

MEMORANDUM

To: Massachusetts Program Administrators (PAs), Massachusetts Energy Efficiency Advisory Council (EEAC) Consultants

From: Alex Chamberlain, Althea Koburger, and Allen Lee, Cadmus

Cc: Monica Nevius, Betty Tolkin, Zack Tyler, Lynn Hoefgen, NMR Group; Allen Lee, Althea Koburger, Alex Chamberlain, Cadmus Group

Date: January 11, 2018

Re: Analyses of Immediate Code Compliance Support Initiative Commercial Classroom Training Surveys—April 24 through October 1, 2018 (TXC53)

BACKGROUND & SUMMARY OF KEY FINDINGS

This memo provides analyses of the immediate survey responses collected through paper surveys, registration data, and poll questions from seven Code Compliance Support Initiative (CCSI) commercial trainings. These are the first commercial training surveys to be collected since implementation of the CCSI passed from CLEAResult to Performance Systems Development (PSD), who took over providing training sessions in 2018. All trainings focused on the commercial 2015 IECC code which became mandatory in Massachusetts at the beginning of 2017. Two trainings pertaining to solar-ready provisions (which became mandatory at the beginning of 2018) administered in June 2018 are not covered in this memo because few surveys were collected at these sessions. We will discuss findings from the solar-ready provisions training topic in future memos.

Sixty-four (52%) of the 124 attendees filled out paper survey forms. Of these survey respondents, 38 were building code officials and the remaining 26 fell into the general category of builders, architects, contractors, equipment suppliers, and others, referred to as “building professionals.” Not everyone who turned in a survey form answered all the questions. The number of respondents for each individual survey question is shown in the tables throughout this memo.

Many of the immediate survey questions are the same as those fielded in the trainings conducted under the previous contractor, CLEAResult. Where applicable, we compare responses to those provided by trainees from the 19 commercial trainings on the 2015 IECC energy code held from September 15, 2016 through October 25, 2017.

Below we summarize the key findings from the immediate survey responses collected during seven commercial 2015 IECC trainings held in 2018:

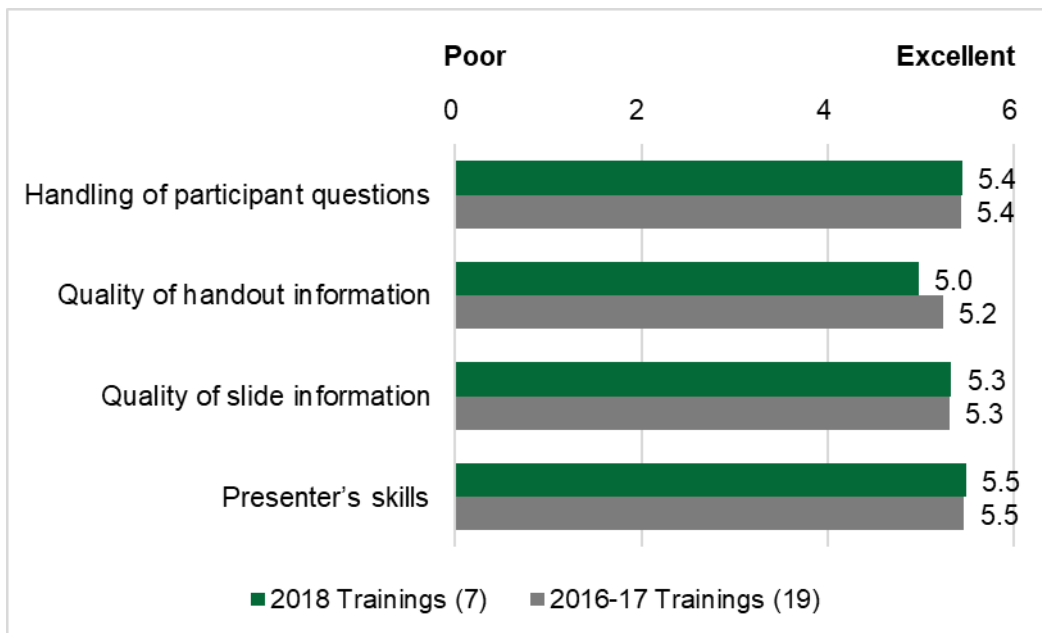
- MA CCSI Commercial Code Update Training Surveys (“Code Update”)
 - Trainings held April 24, May 9, Sept. 19, Sept. 20, and Oct. 1
 - Received 45 surveys from 101 attendees (45%)

