



Minimizing Construction Time

National Self-Help Housing Conference, February 4, 2020

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Welcome!

- Introductions
- Presentations
- Round table discussion
- Report back
- Sign-in sheet





Self-Help Housing Program

Methods of Construction

New Construction- Mutual Concept

- *Method by which participating families are organized into groups and utilize their own labor to lower the cost of the newly constructed homes.*
- Participants have to meet 65% of labor contribution (tasks listed in Exhibit B-2)

Acquisition Rehab and Owner-Occupied Rehab

- *A method by which a family utilizes their own labor to create a “cost savings” in a home that they are in the process of acquiring or in a home that they currently own and reside in.*
- Participants’ labor contribution is recommended to be 10 hours for every \$1,000 in self-help repairs

Contractor-Built vs Self-Help Housing

Contractor-Built

- Shorter timeframe
- Skilled labor
- Ninety days to build a home

Self-Help Housing

- Homeowner working on their homes
- Unskilled labor
- One year to build home
- **Other**



Construct: to form by assembling parts

What Causes Construction Delays?

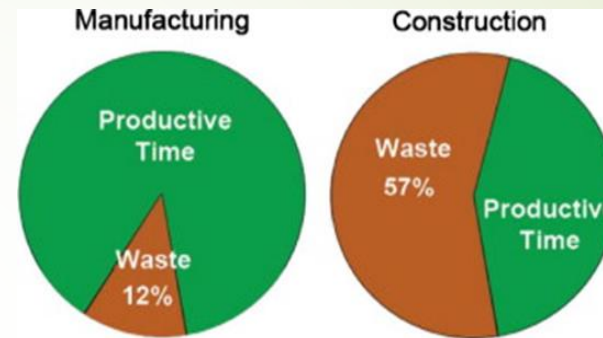
Housing Industry

There are many factors that cause construction delays and some of the most common are:

- Inadequate planning
- Labor and materials handoffs
- Owner changes/change orders
- Injuries
- Weather

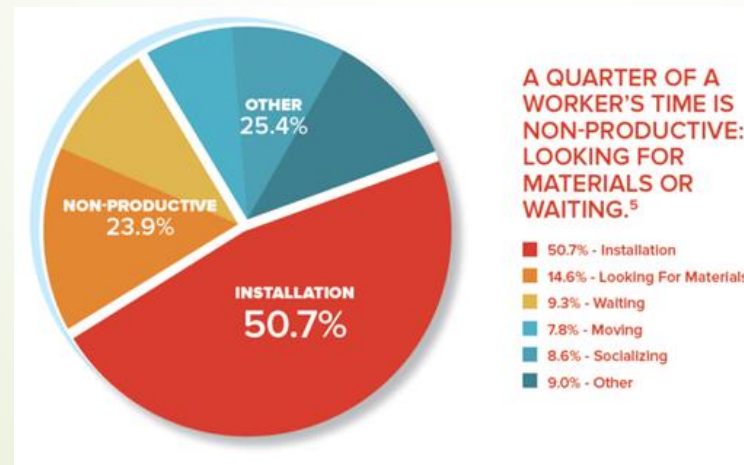


Waste percentages of time in manufacturing and construction



Non-productive time in construction

Willian Tualau Fale



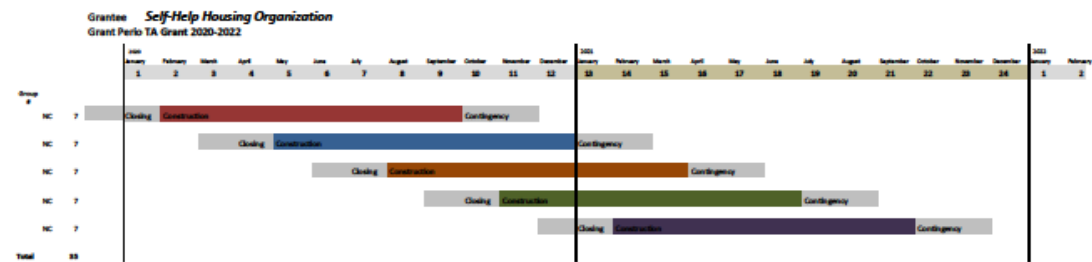
Can you speed up your construction projects?

There are many factors that can improve construction efficiency and some of the most common are:

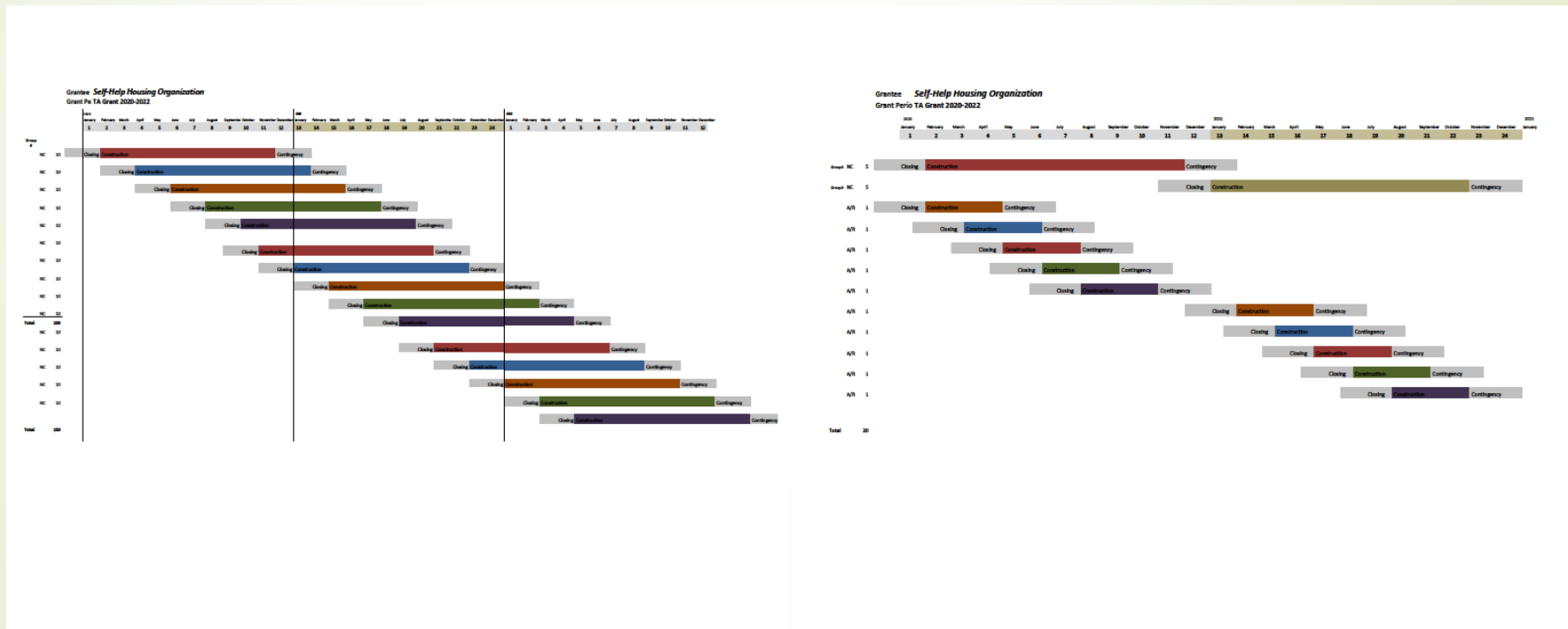
- Planning
- Scheduling
- Construction Safety
- Training
- Construction Project Management Skills



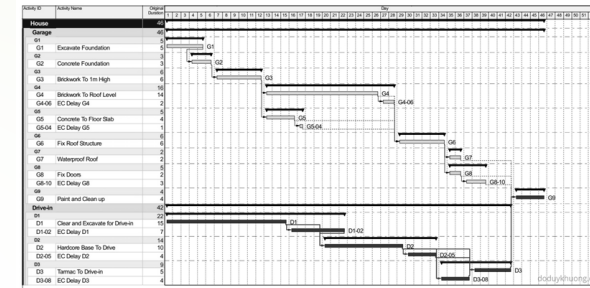
Planning



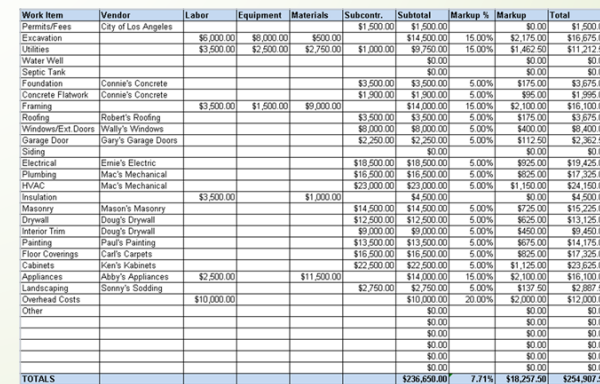
...Planning and Scheduling



The need to complete the project within a certain time frame or by a specific date



An approximate computation of probable costs . A detailed analysis of every item



Working Safely on the Construction Site

The key factors in creating a safe environment and reducing accident rates are

- Promoting a positive attitude towards safety
- **TRAINING**
 - Toolbox Meetings
 - Weekly safety meetings



Weather

- Prepare your construction sites for severe weather
- Practical tips for working in warm or hot conditions

Construction Project Management

What is Construction Management?

Is a professional service that applies effective management techniques to the planning, design, and construction of a project from inception to completion for the purpose of controlling time, cost and quality

-Construction Management Association of America (CMAA)

The art of directing and coordinating all resources throughout the life of a project

- Project Management Institute (PMI)



Construction Project Management

What are your responsibilities as a Construction Project Manager?

