#### 8. PROPOSED ADJUSTED URBANIZED AREA BOUNDARY

#### **BACKGROUND**

The US Census Bureau defines and delineates the geographic boundaries for urbanized areas based on population determined by the Census. Urbanized Areas (UZAs) have a population of at least 50,000. Every ten years when Census data is released, TxDOT leads the process of reviewing and/or adjusting Urbanized Area boundaries with feedback from the Metropolitan Planning Organizations (MPOs). For transportation planning purposes, states have the option of using Census-defined urban boundaries, or they may adjust the census-defined boundaries to be more consistent with transportation needs. Any adjustments to urban area boundaries must be approved by the Federal Highway (FHWA) Division Office.

Historic Urbanized Area Boundary data from 1970-2020 can be seen on <u>H-GAC's Census Urbanized</u> <u>Area Tool</u>.

#### **CURRENT SITUATION**

The original 2020 Census Urbanized Area Boundary may be adjusted ("smoothed") to follow municipal limits, include transit routes, and/or simplify the boundary to remove irregularities. Any adjustments to the Urbanized Area Boundaries must be approved by the FHWA Division Administrator by December 29, 2023.

Staff will discuss the Recommended Adjusted Urbanized Area Boundary for the Houston-Galveston Metropolitan Planning Area.

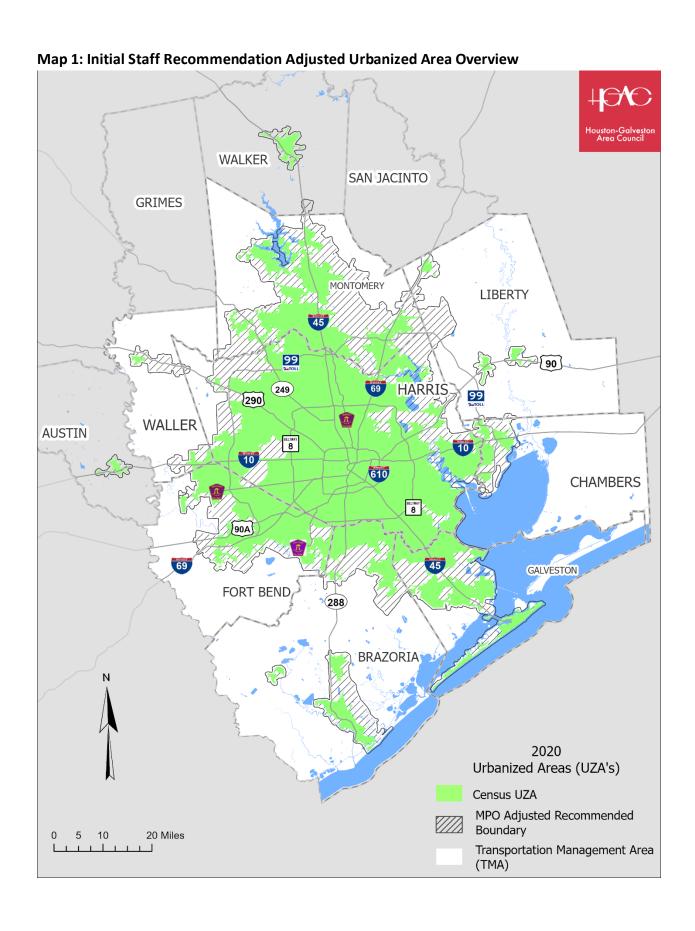
Two additional attachments have been included:

- FHWA presentation about the Urbanized Area adjustment process.
- Abbreviated Frequently Asked Questions developed from FHWA resources.

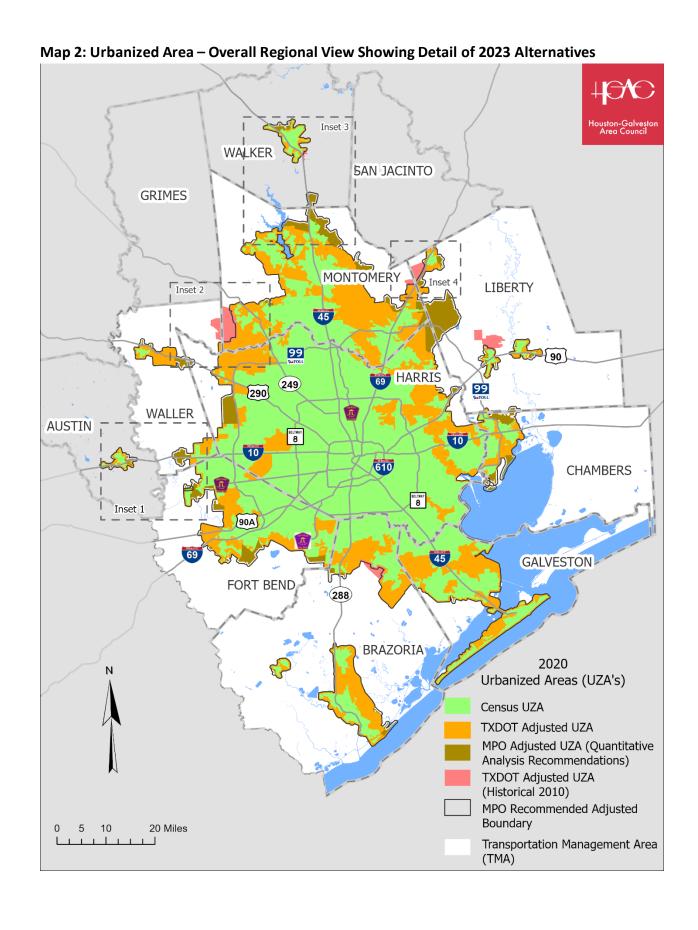
After the 2020 Adjusted Urbanized Area has been completed, staff will work with the TPC Select Committee on Planning Area and Composition to review and potentially recommend updates to the Metropolitan Planning Area.

