EXHIBIT KK 120.

MEMORANDUM

To: Megan LaNier-Wattier, Richard Stevens & Associates, Inc.

From: Kimberly Parducci, Southern Oregon Transportation Engineering, LLC

Date: 07/20/2015

Re: MD2 Coker Butte Development, LLC
Coker Butte Community Project (Additional Analyses)

Southern Oregon Transportation Engineering evaluated buildout conditions of the Urban Growth Boundary (UGB) Expansion Area MD2 south of Vilas Road. This expansion area is located south of Vilas Road and east of OR 62 in NE Medford. Potential impacts were evaluated based on a conceptual site plan which includes:

- 98 acres SFR residential
- 7 acres MFR residential
- 61.5 acres commercial
- 20 acres for a school
- 23.5 acres of open space for parks

The proposed site plan for MD2 is served by two major north-south streets. These include Crater Lake Avenue and a future extension of Springbrook Road. Crater Lake Avenue is re-aligned and signalized at a new location 1,320 feet east of OR 62 to support proposed development. An extension of Burl Crest Road across OR 62 to the east provides a central east-west street, while Vilas Road and Coker Butte Road provide northern and southern connectors, respectively.

Under existing conditions, OR 62 experiences congestion at Vilas Road near the proposed site and at several locations within the corridor between Vilas Road and the North Medford Interchange, but intersections continue to operate within ODOT performance standards. Several intersections were projected to exceed performance standards along OR 62 by the year 2015 in the OR 62 Unit II Environmental Impact Study (EIS), but growth has occurred at a slower rate than predicted since 2010 and many intersections, including the intersections with Vilas Road, Coker Butte, Owens Drive, Delta Waters Road, and Poplar Drive continue to operate within ODOT volume-to-capacity (v/c) ratio performance standards. Current traffic counts also show intersections along Crater Lake Avenue operating acceptably. These intersections with Crater Lake Avenue include Vilas Road, Coker Butte, Owen Drive, and Delta Waters Road.

MD2 is surrounded by significant roadways with OR 62 along the western boundary and several others roadways running through it (Vilas Road, Crater Lake Avenue, proposed Springbrook Road extension, and proposed Burl Crest Road extension), but this is only a detriment if sufficient facilities do not exist or cannot be provided to support future growth, and what we've found in our analysis is that adequate facilities can be provided to support future growth and provide a benefit to the area. Future growth in the City of Medford is projected primarily where developable land exists, and the largest growing areas do not include MD2 so growth near MD2 is shown to be manageable. Model data provided by the Rogue Valley Metropolitan Planning Organization (RVMPO) and future congestion

projections in the current Regional Transportation Plan (RTP) provide supporting evidence for this, which is attached for reference.

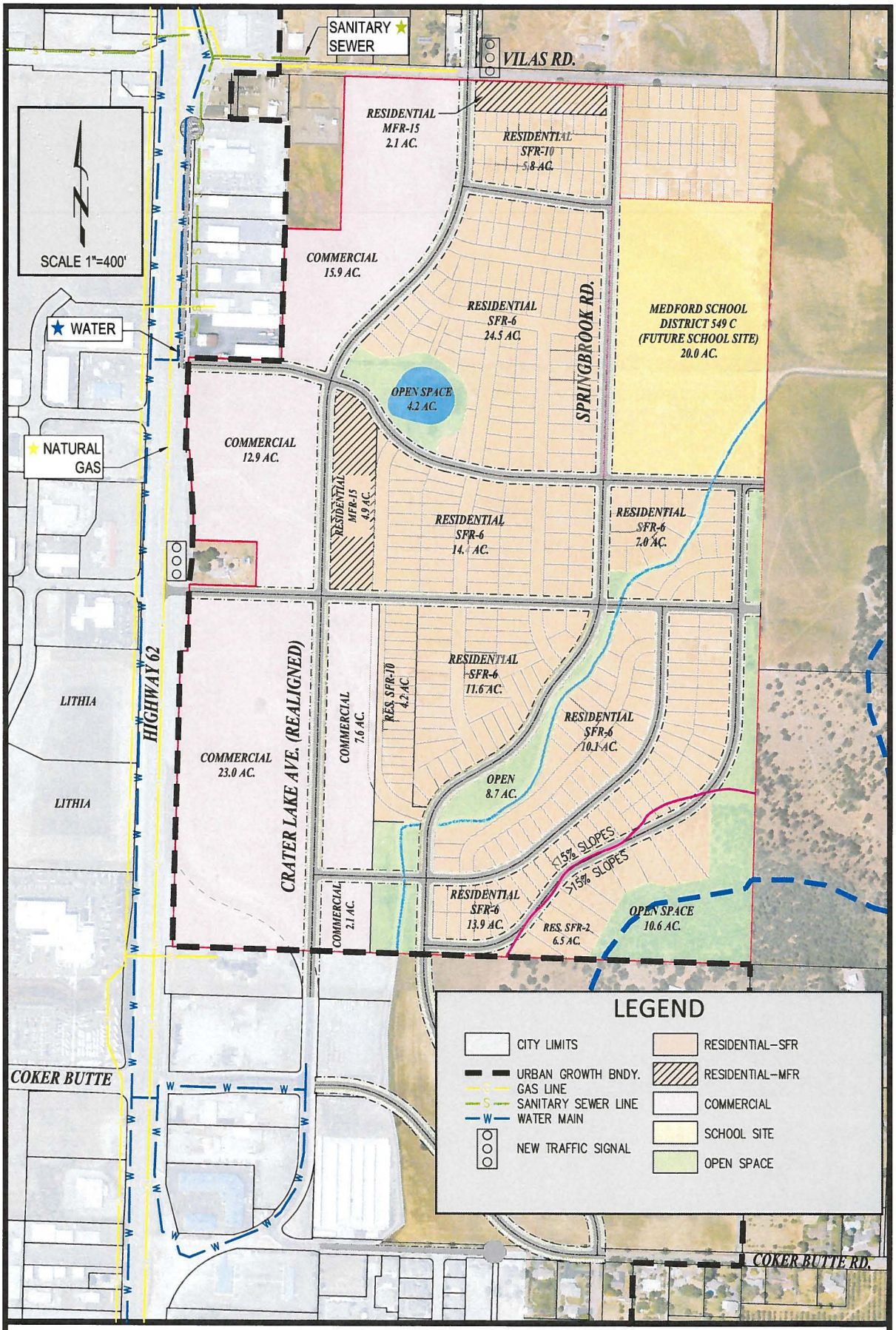
Our analysis shows that as growth occurs along OR 62 and parallel facilities (such as Table Rock Road and Crater Lake Avenue) and traffic volumes increase, planned street improvements are shown to provide adequate mitigation. Phase 1 of the OR 62 Unit II project includes a bypass from a location north of Poplar Drive to approximately Corey Road that is scheduled to begin construction in 2016. This project is expected to divert through-traffic from existing OR 62, Table Rock Road and Crater Lake Avenue, which will reduce congestion along existing OR 62 and improve intersection operations throughout the corridor. MD2 benefits greatly from this project.

Development of the proposed MD2 UGB expansion site was evaluated with phase 1 of the OR 62 project complete. With the bypass in place and internal street connections provided that are consistent with the conceptual layout, proposed development of MD2 south of Vilas Road is shown to operate acceptably. Our analysis assumed 3-lane future cross-sections on Vilas Road, Crater Lake Avenue, Springbrook Road, and Coker Butte Road within MD2 and all are shown to have adequate capacity to support proposed future development. In terms of off-site impacts, no adverse impacts were shown to occur on Owen Drive and/or Delta Waters Road intersections. Under current conditions, Delta Waters Road carries the majority of east-west traffic from Foothill Road to OR 62 because the Owen Drive extension ends at Springbrook Road. Land proposed for inclusion in the UGB Expansion will allow for the extension of Owen Drive to Foothill Road in the future, which will reduce reliance on Delta Waters Road. With planned improvements in place, the east-west and north-south streets within the northeast area are shown to operate acceptably through the planning horizon.

To reiterate previous conclusions of proposed MD2 development south of Vilas Road, key transportation points are as follows:

- Provides a solid network of planned north-south and east-west connections which disperses traffic and reduces reliance on OR 62.
- Benefits from transits services along OR 62.
- Provides pedestrian and bicycle facilities through the site and connects gaps that would otherwise not be connected without proposed development.
- Does not have connectivity constraints that were shown in Scenario 1 as a result of connectivity through the airport, over Bear Creek, or across the steep topography east of Foothill Road
- Is not shown to create adverse conditions or safety concerns relating to congestion on OR 62
- Is not limited in creating the necessary infrastructure to support full development of MD2 south of Vilas Road

Based on key points, it can be shown that the lower traffic rating of Scenario 1 in no way is representative of the portion of MD2 south of Vilas Road. Additional analyses specific to MD2 south of Vilas Road easily support a traffic rating of 3 or 4.



RH2 ENGINEERS PLANNERS SCIENTISTS

COKER BUTTE DEVELOPMENT
CONCEPTUAL SITE PLAN

Revised: 07–21–15 EHM

HCM Signalized Intersection Capacity Analysis
17: Crater Lake Avenue & Delta Waters Road

7/19/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	394	247	75	351	69	254	411	107	112	384	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		*0.83			*0.75		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.95			0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2775			2544		1693	1748	1469	1693	3325	
Flt Permitted		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2775			2544		1693	1748	1469	1693	3325	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	394	247	75	351	69	254	411	107	112	384	43
RTOR Reduction (vph)	0	43	0	0	8	0	0	0	76	0	8	0
Lane Group Flow (vph)	0	643	0	0	487	0	254	411	31	112	419	0
Confl. Peds. (#/hr)			5			5			6			6
Heavy Vehicles (%)	2%	0%	2%	0%	3%	4%	1%	3%	2%	1%	1%	2%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		27.4			22.4		19.3	30.6	30.6	10.4	21.7	
Effective Green, g (s)		27.4			22.4		18.3	30.6	30.6	9.4	21.7	
Actuated g/C Ratio		0.26			0.21		0.17	0.29	0.29	0.09	0.21	
Clearance Time (s)		4.0			4.0		3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		1.5			1.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)		718			538		292	505	424	150	681	
v/s Ratio Prot		c0.23			c0.19		c0.15	c0.24		0.07	0.13	
v/s Ratio Perm									0.02			
v/c Ratio		0.90			0.91		0.87	0.81	0.07	0.75	0.62	
Uniform Delay, d1		37.8			40.7		42.6	35.0	27.3	47.0	38.3	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		13.4			18.4		22.3	10.2	0.1	16.1	1.9	
Delay (s)		51.2			59.0		64.9	45.2	27.4	63.2	40.2	
Level of Service		D			E		E	D	C	E	D	
Approach Delay (s)		51.2			59.0			49.2			44.9	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	177	93	204	70	104	35	176	1173	108	61	1123	206
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1613	1636	1474	1569	1628		1660	3320	1422	1676	3288	1370
Flt Permitted	0.59	1.00	1.00	0.69	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1010	1636	1474	1138	1628		1660	3320	1422	1676	3288	1370
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	182	96	210	72	107	36	181	1209	111	63	1158	212
RTOR Reduction (vph)	0	0	22	0	11	0	0	0	31	0	0	70
Lane Group Flow (vph)	182	96	188	72	132	0	181	1209	80	63	1158	142
Confl. Peds. (#/hr)			2			2			2			2
Heavy Vehicles (%)	6%	10%	3%	9%	7%	3%	3%	3%	5%	2%	4%	9%
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4	5		8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	22.5	22.5	38.2	22.5	22.5		15.7	51.9	51.9	7.3	43.5	43.5
Effective Green, g (s)	22.5	22.5	38.2	22.5	22.5		15.7	54.9	54.9	7.3	46.5	46.5
Actuated g/C Ratio	0.23	0.23	0.40	0.23	0.23		0.16	0.57	0.57	0.08	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	2.5	2.5	3.0	2.5	2.5		3.0	4.6	4.6	2.5	4.6	4.6
Lane Grp Cap (vph)	235	380	643	264	378		269	1884	807	126	1581	658
v/s Ratio Prot		0.06	0.05		0.08		c0.11	0.36		0.04	c0.35	
v/s Ratio Perm	c0.18		0.08	0.06					0.06			0.10
v/c Ratio	0.77	0.25	0.29	0.27	0.35		0.67	0.64	0.10	0.50	0.73	0.22
Uniform Delay, d1	34.7	30.2	20.0	30.4	31.0		38.1	14.2	9.6	42.9	20.1	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.1	0.3	0.3	0.4	0.4		6.5	1.0	0.1	2.3	2.1	0.3
Delay (s)	48.9	30.5	20.3	30.8	31.4		44.6	15.2	9.7	45.2	22.2	14.8
Level of Service	D	C	C	C	C		D	B	A	D	C	B
Approach Delay (s)		32.9			31.2			18.3			22.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	96.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	216	506	310	292	46	703	1035	313	157	1011	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	*0.98	0.88	1.00	*0.94		0.97	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1710	2100	2693	1950	3760		3674	3976	1495	1693	3616	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1710	3493	2693	1676	3278		3285	3320	1495	1693	3299	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	216	506	310	292	46	703	1035	313	157	1011	49
RTOR Reduction (vph)	0	0	53	0	9	0	0	0	89	0	3	0
Lane Group Flow (vph)	53	216	453	310	329	0	703	1035	224	157	1057	0
Confl. Peds. (#/hr)						6			6			8
Heavy Vehicles (%)	0%	1%	0%	2%	1%	0%	1%	3%	1%	1%	3%	0%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	7.2	19.1	43.4	22.0	33.9		24.3	51.3	73.3	14.3	41.3	
Effective Green, g (s)	7.2	19.1	43.4	22.0	33.9		24.3	52.3	73.3	14.3	42.3	
Actuated g/C Ratio	0.06	0.15	0.35	0.18	0.27		0.20	0.42	0.59	0.12	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	5.0	4.0	4.0	5.0	
Vehicle Extension (s)	2.0	3.0	2.0	2.0	2.0		2.0	5.0	2.0	2.0	5.0	
Lane Grp Cap (vph)	99	324	1031	346	1030		721	1681	885	195	1236	
v/s Ratio Prot	0.03	c0.10	0.09	c0.16	0.09		c0.19	0.26	0.04	0.09	c0.29	
v/s Ratio Perm			0.08						0.10			
v/c Ratio	0.54	0.67	0.44	0.90	0.32		0.98	0.62	0.25	0.81	0.86	
Uniform Delay, d1	56.6	49.3	30.8	49.7	35.7		49.4	27.9	12.1	53.3	37.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.8	5.1	0.1	23.8	0.1		27.1	1.0	0.1	19.9	6.6	
Delay (s)	59.4	54.4	30.9	73.5	35.8		76.5	28.8	12.1	73.2	44.4	
Level of Service	E	D	C	E	D		E	C	B	E	D	
Approach Delay (s)		39.4			53.9			42.6			48.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	123.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
58: Highway 62 & Coker Butte Rd

