APPENDIX A: AUDIT FOR INTEGRATED LAND USE & TRANSPORTATION PLAN

Rogue Valley
Metropolitan Planning Organization

Regional Transportation Planning

Ashland • Central Point • Eagle Point • Jacksonville • Medford • Phoenix •Talent • White City
Jackson County • Rogue Valley Transportation District • Oregon Department of Transportation

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DATE: June 14, 2005

TO: Jacksonville Planning Commission and City Council

FROM: Dick Converse and Vicki Guarino, Rogue Valley Council of Governments

SUBJECT: Final Report: Integrated Land Use and Transportation Plan

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Jacksonville is a member of the Rogue Valley Metropolitan Planning Organization (RVMPO), which has adopted measures to reduce reliance on the automobile. The state requires these measures when a metropolitan area is unable to demonstrate through its Regional Transportation Plan that per capita vehicle miles traveled will be reduced by at least five percent over the planning period (for the RVMPO the timeframe is 2000-2020).

Another requirement is that cities and counties within the metropolitan area prepare and adopt integrated land use and transportation plans (ILUTP). This ILUTP final report contains results of an audit of Jacksonville's land use regulations. It also contains recommendations to increase densities in residential and commercial areas.

Discussion

In February, the RVMPO staff made an initial presentation on the ILUTP to the city, including results of the ILUPT audit (checklists charts at the back of this report) and an audit of development from 2000-03. These audits showed that Jacksonville largely supports the aims of the ILUTP. There were questions from City Council members, however, about flexibility in adopting recommendations contained in this report. In a report issued last fall by the Department of Land Conservation and Development on the status of ILUTPs around the state, it was noted that the adoption of requirements for ILUTPs marked a shift from measuring results, such as a reduction in per capita vehicle miles traveled, to measuring efforts toward achieving the result.

The state requires that an ILUTP contain changes to land use designations, densities and design standards that:

- Increase residential densities along transit lines and near major employment and shopping areas;
- Increase allowed densities in office and retail developments in centers;
- Designate land for neighborhood shopping within convenient walking and cycling distance of residential areas;
- Designate land to provide a better balance of jobs and housing.

In February 2003, the Department of Land Conservation and Development conducted a workshop with the RVMPO Technical Advisory Committee (TAC) to present information about the Transportation Planning Rule (TPR) requirements for and benefits of integrated land use and transportation planning. At that time, the TAC recommended that RVCOG staff assist communities in conducting assessments to determine what each RVMPO jurisdiction needs to do to comply with the TPR requirements.

The purpose of the ILUTP project is to audit existing plans, policies, and ordinances with the specific intent of identifying opportunities and constraints to integrate land use and transportation planning consistent with the TPR. The audits provide each jurisdiction with a planning direction to enable land use choices and transportation opportunities that work together to reduce VMT per capita.

Other Measures

In addition to the ILUTP, the RVMPO is working to meet the requirements of seven Alternative Measures. These measures, which the Land Conservation and Development Commission approved December 13, 2001, are to be followed within the RVMPO in place of the Vehicle Miles Traveled (VMT) reduction standard contained in the state Transportation Planning Rule.

Several Alternative Measures relate to land use and, therefore, are closely linked with the ILUTP. In particular, two measures set benchmarks for the percentage of new dwelling units and employment growth that must occur within compact, mixed-use, pedestrian- and transit-friendly neighborhoods. By 2005, this kind of development must account for 9 percent of development in the RVMPO. Jacksonville has exceeded both the residential and employment benchmarks so far, with 21 percent of homes and all of the business growth (100 percent) meeting the standards. The requirements will grow more demanding in the years to come, however, necessitating ILUTP provisions. By 2020, nearly half of all development occurring since 2000 will have to meet the benchmarks.

Other RVMPO Alternative Measures set benchmarks for bicycle lanes, sidewalks, and houses near transit lines. This ILUTP project addresses all of these standards and offers RVMPO member cities suggestions for zoning ordinance changes that can help the region meet state requirements

ALTERNATIVE MEASURES

Measure	*How Measured*	*Current 2000*	*Benchmark 2005*	*Benchmark 2010*	*Benchmark 2015*	*Target 2020*
Measure 1: Transit and bicycle/pedestrian mode share	The percent of total daily trips taken by transit and the combination of bicycle and walking (non-motorized) modes. Determined from best available data (e.g., model output and/or transportation survey data).	*% daily trips* transit: 1.0 bike/ped: 8.2	*% daily trips* transit: 1.2 bike/ped: 8.4	*% daily trips* transit: 1.6 bike/ped: 8.8	*% daily trips* transit: 2.2 bike/ped: 9.8	*% daily trips* transit: 3.0 bike/ped: 11
Measure 2: % Dwelling Units (DU's) w/in ¼ mile walk of 30-minute transit service	Determined through GIS mapping. Current estimates are that 12% of DU's are within ¼ mile walking distance of RVTD transit routes.	*12%*	*20%*	*30%*	*40%*	*50%*

Measure 3: % Collectors and arterials w/ bicycle facilities	Determined through GIS mapping. Current estimates are that 21% of collectors and arterials in the MPO have provisions for bicyclists.	*21%*	*28%*	*37%*	*48%*	*60%*
Measure 4: % Collectors and arterials in TOD areas w/ sidewalks	Determined through GIS mapping. Current estimates are that 46% of collectors and arterials in TOD areas have sidewalks.	*47%*	*50%*	*56%*	*64%*	*75%*
Measure 5: % Mixed-use DUs in new development	Determined by tracking building permits - the ratio between new DUs in TODs and total new DUs in the region.	*0%*	*9%*	*26%*	*41%*	*49%*
Measure 6: % Mixed-use employment in new development	Estimated from annual employment files from State - represents the ratio of new employment in TODs over total regional employment.	*0%*	*9%*	*23%*	*36%*	*44%*
Measure 7: Alternative Transportation Funding	Funding committed to transit or bicycle/pedestrian/TOD projects. Amounts shown represent ½ of the MPO's estimated accumulation of discretionary funding (STP*).	*N/A*	*$950,000*	*$2.5 Million*	*$4.3 Million*	*$6.4 Million*

Jacksonville ILUTP

This ILUTP notes several strengths of Jacksonville's current land use regulations as they relate to supporting the transportation system. It also suggests some revisions or changes that could be made to some zones, and applied in some areas of the city.

In addition, this report contains the audit of exiting land use regulations to gauge the extent to which city measures support transportation efficiencies. The audit was developed as a checklist by RVCOG staff based on Oregon's *Model Development Code & User's Guide for Small Cities.* The checklist identifies features that support conditions under which motor vehicle use may be reduced. City zones reviewed are grouped by category: residential, commercial and industrial. The audit also examined city design standards that relate to transportation. The audit distinguishes whether a feature is permitted outright in a particular zone (P), or is allowed conditionally (C). Jacksonville audit results are attached at the end of this memo.

Strengths

Historically, Jacksonville has supported innovative designs that have led to compact, pedestrian and transit-friendly, mixed-use development. These efforts include the pedestrian network that links important city destinations, and the Nunan Square development.

Other city regulations that support an efficient transportation system include:

- Opportunities for mixed-use development, including industrial-residential mix in the Cottage Industry zone
- Flaglots to achieve infill
- Commercial zones permit mixed-use residential
- Sidewalks are required to connect with existing sidewalks, even beyond project boundary.
- Industrial and commercial zones provide buffers from incompatible uses
- Street access issues

  Access consolidation recommended in residential and commercial zones

Shared driveways recommended in residential and commercial zones
400-foot maximum block length
Traffic calming provided in land division regulations

- Pedestrian access
  Required to connect with adjacent lots
  The Core Enhancement goal is to enhance the pedestrian environment
- Landscaping required in land division regulations
  Street trees
  Landscape conservation
  Landscape buffers
- Parking
  Shared parking permitted
  Bicycle parking required
  In Core Enhancement area, parking must be to the side or rear of buildings
- Nunan Square is recognized statewide as an example of Smart Development.

Recommendations: Achieving the benchmarks adopted for the MPO will require concerted effort on the part of all member jurisdictions. The Model Code and Development Guide for Small Cities suggests several measures that Jacksonville has not yet incorporated into its regulations:

- Establish maximum lot sizes. While most zoning ordinances include minimum parcel sizes, they do not have maximum parcel sizes. The model code recommends that single-family zones have a maximum size of 120 percent of the minimum size; e.g., 7,200 square feet in an SF-6 zone. In multi-family zones, the recommendation is 150 percent of the minimum.
- The alternative measures recommend increasing the amount of residential land having densities at a minimum of ten units per acre. Currently, only the MF zone provides for this density in Jacksonville. Medford, for example, has an SFR-10 district that permits 10 dwelling units per gross area, and Central Point's TOD district permits densities of at least 10 dwelling units per acre in its mixed residential zones. Nunan Square comes close, but doesn't entirely achieve the 10 dwelling units per acre goal.
- Increase lot coverage [and building height?] where transportation facilities and public safety measures can be achieved. Current coverage requirements for single-family and multi-family districts are in the middle of the ranges suggested by the Model Development Code. For example, the SF zone limits coverage to 35 percent, while the model code suggests a range from 30-40 percent. The MF zone limits coverage to 50 percent, while the model code suggests 40-60 percent. Jacksonville could increase its coverage, but it is clearly consistent with current standards.
- Consider requiring a portion of a commercial building to be at the property line, with entrances oriented to street to encourage pedestrian use. The North 5th Street planning area has at least two examples of this.
- Provide measures for evaluating proximity of transit to commercial uses in other than the North Fifth Street planning area.
- As in many communities, Jacksonville's street design standards call for wider streets than the Model Code recommends. To be consistent with the goal of providing narrower streets, evaluate the standards in the Model Code when updating the Transportation System Plan.
- Consider permitting density transfers to preserve valuable characteristics (woodland, open space) while maintaining higher density overall.

Proposed Zoning Ordinance Revisions:
Because of Jacksonville's traditional downtown development pattern, coupled with its Smart Development principles embodied in such areas as Nunan Square, there are few specific suggestions for changes. General proposals are in the previous discussion, including the need to evaluate street, sidewalk, and bike lane widths.

If the City decided to include maximum lot sizes to ensure that zones achieve their desired residential densities, new sections could be added as follows:

CHAPTER 17.20 SINGLE-FAMILY RESIDENTIAL (SF) DISTRICT
17.20.055 Maximum Lot area
Maximum lot areas in the SF zone shall be as follows:

Zone	Maximum Lot Size Square Feet
SF-6	7,200
SF-8	9,600
SF-10	12,000
SF-12	14,400

CHAPTER 17.24 MULTIPLE-FAMILY RESIDENTIAL (MF) DISTRICT
17.24.045 Maximum Lot Area
Maximum lot area shall be 7,500 feet for two family dwellings; for each additional dwelling unit, the lot area shall be increased by 3,600 feet.

Residential Zones	*city:* **Jacksonville**	*date:* **October 2004**

	FEATURE	ZONE BR*		ZONE HR*		ZONE SF*		ZONE MF*		ZONE PUD*		ZONE B-PUD*	
		P*	CU*	P	CU	P	CU	P	CU	P	CU	P	CU
1	Zero lot line			--	--			--	--				
2	Accessory dwelling	X		X		X							
3	Attached townhome	X		X		X						X	
4	Two-, three-family homes	X		X		X						X	
5	Multi-family	--	--	--	--	--	--					X	
6	Care home (<15 adults)		X		X		X		X				
7	Family daycare		X		X		X		X				
8	Home occupations *1		X		X		X		X				
9	Public/institutional		X		X		X	X					
10	Churches		X		X		X	X		X		X	
11	Clubs, lodges		X		X	--	--	X		X		X	
12	Govt. facilities		X		X		X	X		X		X	
13	Library, museum, com. cntr		X		X		X	X		X		X	
14	Parks, rec. facilities		X		X		X	X		X		X	
15	Schools		X		X		X	X		X		X	
16	Child Care (12+)	--	--	--	--	--	--	--	--				
17	Food service (non-auto)	--	--	--	--	--	--	*2					
18	Laundry	--	--	--	--	--	--	*2					
19	Lt. Manufacturing	--	--	--	--	--	--	--	--				
20	Retail goods/services	--	--	--	--	--	--	--	--				
21	Medical office/lab	--	--	--	--	--	--	--	--				
22	Personal Service (barber/etc.)	--	--	--	--	--	--	*2					
23	Professional office	--	--	--	--	--	--	--	--				
24	Repair services	--	--	--	--	--	--	--	--				
25	Mixed use	--	--	--	--	--	--	--	--	X		X	
26	B&B Inn		X		X		X	X					
27	Maximum lot size	No		No		No		No		No		No	
28	Density <0.1 ac max	No		No		No *3		Yes		Yes		Yes	
29	Encourage infill	Yes		Yes		Yes		Yes		Yes		Yes	
30	a. Flag lots	Yes		Yes		Yes		Yes					
31	b. ***Mixed Use/density/design***									Yes		Yes	
32	Max. lot coverage (enter %)	35%		35%		40%		50%					
33	Building height (enter feet)	35'		35'		35'		35'					
34	Proximity to transit	--		--		--		Yes					
35													
36													
37													
38													
39													
40													
41													
42													

Commercial Zones	*city:* Jacksonville	*date:* October 2004

	FEATURE	ZONE		OVERLAY ZONES						ZONE		ZONE	
		Gen. Com *4		Core Enhance		Historical Core		Special Protection					
		P	CU	P	CU	P	CU	P	CU	P	CU	P	CU
1	Accessory dwellings	X				X							
2	Mixed use residential	X				X							
3	Single-fam. attached townhse	X				X							
4	Two- & three-family housing	X				X							
5	Multi-family housing	X				X							
6	Care home/facility	X				X							
7	Day care (<12 children)	X											
8	Home occupations	X											
9	B&B Inns, vacation rental	X											
10	Churches/temples	X							X				
11	Clubs, lodges	X		X					X				
12	Gov't offices	X		X					X				
13	Library, museum, com. cntr.	X		X									
14	Public parking	X		X									
15	Parks/recreation facilities	X		X									
16	Schools	X				X			X				
17	Auto-oriented	X											
18	Entertainment	X											
19	Hotel/motel	X											
20	Medical office/lab	X				X							
21	Office	X				X							
22	Professional services	X				X							
23	Repair services (fully enclsd)	X											
24	Retail/service (non-auto)	X				X			X				
25	Lt. Ind. only with retail	X											
26	Setbacks							*6					
27	a. No min. setback (y/n)	Yes				Yes		No					
28	b. Max. distance (#ft.)	No				No		No					
29	Floor area ratio	--											
30	a. Min. ratio (y/n)	No				No		No					
31	b. Floor/lot ratio (%)	No				50%		40%					
32	Street entrance (y/n)	Yes		Yes		Yes							
33	Ped./transit amenities	Yes											
34	a. Plaza/park	--		Yes									
35	b. Sitting area	--		Yes									
36	c. Canopy ***(Bike Parking)***	Yes		Yes									
37	d. Art	--											
38	e. Bus shelter	--											
39	f. Connect w/adjacent lot	Yes				Yes							
40	Proximity to transit	--											
41													

Industrial/Employment Zones	*city:* Jacksonville	*date:* October 2004

	FEATURE	ZONE Cottage		ZONE		ZONE		ZONE		ZONE		ZONE	
		P	CU	P	CU	P	CU	P	CU	P	CU	P	CU
1	Light manufacturing	**X**											
2	Research	**X**											
3	Warehousing/distribution	**X**											
4	Mini-storage												
5	Commercial uses												
6	Auto-oriented		**X**										
7	Entertainment	--	--										
8	Hotel/motel	--	--										
9	Medical facility	**X**											
10	Outdoor sales	--	**X**										
11	Professional services	**X**											
12	Laundry	--	--										
13	Repair services	**X**											
14	Civic uses												
15	Gov't facilities												
16	Utilities												
17	Special dist. Facilities												
18	Vocational schools												
19	***Residential uses*** ****6***	**X**											
20	***Retail*** ****6***	**X**											
21													
22													
23													
24													
25													
26	Commercial use by CU only	**Yes *6**											
27	a. Max. sq. ft. (enter #ft.)	**No**											
28	Setbacks												
29	a. Buffers	**Yes**											
30	b. Neighborhood access	**Yes**											
31	Street orientation	**Yes**											
32	Pedestrian-scale entry	**No**											
33	Ped./transit amenities	**No**											
34	a. Plaza/park												
35	b. Sitting area												
36	c. Canopy ***(Bicycle parking)***	**Yes**											
37	d. Art												
38	e. Bus shelter												
39													
40													
41													

Design Standards	*city:* Jacksonville	*date:* October 2004

	FEATURE	ZONE Residential		ZONE Downtown		ZONE Commercial		ZONE Industrial		Land Division Regs.	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	Street-access permit										
2	a. Conditions for approval	X								X	
3	b. Access consolidation	X									
4	c. Shared driveways	X									
5	d. Max. block length 600 ft. *(400 ft.)*	X		X		X		X		X	
6	Traffic calming		X		X		X		X	X	
7	Pedestrian access										
8	a. Path grade separated		X		X		X		X		X
9	b. Marked crosswalks		X		X		X		X	X	
10	c. Connect w/adjacent lot	X		X		X		X		X	
11	Landscaping										
12	a. Street trees									X	
13	b. Landscape conservation									X	
14	c. Buffers								X	X	
15	Parking										
16	a. Set max. for off-street		X		X		X		X		X
17	b. Shared parking	X		X		X		X			X
18	c. Bicycle prkng required	X		X		X		X			X
19	d. Protected walkways		X		X		X		X		X
20	e. Street-like features		X		X		X		X		X

Street Design Standards

	DESIGN STANDARDS		STREET CATEGORY Arterial Yes	Arterial No	Collector Yes	Collector No	Local Yes	Local No
21	Motor Vehicle Travel Lane							
22	a. Blvd.: 11 ft. max.	*17.5 ft.*		X				
23	b. Avenue: 10.5 ft. max.	*16 ft.*		X				
24	c. Residential, without parking: 11 ft. max.				X			
25	d. Residential, with parking: 10 ft. max.	*11 ft.*				X		
26	e. Commercial: 10 ft. max.				--	--		
27	f. Parking one side: 17 ft. max. (2-way, 24' total width)							X
28	g. Parking both sides: 14 ft. max (28' total width)							
29	Bike Lanes: 6 ft. wide, on both sides	*5.5 ft.*		X				
30	On-street parking							
31	a. 8-foot bays	*No Parking*	--	--				
32	b. Residential: 7-ft. lane(s)	*8 ft.*				X		X
33	c. Commercial: 8-ft. lane(s)				X			
34	Sidewalks (on both sides)							
35	a. 6-10 feet wide	*5 ft.*	X		X			
36	b. Residential: 5-6 feet wide	*5 ft.*			X		X	

Integrate Land Use and Transportation Plans

Audit of Existing Plans

Jacksonville, Audit Notes

*The following typography elements apply in all instances:

A. The double dash (--) indicates feature is not allowed, or discussed in the city's documents.

B. Items in ***bold italic type*** are from city documents. They include features not contained in the ILUTP checklist.

C. P=Permitted Use; CU=Conditional use

D. Zones:

BR	Border Residential
HR	Hillside Residential
SF	Single-Family Residential
MF	Multiple-Family Residential
PUD	Planned Unit Development
B-PUD	Border Planned Unit Development
Gen Com	General Commercial (C-1)
Cottage	Cottage Industrial (CI)

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1. Where allowed, use is conditional if pick-up and delivery service is needed.

2. Ordinance limits use to tenants only. Allowing these uses as small businesses would reduce residents' need to drive.

3. May meet standard if developed as PUD, which permits density increase by up to 35 percent.

4. All uses in the General Commercial zone are controlled by performance standards to ensure compatible development and protect the prevailing pattern of differentiation and uniqueness.

5. Sets front, side and rear yard minimum setbacks.

6. Uses permitted outright, but subject to space limitations.

The city has several overlay districts addressing various needs and uses that were not addressed in the review. These districts address specific concerns, such as future growth areas and use of manufactured homes, and do not contain provisions pertinent to the requirements triggered by the Regional Transportation Plan's Alternative Measures.

Appendix B

Documentation of Traffic Counts & Seasonal Adjustments

Table A-1

Summary of All Turning Movements by Intersection - 2006

	OR238& Old230	OR238& Shafer	OR230&E	5th&California	Calif&3rd	Calif& Oregon	Calif&6th	Calif&0th	SoStage&WellsFargo	Oregon&C	Oregon&F	OR238& PairDice	Total by Time	Forward One-Hour Total
3:00 - 3:15	193	165	139	198	155		134	144	131	115	77		1451	6088
3:15 3:30	223	152	158	180	136		103	100	110	112	55		1345	6526
3:30 - 3:45	288	180	158	189	168		128	132	246	141	107		1737	7034
3:45 - 4:00	261	145	150	186	179		140	154	150	113	77		1555	7141
4:00 - 4:15	232	164	163	231	179	212	111	144	136	102	77	136	1889	7575
4:15 4:30	243	157	154	198	170	227	102	108	113	137	80	155	1853	7680
4:30 - 4:45	210	191	170	179	175	200	114	120	127	121	90	195	1644	0014
4:45 - 5:00	261	175	148	244	177	230	118	142	139	136	96	136	1989	8244
5:00 - 5:15	202	175	150	199	100	210	149	105	105	119	94	121	2003	0101
5:15 - 5:30	280	196	200	192	197	253	157	166	156	115	99	167	2178	n/a
5:30 - 5:45	242	210	197	100	197	215	155	172	101	95	90	140	2074	n/a
5:45 - 6:00	253	195	158	205	180	224	107	117	138	96	90	163	1926	n/a
PHF	0.92	0.88	0.88	0.84	0.93	0.90	0.92	0.94	0.86	0.85	0.96	0.86		

Table A-2

Raw Traffic Volumes

INTNAME	INTID	DATE	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Totals
OR 238 & Old OR 238	1	1/22/2007	4:45 PM - 5:45 PM	513	0	88	0	0	0	0	202	227	56	357	0	1444
OR 238 & Shafer Lane	2	8/17/2006	4:45 PM - 5:45 PM	26	264	16	32	376	15	6	1	27	6	0	26	796
OR 238 & E Street	3	8/17/2006	4:45 PM - 5:45 PM	33	252	9	11	305	27	16	21	31	2	15	11	734
OR 238/5th Street & OR 238/California Street	4	9/19/2005	4:45 PM - 5:45 PM	0	12	3	25	12	347	174	142	0	5	147	59	926
OR 238/California Street & 3rd Street	5	8/17/2006	4:45 PM - 5:45 PM	4	2	34	2	1	8	6	263	4	57	369	11	763
OR 238/California Street & Oregon Street	6	8/17/2006	4:45 PM - 5:45 PM	4	33	46	50	58	168	47	171	3	61	268	44	955
California Street & 6th Street	7	8/17/2006	4:45 PM - 5:45 PM	0	0	0	45	0	6	3	201	0	0	296	52	603
California Street & 8th Street	8	8/17/2006	4:45 PM - 5:45 PM	0	0	0	26	0	5	9	257	0	0	346	30	674
South Stage Road & Wells Fargo Drive	9	8/17/2006	4:45 PM - 5:45 PM	14	0	7	0	0	0	0	262	9	19	357	0	668
Oregon Street & C Street	10	8/17/2006	4:45 PM - 5:45 PM	18	96	17	11	226	10	11	16	37	16	13	16	486
Oregon Street & F Street	11	8/17/2006	4:45 PM - 5:45 PM	0	122	7	13	176	0	0	0	0	33	0	33	385
OR 238 & Pair-a-Dice Ranch Road	12	8/17/2006	4:45 PM - 5:45 PM	0	0	0	13	0	0	0	184	0	0	384	17	597

Adjusted & Rounded Volumes

Turning Movement Count
60 Minute Data

INTNAME	INTID	DATE	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Totals
OR 238 & Old OR 238	1	1/22/2007	4:45 PM - 5:45 PM	515	0	90	0	0	0	0	200	225	55	355	0	
Balanced Volume				225		90					135	155	55	180		
OR 238 & Shafer Lane	2	8/17/2006	4:45 PM - 5:45 PM	25	265	15	30	375	15	5	0	25	5	0	25	
OR 238 & E Street	3	8/17/2006	4:45 PM - 5:45 PM	35	250	10	10	305	25	15	20	30	0	15	10	
OR 238/5th Street & OR 238/California Street	4	9/19/2005	4:45 PM - 5:45 PM	0	10	5	25	10	345	175	140	0	5	145	60	
Balanced Volume					10	5	45	20	270	170	145	5	10	190	60	
OR 238/California Street & 3rd Street	5	8/17/2006	4:45 PM - 5:45 PM	5	0	35	0	0	10	5	265	5	55	370	10	
OR 238/California Street & Oregon Street	6	8/17/2006	4:45 PM - 5:45 PM	5	35	45	50	60	170	45	170	5	60	270	45	
California Street & 6th Street	7	8/17/2006	4:45 PM - 5:45 PM	0	0	0	45	0	5	5	200	0	0	295	50	
California Street & 8th Street	8	8/17/2006	4:45 PM - 5:45 PM	0	0	0	25	0	5	10	255	0	0	345	30	
South Stage Road & Wells Fargo Drive	9	8/17/2006	4:45 PM - 5:45 PM	15	0	5	0	0	0	0	260	10	20	355	0	
Oregon Street & C Street	10	8/17/2006	4:45 PM - 5:45 PM	20	95	15	10	225	10	10	15	35	15	15	15	
Oregon Street & F Street	11	8/17/2006	4:45 PM - 5:45 PM	0	120	5	15	175	0	0	0	0	35	0	35	
OR 238 & Pair-a-Dice Ranch Road	12	8/17/2006	4:45 PM - 5:45 PM	0	0	0	15	0	0	0	185	0	0	385	15	

Table A-3

Seasonal Adjustment of Traffic Volumes

INTNAME	INTID	DATE	Seasonal Adjustment Factor	2007 Adjustment Factor	Total Adjustment
OR 238 & Old OR 238	1	1/22/2007	1.3950	1.000	1.395
OR 238 & Shafer Lane	2	8/17/2006	1.0263	1.018	1.044
OR 238 & E Street	3	8/17/2006	1.0263	1.018	1.044
OR 238/5th Street & OR 238/California Street	4	9/19/2005	1.0897	1.035	1.128
OR 238/California Street & 3rd Street	5	8/17/2006	1.0263	1.018	1.044
OR 238/California Street & Oregon Street	6	8/17/2006	1.0263	1.018	1.044
California Street & 6th Street	7	8/17/2006	1.0263	1.018	1.044
California Street & 8th Street	8	8/17/2006	1.0263	1.018	1.044
South Stage Road & Wells Fargo Drive	9	8/17/2006	1.0263	1.018	1.044
Oregon Street & C Street	10	8/17/2006	1.0263	1.018	1.044
Oregon Street & F Street	11	8/17/2006	1.0263	1.018	1.044
OR 238 & Pair-a-Dice Ranch Road	12	8/17/2006	1.0263	1.018	1.044

Calculation of Seasonal Adjustments

	Summer	Commuter	Average	Adjustment Factor
Peak Period Season Factor	0.8378	0.9000	0.8689	
Count Date Seasonal Factors				
January (15th)	1.2047	1.0256	1.2121	1.3950
February (1st)	1.5940	1.0240		
September(15th)	0.9318	0.9449	0.9468	1.0897
October(1st)	0.9631	0.9474		
August(15th)	0.8525	0.9224	0.8918	1.0263
September(1st)	0.8922	0.9000		