- MA CCSI Commercial Air Barriers Training Surveys (“Air Barriers”)
 - Trainings held May 8 and Oct. 1
 - Received 19 surveys from 38 attendees (50%)

The detailed findings on which these are based can be found in [Appendix A](#).

- **Respondents provided generally positive feedback on the quality of the trainings, consistent with commercial trainings held in 2016 and 2017 (Figure 1).** On a 6-to-1 scale, in which 6 is excellent and 1 is poor, mean ratings ranged from 5.0 for the handouts to 5.5 for the presenter’s skills. **Over the course of the seven training sessions, the rating for presenter’s skills increased from a 5.0 to a 6.0.** This suggests that PSD and the presenter made continuous improvements in the presentations. However, averaged scores across all four quality aspects were either identical, or within 0.2 of the 2016 to 2017 scores, suggesting an overall similar quality of participant experience.
- Eighty-nine percent of respondents indicated they would recommend the training to others, which is down from 97% of respondents from the trainings held in 2016 and 2017. **Fewer attendees said they would recommend the first three trainings (79%, n=24) compared to the latter four (97%, n=33), which could be attributed to PSD gaining experience as the new implementer.** The quality ratings shown in [Figure 1](#) reflect 61 responses from the 2015 IECC trainings conducted in 2018 and 228 responses from the 2015 IECC trainings conducted in 2016 and 2017.

Figure 1: Mean Quality Ratings – 2015 IECC Commercial Trainings in 2018 and 2016-2017*



*Numbers in parentheses in legend depict number of trainings held.

- Using a 6-to-1 scale, in which 6 is extremely useful and 1 is not at all useful, **the mean usefulness of the 2018 trainings is 5.1, compared to 4.9 for trainings held in 2016 and 2017.**
- **Attendees found information about COMcheck software and solar-ready provisions to be the most important new information provided by the trainings.** While the Massachusetts building energy code remains based on the 2015 IECC, the “solar ready” provision (i.e., the requirement that a section of the roof or building overhang in new homes is designated and reserved for the future installation of a solar photovoltaic or solar thermal system) went into effect at the beginning of 2018. Respondents also mentioned learning about codes/requirements and documentation as other important training components.
- While relatively few respondents (10 of 64) offered additional comments, they most often cited the **need for more information on code requirements and COMcheck.**

Cadmus and NMR provided summaries of the findings from the immediate commercial training surveys to the sponsors and EEAC every other month in 2014, three times in 2015, twice in 2016, once in 2017, and twice in 2018. These interim deliverables are designed to provide early feedback to PAs, EEAC, and implementers on how well specific aspects of the trainings are being received. We are providing this memo after collecting fewer responses than in the past in order to provide timely feedback after the switch in implementation contractors. A listing of the residential and commercial immediate survey memos previously provided can be found in [Appendix B](#).

Appendix A Detailed Findings

A.1 USEFULNESS: AIR BARRIERS

- Each survey asked respondents to rate the usefulness of 10 components of the trainings on a 1-to-6 scale, in which 6 is extremely useful and 1 is not at all useful. The 2018 usefulness ratings were quite high: Air Barriers training respondents provided an average rating of at least 5.2 for every training component ([Table 1](#)). Ratings for all components ranged from 5.2 to 5.4.
- Mean usefulness ratings were somewhat higher in 2018 (5.2 to 5.4) than in 2016-17 among similar training components (4.8 to 5.2).¹
- Table 2 shows at least half the respondents who answered questions about the newness of the training presented indicated that all the training components were at least somewhat new except for air barrier installation. (Only two of seven respondents said at least some air barrier insulation information was new.)

