

TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER

DEPARTMENT: PLANNING

DATE: AUGUST 9, 2004

CMR:391:04

SUBJECT: SECOND TRIAL PLAN FOR DOWNTOWN NORTH TRAFFIC CALMING PROJECT

This is an informational report and no Council action is required.

BACKGROUND

On March 29, 2004, Council directed staff to remove most elements of the first trial plan for Downtown North Traffic Calming that was installed in June 2003, including six of the seven street closures. Council directed staff to implement a modification of one of the staff-prepared alternative traffic calming plans, the no closures plan, for a one-year trial period. Council also approved Resolution 8415, as revised to reflect approval of the modified no closures plan. Council asked staff to provide an informational report on various aspects of the new plan.

Council approved implementation of the no closures plan with two modifications—(i) keep the existing closure on Palo Alto Avenue at Middlefield, and (ii) add a speed table on Palo Alto Avenue west of Bryant as a replacement for the removed street closure near Bryant (Attachment A). Council also asked staff to consider adding up to two traffic circles to Hawthorne and/or Everett. The Commission and some Council Members were concerned about the impact of the Everett/High street closure (in the first trial plan) and the Alma/Everett turn restriction (in the no closures and modified mixed measures plans) on the retail business of Stanford Electric, but Council's motion did not remove that turn restriction from the plan. Staff believes it is important to maintain the turn restrictions at all four locations in order to insure that neither Hawthorne nor Everett becomes the sole, unbalanced access point for through traffic during the peak hours. If the Alma/Everett turn restriction were to be removed in the future, staff would recommend adding a traffic circle at the Everett/ Bryant intersection in order to maintain some degree of balance in traffic calming measures between the two streets.

At its March 29 meeting, Council also gave direction to staff direction to evaluate adding either one or two additional traffic circles to the no closures plan (second trial plan) as adopted by Council. Staff does not recommend adding either one or two additional traffic

circles to the no closures plan since traffic circles additional to those shown in the no closures plan would not add significantly to the volume or speed reduction effects of the second trial plan.

Staff plans to locate the new speed table on Palo Alto Avenue to the west of Emerson, about midway between Alma and Bryant, in order to impact the section of Palo Alto Avenue that includes the Emerson to Alma travel route. In this section, it can be located approximately midway between Alma and High, to the east of the 101 Alma building, on a location with good sight distance and a straight alignment on the property line between two single family houses.

DISCUSSION

An expedited implementation of the second trial plan will require two phases. The first phase was completed with installation by April 23 of turn restriction signs along Alma and Middlefield. The timeline for the second phase, installation of the second trial plan physical measures, including traffic circles and speed tables, is presented below:

- Construction of second trial plan will begin in mid-August 2004. It is expected that construction will be completed no later than mid-September 2004. Every effort will be made to minimize any disruption to traffic flow during construction.
- One-year trial will begin mid-September 2004.
- Trial evaluation will begin mid-February 2005 and continue for three months (including data gathering, neighborhood meeting, and resident opinion survey).
- Planning and Transportation Commission (PTC) public hearing in June 2005
- City Council meeting and decision regarding second Downtown North Traffic Calming Trial, in September/October 2005.

New Performance Measures for Second Trial Plan

It is important to note that, due to the desire to expedite installation of the turn restrictions, the Transportation Division was unable to collect new existing conditions data (post-closure removal, but prior to installation of the turn restriction signs). There was some interest expressed during recent public hearings at the Planning and Transportation Commission and Council on the first traffic calming trial plan in an even more comprehensive and robust set of such data than had been collected before and after installation of the first trial plan. Since staff will be unable, because of too short a time window between barrier removal and installation of the turn restriction signs, to collect a set of brand new data, the Transportation Division will use a data set collected in February and March 2003, prior to installation in June 2003 of the first Downtown North traffic calming trial plan (i.e. pre-project with no traffic calming measures in place). Approximately five months after implementation of the second trial plan, corresponding after data will be gathered. Most performance measures will be evaluated by comparing the before and after data.

The Transportation Division assembled an informal group of twenty-two stakeholders, approximately evenly divided between proponents and opponents of the first Downtown North traffic calming trial to review staff proposals for assessment of the second Downtown North traffic calming trial. The, or “Roundtable” as it came to be called, met three times. Staff, in dialog with the roundtable members, defined the “roundtable” purpose as being to “discuss with the Transportation Division assessment measures to employ for the second Downtown North traffic calming trial that the Palo Alto City Council directed the Transportation Division to implement, as well as to discuss the impact and effectiveness of the Trial.” The “Roundtable” reviewed, discussed, and made suggested revisions to statements of purpose and needs both for the group itself and for the project. “Roundtable” members agreed to re-convene after the construction of the traffic circles and speed table called for in the second Downtown North traffic calming trial to discuss its effects and the evaluation process.

