

Route 206 Corridor Study *PFARS Site*

July 8, 2019



Purpose of Study

- Improve peak hour traffic flow
- Reduce traffic congestion
- Short-term and long-term recommendations
- Improve pedestrian mobility and safety



Problem Statement

- Impact due to closure of Terhune Road
- Change in traffic patterns
- Impact of Cherry Valley Road closure for construction



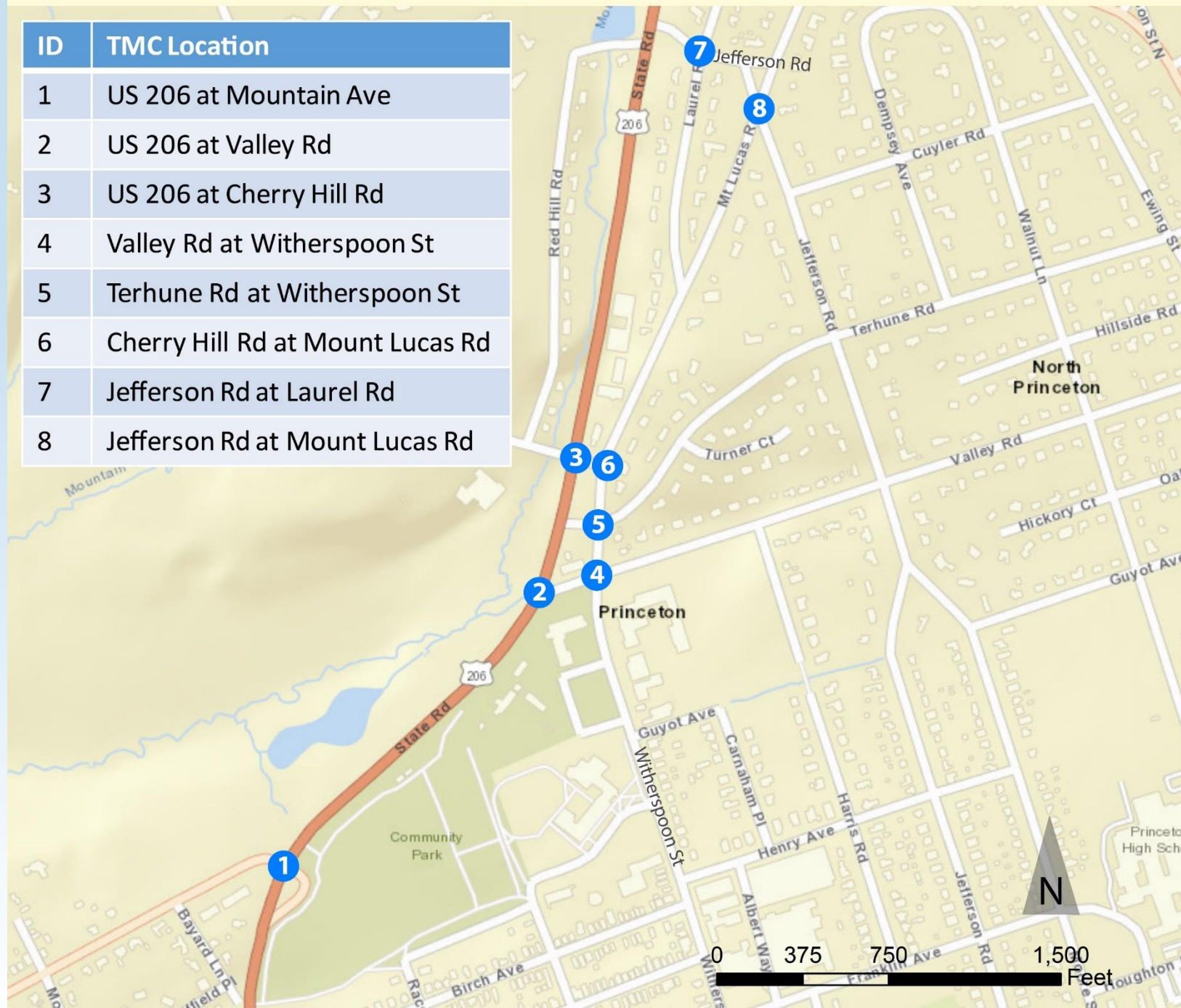
Summary of Traffic Study

- Traffic queues during the morning and afternoon peaks
- Traffic counts
- Intersection capacity analysis



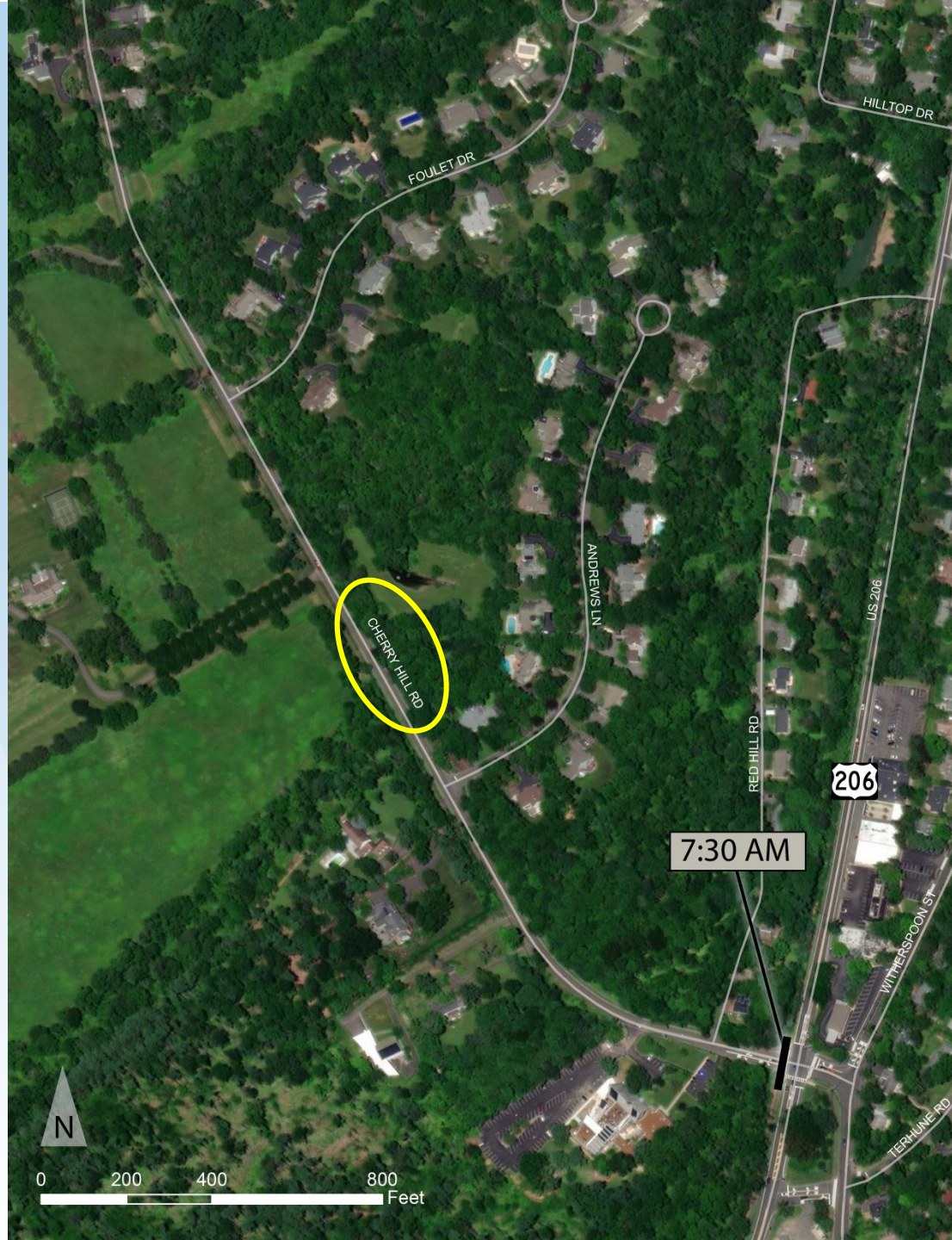
Traffic Count Locations: Intersection Counts

