PELICAN ISLAND CONNECTIVITY BUSINESS PLAN
June 1st, 2016

Background

Galveston County has recently entered into agreements with the City of Galveston and Port Houston Authority which secure landing rights for a new vehicular and potential rail bridge between Galveston and Pelican Islands. The Memoranda of Understanding executed between the respective stakeholders is based upon detail advanced planning, alignment and other studies completed by The Goodman Corporation (TGC) on behalf the Rural Rail Transportation District (RRTD), to address the growing need for a replacement vehicular bridge and potential future rail connectivity between Galveston and Pelican Island. The need for both rail and improved vehicular connectivity has been discussed for many years; particularly since the existing Pelican Island Bridge is structurally deteriorated to a point where the Texas Department of Transportation (TxDOT) ranks Pelican Island Bridge very low on the structural integrity level. In addition, the growing demand for movement of freight due to the boom in oil exploration and development, Panama Canal widening, and growing need for deep water access for other commodities, contribute to the necessity to maximize the economic development potential of Pelican Island. This will only occur with first-rate transportation systems to move people and freight between Galveston Island and Pelican Island

Galveston County has worked with stakeholders on the development of the proposed new alignment for a new vehicular bridge including the City of Galveston, Port Houston Authority, Galveston Navigation District, Port of Galveston, and Texas A & M University. The County has pledged $2 million to achieve environmental and alignment clearances from the Corps of Army Engineers, Texas General Land Office, and other relevant agencies toward the objective of creating a “shovel ready” project which will rank high for federal and state funding.

The general condition of the 52-year old bascule bridge at the Pelican Island channel has been documented over more than 20 years through semi-annual bridge inspections by the Texas Department of Transportation (TxDOT). Two rehabilitation projects by TxDOT utilized federal off-state-system bridge replacement/rehabilitation program funds needed to keep the bridge open and functional. Despite these efforts, the bridge’s current condition rating by TxDOT is ‘Structurally Deficient’ with a sufficiency rating of 39 on a scale of 0 to 100 and is load zoned at 14 tons.

At the same time, there continues to be increasing industrial development on Pelican Island by existing businesses, most notably Gulf Copper with over 400 hundred employees. The Port of Houston Authority and the Port of Galveston collectively own over 1,370 acres on Pelican Island awaiting potential marine cargo development requiring good landside terminals and connectivity ultimately to the mainland. U.S. Foreign Trade Zone No. 36 is also located on a portion of this acreage and is currently unused.

Texas A&M University at Galveston (TAMUG) currently has 2,000 students, 450 faculty/staff, and housing for 1,500 students. It has a 15 year capital improvement plan that would add 525,000 square feet of academic and support building space as well as expanding student living space by 1,000 beds and academic space to support 3,000 students. The total projected capital investment will exceed $328 million.

Tourism and recreation brings thousands of visitors annually to Seawolf Park.

The current average daily traffic counts over this bridge exceed 7,300 vehicles. The bascule bridge logged 1,759 bridge openings for marine vessels in 2011 and over 2,600 for 2012.

The aging and inadequate bridge is the only current access to Pelican Island and is considered an impediment to future economic development on the island. The addition of a rail bridge and service to tremendous amounts of acreage for industrial and port development would stimulate the development of facilities required to attract world-class shipping interests.

Preliminary Advanced Planning Activities

Preliminary engineering activities will be managed following the new FAST Act streamlined federal Department of Transportation procedures to expedite completion of this scope of services in an accelerated timeframe with the full coordination of state and federal resource agencies such as the United States Coast Guard (USCG), United States Army Corps of Engineers (USACE), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and TxDOT, among many others related to planning and environmental impacts.

Good project management practices will be followed for this project including communications with the GCRRTD and its partners as necessary along with management of time and resources. Throughout the project development process, TGC will maintain project files in accordance with FHWA and FRA procedures for updating and scrutiny by Commissioners Court, staff, and project partners. It will be TGC's responsibility to bring the very best engineering judgment, practices, experience, and principles possible during the prosecution of the work. Upon initiation of the preliminary engineering phase, a detailed budget and cash flow forecast will be provided to all partners indicating the amount of resources anticipated to be expended each quarter.

Preparation of Plans, Specifications and Estimates (P,S&E) as proposed in the following preliminary engineering tasks would be developed to a level that will allow the project to be eligible for inclusion in the Houston-Galveston Area Council Regional Transportation Improvement Program (TIP) for federal-aid funding and final project development up to and including final permitting and construction letting.

Next Steps

Proposed Preliminary Engineering Activities

The following tasks include activities that are currently anticipated to be required to prepare shovel-ready support documentation needed to secure capital funding commitments. The organization chart indicates the structure and lines of responsibility. Two time schedules are shown. A more traditional schedule is provided followed by a more aggressive schedule anticipated to be achieved because of the expedited processes made possible by the MAP-21

legislation.

