MARICOPA ASSOCIATION of GOVERNMENTS

302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
E-mail: mag@mag.maricopa.gov ▲ Web site: www.mag.maricopa.gov

May 8, 2007

TO: Members of the Transportation Policy Committee

FROM: Councilmember Peggy Bilsten, Phoenix, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, May 16, 2007 - 4:00 p.m.
MAG Office, Suite 200 - Saguaro Room
302 N. First Avenue, Phoenix

A meeting of the Transportation Policy Committee is scheduled for the time and place noted above. Members of the Committee may attend the meeting either in person, by videoconference, or by telephone conference call. As was discussed at the first meeting of the Committee, proxies would not be allowed. Members who are not able to attend the meeting are encouraged to submit their comments in writing, so that their view would always be a part of the process.

Please park in the garage under the building. Bring your ticket to the meeting, parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Valerie Day at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Refreshments and a light snack will be provided. If you have any questions, please contact me at (602) 262-7441, or Eric Anderson, MAG Transportation Director, or Dennis Smith, MAG Executive Director, at (602) 254-6300.

c: MAG Regional Council
MAG Management Committee

TRANSPORTATION POLICY COMMITTEE
TENTATIVE AGENDA
May 16, 2007

	COMMITTEE ACTION REQUESTED
1. Call to Order	
2. Pledge of Allegiance	
3. Call to the Audience An opportunity will be provided to members of the public to address the Transportation Policy Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Citizens will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Transportation Policy Committee requests an exception to this limit. Please note that those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard.	3. Information.

MINUTES

4. Approval of March 21, 2007 Meeting Minutes	4. Review and approval of the March 21, 2007 meeting minutes.

ITEMS PROPOSED TO BE HEARD

5. Proposed Major Amendment to Delete SR 153 from the MAG Regional Transportation Plan The City of Phoenix and the Arizona Department of Transportation have been working with MAG staff to analyze the impact of removing SR 153 (Sky Harbor Expressway) from the Regional Transportation Plan (RTP) and using the available funding for improvements to SR 143. SR 153 has been part of the MAG regional freeway system since 1985 and was included in the MAG RTP and Proposition 400. Since the RTP was approved, substantial studies have been conducted related to the improvements of I-10 (the I-10 Collector - Distributor road system) and related to access to the airport. These analyses	5. Information, discussion and recommendation to consult with the State Transportation Board, the Maricopa County Board of Supervisors, the Regional Public Transportation Authority, the Indian Communities, the cities and towns in Maricopa County, and the Citizens Transportation Oversight Committee, as required by A.R.S. 28-6353, on the proposal to delete SR 153 from the Regional Transportation Plan and to shift the available funding for improvements to SR 143.

indicate that the original concept for SR 153 no longer is an effective facility in terms of the connection with I-10 at 40th Street and in providing access to Sky Harbor. Furthermore, the current egress from Sky Harbor does not have a connection to SR 143 causing considerable concern for travelers exiting the airport who want to access I-10 and the southeast valley. The proposed change is a major amendment and, as such, requires that the statutory consultation process be followed. This item is on the May 9, 2007 Management Committee agenda. An update will be provided on action taken by the Committee. Please refer to the enclosed material.

6. Proposition 400 Noise Mitigation Funding

At the March 2007 TPC meeting, an overview and discussion occurred about the Proposition 400 Noise Mitigation Funds. Based on the overall approach that was outlined at the meeting, a draft of possible uses, process, and evaluation to identify possible noise mitigation projects has been prepared. Approximately $20 million is available for this program. Upon approval of the approach by the TPC, MAG would send out a request for projects for this funding. After the projects are submitted to MAG, a report will provided to the TPC that outlines the requests submitted and recommendations for project funding. Please refer to the enclosed material.

6. Information, discussion and possible action to recommend that MAG solicit projects from MAG member agencies for noise mitigation projects.

7. Building a Quality Arizona

The Chairs and Directors of the Arizona Councils of Governments (COGs) and Metropolitan Planning Organizations (MPOs) (Arizona COG/MPO Association), as well as business leaders, the Arizona Department of Transportation (ADOT) and representatives from the Governor's Office, have been participating in a series of meetings to address statewide transportation needs. An update on this planning effort will be provided.

7. Information and discussion.

8. Legislative Update

An update will be provided on legislative issues of interest.

8. Information, discussion and possible action.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
TRANSPORTATION POLICY COMMITTEE MEETING

March 21, 2007
MAG Office, Saguaro Room
Phoenix, Arizona

MEMBERS ATTENDING

* Councilmember Peggy Bilsten, Phoenix, Chair
Mayor Keno Hawker, Mesa, Vice Chair
Councilmember Ron Aames, Peoria
Kent Andrews, Salt River Pima-Maricopa Indian Community
F. Rockne Arnett, Citizens Transportation Oversight Committee
Councilmember Gail Barney, Queen Creek
Stephen Beard, SR Beard & Associates
Mayor Steven Berman, Gilbert
* Dave Berry, Swift Transportation
* Jed S. Billings, FNF Construction
Mayor Bobby Bryant, Buckeye
Mayor James Cavanaugh, Goodyear
Mayor Boyd Dunn, Chandler
Councilmember Cliff Elkins, Surprise
Mayor Hugh Hallman, Tempe
Eneas Kane, DMB Associates
* Mark Killian, The Killian Companies/ Sunny Mesa, Inc.
* Joe Lane, State Transportation Board
Mayor Marie Lopez Rogers, Avondale
Mayor Mary Manross, Scottsdale
* David Scholl, Westcor
# Mayor Elaine Scruggs, Glendale
Supervisor Max W. Wilson, Maricopa County

* Not present
# Participated by telephone conference call
+ Participated by videoconference call

1. Call to Order

The meeting of the Transportation Policy Committee (TPC) was called to order by Vice Chair Keno Hawker at 4:05 p.m.

2. Pledge of Allegiance

The Pledge of Allegiance was recited.

Vice Chair Hawker announced that Councilmember Gail Barney, Mayor Boyd Dunn, Mayor Hugh Hallman, Mayor Elaine Scruggs, and Steve Beard were participating by telephone.

Vice Chair Hawker noted materials at each place: for agenda item #6, a written statement submitted by a citizen; for agenda item #8, a bill summary chart.

Vice Chair Hawker requested that members of the public turn in their public comment cards to staff. Transit tickets for those who used transit to attend the meeting and parking garage ticket validation were available from MAG staff.

3. Call to the Audience

Vice Chair Hawker stated that an opportunity is provided to the public to address the Transportation Policy Committee on items that are not on the agenda that are within the jurisdiction of MAG, or non action agenda items that are on the agenda for discussion or information only. Citizens will be requested not to exceed a three minute time period for their comments. An opportunity is provided to comment on agenda items posted for action at the time the item is heard.

Vice Chair Hawker recognized public comment from Andrew Marwick, who addressed the committee on commuter rail. He said that he was disappointed that Proposition 400 did not give a higher priority to commuter rail given the congestion in the region. Mr. Marwick stated that commuter rail is under construction in San Diego, Los Angeles, Salt Lake City, Denver, and Albuquerque. He noted that commuter rail has been a strong presence in Chicago for 155 years, and it is hard to imagine how that city would function without it. Mr. Marwick stated that 10 to 15 traffic lanes would need to be added to compensate. He spoke about the punctuality and convenience of the commuter rail routes in Chicago. Mr. Marwick stated that his primary idea is to have commuter rail along Loop 303 to connect Goodyear, Surprise, Anthem, Scottsdale, and the Salt River Pima-Maricopa Indian Community and connect with the line in the Tempe/Mesa area. Mr. Marwick stated that with the population doubling or tripling, commuter rail would be a good option. He said he did not think that building only freeways was a realistic answer to handling congestion. Vice Chair Hawker thanked Mr. Marwick for his comments and requested that staff provide him with MAG's commuter rail information.

4. Approval of Consent Agenda

Vice Chair Hawker stated that public comment is provided for consent items. Each speaker is provided with a total of three minutes to comment on the consent agenda. He noted that no public comment cards were received.

Vice Chair Hawker stated that agenda items #4A and #4B were on the consent agenda. He commented on agenda item #4B. Vice Chair Hawker asked if corridors not yet built had been considered in order to avoid the argument that these roads have already been funded with taxpayer money. Eric Anderson, MAG Transportation Director, replied that the USDOT has two programs, the Urban Partnership and the ITS program. If an organization applies for ITS and is an urban partner, it receives bonus points. Mr. Anderson stated that MAG staff is preparing applications for Urban Partners and for an ITS Operations Test to Mitigate Congestion. He stated that the Urban Partners process guidelines include congestion pricing. Mr. Anderson noted that MAG staff had a discussion with the USDOT if the applications still had a chance if they were submitted without congestion pricing. He that the proposals have to be written in anticipation of statutory changes. Mr. Anderson commented that he understood the focus will be more on existing facilities. Vice Chair Hawker noted that a group is being formed to look at needs statewide. He said that if a law change is needed to allow for the use of private money, he would like to put that on the TPC or Regional Council agenda and have that discussion to see if there

is support. Vice Chair Hawker commented that Secretary Mary Peters' philosophy is privatization and tolling and he thought if we avoid that we will be doing it at our peril.