ID	TMC Location
1	US 206 at Mountain Ave
2	US 206 at Valley Rd
3	US 206 at Cherry Hill Rd
4	Valley Rd at Witherspoon St
5	Terhune Rd at Witherspoon St
6	Cherry Hill Rd at Mount Lucas Rd
7	Jefferson Rd at Laurel Rd
8	Jefferson Rd at Mount Lucas Rd



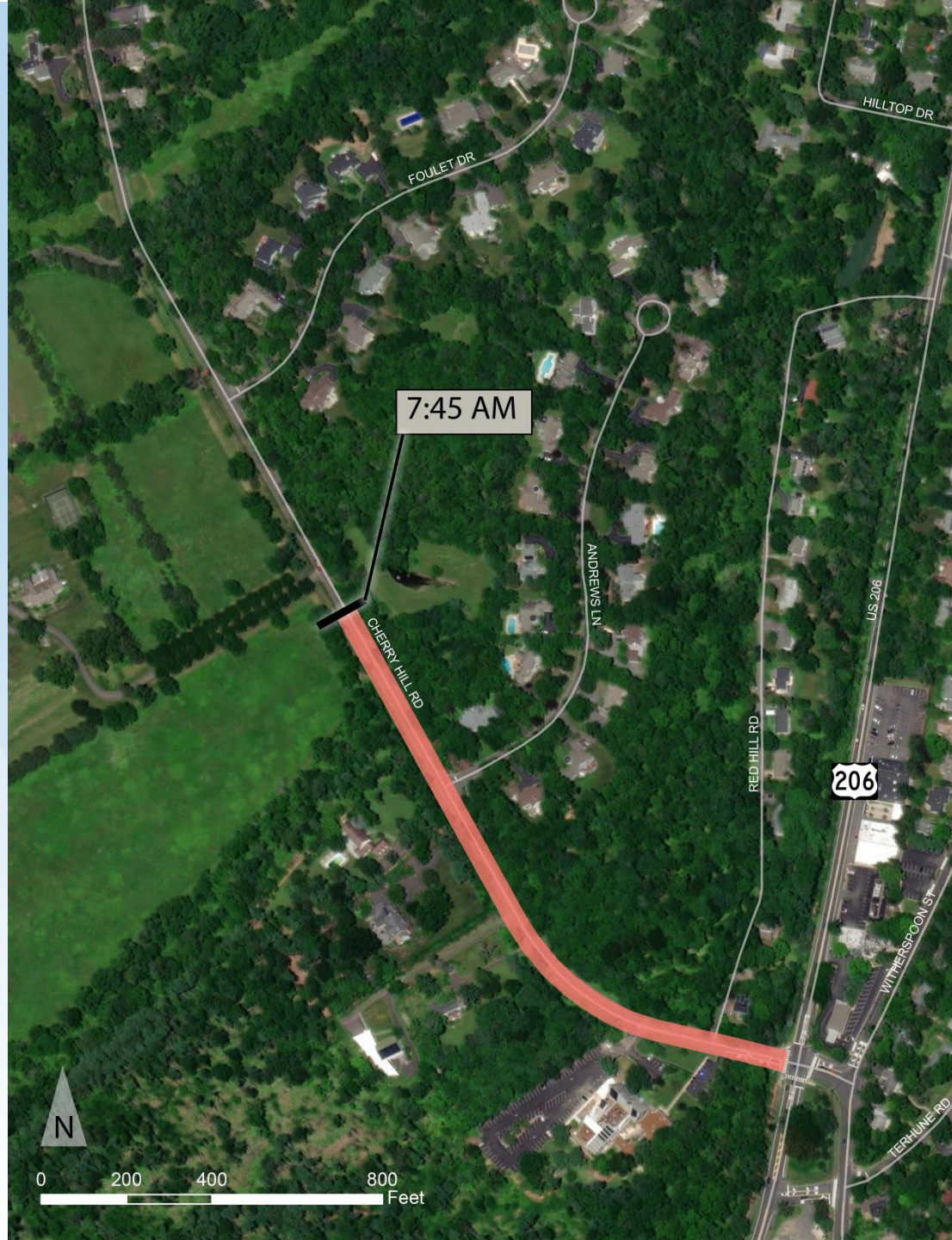
7:30 a.m.

No Queue



7:45 a.m.

0.30 miles



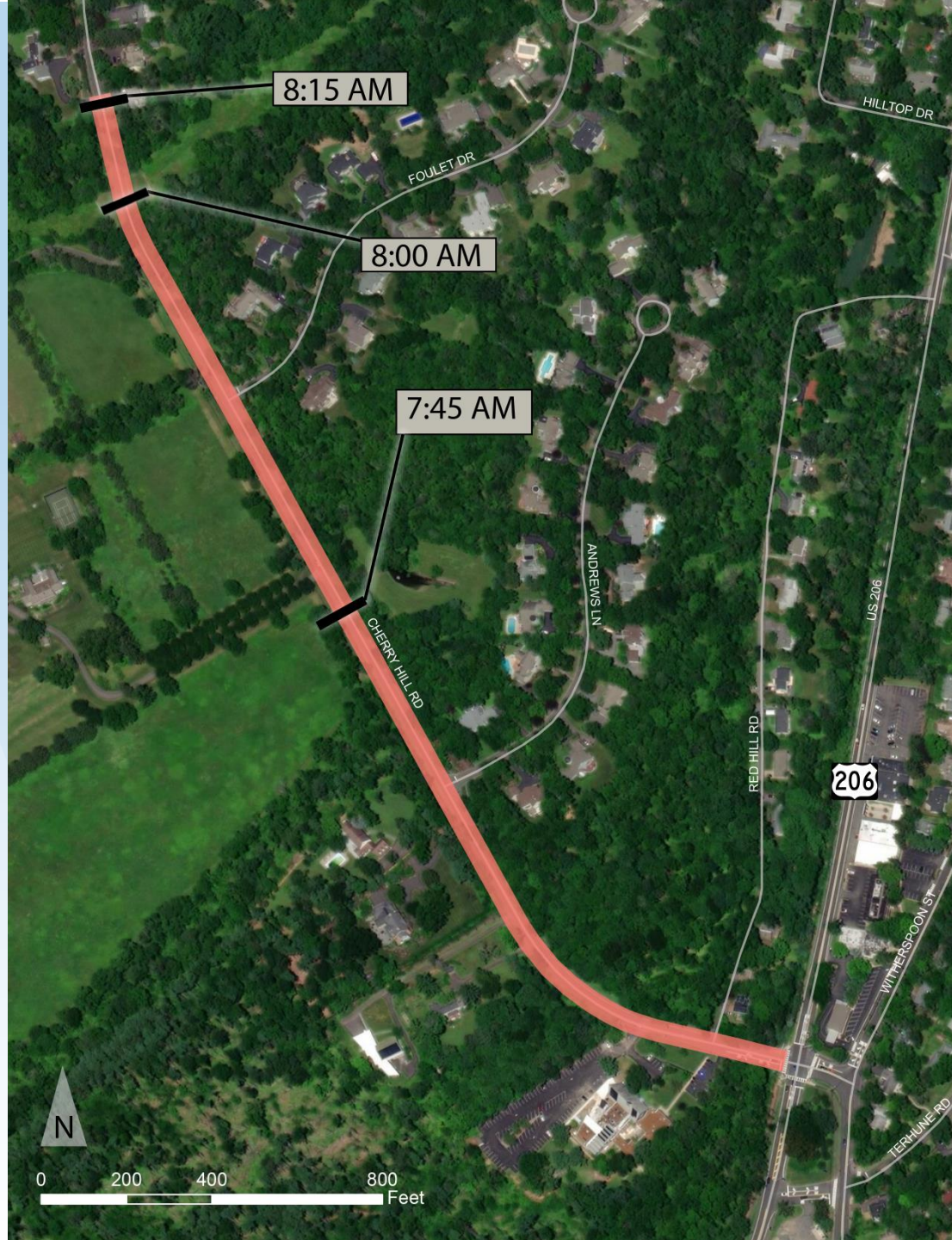
8:00 a.m.

