



VINCE J. WHIBBS SR. COMMUNITY
MaritimePark[™]
PENSACOLA, FL

COMMUNITY MARITIME PARK ASSOCIATES, INC.

BOARD OF TRUSTEES MEETING

Wednesday, February 15, 2017 – 1:30 P.M.

AGENDA

- I. Call to Order – Chairman’s Comments
- II. Approval of the Minutes
- III. Open Forum
- IV. Maritime Park Signage
- V. Maritime Park Marketing Update
- VI. Legal Counsel Update
- VII. CMPA Committee Reports
 - A. Design Committee
 - B. Operations and Audit Committee
 - C. Executive Committee – Did not meet
- VIII. Old Business
- IX. New Business
- X. Adjourn



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The CMPA Board of Trustees of the Community Maritime Park Associates, Inc. was called to order at 1:30 P.M. on January 18, 2017. Present at the meeting were Mr. Jim Reeves, Mr. John Merting, Ms. Ann Hill, Dr. Jimmy Jones, Mr. Buddy McCormick, Jr. (left at 2:47), Mr. James Smith, Mr. Mark Taylor, Ms. Kelly Wieczorek, Ms. Amy Klotz (left at 2:05 pm), Ms. Alexis Bolin and Mr. Fred Gunther (arrived 1:34 pm). Also present was Mandy Bills, CMPA Executive Assistant, and Justin Paul, Special Events Coordinator, from the City of Pensacola. CMPA Legal Counsel Ms. Lisa Minshew was also present. The meeting was properly noticed and open to the public. These minutes are a synopsis of the actions taken at that meeting and are not intended as verbatim minutes.

- I. Chairman Reeves called the meeting to order at 1:30 p.m.
- II. Chairman Reeves called for any corrections, additions, or deletions to the minutes of the previous meeting on November 21, 2016. Mr. Smith moved to approve the minutes and Ms. Bolin seconded the motion. Without objection, the minutes then passed unanimously (10-0).
- III. Open Forum

On May 10, 2016, the proposed sign design for a Maritime Park Sign was presented to the Planning Board by Ms. Wieczorek. The Planning Board gave conceptual approval for the proposed design and size of the sign. Ms. Wieczorek has contacted Mr. Tom Paux from Brix Design seeking informal advice and suggestions on the sign design plan.

Mr. Paux presented the Board of Trustees with a rendering of the proposed signage for the Community Maritime Park including size specifications. He stated that the sign would sit upon a concrete footer with a beveled edge. Mr. Paux

suggested placing a small bed of gravel surrounding the sign to prevent any damage from lawnmowers. The majority of the sign would be 100% stainless steel with the steel beam supporting the Vince J. Whibbs, Sr. portion of the sign powder coated blue. He provided a sample letter from the sign so the Board could determine the size of the sign and the readability from the road. The potential size of the signage could be 150 to 250 square feet depending on the size chosen for the letters. Mr. Paux will provide the Operations and Audit Committee with pricing by the next meeting.

- IV. Chairman Reeves called on Mr. Justin Paul to present the Community Maritime Park Events Update. Mr. Paul stated that there were 59 total events with over 58,000 in attendance last year. He noted that the events have continued to grow each year. Several of the events mentioned included: Hill Kelly Movies in the Park, Blues on the Bay Concert Series, 5210 Day of Play, Memorial Concert with the Civic Band, and 4th of July Concert with the Pensacola Symphony. Mr. Paul stated that in addition, there were 20 park rentals last year including the Double Bridge Run, Summerfest and a Bark to Remember.

During the baseball season, a Volunteer Parking Program is provided that allows non-profit entities to earn funds towards their causes. In 2016, \$12,784 was raised for non-profit entities and \$58,138.86 has been raised since inception of the program.

Awards received by the Community Maritime Park this year included the Urban Land Institute Award of Excellence, Best of the Coast for the Rotary Centennial Playground and the Best of the Coast 1st Runner-up for the Best Free Concert Series.

- V. Chairman Reeves called on Mr. David Lister and Mr. Greg Storey from Saltmarsh, Cleaveland and Gund to present the FY 2016 Annual Financial Statement Audit. Mr. Lister stated, in their opinion, the financial statements were presented fairly. He stated they saw no problems nor did they have any audit adjustments. Mr. Lister then reviewed the FY 2016 Annual Financial Statement Audit and stated that it was a clean audit.

Ms. Bolin move to accept the CMPA Annual Financial Statement Audit for the fiscal year ended September 30, 2016 and the Independent Auditors Report issued thereon. Mr. Taylor seconded the motion and it passed (10-0).

- VI. Chairman Reeves called on Mandy Bills to present the 2016 CMPA Form 990 Informational Tax Return prepared by Warren Averett. Ms. Bills stated Form 990 is an annual IRS reporting requirement for all nonprofit corporations and the information contained in the return is taken from the audited financial statements.

Ms. Bolin moved that the CMPA Board of Trustees accept the Form 990 Informational Tax Return for the fiscal year ended September 30, 2016. Ms. Wieczorek seconded the motion and it passed unanimously (9-0).

