Water For People: Engineering the Future in the Developing World

A Presentation by Volunteer Colin Sherrill

water for people

everyone | forever

Overview

- Honduras at a Glance
- The engineering
- Making *Everyone Forever* Sustainable

Honduras

- Total GDP (2011) = $36 Billion
- 2nd poorest country after Haiti
- Farmers & rural poverty
- Most dangerous country in the world
- Large Christian and Catholic demographic
- National team is going to the World Cup

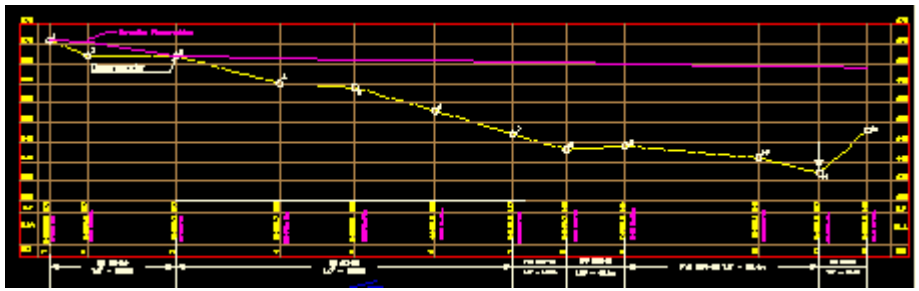

Maya Mountains
La Ceiba
San Pedro Sula
El Negrito, Yoro
Guatemala
Chinda, Santa Barbara
San Antonio de Cortes, Cortes
Quetzaltenango
Guatemala City
Honduras
Tegucigalpa
El Salvador
San Salvador
San Miguel
Nicaragua

Being an Engineer

- Honduras National Autonomous Water and Sewage Service (SANAA)
- Water For People's place in a project
- Reviewing designs and preparing budgets
- Specialty Designs
- Problem solving
- Latrine SWASH+ projects
- Advisor for University of Portland student project

Water Systems

- Gravity – Fed
  - Ideal
  - Elevation dependent
- Pumps
  - Special case projects
  - Electricity access is an issue
  - System may have elevated tank

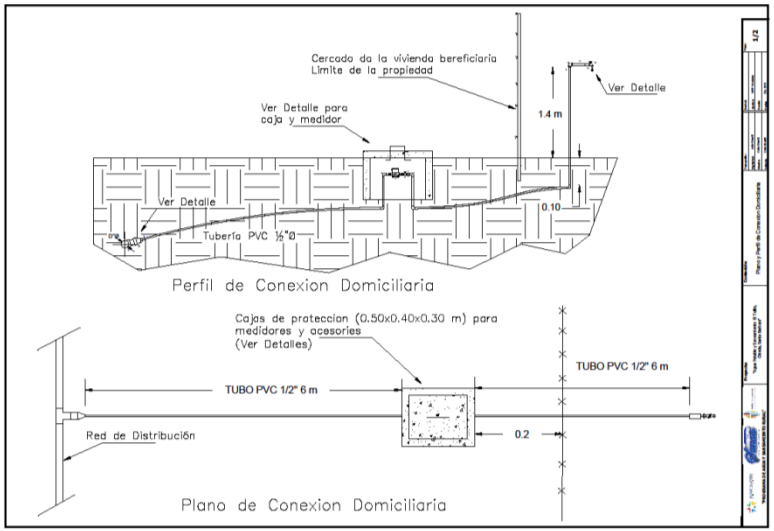


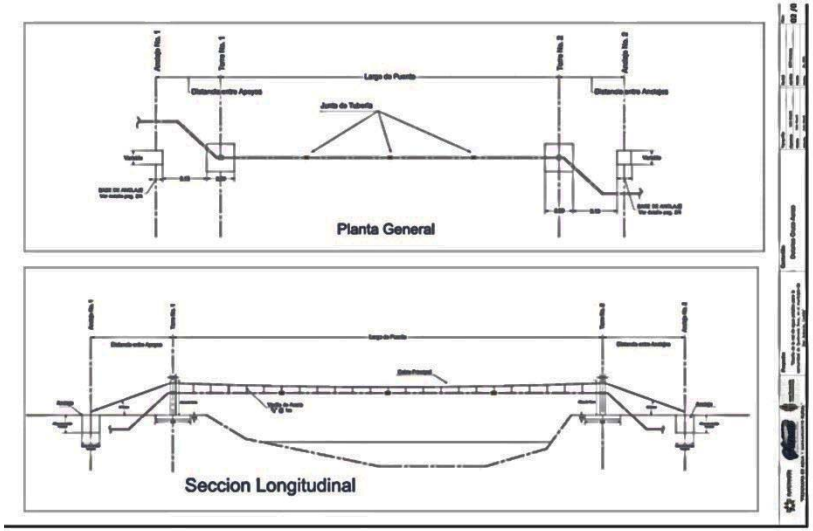
$$\frac{h_f}{L} = \frac{10.67\ Q^{1.85}}{C^{1.85}\ d^{4.87}}$$

