DOWNTOWN ALBUQUERQUE WALKABILITY ANALYSIS AND RECOMMENDATIONS

JULY 31, 2014

JEFF SPECK AICP CNU-A LEED-ND Hon. ASLA

MAKING ALBUQUERQUE WALKABLE

JULY 31, 2014

JEFF SPECK AICP CNU-A LEED-ND Hon. ASLA



IF
A VITAL PLACE
IS FULL OF
PEDESTRIANS...

HOW DO YOU GET PEOPLE TO WALK?

THE GENERAL THEORY OF WALKABILITY

WALKABLE CITY

HOW DOWNTOWN
CAN SAVE AMERICA,
ONE STEP AT A TIME



COAUTHOR OF SUBURBAN NATION

HOW DO YOU GET PEOPLE TO WALK?

- A SAFE WALK
- A COMFORTABLE / INTERESTING WALK
- A USEFUL WALK

A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND
- CYCLING NETWORK
- ONE WAYS
- OTHER INDIVIDUAL STREETS
- SIGNALIZATION

SAFETY FACTORS

- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION
- BIKE LANES
- 1-WAY vs. 2-WAY STREETS
- CURB RADII
- SIGNAL PROVISION





Vehicle Speed	Percentage of Pedestrian Fatalities in accidents
15 Mph	3.5%
31 Mph	37.0%

83.0%

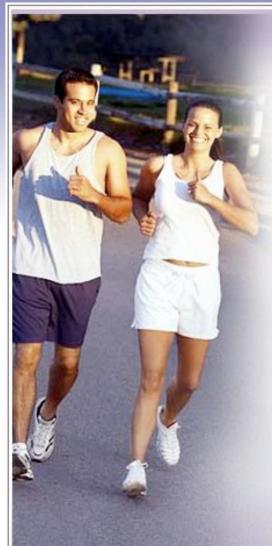
Source: National Highway Traffic Safety Administration Federal Highway Administration

44 mph

SAFETY FACTORS

- **DESIGN SPEED**
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION
- BIKE LANES
- 1-WAY vs. 2-WAY STREETS
- CURB RADII
- SIGNAL PROVISION





BEST WALKING CITIES FINDER

OKLAHOMA

sparse on parks, and it has the lowest number of schools per square mile in the state.

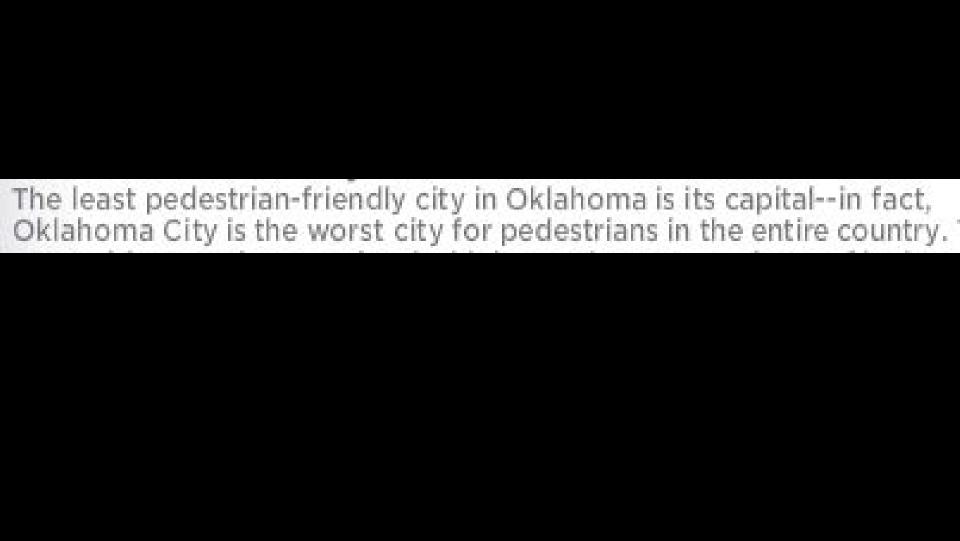
No. 9: Enid

Enid is the 2nd-smallest city in Oklahoma on our list, and its tied with Lawton for the fewest parks in the state. Enid also has a low percentage of people who ride mass transit and a high crime rating--which is particularly surprising for one of the states smaller cities (fewer people often means fewer crimes).

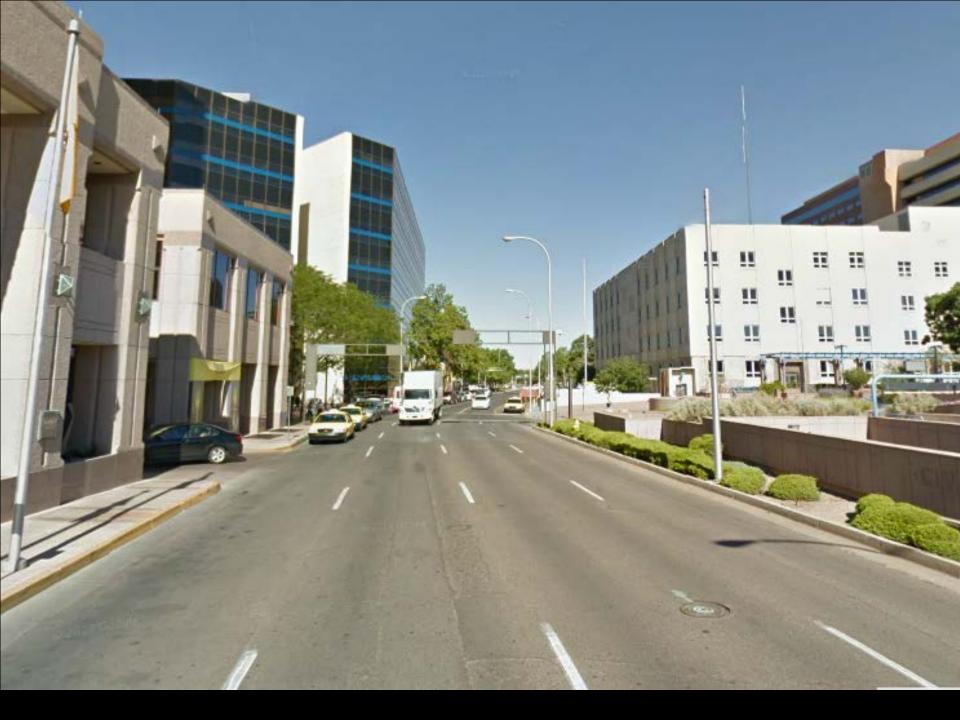
No. 10: Oklahoma City

The least pedestrian-friendly city in Oklahoma is its capital--in fact, Oklahoma City is the worst city for pedestrians in the entire country. The state's biggest city state has its highest crime rate and one of its lowest percentages of people who walk to work. Located smack-dab in the center of the state, Oklahoma City also has one of the lowest Walk Scores, meaning its just too car-centric for walking in the downtown area to be enjoyable. The city is also on the low end of the state for school and park density. Overall, this town needs more work than any other on our list to become a city for walkers.

SELECT A STATE







SAFETY FACTORS

- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH







Width of streets is narrowed by popular demand

BY HELEN NIEMIEC STADY WEITER

Complaints from residents about mandated street widths has resulted in an emerging street-width policy for improved roads in Birmingham.

The City Commission has narrowed the standard width for hon-fire route streets and is expected to set a width for fire routes within a month.

"We need information and then we need to officially designate fire routes," said city commissioner Archie Damman III.

The city's engineering and public services department will present a report on street widths concerning fire routes at today's city commission meeting.

The new policy is that non-fire route streets can be 20-feet wide with parking on one side of the street or 26-feet wide with parking on both sides of the street.

Nine residents attended the Jan. 18 long-range planning session where the street width policy changed. Susan Gienapp, who has endorsed narrower streets, had given the commission a report from Portland, Oregon that showed how it had narrowed streets.

The idea of "traffic calming" and residential streets that had more of a small town flavor came up a number of times during the Downtown Master Plan study

The policy affects the approximately half of Birmingham's roadways that still don't have curbs, gutters and storm sewers and currently are classified as unimproved roads. The city has 45 miles of improved streets, 25 miles of unimproved streets without curbs or gutters; and 20 miles of unimproved streets with curbs.

The petition of three streets in

BIRMINGHAM

the neighborhood immediately south of the downtown prompted the commission to rethink its... policy which was reaffirmed last "year as 29-feet wide. On citizen petitions to pave and improve the streets, the city engineering department had specified that improved streets would be done at 29-foot widths.

"I support this concept," said city commissioner Eleanor Siewert of the new widths. "We could bandle something with options. I was very influenced by reading the Portland report. After the master plan, I've become more aware of what our streets look like."

City Manager Thomas Markus still has reservations about marrower streets. Portland, be noted, has a public transit system where Birmingham residents are reliant upon their cats and need more parking space.

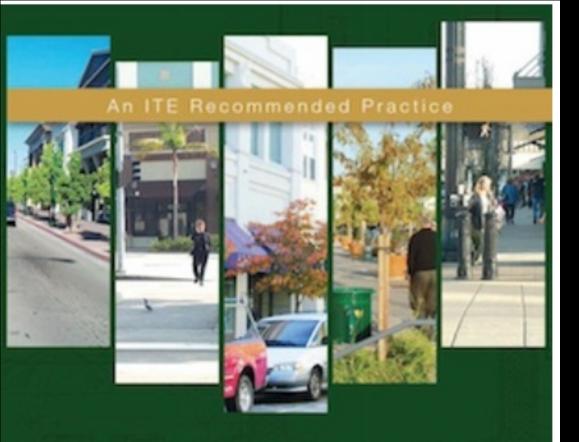
Additionally, Markus expects that the narrower streets will become less used for cut-through traffic

"When we downsize one neighborhood street, that will force traffic on the wider streets," Markus said.

Birmingham went with a 29foot street width to allow safety
vehicles, such as fire trucks and
ambulances, to pass if cars are
parked on both sides of a street.
The large fire trucks are 9-feet,
10-inches wide. The street width
policy last year was reaffirmed
by a 4-3 city commission vote,
though the topic of street width
surfaced at every commission
meeting where road improvements were discussed.

"Increased lane widths are responsible for approximately 900 additional traffic fatalities per year."

-- Robert Noland, "Traffic Fatalities and Injuries: The Effect of Changing Infrastructure and Other trends," *Center for Transport Studies*, 2002.



Designing Walkable Urban Thoroughfares: A Context Sensitive Approach





URBAN TRAVEL LANES: 10' - 11'

10

15.

12/

EVIDENCE

- CRASH RATES
- CRASH SEVERITY
- TRAFFIC IMPACTS

"Increased lane widths are responsible for approximately 900 additional traffic fatalities per year."

-- Robert Noland, "Traffic Fatalities and Injuries: The Effect of Changing Infrastructure and Other trends," *Center for Transport Studies*, 2002.

WHAT DOES AASHTO SAY?

POLICY ON GEOMETRIC
DESIGN OF HIGHWAYS AND
STREETS

Geometric Design of

Highways and Streets

2004

AASHTO

For rural and urban arterials, lane widths may vary from 10 to 12 feet.

AASHTO

12-foot lanes should be used where practical on higher speed, free flowing, principal arterials

AASHTO

However, under interruptedflow [signalized] conditions operating at low speeds [45] MPH or less] narrower lane widths are normally quite adequate and have some advantages.

MIDWEST RESEARCH INSTITUTE

NCHRB PROJECT 3-72:
RELATIONSHIP OF LANE
WIDTH TO SAFETY FOR
URBAN AND SUBURBAN
ARTERIALS

MIDWEST RESEARCH INSTITUTE

" A safety evaluation of lane widths for arterial roadway segments found no indication, except in limited cases, that the use of narrower lanes increases crash frequencies."

MIDWEST RESEARCH INSTITUTE

" The lane width effects in the analyses conducted were generally either not statistically significant or indicated that narrower lanes were associated with lower rather than higher crash frequencies."

NCHRP 330

EFFECTIVE UTILIZATION OF STREET WIDTH ON URBAN ARTERIALS

NCHRP 330

"all projects evaluated during the study that consisted of lane widths exclusively of 10 feet or more [vs. 12 feet] resulted in accident rates that were either reduced or unchanged."

EVIDENCE

- CRASH RATES
- CRASH SEVERITY

Vehicle Speed	Percentage of Pedestrian Fatalities in accidents
15 Mph	3.5%
31 Mph	37.0%

83.0%

Source: National Highway Traffic Safety Administration Federal Highway Administration

44 mph

TEXAS TRANSPORTATION INSTITUTE

PROJECT SUMMARY REPORT 1969-S, 2000:

DESIGN FACTORS THAT
AFFECT SPEED ON
SUBURBAN ARTERIALS

TEXAS TRANSPORTATION INSTITUTE

"On suburban arterial straight sections away from a traffic signal, higher speeds should be expected with greater lane widths."

EVIDENCE

- CRASH RATES
- CRASH SEVERITY
- TRAFFIC IMPACTS

FLORIDA DEPARTMENT OF TRANSPORTATION

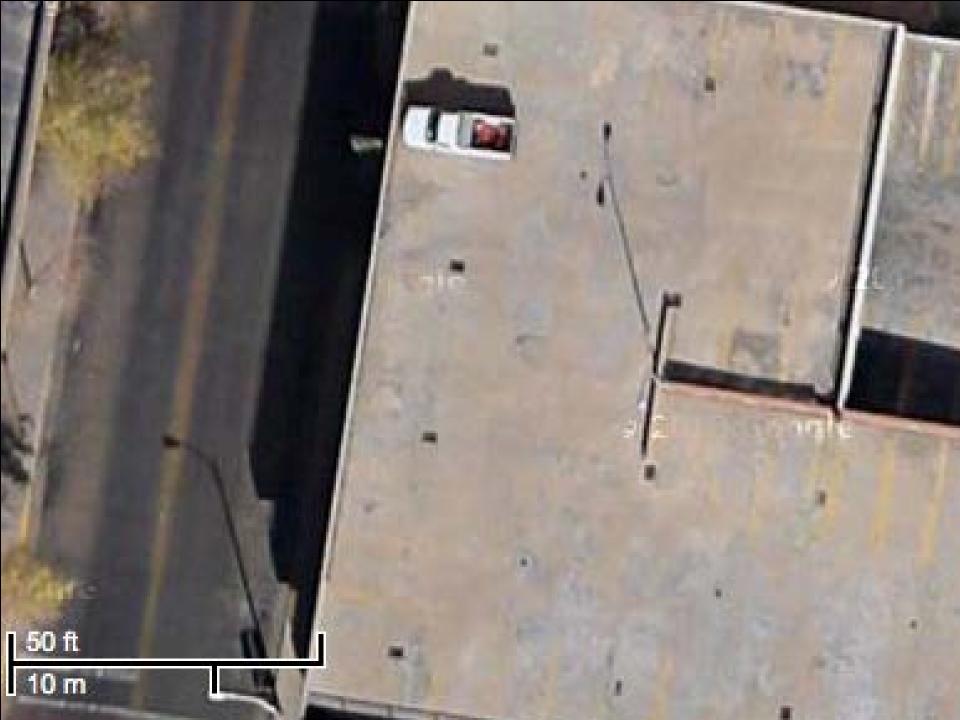
CONSERVE BY BIKE
PROGRAM STUDY, 2007

FLORIDA DEPARTMENT OF TRANSPORTATION

"so long as all other geometrical and signalization conditions remain constant, there is no measurable decrease in urban street capacity when through-lane widths are narrowed from 12 feet to 10 feet."

IN SUMMARY:

- 10-FOOT LANES HAVE NO MORE COLLISIONS THAN 12-FOOT LANES, AND MAY HAVE FEWER.
- 10-FOOT LANES ENCOURAGE SLOWER SPEEDS, SO COLLISIONS ARE LESS LIKELY TO BE INJURIOUS OR DEADLY.
- THEREFORE, 10-FOOT LANES ARE SAFER THAN 12-FOOT LANES.
- IF YOU USE A 12-FOOT LANE INSTEAD OF A 10-FOOT LANE, YOU ARE KILLING BABIES.





- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH

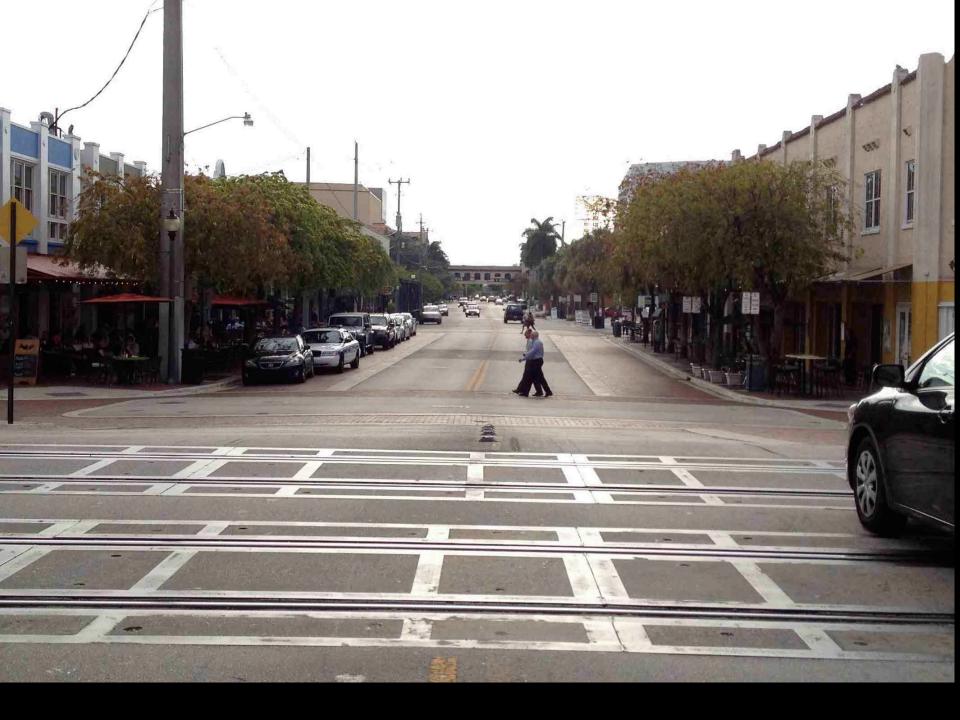






- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION









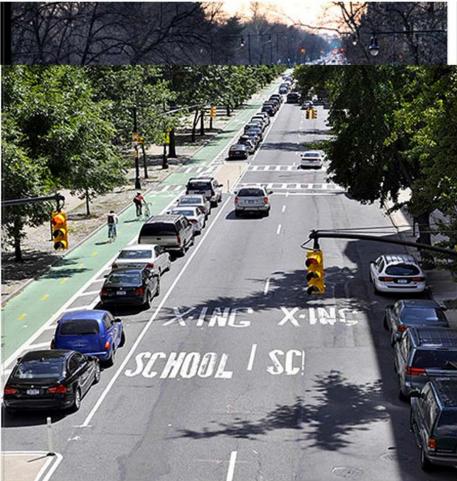


INVENTORY

- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION
- BIKE LANES







- NUMBER OF CYCLISTS TRIPLED
- SPEEDING DROPPED FROM 75% TO 17%
- INJURY CRASHES DROPPED 63%
- AUTOMOBILE VOLUME UNCHANGED.

ARTS

OUR SPONSORS:



Read more »

TRENDING STORIES

Inside Mars Hill's massive meltdown

Facelift for 2nd Avenue's bike death trap

Dazed and confused in Seattle's medical marijuana business

Remembering Paul Schell

Parks and Proposition 1: Oh, how to vote?

What have Amazon's drones done for you lately?

Control of Olympia: It's a primary free-for-all

Are the feds simply shielding Columbia River dams from wrecking balls?

Coal exports from Bellingham could ramp up rapidly

What the Carlton Complex wildfire left behind

OUR MEMBERS

Many thanks to RANDAL HASSLER and TOM GIBBS some of our many supporters. ALL MEMBERS »

MOST COMMENTED

TRANSPORTATION

JULY 23, 2014

Facelift for 2nd Avenue's bike death trap

The city is planning a new separated cycle track to replace Seattle's most dangerous bike lane.

By Josh Cohen

If all goes according to plan, Seattle's worst bike lane will be one of its best by the end of the summer. The Seattle Department of Transportation released their proposed redesign for 2nd Avenue; a demonstration project that will transform the bike lane from a dangerous one-way bike lane sandwiched between parked cars and traffic to a two-way "cycle track" with a barrier separating it from traffic and no parking lane to deal with.

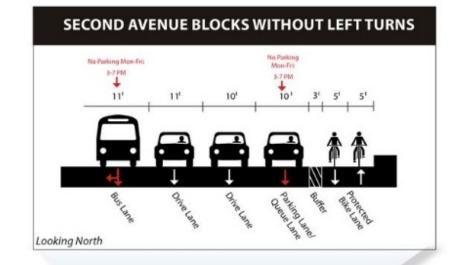
Mayor Ed Murray announced plans for the protected bike lane at a Pronto! bike share press conference in May, promising the lane would be done in time for the bike share's launch in September.

The current 2nd Ave bike lane is widely considered one of the city's most dangerous.

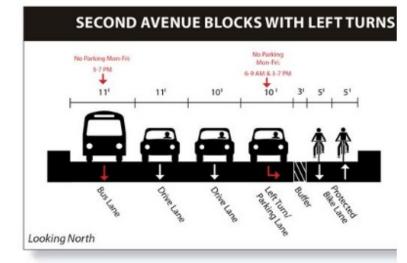








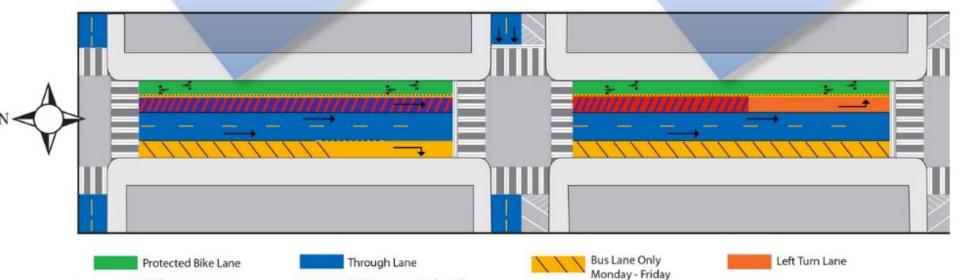
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Parking permitted at all

times except weekdays,

6 - 9 AM and 3 - 7 PM



3 - 7 PM

other times

Parking permitted all

Parking permitted at all

times except weekdays,

3-7 PM





- DESIGN SPEED
- NUMBER OF LANES
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION
- BIKE LANES
- 1-WAY vs. 2-WAY STREETS





Vancouver, WA

GOVERNING

HOME

LATEST NEWS

BY TOPIC

COLUMNS AND BLOGS

MAGAZINE

EVENTS

MANAGEMENT BOOKS

SOURCEBOOK

JOBS

REPORTS AND WHITE PAPERS

Assessments







The Return of the Two-Way Street

Why the double-yellow stripe is making a comeback in downtowns.

By Alan Ehrenhalt | December 2009



Alan Ehrenhalt is Governing's former editor. Email him at ehrenhalt@yahoo.com.