¹ Three of the training components in the surveys used in 2018 were not part of the 2016-17 surveys.

Table 1: Usefulness Ratings for Commercial Air Barriers Training Components in 2018

Training Component	Respondents (n)			Rating of Usefulness*						Mean Ratings			2016-17
	All	Code Officials	Building Professionals	6**	5	4	3	2	1	All	Code Officials	Building Professionals	Mean***
Advantages of proper air barrier insulation	18	13	5	12	4	1	0	0	1	5.4	5.4	5.4	5.2
Air barrier installation	17	13	4	11	4	1	0	1	0	5.4	5.5	5.3	5.0
Design considerations	17	13	4	11	4	1	0	1	0	5.4	5.5	5.3	5.0
Air flow effects (stack, wind, mechanical)	18	13	5	10	5	3	0	0	0	5.4	5.5	5.0	N/A
Effective air barrier characteristics	17	13	4	10	6	0	0	1	0	5.4	5.4	5.5	4.8
Material choices	17	13	4	9	6	1	0	1	0	5.3	5.3	5.3	N/A
Moisture flow impacts	17	13	4	8	6	2	1	0	0	5.2	5.4	4.8	N/A
Leakage impacts	17	13	4	8	8	0	1	0	0	5.4	5.4	5.3	5.2
Insulation efficacy	17	13	4	8	7	0	2	0	0	5.2	5.3	5.0	5.1
Key requirements per IECC 2015	17	13	4	7	9	0	1	0	0	5.3	5.3	5.3	5.2

*The number of responses is shown where sample size is less than 20.

**Sorted descending by number of 6 ratings.

***For 2016-17 mean usefulness ratings, training components from 2018 are matched to the most similar training components from 2016-17.

Table 2: Whether Commercial Air Barriers Training Components Were New to Attendees

Training Component	All*				Code Officials*				Building Professionals*				2016-17
	<i>n</i>	All or Most**	Some	None	<i>n</i>	All or Most	Some	None	<i>n</i>	All or Most	Some	None	Yes***
Key requirements per IECC 2015	9	2	6	1	6	1	4	1	3	1	2	0	50%
Moisture flow impacts	10	2	4	4	6	1	2	3	4	1	2	1	N/A
Material choices	8	2	3	3	5	1	2	2	3	1	1	1	N/A
Air flow effects (stack, wind, mechanical)	11	1	6	4	7	1	3	3	4	0	3	1	N/A
Advantages of proper air barrier insulation	11	1	6	4	7	0	4	3	4	1	2	1	23%
Leakage impacts	9	1	6	2	6	1	3	2	3	0	3	0	17%
Effective air barrier characteristics	9	1	6	2	6	1	3	2	3	0	3	0	39%
Design considerations	8	1	3	4	5	0	2	3	3	1	1	1	40%
Air barrier installation	7	1	1	5	5	0	1	4	2	1	0	1	28%
Insulation efficacy	9	0	6	3	6	0	3	3	3	0	3	0	20%

*The number of responses is shown where sample size is less than 20.

**Sorted descending by number of “All or Most” ratings. Responses changed from “yes/no” to “most/some/none” in 2017.

***For 2016-17 newness ratings, training components from 2018 are matched to the most similar training components from 2016-17.

A.2 USEFULNESS: CODE UPDATE

- Respondents also rated the usefulness of 10 components of the Code Update trainings on a 1-to-6 scale, in which 6 is extremely useful and 1 is not at all useful. The Code Update trainings were generally rated as less useful compared to the Air Barrier trainings. Average usefulness ratings for Code Update training components were between 4.7 and 5.3 (Table 3).
- Mean usefulness ratings were roughly the same in 2018 (4.7 to 5.3) as they were for similar training components from 2016 and 2017 (4.7 to 5.2).² However, several showed lower usefulness ratings, including lighting and lighting controls and setback controls.
- As Table 4 shows, most respondents who responded to questions about the newness of the training presented indicated that all the Code Update training components were at least somewhat new.
- Although the sample sizes are small, the proportions of respondents indicating that setback controls and lighting and controls commissioning components were new to them decreased significantly from 2016-17 to 2018.