Second Downtown North Traffic Calming Trial

The goal of the second Downtown North traffic calming trial project is “to reduce cut-through vehicular traffic in accordance with the second Downtown North traffic calming plan directed by City Council, without diminishing traffic safety for all modes of travel on any Palo Alto street.”

Evaluation Methods and Metrics

1. *Reduction in Downtown North Cut-Through Traffic* (Target Measure). The proposed target: “Cut-through” traffic should be reduced by 20 percent compared to the before condition, as measured in February-March 2003 traffic volume (24-hour) counts. This reduction in cut-through traffic is equivalent to a 9 percent reduction in before (i.e. February-March 2003) traffic count data for traffic count locations on the first (or gateway) block from Alma, Lytton, and Middlefield compared to February-March 2005 after data. Traffic count locations will be in the first blocks of the following Downtown North streets:
 - (a) Everett (between Middlefield and Byron to the east and between Alma and High to the west),
 - (b) Hawthorne (between Middlefield and Byron to the east and between Alma and High to the west),
 - (c) Palo Alto Avenue (between Alma and Emerson), High (between Lytton and Everett),
 - (d) Emerson (between Lytton and Everett),
 - (e) Ramona (between Lytton and Everett),
 - (f) Bryant (between Lytton and Everett),
 - (g) Waverley (between Lytton and Everett),
 - (h) Kipling (between Lytton and Everett),

- (i) Cowper (between Lytton and Everett),
- (j) Webster (between Lytton and Everett), and
- (k) Byron (between Lytton and Everett).

This method is an acceptable alternative to best practice, which is to conduct an expensive, labor-intensive origin and destination study using license plate matching methodology such as was conducted in 1999, prior to development of the first Downtown North Traffic Calming Plan.

2. *Diversion to Local Streets:* No more than a 25 percent increase in before-after traffic on any residential street having less than one standard deviation below the mean value of traffic counts for Palo Alto residential streets in each of the three street classifications in the Palo Alto Comprehensive Plan.
3. *Diversion to Local Streets >one standard deviation from the mean:* No more than a 10 percent increase in before-after traffic on any residential street having more than one standard deviation above the mean value of traffic counts on for Palo Alto residential streets in each of the three street classifications in the Palo Alto Comprehensive Plan.
4. *The traffic shift thresholds for streets with base (pre-project) traffic volumes on streets between the 10 percent and 25 percent thresholds* above will be determined by increasing the threshold by 1 percent for each 1/15 increment in base traffic volume.
5. *Arterial Intersection Level of Service (LOS):* The AM and PM peak hour level of service (LOS) at the Lytton/Alma, Lytton/Middlefield, Lytton/Cowper and Lytton/Emerson intersections will not degrade to less than LOS D, which is the minimum acceptable LOS in Palo Alto. Only “after” measurements of the second trial plan are required for this measure, since the impact measure is whether or not the threshold value (LOS D) has been exceeded, not whether there has been a change in LOS.
5. *Queue Length at Lytton/Middlefield:* The change in maximum and average stopped vehicle queue lengths during AM and PM peak hours on all four legs of this intersection will be measured through observation. Queue lengths will be estimated in early August, just prior to construction of the traffic circles in mid-August 2004 and again in Mid-February 2005 as part of the broad assessment of the second Downtown North traffic calming trial. Queue lengths were not estimated as part of the February-March 2003 “base conditions” data collection prior to installation of the Downtown North first traffic calming trial plan.
6. *Speed Reduction:* Speeds will be evaluated at 6–8 mid-block locations on the interior Downtown North streets where speed tables and traffic circles are located. This will provide a gauge of the effectiveness of these measures at reducing speeds in their vicinity. Little change in speed is expected at locations that are over 200 feet away from

speed tables or traffic circles. Staff will compare these after data with such before data as may be available. Since some before volume counts (hence also speed, since counting tubes are deployed in pairs allowing for simultaneous recording of both vehicle volumes and speeds) will not have been taken within 200 feet of the new speed table or traffic circle locations, staff will not have an identical set of before and after speed data.

