City of Huntington Beach
Charter Review Commission

AGENDA

Tuesday., March 2 2010, 6:00 PM
City Hall, B-8

I. Roll Call: **Jerry Bame, Ralph Bauer, Mark Bixby, Patrick Brenden, Shirley Dettloff, Dick Harlow, Gregory Hartnett, Marijo Johnson, Gary Kutscher, Joe Shaw, Ray Silver, Sharie Sneddon, Tim Stuart, Dave Sullivan, Shane Whiteside**

II. Public Comments:

An opportunity for the public to comment on any item of interest, either in general or specific to this agenda, that is within the subject matter or jurisdiction of the Commission. Comments will be limited to no more than 3 minutes. Speakers are encouraged to submit their comments in writing. Each Commission Member will receive a copy of all the submitted comments.

III. Approval of the Commission minutes from February 18 meeting.

IV. Charter Section 617 – Infrastructure –

- **Review of the City Attorney's legal opinion on the use of the 15% Infrastructure set aside.**
- **Discussion on potential amendments**

V. Charter Section 612 –

- **Staff Presentation and request on a proposed additional amendment to Charter Section 612 (c) to state that Section 612 (a) and 612 (b) s*hall not apply: " to renewable energy projects that do not impact open space."* – Aaron Klemm**
- **Recommendation by Commissioner Bixby to amend Huntington Beach Charter Section 612 to add new public vote trigger to the list in section 612(a) when entering into any form of agreement which results in reduced public recreational opportunities.**

VI. Review of the City Charter as a whole with legislative draft notation of changes recommended thus far by a straw vote of the Charter Review Commission – McGrath - Sonenshein

VII. Commissioner Requests: Questions, comments, or suggestions for discussion at a subsequent meeting of the Commission

VIII. Adjourn to the next regular meeting scheduled for Tuesday Mar 16 at 6 PM in City Hall Room, B 8

Attachments: *

1. Minutes from the February 18 meeting
2. Staff report on the proposed new exemption to Charter Section 612
3. Commissioner Bixby's Recommendation for an amendment to Charter Section 612
4. Memo from the Public Works Commission dated 2/25/10 with recommendations for amending Charter Section 617.
5. Material on prevailing wage from Commissioner Silver.

***** Material related to the Charter Sections to be discussed and submitted prior to the posting of the agenda will be included in the agenda packet. Items received after posting of the agenda will be distributed at the Commission meeting as late communications.

ATTACHMENT #1

City of Huntington Beach
Charter Review Commission

ACTION MINUTES
Thursday., Feb. 18 2010, 6:00 PM

I. Roll Call: **Jerry Bame, Ralph Bauer, Mark Bixby, Patrick Brenden, Shirley Dettloff, Dick Harlow, Gregory Hartnett, Marijo Johnson, Gary Kutscher, Joe Shaw, Ray Silver, Sharie Sneddon, Tim Stuart, Dave Sullivan, Shane Whiteside**

All present except Brenden, Johnson, Kutscher – Sullivan arrived after taking of the roll.

II. Public Comments:

An opportunity for the public to comment on any item of interest, either in general or specific to this agenda, that is within the subject matter or jurisdiction of the Commission. Comments will be limited to no more than 3 minutes. Speakers are encouraged to submit their comments in writing. Each Commission Member will receive a copy of all the submitted comments.

Doug Mangione thank the Commission for considering the request to include a prevailing wage provision in the Charter. He asked that the Commission reconsider their decision as they make their final recommendations.

III. Approval of the Commission minutes from February 2 meeting.

On motion from Bixby, second by Dettloff the minutes were approved as submitted 12-0-3

IV. Charter Section 302 – Compensation

- **The Commission has not made a final determination on amending the Council Compensation section of the Charter. Additional information was requested.**

After a brief discussion, on a motion by Commissioner Sneddon seconded by Commissioner Dettloff, the Commission voted to keep Charter Section 302 as is. 12-0-3

V. Charter Section 313 – Conflict of Interest

- **A Commissioner request had been made and never resolved on adding language to prohibit elected officials from participating in labor negotiations.**

Commissioner Dettloff commented that the question of elected department heads taking part in labor negations had been discussed previously, but that the question had not been resolved. The concern she and others expressed was the potential conflict in the fact that the elected department heads receive campaign contributions from labor unions. Following a lengthy discussion and several suggestions, Commissioner Silver made a motion, seconded by Commission Sneddon to add to either Section 313, 307 (Non-Interference) or separately to sections 309, 310, & 311 the following provision: Elected Department Heads shall not directly participate as a member of the city's labor negotiating team. The motion carried 8-4-3 (Stuart, Harnett, Bixby. & Shaw – NO)

VI. Staff Presentation on Charter Section 612 – Measure C

VII. Charter Section 612 - The Commission has requested that staff return for the following on Measure C

***** Material related to the Charter Sections to be discussed and submitted prior to the posting of the agenda will be included in the agenda packet. Items received after posting of the agenda will be distributed at the Commission meeting as late communications.

- **Optional language for including the City Council action taken on July 11, 1994 (currently at the end of the Charter index) into Section 612 of the Charter**

A motion was made by Commissioner Bauer, seconded by Commissioner Dettloff to add language to Section 612 of the Charter indicating when a Measure C vote should occur in the process as follows: A Measure C vote is required after the appropriate environmental assessment has been completed.

A substitute motion was made by Commissioner Sullivan, seconded by Commissioner Shaw to add to take a Measure C vote after the appropriate environmental assessment has been completed and that the a professionally prepared conceptional estimate of the cost for the project and a description of the project be completed prior to placing it on the ballot. The substitute motion carried 11-1-3 (Bixby – NO)

- **Optional language for exempting from a Measure C vote repair, replacement, and/or maintenance of sewer, water, water quality, and storm drain facilities**
- **Optional language and a rationale for exempting from a Measure C vote underground city structures**

Motion by Commissioner Bauer, second by Commissioner Silver to add the following exemptions to Charter Section 612 (c):

- **to above ground city [public works] utility structures under 3,000 square feet, and**
- **to city [public works] underground structures if park or beach use is not impeded; and**
- **to any city [public works] construction, maintenance or repair mandated by state or federal law**

The motion carried 9-3-3 (Sullivan, Shaw, & Bixby – NO)

- **Recommendations for an appropriate monetary minimum for a Measure C vote with options for indexing that amount**

A motion was made by Commissioner Bauer, seconded by Commissioner Dettloff to amend Section 612 (b) of the Charter to change the amount that triggers a Measure C vote from $100,000 to $161,000. The motion carried 10-2-3 (Shaw, Bixby – NO)

Commissioner Stuart made a motion, seconded by Commissioner Sullivan to add language to the Charter indexing the trigger for a Measure C to the Consumer Price Index.

- **Wording for a Commission recommendation to the City Council for requiring notification of residents in the surrounding area when a project below the Measure C threshold is planned for a city park or beach.**

A motion was made by Commissioner Shaw, second by Commissioner Dettloff that a non-Charter recommendation be forwarded to the City Council as follows:

The city adopt:

- **A procedure for an <u>independent cost estimate</u> to determine if a public or private project would require a Measure C vote**

- **A Public Notification processes for every city-owned or city-operated park or beach development project not requiring a Measure C vote, and with a cost of $10,000 to $161,000.**
- **A notification process similar to that currently used by Community Services and Planning Departments (mail public notice to property owners w/in 300' of site and public notice in newspaper)**

The motion carried 12-0-3.

A motion was made by Commissioner Shaw, seconded by Commissioner Bixby that a non-Charter recommendation be forwarded to the City Council as follows:

There be a process to verify the cost of improvements covered under Measure C by:

- **The Public Works Dept. retaining an as-needed professional estimating consultant**
- **Requiring project applicants to submit their construction cost estimates to Public Works for review and pay an associated fee**

The motion carried 12-0-3.

A motion was made by Commissioner Bauer, seconded by Commissioner Dettloff provide an exemption to a Measure C vote for recreation amenity that replaces existing recreation amenity provided it say within the same square footage and as long as it is consistent with the existing use and does not change a passive use to an active use.
The motion carried 12-0-3.

Commissioner Bixby to bring back his recommendation on Charter Section 612 at the next meeting.

VIII. Charter Section 614 – Contracts – The City Attorney is to provide feedback on potential issues with requiring a local preference on city contracts.

The City Attorney reported that a local preference would not be permissible based on current case law. No action was taken.

IX. <u>Charter Section 703</u> – The Commission has requested that staff return with optional language for changing the number of signatures required to place a citizen initiative on the ballot

Commissioner Shaw made a motion, seconded by Commissioner Bixby to approve an amendment to Charter Section 703 to change the number of signatures to place an initiative on the ballot to require the number of signatures be set by using the average number of ballots case in the two preceding general municipal elections (one presidential and one non-presidential). The motion failed 3-9-3 (Bixby, Shaw, & Dettloff – NO)

X. Commissioner Requests: Questions, comments, or suggestions for discussion at a subsequent meeting of the Commission

XI. Adjourn to the next regular meeting scheduled for Tuesday Mar 2 at 6 PM in City Hall Room, B 8

ATTACHMENT #2

City of
Huntington Beach

Large Scale Municipal Solar

Charter Review Commission

City of Huntington Beach

03-02-2010

HB Measure C Sites:

- Solar Carports
  - Central Library parking lots & roof
  - Sports Complex parking lots
  - Murdy Center
    (Measure C)

Examples Solar Carports

MUNICIPAL PHOTOVOLTAIC SOLAR PROJECT
CITY OF HUNTINGTON BEACH

Solar carports and panels are widely incorporated in both municipal and private sectors.

City of Perris, CA

Contra Costa Community College

Coast Community College

Rocklin Police Station

Hunters Point

San Diego Environmental Services

Diablo Valley College

Over time this will become the new normal for parking lots.

Chico, CA

Solar carports are a great opportunity for environmental stewardship, economic benefit, and successful design.

LOCATION	MOUNTING	# OF PV PANELS
PARKING LOT	TILT MOUNTED FACING S AND SW	3,620
LIBRARY ROOF	TILT MOUNTED FACING S AND SW	250
TOTAL # OF PV PANELS		3,870

NORTH

PHOTOVOLTAIC LAYOUT FOR CENTRAL LIBRARY PARKING LOT AT 7111 TALBERT AVENUE

1

DIGITAL ENERGY, INC.
Project Management
Energy Engineering

DIGITAL ENERGY, INC.
120 Auburn Court
Suite 100
Westlake Village
CA 91362
Tel: (805) 374-1777
Fax: (805) 374-1778
www.digitalenergy.com

MUNICIPAL
PHOTOVOLTAIC
SOLAR PROJECTS

CITY OF
HUNTINGTON
BEACH

2000 Main Street
Huntington Beach, CA 92648

Revision Number	Description	Date

Sheet Title

CENTRAL LIBRARY
PARKING LOT
PV LAYOUT

Sheet Number

PV5

LOCATION	MOUNTING	# OF PV PANELS	FUTURE PV PANELS (OPTIONAL)
PARKING LOT	FLAT MOUNTED	3,240	2,450
PARKING LOT	TILT MOUNTED FACING SOUTH	730	250
TOTAL # OF PV PANELS		3,970	2,700

NORTH

PHOTOVOLTAIC LAYOUT FOR HB SPORTS COMPLEX LOCATED AT 18100 GOLDENWEST STREET

1

DIGITAL ENERGY, INC.
Project Management
Energy Engineering

DIGITAL ENERGY, INC.
120 Auburn Court
Suite 100
Westlake Village
CA. 91362
Tel: (805) 374-0371
Fax: (805) 374-0770
www.digitalenergy.com

MUNICIPAL PHOTOVOLTAIC SOLAR PROJECTS

CITY OF HUNTINGTON BEACH

2000 Main Street
Huntington Beach, CA 92648

Revisions
Number Description Date

Sheet Title

HB SPORTS COMPLEX PV LAYOUT

Sheet Number

PV6

LOCATION	MOUNTING	# OF PV PANELS
PARKING LOT	FLAT MOUNTED	150
PARKING LOT	TILT MOUNTED FACING SOUTH	520
BUILDING ROOF	TILT MOUNTED FACING SW	200
TOTAL # OF PV PANELS		870

NORTH

PHOTOVOLTAIC LAYOUT FOR MURDY COMMUNITY CENTER LOCATED AT 7000 NORMA DRIVE

1

DIGITAL ENERGY,INC.
Project Management
Energy Engineering

DIGITAL ENERGY, INC.
[illegible]
Suite 108
Westlake Village
CA. 91361
Tel: (805) 374-1717
Fax: (805) 374-1719
www.digitalenergy.com

MUNICIPAL PHOTOVOLTAIC SOLAR PROJECTS

CITY OF HUNTINGTON BEACH

2000 Main Street
Huntington Beach, CA 92648

Revisions
Number Description Date

Sheet Title

MURDY COMMUNITY CENTER PV LAYOUT

Sheet Number

PV7

ATTACHMENT #3

REQUEST FOR CHARTER REVIEW COMMISSION ACTION

MEETING DATE(S): 03/02/2010

SUBMITTED TO: HB Charter Review Commission

SUBMITTED BY: Mark D. Bixby, Charter Review Commissioner MDB

SUBJECT: Close the "lease" synonym loophole in charter section 612(a) (Measure C)

Statement of Issue: In the past the city has permitted wireless communications facilities to be constructed in parks by calling the agreements "site licenses" in order to avoid the Measure C 612(a) requirement for leasing agreements to be put to a vote of the people. My proposal tightens up this loophole by requiring a vote of the people for "any form of agreement" which reduces public recreational opportunities.

Recommended Action: Motion to:

Amend Huntington Beach charter section 612 to add new public vote trigger to the list in section 612(a) when entering into any form of agreement which results in reduced public recreational opportunities.

Analysis:

I first brought this proposal before the commission at the December 15, 2009 meeting. At that meeting, Community Services staff stated that they were not opposed to my proposal, but ultimately no action was taken as all of the Measure C proposals were deferred to a future date.

Section 612(a) forces a public vote whenever public utilities, parks, or beaches are "leased" (emphasis added) in whole or in part:

> "No public utility or park or beach or portion thereof now or hereafter owned or operated by the City shall be sold, ***leased***, exchanged or otherwise transferred or disposed of unless authorized by the affirmative votes of at least a majority of the total membership of the City Council and by the affirmative vote of at least a majority of the

> electors voting on such proposition at a general or special election at which such proposition is submitted."

This finite list of actions leaves a loophole whereby the city can evade a Measure C vote by labeling the action something other than a sale, lease, exchange, transfer or disposal. The city has exploited this loophole to lease portions of certain parks to wireless companies for cell phone towers by calling such agreements "site licenses". It is telling to note that the cell phone company documents for these agreements refer to them as "leases" and not "site licenses". Thus it is obvious that the city is playing semantic games to avoid the word "lease" to avoid Measure C votes.

I propose to close this loophole by adding an additional vote trigger to section 612(a) – "…or any form of agreement which results in reduced public recreational opportunities…".

It is not my intent to abrogate any existing agreements, or to prevent the renewal of such existing agreements. This will only apply to future agreements.

Note that agreements that DO NOT reduce public recreational opportunities are exempt from this vote trigger. Thus, for example it would be permissible to add a cell antenna to an existing lighting pole or other structure (does not impact any recreational opportunities), but it would not be permissible to add a new cell tower in the middle of a grassy play area (reduces recreational opportunities) without a vote.

Finally, note that this proposed additional language does not create any new exemptions to the section 612(b) size/cost vote trigger. Any construction or agreement that did not reduce public recreational opportunities would still be subject to the size/cost trigger.

ATTACHMENT #4

CITY OF HUNTINGTON BEACH

INTERDEPARTMENTAL COMMUNICATION

TO: Chairman Harlow and the Charter Review Commission

FROM: Chairman Siersema and the Public Works Commission

DATE: February 25, 2010

SUBJECT: City Charter Section 617 Infrastructure Fund

With respect to the Charter Commission's direction not to modify paragraph (b) of Section 617 Infrastructure Fund, the Public Works Commission (PWC) proposes additional language to ensure oversight of the average fifteen percent (15%) expenditure of general fund revenue on infrastructure. As a related action, the PWC supports additional duties while acting in the capacity of the Citizens Infrastructure Advisory Board. Changes to the Municipal Code will be processed through the City Attorney's office and the City Council Proposed modifications are incorporated in this memo with *italicized and underlined text* to show insertions.

City Charter Section 617 INFRASTRUCTURE FUND

(c) The City Council shall by ordinance establish a Citizens Infrastructure Advisory Board to conduct an annual review and performance audit of the Infrastructure Fund *and infrastructure expenditures*, and report its findings to the City Council prior to adoption of the following fiscal-year budget.

Municipal Code Chapter 2.111 PUBLIC WORKS COMMISSION

Section 2.111.030 Duties

i) Acting in the capacity of the Citizens Infrastructure Advisory Board:

i) conduct an annual review and performance audit of the Infrastructure Fund and report its findings to the City Council prior to the City Council's adoption of the ensuing fiscal year budget. *(No Change)*

ii) *conduct a semi-annual review and performance audit of compliance with Section 617 Infrastructure Fund (b) of the City Charter and report its findings to the City Council prior to the City Council's adoption of the ensuing fiscal year budget.*

Representatives from the PWC and the Public Works Department will attend the scheduled Charter Review Commission meetings to further discuss this section. Please let us know if you have questions or require further information.

Michael Siersema

Michael Siersema, Chairman

MS/LD:jg

Cc: Mayor Green and City Council
Fred Wilson, City Administrator

ATTACHMENT #5

INFORMATION ON PREVAILING WAGE FROM COMMISSIONER SILVER:

1. A Rough Estimate of Cost for Paying Prevailing Wage
2. CA Prevailing Wage Study 2004
3. Industrial Labor Board: - Impact of Prevailing Wage
4. Wage Comparison Analysis

A Rough Estimate of the Costs of Paying Prevailing Wages for Construction of Affordable Housing
DRAFT 2/2005

A "back of the envelope" estimate of the impact of paying prevailing wages on redevelopment financed housing construction was made using an economic impact study commissioned by CRA and studies and cost estimates available on the Internet. No additional research was done.

Note that prevailing wage is set regionally, having a varying impact on the cost of redevelopment financed housing construction. The following estimate is for the state of California.

The analysis shows that prevailing wage has a significant impact on the cost and production of affordable housing. However, not paying prevailing wage may result in public and private sector costs that significant off-set potential savings realized.

I. Estimate of the Impact of Prevailing Wage on Redevelopment Agency housing construction:

- The 2004 CED study estimates that RDA construction spending for 2002-03 was $2,293 million.[1]
- According to the same study, 68 percent of redevelopment-financed construction went towards housing in 2002-2003, or $1,559 million.
- Cost of affordable housing due to prevailing wage is estimated to have increased by 11%[2] to 30%[3].
- This means from $171 million to $467 million might have been available for affordable housing.
- An unknown amount of public funding in the form of various publicly funded incentives were needed to compensate for the higher costs of development to encourage public-private partnerships. One commentator noted that: "Without increased funding from the state, the number of projects redevelopment agencies will be able to fund in the future may drop by two thirds."[4]

---

[1] Center for Economic Development, CSU Chico, The Impact of Fiscal 2002-03 Community Redevelopment Agency Activities on the California Economy, December 4, 2004.
[2] "Impact of Prevailing Wage Rate Requirements on The Costs of Affordable Housing In California" The California Institute for County Government, June 9, 2004. This research was supported by funds from the California Coalition for Affordable Housing (CCAH).
[3] Little Hoover Commission, Rebuilding The Dream: Solving California's Affordable Housing Crisis, May 2002 http://www.lhc.ca.gov/lhcdir/165/report165.pdf
[4] Impact Of New Prevailing Wage Law On Development In California by Joseph E. Petrillo KOREK LAND COMPANY, INC.

Prepared for CRA by Gus Koehler, Time Structures
February 2, 2005

II. Estimated of cost born by developers and the public when prevailing wage is not paid:[5]

- The payment of prevailing wages often reduces costs because of the increase in productivity, the decrease in job site injuries, and savings derived from significant reductions in future maintenance because of the higher quality of the original construction.
- The failure to pay prevailing wages and benefits creates a direct cost to taxpayers because it shifts the cost of health care and pensions from employers to public health systems.
- The failure to pay prevailing wages creates direct costs to taxpayers and insurers because of the significant increase in job site injuries created by less-well trained workers.
- One study concluded that if the federal Davis-Bacon Act [which requires prevailing wage] was repealed that federal tax revenues would drop by $1 billion per year, and that there would be 76,000 additional workplace injuries in construction annually, with more than 675,000 work days lost each year. These increases would be felt in increased workers compensation costs and costs placed on public health systems by workers without health and pension benefits.[6]

[5] State Building and Construction Trades Council in California, Prevailing Wages in Construction, http://www.sbctc.org/default.asp?id=974&pagetype=about

[6] Phillips, Peter, Ph.D., et al, University of Utah, Losing Ground: Lessons from the Repeal ofNine 'Little Davis-Bacon' Acts, February, 1995.

Impact of Prevailing Wage Rate Requirements on The Costs of Affordable Housing In California

Prepared by

Matthew Newman

Shawn Blosser

Hilary Haycock

The California Institute for County Government

June 9, 2004

This research was supported by funds from the California Coalition for Affordable Housing (CCAH).

Executive Summary 3

Introduction 5

Redefining "Public Works" 7
Redefining "Public Funds" 7
How Do State and Federal Methodologies Compare? 10
Implementation Difficulties 11

Our Analysis 12

Higher Wages for Construction Workers 14
Higher Costs for Developers 14
Lower Employment in the Construction Trades 14
Contractors Exiting the Market 15
Substitution Effects 15

Existing Literature 15

Wage Differential Analysis 18

Data Sources for Wage Differential Analysis 19
Analysis of Wage Data 21
California Commercial Prevailing Wage Rates vs. Market Wage Rates 21
Commercial Prevailing Wage Rates: Davis-Bacon Federal Prevailing Wage Rates vs. DIR State Prevailing Wage Rates 24
Davis-Bacon Federal Prevailing Wage Rates: Residential vs. Commercial Rates 25
Discussion of Wage Differentials 27

Regression Analysis 28

Data Sources for Regression Analysis 28
Summary Statistics for Variables Used in Regression Analysis 30
Regression Results 32
Cost Effects Regression Analysis 32
Discussion of Regression Results 36

Reduction in Number of Affordable Units 36

Conclusion 37

Works Cited 39

Appendices 41

Executive Summary

On January 1, 2004 California implemented new rules requiring that virtually all affordable housing projects built with public support pay workers a specified minimum wage known as the "prevailing wage." These prevailing wage rates are substantially higher than market wages. In response to these changes, affordable housing advocates, developers, and local governments have expressed concern that the prevailing wage requirements will increase costs and reduce the supply of affordable housing units.

In spite of the importance of the prevailing wage issue, relatively little research has been conduced that would allow policy makers to assess the impact of these requirements on both the costs to construct and the supply of affordable housing units. This study seeks to fill this gap in the research by answering three important questions about the prevailing wage requirements:

1. How do prevailing wages compare with market wages?
2. How much will construction and total project costs increase as a result of prevailing wage requirements, and how will the impact of these requirements vary across the state?
3. How many fewer affordable units will be produced as a result of cost increases stemming from prevailing wage requirements?

Our research indicates that prevailing wages are substantially higher than market wages. In fact, California's published prevailing wage rates are about one-third to one-half higher than comparable market wages.

Our regression analysis allowed us to directly compare costs for prevailing wage projects to costs for comparable projects built with market wages. We found that the prevailing wage requirements increased overall project costs by about 11 percent, even while controlling for other factors known to influence costs such as regional variations in construction costs and characteristics of the structures themselves. We further found that the impact from these expanded prevailing wage requirements varies across the state, with some areas expected to experience cost increases of as little as six percent while others will likely experience increases of more than 15 percent.

Finally, we estimate that, as a result of the cost increases stemming from prevailing wage requirements, significantly fewer affordable units would be produced in California each year. Specifically, we estimate that more than 1,400 fewer units would have been subsidized by the California Tax Credit Allocation Committee (TCAC) in 2003 had the new prevailing wage requirements been in effect at the time. There is some anecdotal evidence of undersubscription to the tax credits and tax exemption programs run by the California Debt Limit Allocation Committee (CDLAC) and TCAC. It is unclear whether that is a result of confusion regarding the transition to prevailing wage requirements for residential construction, or the beginning of a longer term trend of even further decreases in the production of government subsidized affordable housing.

Introduction

Prevailing wage legislation requires that construction workers building government-funded projects be paid specified minimum wage rates, typically the rates paid to unionized workers for the relevant trade and region. Both the federal government and the state of California have prevailing wage laws on the books. Proponents of prevailing wages argue that these requirements increase wages and ensure a middle class standard of living for workers, while opponents believe that they needlessly increase costs for publicly funded construction projects.

Recently California expanded the scope of the state's existing prevailing wage legislation, causing many previously exempt categories of publicly financed affordable housing projects to be governed by prevailing wage requirements. This recent legislation has reopened the debate about the economic and public policy consequences of prevailing wage laws.

Although prevailing wage requirements have important, far reaching implications for wages paid, costs incurred, and number of units completed, relatively little research has been conducted that would allow policy makers to assess the impact of these requirements. This report seeks to address several important questions about prevailing wage requirements. First, we discuss the likely effects of prevailing wage requirements on labor markets and affordable housing developers. Second, we identify the wage differential between market wages and prevailing wages. Finally, we analyze the effect of prevailing wages on the costs of building affordable housing units in California and estimate the likely effect on the supply of these units going forward.

Background: Origin of Prevailing Wage Laws

Congress passed the Davis-Bacon Act, the federal prevailing wage law, in 1931. The purpose of this act was to protect the livelihood of workers during the Great Depression from the bidding process for federal construction projects, which encouraged contractors to lower wages in order to win bids. The Davis-Bacon Act applies to all projects over $2,000, and after 1964 required contractors to provide specified fringe benefits as well. The Secretary of the Department of Labor is responsible for determining both the prevailing wage rates and the minimum fringe benefits to be paid.

Following the enactment of the federal law, a number of states passed their own versions of the Davis-Bacon Act. California passed a state prevailing wage law in 1931, the same year as the federal bill. Administered by the Department of Industrial Relations (DIR), the California statute applies to a broader spectrum of publicly funded projects than the federal bill, including demolition work, job site refuse hauling, street and sewer construction, and building maintenance for public utilities.[1]

Recent Changes to California's Prevailing Wage Laws

In 2001 the California legislature passed Senate Bill 975, which expanded the scope of the state's prevailing wage regulations. SB 975 defined the statutory phrase "paid for in whole or part out of public funds"[2] even more broadly to encompass indirect financial assistance. Prior to the passage of SB 975, public entities frequently were able to indirectly fund private projects without requiring contractors to pay local prevailing wages. These indirect funding mechanisms included tax credits, gifts of land, and fee waivers, among others.

---

[1] See Theiblot 1995.
[2] See SB 975 Legislative Counsel's Digest.

SB 975 was in part a response to several recent DIR administrative decisions applying prevailing wage requirements to projects receiving indirect funding from public agencies. These decisions were inconsistent with previous DIR decisions exempting such projects from prevailing wage requirements.[3] The apparent change in DIR policy lead to confusion among developers, government sponsors of affordable housing projects, and construction workers alike. The California legislature opted to resolve this ambiguity by requiring all projects built directly or indirectly with public support to use prevailing wages. Affordable housing advocates, developers, and local governments opposed this change, arguing that it would increase costs and reduce the supply of affordable housing.

The California law was amended again in 2002 with Senate Bill 972, which provided limited exemptions for certain types of affordable housing projects but did not fully address the concerns of affordable housing proponents.

Redefining "Public Works"

In addition to increasing the number of affordable housing projects that were required to pay prevailing wages, SB 975 expanded the definition of "public works" from "construction, alteration, demolition, or repair work" [4]to include installation. This change resulted in a larger number of infrastructure projects coming under the jurisdiction of prevailing wage laws.

Redefining "Public Funds"

The original prevailing wage law required prevailing wages for construction projects "paid for in whole or in part out of public funds." The definition of "paid for

[3] SB 975 took effect January 1, 2002. SB 972 took effect January 1, 2003, and subsequently amended some of the provisions of SB 975.
[4] See SB 975 Legislative Counsel's Digest.

with public funds"[5] generally included projects directly funded with public money. This definition excluded government grants, loans, and other indirect forms of government financial assistance to private projects, creating an exemption in the prevailing wage law which allowed a number of projects receiving indirect public financial assistance to avoid prevailing wage requirements. Under SB 975, each of the following types of public financial assistance triggers prevailing wage requirements:

- Money paid on behalf of public agencies directly to public works contractors, subcontractors, or developers.
- Construction work done directly by public agencies.
- Transfer of an asset for less than fair market price.
- Reduction or elimination of fees, costs, rents, insurance, loans, interest rates or other obligations normally required.
- Money to be repaid on a contingent basis.
- Credits against repayment obligations.[6]

Many private redevelopment and affordable housing projects are now required to pay prevailing wages under the broadened definition of what constitutes payment with public funds, as well as most other private projects receiving some public agency assistance.

[5]See SB 975 Legislative Counsel's Digest.
[6] See Goldfarb and Lipman, 2001.

Table 1: Exemptions to Prevailing Wage Requirements

Exemptions Provided by SB 975[1]	
• The sale of land for fair market values.	• If the government reimburses a private developer for normal public costs.
• In some instances, take-out loans to private developers that take place after construction is completed.	• Public subsidies that are de minimis in context of the project.
• Residential projects undertaken independently of public agencies or housing authorities. This allows cities and counties to build public infrastructure (with prevailing wages) for private projects exempt from prevailing wages.	• The government can also construct public infrastructure for other types of private projects, without requiring those private projects to pay prevailing wages, as long as the government "maintains no proprietary interest in the overall project."
• The construction or rehabilitation of affordable housing units for low- or moderate-income individuals with only specific public funds governed by the Health and Safety Code and other private funds.	• Affordable housing projects financed through mortgage revenue bonds, or government low-income housing tax credits. [1]
Exemptions Provided by SB 972[2]	
• Self-help housing where homebuyers participate in at least 500 hours of construction work.	• Financial assistance to individual homeowners.
• Nonprofit work on emergency or transitional housing operated on at least 50% nonpublic funding.	• Rehabilitation or expansion of temporary or transitional homeless housing costing under $25,000.
• Public below market interest rate loans for projects where 40% of units are dedicated for at least twenty years to low income households (below 80% of area median income) where projects do not receive any government grants or non-loan assistance	

[1] See Goldfarb and Lipman, 2001.

[2] See Goldfarb and Lipman, 2002.

How Are Prevailing Wages Calculated?

Prevailing wage rates are determined for each construction trade and region of the state by the Department of Industrial Relations (DIR). In addition, the DIR is responsible for determining separate rates for residential and commercial projects. To determine these prevailing wage rates, the DIR uses a modal method, meaning the prevailing wage is set

to equal the wage paid to the majority, or greatest number, of workers. California's Labor Code states:

> The basic hourly wage rate being paid to a majority of workers engaged in the particular craft, classification, or type of work within the locality and in the nearest labor market area, if a majority of the workers is paid at a single rate. If no single rate is being paid to a majority of the workers, then the single rate being paid to the greatest number of workers, or modal rate, is prevailing.[7]

In practice the prevailing wage rate often equals the wage rate determined by collective bargaining agreements. Indeed, the California's Labor Code explicitly states that these union wage rates are to be considered in setting the prevailing wage:

> The director shall establish an alternative rate, consistent with the methodology for determining the modal rate, by considering the appropriate collective bargaining agreements, federal rates, rates in the nearest labor market area, or other data such as wage survey data.[8]

How Do State and Federal Methodologies Compare?

The state methodology for determining prevailing wages is very similar to the federal process outlined in the Davis-Bacon Act. The federal government also uses a modal method to calculate prevailing wages. And in practice, federal prevailing wage rates are very similar to those determined by the state (see the section "Wage Differential Analysis" below).

If no one wage rate is found to be prevailing (i.e. paid to 51 percent or more of workers), then a weighted average is used. As the Code of Federal Regulations states:

> The prevailing wage shall be the wage paid to the majority (more than 50 percent) of the laborers or mechanics in the classification on similar projects in the area during the period in question. If the same wage is not paid to a majority of those employed in the classification, the prevailing

[7] California Labor Code, Section 1773.9(b)(1).
[8] California Labor Code, Section 1773.9(b)(1).

> wage shall be the average of the wages paid, weighted by the total employed in the classification.[9]

Like the DIR generated prevailing wages, the U.S. Department of Labor often finds negotiated wages to be prevailing. The mode wage rate for a particular trade and region is determined based on a survey of voluntary submissions by contractors. Market wages tend to vary slightly within job classifications, but negotiated wages apply to large numbers of workers, making it more likely that a negotiated wage rate will be the most commonly paid, and thus prevailing. See the Wage Differential Analysis below for an in-depth comparison of wage rates, and Appendices A and B for more information on how prevailing wages are calculated at the state and federal levels.

Implementation Difficulties

Both the state and federal governments determine prevailing wage rates for a number of classifications of construction jobs within two broad categories: residential construction and commercial construction. Residential construction wages are generally lower than those in commercial construction.

The DIR uses the same process to determine prevailing wage rates for both residential and commercial construction. Commercial prevailing wage determinations are blanket determinations for specific localities and worker classifications, and are public information available to all potential bidders. However, unlike federal residential prevailing wage determinations which apply to broad regions, California residential prevailing wage determinations are made on a project-by-project basis and are not made available for public review.

[9] Code of Federal Regulations Title 29, Pt. 1.2.

Potential bidders for residential projects covered by California's prevailing wage law must request prevailing wage determinations from the DIR. These determinations can take up to 90 days or longer to complete. In the absence of a residential wage determination, (the generally higher) commercial prevailing wage rates must be applied. In addition, the implementation of SB 975 has greatly increased the volume of requested residential prevailing wage determinations, which has increased the time it takes for the DIR to complete requests for prevailing wage rate determinations. Because of the difficulty in obtaining residential wage rates from the DIR, many builders report that they must in practice rely on commercial prevailing wage rates for the majority of residential projects.

Our Analysis

This study attempts to identify the cost impact of prevailing wage requirements on government funded construction projects. Specifically, we examine the impact of prevailing wage requirements on the construction of affordable housing units in California, examining the wage differentials between prevailing wages and market wages, the impact of prevailing wage requirements on construction costs, and ultimately, the impact of prevailing wages on the number of affordable units that are produced.

Our first analysis is a wage differential analysis, which examines the difference between prevailing wages and market wages. We also examine the difference between California prevailing wage rates and federal Davis-Bacon wage rates. Finally, we analyze the difference between residential prevailing wage rates and commercial prevailing wage rates.

In addition to the wage rate differential, however, there are a number of additional influences on construction project costs, which may act to mitigate or exacerbate the effects of wage increases on overall project cost increases. To identify the specific impact of prevailing wage requirements on construction costs, we compare a sample of projects built with prevailing wages to a comparable set of projects not subject to prevailing wage requirements. Specifically, we use ordinary least squares (OLS) regression analysis to compare various cost measures of projects that have paid prevailing wages to those that have not. This approach allows us to control for a number of factors, such as regional variations in construction costs, economies of scale associated with building larger projects, and variations in building characteristics (e.g. number of stories, size of units, etc.). Next, we use the results from our wage differential and regression analyses, to estimate the region-by-region effects of prevailing wage requirements. These results are presented in the section entitled "Regional Variation in Prevailing Wage Impact" below.

Finally, we use the estimated cost impact of prevailing wage requirements on construction costs for affordable housing projects to estimate the impact of those requirements on the number of government-funded affordable housing units that will be constructed in the future.

Economic Impact of Prevailing Wages

There are a number of effects prevailing wage requirements may have on the publicly funded construction market, most related in some way to the potential of prevailing wage requirements to raise construction costs. These effects are briefly discussed in the following sections.

Higher Wages for Construction Workers

The most immediate impact of prevailing wage requirements is higher wages for construction workers on government-funded projects. This brings an immediate benefit to construction workers employed on publicly funded projects, but there is the possibility that increased wages may put pressure on the reach of available funding, ultimately decreasing the number of construction workers benefiting from wage increases.

Higher Costs for Developers

Prevailing wage laws will also likely result in higher costs for developers by raising labor and compliance costs. Prevailing wage laws not only mandate wage rates, but it has also been suggested that public construction contracts require work previously done by relatively lower paid laborers to be reassigned to other categories of higher paid workers.[10] It is also possible that increases in wages paid for public works projects will lead to increases in wages negotiated by unions and in the labor market, pushing labor costs up for the entire construction industry.

Lower Employment in the Construction Trades

The payment of prevailing wages at a rate higher than the market rate may serve to attract better workers who are skilled and more productive. Studies have shown a link between unionization, wage increases and increases in productivity.[11] Higher productivity may allow contractors to hire fewer workers, and in particular fewer supervisory positions, as highly trained workers tend to need less assistance and

[10] See Fraundorf., 1984.
[11] See Allen, 1984.

monitoring.[12] This increase in productivity would serve to partially offset the cost increases associated with higher wage rates, but it would also reduce the supply of construction jobs.

Contractors Exiting the Market

Requiring contractors to pay prevailing wages and to comply with the administrative burdens of the prevailing wage laws may act as a disincentive for potential bidders on public works projects. It has been suggested that public agencies are more demanding clients than those from the private sector, further raising costs and discouraging potential bidders.[13] Decreased competition for federal construction projects may lead to fewer and possibly worse options, as well as increased costs for government agencies, and thus taxpayers.

Substitution Effects

One way contractors may act to mitigate the impact of increased wages on construction costs is to "substitute capital or other inputs for labor."[14] Contractors may therefore invest in better equipment to make construction labor more productive, or choose to increase the use of prefabricated components in construction as a way to reduce the amount of construction labor needed for a given project.

