

PLUMBING SPECIFICATIONS

SANITARY, CONDENSATE AND VENT PIPING

A.

ALL HORIZONTAL BRANCHES, SEWER AND DRAIN LINES SHALL BE SLOPED A MINIMUM OF 1/8 INCH PER FOOT FOR PIPE SIZES LARGER THAN 2" AND 1/4 INCH PER FOOT FOR PIPE SIZES 2" AND BELOW UNLESS OTHERWISE INDICATED ON PLANS.

B.

EVERY FIXTURE CONNECTED TO THE DRAINAGE SYSTEM SHALL BE EQUIPPED WITH A WATER SEAL TRAP.

C.

VENT STACKS SHALL NOT PASS THROUGH ROOF AT VALLEYS, ROOF CRICKETS, IN FRONT OF WINDOWS OR WITHIN 6'-0" OF ROOF EDGE.

D.

MATERIALS SHALL BE AS FOLLOWS:

1.

DRAINAGE AND VENT PIPING (BELOW GRADE):

a.

PVC SCHEDULE 40 SOLID WALL PIPE & DWV FITTINGS WITH SOLVENT CEMENT.

2.

DRAINAGE AND VENT PIPING (ABOVE GRADE):

a.

PVC SCHEDULE 40 SOLID WALL PIPE & DWV FITTINGS WITH SOLVENT CEMENT.

b.

LESS THEN 2"-COPPER DRAINAGE TUBE, TYPE DWV ASTM B306 WITH WROUGHT COPPER FITTINGS AND 95-5 SOLDERED JOINTS.

DOMESTIC COLD AND HOT WATER PIPING

A.

PROVIDE WATER HAMMER ARRESTERS SIZED AS INDICATED ON THE DRAWINGS.

B.

PROVIDE DIELECTRIC UNIONS WHERE DISSIMILAR METALS ARE JOINED.

C.

ESCUTCHEONS SHALL BE CHROME PLATED BRASS WITH LOCKING SCREWS WHERE PIPES PASS THROUGH FINISHED WALLS.

D.

EACH HOSE BIBB SHALL BE FURNISHED WITH A VACUUM BREAKER AND SHUT-OFF VALVE.

E.

MATERIALS SHALL BE AS FOLLOWS:

1.

WATER PIPING (BELOW GRADE):

a.

COPPER TYPE "K" ASTM B-88 WITH WROUGHT COPPER FITTINGS AND 95-5 SOLDERED JOINTS. COAT UNDERGROUND PIPING WITH 1/16" THICK BLACK BITUMINOUS PROTECTIVE COATING.

2.

WATER PIPING (ABOVE GRADE):

a.

COPPER TYPE "L" ASTM B-88 WITH WROUGHT COPPER FITTINGS AND 95-5 SOLDERED JOINTS.

3.

PRESSURE AND TEMPERATURE RELIEF LINES: SHALL BE TYPE "M" COPPER WITH WROUGHT COPPER FITTINGS AND 95-5 SOLDERED JOINTS.

F.

SLEEVE PIPING WHEN PENETRATING FOUNDATION WALLS. PIPE SLEEVE SHALL BE TWO PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH THE WALL.

G.

ALL EXPOSED PIPING WITHIN TOILET ROOMS SHALL BE CHROME PLATED.

VALVES

A.

PROVIDE CONTROL VALVES WHERE NOTED ON PLANS, AND AS REQUIRED FOR COMPLETE REGULATION OR CONTROL OF ALL SYSTEM MAINS, BRANCHES TO GROUP OF FIXTURES, AND TO EACH PIECE OF EQUIPMENT.

B.

PROVIDE ACCESS PANELS AS REQUIRED TO VALVES, OR GROUP OF VALVES, WHERE CONCEALED AND FOR PROPER MAINTENANCE AND OPERATION OF SYSTEM.

E.

PROVIDE VALVES AS FOLLOWS:

1.

GATE VALVES (COPPER WATER SERVICE):
3" AND SMALLER SHALL BE BRONZE BODY, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE, 300 PSI NON-SHOCK WATER, SOLDER END
LEAD FREE BY NIBCO MODEL S-113-LF.

2.

BALL VALVES (COPPER WATER SERVICE):
UP TO 2" SHALL BE BRONZE BODY WITH BRASS ALLOY/CHROME PLATED BALL, FULL PORT, LEAD FREE BY NIBCO MODEL S-585-80-LF.

3.

BALL VALVES (COPPER WATER SERVICE):
2 1/2" TO 4" SHALL BE BRASS BODY WITH BRASS/CHROME PLATED BALL, FULL PORT,
LEAD FREE BY NIBCO MODEL S-FF-600A-LF UP TO 3" AND T-FF-600A-LF FOR 4".

HANGERS AND SUPPORTS

A.

PROVIDE ADJUSTABLE HANGERS, INSERTS, BRACKETS, ROLLS, TRAPEZE, CLAMPS AND SUPPLEMENTARY STEEL AS REQUIRED FOR PROPER SUPPORT OF PIPE LINES.

B.

HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPE LINES AND OF ADEQUATE SIZE TO PERMIT COVERING TO RUN CONTINUOUSLY THROUGH HANGERS.

C.

CONTRACTOR SHALL COORDINATE LOCATION OF HANGERS WITH OTHER TRADES.

D.

HANGERS SHALL BE PLACED WITHIN 18 INCHES OF HUB OR JOINT FOR HORIZONTAL CAST IRON PIPE. HUBLESS JOINTS MUST BE SUPPORTED AT EVERY OTHER JOINT EXCEPT THAT WHEN THE LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET THEY SHALL BE PROVIDED AT EACH JOINT.

E.

HANGERS SHALL BE PLACED AT EACH CHANGE OF DIRECTION, WITHIN ONE FOOT OF VALVES AND OTHER APPURTENANCES INSTALLED IN HORIZONTAL PIPING AND NOT MORE THAN THREE FEET FROM END OF EACH BRANCH RUNOUT.

F.

HANGERS SHALL BE ADJUSTABLE CLEVIS TYPE WITH CONTINUOUS THREADED RODS AND SPACING SHALL BE IN ACCORDANCE WITH FBC-PLUMBING TABLE 308.5.

TESTING

A.

COMPLETE WATER PIPING SYSTEM SHALL BE PRESSURE TESTED BY CAPPING OR PLUGGING OPENINGS, FILLING SYSTEM WITH WATER AND APPLYING HYDROSTATIC PRESSURE OF 200 PSI FOR PERIOD OF NOT LESS THAN 2 HOURS.

B.

SOIL WASTE AND VENT PIPING SHALL BE TESTED BY CAPPING OR PLUGGING THE ENDS OF THE SYSTEM AND ALL LINES FILLED WITH WATER TO 10 FEET OF HEAD AND ALLOW TO STAND UNTIL INSPECTION IS MADE AND WATER LEVEL REMAINS CONSTANT FOR A PERIOD OF NOT LESS THAN 2 HOURS.

INSULATION

A.

INSULATION SHALL RUN CONTINUOUS THROUGH WALLS, FLOORS AND CEILINGS.

B.

WHERE INSULATION PASSES THROUGH HANGERS IT SHALL BE PROVIDED WITH A PROTECTION SHIELD, 180 DEGREE ARC GALVANIZED SHEET METAL COVERING 12 INCHES LONG.

C.

DOMESTIC HOT WATER SUPPLY AND RETURN PIPING:
1" THICK GLASS FIBER MOLDED INSULATION WITH PRE-SIZED FACTORY APPLIED FIRE RATED JACKET OF GLASS CLOTH WITH LONGITUDINAL LAP AND BUTT JOINT STRIPS WITH SELF-SEALING ADHESIVE. INSULATION MAY BE 1/2" FOR VERTICAL BRANCHES TO INDIVIDUAL FIXTURES.

D.

ALL ABOVE GROUND A/C CONDENSATE LINES, ELECTRIC WATER COOLER DRAINS, HORIZONTAL PORTIONS OF STORM DRAIN PIPING AND VERTICAL PORTIONS OF PVC STORM DRAIN PIPING RUNNING THROUGH OCCUPIED SPACES:
1" THICK ELASTOMERIC (ARMAFLEX) THERMAL INSULATION WITH BUILT-IN VAPOR BARRIER RATED SELF- EXTINGUISHING ASTM D1056. SEAL ALL SEAMS WITH INSULATION MANUFACTURER'S SOLVENT OR WITH SELF SEALING JOINTS. NO TAPES ARE ALLOWED.

E.

PIPING INSULATION EXPOSED TO THE EXTERIOR SHALL RECEIVE ARMAFLEX EXTERIOR UV RESISTANT "WB" FINISH AND SHALL BE PAINTED TO MATCH ADJACENT COLOR SCHEME.

F.

WHERE STORM LINES ARE UTILIZED TO CONVEY A/C CONDENSATE DRAINAGE, THE ENTIRE PIPE RUN (HORIZONTAL AND VERTICAL) EXTENDING THROUGH THE FLOOR SLABS AND WALLS SHALL BE INSULATED TO PREVENT CONDENSATION.

STERILIZATION

A.

AFTER WATER PIPING HAS BEEN THOROUGHLY FLUSHED OUT, STERILIZE THE LINES BY INTRODUCING INTO THEM A SOLUTION OF CALCIUM HYPOCHLORITE OR CHLORIDE OF LIME. OPEN AND CLOSE ALL VALVES WHILE SYSTEM IS BEING CHLORINATED. AFTER THE STERILIZING AGENT HAS BEEN APPLIED FOR 24 HOURS, TEST FOR RESIDUAL CHLORINE AT THE ENDS OF THE LINES. IF LESS THAN 5 PARTS PER MILLION IS INDICATED, REPEAT THE PROCESS. WHEN THE TESTS SHOW AT LEAST 5 PARTS PER MILLION OF RESIDUAL CHLORINE, FLUSH OUT THE SYSTEM UNTIL ALL TRACES OF THE CHEMICAL USED ARE REMOVED. MAKE NECESSARY CONNECTIONS TO STERILIZE PIPING.

