

# Default Report

## Pavement Training Needs Survey for California

January 29, 2019 2:22 PM MST

Q1 - Please rate the following potential training topics according to how important they are

for your agency. We will use this information to plan future CCPIC training offerings.

Field	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant	Total
Pavement first principles: management, design, construction, maintenance and rehabilitation and sustainability	68.42% 130	20.00% 38	9.47% 18	1.05% 2	1.05% 2	190
Asphalt pavement maintenance and preservation	66.67% 126	20.11% 38	8.99% 17	1.59% 3	2.65% 5	189
Asphalt pavement rehabilitation and reconstruction	65.08% 123	25.40% 48	4.76% 9	2.12% 4	2.65% 5	189
Chip seals, slurry seals, cape seals and microsurfacing	59.69% 114	29.32% 56	5.24% 10	2.62% 5	3.14% 6	191
Asphalt paving construction specifications and quality	56.08% 106	29.63% 56	10.05% 19	3.17% 6	1.06% 2	189
Asphalt pavement materials design and specification	53.37% 103	28.50% 55	11.40% 22	5.70% 11	1.04% 2	193
Asphalt pavement fundamentals	49.21% 94	34.03% 65	13.09% 25	1.57% 3	2.09% 4	191
Construction inspection fundamentals	48.95% 93	32.11% 61	13.16% 25	3.68% 7	2.11% 4	190
Pavement construction quality management and practices	48.17% 92	38.22% 73	10.99% 21	1.57% 3	1.05% 2	191
Pavement for managers (engineers and non-engineers)	46.60% 89	30.37% 58	16.23% 31	5.24% 10	1.57% 3	191
Optimizing use of pavement management systems	45.21% 85	32.45% 61	14.89% 28	4.79% 9	2.66% 5	188
Pavement management fundamentals	42.11% 80	32.63% 62	19.47% 37	4.74% 9	1.05% 2	190
In-place asphalt pavement reclamation and stabilization: candidate and type selection, design, construction	41.67% 80	41.15% 79	11.46% 22	4.17% 8	1.56% 3	192
Subgrade and gravel layer construction and stabilization	41.40% 77	38.17% 71	13.44% 25	5.91% 11	1.08% 2	186
Traffic control for safer work zones	39.57% 74	24.06% 45	30.48% 57	4.28% 8	1.60% 3	187
In-place recycling construction quality practices	38.74% 74	39.79% 76	15.71% 30	3.66% 7	2.09% 4	191
Life cycle cost analysis to select pavement types and treatments	38.74% 74	32.98% 63	20.94% 40	5.76% 11	1.57% 3	191
Utility cuts and pavement	33.86% 64	39.68% 75	19.58% 37	4.76% 9	2.12% 4	189

Field	Very Important		Somewhat Important		Neutral		Somewhat Unimportant		Very Unimportant		Total
Pavement sustainability principles and practices	33.16%	62	38.50%	72	22.46%	42	4.81%	9	1.07%	2	187
Superpave mix design for local agencies	33.16%	62	27.27%	51	29.95%	56	6.42%	12	3.21%	6	187
Pavement drainage: design and maintenance	32.11%	61	40.53%	77	22.11%	42	4.74%	9	0.53%	1	190
Laboratory tests for paving materials	31.22%	59	34.92%	66	24.34%	46	6.88%	13	2.65%	5	189
Superpave and Caltrans section 39 HMA specs: critical changes	31.02%	58	27.81%	52	31.55%	59	5.35%	10	4.28%	8	187
Asphalt rubber and rubberized asphalt paving materials	30.89%	59	38.22%	73	21.47%	41	5.76%	11	3.66%	7	191
Integrated asset management: roads, utilities, urban forestry, stormwater	28.57%	54	33.86%	64	26.46%	50	7.41%	14	3.70%	7	189
Asphalt pavement design: R-value and advanced	28.42%	52	38.80%	71	24.04%	44	5.46%	10	3.28%	6	183
Pavement selection, design, and construction for active transportation features	27.42%	51	31.18%	58	32.80%	61	5.38%	10	3.23%	6	186
Pavement evaluation and design using deflection methodologies for local agencies	26.32%	50	38.95%	74	24.21%	46	7.89%	15	2.63%	5	190
Pavement smoothness: essentials	25.67%	48	44.92%	84	22.46%	42	5.35%	10	1.60%	3	187
Unpaved roads and rural roads management best practices	25.41%	47	22.16%	41	25.41%	47	17.30%	32	9.73%	18	185
Fast-track pavement work and public communication for large projects	23.66%	44	29.03%	54	32.26%	60	10.75%	20	4.30%	8	186
Review of development pavement plans	23.12%	43	29.57%	55	33.87%	63	9.14%	17	4.30%	8	186
Concrete pavement rehabilitation, restoration and reconstruction	20.43%	38	23.66%	44	27.96%	52	17.20%	32	10.75%	20	186
Permeable pavement construction best practices	19.57%	36	32.61%	60	28.26%	52	13.04%	24	6.52%	12	184
Concrete paving construction specifications and quality	19.46%	36	22.70%	42	30.27%	56	15.68%	29	11.89%	22	185
Concrete pavement maintenance and preservation	19.25%	36	25.13%	47	26.20%	49	16.58%	31	12.83%	24	187
Permeable pavements: multi-functional pavement for transportation, stormwater quality and flood control	18.28%	34	36.56%	68	28.49%	53	10.75%	20	5.91%	11	186
Pavement forensic investigations: structural and functional	17.65%	33	37.43%	70	32.09%	60	8.02%	15	4.81%	9	187
Gravel road construction and unpaving to gravel	17.30%	32	20.00%	37	32.97%	61	16.76%	31	12.97%	24	185
Concrete pavement fundamentals	17.20%	32	28.49%	53	25.27%	47	18.82%	35	10.22%	19	186
Concrete pavement and flatwork materials and specification	16.76%	31	23.78%	44	31.89%	59	15.68%	29	11.89%	22	185

