

NU 1801 Maple Avenue Chiller & Boiler Replacements

Project Highlights and Results

- Replaced two 400-ton water cooled centrifugal chillers with high-efficiency water cooled chillers of the same capacity; replaced associated existing condenser water pumps
- During design of chiller replacement project, identified opportunity to enhance the building's existing heating boiler system
- Replaced one low-pressure boiler and combustion makeup air unit with three low pressure steam cast iron boilers salvaged from another NU building

Project Background

Owner:	Northwestern University
Location:	Evanston, IL
Team/Team Lead:	Jay Parikh, Chad Von Holten, Bhupendra Tailor, Mark Rockwood
Elara Role:	MEP Engineering Design
Type:	Chiller, Boiler Replacement; Laboratory Relocation
Construction Cost:	\$1,200,000

Project Overview

Building Type:	Higher Education; Office, Laboratory
Building Attributes:	6 Stories; 130,000 SF
Initial Construction:	1987
MEPFPIT Systems:	High efficiency CHW plant, low pressure steam boilers, steam to hot water heat exchangers, VAV air handling units with VAV boxes & hot water reheat coils, fume hood exhaust systems

Innovation

- Provided engineering services to prepare permit/bid/construction documents along with bidding and construction services to replace the following mechanical systems:
 - Two 400-ton water cooled centrifugal chillers with high-efficiency water cooled chillers of the same capacity; also replaced associated existing condenser water pumps.
 - One low-pressure boiler and combustion makeup air unit with three low pressure steam cast iron boilers salvaged from another NU building.
- Because the building consists of research laboratories that cannot be interrupted, the steam boiler plant needed to remain fully operational throughout construction.