Vice Chair Hawker asked members if they had questions or would like to hear any of the consent agenda items individually. No requests were noted.

Mayor Bryant moved to recommend approval of consent agenda items #4A and #4B. Mayor Cavanaugh seconded, and the motion passed unanimously.

4A. Approval of January 17, 2007 Meeting Minutes

The Transportation Policy Committee, by consent, approved the January 17, 2007 meeting minutes.

4B. Response to U.S. Department of Transportation Congestion Initiative

On December 8, 2006, the U.S. Department of Transportation (USDOT) issued a notice of solicitation for applications to enter into urban partnership agreements (UPA) as part of the Congestion Initiative to demonstrate strategies for reducing traffic congestion. A program has been announced under the UPA that would provide funding support for carrying out operational tests using Intelligent Transportation Systems (ITS) applications to mitigate congestion. Approximately $100 million will be made available nationwide for the implementation of selected ITS projects over three years. Two applications are being prepared by a team led by the Arizona Department of Transportation and MAG. The first would seek to qualify the MAG region as an Urban Partner, and the second would seek funds for a corridor project for utilizing ITS technology solutions to better manage the travel demand and traffic flow in the I-10 corridor from I-17 to Loop 303. The USDOT grant is estimated to be in the range of $10 to $15 million. This item was on the agenda to inform the TPC of this opportunity.

5. Report on ADOT Litter Pickup and Landscape Maintenance Program

Mark Schalliol, Manager of the ADOT Freeway Landscape Program, addressed the Committee on enhanced litter control and landscape maintenance efforts that were funded as part of Proposition 400. Mr. Schalliol stated that the program is divided into four areas: litter, landscape, sweeping, and education/prevention. He stated at the beginning of the program, the landscaping portion included four on-call labor crews, and three tree trimming crews for full care landscaping of eight miles. The program also began funding miscellaneous contracts. Mr. Schalliol stated that currently, the landscaping portion includes 16 on-call landscaping crews and five on-call trimming crews covering 60 miles. In addition, full care landscaping for 19 miles of freeway is in place.

Mr. Schalliol stated that initially, four crews were mobilized to handle litter pickup. He noted that this had grown to 12 crews by June 2006. Mr. Schalliol stated that at the beginning of the program, the department received many complaints about litter. He indicated that in 2005, crews picked up more than 85,000 bags of litter from the region's freeways, which increased to about 144,000 bags in 2006. Mr. Schalliol stated that currently, 18 crews are working full time and litter complaints have significantly declined.

Ms. Schalliol then spoke about the sweeping portion of the program. He said 240 curb miles are being swept more frequently in compliance with PM-10 issues in the region. He then displayed some before and after photographs of freeways that have received landscaping and litter pick up.

Mr. Schalliol reviewed the budget. He said that about $5.7 million were allocated to the program in FY 2006. He said that a little over $2 million were expended and about $3.5 million were carried over. Mr. Schalliol stated that this carryover was combined with the $5.7 million allocated to FY 2007 for a total of about $9.2 million. He stated that a total of approximately $11 million is the projected need for FY 2008 and advised that the most significant change will be the increase in the full care contracts to 49 miles from 19 miles. Mr. Schalliol noted that some of this increase results from the Santan coming online.

Mr. Schalliol stated that level of service measurements are taken annually in the spring. He added that ADOT is currently using a system based on the Cambridge Systematics program. Mr. Schalliol noted that a score above two is not functioning as intended. For plant replacement, the sample areas rated 3.12. Mr. Schalliol stated that not a lot of plant replacement has been done, and he is trying to improve that to a two rating. For weeds, the sample average was 2.93. He said the crews have been spraying with herbicides to combat weeds. Mr. Schalliol stated that the sample areas received a rating of 2.44 for litter.

Mr. Schalliol expressed his thanks to the TPC for funding the program. He said that the program a big success--litter complaints have decreased to just a few per month, the appearance of landscaping has improved, and more frequent sweeping has helped with the region's PM 10 problem. Vice Chair Hawker thanked Mr. Schalliol for his report and asked members if they had questions.

Supervisor Wilson asked the hours of operation. Mr. Schalliol replied that crews typically work from sunrise to about 3:00 p.m. Supervisor Wilson commented that crews working during rush hours can contribute to traffic jams and suggested they might work around certain hours. Mr. Schalliol stated that the restriction of work hours can significantly increase costs.

6. Proposition 400 Noise Mitigation Funding

Mr. Anderson stated that Proposition 400 provided $75 million for noise mitigation along the freeways within the MAG region. He said that a substantial portion of this funding has been used to complete the rubberized asphalt program that was not included as part of the initial round of the ADOT quiet paving program. Mr. Anderson noted that approximately $20 million remain in the noise mitigation fund.

Mr. Anderson introduced Mike Dennis, Air/Noise Team Leader, ADOT Environmental Planning Services, who provided a report on ADOT's noise mitigation program. Mr. Dennis stated that ADOT is conducting limited noise measurements to establish baseline noise reductions. He said that the benefits of rubberized asphalt include a smooth, skid resistant surface, a reduction of noise in adjacent neighborhoods by about five decibels, and extending noise reduction benefits to more customers when compared to noise barriers. Mr. Dennis noted that noise measurements are collected at about 80 locations. He said that from 2003 to 2005, the average noise reduction was 5.3 decibels and had increased to 5.4 decibels in 2006.

Mr. Dennis stated that in 2003 to 2005 during Phases One through Five, ADOT applied approximately 115 miles of rubberized asphalt on the region's freeways. He noted that this was done at a cost of $35 million in Proposition 300 funds. Mr. Dennis stated that the current program includes Phases Six through Ten, which began in 2006 and ends in 2008. He said that ADOT will pave approximately 35 miles of freeway with rubberized asphalt at a proposed cost of $55 million of Proposition 400 funds.

Mr. Anderson asked Mr. Dennis about the impact on the rubberized asphalt program resulting from the increase in the cost of materials. Mr. Dennis replied that ADOT saw an increase of about 35 percent from Phases One through Five versus phases Six through Ten.

Mr. Smith stated that he has been hearing about research conducted by Arizona State University on urban heat islands that rubberized asphalt could act as a blanket, resulting in less heat. Mr. Dennis said that heat islands were discussed a couple of years ago at a conference in Washington, DC. He indicated that the conference proposed three stages to prevent heat islands: urban forests, rooftop gardens, and green highways. He noted that a major component of green highways is porous asphalt and added that rubberized asphalt is porous. Mr. Dennis commented that they are interested in seeing if rubberized asphalt has a mitigating effect on heat islands.

Mr. Anderson continued the presentation. He stated that $55 million of Proposition 400 funds were allocated to complete the noise mitigation program in 2008, leaving $20 million for other noise mitigation efforts in the region. Mr. Anderson noted that when the Regional Transportation Plan was first being drafted, certain areas of freeways were not slated for improvements. He said that when improvements are made to a freeway, ADOT conducts additional noise measurements as standard practice and has to mitigate the noise according to its policy. Mr. Anderson noted that many areas that may have noise issues today will be dealt with when the freeways are widened in the future. Mr. Anderson advised that those not slated for improvements will not receive noise mitigation. Mr. Anderson stated that one example of this is the F. Q. Story Historic District near 15th Avenue and I-10. He said that a citizen from the neighborhood, Steve Dreiseszun, attended MAG committee meetings and demonstrated the noise issues in the neighborhood. He noted that a statement had been submitted by Mr. Dreiseszun and was at each place. This statement was entered into the permanent record. Mr. Anderson commented that if there were additional regional money, mitigation could be provided in areas such as this.

Mr. Anderson stated that MAG and ADOT put together some concepts for discussion and direction by the TPC: 1) Noise mitigation for areas that have noise levels that exceed ADOT's threshold. 2) Options that could reduce noise levels if there is no practical solution. 3) No freeway improvements are scheduled in the RTP that would provide noise mitigation.

Mr. Anderson reviewed examples of projects that could utilize the funds: new noise barriers; extending existing noise barriers; upgrading noise wall foundations; soundproofing public use or nonprofit institutional structures; and repairing damaged rubberized asphalt. He noted that a project would need to be adjacent to an existing roadway, in a neighborhood impacted by noise. Mr. Anderson advised that a technical noise analysis would be needed to determine the sound level, the project must reduce noise by three decibels, and be feasible and cost effective.

Vice Chair Hawker stated that the background information indicated that rubberized asphalt has a life of about 10 to 15 years. He said that the $20 million total is cumulative, and in order to complete a large project, the funds would have to be front loaded. Vice Chair Hawker asked the disadvantages to not spending the entire $20 million right now or to spending the entire amount up front to receive 20 years of benefits. He added that he liked to do quality projects with benefits. Vice Chair Hawker expressed his concern with the life cycle of rubberized asphalt. He said he realized that $20 million would not go far over a span of 15 years, however, the possibility that a future freeway system repair would be needed brought him back to banking it. Then if a repair is needed the funds will be available to get the project started. Mr. Anderson noted that he was unsure how many areas will need additional noise mitigation beyond those included in the RTP improvements. He said that the process would include the solicitation of projects to member agencies to identify areas that may fit the guidelines. Mr. Anderson commented that if only a few projects that meet the criteria are received, they could probably be funded and the rest of the money saved. He added that if a lot of projects are received, a policy discussion would be necessary.

