



# JARRELL INDEPENDENT SCHOOL DISTRICT

## Memo to the Board of Trustees



**Date:** November 19, 2025

**Reported by:** Sledge Engineering

**Subject:** 2023 Bond Update and Athletic Fields Light Upgrades as presented by Sledge Engineering

### **Background Information:**

The purpose of this communication item is to hear the 2023 Bond update from the District's Program Manager, Sledge Engineering.

The purpose of this communication item is to also present potential energy and cost savings measure at Jarrell High School athletic fields. The current football, baseball, and softball fields have vintage metal halide lights. The 1999 construction plans list information for all three fields:

1. Football – 4 70' tall poles – 13 fixtures per pole– 52 fixtures (plus 4 fixtures pointing at track)
2. Baseball – 6 70' tall poles – 6, 8, and 15 fixtures per pole – 58 fixtures
3. Softball – 2 60' poles + 2 70' poles – 4 and 9 fixtures per pole, respectively – 26 fixtures

All original fixtures were 1500 watt, 155,000 lumen, metal halide lights. Upgrade of these fixtures to LED (light-emitting diodes) has many advantages:

1. Lighting levels - improved lighting and visibility including “instant-on”. Advanced LED systems allow for precise beam control, reducing glare and light spillage while ensuring uniform illumination across the field
2. Bulb Lifespan: LED stadium lights last much longer with estimated 50,000 to 100,000 hours vs metal halide fixtures typically lasting only 10,000 to 20,000 hours. LED lights are more resistant to vibrations, extreme temperatures, and moisture. Metal halide fixture replacement cost for the previous 4 fiscal years is tabulated below:

<b>Bulb Replacement Cost per Fiscal Year</b>	<b>Cougar Stadium</b>	<b>Baseball / Softball</b>
FY2021-2022	\$10,700.49	
FY2022-2023	\$1,115.00	
FY2023-2024	\$5,516.17	\$7,633.20
FY2024-2025	\$19,880.37	\$10,376.74
<b>Subtotal =</b>	<b>\$37,212.03</b>	<b>\$18,009.95</b>
<b>TOTAL= \$55,222</b>		
<b>Average Annual Cost = \$14,000</b>		

3. Electric cost – energy savings estimated as 50% to 70% with upgrade to LED lights versus metal halide fixtures (*estimated \$33,000 annual savings at the 50% reduced energy assumption*)
4. Payback - retrofit of all fields has 13-year payback based on **Total Cost (based on bulb replacement and energy savings)**.
5. Warranty – Reuse existing Musco Poles and add new LED lights provides extended warranty on system. Baseball and Softball warranty will be comprehensive 10-year warranty covering all materials and onsite labor—eliminates 100% of maintenance costs by JISD. Football warranty with the **Total Light Control** system provides 25-year warranty.

6. New costs – estimated cost assumes retrofit for baseball and softball with minimum 50 foot-candles and uniformity of 2:1. Costs to retrofit all three fields follows:
- Stadium = \$300k (*includes technology and software called Total Light Control which allows for 4 standard plus 2 optional lighting effects complete with control cabinet, touch screen for programming, and capability of up to 30 lighting scenes.*)
  - Baseball = \$215k
  - Softball = \$110k
  - **TOTAL COST = \$625,000**

Material delivery is 8 to 10 weeks after submittal approval with 4 to 6 weeks installation (up to 4 months total timeline). The work would not impact current sports and be planned to complete by the start of the 2026-2027 school year.

The purpose of this item is to receive Board input on the desire to complete the lighting upgrades to JHS football, baseball, and softball athletic fields. Consideration and possible action will be on future Board agenda, if desired.

**Strategic Goal:**

**Item Addressed:**

No action item at this time.

**Budget Information:**

No budget impact at this time.

**Recommended Action:**

No action item at this time.