² One of the training components in the surveys used in 2018 was not part of the 2016-17 surveys.

Table 3: Usefulness Ratings for Commercial Code Update Training Components in 2018

Training Component	Respondents (n)			Rating of Usefulness						Mean Ratings			2016-17
	All	Code Officials	Building Professionals	6*	5	4	3	2	1	All	Code Officials	Building Professionals	Mean**
Solar-Ready	37	18	19	51%	30%	14%	3%	3%	0%	5.2	5.4	5.1	N/A
COMcheck	37	19	18	46%	38%	14%	3%	0%	0%	5.3	5.4	5.2	4.7
Additional efficiency packages	34	16	18	41%	29%	12%	15%	3%	0%	4.9	5.3	4.6	5.0
Air barriers	35	17	18	40%	29%	17%	11%	0%	3%	4.9	5.0	4.8	5.2
Economizers	35	17	18	40%	26%	17%	17%	0%	0%	4.9	5.1	4.7	4.9
Mechanical systems commissioning	36	18	18	36%	36%	17%	8%	3%	0%	4.9	5.1	4.8	4.8
Setback controls	34	16	18	35%	29%	24%	6%	6%	0%	4.8	5.1	4.6	5.1
Documentation	37	19	18	35%	38%	16%	8%	0%	3%	4.9	5.1	4.8	4.9
Lighting and controls commissioning	35	17	18	34%	37%	11%	14%	3%	0%	4.9	5.3	4.4	5.0
Concurrency period	36	18	18	31%	33%	17%	11%	8%	0%	4.7	4.9	4.4	4.8

*Sorted descending by number of 6 ratings.

**For 2016-17 mean usefulness ratings, training components from 2018 are matched to the most similar training components from 2016-17.

Table 4: Whether Commercial Code Update Training Components Were New to Attendees

Training Component	All*				Code Officials*				Building Professionals*				2016-17
	<i>n</i>	All or Most**	Some	None	<i>n</i>	All or Most	Some	None	<i>n</i>	All or Most	Some	None	Yes***
Economizers	20	45%	50%	5%	10	5	4	1	10	4	6	0	43%
Solar-Ready	20	35%	55%	10%	10	3	5	2	10	4	6	0	N/A
Mechanical systems commissioning	20	30%	65%	5%	10	4	5	1	10	2	8	0	38%
Concurrency period	20	30%	25%	45%	10	4	1	5	10	2	4	4	46%
COMcheck	21	24%	48%	29%	11	2	4	5	10	3	6	1	46%
Documentation	21	24%	67%	10%	11	3	6	2	10	2	8	0	15%
Air barriers	20	20%	55%	25%	10	2	4	4	10	2	7	1	23%
Setback controls	19	7	10	2	9	3	4	2	10	4	6	0	63%
Additional efficiency packages	19	7	10	2	9	4	4	1	10	3	6	1	27%
Lighting and controls commissioning	19	6	12	1	9	4	4	1	10	2	8	0	63%

*The number of responses is shown where sample size is less than 20.

**Sorted descending by number of “All or Most” ratings. Responses changed from “yes/no” to “most/some/none” in 2017.

***For 2016-17 newness ratings, training components from 2018 are matched to the most similar training components from 2016-17.

A.3 QUALITY

- Respondents also gave high ratings to the quality of the presentations (Table 5), with mean ratings ranging from 5.0 to 5.5 on a 6-to-1 scale, in which 6 is excellent and 1 is poor. The highest ratings went to the presenter’s skills and handling of participant questions. Eighty-nine percent of respondents said they would recommend the training to others.
- The quality of the presenter’s skills improved consistently from the first training in April (5.0) to the two final trainings in October (5.9 weighted average). The average rating for handout quality was inconsistent, ranging from 3.3 to 6.0. The quality of handout information received the lowest mean quality rating of the four categories. As per PSD, four documents have been handed out at all classroom training sessions (two residential and two commercial checklists), with a fifth (another residential worksheet) added in October. Please review the 2018 CCSI Process Assessment for more details about the handouts provided by the instructors and made available to training participants as well as considerations for handouts in the future.

