

CARPENTER INDUSTRY ADVISORY COMMITTEE

2010

Minimum Industry Training Standards

Acoustical

Cabinetmaker

Carpentry

Drywall Applicator

Hardwood Floor Layer

Insulator

Modular Installer

Millwright

Pile Driver

Scaffold Erector

Shingler

Industry Training Criteria for Acoustical Installer

ONET Code: 47-2031-01A

Date: 9-28-2010

1. Length of Training

Minimum of three years

Minimum of 3600 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Acoustical Installer related and supplemental instruction

3. On The Job Training

Appendix B: Acoustical Installer Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 30%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Acoustical Installer shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Acoustical Installer Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First aid and CPR certification

2. Basic Skills
 - Trade orientation
 - Construction Mathematics
 - Print reading
 - Layout and leveling instruments
 - Scaffolds

3. Hanger Installation
 - Measuring and layout
 - Cutting and fitting
 - Code requirements

4. Ceiling Suspension Installation
 - Standard grid patterns
 - Special ceilings and security systems

5. Sound Attenuation Systems

6. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Acoustical Installer Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Scaffolds and Material Handling	700
B. Suspended Ceiling Systems	1300
C. Acoustical Tile and Panel Installation	400
D. Layout and Use of Leveling Devices	400
E. Special Application Techniques	500
F. Supplemental Skills and Green Site Work	300
Total	3600

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through F may be combined in different hourly totals to meet the minimum of 3600 hours of on the job training.

Submitted By: Acoustical Installer Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Acoustical Installer
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. ACOUSTICAL INSTALLER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 30%

V. APPROVAL

- Acoustical Installer MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Cabinet Maker

ONET Code: 51-7011.0

Date: 9-28-2010

1. Length of Training

Minimum of four years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Cabinet Maker related and supplemental instruction

3. On The Job Training

Appendix B: Cabinet Maker Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Cabinet Maker shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Cabinet Maker Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)/respirators; confined space
 - Material safety data sheets (MSDS)
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Layout and leveling instruments
 - Stock bills and estimating
3. Hand and Power Tools
 - Precision measuring and layout
 - Plunge and edge cuts
 - Finishing edges and surfaces
4. Milling and Shaping Equipment
 - Materials and cut lists
 - Quality control and productivity
5. Cabinet Design Construction
 - Computer aided design (CAD); production work
 - Jigs and fixtures
 - Fitting and assembly
6. Installation and Finish Work
 - Layout and alignment
 - Installation sequences and procedures
 - Wood finishes and repairs
7. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Cabinet Maker Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Material Handling and Safety Procedures	300
B. Stationary Machine Operations	500
C. Bench Work/Assembly	350
D. Portable Power Tools	500
E. Sharpening & Use of Hand Tools	1000
F. Stock Bill and Work Orders	650
G. Installation procedures	1200
H. Supplemental Skills and Green Site Work	300
Total	4,800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through H may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Cabinet Maker Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Cabinet Maker
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. CABINET MAKER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Cabinet Maker MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Carpentry

ONET Code: 47-2031.01

Date : 9-28-2010

1. Length of Training

Minimum of four years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Carpentry related and supplemental instruction

3. On The Job Training

Appendix B: Carpenter Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Carpentry shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Carpentry Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First Aid and CPR Certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading and code requirements (Cal-Green)
 - Layout and leveling instruments
 - Scaffolds
3. Foundation and Floor Construction Systems
4. Structural Framing
 - Wood
 - Metal
 - Manufactured panels
5. Concrete Form Construction
6. Finish Carpentry
 - Interior
 - Exterior
7. Interior Systems
 - Metal studs; drywall; acoustical
 - Cabinet and casework installation; modular systems
 - Clean room
8. Roof Framing
 - Conventional roof framing
 - Engineered components
9. Stair Building
10. Building Envelope and Weatherization Skills
11. Alternative Energy Systems
 - Residential solar systems installation
 - Commercial photovoltaic; concentrated PV and tracking systems

