

**CLEAR CREEK FHAD AND MASTER PLAN
PROGRESS MEETING
JUNE 13, 2007 9:00 AM**

UDFCD BOARD ROOM

Minutes

- Meeting agendas and a sign in sheet were distributed.
- A general discussion was held regarding the inflatable dam downstream of Washington Street and if ICON had received Improvement alternatives from the consultant working with Golden. Icon had not received data at this time and will contact them.
- Ben Urbonas (UDFCD) indicated that the FHAD is on the agenda for approval on the upcoming Board Meeting later this month.
- Craig Jacobson (ICON) started the discussion for the work completed on the Phase B and indicated that the effort focused in the Adams County reaches. Sheet layouts were discussed and it was decided that due to the very wide FHAD floodplain and residual floodplains, that a separate set of drawings may be included at a larger scale (i.e. 1" =400' original scale) that will just show the two floodplains. Only areas where there are proposed improvements will be shown on plan & profile drawings. Floodplains will be referenced to the separate drawings as required.
- Design sheets were projected as PDF's on the overhead screen and discussions were held for the proposed improvements. Craig indicated that the preliminary designs were closely following the recommendations from the Phase A Study. Some general comments on the "drafting" were made and including that the schematic view of the drop structures should be shown as "V" or "crescent" shapes; boat chutes need to be shown consistently and without curves; be consistent with notes & reference the flood plain maps when applicable.
- Craig mentioned that the master planning efforts in Adams County would mainly focus on bridge replacements and north overflow conveyance. Much of the reduction in damages to structures would occur with the bridge improvements. Craig mentioned that ICON was not planning on evaluating improvements to protect single, isolated structures in the floodplain, but would focus on groups of structures, such as at Federal Boulevard and the mobile home park.
- There is an 18-ft. vertical concrete drop that needs to be retro-fitted with grouted boulders to include a boat chute. After discussions, it was decided to show the retro-fit as two 9-ft. drops with a new drop being constructed approximately 100 to 200 ft. d/s of the existing drop that will form a pool between the two structures and will help make boating safer. We also need to take any curves out of the boat

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chute. It was also decided that all grouted boulder structures with boat chutes should use a 10:1 slope along the face and as steep as a 2.5:1 slope stepped along the sides of the structure.

- For railroad bridges that need to be widened, it should be assumed that they can be retro-fitted for the required widening for cost estimating purposes.
- Based on discussions in past progress meetings, ICON will show improvements to bridges to pass the 100-yr. flow regardless of the street designation.
- The channel improvement shown d/s of Federal should not show a curve in the low flow channel (Cad issue).
- Channel cross sections were discussed. Everyone thought that it would be a good idea to provide a bench on the side slopes (approximately 10' wide) for planter areas, and the slopes should be varied and steeper than 4:1 in areas. Riprap toe protection should be placed outside of the lower bench. The low flow channel would not need riprap and could be deeper than 3ft. (up to 5ft. deep) with willows being planted along the toes.
- It was decided not to relocate sanitary sewers that had minimal coverage. Instead, show encasement and protection with riprap buried on the stream channel side.
- When showing channel lowering through bridges, we need to add a cost for extending concrete caps at any piers or abutments. ICON will obtain bridge drawings for Lowell Boulevard and Tennyson Street.
- On Lowell Boulevard Bridge, we should put a note stating that the bridge could be widened in lieu of lowering the channel invert and constructing a drop structure on the upstream side.
- Change any notes referencing the "Ayers" report. Just refer to it as the 2005 FHAD Report.
- There is an area upstream of Tennyson where some high ground appears to confine the residual floodplain. If this is the case a note needs to be put on the drawings that say a certifiable levee would need to be constructed to officially change the floodplain to meet FEMA requirements.

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- Discussions were held regarding the possibility of Highland Hills buying the Calabrese property and use it for parks and open space. They would be looking for help from Adams County & the UDFCD. They will pursue requesting assistance from those entities.
- On the North Overflow Channel at the Calabrese property, a note will be added that says that the channel sizing and residual floodplain could change if the property is purchased by Highland Hills.
- Due to water rights issues and consumptive use requirements, it would be very expensive to provide any modifications to the ponds within Hyland Hills property, but changes could be made to the areas in between them. ICON will look at modifying the improvements in this area in order to avoid changes to the pond water surface elevations.
- At the upstream end of this reach near Sheridan, it is acceptable to show the channel improvements going through the out buildings to the South. They will be accounted for in the costs.

ACTION ITEMS:

- ICON will continue to try and collect utility data and bridge design drawings for those bridges that will have channel lowering.
- Terry Barnhart will collect data for buying Calabrese property and submit requests for assistance from UDFCD & Adams Co.
- Terry Barnhart will let ICON know of any additional requirements for the pond areas through Hyland Hills

- END OF MEETING--

To the best of my knowledge, these minutes are a factual account of the business conducted, the discussions that took place, and the decisions that were reached at the subject meeting. Please direct any exceptions to these minutes in writing to the undersigned within ten (10) days of the issue date appearing herein. Failure to do so will constitute acceptance of these minutes as statements of fact in which you concur.



Minutes prepared by:

Craig D. Jacobson, P.E.
ICON Engineering, Inc.

6-14-07

Date

