McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS D.P.C.

MARK J. EDSALL, P.E., P.P. (NY, NJ & PA)
MICHAEL W. WEEKS, P.E. (NY, NJ & PA)
MICHAEL J. LAMOREAUX, P.E. (NY, NJ, PA, VT & VA)
MATTHEW J. SICKLER, P.E. (NY & PA)
PATRICK J. HINES

Main Office
33 Airport Center Drive
Suite 202
New Windsor, New York 12553

(845) 567-3100
fax: (845) 567-3232
e-mail: mheny@mhepc.com

Principal Emeritus:
RICHARD D. McGOEY, P.E. (NY & PA)
WILLIAM J. HAUSER, P.E. (NY, NJ & PA)

TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS

PROJECT NAME:	**DUNKIN DONUTS**
PROJECT NO.:	**14-02**
PROJECT LOCATION:	**SECTION 14, BLOCK. 1, LOT 43**
REVIEW DATE:	**13 MARCH 2015**
MEETING DATE:	**19 MARCH 2015**
REPRESENTATIVE:	**JOSEPH MINUTA**

1. The Applicants are proposing the demolition and reconstruction on the same building footprint as an existing structure on the site. The change of use from retail to convenient store with or without gasoline filing station requires that the project obtain variances for existing non-conforming bulk regulations. The following variances are required, front yard required 60 feet state highway provided NYS Route 32- 21.5 feet, NYS Route 300 - 4.9 feet. Note that Section 185-18 allows for modification of front yards where existing structures on adjoining lots are less than the 60 foot requirement, however, this lot is significantly less than the average of any adjoining lots combined.

2. Information pertaining to the existing subsurface sanitary sewer disposal system should be provided for review. Hydraulic loading from proposed convenient store should be identified in the analysis of the existing septic system.

3. NYSDOT approval for the project is required. Ken Wersted's comments regarding the extension of the stone wall into the project site should be received.

4. Revised Town of Newburgh Water System Notes should be added to the plans. (2015 version provided).

5. Building is proposed to be sprinklered. Sprinkler and potable water supply should be laid out in compliance with Town of Newburgh regulations whereby valves for sprinkler system are on the water main side of the valve for the potable water such that potable water is terminated when sprinkler supply is terminated.

6. Impervious surfaces on the site remain the same such that no significant impact for runoff will result from the redeveloped project.

7. The Planning Board should review the lighting fixtures proposed. A 20.5 foot light fixture is proposed in more pedestrian scale lighting may be called for on the small site. Design guidelines identify 16 foot maximum height lighting for such a site. The change may require an additional light fixture on the site. Currently one 20.5 foot light fixture is proposed.

8. Parking in front yard is identified on the plan based on existing lot geometry and building location. A dry laid stone wall is identified on the plan as a mitigation measure. Planning Board should confirm acceptability of the stone wall screening mitigation.

9. It is noted that the new parking area will be milled and overlaid with a new pavement where existing asphalt is located on the site. A small portion of new asphalt section will be placed for the northerly most parking expansion. Entire parking lot will then be restriped with new compliant striping.

10. County Planning referral is required.

Respectfully submitted,

McGoey, Hauser & Edsall
Consulting Engineers, D.P.C.

Patrick J. Hines
Principal

Appendix A:
Traffic Count Volume Data

The Chazen Companies

547 River Street
Troy, New York, 12180
www.chazencompanies.com

Project No: 31405.01
Counted By: S. Radloff
Intersection: Route 300 and Route 32
Time: 7:00 - 9:00 AM

File Name : TMC_Route 300&32_AM Peak Hour
Site Code : 31405.01
Start Date : 2/5/2015
Page No : 1

Groups Printed- Pass Vehicles - Heavy Vehicles - School Bus

	Route 32 Southbound					North Plank Road (Route 32) Westbound					Route 300 Northbound					Route 300 Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	38	46	0	0	84	23	8	7	0	38	9	7	11	0	27	4	56	20	0	80	229
07:15 AM	39	50	3	0	92	18	17	13	0	48	3	13	4	0	20	3	51	27	0	81	241
07:30 AM	42	76	3	0	121	30	22	7	0	59	11	13	14	0	38	4	63	12	0	79	297
07:45 AM	32	64	6	0	102	29	30	14	0	73	9	12	8	0	29	7	58	27	0	92	296
Total	151	236	12	0	399	100	77	41	0	218	32	45	37	0	114	18	228	86	0	332	1063
08:00 AM	38	54	3	0	95	31	30	8	0	69	7	25	13	0	45	5	67	27	0	99	308
08:15 AM	44	60	9	0	113	20	22	5	0	47	8	21	24	0	53	6	58	21	0	85	298
08:30 AM	31	48	4	0	83	23	31	15	0	69	13	23	20	0	56	4	62	14	0	80	288
08:45 AM	24	36	3	0	63	33	22	12	0	67	10	23	20	0	53	4	50	19	0	73	256
Total	137	198	19	0	354	107	105	40	0	252	38	92	77	0	207	19	237	81	0	337	1150
Grand Total	288	434	31	0	753	207	182	81	0	470	70	137	114	0	321	37	465	167	0	669	2213
Apprch %	38.2	57.6	4.1	0		44	38.7	17.2	0		21.8	42.7	35.5	0		5.5	69.5	25	0		
Total %	13	19.6	1.4	0	34	9.4	8.2	3.7	0	21.2	3.2	6.2	5.2	0	14.5	1.7	21	7.5	0	30.2	
Pass Vehicles																					
% Pass Vehicles	99.3	98.8	93.5	0	98.8	95.2	93.4	97.5	0	94.9	80	89.8	92.1	0	88.5	94.6	98.1	96.4	0	97.5	96.1
Heavy Vehicles																					
% Heavy Vehicles	0.7	0.2	3.2	0	0.5	3.4	5.5	1.2	0	3.8	2.9	7.3	5.3	0	5.6	2.7	1.3	1.8	0	1.5	2.3
School Bus	0	4	1	0	5	3	2	1	0	6	12	4	3	0	19	1	3	3	0	7	37
% School Bus	0	0.9	3.2	0	0.7	1.4	1.1	1.2	0	1.3	17.1	2.9	2.6	0	5.9	2.7	0.6	1.8	0	1	1.7

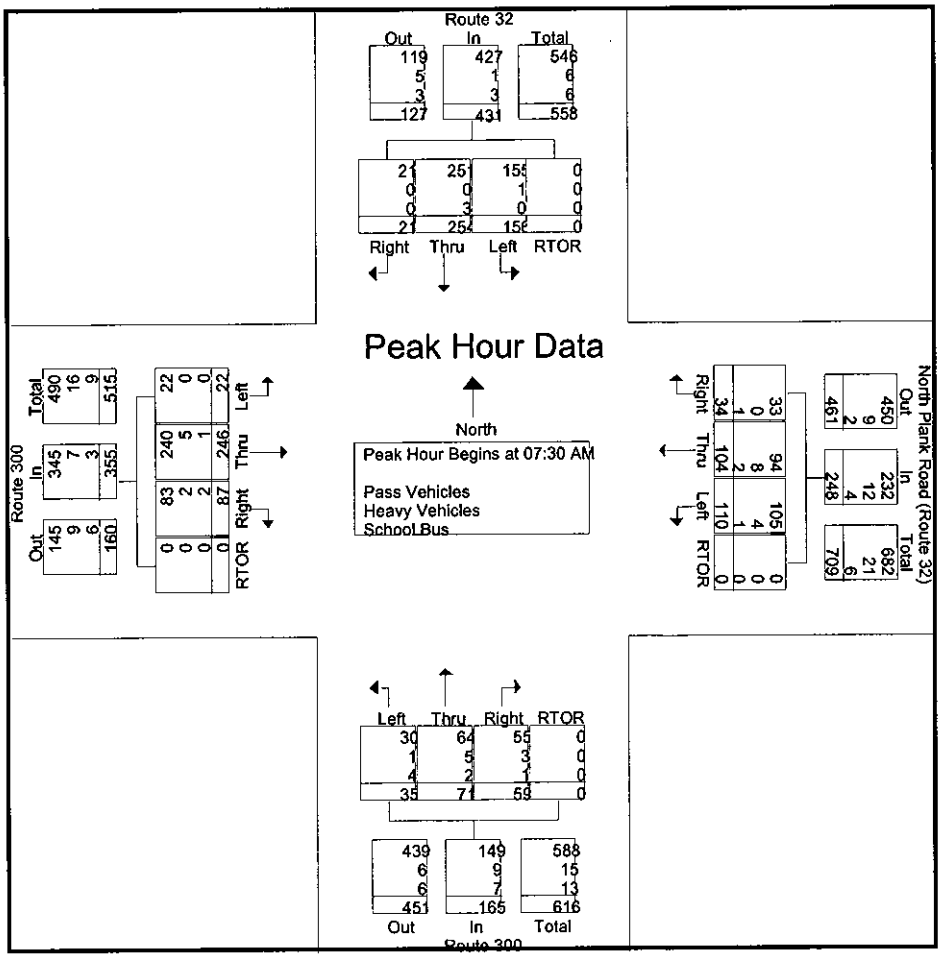
The Chazen Companies

547 River Street
Troy, New York, 12180
www.chazencompanies.com

Project No: 31405.01
Counted By: S. Radloff
Intersection: Route 300 and Route 32
Time: 7:00 - 9:00 AM

File Name : TMC_Route 300&32_AM Peak Hour
Site Code : 31405.01
Start Date : 2/5/2015
Page No : 2

	Route 32 Southbound					North Plank Road (Route 32) Westbound					Route 300 Northbound					Route 300 Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	42	**76**	3	0	**121**	30	22	7	0	59	**11**	13	14	0	38	4	63	12	0	79	297
07:45 AM	32	64	6	0	102	29	**30**	**14**	0	**73**	9	12	8	0	29	**7**	58	**27**	0	92	296
08:00 AM	38	54	3	0	95	**31**	30	8	0	69	7	**25**	13	0	45	5	**67**	27	0	**99**	**308**
08:15 AM	**44**	60	**9**	0	113	20	22	5	0	47	8	21	**24**	0	**53**	6	58	21	0	85	298
Total Volume	156	254	21	0	431	110	104	34	0	248	35	71	59	0	165	22	246	87	0	355	1199
% App. Total	36.2	58.9	4.9	0		44.4	41.9	13.7	0		21.2	43	35.8	0		6.2	69.3	24.5	0		
PHF	.886	.836	.583	.000	.890	.887	.867	.607	.000	.849	.795	.710	.615	.000	.778	.786	.918	.806	.000	.896	.973
Pass Vehicles																					
% Pass Vehicles	99.4	98.8	100	0	99.1	95.5	90.4	97.1	0	93.5	85.7	90.1	93.2	0	90.3	100	97.6	95.4	0	97.2	96.2
Heavy Vehicles																					
% Heavy Vehicles	0.6	0	0	0	0.2	3.6	7.7	0	0	4.8	2.9	7.0	5.1	0	5.5	0	2.0	2.3	0	2.0	2.4
School Bus	0	3	0	0	3	1	2	1	0	4	4	2	1	0	7	0	1	2	0	3	17
% School Bus	0	1.2	0	0	0.7	0.9	1.9	2.9	0	1.6	11.4	2.8	1.7	0	4.2	0	0.4	2.3	0	0.8	1.4



Appendix B:
Level of Service Analysis Results

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	246	87	110	104	34	35	71	59	156	254	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.926			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1725	0	1770	1833	0
Flt Permitted	0.680			0.251			0.308			0.543		
Satd. Flow (perm)	1267	1783	0	468	1863	1583	574	1725	0	1011	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		42			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.58
Adj. Flow (vph)	28	267	107	124	120	56	44	100	97	175	302	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	374	0	124	120	56	44	197	0	175	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	5			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.05	0.78		0.35	0.24	0.07	0.11	0.41		0.35	0.70	
Control Delay	18.4	49.6		28.9	34.7	1.7	20.5	29.9		23.9	46.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.4	49.6		28.9	34.7	1.7	20.5	29.9		23.9	46.0	
LOS	B	D		C	C	A	C	C		C	D	
Approach Delay		47.4			26.1			28.2			38.5	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	11	244		53	69	0	18	93		77	221	
Queue Length 95th (ft)	25	#384		90	116	0	35	117		123	298	
Internal Link Dist (ft)		283			198			103			112	
Turn Bay Length (ft)	100			250		250	225			225		
Base Capacity (vph)	566	481		356	490	755	383	484		498	486	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.78		0.35	0.24	0.07	0.11	0.41		0.35	0.70	

Intersection Summary

Area Type: Other

Cycle Length: 114

Actuated Cycle Length: 114

Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 36.7 Intersection LOS: D

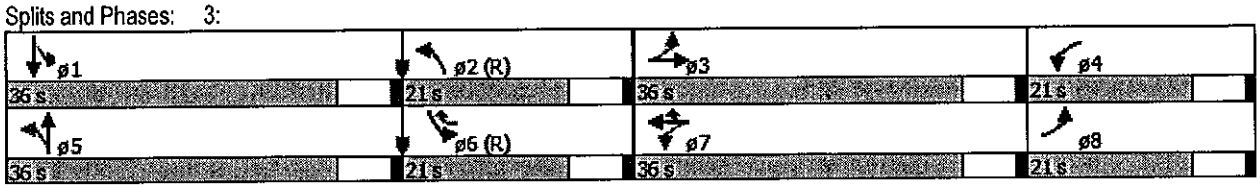
Intersection Capacity Utilization 62.3% ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3:



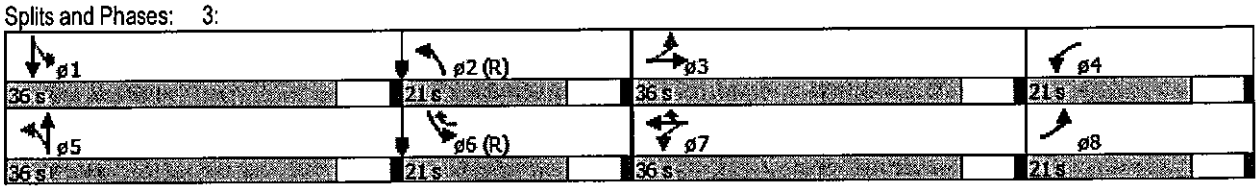
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	256	90	114	108	35	38	74	61	162	264	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.926			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1725	0	1770	1831	0
Flt Permitted	0.673			0.228			0.283			0.530		
Satd. Flow (perm)	1254	1783	0	425	1863	1583	527	1725	0	987	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		41			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.68
Adj. Flow (vph)	37	278	111	128	124	57	48	104	100	182	314	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	389	0	128	124	57	48	204	0	182	354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	5			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.07	0.81		0.37	0.25	0.08	0.13	0.42		0.37	0.73	
Control Delay	18.6	52.0		30.7	34.9	1.7	21.1	30.7		24.4	47.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.6	52.0		30.7	34.9	1.7	21.1	30.7		24.4	47.8	
LOS	B	D		C	C	A	C	C		C	D	
Approach Delay		49.1			27.1			28.8			39.9	
Approach LOS		D			C			C			D	
Stops (vph)	16	298		77	84	2	22	89		102	255	
Fuel Used(gal)	0	6		1	1	0	0	2		2	5	
CO Emissions (g/hr)	20	440		97	102	7	24	107		113	324	
NOx Emissions (g/hr)	4	86		19	20	1	5	21		22	63	
VOC Emissions (g/hr)	5	102		22	24	2	5	25		26	75	
Dilemma Vehicles (#)	0	0		0	0	0	0	0		0	0	

Intersection Summary

Area Type: Other
Cycle Length: 114
Actuated Cycle Length: 114
Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 38.0 Intersection LOS: D
Intersection Capacity Utilization 63.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3:



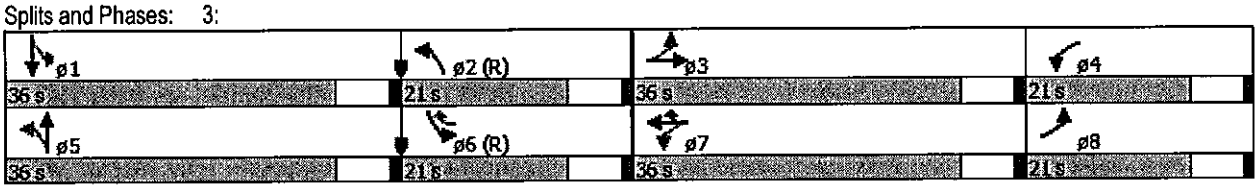
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	256	90	114	108	45	38	83	61	193	315	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.931			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1734	0	1770	1831	0
Flt Permitted	0.673			0.228			0.177			0.508		
Satd. Flow (perm)	1254	1783	0	425	1863	1583	330	1734	0	946	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		37			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.58
Adj. Flow (vph)	49	278	111	128	124	74	48	117	100	217	375	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	389	0	128	124	74	48	217	0	217	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	5			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.09	0.81		0.37	0.25	0.10	0.15	0.45		0.45	0.87	
Control Delay	18.9	52.0		30.7	34.9	3.3	23.6	32.3		26.9	59.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.9	52.0		30.7	34.9	3.3	23.6	32.3		26.9	59.3	
LOS	B	D		C	C	A	C	C		C	E	
Approach Delay		48.3			26.1			30.7			48.3	
Approach LOS		D			C			C			D	
Stops (vph)	23	298		77	84	4	22	98		126	302	
Fuel Used(gal)	0	6		1	1	0	0	2		2	6	
CO Emissions (g/hr)	27	440		97	102	10	25	118		143	441	
NOx Emissions (g/hr)	5	86		19	20	2	5	23		28	86	
VOC Emissions (g/hr)	6	102		22	24	2	6	27		33	102	
Dilemma Vehicles (#)	0	0		0	0	0	0	0		0	0	

Intersection Summary

Area Type: Other
Cycle Length: 114
Actuated Cycle Length: 114
Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 41.2 Intersection LOS: D
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3:



Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	86	29	138	449	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	93	32	150	488	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	738	281	562	0	-	0
Stage 1	525	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.14	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.22	-	-	-
Pot Cap-1 Maneuver	369	717	1005	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	356	717	1005	-	-	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1005	-	666	-	-
HCM Lane V/C Ratio	0.031	-	0.152	-	-
HCM Control Delay (s)	8.7	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Appendix C:
Queues Analysis Results

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	374	124	120	56	44	197	175	338
v/c Ratio	0.05	0.78	0.35	0.24	0.07	0.11	0.41	0.35	0.70
Control Delay	18.4	49.6	28.9	34.7	1.7	20.5	29.9	23.9	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	49.6	28.9	34.7	1.7	20.5	29.9	23.9	46.0
Queue Length 50th (ft)	11	244	53	69	0	18	93	77	221
Queue Length 95th (ft)	25	#384	90	116	0	35	117	123	298
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	566	481	356	490	755	383	484	498	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.78	0.35	0.24	0.07	0.11	0.41	0.35	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	37	389	128	124	57	48	204	182	354
v/c Ratio	0.07	0.81	0.37	0.25	0.08	0.13	0.42	0.37	0.73
Control Delay	18.6	52.0	30.7	34.9	1.7	21.1	30.7	24.4	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	52.0	30.7	34.9	1.7	21.1	30.7	24.4	47.8
Queue Length 50th (ft)	15	257	55	72	0	20	98	80	234
Queue Length 95th (ft)	30	#408	93	119	0	38	123	128	314
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	562	481	344	490	755	371	484	492	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.81	0.37	0.25	0.08	0.13	0.42	0.37	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	389	128	124	74	48	217	217	422
v/c Ratio	0.09	0.81	0.37	0.25	0.10	0.15	0.45	0.45	0.87
Control Delay	18.9	52.0	30.7	34.9	3.3	23.6	32.3	26.9	59.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	52.0	30.7	34.9	3.3	23.6	32.3	26.9	59.3
Queue Length 50th (ft)	20	257	55	72	0	20	110	98	293
Queue Length 95th (ft)	38	#408	93	119	3	38	134	151	#412
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	562	481	344	490	755	319	483	481	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.81	0.37	0.25	0.10	0.15	0.45	0.45	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Engineering Report

Dunkin Donuts - Newburgh

Traffic Impact Assessment

Town of Newburgh
Orange County, New York

February 13, 2015

Chazen Project No: 31405.01

THE Chazen COMPANIES®
Proud to be Employee Owned
Engineers
Land Surveyors
Planners
Environmental Professionals
Landscape Architects

Prepared for:

Liberty General Contracting
2629 Route 302
Middleton, NY 10941

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

EXECUTIVE SUMMARY

A Traffic Impact Assessment (TIA) has been completed for the proposed Dunkin Donuts project to be located at the intersection of NYS Routes 32 (North Plank Road) and NYS Route 300 the Town of Newburgh, Orange County New York. A 1,750± square foot building currently occupies the site, but is presently vacant. Access to the site will be restricted to the existing driveway on Route 32 north of the noted intersection.

This assessment follows accepted national engineering practice and utilizes accepted engineering data sources and software analysis programs. Field reviews were undertaken and manual vehicle turning counts were competed for the study intersections. The TIA methodology is detailed in Section 1.1 Assessment Methodology. All field data and analysis results are presented in the Appendices to this report.

The following intersections were reviewed and analyzed for 2015 Existing, 2016 No-Build, and 2016 Build conditions for the AM peak traffic condition, consistent with the peak hour of site trip generation and roadway traffic.

- NYS Route 32 at NYS Route 300
- NYS Route 32 at the site driveway

The results of this assessment clearly demonstrate that the traffic generated by proposed project can be safely and efficiently integrated into the local roadway system without any significant negative impact to the system.

1.0 INTRODUCTION

A Traffic Impact Assessment has been completed for the proposed Newburgh Dunkin Donuts project to be located at the intersection of NYS Routes 32 and NYS Route 300 in the Town of Newburgh, Orange County, New York.

The project site is located in the northwest quadrant of the NYS Route 32 and NYS Route 300 intersection. The project site consists of an unoccupied 1,750± square foot building to be razed and the exiting foundation utilized to construct a Dunkin Donuts shop. The proposed store will not have a drive-through window. Vehicular access and egress to/from the site will be provided by one driveway off of NYS Route 32. Section 3.0 presents a more detailed discussion of the proposed project.

This Assessment was completed to identify and quantify the traffic impacts associated with the proposed project and to identify any recommend mitigation for those impacts where appropriate. The Study follows accepted national engineering practice, and utilizes accepted engineering data sources and software analysis programs.

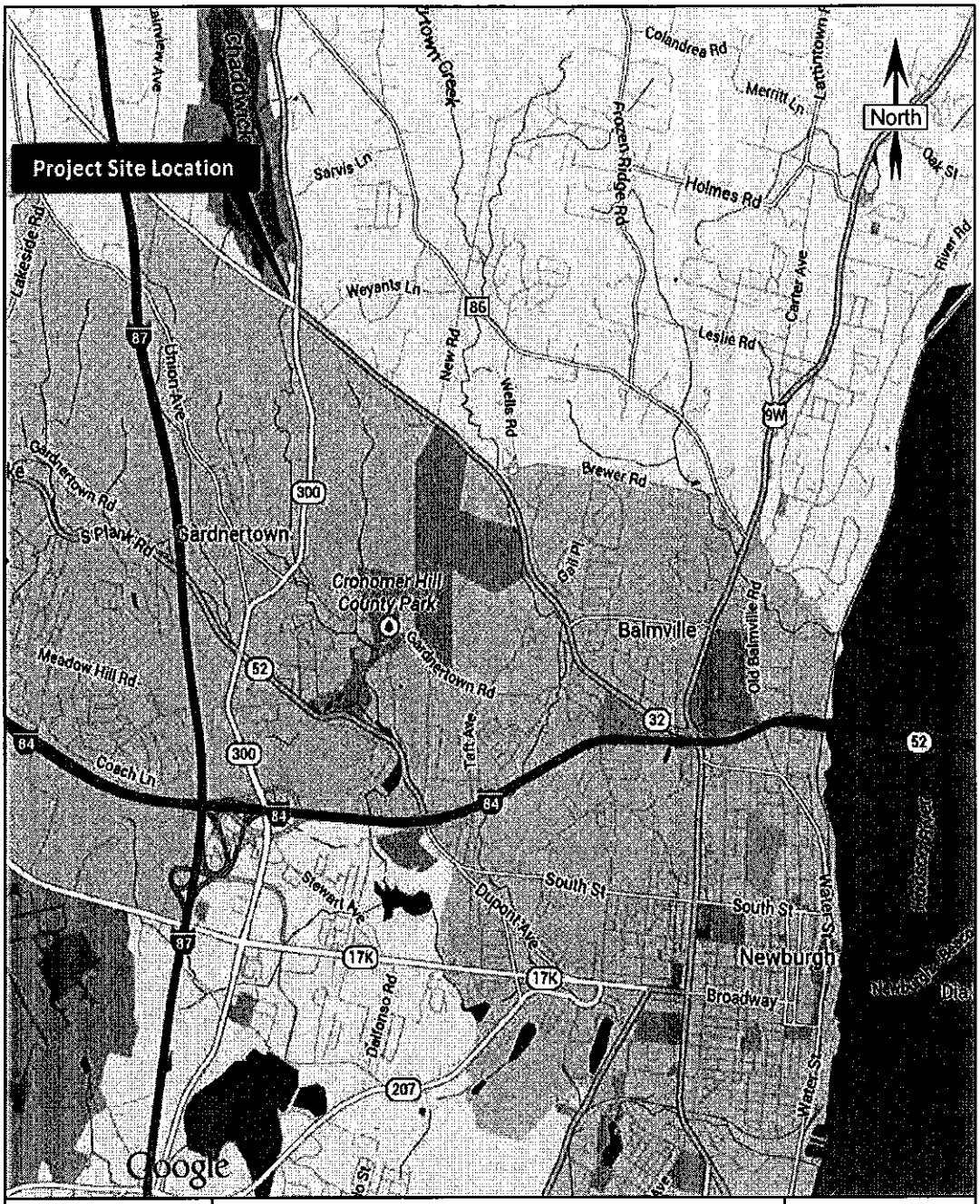
Figure 1 shows the project site location relative to the general geographic area. Figure 2 shows the project site location, study area limits and the roadway network immediately adjacent to the site including the intersections that would likely be affected by the trips generated by the proposed project.

Measurement of possible impact to traffic flow on the adjacent roadway network can be determined by reviewing the capacity and delay changes to the local intersections and access points within the roadway network that result from application of the site generated traffic. The New York State Department of Transportation generals considers impact to traffic as being defined by a drop in Level of Service or a significant increase in vehicle delay time.

The intersections deemed to be critical from a potential traffic impact perspective are the site driveway on NYS Route 32 and the intersection of NYS Route 32 with NYS Route 300.Traffic movement counts and site review was conducted on Thursday February 5, 2015. All field data and analysis results are presented in the Appendices to this report.

The operating conditions at the study intersection and the surrounding area were reviewed and analyzed, and recommendations were advanced to accommodate traffic activity associated with the project. It is anticipated that completion of the proposed development will occur in 2016; therefore 2016 is to be considered the build year for the proposed project.

Figure 1 - Area Map



THE Chazen COMPANIES *Proud to be Employee Owned*	**Dunkin Donuts** NYS Route 300 and Route 32 Town of Newburgh, Orange County, New York	Area Map
	Project #: 31405.01 | Date: February 13, 2015	Figure: #1

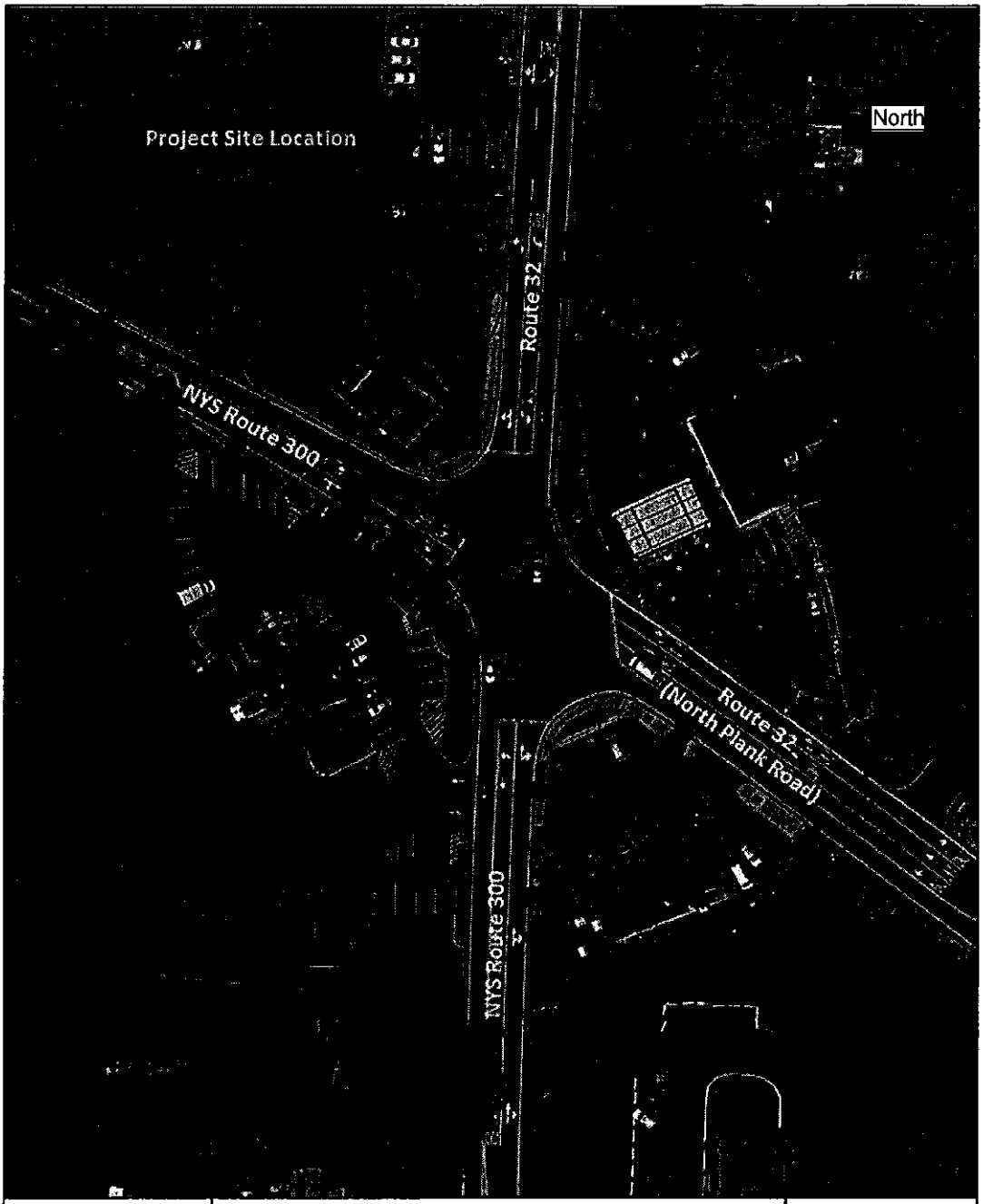
1.1 Assessment Methodology

This Assessment is based on the recommendations contained in the letter of March 17, 2014 from Creighton Manning Engineers to the Town of Newburgh Planning Board. The following is a brief description of the detailed tasks.

- Information pertinent to the existing traffic and roadway conditions was collected and analyzed relative to its effect on operating characteristics.
- Field observations were made in the AM commuter peak period to observe traffic movement, including vehicle queues, and pedestrian and bicycle movements within the existing roadway network to determine and verify traffic patterns and distributions.
- 2015 Existing traffic volumes were determined by conducting manual vehicular traffic counts at the critical intersections.
- A trip generation analysis and directional distribution analysis were conducted for the proposed land use component of the development.
- Operational analysis of the study intersections for the Existing, No Build, and Build conditions were conducted, as appropriate, for the peak hours of anticipated project operation to assist in the determination of possible improvements to the study intersections operation.
- A queue assessment was conducted based on both observed conditions and analysis.
- Conclusions and recommendations were made of the potential traffic improvements as a result of the data, facts gathered, and analyses in this study.

Throughout this study, distinction is made between the Existing traffic (i.e. traffic currently accommodated on the roadway network), No-Build traffic (i.e. traffic anticipated to exist on the system without the proposed project in the anticipated build year of 2016) and Build traffic (i.e. the combination of No-Build and site or project generated traffic volumes).

