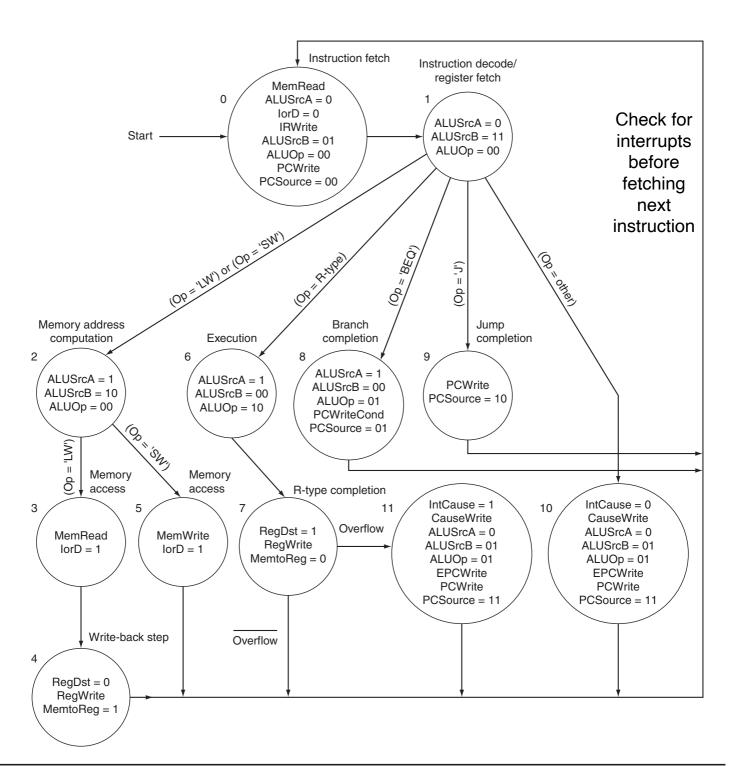**FIGURE 5.40 This shows the finite state machine with the additions to handle exception detection.** States 10 and 11 are the states that generate the appropriate control for exceptions. The branch out of state 1 labeled (*Op = other*) indicates the next state when the input not match the opcode of any of lw, sw, 0 (R-type), j, or beq. The branch out of state 7 labeled *Overflow* indicates the action to be taken when ALU signals an overflow.