Field	Very Important	Somewhat Important	Neutral	Somewhat Unimportant	Very Unimportant	Total
Concrete pavement design	10.27% 19	20.00% 37	38.38% 71	16.22% 30	15.14% 28	185

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## Q7 - Please rank the course you selected as important in order of importance with the top

being the most important and the bottom being the least (by dragging and dropping)

Field	1	2	3	4	5	6	7	8
Pavement first principles: management, design, construction, maintenance and rehabilitation and sustainability	37	14	6	4	6	2	5	5
Asphalt pavement fundamentals	12	12	8	10	3	10	6	5
Traffic control for safer work zones	6	3	1	1	0	1	1	3
Pavement for managers (engineers and non-engineers)	6	14	14	5	3	2	6	4
Construction inspection fundamentals	5	4	2	2	4	2	3	3
Asphalt pavement maintenance and preservation	5	11	16	9	11	9	6	8
In-place asphalt pavement reclamation and stabilization: candidate and type selection, design, construction	4	5	3	0	2	2	7	2
Chip seals, slurry seals, cape seals and microsurfacing	4	8	8	6	5	3	6	9
Asphalt paving construction specifications and quality	4	4	1	6	5	4	6	7
Asphalt pavement rehabilitation and reconstruction	4	3	7	10	11	17	7	4
Superpave and Caltrans section 39 HMA specs: critical changes	3	0	1	0	0	5	3	1

Field	1	2	3	4	5	6	7	8
Optimizing use of pavement management systems	3	2	2	5	2	3	1	2
Utility cuts and pavement	2	2	2	2	3	0	1	1
Integrated asset management: roads, utilities, urban forestry, stormwater	2	1	0	0	0	1	0	0
Pavement management fundamentals	2	2	2	4	7	1	4	3
Life cycle cost analysis to select pavement types and treatments	2	2	4	4	5	3	4	2
Fast-track pavement work and public communication for large projects	1	0	0	1	1	0	0	1
Gravel road construction and unpaving to gravel	1	2	0	1	1	2	1	2
Unpaved roads and rural roads management best practices	1	2	1	1	0	2	1	2
Superpave mix design for local agencies	1	2	0	1	2	1	2	2
Pavement smoothness: essentials	1	0	1	0	1	1	3	1
Asphalt pavement materials design and specification	1	4	7	6	13	6	3	6
Concrete pavement maintenance and preservation	1	0	0	1	0	2	5	0
Pavement forensic investigations: structural and functional	0	0	2	0	0	0	1	1
Review of development pavement plans	0	0	1	0	0	0	2	0

