AGENDA MEMORANDUM
June 19, 2017
Corpus Christi Business and Job Development Board Meeting

DATE: June 12, 2017

TO: President and Honorable Board Members,
Corpus Christi Business and Job Development Corporation

THROUGH: Margie C. Rose, City Manager

FROM: J.H. Edmonds, P.E., Director of Engineering Services
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UPDATE
Engineering Services Monthly Project Updates

STAFF PRESENTER(S):

Name	Title/Position	Department
1. Jeff H. Edmonds, P.E.	Director	Engineering Services

OUTSIDE PRESENTER(S):
None.

BACKGROUND:
The current active projects are listed below with the monthly activity shown.

1. **Salt Flats Levee Project/ FEMA Mapping:**

Project History:

- In 2012 through 2014, the City submitted a FEMA Certification Guidance Document and began an assessment of the impact of FEMA's new FIRM maps.
- Beginning in 2015, Staff revised the engineer's scope to better adapt a strategy to support identifying existing flood protection deficiencies, corrective actions and validation of the FEMA FIRM maps in lieu of "certifying" the systems. This is a result of the changes from FEMA moving from the Provisional Accreditation Levee (PAL) to the Levee Accreditation Mapping Procedure (LAMP).
- In 2015, Type A Board and City Council approved an MSA contract with HDR.
- A meeting was held with FEMA on August 26th 2015 to discuss the LAMP and several task orders were negotiated. (See Task Orders Below)
- Task Order No. 2, a flood protection system vulnerabilities assessment, was conducted by the consultant and completed in 2016, and reviewed at the March 2016 Type A Board meeting. It is possible this can be re-opened at a later date.
- In 2016, the engineer prepared a proposal for Task Orders No. 3, 4, and 5 (see descriptions and project status below).

Task Orders:

1. Update and Finalize Phase 2A Report – Salt Flat Levee Assessment (Complete)
2. LLPT Participation/Flood Protection System Vulnerabilities Identification (Complete)
3. Salt Flats Levee 2D Hydraulic Model (Complete)
4. Conceptual Design of Improvements for Salt Flat Levee (90% Complete)
5. Preliminary Design of Floodwall Replacement for Museum of Science and History (Complete)

2017 Progress:

Task Order No. 3:

- Task Order No. 3 was completed and the hydraulic model has been sent to FEMA for comments. This was distributed to Type A in January 2017.

Task Order No. 4:

- Task Order No. 4 Salt Flats Preliminary Design Memo was submitted in December 2016. Attachment #1 – Preliminary Technical Memorandum Improvement Concepts for Salt Flats Levee was given to Type A Board in February 2017. City comments were provided to HDR in April 2017.
- An Amendment for Task Order No. 4 was issued in March 2017 to verify how the New Harbor Bridge will impact the Salt Flats Levee.
- Flatiron/Dragados, LLC (Harbor Bridge contractor) presented their analysis of the effects of the Harbor Bridge infrastructure on the Salt Flats Levee on 04/21/17.
- HDR reviewed the Flatiron/Dragados, LLC analysis/report, and provided comments to the City on 05/04/17.

Task Order No. 5:

- Task Order No. 5 Museum Floodwall Preliminary Design draft design memo was submitted to City for review (Distributed in January 2017 Type A Board Meeting). City comments were provided to the consultant in April 2017.
- The consultant submitted the final report for Task Order No. 5 in April 2017.

Future Projects:

- The City issued a RFQ to select consultants for six Type A Projects; two of the projects are for design of the improvements recommended thru Task Orders No. 4 & 5 of this project (see also Item 6 below). The City received RFQ submittals and the Award Letters were sent out in February 2017.
- Scope and Fee negotiations with the selected consultant (HDR) began in March 2017.
- HDR submitted their design proposal for the Museum Flood Wall portion of the project on 4/26/17.
- HDR will wait to submit the Salt Flats Levee design proposal until they have completed Task Order No. 4.

2. Barge Dock Project:

Project History:

- The August 2012 contract with LJA (RVE) for **$309,870.00**, defined their scope as a forensic assessment of the barge dock and the adjacent sloped seawall to pursue improvements identified in the 2012 CIP. The scope also included collaboration with the Barge Dock

stakeholders to determine if the Barge Dock should continue to function as designed or if additional uses should be considered. The future CIP Funds identified at that time totaled **$8,350,000**. The first phase of the assessment was completed by LJA (RVE) and they requested to move forward with the Wave Load Analysis and Structural Stability Analysis. However, because the Barge Dock usage will not change, the City decided to not pursue the Wave Load Analysis and Structural Analysis.

