DOLAN & DEAN
CONSULTING ENGINEERS, LLC

GARY W. DEAN, PE, PP
ELIZABETH DOLAN, PE

792 CHIMNEY ROCK ROAD
MARTINSVILLE, NJ 08836
732 469 0600
732 469 0663 FACSIMILE

February 29, 2016

Montgomery Township Planning Board
2261 Route 206 North
Belle Mead, NJ 08502

Re: Princeton Audi
Block 34001, Lot 64
Cherry Valley Road
Township of Montgomery
Somerset County

Dear Board Members:

This letter has been prepared to address the traffic-related comments included in the January 27, 2016 Dewberry Engineers, Inc. letter. Additionally, information discussed at the technical review meeting on February 8, 2016 has been incorporated in this analysis as well.

As requested by Dewberry Engineers Inc., the trip generation associated with the proposed car dealership has been increased. Trip generation for a 46,000 square foot building was used in our initial Traffic Impact Assessment and has now been revised for a 66,175 square foot building. Table I below illustrates the trip generation used in this revised analysis.

Table I
Projected Trip Generation- Revised
Princeton Audi Service Center – 66,175 SF

Morning Peak Hour		Evening Peak Hour	
Enter	Exit	Enter	Exit
97	32	69	103

Our office also contacted the Montgomery Township Planning office to confirm if there are any approved projects in the area that should be considered in our revised analysis.

The following is a list of the projects and their status that was provided by the Planning office:

- Sunoco proposes a mini-mart at the Route 206/Princeton Avenue intersection. It is anticipated that this development will primarily generate pass-by traffic and will have minimal impact to the surrounding roadway network.

- Montgomery Associates had proposed a commercial and residential development near Applegate Road. Based on discussions, this project will not be moving forward.

- Honda of Princeton proposed an expansion to its facilities along Route 206. Based on discussions the expansion has been approved and completed.

- A medical building was proposed near the Princeton Airport. However, based on our discussions with the Planning Board it will not be constructed.

- A 300,000 square foot retail center (Madison Marquette) is proposed to the north along Route 206.

  Traffic associated with this development as well as the other area development included in the project's traffic report, has been added to the roadway network and is shown in attached Figure A.

- On the westerly side of Route 518, Sharbell is developing an approximately 200-unit residential development which is close to final "build out."

- A K. Hovnanian development is proposed along Orchard Road, with approximately 212 market units and 40 COAH apartments. Traffic from this development has been added to the roadway network and is included on Figure A.

Signage is requested at the site driveways which will direct traffic destined to US Route 206 southbound to make a left and use the Cherry Valley connector. Therefore, site generated traffic has been revised to account for this signage and the trip generation referenced above and is illustrated in Figure B.

The other area development in Figure A and the revised site generated traffic in Figure B has been added to the "no-build" volumes to create the revised "build" scenario in Figure C. The volumes in Figure C have been analyzed using the Highway Capacity Software and the results are shown in appended Figure D. As shown, all movements will operate at Level of Service "E" or better.

Also appended to this report is a Technical Appendix which includes traffic counts, figures and highway capacity software printouts.

At this time, we trust we have satisfied the comments in the Dewberry Engineers, Inc. review letter and we look forward to discussing these at a public hearing.

PRINCETON AUDI
BLOCK 34001, LOT 64
CHERRY VALLEY ROAD
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY

FEBRUARY 29, 2016

Please contact the undersigned with any questions regarding these findings.

