

LOCATION	IDENT NO: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30px; border: 1px solid black; text-align:center;">x</td> <td style="padding-left: 5px;">TOWN</td> <td rowspan="3" style="padding-left: 20px; vertical-align: middle;">OF <u>Seneca</u></td> </tr> <tr> <td style="border: 1px solid black; text-align:center;"> </td> <td style="padding-left: 5px;">CITY</td> </tr> <tr> <td style="border: 1px solid black; text-align:center;"> </td> <td style="padding-left: 5px;">VILLAGE</td> </tr> </table>	x	TOWN	OF <u>Seneca</u>		CITY		VILLAGE	STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION TRAFFIC AND SAFETY DIVISION PROJECT BENEFIT AND COST SUMMARY		
	x	TOWN	OF <u>Seneca</u>								
	CITY										
	VILLAGE										
Route No. or Street Name County Road 4	State Highway No.	From or at Ref Mrkr.									
At Intersection With (If Applicable) County Road 20	Route No. or Street Name	State Highway No.	To Ref Mrkr.								
BENEFITS	ANNUAL SAFETY BENEFITS: <u>\$2,443,500</u> (Attach Form TE164 or other documentation)										
	ANNUAL SERVICE BENEFITS: <u>\$0</u> (Explanation and calculation must be in project report)										
	OTHER ANNUAL BENEFITS: <u>\$0</u> (State their nature under "comments" and provide an explanation in the project report.)										
	TOTAL ANNUAL BENEFITS <u>\$2,443,500</u>										
COSTS	COST ITEM OR PROJECT ELEMENT	SERVICE LIFE (YRS)	COST	CRF @ 4%	ANNUALIZED COST						
	RoW	100	\$69,000	0.0408	\$2,816						
	Roundabout	20	\$3,244,000	0.0736	\$238,699						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
		0	\$0	0.0000	\$0						
ITEM SUBTOTAL			\$3,313,000	ANNUALIZED ITEM SUBTOTAL	\$241,515						
% USED FOR CONTINGENCIES 10%	COST OF CONTINGENCIES		\$331,300	ANNUALIZED COST OF CONTINGENCIES	\$24,151						
ANNUAL COST FOR SPECIAL MAINTENANCE, OPERATION, ENERGY					\$0						
TOTAL CAPITAL COST			\$3,644,300	TOTAL ANNUAL COST	\$265,666						
Please keep in mind that any Recommendation for Programming is based on the costs summarized here. Cost escalations during subsequent project development may necessitate the project's priority to be re-evaluated.											
B/C RATIOS	SAFETY BCR	=	$\frac{\text{ANNUAL SAFETY BENEFIT}}{\text{TOTAL ANNUAL COST}}$	=	9.20						
	SERVICE BCR	=	$\frac{\text{ANNUAL SERVICE BENEFIT}}{\text{TOTAL ANNUAL COST}}$	=	0.00						
	TOTAL PROJECT BCR	=	$\frac{\text{TOTAL ANNUAL BENEFITS}}{\text{TOTAL ANNUAL COSTS}}$	=	9.20						

COMMENTS:

RoW Element Cost: Include anticipated right-of-way consultant costs of \$46,000 & acquisition costs of \$23,000
Roundabout Element Costs: Include anticipated consultant costs of \$754,000 & construction costs of \$2,490,000
Summary of project costs are attached to this document

**STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC & SAFETY DIVISION
SAFETY BENEFITS
EVALUATION FORM**

TRAFFIC & SAFETY IDENTIFICATION NUMBER:	
---	--

EVALUATION OF ALTERNATE NO.:

STUDY PERIOD:	From 01/01/13	To 05/31/18	No. of Years 5.41
---------------	------------------	----------------	----------------------

LOCATION	Route No. or Street Name: County Road 4.	State Hwy No.	From or At Reference Marker
	At Intersection With: (If Applicable) Route No. or Street Name: County Road 20	State Hwy No.	To Reference Marker

PROJECT DATA	PROPOSED IMPROVEMENT: Convert existing 4-leg TWSC intersection into modern roundabout			
	Present AADT:	4,974	Future AADT:	7,217
			Volume Correction Factor (VCF):	1.23

REDUCTION CALCULATION	METHOD I (From Reduction Factor Table)			
	Average Reduction Factor 91.18 %			
	METHOD II (Engineering Analysis)		METHOD III (For General Upgradings)	
	a. Total Accidents: <u>34</u> b. Accidents Reduced: <u>31</u> c. Calculated RF (b÷a): <u>91.18%</u> %	a. Existing Accident Rate: _____ b. Future Accident Rate: _____ c. Difference (a-b): _____ d. Calculated RF (c÷a): _____ %		

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED : 31 of the 34 accidents would be correctable by construction of roundabout

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION					
	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity	0.89	27.67	28.56	71.43	100%
b. actual	3.00	14.00	17.00	17.00	34.0
c. expected	0.30	9.41	9.71	24.29	43.7
d. difference	2.70	4.59	7.29	7.29	9.7
e. significance	YES	YES	YES		

BEFORE COST PER ACCIDENT CALCULATION			
TYPE	No. ACC	COST/ACC	ACC COST
Fatal	3	\$ 3,455,400	= \$ 10,366,200
Injury	14	\$ 102,200	= \$ 1,430,800
F & I	0	\$ 207,200	= \$ -
PDO	8	\$ 5,200	= \$ 41,600
Total			\$ 11,838,600
BEFORE COST/ACC (Tot. Acc Cost ÷ Tot. Acc)			\$ 348,194

SAFETY BENEFITS	A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:			
	ACC/YR	6.3	x VCF	1.23
			x BEFORE COST/ACCIDENT	\$ 348,194
			=	\$ 2,679,846
B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:				
ACC/YR	6.3	x VCF	1.23	
		x (1.00 -	0.9118	
		RF) x AVG. COST/ACC	\$ 348,194	
			=	\$ 236,362
ESTIMATED ANNUAL SAFETY BENEFITS (A-B)				\$ 2,443,500.00

Ontario County DPW

2962 County Road 48
Canandaigua, Ny 14424

CR04_003_09 2000' west of CR20 (utp)