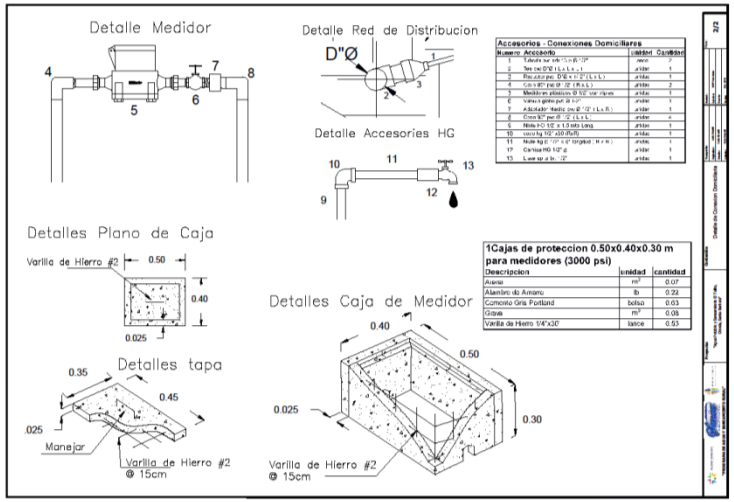
Project Management

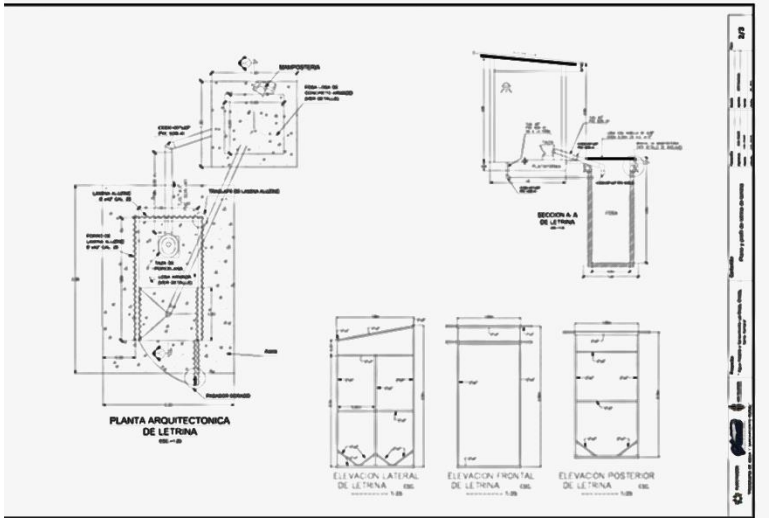
Designer ← Water For People → Municipality/Water Board

Community


Cercado de la vivienda bereficiaria
Limite de la propiedad
Ver Detalle
Ver Detalle para
caja y medidor
1.4 m
Ver Detalle
0.10
Tubería PVC ½"Ø
Perfil de Conexion Domiciliaria
Cajas de proteccion (0.50x0.40x0.30 m) para
medidores y acesorios
(Ver Detalles)
TUBO PVC 1/2" 6 m
TUBO PVC 1/2" 6 m
Red de Distribución
0.2
Plano de Conexion Domiciliaria


Planta General
Seccion Longitudinal

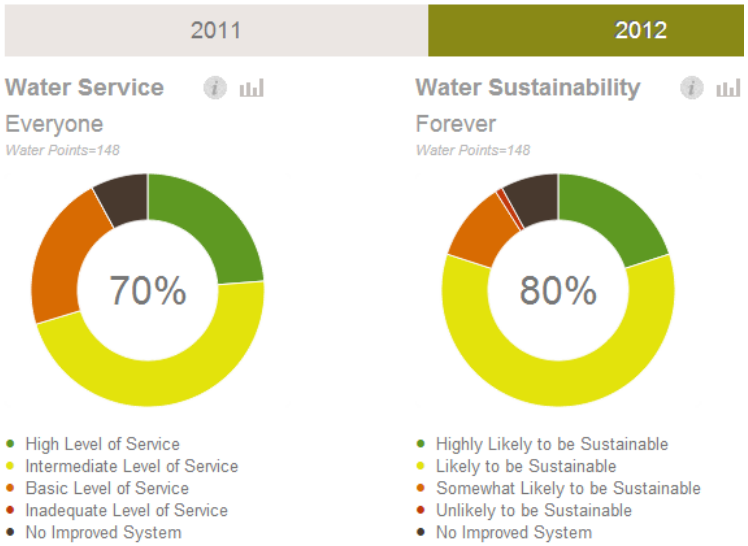

Detalle Medidor
Detalle Red de Distribucion
D"Ø
Detalle Accesorios HG
Accesorios - Conexiones Domiciliares
1Cajas de proteccion 0.50x0.40x0.30 m
para medidores (3000 psi)
Descripcion
unidad
cantidad
Detalles Plano de Caja
Varilla de Hierro #2
Detalles tapa
Manejar
Varilla de Hierro #2
@ 15cm
Detalles Caja de Medidor
Varilla de Hierro #2
@ 15cm


