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16. ABSTRACT

The following report is a summary of two workforce development projects completed by California State University, San Bernardino (CSUSB), California State Polytechnic University, Pomona (CPP) to assist Caltrans planning staff. In the first project, the researcher partners prepared promotional and study materials to prepare Caltrans employees for AICP certification exam. Four webinars were developed and reference materials were purchased for each of the districts. The second project developed a fully online certification in transportation leadership, planning and performance. This program will be offered to Caltrans employees (First 100 for free), and the public. Ultimate goal is to provide information and scholarship to prepare the next generation of transportation leaders.

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## **Professional Planner Workforce Development Training Program**

**Submitted: May 2017**

**Project Director: Kimberly Collins, PhD, Executive Director, Leonard Transportation Center,  
California State University, San Bernardino**

**Performance Period: January 31, 2016 to April 1, 2017**

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## I. Summary

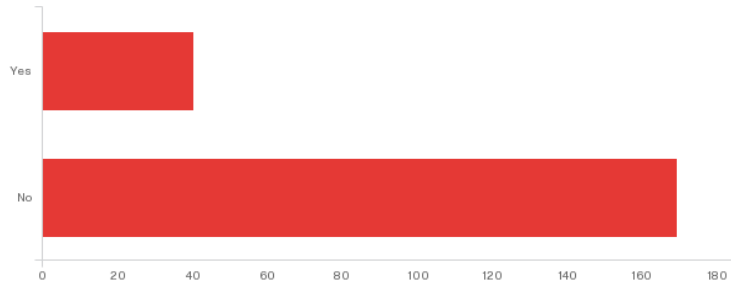
1. The following report is a summary of two workforce development projects developed to assist Caltrans planning staff. This program was completed by the Leonard Transportation Center at California State University, San Bernardino (CSUSB) and faculty from the Urban and Regional Planning Department at California State Polytechnic University, Pomona (CPP).
2. The first project was designed to assist planning staff at Caltrans obtain the American Institute of Certified Planners (AICP) certification. The typical cost for an individual to join American Planning Association (APA), purchase the AICP study materials, and take the AICP exam can fall in the neighborhood of \$1,200 to \$1,500. The first main objective was to develop a series of webinars that will help Caltrans planners and other participants pass the AICP exam. With this in mind, the researcher partners prepared promotional and study materials; developed four webinars that were recorded and posted to the Caltrans training website page; and reading/reference materials were purchased for each of the districts.
3. The second project developed a fully online certification in transportation leadership, planning and performance. The Transportation Leadership, Planning and Performance Institute consists of 26 modules, plus a capstone project. The modules include pertinent reading assignments; basic lectures that outline the main concepts and theories; advanced discussion of the concepts through interviews with experts in the field; short essay assignments; a certification quiz; and a feedback form. This program will be offered to Caltrans employees (first 100 free), and the public.
4. The goal of the AICP certification and TLPPI is to assist with the professional development of Caltrans planners and those working in related fields. This benefits the agency with its work as it provides their employees with the knowledge and skills to further decision making and leadership in their fields.

## II. Survey of Caltrans Planning Employees

1. To obtain feedback and opinions from Caltrans employees regarding the AICP certification, an online survey was created and implemented.
2. The following section provides results from this survey:

**Q1 - Are you currently a member of the American Planning Association (APA)? If yes, what encouraged you to become a member? If no, why not?**

Answer	%	Count
Yes	19.14%	40
No	80.86%	169
Total	100%	209



Reason for "No" Answer	%	Count
Cost	40.24%	68
No financial support from Caltrans	11.24%	19
Time	4.73%	8
Unaware of the APA	10.65%	18
Irrelevant to work/job	2.96%	5
No incentive from Caltrans	18.93%	32
Not required or encouraged by Caltrans	7.69%	13

**Written Responses:**

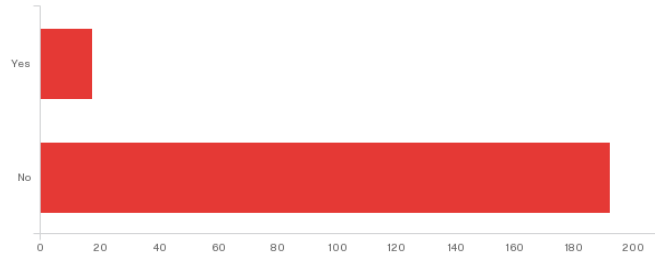
- Planning is my profession; APA is the preeminent professional organization -- Networking for jobs, both as an employer and employee -- As a consultant, to do marketing and find potential project opportunities -- Access to professional resources, libraries, specialty publications, best practices -- Access to others for technical inquiries, advisory service -- To meet others in related professions -- To learn about new ideas, legal developments, practices, emerging areas -- To participate in state and national conferences -- It's required for the AICP certificate
- I had a student membership when attending SJSU (San Jose State) where I received my masters in Urban and Regional Planning. I have graduated and since not applied for the full membership. Reason: What benefit does the membership hold in my career as a transportation planner with Caltrans? I think the organization is great but I have a limited budget and the membership cost a few hundred dollars.
- I joined APA initially to be a part of the Sacramento Valley Section Mentorship Program. The program was amazing and one of the best decision I've made! I've continued to maintain my membership ever since. Membership allows me to attend great networking events and I am eligible to attend the APA conferences. I also am involved in the Sacramento Valley Section's Young Planners Group.
- As a practicing City and Transportation Planner I saw APA as the key professional organization that would provide leadership and promote excellence in the Planning profession that would

support my continued career growth. The APA has continued to provide tools and education to support my career.