Calculation of Annual Adjustments

OR 238 (Hwy No. 272)	Mp	2004	2025	RSQ	Annual Growth	
0.01 mile East of Oregon St.	33.24	8400	11500	0.9354	0.018	1.8%

Appendix C

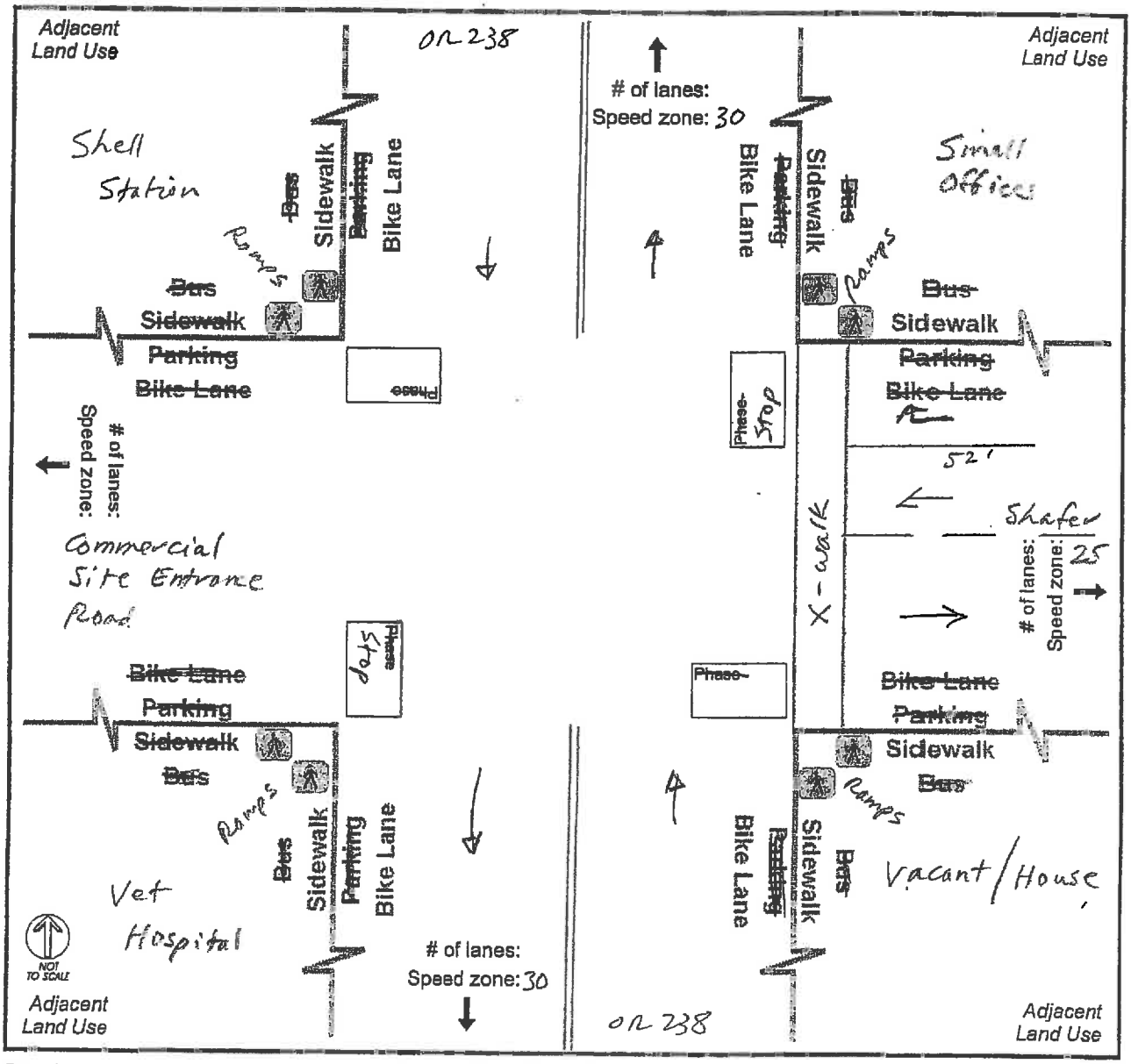
Intersection Geometrics and Traffic Control

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 @ Shafer Lane



Staging:

Queuing Problems:

Saturation Flow Check

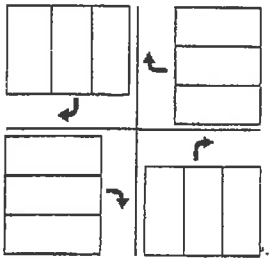
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

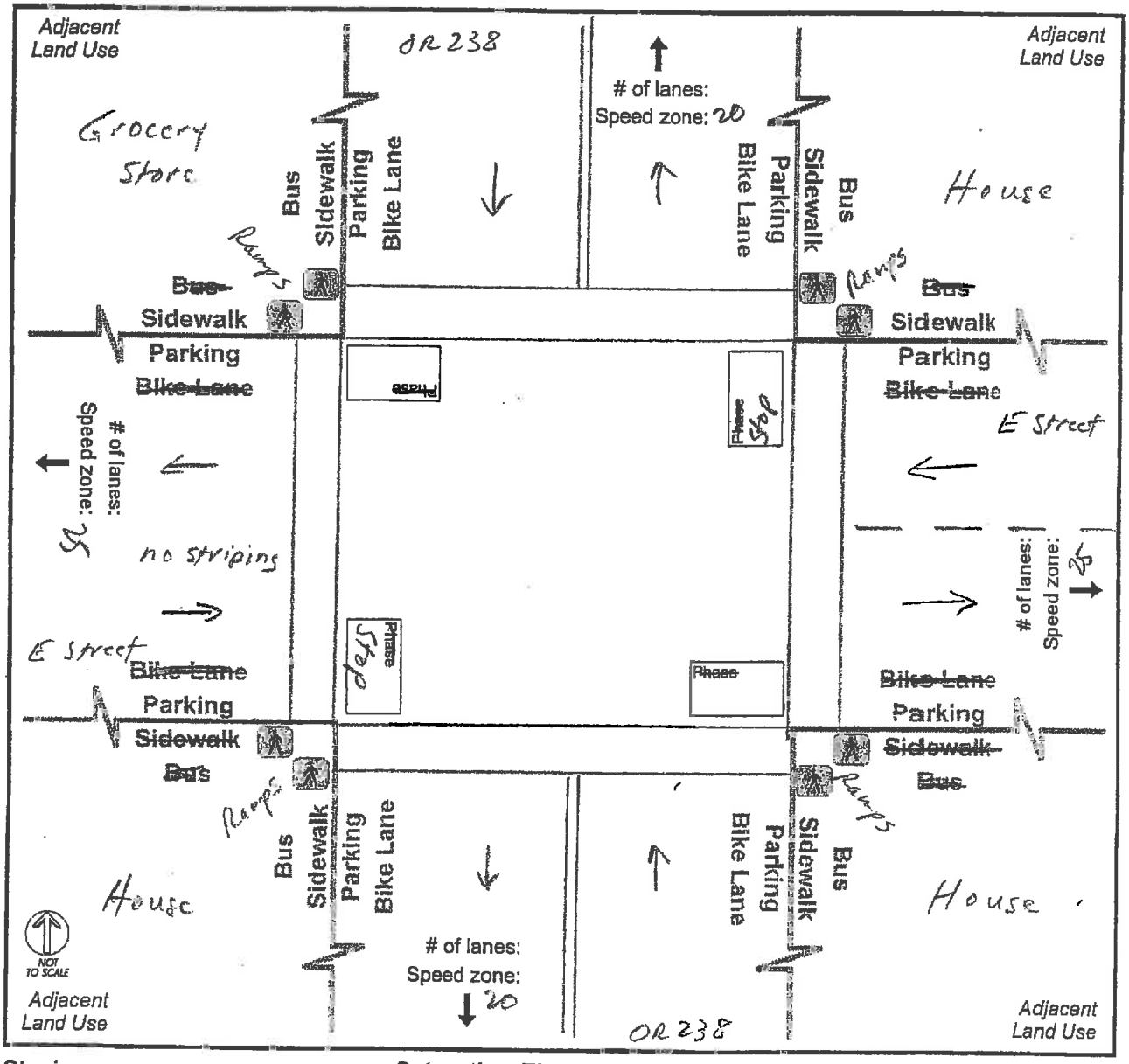
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 (5th Street) & E Street



Staging:

Queuing Problems:

Saturation Flow Check

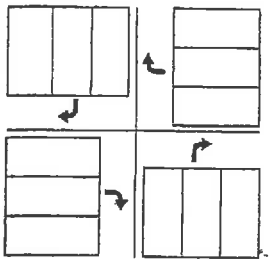
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

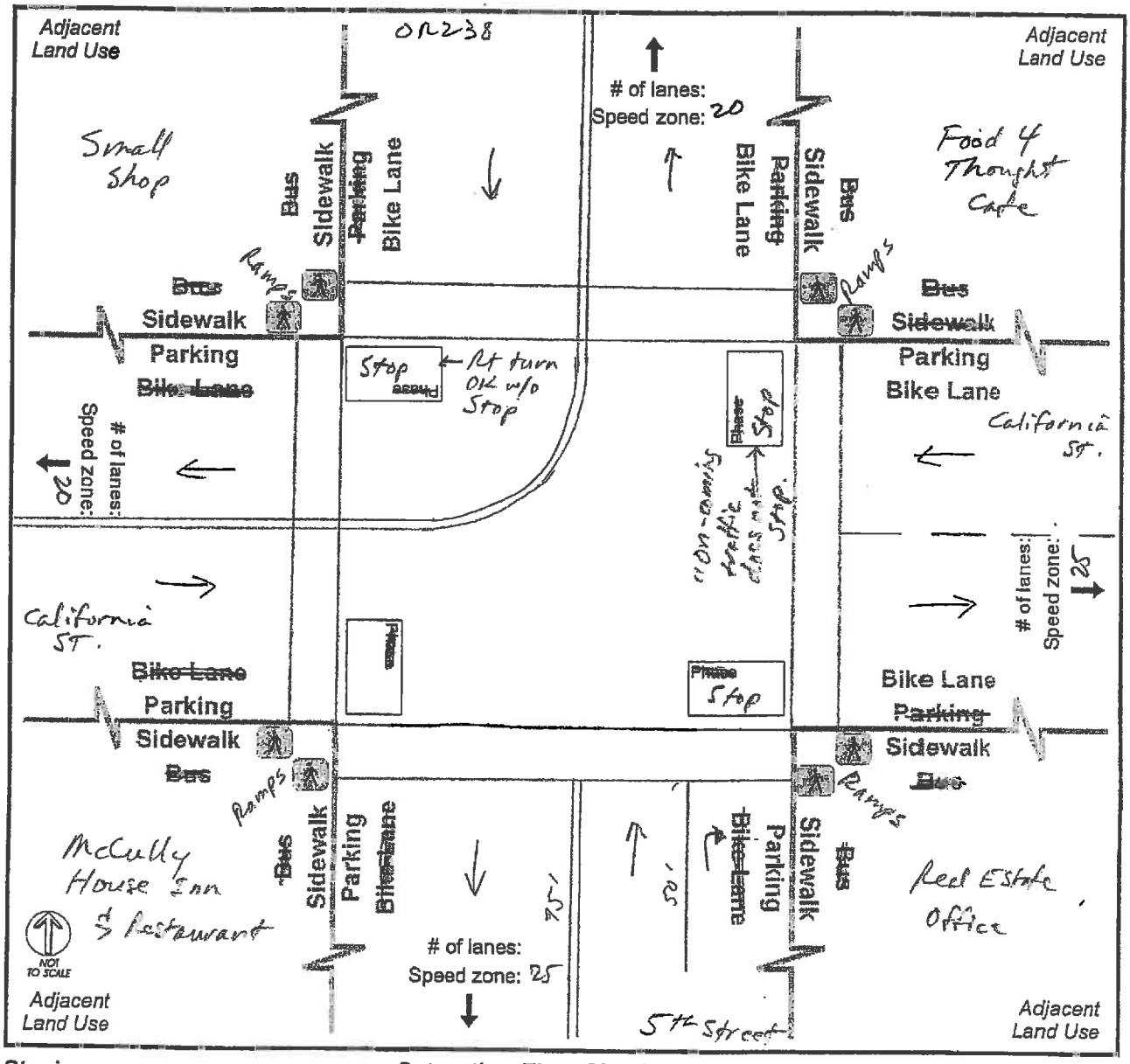
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 corner – 5th Street & California Street



Staging:

Queuing Problems:

Saturation Flow Check

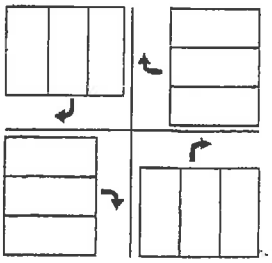
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

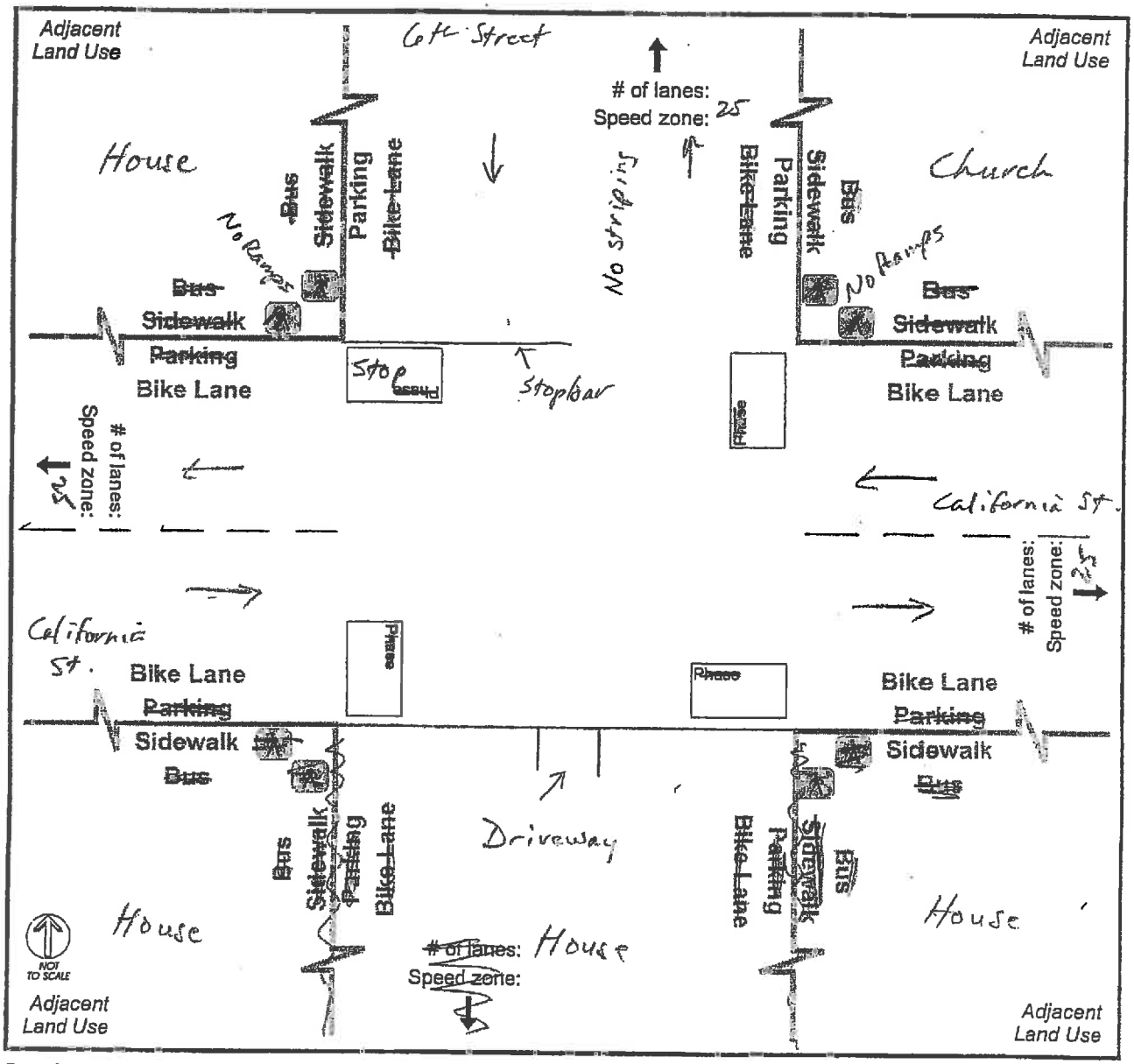
A B C D E F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: California Street & 6th Street



Staging:

Queuing Problems:

Saturation Flow Check

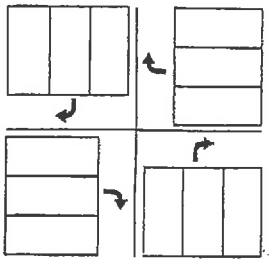
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



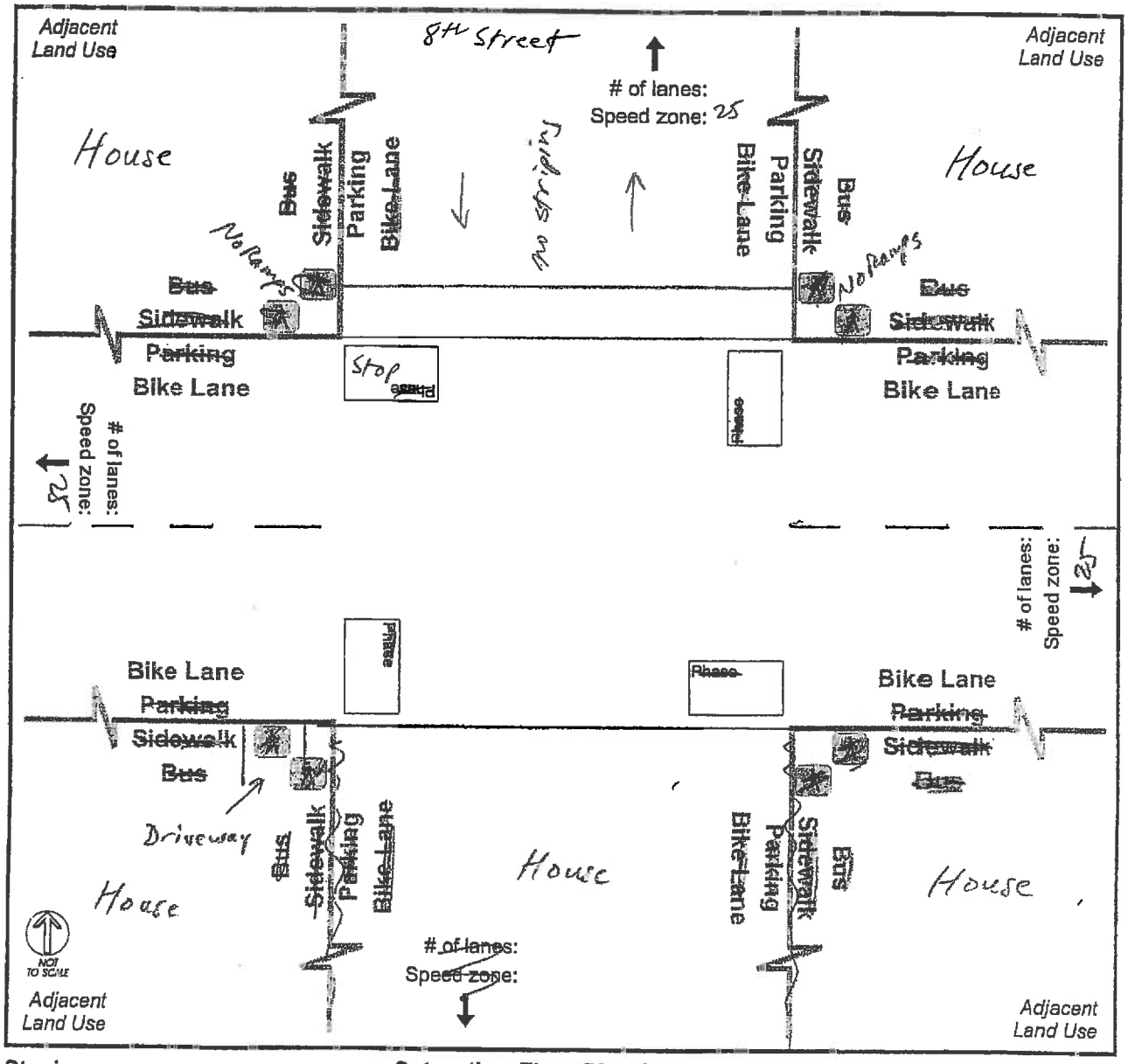
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: California Street & 8th Street



Staging:

Queuing Problems:

Saturation Flow Check

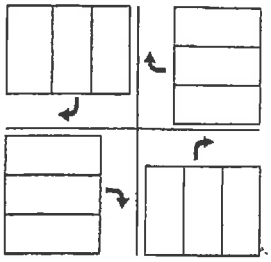
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



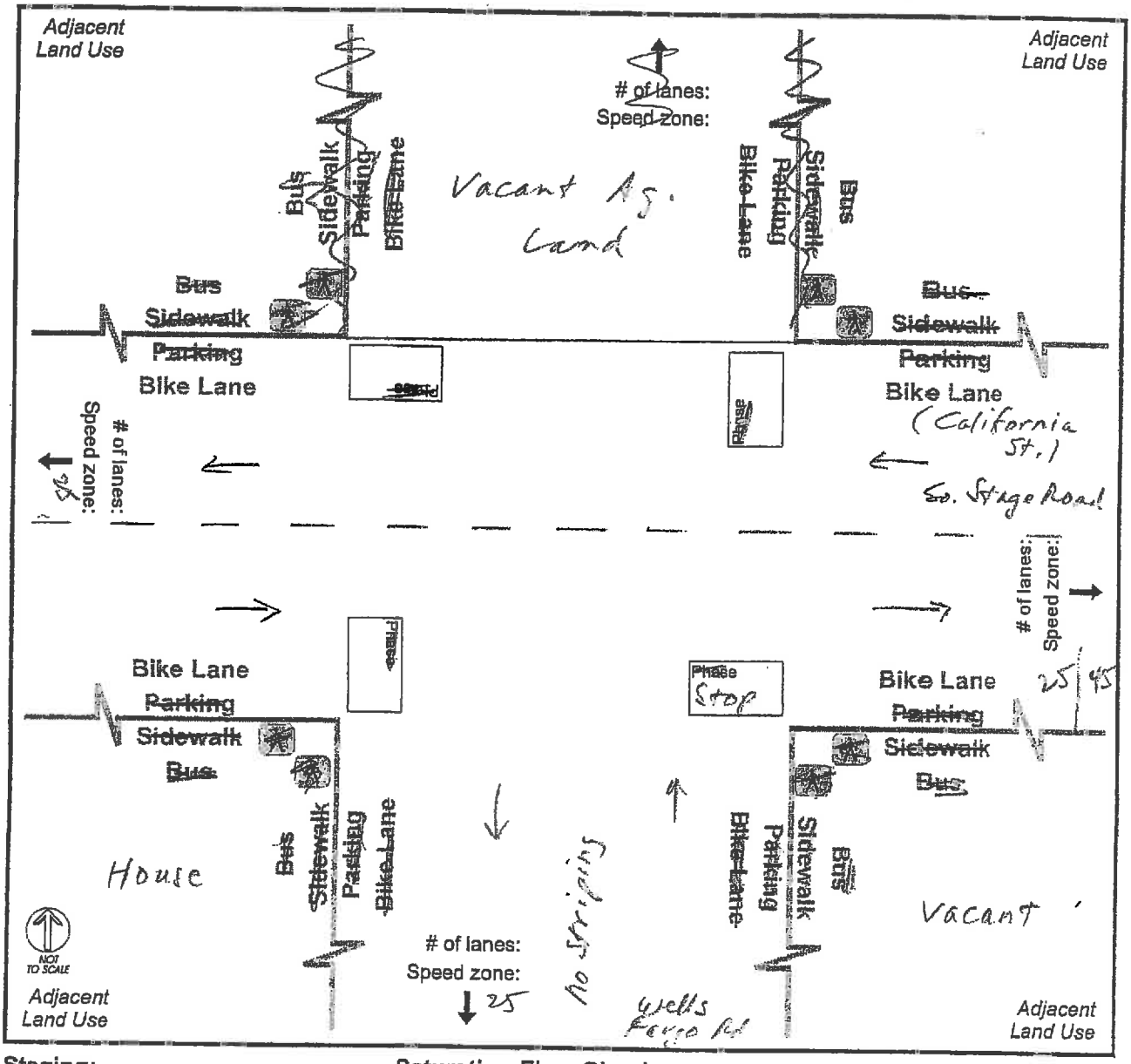
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: South Stage Road (California Street) & Wells Fargo Road



Staging:

Queuing Problems:

Saturation Flow Check

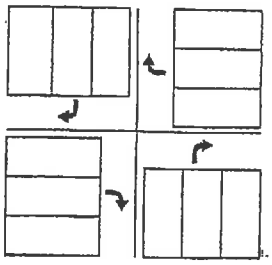
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



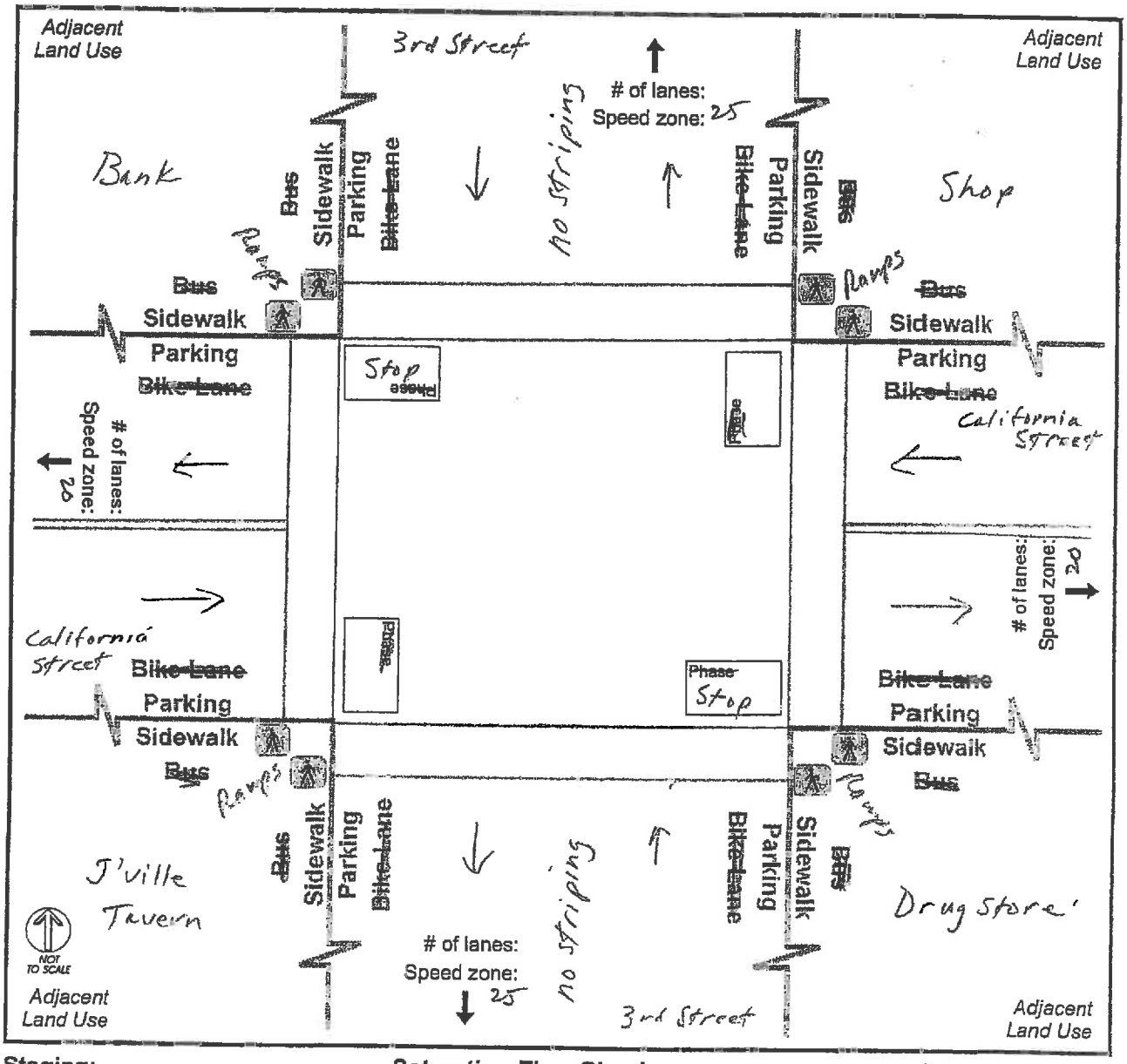
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 (California Street) & 3rd Street



