



Figure 1: Morris Louis, *Beta Upsilon*, 1960, Magna on canvas, 102½ x 243½ inches, purchased from the Vincent Melzac Collection through the Smithsonian Institution Collections Acquisition Program, accession number 1980.5.6

The raw canvases of Morris Louis and Gene Davis: Structural Treatments using Sailmaking Techniques



Figure 2: Gene Davis, *Dr. Peppercorn*, 1967, acrylic on canvas, 117 x 224 inches, SAAM Bequest of Florence Coulson Davis, accession number 1996.104.5

Introduction:

Washington Color School painters Morris Louis (1912–1962) and Gene Davis (1920–1985) are part of a collective of abstract expressionists whose oeuvre is characterized by large-scale compositions, which feature vibrant paint colors and generous swaths of exposed canvas. Louis is known for his Unfurled series (1960–1961), which includes *Beta Upsilon*, 1960, Magna on canvas, 102½ x 243½ inches. Davis is known for his Stripes series (1958–1985), which includes *Dr. Peppercorn*, 1967, acrylic on canvas, 117 x 224 inches. These two unprimed canvases are large-scale and posed notable challenges when the rolled paintings had to be re-stretched for museum display.

Background:

Raw canvas is especially vulnerable to staining from accumulated surface grime, fabric oxidation, or interventive conservation treatment (such as exposure to consolidants or lining adhesives). Taking these concerns into account, a non-traditional edge-lining method was sought to provide adequate strength and stability for the tacking margins of *Beta Upsilon* and *Dr. Peppercorn*. The team decided to avoid machine sewing, since this would allow for more accurate placement of the stitches and permit the use of a heavier-weight thread. After testing various hand-sewing techniques, a customized sequence based on stitches used in sailmaking was generated to provide the necessary support. This sequence provides the strength of a zig-zag stitch, a running stitch, and a back stitch; without having to do the individual methods independent of one another.

Both the *Beta Upsilon* and *Dr. Peppercorn* conservation treatments involved a team of people. Therefore, achieving consistency in the stitch height and length was another essential component to take under consideration. Indication markers were measured and drawn onto the edge-lining fabric to provide guidelines for the stitch height and maintain a straight edge.

