

# Web Performance Optimization Report

## Test Tool

- Google PageSpeed Insights (Lab Emulated Mobile)

## Baseline Performance (Before Optimization)

Metric	Value
LCP (Largest Contentful Paint)	11.3 s
INP / TBT (Interaction to Next Paint / Total Blocking Time)	740 ms
CLS (Cumulative Layout Shift)	0.274

## Optimization Performed

- Image Format Adjustment**
  - Converted one large image from **JPEG** → **JPG** (no change in format type family, only minor compression difference).
- Video Adjustment**
  - The video was re-encoded from MP4 → MP4 with a slightly lower bitrate.
  - This reduced the file size from 44 MB to 24 MB (≈ 45% size reduction) while maintaining visual quality.
- Lazy Loading for Video**
  - Applied **loading="lazy"** to delay video load until in the viewport, reducing initial load weight.

## Performance After Optimization

Metric	Value
LCP	8.9 s (↓ 2.4 s improvement)
INP / TBT	0 ms (↓ 740 ms improvement)
CLS	0.311 (slight increase of 0.037)