PLANTA ARQUITECTONICA
DE LETRINA
SECCION A-A
DE LETRINA
ELEVACION LATERAL
DE LETRINA
ELEVACION FRONTAL
DE LETRINA
ELEVACION POSTERIOR
DE LETRINA

Working in the Jungle

Engineering *Everyone Forever*

- Chinda
  - 100% coverage as of 2011
  - Focus is now on the water boards
- San Antonio de Cortes
  - 17 Community project
- El Negrito
  - 75% coverage



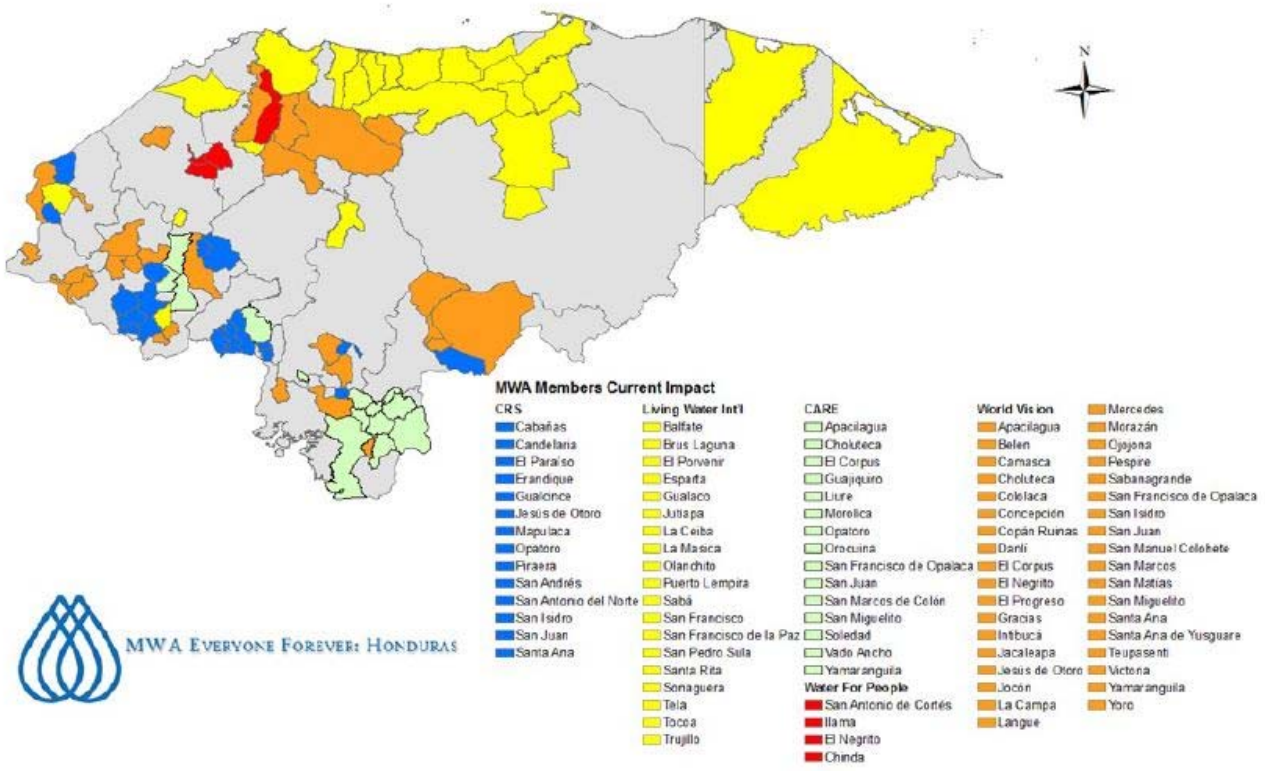
The Projects & Meters

- The 17 Community Project
  - Conduction line - 41 km (25 miles)
  - Distribution piping - 53 km (33 miles)
- Importance of metering
  - Included with all new projects
  - Helps with water use sustainability
  - Tariffs help with O&M costs

Water Boards

- The key to the future and sustainability
- On going education and training
- Boards are community elected
- Water For People only evaluates and assists

The 10 Year Plan



MWA Everyone Forever: Honduras

Questions?

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