Evaluate existing facility

- Identify purpose and need of the project
- Obtain existing bridge plans, existing rail plans, foundation details and specifications
- Evaluate the condition of the existing bascule bridge including an extensive underwater survey and inspection of the lift mechanism

Prepare preliminary estimates and scopes for construction of a new lift span railroad bridge and replacement of the existing bascule bridge with a new fixed span bridge ($25K)

- Determine bridge and approach rail and roadway geometry and alignments for each proposed alternative
- Vessel impact data collection and criteria
- Foundation and superstructure alternatives for existing bridge rehabilitation (No-Build Option)

Advanced planning activities

- Compile all data about existing bridge operations, roadway traffic, seagoing traffic, operating activities and budget
- Compile forecasts for increased tourism, educational, housing, shipping, heavy industrial and other activities on Pelican Island and their interaction with similar activities on Galveston Island and off-island connections
- Estimate 30 year bridge traffic in 5 year increments, including vehicular mix supporting the required bridge capacity
- Compile physical requirements for the proposed bridges from the USCG, Corps of Engineers, GCRRTD and Legacy Port Partnership (LPP), Galveston County, GCND No. 1, Ports of Houston and Galveston, TxDOT, FHWA, FRA, City of Galveston, Pelican Island land owners and other relevant agencies
- Prepare a diagrammatic representation of the bridge requirements to guide and inform funding requests and further preliminary design efforts
- Prepare a preliminary cost estimate commensurate with diagrammatic plan phase of work
- Conduct public and/or stakeholder meetings as necessary.
- Stakeholder coordination throughout the process
- Determination of "Locally Preferred Project Alternatives"

Right-of-Way needs determination

- Dimensions and orientation of existing facilities
- Determine fee title to existing facilities (roadway and bridge, railroad, channel) including approach/connecting roadways on both islands
- Determine right-of-way needs, sufficiency of existing conditions, and modifications based upon locally preferred design alternatives
- Analyze bridge and rail ownership, governance, and future options

Market Analysis

- Stakeholder needs survey (present and future)
- International and domestic marine cargo development
- Potential available rail capacity between Pelican Island and the mainland rail network
- Increased truck-borne cargo capacity
- Competing regional port capabilities and future known Capital Improvement Plans (CIP)

Financial Analysis

- Based on market analysis; projected required capital expenditures
- Financial indicators of capital availability and identifying sources (federal funding, private equity, and local fund leverage)
- Return-On-Investment timeline of capital outlays (break-even analysis)
- Operations and Maintenance expenditure planning
- Employment impacts of increased port and industrial activity on Pelican Island
- Projected fee and tax revenue on Pelican Island (post improvements)

