



ITEM # 4

To: Traffic Committee Members  
From: Richard Pedersen, Deputy Town Engineer  
Date: September 3, 2008  
Subject: Four-way STOP sign installation at the intersection of Sitting Bull Road and Iroquois Road

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Staff received a request from to investigate the intersection of Sitting Bull Road and Iroquois Road to determine if a four-way stop is warranted. Currently there are STOP signs on the north and south legs of the intersection on Iroquois Road.

Staff performed a traffic engineering investigation which included an evaluation of past records of vehicle conflict, traffic volumes, and a field review of the intersection. Four-way STOP controls may be warranted if 1) the total volume of the major approach legs of the intersection average 210 vehicles per hour for the peak eight hours and 2) that for the same eight hour period the minor approach legs average a total of 140 vehicles per hour. Currently the average is 297 vehicles per hour for the major legs and 101 vehicles per hour for the minor legs.

State warrants also indicate that if 5 accidents occur in a 12 month period that may be susceptible to correction by placing additional stop signs, a four way stop may be justified. Between July 2007 and July 2008 there have been five (5) traffic collisions at this intersection, and five (5) collisions occurred where additional stop signs may be a correction measure.

Staff investigated other factors including surrounding geography, and intersection layout for clear sight views. Sitting Bull Road has a speed limit of 45 mph through this intersection. Approximately 300 feet west of this intersection is a hill that limits the amount of time a driver on Iroquois Road has to see oncoming traffic heading eastbound on Sitting Bull Road.

Recommendation

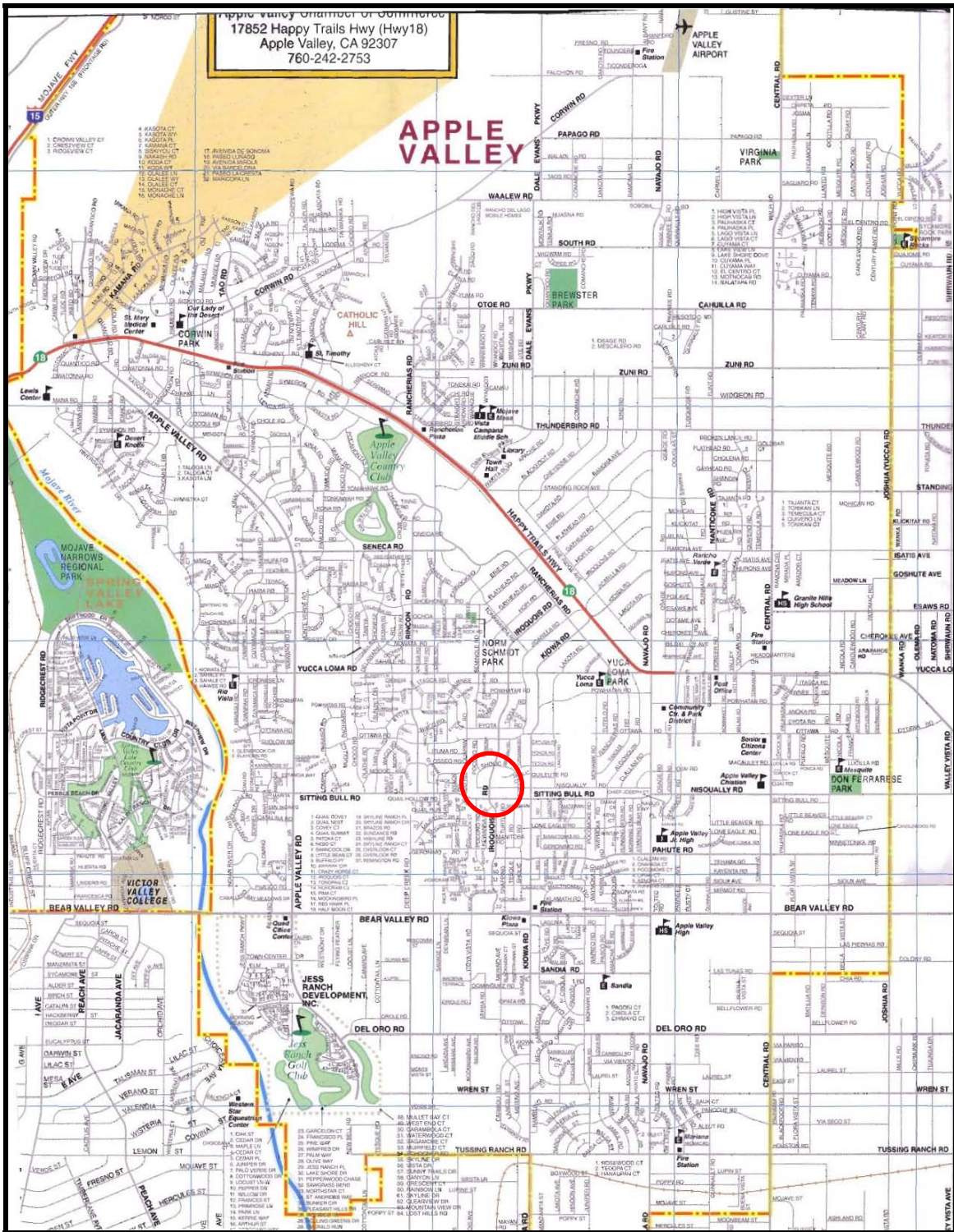
Staff recommends that four-way STOP controls be installed at the intersection of Sitting Bull Road and Iroquois Road because the accident warrant has been met.

