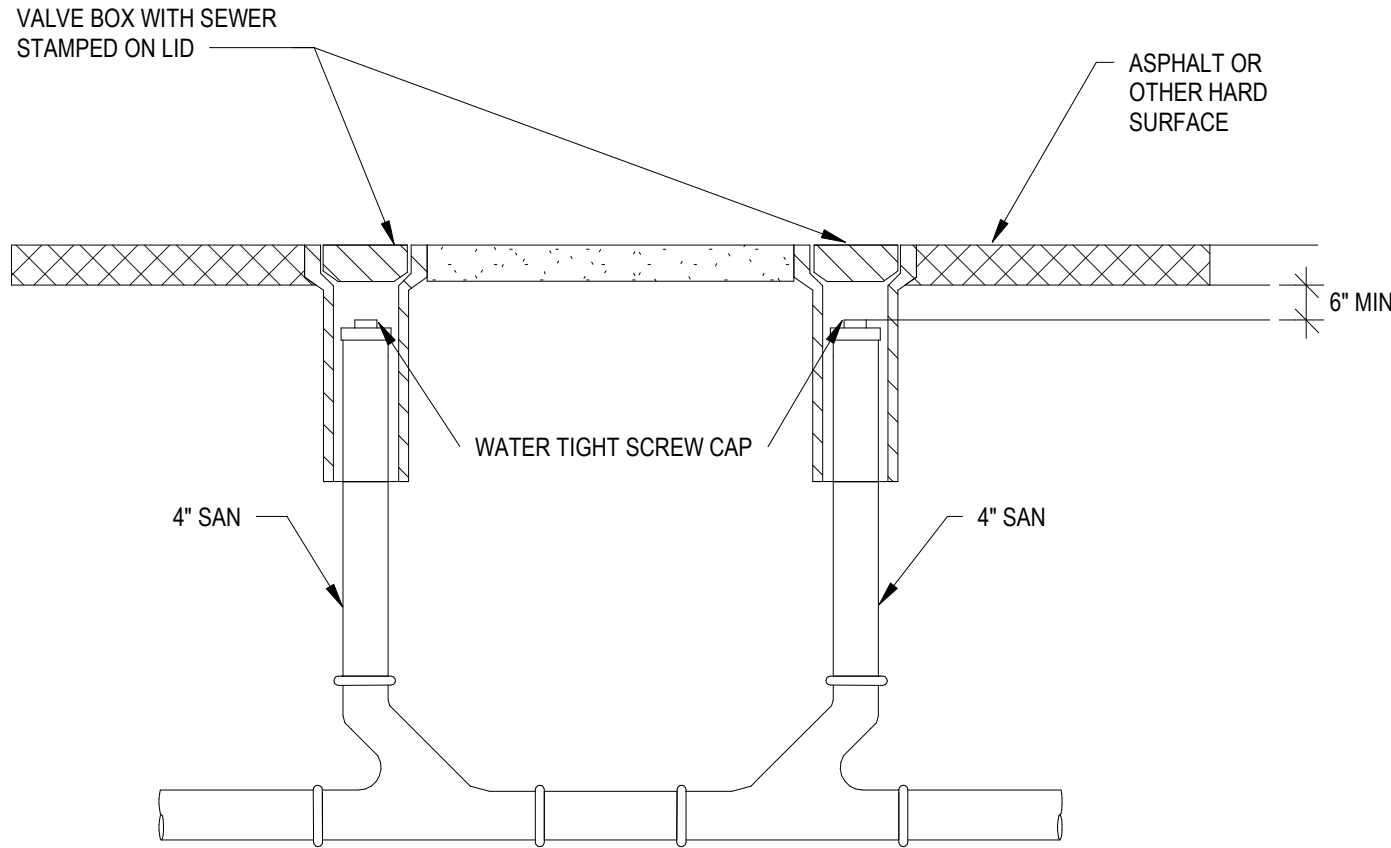
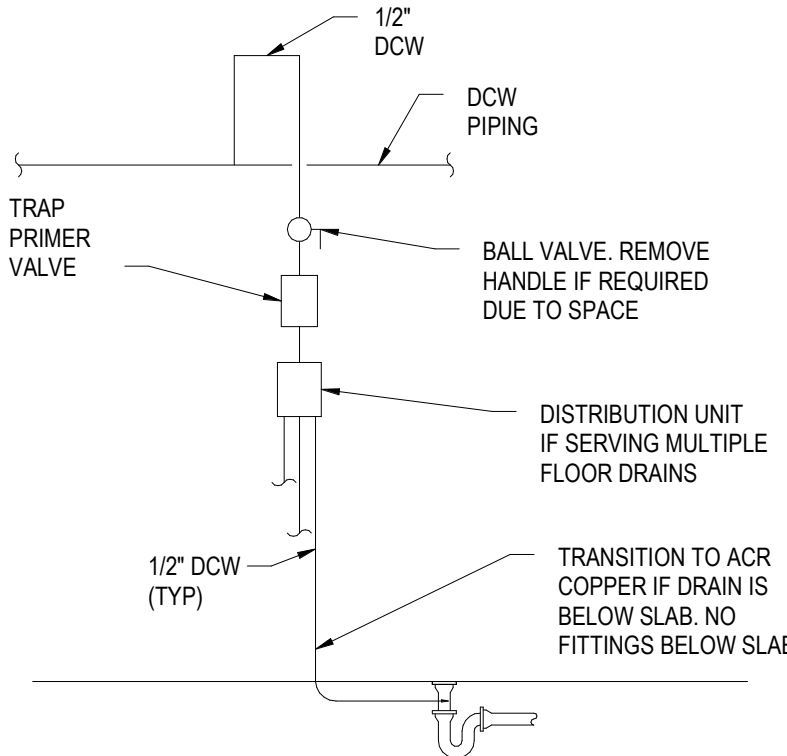
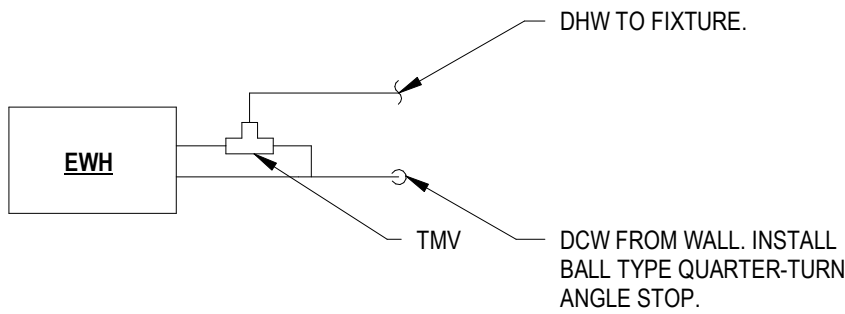