12. Green Construction & Supplemental Skills

- Green awareness: environment and sustainability; jobsite energy conservation and efficiency
- Green rating systems; personal jobsite “green” responsibilities
- Green building codes: CalGreen
- Green products and sustainable building materials
- Waste management and recycling procedures
- Site environmental management and protection procedures
- Construction air quality management

Appendix B: Carpenter Work Processes

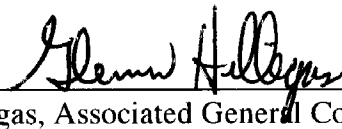
Suggested Minimum On-The-Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Concrete Formwork	1200
B. Framing	1300
C. Finish Carpentry	800
D. Building Envelope and Weatherization	700
E. Solar Systems, Specialty Installations, and Green Site Work	800
Total	4800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Carpenter Minimum Industry Training Criteria Committee

Chair:  Date: 10/8/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 10/8/2010
Glenn Hillegas, Associated General Contractors, San Diego

Carpenter
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[P]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. CARPENTER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Carpenter MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Drywall Applicator

ONET Code: 47-2031.01D

Date: 9-28-2010

1. Length of Training

Minimum of three years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Drywall Applicator related and supplemental instruction

3. On The Job Training

Appendix B: Drywall Applicator Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 30%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Drywall Applicator shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Drywall Applicator Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First aid and CPR certification

2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Layout and leveling instruments
 - Scaffolds

3. Framing Installation
 - Measuring and layout
 - Wood and metal
 - Cutting and fitting
 - Welding AWS

4. Interior and Exterior Systems
 - Gypsum and low VOC; green board
 - Exterior insulation finish system (E.I.F.S.)
 - Drywall repairs and patching
 - Drywall finishing

5. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Drywall Applicator Work Processes

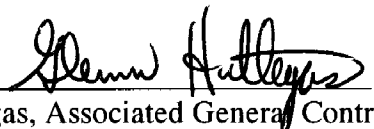
Suggested Minimum On-The-Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Handling and Storage of Materials	350
B. Metal Framing Systems and Layout	1150
C. Interior and Exterior Coverings	2200
D. Special Systems	800
E. Supplemental Skills and Green Site Work	300
Total	4,800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Drywall Applicator Minimum Industry Training Criteria Committee

Chair:  Date: 10/8/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 10/8/2010
Glenn Hillegas, Associated General Contractors, San Diego

Drywall Applicator
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[P]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. DRYWALL APPLICATOR MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 30%

V. APPROVAL

- Drywall Applicator MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Hardwood Floor Layer

ONET Code: 47-2031.01L

Date: 9-28-2010

1. Length of Training

Minimum of three years

Minimum of 3600 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Hardwood Floor Layer related and supplemental instruction

3. On The Job Training

Appendix B: Hardwood Floor Layer Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Hardwood Floor Layer shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Hardwood Floor Layer Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA); respirators
 - Material safety data sheets
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading and code requirements (Cal-Green)
3. Tools of the Trade
 - Sanding and finishing equipment
 - Tool maintenance and repair
4. Installation of Wood Flooring
 - Strip flooring
 - Tongue and groove
 - Pre-finished
 - Athletic and specialty floors
 - FSC certified and/or rapidly renewable flooring materials
5. Sanding and Finishing
6. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Hardwood Floor Layer Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Preparation and Laying	1350
B. Nailing	450
C. Sanding and Finishing	1300
D. Athletic Floors and Systems	400
E. Supplemental Skills and Green Site Work	100
Total	3600

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 3600 hours of on the job training.

