

## KEY TO SYMBOLS

| PLUMBING LEGEND |        |                           |
|-----------------|--------|---------------------------|
| SYMBOL          | ABBREV | DESCRIPTION               |
| ---             | S OR W | SANITARY BELOW GRADE      |
| ---             | S OR W | SANITARY ABOVE GRADE      |
| ---             | ST     | STORM BELOW GRADE         |
| ---             | ST     | STORM ABOVE GRADE         |
| ---             | CW     | DOMESTIC COLD WATER       |
| ---             | HW     | DOMESTIC HOT WATER        |
| ---             | HWR    | DOMESTIC HOT WATER RETURN |
| ---             | V      | SANITARY VENT             |
| ---             | G      | NATURAL GAS               |
| ---             | IW     | INDIRECT WASTE PIPING     |
| ---             | DN     | PIPE OFFSET DOWN          |
| ---             | UP     | PIPE OFFSET UP            |
| ---             | FD     | FLOOR DRAIN               |

### VALVES

|  |                         |  |                      |
|--|-------------------------|--|----------------------|
|  | TRIPLE DUTY VALVE       |  | PUMP                 |
|  | 3-WAY VALVE             |  | PUMP                 |
|  | AUTOMATIC CONTROL VALVE |  | WATER METER          |
|  | BALL VALVE              |  | GAS METER            |
|  | BASKET STRAINER         |  | ANNOTATION           |
|  | BUTTERFLY VALVE         |  | LIMIT OF REMOVAL     |
|  | CHECK VALVE             |  | FIXTURE TYPE         |
|  | FLOW CONTROL VALVE      |  | NO. OF FIXTURE UNITS |
|  | GATE VALVE              |  | L1                   |
|  | GLOBE VALVE             |  |                      |
|  | MOTOR OPERATED VALVE    |  |                      |
|  | OUTSIDE SCREW YOKE      |  |                      |
|  | PLUG VALVE              |  |                      |
|  | PRESSURE REDUCING VALVE |  |                      |
|  | SHUTOFF BALANCING VALVE |  |                      |
|  | SOLENOID VALVE          |  |                      |
|  | PRESSURE RELIEF VALVE   |  |                      |
|  | GAS COCK                |  |                      |
|  | SHUT OFF VALVE          |  |                      |

### PIPING

|  |      |                             |
|--|------|-----------------------------|
|  | C.O. | CLEANOUT                    |
|  | COOP | CLEANOUT DECK PLATE         |
|  | COWP | CLEANOUT WALL PLATE         |
|  | HB   | HOSE BIBB                   |
|  | FFHB | FROST FREE HOSE BIBB        |
|  |      | CAPPED PIPE                 |
|  | FLD  | FUNNEL DRAIN                |
|  |      | TRAP                        |
|  |      | DOUBLE CHECK VALVE          |
|  | RPZ  | REDUCED PRESSURE ZONE VALVE |
|  | RD   | ROOF DRAIN                  |
|  | OD   | OVERFLOW DRAIN              |