7. *Crashes Due to Traffic Calming Measures:* There will be no reported crashes directly attributable to the traffic calming plan elements in the Downtown North neighborhood during the trial period. Any crashes so attributable will result in such changes in traffic calming device design and location (including removal with or without re-location) as may be required. The following crashes and/or primary causal factors will not be considered in evaluating this measure: property damage only, driving under the influence, failure to obey rules of the road (California Vehicle Code violation) or mechanical failure. Careful assessment must be made with respect to attribution of crash causation.]
8. *Fire and Police Responses:* The travel times for Fire and Police Department calls within and near the Downtown North neighborhood will not exceed the Departments' mission goals for travel times of 4 minutes for 90 percent of fire and basic medical responses, 6 minutes for 90 percent of advanced medical responses (paramedics), and 3 minutes for police calls. Fire and police response time goals within and to the boundaries of the primary service area of Fire Station 1 (located at Alma, Everett and High) will continue to be met after installation of the Downtown North Second Traffic Calming trial measures. The methodology of response time measurement will be determined by the Fire Department and Police Department.
9. *Fire Department Access to Lytton Gardens and Webster House:* Fire Department access to Lytton Gardens and Webster House will not be impeded due to implementation of the second Downtown North traffic calming trial project. The Fire Department will evaluate the impact of the traffic calming project on access to these facilities with respect to increased traffic congestion on Lytton and Middlefield or any other aspect of the traffic calming plan.
10. *Turn Restriction Compliance:* Staff will evaluate compliance with turn restrictions through a representative sample visual survey during turn-restricted hours. This report will document non-compliance since the extent of compliance of those who would otherwise have made the banned turns cannot be visually observed.
11. *Impacts on Service Providers:* Impacts attributable to the traffic calming plan as reported by City departments, PASCO, the US Postal Service, or any other public agencies serving the neighborhood (including bordering arterials) will be documented and reported.

12. *Neighborhood Acceptance:* Residents' acceptance will be determined through a household-based and business address-based advisory survey of Downtown North and environs. Non-resident property owners will be included in the survey. The survey will take place within an area bounded on the north by Menlo Park, the west by Alma, the east by Chaucer (both sides), the southeast by University Avenue (both sides) and the northeast by Lytton (both sides). Staff will report results for the following sub-areas: (a) Downtown North interior streets (bounded by - but not including - Alma, Lytton, and Middlefield), (b) the Lytton Neighborhood, (c) Middlefield Avenue between Menlo Park and University Avenue, (d) Lytton Avenue between Alma and Middlefield, (e) University Avenue between Chaucer and Middlefield, and (f) Alma between Palo Alto Avenue and Lytton. In addition, staff will report survey results for (g) the area survey before the first Downtown North traffic calming trial project, which included the interior streets of Downtown North as well as the west side of Middlefield, the east side of Alma, and the north side of Lytton. Interpretation of advisory survey results will be up to the Planning and Transportation Commission and Council. No target percentage of advisory survey results will be set a priori.

RESOURCE IMPACT

The Second Trial Plan as approved by Council will cost approximately \$72,000, including \$15,000 for removal of the first trial plan elements (already accomplished), \$8,000 for new before and after data, and \$49,000 for installation of the second trial plan elements. There is \$85,000 in the Transportation Division FY 2003/04 operating budget for this project, which would need to be carried over to FY 2004/05. The estimated cost for Public Works Operations to maintain the traffic calming measures in the second trial plan is not significant. The on-going installation of traffic calming measures is incrementally adding to maintenance costs, and these extra maintenance requirements are not funded. In the near future, when the PTC and Council consider staff's proposed revisions to the Neighborhood Traffic Calming Program, staff will propose that funding for annual maintenance of new traffic calming measures be taken from the Traffic Calming Program CIP.

Any possible future changes to the second trial plan are not included in these estimates. If the plan is successful and remains permanently, an additional \$12,000 would be required to fill the three traffic circles with decomposed granite, similar to the fill used in the now-removed street closures. Additional funds would have to be secured for this work, or for any future changes to the plan.

POLICY IMPLICATIONS

This traffic calming plan is consistent with Comprehensive Plan policies and programs relating to neighborhood streets, including the following:

Policy T-32: "Design and maintain the City street network to provide a variety of alternate routes, so that the traffic loads on any one street are minimized."

Policy T-33: “Keep all neighborhood streets open unless there is a demonstrated safety or overwhelming through traffic problem and there are no acceptable alternatives, or unless a closure would increase the use of alternative transportation modes.”

Policy T-34: Implement traffic calming measures to slow traffic on local and collector residential streets and prioritize these measures over congestion management. Include traffic circles and other traffic calming devices among these measures.”

ENVIRONMENTAL REVIEW

A mitigated negative declaration was approved by the Council for the Modified Mixed Measures Plan, which included plans with similar or less impact, such as the Second Trial Plan.

ATTACHMENTS

A. Downtown North Second Traffic Calming Trial Map

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Lytton neighborhood representatives (Alan and Bonnie Luntz)
Palo Bicycle Advisory Committee Members
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