



MODOC COUNTY
TRANSPORTATION COMMISSION

PARS RETIREMENT PLAN

BARTEL
ASSOCIATES, LLC

June 30, 2016 Actuarial Valuation
Preliminary Results

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Bartel Associates, LLC

August 1, 2016

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DEFINITIONS

■ PVPB – Present Value of all Projected Benefits

- Expected benefit payments modeled based on:
 - Plan benefit provisions
 - Current employee/retiree population
 - Actuarial assumptions: Retirement/termination, future salary increases, longevity
 - Discounted to measurement date using discount rate (rate invested assets are expected to earn in the long-term future).

■ AAL – Actuarial Accrued Liability

- Discounted value at measurement date (valuation date) of benefits “earned” through measurement date
- \$0 for Commission since no past service counted for benefits.

■ NC – Normal Cost

- Value of benefits “earned” during year after measurement date
- Benefits “earned” in proportion to expected payroll over employee’s working lifetime.

BENEFIT SUMMARY

■ Eligibility	<ul style="list-style-type: none"> ■ All full-time employees on or after August 1, 2016 excluding the Executive Director ■ Age 52 with 5 years Commission service
■ Retirement Benefit	<ul style="list-style-type: none"> ■ 2% @ 62 benefit formula ■ Benefit Factor x Final Pay x Benefit Service ■ Final Pay is highest average 36 months limited to PEPR limit (\$117,020 in 2016)
■ Service	<ul style="list-style-type: none"> ■ Benefit service is years with Commission after 8/1/16
■ Death Benefits	<ul style="list-style-type: none"> ■ After 5 years Commission service – spousal benefit
■ Termination	<ul style="list-style-type: none"> ■ Refund of employee contributions with 3% interest, or ■ Deferred formula benefit calculated at termination. Requires 5 years of service if hired after 8/1/2016.
■ Disability	<ul style="list-style-type: none"> ■ Same as termination
■ Employee Contributions	<ul style="list-style-type: none"> ■ ½ of Normal Cost. ■ Calculated as % of pay up to PEPR pay limit. ■ Will depend on discount rate and other actuarial assumptions. ■ Recalculated in each actuarial valuation
■ COLA	<ul style="list-style-type: none"> ■ 2% increases per year after retirement

BENEFIT SUMMARY

■ Benefit Form	■ Single life annuity, spousal continuation benefits paid by retiree			
■ Retirement Benefit Factors	Retirement		Retirement	
	<u>Age</u>	<u>2% @ 62</u>	<u>Age</u>	<u>2% @ 62</u>
	52	1.0%	58	1.6%
	53	1.1%	59	1.7%
	54	1.2%	60	1.8%
	55	1.3%	61	1.9%
	56	1.4%	62+	2.0%
	57	1.5%		

DATA SUMMARY

Participant Statistics

	6/30/16
■ Actives	
• Count	2
• Average Age	52.8
• Average Commission Service	12.7
• Average Benefit Service	0.0
• Total Payroll	\$123,164

ACTUARIAL ASSUMPTIONS

Assumption	June 30, 2016 Valuation
<ul style="list-style-type: none"> ■ Valuation Date 	<ul style="list-style-type: none"> ■ June 30, 2016 ■ Determines contributions for fiscal years 8/1/2016 to 6/30/2017 & 2017/18
<ul style="list-style-type: none"> ■ Investments 	<ul style="list-style-type: none"> ■ To be selected. Illustration shows selected PARS funds
<ul style="list-style-type: none"> ■ Discount Rate 	<ul style="list-style-type: none"> ■ 6.0%, 6.5% and 7.0% to illustrate possible costs ■ Rate to be determined after investment fund is selected ■ Net of investment expenses
<ul style="list-style-type: none"> ■ Payroll Increase 	<ul style="list-style-type: none"> ■ Merit Increases – CalPERS 1997-2011 Experience Study ■ Aggregate payroll increase – 3.25%
<ul style="list-style-type: none"> ■ Mortality, Withdrawal, Disability and Retirement 	<ul style="list-style-type: none"> ■ CalPERS 1997-2011 Experience Study ■ Mortality projected fully generational with Scale MP-2014 modified to converge to ultimate rates in 2022

ACTUARIAL ASSUMPTIONS

Assumption	June 30, 2016 Valuation
<ul style="list-style-type: none"> ■ Basis for Assumptions 	<ul style="list-style-type: none"> ■ CalPERS experience studies used, since CalPERS covers similarly situated people ■ Mortality improvement is the most recent Society of Actuaries table, modified slightly as, in our estimate, appropriate for application to CalPERS base mortality table ■ Inflation based on our estimate for the Plan’s very long time horizon

ACTUARIAL METHODS

Method	June 30, 2016 Valuation
■ Actuarial Cost Method	■ Entry Age normal cost method
■ Administrative Expenses	■ Allowance for administrative expense, if paid from Trust assets, to be added to actuarially determined contribution. Assumed \$0 for fiscal years 16/17 and 17/18 (i.e., all costs paid by Commission)
■ Future New Entrants	■ Closed group, no new hires. ■ Contribution rates determined in this valuation should be applied to any new employees until the next actuarial valuation.
■ Employer Accounting	■ Governed by GASB Statement 68, first applicable for the Commission 6/30/17. Accounting results will differ from those in this funding report.

