RIVERSIDE UNIFIED SCHOOL DISTRICT
OPERATIONS DIVISION

Operations Board Subcommittee Meeting
May 22, 2019
3:00 p.m. – 5:00 p.m.
Conference Room 3
3380 14th Street, Riverside, CA 92501

A G E N D A

As required by Government Code 54957.5, agenda materials can be reviewed by the public at the District's Administrative Offices, Reception Area, First Floor, 3380 Fourteenth Street, Riverside, California.

Call Meeting to Order

Public Input

The subcommittee will consider requests from the public to comment. Comments should be limited to three minutes or less. If you wish to address the subcommittee concerning an item already on the agenda, please indicate your desire to do so on a provided card. You will have an opportunity to speak prior to the subcommittee's deliberation on that item.

Pursuant to Section 54954.2 of the Government Code, no action or discussion shall be undertaken on any item not appearing on the posted agenda, except that members of the Subcommittee or staff may briefly respond to statements made or questions posed by persons exercising their public testimony rights. Discussion of items brought forward that are not on the agenda shall be considered for future agendas by the Subcommittee Chair.

Action/Discussion Items

The following agenda items will be discussed and the subcommittee members may choose to introduce and pass a motion as desired.

1. **Approval of Minutes**
   The subcommittee will be asked to approve the minutes of the March 20, 2019, and April 17, 2019, meetings.

2. **Riverside Polytechnic High School Measure O Project Update**
   Staff and design teams will present an update on the project.

3. **Community Benefits Agreements on Public School Construction**
   The subcommittee will continue the discussion on the Community Benefits Agreements on public school construction.

4. **Measure O Citizens Bond Oversight Committee Applications**
   Staff to provide update on applications received for the Measure "O" Citizens Bond Oversight Committee.

5. Schedule of Meetings

The subcommittee's next meeting has been scheduled for Wednesday, June 19, 2019, 3:00 - 5:00 p.m., in Conference Room 3, 3380 14th Street, Riverside, CA 92501.

Conclusion

Subcommittee Members Comments

Adjournment

Riverside Unified School District
Operations Division
Operations Board Subcommittee Meeting
March 20, 2019
3: 00 p.m. – 5:00 p.m.
Conference Room 3
3380 14th St., Riverside, CA 92501

MINUTES

CALLED TO ORDER: 3:14 p.m. by Mr. Lee

PRESENT: Brent Lee and Tom Hunt, Board Members, and Sergio San Martin, Assistant Superintendent, Operations.

Also present were Mays Kakish, Chief Business Officer, Ana Gonzalez, Planning and Development Director; Ken Mueller, Maintenance and Operations Director; Kevin Hauser, Assist Director, Facilities Projects; Daniel Rodriguez, Facilities Planning Assistant Director; Gaby Adame, Facilities Planner; Annette Alvarez, Fiscal Services Manager; Richard Prince, Community Relations Manager; John Tibbels, Assistant Principal, Ramona High School; Rhonda Barnes, Ramona High School, Connie Wong and Mark Graham, WLC, Architects; Malissa McKeith, Mitchell Adkison, Gordon Edwards, and Ed Adkison, Members of the Public, and Lizette Delgado, (Recorder).

Public Input

Malissa McKeith spoke to the Subcommittee regarding item No. 2, Victoria and Central Property Lines. Rhonda Barnes and John Tibbels, Ramona High School, spoke to the Subcommittee regarding item No. 3, Ramona High School Theater Window Designs Update.

Call Meeting to Order

1. **Approval of Minutes**
   Mr. Hunt moved and Mr. Lee seconded to approve the minutes of the February 13, 2019, meeting, as presented.

2. **Victoria and Central Property Lines**
   Staff presented information on surveyed property lines and a potential disputed encroachment matter at the existing property located at Central and Victoria Avenues with neighboring property owner Malissa McKeith. Legal Counsel recommended solving the encroachment matter through a lot line adjustment settlement agreement affecting approximately 1/10 of an acre (4500 square feet).

   The subcommittee agreed with staff's and Legal Counsel's recommendation to clear the cloud on title through a lot line adjustment settlement agreement. Legal Counsel will work

staff and Mrs. McKeith to develop a settlement agreement. Staff will present the agreement for discussion and approval in Closed Session at a future Board of Education meeting.

In response to a question from Ms. McKeith, staff stated that the Board of Education is not selling the property (10± ac) and that alternative project options for the Riverside Polytechnic High School project will be presented to the subcommittee and Board of Education for discussion at future meetings.

3. Ramona High School Theater Window Designs Update

Staff presented a mock up and update on the proposed vinyl silhouette graphics of musical notes to be installed on the Maxine Frost Performing Arts Center windows.

Rhonda Barnes and John Tibbels, Ramona High School faculty members, presented their concerns regarding the windows design and shared comments received from staff, students, and faculty on the proposed graphics.

After receiving comments and information, the subcommittee made a recommendation to staff to cancel the installation of the graphics on the windows and stated that there will be no design added to the windows at this time.

4. District Office Project Update

Staff presented an update and scope of work on the proposed District Office Project. Boots on the ground findings and alternatives were discussed. Improvements are estimated at $10.9 Million for ADA, seismic, safety, mechanical and infrastructure, due to the age of the building. The project's total funding is $5 Million.

The subcommittee asked staff to bring back other options for consideration and suggested to look into other locations/building (i.e., Palm site, RCCD's Spruce St. building, etc.) in the area for potential/future relocation of the District's administration offices.

5. Use of Facilities Report

Staff presented an update on the District's Use of Facilities Feasibility Study and an updated proposed fee schedule to be presented to the Board of Education for approval at a future meeting. Existing fee schedule was updated in 2014.

The proposed new fee schedule is based on the California Department of Education (CDE) guidelines and cost schedule calculations. Staff would like to implement new fee schedule in July 2019, if approved by the Board of Education.

6. California Baptist University Student Housing Project

Staff presented a request from the California Baptist University to waive developer fees on 165,553 square feet, 93-units, Student Housing Project, consisting of a single, 4-story building with surface parking and amenity building within.

The subcommittee recommended to present the request to the Board of Education at a future meeting for approval and agreed that the Board should be consistent regarding the waiving

of developer fees on college/university student housing project. In the past, RUSD has waved developer fees for other student housing projects that do not directly affect student generation in the District.

7. Schedule of Meetings

The subcommittee's next meeting has been scheduled for Wednesday, April 17, 2019, 3:00 - 5:00 p.m., in Conference Room 3, 3380 14th Street, Riverside, CA 92501.

Conclusion

Subcommittee Members Comments

There were no comments from subcommittee members.

Adjournment

5:13 p.m.

Riverside Unified School District
Operations Division
Operations Board Subcommittee Meeting
April 17, 2019
3: 00 p.m. – 5:00 p.m.
Conference Room 3
3380 14th St., Riverside, CA 92501

MINUTES

CALLED TO ORDER: 3:03p.m. by Mr. Lee

PRESENT: Brent Lee and Patricia Lock Dawson for Tom Hunt, Board Members, and Sergio San Martin, Assistant Superintendent, Operations.

Also present were Mays Kakish, Chief Business Officer, Ana Gonzalez, Planning and Development Director; Ken Mueller, Maintenance and Operations Director; Kevin Hauser, Assistant Director, Facilities Projects; Phillip Valadez, Facilities Consultant; Gaby Adame, Facilities Planner; Annette Alvarez, Fiscal Services Manager; Richard Prince, Community Relations Manager; Nick Farrel, Analyst, and Doug Floyd, Senior Associate, Koppel & Gruber Public Finance, Marty Greenwood ,Tilden-Coil Constructors, Iris Barrientos and Roger Clarke, Ruhnau Clarke Architects, Wendy Willes, Attorney, Atkinson, Andelson, Loya, Ruud & Romo, and Susanne Anderson, (Recorder).

Public Input
There were no requests to speak to the subcommittee members.

Call Meeting to Order

1. **Approval of Minutes**
   Approval of minutes for the March 20, 2019, meeting, was tabled until next meeting.

2. **California Clean Energy Jobs Act, Proposition 39, Update**
   Staff provided the subcommittee with an update on the California Clean Energy Jobs Act, Proposition 39.

3. **2019 School Facilities Needs Analysis (SFNA)**
   Pursuant to Government Code 66995.5 et seq., the District is required to adopt a School Facilities Needs Analysis (SFNA) in order to levy the alternative school facilities fees provided under Senate Bill 50. The SFNA, dated March 27, 2019, demonstrates that the District may impose $4.25 per square foot in Level II Fees and $8.50 per square foot in Level III Fees on new residential construction.

   After reviewing the 2019 School Facilities Needs Analysis report, discussion was held and the subcommittee recommended presenting the report and proposed fee increases to the Board of Education's consideration and approval at the May 7, 2019, meeting.

4. Highgrove Elementary School

Staff provided the subcommittee with an update on the bid results on the Highgrove Elementary School Measure O Project, scheduled to begin this summer. As of March 2018, the project budget was $20.5 million. Based on escalation of cost and biding environment, project cost has increased to $24.5 million, a difference of $4.0 million.

The subcommittee reviewed and discussed increase indicators and recommended the new project budget be presented for approval of the Board of Education at the May 7, 2019, meeting.

5. 10-Acre Site Review

At the request of Board Member Brent Lee, the subcommittee received information from staff concerning site assessment findings on a 10-acre site located on Howard Avenue and Date Street in the City of Riverside. The subcommittee was informed that the location of the property is next to railroad tracks and within flood zone. Based on the findings, the subcommittee did not recommend this location due to risk factors.

6. Schedule of Meetings

The subcommittee's next meeting has been scheduled for Wednesday, May 22, 2019, 3:00 - 5:00 p.m., in Conference Room 3, 3380 14th Street, Riverside, CA 92501.

Conclusion

Subcommittee Members Comments

There were no comments from subcommittee members.

Adjournment

The meeting was adjourned at 4:20 p.m.

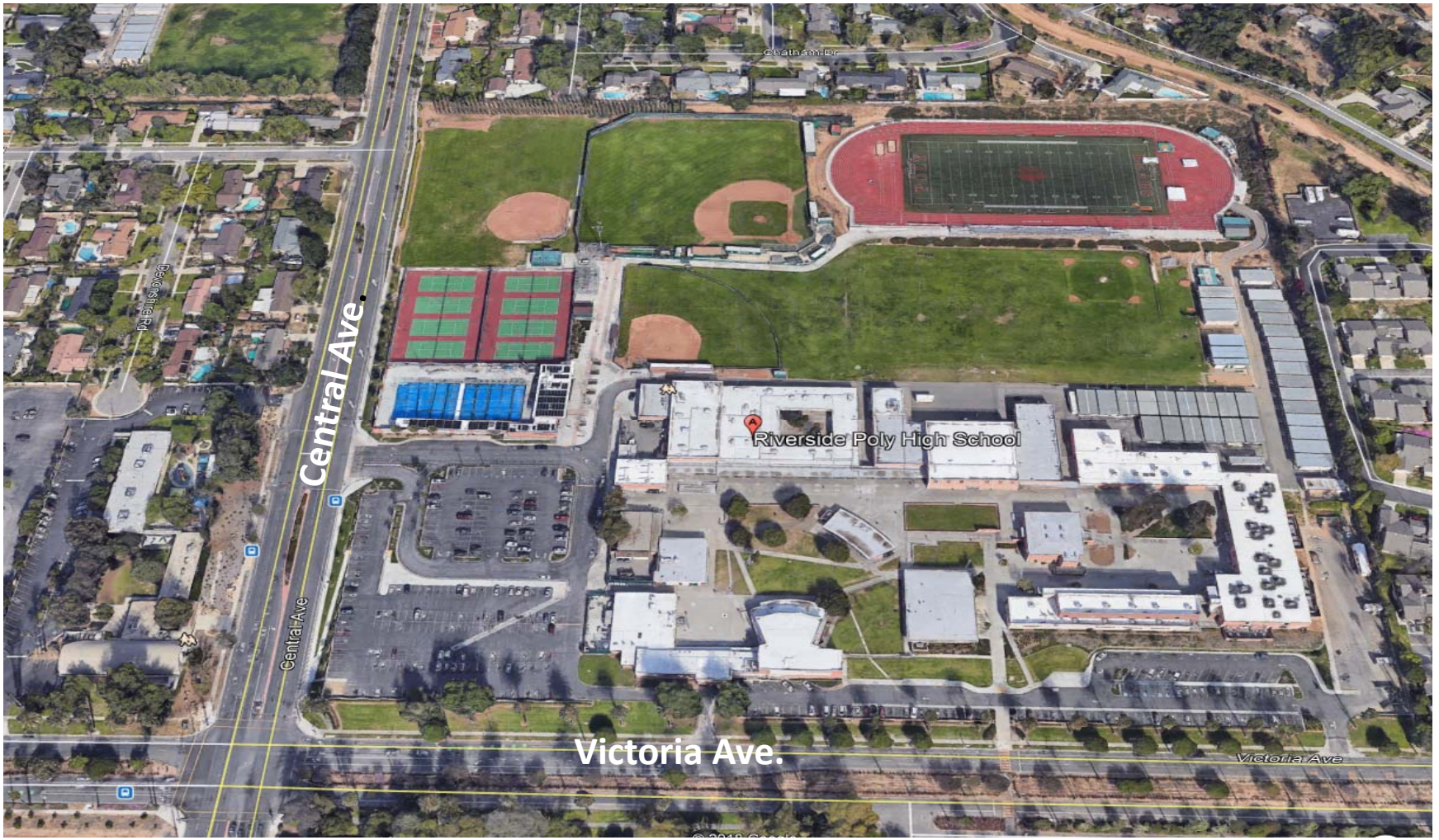
RUSD
BE EXTRAORDINARY

Poly High School - Measure O Project Update
Operations Board Subcommittee

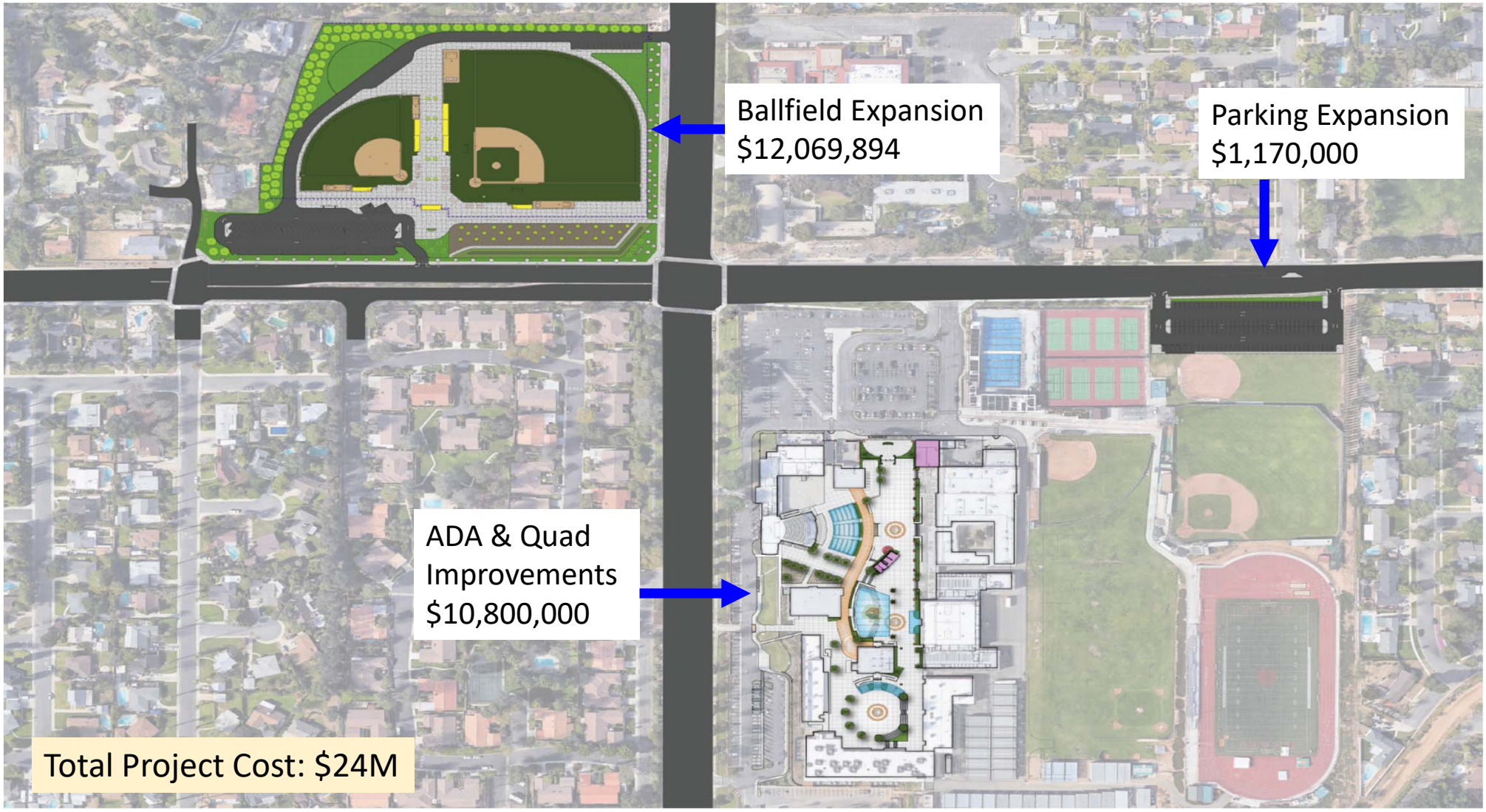
May 22, 2019

Operations Division

POLY HIGH SCHOOL



ORIGINAL PROPOSED SCOPE OF WORK



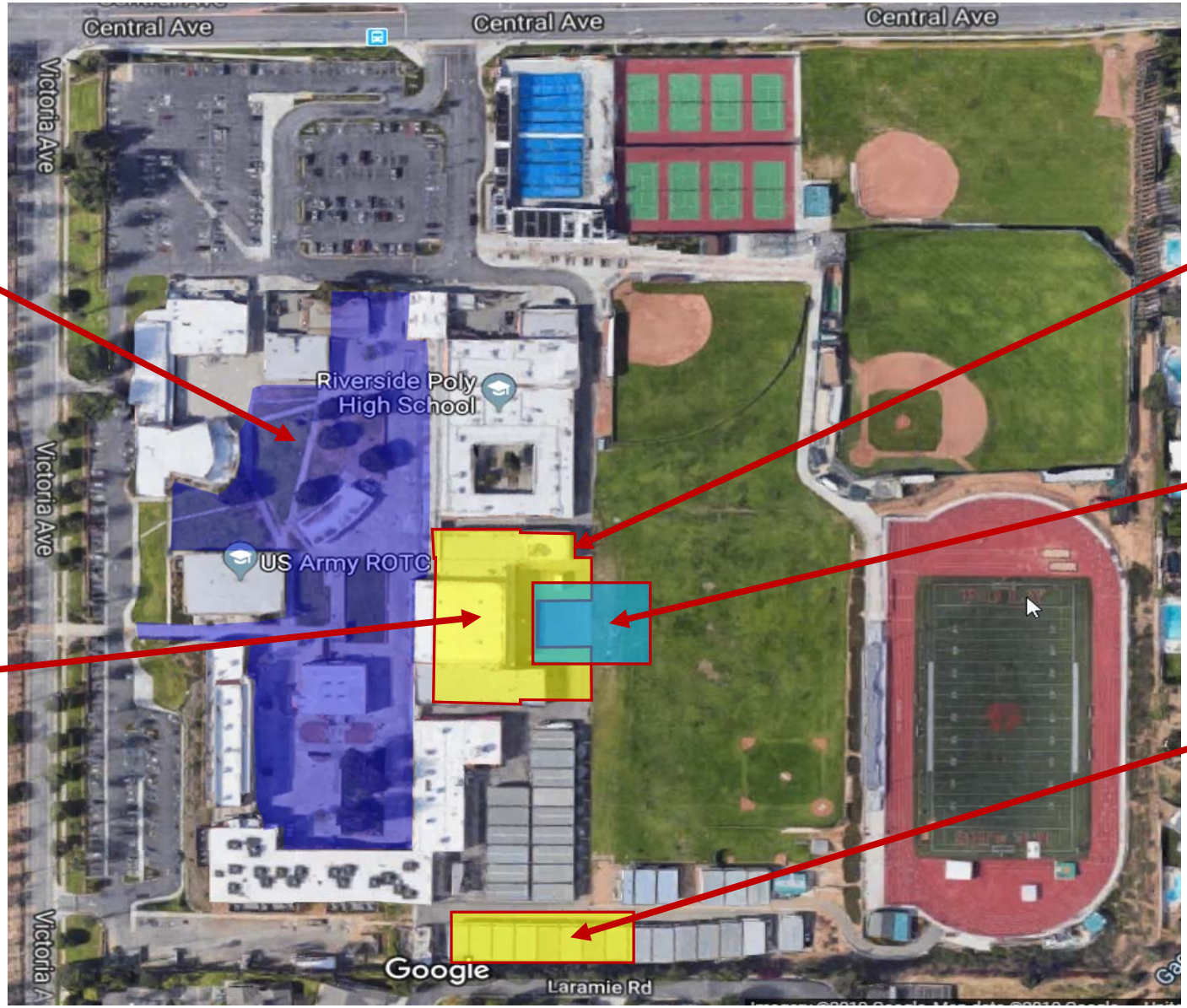
CURRENT BUDGET

Board Approved Budget	**$24,039,894**
Quad ADA Upgrades	($10,800,000)
Less Expended to Date	($500,000)
Remaining Balance	**$12,739,894**

