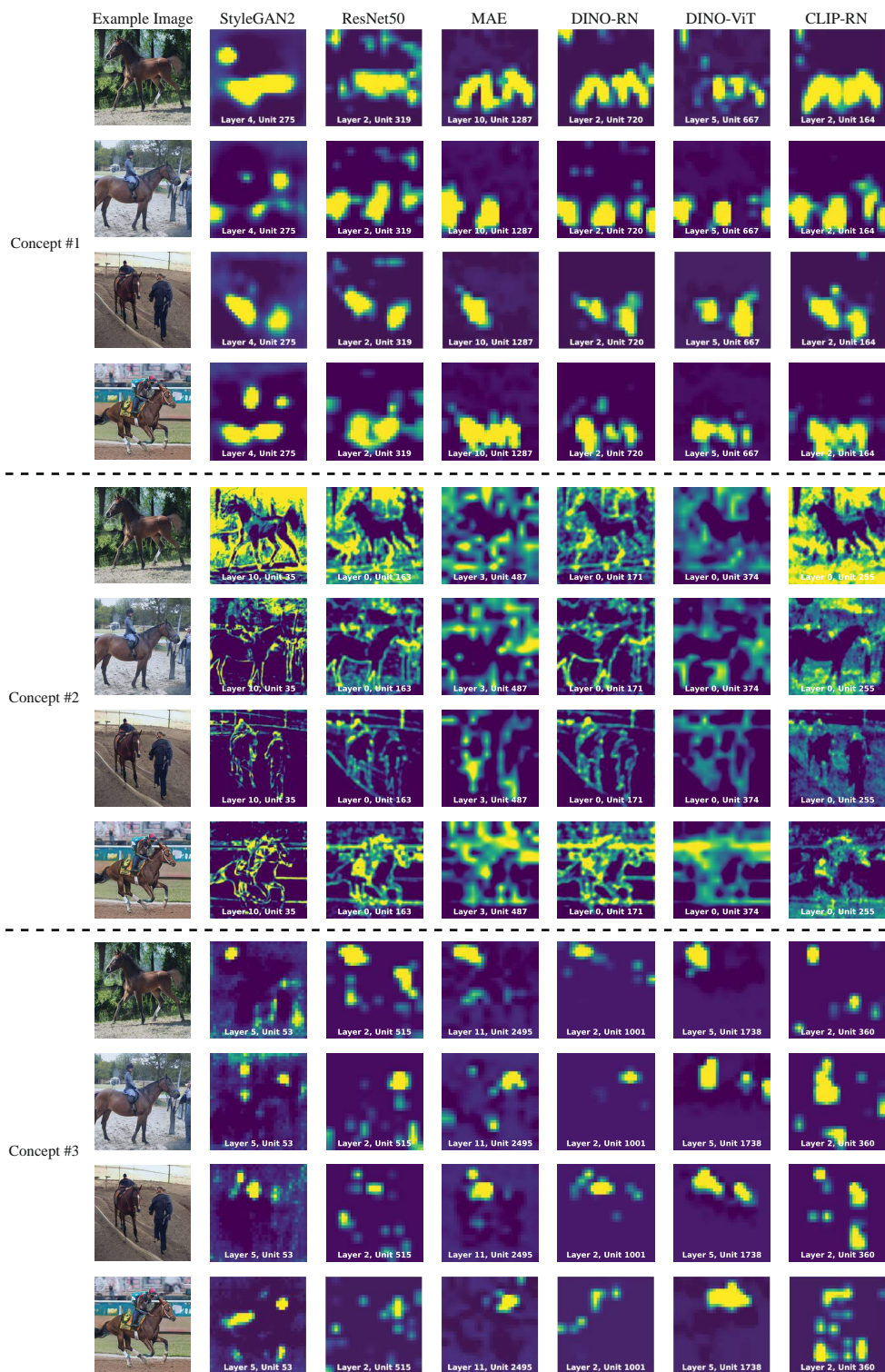# 7. Appendix

We provide extended examples of Rosetta dictionaries as well as additional edits and visualizations. We further provide the code for extracting and visualizing Rosetta neurons.