TWO WAY CLEANOUT DETAIL
NOT TO SCALE



TRAP PRIMER DETAIL
NOT TO SCALE



INSTANTANEOUS WATER HEATER DETAIL
NOT TO SCALE

PLUMBING LEGEND

XX YY	EQUIPMENT TAG XX=EQUIP TYPE, YY=EQUIP. NO.
	CONNECT TO EXISTING
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CALIBRATED BALANCING VALVE (CIRCUIT SETTER)
	RELIEF VALVE
	TWO WAY CONTROL VALVE
	THREE WAY CONTROL VALVE
	PLUG VALVE
	PRESSURE REDUCING VALVE
	STRAINER
	THERMOMETER
	SENSOR WELL
	UNION
	PRESSURE GAUGE
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	VENTURI FLOW METER
	FLEXIBLE PIPE CONNECTION
	TRAP PRIMER
	WATER HAMMER ARRESTOR

PLUMBING GENERAL NOTES

- COORDINATE WORK WITH OTHER TRADES. PROVIDE OFFSETS AND RELOCATE AS REQUIRED TO INSTALL A COMPLETE SYSTEM WITHOUT INTERFERING WITH OTHER TRADES. COORDINATE ANY NECESSARY CHANGES WITH THE GENERAL CONTRACTOR.
- VERIFY INVERT ELEVATIONS WITH THE CIVIL DRAWINGS AND ON SITE CONDITIONS PRIOR TO INSTALLING ANY SYSTEM. ADJUST SYSTEM INVERT ELEVATIONS AND PROVIDE OFFSETS TO ACCOMMODATE EXISTING CONDITIONS.
- CONTRACTOR SHALL INSTALL ALL SYSTEMS IN THEIR ENTIRETY ACCORDANCE WITH REFERENCED CODES, STANDARDS, DRAWINGS AND SPECIFICATIONS.
- CONTRACTOR SHALL VISIT THE PROJECT SITE TO ACQUAINT THEMSELVES WITH THE EXISTING PROJECT CONDITIONS.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER AND GENERAL CONTRACTOR PRIOR TO ANY SYSTEM SHUT DOWN. PROVIDE ONE WEEK OF PRIOR NOTICE.
- DO NOT CUT ANY BUILDING STRUCTURE WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. PROVIDE OPENINGS IN THE STRUCTURE PER THE STRUCTURAL ENGINEER'S DIRECTIONS PRIOR TO OR DURING STRUCTURE INSTALLATION. (SEE STRUCTURAL DRAWINGS.) REQUEST INFORMATION WHEN REQUIRED TO VERIFY STRUCTURAL REQUIREMENTS WITH THE GENERAL CONTRACTOR.
- DO NOT HAMMER THROUGH CONCRETE WALLS TO INSTALL ANY ITEM. CORE DRILL, CUT HOLES OR PROVIDE SLEEVES DURING WALL INSTALLATIONS. DAMAGE DONE BY OTHER MEANS TO BLOCK WALLS SHALL BE REPAIRED TO THE SATISFACTION OF THE ARCHITECT.
- PROVIDE BOTH DEEP SEAL TRAPS AND (TRAP PRIMER VALVES & CONNECTIONS) FOR FLOOR DRAINS IN AREAS OTHER THAN SHOWERS OR AS NOTED FOR KITCHEN FLOOR DRAINS. VERIFY EACH FLOOR DRAIN LOCATION WITH THE GENERAL CONTRACTOR SO THAT PROPER FLOOR SLOPES CAN BE PROVIDED. FLOOR DRAINS THAT DO NOT ACCEPT WATER DUE TO IMPROPER FLOOR SLOPES WILL NOT BE ACCEPTABLE. INSTALL SUCH THAT NO TRIP HAZARD IS PRESENT WHEN COMPLETED, MEANING THE TOP SHALL BE FLUSH WITH FINISHED FLOOR.
- PROVIDE ACCESS TO ITEMS PLACED IN WALLS OR ABOVE CEILINGS. ABOVE CEILING ITEMS SHALL BE ACCESSIBLE FROM A 6' LADDER.
- ANY PIPING PASSING THROUGH A FOUNDATION WALL SHALL BE PROVIDED WITH A RELIEVING ARCH OR A PIPE SLEEVE TWO PIPE SIZES LARGER THAN THE PIPE PASSING THROUGH THE FOUNDATION. PER THE FLORIDA PLUMBING CODE. MODIFICATIONS TO STRUCTURE REQUIRE THE STRUCTURAL ENGINEER'S DIRECTION. NOTIFY GENERAL CONTRACTOR OF INTERFERENCES PRIOR TO INSTALLATION. PIPING SHALL NOT PASS THROUGH OR BELOW BUILDING FOOTINGS.
- PROTECT PIPES FROM CONTACT WITH CONCRETE. USE SLEEVES PER SPECIFICATIONS. ALLOW FOR EXPANSION AND CONTRACTION OF PIPE SYSTEMS.
- PROVIDE FIRE STOPPING AT EACH RATED FLOOR OR WALL PENETRATION. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATINGS AND SYSTEMS.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND ELEVATIONS.
- PROVIDE PROPER BRACING FOR ALL FIXTURES TO SUPPORT THE WEIGHT DESCRIBED IN THE FLORIDA BUILDING CODE - ACCESSIBILITY.
- DO NOT INSTALL PLASTIC PIPING IN AIR PLENUMS OR IN FIRE RATED WALLS. CONVERT TO CAST IRON AND/OR COPPER TUBING AS REQUIRED.
- MAINTAIN A 15' CLEARANCE BETWEEN OUTDOOR AIR INTAKES AND PLUMBING VENTS. VERIFY LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLING THE VENTS.
- THE ROOFING CONTRACTOR SHALL PROVIDE THE ROOF FLASHING FOR VENTS THROUGH THE ROOF. PLUMBING CONTRACTOR SHALL COORDINATE WITH THE ROOF CONTRACTOR AND GENERAL CONTRACTOR FOR EACH PENETRATION THROUGH THE ROOF. PROVIDE OFFSETS AS REQUIRED.
- IN CONCEALED LOCATIONS WHERE PIPING, OTHER THAN CAST-IRON OR GALVANIZED STEEL, IS INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS LESS THAN 1-1/4" FROM THE NEAREST EDGE OF THE MEMBER, THE PIPE SHALL BE PROTECTED BY STEEL SHIELD PLATES. SUCH SHIELD PLATES SHALL HAVE A THICKNESS OF NOT LESS THAN 16 GA. SUCH PLATES SHALL COVER THE AREA OF THE PIPE WHERE THE MEMBER IS NOTCHED OR BORED, AND SHALL EXTEND NOT LESS THAN 2" ABOVE SOLE PLATES AND BELOW TOP PLATES. (FBC-P-305.6).