POLY HS

ADA & Quad
Improvements

Alternative
Competition Gym

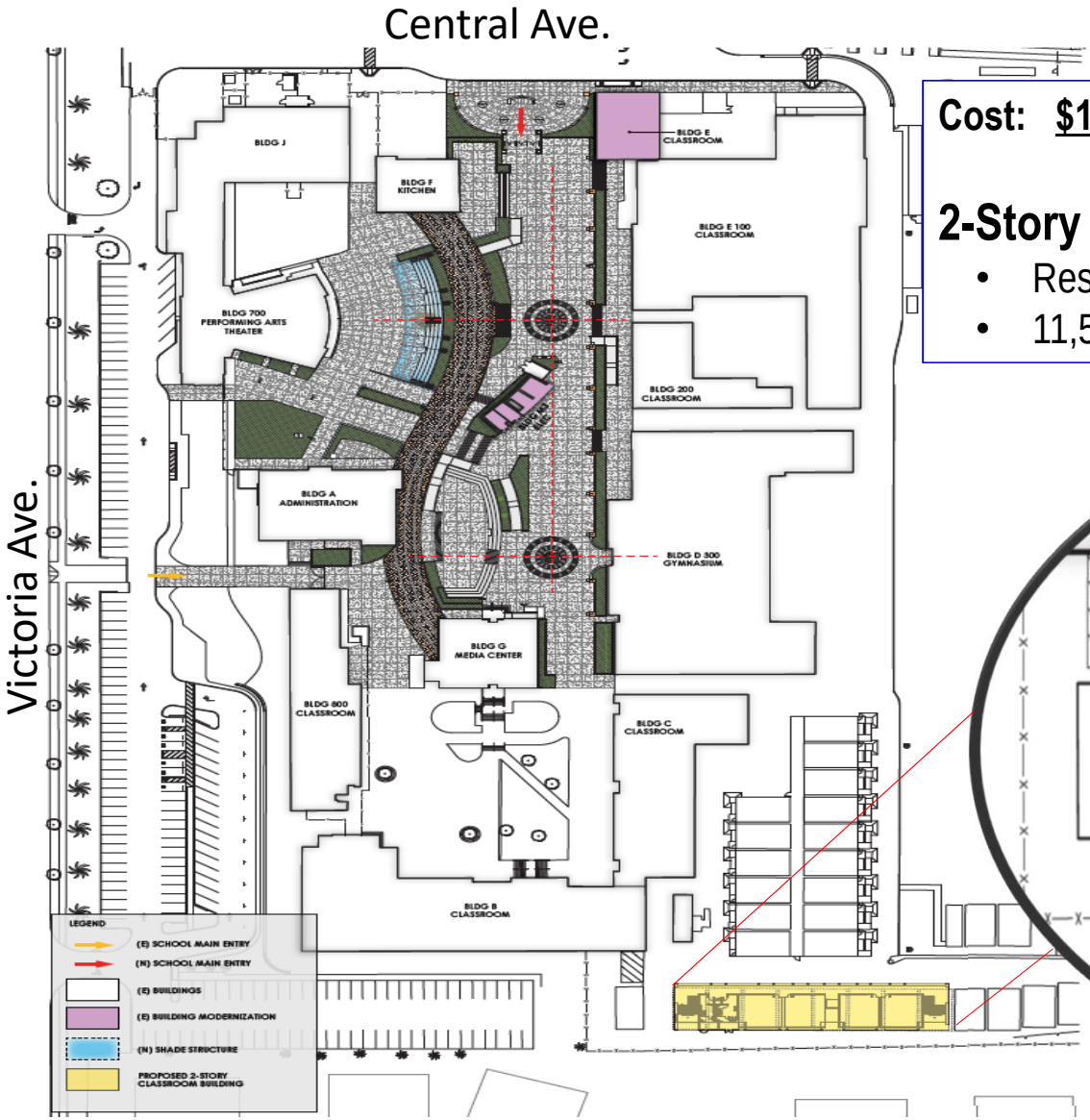


Option 3
Renovate
Existing Gym

Option 2
Auxiliary Gym

Option 1
2-Story
Classroom
Building

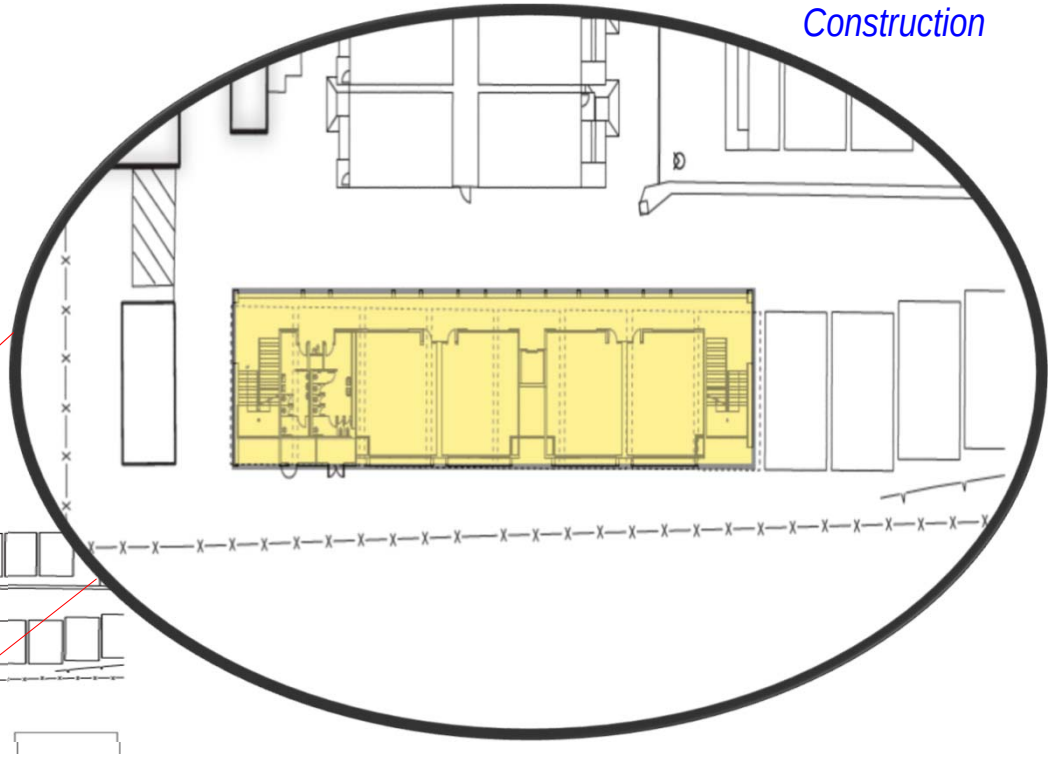
OPTION 1



Cost: **$12,672,750**

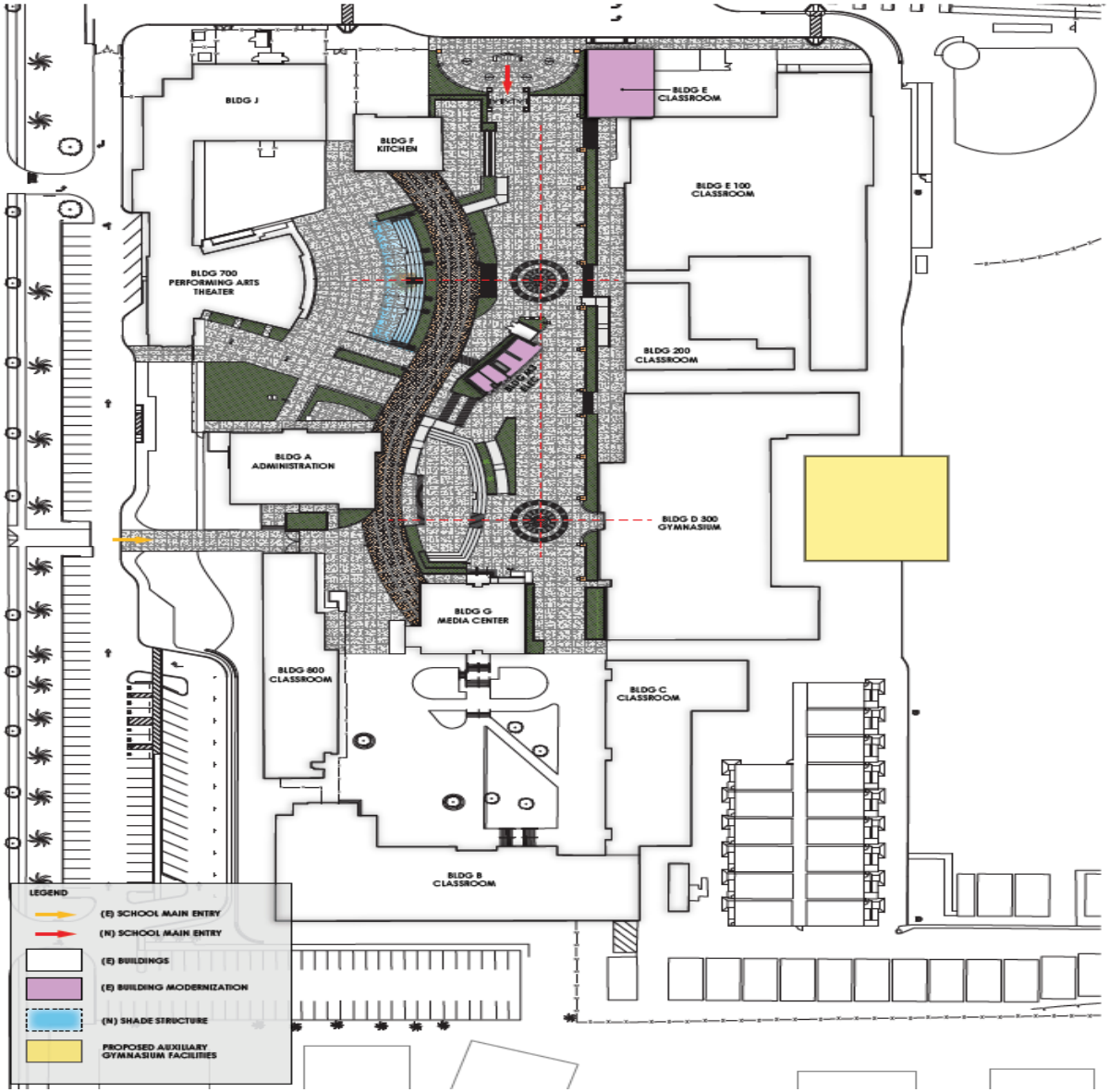
2-Story Eight Classroom Building

- Restroom & Support Facilities
- 11,550 Square Feet



Pros:
New CR Wing
Removes 8 Relos

Cons:
Disruption during Construction



OPTION 2

Cost: $12,728,571

Auxiliary Gym

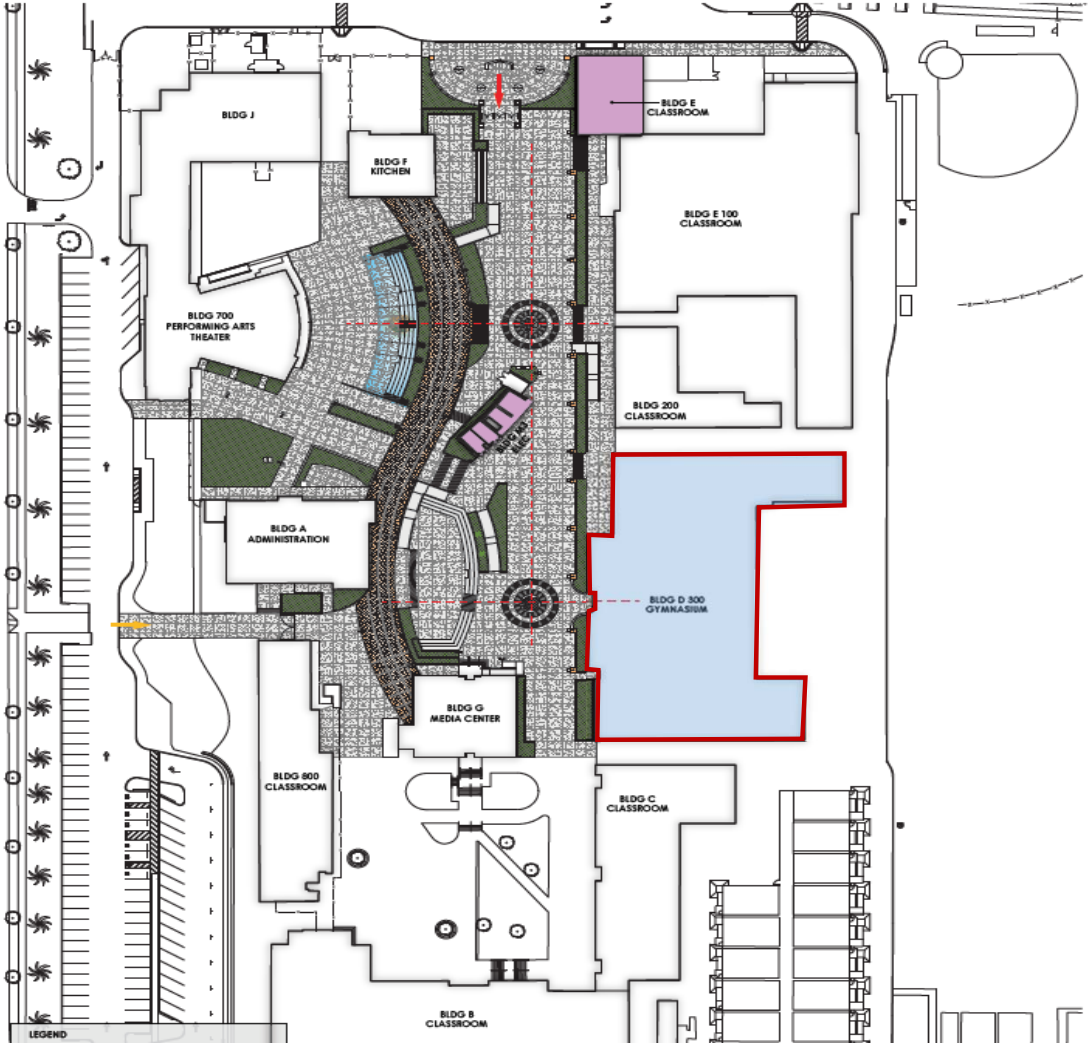
- Restroom Facilities
- Single practice court
- Wrestling room
- Storage
- 12,000 Square Feet

Pros:
New Practice GYM

Cons:
Disruption during Construction
Existing Gym Remains w/ no improvements

Central Ave.

Victoria Ave.



OPTION 3

Cost: $12.7M

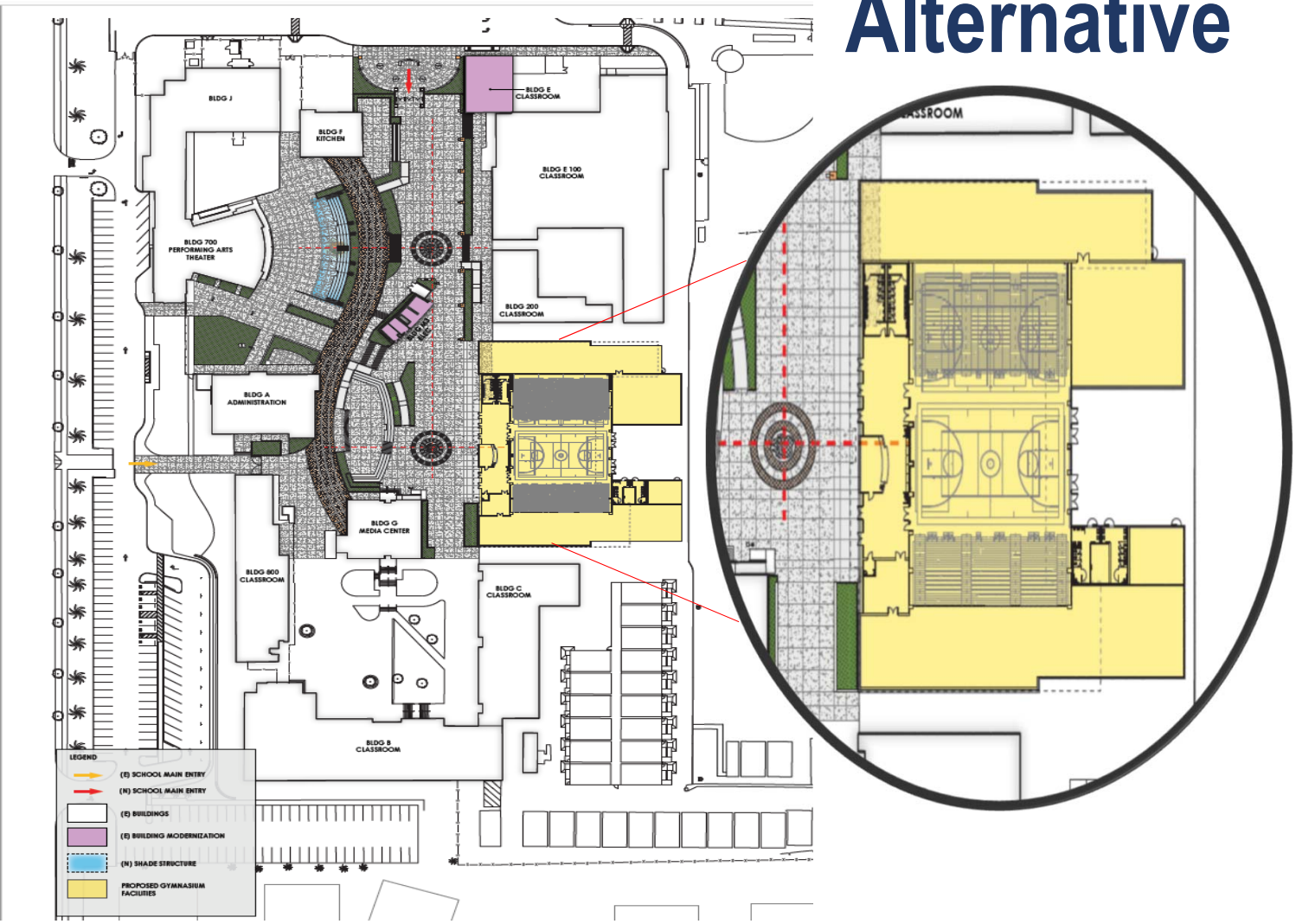
Renovate Existing Gym

- Restrooms
- Lockers Rooms
- Infrastructure
- MEP

Pros:
Improve existing building systems
Renovate Locker Rooms
Code Compliance & ADA

Cons:
No added capacity nor square footage

Alternative



Cost: **$49,799,536**
($37,059,642) short fall

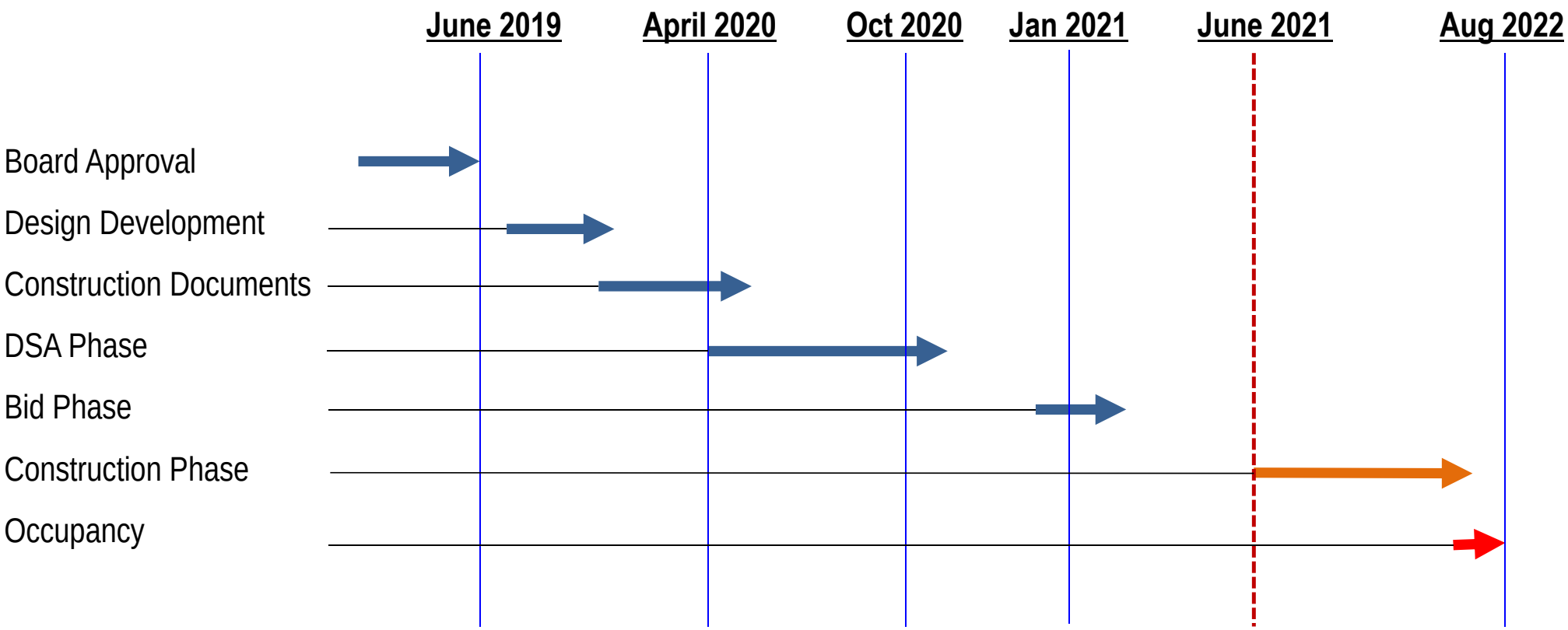
Competition Gym

- Triple Courts
- Wrestling room
- Lockers & Team Rooms
- Coach Office
- Restroom Facilities
- Storage
- 40,000 Square Feet

Pros:
New Competition GYM
Demo Existing Gym (29,500sf)

Cons:
Site Disruption during Construction
No Gym Use during Construction

TIMELINES



Note: All options presented are two years out

Questions & Answers

RIVERSIDE UNIFIED SCHOOL DISTRICT
APPLICATION FOR INDEPENDENT CITIZENS' OVERSIGHT COMMITTEE REC'D APR 04 2019

(Please Print or Type)

Name: Dale Kinnear

Address: 1210 Via Vallarta
Riverside CA 92506

Home Phone: 951-295-1101 Work Phone:

FAX #: E-Mail: dalekinnear@att.net

RUSD Trustee Area (see attached map): 2

Why do you want to serve on the Measure O Independent Citizens' Oversight Committee?

I want to serve on the Measure O Independent Citizens' Oversight Committee for three reasons:
1) to assist in informing the public about the expenditure of bond proceeds.
2) to assist in reviewing District expenditure reports
3) to assist in preparing an annual report to the Board of Trustees.

Do you have any special area of expertise or experience that you think would be helpful to the committee?

As a former 23 year high school principal in RUSD, I have experience to accomplish the duties set forth in the by-laws. In addition, I've been an active resident in Riverside throughout these years resulting in significant knowledge of RUSD and our various communities.