Figure 10: Rosetta Neuron Dictionary for LSUN-horses. A sample from the dictionary curated for the LSUN-horses dataset. The figure presents 6 emergent concepts demonstrated in 4 example images.
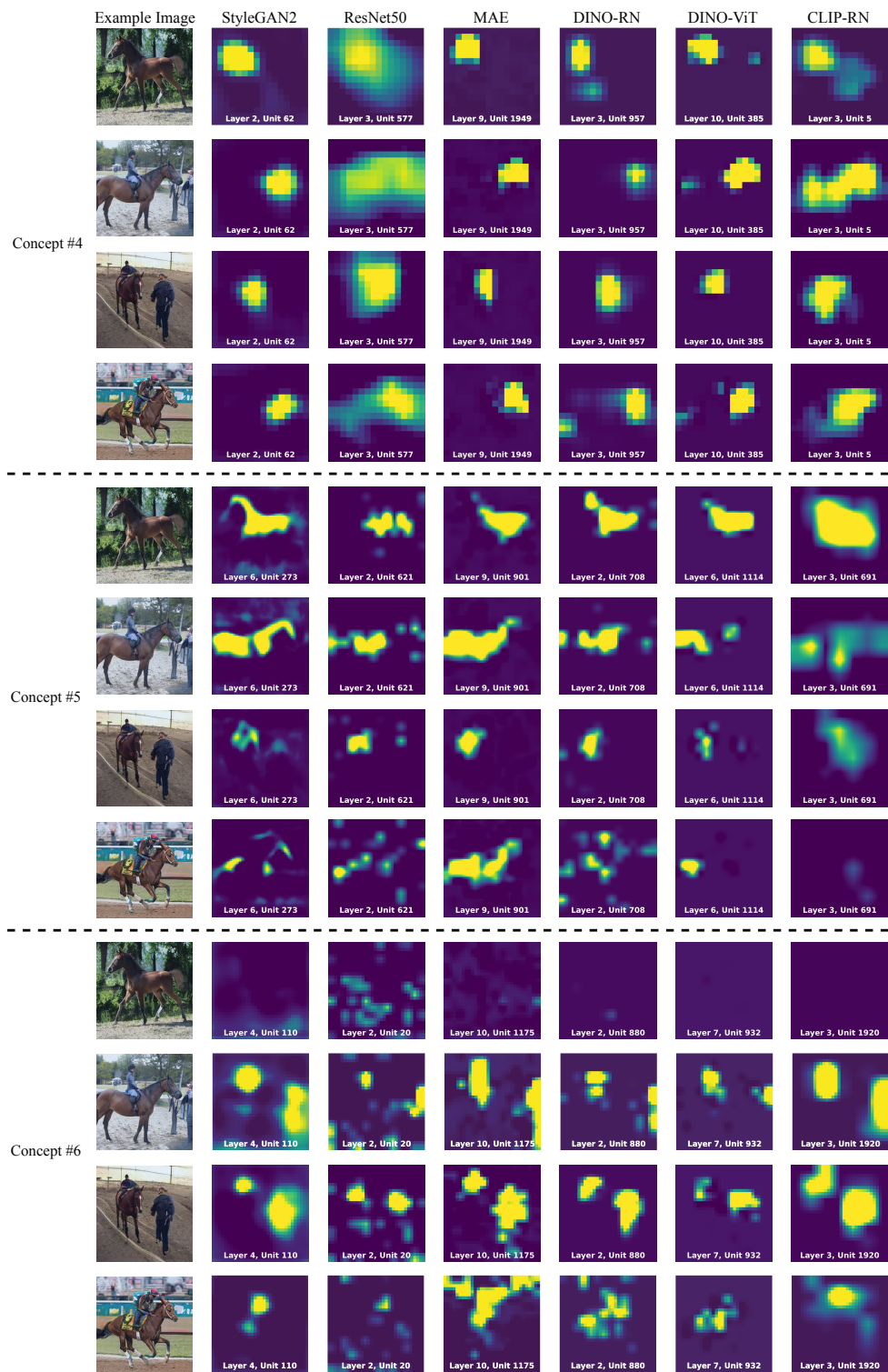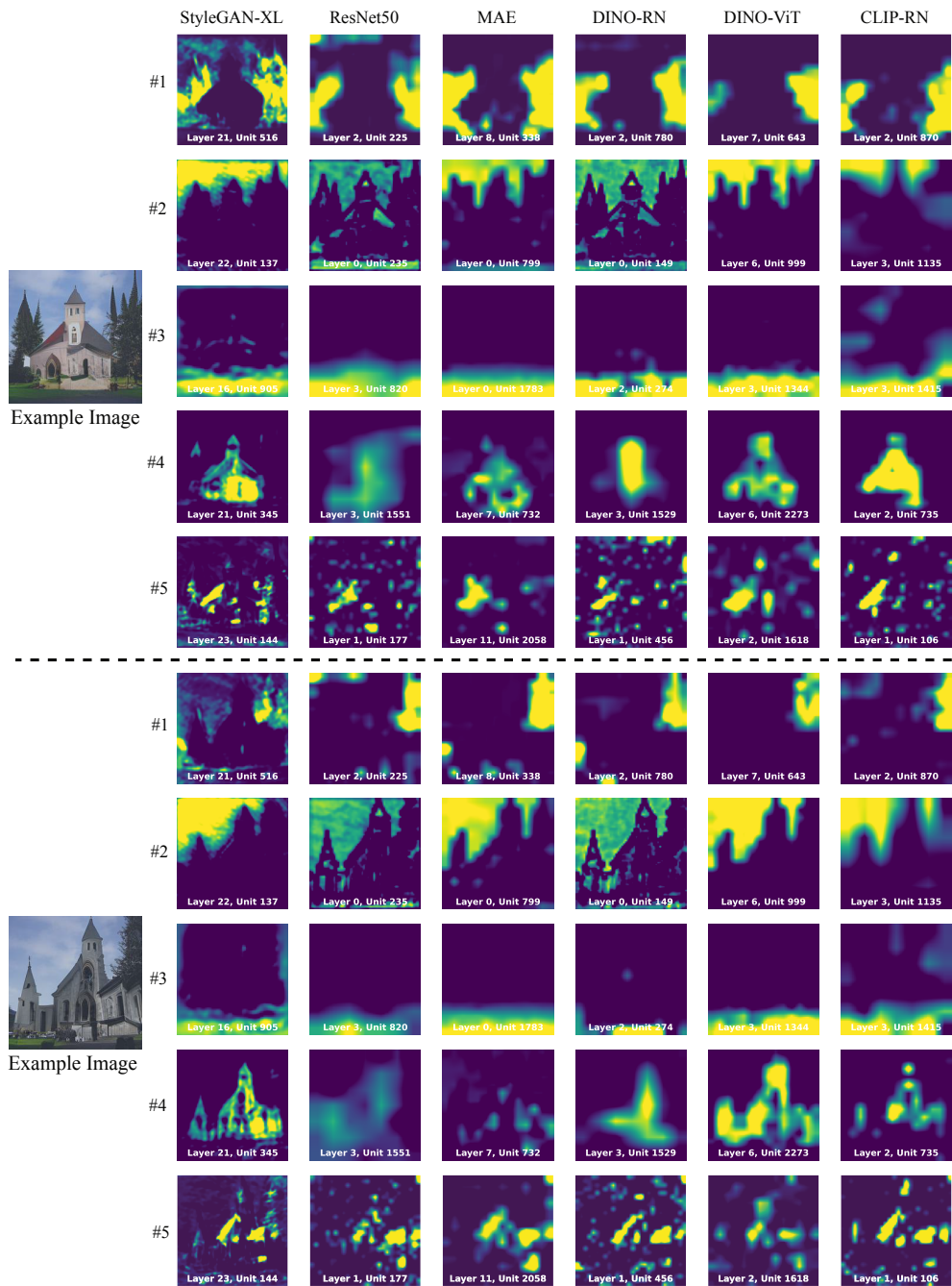
Figure 11: Rosetta Neuron Dictionary for LSUN-horses (cont.)

