

ground surface.

- (d) Only boilers or furnaces certified by the U.S. Environmental Protection Agency as Phase 2 qualified models are allowed.
- (3) **Permitted and Prohibited Fuels.**
- (a) Fuel burned in any new or existing outdoor wood furnace shall be only natural untreated wood, wood pellets, corn products, biomass pellets, or other listed fuels specifically permitted by the manufacturer's instructions such as fuel oil, natural gas, or propane backup.
  - (b) The following fuels are strictly prohibited in new or existing outdoor wood furnaces:
    - (i) Grass clippings and other landscaping or vegetative refuse;
    - (ii) Wood that has been painted, varnished or coated with similar material and/or has been pressure-treated with preservatives and contains resins or glues as in plywood or other composite wood products.
    - (iii) Rubbish or garbage, including but not limited to food wastes, food packaging, or food wraps.
    - (iv) Any plastic materials, including but not limited to nylon, PVC, ABS, polystyrene or urethane foam, and synthetic fabrics, plastic films and plastic containers.
    - (v) Rubber, including tires or other synthetic rubber-like products.
    - (vi) Any other items not specifically allowed by the manufacturer or this section.
- (G) **Porches.** Screened porches or other porch types that are enclosed by walls and a roof shall be considered a part of the principal structure and may not encroach into the setback and build to requirements with Section 3.1.5(F), Allowed Encroachments into Setbacks and Build-to Lines.
- (H) **Solar Energy Sources and Systems.**
- (1) **Placement and Design Standards.** Northfield encourages the installation of productive solar energy systems and recognizes that a balance must be achieved between character and aesthetic considerations and the reasonable desire of building owners to harvest their renewable energy resources. Roof and ground-mounted solar energy systems that meet the provisions of Section (b) below are permitted accessory uses in all districts where buildings are permitted. Pursuant to Minn. Stat. § 462.357, subd. 6(2), solar energy systems that cannot satisfy the standards set forth in subparagraphs (a) through (e) below and receive adequate access to direct sunlight shall satisfy the practical difficulties standard applicable to variance applications under Section 8.5.16 of this [Chapter 34](#).
    - (a) Height - Solar energy systems must meet the following height requirements:
      - (i) Building mounted solar energy systems shall not exceed the maximum allowed height in any zoning district.
      - (ii) Freestanding solar energy systems shall not exceed 20 feet in height in any zoning district when oriented at maximum tilt.
    - (b) Setback—Solar energy systems must meet the following setback requirements:

- (i) Building mounted solar energy systems - The collector surface and mounting devices for building mounted solar energy systems shall not extend beyond the required setbacks of the building on which the system is mounted.
    - (ii) Freestanding solar energy systems - Freestanding solar energy systems may not extend into the side-yard or rear setback when oriented at minimum design tilt.
  - (c) Coverage - Freestanding solar energy systems are not allowed in a front yard.
    - (i) They may cover no more than 35 percent of a rear yard, and no more than 3 freestanding accessory solar structures are allowed on lots with one- and two- family dwellings.
  - (d) **Visibility**
    - (i) Building-mounted solar energy systems shall be designed to be flush- mounted with the roof when facing the public right-of-ways other than alleys. The color of the solar collector is not required to be consistent with other roofing materials.
    - (ii) Building-integrated Photovoltaic Systems: Building-integrated photovoltaic systems shall be allowed regardless of visibility, provided the building component in which the system is integrated meets all required setback and land use standards for the district in which the building is located.
  - (e) Historic Buildings - Solar energy systems on buildings within designated historic districts or on locally designated historic buildings (exclusive of State or Federal historic designation) will require a conditional use permit and the accompanied Historic Preservation Committee review.
- (2) **General Standards.**
- (a) Feeder lines - Any electric lines accompanying a solar energy system, other than those attached to on- site structures by leads, shall be buried within the interior of the subject parcel, unless there are existing lines in the area which the lines accompanying an solar energy system can be attached.
  - (b) Commercial - All solar energy systems shall be limited to the purpose of on- site energy production, except that any additional energy produced above the total onsite demand may be sold to the operator's regular electrical service provider in accordance Minn. Stat. § 216B.164 or successor statute.
  - (c) Northfield encourages solar access to be protected in all new subdivisions and allows for existing solar to be protected consistent with Minnesota Statutes. Any solar easements filed, must be consistent with Minn. Stats. § 500.30.
- (3) **Abandonment.** A solar energy system that is allowed to remain in a nonfunctional or inoperative state for a period of 12 consecutive months, and which is not brought in operation within the time specified by the city, shall be presumed abandoned and shall constitute a public nuisance that may be removed by the City and the costs thereof certified as a special assessment against the owner of the property on which the abandoned solar energy system was located.
- (l) **Swimming Pools, Hot Tubs, and Spas.**