Submitted By: Hardwood Floor Layer Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Hardwood Floor Layer
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. HARDWOOD FLOOR LAYER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Hardwood Floor Layer MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Insulator

ONET Code: 47-2131.00

Date : 9-28-2010

1. Length of Training

Minimum of 3 years

Minimum of 3600 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Insulator related and supplemental instruction

3. On The Job Training

Appendix B: Insulator Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Insulator shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading and code requirements (Cal-Green)
 - Layout and leveling instruments
 - Scaffolds
3. Job Preparation, Organization and Control
 - Material identification, handling, storage, loading and securing for transport
 - Stocking, record keeping/inventory control; job orders (work sheets), and material quantity control
 - Familiarization with building envelope insulation best practices
4. Blown-In Insulation
 - Access preparation, refitting and close up
 - Blow machine operation and maintenance
 - Application of loose fill in walls and ceilings
5. Batt & Blanket Installation
 - Residential
 - Commercial and industrial building walls, ceiling and floors
6. Foil & Moisture Barrier Installation
 - Applicable to residential, commercial and industrial applications.
7. Spray, Rigid, and Specialty Application
 - Residential, commercial and industrial application of low volatile organic compounds (VOC) (g), cellulose, urethane and light weight plaster
 - Sound board, styrene, and urethane rigid insulation
 - Fire stop systems
8. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Insulator Work Processes


Suggested Minimum On-The-Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Job Preparation, Organization and Control	300
B. Blown-In Insulation	400
C. Batt & Blanket Installation	1100
D. Foil & Moisture Barrier Installation	700
E. Spray, Rigid, and Specialty Application	1000
F. Building Envelope, Fire Stop, Supplemental Skills and Green Site Work	200
Total	4800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Carpenter Minimum Industry Training Criteria Committee

Chair:  Date: 9/29/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Insulator
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. INSULATOR MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Insulator MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Modular Installer

ONET Code: 51-9199.99M

Date: 9-28-2010

1. Length of Training

Minimum of two years

Minimum of 2400 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Modular Installer related and supplemental instruction

3. On The Job Training

Appendix B: Modular Installer Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Modular Installer shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Modular Installer Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)/ergonomics
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Stock bills and work orders
3. Hand and Power Tools
 - Measuring, layout and alignment
 - Power supply and cordless tool management
 - Drills, attachments and anchoring
4. Site Considerations
 - Personal appearance, behavior and office etiquette
 - Material delivery, handling and staging
 - Establishing and maintaining clear transit route(s)
 - Housekeeping and health hazards
5. Assembly Construction
 - General assembly procedures
 - Manufacturer's product-specific instructions and guidelines
 - Custom work and adjustments
 - Quality Control and productivity
6. Installation and Finish Work
 - Layout and alignment
 - Installation sequences and procedures
 - Electrical and component connections
 - Cabinets, shelving and accessories
 - Wood finishes and repairs
7. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite "green" responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Modular Installer Work Processes

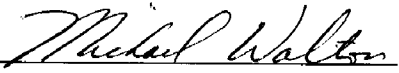
Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Material Storage & Safety Procedures	100
B. Staging, Uncrating and Pre-Job Preparation	350
C. Measuring, Layout and Assembly	750
D. Installation and Quality Controls	1000
E. Supplemental Skills and Green Site Work	200
Total	2,400

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 2400 hours of on the job training.

Submitted By: Modular Installer Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Modular Furnishings Installer
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. MODULAR FURNISHINGS INSTALLER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Modular Furnishings Installer MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Millwright

ONET Code: 49-9044.00

Date: 9-28-2010

1. Length of Training

Minimum of four years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Millwright related and supplemental instruction

3. On The Job Training

Appendix B: Millwright Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 36%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Millwright shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Millwright Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First aid and CPR certification

2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Layout and leveling instruments
 - Human performance

3. Cutting & Welding
 - Oxy-acetylene cutting and welding
 - Plasma-arc cutting
 - Layout, fabrication and fitting
 - AWS structural welding

4. Machinery Installation
 - Layout and machinery bases
 - Precision measuring and alignment
 - Power drives and hydraulic systems
 - Rigging

5. Machinery Maintenance
 - Pumps and motors
 - Compressors
 - Bearings, pulleys and belts
 - Turbines and generators
 - Troubleshooting and repairs