Existing Literature

There is a considerable body of academic literature on the impacts of Davis-Bacon prevailing wage requirements. Most of these studies, however, focus on non-

[12] See Allen, 1986.
[13] See Prus, 1996.
[14] Ibid.

residential construction projects, such as schools, hospitals, and other public construction. To quantify the impact of Davis-Bacon on construction costs, these studies used various methods to define control groups. Some studies compared projects within a defined region over time periods with and without prevailing wage requirements. Others compared similar projects in regions with prevailing wages against regions without such requirements. Issues examined included the economic efficiency of such legislation, the impact on wages for construction workers, and their effect on state budgets. None of these studies, however, have focused specifically on California or the prevailing wage requirements of the state.

In spite of these differences, previous studies can provide some insight into the impacts of prevailing wages on construction costs in general. Goldfarb and Morrall reviewed a number of the existing empirical studies on the costs associated with the federal Davis-Bacon requirements and concluded that although the studies to date have been faulty in many respects, there are clear indications that the act is "…unattractive on grounds of economic efficiency alone."[15] Previous work by these same authors estimated substantial cost savings from using mean wage rates rather than modal rates as is currently done.[16]

Specific estimates of the additional costs associated with the use of prevailing wages vary considerably across studies. Thiebolt estimated an increase of about one-half percent for prevailing wage projects.[17] Gould and Bittlingmayer later accounted for

[15] See Goldfarb and Morrall, 1981.
[16] See Goldfarb and Morrall, 1978.
[17] See Thiebolt, 1975.

institutional factors and inflation to estimate an increase of between 4 and 7 percent.[18] Fisher and Sheehan examined bids for government contracts in a rather simplistic analysis and estimated that prevailing wage requirements in Iowa would raise construction costs approximately 1 percent for highways and 3.5 percent for buildings.[19] Prus used data from the F.W. Dodge Company to compare government construction projects across states and found costs for such projects to be 18 percent higher in states with prevailing wage requirements.[20] Fraundorf, et.al. surveyed contractors for 215 randomly selected non-residential rural projects and concluded that costs for prevailing wage projects increased an average of about 26 percent.[21]

While such studies indicate there may be some impact of prevailing wage requirements on construction costs, their findings vary considerably and, as mentioned above, do not look specifically at residential construction for California. A recent working paper by Sarah Dunn, John M. Quigley and Larry A. Rosenthal at the University of California at Berkeley, however, does look specifically at the impact of prevailing wage requirements on the cost of residential construction in California.[22] This study, funded by a grant from the U.S. Department of Housing and Urban Development and by the Berkeley Program on Housing and Urban Policy, examined the effects of recent prevailing wage legislation on the costs of subsidized low-income housing in California. The study examined 205 projects consisting of new dwellings constructed for California Low-Income Housing Tax Credit (LIHTC) housing projects, where the funding applications were filed after January 1, 1997 and were placed in service prior to May

[18] See Gould and Bittlingmayer, 1980.
[19] See Fisher and Sheehan, 1985.
[20] See Prus, 1996.
[21] See Fraundorf et. al., 1984.
[22] See Dunn et. al., 2003.

2002. All of these projects received federal (and some state) tax credits through the California Tax Credit Allocation Committee (TCAC), which administers the federal LIHTC program in California. The authors applied standard econometric techniques to account for differences in building attributes, geography, financing, and developer characteristics, and found that prevailing wage requirements increased construction costs by between 9 and 32 percent. They also estimated that the implementation of such requirements will result in some 2,600 fewer units being built each year from the tax credit program alone.

Wage Differential Analysis

To understand how prevailing wages impact the combined cost of construction projects, it is important to understand the difference between market wages and prevailing wages. We compared wage rates for five job categories on a county-by-county basis: carpenters, electricians, drywall installers, HVAC/sheet metal workers, and plumbers. For each of these trades, data were collected for (1) market wage rates (combined residential and commercial construction), (2) Davis-Bacon federal prevailing wage rates for residential construction, (3) Davis-Bacon federal prevailing wage rates for commercial construction, and (4) California state prevailing wage rates for commercial construction.[23] To calculate aggregate statistics for all of California, two estimates were constructed: (1) an equally-weighted average across all counties and (2) a population-weighted average across all counties, with each county weighted by its 2002 population.

Using the data described above, three analyses were performed. The first analysis compared state commercial prevailing wage rates to average market wage rates, and

[23] As mentioned above, the DIR determines prevailing wage rates for residential construction on a project-by-project basis and does not publish these rates; thus, they were not available to be used for this analysis.

found that for the five trades examined, the commercial prevailing wage rates are, on average, about one-third to one-half more than current market rates. The second analysis compared the same state commercial prevailing wage rates to the comparable federal Davis-Bacon commercial prevailing wage rates and found that these two rates are on average extremely close (within ± 2%). The third analysis compared the federal Davis-Bacon commercial prevailing wage rates to the Davis-Bacon residential prevailing wage rates, and found that the commercial rates were on average 14% to 53% higher.

Data Sources for Wage Differential Analysis

California commercial prevailing wage rates were collected from the California DIR's Division of Labor Statistics and Research. The rates used for this analysis represent simple wages without benefits or overtime pay.[24] See Appendix A for a more detailed description of the methodology used by the DIR to calculate these wages.

Market wage rates used in this analysis are the "Mean Hourly Wage" for 2002, as reported by the California Employment Development Department (EDD). The data are reported for each county, and represent the average wage rate (excluding benefits) for both union and non-union workers. The market wage rate includes both commercial and residential construction workers. The "Mean Hourly Wage" is determined based on a survey of industries and employees, and then a weighted average of those results. See Appendix C for a more detailed description of the methodology used by the EDD to calculate these wages.[25]

[24] The DIR data used in this analysis were downloaded on May 23, 2003 from the DIR website at http://www.dir.ca.gov/DLSR/PWD/index.htm.
[25] The data for this analysis were downloaded on May 5, 2003 from the EDD website at http://www.calmis.ca.gov/htmlfile/subject/occup$.htm.

The population for each county was downloaded from the California Department of Finance website in June 2003.[26] The figures used represent estimates of each county's population in 2002.

Federal Davis-Bacon prevailing wage rates (residential and commercial) are determined by the U.S. Department of Labor. See Appendix B for a more detailed description of the methodology used by the Department of Labor to calculate these wages.[27]

The Davis-Bacon wage rates as downloaded were already divided into residential and commercial wage rates for each trade. When multiple wage rates were given for a specific trade within a county, different rates usually were distinguished by one or more of the following three types of characteristics:

- Geography (e.g., east of the Sierra watershed vs. west of the Sierra watershed)
- Size of project (e.g., total project costs over $25 million vs. under $25 million)
- Type of work or scope of project (e.g., structures up to and including 4 stories vs. those with 5 stories or more)

Whenever more than one wage rate was given in the Davis-Bacon data, care was taken to ensure that the correct rate or rates were used so that valid comparisons could be made with wage rates from the other sources. This usually involved either selecting the single most comparable rate based on the description given, or taking the average of two

[26] See http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm.
[27] The Davis-Bacon data used for this analysis were downloaded from the GPO-access website (http://www.access.gpo.gov/davisbacon/ca.html) on May 25, 2003.

or more rates. For a complete listing of instances where an average wage rate was calculated, see the notes in Appendix D.

Analysis of Wage Data

The analysis conducted for this study was done to answer the following three questions:

1) How do the published California commercial prevailing wage rates compare to market rates in general, and are there pronounced regional differences in different parts of California?
2) How do Davis-Bacon commercial prevailing wage rates compare to DIR commercial prevailing wage rates?
3) How do Davis-Bacon commercial prevailing wage rates compare to Davis-Bacon residential prevailing wage rates?

As mentioned above, statistics were calculated for each analysis on a county-by-county basis, and then summarized across all counties in two ways: (1) a simple average where each county is weighted equally and (2) a population-weighted average where each county is weighted by its 2002 population. Calculating the population-weighted average provides a more representative estimate to the extent that construction occurs proportionally to the population in a given area.

California Commercial Prevailing Wage Rates vs. Market Wage Rates

This analysis compares the California prevailing wage rates for commercial construction as published by the DIR with the market wage rate as published by the EDD. The comparison is conducted for each of the five trades on a county-by-county basis. The

results of this comparison, as summarized in Table 2 below, indicate that DIR prevailing wage rates are significantly higher than market wage rates, with considerable variation across trades. The DIR commercial prevailing wage rates range from 28% higher for carpenters to 61% higher for HVAC/sheet metal workers when each county is weighted equally, and from 36% for carpenters to 55% for plumbers when each county is weighted by its population. Appendix E presents a more detailed summary of the results of this comparison.

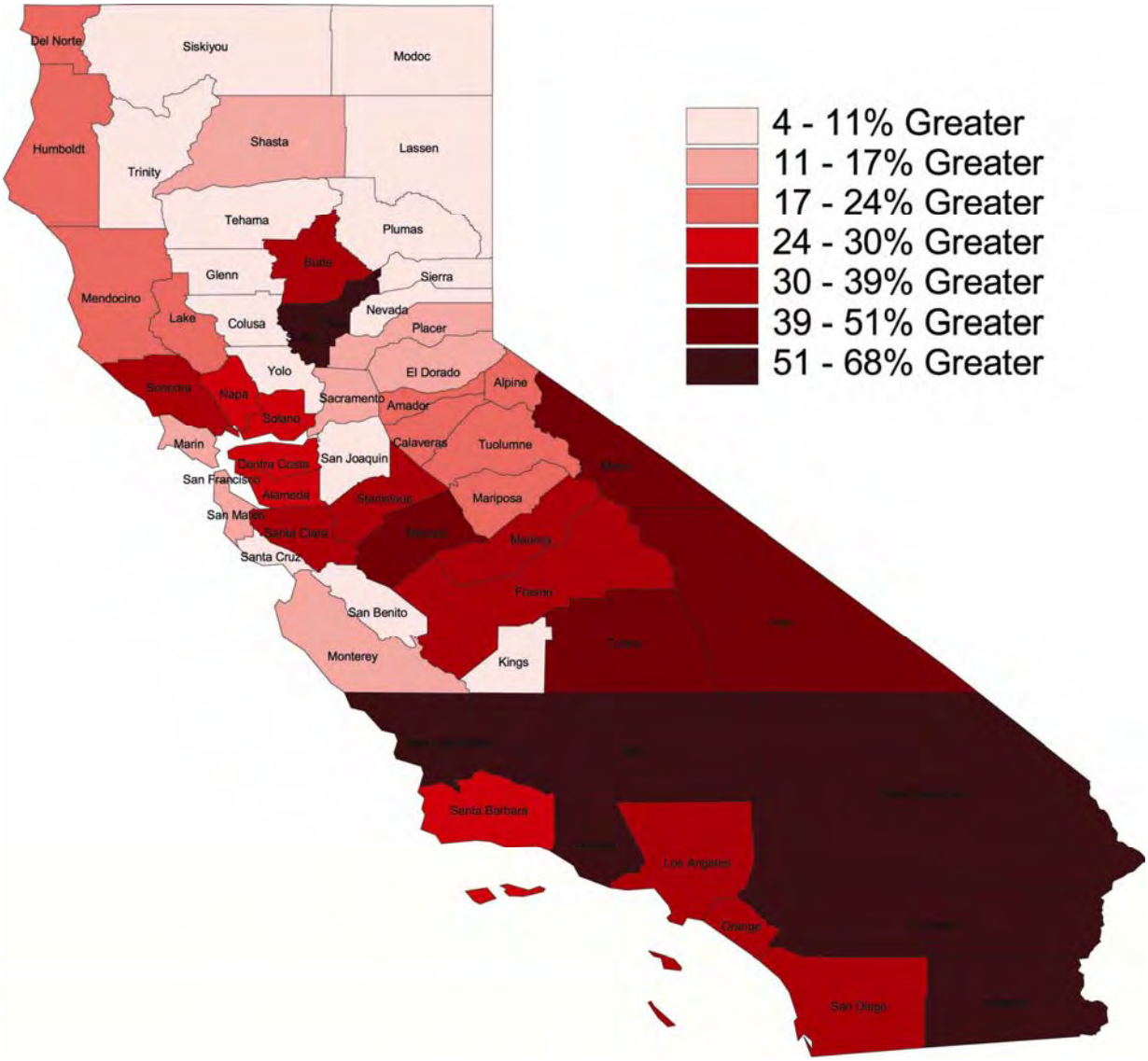
Table 2: California DIR Commercial Prevailing Wage Rates vs. EDD Market Wage Rates (Percent by which DIR prevailing wage rate is greater than EDD market rate)

	Simple Avg.	Population-Weighted Avg.
Carpenter	28%	36%
Drywall Installer	43%	41%
Electrician*	41%	40%
HVAC/Sheet Metal Worker	61%	53%
Plumber	56%	55%

* Yolo County could not be included in the analysis for electricians because the EDD data did not include a market wage rate for electricians for this county.

A county-by-county comparison of DIR commercial prevailing wage rates with EDD market wage rates reveals significant variation, both across trades and among regions of the state. In the vast majority of cases, the DIR commercial prevailing wage rate is higher than the market wage rate (although there are a few counties where the prevailing wage rate is lower than the published market rate for a particular trade). In fact, there are a number of instances where the DIR prevailing wage rate is more than 100% greater than the average market rate, with the greatest difference being 149% (see San Benito County for plumbers).

Figure 1: California Commercial Prevailing Wage Rates vs. Market Rates for Carpenters (Percent by which DIR prevailing wage rate is greater than EDD market rate)



While the variation in wage rates makes it difficult to generalize across counties and trades, Figure 1 above shows a map presenting the difference between commercial prevailing wages and market wages for carpenters in each county in the state. As the map in Figure 1 shows, the largest differential for carpenters generally occurs in the

southeastern (50-60% increase) and central (60-70% increase) counties. In contrast, the northeastern counties and coastal Bay Area counties have in general a much smaller differential (10-20% increase). Note that this analysis applies only to carpenters, and other trades may exhibit different patterns of wage differentials. Appendix E contains similar maps for the other trades examined, and a table with the differential between DIR prevailing wage rates and the EDD market wage rates for each county.

Commercial Prevailing Wage Rates: Davis-Bacon Federal Prevailing Wage Rates vs. DIR State Prevailing Wage Rates

This analysis compares the Davis-Bacon federal prevailing wage rates for commercial construction against the comparable DIR California state prevailing wage rates for commercial construction. Because some of the data series presented in the Davis-Bacon wage rates have not been updated recently, this analysis was conducted in two ways – first using all of the available data regardless of when the wage rate was last updated, and, second, looking only more recent Davis-Bacon data, which for the purposes of this analysis was defined as data that has been updated within the last four years (since June 1, 1999). A summary of the results of this analysis is presented in Table 3 below, with more detailed results for each county given in Appendix F.

Table 3: DIR Commercial Prevailing Wage Rates vs. Davis-Bacon Commercial Rates
(Percent by which DIR prevailing wage rate is greater than Davis-Bacon prevailing wage rate)

	Simple Avg.	Population-Weighted Avg.	Counties/Population Included	
Using All Available Davis-Bacon Data Series:[1]				
Carpenter	3%	2%	All	
Drywall Installer	3%	2%	All	
Electrician	7%	1%	All	
HVAC/Sheet Metal Worker	1%	0%	All	
Plumber	6%	1%	All	
Using Only Recent Davis-Bacon Data Series:[2]				
Carpenter	0%	1%	(52 counties)	(97.9% of Pop.)
Drywall Installer	0%	2%	(53 counties)	(99.0% of Pop.)
Electrician	1%	0%	(53 counties)	(99.0% of Pop.)
HVAC/Sheet Metal Worker	-2%	0%	(53 counties)	(99.0% of Pop.)
Plumber	1%	0%	(53 counties)	(99.0% of Pop.)

Notes:

[1]This analysis was performed using all available Davis-Bacon data series, regardless of the date that data series was last updated. All 58 counties had the necessary data for this analysis.

[2]This analysis was performed using only counties for which Davis-Bacon commercial data series were last updated on 6/1/1999 or later. When this filter is applied, some counties are no longer included in the analysis as shown.

As Table 3 shows, Davis-Bacon commercial prevailing wage rates are quite close to the DIR's commercial prevailing wage rates (between 1 and 7% for the simple average across counties, and between 0 and 2% on a population-weighted basis). When only the recent Davis-Bacon data are used, the differences narrow for the simple average to between 0 and 2%, and remain within that narrow range for the population-weighted average.

Davis-Bacon Federal Prevailing Wage Rates: Residential vs. Commercial Rates

This analysis compares the Davis-Bacon federal prevailing wage rates for commercial construction against the comparable prevailing wage rates for residential

construction. Again, the comparison is conducted for each of the five trades on a county-by-county basis, and the estimates are done both using all of the Davis-Bacon data and then using only the more recent Davis-Bacon data. The results are summarized in Table 4 below, with more detailed county-by-county results presented in Appendix G.

Table 4: Federal Davis-Bacon Prevailing Wage Rates: Commercial vs. Residential
(Percent by which commercial rates are greater than residential rates)

	Simple Avg.	Population-Weighted Avg.	Counties/Population Included	
Using All Available Davis-Bacon Data Series:[1]				
Carpenter	52%	36%	(58 counties)	(100.0% of Pop.)
Drywall Installer	38%	36%	(46 counties)	(96.6% of Pop.)
Electrician	89%	56%	(58 counties)	(100.0% of Pop.)
HVAC/Sheet Metal Worker	64%	19%	(42 counties)	(89.7% of Pop.)
Plumber	85%	39%	(56 counties)	(99.9% of Pop.)
Using Only Recent Davis-Bacon Data Series:[2]				
Carpenter	18%	34%	(37 counties)	(95.7% of Pop.)
Drywall Installer	26%	35%	(35 counties)	(94.8% of Pop.)
Electrician	40%	53%	(34 counties)	(87.9% of Pop.)
HVAC/Sheet Metal Worker	11%	14%	(31 counties)	(87.4% of Pop.)
Plumber	42%	36%	(38 counties)	(96.8% of Pop.)

Notes:

[1]This analysis was performed using all available Davis-Bacon data series, regardless of the date that data series was last updated. Some counties did not have Davis-Bacon residential prevailing wage rates for some trades, and could therefore not be included in the analysis as shown above.

[2]This analysis was performed using only counties for which Davis-Bacon commercial data series were last updated on 6/1/1999 or later. When this filter is applied, more counties are no longer able to be included in the analysis as shown.

As Table 4 shows, the simple average difference between commercial and residential prevailing wage rates ranges from 38% to 89% higher when each county is weighted equally, and from 19% to 56% higher when each county is weighted by its population. When only recent data are included, however, the difference between commercial and residential Davis-Bacon prevailing wage rates decreases considerably for

the simple-average across counties, and decreases somewhat for the population-weighted average. As the table shows, the minimum average difference goes from 19% to 14% for HVAC/sheet metal workers, and the maximum average difference goes from 56% to 53% for electricians. For all five of the trades examined, the population-weighted figures change by fewer than 5 percentage points, indicating that these estimates are quite robust.

Discussion of Wage Differentials

The analyses described above indicate that prevailing wage rates differ considerably from market wage rates, that state and federal commercial prevailing wage rates are nearly identical, and that the Davis-Bacon prevailing wage rates differ considerably between commercial and residential construction. While there is a great deal of variation across counties and among the five construction trades examined, three clear patterns emerge when the data are examined for California as a whole:

1) The current prevailing wage rates for commercial construction as determined by the DIR are considerably higher than the average market wage rates for the same trade. Based on this analysis, the DIR rates are on average about 36% to 55% higher.

2) The current Davis-Bacon commercial prevailing wage rates for federally funded construction projects are very close to the DIR commercial prevailing wage rates for state funded construction projects. For the state as a whole, the two rates are on average within 2% of one another, and, for most trades, identical.

3) The current Davis-Bacon commercial prevailing wage rates are considerably higher than the Davis-Bacon residential prevailing wage rates. When analyzing only the

most recent Davis-Bacon data series, the commercial rates range from 14% to 53% higher than the residential rates, with a median difference of approximately 35%.

Regression Analysis

The wage comparison analysis presented above clearly indicates that prevailing wages are significantly higher than market wage rates. In order to determine the impact of higher wages on the construction costs for affordable housing projects, we compared costs for a sample of affordable housing projects built with prevailing wages to a comparable sample of projects not subject to these requirements.

Any analysis that seeks to identify the effect of one factor on an outcome, in this case the effect of prevailing wages on construction costs, must also take into account a number of other factors that together determine the level of construction costs. We used a method called regression analysis, which shows us the effect of an influencing factor (or independent variable) on an outcome (the dependent variable), while allowing us to control for other possible explanatory factors. The approach we followed closely resembled the methodology of the Dunn, et.al. study. Our analysis, however, is based on a substantially larger sample of projects and incorporates several refinements to the earlier methodology.

Data Sources for Regression Analysis

Our dataset consists of newly constructed multi-family rental-housing projects that received federal Low-Income Housing Tax Credits (LIHTC) from the California Tax Credit Allocation Committee (TCAC).[28] Information was collected on 365 projects with

[28] Many projects also received state tax credits.

applications filed after January 1, 1997, and which were placed in service before December 31, 2003.

Two cost variables were used as outcomes in our analysis. “Construction Cost” includes site preparation, materials and labor, overhead and profits for the contractor, and general requirements. “Total Project Cost” is a broader cost measure, including all costs related to the development and construction of the residential portion of a project, including site preparation and land, architect and engineering costs, financing, and other costs, as well as construction costs.

We employed two methods to test for the impact of the prevailing wage requirements on project costs. In the first, we included a simple variable indicating whether or not prevailing wages were paid. Analysis of this variable indicates the overall cost increase resulting from prevailing wage requirements.

In the second, we constructed a new variable to estimate the percent difference between the market wage rates and the prevailing wage rates, based on our wage differential analysis. For prevailing wage projects we assigned this variable to the value of the average wage difference between market and prevailing wages for that county, and for non prevailing wage projects we assigned this variable to zero. Analysis of this variable allows us to estimate the likely impact on total project costs stemming from a specified increase in wage rates.

We collected data on several variables to help explain variations in construction costs and total project costs. These measures included characteristics of the projects such as the inclusion of elevators, below-structure parking or special facilities, the type of structure, location, number of units, density, and affordability. We grouped projects into

one of nine geographical areas to ascertain regional cost differentials. Our study included dummy variables for the years 1997 to 2002 in order to account for year-specific factors that may influence construction or project costs. A complete list of variables, and further explanation of our regression analysis methodology is included in Appendix H.

Summary Statistics for Variables Used in Regression Analysis

Of the 365 projects, 85 (or 23%) paid prevailing wages to construction workers while 280 paid market wages. The average project had 85 units and was just over 80,000 square feet. Over half of all projects were targeted at large families, and approximately 40 percent were at least half composed of units with three or more bedrooms.

Figure 2: Location of TCAC Affordable Housing Projects used in Regression Analysis by Region

The projects were spread throughout the state. One hundred and twenty three projects were located in Southern California. Ninety-eight, or about one quarter, were located in the Bay Area, and 12 percent in the San Joaquin Valley. The map in Figure 2 above shows the location of all the projects in the sample.

In nominal terms, the average prevailing wage project cost nearly $12.6 million while the average market wage project cost just under $10 million. The average cost per unit was $168,088 for prevailing wage projects and $123,435 for market wage projects. Table 5 shows a comparison of prevailing wage and non prevailing wage projects according to several nominal and real (inflation-adjusted) cost measures. As Table 5 indicates, the prevailing wage projects were more expensive on average when compared with the market wage projects for every measure used, both in real and nominal terms.

Table 5: Various Cost Measures for Prevailing Wage and Non Prevailing Wage Projects

	Prevailing Wage Projects			Non Prevailing Wage Projects		
Cost Measures	Number	Mean	Median	Number	Mean	Median
Project Costs ($Millions)						
Construction Costs - Unadjusted	85	7.381	6.199	280	6.123	5.460
Construction Costs - Constant 1997 Dollars	85	7.027	5.742	280	5.837	5.256
Total Project Costs - Unadjusted	85	12.590	10.594	280	9.953	8.916
Total Project Costs - Constant 1997 Dollars	85	11.972	9.862	280	9.498	8.540
Per-Unit Construction Costs ($)						
Construction Costs - Unadjusted	85	99,678	94,279	280	75,130	71,186
Construction Costs - Constant 1997 Dollars	85	95,206	90,586	280	71,839	68,067
Total Project Costs - Unadjusted	85	168,088	165,429	280	123,435	117,187
Total Project Costs - Constant 1997 Dollars	85	160,361	159,377	280	118,098	110,835

On a regional basis, the difference between prevailing wage projects and non prevailing wage projects varied, although it is difficult to draw definitive conclusions from a regional analysis because some regions had few or no prevailing wage projects to compare. As Table 6 shows, prevailing wage projects were on average more expensive than non prevailing wage projects in every region except for the Northern California

region, although it is difficult to draw any reliable conclusions from this due to the small number of projects being compared.

Table 6: Regional Comparison of Total Project Costs/Unit in Constant 1997 Dollars

	Prevailing Wage Projects			Non-Prevailing Wage Projects		
Region	**Number**	**Mean ($)**	**Median ($)**	**Number**	**Mean ($)**	**Median ($)**
Northern California	2	90,289	90,289	2	111,036	111,036
Northern Sacramento Valley	0	n/a	n/a	5	109,811	109,868
Central Sierra	0	n/a	n/a	2	94,498	94,498
Greater Sacramento	1	108,255	108,255	34	100,103	97,980
Bay Area	52	175,321	179,862	46	130,638	129,950
Central Coast	0	n/a	n/a	18	124,430	129,876
San Joaquin Valley	3	108,941	117,755	38	92,853	90,702
Southern California	23	146,555	152,183	100	125,903	113,287
Southern Border Region	4	131,897	134,632	35	123,886	118,096
OVERALL	**85**	**160,361**	**159,377**	**280**	**118,098**	**110,835**

* Note that due to the limited number of projects in most regions, direct comparisons may be unreliable.

Regression Results

Using our expanded dataset, we first replicated the regression models presented by Dunn et.al.[29] Our results very closely matched those reported in this UCB study. Our analysis showed that projects paying prevailing wages have a total project cost of approximately 11 percent more than those not under prevailing wage requirements when controlling for relevant factors that influence cost. These cost effect results were virtually identical to the results reported by Dunn et.al.

Cost Effects Regression Analysis

We also made several modifications to the Dunn et.al. methodology. First we used a substantially larger dataset, including 365 projects. We also made several adjustments to account for inflation and time-specific factors that may influence construction or project costs. Finally, we built and tested a series of models using the

[29] We replicated these models as closely as possible, however, certain data used by Dunn et.al. was not available for our analysis.

difference between market and prevailing wages as an independent variable (i.e., a factor that influences construction or project costs).

Appendix I shows the results of the four main statistical models we used in our analysis. We found that project costs are affected by project size, developer type, and project type. Projects constructed by nonprofit developers are more expensive, as are projects in the Bay Area. Features such as tenant parking located below the project structure and elevators also contribute to higher costs. All these findings are consistent with our expectations, and with the Dunn et.al. results.

Our analysis suggests that even when other factors are taken into account, projects paying prevailing are more expensive to develop. Our models suggest that projects paying prevailing wages are likely to incur 11.0 percent higher total residential project costs, and 11.8 percent higher residential construction costs.

Regional Variation in Prevailing Wage Impact

Although the TCAC projects used for our analyses were located throughout the state, there were not a sufficient number of prevailing wage projects in many regions to estimate regional differences directly through regression analysis. Indeed, as Figure 2 above illustrates, the prevailing wage projects in our sample were located primarily in the Southern California and San Francisco Bay Area regions. Thus, to estimate the regional variation in the impact of the new prevailing wage requirements, we have applied the coefficient estimate for the average percent wage differential variable (PctDiff_Avg) in Table (see Appendix I) to the average wage differential for each county as determined by our wage differential analysis above. In this way, we are able to estimate the impact of the prevailing wage requirement by county. The results of these calculations are

presented in Table 7 below. As Table 7 shows, the estimated change in total project cost ranges from a low of 6.4% in Mariposa County to a high of 15.3% in Lake County. Table 7 shows how the total residential construction cost varied between prevailing wage and non prevailing wage projects across regions.

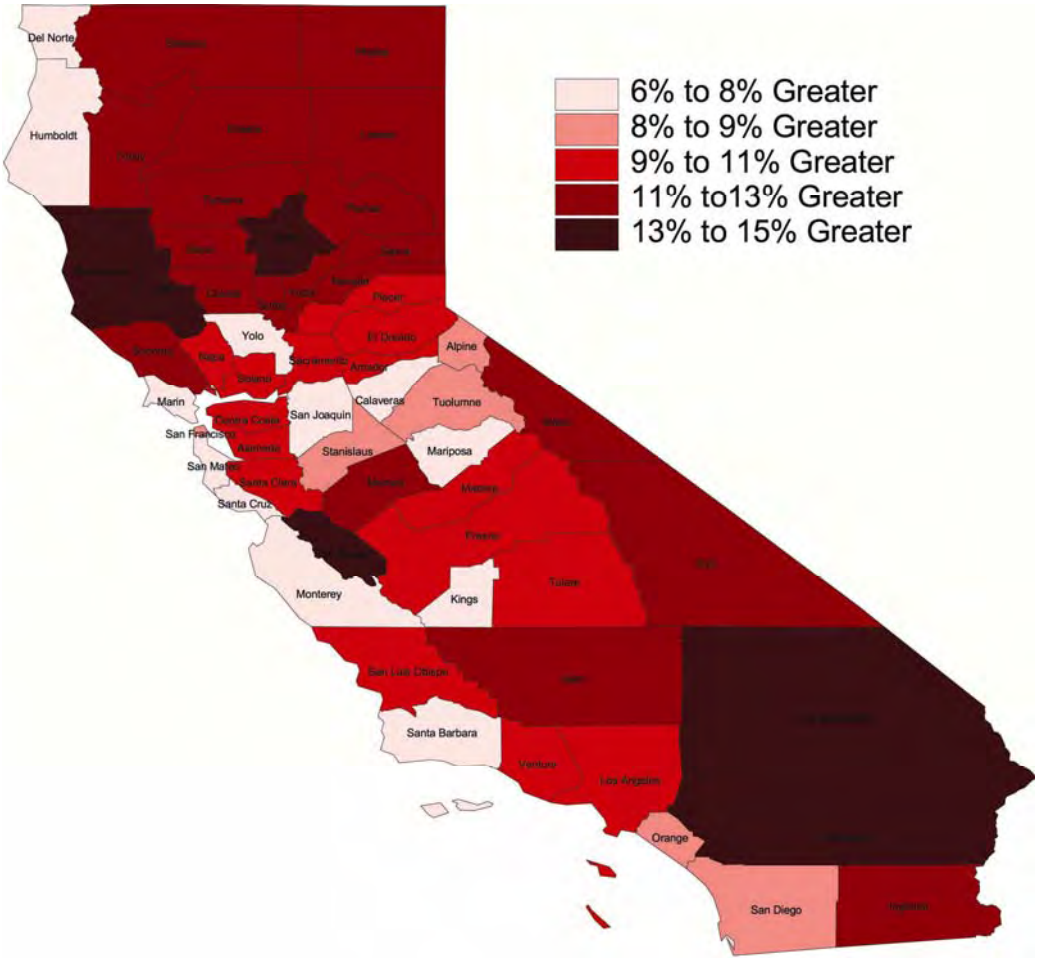
Table 7: Estimation of Regional Variation in Prevailing Wage Impact on Total Project Cost

County	Avg. Pct Wage Difference	Total Project Cost: Coefficient from Regression Analysis	Estimated Change: Total Project Cost
ALAMEDA	45%	0.2366	10.7%
ALPINE	39%	0.2366	9.2%
AMADOR	43%	0.2366	10.3%
BUTTE	58%	0.2366	13.8%
CALAVERAS	36%	0.2366	8.5%
COLUSA	55%	0.2366	13.1%
CONTRA COSTA	45%	0.2366	10.7%
DEL NORTE	33%	0.2366	7.8%
EL DORADO	41%	0.2366	9.7%
FRESNO	42%	0.2366	9.9%
GLENN	55%	0.2366	13.1%
HUMBOLDT	33%	0.2366	7.8%
IMPERIAL	56%	0.2366	13.2%
INYO	49%	0.2366	11.7%
KERN	53%	0.2366	12.5%
KINGS	31%	0.2366	7.2%
LAKE	65%	0.2366	15.3%
LASSEN	55%	0.2366	13.1%
LOS ANGELES	48%	0.2366	11.3%
MADERA	42%	0.2366	9.9%
MARIN	30%	0.2366	7.1%
MARIPOSA	27%	0.2366	6.4%
MENDOCINO	65%	0.2366	15.3%
MERCED	50%	0.2366	11.9%
MODOC	49%	0.2366	11.7%
MONO	49%	0.2366	11.7%
MONTEREY	29%	0.2366	6.9%
NAPA	48%	0.2366	11.3%
NEVADA	56%	0.2366	13.3%
ORANGE	40%	0.2366	9.4%
PLACER	41%	0.2366	9.7%
PLUMAS	55%	0.2366	13.1%
RIVERSIDE	58%	0.2366	13.7%
SACRAMENTO	42%	0.2366	10.0%
SAN BENITO	64%	0.2366	15.2%
SAN BERNARDINO	59%	0.2366	14.0%
SAN DIEGO	38%	0.2366	9.0%
SAN FRANCISCO	38%	0.2366	9.0%
SAN JOAQUIN	31%	0.2366	7.4%
SAN LUIS OBISPO	41%	0.2366	9.6%
SAN MATEO	35%	0.2366	8.4%
SANTA BARBARA	34%	0.2366	8.0%
SANTA CLARA	43%	0.2366	10.1%
SANTA CRUZ	32%	0.2366	7.5%
SHASTA	55%	0.2366	13.0%

County	Avg. Pct Wage Difference	Total Project Cost: Coefficient from Regression Analysis	Estimated Change: Total Project Cost
SIERRA	55%	0.2366	13.1%
SISKIYOU	49%	0.2366	11.7%
SOLANO	48%	0.2366	11.3%
SONOMA	55%	0.2366	13.0%
STANISLAUS	39%	0.2366	9.2%
SUTTER	52%	0.2366	12.3%
TEHAMA	55%	0.2366	13.1%
TRINITY	55%	0.2366	13.1%
TULARE	45%	0.2366	10.6%
TUOLUMNE	36%	0.2366	8.6%
VENTURA	46%	0.2366	10.8%
YOLO	32%	0.2366	7.5%
YUBA	52%	0.2366	12.3%

To illustrate how the estimated change in total project cost varies by region, we have also constructed a map that plots these values for each county. This map is

Figure 3: Estimated Change in Total Project Cost by County



presented in Figure 3 above. As Figure 3 shows, the regional differences, while not extreme, do indicate that different parts of California will be affected differently by the new prevailing wage requirements.

Discussion of Regression Results

Our regression results confirm earlier studies and what has long been suspected: prevailing wage requirements increase the costs of building affordable housing. Those cost increases can be expected to have a significant impact on the long-term funding and availability of affordable housing. The goal of government subsidies for affordable housing construction is to increase the availability of affordable housing, yet the increased costs associated with prevailing wages may serve instead as a greater disincentive. Increased costs, without matching increases in public subsidy funding, will most likely lead to fewer low-income housing units being constructed in California.

Reduction in Number of Affordable Units

Increasing the costs of producing affordable housing is expected to lead to a decrease in the number of low-income housing units produced. Using the estimated total project cost increase from our regression analyses, we can estimate the reduction in affordable units produced. In 2003 TCAC funded 18,779 low-income housing units.[30] This number includes both newly constructed and rehabilitated units.[31]

Based on our dataset, we estimate that 23% of TCAC funded projects were required to pay prevailing wages. Thus in 2003, we estimate that 4,338 units were subject to prevailing wage requirements, and 14,441 were not. Had these additional units been

[30] TCAC Annual Report, 2003. This number includes units funded through both the 9% competitive tax credit program, and the 4% tax-exempt bond financed program.
[31] In estimating the number of reduced units, we are assuming that the cost impact of prevailing wages on new construction will be the same on rehabilitation projects.

subject to prevailing wage requirements, total project costs would have increased by 11 percent. Without funding increases, this would have caused a reduction in the number of units that were produced. We estimate that had prevailing wage requirements been in effect for all TCAC funded units in 2003, 1,431 fewer units would have been built. Going forward, we estimate that these same economic forces will act to reduce the number of affordable units produced each year.

Conclusion

While many public works projects have been subject to prevailing wage requirements since 1931, the expansions to the law provided by SB 975 will impact additional construction sectors. In particular, attention has been focused on affordable housing programs which now fall under the umbrella of prevailing wage laws. Available evidence strongly indicates that prevailing wage requirements increase labor costs and ultimately overall project costs for publicly funded construction projects.

The conclusion based on existing evidence is clear: requiring prevailing wages for construction of affordable housing in California will significantly increase construction costs and ultimately reduce the number of units produced unless additional resources are made available. Specifically, our analysis indicates that prevailing wages are approximately one-third to one-half higher than comparable market wages. Furthermore, our comparison of prevailing wage projects to market wage projects reveals that these higher wages increase overall project costs by nearly 11 percent. Because affordable housing developers often piece together funding from multiple small sources, even an 11 percent construction cost increase could prevent projects from being built at all. Finally, we estimate that the requirement that virtually all affordable projects be built with

prevailing wages will reduce the number of units produced by approximately 1,400 annually.

Public agencies funding construction projects must accommodate higher project costs in their funding priorities. If they wish to continue funding the same number of projects with the same level of aid impact, larger budget allocations will be needed. Due to the current expectation of ongoing budget deficits at the state and federal levels, it is unclear whether additional funding will be available to maintain the number of publicly funded construction projects.

Alternatives to increased budgets include reducing the number of projects funded by public agencies or reducing per-project funding. Reducing per-project funding may place a large burden on private contractors who receive less funding but face higher labor costs. This may decrease the relative attractiveness of public funding for certain projects.

Initial examinations of the first funding rounds by CDLAC and TCAC, two top government sources of funding for affordable housing units, suggest there may be undersubscription to their tax credit and tax-exempt bond programs. While this is not unheard of in the history of those programs, it is unclear whether this is short-term economic dislocation resulting from confusion created by the introduction of prevailing wage requirements, or evidence of the beginning of ongoing reductions in publicly subsidized affordable housing.

