

SECTION 110660 - LED DISPLAY SYSTEMS SCHEDULE OF DISPLAYS

PART 1 - GENERAL

1.1 TERMS

- A. Unique Identification
 - 1. DESC – Display reference name
- B. Dimensions
 - 1. HT x WD – Height and width of the display.
 - 2. TOL - Tolerance, expressed as a percentage of Height or Width (or pixels). Allowable variation to base size.
- C. TYPE – LED type
- D. MIN RES - Absolute Minimum Physical Pixel Resolution expressed in mm (higher resolution products are implicitly allowed; within the available power limitations).
- E. USE - Purpose of display
- F. POS INFO - Physical location of display.
- G. NOTES - Special notes

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SCHEDULE OF

DISPLAYS

DESC	HT x WD	TOL	TYPE	Min RES	Use	Pos Info	Notes
NE Low Head Height Entry	13' - 6" x 24'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Northeast Main Concourse	REF. A434-03.2 FOR TYPICAL APPLICATION
SE Low Head Height Entry	13' - 6" x 24'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southeast Main Concourse	REF. A434-03.2 FOR TYPICAL APPLICATION
NW Low Head Height Entry	13' - 6" x 24'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Northwest Main Concourse	REF. A434-03.2 FOR TYPICAL APPLICATION
SW Low Head Height Entry	13' - 6" x 24'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southwest Main Concourse	REF. A434-03.2
SE Biergarten	15' x 23'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southeast Main Concourse	REF AV-503
SW Biergarten	15' x 23'	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southwest Main Concourse	REF AV-503
SE Plaza	1,978 WITH FRAME	2%	SMD	10mm	Live video, animations, advertising, scoring and game in progress information	Southeast Main Concourse Plaza Facing	REF. A434-03.1 FOR TYPICAL APPLICATION

DESC	HT x WD	TOL	TYPE	Min RES	Use	Pos Info	Notes
SW Plaza	1,978 WITH FRAME	2%	SMD	10mm	Live video, animations, advertising, scoring and game in progress information	Southwest Main Concourse Plaza Facing	REF. A434-03.1
NE Upper Concourse Quad A	13' - 4" x 34' - 9"	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Northeast Upper Concourse	REF. A464-03
SE Upper Concourse Quad D	13' - 4" x 34' - 9"	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southeast Upper Concourse	REF. A464-03
NW Upper Concourse Quad B	13' - 4" x 34' - 9"	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Northwest Upper Concourse	REF. A464-03
SW Upper Concourse Quad A	13' - 4" x 34' - 9"	2%	SMD	4mm	Live video, animations, advertising, scoring and game in progress information	Southwest Upper Concourse	REF. A464-03
NE Upper Concourse Quad A Bar Header	3' x 37'-3"	2%	SMD	4MM	Animations, advertising, scoring and game in progress information	Northeast Upper Concourse Deck	REF. A464-01
SE Upper Concourse Quad D Bar Header	3' x 37'-3"	2%	SMD	4MM	Animations, advertising, scoring and game in progress information	Southeast Upper Concourse Deck	REF. A464-04
NW Upper Concourse Quad B Bar Header	3' x 37'-3"	2%	SMD	4MM	Animations, advertising, scoring and game in progress information	Northwest Upper Concourse Deck	REF. A464-01

DESC	HT x WD	TOL	TYPE	Min RES	Use	Pos Info	Notes
SW Upper Concourse Quad C Bar Header	3 x 37'-3"	2%	SMD	4MM	Animations, advertising, scoring and game in progress information	Southwest Upper Concourse Deck	REF. A462-01
North End Zone Cabana Ribbon	3' x 253'	2%	SMD	4MM	Animations, advertising, scoring and game in progress information	North Cabana Level	REF AV-502
South End Zone East Main Concourse	6' – 9" x 12'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	South End Zone East Main Concourse	REF. AV502
South End Zone West Main Concourse	6' – 9" x 12'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	South End Zone West Main Concourse	REF. AV501.4
South Field Club East	8' – 5" x 30'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	South End Zone Field Club	REF. AV501.3
South Field Club West	8' – 5" x 30'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	South End Zone Field Club	REF. AV501.3
East Field Club North	4' – 2" x 15'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	East Field Club	REF. A714.4
East Field Club South	4' – 2" x 15'	2%	SMD	2MM	Live video, animations, advertising, scoring and game in progress information	East Field Club	REF. A714.4