6. Alternative Energy Systems
 - Utility scale concentrated PV and tracking systems
 - Wind turbine installation and maintenance
 - Geo-thermal and cogeneration power production

7. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management


Appendix B: Millwright Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Material Handling, Rigging and Safety Procedures	600
B. Welding, Layout, Fabrication	500
C. Machinery Leveling & Alignment	600
D. Power Drives and Hydraulic Systems	1,000
E. Machinery Installation, Power Generation, Petro- Chemical, and Maintenance	1,600
F. Supplemental Skills, Alternative Energy Installations, and Green Site Work	500
Total	4800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through F may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Millwright Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Millwright
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. MILLWRIGHT MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 36%

V. APPROVAL

- Millwright MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Pile Driver

ONET Code: 47-2072.00

Date: 9-29-2010

1. Length of Training

Minimum of four years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Pile Driver related and supplemental instruction

3. On The Job Training

Appendix B: Pile Driver Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 30%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Pile Driver shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Pile Driver Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Layout and leveling instruments
 - Scaffolds
3. Pile Driving
 - Measuring and layout
 - Rigging and signaling
 - Structural pile driving
 - Retaining pile systems (cofferdams, etc.)
 - Handling piles and hammers
 - Pile driving equipment
4. Concrete and Formwork
 - Bridge decks and abutments
 - Pile caps and columns
5. Heavy Timber Framing and Falsework
 - Pipe shoring
 - Timber falsework
 - Manufactured falsework
6. Marine and Underwater Work
 - Piers and docks
 - Diving systems and submersibles
 - Underwater welding
 - Wave energy conversion (WEC) devices
7. Cutting and Welding
 - Oxy-acetylene cutting and welding
 - Layout, fabrication and fitting
 - AWS structural welding

8. Green Construction & Supplemental Skills

- Green awareness: environment and sustainability; jobsite energy conservation and efficiency
- Green rating systems; personal jobsite “green” responsibilities
- Green building codes: CalGreen
- Green products and sustainable building materials
- Waste management and recycling procedures
- Site environmental management and protection procedures
- Construction air quality management

Appendix B: Pile Driver Work Processes

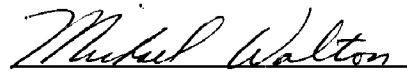
Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Pile Driving	1400
B. Concrete and Formwork	1400
C. Heavy Timber Framing and Falsework	1000
D. Marine Construction, and Wave Energy Conversion	400
E. Hot Work – Burning and Welding	500
F. Supplemental Skills and Green Site Work	100
Total	4800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through F may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Pile Driver Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Pile Driver
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. PILE DRIVER MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 30%

V. APPROVAL

- Pile Driver MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Scaffold Erector

ONET Code: 47-2031.02S

Date: 9-28-2010

1. Length of Training

Minimum of four years

Minimum of 4800 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Scaffold Erector related and supplemental instruction

3. On The Job Training

Appendix B: Scaffold Erector Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Scaffold Erector shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Scaffold Erector Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)/fall protection
 - First aid and CPR certification
 - Confined space safety training
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading
 - Layout and leveling instruments
 - Scaffold regulations
3. Frame Scaffold Installation
 - Measuring and layout
 - Basic installation and attachment methods
4. System Scaffold Installation
 - Measuring and layout
 - Basic installation and attachment methods
5. Tube & Clamp Scaffold Installation
 - Measuring and layout
 - Basic installation and attachment methods
 - Confined space (angles and slopes)
6. Specialty Scaffold Applications
7. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Scaffold Erector Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

WORK PROCESS	APPROXIMATE HOURS
A. Material Handling and Safety Procedures	500
B. Layout, Leveling, Alignment and Anchoring Procedures	300
C. Frame, System, Tube & Clamp Scaffold Construction	3000
D. Specialty Scaffold Installations & Procedures	500
E. Supplemental Skills and Green Site Work	500
Total	4,800

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through E may be combined in different hourly totals to meet the minimum of 4800 hours of on the job training.