Staging:

Queuing Problems:

Saturation Flow Check

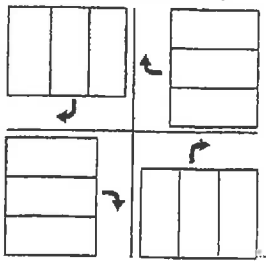
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

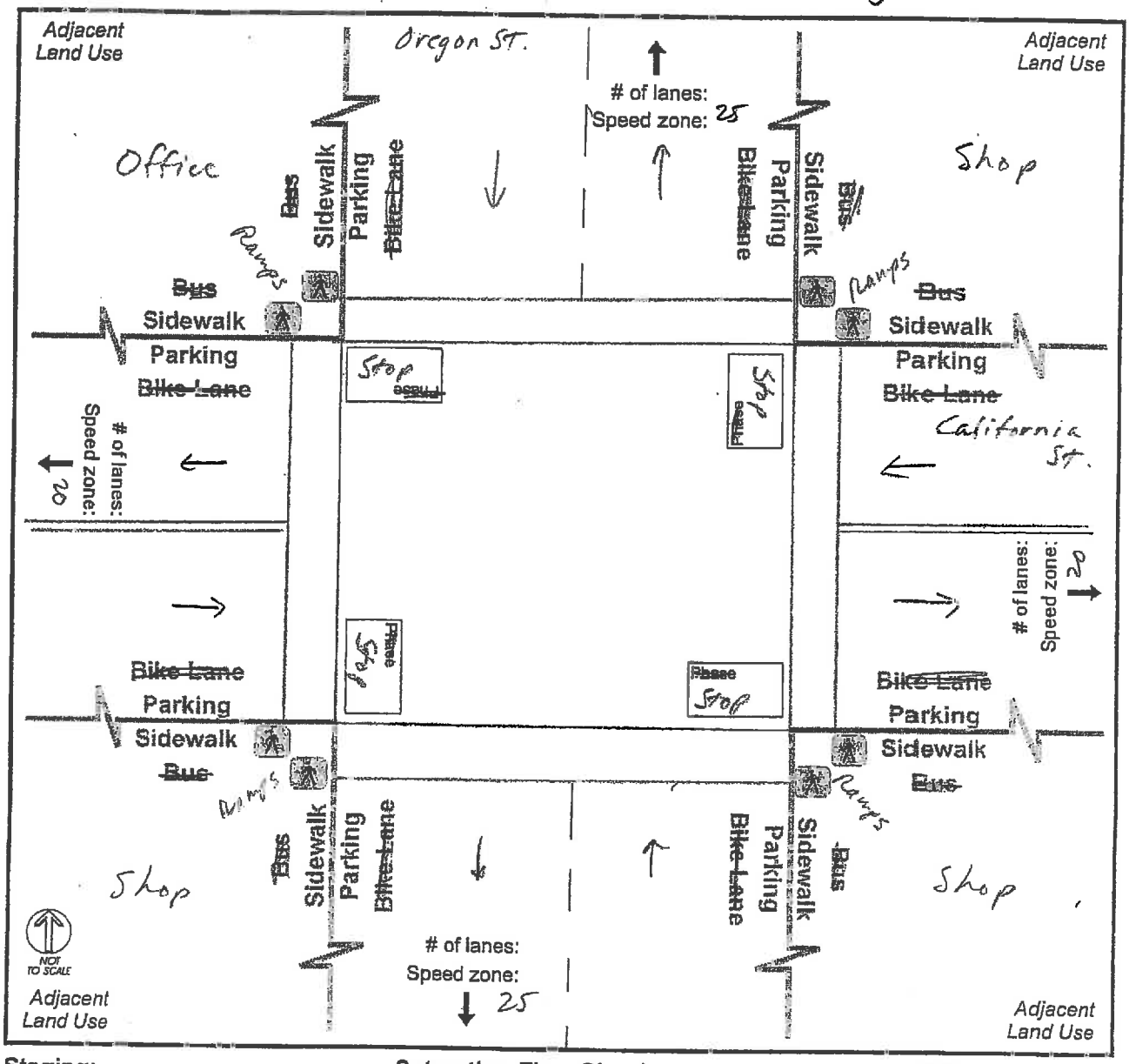
A B C D E F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 (California Street) & Oregon Street



Staging:

Queuing Problems:

Saturation Flow Check

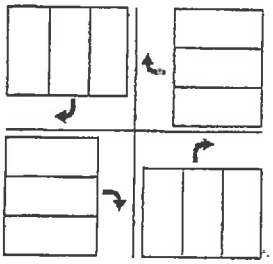
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



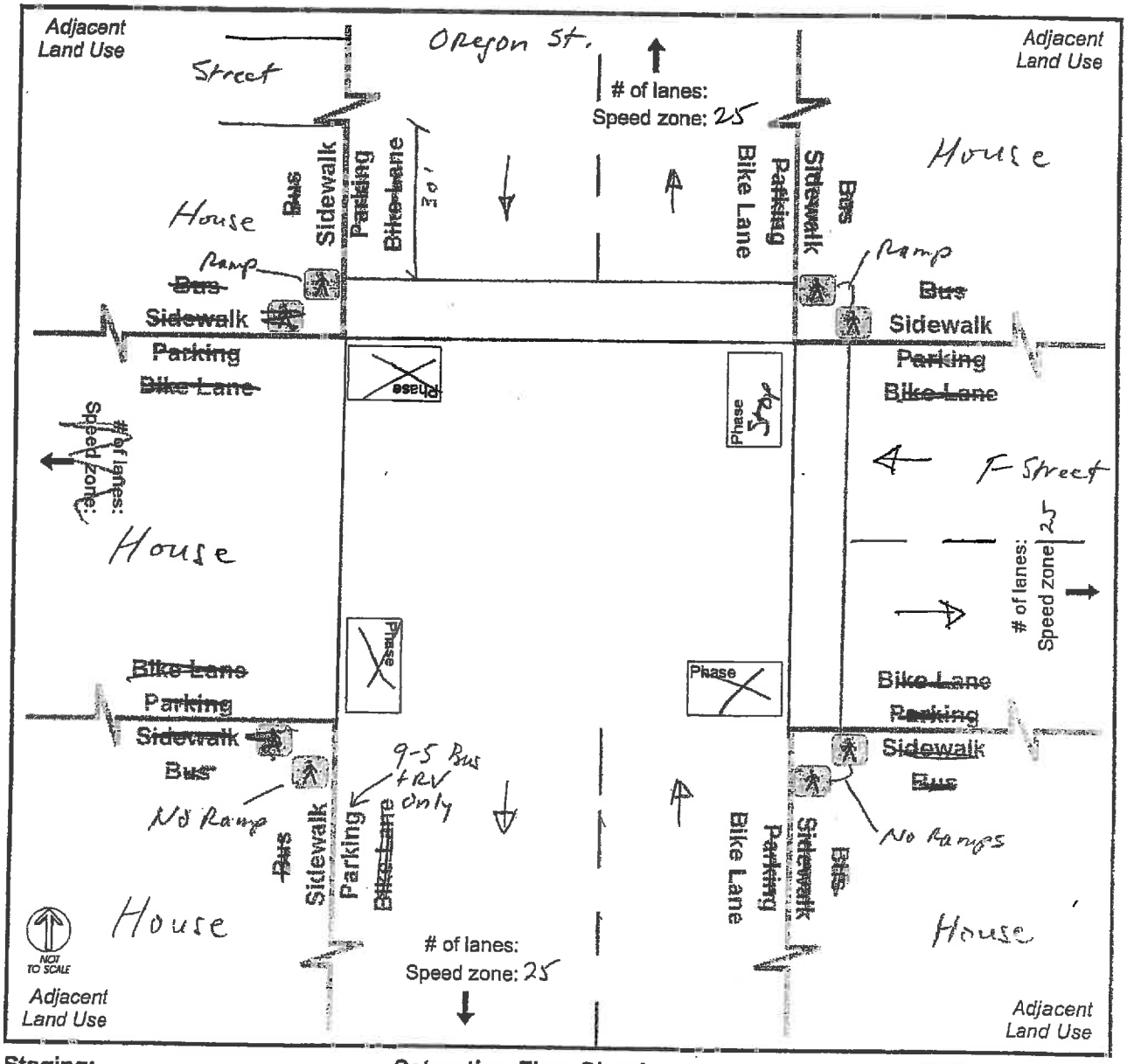
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

Date: 4/30/07

Time: _____

Intersection Name: Oregon Street @ F Street



Staging:

Queuing Problems:

Saturation Flow Check

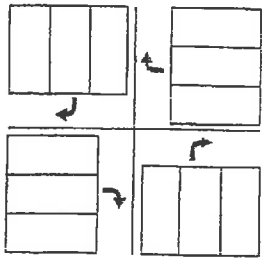
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

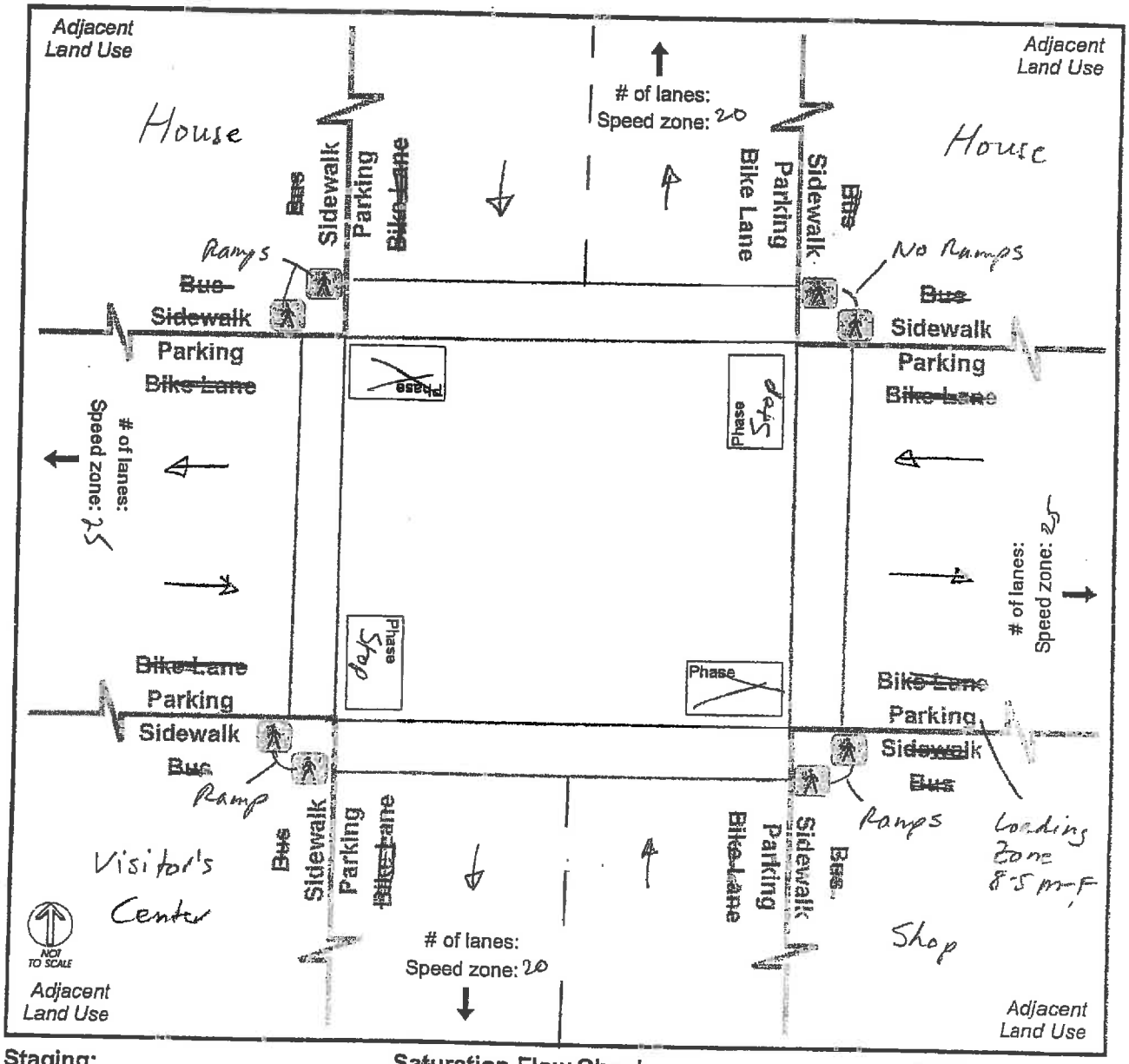
A	B	C	D	E	F

LANE GEOMETRY

Date: 1/30/07

Time:

Intersection Name: Oregon Street & C Street



Staging:

Queuing Problems:

Saturation Flow Check

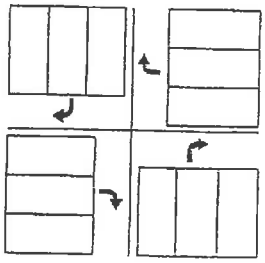
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

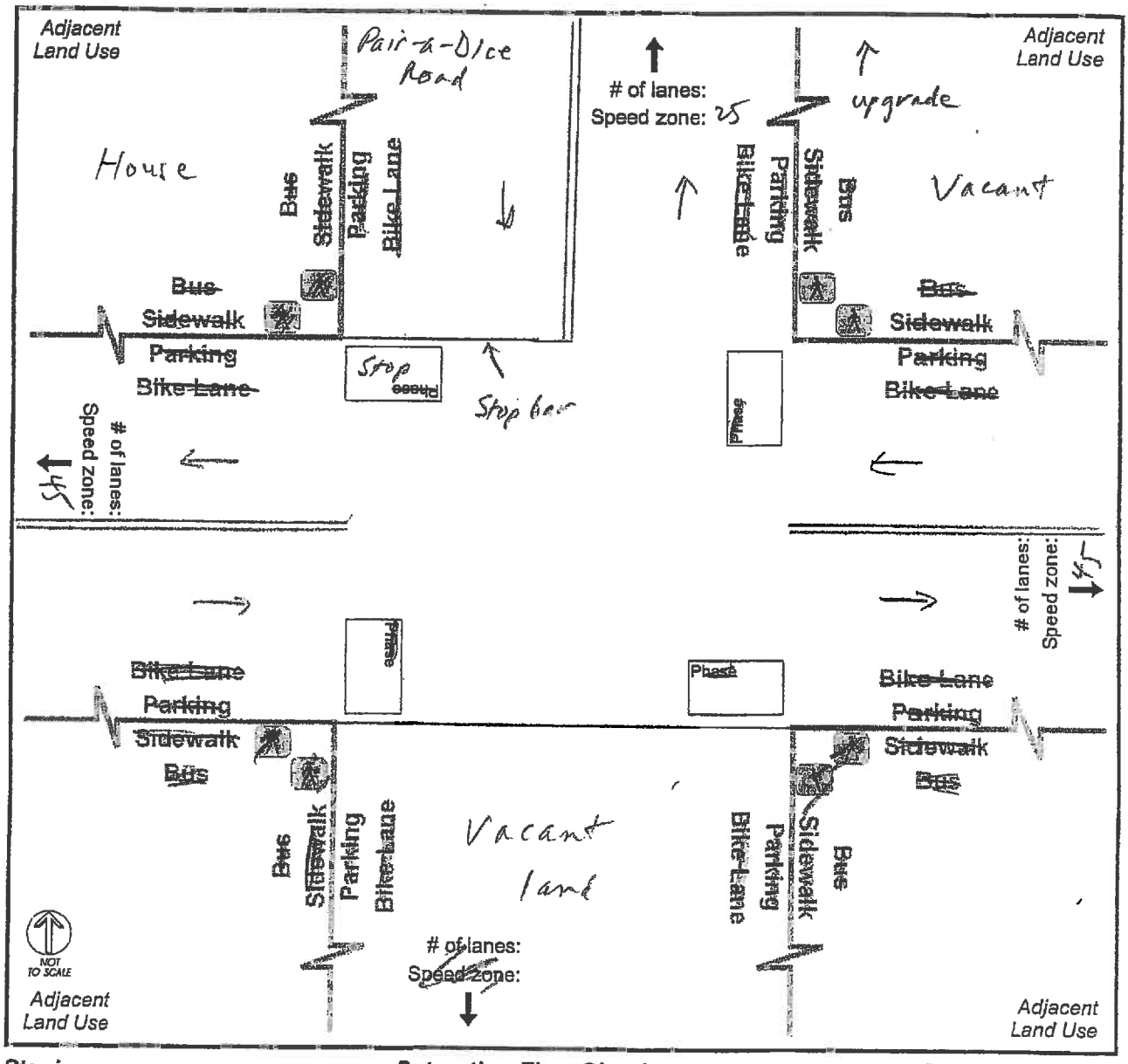
A B C D E F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 @ Pair-a-Dice Road



Staging:

Queuing Problems:

Saturation Flow Check

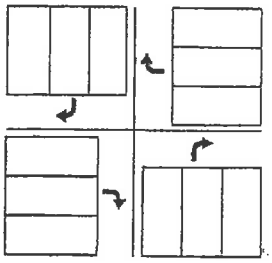
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



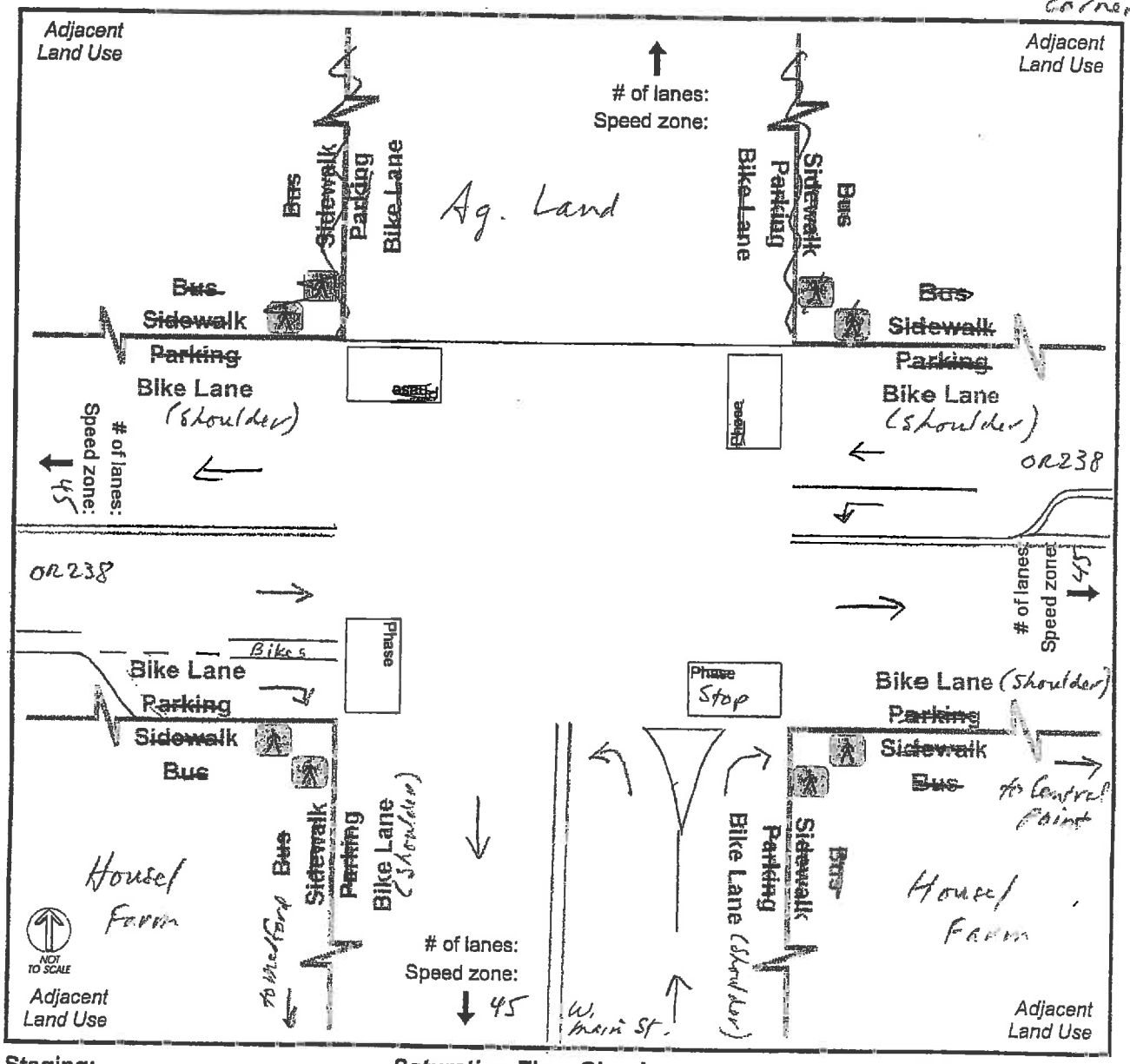
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

Date: _____

Time: _____

Intersection Name: OR 238 & Old OR 238 (W. Main Street) - Bybee Corner



Staging:

Queuing Problems:

Saturation Flow Check

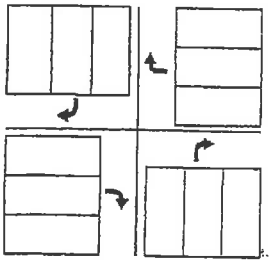
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

A	B	C	D	E	F

Appendix D

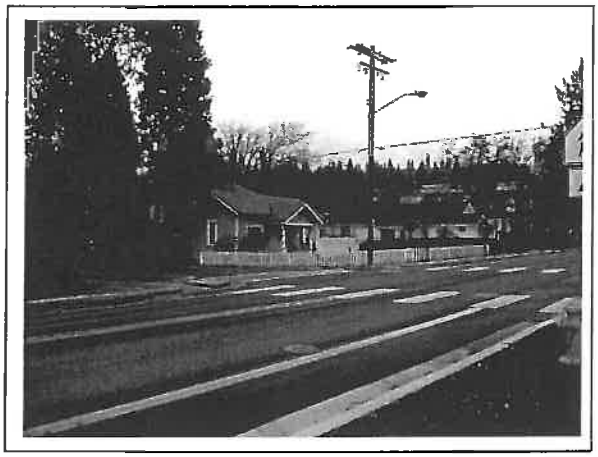
Intersection Photographs

OR 238 (5th Street) @ Shafer Lane:
Looking west through intersection from northeast corner.
Jville01.jpg

OR 238 (5th Street) @ Shafer Lane:
Looking northwest through intersection from southeast corner.
Jville02.jpg

OR 238 (5th Street) @ Shafer Lane:
Looking west through intersection from southeast corner.
Jville03.jpg

OR 238 (5th Street) @ E Street:
Looking east through intersection along north side of E Street.