Fiscal Impact

Installation of 2 stop signs \$150 each

Exhibits

Location Map, Traffic Volume Analysis, Traffic Collision History Report, Traffic Collision Diagram



**LOCATION MAP**  
**Sitting Bull Road and Iroquois Road**

**TOWN OF APPLE VALLEY**

**Traffic Count Datasheet**

Intersection of Sitting Bull Road and Iroquois Road

Study Date: August 19, 2008 10:00 a.m. - August 20, 2008 10:00 a.m.

Sitting Bull Road and Iroquois							
Time of Day	Location						
(Military Time)	Iroquois Rd N/B	Iroquois Rd S/B	Sitting Bull Rd E/B	Sitting Bull Rd W/B	Traffic Count on Major Legs <i>210 Required</i>	Traffic Count on Minor Legs <i>140 Required</i>	
00:00 - 01:00	3	4	0	11	11	7	
01:00 - 02:00	5	4	9	9	18	9	
02:00 - 03:00	2	4	10	6	16	6	
03:00 - 04:00	6	2	4	15	19	8	
04:00 - 05:00	3	8	6	18	24	11	
05:00 - 06:00	15	20	29	30	59	35	
06:00 - 07:00	24	43	110	150	260	67	
07:00 - 08:00	71	53	143	215	358	124	
08:00 - 09:00	50	39	133	155	288	89	
09:00 - 10:00	25	39	60	89	149	64	
10:00 - 11:00	42	26	83	57	140	68	
11:00 - 12:00	47	42	115	99	214	89	
12:00 - 13:00	53	35	89	129	218	88	
13:00 - 14:00	53	39	48	135	183	92	
14:00 - 15:00	59	43	126	157	283	102	
15:00 - 16:00	61	53	165	165	330	114	
16:00 - 17:00	58	37	139	141	280	95	
17:00 - 18:00	72	43	173	115	288	115	
18:00 - 19:00	59	41	172	116	288	100	
19:00 - 20:00	52	26	105	77	182	78	
20:00 - 21:00	34	33	98	77	175	67	
21:00 - 22:00	25	21	64	47	111	46	
22:00 - 23:00	12	9	8	32	40	21	
23:00 - 24:00	6	6	0	10	10	12	
<b>TOTALS</b>	<b>837</b>	<b>670</b>	<b>1,889</b>	<b>2,055</b>	<b>3,944</b>	<b>1,507</b>	
= 8 hour period					Average for highest 8 hours =	297	101
= maximum hour					Required =	210	140

**TRAFFIC VOLUME ANALYSIS**

**Town of Apple Valley  
Traffic Engineering Department  
Traffic Collision History Report**

8/12/2008  
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Location: Iroquois Rd / Sitting Bull Rd  
Date Range Reported: 1/1/2007 - 8/1/2008

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
180703230	5/26/07	19:02	0	In Int.	Hit Object	Fixed Object	East	Ran Off Road			Driving Under Influence	0	0
180705042	8/18/07	18:40	0	In Int.	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Other	0	0
180706322	10/16/07	17:53	0	In Int.	Hit Object	Fixed Object	North	Proceeding Straight	East	Proceeding Straight	Auto R/W Violation	0	0
180706402	10/20/07	13:01	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Auto R/W Violation	0	0
180802194	4/11/08	18:37	0	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Auto R/W Violation	0	0
180804172	7/14/08	10:13	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Auto R/W Violation	0	0