If you have served on other school district, city or community committees please list and briefly describe your role:

In my 23 years as principal of JW North & Poly High Schools, I've participated in most of the district committees including ~~curr~~ curriculum, budget, facilities and attendance boundary committees. As a resident of Riverside I've been involved in numerous committees established by the Mayor including the city's multi-cultural group. Finally, I've been active in the leadership of Riverside's International Relations Committee.

Please note any additional information you feel should be considered as part of your application :

My experiences as a high school principal and leader in our community will support the goals and purpose of the Oversight Committee.

	YES	NO
1. Are you an employee of the District?*		X
2. Are you a vendor, contractor, or consultant to the school district?*		X
3. Do you have conflicts that would preclude your attending quarterly meetings?		X
4. Do you know of any reason, such as a potential conflict of interest, which would adversely affect your ability to serve on the Independent Citizens' Oversight Committee?*		X
5. Are you willing to comply with the ethics code included in the bylaws?	X	

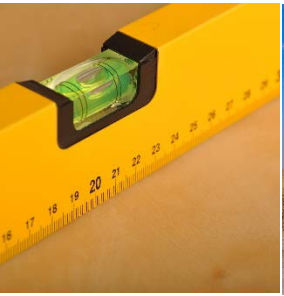
(*Employees, vendors, contractors, and consultants of the Riverside Unified School District are prohibited by law from being members of the Citizens' Oversight Committee. Employment which could result in becoming a contractor or subcontractor to the district would also be a potential conflict.)

Signature of Applicant

All answers and statements in this document are true and complete to the best of my knowledge.

Signature _____ Date 4-2-19

Update on PLA / CBA



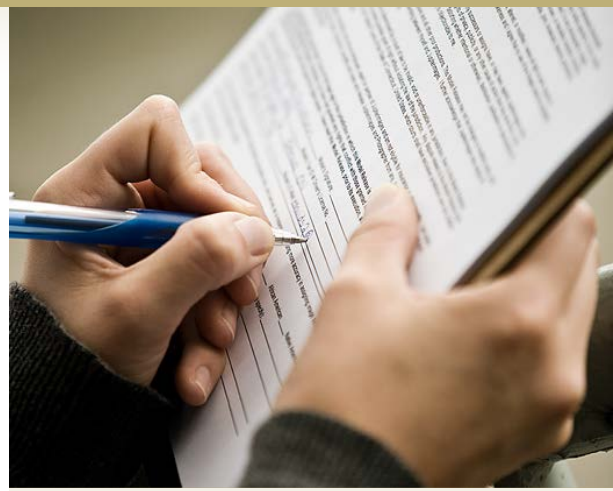


Presented by:
Thomas W. Kovacich, Partner

aalrr
Atkinson, Andelson Loya, Ruud & Romo
A Professional Law Corporation

Agenda

- Arguments in Favor of Project Labor Agreements
- Arguments Against Project Labor Agreements
- General Questions Related to PLA vs. Non-PLA Agreements



Arguments in Favor of PLA/CBA Agreements

Typically arguments from proponents of PLAs/CBAs are:

1. PLAs/CBAs on public projects offer a guarantee of labor harmony and an agreement to avoid strikes and speedily resolve all labor disputes during the construction of the project.
2. PLAs/CBAs keep a project on time and on budget by guaranteeing wage costs for the life of the project. The wage rates allow for more accurate bids and keep the project on budget. The work rules and no strikes provisions prevent cost overruns due to delays.
3. PLAs/CBAs provide for the use of qualified skilled workers.
4. PLAs/CBAs attempt to require safer working conditions, thereby reducing accidents and worker's compensation claims.

Typically arguments from proponents of PLAs/CBAs are:

5. Union apprenticeship programs can offer skilled workers at lower costs and save money in the long run and assure that local workers are hired and trained in a specific trade, safety and anti-drug programs.
6. PLAs/CBAs foster cooperation between the construction workforce and management because of pre-job conferences and set rules and expectations.
7. PLAs/CBAs provide for a division of labor between trades that provide benefits, such as formal apprenticeship training programs, a network of referrals from union hiring halls, labor discipline and higher skills developed by specialization.

Typically arguments from proponents of PLAs/CBAs are:

8. PLAs/CBAs on public projects can minimize costs and increase efficiency and quality, promote labor-management stability and promote compliance with applicable legal requirements. They address broad public and policy interests, and not just the narrower interests of builders, unions and workers.
9. PLAs/CBAs help systematize and formalize labor terms, which promote efficiency and lower costs. Wages, benefits, work rules, grievance procedure are spelled out for all contractors and this saves time and money because they are not renegotiated with each contractor or subcontractor. It reduces jurisdictional disputes and provides a mechanism to resolve them.
10. PLAs/CBAs reduce the risk of construction delays from worker shortages.
11. PLAs/CBAs provide legal benefits with respect to skilled and trained workforce and formalize a structure to establish local hire goals.

Arguments Against PLA/CBA Agreements

Typically arguments of opponents of PLAs/CBAs are:

1. PLAs/CBAs are not needed to secure “fair” wages to workers on public projects, because these wages are already guaranteed under “prevailing wage” statutes in California.
2. PLAs/CBAs reduce the opportunity for non-union contractors to compete for work on a project, because even if the work is awarded to them, the contractors must operate under union rules and requirements which undermine the efficiencies and economies of the non-union contractors that give them a competitive advantage.
3. PLAs/CBAs tend to restrict the number of bidders on a project and reduce the savings to the public that would accrue if non-union contractors could follow their customary methods.

Typically arguments of opponents of PLAs/CBAs are:

4. PLAs/CBAs tend to discriminate against non-union workers, by requiring them to either join a union or pay union dues and benefit funds to the union from which they are unlikely to derive benefits for themselves. Non-union contractors generally must also continue to pay their regular employee benefits plus union fees and contributions.
5. PLAs/CBAs increase the cost of construction projects, even if the projects otherwise require the payment of "prevailing wages." California's prevailing wage laws set wage levels on public projects and PLA/CBA wages may be set higher than the prevailing wage.
6. The possibility for wildcat strikes and walkouts still exist.

Typically arguments of opponents of PLAs/CBAs are:

7. PLAs/CBAs result in rigid divisions of labor and work rules that slow down productivity. Non-union workforce rules allow for the assignment of work across trade lines, use of laborers to move materials, employment of generalized helpers and the setting of hourly wages based on specific market requirements.
8. PLAs/CBAs discourage non-union bidders who represent at least 80% of the construction industry, particularly minority or women owned businesses. This results in fewer bids and the potential for overbidding. More competitive bidding encourages contractors to bid the lowest possible cost. There is no guarantee that a particular scope will generate enough interest to have a competitive bid.

Typically arguments of opponents of PLAs/CBAs are:

9. A recent study by the National University System Institute for Policy Research entitled “Measuring the Cost of Project Labor Agreements on School Construction in California,” concluded in 2011 that PLAs/CBAs are associated with higher construction cost. The study found the costs are 13% to 15% higher when school districts construct a school under a PLA/CBA. In inflation/adjusted dollars, the study found that the presence of a PLA/CBA is associated with costs that are $28.90 to $32.49 per sq. ft. higher.

Typically arguments of opponents of PLAs/CBAs are:

10. Contracts for construction should be awarded solely on the basis of merit and not union affiliation.
11. If the PLA/CBA requires that all employees be hired through union halls and the non-union contractor has a permanent group of employees, the contractor may only use up to five (5) of his employees and all others must be dispatched from the union. This can create costly organizational and management problems, especially for smaller contractors.

General Questions Related to PLA/CBA
vs.
Non-PLA/CBA Agreements

Will PLAs/CBAs interfere with the CM oversight during the Project Construction Phase?

- May slow down the productivity. Union versus non-union procurement process may impact the construction schedule. Comment from CM: It really won't affect how CM function. We are currently managing union and non-union contractors as a CM.

Which local District's currently use PLAs/CBAs?

- Coachella Valley USD, Delano Union SD, Long Beach USD, Santa Ana USD, San Diego USD, Riverside CCD, LACCD, Norwalk-La Mirada USD, Pasadena USD, Rancho Santiago CCD, Chula Vista Elementary SD, Grossmont-Cuyamaca CCD, Azusa USD, Anaheim Elementary SD, Anaheim Union HSD, Southwestern CCD, LAUSD.

How will PLAs/CBAs affect the State mandated “Pre-Qualification” process?

- PLA and CBA Agreements add a separate layer of qualification process for qualified contractors.

How will PLAs/CBAs affect Projects that bid under the Multi-Prime process?

- The bidding climate is rapidly reducing qualified bidders in all prime trades. PLA and CBA Agreements may add additional impacts to a stressed climate. The CM comment: We are quickly entering a market where contractors will be increasing their profits taken on projects because they can get it. If you go with PLA/CBA and reduce your bidder pool by about half, you are giving contractors the ability to take even more profit, because there will be less or no competition. You will undoubtedly exceed the project budgets.

Will OPCS (State) Fund Projects with PLAs?

- Yes. PLA and CBA Agreements are handled by the District. OPSC may question District contracts during an audit due to added costs not generally encumbered with non PLAs/CBAs.

How will the PLAs affect the OCIP process?

- PLA and CBA Agreements may impact and limit the use of District OCIPs, but unlikely. With OCIP the District handles the project insurance, builders risk, and workers comp. In essence, removing this cost from the contractors, and reducing the bid costs.

Will PLAs/CBAs impact the Bid Pool?

- We would be the only PLA/CBA District except Coachella Valley Unified School District and Riverside Community College District in the Inland Empire area, this could easily make contractors simply skip our bid, reducing the bidder pool. There are some categories that may receive zero or one bid.

How much more will Project costs/bids increase with PLA/CBA participation?

- Surveys are inconsistent and projects are too varied to compare, but expect a smaller bidder pool initially.

What percentage of RUSD student apprenticeship participation is guaranteed with PLAs/CBAs?

- Zero but is a negotiable term.

What is the cost for a Project PLA Administrator?

- Depending on services requested, e.g. project labor coordinator, labor compliance program, frequency of reports, etc. It would likely be over $100K per annum. Costs of negotiating the PLA/CBA would be $20K to $30K and legal services to administer the PLA/CBA of $10K to $15K per year.

Will non-union contractors apprenticeships be impacted?

- Yes—cannot be used.

Are PLAs/CBAs the only way to guarantee fair prevailing wages?

- Past projects have always had a mix of both union and non-union. The California prevailing wage requirement is intended to level the playing field, so you have “equal” pay scales for union and non-union contractors.

What impacts do non-union contractors experience participating in a PLA/CBA project?

- Increased costs, double payment of fringes and unknown workforce.

Are PLAs/CBAs wages different from the required California's prevailing wage laws?

- Should not be.

What is the comparison of District's past projects with union vs. non-union participation? (Ramona & Poly Project)

- See handout.

What is the difference between a Building Trade MC3 Pre-Apprenticeship Program vs. a Labor Pre-Apprenticeship program?

- The Building Trades ARPs use the Multi-Craft Core Curriculum (MC3), a comprehensive, 120-hour apprenticeship preparation curriculum. The MC3 provides a gateway for community residents to gain access to Building Trades registered apprenticeships, which are jointly administered by labor and management [not sure what are the limit participation or age requirements for the MC3 Programs]. The Southwest Regional Council of Carpenters offers Apprenticeship Programs, and Pre-Apprentice Programs curriculum. Their Pre-Apprentice Programs are offered to high school students.

What projects would be covered by a PLA/CBA?

- It is negotiable but we prefer a defined project list as opposed to a dollar threshold.

What is term of PLA/CBA?

- Usually three (3) years or until all project work is completed whichever occurs first.

Is there potential for legal challenge?

- Yes, if PLA/CBA is not negotiated by the District as a market participant as opposed to a market regulator.

Question & Answer Session

Thank You

For questions or comments, please contact:

Thomas W. Kovacich
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tkovacich@aalrr.com

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Loya, Ruud & Romo
A Professional Law Corporation

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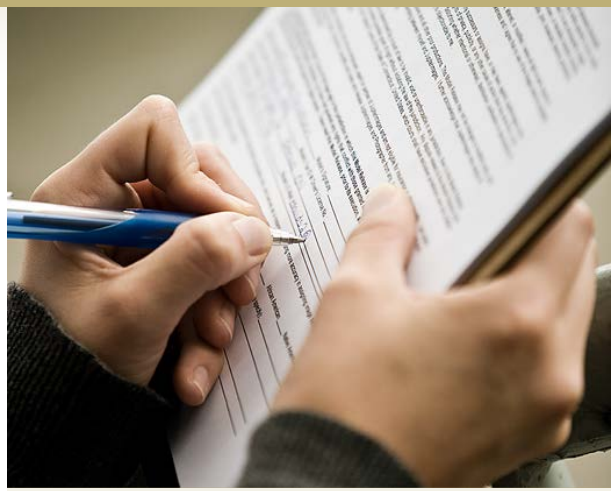

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OFFICIAL RESULTS

Riverside Unified School District
Highgrove Elementary School
New Building and Modernization
Thursday, April 4, 2019 at 2:00 pm

RUSD RIVERSIDE UNIFIED SCHOOL DISTRICT

BC 01 - Earthwork & Paving (A *PREQUALIFIED*)	Location	Bid Bond	Addenda	Total Cash Purchase Price	Alternate #1	Total (Basis of Award)	Certification Union/Non Union	Apparent Low Bid	Revised number if low bid was non union and need to have union.	Varience increase for Union Study
Lee & Stires	Ontario	X	X	$ 890,975.00	$ 5,025.00	$ 896,000.00	UNION	$896,000.00	$ -	$0.00
Crew, Inc.	Rancho Dominquez	X	X	$ 944,320.00	$ 7,500.00	$ 951,820.00	NON UNION			
J/K Excavation	Fontana	X	X	$ 1,093,850.00	0.00	$ 1,093,850.00	UNION			
Roadway Engineering & Contracting Inc.	Mira Loma	X	X	$ 1,698,400.00	$ 100,000.00	$ 1,798,400.00	NON UNION			
BC 02 - Concrete (Building & Site) (C8)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
K.A.R. Construction, Inc.	Ontario	X	X	$ 1,527,000.00	$ 94,000.00	$ 1,621,000.00	UNION	$1,621,000.00	$ -	$0.00
W.D. Gott Construction Co.	Upland	X	X	$ 1,510,000.00	$ 133,000.00	$ 1,643,000.00	UNION			
Bravo Concrete Construction Services, Inc.	Riverside	X	X	$ 1,661,371.00	$ 152,000.00	$ 1,813,371.00	UNION			
BC 03 - Rough Carpentry (B *PREQUALIFIED*)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Infinity Structures, Inc.	Perris	X	X	$ 1,137,000.00	$ 205,000.00	$ 1,342,000.00	UNION	$1,342,000.00	$ -	$0.00
Tomahawk Builders, Inc.	Riverside	X	X	$ 1,898,777.00	$ 261,077.00	$ 2,159,854.00	UNION			
Rocky Coast Builders	Escondido	X	X	$ 1,911,286.00	$ 359,467.00	$ 2,270,753.00	NON UNION			
Cuyamaca Const., Inc.	Santee	X	X	$ 1,989,000.00	$ 298,000.00	$ 2,287,000.00	NON UNION			
Abdellatif Enterprises, Inc.	Mission Viejo	X	X	$ 2,770,000.00	$ 387,000.00	$ 3,157,000.00	UNION			
BC 04 - Casework (C6)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
K & Z Cabinet Co., Inc.	Ontario	X	X	$ 393,820.00	$ 33,520.00	$ 427,340.00	UNION	$427,340.00	$ -	$0.00
Stolo Cabinets, Inc.	Brea	X	X	$ 440,900.00	$ 26,000.00	$ 466,900.00	UNION			
David M. Bertino Manufacturing, Inc.	Colton	X	X	$ 441,380.00	$ 30,935.00	$ 472,315.00	NON UNION			
BC 05 - Roofing & Sheet Metal (C39)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Pacific Builders & Roofing, Inc. dba WSP Roofing	Colton	X	X	$ 1,300,000.00	*$ 35,000.00*	Pulled Bid	NON UNION	$1,929,873.00	$ -	$0.00
Best Contracting Services Inc.	Gardena	X	X	$ 1,847,873.00	*$ 82,000.00*	$ 1,929,873.00	UNION			
Risher Sutherland, Inc. dba United Contractors	San Bernardino	X	X	$ 1,640,000.00	$ 500,000.00	$ 2,140,000.00	NON UNION			
BC 06 - Lath, Plaster, Drywall & Insulation (C9 & C35)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Caston, Inc.	San Bernardino	X	X	$ 938,585.00	$ 180,000.00	$ 1,118,585.00	UNION	$1,118,585.00	$ -	$0.00

OFFICIAL RESULTS

Riverside Unified School District
Highgrove Elementary School
New Building and Modernization
Thursday, April 4, 2019 at 2:00 pm

RUSD RIVERSIDE UNIFIED SCHOOL DISTRICT

Sierra Lathing Co., Inc.	Rialto	X	X	$ 1,100,584.00	$ 179,008.00	$ 1,279,592.00	UNION			
Church & Larsen Inc.	Irwindale	X	X	$ 1,244,000.00	*$ 187,400.00*	$ 1,431,400.00	UNION			
Infinity Drywall Contracting	Anaheim	X	X	$ 1,218,416.00	$ 258,226.00	$ 1,476,642.00	UNION			
BC 07 - Tile (C54)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Inland Pacific Tile, Inc.	San Bernardino	X	X	$ 187,400.00	*$ 28,400.00*	$ 215,800.00	UNION	$215,800.00	$ -	$0.00
Continental Marble & Tile Co	Ontario	X	X	$ 207,387.00	$ 67,443.00	$ 274,830.00	UNION			
Premier Tile & Marble	Gardena	X	X	$ 265,358.00	$ 84,629.00	$ 349,987.00	UNION			
BC 08 - Acoustical (C2)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Preferred Ceilings, Inc.	Brea	X	X	$ 263,300.00	$ 22,900.00	$ 286,200.00	UNION	$286,200.00	$ -	$0.00
Southcoast Acoustical Interiors, Inc	Fontana	X	X	$ 299,940.00	$ 21,430.00	$ 321,370.00	UNION			
C G Acoustics, Inc	Canyon Lake	X	X	$ 307,430.00	$ 20,500.00	$ 327,930.00	UNION			
BC 09 - Floor Covering (C15)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Riccardi Floor Covering, Inc.	Ontario	X	X	$ 200,700.00	$ 14,500.00	$ 215,200.00	NON UNION	$215,200.00		$4,939.00
Continental Flooring, Inc.	Rancho Cucamonga	X	X	$ 202,103.00	$ 18,036.00	$ 220,139.00	UNION		$ 220,139.00	
BC 10 - Painting (C33)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Simmons & Wood, Inc	Lakeside	X	X	$ 209,056.00	$ 11,228.00	$ 220,284.00	NON UNION	$220,284.00		$122,716.00
D & M Painting	Orange	X	X	$ 214,800.00	$ 18,500.00	$ 233,300.00	NON UNION			
Meyer Coatings, Inc. dba Meyer Construction Services	Orange	X	X	$ 289,816.00	$ (21,206.00)	$ 268,610.00	NON UNION			
CTG Construction, Inc. dba C.T. Georgiou Painting Co.	Wilmington	X	X	$ 315,000.00	$ 28,000.00	$ 343,000.00	UNION		$ 343,000.00	
Inland Pacific Coatings, Inc.	Lytle	X	X	$ 322,957.00	$ 22,462.00	$ 345,419.00	NON UNION			
Borbon, Inc.	Buena Park	X	X	$ 362,215.00	$ 30,000.00	$ 392,215.00	UNION			
Western Painting & Wallcovering, Inc.	Monrovia	X	X	$ 380,000.00	$ 20,000.00	$ 400,000.00	UNION			
A.J. Fistes Corporation	Long Beach	X	*Addenda 1-4 NOTED*	$ 193,795.00	$ 18,000.00	*Not Complete*	UNION			
BC 11 - Misc Specialties/Gen Const (B *PREQAULIFIED*)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
RVH Constructors, Inc.	Tustin	X	X	$ 3,819,000.00	$ 300,000.00	$ 4,119,000.00	NON UNION	$4,119,000.00		$175,900.00
Hamel Contracting, Inc. (aka Hamel Concrete, Inc.)	Murrieta	X	X	$ 3,694,008.00	$ 488,008.00	$ 4,182,016.00	NON UNION			