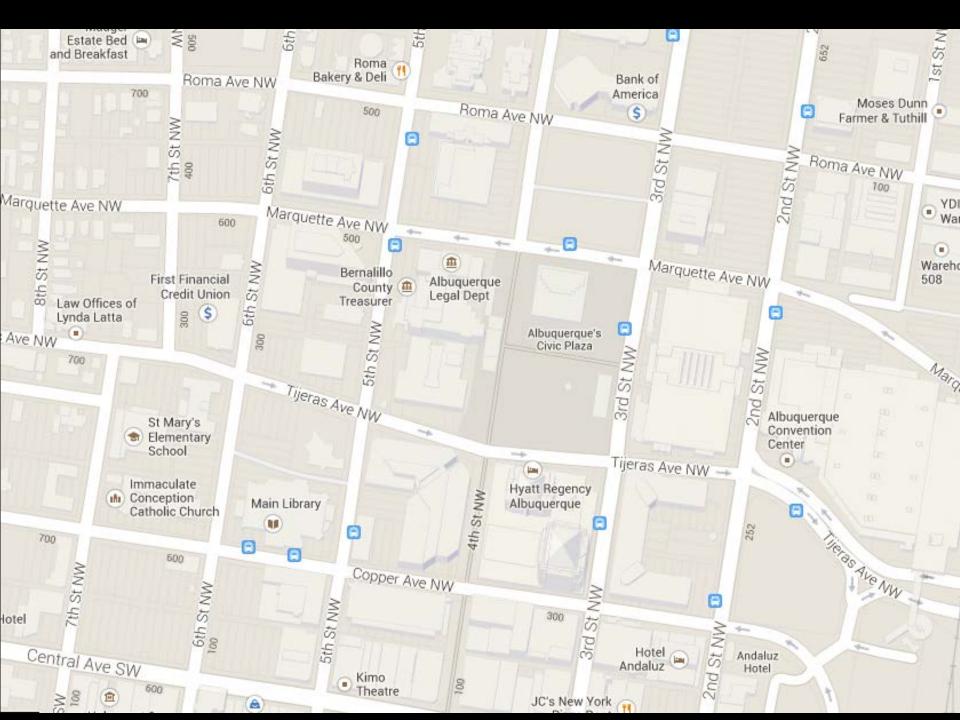
ver the past couple of decades, Vancouver, Washington, has spent millions of dollars trying to revitalize its downtown, and especially the area around Main Street that used to be the primary commercial center. Just how much the city has spent isn't easy to determine. But it's been an ambitious program. Vancouver has totally refurbished a downtown park, subsidized condos and apartment buildings overlooking it and built a new downtown Hilton hotel.

Some of these investments have been successful, but they did next to nothing for Main Street itself. Through most of this decade, the street remained about as dreary as ever. Then, a year ago, the city council tried a new strategy. Rather than wait for the \$14 million more in state and federal money it was

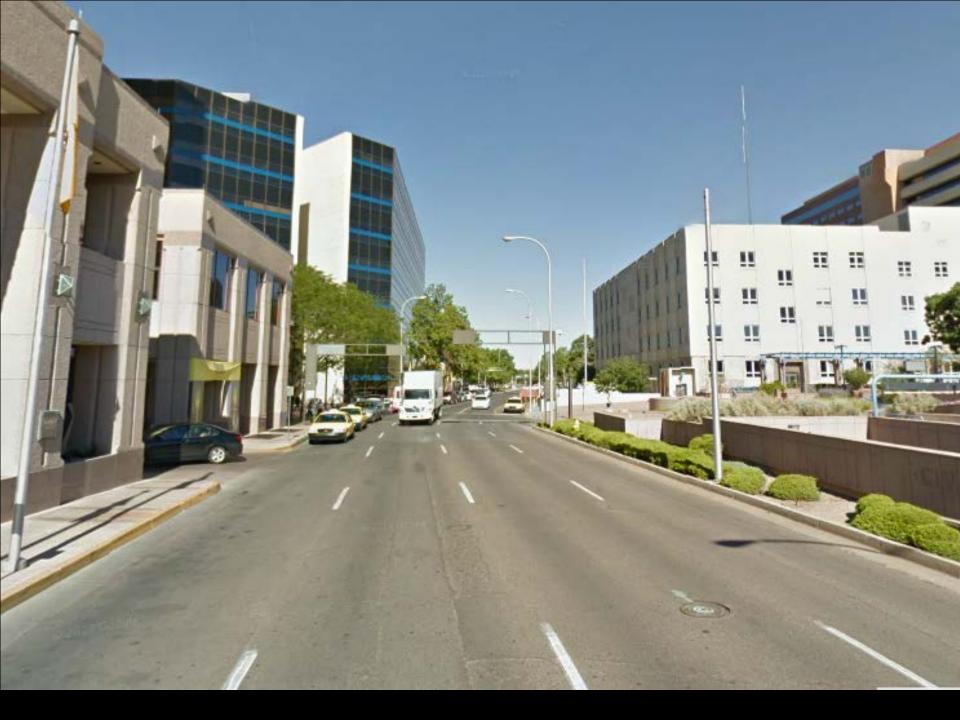
EAST BROAD ST., SAVANNAH

CONVERTED 1-WAY, 1969: 64% LOSS OF BUSINESSES ADDRESSES.

REVERTED 2-WAY, 1990: 50% GAIN IN BUSINESS ADDRESSES.







SAFETY FACTORS

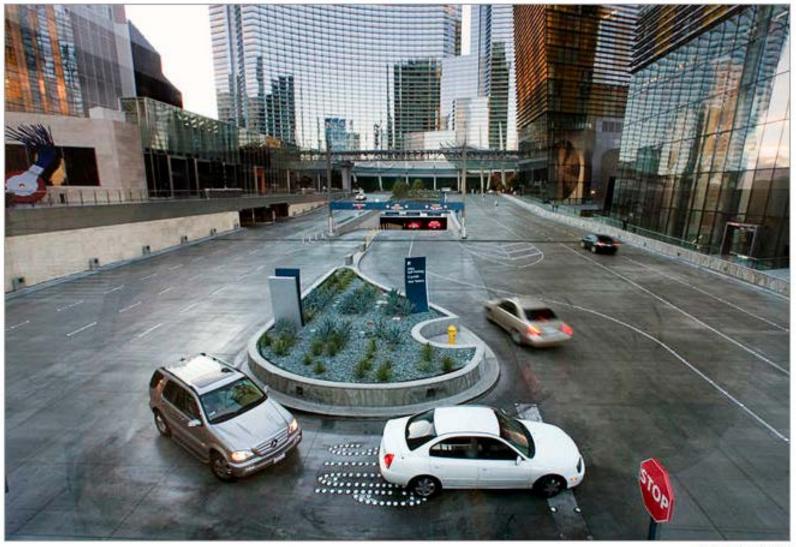
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- CURB RADII



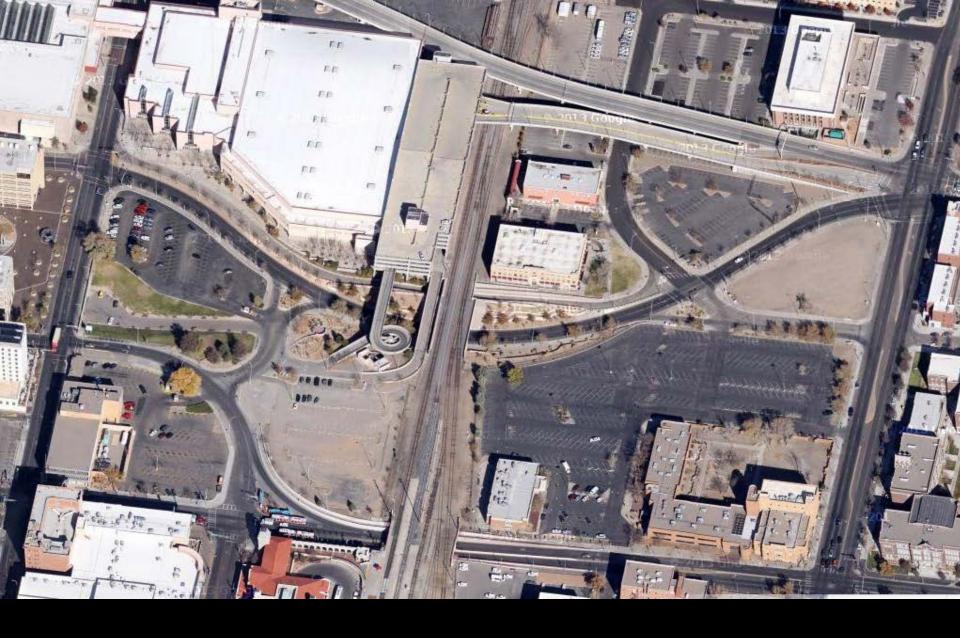




Design challenges leave passers-by passing CityCenter by



STEVE MARCUS









SAFETY FACTORS

- DESIGN SPEED
- NUMBER OF LANES
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- SIGNAL PROVISION

PERSAUD ET. AL.

CRASH REDUCTIONS RELATED TO TRAFFIC SIGNAL REMOVAL IN PHILADELPHIA, 1997

PERSAUD ET. AL. 1972

472 SIGNALS REMOVED
DATA COLLECTED ON 199
CRASHES REDUCED 24%
SEVERE INJURY CRASHES
REDUCED 63 %

SEVERE PED INJURY CRASHES REDUCED 68%

PERSAUD ET. AL.

"Traffic engineers in Philadelphia believe that the safety benefit stems from elimination of the local habit of speeding up to beat the red."



SAFETY FACTORS

- DESIGN SPEED
- LANE WIDTH
- TURN LANE PRESENCE & LENGTH
- CURB PROTECTION
- CYCLE FACILITIES
- 1-WAY vs. 2-WAY STREETS
- CURB RADII
- SIGNAL PROVISION

A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM

Albuquerque, New Mexico Development Process Manual

October 2008 Revision

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al Street Cross Section with Rear Residential Yards Fa Street and Front Yard on the Other

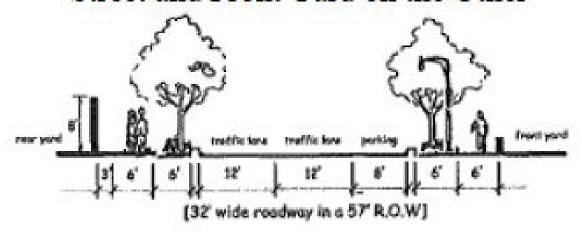


Figure 23-1B

1 Street Cross Section with Rear Residential Yards Fa Street

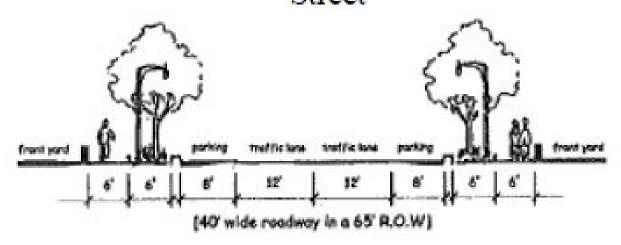


Table 23.3.3

STANDARD CURB RETURN RADII (AT FLOWLINE)

AND RIGHT-OF-WAY AT INTERSECTIONS

INTERSECTI	NG PRINCI	PAL	MINOR		MAJOR	LOCAL	LOCAL-IND	USTRIAL
STREETS	ARTERIAL	ART	TERIAL	COLLE	CTOR	LOCAL	RESIDENTIAL	COMMERCIA
L								
PRINCIPAL								
ADTEDIAL	(2) MINT #	2514	2514	201	201 20	1 de		

ARTERIAL (3) MIN.* 35'* 35'*

MINOR

ARTERIAL 35'* 35'* 30'* 30' 30' 30'*

COLLECTOR 35'* 30'* 30'* 25' 25' 25'

MAJOR LOCAL 30' 30' 25' 20' 20' 30*

LOCAL

25' RESIDENTIAL 30' 30' 20' N/A 20'

LOCAL

INDUSTRIAL

COMMERCIAL 30'* 30'* 30' 30' N/A 30'*

Shall match the radii requirements for design vehicles expected - 25' minimum ALLEY

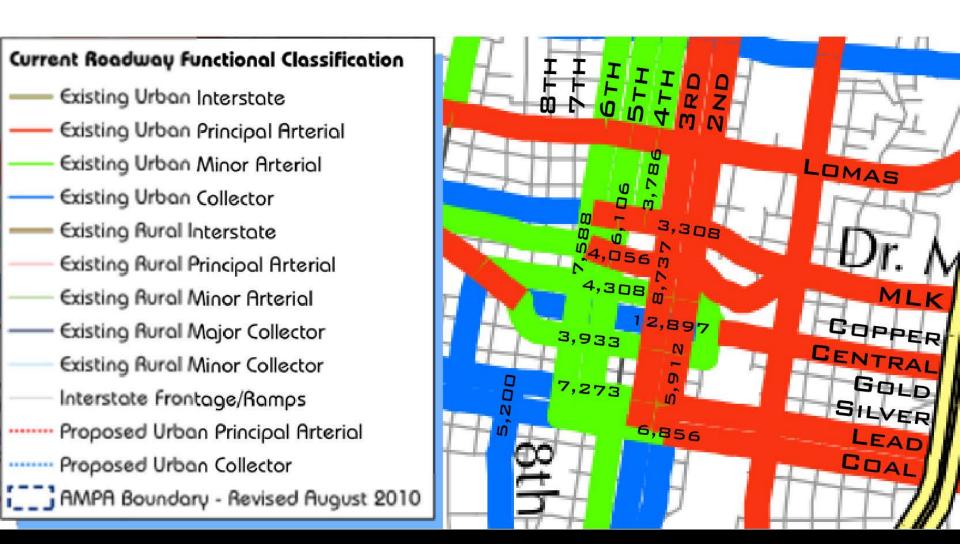
RETURNS



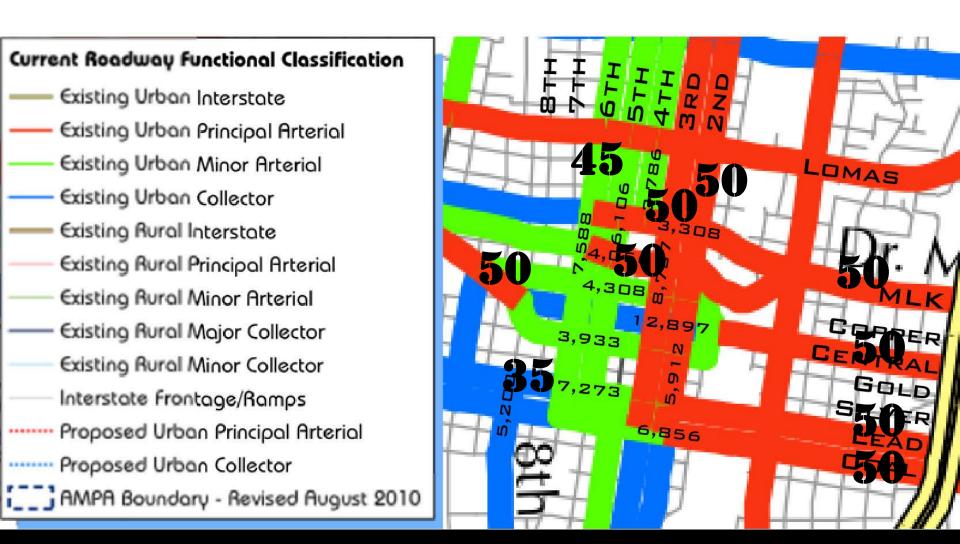
Table 23.3.1 GENERAL DESIGN CRITERIA FOR STREETS (Numbers in parentheses apply to footnotes below) VERTICAL CURVE REQUIREMENTS(4)

MINIMUM CENTERLINE VERTICAL CURVATURE DESIGN RADIUS - FEET⁽⁵⁾ VALUE K⁽²⁾

STREET CLASSIFICATION	DESIGN SPEED M.P.H	WITH 0.02 FT./FT/ SUPER- ELEVATION	WITH NORMAL CROWN ⁽⁷⁾	MINIMUM LENGTH VERTICAL CURVE (FEET) (1)	FOR CREST STOPPING SIGHT DISTANCE ⁽⁶⁾	FOR SAG STOPPING SIGHT DISTANCE
PRINCIPAL ARTERIAL	50(11)	(10)	(10)	150	160	110
MINOR ARTERIAL	45 ⁽¹¹⁾	800	1,100	135	120	90
COLLECTOR	35 ⁽¹¹⁾	450	650	100	50	50
MAJOE LOCAL	30		300	100	30	40
LOCAL RESIDENTIAL	25		180 ⁽⁹⁾	75	20	30
LOCAL RESIDENTIAL: ACCESS STREETS ⁽¹²⁾ CUL-DE-SACS & ALLEYS	20		120 ⁽⁹⁾	60	10	20
LOCAL INDUSTRIAL/ COMMERCIAL	30		380	90	30	40
LOCAL LEG OF "T" INTERSECTION	15	N/A	N/A	45	5	9



ARBITRARY



DANGEROUS

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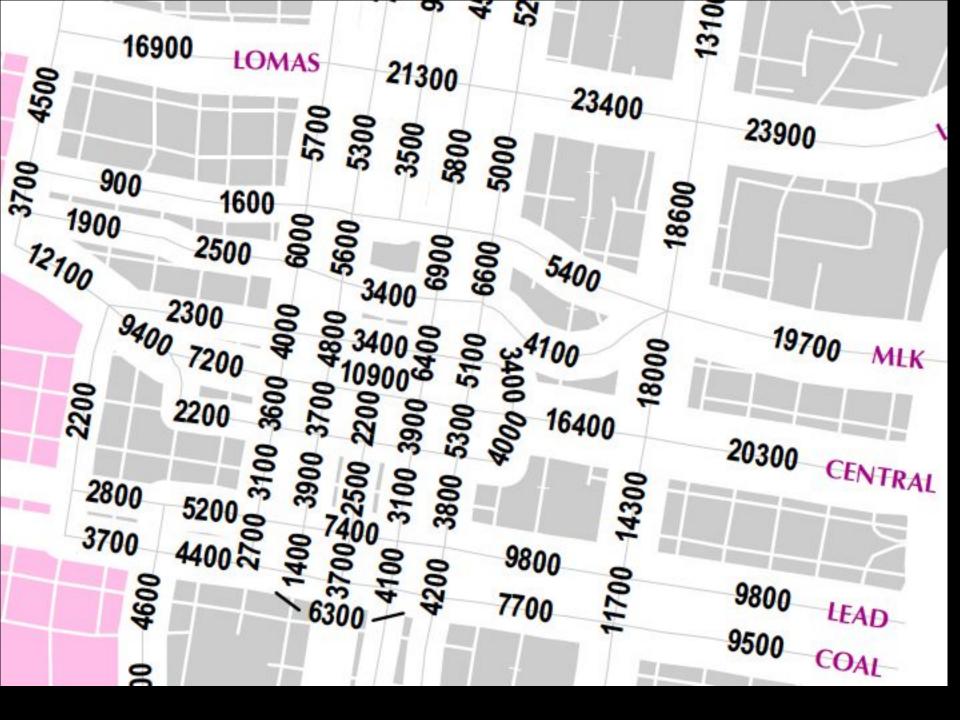
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UNIFIED DEVELOPMENT ORDINANCE

A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND



Dow	ntow	n Raw	and.	AM/PM	Peak	Data										
co_cogi		RTE		LOCAT		11	DTE	RWCN	AMPK	AMDS	DA	AMHR	PMPK	PMDS	DP	PMHR
	250972	10TH STREET		SOUTH OF LEA	D		1207	1629	161	0.86	S	900	127	0.81	S	1500
	250961	10TH STREET		NORTH OF LEA	AD		1304	1832	168	0.55	N	800	160	0.59	S	1530
	241921	12TH STREET		NORTH OF MAI	RQUETTE		1104	4973	493	0.6	S	745	530	0.64	N	1630
1	240961	12TH STREET		NORTH OF LON	MAS		1104	8831	860	0.6	S	745	899	0.63	N	1630
	244601	12TH STREET		NORTH OF TIJE	ERAS		1104	4056	352	0.6		800	418	0.56	N	1630
li l	243801	12TH STREET		NORTH OF CEN	NTRAL		1105	3819	276	0.7	S	815	397	0.62	S	1630
	236402	12TH STREET		S. OF I-40 S. FR	ONTAGE RD).	1106	12226	946	0.67	S	745	1168	0.65	N	1630
10	241922	12TH STREET		SOUTH OF LON	MAS		1109	5103	470	0.64	S	745	572	0.64	N	1630
	237961	12TH STREET		NORTH OF MO	UNTAIN		1304	9193	742	0.68		730	927	0.69		1630
	242242	2ND STREET		SOUTH OF MOU			1108	5718	340		N	715	740		N	1630
	249802	2ND STREET		SOUTH OF CEN			1108	5912	521		N	715	565	0.59		1645
8	246202	2ND STREET		SOUTH OF MAI			1109	7217	609	0.67		730	740	0.68		1630
	247802	2ND STREET		SOUTH OF COP	PPER		1207	5078	329	0.65		715	476	0.57		1630
le le	248602	2ND STREET		SOUTH OF TIJE	ERAS		1208	5871	424	0.73		730	529	0.76	S	1630
	253281	2ND STREET		NORTH OF COA	AL		1302	6162	595	0.64		715	768	0.59	N	1630
8	238762	2ND STREET		S. OF I-40 S. FR).	1302	6261	374		N	900	913		N	1630
	252041	2ND STREET		NORTH OF LEA	ND.		1303	4631	444	0.85		730	374	0.74		1515
	244482	2ND STREET		SOUTH OF LON			1307	8317	612	0.57		745	856	0.7		1630
	242242	2ND STREET		SOUTH OF MOU	UNTAIN		1310	6417	439	1	N	730	819	1	N	1630
0	249802	2ND STREET		SOUTH OF CEN	NTRAL		1310	5749	446	0.79		715	500	0.64		1615
	248522	3RD STREET		SOUTH OF TIJE	ERAS		1104	8737	706	0.73		745	902	0.65		1615
le le	238562	3RD STREET		S. OF I-40 S. FR	ONTAGE RD).	1105	5121	716		S	745	354	1	S	1600
	242042	3RD STREET		SOUTH OF MOU			1106	4996	681		S	730	451	1		1645
0	247682	3RD STREET		SOUTH OF COP	PPER		1111	5273	455	0.69		745	484	0.76		1645
	246042	3RD STREET		SOUTH OF MAI			1207	7256	594	0.66		745	660	0.63		1615
	244322	3RD STREET		SOUTH OF LON	AAS		1207	6144	541	0.75	S	745	549	0.66	S	1615
	249721	3RD STREET		NORTH OF GOI	LD		1210	4110	294	0.69		745	419	0.75	W	1630
	251961	3RD STREET		NORTH OF LEA	VD.		1306	3336	227	0.64	S	815	398	0.72	S	1630
			Page I of 5				200.00									
co_cogi		RTE		LOCAT			DTE	RWCN	AMPK	AMDS	DA	AMHR	PMPK	PMDS	DP	PMHR
	253161	3RD STREET		NORTH OF COA	AL		1306	3651	274	0.78	S	745	515	0.86	S	1630
	241841	4TH STREET		NORTH OF LON	MAS		1104	10181	886	0.55	S	900	826	0.62	N	1630
	238442	4TH STREET		S. OF I-40 S. FR	ONTAGE RD).	1204	11046	846	0.67	S	745	1037	0.62	N	1630
	249522	4TH STREET		SOUTH OF CEN	NTRAL		1205	2330	213	0.58	S	800	228	0.64	S	1530
	244122	4TH STREET		SOUTH OF LON	MAS		1205	3786	336	0.78	S	745	345	0.59	N	1630
	251761	4TH STREET		NORTH OF LEA	AD		1208	2619	289	0.78	N	745	240	0.61	N	1545
	253001	4TH STREET		NORTH OF COA	AL		1307	3264	240	0.65	N	715	345	0.77	S	1645
	241682	5TH STREET		SOUTH OF MOU	UNTAIN		1102	7788	497	1	N	815	1328	1	N	1630
	248362	5TH STREET		SOUTH OF TIJE	ERAS		1104	6466	506	0.62	N	745	550	1	S	1515
	249281	5TH STREET		NORTH OF GOI	LD		1104	4180	386	0.66	N	745	455	0.71	N	1615
5	243842	5TH STREET		SOUTH OF LON	MAS		1107	5795	426	0.61	N	800	753	0.87	N	1630
	238322	5TH STREET		S.E. OF 6TH ST.			1201	6190	332	1	N	815	1029	1	N	1630
	245762	5TH STREET		SOUTH OF MAI	RQUETTE		1204	6106	522	0.58	N	745	704	0.68	N	1615
	247362	5TH STREET		SOUTH OF COP	The second second		1204	4235	350	0.78		730	443	0.74	N	1600
	252761	5TH STREET		NORTH OF COA			1302	2136	252	0.54		800	214	0.69		1615
	951561	5TH STREET		NORTH OF LEA	ID.		1306	9305	956	0.89	N	790	939	0.53	N	1600

TABLE 23.4.6 GROWTH FACTOR*

De	ign Period, Y	ears (n)	Annual Growth Rate, Percent (r)						
Ť			37 (3)							
П	N / rc th	2	4		б	7	*	0		
1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
2	2.0	2.02	2.04	2.05	2.06	2.07	2.08	2.10		
3	3.0	3.06	3.12	3 15	3.18	3.21	3 25	3.31		
4 5	4.0	4.12	4.25	31	37	14	4 1	64		
5	5.0	5.20	5.42	53	5 Y	/3	5 7	11		
6	J.0	0.31	0.05	U.80	6.90	7.17	7.54	7.72		
7	7.0	7.43	7.90	8.14	8.39	8.65	8.92	9.49		
8	8.0	8.58	9.21	0 55	9.90	10.26	10.64	11.44		
		9.75	10.	11.03	1.4	11 8 3 2	12.4	.58		
0	10.0	10 95	12.01	1. 8	3.:	₹ 2	14.49	.94		
1	11.0	12.17	13.45	14.21	14.57	15.78	10.03	10.55		
12	12.0	13.41	15.03	15.92	16.87	17.89	18.98	21.38		
13	13.0	14 68	16.63	17.71	18.88	20.14	21.50	24.52		
4	1 0	15.97	18.29	19.16	21.01	22.55	24.21	27.97		
4 5	1 0	17.7	20.02	21.58	23.28	25.13	27.15	31.77		
1	10.0	184	21.82	23.66	25.67	27.89	30.32	35.95		
17	17.0	20.01	23.70	25.84	28.21	30.84	33.75	40.55		
18	18.0	21.41	25.65	28.13	30.91	34.00	37.45	45.60		
19	19.0	22.84	27.67	30.54	33.76	37.38	41.45	51.16		
20	20.0	24.30	29.78	33.06	36.79	41.00	45.76	57.28		
25	25.0	32.03	41.65	47.73	54.86	63.25	73.11	98.35		
30	30.0	40.57	56.08	66.44	79.06	94.46	113.28	164.49		
35	35.0	49.99	73.65	90.32	111.43	138.24	172.32	271.02		

ONE WELL-NETWORKED LANE ON A TWO-WAY STREET HANDLES APPROX. 650 CARS PER PEAK HOUR.