PLUMBING ABBREVIATIONS

A	AMPS
AFF	ABOVE FINISHED FLOOR
AIR	COMPRESSED AIR
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CFH	CUBIC FEET PER HOUR
CTG	CLEAN OUT TO GRADE
DEGF	DEGREE FAHRENHEIT
DI	DEIONIZED WATER
DIA	DIAMETER
DCW	DOMESTIC COLD WATER
DFU	DRAINAGE FIXTURE UNITS
DHW	DOMESTIC HOT WATER
DHR	DOMESTIC HOT WATER RETURN
EA	EACH
EX	EXISTING
EWC	ELECTRIC WATER COOLER
EWV	ELECTRIC WATER HEATER
FBC	FLORIDA BUILDING CODE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FD W/TP	FLOOR DRAIN W/TP
FFM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FT WG	FEET WATER GAUGE
GA	GAUGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HB	HOSE BIBB
HP	HORSEPOWER
IN	INCHES
IN WG	INCHES WATER GAUGE
KW	KILOWATTS
KWH	KILOWATT HOUR
LAV	LAVATORY
LB	POUND
LWT	LEAVING WATER TEMPERATURE
MBH	1,000 BTUH
MIN	MINIMUM
MR	MOP RECEPTOR
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PH	PHASE
PSI	POUNDS PER SQUARE INCH
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
SAN	SANITARY
SF	SQUARE FEET
SH	SHOWER
SK	SINK
SPEC	SPECIFICATION
SS	STAINLESS STEEL; SERVICE SINK
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
V	VOLTS OR VENT
VACUUM	VACUUM
VYB	VALVE IN YARD BOX
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WPD	WATER PRESSURE DROP
WSFU	WATER SUPPLY FIXTURE UNITS

CODES AND STANDARDS

ALL PROJECT WORK SHALL BE GOVERNED BY AND ADHERE TO THE FOLLOWING CODES AND STANDARDS.

- FLORIDA BUILDING CODE 8TH EDITION (2023)
- FLORIDA BUILDING CODE 8TH EDITION (2023) - PLUMBING
- FLORIDA BUILDING CODE 8TH EDITION (2023) - ENERGY CONSERVATION
- FLORIDA BUILDING CODE 8TH EDITION (2023) - MECHANICAL
- FLORIDA BUILDING CODE 8TH EDITION (2023) - ACCESSIBILITY
- FLORIDA FIRE PREVENTION CODE EIGHTH EDITION (2023)
 - FIRE CODE (NFPA 1 - 2021 FLORIDA EDITION)
 - LIFE SAFETY CODE (NFPA 101 - 2021 FLORIDA EDITION)
- NATIONAL ELECTRIC CODE (NFPA 70) - 2020 EDITION
- FLORIDA STATE UNIVERSITY DESIGN AND CONSTRUCTION STANDARDS

ELECTRIC TANKLESS WATER HEATER SCHEDULE

MARK	EWH-1
TYPE	ELECTRIC TANKLESS
MANUFACTURER	CHRONOMITE
MODEL	M-201 /208
ELECTRICAL INPUT (VOLT-PHASE)	208-1
TOTAL INPUT (W)	4,160
DELIVERY TEMPERATURE (DEG F)	110
THERMOSTATIC MIXING VALVE (MODEL)	WATTS MINIMIX
THERMOSTATIC MIXING VALVE PIPING	3/8" IN - 3/8" OUT
THERMOSTATIC MIXING VALVE OUTPUT TEMPERATURE (DEG F)	110

NOTES:
1. INSTALL ISOLATION VALVE ON UNIT INLET AND OUTLET PIPING.
2. ALLOWABLE ALTERNATE MANUFACTURERS ARE EEMAX AND TANKLESS INC.
ALTERNATE PRODUCTS MUST MEET ALL SCHEDULED VALUES AND ELECTRICAL DATA.

