

# **Performance Based Construction Contractor Prequalification**



**NCHRP SYNTHESIS 39-04**

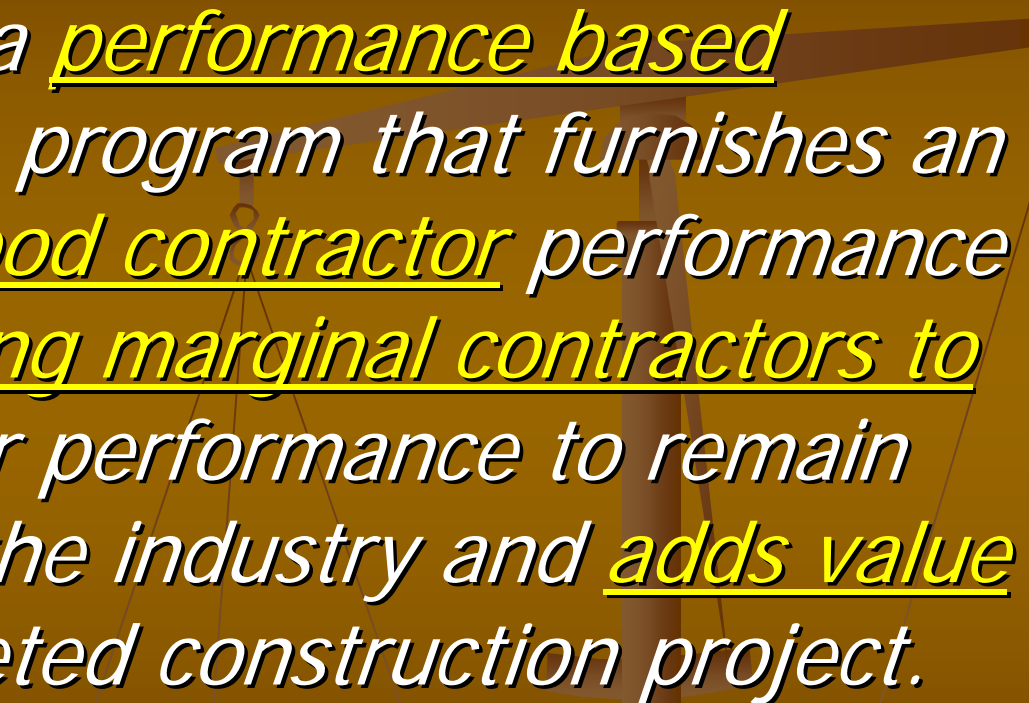
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# Objective

*Develop a performance based prequalification program that furnishes an incentive for good contractor performance while influencing marginal contractors to improve their performance to remain competitive in the industry and adds value to the completed construction project.*



