

**PLUMBING NOTES**

- ALL NEW HOT AND COLD WATER LINES TO BE COPPER TUBING AND SHALL ORIGINATE ON THE SAME FLOOR FROM THE NEAREST WET COLUMN WITH PROPER ACCESS FOR MAINTENANCE. IF ATTACHED OR DISSIMILAR METAL, A CORROSION INHIBITOR IS TO BE PROVIDED.
- INSULATE ALL WATER SUPPLY LINES.
- WASTE LINES SHALL BE PROPERLY PITCHED TO PREVENT "TRAPPED" WATER. INSTALL WASTE LINE CONNECTIONS WITH LONG TERM OR 45° "Y" FITTINGS.
- RETAIN EXISTING CLEAN OUT CONNECTIONS AND PROVIDE CLEAN OUT CONNECTIONS AT NEW FITTINGS.
- WHEN CONNECTING NEW HOT AND COLD WATER LINES TO EXISTING RISERS, CONTRACTORS SHALL LEAVE A PLUGGED VALVED OUTLET FOR EACH, FOR FUTURE USE.
- ALL NEW HOT AND COLD WATER LINES ATTENDANT FITTINGS MUST BE PROPERLY INSULATED AND COVERED.
- INDIVIDUAL SHUT-OFF VALVES MUST BE SUPPLIED AND INSTALLED FOR EACH NEW FIXTURE, INCLUDING WATER COOLERS.
- ALL NEW PIPES ARE TO BE SUPPORTED FROM SLAB OR STEEL BEAMS, NOT FROM EXISTING PIPES OR DUCT WORK.
- ALL WATER SHUTDOWNS TO BE COORDINATED THROUGH THE BUILDING MANAGER. ALL WATER SHUTDOWNS ARE TO BE PERFORMED OR SUPERVISED BY BUILDING PERSONNEL, AT THE DISCRETION OF THE BUILDING MANAGER.
- PLUMBER SHALL BE RESPONSIBLE THAT ENTIRE INSTALLATION IS IN ACCORDANCE WITH LOCAL AND STATE CODES.
- PRIVATE BATHROOMS MUST BE INSTALLED ON MINIMUM 4" WASTE LINE.
- ALL VALVES ARE TO BE PROPERLY TAGGED.
- ANY WET COLUMNS USED SHOULD BE PROVIDED WITH A 24" x 24" STEEL SURFACE MOUNTED ACCESS DOOR.
- HOT WATER HEATERS SERVING PRIVATE BATHROOMS, KITCHENS, ETC. ARE TO BE SUPPLIED FROM THE WET COLUMN THAT SUPPLIES THE COLD WATER TO THESE AREAS.

**PLUMBING DEMOLITION NOTES**

- GENERAL
  - PRIOR TO PROPOSAL SUBMISSION, THIS CONTRACTOR SHALL VISIT THE SITE TO REVIEW THE EXISTING CONDITIONS ASSOCIATED WITH THE SCOPE OF WORK AND ADJACENT AREAS TO ASCERTAIN THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT.
  - SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE ABOVE SITE EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
  - DEMOLITION WORK SHALL INCLUDE ALL MATERIALS, LABOR, EXTENSIONS, CONNECTIONS, CUTTING, REPAIRING, ADAPTING AND OTHER PLUMBING WORK REQUIRED TO MAINTAIN SERVICE PENDING THE COMPLETION OF THE PERMANENT WORK. COORDINATE THE EXTENT OF DEMOLITION WORK WITH THE ARCHITECT AND BUILDING MANAGEMENT.
- SCOPE OF WORK
  - ALL EXISTING WORK REQUIRED TO REMAIN BUT INTERFERING WITH PROPOSED NEW PLUMBING (AS WELL AS ELECTRICAL, MECHANICAL AND GENERAL CONSTRUCTION WORK) SHALL BE RELOCATED AND RECONNECTED USING MATERIALS CONFORMING TO STANDARDS OF THIS CONTRACT.
  - REMOVE ALL FIXTURES AS NOTED ON THE ARCHITECTURAL PLANS. PROVIDE TEMPORARY COVERS FOR HOT, COLD AND SANITARY CONNECTIONS DURING NEW CONSTRUCTION.
  - REMOVE BASE BUILDING PIPING AS INDICATED BELOW:
    - REMOVE ALL ABANDONED BASE BUILDING PIPING BACK TO THE EXISTING WET COLUMNS OR SHAFTS, OR AS NOTED ON DRAWINGS.
    - CONTRACTOR TO CONTACT BUILDING MANAGEMENT AND TENANT REGARDING REMOVAL SCOPE OF WORK TO MAINTAIN CONTINUITY OF ALL SERVICES TO ALL TENANTS WHO ARE TO REMAIN OPERATIONAL AND NOT BE AFFECTED BY DEMOLITION WORK.
    - ALL EXISTING BUILDING VALVES FOR DOMESTIC WATER MAINS AT SHAFTS ARE TO REMAIN.
  - PROVIDE ADDITIONAL SUPPORT FOR ALL EXISTING PIPING TO REMAIN WHICH ARE AFFECTED BY DEMOLITION OF EXISTING CEILING AND PARTITIONS.
  - ALL MATERIALS AND EQUIPMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS.
  - COORDINATE WITH OWNER TO DETERMINE WHETHER EQUIPMENT IS TO BE TURNED OVER FOR FUTURE USE AND STORED IN THEIR ASSOCIATED STORAGE LOCATIONS.

**PLUMBING LEGEND**

	BUTTERFLY VALVE		ELECTRONIC WATER COOLER
	GATE VALVE		TWO-COMPARTMENT SINK
	EXISTING GATE VALVE		THREE COMPARTMENT SINK
	PRESSURE REDUCING VALVE		WATER CLOSET
	CHECK VALVE		MOP RECEPTOR
	EXISTING CHECK VALVE		LAVATORY
	BALL VALVE		MOP RECEPTOR
	PLUG VALVE		KITCHEN SINK
	O,S & Y VALVE		SLOP SINK
	EXISTING O,S & Y VALVE		SHOWER (P-4)
	MIXING VALVE		BATH TUB (P-3)
	SOLENOID VALVE		BIDET
	VALVE WITH HOSE BIBB		WATER CLOSET (FLUSH VALVE-WALL HUNG)
	STRAINER WITH BLOW OFF VALVE		WATER CLOSET (FLUSH TANK) (P-1)
	STRAINER		URINAL
	FLOOR DRAIN		LAVATORY (P-2)
	CLEAN OUT DECK PLATE		TWO-COMPARTMENT SINK (ELEVATION)
	FUNNEL FLOOR DRAIN		E, EDA WATER COOLER ELEVATION
	STRAINER		WATER CLOSET (ELEVATION)
	LADDER		MOP RECEPTOR (ELEVATION)
	PIPE UP		BATH TUB (ELEVATION)
	PIPE DROP		KITCHEN SINK (ELEVATION)
	BOTTOM CONNECTION		LAVATORY (ELEVATION)
	TOP CONNECTION		THREE COMPARTMENT SINK (ELEVATION)
	CAP		BIDET (ELEVATION)
	PLUG OUTLET		ROOF DRAIN (ELEVATION)
	CLEANOUT		SLOP SINK (ELEVATION)
	FRESH AIR INLET		WATER CLOSET (ELEVATION)
	HOUSE TRAP		URINAL (ELEVATION)
	SHOCK ABSORBER		WALL HUNG WATER CLOSET (ELEVATION)
	PIPE SENSOR WELL		
	VACUUM BREAKER		
	VACUUM BREAKER		
	PIPE GUIDE		
	UNION		
	PIPE SLEEVE		
	FLOW SWITCH		
	PRESSURE GAGE		
	THERMOMETER		
	THERMOWELL		
	DOMESTIC WATER METER		

(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

**PLUMBING DRAWING LIST**

SHEET #	DWG #	DESCRIPTION
1	P-101.00	CELLAR THRU ROOF LEVEL: PLUMBING - SYMBOLS & NOTES
2	P-201.00	CELLAR THRU ROOF LEVEL: PLUMBING - SPECIFICATIONS 1
3	P-301.00	GROUND & 2ND FLOOR: PLUMBING - PLAN & NOTES
4	P-302.00	ROOF LEVEL: PLUMBING - PLAN & NOTES
5	P-401.00	CELLAR THRU ROOF LEVEL: PLUMBING - DETAILS 1
6	P-402.00	CELLAR THRU ROOF LEVEL: PLUMBING - DETAILS 2
7	P-403.00	CELLAR THRU ROOF LEVEL: PLUMBING - DETAILS 3
8	P-501.00	CELLAR THRU ROOF LEVEL: PLUMBING - RISER DIAGRAMS

**PLUMBING LINE REPRESENTATION**

	NEW SOIL, WASTE OR SANITARY PIPING
	EXIST SOIL, WASTE OR SANITARY PIPING
	NEW UNDERGROUND SANITARY PIPING
	EXIST UNDERGROUND SANITARY PIPING
	NEW VENT PIPING (SANITARY)
	EXIST VENT PIPING (SANITARY)
	NEW DOMESTIC COLD WATER PIPING
	EXIST DOMESTIC COLD WATER PIPING
	NEW DOMESTIC HOT WATER PIPING
	EXIST DOMESTIC HOT WATER PIPING
	NEW DOMESTIC HOT WATER CIRCULATION PIPING
	EXIST DOMESTIC HOT WATER CIRCULATION PIPING
	NEW STORM PIPING
	EXIST STORM PIPING
	NEW GAS PIPING
	EXIST GAS PIPING
	PUMP DISCHARGE PIPING
	INDIRECT WASTE PIPING
	DEMO PIPING
	DEMO VENT

**PLUMBING DRAWING NOTATIONS**

	DRAWING NOTE TAG
	SECTION DESIGNATION ON DRAWING WHERE SECTION IS CUT A-SECTION DESIGNATION B-DRAWING NO.
	POINT OF NEW CONNECTION TO EXISTING WORK
	REMOVE AND PATCH EXISTING WORK
	REVISION SYMBOL
	FIRE STANDPIPE RISER DESIGNATION
	PLUMBING RISER DESIGNATION
	LEADER DESIGNATION
	PIPING FLOW DIRECTION