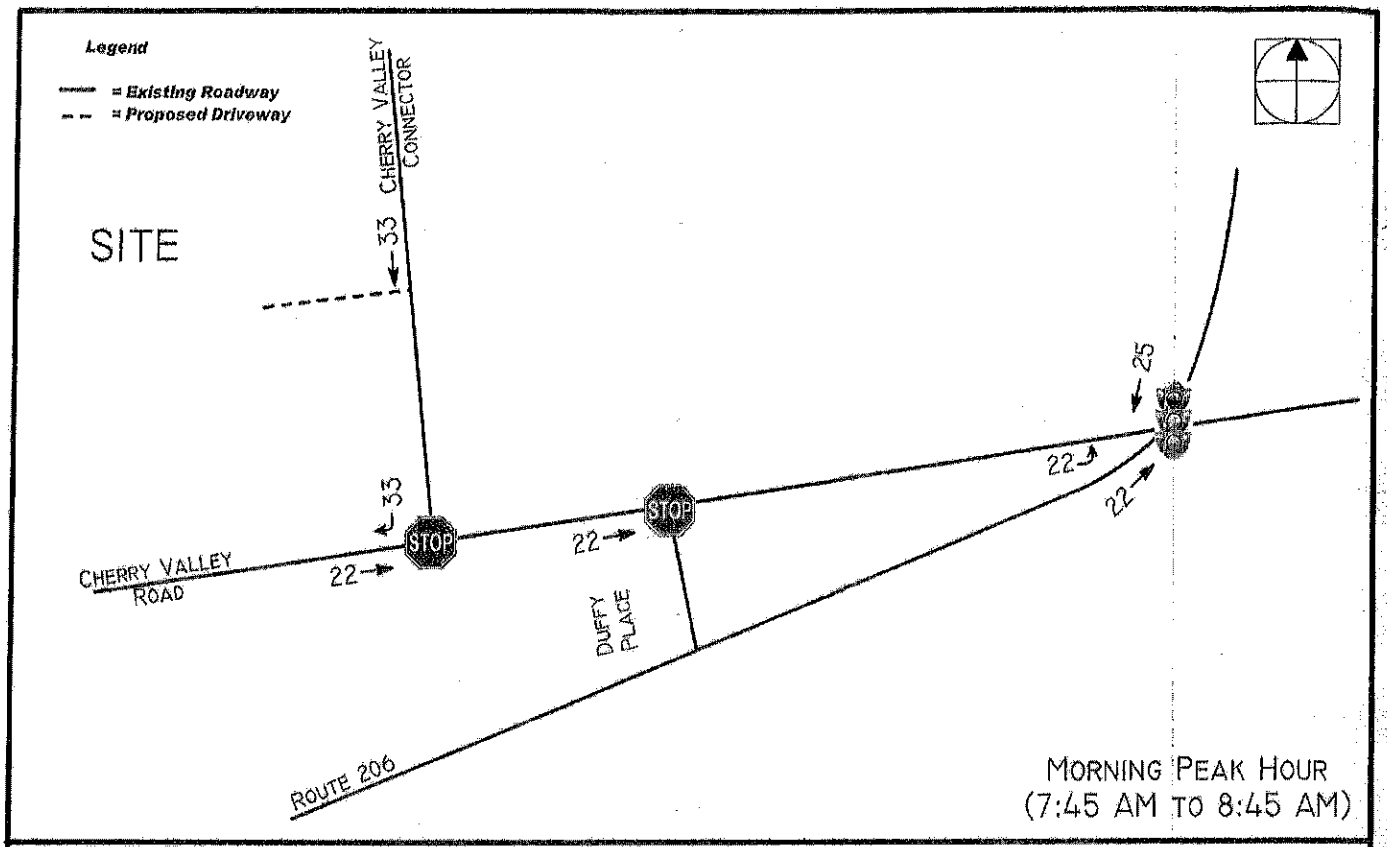
Very truly yours,

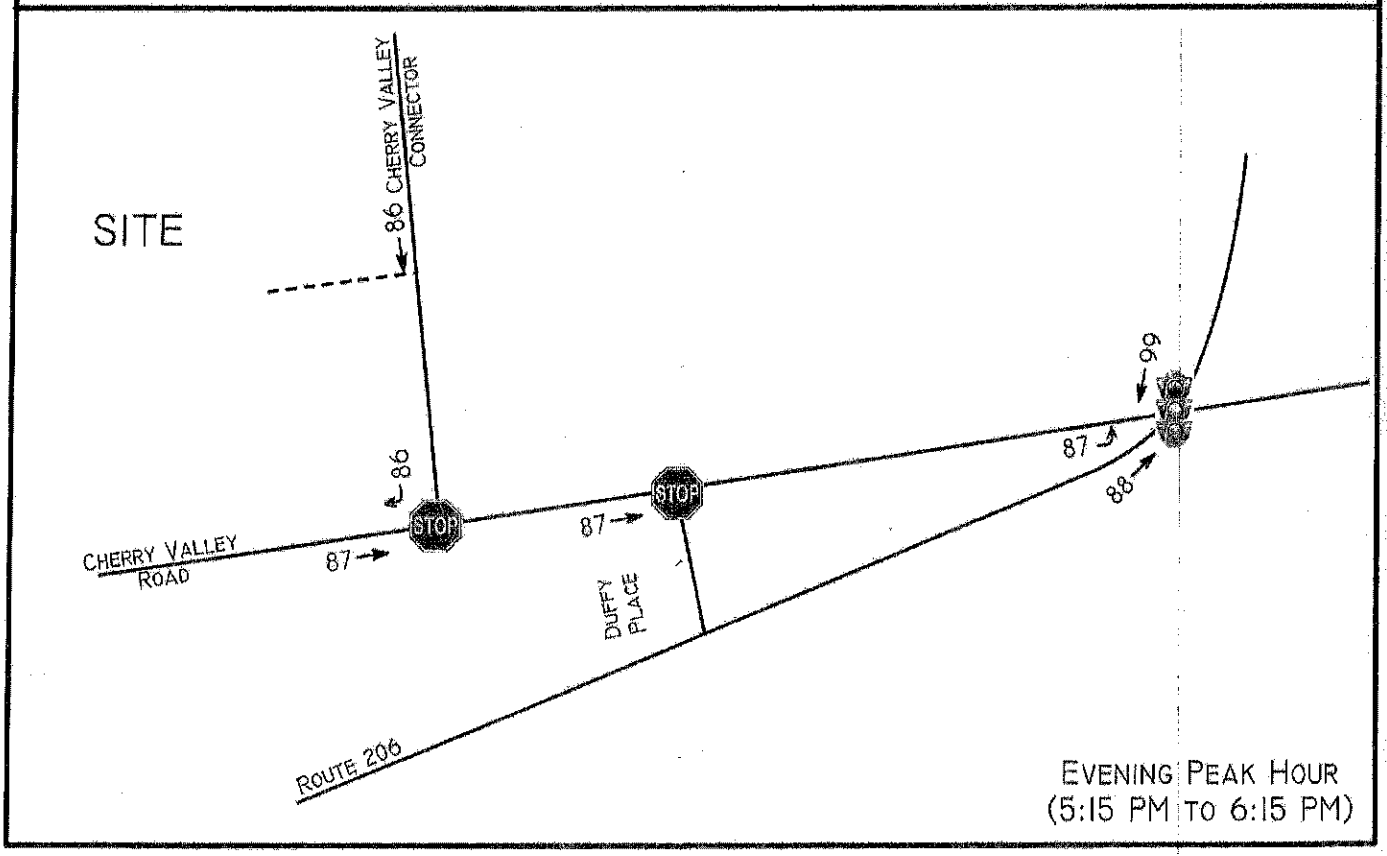
DOLAN & DEAN
CONSULTING ENGINEERS, LLC

Gary W. Dean, P.E., P.P.