- The improvements originally were planned to include raising the elevation of the barge dock by 2', constructing a relief platform to prevent the new fill from surcharging the existing bulkhead, developing a stepped terrace area to reduce wave run-up onto the adjacent roadways during storms, and developing additional parking and other amenities.
- As of 2015, it was recommended that the deficiencies be corrected and the major alterations be deferred to allow for more critical flood protection upgrades.
- August of 2015, Engineering Services initiated discussions with LJA (RVE), and developed a scope of work for repairs to address deficiencies identified during the condition assessment. Any further betterments to the barge dock are being put on hold until requirements can be better defined.
- The City received a final condition assessment report from the LJA (RVE). A proposal was also received and approved, and negotiations were finalized for the design phase services to make repairs to the barge dock (2016).
- The preliminary submittal and OPCC (Opinion of Probable Construction Cost) was received in September of 2016. A review meeting was held in October 2016.

2017 Progress:

- LJA (RVE) prepared 100% drawings and construction documents (December 2016), which were distributed for City review (January 2017).
- American Disability Act (ADA)/ Texas Department of Licensing and Regulation (TDLR) scope of work was added to the design requirements for accessibility (February 2017). An amendment to the AE contract for TDLR scope of work was expected in March 2017; however, the City opted not to amend the AE contract. The design will be completed under the current contract.
- Final (and sealed) plans were received on May 30th, 2017 and ATA (Authorization to Advertise) was issued on June 5th. Pre-Bid Meeting scheduled for 06/27/17 and Bid Opening 07/05/17.

3. McGee Beach Renourishment/ Boat Basin Dredging Project:

Project History:

- In 2014, funding was approved and the Coastal Erosion Planning and Response Act Project Cooperation Agreement (PCA) would allow for the GLO to develop a design for the nourishment of McGee Beach.
- In 2015, City staff met with GLO and the design consultant to discuss reducing beach re-nourishment demands to reduce cost and improve beach conditions. Based on the evaluations, McGee Beach re-nourishment could be deferred and North Beach was scheduled for re-nourishment.
- August of 2015, Engineering Services staff met with GLO's consultant about planning and permitting. The City determined it may assume responsibility for this project from GLO and link it with other area project needs such as the boat basin dredging and breakwater repairs.

- A meeting was held during the month of September 2015 with Cameron Perry (HDR) to formulate a new dredging and beach re-nourishment project.
- In February 2016, HDR recommended that a feasibility study be conducted prior to initiating the design phase.
- HDR's proposal for the feasibility study was reviewed by Engineering Services in March 2016, and the contract was presented to the Type A Board during the May 2016 meeting. The Type A Board approved the contract at the June 2016 meeting.
- A kick-off meeting was held on September 19, 2016 for the study phase.

2017 Progress:

- Final report was received and distributed to Type A Board (January 2017).
- The City issued a RFQ to select consultants for six Type A Projects, one of which is to prepare the McGee Beach re-nourishment plans (see also Item 6 below). The City received RFQ submittals and the Award Letters were sent out in February 2017.

4. McGee Beach – Breakwater Safety Improvements

Project History:

- The Breakwater structure provides wave dissipation reducing wear and tear on the sea wall and protects the Marina facilities. This structure includes a concrete cap that allows citizens to walk and fish from it.
- In 2009, HDR prepared a report recommending repairs and improvements to the Breakwater. This project's scope was based on HDR's 2009 study, and includes removing a portion of the breakwater cap and replacing it with a 6' wide concrete cap over stone, and repairing the damaged portions of rest of the concrete cap.
- Since 2009, the deterioration has continued such that the structure is experiencing minor failures and presents potential safety risks to travel to and from the structure. Parks and Recreation continues to provide maintenance; however, the deterioration is beyond economical maintenance capabilities.
- In 2009, Engineering Services recommended approval for major repairs to the structure for approximately **$1.8 Million**. Engineering Services developed preliminary plans that phased the improvements to restore safety and structural integrity. These improvements will help fortify the seawall against wave attacks by preventing failure of the breakwater and excessive erosion of McGee Beach. The proposed improvements consist of demolishing the existing elevated concrete cap and constructing a new breakwater and concrete cap in its place. The total costs associated with these repairs/improvements were estimated at **$1,769,875** in 2009. For the Breakwater at McGee Beach, the Seawall Maintenance Capital Improvement Plan Budget shows:
  - $730,000 for 2019/2020
  - $3,570,000 for 2020/2021
  - $3,000,000 for 2021/2022
- The deteriorated concrete stairs to the breakwater structure were repaired by Parks and Recreation in June of 2015.
- In 2015, Engineering Services received a proposal from HDR to update the 2009 study of the breakwater. The goal was to obtain an updated work scope based on the current condition of the breakwater and current pricing for the repairs/upgrades.