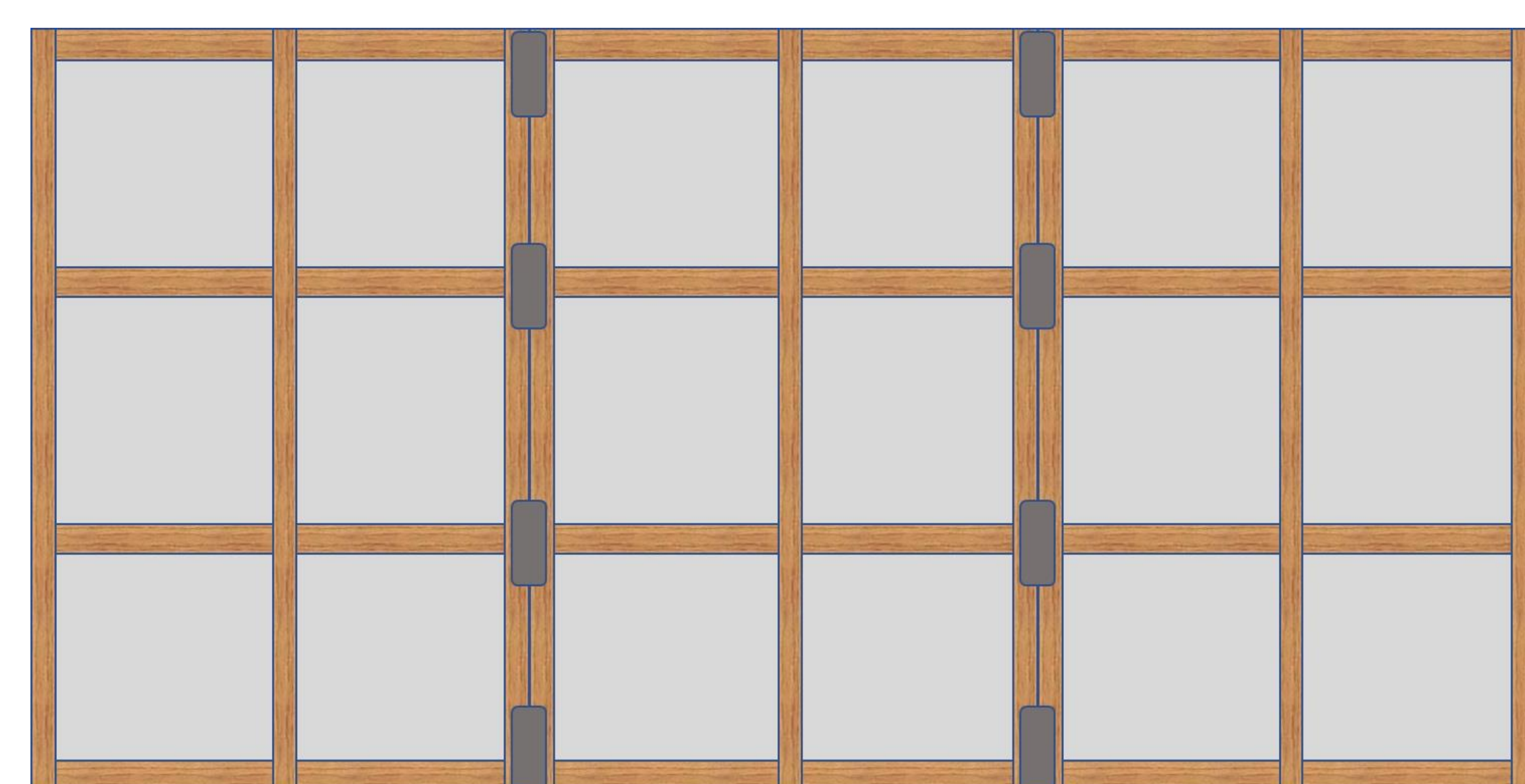


Figure 3: View from the underside of the tabletop. Overall dimensions are 144" x 288". The structure was constructed from three 144" x 96" wooden frames, joined by metal plates. Collapsible tables were staged underneath to support the wooden frame, since this tabletop design does not include "legs". Once the tabletop was setup, the topside work surface was prepared by adding Foamcore boards (attached with screws) and blotting paper (attached with pressure-sensitive tape).

Materials:

Edge lining: Mark-B-Gone™ Marking Pen (water-soluble ink), ½"-wide double-sided basting tape (acrylic adhesive), tapestry needles, cotton thread (40wt), cotton duck canvas

Oversize tabletop work surface: Collapsible folding tables, ½"-thick Foamcore boards, Phillips-head screws, cotton blotting paper (30pt)

Hand-sewing method:

Prologue

Three sailmaking stitches are incorporated into this sequence: the zig-zag stitch, running stitch, and back stitch. The zig-zag is achieved from two separate half cross-stitches; the first thread creates a row of perpendicular diagonal stitches and the second thread creates a row of diagonal stitches in the opposite direction. The running stitch is a line of even-length stitches that do not overlap, creating a "dashed" pattern. The back stitch is a variation of the running stitch; after each forward stitch, the needle and thread doubles back on itself and creates a continuous "solid line" pattern.

Prepare the Materials

Position the edge-lining fabric just below the folded edge of the canvas. Draw two parallel blue lines (¼" apart) on the edge-lining fabric using Mark-B-Gone™.

First Thread: begin the stitch

1. Start with a double knot on the edge lining side. Send the needle through the two fabrics, starting at the bottom blue line, and exit the thread on the artwork tacking margin. Make a right straight stitch (–) along the bottom blue line and exit the needle through the edge lining.
2. Add a right diagonal stitch (/) to the top blue line and exit the needle through the tacking margin.
3. Add a right straight stitch (–) along the top blue line and exit the needle through the edge lining.
4. Add a left diagonal stitch (\) to the bottom blue line, so the thread runs parallel to the previous stitch. Repeat steps 1-4 until reaching the end of the thread length; the second double knot should be finished on the edge lining side.

