March 10, 2014

TO: Members of the MAG Street Committee

FROM: Dana Owsiany, P.E., Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Tuesday, March 18, 2014 - 1:00 p.m.
MAG Office, Suite 200, Chaparral Room
302 North First Avenue, Phoenix

The next meeting of the MAG Street Committee will be held at the time and place noted above. **Please note the earlier starting time of 1:00 pm.** Committee members or their proxies may attend in person, via video-conference or by telephone conference call. Those attending video conference must notify the MAG site three business days prior to the meeting. Those attending by telephone conference please contact MAG offices for conference call instructions.

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

The next meeting of the MAG Street Committee will be held at the time and place noted above**.** If you have any questions or need additional information, please contact Teri Kennedy or Steve Tate at (602) 254-6300.

TENTATIVE AGENDA

	COMMITTEE ACTION REQUESTED
1. Call to Order For the March 2014 meeting, the quorum requirement is 12 committee members.	
2. Introductions and Attendance An opportunity for new members to introduce themselves and record member attendance at the meeting will be provided.	2. For information.
3. Approval of the January 14, 2014 Meeting Minutes	3. Review and approve the minutes from the January 14, 2014 meeting.
4. Call to the Audience An opportunity will be provided to members of the public to address the Street 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. Members of the public 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 Street Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard.	4. For information.
5. Transportation Programming Manager's Report The MAG Transportation Programming Manager will review recent transportation planning activities and upcoming agenda items for MAG Committees and other related regional transportation activities.	5. For information and discussion.
6. Arterial Life Cycle Program Project Changes Technical Review: Mesa Drive at Broadway Road The Arterial Life Cycle Program (ALCP) Policies and Procedures (Policies) approved on December 9, 2009 require Lead Agencies to	6. For information, discussion, and possible recommendation to include the proposed project change in the Draft FY 2015 ALCP.

present proposed statute projects or changes in project scope to the MAG Street Committee for a technical review and recommendation for approval through the MAG Committee Process. The City of Mesa will present a proposed project scope change to their Mesa Drive at Broadway Road project. Please refer to the attached memorandum and excerpt from the ALCP Policies. Additional information specific to this project change request will be provided at the meeting

7. <u>Enhanced NHS</u>

In June, 2012, the Congress added all locally owned principal arterial roadways to the National Highway System (NHS). In February, 2013, the MAG Regional Council requested the removal of these facilities from the NHS. Eight months later MAG was informed that this request would not be approved.

Except for intermodal connectors and STRANET routes, the NHS is to consist of an interconnected network of principal arterial roadways. Reclassifying principal arterial roadways to minor arterial status provides a justification for removing a roadway from the NHS that are principal arterial roadways.

At the meeting four approaches for addressing the NHS expansion will be discussed and possible action to recommend approval of one of these requests will be taken.

- Approach One: Take no action at this time and wait for ADOT and FHWA to develop a implementation framework,

- Approach Two: Use functional classification to reduce the size of the locally owned NHS network,

- Approach Three: Use functional classification to reduce the size of the NHS, but leave some principal arterials and request that these principal arterials be removed from the NHS,

7. For information, discussion and possible action to recommend approval of an approach to address the NHS expansion.

• Approach Four: Use functional classification to remove all locally owned roadways from the NHS.	
8. <u>Member Agency announcements</u> An opportunity will be provided for member agencies to announce issues of concern to them.	8. For information.
9. <u>Requests for future agenda items</u> An opportunity will be provide for member agencies to request future agenda items.	9. For information and discussion.
<u>Adjournment</u>	

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
STREET COMMITTEE

Tuesday January 14, 2014 1:00 p.m.
MAG Offices, Suite 300,
302 North First Avenue, Phoenix, Arizona 85003

MEMBERS ATTENDING

Dana Owsiany, Phoenix, Chair Woman
Patrick Stone for Steve Beasley ADOT
Charles Andrews, Avondale
* Jose Heredia, Buckeye
Dan Cook, Chandler
Jorge Gastelum, El Mirage
* Aryan Lirange, FHWA
Wayne Costa, Florence
Tim Oliver, Gila River Indian Community
* Michael Gillespie, Gilbert
Bob Darr, Glendale
Luke Albert for Hugh Bigalk, Goodyear
David Gu for Darryl Crossman, Litchfield Park
Bill Fay, Maricopa City
* Jack M. Lorbeer, Maricopa County
Maria Angelica Deeb, Mesa
* James Shano, Paradise Valley
Scott Bender, Pinal County
Dab Nissen for Ben Wilson, Peoria
Janet Martin, Queen Creek
* Elaine Cabrera, Salt River Pima-Maricopa Indian Community
Phil Kercher, Scottsdale
Suneel Garg, Surprise
Isaac Chivera, Tempe
* Jason Earp, Tolleson
Grant Anderson, Youngtown

* Members neither present nor represented by Proxy

OTHERS PRESENT

David Maestas, Maricopa City
Cathy Arthur, MAG
Chaun Hill, MAG
Teri Kennedy, MAG
Stephen Tate, MAG

1. Call to Order

Vice Chair Dana Owsiany called the meeting to order at 1:00 p.m. and asked for a roll call of those attending.

2. Introductions and Attendance

Ms. Kennedy briefed the Committee on new MAG quorum requirements. She noted that these new requirements indicated that if a member agency missed three consecutive meetings, the agency would not be used to determine the quorum required to hold a meeting. Upon returning to regular meetings the quorum required would be increased to reflect the member agency's attendance.

Removal of the member agency from the quorum count would not remove the agency from Committee, stop it from receiving the meeting packet, and would not affect its ability to attend and vote in future Committee meetings.

3 Approval of the December 10, 2013 Meeting Minutes

Ms. Maria Deeb moved approval of the minutes and Mr. Grant Anderson seconded the motion. The motion carried unanimously.

4 Call to the Audience

No members of the audience requested to speak before the Committee.

5. Transportation Programming Manager's Report

Ms. Teri Kennedy briefed the Committee. She noted that MAG is currently over programmed for CMAQ and STP in Federal Fiscal Year 2014, but that information from project workbooks may result in project deferrals that would free up funding to cover the shortfall or allow for project advancements or increased funding for FY 2014 programmed projects. She went on to note that information for five projects had not been received and that this information was needed.

Ms. Kennedy added that project commitment letters for federal fiscal year 2015 were due last month. Provision of signed project commitment letters is a requirement for MAG federally funded projects to continue in the TIP. If by Spring, 2014 commitment letters are not received, the offending projects will be deleted from the TIP.

Ms. Kennedy noted that MAG had developed a ranked list for MAG sub allocated urban federal transportation alternatives (TA-MAG) funding. The project applications were submitted in September and reviewed by a composite committee made up of representatives from the MAG Safety Committee, the MAG Pedestrian and Bicycle Committee, the MAG Transit Committee, ADOT and the Federal Highway Administration. The recommendation of the composite committee will be considered by the Transportation Review Committee at their next meeting.

Ms. Kennedy congratulated Litchfield Park and Maricopa County on two projects that were opened to use since the last Committee meeting.

Ms. Kennedy concluded by noting that the draft 2014-2018 TIP is available on the MAG website for review. On Thursday, December 12, 2013 there will be an ALCP Working Group meeting. It is anticipated that there will be a January 14, 2014 Street Committee meeting. All 2014 HSIP projects are due to ADOT by May 15, 2014. FY 2014 CMAQ projects are due to ADOT by June 30, 2014. Funding from projects that fail to meet these deadline will be swept.

Ms. Maria Deeb asked Patrick Stone about the ADOT Rural Summit. It was noted that all could attend, but that its focus is on rural agencies. It would have some presentations on alternative funding.

6. Air Quality Scoring of FY 2014, FY 2015 and FY 2016 Paving and FY 2014 Street Sweeper Applications

Ms. Cathy Arthur briefed the Committee. She indicated that air quality analysis was performed for all bicycle, pedestrian, street sweepers, ITS and dirt road paving projects and that MAG prepared an annual report to the FHWA on CMAQ projects.

She indicated that the scoring methodology addressed carbon monoxide, ozone and its precursors and particulate matter. This methodology uses a variety of weights and emission factors and is sensitive to project location. The score is expressed as a reduction in emissions per federal dollar programmed.

She noted that the model is implemented as a spreadsheet. She noted that street sweepers and paving projects have the best cost effectiveness scores. Scores are provided for street sweepers projects that replace existing sweepers or purchase new sweepers to increase the frequency of sweeping or expand the area to be swept.

She then discussed the methodology, noting that the replacement life required is based on standards developed in California and that the sweepers must meet certification requirements.

She then turned to discuss the paving scoring process. She noted that the process accounted for roadway paving and paving shoulders and access points. Data required includes the location, the amount of CMAQ funding, the number of segments to be paved, segment mileage, current ADT and current surface type.

The process for reviewing street sweeper and paving projects involve the Street Committee and the Air Quality Advisory Committee and are processed through MAG policy committees.

7. Second Review and Approval of Project Data Submitted for FY 2014, FY 2015 and FY 2016 Paving and Street Sweeper Applications

Ms. Kennedy briefed the Committee on written materials developed for the agenda item. She noted that the City of Maricopa and MAG staff had reviewed the paving project and determined that development in the area of the proposed project is not anticipated in the near future. The area immediately adjacent to the project is not ripe for development due to drainage issues and there are a number of vacant locations in other areas of the City ripe for development.

She continued going over the written material noting that the FHWA had indicated that MAG would need to seek a Buy America waiver for PM-10 certified street sweepers. There are no PM-10 certified street sweepers that fully meet Buy America requirements. This is not anticipated to be a problem.

Ms. Deeb asked if non federally funded features needed to meet Buy America requirements. Ms. Kennedy indicated that she would check with FHWA on the isssue.

Mr. Anderson asked about the Casa Grande paving project. She noted that Casa Grande is eligible for the funding as the area to be paved is in the PM-2.5 non attainment area.

Mr. Anderson asked if the life-span of the City of Maricopa paving project would have an adequate life-span. Ms. Kennedy noted that the property adjacent to the roadway would be delayed due to a wash in the area. It was noted that the chip seal treatments were standard in the area and had a ten-year life-span. It was noted that the FHWA had indicated that a ten-year life span is acceptable for a dirt road paving project.

Mr. Tim Oliver moved approval and Mr. Anderson seconded the motion. The motion carried unanimously.

8. Draft MAG Federally Funded Project Status Report

Mr. Stephen Tate presented on the topic. He noted that the report was developed pursuent to the MAG programming principals. He noted that the report tracked the ADOT review process. Corrections to the report should be sent to Mr. Tate.

Ms. Kennedy noted that should an agency need to request a second deferral request. The agency should contact MAG staff to initiate the process to hear second deferral requests.

Adjournment

The meeting adjourned at 2:09 p.m.

MARICOPA ASSOCIATION of GOVERNMENTS

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March 7, 2014

TO: Members of the Streets Committee

FROM: John Bullen, Transportation Planner II

SUBJECT: ARTERIAL LIFE CYCLE PROGRAM (ALCP) PROJECT CHANGES TECHNICAL REVIEW

The Arterial Life Cycle Program (ALCP) is the financial management tool for the arterial street component of the Regional Transportation Plan (RTP). Management of the program is guided by the ALCP Policies and Procedures, which were approved by the MAG Regional Council on December 9, 2009. The Policies and Procedures require Lead Agencies to present proposed substitute projects or changes in project scope to MAG Street Committee for a technical review and recommendation for approval. Pending the Street Committee approval, proposed changes will be incorporated into the draft ALCP and presented through the MAG Committee Process for a final approval.

