Date: March 8, 2023
To: RTC Board of Commissioners
Re: RTC Strategic Road Map Goal #2 – Enhance RTC's Role in Anticipating and Meeting Future Transportation Needs (Roadways)

Background

At its January 2022 workshop, the RTC Board discussed strategic goals for FY 2023. In March 2022, the Executive Director brought versions of those goals back to the RTC Board for further input and direction. Following that input and direction, the Executive Director worked with an outside consultant and the director team to develop the RTC Strategic Roadmap for FY 2023. In June 2022, the RTC Strategic Roadmap for FY 2023 was presented to the RTC Board for further input and direction. This is a report on the status of ongoing and planned efforts regarding Goal #2 for further input and direction from the RTC Board. *See* Attachment 1 – Goal #2.

Summary

State, regional and local entities share responsibility for the roadway network in Washoe County. Different entities are responsible for different categories and classifications of roads. In some cases, multiple entities may have different responsibilities for the same category or classification. Each entity has different funding sources available to meet its responsibilities. The entities engage in various planning efforts (individually and cooperatively) to anticipate roadway needs and identify projects to meet those needs. Each entity has its own decision-making processes that it uses to plan, prioritize and deliver projects.

The result of this shared responsibility is that there are interrelated processes, decisions and efforts that ultimately determine the quality of the roadway network. Staff efforts on this strategic goal have been focused on analyzing the overall process for transportation decision-making, and RTC's process, to identify opportunities to enhance RTC's role in anticipating and meeting future roadway needs.

Outline

Section 1 – Categories of Roadways

In general, and for purposes of this report, the roads in Washoe County can be organized into three main categories: (1) state roads; (2) regional roads; and (3) local roads.[1] There are different classifications of roads in each main category. These categories and classifications are a product of various federal and state laws and regulations, and in some cases state, regional and local planning efforts.

There is no category needed for "federal roads" because, with few exceptions, the federal government does not construct, own or maintain roads. Instead, the federal government funds and administers various programs to provide financial assistance to the state, regional, and local entities that construct, own, and maintain those roads. Federally-owned roads are generally found only on federal lands, such as national parks and military installations.[2]

The roads that are eligible for federal financial assistance under current law are referred to as "Federal-aid highways."[3] Federal-aid highways include roads that are part of the National Highway System (NHS), as well as other roads. The NHS includes the Interstate System, and other roads designated as most important to interstate travel, economic expansion, and national defense.[4]

A. State Roads

The Nevada Department of Transportation (NDOT) is responsible for planning, constructing, operating and maintaining the state highway system, which includes the following classifications of state roads:[5]

1. Interstate Routes
2. US Routes
3. State Routes
4. Other roads (including frontage roads, state park roads, access roads, and others)

[1] There are also "private roads" in the local jurisdictions. Private roads are roads that are owned or controlled by a private entity and which are not open to use by the general public. Private entities are responsible for private roads.
[2] FHWA, *Status of the Nation's Highways, Bridges, and Transit*, Conditions and Performance, 23rd Edition.
[3] Moving Ahead for Progress in the 21st Century Act (MAP-21; Pub. L. 112-141 (2012).
[4] The USDOT Federal Highway Administration (FHWA) map of the NHS roads in Washoe County can be found on the FHWA website. *See* https://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/nevada/.
[5] NDOT, One Nevada Transportation Plan, November 2018 (Revised February 2020), p. 19.

In the Washoe County region, there are approximately 1,396 lane miles of state roads.[6] Those state roads include two Interstate Routes (I-80; I-580), two US Routes (US 395; US 395A), and 16 State Routes. NDOT has prepared a map of all state roads in the region.[7] NDOT also lists and maps the state roads it maintains by county.[8]

B. Regional Roads

The responsibilities for regional roads are shared by RTC and the local jurisdictions in which the roads are located. RTC is responsible for planning the regional road network which, for planning purposes, includes certain state roads and local roads. RTC does not own roads. RTC plans and constructs regional road projects, and then turns over the project and any underlying right-of-way to the local jurisdiction in which the project is located. RTC and the local jurisdictions maintain regional roads through collaboration and cooperation on the regional "Pavement Preservation Program" that RTC administers on behalf of the local jurisdictions.[9] The local jurisdictions own, operate, and otherwise maintain the regional roads, and can also plan and construct regional road projects.

