$$R^*(s_1, s), \ i = \text{null}, \ u, v \neq \text{null}, \ \underline{i_1 \leq_1 u \leq_1 v} \Rightarrow v \leq u$$

general prop of TC *(probably needs proof too)*

$$i_0 \leq_0 u', \ u = n_0(u') \Rightarrow \underline{n_0(i_0) \leq_0 u}$$

from frame prop R-≤ (extended)

$$Ax_0, \ R(s_0, s_1), \ \underline{i_1 \leq_0 u \leq_0 v} \Rightarrow \underline{i_1 \leq_1 u \leq_1 v}$$

follows from def of R

$$R(s_0, s_1) \Rightarrow \underline{i_1 = n_0(i_0)}$$

$$R(s_0, s_1), \ R^*(s_1, s), \ i = \text{null}, \ u, v \neq \text{null}, \ \underline{i_0 \leq_0 u'}, \ u = n_0(u'), \ \underline{u \leq_0 v} \Rightarrow v \leq u$$