Supervisor Wilson asked if traffic or weather was the more determining factor in the life of rubberized asphalt. Dan Lance, Deputy State Engineer, noted that the wear and tear results from both traffic and weather. He stated that the life span for rubberized asphalt, which is a one-inch overlay over concrete pavement, is anticipated to be 10 to 12 years. Mr. Lance stated that ADOT has test sections in Phoenix and Tucson–one is in its 14th year and the other is in its 16th year. Mr. Lance stated that one concern with noise mitigation nationally is that the porous voids in rubberized asphalt may fill up with dust and debris, thus decreasing the value of noise mitigation. He noted that ADOT will track this over time through the noise measurement process. Mr. Lance commented that there may be some value to reserving some of the funds to address where there are noise problems.

Councilmember Aames commented on the criteria. He said that Criteria #1) and #2) were both acceptable; Criteria #3), where no freeway improvements are scheduled in the RTP that would provide noise mitigation, needs more flexibility. Councilmember Aames commented that at some point there will be freeway work that will allow for mitigation, but that could be in 10 to 15 years. Councilmember Aames stated that residents are living with the noise with no resolution because we are waiting for the future. Mr. Anderson stated that an element could be added to the criteria that a project gets a maximum score if improvements are scheduled in the outer years.

Mr. Anderson replied that the next step would be to solicit projects from member agencies. He stated that the survey questions could include: Does the project fit in with the program requirements? Do noise levels exceed the threshold? What is the effectiveness of the proposed solution? What is the timing of the freeway improvements? What is the age of neighborhood and how long residents have lived with the conditions?

Mr. Anderson stated that the results of the survey would be brought back to the TPC. Based on TPC input, MAG and ADOT will prepare the program description and draft solicitation for projects and provide them to member agencies. Mr. Anderson noted that while member agencies are reviewing those items, staff could work on a proposed schedule, the evaluation criteria, and the ranking process.

Vice Chair Hawker reiterated his feeling to reserve some money for rubberized asphalt replacement and to not spend all of the money on one or two projects, but to have some funds left for future needs.

Mayor Cavanaugh moved that the TPC direct staff to proceed with conducting the process as staff briefed the TPC and to include the suggestions presented by Vice Chair Hawker and Councilmember Aames. Mayor Lopez Rogers seconded, and the motion carried unanimously.

7. MAG Freeway Construction Status Report

Bill Hayden, Arizona Department of Transportation, provided an update on progress and upcoming construction activities of the freeway projects in the Regional Transportation Plan. He said that current construction projects scheduled for completion in summer 2007 include the US-60 improvement project from Gilbert Road to Power Road, the US-60/Loop 202 traffic interchange, Phase 2; the Loop 202, University Drive to Southern Avenue; and the I-10 Ray Road Bridge improvements. Mr. Hayden noted that Loop 101, northern half of the Bethany Home traffic interchange is scheduled for completion in fall 2007, and the Loop 202, Power Road to University Drive project is scheduled for completion in summer 2008.

Mr. Hayden reviewed freeway projects scheduled to begin in 2007, which include the I-17 interchanges at Jomax Road and Dixileta Drive; the SR-51 carpool lanes between Shea Boulevard and Loop 101; I-17/Carefree Highway interchange reconstruction; Loop 101 carpool lanes between Princess Drive and Loop 202; the I-10 interchange at Bullard Avenue; the I-17 widening between Loop 101 and Carefree Highway; the I-10 widening between Loop 101 and Sarival Avenue; and the US-60 Higley Road bridge widening.

Mr. Hayden reviewed major new construction projects. He said that improvements to I-10 in the West Valley include median widening to add one general purpose lane and one HOV lane in the median in each direction between the Loop 101 traffic interchange and 1,700 feet east of Sarival Road in 2008, which was advanced from 2014. Mr. Hayden stated that outside widening includes adding one general purpose lane in each direction, from 1,700 feet east of Sarival Road to Dysart Road in 2009, which was advanced from 2011. He noted that the total cost of the project is estimated to be $135 million, and added that a $7 million HELP loan and a $122 million GAN enabled the acceleration of construction. Mr. Hayden advised that with the widening completed, I-10 will have four general purpose lanes and an HOV lane in each direction from Loop 101 to east of Sarival Road, which matches the lane profile of I-10 east of the Loop 101 interchange.

Mr. Hayden stated that another I-10 project, scheduled to begin in 2009, is to add five and one-half miles of general purpose lanes in the I-10 median from Verrado Way to Sarival Road. He noted that this project was accelerated using $46.9 million in STAN funds. Mr. Hayden stated that the Bullard Avenue traffic interchange is scheduled to begin this summer.

Mr. Hayden stated that the improvements to I-10 between SR-51 and Baseline Road include constructing the Collector/Distributor road system from 40th Street to Baseline Road, at an estimated cost of $580 million. He noted that this is the Broadway Curve area that was mentioned in recent media reports about the 24-lane wide freeway. Mr. Hayden advised that this is still in the environmental and design concept report stage and no decision has yet been made.

Mr. Hayden reported on new construction projects on I-17. He said that nine miles of one general purpose lane and one HOV lane will be added between Loop 101 and SR-74. Mr. Hayden advised that

this project, scheduled to begin in summer 2007, is estimated at $194 million. Other projects on I-17 include adding five miles of one general purpose lane between SR-74 and Anthem Way at an estimated cost of $33.1 million, scheduled to begin in FY 2009; construct traffic interchanges at Jomax Road and Dixileta Drive at a cost of $40 million, scheduled to begin in spring 2007; construct Dove Valley traffic interchange at an estimated cost of $17 million, scheduled to begin in FY 2008.

Mr. Hayden reviewed new construction projects on SR-51: six miles of HOV lanes to be constructed between Shea Boulevard and Loop 101, including HOV connection ramps, scheduled to begin in spring 2007.

Mr. Hayden stated that improvements to the Loop 101/Pima Freeway include 30 miles of new HOV lanes. This includes adding 14.8 miles of HOV lanes between Princess Drive to the Loop 202 traffic interchange to begin in summer 2007 at a cost of $69.5 million; adding 5.3 miles of HOV lanes from Tatum Boulevard to Princess Drive, at a cost of $32.6 million in STAN funds in FY 2008; adding 4.2 miles of HOV lanes from the Loop 202 traffic interchange to Baseline Road in FY 2008 at a cost of $17 million; continuing 5.5 miles of HOV lanes from Baseline Road to the Santan Freeway, at a cost of $38.5 million in STAN Funds.

Mr. Hayden stated that construction of the west segment of Loop 202 South Mountain Freeway, from I-10 to 51st Avenue is scheduled to begin in FY 2010, pending final environmental approval from FHWA. This project is estimated at $500 million.

Mr. Hayden stated that the completion of the construction for the remaining segments of SR-85 from I-8 to I-10 is anticipated to take place from FY 2008 - FY 2010 at an estimated cost of $133 million. He advised that this will make the facility a four-lane, divided roadway from I-10 to I-8. Mr. Hayden stated that construction of the Wickenburg Bypass is anticipated to begin this year and is estimated to cost $29 million.

Mr. Hayden summarized the totals of these projects: 133 miles of existing corridor widening and improvements, including general purpose lanes; 75 miles of HOV lanes; six new traffic interchanges and HOV ramps; 38 miles of new or multiphase new construction; 27 miles of right-of way-protection; 75 miles under study; and 34 miles of rubberized asphalt application to complete the RTP program. He added that this application makes the total miles where rubberized asphalt has been applied to 150 miles in the metro area. Mr. Hayden noted that the FY 2008 to FY 2012 regional freeway program totals $3.64 billion. Vice Chair Hawker thanked Mr. Hayden for his report and asked members if they had questions.

Supervisor Wilson asked if the TPC members would be alerted to any scheduling problems, such as in the EIS process? Mr. Hayden replied that they would. He noted that most of the environmental work has been completed, with the exception of the South Mountain, particularly the portion eastward from 51st Avenue to I-10. Mr. Hayden stated that the I-10 Reliever and Williams Gateway Freeway will need environmental studies, but no new concerns are anticipated beyond the increased costs for right-of-way, construction, and commodities. He noted that the bid for the Jomax/Dixileta project recently came in $5.5 million less than the state's estimate, and there is hope this indicates a trend of reduced costs. Supervisor Wilson expressed concern that there might be issues with the I-10 Reliever because of its position along the river. Mr. Hayden noted that Supervisor Wilson's concerns were correct. Because

the alignment is along a waterway, there could be archaeological issues. He added that if there are archaeological findings, they would be addressed.

Councilmember Aames asked if any additional lanes on the interchange between Loop 101 and I-17 were planned. Mr. Hayden replied that he believed modifications were planned to two interchanges in the median.

Vice Chair Hawker asked how much of the $250 million cost of improving I-17 might have been passed along to residents if the state had an adequate public facilities ordinance. Mr. Hayden replied that he did not have an answer to Vice Chair Hawker's question, however, there has been a lot of discussion about developments built on the outskirts bearing some of the cost.

Vice Chair Hawker asked if construction for the north/south segment of the South Mountain could begin without knowing the east/west alignment. Mr. Hayden replied that this is a complex issue. He indicated that ADOT's intent is to proceed, beginning at I-10 and 55th Avenue southerly to 51st Avenue. He added that ADOT anticipates a decision will be made to proceed easterly following completion of the ongoing alternatives study. Mr. Hayden stated that a potential agreement with the Gila River Indian Community is still being considered. He said ADOT is confident they will end up with a connection to I-10.

