

DESIGN TEAM SERVICES

The Planar Design Team offers professional services including custom LED video wall design, mounting frame design, power and signal flow diagrams, and architectural drawing review. The Design Team can also provide budgetary estimates and quotations for these products and services. Each inquiry will be addressed on a case-by-case basis following the General Services Outline below.

WHEN TO ENGAGE THE DESIGN TEAM

- When requesting services that exceed Planar's typical scope of work
- When requesting LED displays that are not on the Planar USD Price List [*From Leyard China, Linso, GLUX, Lighthouse, or third-party factories*]
- When requesting mounting frames that are not covered by stock part numbers [*SourceOne, Premier, AMD, Peerless, RP Visuals, Draper, or other fabricators*]
- When a design, estimate or quote needs to be provided for a new custom solution

INITIATING DESIGN SERVICES

1. A Planar Custom Work Request Form must be completed and submitted to the Design Team. This is a mandatory first step. Send to: DesignTeam@planar.com.
2. The Design Team will confirm receipt of the work request, log it, assign it, schedule it and track it through to completion.
3. If design and/or documentation work is requested, the Design Team will provide a quotation for these services along with an estimated completion date.
4. The Planar Account Manager will issue a quote to the Reseller Partner or Enduser based on the pricing provided by the Design Team.
5. Once Planar receives the Purchase Order, design work will begin. Typical time to completion is 1-2 weeks.
6. The Planar Account Manager will coordinate any required meetings or information exchange between the Design Team and the Reseller Partner or Enduser.

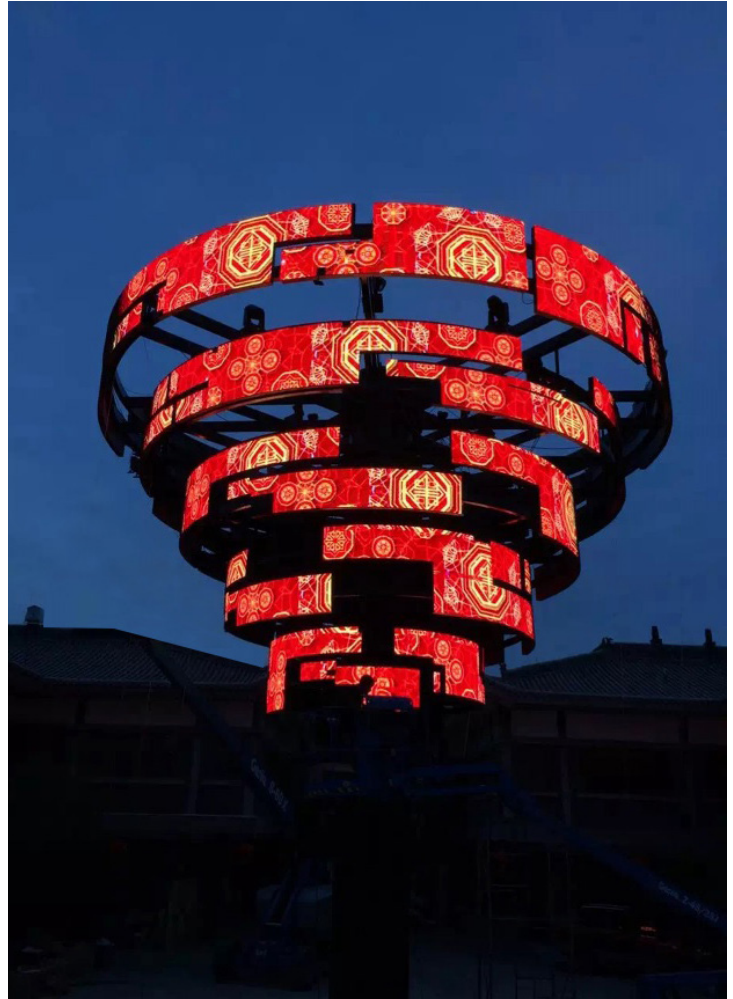
GENERAL SERVICES OUTLINE

- **Architectural Drawing Review:** \$75 per hour for review of architectural drawings for conformity. The Design Team will estimate the number of hours required after receipt of the drawings.
- **Display & Frame Layout Drawings:** \$125 per hour to produce layout drawings. The Design Team will estimate the number of hours based on the scope of work requested.
- **Power Drawings:** \$175 per unique LED display and \$75 for each additional similar display.
- **Signal Drawings:** \$225 per unique LED display and \$100 for each additional similar display.
- **Mechanical Engineering:** \$250 per hour for mechanical design of custom mounting frames, brackets, structures or other related components.
- **3D Renderings:** \$300 for the first rendering, and \$200 for each additional rendering. These will be 3D colored architectural renderings in perspective, elevation and other views.