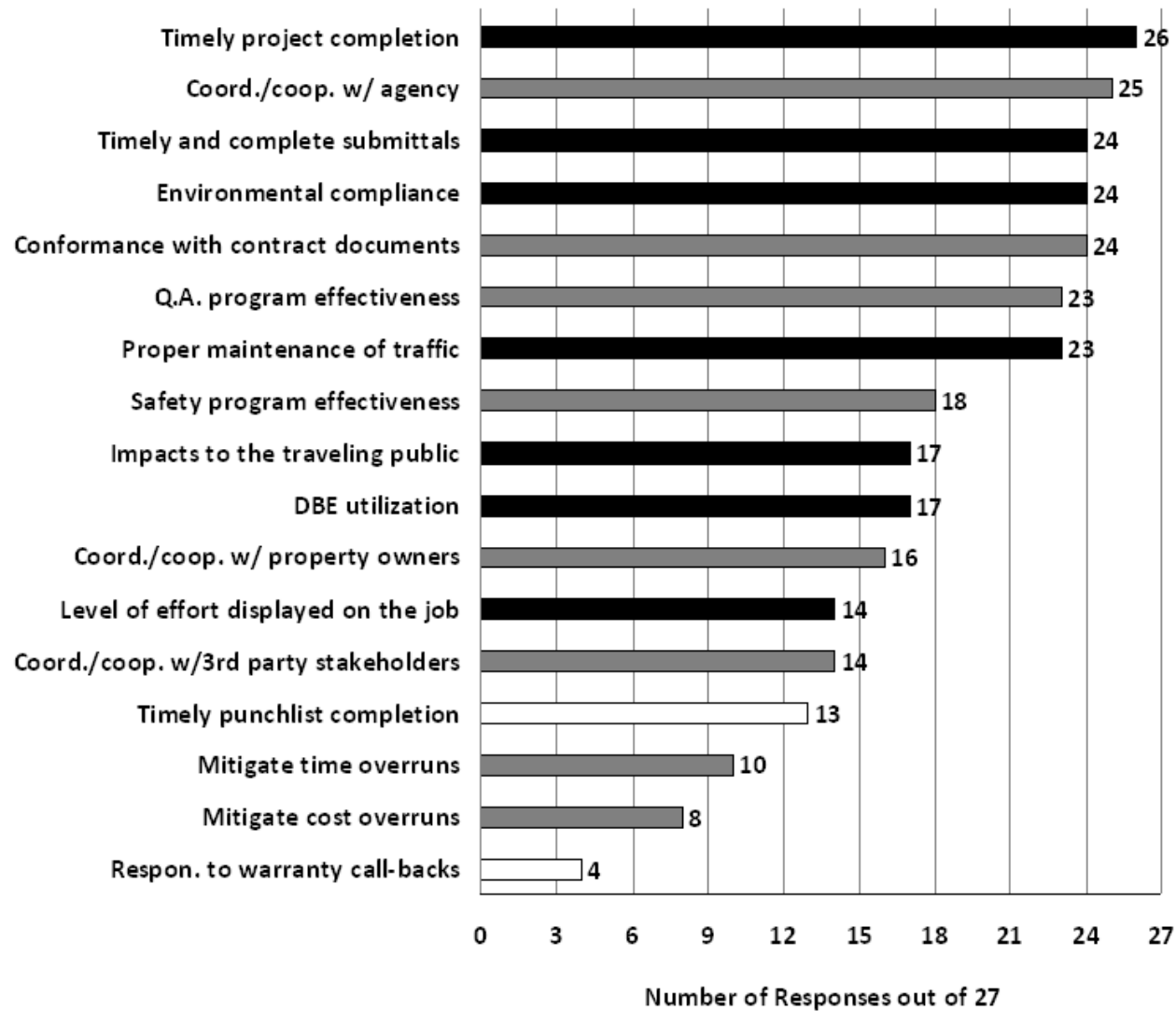
# Methodology



- Literature review
- Survey of US DOTs and Canadian MOTs
- Content analysis of US administrative prequalification forms
- Content analysis of US & Canadian RFQs
- Structured interviews with US & Canadian contractors
- Case Studies of Current Systems



## Survey Post-Project Performance Evaluation Factors



Performance Factors



Managerial Factors



Closeout Factors



# Perceived Impact of Implementing

Project Aspects	Better	No Change	Worse	No Opinion
Number of bidders	5%	37%	37%	21%
Material quality	37%	41%	0%	22%
Workmanship quality	59%	15%	0%	26%
Safety	46%	22%	0%	32%
Maintenance of traffic	34%	37%	0%	29%
Level/amount of agency inspection required	20%	54%	2%	24%
Timely project completion	44%	29%	0%	27%
Timely construction submittal completion	39%	37%	0%	24%
Timely punchlist completion	41%	34%	0%	25%
Personnel experience	29%	42%	0%	29%
Personnel competence	37%	37%	2%	24%
Number of contractor initiated change order requests	17%	54%	0%	29%
Number of claims/disputes	24%	47%	0%	29%
Responsiveness on warranty call -backs	24%	35%	0%	41%
Achievement of DBE goals	32%	42%	2%	24%
Environmental compliance	27%	44%	0%	29%
Contractor cooperation with agency	44%	32%	0%	24%
Contractor cooperation with property owners	24%	49%	0%	27%
Contractor cooperation with third party stakeholders	24%	49%	0%	27%
Contractor cooperation with public concerns	29%	44%	0%	27%
Grey Shading Indicates Predominate Opinion				

