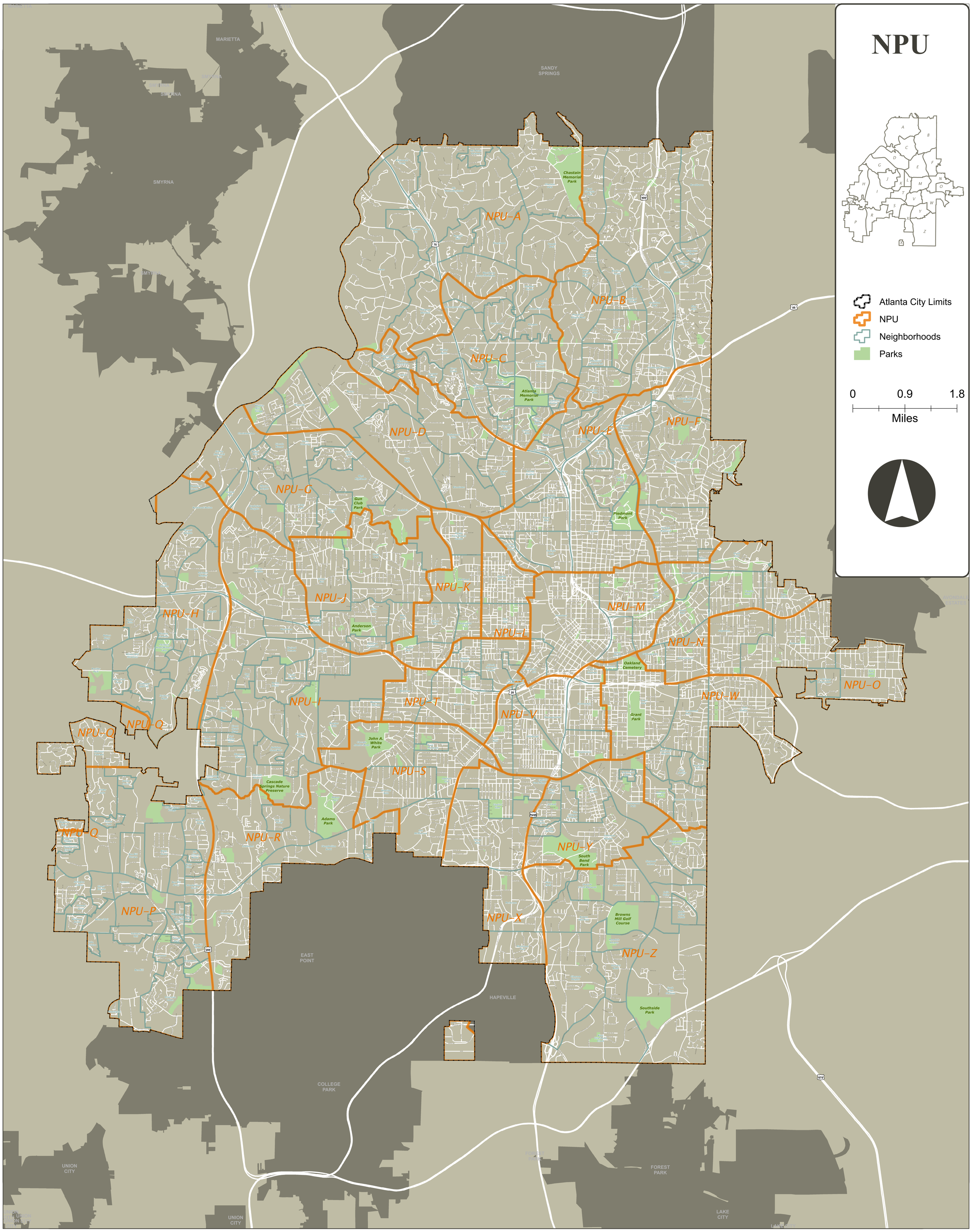NEIGHBORHOOD AND NPU MAP