



MEETING SUMMARY NOTES

Table with meeting details: Date Produced, Meeting, Date, Location, Purpose.

Participants

See attached roster

The following meeting summary notes are intended to be a summary of the discussions at the meeting. Any changes or corrections to the meeting summary notes must be received by the author within ten days. After that date, they will be final.

Welcome and Opening Remarks

Jennifer Toth, ADOT Project Manager called the meeting together at approximately 8:30 a.m. and thanked the participants for attending. Don Sneed, ADOT Tribal Liason, Kenneth Poocha, Arizona Commission of Indian Affairs, followed Jennifer's introduction with opening remarks. A presentation was given by the project's Planning Management Consultant John McNamara.

Overview of Scenarios

Scenario A - Personal Vehicle Mobility

This scenario assumes a continuation of the existing approach of focusing on transportation solutions (primarily roadways) that assume people will continue to choose to drive their cars as their primary mode of transportation. However, the scenario assumes that automobile technology will continue to advance and that more high-fuel-efficiency vehicles such as hybrids, etc. will be more prominent than today. This scenario also includes significantly more transit than is currently available today.



Scenario B - Transit Mobility

This scenario shifts the focus from personal vehicles to a heavier emphasis on public transit, walking, and bicycling for regular daily trips in response to increased cost of owning and operating personal vehicles (fuel, insurance, and vehicle maintenance costs) and socioeconomic trends such as an aging population, environmental considerations, and a desire for a wider range of transportation choices.

Scenario C – Focused Growth

This scenario envisions a change in community development patterns toward more compact instead of spread-out development. It shifts the focus from personal vehicles only to transportation improvements emphasize local travel using transit, bicycling, and walking. This scenario responds to a growing trend toward a non-auto-dependent lifestyle that encourages a mix of land uses close to one another.

Small Group Discussions

Following the presentation the participants were asked to divide into three small groups to discuss the three scenarios. John McNamara; Dianne Kresich (ADOT); and Peggy Fiandaca (Public Involvement Management Consultant) lead the groups in their discussions. The following is a summary of all three small group discussions.

Scenario A:

Group I

- There is a shift in Arizona towards transit, but we will always need personal vehicle mobility in Arizona. A lot of new population in Arizona will be used to transit.
- Parker, AZ will always rely on personal mobility. How will I-10 connect to I-40? There is a problem with truckers using roads in CRIT to avoid checkpoints. Transportation issues in Arizona are not unlike those in California, on the other side of the Colorado River.
- There needs to be communication with tribes from Arizona and surrounding states and involvement from them early in the process.
- Arizona cities and towns were not prepared for the population growth over the past few decades creating a strain on existing roads. This makes it difficult to accommodate the large population today. We need to be prepared for the expected growth.
- There have been discussions of creating a Tribal COG.



- Maricopa County does not consider the impact of its decisions on the GRIC. It increase the speed limit on 51st Avenue without taking into consideration the impact on the community.
- There is no tax base on reservation lands. Transportation funding needs to come from other sources.
- This study shouldn't commit the State of Arizona to extend SR 77 past where it currently ends. It cannot be called a State Route on tribal land.
- Piñon should be shown on the map because it is developing as a commercial center.
- The BIA has lower standards for construction of roads, which should be taken into consideration before ADOT takes over a BIA road.
- Tribal communities may not want to developed/improved roadways on their land. Improved roadways will create higher traffic volumes and development. Simply showing these roads on a map may upset some communities. Affected communities should be able to make the decision on these roads.
- User Pass Road is not shown. It gets traffic from East Mesa to SR 87 and is an existing corridor.
- SR 87 between Payson and Winslow is a major commuter route for tribal members.
- SCAT is expecting increases in traffic on US 70 because of improvements on US 60. There is a rail study from Globe to the Apache Gold Casino. SCAT wants a partnership with ADOT.
- There is a tiered transportation structure in Arizona: state, county, local. Maricopa County has a different role than other counties – it maintains the 51st Avenue-Beltline-Riggs Road alignment.

Group 2

- Scenario A is an "environmental disaster". More roads will lead to larger impacts to the environment.
- Planning that has occurred in the past has not worked. It wasn't prepared for the amount of growth. Effects of that planning has lead to high pollution, erosion and damage to riparian areas.
- People want their own cars to expand the way they do business.
- More efficient vehicles would help Scenario A. Cleaner vehicles may change the impacts. SUV's are a problem. Why hasn't our mindset changed from big vehicles and single occupants.
- When shoulders were built on some of these roads, drainage was not taken into account. This leads to erosion and oil leaking into the riparian areas.
- This scenario doesn't account for what is happening with the global climate change. Lifestyles need to change mostly in urban areas, rural areas rely on roads.



- What about different types of vehicles? If we make smarter vehicles, we can leave less of a footprint.
- Why are there so many bus lines in northeast Arizona? The community wanted it. It is understood that this means more money.
- Need funding to sustain the public transit investments.
- Hazardous material transportation should be considered. This poses big potential for a disaster. Where would a route go that would allow for such hazardous material transportation?
- Arizona should participate in the NAFTA Train Line that crosses Arizona east to west.
- Would like to see enhanced technology to use Scenario A.

Group 3

- Why was the road from Globe to Payson not recommended to be widened?
- Were environmental impacts considered when developing the scenarios?
- Why was SR 188 not improved or included in this scenario?
- What is the driving factor for improvements in the Tohono O'odham tribal area along SR 86?
- Was an I-17 alternative route considered for Scenario A and if so where would the alignment be?
- SR 87 is an artery to get out of the megapolitan area.
- What is happening in the Chino Valley area to justify all the new roads (several master plans)?
- Why are there no proposed improvements to SR 99 and SR 87?
- Is the proposed expressway near Flagstaff on the south side or the north side of the mountain?
- Development between Camp Verde and Cottonwood.
- SR 347 can potentially become a parkway.
- Look for more conductivity to Casa Grande and relievers for I-10.
- Are you looking to make Hunt Highway an east – west connector? GRIC are conducting their SATS and would like to see it on maps for Scenario A.
- Scenario A makes sense in regards to the area personally traveled by the tribes. The sheer number of people that travel in the future on Arizona roads is difficult to comprehend. For Northeast Arizona A makes sense.



Scenario B:
Group 1

- The railroad station is active in Parker. They disregard the noise ordinance and park trains on across roads. This causes traffic issues. There needs to be grade separated crossings with passenger rails.
- It would be logical to include CalTrans in this study.
- Bouse, Poston and other small communities are growing and need to be dealt with. Need a transition on the California side. The port of entry needs to be moved.
- An interstate planning effort between Arizona and California is needed.
- Pinta will not be a commercial center; the casino is going to Twin Arrows. Transit should be shown in Sanders since it will become a new commercial area.
- Transit needs to tie into airports.
- There is a different perspective in urban areas (MAG) because of the greater level of transit.
- There is an effort under way between Navajo, Hopi and Sun Country Transit.
- GRIC is a member of MAG and is also considering joining CAAG.
- The Colorado River is somewhat used for transit. This type of transportation needs to be considered.
- The connection for rail on the GRIC is north of SR 87. How does GRIC benefit from transit? A new hospital is planned at Price and Loop 202, which will generate need for transit.
- A medical facility is planned for Red Mesa on the Navajo Nation. How do we get people to terminal sites? A feeder system is needed.

