

# Ketchum Stop Sign Study Update Ketchum Traffic Authority Meeting



# Agenda

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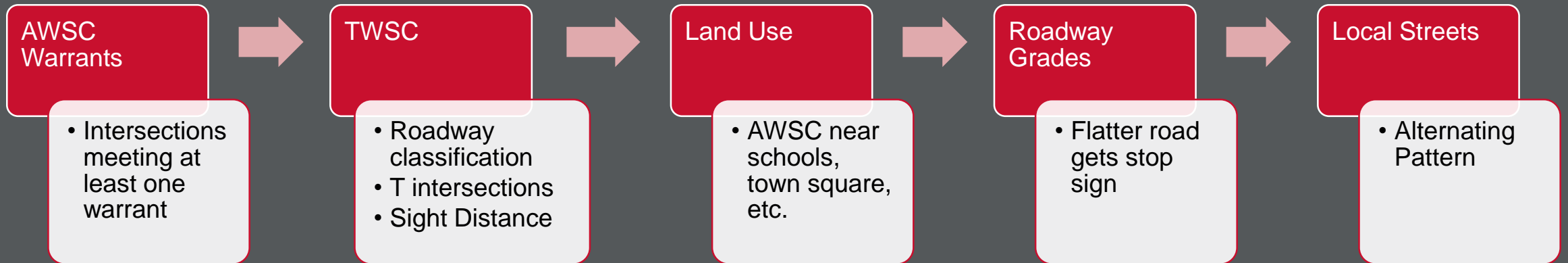
- 1** Project Background
- 2** Analysis
- 3** Stop Sign Scheme Recommendations
- 4** Additional Improvement Locations
- 5** Feedback and Questions
- 6** Next Steps



# Project Background

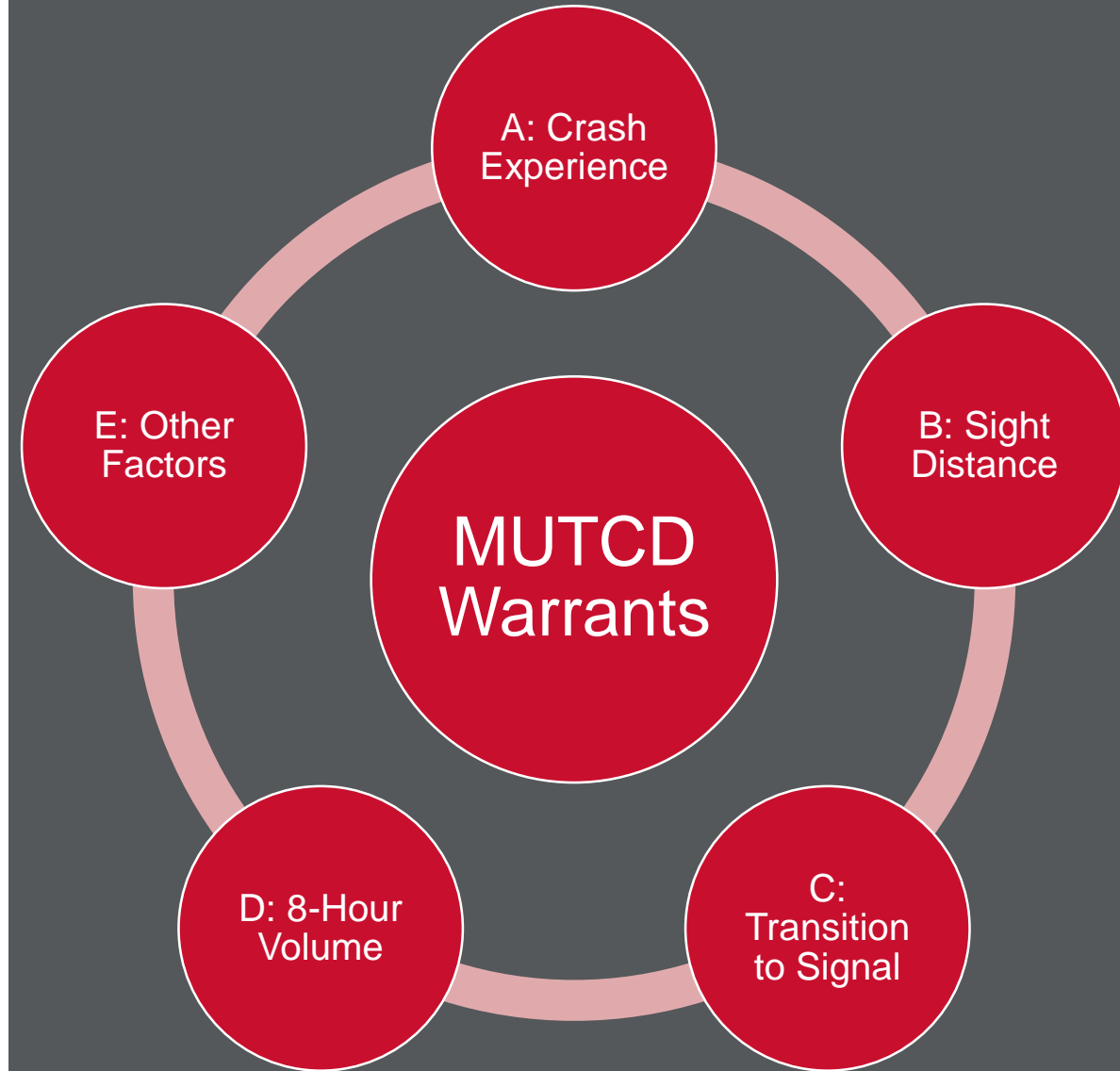
- Study Area: Downtown Core
- Ketchum residents and business owners have requested stop signs over the years for traffic calming
- Stop signs placed without regards to traffic patterns or coordination of intersections
- Project Goal:
  - Develop a report that will guide the city in implementing a traffic control scheme that reflects driver expectations and increases safety

