

Non-Radioactive Hazardous Materials Route Designation Study

Process Summary



Federal & State Regulations



- ▶ Federal regulations authorize states and Indian tribes to designate non-radioactive hazardous materials (NRHM) routes on public roads and highways under their jurisdiction¹
- ▶ State regulations **require** municipalities with a population of more than 850,000 to designate routes for commercial motor vehicles carrying NRHM²
 - Requires that municipalities use Federal Highway Administration's (FHWA) "Guidelines for Applying Criteria to Designate Routes for Transporting Hazardous Materials" in developing a NRHM routing designation

1. Code of Federal Regulations, Title 49, Subtitle B, Chapter III, Subchapter B, Part 379, Subpart C Routing of Non-Radioactive Hazardous Materials

2. Texas Transportation Code, Title 7, Subtitle F, Chapter 644, Subchapter E, Section §644.202 Designation of Route

Purpose of Study



- ▶ **Designate** roadways for through-routing of NRHM in Austin without unduly burdening commerce
- ▶ **Minimize** potential for vehicular incidents involving NRHM
- ▶ **Minimize** consequences to all Austin residents should an NRHM incident occur
- ▶ **Maximize** public safety in relation to NRHM transport

1 Define Objectives and Responsibilities



- ▶ Formed Steering Committee and Stakeholder Working Group (SWG) to guide process
- ▶ Steering Committee:
 - City of Austin (CoA) Transportation Department (Rob Spillar, Jim Dale, Marissa Monroy, Annick Beaudet, Tien-Tien Chan), Capital Area Metropolitan Planning Organization (CAMPO - Ashby Johnson, Phillip Tindall), CoA Communications & Public Information Office (Douglas Matthews), CoA Office of Sustainability (Lucia Athens, Lewis Leff), CoA Public Works Department (Richard Mendoza, David Magana), CoA Law Department (Angela Rodriguez)

1 Define Objectives and Responsibilities



▶ Stakeholder Working Group – to provide technical expertise on infrastructure and operations:

- CoA departments; TxDOT; CAMPO; Central Texas Regional Mobility Authority (CTRMA); local Chambers of Commerce; emergency response agencies; environmental protection agencies; schools/universities; county representatives; healthcare providers; and shipping/trucking industry representatives
- CoA boards and commissions including the Chairs of the Urban Transportation Commission and Public Safety Commission

1 Public Involvement and Outreach



- ▶ The following public events and outreach efforts were conducted to gather input on the NRHM route identification process, priorities of the community, and preliminary outcomes:
 - 2 public open houses
 - Locations: Ruiz Branch Public Library & Terrazas Branch Public Library
 - Advertised through official CoA press release, social media, project webpage, and secondary outreach to the SWG and City Council
 - Advertised and covered by local news
 - 2 presentations to local emergency planning committees
 - Presentations to the CoA Public Safety Committee, the CoA Mobility Committee, and the CAMPO Technical Advisory Committee
 - Outreach to CoA City Council
 - One-on-one meetings with council members and/or aides
 - Provided project information 30 days in advance of open house for distribution to constituents
 - Coordinated outreach with Austin Strategic Mobility Plan (ASMP) public events