Start Time	20-Aug-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	10	3	12	5	7	9	12	9	*	*	*	*	10	6
01:00	*	*	6	3	3	2	3	6	3	3	*	*	*	*	4	4
02:00	*	*	2	3	2	2	2	0	3	3	*	*	*	*	2	2
03:00	*	*	7	0	5	2	3	9	5	3	*	*	*	*	5	4
04:00	*	*	8	9	7	10	12	10	13	7	*	*	*	*	10	9
05:00	*	*	39	35	37	31	39	31	31	19	*	*	*	*	36	29
06:00	*	*	74	93	69	97	77	80	67	72	*	*	*	*	72	86
07:00	*	*	134	167	147	153	128	165	116	142	*	*	*	*	131	157
08:00	*	*	98	137	105	121	116	119	93	104	*	*	*	*	103	120
09:00	*	*	87	103	76	88	85	122	*	*	*	*	*	*	83	104
10:00	102	94	91	88	113	102	82	79	*	*	*	*	*	*	97	91
11:00	94	86	89	84	99	93	105	115	*	*	*	*	*	*	97	94
12:00 PM	96	83	87	92	111	115	115	94	*	*	*	*	*	*	102	96
01:00	100	110	100	104	103	91	116	98	*	*	*	*	*	*	105	101
02:00	109	127	110	112	129	89	125	114	*	*	*	*	*	*	118	110
03:00	130	134	129	119	155	136	185	158	*	*	*	*	*	*	150	137
04:00	174	161	181	139	196	123	209	159	*	*	*	*	*	*	190	146
05:00	148	133	135	134	147	139	169	148	*	*	*	*	*	*	150	138
06:00	84	75	75	73	78	82	97	86	*	*	*	*	*	*	84	79
07:00	36	51	60	46	45	56	53	50	*	*	*	*	*	*	48	51
08:00	38	32	34	25	37	24	41	43	*	*	*	*	*	*	38	31
09:00	20	23	36	26	40	37	30	24	*	*	*	*	*	*	32	28
10:00	22	14	27	18	24	22	17	22	*	*	*	*	*	*	22	19
11:00	9	15	15	21	18	34	17	20	*	*	*	*	*	*	15	22
Lane	1162	1138	1634	1634	1758	1654	1833	1761	343	362	0	0	0	0	1704	1664
Day	2300		3268		3412		3594		705		0		0		3368	
AM Peak	10:00	10:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	-	-	-	-	07:00	07:00
Vol.	102	94	134	167	147	153	128	165	116	142	-	-	-	-	131	157
PM Peak	16:00	16:00	16:00	16:00	16:00	17:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	174	161	181	139	196	139	209	159	-	-	-	-	-	-	190	146

Comb. Total	2300	3268	3412	3594	705	0	0	3368
ADT	ADT 3,366	AADT 3,366						

Ontario County DPW

2962 County Road 48
Canandaigua, Ny 14424

CR10_004_10 2000' east of CR20 (gr)

Start Time	20-Aug-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	8	4	8	6	4	9	12	6	*	*	*	*	8	6
01:00	*	*	3	4	1	1	2	6	1	1	*	*	*	*	2	3
02:00	*	*	1	2	1	2	2	0	2	3	*	*	*	*	2	2
03:00	*	*	4	1	6	2	4	5	4	4	*	*	*	*	4	3
04:00	*	*	8	5	6	5	8	6	10	3	*	*	*	*	8	5
05:00	*	*	27	25	22	18	22	18	19	12	*	*	*	*	22	18
06:00	*	*	59	62	57	69	61	58	52	50	*	*	*	*	57	60
07:00	*	*	104	132	110	125	86	129	73	107	*	*	*	*	93	123
08:00	*	*	90	97	80	90	92	86	73	85	*	*	*	*	84	90
09:00	*	*	63	76	60	76	57	95	*	*	*	*	*	*	60	82
10:00	*	*	59	66	80	76	70	70	*	*	*	*	*	*	70	71
11:00	76	73	81	64	65	68	86	93	*	*	*	*	*	*	77	74
12:00 PM	81	76	60	79	67	93	82	83	*	*	*	*	*	*	72	83
01:00	72	89	71	82	69	74	85	82	*	*	*	*	*	*	74	82
02:00	78	103	86	90	97	84	92	93	*	*	*	*	*	*	88	92
03:00	90	103	84	95	92	115	135	118	*	*	*	*	*	*	100	108
04:00	134	118	128	110	136	96	142	125	*	*	*	*	*	*	135	112
05:00	97	102	96	101	100	101	95	117	*	*	*	*	*	*	97	105
06:00	66	56	51	58	56	51	55	71	*	*	*	*	*	*	57	59
07:00	30	39	43	37	31	48	29	41	*	*	*	*	*	*	33	41
08:00	32	26	25	21	29	20	27	29	*	*	*	*	*	*	28	24
09:00	13	20	24	14	34	26	24	20	*	*	*	*	*	*	24	20
10:00	14	10	17	22	17	16	10	18	*	*	*	*	*	*	14	16
11:00	8	12	7	15	13	24	9	19	*	*	*	*	*	*	9	18
Lane	791	827	1199	1262	1237	1286	1279	1391	246	271	0	0	0	0	1218	1297
Day	1618		2461		2523		2670		517		0	0	0		2515	
AM Peak	11:00	11:00	07:00	07:00	07:00	07:00	08:00	07:00	07:00	07:00	-	-	-	-	07:00	07:00
Vol.	76	73	104	132	110	125	92	129	73	107	-	-	-	-	93	123
PM Peak	16:00	16:00	16:00	16:00	16:00	15:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	134	118	128	110	136	115	142	125	-	-	-	-	-	-	135	112

Comb. Total	1618	2461	2523	2670	517	0	0	2515
ADT	ADT 2,518	AADT 2,518						

Ontario County DPW

2962 County Road 48
Canandaigua, Ny 14424

CR20_001_03 1300' south of CR04 (hyd)

Start Time	16-Jul-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	2	2	2	0	1	2	*	*	*	*	2	1
01:00	*	*	*	*	4	1	4	0	4	0	*	*	*	*	4	0
02:00	*	*	*	*	2	0	1	0	1	1	*	*	*	*	1	0
03:00	*	*	*	*	5	1	3	2	5	1	*	*	*	*	4	1
04:00	*	*	*	*	3	6	6	5	4	6	*	*	*	*	4	6
05:00	*	*	*	*	11	21	14	22	12	21	*	*	*	*	12	21
06:00	*	*	*	*	32	65	34	53	36	59	*	*	*	*	34	59
07:00	*	*	*	*	65	79	65	85	56	75	*	*	*	*	62	80
08:00	*	*	*	*	62	65	62	57	61	62	*	*	*	*	62	61
09:00	*	*	33	39	51	49	55	56	45	53	*	*	*	*	46	49
10:00	*	*	41	52	46	34	61	49	59	45	*	*	*	*	52	45
11:00	*	*	43	29	43	37	43	33	51	45	*	*	*	*	45	36
12:00 PM	*	*	55	55	47	44	57	42	*	*	*	*	*	*	53	47
01:00	*	*	37	38	42	49	61	48	*	*	*	*	*	*	47	45
02:00	*	*	45	57	51	40	55	64	*	*	*	*	*	*	50	54
03:00	*	*	63	55	68	68	75	74	*	*	*	*	*	*	69	66
04:00	*	*	69	52	72	50	99	64	*	*	*	*	*	*	80	55
05:00	*	*	69	47	70	61	84	50	*	*	*	*	*	*	74	53
06:00	*	*	39	32	51	29	46	43	*	*	*	*	*	*	45	35
07:00	*	*	26	26	31	33	32	41	*	*	*	*	*	*	30	33
08:00	*	*	33	15	29	17	27	27	*	*	*	*	*	*	30	20
09:00	*	*	16	11	18	17	19	20	*	*	*	*	*	*	18	16
10:00	*	*	13	7	5	5	18	7	*	*	*	*	*	*	12	6
11:00	*	*	8	4	7	4	10	8	*	*	*	*	*	*	8	5
Lane	0	0	590	519	817	777	933	850	335	370	0	0	0	0	844	794
Day	0	0	1109	1109	1594	1594	1783	1783	705	705	0	0	0	0	1638	1638
AM Peak	-	-	11:00	10:00	07:00	07:00	07:00	07:00	08:00	07:00	-	-	-	-	07:00	07:00
Vol.	-	-	43	52	65	79	65	85	61	75	-	-	-	-	62	80
PM Peak	-	-	16:00	14:00	16:00	15:00	16:00	15:00	-	-	-	-	-	-	16:00	15:00
Vol.	-	-	69	57	72	68	99	74	-	-	-	-	-	-	80	66