Field	1	2	3	4	5	6	7	8
Pavement selection, design, and construction for active transportation features	0	2	0	3	0	2	3	0
Concrete pavement design	0	0	0	0	0	0	0	0
Asphalt pavement design: R-value and advanced	0	0	1	3	0	0	2	5
Permeable pavement construction best practices	0	0	1	0	0	0	0	0
Permeable pavements: multi-functional pavement for transportation, stormwater quality and flood control	0	1	0	0	0	1	0	0
Pavement sustainability principles and practices	0	3	1	2	1	1	0	0
Pavement drainage: design and maintenance	0	0	2	4	1	2	2	0
Pavement evaluation and design using deflection methodologies for local agencies	0	0	1	0	2	3	3	0
Pavement construction quality management and practices	0	1	2	2	3	1	2	3
In-place recycling construction quality practices	0	2	4	3	0	2	1	3
Laboratory tests for paving materials	0	0	2	3	1	1	1	5
Asphalt rubber and rubberized asphalt paving materials	0	0	0	2	5	4	2	4
Concrete paving construction specifications and quality	0	0	1	0	0	0	0	0
Subgrade and gravel layer construction and stabilization	0	1	2	1	5	7	4	4

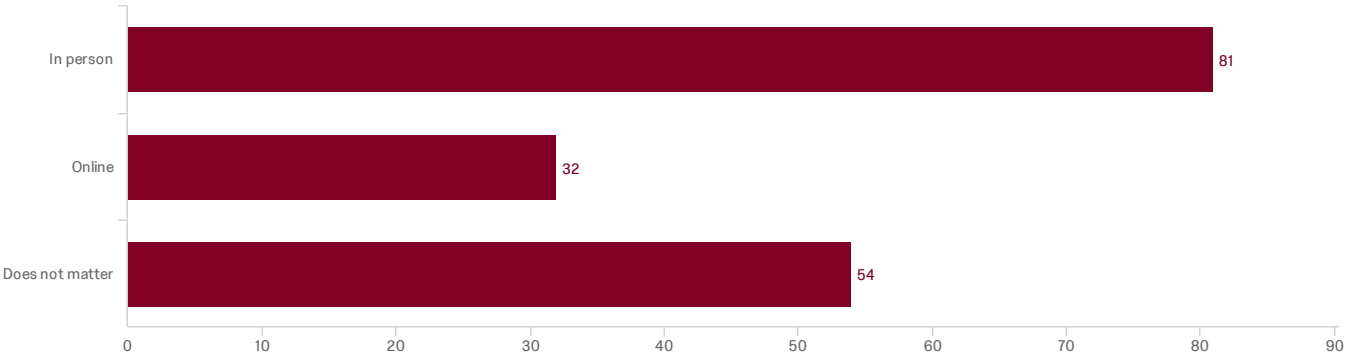
Field	1	2	3	4	5	6	7	8
Concrete pavement and flatwork materials and specification	0	0	0	0	0	2	1	0
Concrete pavement rehabilitation, restoration and reconstruction	0	0	0	1	1	1	2	8
Concrete pavement fundamentals	0	1	2	5	4	1	0	1
	108	108	108	108	108	107	107	107

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# Q2 - I prefer training

Field	Choice Count
In person	48.50% 81
Online	19.16% 32
Does not matter	32.34% 54
167	