**PLUMBING ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
CM	COFFEE MAKER
CODP	CLEAN OUT DECK PLATE
CW	COLD WATER
DIA	DIAMETER
DN	DOWN
EWC	ELECTRIC WATER COOLER
FAI	FRESH AIR INLET
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FL	FLOOR
FS	FLOOR SINK
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
IM	ICE MAKER
LAV	LAVATORY
LDR	LADDER
MIN	MINIMUM
MR	MOP RECEPTOR
NO	NUMBER
RD	ROOF DRAIN
RPZ	REDUCED PRESSURE BACKFLOW PREVENTER
RTU	ROOF TOP UNIT
S	SANITARY
SH	SHOWER
S.P.O	SANITARY PLUGGED OUTLET
SS	SERVICE SINK
UR	URINAL
V	VENT
VB	VACUUM BREAKER
V.P.O	VENT PLUGGED OUTLET
VTR	VENT THRU ROOF
W	WASTE
WH	WALL HYDRANT
WC	WATER CLOSET

(NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT)

NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM THE NYC ENERGY CONSERVATION CODE (NYC ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

# PLUMBING SPECIFICATIONS

## PART I - GENERAL

### 1.01 DESCRIPTION

- A. THE PLUMBING CONTRACTOR SHALL BE A LICENSED INSTALLER OF PLUMBING SYSTEMS IN THE CITY OF NEW YORK.
- B. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
- C. THE ARCHITECT'S SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.
- D. THE CONTRACTOR IS ADVISED TO CLOSELY COORDINATE HIS WORK WITH THE BUILDING ENGINEER, SO THAT THE INTERRUPTION OF EXISTING BUILDING SERVICES, IN ORDER TO CONNECT NEW PIPING TO EXISTING SHALL BE MADE AT SUCH TIME AS TO CAUSE THE LEAST INTERFERENCE WITH ESTABLISHED BUILDING OPERATING PROCEDURE. CONTRACTOR SHALL NOT INTERRUPT THE SERVICES WITHOUT EXPRESS WRITTEN PERMISSION OF THE OWNER.
- E. WORK IN CEILING OF TENANT SPACE ON FLOOR BELOW MUST TAKE PLACE BEFORE OR AFTER TENANTS' NORMAL BUSINESS HOURS AND SHALL BE CONSIDERED OVERTIME WORK. ALL CEILINGS DAMAGED MUST BE RESTORED TO ORIGINAL CONDITION.

### 1.02 VERIFYING CONDITIONS

- A. EXAMINE ALL DRAWINGS COVERING THE WORK OF THIS SECTION AND REFER TO ALL OTHER DRAWINGS, INCLUDING ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, WHICH MAY AFFECT THE WORK OF THIS SECTION OR REQUIRE COORDINATION BY SAME.
- B. BEFORE STARTING ANY WORK, EXAMINE EXISTING CONDITIONS, AND THOROUGHLY CHECK DRAWINGS, DIMENSIONS, SPECIFICATIONS, AND ADJOINING OR UNDERLYING CONDITIONS IN WHICH THE WORK OF THIS SECTION IS TO BE PERFORMED.
- C. REPORT, IN WRITING, TO THE ARCHITECT ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK OF THIS SECTION. DO NOT COMMENCE WORK UNTIL ANY AND ALL SUCH CONDITIONS HAVE BEEN CORRECTED BY THE TRADE OR TRADES RESPONSIBLE.
- D. FAILURE TO NOTIFY THE ARCHITECT OF UNSATISFACTORY CONDITIONS WILL BE CONSTRUED AS AN ACCEPTANCE OF ALL CONDITIONS.
- E. THE EXECUTION OF THE WORK OF THIS SECTION CONSTITUTES ACCEPTANCE OF THE BASE OR ADJOINING WORK AND OTHER CONDITIONS AS BEING SATISFACTORY IN EVERY RESPECT AND LATER CLAIMS OF DEFECTS IN SUCH CASES WILL NOT BE ALLOWED.
- F. THE DRAWINGS INDICATE AND THE SPECIFICATIONS DESCRIBE THE GENERAL ARRANGEMENT AND THE APPROXIMATE LOCATION OF EQUIPMENT, FIXTURES, PIPING, ETC. EXACT LOCATIONS MAY BE ADJUSTED IN THE FIELD TO SUIT EXISTING CONDITIONS.

- G. THE CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE OWNER, MAKE ALL REASONABLE MODIFICATIONS IN THE WORK AS MAY BE REQUIRED TO PREVENT CONFLICT WITH THE WORK OF OTHER TRADES, OR FOR THE PROPER INSTALLATION OF THE WORK.

### 1.03 SHOP DRAWINGS AND SAMPLES

- A. SUBMIT SHOP DRAWINGS AND SAMPLES WITH ALL DETAILS AND INFORMATION, AS REQUIRED FOR THE WORK OF THIS SECTION AND IN ACCORDANCE WITH GENERAL CONDITIONS OR AS REQUESTED BY THE ARCHITECT OR ENGINEER.
- B. SUBMIT FOR APPROVAL; SAMPLES OF MATERIALS, AFFIDAVITS, CERTIFICATES, ETC., AS REQUIRED BY THE GENERAL CONDITIONS OR AS REQUESTED BY THE ARCHITECT OR ENGINEER.
- C. SUBMIT FOR APPROVAL SHOP DRAWINGS AND CATALOG CUTS OF THE FOLLOWING:
1. PLUMBING FIXTURES AND EQUIPMENT.
  2. VALVES.
  3. PIPE AND FITTINGS.
  4. HANGERS.
  5. INSULATION
  6. HW HEATER & RECIRCULATION PUMP
  7. VACUUM BREAKERS
  8. PIPING LAYOUT
  9. GREASE TRAPS
  10. SEWAGE EJECTOR

### 1.04 AS-BUILT DRAWINGS

- A. PREPARE AND SUBMIT "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE PROJECT.

### 1.05 TESTS

- A. THE PLUMBING SYSTEMS SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.

### 1.06 CLEANING

- A. ALL PIPING, FIXTURES, EQUIPMENT, ETC., INSTALLED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED AND PROTECTED DURING CONSTRUCTION AND PUT INTO FIRST-CLASS OPERATING CONDITION BEFORE BEING OFFERED FOR ACCEPTANCE.
- B. UPON COMPLETION OF ALL WORK, THE PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN ALL PLUMBING FIXTURES, SINKS AND TRIM AND LEAVE ALL ITEMS READY FOR USE BY THE OWNER. ALL FLOOR DRAINS SHALL BE CLEANED AND MANUFACTURERS' PROTECTIVE COVERINGS SHALL BE REMOVED.

### 1.07 LAWS, ORDINANCES, ETC.

- A. THE WORK OF THIS CONTRACTOR MUST COMPLY WITH ALL LOCAL LAWS, ORDINANCES AND RULES. THIS CONTRACTOR MUST HAVE THE NECESSARY INSPECTIONS MADE BY THESE AUTHORITIES, PAY ALL THE REQUIRED FEES, AND

- FURNISH THE OWNER WITH CERTIFICATES OF APPROVAL BEFORE FINAL PAYMENT ON THIS CONTRACT IS MADE. HE SHALL APPLY, PAY FOR, AND OBTAIN ALL PERMITS.

### 1.08 SUPERVISION

- A. THIS CONTRACTOR SHALL HAVE A COMPETENT FOREMAN IN RESPONSIBLE CHARGE OF THE WORK WHO SHALL BE ON THE SITE DURING THE INSTALLATION OF THE MATERIAL FURNISHED UNDER THIS SPECIFICATION UNTIL SAME HAS BEEN PUT IN COMPLETE OPERATIVE CONDITION AND ACCEPTED BY THE OWNER.

### 1.09 CUTTING AND PATCHING

- A. THIS CONTRACTOR SHALL DO ALL CUTTING AND PATCHING FOR PLUMBING WORK AND SHALL COORDINATE SAME WITH ALL OTHER TRADES. ALL CUTTING SHALL BE SUBJECT TO TRADE REGULATIONS. NO CUTTING OF STRUCTURAL MEMBERS SHALL BE DONE WITHOUT THE APPROVAL OF THE ARCHITECT.

## PART 2 - MATERIAL

### 2.01 GENERAL

- A. THE PLUMBING SYSTEMS SHALL BE COMPLETE WITH ALL PIPES, FITTINGS, TRAPS, SUPPLIES, VALVES, HANGERS AND SUPPORTS, INSULATION, ETC. AND ALL OTHER ITEMS NECESSARY FOR COMPLETE, SATISFACTORY OPERATING AND APPROVED TYPE SYSTEM.

- B. ALL PIPE FITTINGS, VALVES, FIXTURES, HANGERS, SUPPORTS, INSULATION, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.

### 2.02 SOIL, WASTE, AND VENT PIPE AND FITTINGS

- A. ALL ABOVE GROUND SOIL, WASTE, AND VENT PIPING SHALL BE "NO-HUB" CAST IRON PIPE AND FITTINGS EXCEPT AS NOTED OTHERWISE.

- B. ALL JOINTS AND CONNECTIONS SHALL BE ASSEMBLED BY MEANS OF SEALING SLEEVES AND STAINLESS STEEL CLAMPS AND SHIELD ASSEMBLIES.

- C. PIPE AND FITTINGS SHALL BE CENTRAL FOUNDRY COMPANY, TYLER PIPE COMPANY, EAST PENN FOUNDRY OR APPROVED EQUIVAL.

- D. EXPOSED PIPE TO BE CHROME PLATED. UNDERGROUND AND WHERE INDICATED

### 2.03 SOIL, WASTE, VENT AND LEADER PIPE AND FITTINGS -

- A. ALL UNDERGROUND SOIL, WASTE, VENT AND LEADER PIPING SHALL BE APPROVED BELL AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS.

- B. ALL JOINTS AND CONNECTION SHALL BE MADE BY THE USE OF DOUBLE-SEAL NEOPRENE CAST IRON SOIL PIPE GASKETS. ALABAMA PIPE COMPANY 'DUAL-TITE' APPROVED OTHER.

- C. PIPE AND FITTINGS SHALL BE CENTRAL FOUNDRY COMPANY, ALABAMA PIPE COMPANY, EAST PENN FOUNDRY, OR APPROVED OTHER.

### 2.04 COLD WATER AND HOT WATER PIPE AND FITTINGS

- A. DOMESTIC COLD WATER, HOT WATER AND HOT WATER CIRCULATION PIPE SHALL BE TYPE "L", HARD DRAWN, COPPER TUBING WITH WROUGHT BRONZE FITTINGS FOR 150 POUND WATER WORKING PRESSURE AND WITH JOINTS OF 95-5 (TIN-ANTIMONY) SOLDER. NO SOLDER CONTAINING LEAD IS PERMITTED.