Comb. Total	0	1109	1594	1783	705	0	0	1638
-------------	---	------	------	------	-----	---	---	------

ADT	ADT 1,640	AADT 1,640
-----	-----------	------------

Ontario County DPW

2962 County Road 48
Canandaigua, Ny 14424

CR20_002_04 1500' north of CR04 (gr)

Start Time	16-Jul-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	5	5	5	3	4	10	*	*	*	*	5	6
01:00	*	*	*	*	4	2	3	0	4	3	*	*	*	*	4	2
02:00	*	*	*	*	2	1	2	0	2	4	*	*	*	*	2	2
03:00	*	*	*	*	7	2	6	8	8	2	*	*	*	*	7	4
04:00	*	*	*	*	10	7	8	7	8	7	*	*	*	*	9	7
05:00	*	*	*	*	21	30	26	34	20	26	*	*	*	*	22	30
06:00	*	*	*	*	56	86	61	79	49	78	*	*	*	*	55	81
07:00	*	*	*	*	75	100	87	99	76	102	*	*	*	*	79	100
08:00	*	*	*	*	87	84	86	87	85	79	*	*	*	*	86	83
09:00	*	*	47	56	71	72	68	75	69	74	*	*	*	*	64	69
10:00	*	*	69	65	65	54	55	67	80	57	*	*	*	*	67	61
11:00	*	*	51	54	53	65	68	61	54	70	*	*	*	*	56	62
12:00 PM	*	*	79	81	60	66	80	73	*	*	*	*	*	*	73	73
01:00	*	*	63	64	68	82	75	83	*	*	*	*	*	*	69	76
02:00	*	*	71	85	76	69	70	100	*	*	*	*	*	*	72	85
03:00	*	*	98	86	88	105	92	112	*	*	*	*	*	*	93	101
04:00	*	*	97	99	96	96	128	115	*	*	*	*	*	*	107	103
05:00	*	*	88	78	109	101	115	85	*	*	*	*	*	*	104	88
06:00	*	*	54	53	69	60	67	82	*	*	*	*	*	*	63	65
07:00	*	*	44	52	45	49	49	54	*	*	*	*	*	*	46	52
08:00	*	*	39	36	49	35	38	41	*	*	*	*	*	*	42	37
09:00	*	*	19	23	29	30	23	27	*	*	*	*	*	*	24	27
10:00	*	*	18	14	12	21	28	14	*	*	*	*	*	*	19	16
11:00	*	*	13	9	9	10	10	12	*	*	*	*	*	*	11	10
Lane	0	0	850	855	1166	1232	1250	1318	459	512	0	0	0	0	1179	1240
Day	0		1705		2398		2568		971		0		0		2419	
AM Peak	-	-	10:00	10:00	08:00	07:00	07:00	07:00	08:00	07:00	-	-	-	-	08:00	07:00
Vol.	-	-	69	65	87	100	87	99	85	102	-	-	-	-	86	100
PM Peak	-	-	15:00	16:00	17:00	15:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	-	-	98	99	109	105	128	115	-	-	-	-	-	-	107	103

Comb. Total	0	1705	2398	2568	971	0	0	2419
-------------	---	------	------	------	-----	---	---	------

ADT	ADT 2,420	AADT 2,420
-----	-----------	------------

Ontario County Traffic Growth Rates

Town	2010 DVMT	2035 DVMT	Net Difference	Total Pct. Change	Annual Pct. Change
Canandaigua	478,360	605,427	127,066	26.6%	1.1%
East Bloomfield	163,447	212,478	49,031	30.0%	1.2%
Farmington	317,188	398,089	80,900	25.5%	1.0%
Victor	368,746	502,073	133,328	36.2%	1.4%
West Bloomfield	106,922	141,063	34,141	31.9%	1.3%

Please note that the growth rates shown above are based on modeled volume data for 2010. Actual volume counts may vary.

Source: GTC Travel Demand Model, January 2013

	2015 DVMT	2035 DVMT	Net Difference	Total Pct. Change	Annual Pct. Change
Regional Non-TMA towns	13,320,089	17,441,962	4,121,873	30.9%	1.5%

The Non-TMA growth rates shown above were taken from GTC's June 2012 Conformity Statement (Appendix E)