Figure 2 - Project Location



THE Chazen COMPANIES *Proud to be Employee Owned*	**Dunkin Donuts** NYS Route 300 and Route 32 Town of Newburgh, Orange County, New York	Project Location
	Project #: 31405.01 | Date: February 13, 2015	Figure: #2

2.0 EXISTING CONDITIONS

2.1 Roadways and Intersections

2.1.1 Roadways

The following provides a narrative and pictorial description of the roadways in the study area, including general condition, travel lanes, pavement markings, on-street parking, and heavy vehicle information where available. As shown in Figure 2 the proposed site is bounded by NYS Route 32, NYS Route 300 and adjoining properties. Site access will provided from/onto NYS Route 32 at the one existing driveway location north of the NYS Route 32/300 intersection.

NYS Route 32 is a two lane, New York State owned and operated roadway running west from NYS Route 9W and then heading north after its intersection with NYS Route 300. NYS Route 32 is characterized by residential and commercial development. NYS Route 32 is classified as an Urban Minor Arterial with a posted speed limit of 45 MPH, which increases to 55 mph shortly north of NYS Route 300 intersection. Latest NYSDOT data (2011) shows an AADT of 11,040 vehicles in the vicinity of the project. Parking is not designed along NYS Route 32 in the immediate study area and sidewalks are not provided.

NYS Route 300 is a two lane New York State owned and operated roadway running north from Interstate 84 and then heading west after its intersection with NYS Route 32. NYS Route 300 is characterized by residential and commercial development. NYS Route 300 is classified as an Urban Minor Arterial with a posted speed limit of 45 MPH before and after its intersection with NYS Route 32. NYSDOT data shows an estimated AADT of 6,380 vehicles in the vicinity of the project. Parking is not designed along NYS Route 300 in the immediate study area and sidewalks are not provided.

2.1.2 Intersections

The study intersections were analyzed relative to geometric and operating characteristics. These characteristics define the parameters used in the capacity analysis for each location.

NYS Route 32 with NYS Route 300 is a four way intersection under traffic signal control (NYSDOT signal O-34) with designated left turn lanes for all approaches, with each left turn lane in excess of 200' in length. In addition the NYS Route 300 westbound approach provides a designated right turn lane. The traffic signal operates as an eight phase actuated signal, providing signal phases to accommodate the various traffic movements, including permitted/exclusive left turn phasing for all approaches and an overlap arrow for the westbound right turn lane. There are no sidewalks and no marked pedestrian crosswalks

Commercial/retail facilities occupy the other three quadrants of the intersection, with the proposed Dunkin Donuts to be built in the northwest quadrant. The facilities, a gas station/mini-mart in the northeast quadrant, a deli in the southeast quadrant, and a restaurant/pizzeria in the southwest quadrant, each have access and egress to/from both NYS Route 32 and NYS Route 300 via channelized driveways.

Site Driveway with NYS Route 32 is an existing two-way driveway serving the project site. One lane for access and one lane for egress are provided. There are no traffic controls at this intersection. The center of the driveway is 110' from the traffic signal stop bar on the NYS Route 32 southbound approach.

2.2 Public Transportation

Public transportation is available throughout Orange County although it is more concentrated south of Interstate 84. Newburgh Area Transit provides bus service on NYS Route 32 south of the NYS Route 300 intersection into the City of Newburg via the Northside line. It also provides service Route 300 south of the NYS Route 32 intersection via the Crosstown line into the City of Newburgh. Other local and regional public transportation can then be accessed. Dial a Bus provides curb to curb service, via call up reservations made one week in advance, for all points within the Town of Newburgh.

2.3 Existing Traffic Volumes

Existing peak hour traffic volumes at the study intersection was documented via manual vehicular turning movement counts conducted on Thursday February 5th, 2015. The counts were conducted during the AM commuter peak, coinciding with the busiest time period for the proposed Dunkin Donuts shop as well as the local morning commuter peak. The peak hour volumes consist of the highest consecutive 60 minutes observed volumes at the study intersection.

Figure 3 summarizes the Existing traffic volumes for the study intersections for the AM peak hour as noted above. Traffic count and volume data is presented in Appendix A. Based upon the traffic count data collected the following observations are evident:

1. The AM peak hour was from 7:30 to 8:30 AM with 1194 vehicles traveling through the intersection.

2. The heaviest used approaches were NYS Route 32 from the north with 431 vehicles and NYS Route 300 from the west with 355 vehicles during the peak hour. This is consistent with an expected commuter pattern toward Newburgh, Interstate 84 and the NYS Thruway.

3.0 PROJECT DISCUSSION

The proposed Newburgh Dunkin Donuts project site is located in the northwest quadrant of the intersection of NYS Routes 32 and NYS Route 300 intersection. Site access will be provided at one location, via the existing two way driveway on NYS Route 32 north of the NYS Route 32/300 intersection.

The project involves the demolition of the existing above ground structure, the retention of the current foundation and the construction of a Dunkin Donuts shop. The shop will not have a drive-through window and will have minimal seating.

The completed facility will be similar to the existing Dunkin Donuts shop in Ellenville, N.Y. Sales statistics from the Ellenville location show the busiest period of activity from 7:00 to 10:00 AM, coinciding with normal morning commuter traffic. Data from the Ellenville site showed 42 transactions during the 7:00 to 8:00 AM period and 51 transactions during the 8:00 to 9:00 AM period.

4.0 TRAFFIC FORECAST

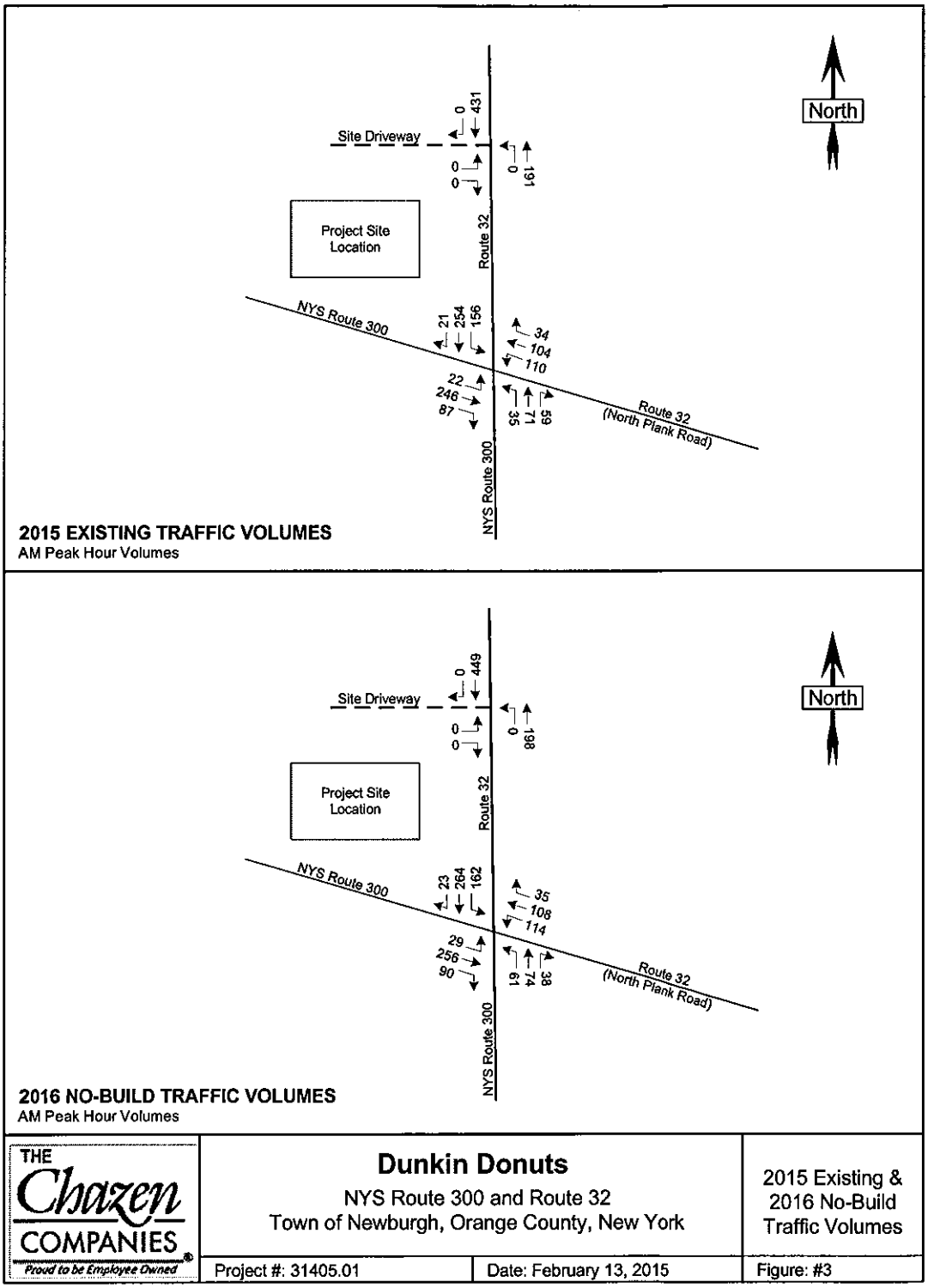
4.1 2016 No-Build Traffic Conditions

The No-Build traffic volumes were generated by projecting the 2015 Existing traffic volumes to the build year of 2016 using an estimated growth rate factor based on previous traffic growth trends in the area. The *NYSDOT 2011 Traffic Volume Report* indicates that traffic volumes on NYS Routes 32 and NYS Route 300 in the project area have stayed constant in recent years. To account for any new growth, a growth rate of 2% per annum was applied to the 2015 existing traffic volumes to project the future traffic conditions in the year of 2016 without the proposed project. Since that time frame may encompass almost two years, the Existing volumes were increased by 4% to arrive at the 2016 No-Build volumes.

Figure 3 shows the projected 2016 vehicular volumes for the weekday AM period, referred to as the No-Build condition. These volumes are those anticipated in 2016 without the proposed Dunkin Donuts project.

This information is utilized as the foundation volumes in 2016 to which the anticipated generation of the proposed project is added to predict the combined, or Build volumes anticipated in 2016.

Figure 3 - 2015 Existing and 2016 No-Build Traffic Volumes



4.2 Trip Generation Analysis

The trip generation analysis for the proposed project provides the anticipated traffic impact that can be expected as a result of that development. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and building types. This document, Trip Generation Manual[1], 9th Edition, is updated periodically and details rates developed for the average weekday during the peak hours of the generator and during the peak hours of the adjacent roadway traffic.

The above noted resource provides trip generation data for Land Use 936: Coffee/Donut Shop without Drive-Through Window. This Land Use was utilized to establish the anticipated trips generated by the proposed project. In addition, transaction data from a similar Dunking Donuts in Ellenville NY, located on Route 209 (North Main Street) north of the village center, was reviewed. The Ellenville store transaction data is significantly below that provided by the ITE trip rate.

ITE does not provide data on pass-by trips for Land Use 936: Coffee/Donut Shop without Drive-Through Window. A pass-by trip is a trip that is already on the local roadway network and makes a stop at the subject land use. This stop is not the primary reason for the trip but is a secondary destination. A pass-by trip is analyzed at the site driveway but is not added to the overall traffic on the study roadways as it is already there.

The peak hours of a Dunkin Donut shop are the morning commute hours. Accordingly, it is apparent that many site trips are made by those already on the local roadways on their way to work. These trips to the site would be pass-by trips. A pass-by rate of 50% has been assumed to apply for this assessment. In reality this pass-by rate of 50% may be conservative.

Table 1 presents the forecasted vehicular trip generation values for the proposed project.

Table 1 - Project Trip Generation

ITE Land Use #936: Coffee/Donut Shop without Drive-through window (1750 SF) ITE Trip rate: 108.38 trips per 1000 SF Gross Floor Space	Peak Hour Volumes Weekday AM		
	Enter (51%)	Exit (49%)	Total
New Trips Generated at the Site Driveway	97	93	190
Pass-by Trips at 50% Rate	48	46	94
Trips added to the local system.	49	47	96

[1] *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers, 2012.

As per the above, 190 trips (97 in and 93 out) will use the Dunkin Donuts driveway, with 94 trips (48 in and 46 out) already on the local roadways, and 96 trips (49 in and 47 out) being new trips generated by the new Dunkin Donuts.

The ITE trip figures indicate activity significantly greater than the number of transactions recorded at the Ellenville location. The Ellenville figures show the highest hour of transaction was between 8:00 and 9:00 AM with 51 transactions taking place, indicating at most 51 trips. Based on the ITE trip rates it would be expected that a minimum of 97 transactions would take place during the peak morning hour. To study a worse-case scenario the trip rates as per ITE will be utilized. However it is anticipated that the actual number of trips may be less due to the location of the site and the fact that access/egress will be provided only to/from NYS Route 32 north of the NYS Route 300 intersection.

4.3 Trip Distribution

The distribution of vehicular traffic describes where traffic originates or where traffic is destined. The trip distribution of the site generated vehicular traffic is based upon the land-uses being proposed and the marketing demographics based upon regional considerations. If the land-use being proposed is consistent with existing activity then the new traffic flows would approximate the distribution of the existing volumes at the locations monitored during the manual counts. Although the land use being considered serves the morning commuter flow, traffic to the proposed Dunkin Donuts is anticipated to arrive mainly from the north on NYS Route 32 due to the site driveway located on NYS Route 32. It is anticipated that significant trips to the site will not come from traffic on the other the three approaches due to travel routes, including left turns into the site that would have to be followed.

The distribution of trips also takes into consideration pass-by trips which are significant for a coffee shop such as proposed. Pass-by trips must be removed from their normal path, moved to a secondary path and distributed to the site driveway, and then placed back on a travel path to get back to their primary travel route.

The percentages of site generated traffic assigned to the study intersections are shown in Figure 4. These percentages are based on the discussion above and show 70% of site trips originating from the north.

4.4 Trip Assignment

Trip assignment combines the results of the trip generation and trip distribution and determines the number of trips utilizing specific paths and roadways between various origin/destination pairs. As with the trip distribution, the assignment of trips takes pass-by traffic into consideration. The trip assignment for the proposed development is shown in Figure 4.

4.5 2017 Build Volumes

To estimate the 2016 Build traffic volumes, the results of the site generated trip assignment were added to the 2016 No-Build traffic volumes. These traffic volumes represent the future traffic conditions after full build-out of the proposed project and are presented in Figure 5.