BACKGROUND

The RTP identifies that ALCP capacity and intersection improvements may include:

(1) Widening of existing arterial streets (some of these projects will focus on intersection improvements);
(2) Extensive upgrading of facilities;
(3) Constructing new facilities on new alignments; and/or,
(4) Improving individual intersections.

Per the ALCP Policies and Procedures, updates to the Arterial Life Cycle Program or projects (scope, schedule, and budget) are required to go through the MAG Committee process, which typically involves the Transportation Review Committee, Management Committee, Transportation Policy Committee and Regional Council. Section 220 of the ALCP Policies requires the technical recommendation of the Street Committee on proposed substitute projects or project scope changes for ALCP Projects.

TECHNICAL REVIEW PROCESS

Before a project change may be included in the Draft ALCP, the Lead Agency is required to present the proposed changes to the Street Committee for a technical review. A project change summary sheet for each proposed change is required and has been attached for review. The project change form summarizes current and planned facility features, ALCP project budgets, and project cost estimates. In addition, the form requires Lead Agencies to address:

(1) the reason for and feasibility of the requested change;
(2) how the change would improve safety/mobility and reduce congestion; and,
(3) the benefit to the MAG Region.

ALCP project change requests may not include project segments completed prior to the inclusion of the project in an ALCP approved by the MAG Regional Council. Presentations to the Street Committee will explain:

(1) Why the original project was deemed not feasible,
(2) How the change would relieve congestion and improve mobility, and
(3) The new/revised project cost estimate.

Excerpts from the ALCP Policies and Procedures are attached for review. Project change forms and related materials will be provided at the meeting. For further information or questions, please contact me at jbullen@azmag.gov or at (602) 254-6300.

ARTERIAL LIFE CYCLE PROGRAM POLICIES AND PROCEDURES EXCERPTS

The Arterial Life Cycle Program (ALCP) Policies and Procedures approved by the MAG Regional Council on December 9, 2009 require Lead Agencies to present proposed substitute projects or changes in project scope to MAG Street Committee for a technical review and recommendation before the request will be presented through the MAG Committee Process for approval. Key excerpts from the Policies regarding the program, proposed substitute projects, and changes in project scope are provided below. The complete version of the ALCP Policies and Procedures may be downloaded from the MAG website at: http://www.azmag.gov/Projects/Project.asp?CMSID2=1065&MID=Transportation.

SECTION 100: PROGRAM OBJECTIVES

A. The ALCP has five key objectives:

1. Effective and Efficient Implementation of the RTP: Facilitate the effective and efficient implementation of the arterial component of the RTP. In support of this objective, the Program should:
   a. Ensure Projects are implemented in a manner consistent with the RTP, including any updates or amendments;
   b. Include the means to track Project implementation against requirements established in the RTP and the ALCP; and,
   c. Be administratively simple.
2. Fiscal Integrity: Ensure the fiscal integrity of the regionally funded arterial component of the RTP. In support of this objective, the Program should:
   a. Establish comprehensive financial and reporting requirements for each Project; and
   b. Coordinate with the RTP and the other modal programs on key financial, accounting and reporting policies, procedures and practices.
3. Accountability: Provide the means to track and ensure effective and efficient Project implementation. In support of this objective, the Program should:
   a. Employ comprehensive Project Agreements, or other legal instruments, that detail agency roles and responsibilities in the implementation of specific Projects; and
   b. Provide the means within each Project Agreement, Project Overview and Project Reimbursement Request to track Project implementation, performance and successful completion of individual Projects and the Program.
4. Transparency: Provide members of the public, elected officials, stakeholders, participating agencies and others with ready access to information on the Program and on each Project. In support of this objective, the Program should:
   a. Include substantial public and stakeholder consultation as part of the implementation process for each Project; and
   b. Require that material changes to Projects in the Program be subject to public and stakeholder consultation through the MAG Committee Process as well as any other consultation processes, including within the community or communities affected, as specified in the associated Project Agreements.
5. Compliance: Comply with all applicable federal, state and local requirements in the implementation of Projects.

B. Consistency with the RTP generally means that an ALCP Project meets Project the eligibility requirements specified in Section 300, the Project regional reimbursement is fiscally constrained, and the reimbursement is in the original RTP phase.

C. The Program must be flexible and allow adjustments as needed in support of meeting the key objectives.

SECTION 200: PROGRAMMING THE ALCP

A. The RTP establishes regional funding limits, reimbursement phases, as well as general scopes and priorities for all ALCP Projects.

C. Programming of Projects funded by the ALCP must be consistent with the ALCP Program and the ALCP Policies and Procedures. The Maricopa Association of Governments (MAG) is the agency designated by law to implement the Arterial Life Cycle Program ensuring the estimated cost of the program improvements does not exceed the total amount of available revenues.

1. Initially, Projects will be programmed based on the regional funding specified in the RTP plus local match contributions, as well as scopes and termini as described in the RTP.

    a. In order to support the development of Project Agreements that include a scope and schedule for each Project, programming of each ALCP Project shall include a separate scoping or design phase that precedes right-of-way acquisition and construction, unless otherwise agreed to by MAG. Environmental clearances may be funded as part of the scoping or design phase.

SECTION 210: UPDATING ALCP PROJECTS IN THE ALCP

A. All ALCP Projects will be updated annually (refer to Section 200C.2).

B. Any necessary changes to an ALCP Project must be submitted by a written request stating the new updated schedule and budget and any other necessary justifications.

1. Requests will be approved through the MAG Committee Process by the approval of the ALCP.

2. Update forms will be provided by MAG.

SECTION 220: TYPES OF ALCP PROJECT UPDATES

E. If an original ALCP Project is deemed not feasible, a substitute Project may be proposed for substitution in the same jurisdiction as the original Project.

1. The Lead Agency may propose a substitute Project that would use the regional funds allocated to the original Project. The substitute Project shall relieve congestion and improve mobility in the same general area addressed by the original Project, if possible.

2. Substitute projects may not be completed prior to inclusion in the Arterial Life Cycle Program.

3. The Lead Agency must submit a written request to MAG. The written request must include:

    a. Justification, such as a feasibility study, level of service justification, or other documents explaining why the Project is deemed not feasible, and the description of steps to overcome any issues related to deleting the original Project from the ALCP and RTP.

    b. How the proposed project would relieve congestion and improve mobility;

    c. The proposed substitute project budget and schedule; and,

    d. MAG Staff will work with jurisdictions on a case-by-case basis to ensure proper justification.

F. An original ALCP Project can change its original Project scope due to environmental issues, public concerns, costs and other factors.

1. The Lead Agency must submit a written request to MAG. The written request must include justification, such as a feasibility study, level of service justification, revised budget and/or other documents explaining why the change to the original Project is required, and the description of steps to overcome any issues related to changing the original scope of the ALCP Project.

    a. MAG Staff will work with jurisdictions on a case-by-case basis to ensure proper justification.

2. The scope change should relieve congestion and improvement mobility in the same area addressed by the original planned Project, if possible.

3. Project scope changes may not include completed portions of a project or project segment, which are not included in an Arterial Life Cycle Program approved through the MAG Committee process.

G. All requests to change original ALCP project scope or a substitute a project in the ALCP must meet all requirements established in Sections 200, Section 210, and Section 220.

1. Before being approved through the standard MAG Committee Process, the requests will be presented by an employee of the Lead Agency to the MAG Street Committee for a technical review and recommendation. The presentation will address:

   a. The reason(s) the original project was deemed not feasible;

   b. Explain how the change the original ALCP project scope or substitute project would relieve congestion and improve mobility;

   c. The new/revised project cost estimate; and,

   d. And other information as requested by the MAG Street Committee.

2. After the Streets Committee technical review and recommendation on the proposed changes, the project(s) will be approved through the MAG Committee Process.

3. Requests to change original ALCP project scope or substitute a project must be made by the deadline established in the ALCP Schedule published annually in the MAG Transportation Programming Guidebook.

4. Reimbursements for substitute projects will:

   a. Be programmed in the same fiscal year(s) as the original project

   b. Be programmed with the same funding amount and type as the original project.

SECTION 320: PROJECT ELIGIBILITY

A. To be funded or constructed under the ALCP Program, Projects must:

1. Have a scope, budget (including amounts of regional funding and local match contributions) and a schedule consistent with the Project as included in the RTP, ALCP, and as appropriate, the TIP. In addition, Projects must be consistent with federal requirements, where applicable.

2. Be considered new in keeping with voter expectations, and as such:

   a. Cannot include costs for any pre-existing, programmed or planned element or improvement that is not part of the specific improvement Project described or included in the RTP as of November 25, 2003 or later.

   b. Cannot have started design, acquired right-of-way or started construction before the date specified in Section 340 or the date of the Project addition to the RTP.

B. Facilities eligible for improvements under the ALCP include:

1. Major arterials as defined in Appendix A. Major arterials include:

   a. Roadway facilities on the regional arterial or mile arterial grid system;

   b. Roadway facilities that connect freeways, highways or other controlled access facilities; and,

   c. Other key arterial corridors.

2. Intersections of eligible major arterials.

C. All Projects must be designed to the standards agreed to by the designated local jurisdictions and the Lead Agency established in the Project Agreement.

1. The agreed standards, which may be higher than the standards used in the local jurisdiction(s), must be specified or referenced in the Project Agreement.

2. Standards for multi-jurisdictional Projects should be consistent to the extent feasible.

D. Reimbursable items for regionally funded Projects are limited to:

1. Design, right-of-way and construction, as required in ARS: 28-6304(C)(5) and ARS: 28-6305(A). Design Concept Reports, planning studies and related studies, such as environmental and other studies, are also eligible.
2. Capacity Improvement Projects.
3. Safety Improvement Projects.
4. Projects or components directly related to capacity and safety improvements, including:
   a. Intelligent Transportation Systems (ITS);
   b. Signals;
   c. Lighting;
   d. Transit stops and pullouts, as well as queue jumper lanes, for example, for bus rapid transit;
   e. Bicycle/pedestrian facilities integral to the roadway, including wide sidewalks separated from curbs;
   f. Utility relocations, including under grounding of utility lines where required for safety or other reasons relating to function, and not purely for aesthetic reasons, and not otherwise considered an enhancement;
   g. Drainage improvements for the Project (with limitations), such as retention basins required for the Project that would not normally be handled through County or other drainage funds, within reasonable limits (and generally not exceeding typical practice for the local jurisdiction);
   h. Landscaped medians, shoulders, and other improvements within reasonable limits (and generally not exceeding typical practice for the local jurisdiction);
   i. Reconstruction Projects, as identified in or supported by the RTP and as specified in Project Agreements, for eligible Project elements;
   j. Access management;
   k. Rubberized asphalt and concrete paving;
   l. Staff time directly attributable to Project; and,
   m. Noise, privacy and screen wall, and other buffers, if found to be necessary to meet applicable local, state or federal standards.

