



Presentation – November 15, 2016

Existing Traffic – Background (2013) (Exhibit 3-2A)

Existing Traffic – Background (2016) (Exhibit 3-2B)

Traffic Projection Annual Growth (Exhibit 3-5)

Existing Transportation Detail (Exhibit 3-1A)

Proposed Transportation Detail (Exhibit 3-1B)

Trip Generation Table (Exhibit 4-3)

Distribution of Traffic (Exhibit 4-4)

ADT impact (24-hour weekday)

New Trips (Exhibit 4-5A)

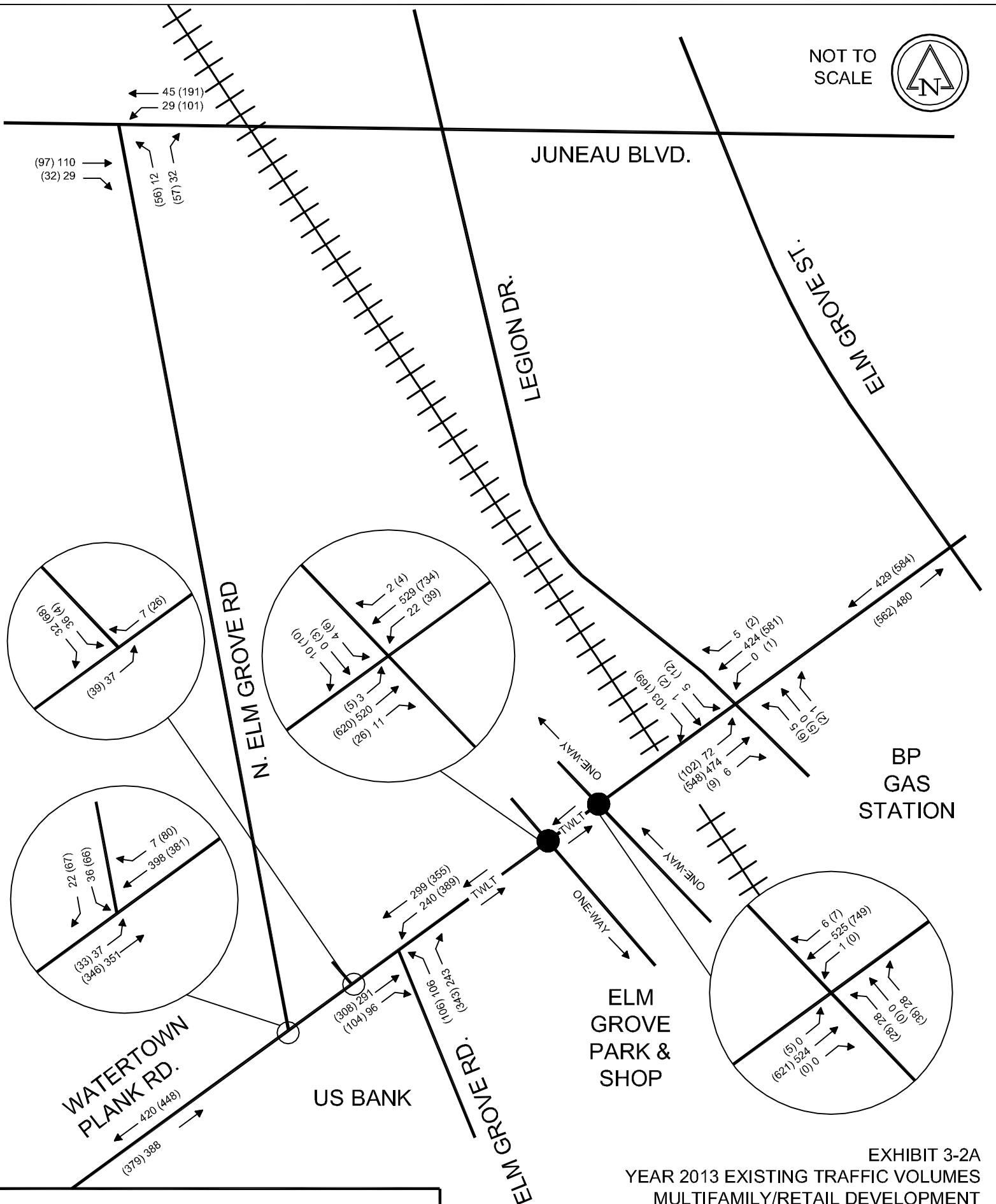
2016 Total Traffic (Background + Development) (Exhibit 4-11)

Signal Options

Analysis of Total Traffic Watertown Plank Road and Elm Grove Road

- Alternative A1 – current 2 phase
- Alternative A2
- Alternative B1
- Alternative B2

NOT TO
SCALE



BP
GAS
STATION

ELM
GROVE
PARK &
SHOP

US BANK

WATERTOWN
PLANK RD.