Submitted By: Scaffold Erector Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

Scaffold Erector
Minimum Industry Training Criteria Committee Meeting
September 28, 2010

ATTENDANTS [P] Present [A] Absent

[P]	Renee Bacchini, DAS	[A]	Mike Christian	[P]	Jamie Robison
[P]	John Bullock, Chair	[A]	Glenn Hillegas, Co-Chair	[A]	Pete Saucedo
[A]	Jack Chapel	[P]	James McNamee	[P]	Michael Walton

I. CALL TO ORDER

- By: John Bullock, Chairman

II. INTRODUCTIONS

III. PURPOSE

- Discuss and prepare minimum industry training criteria for the trade
- Inclusion of “green building” training criteria

IV. SCAFFOLD ERECTOR MITC

- Outline of Related Supplemental Instruction (Appendix A)
- Work Processes (Appendix B)
- Completion rate established at 33%

V. APPROVAL

- Scaffold Erector MITC MSC: Unanimous

ADJOURNMENT

There being no further business, the meeting was adjourned

Respectfully Submitted,

Jamie Robison

Cc: John Bullock, Glenn Hillegas, Michael Walton

Industry Training Criteria for Shingler

ONET Code: 47-2181.00S

Date: 9-28-2010

1. Length of Training

Minimum of two years

Minimum of 2400 work hours

2. Related Supplemental (Classroom) Instruction

Minimum of 144 hours of Related and Supplemental Instruction per year.

Appendix A: Shingler related and supplemental instruction

3. On The Job Training

Appendix B: Shingler Work Processes

4. Competency Evaluation

All apprentices must pass a competency evaluation prior to the time of their classification advancement to the next higher period. The evaluation shall be based on Related Supplemental Instruction.

5. Apprenticeship Program Completion Percentages

Of those apprentices that satisfactorily progressed beyond the first two periods of apprenticeship, program sponsors must have a completion rate of no less than 33%.

6. Procedures for the Review and Revision of the Training Criteria

The Carpenters' Industry Advisory Committee shall meet at the call of the chair or no less than once each three years to review, and revise if necessary the industry training criteria. Any and all such industry training criteria for Shingler shall be in accordance with California Code of Regulations, Title 8, Section 212 in its entirety.

Appendix A: Shingler Related and Supplemental Instruction

1. Safety
 - Safety with hand and power tools
 - Construction site worker safety (OSHA)/fall protection
 - First aid and CPR certification
2. Basic Skills
 - Trade orientation
 - Construction mathematics
 - Print reading and code requirements (Cal-Green)
 - Rigging
3. Weatherization
 - Flashing
 - Underlayment applications
 - Exterior weather protection
 - Sealing the building envelope
4. Roofs and Sidewalls
 - Composition
 - Shake
 - Wood shingle
 - Metal
 - Tile
 - Solar system installations
5. Green Construction & Supplemental Skills
 - Green awareness: environment and sustainability; jobsite energy conservation and efficiency
 - Green rating systems; personal jobsite “green” responsibilities
 - Green building codes: CalGreen
 - Green products and sustainable building materials
 - Waste management and recycling procedures
 - Site environmental management and protection procedures
 - Construction air quality management

Appendix B: Shingler Work Processes

Suggested Minimum On The Job Training (OJT) Hours: *
Includes but not limited to:

	APPROXIMATE HOURS
A. Flashing and Underlayment Applications	500
B. Shake and Wood Shingle Roofs and Sidewalls	400
C. Composition Shingles	900
D. Tile	300
E. Metal	200
F. Solar Installations, Supplemental Skills, and Green Site Work	100
Total	2400

* These are recommended minimums, and individual program sponsors should review and try to meet these minimums. A through F may be combined in different hourly totals to meet the minimum of 2400 hours of on the job training.

Submitted By: Shingler Minimum Industry Training Criteria Committee

Chair:  Date: 9/28/10
John Bullock, Carpenter Training Committee for Northern California

Co-Chair:  Date: 9/28/10
Michael Walton, Construction Employers Association

