

PLUMBING FIXTURE SCHEDULE

Table with columns: SYMBOL, TYPE, MANUFACTURER & MODEL NUMBER, ACCESSORIES, REMARKS, WASTE IN CONNECTION SIZE (WASTE, HOT, COLD), FIXTURE UNIT COUNT (DISH, D.F.U. TOTAL).

ELECTRIC DOMESTIC WATER HEATER SCHEDULE

Table with columns: SYMBOL, MODEL, STORAGE TANK (GAL), WAYS OF ELEMENT, NUMBER OF ELEMENTS, TOTAL KW, ELEC. NILEY WATER TEMP (F), OUTLET WATER TEMP (F), RECOVERY RATE (GPH), (IN), DIAMETER (IN), OPERATING WEIGHT (LBS), NOTES.

PUMP SCHEDULE

Table with columns: SYMBOL, MANUFACTURER, MODEL, PUMP TYPE, FLOW (GPM), HEAD (FT W.C.), V.M.P., RPM, ELECTRICAL VOLTAGE, PHASE, DISCH. SIZE (IN), NOTES.

SEAMLESS ELECTRIC WATER HEATER SCHEDULE

Table with columns: SYMBOL, MODEL, TOTAL KW, NILEY WATER TEMP (F), OUTLET WATER TEMP (F), FLOW RATE (GPM), ELEC. LOAD (KW), DEPTH (IN), WIDTH (IN), HEIGHT (IN), OPER. WEIGHT (LBS), NOTES.

DOMESTIC WATER CALCULATION

Table showing fixture unit calculations, flow test data, static pressure, residual pressure, and pipe loss calculations for various pipe sizes and service sizes.

FIRE PROTECTION NOTES:

- TO ENSURE MINIMUM DESIGN QUALITY IN FIRE PROTECTION SYSTEM ENGINEERING DOCUMENTS, SAID DOCUMENTS SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION WHEN APPLICABLE:
a. THE POINT OF SERVICE FOR THE FIRE PROTECTION WATER SUPPLY AS DEFINED BY SECTION 633.02(1)(b), F.S.
b. POINT OF SERVICE IS SHOWN ON SHEET P120 AND P121.
c. APPROXIMATE STANDARD TO BE APPLIED, E.G. IN THE CASE WHERE NO SUCH STANDARD EXISTS, THE ENGINEERING STUDY, JUDGMENTS, AND/OR PERFORMANCE BASED ANALYSIS AND CONCLUSIONS, NFPA 11, 2013 EDITION IS THE STANDARD APPLIED FOR THIS PROJECT.
d. CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA.
e. HAZARD OCCUPANCIES ARE SHOWN ON SHEET G102.
f. DESIGN APPROACH, WHICH INCLUDES SYSTEM TYPE, DENSITIES, DESIGN TEMPERATURE RATINGS, AND SPACING FOR EACH SEPARATE HAZARD OCCUPANCY.
g. CHARACTERISTICS OF WATER SUPPLY TO BE USED, SUCH AS MAIN SIZE AND LOCATION, WHETHER IT IS DEAD-END OR CIRCULATING, AND IF DEAD-END, THE DISTANCE TO THE NEAREST CIRCULATING MAIN, AS WELL AS ITS MINIMUM DURATION AND RELIABILITY FOR THE MOST UNFAVORABLE DEMANDING DESIGN AREA.
h. WHEN PRIVATE OR PUBLIC WATER SUPPLIES ARE USED, THE FLOW TEST DATA, INCLUDING DATE AND TIME OF TEST, WHO CONDUCTED TEST OR SURVEY, ED INFORMATION, TEST ELEVATION, STATIC GAUGE PRESSURE AT AND FLOW FLOW RATE WITH RESIDUAL GAUGE PRESSURE, HYDRANT BUTT COEFFICIENT, AND LOCATION OF TEST IN RELATION TO THE HYDRAULIC POINT OF SERVICE, FLOW TEST DATE, TIME AND HYDRANT NUMBER AND NAME OF WHOEVER CONDUCTED THE TEST.
i. REFER TO PRELIMINARY FLOW TEST, DATED 2/5/2020, SHOWN FOR REFERENCE ON THIS SHEET.
j. WILING AND ALARM REQUIREMENTS TO MINIMIZE POTENTIAL FOR IMPAIRMENTS AND UNRECOGNIZED FLOW OF WATER, MICROBIAL INDUCED CORROSION (MIC), THE ENGINEER OF RECORD SHALL MAKE REASONABLE EFFORTS TO IDENTIFY WATER SUPPLIES THAT COULD LEAD TO MICROBIAL INDUCED CORROSION (MIC), SUCH EFFORTS MAY CONSIST OF DISCUSSIONS WITH THE LOCAL WATER PURVEYOR AND/OR OFFICIAL, FAMILIAR WITH CONDITIONS IN THE LOCAL AREA, OR LABORATORY TESTING OF WATER SUPPLIES, WHEN CONDITIONS ARE FOUND THAT MAY RESULT IN MIC CONTAMINATION OF THE FIRE PROTECTION PIPING, THE ENGINEER SHALL DESIGN CORRECTIVE MEASURES.
k. BACKFLOW PREVENTION AND METERING SPECIFICATIONS AND DETAILS TO MEET LOCAL WATER PURVEYOR REQUIREMENTS INCLUDING MAXIMUM ALLOWABLE PRESSURE DROP.
l. QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS.
m. A DETERMINATION OF WHETHER A FIRE PUMP IS REQUIRED AND IF SO, THE SPECIFIC METEOROLOGIC FLOW AND PRESSURE RATING OF THE PUMP.
n. FIRE PUMP SHOULD NOT BE REQUIRED FOR THIS PROJECT.
o. VERIFICATION OF WHETHER A FIRE WATER STORAGE TANK IS REQUIRED ON SITE AND IF SO, A DETERMINATION OF THE SIZE AND CAPACITY REQUIRED.
p. STORAGE TANK SHOULD NOT BE REQUIRED FOR THIS PROJECT.
q. OWNERS CERTIFICATE IS EXPECTED TO BE REQUIRED FOR THIS PROJECT.
r. AN OWNERS CERTIFICATE IS EXPECTED TO BE REQUIRED FOR THIS PROJECT.