# Generalized Analysis Process



# AWSC MUTCD Criteria

- Section 2B.12 2023 MUTCD
- Warrant C does not apply
- Does not evaluate intersection operations
- AWSC considered where the intersection met at least one warrant



# Warrant A: Crash Experience

- For a 4-leg intersection:
  - Five crashes in 12 months OR
  - Six in 36 months and susceptible for correction by AWSC
- For a 3-leg intersection:
  - Four crashes in 12 months OR
  - Five in 36 months and susceptible for correction by AWSC
- No intersection met this criteria



# Warrant B: Sight Distance

## Uncontrolled

Mutually clear sight distance 100 feet from intersection

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- No intersections meet guidelines in City code

## Minor Road (TWSC)

Sight Distance of a stopped vehicle on the minor road

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- 8th and 1<sup>st</sup>
- 8<sup>th</sup> and Warm Springs
- 7<sup>th</sup> and Warm Springs
- 6<sup>th</sup> and 2<sup>nd</sup>
- 6<sup>th</sup> and Walnut
- 6<sup>th</sup> and Spruce

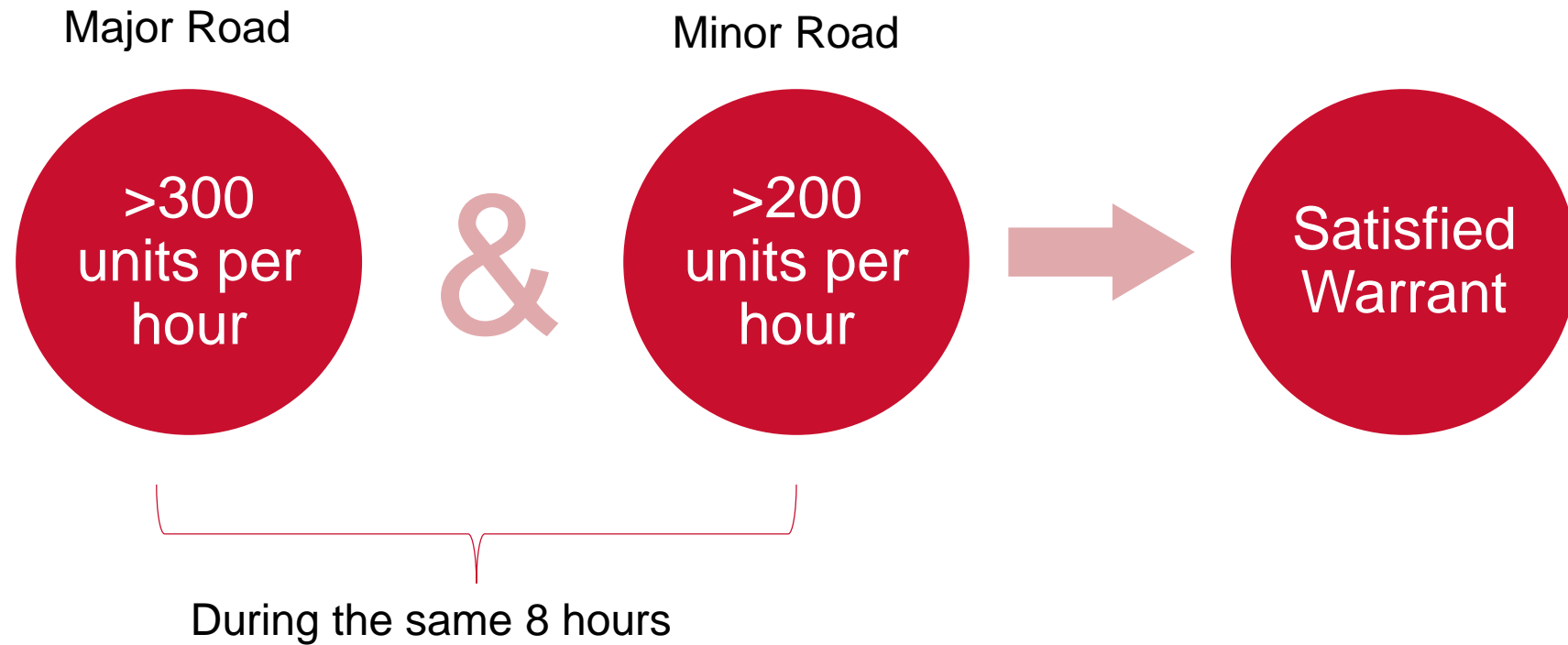
## ASWC

No adequate sightlines for minor road stop control

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- 6<sup>th</sup> and 1<sup>st</sup>
- River and Leadville