N. ELM GROVE RD

LEGION DR.

JUNEAU BLVD.

ELM GROVE ST.

ELM GROVE RD.



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JN# 15E29

Nov 15, 2016, 4:47pm

EXHIBIT 3-2A
YEAR 2013 EXISTING TRAFFIC VOLUMES
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016

NOT TO
SCALE

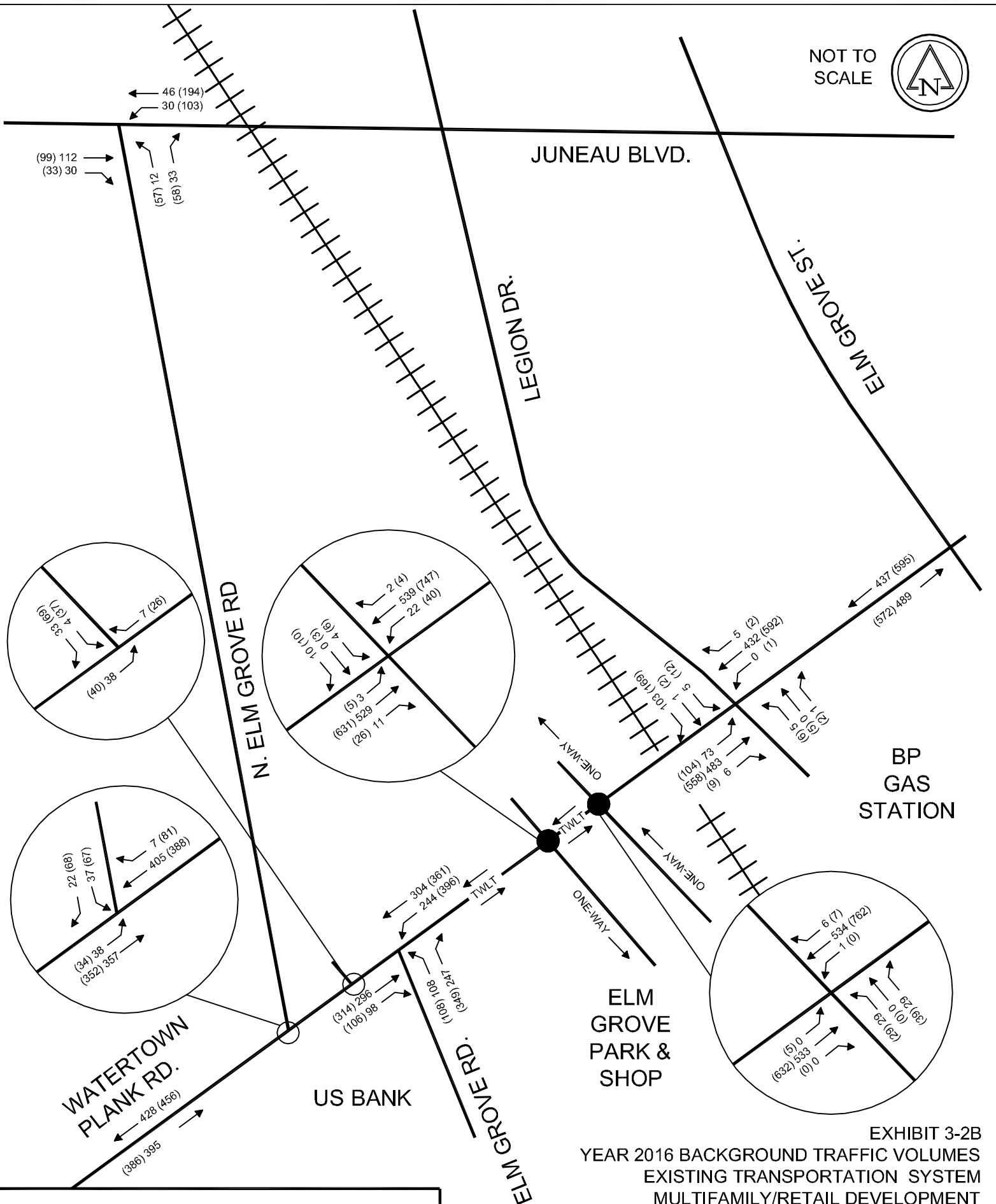


EXHIBIT 3-2B
YEAR 2016 BACKGROUND TRAFFIC VOLUMES
EXISTING TRANSPORTATION SYSTEM
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016



