

September 10, 2013

TO: Members of the Transportation Policy Committee

FROM: Mayor Jackie Meck, Buckeye, Chair

SUBJECT: NOTIFICATION OF MEETING AND TRANSMITTAL OF TENTATIVE AGENDA

Meeting - 12:00 noon  
Wednesday, September 18, 2013  
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 determined at the first meeting of the Committee, proxies are not allowed. Members who are not able to attend the meeting are encouraged to submit their comments in writing, so that their view is always a part of the process.

For those attending in person, 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 admission 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 luncheon will be provided. If you have any questions, please contact Dennis Smith, MAG Executive Director, or Eric Anderson, MAG Transportation Director, at (602) 254-6300.

c: MAG Regional Council  
MAG Management Committee

**TRANSPORTATION POLICY COMMITTEE  
TENTATIVE AGENDA  
September 18, 2013**

		<u>COMMITTEE ACTION REQUESTED</u>
1.	<u>Call to Order</u>	
2.	<u>Pledge of Allegiance</u>	
3.	<u>Call to the Audience</u>  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.
4.	<u>Approval of Consent Agenda</u>  Prior to action on the consent agenda, members of the audience will be provided an opportunity to comment on consent items that are being presented for action. Following the comment period, Committee members may request that an item be removed from the consent agenda. Consent items are marked with an asterisk (*).	4. Recommend approval of the Consent Agenda.

**ITEMS PROPOSED FOR CONSENT\***

*4A.	<u>Approval of the August 14, 2013, Meeting Minutes</u>	4A. Review and approval of the August 14, 2013, meeting minutes.
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**ITEMS PROPOSED TO BE HEARD**

5.	<u>Overview of Regional Transportation Needs</u>  At the August 2013 Transportation Policy Committee, a presentation was provided on potential new transportation revenue sources that can supplement the declining Arizona Highway	5. Information, discussion and input.
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User Revenue Fund (HURF) and support regional transit services. HURF revenues for FY 2013 were \$1.2 billion, the same level they were in 2005. Since Proposition 400 began in January 2006, the projected revenues from the ½ cent sales tax over the 20-year life of the tax have been reduced by 40 percent. The impact of lower revenues has resulted in a number of highway and transit projects being delayed beyond the expiration of the Proposition 400 sales tax in 2025. Staff will present an overview of the identified funding needs for the region. This will include operations and maintenance needs for highways and transit, funding needs for projects that have been deferred, and other capital projects that have been identified since the 2003 Regional Transportation Plan.

6. Sustainable Transportation Land Use Integration Study – Recommendations, Findings and Tools

The Sustainable Transportation Land Use Integration Study (ST-LUIS) was undertaken from 2010-2013 to highlight the potential to move the region toward greater use of sustainable transportation modes - transit, walking and biking. The study was completed in three phases: research and analysis, scenario planning and modeling, and the development of local and regional tools. The study was complemented by nine stakeholder activities. These activities included two business/public forums coordinated by the Arizona Chapter of the Urban Land Institute (ULI). The perspectives of participants from these forums were integral to understanding the market realities in local communities. The outcomes of the scenario modeling exercise, the study's recommendation of place types for high capacity transit and walkable communities, the local/community evaluation tool, the regional high capacity corridor evaluation process, and the overall recommendations and findings will be presented. The study was recommended for acceptance on August 8, 2013, by the MAG Transit Committee and on August 29, 2013, by the MAG Transportation Review Committee. This item is on the September 11, 2013, MAG

6. Recommend acceptance of the Sustainable Transportation Land Use Integration Study recommendations, key findings, and tools to be considered in future planning efforts and be consistent with the Federal Transit Administration evaluation criteria and process, as appropriate.

Management Committee agenda. An update will be provided on action taken by the Committee. Please refer to the enclosed material.

7. Update on the Pinal North-South Corridor Study

Since June 2010, the Arizona Department of Transportation has been developing an Environmental Impact Statement (EIS) and Location/Design Concept Report (L/DCR) for a new high capacity north-south transportation corridor between the US-60/Superstition Freeway in Apache Junction and Interstate 10 near Picacho. This corridor is envisioned to connect the communities of Eloy, Casa Grande, Coolidge, Florence, and Apache Junction, as well as the unincorporated area known as Santan Valley. The Transportation Policy Committee will be provided an update on the planning progress for this new transportation corridor in Pinal County and the work products that have been developed on this process. Please refer to the enclosed material.

8. PHX Sky Train

The PHX Sky Train is an automated train that transports travelers between the light rail station at 44th Street and Washington and the East Economy parking area and Terminal 4 at Sky Harbor International Airport. As requested by a Transportation Policy Committee member, a report on PHX Sky Train will be provided by Sky Harbor International Airport staff.

9. Transportation Alternatives Program: Draft Goals, Objectives, and Competitive Process

Prior to 2013, there were three distinct types of federal formula funds apportioned to the state, which were programmed in collaboration with MPOs and COGs: Transportation Enhancements (TEA), Safe Routes to School (SRTS), and Recreational Trails Program. In July 2012, the federal government passed the new federal transportation authorization bill, Moving Ahead for Progress in the 21st Century (MAP-21), which consolidated these three programs into one

7. Information and discussion.

8. Information and discussion.

9. Recommend approval of the draft goals, objectives, and process for the Transportation Alternatives (TA) program and modification of the MAG Federal Fund Programming Guidelines and Procedures, October 26, 2011.

federal formula funding category: Transportation Alternatives Program (TA). The funding is now directly allocated to MAG, which is different from previous years. The MAG region receives about \$4.4 million per year for this program. Working with member agencies via a survey and a stakeholder meeting, MAG staff drafted goals and objectives and outlined a competitive process to program the TA funds for FY 2015, 2016, and 2017. If approved, the TA process would be incorporated into the MAG Federal Fund Programming Guidelines and Procedures approved October 26, 2011, by the MAG Regional Council. The Transportation Review Committee recommended approval that the draft goals, objectives, and process for the Transportation Alternatives (TA) program and modification of the MAG Federal Fund Programming Guidelines and Procedures on August 29, 2013. This item is on the September 11, 2013, MAG Management Committee agenda. An update will be provided on action taken by the Committee. Please refer to the enclosed material.

10. Legislative Update

An update will be provided on legislative issues of interest.

11. Request for Future Agenda Items

Topics or issues of interest that the Transportation Policy Committee would like to have considered for discussion at a future meeting will be requested.

12. Comments from the Committee

An opportunity will be provided for Transportation Policy Committee members to present a brief summary of current events. The Transportation Policy Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

Adjournment

10. Information, discussion, and possible action.

11. Information and discussion.

12. Information.

MINUTES OF THE  
MARICOPA ASSOCIATION OF GOVERNMENTS  
TRANSPORTATION POLICY COMMITTEE MEETING

August 14, 2013  
MAG Office, Saguaro Room  
Phoenix, Arizona

MEMBERS ATTENDING

Mayor Jackie Meck, Buckeye, Chair	* Joseph La Rue, State Transportation Board
Vice Mayor Jack Sellers, Chandler, Vice Chair	# Lt. Governor Stephen Roe Lewis, Gila River Indian Community
# F. Rockne Arnett, Citizens Transportation Oversight Committee	Mayor Georgia Lord, Goodyear
* Ron Barnes, Total Transit	Mayor Mark Mitchell, Tempe
Dave Berry, Swift Transportation	# Garrett Newland, Macerich
* Jed Billings, FNF Construction	Mayor Tom Rankin, Florence
* Councilmember Cathy Carlat, Peoria	Mayor Marie Lopez Rogers, Avondale
Vice Mayor Ben Cooper, Gilbert	Mayor Scott Smith, Mesa
Supervisor Clint Hickman, Maricopa County	Mayor Greg Stanton, Phoenix
* Mark Killian, The Killian Company/Sunny Mesa, Inc.	Karrin Kunasek Taylor, DMB Properties
Mayor W. J. "Jim" Lane, Scottsdale	Mayor Jerry Weiers, Glendale
	Mayor Sharon Wolcott, Surprise

\* 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 Chair Mayor Jackie Meck at 12:00 p.m.

2. Pledge of Allegiance

The Pledge of Allegiance was recited.

Lt. Governor Stephen Roe Lewis, Mr. Roc Arnett, and Mr. Garrett Newland participated in the meeting by telephone.

Chair Meck welcomed Mayor Tom Rankin to his first TPC meeting. He noted that Mayor Rankin had been elected by the Regional Council to serve on the TPC.

Chair Meck announced that on August 7, 2013, the MAG Management Committee recommended approval of items 4B, 4C, and 4D that were on the TPC agenda. He noted that at each place was material for agenda item #5.

Chair Meck requested that members of the public fill out blue cards for Call to the Audience and yellow cards for consent or action items on the agenda. He stated that parking garage validation and transit tickets for those who purchased transit tickets to attend the meeting were available from staff.

3. Call to the Audience

Chair Meck 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. 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. Those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard.

Chair Meck noted that no comment cards had been received.

4. Approval of Consent Agenda

Chair Meck stated that agenda items #4A, #4B, #4C, and #4D were on the consent agenda. He stated that public comment is provided for consent items, and noted that no public comment cards had been received. Chair Meck asked members if they would like to remove any of the consent agenda items or have a presentation. No requests were noted.

Mayor Lord moved to recommend approval of agenda items #4A, #4B, #4C, and #4D on the consent agenda. Vice Mayor Cooper seconded, and the motion carried unanimously.

4A. Approval of the May 15, 2013, Meeting Minutes

The Transportation Policy Committee, by consent, approved the May 15, 2013, meeting minutes.

4B. Project Changes – Amendment and Administrative Modification to the FY 2011-2015 MAG Transportation Improvement Program, FY 2014 Arterial Life Cycle Program, and Regional Transportation Plan 2010 Update

The Transportation Policy Committee, by consent, recommended approval of the amendments and administrative modifications to the Fiscal Year (FY) 2011-2015 MAG Transportation Improvement Program, and as appropriate, to the FY 2014 Arterial Life Cycle Program and Regional Transportation Plan 2010 Update. The FY 2011-2015 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) 2010 Update were approved by the MAG Regional

Council on July 28, 2010, and have been modified twenty six times, with the latest approval on June 19, 2013. Since then, there was a need to modify projects in the programs. An administrative correction is pending Arizona Department of Transportation and Federal Highway Administration approval. The requested project changes include Federal Highway Administration, Federal Transit Administration, Regional Area Road Funds, and locally funded projects. Projects included in the request may require a conformity consultation. The requested project changes were recommended for approval on August 1, 2013, by the MAG Transportation Review Committee and on August 7, 2013, by the MAG Management Committee.

4C. MAG Federally Funded, Locally Sponsored Project Development Status Report

The Transportation Policy Committee, by consent, recommended approval of the MAG Federally Funded, Locally Sponsored Project Development Status Report, and of actions that defer, delete, advance, and change projects; and of the necessary amendments and administrative modifications to the FY 2011-2015 MAG Transportation Improvement Program, and as appropriate, to the Regional Transportation Plan 2010 Update. The MAG Federal Fund Programming Guidelines and Procedures, approved by the MAG Regional Council on October 26, 2011, outline the requirements for local agencies to submit status information on the development of their federally funded projects. The Project Development Status Report focuses mainly on projects funded with Congestion Mitigation and Air Quality Improvement (CMAQ) funds that are programmed to obligate in Federal Fiscal Year (FFY) 2013, 2014, and 2015 and the number of project deferrals. The Project Development Status workbook sent to member agencies in the May/June timeframe required that a project development schedule be completed and that project changes could be requested. Information submitted by local agencies was at times cross checked with the Arizona Department of Transportation (ADOT) Local Government section for feasibility and further inquiries were made by MAG staff. The Project Development Status Report identifies the projects programmed to obligate in FY 2014 and 2015 that are requesting a deferral to a later year, requesting to be deleted or have funds reprogrammed, and that are projected to obligate based on the schedule submitted. The Project Development Status Report also is a final inventory for ADOT of the projects programmed to obligate in FFY 2013. A separate agenda item lists individual project change line items with the requested FY 2011-2015 MAG Transportation Improvement Program and Regional Transportation Plan 2010 Update amendments and modifications. This item was recommended for approval on August 1, 2013, by the MAG Transportation Review Committee and on August 7, 2013, by the MAG Management Committee.

4D. FY 2013 Draft Transit Program of Projects for Federal Funds

The Transportation Policy Committee, by consent, recommended approval of the FY 2013 MAG Transit Program of Projects, amendments to the FY 2011-2015 MAG Transportation Improvement Program, and as appropriate to the Regional Transportation Plan 2010 Update. The draft transit program of projects is utilized to develop the grant for submittal to the Federal Transit Administration (FTA). Upon approval by the MAG Regional Council, the City of Phoenix (the region's designated and direct recipient of FTA funds) will build the grant for submittal to FTA. MAG provides the concurrence on the grant application. FTA has advised us that they prefer the

grant application to be submitted prior to the 2013 Federal Fiscal Year ending September 30, 2013. A draft listing of projects was recommended for approval by the Transit Committee on June 13, 2013. Since then, there have been a few modifications. This item was recommended for approval on August 1, 2013, by the MAG Transportation Review Committee and on August 7, 2013, by the MAG Management Committee.

5. Update on Transportation Revenues

Eric Anderson, MAG Transportation Director, provided a report on transportation revenues. Mr. Anderson stated that a grim picture of existing transportation revenue was painted at the April TPC meeting. He noted that the purpose of his presentation was to stimulate discussion on augmenting transportation funding resources.

Mr. Anderson said that current sales tax projections reflect a 40 percent decrease compared to the 2002 projections done in preparation for the Regional Transportation Plan. Mr. Anderson stated that the Highway User Revenue Fund (HURF) projections also are lower than the original projections and are similar to 2004 and 2005 levels.

Mr. Anderson then commented on the combined federal and state gas tax rate chart (dated July 2013) that was at each place by saying that the amount of tax collected by Arizona is nearly the lowest at 37.4 cents tax per gallon and California collects the most tax: more than 70 cents tax per gallon.

Mr. Anderson then reviewed three major components of transportation funding. He said that operations and maintenance funding for transit, streets and highways needs to be permanent and sustainable. He noted that some of the Proposition 400 revenue is used for highway maintenance and transit operations, however, when the tax sunsets, operations and maintenance funding will be at risk.

Mr. Anderson stated that capital program funding, which started with a 20-year tax under Proposition 300 and continued with the 20-year tax in Proposition 400, is project specific and limited to the term of the tax in this region. He advised that San Diego's Transnet tax has a term of 40 years, and Glendale's and Tempe's transportation taxes have no sunset. Mr. Anderson advised that a sunset on capital funding is acceptable because it provides the opportunity to demonstrate to the voters that the decision makers can deliver on their promises.

Mr. Anderson stated that tools could capture the benefits of public sector investments, such as the increased value of the property around freeways. He explained that Arizona has no provision for before and after appraisal methodology and no way to capture the increases in land values when infrastructure is built. Mr. Anderson stated that on the trip to Salt Lake City, MAG staff heard about a number of redevelopment tools, such as tax increment financing, that they use to capture some of the value of public sector investments.

Mr. Anderson stated that revenue categories were examined. He said that the genesis of the categories was a study by the Utah Foundation to augment transportation revenues. Mr. Anderson noted that the graph at each place showing potential funding sources was divided into three categories: Fuel Tax Options, Sales Tax Options, and Other Options.

Mr. Anderson first explained Fuel Tax Options. An indexed five-cent local option fuel tax in Maricopa County could raise \$108 million per year on average over the next ten years. Mr. Anderson noted that some states, Nevada, for example, allow counties to levy a gas tax which the local agency is allowed to retain. He noted that Reno, Nevada, has a nine-cent per gallon fuel tax in addition to state and federal taxes.

Mr. Anderson stated that another fuel tax option is indexing the current state fuel tax to the Consumer Price Index. He said that this is the least intrusive option. Mr. Anderson explained that this option includes the current 18 cents per gallon tax and one cent per gallon underground storage tax and indexes it for future inflation. Mr. Anderson noted that this option could raise approximately \$115 million per year statewide on average for ten years.