Group 2

- There needs to be a bus route through Page, Fredonia, and Kanab. People travel to Page for services.
- What is the impact on the environment to construct roads vs. transit (platforms, concrete, etc.).
- There is more attention towards tribal areas in Scenario B.
- There is a lack of north-south train routes.
- There needs to be access transit stops in tribal areas.
- Is there a difference between an express bus and an intercity bus?
- Priority indicated for paving a road between Hopi and Black Mesa. This road is shown on the map as a new road.
- Concern that tribal voice is not heard through COG/MPOs. Are MAG and PAG coordinating with tribes? Is there a tribal process to be heard at MAG



and PAG? Their process does not negate our process. Is NACOG doing something?

- There needs to be all weather roads for medical transport.
- The facilitator described a difference between Scenarios A and B was some freeways were downgraded to parkways. This improves transit and helps with transport, for example, fewer freeway miles.

Group 3

- Chandler South Corridor along SR 87 for passenger rail is needed.
- Tempe South along SR 347 for passenger rail is needed.
- Coolidge current sunset route for passenger rail is needed.
- Expand transit service in Navajo Nation. Who would be responsible for maintenance and operation?
- Transit through GRIC to Casa Grande is needed. GRIC is looking to have a transit study of their own and would like to connect with the two studies currently underway being conducted by MAG and Metro.
- Bus Rapid transit along SR 347 is needed.
- Bus Rapid transit along I-10 to Casa Grande is needed.
- How were local transit needs and areas identified on the Navajo Nation?
- Route 12 is a very hazardous route and in need of improvement.



Scenario C:

Group 1

- There is a conflict between smart growth and culture on reservations. Families want to live together. This makes it more difficult to predict where growth will be.
- Smart growth is based on economic development but tribes want to maintain their culture.
- There is still a feeling in GRIC that ADOT did not keep promises made when I-10 was first planned. Issues need to be resolved from initial promises that were never followed through with.
- Water supply will dictate development. Availability of water needs to be incorporated into planning for the long range plan.
- Green connectivity needs to be a part of transportation planning. Animals and ecosystems need to be connected.
- Highways were not built to benefit Indian communities; they disrupt ancient trails. ADOT needs to maintain contact with the community to see how things are going. Smart growth needs to take Indian needs into account. Highways can bisect tribal communities.
- Roads need to follow trails in the Navajo area.

Group 2

- Keep more open space.
- Scenario C has more emphasis on biking and walking. There is a large interest in biking and walking.
- There is a lot of change that would need to happen to make Scenario C a reality.
- This scenario seems unrealistic, but it would benefit the environment and communities most.
- Policies would need to change to make this scenario a reality. Communities would need to be smaller. Schools would need to build smaller campuses. These smaller communities would need to begin at a local level not a state level.
- Expand the bus services beyond community boundaries.
- Focused growth is how tribal communities work now, more roads encourage sprawl.
- Maintenance of roads is important.
- Weather in Arizona makes many roads impassible four months out of the year.
- Kaibab is considering buying golf carts for its community because they are more environmentally friendly.
- Many changes in policy and legislation need to occur for this scenario to become a reality and to protect our future.



- Sovereign nation discussions need unilateral implementation.
- Growing Smarter Planning Grant (AZ Commerce) applies to tribes in order for them to get funds.
- Convenience is key for transit to work.
- There is a concern of environmental impacts of rail construction.

Group 3

- Does this scenario take airports into consideration?
- Water impacts need to be considered.
- What is the funding mechanism for the different scenarios?
- Has the planning process taken the lack of water or water availability into consideration?
- Safety improvements along State Routes on tribal lands should be considered in all scenarios.



Closing Comments:

Group 1

- ADOT needs to contact tribes to see what their priorities are. Every tribe is different. Do not assume that staff members will convey information to the tribal council.
- Need to maintain continuity throughout the state.
- GRIC will be the green belt for the urban area. The counties also need to be involved in the studies.
- Open to partnering to discuss wildlife connectivity
- Growth in traffic puts pressure on community roads. The problem is determining what roads to develop.
- The lack of green connectivity in the plans is a serious omission. Arizona Game and Fish wants to work with the reservations.
- Residents of reservations still collect native plants such as acorns and piñons along roadways. There is concern about the effects of weed spraying.
- More partnering efforts are needed.
- Water will impact how growth occurs. This needs to be planned for in the long range plan.
- Tribes want to preserve their identity.

Group 3

- Scenario A serves the Navajo Nation well.
- Scenario C may be better because as costs increase in the future we may all rely more on transit.
- Scenario C is better because of transit needs.
- The tribal nations want to be heard.
- Growth impacting the Gila River area requires improvements to SR 347, I-10 and transit. GRIC is a major employer for the East Valley.
- Navajo routes being included in the process are good.
- Navajo Nation should be focused on and concentrated on throughout the process.
- Peach Springs connectivity to Diamond Bar Road is important, and roads of regional significance to the tribes should be considered.

Additional comment received after workshop:

See the attached comment on page 11.

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March 4, 2009

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Mr. Bill Peterson
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Mr. Peterson,

Finally!


Enclosed is my paper addressing the ADOT Statewide Transportation Initiative. I hope it will be helpful in the initiative process.

I intended to include maps showing many of the specific suggestions therein. However, I have encountered multiple setbacks in that effort! I fought one last time to achieve this goal, and the last straw ended it. I was figuring out the program a little at a time, and think I finally had it, when I saw the copyright note in my topographical atlas that precluded any duplication of the maps. As I was using them as the background for my changes, I realized I couldn't continue. Much time has been spent on them and that is the main reason the project wasn't finished three weeks ago. I do have maps that I prepared for the Navajo County Comprehensive Plan - most of them using the Plan maps for background without complaint, but I just don't think I should include them without the newer ones.

Funny thing though, had I finished sooner, some of my comments would not have been included because of current events and experiences occurring in recent times.

Thank you for your support in my self-imposed goal to produce somewhat comprehensive observations and suggestions toward choosing our transportation future.

Sincerely,


Itasca Courtney Small

Suggestions for the
Arizona Department of Transportation
Statewide Transportation Initiative

Itasca Courtney Small

TABLE OF CONTENTS

1.0	Introduction.....	1
1.1	ADOT Travel Time and Traffic Flow Projections and Proposed Solutions.....	1
1.2	Arizonans need to ask “Why?” denser urban centers.....	1
1.3	Renewable energy.....	2
1.4	Cutting edge technologies are not pie-in-the-sky: No NYCW!.....	2
	1.4.1 “Metro” light rail.....	2
	1.4.2 Free choice: “personal vehicle”, plus.....	2
1.5	Desire to resist urbanization.....	2
1.6	Government-owned lands restrict and control growth.....	3
1.7	Resurrect freedom of opportunity.....	3
2.0	Overview.....	3
2.1	Existing commitments.....	3
2.2	Free, natural, psychological metamorphosis - w/ a reined government.....	3
2.3-2.5	New technologies.....	4
2.6	Infrastructure and growth.....	4
2.7	Navajo County and ripple effects.....	4
3.0	Light Rail! Or Not?.....	4
4.0	The Alternative?.....	5
4.1	Affects of real transportation change and: No New York City West!.....	5
4.2	Logistics.....	5
4.3	Additional positive affects.....	6
4.4	Larger regional possibilities.....	6
	4.4.1 Arizona part of integrated interstate system.....	6
	4.4.2 National transportation goals met.....	7
	4.4.3 Arizona Economic Strength Projects enhanced.....	8
4.5	Re: property confiscation.....	8
4.6	Existing railway integration.....	9
4.7	Water scarcity; coal transport.....	9
5.0	What Is It?.....	9
	NEW GENERATION MAGLEV (magnetic levitation transportation)	
5.1	National Maglev Network.....	9
5.2	Why hasn’t magnetic levitation been used here?.....	9
	5.2.1 Current federally-funded projects.....	9
	5.2.2 Ramp-up to meet goals - with rapid cost payback!.....	9
5.3	System versatility and possibilities.....	10
5.4	Coordinated with highway upgrades, especially for Phx/Tuc Megalopolis growth.....	10
5.5	Interstate and National Highway Systems relief and symbiosis.....	11
5.6	Positive aspects of Maglev.....	11
5.7	Even faster and simpler Maglev.....	11
5.8	Water transport by Maglev.....	11
5.9	WE CAN BUILD IT NOW (References).....	12

