Radioactive Enterprises, LLC
2595 Preston Rd, #500
Frisco, TX 75034

Planning and Zoning Commission
City of Keller
110 Bear Creek Parkway
Keller, TX 76248

RE : Planned Monster Mini Golf – 1580 Keller Parkway, Suite 50C

To Whom It May Concern,

My name is Holly Hernandez. Together, with my husband Brian Hernandez, we signed a lease at 1580 Keller Parkway to bring Monster Mini Golf to the City of Keller. Monster Mini Golf is a franchised, indoor family entertainment center. There are approximately 34 operating stores in the US and Canada with another 5-10 stores in various stages of construction.

We wanted to send a letter to introduce ourselves and to let you know more about our planned Monster Mini Golf.

Our Monster Mini Golf will provide indoor family entertainment for all ages. As the name suggests, our key attraction is an 18-hole mini golf course. We also have arcade games, mini bowling (duckpin bowling), a laser maze and special event rooms for birthday parties and corporate events. We also offer filed trips, spirit nights and fundraising events. We offer light concessions such as soda, water, and packaged snacks. We do not serve food or alcohol.

Our proposed hours of operation during the school year are Monday through Friday from 2-9pm, Saturday from 12-10pm and Sunday from 12-8pm. During Summer and school holidays, we open every day at 12pm with the same closing hours as our regular hours of operation.

Typically, Monster Mini Golfs are locating in retail shopping plazas. The average Monster Mini Golf earns $1 - $1.2 million in sales per year.

It should be noted, that we also own the Frisco, TX Monster Mini Golf located at 2595 Preston Rd, Suite 500, Frisco, TX 75034. We opened in the Frisco location in June of 2020 and have been in continuous operation since our opening date. Our sales in 2023 were $1.5 million. While our customer base is primarily from Frisco, Plano, Prosper, Dallas, Lewisville, Celina, Melissa and Allen, we also draw a number of guests from as far west as White Settlement, as far north as Oklahoma City, as far east as Shreveport and as far south as Waco.

We have many residents of Keller, Fort Worth, Southlake and surrounding Keller communities that visit our Frisco location and beg for us to open one in/or around Keller. Keller does not have anything similar to our concept and we feel that Keller would be a great location to bring our family fun to the community.

We also feel that it is important for us to focus on keeping as much business in the local area as possible. The advantage of having our business in this area is that there is not anything else like it. As mentioned, the closest 18-hole indoor mini golf course is located in Frisco.

The growing trend today for people searching for entertainment and birthday party venues is to stay as close-to-home as possible. Families that are searching for a birthday party venue typically do not search more than 15 minutes away from home for fear that other children will not attend. We will be able to keep birthday party revenue and families in Keller.

The location of our planned store is a great place. We plan to occupy the old Tuesday Morning location that has been vacant for approximately 16 months. Further, our planned suite is adjacent to Big Lots which might also be closing. If Big Lots closes, we could potentially lease part of their suite to expand by adding laser tag, additional party rooms or additional family-friendly attractions.

In our Frisco location, we have partnered with Frisco ISD to offer teacher discounts and host field trips. We often sponsor local teams and we participate in local carnivals and events and donate upwards of $5000 a year in free passes to non-profits. We also work closely with the special needs community and offer a safe place for them to bring their special needs groups to practice life skills.

We are typically staffed with 10-25 local residents and we often serve as the first job for teenagers in the community.

We feel strongly that Monster Mini Golf will generate more business for the surrounding stores due our history of routinely pulling guests up to 50 miles away.

We welcome you to read our Monster Mini Golf reviews and/or visit our Monster Mini Golf in Frisco to learn more about our family-friendly business.

In closing, we believe that Monster Mini Golf will be a great asset to the City of Keller.

Thank you in advance for your consideration.

Please feel free to contact me if there are any questions. My cell phone number is 619-726-2632 and my email is holly@monsterminigolf.com. We look forward to getting started and serving the community.

Sincerely yours

/Holly Hernandez/

06-24-004

MMG - KELLER, TX

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. IF CLARIFICATION IS REQUIRED, CONSULT ARCHITECT.
2. HOLD ALL DIMENSIONS INDICATED AS CRITICAL OR CLEAR.
3. ALL DIMENSIONS ARE GIVEN TO FINISHED SURFACES UNLESS OTHERWISE NOTED. ALL LOCATIONS SHALL BE TAKEN FROM ARCHITECTURAL DRAWINGS.
4. ALL SPECIFIED MATERIALS SHALL BE INSTALLED PER MANUFACTURERS' REQUIREMENTS. SPECIFICATIONS AND DETAILS. THE ARCHITECTURAL DRAWINGS DO NOT DEPICT ALL ASPECTS OF THE RELATED ASSEMBLIES. CONTRACTOR TO CONFIRM AND UTILIZE THE MANUFACTURERS' DOCUMENTATION DURING INSTALLATION. NOTIFY ARCHITECT OF ANY MATERIAL CONFLICTS BEFORE PROCEEDING WITH THE WORK.
5. WHEREVER CONFLICTS OCCUR BETWEEN DIFFERENT PARTS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, THE BETTER QUALITY OR LARGER SIZE SHALL PREVAIL UNLESS OTHERWISE NOTED BY THE ARCHITECT IN WRITING.
6. THE CONTRACTOR SHALL LAY OUT THE WORK FROM THE DIMENSIONS SHOWN ON THE DRAWINGS, SHALL BE RESPONSIBLE FOR ALL MEASUREMENTS IN CONNECTION THEREWITH AND SHALL ADVISE THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO COMMENCING THE ACTUAL WORK.
7. AS REQUIRED BY THE CONTRACT, ALL CONTRACTORS SHALL BE LICENSED, BONDED, AND INSURED IN THE STATE AND/OR MUNICIPALITY WHERE THE WORK IS TO TAKE PLACE AND ARE TO BE LICENSED TO PERFORM THE SCOPE OF WORK FOR WHICH THEY ARE CONTRACTED.
8. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
9. ALL DRAWINGS, DETAILS, SPECIFICATIONS, CONTRACT, GENERAL CONDITIONS AND RELATED DOCUMENTS ISSUED AS THE CONTRACT DOCUMENTS ARE INTENDED, TAKEN AND INTERPRETED AS A SINGULAR WHOLE BODY OF WORK. ALL CONTRACTORS, REGARDLESS OF THEIR SKILL SET OR DISCIPLINE, SHALL BE RESPONSIBLE FOR THE FULL SET OF THE CONTRACT DOCUMENTS INCLUDING THE SPECIFICATIONS.
10. THE CHARACTER AND SCOPE OF WORK ARE ILLUSTRATED BY THE DRAWINGS. ADDITIONAL INFORMATION WILL BE PROVIDED TO THE CONTRACTOR BY THE ARCHITECT AS NECESSARY TO INTERPRET AND EXPLAIN THE DRAWINGS. THE ADDITIONAL INFORMATION WILL BE CONSIDERED PART OF THE DOCUMENTS.
11. THE STANDARD SPECIFICATIONS OF THE MANUFACTURERS APPROVED FOR USE IN THE PROJECT ARE HEREBY MADE A PART OF THESE NOTES WITH THE SAME FORCE AND EFFECT AS THOUGH HEREIN WRITTEN OUT IN FULL, EXCEPT THAT WHEREVER THE REQUIREMENTS NOTED HEREIN OR NOTED ON THE DRAWINGS.
12. PRIOR TO FINAL BID SUBMISSION, ALL CONTRACTORS ARE RESPONSIBLE TO REVIEW SUPPLIED DOCUMENTS AND VISIT THE SITE TO UNDERSTAND THE FULL SCOPE OF WORK.
13. PRIOR TO COMMENCING WITH WORK, CONTRACTOR IS TO VISUALLY VERIFY ALL SITE CONDITIONS AND NOTIFY THE ARCHITECT IF THERE ARE ANY MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND THE EXISTING FIELD CONDITIONS, WHICH WILL IMPACT THE NATURE OR THE INTENT OF THE DRAWINGS.
14. CONTRACTORS SHALL REPORT ANY ERRORS, INCONSISTENCIES, OR OMISSIONS THAT MAY BE DISCOVERED IN THE REVIEW OF THE BID/CONSTRUCTION/CONTRACT DOCUMENTS TO THE ARCHITECT. CONTRACTOR SHALL CLARIFY ANY DISCREPANCIES PRIOR TO COMMENCING WORK, AND THE MEANS OF CORRECTION SHALL BE FIRST APPROVED BY THE ARCHITECT AND THE OWNER.
15. ALL CONTRACTORS ARE RESPONSIBLE TO COORDINATE THEIR SCOPE OF WORK WITH THE LOCATION OF NEW UTILITIES (MECHANICAL, PLUMBING OR ELECTRICAL) AS DEFINED WITHIN THE DESIGN DOCUMENTS.
16. COORDINATION OF VARIOUS TRADES IS MANDATORY. ALL CONTRACTORS SHALL CROSS REFERENCE THE ENTIRE SET OF DRAWINGS AND CONFIRM THAT ALL REQUIRED WORKMANSHIP, MATERIALS, EQUIPMENT ETC. IS ACCOUNTED FOR. IT IS EVERY CONTRACTORS RESPONSIBILITY TO PROVIDE A FULLY FUNCTIONING SYSTEM AND COMPLETE PRODUCT.
17. ALL THE ARCHITECTURAL DRAWINGS, SPECIFICATIONS AND CONSTRUCTION NOTES ARE COMPLEMENTARY, AND WHAT IS CALLED FOR BY ONE WILL BE BINDING AS IF CALLED FOR BY ALL. ANY WORK SHOWN OR REFERRED TO ON ANY ONE DOCUMENT SHALL BE PROVIDED AS THOUGH SHOWN ON ALL DOCUMENTS.
18. PRIOR TO THE START OF CONSTRUCTION AND THROUGHOUT THE DURATION OF THIS PROJECT FROM BEGINNING TO COMPLETION, ALL CONTRACTORS ARE RESPONSIBLE FOR MAINTAINING A SAFE WORK ENVIRONMENT AND FOR PROTECTING THE OWNER'S PROPERTY BOTH ON SITE AND IN THE BUILDING, INCLUDING BUT NOT LIMITED TO FURNISHINGS, FURNITURE, AND EQUIPMENT. CONTRACTORS SHALL PROTECT ALL PROPERTY AT ALL TIMES FROM RAIN, WATER, FROST, FIRE, THEFT, VANDALISM, LOSS OR DAMAGE. IF ACCIDENTAL DAMAGE DOES OCCUR, IT SHALL QUICKLY BE REPAIRED AND PROTECTED FROM FURTHER DAMAGE.
19. ALL CONTRACTORS SHALL ALWAYS KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS, AND/OR RUBBISH CAUSED BY IT'S EMPLOYEES OR WORK. AT THE COMPLETION OF EACH DAY OF WORK, THE CONTRACTOR SHALL REMOVE THEIR RUBBISH AND DEBRIS FROM THE JOB SITE AND DISPOSE OF IN A PROPER MANNER. VERIFY DUMPSTER LOCATION WITH OWNER PRIOR TO STARTING ANY DEMOLITION WORK.
20. CONTRACTOR IS TO MAINTAIN RECORD PHOTOGRAPHS OF ALL PHASES OF THE WORK AND MAKE THEM AVAILABLE TO THE ARCHITECT AT ANY TIME. COPIES OF ALL RECORD PHOTOGRAPHS ARE TO BE PROVIDED TO THE ARCHITECT AT THE COMPLETION OF THE WORK.
21. GC TO OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED BY LOCAL LAWS, ORDINANCES AND REGULATIONS PERTAINING TO THIS WORK.
22. CONTRACTOR IS TO PROVIDE TO LOCAL INSPECTION AGENCY ALL REQUIRED AND/OR REQUESTED MANUFACTURERS' INFORMATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CARPETING, HVAC EQUIPMENT, PLUMBING FIXTURES, ACOUSTICAL CEILING BOARD, ALL FINISHES, ET. AL.
23. ANY ITEMS SUBMITTED TO LOCAL AGENCIES FOR REVIEW, SHALL ALSO BE SUBMITTED TO ARCHITECT FOR REVIEW AND COMMENT (AS APPLICABLE).
24. PROVIDE BUILT IN FIRE EXTINGUISHER CABINETS PER NFPA 10. QUANTITIES AS PER FIRE CODE REQUIREMENTS. FINAL LOCATIONS TO BE COORDINATED WITH ARCHITECT AND FIRE MARSHALL.
25. ALL UTILITIES, WIRING, PIPING DUCTWORK ETC. ARE TO BE CONCEALED, EXCEPT IN SPACES WHICH ARE OPEN TO STRUCTURE ABOVE. PROVIDE BOXES OR SOFFITS AS NEEDED, SUBJECT TO THE APPROVAL OF THE ARCHITECT. WHERE PANELS OR PIPES REQUIRE A THICKER WALL, CONTRACTOR TO NOTIFY ARCHITECT. ALL PIPING, WIRING, DUCTWORK ETC. SHALL BE RUN AS HIGH AS POSSIBLE IN ALL SPACES. DUCTWORK SHALL BE GIVEN PRIORITY AND SPRINKLER PIPING SHALL BE ROUTED AROUND DUCTWORK.
26. WHERE PIPING IS REQUIRED TO BE EXPOSED, SUCH AS STANDPIPES, LOCATE TIGHT TO ADJACENT WALLS SO AS NOT TO INTERFERE WITH THE USE OF THE SPACE.
27. WALL SURFACES SHALL BE FLUSH, LEVEL AND PLUMB. WHERE NECESSARY, PROVIDE PACKING OR BLOCKING TO ACHIEVE FLUSH, LEVEL AND PLUMB SURFACES AT WINDOWS AND OPENINGS.
28. SEALANTS SHALL BE PROVIDED AS DOCUMENTED IN THE SPECIFICATIONS AND DRAWINGS.
29. WHERE CAULK JOINTS ARE REQUIRED IN A SURFACE OF SIMILAR MATERIAL, ALL JOINTS SHALL BE UNIFORM. WHERE CAULK JOINTS ARE REQUIRED BETWEEN DISSIMILAR MATERIALS, THE SMALLEST POSSIBLE CAULK JOINT SHALL BE USED.
30. PROVIDE CONTROL JOINTS WHERE REQUIRED. JOINT LOCATIONS SHALL BE APPROVED BY ARCHITECT.
31. PROVIDE BLOCKING FOR ALL WALL MOUNTED ITEMS. PROVIDE BLOCKING IN ALL BATHROOMS FOR GRAB BARS, TOILETS, TUBS AND SHOWERS, AS NOTED.
32. ALL FLOOR SUBSTRATES SHALL BE LEVEL PRIOR TO THE INSTALLATION OF FINISHES, UNLESS NOTED OTHERWISE.
33. PROVIDE HOUSEKEEPING PADS FOR ALL MAJOR MECHANICAL EQUIPMENT, AS REQUIRED. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.
34. EXISTING FIRE ALARM, FIRE SUPPRESSION, STANDPIPE, SMOKE CONTROL AND EMERGENCY POWER SYSTEMS SHALL NOT BE REMOVED WITHOUT REPLACEMENT AND SHALL BE MAINTAINED IN OPERATING CONDITION.
35. WHERE A FIREPROOFING MATERIAL IS REMOVED THAT IS INTEGRAL TO THE RATING OF AN EXISTING FIRE-RATED ASSEMBLY, THE MATERIAL SHALL BE REPLACED SO THAT THE RATING IS PRESERVED.
36. PORTIONS OF THE EXISTING BUILDING MAY BE OCCUPIED DURING RENOVATION AND CONSTRUCTION ACTIVITIES. MAINTAIN LEGAL MEANS OF EGRESS FOR ALL OCCUPIED PORTIONS OF THE BUILDING DURING CONSTRUCTION. ALL CONTRACTORS ARE RESPONSIBLE FOR PROVIDING AND MAINTAINING A WORKSITE THAT IS SAFE AND THAT PROTECTS THE PUBLIC, THE STAFF AND ANY OTHER NON-CONTRACTOR FROM HARM DURING ANY CONSTRUCTION ACTIVITIES. PROVIDE AND MAINTAIN NECESSARY COVERINGS AND PROTECTIONS TO PROTECT EXISTING WORK AND FINISHES INCLUDING DUST CONTROL IN OCCUPIED AREAS. UPON COMPLETION, REMOVE ALL PROTECTION, CLEAN ALL EXPOSED SURFACES AND LEAVE ALL SPACES IN A CLEAN, ORDERLY CONDITION AND BROOM SWEPT.

STANDARD ABBREVIATIONS

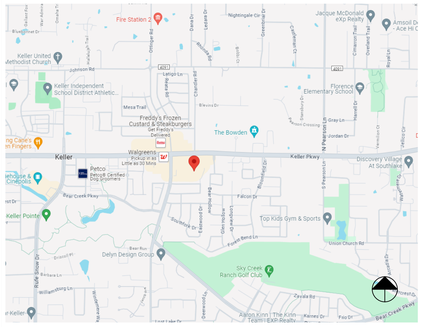
ACP	ACOUSTIC CEILING PANEL
ACT	ACOUSTIC CEILING TILE
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
APPROX	APPROXIMATELY
BLDG	BUILDING
BOC	BOTTOM OF CURB
BOS	BOTTOM OF STEEL
CB	CATCH BASIN
CFMF	COLD FORMED METAL FRAMING
CG	CORNER GUARD
CI	CONTINUOUS INSULATION
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DTL	DETAIL
DWG	DRAWINGS
EJ	EXPANSION JOINT
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EXT	EXTERIOR
FD	FLOOR DRAIN
FF	FINISH FLOOR
FP	FIRE PROOFING
FRP	FIBER REINFORCED PANEL
FRT	FIRE RETARDANT TREATED
GA	GAUGE
GWB	GYPSUM WALL BOARD
HM	HOLLOW METAL
HP	HIGH POINT
HT	HEIGHT
INT	INTERIOR
JB	JUNCTION BOX
LP	LOW POINT
MAX	MAXIMUM
MEP	REFER TO MECHANICAL, ELECTRICAL, OR PLUMBING DRAWINGS
MIN	MINIMUM
MNFR	MANUFACTURER
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTL	METAL
OC	ON CENTER
PT	PRESSURE TREATED
PTD	PAINTED
R	RISER
RM	ROOM
RO	ROUGH OPENING
RWC	RAIN WATER CONDUCTOR
SFRM	SPRAYED FIRE-RESISTIVE MATERIAL
SIM	SIMILAR
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STRUCT	STRUCTURAL
T	TREAD
T&G	TONGUE AND GROOVE
TOC	TOP OF CURB
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
VIF	VERIFY IN FIELD
WRB	WEATHER/WATER RESISTIVE BARRIER

DRAWING SYMBOL LEGEND

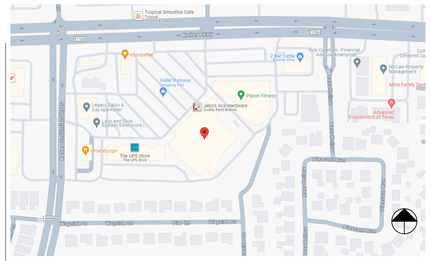
- AA — COLUMN REFERENCE GRID
- 1 / A101 BLDG SECT — BUILDING SECTION TAG
- 1 / A101 WALL SECT — WALL SECTION TAG
- A101 / 1 — EXTERIOR ELEVATION TAG
- A101 / 1 — INTERIOR ELEVATION TAG
- 1 / A101 — DETAIL TAG
- A00 / 000 — WALL PARTITION TAG, SEE SCHEDULE
- ROOM NAME / 101 — ROOM TAG
- 100 — DOOR TAG
- C1 — WINDOW TAG
- A 7'11" — CEILING TAG
- 1A — EXTERIOR MATERIAL TAG
- PT-1 — INTERIOR FINISH TAG
- 0'-0" — SPOT ELEVATION TAG
- DEMOLITION NOTE
- CONSTRUCTION NOTE
- K — KEYED NOTE
- 1 — REVISION TAG

SHEET INDEX

SHEET NUMBER	SHEET NAME	ISSUED FOR PERMIT	PERMIT COMMENTS RESPONSE
GENERAL			
G0.00	COVERSHEET	2024.09.25	2024.11.18
G0.01	TOILET ROOM DETAILS	2024.09.25	
G1.00	LIFE SAFETY PLAN	2024.09.25	
DEMOLITION			
D1.00	DEMOLITION PLAN	2024.09.25	
ARCHITECTURE			
A1.10	FIRST FLOOR PLAN	2024.09.25	2024.11.18
A2.10	FIRST FLOOR REFLECTED CEILING PLAN	2024.09.25	
A8.00	FINISH PLAN AND SCHEDULES	2024.09.25	
A8.10	DETAILS AND SCHEDULES		2024.11.18
MECHANICAL			
M0.1	MECHANICAL GENERAL NOTES, SYMBOLS LIST & ABBREVIATIONS	2024.09.25	
M0.2	MECHANICAL SPECIFICATION	2024.09.25	
M1.0	MECHANICAL FLOOR PLAN	2024.09.25	
M1.1	MECHANICAL ROOF PLAN	2024.09.25	
M5.0	MECHANICAL DETAILS	2024.09.25	
M6.0	MECHANICAL SCHEDULES	2024.09.25	
PLUMBING			
P0.1	PLUMBING SYMBOLS, ABBREVIATIONS, NOTES AND SPECIFICATIONS	2024.09.25	
P1.0	PLUMBING FLOOR PLAN	2024.09.25	
P2.0	PLUMBING DETAILS	2024.09.25	
P3.0	PLUMBING SCHEDULE AND RISERS	2024.09.25	
ELECTRICAL			
E0.1	ELECTRICAL SYMBOLS AND ABBREVIATION	2024.09.25	
E0.2	ELECTRICAL SPECIFICATION SHEET 01 OF 02	2024.09.25	
E0.3	ELECTRICAL SPECIFICATION SHEET 02 OF 02	2024.09.25	
E1.0	ELECTRICAL LIGHTING PLAN	2024.09.25	
E2.0	ELECTRICAL POWER PLAN	2024.09.25	2024.11.18
E2.1	ELECTRICAL ROOF POWER PLAN	2024.09.25	
E3.0	ELECTRICAL RISER DIAGRAM & PANEL SCHEDULE	2024.09.25	
E4.0	ELECTRICAL DETAILS	2024.09.25	



LOCATION PLAN



SITE PLAN

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PERMIT COMMENTS RESPONSE

09.25.2024

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER
NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

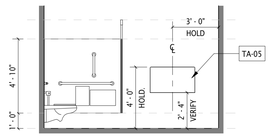
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

COVERSHEET

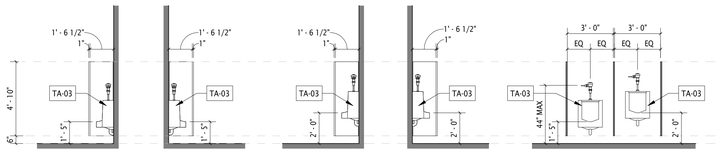
DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

G0.00

PERMIT COMMENTS RESPONSE



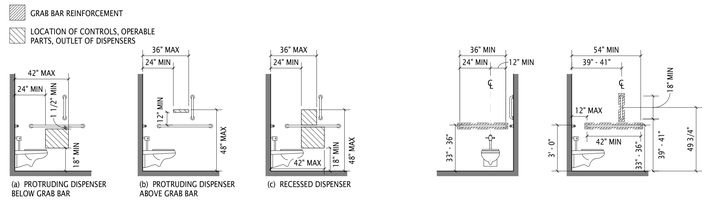
WALL MOUNTED STATION
OUTSIDE OF STALL



(A) 17" FIXTURE MOUNTING
HEIGHT OPTION (ACCESSIBLE)

(B) 24" FIXTURE MOUNTING
HEIGHT OPTION

(A AND B FIXTURE MOUNTING
HEIGHT OPTIONS SHOWN)



(a) PROTRUDING DISPENSER
BELOW GRAB BAR

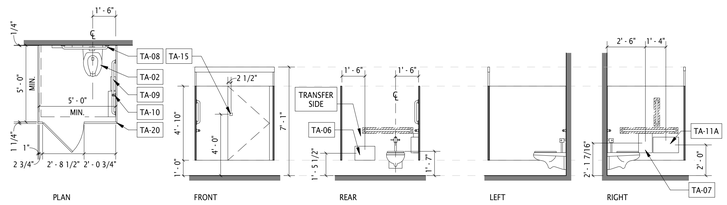
(b) PROTRUDING DISPENSER
ABOVE GRAB BAR

(c) RECESSED DISPENSER

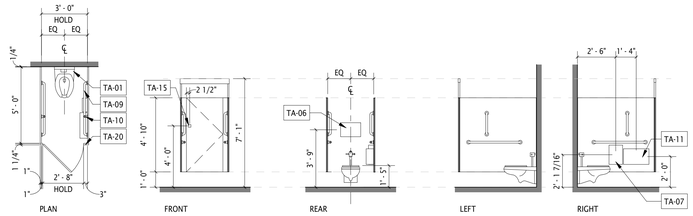
1 G0.01 BABY CHANGING STATION LOCATION
1/4" = 1'-0"

2 G0.01 MEN TYPICAL URINAL STALLS
1/4" = 1'-0"

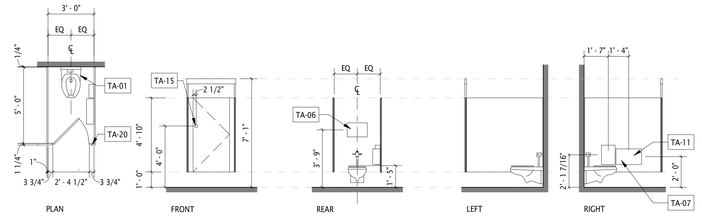
3 G0.01 LEGEND - TYPICAL ACCESSIBILITY REQUIREMENTS - TOILET - WALL MOUNTED ELEVATIONS
1/4" = 1'-0"



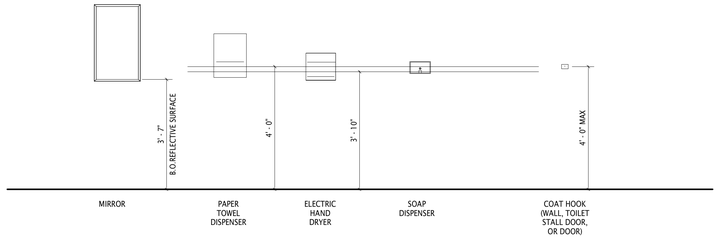
4 G0.01 STALL TYPE A - ACCESSIBLE TOILET STALL
1/4" = 1'-0"



5 G0.01 STALL TYPE B - AMBULATORY TOILET STALL
1/4" = 1'-0"

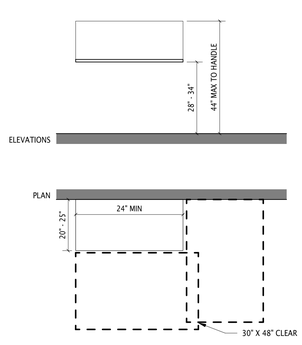


6 G0.01 STALL TYPE C - TYPICAL TOILET STALL
1/4" = 1'-0"



LEGEND - ACCESSORY MOUNTING HEIGHTS
1/2" = 1'-0"

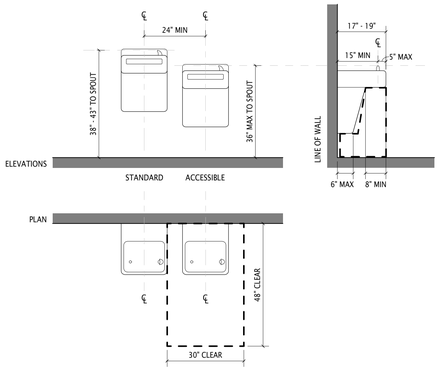
7 G0.01 TYPICAL REQUIREMENTS - TOILET ROOM AND PLUMBING FIXTURES
1/2" = 1'-0"



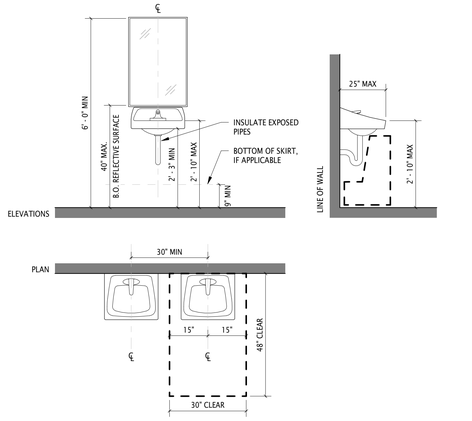
GRAB BAR REINFORCEMENT 250 FT/LB MIN FORCE IN ANY DIRECTION, GC TO COORDINATE WITH REQ. MOUNTING LOCATIONS AND FINISHES

LOCATION OF CONTROLS, OPERABLE PARTS, OUTLET OF DISPENSERS

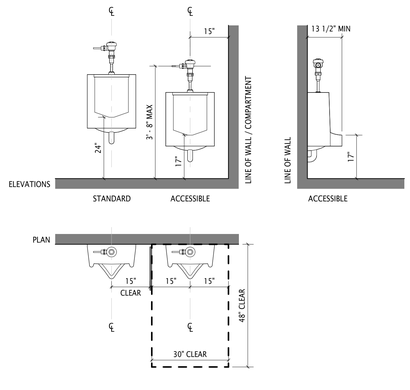
BABY CHANGING TABLES
305; 306; 309; 603.5; 902



DRINKING FOUNTAIN MOUNTING AND CLEARANCE REQUIREMENTS
305; 602



LAVATORY MOUNTING AND CLEARANCE REQUIREMENTS
305.3; 306.2; 306.3; 606



URINAL MOUNTING AND CLEARANCE REQUIREMENTS
305.3; 605

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
215.779.7772
MICHAEL BUCKLEY, AIA
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER
NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

TOILET ROOM DETAILS

DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

G0.01

PERMIT COMMENTS RESPONSE

PROJECT DESCRIPTION:

CONVERSION OF AN EXISTING RETAIL STORE TO GAMING CENTER WITH 18-HOLE MINI GOLF COURSE & ARCADE.

GOVERNING BUILDING CODES:

BUILDING:	2021 INTERNATIONAL BUILDING CODE WITH AMENDMENTS
	2021 INTERNATIONAL EXISTING BUILDING CODE WITH AMENDMENTS
PLUMBING:	2021 INTERNATIONAL PLUMBING CODE WITH AMENDMENTS
MECHANICAL:	2021 INTERNATIONAL MECHANICAL CODE
ELECTRICAL:	2020 NATIONAL ELECTRICAL CODE
FIRE:	2021 INTERNATIONAL FIRE CODE WITH AMENDMENTS
FUEL GAS:	2021 INTERNATIONAL FUEL GAS CODE
ENERGY:	2018 INTERNATIONAL ENERGY CONSERVATION CODE
ACCESSIBILITY:	2012 TEXAS ACCESIBILITY STANDARDS

WITH LOCAL AMENDMENTS

JURISDICTION:

NAME:	CITY OF KELLER BUILDING SERVICES
ADDRESS:	P.O. BOX 770, KELLER, TX 76244
PHONE:	817-743-4110

BUILDING CODE ANALYSIS:

				CODE REFERENCE
GROUP(S):	A-2 (ASSEMBLY); A-3 (ARCADE)			SECTION 303
BUILDING HEIGHT/AREA:		ALLOWED	PROPOSED	
	HEIGHT (FT)	75	22 (NO CHANGE)	TABLE 504.3
	STORIES	3	1 (NO CHANGE)	TABLE 504.4
	AREA (SF/FLOOR)	38,000	13800 (NO CHANGE)	TABLE 506.2
	NOTE: AREA NUMBER(S) SHOWN ON DRAWINGS ARE FOR CODE CALCULATIONS AND USE BY THE BUILDING CODE REVIEWER ONLY AND ARE NOT RELATED TO TENANT LEASING INFORMATION.			
OCCUPANCY:	NONSEPARATED OCCUPANCIES			SECTION 508
OCCUPANCY SEPARATION:	0 HOUR REQUIRED			TABLE 508.4
CONSTRUCTION TYPE:	II-B			CHAPTER 6
FIRE-RESISTANCE RATING:	PRIMARY STRUCTURAL FRAME	0 HRS		TABLE 601
	BEARING WALLS			TABLE 601/602
	EXTERIOR (10 ≤ X < 30)	0 HRS		TABLE 602
	EXTERIOR (X < 10)	1 HR		TABLE 602
	INTERIOR	0 HRS		TABLE 601
	NONBEARING WALLS			TABLE 602
	EXTERIOR (10 ≤ X < 30)	0 HRS		TABLE 602
	EXTERIOR (X < 10)	1 HR		TABLE 602
	INTERIOR	0 HRS		TABLE 601
	FLOOR CONSTRUCTION	0 HRS		TABLE 601
	ROOF CONSTRUCTION	0 HRS		TABLE 601
INTERIOR FINISHES:	REFER TO SHEET A4.3 FOR FINISH SCHEDULE AND FLAME SPREAD RATINGS SCHEDULE.			CHAPTER 8
FIRE PREVENTION:		REQUIRED	PROVIDED	
	AUTOMATIC SPRINKLER SYSTEM	YES	YES	SECTION 903
	STANDPIPE SYSTEM	NO	NO	SECTION 905
	PORTABLE FIRE EXTINGUISHERS	YES	YES	SECTION 906
	FIRE ALARM & DETECTION	NO	YES	SECTION 907
	EMERGENCY ALARM SYSTEMS	NO	NO	SECTION 908
	SMOKE CONTROL SYSTEMS	NO	NO	SECTION 909
	SMOKE & HEAT VENTS	NO	NO	SECTION 910
	FIRE COMMAND CENTER	NO	NO	SECTION 911
	FIRE DEPT. CONNECTION	YES	YES	SECTION 912
	NOTES: PORTABLE FIRE EXTINGUISHERS TO BE INSTALLED PER 2018 FBC, SECTION 906 AND AS DIRECTED BY FIRE MARSHAL.			
OCCUPANT LOAD:	REFER TO 2018 FBC OCCUPANCY SCHEDULE FOR OCCUPANT LOAD			SECTION 1004.1.2
	EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.			SECTION 1004.3
EGRESS SIZING:	REFER TO 'LIFE SAFETY - EXIT REQUIREMENTS' TABLE FOR REQUIRED WIDTH			SECTION 1005
DISTRIBUTION OF MINIMUM WIDTH:	WHERE MORE THAN ONE EXIT, OR ACCESS TO MORE THAN ONE EXIT, IS REQUIRED, THE MEANS OF EGRESS SHALL BE CONFIGURED SUCH THAT THE LOSS OF ANY ONE EXIT, OR ACCESS TO ONE EXIT, SHALL NOT REDUCE THE AVAILABLE CAPACITY OR WIDTH TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY OR WIDTH.			SECTION 1005.5

NUMBER OF EXITS:	OCCUPANT LOAD: 49<X<501 · COMM. PATH OF EGRESS: X<75 · REQUIRED: 2 · PROVIDED: 3	SECTION 1006.2.1
TWO EXITS:	WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2, THE SEPARATION DISTANCE SHALL BE NOT LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF AREA SERVED.	SECTION 1007.1.1, EXCEPTION 2
EGRESS ILLUMINATION:	1 FOOT-CANDLE (11 LUX) MIN	SECTION 1008
EXIT ACCESS:	MAX EXIT ACCESS TRAVEL DISTANCE (FT) 250 FT	TABLE 1017.2
AISLES	AISLES AND AISLE ACCESSWAYS SERVING A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES SHALL COMPLY WITH SECTION 1029.	SECTION 1018.2
ASSEMBLY MAIN EXIT:	A BUILDING, ROOM OR SPACE USED FOR ASSEMBLY PURPOSES OTHER THAN NIGHTCLUBS, THAT HAS AN OCCUPANT LOAD OF GREATER THAN 300 AND IS PROVIDED WITH A MAIN EXIT, THAT MAIN EXIT SHALL BE OF SUFFICIENT CAPACITY TO ACCOMMODATE NOT LESS THAN ONE HALF OF THE OCCUPANT LOAD, BUT SUCH CAPACITY SHALL BE NOT LESS THAN THE TOTAL REQUIRED CAPACITY OF ALL MEANS OF EGRESS LEADING TO THE EXIT. WHERE THE BUILDING IS CLASSIFIED AS A GROUP A OCCUPANCY, THE MAIN EXIT SHALL FRONT ON NOT LESS THAN ONE STREET OR AN UNOCCUPIED SPACE OF NOT LESS THAN 10 FEET IN WIDTH THAT ADJOINS A STREET OR PUBLIC WAY. IN A BUILDING, ROOM OR SPACE USED FOR ASSEMBLY PURPOSES OTHER THAN NIGHTCLUBS, WHERE THERE IS NOT A WELL-DEFINED MAIN EXIT OR WHERE MULTIPLE MAIN EXITS ARE PROVIDED, EXITS SHALL BE PERMITTED TO BE DISTRIBUTED AROUND THE PERIMETER OF THE BUILDING PROVIDED THAT THE TOTAL CAPACITY OF EGRESS IS NOT LESS THAN 100 PERCENT OF THE REQUIRED CAPACITY.	SECTION 1029.2
ASSEMBLY TRAVEL DISTANCE:	EXITS AND AISLES SHALL BE SO LOCATED THAT THE TRAVEL DISTANCE TO AN EXIT DOOR SHALL BE NOT GREATER THAN 200 FEET MEASURED ALONG THE LINE OF TRAVEL IN NONSPRINKLERED BUILDINGS. TRAVEL DISTANCE SHALL BE NOT MORE THAN 250 FEET IN SPRINKLERED BUILDINGS. WHERE AISLES ARE PROVIDED FOR SEATING, THE DISTANCE SHALL BE MEASURED ALONG THE AISLES AND AISLE ACCESSWAYS WITHOUT TRAVEL OVER OR ON THE SEATS.	SECTION 1029.7
ASSEMBLY COMMON PATH OF EGRESS TRAVEL:	THE COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 30 FEET FROM ANY SEAT TO A POINT WHERE AN OCCUPANT HAS A CHOICE OF TWO PATHS OF EGRESS TRAVEL TO TWO EXITS. EXCEPTIONS: 1. FOR AREAS SERVING LESS THAN 50 OCCUPANTS, THE COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 75 FEET.	SECTION 1029.8
ASSEMBLY AISLES:	EVERY OCCUPIED PORTION OF ANY BUILDING, ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT CONTAINS SEATS, TABLES, DISPLAYS, SIMILAR FIXTURES OR EQUIPMENT SHALL BE PROVIDED WITH AISLES LEADING TO EXITS OR EXIT ACCESS DOORWAYS IN ACCORDANCE WITH THIS SECTION.	SECTION 1029.9
ASSEMBLY MINIMUM AISLE WIDTH:	THE MINIMUM CLEAR WIDTH FOR AISLES SHALL BE AS SHOWN: 4. 42 IN. FOR LEVEL OR RAMPED AISLES HAVING SEATING ON BOTH SIDES. EXCEPTIONS: 1. 36 IN. INCHES WHERE THE AISLE SERVES LESS THAN 50 SEATS. 2. 32 IN. WHERE THE AISLE DOES NOT SERVE MORE THAN 14 SEATS. 5. 36 IN. INCHES FOR LEVEL OR RAMPED AISLES HAVING SEATING ON ONLY ONE SIDE.	SECTION 1029.9.1
ASSEMBLY SEATING AT TABLES:	WHERE SEATING IS LOCATED AT A TABLE OR COUNTER AND IS ADJACENT TO AN AISLE OR AISLE ACCESSWAY, THE MEASUREMENT OF REQUIRED CLEAR WIDTH OF THE AISLE OR AISLE ACCESSWAY SHALL BE MADE TO A LINE 19 INCHES AWAY FROM AND PARALLEL TO THE EDGE OF THE TABLE OR COUNTER. THE 19-INCH DISTANCE SHALL BE MEASURED PERPENDICULAR TO THE SIDE OF THE TABLE OR COUNTER. IN THE CASE OF OTHER SIDE BOUNDARIES FOR AISLES OR AISLE ACCESSWAYS, THE CLEAR WIDTH SHALL BE MEASURED TO WALLS, EDGES OF SEATING AND TREAD EDGES.	SECTION 1029.12.1
ASSEMBLY AISLE ACCESSWAY CAPACITY:	AISLE ACCESSWAYS SERVING ARRANGEMENTS OF SEATING AT TABLES OR COUNTERS SHALL COMPLY WITH THE CAPACITY REQUIREMENTS OF SECTION 1005.1 BUT SHALL NOT HAVE LESS THAN 12 INCHES OF WIDTH PLUS 1/2 INCH OF WIDTH FOR EACH ADDITIONAL 1 FOOT, OR FRACTION THEREOF, BEYOND 12 FEET OF AISLE ACCESSWAY LENGTH MEASURED FROM THE CENTER OF THE SEAT FARTHEST FROM AN AISLE. EXCEPTION: PORTIONS OF AN AISLE ACCESSWAY HAVING A LENGTH NOT EXCEEDING 6 FEET AND USED BY A TOTAL OF NOT MORE THAN FOUR PERSONS.	SECTION 1029.12.1.1