Mr. Anderson explained another fuel tax option is to add five cents (unindexed) to the current fuel tax. He said that this option could raise \$178 million per year on average for ten years. Mr. Anderson stated that approximately 50.5 percent of Arizona's HURF goes to ADOT for the state highway system, approximately 30 percent goes to cities and towns, and approximately 19 percent goes to counties.

Mr. Anderson stated that another fuel tax option is adding five cents fuel tax and indexing state and federal fuel taxes to the Consumer Price Index, which could generate the most additional revenue – approximately \$429 million per year on average – that would be kept in Arizona. He said that this was similar to a local tax levied in Washoe County, Nevada, where all of the local tax funds remain in the area. Mr. Anderson stated that in Arizona, the HURF is constitutionally limited to roads and streets, which means that transit capital and operations need to be funded another way.

Mr. Anderson then addressed Sales Tax Options. He stated that the option for obtaining maximum revenue applies a sales tax to fuel sales, which would be on top of the existing fuel taxes, and could generate approximately \$1 billion per year for ten years. Mr. Anderson noted that he had used a 5.6 percent tax rate at the state level and two percent at the local level in this calculation. He reported that of the \$1 billion, approximately \$221 million per year would be collected by cities and towns.

Mr. Anderson stated that replacing the fuel tax with state and local sales tax could generate approximately \$337 million per year for ten years, however, modifications might have to be made to the way fuel taxes are collected, which is currently on a wholesale level.

Mr. Anderson then addressed Other Options by saying that increasing the driver's license fee by \$10 would generate approximately \$13 million over ten years, which is not a large amount. He stated that one option includes a ten percent surcharge on luxury tax collections (liquor and tobacco, for example), however, there is not really a link back to transportation. Another option is

a \$10 increase in license registration fees, which could generate approximately \$50 million per year over ten years. Mr. Anderson stated that another option discussed was a property tax for transportation. He said that the average property tax rate in Arizona is \$7.89 per \$100 of assessed valuation. With a two percent tax, approximately \$100 million per year could be generated. Mr. Anderson noted that a property tax as a source for transportation funding was considered in the early 1980s before settling on the sales tax in Proposition 300. He said that it is a large tax base. In addition, the Legislature has been trying to reduce the assessed ratios on commercial properties to bring them more in line with residential properties. Mr. Anderson remarked that there are pros and cons associated with each of the options that would require discussion.

Mr. Anderson displayed the potential transportation revenue sources ranked from the lowest revenue generation to the highest revenue generation. He noted that adding a state and local sales tax on fuel is projected to generate the most revenue, but whether it is politically doable is the question.

Mr. Anderson stated that many issues and decisions need to be made: (1) Quantify needs at different levels: state, regional, or multi-regional; (2) Identify packages and whether one revenue source or multiple revenue sources are needed; (3) Determine the implementation level: legislative, referendum (e.g., Proposition 400), or initiative (more expensive because signatures have to be collected and the campaign run); (4) Determine timing; (5) Determine the partners and stakeholders who need to be involved in the discussion. Mr. Anderson noted that a statewide election means more participants. He noted that extensive outreach and a number of meetings took place with the business community and stakeholders at the beginning of the Proposition 400 process.

Mr. Anderson reviewed next steps: (1) Conduct a public opinion survey to gauge public sentiment and view and needs and revenue sources. He noted that the Executive Committee approved amending the MAG Work Program to include the survey. (2) Synthesize into a research document the numerous public policy documents, such as *The Arizona We Want*, *Arizona Directions*, and the *National League of Cities Metropolitan Leadership Forum*, that show what the public values. (3) At the September Transportation Policy Committee meeting, have a high level overview and discussion of needs, such as highway, street, and transit operations and maintenance, deferred Proposition 400 capital projects, and new needs. (4) Review the survey results at the November Transportation Policy Committee meeting.

Chair Meck thanked Mr. Anderson for his report and asked members if they had questions.

Mr. Berry thanked Mr. Anderson for his report and asked the total HURF collection. Mr. Anderson replied \$1.2 billion. Mr. Berry remarked that \$100 million per year is a ten percent increase. Mr. Anderson stated that he would revise the chart to show the percentage increases and send it out to the TPC.

Mr. Berry stated that everyone wants mobility and goods movement, but few seem willing to pay for it. He said that MAG and the Legislature have done a good job linking benefits to revenue. Mr. Berry stated that he thought it important to continue to show the benefits throughout the entire

state. He said that the vehicle license tax (VLT), which he did not see on the list, needed more attention and this might be an opportunity for much needed reform. Mr. Berry thought that the automobile registration fees are shamefully low – only \$10 to \$15 per year – and the rest is personal property tax. He stated that if we are to go to the voters for additional funds, he would advise for making a change for constitutional protection from fund shifts, which have been a major source of fund leakage. Mr. Berry added that he thought we owed it to the voters and citizens to do something permanent to protect against fund shifts.

Mr. Anderson replied that 45 percent of the VLT collected goes to HURF and the rest to cities, towns, counties, and the state. He remarked that people think all of the VLT goes toward transportation, but that is not the case. Mr. Anderson stated that the cities, towns and counties depend on those funds, so some sort of combination reform would be needed.

Mayor Wolcott expressed her agreement with Mr. Berry's statements about leakage. She added that leakage is a problem in all states and she thought it would be a good area of focus. Mayor Wolcott stated that there should be discussion of spending on need, which is more and more heading toward transit. She stated that we need to find a dedicated funding source for transit on a more regional scope. Mayor Wolcott recalled a letter she had hand delivered to the Congressional delegation on behalf of MAG that those jurisdictions that contributed their own funds should receive more consideration in the federal component. She remarked that the return from the federal government is an area that needs discussion. Mayor Wolcott stated that the difficult part of a discussion on new taxes will be the distribution formulas, and that will require discussion early in the process. She stated that she did not think there should be only one source of funding, but rather a package that would appeal to different groups and multiple agencies and would include legislative action on HURF protection. Mayor Wolcott stated that the metro area is the largest generator of transportation taxes, but we need to figure out how to best serve the metro area as well as the rest of the state.

Ms. Taylor asked if any analysis had been done to show Arizona's standing against other intermountain west states upon an increase of fuel taxes. She remarked that we do not want to tax ourselves out of being competitive from an economic development standpoint. Mr. Anderson replied that no analysis had yet been done. He mentioned that Reno's indexed gas tax was increased five cents per gallon on July 1, bringing its combined tax rate to 73 cents per gallon, higher than California.

Mayor Lane expressed that he concurred with Ms. Taylor's comments. He said that it is not only important from a competitive viewpoint, but also from a taxpayer's viewpoint because higher fuel taxes can become a burden. Mayor Lane stated that he thought the tax rates with the CPI calculation applied should be discussed. He commented on the percentage versus the cents per gallon issue, by saying that a percentage basis automatically assumes some increase in cost. Mayor Lane stated that the usage of fuel has reduced and the cost of fuel has increased, resulting in a conflicting effect of losing that revenue. He indicated that a percentage would be a good option, but what you add to it to make up shortfall could be a percentage that translates to an increase in the revenue stream. Mayor Lane commented on the leakage issue. He said we need to be candid

with the public about separating the cost, particularly relating to the fuel tax in regard to mass transit or highways. Mayor Lane encouraged defining the mission of what we are trying to accomplish with the tax and convey the percentage and mechanism for mass transit.

Chair Meck asked those participating by teleconference if they had questions. None were noted.

Mayor Lord stated that she thought that the California tax should be used as a bad example. It would say to the public you pay the money but we will not make the improvements.

Mayor Smith asked for more detail on the questions in the survey. Mr. Anderson replied that the survey might ask about current transportation system and future needs, funding concepts, or revenue issues. He remarked that he thought the survey might show that in general, voters are not fully aware of the serious situation for funding the transportation system. Mr. Anderson stated that because this region has added so much capacity, highway miles, and a good transit system, he thought voters will indicate they are satisfied and they do not see a need.

Mayor Smith stated that he did not think the public thinks in terms of policy and that they are satisfied with the new freeways and rail funded by Propositions 300 and 400. He expressed his concern with the manner in which the survey will ask the questions, for example, "Do you believe street maintenance is important and would you be willing to pay for it?" might rank low because it is a policy question. If a survey asks if a pothole should be fixed within 24 hours after you drove through it and lost a tire, he thought it would rank high. Mayor Smith remarked that most of the transportation surveys he had seen were not day-to-day and when questions are personalized you get a different response. He stated that most people do not know the percentage of tax on fuel, they just know the total cost. Mayor Smith stated that gas is a lot more expensive in California than Arizona. People do not know the reason, they just think that gas is more expensive in another state. He said that he would like to believe decision makers have gained the trust of the public because of the high quality projects that have been produced on time.

Vice Chair Sellers stated that people are relatively happy with the transportation system and because of that situation, we are going to have to do a really good job explaining what the problems will be in the future without this funding.

Mayor Wolcott commented on the survey questions. She remarked that the level of satisfaction could vary depending on which part of the region is surveyed. Mayor Wolcott stated that the City of Surprise surveyed its citizens a couple of times and transportation was rated very high on a category that needs improvement. She expressed that where highways and transit are built you will likely see more satisfaction than those areas awaiting investments. Mayor Wolcott remarked that this is what will be tricky about putting together a package without looking at needs across the state. Mayor Wolcott stated that the cost of gasoline is also about refiners and gas prices can fluctuate ten or fifteen cents in one week. She added that raising the gas tax a couple of cents disappears among the overall price.

Mr. Smith described the process in determining questions for a survey leading up to Proposition 400. He said there was a meeting of stakeholders and the TPC to see if the right questions were being asked and they will follow that same process again for this survey.

Mayor Lane stated that the public needs to be presented with the reason current funding is insufficient to cover needs. He said that there is a general assumption that a growing economy funds an increased tax base and so we need to show what has changed, such as reduced gas usage or leakage.

Mr. Smith asked Mr. Anderson to describe the option of extending the sales tax horizon. Mr. Anderson stated that the current half-cent sales tax for transportation is a 20-year tax that expires in 2025. He said that extending the sales tax for another 20 years provides the ability for additional bonding and financing to get projects done sooner. Mr. Anderson commented that current attractive interest rates give more flexibility moving forward. He noted that the San Diego transportation sales tax is a 40-year tax and if you are not going for a permanent tax, 40 years is preferable than 20 years from a planning perspective.

Mayor Rankin asked if the planning for a sales tax would be extended out to Pinal County now that Pinal County jurisdictions are MAG members. Mr. Anderson replied that the entire MAG region would be surveyed, but the area could be the Sun Corridor or even the entire state. He said that depending on the package, a county-level tax would need to pertain to that county. Mr. Anderson stated that a tax could be structured a number of ways. He said that needs outside Maricopa County but in the MAG planning area, such as the north-south freeway, are the types of issues that will need to be worked through.

Mayor Smith stated that operational funding for transit ends in 2025 and ADOT does not have funding for maintenance. He said that operational funding is more difficult to explain but needs to be a part besides capital funding. Mayor Smith said that he recalled Arizona was the only state that does not have state funding for supporting transit and in 12 years the operations funding for transit in this region will expire. He said it seems the only solution is to include the never-ending need for operations funding.

Mr. Anderson stated that operations and maintenance funding for transit, highways, and streets should be permanent and sustainable because the needs are always there. Capital projects can be defined as being delivered over a set period of time and are more saleable to the public.

Mr. Smith referenced the Tools component in Mr. Anderson's report. He said that another policy question is how much land is yet to be developed. Mr. Smith stated that MAG staff calculated that 24 percent of land in the Sun Corridor is yet to be developed and 64 percent of that is Arizona state land. He said that Interstate 11 and the north/south corridor are planned through big tracts of state land. Mr. Smith remarked that the state lands issue needs to be dealt with or the long range future of Arizona is not going to happen. He stated that MAG, PAG, CAG, and perhaps JPAC, need to weigh in on this issue. Mr. Smith also suggested asking Vanessa Hickman the needs of the Arizona State Land Department. He noted that ten percent of the land sales off the top was challenged in

the Supreme Court. Mr. Smith stated that the Arizona State Land Department needs the tools to prepare the land. He noted that there is leapfrog development here because the cities have hopped over state lands and that is inefficient land use.

Mayor Lane commented that street and highway improvements add value to adjacent land and returns are realized on the sale of this land.

Supervisor Hickman asked if there was a state considered to be a model in regard to options. Mr. Anderson replied that each state has unique circumstances, but there is not really one state to hold up as a model. He noted that there are some noteworthy pieces done by some states, for example, Virginia just changed its tax from a cents-per-gallon basis to a percentage-per-gallon basis, Utah has utilized financing tools, and Nevada is indexing its gas tax. Mr. Anderson stated that because this is a high growth area, the need for capital expansion is probably greater here than in the Midwest or East.

Mayor Wolcott asked Mr. Anderson if the sales tax horizon was expanded, what did he envision would be the impact to projects that were deferred because the sales tax did not perform. Mr. Anderson replied that in general, projects that were deferred past 2025 could be built sooner than currently planned. He added that technical analyses would probably be done to verify that they are still needed relative to overall travel demand.

Mayor Wolcott commented on meeting needs and gave as an example the City of Mesa recently shifted funds from an arterial project deemed to be unneeded to a light rail project that was needed. Mayor Wolcott remarked that this might occur all over the entire system that a planned project might not come to fruition. She noted that an examination of the project list might be needed to see the needs on the ground.

Mr. Smith spoke regarding model states. He noted that Mr. Anderson and Bob Hazlett visited the director of the Utah Department of Transportation and discussed the percentages of funds that are state and local. Mr. Smith stated that the Utah Legislature is very conservative like the Arizona Legislature, but their funding mix is quite different from ours.

Mr. Anderson explained that the state highway program in Arizona is basically all federal money (80 to 90 percent) with a local match (10 to 20 percent), but in Utah, it is the opposite and its highway program has a lot of statewide funds. He noted that the Utah Legislature has provided funding to the transportation system which has given it a big boost.

Mayor Mitchell asked for clarification of the tools used by Utah that are not used in Arizona. Mr. Anderson replied that one tool utilized by Utah is Tax Increment Financing, which has been used to revitalize downtown Ogden.

Chair Meck noted that no public comment cards had been received.

6. Update on Central Phoenix Transportation Framework Study

Bob Hazlett, MAG Engineer, provided a report on the Central Phoenix Transportation Framework Study. Mr. Hazlett noted that other MAG framework studies include the Interstate 10/ Hassayampa Valley Roadway Framework Study, the Interstates 8 and 10/ Hidden Valley Transportation Framework Study, the Regional Transit Framework Study, the Hassayampa Framework Study for the Wickenburg Area, the Freight Transportation Framework Study, and the Sustainable Transportation and Land Use Integration Study. Mr. Hazlett noted that the studies are not fiscally constrained, but are there to provide a broad perspective and inform the next generation Regional Transportation Plan.

Mr. Hazlett reviewed the timeline of the Central Phoenix Transportation Framework Study, which began with a large public outreach of more than 500 people in 2011. He commented that the input received assisted in determining the recommendations from the study.

Mr. Hazlett stated that a planning charette, held in 2012, provided a definition of possibilities. He noted that much of the focus ended up on Interstates 10 and 17 and he said that the environmental impact studies for these two corridors were suspended last year. Mr. Hazlett stated that a second charette informed the Interstate 10/17 Corridor Master Plan and spot improvements for both corridors. He noted that the recommendations are currently being reviewed.

Mr. Hazlett reported on work products that have been identified. He noted that the Central Phoenix Transportation Framework Study area includes the area inside Loop 101. Within this area are about 2.3 million residents and about 1.3 million jobs. Mr. Hazlett displayed a word cloud that shows that items people are discussing the most are transit, roads, system, rail, and need.

Mr. Hazlett reported that fourteen recurring themes resulted from the public outreach and charette activities. He highlighted three of them: (1) Complete Streets. (2) Last Mile Strategies. (3) Road Diets.

Mr. Hazlett expanded on Complete Streets, a study done by MAG which says that streets accommodate all modes of travel, not just automobiles. He stated that Last Mile Strategies provide ways to get from a transit stop to home or work. Mr. Hazlett stated that Road Diets deal with six or seven lane roads that are barriers to walkability.