# Contractor Interviews

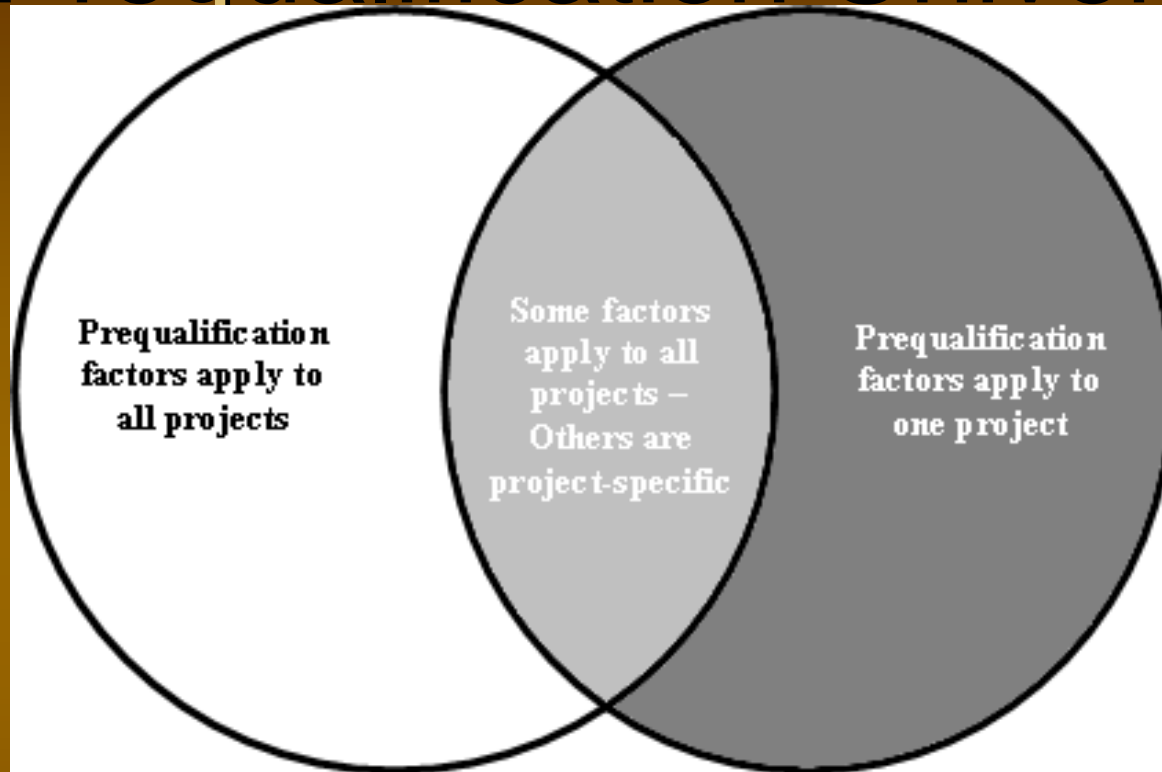
Location	Type Work	Annual Volume	Experience with Performance Based Prequalification	Support Performance Based Prequalification
Alberta	Regional General Contractor	<\$250 million	Yes	Yes
California	National General Contractor	>\$500 million	Yes	Yes
Colorado	National General Contractor	>\$500 million	Yes	Yes
Florida	National General Contractor	>\$500 million	Yes	Yes
Idaho	National General Contractor	>\$500 million	Yes	Yes
Michigan	Local Microsurfacing Contractor	<\$20 million	Yes	Yes
Missouri	Regional Chip Seal Contractor	<\$100 million	Yes	Yes
Nebraska	National General Contractor	>\$500 million	Yes	Yes
Oklahoma	Local Paving Contractor	<\$100 million	Yes	Yes
Texas	Regional General Contractor	<\$100 million	Yes	Yes

# Prequalification Types

- Administrative
  - Financials
  - Insurances
  - Admin Information
- Performance based
  - Post Project evaluations
  - Experience
- Project-specific
  - Critical qualifications for particular project



# Prequalification Universe



## General Performance Based Prequalification

- Financial factors
- Insurance factors
- Bond factors
- Past timely completion factors
- Safety record factors
- Others as appropriate