- To gain exposure to the current issues and hot topics in the field. Also a prerequisite to becoming an AICP.

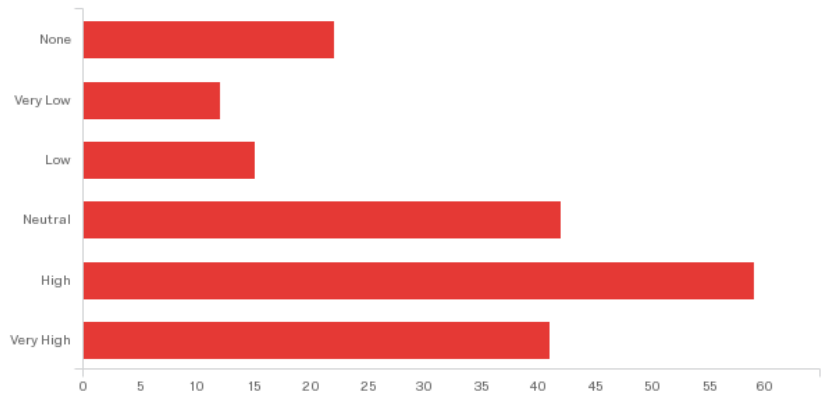
**Q2 - Are you currently a member of the American Institute of Certified planners (AICP)?**

Answer	%	Count
Yes	8.13%	17
No	91.87%	192
Total	100%	209



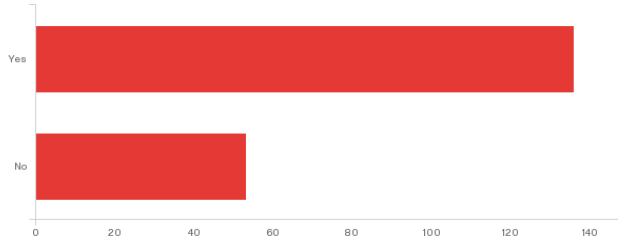
**Q3 - If you answered "No" to Question 2, what is your level of interest in obtaining the AICP certification?**

Answer	%	Count
None	11.52%	22
Very Low	6.28%	12
Low	7.85%	15
Neutral	21.99%	42
High	30.89%	59
Very High	21.47%	41
Total	100%	191



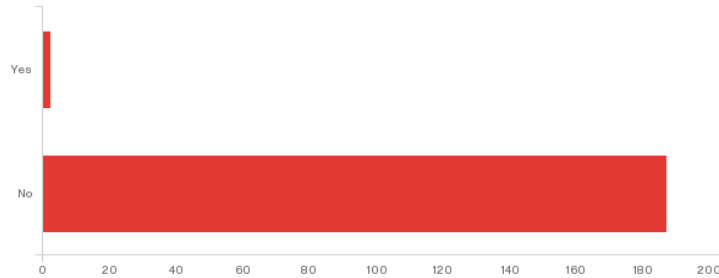
**Q4 - Have you ever considered taking the AICP exam?**

Answer	%	Count
Yes	71.96%	136
No	28.04%	53
Total	100%	189



**Q5 - Have you ever taken, but not passed, the AICP exam?**

Answer	%	Count
Yes	1.06%	2
No	98.94%	187
Total	100%	189



**Q6 - If you answered "Yes" to Question 4, having considered taking the exam and not done so, what were the barriers? Please select all that apply:**

Answer	%	Count
Cost to prepare and take the exam	63.57%	89
Ongoing cost of APA and AICP membership	67.86%	95
Not an APA member	38.57%	54
Concern that my professional experience is too narrow to pass	17.14%	24
Concern that time since my academic training is too great	10.00%	14
Test taking anxiety	9.29%	13
Lack of clarity regarding the relationship between my career advancement and AICP certification	48.57%	68
Lack of financial incentives such as enhanced pay	67.86%	95
Insufficient time to study and prepare for the AICP exam	25.00%	35



Unable to obtain study materials or not sure what materials to study	20.00%	28
Time consuming and lengthy application process	23.57%	33
Lack of study group or support	17.86%	25
Lack of support from supervisors and management at work	27.86%	39
Lack of needed experience or educational qualifications to sit for the exam	10.71%	15
Not sure I could pass the exam	8.57%	12
Other, please specify:	20.71%	29