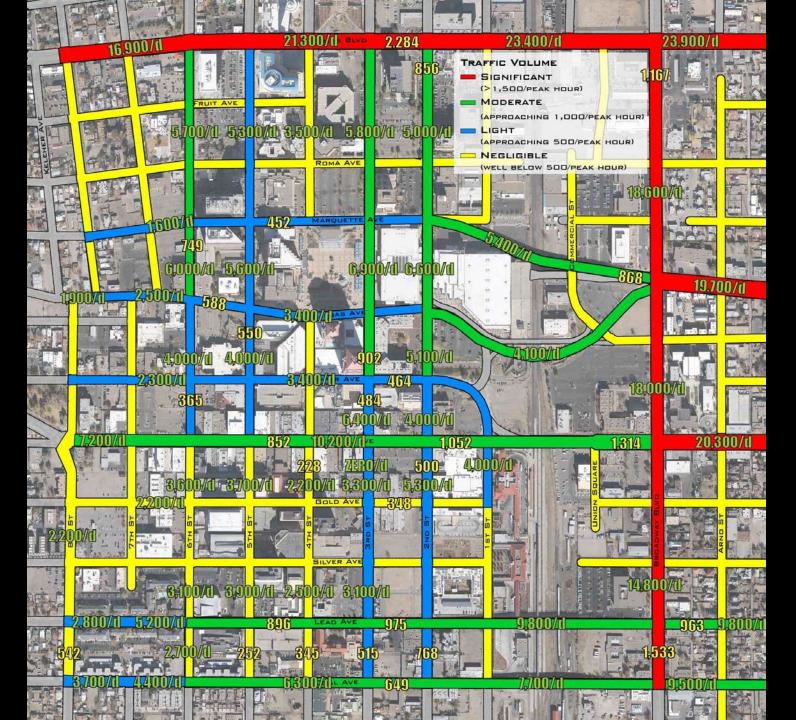
ONE WELL-NETWORKED LANE ON A ONE-WAY STREET HANDLES APPROX. 800 CARS PER PEAK HOUR.

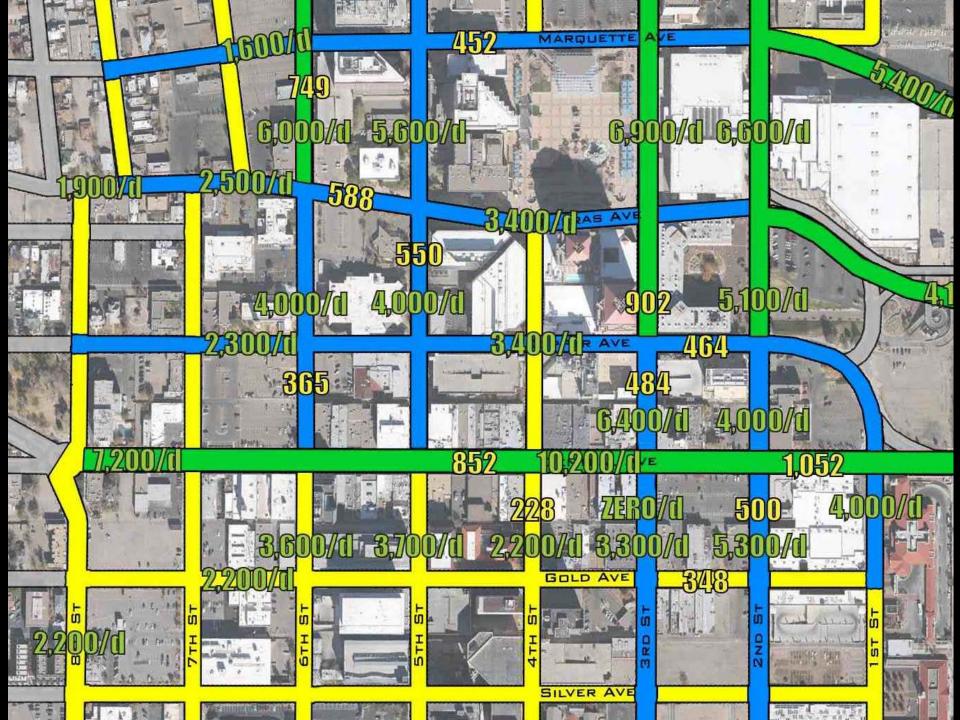
2-LANE STREETS EASILY HANDLE APPROX. 10,000 CARS PER DAY.

3-LANE STREETS CAN HANDLE APPROX. 20,000 CARS PER DAY.

Successful Road Diets

Location	Street	ADT Before	ADT After
San Leandro, CA	East 14th Street	17,700	16,700
Duluth, MN	21st. Avenue East	17,000	17,000
Ramsey County, MN	Rice Street	18,700	16,400
Toronto, ON	St. George Street	15,000	15,000
Kirkland, WA	Lake Washington Boulevard	23,000	25,900
Seattle, WA	North 45th Street	19,400	20,300
Covington, WA	State Road 516	29,900	32,800
Bellvue, WA	Montana Street	18,500	18,500
East Lansing, MI	Grand River Boulevard	23,000	23,000
Santa Monica, CA	Main Street	20,000	18,000
Helena, MT	U.S. 12	18,000	18,000
San Francisco, CA	Valencia Street	22,200	20,000
Oakland, CA	High Street	22,000	24,000
Orlando, FL	Edgewater Drive	20,500	21,000
Seattle, WA	Madison Street	17,000	18,000
Reno, NV	South Wells Avenue	18,000	17,500
University Place, WA	67th Avenue	17,000	15,000
University Place, WA	Cirque Avenue	16,900	14,400
East Lansing, MI	West Grand River Avenue	18,000	18,000
East Lansing, MI	Abbott Road	15,000	21,000
Charlotte, NC	East Boulevard	21,400	18,400





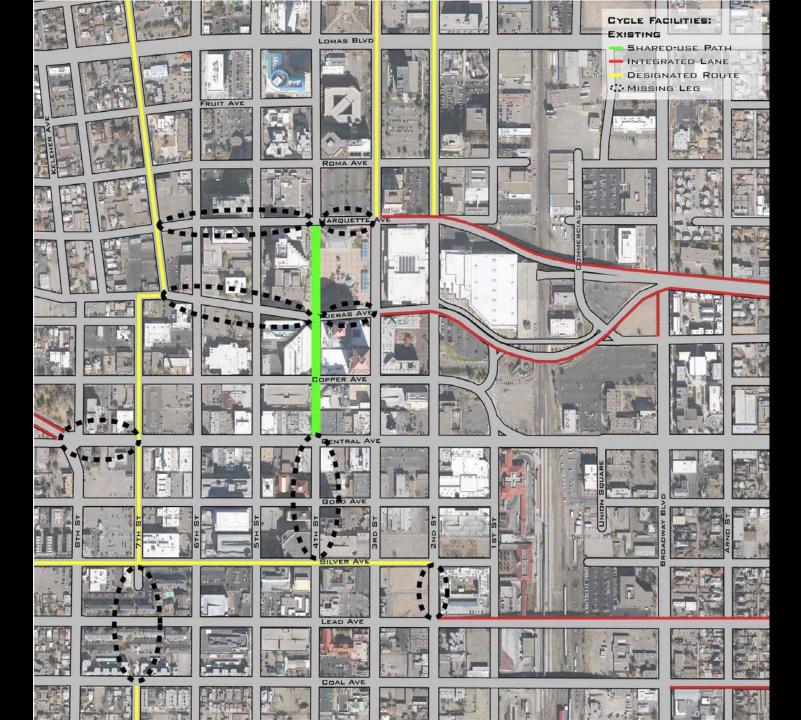


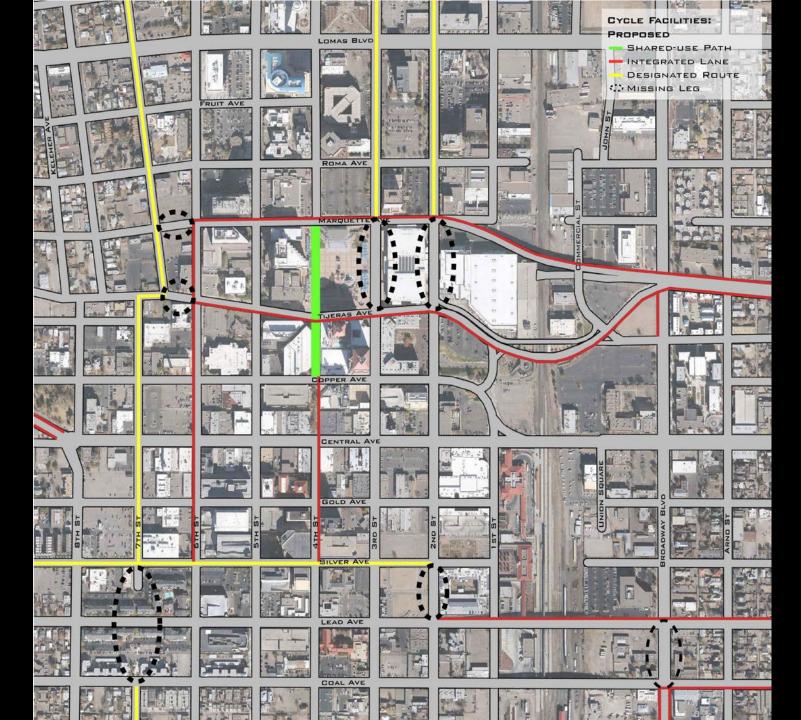


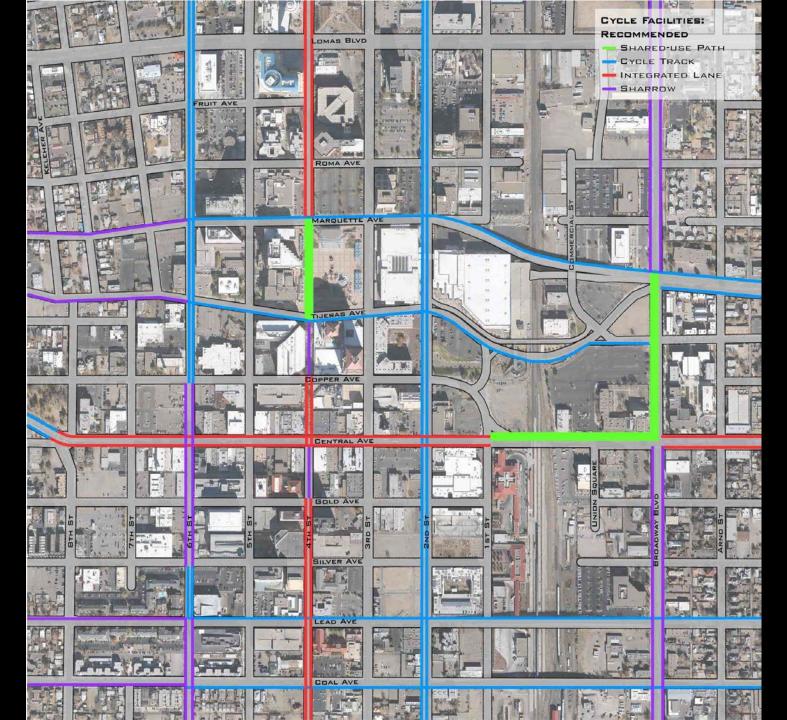


A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND
- CYCLING NETWORK

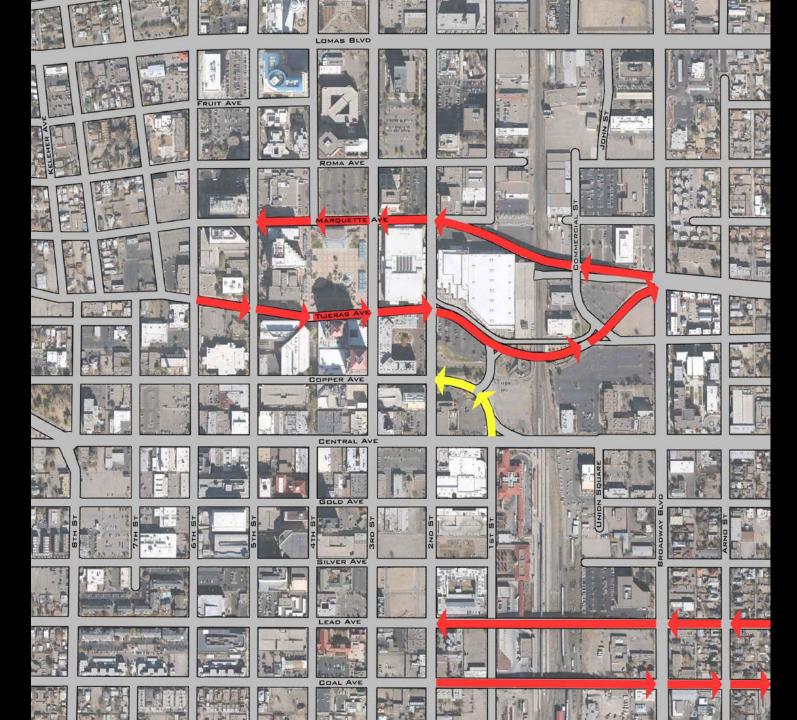




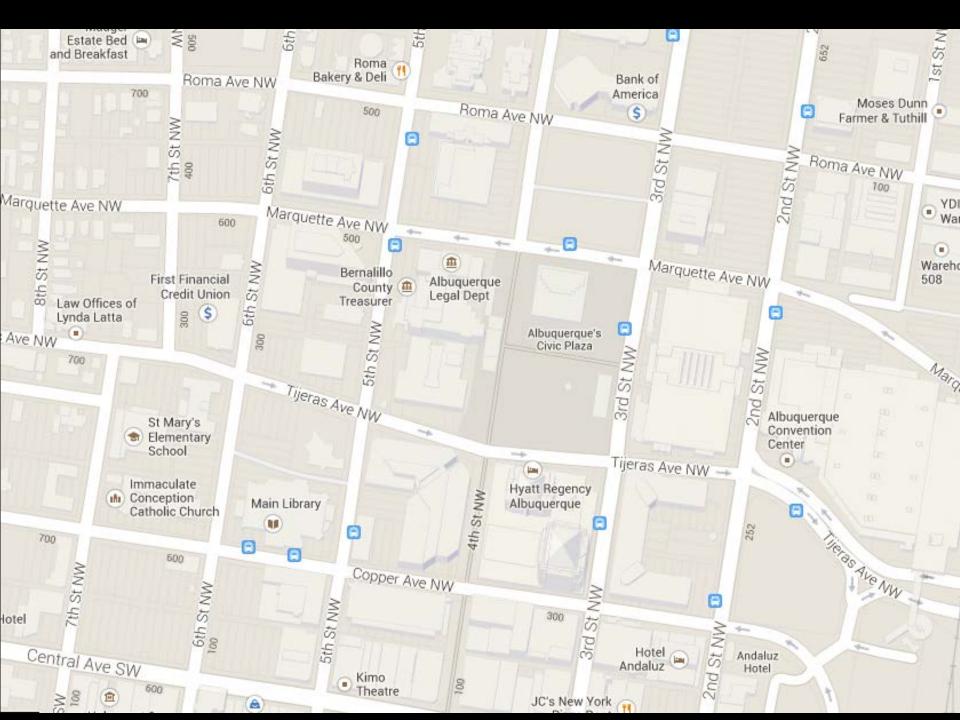


A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND
- CYCLING NETWORK
- ONE WAYS