Works Cited

Allen, Steven G., "Unionized Construction Workers are More Productive," *The Quarterly Journal of Economics*," Vol. 99, Issue 2 (May 1984), pp. 251-274.

Allen, Steven G., "Unionization and Productivity in Office Building and School Construction," *Industrial and Labor Relations Review*," Vol. 39, Issue 2 (January 1986), pp. 187-201.

California Labor Code, Section 1773.9(b)(1).

Dunn, Sarah; Quigley, John M.; and Rosenthal, Larry A.; "The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing," Working Paper W03-003, Institute of Business and Economic Research and the Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, September 2003.

Fisher, Peter S. and Sheehan, Michael F., "Economic Impacts of a Prevailing Wage Law for Iowa State Construction Projects," Prepared for the Iowa State Building and Construction Trades Council, Des Moines, Iowa, February 27, 1985.

Fraundorf, Martha Norby ; Farrell, John P.; and Mason, Robert, "The Effect of the Davis-Bacon Act on Construction Costs in Rural Areas," *The Review of Economics and Statistics*, Vol. 66, Issue 1, February 1984, pp. 142-146.

Goldfarb, Robert S. and Morrall, John F. (III), "Cost Implications of Change Davis-Bacon Administration," *Policy Analysis*, Fall 1978.

Goldfarb, Robert S. and Morrall, John F. (III), "The Davis-Bacon Act: An Appraisal of Recent Studies," *Industrial and Labor Relations Review*, Vol. 34, Issue 2 (January 1981), pp. 191-206.

The Law Offices of Steven H. Goldfarb and Barry R. Lipman, *SB975 Prevailing Wages* Memorandum, Oakland, Nov. 28, 2001.

The Law Offices of Steven H. Goldfarb and Barry R. Lipman, *Prevailing Wages "Clean-Up Legislation" – SB972 Memorandum*, Oakland, Oct. 2, 2002.

Gould, John P. and Bittlingmayer, George, *The Economic sof the Davis-Bacon Act: An Analysis of Prevailing Wage Laws*, American Enterprise Institute for Public Policy Research, Washington, D.C., 1980.

SB 975 Legislative Counsel's Digest.

"Procedures for Predetermination of Wage Rates." *Code of Federal Regulations* Title 29, Pt. 1.2.

Prus, Mark J., "The Effect of State Prevailing Wage Laws on Total Construction Costs," January 1996.

Thieblot, Armand J., The Davis-Bacon Act, Labor Relations and Public Policy Series, Report No 10, Philadelphia: University of Pennsylvania Press, 1975.

Thieblot, Armand J., “State Prevailing Wage Laws,” prepared for Associated Builders and Contractors, Inc., 1995.

Appendices

Appendix A: California Prevailing Wages

1. Prevailing Wage Definitions

A. Prevailing Wage Project Definition: California Labor Code Section 1771

Except for public works projects of one thousand dollars ($1,000) or less, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in this chapter, shall be paid to all workers employed on public works.

Available at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=lab&group=01001-02000&file=1770-1780

B. Commercial/Residential Project Definitions

Commercial Project Definition: All non-residential construction projects including new work, additions, alterations, reconstruction and repairs. This includes residential projects over four stories.

> Residential Project Definition: Projects consisting of single-family homes and apartments up to and including four stories are subject to payment of prevailing wages when paid for in whole or in part out of public funds, including federally funded or assisted residential projects controlled or carried out by an awarding body.

From the DIR's Prevailing Wage FAQs at http://workitout.ca.gov/faq.asp?id=143.

2. DIR methodology for calculating commercial prevailing wage rates

The prevailing wage is the wage paid to the majority, or mode, of workers.

A. The Director of the Department of Industrial Relations:

1. Ascertains the wage rates established by collective bargaining agreements, and wages for federal public works.
2. If this is not the prevailing wage in the locality, then more information is gathered from labor organizations and employers.

3. If this cannot be determined, then the director will establish an alternative rate, based on the methodology of finding the mode.
4. Wage rates change per collective bargaining agreement terms.

B. California Labor Code Section 1773.9

1773.9. (a) The Director of Industrial Relations shall use the methodology set forth in subdivision (b) to determine the general prevailing rate of per diem wages in the locality in which the public work is to be performed.

(b) The general prevailing rate of per diem wages includes all of the following:

(1) The basic hourly wage rate being paid to a majority of workers engaged in the particular craft, classification, or type of work within the locality and in the nearest labor market area, if a majority of the workers is paid at a single rate. If no single rate is being paid to a majority of the workers, then the single rate being paid to the greatest number of workers, or modal rate, is prevailing. If a modal rate cannot be determined, then the director shall establish an alternative rate, consistent with the methodology for determining the modal rate, by considering the appropriate collective bargaining agreements, federal rates, rates in the nearest labor market area, or other data such as wage survey data.

(2) Other employer payments included in per diem wages pursuant to Section 1773.1 and as included as part of the total hourly wage rate from which the basic hourly wage rate was derived. In the event the total hourly wage rate does not include any employer payments, the director shall establish a prevailing employer payment rate by the same procedure set forth in paragraph (1).

(3) The rate for holiday and overtime work shall be those rates specified in the collective bargaining agreement when the basic hourly rate is based on a collective bargaining agreement rate. In the event the basic hourly rate is not based on a collective bargaining agreement, the rate for holidays and overtime work, if any, included with the prevailing basic hourly rate of pay shall be prevailing.

(c) If the director determines that the general prevailing rate of per diem wages is the rate established by a collective bargaining agreement, and that the collective bargaining agreement contains definite and predetermined changes during its term that will affect the rate adopted, the director shall incorporate those changes into the determination. Predetermined changes that are rescinded prior to their effective date shall not be enforced.

Available at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=lab&group=01001-02000&file=1770-1780

Appendix B: Federal Prevailing Wages

1. Prevailing Wage Definitions

A. Prevailing Wage Project Definition: Government Printing Office Davis-Bacon Reference Material

Each contract over $2,000 to which the United States or the District of Columbia is a party for the construction, alteration, or repair of public buildings or public works shall contain a clause setting forth the minimum wages to be paid to various classes of laborers and mechanics employed under the contract. Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character.

Available at: http://www.access.gpo.gov/davisbacon/referencemat.html

B. Commercial/Residential Project Definitions

Commercial Project Determination:

1. Building construction generally is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies.

2. Highway projects include the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction.

3. Heavy construction is not a homogeneous classification. Because of this catch-all nature, projects within the heavy classification may sometimes be distinguished on the basis of their particular project characteristics, and separate schedules issued. For example, separate schedules may be issued for dredging projects, water and sewer line projects, dams, major bridges, and flood control projects.

Residential Project Determination: Residential projects for Davis-Bacon purposes are those involving the construction, alteration, or repair of single-family houses or apartment buildings of no more than four (4) stories in height. This includes all incidental items such as site work, parking areas, utilities, streets and sidewalks.

Available at: http://www.labor.gov/esa/programs/dbra/docs/memo-131.pdf.

2. U.S. Department of Labor methodology for calculating Davis-Bacon prevailing wage rates

The prevailing wage is the wage paid to the majority of workers, or the weighted average wage.

A. The Administrator of the Wage and Hour Division of the Department of Labor:

1. Collects voluntary submissions of wage information in a 'survey.'
2. This data may include collective bargaining agreements, state and local prevailing wage rates, wage rates from contracting agencies, and wage rates on recent projects. It may not include wages paid on federally funded projects.
3. Union rates will be used if they are found to be prevailing (51%). Otherwise, a weighted average will be taken and used. Wage rate listings indicate the source of wage rate, survey or which particular union's rates.
4. New 'surveys' are conducted every three years to update information, with a staggered schedule.

B. Code of Federal Regulations 29 CFR 1.3 - Obtaining and compiling wage rate information. (Source: Davis-Bacon and Related Acts)

For the purpose of making wage determinations, the Administrator will conduct a continuing program for the obtaining and compiling of wage rate information.

(a) The Administrator will encourage the voluntary submission of wage rate data by contractors, contractors' associations, labor organizations, public officials and other interested parties, reflecting wage rates paid to laborers and mechanics on various types of construction in the area. The Administrator may also obtain data from agencies on wage rates paid on construction projects under their jurisdiction. The information submitted should reflect not only the wage rates paid a particular classification in an area, but also the type or types of construction on which such rate or rates are paid, and whether or

not such rates were paid on Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements.

(b) The following types of information may be considered in making wage rate determinations:

(1) Statements showing wage rates paid on projects. Such statements should include the names and addresses of contractors, including subcontractors, the locations, approximate costs, dates of construction and types of projects, whether or not the projects are Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements, the number of workers employed in each classification on each project, and the respective wage rates paid such workers.

(2) Signed collective bargaining agreements. The Administrator may request the parties to an agreement to submit statements certifying to its scope and application.

(3) Wage rates determined for public construction by State and local officials pursuant to State and local prevailing wage legislation.

(4) In making wage rate determinations pursuant to 23 U.S.C. 113, the highway department of the State in which a project in the Federal-Aid highway system is to be performed shall be consulted. Before making a determination of wage rates for such a project the Administrator shall give due regard to the information thus obtained.

(5) Wage rate data submitted to the Department of Labor by contracting agencies pursuant to 29 CFR 5.5(a)(1)(ii).

(6) Any other information pertinent to the determination of prevailing wage rates.

(c) The Administrator may initially obtain or supplement such information obtained on a voluntary basis by such means, including the holding of hearings, and from any sources determined to be necessary. All information of the types described in

Sec. 1.3(b) of this part, pertinent to the determination of the wages prevailing at the time of issuance of the wage determination, will be evaluated in the light of

Sec. 1.2(a) of this part.

(d) In compiling wage rate data for building and residential wage determinations, the Administrator will not use data from Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements unless it is determined that there is insufficient wage data to determine the prevailing wages in the absence of such data. Data from Federal or federally assisted projects will be used in compiling wage rate data for heavy and highway wage determinations.

Available at: http://www.labor.gov/esa/whd/contracts/dbra.htm.

Appendix C: EDD methodology for calculating market wage rates

The "Mean Hourly Wage" is the estimated total wages for an occupation divided by its weighted survey employment.

The EDD conducts their Occupational Employment Statistics Survey:

1. Establishments are asked to report how many workers they employ in a given occupation in each of several wage ranges.
2. Wages reported are averaged, weighted by survey employment.

For more information see

http://www.calmis.ca.gov/file/occup$/oeswages/oestechnotes.htm.

Appendix D: Additional Notes –

The following notes apply to all of the analyses associated with the comparison of various Federal Davis-Bacon prevailing wage rates and California (DIR) prevailing wage rates, as well as market wage rates, for various types of construction occupations.

Listing of Sources Used:

1. Federal Davis-Bacon prevailing wage rates:

Residential and commercial prevailing wage rates are determined for each California county by the U.S. Department of Labor and are made available on the federal government's GPO-Access website at http://www.access.gpo.gov/davisbacon/ca.html. The rates used here were downloaded from this site on 5/25/2003.

2. California (DIR) prevailing wage rates:

Commercial prevailing wage rates are made available by the California Department of Industrial Relations (DIR) Division of Labor Statistics and Research. The rates used here were downloaded from their website at http://www.dir.ca.gov/DLSR/PWD/index.htm on 5/23/2003.

3. Population statistics:

Source: California Department of Finance, 2002 figures, taken from http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm.

4. Market Mean wage rates (EDD):

Market wage rates used are the "Mean Hourly Wage" for 2002, as reported by the California Employment Development Department (EDD). Note that these wage rates include both commercial and residential construction. The information was

downloaded from the EDD website at

http://www.calmis.ca.gov/htmlfile/subject/occup$.htm (downloaded on 5/5/2003).

Notes on Specific Davis-Bacon Wage Rates Used:

Whenever possible, the most appropriate Davis-Bacon wage rate was used, based on the description given. Such determinations were usually based on one or more of the following types of descriptions:

1. The type of work performed (e.g., light commercial, industrial, work on certain types of structures, etc.)

2. The size of the project for which the work is performed (e.g., projects with a total value above or below a certain dollar figure, etc.)

3. The geographic location where the work is performed.

When these types of descriptions were given, the rate most consistent with other available sources was selected if it could be determined, in order to ensure consistent comparisons across counties for a given type of construction occupation for commercial or residential construction. If a single rate could not be determined, the simple average of all the potentially appropriate rates was used. See the attached table for a listing of all specific instances where an average of various given rates was used instead of a single rate.

Appendix D: Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
1.	ALAMEDA	HVAC	COMMERCIAL	$34.56	Rate used represents the average of two rates given: "Work on projects with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or an existing water or air loop to registers and/or diffusers; also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($31.71) and "All Other Work ($37.40)
2.	AMADOR	PLUMBER	COMMERCIAL	$20.88	Rate represents average of two rates given: "(northern half)" ($19.72) and "(southern half)" ($22.03)
3.	AMADOR	PLUMBER	RESIDENTIAL	$20.88	Rate represents average of two rates given: "(northern half)" ($19.72) and "(southern half)" ($22.03)
4.	CONTRA COSTA	HVAC	COMMERCIAL	$34.56	Rate used represents the average of two rates given: "Work on projects with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or an existing water or air loop to registers and/or diffusers; also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($31.71) and "All Other Work ($37.40)
5.	EL DORADO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21). Note also this is only for west of Main Sierra Mountains watershed.
6.	EL DORADO	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
7.	EL DORADO	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
8.	FRESNO	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condominiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)
9.	IMPERIAL	ELECTRICIAN	RESIDENTIAL	$19.41	Rate used represents the average of two rates: "Work on single family homes, duplexes, condominiums and apartments that do not exceed three (3) stories" ($14.61) and "All other residential construction: Electrical subcontracts of $500,000 or less" ($24.21).
10.	KERN	HVAC	COMMERCIAL	$27.09	Rate used represents the average of two rates given: "Work on all commercial HVAC for creature comfort and computers clean rooms, architectural metals, metal roofing and lagging, over insulation (East of Hwy #395 from Red Mountain to the Inyo County)" ($28.99) and "Work on all new construction and remodel work except commercial buildings less than ten thousand (10,000) square feet (excluding that portion east of Highway 395)" ($25.18)

Appendix D: Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

	County	Trade	Residential/ Commercial	Rate Used	Notes
11.	KERN	PLUMBER	COMMERCIAL	$25.34	Rate represents average of three rates given: "Encompasses the far eastern side of Kern County, which includes Edwards Air Force Base, Rosamond, Boron, China Lake Naval Weapons Center and RidgecresT" ($27.67); "Encompasses all the central valley: Bakersfield, Lamont, Arvin, Frazier Park, Taft, Shafter, Wasco, McFarland and Deleano" ($22.67); and "Encompasses Kernville, Tehachapi, Lake Isabella, Mohave, Monolith and Weldon" ($25.67)
12.	KERN	PLUMBER	RESIDENTIAL	$25.34	Rate represents average of three rates given: "Encompasses the far eastern side of Kern County, which includes Edwards Air Force Base, Rosamond, Boron, China Lake Naval Weapons Center and RidgecresT" ($27.67); "Encompasses all the central valley: Bakersfield, Lamont, Arvin, Frazier Park, Taft, Shafter, Wasco, McFarland and Deleano" ($22.67); and "Encompasses Kernville, Tehachapi, Lake Isabella, Mohave, Monolith and Weldon" ($25.67)
13.	LOS ANGELES	HVAC	COMMERCIAL	$29.40	Rate used represents the average of three rates given: (1) "SOUTH OF A STRAIGHT LINE DRAWN BETWEEN GORMAN AND BIG PINES, CALIFORNIA; EXCLUDING THE AREA SOUTH OF IMPERIAL HIGHWAY EAST OF THE LOS ANGELES RIVER, EXCLUDING THE CITIES OF LONG BEACH, CLAREMONT AND POMONA, AND EXCLUDING THE ISLAND OF CATALINA: Work on all new construction and remodel work except residential buildings and commercial buildings less than five thousand (5,000) square feet" ($30.60); (2) "SOUTH OF IMPERIAL HWY. TO THE CITY OF LONG BEACH AND THE CITIES OF PONOMA AND CLAREMONT: Work on all commercial HVAC for creature comfort and computers clean rooms, architectural metals, metal roofing and lagging over insulation" ($28.60); and (3) "AREA SOUTH OF IMPERIAL HIGHLY AND EAST OF THE 710 FREEWAY INCLUDING THE ENTIRE CITIES OF CLAREMONT, LONG BEACH AND POMONA: Work on all commercial HVAC for creature comfort and computer clean rooms, architectural metals, metal roofing and lagging, over insulation" ($28.99).
14.	LOS ANGELES	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: LOS ANGELES COUNTY (south of a straight line drawn between Gorman and Big Pines, including the area south of Imperial Highway to the city limits of Long Beach, including the cities of Long Beach, Claremont, and Pomona, and the Island of Catalina): Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
15.	MADERA	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condominiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)

	County	Trade	Residential/ Commercial	Rate Used	Notes
16.	MERCED	ELECTRICIAN	RESIDENTIAL	$23.26	Rate used represents the average of two rates given: "Applies to construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, duplexes, triplexes, quadruplexes, condominiums apartmentsup to and including three (3) stories" ($18.50) and "All Other Residential Construction" ($28.02)
17.	NAPA	PLUMBER	RESIDENTIAL	$29.90	Rate represents average of two rates given: "Work performed on single family residential units, condominiums, townhouses, apartment houses and mobile homes for which the total plumbing bid does not exceed $250,000; or Any residential project bid in phases shall not qualify unless the total project is less than $250,000 for the Plumbing bid and $250,000 for the heating and cooling bid" ($25.90) and "All other work" ($33.90)
18.	NEVADA	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21)
19.	NEVADA	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
20.	NEVADA	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
21.	ORANGE	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
22.	PLACER	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21). Note also this is only for west of Main Sierra Mountains watershed.
23.	PLACER	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
24.	PLACER	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
25.	RIVERSIDE	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
26.	SACRAMENTO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).

Appendix D: Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

	County	Trade	Residential/ Commercial	Rate Used	Notes
27.	SAN BERNARDINO	ELECTRICIAN	RESIDENTIAL	$23.11	Rate used represents the average of two rates given: "All single family dwellings and multi-family dwellings not exceeding eight units and/or two stories" ($16.00) and "All other residential work" ($27.25).
28.	SAN BERNARDINO	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
29.	SAN BERNARDINO	PLUMBER	COMMERCIAL	$31.46	Rate represents average of three rates given: "Fort Irwin Army Base, Marine Corps Logistic Base at Nebo, Marine Corps Logistic Base at Yermo and Twenty-Nine Palms Marine Base" ($33.31); "George Air Force Base" ($32.06); and "Remainder of County" ($29.81).
30.	SAN DIEGO	ELECTRICIAN	RESIDENTIAL	$23.61	Rate used represents the average of two rates given: "Work on family residences, single family homes duplexes, condominiums, apartments that do not exceed three (3) stories" ($17.00) and "All other residential and building construction" ($30.21).
31.	SAN DIEGO	HVAC	COMMERCIAL	$26.90	Rate represents average of two rates given: Camp Pendleton ($27.90) and "Remainder of County" ($25.90).
32.	SAN DIEGO	HVAC	RESIDENTIAL	$17.83	(Camp Pendleton and Remainder of County)
33.	SAN DIEGO	PLUMBER	COMMERCIAL	$30.94	Rate represents average of two rates given: "Camp Pendleton" ($32.06) and "Remainder of County" ($29.81)
34.	SAN FRANCISCO	ELECTRICIAN	RESIDENTIAL	$36.44	Rate used represents the average of two rates given: "Work on residential wood frame remodel and repair in all wood-constructed buildings not to exceed 24 living units; and new wood frame single structure 1 or 2 family houses, or on all wood-constructed buildings not to exceed 20 living units under 1 roof excluding projects or tracts containing more than 2 houses, or more than 1 building" ($27.33) and "All other work" ($45.55).
35.	SAN MATEO	HVAC	COMMERCIAL	$36.83	Rate represents average of two rates given: "Work with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or air loop to registers and/or diffusers; Also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($35.10) and "All Other Work" ($38.55).
36.	SANTA BARBARA	ELECTRICIAN	RESIDENTIAL	$19.49	Rate used represents the average of two rates given: "Vendenberg Air Force Base" ($21.36) and "(Excluding Vendenberg Air Force Base)" ($17.61).
37.	SANTA BARBARA	PLUMBER	COMMERCIAL	$30.49	Rate represents average of two rates given: "Vandenburg Air Force Base" ($32.06) and "Remainder of County" ($28.92)

	County	Trade	Residential/ Commercial	Rate Used	Notes
38.	SANTA CLARA	HVAC	COMMERCIAL	$37.65	Rate represents average of two rates given: "Work with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or air loop to registers and/or diffusers; Also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also pre-engineered and pre-manufactured siding" ($36.54) and "All Other Work" ($38.75)
39.	SOLANO	PLUMBER	RESIDENTIAL	$29.90	Rate represents average of two rates given: "Work performed on single family residential units, condominiums, townhouses, apartment houses and mobile homes for which the total plumbing bid does not exceed $250,000; or Any residential project bid in phases shall not qualify unless the total project is less than $250,000 for the Plumbing bid and $250,000 for the heating and cooling bid" ($25.90) and "All other work" ($33.90)
40.	STANISLAUS	ELECTRICIAN	RESIDENTIAL	$23.26	Rate used represents the average of two rates given: "Applies to construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, duplexes, triplexes, quadruplexes, condominiums apartments up to and including three (3) stories" ($18.50) and "All Other Residential Construction" ($28.02)
41.	SUTTER	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).
42.	TULARE	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condominiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)
43.	YOLO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).
44.	YUBA	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).

Appendix E: Comparison of Commercial Prevailing Wage Rates with Mean Market Rates (Combined Residential and Commercial Construction)

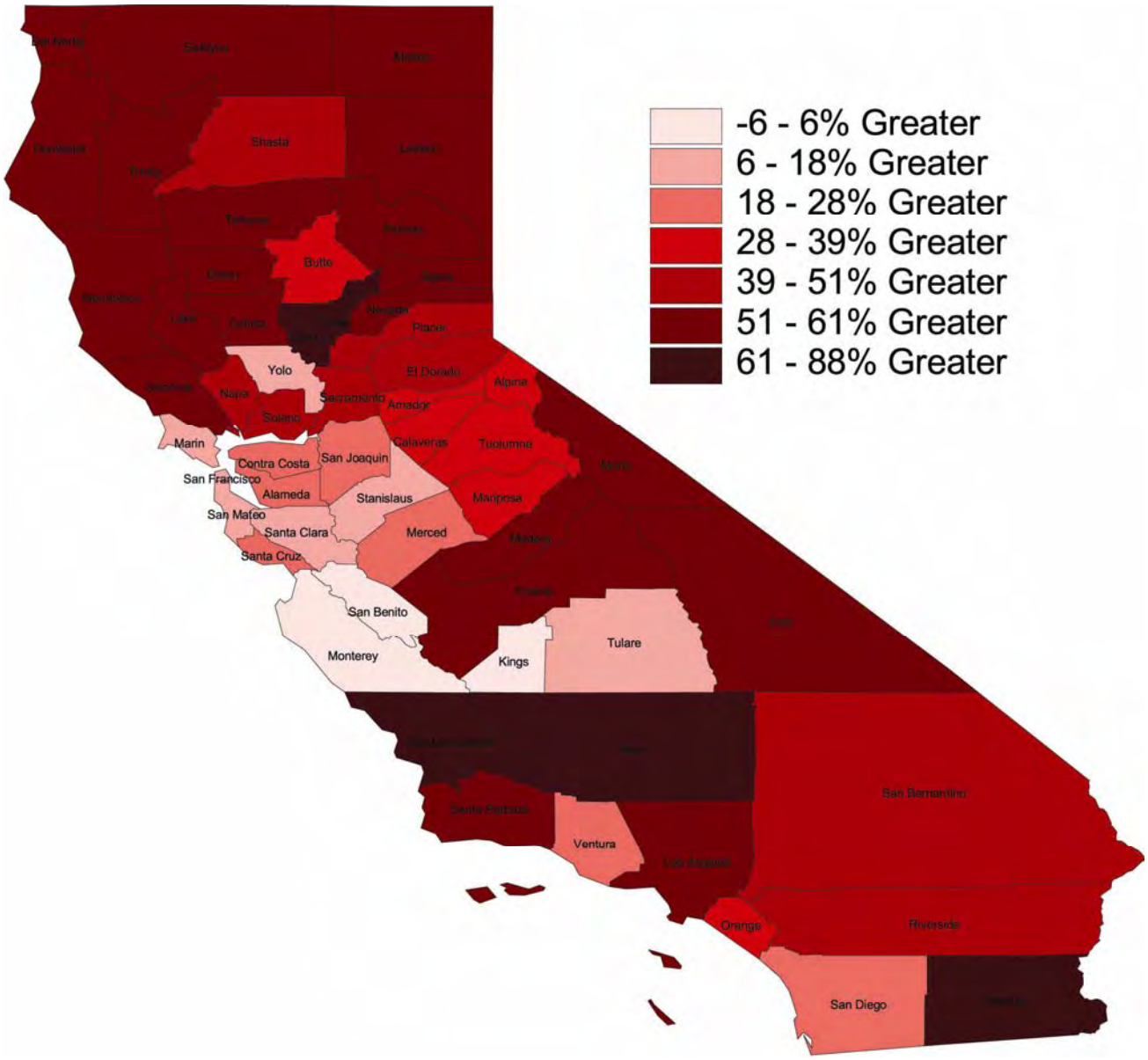
		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$23.07	29%	$29.75	$23.37	27%	$37.00	$31.71	17%	$36.59	$17.02	115%	$35.51	$25.71	38%
ALPINE	1,210	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.21	$24.76	30%	$27.37	$16.52	66%	$29.29	$20.35	44%
AMADOR	36,049	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.21	$24.76	30%	$31.05	$16.52	88%	$29.29	$20.35	44%
BUTTE	207,310	$23.27	$16.73	39%	$23.77	$17.29	37%	$32.21	$20.20	59%	$31.05	$17.33	79%	$28.79	$16.25	77%
CALAVERAS	41,820	$23.27	$18.86	23%	$23.77	$18.01	32%	$28.19	$24.76	14%	$27.37	$16.52	66%	$29.29	$20.35	44%
COLUSA	19,341	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
CONTRA COSTA	980,870	$29.75	$23.07	29%	$29.75	$23.37	27%	$37.51	$31.71	18%	$36.59	$17.02	115%	$35.21	$25.71	37%
DEL NORTE	27,694	$23.27	$18.84	24%	$23.77	$14.75	61%	$26.12	$23.96	9%	$21.92	$20.48	7%	$30.93	$18.74	65%
EL DORADO	163,649	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$29.40	$19.12	54%
FRESNO	827,310	$23.27	$17.43	34%	$23.77	$15.48	54%	$27.10	$18.14	49%	$24.80	$19.20	29%	$28.79	$19.96	44%
GLENN	26,747	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
HUMBOLDT	127,305	$23.27	$18.84	24%	$23.77	$14.75	61%	$26.12	$23.96	9%	$21.92	$20.48	7%	$30.93	$18.74	65%
IMPERIAL	150,217	$29.00	$18.33	58%	$29.00	$15.76	84%	$29.00	$21.77	33%	$25.90	$20.25	28%	$29.81	$16.88	77%
INYO	18,242	$28.43	$18.86	51%	$29.00	$18.01	61%	$36.35	$24.76	47%	$24.76	$16.52	50%	$28.17	$20.35	38%
KERN	688,875	$28.43	$17.40	63%	$29.00	$16.20	79%	$28.84	$20.80	39%	$24.76	$19.89	24%	$28.17	$17.72	59%
KINGS	133,553	$23.27	$22.26	5%	$23.77	$23.24	2%	$27.10	$21.02	29%	$24.80	$15.55	59%	$28.79	$18.29	57%
LAKE	60,519	$23.27	$18.84	24%	$23.77	$14.75	61%	$32.13	$23.96	34%	$38.05	$20.48	86%	$41.00	$18.74	119%
LASSEN	34,237	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
LOS ANGELES	9,817,419	$29.00	$21.04	38%	$29.00	$18.63	56%	$30.45	$20.22	51%	$29.41	$20.58	43%	$29.81	$19.69	51%
MADERA	130,373	$23.27	$17.43	34%	$23.77	$15.48	54%	$27.10	$18.14	49%	$24.80	$19.20	29%	$28.79	$19.96	44%
MARIN	248,490	$29.75	$26.63	12%	$29.75	$26.24	13%	$32.13	$30.78	4%	$38.05	$21.17	80%	$41.00	$28.95	42%
MARIPOSA	17,087	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.02	$24.76	29%	$17.57	$16.52	6%	$29.29	$20.35	44%
MENDOCINO	87,552	$23.27	$18.84	24%	$23.77	$14.75	61%	$32.13	$23.96	34%	$38.05	$20.48	86%	$41.00	$18.74	119%
MERCED	219,554	$23.27	$16.27	43%	$23.77	$19.32	23%	$29.02	$20.68	40%	$28.18	$15.72	79%	$29.29	$17.74	65%
MODOC	9,353	$23.27	$21.11	10%	$23.77	$15.08	58%	$26.66	$18.32	46%	$31.05	$16.91	84%	$28.79	$19.18	50%
MONO	13,247	$28.43	$18.86	51%	$29.00	$18.01	61%	$36.35	$24.76	47%	$24.76	$16.52	50%	$28.17	$20.35	38%
MONTEREY	409,608	$24.62	$21.61	14%	$24.62	$26.06	-6%	$33.01	$24.28	36%	$30.78	$22.44	37%	$31.89	$19.44	64%
NAPA	128,132	$29.75	$22.93	30%	$29.75	$19.72	51%	$33.65	$34.86	-3%	$38.05	$20.01	90%	$33.90	$19.67	72%
NEVADA	94,980	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$29.40	$19.18	53%

County	Population	Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
		DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater
ORANGE	2,930,488	$29.00	$21.55	35%	$29.00	$20.85	39%	$31.10	$23.46	33%	$29.41	$21.40	37%	$29.81	$19.29	55%
PLACER	265,683	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$29.40	$19.12	54%
PLUMAS	20,964	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
RIVERSIDE	1,645,319	$29.00	$18.17	60%	$29.00	$19.49	49%	$28.58	$22.01	30%	$29.41	$18.05	63%	$29.81	$15.84	88%
SACRAMENTO	1,280,920	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$30.97	$19.12	62%
SAN BENITO	55,618	$24.62	$22.26	11%	$24.62	$23.24	6%	$33.01	$21.02	57%	$30.78	$15.55	98%	$45.51	$18.29	149%
SAN BERNARDINO	1,788,479	$29.00	$18.17	60%	$29.00	$19.49	49%	$28.35	$22.01	29%	$30.60	$18.05	70%	$29.81	$15.84	88%
SAN DIEGO	2,908,505	$24.60	$17.87	38%	$22.05	$17.84	24%	$29.00	$20.72	40%	$25.90	$18.63	39%	$29.81	$20.00	49%
SAN FRANCISCO	789,062	$29.75	$26.63	12%	$29.75	$26.24	13%	$45.55	$30.78	48%	$37.05	$21.17	75%	$41.00	$28.95	42%
SAN JOAQUIN	596,907	$23.27	$20.92	11%	$23.77	$18.85	26%	$28.19	$22.26	27%	$27.37	$17.90	53%	$29.29	$21.00	39%
SAN LUIS OBISPO	253,043	$29.00	$17.23	68%	$29.00	$16.76	73%	$27.25	$23.58	16%	$27.28	$26.10	5%	$29.81	$21.00	42%
SAN MATEO	714,414	$29.75	$26.63	12%	$29.75	$26.24	13%	$42.37	$30.78	38%	$37.74	$21.17	78%	$39.40	$28.95	36%
SANTA BARBARA	406,176	$29.00	$22.70	28%	$29.00	$18.48	57%	$30.81	$23.96	29%	$27.28	$20.50	33%	$29.81	$24.22	23%
SANTA CLARA	1,716,755	$29.75	$21.86	36%	$29.75	$26.65	12%	$42.57	$27.34	56%	$37.94	$24.83	53%	$45.51	$28.85	58%
SANTA CRUZ	258,398	$24.62	$23.49	5%	$24.62	$19.88	24%	$33.01	$27.85	19%	$32.32	$20.64	57%	$31.89	$20.70	54%
SHASTA	169,277	$23.27	$19.84	17%	$23.77	$16.69	42%	$32.21	$17.29	86%	$31.05	$20.93	48%	$28.79	$16.00	80%
SIERRA	3,522	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
SISKIYOU	44,329	$23.27	$21.11	10%	$23.77	$15.08	58%	$26.66	$18.32	46%	$31.05	$16.91	84%	$28.79	$19.18	50%
SOLANO	405,642	$29.75	$22.93	30%	$29.75	$19.72	51%	$33.65	$34.86	-3%	$38.05	$20.01	90%	$33.90	$19.67	72%
SONOMA	468,583	$29.75	$22.02	35%	$29.75	$18.74	59%	$32.13	$23.37	37%	$38.05	$20.75	83%	$41.00	$25.57	60%
STANISLAUS	469,969	$23.27	$17.32	34%	$23.77	$20.08	18%	$29.02	$20.07	45%	$28.18	$20.26	39%	$29.29	$18.52	58%
SUTTER	81,561	$23.27	$14.59	59%	$23.77	$12.63	88%	$32.21	$23.90	35%	$31.05	$19.40	60%	$28.79	$24.41	18%
TEHAMA	56,911	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
TRINITY	13,059	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
TULARE	378,477	$23.27	$16.14	44%	$23.77	$20.90	14%	$27.10	$16.86	61%	$28.52	$18.91	51%	$28.79	$18.69	54%
TUOLUMNE	55,859	$23.27	$18.86	23%	$23.77	$18.01	32%	$29.02	$24.76	17%	$27.37	$16.52	66%	$29.29	$20.35	44%
VENTURA	778,423	$29.00	$17.76	63%	$29.00	$22.59	28%	$32.60	$23.01	42%	$27.28	$21.19	29%	$29.81	$17.85	67%
YOLO	176,280	$23.27	$22.45	4%	$23.77	$21.74	9%	$32.21	N/A	N/A	$31.05	$18.58	67%	$30.97	$21.18	46%
YUBA	61,763	$23.27	$14.59	59%	$23.77	$12.63	88%	$32.21	$23.90	35%	$31.05	$19.40	60%	$28.79	$24.41	18%
Simple Average:				**28%**			**43%**			**41%**			**61%**			**56%**
Population Weighted Avg:				**36%**			**41%**			**40%**			**53%**			**55%**

Sources: see Appendix D.