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SCALE

Watertown Plank Road Traffic Volumes
WisDOT Projections

West of
Crescent Dr

Year	AADT	
2011	9060	
2013	9171	1.0122
2024	9667	
2033	10160	
Annual Change	0.0061	

Formula: $((0.0061) * \#Years) + 1$

The reconstruction of Watertown Plank Road in 2011 was the source of the traffic forecasting data above.

	2013	1				
	2016	1.018	9339			
	2026	1.061	9730			



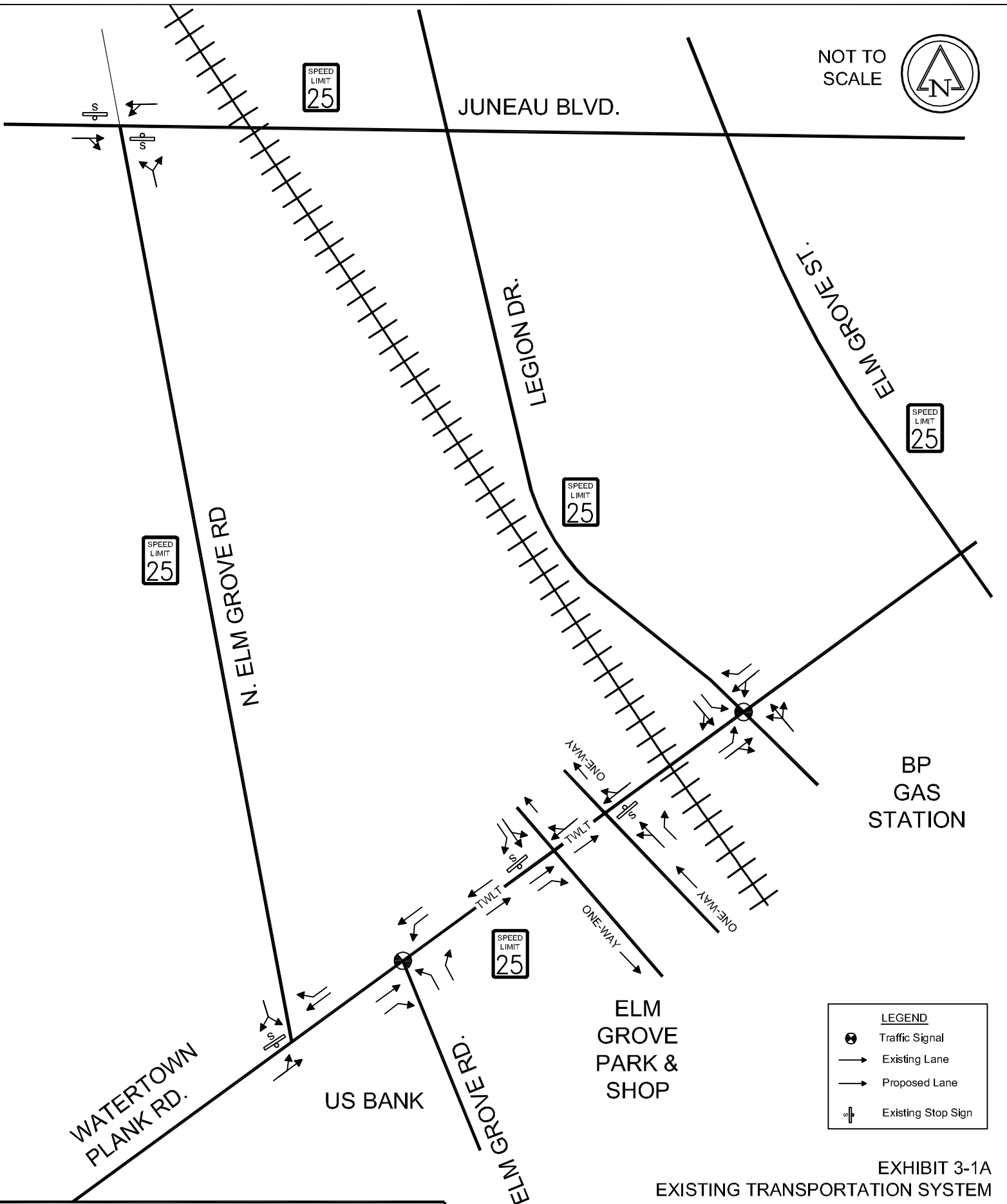
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JN# 15E29