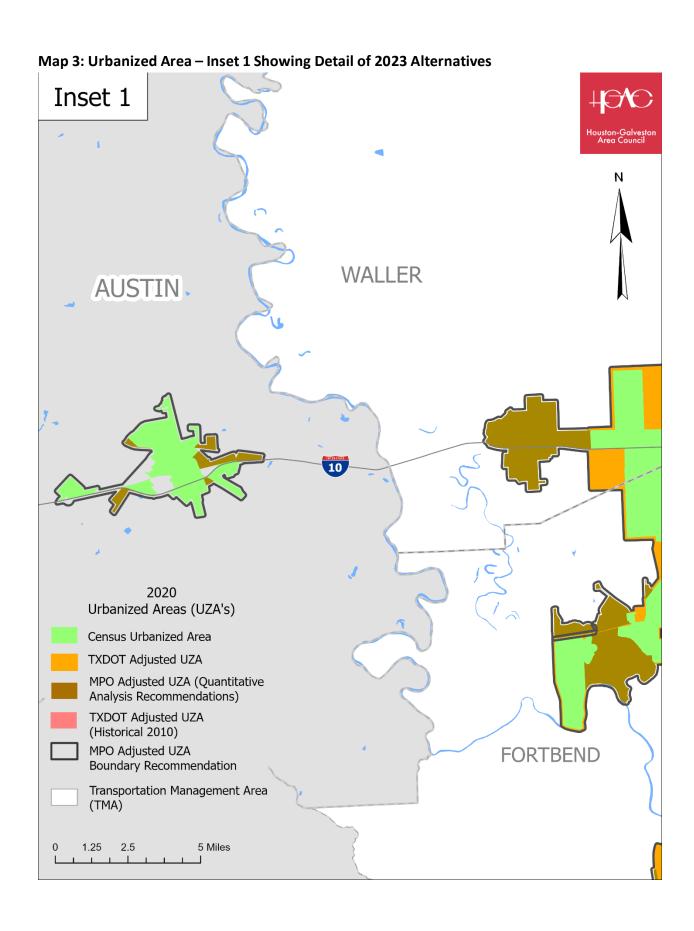
#### **ACTION REQUESTED**

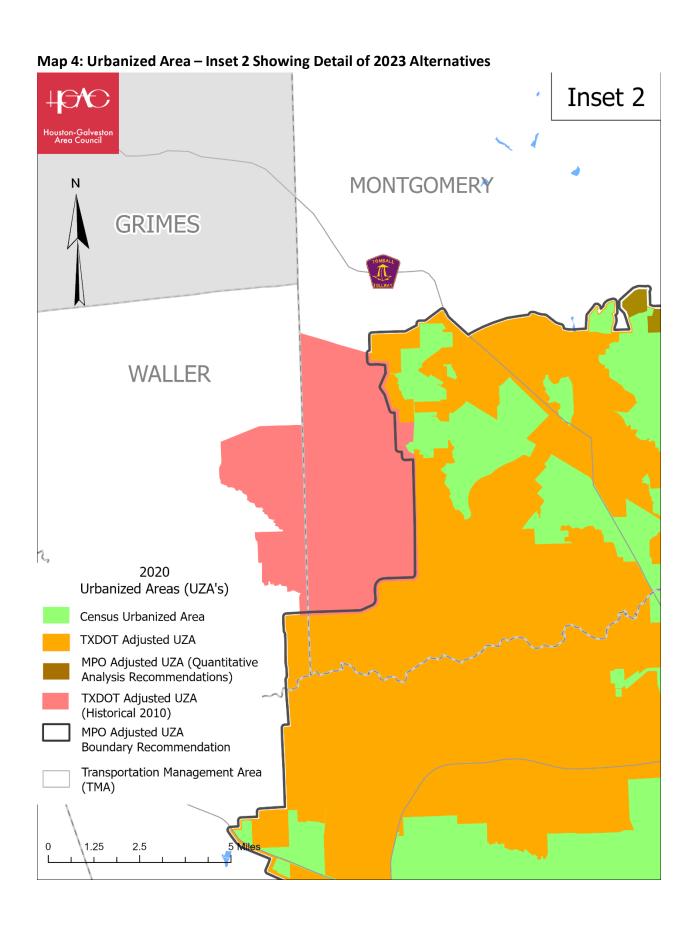
For discussion and possible action. Staff will seek TAC's recommendation to the Transportation Policy Council for approval of the Recommended Adjusted Urbanized Area Boundary.



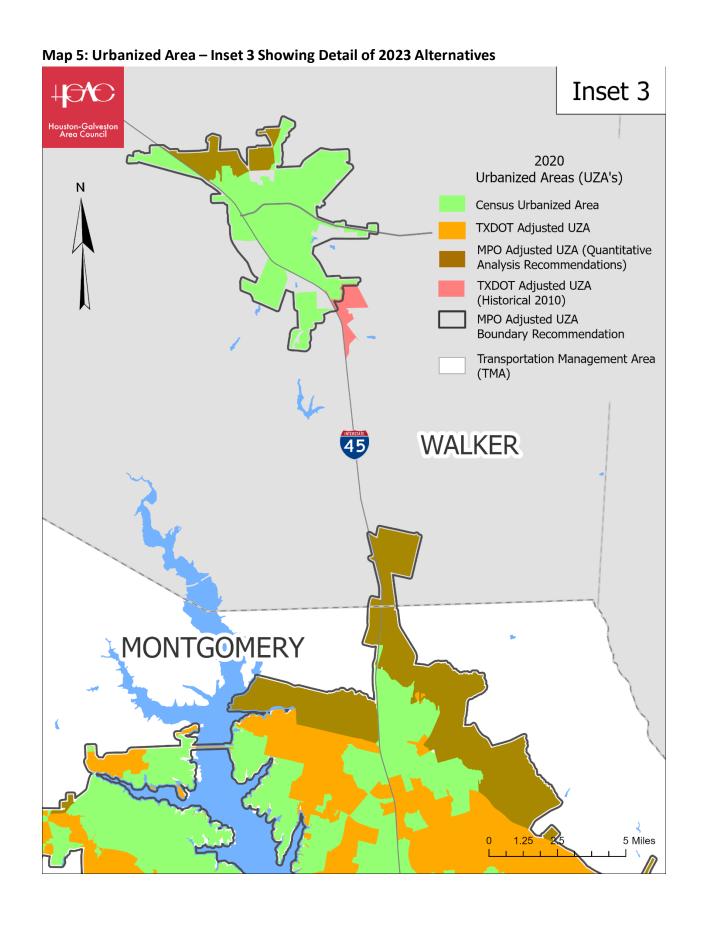
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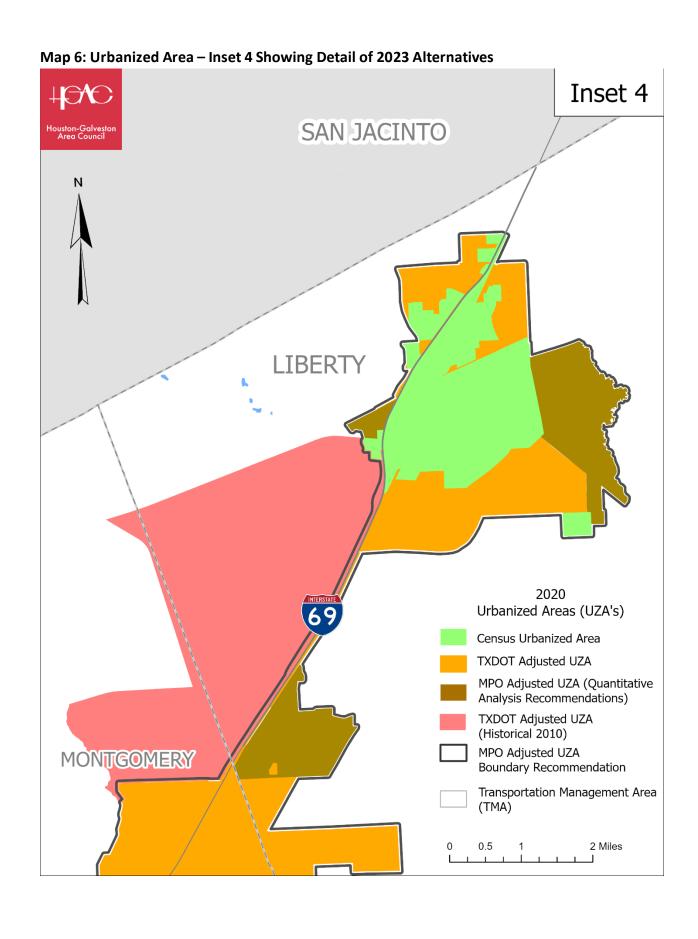


