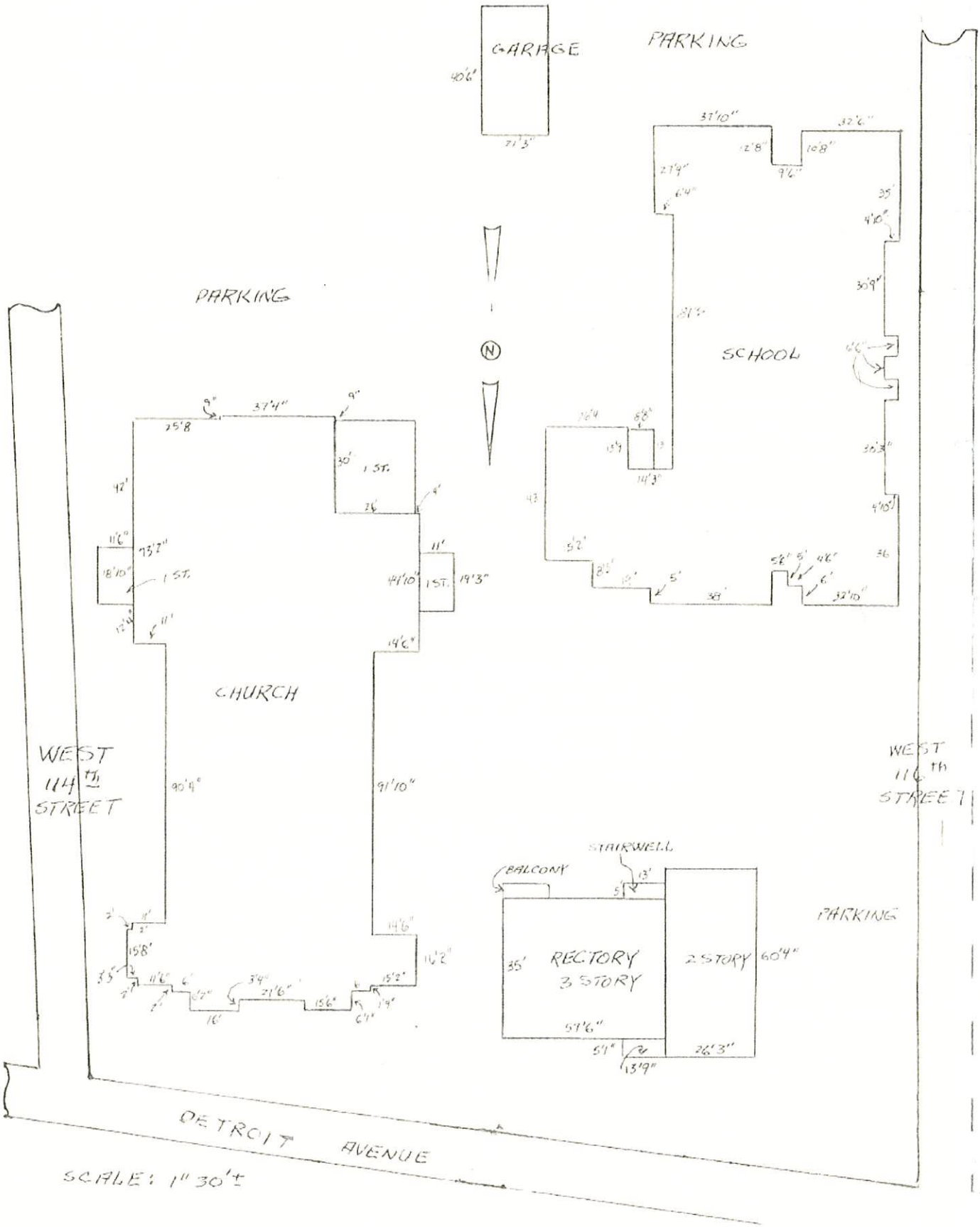SKETCH OF IMPROVEMENTS