TEDESCO & BURR TRAFFIC CONTROL REVIEW

Tedesco Street Reconstruction Project

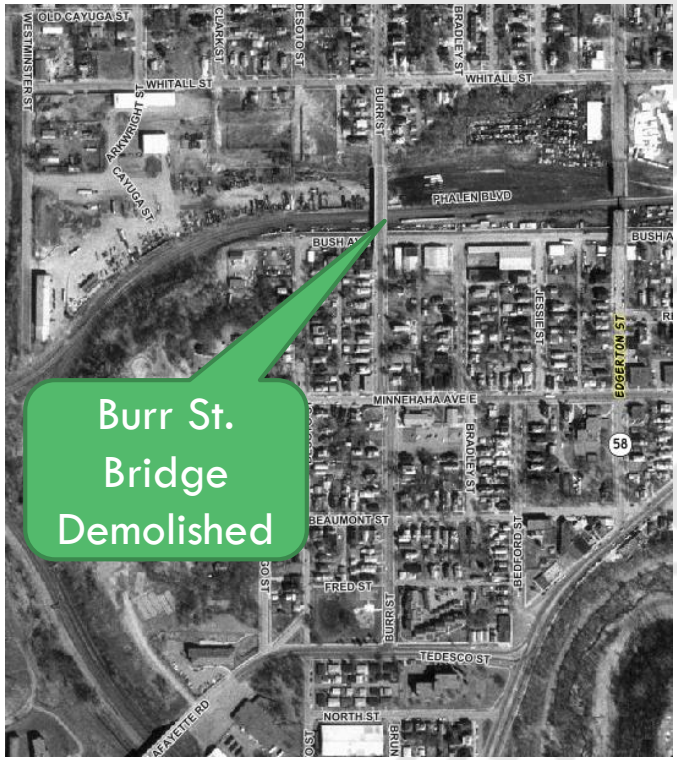
Tedesco & Burr history

- A traffic signal was installed in the late 90s.
- The case for justifying the signal was made based on a "Systems Warrant," as it did not meet safety or volume criteria at the time.
- Project was driven by community support for improved pedestrian crossing.
- The report projected an increase in Average Daily Traffic (ADT) on Tedesco of 2,830 vehicles after five years.

1997 Volumes

Big changes since 1997

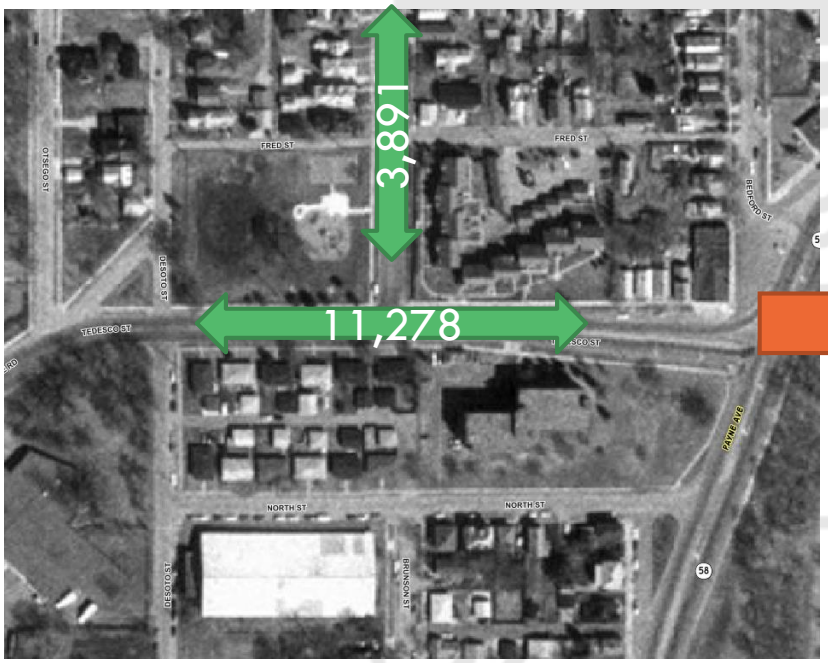
1997



2020

Changes in traffic volume (ADT)

1997



2018

What is the correct traffic control?