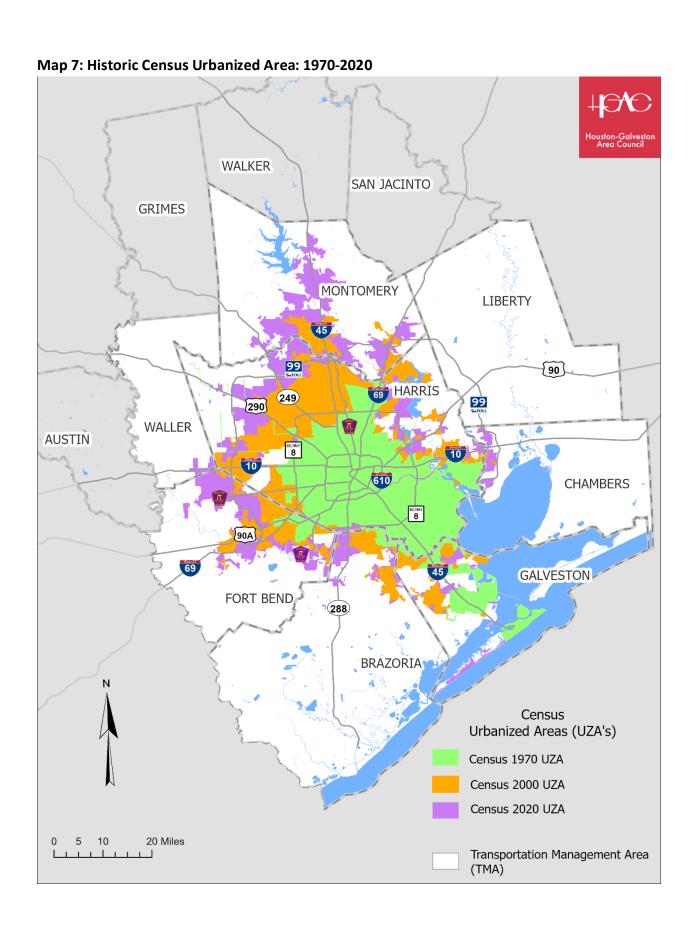


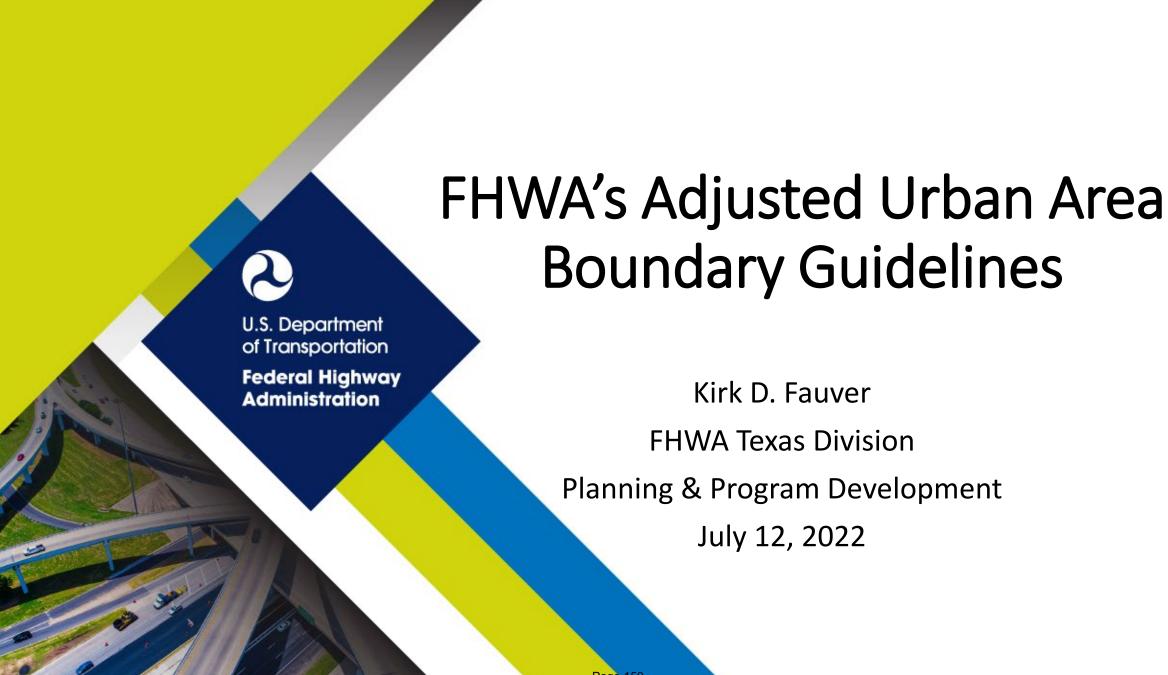


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## Urban Area - Urban/Rural Definition







## 2020 Census Urban Area Boundary Release Schedule







# Summaries of Final Criteria for Delineating 2020 Census Urban Areas

- Increase the minimum population threshold from 2,500 to 5,000
- Include additional housing unit (>= 2000) parameter to qualify as an Urban Area:
- Use housing unit density instead of population density to define initial Urban Area Cores
- Use only Census Block instead of Census Trace & Block to define initial Urban Area Cores
- Reduce the maximum jump distance from 2.5 miles to 1.5 miles
- Exclude the low density Hop or Jump corridors
- Cease distinguishing between urbanized areas and urban clusters
- Use LEHD worker flow data to determine whether to merge or split between 2010 urban areas



## 2010 & 2020 Census Urban Area Thresholds

### **2010 Census Urban Area Definition**

| Census Bureau Urban Area Definition | <b>Population Range</b> |
|-------------------------------------|-------------------------|
| Urban Areas                         | 2,500+                  |
| Urban Clusters                      | 2,500-49,999            |
| Urbanized Areas                     | 50,000+                 |

### **2020 Census Urban Area Definition**

| Census Bureau Urban Area Definition | Population                               | <b>Housing Units</b> |
|-------------------------------------|--|----------------------|
| Urban Areas                         | 5,000 <b>o</b>                           | r 2,000              |
| Urban Clusters                      | No longer distinguishing between the two |                      |
| Urbanized Areas                     | types of urba                            | an areas             |



## 2010 and 2020 Initial Urban Area Cores/Low Density Fill

| Census Bureau Urban Areas     | Population<br>Density | Housing Units Density | Analysis Unit           |
|-------------------------------|-----------------------|-----------------------|-------------------------|
| 2010 Initial Urban Area Cores | 1000/500              |                       | Census Tract<br>& Block |
| 2020 Initial Urban Area Cores | **                    | 1275*/425/200         | Census Block            |

<sup>\*</sup> A high-density nucleus is defined as a collection of blocks (Eligible Block Aggregations), with at least 500 housing units where each census block has density of at least 1,275 housing unit.

<sup>\*\*</sup> Census Blocks that contain a **group quarter** and has a **population density of 500** adjacent to already qualified blocks will be included.