TABLE OF CONTENTS, continued

6.0 Advanced Information Technology - IBM.....12

7.0 Cutting Edge Power Generation.....12
 Mills’ Theory - BlackLight Process producing thermal energy

 7.1 Harnessed for electrical generation.....13

 7.2 Independent studies confirm; technology licensed to New Mexico, Electrical Coop.....13

 7.3 Widespread benefits foreseen.....13

 7.4 Partner with Maglev and existing electrified steel-on-steel-rail transportation.....13

 7.5 Possibility of application to battery-powered vehicles.....13

8.0 Hydrogen Fuel Cell Automotive Technology.....13
 Overgaard, Arizona, resident has done it!

9.0 Further, Possible Route Improvements.....14

 9.1 National defense and international commerce goals - route enhancements.....14

 9.2 Other Greater Phoenix route observations.....15

 9.3 Other Greater Tucson route observations.....15

10.0 Navajo County and Ripple Affects.....15
 Highlights and revision of 2003 contributions to County Comprehensive Plan

 10.1 Roadways augmented by two-speed, hybrid Maglev systems.....15

 10.2 Upgrade Holbrook’s “The Hub City” Municipal Airport to international status.....15

 10.2.1 - 10.2.2.5 General positive affects.....15&16

 10.2.3 Light air freight/commuter airport near Apache Railway and Snowflake.....17

 10.2.4 Growth extending along I-40 and the BNRR to Joseph City and Winslow.....17

 10.2.5 Beyond to Flagstaff.....17

 10.2.6 And, to the Chino Valley Region.....17

 10.3 “Opportunity Triangle”.....17

 10.3.1 Air freight/commuter airport in 9.2.3.....17

 10.3.2 Railroads.....17

 10.4 Intracounty Maglev - Central to the Indian Reservations, North and South.....18

 10.5 Intercity bus service.....18

11.0 Conclusion.....18

SUGGESTIONS FOR THE STATE OF ARIZONA ADOT STATEWIDE TRANSPORTATION INITIATIVE

1.0 INTRODUCTION

This paper is submitted in answer to the invitation to Arizonans to submit comments and suggestions for the above-named initiative. Much of the proposed action would not only stimulate the economy as the end result, but would do so from inception.

- 1.1 Analysis of the ADOT Travel Time and Traffic Flow maps reveals a possible dire future. Unless Arizona (and the nation) looks beyond outdated transportation technologies of the 19th and 20th Centuries, we will rapidly become mired in a self-imposed stagnation echoing the European Dark Ages. The increased urban densities sought will achieve the current horrors of crime-ridden inner cities elsewhere in “civilization”!

As the nightmare scenario presented in the ADOT Media Kit, by the Time and Flow maps, begins to gain the attention of citizens travelling the roadways, people will begin to cry out for solutions. I applaud state efforts to alert/inform/educate and include Arizonans now, before we get there.

However, in perusing the rest of the Media Kit information, I am disappointed to see the main solutions being proposed:

1. Gather the people into urban areas; the goal denser and denser living conditions.
2. Ride bicycles.
3. Walk.
4. Use battery-powered electric vehicles that must be plugged into utility lines supplied by electricity generating plants. And, whose battery fabrication involves much energy usage, and resultant pollution.
5. Provide ultra low speed, light rail, steel wheel-on-steel rail trains - powered by utility lines supplied by electricity generating plants that pollute and/or create hazardous waste.

All being accommodations, not innovations.

- 1.2 Arizonans need to ask, “Why?” Why should we accept the necessity of abandoning the open spaces of our great state? The population is growing because of that space. People are fleeing the density of urban metropolitan areas and all the negative aspects thereof. Westward migration continues, as The American West is still largely wide, open spaces. We have a right to appreciate that space! Man was not created to emulate bees or ants! Those who crave freedom have voted with their feet by escaping human hives ever since God confounded language and scattered the conspiring rebels building the Tower of Babel!

When progress seems to have met an impasse, something new is on the horizon, by God’s grace. Rather than declaring defeat, man must press on and discover the new direction waiting just ahead. It can only be grasped and harnessed if he extends his reach.

- 1.3 Wind and Solar power without major technological breakthroughs cannot supply “green” power to the nation! (Nanotech may revolutionize solar.) There is another possibility.
- 1.4 Cutting edge technologies are not pie-in-the-sky. Some are here now - two can be utilized to take us into the future, now. A third is apparently on the horizon. At least another is in the proof stage. That future does not include herding us like frightened sheep, into urban corridors - at our own expense! If we want to live there it’s one thing, but to be forced by artificial limitations, into New York City West, is immoral and unconscionable.

- 1.4.1 A timely example is the new “Metro” light rail line in Greater Phoenix. I don’t hear the Valley news regularly, but even so, I have already heard of a number of collisions between conventional traffic and the trains since the test runs began. How about spending tax monies on a collision-safe mode of mass transit? One that is much faster, with multi-station capabilities, that could truly move the people more efficiently, safer, and much lower cost?

Yes, Metro ridership has been higher than projections during the winter snowbird season, while the economy is being decimated by bad governmental policies and doom and gloom rhetoric, when the citizenry doesn’t know what to expect from unwise energy restrictions, i.e. dependence on foreign oil and lack of oil refineries within Arizona. (And, “Cap and Trade”, about to be passed by President Obama and the U. S. Congress, will only further feed the chaos by deliberately causing energy costs to “skyrocket” for the entire nation!)

However, history has shown that free of such artificial restrictive controls, Arizonans will return to the preferred freedom of exercising the right to travel as one chooses.

- 1.4.2 That choice will always be “personal vehicle”, whenever possible. Besides the Valley weather, that’s why we live in Arizona - freedom from smothering urban environments, excessive governmental rules and regulations, and freedom to exercise the natural desire to go where one wants - when one wants. Government should encourage such desires, not quash them. How about doing so with cutting edge technologies that work with or promote the right to travel freely?
- 1.5 Wouldn’t it be fun to spread-out over the countryside with not only residences and service-related businesses, but with many types of commerce and home-based businesses and work-from-home jobs? Maybe make use of the original intent of geographical townships? Information technologies make it possible on one plane, while 21st Century transportation technologies make it possible on another.

The desire to own and drive personal vehicles can be sustained and nurtured, but with innovation. How about the positive aspects of raising children in suburbia and beyond? Bicycling and walking would be safer and more enjoyable.

- 1.6 But, I have had a real eye-opening experience while studying topographical maps of Arizona for this project. A picture is, indeed, worth a thousand declarations. It is apparent that governmentally-owned land severely restricts the directions of growth in the state. Attempts to reduce public use of those lands, further sets them apart for enshrinement - and sale to the highest foreign bidders - rather than opening up some of them for the people to spread out and improve their lives and our economic health.