0.50 mi.



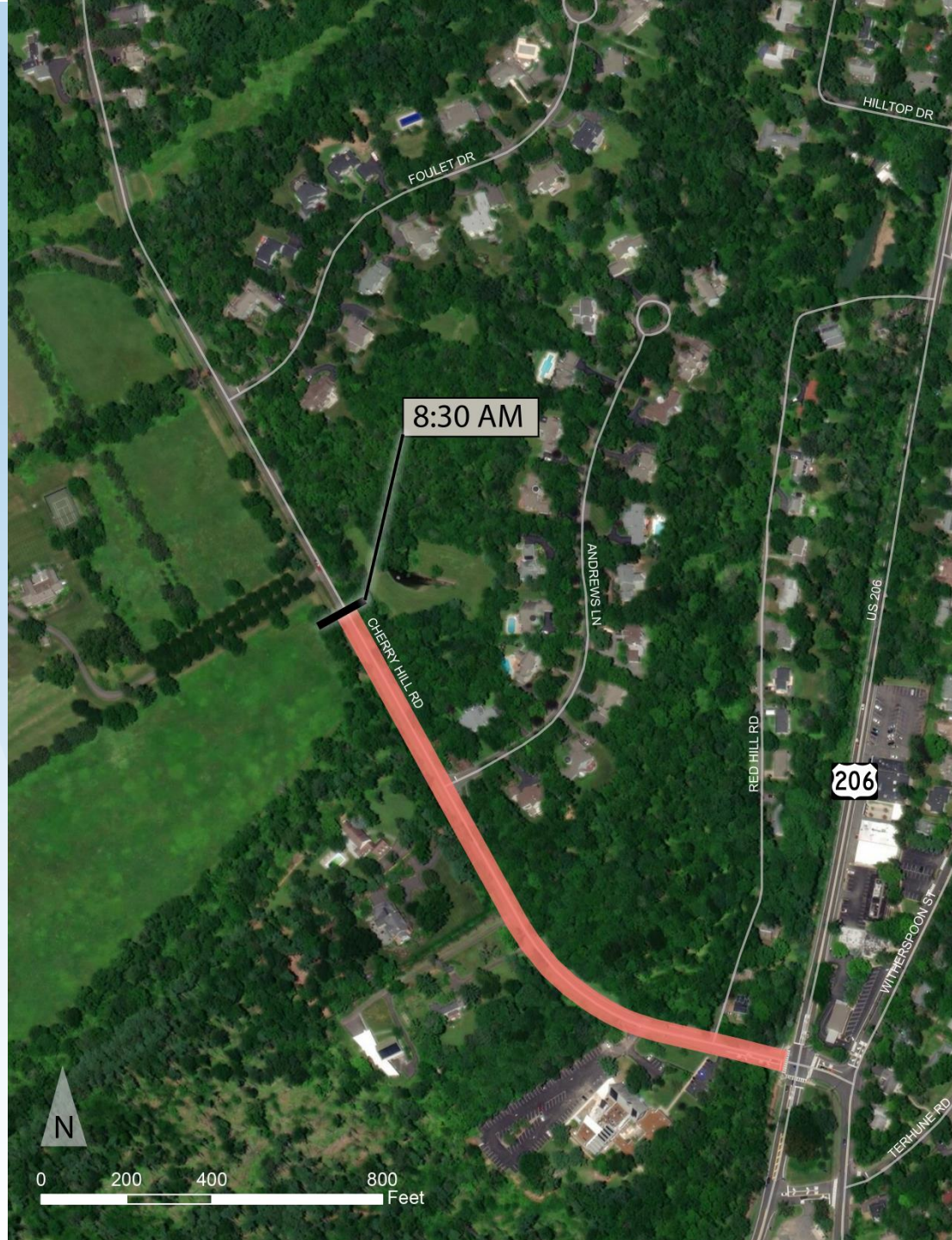
8:15 a.m.

0.56 mi.



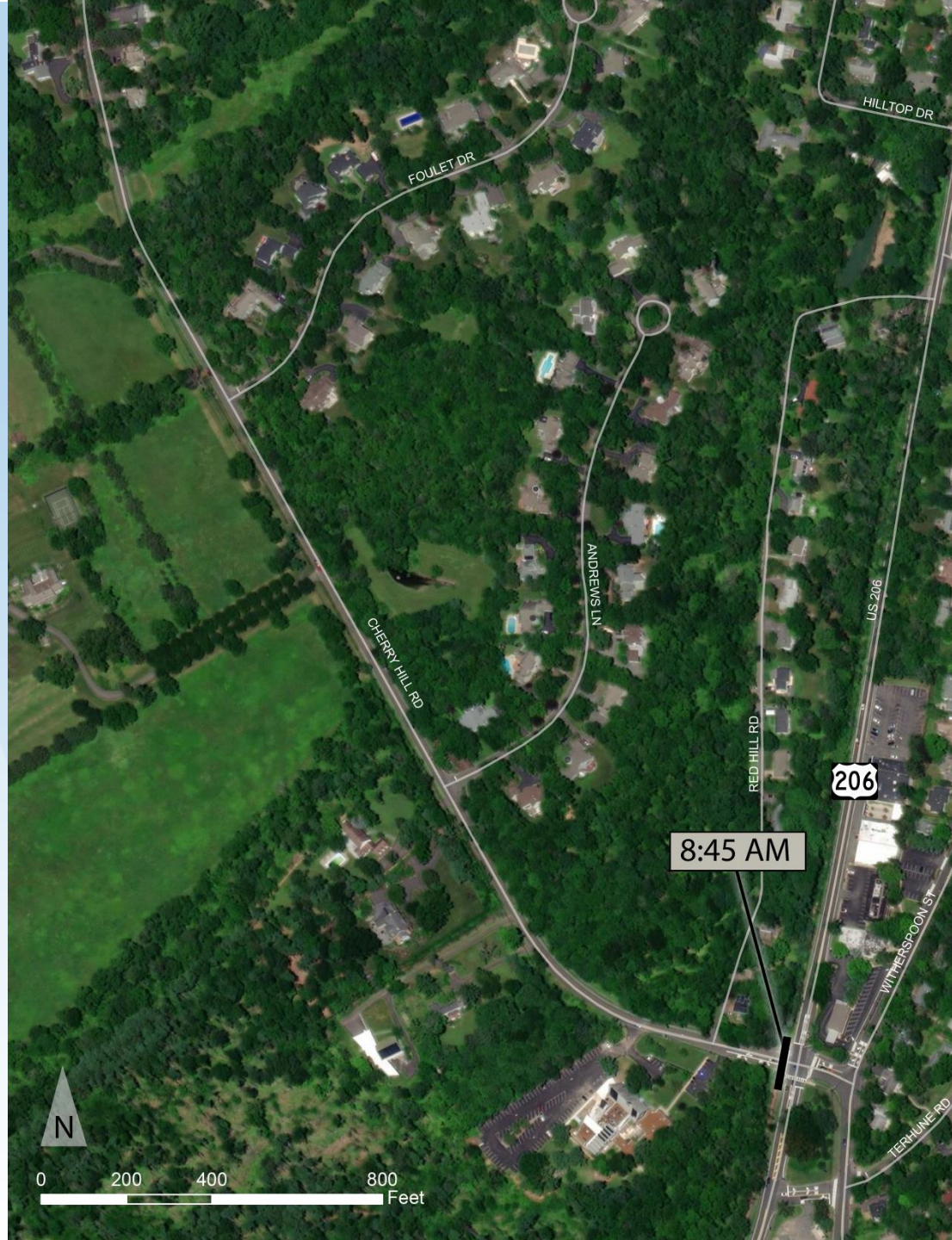
8:30 a.m.