# Potential Benefits of Using Housing Unit Density

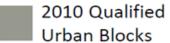
- Better measurement of built environment. Housing Units include both occupied and vacant units, consistent with using impervious surfaces to define commercial and other non-residential urban land uses.
- Census Block level housing unit counts are invariant the new 2020
   Differential Privacy methodology applies only to population counts, not housing unit counts.
- Ability to update urban areas between censuses.



# Reducing Maximum Distance of Jumps from 2.5 to 1.5 miles





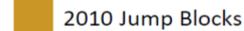


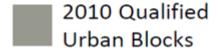




# No Longer Include the Low Density Hop and Jump "Corridors" in Urban Areas











## Census & FHWA 2020 Urban Area Definition

| Census Bureau Urban Area Definition | Population or<br>Housing Unit |
|-------------------------------------|-------------------------------|
| Population Threshold                | 5,000                         |
| Housing Unit Threshold              | 2,000                         |

| FHWA Urban Area Definition | Population   |
|----------------------------|--------------|
| Urban Areas                | 5,000+       |
| Small Urban Areas          | 5,000-49,999 |
| Urbanized Areas            | 50,000+      |



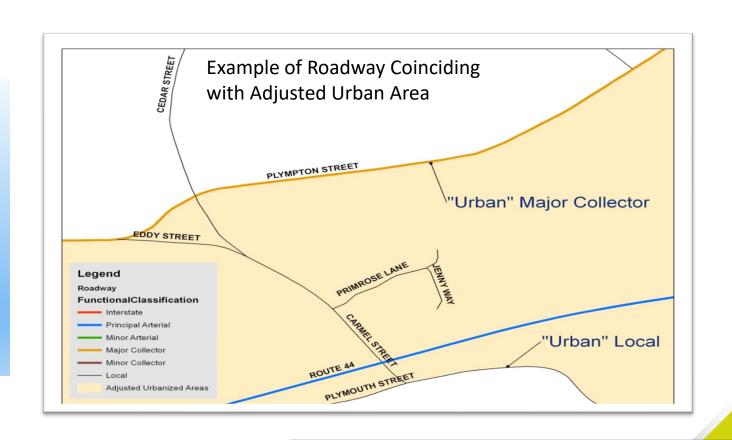
## Authority for Adjusting UABs

- State and local officials authorized to cooperatively adjust
   Urban Area boundaries by 23 U.S.C. 101(a)(35)
  - Primary responsibility lies with the States
  - If an urban area is located outside of an MPO's MPA, the local officials coordinate urban area adjustments with their State DOT
  - If an urban area is within an MPO's MPA, local officials coordinate with their MPO and State DOT
  - FHWA Order M1100.1A delegates the authority to approve adjusted UABs to FHWA Division Administrators



# Census Urban Area Boundaries – Reasons to Expand

- Aligning with existing planning boundaries
- Incorporating local knowledge of urban landscape
- Addressing irregularities in boundary shapes
- Maintaining consistency with highway functional classifications



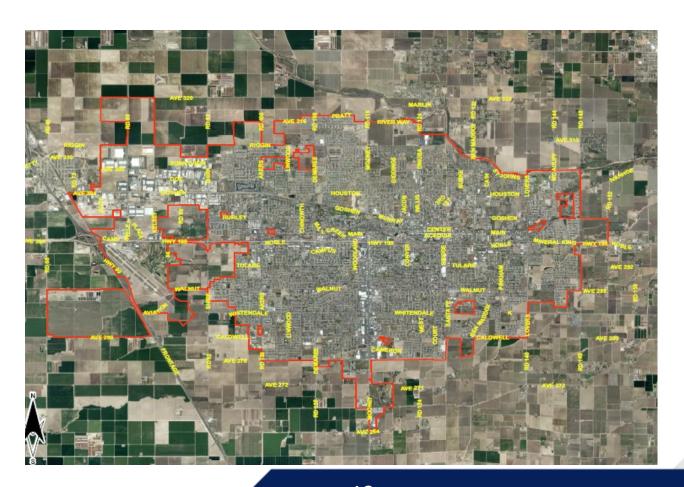


# Census Urban Area Boundaries – Adjustment Considerations

Include entire municipality

Include areas with urban characteristics

Include large/significant traffic generators, e.g., airports, industrial areas, transportation terminals, transit routes



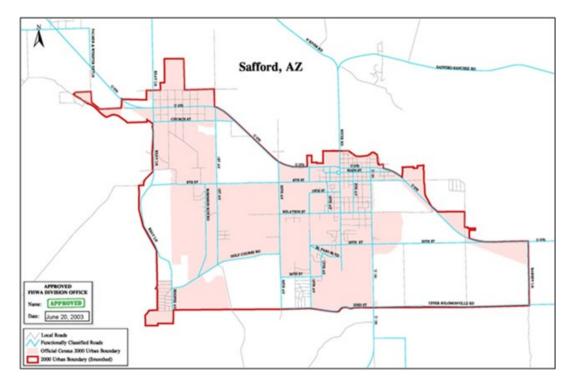


# Census Urban Area Boundaries – Adjustment Considerations

Boundaries should be simple, without irregularities

Boundaries should not split roadways or ramps

Boundaries should be one contiguous area



Example Boundary Adjusted to Align with Major East-West Roadway to the South



# Summary of Common Errors in Adjusting 2010 Census Urban Boundaries

- Boundaries do not encompass an entire Census Bureau urban area
- One adjusted urban area is not associated with one census urban area
- States do not coordinate in adjusting <u>multi-state</u> urban areas
- Adjustment of those Census urban areas that are not defined as FHWA urban areas
- Adjustment of Census urban areas that are defined by earlier decennial census urban areas