- B. ALL SUPPLIES THROUGH WALLS TO FIXTURES SHALL BE 85% RED BRASS WITH THREADED BRASS FITTINGS. ALL EXPOSED PIPING IN FINISHED SPACES SHALL BE CHROME PLATED 85% RED BRASS.

- D. DISINFECTION THE POTABLE WATER SYSTEM SHALL BE DISINFECTED PRIOR TO USE BY A METHOD OF DISINFECTION IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE RS 16, P107-27. THE POTABLE WATER PURITY TEST RESULT FROM A NEW YORK CITY CERTIFIED TESTER SHALL BE SUBMITTED FOR ENGINEER'S REVIEW AND APPROVAL.

### 2.05 HANGERS AND SUPPORTS

- A. FURNISH ALL NECESSARY HANGERS, SUPPORTS, INSERTS, CLAMPS, ETC. AS REQUIRED. ALL HANGERS AND SUPPORTS SHALL BE OF HEAVY CONSTRUCTION AND SUITABLE FOR THE SIZE OF PIPE TO BE SUPPORTED. ALL INSERTS AND HANGERS SHALL BE INSTALLED TO CLEAR WORK OF OTHER TRADES.

- B. ALL HORIZONTAL CAST IRON PIPING SHALL BE SUPPORTED ON FIVE (5) FOOT CENTERS AND AT ALL JOINTS. ALL HORIZONTAL SCREWED PIPING SHALL BE SUPPORTED BY HANGERS SPACED NOT OVER TEN (10) FEET APART. ALL BRANCHES SHALL HAVE SEPARATE HANGERS. HANGERS SHALL BE CLEVIS TYPE, CONSTRUCTED OF HEAVY BAR STEEL STOCK, WITH PROPER SIZE SUSPENSION ROD AND LOCKNUTS, WHERE ADJUSTING IS SUPPORTED FROM THE FLOOR, PROVIDE ADJUSTABLE PIPE SADDLE SUPPORT WITH U-BOLT.

- C. WHERE PIPES ARE TO BE INSULATED, THE HANGERS SHALL BE OF AMPLE SIZE TO PROVIDE FOR THE COVERING SPECIFIED AND BE PROVIDED WITH GALVANIZED STEEL INSULATION SHIELDS.

- D. ALL HANGERS, ROODS, BEAM CLAMPS, ETC. SHALL BE SHOP ZINC COATED.

- E. ALL HORIZONTAL COPPER TUBING SHALL BE SUPPORTED BY HANGERS NOT OVER SIX (6) FEET APART FOR PIPING 1-1/4 INCH AND SMALLER AND NOT OVER TEN (10) FEET APART FOR PIPING 1-1/2 INCH AND LARGER. ALL BRANCHES SHALL HAVE SEPARATE HANGERS. HANGERS SHALL BE CLEVIS TYPE WITH COPPER BOTTOM SUPPORT. IF CHANNEL OR ANGLE IRON TRAPEZE HANGERS ARE USED, THE SPACE ON HANGERS FOR THE COPPER TUBING SHALL BE WRAPPED WITH LEAD SHIELDS TO ISOLATE TUBING.

- F. IN AREAS OF STEEL CONSTRUCTION, PIPE HANGERS SHALL BE SUPPORTED BY BEAM CLAMPS. COORDINATE WITH ENGINEER FOR MAXIMUM LOADING. BEAM CLAMPS SHALL BE STEEL WITH BOLT, NUT AND SOCKET THREADED FOR ROD CONNECTION AND SHALL BE F & S MANUFACTURING COMPANY FIG. #45, CENTRAL IRON, GRINNELL COMPANY, OR APPROVED EQUIVAL.

### 2.06 INSULATION

- A. COVER ALL HOT WATER AND HOT WATER RECIRCULATION PIPE WITH 1 INCH THICK AND ALL COLD WATER PIPE WITH 1/2 INCH THICK MANVILLE MICRO-LOK AP-T PLUS FIBERGLASS INSULATION. FITTINGS AND VALVES SHALL BE INSULATED WITH MANVILLE ZESTON 2000 PVC INSULATED FITTING COVERS. INSTALL ALL INSULATION AS PER MANUFACTURERS' RECOMMENDATIONS. ALL INSULATION MATERIAL SHALL COMPLY WITH THE NEW YORK CITY BUILDING CODE REQUIREMENT OF A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50.

### 2.07 VALVES

- A. STOP VALVES, EXCEPT FIXTURE STOPS, ON HOT AND COLD WATER LINES 2 IN. AND SMALLER SHALL BE FULL PORT 400 LB. NON-SHOCK BRONZE BALL VALVES, NIBCO T-595-Y FOR THREADED CONNECTIONS, AND NIBCO S-595-Y FOR COPPER TO COPPER, OR APPROVED OTHER.

- B. GLOBE VALVES UP TO AND INCLUDING 3 IN. SHALL BE SCREW-OVER BONNET, COMPOSITION DISC, BRASS, NIBCO T-211 FOR THREADED CONNECTIONS AND S-211 FOR SOLDER CONNECTIONS, OR APPROVED OTHER.

- C. CHECK VALVES SHALL BE OF THE SWING-TYPE, SIZES UP TO AND INCLUDING 3 IN. SHALL BE ALL BRASS, 125 LB. S.W.P., NIBCO T-413 FOR THREADED CONNECTIONS AND NIBCO S-413 FOR SOLDER CONNECTIONS, OR APPROVED OTHER.

### 2.08 VALVE TAGS AND CHART

- A. EACH VALVE, EXCEPT VALVES AT FIXTURES, SHALL HAVE A 2 INCH DIAMETER BRASS TAG WITH 1 INCH HIGH NUMERAL STAMPED THEREON, SECURED TO THE VALVE BY MEANS OF BRASS S HOOK OR BRASS CHAIN. EACH SYSTEM TO HAVE A LETTER DESIGNATION AS WELL.

- B. THE CONTRACTOR SHALL FURNISH AN APPROVED, NEATLY DRAWN VALVE CHART, PROPERLY FRAMED, SHOWING THE USE AND LOCATION OF EACH VALVE THAT IS TAGGED.

### 2.09 SHOCK ARRESTORS

- A. SHOCK ARRESTORS SHALL BE JONESPEC MODEL #55000 SERIES. SEE PLANS FOR EXACT MODEL NO.

### 2.10 BACKFLOW PREVENTION DEVICE

- A. VACUUM BREAKER (TYPE"A") - CAST BRASS C.P. IF EXPOSED TO PUBLIC VIEW SIMILAR TO WATTS NO. 288A. (NOT SUBJECT TO CONSTANT PRESSURE.)

- B. VACUUM BREAKER (TYPE"B") - CAST BRASS CHROME PIPE IF EXPOSED TO PUBLIC VIEW SIMILAR TO WATTS NO. 909-S.

- C. VACUUM BREAKER - CAST BRASS CHROME PIPE IF EXPOSED TO PUBLIC VIEW SIMILAR TO WATTS NO. 800MCO. (CONSTANT PRESSURE VACUUM BREAKER).

- D. VACUUM BREAKER (TYPE"D") - CAST BRASS C.P. IF EXPOSED TO PUBLIC VIEW SIMILAR TO WATTS NO. N8C. (CONSTANT PRESSURE V.B.)

### 2.11 CONNECTION TO MISCELLANEOUS EQUIPMENT

- A. PROVIDE ALL NECESSARY PIPE, FITTINGS, VALVES, ETC. EXCEPT AS OTHERWISE SPECIFIED AND MAKE ALL FINAL PLUMBING PIPING CONNECTIONS, INCLUDING WASTE, VENT, HOT AND COLD WATER, ETC., TO ALL EQUIPMENT REQUIRING SAME. FURNISHED UNDER ANOTHER SECTION OF THE SPECIFICATIONS.

### 2.12 DRAINS

- A. IN GENERAL DRAINS SHALL BE JOSAM, ZURN, SMITH OR APPROVED OTHER.

- B. UNLESS OTHERWISE NOTED DRAINS SHALL BE DUOCO COATED, CAST IRON, DOUBLE DRAINAGE PATTERNS, HUB AND SPIGOT, UNLESS OTHERWISE NOTED. DRAINS SHALL BE EQUIPMENT TO THE FIGURE NUMBERS SHOWN AND OF SIZE REQUIRED.

- C. FLOOR DRAINS SHALL BE JAY R. SMITH FIG. NO. 2005-A WITH SEDIMENT BUCKET, UNDER DECK CLAMP AND 8" DIAMETER NICKEL BRONZE TOP, WITH NO-HUB OUTLET CONNECTION.

- D. INDIRECT WASTE FLOOR DRAINS SHALL BE J.R. SMITH FIG. 3610-F11-B WITH 8" ROUND TOP, AND SEDIMENT BUCKET.

- E. FLOOR SINK SHALL BE JAY R. SMITH FIG. 3430-13 PORCELAIN ENAMELED INDIRECT WASTE FLOOR DRAIN WITH 3/4 ACID RESISTANT PORCELAIN ENAMELED GRATING WITH FLASHING FLANGE AND BOTTOM DOME STRAINER. SET RIM 1" ABOVE FINISHED FLOOR.

- F. FUNNEL FLOOR SHALL BE J.R. SMITH FIG. 3510-F11-B WITH F-37 7" ANTI SPLASH RIM AND SEDIMENT BUCKET. SET ANTI-SPLASH RIM FLUSH WITH THE FINISH FLOOR.

### 2.13 FILTERS

- A. CUNO "AQUA-PURE" MODEL SS14A STAINLESS STEEL WITH AP117 CARTRIDGE - FURNISH ONE ADDITIONAL REPLACEMENT CARTRIDGE FOR EACH FILTER PROVIDED. FOLLOW MANUFACTURERS' RECOMMENDATION FOR FILTER CHANGE SCHEDULE.

### 2.14 GUARANTEE

- A. THIS CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE BY THE OWNERS, ALL MATERIALS, APPARATUS AND WORKMANSHIP WHETHER FURNISHED BY HIMSELF OR BY HIS SUBCONTRACTORS AND HE SHALL REPLACE OR REPAIR IN A MANNER APPROVED BY THE ARCHITECTS, WITHOUT COST TO THE OWNER, ANY PARTS OR PARTS OF THE WORK WHICH MAY PROVE DEFECTIVE OR UNSATISFACTORY WITHIN THE PERIOD OF THE GUARANTEE.