E. Notwithstanding findings or recommendations from the Design Concept Report or a similar study, Projects, Project components or other costs that are not reimbursable from the ALCP include:

1. Enhancement Projects or enhancement components of Projects.
2. Right-of-way not used by the ALCP Project, with potential exceptions on a case-by-case basis for land that is identified by the Lead Agency and/or the local jurisdiction or jurisdictions as not marketable for sale.
3. Any Project or Project element that exceeds the reasonable limits or typical practice for the local jurisdiction in which the Project or Projects are located.
4. Administrative overhead costs by the Lead Agency and other agency(ies)/jurisdiction(s) listed in the Project Agreement that are not attributed to the Project.
5. Other expenses, such as bad debts and lump-sum incentives, as determined by MAG.
6. Expenditures that occur after a project or project segment is completed. This includes salaries, applied overhead, record keeping and facility maintenance.

7. Salaries and other administrative expenditures pertaining to the completion of ALCP Project Requirements.

F. The use of federal funds or other funding sources may involve further restrictions on the use of funds or eligible matching contributions.

K. The MAG Committee Process has the final determination on the eligibility of any Project or Project component for reimbursement from the ALCP Program.

APPENDIX A. GLOSSARY AND ACRONYMS

Major Arterial	"an interconnected thoroughfare whose primary function is to link areas in the region and to distribute traffic to and from controlled access highways, generally of region wide significance and of varying capacity depending on the travel demand for the specific direction and adjacent land uses." (ARS 28-6304(c)(5))

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March 9, 2014

FROM: Stephen Tate, Transportation Planner

TO: Members of the MAG Street Committee

SUBJECT: PROPOSED CHANGES TO LOCALLY OWNED NHS FACILITIES IN THE MAG URBAN AREA

In February, 2013, the Regional Council acted to request through ADOT that most member agency owned roadways on the Principal Arterial System (PAS) be removed from the National Highway System (NHS) without changing the functional classification of these facilities. This action was based on the following:

- Membership on the NHS carried substantial, unfunded regulatory burdens and data collection obligations,
- Reclassification roadways is not required to remove them from the NHS and,
- An understanding with ADOT and FHWA staff that removal of these facilities was an urgent matter needing expedited action.

Approximately eight months after the Regional Council action, MAG was informed the request would not be approved. Moreover on May 23, 2013, FHWA updated its NHS guidance to indicate that the "FHWA would not approve a request to remove all the recently added principal arterials ..." and that any "request would have to be based on valid reasons that would not subvert the mandate of Congress."

In light of this change in guidance, additional research into avenues for modifying the NHS, the role of functional classification and NHS designation in federal legislation and a survey of other MPOs and State DOTs, the following four approaches for addressing the NHS expansion are offered for consideration:

- Approach One: Take no action at this time and wait until ADOT and FHWA develop a framework for implementing the NHS requirements on member agency roadways (Map 1).

- Approach Two: Reduce locally owned NHS facilities to a small principal arterial network that meets FHWA criteria (Map 2).

- Approach Three: Reduce the principal arterial network to a small network that meets FHWA criteria and request that roadways on this network be removed from the NHS. Arterials not on

this network would also be removed from the NHS as they are not principal arterial roadways (Map 3).

- Approach Four: Request the re-classification of all member agency principal arterial facilities to minor arterial status, thereby removing these roadways from the NHS (Map 4).

Approach Two is recommended as it is feasible, addresses problems with the federal functional classification and reduces burdens associated with NHS designation. It also exposes the MAG region and member agencies to less risk of federal funding loss should NHS designation and principal arterial classification play a larger role in future federal legislation. The other approaches of addressing the NHS either do not address the issue or are of questionable feasibility.

Background

In June, 2012, the Congress expanded the National Highway System (NHS) to include all roadway facilities that are part of the federal Principal Arterial System (PAS). This system accounts for approximately forty-six percent of all urban roadways that are classified as arterial roadways[1] and fifty-four percent of all arterials in the MAG urban area. In the MAG area approximately 900 miles of member agency roadways were added to the NHS.

MAG was contacted by the local office of the Federal Highway Administration (FHWA) and ADOT in November, 2012 and was requested to review agency member owned facilities on the PAS in the MAG urban area and to where appropriate request the removal of these facilities from the NHS. It was understood that action should be taken by January, 2013.

In December, 2012, a proposal to remove member agency roadways from the NHS was reviewed through the MAG Committee process. This review included a documentation of regulations governing NHS facilities (See Attachment 1).

In February, 2013, the Regional Council acted to request through ADOT that virtually all member agency owned facilities on the Principal Arterial System (PAS) be removed from the NHS. This action did not include a request to reclassify member agency principal arterials to minor arterial status.

Approximately eight months after the Regional Council action, MAG was informed by ADOT and FHWA that the request to remove facilities from NHS would not be approved. On May 23, 2013, FHWA had updated its NHS guidance to indicate that the "FHWA would not approve a request to remove all the recently added principal arterials ..." and that any "request would have to be based on valid reasons that would not subvert the mandate of Congress."

Ways to Modify the NHS

In the Code of Federal Regulations, the PAS and NHS are distinct systems with the headquarters office of the FHWA having the authority to approve modifications to the NHS and the local offices of the FHWA

[1] Based on Tables HM-20 and HM-71, Highway Statistics, 2011 (FHWA)

having the authority to approve changes to federal functional classification. Except for intermodal connectors and STRANET facilities, all facilities on the NHS are required to be part of the PAS, hence a re-classification of a facility to minor arterial would result in the removal of the facility from the NHS.

To remove roadways from the NHS, MAG would prepare a map and list of roadways to be re-classified to minor arterial and transmit the request to ADOT. ADOT would review the request and as appropriate modify the request and transmit it to the Arizona office of the FHWA. The Arizona office would then review and as appropriate approve the changes. Except in cases where the facility is deemed to be an intermodal connector route or the facility is on the STRANET, reductions in classification would result in the removal of facilities from the NHS.

However, it should be noted that the May guidance does say with regard to removing an NHS route that was added as part of MAP-21 that "Circumvention or avoidance of Federal requirements that apply to a Federal System road is not a valid justification for its removal." Hence, care should be taken to avoid the appearance of circumventing Federal requirements should reclassification be used as a way of removing roadways.

A second way of removing routes from the NHS would be to request through ADOT that the headquarters office approve the removal of roadways. This request would as indicated by the May 23, 2013 guidance need to include a "justification that the "national transportation characteristics" of the NHS would be preserved … discuss the reasons for requesting the deletion and the possible effects that deleting the route from the NHS might have on other existing NHS routes that are in close proximity." The headquarters office would address changes "on a case-by-case basis."

This guidance is rather vague, but based on its use of terms such as "case-by-case basis" and "deleting the route", suggests that this method can be used to remove individual roadway segments from the NHS. On the other hand, removing whole networks of roadways seems problematic, particularly if one takes into account language in other parts of the guidance that refer to subverting "the mandate of Congress" and possible concerns about appearing circumvent federal requirements.

Funding Impacts of Minimizing the NHS

The NHS and to a lesser extent the Principal Arterial System are identified in federal legislation and regulation as the Nation's most important roadways. They include the Interstate System and all roadways that are identified as freeways in the federal functional classification system. Approximately 60 percent of all federal highway funding is targeted for NHS facilities.

Inclusion of member agency roadways in the NHS does raise importance of these facilities and makes them eligible to receive National Highway Performance Program (NHPP) funding. However, programming control of NHPP funding resides with the State DOT and priority for this funding clearly resides with the Interstate and other State Highway facilities. At the current time, no additional federal funding is likely to be received by member agencies for the NHS facilities that they own.

At this time, the status of federal transportation funding is in question with the Highway Trust Fund projected to be insolvent before the end of the year and Congress considering re-authorization of the surface transportation act.

Should Congress be able to adequately address the funding question, it is anticipated that minimizing the NHS in the MAG area would have little or no funding impacts. The direction of federal surface transportation legislation since at least 1991 has been to distribute federal highway funds to the States based on state contributions to the Highway Trust Fund and to allow the States considerable flexibility to flex funding between modes and highway systems. MAP-21 for example increased State flexibility by allowing State DOT to flex funds between NHPP and STP.

On the other hand should Congress not be able to adequately address the funding question, we would be in completely uncharted waters. Minimizing the NHS in such a circumstance could be undesirable as it might signal that the roads to be removed are unimportant and reduce the ability of the MAG area to complete for funding with other urban areas that would have much larger NHS networks. It should be stressed that a failure of Congress to address the funding issue is highly questionable and that if there were funding shortfalls that the Interstate System would probably have first priority for funding.

Regulatory and Data Collection Impacts of Minimizing the NHS

NHS designation carries with it numerous regulatory burdens as identified in the Code of Federal Regulations. These include, but are not limited to:

- All new construction must meet ASSHTO standards
- Design exceptions must be approved by the FHWA
- Crashworthy roadway hardware is required
- An independent assurance program is required
- The FHWA must be provided with a materials memo upon project completion
- There are limitation on the use of warranties
- Increased FHWA oversight and possible loss of certification acceptance for agencies using federal funding on NHS facilities

In addition, the State DOT is required to collect on annual basis International Roughness Index data and to collect regular traffic counts and classification counts on NHS roadways. This data is to feed into statewide asset and performance management system that is to have well defined performance standards. Should these standards not be achieved the State DOT may be subject penalties.

On their face these requirements are onerous; however, the devil is in the details. To be implemented for locally owned NHS roadways, the State DOTs and the local offices of the FHWA needed to develop implementing policies and rules. Similarly, rules for State asset management systems need to be developed. Until these rules and policies are in place, it is not fully clear what additional burdens the enhanced NHS will have on the States and local governments.

To date only the Oregon DOT has developed clear rules for locally owned NHS facilities. These rules focus on new construction and rely on a survey to verify compliance with NHS requirements. Certification Accepted Agencies retain their ability to manage federally funded projects on NHS facilities they own. Discussions with Oregon DOT officials indicate that they do not see the expansion of the NHS as a significant problem.

Likewise discussions with California DOT, CalTrans, indicate that it does not see the NHS expansion as major problem. Moreover, staff from the Southern California Association of Governments (SCAG) has indicated that their local office of the FHWA has indicated that they should not be concerned about the impacts of the NHS expansion. California has over 5,000 miles of locally owned NHS roadways, by far the largest number in the Nation.

Impacts of Reclassifying Roadways to Minor Arterial

Most roadways would be removed from the NHS by reclassifying them as minor arterials. This would not affect the eligibility of these roadways for all major federal funding programs except for NHPP funding. Thus reclassified roadways would retain eligibility for following funding categories: STP, HSIP, CMAQ and Transportation Alternatives Program (TA).

The reclassification of roadways to minor arterial would not affect member agency data collection for HPMS as their submittal of HPMS data is strictly voluntary. However, it would benefit ADOT as ADOT is the responsible party for HPMS data collection and has been severely challenge in collecting this data. These requirements include semiannual IRI data collection and a traffic data collection methodology that if rigidly enforced would require ADOT to establish a number of permanent traffic count stations.

The Principal Arterial System (PAS) in the MAG urban area includes approximately 900 miles of locally owned roadway. This system does not closely align with federal functional classification guidelines. Many principal arterials are spaced only a mile apart, there are many cases of stub ending and the traffic volumes of these roadways may be insufficient to justify inclusion in the PAS.