As defined in RTC's 2050 Regional Transportation Plan, the regional road network includes the following classifications of regional roads:[10]

1. Arterials that are direct connections between freeways and other arterials, provide continuity throughout the region, and generally accommodate longer trips within the region, especially in the peak periods on high traffic volume corridors. Arterials are categorized as either "High Access Control," "Moderate Access Control," or "Low Access Control," as those terms are defined in the 2050 RTP.

2. Collectors that have an ADT (average daily trip) level of 5,000 (either currently or in the 2050 forecast), cross a significant travel barrier such as the Truckee River or freeway, or provide access to major existing or future regional facilities.

3. Certain designated industrial roads with freight movement.

4. Roadways that are used for an RTC transit route.

[6] RTC planning staff identified the state roads using GIS data and NDOT's "Description Index" (*see* footnote 7 below), and then used RTC's travel demand model data to approximate the number of lanes and lane miles on those roads. Of the total 1,396 lane miles in Washoe County, approximately 938 lane miles are located in the census designated urbanized area (UZA) that RTC includes in its travel demand model.

[7] "Functional Classification Maps" for all counties can be found on NDOT's website. *See* https://www.dot.nv.gov/travel-info/maps/functional-classification-maps.

[8] NDOT, *State Maintained Highways of Nevada (aka Description Index) Descriptions and Maps*, January 2022.

[9] *See* https://www.rtcwashoe.com/engineering-fees/engineering-impact-fee/.

[10] 2050 Regional Transportation Plan, p. 263.

In total, the regional road network includes approximately 1,047 lane miles of regional roads.[11] There are approximately 662 lane miles in Reno, approximately 254 lane miles in Sparks, and approximately 131 lane miles in the unincorporated area of Washoe County. RTC lists and maps all of those regional roads.

C. Local Roads

Local roads are all roads, other than state roads, regional roads, and private roads, that are located within the local jurisdictions. The local jurisdictions are responsible for planning, constructing, operating and maintaining the local roads within their respective jurisdictions.

In total, there are approximately 3,293 lane miles of local roads in the region.[12] There are approximately 1,061 lane miles in Reno, approximately 484 lane miles in Sparks, and approximately 1,631 lane miles in the unincorporated area of Washoe County.

Section 2 – Roadway Needs

NDOT, RTC and the local jurisdictions determine what "needs" exist on state roads, regional roads, and local roads, respectively. Each entity has different ways of describing and classifying "needs." In general, the main classifications of "needs" are vehicle capacity, pavement preservation, safety, operation and maintenance, and alternative modes of transportation (modes other than vehicles).

Each entity has different ways of determining the "needs" on their roadways. RTC determines "needs" for regional roads. The following describes the methodology RTC uses to determine "needs":

1. Vehicle Capacity: RTC determines the need for capacity improvements during the regional transportation planning process. As a policy matter, the acceptable level of service (LOS) for a given road is established in the regional transportation plan.[13] Those policy decisions regarding LOS establish a targeted and "acceptable" traffic operation level for each individual road, and collectively for the regional road network. RTC uses the regional travel demand model to determine the

[11] RTC planning staff identified all regional roads by jurisdiction using GIS data for the regional road network, and then used RTC's travel demand model data to approximate the number of lanes and lane miles on those roads.

[12] RTC planning staff identified all roads in each jurisdiction, excluded the state roads and regional roads identified in the previous analyses, and then used Washoe County's parcel database to identify and exclude private roads and dirt roads. RTC planning staff reviewed and verified that all local roads were identified using satellite or Google street view imagery, and added any local roads that were not identified. The lane miles were determined using GIS data and the number of lanes (local roads have two lanes).

[13] In the 2050 RTP, RTC planning staff states that "Level of service (LOS) is a term commonly used to measure the operation conditions for traffic flow [on a roadway], generally in terms of speed and travel time, freedom to maneuver, traffic interruptions and comfort and convenience. LOS is represented by the letters A to F; with A generally representing free flowing traffic and F representing bumper to bumper traffic. The qualitative description of the conditions that correspond to each level of services is shown in Table E-3." *See* 2050 RTP, Appendix E, p. 282.

capacity needed to achieve the established LOS based on existing and forecasted population, employment, traffic, and land use data. Proposed capacity improvements must be weighed against potential regional air quality impacts so as to collectively not exceed motor vehicle emissions budgets for specific pollutants. Projects are evaluated in the regional transportation plan using both capacity related criteria and other criteria established in the plan. Projects are initially prioritized through adoption of the regional transportation plan, but priorities are subject to change during subsequent planning and programming processes.