- Volumes are well below thresholds for a traffic signal per Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD).
- Volumes would suggest stop control on Burr Street, with no control on Tedesco Street.
  - Sight distance issues were identified due to the grades on Tedesco Street
  - Additional considerations would be needed for the pedestrian crossing of Tedesco Street.
- Inadequate space is available to seriously consider a roundabout

All-way stop control

- MnMUTCD has guidance on the installation of all-way stop control
  - A volume criteria - for any **eight** hours in one day, both
    - The sum of the volumes on the mainline approaches should exceed 300 vehicles, and
    - The sum of the volumes of the sidestreet approaches should exceed 200, inclusive of peds/bikes
    - Tedesco reaches 300 vehicles in only six hours in a day, while approach volumes on Burr fail to exceed 100 vehicles for any single hour
  - A crash criteria exists, but no relevant crash data is available due to the existing signal

All-way stop control

- Other MnMUTCD criteria for consideration
  - The need to control left-turn conflicts;
  - The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
  - Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
  - An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

All-way stop control

- These two criteria may apply:
  - The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes
    - What are “high pedestrian volumes?”
    - Pedestrian attractors and bus service still exist near the intersection
  - Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop
    - Sight distance issues have been identified

Recommendations & Summary

- **Due to the identified sight distance issues, and the need to control pedestrian/vehicle conflicts at this location, all-way stop control is recommended for the intersection of Tedesco & Burr**
- Other traffic controls considered:
  - Traffic signal: Due to changes to the roadway network in the area, volumes on Tedesco & Burr have decreased below the level at which a traffic signal is appropriate
  - Roundabout: Insufficient right-of-way is available for the installation of a roundabout to be feasible with this project
  - Side-street stop control: While this would likely be the best fit given the existing volumes, the hill to the east of the intersection results in poor sightlines resulting in a potential safety concern

Next steps

- Traffic signal is planned to be placed in all-way red flash for ninety days prior to removal
- Traffic signal will be removed during construction, with temporary controls in place
- Stop signs will be installed as project is completed

Questions?

- For questions about this review, please contact:
  - Mike Klobucar
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    - 651.266.6208
- For general Tedesco Reconstruction questions, contact
  - Chris Engelmann
    - chris.engelmann@ci.stpaul.mn.us
    - 651.266.6084
- Visit the project website
  - https://www.stpaul.gov/departments/public-works/projects/tedesco-street-reconstruction

CITY OF SAINT PAUL

TRAFFIC OPERATIONS
899 DALE ST.
SAINT PAUL, MN 55103

APPROACH COUNT
DATE: 04/24/2019
SUMMARY: CM, BZ
COMMENTS: NA

Site Code: 04241903
Station ID: 10460
EB Tedesco approaching Burr

Start Time	Mon 22-Apr-19	Tue 23-Apr-19	Wed 24-Apr-19	Thu 25-Apr-19	Fri 26-Apr-19	Average Day	Sat 27-Apr-19	Sun 28-Apr-19	Week Average
12:00 AM	*	*	*	22	19	20	*	*	20
01:00	*	*	*	16	22	19	*	*	19
02:00	*	*	*	9	11	10	*	*	10
03:00	*	*	*	9	14	12	*	*	12
04:00	*	*	*	13	5	9	*	*	9
05:00	*	*	*	20	28	24	*	*	24
06:00	*	*	*	54	44	49	*	*	49
07:00	*	*	*	74	72	73	*	*	73
08:00	*	*	*	86	72	79	*	*	79
09:00	*	*	*	98	81	90	*	*	90
10:00	*	*	*	115	109	112	*	*	112
11:00	*	*	*	**143**	**136**	**140**	*	*	**140**
12:00 PM	*	*	140	153	*	146	*	*	146
01:00	*	*	144	140	*	142	*	*	142
02:00	*	*	186	179	*	182	*	*	182
03:00	*	*	326	320	*	323	*	*	323
04:00	*	*	**491**	**470**	*	**480**	*	*	**480**
05:00	*	*	334	349	*	342	*	*	342
06:00	*	*	120	157	*	138	*	*	138
07:00	*	*	108	95	*	102	*	*	102
08:00	*	*	76	73	*	74	*	*	74
09:00	*	*	67	61	*	64	*	*	64
10:00	*	*	41	61	*	51	*	*	51
11:00	*	*	34	38	*	36	*	*	36
Day Total	0	0	2067	2755	613	2717	0	0	2717
% Avg. WkDay	0.0%	0.0%	76.1%	101.4%	22.6%				
% Avg. Week	0.0%	0.0%	76.1%	101.4%	22.6%	100.0%	0.0%	0.0%	
AM Peak	-	-	-	11:00	11:00	11:00	-	-	11:00
Vol.	-	-	-	143	136	140	-	-	140
PM Peak	-	-	16:00	16:00	-	16:00	-	-	16:00
Vol.	-	-	491	470	-	480	-	-	480
Grand Total	0	0	2067	2755	613	2717	0	0	2717