At the National level, federal functional classification is the lens through which the transportation system is seen. It is used by the FHWA to organize federal highway statistics and to track, monitor and report on the performance of the transportation system and specific sub elements. The PAS, in particular, is modelled in the Highway Economics Requirements System (HERS) to produce reports to the Congress on the performance and status of the Nation's highways.

MAP-21 and its predecessors have increasingly focused on performance measures and asset management system requirements. Presumably, a functional classification system that substantially misrepresented the functional characteristics of roadways could have adverse impact on how federal policy is developed and applied to MAG area. An example of this may be the expansion of the NHS to include roadways that are classified as principal arterials, but that do not meet the requirements of the PAS.

Reconsidering the NHS Removal Action

The February, 2013 Regional Council action to request the removal of member agency roadways from the NHS was fast tracked on the assumption that the impacts of NHS designation were clear and onerous, and that nationwide, State DOTs and MPOs would be moving rapidly to remove locally owned facilities from the NHS. These assumptions have proven false.

What is clear from the preceding analysis is the following:

- The exact regulatory and data collection of the NHS expansion will not be known until the States and the local offices of the FHWA develop rules and policies for implementing NHS requirements.

- Roadways cannot be removed from the NHS simply to avoid or circumvent federal requirements.

- Roadways can be removed from the NHS as part of a process to bring roadways into line with Federal functional classification guidelines.

- The reclassification of roadways will not affect the ability of agencies to receive federal funding other than NHPP funding and would reduce ADOT's HPMS data collection burdens.

What is not clear is how changes to the NHS and functional classification will play out in future federal legislation and policy development. If the federal funding issue is resolved and Federal functional classification plays little or no role in the development of performance and asset management policies, little or no impacts will result from reductions in the size of the NHS and the Federal functional classification system.

The following sections detail four alternative approaches for addressing the NHS expansion.

Approach One – Make no changes to the NHS

The MAG region could decide to wait until ADOT and the Arizona office of the FHWA actually develop implementing policies for the NHS. Nationwide this wait and see approach appears to be the dominate one as nowhere do we see MPO's or States moving to remove locally owned principal arterials from the NHS.

This approach is predicated on the following:

- It is not clear that expansion of the NHS is a problem for member agencies.

- Discussions with the Oregon and California DOT and other MPOs make it clear that state-by-state implementing rules for implementing NHS requirements on local roadways will need to be developed.

Approach Two – Reduce the NHS in the MAG area to a much smaller network

At the request of MAG staff, ADOT developed and presented to the Street Committee a reduced roadway network of principal arterial roadways that was intended to comply with federal functional classification guidelines. With the following modifications, this network could serve as a reduced, locally owned NHS network in the MAG urban area (See Map X):

- Remove the section of Country Club Drive/Arizona Avenue between the 202L Red Mountain and the 202L Santan. This section was apparently only included because it was part of the NHS prior to the NHS expansion.

- Replace the section of Indian School Road between SR51 and 101L with a section routed primarily along Camelback Road from SR51 to 101L. The section of Indian School Road through Scottsdale is not considered to be a major roadway.

Arguments in favor of reducing the NHS network to this smaller network are as follows:

- The reduction could be implemented through the auspices of ADOT and the local office of the FHWA as a correction to the functional classification of roadways in the urban area and not as a circumvention or avoidance federal requirements.

- The number of miles of roadway that would be subject to increased regulation as a result of NHS designation would be reduced from xx miles to xx miles.

- ADOT data collection requirements for both HPMS and the NHS mandated asset management system would be greatly reduced.

- Member agencies and the MAG region would retain some miles on the NHS and principal arterial system should future federal legislation or policy development use these for funding purposes.

- The functional classification of principal arterials in the MAG area would be brought into line with federal functional classification guidelines, thereby ending the long standing overuse of this classification in the MAG area.

Approach Three – Reduce the principal arterial network and request to remove these from the NHS

A third approach would be to reduce the principal arterial network to that defined in Approach Two and to request the removal of all locally owned roadways on this network from the NHS. The Pima Association of Governments has a pending request to do something similar to this in the Tucson urban area.

The benefits of this approach are similar to that of Approach Two, but include the additional benefit of removing all regulatory and data collection burdens from NHS designation. On the other hand, it does

expose the region to loss of federal funding should future federal legislation or policy focus funding on the NHS.

The main problem with this approach is that the authority to remove NHS designation from principal arterials resides with the headquarters office of the FHWA. It is the position of this office that the Congress intended to add all principal arterial roadways to the NHS. The roadways that would remain classified as principal arterials under Approach Three would meet FHWA guidelines for principal arterials. If the roadways to be removed from the NHS both meet principal arterial functional classification criteria and are classified as principal arterials, how can the headquarters office of the FHWA approve their removal from the NHS without violating its own assertion that it was the intent of Congress to add all principal arterials to the NHS?

Moreover, the request to remove the remaining principal arterials in Approach Three from the NHS would both appear and, in fact, would be an attempt to circumvent or avoid NHS requirements. This is action is prohibited by guidance from the FHWA headquarters office.

Should the headquarters office decide to not approve the removal the remaining principal arterial roadways in Approach Three, the approach would be no different from Approach Two.

Approach Four – De-classify all locally owned principal arterials, thereby removing them from the NHS

A final approach would be to request that all locally owed principals be re-classified as minor arterial. This approach would could be implemented through the auspices of the local office of the FHWA, but would require the local office to miss classify roadways as minor arterial and require the local office to turn a blind eye to the real reason for the request. Should the local office approve the request it would appear to be in clear conflict with the headquarters office of the FHWA.

This Approach would eliminate all member agency regulatory and data collection burdens resulting from NHS designation and would greatly reduce ADOT HPMS data collection requirements. It could also expose member agency to risks of funding loss should future federal legislation and policy focus on the NHS and principal arterial system.

Recommendation

Approach Two is recommended as it is feasible, addresses problems with the federal functional classification and reduces burdens associated with NHS designation. It also exposes the MAG region and member agencies to less risk of federal funding loss should NHS designation and principal arterial classification play a larger role in future federal legislation.

Approach Three is not recommended as it does not appear to be feasible and in all likelihood would reduce to Approach Two. Approach One is also not recommended as it simply prolongs the question of what to do about the NHS. Approach Four is not recommended as it does not appear feasible.

Proposed National Highway System Changes - Approach One

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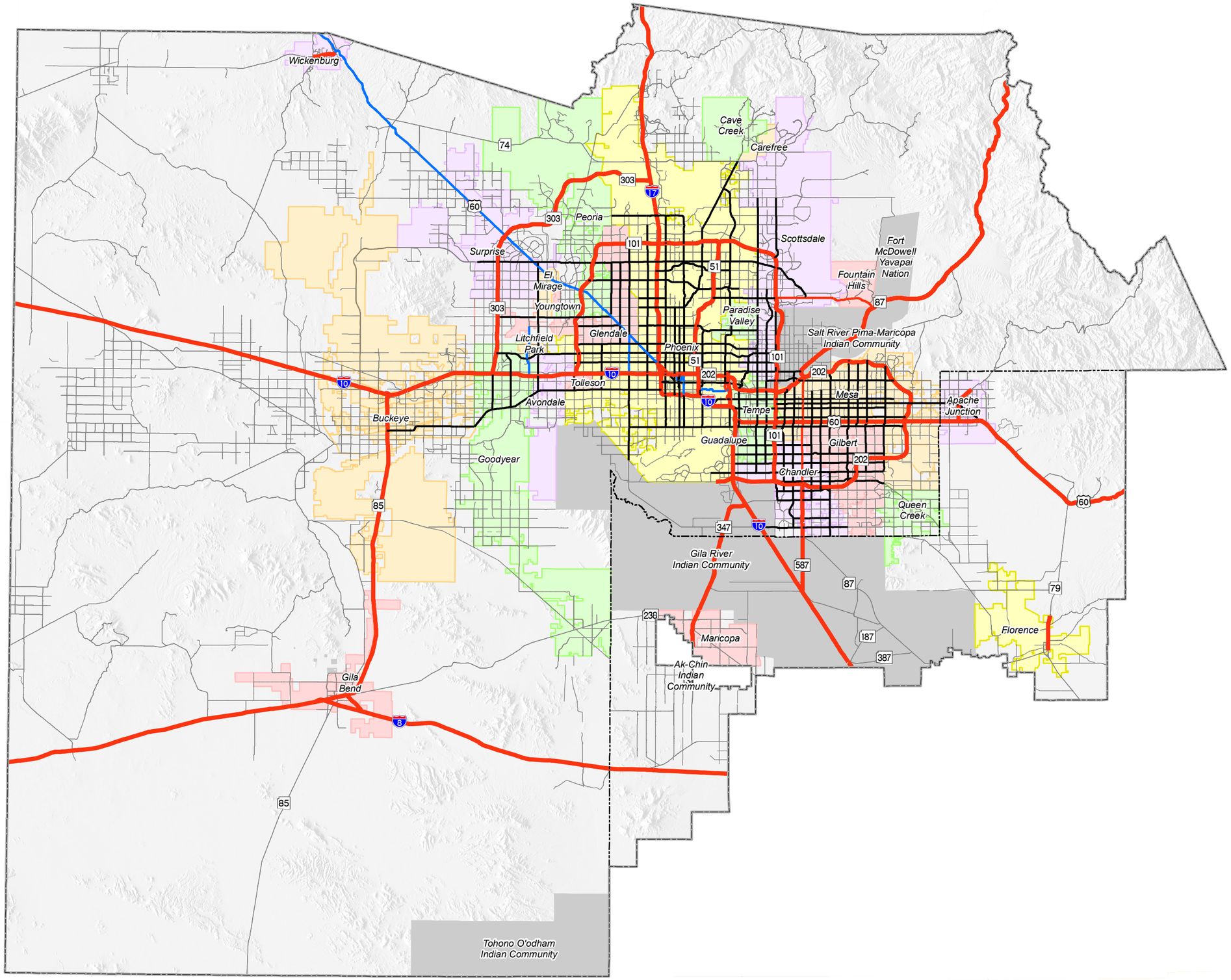

ADOT Owned NHS routes

Locally Owned Pre-MAP-21 NHS routes

STRAHNET and Intermodal

Local Principal Arterials

Non-NHS

Metropolitan Planning Area

County Boundary

Indian Communities

NHS Mileage in MAG Region

State: 729.8 miles
Local: 888.9 miles
STRAHNET and Intermodal: 17.8 miles
Pre-MAP-21 NHS routes: 24.5 miles
Principal Arterials: 846.6 miles
Total: 1618.8 miles

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

N

0 10 20 30 Miles

Source: Maricopa County Elections (Cities)