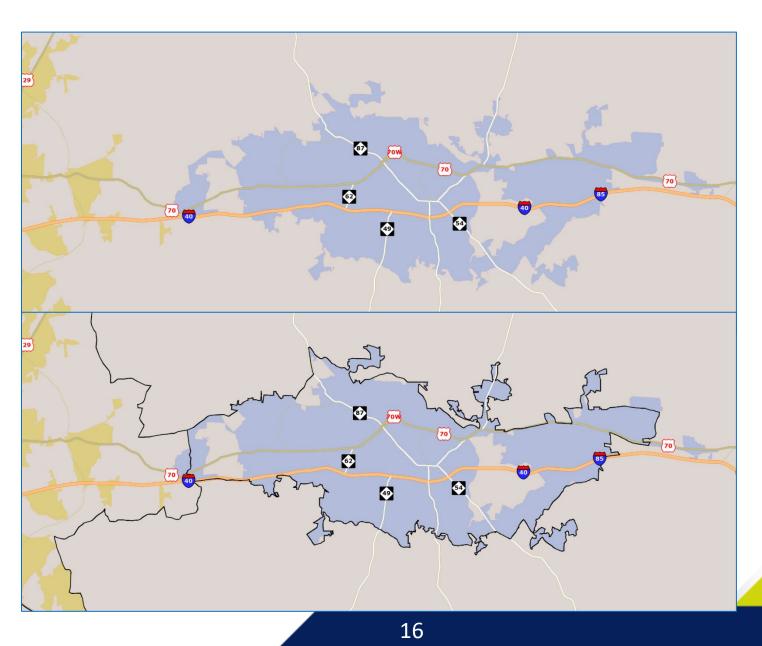


## **Common Errors Found**

in Adjusting 2010 Census Urban Areas

### **Error:**

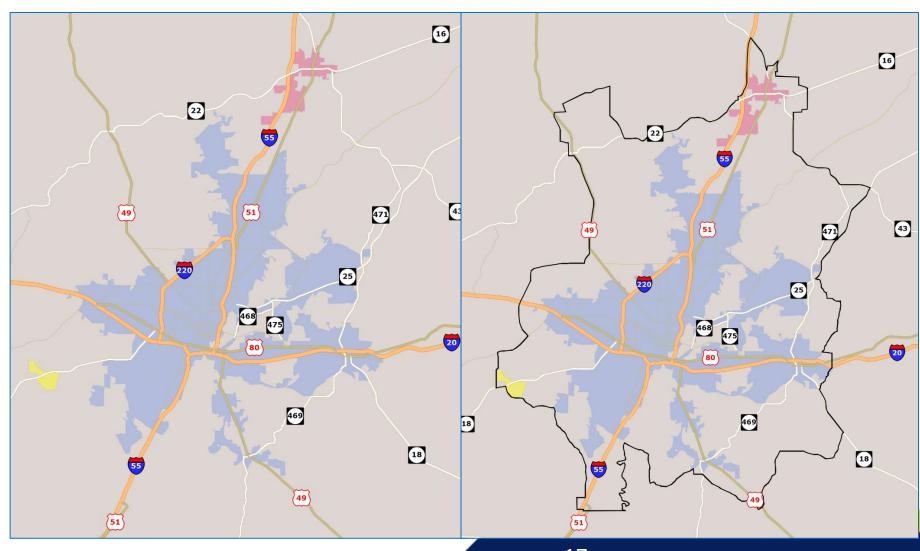
 Missing portions of Census Urban areas





### **Errors:**

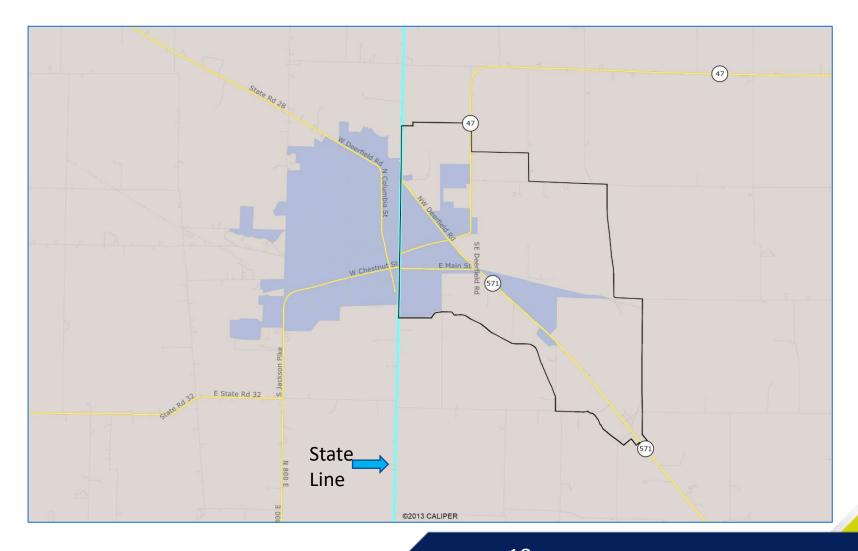
One-to-One relationship: multiple Census Urban Areas in one Adjusted Urban Area, should be 3 Adjusted Urban Areas





### **Multi-State Urban Areas:**

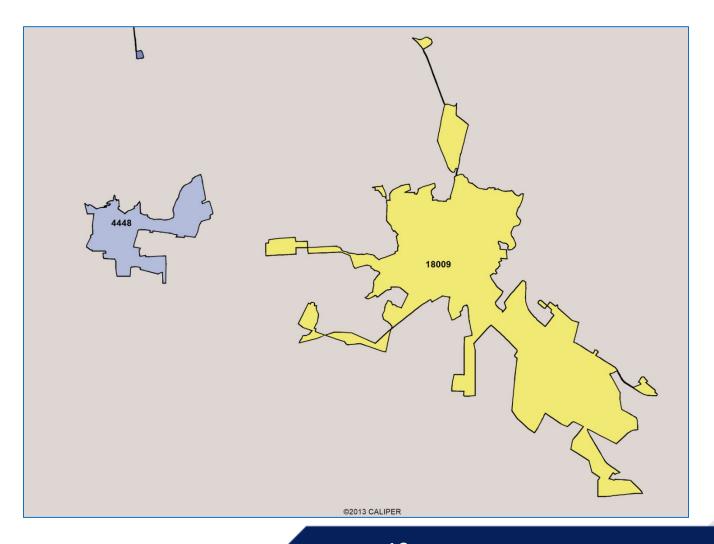
Each state adjusts only their own state portion without working with other states





### **FHWA Urban Area Definition:**

Decennial Census Population of 5000 or more, the one in blue should not be included as an FHWA urban area (population =4448)





## Common Errors Found

in Adjusting 2010 Census Urban Areas

## Did not use the latest Census Urban Area as basis for Adjustment

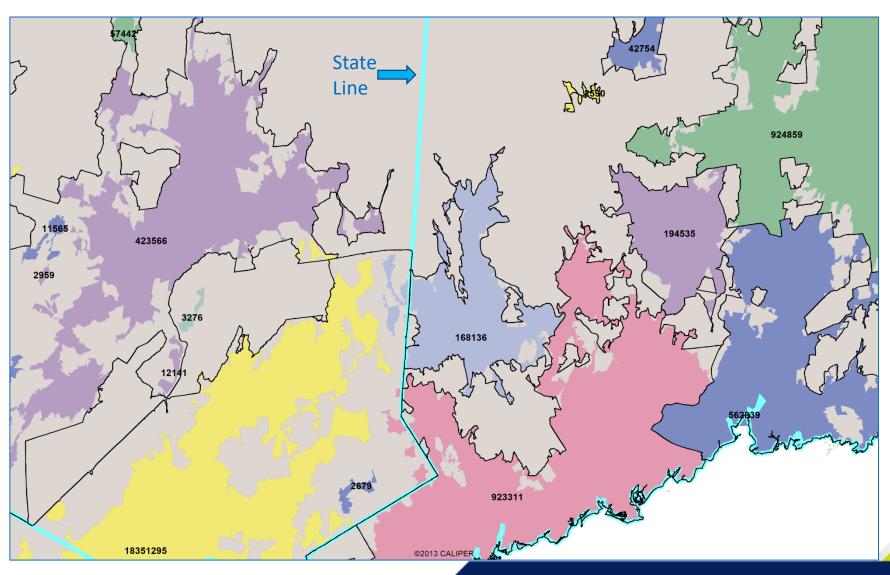
- Previous decennial Census Urban Areas are irrelevant
- Start with the latest decennial Census urban areas



### **Summary**

(figures shown are 2010 Census Population):

How many errors can you find?

