In the postwar era, Republicans have become increasingly more likely than Democrats to live in non-urban counties, and the two parties serve increasingly distinct geographic constituencies. Introducing a theory of geographically-induced policy feedback, this paper shows that policies that shape geographic space have contributed to these changes. It examines the effect of the Interstate Highway System, the largest public works project in American history. Interstates are hypothesized to facilitate partisan geographic polarization by catalyzing residential migration and land use changes. These hypotheses are tested by exploiting Interstates’ conditionally exogenous placement in suburban counties and metropolitan areas. Two studies show that suburban counties with Interstates became about 2 to 3 points less Democratic than they would have been otherwise (about 5 points in the South), and increasing metro-level highway density from the 25th to the 75th percentile increases the urban-suburban partisan gap by up to 4 points.