DJP/lrc

cc: Robert Heibell, P.E. rheibell@vcea.org
Josh Kalafer JKalafer@princetonauto.com



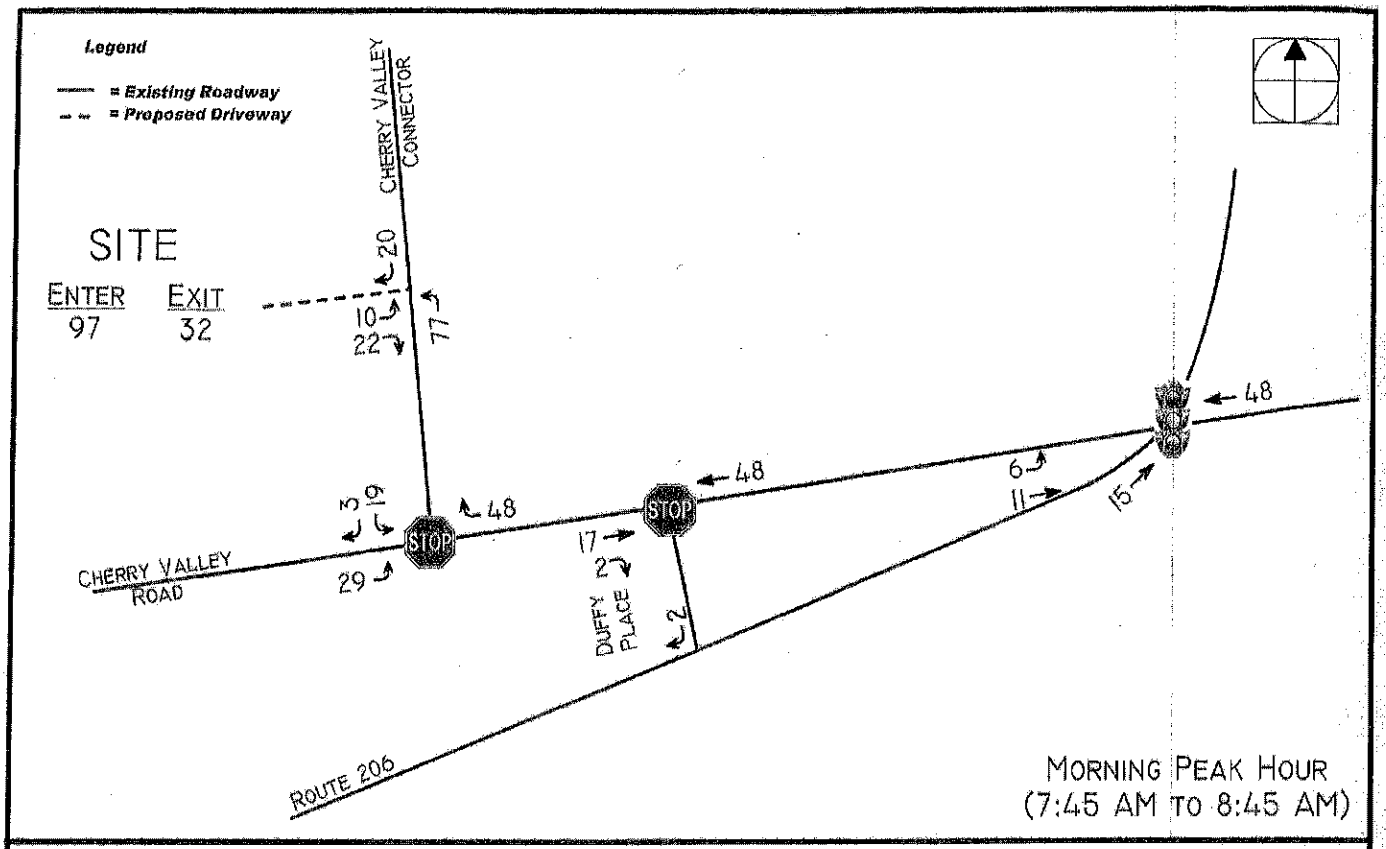


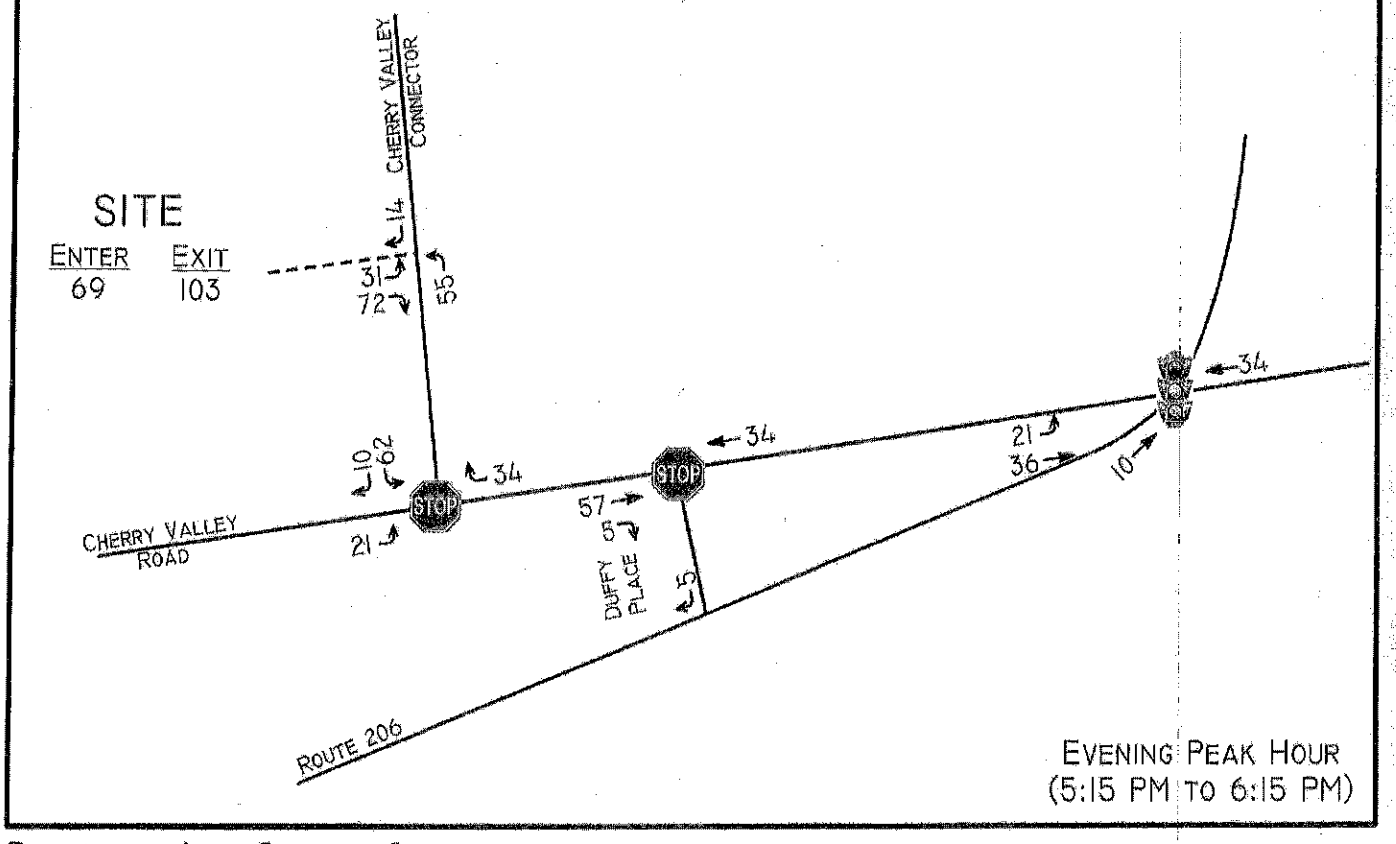
PRINCETON AUDI SERVICE CENTER
MONTGOMERY TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