- VII. Chairman Reeves called on Rebecca Ferguson to present the Marine Debris Removal Update. Ms. Ferguson reminded the Board that the City was able to secure some EPA Brownfields Grant money to do an environmental assessment in the submerged land off of the Community Maritime Park. A side scan sonar which creates an image of the sea floor detected approximately 526 standing pilings of varying heights with many more laying down. A diver took several soil samples to determine what kind of contamination may have occurred from the creosoted pilings. EPA has recommended establishing site specific sediment quality guidelines determining what needs to be treated, how to treat it and whether or not the creosoted pilings need to be cut, capped or pulled out. Ms. Ferguson stated the City has already applied for additional funds from the EPA Brownfields Grant for the cleanup of any contamination and removal of the pilings and is awaiting their decision.

- VIII. Chairman Reeves called on Lisa Minshew to present the Legal Counsel Update. Ms. Minshew provided the Board of Trustees with a copy of the Conflict of Interest Policy. Each year the Board of Trustees has to review and agree to comply with this policy in order to maintain the CMPA's 501C3 status.

Ms. Minshew then stated that she has continued to work on resolving the Maritime One, LLC issue regarding the cost for relocating the irrigation line. The CMPA paid approximately \$35,000 in repairs. Ms. Minshew filed a claim of lien at the Board's direction in September 2016 against Maritime One, LLC. Williams Brown (Maritime One's contractor) and Maritime One have offered to settle in the amount of \$20,000 to have claim of lien removed. It is Ms. Minshew's

recommendation to settle with Williams Brown and Maritime One in the amount of \$20,000.

There is an outstanding issue with Wallace Landscaping who repaired the initial break in the irrigation line during construction and also was paid by the CMPA to subsequently relocate the irrigation line. Therefore the acceptance of the settlement in the amount of \$20,000 is only releasing Maritime One and Williams Brown.

Mr. Merting moved to authorize and accept the \$20,000 as full settlement and to remove the claim of lien from Maritime One and Williams Brown, but to reserve all rights with regard to Wallace Landscaping. Ann Hill seconded the motion and it passed 7-0 with Ms. Wieczorek abstaining.

Ms. Hill moved that the Board of Trustees instruct the City not to use Wallace Landscaping on behalf of the CMPA until Wallace settles the Maritime One, LLC issue regarding the cost for relocating the irrigation line. Mr. Taylor seconded the motion. After some discussion, Mr. Taylor withdrew his second.

IX. CMPA Committee Reports

A. Design Committee

Dr. Jones updated the Board with the current matters of the Design Committee. He stated that the Design Committee has not had a quorum present at their meetings for the last several months and has been unable to make any recommendations.

Chairman Reeves suggested, that without objection, that the non-Trustee members of the Design Committee be considered nonvoting advisory committee member rather than voting members. Seeing no objection Chairman Reeves will send a letter to the affected committee members notifying them of the change.

B. Operations and Audit Committee

Mr. Merting stated that Mr. Rushing has determined it is not economical to buy down the insurance deductible. He advised the Board that Mr. Rushing

provided the Committee a few insurance options offered by Beck Partners Insurance that provide virtually the same benefits with a smaller deductible. These options will need to be reviewed by the City's Risk Manager.

Mr. Merting stated the New Market Tax Credit compliance requirements obligate the CMPA to maintain a minimum of 1.75 leased employees throughout the compliance period. The City has proposed the following employees be leased by the CMPA at the percentages indicated:

- Justin Paul, Special Events Coordinator (Leased Employee Percentage 0.95)
- Tonya Vaden, Marketing Coordinator (Leased Employee Percentage 0.25)
- Bill Kimball, Parks Superintendent (Leased Employee Percentage 0.15)
- Robbie McGuire, Building Construction and Facilities Manager (Leased Employee Percentage 0.15)
- Mandy Bills, Executive Assistant (Leased Employee Percentage 0.25)

Mr. Merting moved to accept the proposed percentages for leased employees from the City of Pensacola. Mr. Smith seconded the motion and it passed unanimously (9-0).

C. Executive Committee – Did not meet

X. Old Business

No old business was brought forth.

XI. New Business

Mr. Reeves noted that Mr. Jonathan Griffith and Mr. Randall Wells had spoken with him and stated that they would like a new sign board for the stadium at the Maritime Park. They stated that the current sign board's warranty has expired and the cost of maintenance would be approximately \$25,000 per year. They proposed purchasing a new sign board at the cost of \$250,000. They would like to split the cost 50/50 with the CMPA. Mr. Reeves suggested that they speak with the University of West Florida and request that they pay \$50,000 towards the new sign board as well.

The passenger elevator at the Community Maritime Park is constantly getting stuck with passengers in it. The manufacturer of the elevator felt like it was a programming error that was causing the elevator to get stuck. Mr. Reeves

authorized at the recommendation of Robbie McGuire no more than 6 hours at \$360 per hour to determine the cost to repair the elevator.

Mr. Gunther made a motion to authorized Ms. Bills to see when the warranty on the current scoreboard expires and obtain bids for a service contract on that existing scoreboard. Mr. Taylor seconded the motion.