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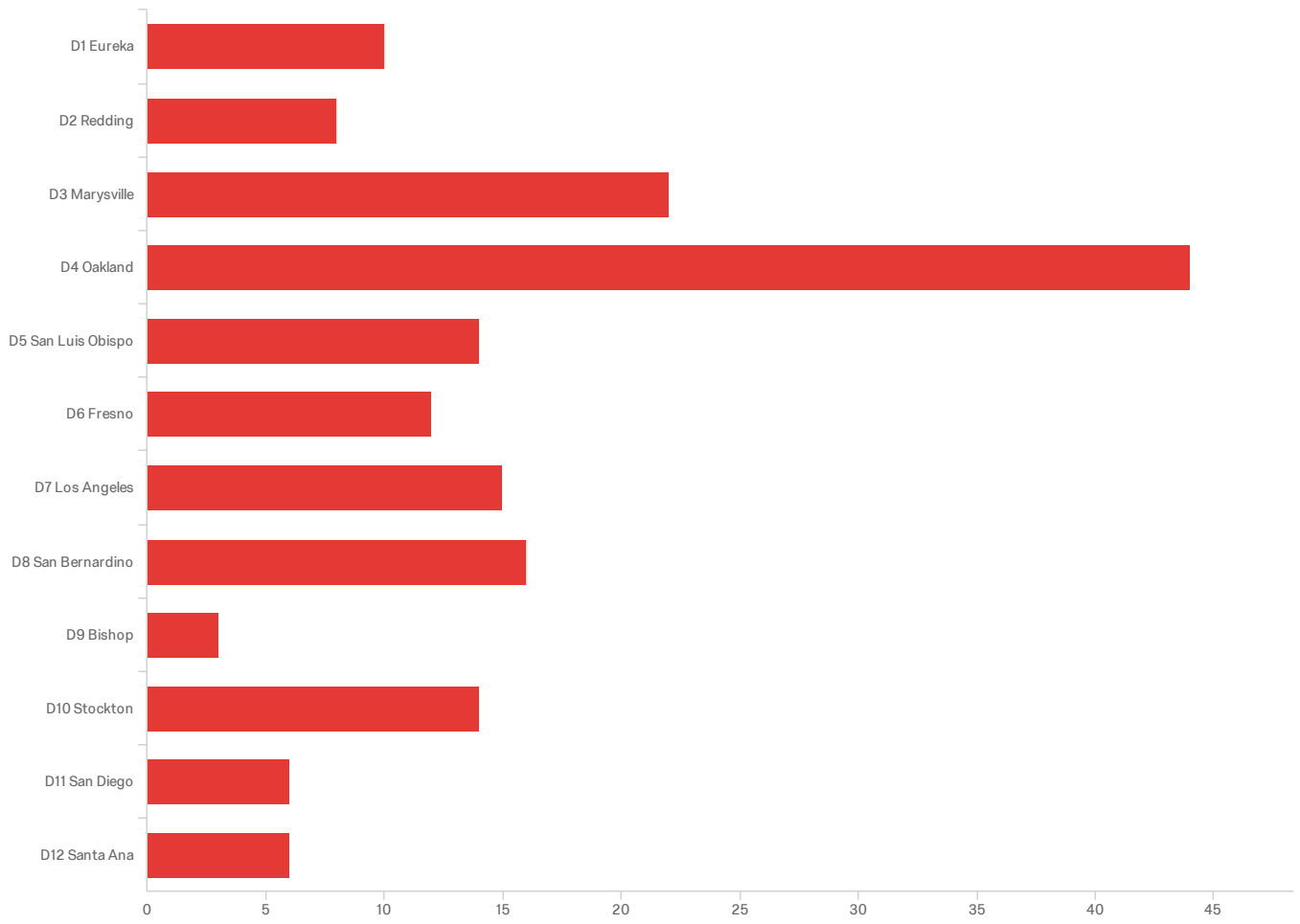


### Q3 - Which Caltrans District is your agency located in?

Field	Choice Count
D1 Eureka	5.88% 10
D2 Redding	4.71% 8
D3 Marysville	12.94% 22
D4 Oakland	25.88% 44
D5 San Luis Obispo	8.24% 14
D6 Fresno	7.06% 12
D7 Los Angeles	8.82% 15
D8 San Bernardino	9.41% 16
D9 Bishop	1.76% 3
D10 Stockton	8.24% 14
D11 San Diego	3.53% 6
D12 Santa Ana	3.53% 6

170

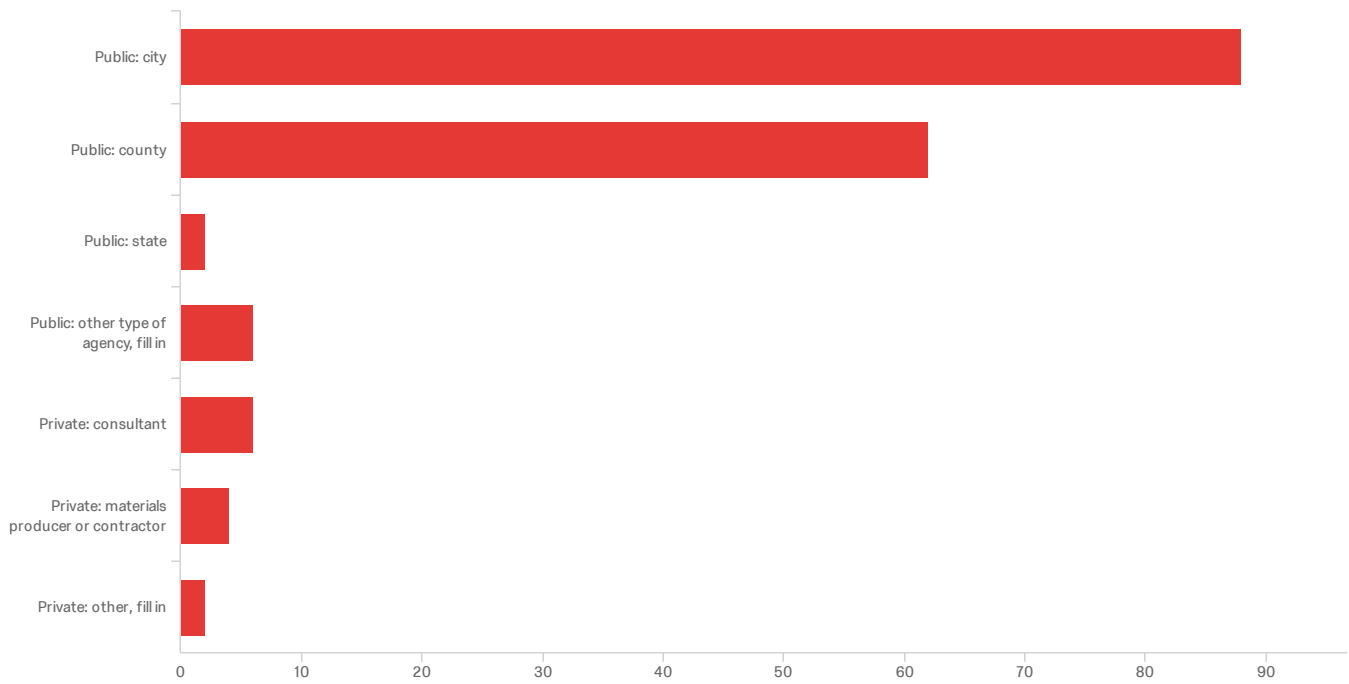
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## Q4 - What kind of organization is your primary employer?

