AMES TRANSIT AGENCY BOARD OF TRUSTEES

AMES, IOWA **April 12, 2012**

The Ames Transit Agency Board of Trustees met on April 12, 2012 in CyRide's Conference Room. President Anders called the meeting to order at 5:16 p.m. Trustees in attendance were Anders, Madden, Schainker and Wacha. Absent: Trustee Gerdes and Vander Velden.

PUBLIC COMMENTS: None.

PUBLIC IN ATTENDANCE: Samantha Long and Nick Wilz, Iowa State University Students for a Political Science class assignment and Dave Eaton, City of Ames Risk Manager.

APPROVAL OF MINUTES: Minutes from the March 22, 2012 transit board meeting will be presented at the April 19, 2012 meeting for approval.

CYRIDE FACILITY – FLOOD PROTECTION TECHNIQUES: In December 2011 - January 2012, the Transit Board and City Council approved a contract with URS Corporation for to design facility improvements including protecting it from future flooding events. Director Kyras introduced Peter Styx and Bill Troe with URS who have been working on the facility's flood protection design, as it is the first priority for the facility improvements.

Director Kyras indicated that the outcome desired from the meeting would be direction from the Transit Board regarding a specific flood measure to be used to protect the facility. There are several options and narrowing of these options to one would allow the project to move forward toward construction later in the fall 2012.

Director Kyras explained that funding is available, totaling $4,985,206, to assist with the flood protection, bus storage expansion, bus storage ceiling height and structural repairs. Peter Styx then presented the various options, the benefits and challenges of each option as well as its projected implementation cost.

He began by explaining Options 1A and 1B which encompass encircling the entire site with a berm, combined with using existing walls as a barrier. He further explained that the berm could be at a height of 4.5 ft. above site elevation of 900 ft. (1A) or 2.5 ft. (1B). The 2.5 ft. level represents the level for which Iowa State University and the City design flood protection structures. The 4.5 ft. level represents the level desired by the City of Ames/CyRide's Insurance Company's desire for flood protection, citing increasing flood occurrences and severity. He further explained that the earthen berm and the building together act as the barrier not allowing water inside. He explained that the west wall of the facility would need to be reconstructed with larger footings to withstand the hydrostatic pressure of the water against the wall, but that improvements could be

done from outside the building as opposed to inside the building disrupting CyRide's operations during the construction period.

Option 2 provides two different variations of a wet-dry solution. Option 2A protects just the office areas as a "dry" area and allows water to flow through the rest of the facility. Option 2B includes the office area plus a mechanical room in the dry area. Mr. Styx further explained that other areas within the maintenance shop would need to have critical components raised above the flood heights through the use of shelving or other raised options. He explained that dry proofing the office and mechanical areas would require significant restructuring as the walls were not built to withstand the water pressure and would collapse with either 2.5 or 4.5 feet water levels in the building. This reconstruction would be expensive and significantly disrupt operations during construction by eliminating the use of 2 bus lanes in areas where the walls required modification.

The third option is to use the entire perimeter of the building as a flood wall and allow everything around it to flood. This third option would require existing walls to be reinforced and a new flood wall to be built to the north of the office area as the walls were not designed for this higher level of flood protection. This option requires every opening in the building (18 openings) to have flood protection in addition to the walls. Mr. Styx indicated that this originally is what the design team believed was needed, but through further investigation with flood experts, discovered that it is the most expensive option.

Mr. Styx then recapped the options and explained the cost of each.

- **Option 1A** – His best characterization of this is that it is a bathtub, but water is outside of the bathtub. The cost for this option is $1,024,476 with flood protection to the 4.5 ft. level.
- **Option 1B** – This option is the same as 1A except it protects the facility to 2.5 ft. above the 900 ft. base elevation. Its cost is $754,915. He explained that the cost is lower due to less earthwork and smaller gates that are needed.
- **Option 2A** – This option is a wet/dry option that protects the office area to the 4.5 ft. level. He explained that this is a cost effective option; however, it requires clean up costs and service disruptions with every flooding event as well as major service disruptions during its construction. The cost is $243,396.
- **Option 2B** – This wet/dry option protects the office area and mechanical room to the 4.5 ft. level at a cost of $274,958.
- **Option 3** – This option uses the building as a flood wall eliminating water in the facility to a 4.5 ft. level. Its cost is $1,433,247. This option is the most intrusive during construction losing the use of bus lanes for a 2-3 month period. It would be difficult to continue CyRide's operation in the facility during this period.

Mr. Styx further indicated that only the south wall of the facility had been designed to withstand the force of floodwaters to the 2.5 or 4.5 level. The remainder of the walls

were not designed to resist vertical loads placed on the structures during flooding; indicating the walls would tip over. Reinforcement of the walls in each of the options would require extending the width of the foundation by 4 ft.

Mr. Styx explained that if the Transit Board chose Option 1, that all modifications to the west side of the building could be done externally, which would not disrupt the fueling and bus wash operations – a critical component of daily operations.

Trustee Schainker asked for an explanation of the flood risk at 4.5 feet versus 2.5 feet on the site. Mr. Styx explained that the 4.5 ft. level is designed for a 500 year flood event (later corrected to 100 year flood level) plus 4.5 ft. higher. The 2.5 ft level is designed for a 500 year flood (later corrected to 100 year flood level) plus 2 feet higher. Trustee Schainker asked what level the 2010 flood reached. Director Kyras indicated that the building received a foot of water, so this would equate to a 901 foot elevation level, which would be below the 2.5 ft. level (902.5). Trustee Madden thought it was no higher than the 2.5 ft. level. Mr. Styx clarified that the 900 ft. level represents the 100 year flood level, not the 500 ft. level.