Vice Chair Hawker asked if a decision is made, would the project be reprogrammed for the next five year program with additional money put into the project to get it built. Mr. Hayden replied that only the western section would be in the next five year program. He stated that $500 million are allocated to 15 miles of this project. He advised that ADOT is estimating $1 billion to complete construction and $1 billion for right-of-way for the South Mountain, assuming right-of-way costs do not significantly increase and there are no new costs.

Vice Chair Hawker asked if the 24 lanes in the area of the Broadway Curve would still be needed if the South Mountain was built and were they linked. Mr. Hayden replied that ADOT believes that a connection to I-10 with the South Mountain is necessary, as it is an integral component of the regional freeway system and it provides system continuity. He indicated that the Collector/Distributor system, when completed, would result in a total of 24 lanes, but the Collector/Distributor lanes would be separate from the mainline.

Mayor Lopez Rogers asked if ADOT would be applying for I-10 as a Corridor of the Future program. Mr. Hayden replied that ADOT, if eligible and could receive funding, would apply.

Mayor Cavanaugh asked for clarification of the 24 lanes at the Broadway Curve and its inclusion in Proposition 400. Mr. Anderson replied that the I-10 Collector/Distributor road system is funded in the amount of $580 million as part of Proposition 400. He commented that this is probably enough funding to fix the 40th Street to Baseline Road section. Mr. Anderson noted that the 24 lanes include four HOV lanes (two each direction) in the median, and six lanes (three each direction) on the outside of the freeway, which are part of the Collector/Distributor road system. He advised that the 24 lanes are not contiguous, but are separated HOV lanes in the median and local access lanes on the outside. The I-10 freeway portion would be 14 lanes. Mr. Anderson stated that the lanes are necessary to accommodate traffic merging from SR-143 and US-60. He added that part of the widening is short sections, not the entire length, but a function of all the traffic movement in the area. Mayor Cavanaugh stated that the

traffic still has to be siphoned through the Deck Park Tunnel. He stated that an integrated approach is needed for improvements to I-10.

Councilmember Elkins stated that this illustrates much more is needed. He stated that neither Grand Avenue West nor Loop 303, both of which are critical to handle congestion in the West Valley, were not mentioned.

Mr. Smith stated that the completion of freeways is driven by the completion of studies. He stated that staff has been considering providing periodic tracking and monitoring reports to the TPC so if a study is sliding, decision makers would know about it.

Vice Chair Hawker asked the status of Proposition 300 funds in the South Mountain Freeway. Mr. Hayden stated that some of the early studies were done with Proposition 300 funds. Mr. Anderson advised that the funds are probably not Proposition 300 funds anymore, because Proposition 300 was a combination of funds. He noted that as part of the 1996 prioritization, $85 million were set aside for building the elbow with access at South Mountain. He stated that this South Mountain funding is being carried forward in the cash flow analysis in the Proposition 400 program.

8. Legislative Update

Matthew Clark, MAG Senior Policy Planner, reported on legislative items of interest. Mr. Clark stated that SB 1049, which appropriates $450 million from the State's Rainy Day Fund for transportation, and SB 1172, which increases the maximum maturity date for state highway bonds from 20 years to 30 years, have stalled. He indicated that they might be considered as part of the appropriations process.

Mr. Clark stated that SB 1591 adds language that states if the light rail system is not completed on or before January 1, 2009, a separate performance audit will be conducted within 12 months after the minimum operating segment has opened. He reported that this bill passed the Senate and House transportation committees. Mr. Clark noted Valley Metro Rail is neutral on this bill.

Mr. Clark stated that HB 2612 would increase the number of representatives on the State Transportation Board based on population. This bill has moved from the House and is waiting in the Senate to be heard.

Mr. Clark stated that HB 2682 would establish a Blue Ribbon Transportation Committee. The bill has passed the House and failed in the Senate Transportation Committee. Mr. Clark reported that Senator Gould included a 24-page amendment to the bill, and this has not gotten out of committee. He added that he was hearing there will be efforts to revive the bill.

Mr. Clark reported on SB 1552, which deals with the adoption of local ordinances in regard to air pollution. This bill passed the Senate and is awaiting consideration in the House. Mr. Clark stated that the bill is being held pending MAG's recommendations on the Suggested List of Measures for the Five Percent Plan for PM-10. He added that Senator Allen has asked stakeholders to meet in two groups to consider the measures.

Mr. Clark stated that HCR 2039 is a strike everything amendment that proposes amendments to the State Constitution relating to disposition of state trust land. He said that it passed the Committee of the Whole March 20th and is awaiting a third read.

Vice Chair Hawker asked if the state trust land item would be back on the ballot for 2008. Mr. Clark replied that it would. Vice Chair Hawker asked the process for the appointments to the Blue Ribbon Transportation Committee. Mr. Clark replied that the Committee would be composed of the President of the Senate and Speaker of the House, and the Chair of each transportation committee. In addition, the President and Speaker will each appoint two members of each political party to the committee. Vice Chair Hawker asked about transportation expertise of the appointees. Mr. Clark replied that the belief is there will be expertise from the transportation chairs and their discretion to appoint members with expertise. The thought was that the Committee would recommend all reports, such as the Reconnaissance and Framework Studies, and report back to the Legislature and the Governor.

Vice Chair Hawker asked if the Legislature was appropriating the funds to pay for the audit authorized by SB 1591. Mr. Clark replied that the audit would be funded by the half cent sales tax.

There being no further business, the meeting adjourned at 5:25 p.m.

_____
Chair

_____
Secretary

Agenda Item #5

Arizona Department of Transportation

Office of the Director

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janet Napolitano
Governor

Victor M. Mendez
Director

Richard Travis
Deputy Director

May 1, 2007

Mr. Dennis Smith,
Executive Director
Maricopa Association of Governments
302 North First Avenue, Suite 300
Phoenix, Arizona 85003

RE: Request for Amendment to the MAG Regional Transportation Plan

Dear ~~Mr. Smith~~: Dennis

The City of Phoenix and the Arizona Department of Transportation (ADOT) staff have coordinated a two year study to develop alternative concepts to extending SR 153 as proposed in the Regional Transportation Plan. The culmination of this study recommends a viable alternative to the SR 153 extension that will be more beneficial to the regional freeway system and will improve local access in and around the east side of Sky Harbor International Airport.

My engineering and right-of-way staff have reviewed the City's proposal and concur with their position that future Sky Harbor Airport development plans will conflict with the planned SR 153 extension south of University Drive. Secondly, their recommended alternative to the current Regional Transportation Plan will improve the SR 143 connection to Sky Harbor Boulevard by providing upgraded and additional free flow directional interchange ramps; thus eliminating the need for the proposed SR 153 extension to I-10. The City's plan will downgrade existing SR 153 to an access controlled arterial and incorporate it into the future airport and related city development planned for this area.

The upgrading of SR 143 as the primary east airport connection in the regional transportation system and reconfiguring existing SR153 to an access controlled arterial will then provide secondary access to the airport and should also provide increased security for the airport. City of Phoenix ownership of the SR 153 corridor will also provide an opportunity for the People Mover System to interface with the Valley Metro Rail Station at 44th Street and Washington St. via this corridor. Overall, this alternative will benefit the public by providing improved airport access and enhancing the regional freeway system given the recommended improvements to SR 143. This option developed to the 15%

design estimate reflects SR 143 improvement costs at approximately $34.4 million.

The City of Phoenix strongly recommends this engineering modification and has requested ADOT initiate action through the Maricopa Association of Governments to formally amend the Regional Transportation Plan. The amendment includes: 1) removal of the SR 153 extension from the current plan, 2) transfer of the remaining $23.5 million of programmed funds, and 3) transfer of proceeds from the sale of thirteen ADOT parcels previously acquired, which is estimated at $10.8 million to be used for the SR 143 improvements.

The City of Phoenix and ADOT will negotiate and prepare appropriate route transfer documents for transfer of ownership of SR 153 and disposition of associated land parcels to accomplish both the change of ownership and the SR 143 improvements. Please refer to the attached graphic which illustrates the SR 143. Additionally the City of Phoenix will dedicate any city owned right-of-way for the proposed SR143 improvements.

State statutes require the City of Phoenix to accept the proposed route transfer by waiving ARS 28-7209, which is the Advance Four Year Notice of Abandonment as a prerequisite for this expedited action. Upon receipt of this document ADOT will submit a Resolution of Abandonment to the Arizona Transportation Board for review and approval.

I have thoroughly reviewed the City of Phoenix proposal and concur with this recommendation. Therefore, I am requesting an amendment to the Regional Transportation Plan to incorporate these proposed modifications.

