



Memorandum

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Project: SRO461

To: Mr. Robin Miller
Trumark Homes

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Subject: Time Travel Runs through the Dutton Meadows Phase II Study Area

As requested, we have performed an analysis to provide a comparison between travel times for vehicles using different paths between the same point on Dutton Meadow south of the project site and Hearn Avenue east of Dutton Avenue. The time required for a vehicle to travel between these two points via the roadway configuration proposed with the Dutton Meadow project was compared to the roadway configuration as shown in the City of Santa Rosa's Roseland Area/Sebastopol Road Specific Plan. The study area consists of the existing intersections of Dutton Meadows/Hearn Avenue and Dutton Avenue/Hearn Avenue as well as the future planned intersections of Dutton Meadows/Northpoint Parkway and the new Dutton Avenue intersection south of the Hearn Avenue intersection.

Three routes were reviewed under anticipated future plus project volumes during the a.m. and p.m. peak periods. All routes either began or ended on Dutton Meadows south of the planned or proposed intersection of Dutton Meadows/Northpoint Parkway with the other end on Hearn Avenue between the intersection with Dutton Avenue and the SMART tracks.

The first route (Route 1) used the roadway configuration from the Specific Plan. For the northbound/eastbound vehicles, the route started on Dutton Meadows south of the Northpoint Parkway intersection, continued through the intersection, and through the project site to the new intersection with Dutton Avenue. From this intersection, the route included an eastbound left turn, followed by a northbound right-turn at the intersection of Hearn Avenue/Dutton Avenue. The southbound/westbound direction would have the reverse path.

The second route (Route 2a) followed the proposed roadway configuration for the Dutton Meadows project. Drivers would travel north on Dutton Meadows, straight through the intersection with Northpoint Parkway to Hearn Avenue where a right turn would lead to travel eastbound through the Dutton Avenue intersection. The reverse of that path was reviewed as well.

The final route reviewed (Route 2b) also used the proposed roadway configuration for the Dutton Meadows project. Like the other routes, vehicles would either begin or end on Dutton Meadows south of the proposed Northpoint Parkway intersection. For this route, drivers would make a northbound right turn at the intersection with Northpoint Parkway followed by an eastbound left turn onto the proposed "New Street" through the project site. The driver would then make another eastbound left turn onto Dutton Avenue followed by a northbound right turn at the Hearn Avenue intersection.

These routes are shown in the following graphical diagrams.



Route 1- General



Route 2a - Proposed Configuration



Route 2b - Proposed Configuration

For the analysis, SIMTRAFFIC, a Synchro application was used. For each route, the model was run ten times. The results were averaged and are summarized in Table 1.

Table 1 – Future plus Project Peak Period Travel Time						
Study Scenario <i>Direction of Travel</i>	AM Peak			PM Peak		
	Travel Time (s)	Delay (s/veh)	Avg. Speed (mph)	Travel Time (s)	Delay (s/veh)	Avg. Speed (mph)
1. Specific Plan Configuration						
<i>EB/NB</i>	127.7	48.1	18	241.1	160.1	10
<i>WB/SB</i>	167.3	86.3	13	319.7	217.9	8
2a. Proposed Configuration – Dutton Meadow						
<i>EB/NB</i>	250.8	110.7	18	272.1	135.7	17
<i>WB/SB</i>	147.2	63.4	17	185.6	95.4	14
2b. Proposed Configuration – Street Network through Project Site						
<i>EB/NB</i>	203.7	46.4	23	322.9	170.0	14
<i>WB/SB</i>	189.4	88.4	14	305.9	196.0	9

Notes: **Bold** – the fastest route per direction per peak.

