ASCE 175th Logo Projection Guidance

Written for teams ranging from "one projector and a laptop" to professional projection-mapping vendors, this guide explains how to safely plan and execute a clear, bright, photo-worthy projection of ASCE's 175th anniversary logo onto an outdoor structure. This guide is **not** a substitute for local permitting, electrical codes, or owner approvals. When in doubt, use a qualified projection-mapping company.

1) Permission, permitting, and safety

Before you plan gear or content, confirm that you are allowed to project in the chosen location. Treat projection like an event plus temporary signage.

Property rights

- Get explicit written permission from the structure/property owner and have a record of it on-site.
- If the infrastructure is public, you may still need permission from the managing agency (city, DOT, parks department, etc.).

Local regulations

- Some municipalities classify projection as advertising/signage and require permits—especially in high-traffic, historic, or downtown zones.
- Check noise and event-time rules if you plan any audio or a crowd-facing "show."

Safety standards

- Place the projector and any stands behind a barrier or away from pedestrian paths; manage cables with ramps or taped runs.
- Never aim projections where they could distract drivers (near roadways, intersections, or reflective traffic signs).
- Secure equipment against wind and vibration; if using a lift, follow all lift safety protocols.
- Have a weather plan (rain, gusts, extreme cold/heat).

2) Choosing the right structure

Projections look best on relatively light, matte surfaces with minimal texture. You can still project onto textured or darker surfaces, but you'll need more brightness and more carefully designed content.

Good candidates

- Light-colored building facades with large uninterrupted areas
- Concrete walls on dams, floodwalls, retaining walls (with permission)
- Bridge abutments/pylons, towers, or museum/civic buildings

Challenging candidates (still possible)

- Glass-heavy facades (reflections + interior lighting washout)
- Very dark brick/stone or heavy ornamentation
- Locations with strong street lighting or vehicle headlights

3) How to pick a projector: brightness and optics

Outdoor projection typically needs much more brightness than indoor projection. Brightness is measured in lumens.

Rule-of-thumb lumen ranges

- Small/medium surface (20-40 feet wide) in full darkness: 7,000–12,000 lumens
- Medium/large surface (40-80 feet wide) in full darkness: 12,000–20,000+ lumens
- Any surface with meaningful ambient light (streetlights, lit windows): add 50–100% more lumens

Lens choice matters as much as lumens. The two common terms are:

- Long-throw: projector is far away (often safer and less intrusive).
- Short-throw: projector is closer (useful in tight spaces but can be harder to hide and more sensitive to people walking through the beam).

4) Content design that works on real structures

Keep it readable

- Plan for windows/columns: keep key text and logos away from architectural breaks.
- Assume the audience sees it from across the street and through a phone camera.

Match the structure (basic "mapping")

Full 3D mapping is used when you want graphics to wrap around features, animate across depth, or precisely fit complex geometry (Example). However, you don't need full 3D mapping for a strong result. A simple approach that works well:

1. Take a straight-on reference photo from your planned projector position.
2. Design your layout on top of that photo.
3. On-site, align the projection to match the photo.

Make sure your content matches your projector's aspect ratio

If it doesn't match, you'll get stretching or black bars. You can download 175th shield logo graphics here. Color options include black, white, or blue. Blue is preferred; however, please select the color option that works best against your projection surface.

- 16:9 → 1920×1080 px, 3840×2160 px
- 16:10 → 1920×1200 px
- Custom mapping → depends on your projection mapping setup

5) Site scouting checklist

- Do this at night!
- Stand where the projector could go and confirm safe access, level ground, and a clear line of sight.
- Check ambient light sources: streetlights, billboards, vehicle traffic, storefront lighting.
- Identify obstacles: trees, poles, signs, fences, parked vehicles, pedestrians.
- Confirm power options: nearby outlets (with permission) or generator placement (with a fuel plan).
- Pick camera spot(s): where you'll capture the best photo/video angle.

6) Equipment and logistics

Minimum viable setup (simple projection)

- Projector (ideally 7,000+ lumens for outdoors) with a correct lens for the throw distance
- Laptop with playback software (a media player is fine for static images)
- Tripod/stand or sturdy platform with safety straps/sandbags, if necessary
- Power: dedicated circuit or quiet generator with proper grounding
- Cables/adapters (HDMI/SDI), spare power cords, gaffer tape/cable ramps
- Small tool kit
- Rain covers

Enhanced setup (recommended)

- Projection-mapping software (e.g., MadMapper, Resolume, TouchDesigner, HeavyM, etc.)
- Backups: spare lamp, backup projector, second smaller projector, etc.
- Signage/barriers to keep pedestrians clear of the projection

7) Step-by-step setup workflow

1. Arrive early (before dark) to stage gear and confirm power and safety layout.
2. Place the projector and lock it down (sandbags/straps). Keep it out of walkways.
3. Project a test grid and square/level the image.
4. Align content: start with your logo/title, then adjust size/keystone/mapping points as needed.
5. Do a camera check: confirm it looks good through a phone camera and a dedicated camera.
6. Run for 5-15 minutes to confirm stability (focus drift, wind shake, thermal shutdown).
7. Capture photos/video, then pack down safely. Leave no trace.

9) Troubleshooting quick guide

Projection looks dim

- Wait for full darkness; reduce ambient light if possible.
- Move closer (if safe) or use a tighter lens; increase projector brightness mode.
- Increase contrast in content; avoid mid-tone colors.

Image won’t align/looks skewed

- Reposition the projector to be more square to the surface (best fix).
- Use mapping points/warp tools instead of extreme keystone.
- Confirm the surface is planar (flat) where your content sits.

Focus drifts over time

- Let the projector warm up for 10-15 minutes and refocus.
- If it's very cold, protect the projector from wind and rapid temperature changes.