7/19/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	294	11	23	17	5	59	17	1145	17	55	1222	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	2926		1710	2857		1710	3353	1452	1676	3353	1494
Flt Permitted	0.71	1.00		0.73	1.00		0.14	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	1258	2926		1321	2857		258	3353	1452	237	3353	1494
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	294	11	23	17	5	59	17	1145	17	55	1222	43
RTOR Reduction (vph)	0	16	0	0	41	0	0	0	9	0	0	21
Lane Group Flow (vph)	294	18	0	17	23	0	17	1145	8	55	1222	22
Confl. Peds. (#/hr)			2			2			2			2
Heavy Vehicles (%)	2%	0%	6%	0%	0%	2%	0%	2%	4%	2%	2%	1%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	26.2	26.2		26.2	26.2		42.5	40.7	40.7	47.9	43.4	43.4
Effective Green, g (s)	26.2	26.2		26.2	26.2		42.5	40.7	40.7	47.9	43.4	43.4
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.51	0.49	0.49	0.57	0.52	0.52
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	392	913		412	892		161	1626	704	212	1734	772
v/s Ratio Prot		0.01			0.01		0.00	0.34		c0.01	c0.36	
v/s Ratio Perm	c0.23			0.01			0.05		0.01	0.13		0.01
v/c Ratio	0.75	0.02		0.04	0.03		0.11	0.70	0.01	0.26	0.70	0.03
Uniform Delay, d1	25.9	20.0		20.1	20.0		11.8	16.9	11.2	10.7	15.4	9.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.9	0.0		0.0	0.0		0.1	1.4	0.0	0.2	1.3	0.0
Delay (s)	33.8	20.0		20.1	20.0		11.9	18.3	11.2	10.9	16.7	9.9
Level of Service	C	B		C	C		B	B	B	B	B	A
Approach Delay (s)		32.3			20.0			18.1			16.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	12.5
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	143	114	110	96	89	158	160	792	92	287	870	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.5	4.0	4.0	4.5		4.0	6.0	4.0	4.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3285	1765	1444	1710	3042		3252	3353	1484	3252	3320	1499
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3285	1765	1444	1710	3042		3252	3353	1484	3252	3320	1499
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	114	110	96	89	158	160	792	92	287	870	55
RTOR Reduction (vph)	0	0	47	0	129	0	0	0	50	0	0	29
Lane Group Flow (vph)	143	114	63	96	118	0	160	792	42	287	870	26
Confl. Peds. (#/hr)			5						2			2
Heavy Vehicles (%)	1%	2%	5%	0%	1%	2%	2%	2%	2%	2%	3%	1%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4						2			6
Actuated Green, G (s)	8.6	14.4	23.9	9.1	14.9		9.5	28.0	37.1	12.1	30.6	39.2
Effective Green, g (s)	8.6	14.4	23.9	9.1	14.9		9.5	28.0	37.1	12.1	30.6	39.2
Actuated g/C Ratio	0.10	0.18	0.29	0.11	0.18		0.12	0.34	0.45	0.15	0.37	0.48
Clearance Time (s)	4.0	4.5	4.0	4.0	4.5		4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0		2.0	5.0	2.0	2.0	5.0	2.0
Lane Grp Cap (vph)	344	309	420	189	552		376	1143	670	479	1237	715
v/s Ratio Prot	0.04	c0.06	0.02	c0.06	0.04		0.05	0.24	0.01	c0.09	c0.26	0.00
v/s Ratio Perm			0.03						0.02			0.01
v/c Ratio	0.42	0.37	0.15	0.51	0.21		0.43	0.69	0.06	0.60	0.70	0.04
Uniform Delay, d1	34.4	29.8	21.6	34.4	28.6		33.8	23.3	12.7	32.7	21.9	11.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.7	0.1	0.8	0.2		0.3	2.3	0.0	1.3	2.3	0.0
Delay (s)	34.7	30.6	21.6	35.2	28.8		34.0	25.7	12.7	34.1	24.2	11.4
Level of Service	C	C	C	D	C		C	C	B	C	C	B
Approach Delay (s)		29.5			30.6			25.8			26.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	82.1	Sum of lost time (s)	18.5
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	101	108	53	13	82	8	34	61	15	11	70	93
Conflicting Peds, #/hr	0	0	2	0	0	2	0	0	2	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	8	2	0	9	0	3	0	0	0	0	6
Mvmt Flow	106	114	56	14	86	8	36	64	16	12	74	98

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	97	0	0	171	0	0	562	480	146	516	504	95
Stage 1	-	-	-	-	-	-	356	356	-	120	120	-
Stage 2	-	-	-	-	-	-	206	124	-	396	384	-
Critical Hdwy	4.15	-	-	4.1	-	-	7.13	6.5	6.2	7.1	6.5	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.245	-	-	2.2	-	-	3.527	4	3.3	3.5	4	3.354
Pot Cap-1 Maneuver	1478	-	-	1418	-	-	436	488	906	473	473	951
Stage 1	-	-	-	-	-	-	659	633	-	889	800	-
Stage 2	-	-	-	-	-	-	794	797	-	633	615	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1416	-	-	316	443	903	384	429	948
Mov Cap-2 Maneuver	-	-	-	-	-	-	316	443	-	384	429	-
Stage 1	-	-	-	-	-	-	605	581	-	817	791	-
Stage 2	-	-	-	-	-	-	638	788	-	508	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	1	16.8	13.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	420	1476	-	-	1416	-	-	600
HCM Lane V/C Ratio	0.276	0.072	-	-	0.01	-	-	0.305
HCM Control Delay (s)	16.8	7.6	0	-	7.6	0	-	13.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0	-	-	1.3

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	64	132	245	27	74	14	164	90	29	26	75	65
Conflicting Peds, #/hr	0	0	5	0	0	5	0	0	2	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	150	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	1	0	4	0	0	0	2	7	0	0	3	0
Mvmt Flow	64	132	245	27	74	14	164	90	29	26	75	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	90	0	0	379	0	0	516	529	196	378	644	51
Stage 1	-	-	-	-	-	-	385	385	-	137	137	-
Stage 2	-	-	-	-	-	-	131	144	-	241	507	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.54	6.64	6.9	7.5	6.56	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.64	-	6.5	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.64	-	6.5	5.56	-
Follow-up Hdwy	2.21	-	-	2.2	-	-	3.52	4.07	3.3	3.5	4.03	3.3
Pot Cap-1 Maneuver	1510	-	-	1191	-	-	442	443	819	559	388	1013
Stage 1	-	-	-	-	-	-	610	597	-	858	780	-
Stage 2	-	-	-	-	-	-	859	765	-	747	535	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1504	-	-	1186	-	-	329	413	814	425	362	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	413	-	425	362	-
Stage 1	-	-	-	-	-	-	583	571	-	820	761	-
Stage 2	-	-	-	-	-	-	705	746	-	579	511	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	1.9	21.7	14.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	329	469	1504	-	-	1186	-	-	425	515
HCM Lane V/C Ratio	0.498	0.254	0.043	-	-	0.023	-	-	0.061	0.272
HCM Control Delay (s)	26.3	15.3	7.5	-	-	8.1	-	-	14	14.6
HCM Lane LOS	D	C	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	2.6	1	0.1	-	-	0.1	-	-	0.2	1.1

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	2	185	113	10	10	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	185	113	10	11	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	248	12	13	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	738	1066	1599	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	686	1066	1599	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	6.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1599	-	686	1066	-	-
HCM Lane V/C Ratio	0.071	-	0.003	0.174	-	-
HCM Control Delay (s)	7.4	-	10.3	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0	0.6	-	-

HCM Signalized Intersection Capacity Analysis
17: Crater Lake Avenue & Delta Waters Road

7/20/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	295	360	85	250	110	320	370	100	165	520	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0		3.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		*0.83			*0.75		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.93			0.96		1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2721			2487		1693	1748	1470	1693	3314	
Flt Permitted		0.99			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2721			2487		1693	1748	1470	1693	3314	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	295	360	85	250	110	320	370	100	165	520	80
RTOR Reduction (vph)	0	123	0	0	18	0	0	0	69	0	11	0
Lane Group Flow (vph)	0	612	0	0	427	0	320	370	31	165	589	0
Confl. Peds. (#/hr)						6			5			
Heavy Vehicles (%)	2%	0%	2%	0%	3%	4%	1%	3%	2%	1%	1%	2%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)		31.2			22.2		24.5	36.9	36.9	14.7	27.1	
Effective Green, g (s)		31.2			22.2		24.5	36.9	36.9	13.7	27.1	
Actuated g/C Ratio		0.26			0.18		0.20	0.31	0.31	0.11	0.23	
Clearance Time (s)		4.0			4.0		3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		1.5			1.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)		707			460		345	537	452	193	748	
v/s Ratio Prot		c0.22			c0.17		c0.19	0.21		0.10	c0.18	
v/s Ratio Perm									0.02			
v/c Ratio		0.87			0.93		0.93	0.69	0.07	0.85	0.79	
Uniform Delay, d1		42.4			48.1		46.9	36.5	29.4	52.2	43.7	
Progression Factor		0.48			1.00		1.00	1.00	1.00	1.00	1.11	
Incremental Delay, d2		11.6			24.6		29.8	4.0	0.1	27.8	5.8	
Delay (s)		31.9			72.7		76.7	40.5	29.5	79.9	54.1	
Level of Service		C			E		E	D	C	E	D	
Approach Delay (s)		31.9			72.7			53.8			59.7	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	300	545	210	345	75	490	800	200	70	645	405
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	6.0	3.0	3.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	1765	1506	1676	3148		1693	3353	1498	1710	3353	1434
Flt Permitted	0.22	1.00	1.00	0.53	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	384	1765	1506	936	3148		1693	3353	1498	1710	3353	1434
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	300	545	210	345	75	490	800	200	70	645	405
RTOR Reduction (vph)	0	0	37	0	16	0	0	0	87	0	0	254
Lane Group Flow (vph)	390	300	508	210	404	0	490	800	113	70	645	151
Confl. Peds. (#/hr)			2			2			2			2
Heavy Vehicles (%)	2%	2%	1%	2%	6%	3%	1%	2%	0%	0%	2%	4%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	43.1	28.3	63.3	25.2	14.4		35.0	54.9	65.7	7.0	26.9	26.9
Effective Green, g (s)	44.1	29.3	65.3	27.2	15.4		36.0	55.9	67.7	8.0	27.9	27.9
Actuated g/C Ratio	0.37	0.24	0.54	0.23	0.13		0.30	0.47	0.56	0.07	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	7.0	4.0	4.0	7.0	7.0
Vehicle Extension (s)	2.5	2.5	3.0	2.5	2.5		3.0	4.6	2.5	2.5	4.6	4.6
Lane Grp Cap (vph)	417	430	857	284	403		507	1561	845	114	779	333
v/s Ratio Prot	c0.20	0.17	0.18	0.07	0.13		c0.29	0.24	0.01	0.04	c0.19	
v/s Ratio Perm	c0.14		0.16	0.09					0.06			0.11
v/c Ratio	0.94	0.70	0.59	0.74	1.00		0.97	0.51	0.13	0.61	0.83	0.45
Uniform Delay, d1	32.6	41.3	18.4	41.2	52.3		41.4	22.5	12.3	54.5	43.8	39.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.77	0.56	1.85	1.00	1.00	1.00
Incremental Delay, d2	28.2	4.5	1.1	9.1	45.6		27.5	1.0	0.0	8.1	9.9	4.4
Delay (s)	60.8	45.8	19.5	50.4	97.9		59.2	13.5	22.8	62.6	53.6	43.9
Level of Service	E	D	B	D	F		E	B	C	E	D	D
Approach Delay (s)		38.9			82.1			29.8			50.7	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	44.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
30: Crater Lake Avenue & Vilas Road

7/20/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	205	315	95	235	30	300	150	105	5	100	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1710	1611		1710	1595		1710	1673		1710	1660	
Flt Permitted	0.54	1.00		0.17	1.00		0.45	1.00		0.60	1.00	
Satd. Flow (perm)	969	1611		298	1595		804	1673		1082	1660	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	205	315	95	235	30	300	150	105	5	100	95
RTOR Reduction (vph)	0	66	0	0	5	0	0	26	0	0	39	0
Lane Group Flow (vph)	50	454	0	95	260	0	300	229	0	5	156	0
Confl. Peds. (#/hr)						2			2			
Heavy Vehicles (%)	0%	4%	0%	0%	12%	0%	0%	0%	0%	0%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	22.9		28.6	24.2		30.3	25.4		17.4	16.5	
Effective Green, g (s)	26.0	22.9		28.6	24.2		30.3	25.4		17.4	16.5	
Actuated g/C Ratio	0.37	0.32		0.41	0.34		0.43	0.36		0.25	0.23	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	389	522		208	546		470	601		274	387	
v/s Ratio Prot	0.01	c0.28		c0.03	0.16		c0.09	0.14		0.00	0.09	
v/s Ratio Perm	0.04			0.16			c0.18			0.00		
v/c Ratio	0.13	0.87		0.46	0.48		0.64	0.38		0.02	0.40	
Uniform Delay, d1	14.5	22.4		15.3	18.2		14.3	16.8		20.1	22.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	14.3		0.6	0.7		2.1	0.4		0.0	0.7	
Delay (s)	14.6	36.8		15.9	18.9		16.4	17.2		20.1	23.6	
Level of Service	B	D		B	B		B	B		C	C	
Approach Delay (s)		34.8			18.1			16.8			23.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
56: Highway 62 & Delta Waters Road

7/20/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	35	335	465	310	235	105	30	270	1000	250	150	835
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0			3.0	4.0	4.0	3.0	4.0
Lane Util. Factor	1.00	*0.98	0.88	1.00	*0.94			0.97	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99			1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1710	3493	2693	1676	3187			3288	3320	1487	1693	3307
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1710	3493	2693	1676	3187			3288	3320	1487	1693	3307
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	335	465	310	235	105	30	270	1000	250	150	835
RTOR Reduction (vph)	0	0	354	0	41	0	0	0	0	135	0	2
Lane Group Flow (vph)	35	335	111	310	299	0	0	300	1000	115	150	858
Confl. Peds. (#/hr)						6				6		
Heavy Vehicles (%)	0%	1%	0%	2%	1%	0%	0%	1%	3%	1%	1%	3%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8		5	5	2		1	6
Permitted Phases			4							2		
Actuated Green, G (s)	4.6	17.4	17.4	25.4	38.2			14.3	47.1	47.1	13.1	45.9
Effective Green, g (s)	5.6	18.4	18.4	26.4	39.2			15.3	48.1	48.1	14.1	46.9
Actuated g/C Ratio	0.05	0.15	0.15	0.22	0.33			0.13	0.40	0.40	0.12	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	5.0	5.0	4.0	5.0
Vehicle Extension (s)	2.0	3.0	3.0	2.0	2.0			2.0	5.0	5.0	2.0	5.0
Lane Grp Cap (vph)	79	535	412	368	1041			419	1330	596	198	1292
v/s Ratio Prot	0.02	c0.10		c0.18	0.09			0.09	c0.30		c0.09	0.26
v/s Ratio Perm			0.04							0.08		
v/c Ratio	0.44	0.63	0.27	0.84	0.29			0.72	0.75	0.19	0.76	0.66
Uniform Delay, d1	55.7	47.6	44.9	44.8	30.0			50.3	30.8	23.3	51.3	30.1
Progression Factor	1.00	1.00	1.00	0.77	0.27			1.00	1.00	1.00	1.33	0.57
Incremental Delay, d2	1.4	2.3	0.4	8.1	0.0			4.8	4.0	0.7	12.4	2.4
Delay (s)	57.1	49.9	45.2	42.8	8.2			55.1	34.8	24.1	80.9	19.6
Level of Service	E	D	D	D	A			E	C	C	F	B
Approach Delay (s)		47.6			24.7				37.0			28.7
Approach LOS		D			C				D			C