Figure 12: Rosetta Neuron Dictionary. A sample from the dictionary curated for the ImageNet class "Church". The figure presents 5 emergent concepts demonstrated in 2 example images.
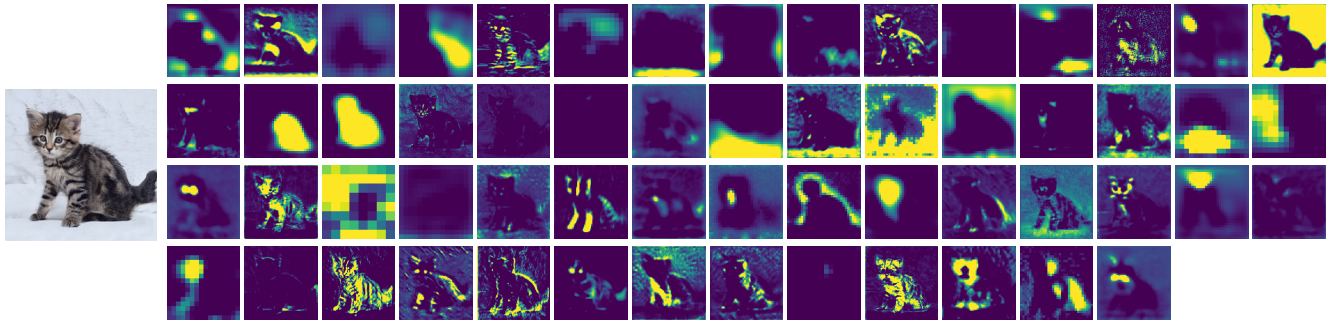
Figure 13: **All the concepts for LSUN-cats.** Shown for one StyleGAN2 generated image.
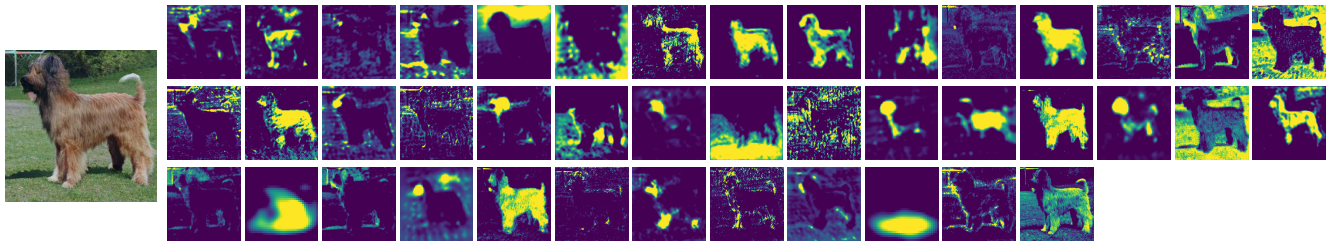