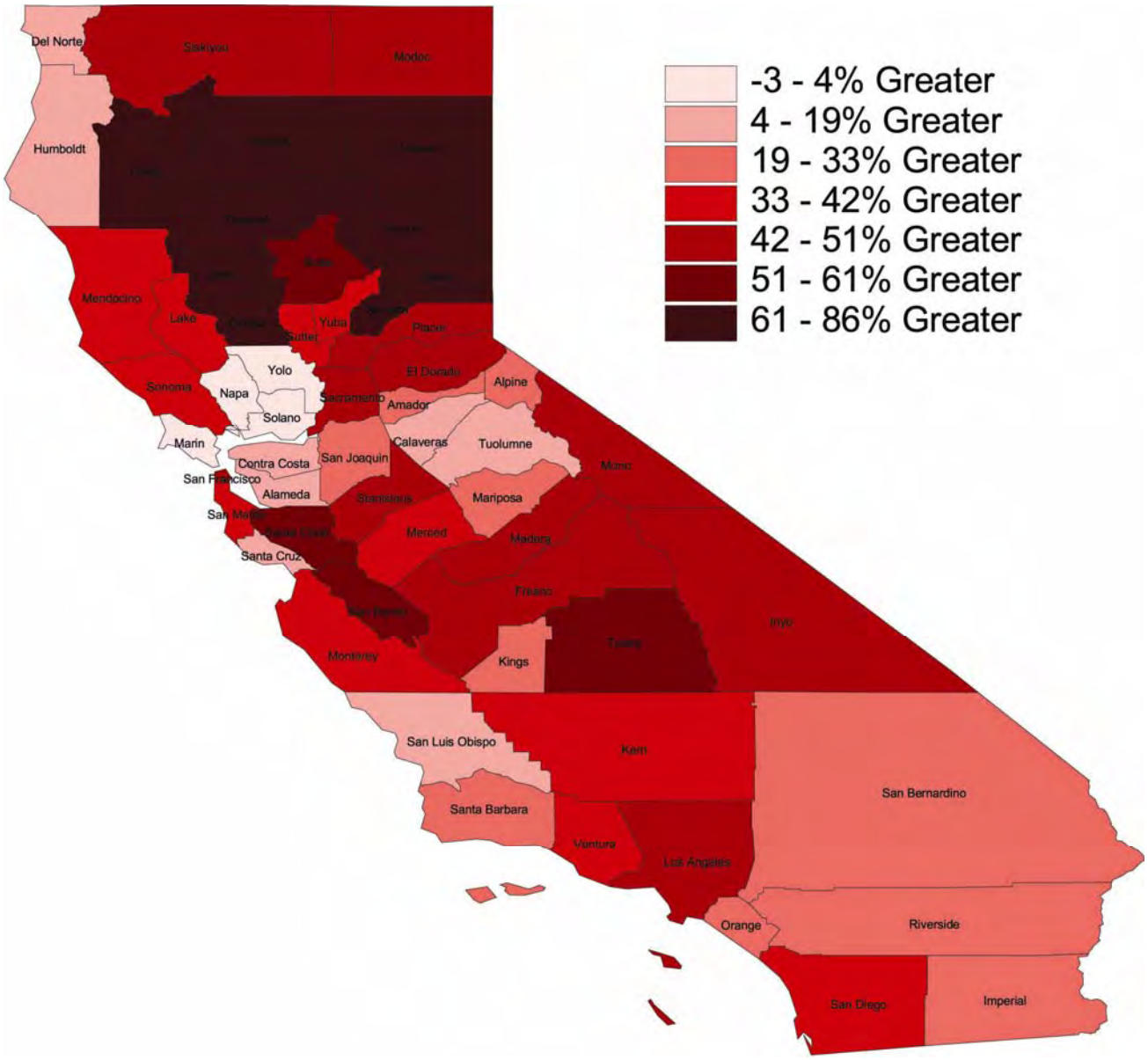
Appendix E:

Figure 1. California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Drywall Installers
(Percent by which DIR prevailing wage is greater than EDD market rate)



Appendix E:

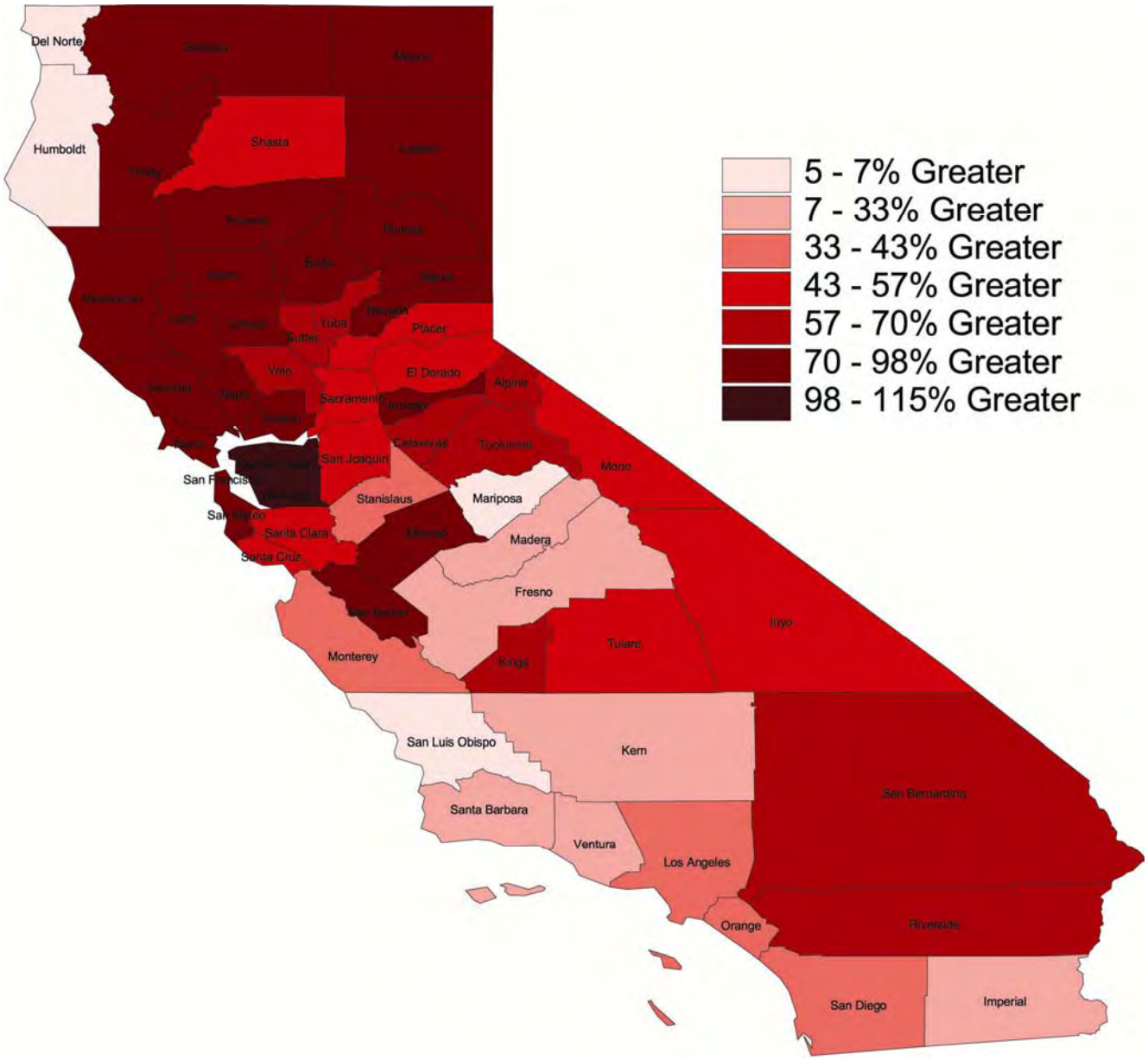
Figure 2. California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Electricians
(Percent by which DIR prevailing wage is greater than EDD market rate)



Appendix E:

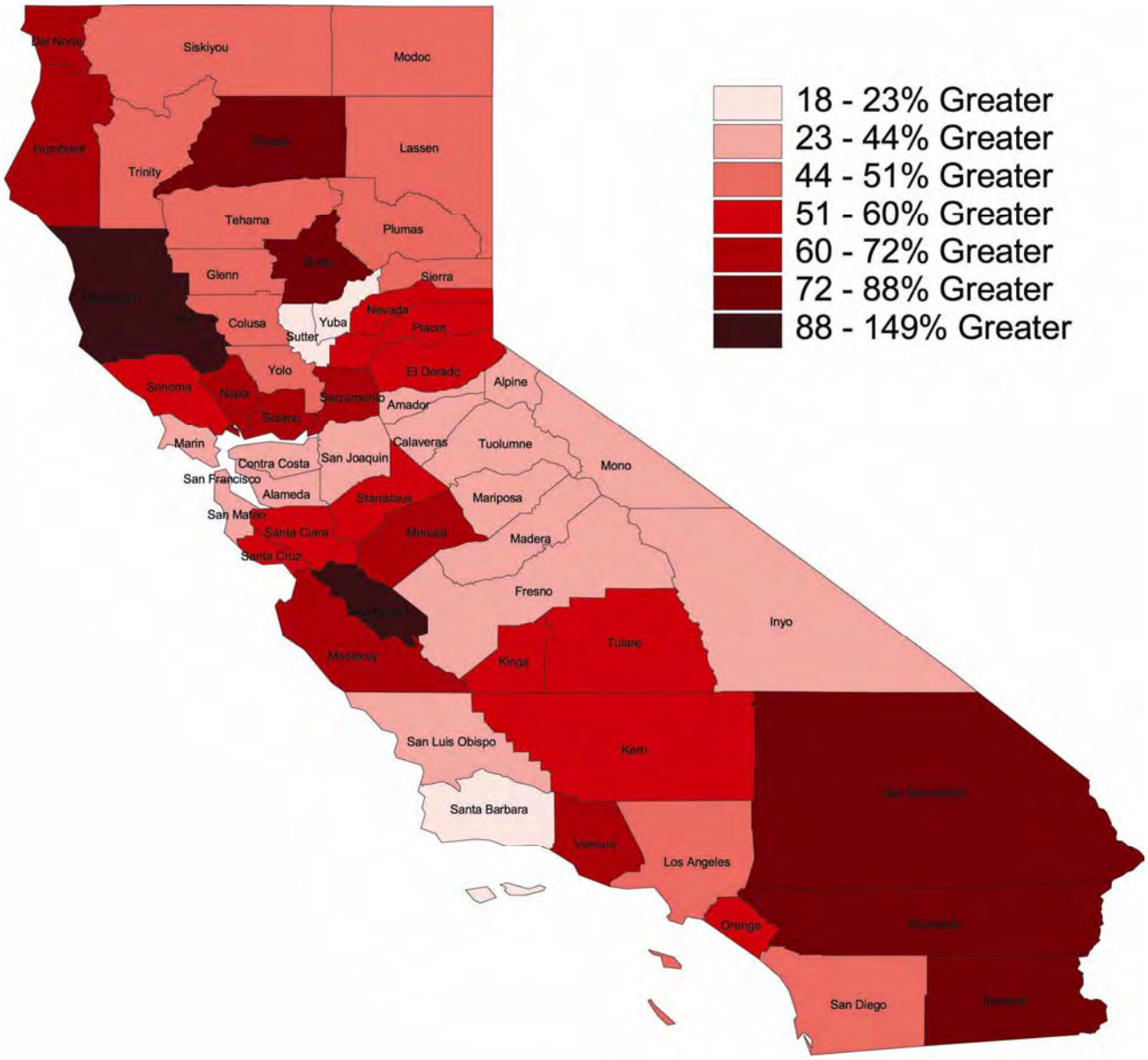
Figure 3. California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for HVAC/Sheet Metal Worker

(Percent by which DIR prevailing wage is greater than EDD market rate)



Appendix E:

Figure 4. California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Plumbers
(Percent by which DIR prevailing wage is greater than EDD market rate)



Appendix F:

Table 1. Comparison of Davis-Bacon Commercial Prevailing Wage Rates with DIR Commercial Prevailing Wage Rates
(Includes all Available Davis-Bacon Rates Regardless of Date of Last Update)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.00	$37.00	0%	$34.56	$36.59	6%	$35.51	$35.51	0%
ALPINE	1,210	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
AMADOR	36,049	$18.58	$23.27	25%	$18.14	$23.77	31%	$16.30	$32.21	98%	$18.37	$31.05	69%	$20.88	$29.29	40%
BUTTE	207,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CALAVERAS	41,820	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
COLUSA	19,341	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CONTRA COSTA	980,870	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.51	$37.51	0%	$34.56	$36.59	6%	$35.21	$35.21	0%
DEL NORTE	27,694	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$26.12	50%	$18.65	$21.92	18%	$16.47	$30.93	88%
EL DORADO	163,649	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
FRESNO	827,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
GLENN	26,747	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
HUMBOLDT	127,305	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$26.12	50%	$18.65	$21.92	18%	$16.47	$30.93	88%
IMPERIAL	150,217	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.21	$29.00	-4%	$25.90	$25.90	0%	$29.81	$29.81	0%
INYO	18,242	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
KERN	688,875	$28.43	$28.43	0%	$29.00	$29.00	0%	$29.34	$28.84	-2%	$27.09	$24.76	-9%	$25.34	$28.17	11%
KINGS	133,553	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
LAKE	60,519	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$32.13	85%	$27.17	$38.05	40%	$29.84	$41.00	37%
LASSEN	34,237	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
LOS ANGELES	9,817,419	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.70	$30.45	3%	$29.40	$29.41	0%	$29.81	$29.81	0%
MADERA	130,373	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
MARIN	248,490	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
MARIPOSA	17,087	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$32.02	10%	$28.18	$17.57	-38%	$29.29	$29.29	0%
MENDOCINO	87,552	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$32.13	85%	$27.17	$38.05	40%	$29.84	$41.00	37%
MERCED	219,554	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
MODOC	9,353	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
MONO	13,247	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
MONTEREY	409,608	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$31.89	$31.89	0%
NAPA	128,132	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
NEVADA	94,980	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%

Table 1 Continued

		Carpenter	Drywall Installer	Electrician	HVAC/Sheet Metal Worker	Plumber

County	Population	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ORANGE	2,930,488	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.85	$31.10	-2%	$28.99	$29.41	1%	$29.81	$29.81	0%
PLACER	265,683	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
PLUMAS	20,964	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
RIVERSIDE	1,645,319	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.23	$28.58	-2%	$29.41	$29.41	0%	$29.81	$29.81	0%
SACRAMENTO	1,280,920	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
SAN BENITO	55,618	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$45.51	$45.51	0%
SAN BERNARDINO	1,788,479	$29.00	$29.00	0%	$29.00	$29.00	0%	$28.25	$28.35	0%	$29.41	$30.60	4%	$31.46	$29.81	-5%
SAN DIEGO	2,908,505	$22.90	$24.60	7%	$18.55	$22.05	19%	$30.21	$29.00	-4%	$26.90	$25.90	-4%	$30.94	$29.81	-4%
SAN FRANCISCO	789,062	$29.75	$29.75	0%	$29.75	$29.75	0%	$45.55	$45.55	0%	$37.09	$37.05	0%	$41.00	$41.00	0%
SAN JOAQUIN	596,907	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
SAN LUIS OBISPO	253,043	$29.00	$29.00	0%	$29.00	$29.00	0%	$27.25	$27.25	0%	$27.28	$27.28	0%	$29.81	$29.81	0%
SAN MATEO	714,414	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.37	$42.37	0%	$36.83	$37.74	2%	$40.65	$39.40	-3%
SANTA BARBARA	406,176	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.83	$30.81	0%	$27.28	$27.28	0%	$30.49	$29.81	-2%
SANTA CLARA	1,716,755	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.57	$42.57	0%	$37.65	$37.94	1%	$45.51	$45.51	0%
SANTA CRUZ	258,398	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$32.95	$32.32	-2%	$31.89	$31.89	0%
SHASTA	169,277	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SIERRA	3,522	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SISKIYOU	44,329	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SOLANO	405,642	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
SONOMA	468,583	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
STANISLAUS	469,969	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
SUTTER	81,561	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
TEHAMA	56,911	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
TRINITY	13,059	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$22.34	$31.05	39%	$28.79	$28.79	0%
TULARE	378,477	$13.36	$23.27	74%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$28.52	0%	$28.79	$28.79	0%
TUOLUMNE	55,859	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$27.37	-3%	$29.29	$29.29	0%
VENTURA	778,423	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.60	$32.60	3%	$27.28	$27.28	0%	$29.81	$29.81	0%
YOLO	176,280	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
YUBA	61,763	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
Simple Average:			**(58 counties)**	**3%**		**(58 counties)**	**3%**		**(58 counties)**	**7%**		**(58 counties)**	**1%**		**(58 counties)**	**6%**
Population Weighted Avg:			**(100.0% of Pop.)**	**2%**		**(100.0% of Pop.)**	**2%**		**(100.0% of Pop.)**	**1%**		**(100.0% of Pop.)**	**0%**		**(100.0% of Pop.)**	**1%**

Sources: see Appendix D.

Appendix F:

Table 2. Comparison of Davis-Bacon Commercial Prevailing Wage Rates with DIR Commercial Prevailing Wage Rates
(Includes Only Recent Davis-Bacon Rates, or Those Updated Since June 1, 1999)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.00	$37.00	0%	$34.56	$36.59	6%	$35.51	$35.51	0%
ALPINE	1,210	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
AMADOR	36,049	(Jul-85) N/A	$23.27	N/A	(Jul-85) N/A	$23.77	N/A	(Jul-85) N/A	$32.21	N/A	(Jul-85) N/A	$31.05	N/A	(Jul-85) N/A	$29.29	N/A
BUTTE	207,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CALAVERAS	41,820	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
COLUSA	19,341	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CONTRA COSTA	980,870	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.51	$37.51	0%	$34.56	$36.59	6%	$35.21	$35.21	0%
DEL NORTE	27,694	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$26.12	N/A	(Jun-86) N/A	$21.92	N/A	(Jun-86) N/A	$30.93	N/A
EL DORADO	163,649	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
FRESNO	827,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
GLENN	26,747	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
HUMBOLDT	127,305	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$26.12	N/A	(Jun-86) N/A	$21.92	N/A	(Jun-86) N/A	$30.93	N/A
IMPERIAL	150,217	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.21	$29.00	-4%	$25.90	$25.90	0%	$29.81	$29.81	0%
INYO	18,242	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
KERN	688,875	$28.43	$28.43	0%	$29.00	$29.00	0%	$29.34	$28.84	-2%	$27.09	$24.76	-9%	$25.34	$28.17	11%
KINGS	133,553	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
LAKE	60,519	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$32.13	N/A	(Jun-86) N/A	$38.05	N/A	(Jun-86) N/A	$41.00	N/A
LASSEN	34,237	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
LOS ANGELES	9,817,419	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.70	$30.45	3%	$29.40	$29.41	0%	$29.81	$29.81	0%
MADERA	130,373	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
MARIN	248,490	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
MARIPOSA	17,087	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$32.02	10%	$28.18	$17.57	-38%	$29.29	$29.29	0%
MENDOCINO	87,552	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$32.13	N/A	(Jun-86) N/A	$38.05	N/A	(Jun-86) N/A	$41.00	N/A
MERCED	219,554	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
MODOC	9,353	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
MONO	13,247	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
MONTEREY	409,608	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$31.89	$31.89	0%
NAPA	128,132	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
NEVADA	94,980	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%

County	Population	Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
		Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ORANGE	2,930,488	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.85	$31.10	-2%	$28.99	$29.41	1%	$29.81	$29.81	0%
PLACER	265,683	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
PLUMAS	20,964	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
RIVERSIDE	1,645,319	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.23	$28.58	-2%	$29.41	$29.41	0%	$29.81	$29.81	0%
SACRAMENTO	1,280,920	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
SAN BENITO	55,618	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$45.51	$45.51	0%
SAN BERNARDINO	1,788,479	$29.00	$29.00	0%	$29.00	$29.00	0%	$28.25	$28.35	0%	$29.41	$30.60	4%	$31.46	$29.81	-5%
SAN DIEGO	2,908,505	$22.90	$24.60	7%	$18.55	$22.05	19%	$30.21	$29.00	-4%	$26.90	$25.90	-4%	$30.94	$29.81	-4%
SAN FRANCISCO	789,062	$29.75	$29.75	0%	$29.75	$29.75	0%	$45.55	$45.55	0%	$37.09	$37.05	0%	$41.00	$41.00	0%
SAN JOAQUIN	596,907	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
SAN LUIS OBISPO	253,043	$29.00	$29.00	0%	$29.00	$29.00	0%	$27.25	$27.25	0%	$27.28	$27.28	0%	$29.81	$29.81	0%
SAN MATEO	714,414	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.37	$42.37	0%	$36.83	$37.74	2%	$40.65	$39.40	-3%
SANTA BARBARA	406,176	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.83	$30.81	0%	$27.28	$27.28	0%	$30.49	$29.81	-2%
SANTA CLARA	1,716,755	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.57	$42.57	0%	$37.65	$37.94	1%	$45.51	$45.51	0%
SANTA CRUZ	258,398	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$32.95	$32.32	-2%	$31.89	$31.89	0%
SHASTA	169,277	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SIERRA	3,522	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SISKIYOU	44,329	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SOLANO	405,642	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
SONOMA	468,583	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
STANISLAUS	469,969	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
SUTTER	81,561	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
TEHAMA	56,911	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
TRINITY	13,059	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$22.34	$31.05	39%	$28.79	$28.79	0%
TULARE	378,477	(Oct-84) N/A	$23.27	N/A	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$28.52	0%	$28.79	$28.79	0%
TUOLUMNE	55,859	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$27.37	-3%	$29.29	$29.29	0%
VENTURA	778,423	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.60	$32.60	3%	$27.28	$27.28	0%	$29.81	$29.81	0%
YOLO	176,280	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
YUBA	61,763	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
Simple Average:			**(52 counties)**	**0%**		**(53 counties)**	**0%**		**(53 counties)**	**1%**		**(53 counties)**	**-2%**		**(53 counties)**	**1%**
Population Weighted Avg:			**(97.9% of Pop.)**	**1%**		**(99.0% of Pop.)**	**2%**		**(99.0% of Pop.)**	**0%**		**(99.0% of Pop.)**	**0%**		**(99.0% of Pop.)**	**0%**

Sources: see Appendix D. Also, the filtered Davis-Bacon data above is denoted with an "N/A" and the date on which the data series were last updated.

Appendix G:

Table 1. Comparison of Davis-Bacon Commercial Prevailing Wage Rates with Davis-Bacon Residential Prevailing Wage Rates
(Includes all Available Davis-Bacon Rates Regardless of Date of Last Update)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ALAMEDA	1,484,698	$28.40	$29.75	5%	$29.00	$29.75	3%	$31.94	$37.00	16%	$30.83	$34.56	12%	$35.51	$35.51	0%
ALPINE	1,210	$13.00	$23.27	79%	N/A	$23.77	N/A	$12.67	$32.21	154%	N/A	$27.37	N/A	$10.25	$29.29	186%
AMADOR	36,049	$18.58	$18.58	0%	$18.14	$18.14	0%	$16.30	$16.30	0%	$18.37	$18.37	0%	$20.88	$20.88	0%
BUTTE	207,310	$9.63	$23.27	142%	$9.77	$23.77	143%	$9.00	$32.21	258%	$13.68	$31.55	131%	$14.00	$28.79	106%
CALAVERAS	41,820	$22.17	$23.27	5%	$23.52	$23.77	1%	$28.19	$28.19	0%	$20.53	$27.37	33%	$31.59	$29.29	-7%
COLUSA	19,341	$11.30	$23.27	106%	$16.33	$23.77	46%	$9.89	$32.21	226%	N/A	$31.55	N/A	N/A	$28.79	N/A
CONTRA COSTA	980,870	$28.40	$29.75	5%	$29.00	$29.75	3%	$35.01	$37.51	7%	$30.83	$34.56	12%	$27.41	$35.21	28%
DEL NORTE	27,694	$19.08	$19.08	0%	$19.08	$19.08	0%	$17.41	$17.41	0%	$18.65	$18.65	0%	$16.47	$16.47	0%
EL DORADO	163,649	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
FRESNO	827,310	$21.24	$23.27	10%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
GLENN	26,747	$11.30	$23.27	106%	$16.33	$23.77	46%	$9.89	$32.21	226%	N/A	$31.55	N/A	N/A	$29.29	N/A
HUMBOLDT	127,305	$19.08	$19.08	0%	$19.08	$19.08	0%	$17.41	$17.41	0%	N/A	$18.65	N/A	$16.47	$16.47	0%
IMPERIAL	150,217	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.41	$30.21	56%	$25.41	$25.90	2%	$24.31	$29.81	23%
INYO	18,242	$13.00	$28.43	119%	$15.00	$29.00	93%	$12.67	$35.25	178%	N/A	$28.99	N/A	$10.00	$27.67	177%
KERN	688,875	$21.24	$28.43	34%	$15.00	$29.00	93%	$29.34	$29.34	0%	N/A	$27.09	N/A	$25.34	$25.34	0%
KINGS	133,553	$6.38	$23.27	265%	N/A	$23.77	N/A	$7.73	$27.10	251%	$9.00	$28.52	217%	$8.25	$28.79	249%
LAKE	60,519	$7.76	$19.08	146%	$7.47	$19.08	155%	$7.47	$17.41	133%	$6.32	$27.17	330%	$7.47	$29.84	299%
LASSEN	34,237	$9.86	$23.27	136%	N/A	$23.77	N/A	$6.68	$32.21	382%	$7.76	$31.55	307%	$9.00	$29.29	225%
LOS ANGELES	9,817,419	$18.79	$29.00	54%	$19.00	$29.00	53%	$16.15	$29.70	84%	$26.58	$29.40	11%	$24.31	$29.81	23%
MADERA	130,373	$21.24	$23.27	10%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
MARIN	248,490	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
MARIPOSA	17,087	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
MENDOCINO	87,552	$7.76	$19.08	146%	$7.47	$19.08	155%	$7.47	$17.41	133%	$6.32	$27.17	330%	$7.47	$29.84	299%
MERCED	219,554	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
MODOC	9,353	$9.86	$23.27	136%	N/A	$23.77	N/A	$6.68	$26.26	293%	$7.76	$31.55	307%	$9.00	$28.79	220%
MONO	13,247	$13.00	$28.43	119%	$15.00	$29.00	93%	$12.67	$35.25	178%	N/A	$28.99	N/A	$10.00	$27.67	177%
MONTEREY	409,608	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$31.59	$31.89	1%
NAPA	128,132	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
NEVADA	94,980	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%

Table 1 Continued

County	Population	Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
		Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ORANGE	2,930,488	$18.79	$29.00	54%	$19.00	$29.00	53%	$20.00	$31.85	59%	$26.58	$28.99	9%	$24.31	$29.81	23%
PLACER	265,683	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
PLUMAS	20,964	$11.57	$23.27	101%	N/A	$23.77	N/A	$9.00	$32.21	258%	N/A	$31.55	N/A	$14.00	$28.79	106%
RIVERSIDE	1,645,319	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.00	$29.23	72%	$26.58	$29.41	11%	$24.31	$29.81	23%
SACRAMENTO	1,280,920	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
SAN BENITO	55,618	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$25.87	$45.51	76%
SAN BERNARDINO	1,788,479	$18.79	$29.00	54%	$19.00	$29.00	53%	$23.11	$28.25	22%	$26.58	$29.41	11%	$24.31	$31.46	29%
SAN DIEGO	2,908,505	$18.32	$22.90	25%	$19.00	$18.55	-2%	$23.61	$30.21	28%	$17.83	$26.90	51%	$24.31	$30.94	27%
SAN FRANCISCO	789,062	$28.40	$29.75	5%	$29.00	$29.75	3%	$36.44	$45.55	25%	$33.94	$37.09	9%	$27.38	$41.00	50%
SAN JOAQUIN	596,907	$21.24	$23.27	10%	$15.00	$23.77	58%	$28.19	$28.19	0%	N/A	$27.37	N/A	$11.50	$29.29	155%
SAN LUIS OBISPO	253,043	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.60	$27.25	55%	$27.28	$27.28	0%	$24.31	$29.81	23%
SAN MATEO	714,414	$28.40	$29.75	5%	$29.00	$29.75	3%	$42.37	$42.37	0%	$33.14	$36.83	11%	$40.65	$40.65	0%
SANTA BARBARA	406,176	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.49	$30.83	58%	$27.28	$27.28	0%	$24.31	$30.49	25%
SANTA CLARA	1,716,755	$28.40	$29.75	5%	$29.00	$29.75	3%	$23.49	$42.57	81%	$34.12	$37.65	10%	$25.87	$45.51	76%
SANTA CRUZ	258,398	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$32.95	$32.95	0%	$31.59	$31.89	1%
SHASTA	169,277	$9.91	$23.27	135%	N/A	$23.77	N/A	$11.00	$32.21	193%	$9.11	$31.55	246%	$10.00	$28.79	188%
SIERRA	3,522	$8.50	$23.27	174%	$12.00	$23.77	98%	$10.00	$32.21	222%	$9.00	$31.55	251%	$7.00	$28.79	311%
SISKIYOU	44,329	$9.91	$23.27	135%	N/A	$23.77	N/A	$11.00	$26.26	139%	$9.11	$31.55	246%	$10.00	$28.79	188%
SOLANO	405,642	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
SONOMA	468,583	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
STANISLAUS	469,969	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
SUTTER	81,561	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
TEHAMA	56,911	$8.56	$23.27	172%	N/A	$23.77	N/A	$10.12	$32.21	218%	N/A	$31.55	N/A	$9.67	$29.29	203%
TRINITY	13,059	$8.56	$23.27	172%	N/A	$23.77	N/A	$10.12	$32.21	218%	N/A	$22.34	N/A	$9.67	$28.79	198%
TULARE	378,477	$21.24	$13.36	-37%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
TUOLUMNE	55,859	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
VENTURA	778,423	$18.79	$29.00	54%	$19.00	$29.00	53%	$31.60	$31.60	0%	$27.28	$27.28	0%	$24.31	$29.81	23%
YOLO	176,280	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
YUBA	61,763	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
Simple Average:			**(58 counties)**	**52%**		**(46 counties)**	**38%**		**(58 counties)**	**89%**		**(42 counties)**	**64%**		**(56 counties)**	**85%**
Population Weighted Avg:			**(100.0% of Pop.)**	**36%**		**(96.6% of Pop.)**	**36%**		**(100.0% of Pop.)**	**56%**		**(89.7% of Pop.)**	**19%**		**(99.9% of Pop.)**	**39%**

Sources: see Appendix D.

Appendix G:

Table 2. Comparison of Davis-Bacon Commercial Prevailing Wage Rates with Davis-Bacon Residential Prevailing Wage Rates (Includes Only Recent Davis-Bacon Rates, or Those Updated Since June 1, 1999)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ALAMEDA	1,484,698	$28.40	$29.75	5%	$29.00	$29.75	3%	$31.94	$37.00	16%	$30.83	$34.56	12%	$35.51	$35.51	0%
ALPINE	1,210	(Jul-80) N/A	$23.27	N/A	N/A	$23.77	N/A	(Jul-80) N/A	$32.21	N/A	N/A	$27.37	N/A	(Jul-80) N/A	$29.29	N/A
AMADOR	36,049	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jan-97) N/A	(Jul-85) N/A	N/A
BUTTE	207,310	(Jan-88) N/A	$23.27	N/A	(Jan-88) N/A	$23.77	N/A	(Jan-88) N/A	$32.21	N/A	(Jan-88) N/A	$31.55	N/A	(Jan-88) N/A	$28.79	N/A
CALAVERAS	41,820	$22.17	$23.27	5%	$23.52	$23.77	1%	$28.19	$28.19	0%	$20.53	$27.37	33%	$31.59	$29.29	-7%
COLUSA	19,341	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	N/A	$31.55	N/A	N/A	$28.79	N/A
CONTRA COSTA	980,870	$28.40	$29.75	5%	$29.00	$29.75	3%	$35.01	$37.51	7%	$30.83	$34.56	12%	$27.41	$35.21	28%
DEL NORTE	27,694	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A
EL DORADO	163,649	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
FRESNO	827,310	$21.24	$23.27	10%	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
GLENN	26,747	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	N/A	$31.55	N/A	N/A	$29.29	N/A
HUMBOLDT	127,305	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A
IMPERIAL	150,217	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.41	$30.21	56%	$25.41	$25.90	2%	$24.31	$29.81	23%
INYO	18,242	(Sep-82) N/A	$28.43	N/A	(Sep-82) N/A	$29.00	N/A	(Sep-82) N/A	$35.25	N/A	N/A	$28.99	N/A	(Sep-82) N/A	$27.67	N/A
KERN	688,875	$21.24	$28.43	34%	$15.00	$29.00	93%	$29.34	$29.34	0%	N/A	$27.09	N/A	$25.34	$25.34	0%
KINGS	133,553	(Nov-82) N/A	$23.27	N/A	N/A	$23.77	N/A	(Nov-82) N/A	$27.10	N/A	(Nov-82) N/A	$28.52	N/A	(Nov-82) N/A	$28.79	N/A
LAKE	60,519	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A
LASSEN	34,237	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	(Apr-86) N/A	$31.55	N/A	(Apr-86) N/A	$29.29	N/A
LOS ANGELES	9,817,419	$18.79	$29.00	54%	$19.00	$29.00	53%	$16.15	$29.70	84%	$26.58	$29.40	11%	$24.31	$29.81	23%
MADERA	130,373	$21.24	$23.27	10%	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
MARIN	248,490	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
MARIPOSA	17,087	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
MENDOCINO	87,552	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A
MERCED	219,554	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
MODOC	9,353	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$26.26	N/A	(Apr-86) N/A	$31.55	N/A	(Apr-86) N/A	$28.79	N/A
MONO	13,247	(Sep-82) N/A	$28.43	N/A	(Sep-82) N/A	$29.00	N/A	(Sep-82) N/A	$35.25	N/A	N/A	$28.99	N/A	(Sep-82) N/A	$27.67	N/A
MONTEREY	409,608	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$31.59	$31.89	1%
NAPA	128,132	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
NEVADA	94,980	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%

Table 2 Continued

County	Population	Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
		Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ORANGE	2,930,488	$18.79	$29.00	54%	$19.00	$29.00	53%	$20.00	$31.85	59%	$26.58	$28.99	9%	$24.31	$29.81	23%
PLACER	265,683	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
PLUMAS	20,964	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$31.55	N/A	(Apr-86) N/A	$28.79	N/A
RIVERSIDE	1,645,319	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.00	$29.23	72%	$26.58	$29.41	11%	$24.31	$29.81	23%
SACRAMENTO	1,280,920	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
SAN BENITO	55,618	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$25.87	$45.51	76%
SAN BERNARDINO	1,788,479	$18.79	$29.00	54%	$19.00	$29.00	53%	(Jun-98) N/A	$28.25	N/A	$26.58	$29.41	11%	$24.31	$31.46	29%
SAN DIEGO	2,908,505	$18.32	$22.90	25%	$19.00	$18.55	-2%	$23.61	$30.21	28%	$17.83	$26.90	51%	$24.31	$30.94	27%
SAN FRANCISCO	789,062	$28.40	$29.75	5%	$29.00	$29.75	3%	$36.44	$45.55	25%	$33.94	$37.09	9%	$27.38	$41.00	50%
SAN JOAQUIN	596,907	$21.24	$23.27	10%	$15.00	$23.77	58%	$28.19	$28.19	0%	N/A	$27.37	N/A	$11.50	$29.29	155%
SAN LUIS OBISPO	253,043	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.60	$27.25	55%	$27.28	$27.28	0%	$24.31	$29.81	23%
SAN MATEO	714,414	$28.40	$29.75	5%	$29.00	$29.75	3%	$42.37	$42.37	0%	$33.14	$36.83	11%	$40.65	$40.65	0%
SANTA BARBARA	406,176	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.49	$30.83	58%	$27.28	$27.28	0%	$24.31	$30.49	25%
SANTA CLARA	1,716,755	$28.40	$29.75	5%	$29.00	$29.75	3%	$23.49	$42.57	81%	$34.12	$37.65	10%	$25.87	$45.51	76%
SANTA CRUZ	258,398	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$32.95	$32.95	0%	$31.59	$31.89	1%
SHASTA	169,277	(Mar-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Mar-86) N/A	$32.21	N/A	(Mar-86) N/A	$31.55	N/A	(Mar-86) N/A	$28.79	N/A
SIERRA	3,522	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	(Jan-82) N/A	$31.55	N/A	(Jan-82) N/A	$28.79	N/A
SISKIYOU	44,329	(Mar-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Mar-86) N/A	$26.26	N/A	(Mar-86) N/A	$31.55	N/A	(Mar-86) N/A	$28.79	N/A
SOLANO	405,642	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
SONOMA	468,583	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
STANISLAUS	469,969	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
SUTTER	81,561	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
TEHAMA	56,911	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$31.55	N/A	(Apr-86) N/A	$29.29	N/A
TRINITY	13,059	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$22.34	N/A	(Apr-86) N/A	$28.79	N/A
TULARE	378,477	$21.24	(Oct-84) N/A	N/A	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
TUOLUMNE	55,859	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
VENTURA	778,423	$18.79	$29.00	54%	$19.00	$29.00	53%	$31.60	$31.60	0%	$27.28	$27.28	0%	$24.31	$29.81	23%
YOLO	176,280	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
YUBA	61,763	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
Simple Average:			**(37 counties)**	**18%**		**(35 counties)**	**26%**		**(34 counties)**	**40%**		**(31 counties)**	**11%**		**(38 counties)**	**42%**
Population Weighted Avg:			**(95.7% of Pop.)**	**34%**		**(94.8% of Pop.)**	**35%**		**(87.9% of Pop.)**	**53%**		**(87.4% of Pop.)**	**14%**		**(96.8% of Pop.)**	**36%**

Sources: see Appendix D. Also, the filtered Davis-Bacon data above is denoted with an "N/A" and the date on which the data series were last updated.

Appendix H: Regression Analysis Methods

In order to isolate the impact of the prevailing wage requirement on project cost, we needed to control for all factors that may influence costs for residential construction projects. To do this we used a series of regression models and controlled for such relevant factors as regional variation in construction costs, economies of scale associated with building larger projects, and specific characteristics of the buildings themselves. The approach we followed closely resembled the methodology of the Dunn, et.al. study. Our analysis, however, is based on a substantially larger sample of projects and incorporates several refinements to the earlier methodology.

Data Sources for Regression Analysis

Our dataset consists of newly constructed multi-family housing projects that received federal Low-Income Housing Tax Credits (LIHTC) from the California Tax Credit Allocation Committee (TCAC).[32] Information was collected on projects with applications filed after January 1, 1997, and which were placed in service before December 31, 2003.

Only rental housing projects are eligible to compete for the limited number of federal and state low-income housing tax credits allocated by TCAC. All projects must use one of two federal set-aside requirements; either 40 percent of units reserved for households earning 60 percent or less of the area median income or 20 percent of units reserved for households earning 50 percent or less of the area median income. Often projects reserve a greater number of units for low-income tenants, as it makes the project

[32] Many projects also received state tax credits.

more competitive in obtaining tax credits (only the affordable housing units are eligible for tax credits). Low-income units must remain so for fifteen years under federal law.

From the TCAC database covering the application years of 1997-2003, we obtained a list of 375 new construction projects that had been placed in service as of December 31, 2003. Data were collected for 365 projects; the remaining projects were either missing relevant portions of their application file, were rehabilitation projects mislabeled as new construction projects, or were in use by TCAC staff and thus unavailable. The final dataset includes information from the TCAC electronic database, from TCAC paper files, and from telephone interviews. The telephone interviews were used to determine whether or not prevailing wages had been paid during project construction; cost measures and other variables were collected from the electronic and paper files. A construction cost index from the Engineering News Record (sponsored by McGraw-Hill Construction) was used to deflate the cost measures to 1997 levels.

Two cost variables were used in our analysis. “Construction Cost” includes site preparation, materials and labor, overhead and profits for the contractor, and general requirements. “Total Project Cost” is a broader cost measure, including all costs related to the development and construction of the residential portion of a project, including site preparation and land, architect and engineering costs, financing, and other costs, as well as construction costs.

We employed two methods to test for the impact of the prevailing wage requirements on project costs. In the first, we included a simple dummy variable indicating whether or not prevailing wages were paid. Analysis of this variable indicates the overall cost increase resulting from prevailing wage requirements.

In the second, we constructed a new variable to estimate the percent difference between the market wage rates and the prevailing wage rates, based on our wage differential analysis. We took the average difference between market and prevailing wages (collected from the EDD and the DIR) for the five construction trades analyzed, and matched those average wage differentials to projects by county. For prevailing wage projects we assigned this variable to the value of the wage differential for that county, and for non prevailing wage projects we assigned this variable to zero. Thus, this variable was used to approximate the percent by which the wages paid on a particular project were above the market wage rate in that area, assuming that prevailing wage projects paid the higher prevailing wage rates and non prevailing wage projects paid the local market rates for construction labor. Analysis of this variable allows us to estimate the likely impact on total project costs stemming from a specified increase in wage rates. This measure was then used to estimate likely region-by-region cost increases stemming from implementation of prevailing wage requirements.

We collected data on several variables to help explain variations in construction costs and total project costs. These measures included characteristics of the projects such as the inclusion of elevators, below-structure parking or special facilities, the type of structure, location, number of units, density, and affordability. We grouped projects into one of nine geographical areas to ascertain regional cost differentials. Our study included dummy variables for the years 1997 to 2002 in order to account for year-specific factors that may influence construction or project costs. A complete list of variables is included in Table 1.