DESC	HT x WD	TOL	TYPE	Min RES	Use	Pos Info	Notes
West Field Club North	4' – 2" x 15'	2%	SMD	2MM	Live Video, Animations, advertising, scoring, GIP, information	West Field Club	REF. A714.4
West Field Club South	4' – 2" x 15'	2%	SMD	2MM	Live Video, Animations, advertising, scoring, GIP, information	West Field Club	REF. A714.4
Northeast Lower West Club	6' – 9" x 12'	2%	SMD	2MM	Live Video, Animations, advertising, scoring, GIP, information	Lower West Club	REF. A722.3
Northwest Lower West Club(N)	6' – 9" x 12'	2%	SMD	2MM	Live Video, Animations, advertising, scoring, GIP, information	Lower West Club	REF. A722.3
Upper Club Ribbon Sector "A"	2' - 6" x 99' – 6"	2%	SMD	10MM	Animations, Advertising, Scoring, GIP, Info	Upper Club Deck West SRO	REF. AV144.A
Upper Club Ribbon Sector "B"	2' - 6" x 99' – 6"	2%	SMD	10MM	Animations, Advertising, Scoring, GIP, Info	Upper Club Deck West SRO	REF. AV144.B
Upper Club Ribbon Sector "C"	2' - 6" x 99' – 6"	2%	SMD	10MM	Animations, Advertising, Scoring, GIP, Info	Upper Club Deck East SRO	REF. AV144.C
Upper Club Ribbon Sector "D"	2' - 6" x 99' – 6"	2%	SMD	10MM	Animations, Advertising, Scoring, GIP, Info	Upper Club Deck East SRO	REF. AV144.D
Upper Club North End Zone Ribbon	3' x 253' – 6"	2%	SMD	10MM	Animations, Advertising, Scoring, GIP, Info	Upper Club Deck North End Zone	REF. AV144.B/C

1.3 BASE WARRANTY SERVICES AND OPTIONS

- H. Service Contract for parts only for Years 3 through 10 for the scope of work covered under this specification. Pricing shall remain in effect until the end of the warranty period or until the Owner accepts or declines this service contract whichever occurs first.
1. Requirements of service contract.
 - a. All costs for US factory parts repair or replacement shall be included.
 - b. Following expiration of initial warranty period, owner will remove failed components from display (scoring or video) and ship, at owner's expense, to US repair depot.
 - c. Installer (or installer's Supplier) shall repair or replace components and ship to owner, at installer's expense using next-day delivery for Tuesday to Saturday deliveries at project location. Installer shall ship repair parts, within 24 hours of request of owner, prior to their receipt of failed part.
 - d. Repair and return shipment shall be in a timely fashion to maintain display operation.
 - e. If any system or component experiences a failure rate of 5% or more, Display Installer shall dispatch to the site, at Display Installer's cost, factory technicians to assess cause, and means of returning the system to full operation.
 - f. Provide lump sum cost of years indicating if discounts are given for selecting some or all years.
 - 1) Provide annual costs for years 3 through 10.
 - a) Option 11 63 10 – A3: Year 3 costs.
 - b) Option 11 63 10 – A4: Year 4 costs.
 - c) Option 11 63 10 – A5: Year 5 costs.
 - d) Option 11 63 10 – A6: Year 6 costs.
 - e) Option 11 63 10 – A7: Year 7 costs.
 - f) Option 11 63 10 – A8: Year 8 costs.
 - g) Option 11 63 10 – A9: Year 9 costs.
 - h) Option 11 63 10 – A10: Year 10 costs.

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- I. Service Contract for parts and on-site labor for the scope of work covered under this specification for Years 3 through 10. Pricing shall remain in effect until the end of the warranty period or until the Owner accepts or declines this service contract whichever occurs first.
 - 1. Requirements of service contract.
 - a. All costs for US factory parts repair or replacement shall be included.
 - b. Following expiration of initial warranty period, Installer will dispatch service representative to site to remove failed components from display (scoring or video) and ship, at installer's expense, to US repair depot.
 - c. Installer (or installer's Supplier) shall repair or replace components and ship to owner, at installer's expense using next-day delivery for Tuesday to Saturday deliveries at project location. Installer shall ship repair parts, within 24 hours of request of owner, prior to their receipt of failed part.
 - d. Repair and return shipment shall be in a timely fashion to maintain display operation.
 - e. If any system or component experiences a failure rate of 5% or more, Display Installer shall dispatch to the site, at Display Installer's cost, factory technicians to assess cause, and means of returning the system to full operation.
 - f. Provide lump sum cost of years indicating if discounts are given for selecting some or all years.
 - 1) Provide annual costs for years 3 through 10.
 - a) Option 11 63 10 – B3: Year 3 costs.
 - b) Option 11 63 10 – B4: Year 4 costs.
 - c) Option 11 63 10 – B5: Year 5 costs.
 - d) Option 11 63 10 – B6: Year 6 costs.
 - e) Option 11 63 10 – B7: Year 7 costs.
 - f) Option 11 63 10 – B8: Year 8 costs.
 - g) Option 11 63 10 – B9: Year 9 costs.
 - h) Option 11 63 10 – B10: Year 10 costs.
- J. Option 11 63 10 – C. Provide incremental cost to decrease physical pixel pitch. Include all associated costs including any increase to CMS, signal or power requirements.