PLUMBING SYMBOL LEGEND

— SAN —

SANITARY PIPE

— — —

VENT PIPE

— RWL —

RAIN WATER LEADER

— SD —

STORM DRAIN

— ESD —

EMERGENCY STORM DRAIN

— CD —

CONDENSATE DRAIN PIPE

— CW —

DOMESTIC COLD WATER PIPE

— HW —

DOMESTIC HOT WATER PIPE

— HWR —

DOMESTIC HOT WATER RETURN PIPE

→

DIRECTION OF FLOW

— PD —

PAN DRAIN PIPE

— PT —

PRESSURE TEMP RELIEF PIPE

CO |

CLEANOUT

| H WCO

WALL CLEANOUT

⊗

FLOOR CLEANOUT

⊗

FLOOR DRAIN, AREA DRAIN OR ROOF DRAIN WITH FULL GRATE

⊗

FLOOR DRAIN WITH TRAP RESEAL

⊥

VENT THRU ROOF

↗

PRESSURE AND TEMPERATURE RELIEF VALVE

⋈

GATE VALVE

⋈

VALVE IN VERTICAL

⋈

BALL VALVE

⋈

CHECK VALVE

⋈

COUPLING OR UNION

⋈

HOSE BIBB

⋈

WATER HAMMER ARRESTOR

⋈

POINT OF CONNECTION BETWEEN EXIST AND NEW

⋈

DEMOLITION TERMINATION POINT

ABV.

ABOVE

AFF

ABOVE FINISHED FLOOR LEVEL

BLW.

BELOW

CEIL., CLG.

CEILING

CO

CLEANOUT

COTG

CLEANOUT TO GRADE

DN

DOWN

FCO

FLOOR CLEANOUT

(N)

NEW

UG

UNDER GROUND

VTR

VENT THRU ROOF

WS

WASTE STACK

NOTE: ALL SYMBOLS MAY NOT BE USED

MARK

DESCRIPTION

WASTE

CW

HW

REMARKS

WC

WATER CLOSET - ADA (FLOOR MOUNTED - BATTERY SENSOR)

4"

1"

-

FIXTURE: AMERICAN STANDARD MODEL NO. 3461.001 MADERA ELONGATED BOWL, 16 1/2" HEIGHT, TOP SPUD OPERATES IN THE RANGE OF 1.1 GPF. TO 1.6 GPF.
FLUSH VALVE: SLOAN ECOS MODEL NO. 8111-1.1-OR BATTERY OPERATED SENSOR 1.1 G.P.F. WITH ELECTRICAL OVERRIDE
TOILET SEAT: CHURCH MODEL NO. 9500SS CT OPEN FRONT SEAT LESS COVER.

LAV

LAVATORY - ADA (WALL HUNG - BATTERY SENSOR)

1-1/4"

1/2"

1/2"

FIXTURE: AMERICAN STANDARD MODEL NO. 0955.001EC "MURRO" WALL HUNG LAVATORY 20 1/2" X 21 1/4" WITH CENTER FAUCET HOLE AND 0059.20 SHROUD/KNEE GUARD.
FAUCET: SLOAN OPTIMA MODEL #EAF-150-ISM WITH EAF-12.0.35 GPM BATTERY OPERATED SENSOR, CHROME PLATED ALL BRASS CONSTRUCTION.
DRAIN: MCGUIRE NO. 8872 1-1/4" TAILPIECE AND NO. 155A PERFORATED GRID CHROME FINISH.
LAVATORY SUPPLY: MCGUIRE MODEL NO. H170LK, 3/8" ANGLE VALVE WITH LOOSE KEY HANDLE, CHROME FINISH.
FIXTURE CARRIER: BY JOSAM#17100 OR ACCEPTED EQUIVALENT.

FD-1

FLOOR DRAIN WITH TRAP PRIMER AT RESTROOMS

3"

-

-

JR SMITH MODEL #2005-NB, 6" ADJUSTABLE SQUARE TOP NICKEL BRONZE FINISH WITH 1/2" TRAP PRIMER CONNECTION.

EW-C-1

ELECTRICAL WATER COOLER (BILEVEL BUBBLER WITH BOTTLE FILLING STATION)

1 1/4"

1/2"

-

EW-C BI-LEVEL W/ SENSOR BOTTLE FILLING SATITION BY ELKAY MODEL EZSTL 8WSLK, BY - LEVEL WATER COOLER WITH EZH2O BOTTLE FILLING STATION WATER FILTER, LAMINAR FLOW ANTI-MICROBIAL PROTECTION IN KEY AREAS.
FINISH: SATIN STAINLESS STEEL

WH-1

WALL HYDRANT AT EXTERIOR WALL

-

3/4"

-

JR SMITH MODEL #5519-SAP; RECESSED 3/4" HOSE THREAD W/ VACUUM BREAKER AND LOOSE KEY OPERATED VALVE BOX COVER, STAINLESS STEEL BOX & COVER (MOUNTED AT 24" AFF).

SK

RELOCATE EXISTING SINK

1-1/2"

1/2"

1/2"

DRAIN: ELKAY(™) MODEL No. LK35B, CHROME FINISH 3-1/2" INLET - 1-1/2" OUTLET WITH MCGUIRE (™) MODEL No. 8912, 1-1/2" TAIL PIECE SINK SUPPLY: MCGUIRE (™) MODEL No. H171LK, 1/2" ANGLE VALVE WITH LOOSE KEY HANDLE, CHROME FINISH, PIPE GUARD: TRUEBO LAV GUARD (™) No. 102 E-Z AERATOR MAX FLOW RATE OF 1.0 GPM.

UR

URINAL - ADA

2"

3/4"

-

FIXTURE: AMERICAN STANDARD MODEL No.6590.001 WASH BROOK, FLOWISE WITH EVERCLEAN
FLUSH VALVE: SLOAN ECOS 81186-0.125 OR

REMARKS:

PLUMBING GENERAL NOTES

1.

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE FLORIDA BUILDING CODE 7TH EDITION (2020), SPECIFICALLY BUT NOT LIMITED TO THE FLORIDA BUILDING CODE 7TH EDITION (2020) - PLUMBING, AND ALL APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES.

2.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE PLUMBING SYSTEMS, ALL IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS.

3.

THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE OF THE WORK AND BECOMING FAMILIAR WITH THE CONDITIONS OF THE WORK PRIOR TO SUBMITTING A BID. THE CONTRACTOR IS REQUIRED TO BECOME FAMILIAR WITH ALL THE CONTRACT DOCUMENTS PERTAINING TO THE PROPOSED WORK. THE SUBMISSION OF A BID SHALL BE SUFFICIENT TO ESTABLISH THAT THE CONTRACTOR HAS INVESTIGATED THE SITE OF THE WORK AND IS SATISFIED AS TO ALL REASONABLE CONDITIONS TO BE ENCOUNTERED, THE WORK TO BE PERFORMED AND THE MATERIALS TO BE PROVIDED IN THE COMPLETION OF THE PROJECT.

4.

FAILURE OF BIDDERS TO MAKE REQUIRED VISITATIONS AND/OR INVESTIGATIONS TO INFORM THEMSELVES FULLY OF EXISTING CONDITIONS, AND TO INCLUDE IN THEIR PROPOSALS A SUM SUFFICIENT TO COVER ALL POSSIBLE FIELD CONDITIONS, WILL NOT IN ANY WAY ENTITLE THEM TO ANY EXTRA CHARGES OVER AND ABOVE THEIR ORIGINAL PROPOSALS.

5.

IT IS THE INTENT OF THE PLANS AND GENERAL NOTES TO PROVIDE A COMPLETE AND OPERATING INSTALLATION INCLUDING ALL NECESSARY ITEMS REQUIRED, EVEN THOUGH ITEMS ARE NOT INDICATED ON THE DRAWINGS OR IN THE NOTES. ALL WORK CONSIDERED NECESSARY FOR THE COMPLETION OF THE WORK IN PROPER MANNER NOT SHOWN ON THE PLANS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO BIDS OTHERWISE WORK SHALL NOT BE ADDITIONALLY CHARGED AFTER BID IS AWARDED.

6.

UPON COMPLETION, CONTRACTOR SHALL CLEAN ALL DUST AND DEBRIS IN AREAS WHERE WORK WAS CONDUCTED.

7.

ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES AT JOB SITE PRIOR TO FABRICATION AND INSTALLATION OF EQUIPMENT.

8.

THE WORK THAT IS TO BE DONE UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE COMPLETION OF THE SYSTEMS SHOWN ON DRAWINGS.

9.

THE DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY BEND, OFFSET, ELBOW OR OTHER FITTINGS WHICH MAY BE REQUIRED FOR THE INSTALLATION IN THE SPACE ALLOCATED.

10.

DRAWINGS ARE NOT TO BE SCALED. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE ARCHITECTURAL AND/OR SITE CONDITIONS SHALL GOVERN EXACT LOCATION OF PIPING AND EQUIPMENT TO BE INSTALLED.

11.

ALL MATERIALS AND EQUIPMENTS SHALL BE NEW AND OF GOOD QUALITY OF RESPECTIVE KIND AND GRADE AND MUST BE FURNISHED SO AS TO PREVENT ANY DELAY IN THE PROGRESS OF THE WORK. ALL WORK THROUGHOUT SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SUFFICIENT NUMBER OF SKILLED WORKMEN.

12.

FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, SEE ARCHITECTURAL DRAWINGS. DO NOT ROUGH-IN ANY PLUMBING FIXTURE AND/OR EQUIPMENT WITHOUT AN APPROVED COPY OF THE CORRESPONDING SHOP DRAWINGS.

13.

FURNISH AND INSTALL CONNECTIONS TO EQUIPMENT PROVIDED BY THE OWNER UNDER THIS CONTRACT, COORDINATE INSTALLATION WITH MANUFACTURER'S RECOMMENDATION.

14.

PLUMBING CONTRACTOR SHALL GUARANTEE ALL WORK FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCES.

15.

CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL ROUGH INS WITH EQUIPMENT AND FIXTURES MANUFACTURER BEFORE MAKING ANY INSTALLATION.

16.

ALL EXPOSED TRIM SHALL BE CHROME PLATED FINISH FOR ALL WATER SUPPLY AND WASTE ASSEMBLIES.

17.

CONTRACTOR SHALL PROTECT AND FIRE SEAL ALL OPENINGS AND PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH ADEQUATE FIRESTOPPING MATERIALS TO MAINTAIN THE INDICATED FIRE RATINGS OF THE ASSEMBLIES BEING PENETRATED.

19.

INSTALL PLUMBING SYSTEMS TO PREVENT RODENTS FROM ENTERING THE STRUCTURE IN ACCORDANCE WITH FLORIDA BUILDING CODE - PLUMBING SECTION 304 "RODENTPROOFING".

20.