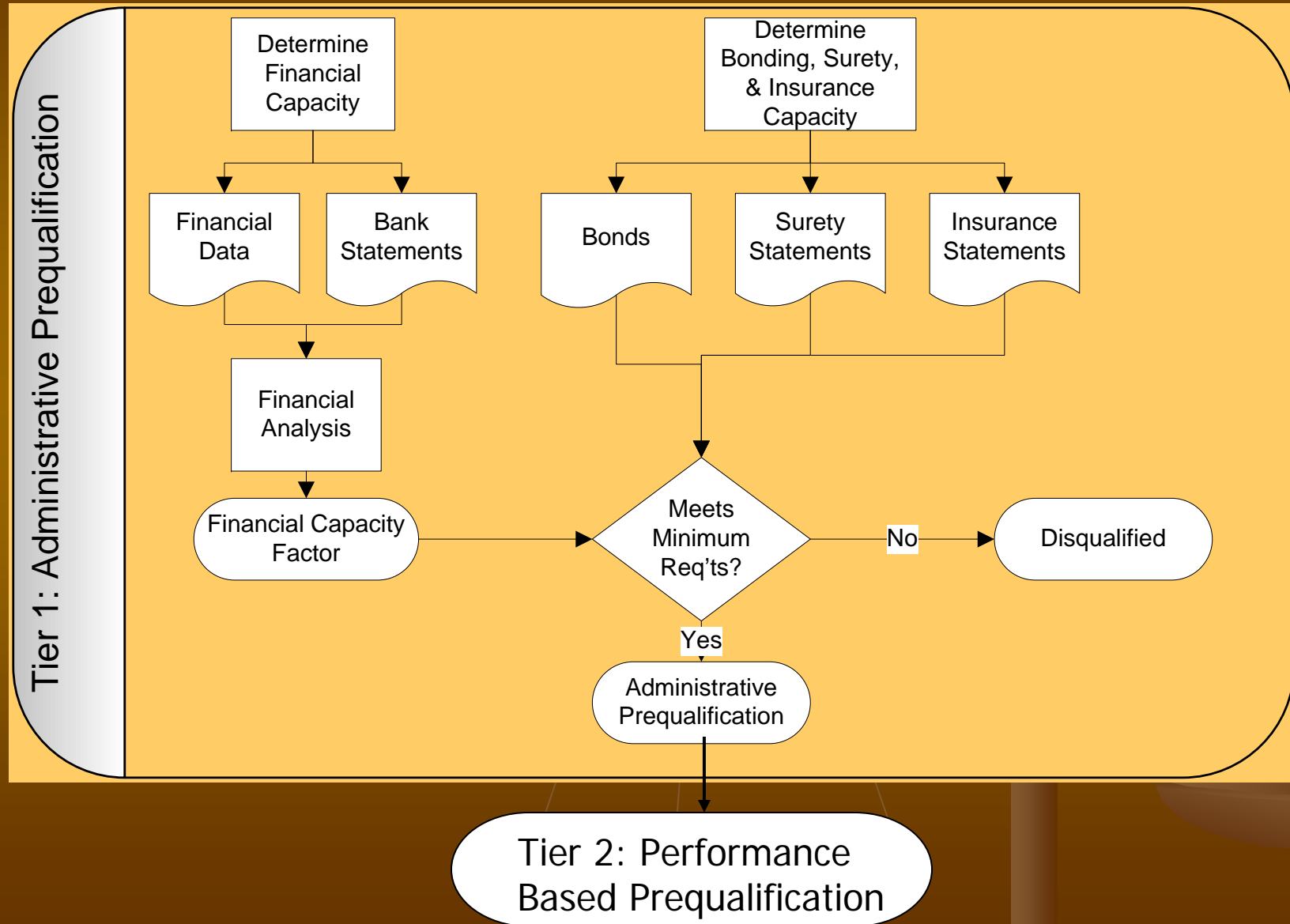
## Hybrid Prequalification

- Two Envelope Method
- A+C Bidding

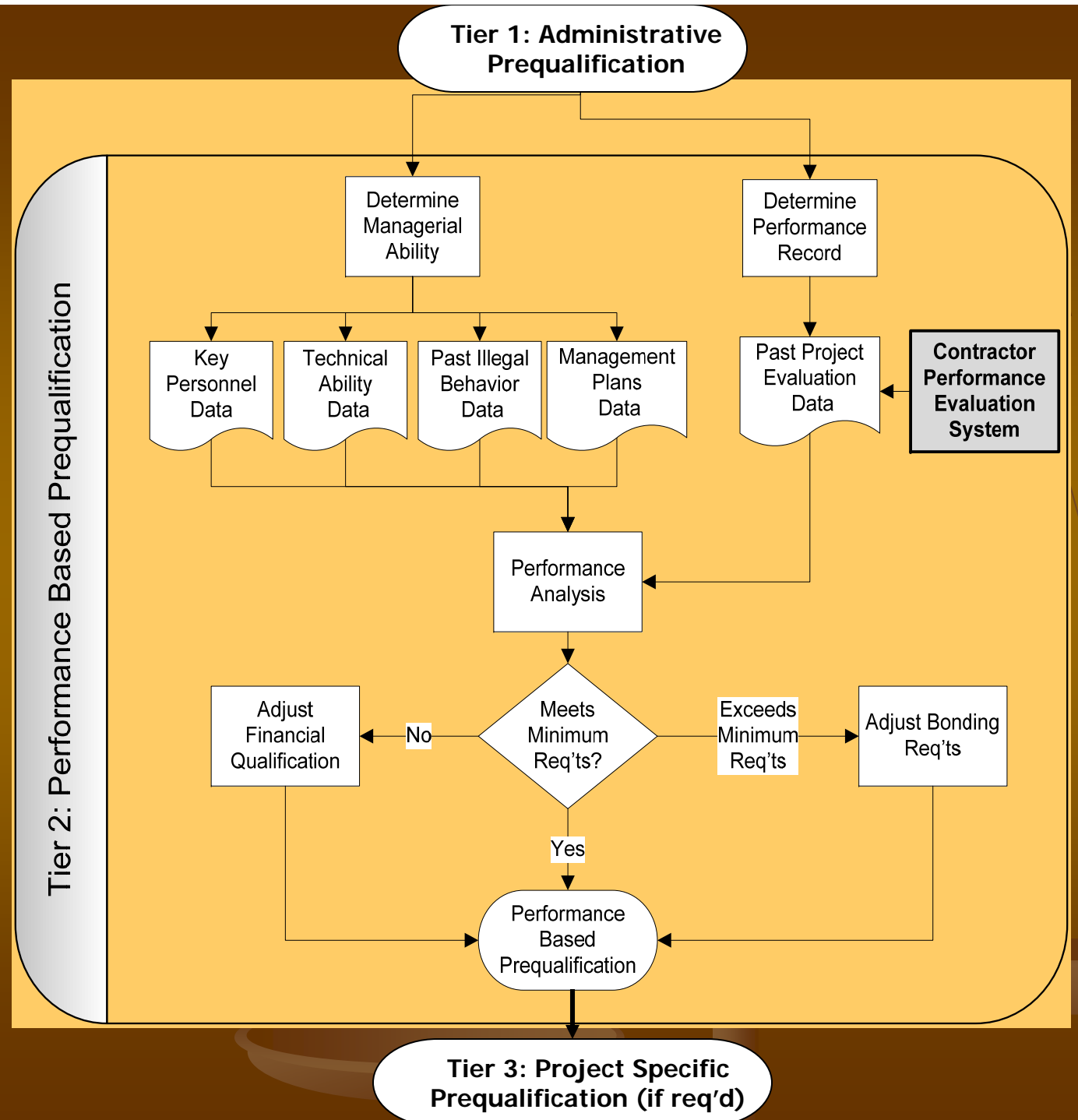
## Project-Specific Performance Based Prequalification

- Technical factors
- Past project factors
- Key personnel factors
- Plant/equipment factors
- Others as appropriate