Field	Choice Count
Public: city	51.76% 88
Public: county	36.47% 62
Public: state	1.18% 2
Public: other type of agency, fill in	3.53% 6
Private: consultant	3.53% 6
Private: materials producer or contractor	2.35% 4
Private: other, fill in	1.18% 2
170	

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### Q4\_4\_TEXT - Public: other type of agency, fill in

Public: other type of agency, fill in

public works

Tribal

Public: other type of agency, fill in

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MPO

County

RTPA

Q4\_7\_TEXT - Private: other, fill in

▲  
Private: other, fill in

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Harrison Engineering

Consulting Engineer for City

## Q5 - If there is one thing that we could do to address your training needs in pavement, what could we do for your agency?

If there is one thing that we could do to address your training needs in pa...

Effective seminar for engineers on design of asphalt and rubberized asphalt pavements. Typically, the courses are either too broad and do not concentrate on the engineering principles and design aspects pavement design.

Pavement markings

Information on polymer modified and the benefits of HMRA, PG 70-10 C2, TRMAC GG, Cape seals, Etc. Along with Construction inspection courses,

We're located in both D1 and D2

Focus on recycled asphalt concrete and reclaimed materials.

Provide training in determining the most cost effective method for pavement restoration, rehabilitation or replacement.

Develop an appropriate local agency HMA specification for mix design for low volume roads, not Superpave with an appropriate smoothness spec.

Pavement preservation best technics

Come to Arvin and see how terrible our roads are and spend a day here with our City Engineer and Staff so that you can assess our specific needs, and understand how critical our pavement management plan and repairing our streets, sidewalks, curb and gutter is crucial to helping our community.

Recommend other memberships to be active in, such as WRAPP, for helping in staying current, and learning what other agencies are doing and what kind of projects are being constructed that are most cost efficient for life cycle analysis.

More classes in Sacramento area.

Best Practices for maintenance of roads consisting only of surface sealing over native/rock. Finding best cost to benefit treatments in surface treatment applications.

Help improve specifications and quality control processes for Cities.

Provide a variety of pavement training courses either available on-demand or at multiple times of the year to allow the best flexibility in attendance by our staff.

Help in the decision process for selecting the best form of pavement treatment taking into account life cycle costs and sustainability.

Provide one-stop Pavement Support Help Desk, local agencies can contact for specific issue or info.

Help us understand the advantages and disadvantages of the many treatment options and which to choose in a given pavement condition. We'd like an emphasis on pavement maintenance (thin layer options) like cape seal and slurry seal. We would also like help understanding life cycle costs as they apply to these varying treatment options. Should we use REAS or Microsurfacing? Does Microsurfacing or Type 2 slurry go better on a layer of ARAM in a cape seal? How economical is using hot in-place recycling instead CIPR or mill/fill? Etc. We would also benefit from a general pavement design overview course on pavement first principles.

If there is one thing that we could do to address your training needs in pa...

Clarify process and expectations for reporting and updating SB1 project information.