ACTUARIAL METHODS

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DISCOUNT RATE

Asset Allocation

To be determined based on fund selected

	Target Allocation of PARS Funds		
	Capital Appreciation	Balanced	Moderate
■ Equity	75%	60%	50%
■ Fixed Income	20%	35%	45%
■ Cash	5%	5%	5%
■ Total	100%	100%	100%

DISCOUNT RATE

Discount Rate Development

Actual Rate to be Determined Based on Fund Selected

PARS Fund:	Capital Appreciation		Balanced		Moderate	
	50%	55%	50%	55%	50%	55%
Confidence Level¹	50%	55%	50%	55%	50%	55%
■ Expected Return	7.69%	7.35%	7.18%	6.89%	6.78%	6.56%
■ Investment Expenses ²	<u>0.80%</u>	<u>0.80%</u>	<u>0.80%</u>	<u>0.80%</u>	<u>0.80%</u>	<u>0.80%</u>
■ Net Return after Expenses	6.89%	6.55%	6.38%	6.09%	5.98%	5.76%
■ Recommended Discount Rate	7.00%	6.50%	6.50%	6.00%	6.00%	5.75%

¹ Based on 5000-trial stochastic modeling, the long-term average return is expected to be equal or higher than the amount shown 50% or 55% of the time.

² Assumes passive investment strategy.

FUNDING RESULTS

Actuarial Obligations

June 30, 2016

■ Discount Rate	7.0%	6.5%	6.0%
■ Present Value of Benefits			
• Active Employees	\$ 212,247	\$ 237,227	\$ 265,898
• Retirees	_____0	_____0	_____0
• Total	212,247	237,227	265,898
■ Actuarial Accrued Liability	0	0	0
■ Actuarial Value of Assets	0	0	0
■ Unfunded AAL	0	0	0
■ Funded Ratio	N/A	N/A	N/A
■ 2016/17 Employer Normal Cost (middle of year payment)	12,701	13,632	14,790

FUNDING RESULTS

Annual Actuarially Determined Contribution (ADC)

	8/1/16 to 6/30/17 Contribution 6/30/16 Valuation		
■ Discount Rate	7.0%	6.5%	6.0%
■ ADC - \$			
• Normal Cost (Employer)	\$12,701	\$13,632	\$14,790
• Administrative expenses paid from Trust	_____0	_____0	_____0
• Total	12,701	13,632	14,790
■ Projected Payroll for FY (unlimited ³)	112,900	112,900	112,900
■ Employee Contribution Rate (% of PEPRAs-limited pay ³)	11.00%	12.00%	13.00%
■ Total Employer Cost (% total pay)	11.25%	12.07%	13.10%

³ PEPRAs pay limits do not currently apply for any employees

FUNDING RESULTS

Annual Actuarially Determined Contribution (ADC)

	6/30/17 to 6/30/18 Contribution 6/30/16 Valuation		
	7.0%	6.5%	6.0%
■ Discount Rate			
■ ADC - \$			
• Normal Cost (Employer)	\$14,306	\$15,355	\$16,659
• Administrative expenses paid from Trust	_____0	_____0	_____0
• Total	14,306	15,355	16,659
■ Projected Payroll (unlimited⁴)	127,167	127,167	127,167
■ Employee Contribution Rate (% of PEPRAs-limited pay⁴)	11.00%	12.00%	13.00%
■ Total Employer Cost (% total pay)	11.25%	12.07%	13.10%

⁴ PEPRAs pay limits do not currently apply for any employees



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ACTUARIAL CERTIFICATION

This report presents the Modoc County Transportation Commission PARS Retirement Plan (“Plan”) June 30, 2016 actuarial valuation. The purpose of this valuation is to:

- Determine the Plan’s June 30, 2016 Funded Status, and
- Calculate the fiscal years 8/1/2016-6/30/2017 and 2017/18 Actuarially Determined Contributions for purposes of Plan funding.

The information in this report may not be appropriate for purposes other than Plan funding but may be useful to the Commission for the Plan’s financial management. Future valuations may differ significantly if the Plan’s experience differs from our assumptions including new employees with different demographics, or if there are changes in Plan design, actuarial methods, or actuarial assumptions. The project scope did not include an analysis of this potential variation.

The valuation is based on Plan provisions, participant data, and asset information provided by the Commission as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,

DRAFT

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Date

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August 1, 2016

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