A Bridge to the Comarca
Del Puente Engineering
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Community Background
- Embera-Wounaan Comarca, Darién province, Panama
  - Six communities totaling 2,000 people
- Alto Playón
  - Closest to Puerto Limón, desired bridge location
  - Subsistence farmers
  - 262 people - 45% under fifteen years old
- Chucunaque River is an important resource
  - Drinking water
  - Bathing
  - Laundry
  - Defecation
  - Trash disposal
- No water purification or sanitation system

Objective
To aid the communities of the Embera-Wounaan Comarca with the development of a footbridge in order to provide safer, more convenient, less expensive and faster travel year-round.

Design Components
- Suspension bridge
- 275 ft span
- 15 ft clearance above 100-year flood level
- 8 ft camber
- Supports pedestrian and equestrian loading
- 50 ft steel towers
- Steel cables and suspenders
- Concrete tower foundations
- Concrete anchor blocks
- 4 ft wide timber decking
- Gabion system for slope protection
- Sloped gravel approach

Cost Breakdown
- Anchor Blocks ........................................... $54,800
- Approaches .................................................. $300
- Cables ......................................................... $88,100
- Gabions ......................................................... $170,000
- Towers ......................................................... $32,700
- Tower Foundations ....................................... $23,500
- Walkway ....................................................... $50,600
- Total Estimated Project Cost .............................. $418,000

Implementation Requirements
- Professional Engineer review
- Potential funding
- Bridges to Prosperity
- Engineers Without Borders
- Material donations
- Formation of local bridge committee
- Banking system
- Maintenance training

Project Description
- Puerto Limón - primary access to Comarca
- Temporary bridge built during dry season
  - Allows vehicular travel
  - Only lasts 3 weeks - 3 months
- Rainy season travel is by motorized dugout canoe
  - 10 minute - 4 hour ride
  - Gas is expensive
- Benefits
  - Opportunity to sell crops outside of community
  - Accessible and affordable continued education
  - Safer and shorter travel