Source: NYSDOT Office of Environment, April 2011

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
TRAFFIC SAFETY DIVISION
ACCIDENT DETAILS, HISTORY LOCATION

DIAGRAM No.: _____

COUNTY: <u>Ontario</u> P.I.N.: _____ <input checked="" type="radio"/> TOWN <input type="radio"/> CITY <input type="radio"/> VILLAGE OF <u>Seneca</u>			ROUTE NO. OR STREET NAME: <u>County Road 4</u> AT INTERSECTION WITH/OR BETWEEN: <u>County Road 20</u>						CASE No.: _____ FILE: _____ BY: <u>Tim</u> DATE: <u>09/18/18</u>				
TIME PERIOD FROM: <u>1/1/2013</u> TO: <u>5/31/2018</u>			4 No. of VEHICLES	5 SEVERITY	ENVIRONMENTAL: Use Codes from MV 104 (shown at right) for these categories				Light Conditions: 1. Daylight 2. Dawn 3. Dusk 4. Dark Road Lighted 5. Dark Road Unlighted	Roadway Character: 1. Straight & Level 2. Straight & Grade 3. Straight & Hillcrest 4. Curve & Level 5. Curve & Grade 6. Curve & Hillcrest	Roadway Surface Condition: 1. Dry 2. Wet 3. Muddy 4. Snow/Ice 5. Slush 10. Other	Weather: 1. Clear 2. Cloudy 3. Rain 4. Snow 5. Sleet/Hail/Freezing Rain 6. Fog/Smog/Smoke 10. Other	
No. OF MONTHS: <u>65</u>					6	7	8	9	10	DIRECTION	*Use Codes from MV 104 Police Report TYPE ¹	11 DESCRIPTION	REFERENCE MARKER
1 ACCIDENT No.	2 DATE	3 TIME			LIGHT CONDITIONS	ROADWAY CHARACTER	ROADWAY SURFACE CONDITION	WEATHER	APPARENT CONTRIBUTING FACTORS				
1	04/09/13	15:32 PM	2	NR	1	2	1	1	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 inched forward and hit V2 as it was turning left; V1 failure to yield ROW	
2	05/12/13	19:26 PM	2	INJ	1	5	1	2	7	S, E	Rt-Angle	EB V2 hit SB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
3	08/16/13	18:00 PM	2	FATAL	1	3	1	1	17, 6	S, W	Rt-Angle	WB V2 hit SB V1 - V1 failed to stop at stop sign	
4	08/26/13	12:35 PM	2	PDO	1	6	1	1	7	N, W	Rt-Angle	WB V2 hit NB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
5	10/03/13	14:02 PM	2	INJ	1	3	1	2	17	S, NE	Rt-Angle	SB V1 hit EB V2 - V1 failed to stop at stop sign; V1 hit V2 as V2 was turning left at intersection	
6	10/12/13	11:46 AM	2	INJ	1	5	1	1	17, 7	S, E	Rt-Angle	SB V1 hit EB V2 - V1 failed to stop at stop sign	
7	02/27/14	17:48 PM	2	NR	1	2	4	2	7	N, W	Rt-Angle	WB V2 hit NB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
8	03/01/14	15:21 PM	2	INJ	1	2	1	1	7	N, W	Rt-Angle	WB V2 hit NB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
9	05/14/14	15:58 PM	2	PDO	1	2	1	1	7	E, W	Rt-Angle	WB V2 hit EB V1 - V1 attempted to turn left in front of V2; V1 failed to yield ROW	
10	11/19/14	12:43 PM	2	PDO	1	2	1	1	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 failed to yield ROW	
11	11/22/14	12:10 PM	2	INJ	1	2	2	3	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 went around uninvolved vehicle and into intersection; V1 failed to yield ROW	
12	11/29/14	11:02 AM	2	PDO	1	5	1	2	7, 4	N, W	Rt-Angle	WB V2 hit NB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
13	12/31/14	14:07 PM	2	FATAL	1	2	1	1	7, 17	S, NE	Rt-Angle	SB V1 hit EB V2 - V1 failed to stop at stop sign; V1 hit V2 as V2 was turning left at intersection	
14	03/22/15	13:42 PM	2	PDO	1	5	1	1	17,, 7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
15	06/19/15	8:40 AM	2	INJ	1	5	1	2	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
16	07/09/15	15:29 AM	2	INJ	1	1	2	3	17	S, E	Rt-Angle	SB V1 hit EB V2 - V1 attempted to stop but skidded into V2; V1 failed to yield ROW	
17	07/10/15	11:11 AM	4	INJ	1	2	1	1	7	S, E	Rt-Angle	SB V1 hit EB V2, V2 hit NB V3, V3 hit NB V4 - V1 failed to stop at stop sign	
18	08/14/15	15:17 PM	2	NR	1	1	1	2	9, 4	N, N	Rear End	NB V1 rear ended NB V2	
19	11/09/15	17:34 PM	1	NR	5	5	1	2	61	W	Animal	WB V1 hit animal	
20	12/03/15	17:03 PM	2	INJ	5	2	2	3	7	S, W	Rt-Angle	WB V2 hit SB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
21	07/15/16	19:42 PM	2	NR	1	1	1	1	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
22	08/30/16	8:29 AM	2	NR	1	1	1	2	9	N, N	Rear End	NB V1 rear ended NB V2	
23	09/02/16	8:51 AM	2	NR	1	5	1	1	7	S, E	Rt-Angle	SB V1 hit EB V2 - V1 failed to yield ROW	
24	10/16/16	18:52 PM	2	INJ	5	4	2	1	7	S, E	Rt-Angle	SB V1 hit NB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW	
25	10/23/16	18:19 PM	2	PDO	3	3	1	2	2, 17	N, W	Rt-Angle	WB V2 hit NB V1 - V1 failed to stop at stop sign; alcohol involvement	

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
TRAFFIC SAFETY DIVISION
ACCIDENT DETAILS, HISTORY LOCATION

DIAGRAM No.: _____

COUNTY: <u>Ontario</u> P.I.N.: _____ <input checked="" type="radio"/> TOWN <input type="radio"/> CITY <input type="radio"/> VILLAGE OF <u>Seneca</u>			ROUTE NO. OR STREET NAME: <u>County Road 4</u> AT INTERSECTION WITH/OR BETWEEN: <u>County Road 20</u>						CASE No.: _____ FILE: _____ BY: <u>Tim</u> DATE: <u>09/18/18</u>							
TIME PERIOD FROM: <u>1/1/2013</u> TO: <u>5/31/2018</u>			4 No. of VEHICLES	5 SEVERITY	ENVIRONMENTAL: Use Codes from MV 104 (shown at right) for these categories 6 7 8 9				Light Conditions: 1. Daylight 2. Dawn 3. Dusk 4. Dark Road Lighted 5. Dark Road Unlighted		Roadway Character: 1. Straight & Level 2. Straight & Grade 3. Straight & Hillcrest 4. Curve & Level 5. Curve & Grade 6. Curve & Hillcrest		Roadway Surface Condition: 1. Dry 2. Wet 3. Muddy 4. Snow/ice 5. Slush 10. Other		Weather: 1. Clear 2. Cloudy 3. Rain 4. Snow 5. Sleet/Hail/Freezing Rain 6. Fog/Smog/Smoke 10. Other	
No. OF MONTHS: <u>65</u>					10 APPARENT CONTRIBUTING FACTORS	DIRECTION	*Use Codes from MV 104 Police Report		11 DESCRIPTION	REFERENCE MARKER						
1 ACCIDENT No.	2 DATE	3 TIME	LIGHT CONDITIONS	ROADWAY CHARACTER			ROADWAY SURFACE CONDITION	WEATHER			TYPE ¹					
26	01/09/17	12:32 PM	2	FATAL	1	3	1	2	17	S, W	Rt-Angle	SB V1 hit WB V2 - V1 failed to stop at stop sign				
27	01/16/17	14:20 PM	2	NR	1	2	1	2	7	N, W	Rt-Angle	NB V1 hit WB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW				
28	05/18/17	18:01 PM	2	PDO	1	1	1	1	13, 9	E, E	Left Turn	EB V1 hit EB V2 - V2 making left turn, V1 tries to pass on left and hits V2; V1 improper passing				
29	06/05/17	12:34 PM	2	PDO	1	5	1	2	4, 7	S, E	Rt-Angle	EB V2 hit SB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW				
30	06/21/17	15:33 PM	2	NR	1	2	1	1	7	S, E	Rt-Angle	EB V2 hit SB V1 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW				
31	08/24/17	13:49 PM	2	INJ	1	2	1	2	5, 7	S, W	Rt-Angle	SB V1 hit WB V2 - V1 attempted to turn left while at intersection and hit V2				
32	09/04/17	14:35 PM	2	INJ	1	2	1	1	17, 4	S, W	Rt-Angle	SB V1 hit WB V2 - V1 failed to stop at stop sign				
33	08/29/17	13:41 PM	2	INJ	5	5	N/A	2	7	N, E	Left Turn	NB V1 and EB V2 collided - V1 attempted to make left turn; V1 failed to yield ROW				
34	09/14/17	15:35 PM	2	INJ	1	1	1	2	7	S, E	Rt-Angle	SB V1 hit EB V2 - V1 stopped at stop sign then proceeded into intersection; V1 failed to yield ROW				