FIGURE A

DOLAN & DEAN
CONSULTING ENGINEERS, LLC

OTHER AREA DEVELOPMENT TRAFFIC VOLUMES



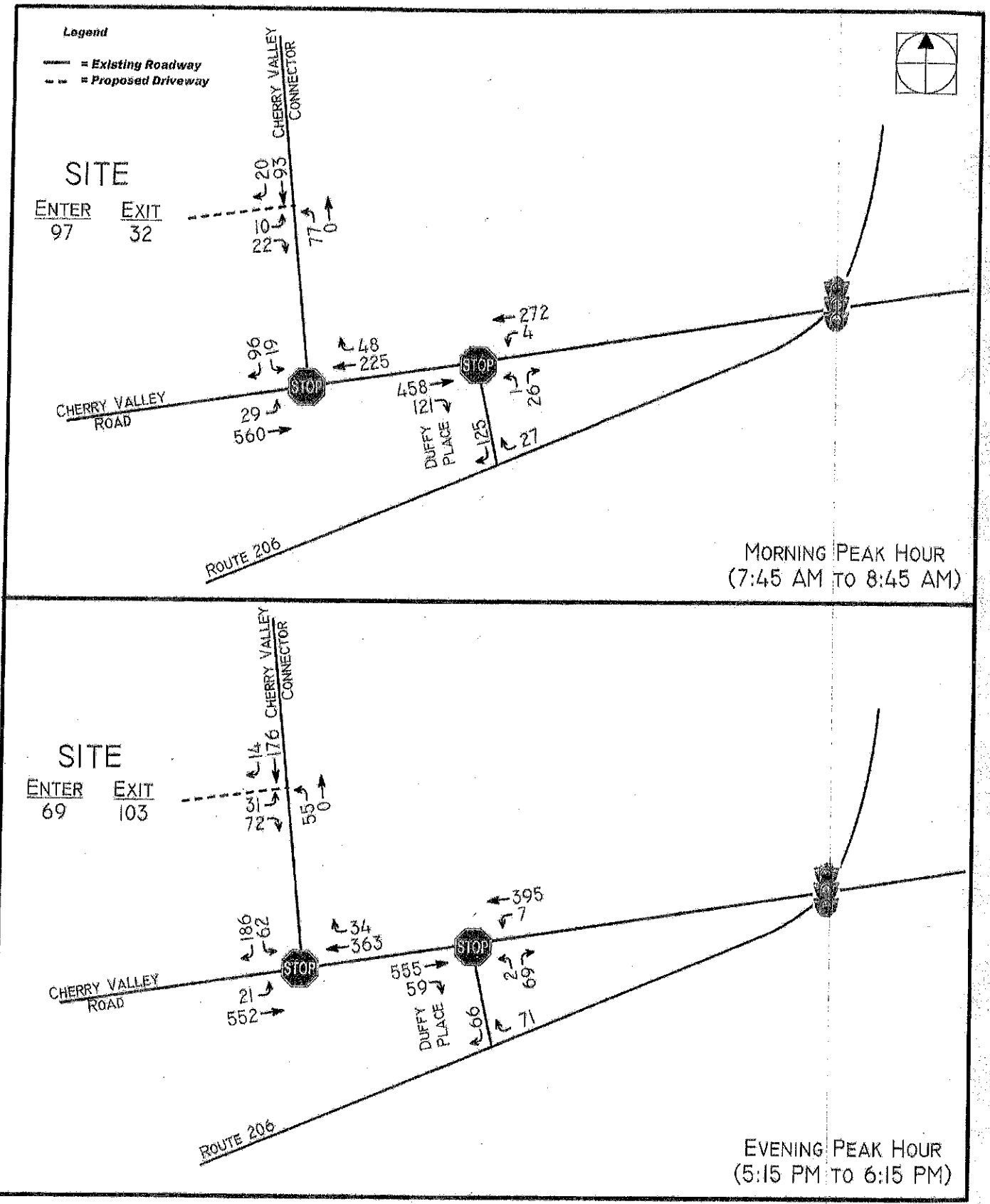


PRINCETON AUDI SERVICE CENTER
MONTGOMERY TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

FIGURE B

DOLAN & DEAN
CONSULTING ENGINEERS, LLC

SITE GENERATED TRAFFIC VOLUMES

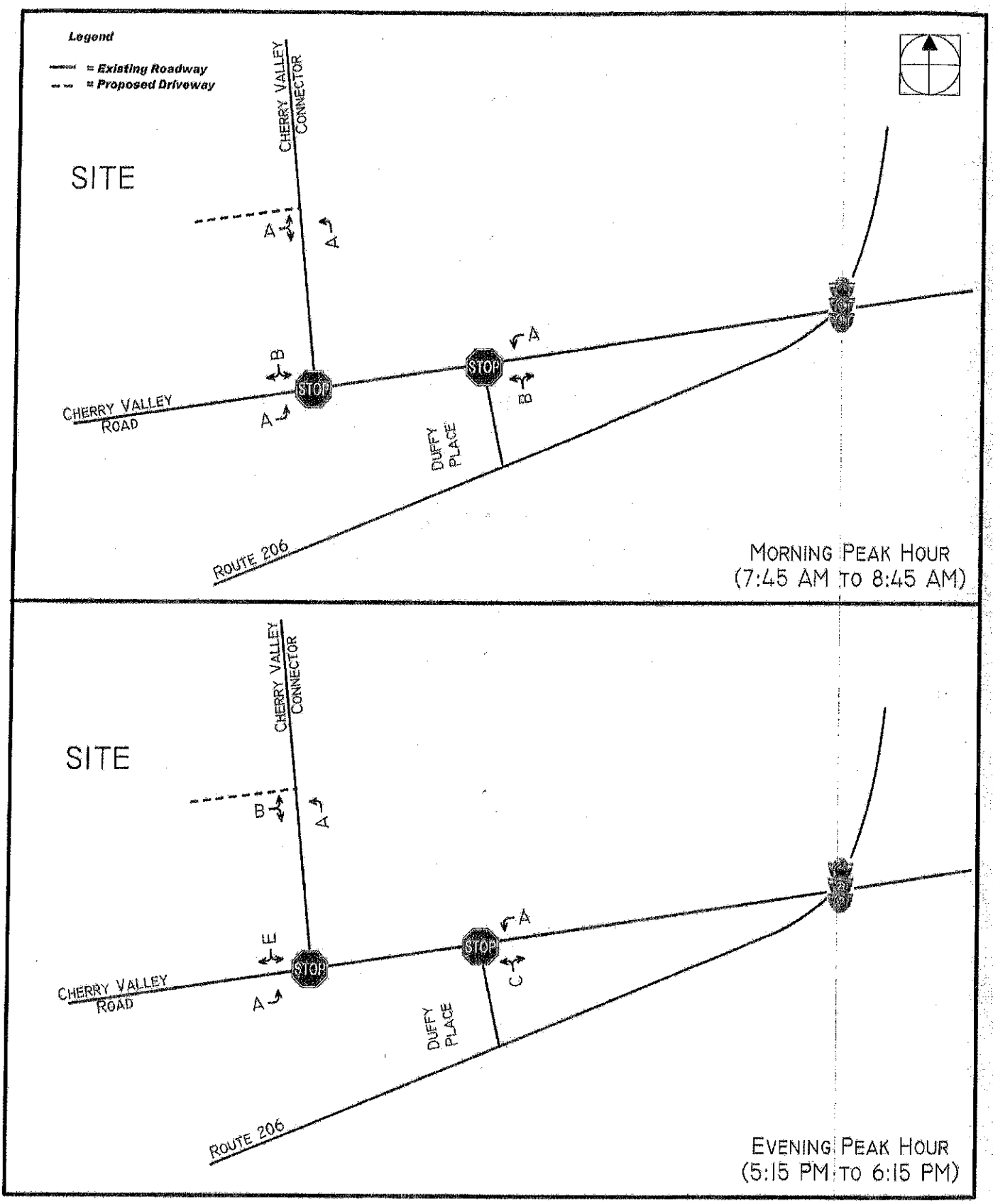


PRINCETON AUDI SERVICE CENTER
MONTGOMERY TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