Table 5: Quality of Trainings, 2018
(Mean ratings on a 6 to 1 scale)

General Category	4/24*	5/8**	5/9*	9/19*
n	15	4	8	9
Presenter’s skills	5.0	5.3	5.3	5.7
Quality of slide information	4.8	5.3	5.3	5.6
Quality of handout information	5.1	5.5	3.3	4.7
Handling of participant questions	5.1	5.3	5.4	5.4
n***	14	3	7	9
Percent recommending training to others	86%	67%	71%	100%
General Category	9/20*	10/1**	10/1*	Total
n	4	15	6	61
Presenter’s skills	5.8	5.8	6.0	5.5
Quality of slide information	5.8	5.5	5.7	5.3
Quality of handout information	5.5	5.2	6.0	5.0
Handling of participant questions	5.8	5.6	5.8	5.4
n***	4	15	5	57
Percent recommending training to others	100%	93%	100%	89%

*Code Update training.

**Air Barriers training.

***Different numbers of respondents replied to this separate question than provided ratings above.

- The latest training quality ratings held steady compared to the 2015 IECC commercial trainings conducted in 2016 and 2017, except for the quality of handout information, which is a bit lower, as shown in [Table 6](#).

Table 6: Quality of Trainings, Compared to 2016-17
(Mean ratings on a 6 to 1 scale)

General Category	2018	2016-17
<i>n</i>	61	228
Presenter’s skills	5.5	5.5
Quality of slide information	5.3	5.3
Quality of handout information	5.0	5.2
Handling of participant questions	5.4	5.4

A.4 USE OF TRAINING

- Among attendees who provided usable responses to the question, the majority of code officials and building professionals expect to work on fewer than five commercial buildings permitted under 2015 IECC ([Table 7](#)).

Table 7: Commercial Buildings Expected Under 2015 IECC

Number of Commercial Buildings	Expected buildings permitted in 2018		Expected buildings completed in 2018	
	Code officials	Building professionals	Code officials	Building professionals
<i>n*</i>	11	10	7	10
Less than five	6	7	4	8
Five to ten	2	2	1	0
Eleven to 100	1	1	1	2
More than 100	2	0	1	0

*The number of responses is shown where sample size is less than 20.

- When considering more specific dates, only about one half of code officials and building professionals (46%) had already worked on or inspected a building permitted under 2015 IECC before the spring of 2018 ([Table 8](#)). More than twice as many building professionals (67%) as code officials (31%) had already worked on or inspected a building as a percentage of each group. Twenty-six percent of attendees overall had inspected and/or worked on 2015 IECC buildings prior to 2018.

Table 8: When First Expect to Inspect/Work on Building Under 2015 IECC

Estimated Time Period	Code Officials	Building Professionals	Total
<i>n</i>	29	21	50
Before January 2018	24%	29%	26%
January through March 2018	7%	38%	20%
April through June 2018	24%	5%	16%
July through September 2018	17%	0%	10%
October through December 2018	21%	14%	18%
Other	7%	14%	10%
Total	100%	100%	100%

- However, as shown in [Table 9](#), 63% said they expected to use the training immediately, and 90% expected to use it within six months, indicating the trainings are providing attendees useful information with immediate applications. Responses from the 2018 trainings are consistent with responses from trainings in 2016 and 2017 in that the most common response was expecting to use the training information immediately, but the 2016 to 2017 respondents' response was slightly lower in the short-term (52% of 2016-17 expected to use the training immediately), possibly due to the IECC 2015 code being new to classroom attendees.
- Code officials reported that they'd be more likely to apply what they learned immediately to their work, whereas building professionals would apply what they learned within six months. The discrepancy between the two groups may relate to how the contents of the trainings are delivered to the attendees.