NYSDOT-Safety Information Management System

AVERAGE ACCIDENT COSTS/SEVERITY DISTRIBUTION STATE HIGHWAYS 2016

Includes period from JAN-01-2015 - DEC-31-2016

Classification**	Accident Severity Distribution (percent)				Average Accident Costs					
	Fatal	Injury	Fatal/Injury	PDO*	Fatal	Injury	Fatal/Injury	PDO*	Average*	
1 L FULL ACCESS, RURAL, DIVIDED, 4 LANE	0.40	12.53	12.93	87.07	4,204,100	91,500	220,200	5,200	33,000	
2 A FULL ACCESS, RURAL, DIVIDED, 4 LANE	0.43	12.70	13.13	86.87	4,127,100	91,300	223,400	5,200	33,800	
3 L FULL ACCESS, RURAL, DIVIDED, 5 LANE	0.40	12.53	12.93	87.07	4,204,100	91,500	220,200	5,200	33,000	
4 A FULL ACCESS, RURAL, DIVIDED, 5 LANE	0.43	12.70	13.13	86.87	4,127,100	91,300	223,400	5,200	33,800	
5 L FULL ACCESS, RURAL, DIVIDED, 6 LANE	0.40	12.53	12.93	87.07	4,204,100	91,500	220,200	5,200	33,000	
6 A FULL ACCESS, RURAL, DIVIDED, 6 LANE	0.43	12.70	13.13	86.87	4,127,100	91,300	223,400	5,200	33,800	
7 L FULL ACCESS, RURAL, DIVIDED, ALL LANES	0.40	12.53	12.93	87.07	4,204,100	91,500	220,200	5,200	33,000	
8 A FULL ACCESS, RURAL, DIVIDED, ALL LANES	0.43	12.70	13.13	86.87	4,127,100	91,300	223,400	5,200	33,800	
9 L FULL ACCESS, RURAL, UNDIVIDED, 2 LANE	0.47	17.76	18.23	81.78	4,865,800	88,900	211,400	5,200	42,800	
10 A FULL ACCESS, RURAL, UNDIVIDED, 2 LANE	0.37	20.00	20.37	79.63	4,865,800	94,400	181,900	5,200	41,200	
11 L FULL ACCESS, RURAL, UNDIVIDED, ALL LANES	0.47	17.76	18.23	81.78	4,865,800	88,900	211,400	5,200	42,800	
12 A FULL ACCESS, RURAL, UNDIVIDED, ALL LANES	0.37	20.00	20.37	79.63	4,865,800	94,400	181,900	5,200	41,200	
13 L FULL ACCESS, URBAN, DIVIDED, 4 LANE	0.26	29.17	29.43	70.57	3,724,800	93,100	125,200	3,800	39,500	
14 A FULL ACCESS, URBAN, DIVIDED, 4 LANE	0.26	29.04	29.30	70.70	3,712,400	92,900	125,300	3,800	39,400	
15 L FULL ACCESS, URBAN, DIVIDED, 5 LANE	0.26	29.17	29.43	70.57	3,724,800	93,100	125,200	3,800	39,500	
16 A FULL ACCESS, URBAN, DIVIDED, 5 LANE	0.26	29.04	29.30	70.70	3,712,400	92,900	125,300	3,800	39,400	
17 L FULL ACCESS, URBAN, DIVIDED, 6 LANE	0.26	29.17	29.43	70.57	3,724,800	93,100	125,200	3,800	39,500	
18 A FULL ACCESS, URBAN, DIVIDED, 6 LANE	0.26	29.04	29.30	70.70	3,712,400	92,900	125,300	3,800	39,400	
19 L FULL ACCESS, URBAN, DIVIDED, 7 LANE	0.26	29.17	29.43	70.57	3,724,800	93,100	125,200	3,800	39,500	
20 A FULL ACCESS, URBAN, DIVIDED, 7 LANE	0.26	29.04	29.30	70.70	3,712,400	92,900	125,300	3,800	39,400	
21 L FULL ACCESS, URBAN, DIVIDED, ALL LANES	0.26	29.17	29.43	70.57	3,724,800	93,100	125,200	3,800	39,500	
22 A FULL ACCESS, URBAN, DIVIDED, ALL LANES	0.26	29.04	29.30	70.70	3,712,400	92,900	125,300	3,800	39,400	
23 L FULL ACCESS, URBAN, UNDIVIDED, ALL LANES	0.83	22.15	22.98	77.02	3,291,500	87,700	203,600	3,800	49,700	
24 A FULL ACCESS, URBAN, UNDIVIDED, ALL LANES	0.73	24.03	24.76	75.25	3,276,900	86,200	179,900	3,800	47,400	
25 L PARTIAL ACCESS, RURAL, DIVIDED, 4 LANES	0.44	18.86	19.30	80.70	3,318,400	93,000	166,300	5,200	36,300	
26 A PARTIAL ACCESS, RURAL, DIVIDED, 4 LANES	0.41	19.15	19.56	80.43	3,318,400	92,200	160,500	5,200	35,600	

* Includes Both Reportable and Non-Reportable Accidents

** A= All Accidents, L= Non-Intersection Accidents, I= Intersection Accidents

NYSDOT-Safety Information Management System

AVERAGE ACCIDENT COSTS/SEVERITY DISTRIBUTION STATE HIGHWAYS 2016

Includes period from JAN-01-2015 - DEC-31-2016

Classification**	Accident Severity Distribution (percent)				Average Accident Costs				
	Fatal	Injury	Fatal/Injury	PDO*	Fatal	Injury	Fatal/Injury	PDO*	Average*
27 L PARTIAL ACCESS, RURAL, DIVIDED, ALL LANES	0.44	18.86	19.30	80.70	3,318,400	93,000	166,300	5,200	36,300
28 A PARTIAL ACCESS, RURAL, DIVIDED, ALL LANES	0.41	19.15	19.56	80.43	3,318,400	92,200	160,500	5,200	35,600
29 L PARTIAL ACCESS, RURAL, UNDIVIDED, 2 LANES	0.00	10.18	10.18	89.82	3,224,800	87,800	87,800	5,200	13,600
30 A PARTIAL ACCESS, RURAL, UNDIVIDED, 2 LANES	0.00	12.90	12.90	87.10	3,287,200	92,800	92,800	5,200	16,500
31 L PARTIAL ACCESS, RURAL, UNDIVIDED, ALL LANES	0.00	10.18	10.18	89.82	3,224,800	87,800	87,800	5,200	13,600
32 A PARTIAL ACCESS, RURAL, UNDIVIDED, ALL LANES	0.00	12.90	12.90	87.10	3,287,200	92,800	92,800	5,200	16,500
33 L PARTIAL ACCESS, URBAN, DIVIDED, 4 LANES	0.29	22.10	22.39	77.61	3,366,700	90,500	133,200	3,800	32,800
34 A PARTIAL ACCESS, URBAN, DIVIDED, 4 LANES	0.27	22.32	22.59	77.40	3,450,700	90,500	131,300	3,800	32,600
35 L PARTIAL ACCESS, URBAN, DIVIDED, 6 LANES	0.29	22.10	22.39	77.61	3,366,700	90,500	133,200	3,800	32,800
36 A PARTIAL ACCESS, URBAN, DIVIDED, 6 LANES	0.27	22.32	22.59	77.40	3,450,700	90,500	131,300	3,800	32,600
37 L PARTIAL ACCESS, URBAN, DIVIDED, ALL LANES	0.29	22.10	22.39	77.61	3,366,700	90,500	133,200	3,800	32,800
38 A PARTIAL ACCESS, URBAN, DIVIDED, ALL LANES	0.27	22.32	22.59	77.40	3,450,700	90,500	131,300	3,800	32,600
39 L PARTIAL ACCESS, URBAN, UNDIVIDED, 2 LANES	0.39	22.79	23.18	76.82	3,244,200	84,600	138,200	3,800	34,900
40 A PARTIAL ACCESS, URBAN, UNDIVIDED, 2 LANES	0.38	24.20	24.58	75.42	3,244,200	89,600	138,900	3,800	37,000
41 L PARTIAL ACCESS, URBAN, UNDIVIDED, ALL LANES	0.39	22.79	23.18	76.82	3,244,200	84,600	138,200	3,800	34,900
42 A PARTIAL ACCESS, URBAN, UNDIVIDED, ALL LANES	0.38	24.20	24.58	75.42	3,244,200	89,600	138,900	3,800	37,000
43 L FREE ACCESS, RURAL, DIVIDED, 2 LANES	0.54	13.32	13.86	86.14	3,256,000	90,900	213,800	5,200	34,100
44 A FREE ACCESS, RURAL, DIVIDED, 2 LANES	0.46	13.76	14.22	85.78	3,256,000	93,800	196,600	5,200	32,400
45 L FREE ACCESS, RURAL, DIVIDED, 4 LANES	0.54	13.32	13.86	86.14	3,256,000	90,900	213,800	5,200	34,100
46 A FREE ACCESS, RURAL, DIVIDED, 4 LANES	0.46	13.76	14.22	85.78	3,256,000	93,800	196,600	5,200	32,400
47 L FREE ACCESS, RURAL, DIVIDED, ALL LANES	0.54	13.32	13.86	86.14	3,256,000	90,900	213,800	5,200	34,100
48 A FREE ACCESS, RURAL, DIVIDED, ALL LANES	0.46	13.76	14.22	85.78	3,256,000	93,800	196,600	5,200	32,400
49 L FREE ACCESS, RURAL, UNDIVIDED, 2 LANES	0.40	14.46	14.86	85.14	3,532,500	88,200	181,900	5,200	31,500
50 A FREE ACCESS, RURAL, UNDIVIDED, 2 LANES	0.43	16.01	16.44	83.56	3,493,400	90,500	179,700	5,200	33,900
51 L FREE ACCESS, RURAL, UNDIVIDED, 3 LANES	0.40	14.46	14.86	85.14	3,532,500	88,200	181,900	5,200	31,500
52 A FREE ACCESS, RURAL, UNDIVIDED, 3 LANES	0.43	16.01	16.44	83.56	3,493,400	90,500	179,700	5,200	33,900