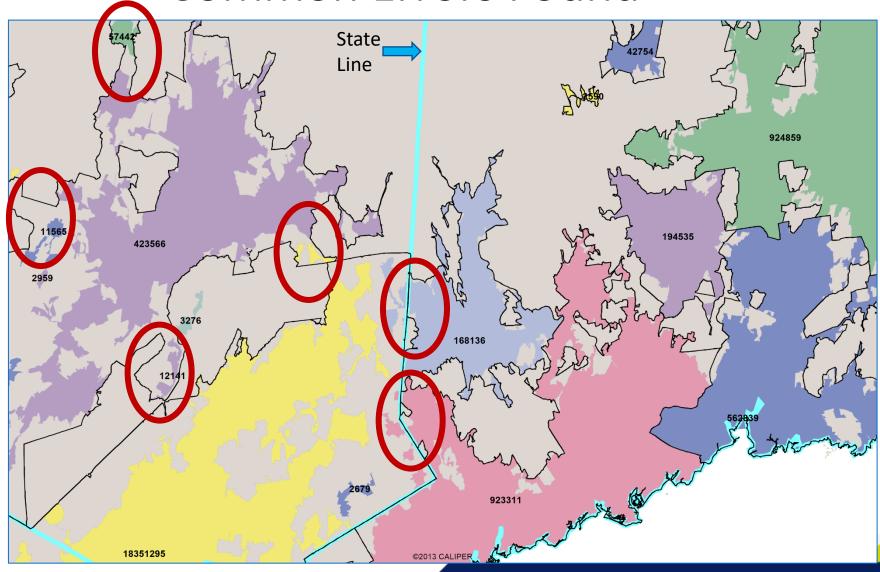




### **Summary**

(figures shown are 2010 Census Population):

How many errors can you find?





## Adjusted Urban Area Boundaries Guideline Summaries

- Boundaries should encompass the entire Census Bureau urban area
- Boundaries should encompass one contiguous area
- Boundaries should be simple, without irregularities
- Boundaries should follow municipal boundaries or other physical features
- Boundaries should include areas with urban characteristics, such as airports, industrial areas, transportation terminals, major activity centers, etc.
- Reference: <a href="https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\_functional\_classifications/fcauab.pdf">https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\_functional\_classifications/fcauab.pdf</a>,

Note: States and MPOs may choose not to adjust the Census urban boundaries



# Relationship between Functional Class & Adjusted Urban Area Boundaries

Federal-Aid Highway System Impact

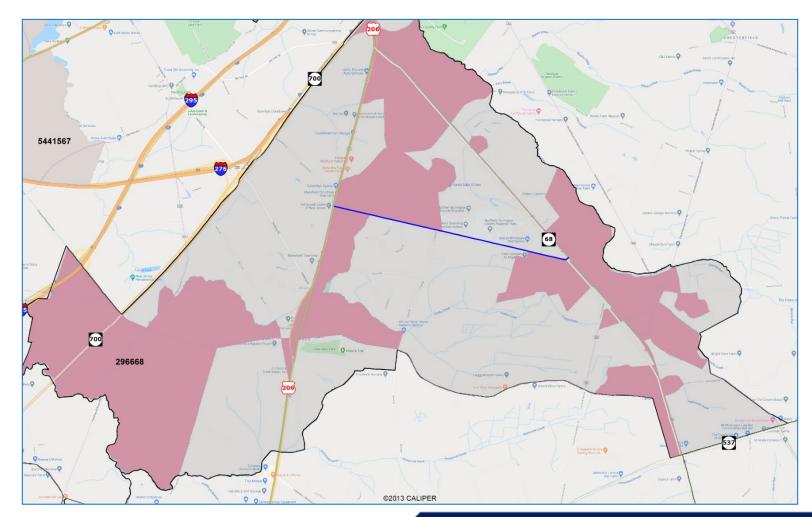
| Functional Class System                                 | Urban | Rural |
|---|-------|-------|
| 1 - Interstate  | Yes   | Yes   |
| 2 - Principal Arterial - Other Freeways and Expressways | Yes   | Yes   |
| 3 - Principal Arterial - Other                          | Yes   | Yes   |
| 4 - Minor Arterial                                      | Yes   | Yes   |
| 5 - Major Collector                                     | Yes   | Yes   |
| 6 - Minor Collector                                     | Yes   | No    |
| 7 - Local   | No    | No    |



Benefits of Adjusted Urban Area
Example: With the adjusted urban
area boundaries, the Minor
Connector shown in blue connecting
two arterials can be uniformly
designated as an Urban Minor
Collector. Without adjusting the
urban boundaries, the connector
would be divided into three roadway
segments: urban, rural and then again
urban minor connectors, making the
roadway planning, programming and
maintenance difficult

## Example of Benefit

Maintaining consistency with highway functional classifications

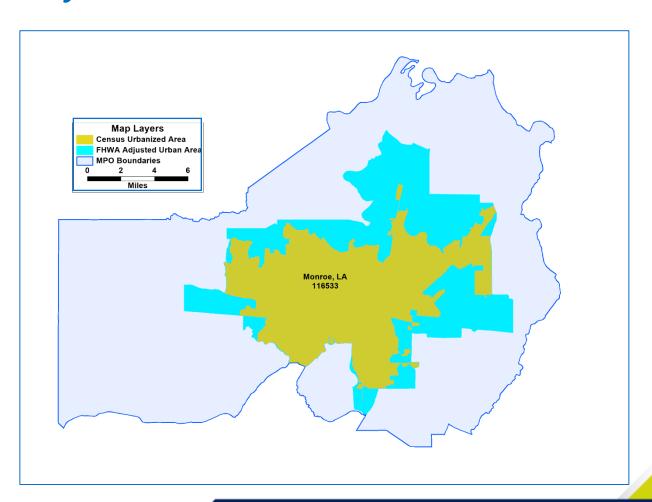




## **Boundary Development Sequency**

Census Urban Area → Adjusted Urban Area → MPO Boundaries

- MPO boundaries can include multiple urbanized areas
- A MPO can also cover portions of urbanized areas inasmuch as the remaining portions of the UZA are covered by other MPOs
- Requirement: an Urbanized Area must be covered entirely by one or more MPO boundaries





## Urban Area Boundary Adjustment Good Practice Steps/Schedule

Recommended 12 month schedule following Census release of Urban Area Boundaries.

