Contracting Experiences from Task Force Hope

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by

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of Engineers.

Agenda



 Hurricane and Storm Damage Risk Reduction System: Repair, Restore, Improve to 100-yr Level of Protection

Long Term Coastal Restoration

Risk Assessment, Risk Communication

Acquisition Strategies



US Army Corps of Engineers.

Mississippi Valley Division







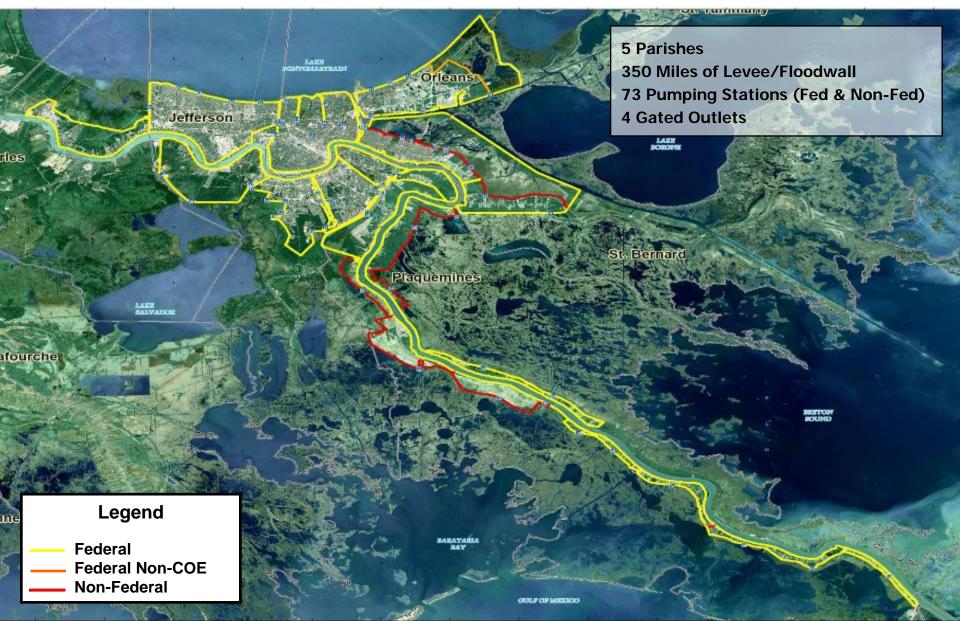
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New Orleans Area

Hurricane Storm Damage Risk Reduction System







Hurricane Katrina

US Army Corps of Engineers®

Aug 29, 2005



- One of America's largest natural disasters
- Cat 5 less than 12 hrs before landfall
- 127 MPH wind at Louisiana landfall
- Maximum surge of 28 to 30 feet along Mississippi coast
- 80 percent of the city of New Orleans flooded



Hurricane Rita

Sep 24, 2005

- Cat 4 less than 12 hrs before landfall
- 175 MPH max sustained winds in Gulf of Mexico
- 120 MPH max sustained winds at landfall
- Cat 3 strength at landfall



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HSDRRS: Our Mission and Commitment



Repair the damages, making what was there before whole again.

 Strengthen and improve the system and provide 100-year level of protection capable of withstanding the effects of a storm having a 1% chance of occurring each year.

Current funding level \$14.3 B (fully funded).

 Study and recommend solutions to provide higher levels of protection; restore and protect coastal wetlands (LaCPR).



HPDC Findings: Key Decision Influences



Tyranny of Incremental Decisions

Lack of Dynamic Use Loss of Vision for Shared Sensitivity of New Information an Integrated to Cost Concerns System Institutional Response Organizational **Decision-Making Issues**

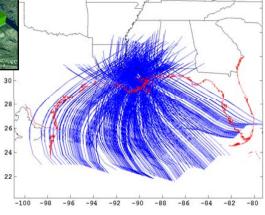


USACE's Actions for Change



- Comprehensive systems approach
- Risk-informed decision making
- Communication of risk to the public
- Professional and technical expertise