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- K. Cost for annual pre-season "health check". Service to include updating of all software, verification of all control and display functions, repair (from owner spare inventory) of all displays and control equipment. The intent is, to the extent possible, bring the system up to as new operating condition and performance. Provide annual cost, guaranteed for years 3 through 10, including expenses.

1.4 ALTERNATES

DESC	HT x WD	TOL	Min RES	Use	Pos Info
West Field Club Ribbon Board	600 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	West Field Club
West Lower Club Level Ribbon Board	455 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	West Lower Club
West Upper Club Level Ribbon Board	520 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	West Upper Field Club
East Field Club Ribbon Board	600 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	East Field Club
East Lower Club Level Ribbon Board	455 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	East Lower Club
East Upper Club Level Ribbon Board	520 SQFT	2%	10mm	Animations, advertising, scoring and game in progress information	East Upper Field Club

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1.5 VOLUNTARY ALTERNATES

- L. Alternate 110660 - VE# The Owner welcomes voluntary alternates that can improve the performance and functionality of the system or remove cost by deleting a requirement of the specifications that can save the Owner significant cost. Describe alternate and consequences, if any, for functionality, reliability, or performance.

1.2 EXISTING TO REMAIN LED DISPLAYS

DESC	HT x WD	Resolution	Use	
(3) Club Displays	11' x 6.3'	2.5mm	Live Video, animations, advertising, scoring and game in progress information	
Club	9' x 16'	2.5mm	Live Video, animations, advertising, scoring and game in progress information	
Club	11' x 19'	2.5mm	Live Video, animations, advertising, scoring and game in progress information	
Ribbon	3.6' x 36'	13mm	Animations, advertising, scoring and game in progress information	
North Main Displays	60' x 362.34'	13mm	Live Video, animations, advertising, scoring and game in progress information	
South Main Displays	60' x 362.34'	13mm	Live Video, animations, advertising, scoring and game in progress information	

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DESC	HT x WD	Resolution	Use	
South End Zone Upper Ribbon Display	3.6' x 364.82'	15mm	Animations, advertising, scoring and game in progress information	
South End Zone Lower Ribbon Display	3.6' x 295.21'	15mm	Animations, advertising, scoring and game in progress information	
Corner Video Displays	18' x 32.4'	15mm	Live video, animations, advertising, scoring and game in progress information	
Tunnel Ribbon	(2) at 6' x 24'	15mm	Animations, advertising, scoring and game in progress information	
Sideline Ribbon	(2) at 3.6' x 573.63'	15mm	Animations, advertising, scoring and game in progress information	

1.3 PERFORMANCE STANDARDS (PROVIDE FOR EACH NEW DISPLAY)

Base Proposal or Alternate Number: Location:
 Proposer: Model:

Fractional Units (e.g. 18.5 ft.)

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)	Vertical: <input type="text"/> ft <input type="text"/> pixels
	Horizontal: <input type="text"/> ft <input type="text"/> pixels
OEM LED Module and Processor manufacturer(s)	<input type="text"/>
LED Lamp Die and Packager Make and Model	<input type="text"/>
Physical Display Size (including cabinet)	Vertical: <input type="text"/> ft
	Horizontal: <input type="text"/> ft
Physical Pixel Pitch (not "lines")	Vertical/Vertical: <input type="text"/> mm
	Horizontal/Horizontal: <input type="text"/> mm
Physical Pixel Density (not "lines")	<input type="text"/> pixels/sqft
Virtual Pixel Pitch	"claimed" pixel pitch: <input type="text"/> mm
3 in 1 SMD LED or discrete lamp make and model	<input type="text"/>
Brightness	<input type="text"/> nits
Brightness Level adjustment	<input type="text"/>
Gradation Method	<input type="text"/>
Tonal Gradation	<input type="text"/>
Color Temperature	<input type="text"/> °K
Color Temperature adjustability	<input type="text"/>
Power Consumption	Avg (entire display): <input type="text"/>
	Max (entire display): <input type="text"/>
Normal Power requirements(Voltage, Service, Ø) Include any ventilationrequirements for entire Display	<input type="text"/>
Entire Display Assembly (ie; total center hung) Weight	<input type="text"/>

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END OF SECTION 110660