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	25
Ideal Flow (vphpl)	1800
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	25
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	8
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	95	120	250	55	185	75	1175	200	100	1165	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.0	3.5	3.5	3.0	3.5	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.92		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	3008		1710	2946		1710	3353	1452	1676	3353	1494
Flt Permitted	0.55	1.00		0.57	1.00		0.17	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	965	3008		1033	2946		306	3353	1452	276	3353	1494
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	115	95	120	250	55	185	75	1175	200	100	1165	90
RTOR Reduction (vph)	0	87	0	0	127	0	0	0	80	0	0	35
Lane Group Flow (vph)	115	128	0	250	113	0	75	1175	120	100	1165	55
Confl. Peds. (#/hr)			2			2			2			2
Heavy Vehicles (%)	2%	0%	6%	0%	0%	2%	0%	2%	4%	2%	2%	1%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.6	32.6		32.6	32.6		73.5	68.0	68.0	76.3	69.4	69.4
Effective Green, g (s)	33.1	33.1		33.1	33.1		75.5	69.0	69.0	78.3	70.4	70.4
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.63	0.57	0.57	0.65	0.59	0.59
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	266	829		284	812		268	1927	834	272	1967	876
v/s Ratio Prot		0.04			0.04		0.02	c0.35		c0.02	0.35	
v/s Ratio Perm	0.12			c0.24			0.16		0.08	0.22		0.04
v/c Ratio	0.43	0.15		0.88	0.14		0.28	0.61	0.14	0.37	0.59	0.06
Uniform Delay, d1	35.7	32.9		41.6	32.7		10.8	16.7	11.8	11.0	15.7	10.6
Progression Factor	1.00	1.00		1.00	1.00		0.78	0.78	1.53	0.81	0.98	1.39
Incremental Delay, d2	1.1	0.1		25.5	0.1		0.2	1.1	0.3	0.3	1.2	0.1
Delay (s)	36.9	33.0		67.1	32.8		8.6	14.2	18.3	9.2	16.5	14.9
Level of Service	D	C		E	C		A	B	B	A	B	B
Approach Delay (s)		34.3			50.3			14.4			15.9	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	400	135	28	290	66	100	150	11	115	170	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	3.5		3.5	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1660	1681		1660	1699		1660	1730		1660	1683	
Flt Permitted	0.45	1.00		0.26	1.00		0.50	1.00		0.62	1.00	
Satd. Flow (perm)	783	1681		449	1699		874	1730		1082	1683	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	400	135	28	290	66	100	150	11	115	170	55
RTOR Reduction (vph)	0	15	0	0	10	0	0	3	0	0	13	0
Lane Group Flow (vph)	25	520	0	28	346	0	100	158	0	115	212	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.1	24.0		25.1	24.0		19.1	14.6		18.7	13.9	
Effective Green, g (s)	25.1	24.0		25.1	24.0		19.1	14.6		18.7	13.9	
Actuated g/C Ratio	0.42	0.40		0.42	0.40		0.32	0.24		0.31	0.23	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	3.5		3.5	4.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	343	672		210	679		337	420		383	389	
v/s Ratio Prot	0.00	c0.31		c0.00	0.20		0.02	0.09		c0.02	c0.13	
v/s Ratio Perm	0.03			0.05			0.07			0.07		
v/c Ratio	0.07	0.77		0.13	0.51		0.30	0.38		0.30	0.54	
Uniform Delay, d1	10.5	15.6		11.3	13.6		14.9	18.9		15.3	20.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	5.5		0.1	0.6		0.2	0.6		0.2	1.6	
Delay (s)	10.5	21.2		11.4	14.2		15.1	19.5		15.4	21.8	
Level of Service	B	C		B	B		B	B		B	C	
Approach Delay (s)		20.7			14.0			17.8			19.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	190	220	100	255	230	295	740	145	410	745	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	5.0	3.0	3.0	4.5		3.0	5.0	3.0	3.0	5.0	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3285	1765	1441	1710	3131		3252	3353	1483	3252	3320	1500
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3285	1765	1441	1710	3131		3252	3353	1483	3252	3320	1500
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	190	220	100	255	230	295	740	145	410	745	195
RTOR Reduction (vph)	0	0	90	0	160	0	0	0	79	0	0	83
Lane Group Flow (vph)	480	190	130	100	325	0	295	740	66	410	745	112
Confl. Peds. (#/hr)			5						2			2
Heavy Vehicles (%)	1%	2%	5%	0%	1%	2%	2%	2%	2%	2%	3%	1%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4						2			6
Actuated Green, G (s)	21.3	30.3	44.9	10.7	19.7		14.6	42.0	52.7	18.5	45.9	67.2
Effective Green, g (s)	22.3	29.8	46.9	11.7	19.7		15.6	43.0	54.7	19.5	46.9	69.2
Actuated g/C Ratio	0.19	0.25	0.39	0.10	0.16		0.13	0.36	0.46	0.16	0.39	0.58
Clearance Time (s)	4.0	4.5	4.0	4.0	4.5		4.0	6.0	4.0	4.0	6.0	4.0
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0		2.0	5.0	2.0	2.0	5.0	2.0
Lane Grp Cap (vph)	610	438	563	166	514		422	1201	676	528	1297	865
v/s Ratio Prot	c0.15	0.11	0.03	0.06	c0.10		0.09	c0.22	0.01	c0.13	0.22	0.02
v/s Ratio Perm			0.06						0.04			0.05
v/c Ratio	0.79	0.43	0.23	0.60	0.63		0.70	0.62	0.10	0.78	0.57	0.13
Uniform Delay, d1	46.6	38.0	24.5	51.9	46.8		50.0	31.7	18.6	48.2	28.7	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.65	0.93	3.56	0.80	1.07	1.53
Incremental Delay, d2	6.1	0.7	0.1	4.2	2.5		3.3	1.9	0.0	5.8	1.6	0.0
Delay (s)	52.7	38.7	24.6	56.1	49.3		36.0	31.4	66.2	44.1	32.4	17.8
Level of Service	D	D	C	E	D		D	C	E	D	C	B
Approach Delay (s)		42.8			50.5			36.8			33.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	190	100	5	125	40	75	175	15	20	85	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1660	1657		1660	1684		1660	1727		1660	1748	
Flt Permitted	0.65	1.00		0.56	1.00		0.70	1.00		0.64	1.00	
Satd. Flow (perm)	1141	1657		979	1684		1226	1727		1115	1748	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	190	100	5	125	40	75	175	15	20	85	0
RTOR Reduction (vph)	0	47	0	0	24	0	0	8	0	0	0	0
Lane Group Flow (vph)	10	243	0	5	141	0	75	182	0	20	85	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	456	662		391	673		490	690		446	699	
v/s Ratio Prot		c0.15			0.08			c0.11			0.05	
v/s Ratio Perm	0.01			0.01			0.06			0.02		
v/c Ratio	0.02	0.37		0.01	0.21		0.15	0.26		0.04	0.12	
Uniform Delay, d1	7.3	8.4		7.2	7.9		7.7	8.1		7.3	7.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	1.6		0.1	0.7		0.7	0.9		0.2	0.4	
Delay (s)	7.4	10.0		7.3	8.6		8.3	9.0		7.5	7.9	
Level of Service	A	B		A	A		A	A		A	A	
Approach Delay (s)		9.9			8.5			8.8			7.8	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	10	0	130	10	185	0	1305	170	175	1225	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00			0.95	1.00	1.00	0.95	
Frt		1.00		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1748		1660	1499			3320	1485	1660	3320	
Flt Permitted		1.00		0.48	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1748		835	1499			3320	1485	1660	3320	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	10	0	130	10	185	0	1305	170	175	1225	0
RTOR Reduction (vph)	0	0	0	0	157	0	0	0	46	0	0	0
Lane Group Flow (vph)	0	10	0	130	38	0	0	1305	124	175	1225	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		7.0		18.2	18.2			73.7	73.7	16.1	93.8	
Effective Green, g (s)		7.0		18.2	18.2			73.7	73.7	16.1	93.8	
Actuated g/C Ratio		0.06		0.15	0.15			0.61	0.61	0.13	0.78	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		2.0	3.0			3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		101		176	227			2039	912	222	2595	
v/s Ratio Prot		0.01		c0.04	0.03			c0.39		c0.11	0.37	
v/s Ratio Perm				c0.07					0.08			
v/c Ratio		0.10		0.74	0.17			0.64	0.14	0.79	0.47	
Uniform Delay, d1		53.5		47.6	44.3			14.7	9.7	50.3	4.5	
Progression Factor		1.00		1.00	1.00			0.97	0.69	1.21	0.43	
Incremental Delay, d2		0.4		13.0	0.4			1.3	0.3	11.4	0.4	
Delay (s)		53.9		60.6	44.7			15.7	7.0	72.3	2.4	
Level of Service		D		E	D			B	A	E	A	
Approach Delay (s)		53.9			51.0			14.7			11.1	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

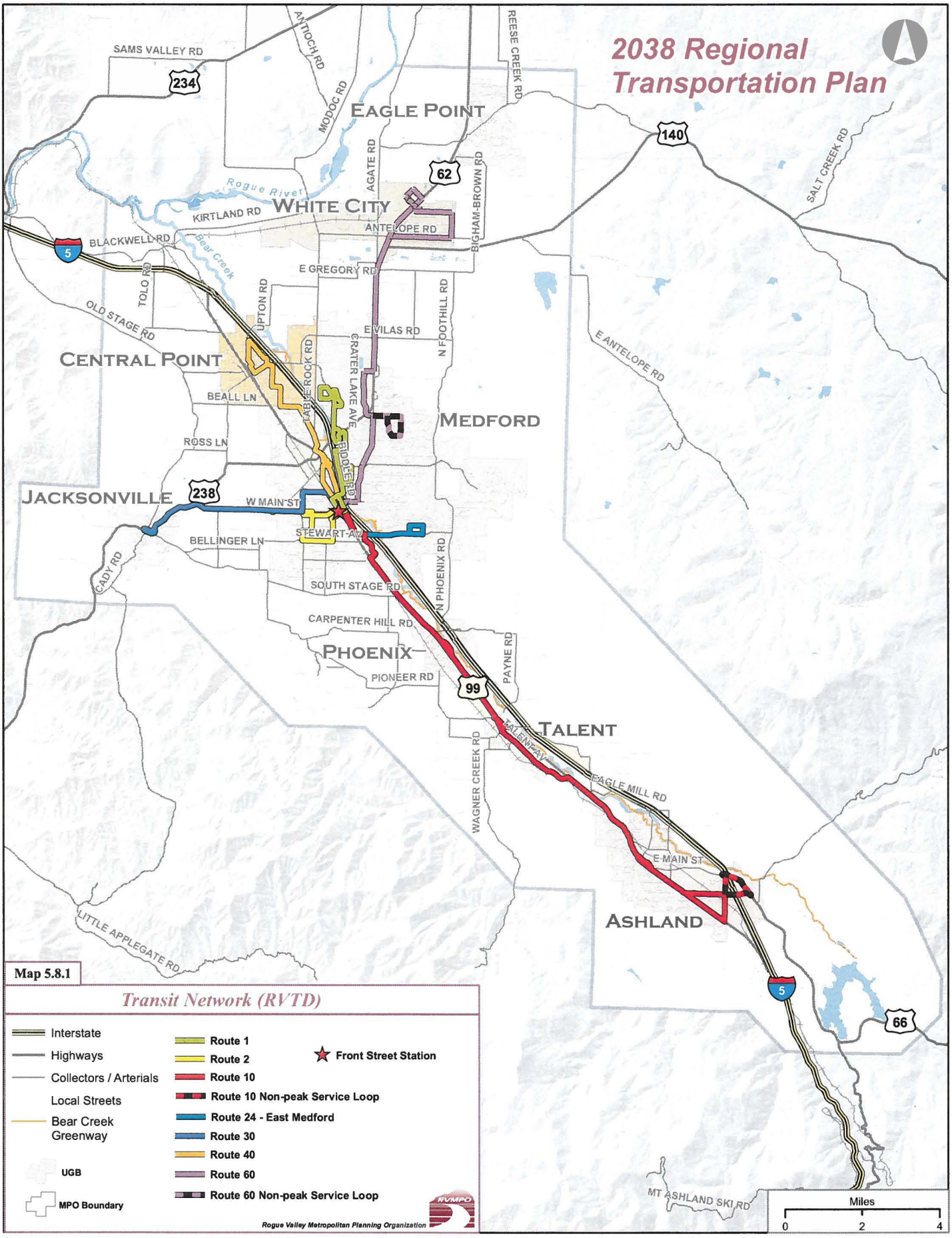
Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	240	75	5	200	160	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	240	75	5	200	160	15

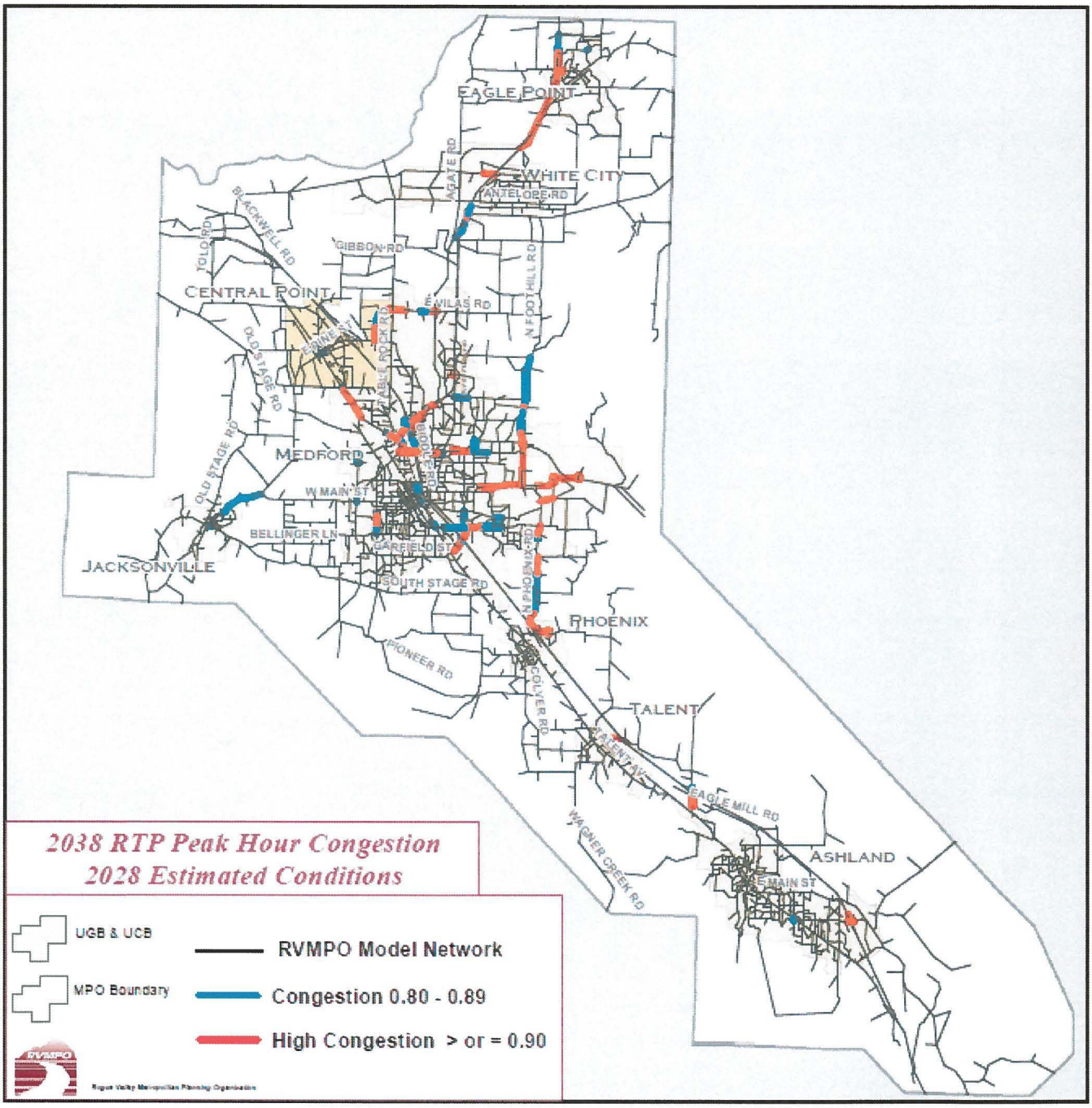
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	315	0	488	278
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1240	-	537	758
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1240	-	535	758
Mov Cap-2 Maneuver	-	-	-	-	605	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	820	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	605	758	-	-	1240	-
HCM Lane V/C Ratio	0.264	0.02	-	-	0.004	-
HCM Control Delay (s)	13.1	9.8	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0	-