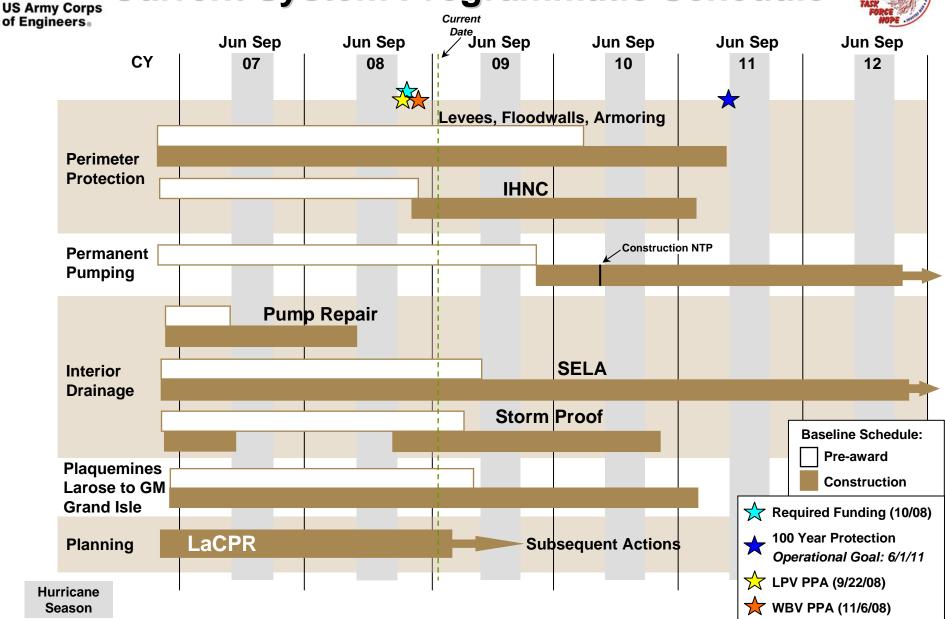






Current System Programmatic Schedule







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Construction Status



- Total expected construction contracts: ~350
- Awarded 170+ construction contracts for \$2.3B
- Overall Program Estimate: ~\$14.6B
- 45 construction contracts worth \$1.4B ongoing
- Awarded IHNC Surge Protection w/Advance Measures

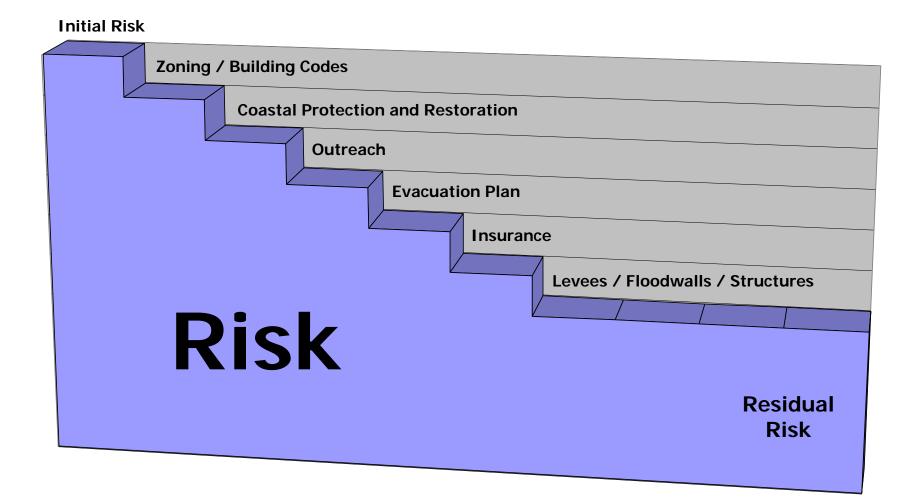
2009

- Anticipate awarding about 120 contracts for around \$4B
- Award 81 contracts for Levees and Floodwalls
- Award 24 contracts for pump station repairs / improve
- Award 10 contracts for SELA (interior drainage)
- Award 3 borrow supply contracts



Buying Down Risk









- Design, Bid, Build
- Design, Build
- Cost Plus
- Early Contractor Involvement
- MATOC/SATOC
- Supply Contracts
 - Govt Furnished Equipment
 - Reverse Auctions