After some discussion, Mr. Gunther withdrew his motion and Ms. Bills will follow up with the Board of Trustees after researching several option regarding the scoreboard.

XI. The meeting was adjourned at 3:37 p.m.

Respectfully submitted, Ms. Ann Hill, Secretary



VINCE J. WHIBBS SR. COMMUNITY

MaritimePark[™]
PENSACOLA, FL

MEMORANDUM

FOR DISCUSSION

TO: CMPA Board of Trustees
THRU: Jim Reeves, Chairman
FROM: Mandy Bills, Executive Assistant
DATE: February 15, 2017
SUBJECT: Item IV – Maritime Park Signage

On May 10, 2016, the proposed sign design for a Maritime Park Sign was presented to the Planning Board by Ms. Wieczorek. The Planning Board gave conceptual approval for the proposed design and size of the sign.

Ms. Wieczorek has been independently seeking informal advice and suggestions on the design plan from colleagues and others. Tom Paux from Brix Design presented preliminary ideas to the Design Committee on January 12, 2017 and February 9, 2017 and to the Board of Trustees on January 19, 2017.

Mr. Paux submitted the attached cost estimate based on four foot letters in the sign. Prior to the Board of Trustees Meeting, Mr. Paux will layout a mock sign in front of the Stormwater Pond at the Maritime Park depicting both the three foot and the four foot letters to enable the Board to visualize the sign and determine the appropriate letter size.



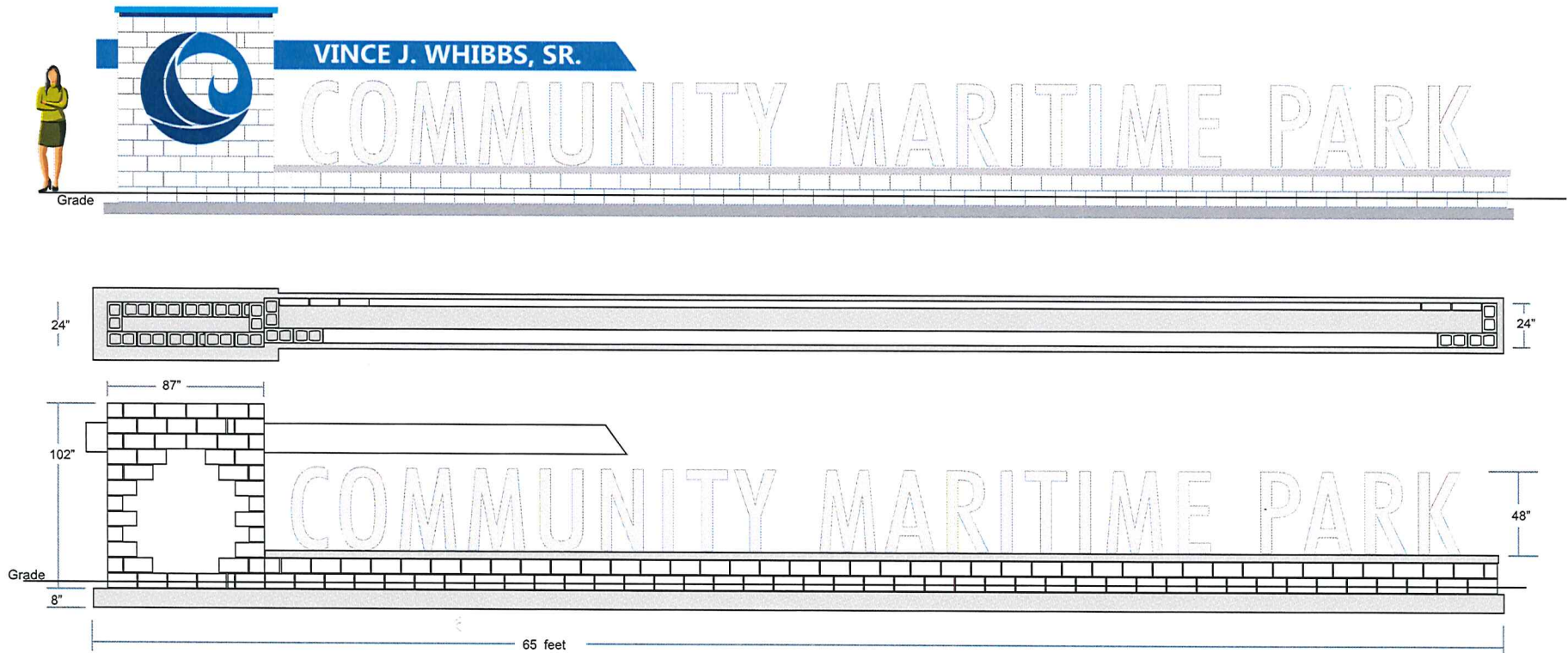
SIGNS • LOGOS • CREATIVE SOLUTIONS

614 West Intendencia Street Pensacola, FL 32502 (O)850.332.6211 (C)850.293.0970

Community Maritime Park Monument sign

This monument is constructed from split face cinder block filled with concrete with a concrete cap on the base. The block will be painted white with a 5' reverse channel logo and 4' tall letters. The 4' letters are cut from 3/8" stainless steel plate with a brushed finish and are mounted at the bottom via stainless steel brackets. These letter brackets will be bolted to the top of the concrete base using stainless steel bolts and epoxy. The logo wall top and the cross beam will be made from powder coated aluminum with the 12" tall stainless steel letters mounted directly to the beam.