MARQUETTE & TIJERAS



















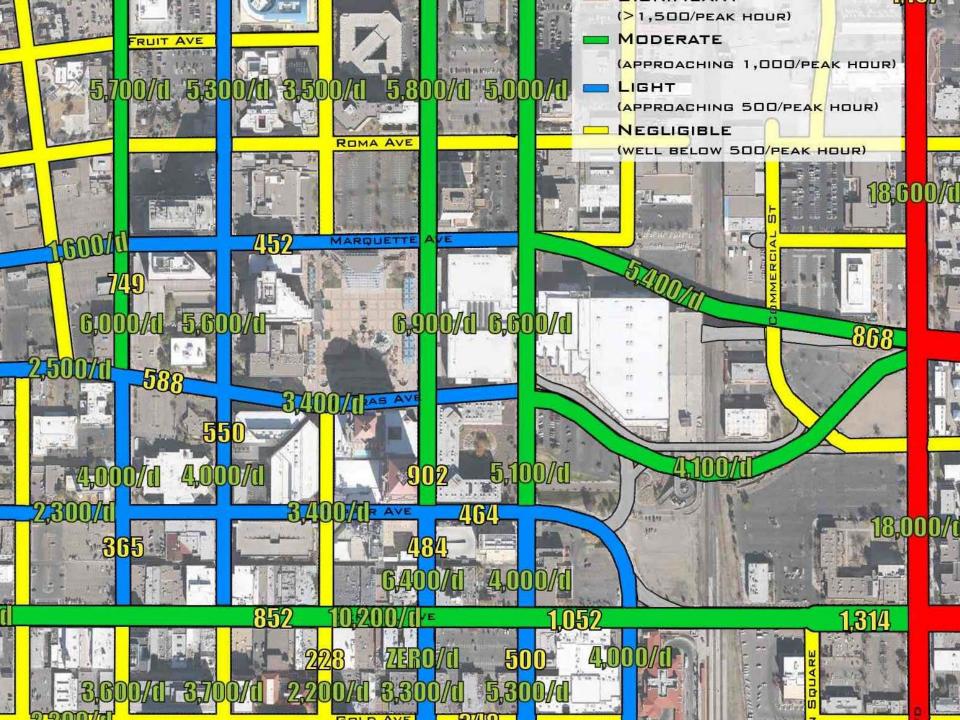


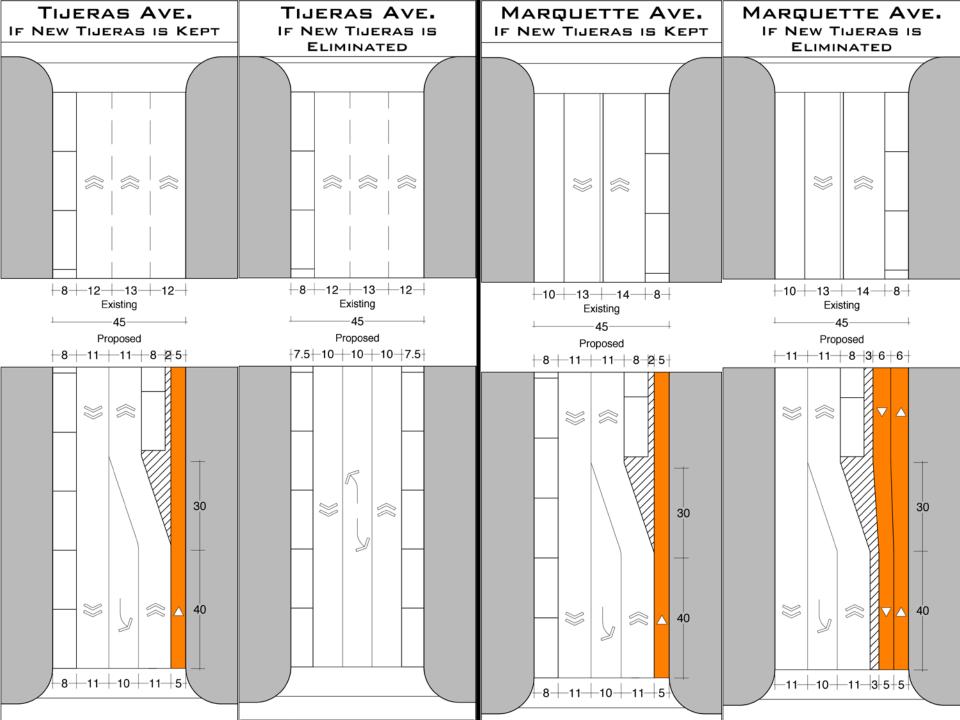


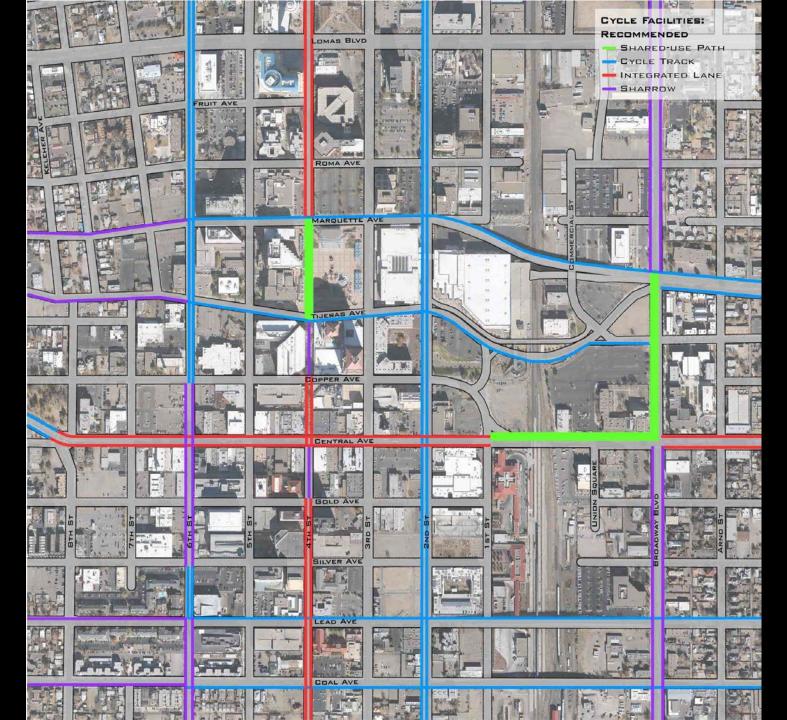


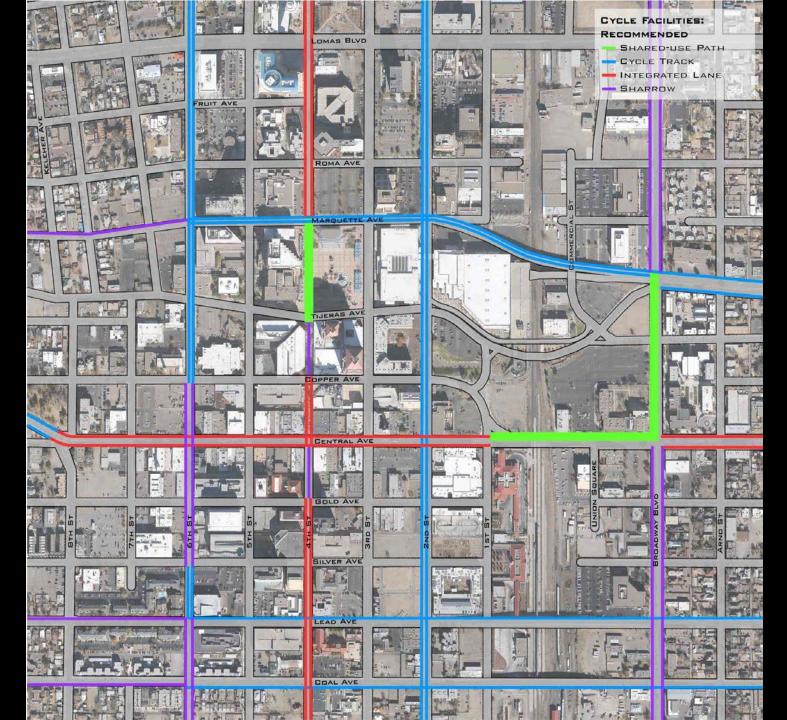








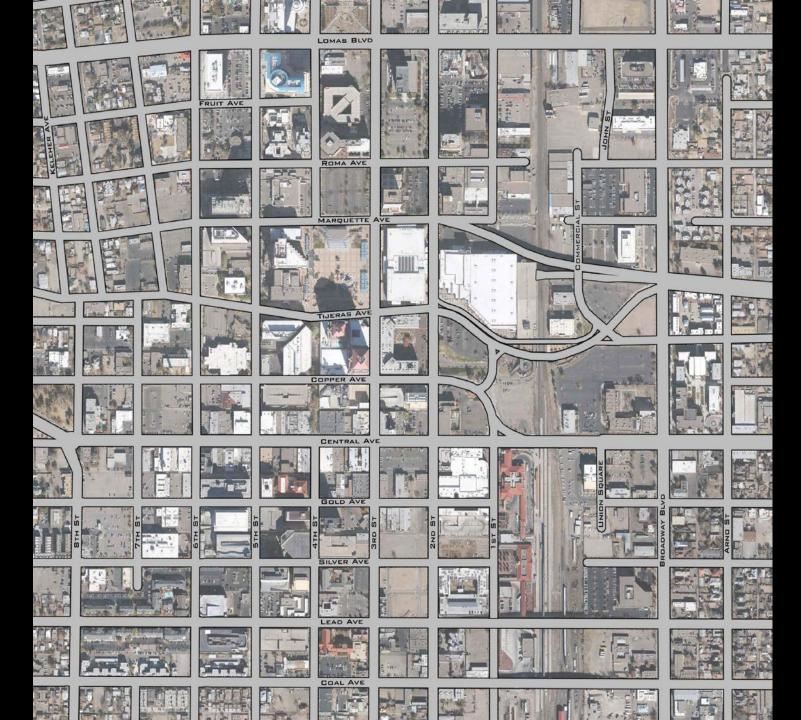




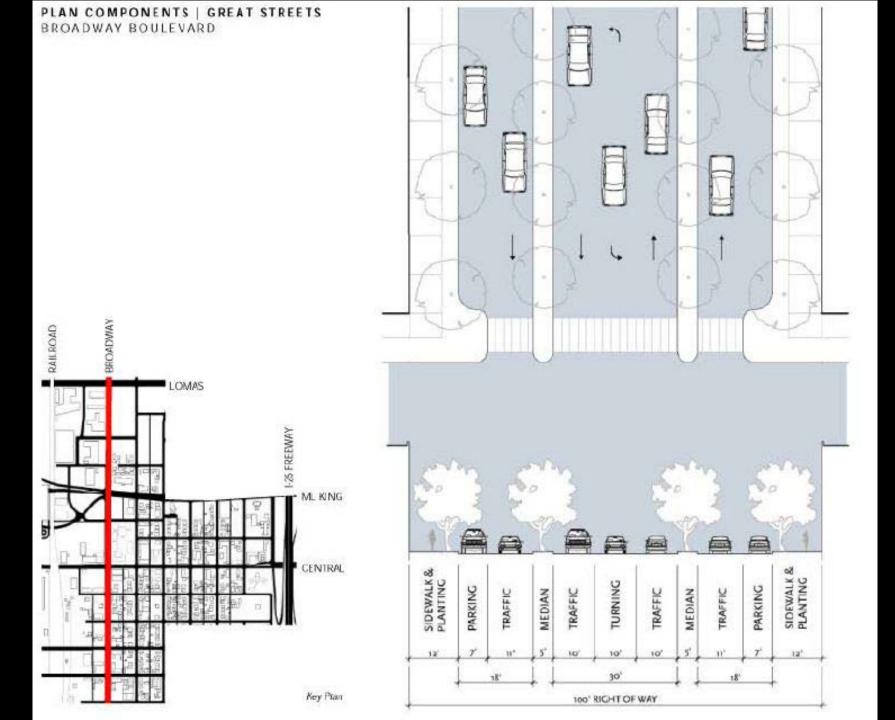
A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND
- CYCLING NETWORK
- ONE WAYS
- OTHER INDIVIDUAL STREETS

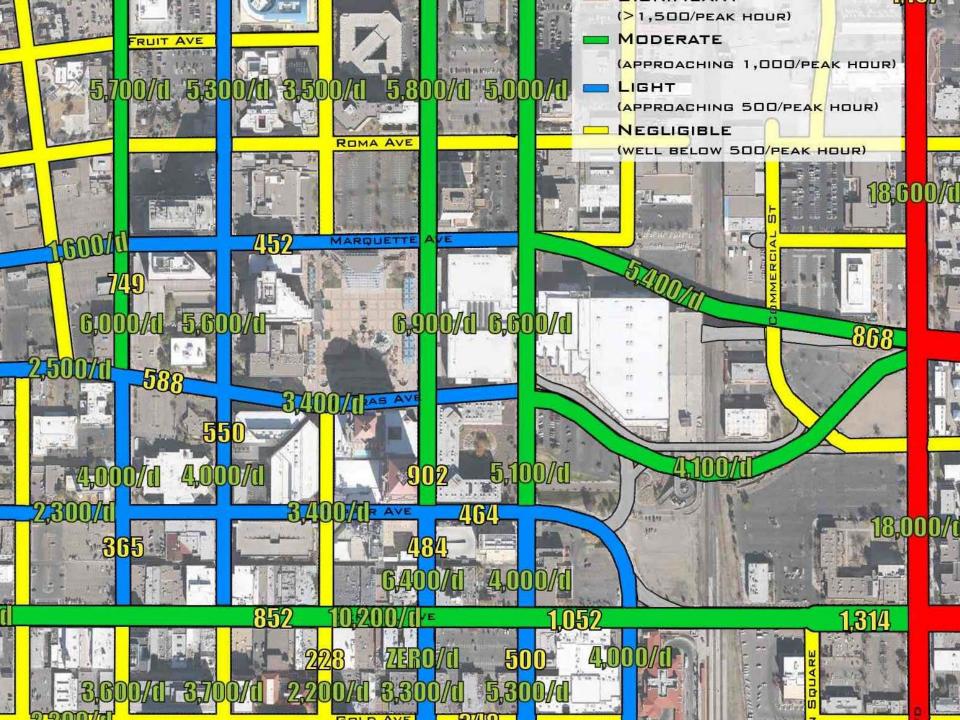
measure weeks to set on it protopped to the state of the set of the s (andse Dr Martig Todal isile 13 130 72100 73600B



BROADWAY

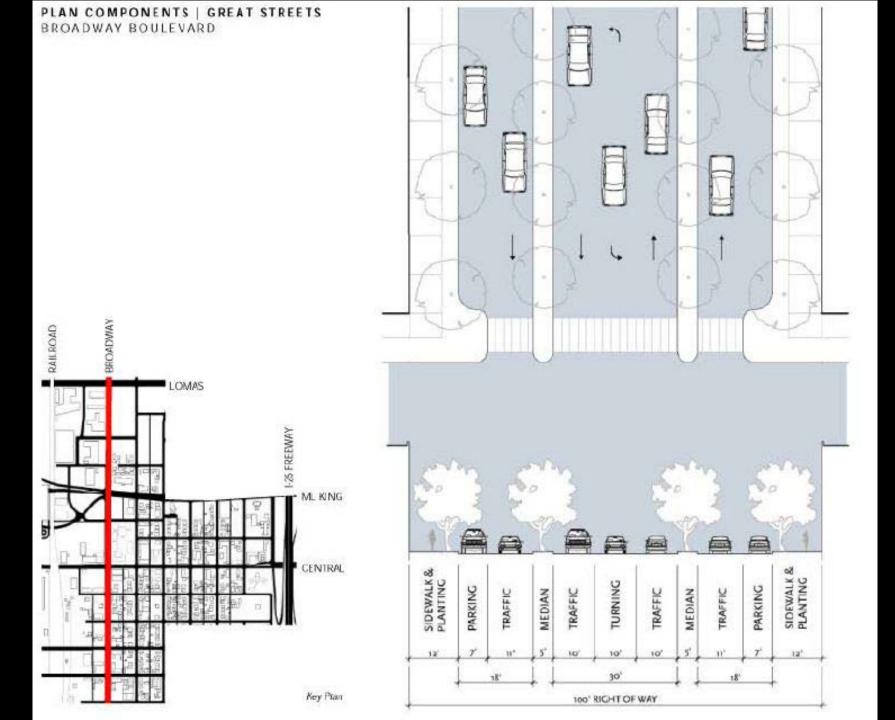




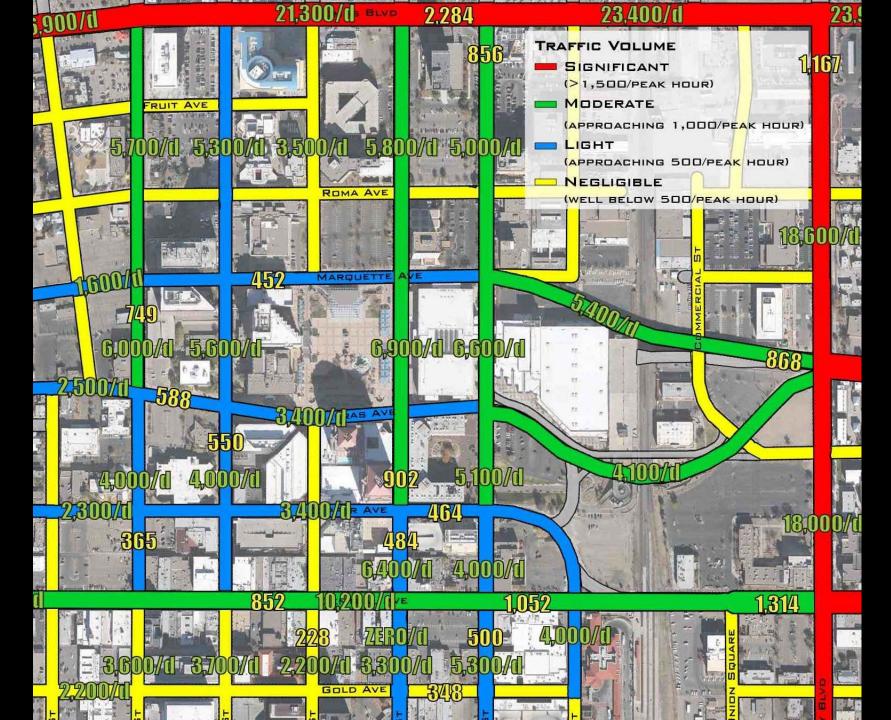


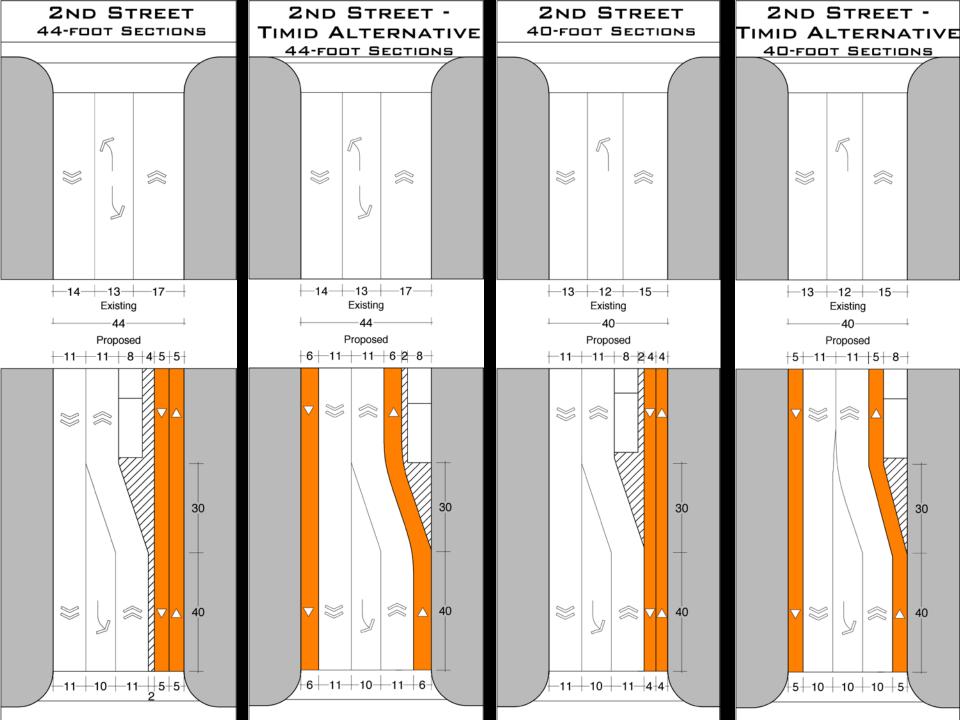
Successful Road Diets

Location	Street	ADT Before	ADT After
San Leandro, CA	East 14th Street	17,700	16,700
Duluth, MN	21st. Avenue East	17,000	17,000
Ramsey County, MN	Rice Street	18,700	16,400
Toronto, ON	St. George Street	15,000	15,000
Kirkland, WA	Lake Washington Boulevard	23,000	25,900
Seattle, WA	North 45th Street	19,400	20,300
Covington, WA	State Road 516	29,900	32,800
Bellvue, WA	Montana Street	18,500	18,500
East Lansing, MI	Grand River Boulevard	23,000	23,000
Santa Monica, CA	Main Street	20,000	18,000
Helena, MT	U.S. 12	18,000	18,000
San Francisco, CA	Valencia Street	22,200	20,000
Oakland, CA	High Street	22,000	24,000
Orlando, FL	Edgewater Drive	20,500	21,000
Seattle, WA	Madison Street	17,000	18,000
Reno, NV	South Wells Avenue	18,000	17,500
University Place, WA	67th Avenue	17,000	15,000
University Place, WA	Cirque Avenue	16,900	14,400
East Lansing, MI	West Grand River Avenue	18,000	18,000
East Lansing, MI	Abbott Road	15,000	21,000
Charlotte, NC	East Boulevard	21,400	18,400