Design service fees may be credited back to the purchaser after Planar receives a purchase order for the video wall associated with the design service.

All prices assume a lead-time of two weeks for completion of design work, or longer if deemed necessary based on the scope of work. The lead-time can be expedited for a 50% up-charge, subject to Design Team availability.

Minor drawing revisions will be made within one week of the request and will not incur additional charges. Numerous or major drawing revisions or a change to the scope of work will result in additional charges.



DETAILED SERVICE OUTLINE

Power Diagrams

The Design Team will prepare power drawings for individual or multiple displays and will detail the following information:

- Maximum and average power consumption of the display(s) and auxiliary equipment
- Recommended number and size of required circuits*
- Individual circuit loading information based on recommended sizes
- Power cable routing between individual LED cabinets
- Maximum and typical BTU-per-hour data
- Recommended NEMA outlet and plug types (upon request)
- Recommended NEMA outlet locations (upon request)
- Any relevant LED product-specific power information

**The integrator must specify the voltage that will be provided. If this data is not provided, the Design Team will assume 110V to complete the work. Any variation from this assumption after the drawings are completed will result in additional charges.*

Signal Flow Diagrams

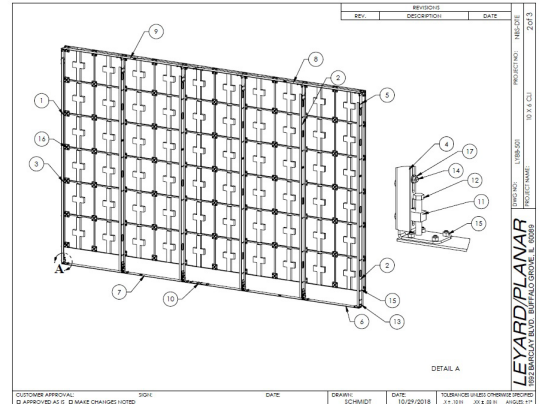
The Design Team will prepare signal flow diagrams for individual or multiple displays and will detail the following information:

- Overall pixel counts
- Type and required quantities of auxiliary equipment provided by Planar
- Type and required quantities of signal inputs into the display
- Signal cable routing between individual LED cabinets
- Any relevant LED product-specific signal information

Architectural Drawing Review

The Design Team will review architectural design packages to ensure the details conform to Planar expectations. The following details will be evaluated:

- The design is within Planar standards (curved or faceted displays, LED orientation, mounting if provided by others, etc.)
- The design allows adequate space for installation and service
- The design supports the proposed mounting frame solution
- The design supports proper ventilation of the LED cabinets
- The design supports proper ventilation of the LED cabinets
- The trim or cladding design does not risk damage to the LEDs during installation or service
- Identify any challenges that might prevent proper installation and service of the LED displays



Screen & Frame Layout Drawings

The Design Team will produce drawings that accurately dimension the proposed LED display(s) within the architectural space provided. These 2D CAD drawings will contain the following information:

- Location of the LED display(s) and frame in plan, front and side elevations within an existing architectural drawing. Provided in .dwg or .stp format.
- Relevant information regarding clearances for installation, service and HVAC
- Constraints unique to each LED product, including:
 1. Maximum radius for concave or convex curve or faceted cabinets
 2. 90-degree or other corners and associated gap dimensions
 3. Specific cable opening requirements
 4. Product-specific or mount-specific electrical outlet locations, if necessary
- Special structural framing requirements (hanging, freestanding, moving, etc.)

If you have any questions, please contact: DesignTeam@planar.com