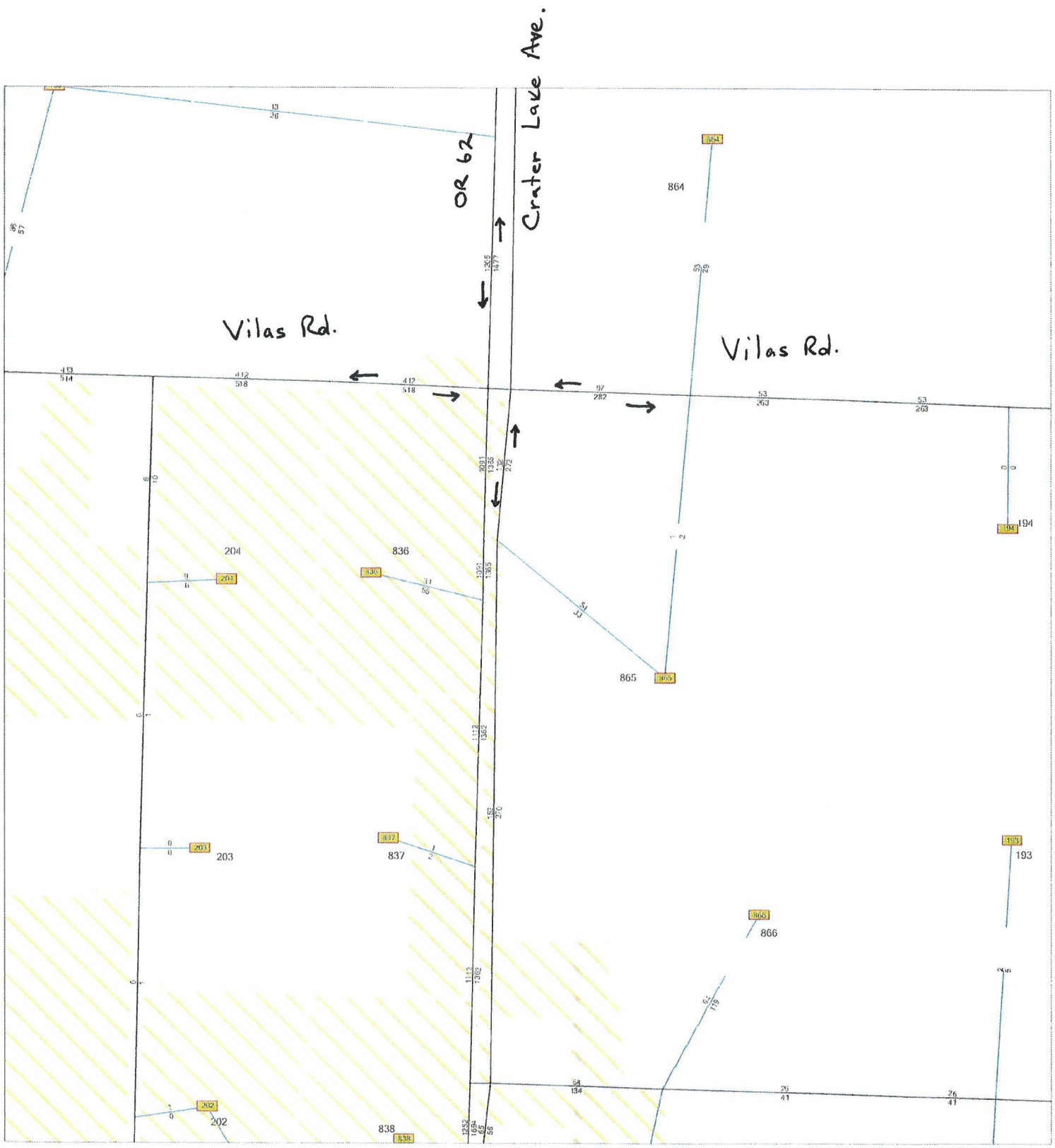

2038 Regional Transportation Plan
SAMS VALLEY RD
234
ANTIOCH RD
MODOC RD
EAGLE POINT
REESE CREEK RD
140
SALT CREEK RD
62
AGATE RD
BIGHAM-BROWN RD
Rogue River
KIRTLAND RD
WHITE CITY
ANTELOPE RD
BLACKWELL RD
5
Bear Creek
TOLO RD
E GREGORY RD
UPTON RD
N FOOTHILL RD
OLD STAGE RD
E VILAS RD
E ANTELOPE RD
CENTRAL POINT
CRATER LAKE AVE
LARKE ROCK RD
BEALL LN
MEDFORD
ROSS LN
FIDDLER RD
JACKSONVILLE
238
W MAIN ST
STEWART AV
BELLINGER LN
CADY RD
N PHOENIX RD
SOUTH STAGE RD
CARPENTER HILL RD
PHOENIX
PIONEER RD
PAYNE RD
99
TALENT
HALEY AV
WAGNER CREEK RD
EAGLE MILL RD
E MAIN ST
ASHLAND
LITTLE APPLEGATE RD
5
66
MT ASHLAND SKI RD
Map 5.8.1
Transit Network (RVTD)
Interstate
Highways
Collectors / Arterials
Local Streets
Bear Creek Greenway
UGB
MPO Boundary
Route 1
Route 2
Route 10
Route 10 Non-peak Service Loop
Route 24 - East Medford
Route 30
Route 40
Route 60
Route 60 Non-peak Service Loop
Front Street Station
RVMPO
Rogue Valley Metropolitan Planning Organization
Miles
0
2
4

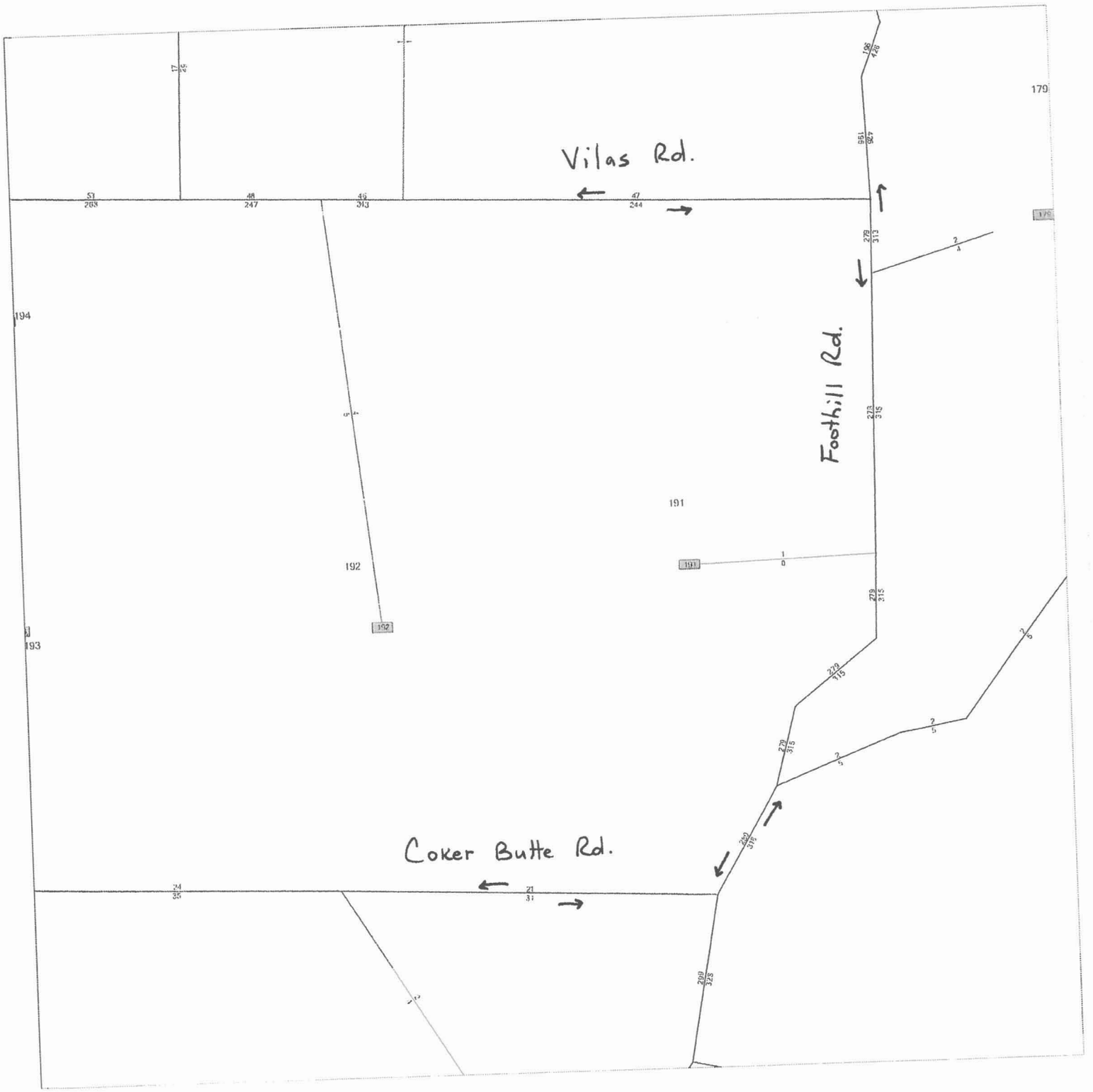
locations where the RVMPO travel demand



RVMPOv3.1_2006_PM Peak

Model Data


OR 62
Crater Lake Ave.
Vilas Rd.
Vilas Rd.
864
865
866
836
837
838
204
203
202
194
193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Foothill Rd.
Coker Butte Rd.
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194
191
192
193
51
208
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313
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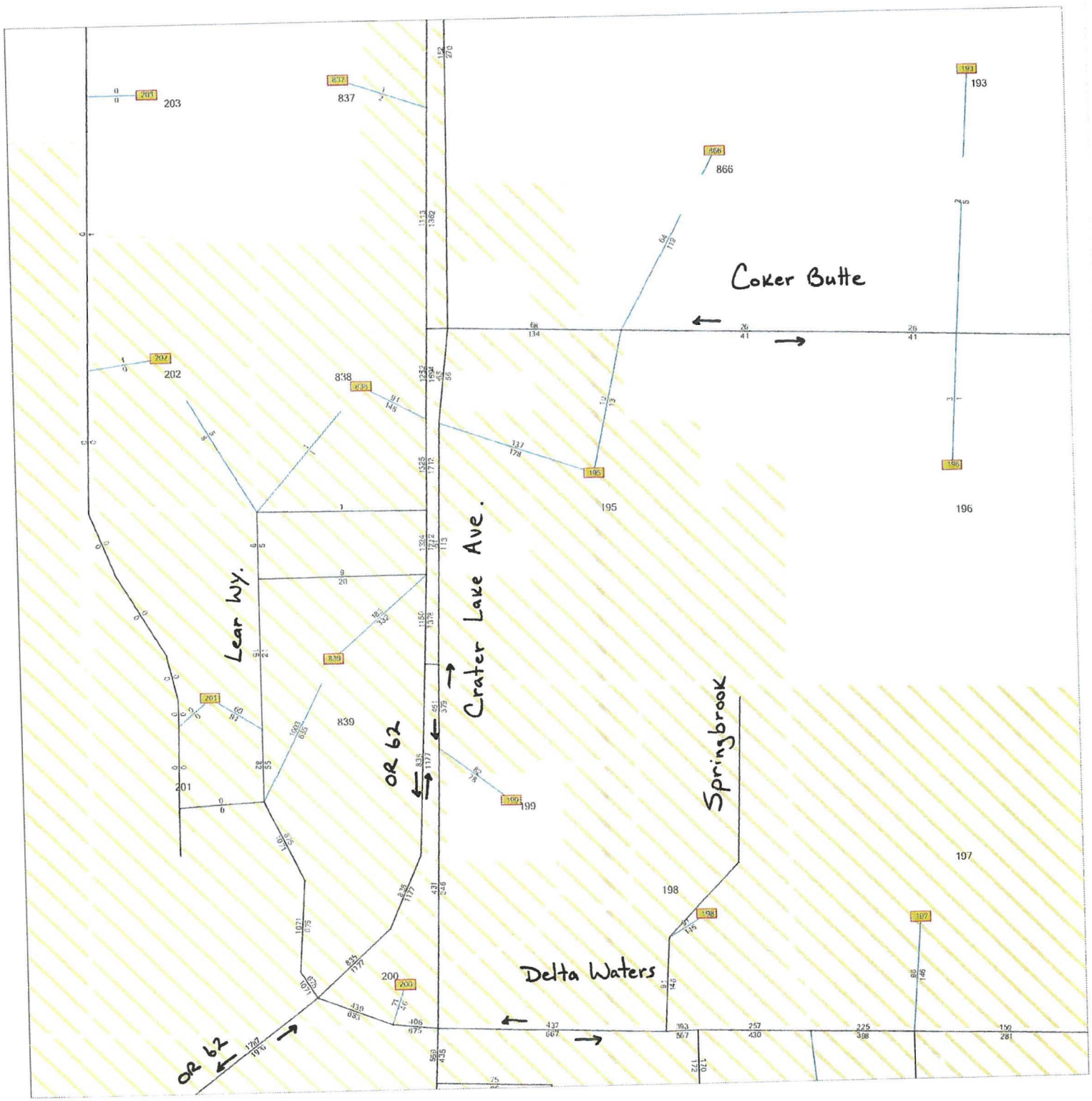
244
24
35
21
37