2. Pavement Preservation (preventative maintenance, rehabilitation, and reconstruction): RTC determines pavement preservation needs on regional roads based on a targeted pavement condition index (PCI) for the regional road network. The regional transportation planning process initially identifies and prioritizes projects by roadway classification, PCI score, and traffic volumes as determined by RTC's travel demand model. RTC then works with the Pavement Preservation Technical Advisory Committee to finalize the selection of projects as part of the regional "Pavement Preservation Program."

3. Safety: RTC determines safety needs through a data analysis program that factors in crash and other data on existing roads. RTC has developed a High Injury Network (HIN) which identifies those regional roads with the most significant traffic safety issues. The HIN is based on a 5-year rolling crash history which is weighted by crash frequency, rate, and severity. In general, RTC aims to implement FHWA best practices when programming safety improvements including following FHWA's "Safe System Approach" and utilizing proven safety countermeasures.

4. Operation and Maintenance: RTC does not determine the need for operation and maintenance of regional roads. The local jurisdictions are responsible for normal operation and maintenance of regional roads.

5. Alternative Modes of Transportation (modes other than vehicles): RTC determines the need for these facilities through various data collection efforts and application of transportation planning and engineering judgement. Regional road projects are planned and designed to include multimodal improvements for "needs" related to vehicle capacity and safety, considering all users of the roadway. At the planning level, RTC is currently developing a program for a connected active transportation network to identify and address "needs" for greater mobility options to further the interests of congestion management, public health, regional air quality, and quality of life.

Section 3 – Funding Sources

NDOT, RTC and the local jurisdictions use various federal, state and local funding sources to meet roadway "needs."[14] Some of the available funding sources are "restricted" in that they must be used for specific transportation purposes. Some of the available funding sources are "flexible" in that they can be used for purposes other than transportation. It appears that most, if not almost all, "flexible" funding sources that could be used for transportation are currently allocated to purposes other than transportation.[15]

Unlike the state and the local jurisdictions, all of the funding sources that are available to RTC are "restricted" to specific transportation purposes. That allows RTC to focus exclusively on transportation. RTC does not have to weigh competing public interests or make decisions about using available funding for transportation purposes instead of purposes other than transportation.

Extensive cooperation from NDOT and the local jurisdictions would be required to identify and analyze the "flexible" and "restricted" funding sources that are available to NDOT and the local jurisdictions. The funding sources that are available to RTC for the region are the following:

1. Federal funding (formula and discretionary from FHWA and FTA): Grants must be used for priorities and projects mandated by the federal government. In order to compete for grants, RTC needs to plan projects that align with federal transportation priorities. In order to receive federal funding, RTC must "match" a percentage of the federal funding with non-federal funding.

2. Fuel tax: RTC fuel tax revenues must be used for street and highway construction projects.[16] Note, RTC fuel tax revenues are separate from the fuel tax revenues that NDOT and the local jurisdictions receive for road projects.

3. Sales tax (0.25% tax): These sales tax revenues must be used for the public transit system.[17]

4. Sales tax (0.125% tax): These sales tax revenues must be used for either the public transit system, the improvement of air quality, or for the construction, maintenance, and repair of public roads.[18]

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[14] Beginning in July 2021, NDOT convened the "Nevada Sustainable Transportation Funding Advisory Working Group" to study transportation needs of the state and recommend sustainable funding options as required by Assembly Bill 413 (2021). That group worked with a team of outside consultants to generate various findings and recommendations for a report to the legislature. The final report is available at: https://nvtransportationfuture.org/.
[15] *See e.g.*, AWG Final Report, Sec. 3.5 – Findings and Conclusions, p. 50.[16] NRS 373.028; Nev. Const. Art IX, Sec. 5.
[16] NRS 373.028; Nev. Const. Art IX, Sec. 5.
[17] NRS 377A.020(1)(a); Washoe County Code § 20.501(3)
[18] NRS 377A.020(1)(a); Washoe County Code § 20.501(4).