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	ABBREV	DCW (IN)	DHW (IN)	SAN (IN)	VENT (IN)	ELEC	FLOW	ACCESSIBLE	NOTES
WC-2	WATER CLOSET	WC	1-1/2	-	4	2	-	1.1	YES	
L-3	LAVATORY	L	1/2	1/2	2	2	-	0.35 GPM	YES	INSTALL ASSE 1070 COMPLIANT MIXING VALVE BELOW LAVATORY
FD	FLOOR DRAIN	FD	-	-	4	2	-	N/A	N/A	INSTALL TRAP PRIMER

NOTE: ALL PIPE SIZES SHOWN ARE FOR SINGLE FIXTURE INSTALLATION. WHERE MULTIPLE FIXTURES ARE SERVED BY A COMMON PIPE, SEE DRAWINGS FOR SIZE.



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STRUCTURAL ENGINEER

-

CIVIL ENGINEER

-

TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH FBC SECTION 110.8 AND CHAPTER 633 OF THE FLORIDA STATUTES.

SEAL AND SIGNATURE

S. Andrew Mitchell
PE - 75609

SUBMITTAL:	ISSUE DATE:
100% CONSTRUCTION DOCUMENTS	08/24/2026
REVISION	DESCRIPTION
DATE	

FSU ENERGY RESEARCH FACILITY

FLORIDA STATE UNIVERSITY
2000 LEVY AVE, TALLAHASSEE,
FLORIDA- 32310

KEY PLAN

DRAWING TITLE:

PLUMBING LEGEND, NOTES & DETAILS

PROJECT NO.:	WA23087	DRAWN BY:	LW
		CHECKED BY:	AM

P001

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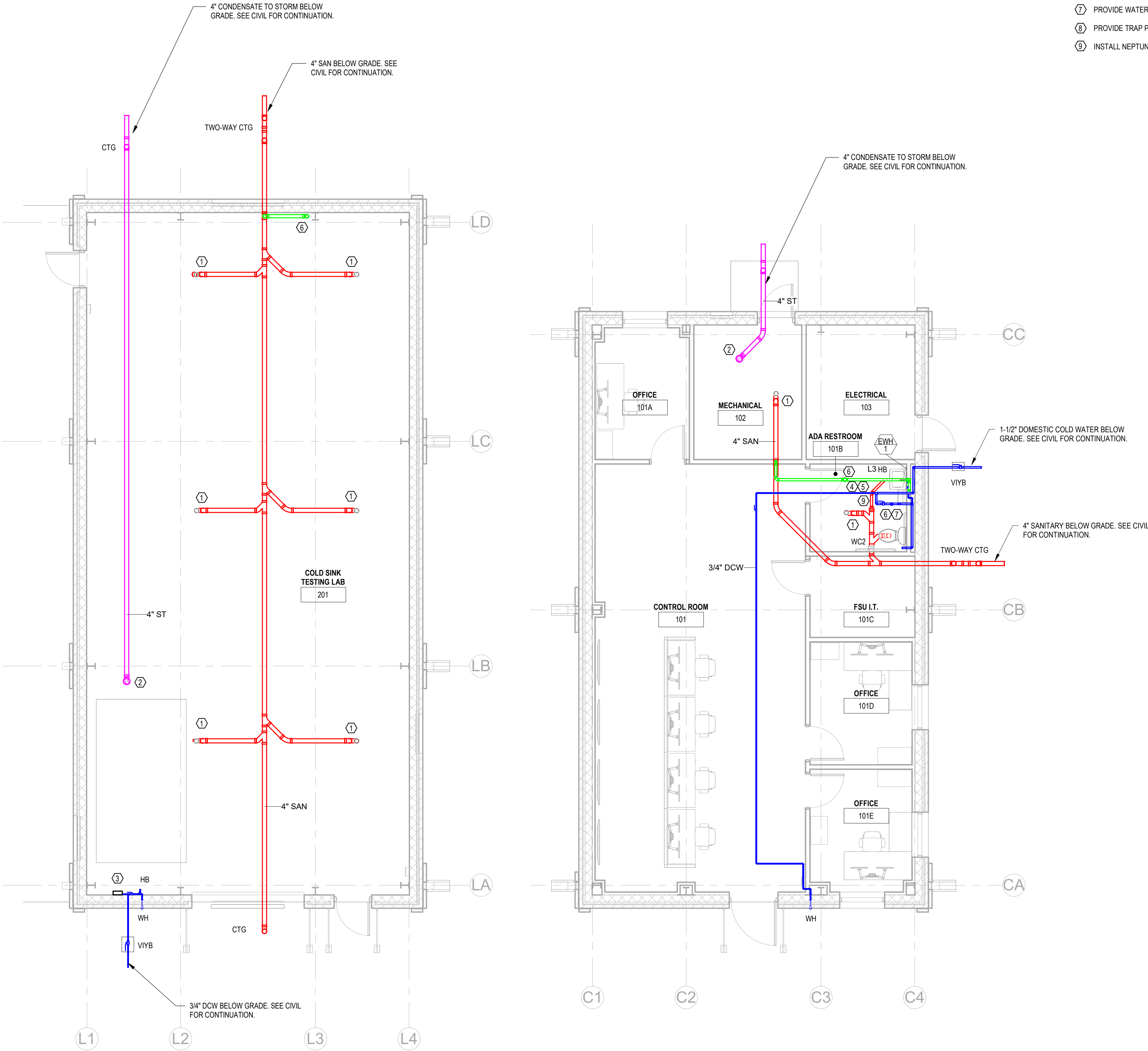
PLUMBING FLOOR PLANS