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Inland Building Construction Companies, Inc.	San Bernardino	X	X	$ 3,980,000.00	$ 314,900.00	$ 4,294,900.00	UNION		$ 4,294,900.00	
Bogh Engineering, Inc.	Beaumont	X	X	$ 3,688,715.00	$ 680,285.00	$ 4,369,000.00	NON UNION			
BC 12 - Fire Sprinklers (C16 *PREQUALIFIED*)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Daart Engineering Company, Inc.	San Bernardino	X	X	$ 150,960.00	*$ (33,320.00)*	Non-Responsive	UNION	$158,000.00		$1,000.00
JPI Development Group, Inc.	Murrieta	X	X	$ 118,000.00	$ 40,000.00	$ 158,000.00	NON UNION			
Apex Fire Protection, Inc.	Montrose	X	X	$ 159,000.00	*N/A - Listed*	$ 159,000.00	UNION		$ 159,000.00	
J.G. Tate Fire Protection Systems, Inc.	Poway	X	X	$ 137,400.00	$ 44,500.00	$ 181,900.00	NON UNION			
Kincaid Industries, Inc.	Thousand Palms	X	X	$ 156,000.00	*$ 46,500.00*	$ 202,500.00	UNION			
Fischer, Inc.	San Bernardino	X	X	$ 265,000.00	*Blank*	$ 265,000.00	NON UNION			
BC 13 - Plumbing & Site Utilities(C36 *PREQUALIFIED*)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Empyrean Plumbing, Inc.	Riverside	X	X	$ 848,485.00	$ 125,316.00	$ 973,801.00	NON UNION	$973,801.00		$246,199.00
JPI Development Group, Inc.	Murrieta	X	X	$ 966,000.00	$ 128,000.00	$ 1,094,000.00	NON UNION			
Kincaid Industries, Inc.	Thousand Palms	X	X	$ 1,048,000.00	*$ 172,000.00*	$ 1,220,000.00	UNION		$ 1,220,000.00	
Interpipe Contracting, Inc.	Santee	X	X	$ 1,148,000.00	*$ 167,000.00*	$ 1,315,000.00	NON UNION			
Pro-Craft Construction, Inc.	Redlands	X	X	$ 1,021,000.00	$ 163,000.00	$ 1,184,000.00	NON UNION			
Vernes Plumbing, Inc.	Buena Park	X	X	$ 1,063,700.00	$ 130,000.00	$ 1,193,700.00	UNION			
MPI - Miller Plumbing, Inc.	Glendora	X	X	$ 1,373,000.00	*$ 1,000.00*	$ 1,374,000.00	NON UNION			
Continental Plumbing, Inc.	Mira Loma	X	X	No Bid Amount - Listed - Incomplete			NON UNION			
BC 14 - HVAC (C20 *PREQUALIFIED*)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Mathews Incorporated dba Mathews Mechanical	Corona	X	X	$ 896,000.00	$ 58,300.00	$ 954,300.00	NON UNION	$954,300.00		$156,807.00
Desert Air Conditioning	Palm Springs	X	X	$ 1,032,000.00	$ 79,107.00	$ 1,111,107.00	UNION		$ 1,111,107.00	
Couts Heating & Cooling	Corona	X	X	$ 1,127,000.00	$ 78,000.00	$ 1,205,000.00	UNION			
ACH Mechanical Contractors, Inc.	Redlands	X	X	$ 1,137,000.00	$ 86,000.00	$ 1,223,000.00	UNION			
Air-Ex Air Conditioning, Inc.	Pomona	X	X	$ 1,528,945.00	$ (123,870.00)	$ 1,405,075.00	UNION			
Arrowhead Mechanical Inc dba Arrowhead Sheet Metal	San Bernardino	X	X	$ 1,325,000.00	$ 119,000.00	$ 1,444,000.00	NON UNION			
Los Angeles Air Conditioning, Inc.	La Verne	X	X	$ 1,451,129.00	$ 89,908.00	$ 1,541,037.00	UNION			
RAN Enterprises, Inc.	Huntington Beach	X	X	$ 1,677,000.00	*$ 100,000.00*	$ 1,777,000.00	NON UNION			
BC 15 - Electrical & Low Voltage (C10 *PREQUALIFIED)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**

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RIS Electrical Contractors, Inc.	Riverside	X	X	$ 2,920,000.00	$ 147,000.00	$ 3,067,000.00	UNION	$3,067,000.00		$0.00
Stronghold Engineering, Inc.	Riverside	X	X	$ 3,437,000.00	$ 175,000.00	$ 3,612,000.00	NON UNION			
BC 16 - Landscape & Irrigation (C27)		**Bid Bond**	**Addenda**	**Total Cash Purchase Price**	**Alternate #1**	**Total (Basis of Award)**	**Certification Union/Non Union**	**Apparent Low Bid**	**Revised number if low bid was non union and need to have union.**	**Varience increase for Union Study**
Conserve LandCare	Thousand Palms	X	X	$ 688,500.00	$ 9,000.00	$ 697,500.00	NON UNION	$697,500.00		$5,914.00
Pierre Landscape, Inc.	Irwindale	X	X	$ 673,821.00	$ 29,593.00	$ 703,414.00	UNION		$ 703,414.00	
Southern California Landscape, Inc.	Fontana	X	X	$ 734,300.00	$ (10,000.00)	$ 724,300.00	NON UNION			
Marina Landscape Inc.	Anaheim	X	X	$ 755,200.00	$ (6,000.00)	$ 749,200.00	UNION			
Inland Empire Landscape, Inc.	San Bernardino	X	X	$ 777,700.00	$ (13,875.00)	$ 763,825.00	NON UNION			
					TOTALS	**$ 18,241,883.00**		**$18,241,883.00**		**$713,475.00**

Add Alt $ 1,356,189

Increase for Union.

Riverside Unified School District
Ramona High School Theater Remodel
Reference study - Union and Non-Union

City of Business	Bid Category Company Name	Union or Non-Union	Total Bid	Contracted value	Next value if Non-Union	delta increase to use assumed next union bidder	Notes
	BC# 01 - Building & Site Demolition & Abatement					$ -	
Riverside	T3 Contractors	U	$ 415,000.00	$ 415,000.00			
Norco	Janus Corporation	U	$ 610,300.00				
	BC# 02 - Landscaping & Irrigation						
Fontana	Southern California Landscape, Inc.	NU	$ 88,000.00	$ 88,000.00			No union bids
Diamond Bar	PUB Construction	NU	$ 92,301.00		$ 92,301.00	$ 4,301.00	Used highest number, no other union bid
	BC# 03 - Structural & Site Concrete						
Rialto	Robert Clapper Construction Services, Inc.	NU	$ 1,145,000.00	$ 1,145,000.00			
Murrieta	Hamel Contracting, Inc.	NU	$ 1,199,000.00				
Riverside	Bravo Concrete Construction Services, Inc.	U	$ 1,221,890.00				won't bid PLA (would need to confirm)
San Bernardino	Inland Building Construction Companies, Inc.	U	$ 1,289,000.00		$ 1,289,000.00	$ 144,000.00	
Escondido	Rocky Coast Builders		$ 1,587,164.00				
	BC# 04 - Structural & Misc. Steel						
Highland	KCB Towers, Inc.	NU	$ 1,073,040.00	$ 1,073,040.00			No union bids
Rialto	Columbia Steel Inc.	NU	$ 1,313,128.00				
Fallbrook	SCW Contracting Corporation	NU	$ 1,485,000.00				
Fontana	RND Contractors, Inc.	NU	$ 1,916,852.00		$ 1,916,852.00	$ 843,812.00	Used highest number, no other union bid
	BC# 05 - Architectural Woodwork						
Ontario	K & Z Cabinet Co., Inc.	U	$ 381,270.00	$ 381,270.00			
	BC# 06 - Roofing & Sheet Metal						
Orange	Danny Letner dba Letner Roofing Company	U	$ 949,599.00	$ 949,599.00			
Gardena	Best Contracting Services Inc.	U	$ 1,037,870.00				
	BC# 07 - Doors/Frames/Hardware						
San Bernardino	Inland Building	U	$ 212,500.00				
Rancho Cucamonga	Montgomery	NU	$ 223,710.00	$ 223,710.00			
Pomona	Construction Hardware Co.	NU	$ 227,000.00				
Los Angeles	Design Hardware	U	$ 287,885.00		$ 287,885.00	$ 64,175.00	

Riverside Unified School District
Ramona High School Theater Remodel
Reference study - Union and Non-Union

City of Business	Bid Category Company Name	Union or Non-Union	Total Bid	Contracted value	Next value if Non-Union	delta increase to use assumed next union bidder	Notes
	BC# 09 - Metal Stud/Drywall/Plaster						
Rialto	Sierra Lathing	U	$ 1,306,120.00	$ 1,306,120.00			
San Bernardino	Caston Inc.	U	$ 1,718,585.00				
	BC# 10 - Finish Flooring						
Ontario	Riccardi Floor Covering	NU	$ 68,500.00	$ 68,500.00			
Rancho Cucamonga	Continental Flooring, Inc.	U	$ 79,126.00		$ 79,126.00	$ 10,626.00	
Pomona	Floor Tech America, Inc.	U	$ 89,395.00				
Fontana	Donald M Hoover Company	U	$ 89,911.00				
	BC# 11 - Wood Flooring						
El Cajon	Geary Floors	NU	$ 63,300.00	$ 63,300.00			
Van Nuys	Hur Flooring Co.	U	$ 68,000.00		$ 68,000.00	$ 4,700.00	
	BC# 12 - Acoustical Treatments						
La Puente	Alert Insulation Company, Inc.	U	$ 302,074.00				
Fontana	Southcoast Acoustical Interiors, Inc.	U	$ 345,900.00	$ 345,900.00			
Brea	Preferred Ceilings, Inc.	U	$ 426,300.00				
	BC# 13 - Painting						
Riverside	Triumph Painting	U	$ 128,820.00				
Orange	Painting & Decor, Inc.	NU	$ 139,000.00	$ 139,000.00			
Lytle Creek	Inland Pacific Coatings	NU	$ 176,800.00		$ 176,800.00	$ 37,800.00	Used highest number, no other union bid
	BC# 14 - Miscellaneous						
Riverside	Dalke & Sons Construction, Inc.	NU	$ 684,760.00	$ 684,760.00			
Murrieta	Hamel Contracting, Inc.	U	$ 698,824.00		$ 698,824.00	$ 14,064.00	
San Bernardino	Inland Building Construction Companies, Inc.	U	$ 731,400.00				
	BC# 15 - Fire Protection						
Poway	J.G. Tate Fire Protection Systems	NU	$ 234,567.00	$ 234,567.00			
Murrieta	JPI Development Group	NU	$ 235,000.00				
Santee	Bradshaw Engineering Corp	U	$ 252,540.00		$ 252,540.00	$ 17,973.00	
San Bernardino	Fischer, Inc.	NU	$ 286,236.00				
San Bernardino	Daart Engineering	U	$ 296,047.00				

Riverside Unified School District
Ramona High School Theater Remodel
Reference study - Union and Non-Union

City of Business	Bid Category Company Name	Union or Non-Union	Total Bid	Contracted value	Next value if Non-Union	delta increase to use assumed next union bidder	Notes
	BC# 16 - Stage Equipment (Already Bid)						
Oxnard	LVH	NU	$ 337,800.00	$ 337,800.00			
Owatonna	Wenger Corporation	U	$ 372,492.00		$ 372,492.00	$ 34,692.00	
Portland, OR	Stage Craft Inc.		$ 464,730.00				
	BC# 17 - Fixed Seating (CMAS)						
Beaumont	District (American Seating)		$ 375,000.00	$ 375,000.00			CMAS
	BC# 18 - Site & Building Plumbing						
Buena Park	Vernes Plumbing, Inc.	U	$ 437,800.00	$ 437,800.00			
La Verne	J.M. Farnan & Company, Inc.	U	$ 465,000.00				
Perris	Pipe Constructors	U	$ 530,000.00				
San Bernardino	Fischer, Inc.	NU	$ 586,400.00				
Murrieta	JPI Development Group	NU	$ 621,000.00				
Riverside	Empyrean Plumbing, Inc.	NU	$ 626,252.00				
	BC# 19 - HVAC						
Corona	Couts Heating & Cooling	U	$ 993,000.00	$ 993,000.00			
Pomona	Air-Ex Air Conditioning, Inc.	U	$ 1,019,000.00				
Redlands	ACH Mechanical Contractors, Inc.	U	$ 1,049,000.00				
La Verne	Los Angeles Air Conditioning, Inc.	U	$ 1,065,000.00				
Riverside	Westland Heating & Air Conditioning, Inc.	U	$ 1,070,000.00				
San Bernardino	Arrowhead Mechanical	NU	$ 1,249,000.00				
	BC# 20 - Electrical						
Rancho Cucamonga	Rancho Pacific Electric Inc.	NU	$ 2,734,400.00				
San Bernardino	Budget Electrical Contractors, Inc. dba BEC	NU	$ 2,770,000.00	$ 2,770,000.00			
Riverside	Construction Electric	NU	$ 3,027,000.00				
Riverside	RIS Electrical Contractors, Inc.	U	$ 3,554,000.00			$ 1,176,143.00	
				$ 12,961,166.00		$ 2,352,286.00	Increase to contracted value

Associated Builders and Contractors, Inc.

Southern California Chapter

Champions of Free Enterprise

Riverside Unified School District
Board of Education
3380 14th Street
Riverside, CA 92501

May 22, 2019

RE: Opposition to Project Labor Agreements

Dear Board of Education:

I am writing regarding the study item examining Project Labor Agreements (PLA) before the Operations Sub Committee on May 22nd, 2019. On behalf of the members of the Associated Builders and Contractors Southern California Chapter and the hundreds of workers we train annually, we are **strongly opposed to PLAs**.

PLAs discriminate against 83% of the California construction workforce that are non-union. PLAs have many requirenments that will prevent many local firms from bidding on projects at your district.

This leads to less competition and higher prices for the taxpayers. In fact, many studies have shown that PLAs raise the cost of a project by 13-18%. A recent example of a PLA is in the City of Selma: construction costs on a police station escalated by $3 million dollars and to date no police station contract has been awarded.

Two recent school examples of PLA cost increases are the Alameda Unified School District and the Ohlone Community College District. In Alameda, this district saw an increase on a project with a PLA from original contract amount of $45,516,271 to $54,483,450, or almost $9 million (19.7%). Ohlone Community College District saw bids come in on a project $1.2 million more than their original estimate of $3.8 million. A 32% increase on a school construction project with a PLA.

Bottom line, PLAs increase costs, prevent local non-union companies from bidding on projects, and reduce competition. You can learn more about PLAs at thetruthaboutplas.com. We strongly urge your study committee to reject the use of PLAs.

Best regards,

Kevin Garrett
President / CEO
Associated Builders and Contractors Southern California Chapter

CC: Anaheim City Council

1400 North Kellogg Drive, Suite A • Anaheim, CA 92807 • (714) 779-3199 • Fax (714) 779-3193 • www.abcsocal.org

Anaheim Union High School District / CBA

1. Article 3 Section 3.7 Core employee requirements
   Only Allows up to 5 Core employees / All Others Need to Be Union
2. Article 5 Section 5.2 Benefits
   Only Allows Payments to Union: / Core Employees will never get the benefits
   Medical
   Pensions
   Vacations / Holidays

Project Core Employees Hours: 3,978.38
Contract Value: $859,000.00
Core Employees Union Fee Losses Based on 3978.38 Hours

Item:	Rate		Employee Loss
Dues:	$1.70		$6,763.25
Pensions:	$7.75		$30,832.45
Health & Welfare	$8.16		$32,463.58
Vacation & Holiday	$3.25		$12,929.74
National Pension	$3.00		$11,935.14
UA Training	$.10		$397.84
X-Mas	$.75		$2,983.79
A&J Training	$1.85		$7,360.00
Pipe	$.60		$2,387.03
LMCC	$.35		$1,392.43
Contr. Education	$.30		$1,193.51
Total Fee Per. Hour	$26.11	Total Loss	$110,638.76
Union Base Wage:	$ 46.03		
Total Package	$ 72.14		

Non-Union Package Fees:			
Training:	$1.95		
Other:	$1.25		
Total Fees:	$3.20	Total Normal Cost	$12,730.82
Pensions:	$8.16		
Health & Welfare	$11.50		
Vacation:	$3.25		
Base Wage:	$46.03		
Total Package:	$72.14		
Total PLA / CBA / LOSS			$97,907.94

This cost is added to Our Bids
Added Labor / Production

$97,907.94 or 11.39%

STRONGHOLD ENGINEERING, INC
BUILDING CONTRUCTION EXCELLENCE SINCE 1991

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April 8, 2019

Dr. David Hansen
Riverside Unified School District
3380 14th Street
Riverside, CA 92501

RE: Project Labor Agreements

Dear Dr. Hansen,

The Greater Riverside Chamber of Commerce recently informed us that the Riverside Unified School District is considering the use of project labor agreements. We would appreciate an opportunity to share our perspective on the controversial PLA issue. Stronghold Engineering, Inc. is an ENR ranked, awarding winning, design build, and bid build general contractor with a focused emphasis in government and public works construction. Throughout its celebrated history of 28 years, Stronghold has designed and constructed high profile ground up facilities, technically challenging repair and renovations for historical and non-historical facilities, and significant seismic upgrades, as well as large civil, infrastructure, and electrical projects – all without PLAs. Stronghold is opposed to government-mandated PLAs because they typically restrict competition, increase costs, create delays, discriminate against nonunion employees, and place nonunion general contractors and subcontractors at a significant competitive disadvantage.

In the interest of understanding Stronghold's statement and putting our comments into the appropriate context, the district should know it is difficult to predict precisely how a PLA will impact construction projects without reviewing the exact content of a PLA. The various terms and conditions contained within the contract will significantly increase or decrease costs as well as its anti-competitive and discriminatory effect on bidders. While supporters of PLA mandates make claims to efficiency, cost control, and improved quality, there are no widely published studies establishing these claims. While case studies have had varying results, research regarding the impact of PLA use on the economy or efficiency of projects, in general the information is inconclusive.

There are many ways a mandated PLA can negatively impact timely completion of a project. For example, PLAs require contractors to follow union work rules, which changes the way they otherwise would assign employees to specific job tasks—requiring contractors to abandon an efficient labor utilization practice called "multiskilling" and instead assign work based on inefficient and archaic union craft jurisdictional boundaries that increase labor costs. Open shop contractors achieve significant labor cost savings through multiskilling, in which workers possess a range of skills that are appropriate for more than one work process and are used flexibly across multiple trades on a project or within an organization. This practice has tremendous labor productivity advantages for contractors, but it is forbidden by typical union work rules and, by extension, PLAs. There is no reliable evidence suggesting that a lack of a PLA prevents qualified firms from completing construction project on schedule.

Similar to schedule impacts, there are many ways a mandated PLA can increase costs. Government mandates for PLAs—even when competition, on its face, is open to all contractors—can have the effect of limiting the number of competitors on a project, increasing costs to the government and, ultimately, the taxpayers. This is because government mandates for PLAs typically require contractors to make fundamental, often costly changes in the way they do business. In 2016, 81.6% of construction industry workers in the state were not members of a union. PLAs require nonunion companies to obtain apprentices exclusively from union apprenticeship programs. Participants in federal and state-approved nonunion apprenticeship programs and community or employer training programs cannot work on a job covered by a PLA. This means future construction industry workers enrolled in qualified apprenticeship programs could be excluded from working in their own community if these training programs are not run by unions.

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Stronghold was recently not allowed to bid work in our community due to a PLA placed on a project at Riverside Community College. During a challenging time in our local economy, our local construction work force could have been completing this project and keeping tax dollars local – supporting local business – but were unable to due to the mandated PLA. We would encourage the district to look at the PLA imposed on the Riverside Community College project. Compare local workforce data and see if there was actual cost or schedule savings. We feel the opposite will be true.

All of this This begs the question: Why not eliminate these provisions and therefore eliminate the controversy? The answer: Without these anti-competitive and discriminatory provisions that discourage nonunion contractors from competing for public projects, unions rarely agree to concessions regarding labor peace, work schedules and other provisions that are the cornerstones of the alleged benefits of a PLA. PLA proponents require these provisions because they are crucial to reducing competition and ensuring union contractors have an unfair advantage over nonunion contractors during the competitive bidding process. For these reasons, and more, Stronghold urges the district to reconsider the use of mandated PLAs on future projects.

Stronghold is well versed in the issue and welcomes an opportunity to speak with you further about the negative impacts and your position on this issue.

Thank you for your consideration,

Beverly Bailey

President/CEO

Stronghold Engineering, Inc.

GREATER RIVERSIDE CHAMBERS OF COMMERCE

The Chamber... building a stronger local economy

April 4, 2019

Dr. Angelov Farooq
Riverside Unified School District
President, Board of Education
3380 14th Street
Riverside, CA 92501

Dr. David Hansen
Riverside Unified School District
3380 14th Street
Riverside, CA 92501

RE: Project Labor Agreements

Dear Dr. Farooq and Superintendent Hansen,

It has come to our attention that Riverside Unified School District is considering the use of project labor agreements. The Chamber remains strongly opposed to project labor agreements, as they discourage free and open competition in the bidding process.

While the Chamber supports efforts to renovate, modernize, and expand our critical educational institutions, the use of project labor agreements to achieve these results places nonunion businesses at a disadvantage. Contracting only with union enterprises will obstruct competition and limit the pool of qualified contractors that can realistically bid on a project. Historically, these agreements have led to increased costs for projects, straining finite tax dollars.

For these reasons, the Chamber must oppose any proposals that seek to implement project labor agreements at Riverside Unified School District. I welcome the opportunity to speak with you further regarding our position.

Thank you for your consideration.

Respectfully,

Cindy Roth
President/CEO

cc: Board of Education Members, Riverside Unified School District

CR/as

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UCLA Institute for Research on Labor and Employment

Research & Policy Brief

Number 11 – December 2011

Project Labor Agreements in Los Angeles

The Example of the Los Angeles Unified School District

Uyen Le, UCLA Labor Center, California Construction Academy
Lauren D. Appelbaum, Institute for Research on Labor and Employment

Introduction

Construction industry jobs fall into two camps – either "high-road" or "low-road." High road construction jobs and contracting opportunities are regulated, safe, pay wages that can support a family, provide benefits, and create middle-class careers. Low-road construction jobs on the other hand are unregulated, dangerous, low-paying and offer few opportunities for career advancement. Many public agencies and private companies are using Project Labor Agreements (PLAs) or Project Stabilization Agreements (PSAs) as a tool to ensure that construction work follows the high-road. These agreements, which help to improve economic opportunity within local communities, provide standards for quality, safety, and cost on construction projects.

One major provider of construction projects in the Los Angeles region is the Los Angeles Unified School District (LAUSD). The LAUSD has spent nearly $8.7 billion over the past 7 years on new construction and renovation projects. The LAUSD has signed a PSA and provides a good case study of PSAs in action as utilized by a large, urban employer. PLAs or PSAs are generally created with the intention of meeting certain goals around local hiring and diversity. The LAUSD PSA established employment goals for small, local, emerging, and disabled business enterprises as well as small and minority contractors. This Research & Policy Brief will draw on a larger report published by the UCLA Labor Center's California Construction Academy[1] to discuss the role of PLAs or PSAs in creating high-road construction industry employment and whether the LAUSD met the goals laid out in its PSA.

[1] This Research Brief is drawn from the larger report: Le, U. (2011, November). Project labor agreements: Pathways to business ownership and workforce development in Los Angeles. Los Angeles: UCLA Labor Center, California Construction Academy.

The UCLA Institute for Research on Labor and Employment supports faculty and graduate student research on employment and labor topics in a variety of academic disciplines.

The Institute also sponsors colloquia, conferences and other public programming, is home to the undergraduate minor in Labor and Workplace Studies at UCLA, and carries out educational outreach on workplace issues to constituencies outside the university.

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Project Labor Agreements – Defined

A Project Labor Agreement or Project Stabilization Agreement is a contract between two parties involved in a construction project, the owner or managing entity of the project (or several associated projects) and a consortium of labor unions. Through a PLA, the different craft unions working on a construction project come together to create one agreement with the owner or managing entity, rather than several agreements being created through a separate negotiation with each union. In fact, all contractors and subcontractors involved in the project or projects covered by the PLA need to sign on to the PLA and then are bound by the requirements of the contract. Because all workers on a project are bound by one agreement, PLAs or PSAs have the ability to streamline the negotiation process and increase efficiency through a set of standardized expectations, logistics, wages and benefits, policies, and processes for the negotiation of labor issues.