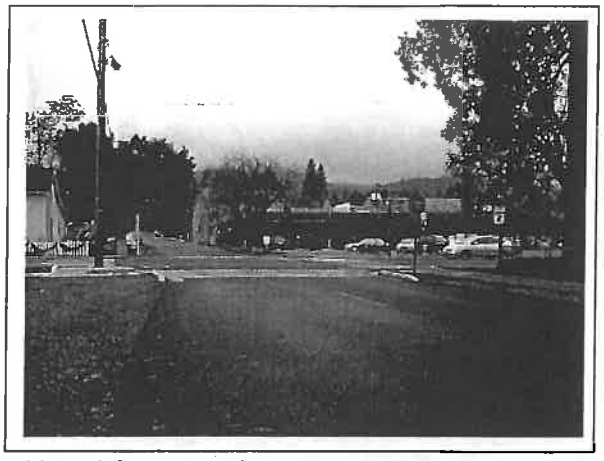


OR 238 (5th Street) @ E Street:
Looking southeast through intersection from northwest corner.
Jville05.jpg

OR 238 (5th Street) @ E Street:
Looking south through intersection along west side of 5th Street.
Jville06.jpg

OR 238 (5th Street) @ E Street:
Looking northwest through intersection from southeast corner.
Jville07.jpg

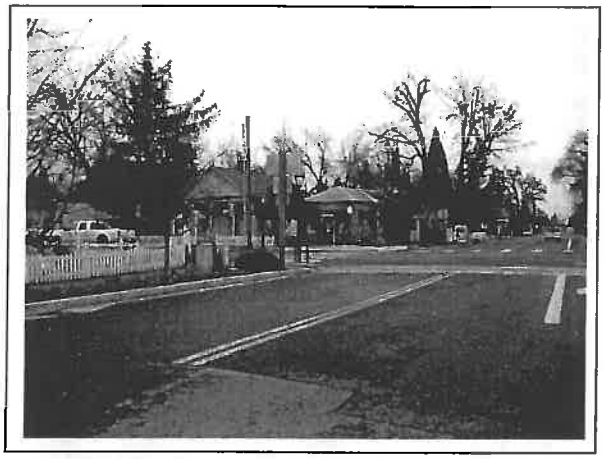
OR 238 (5th Street) @ E Street:
Looking north through intersection along east side of 5th Street.
Jville08.jpg



OR 238 (5th Street) @ E Street:
Looking west through intersection along south side of E Street.
Jville09.jpg

OR 238 (5th Street) @ California Street:
Looking west through intersection along north side of California Street.
Jville10.jpg

OR 238 (5th Street) @ California Street:
Looking north through intersection from south leg (5th Street).
Jville11.jpg



OR 238 (5th Street) @ California Street:
Looking northwest through intersection from south leg (5th Street).
Jville12.jpg

OR 238 (5th Street) @ California Street:
Looking west through intersection from southeast corner.
Jville13.jpg

OR 238 (5th Street) @ California Street:
Looking northwest through intersection from southeast corner.
Jville14.jpg

OR 238 (5th Street) @ California Street:
Looking north across intersection from southwest corner.
Jville15.jpg

OR 238 (5th Street) @ California Street:
Looking east through intersection along south side of California Street.
Jville16.jpg

OR 238 (5th Street) @ California Street:
Looking northeast through intersection from southwest corner.
Jville17.jpg

OR 238 (5th Street) @ California Street:
Looking south across intersection from northwest corner.
Jville18.jpg

OR 238 (5th Street) @ California Street:
Looking south across intersection from northwest corner.
Jville19.jpg

California Street @ 6th Street:
Looking south into intersection from north leg (6th Street).
Jville20.jpg

California Street @ 6th Street:
Looking west through intersection along north side of California Street.
Jville21.jpg

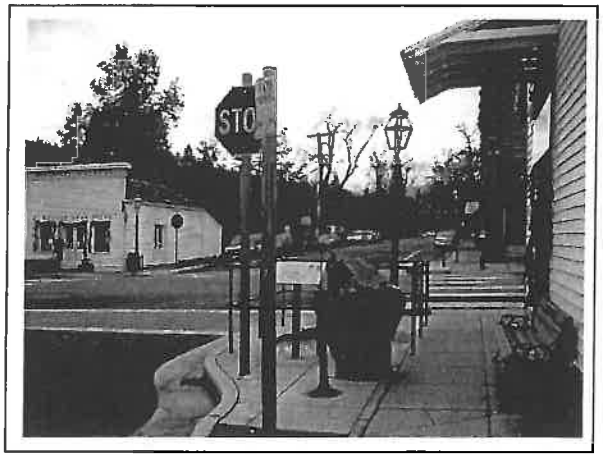
California Street @ 8th Street:
Looking west through intersection along north side of California Street.
Jville22.jpg

California Street @ 8th Street:
Looking northeast through intersection from south side of California Street.
Jville23.jpg

California Street @ 8th Street:
Looking south into intersection from north leg (8th Street).
Jville24.jpg

South Stage Road (California Street) @ Wells Fargo Road:
Looking north into intersection from south leg (Wells Fargo Drive).
Jville25.jpg

South Stage Road (California Street) @ Wells Fargo Road:
Looking west at California Street approaching intersection from southeast corner.
Jville26.jpg



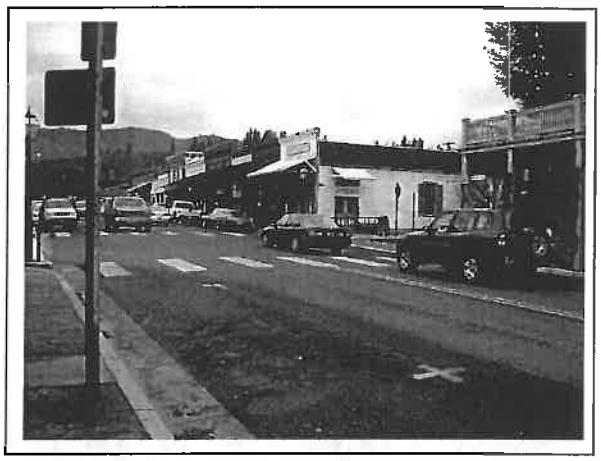
OR 238 (California Street) @ 3rd Street:
Looking south through intersection along west side of 3rd Street.
Jville36.jpg

OR 238 (California Street) @ 3rd Street:
Looking southeast through intersection from northwest corner.
Jville37.jpg

OR 238 (California Street) @ 3rd Street:
Looking southwest through intersection from northeast corner.
Jville38.jpg

OR 238 (California Street) @ 3rd Street:
Looking south through intersection along east side of 3rd Street.
Jville39.jpg

OR 238 (California Street) @ 3rd Street:
Looking southwest through intersection from northeast corner.
Jville40.jpg



OR 238 (California Street) @ 3rd Street:
Looking northwest through intersection from south side of California Street.
Jville41.jpg

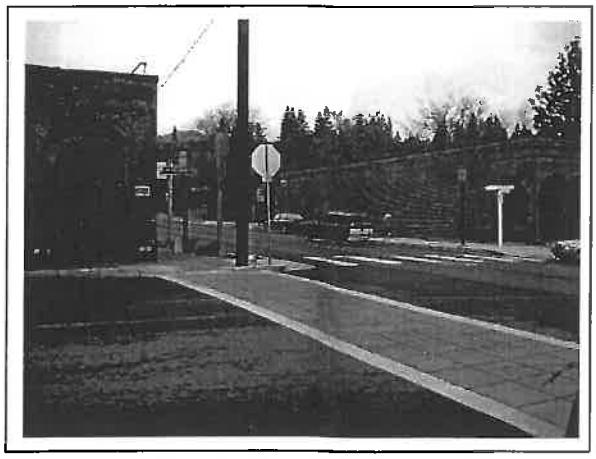
OR 238 (California Street) @ 3rd Street:
Looking west through intersection along south side of California Street.
Jville42.jpg

OR 238 (California Street) @ 3rd Street:
Looking north through intersection along west side of 3rd Street.
Jville43.jpg

OR 238 (California Street) @ Oregon Street:
Looking west through intersection along north side of California Street.
Jville27.jpg

OR 238 (California Street) @ Oregon Street:
Looking southwest through intersection from northeast corner.
Jville28.jpg

OR 238 (California Street) @ Oregon Street:
Looking south through intersection from northeast corner.
Jville29.jpg



OR 238 (California Street) @ Oregon Street:
Looking west through intersection from southeast corner.
Jville30.jpg

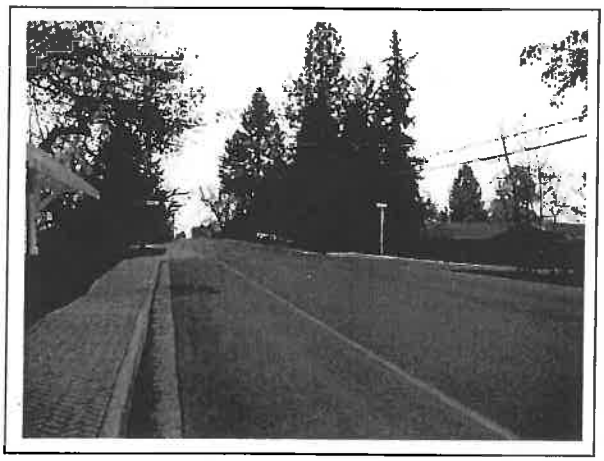
OR 238 (California Street) @ Oregon Street:
Looking northeast through intersection from southwest corner.
Jville31.jpg

OR 238 (California Street) @ Oregon Street:
Looking east through intersection along south side of California Street.
Jville32.jpg

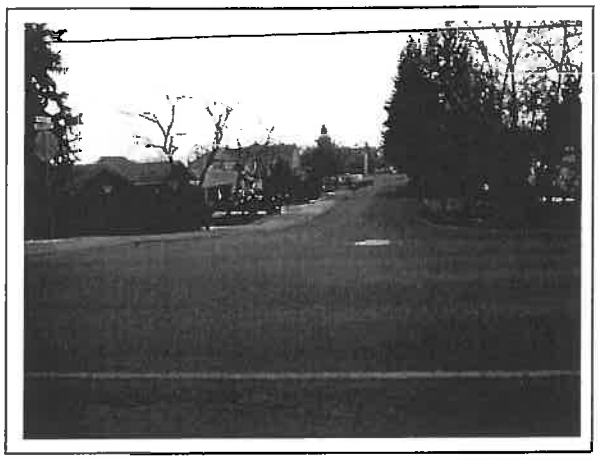
OR 238 (California Street) @ Oregon Street:
Looking east through intersection along north side of California Street.
Jville33.jpg

OR 238 (California Street) @ Oregon Street:
Looking south through intersection from northwest corner.
Jville34.jpg

OR 238 (California Street) @ Oregon Street:
Looking southwest through intersection from north leg (Oregon Street).
Jville35.jpg



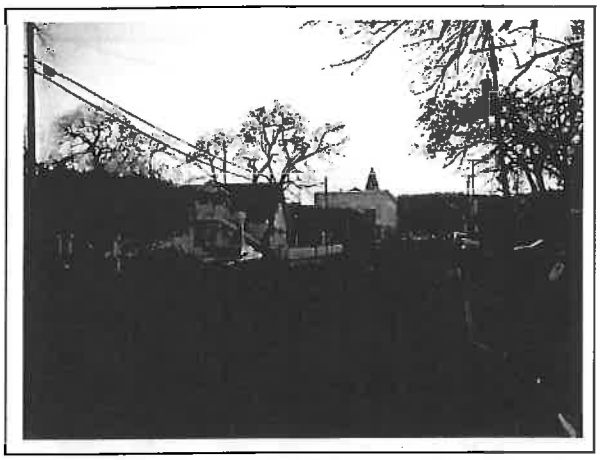
Oregon Street @ F Street:
Looking north through intersection along west side of Oregon Street.
Jville44.jpg



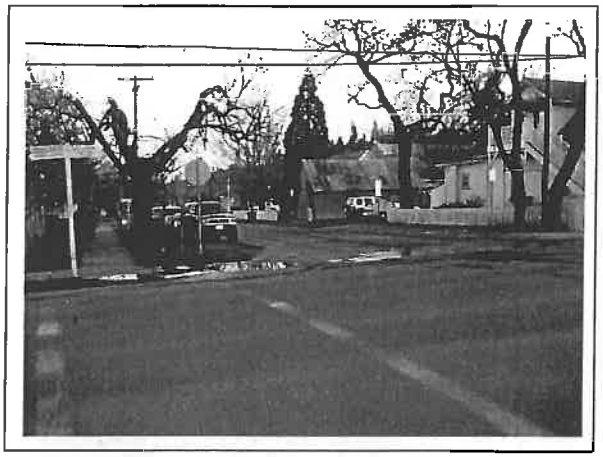
Oregon Street @ F Street:
Looking east through intersection at F Street.
Jville45.jpg

Oregon Street @ F Street:
Looking southeast through intersection at south leg and F Street.
Jville46.jpg

Oregon Street @ F Street:
Looking south through intersection along west side of Oregon Street.
Jville47.jpg



Oregon Street @ C Street:
Looking south through intersection along west side of Oregon Street.
Jville48.jpg



Oregon Street @ C Street:
Looking southeast through intersection at C Street.
Jville49.jpg

Oregon Street @ C Street:
Looking east along C Street through intersection at Oregon Street.
Jville50.jpg

Oregon Street @ C Street:
Looking north through intersection along east side of Oregon Street.
Jville51.jpg

Oregon Street @ C Street:
Looking west by northwest on C Street through intersection with Oregon Street.
Jville52.jpg

Oregon Street @ C Street:
Looking west by southwest on C Street through intersection at Oregon Street.
Jville53.jpg

OR 238 @ Pair-a-Dice Road:
Looking south into intersection from north leg (Pair-a-Dice Road).
Jville54.jpg

OR 238 @ Pair-a-Dice Road:
Looking west through intersection from north side of OR 238.
Jville55.jpg

Appendix E

2007 Intersection Analysis Worksheets

2007

1: OR238 & OLD OR 238

30 HV Balanced

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	135	155	55	180	225	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	147	168	60	196	245	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			315		462	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			315		462	147
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		54	89
cM capacity (veh/h)			1245		531	900

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	147	168	60	196	245	98
Volume Left	0	0	60	0	245	0
Volume Right	0	168	0	0	0	98
cSH	1700	1700	1245	1700	531	900
Volume to Capacity	0.09	0.10	0.05	0.12	0.46	0.11
Queue Length (ft)	0	0	4	0	60	9
Control Delay (s)	0.0	0.0	8.0	0.0	17.4	9.5
Lane LOS			A		C	A
Approach Delay (s)	0.0		1.9		15.2	
Approach LOS					C	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

2007

2: Shafer Lane & OR 238

30 HV Balanced

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	25	265	15	30	375
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	28	301	17	34	426
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	804	310			318	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	804	310			318	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	96			97	
cM capacity (veh/h)	343	730			1242	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1
Volume Total	6	28	318	460
Volume Left	6	0	0	34
Volume Right	0	28	17	0
cSH	343	730	1700	1242
Volume to Capacity	0.02	0.04	0.19	0.03
Queue Length (ft)	1	3	0	2
Control Delay (s)	15.7	10.1	0.0	0.9
Lane LOS	C	B		A
Approach Delay (s)	11.1		0.0	0.9
Approach LOS	B			

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

2007

3: 'E' St & OR 238

30 HV Balanced

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	20	30	0	15	10	35	250	10	10	305	25
Peak Hour Factor	0.88	0.92	0.88	0.92	0.92	0.92	0.88	0.88	0.92	0.92	0.88	0.88
Hourly flow rate (vph)	17	22	34	0	16	11	40	284	11	11	347	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	771	757	361	797	766	290	375			295		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	771	757	361	797	766	290	375			295		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	93	95	100	95	99	97			99		
cM capacity (veh/h)	291	323	684	266	319	750	1183			1266		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	27	335	386
Volume Left	17	0	40	11
Volume Right	34	11	11	28
cSH	415	414	1183	1266
Volume to Capacity	0.18	0.07	0.03	0.01
Queue Length (ft)	16	5	3	1
Control Delay (s)	15.5	14.3	1.3	0.3
Lane LOS	C	B	A	A
Approach Delay (s)	15.5	14.3	1.3	0.3
Approach LOS	C	B		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

2007

4: OR 238 & California St

30 HV Balanced

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	170	145	5	10	190	90	0	10	5	45	20	270
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	202	173	6	12	226	98	0	12	6	54	24	321

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	381	336	12	6	399
Volume Left (vph)	202	12	0	0	54
Volume Right (vph)	6	98	0	6	321
Hadj (s)	0.1	-0.1	0.0	-0.7	-0.4
Departure Headway (s)	5.7	5.3	7.0	6.3	5.4
Degree Utilization, x	0.60	0.49	0.02	0.01	0.60
Capacity (veh/h)	609	564	432	477	639
Control Delay (s)	10.7	9.6	8.9	8.1	10.4
Approach Delay (s)	10.7	9.6	8.6		10.4
Approach LOS	B	A	A		B

Intersection Summary			
Delay	10.2		
HCM Level of Service	B		
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

2007

5: OR 238 & 3rd St

30 HV Balanced

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	265	5	55	370	10	5	0	35	0	0	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	5	285	5	59	398	11	5	0	38	0	0	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	409			290			831	825	288	858	823	403
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	409			290			831	825	288	858	823	403
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			98	100	95	100	100	98
cM capacity (veh/h)	1150			1271			273	292	751	253	293	647

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	296	468	43	11
Volume Left	5	59	5	0
Volume Right	5	11	38	11
cSH	1150	1271	617	647
Volume to Capacity	0.00	0.05	0.07	0.02
Queue Length (ft)	0	4	6	1
Control Delay (s)	0.2	1.4	11.3	10.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.4	11.3	10.7
Approach LOS			B	B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

2007

6: OR 238 & Oregon St

30 HV Balanced

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	45	170	5	60	270	45	5	35	45	50	60	170
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	189	6	67	300	50	6	39	50	56	67	189

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	244	417	94	311
Volume Left (vph)	50	67	6	56
Volume Right (vph)	6	50	50	189
Hadj (s)	0.1	0.0	-0.3	-0.3
Departure Headway (s)	5.8	5.8	6.0	5.6
Degree Utilization, x	0.39	0.67	0.16	0.48
Capacity (veh/h)	581	562	515	619
Control Delay (s)	9.7	11.4	9.3	9.8
Approach Delay (s)	9.7	11.4	9.3	9.8
Approach LOS	A	B	A	A

Intersection Summary			
Delay	10.4		
HCM Level of Service	B		
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

2007

7: California St & 6th St

30 HV Balanced

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	200	295	50	45	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	217	321	54	49	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	375				576	348
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	375				576	348
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				90	99
cM capacity (veh/h)	1183				477	695

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	223	375	54
Volume Left	5	0	49
Volume Right	0	54	5
cSH	1183	1700	492
Volume to Capacity	0.00	0.22	0.11
Queue Length (ft)	0	0	9
Control Delay (s)	0.2	0.0	13.2
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	13.2
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

2007

8: California St & 8th St

30 HV Balanced

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	255	345	30	25	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	11	271	367	32	27	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	399				676	383
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399				676	383
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1160				415	664

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	282	399	32
Volume Left	11	0	27
Volume Right	0	32	5
cSH	1160	1700	443
Volume to Capacity	0.01	0.23	0.07
Queue Length (ft)	1	0	6
Control Delay (s)	0.4	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

2007

9: S. Stage Rd & Wells Fargo Rd.

30 HV Balanced

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	260	10	20	355	15	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	302	12	23	413	17	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			314		767	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			314		767	308
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		95	99
cM capacity (veh/h)			1246		363	732

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	314	436	23
Volume Left	0	23	17
Volume Right	12	0	6
cSH	1700	1246	416
Volume to Capacity	0.18	0.02	0.06
Queue Length (ft)	0	1	4
Control Delay (s)	0.0	0.6	14.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	14.2
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

2007

10: 'C' St & Oregon St

30 HV Balanced

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	15	35	15	15	15	20	95	15	10	225	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	18	41	18	18	18	24	112	18	12	265	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	488	471	271	512	468	121	276			129		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	488	471	271	512	468	121	276			129		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	95	96	96	98	98			99		
cM capacity (veh/h)	458	478	768	426	480	931	1286			1456		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	71	53	153	288
Volume Left	12	18	24	12
Volume Right	41	18	18	12
cSH	607	545	1286	1456
Volume to Capacity	0.12	0.10	0.02	0.01
Queue Length (ft)	10	8	1	1
Control Delay (s)	11.7	12.3	1.3	0.4
Lane LOS	B	B	A	A
Approach Delay (s)	11.7	12.3	1.3	0.4
Approach LOS	B	B		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

2007

11: 'F' St & Oregon St

30 HV Balanced

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	35	35	120	5	15	175
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	36	36	125	5	16	182
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	341	128			130	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	341	128			130	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	96			99	
cM capacity (veh/h)	648	922			1455	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	73	130	198
Volume Left	36	0	16
Volume Right	36	5	0
cSH	761	1700	1455
Volume to Capacity	0.10	0.08	0.01
Queue Length (ft)	8	0	1
Control Delay (s)	10.2	0.0	0.7
Lane LOS	B		A
Approach Delay (s)	10.2	0.0	0.7
Approach LOS	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

12: OR 238 & Pair-A-Dice Rd

2007
30 HV Balanced

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	185	385	15	15	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	215	448	17	17	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	465				672	456
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	465				672	456
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	100
cM capacity (veh/h)	1096				421	604

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	215	465	17
Volume Left	0	0	17
Volume Right	0	17	0
cSH	1096	1700	421
Volume to Capacity	0.00	0.27	0.04
Queue Length (ft)	0	0	3
Control Delay (s)	0.0	0.0	13.9
Lane LOS			B
Approach Delay (s)	0.0	0.0	13.9
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix F

Future Volume Data

Appendix F: Future Volume Data

2030 Added Volumes												
INTNAME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
OR 238 & Old OR 238	61	0	24				0	49	56	15	50	0
OR 238 & Shafer Lane	8	83	5	9	116	5	0	0	0	2	0	8
OR 238 & E Street	6	42	2	3	99	8	6	8	12	0	0	0
OR 238/5th Street & OR 238/California Stree	0	0	0	11	5	64	37	32	1	2	29	14
OR 238/California Street & 3rd Street	2	0	13	0	0	0	1	48	1	14	94	3
OR 238/California Street & Oregon Street	2	14	19	5	6	18	11	43	1	16	72	12
California Street & 6th Street				0	0	0	1	39	0	0	38	7
California Street & 8th Street				13	0	3	1	34	0	0	51	4
South Stage Road & Wells Fargo Drive	0	0	0				0	48	2	3	62	0
Oregon Street & C Street	0	0	0	1	28	1	0	0	0	0	0	0
Oregon Street & F Street	0	38	2	3	32	0				8	0	8
OR 238 & Pair-a-Dice Ranch Road				5	0	0	0	45	0	0	72	3

2030 No Build Balanced Volumes												
INTNAME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
OR 238 & Old OR 238	300		120					165	200	70	235	
OR 238 & Shafer Lane	30	315	20	40	475	20	5		25	10		45
OR 238 & E Street	45	300	10	15	400	35	20	25	40		15	10
OR 238/5th Street & OR 238/California Street		10	5	65	25	345	210	185	5	10	235	110
OR 238/California Street & 3rd Street	10		60			10	5	320	5	75	460	25
OR 238/California Street & Oregon Street	5	45	60	60	55	200	55	210	5	75	340	55
California Street & 6th Street				45		10	10	255			355	60
California Street & 8th Street				35		5	15	305			415	35
South Stage Road & Wells Fargo Drive	15		5					315	15	30	425	
Oregon Street & C Street	25	125	10	15	260	15	10	15	35	15	15	15
Oregon Street & F Street		160	5	20	230					45		45
OR 238 & Pair-a-Dice Ranch Road				30				220			470	40

Appendix G
2030 Intersection Analysis Worksheets (No Build)

Appendix G - Chapter 5, Jacksonville TSP

Jacksonville TSP
OR 238 @ Shafer Lane

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	0	25	10	0	45	30	315	20	40	475	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	0	29	12	0	53	33	350	22	44	528	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1108	1067	539	1085	1067	361	550			372		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1108	1067	539	1085	1067	361	550			372		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	95	93	100	92	97			96		
cM capacity (veh/h)	164	207	543	174	207	683	1020			1186		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	35	12	53	406	594
Volume Left	6	12	0	33	44
Volume Right	29	0	53	22	22
cSH	391	174	683	1020	1186
Volume to Capacity	0.09	0.07	0.08	0.03	0.04
Queue Length (ft)	7	5	6	3	3
Control Delay (s)	15.1	27.2	10.7	1.0	1.0
Lane LOS	C	D	B	A	A
Approach Delay (s)	15.1	13.7		1.0	1.0
Approach LOS	C	B			

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ E Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	25	40	0	15	10	45	300	10	15	400	35
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	24	29	47	0	18	12	50	333	11	17	444	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	957	942	464	998	956	339	483			344		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	957	942	464	998	956	339	483			344		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	88	92	100	93	98	95			99		
cM capacity (veh/h)	211	247	598	178	243	703	1079			1215		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	100	29	394	500
Volume Left	24	0	50	17
Volume Right	47	12	11	39
cSH	323	329	1079	1215
Volume to Capacity	0.31	0.09	0.05	0.01
Queue Length (ft)	32	7	4	1
Control Delay (s)	21.0	17.0	1.5	0.4
Lane LOS	C	C	A	A
Approach Delay (s)	21.0	17.0	1.5	0.4
Approach LOS	C	C		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ 5th Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	210	185	5	10	235	110	0	10	5	65	25	345
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	233	206	6	11	261	122	0	11	6	72	28	383

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	444	394	11	6	483
Volume Left (vph)	233	11	0	0	72
Volume Right (vph)	6	122	0	6	383
Hadj (s)	0.1	-0.1	0.0	-0.7	-0.4
Departure Headway (s)	6.2	5.7	7.8	7.1	5.8
Degree Utilization, x	0.76	0.63	0.02	0.01	0.79
Capacity (veh/h)	561	548	384	421	600
Control Delay (s)	13.5	11.0	9.7	8.9	13.4
Approach Delay (s)	13.5	11.0	9.4		13.4
Approach LOS	B	B	A		B

Intersection Summary			
Delay	12.7		
HCM Level of Service	B		
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	255	355	60	45	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	11	283	394	67	53	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	461				733	428
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	461				733	428
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	98
cM capacity (veh/h)	1100				384	627

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	294	461	65
Volume Left	11	0	53
Volume Right	0	67	12
cSH	1100	1700	413
Volume to Capacity	0.01	0.27	0.16
Queue Length (ft)	1	0	14
Control Delay (s)	0.4	0.0	15.3
Lane LOS	A		C
Approach Delay (s)	0.4	0.0	15.3
Approach LOS			C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
California Street @ 8th Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	15	305	415	35	35	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	17	339	461	39	41	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	500				853	481
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	500				853	481
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				87	99
cM capacity (veh/h)	1064				324	585

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	356	500	47
Volume Left	17	0	41
Volume Right	0	39	6
cSH	1064	1700	344
Volume to Capacity	0.02	0.29	0.14
Queue Length (ft)	1	0	12
Control Delay (s)	0.6	0.0	17.1
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	17.1
Approach LOS			C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
California Street @ Wells Fargo Road

2030 No-Build
30th Highest Hourly Volume

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	315	15	30	425	15	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	350	17	33	472	18	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			367		897	358
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			367		897	358
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		94	99
cM capacity (veh/h)			1192		302	686

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	367	506	24
Volume Left	0	33	18
Volume Right	17	0	6
cSH	1700	1192	351
Volume to Capacity	0.22	0.03	0.07
Queue Length (ft)	0	2	5
Control Delay (s)	0.0	0.8	16.0
Lane LOS		A	C
Approach Delay (s)	0.0	0.8	16.0
Approach LOS			C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ 3rd Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	320	5	75	460	25	10	0	60	0	0	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85
Hourly flow rate (vph)	6	356	6	83	511	28	11	0	67	0	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	539			361			1073	1075	358	1128	1064	525
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	539			361			1073	1075	358	1128	1064	525
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			93			94	100	90	100	100	98
cM capacity (veh/h)	1029			1198			183	203	686	155	206	552

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	367	622	78	12
Volume Left	6	83	11	0
Volume Right	6	28	67	12
cSH	1029	1198	492	552
Volume to Capacity	0.01	0.07	0.16	0.02
Queue Length (ft)	0	6	14	2
Control Delay (s)	0.2	1.8	13.7	11.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.8	13.7	11.7
Approach LOS			B	B

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Oregon Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	55	210	5	75	340	55	5	45	60	60	55	200
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	61	233	6	83	378	61	6	50	67	67	61	222

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	300	522	122	350
Volume Left (vph)	61	83	6	67
Volume Right (vph)	6	61	67	222
Hadj (s)	0.1	0.0	-0.3	-0.3
Departure Headway (s)	6.5	6.7	7.0	6.4
Degree Utilization, x	0.55	0.97	0.24	0.62
Capacity (veh/h)	523	539	457	545
Control Delay (s)	11.4	21.3	10.6	11.8
Approach Delay (s)	11.4	21.3	10.6	11.8
Approach LOS	B	C	B	B

Intersection Summary			
Delay	15.4		
HCM Level of Service	C		
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

Jacksonville TSP

Oregon Street @ F Street

2030 No-Build

30th Highest Hourly Volume

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	45	45	160	5	20	230
Peak Hour Factor	0.85	0.85	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	53	53	178	6	22	256
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	481	181			183	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	481	181			183	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	94			98	
cM capacity (veh/h)	536	862			1392	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	106	183	278
Volume Left	53	0	22
Volume Right	53	6	0
cSH	661	1700	1392
Volume to Capacity	0.16	0.11	0.02
Queue Length (ft)	14	0	1
Control Delay (s)	11.5	0.0	0.7
Lane LOS	B		A
Approach Delay (s)	11.5	0.0	0.7
Approach LOS	B		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
Oregon Street @ C Street

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	15	35	15	15	15	25	125	10	15	260	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	12	18	41	18	18	18	28	139	11	17	289	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	557	536	297	581	539	144	306			150		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	557	536	297	581	539	144	306			150		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	94	95	96	98	98			99		
cM capacity (veh/h)	408	436	742	379	434	903	1255			1431		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	71	53	178	322
Volume Left	12	18	28	17
Volume Right	41	18	11	17
cSH	566	496	1255	1431
Volume to Capacity	0.12	0.11	0.02	0.01
Queue Length (ft)	11	9	2	1
Control Delay (s)	12.3	13.1	1.4	0.5
Lane LOS	B	B	A	A
Approach Delay (s)	12.3	13.1	1.4	0.5
Approach LOS	B	B		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Pair-a-Dice Road

2030 No-Build
30th Highest Hourly Volume

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	220	470	40	30	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	0	244	522	44	35	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	567				789	544
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	567				789	544
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				90	100
cM capacity (veh/h)	1005				360	539

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	244	567	35
Volume Left	0	0	35
Volume Right	0	44	0
cSH	1005	1700	360
Volume to Capacity	0.00	0.33	0.10
Queue Length (ft)	0	0	8
Control Delay (s)	0.0	0.0	16.1
Lane LOS			C
Approach Delay (s)	0.0	0.0	16.1
Approach LOS			C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Old OR 238 (Bybee Corner)