Mr. Hazlett stated that more than 200 suggestions on transit, pedestrian and bicycle, arterial intersections and links, freeway interchanges and links projects were received at the charette. He noted that many of the suggestions help with the COMPASS study and the Managed Lanes study. Mr. Hazlett stated the 200+ charette projects are currently being entered into a database, mapped, and rated using the EPA/Department of Transportation/HUD Livability-Sustainability criteria to help determine which of the projects would rise to the top.

Mr. Hazlett stated that the consultant came up with a strategy of work products. He said that a workshop was held on the Interstates 10 and 17 Spine and added that the consultant has design

build experience. Mr. Hazlett pointed some solutions they developed for the interchange in order to keep it out of the airspace for Sky Harbor Airport.

Mr. Hazlett stated that capping the footprint was also discussed at the workshop. With many environmental impact studies, the focus has been on increasing capacity, however, there are concerns when freeways are located in highly urbanized areas, which makes expansion difficult. Mr. Hazlett displayed a map that was color-coded to show the tight right-of-way in certain areas.

Mr. Hazlett then displayed a graphic of the freeway system plan that the consultant developed that showed the base condition and different scenarios of how many lanes could fit, the types of lanes, and the barriers. He said that the consultant did this exercise for the entire freeway system and added that this will help decision makers when developing the new regional transportation plan.

Mr. Hazlett stated that the charette identified SR-30 (the Interstate 10 Reliever freeway) as one of the work products. He stated that SR-30 is identified in the current Regional Transportation Plan from Loop 202/South Mountain to Loop 303 and an interim facility to SR-85 in Buckeye. Mr. Hazlett stated that the charette suggested not ending SR-30 at the South Mountain Freeway but continuing it to the Durango Curve. Mr. Hazlett displayed a map that showed the continued route of the corridor and reflected factors such as environmental, Title VI, floodplain, the Interstate 17 interchange, and provisions connecting to Avenida Rio Salado. He noted that the map was run through a traffic model. Mr. Hazlett added that this segment of SR-30 would carry about 170,000 vehicles per day by 2035.

Mr. Hazlett stated that the next work product is park and ride lots and how to link them. He said that the consultants looked at best practices in San Diego, Denver, and Seattle to help define integration of transit stations with the freeway system. Mr. Hazlett stated that this establishes a background for the development of future direct high occupancy vehicle (DHOV) ramps. He said that DHOV connections help the system in eliminating vehicle weave and accommodating transit. Mr. Hazlett pointed out the DHOV ramps on the MAG system and noted that one is currently under construction at Loop 101/Agua Fria and Maryland Avenue near the Glendale stadium. He stated that more than 35 DHOV ramp locations were identified from the charette, and this number was then narrowed down based on system and land use compatibility. Mr. Hazlett then displayed a map of existing, candidate, and proposed DHOV ramps on the MAG freeway system.

Mr. Hazlett stated that more information on additional work products would be provided at a future meeting. He said that roadway maintenance is something that cannot be ignored. When you look to the planning horizon for the next generation regional transportation plan, the Stack will be 50 years old and maintenance will be needed.

Chair Meck thanked Mr. Hazlett for his report and asked if there were questions.

Mayor Rogers asked if the outside of Loop 101 had been studied because Avondale was building a park and ride lot. Mr. Hazlett replied that the Central Phoenix Transportation Framework Study

is mostly concerned with the central urban area, but has also provided tools to look to the outside. He said that one goal is to have good access at park and ride lots and DHOV lanes.

Mr. Arnett requested that a copy of the presentation be sent to him.

7. Legislative Update

No report.

8. Request for Future Agenda Items

Topics or issues of interest that the Transportation Policy Committee would like to have considered for discussion at a future meeting were requested.

No requests were received.

9. Comments from the Committee

An opportunity was provided for Transportation Policy Committee members to present a brief summary of current events. The Transportation Policy Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

No comments were noted.

Adjournment

There being no further business, Mayor Wolcott moved, Mayor Mitchell seconded, and the meeting adjourned at 1:16 p.m.

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Chair

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Secretary

# MARICOPA ASSOCIATION OF GOVERNMENTS

## INFORMATION SUMMARY... for your review

**DATE:**

September 10, 2013

**SUBJECT:**

Sustainable Transportation Land Use Integration Study – Recommendations, Findings and Tools

**SUMMARY:**

The Sustainable Transportation and Land Use Integration Study (ST-LUIS) highlights the potential to move the region toward greater use of sustainable transportation modes – transit, walking and biking. The study provides a fresh look at ideas for transit investments and services that have been under previous consideration, and supports the creation of walkable and transit-oriented communities. The uniqueness of the ST-LUIS is the holistic approach taken to investigating transit's potential, by integrating real estate market analysis with transit corridor assessment and ridership modeling. The Study's focus on transit and supportive land use is joined up with recommendations for creating compact walkable places throughout the region.

ST-LUIS asks how the region can move toward sustainable transportation in ways that:

- Reflect market reality
- Recognize the high cost of high capacity transit
- Are consistent with the values and aspirations of member communities

ST-LUIS was undertaken from 2010-2013 and completed in three phases: research and analysis, scenario planning and modeling, and the development of local and regional tools. The study was complemented by nine stakeholder activities. These activities included two business/public forums coordinated by the Arizona Chapter of the Urban Land Institute (ULI). The perspectives of participants from these forums were integral to understanding the market realities in local communities.

Based on the ST-LUIS investigation of market realities and research findings, and the study's testing of high capacity transit (HCT) scenarios in the MAG region, the overarching recommendation from the ST-LUIS is to provide a high quality, productive transit system supported by compact walkable and transit-oriented places.

The Study's key findings are: 1) transit oriented development (TOD) demand will be driven by projected regional growth in population and jobs, and supported by demographic shifts, 2) transit-supportive and compact walkable development is achievable, with distinct opportunities in different parts of the region, 3) targeted corridor modifications improve transit productivity, 4) regional transit mode share and regional access increase with a mix of light rail transit (LRT) and upgraded bus services, and 5) existing conditions drive the pathway for future HCT service.

The study was rooted on the projected demand for TOD, which projects that in a future of 8.3 million people, 1 million (12 percent) will be the market for TOD; as well as a quarter, 1.1 million jobs from a future 4.4 million jobs would drive the TOD employment demand forward.

With this and other key findings, the study moved forward with a scenario planning and modeling exercise to offer three visions for future land uses, high capacity transit networks, transit ridership and transit

productivity, using the project's market demand forecasts for TOD jobs and housing. The results of the scenario planning exercises provide high-level results rather than specific local recommendations. The scenario modeling exercise used the 44 recommended high capacity transit corridors from the MAG Regional Transit Framework Study, as the candidate corridors for analysis.

As part of the scenario planning exercise, the STLUIS created 3 place types: Compact Walkable, Transit Served, and High Capacity Transit (HCT) Oriented were created to reflect threshold densities and development patterns supportive of different transit modes. These land uses were "applied" to station areas (½ mile) in the scenario planning process.

Transit service and capital investments included in each scenario were derived from an understanding of related studies, existing and future transit services, projected travel demand characteristics, land use and growth patterns, and regional connectivity. A brief summary of each scenario is provided below.

#### Enhanced Transit Scenario

The Enhanced Transit Scenario reflects a moderate expansion of the MAG Base Case scenario transit network (the RTP 2035 Network), as well as a reallocation of total regional growth to specify transit-oriented development (TOD) consistent with the ST-LUIS place types within one half mile of transit stations ("station areas"). The scenario includes 10 LRT, streetcar, and commuter rail corridors (including eight service corridors and two commuter rail corridors).

#### Transit Supply Scenario

This scenario reflects a very generous expansion of the Base Case scenario transit network, as well as a reallocation of total regional growth to direct transit-oriented and compact walkable development to station areas. This scenario includes all 44 corridors including LRT, bus rapid transit (BRT) (mixed flow running, similar to the LINK), streetcar, and commuter rail corridors.

#### Refined Transit Supply Scenario

This scenario was generated after Scenario 1 and Scenario 2 were completed. This scenario tests a transit network that is more extensive than that of Scenario 1, but less extensive compared to Scenario 2. Transit network and land use assumptions were revised with the aim of increasing network productivity and reflecting constraints to HCT-supportive densities in some locations. This scenario includes 25 corridors including LRT, BRT (mixed flow running, similar to the LINK), streetcar, and commuter rail corridors.

ST-LUIS Scenario Modeling revealed that the small, compact, and selective strategic HCT network in the Enhanced Transit Scenario was the most productive, had the best fit with regional TOD demand, and represented the lowest capital cost.

As cities, towns, communities, neighborhoods, and transportation corridors are quite different throughout the region, the STLUIS recognizes that *One Size Doesn't Fit All* and created 3 tools for the region and its member agencies to use: 1) Place Types, 2) Local Toolkit - Community Pathways to Sustainable Transportation and Development Prototypes Catalogue, and the 3) Regional High Capacity Transit (HCT) Evaluation and Scenario Planning Process.

The study recommendations, findings and tools have set the stage for the region to move toward more sustainable transportation options by evaluating regional projects that support sustainable transportation, jump start the regional transportation plan process, consider upgrading transit services, and support municipal actions. A copy of the Key Recommendations and Tools is enclosed and the seven working papers and employment/market analysis are available at [www.bqaz.org](http://www.bqaz.org).

**PUBLIC INPUT:**

The study process included seven stakeholder meetings and two public/private business meetings to define sustainable transportation for the MAG region, and coordinate findings, create useful tools and products from the study.

**PROS & CONS:**

PROS: This study takes a holistic approach in investigating the region’s high capacity transit network potential, by integrating real estate market analysis with transit corridor assessment and ridership modeling.

CONS: A shift in regional transportation, transit priorities, and discussions with local agencies on compatible land uses would be required to implement the recommendations for sustainable transportation services identified in the Sustainable Transportation Land Use Integration Study.

**TECHNICAL & POLICY IMPLICATIONS:**

TECHNICAL: To provide a data driven, analytical approach for testing different high capacity transit systems and their productivity, the scenario planning process established a two tiered screening and selection process of HCT candidate corridors, while evaluating the positive relationship with the more compact walkable and transit oriented land uses. The overarching finding and recommendation is for the region to provide a high quality and productive transit system that is supported by compact walkable and transit-oriented places.

POLICY: The Sustainable Transportation Land Use Integration Study provides a data driven, technical foundation for future policy discussions related to creating a more sustainable transportation network, and shifting transit investments and prioritization.

**ACTION NEEDED:**

Recommend acceptance of the Sustainable Transportation Land Use Integration Study recommendations, key findings, and tools to be considered in future planning efforts and be consistent with the Federal Transit Administration evaluation criteria and process, as appropriate.

**PRIOR COMMITTEE ACTIONS:**

This item is on the September 11, 2013, MAG Management Committee agenda. An update will be provided on action taken by the Committee.

On August 29, 2013, the Transportation Review Committee recommended acceptance of the Sustainable Transportation Land Use Integration Study recommendations, key findings, and tools to be considered in future planning efforts and be consistent with the Federal Transit Administration evaluation criteria and process, as appropriate.

MEMBERS ATTENDING

- Avondale: Kristen Sexton for David Fitzhugh
- Glendale: Debbie Albert, Acting Chair
- ADOT: John Nelson for Floyd Roehrich
- Buckeye: Jose Heredia for Scott Lowe
- # Cave Creek: Ian Cordwell
- Chandler: Dan Cook
- El Mirage: Jorge Gastelum for Sue McDermott
- Fountain Hills: Randy Harrel
- \* Gila Bend: Eric Fitzer
- \* Gila River: Steven Johnson
- Gilbert: Dawn Irvine for Leah Hubbard

- \* Goodyear: Cato Esquivel
- Litchfield Park: Woody Scoutten
- \* Maricopa (City): Paul Jepson
- Maricopa County: Lynne Hilliard for John Hauskins
- Mesa: Jeff Martin for Scott Butler
- \* Paradise Valley: Jim Shano
- Peoria: Andrew Granger
- Phoenix: Ray Dovalina for Rick Naimark
- \* Queen Creek: Troy White
- Scottsdale: Todd Taylor for Paul Basha
- Surprise: Dick McKinley for Terry Lowe

Tempe: Shelly Seyler  
Valley Metro: Wulf Grote John Farry  
Wickenburg: Vince Lorefice

Youngtown: Grant Anderson for Jeanne  
Blackman

EX-OFFICIO MEMBERS ATTENDING

- \* Street Committee: Charles Andrews, Avondale
- \* ITS Committee: Catherine Hollow, Tempe  
FHWA: Ed Stillings

- Bicycle/Pedestrian Committee: Denise Lacey, Maricopa County
- \* Transportation Safety Committee: Renate Ehm, Mesa

- \* Members neither present nor represented by proxy.
- + Attended by Videoconference # Attended by Audioconference

On August 8, 2013, the Transit Committee recommended acceptance of the Sustainable Transportation Land Use Integration Study recommendation, key findings, and tools to be considered in future planning efforts and be consistent with the Federal Transit Administration process, including evaluation criteria as appropriate.

MEMBERS ATTENDING

- \* ADOT: Nicole Patrick
- \* Avondale: Rogene Hill
- # Buckeye: Andrea Marquez  
Chandler: Jason Crampton for RJ Zeder  
El Mirage: Sue McDermott  
Gilbert: Leslie Hart  
Glendale: Matthew Dudley for Cathy Colbat  
Goodyear: Cato Esquivel  
Maricopa County DOT: Mitch Wagner  
Mesa: Jodi Sorrell

- \* Paradise Valley: Jeremy Knapp  
Peoria: Maher Hazine  
Phoenix: Maria Hyatt
- # Queen Creek: Chris Anaradian  
Scottsdale: Madeline Clemann, Chair  
Surprise: David Kohlbeck  
Tempe: Robert Yabes
- \* Tolleson: Chris Hagen  
Valley Metro: Wulf Grote  
Youngtown: Grant Anderson

- \* Members neither present nor represented by proxy.
- + Attended by Videoconference # Attended by Audioconference

**CONTACT PERSON:**

Eileen Yazzie, Transportation Planning Project Manager, MAG (602) 254-6300.



# ► Sustainable Transportation & Land Use Integration Study

## Key Recommendations and Tools

July 2013



SUSTAINABLE TRANSPORTATION  
& LAND USE INTEGRATION STUDY



MARICOPA ASSOCIATION  
of GOVERNMENTS

# 1. Project Overview

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The **Sustainable Transportation and Land Use Integration Study (ST-LUIS)** highlights the potential to move the region towards greater use of sustainable transportation modes – transit, walking and biking.

The study provides a fresh look at ideas for transit investments and services that have been under previous consideration, and supports the creation of walkable and transit-oriented communities. The uniqueness of the ST-LUIS is the holistic approach taken to investigating transit’s potential, by integrating real estate market analysis with transit corridor assessment and ridership modeling. The Study’s focus on transit and supportive land use is joined up with recommendations for creating compact walkable places throughout the region.

ST-LUIS was completed in three phases undertaken from 2010-2013, complemented by the stakeholder activities shown in Figure 1. These activities included two business/public forums coordinated by the Arizona Chapter of the Urban Land Institute (ULI). The perspectives of participants from these forums were integral to understanding the market realities in local communities. This document presents key study recommendations, findings, and a summary of the project’s research and analysis activities, scenario planning, and tools and strategies development.

## DEFINITION

### SUSTAINABLE TRANSPORTATION

“A transportation system that supports prosperity in Maricopa County by providing a variety of mobility options, offering walkable communities throughout the region and locating high capacity transit that will be chosen by households and businesses seeking excellent access to local and regional destinations.”

*ST-LUIS Stakeholder Group*

ST-LUIS asks how the region can **move toward sustainable transportation** in ways that:

- Reflect market reality
- Recognize the high cost of high capacity transit, and
- Are consistent with the values and aspirations of member communities.

