$\pi \circ \pi'^{-1}$. $\lrcorner$

In terms of linear series, the map $\varphi_{a,b,c}$ is given by the linear system $|2H|_{a+b+c}$ of conics in $\mathbb{P}^2$ passing through the three points a, b, and c; in homogeneous coordinates, if

$$a = [1, 0, 0], \quad b = [0, 1, 0], \quad c = [0, 0, 1],$$

the map φ_{abc} is

$$\varphi_{abc} : [X_0, X_1, X_2] \longrightarrow [X_1X_2, X_0X_2, X_0X_1].$$

$\ulcorner$ By the correspondence on P492, $\exists$ a linear system of divisors on $\mathbb{P}^2$ with base locus of codimension ≥ 2.

$\Rightarrow$

$$\mathbb{P}^2 \xrightarrow{\varphi_{abc}} \mathbb{P}^2$$

$$[X_0, X_1, X_2] \longmapsto [\sigma_0(X_0, X_1, X_2), \sigma_1(X_0, X_1, X_2), \sigma_2(X_0, X_1, X_2)]$$

is a birational map, up to an automorphism of $\mathbb{P}^2$, where $\sigma_0, \sigma_1, \sigma_2 \in H^0(\mathbb{P}^2, \mathcal{O}(nH))$ for some $n \in \mathbb{Z}_+$.

By the construction above,

$$\varphi_{abc}(\{[*, *, 0]\}) = \text{point}, \text{ say } [0.0.1]$$
$$\varphi_{abc}(\{X_0 = 0\}) = \text{〃} \quad \text{say } [1.0.0]$$
$$\varphi_{abc}(\{X_1 = 0\}) = \text{〃}, \quad \text{〃} \quad [0.1.0].$$

$\Rightarrow$ σ_0 & σ_1 are divisible by X_2
σ_1 & σ_2 〃 X_0
σ_0 & σ_2 〃 X_1

$\Rightarrow$ $\sigma_0 = X_1X_2 g_0$, $\sigma_1 = X_0X_2 g_1$, $\sigma_2 = X_0X_1 g_2$