# Warrant D: 8 Hour Volume





# Warrant D: 8 Hour Volume

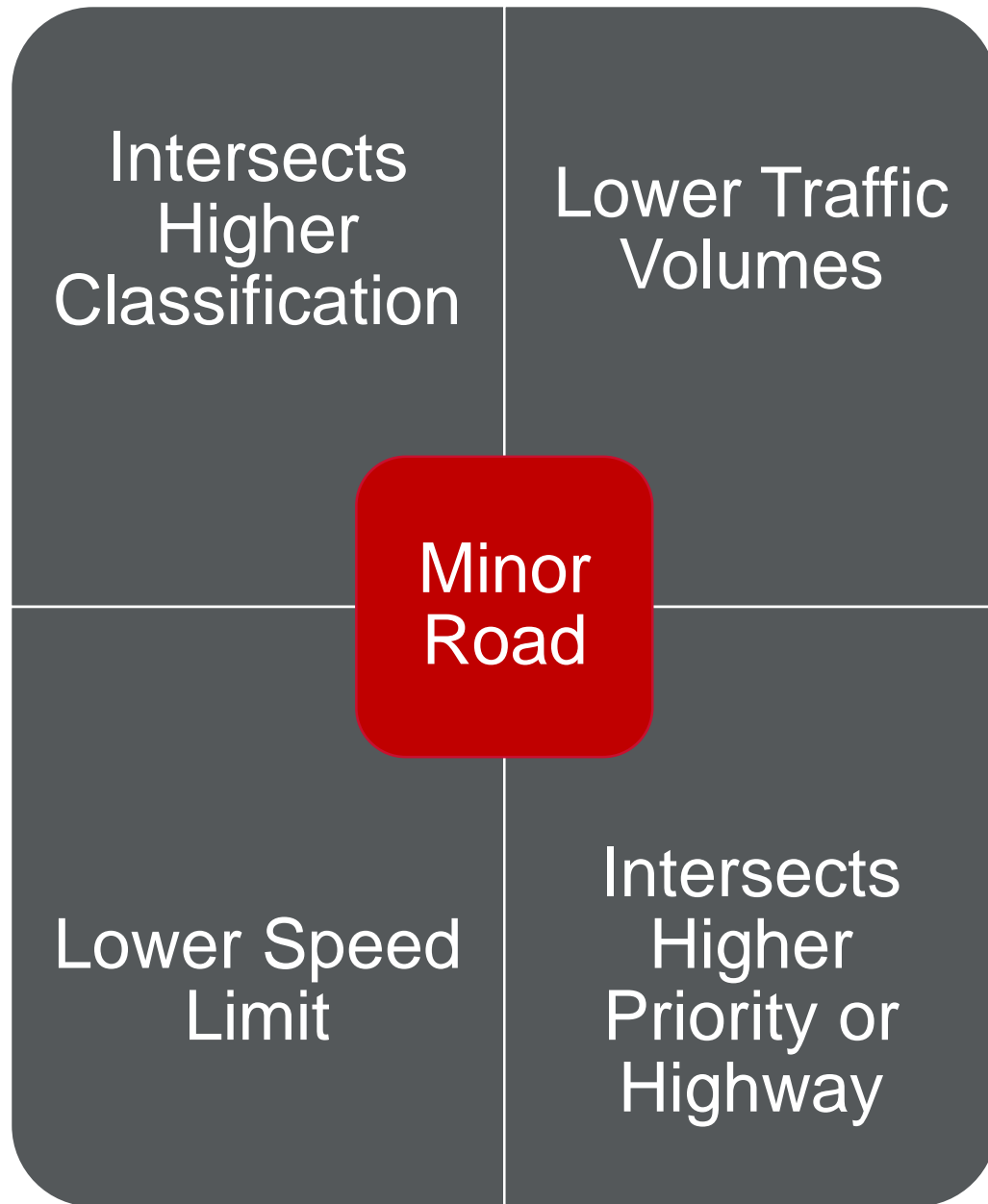
Ketchum Stop Sign Warrant D: 8 Hour Volume Analysis

East/West Road	North/South Road	Max 8 Hours Major								Corresponding 8 Hours Minor							
8th St	2nd Ave	221	217	203	168	156	124	121	121	38	43	31	34	37	18	32	32
8th St	1st Ave	274	224	181	163	144	143	137	121	142	103	48	44	75	58	43	41
8th St	Washington Ave	150	141	129	124	121	119	117	109	17	29	14	18	16	13	14	15
6th St	2nd Ave	274	255	254	252	229	227	212	194	140	77	95	74	95	67	64	69
6th St	1st Ave	99	97	94	89	87	84	80	80	59	76	77	57	91	84	53	53
6th St	East Ave	69	68	62	42	37	35	34	29	35	47	36	37	32	26	42	22
5th St	Washington Ave	291	290	280	274	256	251	222	169	96	95	86	103	79	101	62	53
4th St	2nd Ave	385	343	331	325	298	266	240	234	114	110	97	74	91	35	77	76
4th St	1st Ave	204	188	182	159	155	151	120	118	108	113	149	102	91	114	65	60
4th St	Washington Ave	164	163	159	144	136	125	118	113	108	138	129	131	124	89	83	117
4th St	Leadville Ave	261	260	239	228	208	206	193	187	191	228	234	200	234	158	179	162
4th St	East Ave	397	395	359	321	319	302	287	226	143	156	133	141	201	163	108	93
4th St	Walnut Ave	293	293	274	271	258	206	186	156	126	126	116	161	174	124	148	76