- The proposed AE agreement was presented to City Council in February 2016 to approve the $19,000 to update the report with a more detailed scope and fee.
- The study was kicked-off on February 11, 2016.
- The City received the Draft ELR on March 30th, 2016 and met with the consultant to review the draft on April 20th, 2016. The review comments were provided to the consultant and were incorporated into a final report which was presented to the Type A Board in May 2016.
- A presentation of the findings was made to the Type A Board at the June 2016 meeting. Repair recommendations were added and approved to the CIP (Capital Improvement Program).

2017 Progress:

- The City issued a RFQ to select consultants for six Type A Projects, one of which is to prepare construction plans for the Marina Breakwater at McGee Beach repairs (see also Item 6 below). The City received RFQ submittals and the Award Letters were sent out in February 2017.
- Scope and Fee negotiations with the selected consultant (LAN) began in May 2017.

5. Bayshore Park

- Type A Board was informed in June and July of 2016 of the synergy between the Bayshore Park (Bond 2008) project and the McGee Beach Pier and Breakwater and the Marina Dredging/McGee Beach re-nourishment project.
    - Bayshore Park scope included pier surface treatments and upgrades of up to $454,000 but no structural repairs for the pier.
    - Type A Breakwater Safety Improvements Study (see Item 4 above) estimated $750,000 for structural repairs to the pier and walkway leading up to the Breakwater.
    - Plans include shade, landscape and lighting upgrades for the pier.

2017 Progress:

Bayshore Park:

- The City has been reviewing design submittals for the final scope items at Bayshore Park, Phase 2 & 3, and comments were provided to the design-builder in March and in April 2017.
- The City is not yet in receipt of the signed/sealed plans for Phases 2 & 3.
- The City has not yet received design submittals for the final design and cost estimate for the iconic signage for the park (as the re-naming process is underway).
- It is anticipated that the Bayshore Park construction will be complete by July 3rd, except for the aesthetic improvements to the pier (see the Pier subsection).

Parking Lot:

- In January 2017, a request was made by Johnny Phillipello, CEO of Buc Days, to support the Bayshore Park project with additional funding to provide for the repairs and upgrades to the Old City Hall/Memorial Coliseum parking lot, which is currently not in the scope of Bayshore Park.
    - This parking lot is critical to Buc Days Carnival operations since they are no longer allowed to use the Great Lawn (old Memorial Coliseum Site) for large carnival rides due to the damage to the lawn and the irrigation system.

- The City requested proposals from both Fulton-Coastcon (Bayshore Park contractor) and Grace Paving (one of the City's selected contractor for the IDIQ minor streets improvements) to provide an upgraded parking lot at this location.
- The City will move forward with the best value option for the repair of that parking lot later this year after negotiations are concluded and if the budget source can be identified.
- Budgetary support from the Type A board for the repair and upgrade to the parking lot was requested, as that scope could not be covered by the available 2008 Bond funds in the current design-build project.
- This parking lot has been used in the past as temporary storage for boats from the Marina during hurricane surge events.
- This parking lot is anticipated to be used in the future for other events, such as a park and ride facility to support events at the north end of the seawall or even North Beach.

- On February 20, 2017, the Corpus Christi Business and Job Development Corporation approved an appropriation of Type A funds in the amount of $424,500 for improvements to the parking lot at the old Memorial Coliseum site. This project was requested by the Bayshore Park Task Force to enhance continuity and parking for the McGee Beach, Water's Edge Park, and Seawall. The work will be executed through the City's ongoing Minor Street Pavement Repairs IDIQ project. Work includes reconstruction of the parking lot, adjacent curbs and gutters, and lighting upgrades.
- On June 20, 2017, the City Council is expected to appropriate the Type A funds into a City Capital account so a Contract may be awarded to the Minor Street IDIQ contractor and work may begin on the Parking lot. Repairs scheduled to commence after July 4th celebrations.