## ABBREVIATIONS

|        |                            |        |                                 |              |                               |                              |
|--------|----------------------------|--------|---------------------------------|--------------|-------------------------------|------------------------------|
| AB     | ABOVE                      | FPS    | FEET PER SECOND                 | PD           | PRESSURE DROP                 |                              |
| AD     | ACCESS DOOR                | FT     | FEET                            | PUD          | PUMPED DISCHARGE              |                              |
| AFF    | ABOVE FINISHED FLOOR       | FLD    | FUNNEL DRAIN                    | PRESS        | PRESSURE                      |                              |
| AP     | ACCESS PANEL               | G      | GAS                             | PSI          | POUNDS PER SQUARE INCH        |                              |
| AUTO.  | AUTOMATIC                  | GA     | GAUGE                           | R            | RISE                          |                              |
| BLDG   | BUILDING                   | GC     | GENERAL CONTRACTOR              | (R)          | RELOCATED                     |                              |
| BOP    | BOTTOM OF PIPE             | GL     | GALLON                          | REQD         | REQUIRED                      |                              |
| BTU    | BRITISH THERMAL UNIT       | GPH    | GALLONS PER HOUR                | RPM          | REVOLUTIONS PER MINUTE        |                              |
| BTUH   | BTU PER HOUR               | GPM    | GALLONS PER MINUTE              | RD           | ROOF DRAIN                    |                              |
| ¢      | CENTERLINE                 | H      | HEIGHT                          | RH           | ROOF HYDRANT                  |                              |
| CLG    | CEILING                    | HB     | HOSE BIB                        | RM           | ROOM                          |                              |
| CO     | CLEAN OUT                  | HC     | HUNG CEILING                    | RND          | ROUND                         |                              |
| COOP   | CLEAN OUT DECK PLATE       | HW     | HOT WATER                       | RPZ          | REDUCED PRESSURE ZONE DEVICE  |                              |
| COWP   | CLEAN OUT WALL PLATE       | HWR    | HOT WATER RETURN                | S            | SOUTH                         |                              |
| COD    | CONTINUED ON DRAWING       | HWH    | HOT WATER HEATER                | SK           | SINK                          |                              |
| CU FT  | CUBIC FEET                 | HR     | HOUR                            | SS           | SERVICE, SLOP SINK            |                              |
| CU IN  | CUBIC INCHES               | HZ     | FREQUENCY                       | SF, SQ FT, ⌘ | SQUARE FEET                   |                              |
| CW     | COLD (DOMESTIC) WATER      | IN     | INCH OR INCHES                  | S.O.         | SHUT-OFF                      |                              |
| D      | DROP                       | IPS    | IRON PIPE SIZE                  | SP           | STATIC PRESSURE               |                              |
| (D)    | DEMOLITION                 | IW     | INDIRECT WASTE                  | SPEC         | SPECIFICATION                 |                              |
| DF     | DRINKING FOUNTAIN          | INVERT | INVERT ELEVATION                | STST         | STAINLESS STEEL               |                              |
| DIA. Ø | DIAMETER                   | KW     | KILOWATT                        | SD           | STORM DRAIN                   |                              |
| DN     | DOWN                       | LAV    | LAVATORY                        | ST           | SEPTIC TANK                   |                              |
| DWG    | DRAWING                    | LAVH   | LAVATORY HANDICAPPED            | STP          | INDIRECT WASTE STANDPIPE      |                              |
| DP     | DISTRIBUTION POOL          | L      | LENGTH                          | T            | THROAT                        |                              |
| E      | EAST                       | LBS    | POUNDS                          | TAL          | TOTAL ACTIVE LENGTH           |                              |
| EA.    | EACH                       | LIN FT | LINEAR FEET                     | TBR          | TO BE REMOVED                 |                              |
| EC     | ELECTRICAL CONTRACTOR      | LP     | LEACHING POOL                   | TEMP         | TEMPERATURE                   |                              |
| EL     | ELEVATION                  | M      | METER                           | TOS          | TOP OF STEEL                  |                              |
| ELEC   | ELECTRIC                   | MAX    | MAXIMUM                         | TYP          | TYPICAL                       |                              |
| EMSH   | EMERGENCY SHOWER           | MBH    | THOUSAND BTU PER HOUR           | UON          | UNLESS OTHERWISE NOTED        |                              |
| EQ     | EQUAL                      | MC     | MECHANICAL CONTRACTOR           | URN          | URNAL                         |                              |
| EWC    | ELECTRIC WATER COOLER      | MR     | MEN'S ROOM                      | V            | VENT                          |                              |
| EWT    | ENTERING WATER TEMPERATURE | MIN    | MINIMUM                         | VTR          | VENT THROUGH ROOF             |                              |
| (E)    | EXISTING                   | MOT    | MOTOR                           | W            | WASTE                         |                              |
| EXP    | EXPANSION TANK             | N      | NORTH                           | W/           | WITH                          |                              |
| °F     | DEGREES FAHRENHEIT         | (N)    | NEW                             | W/O          | WITHOUT                       |                              |
| F & T  | FLOAT AND THERMOSTATIC     | NFPA   | NATIONAL FIRE PROTECTION ASSOC. | WCV          | WATER CLOSET FLUSH VALVE TYPE |                              |
| FA     | FREE AREA (SQ. FT.)        | NC     | NORMALLY CLOSED                 | WCVH         | WATER CLOSET FLUSH VALVE TYPE |                              |
| FAI    | FRESH AIR INTAKE           | NIC    | NOT IN CONTRACT                 |              | HANDICAPPED                   |                              |
| FC     | FLEXIBLE CONNECTION        | NO     | NORMALLY OPEN                   |              | WCT                           | WATER CLOSET FLUSH TANK TYPE |
| FD     | FLOOR DRAIN                | #      | NUMBER                          |              | WCTH                          | WATER CLOSET FLUSH TANK TYPE |
| FFHB   | FROST FREE HOSE BIB        | NPT    | NATIONAL PIPE THREAD            |              |                               | HANDICAPPED                  |
| FIN FL | FINISHED FLOOR             | NTS    | NOT TO SCALE                    |              | WC                            | WATER COLUMN                 |
| FLA    | FULL LOAD AMPERES          | O.A.I. | OUTSIDE AIR INTAKE              |              | WG                            | WATER GAUGE                  |
| FLR    | FLOOR                      | OD     | OVERFLOW DRAIN                  |              | WMS                           | WIRE MESH SCREEN             |
| FPM    | FEET PER MINUTE            | OV     | OUTLET VELOCITY                 |              | WR                            | WOMEN'S ROOM                 |