Table 9: Expected First Use of Training Information

Expected First Use of Training Information	2018 Commercial Trainings			2016 to 2017 Commercial Trainings		
	Code Officials	Building Professionals	Total	Code Officials	Building Professionals	Total
<i>n</i>	35	24	59	145	55	200
As soon as I return to work	77%	42%	63%	54%	47%	52%
Sometime in the next three months	6%	33%	17%	18%	31%	22%
In the next four to six months	3%	21%	10%	18%	13%	17%
In the next seven to twelve months	6%	0%	3%	6%	0%	4%
More than a year from now	3%	0%	2%	2%	5%	3%
Not likely to ever use it	6%	4%	5%	3%	4%	3%
Total*	100%	100%	100%	100%	100%	100%

*Totals may not sum to 100% due to rounding.

A.5 COMCHECK USE

- Questions on the use of COMcheck were added for the two October 1st training sessions. Code officials were asked to indicate how often they observed COMcheck being used on projects before and since the start of 2017 (Table 10). Eight of 16 respondents observed it being used less than half the time before 2017, whereas only four of 16 observed it being used less than half the time since the start of 2017. Seven respondents reported increased usage, two reported decreased usage, and seven reported no change in usage on commercial projects they worked on.

Table 10: How Often Code Officials Use COMcheck

Frequency	Before 2017	2017 Onward
<i>n*</i>	16	16
Never	2	2
1%-24%	4	1
25%-49%	2	1
50%-74%	4	4
75%-99%	2	6
Always	2	2

*The number of responses is shown where sample size is less than 20.

- Building professionals were also asked questions about their use of COMcheck, but none of the submitted surveys included responses to the questions. Since this question was

added later in the year, it was not asked of all participants, which affects the number of responses available to evaluate for these questions.

A.6 MOST IMPORTANT NEW INFORMATION AND OTHER QUALITATIVE DATA

- Combining responses from building code officials and building professionals, information about COMcheck software and the solar-ready provisions was identified most frequently as the most important new information provided by the trainings (Table 11). While the Massachusetts building energy code remains based on the 2015 IECC, the “solar ready” provision (i.e., the requirement that a section of the roof or building overhang in new homes is designated and reserved for the future installation of a solar photovoltaic or solar thermal system) went into effect at the beginning of 2018. The information building code officials mentioned second-most often as important new information was related to documentation.

Table 11: Most Important New Information Provided by the Trainings
(Open-end response)

General Category	Code Officials	Building Professionals	All Trainees
<i>n</i> *	17	16	33 (100%)**
COMcheck	4	4	24%
Solar ready	2	5	21%
Code/requirements	1	3	12%
Documentation	3	0	9%
Everything/general	0	2	6%
Dangers of moisture	1	1	6%
Air barrier information	2	0	6%
Reports	1	0	3%
Compliance	1	0	3%
Other	2	1	9%

*The number of responses is shown where sample size is less than 20.

**Percentages may not sum to 100% due to rounding.

- Building code officials mostly said the trainings provided them with information useful for planning and inspections, code enforcement, and current projects. Building professionals mostly said they would use this information for current projects and as a reference (Table 12).

Table 12: How Information Will Be Used
(Open-end response)

General Category	Code Officials	Building Professionals	Total
<i>n</i> *	16	12	28 (100%)**
Current projects	3	4	25%
Planning/inspections	5	1	21%
As a reference	1	3	14%
Code enforcement	2	0	7%
Share information with own staff	1	1	7%
Future projects	1	0	4%
Other	3	3	21%

*The number of responses is shown where sample size is less than 20.

**Percentages may not sum to 100% due to rounding.

- Very few participants provided comments and suggestions for improving the trainings. Suggestions for providing more information on code requirements and additional training on COMcheck software were the only suggestions offered by more than one person. Four respondents offered praise for the training (Table 13).