PLAs or PSAs have been used on a variety of projects and involve a variety of policies and goals. PLAs have been employed in publicly as well as privately funded projects, as well as construction projects that are large, small, urban, rural, technical or standard. All PLAS are negotiated between the owners and the consortium of unions, so that common interests will be addressed. Therefore, they all have a "no-strike" clause and an agreed upon arbitration process for disputes that may arise during the length of the contract. In addition, many PLAs include particular policies such as setting goals for local hiring or diversity. These targeted community workforce policies may serve to increase the employment of groups such as women, people of color, or veterans who have been historically underrepresented in construction work. Furthermore, local hire programs set expectations for the percentage of workers on a project who must reside within a particular area near the work site.[2] When followed, these programs may make union apprenticeship and journey-level programs more accessible to local workers.

In addition to local hiring goals, PLAs may create goals for the number of small business enterprises to be involved in the construction project. A small business enterprise (SBE) in the construction industry may be larger than in other industries because contractors spend much of what they bring in on equipment, materials, and workers, so the profit margin is smaller than for other industries. Thus, a general contractor or heavy construction contractor is considered an SBE if average annual receipts do not total more than $33.5 million. Similarly, specialty trade contractors may be classified as an SBE if their average annual receipts are limited to $14 million. Table 1 gives examples of PLAs or PSAs that have agreed upon hiring and SBE goals.

[2] Workers are considered local when they reside in particular zip codes or some other geographic boundary that has been determined to represent an area close to the work site.

Table 1. Typical workforce requirements of recent PLAs/PSAs in Southern California

Project	% Local Hire	% Apprentices	% Small Business Participation
LAUSD	50%	30% of total workforce 40% of apprentices 1st year apprentices	25%
Los Angeles Community College District	30%	30% of total workforce 50% of apprentices 1st year apprentices	28% Small, Emerging, Disabled Veteran Business Enterprise
San Diego Unified School District	35% in Targeted Zip Codes 70% Residents of SDUSD Zip Codes 100% Residents of SD County	N/A	40% Small, Emerging, Disabled Veteran Women, Minority-Owned Enterprise

Los Angeles Unified School District PSA Requirements

The Los Angeles Unified School District was chosen as an employer to highlight because it is both the second largest school district in the country and employer in Los Angeles County. A number of ballot measures have provided funding for new building and modernization projects throughout the school district. Indeed, since 2004, 111 new schools have been built and many hundreds of repairs and modernizations have been completed.

In 2003, a five-year extension was granted for the Project Stabilization Agreement negotiated for construction projects contracted by the LAUSD. This PSA created a goal of 25% participation by small businesses. In addition, 50% of workers hired must be from local areas (i.e., living in a zip code that is within the LAUSD's eight sub-districts). Workers who are not "core workers" for a contractor will be referred through union hiring halls and 30% must be apprentices (40% of these must be first year apprentices). In an effort to achieve the apprentice level worker goals, the LAUSD runs the "We Build" program. This program provides pre-apprenticeship training that feeds into the apprenticeship programs that the LAUSD draws on to satisfy the hiring goals of its PSA. In addition, the "We Build" program provides placement and referral services to construction apprenticeship programs, and actively works with contractors and unions to ensure that local hire goals are being met. The local hire and apprenticeship requirements will help workers who desire to begin a career in construction to find work and on-the-job training on LAUSD projects.

Los Angeles Unified School District – Outcomes

The California Construction Academy (CCA) report looked at how well the LAUSD lived up to its hiring goals as laid out in the PSA. As with the larger CCA report, this Brief will examine hiring starting in May 2003. This date was chosen because it was when the PSA that included the 25% Small Business Participation goal was renewed.[3] The LAUSD PSA calls for an outside third-party to monitor adherence to the goals of the PSA. The LAUSD chose to use Parsons Construction, Inc.'s (PCI) data tracking server to assess how well they were meeting their goals.

Small Business Participation

The PSA enacted by the LAUSD called for 25% of businesses involved in construction projects for the school district to be classified as small business. Between 2003 and 2011, the LAUSD spent about $8.68 billion on construction. Nearly 48% of the businesses receiving construction contracts from the district were small business establishments. Thus, the LAUSD's use of small businesses in construction projects was almost double its agreed upon goal. Furthermore, 44% of prime contractors that signed on to LAUSD construction projects were small businesses. Finally, even subcontractors working under the LAUSD PSA met the goal of 25% SBE participation.

Table 2. Small Business Participation under LAUSD's Project Stabilization Agreement 2003-2011
Total Construction Contract Awards: $8,678,876,754.78
Total SBE Contract Awards: $4,149,527,603.75
SBE Participation Level: 47.8%

*Source: Le, U. (2011, November). Project labor agreements: Pathways to business ownership and workforce development in Los Angeles. Los Angeles: UCLA Labor Center, California Construction Academy.

Table 3. SBE Prime Contractor Participation Under LAUSD's Project Stabilization Agreement 2003-2011
Total Number of Prime Contractors: 496
Total Number of SBE Prime Contractors: 219
SBE Participation Level: 44%

*Source: Le, U. (2011, November). Project labor agreements: Pathways to business ownership and workforce development in Los Angeles. Los Angeles: UCLA Labor Center, California Construction Academy.

Table 4. SBE Subcontractor Participation Under LAUSD's Project Stabilization Agreement 2003-2011
Total Number of Subcontractors: 4,773
Total Number of SBE Prime Contractors: 219
SBE Participation Level: 44%

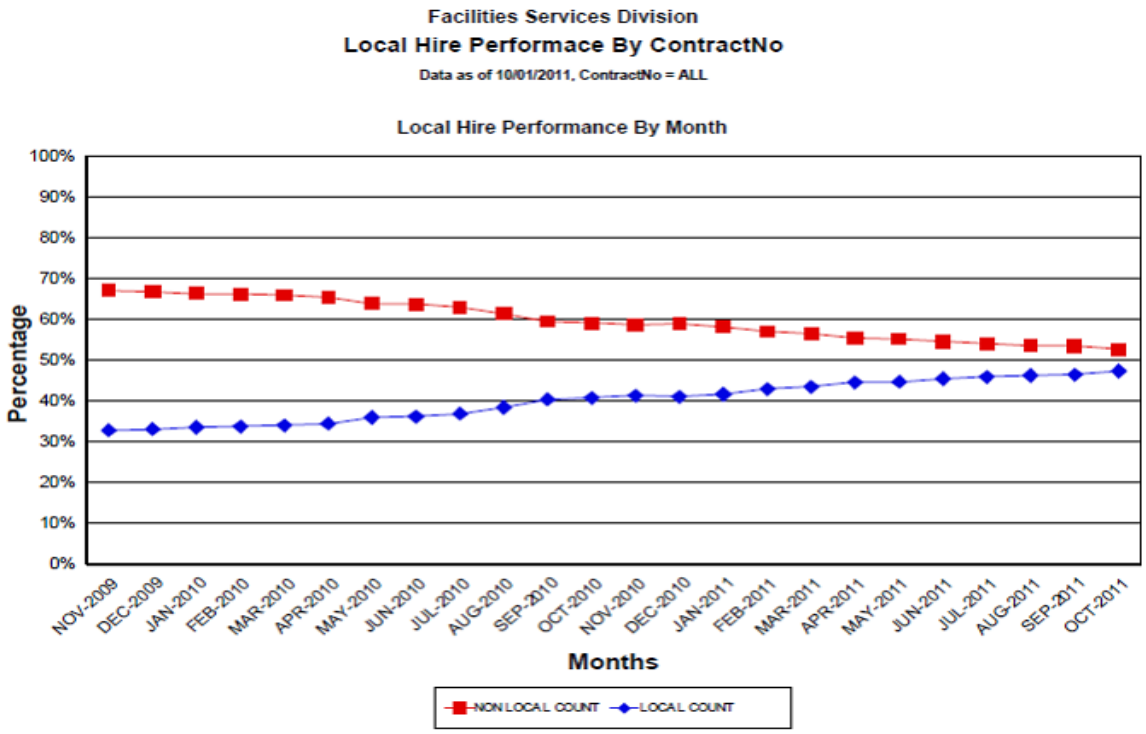
*Source: Le, U. (2011, November). Project labor agreements: Pathways to business ownership and workforce development in Los Angeles. Los Angeles: UCLA Labor Center, California Construction Academy.

[3] The 25% Small Business Participation Goal was first adopted in February 2003.

Local Hire & Apprentices

As noted above, the LAUSD PSA calls for 50% of the individuals hired to work on district construction projects to be from the local area. In addition, 40% of workers should be apprentices and 30% of the apprentices are expected to be first-year apprentices. In order to meet these goals, the LAUSD drew from its "We Build" program. Local residents can enter "We Build" program in order to get pre-apprenticeship training. The LAUSD uses the program as a pipeline for hiring local residents as "We Build" then helps participants to find apprenticeship programs that work on LAUSD construction projects. As a result, between July 2004 and August 2011, 41% of the 96,052 people who worked on LAUSD PSA projects were local hires, almost 32% were apprentices, and 41.5% of those apprentices were first-year apprentices. Thus, the LAUSD met its apprentice goals. While the district did not meet its local hire goal of 50%, with 41% of workers on LAUSD PSA projects coming from the local area, the district seems to be on track to achieve its goal. In addition, the local hire percentage for new construction projects (instead of new construction and renovation projects combined) is at 48%, which is very close to LAUSD's goal of 50%.

Table 5. SBE Local Hire and Apprentice Participation Under LAUSD's PSA 2003-2011		
Total Number of Workers	96,052	
Percent Local Hire		41%
Total Number Apprentices	30,557	
Percent Apprentices		31.8%
Total Number First-Year Apprentices	12,678	
First-Year Apprentices as a Percent of all Apprentices		41.5%



*Source: Le, U. (2011, November). Project labor agreements: Pathways to business ownership and workforce development in Los Angeles. Los Angeles: UCLA Labor Center, California Construction Academy.

Diversity

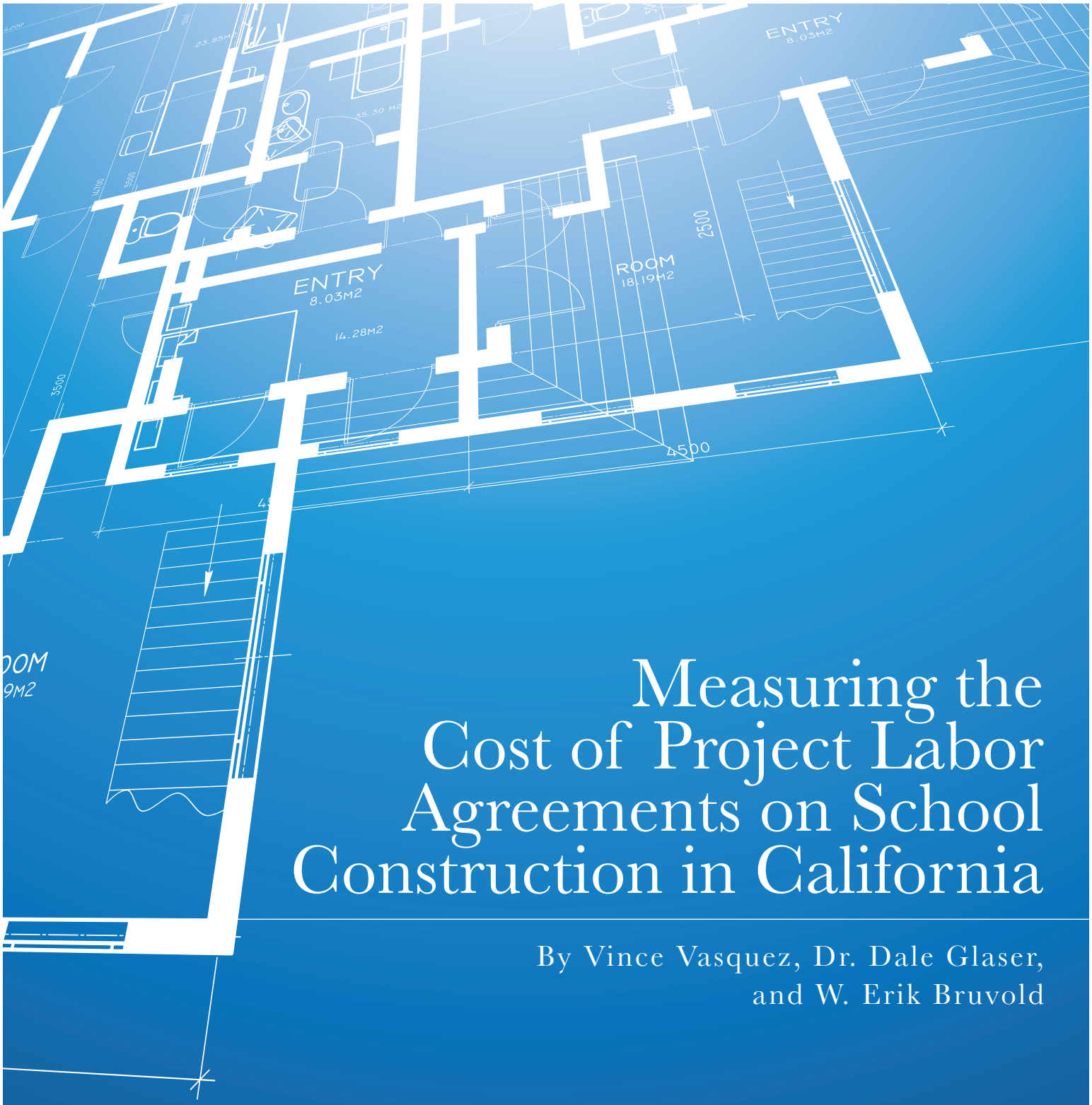
While there was no specific diversity goal in the LAUSD PSA, along with the 50% local hire rate, there was an expectation that the workforce should reflect the local population. Between 2004 and 2011, among workers on LAUSD PSA projects, .38% were Native American, 1.45% were Asian/Pacific Islander, 3.8% were African-American/Black, 61.05% were Hispanic, 23.07% were white, 2.28% identified as other, and 7.97% declined to state. In addition .61% of these workers were veterans and 98.52% were male, while only 1.48% were female. It is not possible to make an exact comparison to local population statistics. However, looking at census data[4] for all people in Los Angeles County in 2010,[5] the workers on these projects seem to over-represent Hispanics, and particularly under-represent Asian/Pacific Islanders, African-American/Blacks, veterans, and women. These are workers who may continue to benefit from the efforts of the LAUSD to improve the percentage of local workers and "We Build" graduates hired to work on LAUSD PSA construction projects.

[4] http://quickfacts.census.gov/qfd/states/06/06037.html. Accessed December 7, 2011.

[5] It is important to note that the census data are for 2010, while the LAUSD data span the period from 2004 to 2011. In addition, the census data reported are for all of Los Angeles County, not just the area covered by the Los Angeles Unified School District. Finally, the census data reported are for all people in Los Angeles, not just the workforce.

Summary

The data provided above indicate that the LAUSD met or is on the way to meeting all of the goals laid out in its PSA. One reason for this success was the explicit support of the highest levels of LAUSD leadership. Furthermore, a clear mission was put forth by the Board of Education to improve facilities and decrease overcrowding in schools. The Board was also held accountable by the local communities, and the "We Build" program received support and became a strong partner in LAUSD's hiring for construction projects. "We Build" and Small Business Program staff ran workshops for LAUSD program and facilities managers to ensure that the leadership of the LAUSD were aware of, and working toward the PSA goals. The LAUSD also ensured that their projects would be extremely well-run and well-managed. Because of this, the district became the "Owner of Choice" for contractors, who then were happy to comply with LAUSD policies in order to get to work with the LAUSD. Finally, the LAUSD haired a third-party monitor to ensure transparency and compliance. The CCA finds that third-party monitors can increase the likelihood of meeting goals. However, there are multiple approaches to PSA program administration and monitoring, so local stakeholders should decide whether an internal administration process or a 3rd party administrator would be successful based on the local context. The LAUSD example demonstrates the importance of committing resources, time, staff, and leadership for successfully implementing a new policy, such as a PLA or PSA.



Measuring the Cost of Project Labor Agreements on School Construction in California

By Vince Vasquez, Dr. Dale Glaser, and W. Erik Bruvold

National University System
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This study was underwritten, in part, by the Associated Builders and Contractors, California Cooperation Committee (ABC-CCC). All conclusions, errors and omission are the sole responsibility of the authors. We thank ABC-CCC for their support.

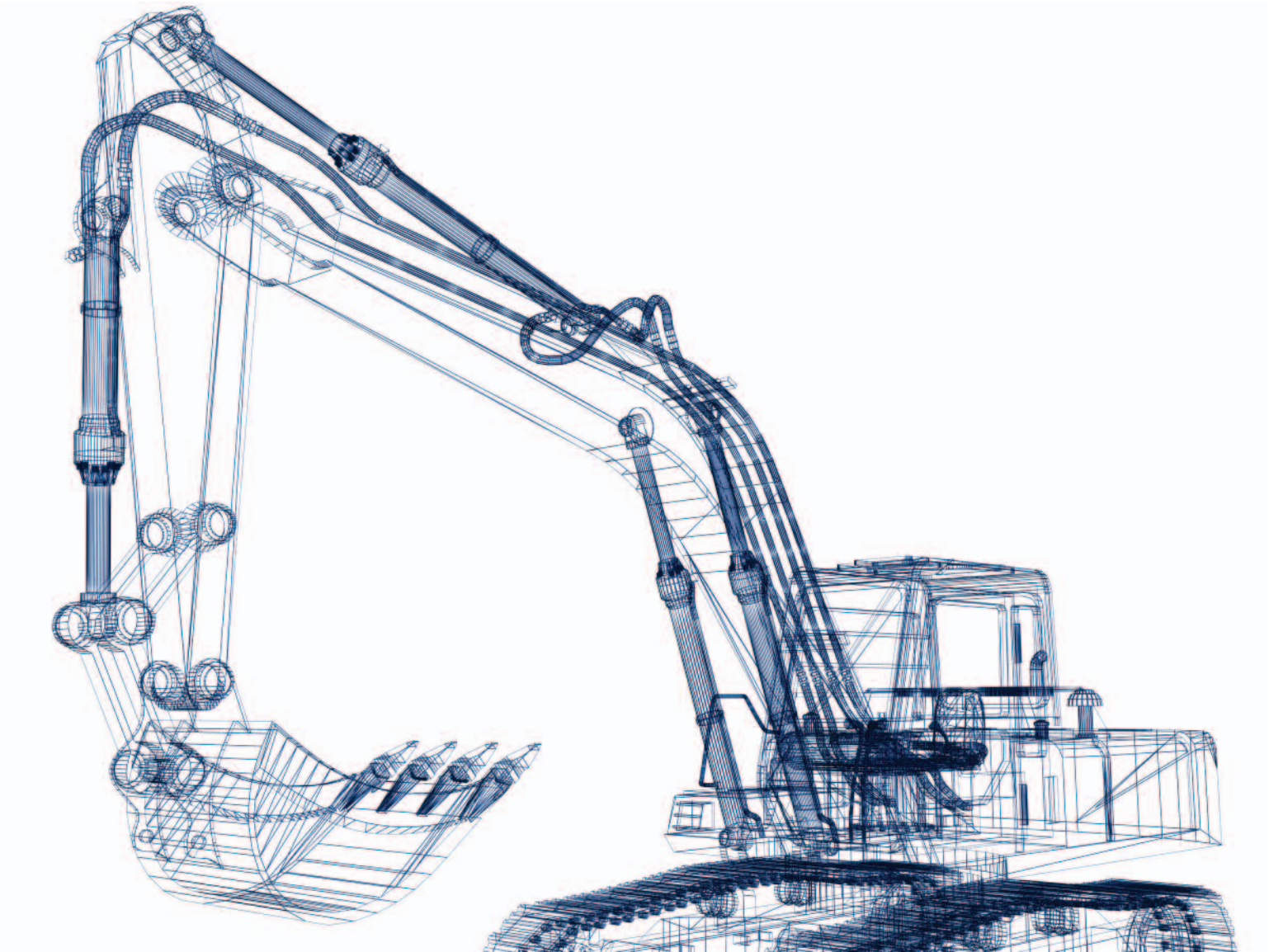
ACKNOWLEDGMENTS

The authors would like to acknowledge a number of individuals that have made the completion of this report possible. All errors, omissions or faults are solely those of the authors.

Recognition is due to Dr. Jerry Lee, Chancellor of the National University System, and the NUSIPR Advisory Committee, whose guidance and support was instrumental from beginning to end. We also would like to thank Dr. Paul Bachman of the Beacon Hill Institute at Suffolk University whose original work in this area inspired us when we first encountered it almost a decade ago.

Jason Clemens of the Pacific Research Institute, Dr. Michael D. Winters of Caldwell Flores Winters, Inc., and Vladimir Kogan, UCSD Ph.D. candidate provided extremely useful insight during critical parts of the project. Additionally, the report benefited from the professional and courteous assistance of many public officials whom promptly provided public documents and answered detailed questions, including various school district representatives, and employees at the Office of Public School Construction and the Division of the State Architect.

The authors would also like to extend a special thank you to the extensive comments they received from Mr. Richard G. Little and his team at The Keston Institute for Public Finance and Infrastructure Policy at the University of Southern California. Their review was requested by the project sponsors, and the final comments the authors received from them are included in this report as Appendix A.



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Project Labor Agreements (PLAs) are collectively bargained contracts that establish working conditions and management rights.

This study examines the relationship between the adoption of PLAs and public school construction costs in California.

EXECUTIVE SUMMARY

Project Labor Agreements (PLAs) are collectively bargained contracts that establish working conditions and management rights. They have been used by both public and private entities since the 1930s. In the debate over the use of PLAs, one of the most prominent areas of disagreement is whether these contracts effect construction costs[1]. Supporters argue that PLAs save public dollars because contractors with highly skilled workers are more likely to participate in construction projects, resulting in higher worker productivity and fewer change orders[2]. Proponents also contend that special provisions in PLAs enhance job site cooperation and ensure quick and effective resolution of labor disputes that would otherwise result in delays that could either increase costs or create severe operational disruptions.