FIGURE C

DOLAN & DEAN
CONSULTING ENGINEERS, LLC

2017 BUILD TRAFFIC VOLUMES



PRINCETON AUDI SERVICE CENTER
MONTGOMERY TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

FIGURE D

DOLAN & DEAN
CONSULTING ENGINEERS, LLC

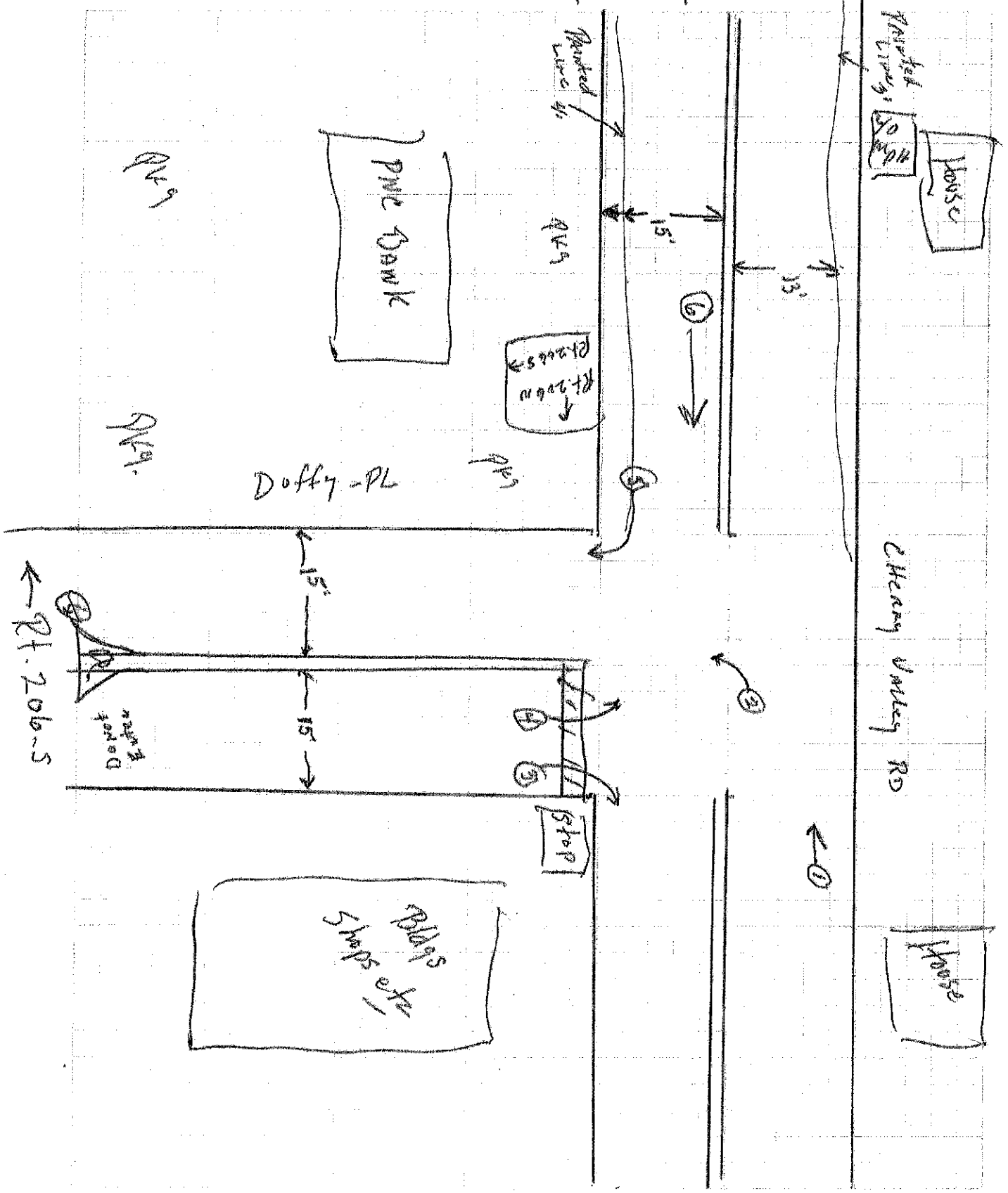
2017 BUILD LEVELS OF SERVICE

DOLAN & DEAN
CONSULTING ENGINEERS, LLC

BY J Kelly PROJECT NO.

CLIENT/PROJECT Kalodner Montgomery – Somerset

