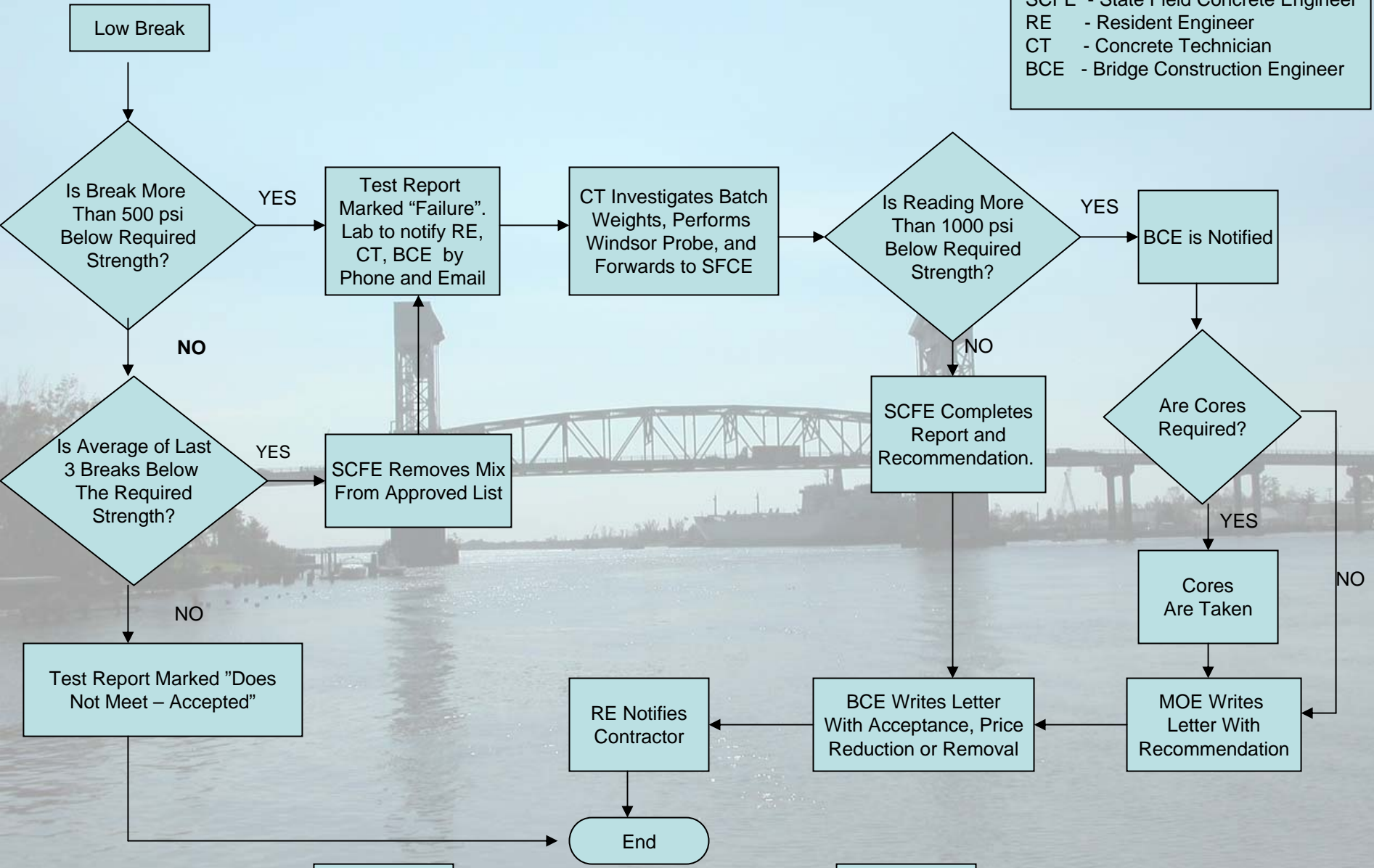


Low Strength Concrete Procedures



Class A & AA Low Cylinder Investigation

- MOE - Materials Operations Engineer
- FOE - Field Operations Engineer
- SCFE - State Field Concrete Engineer
- RE - Resident Engineer
- CT - Concrete Technician
- BCE - Bridge Construction Engineer