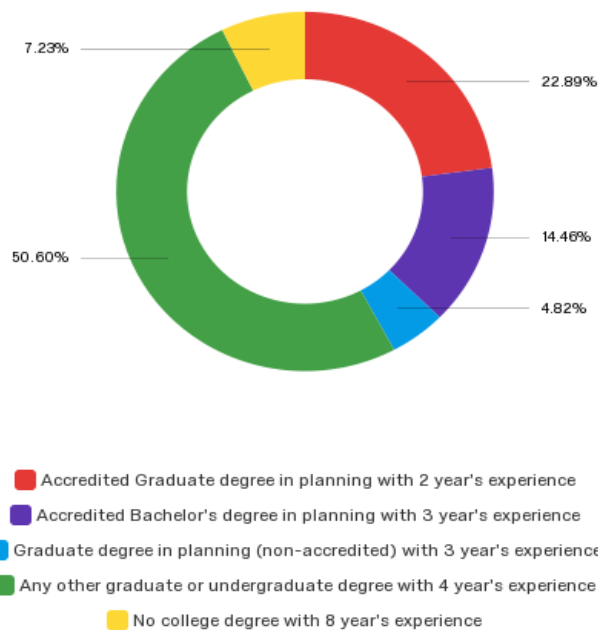
	%	Count
"Other Responses"		
Not enough reimbursement	2.85%	4
Not required, encouraged, or recognized	5.71%	8
No incentive with Caltrans	7.14%	10
Makes planners marketable for other jobs	2.85%	4

#### Written Responses:

- AICP does not help me in my planning duties at Caltrans. Also, Cal HR does not recognize AICP certification. In fact, Cal HR specifically told us we cannot require planning degrees or use AICP certification as an education requirement when advertising for a Transportation Planner position at Caltrans. So why join APA or pursue AICP? Why in the world would I spend the time and effort to achieve AICP if it makes no difference in pay or promotion? I know management likes to say there are so many other incentives than pay/benefits. That only works for so long. When we are 28% behind in pay parity (per current SEIU Recruitment and Retention Committee findings), PLUS there is no added compensation for having AICP, a person would be nuts to do it.
- I think the biggest barriers is that there is no incentive to be AICP certified, and the culture here doesn't really support it. You don't need AICP certification to advance here. I would like to be AICP certified to feel more legitimate in my career. I think another problem is that if people here were to pursue AICP certification, it would make them more marketable and increase the likelihood they would leave Caltrans for better paying and prestigious career opportunities.
- The State only reimburses a small portion of the cost for taking the AICP exam, which is expensive, and does not reimburse for the annual certification fees which are even higher. Nor does the State transportation planner classification offer financial incentive to hold the certification. Also one has to also be a member of the American Planning Association (another expense). Because the net result of becoming certified and paying annual fees essentially results in a lowered income, there is no current purpose for holding such a credential as a State Employee. In addition there is an agreed 28% shortfall for State Transportation Planner's salaries. The office of Workforce Development might first want to consider ways to influence salary increases and reimbursements sought by planners (<http://www.seiu1000.org/post/recruitment-and-retention-mutual-report>). A promotional effort to encourage AICP certification seems premature.

- Cost to maintain the AICP after you have your certification, it's just not worth the out of pocket expenses to have the credential, when there's no financial benefit to the investment (low ROI).
- Office atmosphere is not one that supports Transportation Planners (TP) in maintaining the skills necessary to qualify for the exam. Everything is engineer-oriented. Management and supervisors are not aware of the connection between transportation planners and AICP certification nor are/have they been open to understanding. Suggestions for projects that will expand TP's work experience and attempts to develop the connection within the organization via work-related projects, training, and classes is met with strong resistance.

**Q7 - If you do not think you are eligible to take the exam, what do you believe you need to do to eventually qualify? (Please scroll down for information about the exam requirements).**



Answer	%	Count
Accredited Graduate degree in planning with 2 year's experience	22.89%	19
Accredited Bachelor's degree in planning with 3 year's experience	14.46%	12
Graduate degree in planning (non-accredited) with 3 year's experience	4.82%	4
Any other graduate or undergraduate degree with 4 year's experience	50.60%	42
No college degree with 8 year's experience	7.23%	6
Total	100%	83