2 Define Network

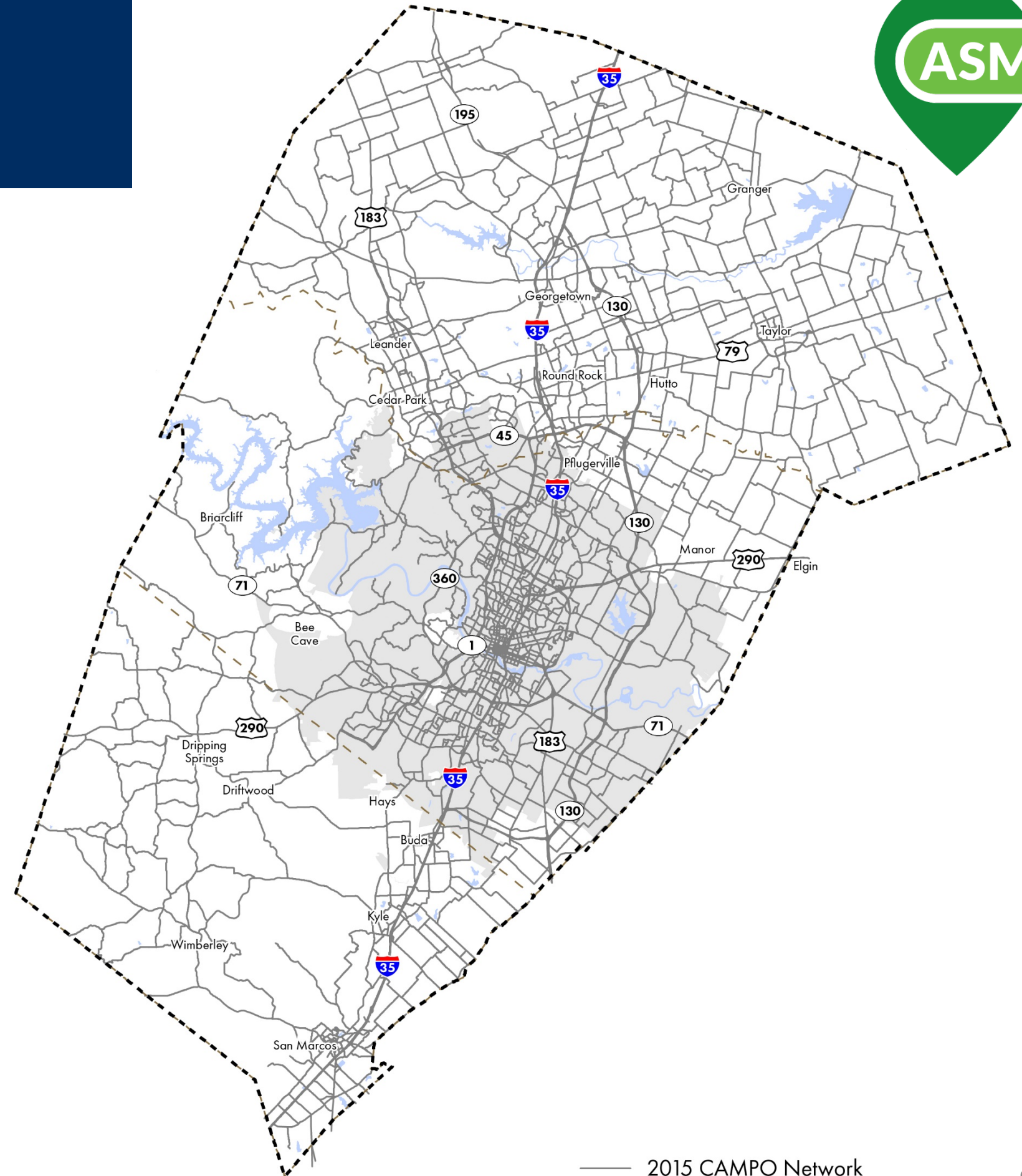


- ▶ Established that the routing designation would focus on through-routes
- ▶ Started with CAMPO model network updated for 2015; all roadways considered as candidates for NRHM routing designation
- ▶ Removed roads with physical or legal constraints
- ▶ Removed roads identified by SWG as unsuitable for NRHM through-traffic
- ▶ Limited network to all roadways with a functional classification of principal arterial and above that were not disqualified in previous steps