A highly visible example is the Greater Phoenix and Tucson Area - soon to become a megalopolis. Occupation of the existing private lands, and necessary transportation modes are dictated by the terrain and by this governmental control of thousands of acres. (Thankfully, highways are built through these lands and not just through eminent domain-seized, private property.) The huge number of acres artificially limits growth and necessitates some of the density sought by the Growing Smarter crowd. Eastern states are not shackled by this huge landownership limitation. Hmm, and look at the density of their interstate highways compared to the West!

- 1.7 As much as possible, let's resurrect freedom of opportunity. Enhance the infrastructure with that goal in mind, and the pieces will fall together naturally. Then, "Government get out-of-the-way," and watch this state grow smart the American Way!

2.0 OVERVIEW

- 2.1 Notwithstanding the preceding comments about new technology, I do recognize that there must be orderly acknowledgment of existing commitments, and where possible, those must be honored. However, we must not use tax monies to support past-centuries' technology where better choices are available. If that means "the people" must effect changes to existing commitments, then, we must find the way to do so.
- 2.2 Arizonans' psychology of personal vehicle-based transportation must metamorphose. However, government beating us over the head with enforced rising energy costs as promised by President Obama, will not change our mindset, nor should it. We may have to comply, but the result will fall short of the true potential. Reality is the engine of true progress. Government spends the people's money, and wields power, it does not create. In appropriate instances it facilitates. Reality is that a free populace creates!

Legitimate, new technology that has heretofore been ignored or rejected will eventually gain notoriety and be welcomed. The key is to seek the new, before wasting tax monies on the old, and on that which can not yet be applied to mass usage. When nanotech solar power is feasible, that may change, but it and wind power on mass scales are pie-in-the-sky at this point. (I live where I have to use solar power with a back-up LP generator. It is wonderful for individual households, but is prohibitively expensive and I am in debt for it. It is not well-suited for mass energy supply. See 21st Century Science & Technology, Summer 2003, All You Need to Know to Prove The Renewable Energy Economy Is a Hoax, Greg Murphy; Book Review of The Solar Fraud: Why Solar Energy Won't Run the World,

Howard C. Hayden, 2001)

The people must be informed of all the possibilities when taxes will be used, and where eminent domain will take private property. (Remember the Moreland Corridor!) Given a better choice, the voters would have turned down the multibillion dollar light rail projects!

- 2.3 IBM is now advertising a breakthrough information technology system called "Petaflop" (sp.?), and traffic information systems.
- 2.4 Certain revolutionary, cutting edge, energy production technology is being proven now. It can be applied to mass transit modes in the near future, if it works as advertised.
- 2.5 Hydrogen/gasoline fuel cell technology is here, and an Arizona man has developed it!
- 2.6 Comments and suggestions are presented relative to specific area and corridor, transportation infrastructure and growth.
- 2.7 Navajo County focus, with ripple effects to the rest of the north central and central regions.

3.0 LIGHT RAIL! OR NOT?

- 3.1 Light rail is not new. It is an expensive, collision-prone, polluting - by production of the electrical power, high maintenance, obsolete technology that, along with HSR, should be rejected rather than embraced as if it is new and wonderful. They are apparently still being promoted to eke out every drop of life from traditional steel-on-steel-rail technology.

Railroads opened the West and connected the continent, serving us well for over a century. However, spending 1.4 billion taxpayer dollars for twenty miles of the same old snailrail with new, \$3,000,000., catenary-electrified, lighter-than-normal, steel wheel rolling stock, averaging twenty-two miles per hour over a steel-on-steel railroad track is simply miring Arizonans in the mud of centuries past. Regression must result in stagnation.

- 3.2 Obviously, looking toward 2050, in view of the Time and Flow maps for the Phoenix/Tucson Megalopolis, something must be done soon to reduce existing congestion and prepare for exponential increase. Precious tax dollars, time, and opportunity have been lost on light rail, but twenty miles of it are locked in for the immediate future. (However, good news - it can be integrated with the newest technology, and upgraded as necessary.)
- 3.4 Please, forgive me if I seem cynical, but realistically, how much will the twenty-two mile per hour average speed of Metro relieve the current and coming congestion? The 2009 Rand McNally's "the road atlas", gives combined population Phoenix, Mesa, and Tempe, as: 2,065,498. I am skeptical of the ability of this snailrail system to relieve the problem in a meaningful way, especially as the population continues to grow rapidly. It takes 60 minutes to travel twenty miles! I submit that the net result will actually be increased

congestion. How? Increasing need, imposition of new turn restrictions on roadways near the railroad, and by the necessary interruption of traffic flow at railroad crossings.

I didn't seek out such crossings, but on February 19, 2009, stuck in the afternoon, rush hour, power outage in Tempe, I heard news flashes warning drivers that although train traffic signals were off, the Metro trains were still running! We were told to "exercise extreme caution"! I didn't hear how much this increased congestion, nor if there were any related collisions.

- 3.5 I realize that to those regularly stuck in traffic, the idea of riding a train instead can be inviting. I have used the rails to commute! - the Long Island Rail Road, for one month in 1985. It was great compared to driving a rental car to the consulting job! But, it still took about the same time as the rental car. I had to take a taxi from my apartment to the Port Jefferson Station and back again, while a friend transported me by private vehicle between the job and the second train station. It was nice to be able to read, work, or, yes, even sleep!

But, if I lived there now, I would be campaigning for replacement of the L.I.R.R. - and not by light rail - by cutting edge technology, so that I could enjoy sleeping later in my bed, and have more time at home in the evenings, and know that energy was saved, and congestion and pollution relieved.

4.0 THE ALTERNATIVE?

I'd like to see Arizonans in the forefront of drastically improving energy efficiency, traffic congestion mitigation, and safety benefits, as mandated in United States Code, Title 23, §322. Arizonans would travel freely under these benefits with greatly reduced trip times, and air and noise pollution. For those who believe in man-made global warming - greatly reduced carbon emissions.

- 4.1 Arizonans (and winter visitors & tourists) would look forward to riding to work, shopping, medical appointments, sports, museums, concerts, travelling our wondrous state, or even family get-togethers, in mere minutes. Industrious commuters would just barely get to work on projects when they would have to stow them at their destinations. Sleepers could only take catnaps. Only high-speed readers could read an entire book. Of course, some of these trips would still require further transit modes to get to and from the stations, i.e. autos, company/business/mall/ballpark shuttles, rapid bus, taxicab, bicycle, foot power - moving sidewalks?

All while being able to freely choose to live in urban centers, suburbia, rurally, or remotely!
No New York City West in 21st Century Arizona!

- 4.2 Those travelling intercity to and from Phoenix/Tucson Megalopolis could choose to bring their cars/trucks/SUVs along to drive at will to and from the stations and their destinations!

4.2.1 I could travel from my remote, solar-powered home to the Valley (now 160+ road

miles and 3 1/2 hours, to Mesa) by driving a relatively short distance to a station, putting my vehicle on a piggyback carrier - maybe not even get out of it if I choose - and a little more than half an hour later disembark at a station in Mesa, and drive on to my destination! Reversing the process to return home. Reducing my travel time from 7 hours to about 65 minutes plus the time to and from the station!

Or, not! I could park my vehicle at my local station and use other modes in the Valley, returning to retrieve my vehicle and drive home.

Either way, using less fuel, reducing pollution and congestion, and travelling much more safely.