PROJECT NO.:	WAZ3087	DRAWN BY:	LW
		CHECKED BY:	AM

P101

PLUMBING SHEET NOTES:

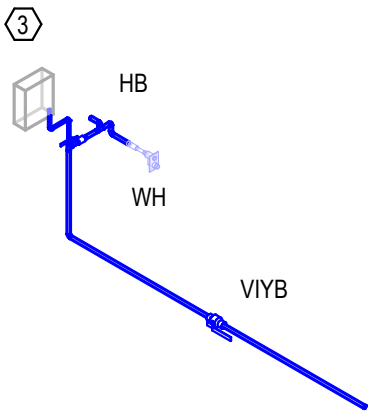
- ① 4" FLOOR DRAIN WITH TRAP PRIMER.
- ② 4" HUB DRAIN RECEIVING CONDENSATE. ROUTE TO SITE STORM.
- ③ ELECTRONIC TRAP PRIMER, PRECISION PLUMBING PRODUCTS PRIME TIME MODEL PT-6 OR APPROVED EQUAL. PROVIDE WITH 120V SOLENOID VALVE IN FLUSH MOUNT CABINET. ROUTE DISCHARGE TO FLOOR DRAINS.
- ④ 4 KW INSTANTANEOUS WATER HEATER BELOW LAVATORY.
- ⑤ 3/4" DCW HOSE BIBB BENEATH LAVATORY.
- ⑥ 3" VENT THROUGH ROOF.
- ⑦ PROVIDE WATER HAMMER ARRESTOR FOR FLUSH VALVE FIXTURE.
- ⑧ PROVIDE TRAP PRIMER AND ROUTE DISCHARGE TO FLOOR DRAINS.
- ⑨ INSTALL NEPTUNE T-10 WATER METER ON DCW FEED TO WATER HEATER.