**Q8 - What type of assistance would be helpful for you to complete the exam? Please select all that apply:**

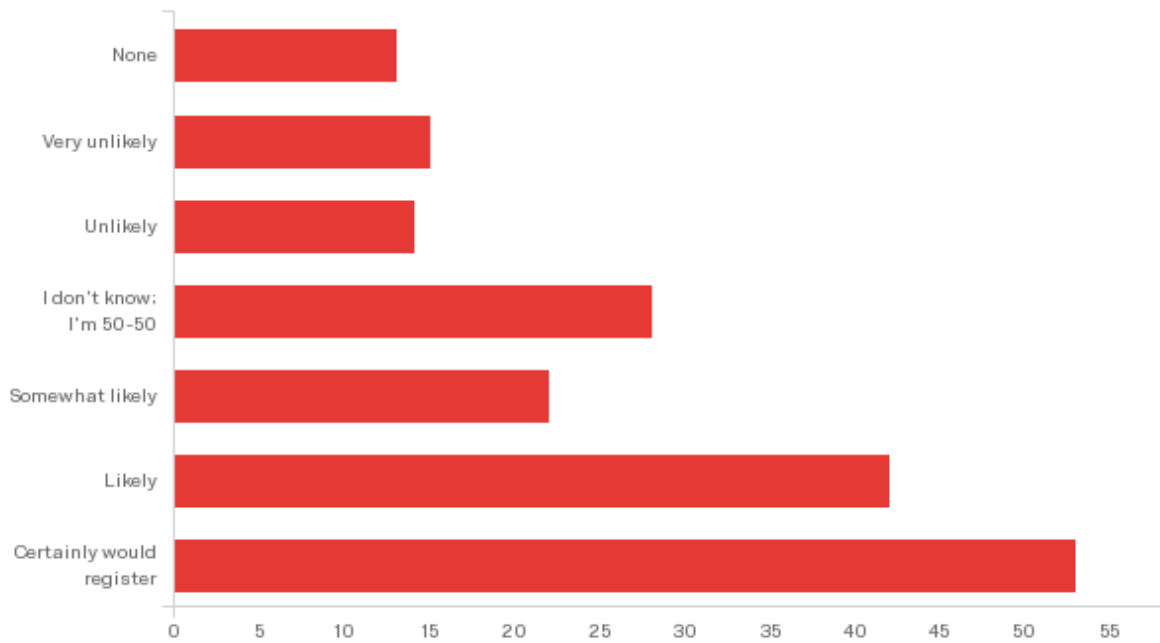
Answer	%	Count
Study materials tailored to Caltrans employees	68.89%	124
In-person preparation courses -- lectures at multiple sites	48.89%	88
On-line preparation courses -- lectures both live and archived	65.00%	117
Face-to-face study groups	35.56%	64
Online study groups	32.78%	59
Practice exams	77.22%	139
Assistance with preparing application	31.11%	56
Help with the cost of the material and the class	79.44%	143
General education beyond transportation	25.00%	45
Coordination with other training programs such as the Mineta Institute and Caltrans' courses	32.22%	58
Separate tracks for those with and without previous academic planning background	28.33%	51
Other, please specify:	20.00%	36
"Other" Responses	%	Count
Caltrans covers cost	3.33%	6
Improve financial and merit incentive	5%	9
Current planning materials	.56%	1
In-house training during working hours at no cost	1.67%	3

**Written Responses:**

- The AICP exam has only minimal transportation planning questions. Spending any DRISI money on tailoring study materials to Caltrans is pointless and a waste of public money.
- I am well over the minimum to qualify to take the exam. There is nothing you could give me or do for me to prepare to take the exam that would cause me to take it. If you secured pay parity for Caltrans Planners AND a pay differential for AICP then we can talk.
- Support and macro-view from Caltrans management and supervisors in recognizing the land-planning practicum that can be derived from the day-to-day work that Transp. Planners currently do and to further develop it.
- Really specific instructions and a time line, without Caltrans acronyms, and also a designated amount of work time to study, attend study groups. Guarantee that there will be a salary increase if we earn AICP certification. Ongoing program to support us in earning credits, renewing cert., updates. The APA CA and National conferences are a great information resource. and more planners should be given the opportunity to attend.

- Coordination with planning training programs for classes at work-site. Coordination with local governments planning depts. and local agencies such as transportation commissions and metropolitan planning organizations to have someone from their planning to give a class sharing their experience and knowledge with appropriate materials.

**Q9 - If an AICP training program were to be instituted, what is the likelihood that you would register for the program?**



Answer	%	Count
None	6.95%	13
Very unlikely	8.02%	15
Unlikely	7.49%	14
I don't know; I'm 50-50	14.97%	28
Somewhat likely	11.76%	22
Likely	22.46%	42
Certainly would register	28.34%	53
Total	100%	187

**Q10 - What do you see being the benefits of being a certified planner? Please select all that apply:**

Answer	%	Count
Improve my resume	58.54%	120
Find a better job, either within or outside of Caltrans	50.24%	103
Be more likely to get salary increases sooner	27.80%	57
Improve my planning knowledge and skills through the study process	59.51%	122
Improve my planning knowledge and skills through continuing AICP certification maintenance and activities	63.90%	131
Gain respect from others, including employers, colleagues, and partner agency staff	48.78%	100
None. There are no tangible benefits to being an AICP certified planner	14.15%	29
Other, please specify:	19.02%	39

“Other” Responses	%	Count
Good for employment elsewhere	3.9%	8
Personal satisfaction or feel legitimate	3.9%	8
Enhance Caltrans as an agency	2.93%	6
Expand professional knowledge and skills	1.95%	4

**Written Responses:**

- I think paying for the certification will just encourage planners to leave. We constantly hear about succession planning and without any doubt, I believe this will contribute to a greater turnover. Our training is so good that we develop skills that advance planners at a much faster pace. Considering the obvious choice for a preference for young planners to primarily promoted over seasoned employees, this will just make an even smaller pool to pick from for promotion. The real skill that is lacking here is writing and analysis. The AICP will not provide these needed skills and will just cloak the problem.
- Produce a better product and partake in keeping Caltrans relevant currently and for the future. Much planning work is not being done because management and supervisors and the Directors are only oriented to engineering.
- As a planner, we must continue to learn and understand our built environment to improve communities across California.
- I could bring a greater depth of understanding of the connection between transportation and land planning to my work environment, co-workers, supervisors and management. Would be able to integrate, in a much more meaningful way, planning within and throughout the transportation process. Would be able to partner with agency and local government staff in a way that is not currently being done. Also be a part of keeping Caltrans relevant in the transportation and land use planning arena for years to come.