- 4.3 Freight in semi-trailers could be carried piggyback when possible, between terminals and distribution centers, rather than unnecessarily congesting the roadways and highways, greatly improving traffic flow and safety for all. And, moving much more rapidly, using much less fuel and drastically reducing pollution!
 - 4.3.1 Revenues would quickly pay for the system, while shipping costs would be greatly decreased.
- 4.4 Arizonans could also travel to more distant locales, such as Los Angeles and San Diego, in a little more than an hour! And, personal vehicles could be taken along.
 - 4.4.1 Arizona could be part of an integrated interstate system built to serve the nation. One proposed system would be built along existing Interstate Highway System rights of way; cover 16,000 miles and have stations within 15 miles of 70% of the populace. (Integration with the local systems would smoothly transition to urban stations.) Passengers, automobiles, and freight could be carried at about 300 miles per hour. This proposed network could also reach into the major Canadian cities, if they chose to participate.
 - 4.4.1.1 This could be done relatively quickly, with accurate education of the people, governments, planners, and administrators; a challenge to the country similar to President John F. Kennedy's met-challenge for America to put a man on the moon in less than ten years. It could be finished well-before 2025!
 - 4.4.1.2 With greatly reduced passenger and ton mile costs, and revenues from passenger and freight use, the price of building the system would be recouped in an unbelievably small number of years. Fuel use by autos and trucks would substantially decrease; power plant energy usage would be much less than for light rail. Operating costs would be substantially lower, with virtually no maintenance/repair needed on guideways and vehicles, and equipment lasting fifty years or more. People, autos, and freight would be

moved to destinations at speeds in minutes “locally”, hours regionally, and less than twelve hours across the country!

- 4.4.1.3 Private industry and investors would be happy to participate in implementing systems. Integrated with intrastate systems, every American would be free to travel faster, cheaper, safer, and more comfortably and efficiently than ever before in our history.
- 4.4.2 Other important national goals to consider could be greatly advanced, i.e.:
 - 4.4.2.1 Pub. L. 102-240, § ?, 105 STAT. 2032, (c) IDENTIFICATION OF HIGH PRIORITY CORRIDORS ON NATIONAL HIGHWAY SYSTEM. ... (16) Economic Lifeline Corridor along I-15 and I-40 in California, Arizona, and Nevada.
 - 4.4.2.2 Pub. L. 102-240, § 1106, 105 STAT. 2041, RURAL AND URBAN ACCESS PROJECTS, (a) Rural Access Projects, (2): 95. Arizona: Turquoise Trail Highway, Navajo County, Arizona.
 - 4.4.2.3 As referenced in Pub. L. 105-178, Title I, § ?, 112 STAT. 136, (d) INTERMODAL FREIGHT CONNECTORS STUDY, it is a national goal to “provide and improve service to an intermodal facility referred to in paragraph (1) and to facilitate the efficient movement of freight, including movements of freight between modes.” Also, 112 STAT. 138, (3) PRIORITY CONSIDERATION FOR CERTAIN PROJECTS. “...priority consideration to any project the cost of which exceeds \$10,000,000 on any high volume route in an urban area or a high truck-volume route in a rural area.”
 - 4.4.2.4 Goals of Pub. L. 105-178, Title I, § 103, 112 STAT. 131+. Federal-aid systems re: Interstate System and National Highway System. (b) NHS. (A) serve major population centers, international border crossings, ports, airports, public transportation facilities, and other intermodal transportation facilities and other major travel destinations; (B) meet national defense requirements; and (C) serve interstate and interregional travel.

And following, including: (c) IS (1) (C) LOCATION. (i) to connect by routes, as direct as practicable, the principal metropolitan areas, cities, and industrial centers; (ii) to serve the national defense; and (iii) to the maximum extent practicable, to connect at suitable border points with routes of continental importance in Canada and Mexico.
 - 4.4.2.5 Of particular note are references to international border crossings, regarding Mexico, and to national defense. Today (2/26/09), Governor Perry of Texas has asked for help from the federal government to combat the escalating violence crossing our border at El Paso.

4.4.2.5.1 The referenced new technology described hereinafter would greatly upgrade our ability to move troops and matériel through Arizona in defense of our state and nation. Consider today's request by Texas, with the rating Mexico has earned - tied with Pakistan as the most likely to explode into full-blown violence - and increasing incidents along the border corridor.

4.4.2.5.2 Now, today (2/27/09), there is a report of school children less than two miles from El Paso being terrorized with dead bodies outside their school in efforts to intimidate teachers to support drug cartels! Parents have pulled their children out of school all over Juarez. There is no wall or fence to protect El Paso's citizens from these horrors! Do we believe this will not spill-over from Mexico across our stretch of the border?

And, today (3/3/09), according to current news, incidents have already occurred along, and well-within, Arizona's common border with Mexico. I recall the incident when Mexican invaders attacked our National Guard on the Arizona border a couple of years ago! Phoenix has the dubious distinction of having the second highest kidnapping rate in the world, after Mexico! Much of this is by Mexican human and drug smuggling! With this horror and groups like La Raza inciting for Mexican annexation ("reclamation", according to their ilk!) of Arizona and other Southwestern States, we must become more vigilant in defense.

4.4.2.6 On a more positive note, these same changes would also meet the goals of improving the Economic Lifeline Corridor, improving tourism and travel for all, and enhancing commerce through movement of domestic and international freight. Pub. L., 205-178, § 1118 & 1119.

4.4.3 So, the above national benefits are applicable to Arizona. And, the intrastate, local, and regional lines would also contribute to the mandate of Arizona Revised Statutes, Title 28, Ch. 20, Article 10. ECONOMIC STRENGTH PROJECTS. §28-7281.
 ... 1. A project that will retain a significant number of jobs in this state or within a local authority. 2. A project that will significantly increase the number of jobs in this state or within a local authority. 3. A project that will lead to significant capital investment in this state or within a local authority. 4. A project that will make a significant contribution to the economy of this state or within a local authority.
 The cutting edge 21st Century transportation mode will achieve all of the above.

4.5 Networks could be built with less confiscation of private property than for building/widening roadways and for building steel rail lines.

- 4.6 Existing railways could be integrated, and upgraded as necessary.
- 4.7 We could even solve water scarcity by this mode of transport!

And, unless we are forced to stop using one of the substances given to us by the Creator, it could be used for coal transport as needed. (Coal supplies 50% of our power needs, and is the cheapest, most abundant power source at the moment. Coal-fired power plants can be built for \$.06, per KW, compared to \$.11, for gas or wind. However, if the new source in 2.5, above, and 8.0, below, comes online, the others will be outmoded.)

5.0 WHAT IS IT?

NEW GENERATION MAGLEV systems! With the facts widely known and embraced, they could be built now. These are NOT the magnetic levitation systems used in Germany and Japan! The newer generation technology costs much less, is more advanced, lighter weight, uses electronic high-speed switching capability, and is more versatile - allowing piggyback freight and auto transport. Using the latest information, the cost of building a Stabilized Permanent Magnet guideway alone would be about that of building one lane of freeway! It could carry twenty times that of a freeway lane. The energy crisis could be greatly alleviated and “going green” more rapidly realized, because the energy usage is so incredibly less than light rail or HSR.