Figure 1: ST-LUIS Meetings and Forums



## 2. Achieving Sustainable Transportation - Key ST-LUIS Recommendations

Based on the ST-LUIS investigation of market realities and research findings, and the study's testing of high capacity transit (HCT) scenarios in the MAG region, the overarching recommendation from the ST-LUIS is to:

*Provide a high quality, productive transit system supported by compact walkable and transit-oriented places.*

The ST-LUIS has created tools and implementation strategies for the region and local agencies to move to a more sustainable transportation system in the future. These are discussed further on pages 18-21.

## 3. Key ST-LUIS Findings

Out of the research and analysis, five key findings helped set the stage in testing illustrative high capacity transit networks in conjunction with land use modifications, and created tools and strategies for the region and local agencies to assess sustainable transportation options with appropriate land uses.

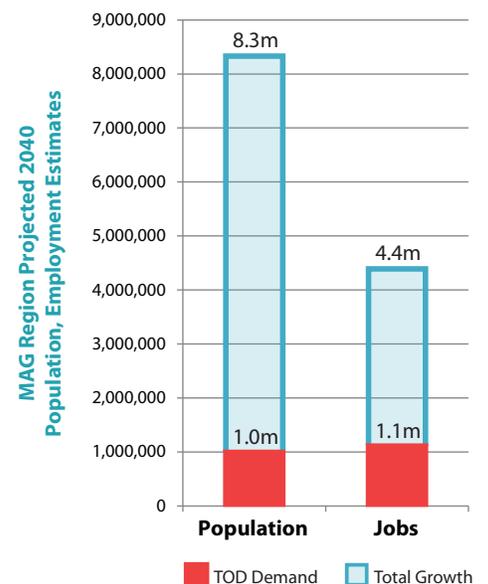
### 3.1 TOD Demand Will Be Driven by Projected Regional Growth in Population and Jobs, and Supported by Demographic Shifts

Overall regional growth is the fundamental factor fuelling demand for Transit-Oriented Development (TOD) and walkable communities. Growth in knowledge-based industries and demographic changes are the two key factors for growth in transit-oriented place types. Figure 2 illustrates the projected demand for TOD within the future regional growth of population and jobs. These trends are discussed in the 4.1 *Research & Analysis* section, and in greater depth in project background documents.

### 3.2 Transit-Supportive and Compact Walkable Development is Achievable, with Distinct Opportunities in Different Parts of the Region

The outlook for transit-oriented and compact walkable places in the MAG region is good with specific forms depending largely on market conditions. The ST-LUIS market analysis and financial feasibility analysis demonstrate that the strongest locations for new higher density development are mixed use employment centers in the core locations of Downtown Phoenix, Downtown Tempe, and Downtown Scottsdale. These employment centers can support the densities

Figure 2: Regional Population and Employment Projections



Source: Woods and Poole; MAG; Strategic Economics 2011

that correspond to **HCT Oriented** place types, ranging from 2-3 story townhomes to 5-7 story mixed use buildings.

There are other places in central locations—such as Camelback Corridor—that can offer relatively dense, walkable, bike-friendly environments, but that command slightly lower prices than the large employment centers. In these locations, the **Transit Served** place type will typically be achievable with likely product types including 2-3 story townhomes, 2-3 story apartments, and 3-4 story office buildings.

The market conditions necessary to support compact walkable development are far more widespread than are locations with the market strength required to support Transit Served and HCT Oriented development. There are many locations that have promise as places that could transition from conventional large-lot single family housing to the **Compact Walkable** place type that supports sustainable transportation.

The place types convey the development characteristics that need to be present on an area- or corridor-wide basis in order to support transit productivity and increased walk and biking. However, these characteristics will be found elsewhere in localized cases as well. The densities and the characteristics described are likely to continue to be found in contexts where higher densities and walkable character are valuable components of placemaking and identity, such as mixed use downtowns in places with low centrality that may not be directly served by high capacity transit.

### 3.3 Strategic Corridor Modifications Improve Transit Productivity

Adjustments to the planned corridors and networks made during upcoming planning phases are very likely to improve forecast productivity relative to the ST-LUIS projections. Careful modification and evaluation of specific alignments, stop locations, corridor length, connecting pedestrian improvements, land use shifts, and mode will be part of subsequent stages of planning for an Enhanced Transit system, with likely productivity gains.

### 3.4 Regional Transit Mode Share and Regional Access Increase with a Mix of LRT and Upgraded Bus Services

To increase regional transit use and productivity, a mixed network of both LRT and high quality bus services will generate the greatest transit productivity share as well as giving more households and communities improved options for travel throughout the region. LRT alone does not meaningfully increase the regional transit mode share. A high quality bus system that complements rail services, walk, bike and land use strategies is essential to shifting people from single occupant vehicles to transit. While upgraded bus services may include “true” Bus Rapid Transit (BRT) with exclusive guideways, lower-cost upgrades to provide all-day reliable and fast service can provide the quality envisioned by the study.

### 3.5 Existing Conditions Drive the Pathway for Future HCT Service

The HCT Supportiveness Analysis assessed existing corridor conditions such as land use, transit-supportive densities, and current transit demand to gauge a corridor’s potential to support future HCT service. Corridors with transit-supportive jobs and populations as well as demographic characteristics supporting transit ridership generally performed well in the corridor-level analysis for each scenario. Current transit-supportive conditions play a significant role in whether a corridor can sustain and support upgrades to HCT service in the future. Increased presence of the factors listed as HCT screening criteria will, over time, improve conditions for productive transit service and for TOD.

Continuing attention to existing conditions is particularly important because ridership of existing low-income and transit-dependent populations is taken into account most strongly in this part of the study.

#### PRIMARY HCT SCREENING CRITERIA

Total Residents

Percent Minority Population

Percent Low-Income Households (under \$20,000 per year)

Total Jobs

Transit-Supportive Job Density (jobs / acre)

Transit-Supportive Density (jobs + residents / acre)

Average Daily Weekday Boardings

Average Daily Weekday Boardings / Mile

# 4. Project Summary

The ST-LUIS effort was organized into three broad components. Each is summarized in this section.

## 4.1 RESEARCH & ANALYSIS

The *Research and Analysis* component provided the foundation of the Sustainable Transportation and Land Use Integration Study, set the parameters for the *Scenario Planning* component, and informed the development of the *Tools & Strategies* component.

### Investigating the Opportunity for TOD

ST-LUIS included a range of activities to investigate the opportunity to create TOD, as shown in Table 1.

Through this investigation it was found that:

- **The commute trip is a critical factor in transit productivity.** Though work trips are less than

20% of total trips, work trips make up close to 60% of transit trips nationally.

- **Some business sectors are more likely to be near transit than others.** Jobs in industry sectors that have a tendency to cluster near transit include: Government; Information; Finance and Insurance; Real Estate; Professional, Scientific and Technical Services; Management of

Companies and Enterprises; Arts, Entertainment, and Recreation; and Accommodation and Food Services (based on national studies from the Center for Transit-Oriented Development).

- National research shows that **higher job density at station areas has a greater impact on increasing ridership** than does higher residential density, though both factors build transit use.

Table 1: ST-LUIS Activities and Outcomes

ST-LUIS ACTIVITIES				OUTCOMES
<b>Transit-Oriented Development (TOD) and walkable communities</b>	Research	Best Practices	Local Precedents	ST-LUIS Place Types and Local Toolkit
<b>Understanding the real estate market</b>	Development feasibility	Regional growth	Forecast Demand (jobs & housing)	Estimate of demand for jobs and housing in station areas
<b>Corridor Potential</b>	Current Conditions	Past Plans and Studies	Services and Modes	Corridor screening results and Transit Service Characteristics

*“The Phoenix Metro region has historically ignored the business community in this conversation. ST-LUIS has been instrumental in moving this conversation forward in terms of understanding the role that employment plays in public transportation.”*

**Dena Belzer**  
ULI Forum 2

## Key Factors Impacting Transit Ridership

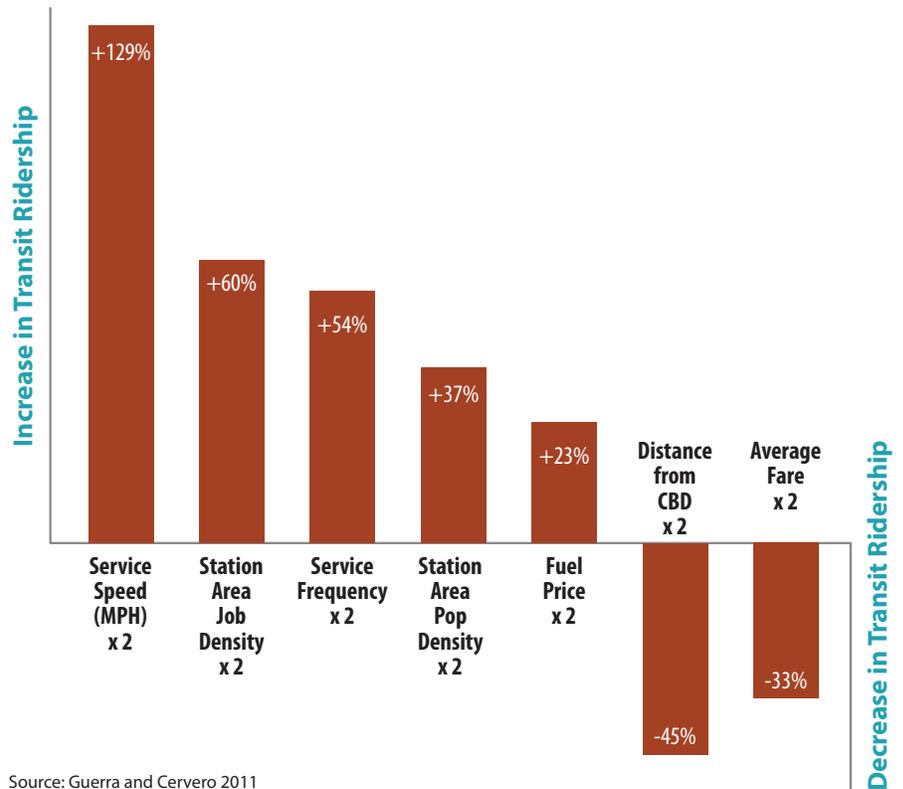
Academic research and practical experience have identified factors having significant impact on transit ridership.

These factors include service speed and frequency, station area job and population density, and distance from the central business district (CBD). Increasing values for these key factors results in either an increase or decrease in ridership, as shown in Figure 3.

Many of the factors supporting transit use have been shown to support walking and cycling as well. These include:

- Mixed use neighborhoods and districts at compact densities
- Local street networks with high connectivity
- Travel demand management/ incentives, including parking management

Figure 3: Change in Transit Ridership Resulting from Doubling Key Factors



Source: Guerra and Cervero 2011

## Shifting Demographic Trends

A variety of trends, both locally and nationally, will support the success of walkable communities in the region.

National studies have demonstrated a growing demand for housing in compact, “walkable” neighborhoods near transit. Many households are interested in compact housing types in pedestrian-oriented neighborhood with good access to amenities, transportation options, and shorter commutes. TOD demand nationally in

the coming decades will be influenced by a variety of trends:

1. **An increasing number of smaller households:** 79 million Baby Boomers (who prioritize public transportation, walkability, and access to amenities, and are more receptive to living in smaller housing units on smaller lots) are approaching retirement.
2. **Changing consumer preferences among Millennials and knowledge workers toward authentic**

### places and convenient lifestyles:

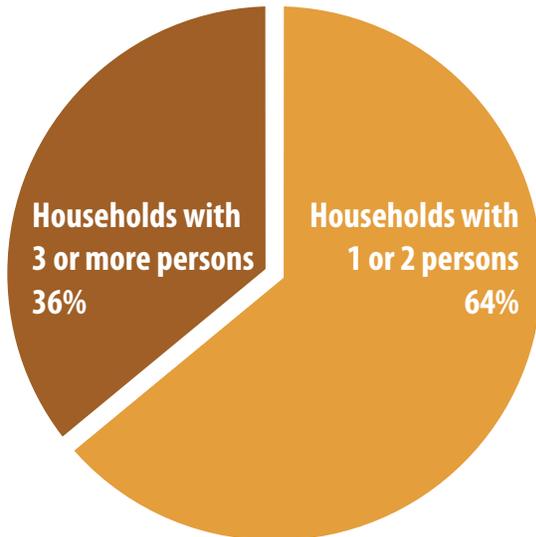
85 million Echo Boomers (who prefer walkable, mixed use neighborhoods short commutes) will enter the housing market for the first time.

3. **Disincentives to driving** including high gas prices, drive the search for alternatives to single-occupancy vehicle trips/commutes.

Local demographic shifts will support the growth of walkable communities in the region, as shown in Figure 4.

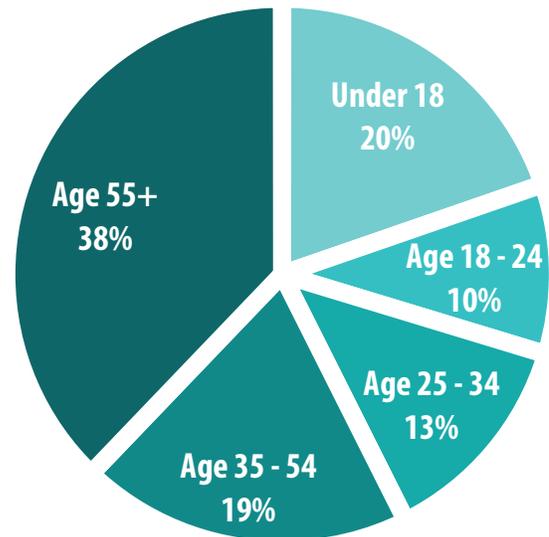
Figure 4: 2010-2040 Regional Growth Characteristics

### Population Growth by Household Type Maricopa County 2010-2040



Source: Woods and Poole, Strategic Economics 2011

### Population Growth by Age Maricopa County, 2010-2040



#### Sources:

Belden Russonello & Stewart, *The 2011 Community Preference Survey* (Washington D.C.: National Association of Realtors, March 2011).  
*Ibid* and Joint Center for Housing Studies of Harvard University. *State of the Nation's Housing*, 2011.

## Future Success Means Responding to Today's Challenges

The region faces a number of challenges to creating transit-supportive communities. Today, existing and planned development patterns are largely low density, as seen in Figure 5.

Infill development at TOD and walkable densities is hindered in some locations by zoning that allows densities in excess of those currently supported

by the real estate market. In addition, the region has significant supply of underutilized built space as well as vacant properties available which may slow TOD development.

Success requires regional collaboration in investment decisions, so regional assets—those attracting many people, such as major medical, educational and cultural institutions—will locate in places where high capacity transit can be provided efficiently and linked to the region.