Table 1: Variable Descriptions and Summary Statistics

Variable Name	Description	Mean	StDev
PW_Project	One if prevailing wages were paid as a result of federal, state or local requirements, else 0	0.233	0.423
TotUnits	Number of units in project	85.566	58.149
UnitsPerAcre	Number of units per acre	34.328	41.487
SqFeet	Total interior square footage	80,003	55,103
ParkingBelow	One if project contains parking beneath the structure, else 0	0.207	0.406
Bldg3Stories	One if project contains buildings with three or more stories, else 0	0.141	0.349
Elevator	One if project contains at least one elevator, else 0	0.356	0.480
ThreeBedrooms	One if 50 percent or more units have 3 or more bedrooms, else 0	0.403	0.491
SpecialNeeds	One if project contains special needs facilities, else 0	0.039	0.193
Island	One if project is on an island, else 0	0.003	0.052
Bond	One if project is eligible for tax-exempt bond finance	0.408	0.492
Affordability	Fraction of units in project that meet affordability guidelines	0.928	0.156
EnvMitigation	One if project required substantial environmental mitigation, else 0	0.051	0.221
Infill	One if development is an inner city infill site, else 0	0.177	0.382
Year			
YR1997	One if project applied for credits in 1997, else 0	0.208	0.407
YR1998	One if project applied for credits in 1998, else 0	0.197	0.398
YR1999	One if project applied for credits in 1999, else 0	0.208	0.407
YR2000	One if project applied for credits in 2000, else 0	0.200	0.401
YR2001	One if project applied for credits in 2001, else 0	0.134	0.341
YR2002	One if project applied for credits in 2002, else 0	0.038	0.192
YR2003	One if project applied for credits in 2003, else 0	0.014	0.116
Type of Developer			
DevNonProfit	One if developer is a joint venture, else 0	0.447	0.498
DevProfit	One if developer is a for-profit organization, else 0	0.156	0.363
DevJV	One if developer is a non-profit organization, else 0	0.394	0.489
Targeting			
Nontargeted	One if units are not targeted to a specific population, else 0	0.088	0.283
SRO	One if units are single room occupancy, else 0	0.022	0.147
Senior	One if units are targeted to seniors, else 0	0.263	0.441
Needs	One if units are targeted to special needs populations, else 0	0.063	0.243
Family	One if units are targeted to large families, else 0	0.559	0.497
Type of Building			
Townhouse	One if project is a townhouse, else 0	0.025	0.156
Coop	One if project is a cooperative, else 0	0.003	0.053
TwoStories	One if project has two or more stories, else 0	0.564	0.497
SingleFam	One if project is single family detached, else 0	0.000	0.000
GardenApt	One if project is garden apartments, else 0	0.406	0.492
Geographic Regions			
Northern_California	One if project is in one of the following counties: Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Sierra, Siskiyou, Trinity; else 0.	0.011	0.104

Variable Name	Description	Mean	StDev
Northern_Sacramento_Valley	One if project is in one of the following counties: Butte, Colusa, Glenn, Shasta, Tehama; else 0.	0.014	0.116
Central_Sierra	One if project is in one of the following counties: Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne; else 0.	0.005	0.074
Greater_Sacramento	One if project is in one of the following counties: El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba; else 0.	0.096	0.295
Bay_Area	One if project is in one of the following counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma; otherwise 0.	0.268	0.444
Central_Coast	One if project is in one of the following counties: Monterey, San Benito, San Luis Obispo, Santa Barbara; otherwise 0.	0.049	0.217
San_Joaquin_Valley	One if project is in one of the following counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare; otherwise 0.	0.112	0.316
Southern_California	One if project is in one of the following counties: Los Angeles, Orange, Riverside, San Bernardino, Ventura; otherwise 0.	0.337	0.473
Southern_Border_Region	One if project is in one of the following counties: Imperial, San Diego; otherwise 0.	0.107	0.309

Appendix I: Regression Analysis and Results

Although we followed their basic approach, we did make several modifications to the Dunn et.al. methodology. First we used a substantially larger dataset, including 365 projects. We also made several adjustments to account for inflation and time-specific factors that may influence construction or project costs. Specifically, we adjusted the cost variables to account for inflation in construction costs by using a construction cost index published by McGraw Hill. We also included dummy variables for the year in which the application was submitted to the TCAC in order to account for year-specific factors that may influence construction costs. These factors could include surpluses or shortages in raw materials, regulatory or statutory changes, or one-time events such as elections or unusual weather conditions. Finally, we built and tested a series of models using the difference between market and prevailing wages as an independent variable (i.e., a factor that influences construction or project costs.)

Table 1 shows the results of the four main statistical models we used in our analysis. For the results given, the dependent variables were the logarithm of either residential construction cost or total project cost, in constant 1997 dollars. Two sets of regression equations were used: one with the simple prevailing wage dummy variable (PW_Project) and one with the average percent wage differential (PctDiff_Avg) described above.

Table 1: Regression Results Using Prevailing Wage Dummy Variable

Variable from Regression	Construction Cost Model w/ PW Dummy Coeff	(T-Stat)	Total Project Cost Model W/ PW Dummy Coeff	(T-Stat)	Construction Cost Model w/ Pct Wage Diff Coeff	(T-Stat)	Total Project Cost Model w/ Pct Wage Diff Coeff	(T-Stat)
Rsquared	0.933		0.913		0.933		0.913	
AdjRSquared	0.926		0.904		0.926		0.904	
Intercept	9.547	26.271	10.186	24.600	9.549	26.185	10.188	24.546
PW_Project	0.118	4.095	0.110	3.346				
PctDiff_Avg					0.254	3.809	0.237	3.115
log_units	0.728	16.164	0.692	13.487	0.726	16.068	0.690	13.422
log_UnitsPerAcre	(0.051)	(2.304)	(0.045)	(1.798)	(0.049)	(2.223)	(0.044)	(1.734)
log_SqFeet	0.229	5.340	0.216	4.425	0.231	5.355	0.218	4.441
ParkingBelow	0.146	3.753	0.089	2.004	0.147	3.750	0.089	2.008
Bldg3Stories	0.074	1.778	(0.022)	(0.471)	0.075	1.794	(0.021)	(0.451)
Elevator	0.033	1.084	0.112	3.208	0.033	1.065	0.112	3.185
ThreeBedrooms	0.031	1.047	(0.033)	(0.969)	0.030	0.996	(0.034)	(1.006)
SpecialNeeds	0.115	1.747	0.052	0.698	0.116	1.757	0.053	0.709
Island	0.770	4.166	0.553	2.624	0.771	4.154	0.553	2.619
Bond	(0.170)	(6.745)	(0.110)	(3.806)	(0.170)	(6.690)	(0.109)	(3.771)
EnvMitigation	0.112	2.358	0.089	1.637	0.111	2.328	0.088	1.615
Infill	0.113	3.291	0.047	1.199	0.111	3.213	0.045	1.144
Developer Type (excluded: DevProfit)								
DevNonProfit	0.121	3.725	0.158	4.283	0.123	3.772	0.160	4.323
DevJV	0.037	1.124	0.071	1.914	0.036	1.115	0.071	1.905
Targeting (excluded: SRO)								
Nontargeted	0.319	3.857	0.202	2.138	0.322	3.874	0.204	2.158
Senior	0.136	1.934	0.010	0.131	0.135	1.918	0.010	0.123
Needs	0.188	2.103	0.141	1.389	0.188	2.101	0.142	1.390
Family	0.308	3.967	0.254	2.873	0.310	3.973	0.256	2.882
Year Dummies (excluded: Yr2003)								
Yr1997	(0.221)	(1.196)	(0.130)	(0.620)	(0.223)	(1.204)	(0.133)	(0.629)
Yr1998	(0.152)	(0.824)	(0.033)	(0.157)	(0.153)	(0.828)	(0.034)	(0.162)
Yr1999	(0.149)	(0.810)	(0.079)	(0.377)	(0.151)	(0.814)	(0.080)	(0.381)
Yr2000	(0.093)	(0.503)	0.026	0.126	(0.095)	(0.516)	0.024	0.114
Yr2001	(0.017)	(0.093)	0.076	0.362	(0.018)	(0.100)	0.074	0.355
Yr2002	(0.018)	(0.093)	0.111	0.499	(0.022)	(0.113)	0.107	0.481
Regions (excluded: Northern_California)								
Northern_Sacramento_Valley	(0.025)	(0.197)	0.148	1.027	(0.041)	(0.323)	0.133	0.923
Central_Sierra	0.110	0.681	0.112	0.607	0.094	0.581	0.097	0.526
Greater_Sacramento	0.111	1.098	0.194	1.683	0.096	0.947	0.180	1.561
Bay_Area	0.336	3.519	0.484	4.442	0.326	3.398	0.474	4.342
Central_Coast	0.073	0.701	0.241	2.038	0.056	0.542	0.226	1.910
San_Joaquin_Valley	(0.045)	(0.451)	(0.005)	(0.045)	(0.060)	(0.597)	(0.019)	(0.166)
Southern_California	0.191	1.959	0.276	2.478	0.174	1.780	0.260	2.334
Southern_Border_Region	0.118	1.201	0.264	2.350	0.104	1.050	0.250	2.229

As shown in Table 1, our models include an intercept term, 19 project descriptors, six year variables, and eight geographical identifiers. We found that project costs are

affected by project size, developer type, and project type. Projects constructed by nonprofit developers are more expensive, as are projects in the Bay Area. Features such as tenant parking located below the project structure and elevators also contribute to higher costs. All these findings are consistent with our expectations, and with the Dunn et.al. results.

Our analysis suggests that even when other factors are taken into account, projects paying prevailing wages to construction workers are more expensive to develop. Our models suggest that projects paying prevailing wages are likely to incur 11.0 percent higher total residential project costs, and 11.8 percent higher residential construction costs. The average wage differential variable resulted in coefficients between 0.237 and 0.254. When the coefficients are multiplied by the average wage differentials (prevailing wages are on average approximately 45 percent higher than market wages), the effect of prevailing wages on project costs is again about 11 percent, reinforcing the robustness of our findings.

Industrial & Labor Relations Review

Volume 59, *Issue* 1 2005 *Article* 8

The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing

Sarah Dunn* John M. Quigley† Larry A. Rosenthal‡

*Berkeley Program on Housing and Urban Policy,
†University of California, Berkeley,
‡University of California, Berkeley,

Copyright ©2005 by the authors. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher, bepress, which has been given certain exclusive rights by the author. *Industrial & Labor Relations Review* is produced by The Berkeley Electronic Press (bepress). http://digitalcommons.ilr.cornell.edu/ilrreview

The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing*

Sarah Dunn, John M. Quigley, and Larry A. Rosenthal

Abstract

Recent California legislation extends the application of prevailing wage regulations to construction workers building subsidized low-income residential projects. Econometric evidence based on micro data covering 205 residential projects subsidized by the California Low Income Housing Tax Credit since 1996 and completed by mid-2002 demonstrates that construction costs increased substantially under prevailing wage requirements. Estimates of additional construction costs in the authors' most extensive models range from 9% to 37%. The analysis controls for variations in cost by geographical location and for differences in project characteristics, financing, and developer attributes. The authors estimate the effect of uniform imposition of these regulations on the number of new dwellings for low-income households produced under the tax credit program in California. Under reasonable assumptions, the mid-range estimate of the prospective decrease exceeds 3,100 units per year.

KEYWORDS: prevailing wages, low-income housing

*This research is supported by a grant from the U.S. Department of Housing and Urban Development and by the Berkeley Program on Housing and Urban Policy. The authors are grateful for the comments of Andrew Blauvelt, Shawn Blosser, Scott Littlehale, Matt Newman, Jeanne Peterson, Scott Smith, and Fran Wagstaff.

THE EFFECTS OF PREVAILING WAGE REQUIREMENTS ON THE COST OF LOW-INCOME HOUSING

SARAH DUNN, JOHN M. QUIGLEY, and LARRY A. ROSENTHAL*

Recent California legislation extends the application of prevailing wage regulations to construction workers building subsidized low-income residential projects. Econometric evidence based on micro data covering 205 residential projects subsidized by the California Low Income Housing Tax Credit since 1996 and completed by mid-2002 demonstrates that construction costs increased substantially under prevailing wage requirements. Estimates of additional construction costs in the authors' most extensive models range from 9% to 37%. The analysis controls for variations in cost by geographical location and for differences in project characteristics, financing, and developer attributes. The authors estimate the effect of uniform imposition of these regulations on the number of new dwellings for low-income households produced under the tax credit program in California. Under reasonable assumptions, the mid-range estimate of the prospective decrease exceeds 3,100 units per year.

In October 2001, following heated political debate, the California legislature voted to extend the application of the state's "prevailing wage" laws to many construction projects not previously covered, including housing subsidized with public funds and even some private construction. The passage of Senate Bill 975 (SB 975) amended section 1720 of the California Labor Code, expanding the scope of "public funds" that trigger prevailing wage obligations when used to finance new construction.

The new law brings to the forefront of the policy debate concerns about the costs and benefits of prevailing wage laws, specifically in the context of subsidized housing for low-income households. Since prevailing wage rates are almost invariably higher than market wages, the new law may significantly increase construction costs in affected projects, perhaps to the point that they will no longer be financially feasible. Although SB 975 and subsequent enactments exempted some subsidized projects—

*Sarah Dunn is Research Associate at the Berkeley Program on Housing and Urban Policy, John M. Quigley is I. Donald Terner Distinguished Professor and Professor of Economics, and Larry A. Rosenthal is Executive Director of the Berkeley Program on Housing and Urban Policy and Lecturer at the Goldman School of Public Policy, all at the University of California, Berkeley. This research is supported by a grant from the U.S. Department of Housing and Urban Development and by the Berkeley Program on Housing and Urban Policy. The authors are grateful for the comments of Andrew Blauvelt, Shawn Blosser, Scott Littlehale, Matt Newman, Jeanne Peterson, Scott Smith, and Fran Wagstaff.

The dataset on which this paper is based is available for download at http://urban policy.berkeley.edu/publist.htm.

Industrial and Labor Relations Review, Vol. 59, No. 1 (October 2005). © by Cornell University.
0019-7939/00/5901 $01.00

such as those already under way at the time of the new law's passage, as well as certain self-help projects and transitional housing for the homeless—prevailing wage requirements have come to affect more and more residential development in California, including many housing projects targeted toward low- and moderate-income families.

While SB 975 itself applies only in California, the impact of prevailing wage policy is of national importance. Several studies have estimated the impact of the provisions of long-standing federal prevailing wage laws, the Davis-Bacon and Related Acts, on the cost of government contracts, but there is little hard evidence on the impact of prevailing wage policy on housing or residential construction costs, or on subsidized projects in particular. While some supporters argue that prevailing wage laws increase the efficiency or stability of construction labor markets, these claims remain unsubstantiated. Rather, redistribution of income appears to be the ultimate goal, and the principal effect (Allen 1983; Goldfarb and Morrall 1981).

This paper presents new evidence on some of these issues. It estimates the effect of prevailing wage requirements on the cost of construction of state-subsidized low-income housing in California. The evidence is based on micro data covering newly constructed units funded in part by the Low-Income Housing Tax Credit Program (LIHTC) from 1997 to 2002.

Prevailing Wage Legislation in California

California's prevailing wage law was passed in 1931, the same year as the Davis-Bacon Act. A 1995 study of state prevailing wage laws found it to be one of the most stringent in the nation (Thieblot 1995). The California statute extends to areas beyond the scope of the federal law, such as demolition work, site and sewer construction, and some janitorial and hauling work.

The administration of the California statute falls under the jurisdiction of the state's Department of Industrial Relations (DIR), and determination of the regulated wage rates is left to the discretion of the director of the DIR. California's determination of "prevailing wages" is similar to the federal standard, in that it effectively employs the modal wage rate. This usually results in the selection of a negotiated wage rate (under a union collective bargaining agreement), since free market wages are unlikely to be identical to the penny.

Local prerogative on construction wage regulation varies within the state. By 1995, two California localities had won judicial approval of ordinances exempting certain projects from prevailing wage requirements. A handful of other cities imposed prevailing wage obligations on some industrial construction projects wholly outside the public sphere (Thieblot 1995).

Since passage of the Davis-Bacon Act, construction of low-income housing sponsored directly by the U.S. Department of Housing and Urban Development (HUD), such as public housing and most Section 8 New Construction and Substantial Rehabilitation projects, has necessitated payment of "prevailing wages."[1] But there has been some ambiguity about coverage of housing projects subsidized indirectly through tax credits or federal grants to lower levels of government. The 2001 California law resolved this ambiguity. It extended this coverage to subsidized housing construction using federal, state, and local public funding sources such as the Community Development Block Grant Program and other common sources of grants for subsidized housing.

Effects of Prevailing Wage Requirements

Effects on Construction and Costs

A large literature has developed on the efficiency and distributional effects of mini-

[1]The application of the Davis-Bacon Act to HUD-sponsored construction is subject to a variety of detailed regulations, and HUD has provided wage surveys to assist the U.S. Department of Labor in its determination of wage rates (see HUD 1981).

mum wage laws generally (for a review, see Card and Krueger 1995) and Davis-Bacon and state prevailing wage legislation in particular. Goldfarb and Morrall (1981) reviewed a number of the early empirical studies of the costs of Davis-Bacon, and concluded that the legislation could hardly be attractive on efficiency grounds. The same authors (Goldfarb and Morrall 1978) examined construction wage data to estimate the large cost savings achievable by using mean wages (rather than modes) as the regulatory benchmark for defining prevailing wages. Metzger and Goldfarb (1983) developed an economic model to evaluate claims that output quality improves under a prevailing wage regime, and concluded that quality may easily decrease as a consequence of the increased costs imposed by regulation.

Estimates of increased project costs under Davis-Bacon vary considerably, most likely due to the difficulty in finding a control group unaffected by the Davis-Bacon Act with which to compare construction costs of Davis-Bacon projects. Two studies focused on a one-month suspension of the Act in 1971, which forced contractors to rebid for projects in the pre-award phase. Thieblot (1975) found an increase of about .5% on prevailing wage projects. By accounting more fully for institutional factors and inflation, Gould and Bittlingmayer (1980) estimated the increase to be between 4% and 7%. Using contractor surveys to compile a sample of affected and unaffected projects in rural areas, Fraundorf et al. (1984) concluded that the Act increased costs by an average of more than 26%.

More recent literature has addressed the control group problem by exploiting the variation in state prevailing wage laws among states and over time. A number of studies have used intrastate variation in prevailing wage laws resulting from the introduction of a new law, temporary suspension of an existing law, or the repeal of the state's prevailing wage law. Philips et al. (1995) examined the effect on construction wages of the repeal of state prevailing wage laws in nine states. They found that construction wages declined more in repeal states than in non-repeal states, but claimed that any savings to the government in construction costs was offset by losses in income tax revenue. Thieblot (1996) questioned these conclusions on methodological grounds. Bilginsoy and Philips (2000) used intra-provincial variation in prevailing wage laws to estimate the impact of the law on school construction costs, and found that the introduction of a prevailing wage law in British Columbia increased construction costs by at least 16% in the most restrictive model. The robustness of their results was limited by a small sample (54 projects). Philips (2001) also examined the impact of state prevailing wage laws on school construction using intrastate variation, finding a positive but not statistically significant effect of prevailing wage laws on construction costs.

Other studies have exploited the interstate variation in prevailing wage laws. Prus (1996) used FW Dodge data on various project types and found construction costs to be 18% higher in prevailing wage states than in states without prevailing wage laws, but the unconventional manner in which results were reported makes the level of statistical significance unclear. Prus (1999), Philips (1999), and Azari-Rad, Philips, and Prus (2003, 2002) all used the interstate variation and FW Dodge data on school construction costs and found positive yet statistically insignificant effects of prevailing wage laws on construction costs. The results of these latter studies are questionable, as the authors did not control for many important project characteristics, and some unmeasured differences among state institutions may affect the results.

Kessler and Katz (2001) examined the impact of repeal of state prevailing wage laws on construction wages, comparing variations across states and over time. The authors found a small (2–4%) but statistically significant decrease in the average wages of construction workers in a state after the repeal of its prevailing wage law.

Table 1. Rough Estimates of Increased Housing Costs Due to Prevailing Wage Requirements for Selected California Cities.

Location	*Labor Share of Construction Cost (%)*	*Prevailing Wage Differential (%)*	*Project Cost Increase (%)*
Major Cities			
Los Angeles	43.5	48.9	21.3
Sacramento	44.9	41.7	18.7
San Diego	43.6	37.6	16.4
San Francisco	47.2	28.7	13.5
Average Major Cities	44.8	39.2	17.5
Other Cities			
Bakersfield	42.6	60.0	25.6
Fresno	42.6	45.2	19.2
Marysville	45.0	50.1	22.5
Oxnard	43.9	50.1	22.0
Redding	43.2	56.5	24.4
San Bernardino	42.6	56.3	24.0
Average Other Cities	43.3	53.0	23.0

Source: http://www.building-cost.net; Newman and Blosser (2003). See text for assumptions and methods.

Effects on Housing Markets

One paper prepared for the President's Commission on Housing related housing construction costs to prevailing wage legislation (HUD 1981), but that document is merely a compendium of assertions. There is apparently no other direct evidence on the link between prevailing wage regulations and housing costs.

However, cost estimators used by house builders, and rules of thumb used by lenders, may yield rough estimates of the link between prevailing wage requirements and housing costs. For California, we can use existing information—on the labor share of residential construction costs, and on the premium of prevailing wages over market wages—to make some rough approximations.

Rough estimates for selected California cities—the labor share in housing output[2] times the wage premium—are presented in Table 1. Increases in project cost due to prevailing wages average 20.8% for the ten cities considered. Increases range from 13.5% in Stockton to 25.6% in Bakersfield. Major cities have a lower average increase in project cost (17.5%) than the six smaller cities included in the table (23%).

Of course, these rough estimates do not account for a number of influences prevailing wage legislation could have on overall project cost. For example, affected developers can substitute away from more expensive labor inputs by such means as using more prefabricated components, thus reducing the costs of on-site assembly. The enforcement of wage regulations might impose increased administrative cost due to more complex reporting requirements. There are likely labor and materials econo-

[2]The labor share of construction cost, available at http://www.building-cost.net, is based on a wood-frame, single-family home of average quality and size. Percent increases in mean market wages were obtained from the California Employment Development Department's "Occupational Employment Statistics" survey and state prevailing wage determinations published by the Department of Industrial Relations (as compiled in Newman and Blosser 2003). An average of wages from four construction occupations—Carpenters, Electricians, Plumbers, and Drywall Installers—was used to yield an overall labor rate.

mies present in multi-unit projects for lower-income families, compared to the single-family basis used in the published wage-share figures. Finally, increased wage levels may attract more productive workers, working fewer hours over the duration of an affected project. The subtle interactions of these effects are ignored in these rough approximations. We now turn to more precise econometric models estimating the cost effects based on the actual cost of housing projects completed in California.

Empirical Analysis

Our analysis extends the literature on the effects of prevailing wages by analyzing micro data on a large sample of individual construction projects, and by relying on observations from a single state. Our concentration on subsidized housing projects also permits explicit consideration of the tradeoff between the use of public resources to benefit two different sets of deserving households—low-income housing consumers, and workers within the residential construction industry.

We analyze the structure of costs for newly constructed dwellings for California Low-Income Housing Tax Credit (LIHTC) housing projects whose applications for funding were filed after January 1, 1997, and that were placed in service before May 1, 2002. All projects were selected to receive federal (and some state) tax credits by the California Tax Credit Allocation Committee (TCAC), the administrator of the federal LIHTC program in California.[3]

In accordance with program regulations, only rental housing projects are eligible for credits. The allocation process is competitive, so that projects that best fulfill housing needs and public policy objectives (as determined by TCAC) have priority. For newly constructed units to be eligible for tax credits, they must meet both rent and income requirements. The rents charged may not exceed 30% of the "imputed income" for the unit.[4] At initial occupancy, the income of a resident household may not exceed 50% or 60% of the area median income (AMI). Developers choose between a "20/50" or "40/60" minimum set aside, meaning that at least 20% (or 40%) of the units must be "affordable" to families with incomes at 50% (or 60%) of the median income. Only "affordable" units are eligible for tax credits. To increase the attractiveness of projects in the competition for credits, most applicants designate a greater proportion than the minimum set aside as "affordable," and many target occupants with incomes lower than the 50%/60% AMI threshold. Units receiving federal tax credits are required to remain "affordable" according to the above definition for 15 years.[5]

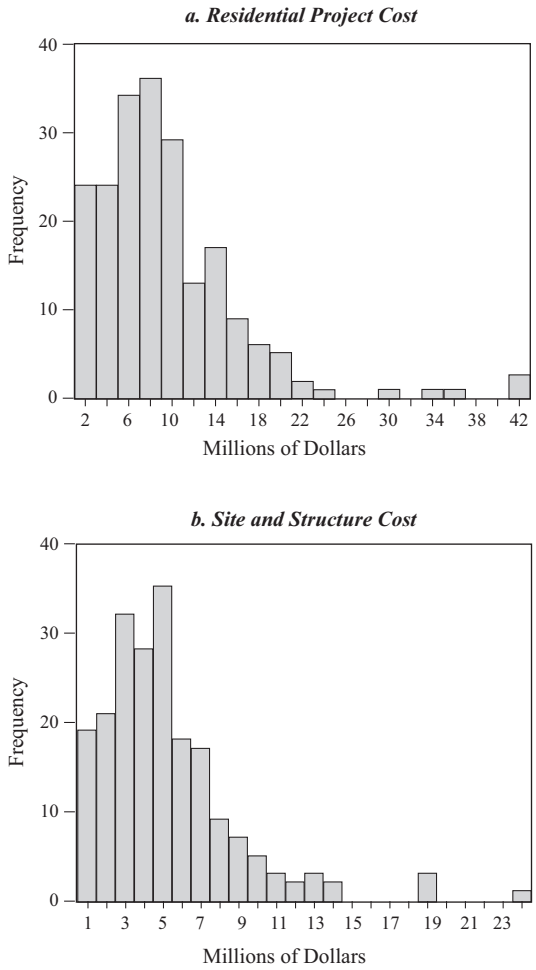
A number of criteria are considered in the allocation process. Federal guidelines grant priority to those projects that serve the lowest-income tenants and that maintain affordability for the longer periods. Other selection criteria include project location and the housing needs of that location (including consideration of public housing waiting lists and target populations with special needs), project characteristics, and projects intended for eventual tenant ownership. In California, the demand for credits usually exceeds their availability by about four to one, and elabo-

[3]The federal LIHTC program, authorized by Congress in 1986 and administered nationally by the Internal Revenue Service, enables developers of qualifying rental housing to raise project equity through the sale of federal tax credits to investors. TCAC allocates additional state tax credits to those projects that are selected to receive federal credits. TCAC may also authorize tax credits for rehabilitation of low-income housing. Due to their heterogeneity, housing rehabilitation projects are excluded from this analysis.

[4]Income is imputed assuming an occupancy of 1.5 persons per bedroom, and the area median income for a family of that size. The rent charged must not exceed 30% of this imputed income.

[5]Units benefiting from California state tax credits are generally required to maintain "affordability" for 55 years.

Figure 1. Cost Distributions for Sample Projects, 1997-2002.



rate priorities and guidelines have been established.[6]

Two hundred and ninety-two New Construction Projects were approved by TCAC from the application years 1997 through 2002 and completed before May 1, 2002. We compiled a dataset covering 205 of these projects, including *ex post* cost data on each project, reflecting certification by external auditors upon completion of construction.[7] Other project characteristics were assembled from the Committee's electronic database, from paper files of TCAC, and from telephone interviews.

Two measures of project costs were compiled based on expenditures reported *ex post* in the final cost certification. The first and most inclusive, *Residential Project Cost*, includes all costs associated with residential construction. These costs include land acquisition and development, construction (labor, materials, contractor profit, and overhead), survey and engineering costs, financing, legal fees, developer fees, and other expenses. *Site and Structure Cost* includes only site preparation and building-construction costs (that is, excluding contractor overhead and profit and general requirements). This measure of cost is most closely linked to changes in labor and materials costs. As shown in Figure 1, the distribution of these cost measures is highly skewed and roughly lognormal.[8] On a per unit basis, *Site and Structure Cost* averages about 56% of *Residential Project Cost*.

We also compiled information on a number of project characteristic variables: tar-

[6]For example, both state and federal law require that 10% of annual credit be awarded to projects that involve non-profit developers. In addition, the state law requires that at least 20% of the credits be used for projects located in rural areas, and at least 2% be set aside for small projects (consisting of 20 or fewer units). California also has guidelines to maintain geographic distribution of the tax credits, awarding a certain percentage of annual credits to each of 12 geographic regions across the state. Preference for credit allocation is also given to projects that promote certain public policies, such as smart growth, energy efficiency, and community revitalization efforts.

[7]There were a total of 454 approved projects, of which 162 were classified as Acquisition or Rehabilitation projects. Project files for 76 of 292 New Construction projects were not available at the time of data collection during the fall of 2002. (This typically meant that the files were in use by TCAC staff or other state officials at the time data were collected.) Complete data could not be assembled for 11 of the 216 remaining projects.

[8]In simple linear regressions, the intercept terms are insignificantly different from zero, implying a proportional relationship between *Residential Project Cost* and *Site and Structure Cost*.

get populations (senior citizens and special needs residents, for example), affordability levels, and the minimum set aside chosen by the applicant ("20/50" or "40/60"). All of these indicia are reflected in the criteria for allocating tax credits. In addition, we gathered information on project location, special facilities and features, structure and construction details, the applicant and developer, and financing.

We also determined whether project developers paid construction workers "prevailing wages." Beginning in 1999, applicants for LIHTC funding were asked to specify whether "use of federal, state or local subsidies requires that higher than normal wages must be paid."[9] We collected developers' responses to this question in the project information extracted from TCAC files. We then briefly interviewed developers by telephone to verify the payment of prevailing wages for each project. These interviews determined whether prevailing wages were paid on LIHTC projects whose applications were filed pre-1999 and also confirmed the "higher than normal wages" information extracted from TCAC files for project applications filed after 1998. We identified payment or nonpayment of prevailing wages for 175 of the 205 projects.[10] In the analysis below, the prevailing wage indicator variable has a value of one when we have confirmed that prevailing wages were paid, and is zero otherwise. We have made no independent determination concerning whether developers' choices about the payment of prevailing wages were legally mandated or, if so, whether the requirement arose from federal, state, or local requirements.

Table 2 presents summary information on the observed projects.

The Basic Statistical Models

Table 3 presents results of simple ordinary least squares (OLS) regressions[11] relating various measures of residential construction costs to the descriptors listed in Table 2. Regressions are presented for both measures of project cost: "site and structure" cost, including all construction wage expenditures, and total "residential project cost." In the first specification (columns 1 and 2), the dependent variable is the logarithm of cost, and the logarithm of the number of units is included as a regressor. In the second specification (columns 3 and 4), we impose constant returns to scale; the logarithm of cost per unit is the dependent variable.

As reported in Table 3, project costs vary by type of project, type of developer, and type of structure. There is also some evidence that projects with larger fractions of "affordable" units had lower total costs and lower costs per unit. Projects completed more recently tended to be more expensive, and those providing beneath-structure parking had higher costs. Projects with larger dwellings were more costly, as were those constructed on urban infill sites. There are some differences in costs by location; projects located in San Francisco, Sacramento, and Los Angeles tended to be more expensive to build.

The cost relationships reported in Table 3 are generally consistent for both specifications and both definitions of cost. In particular, the simple OLS models indicate that, holding other factors constant,

[9]The LIHTC application thus clearly refers to requirements imposed as conditions for the attainment of government subsidies, thereby eliminating the possibility that "higher than normal" wages are interpreted by the respondents to be higher-than-market union scale. Interviews with developers confirmed that builders understood "prevailing wages" to be those required by regulators, and hence the term is not to be considered synonymous with "union wages."

[10]In the remaining thirty cases, the developer lacked information or could not be reached.

[11]In preliminary regressions, eleven project characteristics in the TCAC data were individually and jointly statistically insignificant. Excluding them affected the magnitude of the prevailing wage coefficient only negligibly and therefore they were omitted from these regressions. Fourteen geographical identifiers are retained within the models but, for the sake of simplicity, are not reported in the tables below. These results are available from the authors on request.

Table 2. Variable Definitions and Descriptive Statistics.
(205 Observations on LIHTC Projects, Completed 1997–2002)

Variable	*Definition*	*Mean*	*Standard Deviation*
Prevailing Wages	One if prevailing wages were paid as a result of federal, state, or local requirements, zero otherwise.	0.20	0.40
Units	Number of units in project.	82.79	56.41
Affordability	Fraction of units in project that meet affordability guidelines.	0.95	0.14
Targeting			
Non-Targeted	One if units are not targeted to a specific population, zero otherwise.	0.09	0.28
Senior	One if units are targeted to seniors, zero otherwise.	0.28	0.45
SRO	One if units are single room occupancy, zero otherwise.	0.02	0.15
Needs	One if units are targeted to special needs populations, zero otherwise.	0.04	0.21
Time	Occupancy date. Elapsed time in days from July 19, 1995.	1,700	376
Parking	One if project contains parking beneath the structure, zero otherwise.	0.17	0.37
Three Bedrooms	One if ≥ 50% of units have ≥ 3 bedrooms, zero otherwise.	0.31	0.46
Island	One if project is on an island, zero otherwise.	0.00	0.07
Special Facilities	One if project contains special needs facilities, zero otherwise.	0.03	0.18
Mitigation	One if project requires substantial environmental mitigation, zero otherwise.	0.05	0.23
Applicant Non-Profit	One if applicant is a non-profit organization, zero otherwise.	0.22	0.42
Developer			
For Profit	One if developer is a for-profit organization, zero otherwise.	0.22	0.42
Non Profit	One if developer is a non-profit organization, zero otherwise.	0.41	0.49
Funding	Fraction of project funding from public sources.	0.19	0.21
Sources	Number of different funding sources.	3.63	1.45
Bonds	One if project received tax-exempt bond finance.	0.40	0.49
Structure			
Townhouse	One if project is a townhouse, zero otherwise.	0.18	0.39
Cooperative	One if project is a cooperative, zero otherwise.	0.00	0.07
Two Stories	One if project has two or more stories, zero otherwise.	0.50	0.50
Single Family	One if project is single family detached, zero otherwise.	0.01	0.10
Infill	One if development is an inner city infill site, zero otherwise.	0.15	0.35
Residential Project Cost	See text (millions of $).	9.39	6.54
Site and Structure Cost	See text (millions of $).	5.14	3.50

projects paying prevailing wages were about 9–11% more costly than otherwise identical projects not subject to these regulations.[12] In columns (1) and (2), the estimated coefficient for the logarithm of the number of units is statistically significantly less than one, suggesting that there were modest economies of scale in projects containing more dwellings. Despite this, models using the logarithm of cost per unit as the dependent variable (thereby constraining the model to reflect constant returns to scale) are quite similar; the magnitudes and statistical significance of the coefficients are also similar.

When the geographic identifiers are removed from the specification, the explained variation is slightly lower, but the magnitudes of the other coefficients and their statistical significance are quite comparable. However, the estimated coefficients for the prevailing wage variable are substantially larger, suggesting cost increases of about 18% for those projects paying prevailing wages as compared to projects for which this requirement was not imposed. Results from specifications including interactions between geography and regulation suggest that prevailing wage effects on construction costs did vary by region within California.[13]

Instrumental Variables Estimates

It is possible that the requirement to pay prevailing wages imposed on some of these construction projects is not exogenous to the other factors determining project costs. If projects located in higher-cost areas (for example, in highly urbanized areas) were more likely to be required to pay prevailing wages (for example, because unions were able to exercise more political influence in these regions), then simple ordinary least squares regression models would falsely attribute these higher costs to the payment of prevailing wages. Alternatively, lower-cost areas of California may feature relatively more intensive advocacy for prevailing wages adoption and enforcement, in which case OLS might falsely bias estimates of regulatory effects downward.

Estimation of the models by the method of instrumental variables (IV) eliminates this source of bias and yields consistent estimates of the effect of prevailing wage requirement on construction costs. Appropriate instruments are variables that are correlated with the regulatory classification of projects—that is, identifying those paying prevailing wages as opposed to those paying market wages—and that do not themselves cause construction costs to vary.

From computerized voting information, we obtained the election results on ten statewide California propositions for the city in which each of the 205 sample projects was located. We also measured the party registration of voters in each jurisdiction, and the percentage of workers in highly unionized industries and occupations by census place.[14] Finally, we tabulated homeownership rates and age distributions of the population in each jurisdiction, as well as union membership in the relevant geographical location, as a fraction of total wage and salary employment.

[12]Since the dependent variable is the natural logarithm of costs, the percentage change in cost due to payment of prevailing wages is the exponentiated coefficient on that dummy variable.

[13]Geographic identifiers specify project location by metropolitan statistical area (MSA). Geographic differences in cost appear to have been significantly greater in certain regions (for example, San Francisco/Oakland/San Jose, Los Angeles, Sacramento, and Modesto) whether or not the prevailing wage variable is included in the basic OLS model. When models include interactive variables reflecting both geographic and regulatory effects, it appears that prevailing wage regulation added significantly greater cost in the San Francisco metropolitan area than in other high-cost construction areas in California. These results are also available from the authors on request.

[14]Highly unionized industries and occupations are defined based on Current Population Survey data analyzed by Barry T. Hirsch and David A. Macpherson (2003). U.S. Census data on employment by industry and occupation for employed persons 16 years and older in each census place were used to compute the variables "highly unionized industries" and "highly unionized occupations" associated with each of the 205 housing projects.

