



Item No. 1 Town of Atherton

CITY COUNCIL STAFF REPORT – STUDY SESSION

**TO: HONORABLE MAYOR AND CITY COUNCIL
GEORGE RODERICKS, CITY MANAGER**

**FROM: MICHAEL KASHIWAGI
COMMUNITY SERVICES DIRECTOR**

DATE: MAY 7, 2014

SUBJECT: DRAINAGE STUDY MASTER PLAN UPDATE

RECOMMENDATION

Review, discuss, and provide feedback regarding work performed to date on the Drainage Study Master Plan Update.

BACKGROUND

The City Council approved an agreement with NV5 in August 2013 for the update of the 2001 Drainage Master Plan. The primary focus of the Drainage Master Plan Update was to:

- identify locations where drainage infrastructure (pipes, culverts, inlets, channel walls) are in need of repair or replacement;
- identify locations and propose improvements for localized ponding/flooding;
- map storage facilities constructed since 2001;
- propose policy and operational changes and capital projects to improve water quality and implement requirements of the Regional Board permit; and
- prioritize proposed improvements and develop preliminary cost estimates.

In February 2014, the Town hosted a noticed public meeting to present data and technical analysis and gather input on new and pre-existing drainage problems and issues.

In April 2014, the City Council approved a contract amendment for additional engineering services for the analysis of additional flood protection along the Atherton channel. The work completed thus far is about 50-60 percent of contract. At this time there has been a lot of data collected and preliminary analysis but no draft or final report.

Tonight's presentation by staff and NV5 is a high-level overview of the initial findings and a check-in with the Council on project progress. It is anticipated that the final report will be before the Council in the next 60 to 90 days.

FINDINGS | ANALYSIS

In 2001, Nolte Engineering prepared a drainage study that identified and analyzed deficient drainage conditions and proposed improvements to alleviate localized ponding/flooding. The Town constructed many of the high-priority drainage projects recommended in the 2001 drainage study, based upon available Town budget. A number of constructed projects improved local conditions, but did not completely resolve the problems due to limitations in downstream conditions. The current update will identify new projects that will further improve local conditions.

NV5 has completed their investigation of the existing drainage conditions, through visual inspections and gathering input from residents impacted by local ponding/flooding. Local ponding issues are considered to be standing water that has not receded within 48 hours.

Early on, NV5 identified a capacity shortfall in the Atherton Channel. Approximately 2/3 of the Town's storm water runoff flows into the Atherton Channel, but the current channel capacity is limited to a 7-year storm event. Accordingly, in order to improve drainage issues upstream from the channel, the Town must first address the capacity of the Atherton Channel. A study to analyze retention along the Atherton Channel for a 10-year storm event is currently in progress. NV5 is also preparing a proposal to analyze a 25-year storm event.

Even at this early stage, NV5 has recommended a number of drainage projects to improve the Town's ability to accommodate storm flows and to improve water quality. Because the Atherton Channel is the central component of the system that drains the majority of the Town, its improvement is assigned the highest priority. Recommended storm drain projects are categorized in the following order of priority:

1. Resolve drainage limitations in the downstream part of the Atherton Channel
2. Enhance health and safety
3. Relieve El Camino Real intersection flooding
4. Remove/improve arterial and collector streets flooding/drainage issues
5. Remove/improve local residential flooding/drainage issues

Recommended drainage projects will be proposed within six priority areas:

1. Atherton Channel Repairs
2. Atherton Channel Capacity Improvements
3. El Camino Real Intersection Flooding Relief
4. Collector Street Lane Flooding Relief through New Storm Drains
5. Collector Street Lane Flooding Relief through Upgrades to Current Storm Drains
6. Collector Street Lane Flooding Relief through Swales and/or Berms

The three highest priority areas focus on the Atherton Channel and El Camino Real. The lower priority areas focus on more localized issues and mainly upgrade elements of the Town's existing drainage system.

Within these areas, NV5 has identified several conceptual high-priority projects. Some of these include::

1. *Area One*
 - a. Atherton Channel Relining and Erosion Control (approximately \$7 million)
2. *Area Two*
 - a. Barry Lane/Elena Avenue Channel Upgrade (approximately \$6.6 million)
 - b. Watkins South Channel & Culvert Upgrade (approximately \$2.5 million)
 - c. Watkins/Middlefield/Marsh Channel & Culvert (approximately \$20.5 million – less any project completed separately by the Town)
3. *Area Three*
 - a. El Camino Real Storm Drain System (approximately \$7.5 million)
4. *Area Four*
 - a. Various Collector Street New Storm Drains (Belbrook/Walsh, Fair Oaks Lane, Mandarin, Macbain/Alejandra/Brittany, Heather) (approximately \$2.8 million)
5. *Area Five*
 - a. Various Collector Street Upgrade Storm Drains (Belbrook/Walsh, Selby/Stockbridge, Alameda/Camino Al Lago, Middlefield East) (approximately \$8 million)
6. *Area Six*
 - a. Various Collector Street Swales/Berms (Stockbridge, Linda Vista/Camino Al Lago, Por Los Arboles/Valparaiso) (approximately \$1.3 million)

These are all high-level conceptual projects based on preliminary data. There remains additional analysis to be completed by NV5 and staff. Each proposed project will be further evaluated through a cost-benefit analysis as well as feasibility analysis. It is anticipated that as the analysis is completed the magnitude of projects will decrease.

When the Drainage Master Plan returns in the next 60 to 90 days, the City Council will be asked to review and accept it. As part of the Council's review of the 5-year Capital Improvement Program, projects proposed in the Master Plan will be evaluated for benefits versus costs by staff and will be proposed for inclusion, depending on available funding. With all projects, staff will seek available grants as well as contributory partners, where feasible and possible. At this time, grant opportunities applicable to the types of projects to be undertaken are not available. However, staff will continue to seek out grants where possible at the local as well as state and federal level.

Further, with respect to upstream or downstream contributory partners, the Town takes ownership of the water moving through its channel. If the Town enhances the capacity of the channel in an effort to address upstream concerns, the Town will be responsible for downstream mitigation as the water is conveyed to and through outside jurisdictions.

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Due to the magnitude of the conceptual projects, it is unlikely that these projects would be fully funded in the FY 2014-2019 5-Year Capital Improvement Program. Once the Master Plan is complete and accepted, staff will propose discreet priority projects and identify funds to “save” toward the project over subsequent years. Staff will also recommend projects that can be “pre-set” with any required environmental analysis and clearance prior to inclusion in the CIP as a construction project.

NV5 is present this evening to provide the City Council with an overview of the Drainage Master Plan, preliminary results of their analysis, along with recommendations for future consideration as the plan moves forward. After tonight’s Study Session, NV5 will return with a final report in the next 60 to 90 days, together with the potential addition of a 25-year storm water retention analysis.

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