PROVIDE CEILING / WALL ACCESS PANELS WHERE INDICATED IN THE DRAWINGS AND WHERE REQUIRED TO ACCESS PLUMBING EQUIPMENT. PANELS SHALL BE RECESSED TYPE, FIRE RATED IF IN FIRE RATED WALLS OR CEILINGS. LOCATIONS OF PANELS SHALL BE COORDINATED WITH ALL THE OTHER TRADES.

21.

ALL ABOVE CEILING ITEMS SUCH AS VALVES, MANUAL VOLUME DAMPERS, SLEEVES, VAV'S, ECT. SHALL BE LOCATED NO HIGHER THAN 4 FEET ABOVE THE CEILING TO ALLOW FUTURE SERVICING BY A LADDER.

22.

ALL PIPING PASSING THROUGH CONCRETE OR CINDER WALL AND FLOORS OR OTHER CORROSIVE MATERIALS SHALL BE PROTECTED IN ACCORDANCE WITH FLORIDA BUILDING CODE - PLUMBING SECTION 305 "PROTECTION OF PIPES AND PLUMBING SYSTEM COMPONENTS".

23.

WASTE PIPING AND WATER SUPPLY PIPING SHALL BE ISOLATED FROM THE BUILDING CONSTRUCTION AT POINTS OF CONTACT WITH RESILIENT SLEEVES, VIBRATION ISOLATORS, OR A MINIMUM OF 1/4-INCH RESILIENT MATERIAL SUCH AS SOFT NEOPRENE OR RUBBER. SYSTEMS SHALL BE AS MANUFACTURED BY HOLDRITE OR APPROVED EQUIVALENT.

NOTE: PROVIDE TO LAVATORIES AND SINK WHERE APPLICABLE, MIXING VALVE TO CONTROL THE HOT WATER TEMPERATURE AND MINIMIZE THE OCCURRENCE OF ACCIDENTAL SCALDING , DEVICE MAXIMUM TEMPERATURE OF 105F.

PROJ. No. 30056

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PLUMBING SPECIFICATIONS

UNLESS OTHERWISE SPECIFIED WITHIN THE CONSTRUCTION DOCUMENTS, CONTRACTOR SHALL REFER TO THE PROJECT MANUAL BOOK FOR ALL PRODUCT SPECIFICATIONS. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE PROJECT MANUAL SHALL BE BROUGHT UP TO THE A/E PRIOR TO BIDDING AND CONSTRUCTION FOR CLARIFICATION.

GENERAL COORDINATION NOTES

1.

AS PART OF THIS CONTRACT, THE SUB-CONTRACTOR AND THE CONTRACTOR ARE RESPONSIBLE FOR COORDINATION AND VERIFICATION THAT ALL EQUIPMENT, SHOWN IN THE ARCHITECTURAL DRAWINGS PARTICULARLY, BUT NOT LIMITED TO THE ARCHITECTURAL EQUIPMENT PLAN, INCLUDE ALL SERVICE/UTILITY REQUIRED TO OPERATE THE EQUIPMENT SHOWN. ANY DISCREPANCIES ARE TO BE POINTED OUT DURING THE BIDDING PROCESS. DISCREPANCIES NOT POINTED OUT DURING THE BIDDING PROCESS WILL BE RESOLVED BY THE CONTRACTOR AS PER THE ARCHITECT DETAILS AT NO ADDITIONAL COST TO THE OWNER.

2.

CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL NEW PIPING, DUCTWORK, CONDUITS, ECT. WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS OF THE BUILDING. VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOBSITE PRIOR TO FABRICATION AND INSTALLATION OF EQUIPMENT AND MATERIALS.

3.

THE CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS TO ARCH/ENG AND OWNER'S PROJECT MANAGER FOR APPROVAL PRIOR TO ANY FABRICATION AND INSTALLATION. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT/ENGINEER PRIOR TO BEGINNING OF CONSTRUCTION.

BACTERIOLOGICAL TEST

BACTERIOLOGICAL TEST SHALL BE PERFORMED UPON COMPLETION OF WORK TO INDICATE THAT THE WATER IS EITHER COLIFORM NEGATIVE OR COLIFORM POSITIVE. IF THE TEST IS COLIFORM POSITIVE, THEN ACTION SHALL BE TAKEN IMMEDIATELY TO DETERMINE THE SOURCE OF CONTAMINATION AND /OR DISINFECT THE WATER BEFORE USE.

DRAINAGE SLOPE PER FOOT SCHEDULE

DIAMETER OF PIPE

PITCH

UP TO 2 1/2"

MIN. 1/4" / FT

3" TO 6"

MIN. 1/8" / FT

8" AND ABOVE

MIN. 1/16" / FT

WATER HAMMER ARRESTER SCHEDULE

MARK

"P.D.I. SIZE

CONN. SIZE

A

A (1 - 11 F.U.)

1/2"

B

B (12 - 32 F.U.)

3/4"

C

C (33 - 60 F.U.)

1"

D

D (61 - 113 F.U.)

1"

E

E (114 - 154 F.U.)

1"

F

F (155 - 330 F.U.)

1"

* PLUMBING AND DRAINAGE INSTITUTE STANDARD WH-201

CODE OF MIAMI DADE COUNTY Sec. 8-31

Local technical amendments to Florida Building Code.

(A)The County hereby adopts the following local technical amendments to Chapter 6 (Plumbing) of the Florida Building Code, 604.4 Maximum flow and water consumption.

The maximum water consumption flow rates and quantities for all plumbing fixtures, fixture fittings and appliances shall be in accordance with Table 604.4, Effective January 1, 2009, permit applications for new residential and commercial structures shall include high efficiency plumbing fixtures, fixture fittings and appliances as provided in Table 604.4. Such high efficiency plumbing fixtures, fixture fittings and appliances shall comply with the specifications in Table 604.4 or have received the U.S. Environmental Protection Agency (EPA) WaterSense Label.

Exceptions:

1.Blowout design water closets [3.5 gallons (13L) per flushing cycle].

2.Vegetable sprays.

3.Clinical sinks [4.5 gallons (17 L) per flushing cycle].

4.Service sinks.

5.Emergency showers.

TABLE 604.4
MAXIMUM FLOW RATES AND CONSUMPTION FOR
PLUMBING FIXTURES, FIXTURE FITTINGS AND APPLIANCES

PLUMBING FIXTURE OR FIXTURE FITTING

MAXIMUM FLOW RATE (b)

Lavatory, private

1.5 gpm at 60 psi

Lavatory, public, (metering)

0.25 gallon per metering cycle

Lavatory, public (other than metering)

0.5 gpm at 60 psi

Shower head (a)

1.5 gpm at 80 psi

Sink faucet

1.5 gpm at 80 psi

Urinal

>>Waterless or 0.5 gallon per flushing cycle

Water closet

1.28 gallons per flushing cycle

Dishwasher (residential)

6.5 gallons per cycle or less (Energy

Star/Water Sense Certified) (c)

Less than 1.2 gallons per rack for fill and dump machines and less than 0.9 gallons per rack for all other types of machines

Dishwasher (commercial)

1.5 gpm at 80 psi

Dishwasher (under the counter machines)

Dishwash 1.0 gallon or less per rack for high-temperature machines and 1.7 gallons per rack for low-temperature machines

Washing machine

Water factor of 8 or lower (Energy Star/Water Sense Certified) (c)

For SI:

1 gallon = 3.785 L

1 gallon per minute = 3.785 L/m

1 pound per square inch = 6.895 kPa.

(a) A hand-held shower spray is a shower head.

(b) Consumption tolerances shall be determined from referenced standards.

(c) Water factor in gallons per cycle per cubic foot.

APPLICABLE CODES / STANDARDS

APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL STATE LAWS, LOCAL ORDINANCES, UTILITY COMPANY REGULATIONS AND THE APPLICABLE REQUIREMENTS OF THE FOLLOWING ACCEPTED CODES AND STANDARDS, WITHOUT LIMITING THE NUMBER, AS FOLLOWS:

1. FLORIDA BUILDING CODE - 7th EDITION (2020)

2. FLORIDA FIRE PREVENTIVE CODE - 7th EDITION (2020)

3. ENVIRONMENTAL PROTECTION AGENCY (EPA).

4. DEPARTMENT OF ENVIRONMENTAL REGULATION MANAGEMENT (DERM).

5. LOCAL ORDINANCES, REGULATIONS OF THE BUILDING DEPARTMENTS AND FIRE DEPARTMENTS.

6. OCCUPATIONAL SAFETY AND HEALTH STANDARD.

7. RECOMMENDATION OF NFPA, IN GENERAL AND IN PARTICULAR:

8. RECOMMENDATION OF ASHRAE FUNDAMENTALS (2005).

9. FLORIDA WITH DISABILITIES ACCESSIBILITY ACT (2017).

ELM ARCH

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Qualifier: Erik Lloyd Myers AR 93574
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STATE OF FLORIDA
PROFESSIONAL ENGINEER

OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Symbol Legend and General Notes - Plumbing