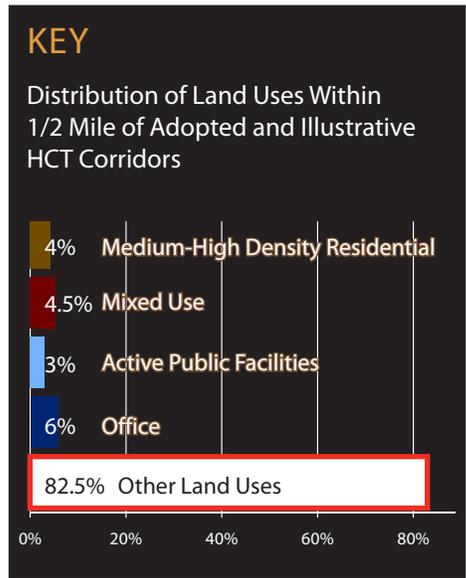
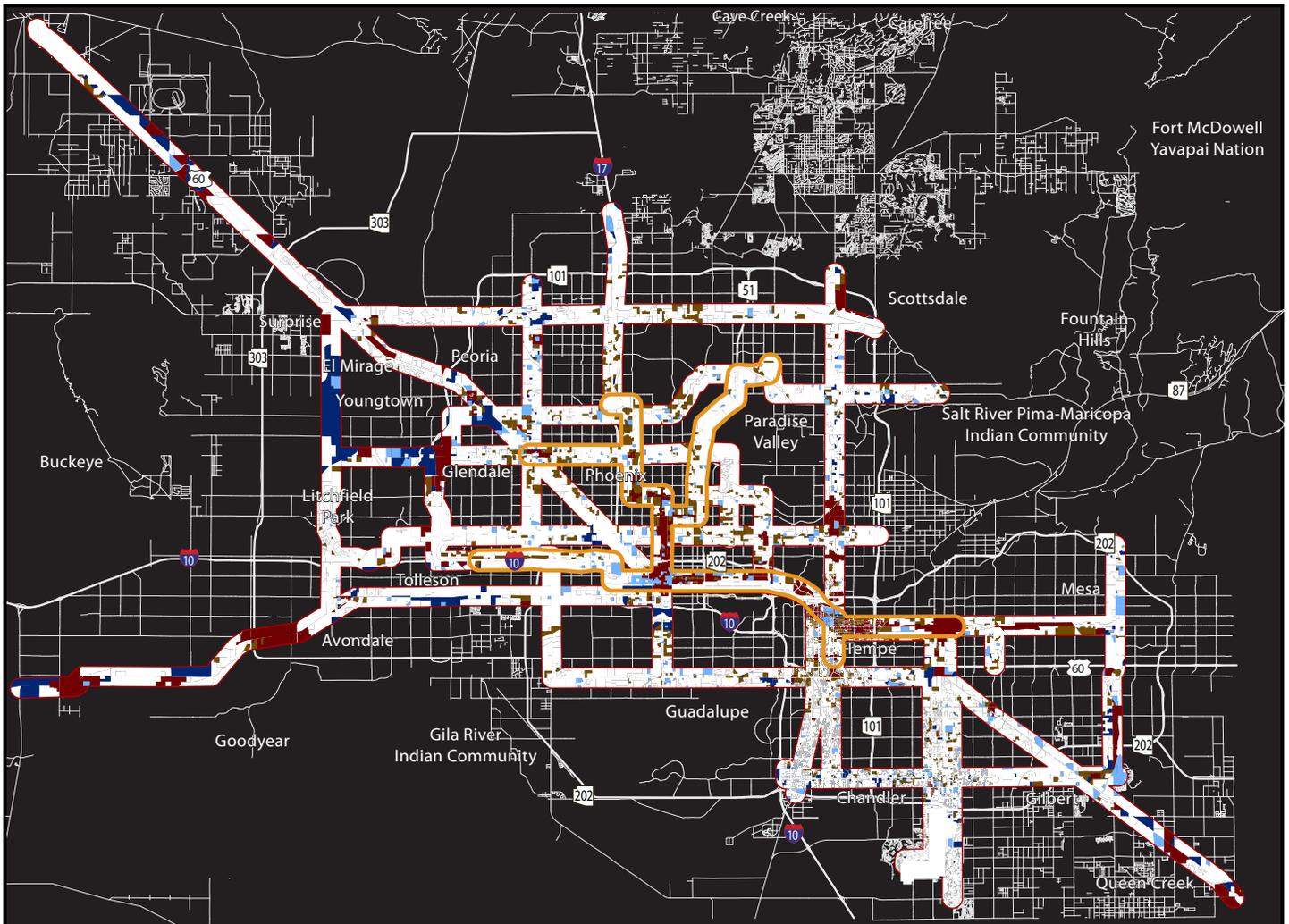


Figure 5: 2010 Regional Transportation Plan (RTP) Illustrative HCT Corridors & 2009 General Plan Land Uses



## 4.2 SCENARIO PLANNING AND MODELING

A central part of the ST-LUIS is the use of Scenario Planning to investigate: *What would happen if the region made changes to development patterns with the specific objective of supporting transit productivity and non-motorized transportation, while meeting market demand for TOD? Scenario planning offers the opportunity to envision the region’s future land uses and the productivity of its high capacity transit network.*

The ST-LUIS scenarios offer three visions for future land uses, high capacity transit networks, transit ridership and transit productivity, using the project’s market demand forecasts for TOD jobs and housing. The results of the scenario planning exercises provide high-level results rather than specific local recommendations.

Transit performance was analyzed through coordinated use of two modeling tools. Together they **reflect the influence on transit ridership of localized features** including development density, walkability and feeder bus service.

ST-LUIS Scenario Planning has been a valuable tool for investigating policy and investment options. MAG and partner agencies may wish to address some of the limitations of Scenario

Planning in future activities. Table 2 explains what ST-LUIS Scenario Planning does and doesn’t accomplish.

### Shared Scenario characteristics

Each of the three scenarios matches a high capacity transit network with assumptions for station-area land uses that use ST-LUIS place types that illustrate three different sets of development characteristics that support walkable communities with different levels of transit investment.

The scenarios reflect:

- Expected regional population growth to over 8 million people
- Results of ST-LUIS analysis of candidate HCT corridors (from the Regional Transit Framework Study—RTFS)

- Investigation of real estate market, transit-supportive job sectors, location and density of existing job centers
- Use of ST-LUIS place types to streamline scenario design

*“The winning strategy is about differentiation rather than everybody doing standard out-of-the-box TOD. The path of success is different for every community.”*

**Ellen Greenberg**  
ULI Forum 2

Table 2: What Does ST-LUIS Scenario Planning Accomplish?

ST-LUIS SCENARIO PLANNING	
DOES...	DOESN'T...
Test three land use and transit corridor patterns	Test additional scenarios of interest
Incorporate MAG socioeconomic data and ST-LUIS market findings	Reflect location-specific opportunities
Use MAG’s Regional Transit Framework Study (RTFS) corridors as input	Evaluate all corridor combinations
“Imagine” population and job growth directed to HCT station areas	Reflect localized existing conditions
Use a hybrid modeling method: Direct Ridership Model (DRM) and MAG 4-step model	Reflect benefits of compact walkable development outside station areas
Provide generalized results and recommendations	Make specific corridor recommendations
Include HCT corridors and assumptions for feeder bus services	Include specific local transit proposals

## ST-LUIS Place Types

The place types were created to reflect threshold densities and development patterns supportive of different transit modes, and were “applied” to station areas in the scenario planning process. Figure 6 provides an overview of each place type. Additional detail regarding place types is included on pages 15 and 16.

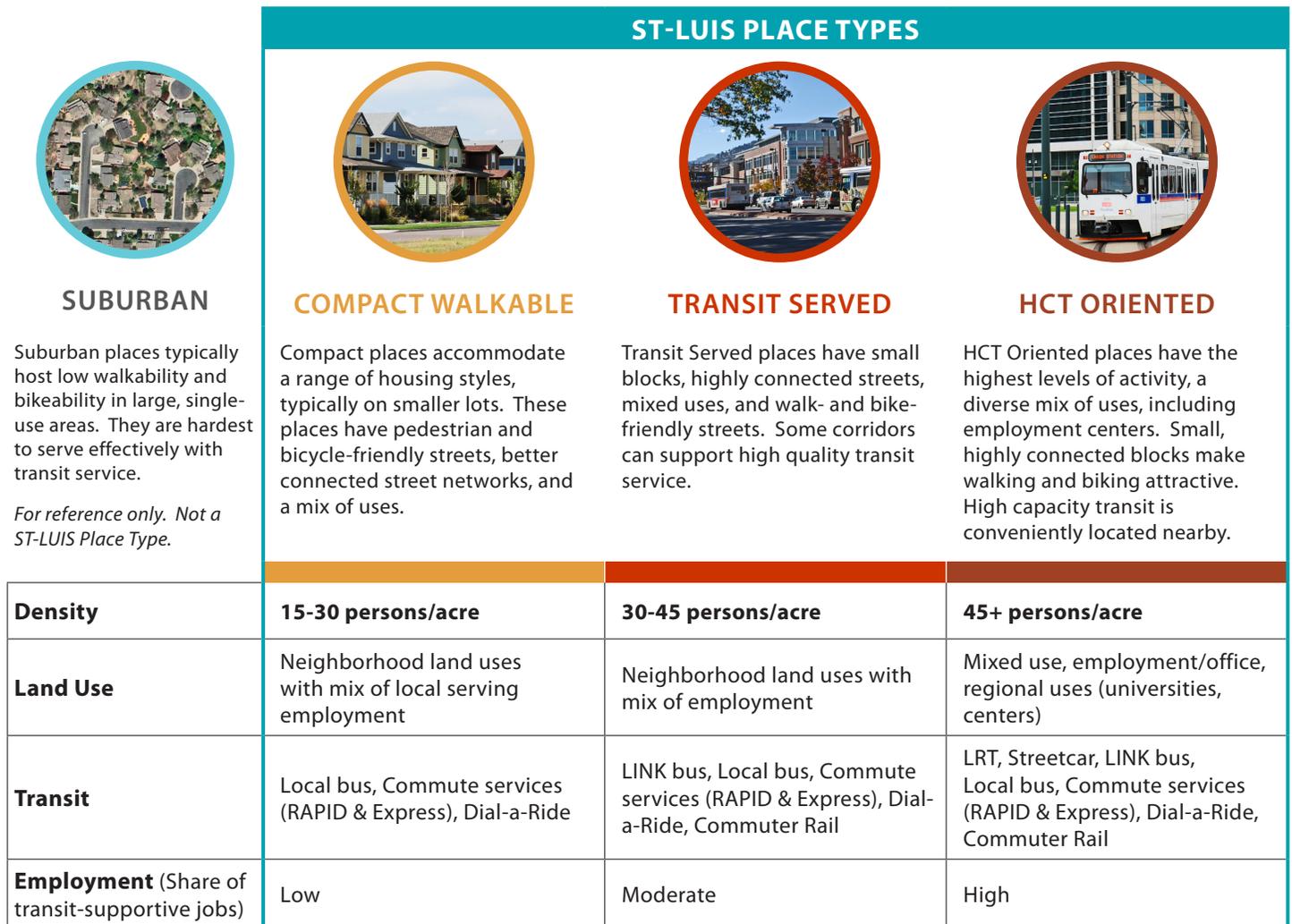
### Factors in designing place types:

- Densities supportive of different travel choices and modal productivity
- Densities supported by regional real estate market demand
- Existing and planned densities (especially in core sub-areas)
- Transit-supportive job sectors

### Factors in applying place types:

- Centrality (proximity to the region’s core)
- Location in specific core sub-areas (custom densities)
- Location in or out of employment cluster
- Inner or outer station area (1/4 or 1/2 mile radius)
- Special uses (e.g., Arizona State University)

Figure 6: ST-LUIS Place Type Overview



## ST-LUIS Scenarios

The three ST-LUIS scenarios—*Enhanced Transit*, *Transit Supply*, and *Refined Transit Supply*—are compared in Figure 7, which shows the relative transit network size of each scenario, as well as each transit corridor’s service type.

Figure 7: ST-LUIS Scenario Corridor Maps by Corridor Service Type

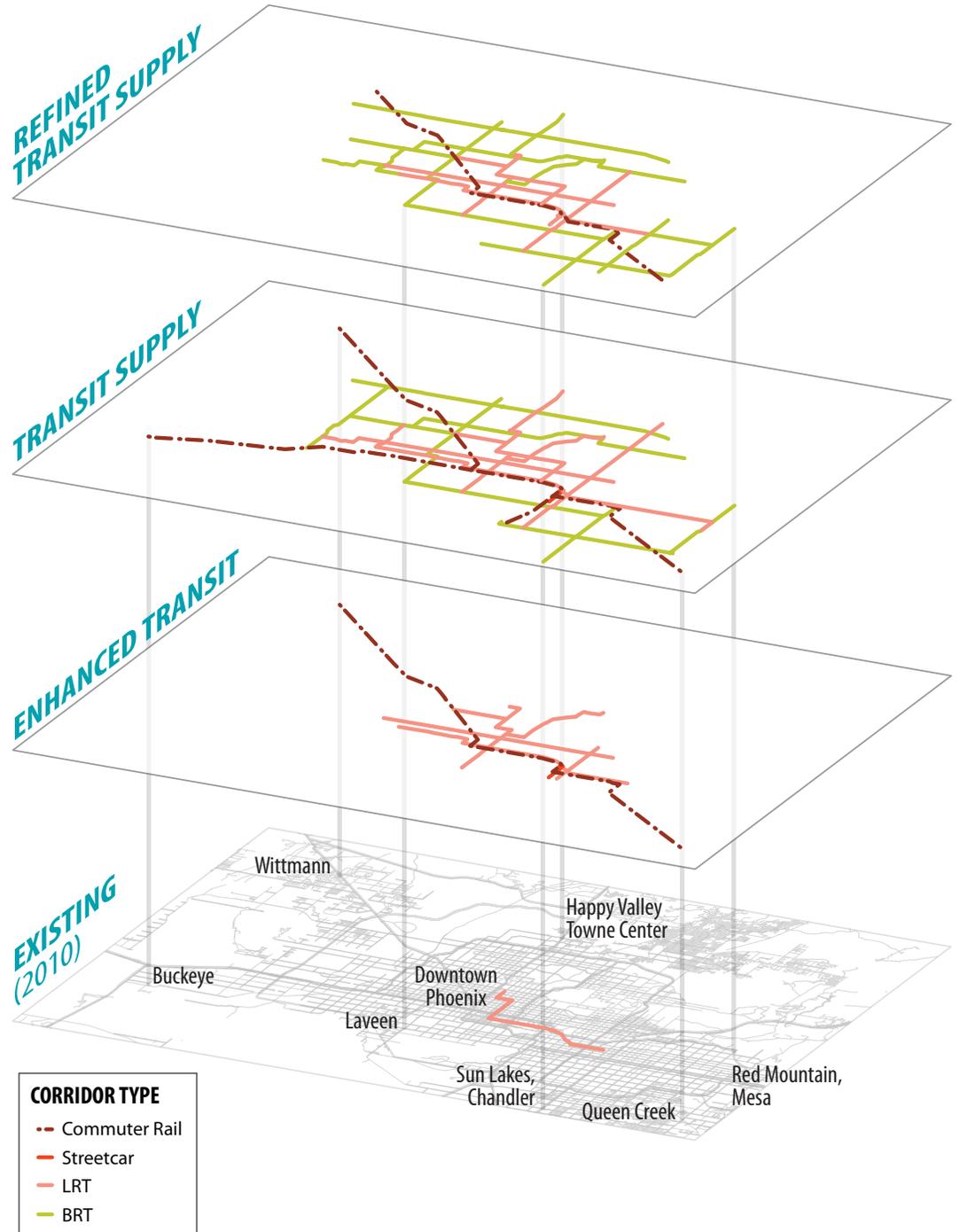
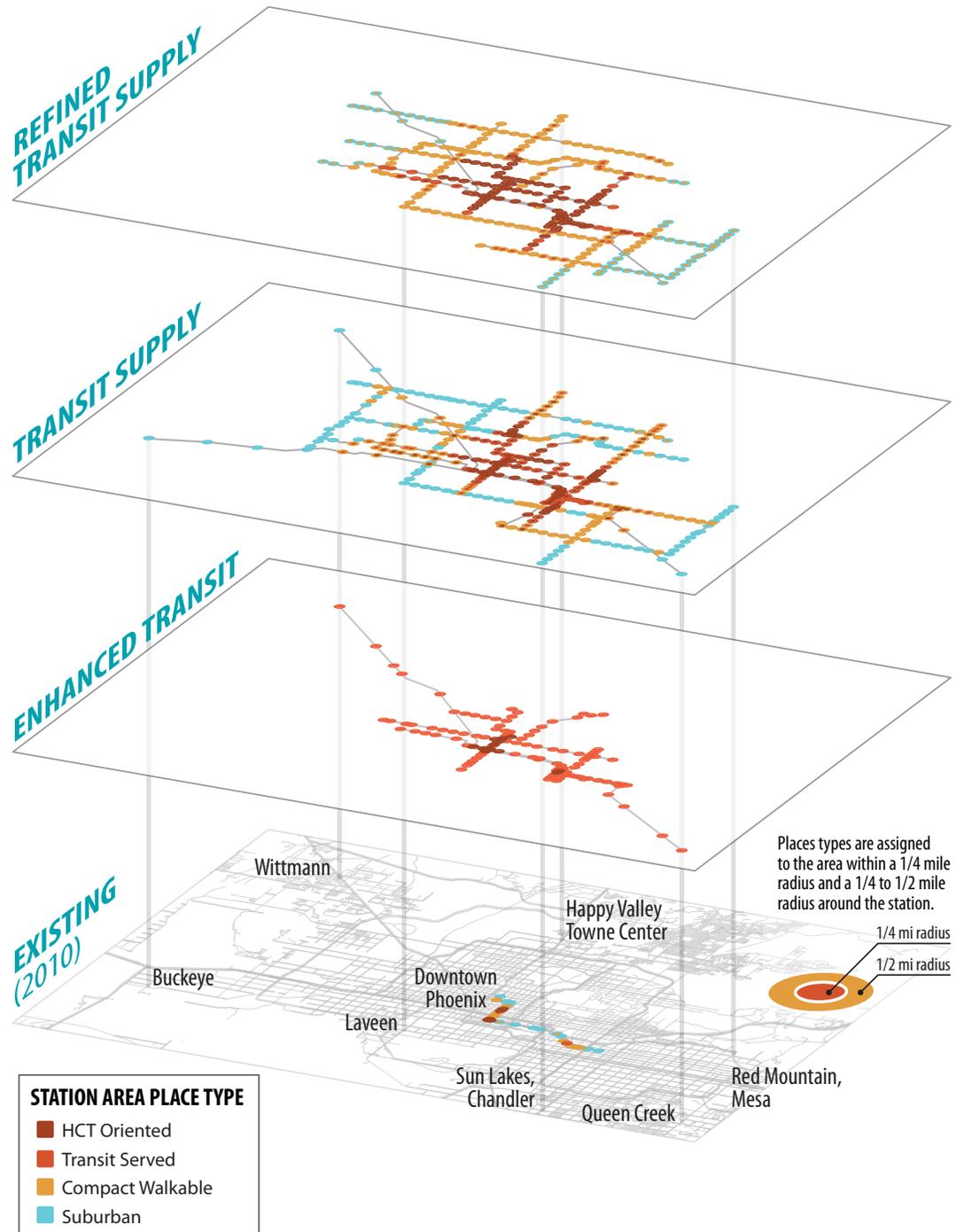


Figure 8 depicts the station area place type assignments for each scenario. Place types for may differ between the inner (1/4 mile radius) and outer (1/4 to 1/2 mile radius) station areas.

