

# Bismarck High School

Bismarck, Arkansas

## Architect

Jackson Brown Palculict Architects



Photos Courtesy of Tim Siller of Siller & Henry

The Bismarck School District, in both financial and facility distress, turned to Jackson Brown Palculict Architects to assist the District in support of state participant funding and in the pursuit and marketing of a millage to the community. Working together they sought a high-performance facility, which would offer the District energy efficiencies, maintain savings and most importantly create spaces to contribute to an enhanced learning environment.

With Community and State approval, the District is now home to Bismarck High School, a new high performance high school facility pending LEED Silver status accommodating academic core, workforce, extra curricular and support programs. This was achieved through careful site analysis, using natural topography and features of the site, orientating the structure to maximize natural lighting and planning for existing campus and future District growth.

From entry lobbies to typical classrooms to shop class, the quality of spaces always weighed heavily on the design team's mind. The team employed an inexpensive structural system that allowed the building many opportunities for natural light and quality materials. The mechanical and electrical systems were exposed throughout the project to engage and educate the students about the buildings.

Classroom acoustics was a major consideration for the design team. Because of the many hard materials in the space, care was paid to the wall and ceiling treatment to cut down on distracting noise. The use of the vaulted, exposed ceiling floods the classrooms with light.



The media center is a 2-story space. Sun louvers and glazing strategies were calculated to allow the optimum sun infiltration into the space. Sound clouds were also used to create a quiet, hospitable environment for learning.

The Bismarck High School continues to be a good investment for the community, and a small town in the midst of consolidation now has one of the most state-of-the-art schools in Arkansas. The project is not only a school for the students, but it has become a beacon for the community. The structure stands to remind the residents of Bismarck, Arkansas, that if they work together towards a common goal, anything can be achieved.

## LEED® Silver Pending

### Product Information

*Pre-Engineered Building:*

Alliance Steel, Inc.

*Insulation:*

Simple Saver by Thermal Design

*Metal Stud:*

Clark Western Building Systems

*Gypsum:* United States Gypsum

*Window, Entrances & Storefronts:* Kawneer

*Elevators:* Thyssen Krupp

*Lighting:* Mule, Lightolier, Exceline, Iota, Ledalite, HCl, Sea Gull, Visionaire

**Architect**

Jackson Brown Palculict Architects  
12921 Cantrell Road, #201, Little Rock, AR 72223  
www.jbparchitects.com

**Construction Team**

**Structural Engineer:**

Engineering Consultants, Inc.  
401 West Capitol, #305, Little Rock, AR 72201

**General Contractor:**

May Construction Company  
2226 Cottondale Lane, #100, Little Rock, AR 72203

**Mechanical Engineer:**

Innovative Solutions Group, Inc.  
136 Apple Blossom Loop, Maumelle, AR 72113

**Electrical Engineer:**

Lucas, Merriott & Associates  
2225 West 7th Street, Little Rock, AR 72201

**Civil Engineer:**

Crafton Tull Sparks & Associates  
10825 Financial Center Parkway, #300, Little Rock, AR 72211