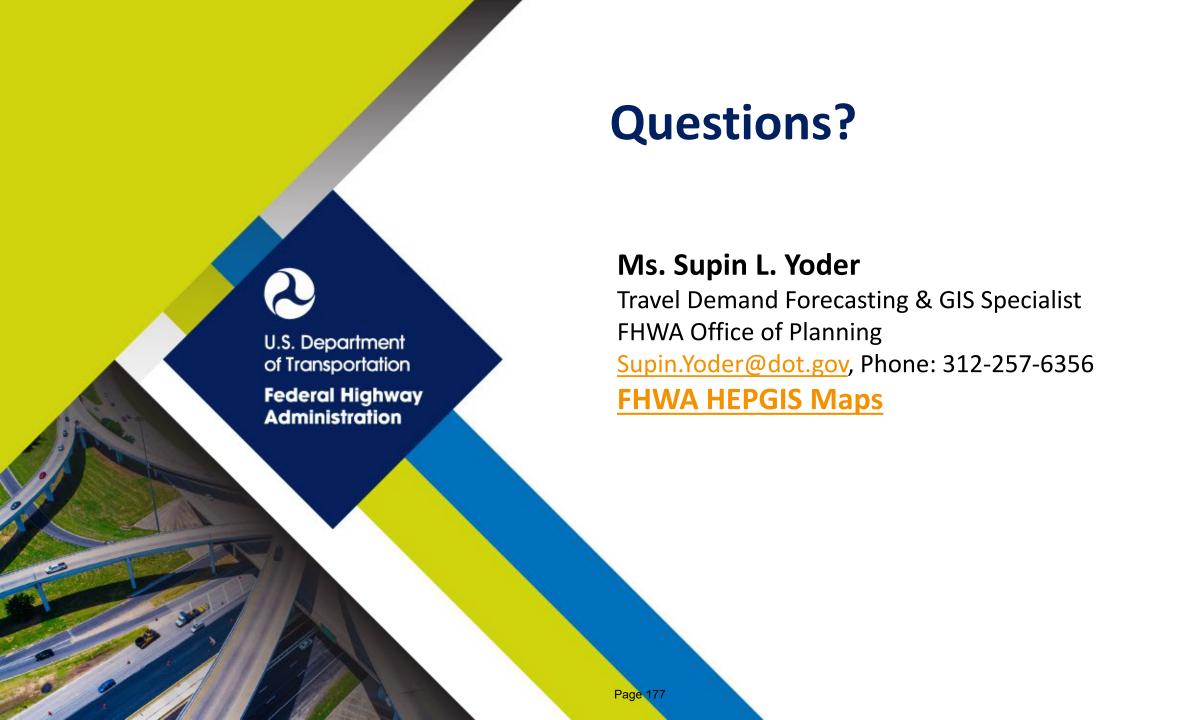
At a minimum – confirm Census boundaries are adequate, also...

Build/share understanding of game plan

Generate maps and share electronically – use GIS if at all possible

Encourage/work towards timely delivery of UAB revisions

| Event   | Months Following Release of<br>2020 Census Urban Area<br>boundaries |
|---|---|
| FHWA issues transmittal letter  | Month 1   |
| Begin adjusted urban area boundary update process                         | Month 1   |
| DOT works with planning partners to define adjusted urban area boundaries | Month 3-9   |
| Provide draft final data and/or maps to FHWA Division Office for review   | Month 10  |
| DOT incorporates Review Comments  | Month 11  |
| DOT submits adjusted urban area boundaries to FHWA Office of Planning     | Month 12  |



#### **Frequently-Asked Questions:**

#### **Census Urban Areas and MPO/TMA Designation**

(Source:

https://www.fhwa.dot.gov/planning/census\_issues/urbanized\_areas\_and\_mpo\_tma/faq/pag e00.cfm)

#### **FAQ Topic 1: Definitions**

**Urban Area (Census definition)** - A statistical geographic entity consisting of a densely settled core created from census blocks and contiguous qualifying territory that together have at least 2,000 housing units or 5,000 persons. (87 FR 16706)

**Urban Area (FHWA definition)** - The term "urban area" means an urbanized area or, in the case of an urbanized area encompassing more than one State, that part of the urbanized area in each such State, or urban place as designated by the Census Bureau having a population of 5,000 or more and not within any urbanized area, within boundaries to be fixed by responsible State and local officials in cooperation with each other, subject to approval by the Secretary. Such boundaries shall encompass, at a minimum, the entire urban place designated by the Census Bureau, except in the case of cities in the State of Maine and in the State of New Hampshire. (23 U.S.C. 101(a)(35))

Rural (Census definition) - Territory not defined as urban. (87 FR 16706)

**Rural Areas (FHWA definition)** - The term "rural areas" means all areas of a State not included in urban areas. (23 U.S.C. 101(a)(25))

**Urbanized Area (Census definition)** - A retired statistical geographic entity type consisting of a densely settled core created from census tracts or blocks and adjacent densely settled territory that together have a minimum population of 50,000 people. Urbanized areas were not identified for the 2020 Census. (87 FR 16706)

Please note that for the 2020 Decennial Census, the Census Bureau designated all qualifying areas as "urban areas" and did not distinguish any urban areas as an "urbanized area".

**Urbanized Area (FHWA definition)** - The term "urbanized area" means an area with a population of 50,000 or more designated by the Census Bureau, within boundaries to be fixed by responsible State and local officials in cooperation with each other, subject to approval by the Secretary. Such boundaries shall encompass, at a minimum, the entire urbanized area within a State as designated by the Census Bureau. (23 U.S.C. 101(a)(36))

**Adjusted Urban Area (FHWA definition)** - A Census-defined urban area with a population of 5,000 or more where the boundaries have been adjusted to include additional territory by responsible State and local officials in cooperation with each other. Per <u>23 U.S.C. 101(a)(35)</u>, adjusted urban areas are subject to approval by the Secretary of Transportation.

Adjusted Urbanized Area (FHWA definition) - A Census-defined urban area with a population of 50,000 or more where the boundaries have been adjusted to include additional territory by responsible State and local officials in cooperation with each other. Per 23 U.S.C. 101(a)(36), adjusted urbanized areas are subject to approval by the Secretary of Transportation.

Please note that <u>FHWA Order M1100.1A</u> delegates the authority to approve adjusted urban area boundaries from the Secretary of Transportation to FHWA Division Administrators.

**Metropolitan Planning Area (FHWA definition)** - The geographic area determined by agreement between the MPO for the area and the Governor, in which the metropolitan transportation planning process is carried out. (23 CFR 450.104)

**Metropolitan Planning Organization (FHWA definition)** - The policy board of an organization created and designated to carry out the metropolitan transportation planning process. (23 CFR 450.104)

**Transportation Management Area (FHWA definition)** - An urbanized area with a population over 200,000, as defined by the Census Bureau and designated by the Secretary of Transportation, or any additional area where TMA designation is requested by the Governor and the MPO and designated by the Secretary of Transportation. (23 CFR 450.104)

#### **FAQ Topic 4: Existing MPOs**

### When do MPA boundaries for existing MPOs need to be updated to reflect the 2020 urbanized area boundaries?

MPOs (in cooperation with the State and public transportation operator(s)) shall review the MPA boundaries after each Census to determine if existing MPA boundaries meet the minimum statutory requirements for new and updated urbanized area(s) and shall adjust them as necessary. As appropriate, additional adjustments should be made to reflect the most comprehensive boundary to foster an effective planning process that ensures connectivity between modes, improves access to modal systems, and promotes efficient overall transportation investment strategies. (23 CFR 450.312(i))

The MPA boundaries of existing MPOs should be updated no later than the next scheduled MTP update after October 1, 2023, or within 4 years of the designation of the 2020 urbanized area boundary (i.e., December 29, 2026), whichever occurs first.

#### **FAQ Topic 6: Funding**

#### How will the 2020 Census urban areas impact STBG funding?

Per <u>23 U.S.C. 133(d)(1)(A)</u>, 55% of each State's STBG apportionment (after the set-aside for Transportation Alternatives) is to be obligated in the following areas, in proportion to their relative shares of the State's population:

- In urbanized areas of the State with an urbanized area population of over 200,000,
- In urbanized areas of the State with an urbanized area population of not less than 50,000 and not more than 200,000,
- In urban areas of the State with a population not less than 5,000 and not more than 49,999, and
- In other areas of the State with a population less than 5,000.