Sun Valley Rd	2nd Ave	369	353	347	339	328	271	271	261	382	329	332	271	356	248	248	340
Sun Valley Rd	1st Ave	425	406	386	372	357	330	325	302	174	143	189	197	219	152	144	128
Sun Valley Rd	Washington Ave	488	473	431	430	412	406	384	354	130	177	126	121	159	138	111	116
Sun Valley Rd	Leadville Ave	686	664	591	580	562	528	514	431	213	212	147	133	146	185	124	177
Sun Valley Rd	East Ave	737	701	659	606	595	574	566	498	503	451	323	338	339	378	283	262
Sun Valley Rd	Walnut Ave	579	574	569	551	550	520	456	439	192	196	125	178	166	160	118	119
Sun Valley Rd	Spruce Ave	567	562	561	544	523	464	423	381	139	139	144	146	119	135	93	88
2nd St	1st Ave	105	94	93	91	75	70	55	53	98	104	76	78	87	64	51	82
2nd St	Leadville Ave	117	111	104	103	100	96	85	67	106	73	108	85	73	59	67	54
2nd St	East Ave	249	235	212	178	173	168	161	150	159	194	185	167	126	156	186	159
2nd St	Walnut Ave	139	132	117	116	113	111	105	88	25	16	18	13	7	11	17	11
1st St	2nd Ave	513	443	406	380	365	333	306	285	325	285	258	227	217	151	238	224
1st St	Washington Ave	368	348	334	321	321	283	281	240	87	77	63	85	85	93	87	61
1st St	Leadville Ave	290	237	232	213	209	200	166	162	98	98	79	87	95	71	74	68
1st St	East Ave	110	109	98	94	90	82	82	80	23	26	17	21	12	16	16	10
River St	Leadville Ave	71	70	67	65	62	58	55	54	22	51	26	32	31	17	20	35