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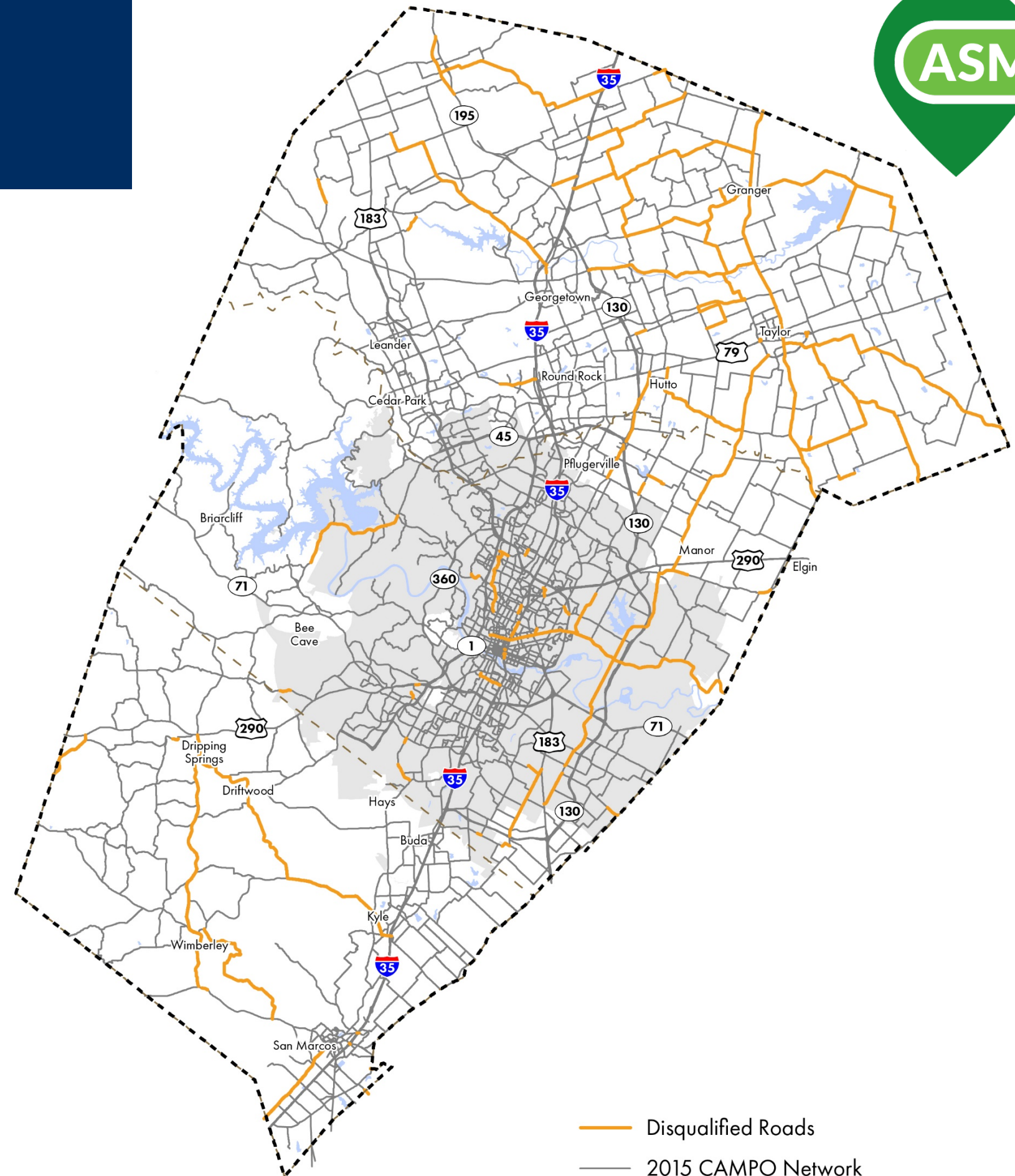


