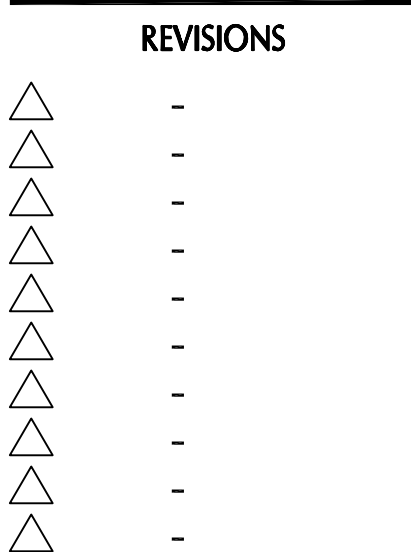


KITCHEN RENOVATION FOR
US FOODS - SOUTH FLORIDA
7598 NW 6TH AVENUE
BOCA RATON, FL 33487



DATE	JOB NO.
1-6-20	50-1414-19
DWG BY	CHKD BY
AMK	JRO

SHEET TITLE
ABBREVIATIONS,
GENERAL NOTES,
AND SYMBOLS

PRELIMINARY DWGS.
FINAL CONST. DWGS.
SHEET NUMBER

P001

PLUMBING

GENERAL NOTES

GENERAL

- A. Provide all materials 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 authorities having jurisdiction.
- B. Contract document drawings for mechanical work (HVAC and plumbing) are diagrammatic and are intended to convey scope and general arrangement only.
- C. Install all mechanical equipment and appurtenances in accordance with manufacturers' recommendations, contract documents, and applicable codes and regulations.
- D. Provide vibration isolation for all mechanical equipment to prevent transmission of vibration to building structure.
- E. Provide vibration isolators for all piping supports connected to, and within 50 feet of, isolated equipment (except at base elbow supports and anchor points) throughout mechanical equipment rooms.
- F. The location of existing underground utilities is shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. The contractor shall pay for and repair all damages caused by failure to exactly locate and preserve any and all underground utilities unless otherwise noted.
- G. Coordinate construction of all mechanical work with architectural, structural, civil, electrical work, etc., shown on other contract document drawings.
- H. Maintain a minimum 6'-9" clearance to the underside of pipes, ducts, conduits, suspended equipment, etc., throughout access routes in mechanical rooms.
- I. All tests shall be completed before any mechanical equipment or piping insulation is applied.
- J. Locate all temperature, pressure, and flow measuring devices in accessible locations with the straight section of pipe or duct up- and downstream as recommended by the manufacturer to ensure accuracy of measurements.
- K. Where two or more items of the same type of equipment are required, the product of one manufacturer shall be used.
- L. Reinforcement, detailing, and placement of concrete shall conform to ASTM 315 and ACI 318. Concrete shall conform to ASTM C94. Concrete work shall conform to ACI 318, part entitled "Construction Requirements." Compressive strength in 28 days shall be 3,000 psi. Total air content of exterior concrete shall be between 5 and 7 percent by volume. Slump shall be between 3 and 4 inches. Concrete shall be cured for 7 days after placement.
- M. 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.
- N. All control wire and conduit shall comply with the National Electric Code and Division 26 of the specification.
- O. Concrete housekeeping pads to suit mechanical equipment shall be sized and located by the mechanical contractor. Minimum concrete pad thickness shall be 6 inches. Pad shall extend beyond the equipment a minimum of 6 inches on each side. Concrete housekeeping pads shall be provided by the general contractor. It shall be the responsibility of the mechanical contractor to coordinate the size and location of concrete housekeeping pads with the general contractor.
- P. 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.
- Q. When mechanical work (HVAC, plumbing, sheet metal, 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.
- R. The locations of all items shown on the drawings or called for in the specifications that are not definitely 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.
- S. All miscellaneous steel required to ensure proper installation and as shown in details for piping, ductwork, and equipment (unless otherwise noted) shall be furnished and installed by the mechanical contractor.
- T. 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.
- U. All equipment, piping, ductwork, etc., shall be supported as detailed, specified, and required to provide a vibration-free isolation.
- V. All ductwork, piping, and equipment supported from structural steel shall be coordinate 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.