2030 No-Build
30th Highest Hourly Volume

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	165	200	70	235	300	120
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	183	222	78	261	333	133
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			406		600	183
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			406		600	183
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		23	84
cM capacity (veh/h)			1153		433	859

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	183	222	78	261	333	133
Volume Left	0	0	78	0	333	0
Volume Right	0	222	0	0	0	133
cSH	1700	1700	1153	1700	433	859
Volume to Capacity	0.11	0.13	0.07	0.15	0.77	0.16
Queue Length (ft)	0	0	5	0	165	14
Control Delay (s)	0.0	0.0	8.3	0.0	36.2	10.0
Lane LOS			A		E	A
Approach Delay (s)	0.0		1.9		28.7	
Approach LOS					D	

Intersection Summary			
Average Delay	11.6		
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix H
2030 Intersection Analysis (Transit/Bike Loss)

Appendix H - Chapter 5, Jacksonville TSP

Jacksonville TSP
OR 238 @ Shafer Lane

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	0	25	10	0	45	30	315	20	40	475	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	0	30	12	0	54	34	357	23	45	538	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1131	1088	550	1107	1088	368	561			380		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1131	1088	550	1107	1088	368	561			380		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	94	93	100	92	97			96		
cM capacity (veh/h)	157	200	535	168	200	677	1010			1179		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	36	12	54	414	606
Volume Left	6	12	0	34	45
Volume Right	30	0	54	23	23
cSH	382	168	677	1010	1179
Volume to Capacity	0.09	0.07	0.08	0.03	0.04
Queue Length (ft)	8	6	6	3	3
Control Delay (s)	15.4	28.1	10.8	1.1	1.0
Lane LOS	C	D	B	A	A
Approach Delay (s)	15.4	13.9		1.1	1.0
Approach LOS	C	B			

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ E Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	25	40	0	15	10	45	300	10	15	400	35
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	24	30	48	0	18	12	51	340	11	17	453	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	976	960	473	1018	975	346	493			351		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	976	960	473	1018	975	346	493			351		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	88	92	100	92	98	95			99		
cM capacity (veh/h)	203	241	591	171	236	697	1071			1207		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	102	30	402	510
Volume Left	24	0	51	17
Volume Right	48	12	11	40
cSH	315	321	1071	1207
Volume to Capacity	0.32	0.09	0.05	0.01
Queue Length (ft)	34	8	4	1
Control Delay (s)	21.8	17.4	1.5	0.4
Lane LOS	C	C	A	A
Approach Delay (s)	21.8	17.4	1.5	0.4
Approach LOS	C	C		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ 5th Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	210	185	5	10	235	110	0	10	5	65	25	345
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	238	210	6	11	266	125	0	11	6	74	28	391

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	453	402	11	6	493
Volume Left (vph)	238	11	0	0	74
Volume Right (vph)	6	125	0	6	391
Hadj (s)	0.1	-0.1	0.0	-0.7	-0.4
Departure Headway (s)	6.3	5.8	7.9	7.2	5.9
Degree Utilization, x	0.79	0.65	0.02	0.01	0.81
Capacity (veh/h)	556	546	381	418	595
Control Delay (s)	14.1	11.3	9.8	9.1	14.0
Approach Delay (s)	14.1	11.3	9.5		14.0
Approach LOS	B	B	A		B

Intersection Summary			
Delay	13.2		
HCM Level of Service	B		
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

Jacksonville TSP
California Street @ 6th Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	255	355	60	45	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	11	289	402	68	54	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	470				748	436
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	470				748	436
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	98
cM capacity (veh/h)	1091				376	620

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	300	470	66
Volume Left	11	0	54
Volume Right	0	68	12
cSH	1091	1700	405
Volume to Capacity	0.01	0.28	0.16
Queue Length (ft)	1	0	14
Control Delay (s)	0.4	0.0	15.6
Lane LOS	A		C
Approach Delay (s)	0.4	0.0	15.6
Approach LOS			C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
California Street @ 8th Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	15	305	415	35	35	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	17	346	470	40	42	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	510				870	490
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	510				870	490
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				87	99
cM capacity (veh/h)	1055				317	578

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	363	510	48
Volume Left	17	0	42
Volume Right	0	40	6
cSH	1055	1700	336
Volume to Capacity	0.02	0.30	0.14
Queue Length (ft)	1	0	12
Control Delay (s)	0.6	0.0	17.5
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	17.5
Approach LOS			C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
California Street @ Wells Fargo Road

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	315	15	30	425	15	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	357	17	34	482	18	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			374		915	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			374		915	366
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		94	99
cM capacity (veh/h)			1184		294	680

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	374	516	24
Volume Left	0	34	18
Volume Right	17	0	6
cSH	1700	1184	343
Volume to Capacity	0.22	0.03	0.07
Queue Length (ft)	0	2	6
Control Delay (s)	0.0	0.8	16.3
Lane LOS		A	C
Approach Delay (s)	0.0	0.8	16.3
Approach LOS			C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ 3rd Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	320	5	75	460	25	10	0	60	0	0	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85
Hourly flow rate (vph)	6	363	6	85	521	28	11	0	68	0	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	550			368			1094	1096	366	1150	1085	536
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	550			368			1094	1096	366	1150	1085	536
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			93			94	100	90	100	100	98
cM capacity (veh/h)	1020			1190			176	197	680	148	200	545

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	374	635	79	12
Volume Left	6	85	11	0
Volume Right	6	28	68	12
cSH	1020	1190	483	545
Volume to Capacity	0.01	0.07	0.16	0.02
Queue Length (ft)	0	6	15	2
Control Delay (s)	0.2	1.9	13.9	11.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.9	13.9	11.8
Approach LOS			B	B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Oregon Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	55	210	5	75	340	55	5	45	60	60	55	200
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	62	238	6	85	385	62	6	51	68	68	62	227

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	306	533	125	357
Volume Left (vph)	62	85	6	68
Volume Right (vph)	6	62	68	227
Hadj (s)	0.1	0.0	-0.3	-0.3
Departure Headway (s)	6.7	6.8	7.2	6.5
Degree Utilization, x	0.57	1.00	0.25	0.64
Capacity (veh/h)	519	537	453	539
Control Delay (s)	11.7	23.6	10.8	12.2
Approach Delay (s)	11.7	23.6	10.8	12.2
Approach LOS	B	C	B	B

Intersection Summary			
Delay	16.5		
HCM Level of Service	C		
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

Jacksonville TSP
Oregon Street @ F Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	45	45	160	5	20	230
Peak Hour Factor	0.85	0.85	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	54	54	181	6	23	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	490	184			187	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490	184			187	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	94			98	
cM capacity (veh/h)	529	858			1387	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	108	187	283
Volume Left	54	0	23
Volume Right	54	6	0
cSH	654	1700	1387
Volume to Capacity	0.17	0.11	0.02
Queue Length (ft)	15	0	1
Control Delay (s)	11.6	0.0	0.7
Lane LOS	B		A
Approach Delay (s)	11.6	0.0	0.7
Approach LOS	B		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
Oregon Street @ C Street

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	15	35	15	15	15	25	125	10	15	260	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	12	18	42	18	18	18	28	142	11	17	295	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	568	547	303	592	550	147	312			153		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	568	547	303	592	550	147	312			153		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	96	94	95	96	98	98			99		
cM capacity (veh/h)	400	429	737	371	428	900	1249			1428		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	72	54	181	329
Volume Left	12	18	28	17
Volume Right	42	18	11	17
cSH	559	488	1249	1428
Volume to Capacity	0.13	0.11	0.02	0.01
Queue Length (ft)	11	9	2	1
Control Delay (s)	12.4	13.3	1.4	0.5
Lane LOS	B	B	A	A
Approach Delay (s)	12.4	13.3	1.4	0.5
Approach LOS	B	B		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Pair-a-Dice Road

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	220	470	40	30	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.85	0.85
Hourly flow rate (vph)	0	249	533	45	36	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	578				805	555
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	578				805	555
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				90	100
cM capacity (veh/h)	996				352	531

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	249	578	36
Volume Left	0	0	36
Volume Right	0	45	0
cSH	996	1700	352
Volume to Capacity	0.00	0.34	0.10
Queue Length (ft)	0	0	8
Control Delay (s)	0.0	0.0	16.4
Lane LOS			C
Approach Delay (s)	0.0	0.0	16.4
Approach LOS			C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

Jacksonville TSP
OR 238 @ Old OR 238 (Bybee Corner)

2030 Modal Cessation
30th Highest Hourly Volume

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	165	200	70	235	300	120
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	187	227	79	266	340	136
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			414		612	187
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			414		612	187
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		20	84
cM capacity (veh/h)			1145		425	855

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	187	227	79	266	340	136
Volume Left	0	0	79	0	340	0
Volume Right	0	227	0	0	0	136
cSH	1700	1700	1145	1700	425	855
Volume to Capacity	0.11	0.13	0.07	0.16	0.80	0.16
Queue Length (ft)	0	0	6	0	179	14
Control Delay (s)	0.0	0.0	8.4	0.0	39.7	10.0
Lane LOS			A		E	B
Approach Delay (s)	0.0		1.9		31.2	
Approach LOS					D	

Intersection Summary			
Average Delay	12.6		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX I

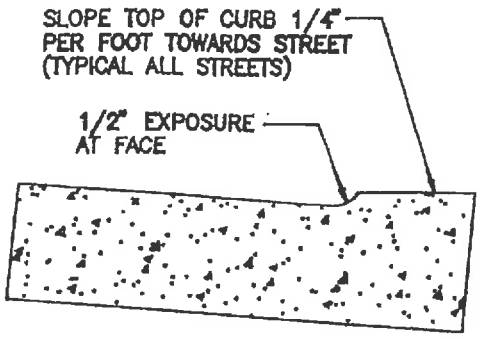
The City of Jacksonville

Transportation Design Standards

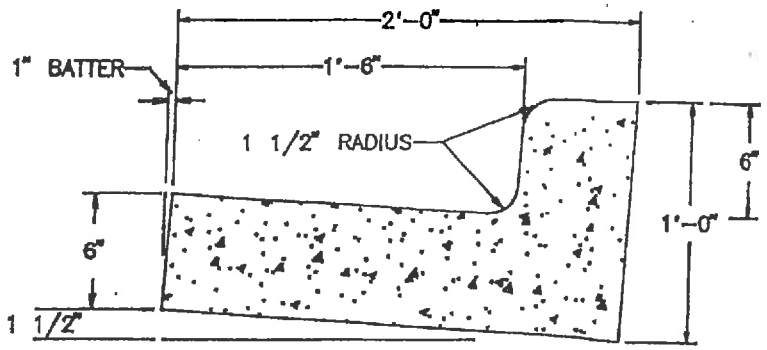
for

Transportation Systems Plan

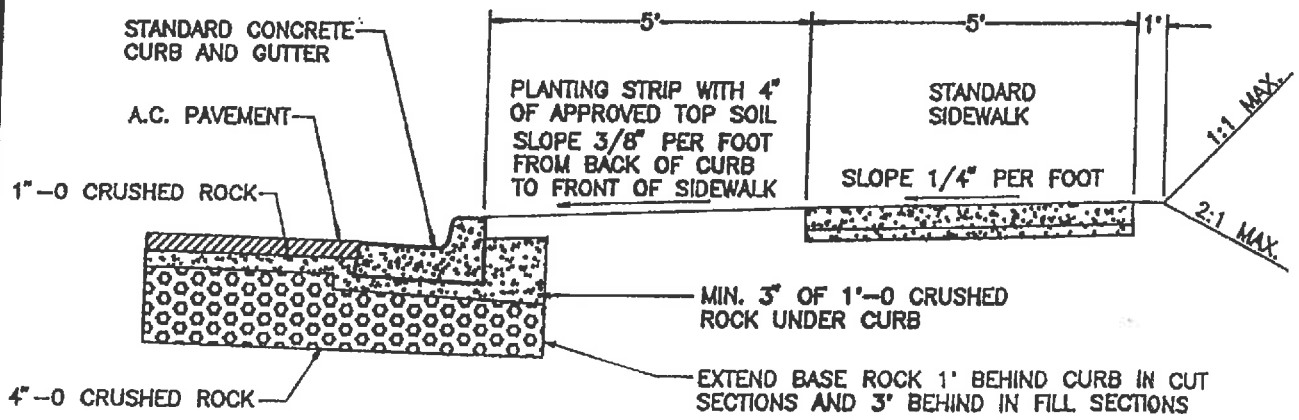
June 2009



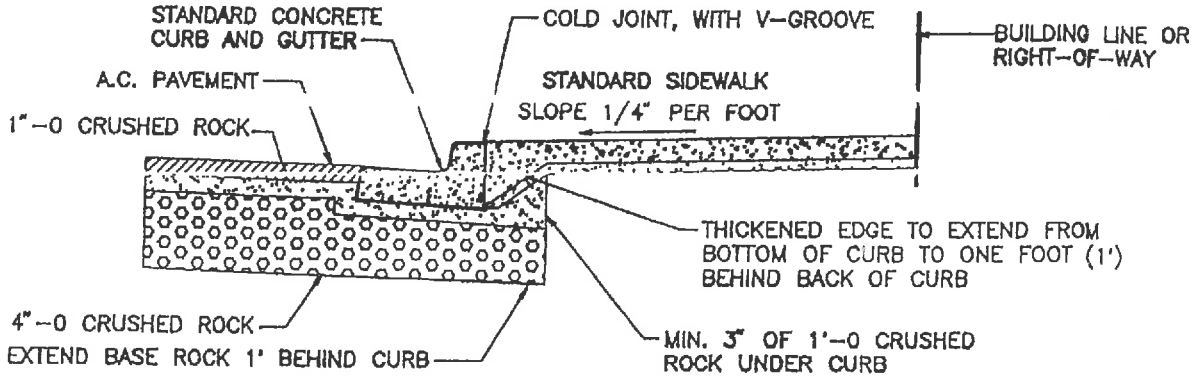
CURB AND GUTTER AT DRIVEWAYS



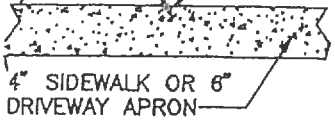
STANDARD CURB AND GUTTER



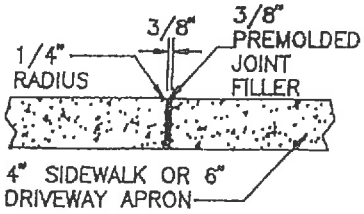
SIDEWALK DETAIL WITH PLANTER STRIP



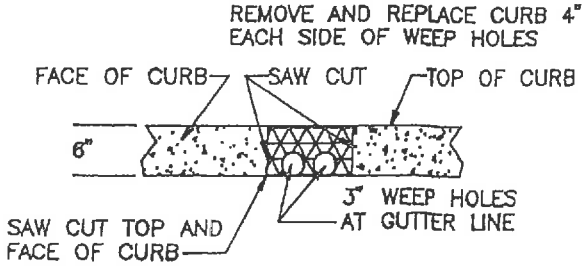
SIDEWALK ADJACENT TO CURB



V-GROOVE JOINT



EXPANSION JOINT



WEEP HOLE INSTALLATION

CITY OF JACKSONVILLE OREGON	TYPICAL SIDEWALK AND CURB AND GUTTER DETAILS	DATE: 9/95 REV.	STANDARD DWG. NO. 109

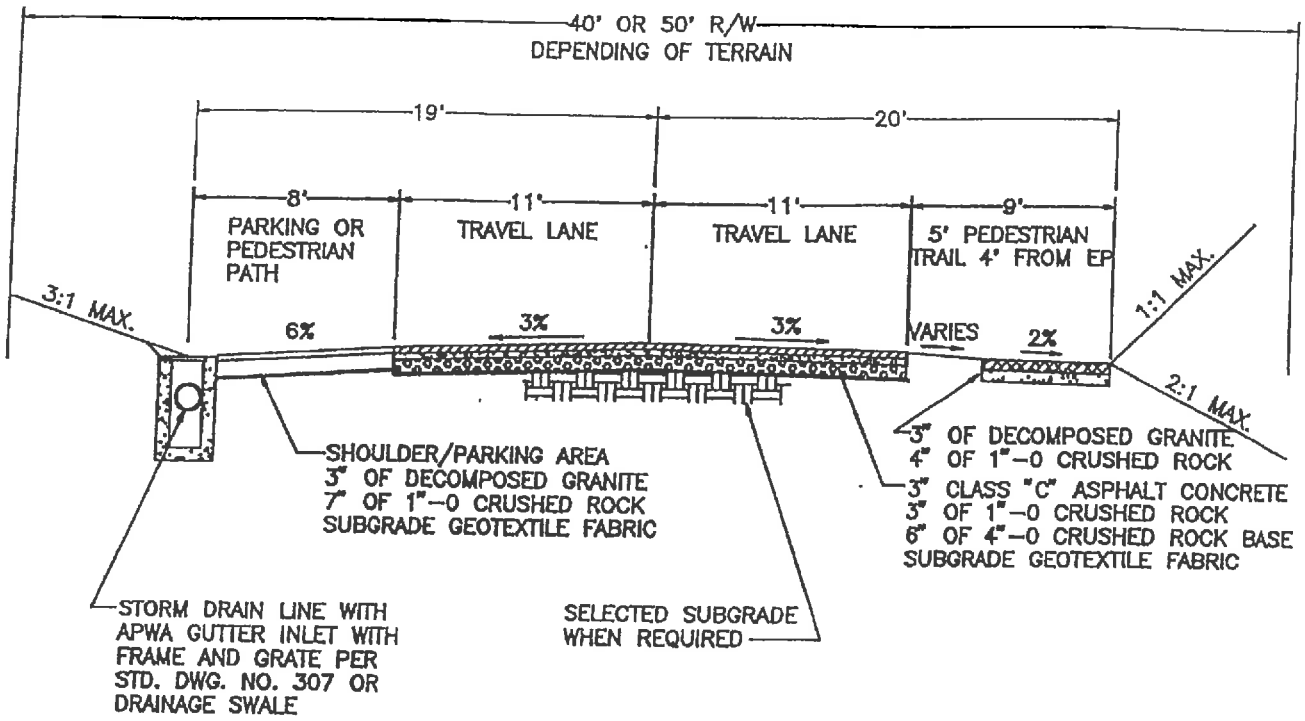
GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE 1990 OREGON A.P.W.A., THE UNIFORM PLUMBING CODE AND THE CITY OF JACKSONVILLE, OREGON.
2. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHOWN ARE FROM RECORD ONLY. THE CONTRACTOR SHALL VERIFY ALL UTILITIES IN POTENTIAL CONFLICT AREAS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONFLICTS OCCUR.
3. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS PRIOR TO BEGINNING CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN AND/OF MAINTAIN EXISTING PUBLIC STREETS OF SOIL, OR OTHER DEBRIS DEPOSITED BY CONSTRUCTION OPERATIONS AND REPAIR ALL STREETS AND UTILITIES DAMAGED BY CONSTRUCTION OPERATIONS IN A TIMELY MANNER TO AVOID INCONVENIENCES OR HAZARDS TO THE PUBLIC.
5. ALL CONSTRUCTION AREAS SHALL BE "STRIPPED" OF UNDESIRABLE MATERIAL PRIOR TO BACKFILL WITH SUITABLE EARTH OR ROCK, UNCONTAMINATED WITH ORGANIC MATTER. EMBANKMENT SHALL BE PLACED IN HORIZONTAL LAYERS (PARALLEL TO THE FINISHED SURFACE) NOT EXCEEDING EIGHT (8) INCHES IN UNCOMPACTED THICKNESS. EACH LAYER SHALL BE COMPACTED TO 90% OF AASHTO T-99, EXCEPT WITHIN 3 FEET OF THE SUBGRADE WHICH SHALL BE COMPACTED TO 95% OF AASHTO T-99.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CALL FOR UTILITY LOCATES (779-6676) A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

CONCRETE SIDEWALK AND CURB AND GUTTER NOTES

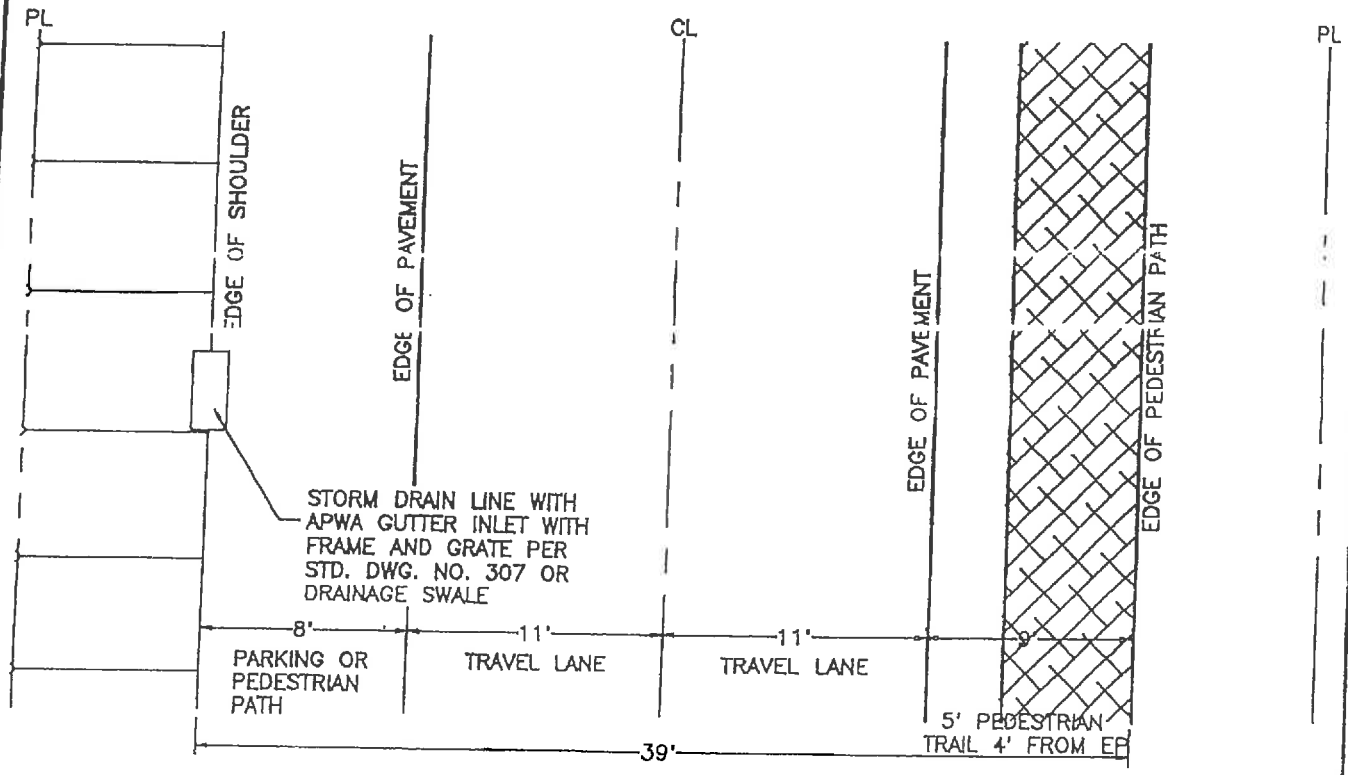
1. ALL CONCRETE SHALL BE; MIN. 500 LB CEMENT/C.Y., MAX. 4" SLUMP, MAX. AGGREGATE SIZE OF 1 1/2" AND SHALL BE 3000 PSI AT 28 DAYS.
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE 1990 OREGON A.P.W.A.
3. INSTALL 2-3" WEEP HOLES FOR EACH RESIDENTIAL LOT.
4. GRANULAR MATERIAL UNDER SIDEWALKS AND DRIVEWAYS SHALL BE SAND, GRANITE, OR CRUSHED ROCK, FIRMLY TAMPED, AND SHALL BE 2" MIN. THICKNESS UNDER SIDEWALKS AND 3" MIN. THICKNESS UNDER DRIVEWAYS.
5. ALL SIDEWALKS SHALL BE 4" THICK AND ALL DRIVEWAY APRONS SHALL BE 6" THICK. ALL COMMERCIAL/INDUSTRIAL DRIVEWAY AND ALLEY APRONS SHALL HAVE #4 REBAR AT 12" O.C. EACH WAY. DRIVEWAY APRONS SHALL EXTEND TO THE BACK OF SIDEWALK.
6. EXPANSION JOINTS WITH PREMOLDED FILLER SHALL BE INSTALLED BETWEEN DRIVEWAYS AND SIDEWALK AND AT ALL CURB RETURNS AS DIRECTED BY THE ENGINEER.
7. ALL DRIVEWAY AND ALLEY APRONS SHALL HAVE A MAX. SLOPE OF 1:12 AND SHALL HAVE 6' FLARES.
8. ALL JOINTS IN THE SIDEWALK SHALL LINE UP WITH THE JOINTS IN THE CURB AND GUTTER, WHERE SIDEWALK IS ADJACENT TO CURB.
9. SIDEWALK RAMPS SHALL CONFORM TO ODOT DWG. NO. 2077C.

CITY OF JACKSONVILLE OREGON	TYPICAL GENERAL CONSTRUCTION NOTES	DATE: 9/95 REV.	STANDARD DWG. NO. 110



COLLECTOR STREET TYPICAL SECTION – AREA A

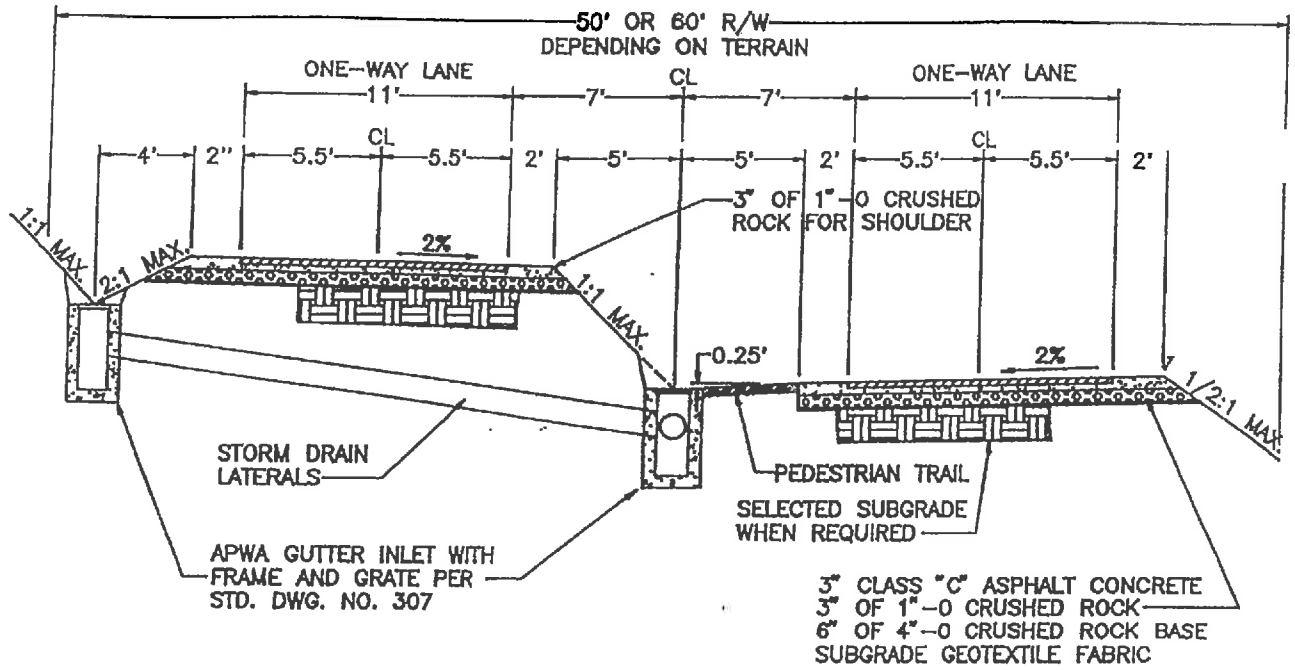
PEDESTRIAN TRAIL MAY BE PLACED ON EITHER SIDE OF STREET ACCORDING TO THE CITY'S MASTER PLAN.



