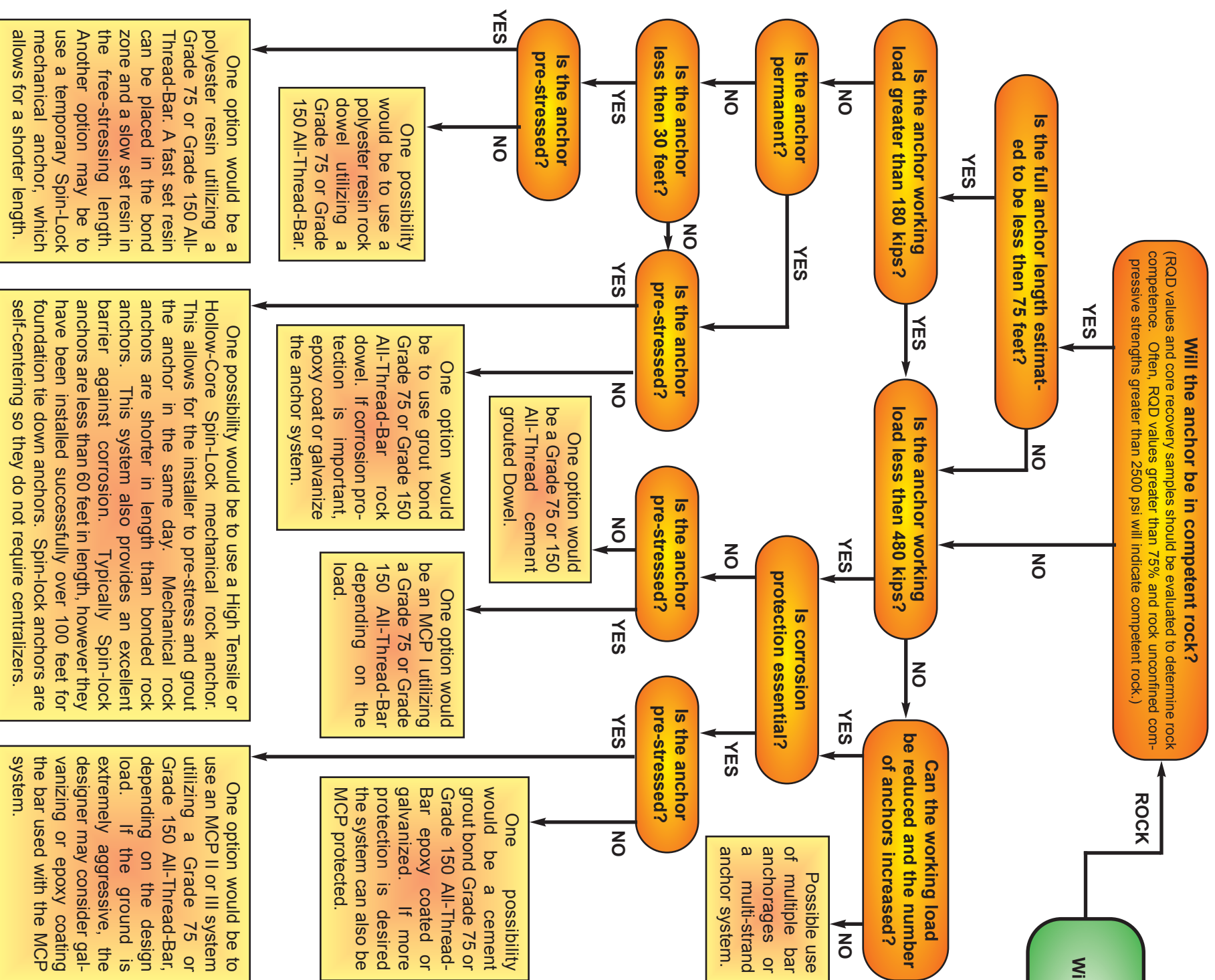
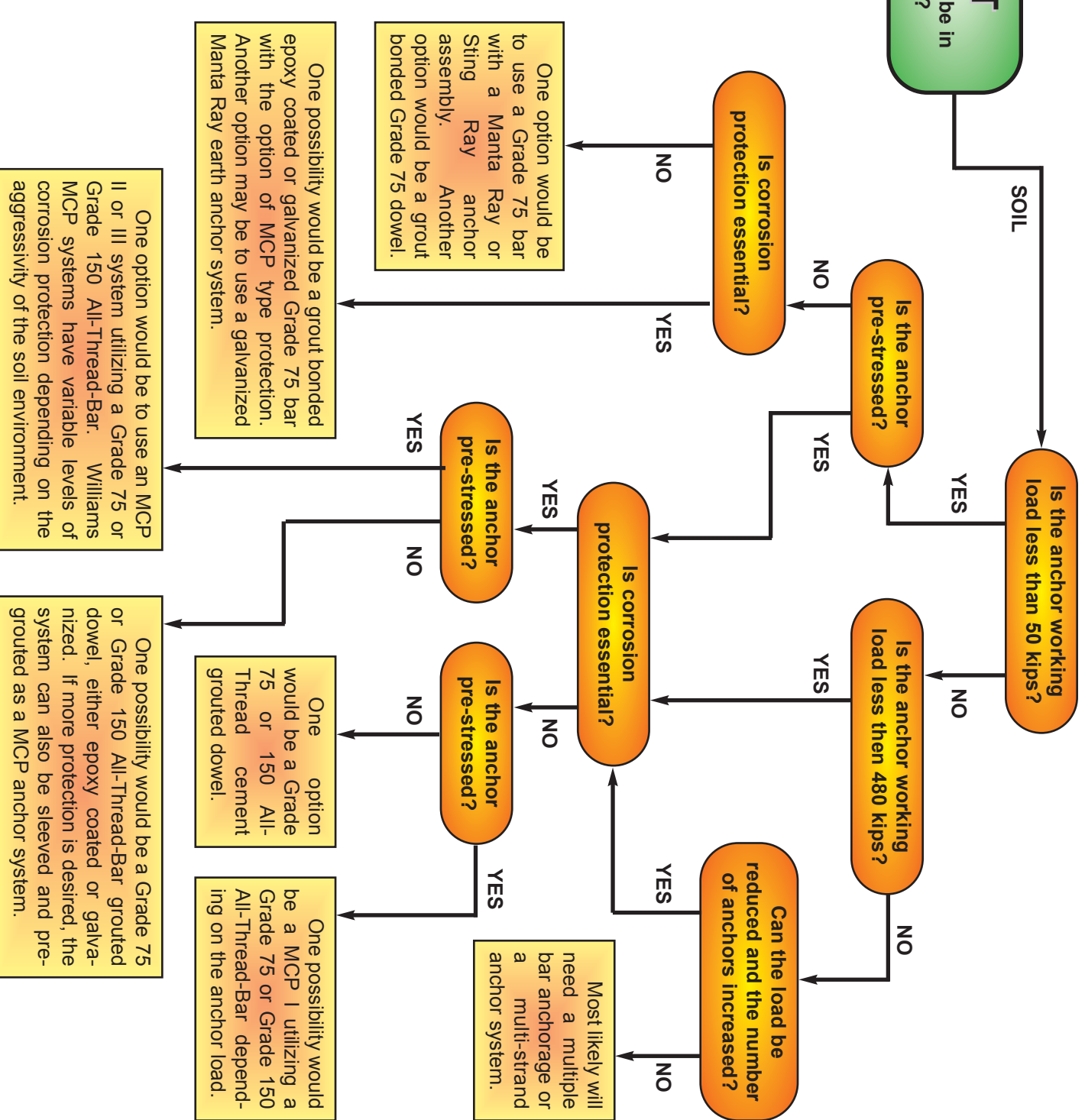


Choosing an Appropriate Rock Anchor



Choosing an Appropriate Soil Anchor



Notes:

- This flow chart is meant to be a quick reference. A designer should consider that flow charts such as this can not incorporate every variable relevant to the design of earth anchors. For additional help in choosing an anchor system please contact your nearest Williams representative.
- Certain rock strata may require consolidation grouting prior to rock anchor installation in order to minimize the difficulties associated with grouting anchors in fractured rock.
 - For low temperature and high impact applications, Williams can manufacture Spin-Lock anchors using ASTM A-193 grade B7 material or an ASTM A-320 grade L7 material.
 - The term MCP refers to Williams (M)ultiple (C)orrosion (P)rotection anchor systems, which are shown on pages 30-34.
 - Most of Williams All-Thread Bars come in stock lengths of 50 ft. For longer anchors, Williams Stop-Type Couplings are often used for a mechanical connection between bars. Williams couplers develop 100% of the bars ultimate strength.
 - Williams can manufacture anchors using stainless steel bars if anchoring into highly aggressive rock or soil.