REVISION

OWNER CHANGES

08/28/23

DATE

04-03-2023

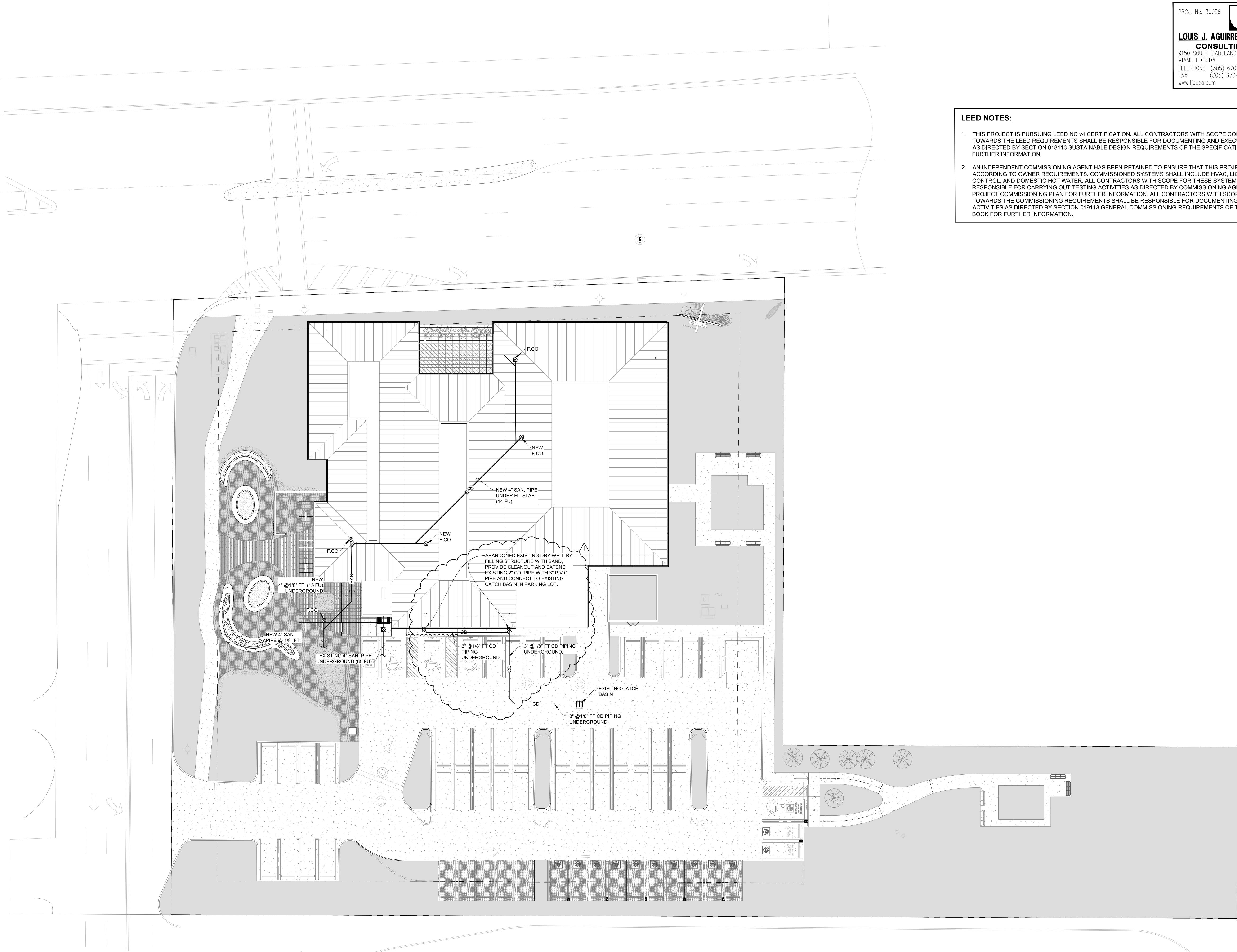
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SHEET NUMBER


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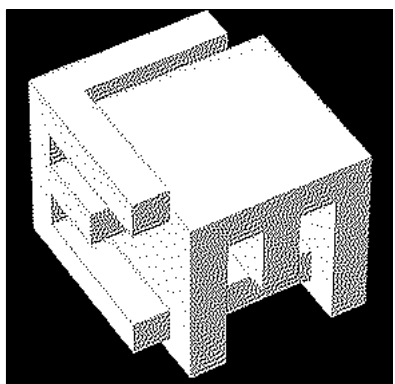


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FAX: (305) 670-0144
www.ljaopa.com

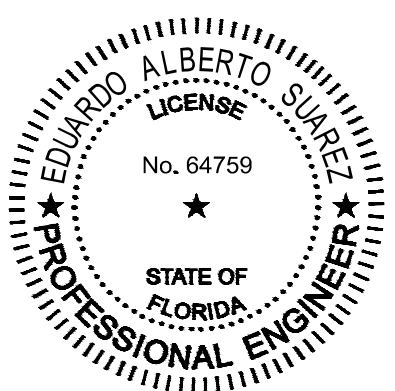
- LEED NOTES:**
1. THIS PROJECT IS PURSUING LEED NC v4 CERTIFICATION. ALL CONTRACTORS WITH SCOPE CONTRIBUTING TOWARDS THE LEED REQUIREMENTS SHALL BE RESPONSIBLE FOR DOCUMENTING AND EXECUTING ALL ACTIVITIES AS DIRECTED BY SECTION 018113 SUSTAINABLE DESIGN REQUIREMENTS OF THE SPECIFICATION BOOK FOR FURTHER INFORMATION.
 2. AN INDEPENDENT COMMISSIONING AGENT HAS BEEN RETAINED TO ENSURE THAT THIS PROJECT IS COMPLETED ACCORDING TO OWNER REQUIREMENTS. COMMISSIONED SYSTEMS SHALL INCLUDE HVAC, LIGHTING/LIGHTING CONTROL, AND DOMESTIC HOT WATER. ALL CONTRACTORS WITH SCOPE FOR THESE SYSTEMS SHALL BE RESPONSIBLE FOR CARRYING OUT TESTING ACTIVITIES AS DIRECTED BY COMMISSIONING AGENT. SEE THE PROJECT COMMISSIONING PLAN FOR FURTHER INFORMATION. ALL CONTRACTORS WITH SCOPE CONTRIBUTING TOWARDS THE COMMISSIONING REQUIREMENTS SHALL BE RESPONSIBLE FOR DOCUMENTING AND EXECUTING ALL ACTIVITIES AS DIRECTED BY SECTION 019113 GENERAL COMMISSIONING REQUIREMENTS OF THE SPECIFICATION BOOK FOR FURTHER INFORMATION.



ELM ARCH
8950 SW 74TH Court
Suite 1204
Miami, FL 33156
786-391-2646

Qualifier:
State of Florida: Erik Lloyd Myers
AR 93574

Sign & Seal: Eduardo A. Suarez P.E.
State of Florida: License No. 64759



OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

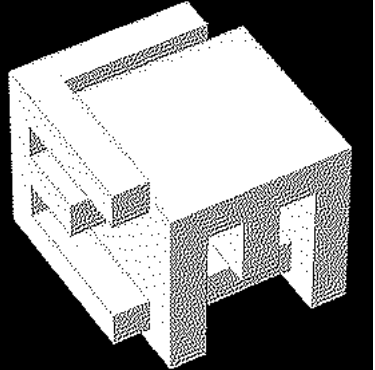
TITLE: Site Plan- Plumbing

| REVISION | |
|---------------|----------|
| OWNER CHANGES | 08/28/23 |

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| DATE | 04-03-2023 |
| PROJECT NUMBER | 19119 |
| SHEET NUMBER | |

P1.0
OF



8950 SW 74TH Court

Suite 1204

Miami, FL 33156

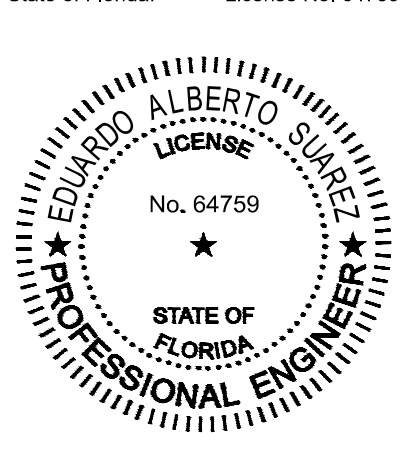
786-391-2646

Qualifier: Erik Lloyd Myers

State of Florida: AR 93574

Sign & Seal: Eduardo A. Suarez B.E.

State of Florida: License No. 64759



OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Floor Plan - Plumbing

[illegible]

DATE _____

04-03-2023

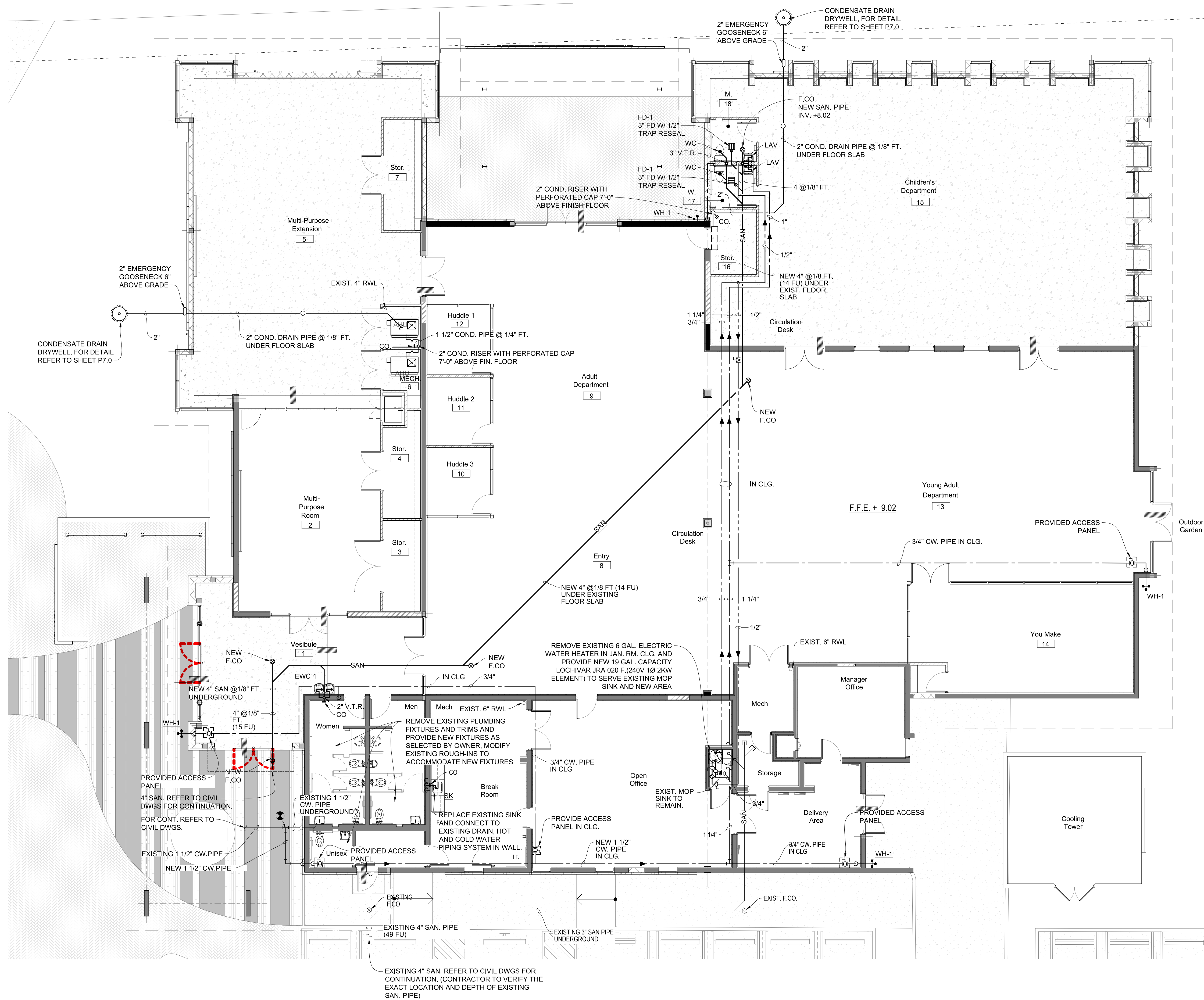
PROJECT NUMBER

19119

SHEET NUMBER

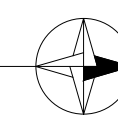
P3.0

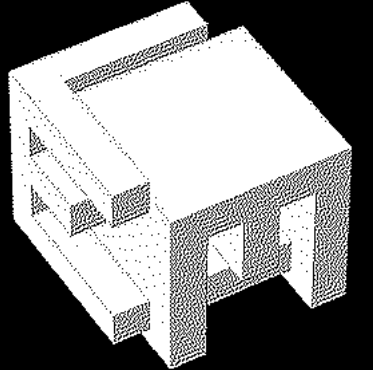
OF



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|---|-----------------------|
| 1 | Floor Plan - Plumbing |
|---|-----------------------|

