

# TRANSPORTATION COMMITTEE MINUTES

December 2, 2002

The Transportation Committee of the City of Mesa met in the lower level meeting room of the Council Chambers, 57 East 1st Street, on December 2, 2002 at 3:30 p.m.

**COMMITTEE PRESENT**

Mike Whalen, Chairman  
Rex Griswold  
Janie Thom

**COMMITTEE ABSENT**

None

**OFFICERS PRESENT**

Mike Hutchinson

1. Discuss and consider the City of Mesa street median construction policy.

Traffic Engineer Alan Sanderson addressed the Committee relative to this agenda item. He provided a brief historical overview of the City's existing Median Islands Street program and reported that in 1994, the City adopted a Median Islands Map which provided direction to staff, businesses, developers and residents relative to which arterial streets within Mesa would be constructed with median islands. He commented that in June 2002, the Council adopted an updated Map that is contained in the Mesa Transportation Plan. (See Attachment)

Mr. Sanderson discussed the pros and cons of using median islands in the City of Mesa. He advised that median islands create a more visually pleasing image on the City's multiple-lane roadways, eliminate a "sea of asphalt" seven lanes wide, and added that landscaped medians also break up large expanses of pavement. Mr. Sanderson stated that with regard to the issue of traffic control, median islands direct access by limiting where a motorist can make a turn; are beneficial in areas where multiple drivers are competing for the same center median space; assist in managing and reducing conflict points and preserving the traffic-carrying capacity of arterial streets; and that the addition of median islands on existing streets has decreased the frequency of angle, sideswipe-same direction and head on accidents. He noted, on the other hand, that along urban arterial streets, median islands restrict access to and from adjacent properties, which require motorists to take alternative and potentially longer routes to access those locations; increase the need to make U-turns at intersections or other median openings; restrict the ability for emergency service vehicles to bypass backed up traffic at intersections, and increase the frequency of fixed object accidents.

Mr. Sanderson commented that the Median Islands Map was developed for the purpose of balancing Mesa's need to carry high traffic volumes along major arterials with the property access benefits of streets without medians. He noted that Mesa has historically installed

median islands on arterial streets where traffic volumes are expected to be high, along roads of regional significance, and within one-half mile of freeway interchanges.

Mr. Sanderson commented that the cost to install the initial landscaping is estimated at \$110,000 per mile. He noted, however, that with the installation of street lighting in the median island area only, as opposed to on both sides of the roadway, the cost would be reduced to approximately \$50,000 per mile. Mr. Sanderson added that the cost to maintain the landscaping is approximately \$10,000 per mile annually.

Mr. Sanderson concluded his presentation by stating that it is the recommendation of staff to continue the existing practice of installing median islands on arterial streets in accordance with the adopted Median Islands Map.

Committeemember Thom requested Mr. Sanderson to investigate the legality of using the center lane to make left turns in or out of driveways.

In response to a question from Chairman Whalen, City Engineer Keith Nath clarified that it is more cost efficient for the City to install the median island during the initial construction of a roadway project.

Discussion ensued relative to the fact that a majority of the median island construction projects, with the exception of Thomas Road improvements, are being done in conjunction with the widening of the City's roadways.

Committeemember Thom voiced a series of concerns including the fact that the proposed costs for the Thomas Road widening project are significantly higher than the cost to simply paint the medians on the roadway; that she has seen streets in Mesa that not only have streetlights along the sides of the road, but also in the median island area; that median islands increase the number of U-turns and restrict the flow of traffic and create safety issues, and that the addition of a median island on Baseline Road at the intersection of Gilbert Road has negatively impacted the surrounding businesses and does not promote Mesa's goal to be a "business friendly" community. She concluded that because of the above-stated reasons, she would prefer to limit the number of median islands that are recommended for future construction.

It was moved by Committeemember Thom to recommend to the Council that the recommendations of staff relative to the construction of the proposed median islands, as depicted on the Mesa Transportation Plan's Median Islands Map, not be approved.

In response to a series of questions from Committeemember Griswold, Mr. Nath explained that there is no specific timeframe for the completion of the median islands, but noted that the Median Islands Map is merely a guide for the possible location of median islands throughout the City. He added that the Map is subject to modification per the direction of the Council.

