Developing a Standard Plan Set for Retrofitting Hillside Assam Homes

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Identifying Risk:

• Aizawl, India: Population 600,000, expected to double in the next 20 years.
• Under a scenario M7 earthquake approximately 1/3 of the structures will collapse.
• Timber Assam structures represent 35% of these buildings at risk of collapse.
  • They are made vulnerable by their position on steep hillsides with slender post supports.
A Model To Address Risk: Plan Set A

- For bracing cripple walls in single family homes.
- Offers a great model to encourage voluntary retrofit
  - Standardize the process
  - Streamline the process
  - Reduce design costs
Creating a Concept Model

- Develop a set of limits to confine the problem:
  - Building Size
  - Hillside slope, etc.
- Cross bracing to limit down slope deformations
- Ductile steel anchors to tie back to the hillside