0.30 mi.



8:45 a.m.

No Queue



7:30 a.m.

No Queue



7:45 a.m.

275 feet
(0.05 mi.)



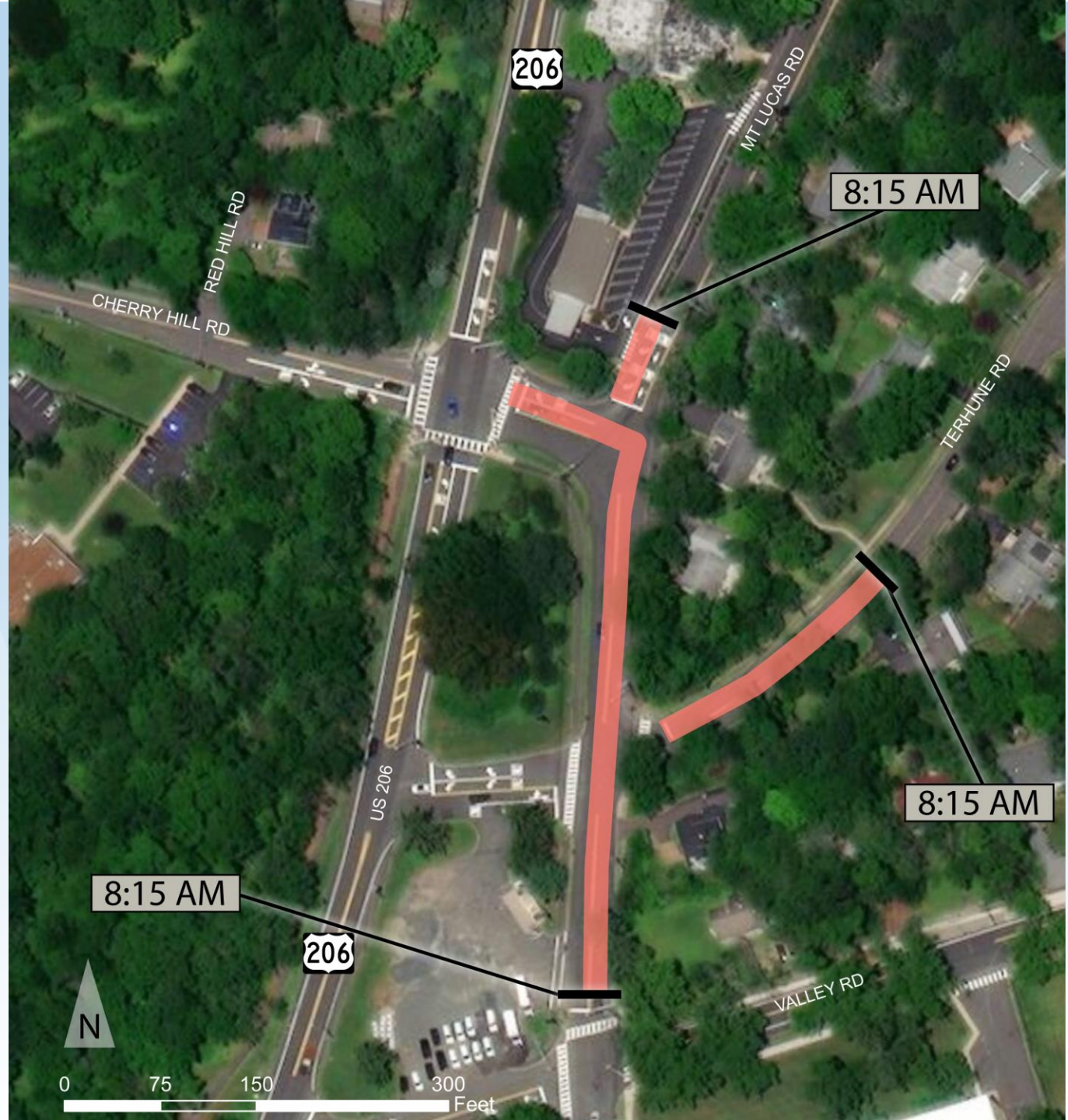
8:00 a.m.

300 feet
(0.06 mi.)



8:15 a.m.

550 feet
0.10 mi.



8:30 a.m.

450 feet
0.09 mi.



8:45 a.m.

No Queue



4:30 p.m.

25'



4:45 p.m.

175'



5:00 p.m.

425'
(0.08 mi.)



5:15 p.m.

175'



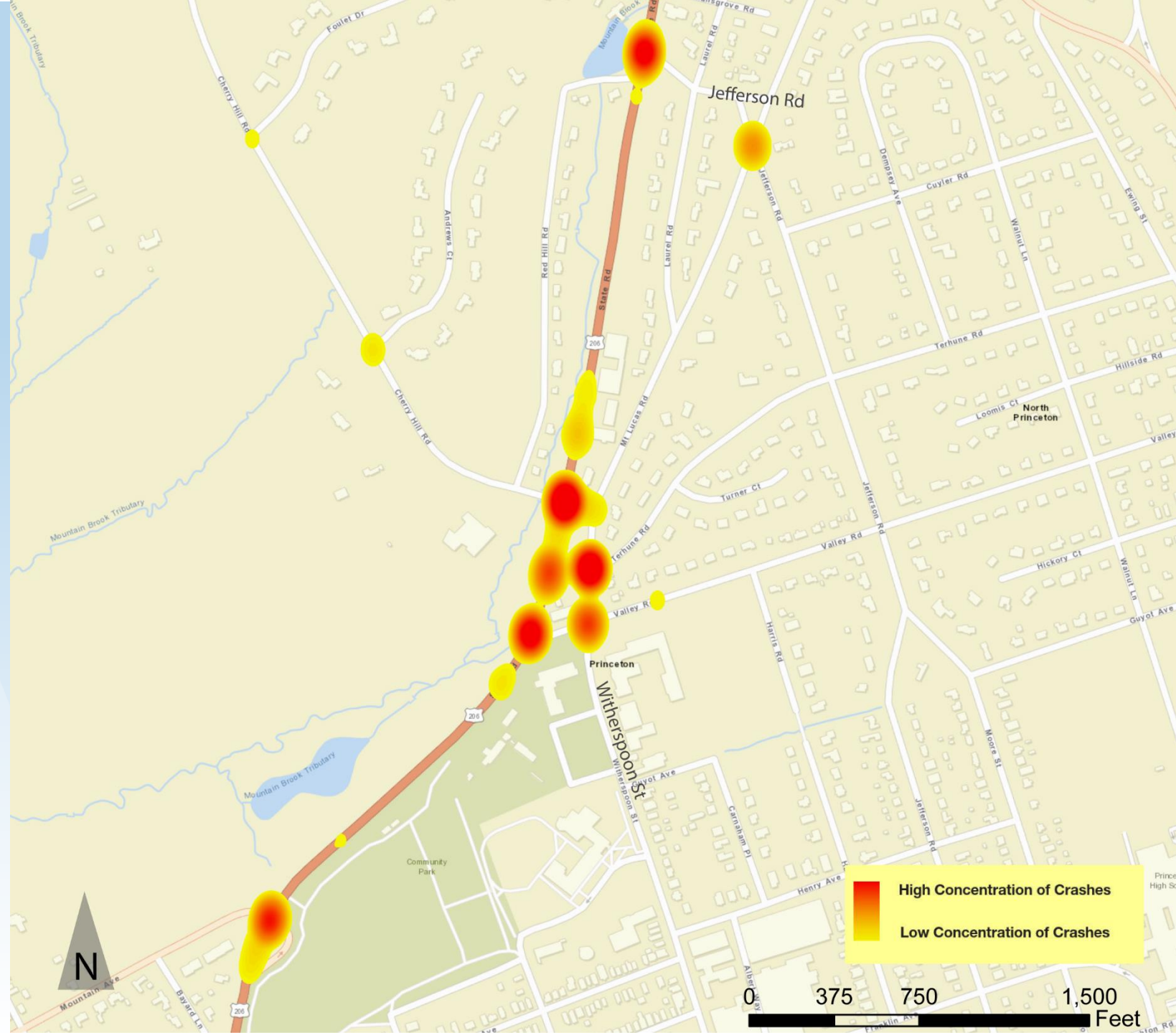
5:30 p.m.