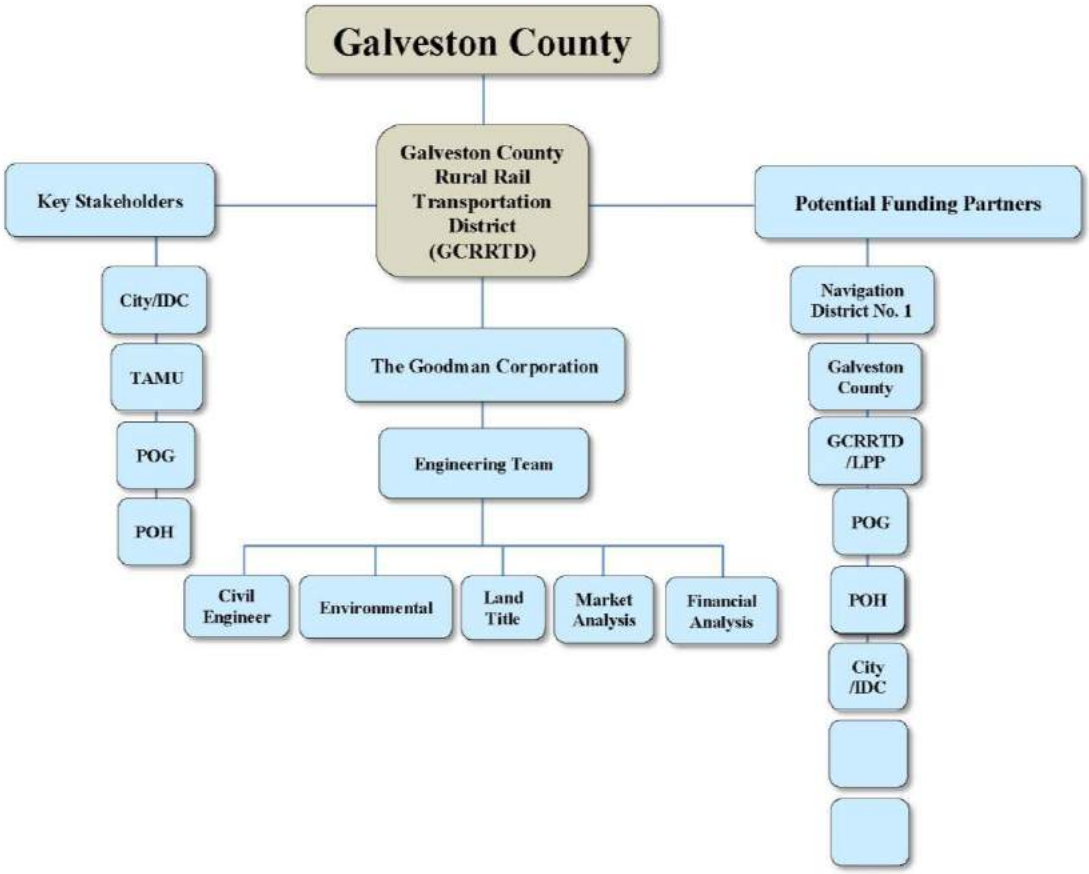
Environmental Assessment

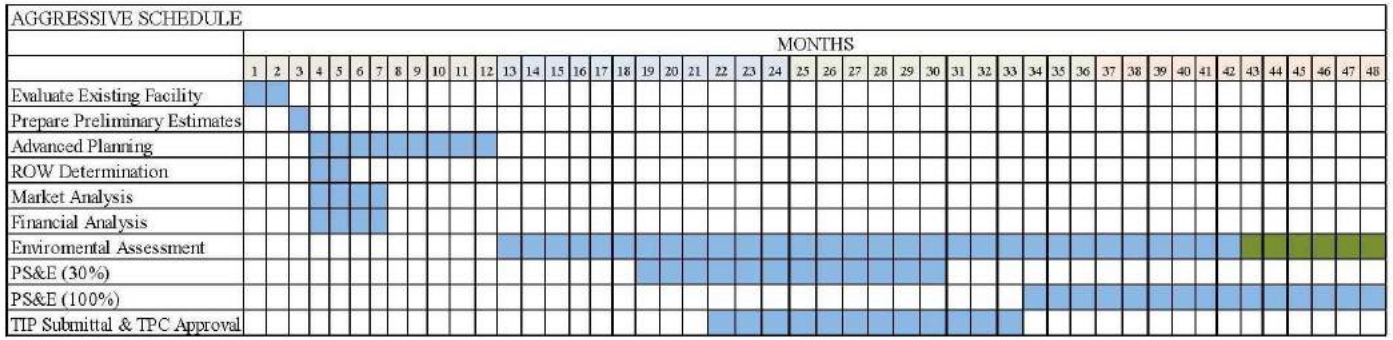
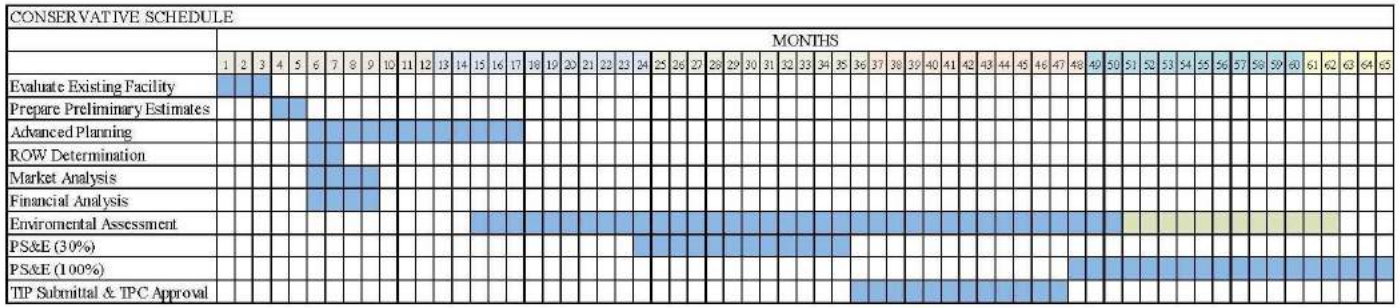
- Select environmental consultant team
- Scoping document preparation and submittal, including public agency input
- Determination of wetland and surface waters jurisdictional boundaries
- Prepare assessment of current conditions and potential impacts for 28 categories of environmental considerations (including land acquisition, displacements, land use, zoning, air quality, noise, vibration, water quality, wetlands, flooding, navigable waterways, coastal zones, ecologically sensitive areas, endangered species, traffic, parking, energy requirements/conservation, historic properties, parklands, construction, aesthetics, community disruption, safety, security, secondary development, consistency with local plans, hazardous/regulated materials, seismic risk, and environmental justice)
- Coordination and verification with all state and federal resource agencies of all findings
- Public meeting and "notice affording opportunity" of a hearing and public hearing if requested
- Completion and submission of all required reviews, permitting applications, and Environmental Assessment documentation
- Prepare USCG Permit sketches per Agency criteria

Preliminary Plans, Specifications, and Estimate (30%) preparation activities ($700K)

- Select consultant design team
- Federal-aid specifications and design standards
- Preliminary project limits, layouts and estimate
- Prepare 30% design plans and schematic (including surveying, geotechnical, demolition requirements, and preliminary construction phasing plan)
- Prepare estimate commensurate with 30% plan development
- Coordination of plan reviews and approvals by local, state and federal agencies

Organization Chart



GALVESTON COUNTY RURAL RAIL TRANSPORTATION DISTRICT (GCRRTD)

August 23, 2013