PLUMBING LEGEND: (NOT ALL SYMBOLS WILL BE USED ON THESE DRAWINGS)

Legend table with columns: PIPING, TAGS AND SYMBOLS, REVISION TAG, KEYNOTE TAG, POINT OF CONNECTION, SECTION HEAD CALLOUT, EXISTING, REMOVE EXISTING (DEMOLISH), PIPING SYSTEM, SEE SPEC FOR PIPE SPECIFICATIONS, ABOVE GRADE, EXPOSED, BELOW GRADE, CONCEALED, ACCESS, FLOOR, INVERTED, STRAINER, DRAINING, MECHANICAL CONTRACTOR, MECHANICAL CONTRACTOR, EQUIPMENT, FLOOR CLEANOUT, INTERNATIONAL BUILDING CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL PLUM AND GAS CODE, INVERT ELEVATION, GALLON, GENERAL CONTRACTOR, GALLONS PER MINUTE, LINE CLEANOUT, MAXIMUM, MECHANICAL CONTRACTOR, MINIMUM CIRCUIT AMPACITY, MANUFACTURER, MANHOLE, MINIMUM, MAXIMUM OVERCURRENT PROTECTION, NEW, NEW LOCATION, NOT APPLICABLE, NORMALLY CLOSED, NORMALLY OPEN, NOT IN CONTRACT, PLUMBING CONTRACTOR, PRESSURE REDUCING VALVE, REDUCED PRESSURE BACKFLOW PREVENTER, REFERENCE, RELOCATE, SURFACE CLEANOUT, STANDARD, SPECIFICATION, TYPICAL, TEMPERATURE CONTROL CONTRACTOR, VENT THROUGH ROOF, WALL CLEANOUT, WITHOUT.