No Queue



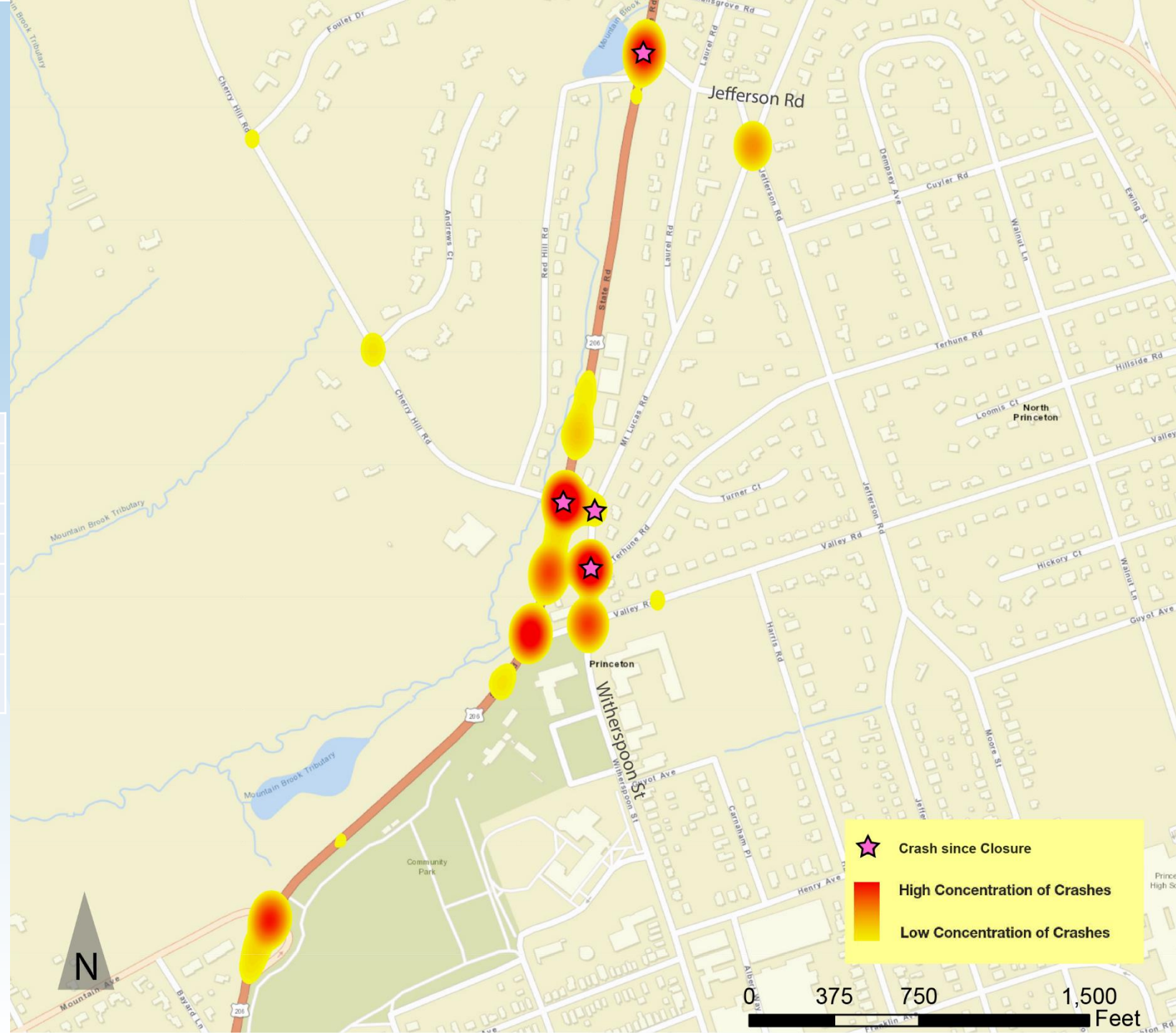
Crash Hotspots (2013-2018)

<u>Year</u>	<u>Total Crashes</u>
2013	23
2014	31
2015	21
2016	38
2017	33
2018	50



Crash Hotspots (2013-2019)

Year	Crashes in Study Area	Total Princeton Crashes	Percent
2013	23	741	3.1%
2014	31	881	3.5%
2015	21	691	3.0%
2016	38	770	4.9%
2017	33	795	4.2%
2018	50	748	6.7%
Average	33	771	4.2%
2019 (6 months)	4		