Coker Butte
Lear Wy.
Crater Lake Ave.
OR 62
OR 62
Springbrook
Delta Waters
203
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201
200
199
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197
196
195
193
837
838
839
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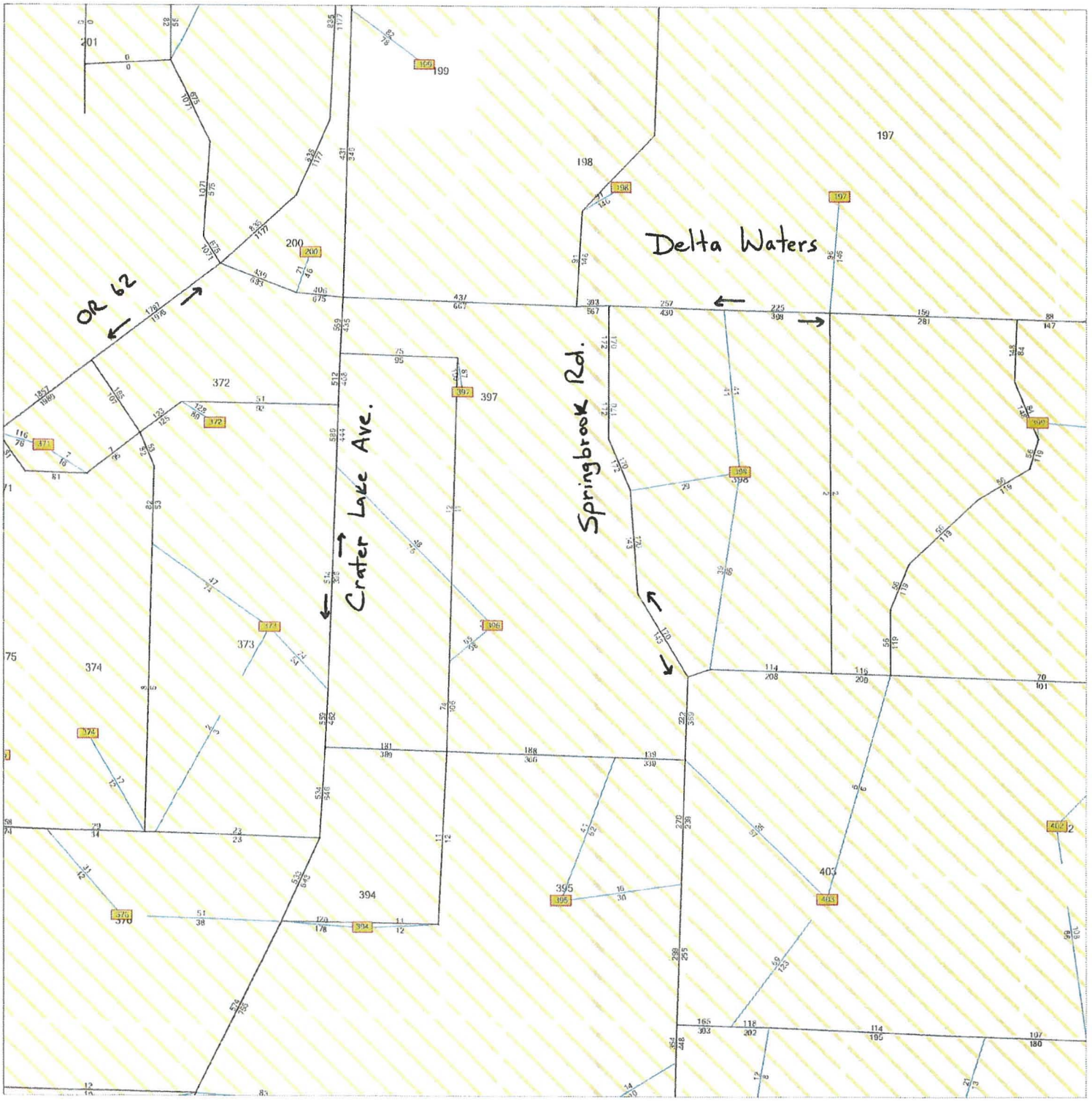
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OR 62
Crater Lake Ave.
Springbrook Rd.
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394
395
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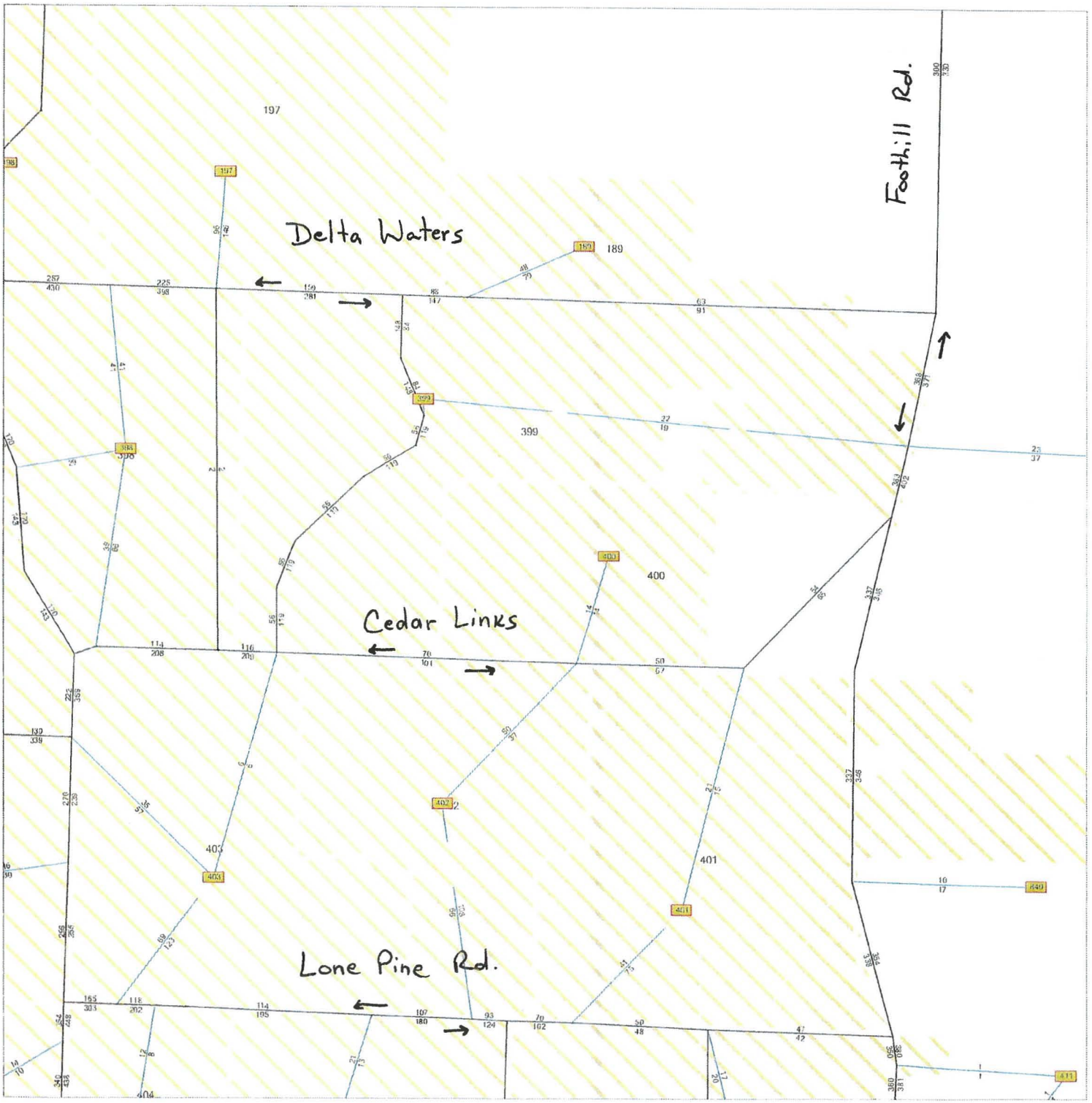
397
403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Delta Waters
Cedar Links
Lone Pine Rd.
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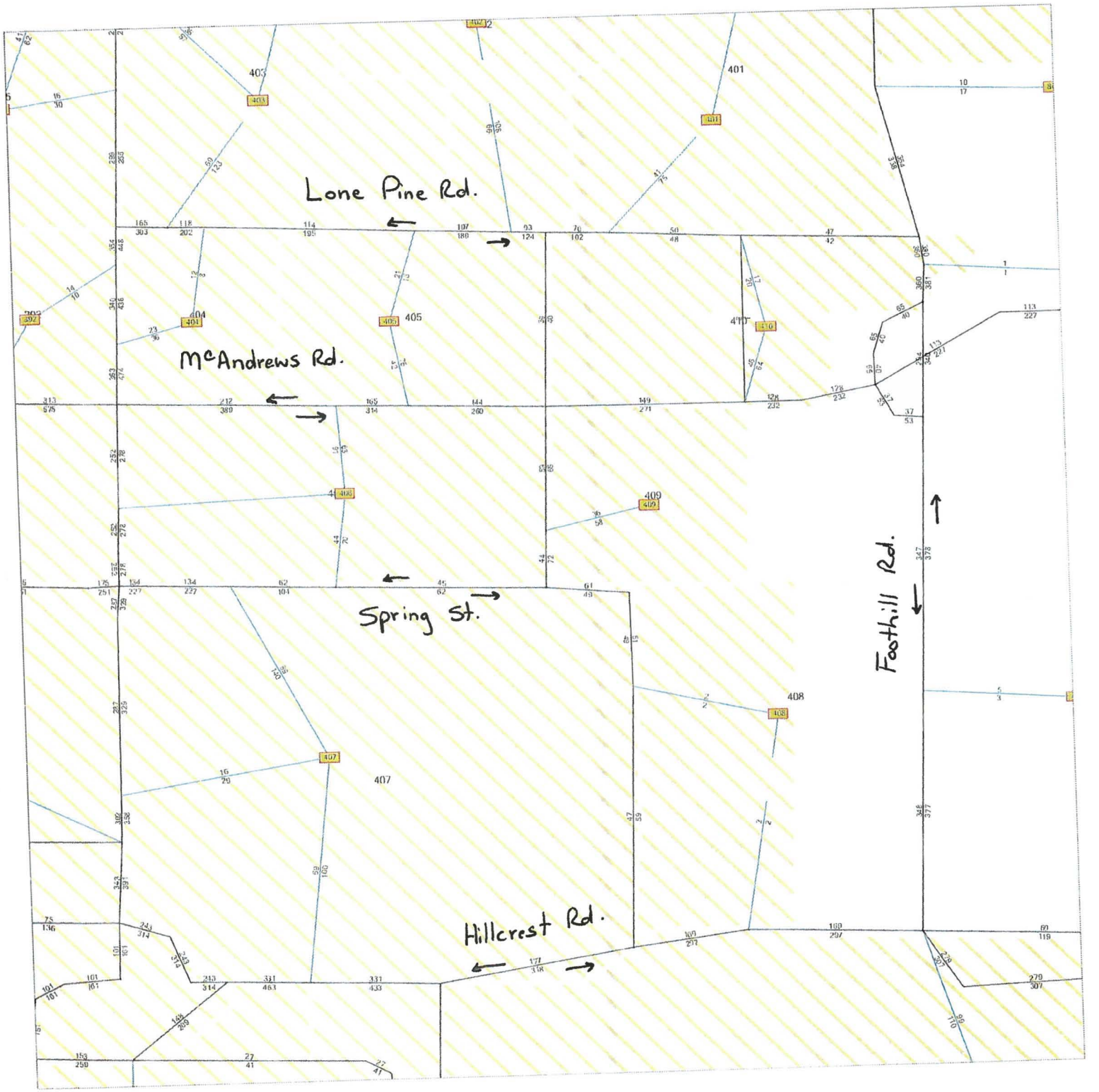
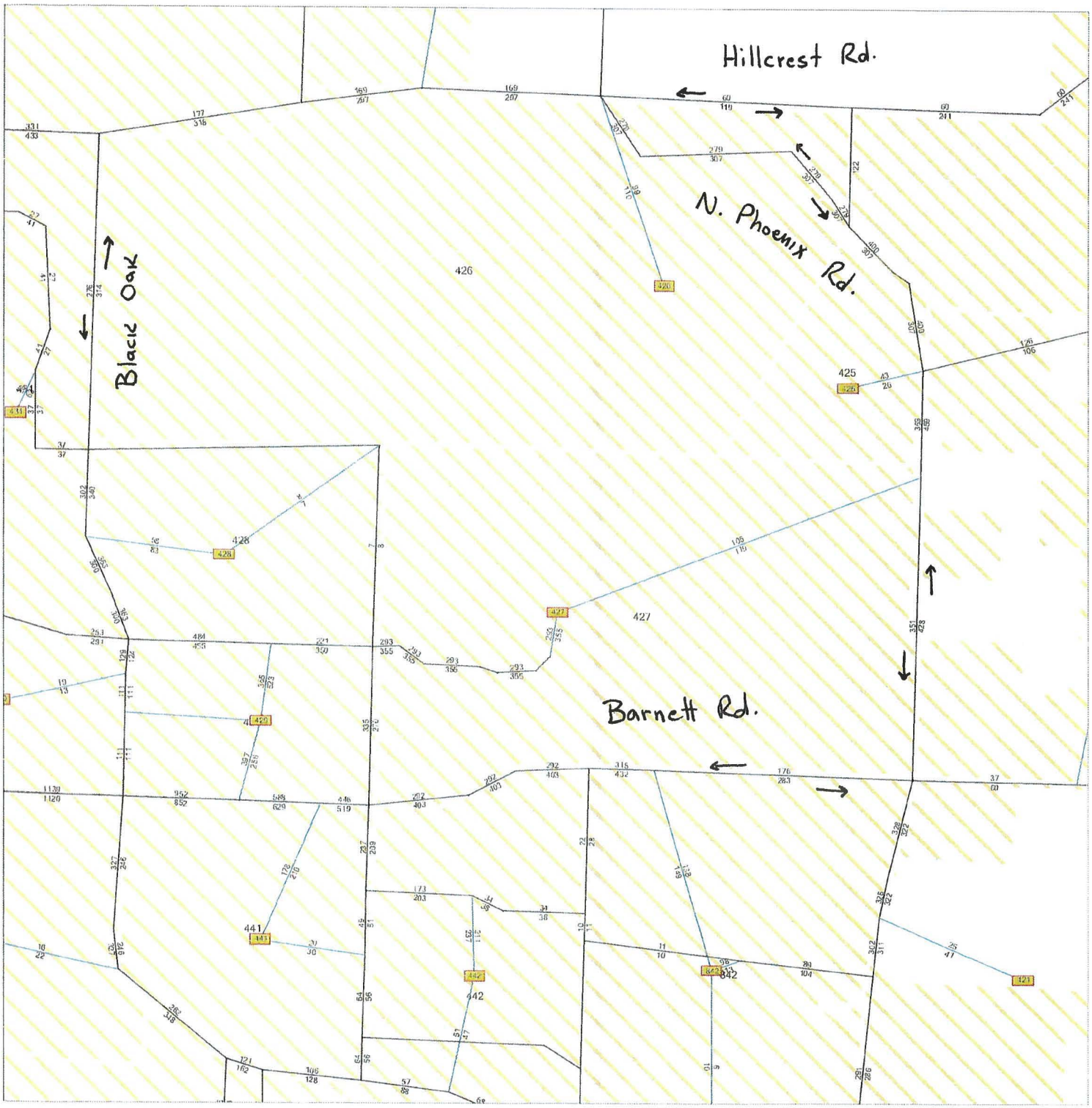
189
399
400
401
403