Table 3. OLS Models of Construction Costs.
(Dependent Variables in Logarithms)
(t-ratios in parentheses)

	Total Cost		*Cost per Unit*	
Variable	*Site and Structure Cost*	*Project Cost*	*Site and Structure Cost*	*Project Cost*
Prevailing Wage	0.103	0.097	0.097	0.091
	(2.41)	(2.82)	(2.22)	(2.56)
Log Units	0.913	0.917	—	—
	(33.39)	(41.67)	—	—
Affordability	–0.352	–0.144	–0.303	–0.097
	(2.91)	(1.49)	(2.47)	(0.97)
Targeting				
Non-Targeted	–0.150	–0.065	–0.138	–0.053
	(2.56)	(1.39)	(2.30)	(1.10)
Senior	–0.168	–0.200	–0.184	–0.215
	(4.06)	(5.99)	(4.37)	(6.27)
SRO	–0.541	–0.641	–0.577	–0.675
	(5.62)	(8.28)	(5.88)	(8.46)
Needs	–0.011	–0.093	–0.009	–0.091
	(0.13)	(1.40)	(0.11)	(1.32)
Time	4.878	6.561	4.597	6.290
	(3.04)	(5.08)	(2.79)	(4.70)
Parking	0.173	0.155	0.201	0.182
	(3.35)	(3.73)	(3.87)	(4.30)
Three Bedrooms	0.144	0.082	0.156	0.094
	(3.86)	(2.74)	(4.11)	(3.04)
Island	0.625	0.379	0.625	0.379
	(2.94)	(2.22)	(2.87)	(2.14)
Special Facilities	–0.223	0.035	–0.257	0.002
	(2.19)	(0.42)	(2.47)	(0.02)
Mitigation	–0.061	0.053	–0.073	0.041
	(0.84)	(0.90)	(0.98)	(0.68)

Continued

Arguably, these demographic and political variables affect the propensities of local government and regional officials to require payment of prevailing wages. These demographic and political variables have no direct causal effect on construction costs. Table 4 summarizes these measures of political and demographic variation across the sample of construction projects, reporting the means and standard deviations. The table also reports the results of the first stage regressions of the instrumental variables procedure.

In this first stage, the dependent variable is the dummy representing whether prevailing wages were required to be paid. Two models are presented, both including the complete set of instruments and including all other variables presented in Table 2. As shown in the table, a number of the instruments are individually significant at about the 0.10 level. An F-test for the joint significance of the instruments when no other regressors are included is highly statistically significant. When the other regressors are included, the F-ratio is significant at the 0.10 level.

Table 3. Continued.

Variable	*Total Cost*		*Cost per Unit*	
	Site and Structure Cost	*Project Cost*	*Site and Structure Cost*	*Project Cost*
Applicant				
Non-Profit	–0.005	0.029	–0.008	0.026
	(0.10)	(0.78)	(0.16)	(0.68)
Developer				
For Profit			–0.017	–0.006
			(0.14)	(0.06)
Non Profit	0.115	0.052	0.147	0.083
	(2.69)	(1.53)	(3.46)	(2.40)
Funding	–0.118	0.142	–0.015	0.241
	(1.25)	(1.87)	(0.17)	(3.26)
Sources	0.016	0.005	0.014	0.003
	(1.39)	(0.54)	(1.18)	(0.31)
Bonds	–0.065	–0.035	–0.098	–0.067
	(1.59)	(1.08)	(2.43)	(2.05)
Structure				
Townhouse	0.155	0.134	0.168	0.146
	(3.17)	(3.39)	(3.35)	(3.57)
Cooperative	0.697	0.459	0.874	0.629
	(2.81)	(2.30)	(3.51)	(3.11)
Two Stories	0.102	0.061	0.106	0.065
	(2.65)	(1.96)	(2.69)	(2.01)
Single Family	0.371	0.243	0.399	0.271
	(2.43)	(1.98)	(2.55)	(2.13)
Infill	0.161	0.073	0.179	0.091
	(3.15)	(1.77)	(3.44)	(2.14)
Constant	6.313	4.951	6.190	4.831
	(3.80)	(3.70)	(3.63)	(3.48)
R^2	0.932	0.955	0.732	0.802

Note: Regressions based on 205 observations on LIHTC projects in California completed from 1997 to 2002. All models include 14 additional controls for geographic location (by MSA).

Table 5 presents instrumental variables estimates of the same models reported in Table 3. The pattern of magnitudes and statistical significance of the coefficients in Table 5 is nearly identical to that previously reported. The coefficient on the logarithm of the number of units is significantly less than one, again suggesting modest scale economies. When the coefficient is constrained to one, representing constant returns to scale—in the third and fourth columns of the table—the substantive results are unchanged.

Note that when the model is estimated using instrumental variables, the coefficient on the prevailing wage variable is larger in magnitude and is more precisely measured than in the ordinary least squares regression. The results in Table 5 imply that—for otherwise identical low-income projects—prevailing wage construction is between 19% and 28% more costly. Importantly, the finding that prevailing wage legislation increases housing costs does not arise simply because prevailing wages are more likely to be required in high-cost housing markets.

Table 4. First Stage Instruments in Two Stage Least Squares Models.
(Dependent Variable: Prevailing Wage)
(t-ratios in parentheses)

		First Stage Coefficient	
Variable	*Mean (Standard deviation)*	*Model 1*[a]	*Model 2*[b]
Number of Adjacent Jurisdictions	7.440	0.002	0.002
	(9.49)	(0.49)	(0.40)
Fraction Yes Vote on Prop. 199	0.386	–0.013	0.057
Low-Income Rental Assistance, 1996	(0.08)	(0.02)	(0.10)
Fraction Yes Vote on Prop. 107	0.533	1.090	1.084
Housing and Homeless Bonds, 1990	(0.09)	(1.24)	(1.23)
Fraction Yes Vote on Prop. 168	0.422	–1.283	–1.306
Low-Rent Housing Projects, 1993	(0.10)	(1.56)	(1.59)
Fraction Yes Vote on Prop. 155	0.496	–0.877	–0.973
School Facilities Bonds, 1992	(0.12)	(0.93)	(1.03)
Fraction Yes Vote on Prop. 156	0.483	0.723	0.757
Passenger Rail and Clean Air Bonds, 1992	(0.09)	(0.82)	(0.86)
Fraction Yes Vote on Prop. 157	0.330	–0.275	–0.427
Toll Roads and Highways, 1992	(0.13)	(0.26)	(0.41)
Fraction Yes Vote on Prop. 160	0.503	1.734	1.762
Project Tax Exemptions, 1992	(0.07)	(1.74)	(1.77)
Fraction Yes Vote on Prop. 164	0.575	–0.617	–0.776
Term Limits, 1992	(0.12)	(0.72)	(0.89)
Fraction Yes Vote on Prop. 167	0.413	–1.730	–1.724
State Taxes, 1992	(0.07)	(1.65)	(1.64)
Fraction Yes Vote on Prop. 210	0.649	1.769	1.770
Minimum Wage Increase, 1996	(0.09)	(1.47)	(1.47)
Percent of Voters Registered as Democrats	0.597	–1.136	–1.102
	(0.13)	(1.35)	(1.31)
Percent of Population over 40 Years Old	0.341	–0.209	–0.117
	(0.06)	(0.34)	(0.19)
Percent of Housing Units Owner-Occupied	0.554	–0.682	–0.717
	(0.13)	(1.60)	(1.68)
Percent Working in Highly Unionized Industries	0.339	0.841	0.836
	(0.07)	(1.31)	(1.31)
Percent Working in Highly Unionized Occupations	0.265	–1.065	–1.093
	(0.07)	(1.57)	(1.61)
Percent Unionized	0.166	1.446	1.667
	(0.06)	(1.13)	(1.28)
F-ratio[c]		1.492	1.492
[p value]		[0.11]	[0.11]
F-ratio[d]		2.981	2.981
[p value]		[0.00]	[0.00]

[a]Regression includes all observed project characteristics (coefficients not shown).
[b]Regression includes log-units regressor, and all observed project characteristics (coefficients not shown).
[c]F-test for the joint significance of the instruments.
[d]F-test for the joint significance of the instruments in an equation including no other covariates.
Both models include 14 additional controls for geographic location (by MSA).

Conclusions

We have presented the first systematic evidence showing the effects of prevailing wage requirements on the costs of constructing low-income housing. A sample of 205 low-income housing projects subsidized by the California Tax Credit Allocation Commission during the 1997–2002 period formed the basis for the empirical analysis. We estimated statistical models using several definitions of cost certified by TCAC and by an independent auditor, in two specifications—one allowing for scale economies in construction and the other imposing constant returns to scale. Finally, we estimated models both by ordinary least squares regression and by instrumental variables techniques. *Ceteris paribus,* low-income housing projects were significantly more expensive if developers were required to pay prevailing wages. Importantly, these cost increases did *not* arise simply because prevailing wages were more likely to be required in high-cost housing markets.

The statistical models explain about 90% of the variation in construction costs across a broad sample of low-income housing projects, and about 80% of the variation in cost per unit built. The results confirm the variation in costs by type of project. Single room occupancy projects were considerably less expensive to build, while projects targeted toward large families were more expensive.[15] Underground parking and greater numbers of three-bedroom units also added significantly to project costs.

Construction costs may vary by type of applicant and type of developer. Cooperatives and single-family dwellings appear to have been more costly to build. Some differences in construction costs are also apparent by geographical region. In particular, newly constructed units in San Francisco were more than 20% costlier than elsewhere. There is also clear evidence of economies of scale in multifamily housing construction.

Table 6 provides a summary of the results of various econometric specifications as they pertain to prevailing wage requirements. It presents estimates of the percentage increase in construction costs arising from the imposition of prevailing wage regulation, holding constant characteristics such as the project's sponsorship, its financing, and its location.

Using the most realistic specifications of costs where geographic variation is accounted for, ordinary least squares models imply that prevailing wage requirements increased the cost of low-income housing construction between 9% and 11%.[16] The instrumental variables models imply that cost increases were higher—between 19% and 37% for the most realistic specifications.[17] These increases are far greater than those recently reported for construction wages (rather than overall projects) by Kessler and Katz (2001). There are several ways to harmonize our results with theirs. First, our study uses only California data rather than a multistate sample; the enforcement of prevailing wages may be more aggressive in California than elsewhere. Second, Kessler and Katz reported smaller *decreases* in wage levels *after repeal* of the regulation. Price effects of wage regulation, captured more directly by our project-cost analysis, may linger long after repeal. Finally, it is certainly possible that the process of complying with prevailing wage regulations exacerbates known administrative inefficiencies in tax-credit projects (Cummings and DiPasquale 1999).

[15]Single room occupancy units lack individual bathrooms, kitchens, and living areas. To consider these aspects of housing costs, we also estimated the same models reported in the text using cost per square foot as the dependent variable. The results did not differ substantially from those reported in the text.

[16]Alternatively, if low-income housing is subsidized by 9–11% and if prevailing wage requirements are imposed, these results suggest that developer costs were unchanged, but income was transferred from taxpayers to construction workers.

[17]While it is possible that payment of prevailing wages attracts more productive construction workers, these results indicate that higher wage costs outweighed any unmeasured productivity gain in those housing projects.

Table 5. Instrumental Variables Estimates of Construction Costs.
(Dependent Variables in Logarithms)
(t-ratios in parentheses)

Variable	*Total Cost*		*Cost per Unit*	
	Site and Structure Cost	*Project Cost*	*Site and Structure Cost*	*Project Cost*
Prevailing Wage	0.225	0.177	0.248	0.196
	(2.58)	(2.50)	(2.76)	(2.67)
Log Units	0.910	0.914	—	—
	(33.26)	(41.25)	—	—
Affordability	–0.363	–0.152	–0.315	–0.105
	(3.01)	(1.55)	(2.58)	(1.05)
Targeting				
Non-Targeted	–0.187	–0.089	–0.182	–0.084
	(2.98)	(1.76)	(2.85)	(1.62)
Senior	–0.161	–0.195	–0.176	–0.210
	(3.87)	(5.78)	(4.18)	(6.08)
SRO	–0.554	–0.649	–0.595	–0.688
	(5.75)	(8.32)	(6.08)	(8.59)
Needs	–0.047	–0.117	–0.053	–0.122
	(0.55)	(1.68)	(0.61)	(1.70)
Time	4.327	6.200	3.900	5.806
	(2.64)	(4.67)	(2.33)	(4.24)
Parking	0.169	0.152	0.198	0.180
	(3.28)	(3.65)	(3.83)	(4.25)
Three Bedrooms	0.147	0.084	0.161	0.097
	(3.94)	(2.79)	(4.24)	(3.13)
Island	0.677	0.413	0.689	0.424
	(3.16)	(2.38)	(3.15)	(2.36)
Special Facilities	–0.236	0.026	–0.275	–0.011
	(2.32)	(0.31)	(2.66)	(0.13)

Continued

Increases in project cost due to prevailing wage regulation surely lead to reductions in the number of newly constructed low-income housing units produced through public subsidy. Consider, for example, new dwellings completed under the LIHTC. The federal allocation of tax credits provided financing for an average of 19,129 low-income housing units per year from 2000 to 2002 (including both new construction and rehabilitation).[18] We can estimate the effect of applying new prevailing wage requirements to the share of annual production (about 15,686 units annually)[19] not previously subject to these regulations. If costs were increased by just 9.5% as a result of prevailing wage legislation (the smallest increase predicted by any of

[18]See California Tax Credit Allocation Committee *Annual Reports* (2000–2002). The total credits reported combine those issued at the 9% and 4% levels, the latter being applied to projects using federal subsidies or tax-exempt fund sources beyond tax credits alone. The two categories are subject to different rules concerning the state's total credit-issuing authority.

[19]On the basis of our dataset, it appears that approximately 20% of the LIHTC units, or about 3,443 annually, may have been governed by prevailing wage prior to the application of SB 975.

Table 5. Continued.

Variable	*Total Cost*		*Cost per Unit*	
	Site and Structure Cost	*Project Cost*	*Site and Structure Cost*	*Project Cost*
Mitigation	–0.041	0.066	–0.049	0.058
	(0.56)	(1.11)	(0.66)	(0.94)
Applicant Non-Profit	–0.022	0.018	–0.029	0.011
	(0.46)	(0.46)	(0.61)	(0.28)
Developer Non-Profit	0.105	0.046	0.136	0.076
	(2.45)	(1.32)	(3.22)	(2.18)
Funding	–0.172	0.106	–0.078	0.197
	(1.73)	(1.31)	(0.81)	(2.52)
Sources	0.015	0.004	0.013	0.002
	(1.32)	(0.49)	(1.10)	(0.24)
Bonds	–0.073	–0.041	–0.110	–0.075
	(1.78)	(1.23)	(2.70)	(2.27)
Structure				
Townhouse	0.148	0.129	0.160	0.140
	(3.02)	(3.24)	(3.20)	(3.43)
Cooperative	0.725	0.477	0.916	0.659
	(2.92)	(2.37)	(3.70)	(3.25)
Two Stories	0.090	0.053	0.092	0.055
	(2.32)	(1.69)	(2.32)	(1.69)
Single Family	0.418	0.274	0.459	0.312
	(2.70)	(2.18)	(2.90)	(2.41)
Infill	0.159	0.072	0.179	0.090
	(3.13)	(1.74)	(3.46)	(2.13)
Constant	6.926	5.352	6.943	5.354
	(4.07)	(3.88)	(4.00)	(3.76)
R^2	0.932	0.955	0.736	0.802

Regressions based on 205 observations on LIHTC projects in California completed from 1997 to 2002. All models include controls for geographic location (by MSA).

our statistical models), 1,361 fewer subsidized dwellings would have been built. A cost increase of 25.2%, a mid-range level among the estimates presented in Table 6, would have resulted in 3,157 fewer low-income housing units. And at a cost increase of 37.2%—our upper bound estimate—the imposition of prevailing wage legislation would have prevented 4,253 low-income housing units from being developed. In this way, state regulation of construction wages conflicts with the federal goal of increasing access to new housing for California's low-income households.

These estimates are illustrative rather than definitive. But they do demonstrate how the imposition of prevailing wages affects the supply of low-income housing provided by the federal tax credit program. Of course, the LIHTC is not the only program providing low-income housing in California. In November 2002, California voters approved Proposition 46, a $2.1 billion bond measure dedicated to affordable housing development and related programs. About half these funds are directed toward new multifamily construction. If prevailing wage requirements are applied to dwellings built using proceeds from the tax-exempt bonds and those from other existing programs—the HOME program and the Community Development Block Grant Program, for

Table 6. Cost Increases for Low-Income Housing Projects in California Due to Prevailing Wage Requirements. (%)

Statistical Model	*Scale Economies Assumed?*	*Site and Structure Cost*	*Project Cost*
A. Ordinary Least Squares Estimation			
Extended	YES	10.4%	11.0%
	NO	9.3	10.0
Basic	YES	10.8	10.2
	NO	10.2	9.5
B. Instrumental Variables Estimation			
Extended	YES	34.9	33.9
	NO	37.2	35.9
Basic	YES	25.2	19.4
	NO	28.1	21.7

Notes: "Extended" models include all observed project characteristics. "Basic" models include only the variables reported in Table 3. Estimates are based on the antilog of coefficients on the prevailing wage indicator variable in multivariate regressions.

example—the effect on low-income housing production will be much larger. The requirement would effectively transfer income from low-income housing consumers in California to workers in California's construction industry.

REFERENCES

Allen, Steven G. 1983. "Much Ado about Davis-Bacon: A Critical Review and New Evidence." *Journal of Law and Economics,* Vol. 26, No. 2 (October), pp. 707–36.

Azari-Rad, Hamid, Peter Philips, and Mark J. Prus. 2002. "Making Hay When It Rains: The Effect Prevailing Wage Regulations, Scale Economies, Seasonal, Cyclical, and Local Business Patterns Have on School Construction Costs." *Journal of Education Finance,* Vol. 27, No. 4 (Spring), pp. 997–1012.

____. 2003. "State Prevailing Wage Laws and School Construction Costs." *Industrial Relations,* Vol. 42, No. 3 (July), pp. 445–57.

Bilginsoy, Cihan, and Peter Philips. 2000. "Prevailing Wage Regulations and School Construction Costs: Evidence from British Columbia." *Journal of Education Finance,* Vol. 24, No. 3 (Winter), pp. 415–32.

California Tax Credit Allocation Committee. 2000–2002. *Annual Report.* Sacramento: State Treasurer's Office.

Card, David, and Alan B. Krueger. 1995. *Myth and Measurement: The New Economics of the Minimum Wage.* Princeton, N.J.: Princeton University Press.

Cummings, Jean L., and Denise DiPasquale. 1999. "The Low-Income Housing Tax Credit: An Analysis of the First Ten Years." *Housing Policy Debate,* Vol. 10, No. 2, pp. 251–307.

Fraundorf, Martha Norby, John P. Farrell, and Robert Mason. 1984. "The Effects of the Davis-Bacon Act on Construction Costs in Rural Areas." *Review of Economics and Statistics,* Vol. 66, No. 1 (February), pp. 142–46.

General Accounting Office/HEHS–99–21. 1999. "Davis-Bacon Act: Labor Now Verifies Wage Data, but Verification Process Needs Improvement." Washington, D.C., January.

General Accounting Office/HRD–79–18. 1979. "The Davis-Bacon Act Should Be Repealed." Washington, D.C., April 27.

Goldfarb, Robert S., and John F. Morrall III. 1978. "Cost Implications of Changing Davis-Bacon Administration." *Policy Analysis,* Vol. 1, No. 2 (Fall), pp. 439–53.

____. 1981. "The Davis-Bacon Act: An Appraisal of Recent Studies." *Industrial and Labor Relations Review,* Vol. 34, No. 2 (January), pp. 191–206.

Gould, John P., and George Bittlingmayer. 1980. *The Economics of the Davis-Bacon Act: An Analysis of Prevailing Wage Laws.* Washington, D.C.: American Enterprise Institute for Public Policy Research.

Hirsch, Barry T., and David A. Macpherson. 2003.

"Union Membership and Coverage Database from the Current Population Survey: Note." *Industrial and Labor Relations Review,* Vol. 56, No. 2 (January), pp. 349–54.

HUD (U.S. Department of Housing and Urban Development). 1981. "Housing under the Davis Bacon Act." Mimeo. Prepared for the President's Commission on Housing, November.

Kentucky Legislative Research Commission. 2001. "An Analysis of Kentucky's Prevailing Wage Laws and Procedures." Research Report No. 304, December 13.

Kessler, Daniel P., and Lawrence F. Katz. 2001. "Prevailing Wage Laws and Construction Labor Markets." *Industrial and Labor Relations Review,* Vol. 54, No. 2 (January), pp. 259–74.

Metzger, Michael R., and Robert S. Goldfarb. 1983. "Do Davis-Bacon Minimum Wages Raise Product Quality?" *Journal of Labor Research,* Vol. 4, No. 3 (Summer), pp. 265–72.

Newman, Matthew, and Shawn Blosser. 2003. "An Analysis of Market and Prevailing Wage Rates for the Construction Trades in California." Mimeo. Sacramento, California Institute of County Government.

Ohio Legislative Service Commission. 2002. "SB 102 Report: The Effects of the Exemption of School Construction Projects from Ohio's Prevailing Wage Law." Staff Research Report No. 149, May 20.

Philips, Peter. 1998. "Kansas and Prevailing Wage Legislation." Prepared for the Kansas Senate Labor and Industries Committee, February 20. Available at http://www.faircontracting.org.

____. 1999. "Kentucky's Prevailing Wage Law: Its History, Purpose, and Effect." University of Utah Department of Economics, October.

____. 2001. "A Comparison of Public School Construction Costs in Three Midwestern States That Have Changed Their Prevailing Wage Laws in the 1990s: Kentucky, Ohio, and Michigan." February.

Philips, Peter, Garth Mangum, Norm Waitzman, and Anne Yeagle. 1995. "Losing Ground: Lessons from the Repeal of Nine Little Davis-Bacon Acts." Working paper, University of Utah Economics Department, February.

Prus, Mark J. 1996. "The Effect of State Prevailing Wage Laws on Total Construction Costs." State University of New York at Cortland, January. Available at http://www.faircontracting.org.

____. 1999. "Prevailing Wage Laws and School Construction Costs." Prepared for Prince George's County Council, Maryland, January.

Thieblot, Armand J. 1975. *The Davis-Bacon Act.* Labor Relations and Public Policy Series, Report No. 10. Philadelphia: University of Pennsylvania Press.

____. 1996. "A New Evaluation of Effects of Prevailing Wage Law Repeal." *Journal of Labor Research,* Vol. 17, No. 2 (Spring), pp. 297–322.

____. 1997. "Prevailing Wage Laws and Market Recovery Strategies of Construction Unions." *Journal of Labor Research,* Vol. 18, No. 1 (Winter), pp. 31–46.

____. 1999. "Prevailing Wage Laws and Black Employment in the Construction Industry." *Journal of Labor Research,* Vol. 20, No. 1 (Winter), pp. 155–59.

____. 1995. "State Prevailing Wage Laws." Prepared for Associated Builders and Contractors, Inc.

An Analysis of Market and Prevailing Wage Rates

for the Construction Trades in California

Prepared by

Matthew Newman
Shawn Blosser

The California Institute for County Government

July 28, 2003

Executive Summary

This study examines various construction trade wage rates in California. Specifically, it compares wage rates for five job categories on a county-by-county basis: carpenters, electricians, drywall installers, HVAC/sheet metal workers, and plumbers. For each of these trades, data were collected for (1) market wage rates (combined residential and commercial construction), (2) Davis-Bacon federal prevailing wage rates for residential construction, (3) Davis-Bacon federal prevailing wage rates for commercial construction, and (4) California state prevailing wage rates for commercial construction.[1] To calculate aggregate statistics for all of California, two estimates were constructed: (1) an equally-weighted average across all counties and (2) a population-weighted average across all counties, with each county weighted by its 2002 population.

Using the data described above, three analyses were performed. The first analysis compared state commercial prevailing wage rates to average market wage rates, and found that for the five trades examined, the commercial prevailing wage rates are, on average, about one-third to one-half more than current market rates (the actual differences range from 36% higher for carpenters to 55% higher for plumbers).

The second analysis compared the same state commercial prevailing wage rates to the comparable federal Davis-Bacon commercial prevailing wage rates and found that these two rates are on average extremely close (within 0-2% difference). The third analysis compared the federal Davis-Bacon commercial prevailing wage rates to the Davis-Bacon residential prevailing wage rates, and found that the commercial rates were on average 14% to 53% higher.

[1] Because California's Department of Industrial Relations (DIR) determines prevailing wage rates for residential construction on a project-by-project basis and does not publish these rates, they were not available to be used for this analysis.

Data Sources

California commercial prevailing wage rates are published by the California Department of Industrial Relations' (DIR) Division of Labor Statistics and Research. The DIR most often bases its prevailing wage rates directly on existing collective bargaining agreements. See Appendix A for a more detailed description of the methodology used by the DIR to calculate these wage rates. The rates used for this analysis represent simple wages without benefits or overtime pay. The DIR data used in this analysis were downloaded on May 23, 2003 from the DIR website at http://www.dir.ca.gov/DLSR/PWD/index.htm.

Market wage rates used in this analysis are the "Mean Hourly Wage" for 2002, as reported by the California Employment Development Department (EDD). The data are reported for each county, and represent the average wage rate (excluding benefits) for both union and non-union workers. The "Mean Hourly Wage" is determined based on a survey of industries and employees, and then a weighted average of those results. See Appendix B for a more detailed description of the methodology used by the EDD to calculate these wages. The data for this analysis were downloaded on May 5, 2003 from the EDD website at http://www.calmis.ca.gov/htmlfile/subject/occup$.htm.

The population for each county was downloaded from the California Department of Finance website (http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm) in June, 2003. The figures used represent estimates of each county's population in 2002.

Federal Davis-Bacon prevailing wage rates (residential and commercial) are determined by the U.S. Department of Labor. The Department of Labor conducts a survey of contractors, employers and employees, and uses the mode or mean of the survey results to determine the prevailing wage for an area. See Appendix C for a more

detailed description of the methodology used by the Department of Labor to calculate these wages. The Davis-Bacon data used for this analysis were downloaded from the GPO-access website (http://www.access.gpo.gov/davisbacon/ca.html) on May 25, 2003.

The Davis-Bacon wage rates as downloaded were already divided into residential and commercial wage rates for each trade. When multiple wage rates were given for a specific trade within a county, different rates usually were distinguished by one or more of the following three types of characteristics:

1) Geography (e.g., east of the Sierra watershed vs. west of the Sierra watershed)
2) Size of project (e.g., total project costs over $25 million vs. under $25 million)
3) Type of work or scope of project (e.g., structures up to and including 4 stories vs. those with 5 stories or more)

Whenever more than one wage rate was given in the Davis-Bacon data, care was taken to ensure that the correct rate or rates were used so that valid comparisons could be made with wage rates from the other sources. This usually involved either selecting the single most comparable rate based on the description given, or taking the average of two or more rates. For a complete listing of instances where an average wage rate was calculated, see the notes in Appendix D.

Analysis

The analysis conducted for this study was done to answer the following three questions:

1) How do the published California commercial prevailing wage rates compare to market rates in general, and are there pronounced regional differences in different parts of California?
2) How do Davis-Bacon commercial prevailing wage rates compare to DIR commercial prevailing wage rates?
3) How do Davis-Bacon commercial prevailing wage rates compare to Davis-Bacon residential prevailing wage rates?

As mentioned above, statistics were calculated for each analysis on a county-by-county basis, and then summarized across all counties in two ways: (1) a simple average where each county is weighted equally and (2) a population-weighted average where each county is weighted by its 2002 population. Calculating the population-weighted average provides a more representative estimate to the extent that construction occurs proportionally to the population in a given area.

(1) California commercial prevailing wage rates vs. market wage rates

This analysis compares the California prevailing wage rates for commercial construction as published by the DIR with the market wage rate as published by the EDD. The comparison is conducted for each of the five trades on a county-by-county basis. The results of this comparison, as summarized in Table 1 below, indicate that DIR prevailing wage rates are significantly higher than market wage rates, with considerable variation across trades. The DIR commercial prevailing wage rates range from 28% higher for carpenters to 61% higher for HVAC/sheet metal workers when each county is weighted

equally, and from 36% for carpenters to 55% for plumbers when each county is weighted by its population. Appendix E presents a more detailed county-by county summary of the results of this comparison.

Table 1: California DIR Commercial Prevailing Wage Rates vs. EDD Market Wage Rates (Percent by which DIR prevailing wage rate is greater than EDD market rate)

	Simple Avg.	Population-Weighted Avg.
Carpenter	28%	36%
Drywall Installer	43%	41%
Electrician*	41%	40%
HVAC/Sheet Metal Worker	61%	53%
Plumber	56%	55%

* Yolo County could not be included in the analysis for electricians because the EDD data did not include a market wage rate for electricians for this county.

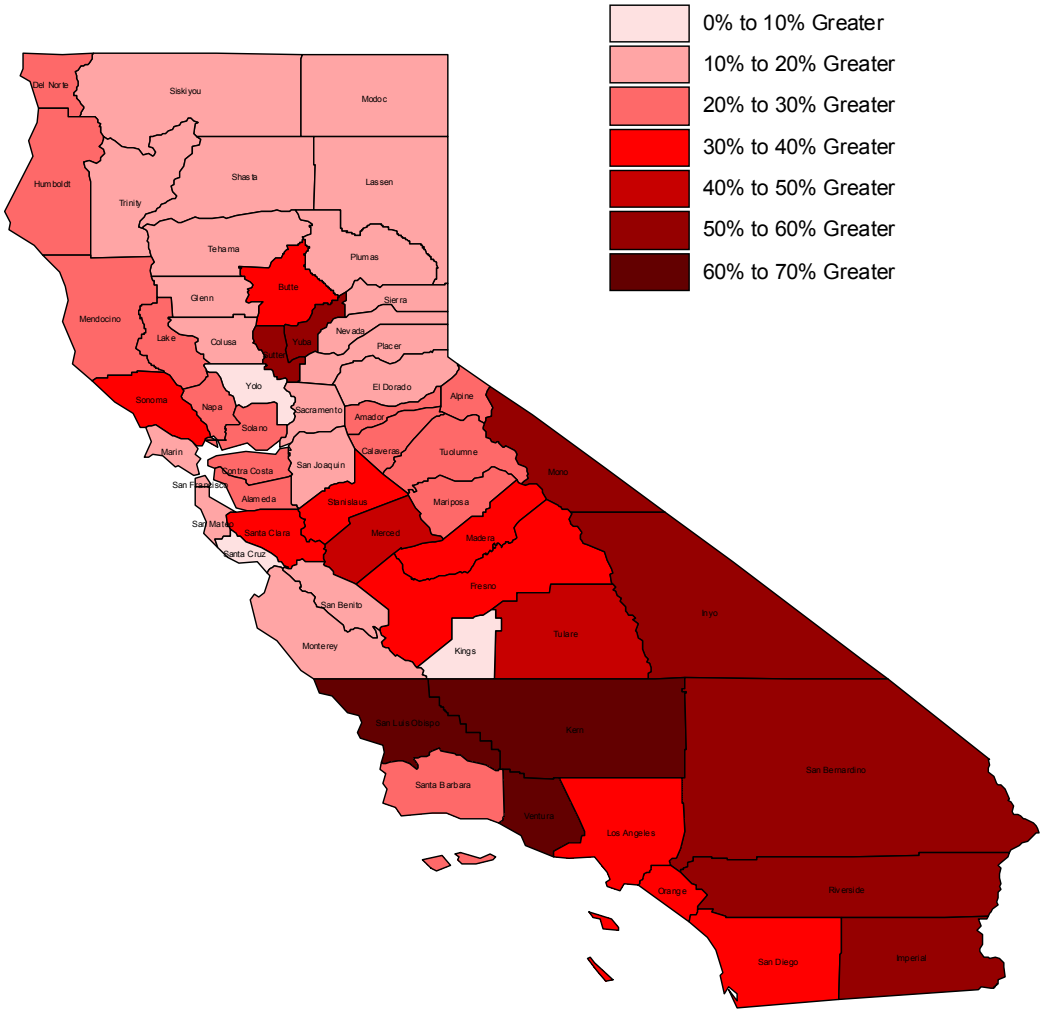
A county-by-county comparison of DIR commercial prevailing wage rates with EDD market wage rates reveals significant variation, both across trades and among regions of the state. In the vast majority of cases, the DIR commercial prevailing wage rate is higher than the market wage rate (although there are a few counties where the prevailing wage rate is lower than the published market rate for a particular trade). In fact, there are a number of instances where the DIR prevailing wage rate is more than 100% greater than the average market rate, with the greatest difference being 149% (see San Benito county for plumbers).

While this variation makes it difficult to generalize across counties and trades, Figure 1 below provides a map presenting the difference between commercial prevailing wages and market wages for carpenters in each county in the state. As the map in Figure 1 shows, the largest differential for carpenters occurs generally in the southeastern (50-60% increase) and central (60-70% increase) counties. In contrast, the northeastern

counties and coastal Bay Area counties have in general a much smaller differential (10-20% increase). Note that this analysis applies only to carpenters, and other trades may exhibit different patterns of wage differentials. Appendix E contains similar maps for the other trades examined.

Figure 1: California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Carpenters

(Percent by which DIR prevailing wage rate is greater than EDD market rate)



(2) Commercial prevailing wage rates: Davis-Bacon federal prevailing wage rates vs. DIR state prevailing wage rates

This analysis compares the Davis-Bacon federal prevailing wage rates for commercial construction against the comparable DIR California state prevailing wage rates for commercial construction. Because some of the data series presented in the Davis-Bacon wage rates have not been updated recently, this analysis was conducted in two ways – first using all of the available data regardless of when the wage rate was last updated, and, second, looking only at more recent Davis-Bacon data, which for the purposes of this analysis was defined as data that has been updated within the last four years (since June 1, 1999). A summary of the results of this analysis is presented in Table 2, below, with more detailed results for each county given in Appendix F.

Table 2: DIR Commercial Prevailing Wage Rates vs. Davis-Bacon Commercial Rates (Percent by which DIR prevailing wage rate is greater than Davis-Bacon prevailing wage rate)

	Simple Avg.	Population-Weighted Avg.	Counties/Population Included
Using All Available Davis-Bacon Data Series:[1]			
Carpenter	3%	2%	All
Drywall Installer	3%	2%	All
Electrician	7%	1%	All
HVAC/Sheet Metal Worker	1%	0%	All
Plumber	6%	1%	All
Using Only Recent Davis-Bacon Data Series:[2]			
Carpenter	0%	1%	(52 counties) (97.9% of Pop.)
Drywall Installer	0%	2%	(53 counties) (99.0% of Pop.)
Electrician	1%	0%	(53 counties) (99.0% of Pop.)
HVAC/Sheet Metal Worker	-2%	0%	(53 counties) (99.0% of Pop.)
Plumber	1%	0%	(53 counties) (99.0% of Pop.)

Notes:

[1] This analysis was performed using all available Davis-Bacon data series, regardless of the date that data series was last updated. All 58 counties had the necessary data for this analysis.

[2] This analysis was performed using only counties for which Davis-Bacon commercial data series were last updated on 6/1/1999 or later. When this filter is applied, some counties are no longer included in the analysis as shown.

As Table 2 shows, Davis-Bacon commercial prevailing wage rates are quite close to the DIR's commercial prevailing wage rates (between 1 and 7% for the simple average across counties, and between 0 and 2% on a population-weighted basis). When only the recent Davis-Bacon data are used, the differences narrow for the simple average to between 0 and 2%, and remain within that narrow range for the population-weighted average.

(3) Davis-Bacon federal prevailing wage rates: residential vs. commercial rates

This analysis compares the Davis-Bacon federal prevailing wage rates for commercial construction against the comparable prevailing wage rates for residential construction. Again, the comparison is conducted for each of the five trades on a county-by-county basis, and the estimates are done both using all of the Davis-Bacon data and then using only the more recent Davis-Bacon data. The results are summarized in Table 3 below, with more detailed county-by-county results presented in Appendix G.

Table 3: Federal Davis-Bacon Prevailing Wage Rates: Commercial vs. Residential
(Percent by which commercial rates are greater than residential rates)

	Simple Avg.	Population-Weighted Avg.	Counties/Population Included	
Using All Available Davis-Bacon Data Series:[1]				
Carpenter	52%	36%	(58 counties)	(100.0% of Pop.)
Drywall Installer	38%	36%	(46 counties)	(96.6% of Pop.)
Electrician	89%	56%	(58 counties)	(100.0% of Pop.)
HVAC/Sheet Metal Worker	64%	19%	(42 counties)	(89.7% of Pop.)
Plumber	85%	39%	(56 counties)	(99.9% of Pop.)
Using Only Recent Davis-Bacon Data Series:[2]				
Carpenter	18%	34%	(37 counties)	(95.7% of Pop.)
Drywall Installer	26%	35%	(35 counties)	(94.8% of Pop.)
Electrician	40%	53%	(34 counties)	(87.9% of Pop.)
HVAC/Sheet Metal Worker	11%	14%	(31 counties)	(87.4% of Pop.)
Plumber	42%	36%	(38 counties)	(96.8% of Pop.)

Notes:

[1] This analysis was performed using all available Davis-Bacon data series, regardless of the date that data series was last updated. Some counties did not have Davis-Bacon residential prevailing wage rates for some trades, and could therefore not be included in the analysis as shown above.

[2] This analysis was performed using only counties for which Davis-Bacon commercial data series were last updated on 6/1/1999 or later. When this filter is applied, more counties are no longer able to be included in the analysis as shown.

As Table 3 (above) shows, the simple average difference between commercial and residential prevailing wage rates ranges from 38% to 89% higher when each county is weighted equally, and from 19% to 56% higher when each county is weighted by its population. When only recent data are included, however, the difference between commercial and residential Davis-Bacon prevailing wage rates decreases considerably for the simple-average across counties, and decreases somewhat for the population-weighted average. As the table shows, the minimum average difference goes from 19% to 14% for HVAC/sheet metal workers, and the maximum average difference goes from 56% to 53% for electricians. For all five of the trades examined, the population-weighted figures change by fewer than 5 percentage points, indicating that these estimates are quite robust.