Sincerely,

Victor

Victor M. Mendez

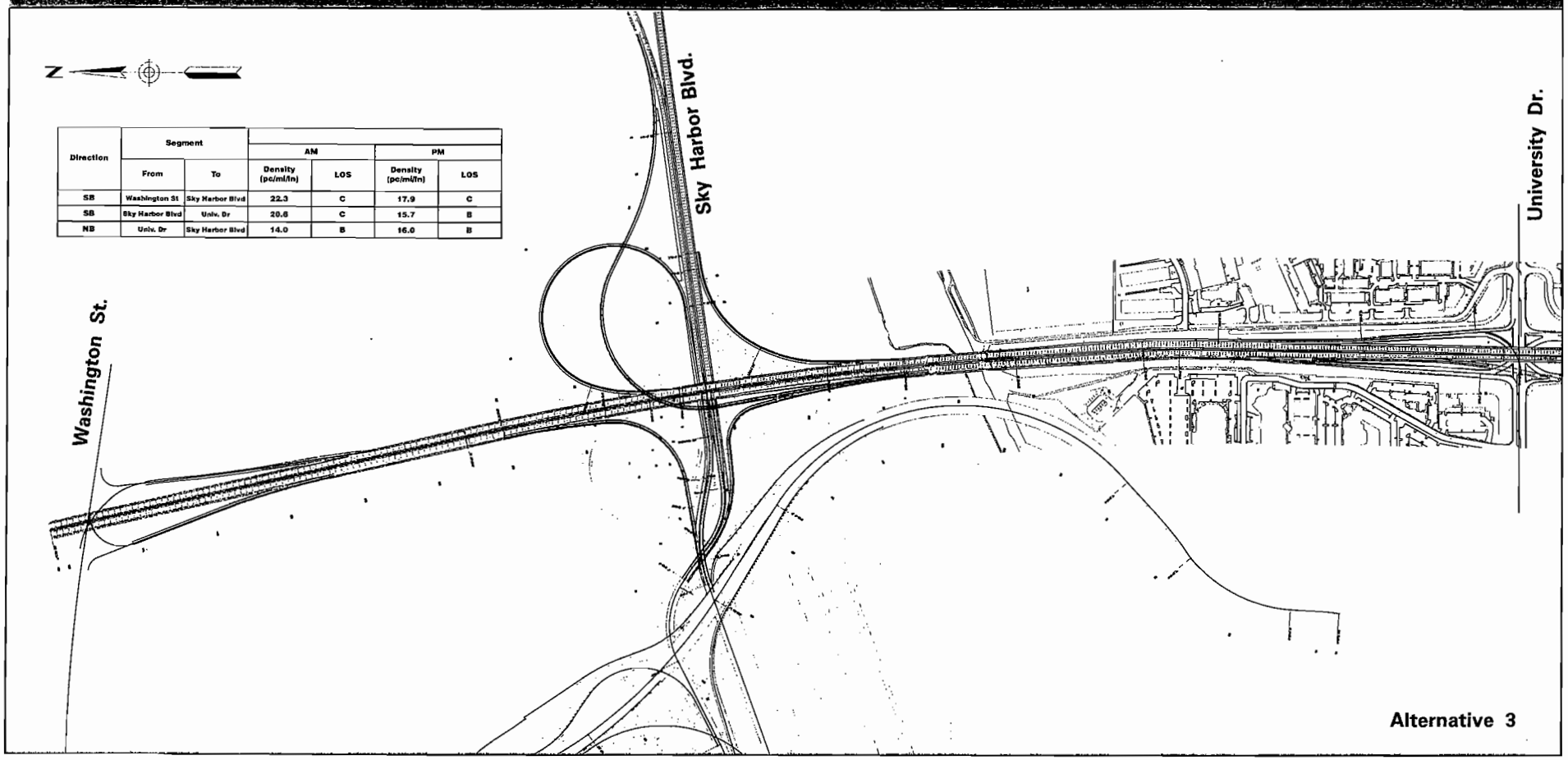
cc: S. Elters, ADOT
D. Lance, ADOT
F. Roehrich, ADOT
S. Mousavi, ADOT
B. Rockwell, ADOT
F. Fairbanks, City of Phoenix
T. Callow, City of Phoenix
R. Blakely, City of Phoenix
D. Herp, City of Phoenix
Eric Anderson, Maricopa Association of Governments

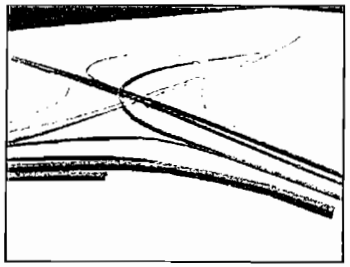
Attachments

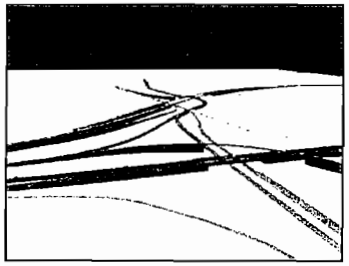
Proposed Improvements to SR 143

Alternative 3

Direction	Segment		AM		PM	
	From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SB	Washington St	Sky Harbor Blvd	22.3	C	17.9	C
SB	Sky Harbor Blvd	Univ. Dr	20.6	C	15.7	B
NB	Univ. Dr	Sky Harbor Blvd	14.0	B	16.0	B







Characteristics

Bridge Widening

Greatest weaving distance between Sky Harbor Blvd and University (2000')

Preserves portion of parking lot

Smaller radius on WB-to-SB ramp, lower design speed (45 mph)

EB-to-SB design speed 30 mph

Gore spacing of SB onramps does not meet AASHTO recommended spacing for successive on ramps

Area of new structure: 49,500 sf

Area of new pavement: 23,300 sy

PHX Phoenix Sky Harbor

PB

Agenda Item #6

MARICOPA ASSOCIATION of GOVERNMENTS

302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
E-mail: mag@mag.maricopa.gov ▲ Web site: www.mag.maricopa.gov

May 8, 2007

TO: Members of the Transportation Policy Committee

FROM: Eric J. Anderson, Transportation Director

SUBJECT: DRAFT PROCESS FOR PROPOSITION 400 NOISE MITIGATION FUNDING

Overview of RTP Noise Mitigation Funding

Proposition 400 included $75 million to help mitigate the noise impacts of the regional freeway system. A large part of the funding was allocated to complete the rubberized asphalt program for the balance of the regional system. At the completion of the program in 2008, approximately 150 miles of freeways will have rubberized asphalt. Of the $75 million, about $20 million will remain for other noise mitigation purposes.

During the development of the MAG Regional Transportation Plan (RTP) in 2003, the Transportation Policy Committee (TPC) discussed the need for and heard public testimony about additional noise mitigation efforts along the freeway system. In particular, sections of the freeway system that are not scheduled for any capacity improvements in the plan were identified as needing specific attention. This is because the Arizona Department of Transportation (ADOT) has to address noise mitigation as part of any road project. Therefore, a section of roadway needing noise mitigation and that is scheduled for improvements in the future, will be provided any needed noise mitigation measures as part of the improvement project.

ADOT Noise Abatement Policy

The ADOT Noise Abatement Policy is included as an appendix to this document. According to the policy, ADOT will consider noise abatement when the noise levels outside of residences exceed 64 dBA and when feasible and reasonable noise abatement measures can provide at least a 3 dBA reduction. The ADOT noise abatement policy includes a discussion of "feasible" and "reasonable."

Description of the Proposed Supplemental Noise Mitigation Program

The purpose of this potential program is to address noise mitigation in residential areas where traffic noise substantially increased due to overall increases in traffic volume on the MAG Regional Freeway System. The intent of this proposed program is to mitigate noise in areas originally not eligible for noise mitigation.

Project Type Examples:

- Construct new noise barriers.
- Increase existing noise barrier length or height.

- Upgrade noise wall foundations for developer-funded noise walls adjacent to planned roadway expansions.
- Repair damaged ARFC (rubberized asphalt) overlay.
- Soundproof public use or nonprofit institutional structures.
- Other accepted noise mitigation measures.

Project Requirements:

- Project area is adjacent to an existing freeway.
- Existing noise levels must exceed 64 dBA.
- Project must decrease existing noise levels by approximately 3 dBA.
- Project must be feasible and reasonable.
- Construction costs unrelated to noise reduction may not be included in the project.
- Approved funds must be expended on the project designated in the request.
- Technical noise study completed by a qualified specialist in accordance with ADOT's Noise Abatement Policy before final approval of project.

Process:

- MAG issues solicitation for requests for noise abatement projects. The solicitation will request the following information:
  - Project description including the limits of the project
  - The size and age of the neighborhood being impacted by freeway noise
  - Estimated number of units or person impacted
  - Existing noise mitigation measures currently in place
  - Estimate of existing noise levels
  - Discuss customer complaints about existing traffic noise levels
  - Proposed mitigation solution
  - Estimated noise reduction of proposed solution
  - Estimated cost of proposed solution
  - Anticipated environmental impacts of the proposed solution
  - Other issues or factors that should be considered in evaluating the request

- MAG and ADOT review requests with respect to eligibility, feasibility and reasonableness. If preliminary review indicates that the proposed project may not be eligible, feasible, or reasonable, discussions with the jurisdictions will be held to clarify the project characteristics before a final recommendation to the TPC to exclude the proposed project from further consideration.

- A list of the proposed projects that are eligible, feasible and reasonable will be prepared. This list will also include those projects not recommended if the proposing jurisdiction requests further review.
  - A request for more detailed information, if needed, will then be made to the jurisdiction. For example, if the required technical noise analysis has not yet been conducted, the jurisdiction would have to complete the analysis and submit the results to continue in the process.