— 2015 CAMPO Network

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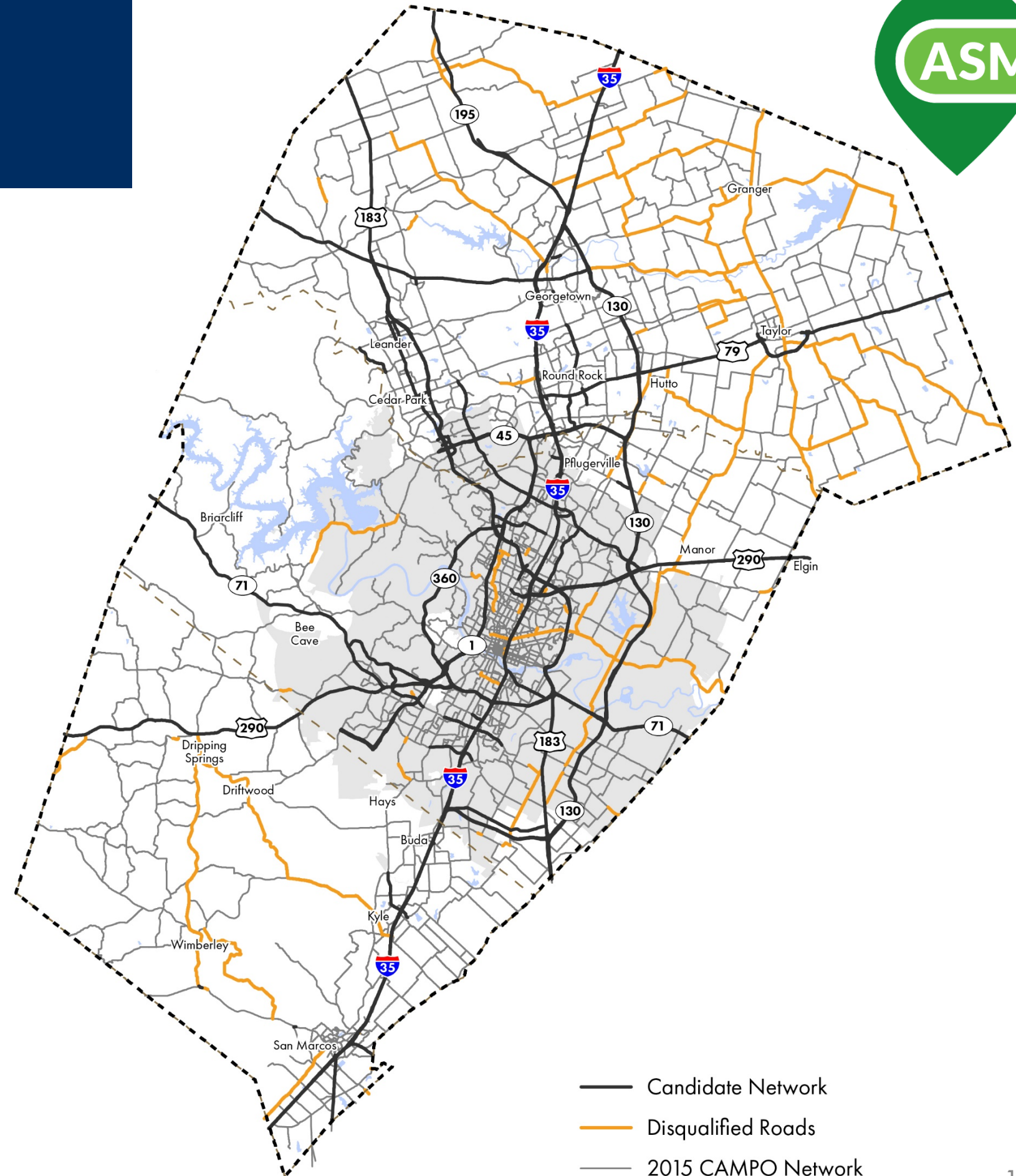
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3 Risk Analysis and Routing Options



- ▶ Current likely through-routing shows likely existing conditions based on hazmat freight routing data and minimized travel time
- ▶ Used as a baseline comparison for through-routing options developed in risk analysis

3 Risk Analysis and Routing Options



- ▶ Calculated an “incident risk factor” for all candidate network links
 - Incident risk factor = impacted population X crash probability
 - Impacted Population = population within 0.5 mile of roadway
- ▶ Compared the risk of through-routes between major study area entry and exit points
- ▶ All possible major through-routing options were considered, including Mopac/Loop 1, US 183, Loop 360, and IH 35

4 Stakeholder and Public Feedback

- ▶ Presented through-routing options to SWG
- ▶ Presented through-routing options to the public
- ▶ Feedback was collected and vetted with the Steering Committee



5 Routing Options



▶ The following factors were used to compare routing options:

- Incident risk factor
- Travel time
- Population of environmental justice (EJ) areas within 0.5 miles of route
 - EJ areas have at least 50% of families earning less than 80% of the county median family income, and/or at least 25% of the population earning below the poverty level, and/or less than 50% of the population identifying themselves as White, non-Hispanic
- Roadway miles in Edwards Aquifer
- Number of sensitive environmental features within 0.5 miles of route

