

PROGRESS MEETING MINUTES

Baranmor Ditch Watershed OSP
UDFCD Agreement No. 08-08.07
Olsson Project No. 009-0064

June 09, 2009, 10:00 AM at UDFCD

Attendees:

Shea Thomas – Urban Drainage and Flood Control District (UDFCD)
Hoanh Tran – City of Aurora (Aurora)
Clint Weisz – City of Aurora
Amy Gabor – Olsson Associates (Olsson)
Deb Ohlinger – Olsson Associates

Items Distributed:

- Draft Natural Resources Assessment by ERO Resources
- Tables of Baranmor Ditch, Smith Road swale, storm sewer, and street capacities, and existing and proposed culverts
- Existing conditions map

Discussion Items:

The meeting was held to discuss progress of the OSP Phase A alternatives analysis. While this summary is not intended to represent a comprehensive account of the meeting, it is intended to reflect the key points raised and issues for further consideration and to identify the action items resulting from the discussions.

1. Existing culvert capacities were calculated and compared to the peak flows calculated during the hydrology phase. Overtopping depths (at the roadway crest elevation) for each event where overtopping occurs were determined. The culvert analysis was done using HY8 and assumed no detention.
2. Potential culvert replacements for structures that do not have capacity for the 100-year future event were determined. The replacement structures were sized such that the height of the proposed structure either matched the existing height, or had 2' of cover.
 - a) In instances where only a small increase in capacity is needed it may be acceptable to install additional culverts and leave the existing in-place. The design life and general condition of the existing culvert(s) will be evaluated to determine whether or not to remove and replace the existing culvert(s).
 - b) The width of the proposed culverts relative to the channel width will be evaluated and proposed culvert alternatives will be refined.
 - c) It may be acceptable to allow water to overtop the road during the 100-year storm event on local streets. This criterion will be investigated further.

3. Baranmor Ditch capacities were calculated. The channel cross sections were taken from the 2-foot LIDAR mapping and were analyzed using FlowMaster. Most of the channel has capacity for the future 100-year storm event. The channel is generally in good condition, but does have some local erosion at several outfalls. It was decided that areas that meet all storm events other than the future 100-year event will not be investigated further, given the level of accuracy of the topography used in the analysis. The flow path if the channel capacity is exceeded will be evaluated.
4. The storm sewer capacities were calculated using Manning's equation. The majority of the storm sewer appears to have been designed for the 2-year event; however, the capacity of most of the storm sewer is less than the 2-year storm event. All storm sewer locations have streets for overflow.
5. The street capacities were calculated. It was decided that there is no need for a greater level of detail for the street capacity analysis. Olsson will determine appropriate design points to compare the capacities to the various storm event flows and ensure that the streets have positive drainage.
6. The intersection of Smith Road and I-225 was identified as an area of concern. The Smith Road swale capacity, storm sewer, and culvert capacities were calculated at this location. Near the intersection of I-225 and Smith Road, the swale has a capacity of approximately 230 cfs. There is a grate inlet at this location with a storm sewer system that has capacity of 369 cfs. The three 42" RCP culverts under Smith Road have an approximate capacity of 248 cfs. The total combined capacity of the storm sewer and culvert under Smith Road is 617 cfs, compared to the 100-year existing peak flow of 799 cfs and the future peak flow of 1,108 cfs. More than likely, water will pond north of Smith Road and will not overtop the road. However, this inadvertent detention cannot be considered in the calculations. Improvements for this area will be further investigated. Hoanh pointed out that the railroad right-of-way is 200' wide and includes Smith Road.
7. Alternatives were discussed. The analysis will focus on the 100-year storm event and will not include storm sewer alternatives. The alternatives will be broken into reaches. The main alternatives will include:
 - a) Conveyance alternatives, including culvert upgrades and some minor channel improvements.
 - b) Detention, possibly at I-225 and Smith Road. Other areas that will be considered are near Scranton Street and near Quentin Street. Ponds with full spectrum detention for water quality will be included in the analysis.
 - c) Local erosion control at outlets.
 - d) Water quality alternatives, including removal of the concrete trickle channel east of I-225 and/or a water quality pond upstream of the Sand Creek confluence.
 - e) Resolving utility crossing conflicts.
 - f) Do nothing alternative, which will include a cost to maintain the existing channel and structures.
8. The schedule was discussed. The draft Phase A will be submitted in one month. The overall project schedule will still be maintained. When the draft report is submitted, the first public meeting date and location will be decided, it will likely be held in mid-August. Upon completion of the draft report review, a meeting will be held to discuss comments.

Action Items:

Olsson:

- Submit draft Phase A report

City of Aurora:

- Verify overtopping criteria

Please contact Olsson at 720-962-6072 if there are any changes or questions with these meeting minutes. These minutes will be considered final unless comments are received within seven days of distribution. Although comments will be incorporated, as appropriate, only major revisions will be redistributed.

Minutes prepared by: Amy Gabor

cc: Attendees via e-mail
Bill McCormick, City of Aurora
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