Contract to Perform Boiler-Room Work at 250 Cabrini Boulevard New York, New York

Contractor agrees to perform boiler-room work at 250 Cabrini Boulevard in New York, New York for the sums shown below, to be paid by the Owner. (Note: these prices will hold for thirty days from the date of the Contractor's signature). Prices given are inclusive of any applicable sales tax.

The work is specified in the attached pages of this Contract. The Work does not include asbestos abatement. Any changes to the Work resulting in extra costs will require a change order, to be signed by both the Owner and the Contractor. No substitution of specified equipment or materials shall be allowed without the prior written approval of the Construction Manager. Contractor shall have general-liability and workman's compensation insurance. The Owner and Jonathan Flothow shall each be named as additionally insured parties. All labor and materials will be warranted for a period of one year commencing with receipt of all signoffs. All equipment shall be installed in strict conformance with the manufacturers' recommendations, requirements, and instructions. The work shall conform to all applicable laws, codes, and standards. Contractor is responsible for confirming all site conditions, and for immediately reporting all problems, discrepancies, errors, or omissions relating to the site or this specification to the Construction Manager.

A COPY OF THE ATTACHED SPECIFICATION SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES THAT WORK IS BEING PERFORMED!

COST FOR BOILER ROOM RETURN PIPING WORK: **$**_____

COST FOR ALL OTHER WORK: **$**_____

Offered By: Accepted By:

_____ _____ _____ _____

Date Date

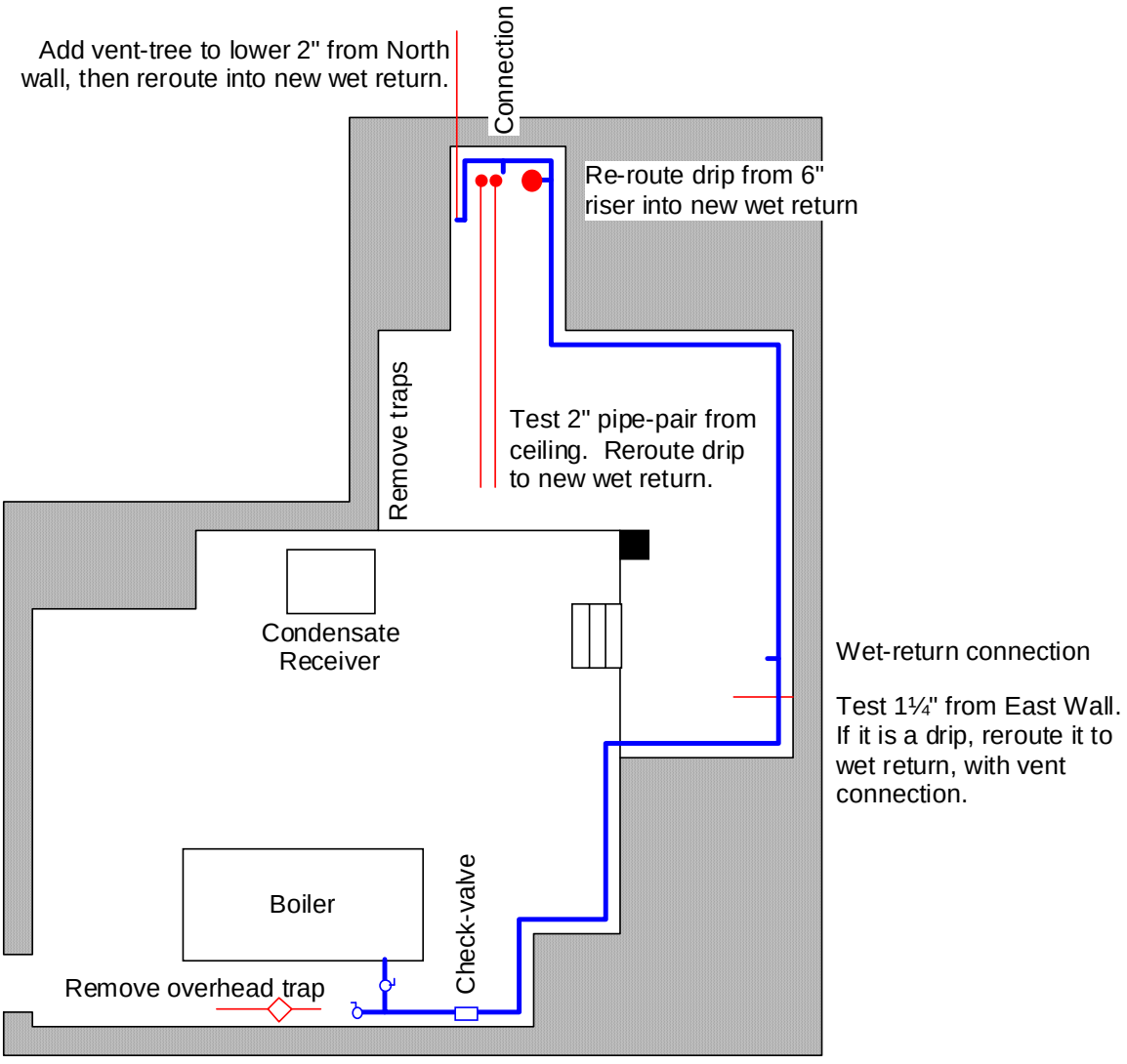
("Contractor") ("Owner")

