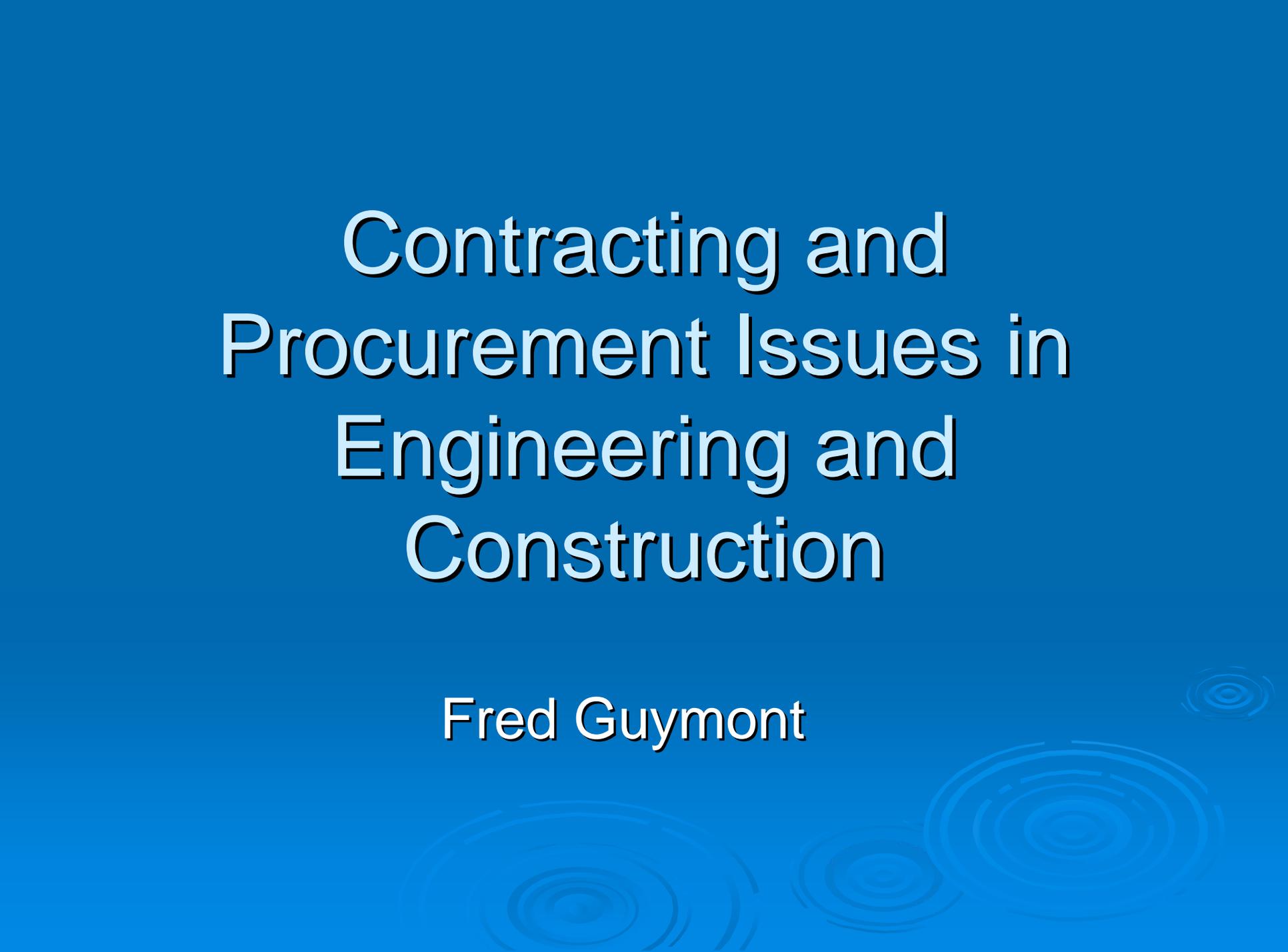


Contracting and Procurement Issues in Engineering and Construction

Fred Guymont

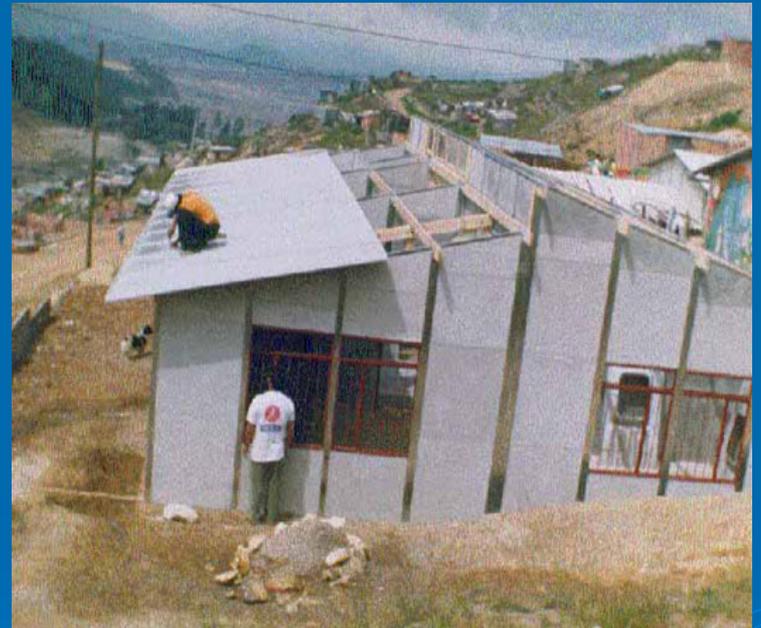


Mechanisms USAID Uses

- USAID has used contracts, cooperative agreements and grants to implement engineering and construction
- Differences are important
- Contracts are used to acquire commodities or services with the expectation that USAID will exercise substantial day-day control
- Cooperative agreements are used when the principal purpose is the transfer of money, property or services to the recipient. Substantial USAID involvement in approving key personnel, implementation plans and the right to stop construction

Grants and Cooperative Agreements

- Grants are given to a recipient to accomplish a program with no direct USAID involvement in the implementation of the program.
- Grants and cooperative agreements usually require some cost sharing and the recipient does not receive a fee.
- Most grants and cooperative agreements go to NGOs although for profit firms can apply



Contracts

- Two types of contracts for engineering & construction – host country and direct
- In a host country contract USAID acts as the financier only
- Host country contracting and financial systems have to be approved by USAID before USAID can finance a contract
- About 10 mandatory clauses including USAID approvals, marking, cargo preference, workman compensation insurance
- Host country contracts for construction usually use FIDIC terms and conditions – FIDIC is used internationally and is familiar to host countries, engineering and construction companies
- USAID used host country contracts extensively in the 80s and 90s in countries like Egypt
- Today there is less host country contracting done with most engineering and construction contracts direct contracts that use the FAR. USAID Egypt is currently using Fixed Amount Reimbursement Agreements which are a type of host country contract.

Role of the Engineer

- An engineering firm is needed as USAID's representative for all but the smallest construction activities.
- This is true whether the contract is a design/build, conventional design/bid/build, construction management services
- Engineer is necessary to do the designs, manage the construction contractor procurement and supervise construction

Contracts USAID Uses

- Conventional design/bid/build
- Two separate contracts, one for engineering work, one for construction
- Engineering work can include feasibility studies, preliminary and final designs, preparation of construction tender documents, assistance during the tendering process.