Asset management and decision making. Coordination with other local and regional agencies to address pavement in a more coordinated effort than from an individual agency to agency effort (working in a vacuum).

about

Key criteria/principles to consider for when to use one treatment vs. another (for example, when to use in-place recycling vs. reconstruction, and then whether to use cold in-place vs. warm in-place recycling).

Schedule more training in district 6.

BMPs for pavement types, design, construction, and qualification for Federal and State projects.

Conduct webinars

Understand how to best manage paving (flexible and rigid) on expansive, clayey native soils in a manner that is cost effective and sustainable.

HMA specs for local agencies

Provide more online training that would also help the supervisors that are out in the field with the crew.

Local agency paving spec understanding. Superpave is not applicable but need to know and understand how to comply with CT specs.

Training for inspectors

Design and Quality Control... I know, that's two things!

Regular training

let more County employees enroll in your META classes

Training in pavement sustainability, preservation, design, and inspection.

Online training for asphalt and concrete design.

It would be helpful if the schedule, or at least the order, of all the training sessions was fairly regular so we would always know that whatever training is needed, we're assured it's coming around. This of course presupposes a whole training program, not just a slew of training for one time.

Importance of pavement preservation to a pavement management system. Also, the use of RAP aggregates in pavement preservation systems.

While I love to attend in person, but our remote location makes it difficult to attend. Webinars work great!

ONLINE OPPORTUNITIES MAKE THE MATERIAL ACCESSIBLE TO ALL. IF IT MUST BE IN A CLASSROOM SETTING, A CAMERA IN THE ROOM WOULD PROVIDE MINIMAL ACCESS FOR AGENCIES, WHICH IS BETTER THAN NO ACCESS.

Explore the use of recycled plastics as a part of binder blend for Asphalt Concrete. Can you tell I am responsible for both the roads and landfills in our County

If there is one thing that we could do to address your training needs in pa...

Have more trainings here at the D3 Headquarters.

Web-based training for inspection and testing of rubberized pavements (inspectors could watch on rain days)

Local Training.

NO

continue supporting the local agencies

have some of the in-person classes in the South Bay/Peninsula Area. It is difficult for staff to get to Richmond and Oakland. :) Thanks!!!

Schedule an in person training for local agencies within the District.

Provide pavement construction inspections.

Just a really good basic class on what a Resident Engineer and Inspector does and looks out for just prior to and during construction - approval of Contractor Mix Design, the minimum necessary quality control/testing needed, and just good "during paving" construction practices.

N/A

Field judgment calls for engineers and inspectors.

Start to finish in all paving methods such as dig outs, overlays, potholing, reconstruct, sub base, and equipment operations for all methods( rollers, paver, tractor, etc. ).

More training offered.

More online classes.

Provide free, or low cost, fundamental training for pavement work crews.

I think periodic training in Pavement Management is always a topic of discussion. We are in the process of adopting Superpave and training in that area is needed to assure we are moving forward in the right direction.

Superpave Lite!

Provide training on implementation of upcoming pavement specification changes. Preferably BEFORE it is required to be implemented.

Local agency specification for HMA suitable for local roads

Yes, I need you to integrate the State SB1 program (and the funds available) for local agency roadway upkeep and the pavement management system they currently use. Is this possible? This could assist the state in understanding the health and safety capabilities of the roadway (statewide off-system local roads), and how much is needed to sustain that level (or any other acceptable level) of performance.

Help us with training our inspectors in construction inspection fundamentals.

Pavement Management & Assessment Training

If there is one thing that we could do to address your training needs in pa...

On site training on obtaining asphalt compaction

Online Training On Demand or Webinar.

Provide free training.

Include best construction practices for doing Base Failure Repairs. Discuss best practices to deal with when one encounters pumping subgrades. Discuss the use pavement fabrics, glass grids ..etc. Discuss factors that determine the best treatment based on existing pavement conditions. Discuss current HMA costs. Discuss types of Tack Oil and best practices for it's application and rates.

make training available online, on demand

Include FHWA grant eligibility training with regard to pavement restoration and rehabilitation. In other words, help local agencies discover all available outside fund sources in order to leverage limited local funding.

Educate the agency on what treatment works best for the existing type of road.

1. Provide more focus on local pavement needs (i.e. specs for locals to implement on smaller projects). 2. Sustainable pavement approaches for locals (including RAP).

Offer training for pavement managers

Currently working on LCCA, especially to incorporate permeable pavement options into StreetSaver decision tree.

**End of Report**