## TRAFFIC COLLISION HISTORY REPORT

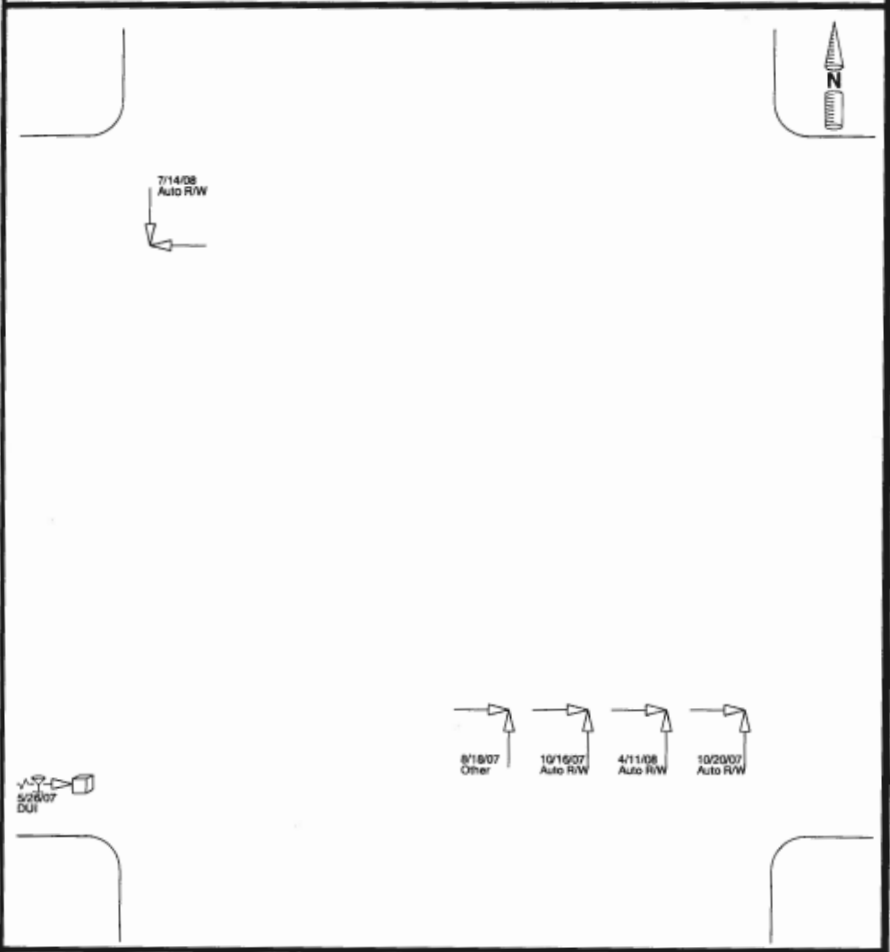
# Collision Diagram

**Horizontal Street:** SITTING BULL RD

**From:** 1/1/2007 **To:** 8/1/2008

**Vertical Street:** IROQUOIS RD

**Date Prepared:** 8/12/2008



**Number of Collisions**

- 6 Property Damage Only
- 0 Injury Collisions
- 0 Fatal Collisions
- 6 Total Collisions

**Legend**

- |                   |              |                |
|-------------------|--------------|----------------|
| ← Moving Vehicle  | ↘ Right Turn | 🚶 Pedestrian   |
| ⏹ Stopped Vehicle | ↙ Left Turn  | 📦 Fixed Object |
| ↔ Backing Vehicle | ↔ Sideswipe  | 🚲 Bicycle      |
| ↔ Ran Off Road    | ☀ Day        | 🍷 DUI          |
| ⬅ Movement        | 🌙 Night      | 👤 Injury       |
| ⋯ Unknown         |              | ☠ Fatal        |

**RESOLUTION NO. 2008-55**

**A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY ESTABLISHING THE INTERSECTION OF SITTING BULL ROAD AND IROQUOIS ROAD AS A FOUR-WAY STOP INTERSECTION.**

WHEREAS, a traffic engineering investigation has determined that establishing the intersection of Sitting Bull Road and Iroquois Road as a four-way STOP intersection is warranted in accordance with Section 52.0111 of the San Bernardino County Code as adopted by the Town of Apple Valley.

NOW THEREFORE, THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY DOES RESOLVE AND ORDER AS FOLLOWS:

Section 1: Approves and establishes the intersection of Sitting Bull Road and Iroquois Road as a four-way STOP intersection.

Section 2: Authorizes and directs the Town Manager to cause additional STOP signs to be placed on Sitting Bull Road and Iroquois Road.

APPROVED and ADOPTED this the 23rd day of September, 2008.

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MAYOR

ATTESTED:

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TOWN CLERK