Crash since Closure

High Concentration of Crashes

Low Concentration of Crashes



Intersection Analysis & Alternatives





Prior to
closure





Terhune Rd.
Closed

206

US 206

WITHERSPOON ST

VALLEY RD

RED HILL RD

CHERRY HILL RD

MT LUCAS RD

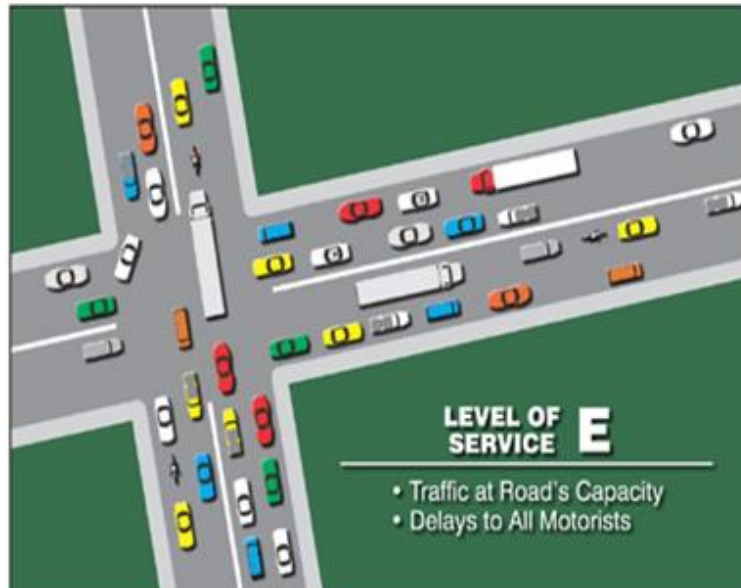
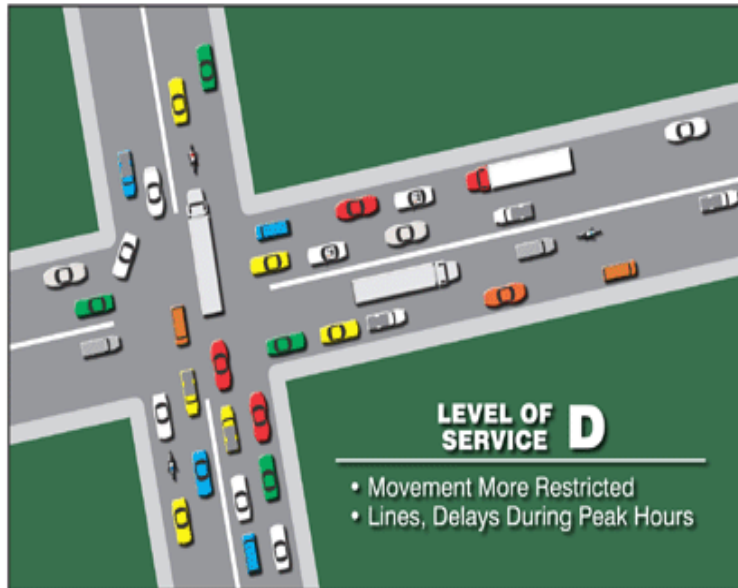
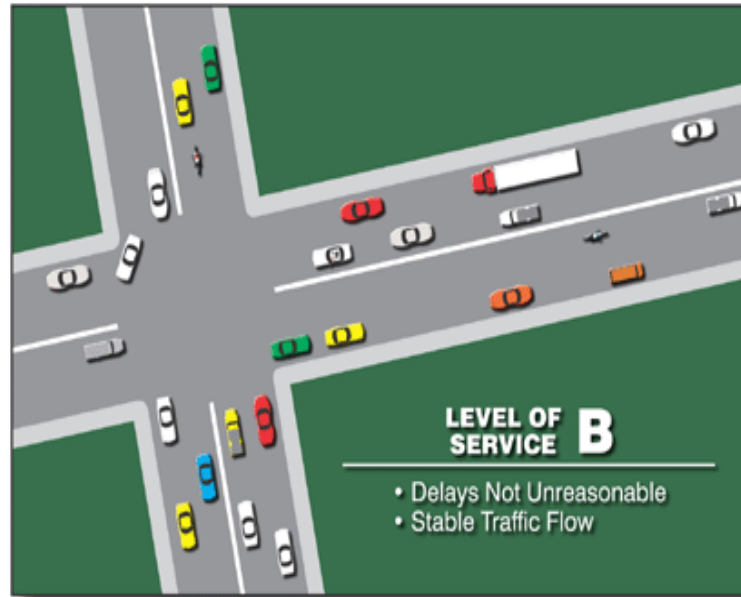
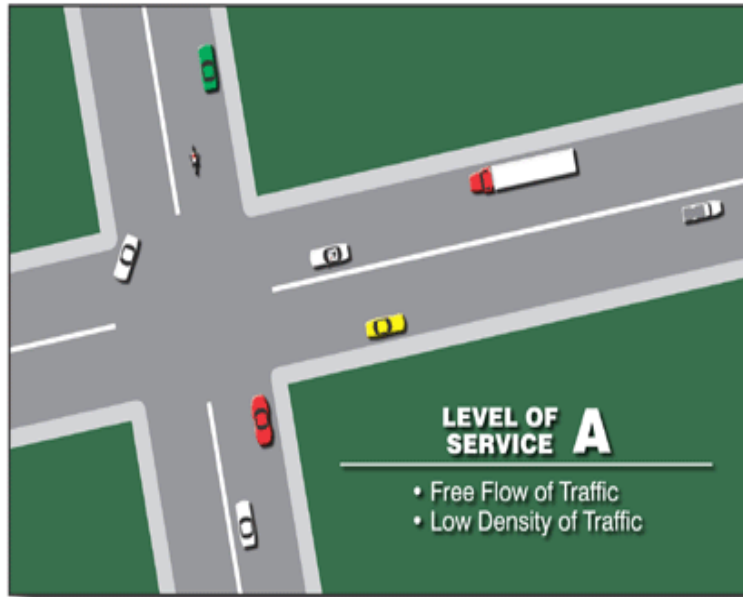
TERHUNE RD