Committeemember Griswold stated that for purposes of bringing this item forward to the full Council for consideration, he would second Committeemember Thom's motion.

Committeemember Griswold commented that he is personally supportive of median islands, and suggested that it would be beneficial to the member of the community if staff prepared a presentation similar to today's that could be aired on Mesa Channel 11.

Chairman Whalen requested that when this matter is presented to the full Council, that staff provide a more in-depth presentation addressing how and why median islands were first used in the City of Mesa, and what methods cities of a comparable size to Mesa are using to more efficiently move traffic along their roadways.

Chairman Whalen expressed opposition to the motion, but noted that he recognizes the interest of the other Committeemembers to bring this issue forward to the Council for further discussion.

Upon tabulation of votes, it showed:

AYES - Griswold-Thom  
NAYS - Whalen

Chairman Whalen declared the motion carried by majority vote.

Chairman Whalen expressed appreciation to staff for their presentation.

2. Discuss and consider the City of Mesa's practice regarding leading and lagging left-turn signals.

Traffic Engineer Alan Sanderson and Signal Systems Supervisor Jan Siedler addressed the members of the Committee relative to this agenda item.

Mr. Sanderson displayed graphics in the Council Chambers and provided a brief overview of the left-turn signal operation in Mesa. He reported that Mesa currently uses two types of left-turn arrows, the protected and protected permissive; that the protected arrow allows left turns only while the green arrow is on, and that it is followed by a yellow and red arrow indication, signaling the termination of that movement; that the protected permissive arrow allows left turns when the green arrow is on and is followed by a yellow arrow; that protected arrows are the safest operation, but also the most restrictive, and that the protected permissive arrow provides the driver with greater opportunity to make a turn and is a more efficient operation during off-peak and light-to-moderate traffic. Mr. Sanderson added that during high volume traffic, the differences between the protected and protected permissive arrows are less pronounced due to the fact that there is heavy conflicting traffic and limited opportunities to make left turns on green arrows.

Mr. Sanderson provided a short synopsis of a number of studies regarding leading and lagging left-turn signals. He explained that in April 1999, the City of Phoenix conducted a study which revealed that 98% of cities nationwide use leading left turns predominantly. Mr. Sanderson also cited the findings of a 1991 Arizona Department of Transportation (ADOT) funded study which indicated, among other things, that significantly greater delay per approach vehicle occurs with lagging operation than leading operation; that there is no significant difference in signal progressive effectiveness with the different operating conditions; that the most promise for benefit from a mixed operation was found in the City of Mesa where leading/lagging provided the best progression, and that no evidence supported the need to have the same phasing

consistency. Mr. Sanderson noted that in 1999, Paul Box, a nationally recognized traffic engineer, conducted a study comparing lead versus lag left-turn phasing and determined that decisions on the use of lead or lag left-turn phasing should be based on other considerations than accident potential. He added that in November 2000, a Valley Traffic Engineers (VATEC) meeting was held and the leading and lagging left turns were the primary focus of discussion. At that time, the participants concluded that neither leading nor lagging left turns has a safety advantage.

Mr. Sanderson concluded his presentation by stating that it is the recommendation of staff that the City of Mesa continue to operate left-turn signals based on traffic conditions and in a manner that promotes efficiency and does not adversely impact traffic safety.

Committeemember Thom thanked staff for the informative presentation.

Discussion ensued relative to red light running, and the use of traffic detectors (electromagnetic and machine vision) to identify the presence of vehicles on the roadway.

It was moved by Committeemember Griswold, seconded by Committeemember Thom, to recommend to the Council that staff's recommendation that the City continue to operate left-turn signals based on traffic conditions and in a manner that promotes efficiency and does not adversely impact traffic safety, be approved.

Carried unanimously.

Chairman Whalen expressed appreciation to staff for their presentation.

3. Adjournment.

Without objection, the Transportation Committee meeting adjourned at 4:22 p.m.

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Transportation Committee meeting of the City of Mesa, Arizona, held on the 2<sup>nd</sup> day of December 2002. I further certify that the meeting was duly called and held and that a quorum was present.

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BARBARA JONES, CITY CLERK