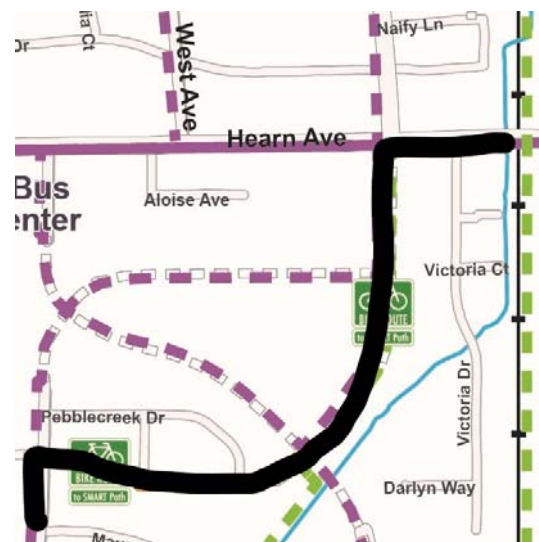
Based on the analysis performed, during both the a.m. and p.m. peak hours the fastest projected eastbound/northbound route would be via the network from the Specific Plan. For the reverse direction with vehicles beginning on Hearn Avenue between the Dutton Avenue intersection and the SMART tracks, the fastest route would be with the proposed configuration where the driver would travel westbound on Hearn Avenue and make a left turn onto Northpoint Parkway and travel straight southbound through the new Dutton Meadows intersection onto Dutton Meadows.

Regional Impacts

Additional runs were completed to determine if the change in alignment might reasonably be expected to have a regional impact by considering the route vehicles could take coming from or returning to the areas south of Tuxhorn Drive (shown as Pebblecreek Drive on the diagram used) on Dutton Meadow. The potential routes between Hearn Avenue and Dutton Meadow considered differed only in the roadway used between the two intersections of Tuxhorn Drive and Dutton Meadow. Route 3a included Dutton Meadow, resulting in a left turn at the northeast intersection of Dutton Meadow/Tuxhorn Drive for northbound trips, while Route 3b along Tuxhorn Drive included a left turn at the southwest intersection of the two roadways on the southbound trips. These routes are shown below.



Route 3a - Planned Configuration So. of Tuxhorn Dr



Route 3b - Proposed Configuration Via Tuxhorn Dr

The results of the analysis are summarized in Table 2.

Table 2 – Future plus Project Peak Period Travel Time – South of Tuxhorn Dr

Study Scenario <i>Direction of Travel</i>	AM Peak			PM Peak		
	Travel Time (s)	Delay (s/veh)	Avg. Speed (mph)	Travel Time (s)	Delay (s/veh)	Avg. Speed (mph)
3a. Via Dutton Meadow to the Northeast Intersection with Tuxhorn Drive						
<i>EB/NB</i>	152.0	56.9	18	261.1	166.8	11
<i>WB/SB</i>	197.8	98.2	14	319.9	211.8	9
3b. Via Tuxhorn Drive						
<i>EB/NB</i>	152.0	50.5	19	406.9	204.7	9
<i>WB/SB</i>	183.8	85.3	16	298.4	187.5	10

Notes: **Bold** – the fastest route per direction per peak.

During the a.m. peak, the route via Tuxhorn Drive has the same travel time and slightly less delay for the eastbound/northbound route. For the reverse route, the route via Tuxhorn Drive has a shorter projected travel time.

During the p.m. peak, the travel time for the eastbound/northbound direction via Dutton Meadow is about two and a half minutes less than the route via Tuxhorn Drive. Based on the review of the synchro files, this was due to the delay at the Dutton Avenue/Hearn Avenue intersection. With the configuration shown in the Specific Plan a queue on northbound Dutton Avenue would develop that would extend south past the intersection with Dutton Meadow. Under the volumes as presented in the Specific Plan, few trips would be drawn to Dutton Meadow, but those that used this route would be able to “jump” the queue of northbound vehicles on Dutton Avenue while those on Tuxhorn Drive would be waiting in the northbound queue to get to Hearn Avenue. For the reverse westbound/southbound direction, the route along Tuxhorn Drive was projected to be faster.

Conclusion

The volumes shown in the Specific Plan indicate that a nominal amount of traffic would use the Dutton Meadow connection from southwest to northeast, and based on the numbers from that study, it appears that the volume is primarily comprised of trips to and from the residences that would be constructed in the project area. Conversely, traffic between the areas south of the project site and Hearn Avenue were shown to predominantly use the route along Tuxhorn Drive, making the configuration of the intersection of Dutton Meadow/Northpoint Parkway less relevant to regional travel patterns.