SUBJECT Cheany Valley & Duffy PL DATE 9-24-15



TRAFFIC SURVEY SHEET

INDICATE NORTH BY ARROW

DOLAN & DEAN
CONSULTING ENGINEERS
792 Chimney Rock Road
Suite B
Martinsville, NJ 08836
(732) 469-0600
(732) 469-0663 fax

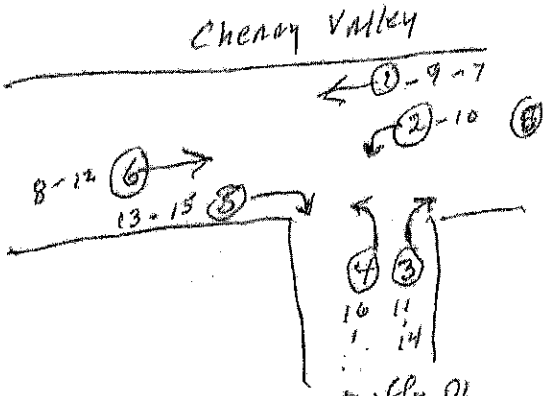
PROJECT #: CLIENT: Kalnfen

INTERSECTION: Cheney Valley & Duffy PL

MUNICIPALITY: Montgomery - Somerset

COUNT BY: JKelly DATE: 9-24-15

TIME from 7AM to 9AM S M T W T F S (CIRCLE DAY)