Figure 4 - Trip Distribution and Assignment

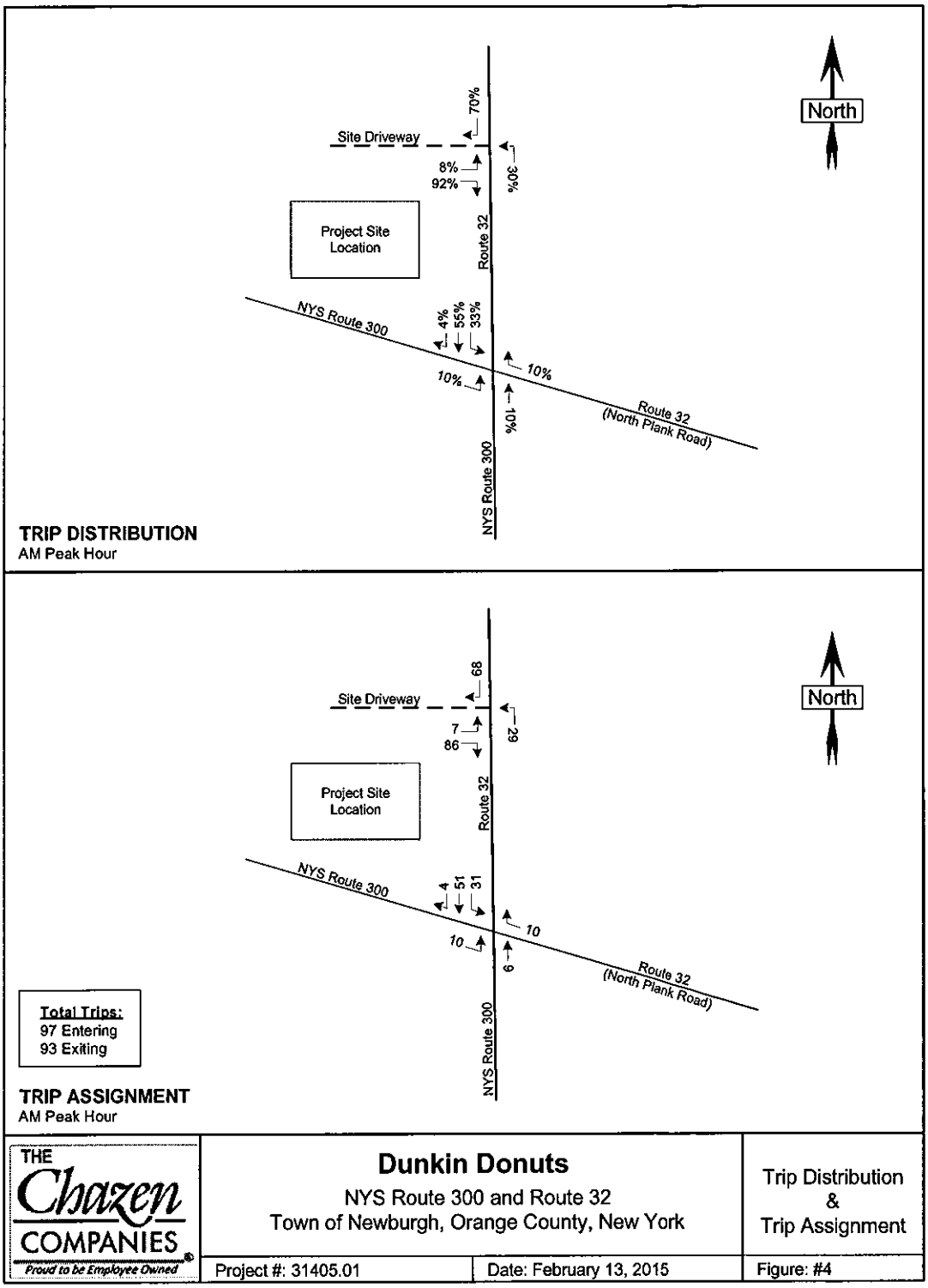
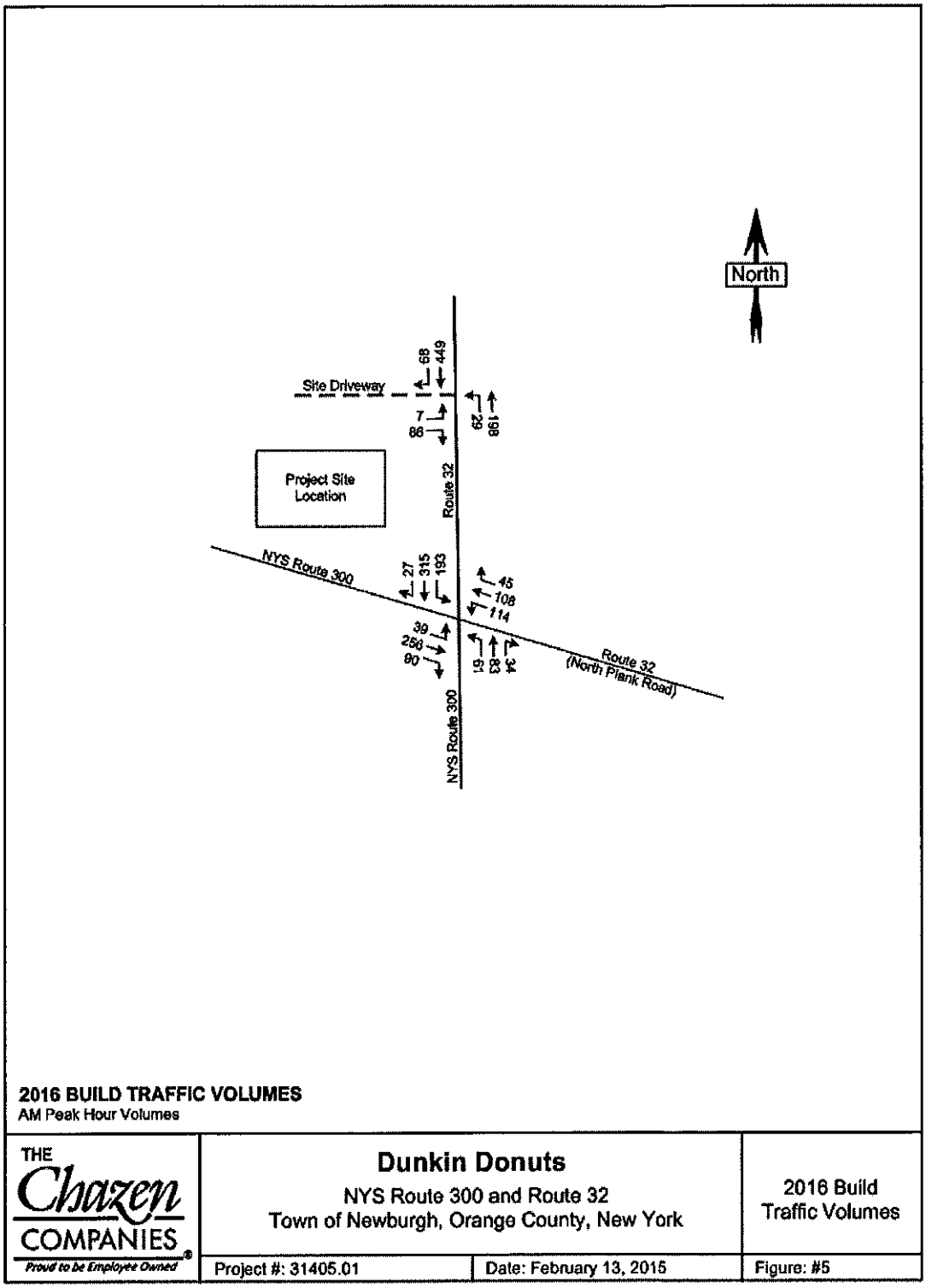


Figure 5 - 2016 Build Volumes



5.0 ANALYSIS

5.1 Capacity/Level of Service Methodology

A level of service analysis was conducted for the morning peak hour. As the project site building is currently vacant and not generating trips to the local roadway network, an operation analysis was not conducted for the 2015 Existing condition or the 2016 No Build condition.

The capacity analysis methodology is based upon the 2010 Highway Capacity Manual which utilizes "levels-of-service" (LOS) designations to identify traffic flow based on vehicle delay. A LOS A represents the best condition and a LOS F represents the worst condition. A LOS C is generally used as a design standard while a LOS D is acceptable during peak periods. LOS E represents an operation at or near capacity.

In order to identify a signalized intersection's level-of-service, the average amount of vehicle delay is computed for all traffic movements. Based on the vehicle delays computed levels of service are determined for each movement, each intersection approach and each approach.

To identify an un-signalized intersection's level-of-service, the average amount of vehicle delay is computed for the critical traffic movements. These are defined as the left turn into the minor road from the major road, and all movements from the minor road. Based on the vehicle delays computed levels of service are determined for the critical intersection movements.

Tables 2 and 3 summarize the level-of-service criteria for signalized and un-signalized intersections.

Table 2 - Signalized Intersection LOS Criteria

Level of Service (LOS)	Control Delay Per Vehicle (seconds)
A	Less than or equal to **10**
B	Greater than **10** and less than or equal to **20**
C	Greater than **20** and less than or equal to **35**
D	Greater than **35** and less than or equal to **55**
E	Greater than **55** and less than or equal to **80**
F	Greater than **80**

Table 3 - Un-Signalized Intersection LOS Criteria

Level of Service (LOS)	Control Delay Per Vehicle (seconds)
A	Less than or equal to **10**
B	Greater than **10** and less than or equal to **15**
C	Greater than **15** and less than or equal to **25**
D	Greater than **25** and less than or equal to **35**
E	Greater than **35** and less than or equal to **50**
F	Greater than **50**

The NYS Route 32 at NYS Route 300 intersection was analyzed during the weekday AM peak hour period for the Existing (2015), No-Build (2016), and Build (2016) conditions. The site driveway intersection with NYS Route 32 was analyzed for the 2016 Build condition as this driveway generates no traffic at the present time. The capacity analyses were undertaken with the use of the latest version of Synchro software by McTrans[2]. The procedure is based on the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. The average amount of vehicle delay is computed for each critical movement to the intersection.

The results of the capacity analyses for the study intersection is summarized in Table 3 and described after the table. The analysis output is provided in Appendix B.

Table 4 - Level of Service Summary

Level of Service/Estimated Delay (Seconds per Vehicle)/ Volume to Capacity Ratio (v/c)

Intersections		2015 Existing Traffic Volumes	2016 No-Build Traffic Volumes	2016 Build Traffic Volumes
		AM Peak	AM Peak	AM Peak
NYS Route 32/NYS Route 300 (Signalized)				
NYS Route 300 EB	LTR	D (47.4)	D (49.1)	D (48.3)
NYS Route 32 WB	LTR	C (26.1)	C (27.1)	C (26.1)
NYS Route 300 NB	LTR	C (28.2)	C (28.8)	C (30.7)
NYS Route 32 SB	LTR	D (38.5)	D (39.9)	D (48.3)
Overall		D (36.7)	D (38.0)	D (41.2)
NYS Route32/Site Driveway (Unsignalized)				
NYS Route 32 NB	L	--	--	A (8.7)
Site Driveway EB	LR	--	--	B (11.4)

Key: X (Y.Y) = Level of Service/Estimate Delay (Seconds per Vehicle
NB, SB, WB, EB = Northbound, Southbound, Westbound, Eastbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements.

As indicated in Table 4, the results of the analysis for the study intersections show that the level of service at the NYS Route 32/300 intersection is maintained at LOS "D" from the existing condition through the No-Build and Build conditions with only an increase in vehicle delay of 4.5 seconds in the Build condition. LOS "D" is considered acceptable at urban intersections as long as no approach operates at LOS "E" or worse.

The proposed Dunkin Donuts driveway operates at LOS "B" during the Build condition with the left turn from NYS Route 32 into the site operating at LOS "A".

Based on the analysis of the site driveway under the Build condition, it is not anticipated that any turn restrictions will be required.

[2] Synchro 8 Software

5.2 Queue Assessment

A field review of the vehicle queues on the NYS Route 32 southbound approach was conducted. This approach carries the heaviest traffic during the AM commuter period and also is the location of the site driveway. Excessive queues up to and past the site driveway may be problematic for vehicles wishing to make a left turn into the site, and vehicles exiting the site. The site driveway is 110 feet from the stop bar at the signalized intersection.

During the manual traffic counts, it was observed that southbound traffic on NYS Route 32 did queue past the site driveway. Queues consistently cleared during the traffic signal green time provided.

The operational analysis of the driveway, with anticipated site traffic added, showed anticipated queue lengths significantly greater than that observed in the field, as presented below.

1. The Existing 50% queue length to be 74 feet for the southbound left turn lane and 191 feet for the southbound through lane. Queues will be less than these lengths 50% of the time.

2. The Existing 95% queue length to be 122 feet for the southbound left turn lane and 286 feet for the southbound through lane. Queues will be less than these lengths 95% of the time.

In the Build condition, the NYS Route 32 queue will increase as would be expected with additional volumes.

1. The Build 50% queue length computes to 98 feet for the southbound left turn lane and in excess of 293 feet for the southbound through lane. Queues will be less than these lengths 50% of the time.

2. The Build 95% queue length to be 151 feet for the southbound left turn lane and 412 feet for the southbound through lane. Queues will be less than these lengths 95% of the time.

The queue analysis results are presented in Appendix C.

The above discussion pertains to the one hour of greatest site activity and of high commuter traffic volumes. While the PM peak would likely produce slightly higher traffic volumes on NYS Route 32, the proposed land use generated trips are only 50% of the AM trips analyzed in this assessment. At other times during the day both overall traffic volumes and site generated trips will be substantially less. Accordingly queues of NYS Route 32 southbound approach would not be considered to be problematic except during the AM peak hour.

The difference in observed and calculated queues can be placed on several factors, including the winter season during which the field observations were made, and driver behavior.

Traffic turning into or leaving a commercial facility is often in conflict with queued traffic on the roadway, especially near a signalized intersection in urban areas. Drivers routinely wait for queues to

clear prior to making their respective turns, make a right turn while a vehicles turns into the driveway, or are allowed to exit through the courtesy of drivers on the main roadway. The significant movements at the driveway are rights in and rights out. This situation will allow for vehicles to exit the driveway and head south while vehicles are turning right into the driveway, as well as when the NYS Route 32 queue clears.

Accordingly based on field observations, operation analysis, and knowledge of normal driving conditions and driver behavior, it is not anticipated that the southbound NYS Route 32 traffic queues will be a significant detriment to access and egress to/from the proposed Dunkin Donuts.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This Traffic Impact Assessment has analyzed the impact of traffic forecasted to be generated by the proposed Dunkin Donuts project in relation to the existing and future traffic conditions of the adjacent roadway network. The following findings are the result of this analysis and are meant to provide an informed basis for the local decision making process.

6.1 Conclusions

The local roadways and intersections serving the proposed project site provide good access to the immediate area and statewide locations. Based on the reviews and analysis conducted, traffic generated by the proposed project, would be safely and efficiently served by the existing local roadway network, and would not have any negative impact on the local roadway the network.

Based on the analysis undertaken, vehicles entering and exiting the site driveway will be able to proceed in a safe and efficient manner without the need for turn restrictions.

6.2 Recommendations

Based on this assessment and the analysis contained therein, the following recommendations are presented.

1. To facilitate safety egress from the site driveway it is recommended that a stop sign be installed, along with a marked stop bar and centerline to differentiate driveway directional flow. State law mandates that traffic, in the absence of a traffic control device, must stop while entering a state highway. However since this site is now vacant and is close to a signalized intersection, a stop sign with associated pavement markings would help facilitate safe egress from the site.

Appendix A:
Traffic Count Volume Data

The Chazen Companies

547 River Street
Troy, New York, 12180
www.chazencompanies.com

Project No: 31405.01
Counted By: S. Radloff
Intersection: Route 300 and Route 32
Time: 7:00 - 9:00 AM

File Name : TMC_Route 300&32_AM Peak Hour
Site Code : 31405.01
Start Date : 2/5/2015
Page No : 1

Groups Printed- Pass Vehicles - Heavy Vehicles - School Bus

	Route 32 Southbound					North Plank Road (Route 32) Westbound					Route 300 Northbound					Route 300 Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	38	46	0	0	84	23	8	7	0	38	9	7	11	0	27	4	56	20	0	80	229
07:15 AM	39	50	3	0	92	18	17	13	0	48	3	13	4	0	20	3	51	27	0	81	241
07:30 AM	42	76	3	0	121	30	22	7	0	59	11	13	14	0	38	4	63	12	0	79	297
07:45 AM	32	64	6	0	102	29	30	14	0	73	9	12	8	0	29	7	58	27	0	92	296
Total	151	236	12	0	399	100	77	41	0	218	32	45	37	0	114	18	228	86	0	332	1063
08:00 AM	38	54	3	0	95	31	30	8	0	69	7	25	13	0	45	5	67	27	0	99	308
08:15 AM	44	60	9	0	113	20	22	5	0	47	8	21	24	0	53	6	58	21	0	85	298
08:30 AM	31	48	4	0	83	23	31	15	0	69	13	23	20	0	56	4	62	14	0	80	288
08:45 AM	24	36	3	0	63	33	22	12	0	67	10	23	20	0	53	4	50	19	0	73	256
Total	137	198	19	0	354	107	105	40	0	252	38	92	77	0	207	19	237	81	0	337	1150
Grand Total	288	434	31	0	753	207	182	81	0	470	70	137	114	0	321	37	465	167	0	669	2213
Apprch %	38.2	57.6	4.1	0		44	38.7	17.2	0		21.8	42.7	35.5	0		5.5	69.5	25	0		
Total %	13	19.6	1.4	0	34	9.4	8.2	3.7	0	21.2	3.2	6.2	5.2	0	14.5	1.7	21	7.5	0	30.2	
Pass Vehicles																					
% Pass Vehicles	99.3	98.8	93.5	0	98.8	95.2	93.4	97.5	0	94.9	80	89.8	92.1	0	88.5	94.6	98.1	96.4	0	97.5	96.1
Heavy Vehicles																					
% Heavy Vehicles	0.7	0.2	3.2	0	0.5	3.4	5.5	1.2	0	3.8	2.9	7.3	5.3	0	5.6	2.7	1.3	1.8	0	1.5	2.3
School Bus	0	4	1	0	5	3	2	1	0	6	12	4	3	0	19	1	3	3	0	7	37
% School Bus	0	0.9	3.2	0	0.7	1.4	1.1	1.2	0	1.3	17.1	2.9	2.6	0	5.9	2.7	0.6	1.8	0	1	1.7