Conclusions

The analyses described above clearly show that prevailing wage rates differ considerably from market wage rates, that state and federal commercial prevailing wage rates are nearly identical, and that the Davis-Bacon prevailing wage rates differ considerably between commercial and residential construction. While there is a great deal of variation across counties and among the five construction trades examined, three clear patterns emerge when the data are examined for California as a whole:

1) The current prevailing wage rates for commercial construction as determined by the DIR are considerably higher than the average market wage rates for the same trade. Based on this analysis, the DIR rates are on average about 36% to 55% higher.

2) The current Davis-Bacon commercial prevailing wage rates for federally-funded construction projects are very close to the DIR commercial prevailing wage rates for state-funded construction projects. For the state as a whole, the two rates are on average within 2% of one another, and, for most trades, identical.

3) The current Davis-Bacon commercial prevailing wage rates are considerably higher than the Davis-Bacon residential prevailing wage rates. When analyzing only the most recent Davis-Bacon data series, the commercial rates range from 14% to 53% higher than the residential rates, with a median difference of approximately 35%.

While this analysis has not attempted to explain the reasons behind the differences in residential and commercial construction prevailing wage rates, the analyses performed clearly indicate that commercial prevailing wage rates are considerably higher. Thus, the imposition of commercial prevailing wage rates on residential construction projects likely would lead to increased labor costs for these projects, although the magnitude of the increased costs is unclear. Further research is necessary to determine exactly how these increased labor costs could impact the cost of residential construction projects in California.

Appendix A: DIR methodology for calculating commercial prevailing wage rates

The Director of the Department of Industrial Relations determines the prevailing wage for particular crafts or classifications of work within each region (generally a county). The prevailing wage is defined as the wage paid to the majority of workers, or, if nto single wage is paid to the majority then the prevailing wage is that wage most commonly paid (i.e. the Mode wage).

The determination process, as outlined by California's labor code is as follows:

1. The DIR determines the basic hourly wage paid to a majority of workers in a particular craft or classification of work in a particular locality. The wage paid to a majority of workers is the prevailing wage.
2. If a majority of workers are not paid one single rate, than the "single rate being paid to the greatest number of workers" or the modal rate, is considered the prevailing wage.
3. The Director may determine the prevailing wage based a review of appropriate collective bargaining agreements, federal prevailing wage rates, or other data. In practice, the most commonly paid (or modal) wage rate will be that rate specified in collective bargaining agreements.
4. If the Director determines that the prevailing wage is the rate established by a collective bargaining agreement, any provisions in that agreement that will change the rate paid to workers will be incorporated into the prevailing wage determinations. For example, if a collective bargaining agreement included a scheduled increase in wage rates paid to employees, the prevailing wage determination would increase at the same time.

California Labor Code Section 1773.9

1773.9. (a) The Director of Industrial Relations shall use the methodology set forth in subdivision (b) to determine the general prevailing rate of per diem wages in the locality in which the public work is to be performed.

(b) The general prevailing rate of per diem wages includes all of the following:

(1) The basic hourly wage rate being paid to a majority of workers engaged in the particular craft, classification, or type of work within the locality and in the nearest labor market area, if a majority of the workers is paid at a single rate. If no single rate is being paid to a majority of the workers, then the single rate being paid to the greatest number of workers, or modal rate, is prevailing. If a modal rate cannot be determined, then the director shall establish an alternative rate, consistent with the methodology for determining the modal rate, by considering the appropriate collective bargaining agreements, federal rates, rates in the nearest labor market area, or other data such as wage survey data.

(2) Other employer payments included in per diem wages pursuant to Section 1773.1 and as included as part of the total hourly wage rate from which the basic hourly wage rate was derived. In the event the total hourly wage rate does not include any employer payments, the director shall establish a prevailing employer payment rate by the same procedure set forth in paragraph (1).

(3) The rate for holiday and overtime work shall be those rates specified in the collective bargaining agreement when the basic hourly rate is based on a collective bargaining agreement rate. In the event the basic hourly rate is not based on a collective bargaining agreement, the rate for holidays and overtime work, if any, included with the prevailing basic hourly rate of pay shall be prevailing.

(c) If the director determines that the general prevailing rate of per diem wages is the rate established by a collective bargaining agreement, and that the collective bargaining agreement contains definite and predetermined changes during its term that will affect the rate adopted, the director shall incorporate those changes into the determination. Predetermined changes that are rescinded prior to their effective date shall not be enforced.

Additional information is available at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=lab&group=01001-02000&file=1770-1780

Appendix B: EDD methodology for calculating market wage rates

The "Mean Hourly Wage" is the estimated total wages for an occupation divided by the estimated employment for that occupation. Both estimates of wages and employment are based on the Occupational Employment Statistics Survey. This survey uses the Standard Occupational Classification system of occupations (established by the federal government) to determine employment, and wage intervals to determine pay. There are 12 wage intervals, starting with employees paid "Under $6.75 per hour," and going up to "$70.00 per hour and over."

For more information see
http://www.calmis.ca.gov/file/occup$/oeswages/oestechnotes.htm.

Appendix C: U.S. Department of Labor methodology for calculating Davis-Bacon prevailing wage rates

The Administrator of the Wage and Hour Division of the Department of Labor determines the Federal Davis-Bacon prevailing wage as follows:

1. The prevailing wage is the wage paid to the majority of workers. If no single wage is paid to a majority, then the weighted average wage is determined to be the prevailing wage.
2. Wage data is collected via voluntary submissions of wage information in a 'survey.'
3. This data may include collective bargaining agreements, state and local prevailing wage rates, wage rates from contracting agencies, and wage rates on recent projects. It may not include wages paid on federally funded projects (so that prevailing wage determinations may reflect market wages, not the already existing federal prevailing wage).
4. Union rates will be used if they are found to be prevailing (51%). Otherwise, a weighted average will be taken and used.
5. New 'surveys' are conducted every three years to update information, with a staggered schedule.

Code of Federal Regulations 29 CFR 1.3 - Obtaining and compiling wage rate information. (Source: Davis-Bacon and Related Acts)

For the purpose of making wage determinations, the Administrator will conduct a continuing program for the obtaining and compiling of wage rate information.

(a) The Administrator will encourage the voluntary submission of wage rate data by contractors, contractors' associations, labor organizations, public officials and other interested parties, reflecting wage rates paid to laborers and mechanics on various types of construction in the area. The Administrator may also obtain data from agencies on wage rates paid on construction projects under their jurisdiction. The information submitted should reflect not only the wage rates paid a particular classification in an area, but also the type or typs of construction on which such rate or rates are paid, and whether or not such rates were paid on Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements.

(b) The following types of information may be considered in making wage rate determinations:

(1) Statements showing wage rates paid on projects. Such statements should include the names and addresses of contractors, including subcontractors, the locations, approximate costs, dates of construction and types of projects, whether or not the projects are Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements, the number of workers employed in each classification on each project, and the respective wage rates paid such workers.

(2) Signed collective bargaining agreements. The Administrator may request the parties to an agreement to submit statements certifying to its scope and application.

(3) Wage rates determined for public construction by State and local officials pursuant to State and local prevailing wage legislation.

(4) In making wage rate determinations pursuant to 23 U.S.C. 113, the highway department of the State in which a project in the Federal-Aid highway system is to be performed shall be consulted. Before making a determination of wage rates for such a project the Administrator shall give due regard to the information thus obtained.

(5) Wage rate data submitted to the Department of Labor by contracting agencies pursuant to 29 CFR 5.5(a)(1)(ii).

(6) Any other information pertinent to the determination of prevailing wage rates.

(c) The Administrator may initially obtain or supplement such information obtained on a voluntary basis by such means, including the holding of hearings, and from any sources determined to be necessary. All information of the types described in
Sec. 1.3(b) of this part, pertinent to the determination of the wages prevailing at the time of issuance of the wage determination, will be evaluated in the light of Sec. 1.2(a) of this part.

(d) In compiling wage rate data for building and residential wage determinations, the Administrator will not use data from Federal or federally assisted projects subject to Davis-Bacon prevailing wage requirements unless it is determined that there is insufficient wage data to determine the prevailing wages in the absence of such data. Data from Federal or federally assisted projects will be used in compiling wage rate data for heavy and highway wage determinations.
Available at: http://www.labor.gov/esa/whd/contracts/dbra.htm.

Appendix D

Additional Notes

The following notes apply to all of the analyses associated with the comparison of various Federal Davis-Bacon prevailing wage rates and California (DIR) prevailing wage rates, as well as market wage rates, for various types of construction occupations.

Listing of Sources Used:

Federal Davis-Bacon prevailing wage rates:

Residential and commercial prevailing wage rates are determined for each California county by the U.S. Department of Labor and are made available on the federal government's GPO-Access website at http://www.access.gpo.gov/davisbacon/ca.html. The rates used here were downloaded from this site on 5/25/2003.

California (DIR) prevailing wage rates:

Commercial prevailing wage rates are made available by the California Department of Industrial Relations (DIR) Division of Labor Statistics and Research. The rates used here were downloaded from their website at http://www.dir.ca.gov/DLSR/PWD/index.htm on 5/23/2003.

Population statistics:

Source: California Department of Finance, 2002 figures, taken from http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm.

Market Mean wage rates (EDD):

Market wage rates used are the "Mean Hourly Wage" for 2002, as reported by the California Employment Development Department (EDD) and downloaded from their website at http://www.calmis.ca.gov/htmlfile/subject/occup$.htm (downloaded on 5/5/2003).

Notes on Specific Davis-Bacon Wage Rates Used:

Whenever possible, the most appropriate Davis-Bacon wage rate was used, based on the description given. Such determinations were usually based on one or more of the following types of descriptions:

(1) The type of work performed (e.g., light commercial, industrial, work on certain types of structures, etc.)
(2) The size of the project for which the work is performed (e.g., projects with a total value above or below a certain dollar figure, etc.)
(3) The geographic location where the work is performed.

When these types of descriptions were given, the rate most consistent with other available sources was selected if it could be determined, in order to ensure consistent comparisons across counties for a given type of construction occupation for commercial or residential construction. If a single rate could not be determined, the simple average of all the potentially appropriate rates was used. See the attached table for a listing of all specific instances where an average of various given rates was used instead of a single rate.

Appendix D

Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
1.	ALAMEDA	HVAC	COMMERCIAL	$34.56	Rate used represents the average of two rates given: "Work on projects with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or an existing water or air loop to registers and/or diffusers; also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($31.71) and "All Other Work ($37.40)
2.	AMADOR	PLUMBER	COMMERCIAL	$20.88	Rate represents average of two rates given: "(northern half)" ($19.72) and "(southern half)" ($22.03)
3.	AMADOR	PLUMBER	RESIDENTIAL	$20.88	Rate represents average of two rates given: "(northern half)" ($19.72) and "(southern half)" ($22.03)
4.	CONTRA COSTA	HVAC	COMMERCIAL	$34.56	Rate used represents the average of two rates given: "Work on projects with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or an existing water or air loop to registers and/or diffusers; also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($31.71) and "All Other Work ($37.40)
5.	EL DORADO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21). Note also this is only for west of Main Sierra Mountains watershed.
6.	EL DORADO	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
7.	EL DORADO	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
8.	FRESNO	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condonimiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)
9.	IMPERIAL	ELECTRICIAN	RESIDENTIAL	$19.41	Rate used represents the average of two rates: "Work on single family homes, duplexes, condominiums and apartments that do not exceed three (3) stories" ($14.61) and "All other residential construction: Electrical subcontracts of $500,000 or less" ($24.21).
10.	KERN	HVAC	COMMERCIAL	$27.09	Rate used represents the average of two rates given: "Work on all commercial HVAC for creature comfort and computers clean rooms, architectural metals, metal roofing and lagging, over insulation (East of Hwy #395 from Red Mountain to the Inyo County)" ($28.99) and "Work on all new construction and remodel work except commercial buildings less than ten thousand (10,000) square feet (excluding that portion east of Highway 395)" ($25.18)

Appendix D

Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
11.	KERN	PLUMBER	COMMERCIAL	$25.34	Rate represents average of three rates given: "Encompasses the far eastern side of Kern County, which includes Edwards Air Force Base, Rosamond, Boron, China Lake Naval Weapons Center and RidgecresT" ($27.67); "Encompasses all the central valley: Bakersfield, Lamont, Arvin, Frazier Park, Taft, Shafter, Wasco, McFarland and Deleano" ($22.67); and "Encompasses Kernville, Tehachapi, Lake Isabella, Mohave, Monolith and Weldon" ($25.67)
12.	KERN	PLUMBER	RESIDENTIAL	$25.34	Rate represents average of three rates given: "Encompasses the far eastern side of Kern County, which includes Edwards Air Force Base, Rosamond, Boron, China Lake Naval Weapons Center and RidgecresT" ($27.67); "Encompasses all the central valley: Bakersfield, Lamont, Arvin, Frazier Park, Taft, Shafter, Wasco, McFarland and Deleano" ($22.67); and "Encompasses Kernville, Tehachapi, Lake Isabella, Mohave, Monolith and Weldon" ($25.67)
13.	LOS ANGELES	HVAC	COMMERCIAL	$29.40	Rate used represents the average of three rates given: (1) "SOUTH OF A STRAIGHT LINE DRAWN BETWEEN GORMAN AND BIG PINES, CALIFORNIA; EXCLUDING THE AREA SOUTH OF IMPERIAL HIGHWAY EAST OF THE LOS ANGELES RIVER, EXCLUDING THE CITIES OF LONG BEACH, CLAREMONT AND POMONA, AND EXCLUDING THE ISLAND OF CATALINA: Work on all new construction and remodel work except residential buildings and commercial buildings less than five thousand (5,000) square feet" ($30.60); (2) "SOUTH OF IMPERIAL HWY. TO THE CITY OF LONG BEACH AND THE CITIES OF PONOMA AND CLAREMONT: Work on all commercial HVAC for creature comfort and computers clean rooms, architectural metals, metal roofing and lagging over insulation" ($28.60); and (3) "AREA SOUTH OF IMPERIAL HIGHLY AND EAST OF THE 710 FREEWAY INCLUDING THE ENTIRE CITIES OF CLAREMONT, LONG BEACH AND POMONA: Work on all commercial HVAC for creature comfort and computer clean rooms, architectural metals, metal roofing and lagging, over insulation" ($28.99).
14.	LOS ANGELES	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: LOS ANGELES COUNTY (south of a straight line drawn between Gorman and Big Pines, including the area south of Imperial Highway to the city limits of Long Beach, including the cities of Long Beach, Claremont, and Pomona, and the Island of Catalina): Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
15.	MADERA	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condonimiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)

Appendix D

Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
16.	MERCED	ELECTRICIAN	RESIDENTIAL	$23.26	Rate used represents the average of two rates given: "Applies to construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, duplexes, triplexes, quadruplexes, condominiums apartmentsup to and including three (3) stories" ($18.50) and "All Other Residential Construction" ($28.02)
17.	NAPA	PLUMBER	RESIDENTIAL	$29.90	Rate represents average of two rates given: "Work performed on single family residential units, condominiums, townhouses, apartment houses and mobile homes for which the total plumbing bid does not exceed $250,000; or Any residential project bid in phases shall not qualify unless the total project is less than $250,000 for the Plumbing bid and $250,000 for the heating and cooling bid" ($25.90) and "All other work" ($33.90)
18.	NEVADA	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21)
19.	NEVADA	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
20.	NEVADA	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
21.	ORANGE	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
22.	PLACER	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21). Note also this is only for west of Main Sierra Mountains watershed.
23.	PLACER	PLUMBER	COMMERCIAL	$25.45	Rate represents average of three rates given: "Lake Tahoe Area only" ($23.95); "Excluding Lake Tahoe area (Light Commercial Work)" ($21.43); and "Excluding Lake Tahoe area (All Other Work)" ($30.97)
24.	PLACER	PLUMBER	RESIDENTIAL	$19.04	Rate represents average of two rates given: "(Lake Tahoe basin only)" ($16.65) and "(Does not include Lake Tahoe area)" ($21.43)
25.	RIVERSIDE	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
26.	SACRAMENTO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).

Appendix D

Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
27.	SAN BERNARDINO	ELECTRICIAN	RESIDENTIAL	$23.11	Rate used represents the average of two rates given: "All single family dwellings and multi-family dwellings not exceeding eight units and/or two stories" ($16.00) and "All other residential work" ($27.25).
28.	SAN BERNARDINO	HVAC	RESIDENTIAL	$26.58	Rate used represents the average of two rates given: Installation and repair on all general sheet metal, heating and air conditioning, metal fireplace, and solar systems on single family dwellings, multiple family dwellings tract homes and apartment buildings individually conditioned by separate and independent units or systems ($24.17) and "All Other Work" ($28.99)
29.	SAN BERNARDINO	PLUMBER	COMMERCIAL	$31.46	Rate represents average of three rates given: "Fort Irwin Army Base, Marine Corps Logistic Base at Nebo, Marine Corps Logistic Base at Yermo and Twenty-Nine Palms Marine Base" ($33.31); "George Air Force Base" ($32.06); and "Remainder of County" ($29.81).
30.	SAN DIEGO	ELECTRICIAN	RESIDENTIAL	$23.61	Rate used represents the average of two rates given: "Work on familiy residences, single family homes duplexes, condominiums, apartments that do not exceed three (3) stories" ($17.00) and "All other residential and building construction" ($30.21).
31.	SAN DIEGO	HVAC	COMMERCIAL	$26.90	Rate represents average of two rates given: Camp Pendleton ($27.90) and "Remainder of County" ($25.90).
32.	SAN DIEGO	HVAC	RESIDENTIAL	$17.83	(Camp Pendleton and Remainder of County)
33.	SAN DIEGO	PLUMBER	COMMERCIAL	$30.94	Rate represents average of two rates given: "Camp Pendleton" ($32.06) and "Remainder of County" ($29.81)
34.	SAN FRANCISCO	ELECTRICIAN	RESIDENTIAL	$36.44	Rate used represents the average of two rates given: "Work on residential wood frame remodel and repair in all wood-constructed buildings not to exceed 24 living units; and new wood frame single structure 1 or 2 family houses, or on all wood-constructed buildings not to exceed 20 living units under 1 roof excluding projects or tracts containing more than 2 houses, or more than 1 building" ($27.33) and "All other work" ($45.55).
35.	SAN MATEO	HVAC	COMMERCIAL	$36.83	Rate represents average of two rates given: "Work with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or air loop to registers and/or diffusers; Also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also, pre-engineered and pre-manufactured siding" ($35.10) and "All Other Work" ($38.55).
36.	SANTA BARBARA	ELECTRICIAN	RESIDENTIAL	$19.49	Rate used represents the average of two rates given: "Vendenberg Air Force Base" ($21.36) and "(Excluding Vendenberg Air Force Base)" ($17.61).
37.	SANTA BARBARA	PLUMBER	COMMERCIAL	$30.49	Rate represents average of two rates given: "Vandenburg Air Force Base" ($32.06) and "Remainder of County" ($28.92)

Appendix D

Additional Notes - Table of Instances where Average Davis-Bacon Rate was Calculated and Used

The following determinations represent all instances when a single Davis-Bacon wage rate was not used, but an average of various given rates was instead used:

	County	Trade	Residential/ Commercial	Rate Used	Notes
38.	SANTA CLARA	HVAC	COMMERCIAL	$37.65	Rate represents average of two rates given: "Work with an HVAC contract price of $270,000 equipped with packaged units or a unitary system; Also, tenant completion work extending from an existing trunk line or air loop to registers and/or diffusers; Also, remodel or add-on contracts on existing facilities providing the contract price is $165,000 or less; Also, architectural sheet metal contracts of $100,000 or less; Also pre-engineered and pre-manufactured siding" ($36.54) and "All Other Work" ($38.75)
39.	SOLANO	PLUMBER	RESIDENTIAL	$29.90	Rate represents average of two rates given: "Work performed on single family residential units, condominiums, townhouses, apartment houses and mobile homes for which the total plumbing bid does not exceed $250,000; or Any residential project bid in phases shall not qualify unless the total project is less than $250,000 for the Plumbing bid and $250,000 for the heating and cooling bid" ($25.90) and "All other work" ($33.90)
40.	STANISLAUS	ELECTRICIAN	RESIDENTIAL	$23.26	Rate used represents the average of two rates given: "Applies to construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, duplexes, triplexes, quadruplexes, condominiums apartmentsup to and including three (3) stories" ($18.50) and "All Other Residential Construction" ($28.02)
41.	SUTTER	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).
42.	TULARE	ELECTRICIAN	RESIDENTIAL	$17.80	Rate used represents the average of two rates given: "Construction, alteration, and/or repair of all units built solely for family residence, including mobile homes, single family residence, triplexes, quadruplexes and walkup garden type apartments or walkup condonimiums not to exceed two stories" ($10.00) and "All Other Work" ($25.60)
43.	YOLO	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).
44.	YUBA	ELECTRICIAN	RESIDENTIAL	$26.16	Rate used represents the average of two rates given: "Work on single family homes and apartments up to and including 3 stories" ($20.10) and "All other residential work" ($32.21).

Appendix E
Comparison of DIR Commercial Prevailing Wage Rates with EDD Market Rates

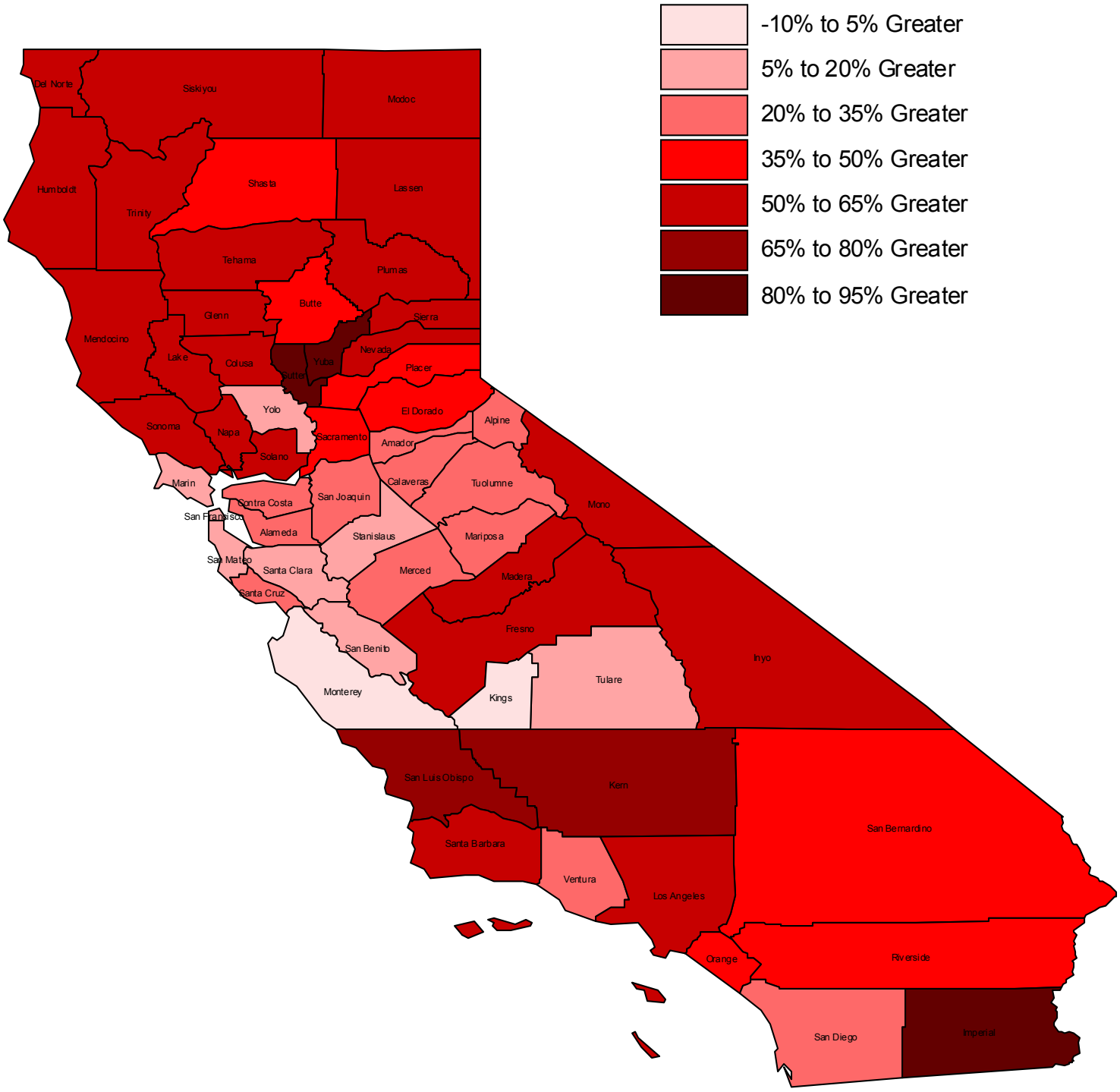
		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater	DIR Commercial PW Rate	EDD Mean Market Wage Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$23.07	29%	$29.75	$23.37	27%	$37.00	$31.71	17%	$36.59	$17.02	115%	$35.51	$25.71	38%
ALPINE	1,210	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.21	$24.76	30%	$27.37	$16.52	66%	$29.29	$20.35	44%
AMADOR	36,049	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.21	$24.76	30%	$31.05	$16.52	88%	$29.29	$20.35	44%
BUTTE	207,310	$23.27	$16.73	39%	$23.77	$17.29	37%	$32.21	$20.20	59%	$31.05	$17.33	79%	$28.79	$16.25	77%
CALAVERAS	41,820	$23.27	$18.86	23%	$23.77	$18.01	32%	$28.19	$24.76	14%	$27.37	$16.52	66%	$29.29	$20.35	44%
COLUSA	19,341	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
CONTRA COSTA	980,870	$29.75	$23.07	29%	$29.75	$23.37	27%	$37.51	$31.71	18%	$36.59	$17.02	115%	$35.21	$25.71	37%
DEL NORTE	27,694	$23.27	$18.84	24%	$23.77	$14.75	61%	$26.12	$23.96	9%	$21.92	$20.48	7%	$30.93	$18.74	65%
EL DORADO	163,649	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$29.40	$19.12	54%
FRESNO	827,310	$23.27	$17.43	34%	$23.77	$15.48	54%	$27.10	$18.14	49%	$24.80	$19.20	29%	$28.79	$19.96	44%
GLENN	26,747	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
HUMBOLDT	127,305	$23.27	$18.84	24%	$23.77	$14.75	61%	$26.12	$23.96	9%	$21.92	$20.48	7%	$30.93	$18.74	65%
IMPERIAL	150,217	$29.00	$18.33	58%	$29.00	$15.76	84%	$29.00	$21.77	33%	$25.90	$20.25	28%	$29.81	$16.88	77%
INYO	18,242	$28.43	$18.86	51%	$29.00	$18.01	61%	$36.35	$24.76	47%	$24.76	$16.52	50%	$28.17	$20.35	38%
KERN	688,875	$28.43	$17.40	63%	$29.00	$16.20	79%	$28.84	$20.80	39%	$24.76	$19.89	24%	$28.17	$17.72	59%
KINGS	133,553	$23.27	$22.26	5%	$23.77	$23.24	2%	$27.10	$21.02	29%	$24.80	$15.55	59%	$28.79	$18.29	57%
LAKE	60,519	$23.27	$18.84	24%	$23.77	$14.75	61%	$32.13	$23.96	34%	$38.05	$20.48	86%	$41.00	$18.74	119%
LASSEN	34,237	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
LOS ANGELES	9,817,419	$29.00	$21.04	38%	$29.00	$18.63	56%	$30.45	$20.22	51%	$29.41	$20.58	43%	$29.81	$19.69	51%
MADERA	130,373	$23.27	$17.43	34%	$23.77	$15.48	54%	$27.10	$18.14	49%	$24.80	$19.20	29%	$28.79	$19.96	44%
MARIN	248,490	$29.75	$26.63	12%	$29.75	$26.24	13%	$32.13	$30.78	4%	$38.05	$21.17	80%	$41.00	$28.95	42%
MARIPOSA	17,087	$23.27	$18.86	23%	$23.77	$18.01	32%	$32.02	$24.76	29%	$17.57	$16.52	6%	$29.29	$20.35	44%
MENDOCINO	87,552	$23.27	$18.84	24%	$23.77	$14.75	61%	$32.13	$23.96	34%	$38.05	$20.48	86%	$41.00	$18.74	119%
MERCED	219,554	$23.27	$16.27	43%	$23.77	$19.32	23%	$29.02	$20.68	40%	$28.18	$15.72	79%	$29.29	$17.74	65%
MODOC	9,353	$23.27	$21.11	10%	$23.77	$15.08	58%	$26.66	$18.32	46%	$31.05	$16.91	84%	$28.79	$19.18	50%
MONO	13,247	$28.43	$18.86	51%	$29.00	$18.01	61%	$36.35	$24.76	47%	$24.76	$16.52	50%	$28.17	$20.35	38%
MONTEREY	409,608	$24.62	$21.61	14%	$24.62	$26.06	-6%	$33.01	$24.28	36%	$30.78	$22.44	37%	$31.89	$19.44	64%
NAPA	128,132	$29.75	$22.93	30%	$29.75	$19.72	51%	$33.65	$34.86	-3%	$38.05	$20.01	90%	$33.90	$19.67	72%
NEVADA	94,980	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$29.40	$19.18	53%
ORANGE	2,930,488	$29.00	$21.55	35%	$29.00	$20.85	39%	$31.10	$23.46	33%	$29.41	$21.40	37%	$29.81	$19.29	55%
PLACER	265,683	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$29.40	$19.12	54%
PLUMAS	20,964	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
RIVERSIDE	1,645,319	$29.00	$18.17	60%	$29.00	$19.49	49%	$28.58	$22.01	30%	$29.41	$18.05	63%	$29.81	$15.84	88%
SACRAMENTO	1,280,920	$23.27	$20.57	13%	$23.77	$16.48	44%	$32.21	$21.85	47%	$31.05	$21.33	46%	$30.97	$19.12	62%
SAN BENITO	55,618	$24.62	$22.26	11%	$24.62	$23.24	6%	$33.01	$21.02	57%	$30.78	$15.55	98%	$45.51	$18.29	149%
SAN BERNARDINO	1,788,479	$29.00	$18.17	60%	$29.00	$19.49	49%	$28.35	$22.01	29%	$30.60	$18.05	70%	$29.81	$15.84	88%
SAN DIEGO	2,908,505	$24.60	$17.87	38%	$22.05	$17.84	24%	$29.00	$20.72	40%	$25.90	$18.63	39%	$29.81	$20.00	49%
SAN FRANCISCO	789,062	$29.75	$26.63	12%	$29.75	$26.24	13%	$45.55	$30.78	48%	$37.05	$21.17	75%	$41.00	$28.95	42%
SAN JOAQUIN	596,907	$23.27	$20.92	11%	$23.77	$18.85	26%	$28.19	$22.26	27%	$27.37	$17.90	53%	$29.29	$21.00	39%
SAN LUIS OBISPO	253,043	$29.00	$17.23	68%	$29.00	$16.76	73%	$27.25	$23.58	16%	$27.28	$26.10	5%	$29.81	$21.00	42%
SAN MATEO	714,414	$29.75	$26.63	12%	$29.75	$26.24	13%	$42.37	$30.78	38%	$37.74	$21.17	78%	$39.40	$28.95	36%
SANTA BARBARA	406,176	$29.00	$22.70	28%	$29.00	$18.48	57%	$30.81	$23.96	29%	$27.28	$20.50	33%	$29.81	$24.22	23%
SANTA CLARA	1,716,755	$29.75	$21.86	36%	$29.75	$26.65	12%	$42.57	$27.34	56%	$37.94	$24.83	53%	$45.51	$28.85	58%
SANTA CRUZ	258,398	$24.62	$23.49	5%	$24.62	$19.88	24%	$33.01	$27.85	19%	$32.32	$20.64	57%	$31.89	$20.70	54%
SHASTA	169,277	$23.27	$19.84	17%	$23.77	$16.69	42%	$32.21	$17.29	86%	$31.05	$20.93	48%	$28.79	$16.00	80%
SIERRA	3,522	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
SISKIYOU	44,329	$23.27	$21.11	10%	$23.77	$15.08	58%	$26.66	$18.32	46%	$31.05	$16.91	84%	$28.79	$19.18	50%
SOLANO	405,642	$29.75	$22.93	30%	$29.75	$19.72	51%	$33.65	$34.86	-3%	$38.05	$20.01	90%	$33.90	$19.67	72%
SONOMA	468,583	$29.75	$22.02	35%	$29.75	$18.74	59%	$32.13	$23.37	37%	$38.05	$20.75	83%	$41.00	$25.57	60%
STANISLAUS	469,969	$23.27	$17.32	34%	$23.77	$20.08	18%	$29.02	$20.07	45%	$28.18	$20.26	39%	$29.29	$18.52	58%
SUTTER	81,561	$23.27	$14.59	59%	$23.77	$12.63	88%	$32.21	$23.90	35%	$31.05	$19.40	60%	$28.79	$24.41	18%
TEHAMA	56,911	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
TRINITY	13,059	$23.27	$21.11	10%	$23.77	$15.08	58%	$32.21	$18.32	76%	$31.05	$16.91	84%	$28.79	$19.18	50%
TULARE	378,477	$23.27	$16.14	44%	$23.77	$20.90	14%	$27.10	$16.86	61%	$28.52	$18.91	51%	$28.79	$18.69	54%
TUOLUMNE	55,859	$23.27	$18.86	23%	$23.77	$18.01	32%	$29.02	$24.76	17%	$27.37	$16.52	66%	$29.29	$20.35	44%
VENTURA	778,423	$29.00	$17.76	63%	$29.00	$22.59	28%	$32.60	$23.01	42%	$27.28	$21.19	29%	$29.81	$17.85	67%
YOLO	176,280	$23.27	$22.45	4%	$23.77	$21.74	9%	$32.21	N/A	N/A	$31.05	$18.58	67%	$30.97	$21.18	46%
YUBA	61,763	$23.27	$14.59	59%	$23.77	$12.63	88%	$32.21	$23.90	35%	$31.05	$19.40	60%	$28.79	$24.41	18%
Simple Average:				**28%**			**43%**			**41%**			**61%**			**56%**
Population Weighted Avg:				**36%**			**41%**			**40%**			**53%**			**55%**

Sources: see Appendix D.