Lone Pine Rd.
McAndrews Rd.
Spring St.
Foothill Rd.
Hillcrest Rd.
401
403
404
405
407
408
409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N. Phoenix Rd.
Black Oak
Barnett Rd.
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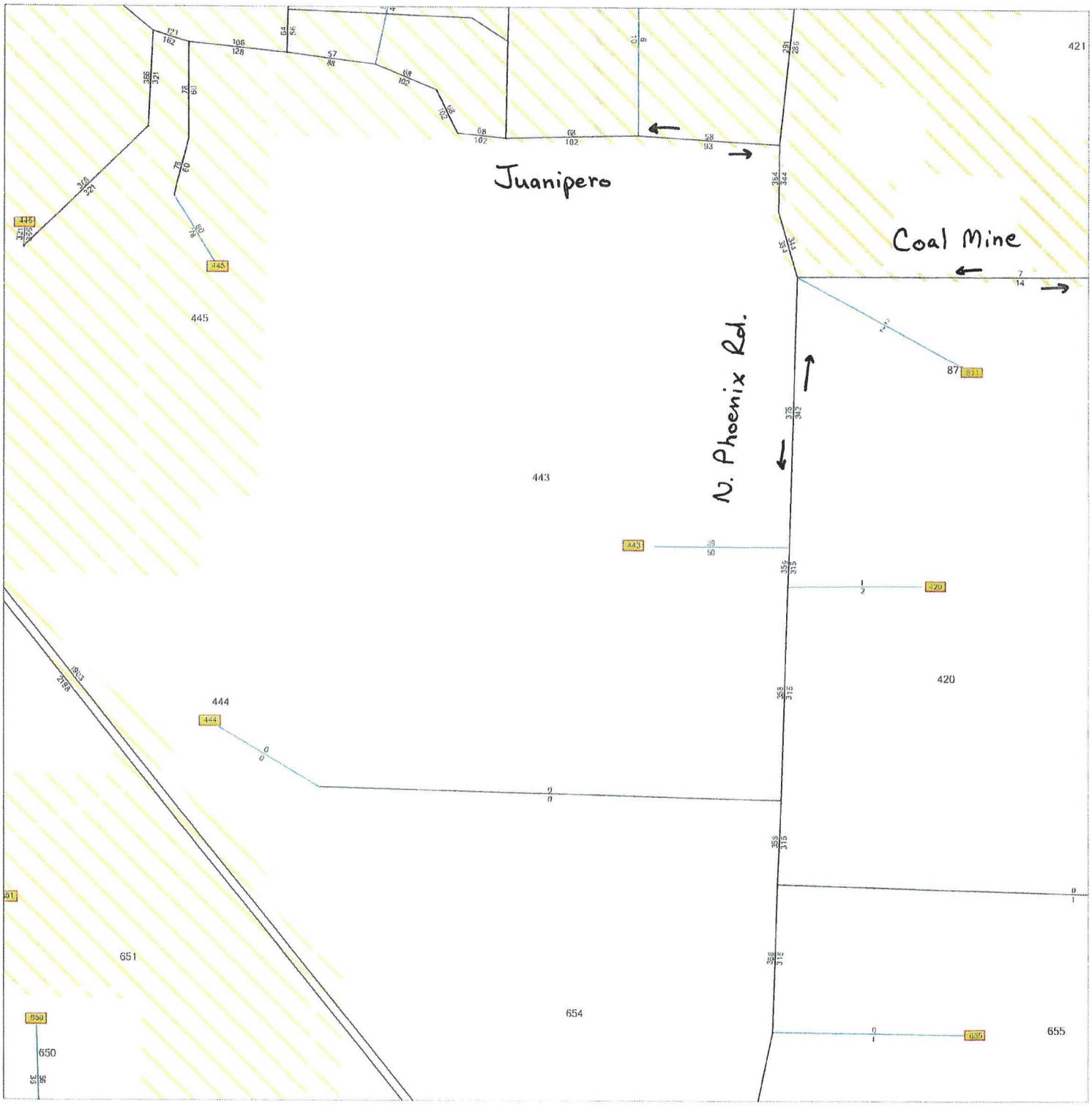
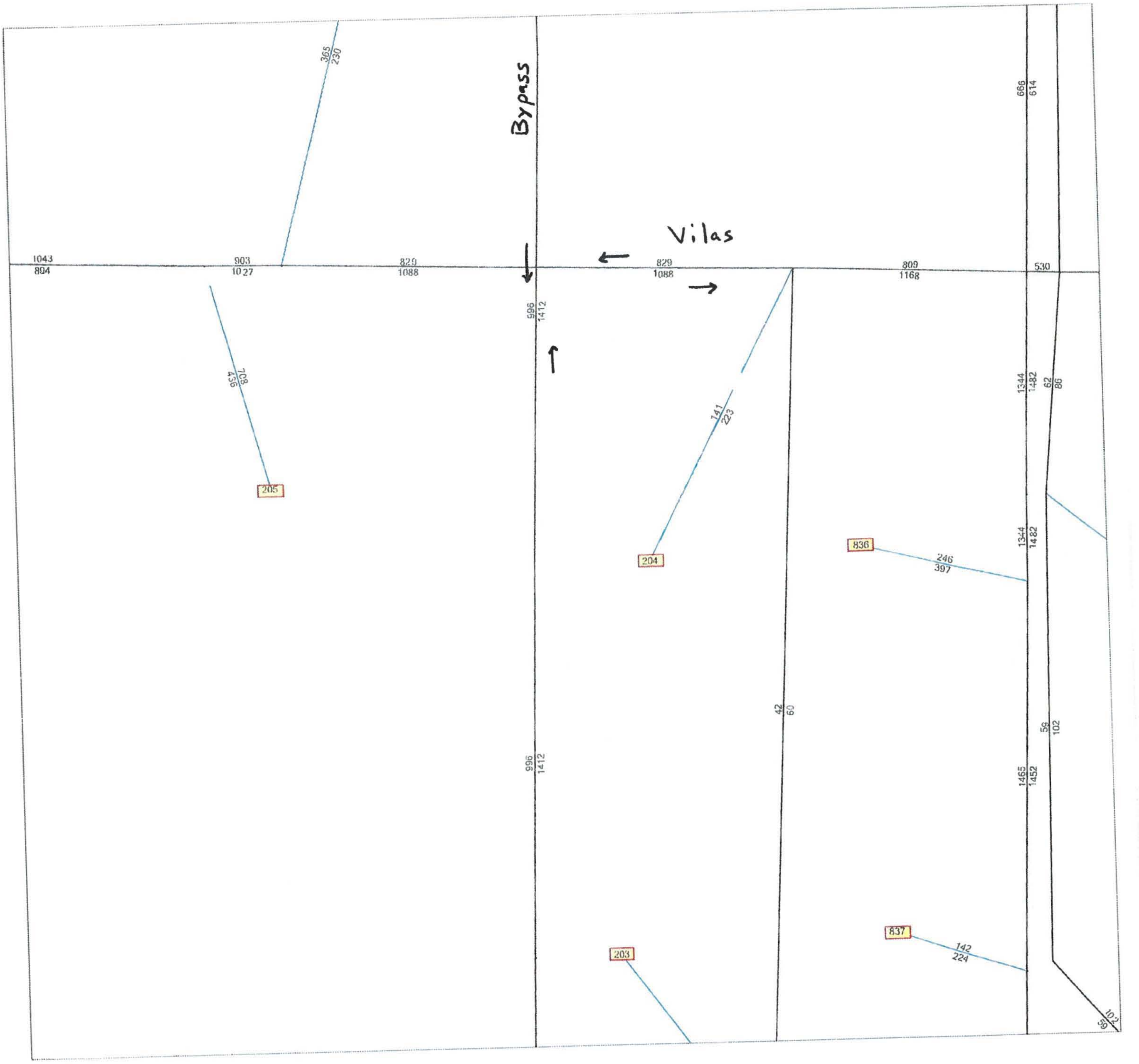
427
428
441
442
842


Juanipero
Coal Mine
N. Phoenix Rd.
421
445
443
420
444
651
654
655
650

RVMPOv3.1_2038_PM Peak

Model Data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Vilas
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903
1027
829
1088
829
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996
1412
708
436
141
223
1344
1482
62
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204
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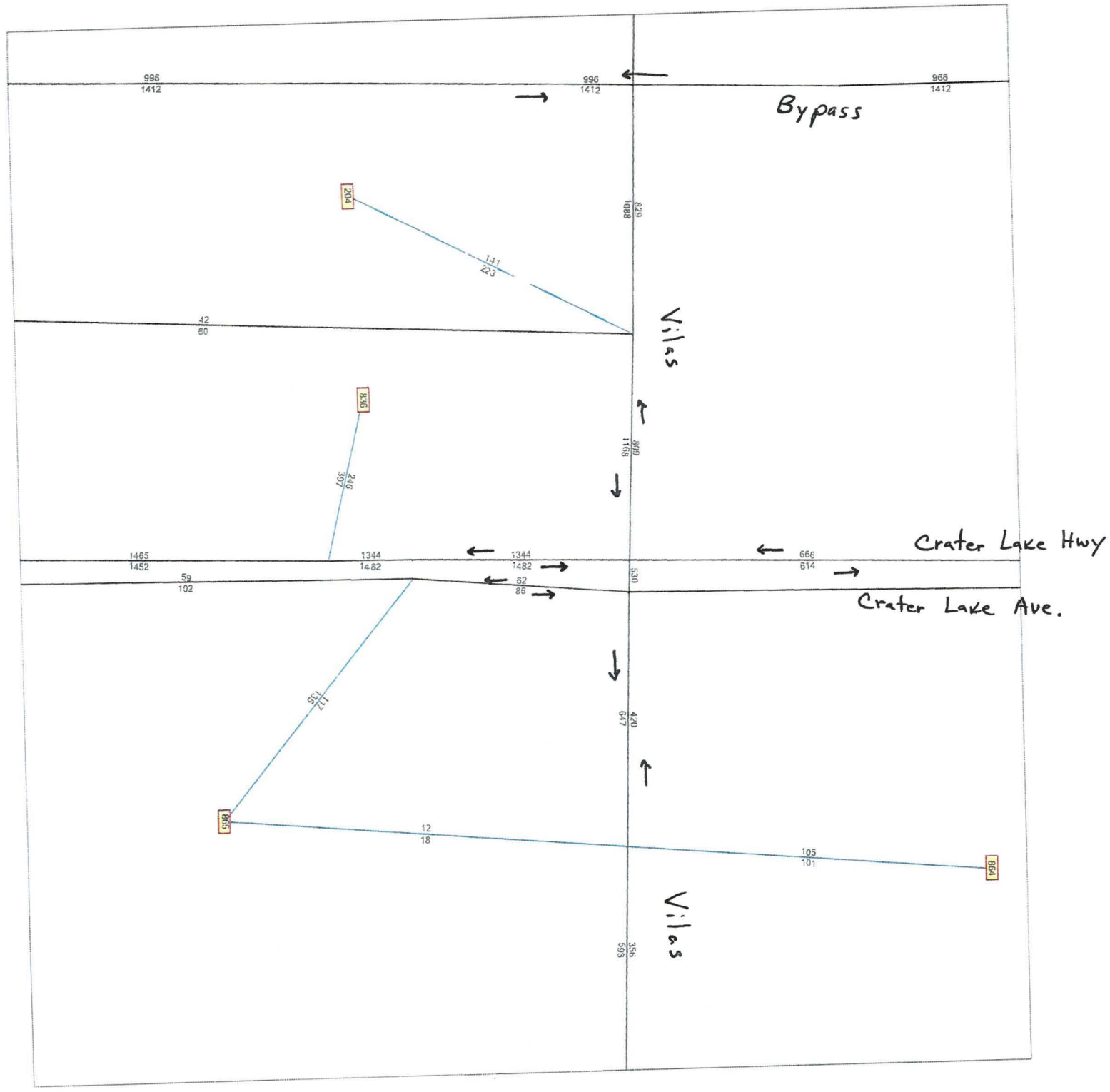
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1412
996
1412
966
1412
Bypass
204
820
1088
141
223
42
60
Vilas
836
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246
397
1465
1452
1344
1482
1344
1482
666
614
Crater Lake Hwy
59
102
62
86
530
Crater Lake Ave.
420
647
121
135
865
12
18
105
101
864
Vilas
356
593