IBC 2021 OCCUPANCY SCHEDULE

NAME	NUMBER	FUNCTION	LOAD FACTOR	TYPE	AREA	OCCUPANTS	FIXED SEATS	OCCUPANT LOAD
LEVEL 1								
LASER MAZE		ASSEMBLY - EXHIBIT GALLERY AND MUSEUM	30	Net	205 SF	7		7
STORAGE		ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	Gross	106 SF	1		1
BOWLING ALLEY UTILITY		ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	Gross	177 SF	1		1
BOWLING LANES		ASSEMBLY - FIXED SEATS			286 SF		20	20
STORAGE		ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	Gross	126 SF	1		1
OFFICE		BUSINESS AREAS	100	Gross	126 SF	2		2
PARTY ROOM 2		ASSEMBLY - UNCONCENTRATED TABLE AND CHAIRS	15	Net	474 SF	32		
PARTY ROOM 1		ASSEMBLY - UNCONCENTRATED TABLE AND CHAIRS	15	Net	474 SF	32		
BREAKROOM		BUSINESS AREAS	100	Gross	178 SF	2		2
MINI GOLF		ASSEMBLY - FIXED SEATS			4,908 SF		72	72
ARCADE		ASSEMBLY - EXHIBIT GALLERY AND MUSEUM	30	Net	4,759 SF	159		159
UTILITY		ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300	Gross	131 SF	1		1
TOTAL								266

LIFE SAFETY - EXIT REQUIREMENTS

NAME	OCCUPANTS	WIDTH FACTOR	REQUIRED WIDTH	PROPOSED WIDTH
1	142	0.15"	21.30"	70"
2	36	0.15"	5.40"	34"
3	36	0.15"	5.40"	34"
4	36	0.15"	5.40"	34"
5	36	0.15"	5.40"	34"

LIFE SAFETY - EGRESS TRAVEL DISTANCE

PATH NAME	EXIT	LENGTH	COMMENTS
A		72' - 5"	COMMON PATH
A1	1	73' - 6"	
A2	2	33' - 7"	
B2	2	152' - 11"	
B3	3	174' - 5"	
C4	4	72' - 11"	
C5	5	124' - 0"	

PLUMBING FIXTURE CODE ANALYSIS:

	OCCUPANT LOAD	REQUIRED		PROVIDED		CODE REFERENCE
REQUIRED PLUMBING FIXTURES:	266	WATER CLOSETS	LAVATORIES	WATER CLOSETS	LAVATORIES	SECTION 3. (1) (OCCUPANCY A-2, A-3)
MALE (50%)	133	1 PER 125 = 2	1 PER 200 = 1	1 AND 2 URINALS	2	
FEMALE (50%)	133	1 PER 65 = 3	1 PER 200 = 1	3	2	
FAMILY	-	-	-	-	-	
EMPLOYEE	-	-		-	-	
DRINKING FOUNTAIN	-	1 PER 500		1		SECTION 3. (1)
OTHER	-	1 SERVICE SINK		1 SERVICE SINK		SECTION 1. (9)

LIFE SAFETY

FIRE-RATED WALL, SEE TABLE BELOW

START — FINISH: EGRESS TRAVEL DISTANCE, SEE TABLE

W: WIDTH — ACCESSIBLE ROUTE

LENGTH OF MAX OVERALL DIAGONAL: 0' - 0" / SEPARATION REQUIREMENT: 0' - 0" — MAXIMUM OVERALL BUILDING DIAGONAL

EXIT SEPARATION DISTANCE: 0' - 0" — EXIT SEPARATION

EXIT SIGNS (SEE RCPS - A2.XX SERIES)

NOTE: REFERENCE ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING INFORMATION

EXIT # → EXIT X
\# OCCUPANTS → XX OCC
REQUIRED WIDTH → XX" R
PROVIDED WIDTH → XX" P

SEE EXIT REQUIREMENTS TABLE FOR MORE INFORMATION

NOTE: FIRE EXTINGUISHER CABINET LOCATIONS CAN BE FOUND ON A1.XX SHEETS - FLOOR PLANS

- FEC FIRE EXTINGUISHER CABINET LOCATION
- FE FIRE EXTINGUISHER LOCATION
- OL OCCUPANT LOAD SIGN. ONCE FOR EACH ROOM AND ONE POSTED AT MAIN ENTRANCE FOR ASSEMBLY AREA TOTAL
- TS TACTILE ADA SIGNAGE. REFER TO DETAIL AND ACCESSIBILITY GUIDELINES
- AS ACCESSIBILITY SIGNAGE

WALL RATINGS LEGEND

NUMERIC CHARACTER	RATING	HEIGHT	GRAPHIC
4	4-HOUR	TO UNDERSIDE OF STRUCTURE	
3	3-HOUR	TO UNDERSIDE OF STRUCTURE	
2	2-HOUR	TO UNDERSIDE OF STRUCTURE	
1	1-HOUR	TO UNDERSIDE OF STRUCTURE	
-	SMOKE RATED	TO UNDERSIDE OF STRUCTURE	
0	NOT RATED	TO UNDERSIDE OF STRUCTURE	

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

REGISTERED ARCHITECT · DAVID SHINN URFFER · 20570 · STATE OF TEXAS

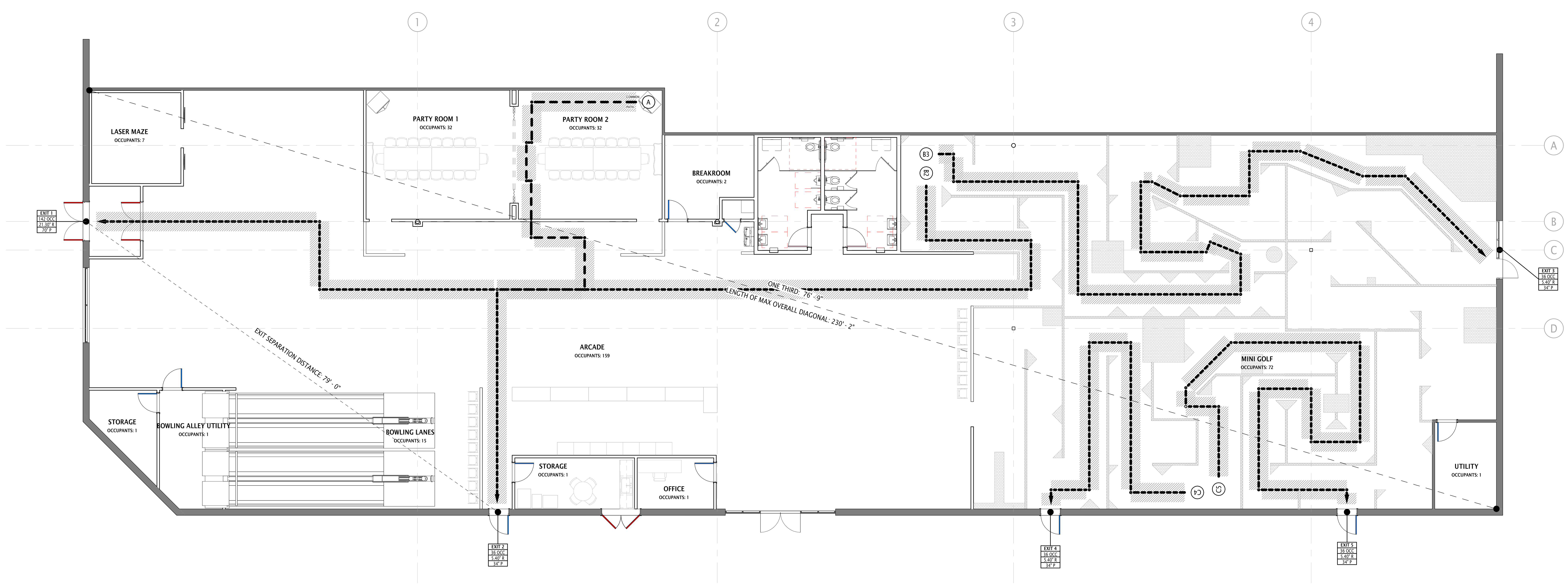
JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER

NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455



2 LIFE SAFETY PLAN
G1.00 1/8" = 1'-0"

MMG - KELLER, TX

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

LIFE SAFETY PLAN

DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

G1.00

PERMIT COMMENTS RESPONSE

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

GENERAL DEMOLITION NOTES

1. THIS IS INTENDED TO BE A "TURNKEY OPERATION."
2. CONTRACTOR IS RESPONSIBLE FOR SUPERVISING ALL WORK, INCLUDING SUBCONTRACTORS & VENDORS FOR THE COMPLETION OF ALL DEMOLITION WORK AS DESCRIBED BELOW, & ACQUIRE ALL PERMITS REQUIRED FOR THE WORK.
3. CONTRACTOR IS RESPONSIBLE TO EXAMINE THE SITE & NOTIFY THE ARCHITECT & OWNER OF ANY EXISTING CONDITIONS THAT MAY AFFECT THE EXECUTION OF DEFINED SCOPE OF WORK. CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL EXISTING CONDITIONS & IMPROVEMENTS REQUIRED FOR A COMPLETE DEMOLITION SCOPE AS DEFINED HEREIN.
4. PRIOR TO THE START OF ANY WORK, CONTRACTOR WILL DETERMINE SYSTEMS TO REMAIN & NOTE POINTS OF TERMINATION &, WHEN NECESSARY DURING DEMOLITION, EXISTING BUILDING SYSTEMS WILL BE IDENTIFIED WHERE REQUIRED TO REMAIN.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING WALL CONSTRUCTION PRIOR TO START OF ANY DEMOLITION.
6. CONTRACTOR IS RESPONSIBLE TO PERFORM ALL NECESSARY DEMOLITION OF EXISTING CONDITIONS TO ALLOW FOR PROPER INSTALLATION OF FINAL FINISHES. CONTRACTOR WILL TEMPORARILY SUPPORT ANY EXISTING CONSTRUCTION THAT MAY BE AFFECTED DURING DEMOLITION. GENERAL SCOPE OF ALL AREAS IS TO PROVIDE COMPLETE REMOVAL OF ALL EXISTING IMPROVEMENTS (PARTITIONS, FLOORS, CEILINGS, ETC.) TO EXISTING STRUCTURE (SLAB TO SLAB).
7. CONTRACTOR IS RESPONSIBLE TO REMOVE FROM THE BUILDING SITE ALL DEBRIS ENCOUNTERED, WHICH INCLUDES ANY MATERIALS RESULTING FROM DEMOLITION.
8. COORDINATE ALL DEMOLITION WORK WITH ARCHITECTURAL, STRUCTURAL, & MEP DRAWINGS. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
9. DEMOLITION CONTRACTOR TO REMOVE ALL REMAINING DUCTWORK, MECHANICAL EQUIPMENT, PLUMBING FIXTURES, ABANDONED PIPES, & MISCELLANEOUS EQUIPMENT.
10. COMMUNICATION CABLES WILL BE PROTECTED WHERE DEMOLITION WORK ENCROACHES.
11. CONTRACTOR TO PROVIDE A CEILING SURFACE CLEARED OF ANY HANGING ITEMS OR ATTACHED HARDWARE.

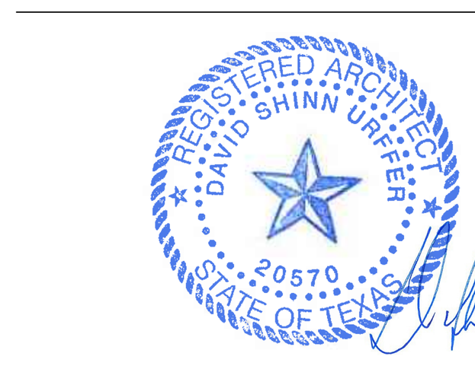
CONSTRUCTION PHASING LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED
- NEW CONSTRUCTION
- 5 1/2" HIGH X 5" WIDE PRE-MANUFACTURED CURBS TO OUTLINE "FAIRWAYS" FOR GOLF COURSE, PROVIDED AND INSTALLED BY TENANT'S VENDOR.

DEMOLITION NOTES KEY

- D1 REMOVE EXISTING INTERIOR DOORS, PARTITIONS, AND CEILINGS THROUGHOUT. FLASH PATCH AND REPAIR FLOOR AS NEEDED TO ACCEPT NEW FINISHES. REPAIR ADJACENT WALLS TO ACCEPT NEW FINISHES.
- D2 REMOVE EXISTING PLUMBING FIXTURES. EXISTING PLUMBING TO BE CAPPED BELOW FLOOR. FLASH PATCH AND REPAIR FLOOR AS NEEDED TO ACCEPT NEW FINISHES.
- D3 EXISTING SLAB TO BE SAW-CUT AND TRENCHED FOR NEW PLUMBING. GC TO COORDINATE TRENCHING WITH PROPOSED PLUMBING FIXTURES.
- D4 REMOVE EXISTING EXTERIOR STOREFRONT AND DOOR. PREPARE FLOOR AND ADJACENT WALL TO ACCEPT NEW STOREFRONT AND DOORS.
- D5 REMOVE EXISTING EXTERIOR DOOR. PREPARE FLOOR AND ADJACENT WALL TO ACCEPT NEW STOREFRONT AND DOORS.

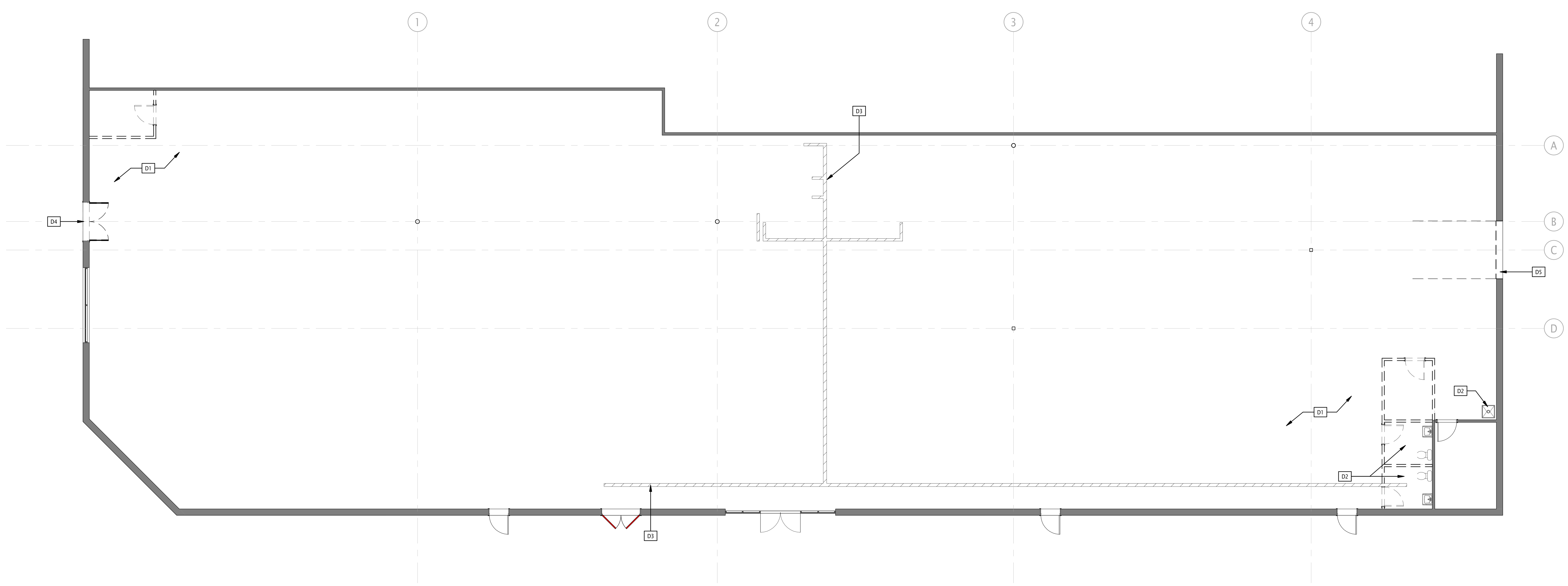
JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM



JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER
NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455



1 / D1.00 DEMOLITION PLAN
1/8" = 1'-0"

MMG - KELLER, TX

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

DEMOLITION PLAN

DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:

D1.00

PERMIT COMMENTS RESPONSE

A1.3 / 2.1.0

UL #: U419

THICKNESS: 4 7/8"

FIRE RATING: 1 HOUR

STC: 43

DESCRIPTION
- (1) LAYER 5/8" FIRE RESISTANT GWB EACH SIDE, APPLIED HORIZONTALLY OR VERTICALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED.
- 3 5/8" METAL STUDS @ 16" O.C.
- 3 1/2" SOUND BATT INSULAN. RUN INSULATION TIGHT TO STRUCTURE ABOVE.

WALLS TO EXTEND TO THE BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.

USE WATER-RESISTANT GYPSUM BOARD IN WET LOCATIONS.

A.0.3 / 2.0.0 — A.0.3 / 2.1.0

UL #: N/A

THICKNESS: 4 7/8"

FIRE RATING: NOT RATED

STC: 39 (A.0.3.2.0.0)
43 (A.0.3.2.1.0)

DESCRIPTION
- (1) LAYER 5/8" GWB EACH SIDE, APPLIED HORIZONTALLY OR VERTICALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED.
- 3 5/8" METAL STUDS @ 16" O.C.
- 3 1/2" SOUND BATT INSULATION AS NOTED & SHOWN.

WALLS TO EXTEND TO THE BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.

USE WATER-RESISTANT GYPSUM BOARD IN WET LOCATIONS.

A.0.6 / 2.0.0 — A.0.6 / 2.1.0

UL #: N/A

THICKNESS: 7 1/4"

FIRE RATING: NOT RATED

STC: 40 (A.0.6.2.0.0)
46 (A.0.6.2.1.0)

DESCRIPTION
- (1) LAYER 5/8" GWB EACH SIDE, APPLIED HORIZONTALLY OR VERTICALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED.
- 6" METAL STUDS @ 16" O.C.
- 6" SOUND BATT INSULATION AS NOTED & SHOWN.

WALLS TO EXTEND TO THE BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.

USE WATER-RESISTANT GYPSUM BOARD IN WET LOCATIONS.

B.0.3 / 1.0.0 — B.0.3 / 1.0.0

UL #: N/A

THICKNESS: 4 1/4"

FIRE RATING: NOT RATED

STC: N/A

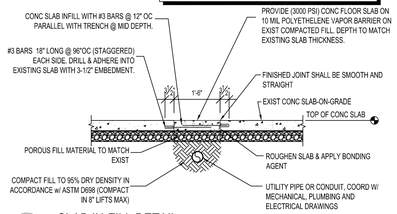
DESCRIPTION
- (1) LAYER 5/8" GWB, APPLIED HORIZONTALLY OR VERTICALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED.
- 3 5/8" METAL STUDS @ 16" O.C.
- 3 1/2" BATT INSULATION WHEN NOTED & SHOWN.

WALLS TO EXTEND TO THE BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.

USE WATER-RESISTANT GYPSUM BOARD IN WET LOCATIONS.

TYPICAL @ NEW SANITARY SEWER PIPE

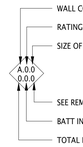
ALL CEMENT USED SHALL CONFORM TO THE LATEST ASTM SPECIFICATION C 150, TYPE 3. ONLY ONE (1) BRAND OF PORTLAND CEMENT SHALL BE USED IN ANY ONE STRUCTURE. CONCRETE MIXTURE SHALL BE DESIGNED TO PROVIDE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 3 DAYS.



B5 SLAB IN-FILL DETAIL

Scale: NTS

WALL TAG LEGEND



WALL CONSTRUCTION TYPE LEGEND

A	METAL STUD WALL
B	METAL STUD FURRING WALL
C	METAL STUD DEMISING WALL
D	METAL STUD SHAFT WALL
E	METAL STUD SOUND WALL (RESILIENT CHANNEL)
M	WOOD SHEAR WALL (DOUBLE SIDE)
N	WOOD STUD WALL
P	WOOD STUD FURRING WALL
Q	WOOD STUD DEMISING WALL
R	WOOD STUD SOUND WALL (RESILIENT CHANNEL)
S	CMU WALL
T	AUTOCLAVED AERATED CONCRETE BLOCK WALLS
V	CONCRETE WALL

SIZE OF CONSTRUCTION MEMBER LEGEND

NUMERIC CHARACTER	WOOD STUD WIDTH	METAL STUD WIDTH	CMU WIDTH
0	-	7/8"	-
1	3/4"	1 5/8"	-
2	1 1/2"	2 1/2"	-
3	2 1/2"	3 5/8"	-
4	3 1/2"	4"	3 5/8"
6	5 1/2"	6"	5 5/8"
8	7 1/4"	8"	7 5/8"
12	-	-	11 5/8"

PARTITION REMARKS LEGEND

0	NO REMARK
1	4'-0" AFF
2	FRAMING AND 5/8" GWB TO STOP AT UNDERSIDE OF EXISTING ACT CEILING

CONSTRUCTION PHASING LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED
- NEW CONSTRUCTION
- 5 1/2" HIGH X 5" WIDE PRE-MANUFACTURED CURBS TO OUTLINE "FAIRWAYS" FOR GOLF COURSE, PROVIDED AND INSTALLED BY TENANT'S VENDOR.

CONSTRUCTION NOTES KEY

C1	ALIGN.
C2	GAMING/ARCADE/BOWLING EQUIPMENT BY TENANT'S VENDOR.
C3	GC TO VERIFY PHONE/DATA PROVIDER LOCATION OF NEW EQUIPMENT AND INSTALL 48"X48"X1/2" FRT PLYWOOD ON COMPLETED GWB PARTITION.
C4	NEW TENANT EQUIPMENT BY OTHERS, PROTECT DURING CONSTRUCTION.
C5	NOT USED
C6	SERVICE COUNTER PROVIDED BY OTHERS. GC TO COORDINATE POWER AND DATA REQUIRED.
C7	APPLY VINYL FILM WITH OWNER'S GRAPHICS TO EXTERIOR SIDE OF EXISTING STOREFRONT.
C8	APPLY 3M BLACKOUT FILM ON INTERIOR SIDE OF EXISTING STOREFRONT PROVIDED BY OWNER'S VENDOR.
C9	NEW EXTERIOR STOREFRONT AT EXISTING OPENING LOCATION.
C10	GC TO PROVIDE FLOOR DRAIN AT PROPOSED ICE MACHINE LOCATION.
C11	GC TO PROVIDE BLOCKING FOR CURTAIN TRACK AND CHANDELIER. CURTAIN TRACK, CURTAIN AND CHANDELIER PROVIDED BY TENANT.
C12	GC TO INFILL INTERIOR GLAZED PORTION OF STOREFRONT DOOR WITH PLYWOOD.
C13	GC TO REFER TO C0.01 FOR ALL TOILET ACCESSORY LOCATION REQUIREMENTS.
C14	GC IS RESPONSIBLE FOR COORDINATING ATTRACTION REQUIREMENTS WITH OWNER'S VENDOR.
C15	NOT USED
C16	NOT USED
C17	GC TO PATCH AND REPAIR COLUMNS AS REQUIRED. PAINT WITH PT-2.

GENERAL PARTITION NOTES

0. GENERAL
A. REFERENCE ROOM FINISH SCHEDULE FOR BASES AND FINAL FINISHES NOT SHOWN ON PARTITION TYPES

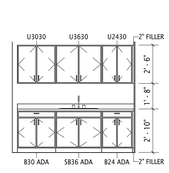
1. FRAMING
A. ALL LOAD BEARING PARTITIONS SHALL BE CONSTRUCTED PER STRUCTURAL DRAWINGS AND SPECIFICATIONS.
B. ALL NON-LOAD BEARING PARTITION FRAMING SHALL BE SIZED TO LIMIT DEFLECTION TO L/240 WITH 5 PSF UNIFORM LOADING.
C. PROVIDE DOUBLE FRAMING MEMBERS AT ALL OPENINGS.
D. ISOLATE NON-LOAD BEARING FRAMING FROM STRUCTURAL ELEMENTS TO PREVENT THE TRANSFER OF LOADS TO PARTITION FRAMING.
E. UNLESS INDICATED OTHERWISE, PARTITIONS RUN FROM TOP OF DECK/SLAB TO STRUCTURE ABOVE.
F. SCREW ATTACHMENT OF STUDS TO RUNNER TRACKS TO OCCUR ON BOTH SIDES.
G. PROVIDE ADEQUATE BLOCKING, CATS OR GROUNDS FOR ALL WALL MOUNTED ARCHITECTURAL WOODWORK, FINISH CARPENTRY, TOILET PARTITIONS AND ACCESSORIES, RAILINGS AND SIMILAR MOUNTED ITEMS.
H. ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED PER SPECIFICATIONS.

2. GYPSUM WALL BOARD
A. WHERE CONTROL JOINTS ARE REQUIRED BASED ON SPECIFIED FREQUENCY, AND ARE NOT SHOWN ON INTERIOR ELEVATIONS, LOCATE CONTROL JOINTS ON BOTH THE STRIKE AND SWING SIDE OF DOORS. WHEN PROVIDING CONTROL JOINTS AT DOORS DOES NOT MEET THE SPECIFIED FREQUENCY, PROVIDE DOUBLE STUD CONTROL JOINT CONSTRUCTION AND VERIFY LOCATION WITH THE ARCHITECT.
B. ALL LONG RUN GWB PARTITIONS AND CEILINGS TO HAVE CONTROL JOINTS AT MAXIMUM 30'-0" OC.
C. ITEMS SHOWN OR SCHEDULED TO BE SEMI OR FULLY RECESSED SHALL BE INSTALLED AS NOTED. PARTITION DEPTH OR TYPE SHALL BE ADJUSTED TO ACCOMMODATE THE DEPTH OF RECESSED ITEM OR AS DIRECTED BY THE ARCHITECT.
D. PROVIDE CEMENTITIOUS BACKER BOARD AT ALL SHOWER LOCATIONS AND MOISTURE-RESISTANT GWB AT ALL OTHER LAVATORY AND TOILET LOCATIONS.

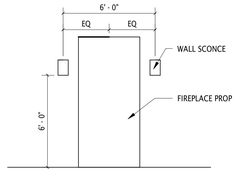
3. FIRE RATED PARTITIONS
A. PROVIDE PERMANENTLY STENCILED IDENTIFICATION ABOVE ACCESSIBLE CEILINGS ON ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS. THE IDENTIFICATION SHALL INCLUDE LETTERING NOT LESS THAN 3" IN HEIGHT WITH A MINIMUM 3/8" STROKE IN CONTRASTING COLOR AND READ AS FOLLOWS: "FIRE AND/ OR SMOKE BARRIER - PROTECT ALL OPENINGS". IDENTIFICATION SHALL BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET.
B. RATED PARTITIONS ARE TO BE CONSTRUCTED BEFORE NON-RATED PARTITIONS. ABUT NON-RATED PARTITIONS TO RATED PARTITIONS.
C. ALL FIRE-RESISTANCE RATED PARTITIONS SHALL BE CONSTRUCTED FROM TOP OF NON-FINISHED FLOOR CONSTRUCTION TO BOTTOM OF FLOOR CONSTRUCTION ABOVE.
D. FIRE RATED HEAD CONDITIONS AND THROUGH PENETRATIONS, WHETHER A SUB-PART OF THE REFERENCED RATED ASSEMBLY, OR AS SHOWN IN DETAIL REPRESENT TYPICAL HEAD-OF-WALL CONDITIONS. ATYPICAL CONDITIONS DISCOVERED DURING REQUIRED TRADE COORDINATION ARE REQUIRED TO MAINTAIN THE INTEGRITY OF THE FIRE-RESISTANCE RATING NOTED ON THE FLOOR PLANS. PROVIDE AND INDUSTRY RECOGNIZED FIRE RESISTANCE TEST OR LETTER OF ENGINEERING JUDGMENT FOR ALL ATYPICAL CONDITIONS FOR REVIEW PRIOR TO CONSTRUCTION.
E. ALL THROUGH PENETRATIONS IN FIRE-RESISTANCE RATED PARTITIONS SHALL BE SEALED WITH MATERIALS AND ASSEMBLIES NECESSARY TO MAINTAIN THE REQUIRED FIRE-RESISTANCE RATING OF THE PARTITION.
F. SEAL ALL STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL PENETRATIONS OF FIRE-RATED WALLS AND FLOORS WITH FIRE-AND-SMOKE-STOPPING SEALANT OF MATCHING FIRE-RATING.
G. THE CEILING SHOULD BE SEALED TO THE WALL/SIDE STRUCTURES USING A PERIMETER ISOLATION MATERIAL SUCH AS 1/4" THICK CROSS-LINKED CLOSED-CELL POLYETHYLENE FOAM OR EPDM RUBBER TAPE (2 PCF) COVERED BY 100% SILICONE CAULK OR APPROPRIATE FIRE-RATED PAINTABLE HIGHLY RESILIENT CAULK SUCH AS 3M FIRE BARRIER 1005L.

4. SOUND RESISTANCE RATING
A. ALL PARTITIONS WITH AN STC RATING, SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE REFERENCED TEST.
B. GYPSUM BOARD PARTITIONS SHALL BE CONSTRUCTED WITH SOUND ATTENUATED INSULATION AS SCHEDULED. INSULATION SHALL BE CONTINUOUS AND WITHOUT INTERRUPTION.
C. ALL THROUGH PENETRATIONS IN ALL PARTITIONS WITH AN STC RATING, SHALL BE SEALED WITH ACOUSTICAL SEALANT TO MAINTAIN REFERENCED SOUND RESISTANCE RATING.
D. THROUGH PENETRATIONS IN ALL PARTITIONS WITH AN STC RATING AND FIRE RESISTANCE RATED ARE REQUIRED TO BE SEALED WITH MATERIALS CAPABLE OF MEETING BOTH SOUND AND FIRE RESISTANCE RATINGS.
E. ALL PENETRATIONS THROUGH THE FLOOR/CEILING ASSEMBLY SHOULD BE OVERSIZED BY 1/2" WITH THE PENETRATING ELEMENT HAVE NO CONTACT WITH GWB. THE RESULTING GAP SHOULD BE COMPLETELY FILLED WITH FOAM BACKER ROD AND 100% SILICONE CAULK OR APPROPRIATE FIRE-RATED RESILIENT CAULK.
F. ELECTRICAL BOXES IN ALL WALLS WITH ACOUSTIC INSULATION OR AN STC RATING LISTED; SWITCHES, ETC. SHALL NOT BE LOCATED BACK-TO-BACK. OUTLETS SHALL BE OFFSET AT LEAST 24" APART IN SEPARATE BAYS. ALL FIVE SIDES OF ELECTRICAL BACK BOXES SHOULD BE SEALED USING MOLDABLE SOUND INSULATION PUTTY PADS SUCH AS KINETICS ISOBACKER (FIRE-RATED) AND KINETICS SEALTIGHT (NON-FIRE-RATED) OR THEIR EQUIVALENTS. PERIMETERS OF WALL SHALL BE CAULKED. ADDITIONALLY, ALL OTHER WALL PENETRATIONS SHALL BE SEALED WITH APPROPRIATE TYPE OF ACOUSTIC SEALANT.

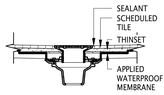
5. MISC
A. ALONG PERIMETER WALLS AND DEMISING WALLS RUN PARTITIONS TIGHT TO THE UNDERSIDE OF DECK ABOVE. ALL PENETRATIONS THROUGH THESE WALLS MUST BE SEALED, FIRESTOPPED AND SOUND CAULKED.
B. PREPARE BASE WALL MATERIALS, (GYP, PLYWOOD, ETC.) AS PER MANUFACTURER'S WRITTEN SPECIFICATIONS, PRIME AND PAINT SUBSTRATE AS REQUIRED TO RECEIVE FINISHES INDICATED.
C. ALL EXTERIOR WALLS TO INCLUDE VAPOR BARRIER ON WARM SIDE OF INSULATION.
D. THE BASE LAYER OF A DOUBLE LAYER PARTITION AND THE FACE LAYER OF SINGLE LAYER PARTITIONS SHOULD BE PERIMETER CAULKED TO THE SURROUNDING FLOOR, WALLS, AND CEILING USING A RESILIENT, NON-HARDENING CAULK. THE FACE LAYER AND THE BASE LAYER SEAMS SHOULD BE STAGGERED.
E. GAPS LEFT AT THE TOP OF A FULL-HEIGHT PARTITION WHERE IT MEETS DECK ABOVE SHOULD BE COMPLETELY SEALED USING 100% SILICONE CAULK. TOP TRACKS SHOULD BE SLOTTED TO PROVIDE A SLIP JOINT CONNECTION OF STUDS TO THE TOP TRACK.
F. AVOID DIRECTLY ATTACHING WINDOW MOLDING, MILLWORK, AND OTHER WALL- MOUNTED ITEMS TO ISOLATED CEILINGS. ALLOW A 1/16" (MIN) AIR GAP BETWEEN THESE FEATURES AND THE CEILING ASSEMBLY.



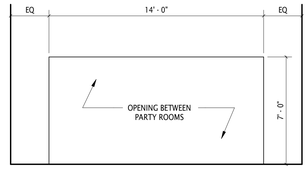
2 / A1.10 BREAK ROOM - PARTIAL
1/4" = 1'-0"



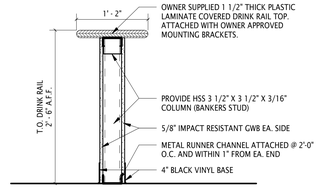
7 / A1.10 PARTY ROOM FIREPLACE ELEVATION
1/4" = 1'-0"



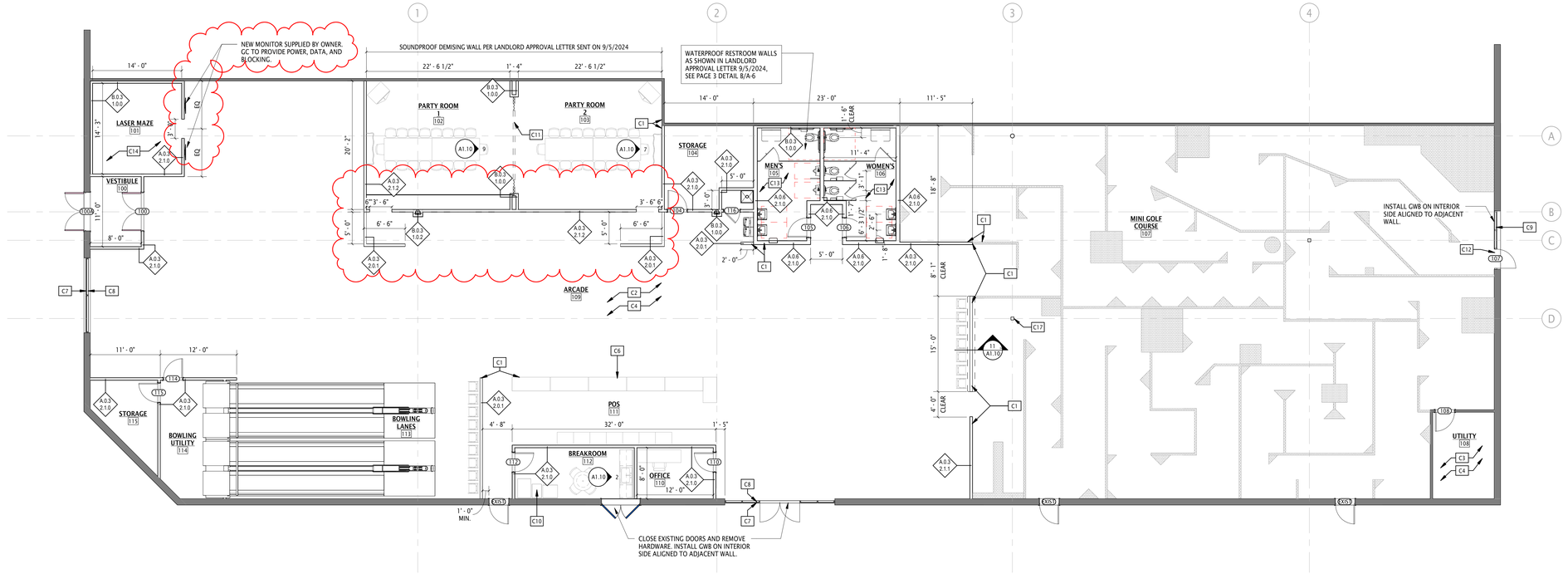
8 / A1.10 SECTION DETAIL - TYPICAL FLOOR DRAIN
1 1/2" = 1'-0"



9 / A1.10 ELEVATION OF PARTY ROOM OPENING
1/4" = 1'-0"



11 / A1.10 DRINK RAIL DETAIL
1" = 1'-0"



1 / A1.10 PROPOSED FLOOR PLAN
1/8" = 1'-0"

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
215.779.7772
MICHAEL BUCKLEY, AIA
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER

NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

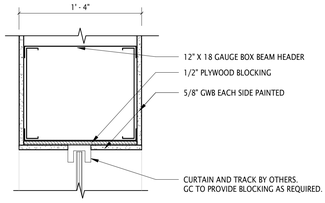
1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

FIRST FLOOR PLAN

DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

A1.10

PERMIT COMMENTS RESPONSE



3 / A2.10 CURTAIN TRACK SOFFIT DETAIL
1 1/2" = 1'-0"

CONSTRUCTION NOTES KEY

C1	ALIGN.
C2	GAMING/ARCADE/BOWLING EQUIPMENT BY TENANT'S VENDOR.
C3	GC TO VERIFY PHONE/DATA PROVIDER LOCATION OF NEW EQUIPMENT AND INSTALL 48"X48"X1/2" FRT PLYWOOD ON COMPLETED GWB PARTITION.
C4	NEW TENANT EQUIPMENT BY OTHERS, PROTECT DURING CONSTRUCTION.
C5	NOT USED
C6	SERVICE COUNTER PROVIDED BY OTHERS. GC TO COORDINATE POWER AND DATA REQUIRED.
C7	APPLY VINYL FILM WITH OWNER'S GRAPHICS TO EXTERIOR SIDE OF EXISTING STOREFRONT.
C8	APPLY 3M BLACKOUT FILM ON INTERIOR SIDE OF EXISTING STOREFRONT PROVIDED BY OWNER'S VENDOR.
C9	NEW EXTERIOR STOREFRONT AT EXISTING OPENING LOCATION.
C10	GC TO PROVIDE FLOOR DRAIN AT PROPOSED ICE MACHINE LOCATION.
C11	GC TO PROVIDE BLOCKING FOR CURTAIN TRACK AND CHANDELIER. CURTAIN TRACK, CURTAIN AND CHANDELIER PROVIDED BY TENANT.
C12	GC TO INFILL INTERIOR GLAZED PORTION OF STOREFRONT DOOR WITH PLYWOOD.
C13	GC TO REFER TO G0.01 FOR ALL TOILET ACCESSORY LOCATION REQUIREMENTS.
C14	GC IS RESPONSIBLE FOR COORDINATING ATTRACTION REQUIREMENTS WITH OWNER'S VENDOR.
C15	NOT USED
C16	NOT USED
C17	GC TO PATCH AND REPAIR COLUMNS AS REQUIRED. PAINT WITH PT-2.

CONSTRUCTION NOTES

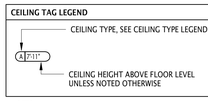
SEE PAGE A1.10 FOR CONSTRUCTION NOTES

LIGHTING FIXTURE LEGEND

A		NOT USED
A1		EXISTING 2X4 LAY-IN TROFFER
C		NOT USED
C1		RECESSED CAN LED DOWNLIGHT 4"
D		4" LED STRIP LIGHT
E		2X4 LAY-IN TROFFER
F1		GLOWPRO LED BLACKLIGHT, UV18X3 - GEN2
P		4" PENDANT, BETA4RP BY ALPHABET LIGHTING
X1		LED EXIT LIGHT WITH DUAL EMERGENCY HEAD (BLACK)
GC		UV BLACK LIGHT CANNON
R1		REMOTE EMERGENCY LIGHT
SC		CHANDELIER BY TENANT

NOTES:
1. LIGHT FIXTURE INSTALLED BY CONTRACTOR, SUPPLIED BY TENANT.
2. LIGHT FIXTURE INSTALLED BY CONTRACTOR, T8 BLACK LIGHT BULBS PROVIDED BY TENANT INSTALLED BY CONTRACTOR
3. FOR CONTROLS TO FIXTURE UTILIZE LUMINARY CABLE
4. GC TO VERIFY FIXTURE MOUNTING HARDWARE PER LOCATION IN FIELD.
5. GC TO PROVIDE UNISTRUT TO SPAN ABOVE GOLF COURSE. GC TO VERIFY LOCATIONS IN FIELD WITH OWNER FOR T-SPEAKERS.

CEILING TAG LEGEND



NOTES:
1. SEE MEP DRAWINGS FOR ADDITIONAL SYMBOL LEGENDS.
2. SEE ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING.
3. SEE ELECTRICAL DRAWINGS FOR LIGHTING SPECIFICATIONS.
4. SEE ELECTRICAL DRAWINGS FOR OUTLET & SWITCHING INFORMATION.