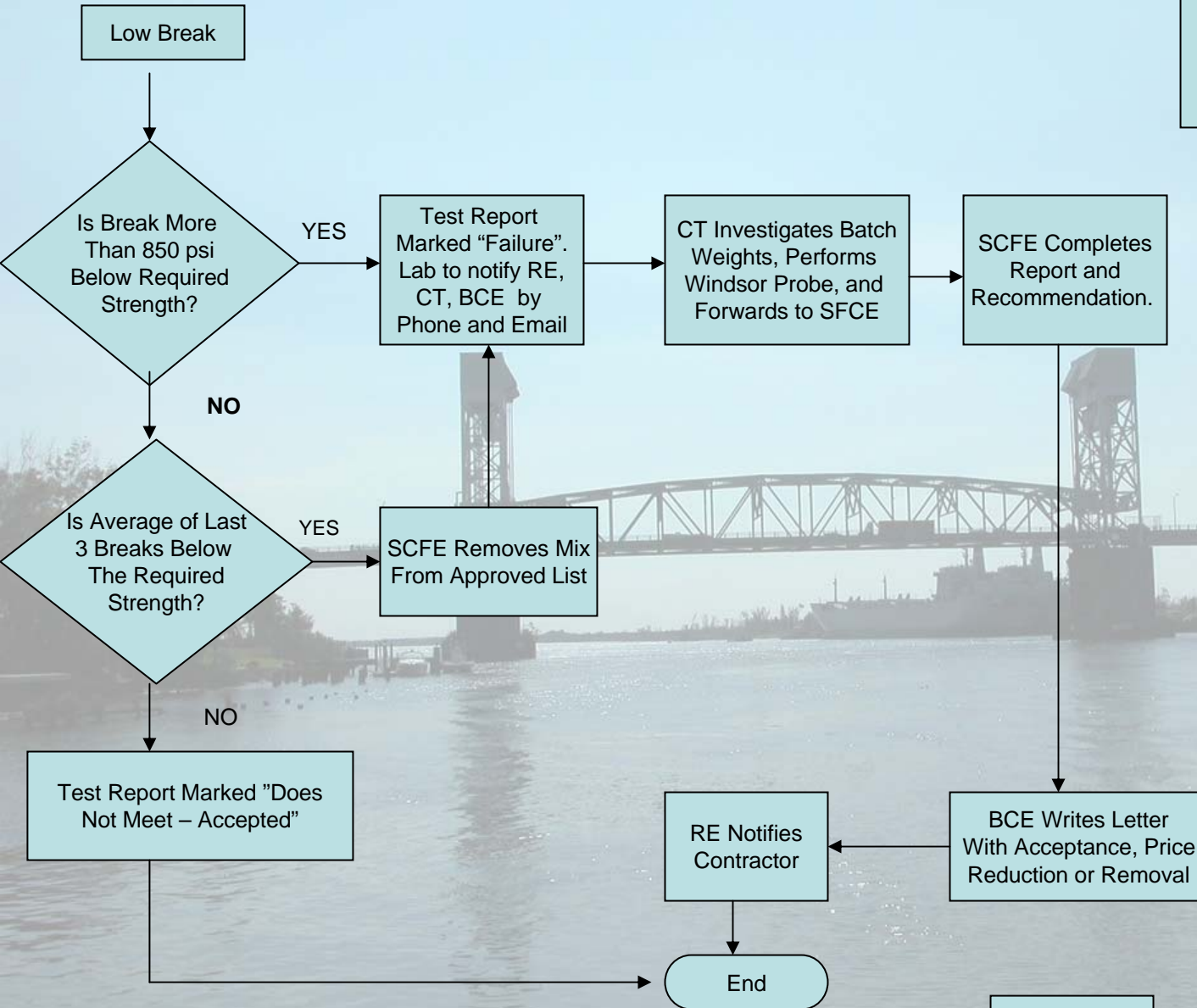
Time Line:
1 - Week



Time Line:
2 - Weeks

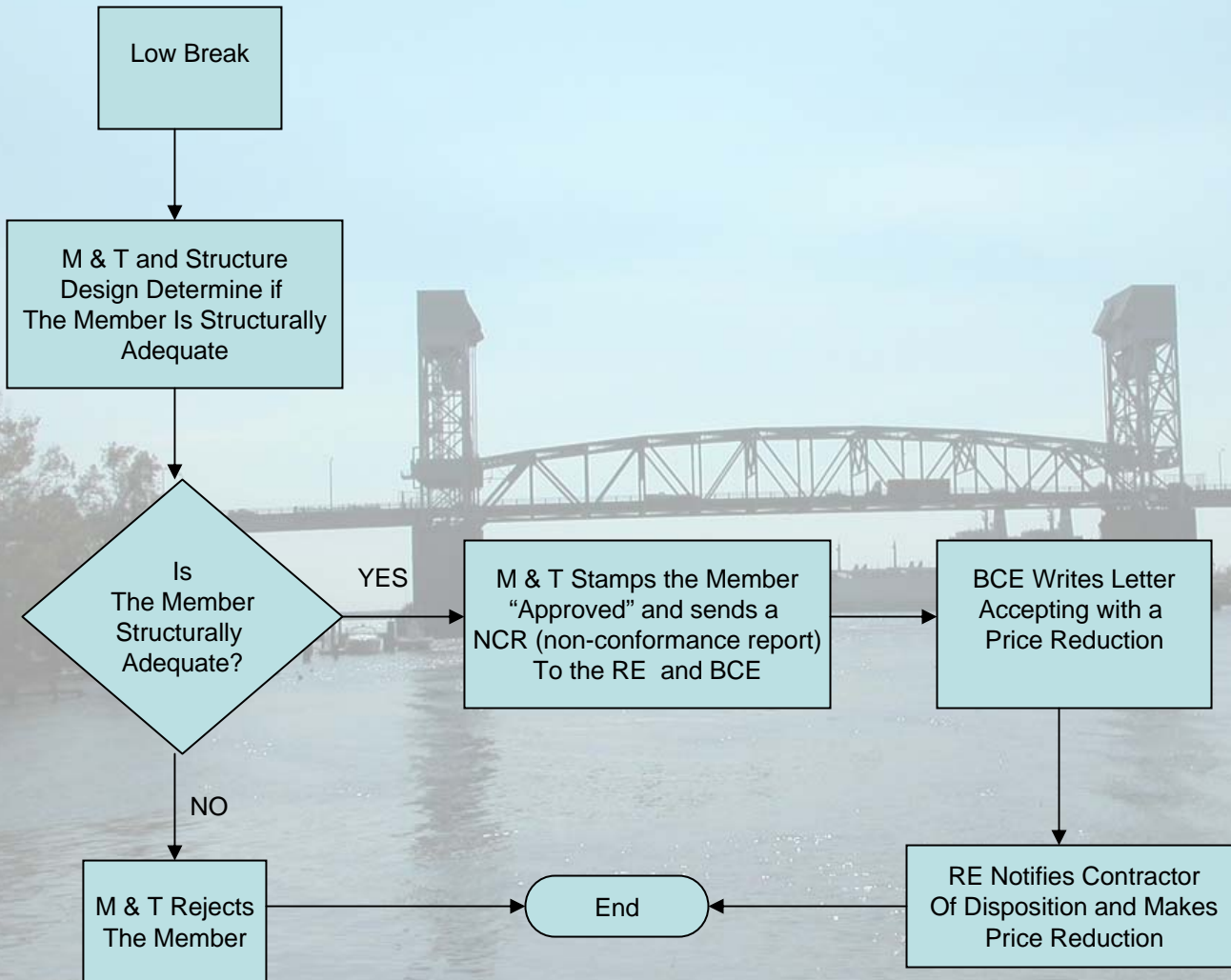
Class B Low Cylinder Investigation

MOE - Materials Operations Engineer
FOE - Field Operations Engineer
SCFE - State Field Concrete Engineer
RE - Resident Engineer
CT - Concrete Technician
BCE - Bridge Construction Engineer