Table 13: Additional Comments and Suggestions to Improve Trainings
(Open-end response; number of responses)

General Category	Code Officials	Building Professionals
n	4	9
Presenter did a good job	0	4
More information on code requirements	2	1
COMcheck training	0	2
Not relevant	0	1
Provide examples	0	1
More general information	1	0
How to use MassSave	1	0

A.7 PROJECT LOCATIONS

- Survey respondents who attended the 2018 trainings examined here work in cities and towns across Massachusetts and Rhode Island.³ Building professionals most often cited Boston and Cambridge (Table 14).
- Of the 45 locations listed in Table 14, 30 use the stretch code and 14 use the code based on the 2015 IECC. The final response was Rhode Island (out of state). Of the 50

³ Attendees could list up to three municipalities on the survey forms.

respondents who indicated specific locations on their survey forms, 34 worked in at least one stretch code location, while an additional four identified Rhode Island.

Table 14: Cities and Towns Represented in the April through October 2018 Trainings

(Number of responses; multiple response; * indicates stretch code location)

City or Town	Code Officials	Building Professionals	Total	City or Town	Code Officials	Building Professionals	Total
Acton*	2	0	2	Lowell*	0	1	1
Amherst*	1	0	1	Marblehead	1	0	1
Andover*	0	1	1	Mattapoissett	1	0	1
Arlington*	0	2	2	Maynard*	1	0	1
Avon	1	0	1	Medford*	1	0	1
Bedford*	0	1	1	Milford	1	1	2
Belmont*	0	1	1	Montague*	1	0	1
Berkeley	1	0	1	Newburyport*	1	0	1
Boston*	1	11	12	Newton*	2	1	3
Braintree	0	1	1	Northbridge*	1	0	1
Brockton*	1	0	1	Peabody	0	1	1
Cambridge*	2	9	11	Pelham*	1	0	1
Chelsea*	0	1	1	Plymouth	1	0	1
Dartmouth*	1	0	1	Reading	0	1	1
Dennis	2	0	2	Revere*	1	0	1
Dracut	0	1	1	Rhode Island (out of state)	4	0	4
Fairhaven	1	0	1	Salem*	0	1	1
Fall River	1	0	1	Salisbury*	1	0	1
Freetown	1	0	1	Shrewsbury*	0	1	1
Halifax*	0	1	1	Somerville*	0	3	3
Kingston*	0	1	1	Wenham*	1	0	1
Lexington*	0	1	1	Worcester*	0	6	6
Littleton*	1	0	1				

A.8 UNIQUE ATTENDEES - ALL TRAININGS

- NMR calculated the number of unique trainees for all 2015 IECC trainings from August 10, 2016 through April 19, 2018 by using trainee enrollment data and completed immediate surveys. NMR counted 193 individuals who attended both residential and commercial trainings through April 19, 2018. Cadmus identified an additional 124 individuals who attended commercial trainings from April 24 through October 1, 2018, at least nine of whom attended previous trainings (six attended previous residential trainings and three attended previous commercial trainings).

Table 15: Numbers of Unique Training Attendees – 8/10/16 to 10/1/18
(Number of attendees)

Position	2015 IECC Residential Training Only	2015 IECC Commercial Training Only	2015 IECC Both Res. and Com. Training	Total Unique Training Attendees
Architect or design engineer	71	95	10	176
Builder (Oversees the entire construction of a home or building)	52	28	6	86
Building code official	221	177	173	571
Building contractor	64	13	2	79
Equipment supplier	7	3	0	10
HERS rater or energy efficiency consultant	32	15	1	48
Other	35	51	10	96
Position not known*	6	18	1	25
Total unique training attendees	488	400	203	1,091

Appendix B

Table 16: Listing of Immediate Survey Memos Delivered

Date	Residential Immediate Surveys	Commercial Immediate Surveys
2012 IECC Trainings		
10/31/14	X	
12/29/14		X
3/13/15	X	
4/30/15		X
7/10/15	X	
7/31/15		X
12/23/15	X	
12/30/15		X
9/26/16	X	
12/5/16		X
2015 IECC Trainings		
12/21/16 (final on 1/9/17)	X	
12/30/16 (final on 1/24/17)		X
5/30/17 (final on 6/13/17)	X	
6/14/17 (final on 6/28/17)		X
1/26/18 (final on 3/6/18)	X	
2/5/18 (final on 3/6/18)		X
6/1/18 (final on 7/9/2018)	X	
11/9/18 (final on 1/25/19)		X