- B. WHERE SPECIAL GUARANTEES COVERING INSTALLATION, OPERATION OR PERFORMANCE OF ANY SYSTEMS OR APPLIANCES FURNISHED UNDER THIS CONTRACTOR ARE REQUIRED, THE FULL RESPONSIBILITY FOR THE FULFILLMENT OF SUCH GUARANTEES MUST BE ASSUMED BY THE CONTRACTOR, WHO SHALL OBTAIN WRITTEN GUARANTEES, IN TRIPPLICATE, WHICH SHALL BE FILED WITH THE ARCHITECT BEFORE FINAL ACCEPTANCE.

- C. CONTRACTOR WILL BE RESPONSIBLE FOR ALL LEAKS IN ALL PIPES FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION OF WORK UNDER THIS CONTRACT. CONTRACTOR SHALL REPAIR AT NO COST TO THE OWNER, ALL SUCH LEAKS WHICH OCCUR AFTER COMPLETION OF THIS CONTRACT UPON 24 HOURS NOTICE THEREOF BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR. LEAKS WHICH OCCUR PRIOR TO THE COMPLETION OF THIS CONTRACT SHALL BE REPAIRED AT ONCE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY SUCH LEAKS AND THE REPAIR THEREOF AND WILL REIMBURSE THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR FOR ALL EXPENSE INCURRED THEREBY.

### 2.15 HOSE BIBBS

- A. HOSE BIBBS SHALL BE CHICAGO FAUCET CO. NO. 293-6, POLISHED CHROME OR APPROVED OTHER, WITH WATTS REGULATOR CO. NO BAC, 3/4" HOSE END VACUUM BREAKER.

### 2.16 UNDER COUNTER ICE MAKER (FURNISHED BY OTHERS)

- A. INSTALL THE UNDER COUNTER ICE MAKERS WHERE INDICATED ON THE DRAWING. PROVIDE 1/2" COLD WATER WITH GATE VALVE AND EXTEND 1" INDIRECT WASTE TO THE ADJACENT FLOOR DRAIN.

### 2.17 DISHWASHER (FURNISHED BY OTHERS)

- A. INSTALL DISHWASHER WHERE INDICATED ON THE DRAWINGS. PROVIDE NEW, ALL ROUGHING AND 1/2" HW SUPPLY WITH GATE VALVE, CHECK VALVE AND VACUUM BREAKER. EXTEND AND CONNECT HOSE TO "T" TAILPIECE AT SINK WASTE.

### 2.18 PLUMBING FIXTURES AND EQUIPMENT

- A. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES AND APPLIANCES, UNLESS OTHERWISE NOTED, AND MAKE ALL FINAL CONNECTIONS AS REQUIRED. FIXTURE AS SELECTED BY ARCHITECT

### 2.19 HOT WATER CIRCULATOR

- A. PROVIDE, WHERE INDICATED ON THE DRAWINGS, BELL AND GOSSETT, OR APPROVED OTHER, ALL BRONZE IN-THE-LINE CIRCULATOR, DIRECT CONNECTED TO 1/6HP, 115 V, SINGLE PHASE, 60 HERTZ MOTOR. PUMP SHALL BE SERIES SC-75 CAPABLE OF CIRCULATING 5 GALLONS PER MINUTE AT 8 FOOT OF HEAD PRESSURE.

- B. CIRCULATING PUMP SHALL BE CONTROLLED BY MEANS OF AN IMMERSION TYPE AQUASTAT WITH VISIBLE SCALE AND DETACHABLE WELL, WHICH SHALL BE INSTALLED IN THE CIRCULATING LINE NEAR THE SUCTION INLET OF THE PUMP. THE AQUASTAT SHALL OPERATE ON 110 VOLTS AND SHALL BE SO DESIGNATED AND CONNECTED THAT THE CIRCULATING MOTOR WILL START AND STOP WITHIN THE TEMPERATURE RANGES OF 135 DEGREES F. TO 140 DEGREES F. THE AQUASTAT SHALL BE GUARANTEED TO OPERATE WITHIN A MAXIMUM RANGE OF PLUS OR MINUS 2 DEGREE F OF THE SETTING.

- C. PROVIDE SUITABLE "HAND-OFF-AUTOMATIC" SWITCH TO NEMA 1 ENCLOSURE MOUNTED ADJACENT TO CIRCULATOR.

- END -

**S s D**

325 W 38TH STREET, SUITE 210  
NEW YORK, NY 10018

tel: 212.248.7500  
fax: 866.677.3878  
www.ssdarchitecture.com  
info@ssdarchitecture.com

CONSULTANTS:

MECHANICAL ELECTRICAL PLUMBING CONSULTANT

**TWIG**  
Consulting Engineers, PC

7 Penn Plaza - Suite 702, New York, NY 10001  
Tel: 212-967-7900 / Fax: 212-967-8946  
www.twigeng.com

STRUCTURAL ENGINEER:  
Richard H. Balsler, Engineers  
228 W 18th Street, No. 11  
New York, NY 10011  
T 212-465-0008

SURVEYOR:

Leonard J. Strandberg and Associates  
Consulting Engineers and  
Land Surveyors, P.C.  
92 Atlantic Avenue, Freeport, NY 11520  
516-378-2064 / 212-213-4090  
fax 516-378-6649

07/03/2012 ISSUED FOR CONSTRUCTION

PROJECT:  
**HSU HOUSE**

PROJECT ADDRESS:  
94 NORTH FIRST STREET  
BROOKLYN, NY 11211

DWG TITLE:

CELLAR THRU ROOF  
PLUMBING  
SPECIFICATIONS

SCALE & SIGNATURE:

DATE: 23 NOV 2011

PROJECT No.:

DWG BY: CAD

CHK BY: TWG

DWG No.:

**P-201.00**

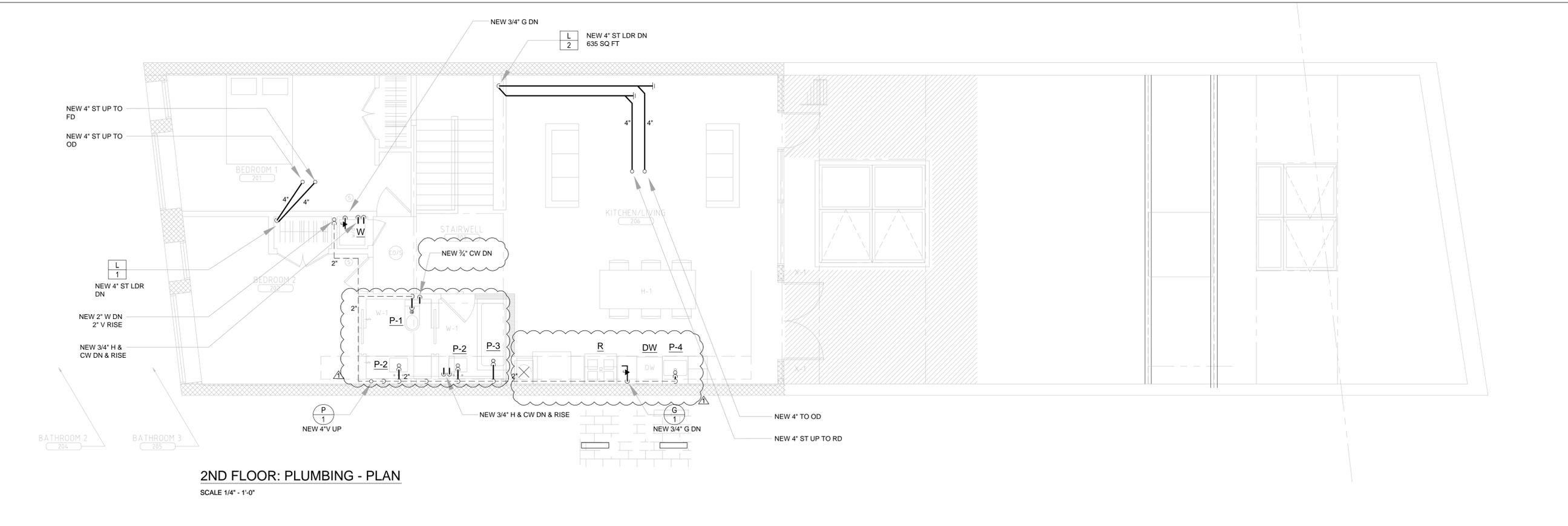
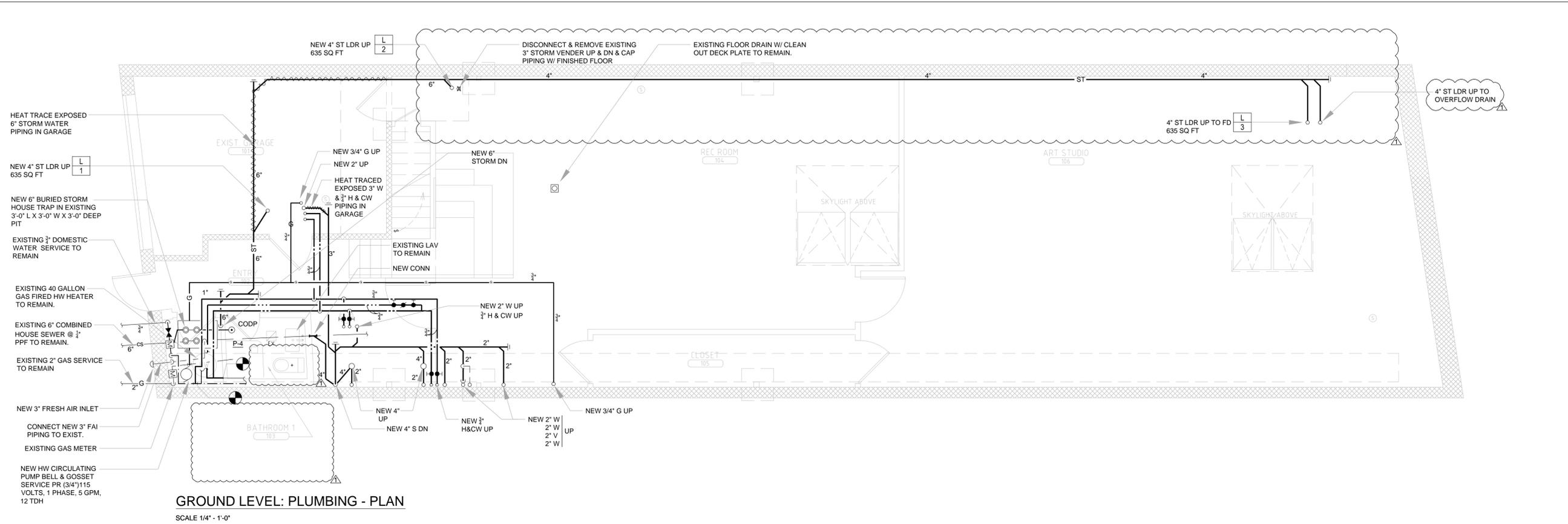
DOB ID No.:

PAGE No.:

2 of 3

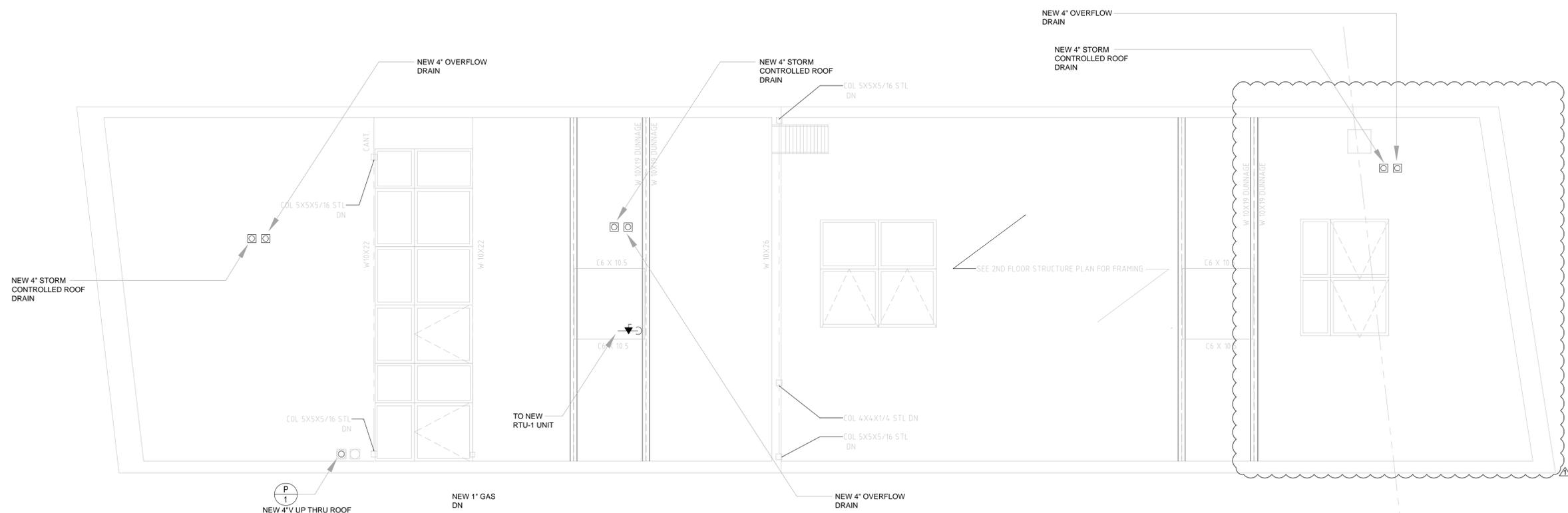
NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM  
THE NYC ENERGY CONSERVATION CODE (NYC  
ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE  
APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN  
ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER  
BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.



NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM THE NYC ENERGY CONSERVATION CODE (NYC ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.



**ROOF LEVEL: PLUMBING - PLAN**  
SCALE 1/4" = 1'-0"

**S s D**  
325 W 38TH STREET, SUITE 210  
NEW YORK, NY 10018  
tel: 212.248.7500  
fax: 866.677.3878  
www.ssdarchitecture.com  
info@ssdarchitecture.com

CONSULTANTS:  
**TWIG**  
Consulting Engineers, PC  
7 Floor Plaza - Suite 702, New York, NY 10001  
Tel: 212-967-7900 / Fax: 212-967-8945  
info@twig.com www.twig.com

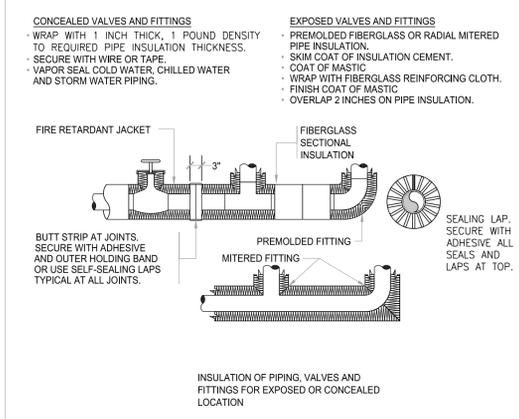
STRUCTURAL ENGINEER:  
Richard H. Balsler, Engineers  
228 W 18th Street, No. 11  
New York, NY 10011  
T 212-465-0008  
SURVEYOR:  
Leonard J. Strandberg and Associates  
Consulting Engineers and  
Land Surveyors, P.C.  
92 Atlantic Avenue, Freeport, NY 11520  
516-378-2064 212-213-4090  
fax 516-378-6649

07.03.2012 ISSUED FOR CONSTRUCTION  
PROJECT:  
**HSU HOUSE**  
PROJECT ADDRESS:  
94 NORTH FIRST STREET  
BROOKLYN, NY 11211  
DWG TITLE:  
**ROOF LEVEL  
PLUMBING  
PLAN**  
SEAL & SIGNATURE:

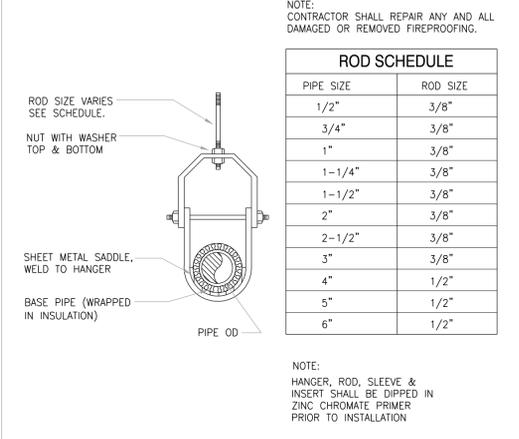
DATE: 23 NOV 2011  
PROJECT No.:  
DWG BY: CAGD  
CHK BY: TWG  
DATE:  
**P-302.00**  
SHEET NO.: PAGE NO.:  
4 of 8

**NYC ECC EXEMPTION:**  
THE PLUMBING APPLICATION IS EXEMPT FROM  
THE NYC ENERGY CONSERVATION CODE (NYC  
ECC) AS PER SECTION 101.6

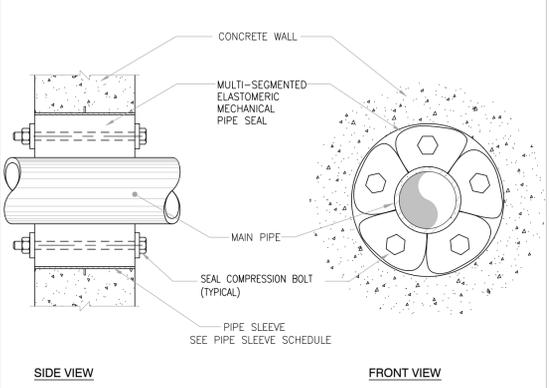
THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE  
APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN  
ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER  
BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.



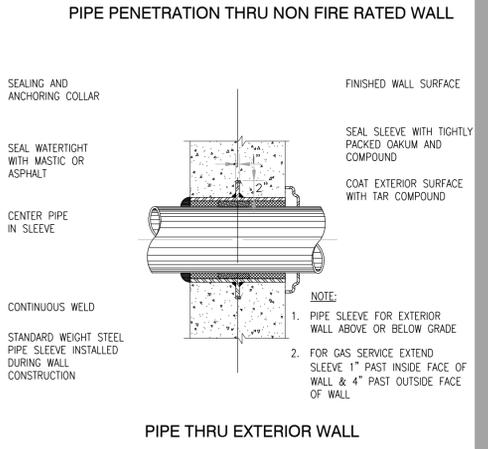
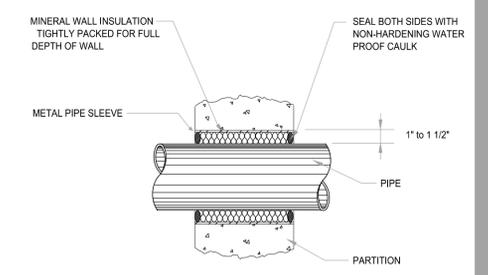
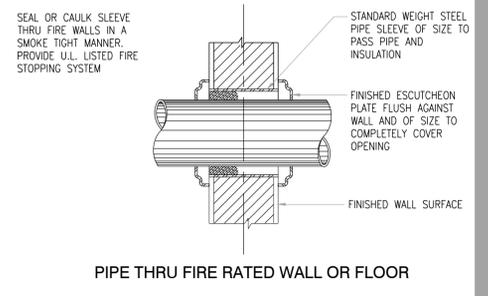
**1. INSULATION DETAIL**  
NOT TO SCALE



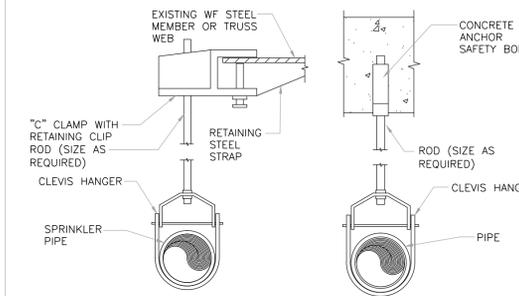
**2. TYPICAL INSULATED CLEVIS PIPE HANGER**  
NOT TO SCALE



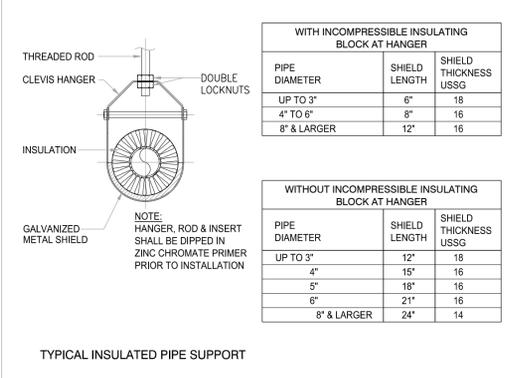
**3. EXTERIOR WALL LINK SEAL DETAIL**  
NOT TO SCALE