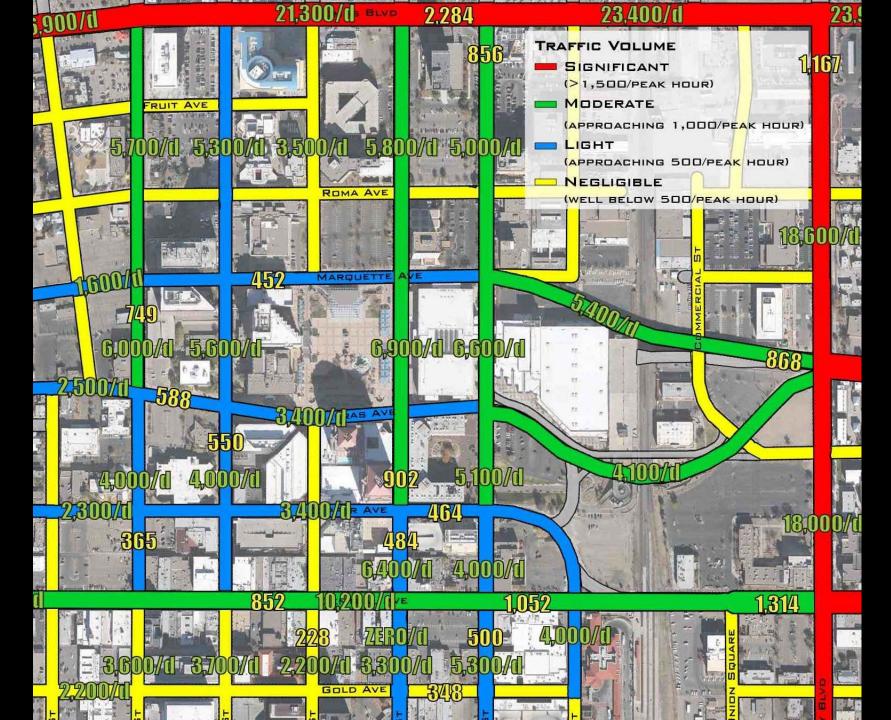


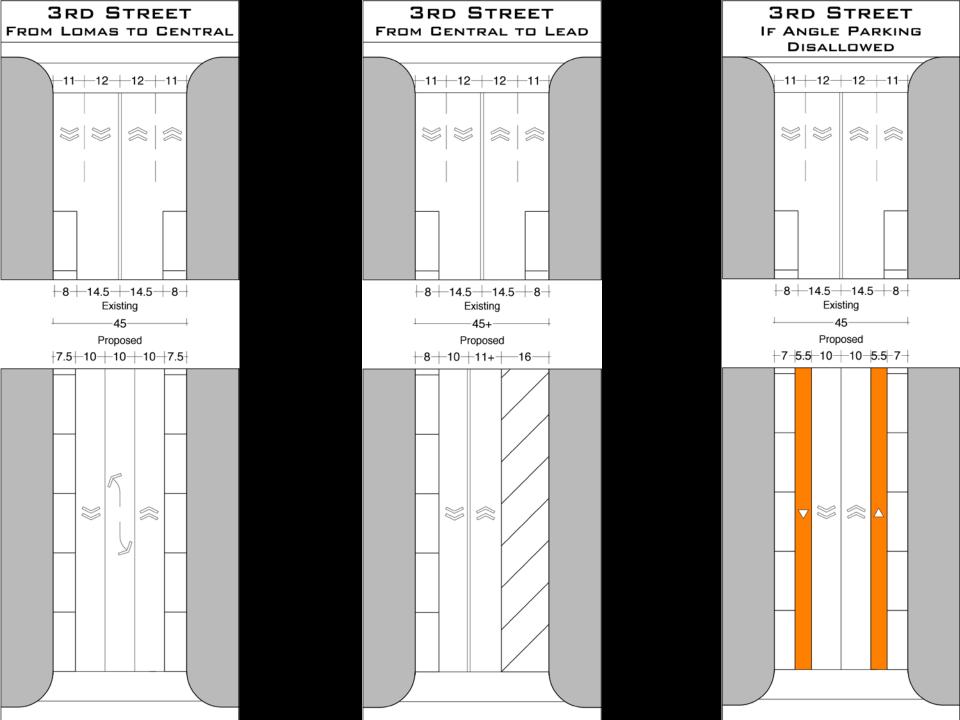
2nd STREET





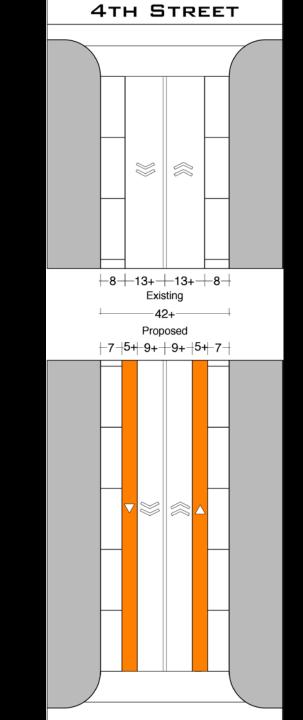
3rd STREET

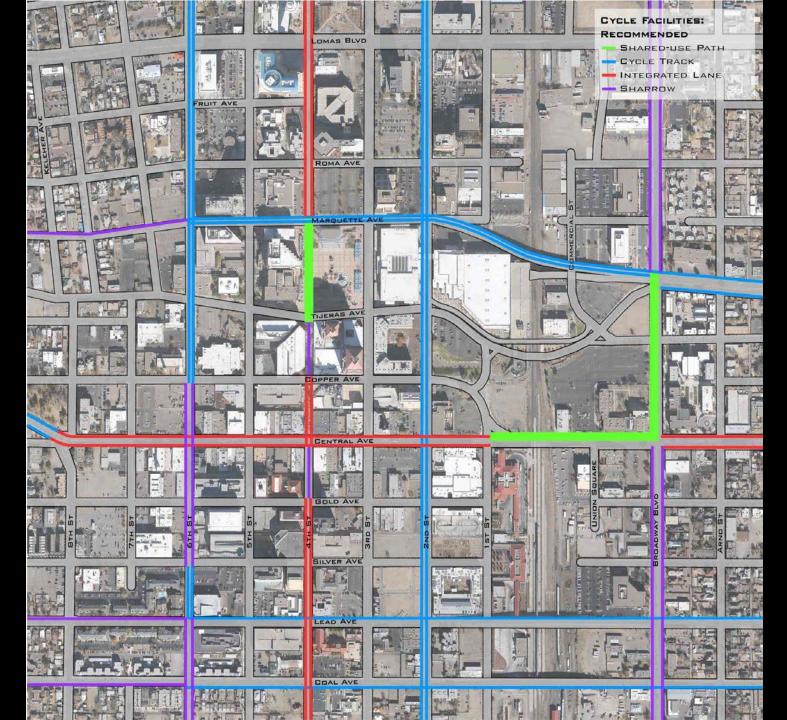




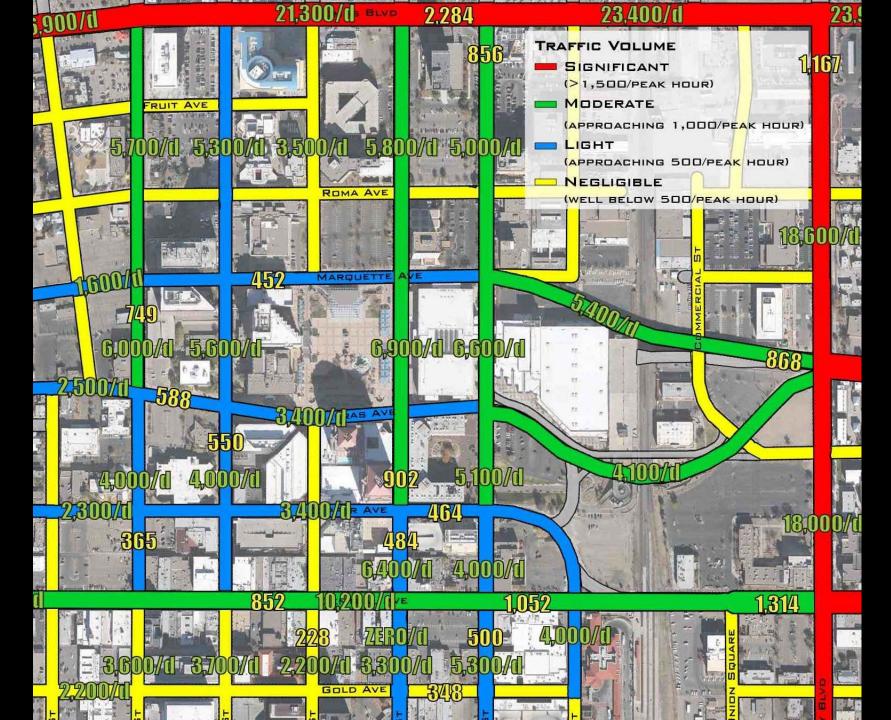
4TH STREET





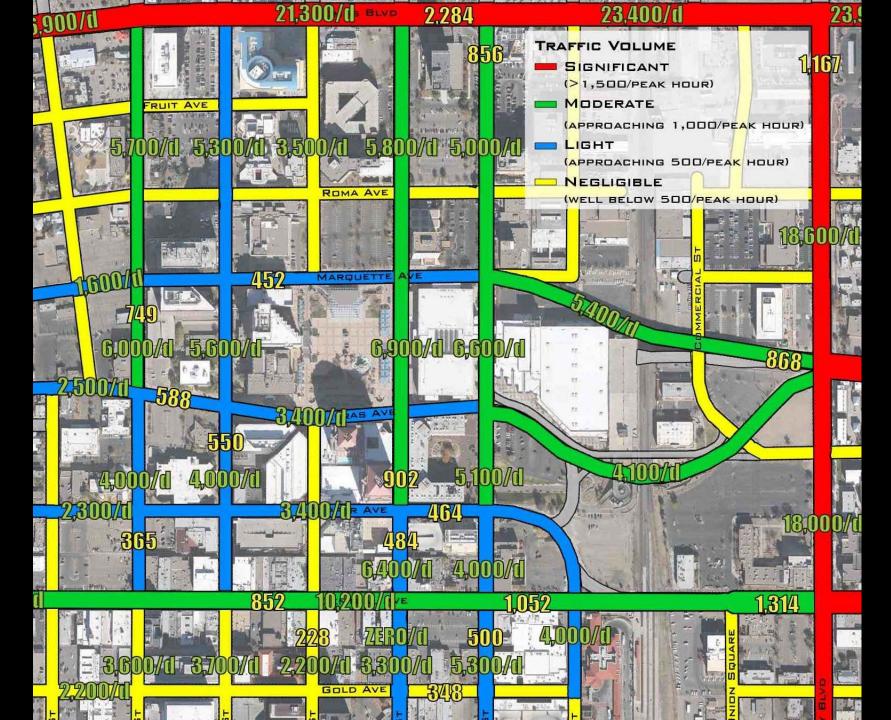


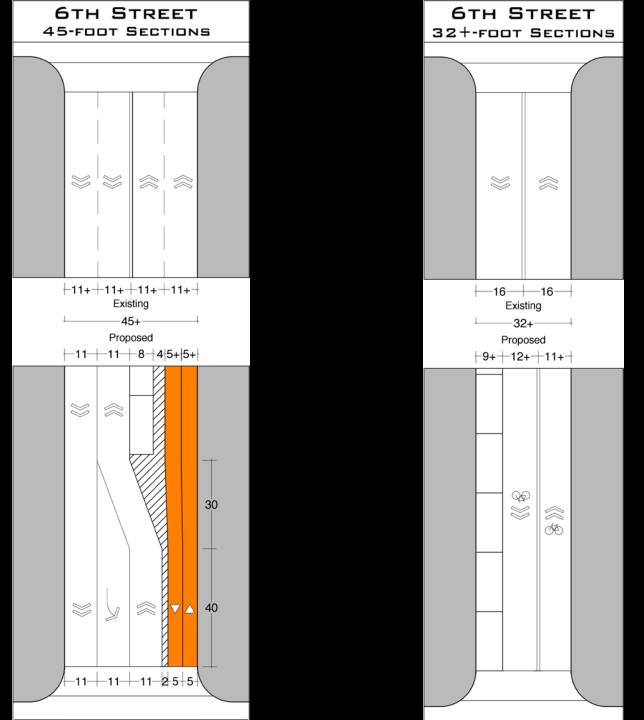
5th STREET

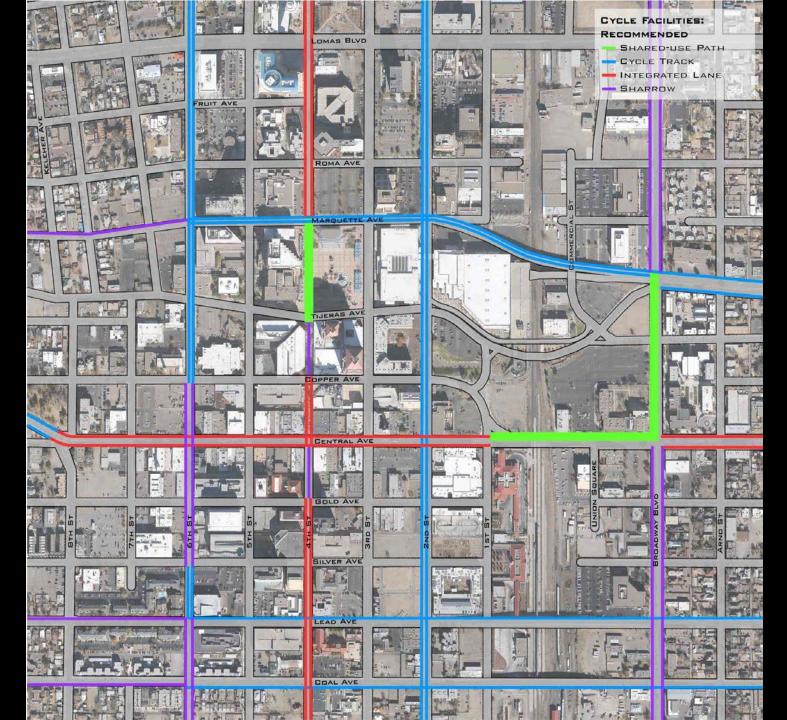


5TH STREET | 13++ 13++ 13+--8-11+-11+-8- Existing **−39+** Proposed 30

6th STREET





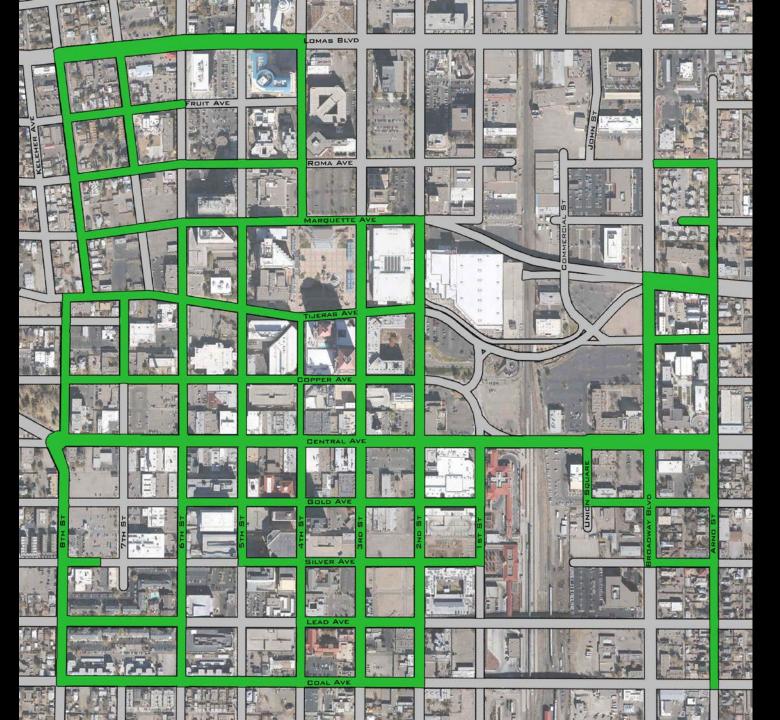


LOMAS



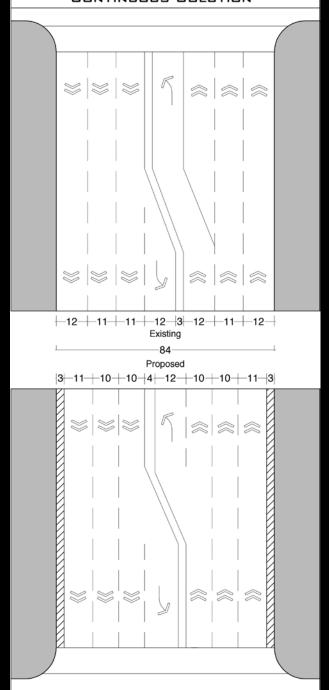
Successful Road Diets

Location	Street	ADT Before	ADT After
San Leandro, CA	East 14th Street	17,700	16,700
Duluth, MN	21st. Avenue East	17,000	17,000
Ramsey County, MN	Rice Street	18,700	16,400
Toronto, ON	St. George Street	15,000	15,000
Kirkland, WA	Lake Washington Boulevard	23,000	25,900
Seattle, WA	North 45th Street	19,400	20,300
Covington, WA	State Road 516	29,900	32,800
Bellvue, WA	Montana Street	18,500	18,500
East Lansing, MI	Grand River Boulevard	23,000	23,000
Santa Monica, CA	Main Street	20,000	18,000
Helena, MT	U.S. 12	18,000	18,000
San Francisco, CA	Valencia Street	22,200	20,000
Oakland, CA	High Street	22,000	24,000
Orlando, FL	Edgewater Drive	20,500	21,000
Seattle, WA	Madison Street	17,000	18,000
Reno, NV	South Wells Avenue	18,000	17,500
University Place, WA	67th Avenue	17,000	15,000
University Place, WA	Cirque Avenue	16,900	14,400
East Lansing, MI	West Grand River Avenue	18,000	18,000
East Lansing, MI	Abbott Road	15,000	21,000
Charlotte, NC	East Boulevard	21,400	18,400

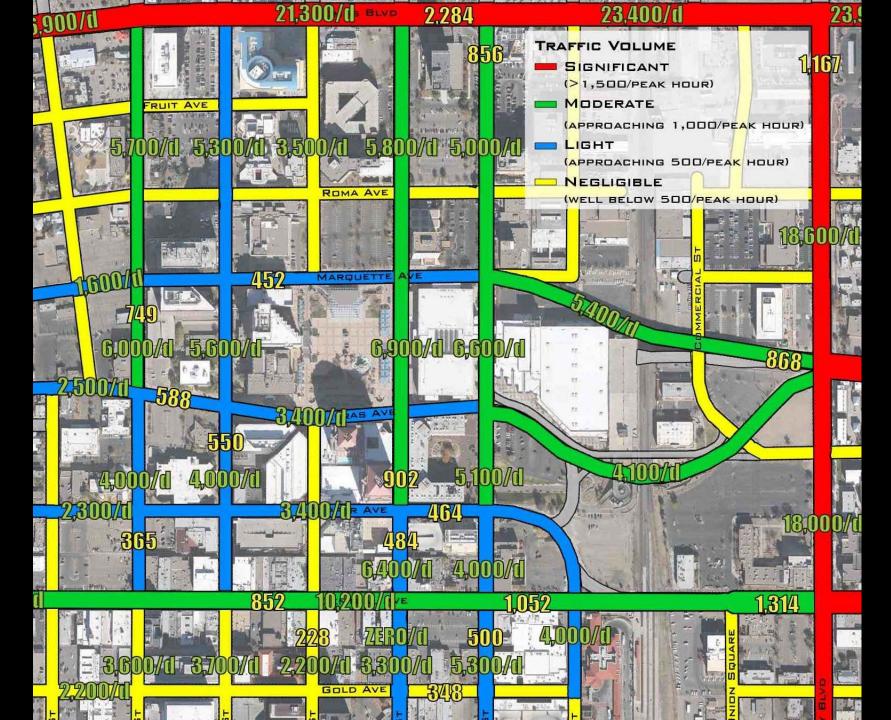


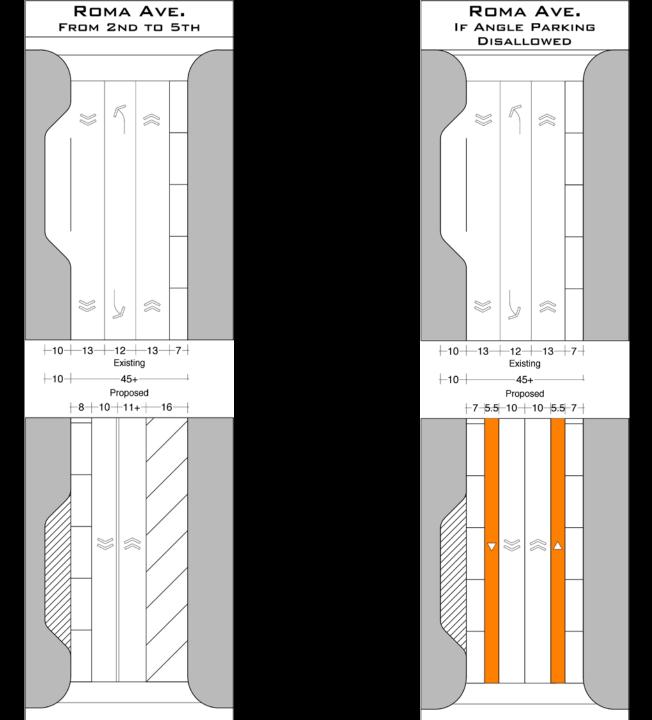
LOMAS BLDV. FROM 3RD TO 8TH 12 11 11 12 3 12 11 12 Existing -84-Proposed 10-12-12-4-12-12-12-10-

LOMAS BLDV. CONTINUOUS SOLUTION



ROMA

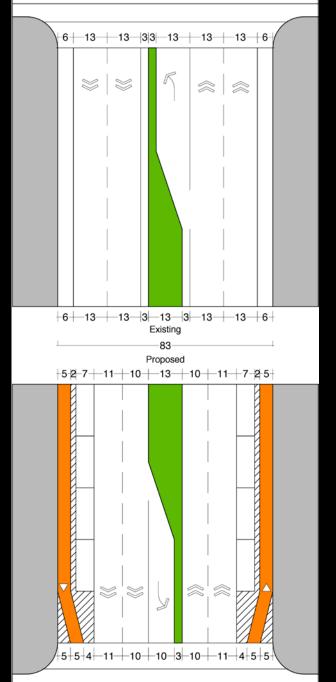




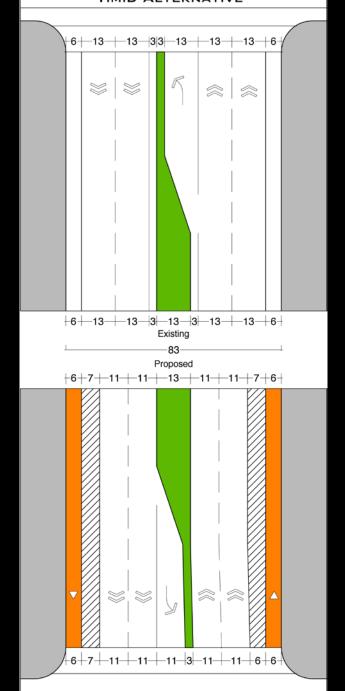
MLK



MLK DRIVE

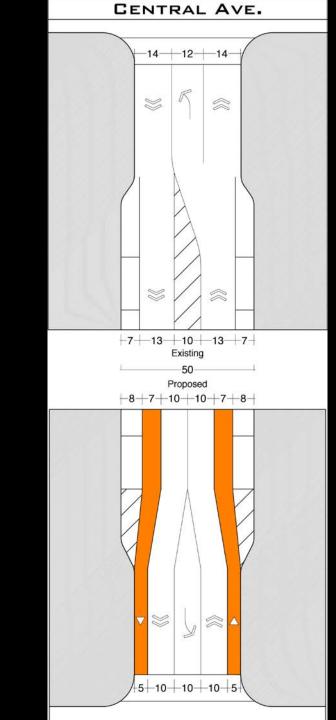


MLK DRIVE TIMID ALTERNATIVE



CENTRAL

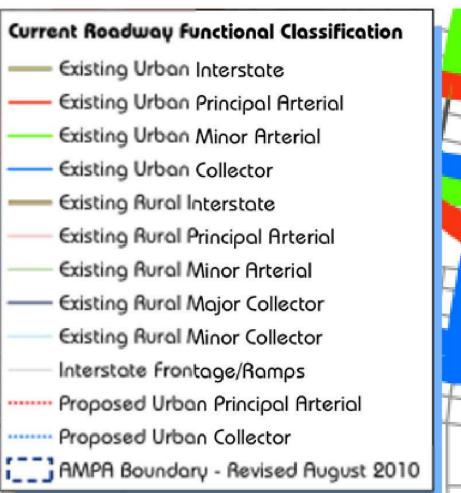




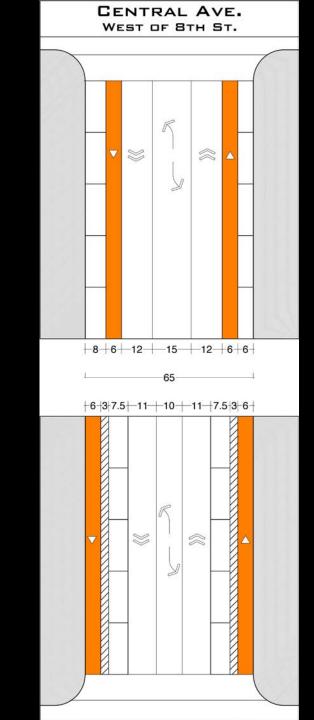
CENTRAL WEST OF 8TH



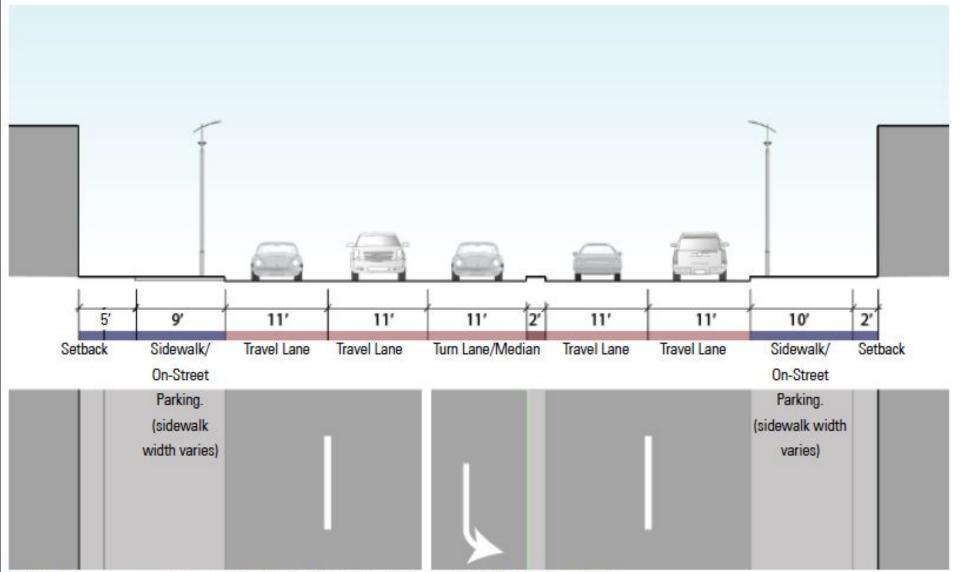




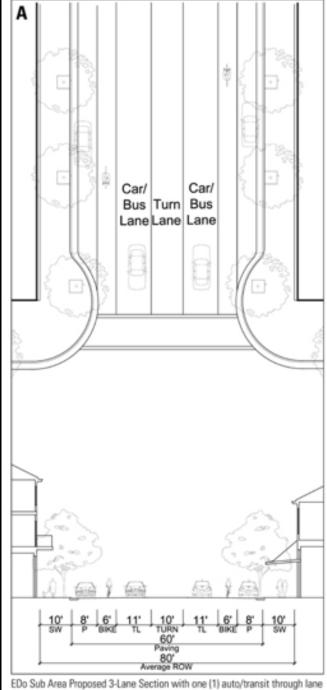




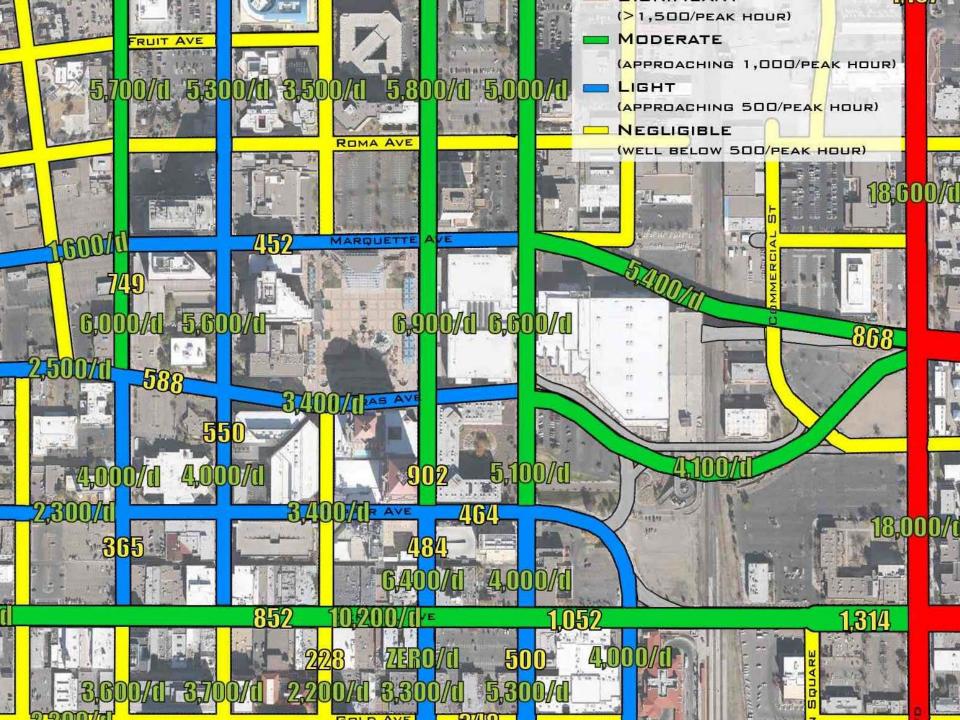
CENTRAL INEDO



EDo Sub Area representative cross section of Central Avenue showing typical conditions (looking West)