CEILING TYPE LEGEND

A	GYPSUM SOFFIT
B	2X2 ACT
C	OPEN TO STRUCTURE ABOVE
D	2X2 ACT, WASHABLE
E	2X4 BLACK ACT CEILING WITH BLACK GRID

1 / A2.10 PROPOSED REFLECTED CEILING PLAN
1/8" = 1'-0"

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER

NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

FIRST FLOOR REFLECTED CEILING PLAN

DATE: 09.25.2024
DRAWN BY: JW/MB/BP
REVISIONS:

A2.10

PERMIT COMMENTS RESPONSE

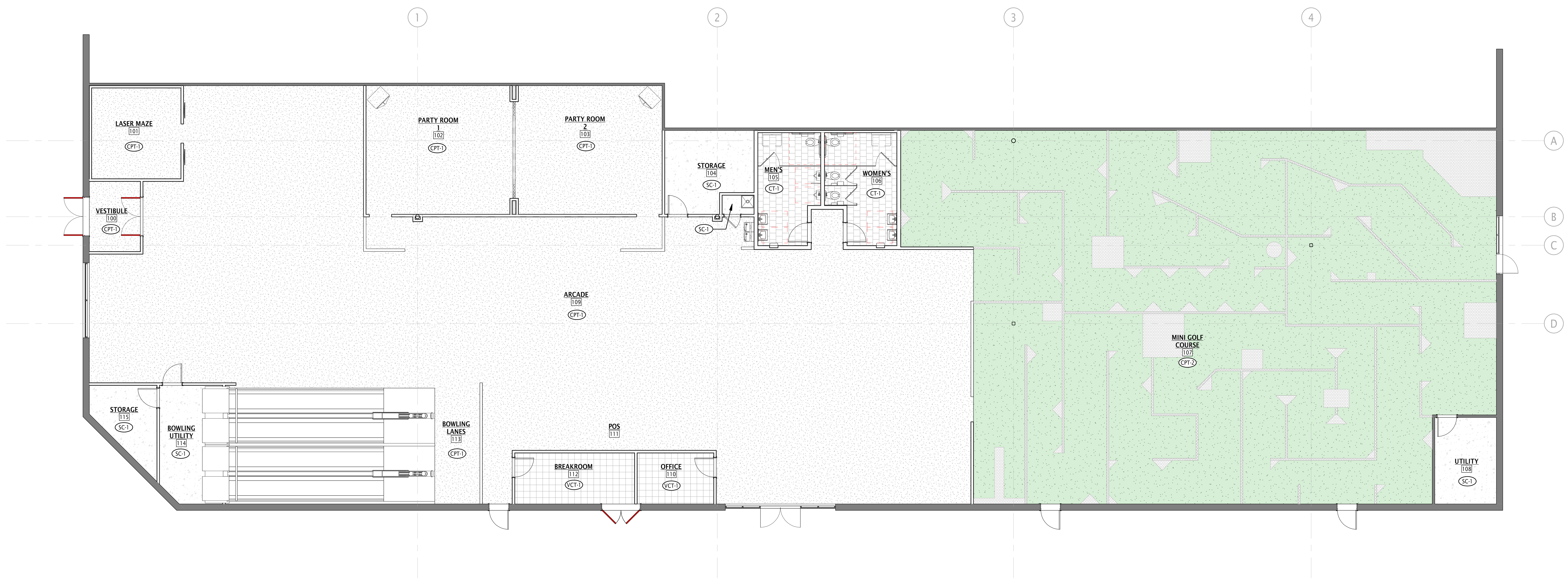
ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

DOOR SCHEDULE

			DOOR						FRAME						ASSEMBLY		
DOOR NUMBER	ROOM NAME	ROOM NUMBER	TYPE	MATERIAL	FINISH	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD	FIRE RATING	HARDWARE	REMARKS
100	VESTIBULE	100	G2F	HM	PT-1	6' - 0"	7' - 0"	2"	M3	HM	PT-1	B	B	ALUM	0	B,C,I,K,N,S,T	
100A	VESTIBULE	100	G2F	HM	PT-1	6' - 0"	7' - 0"	2"	M3	HM	PT-1	C	C	ALUM	0	B,C,I,K,N,S,T	EXTERIOR NOTES: 1. GC TO CONFIRM FIRE RATING OF EXISTING DOORS IN EXTERIOR WALL. NOTIFY OWNER'S ARCHITECT OF FIRE RATING.
104	STORAGE	104	F	WD	PT-1	3' - 0"	7' - 0"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	
105	MEN'S	105	F	WD	PT-1	3' - 0"	7' - 0"	1 3/4"	M1	HM	PT-1	B	B	GRANITE	0	B,C,L,O,P,Q,R	
106	WOMEN'S	106	F	WD	PT-1	3' - 0"	7' - 0"	1 3/4"	M1	HM	PT-1	B	B	GRANITE	0	B,C,L,O,P,Q,R	
107	MINI GOLF COURSE	107	F	HM	PT-1	3' - 0"	7' - 0"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,C,I,K,N,S,T	EXTERIOR NOTES: 1. GC TO CONFIRM FIRE RATING OF EXISTING DOORS IN EXTERIOR WALL. NOTIFY OWNER'S ARCHITECT OF FIRE RATING.
110	OFFICE	110	F	WD	PT-1	3' - 0"	6' - 8"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	
112	BREAKROOM	112	F	WD	PT-1	3' - 0"	6' - 8"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	
114	ARCADE	109	F	WD	PT-1	3' - 0"	6' - 8"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	
115	BOWLING UTILITY	114	F	WD	PT-1	3' - 0"	6' - 8"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	
116	JANITOR CLOSET	116	F	WD	PT-1	2' - 6"	6' - 8"	1 3/4"	M1	HM	PT-1	B	B	ALUM	0	B,E,K,O,P	

ROOM FINISH SCHEDULE

ROOM	FLOOR	BASE	CEILING	WALL	WINSCOT		REMARKS
					FINISH	HEIGHT	
VESTIBULE	SC-1	VB-1	EXPOSED | PT-2	PT-1			
ARCADE	CPT-1	VB-1	EXPOSED | PT-2	PT-1			
STORAGE	EXISTING	VB-1	EXPOSED | PT-2	PT-1			
LAZER MAZE	CPT-1	VB-1	ACT-1	PT-3			
POS	CPT-1	VB-1	EXPOSED | PT-2	PT-1			
STORAGE	EXISTING	VB-1	EXPOSED | PT-2	PT-1			
BOWLING	CPT-1	VB-1	EXPOSED | PT-2	PT-1			
BOWLING MACHINE ROOM	SC-1	VB-1	EXPOSED | PT-2	PT-1			
PARTY ROOM 2	CPT-1	VB-1	EXPOSED | PT-2 \ GWB | PT-5	PT-4			
PARTY ROOM 1	CPT-1	VB-1	EXPOSED | PT-2 \ GWB | PT-5	PT-4			
18-HOLE GOLF COURSE	TURF	VB-1	EXPOSED | PT-2	PT-1			
OFFICE	VCT-1	VB-1	ACT-1	PT-1			
STORAGE	SC-1	VB-1	ACT-1	PT-1			
BREAK ROOM	VCT-1	VB-1	ACT-1	PT-1			
UTILITY	SC-1	VB-1	EXPOSED | PT-2	PT-1			
MENS	CT-1	CT-1	ACT-1	PT-3 | CT-1	CT-1	4' - 0"	
WOMENS	CT-1	CT-1	ACT-1	PT-3 | CT-1	CT-1	4' - 0"	



1 LEVEL 1_FINISH FLOOR PLAN
A8.00 1/8" = 1'-0"

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER

NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

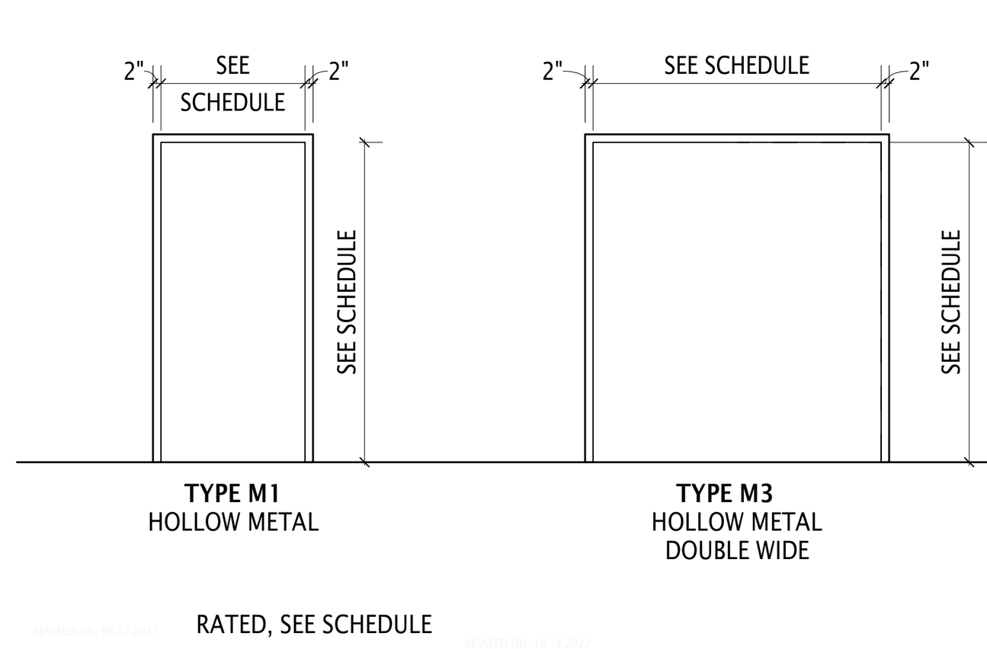
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

FINISH PLAN AND SCHEDULES

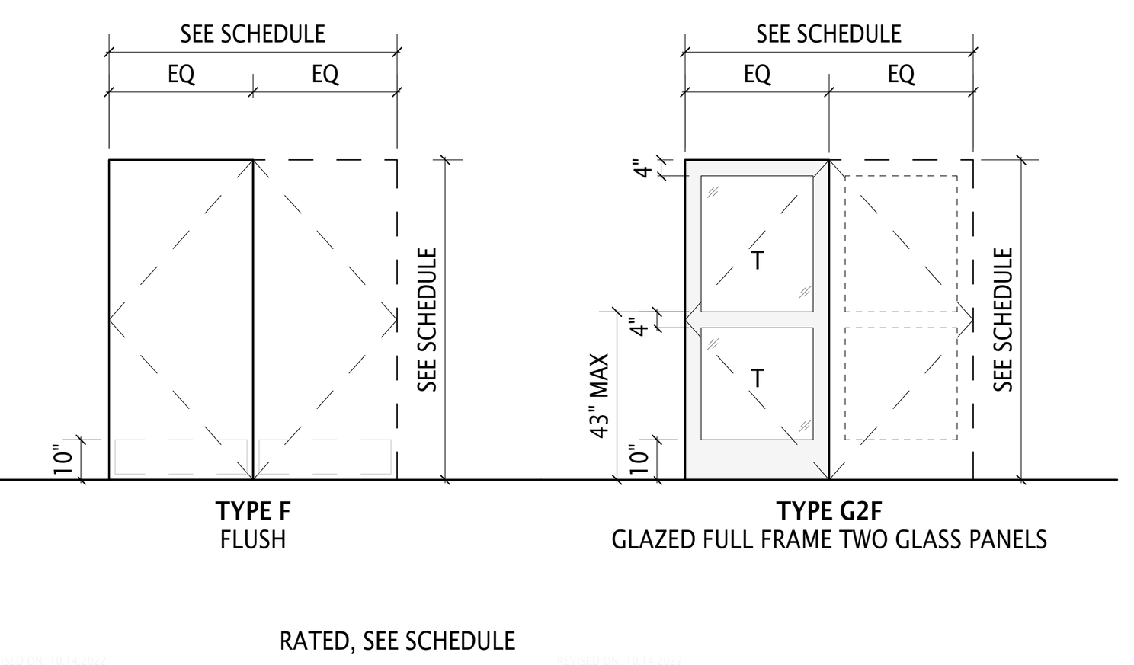
DATE: 09.25.2024
DRAWN BY: JW/MB/GK/LP
REVISIONS:

A8.00

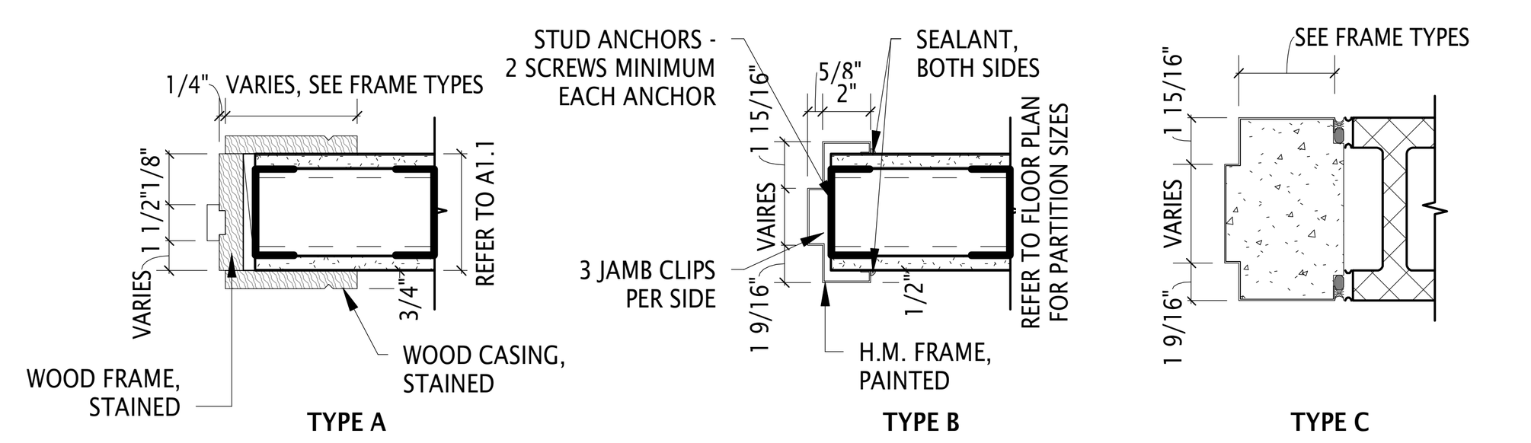
PERMIT COMMENTS RESPONSE



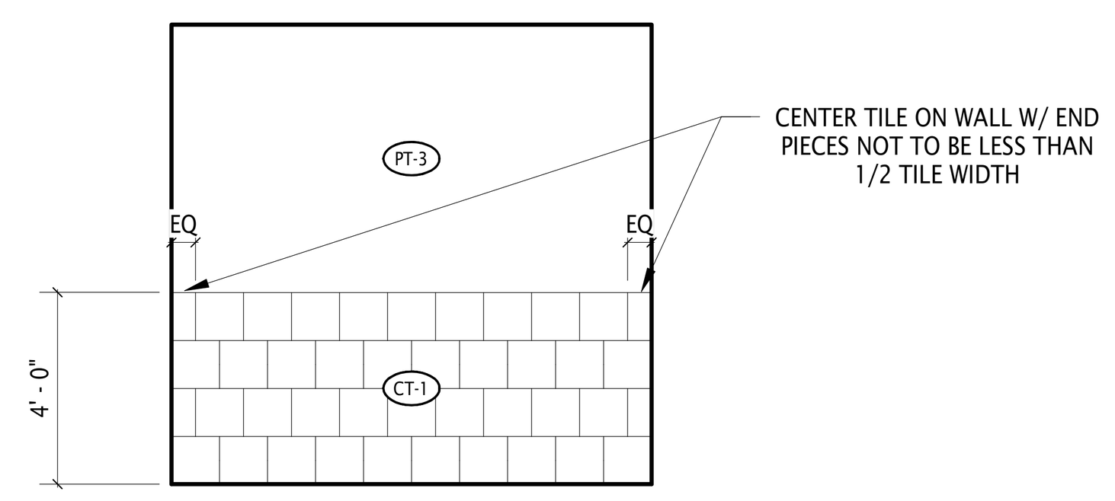
LEGEND - DOOR FRAME TYPES
1/4" = 1'-0"



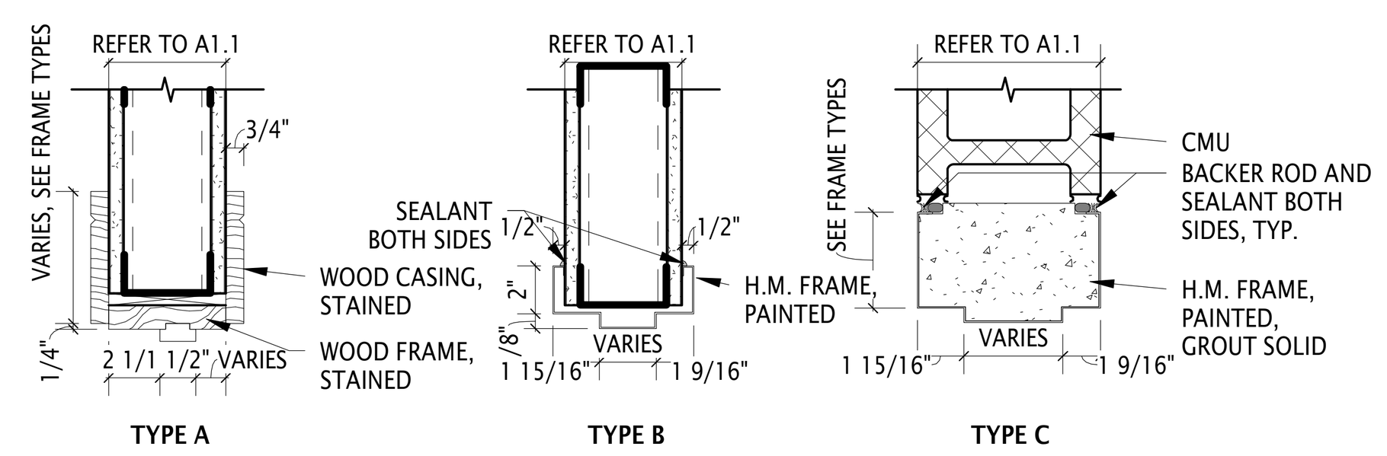
LEGEND - DOOR PANEL TYPES
1/4" = 1'-0"



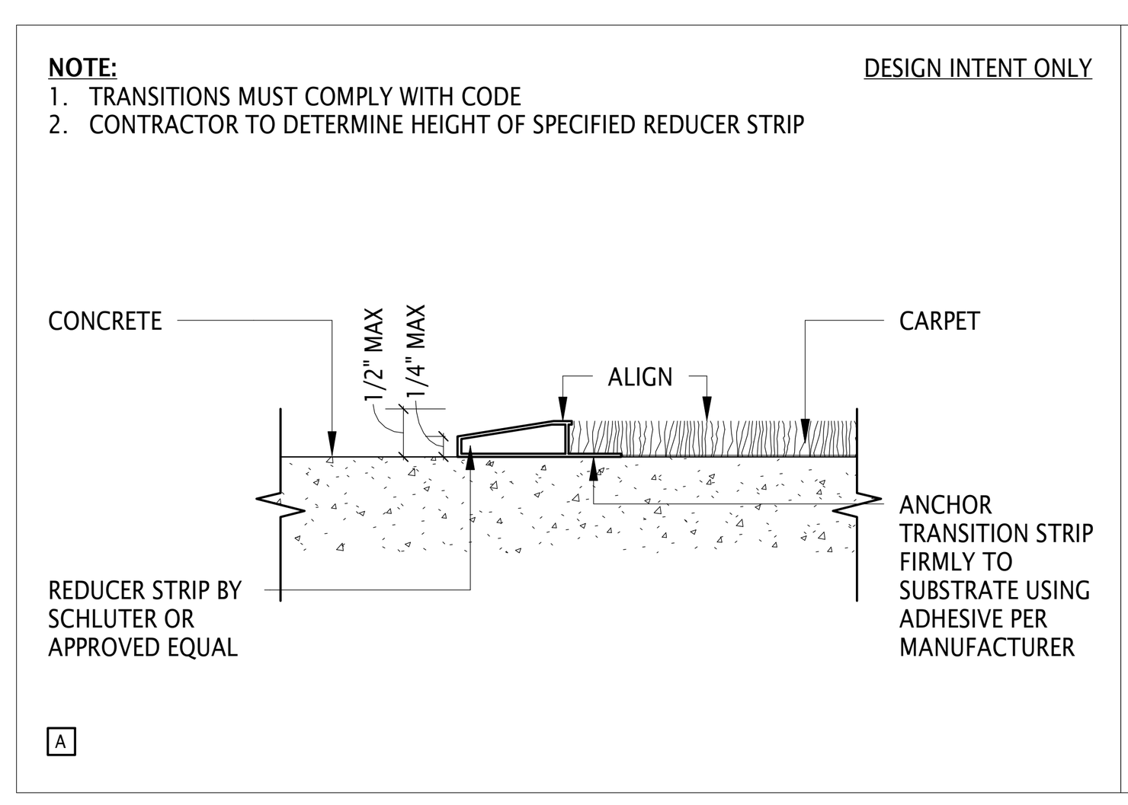
TYPICAL JAMB DETAILS
1 1/2" = 1'-0"



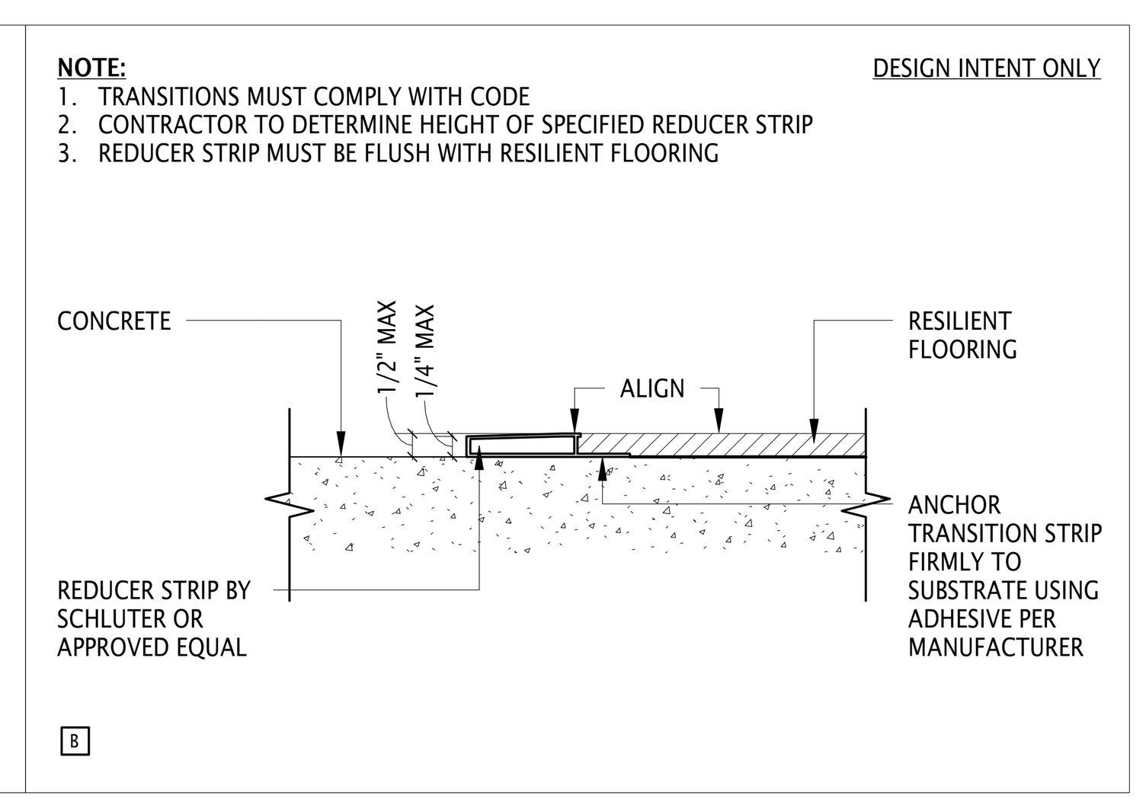
11
A8.10
TYPICAL BATHROOM FINISH ELEVATION
1/4" = 1'-0"



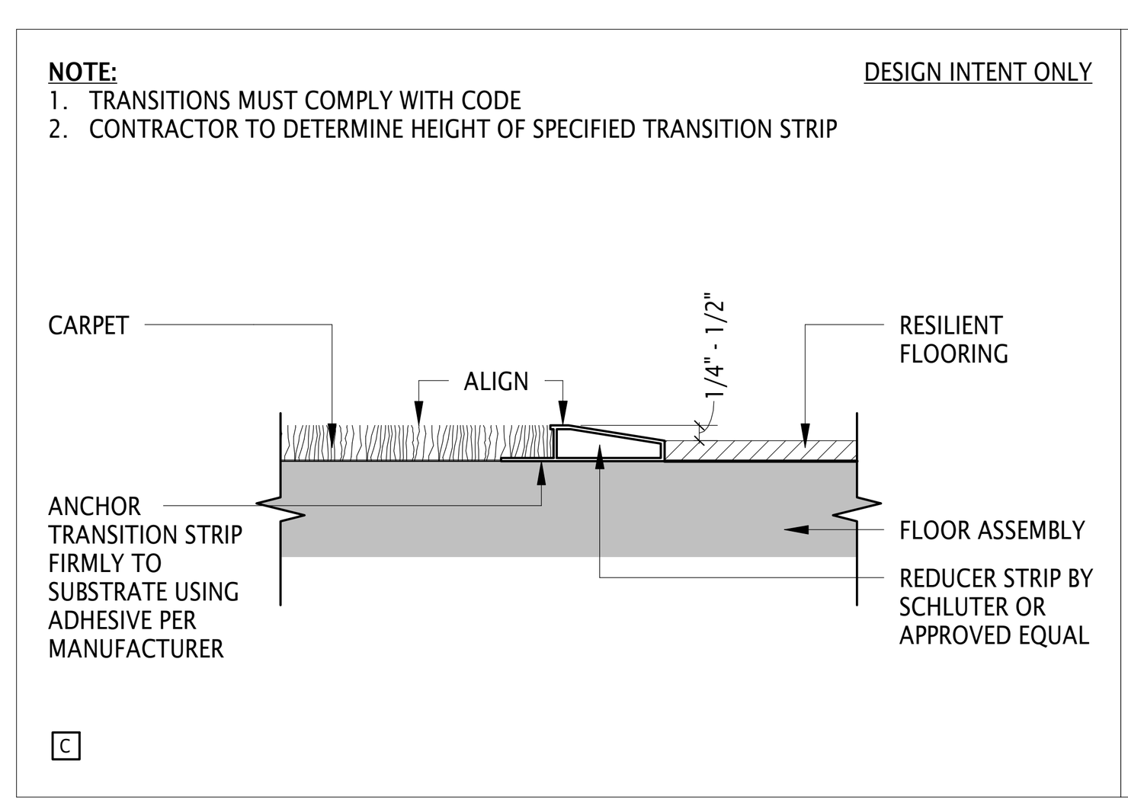
TYPICAL HEAD DETAILS
1 1/2" = 1'-0"



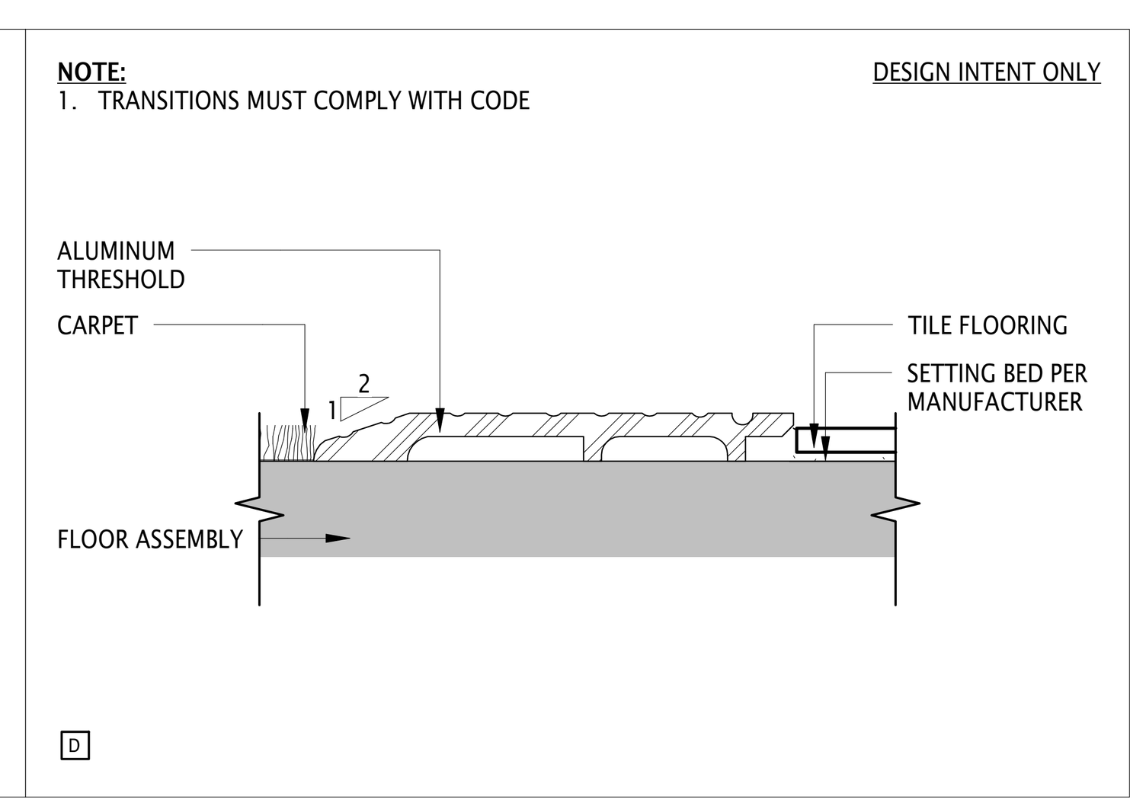
FLOOR TRANSITION - CARPET TO CONCRETE WITH REDUCER STRIP
6" = 1'-0"



FLOOR TRANSITION - RESILIENT FLOORING TO CONCRETE WITH REDUCER STRIP
6" = 1'-0"



FLOOR TRANSITION - RESILIENT FLOORING TO CARPET WITH TRANSITION STRIP
6" = 1'-0"



FLOOR TRANSITION - TILE TO CARPET WITH THRESHOLD
6" = 1'-0"

FINISH ABBREVIATIONS

ACP	ACOUSTIC PANEL CEILINGS
ACT	ACOUSTIC CEILING TILE
BR	BRICK
CONC	CONCRETE
CPT	CARPET
CT	TILE
CTB	TILE BASE
EPX	EPOXY PAINT
FRP	FIBERGLASS REINFORCED PANELS
FWC	FABRIC WALL COVERING
GLZ	GLAZING
HW	WOOD FLOORING
HWB	HARDWOOD BASE
HWM	HARDWOOD MILLWORK
LIN	LINOLEUM FLOORING
LM	LINEAR METAL CEILING
LVT	LUXURY VINYL TILE
PLM	LAMINATE
PT	PAINT
QT	QUARRY TILE
QTZ	QUARTZ SURFACE
RR	RAISED RUBBER FLOORING
SC	SEALED CONCRETE
SS	SOLID SURFACE
SSG	STAINLESS STEEL WALK OFF GRATE
ST	STONE
STB	STONE BASE
STH	STONE THRESHHOLD
STT	STONE TILE
TRZ	TERRAZZO FLOOR
TZB	TERRAZZO BASE
TZT	TERRAZO TILE
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VSF	VINYL SHEET FLOORING
VWC	VINYL WALL COVERING
WWC	WOOD WALL COVERING

HARDWARE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	PRODUCT	SIZE	COMMENTS
A	1 1/2 PAIR BUTT HINGES, ANSI 156.1, A8111	HAGER	BB1168		ANSI A5111 / BB1199 @ EXTERIOR
B	1 1/2 PAIR BUTT HINGES, ANSI 156.1, A8112	HAGER	BB1279		ANSI A5112 / BB1191 @ EXTERIOR
C	CLOSER, ANSI A156.4, GRADE 1	LCN	4000 SERIES		PARALLEL ARM
D	THREE-POINT DEADLOCK	ADAMS RITE	MS-1850S		
	EXIT INDICATOR		4089		
	THRESHOLD BOLT		4015		
	HEADER BOLT		4016		
	KEYED MORTISE CYLINDER, ANSI A156.5, GRADE 1, 5 PIN, W/ ESCUTCHEON PLATE		8650		KEYED BOTH SIDES (ONE DOOR ONLY)
E	STOREROOM LOCKSET, ANSI A156.2, GRADE 2		4000 SERIES		F86 FUNCTION
F	CLASSROOM LOCKSET, ANSI A156.2, GRADE 2		4000 SERIES		F84 FUNCTION
G	PRIVACY LOCKSET, ANSI A156.2, GRADE 2		4000 SERIES		F76 FUNCTION
H	CONCEALED VERTICAL ROD PUSH BAR DEVICE W/ LEVER PASSAGE FUNCTION TRIM	VON DUPRIN	98 SERIES		
I	CONCEALED VERTICAL ROD PUSH BAR DEVICE W/ LEVER ENTRY FUNCTION TRIM	VON DUPRIN	98 SERIES		
J	CONCEALED VERTICAL ROD PUSH BAR DEVICE W/ LEVER EXIT ONLY TRIM FUNCTION	VON DUPRIN	98 SERIES		
K	KEYED CYLINDER, ANSI A156.5, GRADE 1, 5 PIN, MORTISED CYLINDER WITH KEY OPERATION				
L	PUSH/PULL	KAWNEER	CP-11/CO-9		STAINLESS STEEL - US 32
M	THRESHOLD (MAX 1/2"H)				DOOR MANUFACTURER'S STANDARD WEATHERSTRIP PACKAGE AND BOTTOM SWEEP
N	THRESHOLD (MAX 1/2"H)				WEATHERSTRIP PACKAGE (JAMBS AND HEAD) AND BOTTOM SWEEP
O	WALL STOP, ANSI A156.16/BHMA L12101	GLYNN-JOHNSON	50C		
P	DOOR SILENCER, ANSI A156.16/BHMA L03011	IVES	SR64		
Q	KICKPLATE			16" X (DOOR SIZE MINUS 1")	PUSH SIDE OF RESTROOM DOOR & EXTERIOR OF EXIT...
R	MEN'S OR WOMEN'S ADA COMPLIANT RESTROOM SIGN				REFER TO PLAN
S	SIGN - "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED"				1" HIGH LETTERS ON A CONTRASTING BACKGROUND MOUNTED ABOVE DOOR.
T	TACTILE EXIT SIGN				MOUNTED ON WALL AT LATCH SIDE OF DOOR

HARDWARE NOTES

1. ALL HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON ACCESIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING TO OPERATE.
2. MAXIUM EFFORT TO OPERATE DOORS NOT TO EXCEED FIVE (5) POUNDS, PUSH & PULL
3. HARDWARE FOR PAIRS OF DOORS IS FOR EACH LEAF, UNLESS NOTED.
4. FIRE & SMOKE RATED DOOR ASSEMBLIES SHALL HAVE SMOKE GASKETS & SWEEP AS NECESSARY TO PASS UL 1784

FINISH SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	PRODUCT	SIZE	LOCATION	COMMENTS
BASES						
VB-1	VINYL BASE		STRAIGHT BLACK	4"	THROUGHOUT; UNO	
CEILINGS						
ACT-1	ACOUSTICAL TILE CEILING	BLDG STD SCORED	TEGULAR TILES W/ 15/16" SUSPENDED CEILING SYSTEM	2'X2'	SEE RCP	
FIBER-REINFORCED PANELS						
FRP-1	FIBER REINFORCED PANEL	CRANE COMPOSITES	GLASBORD; 085 WHITE	4'X8'	JANITOR CLOSET	10' AFF. BEHIND & ADJACENT SINK. EXTEND TO ADJ SIDES 4'-0"
FLOORING						
CPT-1	CARPET FLOORING	PATCRAFT	ORGANIC INTERRUPTION: 10662 COLOR REVEAL, 00900 VIOLET	17 OZ	SEE PLAN	CONTACT DAN KOZEK, ACCOUNT MANAGER FOR PRICING. 215.907.9631, 800.241.4014
EPX-1	EPOXY FLOORING					
CT-1	TILE FLOORING	DALTILE	PRIME: STAMINA GREY RL23	12 X 12	SEE PLAN	MATCHING BULLNOSE AT TOP OF WALL 48" AFF AND COVE BASE
LVT-1	LUXURY VINYL TILE FLOORING	PATCRAFT	1637V LONGITUDE, 00502 PEARL - V2, LONGITUDE COLLECTION	5.67" X 47.56"	SEE PLAN	BY TENANT
VCT-1	VINYL COMPOSITION TILE FLOORING	ARMSTRONG	SOFT WARM GRAY: 5C861	12 X 12	SEE PLAN	BY TENANT
SC-1	SEALED CONCRETE	PROSOCO	CONSOLIDECK LS DENSIFIER		BOWLING MACHINE ROOM STORAGE	OR OWNER APPROVED EQUAL
CPT-2	CARPET FLOORING	PATCRAFT	SUPPLIED BY OWNER'S VENDOR: TWISTED TOYBOX. GC TO EXCLUDE FROM PRICING.	30 OZ	GOLF COURSE	PROVIDED BY TENANT
GROUT						
GR-1	GROUT					
MILLWORK						
HWM-1	WOOD MILLWORK					
PAINT						
PT-1	PAINT		SATIN BLACK			
PT-2	PAINT		FLAT BLACK			
PT-3	PAINT		WHITE			
PT-4	PAINT	BEHR	ROSE CHINTZ SEMI-GLOSS; 140D-5		PARTY ROOM	
PT-5	PAINT	BEHR	MAYAN GOLD SEMI-GLOSS; 130D-7			
SURFACES						
PLM-1	PLASTIC LAMINATE SURFACE					
TILE						
CT-1	TILE	DALTILE	PRIME: STAMINA GREY RK23	12 X 12	SEE PLAN	MATCHING BULLNOSE AT TOP OF WALL 48" AFF AND COVE BASE
CT-2	TILE					

FINISH NOTES:

1. IN ALL AREAS WHERE CEILING IS EXPOSED TO DECK ABOVE: ALL ROOF DECK STRUCTURE IS TO BE PAINTED P-2 (BLACK). INCLUDING BUT NOT LIMITED TO, DUCTS, CONDUITS, PIPES BRACING, JOIST, BEAMS AND EXPOSED STUDS.
2. ALL FINAL FINISH SELECTIONS SHALL BE VERIFIED BY TENANT AND APPROVED BY LANDLORD PRIOR TO PURCHASE.