Opponents argue that PLAs increase costs. They claim that the requirements imposed by PLAs discourage nonunion contractors from bidding on projects and subcontractors from participating. This reduced competition, it is claimed, results in overall higher bids. Opponents also claim that the work condition rules required in PLAs increase labor costs and that these are passed onto the project's developer.

This study examines the relationship between the adoption of PLAs and public school construction costs in California. We examine the inflation-adjusted square foot construction costs for 551 school projects in California built between 1995 and 2009. Sixty-five of these projects were built using PLAs in eight separate school districts.

Our research shows that PLAs are associated with higher construction costs. We found that costs are 13 to 15 percent higher when school districts construct a school under a PLA. In inflation-adjusted dollars, we found that the presence of a PLA is associated with costs that are $28.90 to $32.49 per square foot higher.

The relationship between the presence of a PLA and higher school construction costs was found when controlling for other factors that previous study in this field found to effect the costs of construction. We conducted three sensitivity tests, including and excluding projects known to have extraordinary costs and employing statistical tests that neutralize the impact of outliers on results. In each case, we found that school construction costs were higher when PLAs were used.

PROJECT LABOR AGREEMENTS

Project Labor Agreements (PLAs) are contracts signed between construction trade unions and project owners (in this research, school district officials) to establish working site conditions and management rights prior to the start of project construction.[3] On federal projects, PLA use dates back to at least 1938 when a PLA was signed for the construction of the Grand Coulee Dam in Washington State. In 1940, a similar agreement was used during the construction of the Shasta Dam in Northern California. Other major public infrastructure projects built under PLAs include atomic facilities in Oak Ridge, Tennessee; Hanford, Washington; the Nevada Test Site; NASA's Cape Canaveral Launch Operations Center (now known as the Kennedy Space Center), and Mississippi Test Facility (now known as the John C. Stennis Space Center).

There is variation among the provisions in PLAs, but generally they contain two key components. The first involves how labor disputes will be handled. Contractors who are party to PLAs agree not to lock out workers from worksites. In turn, the construction trade unions agree to refrain from strikes. Both parties consent to a process where disputes are resolved without labor disruptions, usually under some form of accelerated arbitration.

The second core component found within PLAs involves who will be hired and the conditions of their employment. Signatories to these agreements recognize labor unions as the exclusive bargaining representative for all project workers. Common to most PLAs is a requirement that contractors use a centralized union job referral system or "hiring hall" as a source of workers.[4] Most PLAs require workers on the project to pay union dues, regardless of their membership status. Also common are requirements that contractors make payments on behalf of their workers to union-affiliated fringe benefit trust funds during the course of the project.

Debates about the efficiency and effectiveness of these agreements are intense. Supporters of PLAs argue that they keep costs down and ensure timely construction (and create ancillary benefits beyond the construction of the project).[5] By agreeing to predetermined wages and benefits by mandating the use of union hiring halls, proponents argue that labor markets are more effective and the supply is more certain. Proponents also argue that worker grievances and alleged contract violations can be resolved quickly and more efficiently under PLAs. As

THIS STUDY, WE BELIEVE, BREAKS NEW GROUND IN SIX IMPORTANT WAYS:

1) The data set examined is more than four times larger than the next largest data set used in similar studies.

2) By confining the study to a single state with a highly detailed and prescriptive education-construction code, we partially controlled for factors like architectural requirements and construction regulations.

3) We have richness in the data. Projects ranged from small school additions in rural school districts to large high school facilities built in densely populated urban areas.

4) The data obtained relate to the final cost of construction.

5) NUSIPR took into consideration how some isolated school construction projects were exceptionally costly for reasons unrelated to labor practices. We did this in several ways, including the use of robust regression tests and respecifying the model, excluding projects like the Los Angeles Unified School District's Belmont Learning Center (now known as the Edward R. Roybal Learning Center).

6) We cross-referenced data obtained from districts via public records access laws with data obtained from the California Division of the State Architect. When there were discrepancies, we contacted the school districts to resolve differences in the data, sometimes utilizing the state's public records access laws for a second time. This approach refined data to a much higher degree than in prior studies and offers a way for future researchers to duplicate our methods and confirm our findings.


In each case, we found
that school construction costs
were higher when Project
Labor Agreements were used.

noted, strikes and lockouts are explicitly prohibited. Proponents also claim that PLA requirements involving apprenticeship programs and improved workplace safety lower workers' compensation claims. In total, proponents argue that these provisions create stability and predictability that reduce delays, cost overruns, and change orders, thus increasing the likelihood that projects will be completed on-schedule and on-budget.

PLA critics argue that the provisions within labor agreements are onerous, discriminatory, and unnecessary. They claim that construction projects under PLAs are less likely to receive interest from nonunionized contractors and subcontractors. This results in fewer bidders and less competition, which in turn, leads to higher costs. Mandatory contributions to union trusts for worker benefits (healthcare, pension, etc.) mean some nonunion contractors and subcontractors will have higher labor costs, some of which will be passed through to the project's owner.

PREVIOUS PLA RESEARCH ON COSTS OF NEW SCHOOL CONSTRUCTION

There is an increasing body of empirical research in both mainstream economics and public policy studies that has looked at costs of new school construction. Many studies focused on a single case. For example, the Pasadena City Council re-bid a contract to build a power plant in 2003, amending the contract and adding a PLA. The lowest bidder, Sermatech Power Solutions, increased its bid by 15 percent, from $14.9 million to $17.2 million, to complete the work. In a local newspaper, the vice president, Nathen Howard, stated that "the additional cost is '100 percent' due to the PLA, and that the city actually removed several work items from the contract."[6] Similarly, Oakland Unified School District retroactively added a PLA to a contract to renovate Burckhalter Elementary School in 2004. The original contract winner (and lowest bidder), M. A. Davies Builders, competed against seven other bidders and offered to complete the job for $1.8 million. After Oakland Unified rebid the contract under a PLA, only three companies placed bids, and the lowest bid came in at $2.2 million, a 22 percent increase.[7]

A handful of studies have gone beyond the case study approach and employed comparative techniques. For example, a 2001 UCLA report examined three utility projects in California built under a PLA and featured the testimony of project managers who broadly reject the criticisms of PLA opponents.[8] In 2010, a report from New Jersey's Department of Labor examined the award costs of new school construction for forty PLA projects and thirty-five non-PLA projects.[9] They found that the inflation-adjusted cost per square foot for PLA projects was 30.5 percent higher than for non-PLA projects. The report also concluded that PLA project costs were higher than non-PLA project costs even when controlling for other variables, such as region and type of school.

These anecdotes and narrow approaches have limited value because they are unable to control for other important variables, such site conditions or the complexity of construction (both of which impact costs). These studies also can exhibit selection bias, as proponents and opponents seek out the best cases with which to illustrate their respective points. Often, the projects examined are so unique as to be of limited utility to those trying to understand the general impact of PLAs across geographic and temporal boundaries.

Two groups of researchers have used statistical techniques and larger data sets to better understand construction costs. The first, the Beacon Hill Institute at Suffolk University, published a study in 2003 comparing school construction costs in the Boston area. Written by Paul Bachman, Darlene C. Chisholm, Jonathan Haughton, and David G. Tuerck (Bachman et al.), the study examined a relatively large sample of 126 school construction projects in the greater Boston metropolitan area, 21 of which were built under a PLA.[10] Comparing the preliminary project bid amounts of their sample across five different models, Bachman et al. determined that PLAs increased the cost of projects by $12 to $20 per square foot, or nine percent to 15 percent more than the average cost of a non-PLA project. The researchers were then able to obtain actual construction cost information for 62 projects, and of these, PLA projects cost $16.51 more per square foot than non-PLA projects, a 12 percent premium.

Bachman et al. analyzed their data using regression analysis, a class of statistical techniques used to test relationships between a dependent variable and one or more independent variables. The authors constructed several models, each containing three to seven independent variables. Factors Bachman et al. examined included the number of floors in the construction project, whether the project was new construction or a renovation, and whether the school was an elementary or high school. The researchers consistently found a statistically significant relationship between the presence of a PLA and higher construction costs across all their models.

Bachman et al. have expanded upon their Massachusetts PLA

work in several subsequent studies. In 2004, they published a study with Jonathan Haughton and David G. Tuerck analyzing 71 public schools in the state of Connecticut, of which 14 were built under a PLA. That study found a significant cost increase related to school district requirements that contractors sign PLAs with unions—an 18 percent premium over the average cost of non-PLA projects.[11] In 2006, Paul Bachman and David G. Tuerck examined a sample of 117 public school construction projects in New York State, of which 19 (16 percent) were PLA projects. Bachman and Tuerck found that PLA projects added approximately $27 more per square foot (in 2004 dollars) to the bid cost of construction, which is a 20 percent increase over the average bid cost per square foot for non-PLA projects.[12]

The other principal group examining this issue is Dr. Dale Belman and Russell Ormiston of Michigan State University and William Schriver and Richard Kelso of the University of Tennessee (Belman et al.). In 2005, they distributed a paper examining 92 school construction projects, 70 of which were in Massachusetts and 22 of which were in Rhode Island and Connecticut.[13] Of these, 10 school projects (10.8 percent) were built under a PLA. Belman et al. gradually increased the number of variables tested from three to 30 across six different models.[14] In the first two more leanly specified models, PLA projects in Massachusetts were initially found to be statistically significant, raising the cost of construction by an additional $28.57 to $32.31 per square foot, or 16.6 percent to 20.2 percent more than non-PLA projects. Belman et al. argued, however, that since contractors were often required to sign PLAs for the most complex, largest projects, a robust test would include additional explanatory variables that were likely to impact costs. The authors wrote, "Our research also indicates that schools built under PLAs are often more complex projects than those built without PLAs and that, absent appropriate controls for the nature of the construction, the increased costs associated with complexity are erroneously attributed to PLAs."[15] This expanded analysis found that while the schools built under PLAs had higher costs, this increase was not statistically significant. Belman et al. concluded that while "simple" statistical tests may find that PLAs raise the cost of school construction, "this is not found in more complete specifications that better fit the data."[16]

An updated 2006 brief from Bachman et al. took issue with the Belman et al. analysis, stating that "a cautious conclusion would be that the sample used is not large enough to permit one to conclude that PLAs have no significant effect on costs."[17] As Bachman points out, the Belman study failed to find any support for the proposition that PLAs actually lower construction costs. More recently, in 2010, Belman et al. reexamined their original 2005 data to determine whether it is possible to distinguish between the cost effect of PLAs and the effects of project characteristics commonly found in schools built under PLAs.[18] Looking at seventy school projects from Massachusetts, Belman et al. ran a series of statistical models that attempted to sift through the impact of variables, such as whether a project was built in Boston, within the Boston Public School District, and under a PLA.[19] Ultimately, the authors conclude that there is significant conflation between the presence of PLAs and characteristics commonly associated with PLA projects, and that, absent of a larger data set, it is not possible to statistically isolate their individual explanatory power over project costs. Belman et al. also found that "PLA and non-PLA schools have different and largely non-comparable characteristics" that impair researchers' ability to use advanced statistical techniques that could provide answers in the PLA debate.[20]

CALIFORNIA SCHOOL CONSTRUCTION AND PLAs

This research seeks to expand upon prior work by looking at the effects of PLAs in California. The Belman et al. and Bachman et al. studies provide valuable insight into the fiscal impact of PLAs in general. However, both sides have insufficient sample sizes, which make it difficult to isolate the impact of PLAs from the myriad of other factors that can impact costs, especially in the urban settings where they are frequently employed. The National University System Institute for Policy Research (NUSIPR) set out in May 2010 to assess the impact of PLAs on the cost of public school construction projects in California. The timing for this research is particularly appropriate, as debates over the use of PLAs in school construction are becoming increasingly pronounced.

To date, 24 California K–12 school districts have adopted PLAs covering school construction. In the course of our research, we were ultimately successful in making contact with eight of these school districts: Los Angeles Unified, West Contra Costa Unified, San Leandro Unified, Roseville City Elementary,[21] Pittsburg Unified, Oakland Unified, Sacramento City Unified, and Santa Ana Unified. This allowed us to initially identify 127 PLA projects with significant variation on several independent variables that prior research suggested affect school construction costs.[22] These variables include total square footage; the start and end date of project construction; whether demolition was required prior

to construction; the number of stories; and whether a gym or swimming pool was built under the project.

In addition, California has an education code that is highly prescriptive with respect to construction standards and requirements. Through the Division of the State Architect (DSA), the State of California enforces minimum statewide standards for school design, structural safety, construction, and planning.[23] We believe this highly prescriptive code creates greater uniformity and reduces regulatory variance among different school projects. This isn't to say there are no differences or outliers, but, compared to the areas examined by previous studies, California schools look remarkably similar with respect to design, construction specifications, and the kind of features that are or are not included.[24]

Finally, this study benefits from two factors unique to California that facilitated data collection. First, the State of California has a comprehensive public records disclosure law for state and local governments. Rather than depending on interviews or voluntary data from project architects or subcontractors, we were able to gather data about costs and project characteristics directly from school districts. (For a copy of our Public Record Act requests, see appendix B.)

Secondly, data on final construction costs for California public schools completed over the last 10 years are available in a searchable database located on the California Division of the State Architect website. This database was an invaluable tool for confirming the data provided by districts and identifying the presence of discrepancies that required follow up, refinement, and confirmation.

METHODOLOGY

As with the Bachman et al. and Belman et al. studies, we first gathered school construction information from McGraw Hill Construction/Dodge reports. This data source, which is used by general contractors to prepare work bids, lists numerous features about construction projects, including the school district, site location, square footage, estimated project value, and construction start date. In many cases, it also contains contact information for the district, including in most cases a mailing address and, occasionally, the names of actual individual employees.

We began by identifying all California school construction projects built from 1996 through 2008, which yielded almost 11,000 projects. To reduce this number to a workable set of cases, we limited our analysis by square footage and project value, similar to other studies. For example, Bachman et al. 2003 limited their Dodge data to school projects from the greater Boston area that ranged between 40,000 and 400,000 square feet, were valued at $5 million or more, and were built between 1995 and 2003.[25] The Belman et al. study limited its scope to the years 1996–2002, with no specified size range. With an interest in obtaining both current data and historical data, NUSIPR targeted new construction projects between 40,000 and 400,000 square feet, with a valuation of $5 million or more, and which Dodge identified as being built between 1996 and 2008.[26] These parameters reduced our data set to 1,023 school construction projects.

Both Belman et al. and Bachman et al. verified Dodge data with surveys of architects and contractors involved in the projects and directly obtained final construction data from school district officials. Faced with a significantly larger sample size, we chose a different approach, soliciting data from individual school districts via a California Public Records Act request.[27]

We requested information from 319 different California school districts. The letters listed the school construction projects of interest and requested information or documentation on the following:

- The project's total square footage
- The project's total construction cost
- The start date and end date of construction
- The type of school project built (elementary, high school, etc.)
- Whether the project was built under a PLA
- Whether the project was new construction or a modernization of an existing facility
- The number of stories built
- Whether the project included an HVAC system
- Whether the project included the construction of a gym
- Whether the project included the construction of a swimming pool
- Whether the project required demolition of existing structures[28]

This request generated complete data from approximately 50 percent of schools. Subsequently, NUSIPR followed up at least three times with school officials to obtain missing or incomplete data or to refine the parameters of our request. Over the course of seven months of active data collection, we made telephone

In addition, California has an education code that is highly prescriptive with respect to construction standards and requirements.

calls at least twice to school districts that failed to respond to the initial request or did not provide the data requested in their response. If we still did not receive data, the projects were eliminated from the sample.

We then verified the data from a second source, the California Division of the State Architect's (DSA) online Project Tracking System.[29] The data comes from a form submitted by the districts to the DSA when the construction contract is awarded and the change order documents are submitted to the DSA during the final review process.

We found it necessary to use both information sources. The DSA database contains neither information about construction site characteristics nor uniform information about the square footage of projects. In several instances, a new construction project is reported out in phases or aggregated with other projects undertaken by the district. Ultimately, the greatest value of the DSA database was in identifying discrepancies in the PRA information provided or in helping us to identify those school districts that required follow-up and refinement.

To control for the rise in construction costs during the period of time in our sample, we adjusted for inflation using the California Construction Cost Index (CCCI), which averages the costs of industry labor wages and building materials in Los Angeles and the San Francisco Bay Area.[30] We adjusted the cost per square foot of construction using a constant of 2000 dollars. This adjustment is similar to the "deflation" techniques used by both Bachman et al. and Belman et al.[31]

RESULTS

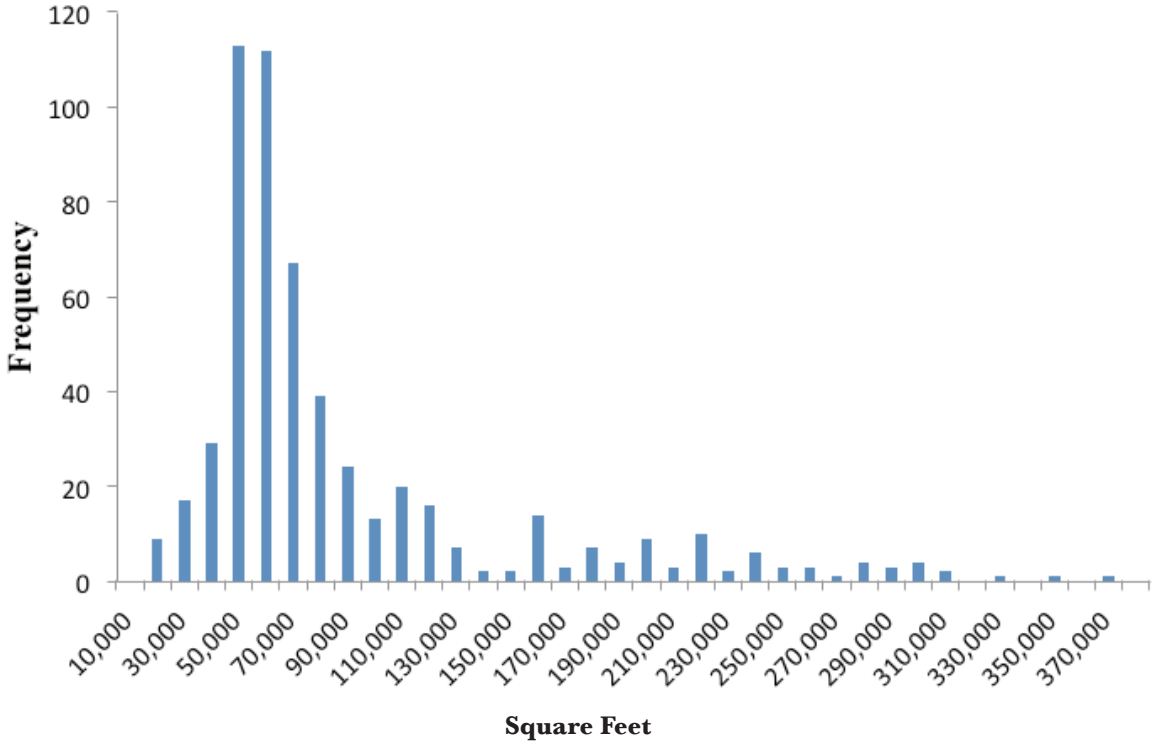
Our final sample size consisted of 551 school construction projects (a 53.8 percent inclusion rate) originating from 180 school districts and spread across 37 counties.[32] Our sample size is four times larger than any other data sample featured in a published PLA study.[33] (Chart 1)

Overall, 25.7 percent of projects (142) in our sample were classified as urban schools, 44.6 percent (246) as suburban schools, and 29.5 percent (163) as rural schools. Of these, 333 were elementary schools, 248 were single story projects, and 259 had a gym or multi-purpose room. Few projects contained

CHART 1: PLA Statistical Study Comparison

Study Name, Author	Year of Study	Number of Schools	Dependent Variable	Data Independently Available?
"The Effect of Project Labor Agreements on the Cost of School Construction," Belman et al.	2005	92	inflation-adjusted final cost of construction per square foot; inflation-adjusted log of final cost per square foot	No
"Do Project Labor Agreements Raise Construction Costs?," Bachman et al.	2003	126	inflation-adjusted bid cost of construction per square foot	No
"Do Project Labor Agreements Raise Construction Costs?," Bachman et al.	2003	62	inflation-adjusted final cost of construction per square foot	No
"Project Labor Agreements and Public Construction Costs in New York State," Bachman and Tuerck	2006	117	inflation-adjusted bid cost of construction per square foot	No
"Project Labor Agreements and Public Construction Costs in Connecticut," Bachman et al.	2004	71	inflation-adjusted final cost of construction per square foot	No
"Measuring the Cost of Project Labor Agreements on School Construction in California," Vasquez et al.	2011	551	inflation-adjusted final cost of construction per square foot	Yes

CHART 2: Histogram of Square Footage Figures in Sample



swimming pools (27), and less than a quarter required the demolition of existing structures on site (132). Within our sample, we were able to positively identify 486 school construction projects as non-PLA, while 65 (11.7 percent) were built under a PLA. This ratio is similar to the ones found in Belman et al. and Bachman et al. Most schools were built in Southern California and the Central Valley. As Charts 2 and 3 show, most school projects ranged from 50,000 to 70,000 square feet, and $10 to $20 million in total construction costs.

The average inflation-adjusted cost per square foot for these projects in California was $228.56 with a standard deviation of $78.08. Construction projects under PLAs were found to cost substantially more, with an average (mean) adjusted cost per square foot of $302.98, and a standard deviation of $102.21. In contrast, projects not built under PLAs had a mean cost of $218.61, with a standard deviation of $68.51.

This is not the whole story. If, for example, PLAs are principally found on projects in urban areas where the demolition of structures is necessary, or on multi-story projects, the observed cost differences may be a result of these project characteristics, not a PLA. Hence, we must isolate the impact of PLAs on adjusted square foot costs from other variables. To do so, we conducted a multiple linear regression analysis of the construction data. We utilized the ordinary least squares method,[34] conducting several sensitivity tests and specified models.

