

Phase 2

Set Construction Training Program

Objective: To train Connecticut residents in the basic duties and practices of the set construction department.

Program Synopsis: The first week will involve an overview of the department, along with detailed lessons on industry terminology, set construction's relationship with other departments, basic set construction and the beginning of construction on sets.

The second week will include the remainder of construction on sets, along with lessons on union rules and budgets.

The following lesson plan defines specific subjects to be covered in the training program and is required as a basis for instruction for each component. Within the described daily and weekly framework of the program, the grantee and/or hired instructor are encouraged to supplement the curriculum as they see fit.

Because all feature film positions and departments are not currently included in the training program, the use of guest speakers is encouraged as an enhancement to the lesson plan. Recommended guest speakers for the Set Construction Training Program include production designers and accountants.

Required Items: Trainees will have the following items on the first day of class:

- Hammer
- Ruler
- Square
- Nippers (for brad nails and staples)
- Utility knife
- Scale ruler

Required Text: The Backstage Handbook: An Illustrated Almanac of Technical Information, by Paul Carter, Third Edition, Broadway Press, 1994.

Week One, Day One

9:00am – 11:00am: Aptitude Test

- To see what students already know
- Ask about past experience
 - In a Q and A section beside test

- Written exam
 - Router bits
 - Name tools
 - Identify items in blueprint drawing
 - Do a cut list from a drawing

10:25 – 10:35am: Break

11:00am – 12:00pm:

- Go over test
 - Instructors will go over all items
 - Students will correct another student's work
- Top student will be unofficial construction coordinator for class project
- 2nd person will be unofficial key carpenter

12:00 – 1:00pm: Lunch

Afternoon: Describing industry terms

- Jacks
- Sawhorses
- Grip
 - Strongbacks
 - Apple boxes
 - Light boxes
- Bevel
- Miter cut
- Cross-cut/rip
- Champer
- Different style bits
- Putting a handle in
- Skyhook
- Skyjack
- French cleat
- Fasteners
 - What applications
- Guns
- In camera vs. not in camera
- Glory side
- Duvateen
- Bucks
- Ellipses
 - String method (cheating way)
 - Mathematical method
 - Lay one out
 - Show how to cut it
- How to swing arches

- Circumferences (routing them)

Homework: Related readings in The Backstage Handbook

Week One, Day Two

9:00 – 10:25am: Set Construction's Relationship with Other Departments

- Importance of knowing what the other departments do
- Taking pride in your work
- Grips
 - Need strongbacks
 - Need jacks
 - Build lockup for their tools
 - Build road boxes
 - Shooting grip needs wedges cut
 - Build apple boxes
 - Give example of how to build them
 - Set carts

10:25 – 10:35am: Break

10:35am – 12:00pm: Set Construction's Relationships, Continued

- Electric
 - Building light boxes
 - Chloroplast cut
 - Gel frames
 - Gels cut (Plexiglas)
- Set dressing
 - Tile
 - Flashing
 - Shingles
 - Repair broken furniture
 - Set Construction helps if cutting
- Teamsters
 - Step-ups for trucks
 - Show construction of step-up

12:00 – 1:00pm: Lunch

1:00 – 3:00pm: Basic Set Construction

- How to build Flats
 - How they're assembled
 - Why they're assembled that way
 - Letting in studs for straps (to nail through)

- Height requirements
 - 12' vs. 8' or 5'
- What material
 - Painted flats use prime luon
 - Unpainted flats use unprimed luon

3:00 – 5:00pm: Practical exercise

- Class will build flats
 - Instructor will give specifications

Homework: Related readings in The Backstage Handbook

Week One, Day Three

9:00 – 10:25am: Blueprints, Part 1

- Blueprints
 - Give everyone a blueprint and have class try to decipher it
 - Why marks are in certain places
 - Instructor will go through blueprint and identify items
 - Discussion
 - Break blueprint into materials list
 - Flats (figure out how many flats you need)
 - Every 4'x8' flat is a bundle of wood
 - Roof
 - Sections
 - Other roofs?
 - Trim

10:25 – 10:35am: Break

10:35am – 12:00pm: Blueprints, Part 2

- Make estimate
 - List of prices from vendor
 - Varies by time
- Place order
 - Getting it there on time
 - What materials can you substitute if desired materials are not available
- Reading a scale ruler
 - How to identify scale

12:00 – 1:00pm: Lunch

1:00 – 3:00pm: On-Set Measurements

- Taking and verifying on-set measurements
 - Exercise: Go to a location close to classroom and verify measurements
 - Instructor will take every measurement before hand

3:00 – 5:00pm: Shop Safety

- Know where the hospital is
- Procedures on power equipment
 - Table saw
 - Router safety
 - Band saw
 - Compressor
 - What guns to use
 - Nail-gun safety
 - Changing blades
 - Why there's a shop grip
 - Clothing – no loose clothes
 - Shoes
 - Eyewash
- First Aid
 - Don't panic if you get hurt
 - Stop the bleeding
 - Safety is always a priority

Homework: Related readings in [The Backstage Handbook](#)