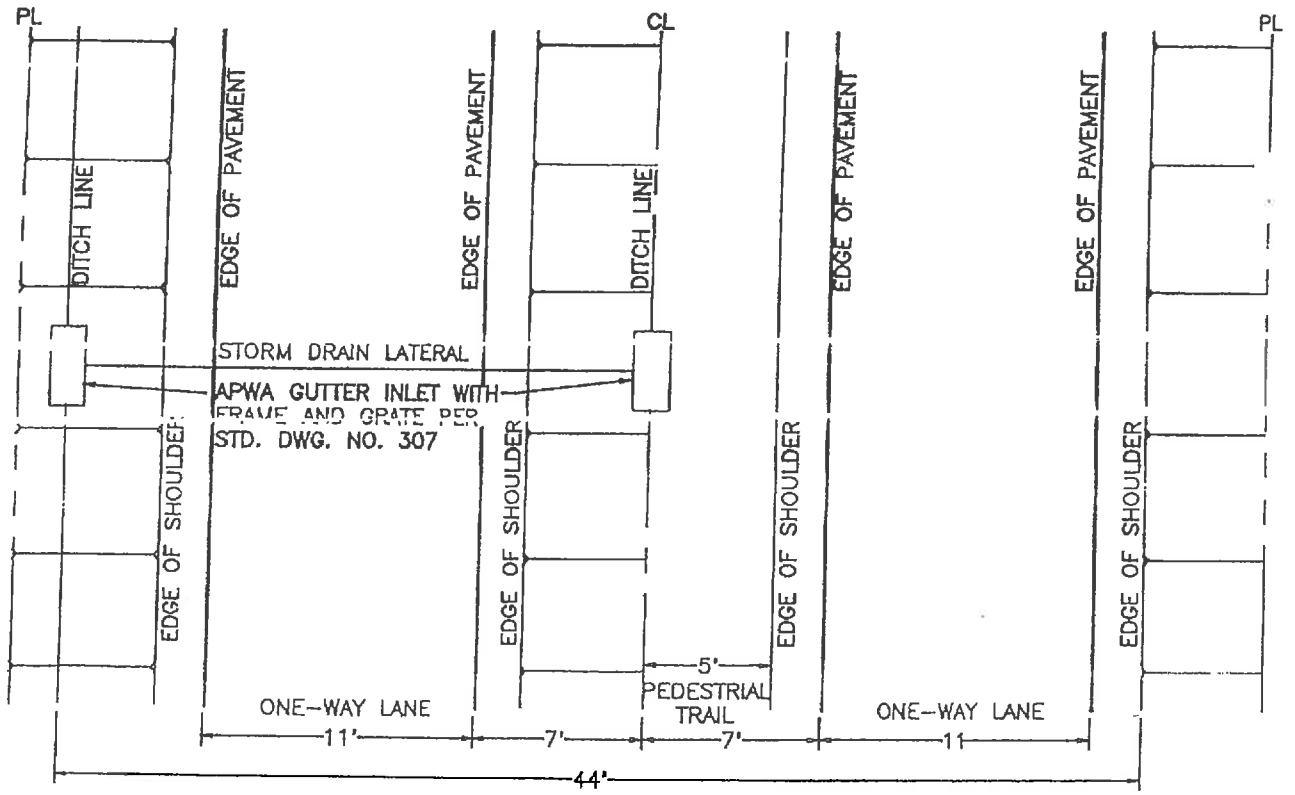
COLLECTOR STREET PLAN VIEW – AREA A

NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION COLLECTOR STREET – AREA A	DATE: 9/95 REV.	STANDARD DWG. NO. 103



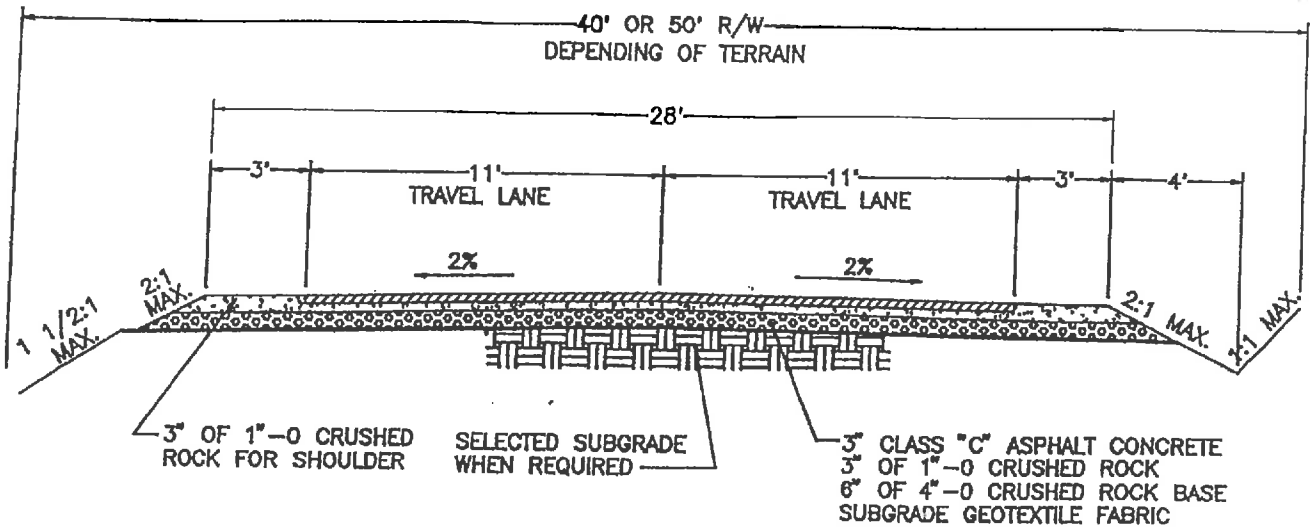
TYPICAL STREET SECTION AREA B – DIVIDED



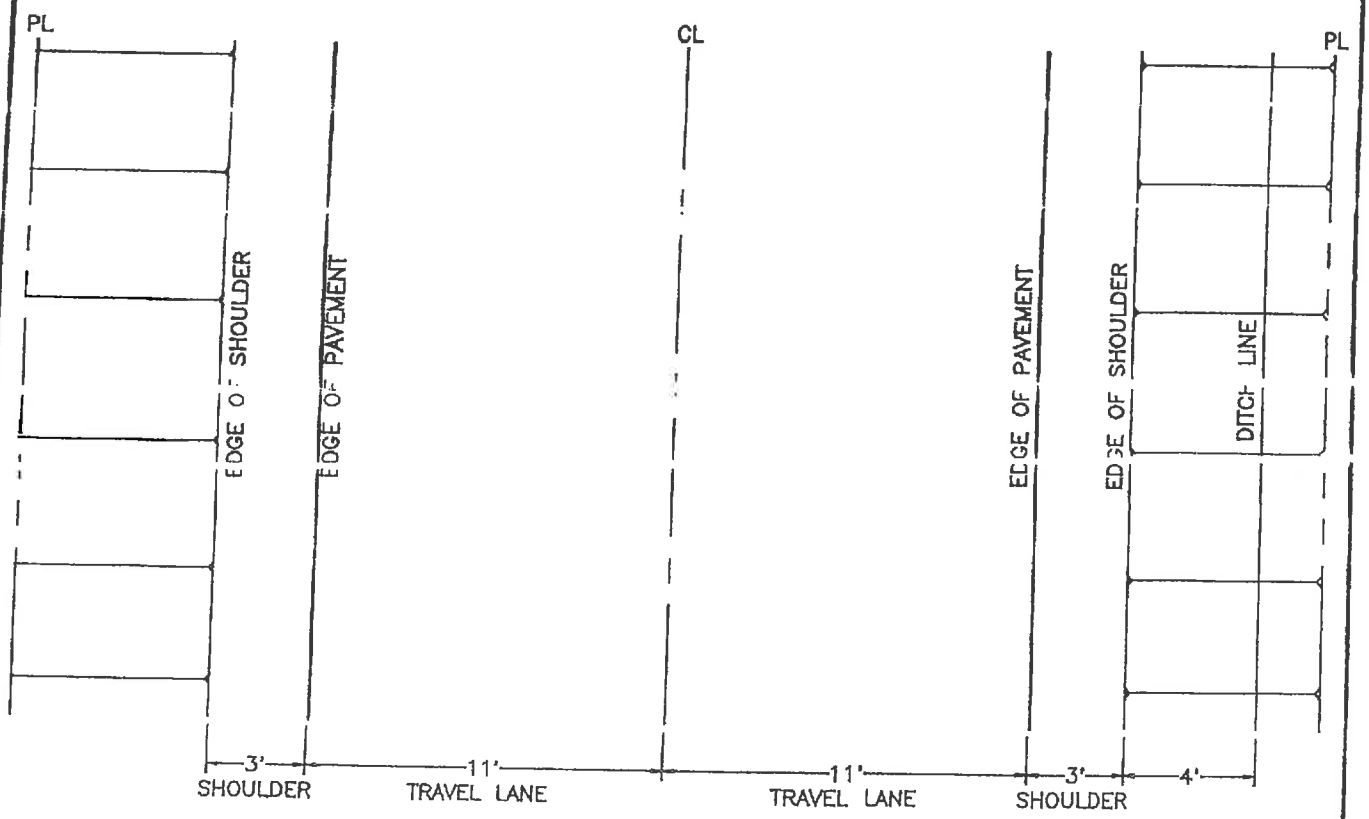
TYPICAL STREET PLAN VIEW AREA B – DIVIDED

NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION AREA B – DIVIDED	DATE: 9/95 REV.	STANDARD DWG. NO. 104



TYPICAL STREET SECTION AREA B – UNDIVIDED

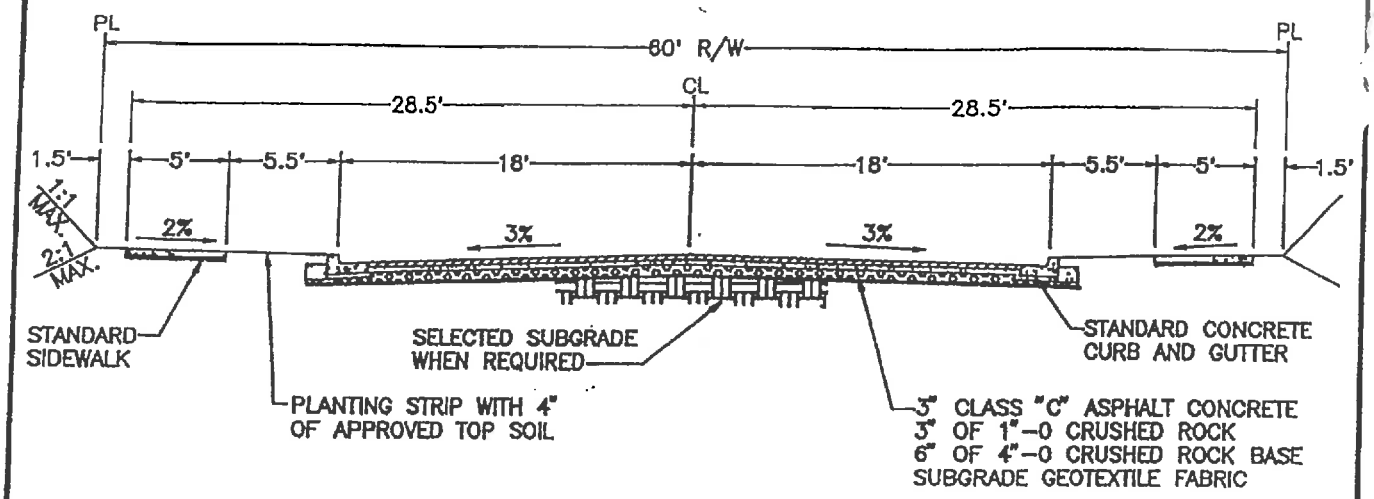


TYPICAL STREET PLAN VIEW AREA B – UNDIVIDED

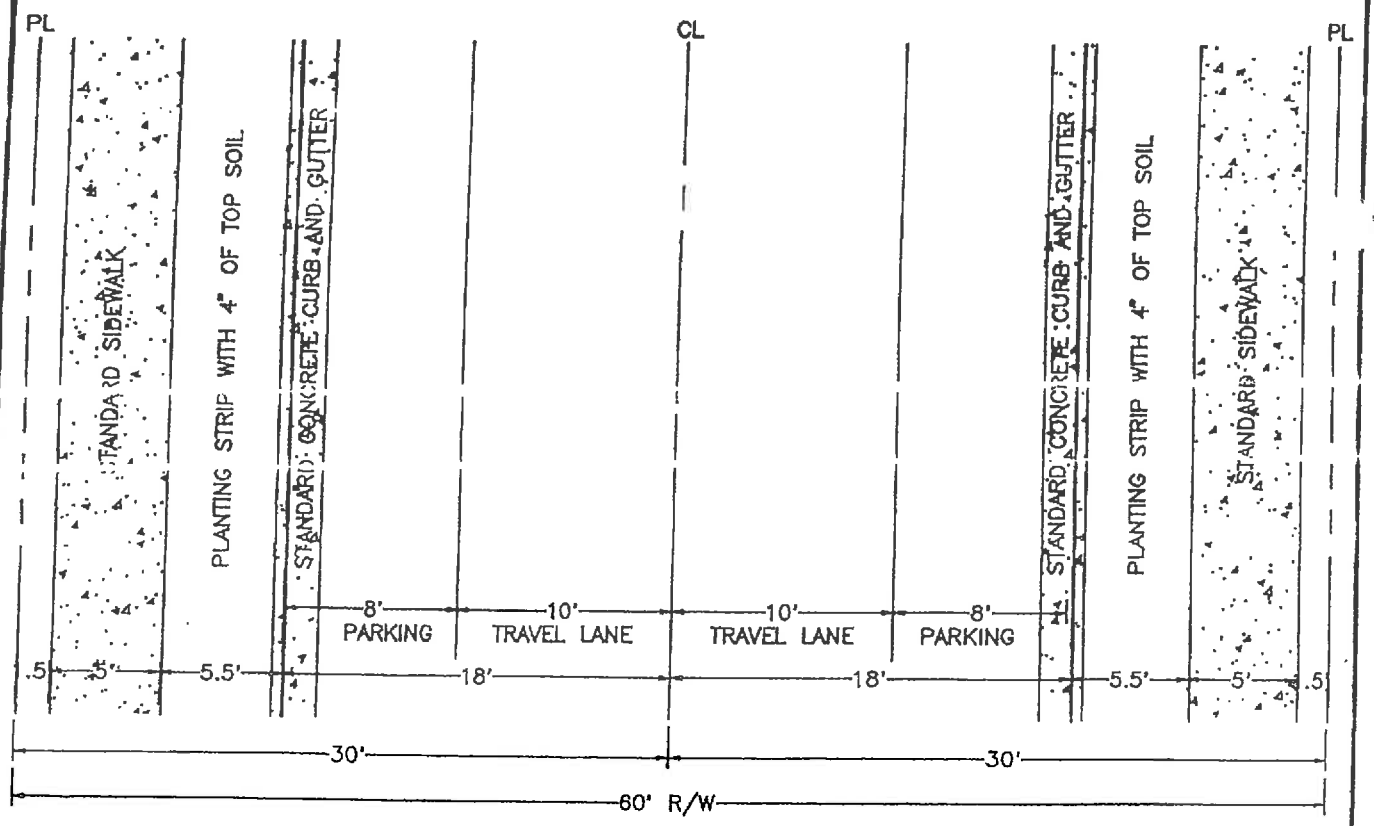
NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE

NO PARKING

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION AREA B – UNDIVIDED	DATE: 9/95 REV.	STANDARD DWG. NO. 105



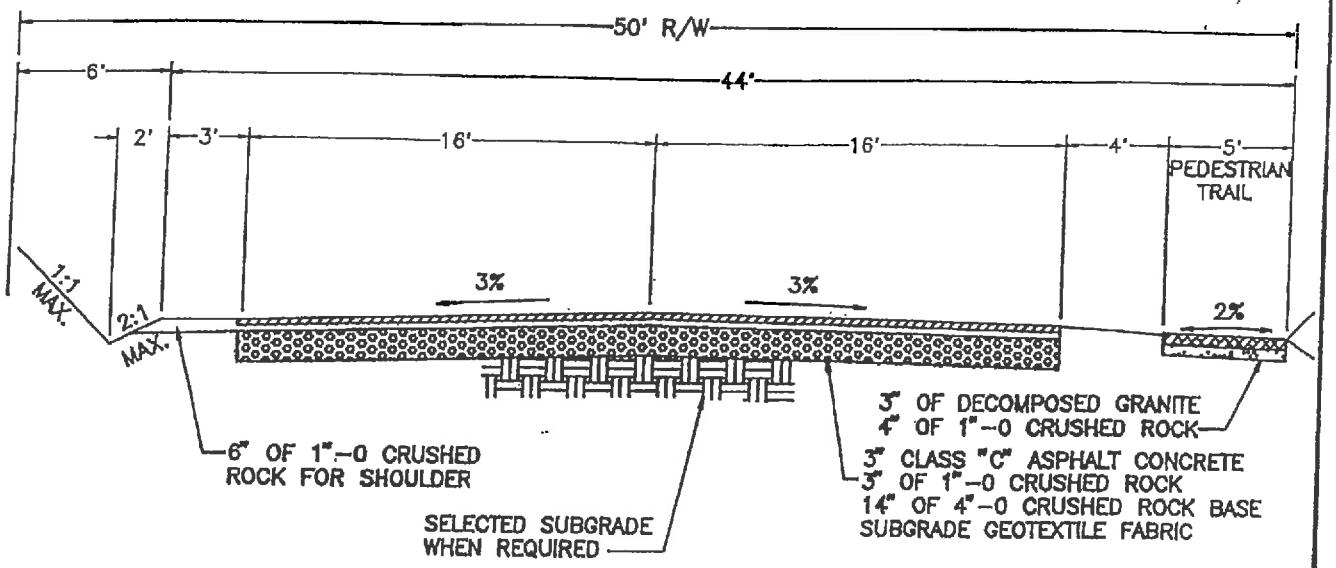
TYPICAL STREET SECTION – AREA C



TYPICAL STREET PLAN VIEW – AREA C

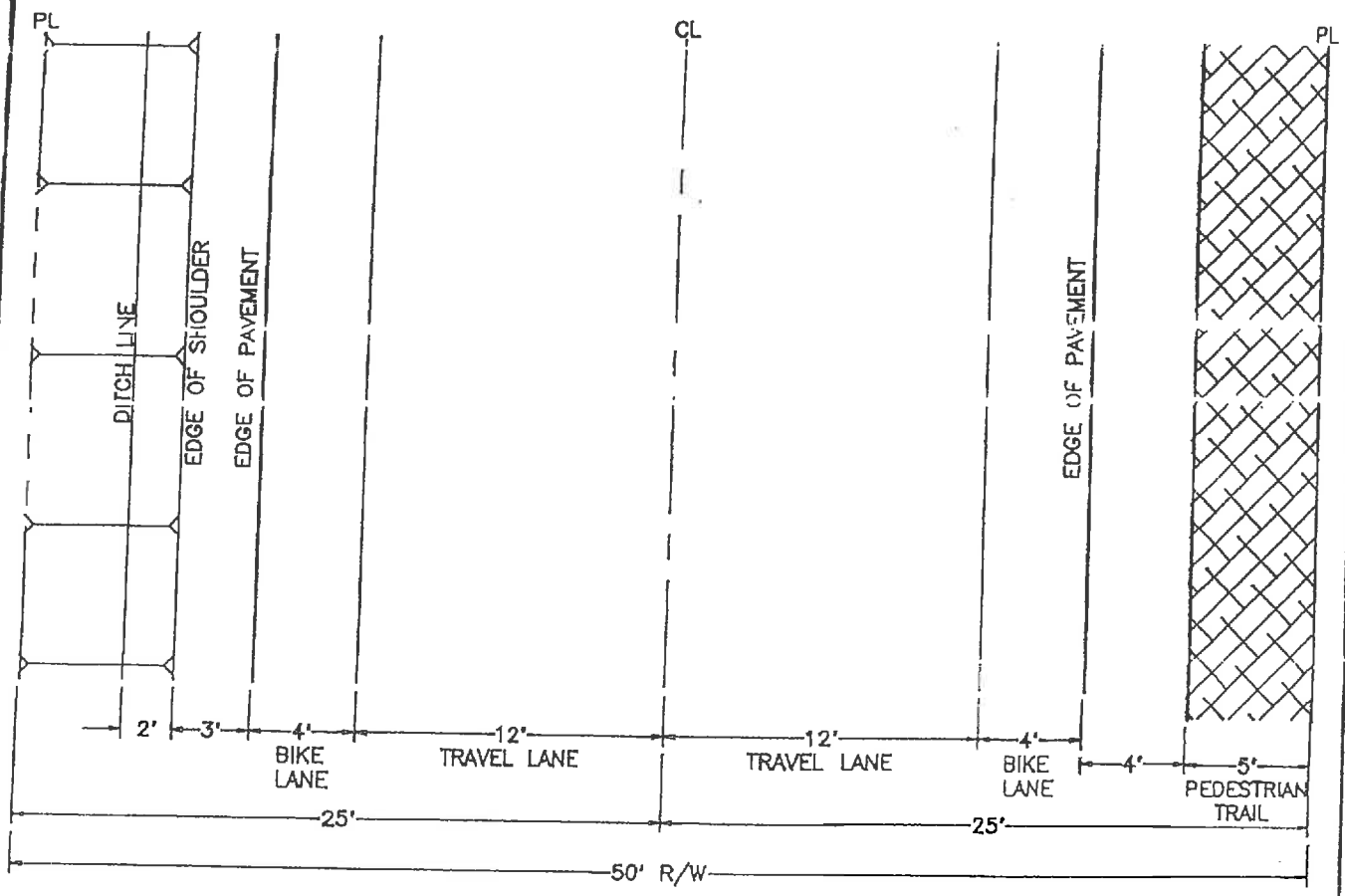
NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION AREA C	DATE: 9/95 REV.	STANDARD DWG. NO. 106



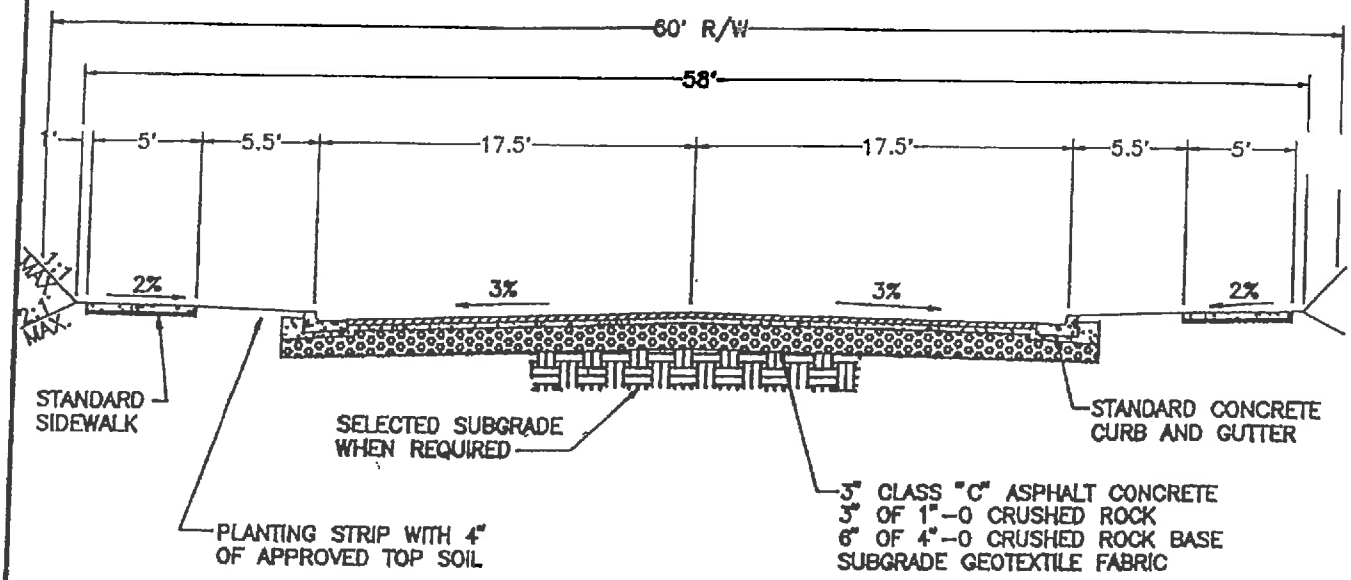
NOTE: BIKE LANE SHALL BE STRIPED AND SIGNED IN ACCORDANCE WITH ODOT GUIDELINES.
PEDESTRIAN TRAIL MAY BE PLACED ON EITHER SIDE OF STREET ACCORDING TO THE CITY'S MASTER PLAN.