APPLICATION OF PIPING SYSTEMS

Table mapping service types to material requirements, including equipment drains, sanitary drains, storm drains, domestic water, and gas piping.

- PIPING NOTES:
1. ALL SANITARY WASTE PIPING 2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT MINIMUM. ALL SANITARY WASTE PIPING 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM.
2. EXPOSED PIPING IN RESTROOM AREAS SHALL BE CHROME PLATED BRASS, WITH WATCHING STOPS AND EIGHT COUSONS.
3. STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS AND AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS.
4. ALL DOMESTIC WATER PIPING SHALL BE RUNG LEVEL, WITHOUT PITCH.
5. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH DISSIMILAR METALS, ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR BRASS. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PREVENT CONTACT WITH OTHER METALS.
6. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY, WHERE COPPER IS SLEEVED THROUGH MASONRY, COPPER OR RED BRASS SLEEVES SHALL BE USED. WHERE COPPER WILL BE CONCEALED IN OR AGAINST MASONRY PARTITIONS, CONTACT SHALL BE PREVENTED BY COATING THE COPPER WITH AN INERT RESIN, OR SEALING WITH AN EPIC RESIN, BETWEEN THE PIPE AND THE MASONRY PARTITION.
7. ALL WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH 1" RIGID FIBERGLASS AN ALL-SERVICE JOCKET WITH ALL JOINTS AND SEAMS REINFORCED WITH A WIPOR BARBER MASTIC, OR SHALL BE INSULATED WITH 1/2" FLEXIBLE FOAM INSULATION, FLEXIBLE FOAM INSULATION SHALL NOT BE SPLIT AND SHALL BE TAPED AT ALL THE BUTT JOINTS.
8. ALL WATER PIPING BELOW GRADE SHALL BE INSULATED WITH 1/2" FLEXIBLE FOAM INSULATION, FLEXIBLE FOAM INSULATION SHALL NOT BE SPLIT AND SHALL BE TAPED AT ALL THE BUTT JOINTS.
9. WATER PIPING SHALL NOT BE RUN IN AREAS SUBJECT TO FREEZING TEMPERATURES. WATER PIPING IN EXTERIOR WALLS SHALL BE RUN ON CONDITIONED SIDE OF THE WALL INSULATION.

GENERAL NOTES:

- 1. SUB CONTRACTORS FOR EACH TRADE ARE ADVISED THAT INFORMATION PERTINENT TO THEIR WORK MAY OCCUR IN OTHER PORTIONS OF THE CONTRACT DOCUMENTS, REFER TO DOCUMENTS RELATING TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND ADDITIONAL CONSULTANTS DRAWINGS FOR ADDITIONAL GENERAL NOTES. ALL NOTES ARE TO BE REVIEWED AND APPLIED TO RELATED BUILDING COMPONENTS. NOTES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND MATERIALS SHEETS ARE TO BE REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLIED ON RELATED DRAWINGS AND DETAILS.
2. THE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS ARE OF EQUAL IMPORTANCE WITH THE ARCHITECTURAL DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF ANY OF THE TRADES WORK, SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE ENGINEERING DRAWINGS THAT WOULD CAUSE AN ANKWARD OR IMPROPER INSTALLATION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK, ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT. CHANGES MUST BE APPROVED IN WRITING BY OWNER, TENANT, AND ARCHITECT BEFORE PROCEEDING. DEVIATIONS FROM THE HVAC PLANS ARE THE RESPONSIBILITY OF THE HVAC CONTRACTOR AND WILL NOT BE IN ADDITIONAL COSTS TO THE OWNER UNLESS WRITTEN CHANGE ORDERS ARE APPROVED BY THE OWNER.
3. INSTALL, EQUIPMENT AND PIPING ABOVE WIRE CEILING IN STORAGE UNITS. FIELD COORDINATE EXACT LOCATIONS AND ROUTING WITH ALL OTHER TRADES.
4. INSTALL STORAGE AREA EQUIPMENT, VALVES, AND OTHER APPURTENANCES REQUIRING ACCESS OR MAINTENANCE SO AS TO BE ACCESSIBLE FROM CORRIDORS.
5. PIPING THROUGH FLOORS SHALL BE INSTALLED IN FIRE RATED SLEEVES. FIELD COORDINATE SLEEVING DURING SLAB CONSTRUCTION.
6. ALL PIPE SHALL CROSS CORRIDORS AT RIGHT ANGLES TO CORRIDORS, AS HIGH AS POSSIBLE. NO PIPING SHALL BE ROUTED UNDER THROUGH CORRIDORS.
7. VERTICAL PIPING SHALL BE INSTALLED IN REAR CORNER OF STORAGE UNITS. INSTALL SO AS TO BE ABLE TO BE HIDDEN FROM VIEW AND TAMPERS BY JAVUS PANEL INSTALLERS.
8. PROVIDE LINK SEAL AT ALL PIPING PENETRATIONS THROUGH FOUNDATION WALL.
9. THE PLUMBING CONTRACTOR SHALL SECURE ALL PERMITS, INSPECTION CERTIFICATES, ETC. AND PAY ALL CHARGES CONNECTED WITH THE SAME.