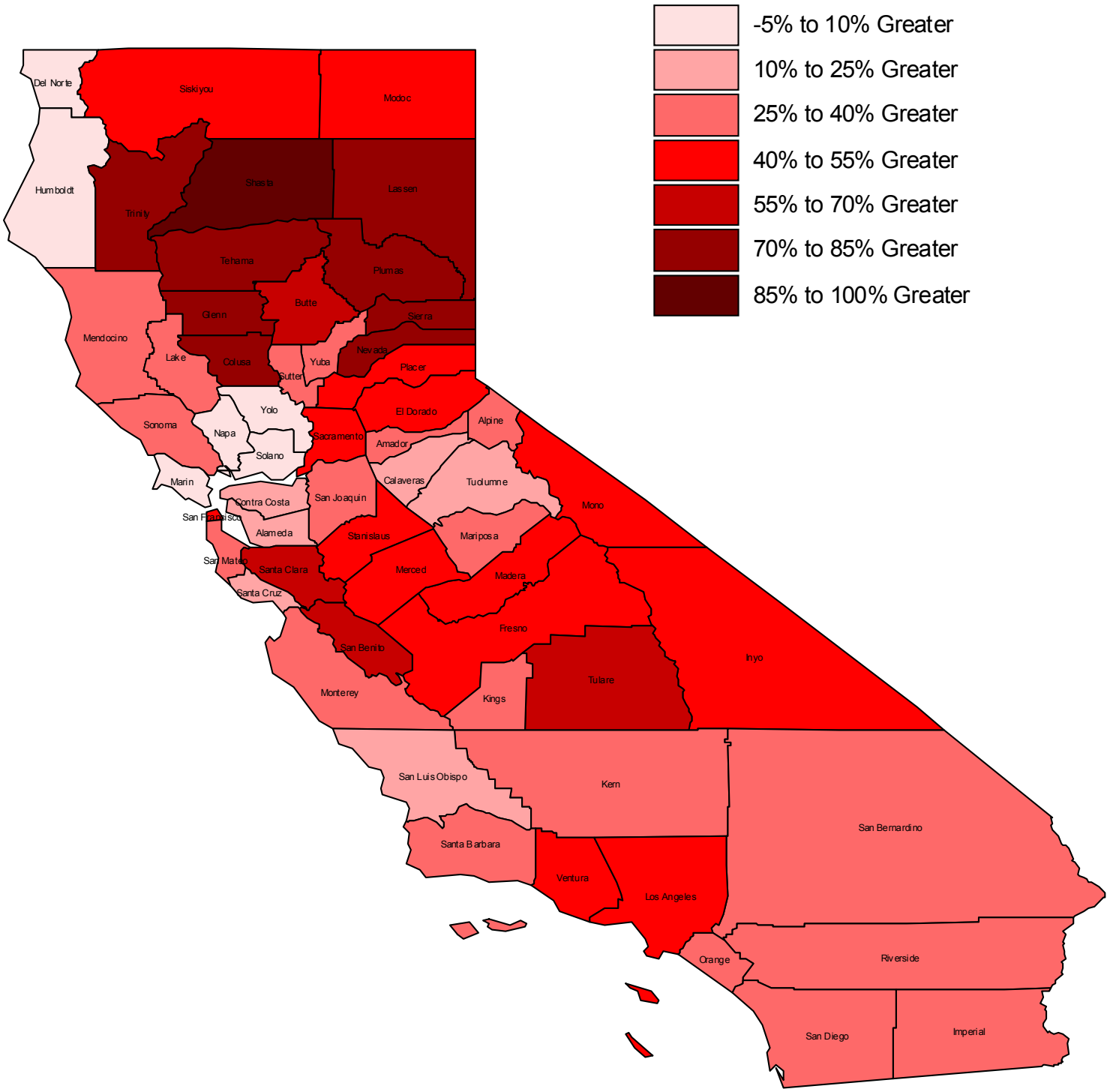
Appendix E

Figure 2: California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Drywall Installers

(Percent by which DIR prevailing wage rate is greater than EDD market rate)



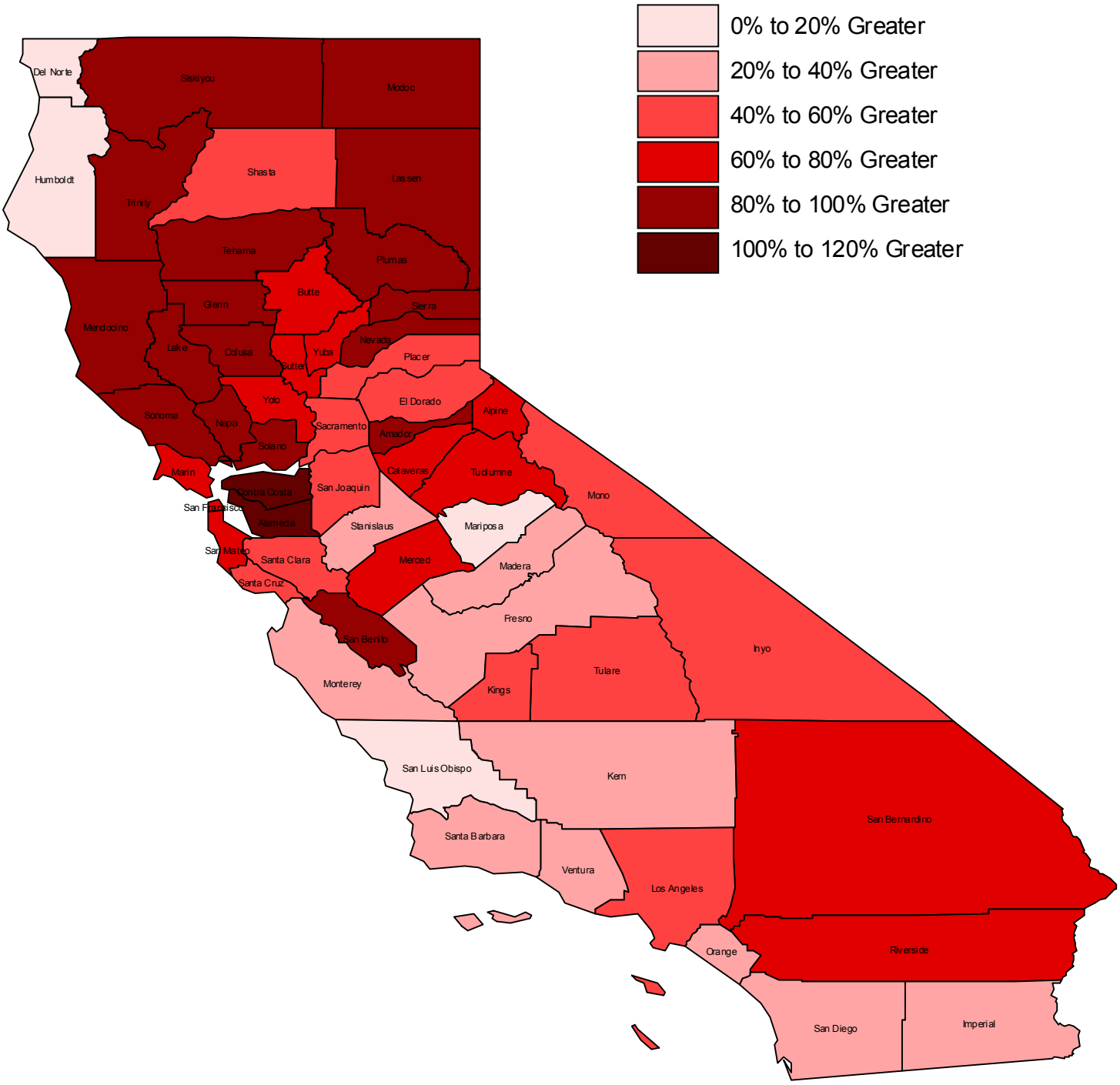
Appendix E
Figure 3: California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Electricians
(Percent by which DIR prevailing wage rate is greater than EDD market rate)



Appendix E

Figure 4: California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for HVAC/Sheet Metal Worker

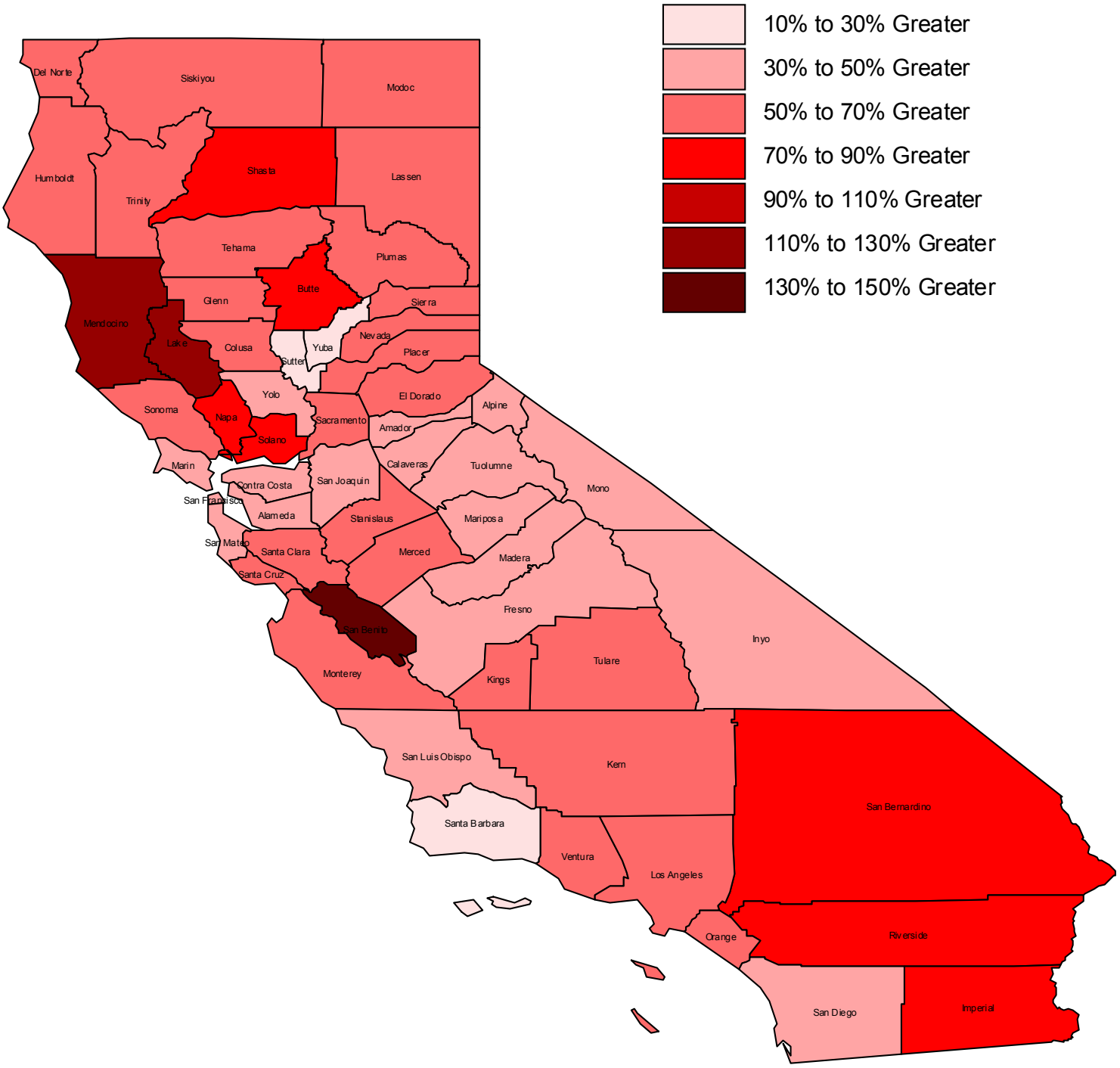
(Percent by which DIR prevailing wage rate is greater than EDD market rate)



Appendix E

Figure 5: California DIR Commercial Prevailing Wage Rates vs. EDD Market Rates for Plumbers

(Percent by which DIR prevailing wage rate is greater than EDD market rate)



Appendix F

Table 1: Comparison of Davis-Bacon Commercial Prevailing Wage Rates with DIR Commercial Prevailing Wage Rates (Includes All Available Davis-Bacon Rates Regardless of Date of Last Update)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.00	$37.00	0%	$34.56	$36.59	6%	$35.51	$35.51	0%
ALPINE	1,210	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
AMADOR	36,049	$18.58	$23.27	25%	$18.14	$23.77	31%	$16.30	$32.21	98%	$18.37	$31.05	69%	$20.88	$29.29	40%
BUTTE	207,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CALAVERAS	41,820	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
COLUSA	19,341	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CONTRA COSTA	980,870	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.51	$37.51	0%	$34.56	$36.59	6%	$35.21	$35.21	0%
DEL NORTE	27,694	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$26.12	50%	$18.65	$21.92	18%	$16.47	$30.93	88%
EL DORADO	163,649	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
FRESNO	827,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
GLENN	26,747	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
HUMBOLDT	127,305	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$26.12	50%	$18.65	$21.92	18%	$16.47	$30.93	88%
IMPERIAL	150,217	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.21	$29.00	-4%	$25.90	$25.90	0%	$29.81	$29.81	0%
INYO	18,242	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
KERN	688,875	$28.43	$28.43	0%	$29.00	$29.00	0%	$29.34	$28.84	-2%	$27.09	$24.76	-9%	$25.34	$28.17	11%
KINGS	133,553	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
LAKE	60,519	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$32.13	85%	$27.17	$38.05	40%	$29.84	$41.00	37%
LASSEN	34,237	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
LOS ANGELES	9,817,419	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.70	$30.45	3%	$29.40	$29.41	0%	$29.81	$29.81	0%
MADERA	130,373	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
MARIN	248,490	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
MARIPOSA	17,087	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$32.02	10%	$28.18	$17.57	-38%	$29.29	$29.29	0%
MENDOCINO	87,552	$19.08	$23.27	22%	$19.08	$23.77	25%	$17.41	$32.13	85%	$27.17	$38.05	40%	$29.84	$41.00	37%
MERCED	219,554	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
MODOC	9,353	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
MONO	13,247	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
MONTEREY	409,608	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$31.89	$31.89	0%
NAPA	128,132	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
NEVADA	94,980	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
ORANGE	2,930,488	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.85	$31.10	-2%	$28.99	$29.41	1%	$29.81	$29.81	0%
PLACER	265,683	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
PLUMAS	20,964	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
RIVERSIDE	1,645,319	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.23	$28.58	-2%	$29.41	$29.41	0%	$29.81	$29.81	0%
SACRAMENTO	1,280,920	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
SAN BENITO	55,618	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$45.51	$45.51	0%
SAN BERNARDINO	1,788,479	$29.00	$29.00	0%	$29.00	$29.00	0%	$28.25	$28.35	0%	$29.41	$30.60	4%	$31.46	$29.81	-5%
SAN DIEGO	2,908,505	$22.90	$24.60	7%	$18.55	$22.05	19%	$30.21	$29.00	-4%	$26.90	$25.90	-4%	$30.94	$29.81	-4%
SAN FRANCISCO	789,062	$29.75	$29.75	0%	$29.75	$29.75	0%	$45.55	$45.55	0%	$37.09	$37.05	0%	$41.00	$41.00	0%
SAN JOAQUIN	596,907	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
SAN LUIS OBISPO	253,043	$29.00	$29.00	0%	$29.00	$29.00	0%	$27.25	$27.25	0%	$27.28	$27.28	0%	$29.81	$29.81	0%
SAN MATEO	714,414	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.37	$42.37	0%	$36.83	$37.74	2%	$40.65	$39.40	-3%
SANTA BARBARA	406,176	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.83	$30.81	0%	$27.28	$27.28	0%	$30.49	$29.81	-2%
SANTA CLARA	1,716,755	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.57	$42.57	0%	$37.65	$37.94	1%	$45.51	$45.51	0%
SANTA CRUZ	258,398	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$32.95	$32.32	-2%	$31.89	$31.89	0%
SHASTA	169,277	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SIERRA	3,522	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SISKIYOU	44,329	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SOLANO	405,642	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
SONOMA	468,583	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
STANISLAUS	469,969	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
SUTTER	81,561	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
TEHAMA	56,911	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
TRINITY	13,059	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$22.34	$31.05	39%	$28.79	$28.79	0%
TULARE	378,477	$13.36	$23.27	74%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$28.52	0%	$28.79	$28.79	0%
TUOLUMNE	55,859	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$27.37	-3%	$29.29	$29.29	0%
VENTURA	778,423	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.60	$32.60	3%	$27.28	$27.28	0%	$29.81	$29.81	0%
YOLO	176,280	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
YUBA	61,763	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
Simple Average:		**(58 counties)**		**3%**	**(58 counties)**		**3%**	**(58 counties)**		**7%**	**(58 counties)**		**1%**	**(58 counties)**		**6%**
Population Weighted Avg:		**(100.0% of Pop.)**		**2%**	**(100.0% of Pop.)**		**2%**	**(100.0% of Pop.)**		**1%**	**(100.0% of Pop.)**		**0%**	**(100.0% of Pop.)**		**1%**

Sources: see Appendix D.

Appendix F

Table 2: Comparison of Davis-Bacon Commercial Prevailing Wage Rates with DIR Commercial Prevailing Wage Rates (Includes Only Recent Davis-Bacon Rates, or Those Updated Since June 1, 1999)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater	Davis-Bacon Commercial PW Rate	DIR Commercial PW Rate	Percent by which DIR rate is Greater
ALAMEDA	1,484,698	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.00	$37.00	0%	$34.56	$36.59	6%	$35.51	$35.51	0%
ALPINE	1,210	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
AMADOR	36,049	(Jul-85) N/A	$23.27	N/A	(Jul-85) N/A	$23.77	N/A	(Jul-85) N/A	$32.21	N/A	(Jul-85) N/A	$31.05	N/A	(Jul-85) N/A	$29.29	N/A
BUTTE	207,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CALAVERAS	41,820	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
COLUSA	19,341	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
CONTRA COSTA	980,870	$29.75	$29.75	0%	$29.75	$29.75	0%	$37.51	$37.51	0%	$34.56	$36.59	6%	$35.21	$35.21	0%
DEL NORTE	27,694	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$26.12	N/A	(Jun-86) N/A	$21.92	N/A	(Jun-86) N/A	$30.93	N/A
EL DORADO	163,649	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
FRESNO	827,310	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
GLENN	26,747	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
HUMBOLDT	127,305	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$26.12	N/A	(Jun-86) N/A	$21.92	N/A	(Jun-86) N/A	$30.93	N/A
IMPERIAL	150,217	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.21	$29.00	-4%	$25.90	$25.90	0%	$29.81	$29.81	0%
INYO	18,242	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
KERN	688,875	$28.43	$28.43	0%	$29.00	$29.00	0%	$29.34	$28.84	-2%	$27.09	$24.76	-9%	$25.34	$28.17	11%
KINGS	133,553	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
LAKE	60,519	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$32.13	N/A	(Jun-86) N/A	$38.05	N/A	(Jun-86) N/A	$41.00	N/A
LASSEN	34,237	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
LOS ANGELES	9,817,419	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.70	$30.45	3%	$29.40	$29.41	0%	$29.81	$29.81	0%
MADERA	130,373	$23.27	$23.27	0%	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$24.80	-13%	$28.79	$28.79	0%
MARIN	248,490	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
MARIPOSA	17,087	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$32.02	10%	$28.18	$17.57	-38%	$29.29	$29.29	0%
MENDOCINO	87,552	(Jun-86) N/A	$23.27	N/A	(Jun-86) N/A	$23.77	N/A	(Jun-86) N/A	$32.13	N/A	(Jun-86) N/A	$38.05	N/A	(Jun-86) N/A	$41.00	N/A
MERCED	219,554	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
MODOC	9,353	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
MONO	13,247	$28.43	$28.43	0%	$29.00	$29.00	0%	$35.25	$36.35	3%	$28.99	$24.76	-15%	$27.67	$28.17	2%
MONTEREY	409,608	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$31.89	$31.89	0%
NAPA	128,132	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
NEVADA	94,980	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
ORANGE	2,930,488	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.85	$31.10	-2%	$28.99	$29.41	1%	$29.81	$29.81	0%
PLACER	265,683	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$25.45	$29.40	16%
PLUMAS	20,964	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
RIVERSIDE	1,645,319	$29.00	$29.00	0%	$29.00	$29.00	0%	$29.23	$28.58	-2%	$29.41	$29.41	0%	$29.81	$29.81	0%
SACRAMENTO	1,280,920	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
SAN BENITO	55,618	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$31.41	$30.78	-2%	$45.51	$45.51	0%
SAN BERNARDINO	1,788,479	$29.00	$29.00	0%	$29.00	$29.00	0%	$28.25	$28.35	0%	$29.41	$30.60	4%	$31.46	$29.81	-5%
SAN DIEGO	2,908,505	$22.90	$24.60	7%	$18.55	$22.05	19%	$30.21	$29.00	-4%	$26.90	$25.90	-4%	$30.94	$29.81	-4%
SAN FRANCISCO	789,062	$29.75	$29.75	0%	$29.75	$29.75	0%	$45.55	$45.55	0%	$37.09	$37.05	0%	$41.00	$41.00	0%
SAN JOAQUIN	596,907	$23.27	$23.27	0%	$23.77	$23.77	0%	$28.19	$28.19	0%	$27.37	$27.37	0%	$29.29	$29.29	0%
SAN LUIS OBISPO	253,043	$29.00	$29.00	0%	$29.00	$29.00	0%	$27.25	$27.25	0%	$27.28	$27.28	0%	$29.81	$29.81	0%
SAN MATEO	714,414	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.37	$42.37	0%	$36.83	$37.74	2%	$40.65	$39.40	-3%
SANTA BARBARA	406,176	$29.00	$29.00	0%	$29.00	$29.00	0%	$30.83	$30.81	0%	$27.28	$27.28	0%	$30.49	$29.81	-2%
SANTA CLARA	1,716,755	$29.75	$29.75	0%	$29.75	$29.75	0%	$42.57	$42.57	0%	$37.65	$37.94	1%	$45.51	$45.51	0%
SANTA CRUZ	258,398	$24.62	$24.62	0%	$24.62	$24.62	0%	$32.01	$33.01	3%	$32.95	$32.32	-2%	$31.89	$31.89	0%
SHASTA	169,277	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SIERRA	3,522	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SISKIYOU	44,329	$23.27	$23.27	0%	$23.77	$23.77	0%	$26.26	$26.66	2%	$31.55	$31.05	-2%	$28.79	$28.79	0%
SOLANO	405,642	$29.75	$29.75	0%	$29.75	$29.75	0%	$30.65	$33.65	10%	$38.86	$38.05	-2%	$33.90	$33.90	0%
SONOMA	468,583	$29.75	$29.75	0%	$29.75	$29.75	0%	$32.13	$32.13	0%	$38.86	$38.05	-2%	$36.05	$41.00	14%
STANISLAUS	469,969	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$28.18	0%	$29.29	$29.29	0%
SUTTER	81,561	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
TEHAMA	56,911	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$29.29	$28.79	-2%
TRINITY	13,059	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$22.34	$31.05	39%	$28.79	$28.79	0%
TULARE	378,477	(Oct-84) N/A	$23.27	N/A	$23.77	$23.77	0%	$27.10	$27.10	0%	$28.52	$28.52	0%	$28.79	$28.79	0%
TUOLUMNE	55,859	$23.27	$23.27	0%	$23.77	$23.77	0%	$29.17	$29.02	-1%	$28.18	$27.37	-3%	$29.29	$29.29	0%
VENTURA	778,423	$29.00	$29.00	0%	$29.00	$29.00	0%	$31.60	$32.60	3%	$27.28	$27.28	0%	$29.81	$29.81	0%
YOLO	176,280	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$30.97	$30.97	0%
YUBA	61,763	$23.27	$23.27	0%	$23.77	$23.77	0%	$32.21	$32.21	0%	$31.55	$31.05	-2%	$28.79	$28.79	0%
Simple Average:		**(52 counties)**		**0%**	**(53 counties)**		**0%**	**(53 counties)**		**1%**	**(53 counties)**		**-2%**	**(53 counties)**		**1%**
Population Weighted Avg:		**(97.9% of Pop.)**		**1%**	**(99.0% of Pop.)**		**2%**	**(99.0% of Pop.)**		**0%**	**(99.0% of Pop.)**		**0%**	**(99.0% of Pop.)**		**0%**

Sources: see Appendix D. Also, the filtered Davis-Bacon data above is denoted with an "N/A" and the date on which the data series were last updated.

Appendix G

Table 1: Comparison of Davis-Bacon Commercial Prevailing Wage Rates with Davis-Bacon Residential Prevailing Wage Rates (Includes All Available Davis-Bacon Rates Regardless of Date of Last Update)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ALAMEDA	1,484,698	$28.40	$29.75	5%	$29.00	$29.75	3%	$31.94	$37.00	16%	$30.83	$34.56	12%	$35.51	$35.51	0%
ALPINE	1,210	$13.00	$23.27	79%	N/A	$23.77	N/A	$12.67	$32.21	154%	N/A	$27.37	N/A	$10.25	$29.29	186%
AMADOR	36,049	$18.58	$18.58	0%	$18.14	$18.14	0%	$16.30	$16.30	0%	$18.37	$18.37	0%	$20.88	$20.88	0%
BUTTE	207,310	$9.63	$23.27	142%	$9.77	$23.77	143%	$9.00	$32.21	258%	$13.68	$31.55	131%	$14.00	$28.79	106%
CALAVERAS	41,820	$22.17	$23.27	5%	$23.52	$23.77	1%	$28.19	$28.19	0%	$20.53	$27.37	33%	$31.59	$29.29	-7%
COLUSA	19,341	$11.30	$23.27	106%	$16.33	$23.77	46%	$9.89	$32.21	226%	N/A	$31.55	N/A	N/A	$28.79	N/A
CONTRA COSTA	980,870	$28.40	$29.75	5%	$29.00	$29.75	3%	$35.01	$37.51	7%	$30.83	$34.56	12%	$27.41	$35.21	28%
DEL NORTE	27,694	$19.08	$19.08	0%	$19.08	$19.08	0%	$17.41	$17.41	0%	$18.65	$18.65	0%	$16.47	$16.47	0%
EL DORADO	163,649	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
FRESNO	827,310	$21.24	$23.27	10%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
GLENN	26,747	$11.30	$23.27	106%	$16.33	$23.77	46%	$9.89	$32.21	226%	N/A	$31.55	N/A	N/A	$29.29	N/A
HUMBOLDT	127,305	$19.08	$19.08	0%	$19.08	$19.08	0%	$17.41	$17.41	0%	N/A	$18.65	N/A	$16.47	$16.47	0%
IMPERIAL	150,217	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.41	$30.21	56%	$25.41	$25.90	2%	$24.31	$29.81	23%
INYO	18,242	$13.00	$28.43	119%	$15.00	$29.00	93%	$12.67	$35.25	178%	N/A	$28.99	N/A	$10.00	$27.67	177%
KERN	688,875	$21.24	$28.43	34%	$15.00	$29.00	93%	$29.34	$29.34	0%	N/A	$27.09	N/A	$25.34	$25.34	0%
KINGS	133,553	$6.38	$23.27	265%	N/A	$23.77	N/A	$7.73	$27.10	251%	$9.00	$28.52	217%	$8.25	$28.79	249%
LAKE	60,519	$7.76	$19.08	146%	$7.47	$19.08	155%	$7.47	$17.41	133%	$6.32	$27.17	330%	$7.47	$29.84	299%
LASSEN	34,237	$9.86	$23.27	136%	N/A	$23.77	N/A	$6.68	$32.21	382%	$7.76	$31.55	307%	$9.00	$29.29	225%
LOS ANGELES	9,817,419	$18.79	$29.00	54%	$19.00	$29.00	53%	$16.15	$29.70	84%	$26.58	$29.40	11%	$24.31	$29.81	23%
MADERA	130,373	$21.24	$23.27	10%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
MARIN	248,490	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
MARIPOSA	17,087	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
MENDOCINO	87,552	$7.76	$19.08	146%	$7.47	$19.08	155%	$7.47	$17.41	133%	$6.32	$27.17	330%	$7.47	$29.84	299%
MERCED	219,554	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
MODOC	9,353	$9.86	$23.27	136%	N/A	$23.77	N/A	$6.68	$26.26	293%	$7.76	$31.55	307%	$9.00	$28.79	220%
MONO	13,247	$13.00	$28.43	119%	$15.00	$29.00	93%	$12.67	$35.25	178%	N/A	$28.99	N/A	$10.00	$27.67	177%
MONTEREY	409,608	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$31.59	$31.89	1%
NAPA	128,132	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
NEVADA	94,980	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
ORANGE	2,930,488	$18.79	$29.00	54%	$19.00	$29.00	53%	$20.00	$31.85	59%	$26.58	$28.99	9%	$24.31	$29.81	23%
PLACER	265,683	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
PLUMAS	20,964	$11.57	$23.27	101%	N/A	$23.77	N/A	$9.00	$32.21	258%	N/A	$31.55	N/A	$14.00	$28.79	106%
RIVERSIDE	1,645,319	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.00	$29.23	72%	$26.58	$29.41	11%	$24.31	$29.81	23%
SACRAMENTO	1,280,920	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
SAN BENITO	55,618	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$25.87	$45.51	76%
SAN BERNARDINO	1,788,479	$18.79	$29.00	54%	$19.00	$29.00	53%	$23.11	$28.25	22%	$26.58	$29.41	11%	$24.31	$31.46	29%
SAN DIEGO	2,908,505	$18.32	$22.90	25%	$19.00	$18.55	-2%	$23.61	$30.21	28%	$17.83	$26.90	51%	$24.31	$30.94	27%
SAN FRANCISCO	789,062	$28.40	$29.75	5%	$29.00	$29.75	3%	$36.44	$45.55	25%	$33.94	$37.09	9%	$27.38	$41.00	50%
SAN JOAQUIN	596,907	$21.24	$23.27	10%	$15.00	$23.77	58%	$28.19	$28.19	0%	N/A	$27.37	N/A	$11.50	$29.29	155%
SAN LUIS OBISPO	253,043	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.60	$27.25	55%	$27.28	$27.28	0%	$24.31	$29.81	23%
SAN MATEO	714,414	$28.40	$29.75	5%	$29.00	$29.75	3%	$42.37	$42.37	0%	$33.14	$36.83	11%	$40.65	$40.65	0%
SANTA BARBARA	406,176	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.49	$30.83	58%	$27.28	$27.28	0%	$24.31	$30.49	25%
SANTA CLARA	1,716,755	$28.40	$29.75	5%	$29.00	$29.75	3%	$23.49	$42.57	81%	$34.12	$37.65	10%	$25.87	$45.51	76%
SANTA CRUZ	258,398	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$32.95	$32.95	0%	$31.59	$31.89	1%
SHASTA	169,277	$9.91	$23.27	135%	N/A	$23.77	N/A	$11.00	$32.21	193%	$9.11	$31.55	246%	$10.00	$28.79	188%
SIERRA	3,522	$8.50	$23.27	174%	$12.00	$23.77	98%	$10.00	$32.21	222%	$9.00	$31.55	251%	$7.00	$28.79	311%
SISKIYOU	44,329	$9.91	$23.27	135%	N/A	$23.77	N/A	$11.00	$26.26	139%	$9.11	$31.55	246%	$10.00	$28.79	188%
SOLANO	405,642	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
SONOMA	468,583	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
STANISLAUS	469,969	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
SUTTER	81,561	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
TEHAMA	56,911	$8.56	$23.27	172%	N/A	$23.77	N/A	$10.12	$32.21	218%	N/A	$31.55	N/A	$9.67	$29.29	203%
TRINITY	13,059	$8.56	$23.27	172%	N/A	$23.77	N/A	$10.12	$32.21	218%	N/A	$22.34	N/A	$9.67	$28.79	198%
TULARE	378,477	$21.24	$13.36	-37%	$15.00	$23.77	58%	$17.80	$27.10	52%	N/A	$28.52	N/A	$11.50	$28.79	150%
TUOLUMNE	55,859	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
VENTURA	778,423	$18.79	$29.00	54%	$19.00	$29.00	53%	$31.60	$31.60	0%	$27.28	$27.28	0%	$24.31	$29.81	23%
YOLO	176,280	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
YUBA	61,763	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
Simple Average:		**(58 counties)**		**52%**	**(46 counties)**		**38%**	**(58 counties)**		**89%**	**(42 counties)**		**64%**	**(56 counties)**		**85%**
Population Weighted Avg:		**(100.0% of Pop.)**		**36%**	**(96.6% of Pop.)**		**36%**	**(100.0% of Pop.)**		**56%**	**(89.7% of Pop.)**		**19%**	**(99.9% of Pop.)**		**39%**

Sources: see Appendix D.

Appendix G

Table 2: Comparison of Davis-Bacon Commercial Prevailing Wage Rates with Davis-Bacon Residential Prevailing Wage Rates

(Includes Only Recent Davis-Bacon Rates, or Those Updated Since June 1, 1999)

		Carpenter			Drywall Installer			Electrician			HVAC/Sheet Metal Worker			Plumber		
County	Population	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater	Davis-Bacon Residential PW Rate	Davis-Bacon Commercial PW Rate	Pct by which Commercial Rate is Greater
ALAMEDA	1,484,698	$28.40	$29.75	5%	$29.00	$29.75	3%	$31.94	$37.00	16%	$30.83	$34.56	12%	$35.51	$35.51	0%
ALPINE	1,210	(Jul-80) N/A	$23.27	N/A	N/A	$23.77	N/A	(Jul-80) N/A	$32.21	N/A	N/A	$27.37	N/A	(Jul-80) N/A	$29.29	N/A
AMADOR	36,049	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jul-85) N/A	(Jul-85) N/A	N/A	(Jan-97) N/A	(Jul-85) N/A	N/A
BUTTE	207,310	(Jan-88) N/A	$23.27	N/A	(Jan-88) N/A	$23.77	N/A	(Jan-88) N/A	$32.21	N/A	(Jan-88) N/A	$31.55	N/A	(Jan-88) N/A	$28.79	N/A
CALAVERAS	41,820	$22.17	$23.27	5%	$23.52	$23.77	1%	$28.19	$28.19	0%	$20.53	$27.37	33%	$31.59	$29.29	-7%
COLUSA	19,341	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	N/A	$31.55	N/A	N/A	$28.79	N/A
CONTRA COSTA	980,870	$28.40	$29.75	5%	$29.00	$29.75	3%	$35.01	$37.51	7%	$30.83	$34.56	12%	$27.41	$35.21	28%
DEL NORTE	27,694	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A
EL DORADO	163,649	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
FRESNO	827,310	$21.24	$23.27	10%	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
GLENN	26,747	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	N/A	$31.55	N/A	N/A	$29.29	N/A
HUMBOLDT	127,305	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A	N/A	(Jun-86) N/A	N/A	(Jun-86) N/A	(Jun-86) N/A	N/A
IMPERIAL	150,217	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.41	$30.21	56%	$25.41	$25.90	2%	$24.31	$29.81	23%
INYO	18,242	(Sep-82) N/A	$28.43	N/A	(Sep-82) N/A	$29.00	N/A	(Sep-82) N/A	$35.25	N/A	N/A	$28.99	N/A	(Sep-82) N/A	$27.67	N/A
KERN	688,875	$21.24	$28.43	34%	$15.00	$29.00	93%	$29.34	$29.34	0%	N/A	$27.09	N/A	$25.34	$25.34	0%
KINGS	133,553	(Nov-82) N/A	$23.27	N/A	N/A	$23.77	N/A	(Nov-82) N/A	$27.10	N/A	(Nov-82) N/A	$28.52	N/A	(Nov-82) N/A	$28.79	N/A
LAKE	60,519	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A
LASSEN	34,237	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	(Apr-86) N/A	$31.55	N/A	(Apr-86) N/A	$29.29	N/A
LOS ANGELES	9,817,419	$18.79	$29.00	54%	$19.00	$29.00	53%	$16.15	$29.70	84%	$26.58	$29.40	11%	$24.31	$29.81	23%
MADERA	130,373	$21.24	$23.27	10%	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
MARIN	248,490	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
MARIPOSA	17,087	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
MENDOCINO	87,552	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A	(Jan-78) N/A	(Jun-86) N/A	N/A
MERCED	219,554	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
MODOC	9,353	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$26.26	N/A	(Apr-86) N/A	$31.55	N/A	(Apr-86) N/A	$28.79	N/A
MONO	13,247	(Sep-82) N/A	$28.43	N/A	(Sep-82) N/A	$29.00	N/A	(Sep-82) N/A	$35.25	N/A	N/A	$28.99	N/A	(Sep-82) N/A	$27.67	N/A
MONTEREY	409,608	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$31.59	$31.89	1%
NAPA	128,132	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
NEVADA	94,980	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
ORANGE	2,930,488	$18.79	$29.00	54%	$19.00	$29.00	53%	$20.00	$31.85	59%	$26.58	$28.99	9%	$24.31	$29.81	23%
PLACER	265,683	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$19.04	$25.45	34%
PLUMAS	20,964	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$31.55	N/A	(Apr-86) N/A	$28.79	N/A
RIVERSIDE	1,645,319	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.00	$29.23	72%	$26.58	$29.41	11%	$24.31	$29.81	23%
SACRAMENTO	1,280,920	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
SAN BENITO	55,618	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$31.41	$31.41	0%	$25.87	$45.51	76%
SAN BERNARDINO	1,788,479	$18.79	$29.00	54%	$19.00	$29.00	53%	(Jun-98) N/A	$28.25	N/A	$26.58	$29.41	11%	$24.31	$31.46	29%
SAN DIEGO	2,908,505	$18.32	$22.90	25%	$19.00	$18.55	-2%	$23.61	$30.21	28%	$17.83	$26.90	51%	$24.31	$30.94	27%
SAN FRANCISCO	789,062	$28.40	$29.75	5%	$29.00	$29.75	3%	$36.44	$45.55	25%	$33.94	$37.09	9%	$27.38	$41.00	50%
SAN JOAQUIN	596,907	$21.24	$23.27	10%	$15.00	$23.77	58%	$28.19	$28.19	0%	N/A	$27.37	N/A	$11.50	$29.29	155%
SAN LUIS OBISPO	253,043	$18.79	$29.00	54%	$19.00	$29.00	53%	$17.60	$27.25	55%	$27.28	$27.28	0%	$24.31	$29.81	23%
SAN MATEO	714,414	$28.40	$29.75	5%	$29.00	$29.75	3%	$42.37	$42.37	0%	$33.14	$36.83	11%	$40.65	$40.65	0%
SANTA BARBARA	406,176	$18.79	$29.00	54%	$19.00	$29.00	53%	$19.49	$30.83	58%	$27.28	$27.28	0%	$24.31	$30.49	25%
SANTA CLARA	1,716,755	$28.40	$29.75	5%	$29.00	$29.75	3%	$23.49	$42.57	81%	$34.12	$37.65	10%	$25.87	$45.51	76%
SANTA CRUZ	258,398	$23.52	$24.62	5%	N/A	$24.62	N/A	$17.42	$32.01	84%	$32.95	$32.95	0%	$31.59	$31.89	1%
SHASTA	169,277	(Mar-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Mar-86) N/A	$32.21	N/A	(Mar-86) N/A	$31.55	N/A	(Mar-86) N/A	$28.79	N/A
SIERRA	3,522	(Jan-82) N/A	$23.27	N/A	(Jan-82) N/A	$23.77	N/A	(Jan-82) N/A	$32.21	N/A	(Jan-82) N/A	$31.55	N/A	(Jan-82) N/A	$28.79	N/A
SISKIYOU	44,329	(Mar-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Mar-86) N/A	$26.26	N/A	(Mar-86) N/A	$31.55	N/A	(Mar-86) N/A	$28.79	N/A
SOLANO	405,642	$28.40	$29.75	5%	$29.00	$29.75	3%	$18.50	$30.65	66%	$31.30	$38.86	24%	$29.90	$33.90	13%
SONOMA	468,583	$28.40	$29.75	5%	$29.00	$29.75	3%	$20.95	$32.13	53%	$31.30	$38.86	24%	$27.38	$36.05	32%
STANISLAUS	469,969	$21.24	$23.27	10%	$15.00	$23.77	58%	$23.26	$29.17	25%	N/A	$28.18	N/A	$11.50	$29.29	155%
SUTTER	81,561	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
TEHAMA	56,911	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$31.55	N/A	(Apr-86) N/A	$29.29	N/A
TRINITY	13,059	(Apr-86) N/A	$23.27	N/A	N/A	$23.77	N/A	(Apr-86) N/A	$32.21	N/A	N/A	$22.34	N/A	(Apr-86) N/A	$28.79	N/A
TULARE	378,477	$21.24	(Oct-84) N/A	N/A	$15.00	$23.77	58%	(Jun-98) N/A	$27.10	N/A	N/A	$28.52	N/A	$11.50	$28.79	150%
TUOLUMNE	55,859	$22.17	$23.27	5%	$23.52	$23.77	1%	$19.00	$29.17	54%	$28.18	$28.18	0%	$31.59	$29.29	-7%
VENTURA	778,423	$18.79	$29.00	54%	$19.00	$29.00	53%	$31.60	$31.60	0%	$27.28	$27.28	0%	$24.31	$29.81	23%
YOLO	176,280	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$21.43	$30.97	45%
YUBA	61,763	$22.17	$23.27	5%	$23.52	$23.77	1%	$26.16	$32.21	23%	$28.99	$31.55	9%	$31.59	$28.79	-9%
Simple Average:		**(37 counties)**		**18%**	**(35 counties)**		**26%**	**(34 counties)**		**40%**	**(31 counties)**		**11%**	**(38 counties)**		**42%**
Population Weighted Avg:		**(95.7% of Pop.)**		**34%**	**(94.8% of Pop.)**		**35%**	**(87.9% of Pop.)**		**53%**	**(87.4% of Pop.)**		**14%**	**(96.8% of Pop.)**		**36%**

Sources: see Appendix D. Also, the filtered Davis-Bacon data above is denoted with an "N/A" and the date on which the data series were last updated.