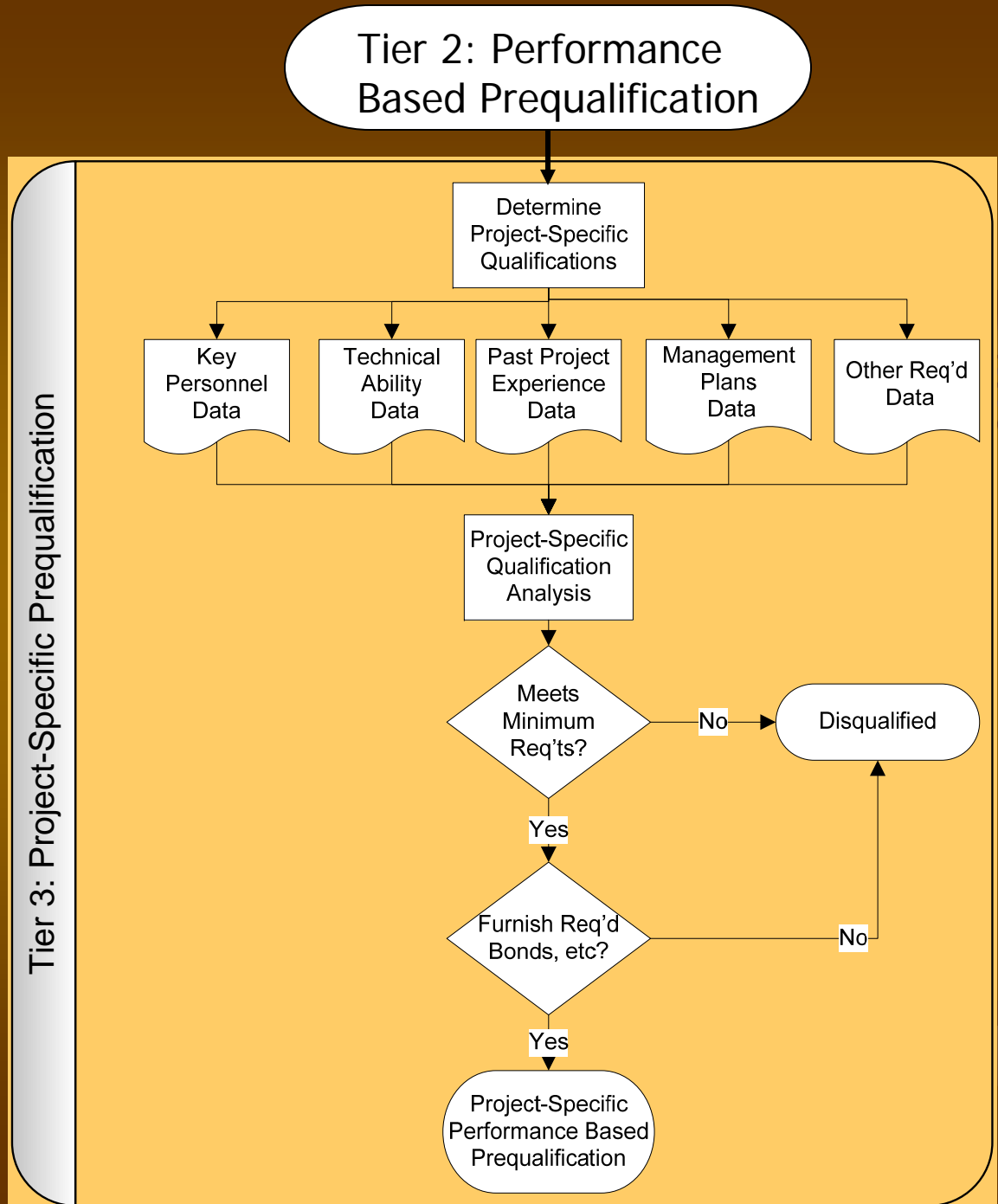
# Tier 1: Administrative Prequal.