- W. Mechanical equipment, ductwork, and piping shall not be supported from a metal deck.
- X. Locations and sizes of all floor, wall, and roof openings shall be coordinated with all other trades involved.
- Y. All openings in fire walls due to ductwork, piping, conduit, etc., shall be fire stopped per specifications.
- Z. All air-conditioning condensate drain lines from each air handling unit and rooftop unit shall be piped full size of the unit drain outlet, with "P" trap, and piped to the nearest allowable drain in accordance with the authority having jurisdiction. See the details shown in the drawings or contract specifications for the depth of the air conditioning condensate trap.
- AA. Refer to typical details for ductwork, piping, and equipment installation.
- PLUMBING**
- A. Provide all materials and equipment and perform all labor required to install complete and operable plumbing systems as indicated on the drawings, and as specified and required by authorities having jurisdiction.
- B. Run all soil waste and vent piping with 1 percent minimum grade unless otherwise noted. Horizontal vent piping shall be graded to drip back to the soil or waste pipe by gravity.
- C. Elevations as shown on the drawings are to the bottom of all pressure piping and to the invert of all gravity piping.
- D. Adjust sewer inverts to keep the tops of pipes in line where the pipe's size changes.
- E. Maintain a minimum of 3'-6" of ground cover over all exterior underground water mains and a minimum of 3'-0" of ground cover over all exterior underground sewers and drains.
- F. Provide shutoff valves in all domestic water piping system branches in which branch piping serves two or more fixtures.
- G. Unless otherwise noted, all domestic cold and hot water piping shall be NPS 1/2.
- H. Unless otherwise noted, all piping is overhead, tight to the underside of the structure, with space for insulation if required.
- I. Install piping so all valves, strainers, unions, traps, flanges, and other appurtenances requiring access are accessible.
- J. Where domestic cold and hot water piping drops into a pipe chase, the size shown for the pipe drops shall be used to the last fixture.
- K. Install all piping without forcing or springing.
- L. All piping shall clear doors and windows.
- M. All piping shall grade to low points. Provide hose end drain valves at the bottom of all risers and low points.
- N. Unions and/or flanges shall be installed at each piece of equipment, in bypasses, and in long piping runs (100 feet or more) to permit disassembly for alteration and repairs.
- O. All valves shall be adjusted for smooth and easy operation.
- P. Unless otherwise noted, all valves (except control valves) and strainers shall be the full size of the pipe before reducing the size to make connections to the equipment and controls.
- Q. Provide all plumbing fixtures and equipment with accessible stops.
- R. Unless otherwise noted, drains shall be installed at the low point of roofs, area-ways, floors, etc.
- S. Provide cleanouts in sanitary and storm drainage systems at ends of runs, at changes in direction, near base of stacks, every 90 feet in horizontal runs and elsewhere as indicated.
- T. All cleanouts shall be the full size of the pipe for pipe sizes NPS 4 and smaller, and shall be NPS 4 for pipe sizes larger than NPS 4.
- U. All balancing valves and butterfly valves shall be provided with position indicators and maximum adjustable stops (memory stops).
- V. All valves shall be installed so the valve remains in service when the equipment or piping on the equipment side of the valve is removed.
- W. All piping work shall be coordinated with all trades involved. Offsets in piping around obstructions shall be provided at no additional cost to the owner.
- X. Provide flexible connections in all piping systems connected to pumps and other equipment that require vibration isolation. Flexible connections shall be provided as close to the equipment as possible or as indicated on the drawings.