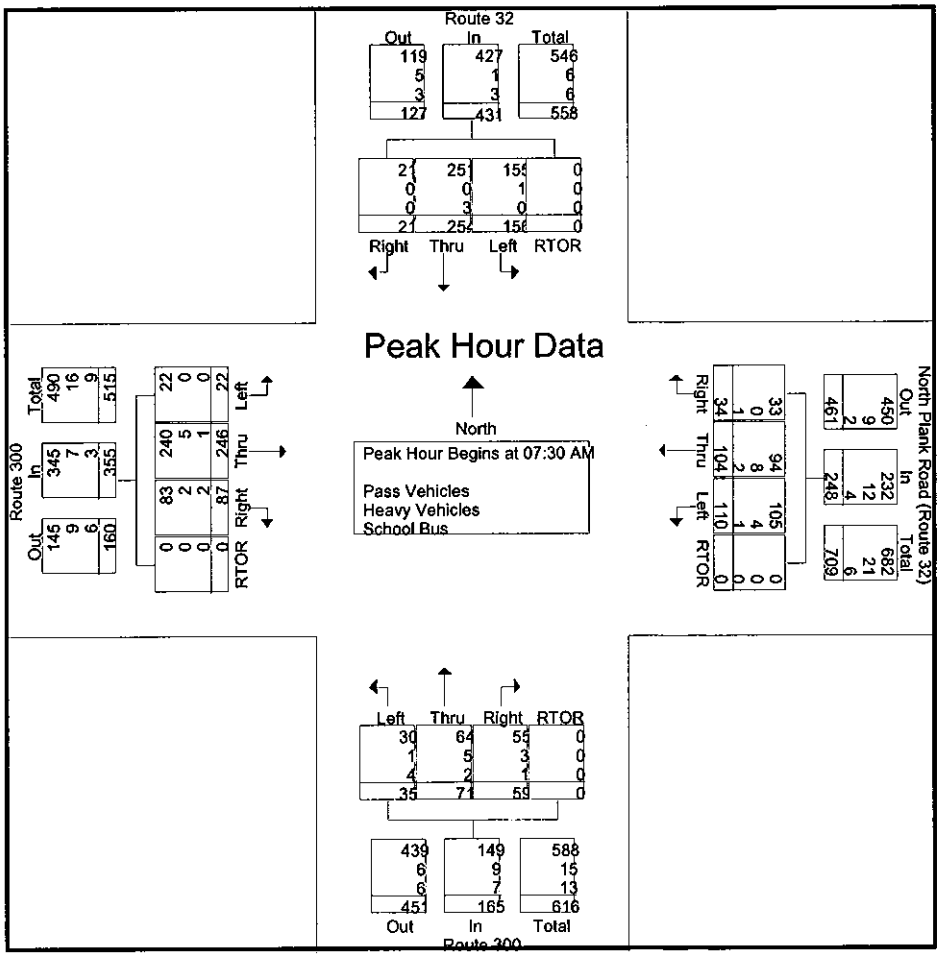
The Chazen Companies

547 River Street
Troy, New York, 12180
www.chazencompanies.com

Project No: 31405.01
Counted By: S. Radloff
Intersection: Route 300 and Route 32
Time: 7:00 - 9:00 AM

File Name : TMC_Route 300&32_AM Peak Hour
Site Code : 31405.01
Start Date : 2/5/2015
Page No : 2

	Route 32 Southbound					North Plank Road (Route 32) Westbound					Route 300 Northbound					Route 300 Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	42	**76**	3	0	**121**	30	22	7	0	59	**11**	13	14	0	38	4	63	12	0	79	297
07:45 AM	32	64	6	0	102	29	**30**	**14**	0	**73**	9	12	8	0	29	**7**	58	**27**	0	92	296
08:00 AM	38	54	3	0	95	**31**	30	8	0	69	7	**25**	13	0	45	5	**67**	27	0	**99**	**308**
08:15 AM	**44**	60	**9**	0	113	20	22	5	0	47	8	21	**24**	0	**53**	6	58	21	0	85	298
Total Volume	156	254	21	0	431	110	104	34	0	248	35	71	59	0	165	22	246	87	0	355	1199
% App. Total	36.2	58.9	4.9	0		44.4	41.9	13.7	0		21.2	43	35.8	0		6.2	69.3	24.5	0		
PHF	.886	.836	.583	.000	.890	.887	.867	.607	.000	.849	.795	.710	.615	.000	.778	.786	.918	.806	.000	.896	.973
Pass Vehicles																					
% Pass Vehicles	99.4	98.8	100	0	99.1	95.5	90.4	97.1	0	93.5	85.7	90.1	93.2	0	90.3	100	97.6	95.4	0	97.2	96.2
Heavy Vehicles																					
% Heavy Vehicles	0.6	0	0	0	0.2	3.6	7.7	0	0	4.8	2.9	7.0	5.1	0	5.5	0	2.0	2.3	0	2.0	2.4
School Bus	0	3	0	0	3	1	2	1	0	4	4	2	1	0	7	0	1	2	0	3	17
% School Bus	0	1.2	0	0	0.7	0.9	1.9	2.9	0	1.6	11.4	2.8	1.7	0	4.2	0	0.4	2.3	0	0.8	1.4



Appendix B:
Level of Service Analysis Results

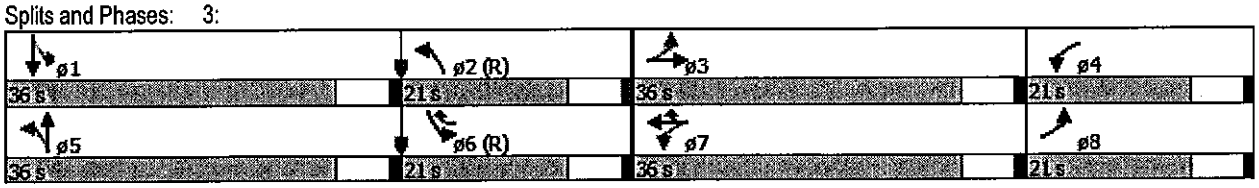
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	246	87	110	104	34	35	71	59	156	254	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.926			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1725	0	1770	1833	0
Flt Permitted	0.680			0.251			0.308			0.543		
Satd. Flow (perm)	1267	1783	0	468	1863	1583	574	1725	0	1011	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		42			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.68
Adj. Flow (vph)	28	267	107	124	120	56	44	100	97	175	302	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	374	0	124	120	56	44	197	0	175	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	5			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.05	0.78		0.35	0.24	0.07	0.11	0.41		0.35	0.70	
Control Delay	18.4	49.6		28.9	34.7	1.7	20.5	29.9		23.9	46.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.4	49.6		28.9	34.7	1.7	20.5	29.9		23.9	46.0	
LOS	B	D		C	C	A	C	C		C	D	
Approach Delay		47.4			26.1			28.2			38.5	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	11	244		53	69	0	18	93		77	221	
Queue Length 95th (ft)	25	#384		90	116	0	35	117		123	298	
Internal Link Dist (ft)		283			198			103			112	
Turn Bay Length (ft)	100			250		250	225			225		
Base Capacity (vph)	566	481		356	490	755	383	484		498	486	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.78		0.35	0.24	0.07	0.11	0.41		0.35	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 114
Actuated Cycle Length: 114
Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 36.7 Intersection LOS: D
Intersection Capacity Utilization 62.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3:



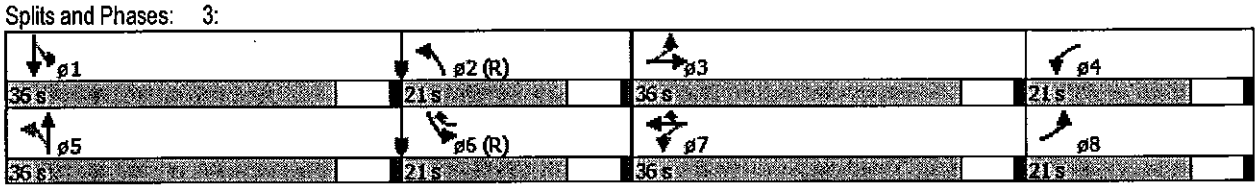
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	256	90	114	108	35	38	74	61	162	264	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.926			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1725	0	1770	1831	0
Flt Permitted	0.673			0.228			0.283			0.530		
Satd. Flow (perm)	1254	1783	0	425	1863	1583	527	1725	0	987	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		41			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.58
Adj. Flow (vph)	37	278	111	128	124	57	48	104	100	182	314	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	389	0	128	124	57	48	204	0	182	354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	6			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.07	0.81		0.37	0.25	0.08	0.13	0.42		0.37	0.73	
Control Delay	18.6	52.0		30.7	34.9	1.7	21.1	30.7		24.4	47.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.6	52.0		30.7	34.9	1.7	21.1	30.7		24.4	47.8	
LOS	B	D		C	C	A	C	C		C	D	
Approach Delay		49.1			27.1			28.8			39.9	
Approach LOS		D			C			C			D	
Stops (vph)	16	298		77	84	2	22	89		102	255	
Fuel Used(gal)	0	6		1	1	0	0	2		2	5	
CO Emissions (g/hr)	20	440		97	102	7	24	107		113	324	
NOx Emissions (g/hr)	4	86		19	20	1	5	21		22	63	
VOC Emissions (g/hr)	5	102		22	24	2	5	25		26	75	
Dilemma Vehicles (#)	0	0		0	0	0	0	0		0	0	

Intersection Summary

Area Type: Other
Cycle Length: 114
Actuated Cycle Length: 114
Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 38.0 Intersection LOS: D
Intersection Capacity Utilization 63.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3:



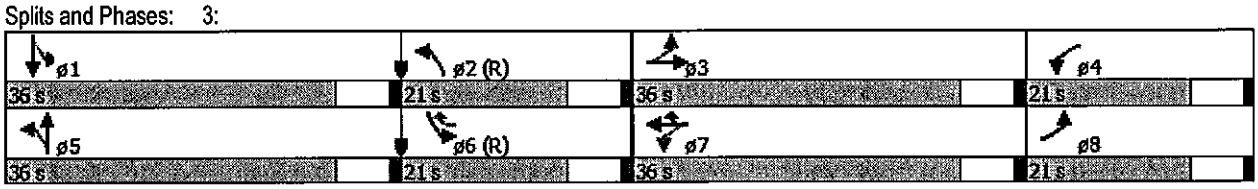
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	256	90	114	108	45	38	83	61	193	315	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	250		250	225		0	225		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850		0.931			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1783	0	1770	1863	1583	1770	1734	0	1770	1831	0
Flt Permitted	0.673			0.228			0.177			0.508		
Satd. Flow (perm)	1254	1783	0	425	1863	1583	330	1734	0	946	1831	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				86		37			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			278			183			192	
Travel Time (s)		8.3			6.3			4.2			4.4	
Peak Hour Factor	0.79	0.92	0.81	0.89	0.87	0.61	0.80	0.71	0.61	0.89	0.84	0.58
Adj. Flow (vph)	49	278	111	128	124	74	48	117	100	217	375	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	389	0	128	124	74	48	217	0	217	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	8	3		4	7	7	2	5		6	1	
Permitted Phases	3			7		6	5			1		
Minimum Split (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Total Split (s)	21.0	36.0		21.0	36.0	36.0	21.0	36.0		21.0	36.0	
Total Split (%)	18.4%	31.6%		18.4%	31.6%	31.6%	18.4%	31.6%		18.4%	31.6%	
Maximum Green (s)	15.0	30.0		15.0	30.0	30.0	15.0	30.0		15.0	30.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lead		Lag	Lead	Lead	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Walk Time (s)	5.0	5.0			5.0	5.0		5.0		5.0		
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)	0	0			0	0		0		0		
Act Effct Green (s)	45.0	30.0		45.0	30.0	51.0	45.0	30.0		45.0	30.0	
Actuated g/C Ratio	0.39	0.26		0.39	0.26	0.45	0.39	0.26		0.39	0.26	
v/c Ratio	0.09	0.81		0.37	0.25	0.10	0.15	0.45		0.45	0.87	
Control Delay	18.9	52.0		30.7	34.9	3.3	23.6	32.3		26.9	59.3	

Lane Group	NBL	NBT	NBR	WBL	WBT	WBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0							
Total Delay	18.9	52.0		30.7	34.9	3.3	23.6	32.3		26.9	59.3				
LOS	B	D		C	C	A	C	C		C	E				
Approach Delay		48.3			26.1			30.7			48.3				
Approach LOS		D			C			C			D				
Stops (vph)	23	298		77	84	4	22	98		126	302				
Fuel Used(gal)	0	6		1	1	0	0	2		2	6				
CO Emissions (g/hr)	27	440		97	102	10	25	118		143	441				
NOx Emissions (g/hr)	5	86		19	20	2	5	23		28	86				
VOC Emissions (g/hr)	6	102		22	24	2	6	27		33	102				
Dilemma Vehicles (#)	0	0		0	0	0	0	0		0	0				

Intersection Summary

Area Type: Other
Cycle Length: 114
Actuated Cycle Length: 114
Offset: 72 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 41.2 Intersection LOS: D
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3:



Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	86	29	138	449	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	93	32	150	488	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	738	281	562	0	-	0
Stage 1	525	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.14	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.22	-	-	-
Pot Cap-1 Maneuver	369	717	1005	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	356	717	1005	-	-	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1005	-	666	-	-
HCM Lane V/C Ratio	0.031	-	0.152	-	-
HCM Control Delay (s)	8.7	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Appendix C:
Queues Analysis Results

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	374	124	120	56	44	197	175	338
v/c Ratio	0.05	0.78	0.35	0.24	0.07	0.11	0.41	0.35	0.70
Control Delay	18.4	49.6	28.9	34.7	1.7	20.5	29.9	23.9	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	49.6	28.9	34.7	1.7	20.5	29.9	23.9	46.0
Queue Length 50th (ft)	11	244	53	69	0	18	93	77	221
Queue Length 95th (ft)	25	#384	90	116	0	35	117	123	298
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	566	481	356	490	755	383	484	498	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.78	0.35	0.24	0.07	0.11	0.41	0.35	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	37	389	128	124	57	48	204	182	354
v/c Ratio	0.07	0.81	0.37	0.25	0.08	0.13	0.42	0.37	0.73
Control Delay	18.6	52.0	30.7	34.9	1.7	21.1	30.7	24.4	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	52.0	30.7	34.9	1.7	21.1	30.7	24.4	47.8
Queue Length 50th (ft)	15	257	55	72	0	20	98	80	234
Queue Length 95th (ft)	30	#408	93	119	0	38	123	128	314
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	562	481	344	490	765	371	484	492	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.81	0.37	0.25	0.08	0.13	0.42	0.37	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	389	128	124	74	48	217	217	422
v/c Ratio	0.09	0.81	0.37	0.25	0.10	0.15	0.45	0.45	0.87
Control Delay	18.9	52.0	30.7	34.9	3.3	23.6	32.3	26.9	59.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	52.0	30.7	34.9	3.3	23.6	32.3	26.9	59.3
Queue Length 50th (ft)	20	257	55	72	0	20	110	98	293
Queue Length 95th (ft)	38	#408	93	119	3	38	134	151	#412
Internal Link Dist (ft)		283		198			103		112
Turn Bay Length (ft)	100		250		250	225		225	
Base Capacity (vph)	562	481	344	490	755	319	483	481	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.81	0.37	0.25	0.10	0.15	0.45	0.45	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

LZL EQUITIES / DUNKIN DONUTS
301 ROUTE 32

1 / T-1 Proposed Front East Elevation
Scale: N.T.S.