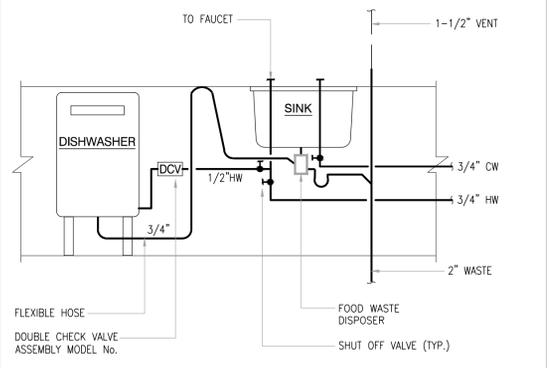
**6. PIPE SLEEVE DETAILS**  
NOT TO SCALE



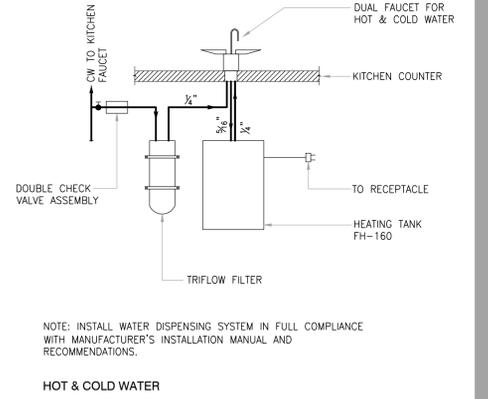
**3. TYPICAL HANGER DETAILS**  
NOT TO SCALE



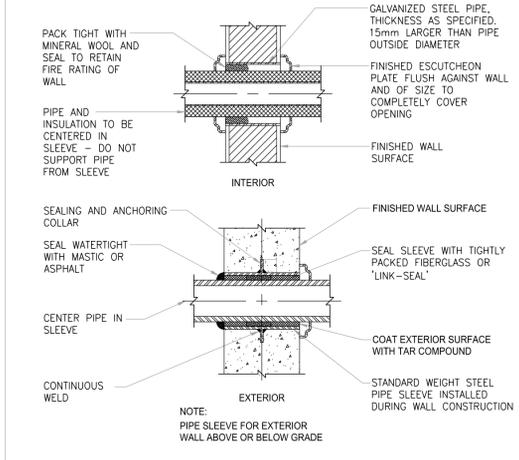
**4. HANGER DETAIL**  
NOT TO SCALE



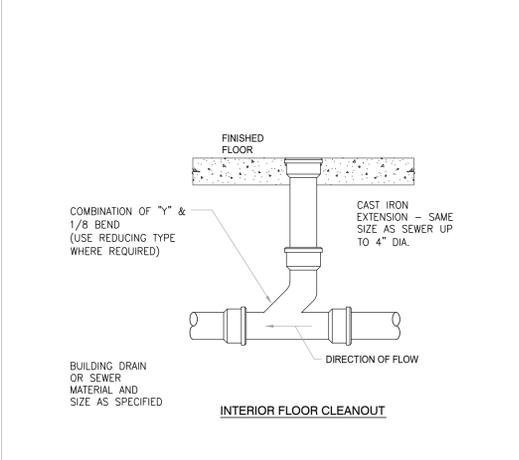
**9. DISHWASHER CONNECTION DETAIL**  
NOT TO SCALE



**10. DISPENSING SYSTEM**  
NOT TO SCALE



**7. PIPE PENETRATION DETAIL**  
NOT TO SCALE



**8. FLOOR CLEANOUT DETAIL**  
NOT TO SCALE

NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM THE NYC ENERGY CONSERVATION CODE (NYC ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

**S s D**  
325 W 38TH STREET, SUITE 210  
NEW YORK, NY 10018

tel: 212.248.7500  
fax: 866.677.3878  
www.ssdarchitecture.com  
info@ssdarchitecture.com

CONSULTANTS:  
MECHANICAL ELECTRICAL PLUMBING CONSULTANT

**TWIG**  
Consulting Engineers, P.C.  
7 Penn Plaza - Suite 702, New York, NY 10001  
Tel: 212-967-7900 / Fax: 212-967-8946  
www.twigan.com

STRUCTURAL ENGINEER:  
Richard H. Balsler, Engineers  
228 W 18th Street, No. 11  
New York, NY 10011  
T 212-465-0008

SURVEYOR:  
Leonard J. Strandberg and Associates  
Consulting Engineers and  
Land Surveyors, P.C.  
92 Atlantic Avenue, Freeport, NY 11520  
516-378-2064 212-213-4090  
fax 516-378-6649

07/03/2012 ISSUED FOR CONSTRUCTION

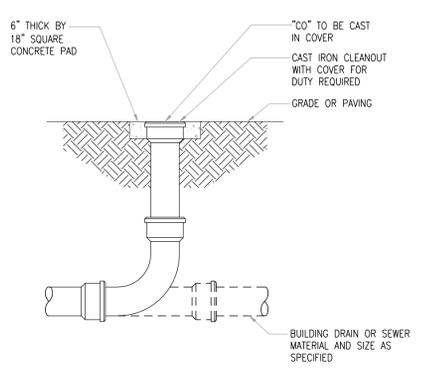
PROJECT:  
**HSU HOUSE**

PROJECT ADDRESS:  
94 NORTH FIRST STREET  
BROOKLYN, NY 11211

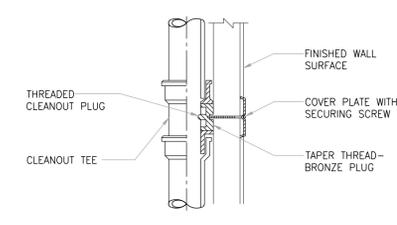
DWG TITLE:  
**CELLAR THRU ROOF  
PLUMBING  
DETAILS I**

DATE: 23 NOV 2011  
PROJECT No.:  
DWG BY: CADO  
CHK BY: TWIG  
DWG No.:  
**P-401.00**

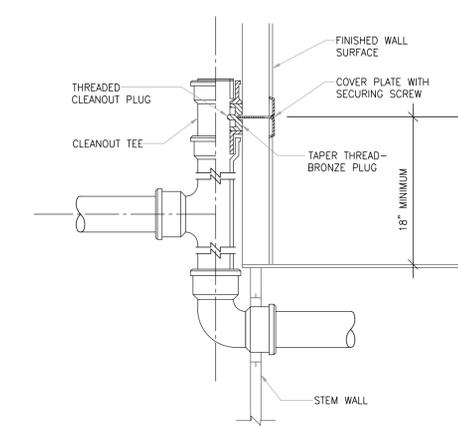
DOB ID No.: PAGE No.: 5 of 8



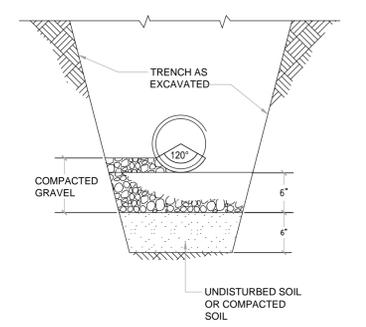
11. EXTERIOR CLEANOUT DETAIL  
NOT TO SCALE



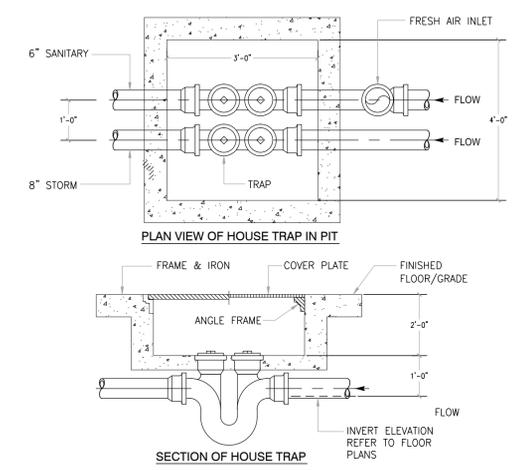
12. WALL CLEANOUT DETAIL  
NOT TO SCALE



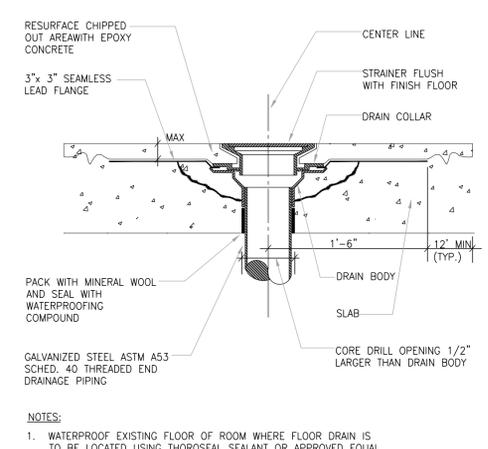
13. WALL CLEANOUT DETAIL  
NOT TO SCALE



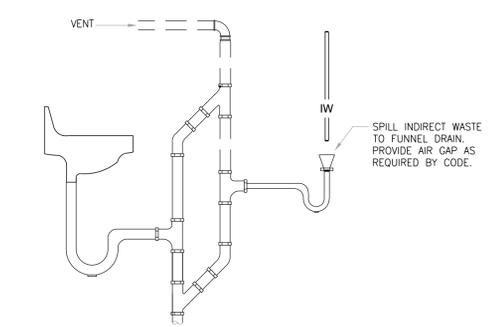
14. TRENCH DETAIL  
NOT TO SCALE



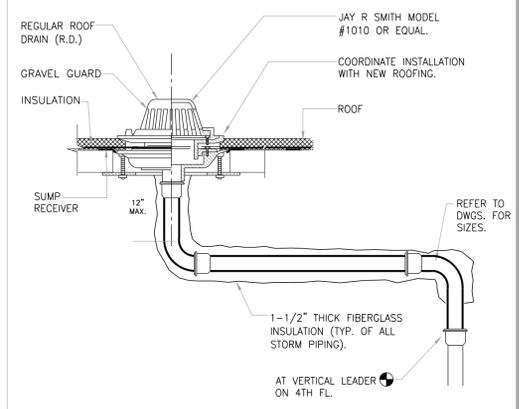
15. HOUSE TRAP  
NOT TO SCALE



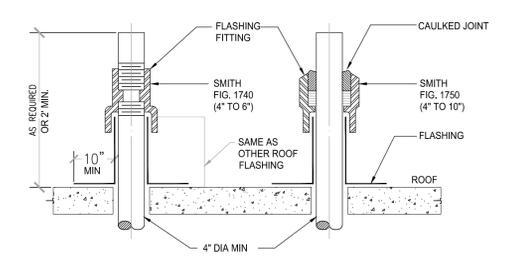
16. TYPICAL FLOOR DRAIN INSTALLATION  
NOT TO SCALE