## Warrant E: Other Factors

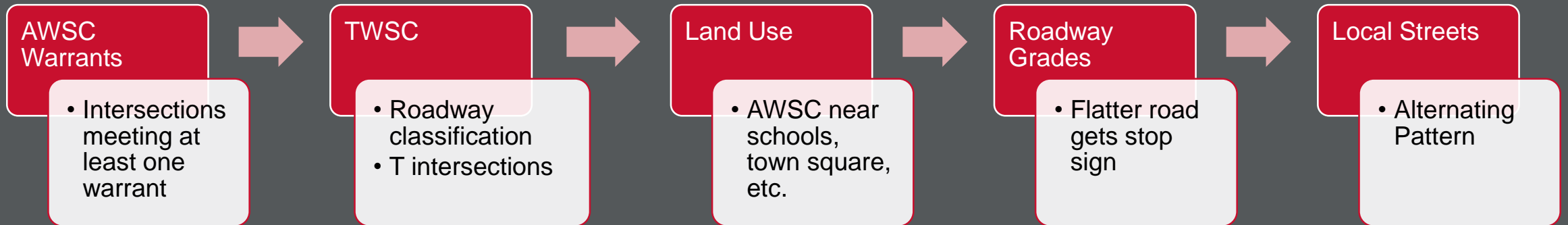
- Need to control left turn conflicts
- Similar intersecting streets
- Ped and Bike activity
- Surrounding Land Use
  - Schools
  - Town Square
  - Post Office
- Grades



## Minor Road Stop Control

- MUTCD 2B.07 Guidelines for Minor Road Control:
  - Obscured vision, dips or bumps on approach
  - Crash History
    - Lower threshold than AWSC
    - No intersections meet threshold
  - Intersects Higher Classification
  - Adjacent Land Use
    - Pedestrian or School Crossings
  - Grades