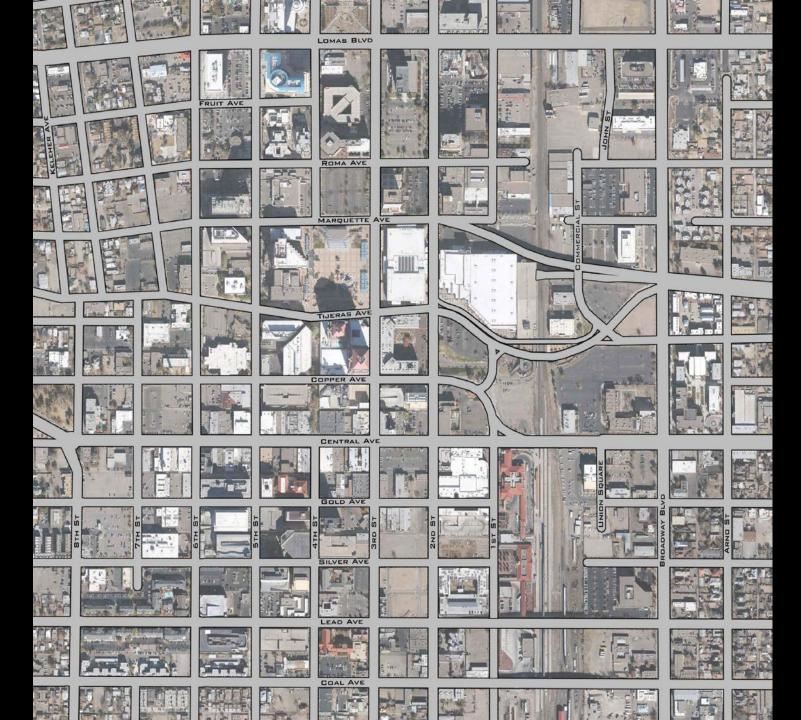


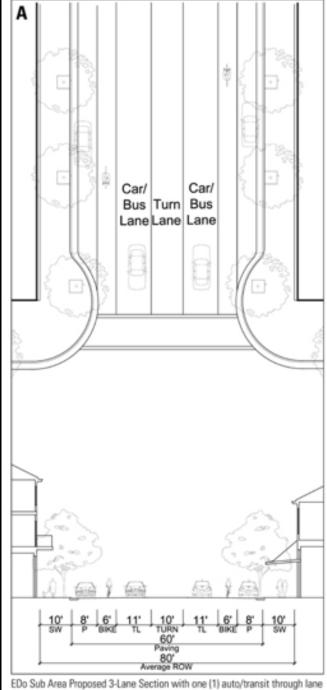
and bike lanes in each direction, with center turn lane



Successful Road Diets

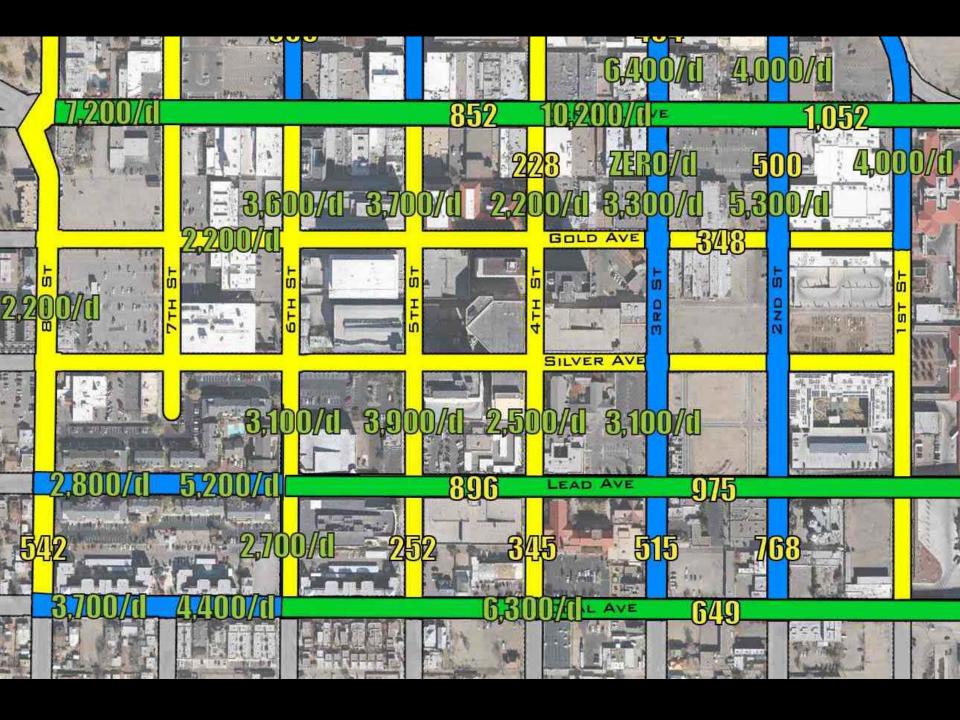
Location	Street	ADT Before	ADT After
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Duluth, MN	21st. Avenue East	17,000	17,000
Ramsey County, MN	Rice Street	18,700	16,400
Toronto, ON	St. George Street	15,000	15,000
Kirkland, WA	Lake Washington Boulevard	23,000	25,900
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San Francisco, CA	Valencia Street	22,200	20,000
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East Lansing, MI	West Grand River Avenue	18,000	18,000
East Lansing, MI	Abbott Road	15,000	21,000
Charlotte, NC	East Boulevard	21,400	18,400

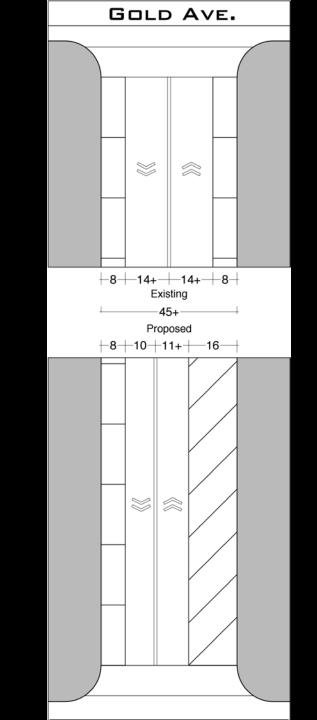




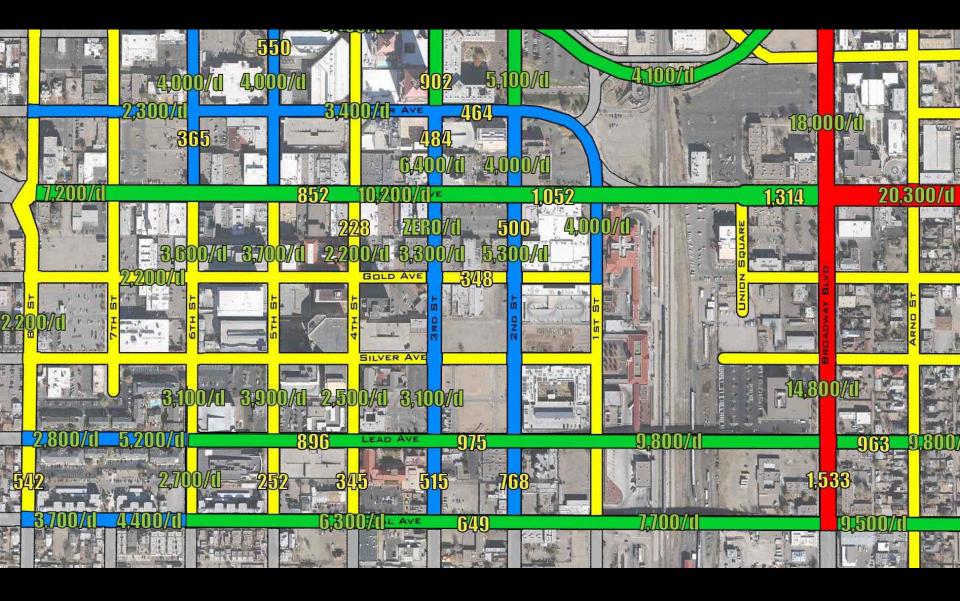
and bike lanes in each direction, with center turn lane

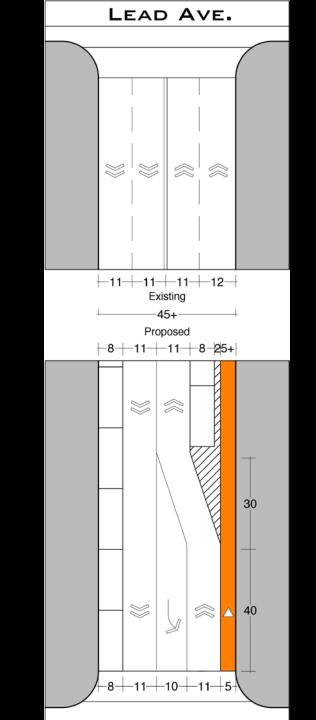
GOLD



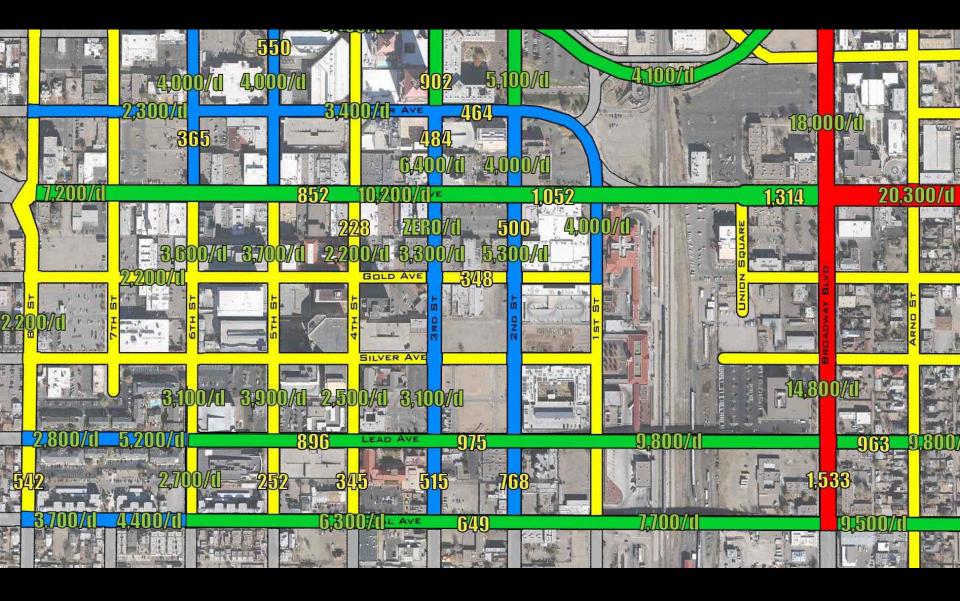


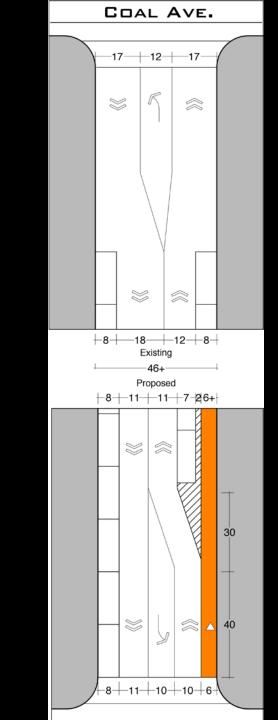
LEAD



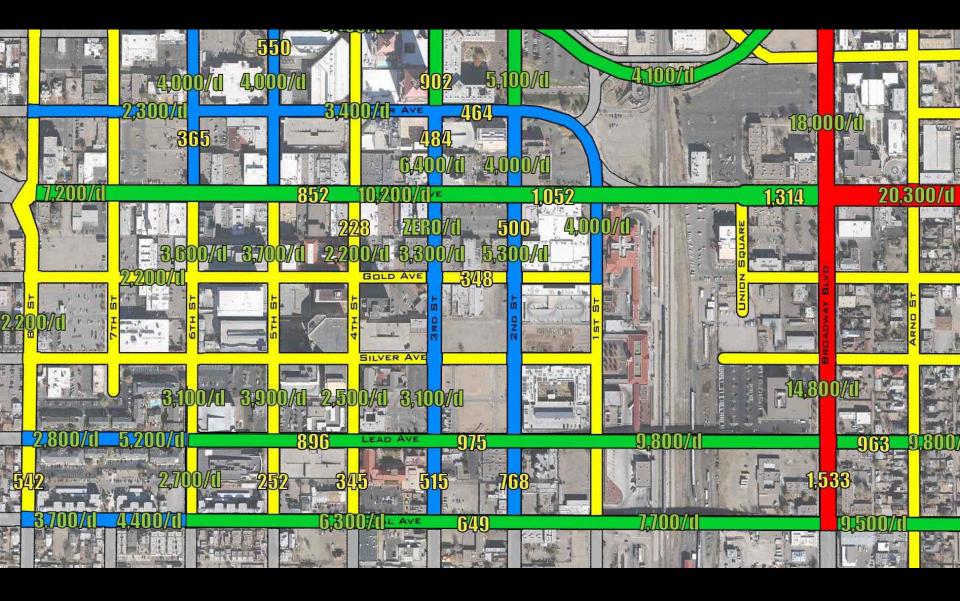


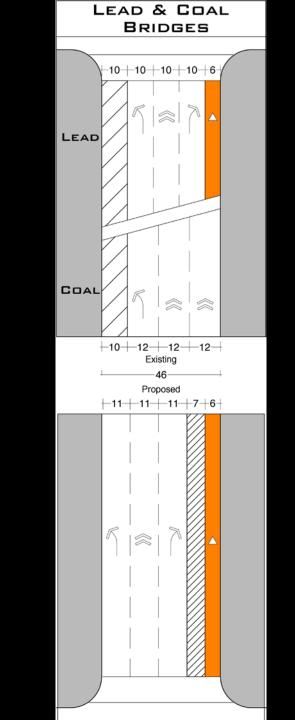
COAL



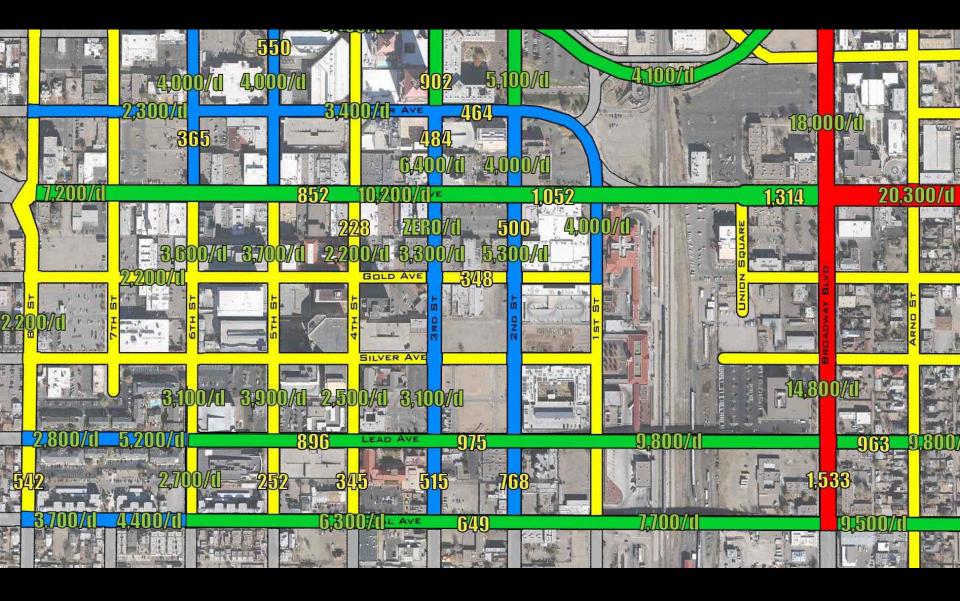


LEADAND COAL BRIDGES

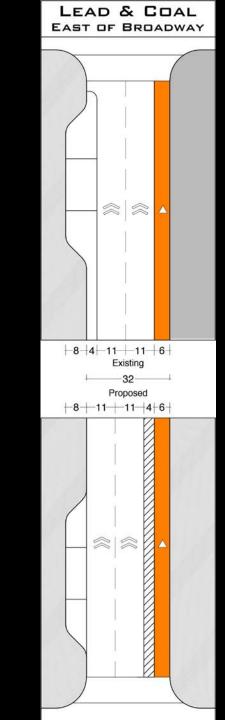


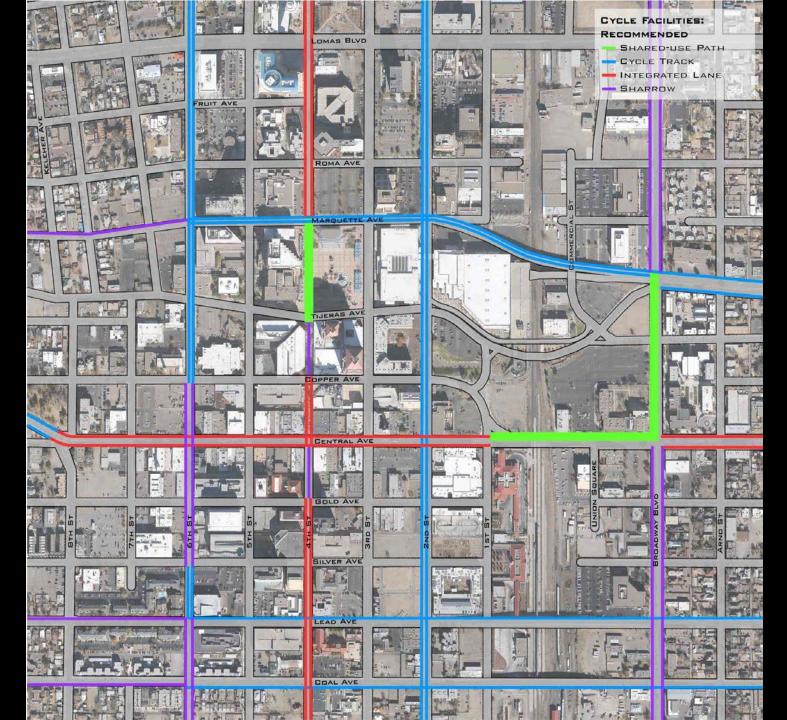


LEAD AND COAL EAST









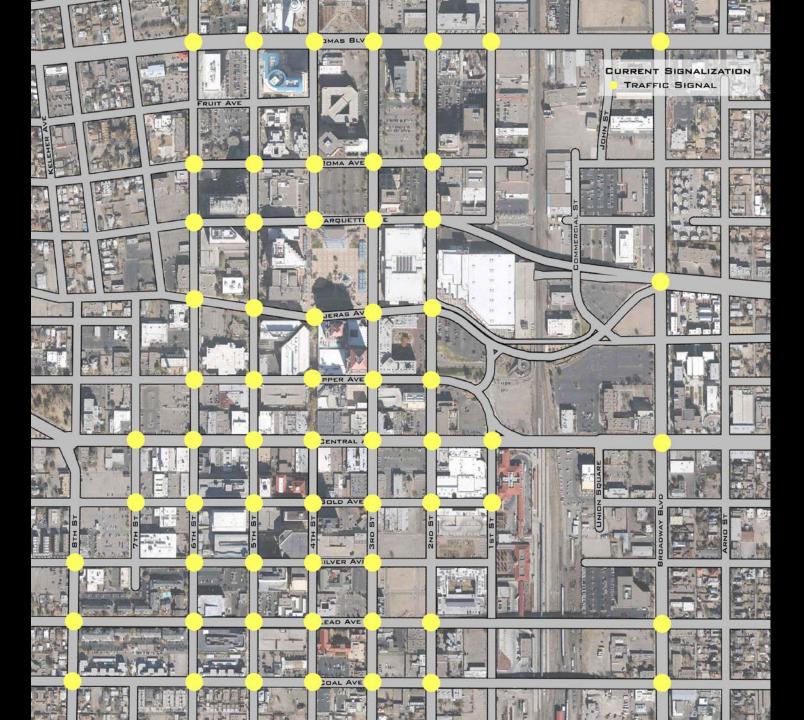
A SAFE WALK

- SAFETY FACTORS
- THE INFAMOUS DPM
- SUPPLY AND DEMAND
- CYCLING NETWORK
- ONE WAYS
- OTHER INDIVIDUAL STREETS
- SIGNALIZATION

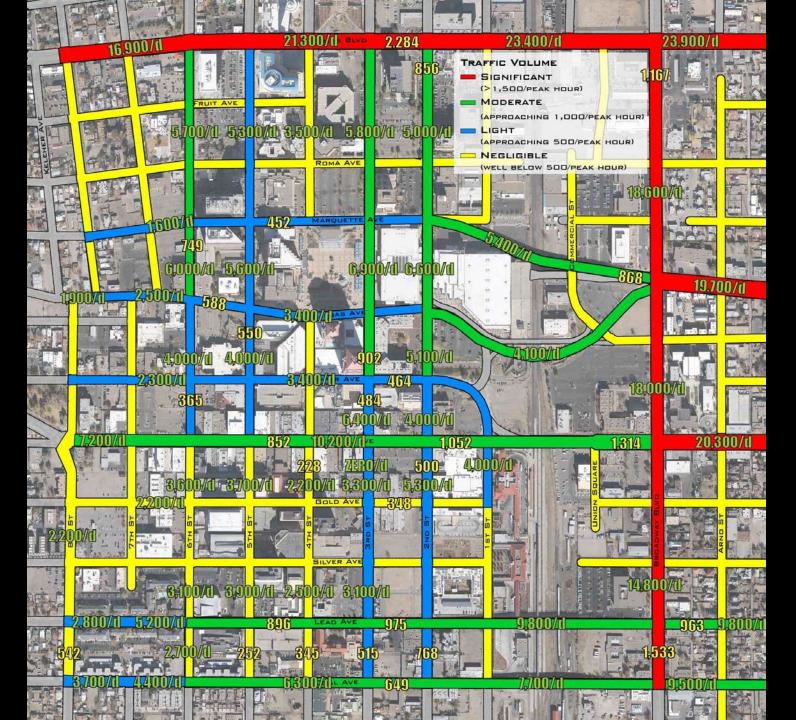


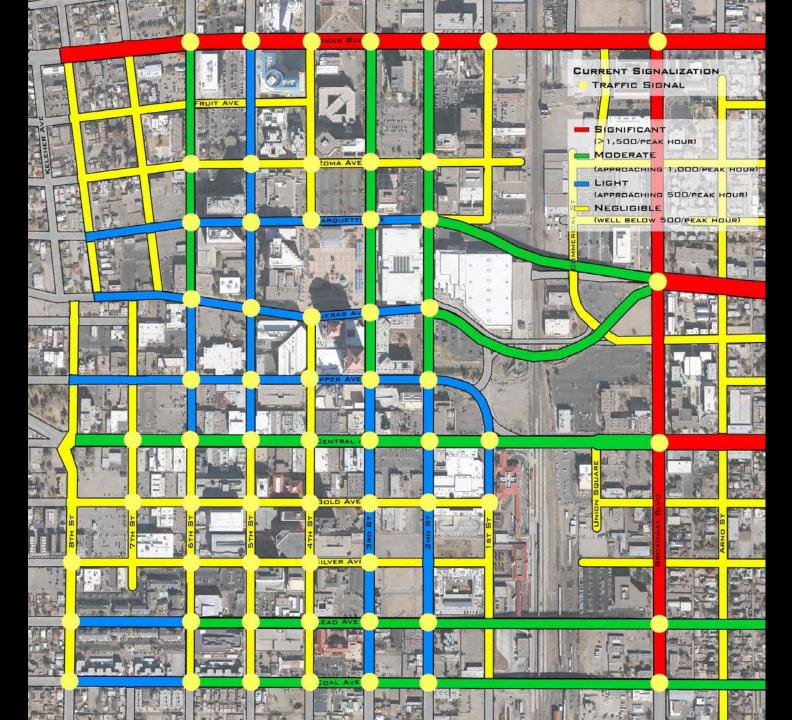
HOW TO EARN A WARRANT

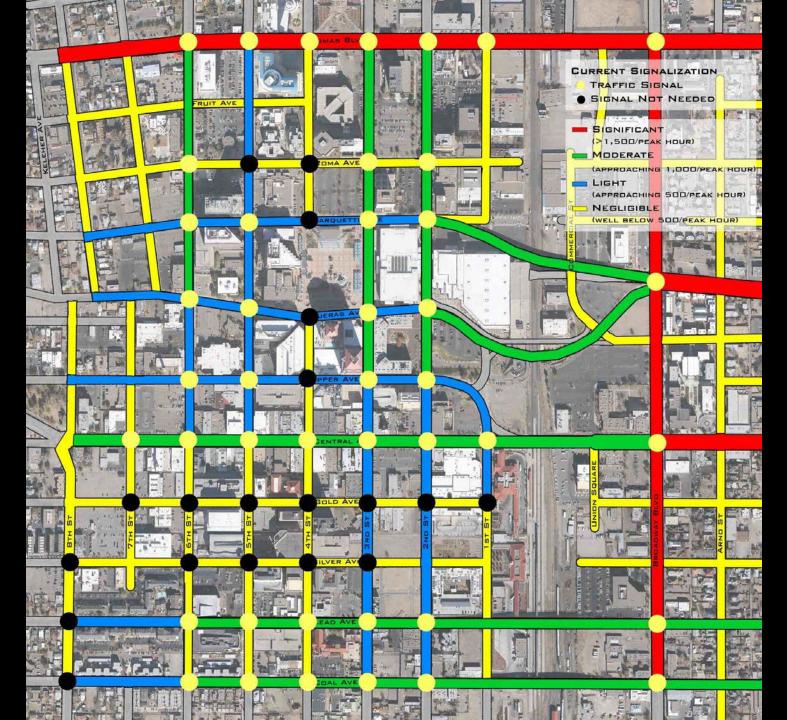
- 800 PEAK-HOUR TRIPS THROUGH INTERSECTION
- AT LEAST 150 OF THOSE FROM THE SIDE STREET