In our final model, we found a statistically significant relationship between PLAs and inflation-adjusted per square foot costs. Controlling for other factors that effect the costs of construction, this test indicated that new school construction projects built under a PLA cost $28.90 (13 percent) more per square foot than non-PLA projects. The following predictors also attained statistical significance: the presence of a gymnasium or pool, whether demolition of structures was required, the average date of construction, and the square footage.[35] (Chart 5)

The percentage of variability that can be explained by a statistical model is often reflected by the value of the model's r-squared value. For the full NUSIPR model, 27.9 percent of the variation in total cost was accounted for by the set of predictors. An r-squared value of 0.279 would generally be considered to be a large effect size for social science research. It is also within range of the r-squared estimates found in previous research.[36] Similar to Beacon Hill, NUSIPR conducted a weighted regression of the sample. This test found that

CHART 3: Histogram of Total Project Cost Figures in Sample in Present Dollars

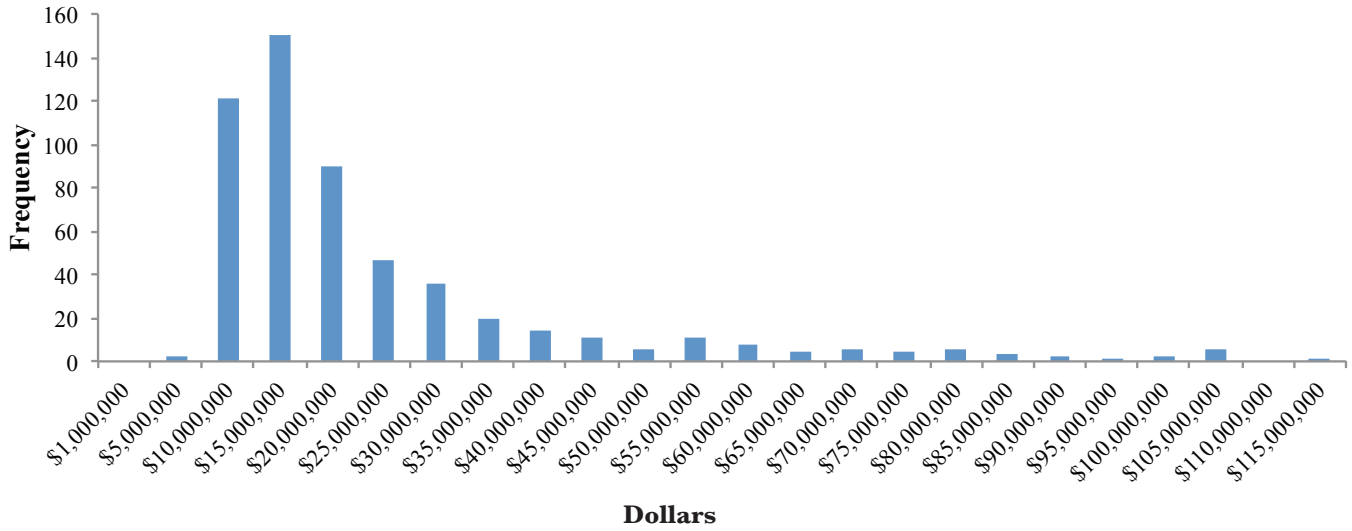


CHART 4: PLA Statistical Study Results Comparison

Study Name, Author	Year of Study	Number of Schools	Additional Cost per Square Foot	Percentage Increase Cost
"The Effect of Project Labor Agreements on the Cost of School Construction," Belman et al.	2005	92	$29-$32	17%-20% *
"Do Project Labor Agreements Raise Construction Costs?," Bachman et al.	2003	62	$12-$20	9%-15%
"Project Labor Agreements and Public Construction Costs in Connecticut," Bachman et al.	2004	71	$30	18%
"Measuring the Cost of Project Labor Agreements on School Construction in California," Vasquez et al.	2011	551	$29-$32	13%-15%

**As noted on Page 5, the fully specified model did not find PLAs were significant.*

PLAs remain statistically significant and increase costs by $32.49 per square foot of school construction, or 15 percent, compared to non-PLA projects. The r-squared value increased slightly to 0.2861, and all other predictors were determined to be significant. Based on the results from the weighted regression and ordinary least squares tests, we found overall that PLAs increase the adjusted square foot final costs of construction by 13%-15%, or approximately $29-$32 per square foot. These results are similar to those found from samples of school construction projects in other states, where final project costs were examined (See Chart 4).

ROBUST REGRESSION AND ROBUST ESTIMATOR RESULTS

In statistical science, probability theory suggests that random values will cluster fairly consistently around the mean or average value. This is known as normal distribution, and it typically takes the shape of a bell curve on an x and y axis. However, when the sequence of random data points lacks this

CHART 5: Ordinary Least Squares Analysis Results

Regression Technique	Variable	b[1]	t-statistic	p-value	Significant?[2]
Ordinary Least Squares *r2 = .279* *F(8,542) = 26.42* *p < .05*	PLA	28.902	2.523	.012	Yes
	Elementary	-8.599	-1.186	.236	No
	Stories	-10.299	-1.419	.157	No
	Gym	25.304	3.511	< .001	Yes
	Pool	38.141	2.585	.010	Yes
	Demolition	18.529	2.216	.027	Yes
	Square Footage	-0.0002	-3.922	< .001	Yes
	Average Date	7.852	8.367	< .001	Yes

[1] Unstandardized partial coefficient
[2] $\propto = 0.05$

predicted uniformity, the data are called "heteroscedastic." Special statistical tests can be used to adjust values in the event of heteroscedasticity in a data set, dampening the effects of outliers at the far extreme of the data. In an effort to provide a rigorous analysis of our data, NUSIPR used two special techniques to address heteroscedasticity as well as outliers: the robust standard errors test (using Huber-White standard errors) and a robust regression. Both are standard robustness techniques, and Bachman et al. also used a Huber-White test to verify robustness.

Robust regression is a statistical technique that is used in conjunction with predictive models when the data set lacks normal distribution, or when there are substantive outliers that may skew the results from a standard regression test. In a robust regression analysis, the influence of outliers is down-weighted, allowing more statistical relationships to appear in the results. A robust standard errors test gives a more precise estimate of relationships when there is heteroscedasticity, or takes it into account. Using Stata 11.0 statistical software, we ran both analyses. In both cases, the presence of PLAs was found to be statistically significant. The complete results of these two statistical tests are shown in chart 6.

ADDITIONAL RESEARCH QUESTIONS

When testing the model for the full sample of schools, 27.9 percent of the variation in the CCCI adjusted cost per square footage was accounted for by the set of predictors. This is generally considered to be a large effect size. A sizeable amount of the variability in the outcome was accounted for in the model. Moreover, across the three alternative regression techniques (i.e., robust regression, regression with robust standard errors, and weighted regression), PLA and four other covariates (gym, pool, square footage, and average date) held as significant predictors with a similar pattern of results.

One issue that arose was that during this period, there were a handful of projects that had extraordinary circumstances that drove costs higher. Several of these were built under a PLA. So as not to bias the results, we eliminated from many of our initial statistical tests projects, such as the Edward R. Roybal Learning Center (formerly known as the Belmont Learning Center) and the Robert F. Kennedy Community Schools Complex.[37] We found that their inclusion or exclusion did not impact the results.

Furthermore, a peculiarity in our data set was the large number of PLA school projects that were built by a single school district, Los Angeles Unified (LAUSD). Part of the reason for this is that LAUSD is the largest school district in the state and has built projects using PLAs since 1999.

To address potential concerns about the disproportionate inclusion of projects from LAUSD, an alternative statistical

CHART 6: Robust Regression Analysis Results

Regression Technique	Variable	b[1]	t-statistic	p-value	Significant?[2]
Robust Regression	PLA	30.549	2.880	0.004	Yes
r2 = .211	Elementary	-12.095	-1.800	0.072	No
F(8,542) = 28.56	Stories	-4.416	-0.660	0.511	No
p < .05	Gym	15.437	2.320	0.021	Yes
	Pool	42.741	3.130	0.002	Yes
	Demolition	10.832	1.400	0.162	No
	Square Footage	-0.0002	-3.470	0.001	Yes
	Average Date	9.051	10.430	< .001	Yes
Robust Standard Errors	PLA	28.903	1.990	0.047	Yes
r2 = .279	Elementary	-8.599	-1.040	0.297	No
F(8,542) = 20.49	Stories	-10.299	-1.460	0.144	No
p < .05	Gym	25.303	3.380	0.001	Yes
	Pool	38.141	2.200	0.028	Yes
	Demolition	18.529	2.060	0.039	Yes
	Square Footage	-0.0002	-3.550	< .001	Yes
	Average Date	7.852	7.110	< .001	Yes
Weighted Regression (Sqr Foot)	PLA	32.498	2.980	0.003	Yes
r2 = .286	Elementary	-2.548	-0.320	0.746	No
F(8,542) = 27.15	Stories	-10.268	-1.550	0.122	No
p < .05	Gym	25.237	3.320	0.001	Yes
	Pool	29.949	3.160	0.002	Yes
	Demolition	20.948	2.580	0.010	Yes
	Square Footage	-0.0001	-2.680	0.008	Yes
	Average Date	7.420	8.190	< .001	Yes

[1] Unstandardized partial coefficient

[2] $\propto = 0.05$

model was examined that codes LAUSD as a dummy variable. PLAs did not yield statistical significance from these specialized tests. (Chart 7)

However, 47 out of 48 (97.92 percent) of the LAUSD school projects used PLAs, resulting in a large correlation effect with PLAs (correlation of LAUSD status and PLA is 0.825). This substantive overlap results in an inability to explain and identify the unique contribution of PLAs.[38] In fact, when the PLA variable was removed from the model and a new variable was included that identified whether a project was built in LAUSD, there were starkly similar results. Both variables (PLA and LAUSD) yielded statistical significance, and 28.7 percent of the variation in cost was accounted for.

When we test an alternative statistical model that removes all LAUSD projects from our data set, and test for fewer variables including square footage (and its squared, nonlinear counterpart), whether the project was a modernization, type of school, and presence of PLA, the r-squared value decreases to 9.6 percent,

CHART 7: LAUSD Regression Analysis Results

Regression Technique	Variable	b[1]	t-statistic	p-value	Significant?[2]
Ordinary Least Squares	PLA	6.598	.395	.693	No
r2 = .284	Elementary	-10.038	-1.379	.168	No
F(9,541) = 23.81	Stories	-10.283	-1.420	.156	No
p < .05	Gym	25.545	3.551	< .001	Yes
	Pool	36.675	2.488	.013	Yes
	Demolition	15.088	1.764	.078	No
	Square Footage	-0.0002	-4.022	< .001	Yes
	Average Date	7.944	8.471	< .001	Yes
	LAUSD	33.718	1.830	.068	No
Robust Regression	PLA	11.021	0.71	0.478	No
r2 = .216	Elementary	-12.918	-1.91	0.057	No
F(9,541) = 27.05	Stories	-3.998	-0.59	0.553	No
p < .05	Gym	15.445	2.31	0.021	Yes
	Pool	40.623	2.96	0.003	Yes
	Demolition	7.625	0.96	0.338	No
	Square Footage	-0.0002	-3.45	0.001	Yes
	Average Date	9.265	10.63	< .001	Yes
	LAUSD	35.851	2.09	0.037	Yes
Robust Standard Errors	PLA	6.599	0.35	0.727	No
r2 = .288	Elementary	-10.039	-1.23	0.22	No
F(9,541) = 18.69	Stories	-10.283	-1.45	0.147	No
p < .05	Gym	25.544	3.41	0.001	Yes
	Pool	36.675	2.11	0.036	Yes
	Demolition	15.088	1.64	0.102	No
	Square Footage	-0.0002	-3.66	< .001	Yes
	Average Date	7.944	7.1	< .001	Yes
	LAUSD	33.719	1.48	0.138	No
Weighted Regression (Sqr Foot)	PLA	13.354	0.82	0.410	No
r2 = .289	Elementary	-3.493	-0.44	0.657	No
F(9,541) = 24.48	Stories	-10.322	-1.56	0.120	No
p < .05	Gym	25.482	3.35	0.001	Yes
	Pool	28.673	3.02	0.003	Yes
	Demolition	18.030	2.17	0.030	Yes
	Square Footage	-0.0001	-2.75	0.006	Yes
	Average Date	7.519	8.29	< .001	Yes
	LAUSD	28.447	1.59	0.111	No

[1] Unstandardized partial coefficient

[2] $\propto = 0.05$


Our study, the largest and most comprehensive to date, provides new insight into the fiscal impact of Project Labor Agreements.

showing an appreciable decrement in model fit. PLA and all the other variables are still statistically significant. That said, the correlation of PLA and the price per square foot is only 0.163 and overall model fit is not impressive (r-squared = 0.096).

PLA projects and LAUSD schools both so strongly co-vary that it hinders us from delineating to what extent each uniquely contributes to explaining the variability in cost. We do, however, control for factors, such as: urban location, demolition, and multiple stories in our fully specified model. It is unknown what additional factors might plausibly account for higher construction costs in LAUSD projects. However, as previously noted, we do see a reduction in model fit when the LAUSD projects are excluded from the analysis. Hence, they are a substantive contributor to the overall fit of our model.

NUSIPR took additional efforts to resolve the collinearity in our data set. Following the methodology explained in the Belman 2010 study, we created a two-step propensity scoring technique. We first performed a binary logistic regression model, using all of the predictors that were originally used to predict the CCI adjusted cost per square foot, with the exception that the grouping variable of interest (PLA vs. non-PLA) now served as the binary outcome. This was accomplished using a propensity score matching macro developed for statistical software (SPSS). Based on the regression solution (the partial logistic coefficients), a predicted probability of whether a project was built under a PLA or not was computed for each of the individual construction projects. This predicted probability served as the propensity score.

Unlike Belman et al., we were able to identify a region of common support, matching 65 PLA projects with 65 non-PLA projects that, but for the absence of a PLA, are similar with respect to other project characteristics, such as the use of demolition and total square footage. Propensity weights can be utilized as a covariate at the first stage of a hierarchical approach to multiple regression. In our second phase, we analyzed the matched set of 130 projects (incorporating a propensity weight covariate) using the ordinary least squares method. We found that PLAs were not statistically significant. Similar results were found when the propensity score was omitted from the model.

However, when PLAs were analyzed in isolation from the other covariates, using a one-way ANOVA test, we found them to be statistically significant. These results tell us that while there is evidence that PLAs are associated with higher project costs, collinearity is still present in the data set, hampering the ability to disentangle the unique contribution of the individual covariates on a wider scale. Interestingly, within our sub-sample of matched schools, we found the average CCI adjusted cost per square foot of non-PLA projects to be $244.69, which is significantly lower than the cost of PLA projects ($302.98/per square foot).

CONCLUSION

Our study, the largest and most comprehensive to date, provides new insight into the fiscal impact of PLAs. Our models suggest a significant positive relationship between PLAs and costs, and they hold true under a number of statistical tests and specifications.

Perhaps most definitively, our examination of the data found no support for the proposition that PLAs reduce costs. Even if one places great weight on the reduction of model fit when excluding LAUSD projects, ours is now the third statistical research project released since 2000 that failed to find evidence that these agreements help lower school construction costs.

Our findings are important for California. Over the last decade, state voters have passed more than $64 billion of school construction bonds (statewide and local) to build new classrooms and modernize existing facilities that have deteriorated over time.[39] In 2007–2008, California public elementary and secondary school districts spent more than $8.2 billion on construction.[40] With this expenditure of funds, the number of statewide school construction projects has swelled. One estimate has identified 21,399 new classrooms built in California from 2002 to 2010.[41] California's rapid pace of school construction activity is now matched by only a handful of other states.[42]

At the same time, several school districts have adopted PLAs and debates about their use rage on. It is our hope that our findings inform public debate when PLAs are advanced as a costless policy tool. Our research suggests that they are not, and should districts choose to adopt them, school construction is very likely to cost more.

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ABOUT THE AUTHORS

VINCE VASQUEZ, SENIOR POLICY ANALYST, NATIONAL UNIVERSITY SYSTEM INSTITUTE FOR POLICY RESEARCH

Vince Vasquez is the senior policy analyst with the National University System Institute for Policy Research. He works on a wide variety of local and regional policy issues, including education, small business, government finance, and the Latino workforce.

Mr. Vasquez's opinion pieces have appeared in many publications, including the *Wall Street Journal*, *San Diego Union-Tribune*, *San Francisco Examiner*, *Silicon Valley-San Jose Business Journal*, and the *Los Angeles Business Journal*. He has also appeared on CNN and has been quoted in the *Los Angeles Times*, *Chicago Tribune*, *Christian Science Monitor*, *San Francisco Chronicle*, and *Investor's Business Daily*.

Prior to joining the National University System Institute for Policy Research, Mr. Vasquez worked at the Pacific Research Institute for Public Policy (PRI), an economic think tank based in San Francisco. He also worked at the Leadership Institute, a nonprofit educational foundation in Arlington, Virginia. Mr. Vasquez received a B.A. in Political Science at the University of California, San Diego (UCSD), and has earned a Master of Public Administration (MPA) at Keller Graduate School of Management.

DALE GLASER, PH.D., GLASER CONSULTING

Dr. Dale Glaser, principal of Glaser Consulting and adjunct professor of statistics for the School of Nursing at the University of San Diego, has accrued extensive experience in statistical analyses, psychometric testing, program evaluation, and organizational assessment and development within the healthcare, nursing, organizational, educational, and marketing research domains. He has published extensively in the area of nursing research and has furnished statistical and methodological consulting to many nursing faculty, practitioners, and students in regard to their research projects.

As a statistical consultant, he has been responsible for engaging in comprehensive assessment efforts from the formative stages of survey construction and experimental design, power analyses, psychometric assessment, and statistical analysis to presentation/implementation and the publishing of results. He also has extensive experience with advanced quantitative methods, including Structural Equation Modeling, multilevel modeling, and other multivariate and biostatistical techniques.

Dr. Glaser obtained his Ph.D. in Industrial-Organizational Psychology from the California School of Professional Psychology and his M.S. in Counseling Psychology from California State University–Fullerton. He also teaches at the graduate and undergraduate levels in courses such as: multivariate and univariate statistics, research methods, testing and measurement, psychometrics, and related industrial-organizational psychology courses, such as Decision Theory.

W. ERIK BRUVOLD, PRESIDENT AND CEO, NATIONAL UNIVERSITY SYSTEM INSTITUTE FOR POLICY RESEARCH

W. Erik Bruvold is the founding president of the National University System Institute for Policy Research. He has conducted several widely cited public policy and economic research reports on the San Diego region. Prior to joining NUSIPR, he was vice president of public policy for the San Diego Regional Economic Development Corporation (EDC), where he oversaw the organization's public policy efforts on a range of issues impacting San Diego's business climate.

Among Mr. Bruvold's achievements at the EDC were his leadership of the successful effort to extend the TransNet sales tax for transportation investment and his leadership of the successful regional response to the 2005 round of military base closures and realignments (BRAC 2005). Prior to joining EDC, Mr. Bruvold was executive director for the San Diego chapter of the American Electronics Association. He has served on several boards, including the North County Economic Development Corporation, the East County Economic Development Corporation, and the San Diego Association of Government's Transnet Citizens Advisory Committee.

Mr. Bruvold holds a Bachelor of Arts with Highest Honors from the University of Denver and a Master of Arts in Political Science with High Honors from the University of California, San Diego.

APPENDIX A:
FINAL LETTER OF REVIEW BY THE KESTON INSTITUTE FOR PUBLIC FINANCE AND INFRASTRUCTURE POLICY, UNIVERSITY OF SOUTHERN CALIFORNIA

USC
UNIVERSITY OF SOUTHERN CALIFORNIA

July 13, 2011

Keston Institute for Public Finance and Infrastructure Policy

Richard G. Little
Director

Direct: 213 740 4120
Cell: 703 582 0317
e-mail: rglittle@usc.edu

Mr. Kevin D. Korenthal
Executive Director
Associated Builders and Contractors of California Cooperation Committee
28005 Smyth Drive
Suite 129
Valencia, CA 91355

Dear Mr. Korenthal:

You have requested the Keston Institute for Public Finance and Infrastructure Policy to provide an independent review of the report "Measuring the Cost of Project Labor Agreements on School Construction in California" prepared by the Institute for Policy Research of the National University System. The review was to focus on the statistical analysis and associated conclusions described in "Measuring the Cost of Project Labor Agreements on School Construction in California" and consisted of an assessment of the analytical methodology employed and assumptions made in regard to the data set used in the analysis and which was provided to me on May 2, 2011 (This data set was not independently verified.). This review was conducted by myself and Professor Lisa Schweitzer, Ph.D., of the USC School of Policy, Planning and Development and undertaken in two parts; a review of the draft report and a review of the revised version that was prepared following a conference call on June 9, 2011 to discuss our initial findings.

Our review determined that the analysis of the school construction data conducted by the Institute for Policy Research employed proven and well-accepted statistical techniques and the conclusions drawn regarding project cost differentials between school projects that utilized Project Labor Agreements (PLAs) and those that did not follow logically from this analysis. In particular, we were impressed by the efforts of the research team to probe deeply into potentially confounding relationships among the variables such as the large number of outliers and the fact that the data points are not normally distributed (heteroscedasticity) through the use of robust regression and robust estimators and other techniques. The fact that the coefficients based on the Ordinary Least Squares Analysis (Chart 5) and the Robust Regression Analysis (Chart 6) do not change significantly supports the overall significance of the PLA variable on construction cost per square foot.

The LAUSD projects represent an unavoidable dilemma of covariance which hindered the ability of the research team to delineate to what extent it was the presence of PLAs or the LAUSD that explain the variability in cost. Despitelaudable efforts by the research team to address this issue, they were not able to disentangle the two factors. Perhaps the only way to do so is empirically, with LAUSD undertaking a group of projects which do not utilize PLAs to serve as a control group.

Overall, we believe that the conclusion drawn in the report regarding the influence of PLAs on project cost are supported by the data set provided to us and the subsequent statistical analysis of that data. The research team appropriately utilized well-accepted statistical methods to arrive at this conclusion and it constitutes an important research finding. However, I would like to reiterate at this time that the results of our review should in no way be construed as the Keston Institute for Public Finance and Infrastructure Policy supporting any position relating to the use of Project Labor Agreements by any public or private entity.

Please let me know if you have any questions regarding this Letter Report or if I can provide additional information pertaining to the Keston Institute's review of "Measuring the Cost of Project Labor Agreements on School Construction in California". We appreciate this opportunity to be of service.