TYPICAL ARTERIAL STREET SECTION WITHOUT CURBS



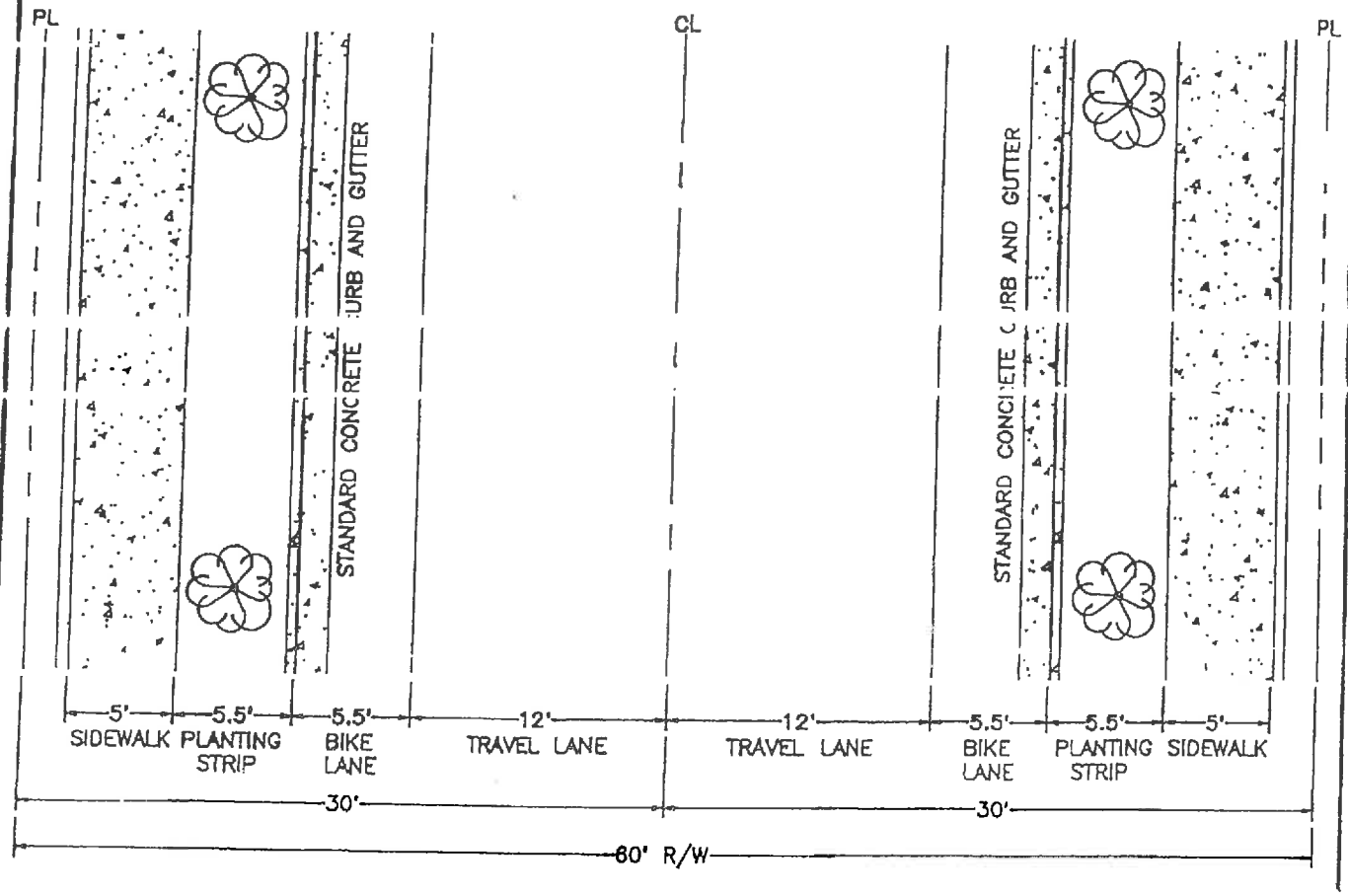
TYPICAL ARTERIAL STREET PLAN VIEW WITHOUT CURBS

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION ARTERIAL WITHOUT CURBS	DATE: 9/95 REV.	STANDARD DWG. NO. 107



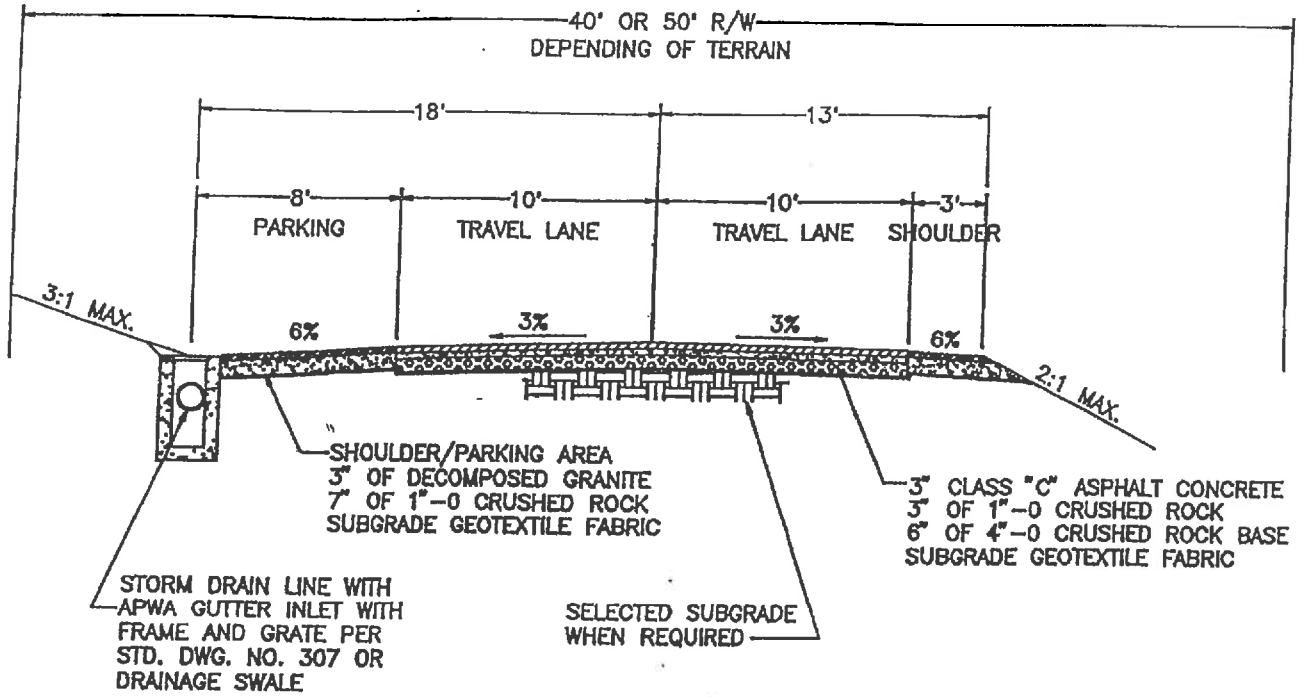
NOTE: BIKE LANE SHALL BE STRIPED AND SIGNED IN ACCORDANCE WITH ODOT GUIDELINES.

TYPICAL ARTERIAL STREET SECTION WITH CURBS AND SIDEWALKS

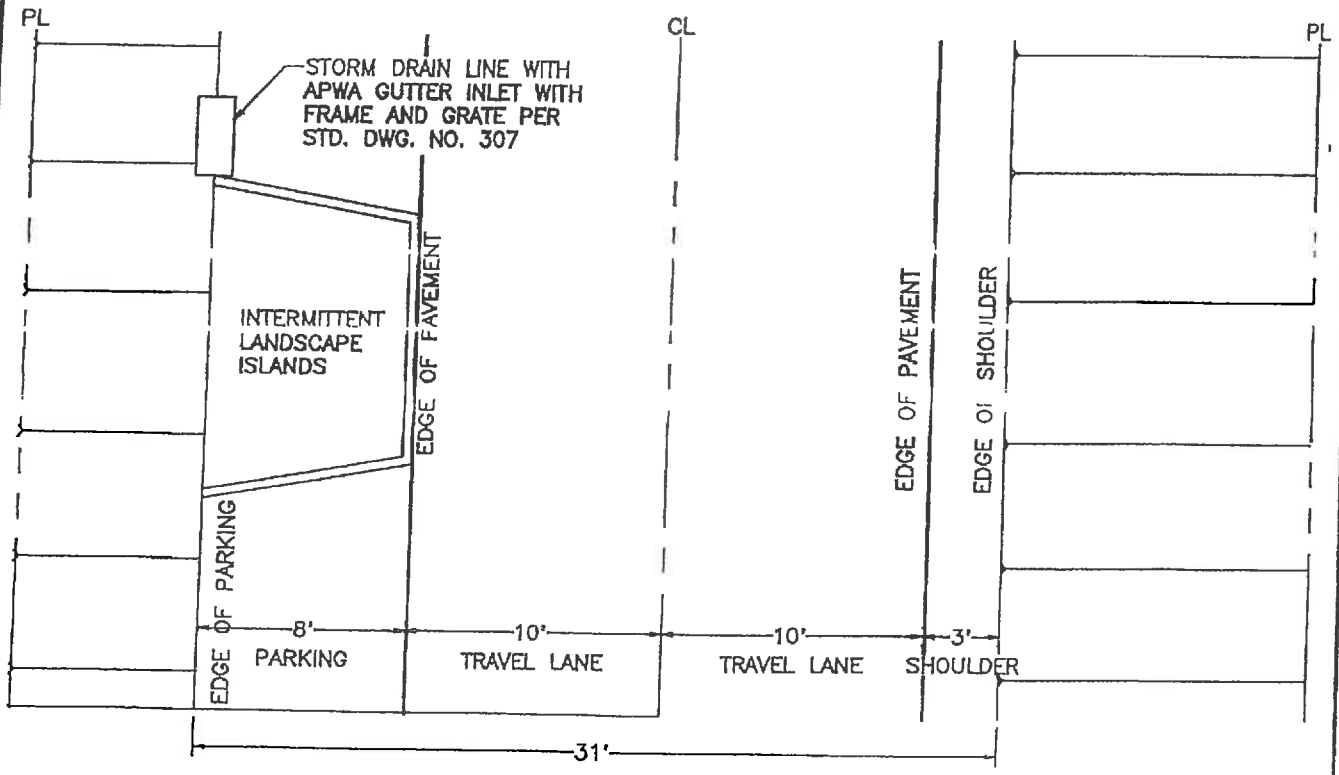


TYPICAL ARTERIAL STREET PLAN VIEW WITH CURBS AND SIDEWALKS

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION ARTERIAL WITH CURBS	DATE: 9/95 REV.	STANDARD DWG. NO. 108



LOCAL STREET TYPICAL SECTION – AREA A



LOCAL STREET PLAN VIEW – AREA A

NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION LOCAL STREET - AREA A	DATE: 9/95 REV.	STANDARD DWG. NO. 102

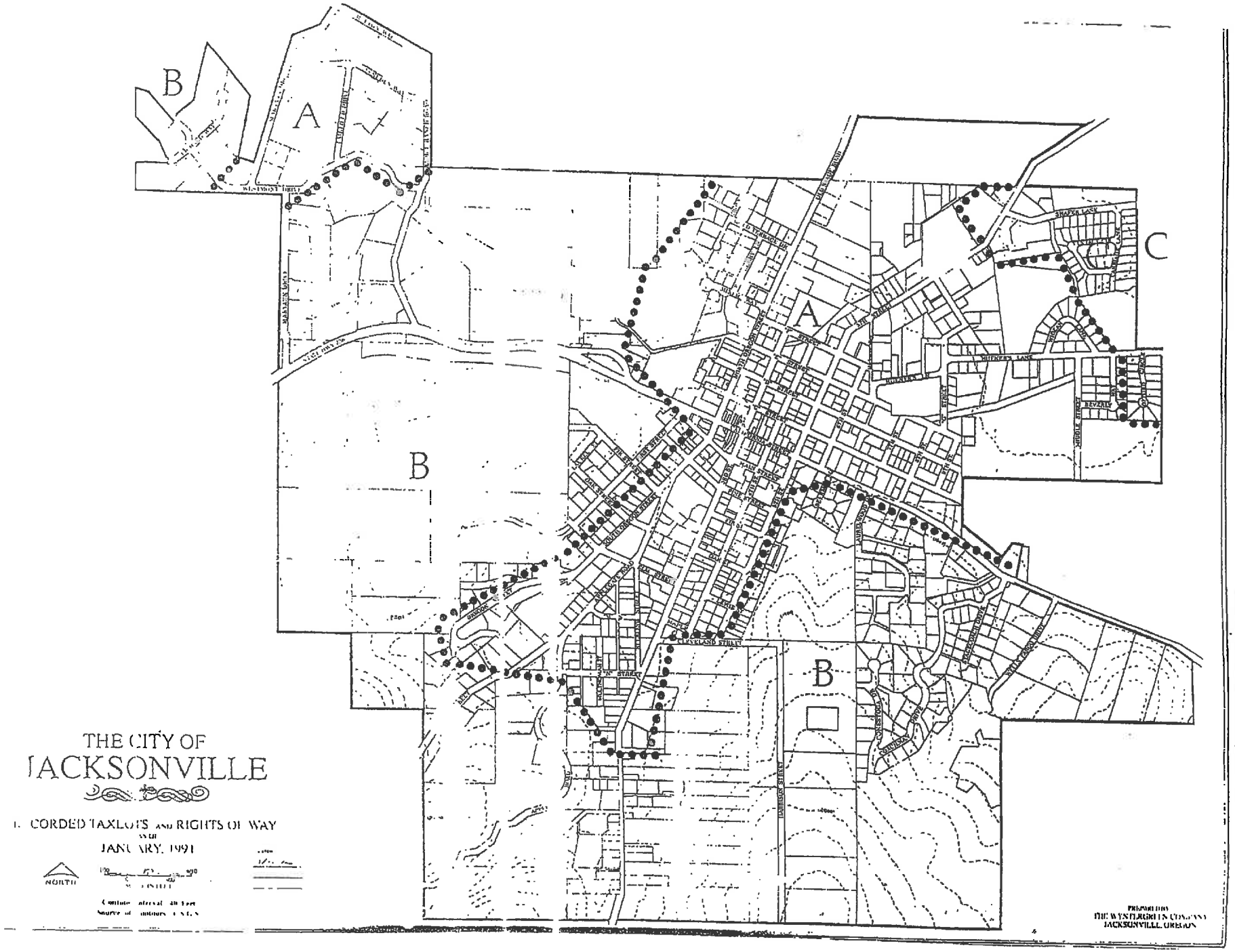

THE CITY OF
JACKSONVILLE
CORDED TAXLOTS AND RIGHTS OF WAY
JANUARY, 1991
NORTH
A
B
C
PREPARED BY
THE WESTLAKE CONSULTANTS COMPANY
JACKSONVILLE, OREGON

EXHIBIT "B"

Resolution No. 744

A RESOLUTION ADOPTING REVISIONS TO APPENDIX "B" OF THE JACKSONVILLE TRANSPORTATION SYSTEM PLAN.

WHEREAS, the City Council has determined that local street standards do not meet the current traffic needs, and

WHEREAS, page 34 of the Jacksonville Transportation System Plan allows appendices to be modified by Resolution:

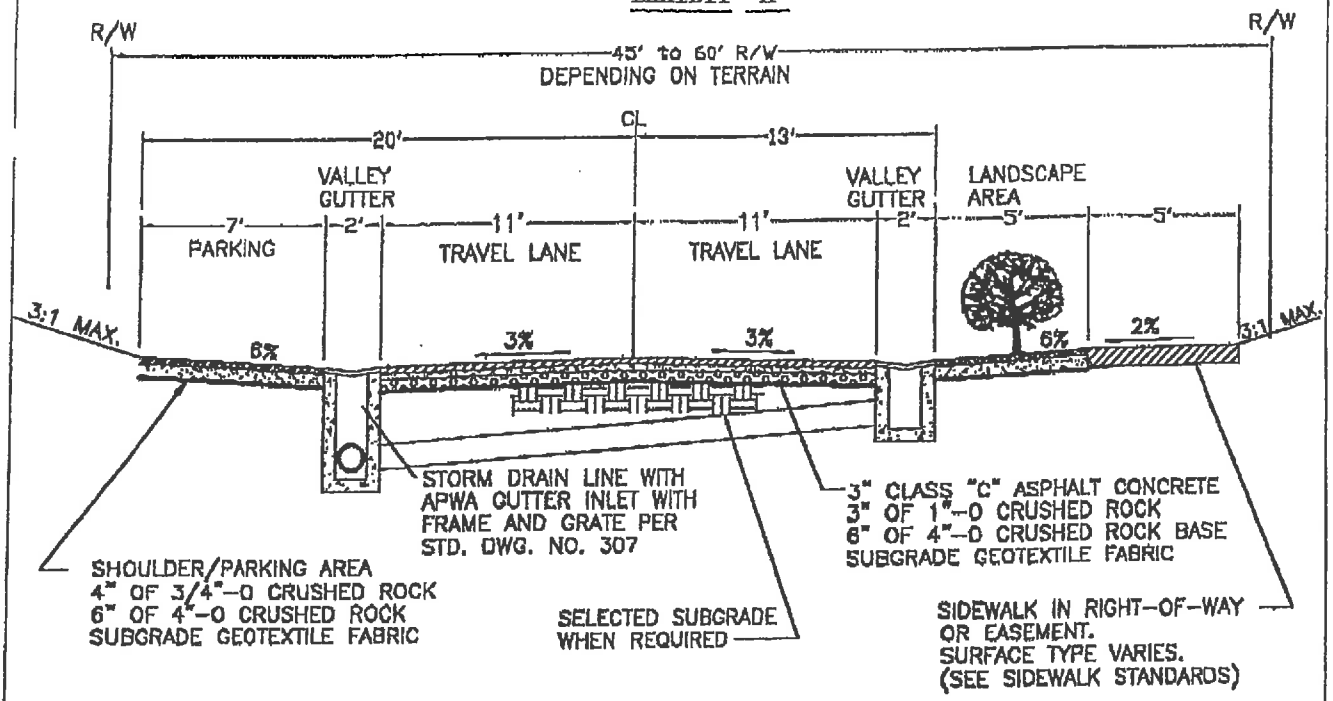
BE IT RESOLVED that the City Council of the City of Jacksonville, in accordance with the Jacksonville Transportation System Plan, hereby adopts Exhibit "A" and Exhibit "B" attached hereto and incorporated herein.

Signed by me in open session in authentication of its passage this 1st day of December, 1998.

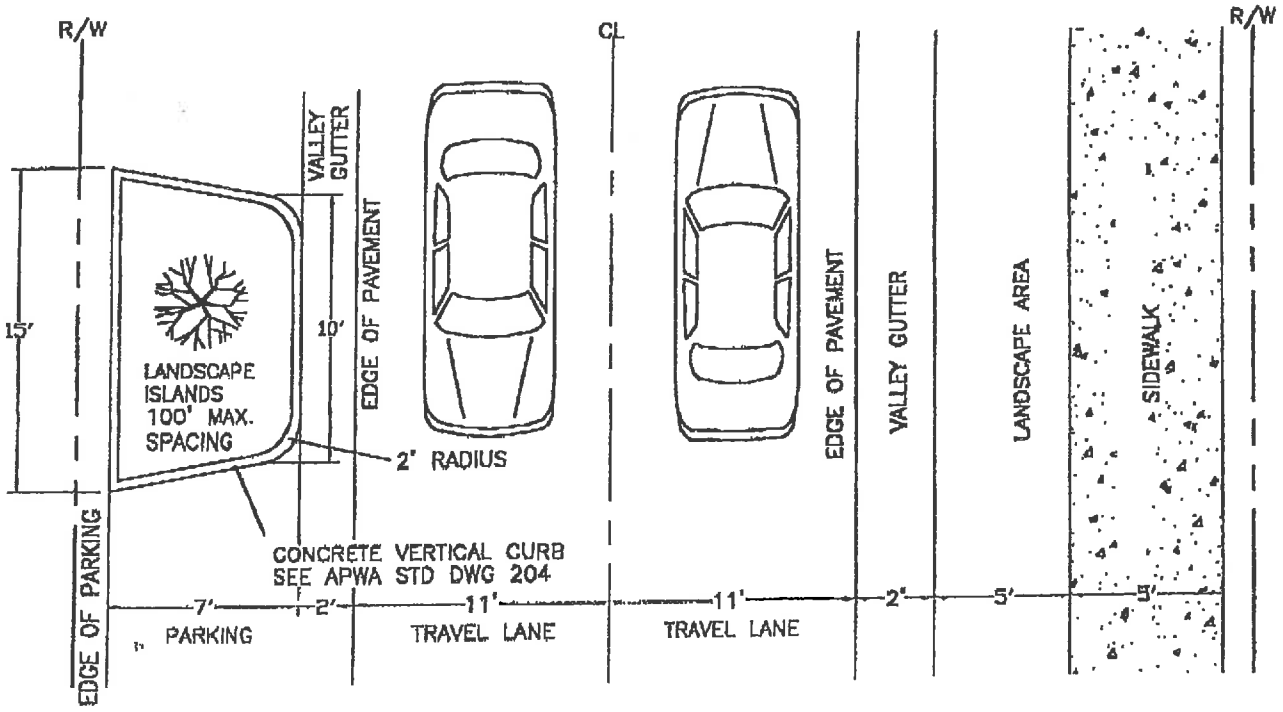
James Lewis, Mayor

ATTEST: Kathy Hall
Kathy Hall, City Recorder

EXHIBIT "A"



LOCAL STREET TYPICAL SECTION - AREA A



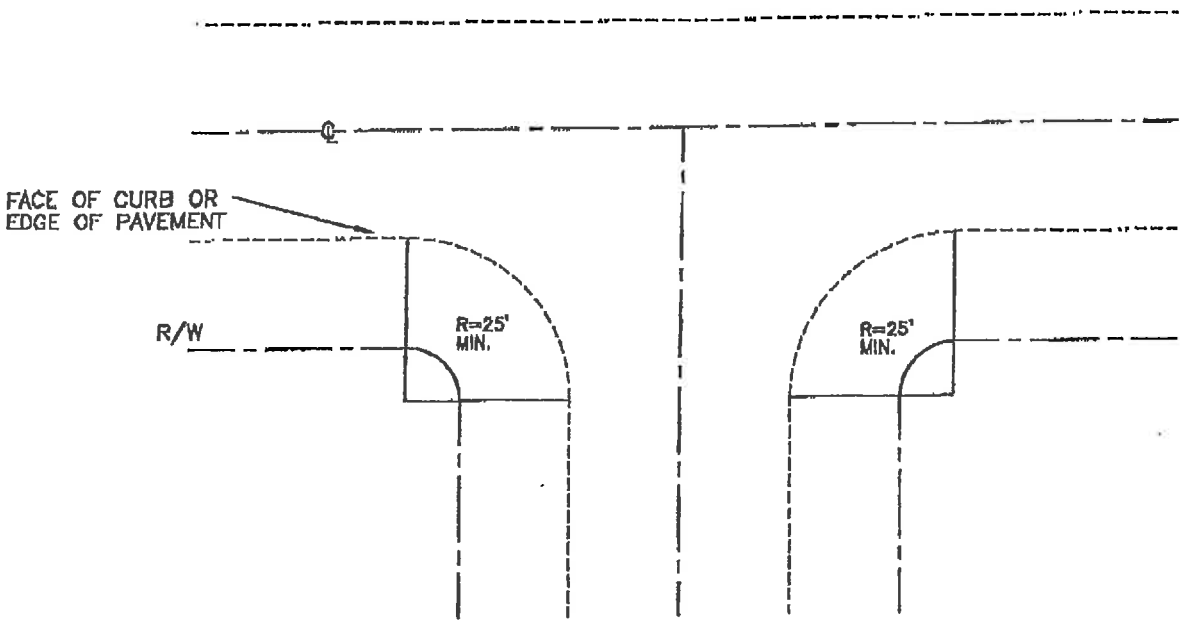
LOCAL STREET PLAN VIEW - AREA A

NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL ORGANIC MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	TYPICAL STREET SECTION LOCAL STREET - AREA A	DATE: 9/95 REV. 11/98	STANDARD DWG. NO. 102

PLOT DATE: 11-20-98 11:38 AM JRR

EXHIBIT "B"



NOTE: THE RIGHT-OF-WAY LINE SHALL BE ROUNDED WITH A CURVE ADEQUATE TO ALLOW A RADIUS OF NOT LESS THAN 25' AT THE FACE OF CURB OR EDGE OF PAVEMENT AND PRIVIDE UTILITY AND PEDESTRIAN SPACE.

SCALE:
NOT TO SCALE

CITY OF JACKSONVILLE OREGON	INTERSECTION CORNER ROUNDING	DATE: 11/98 REV.	STANDARD DWG. NO.

Resolution No. 755

A RESOLUTION ADOPTING STANDARDS FOR SIDEWALKS AND PEDESTRIAN PATHWAYS THROUGHOUT THE CITY OF JACKSONVILLE

WHEREAS, the Transportation System Plan of the City of Jacksonville states that the City should develop standards for pedestrian facilities.

WHEREAS, the City Council appointed an ad hoc Sidewalk Committee to investigate and develop sidewalk standards throughout the City.

WHEREAS, the ad hoc Sidewalk Committee, consisting of representatives from HARC, the Planning Commission, Parks Committee, and City Council, have developed appropriate surfacing types for each Historic Character Unit in the City of Jacksonville, contained herein as Exhibit A.

WHEREAS, the ad hoc Sidewalk Committee has determined that the typicals contained in Exhibit B provide proper subgrade, finish, and site furnishing requirements.

BE IT RESOLVED that the City Council of Jacksonville hereby adopts by resolution Exhibits A and B as standards for pedestrian facilities within the City of Jacksonville.

Signed by me in open session in authentication of its passage this 20th day of April, 1999.

James Lewis, Mayor

ATTEST: Kathy Hall
Kathy Hall, City Recorder

EXHIBIT A

RECOMMENDATIONS OF THE AD HOC SIDEWALK COMMITTEE

Members: Joyce Coleman (Chair), Jack Pfeiffer (Council), John Dodero (Council), Loren Otto (HARC), Bill Leep (PC), Phil Gahr (At Large), Jason Locke (Staff)

Goal:

To develop a set of standards and typicals for sidewalks within the City. that could be added to the Master Plan Requirements of Title 17 of the Jacksonville Municipal Code.

Process:

The ad hoc Sidewalk Committee was formed at the direction of the City Council in order to study the issue of sidewalks within the City and come up with recommendations for developing appropriate sidewalk types and typicals for various neighborhood areas. The Committee met on four occasions in order to explore options and develop the recommendations below.

Recommendations:

The Committee finds that there are distinct areas within the City that exhibit different physical, historical, and pedestrian characteristics, and that the sidewalks should take these characteristics into account. In addition, all sidewalks should be constructed to the attached standards and maintain 8 foot vertical clearance. The following are the nine neighborhood areas and the recommended sidewalk treatments:

3rd Street Corridor: As part of the 3rd St. repaving project, both exposed aggregate concrete and decomposed granite will be employed. However, development occurring within this corridor should employ decomposed granite as a pathway surfacing, subject to slope limitations.

South Oregon Street: This area is relatively flat and contains some well-worn DG pathways. DG is the recommended surface type, subject to slope limitations. Improvement of the existing shoulders should be examined.

North Oregon Street: This area was broken into three subareas:

1. North Oregon Street itself should have asphalt sidewalks on both sides.
2. Gold Terrace/Miners Way- Asphalt.
3. Area between N. Oregon and N. 5th- This flat, vacant land, should, when developed, should have an exposed aggregate or an approved pattern tint concrete pedestrian pathway of a curvilinear nature.

Stagecoach: This area is characterized by steep slope and odd road configurations and less than optimal right-of-way utilization. The recommended surfacing is none or 3/4 minus gravel.

Westmont: The rolling terrain of this area would be well suited to either asphalt or DG.

North 5th Street: This area is the City's commercial area, and should have an exposed aggregate or an approved pattern/tint concrete pedestrian pathway in order to encourage pedestrian use and should be curvilinear to the greatest extent possible.
The area directly north of W, "F" St. and east of Jackson Creek (The area dedicated to the City by Russ Dale) should be asphalt.

Old School District: One of the older areas of the City, it contains many historic resources. The prevailing use of DG or asphalt should continue based on the existing block by block material use. Exposed aggregate concrete should be employed on "G" Street from 5th to Hueners.

New School District: This area contains many newer homes and the majority of the sidewalks are either concrete or asphalt. The use of asphalt or pattern/tint concrete in this area is recommended.

