

Accessibility Report

Color Palette Analysis & Optimization

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CSS File: cm-vars.css

Executive Summary

Metric	Value	Assessment
Total Color Pairs	2	Processed
Improved Accessibility	1/2	Enhanced
Average Delta E	2.84	Good
Brand Preservation	50.0%	Medium

Detailed Color Analysis

Color Pair 1 - Normal Text

Property	Original	Accessible	Improvement
Text Color	#ff0000	#e80000	
Background Color	#ffffff	#ffffff	
Contrast Ratio	4.00	4.74	+0.74
WCAG Level	FAIL	AA	✓
Delta E (Brand Impact)	-	4.94	Fair
CSS Variables	--brand-red-text --brand-white-bg		

Color Pair 2 - Large Text

Property	Original	Accessible	Improvement
Text Color	#0064c8	#0062c6	
Background Color	#f0f0f0	#f0f0f0	

Contrast Ratio	5.04	5.17	+0.13
WCAG Level	AAA	AAA	=
Delta E (Brand Impact)	-	0.73	Excellent
CSS Variables	--text-secondary --brand-light-bg		

Recommendations

- Consider reviewing 1 color pairs with high brand impact ($\Delta E > 3.0$)
- Excellent! 1 color pairs achieved better accessibility levels
- Test the new color scheme with actual users for usability validation
- Consider implementing these changes gradually in your design system
- Monitor brand perception after implementing accessibility improvements

Technical Implementation

- Color difference calculated using CIE Delta E 2000 formula
- Contrast ratios calculated according to WCAG 2.1 standards
- OKLCH color space used for perceptually uniform adjustments
- Brand preservation prioritized with $\Delta E \leq 2.0$ target
- Hierarchical adjustment: Lightness \rightarrow Chroma \rightarrow Hue