

SYMBOL & ABBREVIATIONS

SYMBOL	ABBREVIATION	DESCRIPTION
—	AFF	ABOVE FINISHED FLOOR
—	AHC	ABOVE HUNG CEILING
—	BFP	BACK FLOW PREVENTOR
—	VTR	VENT THROUGH ROOF
—	FAI	FRESH AIR INTAKE
—	FS	FLOOR SINK
—	RPZ	REDUCED PRESSURE ZONE – BFP
—	TYP	TYPICAL
—	H.W. HTR	HOT WATER HEATER
—	EX.	EXISTING TO REMAIN
—	NEW	NEW WORK
---	DEM.	EXISTING TO BE REMOVED
---	CW	COLD WATER
---	HW	HOT WATER
---	TW	TEMPERED WATER
---	HWR	HOT WATER RECIRCULATION
— V —	V	VENT
— W —	W	WASTE LINE
— S —	S	SANITARY
	—	GATE VALVE
	—	GLOBE VALVE
	—	CHECK VALVE
	—	OS&Y GATE VALVE
	—	BALL VALVE
	—	MANUAL AIR VENT
	—	T&P RELIEF VALVE
	—	PRESSURE REDUCING VALVE
— O —	—	TEE DOWN
— O —	—	ELBOW DOWN
— O —	—	TEE UP
— O —	—	ELBOW UP
— T —	—	PIPE CAP
⊙	CODP	CLEAN OUT DECK PLATE
— T —	WCO	WALL CLEAN OUT
— F —	FCO	FLOOR CLEAN OUT
	—	CONCENTRIC REDUCER
	—	ECCENTRIC REDUCER
	—	STRAINER
	—	FLEXIBLE CONNECTION
	—	FLOW ARROW
	—	PRESSURE GAGE
	—	PUMP
	—	THERMOMETER
	—	UNION

GENERAL NOTES

- THE CONTRACT DRAWINGS INDICATE THE EXTENT AND GENERAL ARRANGEMENTS OF THE PLUMBING SYSTEMS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY BY THE PLUMBING CONTRACTOR, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR APPROVAL. NO SUCH DEPARTURES SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND ENGINEER. EQUIPMENT AND PIPING ARRANGEMENTS SHALL PROVIDE ADEQUATE AND ACCEPTABLE CLEARANCES FOR ENTRY, SERVICING, AND MAINTENANCE. ANY CHANGES TO PIPING AND EQUIPMENT LOCATIONS NECESSARY TO AVOID INTERFERENCE WITH OTHER TRADES SHALL BE MADE AT NO EXTRA COST.
- THE PLUMBING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE PREVAILING NEW YORK STATE PLUMBING AND BUILDING CODES, THE STATE EDUCATION DEPARTMENT MANUAL OF PLANNING STANDARDS FOR SCHOOL BUILDINGS, AND ALL LOCAL REGULATIONS THAT MAY APPLY. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE, THE MORE STRINGENT STANDARD SHALL APPLY.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR PAYING RELATED FEES.
- CONNECTIONS TO EXISTING UTILITIES AND SERVICES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, INVERT ELEVATIONS, AND SIZES OF EXISTING PLUMBING SERVICES IN FIELD, AND SHALL CONNECT NEW PLUMBING SERVICES AS INDICATED ON DRAWINGS.
- PRIOR TO FABRICATION, THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB SITE, AND COORDINATE THIS WORK WITH THE WORK OF ALL OTHER TRADES.
- ALL ACCESS PANELS SHALL BE BY GENERAL CONTRACTOR. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR LOCATION.
- PROVIDE ALL PLUMBING FIXTURES, PIPING, VALVES AND ACCESSORY ITEMS AS SPECIFIED AND AS REQUIRED FOR A COMPLETE INSTALLATION. ROUGHING DIMENSIONS OF FIXTURES MUST BE COORDINATED WITH THE GENERAL CONTRACTOR.
- NEW TOILET ROOMS SHALL BE PROVIDED WITH A FLOOR DRAIN AND A TAMPER PROOF HOSE BIBB.
- PITCH ALL WASTE, SANITARY, AND STORM DRAIN PIPING AT MAXIMUM SLOPE POSSIBLE, BUT NOT LESS THAN 1/8" PER FOOT.
- NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.
- PROVIDE DIELECTRIC FITTINGS OR COUPLINGS WHEREVER DISSIMILAR METALS ARE JOINED.
- PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT ON COLD WATER, HOT WATER, AND GAS SUPPLY PIPES.
- ALL WORK SHALL BE PROPERLY TESTED, BALANCED, AND CLEANED AND DISINFECTED. PROVIDE A ONE YEAR WARRANTY FROM DATE OF FINAL INSPECTION ON ALL PARTS AND LABOR.
- PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES. FOR PIPES PENETRATING FIRE RATED PARTITIONS, THE SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE SEALED WITH FIRE STOPPING MATERIAL. PENETRATIONS FOR PIPING SHALL BE MADE BY CORE DRILLING WHENEVER POSSIBLE.
- PROVIDE TRAP SEAL PRIMERS FOR FLOOR DRAINS WHERE INDICATED ON PLAN. INSTALL THE PRIMER VALVE IN THE COLD WATER SERVICE, WITH THE TRAP CONNECTION PIPED TO THE FLOOR DRAIN TRAP. LOCATE THE VALVE ON THE WALL.
- PROVIDE ALL ACCESS PANELS AS REQUIRED FOR PROPER ACCESS TO ALL CLEANOUTS AND VALVES. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR LOCATION WITH THE GENERAL CONTRACTOR.
- THE PLUMBING CONTRACTOR SHALL PROVIDE ALL CUTTING, PATCHING, CORE DRILLING, PAINTING, ACCESS PANELS, AND FINAL RESTORATION REQUIRED TO FACILITATE THE INSTALLATION OF PLUMBING PIPING, INCLUDING ABOVE CEILINGS AND IN SHAFTS THAT WILL NOT BE REPLACED OR OPENED UNDER ANY OTHER SCOPE OF WORK RELATED TO THIS PROJECT. CONTRACTOR TO REMOVE AND REPLACE CEILINGS, AND OPEN AND PATCH SHAFTS AND WALLS, AS REQUIRED TO EXECUTE THE PLUMBING WORK.
- MAINTAIN THE EXISTING WATER, SEWER, AND STORM SERVICES WHICH SERVE THE EXISTING BUILDING IN OPERATION DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ANY SYSTEM SHUTDOWNS WITH THE OWNER.
- CAPPING AND PLUGGING OF ALL PIPING SHALL BE DONE USING THE SAME MATERIAL AS THE PIPING.
- PIPING INDICATED TO BE ABANDONED SHALL BE REMOVED WHERE NECESSARY FOR INSTALLATION OF NEW PIPING OR CONSTRUCTION.
- A CLEANOUT SHALL BE LOCATED AT THE BASE OF EACH STACK AND LEADER.
- SEE THE ARCHITECTURAL DRAWINGS FOR EXACT PHASING AND TIME SCHEDULE FOR CONSTRUCTION.
- ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR PLUMBING EQUIPMENT SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. DISCONNECT SWITCHES FURNISHED BY THE PLUMBING CONTRACTOR FOR PLUMBING EQUIPMENT SHALL BE HEAVY DUTY TYPE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY VENTILATION AND EXHAUST AIR WHEN WELDING OR SOLDERING OPERATIONS ARE PERFORMED, AS REQUIRED BY OSHA.