* Includes Both Reportable and Non-Reportable Accidents

** A= All Accidents, L= Non-Intersection Accidents, I= Intersection Accidents

NYSDOT-Safety Information Management System

AVERAGE ACCIDENT COSTS/SEVERITY DISTRIBUTION STATE HIGHWAYS 2016

Includes period from JAN-01-2015 - DEC-31-2016

Classification**	Accident Severity Distribution (percent)				Average Accident Costs					
	Fatal	Injury	Fatal/Injury	PDO*	Fatal	Injury	Fatal/Injury	PDO*	Average*	
53 L FREE ACCESS, RURAL, UNDIVIDED, 4 LANES	0.40	14.46	14.86	85.14	3,532,500	88,200	181,900	5,200	31,500	
54 A FREE ACCESS, RURAL, UNDIVIDED, 4 LANES	0.43	16.01	16.44	83.56	3,493,400	90,500	179,700	5,200	33,900	
55 L FREE ACCESS, RURAL, UNDIVIDED, ALL LANES	0.40	14.46	14.86	85.14	3,532,500	88,200	181,900	5,200	31,500	
56 A FREE ACCESS, RURAL, UNDIVIDED, ALL LANES	0.43	16.01	16.44	83.56	3,493,400	90,500	179,700	5,200	33,900	
57 L FREE ACCESS, URBAN, DIVIDED, 2 LANES	0.26	25.10	25.36	74.64	3,355,600	91,400	124,900	3,800	34,500	
58 A FREE ACCESS, URBAN, DIVIDED, 2 LANES	0.25	25.86	26.11	73.89	3,368,700	92,000	123,100	3,800	34,900	
59 L FREE ACCESS, URBAN, DIVIDED, 4 LANES	0.26	25.10	25.36	74.64	3,355,600	91,400	124,900	3,800	34,500	
60 A FREE ACCESS, URBAN, DIVIDED, 4 LANES	0.25	25.86	26.11	73.89	3,368,700	92,000	123,100	3,800	34,900	
61 L FREE ACCESS, URBAN, DIVIDED, 6 LANES	0.26	25.10	25.36	74.64	3,355,600	91,400	124,900	3,800	34,500	
62 A FREE ACCESS, URBAN, DIVIDED, 6 LANES	0.25	25.86	26.11	73.89	3,368,700	92,000	123,100	3,800	34,900	
63 L FREE ACCESS, URBAN, DIVIDED, 7 LANES	0.26	25.10	25.36	74.64	3,355,600	91,400	124,900	3,800	34,500	
64 A FREE ACCESS, URBAN, DIVIDED, 7 LANES	0.25	25.86	26.11	73.89	3,368,700	92,000	123,100	3,800	34,900	
65 L FREE ACCESS, URBAN, DIVIDED, ALL LANES	0.26	25.10	25.36	74.64	3,355,600	91,400	124,900	3,800	34,500	
66 A FREE ACCESS, URBAN, DIVIDED, ALL LANES	0.25	25.86	26.11	73.89	3,368,700	92,000	123,100	3,800	34,900	
67 L FREE ACCESS, URBAN, UNDIVIDED, 2 LANES	0.31	21.76	22.07	77.93	3,457,500	90,400	137,900	3,800	33,400	
68 A FREE ACCESS, URBAN, UNDIVIDED, 2 LANES	0.26	23.20	23.46	76.53	3,456,100	90,700	128,600	3,800	33,100	
69 L FREE ACCESS, URBAN, UNDIVIDED, 3 LANES	0.31	21.76	22.07	77.93	3,457,500	90,400	137,900	3,800	33,400	
70 A FREE ACCESS, URBAN, UNDIVIDED, 3 LANES	0.26	23.20	23.46	76.53	3,456,100	90,700	128,600	3,800	33,100	
71 L FREE ACCESS, URBAN, UNDIVIDED, 4 LANES	0.31	21.76	22.07	77.93	3,457,500	90,400	137,900	3,800	33,400	
72 A FREE ACCESS, URBAN, UNDIVIDED, 4 LANES	0.26	23.20	23.46	76.53	3,456,100	90,700	128,600	3,800	33,100	
73 L FREE ACCESS, URBAN, UNDIVIDED, ALL LANES	0.31	21.76	22.07	77.93	3,457,500	90,400	137,900	3,800	33,400	
74 A FREE ACCESS, URBAN, UNDIVIDED, ALL LANES	0.26	23.20	23.46	76.53	3,456,100	90,700	128,600	3,800	33,100	
75 I 3 LEG, RURAL, SIGNAL, ALL LANES	0.34	19.62	19.96	80.04	3,247,100	93,600	147,100	5,200	33,500	
76 I 3 LEG, RURAL, SIGN, ALL LANES	0.34	19.62	19.96	80.04	3,247,100	93,600	147,100	5,200	33,500	
77 I 3 LEG, RURAL, NONE, ALL LANES	0.34	19.62	19.96	80.04	3,247,100	93,600	147,100	5,200	33,500	
78 I 3 LEG, URBAN, SIGNAL, 1-4 LANES	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	