Nov 15, 2016, 4:54pm

EXHIBIT 3-5
TRAFFIC PROJECTION ANNUAL GROWTH
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016

NOT TO
SCALE



BP
GAS
STATION

ELM
GROVE
PARK &
SHOP

US BANK

LEGEND

-  Traffic Signal
-  Existing Lane
-  Proposed Lane
-  Existing Stop Sign

EXHIBIT 3-1A
EXISTING TRANSPORTATION SYSTEM
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016



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JN# 15E29

Nov 15, 2016, 4:45pm

NOT TO
SCALE



JUNEAU BLVD.

SPEED
LIMIT
25

SPEED
LIMIT
25

SPEED
LIMIT
25

SPEED
LIMIT
25

LEGION DR.

ELM GROVE ST.

N. ELM GROVE RD

13%
13%

BP
GAS
STATION

ELM
GROVE
PARK &
SHOP

US BANK

WATERTOWN
PLANK RD.

ELM GROVE RD.

LEGEND

-  Traffic Signal
-  Existing Lane
-  Proposed Lane
-  Existing Stop Sign

EXHIBIT 3-1B
YEAR 2018 PLANNED
TRANSPORTATION SYSTEM
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016



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JN# 15E29

Nov 15, 2016, 4:57pm

Reinders Property-Wangard Development Trip Generation

11/8/2016

Land Use	Size	ITE Code	Daily Rate / Trips	AM Peak Hour (Rate) Trips			Pm Peak Hour (Rate) Trips		
				In	Out	Total	In	Out	Total
Residential Mid-Rise Apartment Units)	170	223	3.90	31%	69%	0.3	58%	42%	0.39
			663	16	35	51	38	28	66
Residential Rental Townhouses (Units)	6	224	5.81	35%	67%	0.7	51%	49%	0.72
			35	1	3	4	2	2	4
Quality Restaurant	5	931	89.95	50%	50%	0.81	67%	33%	7.49
			450	2	2	4	25	12	37
Specialty Retail Center / 1,000 SF	5	826	44.32	60%	40%	0.81	44%	56%	2.71
			222	2	2	4	6	8	14
Total Generated Trips			1,369	22	42	63	72	50	122
Linked Trips (15% for Specialty Retail)			33	0	1	1	1	1	2
Total Driveway Trips			1,336	22	41	62	71	49	120
Pass-by Trips (40% for Specialty Retail)			89	1	1	2	2	3	5
Total Development New Trips			1,247	21	40	60	69	46	115
Office Remove / 1,000 SF	-24	710	11.03	88%	12%	1.56	17%	83%	1.49
			-265	-33	-4	-37	-6	-30	-36
Total New Area Trips			983	-12	35	23	63	16	79



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Nov 15, 2016, 4:50pm

EXHIBIT 4-3
TRIP GENERATION TABLE - PHASE 1
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016

ADT 4%

ADT 8%

JUNEAU BLVD.

NOT TO
SCALE



ELM GROVE ST.

ADT 7 %

ADT 28%

BP
GAS
STATION

ADT 6%

US BANK

ADT 27%

ADT 26%

EXHIBIT 4-4

TRIP DISTRIBUTION
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016



TRAFFIC
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JN# 15E29

Nov 15, 2016, 4:56pm

ADT 4%
39

ADT 8%
79

JUNEAU BLVD.

NOT TO
SCALE



N. ELM GROVE RD

LEGION DR.

ELM GROVE ST.

ADT 7 %
69

ADT 28%
275

BP
GAS
STATION

ADT 6%
59

WATERTOWN
PLANK RD.

ADT 27%
265

US BANK

ADT 26%
255

ELM GROVE RD

EXHIBIT 4-5A
YEAR 2016 ON-SITE DEVELOPMENT TRAFFIC
ADT PERIMETER NEW TRIPS
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016



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JN# 15E29

Nov 15, 2016, 4:51pm

LEGEND

PEAK HOURS	PHF
7:30-8:30 AM	0.89
(4:45-5:45) PM	0.94



EXHIBIT 4-11
YEAR 2016 BUILD DEVELOPMENT
TRAFFIC VOLUMES
MULTIFAMILY/RETAIL DEVELOPMENT
REINDERS / WANGARD
ELM GROVE, WI
SUBMITTAL DATE: 11-2016