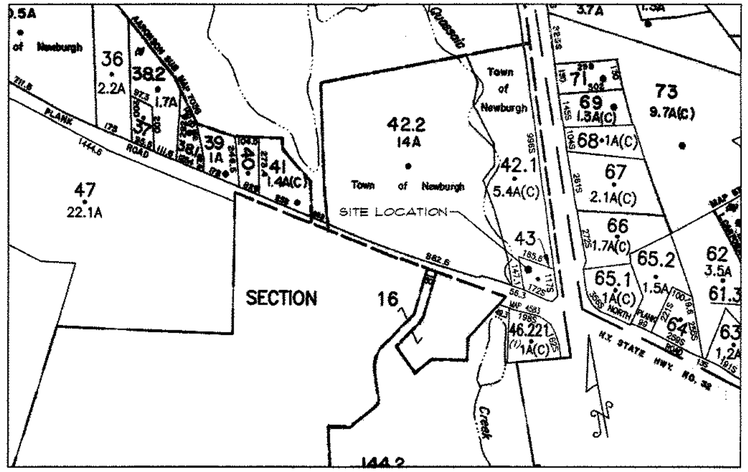
LIST OF DRAWINGS

Legend

- AREA NOT IN SCOPE OF WORK
- WATER CLOSET
- LAVATORY
- NEW DOOR
- EXISTING DOOR
- EXISTING WALL
- NEW CMU WALL
- NEW RATED SHAFT WALL
- NEW MASONRY WALL
- NEW STUD WALL
- CENTER LINE
- BEAM ABOVE
- PROPERTY BOUNDARY
- FENCE LINE
- SETBACK AREA
- FOOTING
- GRADE
- CALL OUT
- SECTION MARKER
- ELEVATION MARKER
- BACKFILL/UNDISTURBED EARTH
- EXIST EARTH
- TARGET ELEVATION
- CENTERLINE
- WALL ASSEMBLY MARKER
- DOOR SCHEDULE MARKER
- WINDOW SCHEDULE MARKER
- COLUMN LINE MARKER

Abbreviations

ADA	AMERICAN DISABILITIES ACT	HT.	HEIGHT
AFF	ABOVE FINISH FLOOR	INSTALL.	INSTALLATION
AHJ.	AUTHORITY HAVING JURISDICTION	INSUL.	INSULATION
ALUM	ALUMINUM	JSTS	JOISTS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	lb.	POUND
APPROX.	APPROXIMATE	LL.	LIVE LOAD
ASSY.	ASSEMBLY	LVL	LAMINATED VENEER LUMBER
BCNY	BUILDING CODE NEW YORK	MAX.	MAXIMUM
BD	BOARD	MIL.	MILLIMETER
BI.	BUILDING INSPECTOR	MIN.	MINIMUM
BLDG.	BUILDING	M.O.	MASONRY OPENING
B.O.	BOTTOM OF	MTL	METAL
BTM	BOTTOM	N/A	NOT APPLICABLE
CL	CLOSET	N.T.S.	NOT TO SCALE
CLNG	CEILING	O.C.	ON CENTER
C.O.	CARBON MONOXIDE DETECTOR	O.H.	OVER HEAD/ OVER HANG
CONC	CONCRETE	P.E.	PROFESSIONAL ENGINEER
CONT.	CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
COV.	COVERAGE	PSI	POUNDS PER SQUARE INCH
CMU	CONCRETE MASONRY UNIT	R.A.	REGISTERED ARCHITECT
D.H.	DOUBLE HUNG	REINF.	REINFORCING
DIA.	DIAMETER	REF.	REFRIGERATOR
D.L.	DEAD LOAD	R.O.	ROUGH OPENING
DTL	DETAIL	RY.	REAR YARD
ELEC.	ELECTRIC	SD	SMOKE DETECTOR
EQ.	EQUAL	SECT.	SECTION
EQUIP.	EQUIPMENT	SF.	SQUARE FEET
E.W.	EACH WAY	SS	STAINLESS STEEL
FDN	FOUNDATION	STL	STEEL
F.I.	FIRE INSPECTOR	STOR.	STORAGE
FIN.	FINISH	S.Y.	SIDE YARD
FLR	FLOOR	TBA	TO BE ANNOUNCED
FT.	FOOT	T.O.	TOP OF
FTG	FOOTING	T.W.S.	TYPICAL WALL SECTION
F.Y.	FRONT YARD	TYP	TYPICAL
GALV.	GALVANIZED	VERT.	VERTICAL
GC	GENERAL CONTRACTOR	V.I.F.	VERIFY IN FIELD
G.S.L.	GROUND SNOW LOAD	W/	WITH
GYP	GYPSUM	W.I.C.	WALK-IN CLOSET
HORIZ.	HORIZONTAL	W.W.M.	WELDED WIRE MESH



2 / T-1 Site Location Map
Scale: N.T.S.

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
354 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.0628
info@minutaarchitecture.com

REGISTERED ARCHITECT
JOSEPH J. MINUTA
028427-1
STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Michael Nafash
S.B.L. 14-1-43
301 Route 32
Newburgh, New York 12550

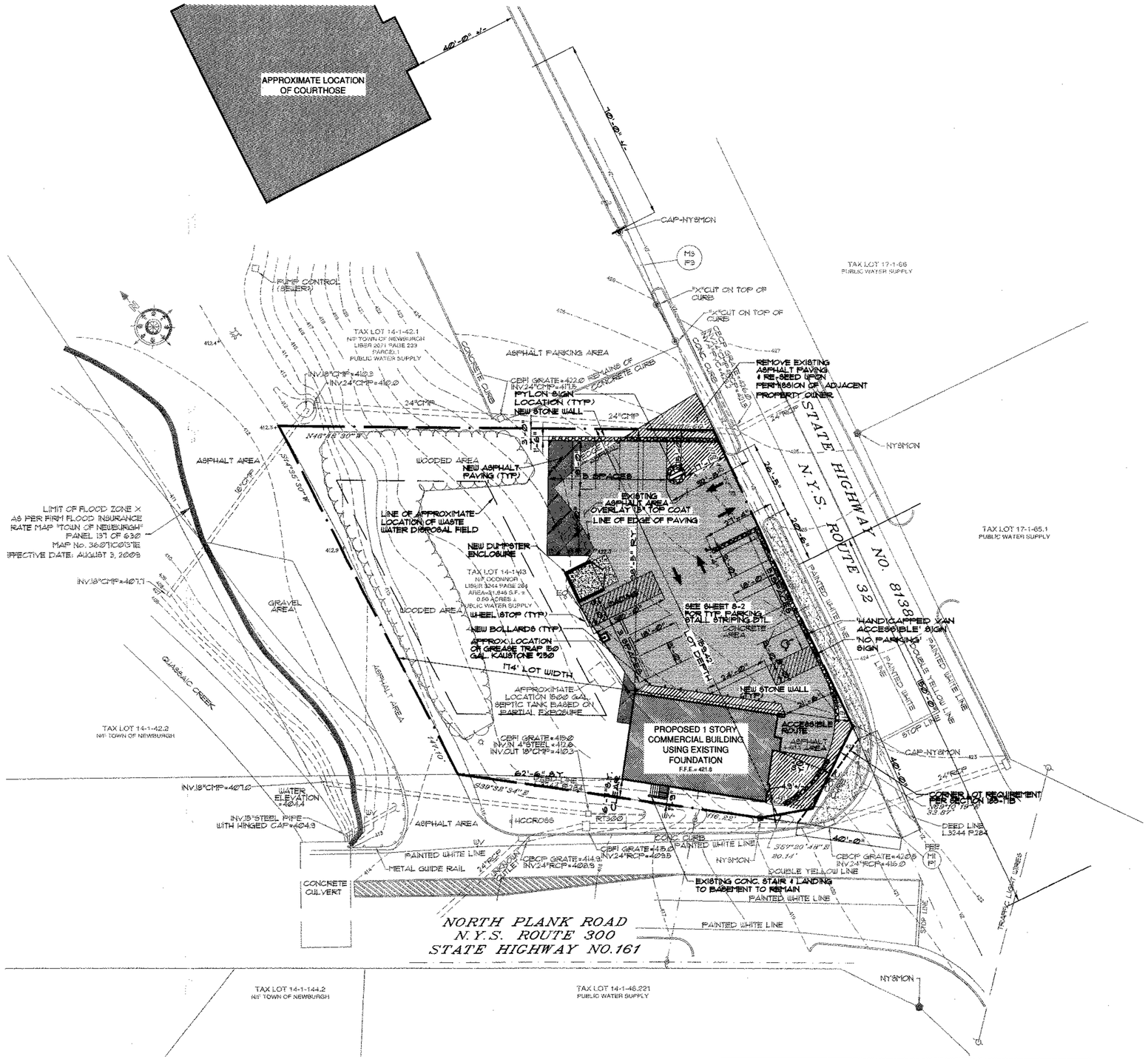
For Planning Board Review- Not For Construction

Date: 09.05.14
Revisions:

Drawn By: JL, LC

T-1

1 of 11



1 / S-1 PROPOSED SITE PLAN

Scale: 1" = 20'-0"

NOTE: INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A PROPERTY SURVEY PREPARED BY DARREN J. STRIDIRON, P.L.S. NYS LIC. # 050487 FOR MR. NAFASH DATED: DECEMBER 17, 2013

BULK TABLE REQUIREMENTS

ZONING INFORMATION		
	ZONE :	Business B DISTRICT
	Use :	Convenience store w/ or w/o gasoline filing station
	Permitted with:	Use Subject to Site Plan Review by the Planning Board

MINIMUM REQUIREMENTS

	Required	Existing	Proposed
Lot Area	20,000 SQ. FT.	21,946 SQ. FT +/-	21,946 SQ. FT
Lot Width	100 FT	174 FT +/-	174 FT
Lot Depth	125 FT	182.42 FT +/-	182.42 FT

YARD SETBACKS

	Required	Existing	Proposed
Front (NYS rte 32)	***60 FT	*21.5 FT +/-	*21.5 FT +/-
Front (NYS rte 300)	***60 FT	*4.9 FT +/-	**4.9 FT +/-
Rear	30 FT	62.6 FT +/-	62.5' FT +/-
Side	15 FT	100.5 FT +/-	98.5 FT +/-

MAXIMUM PERMITTED

	Permitted	Existing	Proposed
Habitable Floor Area Per Dwelling Unit	N/A	——	——
Dwelling Units Per Acre	N/A	——	——
Lot Building Coverage	50% 10,000 SQ FT	8.3% 1,822 SQ. FT +/-	8.2% 1,782 SQ. FT +/-
Building Height	35 FT	15 FT +/-	21.5 FT +/-
Lot Surface Coverage	80% 16,000 SQ FT	44.8% 9,858 SQ. FT +/-	44.8% 9,827.42 SQ. FT +/-

* INDICATES PRE-EXISTING NONCONFORMING CONDITION
** INDICATES VARIANCE REQ'D
*** EXCEPTIONS TO DISTRICT REGULATIONS 185-18:
(4.) ADDITIONAL YARD REQUIREMENTS:
(B.) FRONT YARDS ABUTTING ALL COUNTY AND STATE HIGHWAYS SHALL BE AT LEAST 60 FEET IN DEPTH, EXCEPT WHERE THE MAJORITY OF EXISTING BUILDINGS ON EITHER SIDE OF THE ROAD WITHIN 300 FEET FROM THE INTERSECTION OF THE NEAREST PROPERTY LINE AND STREET LINE ARE OF A LESSER AVERAGE DEPTH, IN SUCH CASE, THE FRONT YARD DEPTH SHALL BE 50 FEET OR THE AVERAGE OF ALL LOT DEPTHS WITHIN SAID 300 FEET, WHICHEVER IS GREATER. 60' OR 50'

PRIOR APPROVAL

185-18 EXCEPTIONS TABLE

(BASED ON GOOGLE EARTH, NOT FIELD VERIFIED)

SBL	BUILDING NAME	APPROX. SETBACK (FT)
14-1-42.1	TOWN OF NEWBURGH COURTHOUSE	40' +/-
35-3-1	MAGIE'S DELI	35' +/-
14-1-46.221	VILLA ITALIA	50' +/-
17-1-65.1	SUNOCO BUILDING	70' +/-
	SUNOCO GAS CANOPY STRUCTURE	20' +/-

PARKING REQUIREMENTS

	Required *	Existing	Proposed
Standard Stalls	11	13	12
Handicapped Stalls Van Accessible	1	1	1
Total Stalls	12	14	13

* PER § 185-13 (RETAIL STORE), ONE SPACE PER 150 SF OF GROSS LEASABLE FLOOR SPACE. (1,782 ÷ 150= 12 SPACES)

LEGEND

- EXISTING ASPHALT PAVING TO BE REMOVED AND RESEED
- NEW ASPHALT PAVING
- EXISTING ASPHALT TO RECIEVE OVERLAY 1.5" TOP COAT
- NEW 18" WIDE STONE WALL

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/19/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P. 845.565.0035 F. 845.565.6622
info@minutaarchitecture.com

REGISTERED ARCHITECT
JOSEPH J. MINUTA
028427-1
STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)
Mixed Use
501 Route 32
Newburgh, New York 12550

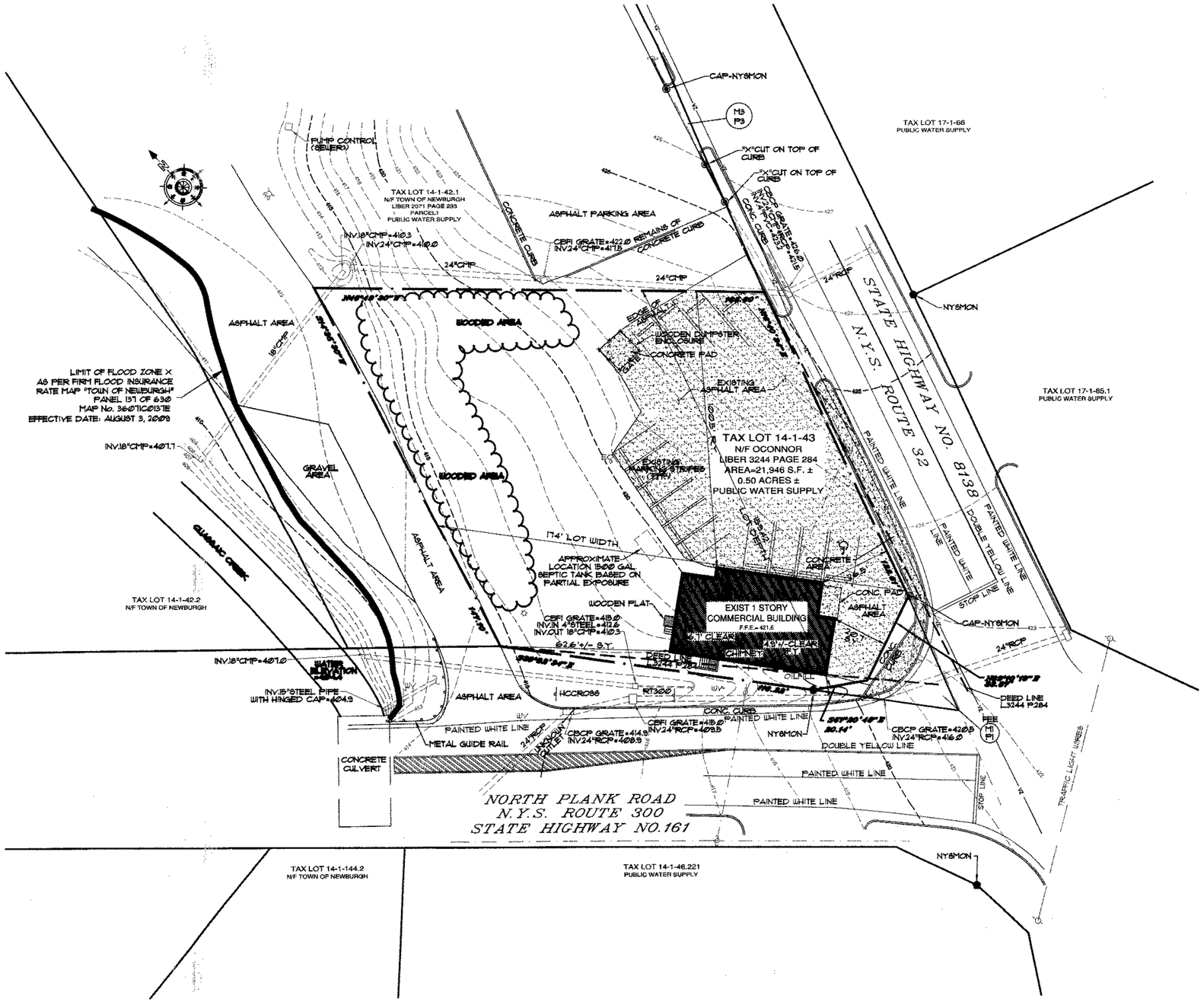
For Planning Board Review- Not For Construction

Date: 09.03.14
Revisions:

Drawn By: JL, LC

S-1

2 of 11



1 / S-2 Existing Site Plan
Scale: 1" = 20'-0"

NOTE: INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A PROPERTY SURVEY PREPARED BY DARREN J. STRIDIRON, P.L.S. NYS LIC. # 050487 FOR MR. NAFASH DATED: DECEMBER 17, 2013