Date: March 2014

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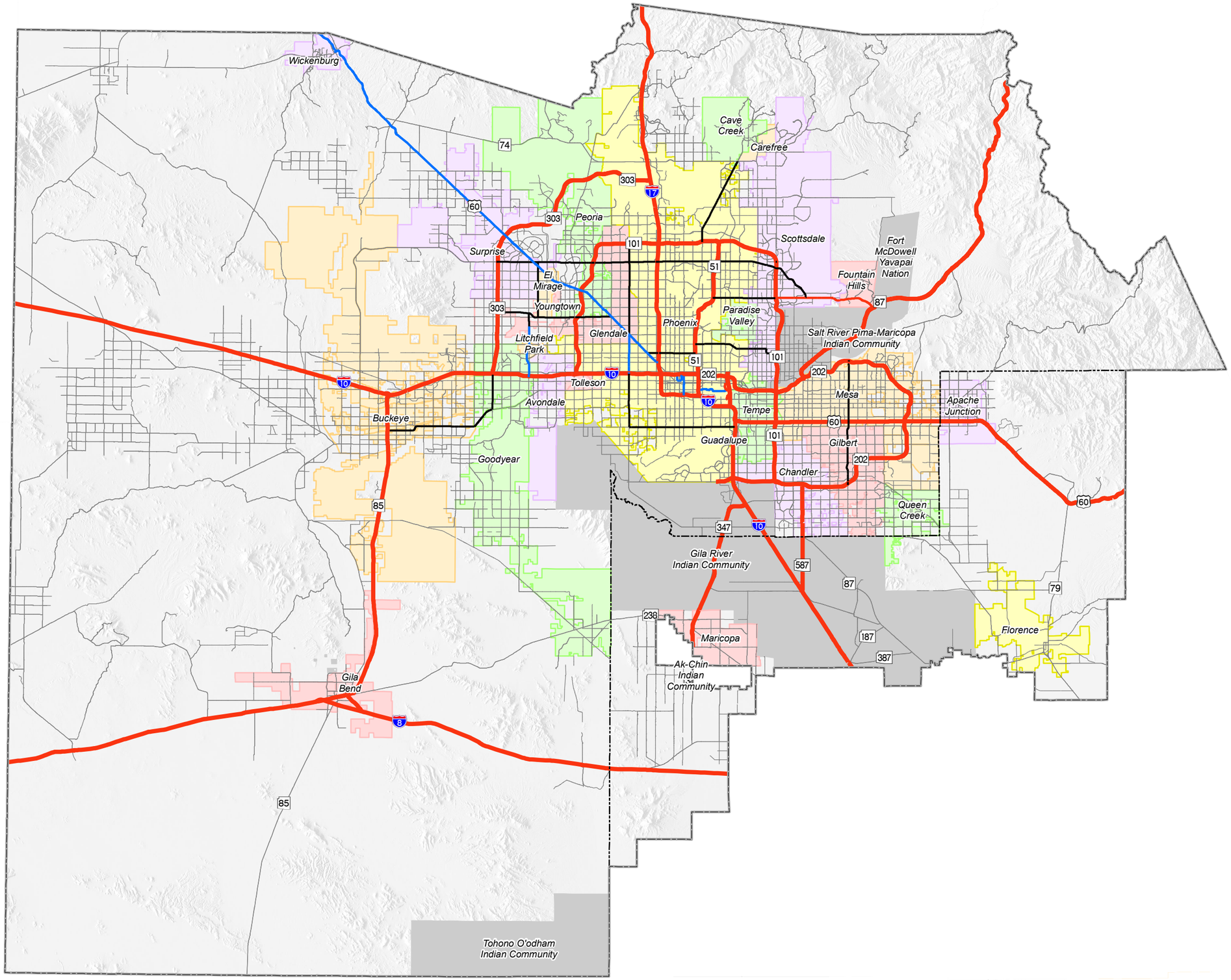
Proposed National Highway System Changes - Approach Two

MARICOPA ASSOCIATION of GOVERNMENTS



ADOT Owned NHS routes

Locally Owned Pre-MAP-21 NHS routes

STRAHNET and Intermodal

Local Principal Arterials

Non-NHS

Metropolitan Planning Area

County Boundary

Indian Communities

Proposed NHS Mileage in MAG Region

State: 716.9 miles
Local: 172.3 miles
  STRAHNET and Intermodal: 17.8 miles
  Pre-MAP-21 NHS routes: 13.5 miles
  Principal Arterials: 141 miles
Total: 889.2 miles

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

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Source: Maricopa County Elections (Cities)

Date: March 2014

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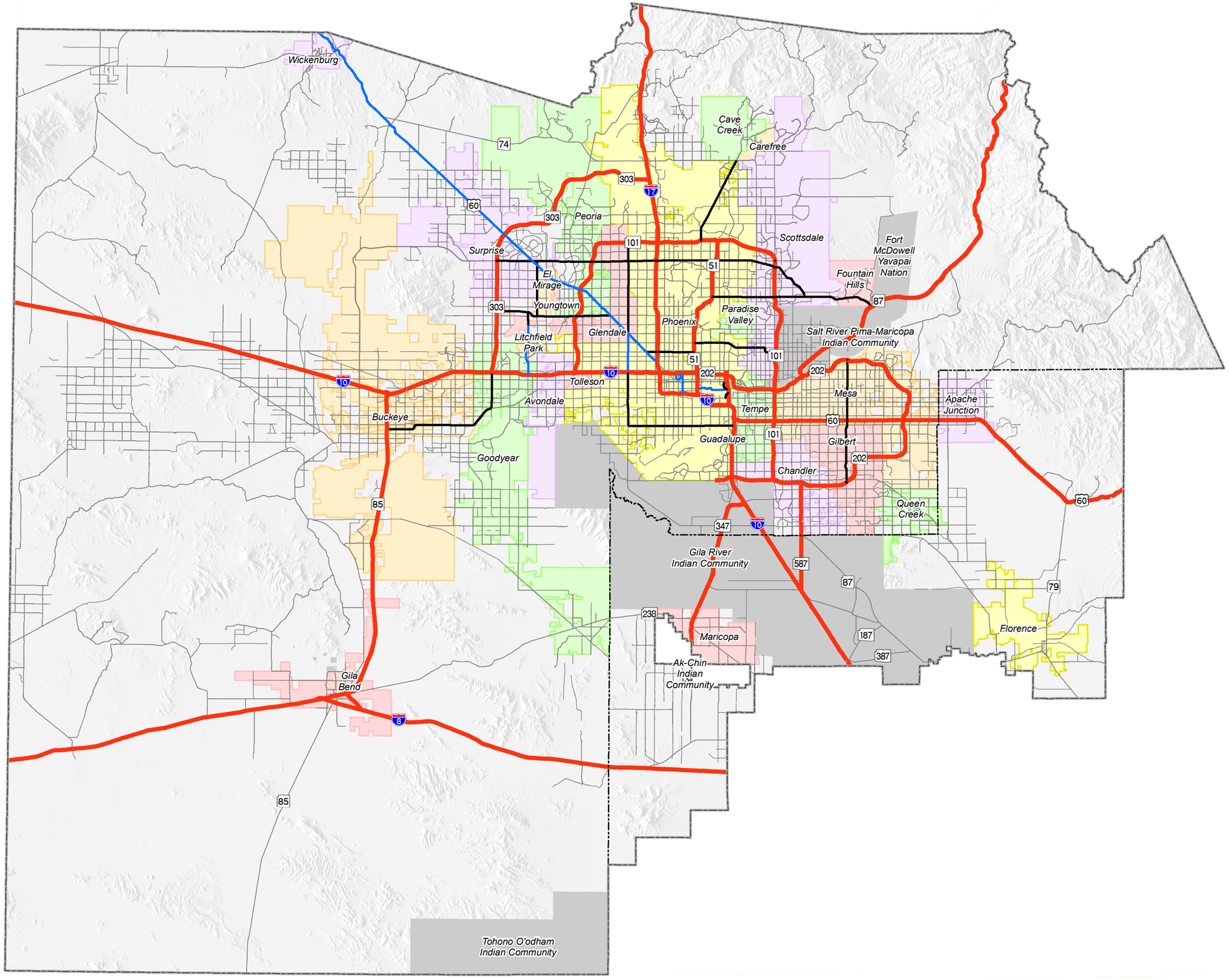
Proposed National Highway System Changes - Approach Three

MARICOPA ASSOCIATION of GOVERNMENTS



ADOT Owned NHS routes

STRAHNET and Intermodal

Local Principal Arterials (Non-NHS)

Non-NHS

Metropolitan Planning Area

County Boundary

Indian Communities

Proposed NHS Mileage in MAG Region

State: 716.9 miles
Local STRAHNET and Intermodal: 17.8 miles
Total: 734.7 miles

Local Principal Arterials (Non-NHS): 154.5 miles

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

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Source: Maricopa County Elections (Cities)

Date: March 2014

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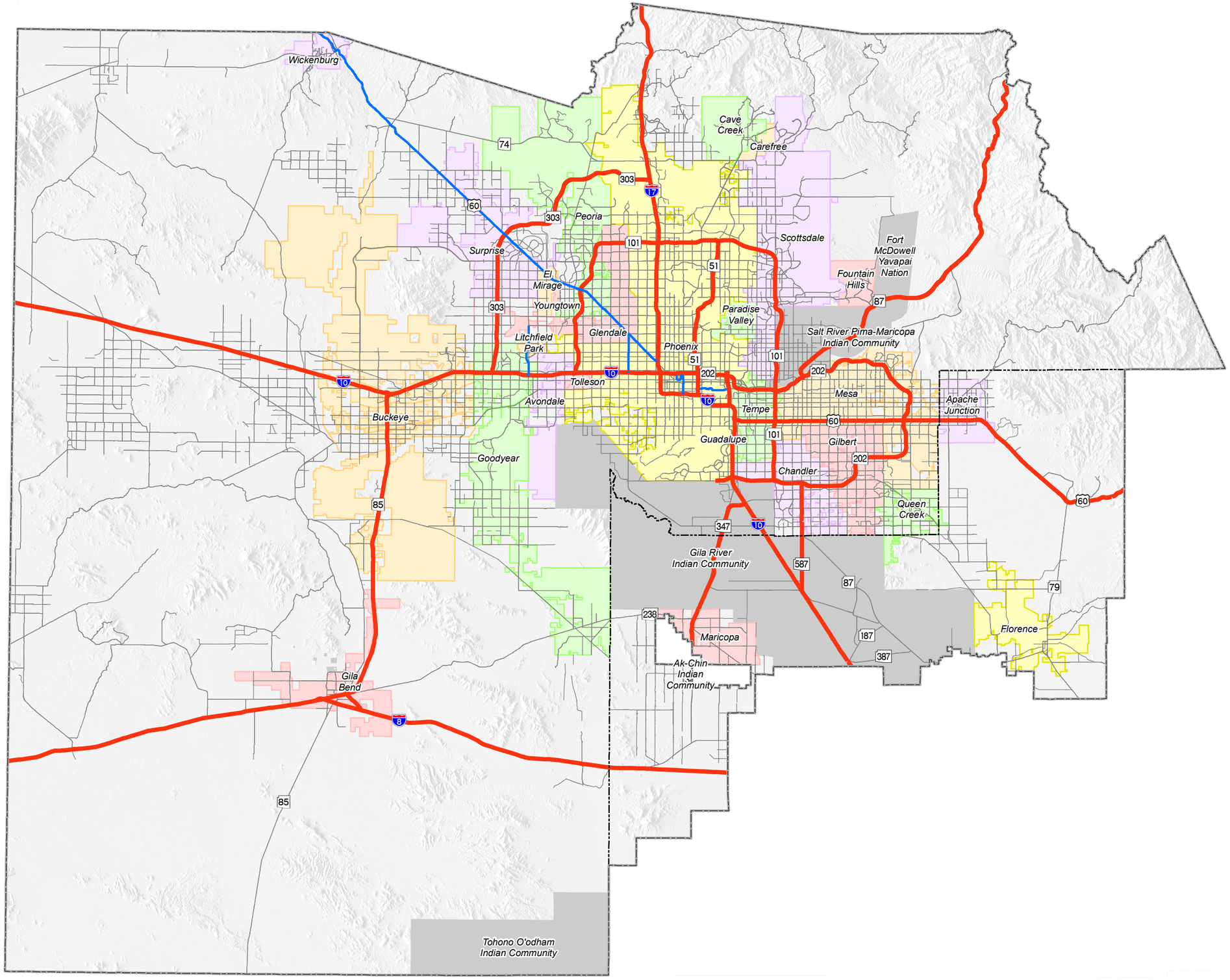
Proposed National Highway System Changes - Approach Four