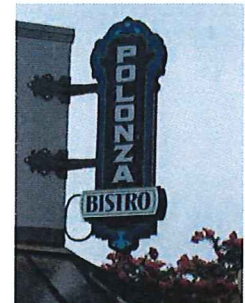
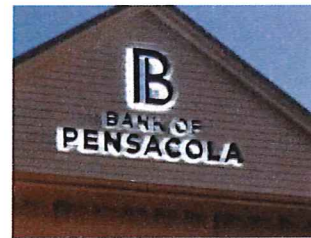
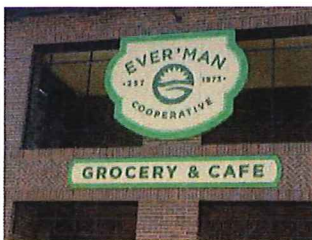
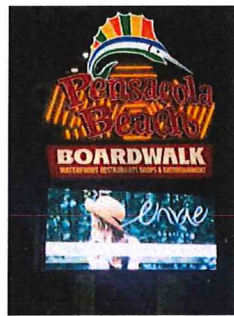
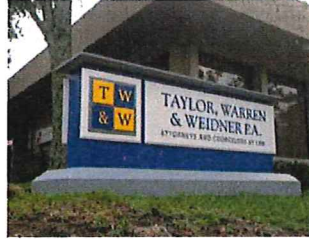
Complete project cost estimate \$109,000





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VICE
C

VINCE
N

This is a Sewerage
Treatment Facility.
Swimming, Boating
or other Recreational
uses are Prohibited



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MEMORANDUM

FOR DISCUSSION

TO: CMPA Board of Trustees
THRU: Jim Reeves, Chairman
FROM: Mandy Bills, Executive Assistant
Justin Paul, Special Events Coordinator
DATE: February 15, 2017
SUBJECT: Item V – Maritime Park Marketing Update

Tonya Vaden, Marketing Coordinator, will give an update on marketing efforts at the Maritime Park.



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MEMORANDUM

FOR DISCUSSION

TO: CMPA Board of Trustees
THRU: Jim Reeves, Chairman
FROM: Mandy Bills, Executive Assistant
DATE: February 15, 2017
SUBJECT: Item VI – Legal Counsel Update

CMPA Legal Counsel, Ms. Lisa Minshew, will provide a legal update.



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MEMORANDUM

FOR DISCUSSION

TO: CMPA Board of Trustees
THRU: Jim Reeves, Chairman
FROM: Mandy Bills, Executive Assistant
DATE: February 15, 2017
SUBJECT: Item VII – CMPA Committee Reports

The Design Committee Meeting was held on Thursday, February 9, 2017. Dr. Jones, Chairman, will provide an update of action taken at that meeting.

The Operations and Audit Committee Meeting was held on Monday, February 13, 2017. John Merting, Chairman, will provide an overview of any action taken at that meeting.



