Lemma (Proof By Contrapositive): $\Gamma, \neg B \vdash \neg A \implies \Gamma, A \vdash B$

$$\dfrac{\dfrac{\dfrac{}{\Gamma, A \vdash B}\,\mathrm{L}\supset \quad \dfrac{}{\Gamma, A, \bot \vdash B}\,\mathrm{id}}{\Gamma, A, \neg B \vdash B}\,\mathrm{L}\supset \quad \dfrac{}{\Gamma, A, B \vdash B}\,\mathrm{id}}{\Gamma, A \vdash B}\,\mathrm{EM}$$