ABBREVIATIONS

AFB	ABOVE FINISHED FLOOR	FCO	FLOOR CLEANOUT	MISC	MISCELLANEOUS	SAN	SANITARY
AFG	ABOVE FINISHED GRADE	FD	FLOOR DRAIN	MOCP	MAXIMUM OVERCURRENT PROTECTION	SCFM	CFM AT STANDARD CONDITIONS
AMP	AMPERE(S)	FLA	FULL LOAD AMPERES	MTR	MOTOR	SCFS	CFS AT STANDARD CONDITIONS
APPROX	APPROXIMATE, APPROXIMATELY	FM	FACTORY MUTUAL	N/A	NOT APPLICABLE	SFU	SUPPLY FIXTURE UNITS
AVG	AVERAGE	FOG	FATS, OILS AND GREASES	N/C	NORMALLY CLOSED	SPEC	SPECIFICATION(S)
AW	ACID WASTE	FPM	FEET PER MINUTE	N/O	NORMALLY OPEN	SQ	SQUARE
BAS	BUILDING AUTOMATION SYSTEM	FPS	FEET PER SECOND	NG	NATURAL GAS	SQ FT	SQUARE FOOT (FEET)
BFF	BELOW FINISHED FLOOR	FT.'	FOOT (FEET)	NPBW	NON-POTABLE COLD WATER	SQ IN	SQUARE INCH(ES)
BFG	BELOW FINISHED GRADE	FUTR	FUTURE	NPHW	NON-POTABLE HOT WATER	SS	STAINLESS-STEEL
BHP	BRAKE HORSE POWER	GA	GAUGE	NPS	NOMINAL PIPE SIZE	ST	STORM
BTU	BRITISH THERMAL UNIT	GAL	GALLON(S)	NPT	NATIONAL PIPE THREAD TAPERED	STD	STANDARD
BTUH	BTU(S) PER HOUR	GALV	GALVANIZED	NTS	NOT TO SCALE	TEMP	TEMPERATURE
CA	COMPRESSED AIR	GPC	GALLONS PER CYCLE	OC	ON CENTER	TMV	THERMOSTATIC MIXING VALVE
CD	CONDENSATE	GPD	GALLONS PER DAY	OD	OUTSIDE DIAMETER	T-STAT	THERMOSTAT
CFM	CUBIC FEET PER MINUTE	GPH	GALLONS PER HOUR	OZ	OUNCE(S)	TYP	TYPICAL
CFS	CUBIC FEET PER SECOND	GPM	GALLONS PER MINUTE	PC	PLUMBING CONTRACTOR	UL	UNDERWRITERS LABORATORIES
CI	CAST-IRON	HB	HOSE BIBB	PCWS	PROCESS COLD WATER SUPPLY	(U)___	UNDERGROUND PIPE - SPECIFY TYPE
CIP	CAST-IRON PIPE	HD	HUB DRAIN	PD	PRESSURE DROP	V	VOLTS
CKT	CIRCUIT	HDPE	HIGH DENSITY POLYETHYLENE	PDI	PLUMBING & DRAINAGE INSTITUTE	VFD	VARIABLE FREQUENCY DRIVE
CMPR	COMPRESSOR	HG	MERCURY	PE	POLYETHYLENE	VTR	VENT THROUGH ROOF
CO	CLEAN OUT	HP	HORSE POWER	PEX	CROSS-LINKED POLYETHYLENE	W	WATTS
COMB	COMBINATION	HR	HOUR	PHWR	PROCESS HOT WATER RETURN	WCO	WALL CLEANOUT
COND	CONDENS(ER, ING, -ATION)	HW	HOT WATER (DOMESTIC)	PHWS	PROCESS HOT WATER SUPPLY	W/	WITH
CPVC	CHLORINATED PVC	HWR	HOT WATER RETURN (DOMESTIC)	PP	POLYPROPYLENE	W/O	WITHOUT
C-TO-C	CENTER TO CENTER	HYD	HYDRANT	PPM	PARTS PER MILLION	WG	WATER GAUGE
CU	COPPER	HZ	FREQUENCY IN HERTZ	PSI	POUNDS PER SQUARE INCH	YCO	YARD CLEANOUT
CU FT	CUBIC FOOT (FEET)	ID	INSIDE DIAMETER	PSIG	PSI GAUGE		
CU IN	CUBIC INCH(ES)	IN, "	INCHES	PVC	POLYVINYL CHLORIDE		
CW	COLD WATER (DOMESTIC)	INV	INVERT	PW	PROCESS WASTE		
DEG-F, °F	DEGREES FAHRENHEIT	IPS	IRON PIPE SIZE	RECIRC	RECIRCULATE		
DFU	DRAINAGE FIXTURE UNITS	KEC	KITCHEN EQUIPMENT CONTRACTOR	REQD	REQUIRED		
DI	DUCTILE IRON	KW	KILOWATT	REV	REVOLUTION(S)		
DIA, Ø	DIAMETER	LBS	POUNDS	RCVR	RECEIVER		
DN	DOWN	LWT	LEAVING WATER TEMPERATURE	RO	REVERSE OSMOSIS (WATER)		
EA	EACH	MAX	MAXIMUM	RPM	REVOLUTIONS PER MINUTE		
EFF	EFFICIENCY	MBH	BTU PER HOUR (THOUSAND)	RPS	REVOLUTIONS PER SECOND		
EL	ELEVATION	MCA	MINIMUM CIRCUIT AMPACITY				
EMV	EMERGENCY MIXING VALVE	MEZZ	MEZZANINE				
EWT	ENTERING WATER TEMPERATURE	MFS	MAXIMUM FUSE SIZE				
		MIN	MINIMUM				