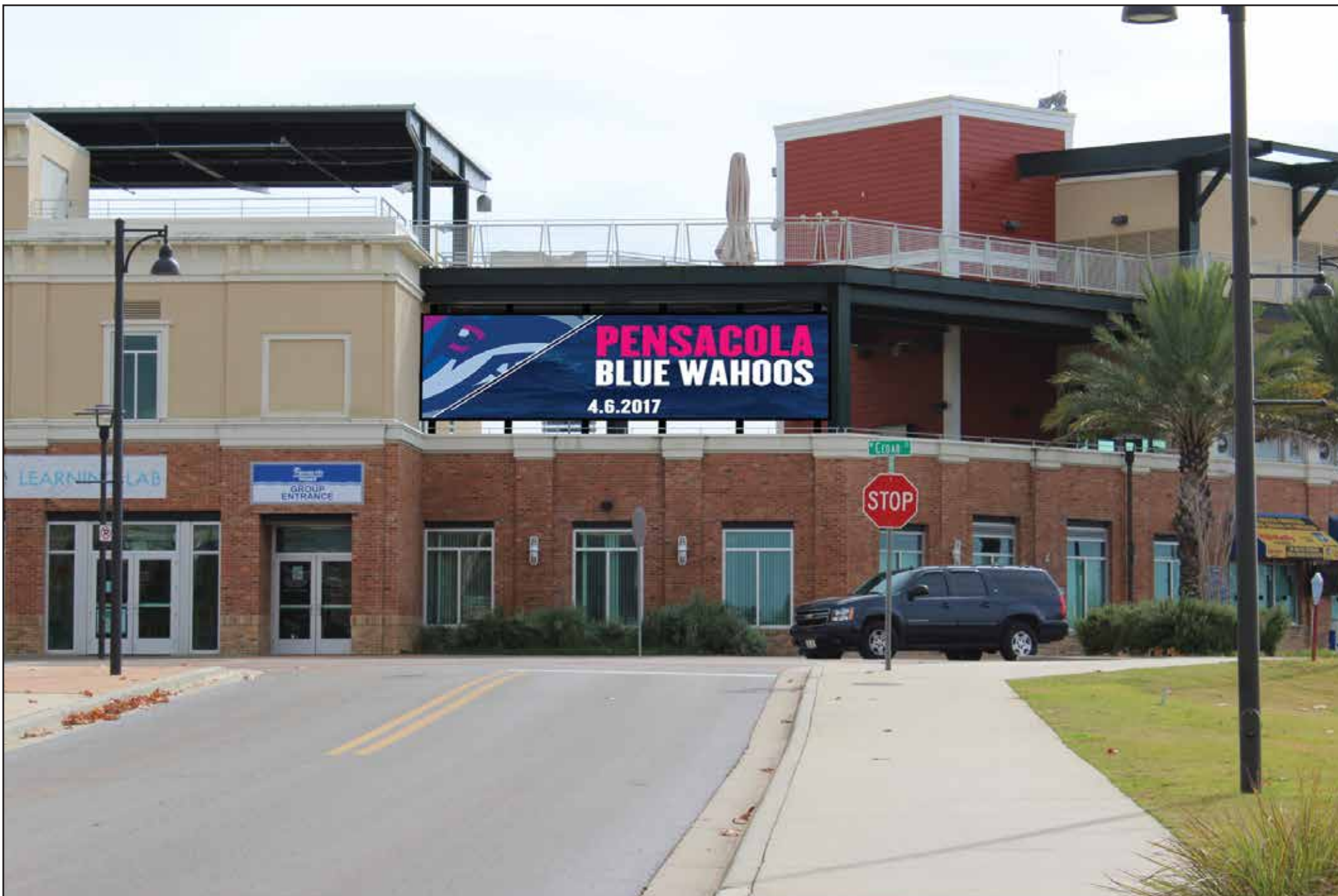


Proposal for:
PENSACOLA BLUE WAHOOS
 Blue Wahoos Stadium
 Pensacola, FL

16mm PIXEL PITCH
 28'4.25" H x 30'5.25" W

INTEGRATED SCORING AND STATS PACKAGE
 FULLY CUSTOMIZABLE VIDEO AND ADVERTISING ZONES
 FULL VIDEO CAPABILITY

FORMETCO
 SPORTS



Proposal for:
PENSACOLA BLUE WAHOOS
Blue Wahoos Stadium
Pensacola, FL

Relocation of existing display
8'H x 29'W

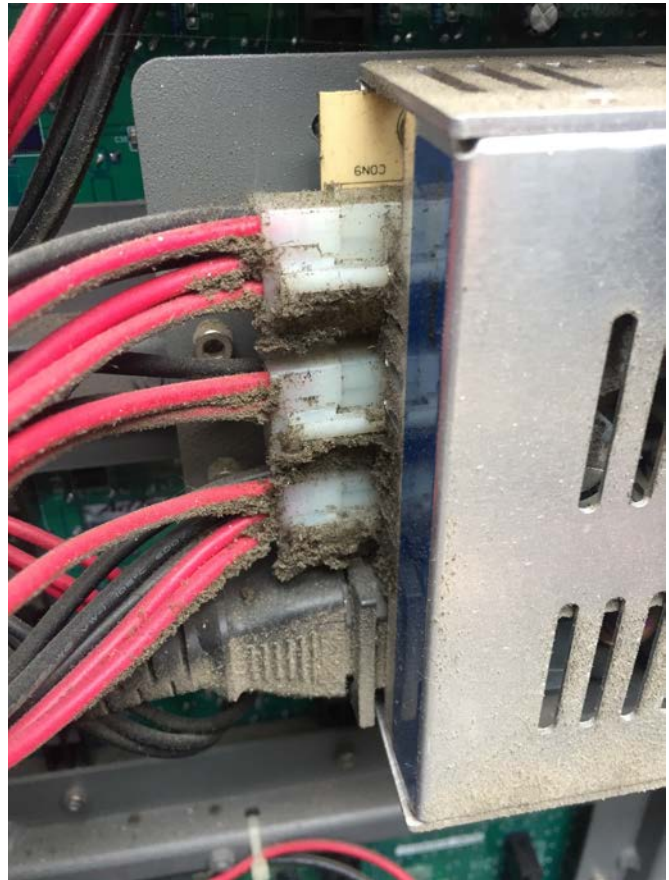
FORMETCO
SPORTS

Environmental Management

Contaminate and Waterproofing

Historically, the number one reason for electronic failures in a LED Screen is contaminate, corrosion caused by Water and contaminate intrusion into the LED screen cabinet. The following will outline failure issues common on typical LED Screens:

- Power supply fail do to fan failure or fans blowing contaminates and moisture into the LED screen cabinet.
- LED Tile failures do to the cabinet intake fans blowing contaminate and moisture into the enclosed LED Screen cabinet. This problem is magnified in coastal areas and areas where salt is used on the roads in the winter.
- Data cable connector failure do to corrosion caused by high Humidity conditions from moisture being blown into the LED screen cabinet by the cabinet fans.
- Power supply, tile, and data cable connectors' premature failure caused by operating in over temp conditions caused by cabinet fan failures and or clogged air intake filters.
- Excessive cost of power, caused by power supplies operating at higher temperatures caused by cabinet fan failures and or clogged air intake filters. Power supplies are less efficient at higher temperatures.
- Premature LED degeneration and/or discoloration caused by the LED's operating in higher temperature conditions caused by fan failures and/or clogged air intake filters.
- Failures caused by Water intrusion from Leaking cabinets or loose LED Tiles. Big LED screens structures can sag over time causing cracks in the LED cabinet causing additional leaks. LED tiles that are not installed correctly will also leak. This leads to water corrosion, higher humidity and component failure.
- Large enclosed cabinets capture the heat and humidity. Most large cabinet designs we analyzed had insufficient air exchange volume and had inefficient air circulation design to properly cool the internal components.





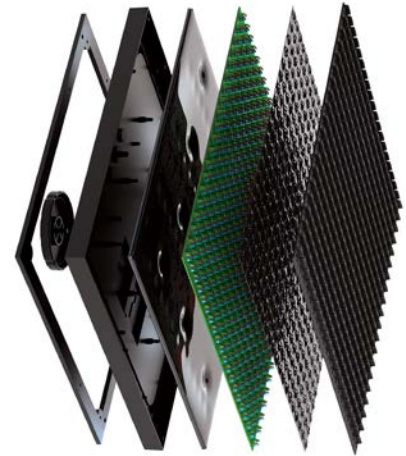
POWERED
BY **AdTech**

Formetco's FTX LED Screen design is completely sealed without fans. Extensive engineering efforts went into the design of heat management and energy efficiency.

Formetco's Contaminate and Waterproofing

The below will outline Formetco's product design for proper control of Contaminates and Waterproofing:

- Louver Face – Ridges to direct Sunlight (and Solar Heat) up and away from the louver face. Curved louver hoods to keep water from accumulating on top of the louver causing moisture problems and visual issues during and after Rain.
- LED Tile- 100% Totally Sealed front and back with a highly efficient heat conductive silicon potting material. The LED tile Housing is completely filled without any air gaps to improve heat dissipation.
- Data and Power Connections – At the LED Tile, connections are located behind a sealed cap and connected behind the potting material so the LED tile is completely sealed and the connector is sealed. At the power supply and data receiver card end, the connections are in a sealed watertight box. Also, we have 50% to 75% less connections.
- All data connections have water resistance Dow Corning Electrical Insulation Compound applied to reduce the possibly of corrosion.
- Power Supply and Data Receiver Card Enclosure – The enclosure is sealed and it is also Fan-less. In addition, we only use Fan-less Power Supplies. No air exchange with external environment.
- Cabinet – The cabinet is vented and open. It does not need to be sealed because all the components are waterproof. No possible problems with traditional leaking cabinets.





Formetco's Heat Management

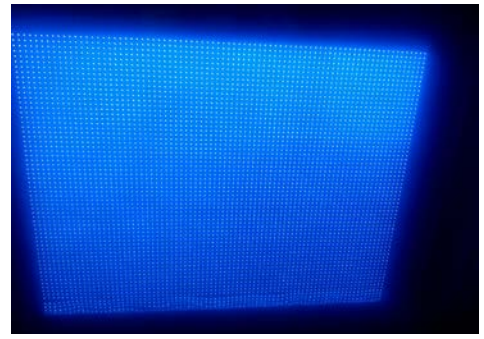
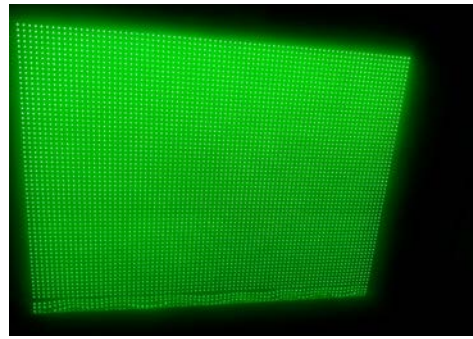
The FTX product design process took three years. The main hurdle in specifying and testing the components with regards to energy efficiency and heat dissipation. We had to develop the correct balance of heat generated and thermal cooling effectiveness. Heat testing and field testing has proven that the fan-less design of the FTX runs cooler in high temperature conditions than traditional cabinets with fans. The FTX product started shipping at the end of 2014, we have almost 1,000 installations operating 24 hours a day 365 days a year from Cairo Egypt, Lima Peru, Phoenix Arizona and all over Alabama, Georgia and Florida.