Figure 8: ST-LUIS Scenario Station Area Maps by Place Type



## Scenario Modeling Results

Three transit network scenarios were tested in this study: Enhanced Transit, Refined Transit Supply and Transit Supply. Table 3 summarizes the transit network characteristics and station area place types by scenario.

The ST-LUIS market analysis, ridership productivity and mode share findings indicated a finite demand for transit-oriented and transit-supportive land use in the region. The Transit Supply scenario included a total of 352 stations along 24 HCT corridors. The TOD market demand was able to supply about half of the stations with TOD Place Types (HCT Oriented or Transit Served). The remaining 180 stations were assigned to compact walkable and/or suburban land uses since the TOD demand

was fully absorbed. This imbalance between supply and demand for TOD contributes to the lower productivity of the larger HCT systems.

ST-LUIS Scenario Modeling revealed that the small, compact, and selective strategic HCT network in the Enhanced Transit Scenario was the most productive, had the best fit with regional TOD demand, and represented the lowest capital cost. The projected annual average boardings per vehicle revenue hour decreased by 23% when the number of rail corridors was expanded from 10 to 24. The Enhanced Transit Scenario also maximizes land use integration with transit investments, due to a good fit between station area acreage and projected TOD demand.

### PLACE TYPES

The ST-LUIS uses three 'place types' to categorize different areas in the region into groups with shared transportation and land use characteristics. These are described in detail on pages 15-16.

SUBURBAN *(Not a ST-LUIS Place Type)*  
 NON-TOD

COMPACT WALKABLE  
 CW

TRANSIT SERVED  
 TOD

HCT ORIENTED  
 TOD

Table 3: Scenario Characteristics

	TRANSIT				STATION AREA PLACE TYPES		
	Modes	Corridors	Miles	Stations	TOD 	TOD+CW  	Non-TOD  
<b>Enhanced Transit Scenario 1</b>	Rail Corridors (LRT, Streetcar, Commuter Rail)	10	160	124	124	-	-
	BRT Corridors	-	-	-	-	-	-
	<b>Total</b>	<b>10</b>	<b>160</b>	<b>124</b>	<b>124</b>	<b>-</b>	<b>-</b>
<b>Transit Supply Scenario 2</b>	Rail Corridors (LRT, Streetcar, Commuter Rail)	15	268	193	106	66	21
	BRT Corridors	9	167	159	-	-	159
	<b>Total</b>	<b>24</b>	<b>435</b>	<b>352</b>	<b>106</b>	<b>66</b>	<b>180</b>
<b>Refined Transit Supply Scenario 3</b>	Rail Corridors (LRT, Streetcar, Commuter Rail)	10	158	123	111	3	9
	BRT Corridors	14	209	200	1	32	167
	<b>Total</b>	<b>24</b>	<b>366</b>	<b>323</b>	<b>112</b>	<b>35</b>	<b>176</b>

Table 4 summarizes the characteristics of each scenario its modeling results.

### Scenario Modeling Key Findings

- Upgraded bus services will complement HCT, feed the rail network and provide a needed increase in regional access.
- BRT services can range from “BRT-light” similar to the current LINK service, to full BRT with dedicated guideway. HCT modes are expected to include LRT, streetcar and commuter rail.
- Optimizing the transit system, relocating or consolidating stops, and truncating unproductive line segments can improve productivity.
- Downtown Phoenix station areas will have the highest sustainable mode share in the region (about 20% of trips with origins or destinations in the station areas) and can serve as a benchmark for measurement.

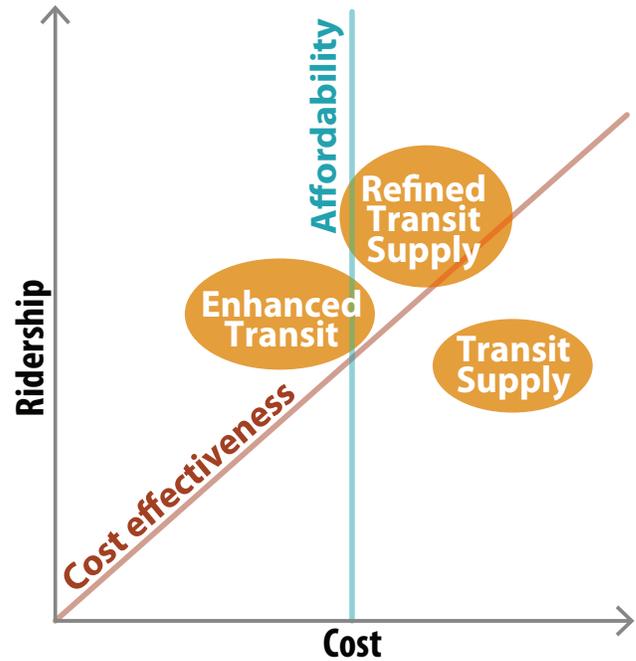


Figure 9: Conceptual Scenario Cost Effectiveness and Affordability Curves

Table 4: Scenario Summary

ST-LUIS SCENARIO	COMPARISON TO 2013 HCT NETWORK	MODE IN ST-LUIS NETWORK	STATION AREA PLACE TYPES	WHAT WE LEARNED FROM THE MODELING RESULTS
<b>Enhanced Transit</b>	Modest Expansion	HCT (LRT, Streetcar, Commuter Rail) Feeder bus	Transit served and high capacity transit oriented place types forecast by ST-LUIS Market Analysis	<ul style="list-style-type: none"> <li>• Highest productivity</li> <li>• Best fit with TOD demand</li> <li>• Lowest cost</li> <li>• Least geographic coverage</li> <li>• Lowest total ridership</li> </ul>
<b>Refined Transit Supply</b>	Generous Expansion	HCT (LRT, Streetcar, Commuter Rail)	Transit served and high capacity transit oriented place types forecast by ST-LUIS Market Analysis	<ul style="list-style-type: none"> <li>• 2nd highest productivity</li> <li>• 2nd poorest fit with TOD demand</li> <li>• 2nd highest cost</li> <li>• Good geographic coverage</li> <li>• 2nd highest ridership</li> </ul>
<b>Transit Supply</b>	Very Generous Expansion	BRT (with and without dedicated guideway) Feeder bus	Compact Walkable and/or suburban land uses where TOD land uses unlikely to be achieved	<ul style="list-style-type: none"> <li>• Lowest productivity</li> <li>• Poorest fit with TOD demand</li> <li>• Highest cost</li> <li>• Excellent geographic coverage</li> <li>• Highest total ridership</li> </ul>

## 4.3A TOOLS - ONE SIZE DOESN'T FIT ALL

The ST-LUIS tools support local and regional stakeholders in advancing plans for transit investments and services, supporting walkable and bikeable communities, enacting policies that support sustainable transportation, and guiding transit-oriented development. The three tools work together and recognize that there is not a *One Size Fits All* solution, allowing the region and local agencies to evaluate transportation and land use options in a market-based and data-driven approach.

### ST-LUIS Place Types

The ST-LUIS place types describe and illustrate three kinds of places that offer the best opportunities for supporting sustainable transportation in the MAG region, based on the study's investigation of research findings, best practices and local precedents.

The place types can be used:

- To characterize **existing conditions**,
- To describe an **ideal condition**, and
- To communicate a **future vision** as a basis for actions.

Some characteristics are common to all three place types. All depend on

appropriate density and land use mix to support walkability, and a high level of street network connectivity. In successful walkable communities, these measurable characteristics are paired with the less-tangible qualities of authentic character, attractive public realm, and placemaking that contribute to identity and value. Figure 10 (see following page) provides information on some of the features that are distinct for the different place types.

As noted in Figure 10, the market conditions necessary to support Compact Walkable development are far more widespread than are locations with the market strength required to support Transit Served and HCT Oriented place types.

ST-LUIS market analysis and continuing national trends suggest that the places where new TOD is most likely will be in the region's central core because it has the advantages of existing density, mix of uses, and a central location. In place with these assets, high capacity transit can reinforce and strengthen the region's opportunity for economic development involving knowledge based industries and the subset of employees who will work for these businesses and who want an urban life style. Although not every part of the region will be able to directly support this type of activity, the entire region will benefit from a strong core and a thriving knowledge based economy.



### COMPACT WALKABLE

15-30 persons/acre



### TRANSIT SERVED

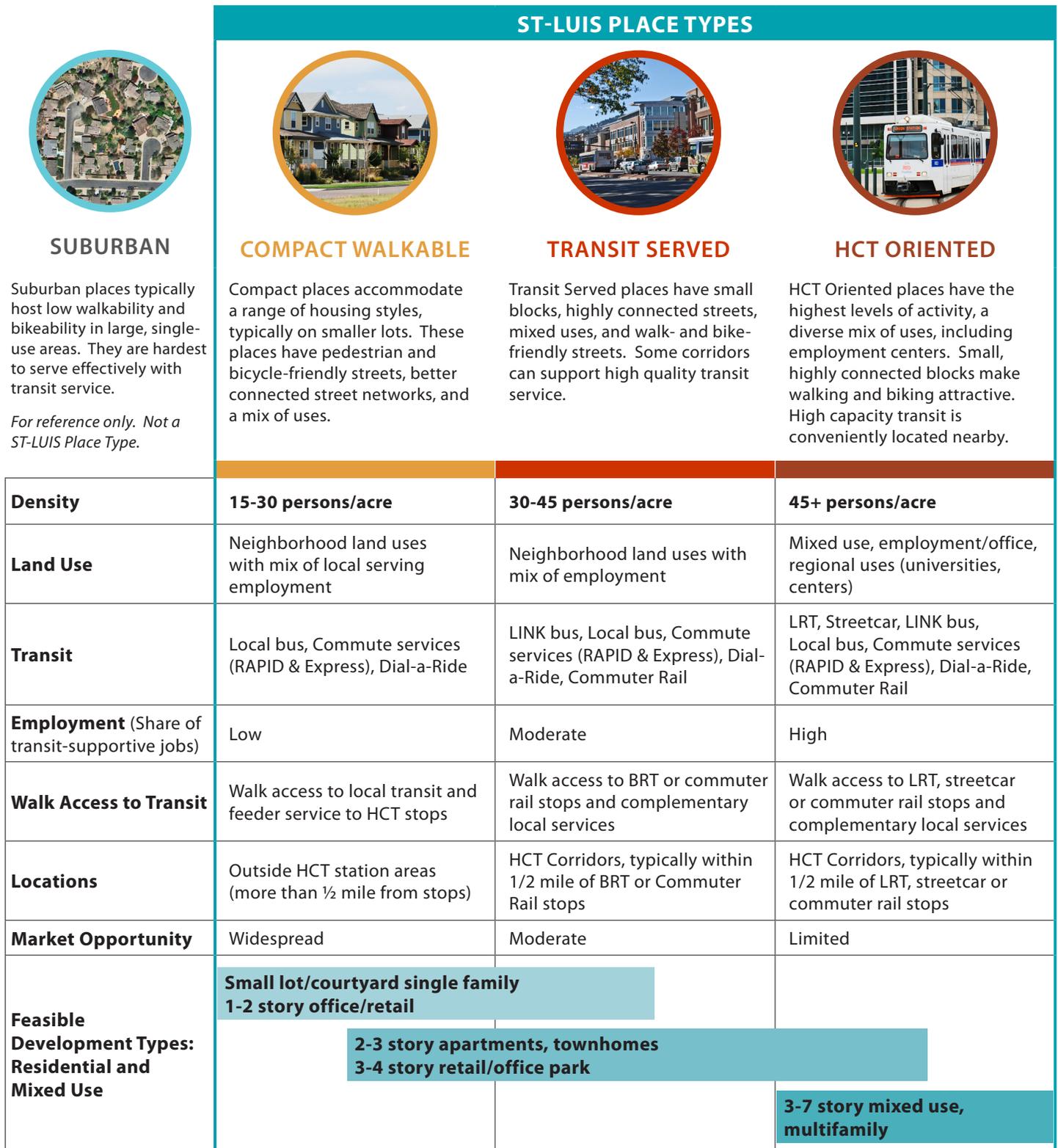
30-45 persons/acre



### HCT ORIENTED

45+ persons/acre

Figure 10: Place Type Characteristics



## Local Toolkit: Pathway Tools

The ST-LUIS provides two tools to assist local users in the region “synch up” transportation and land use plans. *Pathway Tool 1* allows practitioners to explore place type characteristics, consider a specific community’s present status and future vision for development, and review pathways to move toward more sustainable transportation solutions and development patterns. *Pathway Tool 2* provides design and development prototypes that synch up with the three recommended ST-LUIS place types.

Pathways support the transition to places that support sustainable transportation while responding to demographic and market trends. ST-LUIS Pathways are about...

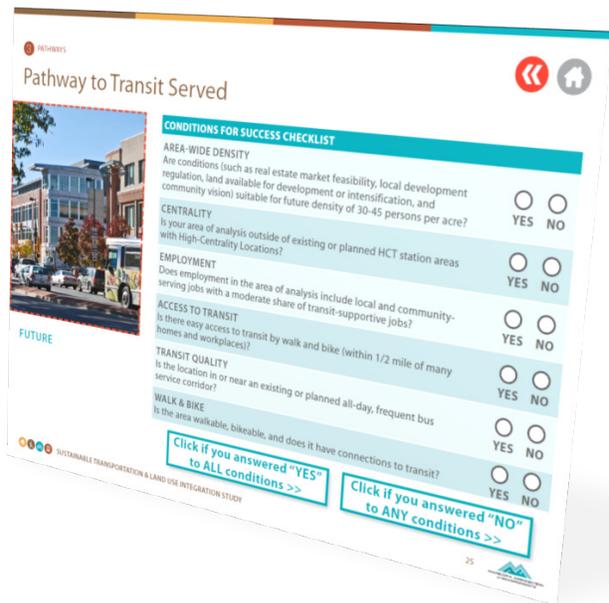
- ... Communities choosing to transition to integrated land use, urban design and mobility systems,
- ... Responding to market demand
- ... And supported by the actions of regional agencies,
- ... With the aim of moving toward sustainable transportation.