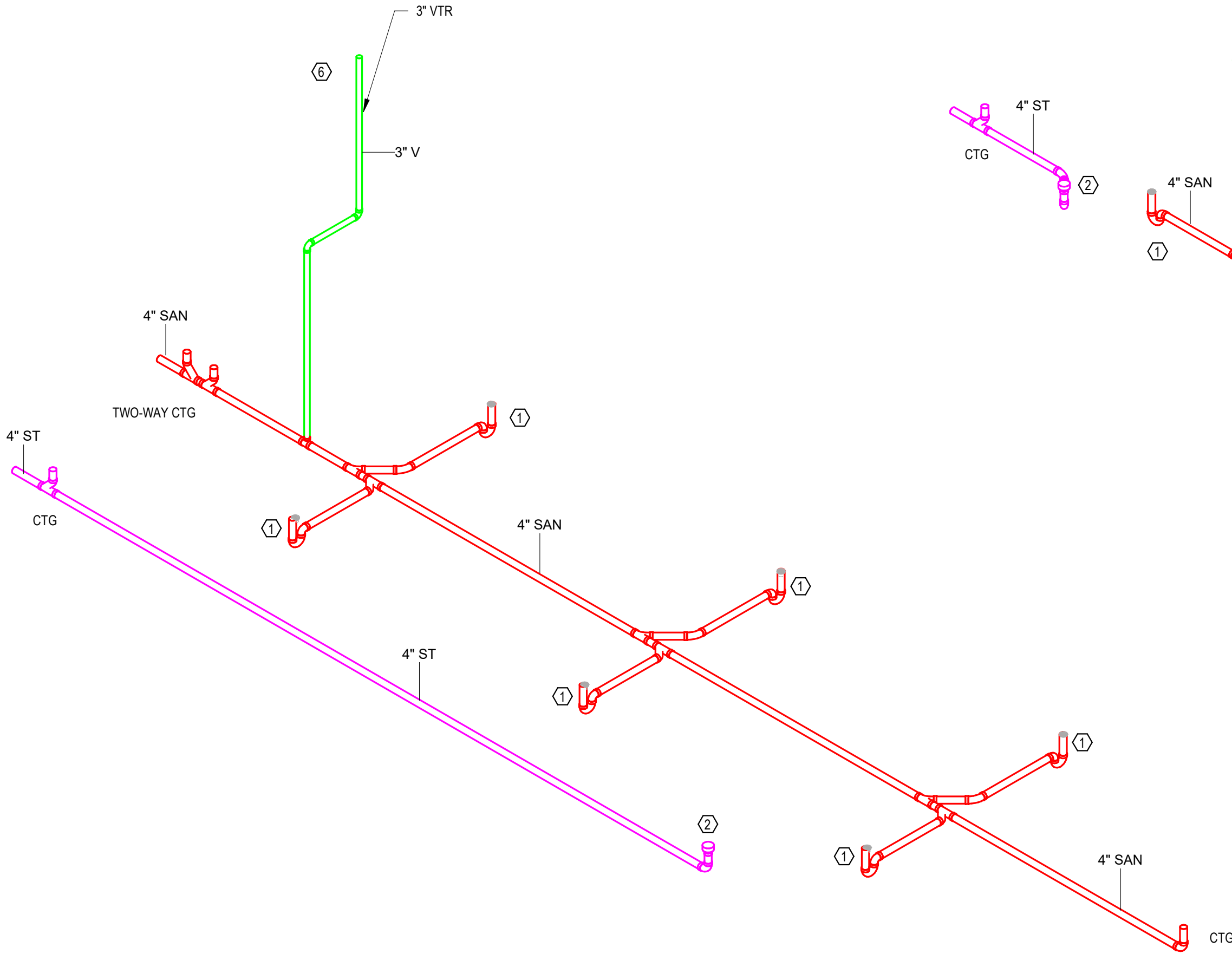