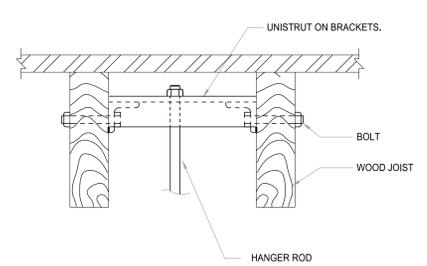
17. FUNNEL DRAIN DETAIL  
NOT TO SCALE



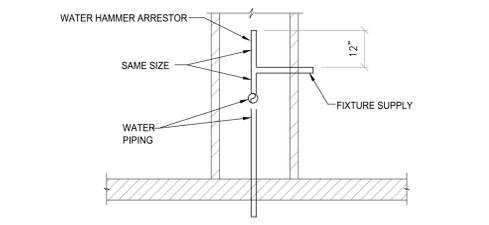
18. ROOF DRAIN DETAIL  
NOT TO SCALE



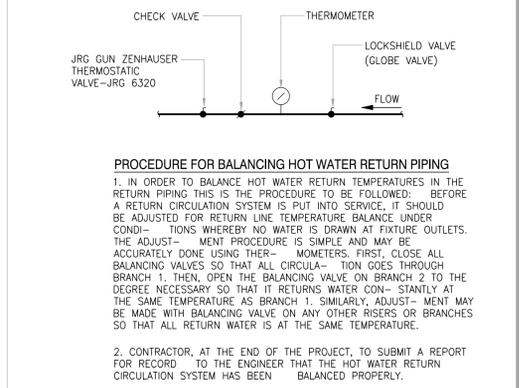
19. FLASHING DETAIL (VTR)  
NOT TO SCALE



20. HANGER SUPPORT DETAIL  
NOT TO SCALE



21. WATER HAMMER ARRESTOR  
NOT TO SCALE



22. HOT WATER RETURN BALANCING VALVE DETAIL  
NOT TO SCALE

NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM THE NYC ENERGY CONSERVATION CODE (NYC ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

**S s D**  
325 W 38TH STREET, SUITE 210  
NEW YORK, NY 10018  
tel: 212 248 7500  
fax: 866 677 3878  
www.ssdarchitecture.com  
info@ssdarchitecture.com

CONSULTANTS:  
MECHANICAL ELECTRICAL PLUMBING CONSULTANT:  
**TWIG**  
Consulting Engineers, PC  
7 Penn Plaza - Suite 702, New York, NY 10001  
Tel: 212 967 7700 / Fax: 212 967 8945  
www.twig.com

STRUCTURAL ENGINEER:  
Richard H. Balsler, Engineers  
228 W 18th Street, No. 11  
New York, NY 10011  
T 212-465-0008

SURVEYOR:  
Leonard J. Strandberg and Associates  
Consulting Engineers and  
Land Surveyors, P.C.  
92 Atlantic Avenue, Freeport, NY 11520  
516-378-2064 / 212-213-4090  
fax 516-378-6649

07.03.2012 ISSUED FOR CONSTRUCTION

PROJECT:  
**HSU HOUSE**

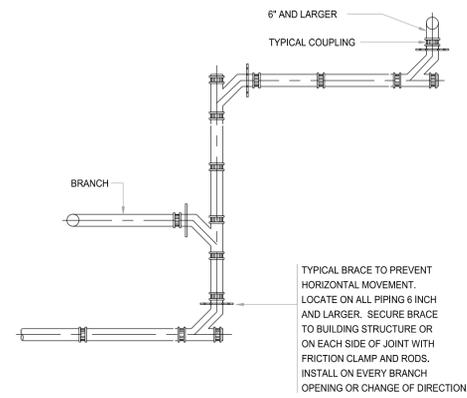
PROJECT ADDRESS:  
94 NORTH FIRST STREET  
BROOKLYN, NY 11211

DWG TITLE:  
**CELLAR THRU ROOF  
PLUMBING  
DETAILS II**

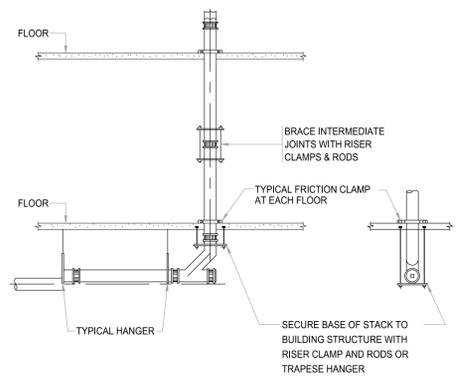
DATE: 23 NOV 2011  
PROJECT No.:  
DWG BY: CASO  
CHK BY: TWG  
DATE:

SCALE & SIGNATURE:  
**P-402.00**

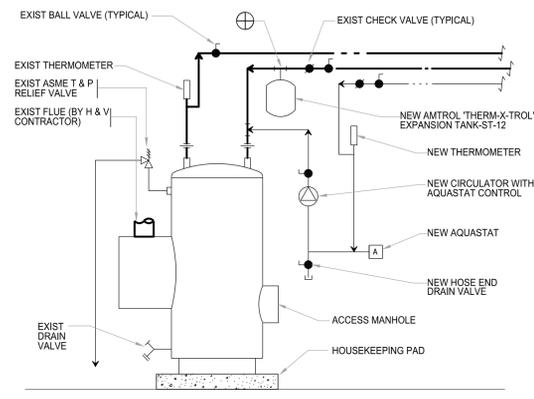
DATE: 23 NOV 2011  
PROJECT No.:  
DWG BY: CASO  
CHK BY: TWG  
DATE:



23. HUBLESS PIPE BRACING LOCATION FOR HORIZONTAL PIPING  
NOT TO SCALE



24. HUBLESS PIPE BRACING FOR VERTICAL PIPING  
NOT TO SCALE



25. GAS FIRED WATER HEATER (FLOOR MOUNTED)  
SCALE: NONE

27.

28.

29.

30.

31.

32.

33.

34.

NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM  
THE NYC ENERGY CONSERVATION CODE (NYC  
ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE  
APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN  
ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER  
BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

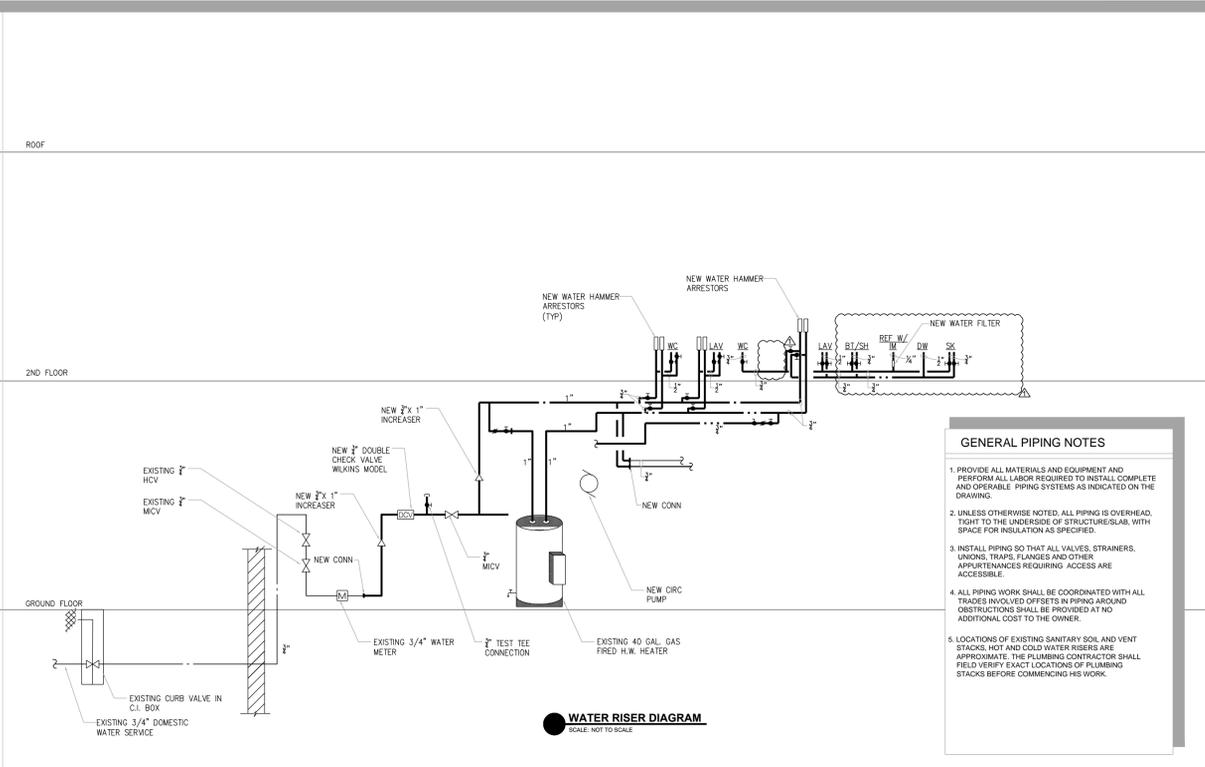
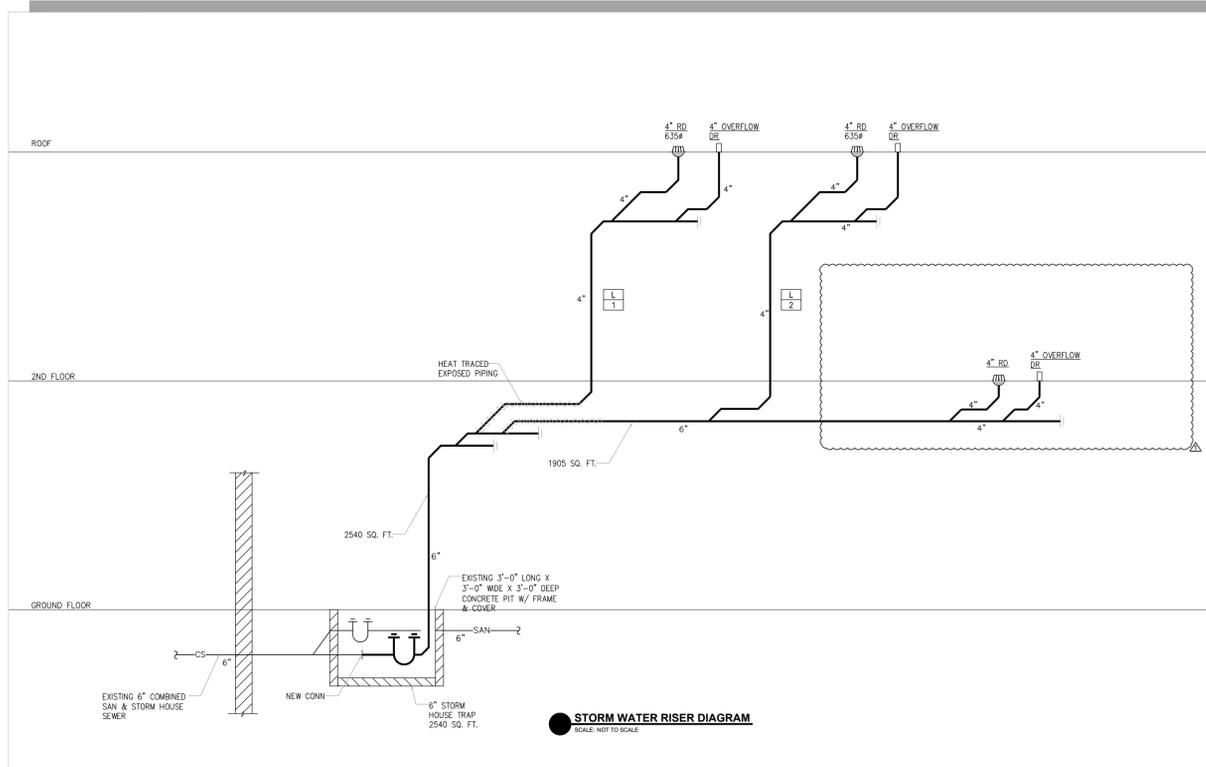
**S s D**  
325 W 38TH STREET, SUITE 210  
NEW YORK, NY 10018  
tel: 212.248.7500  
fax: 866.677.3878  
www.ssdarchitecture.com  
info@ssdarchitecture.com