* Includes Both Reportable and Non-Reportable Accidents

** A= All Accidents, L= Non-Intersection Accidents, I= Intersection Accidents

NYSDOT-Safety Information Management System

AVERAGE ACCIDENT COSTS/SEVERITY DISTRIBUTION STATE HIGHWAYS 2016

Includes period from JAN-01-2015 - DEC-31-2016

Classification**	Accident Severity Distribution (percent)				Average Accident Costs					
	Fatal	Injury	Fatal/Injury	PDO*	Fatal	Injury	Fatal/Injury	PDO*	Average*	
79 I 3 LEG, URBAN, W/ LEFT TURN, SIGNAL,5& > LANE	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
80 I 3 LEG, URBAN, NO LEFT TURN, SIGNAL,5& > LANE	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
81 I 3 LEG URBAN, SIGN, 1-3 LANES	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
82 I 3 LEG URBAN, SIGN, 4 LANES	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
83 I 3 LEG URBAN, SIGN, 5 OR MORE LANES	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
84 I 3 LEG URBAN, NONE, ALL LANES	0.26	26.48	26.74	73.27	3,482,500	91,600	123,900	3,800	35,900	
85 I 4& > LEGS, RURAL, SIGNAL, ALL LANES	0.89	27.67	28.56	71.43	3,455,400	102,200	207,200	5,200	62,900	
86 I 4& > LEGS, RURAL, SIGN, ALL LANES	0.89	27.67	28.56	71.43	3,455,400	102,200	207,200	5,200	62,900	
87 I 4& > LEGS, RURAL, NONE, ALL LANES	0.89	27.67	28.56	71.43	3,455,400	102,200	207,200	5,200	62,900	
88 I 4& > LEGS, URBAN, SIGNAL, 1-4 LANES	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
89 I 4& > LEGS, URBAN, LEFT TURN, SIGNAL,5& >LANE	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
90 I 4& > LEGS, URBAN, NO LEFT , SIGNAL, 5& >LANE	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
91 I 4& > LEGS, URBAN, SIGN, 1-3 LANES	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
92 I 4& > LEGS, URBAN, SIGN, 4 OR MORE LANES	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
93 I 4& > LEGS, URBAN, NONE, ALL LANES	0.17	26.23	26.40	73.60	3,430,100	92,500	113,700	3,800	32,800	
94 I ON RAMP, RURAL, ALL CNTLS, MERGE W/1 LANE	0.75	15.67	16.42	83.58	3,287,200	82,400	228,100	5,200	41,800	
95 I ON RAMP, RURAL, ALL CNTLS, MERGE W/2& > LANE	0.75	15.67	16.42	83.58	3,287,200	82,400	228,100	5,200	41,800	
96 I ON RAMP, URBAN, ALL CNTLS, MERGE W/1 LANE	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	
97 I ON RAMP, URBAN, ALL CNTLS, MERGE W/2 LANES	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	
98 I ON RAMP, URBAN, ALL CNTLS, MERGE W/3& > LANE	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	
99 I OFF RAMP, RURAL, ALL CNTLS, MERGE W/1 LANE	0.75	15.67	16.42	83.58	3,287,200	82,400	228,100	5,200	41,800	
100 I OFF RAMP, RURAL, ALL CNTLS, MERGE W/2&> LANE	0.75	15.67	16.42	83.58	3,287,200	82,400	228,100	5,200	41,800	
101 I OFF RAMP, URBAN, ALL CNTLS, MERGE W/1 LANE	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	
102 I OFF RAMP, URBAN, ALL CNTLS, MERGE W/2 LANES	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	
103 I OFF RAMP, URBAN, ALL CNTLS, MERGE W/3&> LANE	0.16	27.60	27.76	72.23	3,265,000	90,400	109,000	3,800	33,000	

* Includes Both Reportable and Non-Reportable Accidents

** A= All Accidents, L= Non-Intersection Accidents, I= Intersection Accidents

County Road 4 @ County Road 20 Intersection Improvement
 4-leg intersection (TWSC-minor approach) conversion to modern roundabout
 Project Cost Estimate

	Est. Target		
Scoping	1.85%	\$	46,000
Prelim. Engineering	6.43%	\$	160,000
Detailed Design	5.50%	\$	137,000
ROWI	1.85%	\$	46,000
ROWA-Property	0.92%	\$	23,000
Construction		\$	2,490,000 *
Const. Inspection	14.01%	\$	348,750
Const. Support	2.50%	\$	62,250
Total Project Costs:		\$	3,313,000
HSIP	90.0%	\$	2,981,700
Marchiselli	7.5%	\$	248,475
Local - County	2.5%	\$	82,825
	100.0%	\$	3,313,000

* Estimate based on County's project cost tracking for Ontario County roundabout projects

Table 1
Improvement Service Life Maximum

$CRF = i(1+i)^n / (1+i)^n - 1$		
where i = interest rate; n = # yrs service life		
Enter the Interest Rate to Calculate the Capital Recovery Factor ==>	4%	
Improvement	Service Life (years)	Capital Recovery Factor @ 0.04
Right-of Way, Obstacle Removal	100	0.04081
Major Structures	30	0.05783
Major Geometrics: change of intersection configuration, curve flattening, etc.	20	0.07358
Minor Geometrics: left turn bays, channelization islands	20	0.07358
Major Sign Structures	20	0.07358
Concrete Barrier (median or half section)	20	0.07358
Lighting	15	0.08994
Metal Median Barrier	15	0.08994
Metal Guiderail	10	0.12329
Signals and Flashing Beacons	10	0.12329
Signing	10	0.12329
Concrete Pavement Grooving	10	0.12329
Resurfacing (2.5 inch)	10	0.12329
Armor Coat (1 inch)	5	0.22463
Delineators and Guide Markers	5	0.22463
Shoulder Stabilization	4	0.27549
Pavement Markings:		
Traffic Paint	1	1.04000
2-Component Epoxy	4	0.27549
Thermoplastic	5	0.22463
Polymer Tape	7	0.16661
Raised Snowplowable Pavement Markers	5	0.22463

Accident Rate Analysis

Intersection

Intersection: CR 4	CR20	
	Start	End
Study Period =	1-Jan-2013	31-May-2018
		5.41 Years
		365 Days/Year
CR 4 Enter Vehicles =	3001 vpd	
CR20 Enter Vehicles =	1973 vpd	
Number of Days =	1976 days	
Number of Accidents =	34	(3 Fatal, 14 INJ, 8 PDO and 9 Non-Reportable)

ACCIDENT RATE = 3.46 ACC/MEV
rate per million entering vehicles

NYS Average Accident Rate
Rural (FC of 6 & 8) ... 4 Legged Intersection ... Sign 2 Lanes (use All Lanes p
0.35 ACC/MEV (based on 2015-2016 NYS Avg Acc Rates)

CR 4

EB	1704	(2018 Count)
WB	1297	(2018 Count)
CR 4 Enter Vehicles	<u>3001</u>	

CR 20

NB	794	(2018 Count)
SB	1179	(2018 Count)
CR20 Enter Vehicles	<u>1973</u>	

AVERAGE ACCIDENT RATES FOR STATE HIGHWAYS BY FACILITY TYPE

(BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

Average accident rates are based on both reportable and available non-reportable crashes.