- Project Chronology/Pre-During-Post- Construction
- Project Planning and Scheduling
- Estimating Project Costs/Budgeting/Financing
- Bidding and Procurement
- Construction Contracts: Contract Administration
- Drawings and Specifications/Information Technology
- Controlling Project Cost, Time, and Quality
- Job Site Administration/ Reports
- Close- out
- Construction Law
- Regulatory Authorities
- Liability/Insurance/Bonds
- Ethics/ Professional Responsibility
- Construction Safety and Health



According to the CMAA, Construction Project Managers average about 120 responsibilities

The Profession, Project Participants, Company Organization, Managing a Construction Business, Project Delivery Methods



Construction Project Management Self-Help Housing

The Construction Supervisor

Must be skilled in:

- The concepts and practices of construction management
- Managing groups of unskilled labor and providing instruction in construction methods and safety procedures

Must be well versed in:

- Local and National Building Codes/ Regulations/ RD requirements

Must be a good:

- Supervisor, Coordinator, Instructor, Inspector, Troubleshooter, Counselor, Mediator, Motivator

**It is not the Construction Supervisor's job to build the homes
– but to train and supervise the participating families in building their own homes!**

Easy Ways to Improve Construction Efficiency



- Careful planning
- House Plans
 - Simple floor plan, simple process, simple roof lines, simple maintenance...
- Change Orders
 - Build homes according to plans: DO NOT ALLOW ANY CHANGES!
- Give sub-contractors plenty of notice when they will be needed
- Optimize use of materials
 - Value engineering vs conventional framing
 - Green building
- Make sure materials are on build site when needed
- Prepare for inspections
- Process timely payments
 - Verify delivery of materials and completed work
- Maximize the building season
- *Identify alternatives...Plan B and C*



Easy Ways to Improve Construction Efficiency



- **Self- Help Participants**

- Establish a work schedule and start on time (weekends, evenings)
- Be productive on site/ their time has value
- Set reasonable goals
- Keep group sizes adequate to make them efficient
- Create a safe work environment, safety practices
 - Use of safety personal protection equipment (safety glasses, harnesses, hardhats etc.)
 - Proper use, maintenance and storage of tools/ materials
- Build a friendly and productive working relationship
- Establish ground rules for meetings and job site
 - Behavior, mutual respect, dress code, limited use of cell phones, no children and no one under the influence allowed on job site
- *Be firm and fair*



Training the Self- Help Participants

➤ Team Work

- Grantee's Self-Help Team
- Self-Help Participants
 - Mutual Concept
 - Rehab

➤ TRAINING



Software, Tools, Equipment

Construction Project Management

- Microsoft Project
- Buildertrend
- CoConstruct
- Procore
- Buildtools
- Excel
- Excel



Self-Help Homes



Self-Help Homes



Self-Help Homes





Pre-Construction Tasks/ Non-Construction Self-Help Housing

1. Feasibility
2. Planning
3. Design
4. Scheduling
5. Cost Estimating
6. Procurement
7. Selection Sub-contractors
8. Selection/Ordering Materials
9. Grantee Team
10. Participants
11. Training
12. Meetings
13. Reports
14. Safety
15. Weather

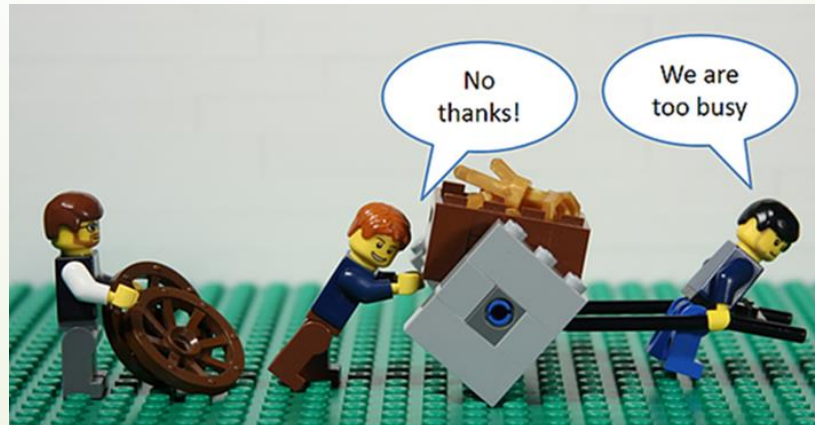
Construction Tasks Self-Help Housing

- | | |
|--|-------------------------------------|
| 1. Excavation | 14. Insulation |
| 2. Footing, Foundations, columns | 15. Dry wall |
| 3. Floor slab or framing | 16. Basement or porch floor, steps |
| 4. Subflooring | 17. Heating - finished |
| 5. Wall framing sheathing | 18. Flooring covering |
| 6. Roof and ceiling framing, sheathing | 19. Interior carpentry, trim, doors |
| 7. Roofing | 20. Cabinets and countertops |
| 8. Siding, exterior trim, porches | 21. Interior painting |
| 9. Windows and exterior doors | 22. Exterior painting |
| 10. Plumbing - roughed in | 23. Plumbing - complete fixtures |
| 11. Sewage disposal | 24. Electrical - complete fixtures |
| 12. Heating - roughed in | 25. Finish hardware |
| 13. Electrical - roughed in | 26. Gutters and downspouts |
| | 27. Grading, paving, landscaping |

Best Practices



- What tools and strategies have you implemented to streamline your work?
- What best practices for minimizing construction time do you wish to share with your colleagues?





The End!



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