TOILET ACCESSORY SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	PRODUCT	SIZE	LOCATION	COMMENTS
TA-01	HAND DRYER					TENANT TO PROVIDE AND INSTALL
TA-02	TOILET PAPER HOLDER	BOBRICK	B-2890		REFER TO INTERIOR ELEVATION	SURFACE MOUNTED
TA-03	MIRROR	BOBRICK	B-1658 2436		40" AFF TO BOTTOM OF REFLECTIVE SURFACE	2'-0"X3'-0"X1/2" TEMPERED GLASS MIRROR
TA-04	SOAP DISPENSER					TENANT TO PROVIDE AND INSTALL
TA-05	HORIZONTAL GRAB BARS	BOBRICK	B-6806X36" B-6806X42"		36" AFF to C.L.	SATIN STAINLESS STEEL FINISH AND CONCEALED FASTENERS
TA-06	VERTICAL GRAB BARS	BOBRICK	B-6806X18"		60" AFF TO TOP	SATIN STAINLESS STEEL FINISH AND CONCEALED FASTENERS
TA-07	TOILET					REFER TO PLUMBING FIXTURE SCHEDULE
TA-08	URINAL					REFER TO PLUMBING FIXTURE SCHEDULE
TA-09	SINK					REFER TO PLUMBING FIXTURE SCHEDULE
TA-10	DRINKING FOUNTAIN	OASIS	PG8ACSL OR EQUAL		REFER TO INTERIOR ELEVATION	TENANT TO CONFIRM REFRIGERATION. IF YES, GC TO PROVIDE POWER.
TA-11	TOILET PARTITION	GLOBAL	VARIES			FLOOR MOUNTED, OVERHEAD BRACED, POWDER COATED, TENANT TO SELECT COLOR.
TA-12	PAPER TOWEL DISPENSER	BOBRICK	B-2620		40" AFF TO TOWEL	SURFACE MOUNTED
TA-13	BABY CHANGING STATION	KOALA KARE	KB300-01		34" AFF MAX	SURFACE MOUNTED

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP ENGINEER
NEARBY ENGINEERS
382 NE 191 ST. STE 49674
MIAMI, FL
914.257.3455

MMG - KELLER, TX

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

DETAILS AND SCHEDULES

DATE: 09.25.2024
DRAWN BY: Author
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

A8.10
PERMIT COMMENTS RESPONSE

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

MECHANICAL SYMBOLS LIST

AC−1 TXF-1	EQUIPMENT SYMBOL
◕	POINT OF NEW CONNECTION TO EXISTING

AIR DEVICES

⊠ ⊠	CEILING DIFFUSER SUPPLY
⧄ ⧄	CEILING DIFFUSER RETURN
⊠ ⊠	CEILING DIFFUSER EXHAUST
↑	SIDEWALL GRILLE–SUPPLY
↓	SIDEWALL GRILLE–RETURN

DUCT ACCESSORIES

VD VD	VOLUME DAMPER W/ ACCESS DOOR
●	FIRE DAMPER W/ ACCESS DOOR
M	MOTORIZED DAMPER W/ ACCESS DOOR
GD	BACKDRAFT DAMPER

CONTROLS AND SENSORS

Ⓣ	THERMOSTAT
Ⓗ	HUMIDISTAT
S	MANUAL ON/OFF SWITCH
S D	DUCT SMOKE DETECTOR
CO	CO DETECTOR
Ⓣ S	TEMPERATURE SENSOR

DUCTWORK

========	AIR DUCT W/ 1.5" ACOUSTICAL LINING
∿∿∿	FLEXIBLE DUCT
FC FC	FLEXIBLE CONNECTION
24X12	RECTANGULAR DUCT (WIDTH X DEPTH)
ø12	ROUND DUCT (DIAMETER)
◯	ROUND DUCT CROSS SECTION
⊠	SUPPLY AIR RECTANGULAR DUCT CROSS SECTION
⧄	RETURN AIR RECTANGULAR DUCT CROSS SECTION

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AL	ACOUSTIC LINING
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOE	BOTTOM OF EQUIPMENT
CDS	CEILING DIFFUSER SUPPLY
CDR	CEILING DIFFUSER RETURN
CFM	CUBIC FEET OF AIR PER MINUTE
EXF	EXHAUST FAN
DN	DOWN
EG	EXHAUST GRILLE
FC	FLEXIBLE CONNECTION
FD/AD	FIRE DAMPER W/ACCESS DOOR
MD	MOTORIZED DAMPER
RTU	ROOF TOP UNIT
RG	RETURN GRILLE
RA	RETURN AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SG	SUPPLY GRILLE
SA	SUPPLY AIR
VD	VOLUME DAMPER
BD	BACKDRAFT DAMPER
EF	EXHAUST FAN
WH	WALL HEATER

MECHANICAL DRAWING LIST

M0.1	MECHANICAL GENERAL NOTES, SYMBOLS LIST & ABBREVIATIONS
M0.2	MECHANICAL SPECIFICATIONS
M1.0	MECHANICAL FLOOR PLAN
M1.1	MECHANICAL ROOF PLAN
M5.0	MECHANICAL DETAILS
M6.0	MECHANICAL SCHEDULES

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

a. INTERNATIONAL BUILDING CODE 2021 WITH AMENDMENTS
b. INTERNATIONAL MECHANICAL CODE 2021 WITH AMENDMENTS
c. INTERNATIONAL PLUMBING CODE 2021 WITH AMENDMENTS
d. NATIONAL ELECTRICAL CODE 2020 WITH AMENDMENTS
e. INTERNATIONAL ENERGY CONSERVATION CODE 2018 WITH AMENDMENTS
f. INTERNATIONAL FUEL GAS CODE 2021 WITH AMENDMENTS

CITY OF KELLER
BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE 2018 INTERNATIONAL BUILDING CODE, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE / ACCA 183.
2. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2018 INTERNATIONAL MECHANICAL CODE,CHAPTER 4.
3. TESTS WILL BE CONDUCTED UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS. THE TESTS WILL SHOW COMPLIANCE WITH 2018 IMC REQUIREMENTS AS OUTLINES IN SECTION.
4. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
5. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2018 INTERNATIONAL MECHANICAL CODE:
   A. VENTILATION SYSTEM BALANCING 2018 INTERNATIONAL MECHANICAL CODE – 403.3
6. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. STANDARDS OF HEATING: 2018 IMC 309.1
   B. DUCT CONSTRUCTION AND INSTALLATION: 2018 IMC 603
   C. AIR INTAKES, EXHAUSTS AND RELIEF: 2018 IMC 401.5
   D. AIR FILTERS: 2018 IMC 605
7. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
8. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2018 INTERNATIONAL MECHANICAL CODE – 403.3
9. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
10. VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED METHOD. CONTRACTOR TO SUBMIT THE AIR – BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.
11. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE LICENSED DESIGN PROFESSIONAL, ELECTRICAL ENGINEER, MECHANICAL ENGINEER OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.
12. A COMMISSIONING PLAN SHALL BE DEVELOPED BY A LICENSED DESIGN PROFESSIONAL, MECHANICAL ENGINEER OR APPROVED AGENCY.
13. MECHANICAL SYSTEMS SHALL BE COMMISSIONED. FINAL COMMISSIONING REPORT SHALL BE DUE WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.

GENERAL NOTES

1. CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING A BID AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. BEFORE PROCEEDING WITH ANY WORK IN OCCUPIED OR USED AREAS, THE CONTRACTOR SHALL APPLY TO OWNER FOR PERMISSION TO ENTER SUCH AREAS. THE CONTRACTOR IS OBLIGED TO PERFORM HIS WORK ONLY AT THE TIMES DESIGNATED BY OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THE WORK PERFORMED AFTER HOURS OR ON OFF–DAYS WITHOUT PRIOR WRITTEN APPROVAL.
4. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
5. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
6. CONTRACTOR SHALL ASCERTAIN THE APPROPRIATE METHOD FOR BRINGING THE UNITS INTO AND THROUGH THE BUILDING TO POSITION UNIT IN LOCATION SHOWN ON THE PLANS. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTIVE SPACES. COORDINATE WITH BUILDING OWNER APPROPRIATE TIMES OF DAY SUCH EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
7. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
8. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
9. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
10. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.
11. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. MULTI–ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
12. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
10. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL (FIBERGLASS INSULATION IS NOT ACCEPTABLE).
11. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
12. ACCESS DOORS ARE REQUIRED FOR ALL BUILDING SERVICE VALVES THAT RUN THROUGH THE SPACE, AND ACCESS DOOR SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL. COORDINATE ALL LOCATIONS OF ACCESS DOORS WITH THE ARCHITECT.
13. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
14. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
15. UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
16. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
17. ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE
18. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST, OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FAILURE OF ANY DUCTWORK SYSTEM OR EQUIPMENT TO FUNCTION PROPERLY UPON COMPLETION OF HIS WORK UPON SAID SYSTEM OR EQUIPMENT.
21. SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.
22. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
23. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON–SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC) AND CONDITIONS.
24. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
25. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
26. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
27. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL APPLY.

DEFINITIONS:

1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

NOTE TO CONTRACTOR

1. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS, FLOOR PLAN(S) DESIGN, DETAIL DRAWINGS, NOTES, RFI'S, ETC. FOR THIS PROJECT. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
2. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
3. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

GENERAL HVAC NOTES

GENERAL:

1. PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
3. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
4. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.
5. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
6. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
7. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
8. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
9. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND ELECTRICAL DIVISION OF THE SPECIFICATION.
10. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
11. LOCATE ALL TEMPERATURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF PIPE OR DUCT UP– AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
12. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK OR PIPING, COORDINATE DUCTWORK AND PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO THE FABRICATION OF DUCTWORK, CUTTING OF PIPING, OR FABRICATION OF BEAMS.
13. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN THE DETAILS FOR DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
14. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION. ACCESS PANELS SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL.
15. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM A METAL DECK.
16. ALL EQUIPMENT, PIPING, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION–FREE INSTALLATION.
17. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C–CLAMPS SHALL NOT BE PERMITTED.
18. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
19. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL.
20. ALL CONDENSATE DRAIN LINES FROM EACH ROOF TOP UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH "P" TRAP, AND PIPED TO THE NEAREST DRAIN. SEE THE DETAILS SHOWN IN THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR THE DEPTH OF THE AIR CONDITIONING CONDENSATE TRAP.
21. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
22. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
23. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.

SCOPE OF WORK

1. RE–USE THE EXISTING #4 QTY OF RTU'S AS SHOWN ON THE PLAN.
2. INSTALL NEW INLINE EXHAUST FAN FOR TOILET EXHAUST SYSTEM.
3. INSTALL NEW CEILING HANGING FAN FOR MOP SINK EXHAUST SYSTEM.
4. ALL HVAC WORKS SHALL BE IN ACCORDANCE WITH THE DRAWING AND SPECIFICATION.

HVAC DUCTWORK – SHEET METAL

1. CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK,ACCESS DOORS, VOLUME DAMPERS, ETC., ARE INDICATED ON THE CONTRACT DOCUMENT DRAWINGS FOR CLARITY FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS.
2. CONTRACTOR TO CHECK AND CORRECT ANY AND ALL DEFICIENCIES IN EXISTING DUCTS. ALL NEW DUCTWORK WILL COMPLY WITH THE LATEST SMACNA GUIDELINES AND CONFORM WITH REQUIREMENTS OF THE LATEST HANDBOOKS PUBLISHED BY ASHRAE.
3. PROVIDE VOLUME DAMPER AT EACH TAP TO MAIN DUCT AND WHERE NECESSARY TO PROPERLY BALANCE SYSTEM.
4. SUPPLY AND RETURN DUCTWORK 20' FROM ALL HVAC UNITS SHALL BE LINED WITH 1.5" ACOUSTICAL LINING.
5. RE–INSULATE ALL DUCTWORK AND PIPING IN WHICH INSULATION HAS BEEN REMOVED OR DAMAGED WITH INSULATION EQUAL TO THE EXISTING INSULATION.
6. CONTRACTOR SHALL SUPPLY AND INSTALL ALL NECESSARY SUPPLY DIFFUSERS AND RETURN AIR REGISTERS WHERE INDICATED ON THE DRAWING. COORDINATE LOCATION OF DIFFUSERS AND REGISTERS WITH REFLECTED CEILING PLAN.
7. IN CORRIDORS WHERE CEILING SPEAKERS AND AIR DIFFUSERS ARE INDICATED BETWEEN THE SAME LIGHT FIXTURES, INSTALL BOTH DEVICES AT THE QUARTER POINTS BETWEEN THE FIXTURES.
8. UNLESS OTHERWISE SHOWN, LOCATE ALL ROOM THERMOSTATS 4'–0" (CENTER LINE) ABOVE THE FINISHED FLOOR. NOTIFY THE ENGINEER OF ANY ROOMS WHERE THE PRECEDING LOCATION CANNOT BE MAINTAINED OR WHERE THERE IS A QUESTION ON LOCATION.
9. ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.
10. ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS.
11. PROVIDE ALL 90–DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. ELBOWS IN DISHWASHER, KITCHEN, AND LAUNDRY EXHAUSTS SHALL BE OF UN–VANED SMOOTH RADIUS CONSTRUCTION WITH A RADIUS EQUAL TO 1–1/2 TIMES THE WIDTH OF THE DUCT. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
12. COORDINATE DIFFUSER, REGISTER, AND GRILL LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.
13. ALL AIR HANDLING UNITS SHALL OPERATE WITHOUT MOISTURE CARRYOVER.
14. LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
15. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS (SUPPLY, RETURN, AND EXHAUST) CONNECTED TO AIR HANDLING UNITS, FANS, AND OTHER EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE INDICATED.
16. UNLESS OTHERWISE NOTED, ALL DUCTWORK IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION IF NEEDED.
17. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5 FT.
18. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
19. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL SMOKE DETECTORS, FIRE DAMPERS, SMOKE DAMPERS, VOLUME DAMPERS, COILS, AND OTHER ITEMS LOCATED IN THE DUCTWORK THAT REQUIRE SERVICE AND/OR INSPECTION.
20. PROVIDE ACCESS DOORS IN DUCTWORK FOR THE OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, AND MECHANICAL EQUIPMENT.
21. ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS. GROUNDING STRAPS SHALL BE BOLTED OR SOLDERED TO BOTH THE EQUIPMENT AND THE DUCT.
22. SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING THE SMOKE DETECTOR IN DUCTWORK AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.
23. SEE SPECIFICATIONS FOR DUCTWORK GAUGES, BRACING, HANGERS, AND OTHER REQUIREMENTS.

100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL TOBIAS
139383
LICENSED
PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

MECHANICAL GENERAL NOTES, SYMBOLS LIST & ABBREVIATIONS

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

M0.1

ISSUED FOR PERMIT

SECTION 0101 – QUALITY OF WORK

1.1 WORKMANSHIP

A. ALL WORK SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

B. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT OR BUILDING MANAGER AT NO ADDITIONAL COST TO THE OWNER.

C. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE SITE, ALL TOOLS, DEMOLISHED APPLIANCES AND ANY SURPLUS MATERIAL.

1.2 CODE COMPLIANCE

A. ALL WORK SHALL MEET ALL STATE AND LOCAL CODES HAVING JURISDICTION.

END OF SECTION 0101

SECTION 0102 –REQUIRED DOCUMENTS

1.1 SHOP DRAWINGS

A. A SET OF PRINTS FOR ANY MECHANICAL WORK INCLUDING BUT NOT LIMITED TO, DUCTWORK AND PIPING LAYOUT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO CONSTRUCTION OR PURCHASE OF MATERIALS.

1.2 SUBMITTALS

A. EQUIPMENT SUBMITTALS OF ALL PROPOSED MECHANICAL AND ANCILLARY EQUIPMENT INCLUDING ALL ACCESSORIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PERTINENT MODELS, SIZES, ACCESSORIES AND CHOICES SHALL BE CLEARLY CHECKED, PRINTED OR OTHERWISE INDICATED ON THE SUBMITTALS.

1.3 RECORD DRAWINGS

A. UPON COMPLETION OF THE WORK, A RECORD DRAWING SHALL BE SUBMITTED TO THE OWNER DEPICTING ALL SUBSEQUENT CHANGES, ADDITIONS AND OR CORRECTIONS TO THE CONTRACT DRAWINGS AND OR CONTRACT SCOPE MADE DURING CONSTRUCTION. THIS DRAWING SHALL REPRESENT A COMPLETE RECORD OF THE WORK INSTALLED.

1.4 EQUIPMENT OPERATING INSTRUCTIONS

A. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS,EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8–1/2 IN. X 11 IN. PAPER AND BOUND IN THREE–RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE ELECTRONIC COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.

END OF SECTION 0102

SECTION 230517 – SLEEVES AND SLEEVE SEALS FOR HVAC PIPING

1.1 SLEEVE–SEAL SYSTEMS

A. FIELD–ASSEMBLED, MODULAR SEALING–ELEMENT UNIT FOR FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVE.

1. SEALING ELEMENTS: EPDM RUBBER OR NBR.
2. PRESSURE PLATES: CARBON STEEL, PLASTIC, STAINLESS STEEL.
3. CONNECTING BOLTS AND NUTS: CARBON STEEL WITH CORROSION–RESISTANT COATING, STAINLESS STEEL.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. ADVANCE PRODUCTS & SYSTEMS, INC.
2. CALPICO, INC.
3. METRAFLEX COMPANY (THE).
4. PIPELINE SEAL AND INSULATOR, INC.

1.2 SLEEVE–SEAL FITTINGS

A. MANUFACTURED PLASTIC, SLEEVE–TYPE, PLASTIC OR RUBBER WATER–STOP ASSEMBLY MADE FOR IMBEDDING IN CONCRETE SLAB OR WALL.

1.3 GROUT

A. NON–SHRINK, FACTORY PACKAGED.

1.4 SLEEVE AND SLEEVE–SEAL SCHEDULE

A. USE SLEEVES AND SLEEVE SEALS FOR THE FOLLOWING PIPING–PENETRATION APPLICATIONS:

1. INTERIOR PARTITIONS:
   a. PIPING SMALLER THAN NPS 6 (DN 150): GALVANIZED–STEEL–PIPE SLEEVES, PVC–PIPE SLEEVES.
   b. PIPING NPS 6 (DN 150) AND LARGER: GALVANIZED–STEEL–SHEET SLEEVES.

END OF SECTION 230517

SECTION 230518 – ESCUTCHEONS FOR HVAC PIPING

PART 2 – PRODUCTS

2.1 ESCUTCHEONS

A. ONE–PIECE, CAST–BRASS TYPE: WITH POLISHED, CHROME–PLATED AND ROUGH–BRASS FINISH AND SETSCREW FASTENER.

2.2 FLOOR PLATES

A. ONE–PIECE FLOOR PLATES: CAST–IRON FLANGE WITH HOLES FOR FASTENERS.

PART 3 – EXECUTION

3.1 INSTALLATION

A. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FINISHED FLOORS.

B. INSTALL ESCUTCHEONS WITH ID TO CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF PIPING AND WITH OD THAT COMPLETELY COVERS OPENING.

1. ESCUTCHEONS FOR NEW PIPING:
   a. PIPING WITH FITTING OR SLEEVE PROTRUDING FROM WALL: ONE–PIECE, DEEP–PATTERN TYPE.
   b. INSULATED PIPING: ONE–PIECE, STAMPED–STEEL TYPE.
   c. BARE PIPING AT WALL AND FLOOR PENETRATIONS IN FINISHED SPACES: ONE–PIECE, CAST–BRASS TYPE WITH POLISHED, CHROME–PLATED FINISH OR STAMPED–STEEL TYPE.
   d. BARE PIPING AT CEILING PENETRATIONS IN FINISHED SPACES: ONE–PIECE, CAST–BRASS TYPE WITH POLISHED, CHROME–PLATED FINISH OR STAMPED–STEEL TYPE.

3.2 FIELD QUALITY CONTROL

A. REPLACE BROKEN AND DAMAGED ESCUTCHEONS AND FLOOR PLATES USING NEW MATERIALS.

END OF SECTION 230518

SECTION 230529 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

1.1 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: DESIGN TRAPEZE PIPE HANGERS AND EQUIPMENT SUPPORTS, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

B. STRUCTURAL PERFORMANCE: HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7.

1. DESIGN SUPPORTS FOR MULTIPLE PIPES CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, SYSTEM CONTENTS, AND TEST WATER.

DESIGN EQUIPMENT SUPPORTS CAPABLE OF SUPPORTING COMBINED OPERATING WEIGHT OF SUPPORTED EQUIPMENT AND CONNECTED SYSTEMS AND 3.DESIGN SEISMIC–RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

1.2 SUBMITTALS

A. SHOP DRAWINGS: SIGNED AND SEALED BY A PROFESSIONAL ENGINEER

1.3 QUALITY ASSURANCE

A. AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE – STEEL."

1.4 COMPONENTS

A. METAL PIPE HANGERS AND SUPPORTS: CARBON OR STAINLESS STEEL

B. FIBERGLASS PIPE HANGERS: –CLEVIS, CENTURY COMPOSITES, COOPER B–LINE

D. METAL FRAMING SYSTEMS: MFMA MANUFACTURER

E. FIBERGLASS STRUT SYSTEMS: COOPER B–LINE

F. THERMAL–HANGER SHIELD INSERTS:

G. FASTENER SYSTEMS: POWDER–ACTUATED FASTENERS OR MECHANICAL–EXPANSION ANCHORS

H. PIPE STANDS: COMPACT, LOW TYPE, SINGLE PIPE, HIGH TYPE, SINGLE PIPE, HIGH TYPE, MULTIPLE PIPES, CURB–MOUNTED TYPE

I. EQUIPMENT SUPPORTS.

END OF SECTION 230529

SECTION 230548 – VIBRATION CONTROLS FOR HVAC PIPING AND EQUIPMENT

PART 1 – GENERAL

1.1 COMPONENTS

A. VIBRATION ISOLATORS:

1. ISOLATOR PADS: NEOPRENE, RUBBER, HERMETICALLY AND/OR SEALED COMPRESSED FIBERGLASS
2. MOUNTS: DOUBLE–DEFLECTION TYPE.
3. RESTRAINED MOUNTS: ALL DIRECTIONAL MOUNTINGS WITH SEISMIC RESTRAINT; CAST–DUCTILE–IRON HOUSING.
4. SPRING ISOLATORS: FREESTANDING, LATERALLY STABLE, OPEN–SPRING TYPE.
5. RESTRAINED SPRING ISOLATORS: FREESTANDING, STEEL, OPEN–SPRING TYPE WITH SEISMIC RESTRAINT.
6. HOUSED SPRING MOUNTS: DUCTILE–IRON OR STEEL HOUSING, WITH INTEGRAL, VERTICALLY ADJUSTABLE SEISMIC SNUBBERS.
7. ELASTOMERIC HANGERS: DOUBLE–DEFLECTION TYPE.
8. SPRING HANGERS: COMBINATION COIL–SPRING AND ELASTOMERIC–INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION.
9. SPRING HANGERS WITH VERTICAL–LIMIT STOP: COMBINATION COIL–SPRING AND ELASTOMERIC–INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION AND WITH VERTICAL–LIMIT STOP.
10. PIPE RISER RESILIENT SUPPORT: ALL–DIRECTIONAL, ACOUSTICAL PIPE ANCHOR.
11. RESILIENT PIPE GUIDES.

B. AIR–MOUNTING SYSTEMS:

1. AIR MOUNTS: FREESTANDING, SINGLE OR MULTIPLE, COMPRESSED–AIR BELLOWS.
2. RESTRAINED AIR MOUNTS: HOUSED COMPRESSED–AIR BELLOWS.

C. RESTRAINED VIBRATION ISOLATION ROOF–CURB RAILS: FACTORY–ASSEMBLED, FULLY ENCLOSED, INSULATED, AIR– AND WATERTIGHT CURB RAIL; WITH SPRING ISOLATORS MOUNTED ON ELASTOMERIC ISOLATION PADS, AND SNUBBER BUSHINGS.

D. VIBRATION ISOLATION EQUIPMENT BASES:

1. STEEL BASE: FACTORY–FABRICATED, WELDED, STRUCTURAL–STEEL BASES AND RAILS.
2. INERTIA BASE: FACTORY–FABRICATED, WELDED, STRUCTURAL–STEEL BASES AND RAILS READY FOR FIELD–APPLIED, CAST–IN–PLACE CONCRETE

.

1.2 FIELD QUALITY CONTROL

A. TESTING: BY EITHER: OWNER–ENGAGED AGENCY, CONTRACTOR–ENGAGED AGENCY, OR CONTRACTOR.

PART–2 PRODUCTS

1.1 VIBRATION ISOLATORS & SEISMIC–RESTRAINT DEVICES

A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. ACE MOUNTINGS CO., INC.
2. AMBER/BOOTH COMPANY, INC.
3. CALIFORNIA DYNAMICS CORPORATION.
4. HILTI, INC.
5. ISOLATION TECHNOLOGY, INC.
6. KINETICS NOISE CONTROL.
7. LOOS & CO.; CABLEWARE DIVISION.
8. MASON INDUSTRIES.
9. TOLCO INCORPORATED; A BRAND OF NIBCO INC.
10. UNISTRUT; TYCO INTERNATIONAL, LTD.

END OF SECTION 230548

SECTION 230593 – TESTING, ADJUSTING, AND BALANCING FOR HVAC

1.1 SUMMARY

A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:

1. AIR SYSTEMS: CONSTANT AND VARIABLE VOLUME SYSTEMS.
2. MOTORS.

1.2 QUALITY ASSURANCE

A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.

1.3 EXECUTION

A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO NEW WORK PRIOR TO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

C. THE REPORT SHALL INDICATE A SCHEMATIC DIAGRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.

D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.

E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

F. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS S3ECTION WITH THE BUILDING MANAGER. BALANCING WORK SHALL NOT CONFLICT WITH OTHER WORK SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIED TIME.

G. ALL INSTRUMENTS USED FOR TAB SHALL BE MAINTAINED IN GOOD WORKING CONDITION AND ACCURATELY CALIBRATED.

H. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN VALUES.

I. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCHITECT TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.

J. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.

END OF SECTION 230593

SECTION 230713 – DUCT INSULATION

1.1 QUALITY ASSURANCE

SURFACE–BURNING CHARACTERISTICS: ALL INSULATION SHALL HAVE COMPOSITE (INSULATION JACKET OR FACING AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) A FLAME–SPREAD INDEX OF 25, AND SMOKE–DEVELOPED INDEX OF 50 FOR INSULATION INSTALLED INDOOR, 75, AND SMOKE–DEVELOPED INDEX OF 150 FOR INSULATION INSTALLED OUTDOORS; ACCORDING TO ASTME 84.

1.2 FIELD QUALITY CONTROL

A. FIELD INSPECTIONS: BY OWNER–ENGAGED AGENCY.

1.3 INDOOR DUCT AND PLENUM INSULATION SCHEDULE;

A. CONCEALED, RECTANGULAR, ROUND AND FLAT–OVAL, SUPPLY–RETURN, OUTDOOR–AND EXHAUST–AIR DUCT AND AIR PLENUM INSULATION:

B. FLEXIBLE ELASTOMERIC, MINERAL–FIBER BLANKET,

MINERAL–FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:
UNCONDITIONED SPACES WITHIN BUILDING: R–6
WITHIN BUILDING ENVELOPE ASSEMBLY: R–8
OUTSIDE OF BUILDING: R–8

1.4 ITEMS NOT INSULATED:

1. FIBROUS–GLASS DUCTS.
2. METAL DUCTS WITH DUCT LINER OR SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE ANDASHRAE/IESNA 90.1.
3. FACTORY–INSULATED FLEXIBLE DUCTS.
4. FACTORY–INSULATED PLENUMS AND CASINGS.
5. FLEXIBLE CONNECTORS.
6. VIBRATION–CONTROL DEVICES.
7. FACTORY–INSULATED ACCESS PANELS AND DOORS.
8. DUCTS THAT HAVE INTERNAL ACOUSTICAL LINING.

1.5 PRODUCTS

A. THE FOLLOWING INSULATION MANUFACTURERS WILL BE ACCEPTABLE:

1. JOHNS–MANVILLE
2. OWENS–CORNING

1.6 ACOUSTICAL TREATMENT

1. WHERE SHOWN ON THE DRAWINGS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1.5" THICK R–6 AS MANUFACTURED BY DUCTMATE, 1–1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER. LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED,

END OF SECTION 230713

SECTION 233113 – METAL DUCTS

1.1 CONSTRUCTION

A. EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC SMACNA DUCT PRESSURE CLASSIFICATIONS SHOWN ON THE CONTRACT DRAWINGS. WHERE NO PRESSURE CLASSES ARE SPECIFIED BY THE DESIGNER, THE SMACNA 2–1/2 INCH WG PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THESE STANDARDS, REGARDLESS OF THE VELOCITY IN THE DUCT.

B. ALL DUCTWORK SHALL BE CONSTRUCTED TO SMACNA 2" WG DESIGN AND NOT LESS THAN THE FOLLOWING STANDARDS:

1. DUCTWORK SHALL BE TRANSVERSELY JOINTED BY CONNECTING SEAMS OF COMPANION ANGLES, FORMED FROM 1–1/2"X1–1/2"X1/8" GALVANIZED ANGLES, TACK–WELDED OR RIVETED TO THE DUCT. THE ANGLE FRAME SHALL BE CONTINUOUSLY FLANGED UP INTO UPRIGHT OF ANGLE AND EACH CORNER SHALL BE FILLED IN AND GROUND SMOOTH. JOINTS SHALL BE GASKETED WITH 1/8" THICK REINFORCED GASKET, OVERLAPPED AT CORNERS, GASKET SIMILAR TO 3M–1202 OR APPROVED EQUAL.
2. RECTANGULAR FITTINGS AND ALL TRANSITION PIECES FROM RECTANGULAR TO ROUND SHALL BE NO. 16 GAUGE ALL WELDED CONSTRUCTION.
3. HORIZONTAL DUCTS SHALL BE SUPPORTED ON NOT MORE THAN 6' CENTERS. VERTICAL RISERS SHALL BE SUPPORTED AT EACH FLOOR.
4. LONGITUDINAL SEAMS FOR RECTANGULAR DUCTWORK SHALL BE PITTSBURGH LOCK SEAMS WITH SEALING COMPOUND, EQUAL TO BENJAMIN FOSTER NO. 30–03 INSERTED INTO SEAM. ALL SEAMS SHALL BE BRUSHED WITH NO. 30–02 AND COVERED WITH APPROVED SEALING TAPE.
5. RECTANGULAR DUCTWORK 18 GAUGE AND HEAVIER, FILLER RODS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR IRON AND STEEL GAS WELDING RODS, ASTM 215; AWG A5.2.
6. ALL FITTINGS SUCH AS ELBOWS, TEES, ETC., SHALL BE NO. 20 GAUGE ZINC COATED STEEL. ELBOWS SHALL BE OF FIVE (5) PIECE WELDED AIRTIGHT CONSTRUCTION.

C. WHERE LATEST EDITION OF SMACNA DOES NOT CLEARLY STATE GAUGES AND/OR STIFFENERS TO BE USED OR, WHERE SMACNA STANDARDS REQUIRE INTERPRETATION, THE FOLLOWING MINIMUM METAL GAUGES AND BRACING SHALL BE USED:

USG	MAX. SIDE INCHES	TRANSVERSE JOINTS AND BRACING
22	UP TO 12	S SLIP, DRIVE SLIP, ONE INCH POCKET LOCK ON 8 FOOT CENTERS
22	13 TO 24	1"X1"X1/8" ANGLES ON 4 FOOT CENTERS
20	25 TO 35	1"X1"X1/8" ANGLES ON 2 FOOT CENTERS

D. PROVIDE TAPPING IN DUCTS FOR THERMOMETERS WHERE SPECIFIED. IN ADDITION, PROVIDE AN AIRTIGHT PLUGGED TAPPING LOCATED AS FOLLOWS:

1. UPSTREAM OF EACH REHEAT COIL AND VAV BOX.
2. DOWNSTREAM OF EACH REHEAT COIL AND VAV BOX.

E. FLAT OVAL OR ROUND DUCTWORK MAY BE PROVIDED IN LIEU RECTANGULAR DUCTWORK WITH THE REINFORCEMENT FOR FLAT SIDES SAME AS SPECIFIED FOR THE RECTANGULAR DUCTWORK, AND AS PER SMACNA FLAT OVAL DUCT CONSTRUCTION STANDARDS SHOWN IN FIG. 3–6 AND AS SHOWN IN FIG. 3–1 AND 3–2 FOR ROUND DUCTWORK.

F. ALL DUCTWORK SHALL BE SEALED TO CLASS "A" AND LEAK TESTED TO MEAT SMACNA CLASS 6 FOR RECTANGULAR AND CLASS 3 FOR ROUND DUCTS.

1.2 MATERIALS

A. SINGLE–WALL RECTANGULAR DUCTS AND FITTINGS.

B. SINGLE–WALL ROUND AND FLAT–OVAL DUCTS AND FITTINGS.

C. SHEET METAL MATERIALS:

1. GALVANIZED SHEET STEEL.
2. STAINLESS–STEEL SHEETS.
3. ALUMINUM SHEETS.
4. FACTORY–APPLIED ANTI–MICROBIAL COATING.

D. DUCT LINER:

1. FIBROUS GLASS, TYPE I, FLEXIBLE.
   a. WITH ANTI–MICROBIAL EROSION–RESISTANT COATING.
2. FLEXIBLE ELASTOMERIC.
3. NATURAL FIBER.

E. SEALANT MATERIALS:

1. TWO–PART TAPE SEALING SYSTEM.
2. WATER–BASED JOINT AND SEAM SEALANT.
3. SOLVENT–BASED JOINT AND SEAM SEALANT.
4. FLANGED JOINT SEALANT.
5. FLANGE GASKETS.
6. ROUND DUCT JOINT O–RING SEALS.

1.3 DUCT CLEANING

A. CLEAN EXISTING DUCT SYSTEM(S) BEFORE TESTING, ADJUSTING, AND BALANCING.

B. CLEAN THE FOLLOWING ITEMS:

1. AIR OUTLETS AND INLETS.
2. SUPPLY, RETURN, AND EXHAUST FANS.
3. AIR–HANDLING UNITS.
4. COILS AND RELATED COMPONENTS.
5. RETURN–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
6. SUPPLY–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
7. DEDICATED EXHAUST AND VENTILATION COMPONENTS AND MAKEUP AIR SYSTEMS.

1.4 DUCT SCHEDULE

A. ALL DUCTS SHALL BE GALVANIZED STEEL EXCEPT AS FOLLOWS:

8. MOIST ENVIRONMENT DUCT MATERIAL: ALUMINUM.

END OF SECTION 233113

SECTION 233713 – DIFFUSERS, REGISTERS, AND GRILLES

1.1 PRODUCTS

A. DIFFUSERS, REGISTERS AND GRILLES SHALL BE FURNISHED AND INSTALLED FOR CAPACITIES AND IN LOCATIONS INDICATED ON DRAWINGS. ALL REGISTERS AND DIFFUSERS SHALL BE PRIME COATED STEEL OR EXTRUDED ALUMINUM FINISHED UNLESS OTHERWISE NOTED IN BAKED WHITE ENAMEL.

B. MANUFACTURERS: TITUS

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING:

a. CARNES.
b. HART & COOLEY INC.
c. KRUEGER.
d. METALAIRE, INC.
e. NAILOR INDUSTRIES INC.
f. RUSKIN

C. ALL DIFFUSERS SHALL HAVE CONTROLLING/EQUALIZING GRID AND OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

D. ALL DUCTED RETURN REGISTERS SHALL HAVE AN OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

END OF SECTION 233713

THERMOSTATIC CONTROLS:

C403.4.1 THERMOSTATIC CONTROLS

THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, AT LEAST ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES OR GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED:

1. THE PERIMETER SYSTEM INCLUDES AT LEAST ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN +/– 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15.240 MM); AND
2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY A THERMOSTAT(S) LOCATED WITHIN THE ZONE(S) SERVED BY THE SYSTEM.

C403.4.1.2 DEADBAND (MANDATORY)

WHERE USED TO CONTROL HEATING AND COOLING, ZONE THERMOSTATIC CONTROL SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEBAND OF NOT LESS THAN 5° (2.8° C) WITHIN WHICH THE SUPPLY OF HEATIING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO AMINIMUM.

EXCEPTION:

1. THERMOSTATE REQUIRING MANUAL CHANGEOVER BETWEEN CCOLING AND HEATING MODE.
2. OCCUPANIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY HE CODE OFFICAL.

C 403.4.1.3 SET POINT OVERLAP RESTRICTION

WHERE A ZONE HAS A SEPRATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SAHLL BE CONFIGURED TO PREVENT THE HRATING SETPOINT FROM EXCEEDING THE COOLING SET POINT AND TO MAINTAIN A DEBAND.

C403.4.2 OFF–HOUR CONTROLS

EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

EXCEPTIONS:

1. ZONES THAT WILL BE OPERATED CONTINUOUSLY.
2. ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A READILY ACCESSIBLE MANUAL SHUTOFF SWITCH.

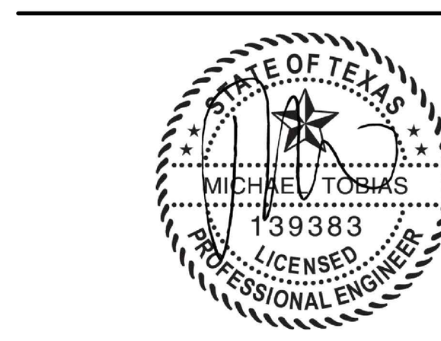
C403.4.2.1 THERMOSTATIC SETBACK

THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATES THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN

AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM



09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

MECHANICAL SPECIFICATION

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

M0.2

ISSUED FOR PERMIT

MECHANICAL FLOOR PLAN KEY NOTES

1. INSTALL A NEW T-STAT AND PLACE IT IN THE OFFICE. MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION WITH ARCHITECT/OWNER. INSTALL AND WIRE NEW 7-DAY PROGRAMMABLE THERMOSTATE WITH RESPECTIVE RTU. PROVIDE INSULATION AT THE BACK.
2. APPROXIMATE LOCATION OF EXISTING DUCTWORK DROPS FOR RTU. CONTRACTOR TO VERIFY EXACT SIZE AND LOCATION IN FIELD PRIOR TO BID. MODIFY/EXTEND AS REQUIRED IN PREPARATION FOR NEW DUCTWORK SYSTEM.
3. CONTRACTOR SHALL CLEAN AND REFURBISH EXISTING SMOKE DETECTOR TO "LIKE NEW" CONDITION. ENSURE SMOKE DETECTOR IS IN GOOD WORKING CONDITION, REPLACE IT IF NECESSARY.
4. EXTEND FULL SIZE SUPPLY & RETURN DUCTWORK FROM ROOFTOP UNITS TO SPACE. EXTEND AS SHOWN. ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY & RETURN MAIN DUCTS.
5. 10x10 EXHAUST DUCT THRU ROOF UP TO THE EF-1.
6. EXISTING DUCTWORK TO BE RE-USED WHEREVER POSSIBLE PER PLAN. CONTRACTOR SHALL CLEAN AND REFURBISH TO "LIKE" NEW CONDITION. SUPLY DIFFUSER TO BE FIXED ON EXISTING DUCT WITH NECESSARY TRANSITION.VERIFY EXACT LOCATION AND SIZE IN FIELD PRIOR TO BID.
7. EXISTING SUPPLY/RETURN DIFFUSER, REGISTER TO BE RE-USED OR RELOCATED AS SHOWN ON THE PLAN AND CLEAN THE DIFFUSER BEFORE USING. CONTRACTOR TO PROVIDE NEW SUPPLY GRILLES AT LOCATION SHOWN. CONTRACTOR SHALL BALANCE CFM'S INDICATED OF ALL NEW & EXISTING SUPPLY DIFFUSER TO BE MAXIMUM CAPACITY OF THE EXISTING RTU TO ACHIEVE FULL PERFORMANCE AND FUCTION OF THE UNIT. PROVIDE VOLUME DAMPER AND VERIFY CFM, DUCT SIZE, LOCATION IN FIELD PRIOR TO BID.

LEGENDS:

NEW DUCT SYSTEM

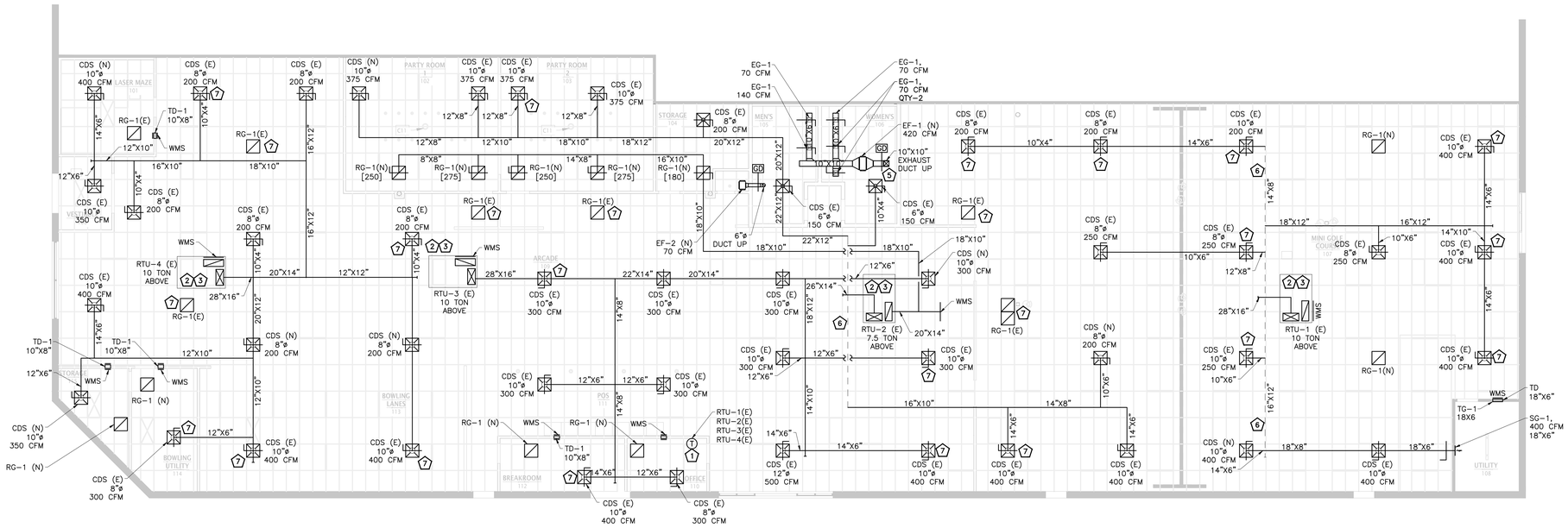
EXISTING DUCT SYSTEM

GENERAL FLOOR PLAN NOTES:

1. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.
4. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL TRADES PRIOR TO INSTALLATION.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THE MECHANICAL DRAWINGS UNLESS OTHERWISE NOTED. ALL EQUIPMENT SHALL BE UL LISTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND / OR INSTALLATION.
6. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
7. ALL METAL DUCT AND AIR DISTRIBUTION DEVICES SHALL BE INSULATED WITH R-6, 75 DENSITY FOIL-BACKED INSULATION WITH FIRE AND SMOKE RATING 25-50.
8. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED, SEALED, AND INSULATED PER THE LATEST ISSUE OF SMACNA LOW-VELOCITY DUCT MANUAL.
9. THE CONTRACTOR SHALL COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.
10. THE CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING TEMPERATURE CONTROLS, ROOF TOP UNITS, SMOKE DETECTORS AND CONTACTOR PANEL.
11. PROVIDE AND INSTALL SMOKE DUCT DETECTORS IN EACH AIR CONDITIONING UNIT RETURN DUCT GREATER THAN 2000 CFM. CONTRACTOR SHALL PROVIDE INTERCONNECTION AND WIRE TO THE FIRE ALARM CONTROL PANEL IF REQUIRED. DUCT DETECTORS SHALL HAVE REMOTE TEST STATIONS LOCATED NEAR THE RESPECTIVE THERMOSTATS. VERIFY CODE REQUIREMENTS FOR DUCT DETECTORS IN BOTH THE SUPPLY AND RETURN AIR STREAMS.
12. THE ENTIRE INSTALLATION SHALL BE GUARANTEED FREE OF DEFECTS AND CONTRACTOR SHALL REPAIR AND / OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO COST TO THE OWNER FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY ARCHITECT OR ENGINEER.
13. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.
14. THE CONTRACTOR SHALL, UPON COMPLETION OF PROJECT, PERFORM A COMPLETE TEST AND BALANCE OF ALL EQUIPMENT. PROVIDE A WRITTEN REPORT TO THE ARCHITECT. ALL CAPACITIES MUST BE SET TO WITHIN ±10% OF AMOUNTS INDICATED ON THE FLOOR PLAN AND SCHEDULES.
15. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/ BARRIERS AS PER LOCAL CODE. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.
16. PROVIDE VOLUME DAMPER AT EACH SUPPLY, RETURN AND EXHAUST DUCTWORK BRANCH.