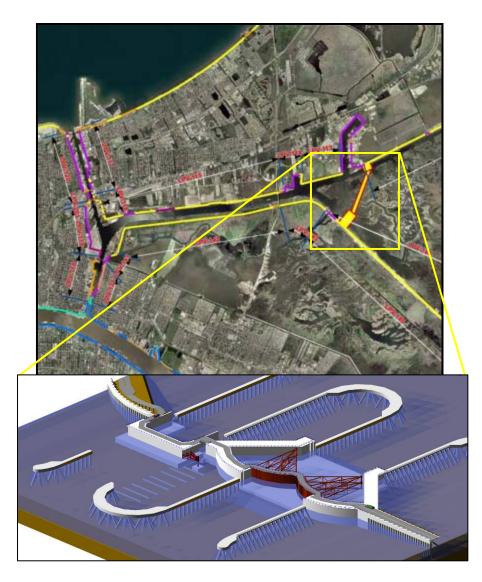
IHNC: Design-Build vs. Design-Bid-Build

Design-Bid-Build

- Traditional method
- Higher cost / less innovation
- Longer schedule for completion
- More gov control of final design

Design-Build

- Gov objectives contractor designs
- Lower costs / more innovation
- Shorter schedule
- Less gov control of final design





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Acquisition Strategy

Design-Build vs. Design-Bid-Build



Design-Build

Pros:

- Team concept focusing on common goals and objectives
- Builder input available during design phase to help determine most cost effective design
- Takes advantage of contractor's ingenuity / innovation in working with A/E firms to reduce cost / schedule
- Reduced schedule
- Reduces owners admin costs

Cons:

- Decisions need to be made sooner in the process
- Team concepts must be implemented early in the process
- More expensive for contractor team to bid and lose
- Difficult for owner to evaluate non-price factors
- Changes are more expensive
- More difficult to question decision of engineer or architect of record
- Possibility of perceived favoritism in procurement decisions
- Does not maximize small business
- Difficult to protect design concepts

Design-Bid-Build

Pros:

- Design is more precise and detailed at outset
- A/E of record works for / represents the owner, not the builder
- More ability to determine acceptability of final end product
- More design and construction competition

Cons:

- More likely to have higher overall cost and require longer schedule
- Coordination responsibility between multiple design, construction, systems and procurement contracts is costly to the owner
- Increased probability of disputes
- Increase owner involvement cost



Early Contractor Involvement (ECI)



- Allows for the selection of the construction contractor based on qualifications, experience and prices as early as the 15% design level, which allows a ceiling price to be set.
- Allows for potential innovation by the contractor
 - Collaboration with industry about construction means / methods
 - Feedback concerning the construction labor climate of the region, resulting in refined project planning.
- Enhanced schedule management.
- Fast tracking of construction using multiple design packages.



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Acquisition Strategy

MATOC and SATOC



MATOC

 Pool of IDIQs with several companies

Pros:

- Set number of pre-qualified contracts
 - Reduces normal acquisition lead times
 - Lowers performance risk
- Lower cost risk
 - Limited competition
- Diversification of contracts by company
- Normal buyer leverage exists

Cons:

- Slower execution
- Less realization of economies of scale
- Learning curve across projects feature reduced
- QC / Safety mgmt not consistent across projects
- Higher schedule risk

- <u>SATOC</u>
- IDIQ with single company

Pros:

- Quick execution
- Economies of scale
- Consistent QC / Safety mgmt
- Learning curve realized over several projects
- Lower performance / schedule risk

Cons:

- High cost risk
- Contracts not diversified over several companies
- Influence of contractor behavior reduced
- Normal buyer leverage is lost



Supply Contracts



- Needed for long lead and mission critical materials
 - Piles
 - Pumps
 - Rock
 - Borrow reverse auction

Pros

- Material acquired in advance to improve schedules
- Purchase in bulk for better unit prices
- Reduce schedule / cost risk
- Identify supply shortages early

Cons

- Increase performance risk
- Responsible for conformance to contract specifications
- Need to store / maintain supplies – adds costs



Reverse Auctions



- Objective is to reduce material prices
- Sources are pre-qualified for particular material
- Reverse auction allows all bids to be viewed by all parties
- Bids can be lowered continuously over time
- Final bids are not public companies give final offers to the Government based on knowledge of other bids during the auction



Applications to Nav Lock work



- COMMENTS
- QUESTIONS?



Applications to Nav Lock work



- New Orleans work fully funded, which provides more flexibility
- Design, bid, build allows for greater standardization of design and components
- ECI appears to have merit
- Stimulus impact emphasis on early funds obligation