# Analysis Process

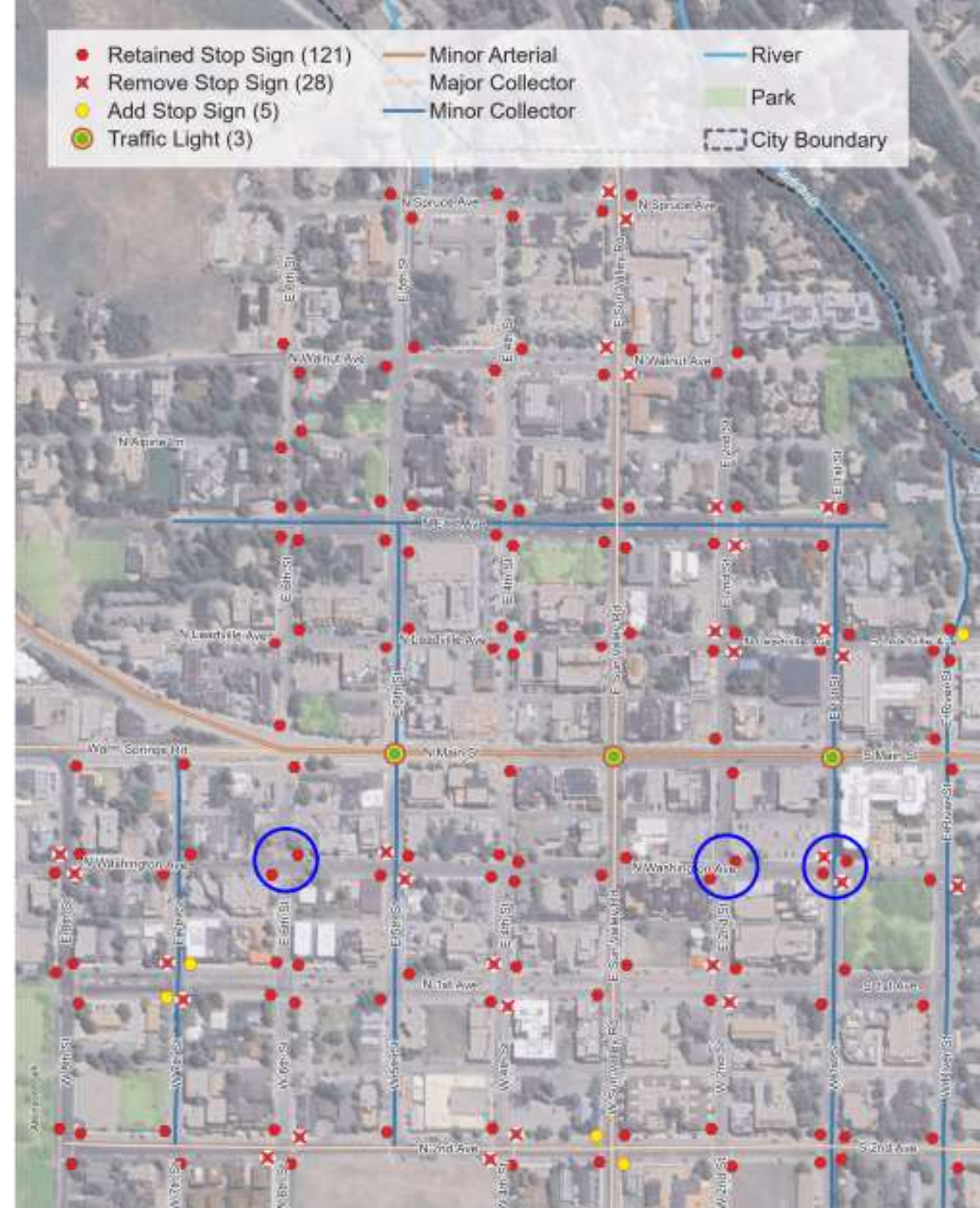


# **Review Stop Sign Schemes**

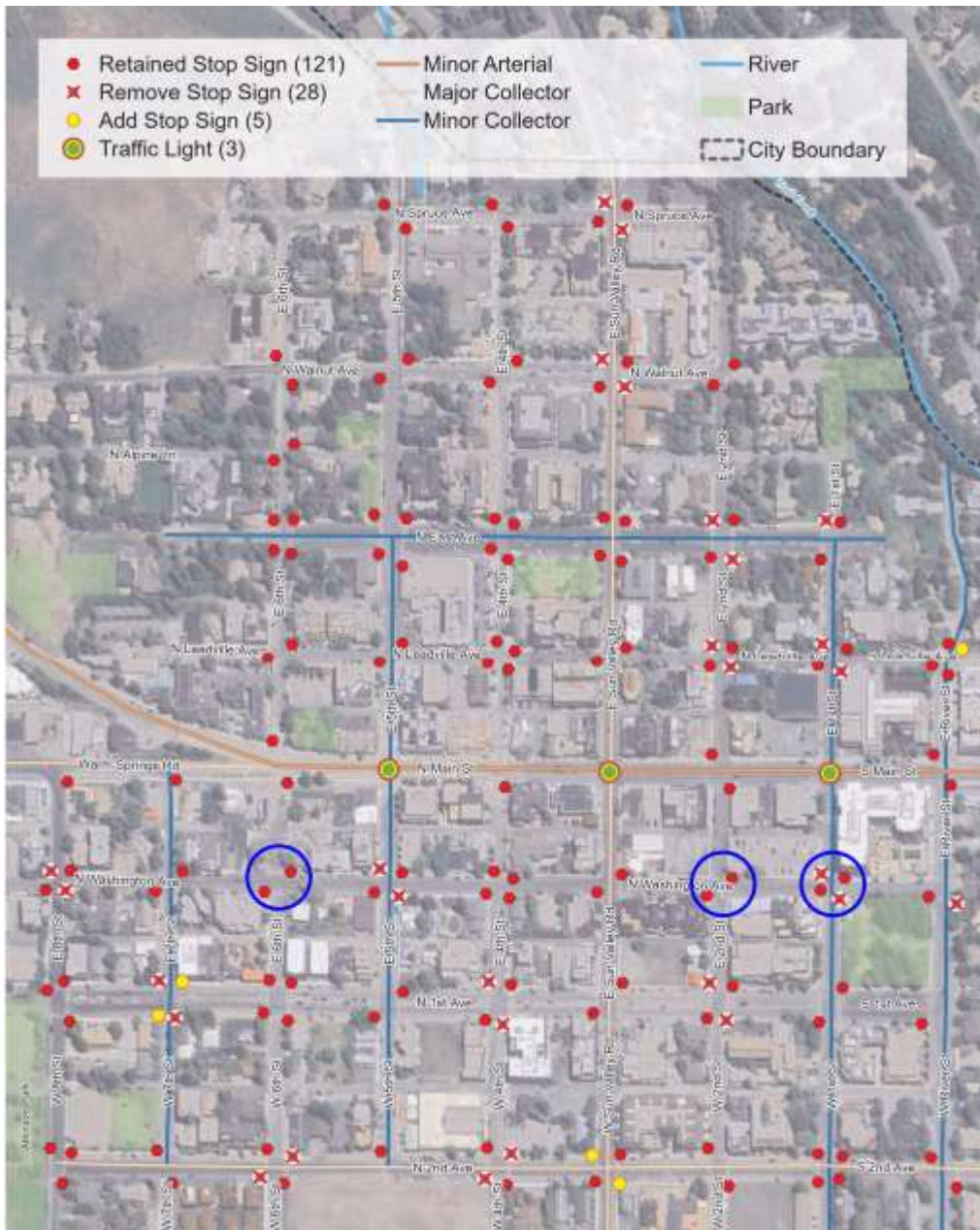


# Stop Sign Schemes

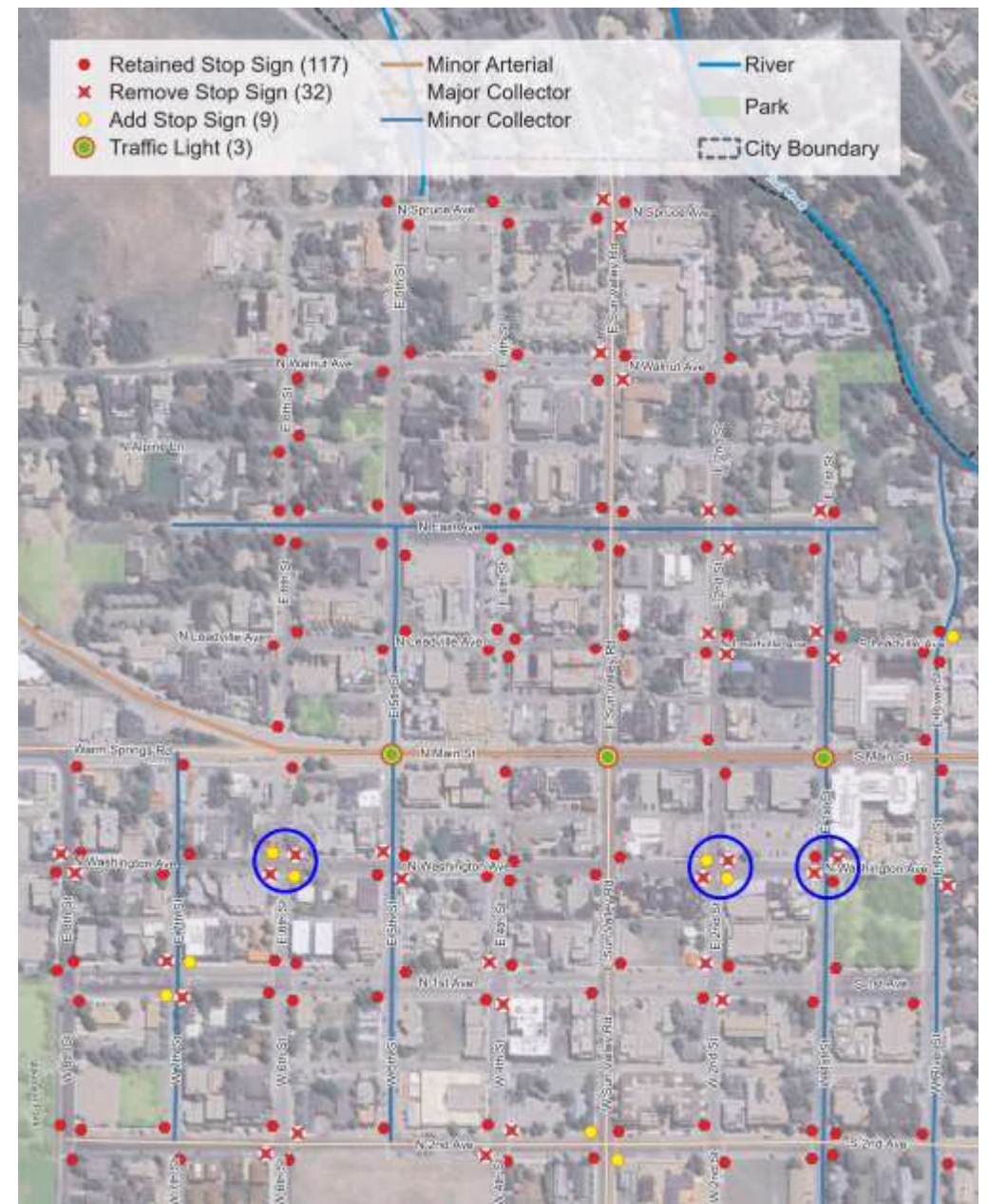
- Prioritize 1<sup>st</sup> Street traffic and traffic leaving Main Street
- Sun Valley Road
  - Convert Walnut and Spruce intersections to TWSC
    - Prioritize through movement on Sun Valley (higher classification roadway)
- 2<sup>nd</sup> Avenue
  - Convert 6<sup>th</sup> and 4<sup>th</sup> to TWSC
    - Prioritize through movement on 2<sup>nd</sup> Ave (higher classification roadway)
  - Convert Sun Valley Road to AWSC
- Blue circles are differences between options







