The Rutherford House is a 2,337 square foot, one-and-one-half story bungalow with a basement, a rectangular footprint, and a steeply pitched hip roof. Hip-roof dormers on the south, east, and north sides and a dramatic tapered chimney on the east façade embellish the roofline. The wood-frame building, originally clad in narrow beveled siding, is finished in asbestos shingle siding; it has a concrete foundation and composition shingle roof. The ca 1905 building displays a central entry on the front (south) façade, overlooking NE Shaver Street. It is flanked by a shallow canted bay window under boxed eaves to the left, complemented by a flush, three-part window to the right. A similar bay is located on the east façade of the building, which fronts on NE 9th Avenue. The residence, which is slightly raised, is accessed via two flights of stairs that approach a small stoop covered with a gable roof supported by two substantial posts. A major change to the building is the enclosure of the recessed front porch, originally located on the east side of the front façade, in 1936. Additional character-defining features, which were added within the historic period, include modest classical references at the front entry and in the interior, which were added in conjunction with this renovation.