EQUIPMENT NOTES

- THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING FIXTURES AND DISTRIBUTION SYSTEMS, INCLUDING ALL ROUGH-INS AND FINAL CONNECTIONS.
- FIXTURE (GENERAL):**
 - FIXTURE SHALL BE COMPLETE WITH REQUIRED TRIM, INCLUDING BUT NOT LIMITED TO: SUPPORTS, FAUCETS, SUPPLIES, STOP VALVES, 17 GAUGE WASTE TAILPIECES, TRAPS, SEATS, FLUSHOMETER, VACUUM BREAKER, BOLTS, GASKETS CHROME PLATED ESCUTCHEONS, CAST BRASS FLOOR FLANGE AND BOLT CAPS. ALL SCREWS SHALL BE VANDAL PROOF.
 - EXPOSED METAL TRIM AND ROUGHING SHALL BE CHROME PLATED NICKEL BRASS, CHROME PLATED CAST BRASS 'P' TRAPS WITH SCREW PLUG CLEANOUT, SLIP-JOINT INLET AND FEMALE CAST SWIVEL THREADED ELBOW OUTLET. CHROME PLATED BRASS NIPPLE AT WALL WITH CHROME PLATED ESCUTCHEON. SWING SPOUTS SHALL HAVE 140° SWING LIMIT STOPS.
 - SUPPORT WALL FIXTURES SECURELY ON APPROVED COMMERCIAL GRADE CARRIERS AS MANUFACTURED BY JAY R. SMITH, JOSAM, OR ZURN.