SKETCH SURVEY AREA (INCLUDE LANDMARKS)

START TIME	MOVEMENT NUMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
7	36		-	3	17	37	-	-				2	1				96
715	71		6	1	44	74	2	2				4	1	1			206
730	63		1		38	67	1	1				1					172
745	84	3	9		48	103	2	3	3			-	4				259
8	57	-	6		23	104	-	-	1								191
815	54	1	3		30	92	-	-	1								184
830	70	-	6	1	12	109	1	-	5					1			205
845	64	1	14		27	73		1	-		1	3	1				185
		Transit Buses						Peds									
	WB	7AM						None									
		8:15AM															
PEAK HOUR TOTAL	499	5	45	5	163	653	6	7	10	-	1	8	7	2	-	-	

TRAFFIC SURVEY SHEET

INDICATE NORTH BY ARROW

DOLAN & DEAN
CONSULTING ENGINEERS
792 Chimney Rock Road
Suite B
Martinsville, NJ 08836
(732) 469-0600
(732) 469-0663 fax

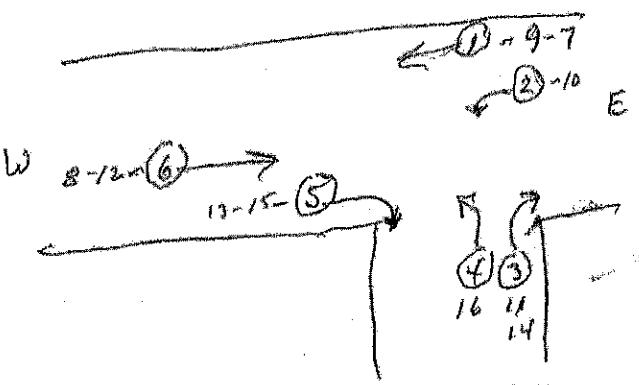
PROJECT #: CLIENT: Kalnfen

INTERSECTION: Cheney Valley & Duffy Pl

MUNICIPALITY: Montgomery - Somerset

COUNT BY: Treally DATE: 9-24-15

TIME from 4pm to 6 30 pm S M T W T F S (CIRCLE DAY)



SKETCH SURVEY AREA (INCLUDE LANDMARKS)

START TIME	MOVEMENT NUMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
4	65	-	17	-	12	86	4	1	4								189
415	65	1	13	2	14	68	1	-				1					115
430	114	2	9	1	10	58	-	-	1						1		196
445	78	1	9	-	8	53	-	-	1			1			1		153
5	95	4	10	-	19	80	-	-	2			1			1		212
615	145	2	23	-	12	124	-	-	2			1			1		310
530	80	4	12	-	15	109	-	-	3	-	-	3			1		227
545	98	1	16	2	11	91	-	-	4	-	4	1			1		226
6	106	-	15	-	11	73			4		1	1			1		212
615	105	3	9	-	18	65	-	-	7	-	1				1		209
			Transit Buses														
		WB	4:15			EB	4	16				40 MPH Cheney Valley					
			4 25				5	30									
			4 40														
			5 55														
											Peds						
										All	WB	410 - 2					
			No Bus Stop Signs									425 - 1					
												435 - 1					
												445 - 1					
			No Bus stopped									500 - 1					
												527 - 1					
												610 - 1					
PEAK HOUR TOTAL	951	18	133	5	130	807	5	1	28	-	3	8			8		

HCS 2010 Two-Way Stop Control Summary Report

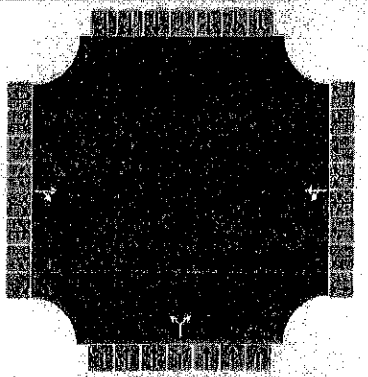
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	11/5/2015
Analysis Year	2015
Time Analyzed	pm ex
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	cherry valley
North/South Street	duffy
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	
Configuration				TR		LT					LR					
Volume (veh/h)			405	65		7	442			2		66				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

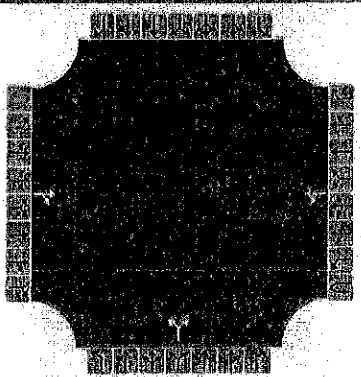
Flow Rate (veh/h)						568					89					
Capacity						991					515					
v/c Ratio						0.57					0.17					
95% Queue Length						3.0					0.6					
Control Delay (s/veh)						8.7					13.5					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)						0.2					13.5					
Approach LOS							A					B				

HCS 2010 Two-Way Stop Control Summary Report

General Information

Analyst	djp	Intersection	
Agency/Co.	cdd	Jurisdiction	
Date Performed	11/5/2015	East/West Street	cherry valley
Analysis Year	2015	North/South Street	duffy
Time Analyzed	am ex	Peak Hour Factor	0.81
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	
Configuration				TR		LT					LR					
Volume (veh/h)			411	117		4	278	5		1		25				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						348					32					
Capacity						980					530					
v/c Ratio						0.37					0.06					
95% Queue Length						0.0					0.2					
Control Delay (s/veh)						8.9					12.7					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.2				12.7							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