5. Regional road impact fees: Impact fees are imposed by ordinances adopted by the local jurisdictions. Impact fee revenues must be used for capacity adding roadway improvements identified in the "RRIF Capital Improvement Plan."[19]

6. Complete Streets Program contributions: Voluntary contributions from new vehicle registration or renewal applicants ($2 for each vehicle) must be used to carry out projects as part of RTC's Complete Streets Program.[20]

There appears to be agreement among NDOT, RTC and the local jurisdictions that available funding sources and resources are insufficient to meet all roadway "needs" at the state, regional, and local levels. The Nevada Sustainable Transportation Funding Advisory Working Group's Final Report estimates that the NDOT-managed state transportation system (not just state roadways) has annual unfunded transportation "needs" of between $621 million and $1.18 billion per year.[21] RTC estimates it will have sufficient funding for most of the regional roadway "needs" it has identified in the current regional transportation plan, but those estimates are based on planning level revenue assumptions and cost estimates that change over time, and also do not reflect scenarios in which new or different "needs" could be identified in the future. The local jurisdictions have indicated a need for additional funding and resources for pavement preservation and operation and maintenance on local roads. Construction cost escalation is increasing the cost of road projects, and inflation and the transition to electric cars is eroding state, regional, and local fuel tax revenues.

So far, there does not appear to be sufficient readily available information and analysis to determine which general and specific roadway "needs" are unfunded in the region. The Nevada Sustainable Transportation Funding Advisory Working Group's Final Report includes a recommendation that "*In collaboration with other public agencies, NDOT, [MPOs], and local governments (cities and counties) should (1) conduct assessments of their current and projected transportation projects and service-level funding gaps and (2) regularly share this information with elected officials, stakeholders, and the public*."[22] In order to conduct an assessment on a truly regional basis, there would need to be cooperation and coordination between NDOT, RTC and the local jurisdictions to develop a "needs" and unfunded "needs" analysis for all state roads, regional roads, and local roads in the region.

Section 4 – Decision-making Processes

NDOT, RTC and the local jurisdictions have their own decision-making processes that they use to plan, prioritize and deliver projects. In general, that is accomplished through planning, programming, and budgeting processes. Those processes include efforts to both anticipate roadway "needs" to the extent possible, and to respond/react to unanticipated "needs" and

[19] NRS chapter 278B.
[20] NRS 277A.240.
[21] AWG Final Report, Sec. 3.2 – Transportation funding needs on the state and local system, p. 36.
[22] AWG Final Report, Recommendation 4, p. 18. *See* materials for AWG Meeting 9 on September 13, 2022 at: https://nvtransportationfuture.org/meeting-materials.

changed circumstances. The state and regional transportation planning processes that NDOT and RTC are responsible for must comply with various federal laws and regulations as a condition for the receipt of federal funding. Each entity has various levels of involvement in the processes of the other entities.

As part of this strategic goal, staff developed a draft flow chart of the overall process for transportation decision-making and the entities involved. *See* Attachment 2 – Overall Process. The flow chart presents the various steps in sequential order, not chronological order. The overall process is cyclical in nature and continually repeated with revised data and assumptions. The entities anticipate roadway "needs" during the initial development of their transportation plans, and then react/respond to unanticipated "needs" and changed circumstances as the process is repeated. The purpose of the flow chart is to facilitate internal and external communication regarding opportunities to enhance RTC's role in interrelated processes.

RTC's process for anticipating and meeting transportation needs is part of the overall process. RTC's process reflects that it is responsible both for regional transportation planning as the metropolitan planning organization (MPO), and for funding and constructing almost all of the regional roadway projects identified in the regional transportation plan (other than state roadway projects). RTC's process begins with and is centered around the 20-year long-range regional transportation plan (RTP). RTC then uses a 10-year financial and capital improvement planning process to identify projects to be included in the 5-year Regional Transportation Improvement Program (RTIP), and eventually RTC's Street and Highway Program and annual budget.

As part of this strategic goal, staff developed a draft flow chart of RTC's process for anticipating and meeting transportation needs. *See* Attachment 3 – RTC Process. The flow chart presents the various steps in sequential order, but not necessarily chronological order. Staff also developed a simplified diagram to present to the Board when decisions are being considered for Board action. *See* Attachment 4 – Simplified Diagram. The purpose of these materials is to facilitate communication regarding RTC's decision-making process, and the effects of specific decisions that are made by either staff or the Board.