MARICOPA ASSOCIATION of GOVERNMENTS



ADOT Owned NHS routes

STRAHNET and Intermodal

Non-NHS

Metropolitan Planning Area

County Boundary

Indian Communities

Proposed NHS Mileage in MAG Region

State: 716.9 miles
Local STRAHNET and Intermodal: 17.8 miles
Total: 734.7 miles

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

N

0 10 20 30 Miles

Source: Maricopa County Elections (Cities)

Date: March 2014

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U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590
202-366-4000

MAP-21 - Moving Ahead for Progress in the 21st Century

National Highway System Questions & Answers

Posted 9/25/2012, *Updated 5/23/2013*

General Information

Question 1: What is meant by "enhanced NHS"? (*added 5/23/2013*)

Answer 1: The "enhanced NHS" is a term used to refer to the National Highway System that was expanded or enhanced by MAP-21. The term "enhanced NHS" is a general descriptive term and is not specifically cited as such in the statutory language. On October 1, 2012, Section 1104 of MAP-21 added to the NHS those roads that were at that time functionally classified as principal arterials but not yet part of the System. The NHS was expanded to about 230,000 total miles with these additions.

Question 2: Do Federal requirements apply to the enhanced NHS? (*added 5/23/2013*)

Answer 2: Yes. All highways on the NHS, including those segments added by MAP-21, must comply with applicable Federal regulations. These requirements include design standards, contract administration, State-FHWA oversight procedures, Highway Performance Monitoring System reporting, National Bridge Inventory reporting, national performance measures data collection, and outdoor advertisement/junkyard control.

The FHWA conducted a webinar on March 20, 2013 titled "The Enhanced NHS and Requirements Under MAP-21" to disseminate information on these requirements. The webinar can be found here: https://connectdot.connectsolutions.com/p1hx0xpyxnh/.

Detailed information and guidance on design standards is posted on the FHWA Web site at (http://www.fhwa.dot.gov/design/standards/).

Question 3: Will all principal arterials that are not currently on the NHS be automatically added to the NHS, effective October 1, 2012?

Answer 3: Yes, principal arterial routes that are not currently on the NHS before October 1, 2012, will automatically be added to the NHS provided the principal arterials connect to the NHS. [23 USC 103(b) (2)(1)(B) as amended by Section 1104 of MAP-21] The automatic addition of the identified principal arterial routes to the NHS will be a onetime occurrence. Future additions to the NHS of eligible principal arterial routes after October 1, 2012, will follow procedures currently outlined in 23 CFR Part 470.

Question 4: How will the States be notified about the updated NHS?

Answer 4: The FHWA, through our Division Offices, will notify the States of the updated NHS via a memorandum and will post new NHS maps online by October 1, 2012. http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/

Question 5: Should States work with Division Offices to make any desired changes to the existing classification of principal arterials prior to October 1, 2012?

Answer 5: Yes. Pursuant to the FHWA's September 5, 2012, memorandum, States were advised to work with their respective Division Offices to review roads classified as principal arterial within the State and identify any functional classification changes needed to the principal arterial system. A listing of any changes to the classification of principal arterials and the subsequent Division Office approval of any changes your State may request was due to the Office of Planning, Environment, and Realty by September 20, 2012.

Question 6: What criteria will be used to determine which principal arterials will be automatically added on the NHS?

Answer 6: The FHWA will determine which principal arterials will be automatically added to the NHS by following current criteria for adding a route to the NHS under 23 CFR 470.113. Under this regulation, the route must meet the criteria in 23 CFR 470.107(b), which provides that the NHS shall consist of interconnected urban and rural principal arterials and highways which serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities, and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel.

The criteria under 23 CFR 470.113 also require proposals for additions to the NHS to consider the guidance contained in Appendix D to 23 CFR Part 470. The FHWA will follow the guidelines of Appendix D, except that the FHWA will not require the route to connect at both ends to other routes on the NHS. Rather, the FHWA will add a principal arterial to the NHS if it connects only at one end. Requiring a connection at one end will continue to meet the regulatory requirement that the NHS be interconnected. The FHWA will initiate a rulemaking to update the guidance contained in Appendix D to 23 CFR Part 470 at some future date.

Question 7: Before October 1, 2012, what do States need to submit to FHWA?

Answer 7: States are not required to submit any documentation, such as formal letters, principal arterial maps, or route listings, prior to October 1, 2012 in order for facilities that are currently classified as principal arterials to be included on the NHS. For facilities that are not currently classified as principal arterials, FHWA Divisions will work with States to make the necessary classification changes (see Q&A #12 below).

Question 8: What information will FHWA use to update the NHS maps?

Answer 8: The FHWA will use the principal arterial coding from the 2011 Highway Performance Monitoring System (HPMS) to update the NHS maps. For those States where the 2011 data year is not currently available, in the interim, FHWA will use the principal arterial coding from the 2010 HPMS data submission. However, after October 1, 2012, when the updated NHS maps are officially released, the State should follow procedures under 23 CFR 470.113 to make further/future modifications to the System (except that principal arterials will only need to connect at one end). At that time, a formal submittal with supporting documentation will be

required.

Question 9: Will the Divisions have to screen the additions?

Answer 9: No, the automatic addition of the identified principal arterial routes to the NHS, effective October 1, 2012, will be a one-time occurrence (based on the data contained in the 2011/2010 HPMS submission) and will occur without Division Office screening. After October 1, 2012, the Divisions will need to screen any proposed modifications to the NHS.

Question 10: Should Division Offices encourage the States to start designating all principal arterials as part of the NHS?

Answer 10: No, FHWA will use State-submitted 2011 HPMS data to identify principal arterials to include in the updated NHS. For some States where the 2011 data year is not currently available, in the interim, FHWA will use the principal arterial coding from 2010 HPMS data submission.

Question 11: Will principal arterials connected to the NHS be eligible for National Highway Performance Program (NHPP) funding? [23 USC 119(c) as amended by Section 1106 of MAP-21]

Answer 11: Yes, as of October 1, 2012, principal arterials that are on the NHS and that connect to the NHS will be eligible for NHPP funding.

Question 12: Is there a restriction on mileage under the updated NHS?

Answer 12: No, effective October 1, 2012, there will no longer be restrictions on maximum NHS mileage.

Intermodal Connectors

Question 13: Will new NHS Intermodal connector miles that meet the Federal intermodal connector designation criteria, outlined in Appendix D to 23 CFR Part 470, be automatically added to the NHS (that becomes effective on October 1, 2012)? [23 USC 103(b)(2)(1)(C) as amended by Section 1104 of MAP-21]

Answer 13: No. To add intermodal connectors to the system, the State will follow procedures outlined in Appendix D of 23 CFR Part 470 to identify connectors to qualifying intermodal terminals. The State will submit a request to (through the FHWA Division Office) FHWA HQ for review and approval.

Strategic Highway Network (STRAHNET)

Question 14: Will new STRAHNET route/connector miles that meet the Federal STRAHNET route designation criteria, outlined in 23 CFR Part 470, be automatically added to the NHS (that becomes effective on October 1, 2012)? [23 USC 103(b)(2)(1)(D) and 23 USC 103(b)(2)(1)(E) as amended by Section 1104 of MAP-21]

Answer 14: No, additional STRAHNET route/connector miles will not be automatically added to the NHS. The State will follow procedures outlined in 23 CFR Part 470 to add STRAHNET routes/connectors. Requests for STRAHNET modifications (including additions/deletions) require coordination among FHWA, the Surface Deployment Distribution Command (Department of Defense), and the impacted State(s).

Functional Classification

Question 15: Will the Division Offices' current authority to approve functional classification changes extend to approving NHS changes?

Answer 15: No, the Division Offices' role in the determination and approval of functional classification will remain the same. The FHWA HQ retains approval authority for NHS changes. After October 1, 2012, all further modifications to the NHS will follow the procedures outlined in 23 CFR 470.113 with approval by the Associate Administrator for Planning, Environment, and Realty (via HEPH-20).

Question 16: Will the request to change functional classification occurring after October 1, 2012 be automatically treated as a request to add to the NHS?

Answer 16: No, typically, the approvals for functional classification changes and NHS changes require two separate approval actions. The Division Office approves the functional classification change and FHWA HQ approves the NHS change. The FHWA HQ reviews a route modification request (with respect to criteria outlined in 23 CFR Part 470) to determine whether the proposed segment "enhances the national transportation characteristics of the NHS." The State should coordinate with the Division Office to submit a concurrent functional classification change and NHS change request. However, Division Office approval of the upgrade to a principal arterial must occur before FHWA HQ can approve an NHS addition.

Question 17: Will the functional classification changes that occur prior to October 1, 2012 but are not reflected in the 2011 HPMS data, be automatically considered a part of the NHS?

Answer 17: Yes, these approved principal arterials will become part of the NHS without an approval action by FHWA. However, the State should coordinate with FHWA HQ (through its Division Office) to identify these additional principal arterials approved after the 2011 HPMS data submission to be included into the NHS. For principal arterial approvals that occurred before October 1, 2012, but are not reflected in the updated NHS (effective October 1, 2012), the State should coordinate with FHWA HQ (through its Division Office) to identify and include these additional principal arterials to the NHS. Any approved changes submitted by the States to the FHWA by September 20, 2012, are reflected in the maps released on October 1, 2012.

Outdoor Advertising and Junkyards

Question 18: How will the new definition of the National Highway System affect a State's responsibility to provide control of outdoor advertising? [23 USC 131 as amended by MAP-21]

Answer 18: MAP-21 Section 1104 results in the addition of road segments to the National Highway System. Because these new segments are now part of the National Highway System, States will be responsible for control of outdoor advertising along these new segments. The penalty for not providing effective control of outdoor advertising remains at 10 percent of the funds that would otherwise be apportioned to the State under section 104.

Question 19: How has MAP-21 changed a State's duty to control junkyards? [23 USC 136 as amended by MAP-21] (*updated 5/23/2013*)

Answer 19: A State must now control junkyards located along highways on the National Highway System.

Section 1404(b) amends section 136 of title 23 to include effective control of junkyards along all highways on the NHS, including the Interstate Highway System. Effective control, as defined by 23 U.S.C. 136(c), means that nonconforming junkyards must be screened by natural objects, plantings, fences, or other appropriate means so that it is not visible from the main travel way of the system or must be removed from sight. The penalty for not providing effective control of junkyards, however, has been reduced by section 1404 from 10 percent to 7% of the funds in section 104(b)(1) through (5).

Interstate System

Question 20: Can segments of congressionally designated future Interstate routes be included in the Interstate System without a connection to the existing Interstate System?