Boiler Room Return Piping Work

Description

- Pipe a new wet return around the boiler room. Remove all traps. Reroute pressurized drip lines into the new wet return. The radiator returns will still flow into the condensate receiver.
- To confirm which pipes are pressurized drips and which are radiator returns, open three pipes and briefly run the boiler.
- All piping shall be steel.

Plan of Boiler Room Work



New Wet Return

- Run a new 1½" wet return on the floor. Start near the boiler's return connection, then wrap around the boiler room to the North end. Developed run is 80', including verticals.
- Include four 1" drip connections, located as shown.
- On the floor, just before connection to the boiler, include a swing check-valve.
- Past the connection to the boiler, pipe a blowoff. Also pipe a valve into the boiler connection, so the check-valve can be blown off. Valves shall be full-port ball-valves.
- Tie into the pumped return by replacing the 1¼" elbow with a Tee, with the end-port facing down.

Test Overheads

- After all orifice plates are installed, run the system to determine if certain pipes in the boiler room are returns, of if they are pressurized drips from steam mains.
- At the 1¼" pipe that comes in through the East wall hard against the ceiling, open the strainer blowoff (valve #035), and check for live steam.
- In the North corner, a pair of 2" pipes comes in through the ceiling. Test both. Open the nearby strainer blowoff (valve #039), and also the 2" union at the ceiling near the condensate receiver. Live steam should come out of one of them.

Remove Traps: General

- Remove all traps.
- Remove all associated valves and strainers.
- Remove all bypasses.
- Remove all Tee's.
- In general, make it look like there were never any traps. Otherwise, someone will put them back in.

Remove Traps: Locations

- The 1½" trap over the boiler, next to the South wall. (Simply reconnect the piping for this trap. Don't pipe in a drip.)
- The two traps next to the condensate receiver.
- The other four traps in the overhead piping.

Vent Connections

- Where indicated below, pipe ¾" connections onto pressurized drips, for main-line vents.
- Locate the vent connection on top of a horizontal pipe, 18" before the elbow going down into the drip-leg. Offset the drip piping as needed.
- Make sure the vent connection is at least 18" above the boiler waterline, but at least 18" below the ceiling.

Reconnect East 1¼" Overhead

- If this pipe is a pressurized return, drip it into the new wet return. Include a capped vent connection. Remove the abandoned overhead piping, and cap the connection at the main.
- If this pipe is *not* a pressurized drip, leave it connected to the overhead piping, with no trap.

Reconnect 2" Pipes from Ceiling

- Drip the pressurized line into the new wet return.
- Leave the unpressurized pipe connected to the overhead piping, with no trap.

Reroute Two Additional Pressurized Drips

Reroute these two pressurized drips into the new wet return:

- The lower 2" coming through the North wall. Include a vent connection.
- The 1½" drip coming off the base of the 6" riser in the North end.

Main Line Vent Trees

Build Trees

- Build two vent-trees of Gorton #2 vents each, as shown in the photo at right. Number of vents will vary.
- Nipples and fittings shall be ¾". Install the vents into ¾"x½" bushings.
- For compactness, use cross-trees and street-elbows as shown.
- Elevate the trees as high as possible.

Install Vent-Tree into Boiler Room

Install a tree with five vents onto the 2" drip coming through the boiler-room's North wall (this is the lowest of the 2" pipes.)

Gas Meter Room

Open the union, cut a reducing Tee into the 2" takeoff from the steam main, and install a tree with three vents.

Electric Meter Hallway

Remove the cap from the ¾" spur on the 2" pipe coming out of the wall. Elbow up 6", and install a single Gorton #2 vent.

Boiler Anode Bars

- Install two Neutro-Chem anode bars into the boiler. These are available from Rockmills Boiler.
- Replace the manhole gasket (Rockmills MP 150 boiler).
- Completely drain the boiler, to remove all chemical treatment, and refill it.

Sidearm Backflush

- Remove the 2" cap from the bottom of the sidearm, and pipe a 1¼" drain from there into the drain line (okay to Tee into the 1" under the pump). Include a full-port-ball-valve.
- After the boiler is filled, backflush as follows: turn the oilstat all the way down, close the sidearm's top connection, and open the new drain valve.

Thermal Well

Install a thermal well into the boiler's steam outlet **after the gate valve** ~~(or the adjacent elbow)~~ by drilling and tapping it ½" IPS.