**One size doesn’t fit all.** Successful Pathways will reflect:

- Local conditions
- Community values and future visions
- Strength of local real estate market
- Location in the region
- Regional growth projected
- Regional plans for transit investments and services

### Pathway Tool 1: Community Pathways to Sustainable Transportation Interactive Tool

- Pathway choices
- Place Type Profiles
- Place Type Dashboards
- Reference Materials



### Pathway Tool 2: Development Prototypes Catalogue

- Prototypes
- Local Precedents
- Fit with ST-LUIS Place Types

## Regional HCT Corridor Evaluation and Scenario Planning Process

ST-LUIS formulated a methodical High Capacity Transit (HCT) scenario planning process. The process was used to screen the various HCT corridors. The HCT corridor evaluation for this study was done in a two-step process that focused heavily on demographic, land use conditions, market demand, transit/bus ridership criteria, and commute conditions.

The STLUIS HCT Corridor Evaluation and Scenario Planning Process included:

- Screening and selection of candidate HCT corridors
- Specification of transit service characteristics
- Real estate demand forecasting
- Assignment of place types to station areas
- Modeling of transit ridership
- Evaluation of results

The screening process is flexible and can be modified accordingly for future regional decision-making efforts and used in further design and testing of regional land use and HCT networks. The evaluation criteria in the HCT corridor evaluation and the scenario planning process can both be changed in the future to meet regional goals/objectives, and/or federal directives.

## 4.3B STRATEGIES - MOVING TOWARD SUSTAINABLE TRANSPORTATION

Moving forward with the ST-LUIS will mean advancing the following strategies.

### Strategy 1: Redefine Regional Projects

ST-LUIS recognizes that projects that advance sustainable transportation locally have value to the entire region—by enabling safe, active transportation, supporting transit use, and walkable communities.

The region should continue and expand regional support for projects that have a local focus, including:

- Complete Streets
- Safe routes to school
- Trails and bikeways
- New car ownership/share models
- First / last mile transit access projects, and
- Local transit services.

### Strategy 2: Integrate the ST-LUIS findings and tools into RTP Planning Process

The Regional Transportation Plan (RTP) update should move forward with HCT network planning based on ST-LUIS results. Implementing activities include:

- Convene discussions with municipalities and the regional agency regarding local land use and transit commitment and HCT corridors
- Model a combined HCT and upgraded bus system
- Evaluate transit projects as part of overall multi-modal corridor mobility, considering highway, streets, intelligent transportation

systems (ITS), bicycle and pedestrian networks.

- Conduct more detailed corridor planning
  - Targeted corridor modifications (extent and alignment)
  - Recognize existing conditions
  - Reconcile ST-LUIS evaluation criteria with federal funding guidelines
- Complement corridor-level planning with strategic planning for nodal development
- Address commuter rail place types and appropriate densities/land use

*“Phoenix’s light rail is already a success. We should be looking at TOD as an opportunity to plan long term.”*

**Mayor Scott Smith (Mesa)**  
ULI Forum 1

*“My suggestion to MAG and Valley Metro is to embrace the development community more actively, as well as the brokerage community, learn where the employment centers are, where those employees live, and create appropriate mechanisms to move those people that would encourage them to take mass transit.*

*Look at the airlines. Do they have one size plane for every market? No. Look at our bus system, how many different bus sizes do we have?”*

**Mark Singerman**  
ULI Forum 2

### Strategy 3: Upgrade Transit Services

Implementing the ST-LUIS Recommendations for upgraded transit services means improving transit quality, offering a mix of complementary services, and enabling easy, safe and comfortable multi-modal trips.

High quality transit is bus or rail service that provides all day (peak and off-peak) service with a long span of service and frequencies of at least 15 minutes during daytime hours, with high reliability, safety and customer experience, providing access to job centers and other major regional destinations. In conjunction with quality transit service, transit signal priority, queue jump lanes, bulb outs,

stop consolidation, in-line management strategies, and technology upgrades can aid network productivity. Table 5 describes key characteristics for ST-LUIS transit modes. These high quality services should be complemented by an array of services serving local and focused markets such as those in the list below. The complementary services will not all have the characteristics of all-day frequent service.

A mix of services that complement high capacity transit will extend the system’s reach and respond to specific needs. These services may include community bus for smaller communities, local feeders to rail stops, and continued and expanded peak-oriented express services. BRT services may also have varying levels of investment, with both all day, frequent rapid-type

services similar to LINK, as well as more capital-intensive BRT with dedicated guideways and rail-like amenities.

The transit system should be designed and operate so multi-modal trips are easy and attractive relative to the choice of driving alone. Multi-modal trips include trips on multiple transit modes as well as trips accessing transit by foot or bike. Supportive strategies include reliable and widely available route and schedule information, comfortable and safe walk and bike access to bus and rail stops, easy transfers with coordinated schedules and stop design, provision for bikes on transit vehicles and secure bike parking at transit stops, and fare integration throughout the network regardless of operator or mode.

Table 5: ST-LUIS Transit Service Characteristics Assumptions

	PEAK HEADWAY (MINUTES)	OFF-PEAK HEADWAY (MINUTES)	SPEED (MPH)	PEAK HOURS/DAY	OFF-PEAK HOURS/DAY
<b>LRT</b>	12	12	20	6 hours	15 hours
<b>BRT</b>	15	30	17.5	6 hours	15 hours
<b>Commuter Rail</b>	30	0	45	6 hours	0 hours
<b>Streetcar</b>	15	15	15	6 hours	15 hours

*“We can plan all we want. The market decides where development goes.”*

*“If you want to build higher density urban infill in this region you’re going to have to change the way government thinks. All of the incentives today are in place to encourage growth on the urban fringe.”*

**Participants**

ULI Forum 1

#### Strategy 4: Support Municipal Action

Local government action is essential in supporting a move to sustainable transportation. The ST-LUIS tools provide support for local decisions about development design, characteristics and transportation types.

**1. Support transition to walkable communities** with densities, transportation and urban form characteristics included in the ST-LUIS place types. The ST-LUIS Community

Pathways to Sustainable Transportation interactive tool (see page 17) focuses on these strategies, highlighting the following factors:

- Density (jobs + housing)
- Mixed land uses
- Connectivity
- Complete Streets
- Parking management
- Transit, walk and bike networks and services appropriate to their place types

**2. Form partnerships between municipalities and transit operators** to start transit service as appropriate, and prioritize services and investments that support pathways to sustainable transportation. Coordinated investments can increase the speed and reliability of transit trips, for instance.

**3. Use “policy levers” identified in ST-LUIS to improve the feasibility outlook for higher density housing:** reduced parking requirements in station areas, higher site coverage, and allowing horizontal mixed use.

*“If local governments really want to see the shift to the urban core, as sought after by the new demographics, then they have to get with it and be more sophisticated in their ability to support good projects and their ability to make it more difficult to just go build houses in the next cotton field.”*

**James Lundy**

ULI Forum 1

Table 6: First Steps to Prioritize Services and Investments Supporting Sustainable Transportation

	FIRST STEPS
<b>Improve walkability</b>	<ul style="list-style-type: none"> <li>Remove barriers to transit stops and stations</li> <li>Develop contiguous walking paths and sidewalks that connect to local and regional networks</li> <li>Provide clearly marked pedestrian crossings and traffic signals with countdown signals</li> <li>Provide bulb outs and wider medians to reduce effective crossing distance</li> </ul>
<b>Increase speed and reliability</b>	<ul style="list-style-type: none"> <li>Include signal priority, in-lane transit stops, and transit-only lanes in corridor planning and capital investments</li> <li>Synchronize traffic signals with bus schedules to improve speed and reliability</li> <li>Improve coordination between traffic operations control centers and transit operators</li> </ul>
<b>Improve waiting areas</b>	<ul style="list-style-type: none"> <li>Invest in covered shelters, seating, landscaping, and other rider amenities</li> <li>Provide real-time transit arrival information</li> <li>Prioritize maintenance and upkeep of waiting areas</li> </ul>

**4. Tailor regulations and design guidelines for infill opportunities.**

Real estate industry representatives who participated in the study emphasized the need for regulations and guidelines specifically addressing

typical infill conditions, such as small parcel sizes that may not satisfy standard on-site parking standards. Locations within HCT station areas will warrant reduced parking requirements.

Table 6 outlines a number of possible first steps for local governments to take toward prioritizing services and investments supporting sustainable transportation.

**Beyond the Study - Next Steps**

MAG and municipalities are already involved in many supportive activities that move the recommendations and strategies of the ST-LUIS forward. The region will need to continue to move

forward and answer questions not resolved through the project. These include:

- More detailed planning activities
- Continued emphasis on implementation activities

supporting the transition to walkable communities and TOD

- Implementation of a walk/bike/transit system that supports transitions to walkable communities and sustainable transportation

# Glossary

TERM	DEFINITION
<b>Bikeability</b>	The comfort, safety, and appeal of cycling in a given place. Highly bikeable places have “comfortable” (or safe, pleasant, and convenient) environments for cyclists, including nearby destinations, a network of bicycle lanes, vehicle door buffers, protected turn lanes, high visibility signage and pavement markings to alert drivers to the presence of cyclists, secure bicycle parking (e.g. bicycle racks, lock boxes), and well-lit streets and sidewalks.
<b>Bus Rapid Transit (BRT)</b>	A rubber-tire based transit mode that is more reliable, is faster, and has a higher capacity than traditional rubber-tire services due to implementation of transit priorities measures such as transit signal priority, bulb outs, queue jump lanes, off-fare boarding, etc. BRT in the context of the ST-LUIS is similar to the existing Valley Metro LINK bus service. Full BRT with significant capital infrastructure including dedicated bus lanes and guideways, similar to the Health Line in Cleveland, Ohio, or the EmX in Eugene, Oregon, is not assumed as part of the ST-LUIS.
<b>Centrality</b>	A place’s proximity to the core of the metropolitan area, the densest concentration of jobs and housing near the geographic center of the region, or other job center. Places with high centrality have a significant number of jobs in transit-supportive categories (see Glossary 2 of 2). The highest centrality places are downtown employment centers like Downtown Phoenix or places with major institutional uses like Tempe.
<b>Commuter Rail</b>	Rail transit operating on a fixed guideway during peak periods in peak directions, typically having fewer stops than LRT and Streetcar and covering longer distance trips. Commuter rail train capacity is typically significantly higher than LRT and vehicles are designed for longer-distance trips (often with seats and tables).
<b>Density</b>	The number of residents and/or jobs in a given area; defined as “people per acre” for this study, combining the number of residents and jobs together. Density is typically regulated through controls on units per acre for residential development or floor area ratio (FAR) for commercial development.
<b>Development Prototype</b>	An illustrative building description that fits the density and urban design parameters of one or more specific Place Type(s).
<b>Dwelling Units per Acre (DU)</b>	The number of residential units divided by the number of acres of property on which they are located. This is a measure of residential density.
<b>Floor Area Ratio (FAR)</b>	The ratio between the area of a building and the area of the parcel on which it sits, typically measured in square feet. This is a measure of commercial density.
<b>High Capacity Transit (HCT)</b>	A frequent, reliable, high-speed, and high capacity form of transit that operates in a fixed guideway (such as rails), typically within a semi- or fully-segregated right-of-way. HCT systems have enhanced and branded passenger stations that may include amenities such as level boarding, real-time information provision, and off-board fare payment. HCT systems are considered more “permanent” and have the potential to generate land use and development impacts at stations and along corridors. In 2013, the types of HCT under consideration for the ST-LUIS are Light Rail Transit (LRT) and Streetcar.

## Glossary (*continued*)

TERM	DEFINITION
<b>High Quality Transit Service</b>	Bus or rail service that provides all day (peak and off-peak) service with a long span of service and frequencies of at least 15 minutes during daytime hours, with high reliability, safety and customer experience, providing access to job centers and other major regional destinations.
<b>Local Serving Employment</b>	Jobs associated with local serving businesses and services, including schools, local retail businesses, personal services, medical offices not associated with major hospitals, real estate offices and bank branches. Home-based businesses and small-scale craft-based businesses may also be included.
<b>Light Rail Transit (LRT)</b>	LRT is a frequent, reliable, high-speed, and high capacity form of transit that operates in a fixed guideway (e.g. rails), typically within a semi- or fully-segregated right-of-way. LRT systems have enhanced and branded passenger stations that may include amenities such as level boarding, real-time information provision, and off-board fare payment. LRT systems are considered more “permanent” and have the potential to generate land use and development impacts at stations and along corridors.
<b>Neighborhood Land Uses (or “land use mix”)</b>	Housing mixed with local serving uses, including parks, schools, places of worship, community centers and child care, and neighborhood retail and services.
<b>Place Type</b>	Classification of an area based on its dominant land use, design, and transportation system characteristics. Describes current conditions and/or future vision, and helps guide local planning decisions with regional goals.
<b>Station Area</b>	An area with a radius of 1/4 or 1/2 mile around a transit station. A 1/2 mile station area covers approximately 500 acres.
<b>Streetcar</b>	Streetcar is a form of rail transit with similar amenities and characteristics to LRT, but typically provides localized circulation, for instance within a downtown or business district. Streetcar stops more frequently than LRT, operates slower than LRT due to its operating environment (which may include pedestrian malls and urban arterials), and generally operates with shorter train cars and thus lower capacities than LRT.
<b>Transit-Oriented Development (TOD)</b>	<p>Transit-Oriented Development (TOD) is a type of community development that includes a mixture of housing, office, retail and/or other commercial development and amenities integrated into a walkable neighborhood or district and located within a half-mile of quality public transportation.</p> <p><i>Adapted from the Center for Transit-Oriented Development, <a href="http://www.ctod.org">http://www.ctod.org</a></i></p>
<b>Transit-Supportive Jobs</b>	Jobs in industry sectors that have a tendency to cluster near transit, based on national studies from the Center for Transit-Oriented Development. Sectors include: Government; Information; Finance and Insurance; Real Estate; Professional, Scientific and Technical Services; Management of Companies and Enterprises; Arts, Entertainment, and Recreation; and Accommodation and Food Services.
<b>Walkability</b>	The comfort, safety, and appeal of walking in a given place. Highly walkable places have “comfortable” (or safe, pleasant, and convenient) environments for pedestrians, including features like very close-together destinations, small blocks, continuous sidewalks, shade, safe street crossings, and buffers from adjoining traffic (e.g. planting strips, street furniture).



# ST-LUIS Project Materials

Related ST-LUIS project materials are available online. Use the following links to access these documents.