With
Re-striping





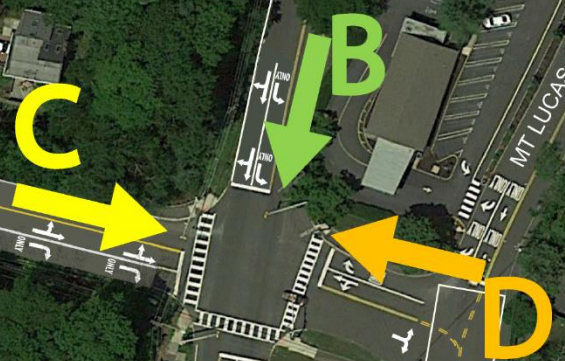


AM
Peak Hour





PM
Peak Hour



206

US 206

CHERRY HILL RD

RED HILL RD

MT LUCAS RD

TERHUNE RD

VALLEY RD

WITHERSPOON ST





Restripe to provide
dedicated left turn
lane

+2 Seconds to side
street

Install Sidewalks

Install Stop Bars

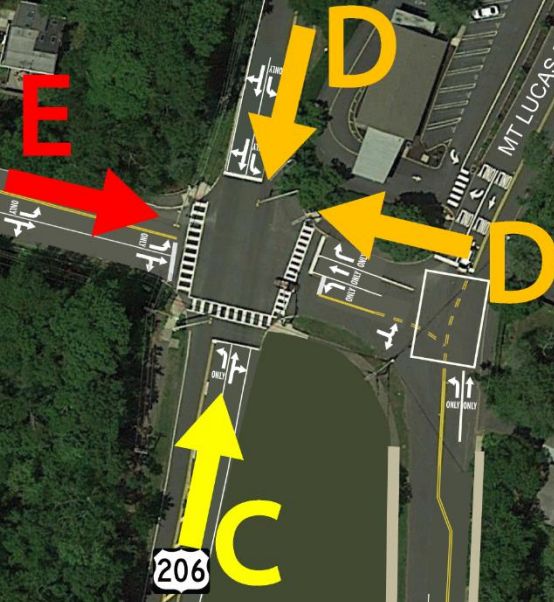
Install Emergency
Traffic Signal

Restripe to provide
each movement with
dedicated lane





AM
Peak Hour





PM
Peak Hour





Prohibit left turns to SB US 206

New Traffic Signal with optimized timing

Stripe Dedicated Left Turn Lane

Stripe Dedicated Left Turn Lane

Stripe Dedicated Right Turn Lane

Fully Signalize Intersection





AM
Peak Hour

B

D

A

C

B

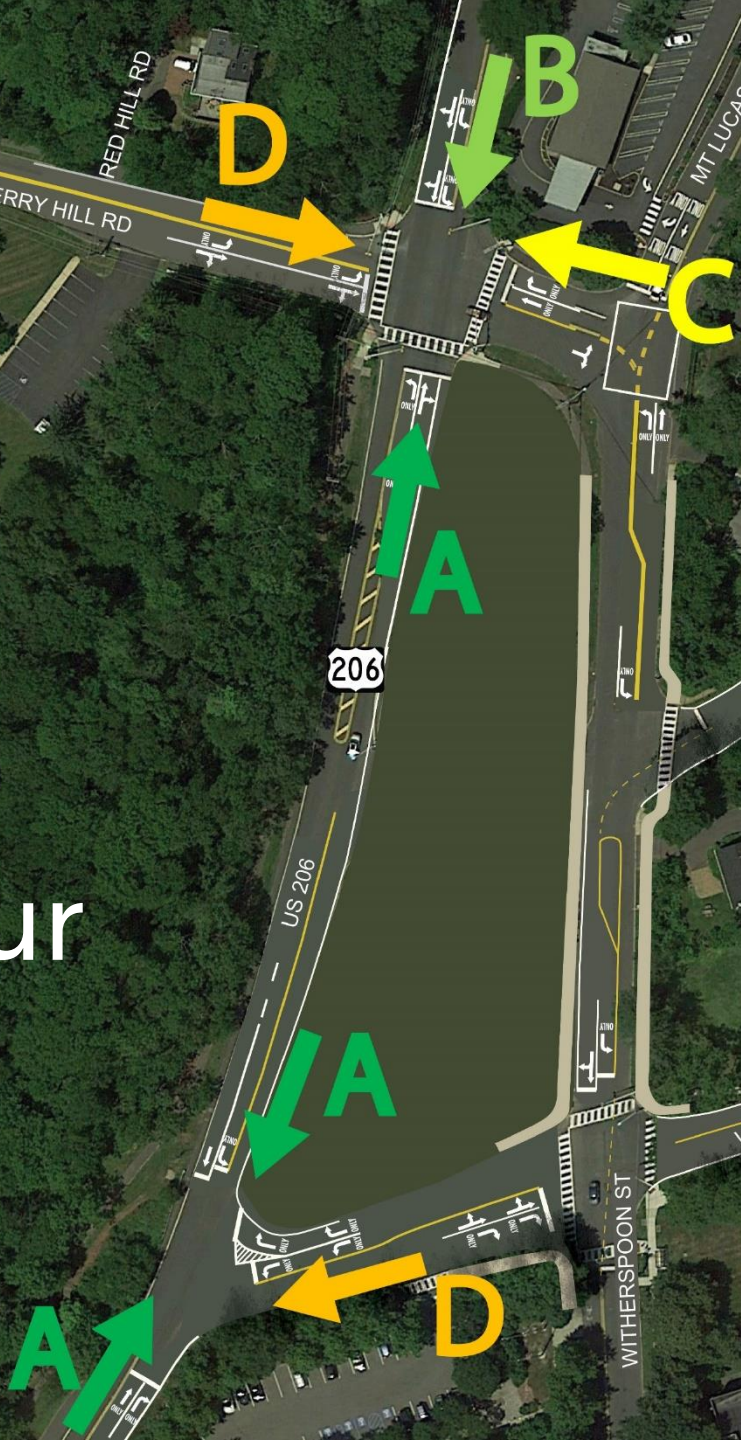
D

E





PM
Peak Hour

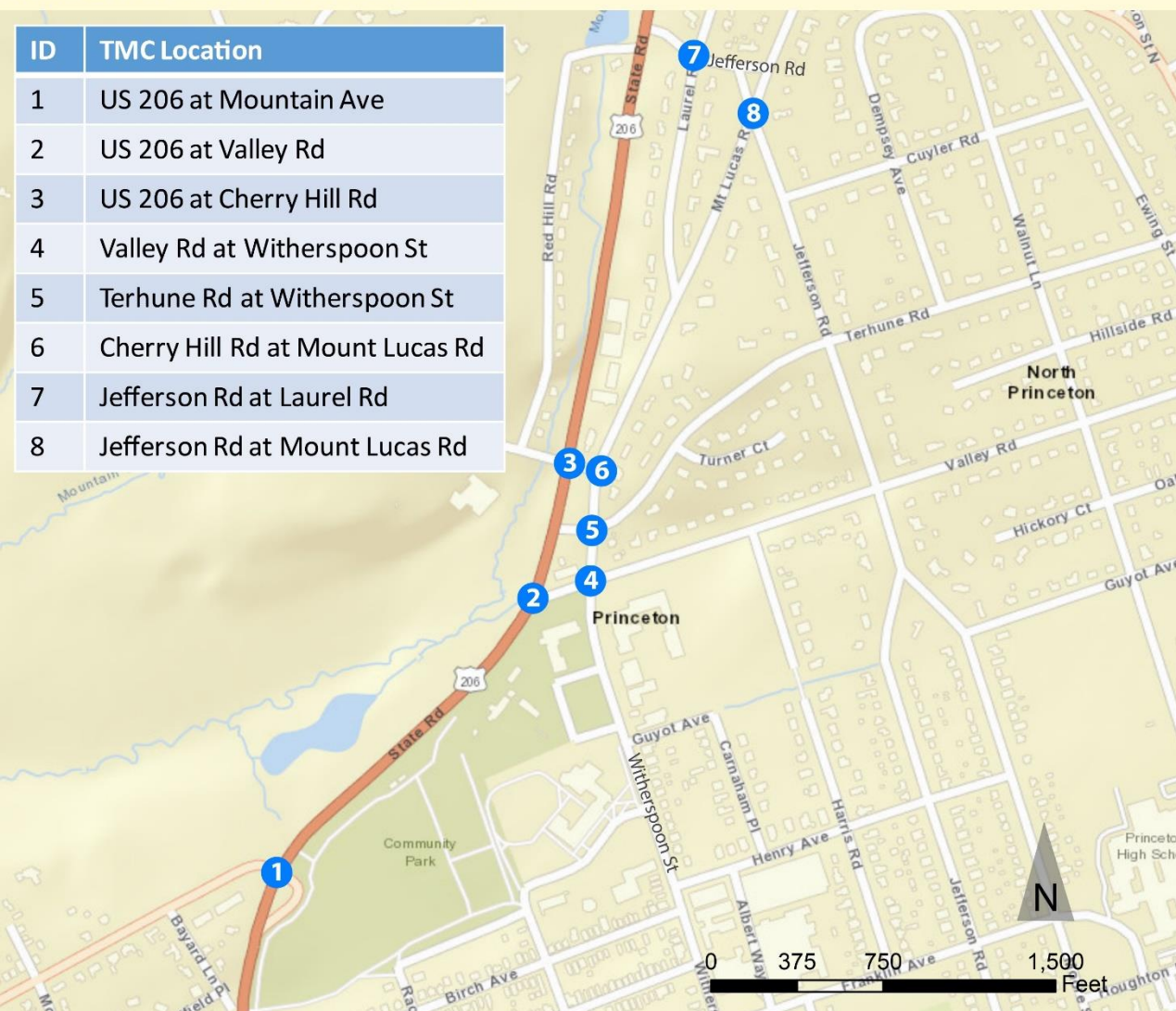


Questions?



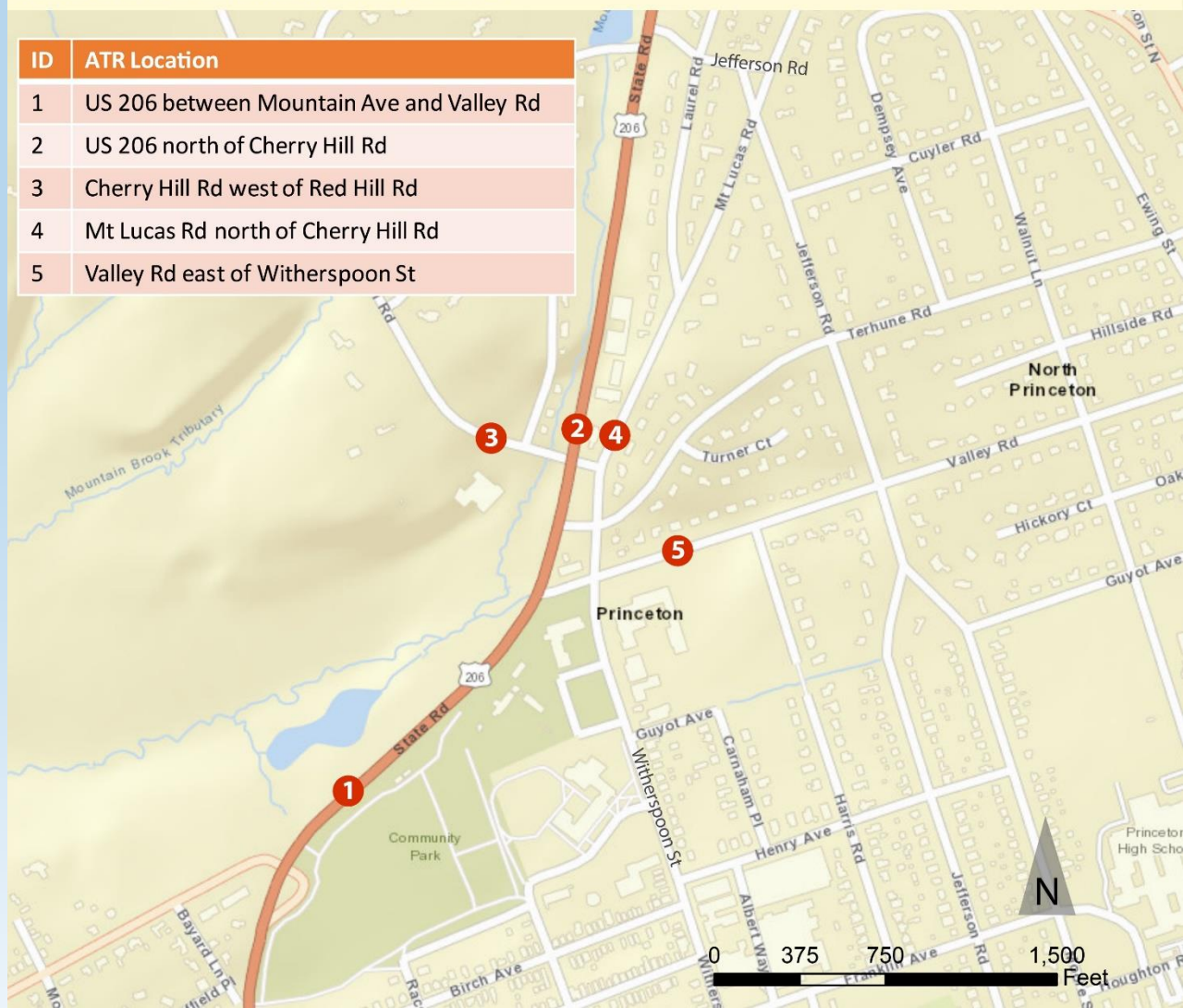
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Traffic Count Locations: Midblock Counts