Week One, Day Four

9:00 – 10:25am: Power Tools, Part 1

- Basic introduction to use
- When to use
- Safety
 - Ear/eye protection
 - Goggles
- Hand nailing
- Gun nailing
- Staple guns

10:25 – 10:35am: Break**9:00 – 10:25am: Power Tools, Part 2**

- Chop saw
- Band saw

- Routers
- Screw guns
- Jigsaw
- Sanders
 - Belt
 - Finish

12:00 – 1:00pm: Lunch

1:00 – 5:00pm: Practical Exercises with Power Tools

- Cut a piece of wood in half
 - Using a stop
 - Using table saw
- Nail strongbacks together
- Make apple boxes from pre-cut pieces
 - 4 boxes of each type
 - full
 - $\frac{1}{2}$
 - $\frac{1}{4}$
 - Pancake (1.5" high)

Homework: Related readings in The Backstage Handbook

Week One, Day Five

9:00am – 12:00pm: Begin Set Construction

- Instructor will give trainees blueprints
 - Two rooms to be built
- Trainees will go over blueprint and discuss construction plan
 - One square box with four walls
 - Room will serve as living room for production
 - Build fifth wall with another door – can serve as bedroom
 - Repaint walls
 - Redress walls

10:25 – 10:35am: Break

12:00pm – 1:00pm: Lunch

1:00 – 5:00pm: Continue Set Construction

- Assumed duties:
- Build walls
 - Grips will unload materials
 - Will move walls

Homework: Related readings in The Backstage Handbook

Week Two, Day One

9:00am – 12:00pm: Continue Set Construction

- Instructor will oversee construction
 - Will watch as trainees work on power tools
 - Will check progress against blueprints

10:25 – 10:35am: Break

12:00pm – 1:00pm: Lunch

1:00 – 5:00pm: Continue Set Construction

- Assumed duties:
- Build door elements today
 - Trainees will build all elements
 - Instructor will check elements to assure correct dimensions

Homework: Related readings in The Backstage Handbook

Week Two, Day Two

9:00am – 12:00pm: Continue Set Construction

- Instructor will oversee construction
 - Will watch as trainees work on power tools
 - Will check progress against blueprints

10:25 – 10:35am: Break

12:00pm – 1:00pm: Lunch

1:00 – 5:00pm: Continue Set Construction

- Assumed duties:
 - On-Set Measurements
 - Trainees will go to location, take measurements and replace a door
 1. Come back and make the door in the shop
 - Trim work

1. Some at the bench
2. Pre-cutting

Homework: Related readings in The Backstage Handbook

Week Two, Day Three

9:00am – 12:00pm: Continue Set Construction

- Instructor will oversee construction
 - Will watch as trainees work on power tools
 - Will check progress against blueprints

10:25 – 10:35am: Break

12:00pm – 1:00pm: Lunch

1:00 – 5:00pm: Complete Set Construction

- Assumed duties:
 - Set construction completed
 - Set dresses put rug in
 - Baseboard put down
 - Laying out floor

Homework: Related readings in The Backstage Handbook

Week Two, Day Four

9:00 – 10:25am: Working With a Union

- Union Rules
 - Differences East vs. West coast
 - How to get in
 - Permit workers
 - Filing an Application and what they require
 - Departmental responsibilities
 - Protections
 - Union representation
 - Working conditions
 - Payment
 - Importance of representation
 - Labor reports

- Timecards
 1. Hand out examples of each

10:25 – 10:35am: Break

9:00 – 10:25am: Life in the Film Industry

- Mental side to film
 - Personality conflicts
 - Anyone can screw up your day; how do you respond?
 - Constantly shifting game plan
 - Family and children sacrifice
 - Long hours
 - Miss events
 - Working styles
 - Jealousy in the business, what to expect
- Discussion and personal stories

12:00 – 1:00pm: Lunch

1:00 – 3:00pm: Budgeting

- Man-days
- Truckers
- Equipment rentals
- Projecting time and necessity
- Role of art department coordinator
 - You need material or blueprints, you call them
 - They go over daily labor reports
 - Valuable to you
- Art Director
 - Makes art department run smoothly
 - Works with
 - Set decorator
 - Dresser
 - Buyer
 - Designer
 - Construction coordinator

3:00 – 5:00pm: Practical Exercise for Budgeting

- Give trainees materials for set
- Figure out a materials list
- Put together a budget
 - Include man-days
 - Look for the unseen

Homework: Related readings in [The Backstage Handbook](#)

Week Two, Day Five

9:00am – 12:00pm: Final Exam Review

- Lectures
- Tools
- Construction techniques
- Safety techniques

10:25 – 10:35am: Break

12:00 – 1:00pm: Lunch

1:00 – 4:00pm: Final Exam

- Questions
 - Router bits
 - Strongbacks, jacks – what are they for?
 - When do you use practical or stick jacks?
 - Crosscut saw – what's it for?
 - When do you use a router arm?
 - Tool question
- Questions about tools
 - Planer
 - Arrow crown
 - Finish nails
- A choice of four or five essays, each relating to a different aspect of construction