

APPENDIX E
DRAINAGE IMPACTS
ANALYSIS

TECHNICAL MEMORANDUM

TO: Will Burns, David J. Powers and Assoc. DATE: March 4, 2014

FROM: Charles D. Anderson, P.E. JOB #: DPOW.71.14

SUBJECT: Drainage Impacts for Homewood Suites Hotel at Cisco6 Site in San Jose

This technical memorandum documents the results of additional storm drain system modeling undertaken to evaluate the drainage impacts of developing the Homewood Suites Hotel near the 237@First office project at the Cisco6 site in San Jose.

We previously evaluated potential impacts to the City of San Jose storm drain system from development proposed at the Cisco 6 sites, including the impacts from each development in turn and cumulative impacts. The Cisco 6 projects include the referenced hotel project, the adjacent 237@First office project, and the Midpoint Project across North First Street.

To complete this evaluation, a hotel site percent imperviousness of 70 percent has been assumed based on communication from Bozena Srebro of Warner Engineering (January 17, 2014 email), with a connection to the storm drain lateral located in Syntax Court according to preliminary utility plans prepared by Warner Engineering, dated February 18, 2014. This memorandum also documents the impact of routing hotel site storm drainage through the adjacent office park development to a combined connection on North First Street at Nortech Parkway.

One of the mitigation measures triggered by the cumulative development of the Cisco 6 sites (all three projects) as first conceived is construction of approximately 560 feet of 33-inch diameter storm drain pipe in North First Street. We have made additional model runs to evaluate mitigation triggers based on the timing of individual Cisco site developments, and whether any trigger changes as a result of the hotel site's storm drain connection location.

Analyses summarized in Table 1 show that regardless of the storm drain connection locations on North First Street, the 33-inch diameter storm drain pipe mitigation is required to mitigate 100-year impacts, unless only the Homewood Suites Hotel site is developed. (The maximum hydraulic grade increase for this scenario is 0.2 foot at Syntax Court, which is not considered significant.) We provide no opinion as to whether the City will expect the hotel developers to help pay for storm drain system improvements necessitated by cumulative impacts.

Table 1: Summary of Results

Development Scenario	Does Storm Drain in North First Street Need to be Upsized to:	
	Meet 10-year City Standard?	Avoid 100-year Impact?
Homewood Suites Only	NO	NO
237@First Only (Syntax Connection)	YES	YES
237@First Only (Nortech Connection)	NO	YES
Midpoint Development Only	NO [†]	YES
All Cisco6 Developments	YES	YES

[†]Storm drain improvements required in Disk Drive

Figures 1 and 2 show graphic representations of the model runs made for the storm drain system without improvement and only the hotel developed, in the 10-year and 100-year event respectively. The City of San Jose's hydraulic gradient performance criterion is based on the 10-year event while impact evaluation for CEQA is based on the 100-year event. Red dots represent increases in flooding depth of nearly one foot, except as described previously for the "hotel only" scenario. If only the hotel were to develop, the City's 10-year criterion is met without system improvement and the predicted increases in 100-year hydraulic grades are less than significant as evaluated for CEQA compliance.

Previous analyses support the information furnished in Table 1. The City of San Jose's 10-year storm drain system criterion is met without the new 33-inch diameter storm drain pipe in North First Street as long as the office project connects its storm drain lateral at Nortech Parkway. The hotel site can drain either to Syntax Court as proposed in the most recent utility plan, or through the office park to Nortech Parkway, without affecting the conclusions of this evaluation, although it is assumed that this latter routing would not happen unless the office park developed before the hotel or is developed simultaneously with the hotel.



Figure 1. Only Hotel Develops; No System Improvements (10-year)



Figure 2. Only Hotel Develops; No System Improvements (100-year)