### GENERAL NOTES

- NOTES APPLY TO ALL PLUMBING SHEETS.
- EACH CONTRACTOR IS RESPONSIBLE FOR HAVING THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS AS THEY RELATE TO THIS WORK. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED DUE TO LACK OF THIS KNOWLEDGE.
- PROVIDE ALL MATERIALS FOR A COMPLETE INSTALLATION IN ALL RESPECTS READY FOR INTENDED USE AND IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS.
- COORDINATE SEWER AND WATER CONNECTIONS WITH EXISTING. PROVIDE PRESSURE REDUCING VALVE AND BACKFLOW PREVENTER AS SHOWN OR REQUIRED BY AHJ. VERIFY INVERT AND SLOPE OF INCOMING SANITARY SEWER BEFORE TRENCHING.
- REFER TO RISER DIAGRAMS AND PLUMBING FIXTURE SCHEDULE FOR ALL PIPING AND PIPE SIZES NOT SHOWN ON PLAN.
- SANITARY AND STORM SEWER PIPING SHOWN IS BASED ON 1/4" PER FOOT FALL FOR ALL PIPE SMALLER THAN 3" DIAMETER AND 1/8" PER FOOT FALL FOR PIPE 3" DIAMETER AND LARGER.
- ALL SEWER PIPING BELOW SLAB TO BE 2" DIAMETER MINIMUM.
- PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES AND CLEAN-OUTS; AND NOT ABOVE AN ACCESSIBLE CEILING.
- PROVIDE TRAP SEAL PRIMERS AND 1/2" COPPER TUBING CONNECTION TO ALL FLOOR DRAINS AS SHOWN OR AS REQUIRED BY AHJ. CONTRACTOR SHALL VERIFY REQUIREMENTS.
- INSTALL VTR'S A MINIMUM 5'-0" FROM PARAPET OR OUTSIDE WALL AND 10'-0" MINIMUM FROM EQUIPMENT WITH OUTSIDE AIR INTAKE.
- INSTALL WATER PIPE ON WARM OF EXTERIOR WALL INSULATION TO PREVENT FREEZING.
- WHEN DEEP FROST LOCATIONS ARE ENCOUNTERED, ROUTE SANITARY LINES UNDER BUILDING AS MUCH AS POSSIBLE.
- PROVIDE PVC SLEEVE FOR ALL COLD/HOT WATER FLOOR PIPE PENETRATIONS. MAKE SLEEVE LARGE ENOUGH FOR INSULATION. SEAL WITH GRAY MASTIC AND ENSURE OF NO WATER PENETRATIONS.
- PROVIDE AND INSTALL WATTS 8A VACUUM BREAKER ON ANY THREADED EXTERIOR OR INTERIOR FAUCETS.
- ALL WATER SHUT-OFF VALVES SHALL BE "BALL LOCK" TYPE. PROVIDE SHUT-OFF VALVES AT EACH TERMINATION POINT OF ASSOCIATED EQUIPMENT.
- PROVIDE SEISMIC BRACING BASED ON APPROPRIATE SEISMIC ZONE REQUIREMENTS PER LOCAL AND NATIONAL CODES. CONTRACTOR'S RESPONSIBILITY INCLUDES STRUCTURAL ENGINEER'S CERTIFICATION ON DETAILS SUBMITTED FOR PERMITTING.

### DRAWING NO.

P-000  
P-100  
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P-301  
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### TITLE

PLUMBING SYMBOLS, ABBREVIATIONS AND DRAWING LIST  
PLUMBING 1ST FLOOR PLAN  
PLUMBING 2ND FLOOR PLAN  
PLUMBING ROOF PLAN  
PLUMBING RISER DIAGRAMS  
PLUMBING RISER DIAGRAMS AND SCHEDULES  
PLUMBING DETAILS  
PLUMBING DETAILS  
PLUMBING DETAILS

### PROJECT:

STUDENT SERVICES & CLASSROOM ADDITION  
UNION COUNTY COLLEGE

1033 Springfield Avenue  
Cranford, New Jersey 07016

### SHEET CONTENTS:

PLUMBING SYMBOLS,  
ABBREVIATIONS AND  
DRAWING LIST

| SUBMISSIONS |               |    |      | REVISIONS |             |    |      | DATE    | FEB. 18, 2014 |
|-------------|---------------|----|------|-----------|-------------|----|------|---------|---------------|
| DATE        | DESCRIPTION   | BY | CHKD | DATE      | DESCRIPTION | BY | CHKD | SCALE   | AS SHOWN      |
| 04/09/14    | ISSUE FOR BID |    |      |           |             |    |      | DRWN BY | PEF           |
|             |               |    |      |           |             |    |      | CHKD BY | FTK /CMS      |
|             |               |    |      |           |             |    |      | JOB NO  | 13-0530       |
|             |               |    |      |           |             |    |      | SHEET:  | 1 OF: 9       |
|             |               |    |      |           |             |    |      | DRWG NO |               |

P-000

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