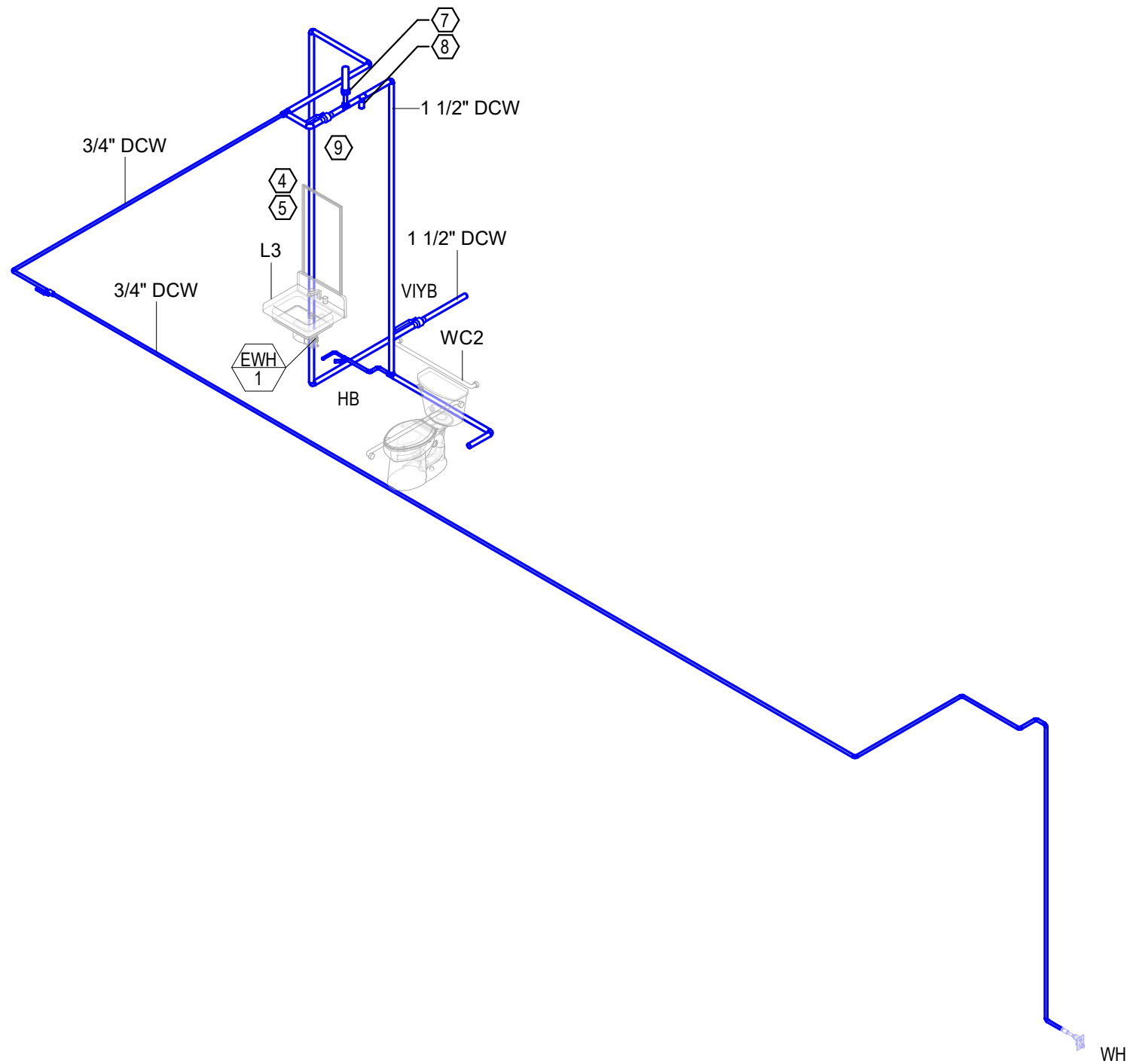
PLUMBING FLOOR PLANS