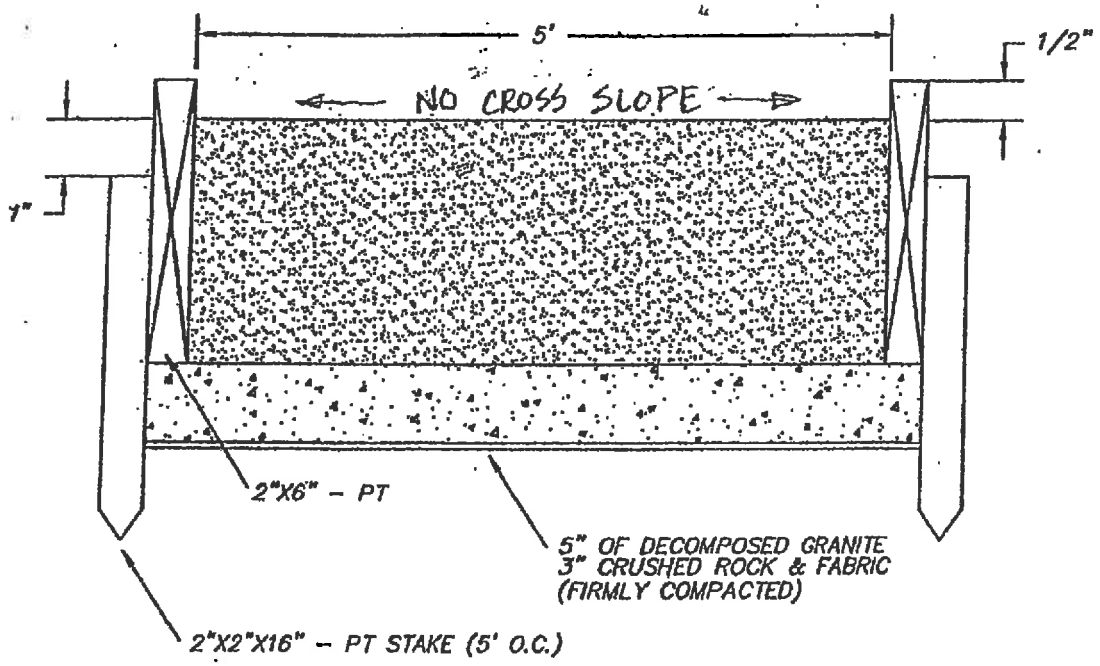
Historic Core: This area has a number of different surfacing types. As part of the ongoing TGM project, the consultants will examine existing sidewalks and make recommendations. The Committee recommends that the results of the TGM process be adopted into this recommendation.

****Pheasant Meadows:*** The existing DG pathway should be rebuilt as per the original design and intent. Once buildout occurs, the residents of the subdivision should be asked in a public forum if DG is the preferable pathway surface. DG rebuilt to City Standards contained in Exhibit B or asphalt can be considered as alternative surfacings. Until that point, DG shall be used.

EXHIBIT B

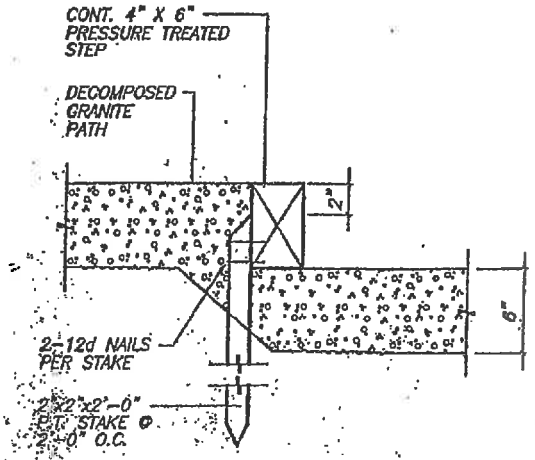
TYPICALS

DECOMPOSED GRANITE PATHWAY TYPICAL SECTION



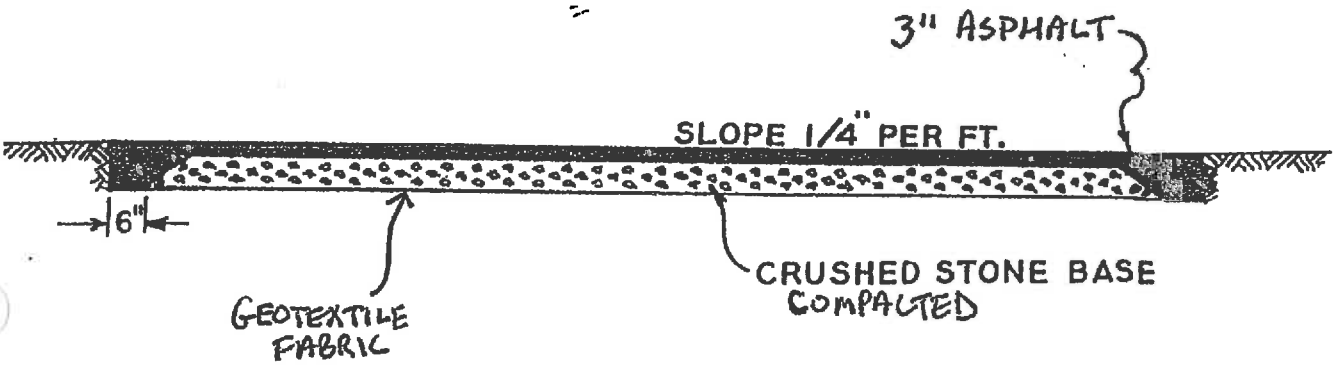
4 / 1A PEDESTRIAN TRAIL SECTION

(NTS)



GRANITE PATH STEP

ASPHALT PATHWAY TYPICAL SECTION

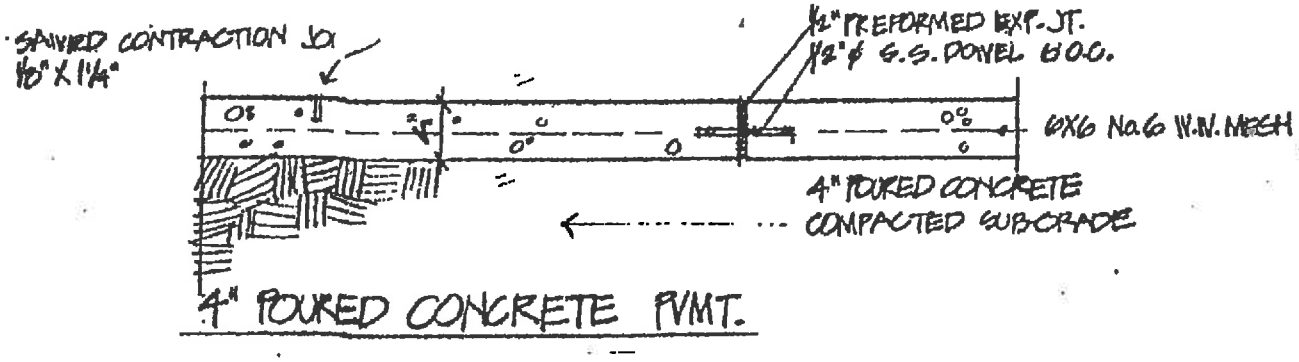


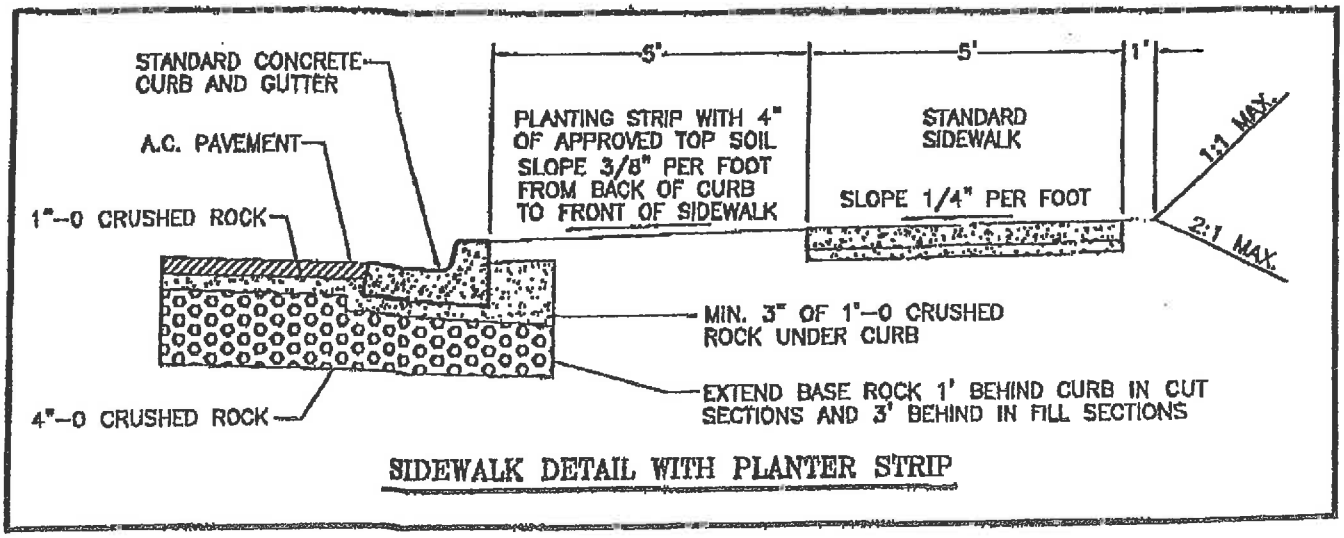
TYPICAL SECTION

ASPHALT SIDEWALK

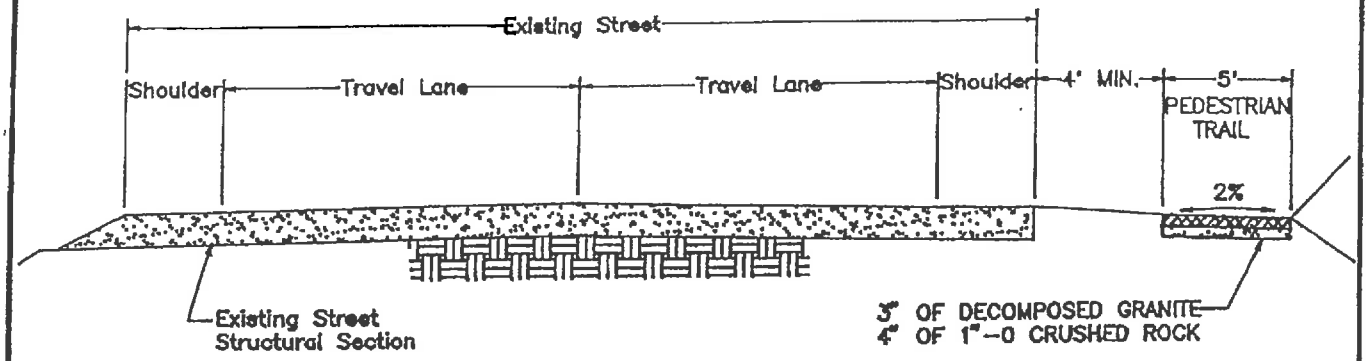
TYPE I

CONCRETE SIDEWALK TYPICAL SECTION





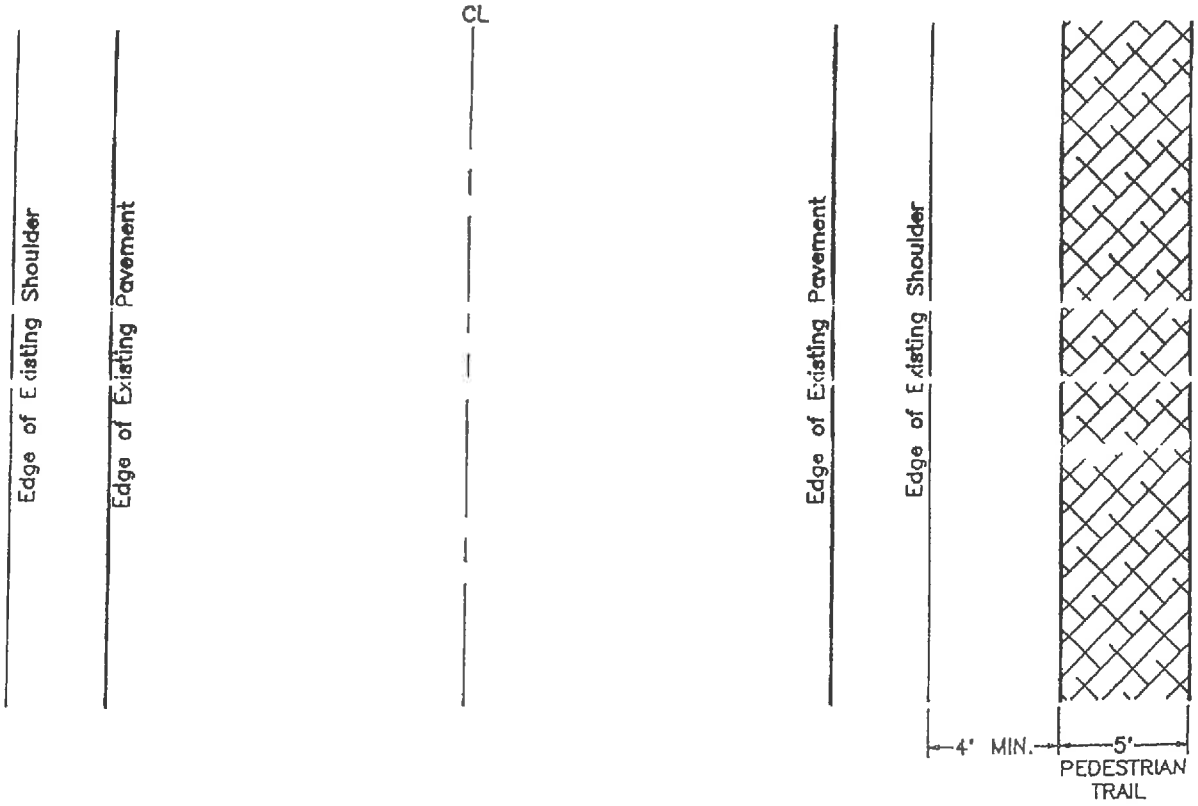
SIDEWALK DETAIL WITH PLANTER STRIP



NOTES

1. THE PEDESTRIAN TRAIL SHALL BE CONSTRUCTED OF 4" OF 3/4"-0 CRUSHED ROCK WHEN THE STREET CENTERLINE SLOPE IS GREATER THAN 6%. MATERIAL SHALL BE APPROVED BY THE ENGINEER.
2. THE DIRECTION OF SLOPE OF THE PEDESTRIAN TRAIL SHALL BE DETERMINED BY THE ENGINEER ON A PROJECT BY PROJECT BASIS, DEPENDING ON DRAINAGE ISSUES ADJACENT TO THE STREET.

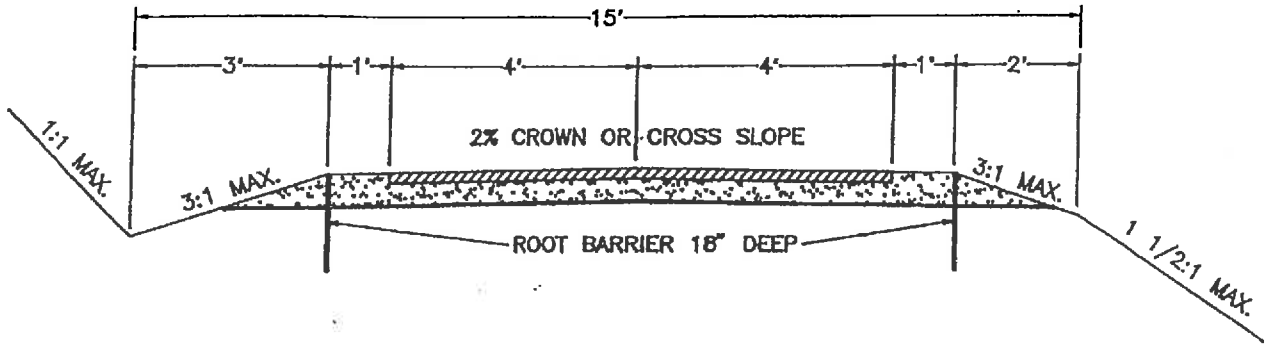
TYPICAL SECTION



TYPICAL PLAN VIEW

NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL ORGANIC MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	PEDESTRIAN TRAIL ADJACENT TO EXISTING STREET	DATE: 9/95 REV.	STANDARD DWG. NO. 100



PEDESTRIAN/BIKE (LOCATIONS AS INDICATED IN THE MASTER PLAN)

3" DECOMPOSED GRANITE
4" 1"–0 CRUSHED ROCK
OR
ALTERNATE SECTION OF
10" DECOMPOSED GRANITE

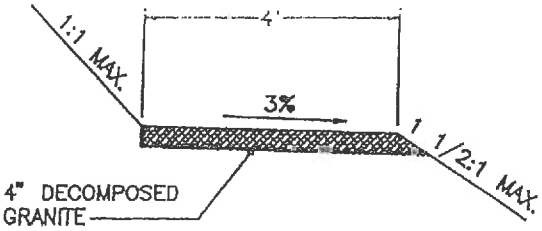
PEDESTRIAN/BIKE PATH WITH PAVEMENT SURFACING

2" CLASS "C" ASPHALT CONCRETE PAVING
4" 1"–0 CRUSHED ROCK

NOTE: SUBGRADE GEOTEXTILE FABRIC SHALL BE PLACED ON SUBGRADE IN UNSTABLE AREAS.

NOTE: PEDESTRIAN/BIKE PATHS PARALLEL TO A STREET MUST BE SEPARATED A MINIMUM OF 5 FEET FROM THE STREET.

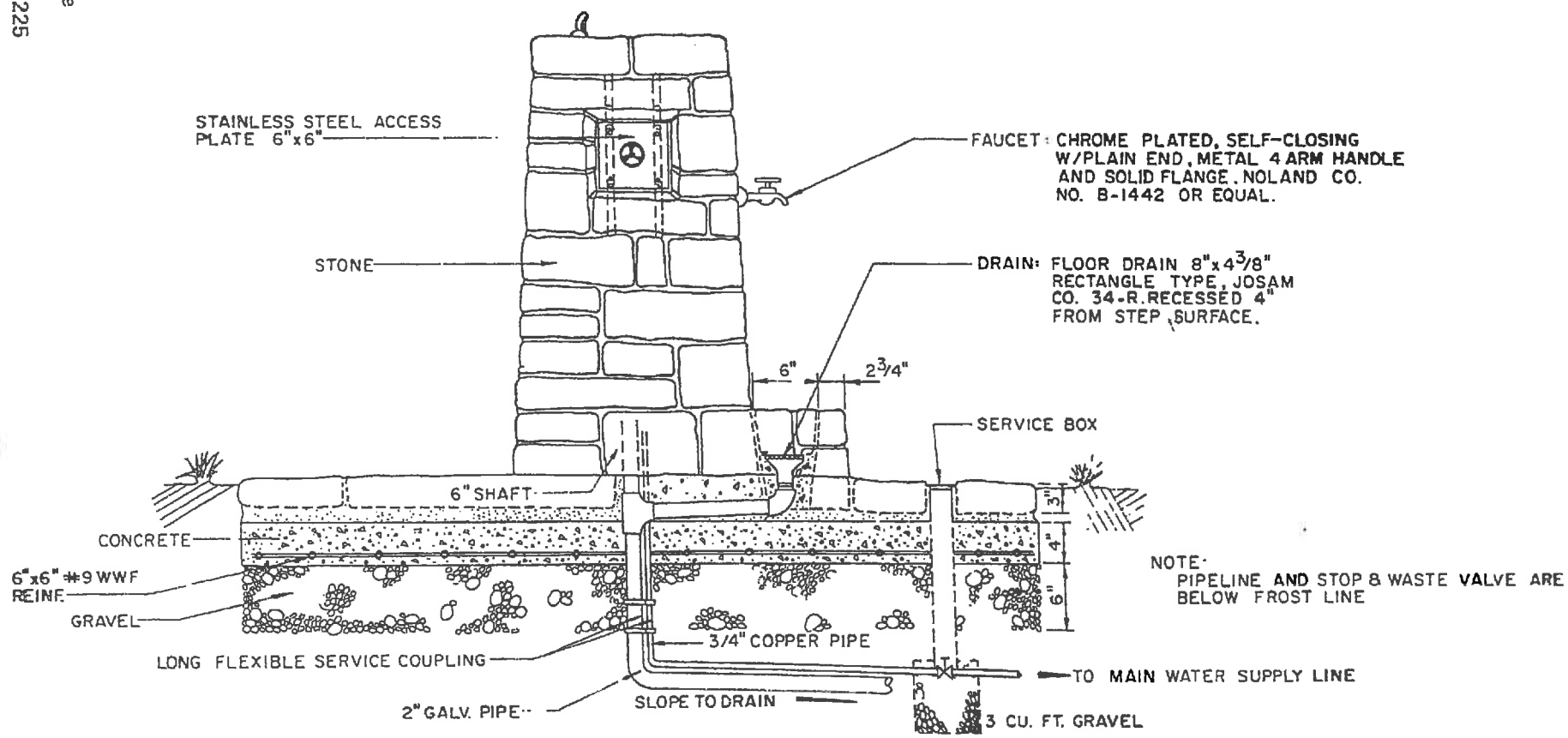
PEDESTRIAN/BIKE PATH



PEDESTRIAN TRAIL

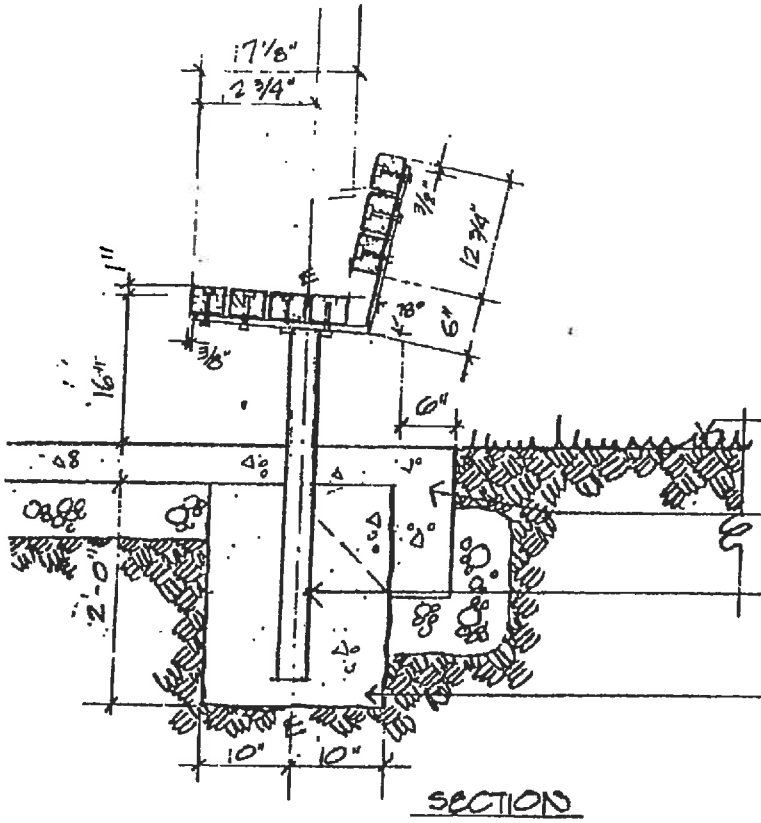
NOTE: PRIOR TO PLACING BASE MATERIAL, THE SUBGRADE SHALL BE STRIPPED OF ALL MATERIAL AND A SOIL STERILANT APPLIED. BASE MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.

CITY OF JACKSONVILLE OREGON	PEDESTRIAN AND BIKE TYPICAL SECTIONS	DATE: 9/95 REV.	STANDARD DWG. NO. 101



National Park Service
655 Parfet Street
Denver, Colorado 80225

Site Furnishings



SECTION

SUPPLY & INSTALL BOLT ASSEMBLY COUNTER-SINK & PLUG. CLIP EXTRA THREADS @ NUT END

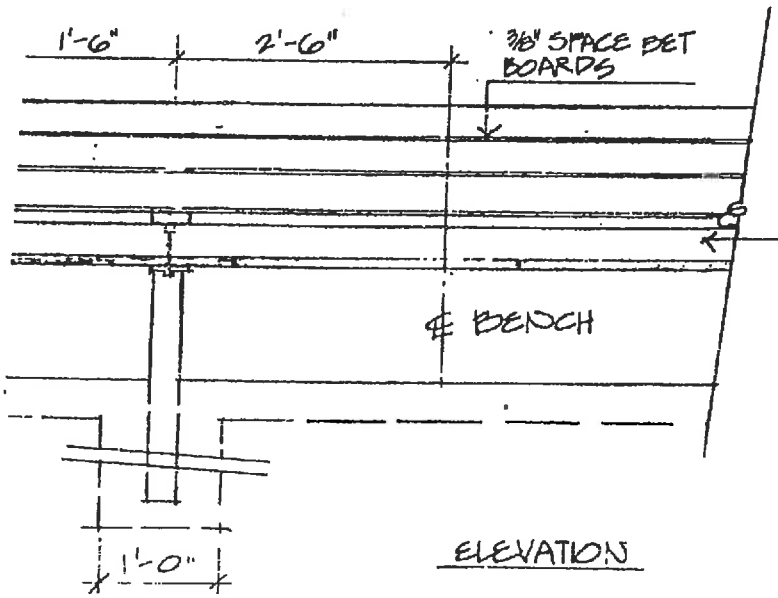
3/8" x 4" STEEL BRACE GALV. AFTER FAB.

FINISHED GRADE

CONC. PAVING SEE (1/L-9)

3" SQUARE STEEL TUBE WELD TO STEEL BRACE

CONC. FOOTING - 2800 PSI IN 28 DAYS



ELEVATION

ALL WOOD TO BE DENSE VERTICAL GRAIN DOUGLAS FIR, GRADE "B SELECT" TREATED WITH ONE COAT CUPRINAL OR APPROVED PRESERVATIVE AFTER FAB & BEFORE ASSEMBLY. AFTER ASSEMBLY APPLY ONE COAT CABOT'S CORDOVAN BROWN STAIN - OV-37 & ONE COAT "LIONOAL".

SEAT & BACKREST FROM 3"x4" BOARDS

NOTE: SHOP DRAWINGS SHALL BE SUBMITTED TO ARCH. FOR APPROVAL.

ALL EXPOSED EDGES ROUNDED TO 1/4" RADIUS

BENCH LEVEL WITH TRUE HORIZONTAL

PAINT ALL STEEL FLAT BLACK ENAMEL

(7/L-9) WOOD BENCH
SCALE 3/4" = 1'-0"

Moriece & Gary, Inc.
25 Mount Auburn Street
Cambridge, Massachusetts 02138

CITY: JACKSONVILLE, OREGON

SCOPE/DATE/TIME: TRUCK COUNTS (Tractor Trailer Vehicles): Thursday, 7-10-08 and Wednesday, 7-16-08 (8am to Noon)

RAW DATA: INFORMATION ON FILE AT THORNTON ENGINEERING, INC.

LOCATION: INTERSECTION CALIFORNIA & OREGON

	7-10-08 8AM-9AM	7-10-08 9AM-10AM	7-10-08 10AM-11AM	7-10-08 11AM-NOON	7-10-08 8AM-NOON	7-16-08 8AM-9AM	7-16-08 9AM-10AM	7-16-08 10AM-11AM	7-16-08 11AM-NOON	7-16-08 8AM-NOON
ENTERING INT. FROM EAST (CALIF)	39	37	33	25	134	32	30	29	20	111
LEAVING INT TO EAST (CALIF)	23	39	34	29	125	33	31	25	29	118
SUBTOTAL DOWNTOWN:	**62**	**76**	**67**	**54**	**259**	**65**	**61**	**54**	**49**	**229**
ENTERING INT. FROM WEST (CALIF)	22	33	36	29	120	32	27	25	28	112
LEAVING INT TO WEST (CALIF)	33	39	30	26	128	34	29	26	25	114
ENTERING INT FROM NORTH (OREGON)	3	8	5	0	16	4	6	1	5	16
LEAVING INT TO NORTH (OREGON)	4	3	6	1	14	3	2	4	0	9
ENTERING INT FROM SOUTH (OREGON)	1	2	2	2	7	3	1	2	2	8
LEAVING INT TO SOUTH (OREGON)	4	2	5	0	11	0	2	1	2	5