ADT ADT 2,718 AADT 2,609

CITY OF SAINT PAUL

TRAFFIC OPERATIONS
899 DALE ST.
SAINT PAUL, MN 55103

APPROACH COUNT
DATE: 04/24/2019
SUMMARY: CM, BZ
COMMENTS: NA

Site Code: 04241902
Station ID: 10460
WB Tedesco approaching Burr

Start Time	Mon 22-Apr-19	Tue 23-Apr-19	Wed 24-Apr-19	Thu 25-Apr-19	Fri 26-Apr-19	Average Day	Sat 27-Apr-19	Sun 28-Apr-19	Week Average
12:00 AM	*	*	*	14	11	12	*	*	12
01:00	*	*	*	6	11	8	*	*	8
02:00	*	*	*	4	7	6	*	*	6
03:00	*	*	*	3	8	6	*	*	6
04:00	*	*	*	28	15	22	*	*	22
05:00	*	*	*	41	40	40	*	*	40
06:00	*	*	*	193	147	170	*	*	170
07:00	*	*	*	**600**	**433**	**516**	*	*	**516**
08:00	*	*	*	385	211	298	*	*	298
09:00	*	*	*	116	95	106	*	*	106
10:00	*	*	*	97	93	95	*	*	95
11:00	*	*	*	106	135	120	*	*	120
12:00 PM	*	*	119	122	*	120	*	*	120
01:00	*	*	108	145	*	126	*	*	126
02:00	*	*	126	139	*	132	*	*	132
03:00	*	*	**159**	127	*	143	*	*	143
04:00	*	*	154	**200**	*	**177**	*	*	**177**
05:00	*	*	133	159	*	146	*	*	146
06:00	*	*	79	83	*	81	*	*	81
07:00	*	*	60	71	*	66	*	*	66
08:00	*	*	56	50	*	53	*	*	53
09:00	*	*	31	41	*	36	*	*	36
10:00	*	*	18	29	*	24	*	*	24
11:00	*	*	14	22	*	18	*	*	18
Day Total	0	0	1057	2781	1206	2521	0	0	2521
% Avg. WkDay	0.0%	0.0%	41.9%	110.3%	47.8%				
% Avg. Week	0.0%	0.0%	41.9%	110.3%	47.8%	100.0%	0.0%	0.0%	
AM Peak	-	-	-	07:00	07:00	07:00	-	-	07:00
Vol.	-	-	-	600	433	516	-	-	516
PM Peak	-	-	15:00	16:00	-	16:00	-	-	16:00
Vol.	-	-	159	200	-	177	-	-	177
Grand Total	0	0	1057	2781	1206	2521	0	0	2521

ADT ADT 2,522 AADT 2,421

CITY OF SAINT PAUL

TRAFFIC OPERATIONS
899 DALE ST.
SAINT PAUL, MN 55103

APPROACH COUNT
DATE: 04/24/2019
SUMMARY: CM, BZ
COMMENTS: NA

Site Code: 04241901
Station ID: 10460
SB Burr approaching Tedesco

Start Time	Mon 22-Apr-19	Tue 23-Apr-19	Wed 24-Apr-19	Thu 25-Apr-19	Fri 26-Apr-19	Average Day	Sat 27-Apr-19	Sun 28-Apr-19	Week Average
12:00 AM	*	*	*	7	5	6	*	*	6
01:00	*	*	*	4	12	8	*	*	8
02:00	*	*	*	4	3	4	*	*	4
03:00	*	*	*	6	2	4	*	*	4
04:00	*	*	*	8	5	6	*	*	6
05:00	*	*	*	17	24	20	*	*	20
06:00	*	*	*	46	43	44	*	*	44
07:00	*	*	*	99	**83**	91	*	*	91
08:00	*	*	*	**122**	77	**100**	*	*	**100**
09:00	*	*	*	62	52	57	*	*	57
10:00	*	*	*	46	43	44	*	*	44
11:00	*	*	*	44	51	48	*	*	48
12:00 PM	*	*	51	83	*	67	*	*	67
01:00	*	*	51	69	*	60	*	*	60
02:00	*	*	75	60	*	68	*	*	68
03:00	*	*	64	76	*	70	*	*	70
04:00	*	*	69	**91**	*	**80**	*	*	**80**
05:00	*	*	**76**	73	*	74	*	*	74
06:00	*	*	66	48	*	57	*	*	57
07:00	*	*	40	47	*	44	*	*	44
08:00	*	*	47	38	*	42	*	*	42
09:00	*	*	33	39	*	36	*	*	36
10:00	*	*	19	31	*	25	*	*	25
11:00	*	*	12	14	*	13	*	*	13
Day Total	0	0	603	1134	400	1068	0	0	1068
% Avg. WkDay	0.0%	0.0%	56.5%	106.2%	37.5%				
% Avg. Week	0.0%	0.0%	56.5%	106.2%	37.5%	100.0%	0.0%	0.0%	
AM Peak	-	-	-	08:00	07:00	- 08:00	-	-	- 08:00 - -
Vol.	-	-	-	122	83	- 100	-	-	- 100 - -
PM Peak	-	-	17:00	16:00	-	- 16:00	-	-	- 16:00 - -
Vol.	-	-	76	91	-	- 80	-	-	- 80 - -
Grand Total	0	0	603	1134	400	1068	0	0	1068

ADT ADT 1,068 AADT 1,026