Mr. Styx indicated that the adjacent ISU cooling towers are designed for a flood at the 903 ft. elevation.

Trustee Wacha asked how long it would take to put each of the options with flood gates in place if a flood event were to occur. Mr. Styx explained that they have not chosen a vendor at this time, but have researched possible gate options. He indicated that there were three manufacturers that could provide a solution for CyRide. He explained how each of these options worked from manual swing gates to automatic gates that rose as the water level rises. Trustee Schainker asked if there was an override on the automatic gate option in case of a malfunction. Mr. Styx indicated that as the designed progressed, they would be reviewing each of these options and would make sure that the option chosen would work in any situation. Trustee Madden asked if there were annual or monthly maintenance issues with any of the options. Mr. Styx indicated that periodic maintenance is required on each of the options.

Trustee Schainker asked if the level of protection had an effect on insurance premiums. Director Kyras indicated that in an earlier meeting that day with the insurance carrier their representative had indicated that it would not have an effect on insurance premiums, stating that CyRide was currently paying higher premiums as a result of being in a flood plain. Dave Eaton, the City of Ames' Risk Manager, confirmed that it should not have an impact on the premium rate.

Dave Eaton explained that the insurance rate is driven by current property characteristics. He shared that the insurance carrier, FM Global, had indicated, in the previous meeting that day, that their recommendation was Option 1A, citing that their reports had always indicated a level of 4.5 ft. was desired. Mr. Eaton further explained

the premium rate currently paid by CyRide. He indicated that CyRide was already paying a surcharge or penalty premium. He stated that the insurance company took the rate paid in 2010 and multiplied it 10 times to determine current rates. He further stated that FM Global indicated that prior to 2010 it had not charged the City/CyRide for flood insurance at CyRide's facility; stating it was an oversight. Trustee Schainker asked if the board did not approve flood protection at the higher level (4.5 ft. level), would the insurance company increase the premium. Mr. Eaton said that the City of Ames' premiums in the future would be based more on other properties within the city as opposed to significant modifications as a result of CyRide's facility. He indicated that it could be a small factor in their willingness to renew the City's property insurance. Trustee Schainker asked if they might lower the City/CyRide's premium. Mr. Eaton indicated that he believed they might get lower bids from other companies.

The discussion then turned to which option was the best solution for CyRide. Director Kyras shared with the board the challenge that a wet/dry option posed with the amount of time required to "clean up" the facility after it flooded. She indicated that it created operational challenges at a time when it was being asked to help the community with its emergency transportation needs. Trustee Madden mentioned that Maple-Willow-Larch has a berm and has been a very successful experience since the last flood. Trustee Schainker questioned the possibility of berm erosion. Mr. Styx explained how the berm was constructed with its width to allow for stability and the construction of a T-shape wall at the berm openings to ensure that erosion does not occur. Further, Mr. Styx explained that the berm would need to be a width of 27 ft. under Option 1A and that this posed a challenge with the site's available space. He indicated that if this option was chosen, they would need to refine the design, which might require a partial wall to reduce the width of the berm so that there was adequate room for parking, sidewalks and berms. He indicated that initial discussions had taken place surrounding this issue with Cathy Brown at ISU's Facility Planning and Management.

Mr. Styx also shared that the site slopes and is lower on the east end by approximately 1.5 feet allowing for time to close gates at the west end of the property.

Trustee Wacha asked if there was an approximate cost to clean up the facility with the wet/dry option. Rich Leners, CyRide's Fleet and Facilities Manager indicated that he did not have a cost calculated, but that it took maintenance staff approximately 3 – 4 days to hose down the bus storage, plus the additional time to clean the maintenance area and ensure that water did not get into the electrical or mechanical systems.

Trustee Schainker made the motion recommending Option 1A, Floodwall/Berm at 4.5 ft at a cost of $1,024,476 subject to Trustee Madden's approval. Trustee Madden supports the berm and was in agreement with the motion on the floor, but wanted to discuss the option with other university officials. Mr. Styx clarified that this option included only minor corrections to the south side of the building and the corrections on the west side of the building would not interrupt operations.

Director Kyras indicated that CyRide had "earmarked" $1 million dollars for flood protection work out of the approximately $4.9 million dollars available. She indicated that Option 1A was only slightly higher than this preliminary estimate and allowed funding of the other facility improvement projects – expansion, ceiling height modifications and structural issues.

Trustee Madden asked whether the ground water issues experienced in the flood of 2010 would be resolved as well. Mr. Styx indicated that the consultant team was currently working on a solution. Mr. Styx said there were site surveys currently being taken to locate storm water drains, so automatic valves could be installed that take care of the storm sewer and sanitary systems. All options include these values. He also indicated that each option included portable pumps incase water seeped into the "dry" areas of the protection. Trustee Madden indicated that ground water was an issue at the Lied Recreation building.

Director Kyras indicated that if an option could be chosen either at the meeting or within the next week, the design team could have construction drawings complete by this fall with construction to begin yet this year.

Trustee Madden supports moving forward with the motion on the floor, Option 1A. Trustee Wacha seconded. No further discussion. (Ayes: four. Nays: None.) Motion carried.

TIME AND PLACE OF NEXT MEETING: Thursday, April 19, 2012 at 5:15 p.m. at CyRide.

Meeting adjourned at 5:53 pm.

_____ _____

Bob Anders, President Joanne Van Dyke, Recording Secretary