Time Line:
1 - Week

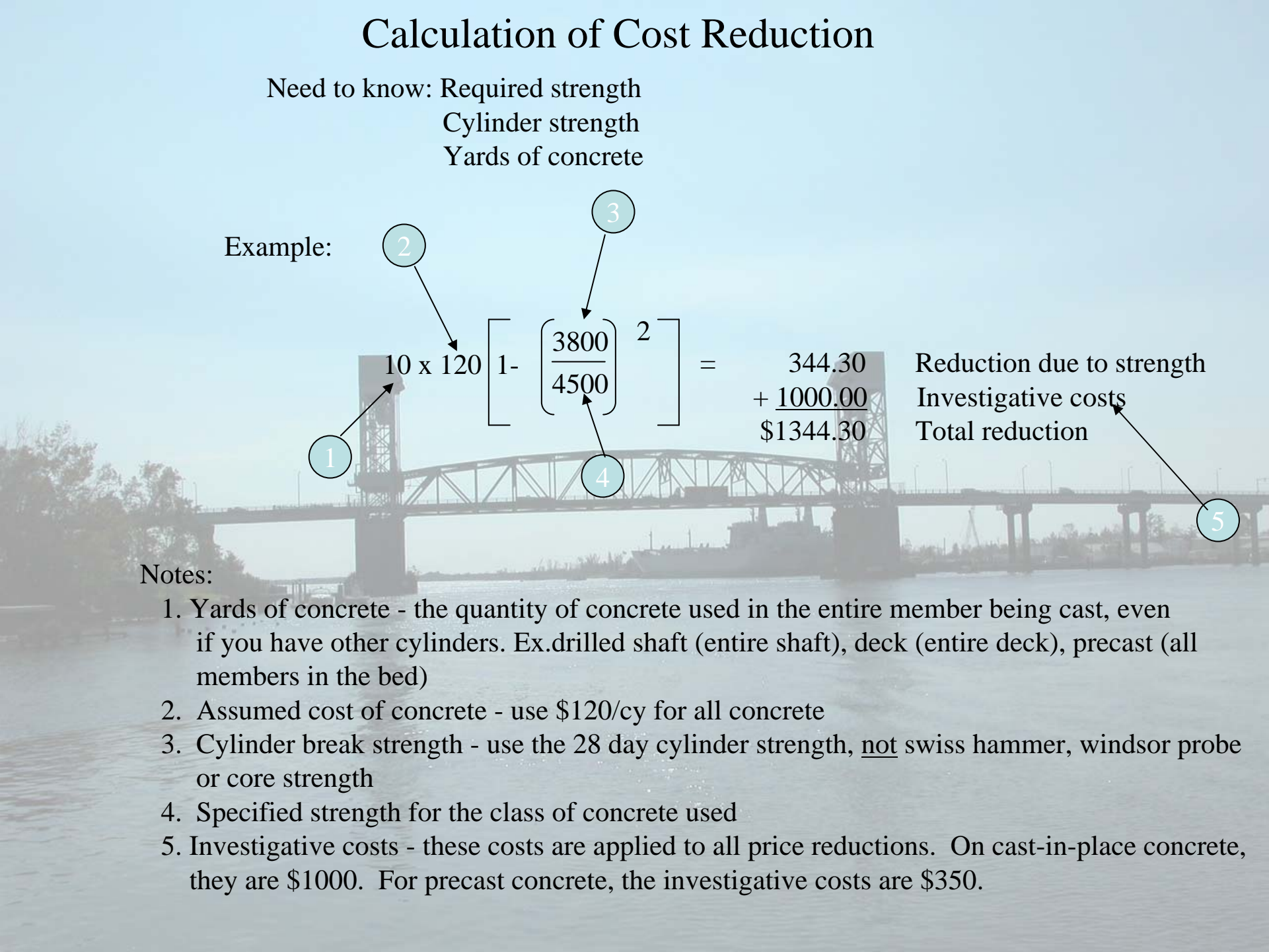
Low Strength Concrete Procedures : Precast Members



Calculation of Cost Reduction

Need to know: Required strength
Cylinder strength
Yards of concrete

Example:


$$\begin{array}{r} \text{1} \rightarrow 10 \times 120 \text{ (2)} \left[1 - \left(\frac{3800 \text{ (3)}}{4500 \text{ (4)}} \right)^2 \right] = \begin{array}{r} 344.30 \\ + 1000.00 \\ \hline \$1344.30 \end{array} \end{array}$$

Reduction due to strength
Investigative costs
Total reduction (5)

Notes:

1. Yards of concrete - the quantity of concrete used in the entire member being cast, even if you have other cylinders. Ex.drilled shaft (entire shaft), deck (entire deck), precast (all members in the bed)
2. Assumed cost of concrete - use \$120/cy for all concrete
3. Cylinder break strength - use the 28 day cylinder strength, not swiss hammer, windsor probe or core strength
4. Specified strength for the class of concrete used
5. Investigative costs - these costs are applied to all price reductions. On cast-in-place concrete, they are \$1000. For precast concrete, the investigative costs are \$350.