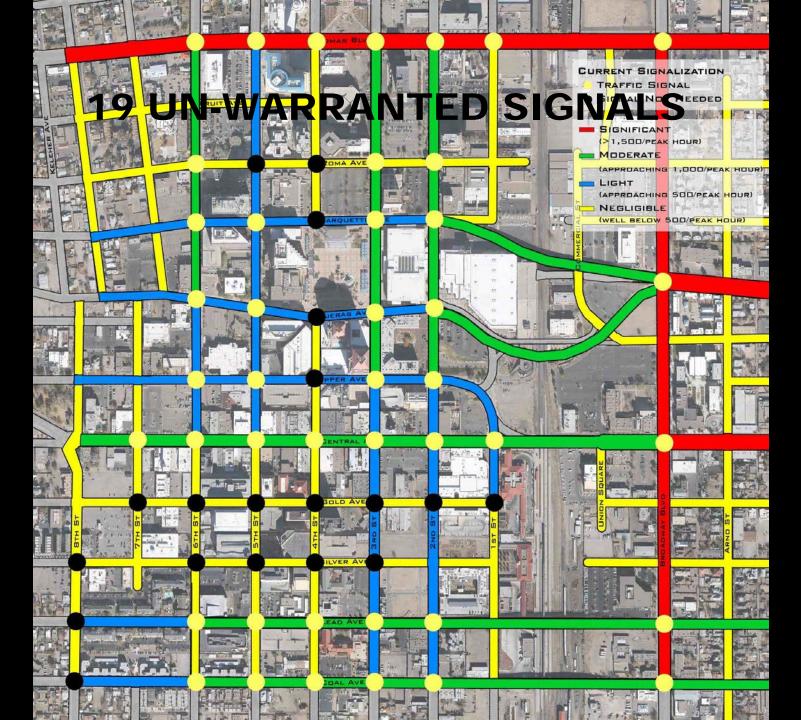










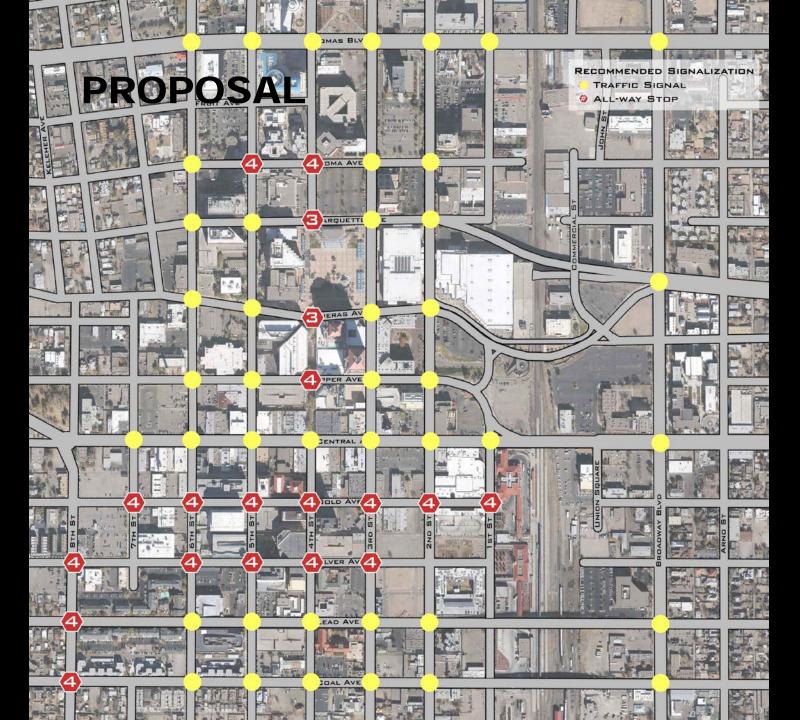


PERSAUD ET. AL. 1972

472 SIGNALS REMOVED
DATA COLLECTED ON 199
CRASHES REDUCED 24%
SEVERE INJURY CRASHES
REDUCED 63 %

SEVERE PED INJURY CRASHES REDUCED 68%



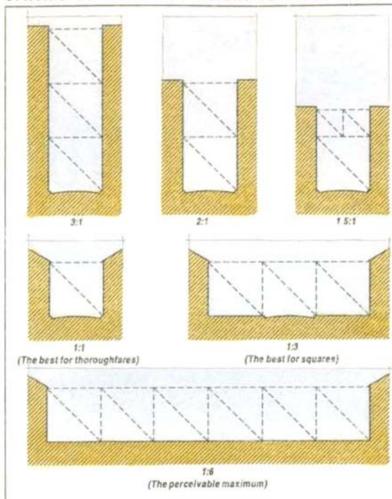


A COMFORTABLE AND INTERESTING WALK

- COMFORT AND INTEREST FACTORS
- TIGER GRANT PROPOSAL
- URBAN TRIAGE EXERCISE
- CIVIC PLAZA

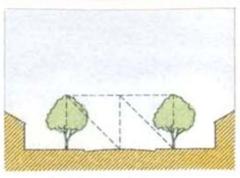


SPATIAL DEFINITION BY HEIGHT-TO-WIDTH RATIO

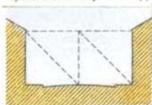


- . Spatial Definition: the labric achieved when enfronting facades are aligned in a coherent manner, and the defined space does not exceed a certain height-to-width ratio.
- . Height-to-Width Ratio: the proportion of spatial enclosure related to the physiology of the human eye. If the width of space is such that the cone of vision encompasses less street wall than open sky, the degree of spatial enclosure is slight. As a general rule, the tighter the ratio, the stronger the sense of place and, often, the higher the real estate value. Serr. Sense of Place

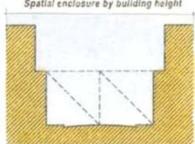
SPATIAL DEFINITION IN SECTION



Spatial enclosure by tree canopy



Spatial enclosure by building height



Spatial enclosure by recess line

- . Spatial Enclosure: the defining elements of a public space provided by facades with disciplined tree planting as an alternative. Trees aligned for spatial enclosure are necessary on thoroughfares that exceed the maximum height-to-width ratios.
- . Enclosure: a physical attribute of thoroughfares and open spaces, contributing to a sense of place. Enclosure of the public realm involves the delinition of the public space by frontages as a room is defined by its walls. Controlling the degree of enclosure is one of the principal variables in the creation of an urban-to-rural transect. Enclosure is adjusted through the selection of frontage types or by a build-to line specifying the minimum building frontage and the minimum building huight.







A COMFORTABLE AND INTERESTING WALK

- COMFORT AND INTEREST FACTORS
- TIGER GRANT PROPOSAL









PRECEDENT?



A COMFORTABLE AND INTERESTING WALK

- COMFORT AND INTEREST FACTORS
- TIGER GRANT PROPOSAL
- URBAN TRIAGE EXERCISE

HOW DO YOU GET PEOPLE TO WALK?

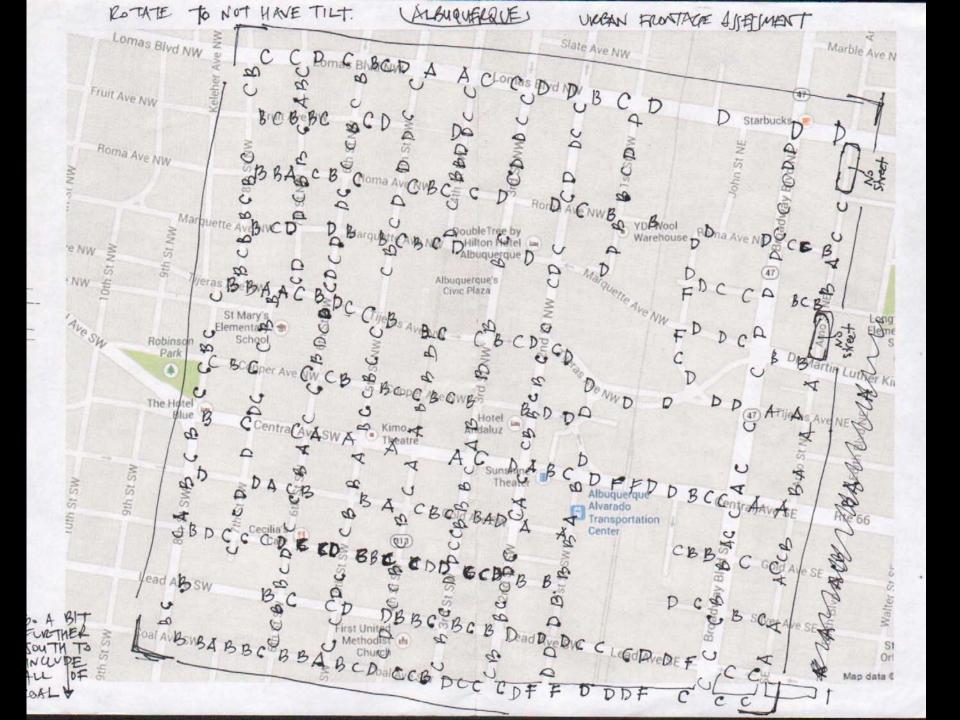
- A REASON TO WALK (BALANCE OF USES)
- A SAFE WALK (REALITY AND PERCEPTION)
- A COMFORTABLE WALK (SPACE AND ORIENTATION)
- AN INTERESTING WALK (SIGNS OF HUMANITY)

HOW DO WE DO ALL THOSE THINGS???

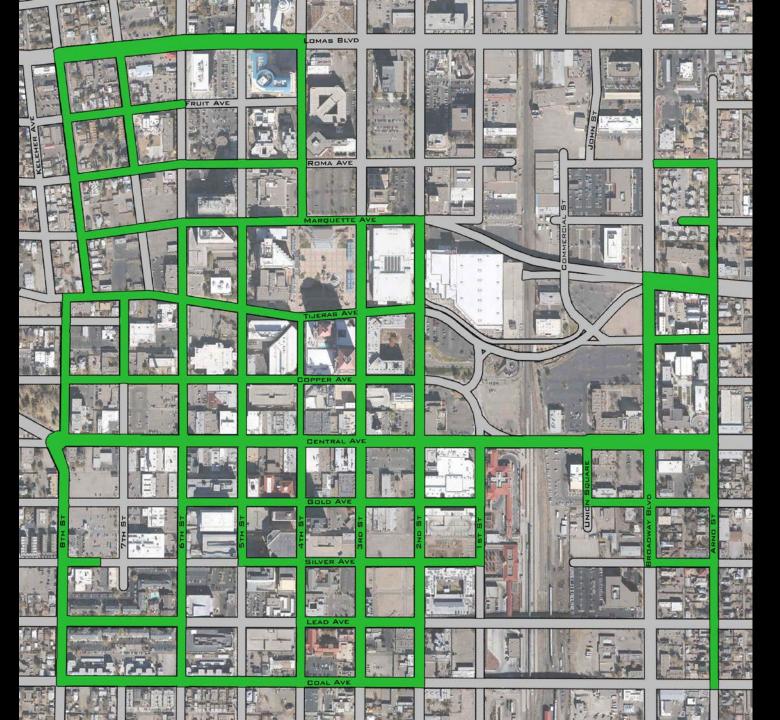
RAGE

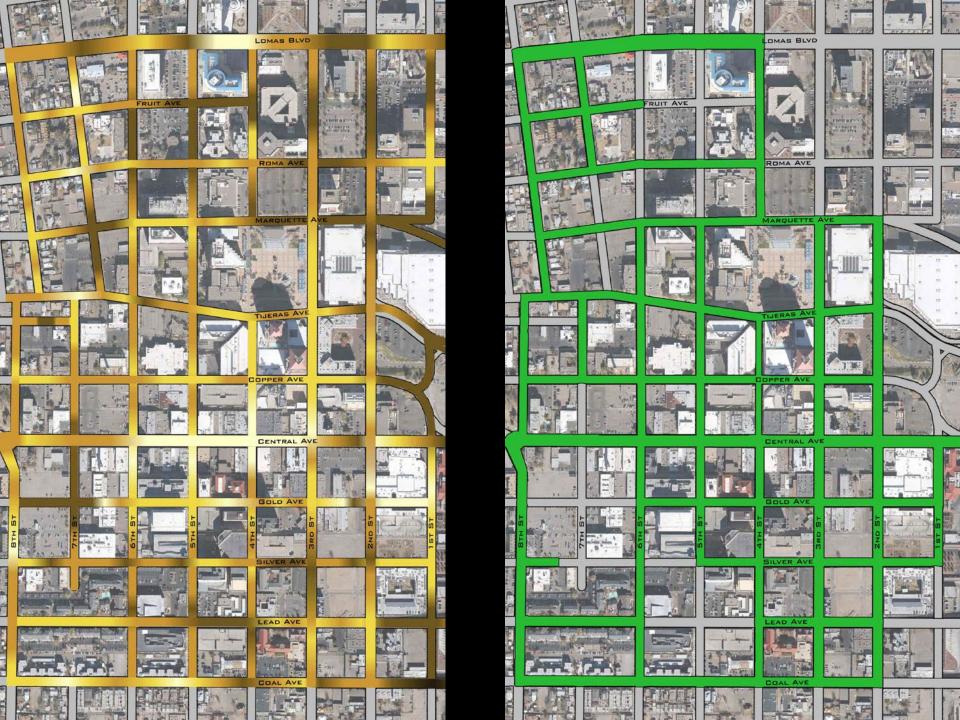
HOW DO YOU GET PEOPLE TO WALK?