MECHANICAL DUCT INSTALLATION NOTES:

1. GC TO RUN ALL DUCTWORK BETWEEN STRUCTURE AS FEASIBLE AND/OR TIGHT TO UNDERSIDE OF STRUCTURE. GC TO PROVIDE SHOP DRAWING FOR REVIEW AND APPROVAL BY ARCHITECT AND OWNER TO CONFIRM FINAL LAYOUT IS ACCEPTABLE.



100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL T. BUCKLEY
139383
LICENSED
PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

MECHANICAL FLOOR PLAN

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

M1.0

ISSUED FOR PERMIT

MECHANICAL FLOOR PLAN KEY NOTES

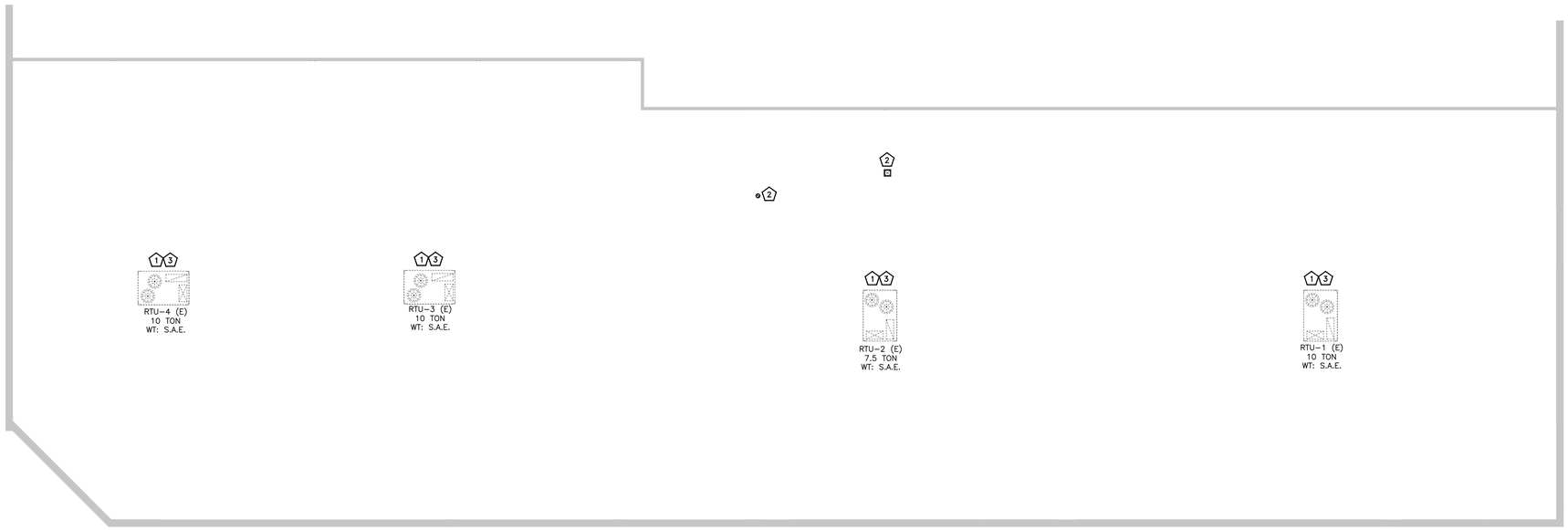
1. EXISTIG RTU TO REMAIN. CONTRACTOR TO FIELD VERIFY MAKE & MODEL, TONNAGE, AGE AND LOCATION OF THE RTU'S. RELOCATE THE RTU AS SHOWN ON THE PLAN IF REQUIRED. CONTRACTOR SHALL CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE FULLY FUCTIONING THE UNIT. IF THE RTU'S IS NOT FUNCTIONING ON ITS 100% REPLACE IT WITH NEW. VERIFY IN FIELD PRIOR TO BID. BALANCE UNIT CFM TO THE MAXIMUM PER MANUFACTURER'S RECOMMENDATION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF THE WORK. CONTRACTOR SHALL RELOCATE THE EXISTING RTU AS SPECIFIED IN THE PLAN, IF NECESSARY. CONTRACTOR TO FIELD VERIFY THE EXISTING CURB AND PROVIDE SUITABLE CURB ADAPTOR IF REQUIRED.
2. TERMINATE MOP SINK & TOILET EXHAUST DUCT WITH 45° GOOSENECK AND BIRD SCREEN. EXHAUST TO BE TERMINATED 3' AWAY FROM THE PROPERTY LINE AND 10' AWAY FROM ANY OUTSIDE AIR INTAKE .
3. EXISTING RTU CONDENSATE REMAIN. CONTRACTOR SHALL VERIFY THE LOCATION IN FIELD AND REPAIR IF NECESSARY.

MECHANICAL GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
3. ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.
4. MAINTAIN MANUFACTURERS RECOMMENDED CLEARANCE AROUND ALL ROOF EQUIPMENT.

IMPORTANT NOTE:

PROVIDE COPY OF TEST AND BALANCE REPORT TO MECHANICAL INSPECTOR AT TIME OF HAVING FINAL INSPECTION



100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL T. BUCKLEY
139383
LICENSED
PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH: 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

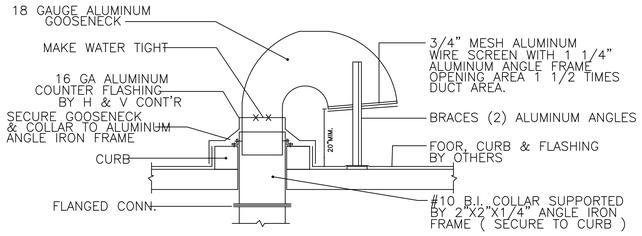
MECHANICAL ROOF PLAN

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

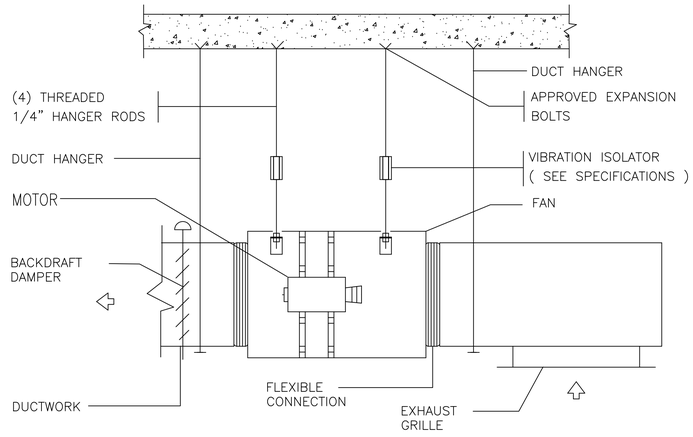
M1.1

ISSUED FOR PERMIT



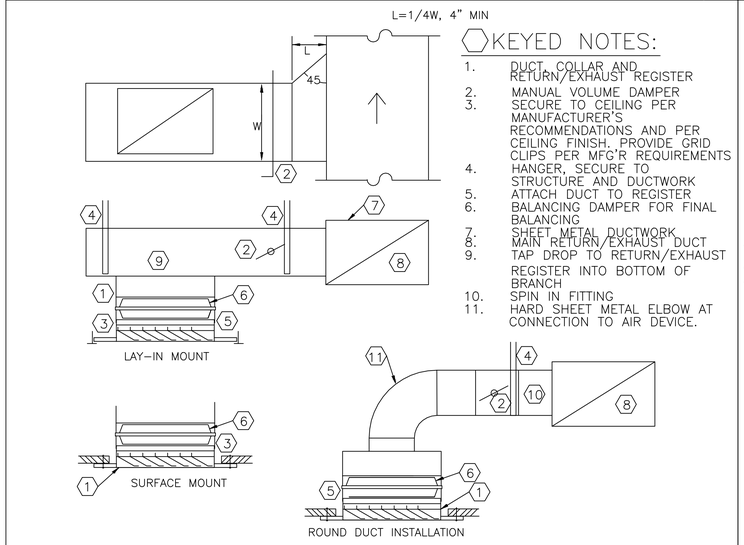
GOOSENECK DETAIL

SCALE: NONE



INLINE FAN HANGING SUPPORT DETAIL

SCALE: NONE

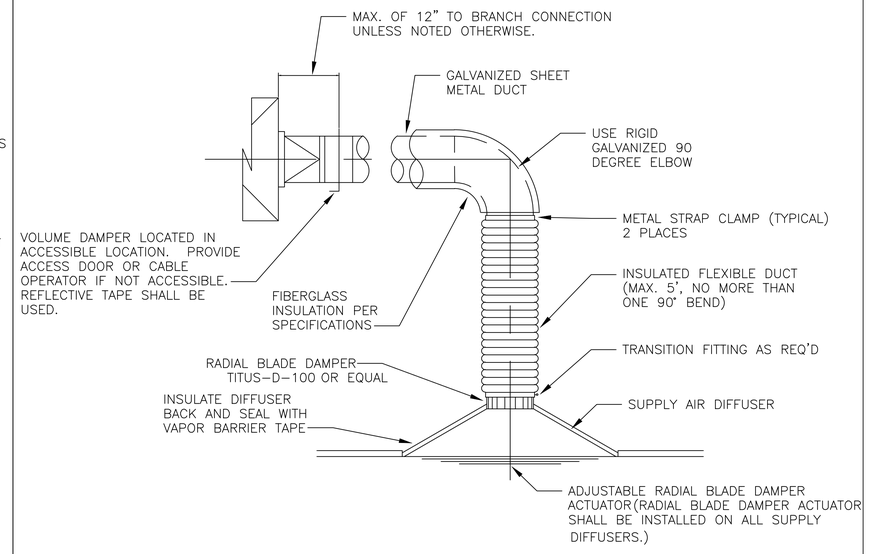


KEYED NOTES:

1. DUCT COLLAR AND RETURN/EXHAUST REGISTER
2. MANUAL VOLUME DAMPER
3. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS
4. HANGER, SECURE TO STRUCTURE AND DUCTWORK
5. ATTACH DUCT TO REGISTER
6. BALANCING DAMPER FOR FINAL BALANCING
7. SHEET METAL DUCTWORK
8. MAIN RETURN/EXHAUST DUCT
9. TAP DROP TO RETURN/EXHAUST REGISTER INTO BOTTOM OF BRANCH
10. SPIN IN FITTING
11. HARD SHEET METAL ELBOW AT CONNECTION TO AIR DEVICE.

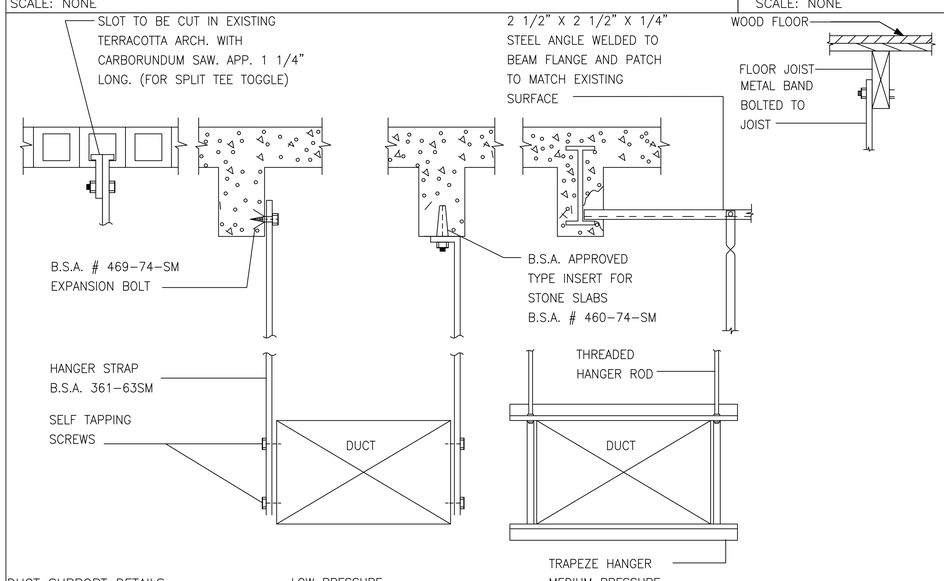
RETURN/EXHAUST REGISTER INSTALLATION

SCALE: NONE



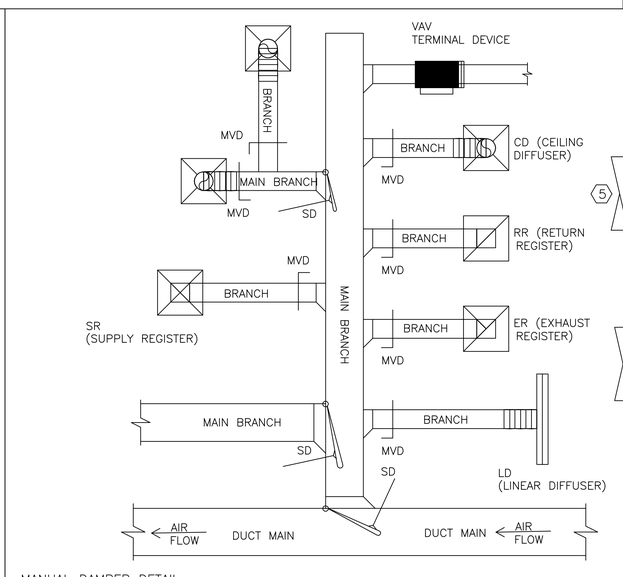
SUPPLY DIFFUSER INSTALLATION

SCALE: NONE



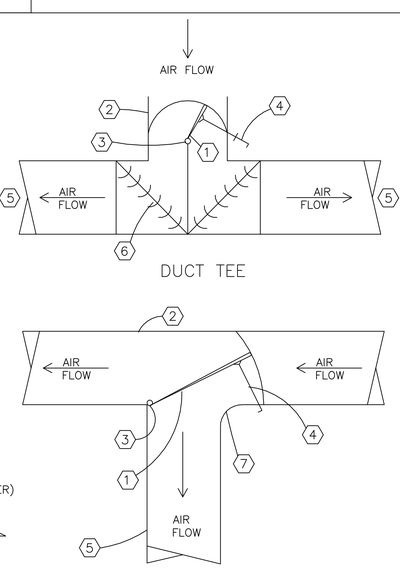
DUCT SUPPORT DETAILS LOW PRESSURE MEDIUM PRESSURE

SCALE: NONE



MANUAL DAMPER DETAIL

SCALE: NONE



GENERAL NOTES:

1. PROVIDE SPLITTER DAMPER (SD) AT ALL MAIN BRANCH TAKEOFFS
2. PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH TAKEOFFS
3. PROVIDE MINIMUM 3 TIMES STRAIGHT INLET DIAMETER TO ALL VAV TERMINAL DEVICES
4. DAMPER NOT REQUIRED AT TERMINAL DEVICE TAKEOFF
5. ALL MANUAL DAMPERS SHALL BE LOCATED IN AN ACCESSIBLE CEILING. PROVIDE ACCESS PANEL AS REQUIRED

KEYED NOTES:

1. 20 GAUGE DOUBLE SHEET METAL AIR FOIL FULL DEPTH OF MAIN DUCT UP TO 12" WIDE BRANCHES 18 GAUGE ON WIDER BRANCHES
2. MAIN DUCT
3. GALVANIZED 3/16" ROD
4. VENTLOCK NO. 600-3 DAMPER BLADE, BRACKET & LOCKING BALL JOINT WITH 1/4" GALVANIZED OPERATOR PAD
5. BRANCH MAIN DUCT
6. DOUBLE THICKNESS TURNING VANES (TYPICAL)
7. 3" RADIUS MINIMUM

100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL T. YOUNG
139383
LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH: 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

MECHANICAL DETAILS

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

M5.0

ISSUED FOR PERMIT

8/230 (V.I.F)	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	6041250673	1,2,3,4 &5
8/230 (V.I.F)	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	6041250676	1,2,3,4 &5

N	REQ. EXHAUST AIRFLOW	PROVIDED EXHAUST
		210
		210
		70
	0	490

NOTES / CCESSORIES
1,2,3,4
1,2,3,4

100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY. UNIT 500
KELLER, TX 76248

PROJECT NORTH

MECHANICAL SCHEDULES

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

M6.0

ISSUED FOR PERMIT

PLUMBING LEGEND

SYMBOL	DESCRIPTION
————	SANITARY WASTE (ABOVE FLOOR)
— — —	SANITARY SEWER (UNDER FLOOR)
- - - - - - -	VENT PIPING
—-—-—	COLD WATER
—--—	HOT WATER
—---—	HOT WATER RETURN
——⊃○	P-TRAP
——⊃	PIPE DROP
——○	PIPE UP
—⊠—	BALANCING VALVE
- -N- -	CHECK VALVE
- -⊠- -	WATER HAMMER ARRESTOR
—⋈—/—●—	SHUT-OFF VALVE
⊕	POINT OF NEW CONNECTION

PLUMBING ABBREVIATIONS

CO	CLEANOUT
FCO	FLOOR CLEANOUT
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
SAN	SANITARY
S	SOIL
ST	STORM
V	VENT
W	WASTE
LAV	LAVATORY
WC	WATER CLOSET
TYP.	TYPICAL
DN	DOWN
EXIST.	EXISTING
FD	FLOOR DRAIN
SQ. FT.	SQUARE FEET
BFP	BACK FLOW PREVENTER
WH	HOT WATER HEATER
DF	DRINKING FOUNTAIN
WCO	WALL CLEANOUT

PLUMBING DRAWING LIST

P0.1	PLUMBING SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS
P1.0	PLUMBING FLOOR PLAN
P2.0	PLUMBING DETAILS
P3.0	PLUMBING SCHEDULE AND RISERS

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

a. INTERNATIONAL BUILDING CODE 2021 WITH AMENDMENTS
b. INTERNATIONAL MECHANICAL CODE 2021 WITH AMENDMENTS
c. INTERNATIONAL PLUMBING CODE 2021 WITH AMENDMENTS
d. NATIONAL ELECTRICAL CODE 2020 WITH AMENDMENTS
e. INTERNATIONAL ENERGY CONSERVATION CODE 2018 WITH AMENDMENTS
f. INTERNATIONAL FUEL GAS CODE 2021 WITH AMENDMENTS

PLUMBING NOTES

1. ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE LOCAL AMENDMENTS TO REQUIREMENTS OF 2021 INTERNATIONAL PLUMBING CODE, 2021 INTERNATIONAL FUEL GAS CODE & 2018 INTERNATIONAL ENERGY CONSERVATION CODE.
2. INSTALLATION OF UNDERGROUND PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 702.2, IPC 2021.
3. PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER SECTION 305, IPC 2021.
4. MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION IN PC 303, PC 402, PC 605, PC 702, PC 802.2, PC 902 & PC 1004.
5. EQUIPMENT CONNECTIONS AND JOINING OF PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 4, 5, 6, 7, AND 9.
6. DEEP SEAL TRAPS FOR FLOOR DRAINS SHALL BE PROVIDED AS PER SECTION PC 1002 AND CLEAN-OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENT OF SECTION PC 708.
7. GREASE INTERCEPTOR SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 1003.
8. VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 308.
9. WATER SUPPLY SYSTEMS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 SECTION PC 601-603, 604, 606, 607, 608, 610.
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 7 SECTION PC 701 THROUGH PC 711.
11. VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 9 SECTION PC 901 THROUGH PC 912.
12. INSPECTION AND TESTING OF PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF SECTION PC 312.
13. GAS PIPING INSTALLATION SHALL BE IN ACCORDANCE WITH 2021 INTERNATIONAL FUEL GAS CODE CHAPTER 4.

PLUMBING SPECIFICATIONS

1. BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

1.01 SCOPE

A. PROVIDE ALL MATERIAL, TOOLS, SUPERVISION AND LABOR INCLUDING ALL MISCELLANEOUS AND INCIDENTAL ITEMS REQUIRED FOR COMPLETE AND OPERABLE PLUMBING INSTALLATIONS AS SHOWN OR DESCRIBED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING AND NEW CONDITIONS AND MATERIALS WITHIN THE CONSTRUCTION AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

C. OBTAIN ALL PERMITS, PAY ALL PERMIT FEES AND SCHEDULE ALL REQUIRED INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION CERTIFICATES SHALL BE FORWARDED TO THE OWNER FOR RECORD.

D. THE GENERAL CONDITIONS OF THE CONTRACT AND ALL DIVISIONAL REQUIREMENTS APPLY TO THE WORK OF THIS SECTION.

E. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID TO DETERMINE CONDITIONS AND THE EXTENT OF THE WORK. BY COMMENCING WORK, THE CONTRACTOR ACKNOWLEDGES HIS CONFIRMATION OF ALL CONDITIONS AS ACCEPTABLE WITH REFERENCE TO HIS CONTRACT, SCOPE OF WORK AND BID PRICE SUCH THAT NO ADDITIONAL COMPENSATION SHALL BE FORTHCOMING FOR UNFORESEEN EXISTING CONDITIONS.

F. ALL AREAS SUBJECT TO FREEZING CONDITIONS, THE CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ALL DOMESTIC WATER PIPING INSTALLED UNDER HIS CONTRACT.

G. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE CONTRACTOR FOR ELECTRICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT. THE CONTRACTOR FOR ELECTRICAL WORK IS RESPONSIBLE FOR LINE VOLTAGE POWER WIRING ONLY.

H. COLOR AND FINISH SELECTIONS FOR ALL MATERIALS, INCLUDING PAINTING OF PIPING, SHALL BE AS DIRECTED AND/OR APPROVED BY THE ARCHITECT.

I. MINOR DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ENGINEER SHALL BE INCLUDED AS IF SPECIFIED OR INDICATED ON THE DRAWINGS.

J. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS FOR THE INSTALLATION, CONNECTION, EXTENSION OR MODIFICATION TO ALL UTILITY SERVICES WITH RESPECTIVE PROVIDERS INCLUDING PAYMENT OF ALL ASSOCIATED FEES.

K. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAINTING ASSOCIATED WITH CUTTING AND PATCHING. ALL PAINTING IN AREAS WITH COMPLETE FINISH RENOVATIONS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

1.02 SUBMITTALS

A. SUBMITTAL REQUIREMENTS SHALL BE COORDINATED WITH THE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL PROVIDE SUBMITTALS AS LISTED BELOW.

1. PIPE AND FITTINGS
2. VALVES
3. HANGERS AND SUPPORTS
4. PLUMBING PIPING LAYOUT
5. TESTS
6. PLUMBING FIXTURES
7. WATER HEATERS & ACCESSORIES
8. FLOOR DRAINS
9. MIXING VALVES
10. ALL SCHEDULED PLUMBING EQUIPMENT

B. SUBMITTALS FROM SUPPLIERS OR MANUFACTURERS WHICH DO NOT BEAR THE STAMP OF THE SUBMITTING CONTRACTOR INDICATING THAT THE CONTRACTOR HAS REVIEWED THE SUBMITTAL FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS WILL BE RETURNED REJECTED.

C. THE ENGINEER'S REVIEW OF SUBMITTALS IS A COURTESY WHICH DOES NOT RELIEVE THE CONTRACTOR FROM CONFORMING WITH THE CONSTRUCTION DOCUMENTS, REGARDLESS OF THE ACTION INDICATED BY THE SHOP DRAWINGS STAMP.

D. SUBMIT PROOF OF APPROVAL AND/OR CONFIRMATION OF SATISFACTORY TEST RESULTS TO THE OWNER AND THE ARCHITECT.

E. SUBMIT TO THE OWNER'S MAINTENANCE PERSONNEL OPERATION AND MAINTENANCE DATA FOR ALL SYSTEM COMPONENTS, SERVICING REQUIREMENTS, INSPECTION DATA, REPLACEMENT PART NUMBERS AND AVAILABILITY AND CONTACT INFORMATION FOR SERVICE/SUPPLY COMPANY.

F. FOR ALL BELOW GRADE PIPING WHERE ACTUAL INSTALLATION DEVIATES FROM CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS INDICATING BELOW GRADE PIPE LOCATIONS DIMENSIONED TO NEAREST COLUMN LINES.

G. RECORD AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE OWNER/TENANT AFTER COMPLETION OF THE WORK SHOWING ANY ALTERATIONS, ADDITIONS AND/OR DELETIONS TO THE SYSTEM(S) INSTALLED.

1.03 SUBSTITUTIONS

A. ALL EQUIPMENT SHALL BE PRODUCTS OF THE SPECIFIED MANUFACTURER OR MANUFACTURERS. ALL BIDS SHALL BE BASED ON THE SPECIFIED MANUFACTURER OR MANUFACTURER'S EQUIPMENT. FOR SUBSTITUTIONS OF OTHER MANUFACTURER'S EQUIPMENT TO BE CONSIDERED, THE SUBSTITUTION MUST BE INDICATED PRIOR TO BIDDING WITH THE REASON FOR THE PROPOSED SUBSTITUTION IDENTIFIED, AND THE PROPOSED CREDIT TO THE OWNER INDICATED. THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF ANY PROPOSED SUBSTITUTIONS.

B. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR COORDINATING THE WORK OF OTHER TRADES WHICH MAY BE AFFECTED BY SUBSTITUTIONS, INCLUDING ALL RELATED COSTS.

1.04 DEFINITIONS

A. FURNISH: TO PURCHASE, PROCURE, ACQUIRE AND DELIVER, COMPLETE WITH RELATED ACCESSORIES.

B. INSTALL: TO ERECT, MOUNT AND CONNECT, COMPLETE WITH RELATED ACCESSORIES.

C. PROVIDE: TO FURNISH AND INSTALL.

D. PLUMBING CONTRACTOR, THE CONTRACTOR, THIS CONTRACTOR: THE CONTRACTOR FOR PLUMBING WORK WHICH IS SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS.

E. REFER TO THE 2021 INTERNATIONAL PLUMBING CODE FOR ADDITIONAL DEFINITIONS.

1.04 DRAWINGS

A. THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO ILLUSTRATE THE GENERAL ARRANGEMENT AND ROUTING OF PIPING AND GENERAL LOCATIONS OF EQUIPMENT. PRECISE LOCATIONS OF EQUIPMENT, RISERS AND STACKS, AND ROUTING AND ELEVATION OF ALL PIPING SYSTEMS SHALL BE COORDINATED IN THE FIELD WITH THE ARCHITECT, ARCHITECTURAL DRAWINGS, THE WORK OF OTHER TRADES, EXISTING AND NEW BUILDING CONDITIONS AND/OR THE PREFERENCES OF THE OWNER/TENANT AS CONSTRUCTION PROCEEDS. ALL PIPING SHALL BE INSTALLED CONCEALED IN FINISHED SPACES, UNLESS NOTED OTHERWISE.

B. PROVIDE ALL NECESSARY INCIDENTAL MATERIALS AND ACCESSORIES REQUIRED TO MAKE THE WORK COMPLETE IN ALL RESPECTS, EVEN IF NOT PARTICULARLY SHOWN OR SPECIFIED.

C. REFER TO PLUMBING EQUIPMENT/FIXTURE SCHEDULE ON THE DRAWINGS FOR ALL FIXTURE AND EQUIPMENT SPECIFICATIONS.

D. REFER TO FIXTURE CONNECTION SIZE SCHEDULE FOR ALL FIXTURE ROUGHING SIZE REQUIREMENTS.

E. VERIFY ALL INDICATED CONDITIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES. THE DRAWINGS REFLECT CONDITIONS WHICH CAN BE REASONABLY INTERPRETED FROM THE EXISTING VISIBLE CONDITIONS OR FROM DRAWINGS AND INFORMATION FURNISHED BY THE OWNER.

F. LOCATE ALL FIXTURES AND EQUIPMENT AS PER THE FINAL ARCHITECTURAL DRAWINGS.

1.05 PRODUCTS

A. SANITARY AND VENT PIPING:

1. ABOVE GRADE/ UNDERGROUND PIPING SHALL BE CAST IRON PIPE WHICH SHOULD COMPLY WITH ASTM A74 STANDARD/CISPI 301.
2. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE OVER 3" (I.D.) AND 1/4" PER FOOT OF RUN FOR PIPE 3" AND SMALLER (I.D.).
3. PVC OR OTHER COMBUSTIBLE PLASTIC PIPING SHALL NOT BE INSTALLED IN CEILING PLENUM SPACES.
4. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.

B. DOMESTIC WATER PIPING:

1. ABOVE GRADE WATER PIPING SHALL BE TYPE 'L' HARD-DRAWN COPPER TUBE.
2. FITTINGS IN DOMESTIC WATER PIPING SHALL BE COPPER OR COPPER ALLOY.
3. JOINTS SHALL BE MADE WITH LEAD-FREE SOLDER.
4. THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE INSULATED INCLUDING ALL VALVES, FITTINGS, ETC.
5. COMPLY WITH NSF 61 FOR MATERIALS FOR WATER-SERVICE PIPING AND SPECIALTIES FOR DOMESTIC WATER.
6. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE-RETARDANT, FACTORY-APPLIED JACKET. PROVIDE COLD WATER PIPING WITH FACTORY-APPLIED VAPOR BARRIER. INSULATION REQUIREMENT SHOULD COMPLY WITH 2018 INTERNATIONAL ENERGY CONSERVATION CODE. REFER BELOW TABLE C403.11.3 FOR MINIMUM PIPE INSULATION THICKNESS.

MINIMUM PIPE INSULATION THICKNESS

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU· IN./ (H· FT2· °F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4	4 to < 8	>8
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

7. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE., C404.6 WATER DISTRIBUTION SYSTEM HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED-WATER SUPPLY PIPE BACK TO THE HEATED-WATER SOURCE THROUGH A COLD-WATER SUPPLY PIPE SHALL BE A DEMAND RECIRCULATION WATER SYSTEM.PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:
   1. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE,SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE.
   2. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F(40°C).

8. HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER INTERNATIONAL ENERGY CONSERVATION CODE 2018 C404.5.1, THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

NOMINAL PIPE SIZE (INCHES)	MIXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
½"	2'	43'
¾"	0.5'	21'
1"	0.5'	13'
1¼"	0.5'	8'
1½"	0.5'	6'
2" OR LARGER	0.5'	4'

9. AS PER IECC 2018, C404.6.1, CONTROLS ARE INSTALLED THAT LIMIT OPERATION OF A RECIRCULATION PUMP INSTALLED TO MAINTAIN TEMPERATURE OF A STORAGE TANK. SYSTEM RETURN PIPE IS A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. AUTOMATIC TIME SWITCHES INSTALLED TO AUTOMATICALLY SWITCH OFF THE RE-CIRCULATING HOT HOT WATER SYSTEM OR HEAT TRACE.

C. ELECTRIC WATER HEATER

1. TANK SHALL 33 GALLON CAPACITY AND SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE.
2. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO WATER SHALL BE GLASS-LINED WITH AN ALKALINE BORO SILICATE COMPOSITION THAT HAS BEEN FUSED-TO-STEEL BY FIRING AT A TEMPERATURE RANGE OF 1400°F TO 1600°F.
3. ELECTRIC HEATING ELEMENTS SHALL BE LOW WATT DENSITY GOLDENROD 1" SCREW-IN TYPE.
4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT-OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

D. GAS PIPING:

1. ALL GAS PIPING WORK SHALL COMPLY WITH INTERNATIONAL FUEL GAS CODE 2021 AND LOCAL UTILITY GAS REQUIREMENTS.
2. FURNISH AND INSTALL ALL NECESSARY GAS PIPING TO ALL EQUIPMENT REQUIRING GAS SUPPLY INCLUDING RECONNECTION TO EXISTING ACTIVE GAS BURNING EQUIPMENT
3. PROVIDE A LUBRICATED GAS VALVE AT ALL CONNECTIONS TO EQUIPMENT.
4. ALL GAS PIPING AND INSTALLATION SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS OF LOCAL UTILITY GAS COMPANY AND OTHER AUTHORITIES HAVING JURISDICTION.
5. PROVIDE ADEQUATE SUPPORT FOR ALL PIPING.
6. GAS PIPING SHALL BE STEEL SCHEDULE 40 THREADED PIPE CONFORMING TO ANSI B36.10, 10M. OR ASTM A 106.
7. FITTINGS SHALL BE MALLEABLE IRON.
8. VALVES SHALL BE NORDSTROM IRON PLUG VALVES FIG. 142.
9. PIPING UNDERGROUND BENEATH BUILDING SHALL COMPLY WITH INTERNATIONAL FUEL GAS CODE 2021 EDITION.

E. MIXING VALVES

1. VALVE BODY SHALL BE MADE OF CAST BRASS. THE INTERNAL COMPONENTS SHALL BE MADE OF BRASS OR STAINLESS STEEL.
2. TYPES A, C & D VALVES: VALVE SHUTS OFF IN FULL COLD POSITION AND MUST PASS THROUGH COLD RANGE BEFORE DELIVERING WARM, AND/OR HOT WATER. TEMPERATURE LIMIT SET AT 105°F MAXIMUM DELIVERY TEMPERATURE. IF ONE SUPPLY SHOULD FAIL, THE OTHER WILL AUTOMATICALLY AND INSTANTLY SHUT DOWN. DELIVERY CAPACITY IS 5 GPM @ 45 PSIG DIFFERENTIAL.
3. TYPES OF VALVES: TYPE A- THERMOSTATICALLY OPERATED BY MEANS OF BI-METALLIC STRIP, OR EXPANSION BELLOWS; TYPE B- SINGLE HANDLE MECHANICAL MIXER, OR INDIVIDUAL HOT AND COLD CONTROL VALVES; TYPE C- PRESSURE BALANCING SHOWER VALVE/PISTON OPERATED MIXING VALVE; TYPE D- BALANCED PRESSURE OPERATION, WITH INTEGRAL DIAL THERMOMETER INDICATING DELIVERED WATER TEMPERATURE.
4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT-OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

F. HANGERS AND SUPPORTS:

1. HANGERS SHALL BE STANDARD STEEL, MALLEABLE OR WROUGHT IRON, AS MANUFACTURED BY GRINNELL OR APPROVED EQUAL, SUITABLE FOR THE TYPE OF CONSTRUCTION. PIPING SHALL NOT BE HUNG FROM OTHER PIPE.
2. SECTIONS OF INDIVIDUAL PIPE RUNS SHALL BE SUPPORTED BY CLEVIS HANGERS.
3. ALL EQUIPMENT SHALL BE PROVIDED WITH APPROVED SUPPORTS..
4. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.

G. VALVES:

1. PROVIDE GATE VALVES, BUTTERFLY OR BALL VALVES FOR SHUT-OFF DUTY ON MAIN AND BRANCH SUPPLY LINES. FOR ALL PIPE RUNS 2" AND SMALLER, PROVIDE BALL FOR ALL PIPE RUNS LARGER THAN 2" AND SMALLER THAN 4", PROVIDE GATE VALVES. PIPING 4" AND LARGER, PROVIDE BUTTERFLY VALVES FOR SHUT-OFF DUTY.
2. ALL FIXTURES WITH THE EXCEPTION OF FLUSHOMETER-EQUIPPED WATER CLOSETS AND URINALS SHALL HAVE STOP VALVES TO CONTROL SUPPLY TO THE FIXTURE. WHERE SUPPLIES ARE EXPOSED PROVIDE CHROME-PLATED STOPS WITH CHROME-PLATED ESCUTCHEONS ON PIPING PENETRATIONS.
3. ALL PLUMBING FIXTURES AND EQUIPMENT TO HAVE SHUT-OFF VALVES ON SUPPLY LINES.
4. ALL BRANCH LINES TO HAVE SHUT-OFF VALVES.
5. ALL VALVES SHALL BE ACCESSIBLE. PROVIDE ACCESS DOORS WHERE REQUIRED FOR VALVE ACCESS.
6. PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE HOT WATER CIRCULATING SYSTEM.

H. SLEEVES AND ESCUTCHEONS:

1. SLEEVES THROUGH STRUCTURAL CONCRETE MEMBERS AND SLEEVES FOR WALLS BELOW GRADE AND FLOORS ON GRADE SHALL BE STANDARD WEIGHT GALVANIZED SCHEDULE 40 STEEL PIPE. SLEEVES THROUGH OTHER THAN STRUCTURAL COMPONENTS OF THE BUILDING SHALL BE 20 GAUGE GALVANIZED SHEET METAL WITH LOCK SEAM JOINTS. USG THERMAFIBER SAFING INSULATION SHALL BE INSTALLED BETWEEN PIPE AND SLEEVE.
2. PIPE ESCUTCHEON PLATES SHALL BE INSTALLED WHERE EXPOSED PIPING PASSES THROUGH WALLS, CEILINGS, AND FLOORS AND SHALL BE MINIMUM 20 GAUGE STEEL. PROVIDE CHROME PLATED ESCUTCHEON PLATES IN FINISHED AREAS.

I. DRAINAGE ACCESSORIES

1. GENERAL:
   a. INSTALL THE WORK OF THIS SECTION IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, UNLESS OTHERWISE SPECIFIED.
   b. SECURE EXTERNAL COMPONENTS IN PLACE WITH VANDAL RESISTANT FASTENERS OR DEVICES WHICH CANNOT BE REMOVED WITHOUT SPECIAL TOOLS.
2. DEVICES:
   a. CLEANOUT & CLEANOUT PLUG
   - THREADED PIPE FITTING OR CAST IRON FERRULE WITH GAS TIGHT CLEANOUT PLUG
   - PLUG SHOULD BE CAST BRASS OR BRONZE, WITH THREADED END, AND RAISED OR COUNTERSUNK HEAD.
   - LUBRICATE THREADS OF CLEANOUT PLUG WITH ANTI-SEIZE LUBRICANT BEFORE FINAL INSTALLATION.

   b. CLEANOUT WALL PLATE
   - IT SHOULD BE ROUND, STAINLESS STEEL OR POLISHED CHROME PLATED BRONZE COVER PLATE WITH STAINLESS STEEL VANDAL RESISTANT FASTENER TO SECURE TO CLEANOUT PLUG.

   c. CLEANOUT DECK PLATE
   - IT SHOULD BE STANDARD DUTY FLOOR CLEANOUT FITTING WITH COATED CAST IRON BODY; ROUND, POLISHED NICKEL BRONZE SCORIATED TOP SECURED TO CLEANOUT PLUG WITH STAINLESS STEEL VANDAL RESISTANT FASTENER; THREADED HEIGHT ADJUSTMENT, CAST IRON HEAD, GAS TIGHT CLEANOUT PLUG, AND CONNECTION TO MATCH PIPING OPTION SELECTED.

J. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.

K. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.

L. PIPE BACKFLOW PREVENTER DRAINS TO FLOOR DRAIN OR OTHER APPROVED INDIRECT WASTE SOURCE.

M. PROVIDE ACCESS DOORS/PANELS FOR SERVICE AND ACCESS TO ALL VALVES AND OTHER SYSTEM COMPONENTS ENCLOSED IN WALLS AND CEILINGS ACCESS DOORS SHALL BE FURNISHED BY THIS CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR.

N. ALL FIXTURES REQUIRING VACUUM BREAKERS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.

O. PROVIDE ANCHOR GUIDES AND EXPANSION JOINTS OR LOOPS IN ALL HOT WATER AND HOT WATER CIRCULATING MAIN SUPPLY PIPING AND SEGMENTS OF SUCH PIPE THAT EXCEED 30'-0" IN LENGTH.

P. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.

Q. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. REMOVE PROTECTIVE COATINGS PRIOR TO INSTALLATION.

R. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE-PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.