- Caltrans does not recognize certified planners nor offers advancement or salary increases for certified planners, so there is almost no reason for a Caltrans employee to become certified except for their own personal growth, or to find a job outside the Department that honors AICP certification.

**Q11 - Which of the following statements best characterize your feelings about the responsibilities associated with being a certified planner -- i.e., the continuing education requirements, standards of excellence, and adherence to the Code of Ethics?**

Answer	%	Count
I'd be happy to meet all these responsibilities	52.20%	107
I can accept the responsibilities -- if I'm guaranteed a better job and higher salary	25.37%	52
I would find these responsibilities a burden	1.46%	3
I have no feelings one way or the other	11.22%	23
Other, please specify:	9.76%	20
Total	100%	205

"Other" Responses	%	Count
Education and certification are not helpful with Caltrans or earning promotions	3.41%	7
Higher pay needed to meet responsibility	1.95%	4
Cost exceeds responsibilities	.98%	2
Will meet responsibilities if education offered during work hours	.98%	2

**Other Responses:**

- I do all this already. I am also a Professional Transportation Planner with the Institute of Transportation Engineers. This is a better fit in my opinion. Also, the maintenance credits are a better fit for Caltrans planners since they are transportation related/focused. In addition, Caltrans has open access to Transportation Research Board webinars that count toward maintenance credits. I just completed my PTP renewal and used the TRB maintenance credits. It's a perfect fit and there is no additional cost to maintain my certification since it is covered by Caltrans being a member of TRB.
- Concern with large portion of financial costs not being reimbursed by employer comparable to PE maintenance being covered.
- I take the AICP responsibility seriously, especially related to ethics and the notion of being an advocate for the public. They are not burdensome other than continuing ed as I do so much of that already that the tracking etc. is a big pain.
- Caltrans doesn't care about planners' formal education, nor has the importance or promotion advantage of AICP certification ever come up in the 17 years I've served as a transportation planner at Caltrans. I completed the SJSU Mineta graduate program in transportation management, and it has yielded zero in promotional advantage. No one has ever noticed,

cared, or asked about my academic qualifications. The same is true of AICP certification. Academic preparation, even a college degree at any level, and in any specialization at all, doesn't matter at Caltrans. Just ask around. Connections, especially family connections, count for much, much more. A former clerical with a high school education does just as well as anyone with a master's degree or doctorate in planning.

- In order to obtain an AICP certification I would have to join the APA. If an AICP certification doesn't guarantee me anymore financial income then I will technically lose money (due to APA membership dues) with an AICP certification.

**Q12 - Please provide written comments on your ideas that will help us assess the need for this program and to develop the most effective training program.**

High Recurring Responses	%	Count (of 128 responses)
Cost (Caltrans covers)	21.1%	27
Need for Incentive (promotions and increased salaries)	29%	37

Significant (although less recurring) Responses	%	Count (of 128 responses)
Ensure support from management	4%	5
Expand knowledge	8%	10
Improve professionalism	7%	9
Create a program that trains for a nexus of fields (such as transportation and land planning)	4%	5
Provide practice tests, flashcards, webinars, online training, and in person training	6%	8
Develop or expand certificate programs at universities that working planners can pursue (especially including the IE, San Diego, Orange, and LA counties)	4%	5
Provide a flexible program that is at least 6 months long	3%	4
Make the program applicable to those who do not have a university degree in Planning (wide breadth of information to learn for AICP exam)	2%	3
Promote AICP and APA	2%	3
Study groups, preferably at work during work hours	4%	5
Integrate Mineta program with San Jose State University Transportation Program	1.5%	2

**Written Responses:**

- Having worked at private and local agencies, I can see the value of AICP certification for Caltrans Planners to help publicize planning as a professional career and a field that is definitely important for the evolution of Caltrans from a highway organization to a multi-modal transportation organization that is innovative, responsive, and gives the public the best transportation system for their tax dollars.
- I find myself at a crossroads in my career at Caltrans. I enjoy the work I do, but I feel like I am grossly underpaid. With a Master's/Graduate degree and 17 years of work experience, I earn

less than my peers in other government agencies and significantly less than my peers in the private sector. Most of my coworkers who were hard workers and good at their jobs have left for better pay. Thank you for considering a program to assist us to take the AICP exam. I am very interested and would greatly appreciate any assistance towards a better Planning career in Caltrans.