Cordially,

Richard G. Little, AICP
Director, The Keston Institute for Public Finance and Infrastructure Policy

APPENDIX B:
COPY OF PUBLIC RECORDS REQUEST LETTER MAILED TO SCHOOL DISTRICTS

PUBLIC RECORD REQUEST

May 19, 2010
Public Information Officer
(School District)
(Street Address)
(City, State, Zip Code)

RE: PUBLIC RECORDS ACT REQUEST – SCHOOL CONSTRUCTION DATA

Dear Public Information Officer,

The National University System Institute for Policy Research, an affiliate of the nation's largest, nonprofit higher education system, is conducting a major econometric project on public school construction costs in California and is collecting data statewide from school districts. Pursuant to my rights under the California Public Records Act (Government Code Section 6250 et seq.), I respectfully request information about the following school(s) in your district:

(School Construction Project Name), located at (Street Address), (City);

Specifically, I am seeking the following details related to the construction of the school(s):

- The total square footage of the construction project(s);
- The final cost(s) of the construction project(s);
- The approximate date on which construction started and the approximated date on which construction was completed;
- Whether the project(s) was constructed under a Project Labor Agreement (PLA);
- The type of school (Elementary or Secondary);
- Whether the project(s) is/are new construction or a rehabilitation of an existing building;
- Number of stories in the project(s);
- Inclusion of HVAC system(s) in the project(s);
- Inclusion of a gymnasium in the project(s);
- Inclusion of a swimming pool in the project(s);
- Whether construction required demolition of an existing structure(s).

I ask for a determination on this request within 10 working days of your receipt of it, and an even prompter reply if you can make that determination without having to review the information in question.

If you determine that any or all or the information qualifies for an exemption from disclosure, I ask you to note whether, as is normally the case under the California Public Records Act, the exemption is discretionary, and if so whether it is necessary in this case to exercise your discretion to withhold the information.

If you determine that some but not all of the information is exempt from disclosure and that you intend to withhold it, I ask that you redact it for the time being and make the rest available as requested.

If you determine that any or all of the information is exempt and will not be disclosed, please provide a signed notification citing the legal authorities on which you rely.

If I can provide any clarification that will help expedite your attention to my request, please contact me at (phone number), or (email address). I ask that you notify me of any duplication costs exceeding $10 before you duplicate the records so that I may decide which records I want copied.

Thank you for your time and attention to this matter.

Sincerely,

s/_____

Vince Vasquez
Senior Policy Analyst
National University System Institute for Policy Research

APPENDIX C:
SCHOOL DISTRICTS THAT PROVIDED COMPLETE SCHOOL CONSTRUCTION DATA

Alpine Union School District
Alta Loma School District
Alvord Unified School District
Anaheim City School District
Anaheim Union High School District
Antelope Valley Joint Union High School District
Antioch Unified School District
Arvin Union Elementary School District
Barstow Unified School District
Beardsley School District
Beaumont Unified School District
Bellevue Union Elementary School District
Beverly Hills Unified School District
Buckeye Union Elementary School District
Burbank Unified School District
Burton School District
Cabrillo Unified School District
Cajon Valley Union School District
Calexico Unified School District
Capistrano Unified School District
Center Unified School District
Chaffey Joint Union High School District
Chowchilla Elementary School District
Chula Vista Elementary School District
Coachella Valley Unified School District
Coalinga/Huron Joint Unified School District
Columbia Elementary School District
Conejo Valley Unified School District
Corona Norco Unified School District
Cottonwood Union Elementary School District
Cutler-Orosi Unified School District
Davis Joint Unified School District
Delano Joint Union High School District
Delano Union School District
Delhi Unified School District
Denair Unified School District
Desert Sands Unified School District
Downey Unified School District
Dry Creek Joint Elementary School District
Dublin Unified School District
East Side Union High School District
El Dorado Union High School District
Elk Grove Unified School District
Escondido Union High School District
Escondido Union School District
Etiwanda School District
Evergreen Elementary School District
Fairfield-Suisun Unified School District
Fallbrook Union Elementary School District
Fallbrook Union High School District
Farmersville Unified School District
Folsom Cordova Unified School District
Fowler Unified School District
Fresno Unified School District
Gilroy Unified School District
Golden Valley Unified School Dist
Greenfield Union School District
Hanford Elementary School District
Hanford Joint Union High School District
Hemet Unified School District
Hesperia Unified School District
Hillsborough City Unified School District
Huntington Beach City School District
Imperial County Office of Education
Imperial Unified School District
Irvine Unified School District
Jefferson School District
Kern County Superintendent of Schools
Kern High School District
King City Joint Union High School District
Kings Canyon Unified School District
Kingsburg Joint Union Elementary School District
Lake Elsinore Unified School District
Lammersville School District
Lancaster Elementary School District
Las Virgines Unified School District
Lawndale School District
Lemoore Union Elementary School District
Lennox School District
Liberty Union High School District
Long Beach Unified School District
Los Alamitos Unified School District
Los Angeles Unified School District
Los Banos Unified School District
Lucia Mar Unified School District
Madera Unified School District
Mammoth Unified School District
Manteca Unified School District
Marysville Joint Unified School District
Menifee Union School District

Merced City School District
Merced Union High School District
Milpitas Unified School District
Modesto City School District
Mojave Unified School District
Moreno Valley Unified School District
Morgan Hill Unified School District
Mountain View/Los Altos Union High School District
Murrieta Valley Unified School District
Natomas Unified School District
New Haven Unified School District
Newhall School District
Newport Mesa Unified School District
Norris School District
Norwalk La Mirada Unified School District
Oakdale Joint Unified School District
Oakland Unified School District
Oceanside Unified School District
Ontario Montclair School District
Oxnard School District
Pajaro Valley Unified School District
Palm Springs Unified School District
Palo Alto Unified School District
Palos Verdes Peninsula Unified School District
Panama Buena Vista Union School District
Paramount Unified School District
Paso Robles Joint Unified School District
Petaluma Joint Union High School District
Pioneer Union School District
Pittsburg Unified School District
Placentia-Yorba Linda Unified School District
Pleasant Valley School District
Plumas Elementary School District
Poway Unified School District
Redlands Unified School District
Reed Union School District
Rescue Union School District
Richland Unified School District
Rio School District
Ripon Unified School District
Riverbank Unified School District
Rocklin Unified School District
Rosedale Union Elementary School District
Roseville City Elementary School District
Roseville Joint Union High School District
Sacramento City Unified School District
Saddleback Valley Unified School District
Saint Helena Unified School District
Salida Elementary School District
Salinas Union High School District
San Bernardino County Superintendent of Schools
San Diego Unified School District
San Dieguito Union High School District
San Francisco Unified School District
San Jacinto Unified School District
San Leandro Unified School District
San Mateo Union High School District
San Ysidro School District
Sanger Unified School District
Santa Ana Unified School District
Santa Clara Unified School District
Santa Maria Joint Union High School District
Santee School District
Silver Valley Unified School District
Simi Valley Unified School District
Snowline Joint Unified School District
Solana Beach School District
Stockton Unified School District
Sulphur Springs Unified School District
Sweetwater Union High School District
Tehachapi Unified School District
Temecula Valley Unified School District
Tracy Unified School District
Tulare City Elementary School District
Tulare Joint Union High School District
Turlock Joint Union High/Elementary School District
Twin Rivers Unified School District
Ukiah Unified School District
Vallejo City Unified School District
Valley Center-Pauma Unified School District
Vista Unified School District
Wasco Union Elementary School District
Waterford School District
Weaver Union School District
West Contra Costa Unified School District
Western Placer Unified School District
Westside Union School District
Wiseburn School District
Yuba City Unified School District
Yucaipa-Calimesa Joint Unified School District

APPENDIX D:
SUPPLEMENTAL RESEARCH ON CALIFORNIA PROJECT LABOR AGREEMENTS

During the course of this project, NUSIPR was able to identify common provisions across California school construction PLAs.[43] A comparative analysis reveals many similarities. Most of the PLAs that were reviewed require construction firms to become signatories to master collective bargaining agreements (CBAs) with all applicable craft unions. Generally speaking, CBAs are detailed documents that identify the terms of employment and working conditions of unionized workers in a particular trade or industry. The majority of PLAs also require all subcontractors to sign both PLAs and CBAs prior to the start of construction.

Seven PLAs absolutely prohibit labor unions from strikes, work stoppages, picketing, and slowdowns of any kind at the worksite. However, five allow unions to withhold workers from contractors that are delinquent on payments to union trust funds. Similarly, seven PLAs prohibit contractors from conducting employee lockouts of any kind, but five make exceptions for laying off, suspending, and terminating employees in cases wholly unrelated to labor disputes.

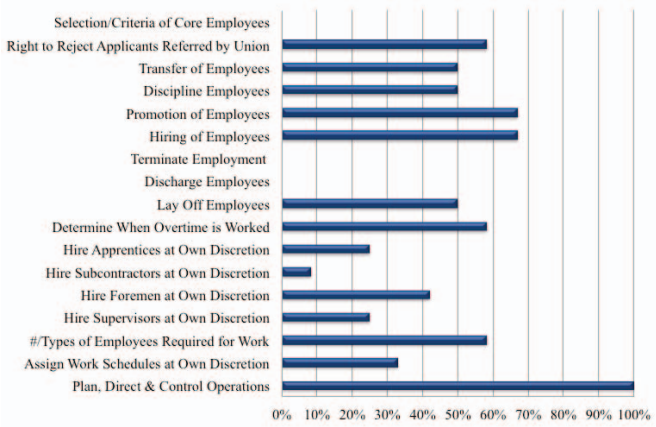
Almost all (92 percent) PLAs required contractors to source workers from union halls, but with exceptions. The overwhelming majority allow firms to obtain workers from any source if union hiring halls are unable to provide workers within a forty-eight hour period. 100 percent of PLAs require construction workers to pay union dues.

All PLAs include language that suggests that contractors retain the exclusive authority, or responsibility for project operations; however, most contain strong restrictions on management rights. Less than half explicitly state that contractors can hire supervisors, apprentices, foremen, and subcontractors at their own discretion.

All of the PLAs restrict a contractor's ability to hire their own "core employees." Usually this is done by restricting who a contractor can classify as a core employee and when they can be employed (if at all) in a way that bypasses the union hall hiring queue.[44] Eight out of 12 PLAs do not allow contractors to discharge at-will employees — most require contractors to have just cause for doing so, or grant workers additional rights under a craft agreement. Seven out of 12 also do not allow contractors to discipline employees at will. All but one reviewed PLA required contractors to make supplemental contributions into separate union-controlled benefit trusts.

CHART 8: Major Provisions of California School PLAs

CHART 9: Management Rights Under California School PLAs



APPENDIX E:
NOTES BY THE AUTHORS

There are important aspects of NUSIPR's research efforts that deserve greater elaboration, which we do here.

WAGE RATES AS A NEUTRAL FACTOR

Unlike many states, the State of California requires contractors to pay state-mandated construction wage rates (known as "prevailing wages") to their construction trade workers on school construction projects.[45] Prevailing wage rates in California are almost always based on the wage rates and benefit payments indicated in collective bargaining agreements for construction trade unions. As a result, all contractors on the school construction projects researched in this study were paying a common wage rate for each specific trade in a defined geographic region, regardless of whether the contractors were signatory to a PLA or signatory to a union collective bargaining agreement for their employees. In addition, school districts using state funding for construction from the statewide bond measure Proposition 47 (approved by voters in 2002) were required to adopt a labor compliance program to ensure that contractors were paying proper wage rates and abiding by the state's other labor laws. We can assume that these conditions effectively neutralize wage rates as a variable and conclude that the difference in project cost between projects with a PLA and projects without a PLA was not due to differences in wage rates for construction trade workers.

GEOGRAPHIC DISTRIBUTION OF THE PROJECTS

To eliminate selection bias, our data sample sourced school construction projects at random. Nonetheless, 60 percent of the projects were built in districts located in the five highly populous counties located at the southern end of the state. These five counties comprise 54 percent of the population. Another 33 percent of the projects were built in districts located in the Central Valley, which was among the fastest growing parts of the state between 2000 and 2010.[46]

ENDNOTES:

1 The Building & Construction Trades Department's website says, "Critics of PLAs frequently claim that PLAs limit the pool of bidders . . . particularly non-union contractors . . . and as a result construction costs for a given project are higher. This is a fallacy that has been refuted through the work of many academic researchers . . . A similar public relations attack on project labor agreements that is frequently used by the open shop leads people to believe that the use of a higher-skill, and better paid, workforce will result in increased costs." See http://www.plaswork.org/CWA/media/Documents/PLA-PowerPoint.ppt. The Associated Builders and Contractors' website says, "PLAs drive up the cost of construction projects. By unnecessarily limiting bidders and following outdated and inefficient union work rules, PLAs consistently and unnecessarily drive up costs on projects. Numerous academic studies indicate PLAs increase the cost of construction between 10 percent and 20 percent when compared to similar projects not subject to union-only PLAs." See http://www.thetruthaboutplas.com/get-the-truth.

2 Benefits include increasing the number of apprentices entering into construction trades and increasing the level of health and retirement benefits available to construction workers. For a vigorous articulation of these supposed benefits, see Fred Kotler, "Project Labor Agreements in New York State: In the Public Interest," New York: Cornell University, 2009, http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1021&context=reports.

3 Alternate names for PLAs include Project Stabilization Agreements and Community Workforce Agreements.

4 Some PLAs have special exemptions for a small number of long-term "core" contractor employees.

5 Detailed arguments of PLA proponents can be found at the PLAs WORK website, a project of the Building & Construction Trades Department. See http://www.plaswork.org/Impact/Contractors-Owners-Developers-and-Construction-Use/Contractors,-Owners,-Developers---Construction-Use.aspx.

6 Gary Scott, "Power Plant Costs to Soar," *Pasadena Star-News*, March 21, 2003.

7 Phillip Matier and Andrew Ross, "School's Costs Skyrocket after Labor Pact," *San Francisco Chronicle*, April 28, 2004.

8 Daniel Rounds, "Project Labor Agreements: An Exploratory Study," Los Angeles: UCLA, 2001.

9 New Jersey Department of Labor, "Annual Report to the Governor and Legislature: Use of Project Labor Agreements in Public Works Building Projects in Fiscal Year 2008," Trenton: State of New Jersey, 2010, pp. 3–4, http://lwd.dol.state.nj.us/labor/forms_pdfs/legal/2010/PLAReportOct2010.pdf.

10 Paul Bachman et al., "Project Labor Agreements and the Cost of School Construction in Massachusetts," Boston: Beacon Hill Institute, 2003, http://www.beaconhill.org/BHIStudies/PLApolicystudy12903.pdf.

11 Paul Bachman, Jonathan Haughton, and David G. Tuerck, "Project Labor Agreements and the Cost of Public School Construction Projects in Connecticut," Boston: Beacon Hill Institute, 2004, http://www.beaconhill.org/bhistudies/pla2004/plainct23nov2004.pdf.

12 Paul Bachman and David G. Tuerck, "Project Labor Agreements and Public Construction Costs in New York State," Boston: Beacon Hill Institute, 2006, http://www.beaconhill.org/BHIStudies/PLA2006/NYPLAReport0605.pdf.

13 Dale Belman et al., "The Effect of Project Labor Agreements on the Cost of School Construction," East Lansing: Michigan State University, 2005, http://isapapers.pitt.edu/57/1/2005-01_Belman.pdf.

14 Variables in the Belman study included minutia such as the presence/absence of tennis courts, band rooms, kitchens, and science labs.

15 Belman et al., "Effect of Project Labor Agreements," p. 3.

16 Ibid., p. 20.

17 Paul Bachman and Jonathan Haughton. "Do Project Labor Agreements Raise Construction Costs?" *Case Studies in Business, Industry and Government Statistics* 1, no. 1 (2006): 78.

18 Dale Belman et al., "Project Labor Agreements' Effect on School Construction Costs in Massachusetts," *Industrial Relations* 49, no. 1 (2010): 44–60.

19 Statistical tests used include three F-test models that examined the relationship between the construction cost per square foot and the effect of PLAs, the city of Boston, and the Boston Public School District. A two-stage propensity score technique was also used to analyze projects that, but for the presence/non-presence of a PLA, are fairly similar. Under this technique, projects were rated based on the probability that their characteristics could predict that they would be built under a PLA, and the resulting "region of common support" was to be examined with a regression test. However, Belman et al. did not complete its propensity score technique, as it failed to find many similar projects.

20 Belman et al., "Effect on School Construction Costs in Massachusetts," p. 57.

21 The Roseville PLA was for three unions in four subtrades and was directly signed with a private developer.

22 As noted below, a remaining limitation which we cannot overcome involves the large number of PLAs in Los Angeles Unified, a district that has had a PLA in place for much longer than other districts and, as one of the nation's largest school districts, has built a large number of schools.

23 The DSA website states, "The Division of the State Architect provides design and construction oversight for K–12 schools, community colleges, and various other state-owned and leased facilities. The Division also develops accessibility, structural safety, fire and life safety, and historical building codes and standards utilized in various public and private buildings throughout the state of California." www.dsa.dgs.ca.gov

24 For example, in Belman (2003), the authors found that the presence of a centralized air conditioner had a statistically significant impact on construction costs. We collected information on this variable, but found that all but one school project in our sample had air conditioning.

25 Bachman et al. noted that their sample size limit excluded abnormally small and larger projects as well as those projects whose valuation is "typically too small to be of interest to union contractors." NUSIPR adopted the same square footage range for project size within its sample in order to achieve similar objectives.

26 NUSIPR's final sample varied slightly from the initial bid estimates given by McGraw Hill. Of the 551 construction projects, 12 were modernization projects, five were built either before 1996 or after 2008, 52 were smaller than 40,000 square feet, and two cost less than $5 million.

27 California Government Code § 6250–6276.48.

28 The language used in the public records requests can be found in appendix B.

29 The California Division of the State Architect's online Project Tracking System is available at https://www.apps.dgs.ca.gov/tracker/default.aspx.

30 The California Construction Cost Index (CCCI) is developed from data featured in the Building Cost Index (BCI) published by Engineering News-Record (ENR). BCI estimates include costs for skilled industry labor, average fringe rates, and the cost of common construction materials.

31 Bachman created a construction cost index using state industry wage and salary data from the U.S. Bureau of Economic Analysis and the national producer price index for intermediate materials, supplies, and components. Belman deflated costs using ENR's construction cost index for Boston.

32 The complete list of complying school districts can be found in Appendix C.

33 The Belman study used a sample size of 92 school projects, and Beacon Hill's sample size was 126 projects.

34 The ordinary least squares method is a statistical technique used to analyze the relationship between a continuous dependent variable and categorical (or continuous) independent variables. It minimizes the "error," or the difference between the predicted outcome and the actual outcome, and optimizes the solution.

35 Both the Bachman et al. and Belman et al. regression tests included square feet squared as a co-variate. However, NUSIPR found that this co-variate did not substantively modify the model fit and declined to include it.

36 The sample used in the Bachman et al. study had an adjusted r-squared of 31 percent. The six models used in the Belman study to study Massachusetts school construction costs had an r-squared range of 19.79 percent to 65.12 percent.

37 For more on Belmont Learning Center see Alan Richard, "L.A. Chief Recommends Abandoning Belmont," *Education Week*, January 26, 2000, and Greg Gittrich, "Most of the Bond Money Blown on Belmont," *Los Angeles Daily News*, July 30, 1999.

38 NUSIPR took additional efforts to resolve the collinearity found in our data set. Following the methodology explained in the Belman 2010 study, we created a two-step scoring technique. We first used a logistic model, rating projects based on the probability that their characteristics could predict that they would be built under a PLA. Unlike Belman et al., we were able to identify a region of common support, matching 65 PLA projects with 65 non-PLA projects that, but for the absence of a Project Labor Agreement, are similar with respect to other project characteristics, such as the use of demolition and total square footage. Two subsequent regression tests (one which had the predicted score as an independent variable and one that excluded it) for the n=130 data set used the ordinary least squares method. These tests failed to find PLAs to be statistically significant. However, a one-way ANOVA test on the sub-sample did find PLAs to be statistically significant. This tells us that though there is evidence that PLAs are associated with higher project costs, collinearity is still present in the data set, hindering further analysis. Interestingly, within our sub-sample, we found the average CCI adjusted cost per square foot of non-PLA projects to be $244.69, still significantly lower than the cost of PLA projects ($302.98/per square foot).

39 According to the Public Policy Institute of California, "Local facilities bonds totaling $36 billion have passed since 2001, and state facilities bonds totaling $28.7 billion have passed since 2002." See "Just the Facts: Education Facilities," September 2008, http://www.ppic.org/content/pubs/jtf/JTF_EducationFacilitiesJTF.pdf.

40 United States Census Bureau, Public Education Finances 2008, table 9, "Capital Outlay and Other Expenditure of Public School Systems by State: 2007–08," Washington, D.C., 2010, http://www2.census.gov/govs/school/07f33pub.pdf.

41 "California Department of Education Closes Out 2010 Noting Record of Accomplishment by State Superintendent Jack O'Connell," California Department of Education, December 28, 2010, http://www.cde.ca.gov/nr/ne/yr10/yr10rel150.asp.

42 National Clearinghouse for Educational Facilities, "State Capital Spending on PK–12 School Facilities," Washington, D.C., 2010, p. 4, http://www.edfacilities.org/pubs/state_capital_spending_on_school_facilities.pdf.

43 NUSIPR obtained PLAs for the following school districts: San Francisco Unified, San Diego Unified, Los Angeles Unified, Oakland Unified, Sacramento City Unified, Pittsburg Unified, West Contra Costa Unified, Rialto Unified, Santa Ana Unified, San Mateo Union High School District, San Gabriel Unified, and Roseville City School District. In some cases, the PLAs were silent as to provisions we examined, or were not explicit in the language of the contract. In other cases, the provisions were referenced as being present within a CBA, which the PLA requires all signatories to assent to. Our charts reflect these aspects of the PLAs.

44 For example, see the provisions of the Project Labor Agreement for the Oakland Unified School District, 2004, p. 19.

45 According to the United States Department of Labor, eighteen states do not have prevailing wage laws: Alabama, Arizona, Colorado, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, New Hampshire, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Utah, and Virginia. See "Dollar Threshold Amount for Contract Coverage Under State Prevailing Wage Laws," n. 1, http://www.dol.gov/whd/state/dollar.htm.

46 United States Census Bureau, table 1, "The Most Populous Counties and Incorporated Places in 2010 in California: 2000 and 2010," http://2010.census.gov/news/xls/cb11cn68_ca_2010redistr.xls.

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