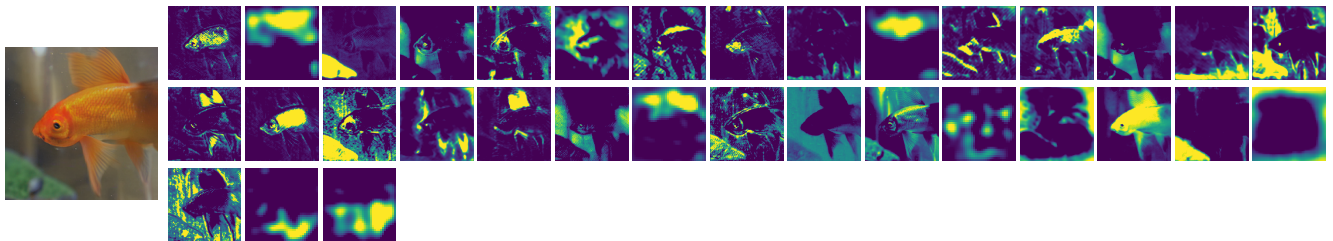Figure 14: **All the concepts for ImageNet class "Briard".** Shown on one StyleGAN-XL generated image.

Figure 15: **All the concepts for ImageNet class "Goldfish".** Shown on one StyleGAN-XL generated image.
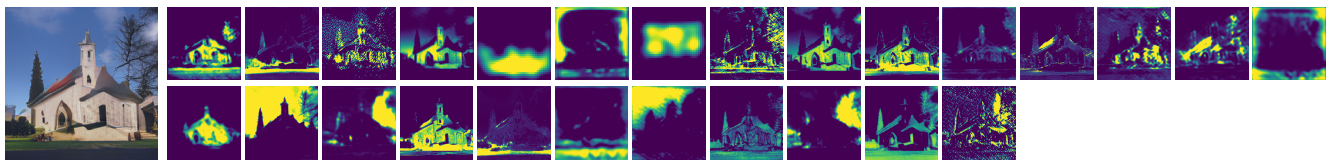

Figure 16: **All the concepts for ImageNet class "Church".** Shown on one StyleGAN-XL generated image.
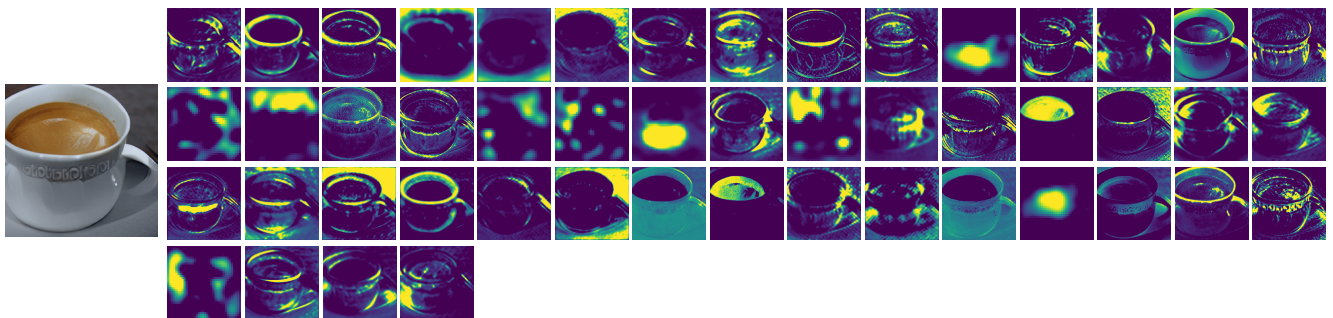