Section 5 – Process Improvement

The purpose and goal of improving the processes described in Section 4 is to increase and maximize the public value that can be generated from available (and limited) funding and resources. There are generally three ways to do that:

- There may be opportunities to make the process itself more efficient and effective.
- There may be opportunities for an entity to perform its role and responsibilities in a way that is faster, cheaper or better quality.
- There may be opportunities for an entity or entities to perform part of the process in a way that is faster, cheaper, or better quality than the entity or entities that are currently performing that part of the process.

There may be other ways to improve the overall process and increase the value generated. Staff has identified initial opportunities for process improvement which are presented in Section 6.

Section 6 – Initial Opportunities

This strategic goal required staff to step back and examine both the overall process for anticipating and meeting transportation needs, as well as RTC's process. The Executive Director and the director team have identified initial opportunities to enhance RTC's role in both:

1. NDOT Relationship: RTC will attempt to strengthen its relationship with NDOT to better understand and participate in NDOT's process for anticipating and meeting transportation needs on state roads in the region. RTC needs to be able to anticipate and provide input on the impacts that NDOT decisions will have on the region, and work with NDOT to collectively consider and address those impacts during their interrelated planning and programming processes.[23]

2. Street and Highway Policy: RTC is developing an updated street and highway policy to better define and guide the process presented in Attachment 3 – RTC Process. One purpose of the policy will be to provide clarity regarding standard improvements included in RTC roadway projects, and the decision-making process for including other improvements on unique projects.

3. Scenario-based Planning: RTC intends to develop a scenario-based planning approach for the next Regional Transportation Plan. Potential scenarios that could be reflected include those involving the timing and location of actual growth/development, land use/zoning/annexation decisions, available funding levels, potential policy and project prioritization decisions, and other factors that are difficult to predict or control. Those scenarios would then be revisited and revised when the cycle of the overall process is repeated as presented in Attachment 2 – Overall Process.

4. Regional Transportation Plan Structure: During development of the next Regional Transportation Plan and in the plan itself, RTC intends to present the categories of roadway and other transportation "needs," describe the methodology used to determine "needs," accurately reflect the scarcity of available funding sources, reflect trade-offs involved with policy and project prioritization decisions, and

[23] The subcommittee that Governor Lombardo created to provide recommendations on transportation and infrastructure presented ideas on ways to improve NDOT's process and for state and local governments to better work collectively as part of that process. *See* Transportation & infrastructure Committee Policy Document, submitted to then governor-elect Lombardo on December 30, 2022.

clearly describe relevant decision-rights and decision-making processes at the state, regional and local levels.

5. Financial and Capital Improvement Planning: RTC is developing a more sophisticated 10-year financial plan and capital improvement planning process (including a 5-year cash flow plan) to improve decision-making regarding regional "needs" and trade-offs involved with policy and project prioritization decisions.

6. Regional Unfunded Needs Analysis: RTC will attempt to work with NDOT and the local jurisdictions to develop a 5 to 10-year regional "needs" analysis and unfunded "needs" analysis for all state roads, regional roads, and local roads in the region. That analysis would allow regional decision-makers to consider the relative importance of state, regional and local "needs," and to make informed decisions about potentially re-defining roles and responsibilities for certain roads and roadway projects.[24]

7. Development Review Process: RTC will focus its involvement in the development review process on supporting the local jurisdictions in their analysis of potential traffic impacts, and TMRPA in its analysis of conformance with the Truckee Meadows Regional Plan. RTC and the local jurisdictions are discussing joint development of a template for standardized traffic impact statements. So far, there do not appear to be advantages to redefining roles and responsibilities for the development review process.

These efforts should significantly improve the process for anticipating and meeting transportation needs in the region, and clarify regional expectations. The Executive Director and staff will continue to examine the overall process, and RTC's process, to identify other opportunities to enhance RTC's role in both going forward.

[24] As noted in Sec. 3 above, the Nevada Sustainable Transportation Funding Advisory Working Group's Final Report includes a substantially similar recommendation.

Attachment 1

Strategic Goal #2

Goal #2

Enhance RTC's Role in Anticipating and Meeting Future Transportation Needs

Focus on transportation decision-making, development impacts, and the future of our community.

Outcome: Clarify and potentially re-define regional relationships and responsibilities for leadership and collaboration.