This suballocation formula will use the population totals from the 2010 Census until the Census Bureau publishes their Federal Register notice announcing the qualifying urban areas based on the results of the 2020 Decennial Census. The remaining 45% of each State's STBG apportionment may be obligated in any area of the State.

In addition, 23 U.S.C. 133(g)(1) allows States to use up to 15% of the STBG amounts suballocated for a fiscal year for use in areas with a population of not more than 49,999 on:

- Roads functionally classified as rural minor collectors or local roads; or
- Critical rural freight corridors designated under 23 U.S.C. 167(e).

## Does each urbanized area receive its own STBG funding allocation? Are these funds eligible to be used for projects outside the designated urbanized area, but within the MPA?

STBG funding allocations are sub-allocated to urbanized areas in proportion to their relative shares of the State's population. (23 U.S.C. 133(d)(1)(A))

For urbanized areas with a population greater than 200,000, this portion is to be divided among those areas based on their relative share of population unless the Secretary approves a joint request from the State and relevant MPO(s) to use other factors. (23 U.S.C. 133(d)(1)(A)(i) and 23 U.S.C. 133 (d)(4))

For urbanized areas with population of at least 50,000 but no more than 200,000, the State is to establish a process to consult with relevant MPOs and describe how funds will be allocated equitably.(23 U.S.C. 133(d)(1)(A)(ii) and 23 U.S.C. 133 (d)(3)(A))

STBG funds attributed to an urbanized area with a population greater than 200,000 may be obligated anywhere within the MPA that encompasses the urbanized area. (23 U.S.C. 133(d)(2))

## FAQ Topic 7: Adjusting Urban Area Boundaries and Implications for FHWA's Programs

### Are States, MPOs, and local governments required to adjust Census-designated urban area boundaries?

No. <u>23 U.S.C. 101(a)(35)</u> and <u>23 U.S.C. 101(a)(36)</u> allow States and local officials to adjust urban and urbanized area boundaries; however, there is no Federal requirement for them to make these adjustments or to recalculate the population numbers if they chose to adjust the boundaries. If an urban area is within an MPO's MPA, local officials coordinate with their MPO and State DOT on the boundary adjustment, per <u>23 CFR 470.103</u>. States, MPOs, and local governments may choose to make boundary adjustments for a variety of reasons, including, but not limited to:

- Aligning urban area boundaries with existing planning boundaries (e.g., MPA boundaries, local municipal boundaries),
- Addressing irregularities in urban area boundary shapes,
- Maintaining consistency with highway functional classifications,
- Including transit routes and/or traffic generators,
- Incorporating local knowledge of urban form (e.g., current and future land use), and/or
- Fostering an inclusive, effective, and comprehensive transportation planning process.

### How often can States, MPOs, and local governments adjust urban area boundaries?

Although there is no specific FHWA policy on how often urban area boundaries can be adjusted, States, MPOs, and local governments are strongly encouraged to make such adjustments as infrequently as possible and only when deemed absolutely necessary to maintain consistency in the transportation planning process and FHWA's programs.

FHWA recommends that States complete the urban area adjustment process within 1 year of the Census Bureau's Federal Register notice announcing the qualifying urban areas based on the results of the 2020 Decennial Census (i.e., December 29, 2023). FHWA will consider all urban area boundaries final as of April 15, 2025, and will use the original 2020 Census boundaries for all urban areas that have not been adjusted. The HPMS data submissions on April 15, 2025, and June 15, 2025, should conform to these urban area boundaries.

#### What FHWA programs are impacted by adjustments to urban area boundaries?

The following FHWA programs distinguish between urban and rural areas and are impacted by adjustments to urban area boundaries:

- Highway Functional Classification: The highway functional classification system distinguishes both by type of roadway facility and whether the facility is located in an urban or rural area. A specific type of roadway facility may have different design criteria depending on whether it is in a rural or urban area, but highway design criteria are not applied strictly according to an urban versus rural boundary designation. If a roadway facility is located within an adjusted urban area boundary, it will be classified as an urban facility. If a roadway facility is located outside of an adjusted urban are boundary, it will be classified as a rural facility. See FHWA's Highway Functional Classification Concepts, Criteria and Procedures for more information.
- HPMS Reporting: FHWA's <u>Highway Performance Monitoring System</u> (HPMS) requests States to report annual highway statistics (i.e., lane and centerline miles, vehicle miles traveled) by highway functional classification, including urban versus rural. Several tables in FHWA's annual <u>Highway Statistics Series</u> also summarize information by urban versus rural classifications. If an urban area boundary has been adjusted, the State must include it in the annual HPMS submittal. See FHWA's <u>HPMS Field Manual</u> for more information on reporting requirements.
- Critical Freight Corridors: The National Highway Freight Program (NHFP) (23 U.S.C. 167) uses the urbanized area definition in 23 U.S.C. 101(a)(36), which includes adjusted urbanized areas, for the designation of critical rural freight corridors (CRFCs) and critical urban freight corridors (CUFCs):
  - 23 U.S.C. 167(e) establishes criteria for designating CRFCs for public roads not within an urbanized area, and
  - 23 U.S.C. 167(f) establishes criteria for designated CUFCs for public roads within an urbanized area.
  - Per FHWA's <u>NHFP guidance</u>, being located inside or outside an adjusted urbanized boundary determines whether a public road can be designated as a CRFC or a CUFC. CUFC routes must be within the adjusted boundaries of an urbanized area. CRFC routes must be outside the adjusted boundaries of any urbanized area.
- STBG Apportionment Formula: Urban area boundary adjustments affect where
  funds may be spent within a State, not how much funding the State receives. Per 23
   <u>U.S.C. 133(d)(1)(A)</u>, 55% of each State's STBG apportionment (after the set-aside for
   Transportation Alternatives) is to be obligated in the following areas, in proportion
   to their relative shares of the State's population:
  - In urbanized areas of the State with an urbanized area population of over 200,000,
  - In urbanized areas of the State with an urbanized area population of not less than 50,000 and not more than 200,000,
  - In urban areas of the State with a population not less than 5,000 and not more than 49,999, and
  - o In other areas of the State with a population less than 5,000.

- STBG Special Rule for Areas Less Than 50,000: 23 U.S.C. 133(g)(1) allows States to use up to 15% of the STBG amounts suballocated for a fiscal year for use in areas with a population of not more than 49,999 on:
  - Roads functionally classified as rural minor collectors or local roads; or
  - o Critical rural freight corridors designated under 23 U.S.C. 167(e).
- CMAQ Traffic Congestion Performance Measures: Per 23 CFR 490.105(d)(2), State DOTs and MPOs shall establish a single urbanized area target that represents the performance of the transportation network in each applicable area for the Congestion Mitigation and Air Quality Improvement (CMAQ) Program traffic congestion performance measures, as specified in 23 CFR 490.703. The boundaries of urbanized areas shall be identified based on the most recent Decennial Census, unless FHWA approves adjustments to the urbanized area and these adjustments are submitted to HPMS. (23 CFR 490.103(b))
- Control of Outdoor Advertising: The Outdoor Advertising Control Program (23 U.S.C. 131) uses the urban area definition in 23 U.S.C. 101(a)(35), which includes adjusted urban areas, to specify the boundary between locations where signage can be placed beyond 660 feet and be intended to be read from the highway. See FHWA's Outdoor Advertising Control website for more information.