- 5.1 As shown in section 4, above, a National Maglev Network would be integrated to interconnect the entire nation, thereby benefitting all of the states and their populace. However, this being an Arizona Transportation Initiative, our focus should obviously be our own state first. But, it is also important to keep in mind the bigger picture, which is, upgrading nationwide transportation in a unified manner will benefit us all.
- 5.2 Thus far, Maglev has not been utilized as it could be in America, because the U. S. Department of Transportation thought back in the 1970s, that America could depend upon automobiles, trucks, and airplanes indefinitely, and therefore we didn't need either HSR or Maglev! Enlightenment seems to have dawned in the 1990s, and Congress passed enabling legislation aimed at developing magnetic levitation technology in both high and low speed capabilities. See USC Title 23 § 322; USC Title 49 § 309; Pub. L. 102-240 § 1036; et. al.
 - 5.2.1 Currently, under implementing legislation, a high-speed MAGLEV project west of the Mississippi River, between Las Vegas, Nevada, and Los Angeles, is in process! On February 13, 2009, the application process closed for project submission to win monies allocated for a system east of the Mississippi River. The candidates are: Baltimore to Washington, D.C.; Atlanta to Chattanooga; and Pittsburgh.
 - 5.2.2 This process has taken nearly twenty years. With technological improvements of the past few years, we need to ramp-up efforts to implement Maglev under priority goals of national defense, freedom to travel, and meeting the needs of energy efficiency, speed, safety, congestion mitigation, and augmenting commerce transport.

As noted in section 4, above, including freight-carrying capabilities would achieve rapid payback of costs, inviting enthusiastic participation by private investment.

- 5.3 Systems could be sized according to location, i.e. lightest-weight, passenger-only vehicles for the densest urban corridors. Terminal stations would be strategically located to provide for transference between these and intercity systems, the latter of which will carry passengers, automobile piggyback, and semi-trailer piggyback vehicles.
 - 5.3.1 Non-mechanical technologies would eliminate switching delays, enabling multiple stops while allowing non-stops to continue at full-speed.
 - 5.3.2 Maglev guideways can be built through mountains.
 - 5.3.3 Maglev can be easily integrated with existing rail and subway systems, which can in-turn be upgraded as they age.
 - 5.3.4 Maglev will not become the only transportation mode, completely replace but with automobiles, trucks, and airplanes, will work together to achieve the most efficient and cost-effective transportation network for the foreseeable future.
- 5.4 Here in Arizona, the need for highway upgrades could be modified according to the speed with which we implement Maglev. I suggest building Maglev routes simultaneously in the areas of greatest stress now, e.g. urban systems in Central Phoenix and the Tri-Cities, along with the greater-weight-capacity systems to serve the Greater Phoenix Area, with appropriate switching and transference capabilities between the two, different, weight scale systems. It could grow toward Tucson as a similar hybrid system begins in Central and Greater Tucson, growing toward Phoenix. Further, it could be started simultaneously from west and south as described next.
 - 5.4.1 This Phoenix/Tucson Megalopolis Maglev system could be built around a main line constructed on the existing Union Pacific Rail Road from State Highway 85 in Buckeye; eastward through Phoenix to Tempe and Mesa; southeasterly to Gilbert, Higley, Queen Creek, and Magma; southerly through Coolidge to I-10 near Picacho; thence following I-10 through Central Tucson to I-19 and south to Nogales to enable greater national defense and international commerce capabilities. Multiple stops would be possible. This line would cover approximately 252 miles.
 - 5.4.1.1 A possible Maglev system can use existing railroad tracks to create a planar guideway where curve radii are acceptable. This is called: M-2000 MERRI (Maglev Emplacement on RailRoad Infrastructure), and will cost less than a standard system.
 - 5.4.1.2 High-speed electronic switching can be combined with off-line stations to allow for multiple stops, as required, without interfering with other

vehicles that don't need to slow down to stop.

- 5.5 The Interstate and National Highway Systems would be relieved, with conventional upgrade costs saved in accordance with the speed of Maglev implementation. Some routes would still require upgrade, i.e. where Maglev is not yet feasible, and, additional urban highway loops are already needed, e.g. in Phoenix and Tucson. Relief of I-8, I-10, and I-40 across the state could begin with Maglev routes following the Interstate rights-of-way where possible

(The I-40 Economic Lifeline Corridor Maglev would include routing away from the existing highway from near Kingman angling through the Black Mountains to near Java, California, across the state line.)

- 5.6 Positive aspects of Maglev transportation implementation include:
1. Energy usage is a factor of ten, or greater, better than automobiles and airplanes!
 2. Job creation.
 3. Safety, speed, comfort: no noise/vibration/turbulence, and first-class seating.
 4. Much fewer adverse affects from weather.
 5. Frequent departures carrying high passenger volumes.
 6. Scalable systems - urban, intercity, interstate, transitional.
 7. Multiple urban/suburban station capabilities with concurrent, nonstop, passage past stations.
 8. Networking using magnetic switching can be similar to internet information routing. (See 7.0, below.)
 9. Elevated guideways do not interfere with automobile, truck, or steel rail traffic.
 10. Straighter, shorter routes. Tunnelling through mountains with tunnel-boring machines. Tunnelling costs should drop with such technological advances.
 11. Guideway construction methods include prefabrication and materials improvements.
 12. Very fast recovery of initial costs through high volume revenues, especially from freight.
 13. Very low operating and maintenance costs. And, equipment will last fifty years, or more, because there is no contact friction.
 14. No air or noise pollution.
 15. Green technology.
 16. Many advantages over air travel, with much lower cost and much higher passenger volumes.
- 5.7 The standard network will eventually be enhanced with connections to the main network hubs - perhaps other special routes, by an overlay of low-pressure, ultra high speed systems, which, for example, will make travel between Los Angeles and New York City possible in one hour! (Centrifugal effects would not be an issue because the speed would still be well-under orbital velocity.) This Maglev technology is actually simpler than standard, open-air Maglev, and is also POSSIBLE NOW!
- 5.8 Maglev can also be utilized to transport coal and water efficiently and cheaply. Arizona

coal transport would benefit greatly; possibly in multi-vehicle trains. In the case of water, after inevitable negotiations between the states over rights to the Colorado River, reminiscent of the days preceding the Central Arizona Project, we will be transporting water from the Colorado, and the Lake Mead and/or Lake Powell, waterway complexes on the Colorado.

This water will be moved by Maglev multi-vehicle "trains", in special, water bladder vehicles (see Powell and Danby, below), to the Phoenix/Tucson Megalopolis, the Navajo, Hopi, and other Indian Reservations, and to other areas of the state where it is needed.

- 5.9 Magnetic levitation transport is not an unrealistic pie-in-the-sky dream from science fiction. It is the future, and WE CAN BUILD IT NOW. Arizona must step up to encourage private investment and lay claim to our share of federal transportation funding now, ahead of other states! Any investor who investigates statistics such as Powell and Danby's, on the projected payback of costs from carrying freight via Maglev, will beat a path to ADOT's door!

Please see the following:

"MAGLEV The New Mode of Transport for the 21st Century", 21st Century Science & Technology Magazine, James Powell and Gordon Danby, Summer 2003.

<http://www.21stcenturysciencetech.com/articles/Summer03/maglev2.html>

This article is the source of some of the information presented hereinbefore.

Applied Levitation, <http://www.appliedlevitation.com/>

& ... [appliedlevitation.com/technology.html](http://www.appliedlevitation.com/technology.html)

These articles are the source of some of the information presented hereinbefore.

MagneMotion, <http://www.magnemotion.com/products/maglev/main.shtml>

This article may be the source of some of the information presented hereinbefore.

GENERAL ATOMICS ELECTROMAGNETIC SYSTEMS,

<http://atg.ga.com/EMS/transportation/related-news.php>

This article may be the source of some of the information presented hereinbefore.

6.0 ADVANCED INFORMATION TECHNOLOGY

IBM's "Petaflop" (sp.?) sounds like cutting edge technology that will augment control systems in mass transportation modes, especially electrified ones - the power grid itself will also benefit. This will revolutionize everything that depends upon computer networking to function. They are also advertising traffic control system improvements we may be able to implement.