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| P3.0 | Scale: 1" = 1/8'-0" |
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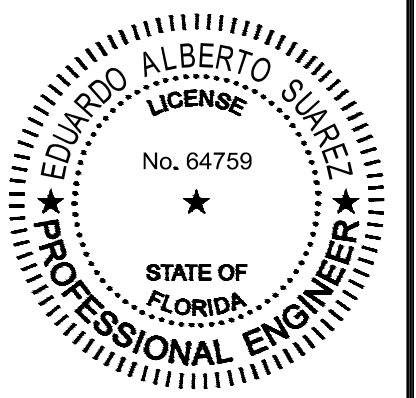




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OWNER:

Miami Lakes Branch Library
6699 Windmill Gate Road

6099 Wilbur III Gate Road
Miami Lakes, FL 33014

TITLE: Roof Plan - Plumbing

[illegible]

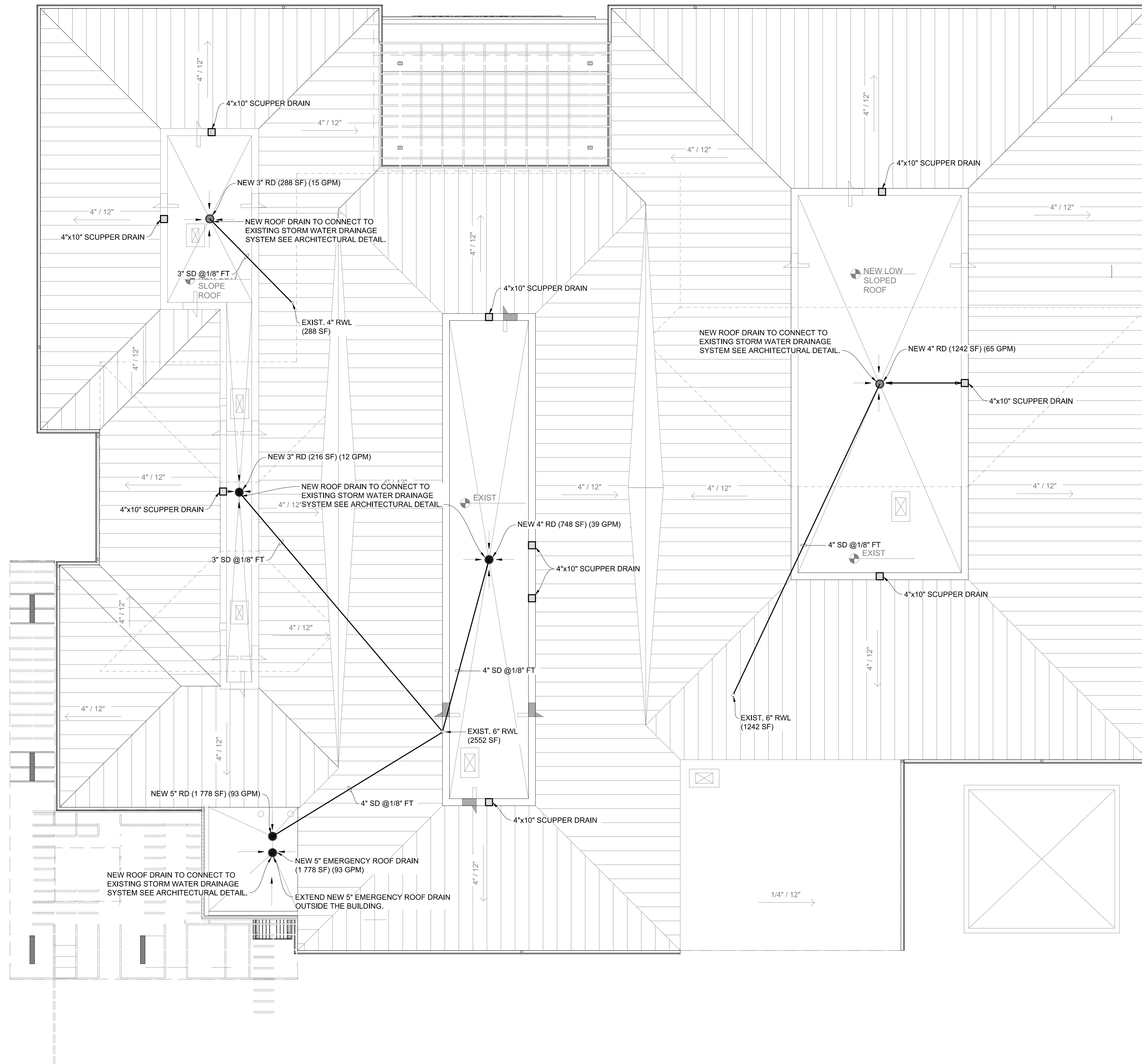
DATE
04-03-2023

PROJECT NUMBER
19119

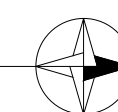
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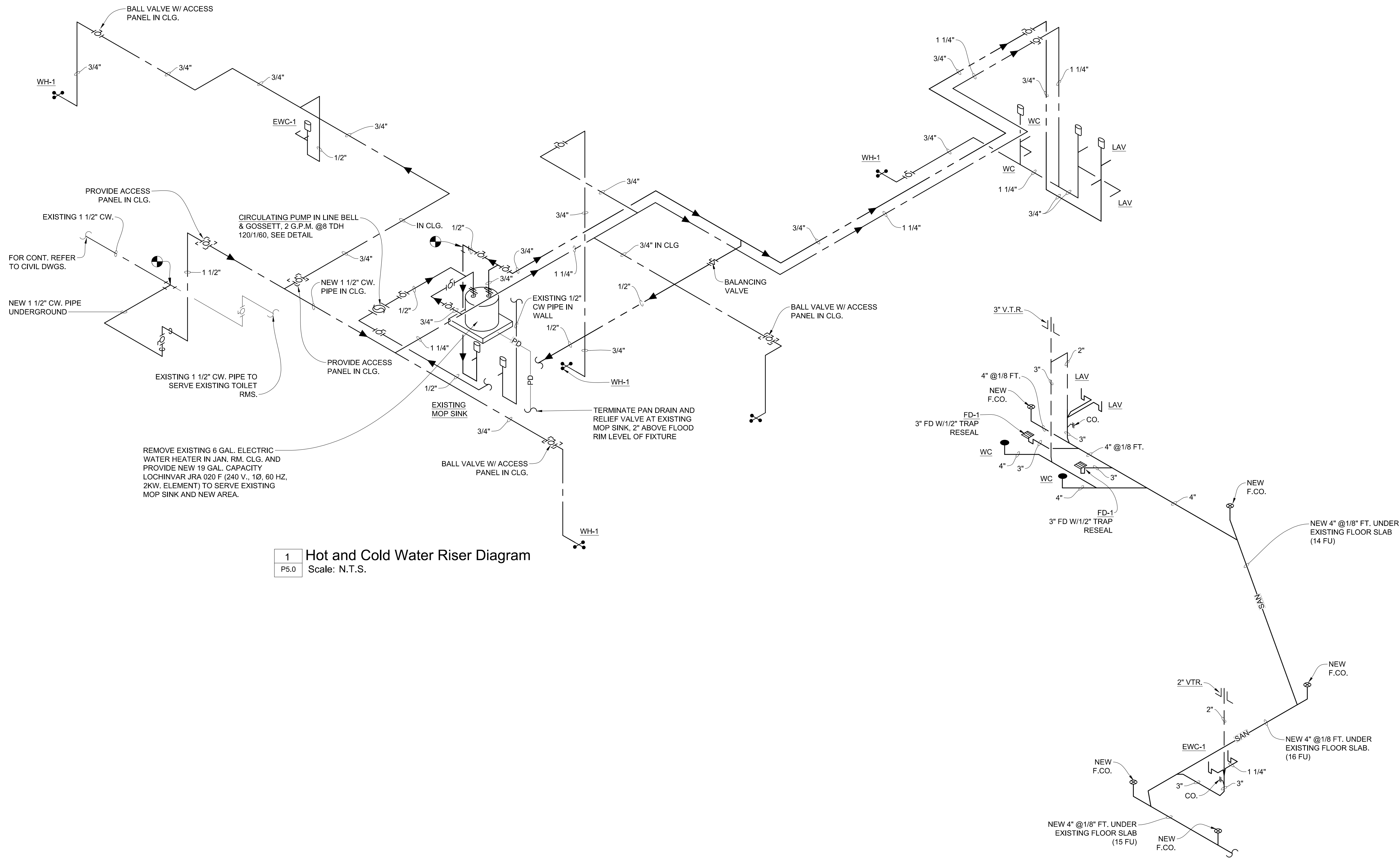
P3.1

OF



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| 1 | Roof Plan - Plumbing |
| P3.1 | Scale: 1" = 1/8'-0" |




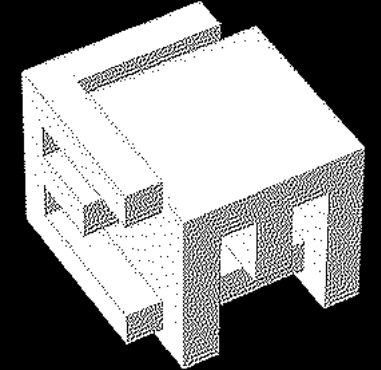


1 Hot and Cold Water Riser Diagram
P5.0 Scale: N.T.S.

1 Sanitary Isometric
P5.0 Scale: N.T.S.

PROJ. No. 30056 CA 924

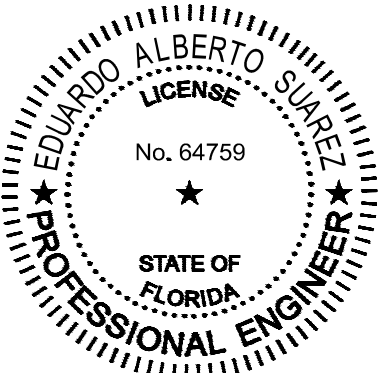
**LOUIS J. AGUIRRE & ASSOCIATES P.A.**
CONSULTING ENGINEERS
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OWNER:

Miami Lakes Branch Library

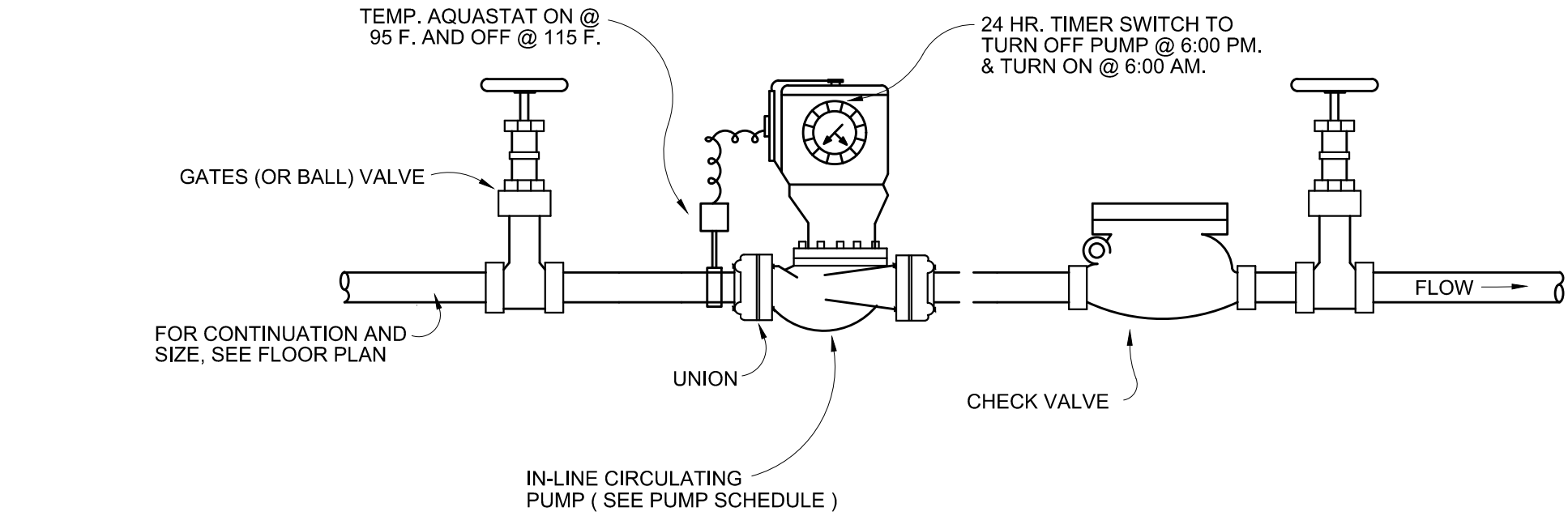
6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Isometrics - Plumbing

| REVISION |
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DATE
04-03-2023
PROJECT NUMBER
19119
SHEET NUMBER

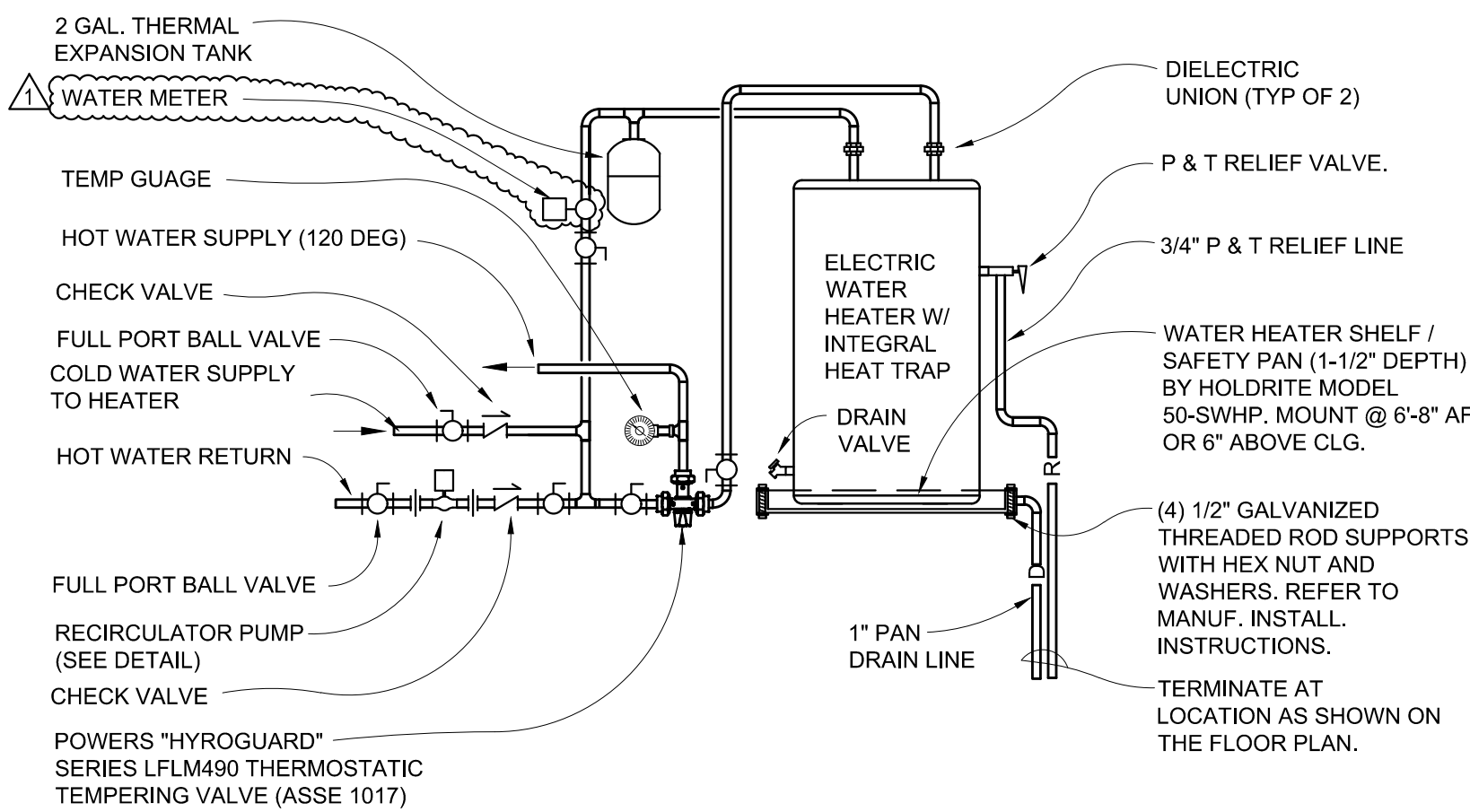
P5.0
OF



| RECIRC. PUMP SCHEDULE | | | | | | | | | |
|-----------------------|------------------------|--------|----------------|-----------|-----|---------|-----------------|------|-----------------------------------|
| MARK | DESCRIPTION | TYPE | MFR | MODEL | GPM | HEAD FT | CONNECTION SIZE | HP | VOLTAGE |
| RECIRC PUMP | HOT WATER RECIRC. PUMP | INLINE | BELL & GOSSETT | NBF-8S/LW | 2 | 8 | 1/2" | 1/40 | 120/1/60 |
| | | | | | | | | | ALL BRONZE W/ TIMER AND AQUASTAT. |

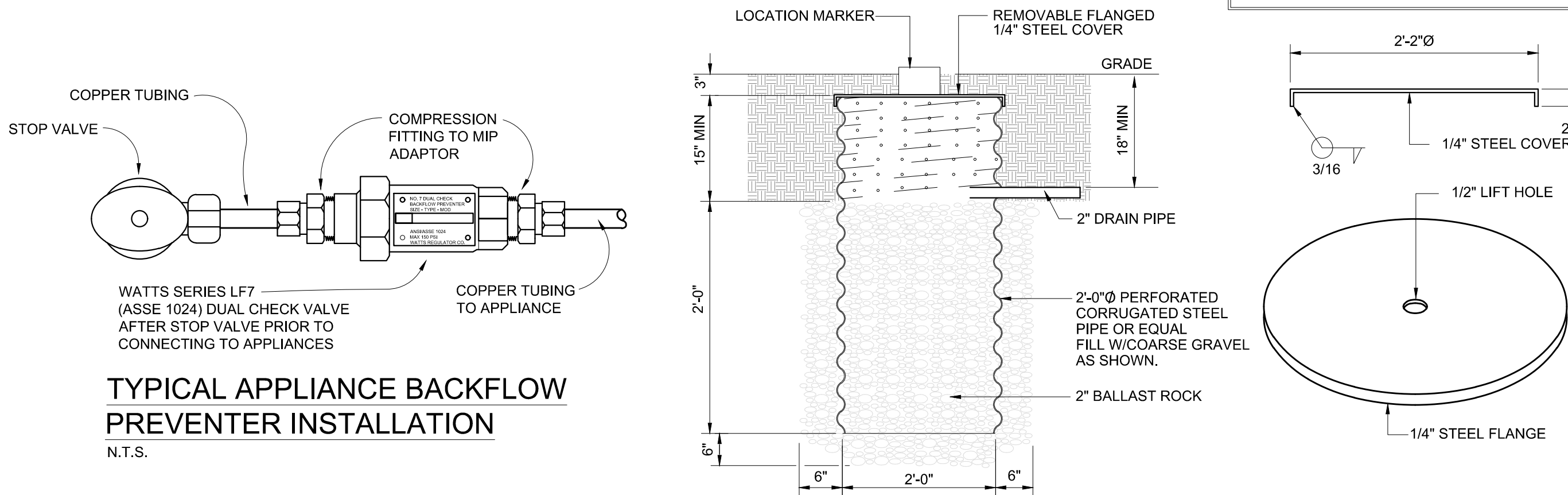
IN LINE CIRCULATING PUMP DETAIL

N.T.S.



TYPICAL WATER HEATER DETAIL

N.T.S.