CONSULTANTS  
**TWIG**  
Consulting Engineers, PC  
7 Floor Plaza - Suite 702, New York, NY 10001  
Tel: 212.967.7900 / Fax: 212.967.8945  
info@twig.com www.twig.com

STRUCTURAL ENGINEER:  
Richard H. Balsler, Engineers  
228 W 18th Street, No. 11  
New York, NY 10011  
T 212-463-0008  
SURVEYOR:  
Leonard J. Strandberg and Associates  
Consulting Engineers and  
Land Surveyors, P.C.  
92 Atlantic Avenue, Freeport, NY 11520  
516-378-2064 212-213-4090  
fax 516-378-6649

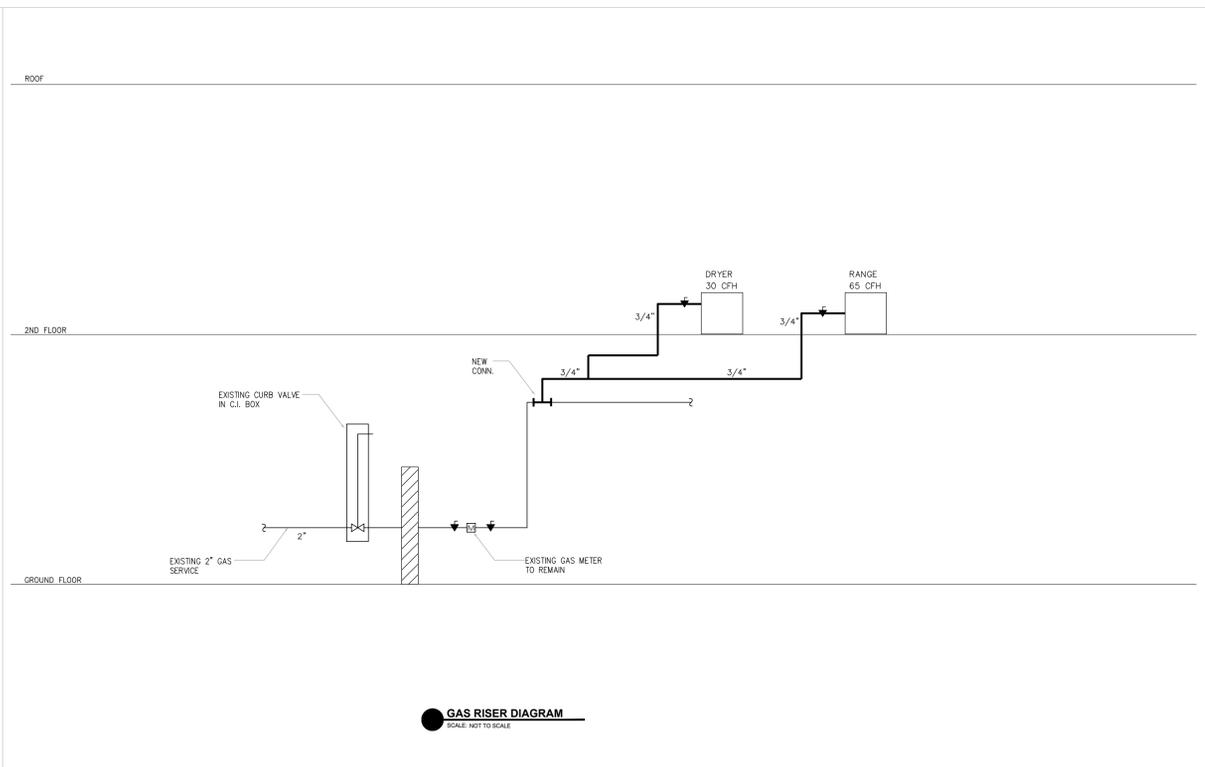
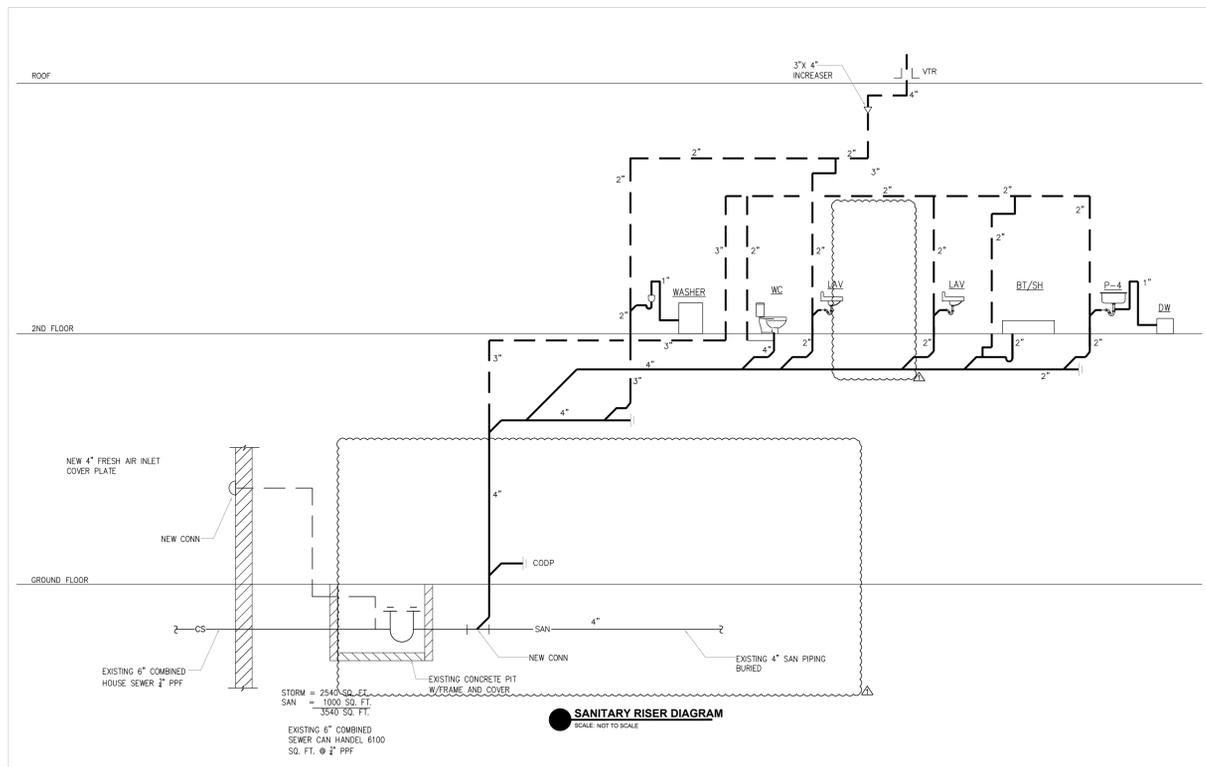
07.03.2012 ISSUED FOR CONSTRUCTION  
PROJECT:  
HSU HOUSE  
PROJECT ADDRESS:  
94 NORTH FIRST STREET  
BROOKLYN, NY 11211  
DWG TITLE:  
CELLAR THRU ROOF  
PLUMBING  
DETAILS III  
SEAL & SIGNATURE:

DATE: 23 NOV 2011  
PROJECT No.:  
DWG BY: CAGD  
CHK BY: TWG  
DWG TITLE:  
**P-403.00**  
SHEET NO.: PAGE NO.:  
7 of 8



**GENERAL PIPING NOTES**

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWING.
2. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO THE UNDERSIDE OF STRUCTURE SLAB, WITH SPACE FOR INSULATION AS SPECIFIED.
3. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
4. 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.
5. LOCATIONS OF EXISTING SANITARY SOIL AND VENT STACKS, HOT AND COLD WATER RISERS ARE APPROXIMATE. THE PLUMBING CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS OF PLUMBING STACKS BEFORE COMMENCING HIS WORK.



NYC ECC EXEMPTION:  
THE PLUMBING APPLICATION IS EXEMPT FROM THE NYC ENERGY CONSERVATION CODE (NYC ECC) AS PER SECTION 101.6

THESE PLANS ARE APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.