7.0 CUTTING EDGE POWER GENERATION

Dr. Randell L. Mills has developed a new chemical process for producing thermal energy at never-before-reached levels, from a non-nuclear, non-radiative source. He calls it:

BlackLight Process

The scientific community, emulating their predecessors who have ridiculed and vilified

pioneers in science numerous times in the past, has done the same to Dr. Mills. This is because he claims to have created a means of lowering the orbit of the hydrogen electron to below the heretofore sacrosanct, theoretical, baseline-energy level. The process of achieving this change releases large amounts of harnessable energy that cannot be accounted for otherwise.

- 7.1 The work has led to many practical possibilities, the most visible being harnessing the chemical reaction to produce electrical energy. This energy is cleaner - non-polluting, more efficient, and much cheaper than petroleum-based fossil fuel and nuclear power generation.
- 7.2 Independent experimental studies have recently confirmed Mills' claims. Mills heads an organization called BlackLight Power, Inc., which has recently licensed its technology to a Roosevelt County, New Mexico, Electrical Cooperative. More information can be found on the website: <http://www.blacklightpower.com>.
- 7.3 The implications of the Mills Theory are widespread and potentially world-changing. With many scientific and technological fields likely to benefit, e.g. medical, line-of-sight telecommunications, photolithography, and many more. Among these, cosmological predictions of the theory are being confirmed by independent astronomical observations.
- 7.4 Partnering BlackLight Power with Maglev transportation and existing electrified steel-on-steel rail technology would yield phenomenal results, replacing dirty and expensive electrical power generation in the near future and beyond.
- 7.5 Relevant to transportation, adding to BlackLight electrical generation the possibility of using the Process to produce high voltage batteries may prove applicable to battery-powered vehicles.

8.0 HYDROGEN FUEL CELL AUTOMOTIVE TECHNOLOGY

An Overgaard, Arizona, resident, Brian Schooley, has developed an on-demand, low-pressure, hydrogen fuel cell that is guaranteed to provide 100% or better, gain in automotive miles per gallon. He will install the system on gasoline fuel-injected vehicles only. Vehicles in which he will not install it include Turbocharged and those under warranty.

Tests performed in a 1971 Z71, four wheel drive, Chevy truck, with over 233,000 miles on it, have achieved miles per gallon efficiency increases of ~160.95%! The system uses inter-mixed conducting and negative plates in a container of water, alcohol, and baking soda, with applied electrical current achieving electrolysis and the separation of the hydrogen and oxygen molecules in the water. Fuel efficiency could be increased even further based upon the fuel cell's temperature. Mr. Schooley can be reached at: 1-928-535-9785.

Hydrogen fuel cell technology is here. Existing vehicles can be retrofitted inexpensively, now. Arizona has the unique opportunity to avail ourselves of this technological advancement ahead of the rest of the country, if we so choose.

9.0 FURTHER, POSSIBLE ROUTE IMPROVEMENTS

[In addition to the roadway specifics following, all of the areas most affected by congestion would benefit by augmentation of conventional roadway improvements as quickly as possible with Maglev systems. Other routes could be augmented as possible as we proceed into the future.]

- 9.1 In view of the aforementioned mandates to improve routes for national defense and international commerce, I suggest more improvements, besides the Maglev system following I-19, north to Tucson and beyond. These would also benefit overall state transportation needs.

To coordinate with major Western Mexico Highway 15, and also with MH 2, for commerce traffic to move faster and, again, to enhance national defense travel capabilities: north to State Highway 87, toward I-40; east on I-10, and west on I-8, to California and the Northwest. They would also relieve general congestion in the Phoenix/Tucson Megalopolis.

- 9.1.1 Build an I-19 alternate - beginning at Exit 22, and travelling from roughly parallel west of I-19, north to northwest to north to west, to join I-8, at Exit 151. It would meet other roadways to provide interchanges to further relieve congestion on I-19, I-10, I-8, State Highway 86, Indian Routes 15 & 42, and other roadways.

It would send a branch north in T10S, parallel Picacho Highway to cross I-10, turn to parallel State Highways 87, 287, & the proposed Maglev route, through Coolidge; continuing northward at Magma, diverging from the Maglev. (Or, another Maglev line could also branch northward here.)

Then, it would cross State Highway 60, east of Exit 198, turning west along the Tonto National Forest boundary to the northeast corner of Loop 202. A branch would head north, east of Usery Mountain Rec. Area near TR 281, to join State Highway 87, about halfway between Fort McDowell Road and Bush Highway. Or, it could branch northerly at near Meridian Drive along the east side of Pass Mountain to the Salt River, then northwest through the pass and to join 87, as above.

- 9.1.2 Upgrade State Highway 82, from Nogales to State Highway 90. Lay a new bypass from 82, before it veers southeastward near the corner of Coronado National Forest west of 90, to east northeasterly across 90, to northeasterly crossing State Highway 80, west of St. David, to I-10, just east of the Benson Airport.
- 9.1.3 Upgrade State Highway 80, from Douglas, northwesterly to the state line; seek upgrade of its continuation, to I-10, in New Mexico.
- 9.1.4 Upgrade State Highway 85, from Lukeville, northward to I-8. (And, on to I-10.)
- 9.1.5 Upgrade State Highway 87, with new bypasses south of Payson to east of Star Valley, and at FR 504, north to northeasterly to I-40 Exit 283, west of Holbrook.

Alternatively, seek to build a Maglev route straighter through the mountains to I-40; super-speed low-pressure tunnel would be best. Research of applicable records would determine if U. S. Patent 1111926, issued in 1941, is still in effect, regarding rights of way “for a Federal Highway under the Act of November 9, 1921 (42 Stat. 212)”. If it is, this would be helpful should the second bypass here be built. (This paragraph is drawn from the Navajo County report referenced in 10, below.)

9.1.6 Upgrade Route 95, from San Luis to I-8.

9.2 I'm sure it's obvious to ADOT that a continuation of the southern portion of Loop 202, should skirt Phoenix South Mountain Park to join I-10, as far west as feasible. Perhaps the main route could extend through the top portion of the Gila River Indian Reservation past the northwest corner of Estrella Mountain Regional Park to pass the Phoenix Goodyear Airport and join I-10, at or near Loop 303. Two feeder lines could extend from near 51st and 59th Aves. to I-10, near Exit 137, and from near 99th Ave. to I-10, near Loop 101.

9.2.1 Also, since it's named Loop 303, I assume the plan is to continue this roadway to further relieve northside congestion.

9.3 I also think that there must already be a plan to build a controlled-access loop, as possible, around Tucson, east and west, from near I-10 Exit 240, to near Exits 269 & 270, with a feeder upgrading Speedway Blvd from the west leg of the new loop, through Central Tucson to the east leg of the new loop.

Again, I'm sure that ADOT also already plans upgrades to other roadways throughout the state where it is obvious that Travel Time and Traffic Flow must be relieved.

10.0 NAVAJO COUNTY AND RIPPLE AFFECTS

In 2003, I developed some observations, opinions, and suggestions that I offered to Navajo County, during the 50-year Comprehensive Plan process. Following are condensed highlights. Although I included Maglev technology suggestions for intracounty transportation improvements, these were not applied at that time to the entire state.

10.1 As covered in sections 4 and 5, above, roadway coverage in the county and state could be augmented by two-speed, hybrid Maglev systems. (See 10.4, below.)