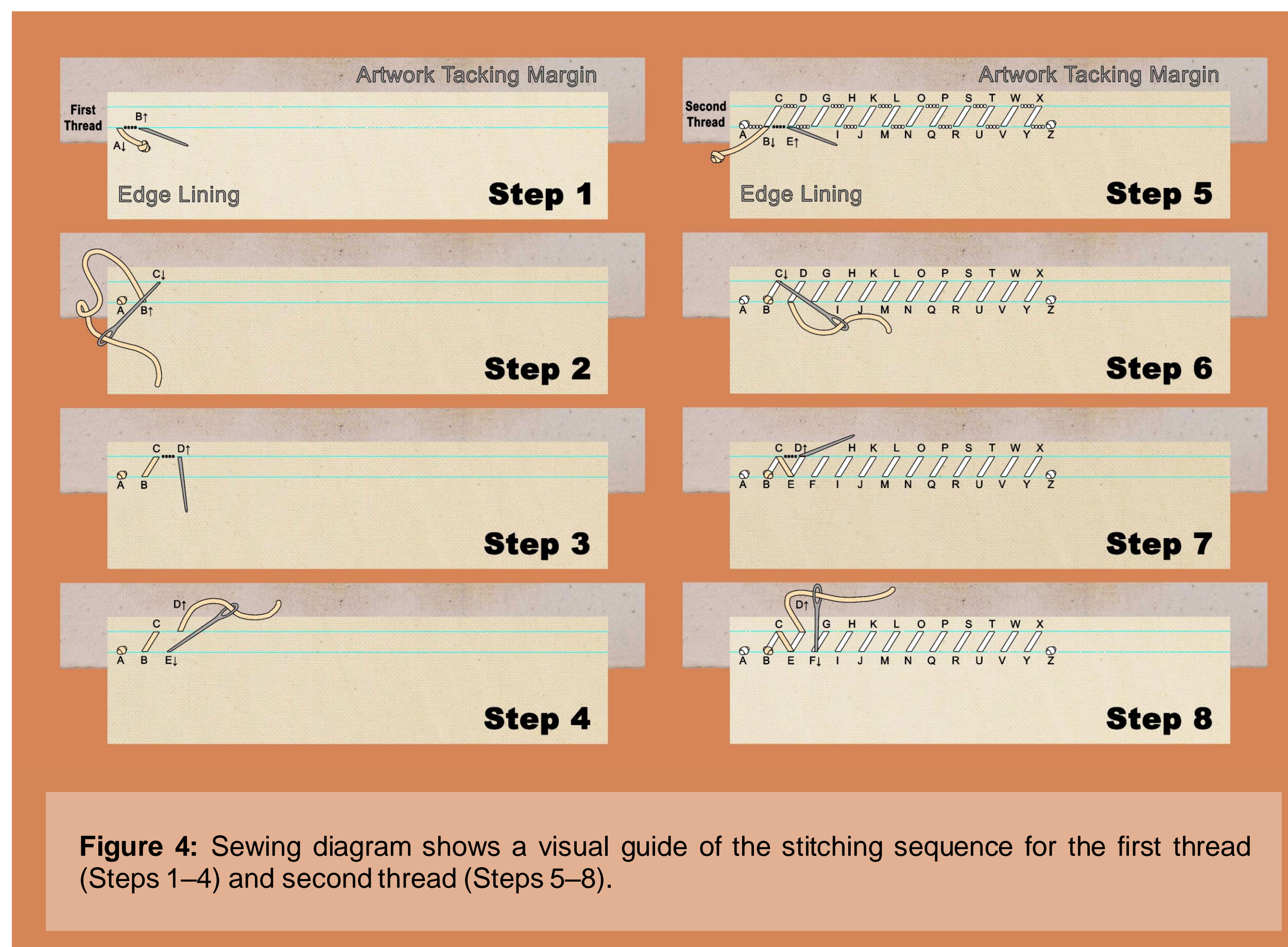


Figure 4: Sewing diagram shows a visual guide of the stitching sequence for the first thread (Steps 1–4) and second thread (Steps 5–8).

Second Thread: complete the stitch

5. Start with a double knot on the edge lining side. Send the needle through the fabrics, at the bottom blue line, and exit the thread on the artwork tacking margin. Make a right straight stitch (–) along the bottom blue line and exit the needle through the edge lining.
6. Make a left diagonal stitch (\) to the top blue line and exit the needle through the tacking margin.
7. Add a right straight stitch (–) along the top blue line and exit the needle through the edge lining.
8. Add a right diagonal stitch (/) to the bottom blue line, so the thread runs parallel to the previous diagonal stitch. Repeat steps 5-8 until reaching the end of the thread length; the final double knot should be finished on the edge lining side.

Handout/flyer for the hand-sewing instructions:

A digital handout of these stitching instructions is available for download. Open the camera app on your phone to scan the QR code and access this digital resource.



Conclusion:

Hand-stitched edge-linings were successfully incorporated in the conservation treatments for *Beta Upsilon* and *Dr. Peppercorn*. This technique can be adapted to treatments of other modern and contemporary artworks with unprimed cotton duck canvases. The method is especially useful if the canvas has structural deficiencies, such as extensive staple holes or insufficient grip for the fabric (i.e. the tacking margin was trimmed after a previous stretching).

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Figure 5A: During treatment in 2016, with Amber Kerr, Laura Raven, and Aimee Hawker stitching edge linings on Gene Davis, *Dr. Peppercorn* (view of painting reverse).

Figure 5B: During treatment in 2022, with Brianna Weakley and Josephine Ren stitching edge linings on Morris Louis, *Beta Upsilon* (view of painting reverse).

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