Champion: General Counsel

OUR APPROACH

Staff will evaluate the landscape of transportation decision-making across our region and look at opportunities to align it better to serve the needs of the community. Staff will focus on opportunities to enhance RTC's ability to facilitate more proactive and regional analysis of anticipated growth and changed conditions, and the resulting transportation needs, through collaboration and coordination with regional partners. Opportunities may exist in the various state, regional, and local transportation, and community planning processes, as well as land development review and approval processes.

OBJECTIVES

#1 New Roads: Identify, analyze, and potentially re-define relationships and responsibilities among RTC, NDOT, and local jurisdictions.

#2 Improvements/Expansions to Existing Roads: Identify, analyze, and potentially re-define relationships and responsibilities among RTC, NDOT, and local jurisdictions.

#3 Maintenance of Existing Roads: Identify, analyze, and potentially re-define relationships and responsibilities among RTC, NDOT, and local jurisdictions.

MEASURES OF SUCCESS

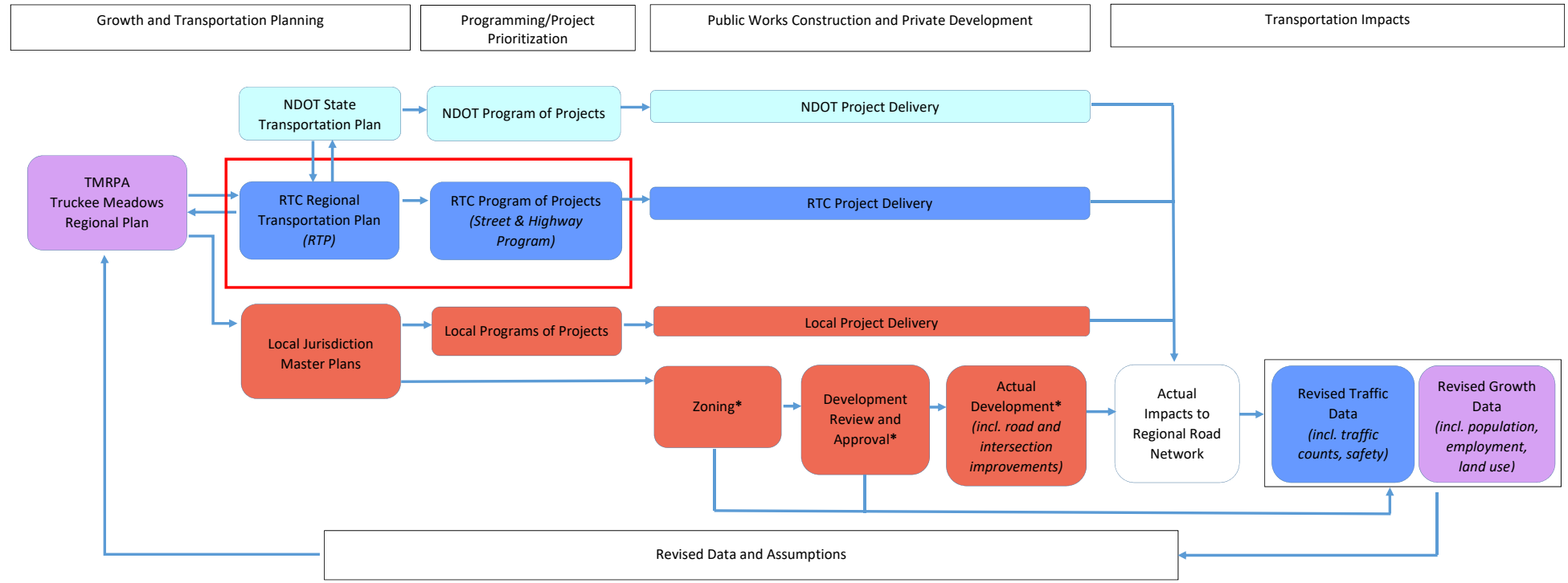
% of Roadway Categories Verified	% of Funding Sources Analyzed	% of Regional Roadway Lane Miles Identified

Attachment 2

Overall Process

OVERALL PROCESS: ANTICIPATING AND MEETING TRANSPORTATION NEEDS (ROADWAYS)

"In preparing for battle, I have always found that plans are useless, but planning is indispensable." – Dwight D. Eisenhower



