

The Penfield Apartments

Type: Market-rate rental apartment building

Size: 254 units

Location: 101 East 10th Street, St. Paul, MN 55101

Year built: 2013

Parking: 250 parking spaces in two-level parking garage

Website: www.thepenfieldapts.com



Description: The Penfield is a newly-constructed premier luxury mixed-use apartment building with a historic facade located in downtown Saint Paul. In addition to apartments, the building houses a full service Lunds grocery store on the first floor, occupying 27,500 square feet of commercial space. The Penfield is LEED Silver certified in conjunction with Minnesota's 2030 Energy Efficiency rating. Along with the construction elements required for Silver certification, there is also a 12,000 square foot green roof. The Minneapolis-Saint Paul Business Journal awarded The Penfield a Best in Real Estate award for multifamily market rate housing in 2013



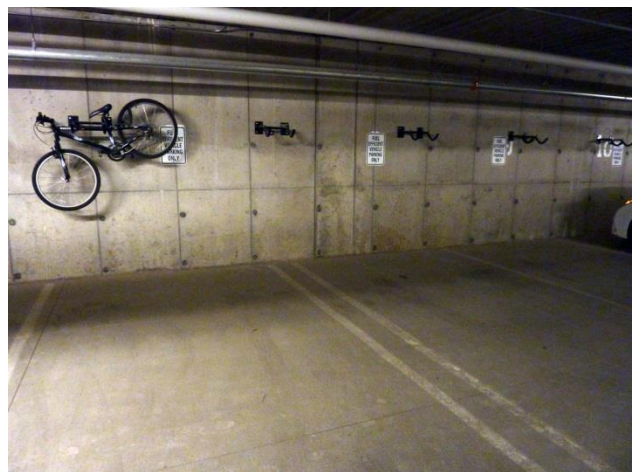
Parking:

The Penfield has 254 parking spaces in their two-level parking garage. Parking spots are assigned - upper level spots cost \$95/month and lower level spots are \$115/month. The third (middle) level of the parking garage is reserved for Lunds customer parking and it has two level 2 public charging stations.

PEV Charging plans and infrastructure:

Building management will consider installing a combination of Level 1 and Level 2 charging stations in the parking garage. Both levels already have

some 120V outlets that could be used for PEV charging. Management is planning to contact the electricity installing company that did the building wiring and ask them to look into the best ways to run new conduits and wiring to the parking areas. If conduits were needed in different parking spots in the future, they would be easy to relocate. The parking garage already has some spots dedicated to high efficiency vehicles and management is considering installing some charging infrastructure in those spaces. Management will consider installing several Level 2 stations in the lower level parking garage. The first charging stations will be installed close to the electrical room.



MultiHousingCharging.com Case Report

Metering and billing:

Building management is planning to charge a flat monthly fee based on the estimated mileage of the user. If there is a need for metering, they will have submeters installed into the charging station supply line and implement flat billing with an annual submetering-based adjustment (You can find the Multi Housing Charging worksheets and the Metering and Systems table by visiting www.MultiHousingCharging.com/Tools.html)

MultiHousingCharging.com tools

Metering and Payment Systems table

Description	Who does billing	Compen- sation needs	Installation costs	Extra ongoing costs	Time of Day metering possible	Pros	Cons
1 Connected to homeowner's existing meter	Utility	Conduit and wiring	No	Low	No	Simple, no extra costs	None
2 New, single residential utility meter	Utility	Mechanical meter, conduit and wiring	Utility company covers	Monthly, based on charge from utility	Yes	Residential utility does the metering and billing	None extra installation and ongoing costs
3 Submetering	Building manager	Mechanical meter, conduit and wiring	Dependent on the type of meter	Higher, extra cost from submeter	Priority communication costs, billing meter	As accurate as utility metering	Building manager has to do the metering and billing
4 Flat billing with annual submetering based adjustment	Building manager	Mechanical meter, conduit and wiring	Dependent on the type of meter	Higher, extra cost from submeter	Priority communication costs	As accurate as utility metering in the long term, but less likely to be than option 3	Building manager has to do the metering and billing
5 Flat billing with submeter	Building manager	Conduit and wiring	No	Low	No	Simple, cheap system	Inaccurate, no time of day option. Must not take into account charging outside of home
6 Third party system and billing	Service provider	Conduit, wiring and advanced EVSE	Yes	Varies based on the service provider	Yes, often (depending on the annual service fee - percentage of billing)	Simple for building manager and user, provides more data, enables multiple users	Expensive, ongoing costs can in some cases be more than electricity costs

This worksheet was developed as part of the Advancing Alternatives for Minnesota Drivers Initiative funded by the U.S. Department of Energy. Author: Jukka Kukkonen, PlugInConnect. For more information visit www.MultiHousingCharging.com.

Purchase and ownership of EVSEs:

Penfield Apartments will purchase the Level 2 EVSEs and Level 1 outlets.

Installation cost sharing:

Penfield Apartments will install the Level 2 EVSEs and Level 1 outlets.

Signage and parking enforcement:

Parking spots equipped with charging systems will be assigned to residents and parking enforcement will operate as with any other assigned parking space in the facility.



Insurance needs: There will be no extra insurance requirements for PEV owners.

Future expansion capability: During this first installation, Penfield Apartments management will install some stations and run conduits to more parking spots to provide for future expansion. The parking setup provides plenty of capacity for future expansion

Public charging availability nearby: Lunds customer parking in the same parking garage has two level 2 public charging stations. There are also several other public Level 2 charging stations nearby.