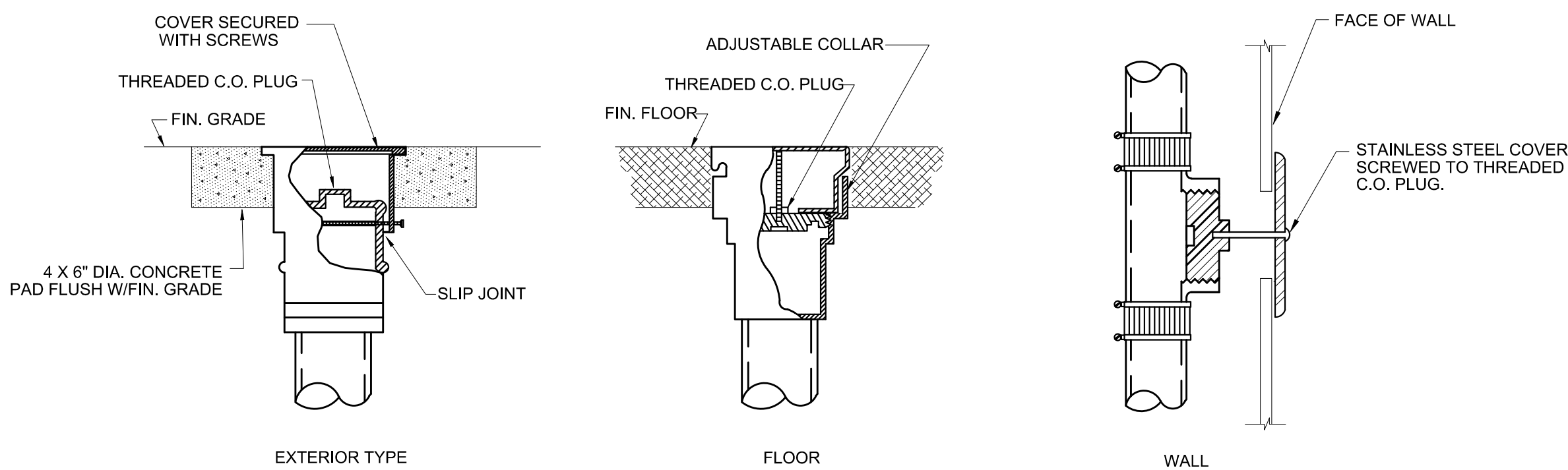


TYPICAL APPLIANCE BACKFLOW PREVENTER INSTALLATION

N.T.S.

CONDENSATE DRAIN DRY WELL DETAIL

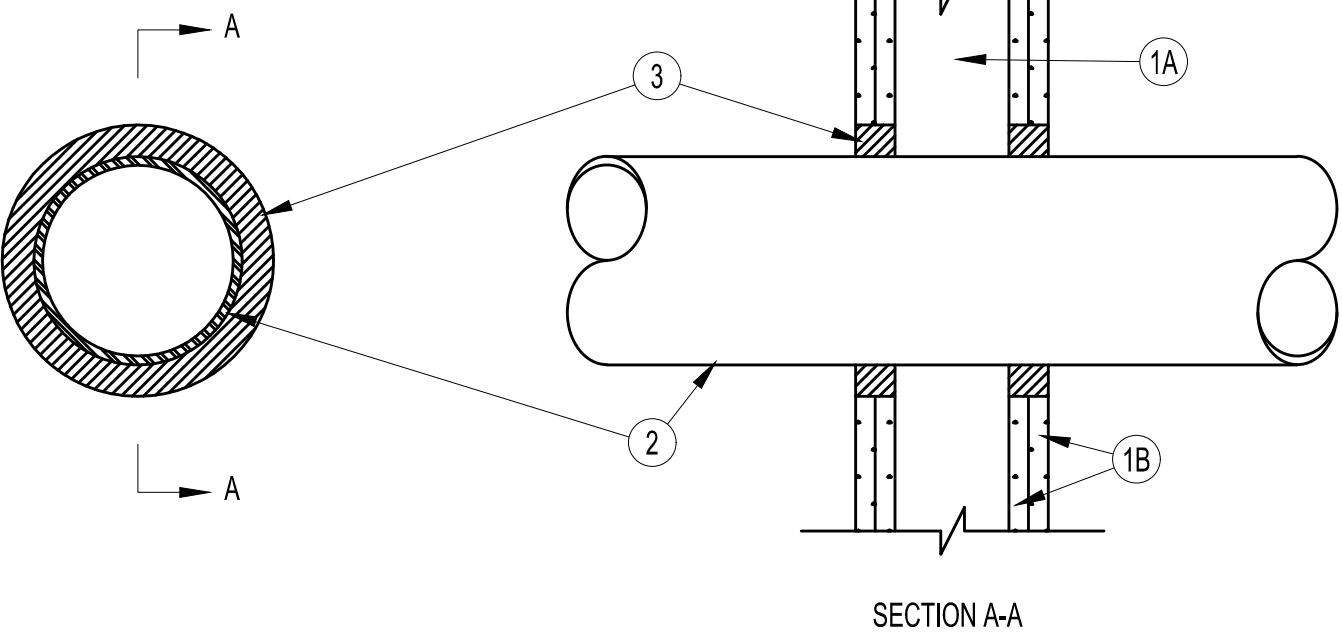
N.T.S.



TYPICAL CLEANOUT DETAIL

N.T.S.

SYSTEM NO. W-L-1054
F RATINGS - 1 AND 2 HR (SEE ITEMS 1 AND 3)
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT L RATING AT 400 F - 4 CFM/SQ FT



- WALL ASSEMBLY -- THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.
- THROUGH-PENETRANTS -- ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
 - STEEL PIPE -- NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - IRON PIPE -- NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - CONDUIT -- NOM 4 IN DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAM STEEL CONDUIT.
 - COPPER TUBING -- NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
 - COPPER PIPE -- NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- FILL, VOID OR CAVITY MATERIAL* -- SEALANT -- MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS. FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE SEALANT