- MAG and ADOT will develop a rating system to rank projects based on the benefit to cost ratio of the proposed project and other criteria.

- The list of ranked projects will be presented to the Transportation Review Committee, MAG Management Committee and the Transportation Policy Committee for review, discussion, and possible recommendation to the MAG Regional Council for funding from the Proposition 400 Noise Mitigation fund.

- Once a list is approved by the MAG Regional Council, the list will be forwarded to ADOT to incorporate into the Freeway Life Cycle Program.

If you have any questions or comments, please contact me at (602) 254-6300 at the MAG offices.

ARIZONA DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT POLICY

APPROVED BY: Sam Elters **DATE:** 11/29/05
SAM ELTERS, State Engineer
Arizona Department of Transportation

APPROVED BY: R E Hollis **DATE:** 12/5/05
ROBERT E. HOLLIS, Division Administrator
Federal Highway Administration

ARIZONA DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL & ENHANCEMENT GROUP
PHOENIX, ARIZONA

www.ADOTenvironmental.com

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
II.	DEFINITIONS	1
III.	TYPICAL NOISE LEVELS	4
IV.	DETERMINATION OF NOISE IMPACT	4
V.	FEASIBILITY OF NOISE ABATEMENT	7
VI.	REASONABILITY OF NOISE ABATEMENT	8
VII.	PREFERENCES OF IMPACTED CUSTOMERS	10
VIII.	EXTENUATING CIRCUMSTANCES	11
IX.	QUIET PAVEMENT PILOT PROGRAM	12
X.	FLOWCHART: ADOT'S NOISE PROCESS	13

ARIZONA DEPARTMENT OF TRANSPORTATION
NOISE ABATEMENT POLICY

I. INTRODUCTION

The Arizona Department of Transportation (ADOT) will use the following guidelines to determine the need, feasibility, and reasonability of noise abatement or reduction measures on all roadway projects. This policy is based on the accepted practices and procedures used by federal and state transportation agencies to assess highway-related noise levels. ADOT's Environmental & Enhancement Group (EEG) will implement the policy.

II. DEFINITIONS

A. **Abatement** – A reduction in sound levels (degree of sound intensity).

B. **Barrier** – A natural or man-made object that interrupts the path of sound. A barrier could be a wall, an earth berm, or a combination of both.

C. **Benefited Developed Property** – A developed property that receives at least a 5 dBA reduction in the predicted traffic noise level because of noise abatement measures. The legal property owner of the benefited developed property, or the owner's designated representative, shall be referred to as a "benefited customer" in this document. For multi-family, developed properties (such as apartments, condominiums, or manufactured home developments), each individual dwelling unit receiving at least a 5 dBA reduction will be considered a benefited customer. This definition applies to all FHWA Activity Categories listed in Table 1.

D. **CFR** – The Code of Federal Regulations.

E. **Decibel (dB)** – A unit for measuring sound levels. Traffic noise level measurements are rounded to the nearest whole number prior to impact determination and presentation in project reports.

F. **dBA** – Sound levels are typically measured using a statistically weighted scale. There are three weighted scales: A, B, and C. Because the A scale most closely represents the range of human hearing, units of measurement for highway sound levels will use the A-weighted scale and be designated with dBA.

G. **Date of Public Knowledge** – The signatory date of the final environmental document prepared in accordance with the National Environmental Policy Act (NEPA) and approved by FHWA. Approval documents consist of Categorical Exclusions (CE), a Finding of No Significant Impact (FONSI) for Environmental

Assessments, or a Record of Decision (ROD) for Environmental Impact Statements.

H. **Date of public knowledge (State Projects)** – The signatory date of the final environmental document prepared in accordance with the ADOT Action Plan and approved by ADOT.

I. **Design Year** – The future year used to estimate the probable traffic volume for which a highway is designed. Normally, traffic estimates are projected 20 years into the future from the estimated start date of construction.

J. **Existing Sound Level** – The current noise level, made up of all natural and man-made noises normally present within a particular area. The existing sound level provides a reference point for determining noise impacts when transportation improvements or new highways are being considered.

K. **Impacted Developed Property** – A developed property where projected noise levels in areas of frequent human activity exceed ADOT's approach threshold for the appropriate FHWA Activity Category summarized in Table 1. The legal owner of the impacted developed property, or the owner's designated representative, shall be referred to as an "impacted customer" in this document. For multi-family, developed properties (such as apartments, condominiums, or manufactured home developments), each individual dwelling unit exceeding ADOT's approach threshold will qualify as an impacted customer. ADOT will consider noise abatement for all impacted developed properties.

L. **Insertion Loss** – A term used in noise analysis describing the projected noise reduction that results when a noise barrier is placed between a noise source and a receiver.

M. **Level Of Service (LOS)** – A term that describes the relationship between traffic volume and traffic speed, consisting of six levels. In general, traffic speed is limited by traffic volume. For example, Level Of Service A describes light volume traffic traveling at uninterrupted, posted speeds. Level Of Service F describes high volume traffic traveling at restricted speeds (gridlock). Level Of Service C describes a condition where the maximum traffic volume moves at the posted speed limit.

N. **L_{eq}** – The steady state sound level, L_{eq}, is calculated as the average sound energy level and is the measurement used to determine noise impacts. When it is measured hourly and the A-weighted scale is used, it is abbreviated as L_{Aeq1h}.

O. **Noise Abatement Criteria (NAC)** – The FHWA has established criteria, based on land use, that identify when a noise impact will likely occur. The FHWA criteria are shown in Table 1.

P. **Noise Receiver** – The technical term used in noise modeling to describe the location of a potential noise impact.

Q. **Planned, Designed and Programmed** – A property is considered to be "planned, designed, and programmed" if a construction permit has been obtained. ADOT considers a permit to construct subsurface utilities as the construction permit. For multiple-phase developments, each phase will be considered a separate development.

R. **Predicted Noise Level** – The noise level determined for the worst traffic noise conditions likely to occur on a regular basis for existing and future conditions. As of October 14, 2004, the Traffic Noise Model (TNM) is the model approved by FHWA for predicting existing and future noise levels on new transportation projects. After consultation with ADOT's EEG, predicted noise levels may be adjusted (*i.e.*, calibrated) based on measurements made at selected reference locations in accordance with the procedures found in FHWA-PD-96-046/DOT-VNTSC-96-5, "Measurements of Highway-Related Noise", May 1996. This reference is available at www.azdot.gov/Highways/EEG/noise.asp.

S. **Section 4(f) Resource** – According to federal regulation, it is a significant publicly-owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site, and is a protected resource.

T. **Traffic Noise Threshold** – ADOT defines an impact when predicted noise levels approach the Noise Abatement Criteria (NAC) or when predicted traffic noise levels substantially exceed existing noise levels. The threshold is a noise level less than the NAC and is utilized by ADOT as a level at which noise abatement is examined and considered.

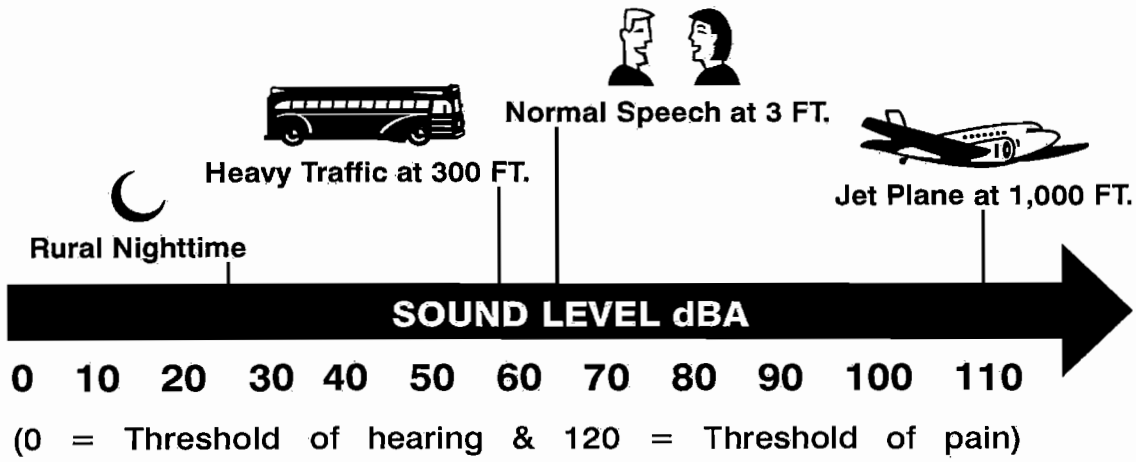
U. **Type I Project** – Construction of a highway at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of continuous travel lanes.

V. **Type II or Retrofit Project** – A highway project proposed strictly for noise abatement on an existing highway. The cut-off date for mandatory FHWA approval of Type II projects was November 28, 1995. ADOT does not have a Type II program.

W. **Worst Traffic Noise Condition** – Predicted noise levels are calculated for the peak noise hour, which is usually the peak traffic hour, or when volumes are heaviest but speeds are not significantly impeded. ADOT considers Level Of Service C traffic traveling in both directions at the posted speed limit, or the maximum speed in accordance with the noise model, to be the worst traffic noise condition.

III. TYPICAL NOISE LEVELS

Noise is measured in decibels (dB), and is perceived differently by every individual. The chart below indicates common indoor and outdoor noise levels.