S. ANY PENETRATIONS THROUGH FIRE RATED PARTITIONS, FLOORS, OR CEILINGS SHALL BE STEEL SLEEVED AND SEALED WITH 3M BRAND UL RATED FIRE BARRIER CAULK OR APPROVED EQUAL.

T. WHEN THE WATER PIPING SYSTEM IS COMPLETE, THOROUGHLY FLUSH ALL DIRT, SEDIMENT, SOLDER, ETC., OUT OF THE SYSTEM, REMOVING ALL STRAINERS, VALVE STEM SEATS, ETC., REQUIRED TO ACCOMPLISH THE FLUSHING.

U. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.

V. ALL PIPING INSTALLED ON THE ROOF SHALL BE SUPPORTED BY "PILLOW BLOCK" PIPE STANDS AS MANUFACTURED BY MIRO INDUSTRIES, OR APPROVED EQUAL. WOOD PIPE SUPPORTS SHALL NOT BE ACCEPTABLE. PROVIDE TRAFFIC/WALK PADS BELOW ALL PIPE STANDS.

W. INSTALL SLEEVES FOR ALL PIPES WHICH PASS THROUGH WALLS, FLOORS, AND CEILINGS. WHERE PIPES ARE TO BE INSULATED, THE SLEEVE SHALL BE LARGE ENOUGH TO ACCOMMODATE INSULATION. SLEEVES SHALL BE FLUSH WITH FINISHED SURFACES AT BOTH ENDS. ON FINISHED SURFACES IN EXPOSED AREAS PROVIDE ESCUTCHEONS COMPATIBLE WITH FINISH.

X. PROVIDE WATER HAMMER ARRESTERS ON SUPPLY PIPING TO ALL FLUSHOMETER VALVES AND QUICK-CLOSING VALVES.

Y. UNLESS OTHERWISE INDICATED, TRAPS SEALS AT ALL FLOOR DRAINS SHALL BE MAINTAINED BY AN APPROVED TRAP PRIMING DEVICE OR BARRIER TYPE TRAP SEAL PROTECTION DEVICE AS PER CODE APPLICABLE.

Z. MAINTAIN ALL REQUIRED AND RECOMMENDED CLEARANCES FOR ALL PLUMBING SYSTEM COMPONENTS AND EQUIPMENT.

AA. MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN ALL PLUMBING V.T.R.S AND ALL OUTDOOR AIR INTAKES. OFFSET VENT STACKS AND STACK VENTS IF AND AS REQUIRED BELOW ROOF TO MAINTAIN SUCH CLEARANCE WHETHER OR NOT SUCH OFFSET IS INDICATED ON THE DRAWINGS. PROVIDE ALL REQUIRED SEISMIC SUPPORTS.

2. INSTALLATION

2.01 GENERAL

A. ALL WORK WHICH REQUIRES DISRUPTION OF THE ROOFING SHALL BE DONE BY A CONTRACTOR CERTIFIED BY THE ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ANY EXISTING ROOF WARRANTIES.

B. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECTS.

C. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.

D. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.

E. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.

F. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

G. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.

H. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING IN ORDER TO COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.

I. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.

J. PRIOR TO DISCONNECTING AND CONNECTING NEW WORK TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL NOTIFY THE PROPERTY MANAGER AND OFFER A PROPOSED SCHEDULE OF WORK. ESB WILL AUTHORIZE CONNECTIONS AND COORDINATE NECESSARY SHUT DOWNS AND DRAIN DOWNS AS REQUIRED. SHUT DOWNS AND DRAIN DOWNS MAY BE PERFORMED BY THE PLUMBING CONTRACTOR ONLY AFTER RECEIVING ESB AUTHORIZATION, AND SHOULD BE PERFORMED UNDER SUPERVISION OF ESB PERSONNEL. THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.

K. THE PLUMBING CONTRACTOR IS ADVISED THAT DUE TO THE NATURE OF THE OPERATIONS AND TENANT REQUIREMENTS, CONNECTIONS TO EXISTING SYSTEMS MAY HAVE TO BE MADE AFTER REGULAR WORKING HOURS. THE PROPERTY MANAGER WILL ADVISE THE PLUMBING CONTRACTOR OF THE TIME CONSTRAINTS UPON RECEIPT AND APPROVAL OF THE PLUMBING CONTRACTOR'S REQUEST FOR SHUT DOWN AND CONNECTION TO EXISTING SYSTEMS.

L. WHEN CONNECTING TO EXISTING STACKS AND RISERS, PROVISION IS TO BE MADE FOR FUTURE CONNECTIONS BY PROVIDING CAPPED AND VALVED OUTLETS ON DOMESTIC WATER RISERS AND PLUGGED OUTLETS ON THE SANITARY AND VENT STACKS.

2.02 ABOVE GRADE

A. INSTALL PLUMBING PIPING IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING COMPLIES WITH REQUIREMENTS AND SERVES INTENDED PURPOSES.

B. ROUTE PIPING IN AN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN. IN DOMESTIC WATER SYSTEMS, PROVIDE DRAIN VALVES AT MAIN SHUT-OFF VALVES AND ALL LOW POINTS IN PIPING.

C. USE EXISTING CONNECTIONS AT MAINS WHERE AVAILABLE FOR NEW BRANCH PIPING. LOCATE ALL RISERS AND PIPING BEFORE CONSTRUCTION COMMENCES AND TAKE CARE NOT TO DAMAGE SAME. ANY DAMAGE OCCURRING TO THE EXISTING PIPING WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

2.03 INSULATION

COVER ALL HOT WATER AND HOT WATER RECIRCULATION PIPE WITH 1" THICK FOR PIPE SIZE UP TO 1½" AND 1½" THICK FOR PIPE SIZE GREATER THAN 1½". INSTALL ALL INSULATION AS PER MANUFACTURERS RECOMMENDATIONS. ALL PIPE INSULATION SHALL COMPLY WITH INTERNATIONAL ENERGY CONSERVATION CODE 2018 EDITION.

3. TESTING

A. AT THE COMPLETION OF THE PLUMBING WORK, COMPLETELY TEST THE ENTIRE INSTALLATION OF ALL SYSTEMS FOR PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND LOCAL REQUIREMENTS. CORRECT ALL DEFICIENCIES FOUND.

B. TESTING OF THE INSTALLED SYSTEMS SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER.

C. THE CONTRACTOR SHALL NOT COVER UP OR PERMANENTLY CONCEAL PIPING, DEVICES OR ANY PORTION OF NEWLY CONSTRUCTED PLUMBING SYSTEM(S) UNTIL SUCH SYSTEM, OR PORTION OF THE SYSTEM, HAS BEEN TESTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND INSPECTED BY THE LOCAL INSPECTOR AND APPROVED IN WRITING, EXCEPT PIPING PASSING THROUGH FLOORS, WALLS, PARTITIONS, OR BEAMS, FOR DISTANCES EQUAL TO THE THICKNESS OF SUCH FLOOR, WALL, PARTITION OR BEAM.

D. THIS CONTRACTOR SHALL NOTIFY THE VARIOUS DEPARTMENTS, BUREAUS AND INDIVIDUALS AT LEAST TWO WEEKS IN ADVANCE OF THE TIME THAT THE TESTS ARE TO BE CONDUCTED.

E. ALL DEFECTIVE PARTS SHALL BE REPLACED OR CORRECTED BY THIS CONTRACTOR AND AN EXTRA TEST OR TESTS SHALL BE MADE UNTIL THE OPERATION IS SATISFACTORY. ALL ARRANGEMENTS AND EXPENSES NECESSARY TO CONDUCT ALL TESTS REQUIRED BY THESE SPECIFICATIONS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THE WORK INSTALLED UNDER THIS CONTRACT SHALL BE MADE BY THIS CONTRACTOR. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THESE TESTS, THE COST THEREOF BEING INCLUDED IN THE LUMP SUM BID FOR THIS CONTRACT.

F. WHERE ANY EVIDENCE OF STOPPAGE IS FOUND IN PIPING OR EQUIPMENT, THIS CONTRACTOR SHALL DISCONNECT, CLEAN, REPAIR AND RECONNECT ALL OBSTRUCTED PIPING OR EQUIPMENT AND SHALL ALSO PAY FOR ALL NECESSARY CUTTING AND REPAIRS TO ADJOINING WORK.

G. ALL PIPING AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUT, OF DIRT, CUTTINGS, OILS AND OTHER FOREIGN SUBSTANCES AND SHALL BE LEFT CLEAN.

H. ALL REQUIRED TESTS SHALL BE WITNESSED BY LOCAL AUTHORITIES AND THE OWNER'S REPRESENTATIVE.

I. ALL EQUIPMENT WILL BE FACTORY TESTED.

J. CONTRACTOR SHALL IDENTIFY TO THE OWNER'S REPRESENTATIVE ANY LEAKS OR DAMAGE THAT OCCURS AS A RESULT OF SYSTEM TESTING. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LIMIT ANY POTENTIAL DAMAGE. CORRECTIVE ACTION REQUIRED AS A RESULT OF TESTING SHALL BE PERFORMED IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.

K. REPORT IN WRITING TO AUTHORITIES HAVING JURISDICTION, THE ARCHITECT AND THE OWNER THE RESULTS OF ALL TESTING.

L. TESTING REQUIREMENTS
   a. ALL TESTS SHALL BE PERFORMED AS PER IPC 2021 SECTION 312 TESTS AND INSPECTION.
   b. TESTS SHALL BE WITNESSED BY THE BUILDING ENGINEER.
   c. THE PLUMBING CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE DUE TO TEST FAILURES AND LEAKAGE IN THE TEST AREA AND ADJACENT TENANT OR ESB SPACES.

N. REFILL ENTIRE POTABLE HOT AND COLD WATER SUPPLY SYSTEM WITH CHLORINE SOLUTION (HTH OLIN CHEMICAL CORP.) AT A STRENGTH TO MEET STANDARDS OF THE DEPARTMENT OF HEALTH, AND FOR A PERIOD OF RETENTION AS STIPULATED.

O. THOROUGHLY FLUSH PIPING SYSTEM WITH FRESH WATER IMMEDIATELY PRIOR TO FINAL ACCEPTANCE.

4. WARRANTY

A. EQUIPMENT, MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL KEEP THE WORK IN GOOD REPAIR FOR ONE YEAR AFTER THE DATE OF FINAL APPROVAL.

B. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROMPTLY CORRECT AND REPAIR ANY AND ALL BREAKS, FAILURES OR WEAR DUE TO FAULTY MATERIALS, WORKMANSHIP OR EQUIPMENT. ALL SETTLEMENTS OF SURFACES THAT MAY OCCUR WITHIN THAT PERIOD SHALL ALSO BE PROMPTLY REPAIRED.

JKRP
ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

MICHAEL TOBIAS
139383
09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL

1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

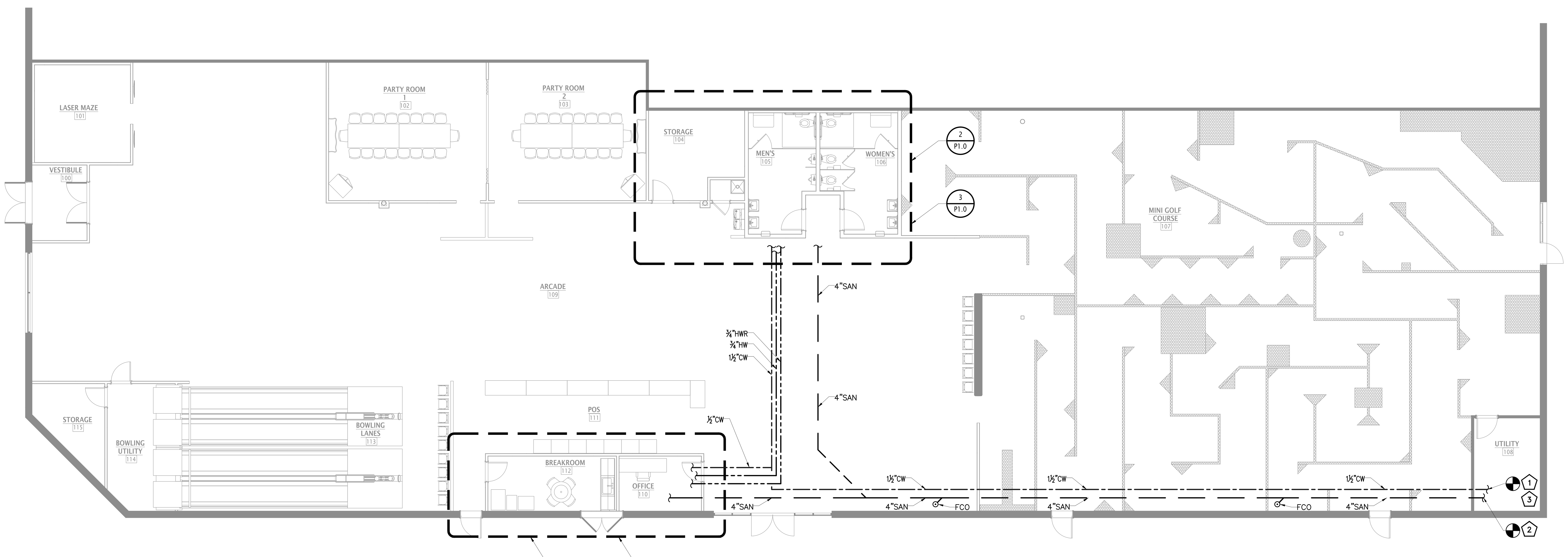
PLUMBING SYMBOLS, ABBREVIATIONS, NOTES AND SPECIFICATIONS

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

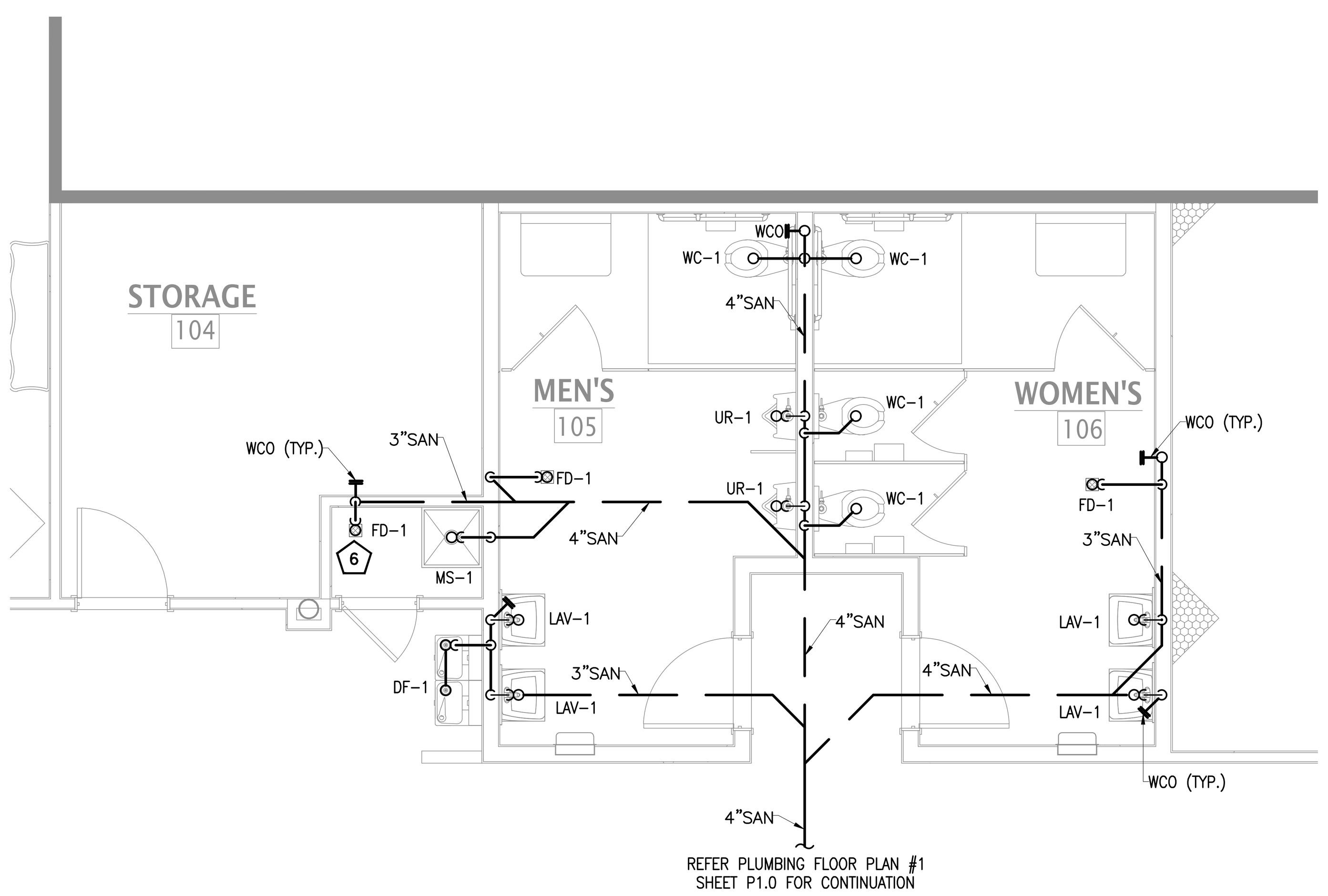
AS INDICATED

P0.1

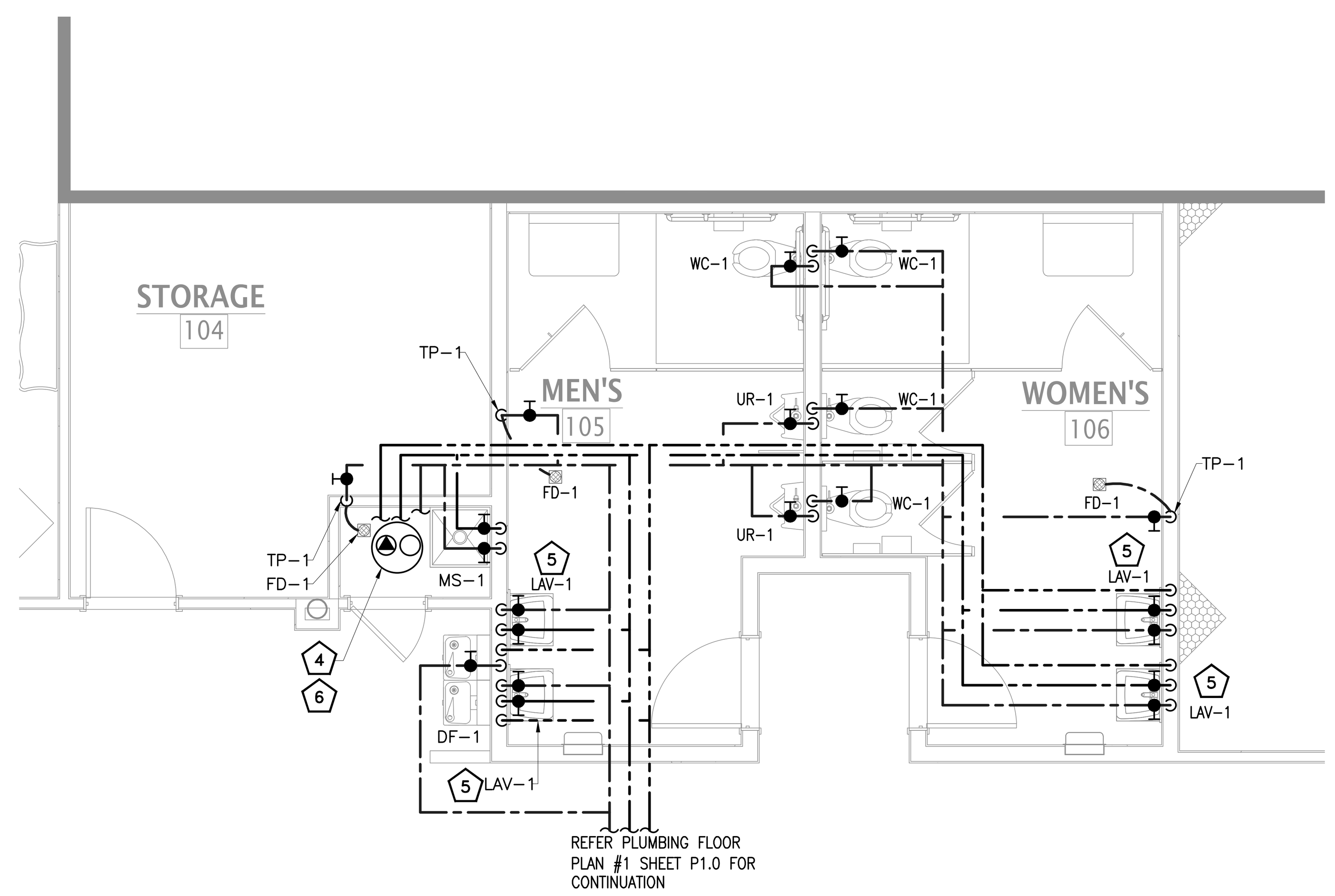
ISSUED FOR PERMIT



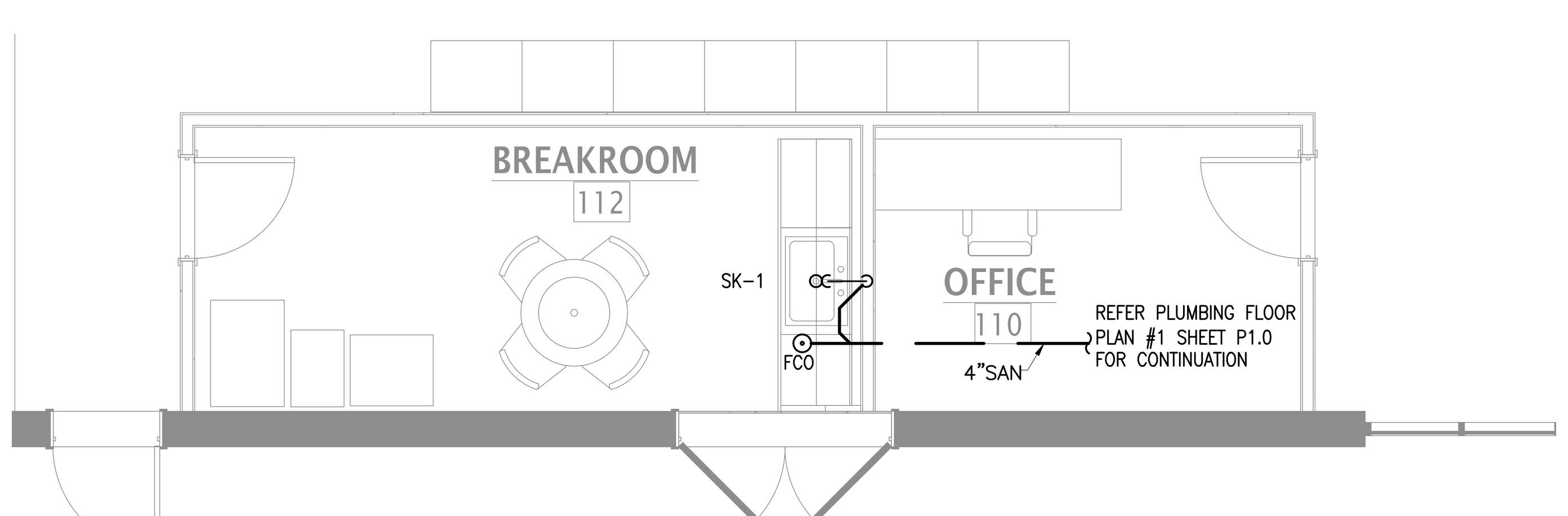
1 P1.0 PLUMBING FLOOR PLAN
1/8" = 1'-0"



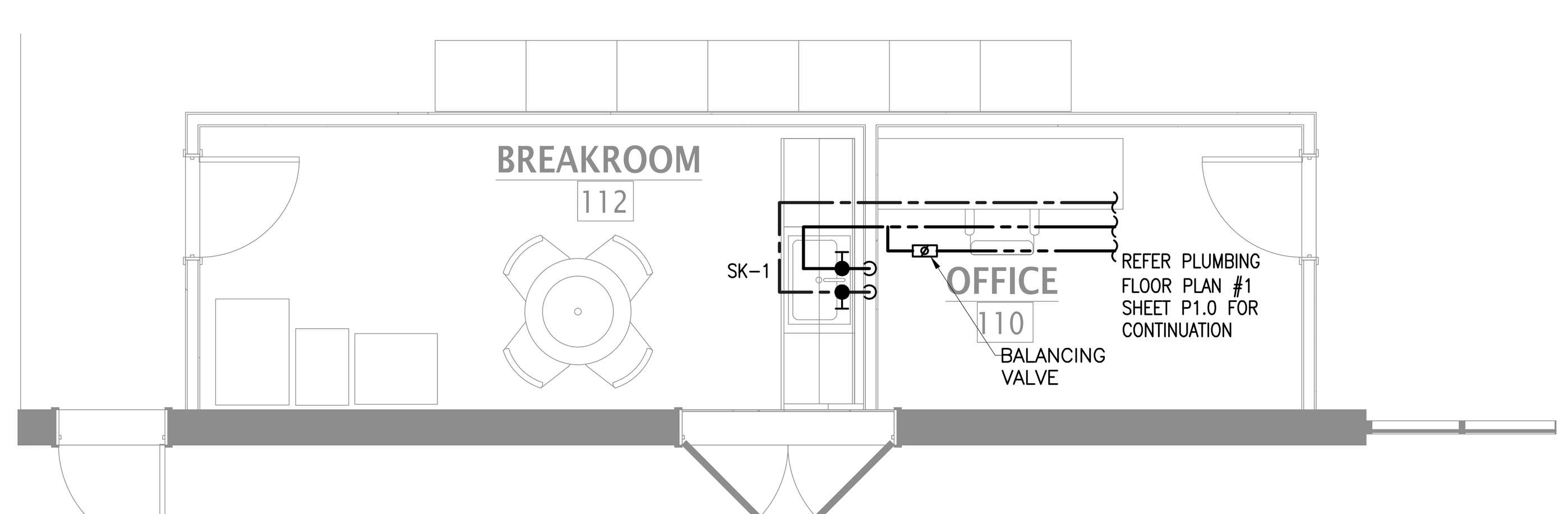
2 P1.0 RESTROOM PARTIAL PLUMBING SANITARY PLAN
1/4" = 1'-0"



3 P1.0 RESTROOM PARTIAL PLUMBING WATER SUPPLY PLAN
1/4" = 1'-0"



4 P1.0 BREAKROOM PARTIAL PLUMBING SANITARY PLAN
1/4" = 1'-0"



5 P1.0 BREAKROOM PARTIAL PLUMBING WATER SUPPLY PLAN
1/4" = 1'-0"

PLUMBING KEYED NOTES:

1. CONNECT NEW 1½" CW PIPING WITH THE EXISTING WATER SERVICE LINE IN SPACE. CONTRACTOR TO FIELD VERIFY AVAILABILITY OF EXISTING WATER SUB-METER AND SECONDARY BACKFLOW PREVENTER. PROVIDE NEW IF NOT EXISTING AVAILABLE AND REROUTE PIPE ACCORDINGLY.
2. CONNECT NEW 4" SANITARY PIPE TO EXISTING SANITARY PIPE. CONTRACTOR TO FIELD VERIFY EXISTING SANITARY PIPE SIZE, LOCATION, INVERT AND REROUTE PIPE ACCORDINGLY.
3. CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE WATER PRESSURE AT INCOMING WATER SERVICES. WATER PRESSURE SHOULD NOT BE LESS THEN 50 PSI AT THE REQUIRED FLOW. NOTIFY ENGINEER IF CONDITION DIFFERS.
4. PROVIDE NEW WATER HEATER (WH-1) WITH RE-CIRCULATION PUMP (RCP-1), THERMAL EXPANSION TANK (ET-1) HOT WATER RETURN PIPING, ASSOCIATED ACCESSORIES AND FITTINGS.
5. PROVIDE ASSE 1070 OR SIMILAR THERMOSTATIC MIXING VALVE AT ALL HAND SINK AND LAVATORIES IF NOT ALREADY PROVIDED WITH THEM. SET AT 110°F MAXIMUM.
6. SPILL WATER HEATER INDIRECT WASTE TO NEAREST FLOOR DRAIN WITH APPROVED AIR GAP.

PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND SIZES OF ALL UTILITIES, INCLUDING THE DEPTHS OF ALL BELOW GRADE SANITARY SEWERS, PRIOR TO START OF WORK. THIS DRAWINGS IS NOT INTENDED TO INDICATE ALL EXISTING UTILITIES.
2. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND FIELD VERIFY EXISTING CONDITIONS TO ENSURE THAT THE WORK REPRESENTED ON THE DRAWING AND IN THESE SPECIFICATIONS CAN BE INSTALLED AS INDICTED.
3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL UTILITY CONNECTION POINTS, INCLUDING SIZES AND INVERTS WITH EXISTING FIELD CONDITION PRIOR TO START WORK.
4. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION RELATED TO THE INSTALLATION OF WORK.
5. ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAW, ACTS AND AUTHORITIES HAVING JURISDICTION AND LANDLORD CRITERIA.
6. MAINTAIN ALL MANUFACTURERS RECOMMENDED SERVICE CLEARANCES FOR ALL FIXTURE AND EQUIPMENT. REFER TO ARCHITECTURAL PLAN FOR EXACT LOCATIONS OF PLUMBING FIXTURES.
7. CONTRACTOR TO VERIFY EXISTING CONDITION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE CONTRACT DOCUMENT BEFORE COMMENCING ANY WORK.
8. PROVIDE CUTTING, CORE DRILLING IN WALLS FOR ALL PIPE PENETRATIONS, CONNECTION, AND ALL ASSOCIATED WORK. PROVIDE PATCHING, RESTORATION, AND FINISHING WORK TO MATCH EXISTING CONDITIONS IN ALL ASPECTS.

WATER AND SANITARY PIPING GENERAL NOTES:

1. CW/HW PIPING TO BE PROVIDED WITH INSULATION AS PER INTERNATIONAL ENERGY CODE 2018 (REFER SHEET P0.1)
2. UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/8" PER FOOT OF RUN FOR PIPE 3" OR LARGER AND 1/4" PER FOOT FOR PIPE SMALLER THAN 3".
3. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
4. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
5. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR, CLEANOUTS & SHUT-OFF VALVES AS REQUIRED.
6. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
7. REFER RISER DIAGRAM FOR VENT PIPING. PROVIDE NEW 4" VTR, IF VTR IS NOT EXISTED IN SPACE.
8. ALL CLEANOUTS TO BE ACCESSIBLE.
9. ANY ROOF PENETRATION SHALL BE PERFORMED BY LANDLORD'S ROOFERS AT LANDLORD OPTION, A BONDED ROOFER APPROVED IN ADVANCE BY LANDLORD.
10. PROVIDE TRAP PRIMER/ SEAL IN FLOOR DRAIN AS PER LOCAL JURISDICTION.
11. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
12. EXISTING STORM SYSTEM TO REMAIN AS EXISTING.

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL TOBIAS
139383
LICENSED
PROFESSIONAL ENGINEER
09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248
PROJECT NORTH

PLUMBING FLOOR PLAN

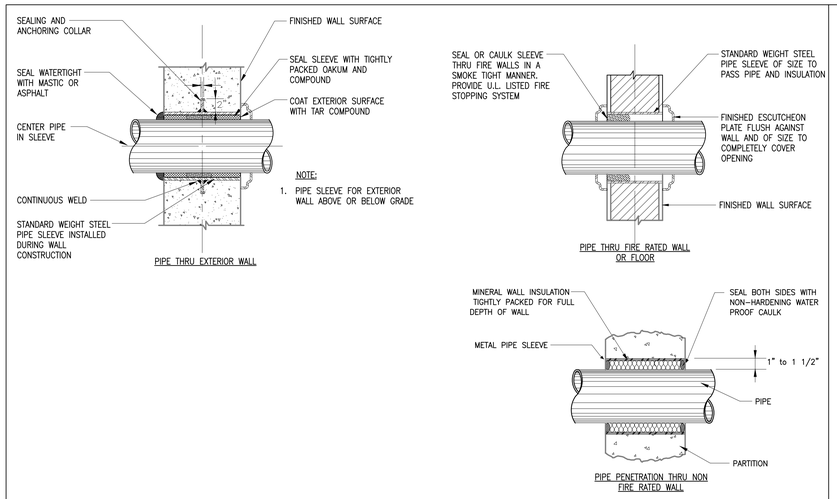
DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

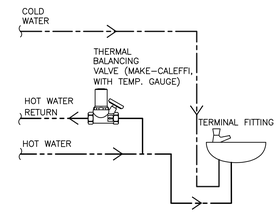
P1.0

ISSUED FOR PERMIT

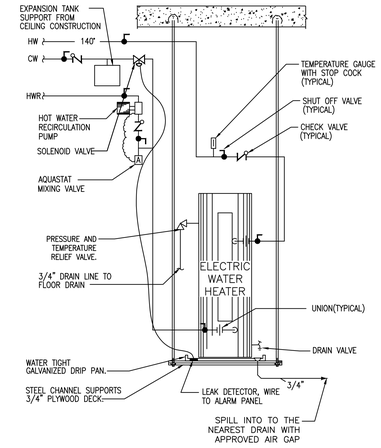
ORIGINAL SHEET SIZE: 30" X 42" ARCH E1



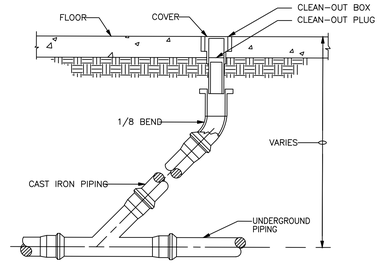
1 / P2.0 PIPE SLEEVE THRU WALL SECTION
N.T.S



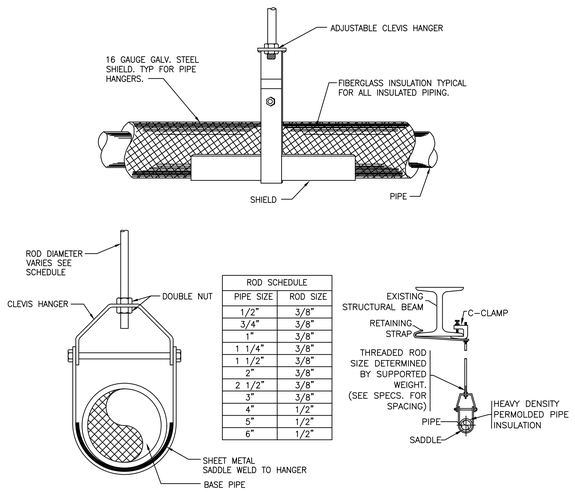
2 / P2.0 HOT WATER HEATER BALANCING VALVE PIPING DETAIL
N.T.S



3 / P2.0 HOT WATER HEATER INSTALLATION ABOVE CEILING DETAIL
N.T.S



4 / P2.0 FLOOR CLEANOUT DETAIL
N.T.S



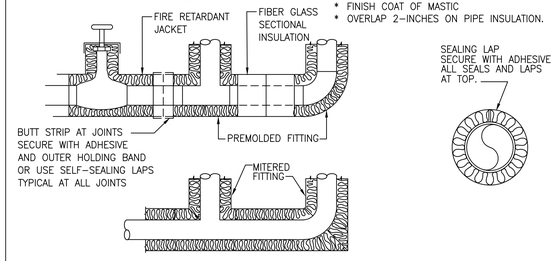
5 / P2.0 HANGER DETAIL
N.T.S

CONCEALED VALVES AND FITTINGS

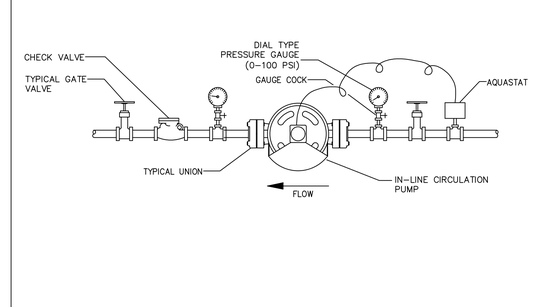
* WRAP WITH 1-INCH THICK, 1-POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS
* SECURE WITH WIRE OR TAPE.
* VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

CONCEALED VALVES AND FITTINGS

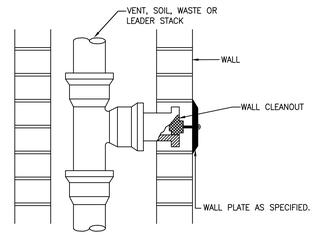
* PREMOLDED FIBER GLASS OR RADIAL MITERED PIPE INSULATION
* SKIM COAT OF INSULATION CEMENT
* COAT OF MASTIC
* WRAP WITH FIBER GLASS REINFORCING CLOTH.
* FINISH COAT OF MASTIC
* OVERLAP 2-INCHES ON PIPE INSULATION.



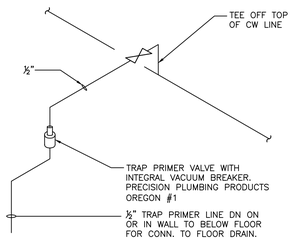
6 / P2.0 INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS
N.T.S



7 / P2.0 INLINE RECIRCULATING PUMP DETAIL
N.T.S

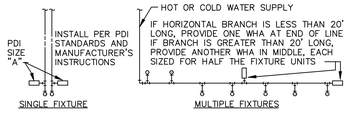


8 / P2.0 WALL CLEANOUT DETAIL
N.T.S



NOTE:-
TRAP PRIMER LINE BELOW FLOOR ARE TO BE TYPE 'K' SOFT COPPER CONTINUOUS LENGTH WITH NO JOINT BELOW FLOOR.

9 / P2.0 FLOOR DRAIN TRAP PRIMER DETAIL
N.T.S

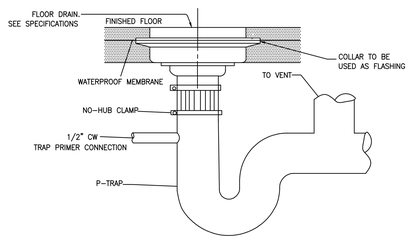


PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

PC TO PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE.