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Order Plans @

WATER SUPPLY SURVEY REPORT: PUBLIC STORAGE, 2431 SOUTH ORANGE BLOSSOM TRAIL, APT. #1, TEST DATE: 2/5/2020. SUMMARY STATEMENT: This report provides the current available water supply for the proposed expansion of Public Storage at 2431 South Orange Blossom Trail, in Apopka, FL. SUMMARY OF RESULTS (CONCLUSION C1 - AS DESIGNED): Fire line Base at Rise: (BOR) static pressure at Finish Floor Elevation: (FFE): 47.9 psig. Fire line BOR high static pressure at FFE: 54.9 psig. Fire line BOR residual pressure at FFE: 41.2 psig @ 900 gpm. Fire line BOR residual pressure at FFE: 15.1 psig @ 1500 gpm. Safety Factor Utilized in Minimum Required Demand: 5.0 psig. Fire line Backflow Preventer Required: 8" detector check valve above ground at the street and 6" Wilkins 350ADA double detector check above ground behind the building. Domestic BOR static pressure at FFE: 45.3 psig. Domestic BOR residual pressure at FFE: 15.1 psig @ 19 gpm. Domestic Backflow Preventer Required: 8" detector check valve above ground at the street. Code Basis for Design: 2017 Florida Fire Prevention Code. Required Fire Flow at 20 psig and Duration: 1500 gpm for 4 hours. Available Fire Flow at 20 psig and Duration: 1500 gpm for 4 hours. SUMMARY OF RESULTS (CONCLUSION C2 - WITH 1 INCH METER AND BACKFLOW AND 1 INCH DOMESTIC FROM THE TAP INTO THE BUILDING): Domestic BOR static pressure at FFE: 43.3 psig. Domestic BOR residual pressure at FFE: 30.0 psig @ 19 gpm. Domestic Backflow Preventer Required: 1" LF909M1 above ground behind the building and 8" detector check valve above ground at the street. CONTACT INFORMATION: Backflow Prevention Contact: Orange County Utilities, Cross Connection Control Manual, November 2017 Revision 3. Fire Department Contact: Christina Diaz, Fire Marshal, Seminole County, 750 Edinger Way, Sanford, FL 32773, Phone: 407.662.5682. Water Department Contact: Gary Humphress, Field Service Division, Orange County Utilities Department, 750 Edinger Way, Sanford, FL 32773, Phone: 407.662.5682. City Representative present during test: Malcolm Skirrad, Orange County Utilities. Please consult with the Fire Protection Engineer of Record to discuss design options prior to site layout.

PUBLIC STORAGE SEMINOLE COUNTY, FL PS#28091 2431 Orange Blossom Trail Apopka, FL

Table with columns: #, Date, Issue/Description, PERMIT SUBMITTAL. Rows: 1 04/24/2020 SECOND SUBMITTAL, 2 06/11/2020 THIRD SUBMITTAL.