ID	ATR Location
1	US 206 between Mountain Ave and Valley Rd
2	US 206 north of Cherry Hill Rd
3	Cherry Hill Rd west of Red Hill Rd
4	Mt Lucas Rd north of Cherry Hill Rd
5	Valley Rd east of Witherspoon St



EB Cherry Hill Rd Queueing

	Cherry Hill Rd Eastbound approaching US 206		
AM Peak	Vehicles Cleared	Additional Vehicles Queued	Estimated Queue Length (feet)
6:45:00 AM	4	0	0
7:00:00 AM	7	0	0
7:15:00 AM	11	0	0
7:30:00 AM	7	0	0
7:45:00 AM	10	63*	1575
8:00:00 AM	10	106*	2650
8:15:00 AM	10	119*	2975
8:30:00 AM	10	63*	1575
8:45:00 AM	12	0	0
9:00:00 AM	9	0	0
9:15:00 AM	-	-	-
PM Peak	Vehicles Cleared	Additional Vehicles Queued	Estimated Queue Length (feet)
4:30:00 PM	6	0	0
4:45:00 PM	8	0	0
5:00:00 PM	5	0	0
5:15:00 PM	5	0	0
5:30:00 PM	5	0	0
5:45:00 PM	9	0	0
6:00:00 PM	7	0	0
6:15:00 PM	6	0	0

*Estimated queue derived from total queue length divided by 25ft

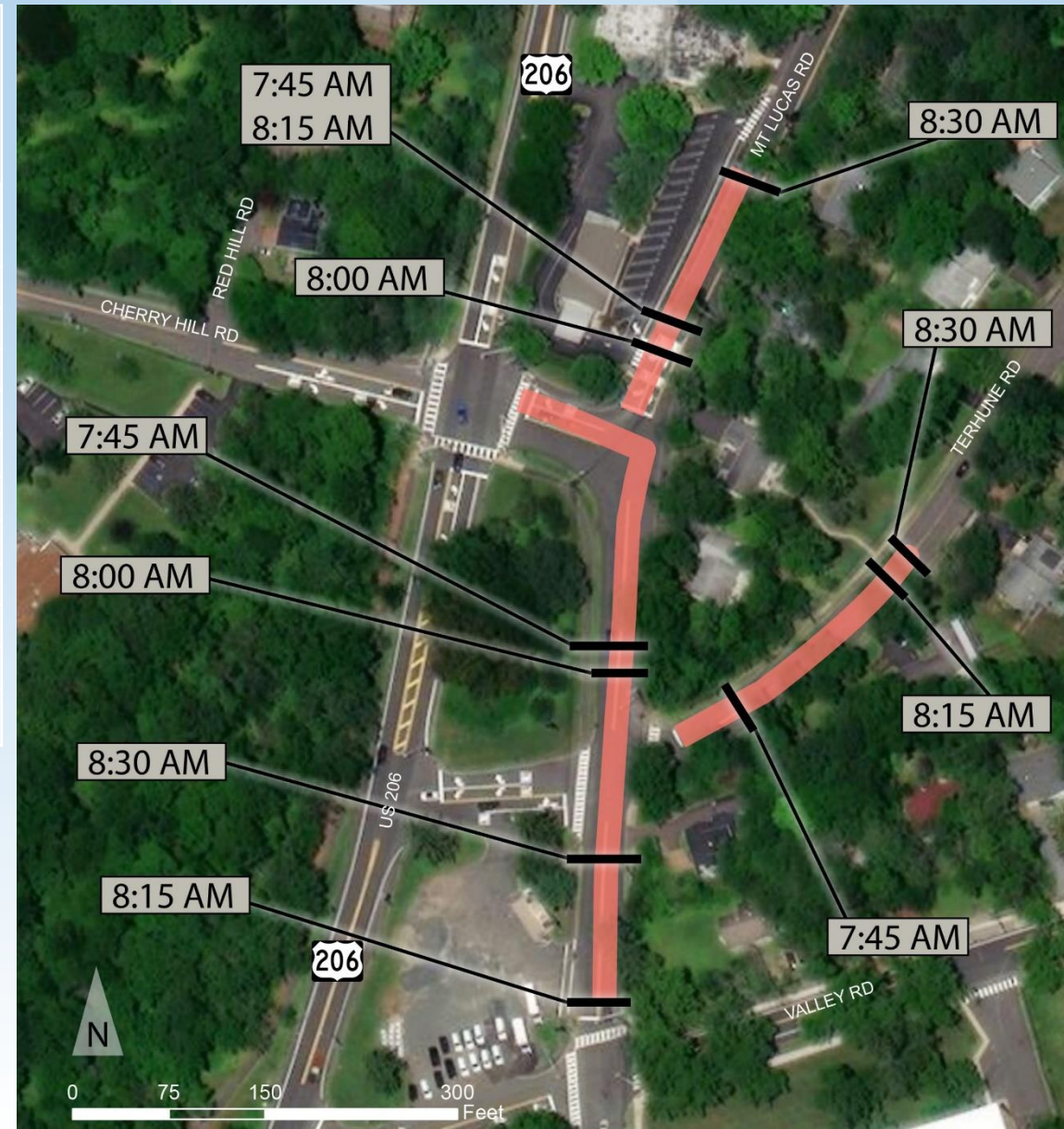


WB Cherry Hill Rd Queueing – AM Peak

**Cherry Hill Rd Westbound approaching US 206
(Includes Queueing along NB Mt. Lucas Rd/Witherspoon St)**

AM Peak	Vehicles Cleared	Additional Vehicles Queued	Estimated Queue Length (feet)
6:45:00 AM	-	-	-
7:00:00 AM	-	-	-
7:15:00 AM	-	-	-
7:30:00 AM	11	0	0
7:45:00 AM	16	11*	275
8:00:00 AM	13	12*	300
8:15:00 AM	25	22*	550
8:30:00 AM	21	18*	450
8:45:00 AM	4	0	0
9:00:00 AM	5	0	0
9:15:00 AM	7	0	0

*Estimated queue derived from total queue length divided by 25ft



WB Cherry Hill Rd Queueing – PM Peak

Cherry Hill Rd Westbound approaching US 206
(Includes Queueing along NB Mt. Lucas Rd/Witherspoon St)

PM Peak	Vehicles Cleared	Additional Vehicles Queued	Estimated Queue Length (feet)
4:30:00 PM	12	1*	25
4:45:00 PM	16	7*	175
5:00:00 PM	23	17*	425
5:15:00 PM	18	7*	175
5:30:00 PM	12	0	0
5:45:00 PM	7	0	0
6:00:00 PM	-	-	-
6:15:00 PM	-	-	-

*Estimated queue derived from total queue length divided by 25ft





+67 (+ 45)

+73 (+ 33)

206

US 206

RED HILL RD

CHERRY HILL RD

MT LUCAS RD

TERHUNE RD

VALLEY RD

Legend

+Change in AM Peak Hour Volume (+ Change in PM Peak Hour Volume)