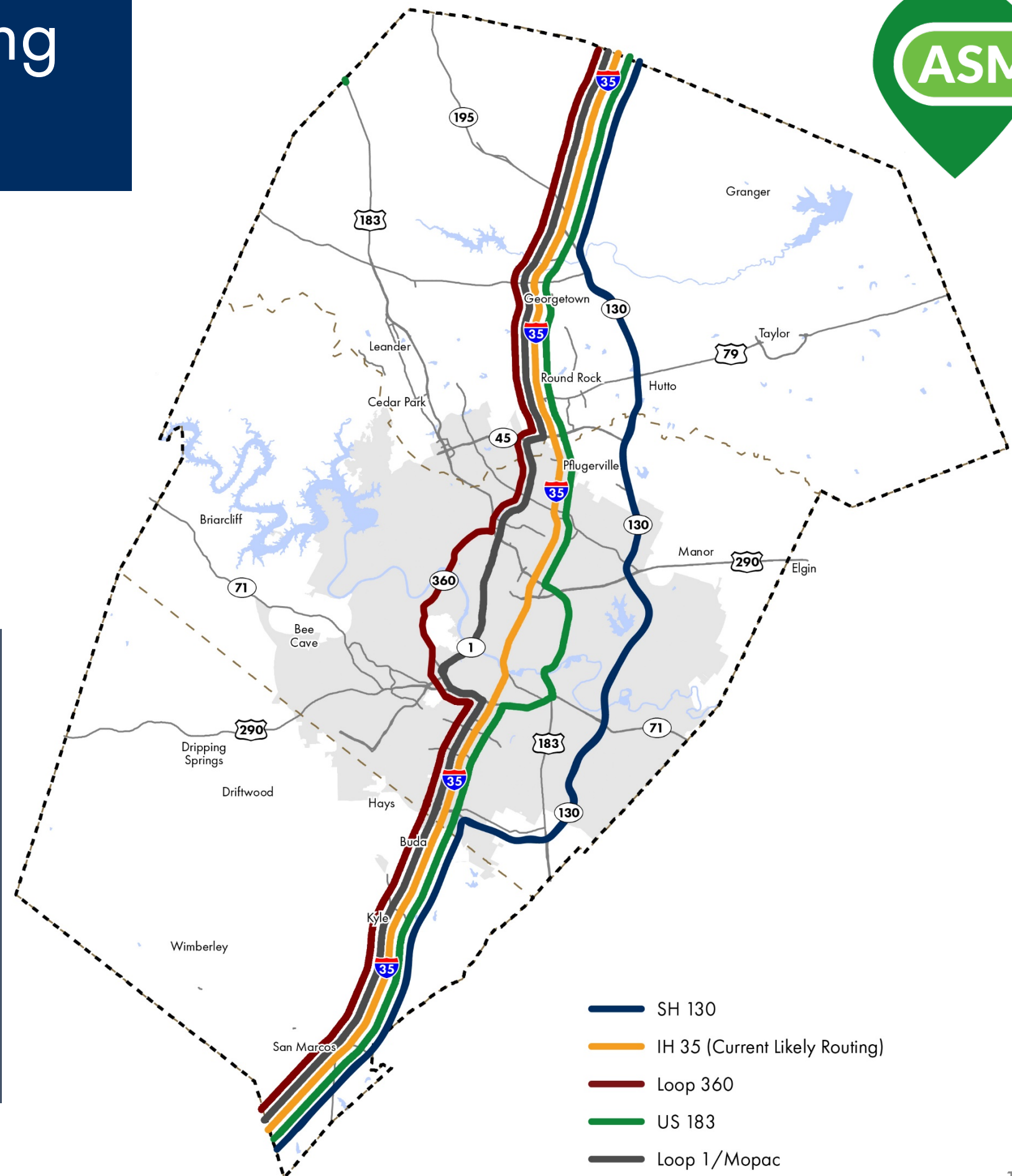
6 North-South Through-Routing Example



▶ North-south is the predominant NRHM through-routing movement for the study area

Major Through-Route Risk Analysis Comparison (IH 35 N - S)

	Incident Risk Factor	Travel Time	Pop. of EJ Area within 0.5 mile	Road Miles in Edwards Aquifer	Sensitive Environmental Features within 0.5 mile
IH 35 (Current Likely)	198	145	396,900	34	10
SH 130	34	148	193,300	12	7
Other Possible Through-Routing Examples					
Loop 1 / Mopac	121	154	300,900	55	22
US 183	209	158	419,600	34	10
Loop 360	170	163	282,300	54	18