IV. DETERMINATION OF NOISE IMPACT

The determination of a noise impact is based on the FHWA regulations. However, the FHWA regulations allow some flexibility for each state to determine noise impacts. Both the federal criteria and the state interpretation of those criteria are presented in this section. These criteria are used to determine when a noise impact occurs or will occur.

A. Federal Highway Administration Noise Abatement Criteria

The FHWA has issued regulations for noise evaluation in Title 23, Code of Federal Regulations, Part 772 (23 CFR 772), **Procedures for Abatement of Highway Traffic Noise and Construction Noise**. The main objectives of 23 CFR 772 are "to provide procedures for noise studies and noise abatement measures, to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to Title 23, United States Code (U.S.C.)." The regulations require the consideration of noise abatement measures when traffic noise impacts are identified. Noise abatement measures must be feasible and reasonable to be incorporated into a transportation project (as described in Sections V and VI).

FHWA has developed specific noise abatement criteria. These criteria are depicted in Table 1. According to the FHWA regulations, a traffic noise impact occurs when the predicted traffic noise level approaches or exceeds the Noise Abatement Criteria (NAC) for the specified land use. In addition, an impact occurs when the predicted traffic noise level substantially exceeds the existing noise level. FHWA allows each individual state to define the levels at which the noise "approaches" the criteria and when it

"substantially exceeds" the existing noise level. ADOT's interpretation of these terms is presented below.

TABLE 1
Noise Abatement Criteria (NAC)
"A"-Weighted Sound Level in Decibels (dBA)

Activity Category	L_{Aeq1h}	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, cemeteries and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.
Source: 23 CFR 772		

B. Arizona Department of Transportation Criteria

The FHWA regulations allow each state some flexibility in determining noise impact. ADOT has established the following thresholds for noise impact based on the FHWA regulations:

i. FHWA: The predicted traffic noise level approaches or exceeds the noise abatement criteria (NAC), as shown in Table 1.

ADOT defines this threshold as 3 dBA below the NAC for Categories B and E and 1 dBA below the NAC for Categories A and C. For example, the approach threshold for Category B is 64 dBA.

In determining and reducing traffic noise impacts, exterior areas are given primary consideration. ADOT generally will consider abatement only where frequent human use occurs and a reduced noise level would be of benefit.

ii. FHWA: The predicted traffic noise level substantially exceeds the existing noise level.

ADOT defines "substantial" in this context as 15 dBA or greater. Noise abatement will be considered for all substantially impacted developed properties. However, when projected unmitigated design year exterior noise levels for a substantially impacted developed properties are equal to or less than 57 dBA, abatement measures generally are not feasible or reasonable.

All noise monitoring shall be done in accordance with the procedures found in Section 4 of FHWA-PD-96-046/DOT-VNTSC-96-5, Measurements of Highway-Related Noise, May 1996.

C. Timing of New Development Near Highways

A noise-sensitive development (including residences, schools, churches, hospitals, and libraries) will be analyzed for traffic noise if the development is planned, designed, and programmed. A development is planned, designed, and programmed if the local jurisdiction has issued a construction permit prior to the Date of Public Knowledge.

For Federal-aid projects, the Date of Public Knowledge is defined as the date the environmental document for a transportation project is approved, specifically the date when the CE, FONSI, or ROD is approved.

For state funded projects, the date of public knowledge is defined as the date the environmental document for a transportation project is approved.

ADOT is responsible for analyzing changes in traffic noise impacts prior to the Date of Public Knowledge. ADOT is not responsible for providing noise abatement for new developments adjacent to the proposed transportation project after the Date of Public Knowledge.

Local government coordination will be accomplished through the distribution of highway project environmental documents and technical noise studies. Upon request, ADOT will furnish the results of highway traffic noise analyses to local government officials. ADOT encourages local communities and developers to practice noise compatible development.

D. Consideration of Noise Abatement

ADOT considers noise abatement when traffic noise impacts are identified. ADOT sets the following goals when considering noise abatement:

- Reduce noise levels to 64 dBA or less.
- Effective aesthetic and architectural integration into the community.
- Keeping the public informed and soliciting public preferences.
- Careful attention to neighborhood issues like fire access, security, visibility, and drainage.
- Careful attention to driver safety, including line of sight and emergency vehicle access.

ADOT evaluates the feasibility and reasonability of implementing noise abatement when impacted customers are identified. As stated in the FHWA regulations and this policy, noise abatement measures must be feasible and reasonable. "Feasible" deals primarily with engineering considerations (e.g., can a barrier be built given the topography of the

location; can a substantial noise reduction be achieved given certain access, drainage, snow, safety, or maintenance requirements; are other noise sources present in the area, etc.). "Reasonable" implies that common sense and good judgment are applied in arriving at a decision. Some specific considerations for feasibility and reasonability are presented in the next two sections.

V. FEASIBILITY OF NOISE ABATEMENT

When noise abatement measures are considered, feasibility criteria shall include, but not be limited to, the following:

A. Amount Of Noise Reduction

Noise barriers should be designed to reduce projected unmitigated noise levels by at least 5 dBA and reduce noise to levels at or below the appropriate ADOT approach threshold, where feasible. For example, if the projected unmitigated noise level of a residential property (Activity Category B) is 72 dBA, the proposed barrier should be designed to reduce the overall noise level to at or below ADOT's approach threshold of 64 dBA, resulting in a barrier design that reduces noise levels by 9 dBA.

It is often possible to reduce noise levels to less than the ADOT approach threshold, but it is not always feasible to achieve an overall noise reduction of 5 dBA. For these exceptional cases, ADOT will consider constructing noise barriers that provide partial abatement, *i.e.* reduction in noise levels of 3 or 4 dBA. For example, if the projected unmitigated noise level of a residential property (Activity Category B) is 67 dBA, the proposed barrier should be designed to reduce the noise level to 62 dBA and achieve an overall noise level reduction of at least 5 dBA. However, if due to constructability constraints the proposed noise barrier reduces projected noise levels by 4 dBA, resulting in an overall noise level of 63 dBA, ADOT will consider building the noise barrier as opposed to rejecting this option because it does not meet the 5 dBA noise level reduction criteria. ADOT will not consider constructing a noise barrier that reduces projected noise levels by 3 or 4 dBA and results in a projected mitigated noise level exceeding 64 dBA or that reduces projected noise levels by less than 3 dBA.

B. Barrier Height

ADOT considers the design of each proposed noise barrier on an individual basis when determining barrier height. The designed height of any proposed barrier may be adjusted, based on barrier location, impacted customer input, and/or the reasonable and feasible criteria. Due to cost, aesthetics, and constructability, ADOT generally will not construct noise barriers higher than 20 feet.

C. Breaks In Barrier

Breaks or openings in noise barriers, such as for side-street access, driveways, or drainage, allow noise to travel through the barrier and reduce the effectiveness of the noise barrier. ADOT discourages placing breaks or openings in barriers. Noise barriers should be designed and located in such a manner that does not require any breaks or openings in the barrier. In some cases, breaks in barriers can be accommodated with offset, overlapping barriers.

D. Other Noise Sources Present

In some instances, the noise level at a particular location may be affected by a noise source other than the nearby highway. Other noise sources include urban streets, railroads, industrial facilities, and airplane flight paths. In such locations, a noise barrier for the proposed transportation project may not be feasible, since a substantial noise reduction cannot be achieved due to other noise sources.

E. Safety

Noise barriers will not be constructed in such a way as to create a potential safety hazard.

F. Line-Of-Sight Check

ADOT recommends any proposed noise barrier break the line-of-sight between the noise source and the impacted customer location, since noise barriers are more effective when traffic is not visible to the impacted customer.

G. Section 4(f) Properties

For properties subject to Section 4(f) protection, impacts must be evaluated by FHWA on a case-by-case basis to determine if there is a "substantial impairment" to the intended use of the property. Section 4(f) protections do not apply to state-funded projects.

VI. REASONABLILITY OF NOISE ABATEMENT

When noise abatement measures are considered, reasonability criteria shall include, but not be limited to, the following:

A. Maximum Cost Of Abatement

The maximum recommended cost of abatement is $43,000 (2005 dollars) per benefited developed property. Benefited residential developed properties include all single-family dwellings (*i.e.*, apartments, manufactured homes, condominiums, detached homes), whether occupied by the owner or a renter, that receive a 5 dBA

noise reduction from proposed mitigation measures. For benefited developed properties such as parks, schools, hospitals, and churches, noise abatement will be considered on a case by case basis, as specified in ADOT's noise guidelines.

B. Local Funding Participation

When a noise barrier has been proposed for a transportation project, local jurisdictions can contribute additional funds to add aesthetic treatments, enhance the design, increase height, or incorporate additional features.

C. Isolated Developed Properties

Generally, it will not be reasonable to provide abatement for isolated developed properties. Noise mitigation will be considered only if barrier costs meet the criteria presented in Sub-Section A under Section VI.

D. Height Restrictions By Local Jurisdictions

Zoning laws or ordinances passed by local jurisdictions may restrict heights of walls or barriers. ADOT will not construct a noise barrier that fails to meet the noise reduction requirements presented in Section V, Subsection A, if a local jurisdiction will not grant a variance to laws or ordinances governing height restrictions. In these cases, noise concerns and noise mitigation associated with roadway improvements completed by ADOT become the responsibility of the local jurisdiction.