10 / P2.0 WATER HAMMER ARRESTORS
N.T.S



11 / P2.0 FLOOR DRAIN DETAILS
N.T.S

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS · MICHAEL T. BUCKLEY · 139383 · LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
215.779.7772
MICHAEL BUCKLEY, AIA
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

PLUMBING DETAILS

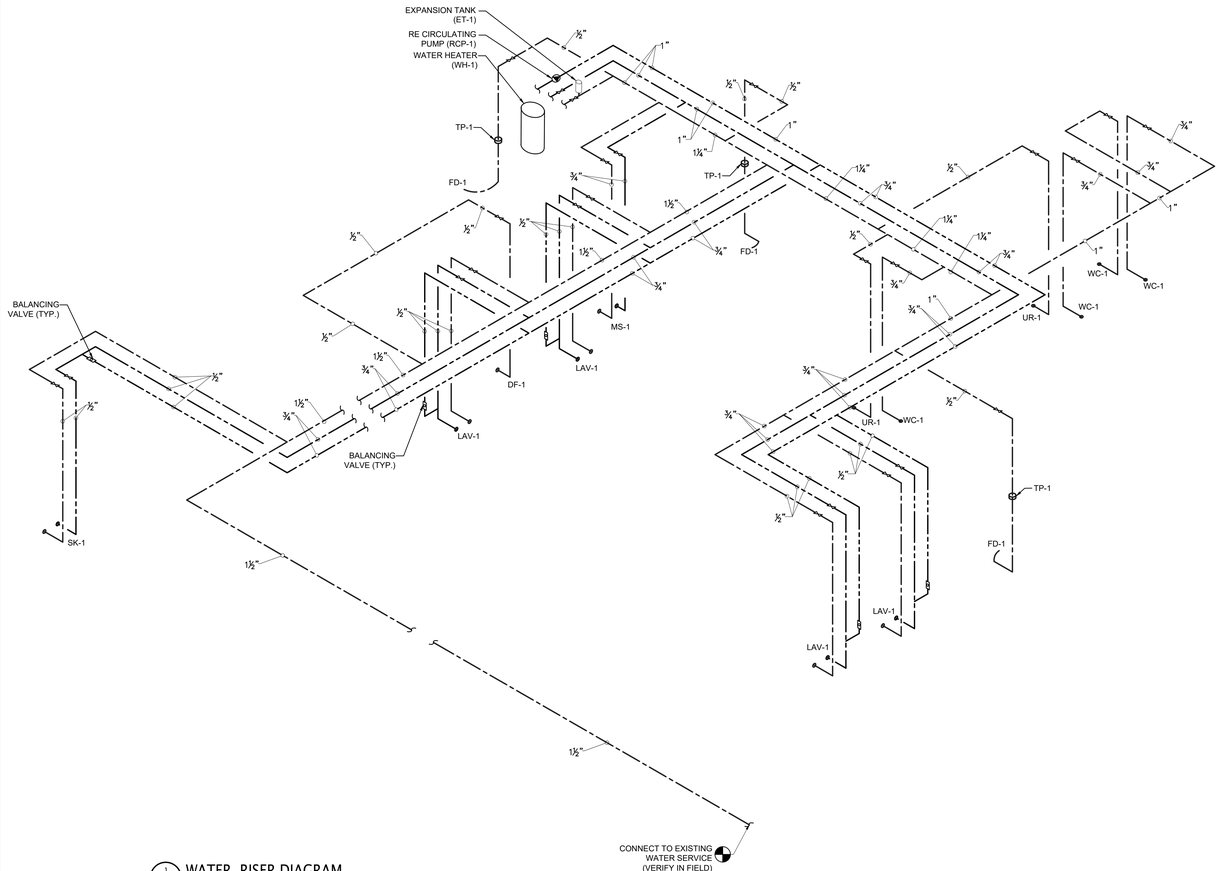
DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

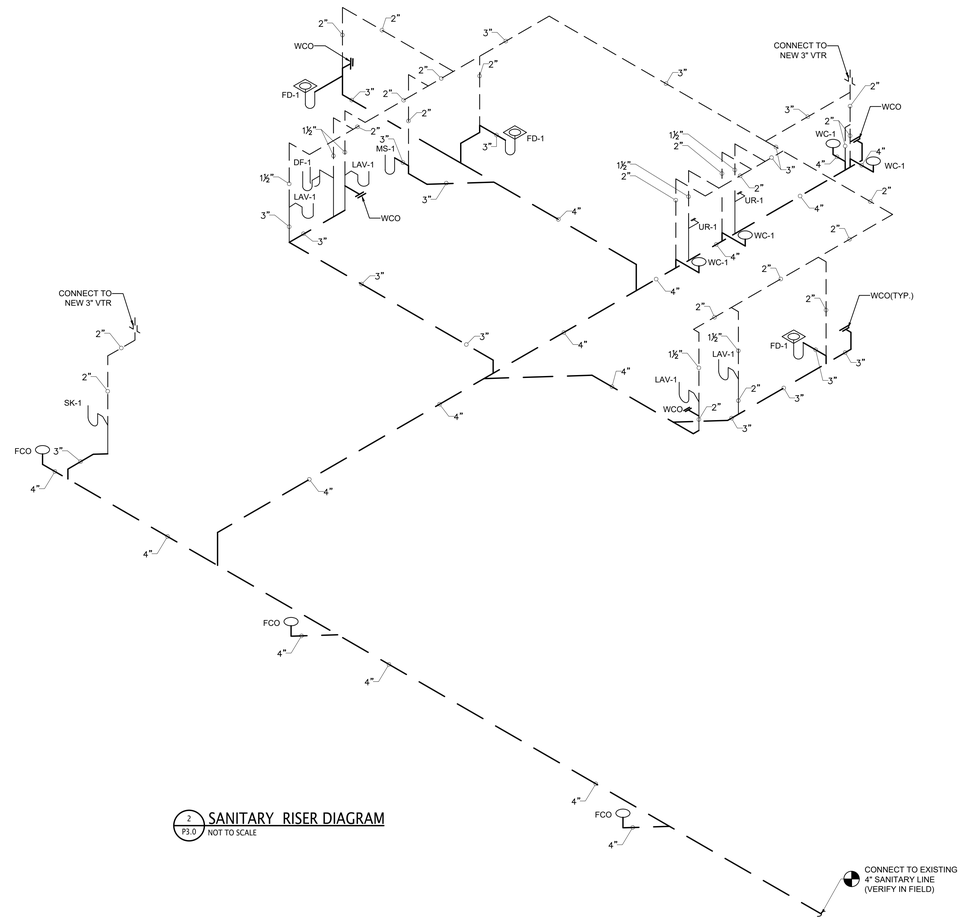
P2.0

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1



1 P3.0 WATER RISER DIAGRAM
NOT TO SCALE



2 P3.0 SANITARY RISER DIAGRAM
NOT TO SCALE

EXPANSION TANKS										
UNIT	NUMBER	MANUFACTURER & MODEL NUMBER	SERVICE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRESSURE RATING (PSI)	DIMENSIONS		SHIPPING WEIGHT (LBS)	NOTES
							DIAMETER (INCH)	HEIGHT (INCH)		
ET-1	1	AMTROL	ST-12C-DD	6.4	3.2	150	12	18	17	1, 2

GENERAL NOTES:
1. SET THE TANK PRESSURE TO EQUAL THE SYSTEM OPERATING PRESSURE. TANK MUST BE DRAINED BEFORE ADJUSTING SET PRESSURE.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS ON INCOMING COLD WATER LINE.

PUMP SCHEDULE								
ID	DESCRIPTION	MANUFACTURER	MODEL NO.	VOLT	PH	TRIM AND REMARKS	SUPPLIED BY	INSTALLED BY
RCP-1	RECIRCULATION PUMP	GRUNDFOS	ALPHA2	120 V	1	2 GPM @ 3.0 FT. HD. INSTALL NEAR WATER HEATER PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE AQUASTAT WITH TIMER KIT	PC	PC

ELECTRIC WATER HEATER																	
UNIT	MANUFACTURER & MODEL NUMBER	NO. OF UNITS	LOCATION	MAXIMUM PRESSURE (PSI)	UNIT CAPACITY			SYSTEM OUTLET TEMP (°F)	ELECTRICAL DATA							DIMENSIONS		SHIPPING WEIGHT (LB)
					STORAGE (GAL)	RECOVERY (GPH)	DEGREE RISE (°F)		NUMBER OF ELEMENTS	KW PER ELEMENT	SIMULTANEOUS / NON-SIMULTANEOUS	POWER (KW)	V	PH	HZ	HEIGHT (INCH)	DIAMETER (INCH)	
WH-1	AO-SMITH DEL-30	1	SERVICE ROOM	150	33	46	75	140	2	4.5	SIMULTANEOUS	9	208	3	60	32"	24"	118

THERMOSTATIC MIXING VALVE											
ITEM	LOCATION	QUANTITY	SERVICE	CAPACITY (GPM)	PRESSURE DROP (PSI)	MINIMUM FLOW (GPM)	MAKE	CW INLET	HIGH TEMP. INLET	LOW TEMP. OUTLET	REMARK
TMV-1	REFER PLAN	4	HOT WATER	5	5	0.5	ACRON MV17-1	½"	½" (140°F)	½" (110°F)	-BRONZE BODY CONSTRUCTION AND LEAD FREE CONSTRUCTION -ASSE CERTIFIED

PLUMBING ROUGHING SIZING SCHEDULE									
SYMBOL	DESCRIPTION	CONNECTION SIZE – INCHES					MANUFACTURER	MODEL	DESCRIPTION
		SOIL / WASTE	VENT	CW	HW	TRAP			
DF-1	DRINKING FOUNTAIN	2"	1½"	½"	–	2"	OASIS	PG8ACSL	TWIN SET CAPACITY 1/5 HP, 115 VOLT
FCO	FLOOR CLEANOUT	4"	–	–	–	–	JAY R SMITH	4020 SERIES	STAINLESS STEEL ROUND COVER
WCO	WALL CLEANOUT	2"	–	–	–	–	JAY R SMITH	4020 SERIES	STAINLESS STEEL ROUND COVER
FD-1	FLOOR DRAIN	3"	2"	–	–	3"	JAY R SMITH	2005 SERIES	CAST IRON BODY WITH FLASHING COLLAR, NICKEL BRONZE ADJUSTABLE STRAINER SECURED GRATE TOP AND TRAP PRIMER CONNECTION.
LAV-1	LAVATORY (WALL HUNG) ADA APPROVED	2"	1½"	½"	½"	1½"	AMERICAN STANDARD	LUCERNE 0355.012	FAUCET: SYMMONS S-60-G-8, METERING SELF CLOSING FAUCET, DRAIN, P-TRAP, & J.R.SMITH 700 SERIES FLOOR MOUNTED WALL SUPPORT. INSULATE TRAP AND HOT WATER SUPPLY. 0.5 GALLONS PER MINUTE
MS-1	MOP SINK	3"	2"	¾"	¾"	3"	FIAT	MSB-2424	FAUCET: CHICAGO FAUCET NO. 540-LD89SCP
TP-1	TRAP PRIMER	–	–	½"	–	–	PRECISON PLUMBING	OREGON #1	PROVIDE ACCESS PANEL AND SHUT-OFF VALVE AHEAD OF TRAP PRIMER
WC-1	WATER CLOSET (FLOOR MOUNTED) FLUSH TANK	4"	2"	¾"	–	INTERNAL	AMERICAN STANDARD	2467-016-020	VITREOUS CHINA, ELONGATED BOWL, SOLID WHITE OPEN FRONT EAT LESS COVER K-4731SC
UR-1	URINAL	2"	1½"	¾"	–	1½"	AMERICAN STANDARD	ALLBROOK 6541.132	WITH WALL CARRIER, MOUNTED AT HANDICAPPED HEIGHT.
SK-1	BREAK-ROOM SINK	2"	2"	½"	½"	1½"	–	–	–

NOTE:
1. INSTALL SERVICE SHUTOFF & CHECK VALVE, COCKS, STOPS, AIR CUSHIONS, VACCUME BREAKERS AND SAFETY DEVICES WHERE REQUIRED BY CODE, SPECIFICATIONS OR DRAWINGS.
2. EXPOSED P-TRAPS TO BE 17GA CHROME PLATED WITH CLEANOUT AND ESCUTCHEON PLATE.
3. STOP TO BE CHROME PLATED, ½" ANGLE VALVE WITH CHROME PLATED 12" LONG, ½" O.D. FLEXIBLE RISER AND ESCUTCHEON PLATE.
4. ALL DRAIN AND WATER PIPING TO LAVATORIES TO BE INSULATED WITH HANDI 'LAV-GUARD' INSULATION KIT BY TRUEBRO.

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
JASON WISTREICH
19383
LICENSED
PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
215.779.7772

MICHAEL BUCKLEY, AIA
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248
PROJECT NORTH

PLUMBING SCHEDULE AND RISERS

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

P3.0

ISSUED FOR PERMIT

ELECTRICAL SYMBOLS LIST

LIGHTING

E1	EMERGENCY WALL PACK LIGHT FIXTURE WITH 90 MINUTES BATTERY BACKUP
X1	EMERGENCY WALL PACK LIGHT FIXTURE AND EXIT SIGN WITH 90 MINUTES BATTERY BACKUP
X2	DIRECTIONAL EMERGENCY EXIT LIGHTS
R1	REMOTE EMERGENCY IGHT

SWITCHES AND CONTROLS

S_a	20A SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE CONTROLLED.
S_{OS}	WALL OCCUPANCY SWITCH
S_D	DIMMER SWITCH
a b c d	SWITCH BANK

WIRING SYSTEMS

3 5 UP–	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 2#12 ø, 2#12 N. & 2#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
3 5 7 UP–	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 3#12 ø, 3#12 N. & 3#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
	CONDUIT AND WIRE TO BUILDING GROUND.
	EXISTING
	NEW

ELECTRICAL DRAWING LIST

POWER AND TELECOMMUNICATION

J	JUNCTION BOX WITH BLANK COVER PLATE, FLUSH IN FLOOR.
A	SPECIAL RECEPTACLE AS REQUIRED PER EQUIPMENT SPECIFICATION
GFI	DUPLEX GFI RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.
	DEDICATED DUPLEX RECEPTACLE.
GFI	DEDICATED DUPLEX GFI RECEPTACLE.
CL	DUPLEX CEILING MOUNTED RECEPTACLE
F	DUPLEX FLOOR MOUNTED RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE – 20A–1P, 125V, NEMA 5–20R.
	TELEPHONE/DATA OUTLET, 4"SQUARE OUTLET BOX WITH SINGLE GANG COLLAR AND BLANK PLATE. PROVIDE 3/4" E.C., U.O.N., UP TO HUNG CEILING AND TERMINATE WITH 90° ELBOW, BUSHING AND DRAG WIRE.
	DATA OULTLET
J	JUNCTION BOX
	DUPLEX SWITCHED RECEPTACLE
D	DUPLEX DROP RECEPTACLE / AS REQUIRED.
D	QUAD DROP RECEPTACLE / AS REQUIRED.
B	DUPLEX BOX RECEPTACLE / AS REQUIRED.
B	QUAD BOX RECEPTACLE / AS REQUIRED.

MOTORS AND CONTROLS

M SW	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.
M WP	AC OUTDOOR UNIT MOTOR AS NOTED WITH CONTROLLER AND DISCONNECT SWITCH WITH WEATHER PROOF.
	NON FUSED DISCONNECT SWITCH AMPERAGE, AND NUMBER OF POLES AS NOTED.
A	30A/240V NON FUSED DISCONNECT SWITCH
B	60A/240V NON FUSED DISCONNECT SWITCH
C	100A/240V NON FUSED DISCONNECT SWITCH
D	200A/240V NON FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH, FURNISHED BY HVAC/CONTRACTOR, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
1.5 kW	ELECTRICAL HEATER, NUMBER DENOTES HEATER RATING
S_M	MANUAL MOTOR SWITCH
LC	LIGHTING CONTACTOR
TC	TIME CLOCK

ANNOTATION

X	KEYED NOTE REFERENCE
+24"	INDICATES MOUNTING HEIGHT, CENTER LINE TO FINISHED FLOOR.
1 E/2–1	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP; DRAWING NUMBER INDICATED ON BOTTOM

POWER DISTRIBUTION

	DISTRIBUTION PANELBOARD, 208V/120V–SURFACE OR FLUSH MOUNTED.

ELECTRICAL ABBREVIATIONS

A	AMPERES	EA	EACH
A/C, AC	AIR CONDITIONING UNIT	EM	EMERGENCY
AF	AMPERE FRAME/AMP FUSE	EMT	ELECTRICAL METALLIC TUBING
AFF	ABOVE FINISHED FLOOR	EQUIP	EQUIPMENT
AS	AMP SWITCH	ER	EXISTING TO BE RELOCATED
AIC	AMPS INTERRUPTING CAPACITY	FA	FIRE ALARM
AT	AMP TRIP	E	EXISTING
ATS	AUTOMATIC TRANSFER SWITCH	FL	FLOOR
AUTO	AUTOMATIC	G	GROUND
AWG	AMERICAN WIRE GAUGE	GFI	GROUND FAULT INTERRUPTER
C	CONDUIT	GP	GENERAL PURPOSE
C/B,CB	CIRCUIT BREAKER	HP	HORSEPOWER
CKT	CIRCUIT	HWH	HOW WATER HEATER
CL	CURRENT LIMITER	HZ	HERTZ
CLG	CEILING	IC	INTERRUPTING CAPACITY
COMM	COMMUNICATION	PP	POWER PANEL
CT	CURRENT TRANSFORMER	PWR	POWER
CU	COPPER	R	REMOVE
DIA	DIAMETER	RE	RELOCATED EXISTING
DISC	DISCONNECT	REC	RECEPTACLE
DN	DOWN	RGS	RIGID GALVANIZED STEEL
DP	DISTRIBUTION PANEL	RR	REMOVE & RELOCATE
DWG	DRAWING	SECT	SECTION
IG	ISOLATED GROUNDING	SPDT	SINGLE POLE DOUBLE THROW
JB	JUNCTION BOX	SPST	SINGLE POLE SINGLE THROW
KCMIL	ONE THOUSAND CIRCULAR MILS	SPEC	SPECIFICATION
KV	KILOVOLT	SW	SWITCH
KVA	KILOVOLT–AMPERES	SWBD	SWITCHBOARD
KW	KILOWATTS	SYM	SYMMETRICAL
LTG	LIGHTING	SYS	SYSTEMS
MAX	MAXIMUM	TELE	TELEPHONE
MC	MOTOR CONTROLLER	TEMP	TEMPERATURE
MCB	MAIN CIRCUIT BREAKER	TXF	TOILET EXHAUST FAN
MLO	MAIN LUGS ONLY	TYP	TYPICAL
MTD	MOUNTED	UON	UNLESS OTHERWISE NOTED
MTS	MANUAL TRANSFER SWITCH	V	VOLT/VOLTAGE
N	NEUTRAL	VA	VOLT AMPERE
NIC	NOT IN CONTRACT	WP	WEATHER PROOF
NTS	NOT TO SCALE	ø	PHASE
PNL	PANEL	DW	DISHWASHER
W	WATT		
REF	REFRIGERATOR		

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CURRENT VERSION OF THE 2020 NATIONAL ELECTRICAL CODE AND 2018 INTERNATIONAL ENERGY CONSERVATION CODE.
2. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR FAILURE TO DO SO.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.
4. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
5. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
6. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
7. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
8. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.
9. CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE–EXISTING CONDITIONS OR BETTER.
10. MINIMUM SIZE OF CONDUIT SHALL BE ¾", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.
11. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
12. PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CANCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
13. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
14. FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.
15. ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAINTIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
16. ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
17. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF NEW WORK WITH THE GENERAL CONTRACTOR AND OTHER ASSOCIATED TRADES IN A TIMELY MANNER. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. ALL CONDUITS AND EQUIPMENT TO BE CONCEAL ED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.
19. ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.
20. OUTLET BOXES AND JUNCTION BOXES ON OPPOSITE SIDES OF FIRE–RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, UNLESS FIRE–RATED BOXES OR PUTTY PADS ARE UTILIZED.
21. COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITH THE ENGINEER AND OWNER BEFORE INSTALLATION.
22. COORDINATE THE MOUNTING HEIGHT AND LOCATION OF RACEWAYS, COMMUNICATIONS OUTLETS, AND RECEPTACLES WITH THE ARCHITECTURAL CASEWORK DRAWINGS AND DETAILS. COORDINATE LOCATIONS OF LIGHT FIXTURES, SWITCHES, AND RELATED DEVICES WITH THE ARCHITECTURAL DRAWINGS AND DETAILS.
23. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL LUMINARIES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.
24. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.
25. LIGHTING FIXTURES PROVIDED WITH EMERGENCY BATTERY PACKS AND INDICATED WITH SWITCH CONTROL SHALL BE WIRED WITH BATTERY CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCH CONTROL.
26. NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT NUMBERS IN PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD.

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS — MICHAEL T. BUCKLEY — 39383 — LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 590
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL SYMBOLS AND ABBREVATION

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E0.1

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

D. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOROPERATION,MAINTANANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

E. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.

F. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

G. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

H. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

I. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

J. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT ND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

O. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATED OF INSPECTION AND APPROVAL.

2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

1) "PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE. AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5) "WIRING": RACEWAY. FITTINGS, WIRE, BOXES, AND RELATED ITEMS.

6) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.

7) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

C. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. SERVICE: 120/208 VOLT, 1 PHASE, 3 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

b. DISTRIBUTION: 120/208 VOLT, 1 PHASE, 3 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

4) HEIGHTS OF OUTLETS:

a. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:

- RECEPTACLES AND TELEPHONES: 1 FT-6 IN.
- WALL SWITCHES: 4 FT-0 IN.
- WALL FIXTURES: 7 FT-0 IN.
- MOTOR CONTROLLERS: 5 FT-0 IN.
- CLOCKS: 7 FT 6 IN

b. EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.

- SINGLE ROD: SIMILAR TO GRINNELL FIG. 281.
- MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS.
- CLIP FORM NAILS FLUSH WITH INSERTS.
- MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

F. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.

G. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

H. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

I. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

3. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH THE 2020 NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE 2021 EXISTING INTERNATIONAL BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

1) PROJECT NAME AND LOCATION

2) NAME OF ARCHITECT AND ENGINEER

3) ITEM IDENTIFICATION

4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1) SAFETY/DISCONNECT SWITCHES

2) FUSES

3) CIRCUIT BREAKERS

4) PANELBOARDS/LOADCENTER (INCLUDING DIMENSIONS, SCHEDULES, AND CATALOG CUTS).

5) RACEWAYS

6) WIRE AND CABLE

7) WALL SWITCHES

8) INSERTION RECEPTACLES

9) MOMENTARY CONTACT SWITCHES

10) TIME SWITCHES

11) LIGHTING FIXTURES.

E. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

5. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6808F. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE- QUICK-BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT-TRIPPING, OPEN A ND CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED. FRAMES, IC AND INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

1) 120 VOLTS, 100-AMP FRAME: 10,000 AMPS, 1 POLE.

2) 120/240 VOLTS, 225-AMP FRAME: 22,000 AMPS MINIMUM

8. RACEWAYS:

A. PROVIDE RACEWAYS COMPLETE WITH BOXES, FITTINGS AND ACCESSORIES. CONDUIT OR TUBING SIZES REFERRED TO IN SPECIFICATIONS AND ON DRAWINGS ARE NOMINAL DIAMETERS. MINIMUM DIAMETER SHALL BE 3/4 IN.

B. MATERIALS

1) RACEWAYS:

a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.

b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.

c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.

d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

2) FITTINGS AND ACCESSORIES:

a. RIGID STEEL: NONSPLIT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.

b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.

c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.

3) BOXES:

a. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.

b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 265/460 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING. FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH ABOVE FLOOR FITTING. TELEPHONE: BUSHED HOLE. POWER: DUPLEX RECEPTACLE OR OTHER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY. FLUSH OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH FLUSH FLOOR FITTING FOR TELEPHONE AND FLUSH DUAL FLAP COVER WITH DUPLEX RECEPTACLE FOR POWER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY.

JKRP
ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHEL TOMAS
139383
LICENSED
PROFESSIONAL ENGINEER
09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL SPECIFICATION
SHEET 01 OF 02

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E0.2

ISSUED FOR PERMIT

ELECTRICAL SPECIFICATIONS

C. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.

PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL FIRE RATED POKE-THROUGH-FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR.

SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER NEC 386.56 AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.

EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.

RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED. EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES. EMT SHALL NOT BE PERMITTED IN RAISED FLOORS. FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE: PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS.

CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION.

RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

D. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH 2020 NATIONAL ELECTRIC CODE ARTICLE 300.19. CABLE SUPPORTS SHALL UTILIZE A ONE-PIECE PLUG WITH POZI-GRIP WEDGING PLUG AS MANUFACTIURED BY OZ-GEDNEY.

INSTALL CABLE SUPPORTS AT THE TOP OF A VERTICAL RISE AND PROVIDE INTERMEDIATE ADDITIONAL SUPPORTS AS REQUIRED TO LIMIT SUPPORTED CONDUCTOR LENGTHS TO NOT GREATER THAN THOSE SPECIFIED IN 2020 NEC TABLE 300.19(A).

ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.

PANEL, JUNCTION AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE. SUPPORT BOXES FROM BUILDING STRUCTURE, INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT. MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING; ADD BOX VOLUME WHERE REQUIRED.

E. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.

F. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

10. WIRE AND CABLE:

A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

D. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFF-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C. FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).

E. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF HOSPITAL GRADE 'BX'.

F. COLOR CODING SHALL BE AS FOLLOWS:

120/208 VOLT SYSTEM:
BLACK FOR A PHASE
RED FOR B PHASE
BLUE FOR C PHASE

1) NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

G. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.

H. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

I. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/208 AND 265/460 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

J. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

K. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP.

PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

11. WIRING DEVICES:

A. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.

B. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/277 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).

C. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.

D. COLORS: COORDINATE COLORS WITH ARCHITECT.

E. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

12. LIGHTING FIXTURES:

A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.

B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.

C. LED DRIVERS SHALL BE ELECTRONIC TYPE, LABELED AS COMPLIANT WITH RADIO FREQUENCY INTERFERENCE (RFI) REQUIREMENTS OF FCC TITLE 47, PART 15 AND COMPLY WITH NEMA SSL 1 "ELECTRONIC DRIVERS FOR LED DEVICES, ARRAYS OR SYSTEMS". LED DRIVERS SHALL HAVE A SOUND RATING OF "A", HAVE A MINIMUM EFFICIENCY OF 85% AND BE RATED FOR A THD OF LESS THAN 20% AT ALL INPUT VOLTAGES.

D. DIMMABLE LED DRIVERS SHALL BE CAPABLE OF DIMMING WITHOUT LED STROBING OR FLICKER ACROSS THEIR FULL DIMMING RANGE. PROVIDE TYPE OF LED DRIVER AS PER LIGHTING FIXTURE SCHEDULE, DIMMABLE LED DRIVERS SHALL BE 0-10V WHERE NOT INDICATED.

E. CONTINUOUS ROW, TWO LAMP STRIP FIXTURES SHALL BE STAGGERED TYPE.

F. EXIT SIGNS SHALL BE PRECISION DIE-CAST ALUMINUM HOUSING WITH LASER-FORMED ACRYLIC LEGEND. EXIT SIGNS SHALL COMPLY WITH UL 924 AND BE MEA APPROVED FOR USE IN CHELSEA CITY. AC POWERED WITH PREMIUM LONG-LIFE NICKEL CADMIUM BATTERY WITH STANDARD UL LISTED 3-HOUR RUN TIME. PROVIDE WITH INTEGRAL AUTOMATIC CHARGER IN A SELF CONTAINED POWER PACK. LED INDICATOR WITH PUSH TO TEST SWITCH.

13. GROUNDING AND BONDING:

A. PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH (NATIONAL ELECTRICAL CODE AND THESE SPECIFICATIONS. THE WIRING SYSTEM SHALL BE INSTALLED AS REQUIRED TO PROVIDE A CONTINUOUSLY GROUNDED SYSTEM. WHERE FLEXIBLE CONDUIT IS USED FOR PART OF A CONDUIT RUN, EXCEPT LIGHTING BRANCH CIRCUITS, AN INSULATED GROUNDING CONDUCTOR SHALL BE PROVIDED IN THE CONDUIT AND CONNECTED TO GROUNDING BUSHINGS AT EACH END OF THE RUN.

B. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.

C. EXTEND EXISTING SYSTEM GROUND TO INCLUDE ALL THE ELECTRICAL EQUIPMENT IN THE SCOPE OF WORK.

D. WHERE FLEXIBLE METALLIC CONDUIT IS USED AN INTERNAL BONDING CONDUCTOR SHALL BE INSTALLED.

E. IN ADDITION, FURNISH A SEPARATE INSULATED GREEN EQUIPMENT GROUND CONDUCTOR WHERE INDICATED ON DRAWINGS AND FOR THE FOLLOWING BRANCH CIRCUITS:
1) CIRCUITS SERVING ANY WALL BOX DIMMER.

2) CIRCUITS SERVING ANY ISOLATED GROUND RECEPTACLES. TERMINATE GROUND DIRECTLY AT AN EQUIPMENT GROUNDING CONDUCTOR TERMINAL OF THE SOURCE AT THE SOURCE , OR AS OTHER WISE NOTED ON DRAWINGS.

3) CIRCUITS SERVING ANY DUPLEX OR SIMPLEX COMPUTER RECEPTACLES

4) ANY CIRCUIT SERVED VIA AN ISOLATION TRANSFORMER OR COMPUTER POWER DISTRIBUTION UNIT.

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS — MICHAEL T. YOUNG — 39383 — LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
215.779.7772
MICHAEL BUCKLEY, AIA
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH: 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL SPECIFICATION
SHEET 02 OF 02

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E0.3

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

ELECTRICAL LIGHTING PLAN GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION & QUANTITY OF ALL THE LIGHT FIXTURES IN FIELD AND PROVIDE NEW LIGHTING CONTROLS AS SHOWN.

B. ELECTRICAL CONTRACTOR SHALL UPDATE THE EMERGENCY LIGHT FIXTURES QUANTITY AND LOCATION AS REQUIRED BY LOCAL AHJ.

C. DIMMER TYPE, REQUIREMENT AND QUANTITY SHALL BE AS PER THE SITE REQUIREMENT IN COORDINATION WITH THE LIGHTING VENDOR/OWNER.

D. EXTERIOR LIGHT FIXTURES & SIGNS WIRING SHALL BE RE ROUTED AND CONTROLLED VIA LIGHTING CONTACTOR (LC) WITH TIME CLOCK/PHOTOCELL. CONTRACTOR SHALL PROVIDE LIGHTING CONTACTOR POLES IN COORDINATION WITH LIGHTING VENDOR AND BASE BID ACCORDINGLY.

E. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTACTOR(LC). ALL THE LIGHT FIXTURES ARE CONTROLLED VIA LIGHTING CONTACTOR WITH TIMER. COORDINATE EXACT CONTROL REQUIREMENTS WITH LIGHTING VENDOR AND PROVIDE AUTOMATIC LIGHTING CONTROLS AS PER IECC 2018. BASE BID ACCORDINGLY.

F. ALL DEVICES, EQUIPMENT, FIXTURES,ETC. MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF HE METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.

G. BRANCH CIRCUIT WIRE SIZES(AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP.BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED A LIMIT OF 3%.

H. CIRCUITS MAY BE COMBINED IN CONDUIT PROVIDED WIRE IS PROPERLY DERATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN NINE(9) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.

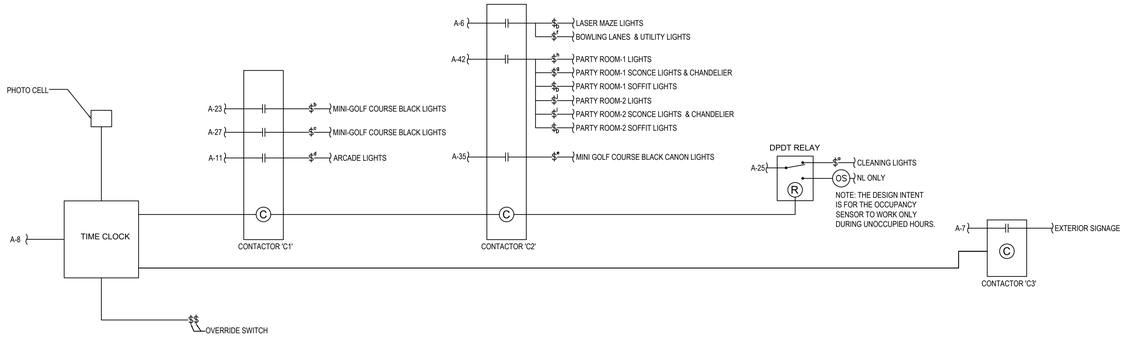
I. EXPOSED CONDUITS, WHERE PERMITTED, SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING STRUCTURAL MEMBERS.

J. CONTRACTOR TO COORDINATE FINAL POWER & LOCATION REQUIREMENTS WITH ARCHITECT/OWNER BEFORE INSTALLATION. BASE BID ACCORDINGLY.

FOR CIRCUIT NUMBERING "A–XX"– REFER TO PANEL–"PH"

ELECTRICAL LIGHTING PLAN KEYED NOTES

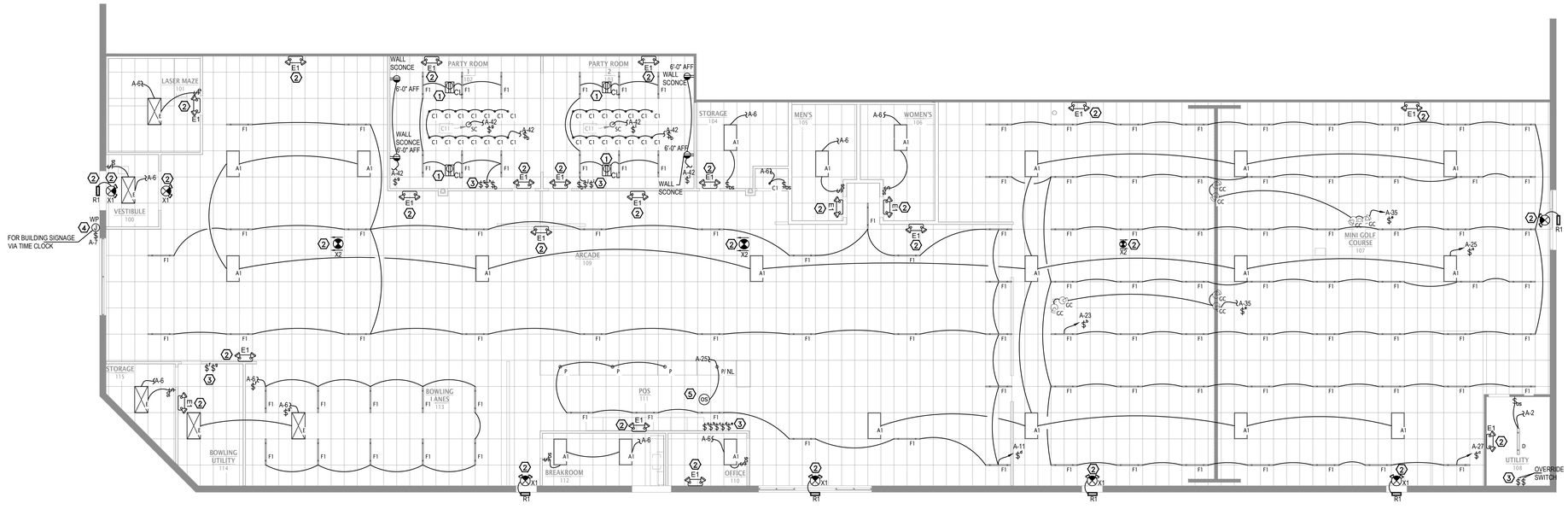
1. PROVIDE CEILING MOUNTED JUNCTION BOX WITH DUPLEX RECEPTACLE FOR SLIM–STRIP PLUG–IN.EXACT LOCATIONS TO BE DETERMINED IN FIELD. CIRCUIT AS INDICATED. BASE BID ACCORDINGLY.
2. CONNECT ALL EGRESS/EMERGENCY LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT VIDE HOT WIRE AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF SWITCHES WITH ARCHITECT/OWNER. CONNECT ALL THE SWITCHES TO THE LIGHTING CONTACTOR WITH TIMER.
4. JUNCTION BOX WITH TOGGLE DISCONNECT SWITCH FOR CONNECTION TO EXTERNAL SIGNAGE.ELECTRICAL CONTRACTOR SHALL SHALL VERIFY IN FIELD THE EXACT MOUNTING LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT/OWNER PRIOR TO ROUGH IN.
5. WIRE LIGHT FIXTURE THRU OCCUPANCY SENSOR FOR TEMPORARY NIGHT LIGHTING TO ALLOW ACCESS TO SWITCH BANK. REFER TO LIGHTING CONTROL SCHEMATIC.



2 E1.0 LIGHT CONTROL SCHEMATIC
N.T.S

Fixture Type	Description	Manufacturer	Model Number	Watts
A1	2x4 LAY-IN TROFFER	EXISTING	EXISTING	35
C1	4" LED DOWN LIGHT	LITHONIA	LDN6-3015-L06WR-LD-MVOLT	21
D	4' LED STRIP LIGHT	LITHONIA	ZL1N-L48-5MR-3000LM-FST-MVOLT-35K-80CRI-WH-HC36	25
E	2x4 LED HIGHBAY FIXTURE WITH WIRE GUARD	LITHONIA	IBE-22LM-MVOLT-40K-WGIBE	166
F1	SLIM STRIP BLACK LIGHT	CHAUVET	UV-18 IRC	51
GC	SPOT LIGHT	UVONIX BLACKSTAR	TRUE 365NM UV LIGHT	120
SC	CHANDELIER	TBD	TBD	80
P	4" PENDANT	ALPHABET LIGHTING	BETA4RP	26
X1	LED EXIT LIGHT WITH DUAL EMERGENCY HEADS(BLACK)	LITHONIA	LHQM-LED-B-R-SD(BLACK)	3
X2	DIRECTIONAL EMERGENCY EXIT LIGHTS	LITHONIA	BE-WR-UM-M2	3
R1	REMOTE EMERGENCY LIGHT	SIGNETIX	MUE-BBB-10-X-W-DG (BLACK)	1.5
E1	SURFACE MOUNTED BATTERY UNIT WITH SELF DIAGNOSTICS	LITHONIA	ELM2-LED-B-SD (BLACK)	3

3 E1.0 LIGHT FIXTURE SCHEDULE
N.T.S



1 E1.0 ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS — JASON WISTREICH — 39383 — LICENSED PROFESSIONAL ENGINEER
09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL LIGHTING PLAN

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E1.0

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

ELECTRICAL POWER PLAN GENERAL NOTES

A. E.C. SHALL COORDINATE WITH OTHER TRADE CONTRACTORS FOR EXACT LOCATION AND POWER REQUIREMENT OF THE EQUIPMENT FROM OTHER TRADES. PROVIDE WIRING AND CONTROLS AS REQUIRED (IF NOT PROVIDED BY THEM), PRIOR TO BID. BASE BID ACCORDINGLY.

B. THE CLEAR WORKING SPACE SHALL BE PROVIDED FOR THE METERS, PANEL BOARDS, AND OTHER ELECTRICAL EQUIPMENT AS PER SECTION 110.26 OF NEC.

C. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITY/ARCHITECT/OWNER FOR EXACT LOCATION OF THE EXISTING SERVICE METER AND OTHER ELECTRICAL DEVICES. PRIOR TO BID. BASE BID ACCORDINGLY.

D. ALL THE CIRCUITS SUPPLYING KITCHEN EQUIPMENT AND SHOWN "GFI" ON POWER PLAN SHALL BE PROTECTED EITHER AT A PANEL WITH GFI RATED BREAKER OR RECEPTACLE WITH GFI AS PER NEC 210.8. IF GFI RECEPTACLES ARE USED, CONTRACTOR SHALL LOCATE THE GFI RECEPTACLES SUCH THAT THESE ARE READILY ACCESSIBLE PER CODE.

E. E.C. SHALL FOLLOW GROUNDING/BONDING AS PER NEC ARTICLE 250.

F. ALL THE RECEPTACLES SHALL BE RATED PER CIRCUIT. E.C. SHALL VERIFY AND MAKE FINAL CONNECTIONS ACCORDINGLY.

G. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI PROTECTION FOR ALL THE FLOOR OUTLETS AS PER NEC ARTICLE 406.4(g).

H. ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED PANEL DIRECTORY FOR ALL THE ELECTRICAL PANELS AS PER NEC 408.4(A).

I. ALL DEVICES, EQUIPMENT, FIXTURES,ETC. MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF HE METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.

J. BRANCH CIRCUIT WIRE SIZES(AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP.BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED A LIMIT OF 3%.

K. CIRCUITS MAY BE COMBINED IN CONDUIT PROVIDED WIRE IS PROPERLY DERATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN NINE(9) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.

L. EXPOSED CONDUITS, WHERE PERMITTED, SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO BUILDING STRUCTURAL MEMBERS.

M. ALL 15A AND 20A, 125V AND 250V NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(6) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. BASE BID ACCORDINGLY.