- The program focus needs to be on more than just passing the AICP exam. AICP certification is a national credential that may apply to a wide variety of planning practice areas. In this program, if it proceeds, training needs to be focused on transportation planning in California. Coordinate closely with APA national and state, and make extensive use of the many available APA training resources. Take a critical look at whether Caltrans is really an effective planning agency and how it could be improved. Plan-making (e.g., CTP, bike plans, rail plans, freight plans, airport compatibility planning) should be a major area of emphasis. The program should be both broad and deep, including theory, planning history, legal and legislative bases, ethics, plan development, planning for multi-modal transportation and high-speed rail, basics of land use planning and environmental impact assessment, benefit-cost analysis, sustainability, smart mobility, VMT and GHG reduction, public engagement, partners and stakeholders, best practices, federal transportation roles and responsibilities, and how CA compares with other states in terms of state DOTs and transportation planning.
- Please do not waste any more tax payer dollars on trying to bring AICP into Caltrans. The State's HR program has already said they cannot use the certification for position or monetary advancement. In fact, please research this to understand Cal HRs position before dangling a benefit-carrot in front of Caltrans planners. To keep going down this path is disingenuous to Caltrans planners. Instead, PLEASE develop certificate programs at universities like Cal Poly, CSUSB, CSUF, SDS, UCLA, USC, UCD, SJS, etc., that actually apply to the work Caltrans planners perform.
- I believe you are on the right track for giving this survey. Caltrans AICP certificate holders would at least be better stewards of the Planning profession. Making the training program available in additional institutions of higher learning should be encouraged. Schools such as California State Universities in Long Beach, San Diego and Los Angeles would provide a larger geographical area for Caltrans employees wishing to participate. Limiting it to Caltrans staff in the San Bernardino and Pomona areas practically eliminates Planners working and living in Orange, Los Angeles and San Diego Counties, unless you have separate surveys specifically tailored to them.

### III. Preparation of AICP Exam study materials

1. From the results for the survey, discussed in Section II, the team members from CPP and LTC developed a series of webinars based on materials from the American Planners Association. The following outlines the topics included and number of attendees for each webinar.

#### Webinar #1 (9/21/16) –AICP Benefits and Process for Applying

- a. Result of survey of Caltrans employees
- b. Information about the AICP Exam
- c. Benefits of certification
- d. Requirements and challenges
- e. Program benefits



f. Questions and answers

➤ There were 22 participants in webinar one.

#### Webinar #2 (10/6/16) Study and Preparation Process

- a. Taking the exam
- b. Guided tour of the AICP 3.0 site
- c. General approach to studying
- d. Handling the “too much material” problem
- e. Using diagnostic and practice tests
- f. Benefits of study groups
- g. Setting up study groups
- h. On-line resources

➤ There were 40 participants in webinar two.

#### Webinar #3 (10/21/16) Content Review/Test Taking Strategies

- a. Content review topic, Law and intergovernmental
- b. Content review topic, Methods

➤ There were 26 participants in webinar three

#### Webinar #4 (10/27/16) Content Review/Test Taking Strategies

- a. Content review topic, Planning Process
- b. Content review topic, Theory/Ethics
- c. Test taking strategies

➤ There were 23 participants in webinar four

2. AICP study materials recommended by CPP faculty were purchased by the LTC to assist those interested in taking the exam.
  - a. 19 copies of *Local Planning: Contemporary Principles and Practice books*
  - b. 19 copies of *Essential Readings in Urban Planning books*
  - c. 19 copies of AICP Exam Flashcard Study System
3. These materials were shipped by the LTC to the Division of Research, Innovation and System Information, Office of Policy, Planning and Program Development at Caltrans and then distributed to the districts.

- IV. Development of the Transportation Leadership, Planning and Performance Institute (TLPPI)**
1. The second project in this program developed the TLPPI. The TLPPI is a fully online certification in transportation leadership, planning and performance.
    - a. The institute consists 26 modules with a capstone project. Period of completion for participants between 2-3 months.
  2. The goal is to provide entry-level and mid-level planners with the skills and applied information needed to work in the complex arena of California transportation planning.
  3. The elements of the 26 modules include:
    - a. Basic review of concepts in a 20-30 minute recorded lecture
    - b. Advanced discussion of topics
      - Transportation leader clips (all modules): Interviews of transportation experts -- 5-10 minute videos.
      - “Professor in a box” (modules 9-13 only): Professors answer 2 to 4 questions related to the topic. Questions emphasize challenges and paradoxes -- 5-7 minute videos.
      - Mini-scenario: brief scenarios illustrating the issues and challenges – 400 word write ups by students
    - c. Quiz of the concepts: 10 questions (drawn from a computer generated, scored, and maintained from pool of approximately 30 questions): 8 from lecture, 16 from designated original source; 6 from advanced materials
    - d. Optional participant feedback survey
    - e. Capstone project (module 27): In order to receive the certification, the participants must satisfactorily complete all of the elements in the modules and the capstone project. This project will bring together the information presented and prepare the students for its application in the workplace.
    - f. The course will be fully released in the fall of 2017, with the goal of offering it every twice a year. It will be offered to 100 Caltrans employees free and to the public for a charge.