E. Multi-story Buildings

ADOT will provide noise abatement for the first story of an eligible multi-story structure if the feasible and reasonable criteria identified in this policy are met. ADOT will also evaluate the feasibility and reasonability of providing noise abatement for second and higher floors. Cost effectiveness criteria, maximum height limitations, and the absence of exterior activity areas are factors that may affect the feasibility and reasonability of noise abatement for upper floors.

F. Line-Of-Sight Check

ADOT recommends any proposed noise barrier break the line-of-sight between the noise source and the impacted customer location, since noise barriers are more effective when traffic is not visible to the impacted customer.

G. Aesthetic Value

Noise barriers designed for roadway projects are frequently discontinuous due to parameters such as roadway geometry, length of project, topography, and location or size of residential subdivisions. It is sometimes beneficial to eliminate gaps

between proposed noise barriers for aesthetic value if the gaps are "limited", meaning the gap is a few hundred feet wide. In addition, closing the gap can result in reduced barrier heights of the original unconnected barriers when the insertion loss of a continuous barrier is compared to the insertion loss of higher barriers with limited gaps. ADOT's Environmental and Enhancement Group (EEG) considers aesthetic value and cost effectiveness of closing barrier gaps when evaluating noise barrier recommendations.

The above listing is not intended to be all encompassing. Other factors may be considered in determining the feasibility and reasonability of proposed abatement measures.

VII. PREFERENCES OF IMPACTED CUSTOMERS

Noise barriers will be constructed unless the majority of impacted customers are opposed to their construction. Opposition to barrier construction shall be documented in writing, such as formal surveys or petitions, and shall be compiled by the local jurisdiction, landowner association, neighborhood representative, or ADOT.

The preferences of impacted customers will be considered regarding the heights of proposed noise barriers. If the majority of impacted customers object to the proposed barrier height recommended by ADOT, the barrier may be constructed at a lower height under certain conditions. The impacted customers shall be informed of the design height of the proposed noise barrier recommended by the noise analysis. If impacted customers request a lower noise barrier, the shorter height wall may be constructed.

To evaluate the preferences of impacted customers, an impacted customer that receives a 3 or 4 dBA reduction in projected noise level is designated as a partially benefited customer.

The preference of impacted customers will be weighted as follows:

- Impacted customers receiving a 5 dBA reduction or more in projected noise levels shall receive three points

- Impacted customers receiving a 4 dBA reduction in projected noise levels shall receive two points

- Impacted customers receiving a 3 dBA reduction in projected noise levels shall receive one point

If a dispute over barrier preferences develops between the owner of an impacted property and the legal occupant of the impacted property, the preferences of the property owner will take precedence.

The definition of a partially benefited customer shall be used only for assigning points to impacted customers participating in the preferences evaluation and shall not apply to the cost per benefited customer evaluation discussed in Section VI, Subsection A.

The preferences of impacted customers will be considered for noise abatement, if options are available within the scope of the project. Only impacted customers responding to the request to evaluate preference will be counted in the point tally. However, additional efforts will be employed to contact non-responsive impacted customers, including mailings, telephone calls, and in-person interviews.

It will be ADOT's responsibility to ensure reasonable efforts are made to contact impacted customers and evaluate their preferences. ADOT will evaluate the preferences of impacted customers when at least 50% of the responses plus 1 additional response are received. ADOT will consider customer preferences that modify the noise barrier as originally presented based on the majority of points tallied. ADOT encourages participation by the local jurisdictions in the process to contact impacted customers and evaluate their preferences.

VIII. EXTENUATING CIRCUMSTANCES

Extenuating circumstances may exist where unique or unusual conditions warrant special consideration of traffic noise impacts and/or implementation of noise abatement measures. Extenuating circumstances could involve:

- Areas extremely sensitive to noise
- Areas where severe traffic noise impacts are anticipated
- Areas containing Section 4(f) resources
- Locations that are difficult or impractical to mitigate with barriers
- Local and regional weather conditions

Extenuating circumstances will be considered on an individual project basis.

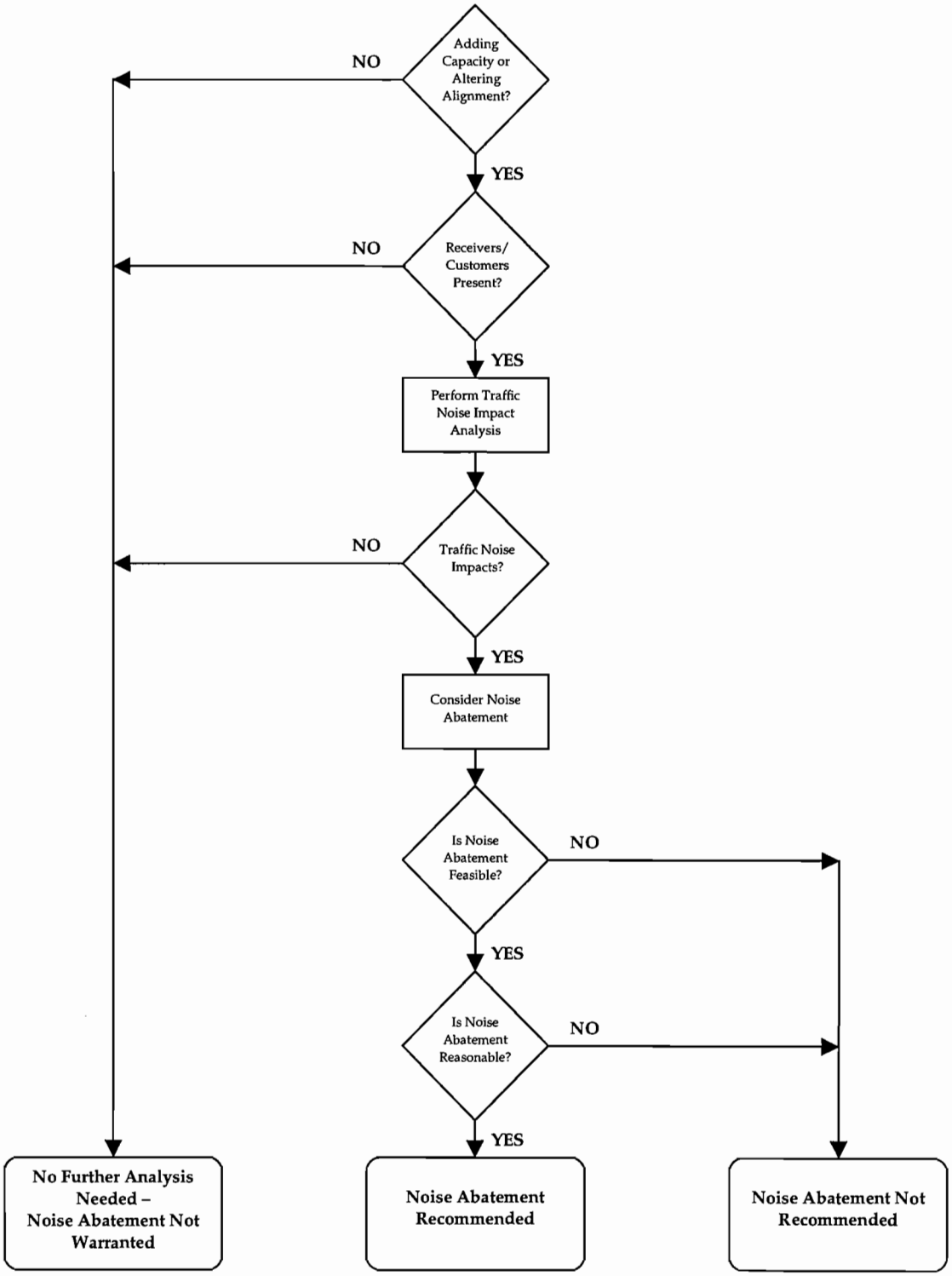
Normal variations in weather and traffic patterns can result in field noise measurements that exceed ADOT's target noise level for abatement at a given location, at a given time. ADOT cannot warranty or guarantee that a specific level of noise abatement can be achieved at all locations at all times.

After construction of a highway project, if based on customer concerns the need arises to revisit the noise analysis and mitigation provisions due to deficiencies in the technical noise study, there will be a three-year time period for additional mitigation under the Type I program. The three-year time period will begin upon ADOT's formal acceptance

of the completed project. ADOT will evaluate customer noise concerns using noise measurements and geographic location.

IX. Quiet Pavement Pilot Program

FHWA approved the Quiet Pavement Pilot Program (QPPP) in April 2003. The QPPP is a pilot study conducted on the Maricopa County regional freeway system to evaluate the potential effectiveness of pavement types, texturing, and specifically overlaying freeways with an Asphaltic Rubber Friction Course (ARFC) as a possible noise mitigation strategy. The results of the Quiet Pavement Pilot Program could reduce future proposed barrier heights.

ADOT currently has no plans to extend the QPPP to other parts of Arizona. Future application of ARFC to federally funded roadway projects as a noise mitigation strategy may be considered for other parts of Arizona and depends on the outcome of the QPPP. ARFC may be considered as a noise mitigation strategy for state-funded roadway projects.

FLOWCHART: ADOT'S NOISE PROCESS