- The engineer then oversees the construction which is done under a separate contract

Design/build (Turnkey)

- This term is used quite often in USAID these days, mostly incorrectly.
- Design/build means there is one contract to do the engineering/construction
- Proponents claim it is faster and less expensive. Construction can be started before design is completed
- Problem with D/B is in the procurement – how to ensure each bidder tenders on the same thing.
- Design/build can be used on certain types of facilities such as chemical plants where the design is so closely related to the construction work that they can't be separated
- Even if D/B is used the employment of an Engineer is needed to assist with contracting, approval of drawings, supervision of construction activities, certification of payments
- What USAID has used is a modified D/B where the design is carried to say 30% and then D/B contractor bids to complete the design and carry out the construction.
- These types of contracts were used by USAID in the 90s in Egypt on water and wastewater projects

Design/Build



Construction Management

- Has been used extensively by USAID for programs in the Balkans, Iraq, Afghanistan and Sri Lanka
- Programs were characterized by the need to do something quickly, exactly what was not clear
- Contract is a USAID direct contract – a cost plus fixed fee type contract is used
- Usually contractor assesses the situation and make recommendations on subprojects
- USAID then authorizes contractor to proceed with the engineering, construction tendering and construction. The engineering might be subcontracted out or done by the construction manager.
- The subcontacts are usually firm fixed price or unit price contracts
- This type of contract requires a strong USAID project management staff – in Iraq the program used the Army Corps of Engineers to augment its support staff

Fixed Amount Reimbursement

- Agreements USAID enters into with host countries
- Reimburse a fixed amount depending upon agreed upon outputs – schools, kilometers of road, meters of pipe
- USAID not concerned about procedures used by host country to rehab the schools, USAID doesn't get involved in the contracting
- USAID is concerned on whether the outputs conform to standards
- USAID disbursements not related to actual costs. Payment is fixed in advance based on reasonable cost estimates
- Payment is made on the basis of a completed project or a quantifiable sub-element.
- USAID often requires a host country contribution
- USAID will often retain an engineer to inspect the construction and certify payments.