**Option 1**



**Option 2**

# Additional Recommendations

Intersection	Major Road RRFB	Bulb-out	Median Refuge Island	Diagonal Pedestrian Crossing Signs	Intersection Illumination
1st Street / 1st Avenue		X	X		X
1st Street / East Avenue		X	X		X
2nd Street / 2nd Avenue	X	X			X
2nd Street / East Avenue		X	X		X
Sun Valley Road / 1st Avenue		X	X		X
Sun Valley Road / Washington Avenue	X	X			X
Sun Valley Road / Leadville Avenue	X	X			X
4th Street / 1st Avenue		X	X		X
4th Street / Leadville Avenue				X	X
4th Street / Washington Avenue				X	X
5th Street / 1st Avenue		X	X		X
5th Street / East Avenue		X	X		X






## Feedback

- Where do you see this plan working?
- Where do you think control should be different
- Where do you think we need additional improvements if we remove stop signs (bulb-outs, RRFB's etc.)?
- Locations you want us to look at again?

# Next Steps



  
Existing Conditions  
Existing  
Conditions  
Memo  
Traffic Counts

  
Stop Sign Analysis  
MUTCD  
Warrants  
Develop  
Schemes

  
KTA Feedback  
Review and  
adjust schemes

  
Mobility Study Coordination  
Integrate  
Approved  
mobility or  
Comp. Plan  
Discuss results  
of traffic study

  
City Council Meeting  
Review and  
adjust based on  
comments

  
Public Involvement  
City Led  
Review  
feedback and  
adjust based on  
comments

  
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# Additional Questions?