MAINLINE ACCIDENTS ONLY: "Non-Intersection Accidents/MVM" is used for linear highway sections where there are no intersecting roads or ramp junctions within analysis limits. An example of the correct use of these rates would involve a linear section of highway which contains no intersections with other public highways, but may contain intersections with private roads or driveways.

MAINLINE & JUNCTURE ACCIDENTS: "Intersection & Non-Intersection Accidents/MVM" includes intersection and mainline accidents. They are used for analysis of linear highway sections where intersections are involved within the analysis limits and are the most commonly used rates for accident analysis purposes.

FACILITY TYPE

FREE ACCESS CONTROLLED		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	2.1	0.33	0.58	2.61	0.4	0.68
	3 LANES	1.87	0.24	0.57	2.25	0.27	0.64
	4 LANES	1.9	0.26	0.36	2.55	0.34	0.44
	ALL LANES	2.09	0.33	0.58	2.6	0.4	0.68
DIVIDED							
	2 LANES	1.88	0.27	0.46	2.56	0.36	0.57
	4 LANES	1.92	0.29	0.51	2.15	0.32	0.54
	ALL LANES	1.92	0.29	0.48	2.3	0.33	0.57
URBAN FUNCTION CLASS							
UNDIVIDED							
	2 LANES	2.23	0.33	0.34	3.5	0.52	0.45
	3 LANES	2.71	0.36	0.27	4.31	0.63	0.38
	4 LANES	3.22	0.49	0.22	5.5	0.86	0.31
	ALL LANES	2.46	0.36	0.31	3.95	0.59	0.43
DIVIDED							
	2 LANES	3.13	0.48	0.2	5.14	0.78	0.28
	4 LANES	2.85	0.45	0.18	4.52	0.72	0.24
	6 LANES	3.65	0.53	0.16	4.8	0.71	0.2
	7 LANES	3.05	0.58	0.09	3.99	0.72	0.16
	ALL LANES	3.1	0.48	0.18	4.7	0.73	0.25

PARTIAL CONTROL OF ACCESS		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	1.87	0.35	0.44	2.44	0.48	0.51
	ALL LANES	1.91	0.35	0.43	2.47	0.48	0.53
DIVIDED							
	4 LANES	1.85	0.29	0.81	1.97	0.32	0.85
	ALL LANES	1.84	0.29	0.8	1.96	0.32	0.85

URBAN FUNCTION CLASS		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
	2 LANES	1.73	0.32	0.39	2.51	0.45	0.47
	ALL LANES	2.02	0.39	0.35	3.11	0.58	0.43
DIVIDED							
	4 LANES	1.62	0.27	0.32	1.94	0.32	0.34
	6 LANES	1.73	0.27	0.25	2	0.32	0.27
	ALL LANES	1.73	0.28	0.31	2.1	0.34	0.33

CONTROLLED ACCESS (FULL)		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	2.13	0.36	0.56	2.64	0.44	0.67
	ALL LANES	2.26	0.37	0.57	2.79	0.44	0.67
DIVIDED							
	4 LANES	1.07	0.16	0.45	1.11	0.16	0.46
	5 LANES	1.01	0.16	0.47	1.04	0.16	0.5
	6 LANES	1.11	0.23	0.51	1.23	0.24	0.55
	ALL LANES	1.08	0.16	0.45	1.11	0.17	0.46

URBAN FUNCTION CLASS		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
	ALL LANES	1.46	0.21	0.27	2.1	0.31	0.34
DIVIDED							
	4 LANES	1.08	0.16	0.29	1.18	0.18	0.3
	5 LANES	0.99	0.16	0.29	1.14	0.18	0.31
	6 LANES	1.16	0.18	0.19	1.26	0.19	0.21
	7 LANES	1.42	0.2	0.28	1.47	0.21	0.33
	ALL LANES	1.12	0.17	0.22	1.22	0.19	0.24

AVERAGE INTERSECTION ACCIDENT RATES FOR STATE HIGHWAYS BY INTERSECTION TYPE
 (BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

<u>INTERSECTION TYPE</u>	ALL TYPES ACC/MEV	WET ROAD ACC/MEV	LEFT TURN ACC/MEV	REAR END CC/ME	OVER- TAKING ACC/MEV	RIGHT ANGLE ACC/MEV	RIGHT TURN ACC/MEV	HEAD ON ACC/MEV	SIDE- SWIPE ACC/MEV
RURAL FUNCTION CLASS									
3 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.26	0.04	0.03	0.09	0.03	0.03	0.01	0.00	0.00
SIGN ALL LANES	0.17	0.02	0.01	0.03	0.01	0.01	0.00	0.00	0.00
NO CONTROL ALL LANES	0.11	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00
4 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.58	0.09	0.06	0.16	0.03	0.15	0.02	0.01	0.01
SIGN ALL LANES	0.35	0.05	0.03	0.05	0.01	0.1	0.01	0	0.01
NO CONTROL ALL LANES	0.23	0.05	0.02	0.05	0.01	0.04	0	0.01	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.19	0	0	0.19	0	0	0	0	0
MERGE W/ 2&> LANES	0.03	0.01	--	--	--	--	--	--	--
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0	0	--	--	--	--	--	--	--
MERGE W/ 2&> LANES	0.08	0.01	--	0.01	0	--	--	--	--

INTERSECTION TYPE	ALL TYPES	WET ROAD	LEFT TURN	REAR END	OVER-TAKING	RIGHT ANGLE	RIGHT TURN	HEAD ON	SIDE-SWIPE
URBAN FUNCTION CLASS	ACC/MEV	ACC/MEV	ACC/MEV	CC/ME	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV
3 LEGGED INTERSECTIONS									
SIGNAL 1-4 LANES	0.32	0.05	0.03	0.12	0.04	0.04	0.01	0	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.05	0.03	0.02	0	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.06	0.03	0.01	0	0	0
SIGN 1-3 LANES	0.18	0.03	0.02	0.06	0.01	0.02	0	0	0
SIGN 4 LANES	0.12	0.02	0.01	0.04	0.01	0.02	0	0	0
SIGN 5 & > LANES	0.06	0.01	0	0.02	0.01	0.01	0	0	0
NO CONTROL ALL LANES	0.05	0.01	0	0.02	0.01	0	0	0	0
4 LEGGED &> INTERSECTIONS									
SIGNAL 1-4 LANES	0.52	0.08	0.05	0.21	0.06	0.08	0.02	0.01	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.25	0.04	0.01	0.11	0.04	0.03	0.01	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.2	0.03	0.02	0.06	0.03	0.04	0.01	0	0
SIGN 1-3 LANES	0.29	0.04	0.03	0.08	0.02	0.07	0.01	0	0
SIGN 4 & > LANES	0.16	0.02	0.01	0.05	0.01	0.03	0	0	0
NO CONTROL ALL LANES	0.19	0.03	0.01	0.07	0.02	0.04	0.01	0	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.17	0	0.01	0.12	0.01	0.01	0	0	0
MERGE W/ 2 LANES	0.03	0	0	0.01	0	0	0	0	0
MERGE W/ 3&> LANES	0.01	0	0	0.01	0	0	0	0	0
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.18	0.03	0	0.06	0.06	0.01	--	--	--
MERGE W/ 2 LANES	0.04	0.01	--	0.01	0.01	--	--	--	--
MERGE W/ 3&> LANES	0.02	0	--	0.01	--	--	--	--	--