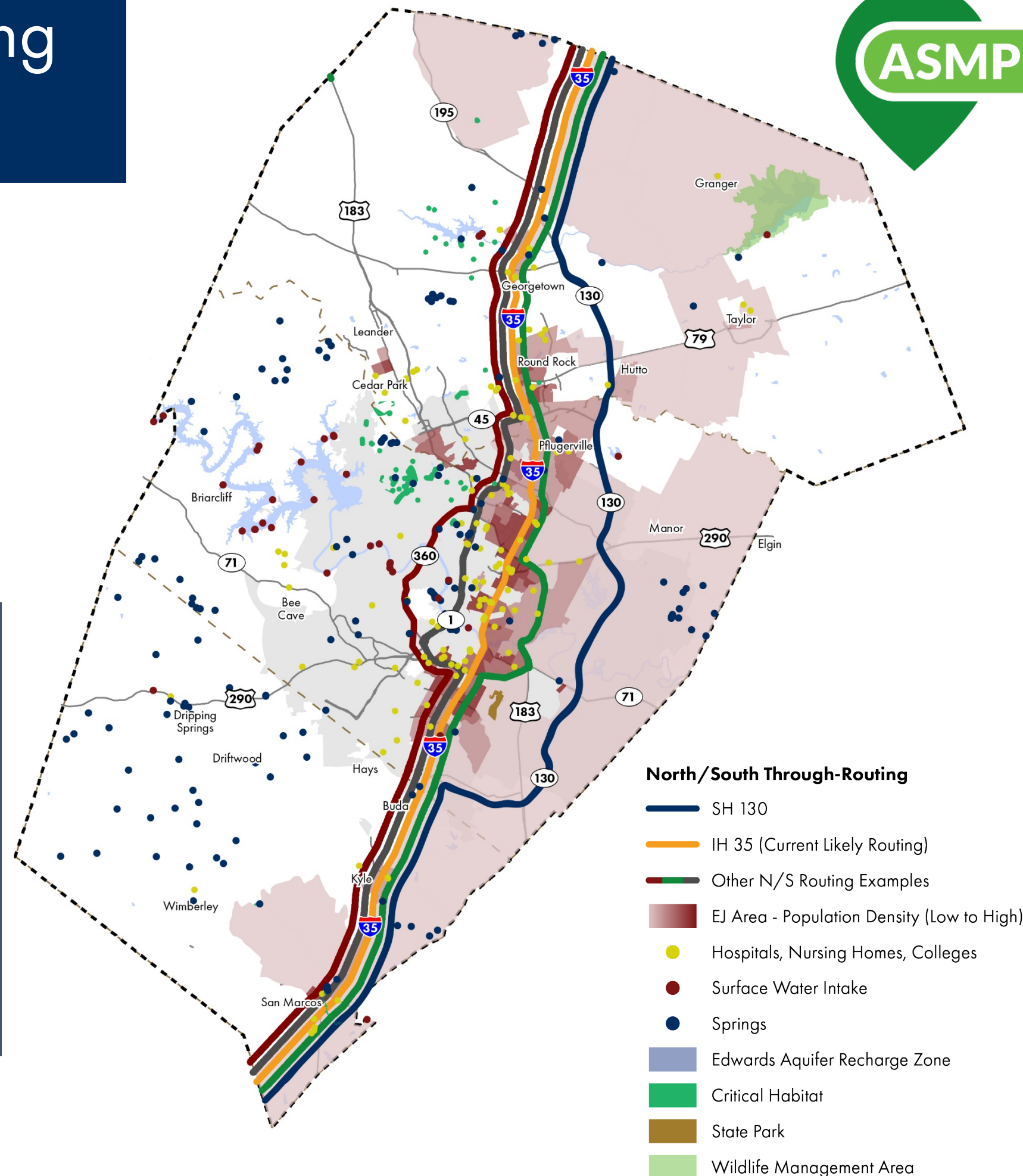
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- North/South Through-Routing**
- SH 130
 - IH 35 (Current Likely Routing)
 - Other N/S Routing Examples
 - EJ Area - Population Density (Low to High)
 - Hospitals, Nursing Homes, Colleges
 - Surface Water Intake
 - Springs
 - Edwards Aquifer Recharge Zone
 - Critical Habitat
 - State Park
 - Wildlife Management Area