PLUMBING SYMBOLS

LINETYPES		
----	COLD WATER (DOMESTIC)	----
----	HOT WATER (DOMESTIC)	----
----	HOT WATER RETURN	----
----	PROCESS COLD WATER (POTABLE)	----
----	PROCESS HOT WATER (POTABLE)	----
----	PROCESS HOT WATER RETURN (POTABLE)	----
----	PIPING WITH HEAT TRACE	----
----	VENT (SANITARY)	----
----	INDIRECT WASTE	----
----	UNDERGROUND INDIRECT WASTE	----
----	SANITARY	----
----	UNDERGROUND SANITARY	----
----	FATS, OILS, & GREASE WASTE	----
----	UNDERGROUND FATS, OILS, & GREASE WASTE	----
----	STORM	----
----	UNDERGROUND STORM	----

SYMBOLS

BP	BACKFLOW PREVENTER	●	POINT OF CONNECTION
⊗	BACKWATER VALVE	◆	POINT OF DISCONNECTION
⌘	BALANCING VALVE	⦿	PUMP
↺	CHECK VALVE - SWING	⊙	PRESSURE GAUGE
↻	ELBOW UP/DOWN	⊙	PRESSURE GAUGE W/ COIL SYPHON
↻	ELBOW UP/DOWN W/ VALVE IN DROP	⊙	PRESSURE REGULATING VALVE
→	END CAP	⌘	SAFETY RELIEF VALVE
— —	FLANGE OR UNION CONNECTION	⌘	SHUT-OFF VALVE
⊠	FLEXIBLE CONNECTOR	⌘	SOLENOID VALVE
⊠	FLOOR CLEANOUT	⌘	STRAINER - Y-PATTERN
⊠	FLOOR DRAIN	⌘	STRAINER - Y-PATTERN W/ DRAIN
⊠	FLOOR SINK	⌘	TEE UP/DOWN
⌘	GLOBE VALVE	⌘	TEE UP/DOWN W/ VALVE IN DROP
⌘	HAMMER ARRESTER	⌘	THERMOMETER
→	HOSE BIBB/ WALL HYDRANT	—X—	TRAP
⊙	IMMERSSION THERMOSTAT	—X—	TRAP (RUNNING)
⊠	METER	⊠	VALVE IN VALVE BOX
⌘	MIXING VALVE		

DRAWING INDEX

P001	ABBREVIATIONS, GENERAL NOTES, AND SYMBOLS
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P201	ENLARGED DRAIN, WASTE, AND VENT FLOOR PLANS
P202	ENLARGED DOMESTIC WATER FLOOR PLAN
P301	DWV AND DOMESTIC WATER ISOMETRICS
P501	DETAILS
P801	SCHEDULES

DESIGN INFORMATION

APPLICABLE CODES:
2017 FLORIDA PLUMBING CODE
2017 FLORIDA FUEL GAS CODE
2017 FLORIDA ENERGY CONSERVATION CODE

PROJECT DESIGN CONDITIONS:
AVAILABLE WATER PRESSURE: APPROX. 70 PSIG
HARDNESS: 65-80 PPM

UTILITY SERVICES CONTACT INFORMATION:
CITY OF BOCA RATON
UTILITY SERVICES
(561) 338-7300