Figure 17: **All the concepts for ImageNet class "Espresso".** Shown on one StyleGAN-XL generated image.

Figure 18: Additional out-of-distribution and cross-class inversions. We show out-of-distribution image inversions done by Rosetta Neurons guidance for StyleGAN2 model, trained on LSUN cats (left 3 images) and LSUN horses (right 3 images).


Figure 19: Dog-to-cat cross-class inversions. Using Rosetta Neurons guidance for StyleGAN2 model, trained on LSUN cats.

Input Image	Zoom In	Shift	Copy & Paste

Figure 20: Additional examples of Rosetta Neurons guided editing. We show examples using BigGAN and its matches to CLIP-RN.

Figure 21: Additional Single Rosetta Neurons Edits. By decreasing (two left image pairs) or increasing (two right image pairs) the values of specific manually chosen Rosetta Neurons before the latent optimization process, we can remove or add elements to the image. In this figure, we demonstrate (left to right): Removing lava eruptions, removing trees, adding Crema to an Espresso, and adding a dog's tongue. For the leftmost example, we also provide the complete list of Rosetta Neurons visualizations. The chosen concept is marked with a red frame.
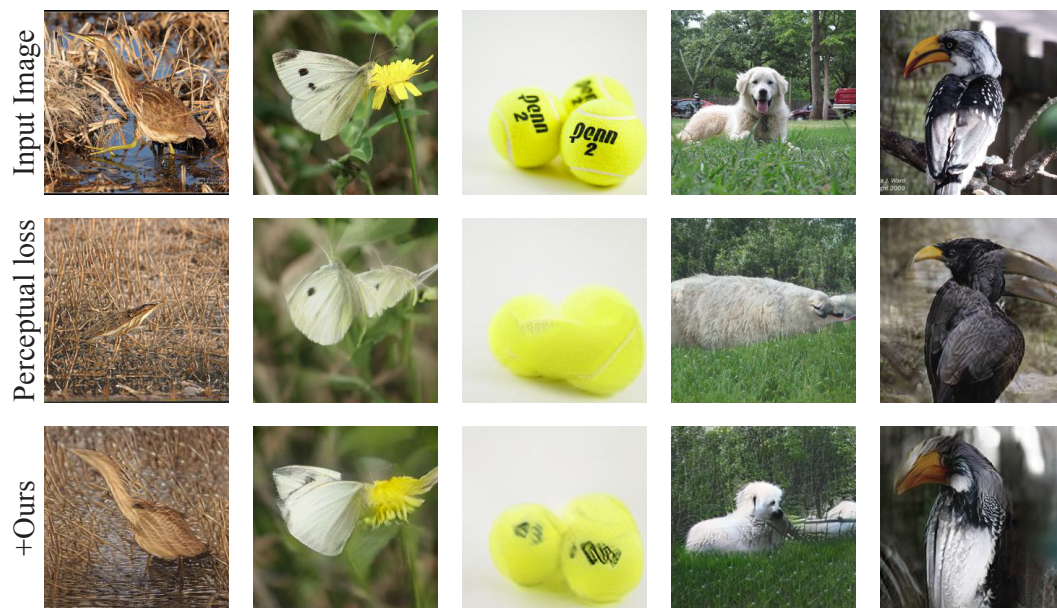
Figure 22: Additional image inversions for StyleGAN-XL. We compare using perceptual loss (second row) to perceptual loss with additional guidance from the Rosetta Neurons (third row).

Figure 23: High Resolution single Rosetta Neuron Edits We provide additional examples, complementary to Fig. 9, but with higher resolution. We conduct matching between a StyleGAN3 trained on 1024×1024 FFHQ images and DINO-ViT with 1000 images, which takes $2700s$. We then apply standard PTI [26] to a real high-res (1024×1024) image (160s). Finally, we perform our editing which takes 18.4s (Zoom-in possible).