**V. Breakdown of TLPPI Modules**

**Module 1: Introduction to the Transportation Leadership, Planning, and Performance Institute (TLPPI)**

- a. This module provides an overview of the program, emphasizing why transportation planning is important; how it is changing rather dramatically; and the need for more “leadership” in transportation in general, and transportation planning in particular.
  - Participant requirements:
  - Reading: None required

- Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
- A short essay assignment
- A certification quiz: None for the first module
- b. Expert interviews in this module
  - Cameron Oakes – Caltrans District 4
  - John Bulinski – Caltrans District 8
  - Anthony Foxx – Former Secretary of Transportation

#### Module 2: Freight and Planning for Alternate Futures

- a. This module covers both the trends/challenges in transportation freight issues nationally and in the state, but also focuses on the why's and wherefores' of scenario planning.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 1 freight*, 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Anthony Foxx – Former Secretary of Transportation
  - Cameron Oakes – Caltrans District 4
  - Xudong Jia, CPP – perspective of global issues
  - John Bulinski – Caltrans District 8

#### Module 3: Transportation and Climate Change

- a. This module looks at the effects that climate change and extreme weather events will have on the highway system, especially in the California context.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 2 climate change* 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Egon Terplan – SPUR
  - Tom Davis – Agua Caliente Band of Indian

#### Module 4: The Impact of Technology on Transportation Planning

- a. How society uses technology significantly effects the expectations for design and service in transportation systems, as well for transportation planning efficiency is the focus of this module.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 3 technologies*, 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz

- b. Expert interviews in this module
  - Cameron Oakes – Caltrans District 4
  - Ryan Chamberlain – Caltrans District 12
  - Xudong Jia – CPP

#### Module 5: The Challenges of Sustainability

- a. As growth of highway systems becomes less of an objective, good maintenance and the long-term sustainability becomes more important. This module looks at sustainability as an organizing principle for transportation agencies.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 4 sustainability*, 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Anthony Foxx – Former Secretary of Transportation
  - Sergio Ruiz – Caltrans District 4
  - Egon Terplan – SPUR
  - Ryan Chamberlain – Caltrans District 12
  - Matt Barth – University of Riverside

#### Module 6: Energy and Fuels Affecting the Transportation Planning

- a. This module looks at the uncertain energy future, and the effects on intermodal mix.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 5 energy*, 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Matt Barth – University of California, Riverside

#### Module 7: The Effects of Demographics on Transportation Planning

- a. This module examines how social demographics affect transportation needs, and what some of the important trends are likely to be.
  - Reading: NCHRP Report 750 Series: *Informing Transportation's Future: 6 social demographics*. 2013.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Anthony Foxx – Former Secretary of Transportation

- Egon Terplan – SPUR

#### Module 8: The Caltrans Strategic Plan

- a. Caltrans Strategic Plan is fundamental to providing focus and strategy for achieving socially authorized goals through a well-run organizational system.
  - Reading: Caltrans Strategic Management Plan 2015-2020.
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Coco Briseno – Caltrans Sacramento

#### Module 9: The Overall Performance-Based Transportation Planning and Programming Model

- Reading: Performance-Based Planning and Programming Guidebook. Chapters 1,2
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- a. Expert interviews in this module
    - Anthony Foxx – Former Secretary of Transportation
    - Tom Davis – Agua Caliente Band of Indians
    - Khalil Saba – HNTB

#### Module 10: Developing Goals and Objective in Transportation Planning

- a. This module examines the selection of broad goals, the development of objectives and the related outcomes, outputs, activities associated with them.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch 3
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - John Bulinski – Caltrans District 8
  - Dara Wheeler – Caltrans District 11
  - Tom Davis – Agua Caliente Band of Indians
  - Chris Gray – Western Riverside Council of Governments

#### Module 11: Selecting Performance Measures

- a. This module looks at the roles and types of measures, as well as the various factors to consider in selecting measures.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch 4

- Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
- A short essay assignment
- A certification quiz
- b. Expert interviews in this module
  - Sergio Ruiz – Caltrans District 4
  - Dara Wheeler – Caltrans District 11

#### Module 12: Identifying Trends and Targets

- a. This module focuses on aligning desired trends and numerical targets, time frames, and the process for setting trends by baseline data, assumptions, and factor consideration.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch 5
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Sergio Ruiz – Caltrans District 4
  - Dara Wheeler – Caltrans District 11- What does innovation look like in organizations and opportunities for the future?
  - Tom Davis – Agua Caliente Band of Indians

#### Module 13: Identifying Strategies and Analyzing Alternatives

- a. This module looks at identifying potential project strategies and examining them in light of various investment approach packages.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch. 6
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Sergio Ruiz – Caltrans District 4
  - Tom Davis – Agua Caliente Band of Indians
  - Khalil Saba – HNTB
  - Hasan Ikharta – SCAG

#### Module 14: Developing Investment Priorities

- a. Investments require plans (e.g., the LRTP) and as well as concrete strategies (such as the TIP and STIR. This module looks at how these overlapping planning tools are designed and implemented.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch 7 and 8
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz

- b. Expert interviews in this module
  - Coco Briseno – Caltrans Sacramento
  - John Bulinski – Caltrans District 8
  - Chris Gray – Western Riverside Council of Governments

#### Module 15: Ongoing Monitoring, Evaluation, and Performance Reporting

- a. This module examines the importance and implementation of monitoring systems, evaluation of program effectiveness, and performance reporting.
  - Reading: Performance-Based Planning and Programming Guidebook. Ch 15
  - Lectures: Basic lecture, Professor in a Box, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Thomas McWeeney – Cal State University San Bernardino

#### Module 16: Introduction to the Field of Leadership Studies

- a. This module introduces participants to leadership studies, concepts, terms, as well as short history of the research field
  - Reading: (Recommended) Leadership in Public Organizations, chapter 1
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Hasan Ikharta – SCAG

#### Module 17: Understanding Leader Styles

- a. This module introduces participants to the nine basic styles used by effective organizational leaders at various times or in combination with one another such as directive, supportive, and achievement-oriented.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 2
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Tom Davis – Agua Caliente Band of Indians
  - Khalil Saba – HNTB

#### Module 18: An Overview of Leadership Theories: Traditional and Transformational

- a. This module looks at traditional theories about leadership such as early hierarchical and time-and-motion approaches, trait theory, stratified

systems, and transactional theories. It also looks at charismatic and transformational theories of leadership.

- Reading: (Recommended) Leadership in Public Organizations, chapter 3 + 4
  - Lectures: Basic lectures (2), Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
- Thomas McWeeney – Cal State San Bernardino

#### Module 19: An Overview of Leadership Theories: Distributed and Ethics-based

- a. This module examines the reality of and need to distribute leadership functions via theories such as informal leadership, followership, substitutes for leadership, team leadership, etc., as well as some important ethical approaches to leadership that are especially relevant to public sector contexts.
- Reading: (Recommended) Leadership in Public Organizations, chapters 5 + 6
  - Lectures: Basic lectures (2), Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
- Ryan Chamberlain – Caltrans, District 12

#### Module 20: Enhancing Positive Leadership Traits

- a. Inherent traits (e.g., self-confidence) should be understood and leveraged, while trait weaknesses should be acknowledge and mitigated. This module examines these issues in public sector contexts.
- Reading: (Recommended) Leadership in Public Organizations, chapter 9
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
- Cameron Oakes – Caltrans, District 4
  - Chris Gray – Western Riverside Council of Governments

#### Module 21: Developing Strong Leadership Skills

- a. This module looks at communication, social, influence, analytic, technical, and capacity for learning skills. Leaders can develop these skills over time with study, experience, and feedback.
- Reading: (Recommended) Leadership in Public Organizations, chapter 10
  - Lectures: Basic lecture, Transportation leader lecture



- A short essay assignment
- A certification quiz
- b. Expert interviews in this module
  - John Bulinski – Caltrans, District 8
  - Chris Gray – Western Riverside Council of Governments

#### Module 22: Assessing One's Organizational Environment for Priorities and Action

- a. This module looks at the strategic planning from an executive and management perspective. It should complement modules 9-15 which look at planning from a transportation content focus.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 11
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - David Ready – City of Palm Springs
  - Khalil Saba - HNTB
  - Chris Gray – Western Riverside Council of Governments

#### Module 23: Getting Tasks Done

- a. This module looks at the management behaviors related to getting things accomplished: monitoring and assessing work, operations planning, clarifying roles, informing, delegating, problem solving, and managing innovation and creativity.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 12
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Chris Gray – Western Riverside Council of Governments

#### Module 24: Leading People

- a. This module examines management behaviors directly related to people: consulting, planning and organizing personnel, developing staff, motivating, managing teams, managing personnel conflict and managing personnel change.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 13
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz

- b. Expert interviews in this module
  - Coco Briseno – Caltrans, Sacramento

#### Module 25: Leading Organizations

- a. This module focuses on leadership from an organizational perspective, focusing on environmental scanning, strategic planning, mission and vision articulation, networking and collaborating, performing general management functions, decision making, and managing organizational change.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 14
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Coco Briseno – Caltrans, Sacramento
  - David Ready – City of Palm Springs

#### Module 26: Developing an Action Plan for your Personal Leadership

- a. This module sums up the issues related to leadership, and asks participants to take a hard look at their own leadership strengths and weaknesses, as well as asking them to put together a personal action plan for leadership development.
  - Reading: (Recommended) Leadership in Public Organizations, chapter 15
  - Lectures: Basic lecture, Transportation leader lecture
  - A short essay assignment
  - A certification quiz
- b. Expert interviews in this module
  - Thomas McWeeney- Cal State San Bernardino
  - John Bulinski – Caltrans, District 8
  - Coco Briseno – Caltrans, Sacramento
  - Ryan Chamberlin – Caltrans, District 8

#### Module 27: Capstone

- a. This module is the capstone project for the certification.