Innovative Contracting Approaches Honduras

- In 1998 Hurricane Mitch devastated Central America
- USAID used host country contracts for construction
- USAID funded a technical support unit (15 Honduran engineers and one USAID PSC)
- US engineering firms did final designs and construction supervision
- Construction contracts were fixed unit rates
- Quick response task orders were used for activities less than \$100k – scope of work and budget were drawn up by the technical support unit.
- Despite this being a HCC the USAID contracting officer worked closely with the Support Unit
- Over 1000 kilometers of rural roads, culverts and bridges were constructed

Egypt

- **USAID used Fixed Amount Reimbursements in a \$100 million program to sewer construction in the late 1980s and 1990s.**
- **Construction used local contractors in heavily populated, poor areas of Cairo, very narrow streets.**
- **An engineering contractor under a host country contract provided assistance to the Egyptian Cairo Wastewater Organization to help them draw up, tender and monitor construction.**
- **USAID used its own staff and AMBRIC to monitor construction performance.**
- **Project enabled Egyptian contractors to develop their capabilities and to play a more significant role in later USAID projects in Egypt.**



Kosovo

- In 2000 USAID used Parsons Delaware through a direct contract to manage the design and construction of infrastructure projects throughout Kosovo under the Community Infrastructure Services Program
- Projects were identified in part by NGOs already working in Kosovo
- Parsons served as the construction manager subcontracting out the design and construction to local Kosovar firms
- Key aspects of the program were job creation and projects in different ethnic and mixed ethnic communities
- Parsons took on all responsibility with oversight of their contract by USAID project management staff.



Serbia

- In Community Revitalization through Democratic Action (CRDA) Program USAID used assistance agreements not contracts.
- CRDA was a broad based program where representative citizens committees were actively engaged in making local decisions on community development activities
- One object of the program was to bring together opposing factions in a community to develop activities that would benefit different groups
- The scope of projects at the local level was broad and included many small scale infrastructure projects such as schools and clinics, farm to market roads and local electrical systems
- USAID used five grantees through cooperative agreements to implement the program in different parts of the country.
- The grantees in turn worked closely with local firms to design and construct infrastructure projects
- The grantees had engineering expertise on their staffs

Afghanistan

Infrastructure is done through various programs including the Afghanistan Infrastructure and Rehabilitation Program and Alternative Livelihoods Program.

- USAID's largest construction program, AIRP, is done through a construction management direct USAID contract. AIRP's two main sectors are roads and electricity.
- The construction management contractor works with USAID to identify projects or USAID defines what projects are to be done.
- The projects are then put out to tender to local, regional or international contractors who subcontract with the consortium.
- USAID monitors the \$1 billion plus contract with an extensive staff of direct hire, PSC, Afghan engineers and the US Army Corps of Engineers.
- Recently USAID issued a RFA for a major rural roads program in the South and Eastern parts of the country.
- USAID also does a considerable amount of infrastructure through the Alternative Livelihoods Program.
- A large number of these projects are implemented through cash for work.



Colombia

- In Colombia, like Afghanistan, there has been a significant alternative livelihoods program to stem the production of illicit drugs
- Technical and financial support has been provided to rehabilitate rural roads, bridges, schools, rural health clinics, and potable water systems.
- The projects are implemented through direct USAID contracts with firms such as Chemonics and ARD.
- Local contractors are used to increase employment
- As with the program in Afghanistan, infrastructure is only one aspect of a program designed to develop economic alternatives to illicit drugs.
- The scale of infrastructure activity is significant with over 1100 projects being completed.



Peru

- To respond to the needs of Peru's highland communities the WB Rural Roads project aimed to increase access to basic social services and income –generating activities by providing a well integrated rural roads system.
- Project activities consisted of the rehabilitation and maintenance of rural roads thru local labor
- Following the rehabilitation of the roads, communities took over maintenance
- The interesting aspect of this program is that micro enterprises consisting of 10 -15 members were formed to take over maintenance such as clearing drainage ditches and culverts, filling pot holes and ruts and removing small landslides



Haiti, Grenada, Jamaica

- In Sept 2004 Hurricane Ivan and Tropical Storm Jean struck
- In response Congress passed a \$100 million supplemental appropriation.
- USAID and OMB agreed to a one year time frame – which proved too ambitious given that construction was involved.
- USAID decided to hire a management firm rather than undertake the reconstruction with its own staff.
- A subsequent GAO audit found flaws in the construction subcontracts such as no warranties or liability clauses
- Recognizing problems, the USAID mission in Haiti contracted an engineering firm to monitor construction activities.
- The GAO audit found that the engineering company identified urgent construction needs that had to be addressed and worked closely with construction companies to remedy problems.
- The engineering company proved to be an arbiter of problems between the management company and its subcontractors.
- In my estimation, the GAO audit points out the need to not short change engineering by building in engineering expertise either thru USAID's own staff or thru engineering contractor support.
- GAO recommended that USAID revise staffing procedures to allow the Agency to more quickly reassign or hire key personnel.