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.6622
info@minutaarchitecture.com

REGISTERED ARCHITECT
JOSEPH J. MINUTA
028427-1
STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Michael Nafash
LZL Equities
3001 Route 9W
Newburgh, New York 12550

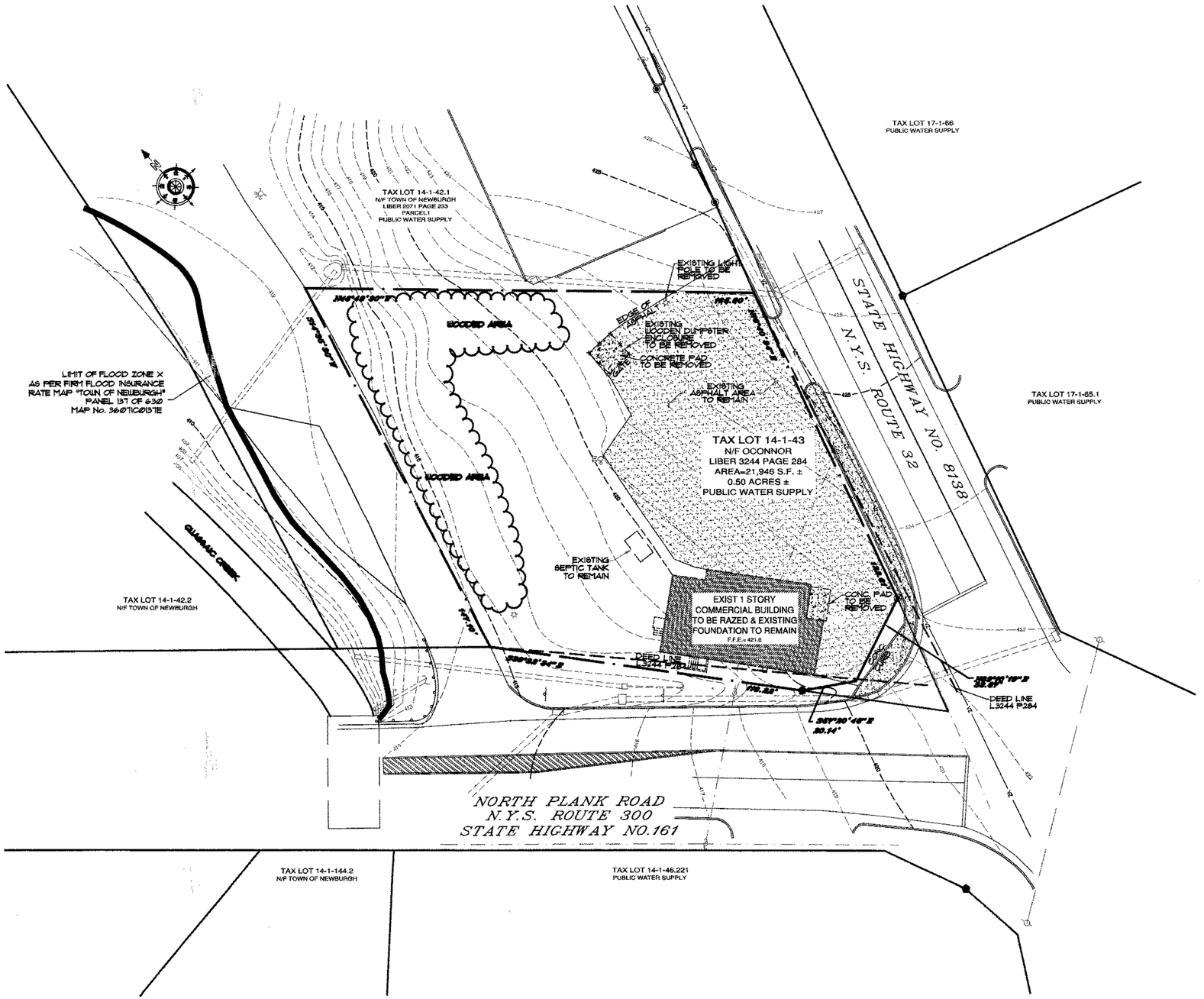
For Planning Board Review- Not For Construction

Date: 09.03.14
Revisions:

Drawn By: JL, LC

S-2

3 of 11



1 SD-1 Demolition Site Plan

Scale: 1" = 20'-0"

NOTE: INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A PROPERTY SURVEY PREPARED BY DARREN J. STRIDIRON, P.L.S. NYS LIC. # 050487 FOR MR. NAFASH DATED: DECEMBER 17, 2013

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P. 845.565.0055 F. 845.565.6622
info@minutaarchitecture.com

SEAL

REGISTERED ARCHITECT
JOSEPH J. MINUTA
026427-1
STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Michael Nafash
SBL: 14-1-43
353 Route 32
Newburgh, New York 12550

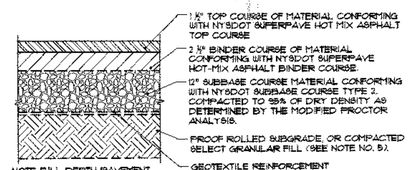
For Planning Board Review- Not For Construction

Date: 09.2014
Revisions:

Drawn By: JL LC

SD-1

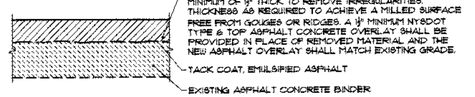
4 of 11



NOTE: FULL DEPTH PAVEMENT SECTION TO BE CONSTRUCTED IN NEWLY PAVED AREAS.

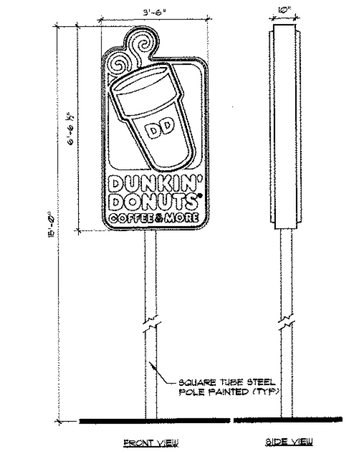
NOTES:
1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED MAY 1, 2008, AND ALL ADDENDA THERETO.
2. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 - SUBBASE COURSE OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS.
3. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400-HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 402-HOT MIX ASPHALT (HMA) PAVEMENTS.
4. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203-EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.

1 S-3 Typical New Pavement Section
Scale: 1" = 1'-0"

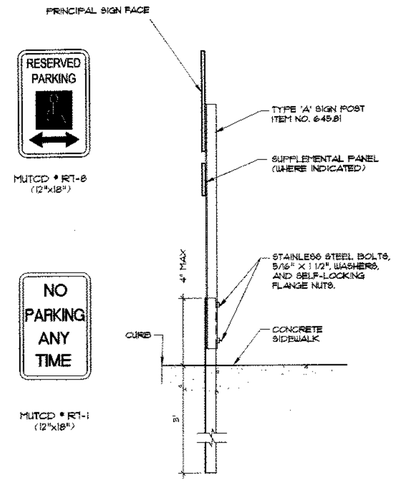


NOTES:
1. COLD MILLING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 490 - COLD MILLING OF THE NYSDOT STANDARD SPECIFICATIONS, CURRENT AS OF MAY 1, 2008.
2. MILLED SURFACES SHALL BE SWEPT CLEAN OF LOOSE MILLINGS AND CLEANED OF ALL FINES AND DUST.
3. ALL MATERIALS REMOVED DURING THE MILLING OPERATION MUST BE DISPOSED OF BY THE CONTRACTOR.
4. IF AREAS ARE ENCOUNTERED THAT ARE UNSUITABLE TO SUPPORT THE ASPHALT OVERLAY, THESE AREAS ARE TO BE BOXED OUT AND THE FULL PAVEMENT SECTION IS TO BE REMOVED. THE PAVEMENT SECTION IS TO BE REPLACED TO MATCH THE EXISTING SECTION WITH A MINIMUM OF A 1 ½" TOP COURSE AND 2 ½" BINDER AND ONLY 12" SUBBASE.
5. MILLED SURFACES TO BE OVERLAID WITH ASPHALT SHALL BE COVERED WITH A DENSE GRADED ASPHALT COURSE WITHIN A 48 HOUR PERIOD OF THE MILLING OPERATION.
6. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
7. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED MAY 1, 2008, AND ALL ADDENDA THERETO.
8. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400-HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 403-HOT MIX ASPHALT (HMA) PAVEMENTS FOR MUNICIPALITIES.

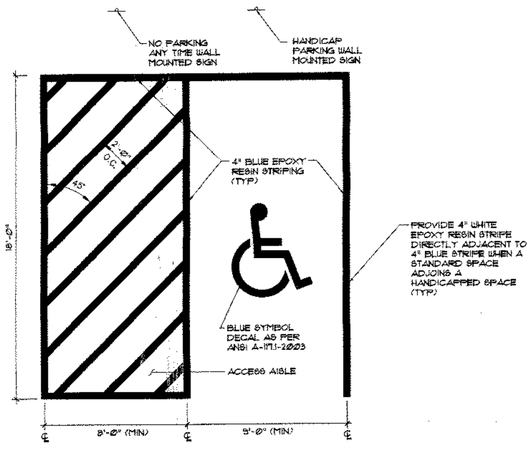
2 S-3 Typical Pavement Overlay Section
Scale: 1" = 1'-0"



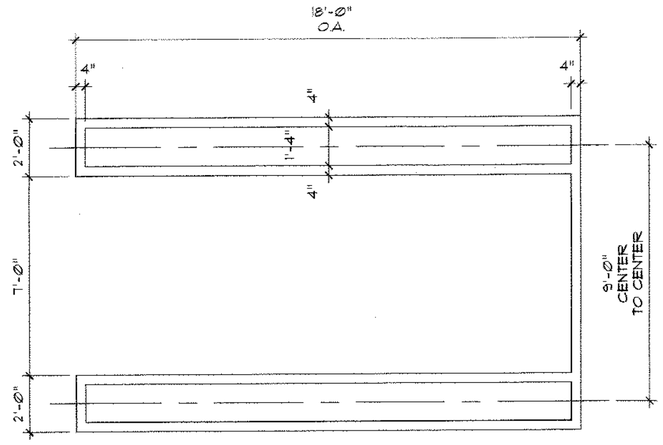
3 S-3 Typ. Monument Sign Detail
Scale: N.T.S.



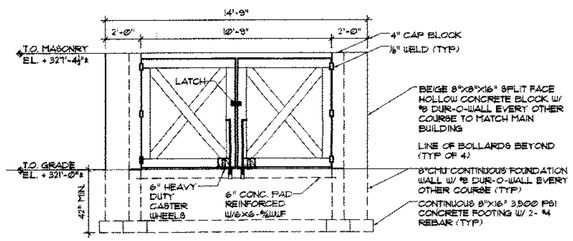
4 S-3 Typical Sign Detail
Scale: N.T.S.

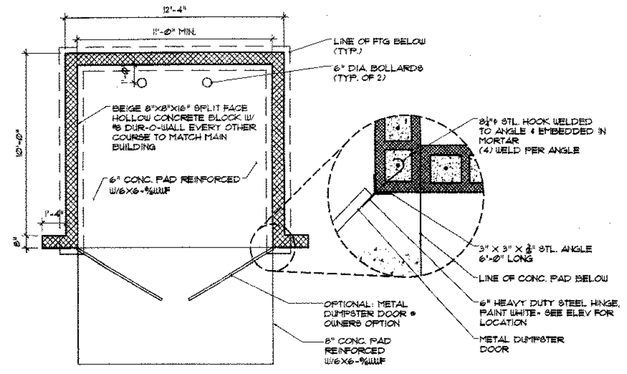


5 S-3 Typ. Handicap Parking Dtl. ANSI A117.1 2010 COMPLIANT
Scale: N.T.S.

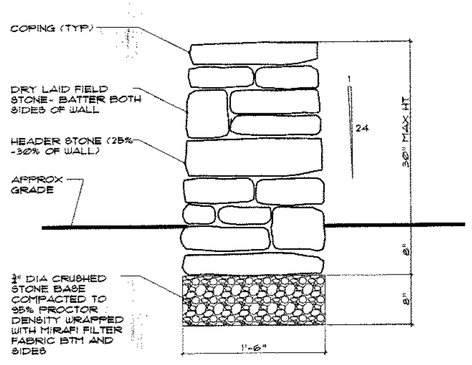


6 S-3 Typical Parking Stall Striping Detail
Scale: 1/4" = 1'-0"

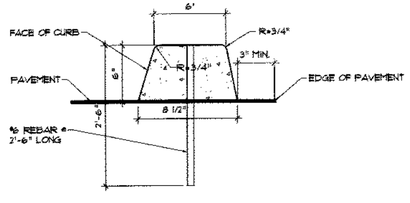




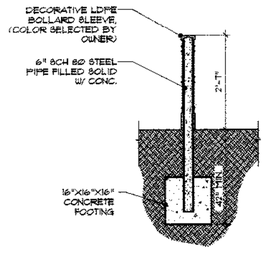
10 S-3 Typical Dumpster Detail
Scale: 1/4" = 1'-0"



7 S-3 Typical Fieldstone Wall Detail
Scale: N.T.S.



8 S-3 Typical Wheel Stop Detail
Scale: 1/2" = 1'-0"



9 S-3 Typical Bollard Detail
Scale: 1/2" = 1'-0"

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
334 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0085 F: 845.565.6622
info@minutaarchitecture.com

SEAL

REGISTERED ARCHITECT JOSEPH J. MINUTA 028427-1 STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)
Michael Nolan
S-B-L: 14-1-43
301 Route 32
Newburgh, New York 12550

For Planning Board Review- Not For Construction

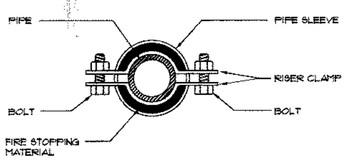
Date: 09.03.14
Revisions:

Drawn By: JL LC

S-3
5 of 11

SPRINKLER NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERATIVE AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM, INCLUDING MAIN VALVES AND TIE-INS WITH FIRE ALARM SYSTEM AS NECESSARY TO COMPLY WITH NFPA 13 SPRINKLER SYSTEM.
2. ALL SPRINKLER SYSTEM WORK SHALL BE INSTALLED IN ACCORDANCE WITH NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, NYS OFPC GUIDELINES, NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 13, AND ALL APPLICABLE LOCAL CODES.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPING, VALVES, SPRINKLER HEADS, TESTS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE SPRINKLER SYSTEM COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS.
4. CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL PIPING, SPRINKLER HEADS AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID CONFLICTS.
5. CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH HILTI INTUMESCENT FIRE STOP MATERIALS TO MAINTAIN FIRE AND SMOKE RATINGS.
6. CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER, AND AGREES TO REPLACE DEFECTIVE WORK AT NO ADDITIONAL COST TO OWNER DURING THE GUARANTEE PERIOD.
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ALL EQUIPMENT, SPRINKLER HEADS AND PIPING WITH HYDRAULIC CALCULATIONS TO ENGINEER AND LOCAL FIRE INSPECTOR FOR APPROVAL. HYDRAULIC CALCULATIONS SHALL BE BASED ON RESIDUAL FLOW TEST AT SITE. DEMONSTRATE NEW SPRINKLER SYSTEM TO OWNER AND REVIEW MAINTENANCE PROCEDURES. SUBMIT (2) EQUIPMENT MANUALS TO ENGINEERS.
8. PROVIDE CHROME PLATED ESCUTCHEON PLATES WHERE PIPES PASS THROUGH WALL, FLOORS, AND CEILINGS IN FINISHED AREAS.
9. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL PIPING IN FINISHED AREAS TO ENSURE CONCEALMENT OF ALL PIPING IN WALLS, FLOORS AND CEILINGS.
10. CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTIONS FEES REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ARCHITECT.
11. CONTRACTOR IS RESPONSIBLE FOR CUTTING, PATCHING AND PAINTING ASSOCIATED WITH SPRINKLER WORK. SEE ARCHITECT'S SPECIFICATIONS AND GENERAL CONDITIONS FOR APPROVED MATERIALS AND METHODS.
12. EXACT LOCATION OF FIRE DEPARTMENT CONNECTION AND SPRINKLER SYSTEM TEST/DRAIN SHALL BE APPROVED BY LOCAL FIRE DEPARTMENT CHIEF AND LOCAL FIRE INSPECTOR PRIOR TO INSTALLATION.
13. CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, TRENCHING, BACKFILL, COMPACTION AND RESURFACING ASSOCIATED SPRINKLER WORK. SEE ARCHITECT'S SPECIFICATIONS AND GENERAL CONDITIONS FOR APPROVED MATERIALS AND METHODS.
14. CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OBSERVE ALL CLEARANCES.
15. ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH N.E.C. ELECTRICAL CODE AND ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER, 120V/1 - MINIMUM CONDUCTOR SIZE # 12, 24V MINIMUM CONDUCTOR SIZE # 18. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION METHODS.
16. CONTRACTOR SHALL OBSERVE CLEARANCES TO OBSTRUCTIONS.
17. CONTRACTOR SHALL CHAIN CONTROL VALVE IN THE OPEN POSITION.
18. CONTRACTOR SHALL COORDINATE POWER CONNECTION TYPE AND LOCATION OF DRY PIPE SPRINKLER SYSTEM AIR COMPRESSOR WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLING AIR COMPRESSOR.
19. SPRINKLER CONTRACTOR SHALL PAY FOR DEDICATED POWER CONNECTION.
20. CONTRACTOR SHALL FURNISH: SHOP DRAWINGS INDICATING LOCATIONS OF ALL EQUIPMENT AND DEVICES INSTALLED IN CEILINGS. THESE DRAWINGS SHALL BE APPROVED BY ALL CONTRACTORS PRIOR TO INSTALLING ANY EQUIPMENT IN CEILINGS. CONTRACTORS THAT DO NOT FOLLOW SHOP DRAWINGS SHALL BEAR ALL COSTS FOR RELOCATING DEVICES AND EQUIPMENT IN CONFLICT WITH OTHER EQUIPMENT.
21. CONTRACTOR SHALL FURNISH & INSTALL KNOX BOX AND EXTERIOR INDICATING LIGHTS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.



