Step-1

Given that Elimination for a 2 by 2 block matrix:

When $A^{-1}A = I$,multiply the first block row by CA^{-1} and subtract from the second row, to find the â€œSchur complimentâ€™â€™ S :

$$\begin{bmatrix} I & 0 \\ -CA^{-1} & I \end{bmatrix}\begin{bmatrix} A & B \\ C & D \end{bmatrix} = \begin{bmatrix} A & B \\ 0 & S \end{bmatrix}.$$

Step-2

Since by multiplying the first row with CA^{-1} and then subtract form row 2, we have

the Schur compliment S is $S = \boxed{D - CA^{-1}B}$.