REFER TO DRAWING P-501 FOR FIXTURE SPECIFICATION AND CONNECTION SCHEDULE.
- DOMESTIC HOT WATER HEATER (DWH-1):** SHALL BE A.O. SMITH GOLD SERIES ELECTRIC WATER HEATER MODEL DRE-120-54, U.L. LISTED, 119 GALLONS STORAGE CAPACITY, 54.0 kW INPUT, 9 ELEMENTS, 6kW PER ELEMENT, 240V/1φ/60Hz HEATING ELEMENT, 246 GPH RECOVERY @ 90° F TEMPERATURE RISE, 150 PSF MAXIMUM WORKING PRESSURE. PROVIDE THE FOLLOWING: AUTOMATIC IMMERSION WATER THERMOSTAT, EXTERNALLY ADJUSTABLE TEMPERATURE RANGE 60-180° F, HIGH LIMIT THERMOSTAT, GLASS LINED WELDED STEEL TANK, POLYURETHANE FOAM INSULATION, ENAMEL FINISH, BRASS WATER CONNECTIONS & DIP TUBE, DRAIN VALVE, MAGNESIUM ANODE, ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE, AND LOCAL DISCONNECT SWITCH.
- PROTECTIVE SHIELDING GUARDS:** WHEREVER PIPING IS EXPOSED BELOW SINKS AND LAVATORIES, PROVIDE MANUFACTURED PLASTIC ENCLOSURES BY TRUEBRO FOR COVERING PLUMBING FIXTURE HOT AND COLD WATER SUPPLIES AND TRAP AND DRAIN PIPING. COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
- HOT WATER RECIRC PUMP:** SHALL BE BASED ON BELL & GOSSET PL-36, 3 GPM, 35' TDH, 1/6 HP, 3300 RPM, 115V/1φ/60HZ. ALL PUMPS SHALL HAVE BRONZE CASING, BRONZE IMPELLER, STEEL SHAFT WITH BRONZE SLEEVE. PUMP SHALL BE FURNISHED WITH A MOTOR STARTER/DISCONNECT SWITCH AND INCLUDE INLET STRAINER. PROVIDE DOMESTIC HOT WATER CIRCULATION PUMPS WITH A PIPE MOUNTED AQUASTAT AND TIMECLOCK.
- REDUCED PRESSURE ZONE:** BACKFLOW PREVENTER SHALL BE BASED ON WATTS MODEL LF009M2QT SERIES 2" HORIZONTAL REDUCED PRESSURE ZONE WITH BALL SHUTOFF VALVES ON EITHER SIDE OF THE BACKFLOW PREVENTION DEVICE.
- MAIN HOT WATER MIXING VALVE:** SHALL BE HOLBY 1-1/2", BSA 578-48-SM, CONSTRUCTED OF ALL BRASS, RATED FOR 300 PSI, SET VALVE FOR 110° MAX. PROVIDE A QUICK SENSING AQUASTAT ON THE BUILDING HOT WATER SUPPLY LINE, WIRED TO A N.C. (POWERED OPEN) SOLENOID VALVE IN THE HOT WATER SUPPLY FROM THE BOILER(S).
- PIPE INSULATION JACKETING:** SHALL BE WHITE ZESTON 2000 PVC COVERS FOR PIPING AND FITTINGS. JACKET ALL PIPING AND FITTINGS THAT ARE EXPOSED IN ANY FINISHED ROOM.
- DOMESTIC EXPANSION TANK:** SHALL BE BASED ON AMTROL EXTROL MODEL EX-30 WITH 4.4 GALLON TANK VOLUME AND 2.5 GALLON ACCEPTANCE VOLUME. EXPANSION TANK SHALL BE ASME RATED WITH 100 PSIG WORKING PRESSURE AND 240° F OPERATING TEMPERATURE. TANK SHALL BE CONSTRUCTED OF CARBON STEEL SHELL, HEAVY DUTY BUTYL DIAPHRAGM AND SHALL HAVE RED OXIDE PRIME COAT. PROVIDE FACTORY SUPPORT SADDLES.

DEFINITION OF TERMS

- WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" OR "OWNER" IS USED, IT MUST BE UNDERSTOOD THAT CROTON DPW IS INTENDED.
- WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT MUST BE UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.
- "WORK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, TRANSPORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, INSPECTIONS, INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / OR REASONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE CONTRACT DOCUMENTS.
- "FURNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE JOB SITE.
- "INSTALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, APPLYING, SETTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION MATERIALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED AND FURNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE COMPLETE IN ALL RESPECTS.
- "PROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL, EQUIPMENT, ETC. AS DEFINED ABOVE.
- THE FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:
 - "NO EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY COMMENCE.
 - "MAKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE WITH THE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING. FABRICATION AND/OR PURCHASE MAY COMMENCE.
 - "AMEND AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION ARE SO EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE COMMENTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR FABRICATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY NOT COMMENCE.
 - "REJECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY NOT COMMENCE.

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WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING NEW BATHHOUSE FACILITY CROTON POINT PARK CROTON-ON-HUDSON, NY PLUMBING SYMBOLS, ABBREV. & NOTES																													
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IN CHARGE OF: SA CHECKED BY: RS MADE BY: CD		LEGAL NOTICE: ALTERATIONS BY ANY PERSON, IN ANY WAY, OF ANY ITEM CONTAINED ON THIS DOCUMENT, UNLESS ACTING UNDER DIRECTION OF THE LICENSED ARCHITECT WHOSE PROFESSIONAL SEAL IS AFFIXED HERETO, IS A VIOLATION OF TITLE VII, SECT. 69.5 (B) OF NEW YORK STATE LAW. WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS AND CONDITIONS ON THE JOB. THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.																											