10.2 Plan to upgrade the Holbrook Municipal Airport to eventual international status, considering its strategic location as The Hub City on I-40, in the fast-growing, Navajo County. I note with surprise that Laughlin/Bullhead City actually has an international airport! Perhaps Holbrook's isn't as far into the future as I previously thought. (In 2003, Holbrook officials took my suggestions under advisement, but, I don't know current status.)

10.2.1 This airport is situated on sufficiently large, perfectly oriented, open, level ground,

that actually looks like it was made for a large airport. Bullhead City's looks like it is on less than two square miles. In 2003, Holbrook's Airport Manager, Mr. Alan Roes, showed me that an airport the size of Phoenix Sky Harbor International could be built on the four to six square miles within and adjacent to the Holbrook site, rather than the nine square miles being claimed at that time.

10.2.2 Looking at a regional or United States map, it is immediately obvious that Holbrook is a natural choice for an International Airport. Many tourist attractions are within driving or commuter flight distance of Holbrook. Charted on a map it is easy to see that given a large airport and accompanying Maglev, rental car, tour bus, and commuter flight services, the economy of the city and the region would be greatly benefited. The Hub feature is readily seen on a large perspective.

10.2.2.1 The reach by air to a large piece of the earth's surface would help to relieve the pressures on existing international airports in the region. Travelers could fly into or out of Holbrook on the international level while connecting with shorter flights to other local or regional locations, contributing to growth of other small regional airports.

10.2.2.2 Increased commerce, tourism, and interstate travel would result in further growth in these areas. Some of the visitors would return to visit again and many would decide to move to the area. An international airport would include booming air freight business as local businesses found shipping and receiving of materials and products greatly improved. Professionals would be more easily encouraged to relocate to the area if they knew the area served all levels of air traffic.

10.2.2.3 The proximity of I-40 and the Railways would be obvious to visiting business people, who would see the attractiveness of an area that could serve ground and air needs.

10.2.2.4 The Economic Lifeline Corridor would be enhanced by an international airport located here. Together with improvements to the ground transportation corridor between Phoenix and Holbrook referenced elsewhere herein, the nation would truly begin to see that this is an important area of the country.

10.2.2.5 This would also provide relief to the transportation corridors between the northern half of the state and the Phoenix/Tucson Megalopolis. Looking at the Travel Time and Traffic Flow maps this would give those travelling to the Valley just to get to Phoenix International Airport, or I-8 and I-10, another viable choice to travel by commuter air intrastate or outside the state. It would also relieve the Time and Flow on I-40 leaving and entering the state. The Maglev route along I-40 would relieve the entire route, and

especially the portions serving this new international airport at Holbrook. Feeder roads to I-40 would require upgrading with this airport considered in the mix, and Maglev would also help to meet this need.

- 10.2.3 As the international airport encourages commerce in the region, a smaller airport serving light air freight and commuters would be needed in the area most likely to see business growth, as addressed in 10.3, below. It could be located in Range 20E, in the area of Township 13N, Sections 1&2, and Township 14N, Sections 35&36, close to the Apache Railway and Snowflake.
- 10.2.4 Also located in Navajo County on I-40 and the Burlington Northern & Santa Fe Rail Road, the Winslow and Joseph City areas would experience growth. Joe City is close enough to Holbrook that it would become a suburb, benefitting from the Holbrook IA. Winslow has a regional airport that would also benefit the area.
- 10.2.5 It is also foreseeable, as these changes occur over the next fifty years, that reaching beyond Navajo County, the Holbrook - Joseph City - Winslow - Flagstaff region could become another megalopolis. Holbrook- to-Flagstaff, at 92 miles, is a shorter distance than that between Phoenix and Tucson - 117 miles! In fact, from Holbrook to Williams is only three more miles, at 120! And, Flagstaff has an airport of its own. However, government land could again interfere with this growth.
- 10.2.6 With a new international airport encouraging growth in the north central region of the state, the third area showing potential to grow into a megalopolis is from I-40, at Seligman southeast through the Chino Valley to Williamson Valley, Prescott Valley, and Prescott; possibly to Humboldt, Mayer, and to I-17 at Cordes Junction, if governmentally-owned land is opened to use. With Holbrook IA to the east and northeast, and Phoenix Sky Harbor IA to the southeast, highway upgrades together with Maglev, could provide the infrastructural transportation modes for such an explosion.
- 10.3 The triangular area bounded by State Highways 77, 277, & 377, with Holbrook at the apex, has been identified as having the best Navajo County potential for business growth. It is a natural business and industrial area that should be encouraged as such while not dictating against other usage. This is already beginning, with the latest new project being the Dry Lake Wind Farm. I call this area, "Opportunity Triangle".
- 10.3.1 The light air freight/commuter airport referenced in 10.2.3, above, would be located in the southern portion of this Triangle, and would support existing business while encouraging new and relocated ones.
- 10.3.2 The railroads in the county are the BN&SF and the Apache Railway. Holbrook is located on both of these lines. The latter runs southerly from Holbrook through the eastern third and southern portion of Opportunity Triangle, curving westward, with

an east/west spur toward Snowflake. This Railway provides great incentive for business. However, once again, government ownership of much of the land near the line will adversely affect growth. Many acres are set-aside for protection, a fact that reduces the overall possibilities. But, growth has continued, and further development that occurs from businesses, residences, and infrastructure such as the proposed airport, must be supported by roadways. Maglev would be a very positive asset, and is included in the system next described.

- 10.4 In the intracounty Maglev system proposed in 2003, I included possible routes laid out on a map. These ran from Winslow to Holbrook; through Opportunity Triangle; to Heber-Overgaard, Snowflake-Taylor, Clay Springs; and to Show Low and Pinetop-Lakeside. Greater distances were served by high-speed, and shorter, by low-speed Maglev. I would add to this, further Maglev systems into the Indian Reservations to the North and South.
- 10.5 Now, in February, 2009, a bus service between Holbrook and Show Low via State Highway 77, has started in the last few weeks. It is well-appreciated. I have heard comments from my neighbors that it would be very helpful to encourage such services between Heber-Overgaard and Holbrook, H-O and Show Low, and H-O and Snowflake-Taylor. This would be helpful in mitigating energy use, congestion, and pollution in the near time.

11.0 CONCLUSION

I, and many Navajo County residents have been forced by unwise oil exploration and supply policies and prohibitive fuel prices to severely restrict travel for basic necessities including: food, jobs, medical needs, mail correspondence, and modes of heating our homes, etc. In my community, out of 19 full-time households, 6 have been lost to the fuel prices - forced to move to major urban areas in and out-of-state. The rest have been sorely stressed. We feel first-hand the goal of forcing Americans to increase urban densities!

With the magnitude of the present task, I hope that ideas and observations in this paper will contribute to a journey of healthy growth augmented by wise choices. Our current and near-future means of improving and meeting our overall transportation needs are phenomenal by 20th Century standards.

Hydrogen fuel cell technology available NOW, is an inexpensive mitigator in the controversy over internal combustion, fossil fuel-powered transportation. It can provide much relief from the manipulated, high fuel prices. In Navajo County, intercity bus service can help in the near term. BlackLight Power promises to be a revolutionary supplier of electrical power to existing light rail, HSR - if implemented, and ideally, magnetic levitation projects. It may contribute to cleaner, more efficient battery sources for personal vehicles. Petaflop promises advanced computer networking support to mass transit modes. Advanced traffic control systems will contribute. Maglev will promote growth and the pursuit of happiness for all Arizonans. It is the catalyst for reaching that goal. And, let's preserve - and promote - the freedom to choose whether or not to live in dense urban centers!