*BEARING THE UL CLASSIFICATION MARK

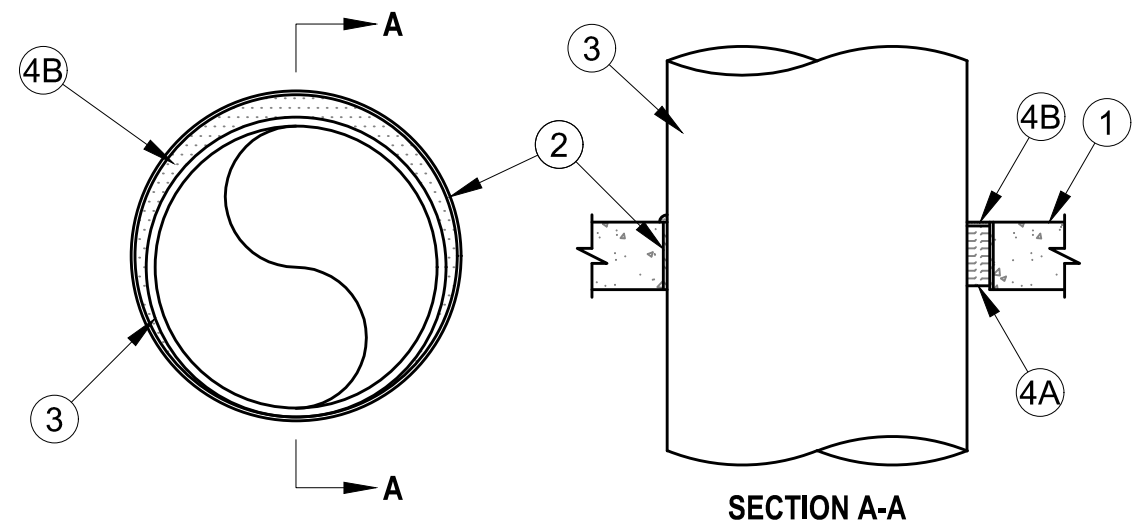
HILTI
FIRESTOP SYSTEMS

REPRODUCED BY HILTI, INC. COURTESY OF
UNDERWRITERS LABORATORIES, INC.
DECEMBER 4, 2002



SYSTEM NO. C-AJ-1226

F RATING -- 3 HR
T RATING -- 0 HR
L RATING AT AMBIENT -- LESS THAN 1 CFM/SQ FT
L RATING AT 400 F -- 4 CFM/SQ FT

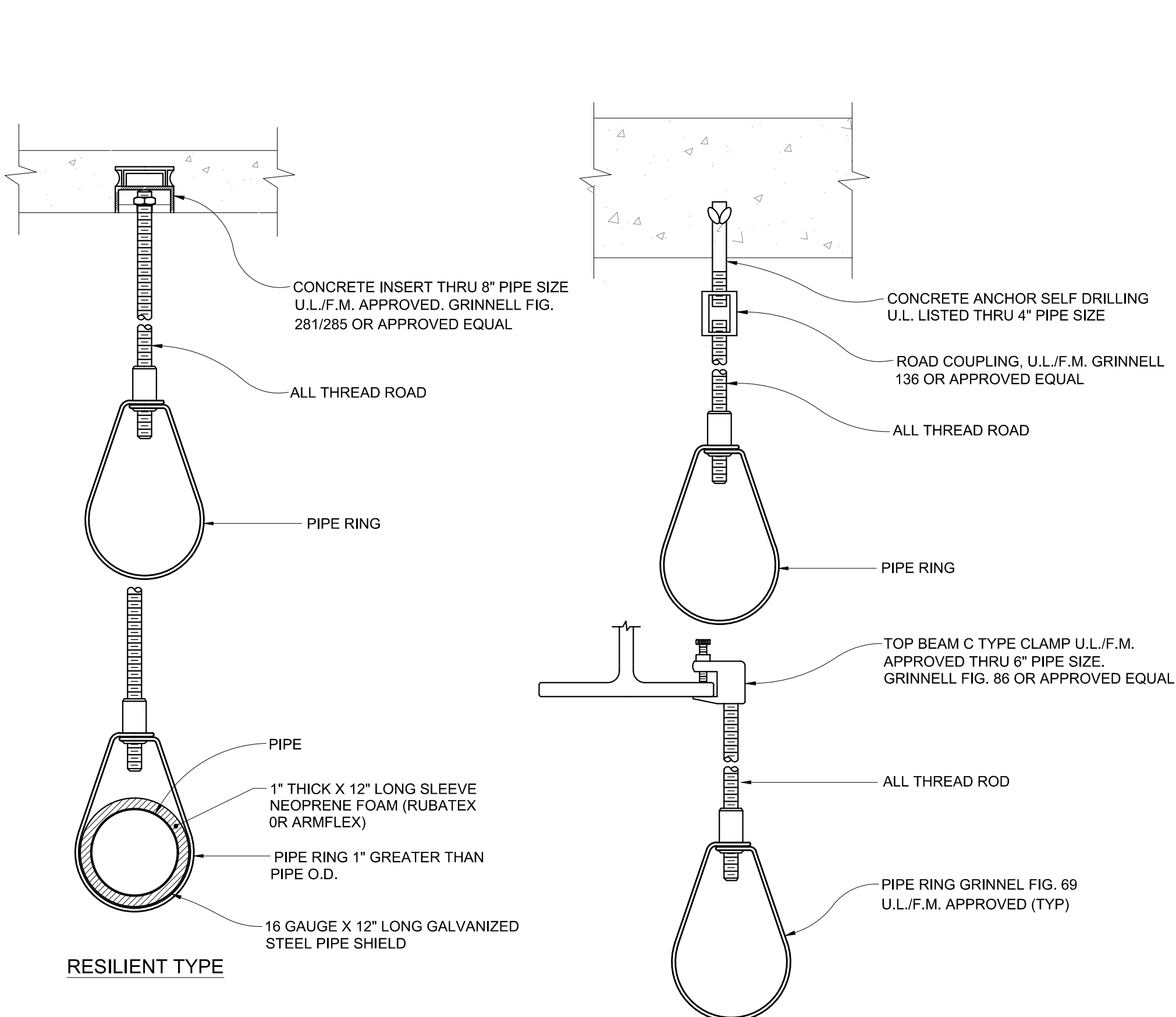


- FLOOR OR WALL ASSEMBLY -- MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 32 IN.
- METALLIC SLEEVE -- (OPTIONAL) NOM 32 IN. DIAM (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES OR EXTENDING A MAX OF 3 IN. ABOVE FLOOR OR BEYOND BOTH SURFACES OF WALL.
 - STEEL PIPE -- NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - IRON PIPE -- NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - COPPER PIPE -- NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
 - COPPER TUBING -- NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
 - CONDUIT -- NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT.
 - CONDUIT -- NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT).
- THROUGH-PENETRANT -- ONE METALLIC PIPE, TUBE OR CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PENETRANT AND PERIPHERY OF OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1-7/8 IN. PENETRANT MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PENETRANTS MAY BE USED:
 - STEEL PIPE -- NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
 - IRON PIPE -- NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - COPPER PIPE -- NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
 - COPPER TUBING -- NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
 - CONDUIT -- NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT.
 - CONDUIT -- NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT).
- FIRESTOP SYSTEM -- THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - PACKING MATERIAL -- MIN 4 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR SLEEVE OR FROM BOTH SURFACES OF WALL OR SLEEVE AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
 - FILL, VOID OR CAVITY MATERIAL* -- SEALANT -- MIN 1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS. FLUSH WITH TOP SURFACE OF FLOOR OR SLEEVE OR WITH BOTH SURFACES OF WALL OR SLEEVE. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PENETRANT AND CONCRETE OR SLEEVE, A MIN 1/4 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE OR SLEEVE/PIPE PENETRANT INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE SEALANT

*BEARING THE UL CLASSIFICATION MARK

HILTI
FIRESTOP SYSTEMS

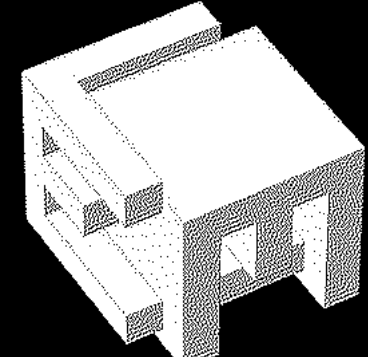
REPRODUCED BY HILTI, INC. COURTESY OF
UNDERWRITERS LABORATORIES, INC.
JUNE 27, 2007



PIPE HANGER DETAILS

N.T.S.

PROJ. No. 30056
LOUIS J. AGUIRRE & ASSOCIATES P.A.
CONSULTING ENGINEERS
9150 SOUTH DADELAND BLVD. SUITE 900
MIAMI, FLORIDA 33156
TELEPHONE: (305) 670-0141
FAX: (305) 670-0144
www.ljagpa.com

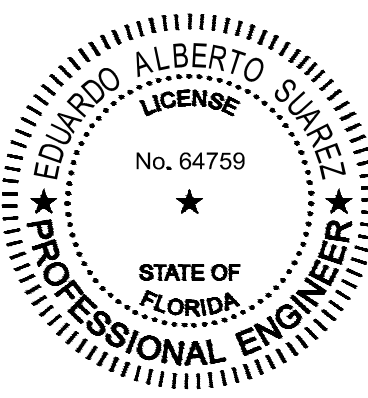


ELM ARCH

8950 SW 74TH Court
Suite 1204
Miami, FL 33156
786-391-2646

Qualifier: Erik Lloyd Myers
State of Florida: AR 93574

Sign & Seal: Eduardo A. Suarez P.E.
State of Florida: License No. 64759



OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road
Miami Lakes, FL 33014

TITLE: Details - Plumbing

REVISION

OWNER CHANGES 08/28/23

DATE

04-03-2023

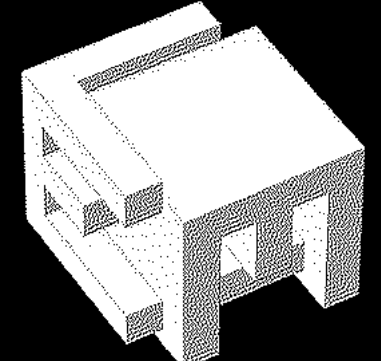
PROJECT NUMBER

19119

SHEET NUMBER

P7.0

OF

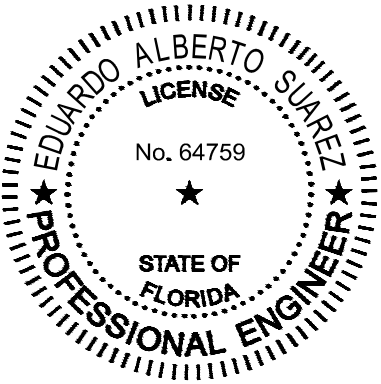


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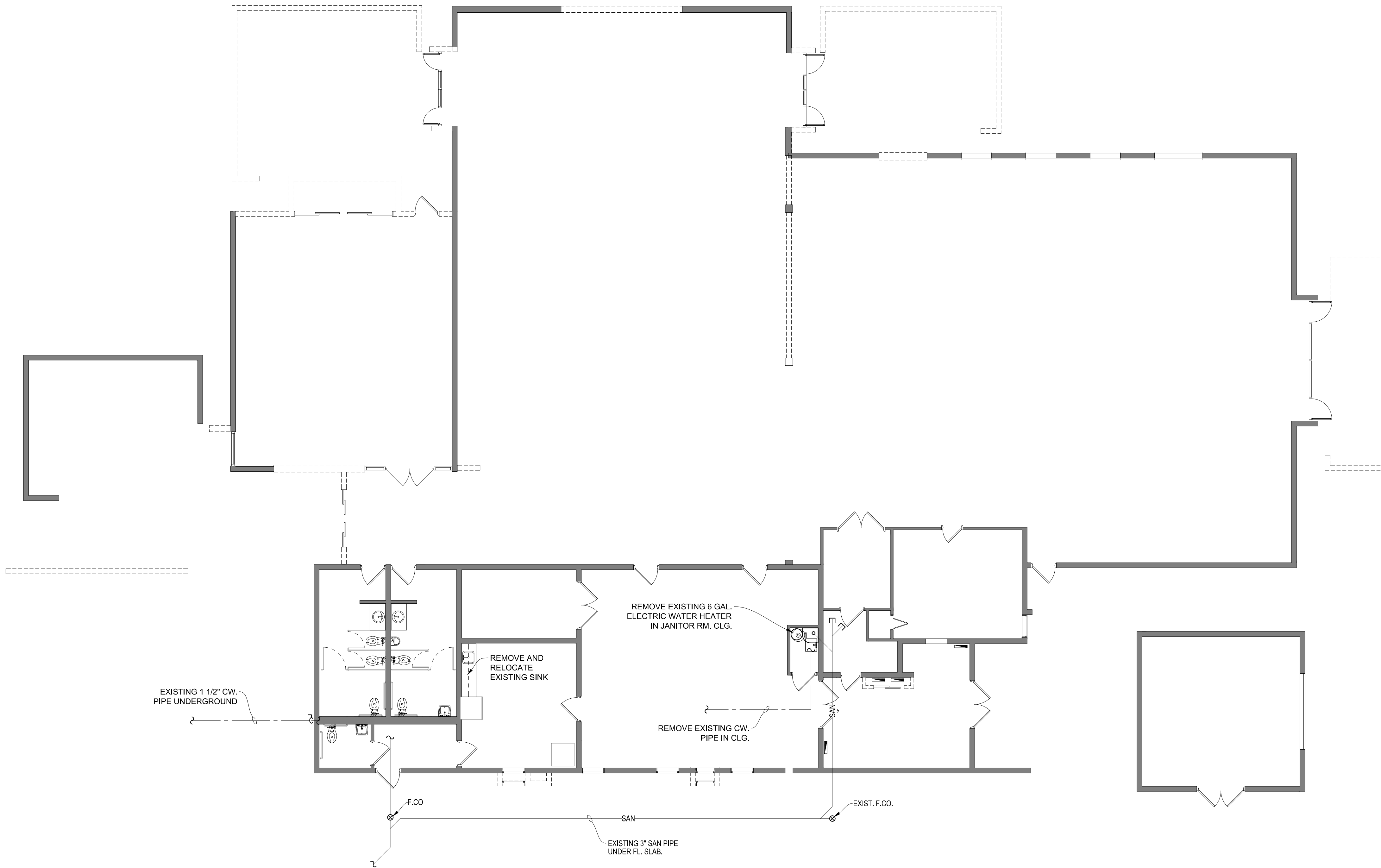
OWNER:

Miami Lakes Branch Library

6699 Windmill Gate Road

Miami Lakes, FL 33014

TITLE: Floor Plan - Demolition - Plumbing



1 Floor Plan - Demolition - Plumbing

PD3.0 Scale: 1/8" = 1'-0"

| REVISION |
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DATE
04-03-2023

PROJECT NUMBER
19119

SHEET NUMBER

PD3.0

OF