Foothill Rd
Vilas Rd
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635
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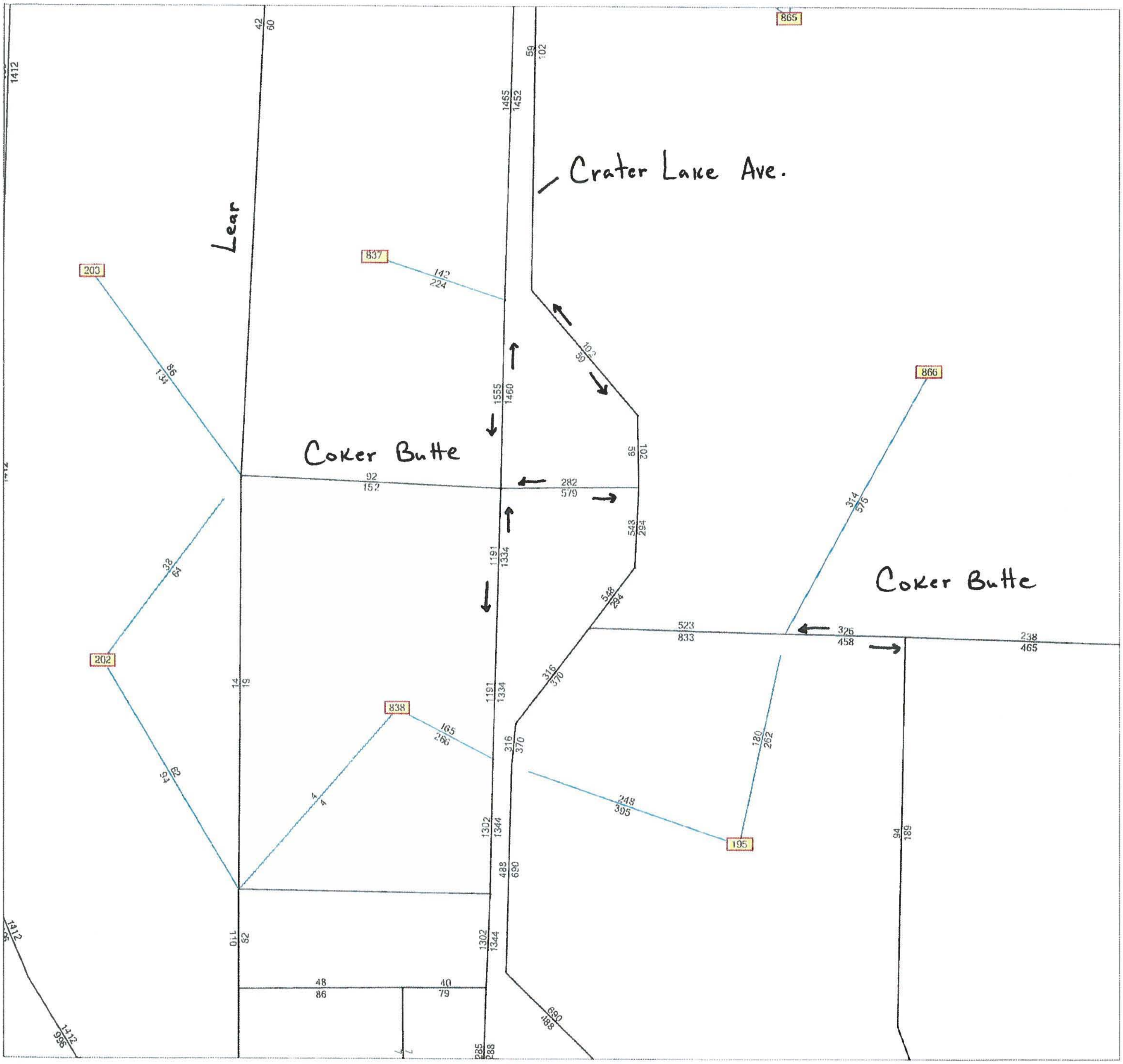
Crater Lake Ave.
Lear
Coker Butte
Coker Butte
865
837
200
866
202
838
195
42
60
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102
1465
1452
1412
142
224
86
134
102
59
1555
1460
65
102
92
152
282
579
543
294
38
64
1191
1334
548
294
523
833
326
458
238
465
314
575
14
19
316
370
165
266
180
262
62
54
4
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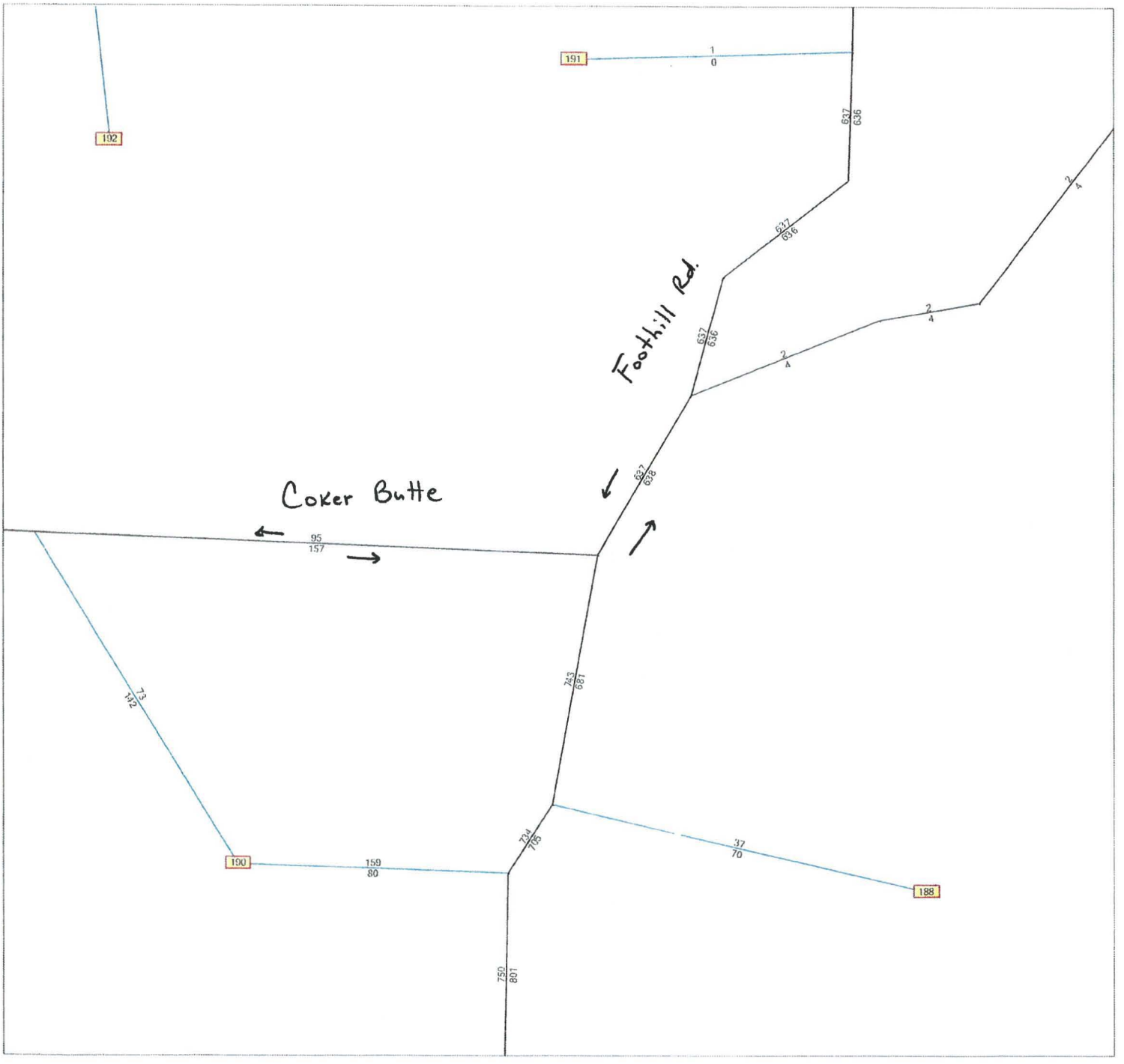
488
996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637
636
637
636
Foothill Rd.
637
636
2
4
2
4
637
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Coker Butte
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743
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73
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734
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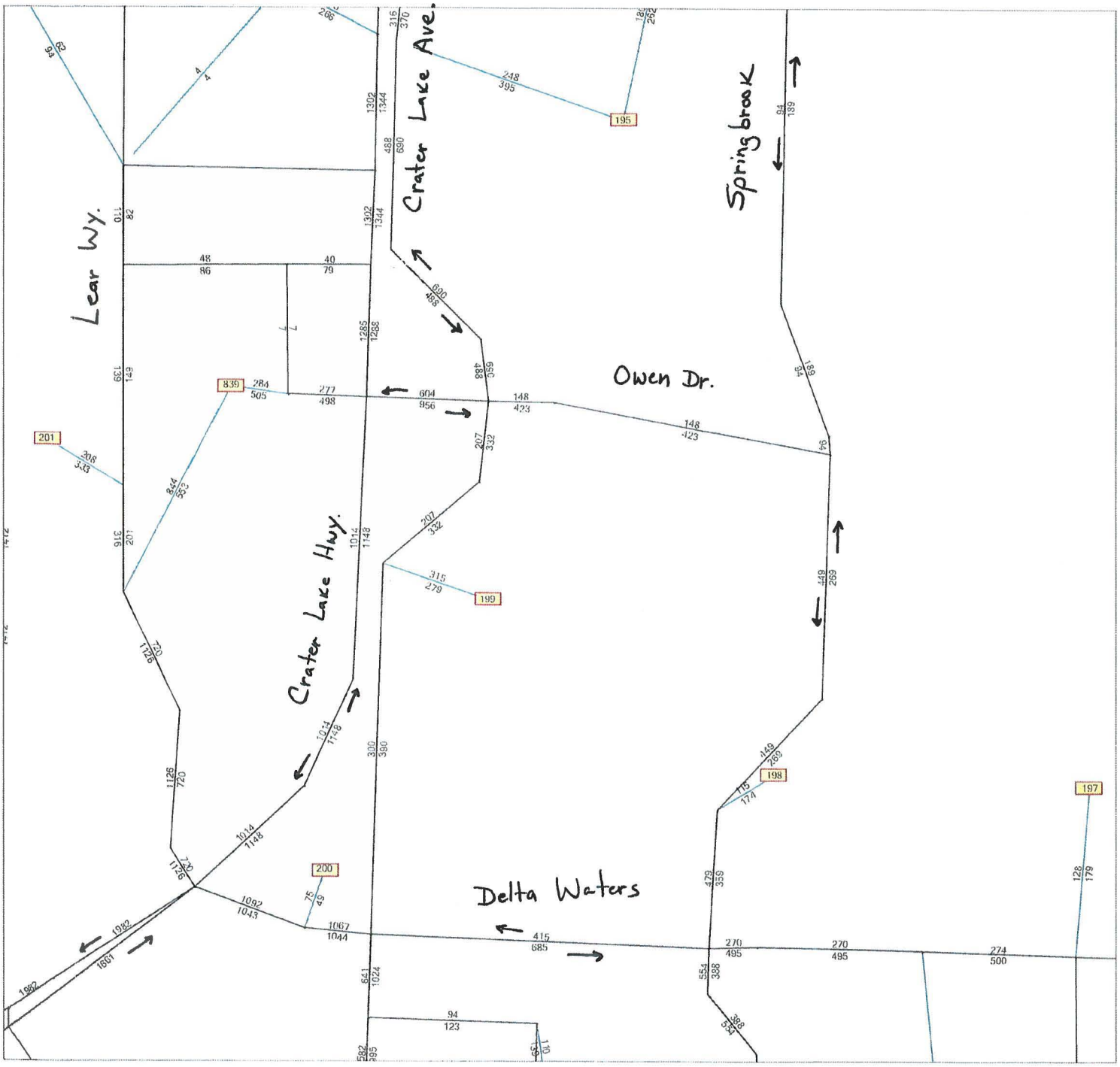
159
80
188
750
801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Crater Lake Ave.
Spring brook
Owen Dr.
Crater Lake Hwy.
Delta Waters
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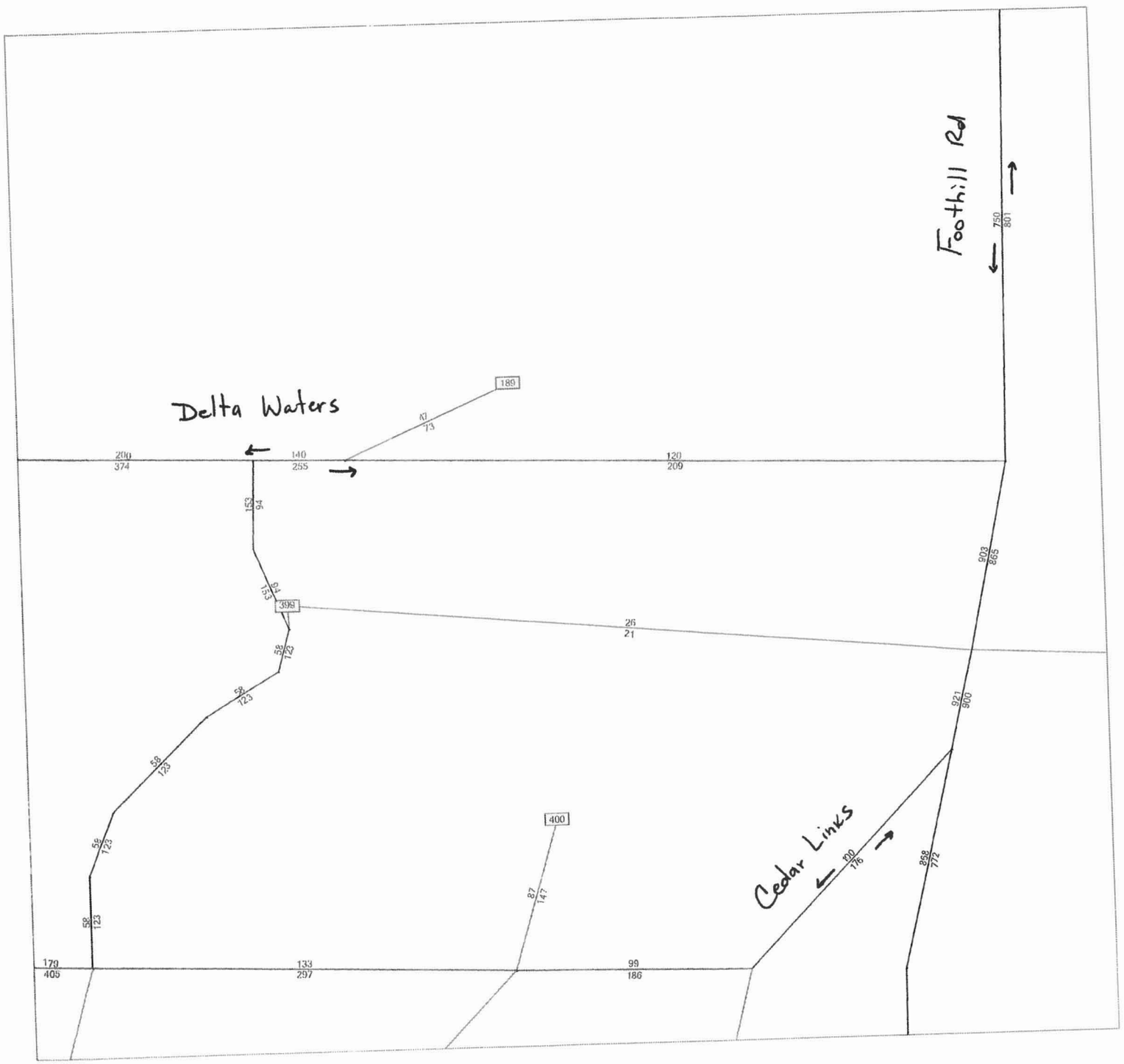
839
201
199
200
198
197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750
801
Delta Waters
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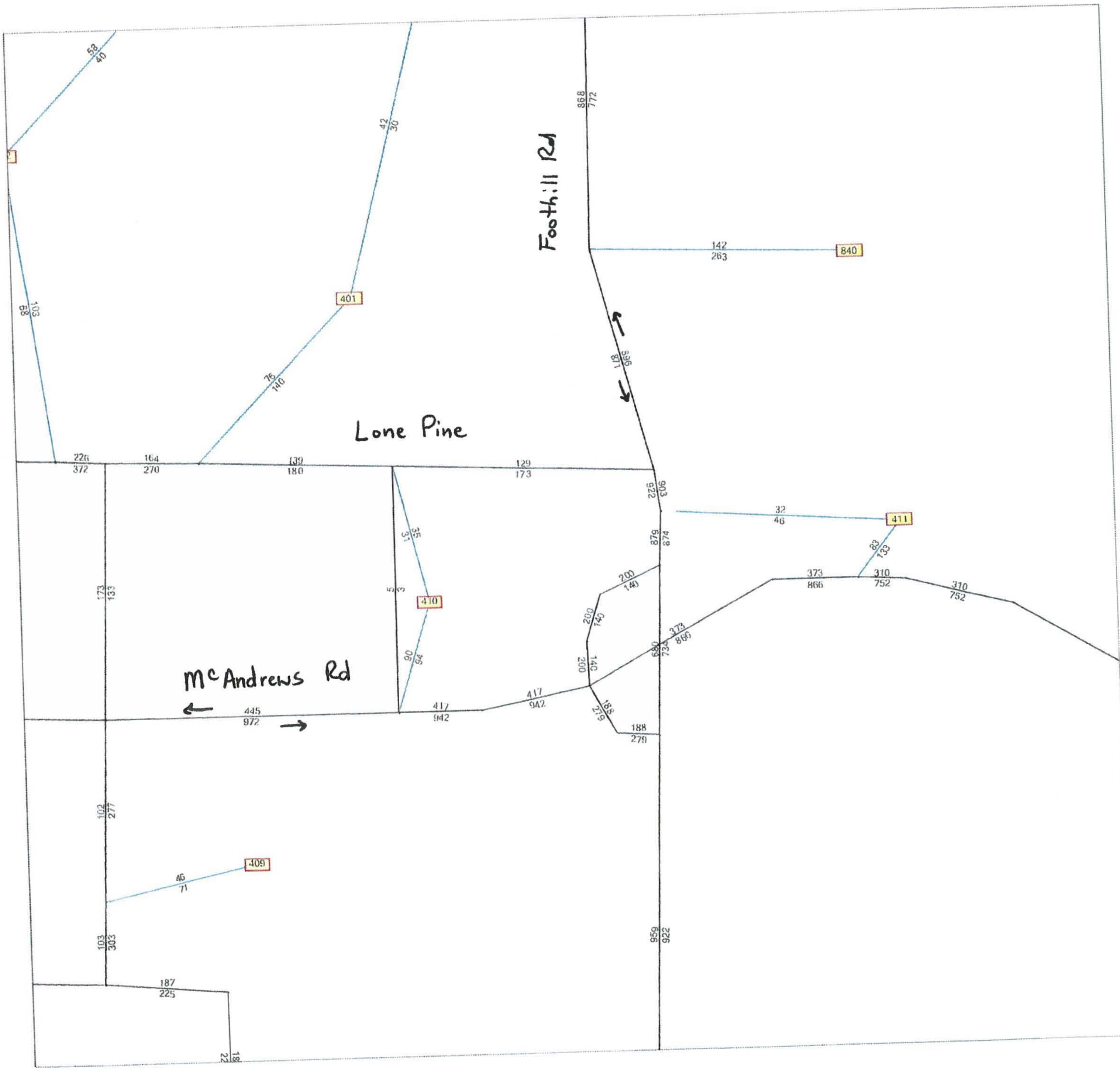