3/16" = 1'-0"

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PLUMBING - DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE



PLUMBING - GRAVITY PIPING RISER DIAGRAM
NOT TO SCALE

PLUMBING SHEET NOTES:

- 4" FLOOR DRAIN WITH TRAP PRIMER.
- 4" HUB DRAIN RECEIVING CONDENSATE. ROUTE TO SITE STORM.
- ELECTRONIC TRAP PRIMER, PRECISION PLUMBING PRODUCTS PRIME TIME MODEL PT-6 OR APPROVED EQUAL. PROVIDE WITH 120V SOLENOID VALVE IN FLUSH MOUNT CABINET. ROUTE DISCHARGE TO FLOOR DRAINS.
- 4 KW INSTANTANEOUS WATER HEATER BELOW LAVATORY. PROVIDE METER FOR BAS MONITORING OF HOT WATER.
- 3/4" DCW HOSE BIBB BENEATH LAVATORY.
- 3" VENT THROUGH ROOF.
- PROVIDE WATER HAMMER ARRESTOR FOR FLUSH VALVE FIXTURE.
- PROVIDE TRAP PRIMER AND ROUTE DISCHARGE TO FLOOR DRAINS.
- INSTALL NEPTUNE T-10 WATER METER ON DCW FEED TO WATER HEATER.



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KEY PLAN

DRAWING TITLE:

PLUMBING RISERS

PROJECT NO.:	WAZ3087	DRAWN BY:	LW
		CHECKED BY:	AM

P201