Pier:

- Felix Ocanas (with ECMS, LLC), who is the contracted structural engineer and inspector, worked through design issues for the new plate deck for the pier and walkway related to load capacity for improvements (March/April 2017).
- The actual amount for the structural repairs and walkway leading up to the Breakwater is $586,326 (Fulton-Coastcon, contractor's actual proposal), which was approved by the Type A Board on their meeting of May 2017. This is additional to the $454,000.
  - Pier improvements include structural restoration, breakaway side panels to reduce sand migration, electrical service extension, lighting, additional shade structure and landscaping features to enhance the experience of visitors. This work creates an additional programmable special event space and provides better continuity between the Waterside Park, McGee Beach and the Seawall.
- City Council had an agenda item on June 13th to consider the Change Order of $586,326 for the structural repairs.

6. Projects Currently Under RFQ (Posted in November 2016 and Awarded in February 2017)

Seawall Capital Repairs (Currently Under Negotiations)

- The Corpus Christi Seawall was originally constructed from 1939 to 1942. With the initiation of the Seawall Maintenance sales and use tax, a major project was completed in 2007 to address advanced levels of deterioration of the Seawall system. That project was completed for a cost of $43.4 million. The funding levels programmed in the CIP are anticipated to address routine maintenance issues. A subsequent major reconstruction is shown to occur after the expiration of the current one-eighth cent sales

and use tax. This project will assess the seawall and develop and prioritize the maintenance repair activities.

- AE Selected (Munoz Engineering)
- A scoping meeting was held with the consultant on 05/16/17.

Salt Flats Levee Improvements (Currently Under Negotiations)

- The Salt Flats Levee System (originally referred to as the Backwater Levee) is an integral component of the downtown flood protection system. The levee requires improvements and maintenance to ensure that the system will function as originally designed. The levee is susceptible to various models of failure. Based on a preliminary study by HDR, improvements are planned that would be sufficient to be certified by FEMA as a freeboard deficient reach. This means that although the system would not afford the level of protection required to be prevent overtopping in a 100-year event, it would not be vulnerable to catastrophic failure. This project will prepare the construction plans for the proposed improvements.
  - AE Selected (HDR)

Repair on Marina Breakwater at McGee Beach (Currently Under Negotiations)

- Proposed improvements consist of demolishing the existing elevated concrete cap and constructing a new breakwater concrete cap in its place. The existing rock breakwater and concrete cap will be repaired and raised. These improvements will help fortify the seawall against wave attack by preventing failure of the breakwater and excessive erosion of McGee Beach. Construction anticipated to consist of placing rock ballast (smaller stones) to fill gaps between the larger stones and provide a base for the new concrete cap, building the new cap wider (assumed to be 2 ft. wider) and higher (assumed to be 1 ft. higher) than original.
  - AE Selected (LAN)
  - A scoping meeting was held with the consultant on 05/02/17.
  - Anticipate funding will be available in October 2017.

McGee Beach Nourishment/Boat Basin Dredging

- The proposed improvements consist of nourishing McGee Beach to improve potential storm damage reduction at the seawall. A wider beach will help the seawall survive a storm of longer duration or greater intensity. Sand may be trucked in from upland sources, such as quarries near the Nueces River, or dredged from the marina or bay. This project would address beach nourishment as well as shoaling issues in the marina.
  - AE Selected (Govind)

Science and History Museum Flood Wall (Currently Under Negotiations)

- This project is to construct a new floodwall (or a coastal structure) that would follow a “hypotenuse” alignment between the existing Promenade and the USACE Bulkhead. The project will also backfill the triangle to make it function more like a coastal structure. This would also provide additional land area for future use.
  - AE Selected (HDR)
  - The consultant submitted their proposal on 4/26/17; it will be reviewed and negotiated prior to contract execution.

Kinney and Power Street Pump Station Improvements (Currently Under Negotiations)

- The downtown flood protection system relies on two pump stations, Power Street Pump Station and the Kinney Street Pump Station, to service this drainage basin during a significant storm event. Previous design and studies for Downtown Drainage projects included a new storm water concrete interceptor box with new inlets that was constructed in 2007 along Water Street to allow transfer of flows between the two stations, and upgrades of the Kinney Street pump station in 2009. Preliminary studies indicate that a third pump station is required to meet the 100-year event. This project evaluates the capacity of the existing 2 pump station to determine the feasibility of interim solutions to maximize the capacity at the Power Street Pump Station before adding the major investment of the third pump station. The project should include 2D modeling to better define the demands to enhance the reliability and capacity of the downtown storm water pumping system.
  - AE Selected (Urban)
  - A scoping meeting was held with the consultant on 05/03/17.

ATTACHMENTS:

None