Answer 20: Yes, if a segment of a congressionally designated future Interstate route identified in Section 1105(e)((5)(A) of ISTEA, as amended, meets Interstate design standards and is planned to connect to an existing Interstate System segment by 25 years of the enactment of MAP-21 on October 1, 2012, it can be included on the Interstate System. Request for addition of these routes will follow procedures outlined in 23 CFR Part 470.

Design Standards

Question 21: Do National Highway System (NHS) design standards apply to highways added to the NHS by MAP-21? (*added 1/15/2013*)

Answer 21: Yes. The design requirements of 23 CFR Part 625 apply to projects on the NHS. Accordingly, the NHS standards adopted by FHWA (currently the 2004 AASHTO Green Book) apply to new and reconstruction projects on the NHS, including NHS routes added by MAP-21. Design standards for resurfacing, restoration, and rehabilitation (3R) projects that have been agreed to by the State DOT and FHWA Division Administrator will apply to 3R projects on these routes.

Question 22: For highways that have been added to the National Highway System (NHS) under MAP-21, what is the effective date that projects are required to comply with the NHS design standards? (*added 1/15/2013*)

Answer 22: The effective date was October 1, 2012. If the applicable Federal or State environmental finding, determination, or decision (under 23 CFR 771.105 or equivalent State legislation) was completed prior to October 1, 2012, the project will not need to comply with NHS design standards. If a Federal or State environmental review is not required for the project, the project will not need to comply with NHS design standards if the final design was complete prior to October 1, 2012. All other projects must comply with NHS standards or receive approval for design exceptions.

NHS Modifications

Question 23: Can the enhanced NHS be modified? (*added 5/23/2013*)

Answer 23: Yes. The NHS, as envisioned by the Intermodal Surface Transportation Efficiency Act of 1991 (P.L. 102-240) and designated in the National Highway System Designation Act of 1995 (P.L. 104-59), was intended to be a flexible system that can adapt to changes in the mobility and connectivity needs of populations,

defense, commerce, and so on. States can request modifications to NHS routes pursuant to 23 CFR 470.113, including those routes that were added by MAP-21.

Question 24: Can the segments added to the NHS by MAP-21 be removed from the NHS but retain their classification as principal arterials? (*added 5/23/2013*)

Answer 24: Yes. The NHS designation of the principal arterials added by MAP-21 can be removed. However, pursuant to 23 CFR 470.113(b), such a request would need to be submitted by the State with the appropriate justification that the "national transportation characteristics" of the NHS would be preserved. The justification should discuss the reasons for requesting the deletion and the possible effects that deleting the route from the NHS might have on other existing NHS routes that are in close proximity. The FHWA will review such requests on a case-by-case basis.

Question 25: Can a State request that all the highways added to the NHS by MAP-21 be removed from the NHS? (*added 5/23/2013*)

Answer 25: No. Federal law requires that the principal arterials that were in existence as of October 1, 2012, be part of the NHS. The FHWA would not approve a request to remove all the recently added principal arterials within a State. Any request would have to be based on valid reasons that would not subvert the mandate of Congress. Circumvention or avoidance of Federal requirements that apply to a Federal System road is not a valid justification for its removal. A State's request would need to be consistent with the requirements in 23 U.S.C. 103 and 23 CFR Part 470.

Page last modified on September 12, 2013.

Memorandum

U.S. Department
of Transportation
**Federal Highway
Administration**

Subject: **ACTION:** Functional Classification Review of MAP-21 Enhanced NHS Principal Arterials

Date: February 19, 2014

From: Gloria M. Shepherd, Associate Administrator
Planning, Environment and Realty, FHWA

In Reply Refer to: HEPH-20

To: Division Administrators and Division Planners

As you know, there was a provision in Section 1104 of the Moving Ahead for Progress in the 21st Century Act (MAP-21) that expanded the National Highway System (NHS) by including all principal arterials in existence on the effective date of MAP-21 (October 1, 2012). This resulted in the addition of 60,000 miles to the NHS. We have heard from the American Association of State Highway and Transportation Officials (AASHTO) and several States that this provision has caused some unintended consequences, specifically related to bringing the newly added principal arterials into compliance with NHS federal requirements. These requirements include design standards, national performance measure data collection, and outdoor advertisement and junkyard control. We have reviewed the provision and have determined FHWA can take administrative actions to address these particular issues.

The purpose of this memorandum is to request each Division Office work with their respective State to review roads classified as principal arterial within the State and identify any functional classification changes needed to the rural and urban principal arterial system. This review can be used to adjust the State's NHS mileage total. In addition, States may also, in some cases, request certain roads be withdrawn from the NHS. While we want to assist States to identify appropriate roads that should not be functionally classified as principal arterial, we cannot allow States to remove all newly designated principal arterials from the NHS en masse. However, if the removal requests are reasonable and appropriate we will consider these actions.

The NHS modification process is defined in regulations (23 CFR 470) and requires a State to submit a request through the Division Office. Each request contains appropriate justification, including documented coordination with impacted MPOs and local officials. States should coordinate with one another for proposed NHS changes at the state line. Because these adjustments impact the NHS, the Divisions will review and forward their recommendation to Headquarters for final approval and subsequent adjustment to the NHS.

Many States routinely review their highway functional classifications, or may be in the midst of a statewide highway functional classification review triggered by the 2010 Census. This request is especially important in those States that have not recently conducted a statewide functional classification review. This is an opportunity for States, as they conduct their review to give

particular attention to routes that are designated as NHS routes. Since NHS routes—with the exception of NHS Intermodal Connectors or STRAHNET Connectors—must be classified as principal arterials or above, downgrading segments would require their removal from the NHS.

States can conduct the reviews at their convenience or to coincide with their existing State highway review processes. There is no deadline for response to this request. Please provide the Office of Human Environment an electronic list of Division Office approvals of functional classification changes to principal arterials (to include route number/name, from/to termini, beginning/ending mile points, digital maps, and associated geographic information system files). Below are links to references that will assist with this process. Please transmit the Division Office's approvals of principal arterials to Mike Neathery. For additional information, please contact Mike Neathery at 202-366-1257 (mike.neathery@dot.gov) or Stefan Natzke at 202-366-5010 (stefan.natzke@dot.gov). For specific questions related to functional classification, please contact Spencer Stevens at 202-366-0149 (spencer.stevens@dot.gov).

References:

Functional Classification Manual,
http://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/

NHS Maps and Procedures,
http://www.fhwa.dot.gov/planning/national_highway_system/

NHS Questions and Answers,
http://www.fhwa.dot.gov/map21/qandas/qanhs.cfm

MAP 21 – NHS STANDARDS

NHS Expansion Working Group

Roles and Responsibilities
(FHWA, ODOT, Local Agency)

Roles and Responsibilities

Some of the current process and procedures (Local Agency Guidelines) established between local agencies and ODOT for project review have changed with the additional National Highway System (NHS) routes. FHWA, through a letter of authority dated March 13 2013, authorizes ODOT to allow certified Local Public Agencies to perform work, in areas in which they have been certified, on federal-aid projects when the projects are on locally owned arterials that are part of the National Highway System. Additionally, ODOT may, at the discretion of FHWA and ODOT, allow Certified Local Public Agencies to administer federal-aid projects that are part of the National Highway system on ODOT-owned arterials subject to the Stewardship Agreement between FHWA and ODOT. ODOT shall assure that the projects on the NHS will follow AASHTO design standards or ODOT design standards if on an ODOT facility.

Other Certified Agency projects (federally funded), non-certified local agency projects (regardless of funding source) on state jurisdiction roadways, and non-certified local agency projects on local agency jurisdiction projects (federally funded) will continue to use the current processes and procedures in place between the local agency and the ODOT Regions. The addition of NHS routes will not change how these projects are processed. The only remaining type of projects that will follow a new procedure are those local agency projects on local agency jurisdiction roadways that have no federal or state funding associated with those projects, and are on roadways that were added to the NHS by MAP-21. These local projects will need to be submitted to ODOT's Technical Services Traffic-Roadway Section for review via the established audit process outlined below. Certified Agency NHS projects on local agency jurisdiction roadways, which have no federal dollars, will also need to be submitted to ODOT Technical Service's Traffic-Roadway Section for review via the audit process. Below is a matrix to assist in providing direction for local agencies and ODOT to address MAP-21 and the addition of NHS routes, followed by a discussion on roles and responsibilities.

MAP-21 NHS Roles/Responsibility Matrix

	PROJECT TYPE (CERTIFIED AND NON-CERTIFIED) ON NATIONAL HIGHWAY SYSTEM			
PROJECT CATEGORY	CERTIFIED AGENCY (CA)	NON-CERTIFIED AGENCY	NON-CERTIFIED AGENCY	NON-CERTIFIED AGENCY and Certified Agency (CA)
PROJECT JURISDICTION (STATE/LOCAL AGENCY)	Local Agency Project on Local Agency Roadway	Local Agency Project on State Jurisdiction Roadway	Local Agency Project on Local Agency Roadway	Local Agency Project on Local Agency Roadway
FUNDING SOURCE	Federal	Local/State/or Federal	Federal	Local
TYPES of PROJECTS	New Construction/Reconstruction (4R), Reconstruction, Resurfacing, Restoration, Rehabilitation (3R), Development Review			
DESIGN EXCEPTIONS	Approved by CA ODOT will approve design exceptions for all projects on an ODOT facility and on bridges on the ODOT inventory list • Audit process as identified by Local Program agreements. No change in process for CA's	Approved by ODOT • No change from current process used by Local Agency and ODOT Region	Approved by ODOT • No change from current process used by Local Agency and ODOT Region	Approved by Local Agency • Local Agency provides ODOT with list of projects, contract plans, specifications, and design exceptions on project by project or yearly basis for audit. Local Agencies submit information to ODOT Technical Services Traffic-Roadway Section for audit procedures.
PLAN REVIEWS (New Construction Reconstruction) (Resurfacing, Restoration, Rehabilitation-3R) (Development Review)	Approved by CA • Audit process as identified by Local Program agreements. No change in process for CA's	Reviewed by ODOT • No change from current process used by Local Agency and ODOT Region	Reviewed by ODOT • No change from current process used by Local Agency and ODOT Region	Reviewed by Local Agency • As with Design Exceptions, Local Agency provides ODOT with a list of projects, contract plans on a project by project or yearly basis for audit. Local Agencies submit information to ODOT Technical Services Traffic-Roadway Section for audit procedures.
AUDIT PROCEDURES				Audit Procedure- ODOT shall select a percentage of projects to perform a quality assurance type audit. Projects selected should consist of a sample of modernization, preservation, and developmental review projects.

Local Agencies

- Certified Agencies- Certified Agencies are to use the same review process for projects as they do today with the following caveat. Those Certified Agency projects on the NHS that use local agency dollars only and are on local agency jurisdiction roadways are to submit those projects to ODOT Technical Services' Traffic-Roadway Section for audit purposes. Submittals are to include a listing of project or projects (if on a yearly basis), contract plans, specifications, and signed design exceptions. Submittals are also to include a design narrative providing justification for those projects that use lane widths less than 12 feet and vertical clearances of less than 16 feet. Types of projects to be submitted include: new construction and reconstruction (4R); resurfacing, restoration, and rehabilitation (3R); and development review. Design exceptions are to be approved by the Certified Agency.