N. ELECTRICAL CONTRACTOR SHALL PROVIDE LOCK-ON BREAKERS AS PER NEC 422.31(B).

FOR CIRCUIT NUMBERING "A-XX"- REFER TO PANEL-"PH"

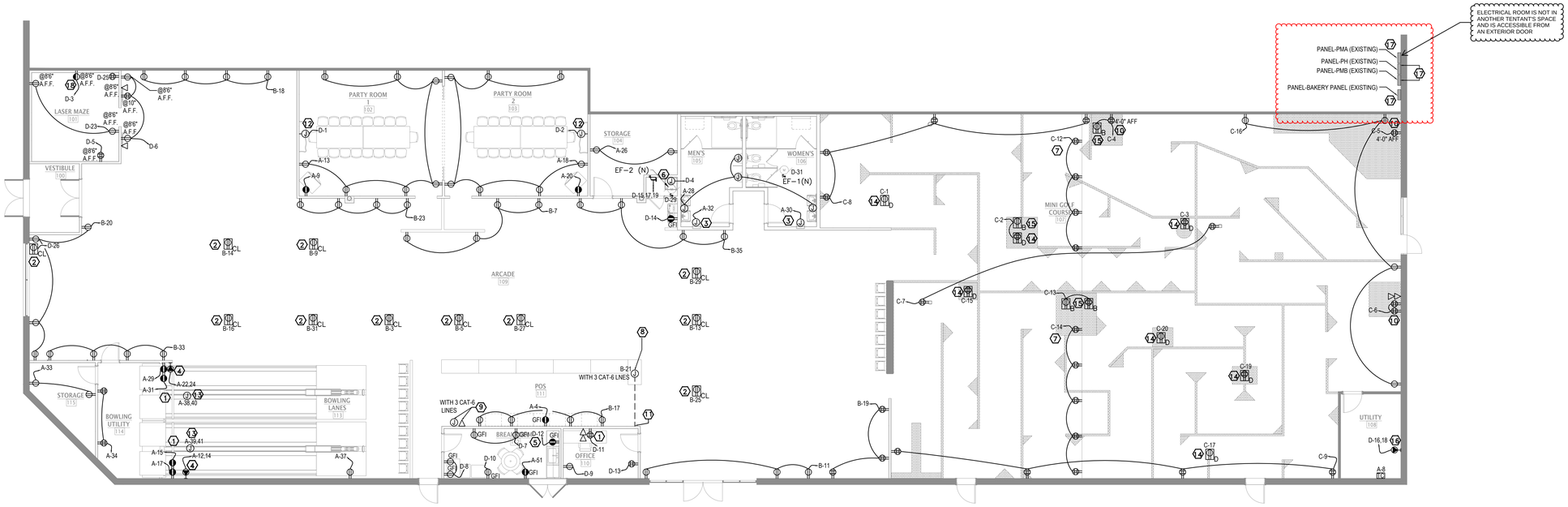
FOR CIRCUIT NUMBERING "B-XX"- REFER TO PANEL-"PMA"

FOR CIRCUIT NUMBERING "C-XX"- REFER TO PANEL-"PMB"

FOR CIRCUIT NUMBERING "D-XX"- REFER TO PANEL-"BAKERY PANEL"

ELECTRICAL POWER PLAN KEYED WORK NOTES

1. PROVIDE DEDICATED 20 AMP OUTLET FOR SECURITY/IT EQUIPMENT(COORDINATE FINAL LOCATION).PROVIDE SEPARATE CIRCUIT FOR WORK STATION.
2. AT ARCADE PROVIDE CEILING MOUNTED QUAD RECEPTACLE WITH DEDICATED CIRCUIT. COORDINATE LOCATION WITH VENDOR AND ARCHITECT.
3. PROVIDE JUNCTION BOX FOR HAND DRYER AT 48" AFF. VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS AND MANUFACTURERS INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN.
4. AT BOWLING MACHINE ROOM PROVIDE, (2) DEDICATED 20AMP, 120V CIRCUITS (1) 20AMP, 208V CIRCUIT. COORDINATE EXACT LOCATION WITH EQUIPMENT VENDOR.
5. COORDINATE LOCATION AND MOUNTING HEIGHT FOR MICROWAVE OUTLET WITH TENANT IN FIELD.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR AND PROVIDE POWER CONNECTIONS FOR WATER HEATER AND RE-CIRCULATION PUMP. BASE BID ACCORDINGLY.
7. AT MINI GOLF AREA PROVIDE UNISTRUT REVISE TO COORDINATE WITH ARCHITECTURAL RECEPTACLES FOR SCAN 360, SPEAKERS AND DISCO BALL. EXACT LOCATIONS TBD. COORDINATE W/ TENANT & THEIR MINI GOLF VENDOR.
   A. LENGTH 58', DEPTH 1.75"
   B. HUNG BY 3/8" ALL-THREAD EVERY 8' O.C. MIN TWO 20 AMP CIRCUIT WITH RECEPTACLES EVERY 6'-0" O.C. TOP MOUNTED QUAD OUTLETS, EVENLY SPACE W.4TH IN CENTER.
8. PROVIDE POWER AND DATA VIA FOUNDATION AT POS.
9. REDEMPTION COUNTER: PROVIDE 20 AMP DEDICATED CIRCUIT TO JUNCTION BOX AT WALL NEXT TO COUNTER. OUTLETS AT REDEMPTION COUNTER TO BE INSTALLED AFTER MILLWORK IS IN PLACE NY TENANT. PROVIDE BACK BOX AND PULL STRING FOR DATA.
10. E.C SHALL COORDINATE WITH ARCHITECT FOR EXACT LOCATION OF WALL QUAD/DUPLEX OUTLETS FOR PROPS. E.C SHALL INSTALL THE WALL OUTLETS AT 4' MINIMUM AND FOR PROPS IN THE CORNERS OUTLETS SHALL BE 36" FROM CORNER. WHERE THE PROPS MOUNTED FLAT TO WALL THE OUTLETS SHALL BE INSTALLED CENTERED TO THE PROP BOX AT 4' MINIMUM. BASE BID ACCORDINGLY.
11. TRENCH POWER AND DATA TO COUNTER. PROVIDE CONSTANT POWER FOR COMPUTERS.
12. E.C. SHALL COORDINATE WITH ARCHITECT FOR EXACT LOCATIONS OF FIRE PLACE. E.C. SHALL PROVIDE THE CONNECTIONS AS PER VENDOR REQUIREMENTS. BASE BID ACCORDINGLY.
13. PROVIDE JUNCTION BOX WITH QUAD RECEPTACLE MOUNTED FLUSH IN CEILING FOR BOWLING MACHINE MONITORS, CIRCUIT AS INDICATED. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH VENDOR. BASE BID ACCORDINGLY.
14. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION OF DUPLEX/QUAD DROP PRIOR TO INSTALLATION. E.C SHALL COORDINATE WITH VENDOR AND PROVIDE THE S.O. FLEX CORD WITH PULL GRIP AT EACH END AND A BOX WITH MOUNTING TABS. THE LENGTH OF THE CORD SHALL BE FROM CEILING JUNCTION BOX TO THE FLOOR. E.C. SHALL SECURE THE BOX TO THE PROP AFTER INSTALLATION. BASE BID ACCORDINGLY.
15. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION OF DUPLEX/QUAD BOX PRIOR TO INSTALLATION. E.C SHALL COORDINATE WITH VENDOR AND PROVIDE THE S.O. CORD TO REACH THE FLOOR WITHOUT THE ELECTRIC BOX INSTALLED. E.C SHALL INSTALL THE BOX ONCE THE PLACEMENT IS FINALIZED BY OWNER AND OUTLET/BOX SHALL BE SECURED INSIDE. SOME OF THESE BOXES SHALL BE USED TO POWER THE FANS, ALSO BOX INSTALLATION IS REQUIRED FOR FEW PROPS. COORDINATE WITH VENDOR/OWNER. BASE BID ACCORDINGLY.
16. E.C SHALL COORDINATE WITH EQUIPMENT VENDORS FOR EXACT LOCATION AND POWER REQUIREMENTS OF AIR COMPRESSOR. BASE BID ACCORDINGLY.
17. E.C SHALL VERIFY THE EXACT LOCATION OF THE EXISTING ELECTRICAL PANELS AND SHALL RE-USE THEM FOR THE TENANT SPACE. RECTIFY/REPLACE THE BREAKERS AS PER THE PANEL SCHEDULE. PROVIDE NEW IF IN-OPERABLE. BASE BID ACCORDINGLY.
18. E.C. SHALL COORDINATE WITH ARCHITECT/VENDOR FOR THE LOCATIONS OF THE OUTLET AND POWER REQUIREMENTS FOR LED BLACK LIGHTS, CIRCULATING FAN, FRESH AIR FAN AND MISSION CONTROL PANEL. BASE BID ACCORDINGLY.
19. PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT/ OWNER.



1 E2.0 ELECTRICAL POWER PLAN
1/8" = 1'-0"

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS · MICHAEL T. BUCKLEY · 39383 · LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL POWER PLAN

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:
1 2024.11.18 PERMIT COMMENTS RESPONSE

AS INDICATED

E2.0

PERMIT COMMENTS RESPONSE

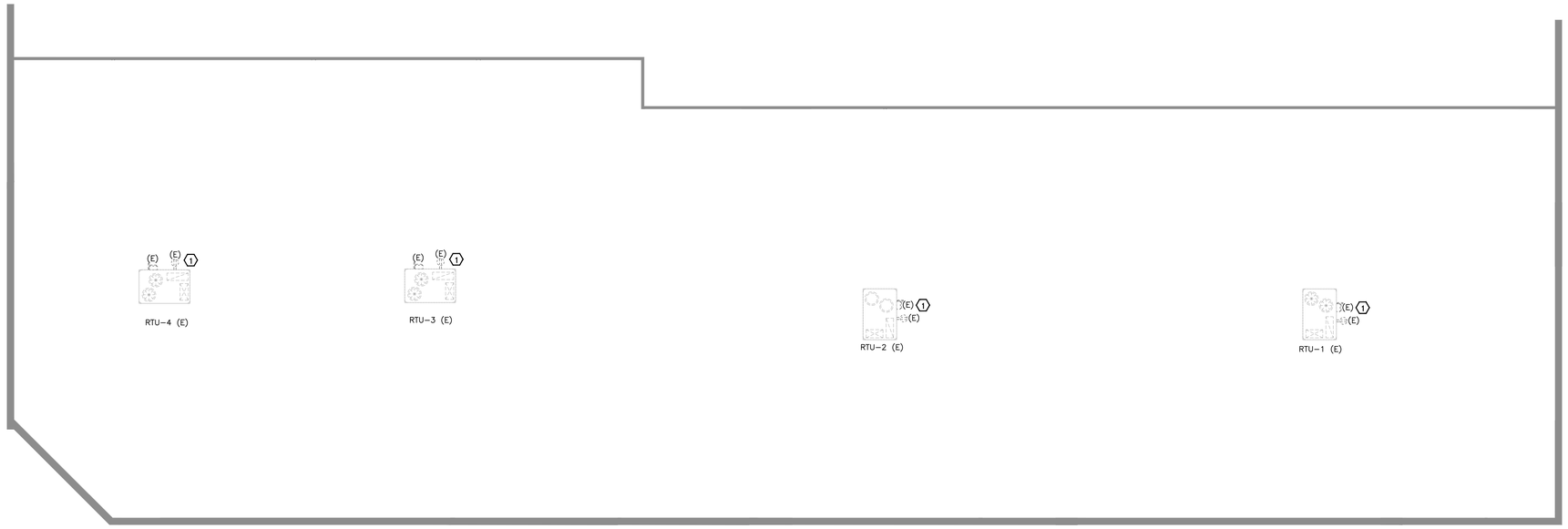
ELECTRICAL ROOF POWER KEY NOTES:

1. ELECTRICAL CONTRACTOR SHALL VERIFY THE OPERABLE CONDITION OF EXISTING HVAC UNITS BREAKERS, DISCONNECT SWITCHES AND REUSE. PROVIDE NEW IF IN-OPERABLE. THE PROVIDED DETAILS ARE FOR REFERENCE PURPOSE ONLY. E.C. SHALL CONFIRM IT AS PER SITE CONDITION. REPORT IF ANY DISCREPANCIES OCCURS.

ELECTRICAL ROOF POWER PLAN:

1. COORDINATE EXACT LOCATION OF HVAC EQUIPMENTS WITH MECHANICAL CONTRACTOR.
2. E.C SHALL PROVIDE THE WEATHER PROOF GFI RECEPTACLE AS PER NEC 210.63

FOR CIRCUIT NUMBERING "D-XX"- REFER TO PANEL-"BAKERY PANEL"



1 / E2.1 ELECTRICAL ROOF POWER PLAN
1/8" = 1'-0"

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL T. BUCKLEY
39383
LICENSED
PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT

HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER

TENANT REMODEL

1580 KELLER PKWY, UNIT 500
KELLER, TX 76248

PROJECT NORTH

ELECTRICAL ROOF POWER PLAN

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E2.1

ISSUED FOR PERMIT

ELECTRICAL RISER KEYED NOTES:

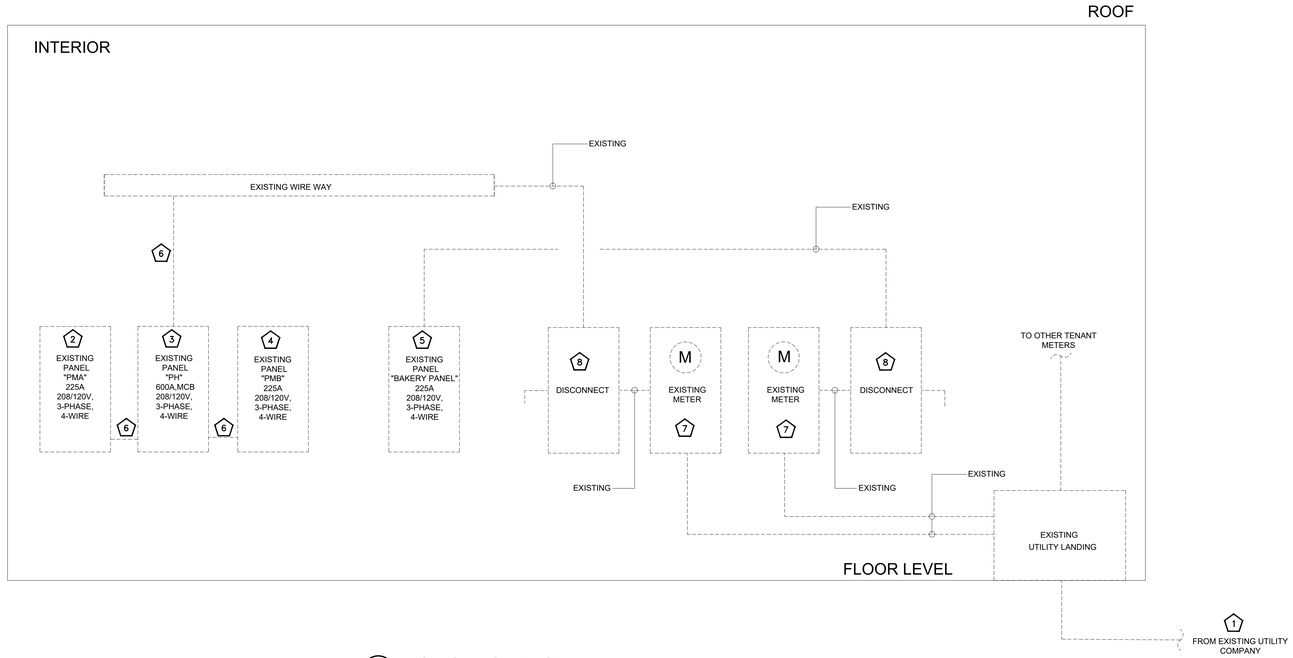
1. EXISTING ELECTRICAL SERVICE FROM UTILITY COMPANY SHALL BE REUSE. REPORT IF ANY DISCREPANCY IS OBSERVED.
2. EXISTING 225A 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "PMA" SHALL REMAIN AND REUSE. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE EXISTING PANEL AND REPLACE OR RECTIFY CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULE. REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED. BASE BID ACCORDINGLY.
3. EXISTING 600A MCB, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "PH" SHALL REMAIN AND REUSE . E.C. TO VERIFY THE OPERABLE CONDITION OF THE EXISTING PANEL AND REPLACE OR RECTIFY CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULE. REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED. BASE BID ACCORDINGLY.
4. EXISTING 225A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "PMB" SHALL REMAIN AND REUSE . E.C. TO VERIFY THE OPERABLE CONDITION OF THE EXISTING PANEL AND REPLACE OR RECTIFY CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULE. REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED. BASE BID ACCORDINGLY.
5. EXISTING 225A MCB, 120/208V, 3 PHASE, 4-WIRE PANEL "BAKERY PANEL" SHALL REMAIN AND REUSE. . E.C. TO VERIFY THE OPERABLE CONDITION OF THE EXISTING PANEL AND REPLACE OR RECTIFY CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULE. REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED. BASE BID ACCORDINGLY.
6. EXISTING ELECTRICAL FEEDERS SHALL REMAIN AND REUSE. E.C SHALL VERIFY THE OPERABLE CONDITION AND REPLACE WITH NEW IF INOPERABLE. BASE BID ACCORDINGLY.
7. EXISTING ELECTRICAL METER SHALL REMAIN AND REUSE . REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED.
8. EXISTING DISCONNECT SHALL REMAIN AND REUSE. E.C. SHALL VERIFY THE OPERABLE CONDITION AND REPLACE WITH NEW IF INOPERABLE. REPORT ON RECORD TO ENGINEER IF ANY DISCREPANCY IS OBSERVED. BASE BID ACCORDINGLY.

ELECTRICAL RISER GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK. BASE BID ACCORDINGLY.
2. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSE ONLY. E.C TO VERIFY EXACT POWER DISTRIBUTION & OPERABLE CONDITION OF EXISTING DEVICES IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCY.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED PANEL DIRECTORY FOR ALL THE ELECTRICAL PANELS AS PER NEC 408.4(A).
4. E.C SHALL VERIFY THE EXACT LOCATION OF THE EXISTING PANELS AND SHALL RE-USE THEM FOR THE TENANT SPACE. RECTIFY/REPLACE THE BREAKERS AS PER THE PANEL SCHEDULE. PROVIDE NEW IF IN-OPERABLE. BASE BID ACCORDINGLY.

ELECTRICAL RISER SYMBOLS

EXISTING ITEM/FEEDER TO REMAIN



1 E3.0 ELECTRICAL RISER DIAGRAM N.T.S

PANEL:	PH (EXISTING)										MOUNTING:	SURFACE
208Y/120	VOLTS,	3	PHASE,	4	WIRE						PANEL LOCATION:	EXISTING
MAIN CB:	600A	MLO:		BUS:	EXISTING	MIN,					FED FROM:	EXISTING
NOTE:NOTE:	L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E: EQUIPMENT, O : OTHER/MISC. (TYPICAL)											

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE		MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	80/3P	RTU-2 (E)	H	7.69	EXISTING	8.39			2#12, #12G, 3/4"C	0.70	L	UTILITY LIGHTS	20	2
3			H	7.69			8.19		2#12, #12G, 3/4"C	0.50	E	REFRIGERATOR	20	4
5			H	7.69				9.29	2#12, #12G, 3/4"C	1.61	L	VESTIBULE, MEN'S AND WOMEN'S RESTROOM, BREA KROOM, OFFICE. STORAGE(115), STORAGE(112) ,LASER MAZE AND BOWLING LANES LIGHTS	20	6
7	20	EXTERNAL SIGNAGE	L	1.00	2#12, #12G, 3/4"C	1.50			2#12, #12G, 3/4"C	0.50	L	TIME CLOCK	20	8
9	20	REFRIGERATOR	E	0.50	2#12, #12G, 3/4"C		0.50					SPARE	20	10
11	20	ARCADE LIGHTS	L	1.67	2#12, #12G, 3/4"C			2.67	2#12, #12G, 3/4"C	1.00	E	BOWLING LANE EQUIPMENT*	#20/2P*	12
13	20	PARTY ROOM-1 GENERAL RECEPTACLE	R	1.26	2#12, #12G, 3/4"C	2.26				1.00	E			14
15	20	BOWLING MACHINE ROOOM RECEPTACLE	R	0.50	2#12, #12G, 3/4"C		0.50					SPARE	20	16
17	20	BOWLING MACHINE ROOOM RECEPTACLE	R	0.50	2#12, #12G, 3/4"C			1.76	2#12, #12G, 3/4"C	1.26	O	PARTY ROOM -2GENERAL RECEPTACLE	20	18
19		SPACE				0.54			2#12, #12G, 3/4"C	0.54	E	REFRIGERATOR	20	20
21		SPACE					1.00		2#12, #12G, 3/4"C	1.00	E	BOWLING LANE EQUIPMENT	#20/2P*	22
23	20	MINI GOLF LIGHTS	L	1.35	2#12, #12G, 3/4"C			2.35		1.00	E			24
25	20	MINI GOLF & ARCADE LIGHTS	L	0.53	2#12, #12G, 3/4"C	0.89			2#12, #12G, 3/4"C	0.36	R	STORAGE GENERAL RECEPTACLE	20	26
27	20	MINI GOLF LIGHTS	L	1.73	2#12, #12G, 3/4"C		2.73		2#12, #12G, 3/4"C	1.00	R	MEN'S & WOMEN'S TOILET FIXTURE POWER	#20	28
29	20	BOWLING MACHINE ROOOM RECEPTACLE	R	0.50	2#12, #12G, 3/4"C			1.50	2#12, #12G, 3/4"C	1.00	M	WOMEN'S TOILET HAND DRYER	#20	30
31	20	BOWLING MACHINE ROOOM RECEPTACLE	R	0.50	2#12, #12G, 3/4"C	1.50			2#12, #12G, 3/4"C	1.00	M	MEN'S TOILET HAND DRYER	#20	32
33	20	STORAGE GENERAL RECEPTACLE	R	0.36	2#12, #12G, 3/4"C		1.08		2#12, #12G, 3/4"C	0.72	R	BOWLING UTILITY QUAD RECEPTACLE	20	34
35	20	MINI GOLF LIGHTS	L	0.96	2#12, #12G, 3/4"C			1.14	2#12, #12G, 3/4"C	0.18	E	REFRIGERATOR	20	36
37	20	GENERAL RECEPTACLE BOWLING LANES	R	0.18	2#12, #12G, 3/4"C	1.18			2#12, #12G, 3/4"C	1.00	E	BOWLING EQUIPMENT	20/2P*	38
39	20-2P*	BOWLING EQUIPMENT	E	1.00	2#12, #12G, 3/4"C		2.00			1.00	E			40
41			E	1.00					2#12, #12G, 3/4"C	1.78	L	PARTYROOM-1 &2 LIGHTS	20	42
					TOTAL CONNECTED LOAD (KVA)	16.25	15.99	18.71	"*-NEW MCB AS RATED TO BE REPLACED AS SHOWN IN PANEL SCHEDULE", "#-LOCK-ON BREAKER TO BE PROVIDED"					

PANEL:	PMA (EXISTING)										MOUNTING:	SURFACE
208Y/120	VOLTS,	3	PHASE,	4	WIRE						PANEL LOCATION:	EXISTING
MAIN CB:		MLO:	225A	BUS:	EXISTING	MIN,					FED FROM:	EXISTING
NOTE:NOTE:	L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E: EQUIPMENT, O : OTHER/MISC. (TYPICAL)											

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE		MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1		SPACE				5.76			EXISTING	5.76	E	RTU-3 (E)	60/3P	2
3	20	ARCADE CEILING GAME RECEPTACLE	E	1.01	2#12, #12G, 3/4"C		6.78			5.76	E			4
5	20	ARCADE CEILING GAME RECEPTACLE	E	1.01	2#12, #12G, 3/4"C			6.78		5.76	E			6
7	20	ARCADE AREA-GAME RECEPTACLES	E	1.96	2#12, #12G, 3/4"C	7.72			EXISTING	5.76	E	RTU-4 (E)	60/3P	8
9	20	ARCADE CEILING GAME RECEPTACLE	E	1.01	2#12, #12G, 3/4"C		6.78			5.76	E			10
11	20	ARCADE AREA-GAME RECEPTACLES	E	1.44	2#12, #12G, 3/4"C			7.20		5.76	E			12
13	20	ARCADE CEILING GAME RECEPTACLE	E	1.01	2#12, #12G, 3/4"C	2.02			2#12, #12G, 3/4"C	1.01	E	ARCADE CEILING GAME RECEPTACLE	20	14
15		SPACE					1.01		2#12, #12G, 3/4"C	1.01	E	ARCADE CEILING GAME RECEPTACLE	20	16
17	20	REDEMPTION COUNTER	R	0.80	2#12, #12G, 3/4"C			2.76	2#12, #12G, 3/4"C	1.96	E	ARCADE AREA-GAME RECEPTACLES	20	18
19	20	ARCADE AREA GENERAL QUAD RECEPTACLE	R	1.08	2#12, #12G, 3/4"C	3.04			2#12, #12G, 3/4"C	1.96	E	ARCADE AREA-GAME RECEPTACLES	20	20
21	20	ARCADE POS	R	0.50	2#12, #12G, 3/4"C		0.50					SPARE	20	22
23	20	ARCADE AREA GAME RECEPTACLE	R	1.96	2#12, #12G, 3/4"C			1.96				SPARE	20	24
25	20	ARCADE CEILING GAME RECEPTACLE	R	1.01	2#12, #12G, 3/4"C	1.01						SPARE	20	26
27	20	ARCADE CEILING GAME RECEPTACLE	R	1.01	2#12, #12G, 3/4"C		1.01					SPARE	20	28
29	20	ARCADE CEILING GAME RECEPTACLE	R	1.01	2#12, #12G, 3/4"C			1.01				SPARE	20	30
31	20	ARCADE CEILING GAME RECEPTACLE	R	1.01	2#12, #12G, 3/4"C	1.01						SPARE	20	32
33	20	ARCADE AREA GAME RECEPTACLE	R	1.96	2#12, #12G, 3/4"C		1.96					SPARE	20	34
35	20	ARCADE AREA GAME RECEPTACLE	R	1.96	2#12, #12G, 3/4"C			1.96						36
37	20	SPARE				0.00						SPARE	30/3P	38
39	20	SPARE					0.00							40
41		SPACE						0.00				SPARE	20	42
					TOTAL CONNECTED LOAD (KVA)	20.57	18.03	21.67	"*-NEW MCB AS RATED TO BE REPLACED AS SHOWN IN PANEL SCHEDULE"					

PANEL:	PMB (EXISTING)										MOUNTING:	SURFACE
208Y/120	VOLTS,	3	PHASE,	4	WIRE						PANEL LOCATION:	EXISTING
MAIN CB:		MLO:	225A	BUS:	EXISTING	MIN,					FED FROM:	EXISTING
NOTE:NOTE:	L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E: EQUIPMENT, O : OTHER/MISC. (TYPICAL)											

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	GFC PROP	E	0.18	2#12, #12G, 3/4"C	1.26			2#12, #12G, 3/4"C	1.08	E	CEMETARY PROP	20	2
3	20	SPELL WELL PROP	E	0.54	2#12, #12G, 3/4"C		1.62		2#12, #12G, 3/4"C	1.08	E	GARGOYLE/BOBO- PROP	20	4
5	20	GIANT SKULL PROP	E	0.36	2#12, #12G, 3/4"C			1.80	2#12, #12G, 3/4"C	1.44	E	ZOMBIE PROP	20	6
7	20	GOLF AREA-GENERAL RCPT	R	1.44	2#12, #12G, 3/4"C	2.88			2#12, #12G, 3/4"C	1.44	R	QUADS MINI GOLF	20	8
9	20	QUADS MINI GOLF	R	1.44	2#12, #12G, 3/4"C		1.44					SPACE		10
11		SPACE						1.44	2#12, #12G, 3/4"C	1.44	R	MINI GOLF UNI-STRUT RECEPTACLE	20	12
13	20	BEAST BOX PROP	E	1.08	2#12, #12G, 3/4"C	2.88			2#12, #12G, 3/4"C	1.80	R	MINI GOLF UNI-STRUT RECEPTACLE	20	14
15	20	WERE WOLF PROP	E	0.36	2#12, #12G, 3/4"C		0.90		2#12, #12G, 3/4"C	0.54	R	MINI GOLF GENERAL RCPT	20	16
17	20	LH PROP	E	0.18	2#12, #12G, 3/4"C			0.36	2#12, #12G, 3/4"C	0.18	R	GOLF COURSE GENERAL RCPT	20	18
19	20	WITCH PROP	E	0.36	2#12, #12G, 3/4"C	0.54			2#12, #12G, 3/4"C	0.18	E	HH PROP	20	20
21	20	SPARE					0.00					SPARE	20	22
23	20	SPARE										SPARE	20	24
25	20	SPARE										SPACE		26
27	20	SPARE										SPACE		28
29	20	SPARE						0.00				SPACE		30
					TOTAL CONNECTED LOAD (KVA)	7.56	3.96	3.60	"*-NEW MCB AS RATED TO BE REPLACED AS SHOWN IN PANEL SCHEDULE"					

PANEL:	BAKERY PANEL (EXISTING)										MOUNTING:	SURFACE
208Y/120	VOLTS,	3	PHASE,	4	WIRE						PANEL LOCATION:	EXISTING
MAIN CB:	225A	MLO:		BUS:	EXISTING	MIN,					FED FROM:	EXISTING
NOTE:NOTE:	L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, E: EQUIPMENT, O : OTHER/MISC. (TYPICAL)											

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE		MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	FIRE PLACE	R	0.18	2#12, #12G, 3/4"C	0.36			2#12, #12G, 3/4"C	0.18	R	FIRE PLACE	20	2
3	20	LASER MAZE	R	0.36	2#12, #12G, 3/4"C		0.54		2#12, #12G, 3/4"C	0.18	O	RCP-1	20	4
5	20	LAZER MAZE QUAD RECEPTACLE	R	1.35	2#12, #12G, 3/4"C			1.89	2#12, #12G, 3/4"C	0.54	R	LASER MAZE	20	6
7	20	BREAKROOM RECEPTACLE	R	0.36	2#12, #12G, 3/4"C	0.72			2#12, #12G, 3/4"C	0.36	E	BREAKROOM COUNTER TOP RECEPTACLE	20	8
9	20	OFFICE GENERAL RECEPTACLE	R	0.18	2#12, #12G, 3/4"C		0.68		2#12, #12G, 3/4"C	0.50	E	BREAKROOM ICEMAKER	20	10
11	20	OFFICE DESKTOP OUTLET	R	0.36	2#12, #12G, 3/4"C			1.36	2#12, #12G, 3/4"C	1.00	E	BREAKROOM MICROWAVE	20	12
13	20	OFFICE GENERAL RECEPTACLE	R	0.36	2#12, #12G, 3/4"C	0.86			2#12, #12G, 3/4"C	0.50	E	WATER FOUNTAIN	20	14
15			O	3.00			4.50		2#10, #10G, 3/4"C	1.50	O	AIR COMPRESSOR	30/2P*	16
17	40/3P*	WATER HEATER(WH-1)	O	3.00	3#8, #10G, 3/4"C			4.50		1.50	O			18
19			O	3.00		8.76				5.76	E			20
21	20	ROOF RTU RECEPTACLES	R	0.90	2#12, #12G, 3/4"C		6.66		EXISTING	5.76	E	RTU-1 (E)	60/3P	22
23								5.76		5.76	E			24
25	20	SPARE				0.00						SPARE	20	26
27							0.00					SPARE	20	28
29	20	EF-2(N)	M	0.61	2#12, #12G, 3/4"C			0.61				SPACE		30
31	20	EF-1(N)	M	0.23	2#12, #12G, 3/4"C	0.23						SPARE	20	32
33	20	SPARE					0.00					SPARE	20	34
35	20	SPARE						0.00				SPARE	20	36
37		SPACE				0.00						SPARE	20	38
39	20	SPARE					0.00					SPARE	20	40
41	20	SPARE						0.00				SPARE	20	42
					TOTAL CONNECTED LOAD (KVA)	10.93	12.38	14.13	"*-NEW MCB AS RATED TO BE REPLACED AS SHOWN IN PANEL SCHEDULE"					

2 E3.0 ELECTRICAL PANEL SCHEDULES N.T.S

JKRP ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS — JASON WISTREICH — 39383 — LICENSED PROFESSIONAL ENGINEER

09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772

MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
182 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY , UNIT 50D
KELLER, TX 76248
PROJECT NORTH

ELECTRICAL RISER DIAGRAM & PANEL SCHEDULE

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

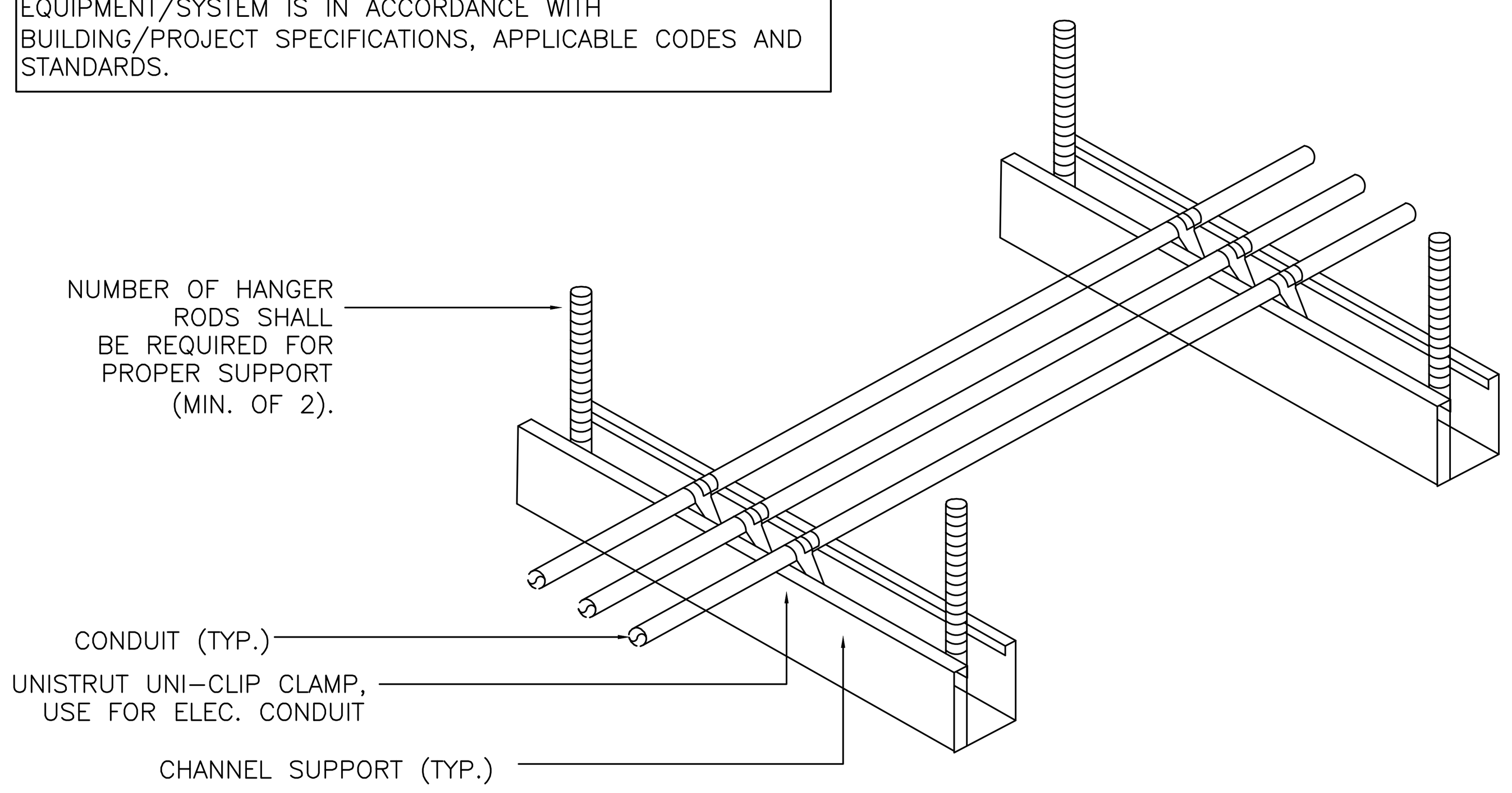
AS INDICATED

E3.0

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1

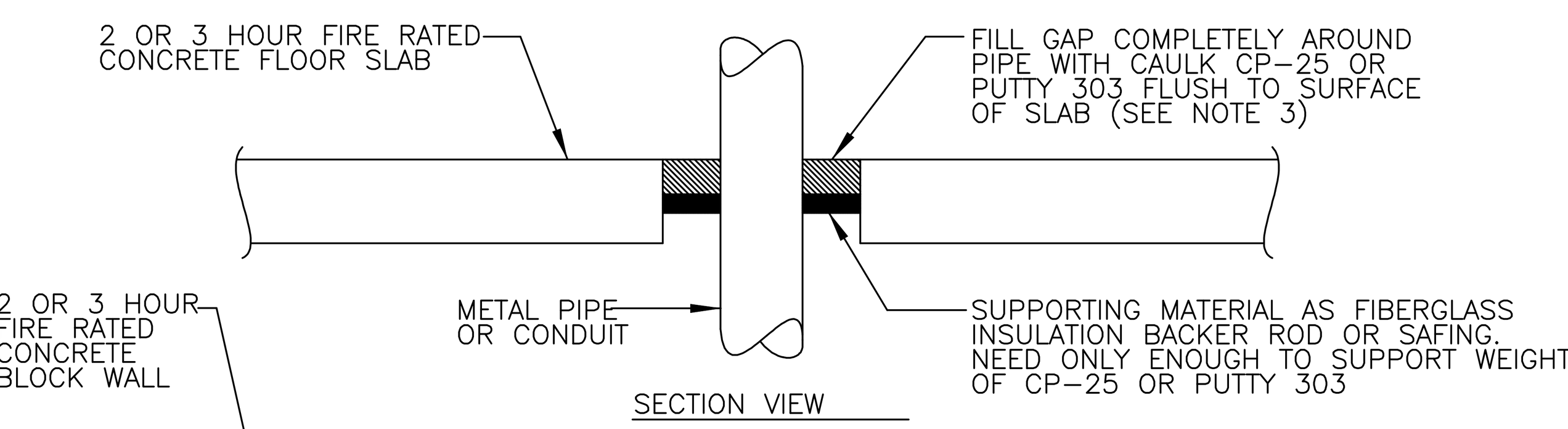
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.

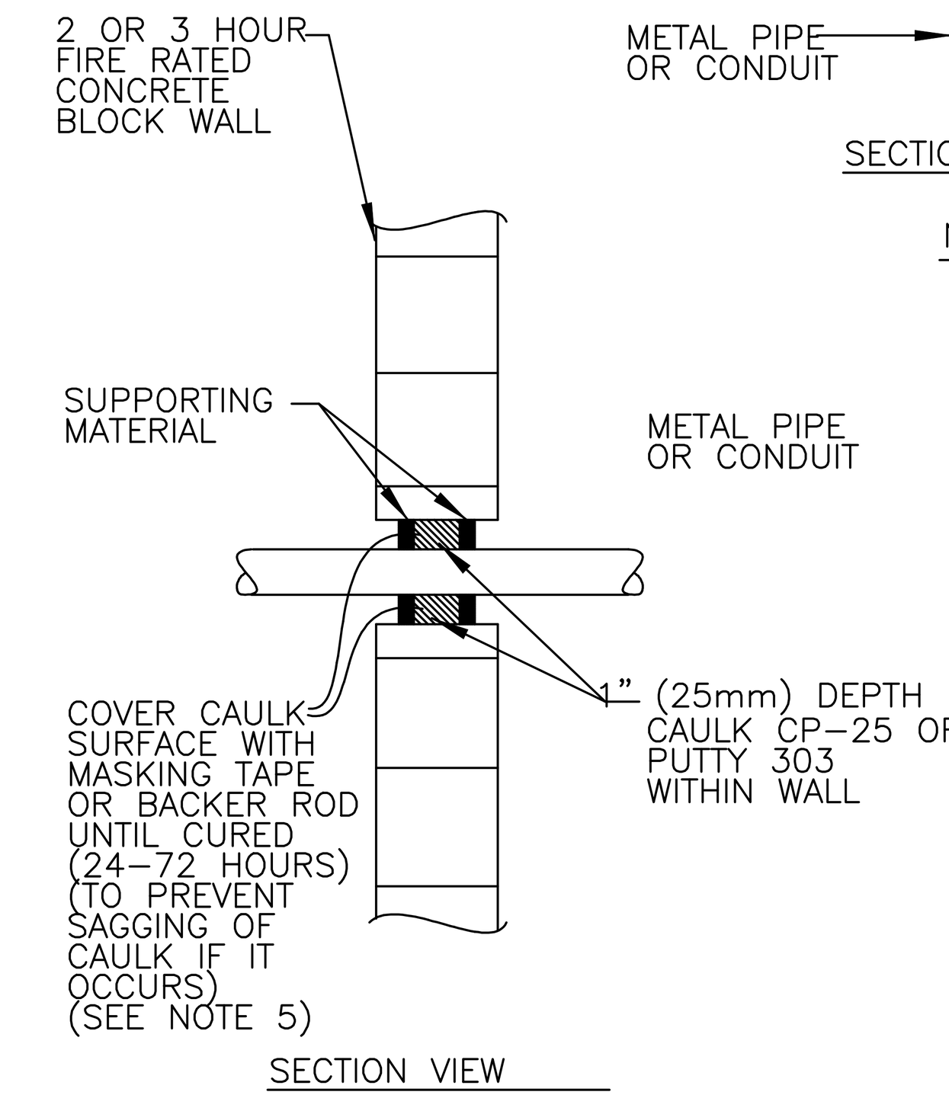


NOTES:

1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

2 / E4.0 CONDUIT SUPPORT DETAIL
N.T.S





NOTES:

① FOR CONCRETE BLOCK WALLS, CENTER CAULK CP-25 OR PUTTY 303 WITHIN WALL WITH DAMMING ON BOTH SIDES.

② RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRE STOP SYSTEMS 49, 33 AND 91.

③ WET INSTALLED DEPTH OF CAULK CP-25 OR PUTTY 303 DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX. 8" (203mm)	2 HRS.
2" (25mm)	MAX. 6" (152mm)	3 HRS.

④ UP TO 40% SHRINKAGE OF CP-25 OR PUTTY 303 IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.

⑤ OPTIONS TO MASKING TAPE TO PREVENT SAGGING:
A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.
B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HRS. THEN HAND FORM INTO OPENING.

⑥ WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm), A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE 3M FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY.

1 / E4.0 CONDUIT SUPPORT DETAIL
N.T.S

JKRP
ARCHITECTS
100 EAST PENN SQUARE
SUITE 1080
PHILADELPHIA, PA 19107
215 . 928 . 9331
JKRPARCHITECTS.COM

STATE OF TEXAS
MICHAEL TOBIAS
139383
LICENSED PROFESSIONAL ENGINEER
09.25.2024

JASON WISTREICH, AIA
[redacted]
215.779.7772
MICHAEL BUCKLEY, AIA
[redacted]
315.447.9615

OWNER/CLIENT
HOLLY HERNANDEZ
3524 SHELL RIDGE DR.
FRISCO, TX 75033
619.726.2632

MEP CONSULTANT
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674,
MIAMI, FL 33179
PH- 786.788.0295

MMG - KELLER
TENANT REMODEL
1580 KELLER PKWY, UNIT 50D
KELLER, TX 76248
PROJECT NORTH

ELECTRICAL DETAILS

DATE: 09.25.2024
DRAWN BY: NYE
REVISIONS:

AS INDICATED

E4.0

ISSUED FOR PERMIT

ORIGINAL SHEET SIZE: 30" X 42" ARCH E1