The basic theory is that if a LED Screen consumes less power it will generate less heat that needs to be dissipated. The main cause of premature failure and reduced useful life of an LED Screen is Heat and Humidity. Please review the following:

- Energy Efficiency components and design uses less power so the LED Screen generates less heat to dissipate.
- Louver face designed to reflect sunlight and solar heat up and away from the LED electronics. By incorporation angle ridges in the background of the louver face, sunlight and heat is reflected up and away from the louver face. This also increases the amount of surface area also improving the cooling capabilities. This is called Formetco's Louver Face Mirror Reflector Design.
- LED Tile- 100% Totally Sealed front and back with a highly efficient heat conductive silicon potting material. The LED tile Housing is completely filled without any air gaps; this improves heat dissipation. The conductive silicon pulls the heat away from the components to improve radiant cooling.
- The power supply is enclosed in a sealed power supply box. The power supply uses a special heat transfer material between power supply and the heat dissipating aluminum housing. Delta has tested our design with the power supply suspended in the box not using the aluminum housing for additional cooling and have certified that their power supply will operate at a ambient temp of 70C/158F.
- Each power supply box has one data receiver card. On each data receiver card is a temp sensor. Over the years, we have monitored the internal temperature of our F4X that uses a traditional cabinet with fans. In 100F ambient temperature day, operating in direct sunlight on the face of the sign, the internal temperature on the receiver card will reach a temperature of just over 140 F. The highest recorded internal temperature on the fan-less FTX this summer with 104F ambient temperature in direct sunlight recorded was 128F.
- Total system testing - Formetco has tested a complete cabinet operating a full bright white in a heat chamber for 192 hours continually at 70C and 90% humidity without any operational issues.
- See Heat Test Reports- See the test report XSP-016 Power Supply Test Report at the end of this section.

Environmental Reliability Test Report

1. Sample Info :		Test No. : XSP-135		
Name : Cabinet		Applicable Ambient:Outdoors		
Part No.F16		Material Code :		
Sampling number : 1PCS		Manufacturer : ledman		
Start Date : 2015-3-20		Completion Date : 2015-3-28		
2. State of test sample : product in production				
3. Main evaluation purpose : reliability evaluation of products in production				
4. Test standard: Custom test methods provided by application division				
5. Environmental test device : Programmable constant temperature and humidity test chamber				
6. Test method,condition and duration:				
(1) High-temperature and high-humidity test:70°C90%RH , all white pattern/192H				
7. Criterion: LED display inspection specification				
8 Testing process: Initial detection(OK)→High-temperature and high-humidity test(OK)→Terminated detection(OK)→End				
9. Judgement:				
Sample Name	Pre-test	Post-test	Judgement	
Cabinet	OK	System operating normally and without LED fail	OK	
Picture description	 			
	Put the whole-white cabinet into the test chamber , setting it as 70°C90%RH			
	 			



Running normally during and after the test

Comprehensive judgement result

After doing the 192H High-temperature and high-humidity Environmental Reliability Test ,it still running normally(Noted: This testing result is effective only for this sample.)

Remark

"-": No test or no condition for testing

責 Responsible departments will make an improvement plan according to the above defective condition.

Tested by/Date : Chunheng Liu
2015-3-31

Reviewed by/Date : Guozhong Zhu
2015-3-31

Rechecked by/Date : Shengwu Zhou
2015-3-31

Lighting Products' Environmental Reliability Test Report

1. Sample Info:		Test No.: XSP-016				
Test No.: power supply		Applicable Ambient: outdoor				
Part No.:		Material Code: L.B.182.TD4260-01				
Sampling number: 1PCS		Manufacturer:Delta				
Start Date: 2014-11-3		Completion Date: 2014-11-8				
2.State of test sample: raw material						
3. Main evaluation purpose: Reliability evaluation of raw material						
4. Test standard: sampling and unqualified disposal regulations for LED display products' reliability						
5. Environmental test device:Programmable constant temperature and humidity test chamber,Switching surge tester,salt spraying tester						
6. Test method,condition and duration:						
(1) Low temperature test: -30°C/running with 85% of the 220V power load/24H						
(2) High temperature test: 55°C/running with 85% of the 220V power load/24H						
(3) Humid heat test: 45°C90%RH/running with 85% of the 220V power load/24H						
(4) Switching surge test: ON 10S ~ OFF 10S/24H						
(5) Salt spray test: test solution PH: 6.5-7.3/24H						
7. Criterion: sampling and unqualified disposal regulations for LED display products' reliability						
8. Judgement:						
Sample No.		1#				
Test item		Initial detection	Testing process	Terminated detection	rate of change	Judgement
Appearance		OK	Apperance inspection(OK)→Low temperature load(OK)→High temperature load(OK)→Wet and hot load(OK)→Switching surge(OK)→Salt spray test(OK)→Terminated detection(OK)→End	OK	--	OK
Function	Voltage(V)	4.20		4.20	0	OK
	Current(A)	51.00		51.00	0	OK
	Power(W)	214.20		214.20	0	OK
Picture description		leave out				
Comprehensive judgement result		After doing the Environmental Reliability Test, we didn't find any abnormality, so this test's comprehensive judgement result is qualified .(Noted: This testing result is effective only for this sample.)				
Remarks		No test or no condition for testing				
		Responsible departments will make an improvement plan according to the above defective condition.				
Tested by/Date : Chunheng Liu 2014-11-8		Reviewed by/Date : Guozhong Zhu 2014-11-8		Rechecked by/Date : Shengwu Zhou 2014-11-8		

Power Supplies

Formetco uses a Delta PMR-4V320WDE Fanless power supply. The attached manufactures data sheet shows a Meantime between failures of 700,000 hours on page 3 under Reliability Data.