- Non-Certified Local Agencies- Non-Certified Local Agencies are to use the current process development for non-certified local agencies projects that use federal, state, or local dollars on state jurisdiction roadways and non-certified local agency projects that use federal dollars on local agency jurisdiction roadways. Those non-certified local agency projects on the NHS that use local agency dollars, and are on local agency jurisdiction roadways are to submit those projects to ODOT Technical Services' Traffic-Roadway Section on a project by project or yearly basis for audit purposes. Design exceptions are to be approved by the local agency. Submittals are to include a listing of project or projects (if on a yearly basis), contract plans, and signed design exceptions. Submittals are also to include a design narrative providing justification for those projects that use lane widths less than 12 feet and vertical clearances of less than 16 feet. Types of projects to be submitted include: new construction and reconstruction; all resurfacing, restoration, and rehabilitation (3R); and development review.

Region Tech Centers

Region Tech Centers are to continue with the review process that is currently in place today for Certified and Non-Certified Local Agency projects with the following caveat: Local projects on the NHS that use local agency funding and on local agency jurisdiction roadways will be submitted by the Local Agency directly to Technical Services' Traffic- Roadway Section. Information submitted to Techical Services will include; a listing of project or projects (if on a yearly basis), project plans, and signed design exceptions. This same procedure will be used for Certified Agency NHS projects on local jurisdiction roadways that use local agency only funding.

Technical Services (Traffic-Roadway)

Technical Services Staff shall perform an audit on those projects received. Initially, a percentage of the projects received will be selected for audit. Primary purpose of the audit is to review the projects for compliance with AASHTO design standards and to review local agency approved design exceptions for adequacy. Audit results will be used by ODOT to determine the effectiveness of current process and to determine if adjustments in the establish project review process are needed.

MAP 21- NHS Standards: ODOT and Local Agencies

With the addition of approximately 600 miles of State, County, and City roads to the National Highway System (NHS) as a result of MAP-21, a working group made up of City, County, State, and FHWA representatives was formed to discuss the added NHS mileage and to determine the impact on City, County, and State design standards. From FHWA guidance, any NHS route has to be designed in accordance with AASHTO's *"A Policy on Geometric Design of Highways and Streets")*. Discussions with local agency representative indicated that not all local agencies current design practices meet AASHTO standards. ODOT's Highway Design Manual (HDM) is in general agreement with AASHTO's Green Book; therefore, it can be used for NHS routes. Below is the proposed design standard guidance for City, County, and State for those roadways part of the NHS.

- **Design Standards Selection Matrix (HDM Table 1-1) –Table 1-1 provides design requirements for projects based upon project type, roadway jurisdiction (State or Local) and whether the project is urban or rural. In an effort to provide design flexibility, the following changes to HDM Table 1-1 establish the standards for local agencies while complying with FHWA guidance regarding the added NHS routes.**
  - No change for ODOT facilities. ODOT will continue to use the Standards outlined in Table 1-1 of the Highway Design Manual.
  - For local Facilities- Footnote will be added to Table 1-1 that notes local agencies can use AASHTO standards for all types of projects. Modernization projects will not change (AASHTO standards will be used). For those local agencies that use their own standards and may not currently meet AASHTO standards- those projects will be required to meet AASHTO standards.
  - Additional footnote with be added to HDM Table 1-1 that allows maximum flexibility for locals to use either AASHTO or ODOT 3R for Preservation projects.
  - See attached HDM Table 1-1 revisions.

- **Vertical Clearance - ODOT requirements for vertical clearance are different than those vertical clearance requirements outlined in AASHTO standards. The following outlines the vertical clearance requirements for ODOT and Local Agency facilities for NHS routes.**
  - No change for ODOT facilities- NHS routes added to the State Highway system will follow current HDM guidance. Oregon Vertical Clearance Standard will have NHS routes added and note that the map is specific to ODOT jurisdiction highways.
  - For Local Facilities- Local Agencies will use AASHTO vertical clearance for both Modernization and Preservation projects.

- **Lane Widths - ODOT's HDM lane width requirements are specific to type of project (modernization or preservation), location (urban or rural) and highway**

segment designation (similar to functional class). Local Agencies have been given the flexibility to use AASHTO or the HDM. The following outlines the lane width requirements for State and Local Agency facilities for NHS routes.

- No change for ODOT facilities. ODOT projects will continue to use HDM guidance.
- For Local Facilities- Local Agencies can use AASHTO for lane width. 3R Tables 6-6 & 7-3 will be revised to note that minimum 11' lanes for NHS Routes and 12' lane for nationally recognized truck routes only apply to ODOT jurisdiction highways.
- See attached HDM Table 6-6 and Table 7-3.

- **Shoulder and Clear Zone/Guardrails - As with lane width, ODOT HDM shoulder widths are specific based on certain parameters. For local agencies, flexibility has been given to use either ODOT or AASHTO standards regarding shoulder width and clear zone. The following outlines guidance for ODOT and Local Agencies.**
  - No change for ODOT facilities
  - For Local Agencies- Local agencies will need to follow ODOT 3R or AASHTO guidance, including safety features.

- **Design Exceptions, Certified Agencies**
  - For Local Agencies- Design Exceptions will continue to be processed through ODOT Local Agency office.

- **Design Exceptions - The following outlines the direction regarding design exceptions that meets FHWA's expectation concerning oversight responsibilities for the existing and added NHS routes on both State and Local jurisdiction facilities.**
  - For Local Agencies-
    - Local Agency projects on the NHS **with** Federal Dollars involved:
      - Follow current process- Design exceptions are processed through ODOT.
    - Local Agency project on the NHS **with no** Federal Dollars involved and on **State** jurisdiction roadway:
      - Design exceptions are processed through ODOT.
    - Local Agency projects on the NHS **with no** Federal Dollars involved on **Local** jurisdiction roadway:
      - Local Agency process and approve design exceptions, maintain a list of those Design Exceptions.
      - Local Agency provides ODOT with a list of projects, contract plans, and list of design exceptions approved by the Local Agency on a project by project basis or yearly basis for audit purposes.

- **Plan Reviews - As with the Design Exception guidance, the following outlines the process to be used for project plan reviews in order to meet FHWA's expectation regarding oversight responsibilities.**

- Local Agency projects on the NHS **with** Federal Dollars involved:
  - Design Exceptions and Plan Review through ODOT.
- Local Agency projects on the NHS with no Federal Dollars involved on **State** jurisdiction roadway:
  - Design exceptions and Plan Review are processed through ODOT.
- Local Agency projects on the NHS **with no** Federal Dollars involved on **Local** jurisdiction roadway-
  - Local Agency provides ODOT with a list of projects and contract plans on a project by project basis or yearly basis for audit purposes.

The following HDM tables outline the changes to be made as a result of the FHWA, ODOT, City, and County MAP21- NHS impact working group meetings. In additional to the changes to the HDM tables, other text in the HDM may need to be revised to fulfill the intent of the HDM design standard changes.

Table 1:1: Design Standards Selection Matrix

Project Type	Roadway Jurisdiction				
	State Highways			Local Agency Roads [1]	
	Interstate	Urban State Highways	Rural State Highways	Urban	Rural
Modernization/ Bridge New/Replacement	ODOT 4R/New Freeway	ODOT 4R/New Urban	ODOT 4R/New Rural	AASHTO	
Preservation/ Bridge Rehabilitation	ODOT 3R Freeway	ODOT 3R Urban	ODOT 3R Rural	AASHTO [2]	ODOT 3R Rural [3]
Preventive Maintenance [4]	1R	1R	1R	NA	NA
Safety-Operations-Miscellaneous/ Special Programs	ODOT Freeway [5]	ODOT Urban [5]	ODOT Rural [5]	AASHTO	AASHTO

1 For projects on a local jurisdiction route, the local authority may, at its option, use either the appropriate AASHTO's "A Policy On Geometric Design Of Highways And Streets - 2011" standard or select a standard of their own choice. This discretion is given by ORS 368.036. (ORS 368.036 applies to counties only, not cities.). **AASHTO standards shall be used for all local agency jurisdiction roadway projects on the National Highway System (NHS)**.

2 The local agency has the choice to use AASHTO's "*A Policy On Geometric Design Of Highways And Streets - 2011*" or ODOT 3R Urban design standards. Local Agencies may use AASHTO for Vertical Clearance requirements on Local Agency Jurisdiction Roads.

3 The local agency has the choice to use AASHTO's "*A Policy On Geometric Design Of Highways And Streets - 2011*" or ODOT 3R Rural design standards. Local Agencies may use AASHTO for Vertical Clearance requirements on Local Agency Jurisdiction Roads.

4 Federally funded Preventive Maintenance work, which includes Chip Seals and Thin Overlays, will be required to follow 1R standards.

5 The appropriate ODOT 3R standard may be used for some projects. Selection is case by case. Designer to confirm appropriate standard with Region Roadway Manager.

Table 6-6: ODOT 3R Urban Non-Freeway Design Standards

Highway Feature	Highway Average Daily Traffic (ADT)			
	< 750	750 - 2000	2001 - 4000	> 4000
Travel Lane [1] <10% Trucks [2] >10% Trucks [2]	 10′ 10′	 10′ 11′	 11′ 12′	 11′ 12′
Left Turn Lane [3]	12′	13′	13′	14′
Right Side Shoulder [4]	2′	3′	4′	6′
On Street Parking (Where Applicable)	7′	8′	8′	8′
Left Side Clearance (Shy Distance) [5] posted speed ≤ 35 mph posted speed ≥ 40 mph	 1′ 2′	 1′ 2′	 1′ 2′	 1′ 2′
Curbside Sidewalk	6′	6′	6′	6′
Cross Slope (crown) [6]	2%	2%	2%	2%
Maximum Superelevation [7] design speed ≤ 40 mph design speed ≥ 45 mph	 4% 6%	 4% 6%	 4% 6%	 4% 6%
Vertical Clearance	See Section 6.4.6 and Section 4.5.1			

1 A minimum 12 foot travel lane is required on nationally recognized truck routes (see current Route Map 7) and a minimum 11 foot lane is required on all NHS Routes on State jurisdiction roadways only. Local Agencies may use AASHTO standards for lane width.

2 Trucks are defined as heavy vehicles, single unit configuration or larger (six or more tires).

3 Left turn lane widths include 2 foot medial separator.

4 Where a right side shoulder is not used, a right side shy distance from curb or on-street parking is required. This shy distance is 2 feet for posted speeds up to 35 mph and 3 feet for 40 mph and above.

5 Left side clearance (shy distance) required from curb or on street parking and is only applicable to one way roadways.

6 See Table 6-9 and Table 6-10 for improvement criteria and corrective measures.

7 Numbers shown are for new design. See Section 6.4.4, Horizontal Curvature and Superelevation correction

Table 7-3: Minimum 3R Lane and Shoulder Widths
Rural Non-Freeway (Arterials, Collectors, Local Streets)

Design Yr Volume (ADT)	Average Running Speed	Lane Width	Shoulder Width
Less Than 750 Vehicles	All Speeds	10′	2′
750 to 2000 Vehicles	Under 50 mph	11′	2′
	50 mph or Over	11′	3′
Over 2000 Vehicles	All Speeds	11′	4′

NOTE: A minimum 11 foot lane is required on all NHS Routes on ODOT jurisdiction roadways only. Local Agencies may use AASHTO standards for lane width.