**Project General Description**

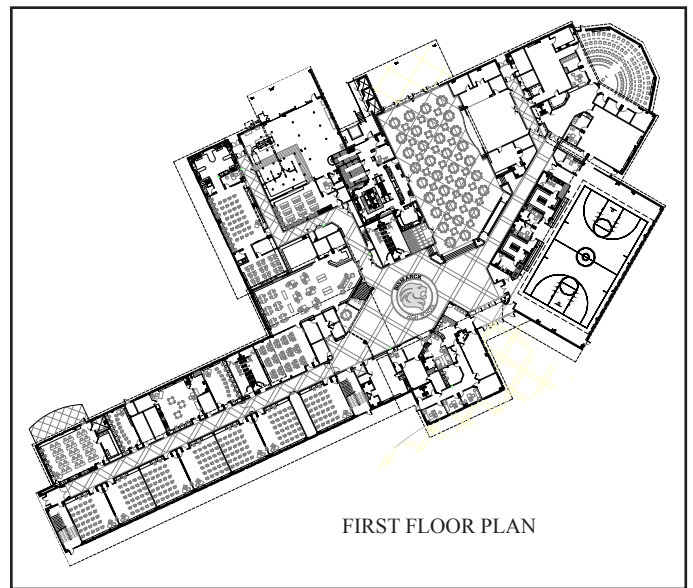
**Location:** Bismarck, Arkansas

**Date Bid:** Nov 2008

**Construction Period:** Dec 2008 to May 2010

**Total Square Feet:** 81,327 **Site:** 21.89 acres

**Number of Buildings:** One; 25 classrooms, 30 per class.



FIRST FLOOR PLAN

**Building Size:** First floor, 63,341; second floor, 17,986; total, 81,327 square feet. **Building Height:** Total, 46'2".

**Basic Construction Type:** New/Type III B Sprinkled/Pre-Engineered Building.

**Foundation:** Cast-in-place, reinforced concrete, slab-on-grade.

**Exterior Walls:** CMU, brick, metal wall panel. **Roof:** Metal.

**Floors:** Concrete. **Interior Walls:** CMU, metal stud drywall.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQ.	769,712	7.74	9.46	—
GENERAL REQUIREMENTS	100,000	1.01	1.23	—
CONCRETE	675,549	6.80	8.31	Forming & accessories, reinforcing, cast-in-place, precast, grouting.
MASONRY	546,738	5.50	6.72	Unit.
METALS	404,730	4.07	4.98	Decking.
WOOD, PLASTICS & COMPOSITES	219,755	2.21	2.70	Rough carpentry, finish carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	63,994	0.64	0.79	Dampproofing & waterproofing, roofing & siding panels, flashing & sheet metal.
OPENINGS	486,279	4.89	5.98	Doors & frames, specialty doors & frames, entrances, storefronts & curtainwalls, windows, hardware, glazing.
FINISHES	1,238,888	12.46	15.23	Plaster & gypsum board, ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	164,331	1.65	2.02	Interior.
EQUIPMENT	299,199	3.01	3.68	—
FURNISHINGS	109,351	1.10	1.34	Cabinet hardware.
SPECIAL CONSTRUCTIONS	1,605,281	16.15	19.74	Pre-engineered building.
CONVEYING SYSTEMS	43,668	0.44	0.54	Elevators (1 passenger).
FIRE SUPPRESSION	151,000	1.52	1.86	Water-based fire-suppression system.
PLUMBING	—	—	—	Included in HVAC.
HVAC	1,230,083	12.37	15.13	Plumbing: piping & pumps, equipment, fixtures, gas & vacuum systems for laboratory & healthcare. HVAC: Piping & pumps, air distribution, air cleaning devices, central heating, central cooling, central HVAC equipment.
ELECTRICAL	1,617,725	16.29	19.89	Medium-voltage distribution, low-voltage transmission, lighting.
ELECTRONIC SAFETY & SECURITY	214,000	2.15	2.63	—
<b>TOTAL BUILDING COSTS</b>	<b>9,940,283</b>	<b>100%</b>	<b>\$122.23</b>	
EARTHWORK	616,412			Site clearing, earth moving.
EXTERIOR IMPROVEMENTS	725,000			Concrete, landscaping.
UTILITIES	295,000			Water, sanitary sewer, storm drainage, electrical.
<b>TOTAL PROJECT COST</b>	<b>11,576,695</b>			(Excluding architectural and engineering fees)

**UPDATED ESTIMATE TO DECEMBER 2011 \$133.41 PER SQUARE FOOT**

**Regional Cost Trends**

*This project, updated to December 2011 in the selected cities of the United States.*

EASTERN U.S.	Sq.Ft. Cost	Total Cost	CENTRAL U.S.	Sq.Ft. Cost	Total Cost	WESTERN U.S.	Sq.Ft. Cost	Total Cost
Atlanta GA	\$153.25	\$12,463,009	Dallas TX	\$153.25	\$12,463,009	Los Angeles CA	\$196.52	\$15,981,976
Pittsburgh PA	\$167.67	\$13,635,998	Kansas City KS	\$158.65	\$12,902,880	Las Vegas NV	\$178.49	\$14,515,740
New York NY	\$216.35	\$17,594,836	Chicago IL	\$192.91	\$15,688,729	Seattle WA	\$191.11	\$15,542,105

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