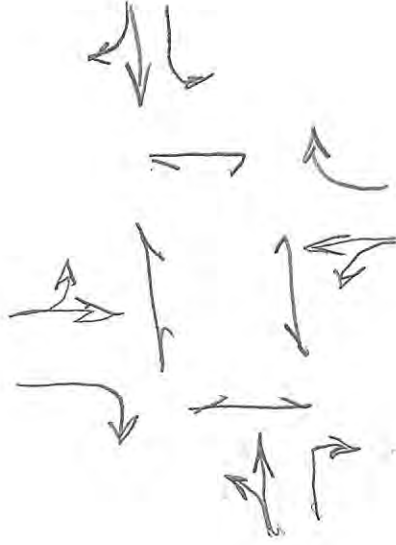
TRAFFIC MOVEMENTS AND TRAFFIC SIGNAL OPERATION WATERTOWN PLANK RD & ELM GROVE RD



EXISTING

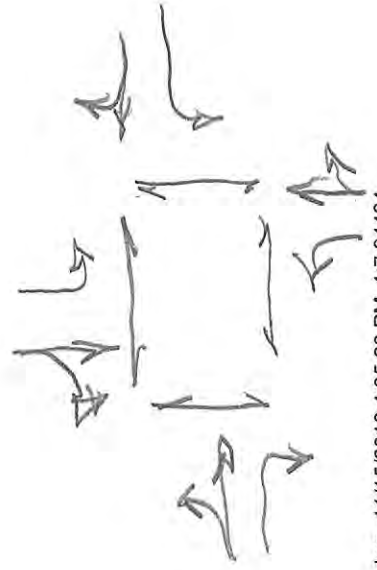


ALTERNATIVE 1



- A. CURRENT 2 PHASE
- B. 3 PHASE NB LEFT

ALTERNATIVE 2



- A. CURRENT 2 PHASE
- B. 3 PHASE WITH WB LEFT

Watertown Plank Road and Elm Grove Road

SBR SBLT

EXISTING TRANSPORTATION SYSTEM

AM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	-	A	-	-	-	-	A	A	A	A	-
95th Queue	85	-	52	-	-	-		112	17	44	51	-
PM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	-	A	-	-	-	-	A	A	B	A	-
95th Queue	83	-	59	-	-	-	-	126	19	110	80	-

STORAGE

Current			110'	-	-	-			80'	100'		-
Proposed			110'		100'				80'	100'*		-

* Peak spills into TWLTL

ALTERNATE 1A TRANSPORTATION SYSTEM

AM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	C	A	C	C	A	A	B	A	B	A	A
95th Queue	-	90	51	-	53	20	-	135	17	135	124	-
PM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	F	C	A	E	C	A	A	B	A	B	A	A
95th Queue	-	86	59	-	74	31	-	132	14	110	77	-

STORAGE

Current			110'	-	-	-			80'	100'		-
Proposed			110'		100'				80'	100'*		-

* Peak spills into TWLTL

ALTERNATE 1B TRANSPORTATION SYSTEM

AM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	-	C	A	C	C	A	A	B	A	B	A	A
95th Queue	-	83	43	-	59	9	-	173	21	76	84	-
PM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	-	B	A	C	C	A	A	B	A	D	B	A
95th Queue	-	81	56	-	84	34	-	167	14	392	181	-

STORAGE

Current			110'	-	-	-			80'	100'		-
Proposed			110'		100'				80'	100'*		-

* Peak spills into TWLTL

ALTERNATE 2A TRANSPORTATION SYSTEM

AM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	A	C	C	B	-	A	B	A	B	A	A
95th Queue	85	52	-	33	39	-	-	137	16	141	126	-
PM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	A	D	D	B	C	A	B	A	B	A	A
95th Queue	48	103	-	56	58	-	-	134	14	309	72	-

STORAGE

Current			110'	-	-	-			80'	100'		-
Proposed			110'		100'				80'	100'*		-

* Peak spills into TWLTL

ALTERNATE 2B TRANSPORTATION SYSTEM

AM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	A	C	C	B	-	B	B	A	A	A	A
95th Queue	96	57	-	38	43	-	-	173	21	59	76	-
PM	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
LOS	C	B	F	E	B	C	B	B	B	B	A	A
95th Queue	55	113	-	38	43	-	-	194	6	181	152	-

STORAGE

Current			110'	-	-	-			80'	100'		-
Proposed			110'		100'				80'	100'*		-

* Peak spills into TWLTL