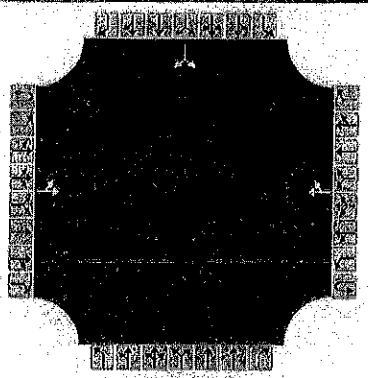
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	am build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	cherry
North/South Street	connector
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		29	560				225	48						19		96
Percent Heavy Vehicles		3												3		3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		727													142	
Capacity		1215													545	
v/c Ratio		0.60													0.26	
95% Queue Length		0.1													1.0	
Control Delay (s/veh)		8.1													13.9	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	0.8												13.9			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

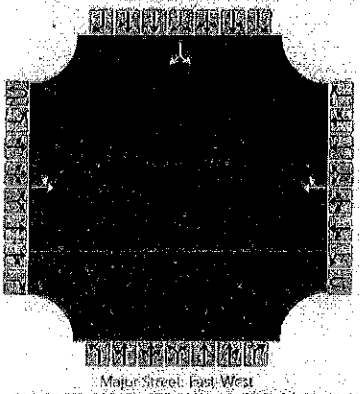
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	pm build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	cherry
North/South Street	connector
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		21	552				363	84						62		186
Percent Heavy Vehicles		3												3		3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		726													313	
Capacity		1056													884	
v/c Ratio		0.69													0.82	
95% Queue Length		0.1													7.3	
Control Delay (s/veh)		8.5													44.7	
Level of Service (LOS)		A													E	
Approach Delay (s/veh)	0.7												44.7			
Approach LOS	A												E			

HCS 2010 Two-Way Stop Control Summary Report

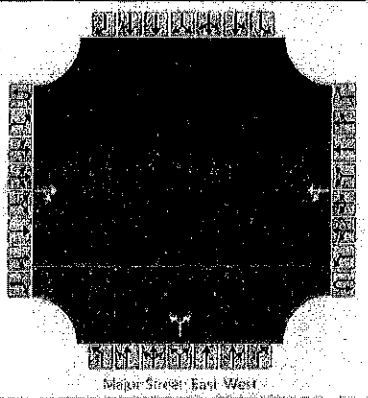
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	amb
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	cherry valley
North/South Street	duffy
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			458	121		4	272			1		26				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						341					33					
Capacity						881					468					
v/c Ratio						0.39					0.07					
95% Queue Length						0.0					0.2					
Control Delay (s/veh)						9.1					13.4					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.2				13.4							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

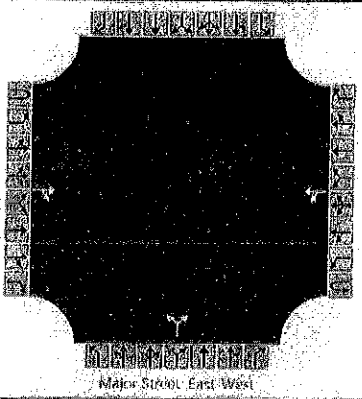
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	pm b
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	cherry valley
North/South Street	duffy
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			555	59		7	395			2		69				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						509					90					
Capacity						833					399					
v/c Ratio						0.61					0.23					
95% Queue Length						0.0					0.9					
Control Delay (s/veh)						9.4					16.6					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					0.3				16.6							
Approach LOS					A				C							

HCS 2010 Two-Way Stop Control Summary Report

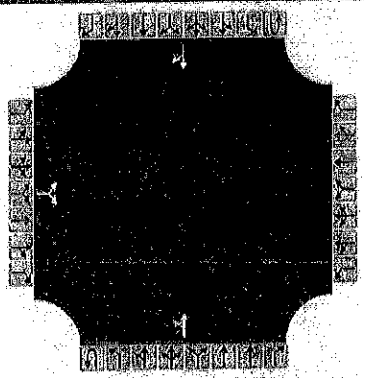
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	am b
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	dway
North/South Street	connector
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		10		22						77	0				93	20
Percent Heavy Vehicles		3		3						3						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			39							95						
Capacity			804							1435						
v/c Ratio			0.05							0.07						
95% Queue Length			0.2							0.2						
Control Delay (s/veh)			9.7							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	9.7								7.7							
Approach LOS	A								A							

HCS 2010 Two-Way Stop Control Summary Report

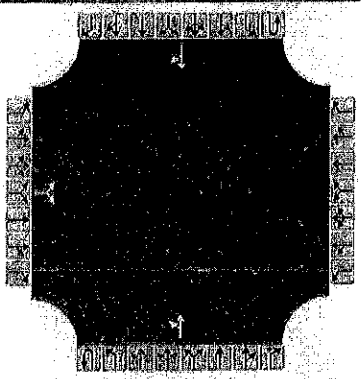
General Information

Analyst	djp
Agency/Co.	dd
Date Performed	2-11-2016
Analysis Year	2017
Time Analyzed	pm b
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	
Jurisdiction	
East/West Street	dway
North/South Street	connector
Peak Hour Factor	0.79
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		31		72						55	0				176	14
Percent Heavy Vehicles		3		3						3						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			130							70						
Capacity			727							1318						
v/c Ratio			0.18							0.05						
95% Queue Length			0.6							0.2						
Control Delay (s/veh)			11.0							7.9						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)	11.0								7.9							
Approach LOS	B								A							