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Lone Pine
McAndrews Rd
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410
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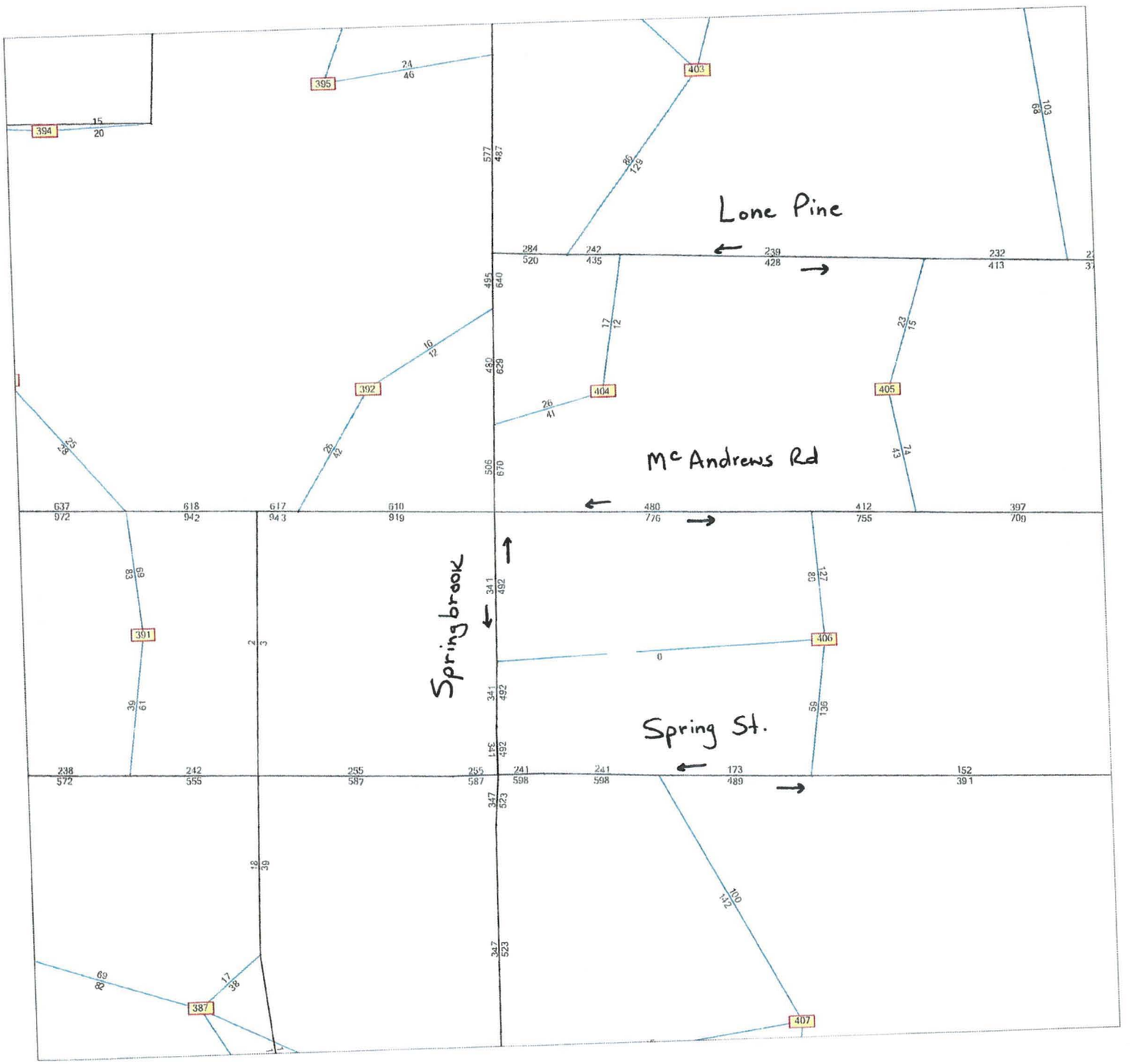
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McAndrews Rd
Spring brook
Spring St.
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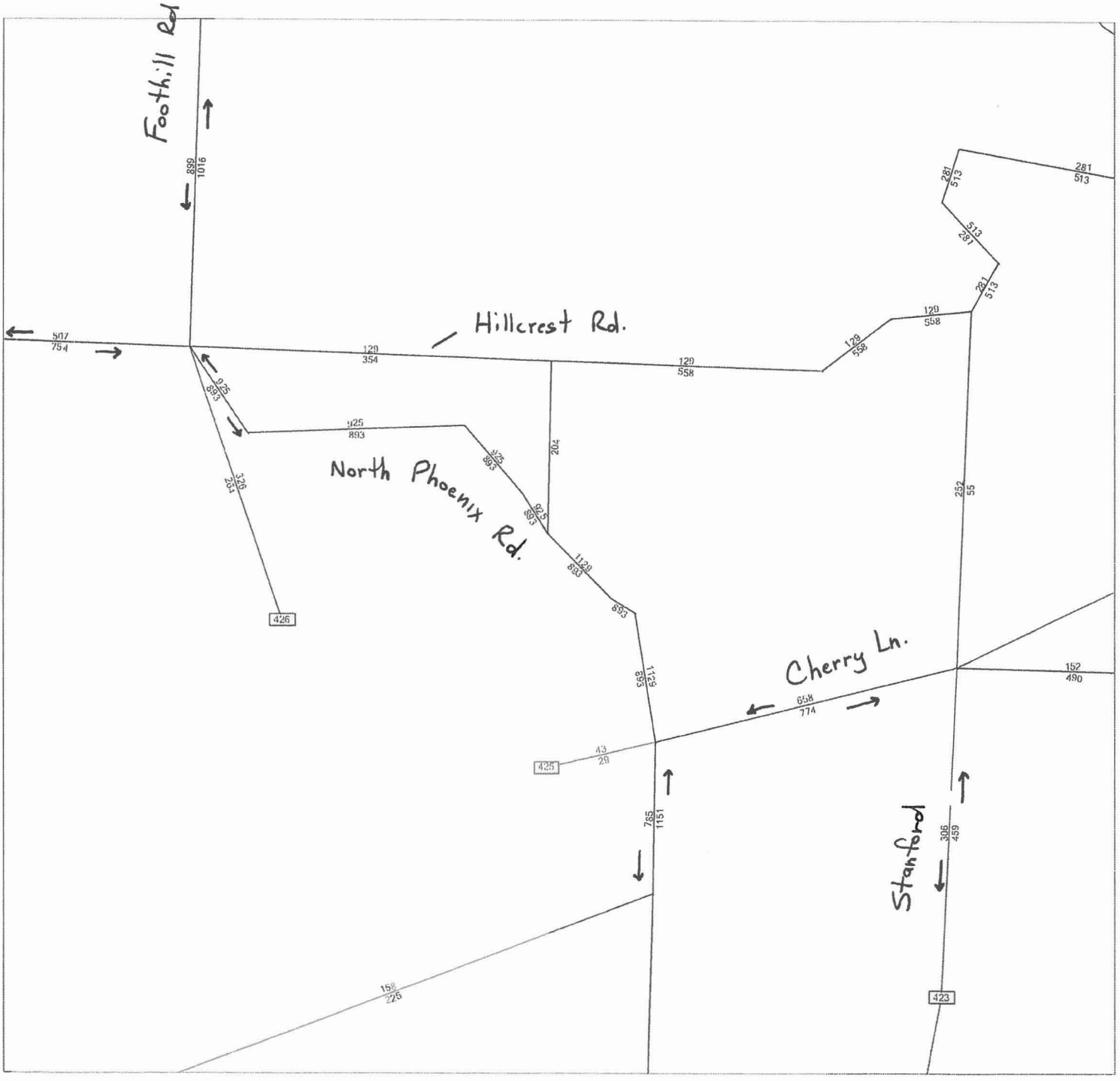
406
387
407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North Phoenix Rd.
Cherry Ln.
Stanford
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925
893
204
326
204
1129
893
568
1129
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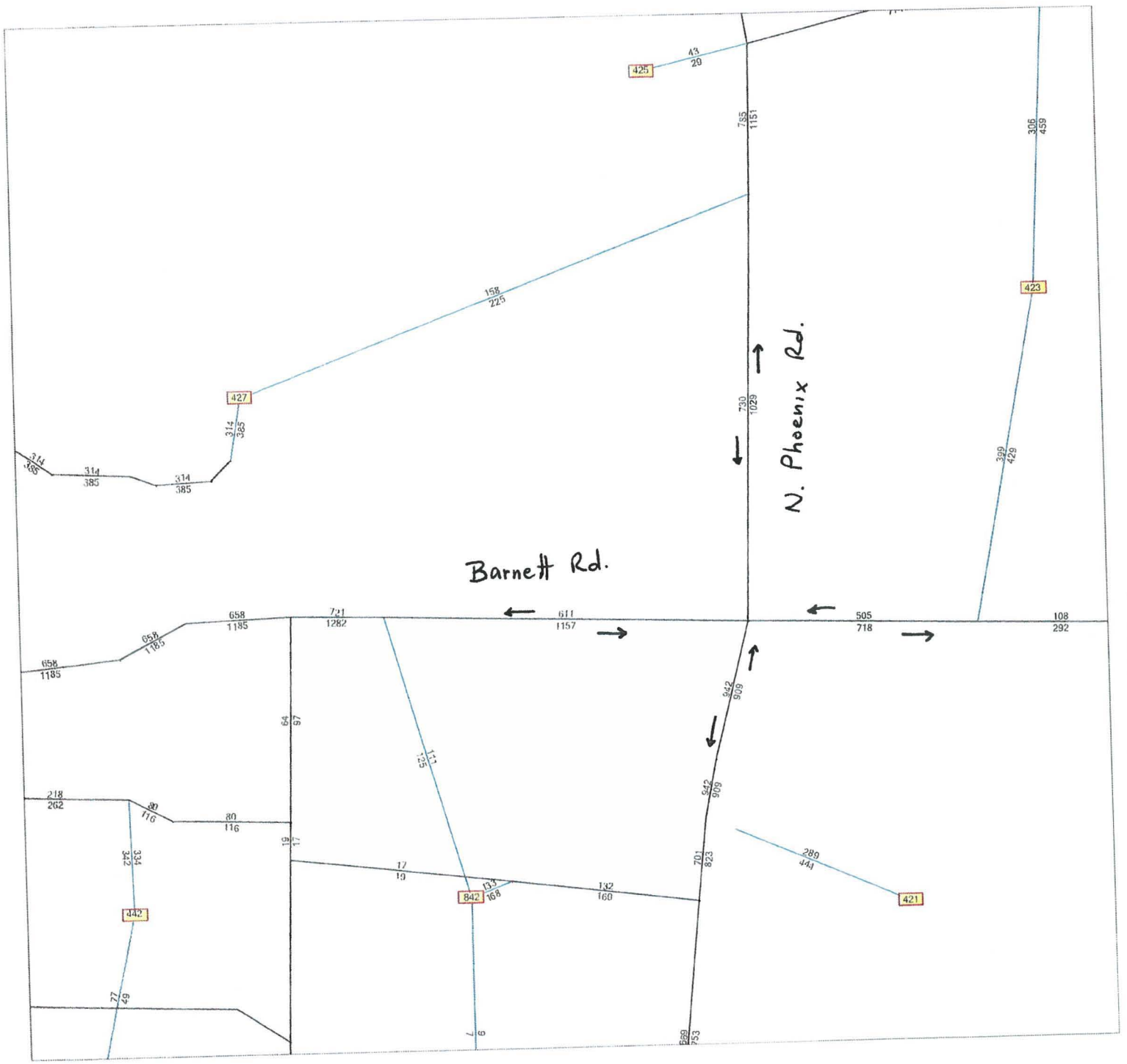
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314
385
785
1151
730
1029
306
459
399
429
658
1185
658
1185
658
1185
721
1282
611
1157
505
718
108
292
842
909
842
909
64
97
111
123
218
262
80
116
80
116
80
116
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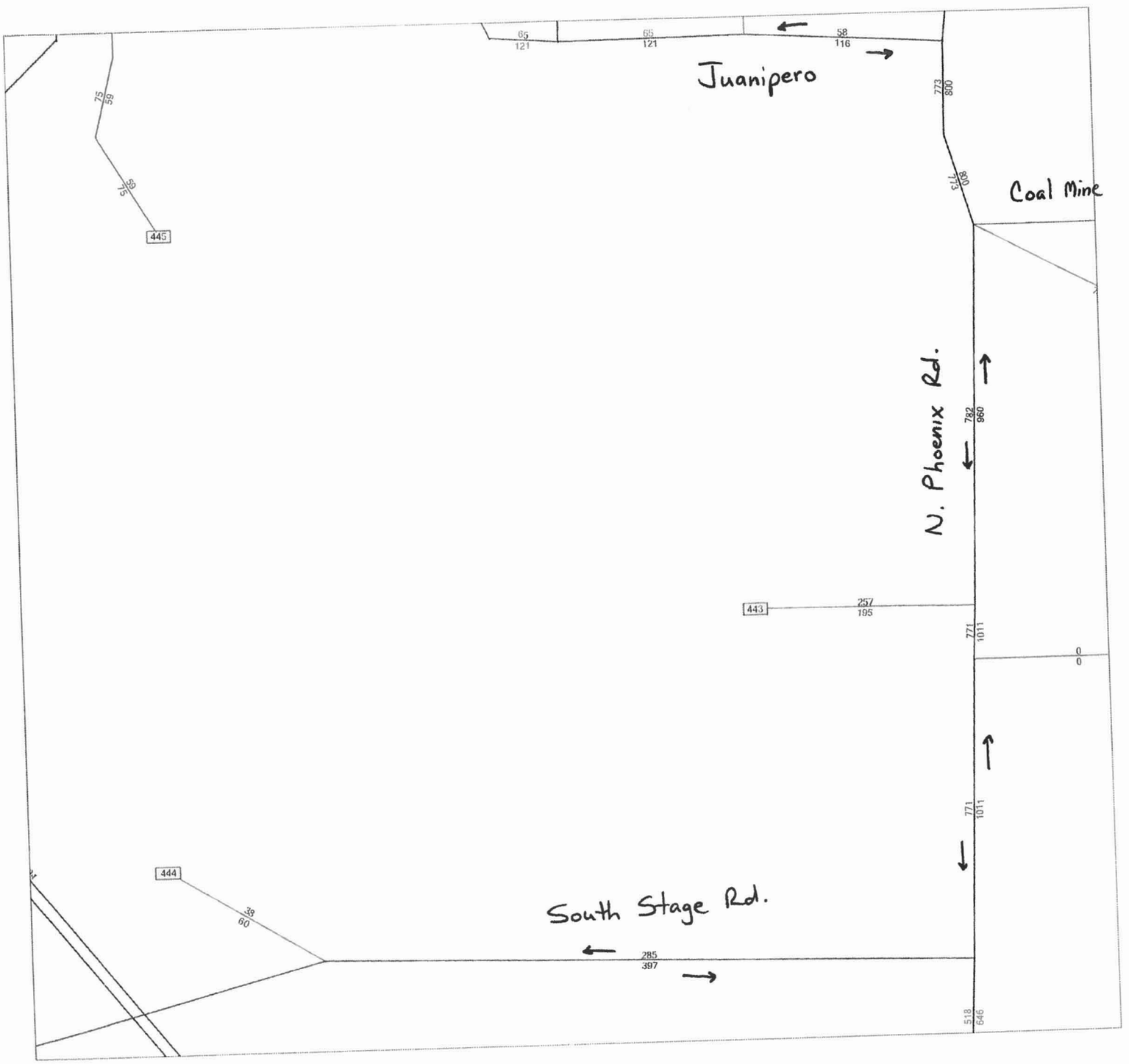
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Coal Mine
N. Phoenix Rd.
South Stage Rd.
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59
98
75
782
960
257
195
771
1011
0
0
771
1011
39
60
285
397
518
646