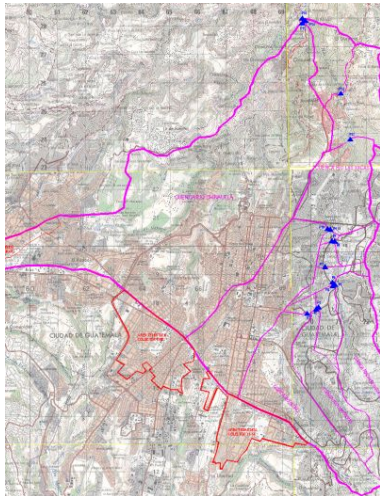




Ubicación		YEAR	
Guatemala		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2006 - 2007	
PROJECT OWNER INFORMATION			
a. PROJECT OWNER	b. CONTACT	c. CONTACT PHONE NUMBER	
MICIVI	Dirección General de Caminos, CIV Manejo de Ríos y Canales	+502-2223-4000	
PROJECT REPORT (reach, size and cost)			

Project Background – The River and Channels Management Unit (Unidad de Manejo de Ríos y Canales de Caminos) is an office that looks over to solve the problems causes. The project objective is to prepare a general long term plan and an emergency plan based on the identification of the points where the river is causing or could cause damage, specifically over infrastructure or people around the river and to design the civil engineering works for flood control and impact alleviation over the Calzada de la Paz road which is an alternative access road to the city from the north and vital to the economy.

Hydrology and Hydraulics – A complete Hydrologic Study was made based on a year of river flow measures, river flood levels surveys, river flow calculation based on rain statistics, basin delimitation and statistical estimation of floods. The basin area of this work is 121.3 square kilometers. Critical sections as bridges crossings were analyzed from its hydraulics to estimate possible damage by floods and possible alleviation works.



Geology – A study was made that describes the geological and geomorphologic characteristics of the river bed, sediments and geotechnical failures on the river banks specially on the areas of the planned works.

Soil Mechanics - All necessary studies were made to establish the soil mechanics characteristics on the work area including slopes stability and soil erosion.

Topography – A detailed study of existing geographic and topographic available information was made including maps, aerial photography and GIS information and a detailed topographic land survey was done including detailed transversal sections on planned work locations.

Social and Environmental Impact Assessment – A study was made to describe the social environment o the area of the project, this study is of key importance because the project is located in an urban area, the study reflects the needs and characteristics of the people living in the area of impact. The social and environmental studies conclusions were in favor of the project.

Detailed Engineering Design – Alter control and alleviation works were established, a detailed design was made that included walls, weirs, gabions, bridge reinforcements, concrete coverings, etc.

Technical and Economic Feasibility - The study included the costs estimates of the different technical options, the economic analysis and its feasibility from its cost – benefit point of view.

Management Plan – From the information obtained on the studies, structural and non structural solutions were proposed depending on its technical, economic, environmental and social feasibility. The study concludes with the recommendations for the basin management improvements like reforestation plans, solid waste and waste water management plans, regulation and environmental education.

Project Key Elements
➤ Social and Environmental Impact Assessment
➤ Technical Feasibility
➤ Economic Feasibility
➤ Hydrology
➤ Geology
➤ Management Plan
➤ Design
➤ Detailed Engineering Design
➤ Basin Management
➤ Alleviation Measures
➤ Topography
➤ Soils Mechanics
➤ Hydraulics
➤ Structures
➤ Flood Control