## ST-LUIS PROJECT WEBSITE

<http://www.bqaz.org/sustainOverview.asp?mS=m16>

## RESOURCES: LOCAL TOOLKIT

Community Pathways to Sustainable Transportation Interactive Tool  
Development Prototypes Catalogue

<http://www.bqaz.org/sustainResources.asp?mS=m16>

## WORKING PAPERS & MEMORANDA

Working Paper One - Regional Transportation Framework and Issues

Working Paper Two - Moving Toward Sustainable Transportation

Working Paper 3A: Supportive High Capacity Transit (HCT) Corridor Technical Analysis, Scenarios 1 & 2

Working Paper 3B: Supportive High Capacity Transit (HCT) Corridor Technical Analysis, Scenario 3

Working Paper Four: Study Recommendations Report

MAG ST LUIS – Market Study Memorandum

MAG ST LUIS – Employment Analysis Memorandum

<http://www.bqaz.org/sustainPapers.asp?mS=m16>

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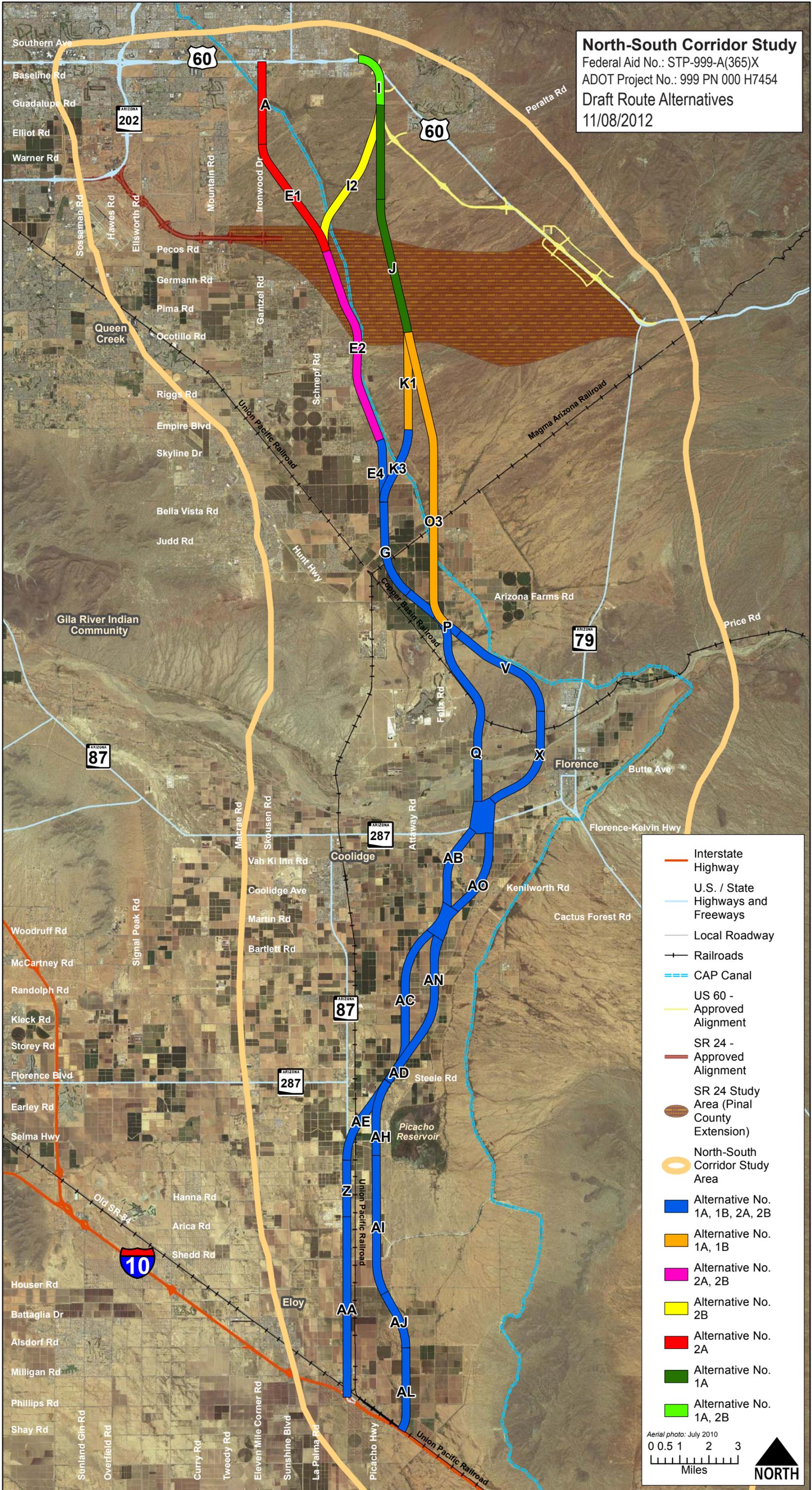
## IMAGE CREDITS

Cover photo: Marc Pearsall

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Aerial imagery: Google Earth

**North-South Corridor Study**  
 Federal Aid No.: STP-999-A(365)X  
 ADOT Project No.: 999 PN 000 H7454  
 Draft Route Alternatives  
 11/08/2012



**Legend**

- Interstate Highway
- U.S. / State Highways and Freeways
- Local Roadway
- Railroads
- CAP Canal
- US 60 - Approved Alignment
- SR 24 - Approved Alignment
- SR 24 Study Area (Pinal County Extension)
- North-South Corridor Study Area
- Alternative No. 1A, 1B, 2A, 2B
- Alternative No. 1A, 1B
- Alternative No. 2A, 2B
- Alternative No. 2B
- Alternative No. 2A
- Alternative No. 1A
- Alternative No. 1A, 2B

Aerial photo: July 2010  
 0 0.5 1 2 3  
 Miles  
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Information is preliminary and subject to change.

# MARICOPA ASSOCIATION OF GOVERNMENTS

## INFORMATION SUMMARY... for your review

**DATE:**

September 10, 2013

**SUBJECT:**

Transportation Alternatives Program: Draft Goals, Objectives, and Competitive Process

**SUMMARY:**

In working with MAG member agencies through an online survey and stakeholder meeting this past summer, DRAFT Goals and Objectives have been developed for the Transportation Alternative Program (TA).

Prior to 2013, there were three distinct types of federal formula funds that were apportioned to the state: Transportation Enhancements (TEA), Safe Routes to School (SRTS), and Recreational Trails Program. In July 2012, the federal government passed the new federal transportation authorization bill, Moving Ahead for Progress in the 21st Century (MAP-21). MAP-21 consolidated these three programs into one federal formula funding category called Transportation Alternatives Program (TA). The TA funding is now allocated directly to MAG in comparison to the previous programs. The MAG region receives about \$4.4 million per year for this program.

The TA program allows all eligible activities (with some exceptions and one addition) that were previously authorized under the TEA, SRTS, and Recreation Trails Program; for more information <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm> (Section B: Eligibility).

Since the eligible activities under the TA program are very broad MAG surveyed five committees (Transit, Streets, Bicycle & Pedestrian, Safety, and Transportation Review) via an on-line survey this past June/July 2013 about the highest needs of the region. From the survey results and a stakeholder meeting held on August 13, 2013, the DRAFT Goals and Objectives were developed to direct the project selection process. Please see Attachment #1 for the DRAFT Goals and Objectives and Attachment #2 for the proposed Evaluation Team and draft schedule.

**PUBLIC INPUT:**

MAG worked with member agency staff through an on-line survey, hosted a stakeholder group to review the goals and objectives of the TA program. There was no public comment at the August 29, 2013, Transportation Review Committee meeting.

**PROS & CONS:**

**PROS:** Approval of the goals, objectives, and process for the Transportation Alternatives Program allows the project selection criteria and application process to move forward. This will enable infrastructure projects to be included in the MAG Transportation Improvement Program (TIP) by January and will allow jurisdictions to develop their projects in a timely and integrated manner, to be able to obligate their projects by FY 2015, 2016, and 2017.

**CONS:** There is no guarantee that the federal program will be extended beyond FFY 2014 by a continuing resolution or if a new Surface Transportation Authorization Act is signed. Funding for this program is subject to change. If this process is not approved, the time to develop new projects is

shortened. Timely development of projects is needed to ensure that MAG federal funds are fully utilized and that obligation authority and the related funding are not lost from the region.

**TECHNICAL & POLICY IMPLICATIONS:**

TECHNICAL: Projects submitted through the competitive application process for TA funding will be evaluated on criteria related to the goals and objectives. All projects are eligible to apply, but may not receive funding if they do not address the TA Program goals and objectives.

POLICY: The Transportation Alternatives (TA) Program goals and objectives relate to the overall MAG Regional Transportation Plan (RTP) goals and objectives about System Preservation and Safety, and Accessibility and Mobility.

**ACTION NEEDED:**

Recommend approval of the draft goals, objectives, and process for the Transportation Alternatives (TA) program and modification of the MAG Federal Fund Programming Guidelines and Procedures, October 26, 2011.

**PRIOR COMMITTEE ACTIONS:**

This item is on the September 11, 2013, MAG Management Committee agenda. An update will be provided on action taken by the Committee.

On August 29, 2013, the Transportation Review Committee recommended approval of the draft goals, objectives, and process for the Transportation Alternatives (TA) program and modification of the MAG Federal Fund Programming Guidelines & Procedures, October 26, 2011.

MEMBERS ATTENDING

- Avondale: Kristen Sexton for David Fitzhugh
- Glendale: Debbie Albert, Acting Chair
- ADOT: John Nelson for Floyd Roehrich
- Buckeye: Jose Heredia for Scott Lowe
- # Cave Creek: Ian Cordwell
- Chandler: Dan Cook
- El Mirage: Jorge Gastelum for Sue McDermott
- Fountain Hills: Randy Harrel
- \* Gila Bend: Eric Fitzer
- \* Gila River: Steven Johnson
- Gilbert: Dawn Irvine for Leah Hubbard
- \* Goodyear: Cato Esquivel
- Litchfield Park: Woody Scoutten
- \* Maricopa (City): Paul Jepson
- Maricopa County: Lynne Hilliard for John Hauskins
- Mesa: Jeff Martin for Scott Butler
- \* Paradise Valley: Jim Shano
- Peoria: Andrew Granger
- Phoenix: Ray Dovalina for Rick Naimark
- \* Queen Creek: Troy White
- Scottsdale: Todd Taylor for Paul Basha
- Surprise: Dick McKinley for Terry Lowe
- Tempe: Shelly Seyler
- Valley Metro: Wulf Grote John Farry
- Wickenburg: Vince Lorefice
- Youngtown: Grant Anderson for Jeanne Blackman

EX-OFFICIO MEMBERS ATTENDING

- \* Street Committee: Charles Andrews, Avondale
- \* ITS Committee: Catherine Hollow, Tempe
- FHWA: Ed Stillings
- Bicycle/Pedestrian Committee: Denise Lacey, Maricopa County
- \* Transportation Safety Committee: Renate Ehm, Mesa

\* Members neither present nor represented by proxy.  
+ Attended by Videoconference # Attended by Audioconference

On August 8, 2013, the Transit Committee recommended acceptance of the Sustainable Transportation Land Use Integration Study recommendation, key findings, and tools to be considered in future planning efforts and be consistent with the Federal Transit Administration process, including evaluation criteria as appropriate.

**MEMBERS ATTENDING**

- \* ADOT: Nicole Patrick
- \* Avondale: Rogene Hill
- # Buckeye: Andrea Marquez
- Chandler: Jason Crampton for RJ Zeder
- El Mirage: Sue McDermott
- Gilbert: Leslie Hart
- Glendale: Matthew Dudley for Cathy Colbath
- Goodyear: Cato Esquivel
- Maricopa County DOT: Mitch Wagner
- Mesa: Jodi Sorrell
- \* Paradise Valley: Jeremy Knapp
- Peoria: Maher Hazine
- Phoenix: Maria Hyatt
- # Queen Creek: Chris Anaradian
- Scottsdale: Madeline Clemann, Chair
- Surprise: David Kohlbeck
- Tempe: Robert Yabes
- \* Tolleson: Chris Hagen
- Valley Metro: Wulf Grote
- Youngtown: Grant Anderson

\* Members neither present nor represented by proxy.

+ Attended by Videoconference

# Attended by Audioconference

**CONTACT PERSON:**

Eileen Yazzie, Transportation Planning Project Manager, MAG (602) 254-6300.

**Transportation Alternatives Program (TA)**  
**DRAFT Goals and Objectives – August 26, 2013**

**Goals:**

1. Improve pedestrian and bicyclist accessibility and connectivity on the transportation network.
2. Assist in providing a safe environment for the bicyclists and pedestrians on both the on-street and the off-street transportation networks.
3. Make bicycling and walking to public K-8 schools a safer and more desirable transportation alternative to motorized vehicles.

**Definitions**

- **Accessibility:** The ability of transportation infrastructure improvements to provide better access to transit stops, destinations, schools, homes/subdivisions, and employment for people that are walking or biking for all ages and abilities.
- **Connectivity:** The ability of transportation infrastructure improvements to link the proposed project to other bike/pedestrian facilities, completing a gap in a bike/pedestrian facility, or a city/town.
- **Safety:** Projects that make a street safer by addressing a perceived or observed safety problem, including (but not limited to): high vehicle speed, crashes, striping, intersection crossings, or mid-block crossings.

**Objectives:**

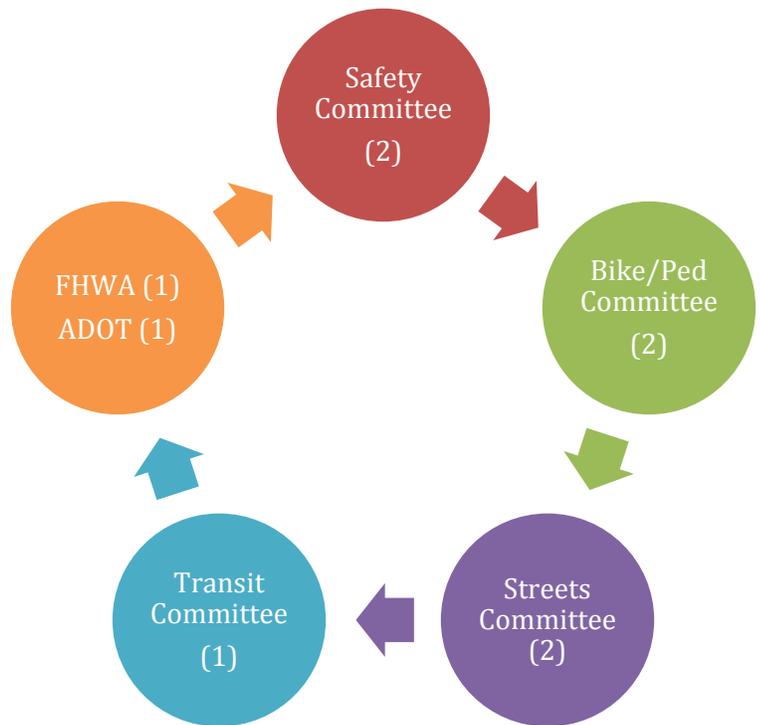
- Fund eligible Transportation Enhancement and Safe Routes to School (SRTS) projects through the federal MAP-21 Transportation Alternatives fund.
- Fund bike and pedestrian improvement projects that provide a safe transportation route or improve a transportation route for (K-8) students to schools.
- Fund bike and pedestrian improvement projects that address a perceived or observed problem/safety issue, including (but not limited to) unsafe street crossings; missing, narrow or poorly maintained sidewalks; adding/improving bike lanes (restriping, widening, colored pavement); or disconnected/inaccessible bike or pedestrian facilities, while connecting residents to transit stops/centers or other destinations.
- Fund Safe Routes to School (SRTS) non-infrastructure projects that educate and encourage K-8 students, parents, and school resources officers/staff on bicycle and walking options.
  - GUIDELINE - Funding will be set aside at 9% of total Transportation Alternatives funding, with a maximum yearly total of \$400,000. If the total value of projects awarded for Safe Routes to School non-infrastructure projects is less than the total programmed set-aside, remaining funds will be applied toward eligible infrastructure projects.
  - GUIDELINE – These projects will need to evaluate on a quarterly basis as required by the federal government, and address enforcement and encouragement. .
- Utilize evaluative tools based on quantitative and qualitative performance measures to inform project rankings in the application process.

**Proposed Evaluation Team - Infrastructure**

It is proposed that the Chairs of the four committees (Streets, Bike/Ped, Safety, and Transit) are asked to be a part of the evaluation team. It is proposed that the TRC Representatives and Vice-Chairs of the three (Streets, Bike/Ped, and Safety) committees are asked to be a part of the evaluation team.

The Evaluation Team members are dependent on their availability and agreement to serve on the evaluation team, which involves a time commitment to review and score applications, and attend a project presentation meeting.

In the case of a double representation of a city on the evaluation team, another committee member would be needed. Volunteers would be requested.

**Proposed Evaluation Team – SRTS Non-Infrastructure**

Like previous years, the SRTS Non-Infrastructure projects would be evaluated by the MAG Safety Committee.

**DRAFT Schedule - Infrastructure**

- Applications available –September 26, 2013
- Applications due – Mid/Late October 2013
- Evaluation Team Work – Late October – November 2013
- Presentations by Agencies to Evaluation Team –December 2013
- Transportation Review Committee review of ranked projects – December 2013
- Management Committee and Regional Council review and approval – January 2014

**DRAFT Schedule - SRTS Non-Infrastructure**

- Applications available – January 2014
- Applications due – February 2014
- Presentations by Agencies to Safety Committee –March 2014
- Transportation Review Committee review of ranked projects – March 2014
- Management Committee and Regional Council review and approval – April 2014