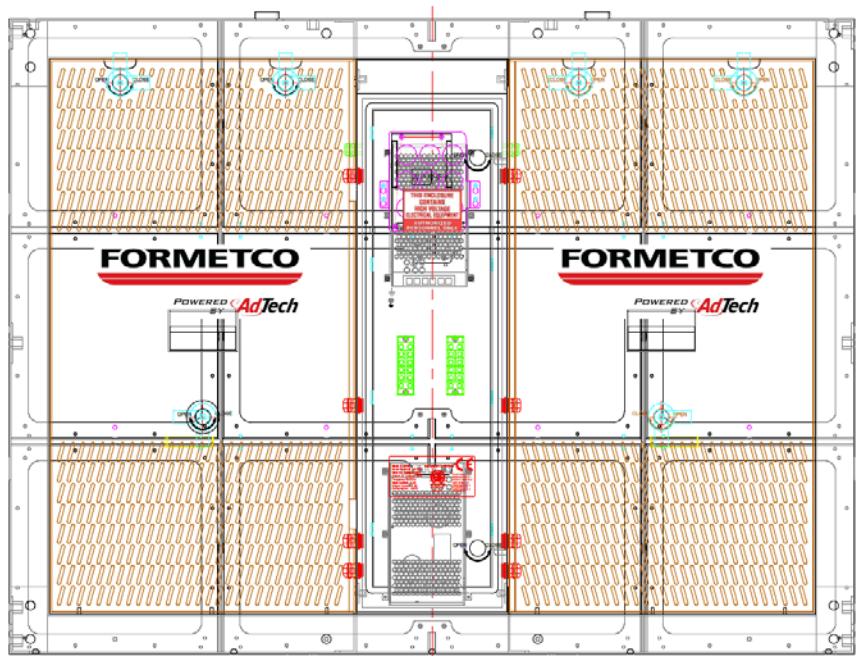
Power Supply Key Features:

- Manufactured by the number one power supply manufacturer in the world - Delta
- Universal AC input voltage
- Full corrosion resistant Aluminum case and chassis
- Conformal coated
- MTBF > 700,000 hours
- Built-in active PFC and conforms to harmonic current IEC/EN 61000-3-2, Class A and Class D
- High reliability with fan-less design and conductive cooling
- Built-in DC OK and redundancy operation
- Operating temp range specified to 70C
- Hiccup mode (auto-recovery) non-latching for all modes, overvoltage/overcurrent/over temperature
- Certified for worldwide use

Historically Formetco has been using conformal coated power supplies for over 5 years. There are three ways that conformal coating can be applied, brushed, sprayed or dipped. The first two methods do not produce acceptable results. Delta power supplies conformal coating is applied with a dipping process.

This power supply draws a lower electrical inrush current than traditional power supplies. In addition, it also emits less noise.

Another advantage of the Delta power supply is its intelligent self-monitoring. In the event of an over-voltage or low power fault, the power supply goes into a safety mode and shuts down. In a traditional power supply, the only way to restart a power supply that has shut down for these faults is to manually power cycling the LED Screen. In the case of the Delta power supply, it continually monitors the incoming voltage and its own temperature and will automatically restart once the critical condition has passed.



Power supply percent of load calculations – The below chart shows the percent of load on the power supplies at various operating temperatures and load conditions:

Temp	Capacity (ea.) Two power supplies are used	Total Load - 4,800 Pixels 7,500NIT White	Percent of Capacity at Full Load (ea.)	Percent of Capacity at Normal Operating - 40% (ea.)	Night Time Percent of load
40	252	288	57.1%	22.9%	3%
50	226	288	63.7%	25.5%	3%
60	189	288	76.2%	30.5%	4%
70	152	288	94.7%	37.9%	5%

The power supply is enclosed in a sealed power supply box. The power supply uses a special heat transfer material between power supply and the heat dissipating aluminum housing. Delta has tested our design with the power supply suspended in the box not using the aluminum housing for additional cooling and have certified that their power supply will operate at a ambient temp of 70C/158F.

The power supply can also be wired in a parallel configuration for redundancy. Because of the high mean time between failure, and low observed failure rate, we have opted not to utilize the redundancy configuration as it can reduce the efficiency of the overall power supply system by up to 10%.



The Delta power supply is equipped with screw terminal connections. In the prior 4 years with the F4X product line, we used power supplies with quick disconnect molded connectors. Through the F4X's product life we have encountered an unacceptable failure rate with this type of connector. In the design criteria for the FTX product we searched for a power supply with a high mean time between failures rating, so that the need to replace a power supply was minimized and the quick disconnect connector unnecessary.

The recorded failure rate of the Delta Power supply is less than .005%



POWERED
BY *AdTech*

A power supply failure typically takes out 6 to 12 Sq.Ft of the sign area.

For our service made simple instructional video scan the QR code:

FTX Power Supply Change

<https://www.youtube.com/watch?v=51SxPI0mDZs>