Legend

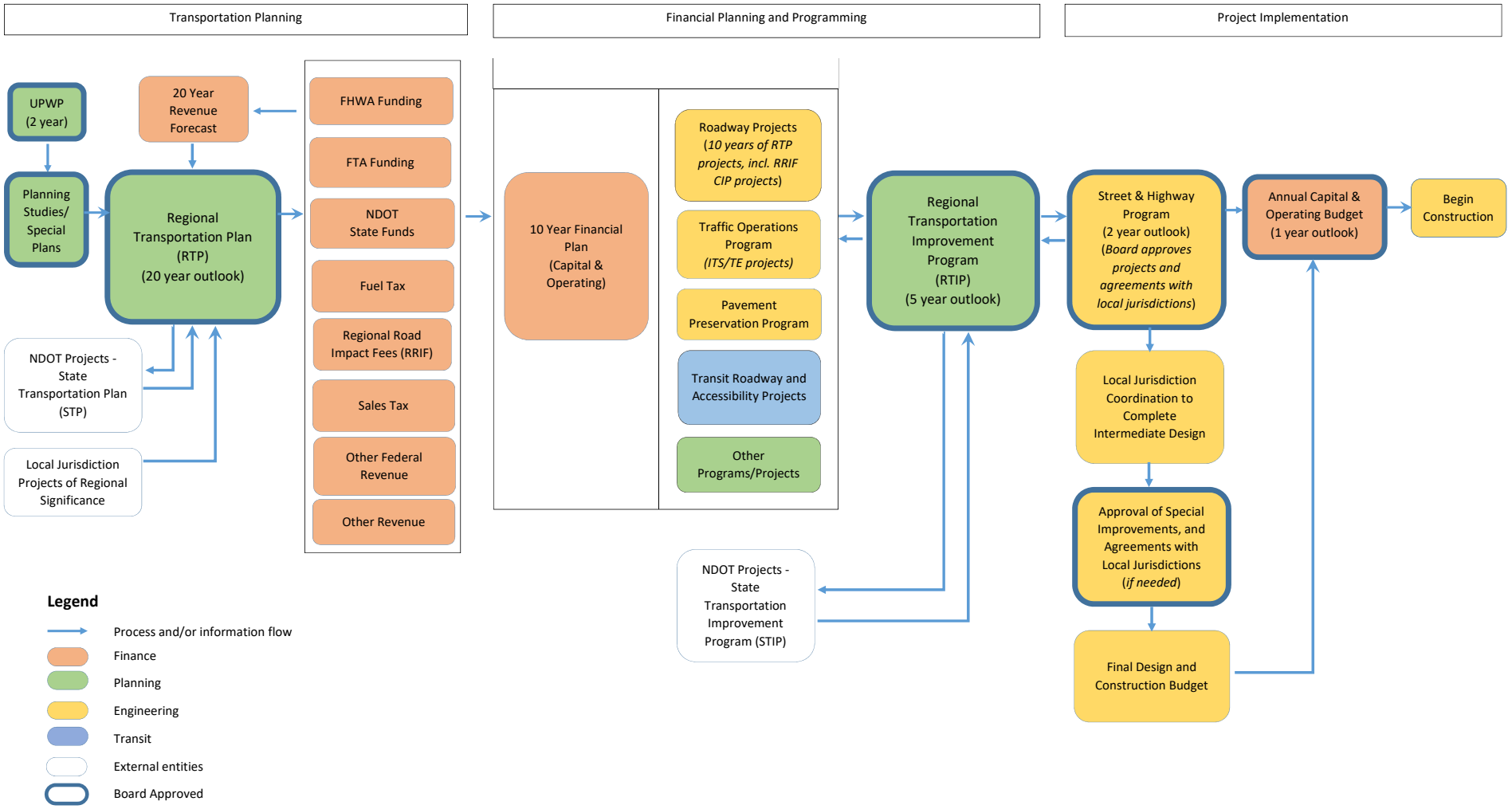
- Process and/or information flow
- TMRPA
- * *TMRPA tracks zoning changes, development approvals, and actual development, and reviews projects of regional significance and master plan amendments for conformance with the Truckee Meadows Regional Plan*
- NDOT
- RTC
- Local Jurisdictions (Washoe, Reno, Sparks)
- *See* flowchart titled "RTC Process"

Updated: 3/8/2023

Attachment 3

RTC Process

RTC PROCESS: ANTICIPATING AND MEETING TRANSPORTATION NEEDS (ROADWAYS)



Updated: 3/8/2023

Attachment 4

Simplified Diagram

Roadway Planning & Project Implementation