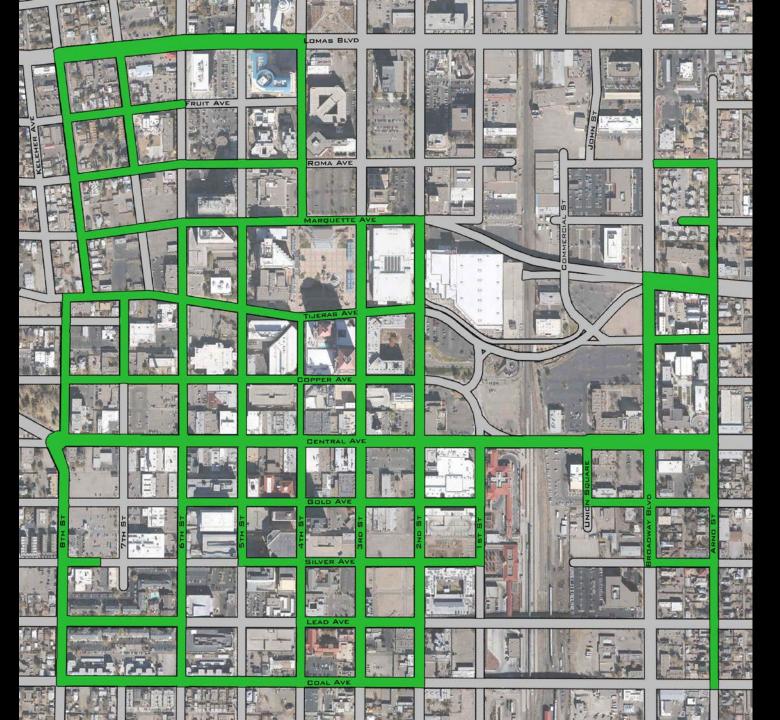
- A USEFUL WALK
- A SAFE WALK
- A COMFORTABLE WALK
- AN INTERESTING WALK

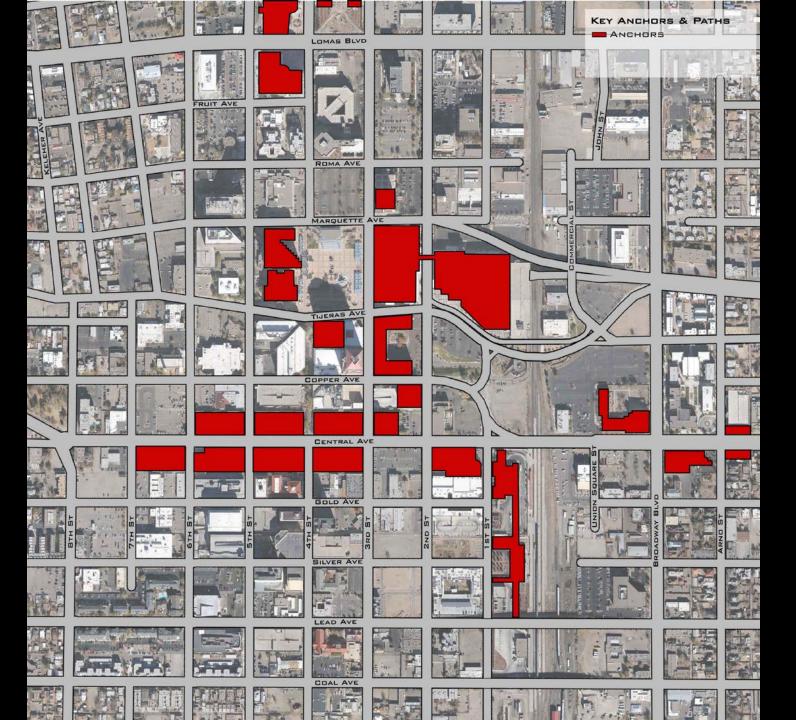


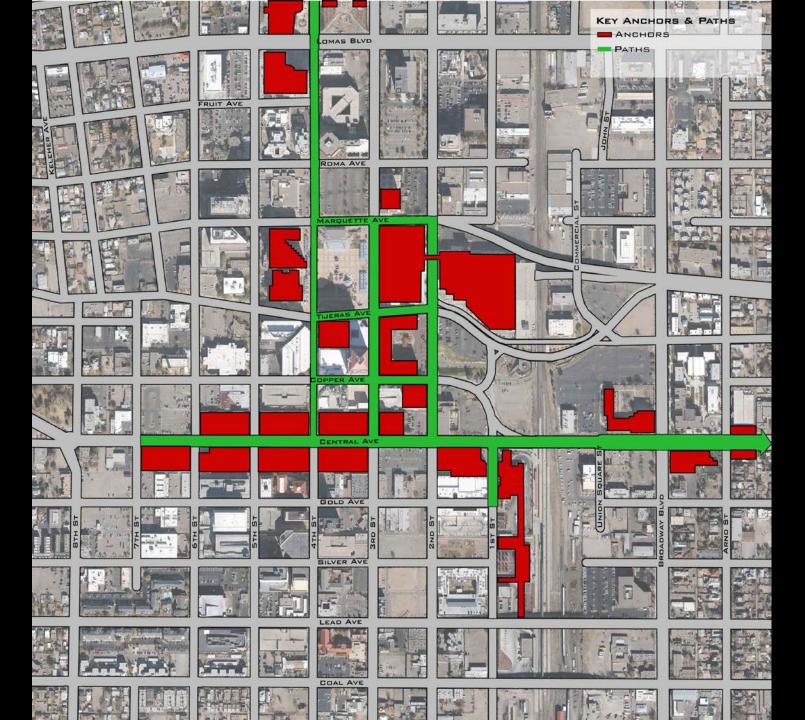


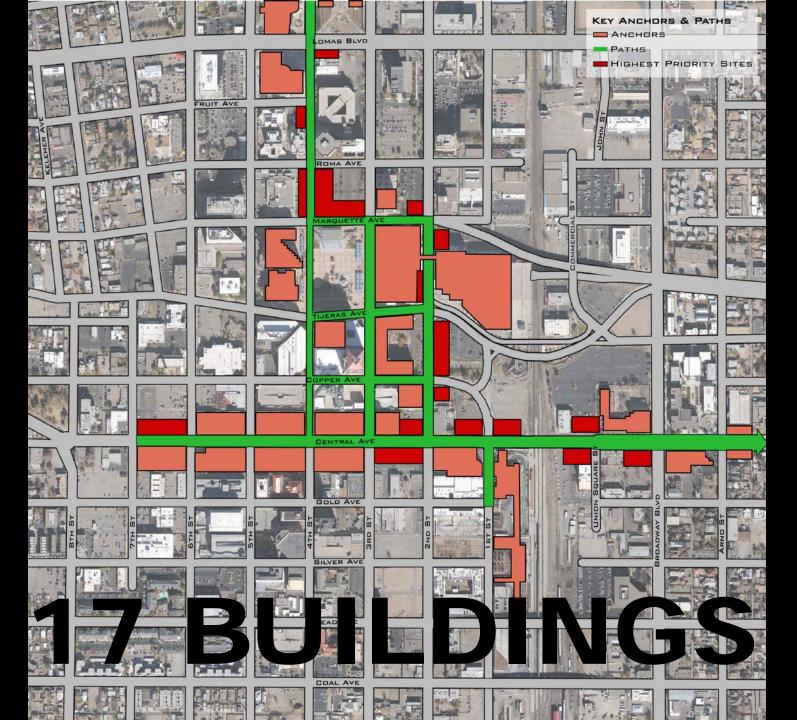
















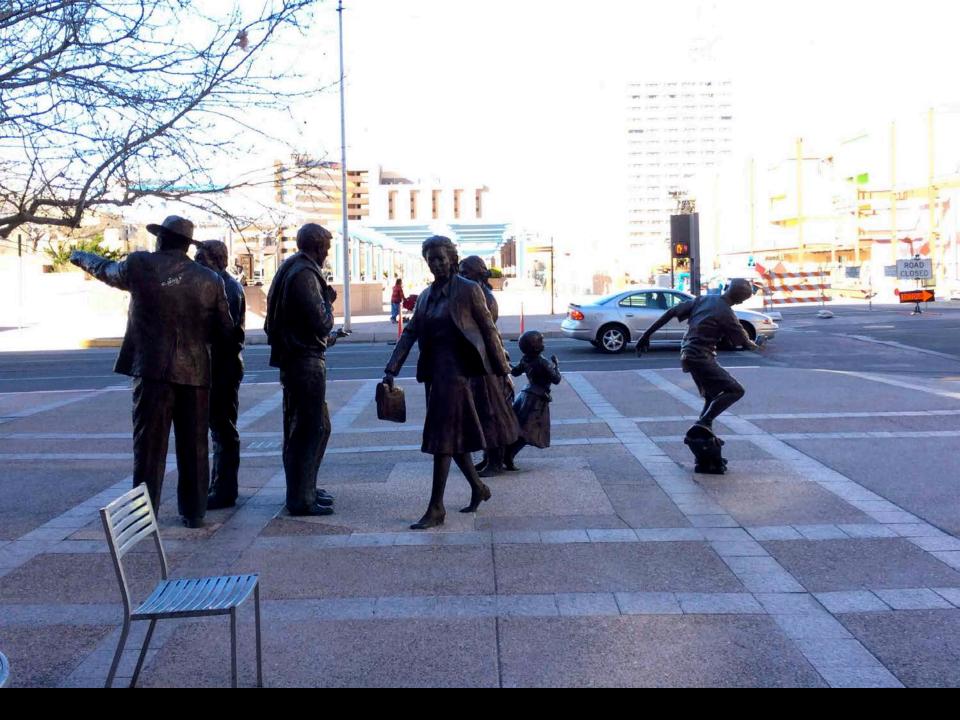


A COMFORTABLE AND INTERESTING WALK

- COMFORT AND INTEREST FACTORS
- TIGER GRANT PROPOSAL
- URBAN TRIAGE EXERCISE
- CIVIC PLAZA









CIVIC PLAZA FLAWS

-TOO BIG









CIVIC PLAZA FLAWS

- -TOO BIG
- -MOAT EDGES







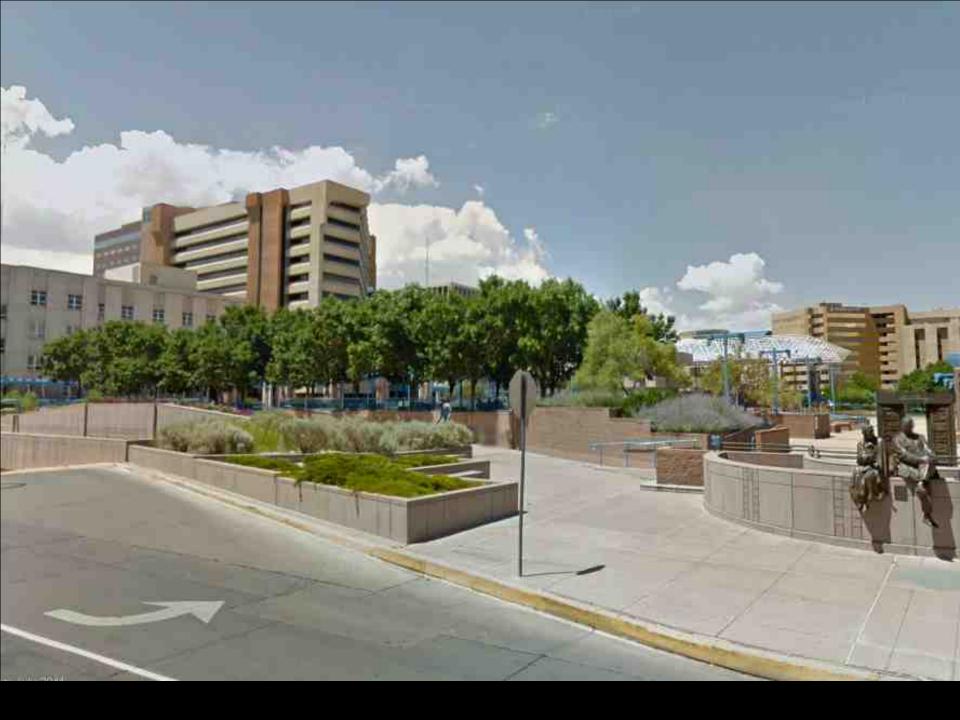
CIVIC PLAZA FLAWS

- -TOO BIG
- -MOAT EDGES
- -MISSING STREET



CIVIC PLAZA FLAWS

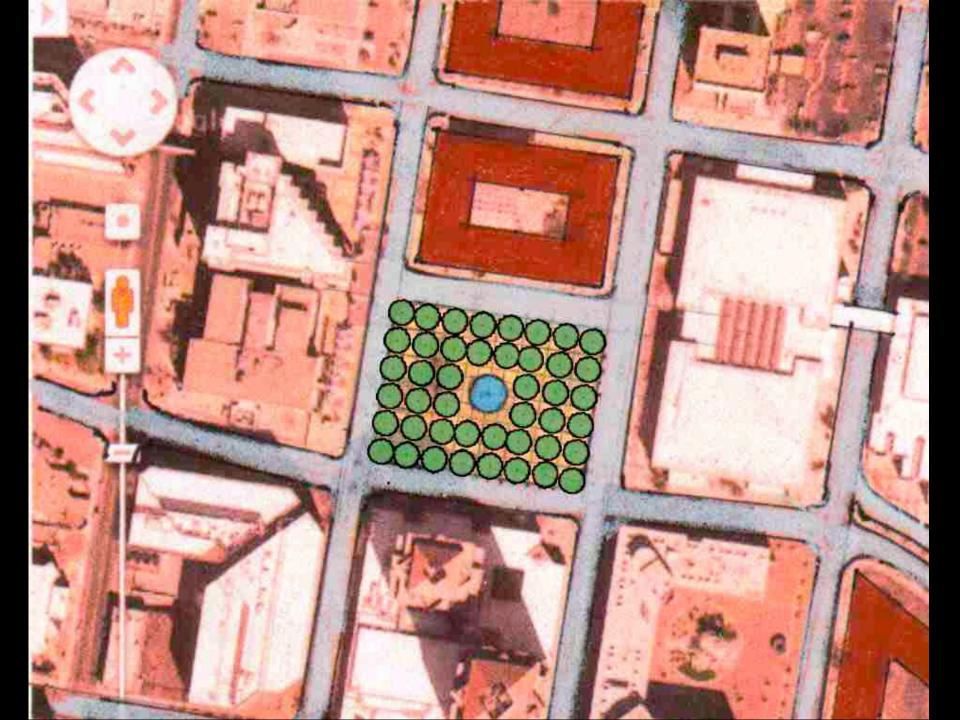
- -TOO BIG
- -MOAT EDGES
- -MISSING STREET
- -BAD VISIBILITY

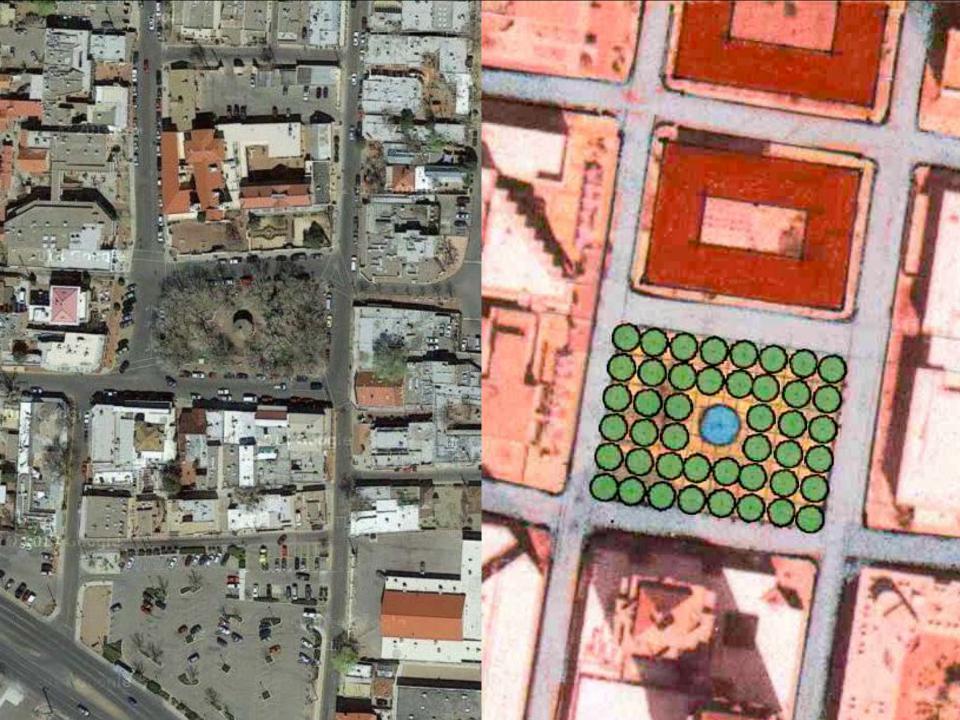


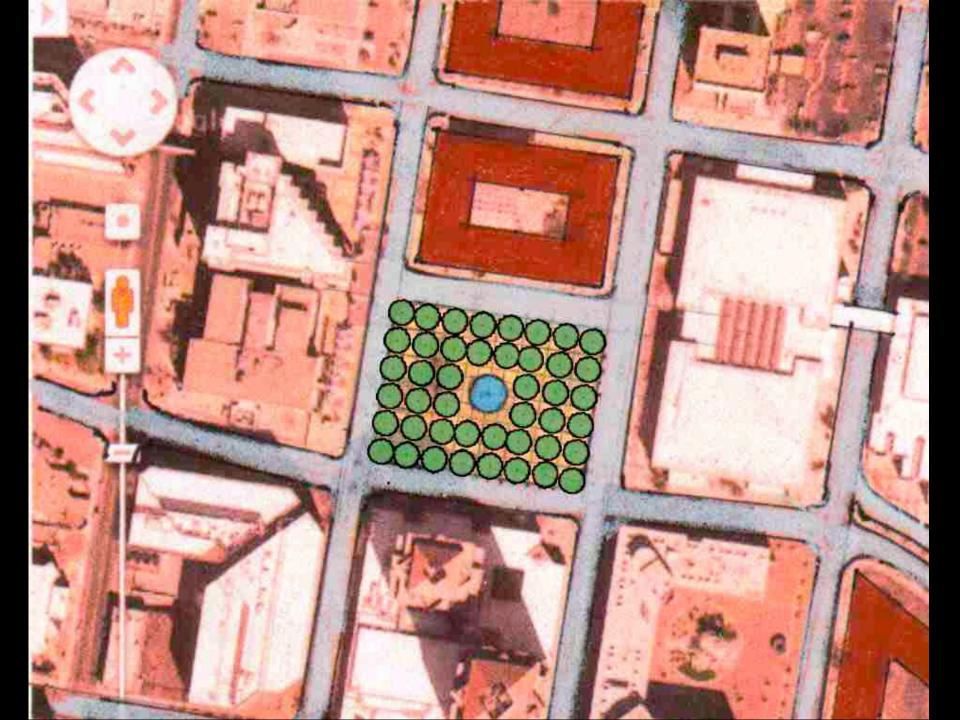
CIVIC PLAZA FLAWS

- -TOO BIG
- -MOAT EDGES
- -MISSING STREET
- -BAD VISIBILITY
- -UNFIXABLE









HOW DO YOU GET PEOPLE TO WALK?

- A SAFE WALK
- A COMFORTABLE / INTERESTING WALK
- A USEFUL WALK

- USEFULNESS FACTORS
- LEVERAGING GARAGES
- INNOVATE ABQ

One & Multil Multil Mixed

- One & Two Family Buildings
- MultiFamily Walkup Buildings
- MultiFamily Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
 - Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
 - All Others or No Data



WHAT IS MISSING OR UNDER-REPRESENTED?

- Office
- Retail
- Dining
- Entertainment
- Housing
- Schools
- Recreation
- Worship
- Parking

Census Tract 002100 in Bernalillo County, New Mexico

Basic Information

Population and Races

Income and Careers

Housing

Census Block Groups Map View. Full data. Click icon to show name.



Show More Locations on the Map

Census Blocks*

Census Block Groups*

Census Tracts*

Zip Codes

School Districts

Cities

Counties

Metro Areas

States

* Census Blocks, Census Block Groups, and Census Tracts are geo areas that are normally smaller than the size of a city. Census Blocks provide block and community level information. They are great for understanding areas within a city.

CENSUS TRACT 002100

- 645 HOUSING UNITS IN 313 ACRES
- PERHAPS 75% SUBSIDIZED
- RESIDENTIAL DENSITY: 2.06/ACRE



CENSUS TRACT 002100

- 645 HOUSING UNITS IN 313 ACRES
- PERHAPS 75% SUBSIDIZED
- RESIDENTIAL DENSITY: 2.06/ACRE
- 2.3M SF OFFICE
- JOBS/HOUSING BALANCE > 5:1
- BUT APPROX 30% OFFICE VACANCY
- & 1/3 OF OFFICE IS CLASS C

<u>SO:</u>

- CONVERT STRUGGLING OFFICE TO HOUSING
- USE EVERY INCENTIVE AVAILABLE
- FOCUS ON UNDERUTILIZED GARAGES

- USEFULNESS FACTORS
- LEVERAGING GARAGES

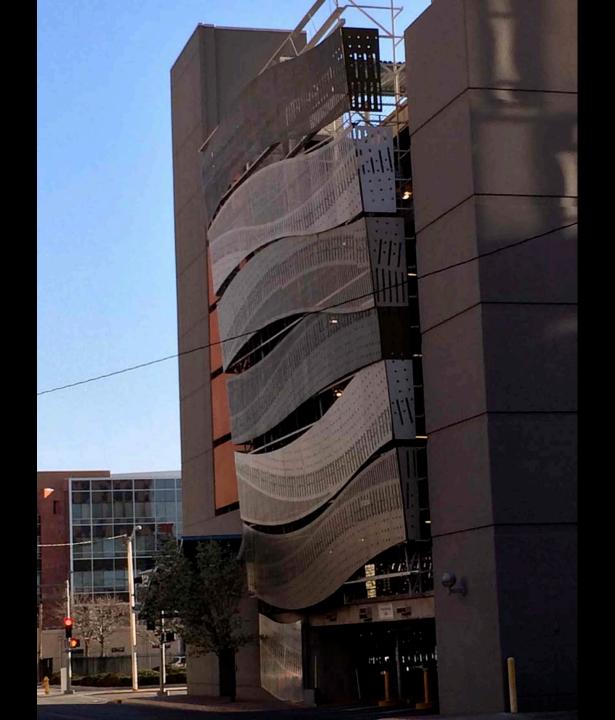
GARAGES LEVERAGE HOUSING



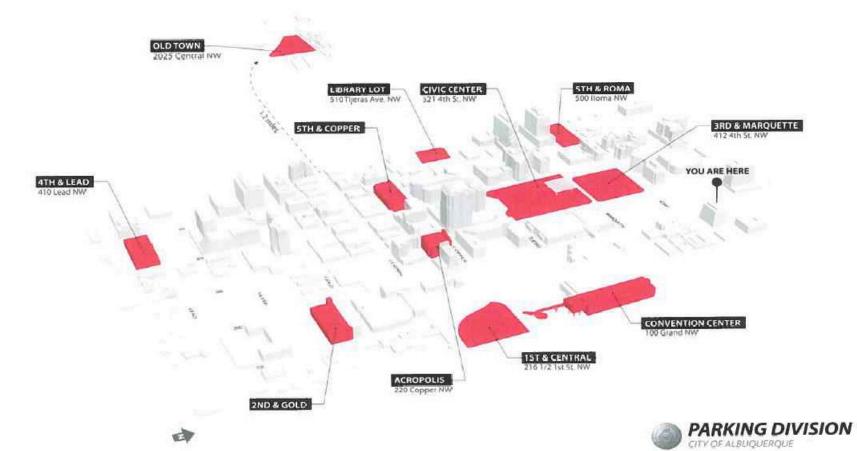




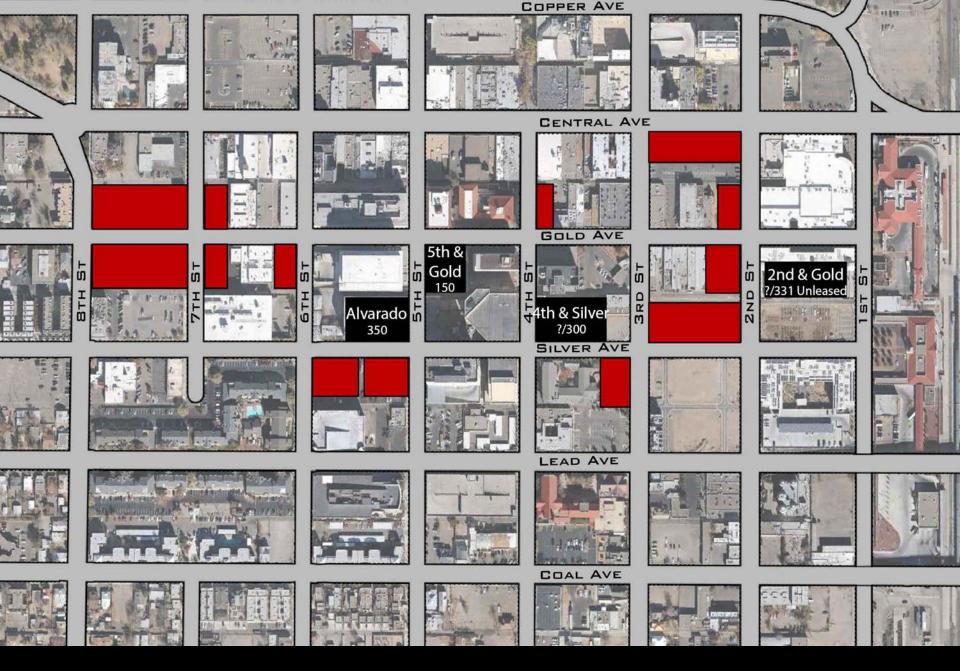




December	2013										
	ACROPOLIS 220 Copper NW	CIVIC CENTER 321 4th St. NW	CONVENTION 100 Grand NW	LIBRARY LOT 510 Tijeras Ave NW	OLD TOWN 2025 Central Ave,	15T & CENTRAL 216 1/2 1st St. NW	2ND & GOLD 2nd & Gold	3RD & MARQ 412 4th St. NW	4TH & LEAD 410 Lead NW	5TH & COPPER 5th & Copper	5TH & ROMA 500 Roma NW
TOTAL SPACES	364	903	693	47	140	130	635	212	545	560	68-25 IN/37 OUT
SPACES LEASED	280	632	396	46	17	43	304	223	511	574	62
SPACES AVAILABLE	84	-13	297	1	123	87	331	-11	34	-14	OIN/6 OUT







- USEFULNESS FACTORS
- LEVERAGING GARAGES
- INNOVATE ABQ

- USEFULNESS FACTORS
- LEVERAGING GARAGES
- REKNIT THE CITY





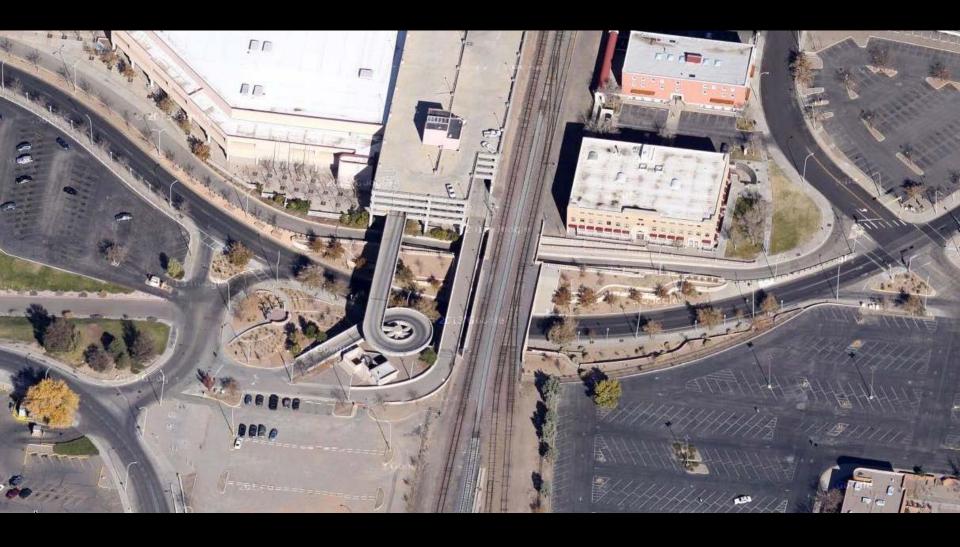














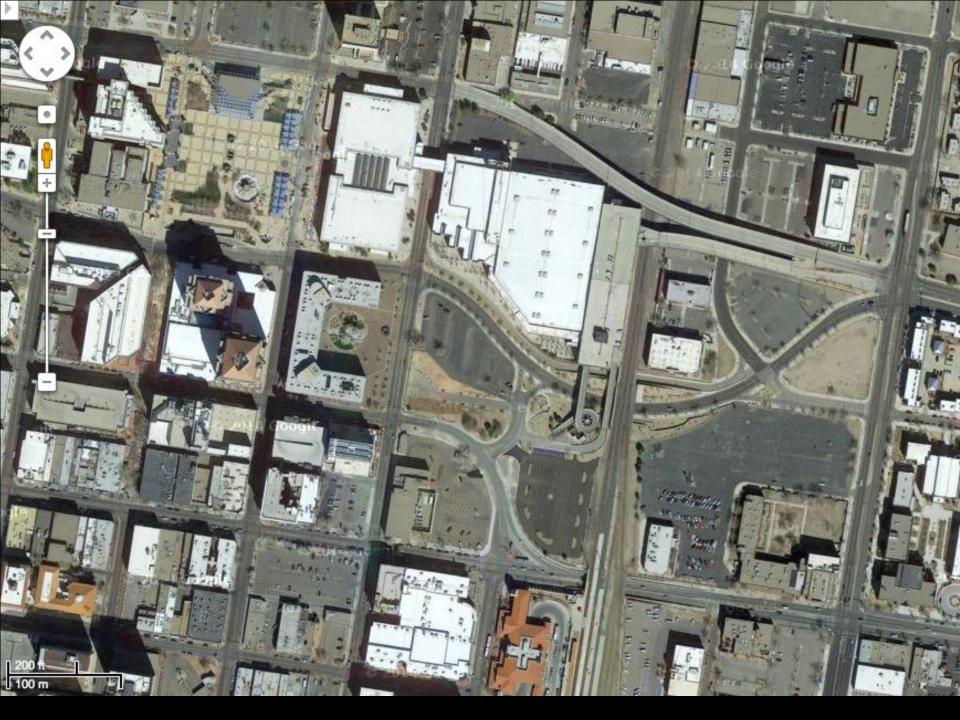




HOW DO YOU GET PEOPLE TO WALK?

- A SAFE WALK
- A COMFORTABLE / INTERESTING WALK
- A USEFUL WALK







AND ESPECIALLY:

ISAAC BENTON DIANE DOLAN ANDREW WEBB **DAVID DAY ROB DICKSON ROXANNE QUALLS** SUSAN DEISCHEL HOTEL ANDALUZ HOTEL PARQ CENTRAL