# Tier 2 Details

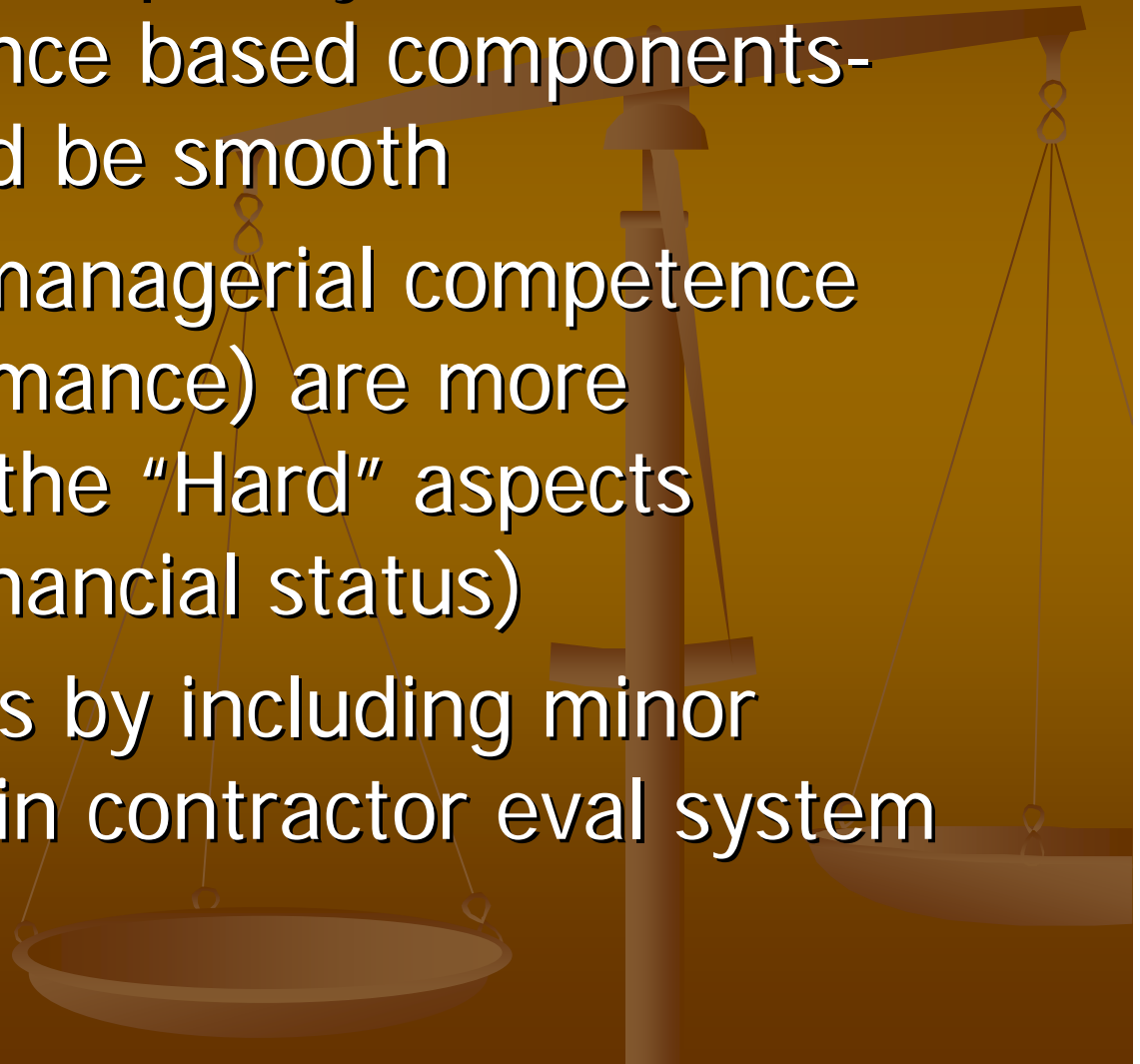


# Tier 3 Details



# Conclusions

- Existing Admin Prequal systems contain many performance based components-transition should be smooth
- “Soft” factors (managerial competence and past performance) are more important than the “Hard” aspects (bonding and financial status)
- Simplify process by including minor prequal factors in contractor eval system



# Conclusions

- Adjust (reduce) marginal contractors' financial capacity – Adjust (reduce) good contractor's bonding requirements
- Barriers to implementation are relatively few and primarily perceptual
  - Only negative seems to be reduced number of bidders as marginal contractors are eliminated

# Special Thanks

- Tony Tunistra, Ontario Ministry of Transportation
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