3 / S-6 **Support / Anchor For Pipe Risers**
Scale: N.T.S.

SPRINKLER SYSTEM REQUIREMENTS

OCCUPANCY CLASSIFICATIONS

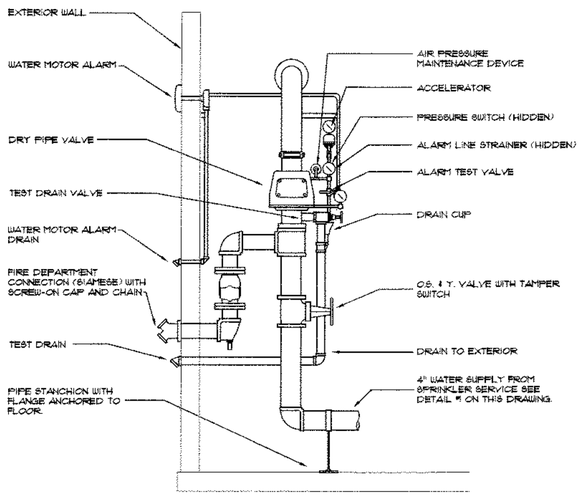
1. NFPA 13
   LIGHT HAZARD OCCUPANCY - RESTAURANT / ATTIC AREAS
   ORDINARY GROUP I - STORAGE / KITCHEN PREP AREAS / MECH. ROOMS

DRY SPRINKLER SERVICE REQUIREMENTS

1. NFPA 13 LIGHT HAZARD:
   A. MINIMUM WATER SUPPLY: (5000 SQFT. x .10 GPM/SQFT. x 1.3 (DRY.) x 1.3 (SLOPE) 254 GPM
   B. TOTAL COMBINED INSIDE AND OUTSIDE HOSE STREAMS. 100 GPM
   MINIMUM 354 GPM

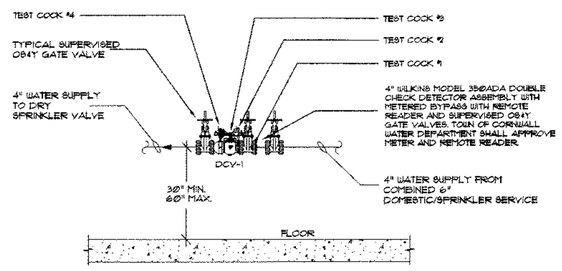
FLOW TEST ON MUNICIPAL SYSTEM BY SPRINKLER CONTRACTOR. SPRINKLER SYSTEM HYDRAULIC CALCULATIONS SHALL BE BASED ON FLOW TEST.

FINAL FLOW BASED ON APPROVED HYDRAULIC CALCULATIONS



NOTE: LOCATE DRY PIPE SYSTEM VALVE IN BOILER ROOM.

1 / S-6 **Dry Pipe System Schematic**
Scale: N.T.S.



NOTE: SUPPORT PIPING AND DOUBLE CHECK VALVE BACKFLOW PREVENTER OFF FLOOR WITH PIPE STANCHIONS AND ANCHOR TO FLOOR.

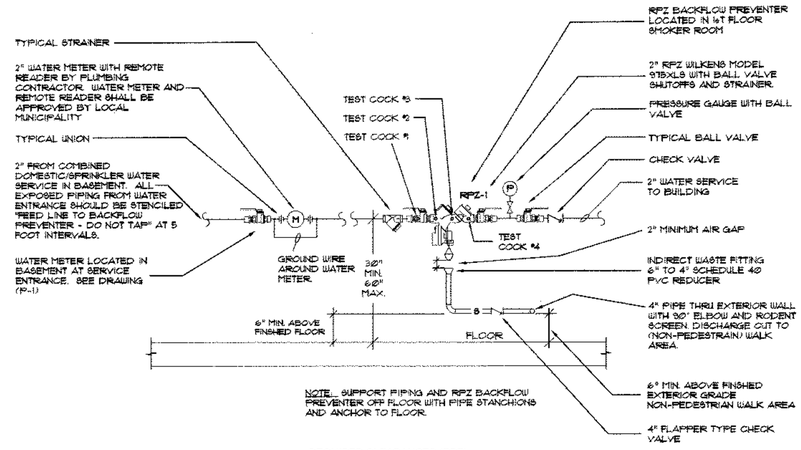
REQUIRED CLEARANCES (DOUBLE CHECKVALVE)

1. FRONT OF CHECKVALVE (2'-6") MINIMUM
2. BEHIND DOUBLE CHECKVALVE (12") MINIMUM
3. DISCHARGE PORT (1'-6") MINIMUM ABOVE FINISHED FLOOR
4. BACKFLOW PREVENTER MINIMUM (2'-6") ABOVE FINISHED FLOOR
5. BACKFLOW PREVENTER MAXIMUM (5'-0") ABOVE FINISHED FLOOR
6. MINIMUM (12") CLEAR ABOVE BACKFLOW PREVENTER

2 / S-6 **Sprinkler System Equipment**
Scale: N.T.S.

SPRINKLER SYSTEM TESTS

1. HYDROSTATIC - 200 PSI FOR 2 HOURS WITHOUT LOSS OF PRESSURE.
2. DRY PIPE AND DOUBLE INTERLOCK SYSTEMS AIR TEST - IN ADDITION TO HYDROSTATIC TEST, AIR PRESSURE LEAKAGE TEST AT 40 PSI FOR 24 HOURS WITH LESS THAN 1½ PSI LOSS.
3. SYSTEM OPERATIONAL TESTS - WATER FLOW DETECTING DEVICES
4. MAIN DRAIN VALVE - STATIC AND RESIDUAL PRESSURES.
5. CONTRACTOR SHALL PERFORM ALL SPRINKLER SYSTEM TESTS REQUIRED BY LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION.
6. ALL TESTS WITNESSED BY LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION. SUBMIT REPORT ON ALL TESTS TO LOCAL FIRE INSPECTOR AND ENGINEER FOR APPROVAL.



NOTE: SUPPORT PIPING AND RPZ BACKFLOW PREVENTER OFF FLOOR WITH PIPE STANCHIONS AND ANCHOR TO FLOOR.

REQUIRED CLEARANCES (RPZ)

1. FRONT OF RPZ (2'-6") MINIMUM
2. BEHIND RPZ (8") MINIMUM
3. DISCHARGE PORT (1'-6") MINIMUM ABOVE FINISHED FLOOR
4. BACKFLOW PREVENTER MINIMUM (2'-6") ABOVE FINISHED FLOOR
5. BACKFLOW PREVENTER MAXIMUM (5'-0") ABOVE FINISHED FLOOR
6. ABOVE BACKFLOW PREVENTER MINIMUM (12")

3 / S-5 **Water Service Detail**
Scale: N.T.S.

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P. 845.565.0055 F. 845.565.6622
info@minutaarchitecture.com

SEAL

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)
S.B.L. 14-1-43
201 Route 32
Newburgh, New York 12550
Michael Nafash

For Planning Board Review- Not For Construction

Date: 09.03.14
Revisions:

Drawn By: JL, LC

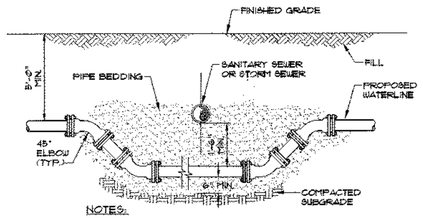
S-4
6 of 11

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

DATE 3/9/15

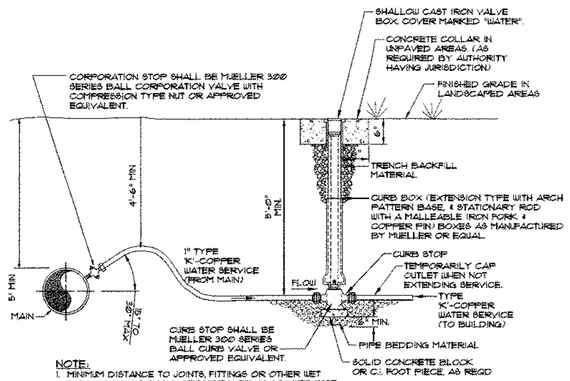
PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43



NOTES:
1. WHEN THE ELEVATION OF THE SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATERLINE SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION.

1 S-7 Waterline Offset Detail

Scale: N.T.S.



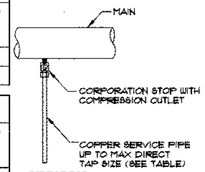
NOTE:
1. MINIMUM DISTANCE TO JOINTS, FITTINGS OR OTHER WET TAPS OR STOPS SHALL BE MAINTAINED IN ACCORDANCE WITH REGULATORY AGENCY.

2 S-7 Copper Water Service

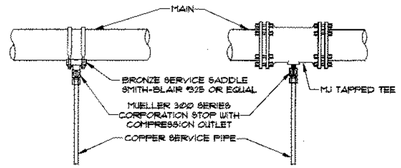
Scale: N.T.S.

MAX DIRECT TAP SIZE FOR DIP			
PIPE SIZE (INCHES)	THICKNESS CLASS	WALL THICKNESS (INCHES)	MAX TAP SIZE (INCHES)
4"	52	0.29	3/4
6"	52	0.31	1

MAX DIRECT TAP SIZE FOR DIP			
PIPE SIZE (INCHES)	PRESSURE CLASS	WALL THICKNESS (INCHES)	MAX TAP SIZE (INCHES)
4"	350	0.25	3/4
6"	350	0.25	1



DIRECT TAP

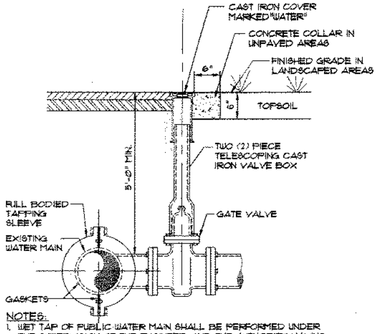


IF SERVICE TAP SIZE EXCEEDS LIMIT FOR DIRECT TAP AS SHOWN IN TABLE USE SERVICE SADDLE OR MJ TAPPED TEE - MAX SIZE OF CORPORATION AND COPPER SERVICE IS 2"

SERVICE SADDLE TAPPED TEE

3 S-7 Typical Copper Water Service Taps

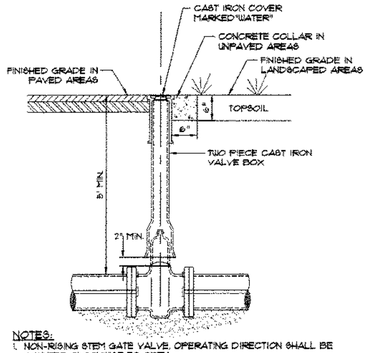
Scale: N.T.S.



NOTES:
1. WET TAP OF PUBLIC WATER MAIN SHALL BE PERFORMED UNDER THE SUPERVISION OF THE ENGINEER, AND THE AUTHORITY HAVING JURISDICTION.
2. TAPPING SLEEVE AND VALVE SUPPORT SHALL BE COORDINATED WITH THE ENGINEER TO SUIT FIELD CONDITIONS.
3. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET.
4. VALVE OPERATING DIRECTION SHALL BE COUNTERCLOCKWISE TO OPEN (TURNING LEFT).
5. TAPPING SLEEVE SHALL BE SELECTED TO FIT EXISTING PIPE MATERIAL (C.I., D.I., A.C.) AND OUTSIDE DIAMETERS.
6. THRUST BLOCK IS REQUIRED WHERE THE BRANCH OF THE TAPPING SLEEVE DOES NOT HAVE RESTRAINED JOINT.
7. TAPPING SLEEVE, VALVE & VALVE BOX SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS & AS MANUFACTURED BY (MUELLER, CLOW OR WATROUS) OR APPROVED EQUIVALENT.

4 S-7 Tapping Sleeve & Valve Detail

Scale: N.T.S.



NOTES:
1. NON-RISING STEM GATE VALVE, OPERATING DIRECTION SHALL BE COUNTER CLOCKWISE TO OPEN.
2. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET.
3. IF VALVE IS TO BE RODDED, PROVIDE VALVE WITH RODDING FLANGES OR EYEBOLTS. TWO (2) 3/4"ø GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 180° SPACING SHALL BE USED FOR RODDING VALVES.
4. DIRECT BURY VALVE SHALL BE MODEL A-2360 RESILIENT WEDGE GATE VALVE WITH MECHANICAL JOINT ENDS AS MANUFACTURED BY MUELLER CO. OR APPROVED EQUIVALENT.

5 S-7 Typical Gate Valve Detail

Scale: N.T.S.

WATER

1. CONSTRUCTION OF POTABLE WATER UTILITIES AND CONNECTION TO THE TOWN OF NEWBURGH WATER SYSTEM REQUIRES A PERMIT FROM THE TOWN OF NEWBURGH WATER DEPARTMENT. ALL REQUIREMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE NEW YORK STATE DEPARTMENT OF HEALTH AND THE TOWN OF NEWBURGH.
2. ALL WATER SERVICE LINES FOUR (4) INCHES AND LARGER IN DIAMETER SHALL BE CEMENT LINED, CLASS 52, DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51-91 OR LATER REVISION FOR DUCTILE IRON PIPE JOINTS SHALL BE EITHER PUSH-ON OR MECHANICAL JOINT AS REQUIRED.
3. THRUST RESTRAINT OF THE PIPE SHALL BE THROUGH THE USE OF JOINT RESTRAINT. THRUST BLOCKS ARE NOT ACCEPTABLE. JOINT RESTRAINT SHALL BE THROUGH THE USE OF MECHANICAL JOINT PIPE WITH RETAINER GLANDS FOR JOINT RESTRAINT. RETAINER GLANDS SHALL BE EBBIA IRON MEGALUG SERIES 1100 OR APPROVED EQUAL. THE USE OF A MANUFACTURED RESTRAINED JOINT PIPE IS ACCEPTABLE WITH PRIOR APPROVAL OF THE WATER DEPARTMENT.
4. ALL FITTINGS SHALL BE CAST IRON OR DUCTILE IRON, MECHANICAL JOINT, CLASS 250 AND CONFORM TO ANSI/AWWA C110/A21.10-87 OR LATEST REVISION FOR DUCTILE AND GRAY IRON FITTINGS OR ANSI/AWWA C153/A21.53-94 FOR LATEST REVISION DUCTILE IRON COMPACT FITTINGS.
5. ALL VALVES SHALL BE RESILIENT WEDGE, MECHANICAL JOINT GATE VALVES CONFORMING TO ANSI/AWWA C509 OR LATEST REVISION SUCH AS MUELLER A-2360-23 OR APPROVED EQUAL. ALL GATE VALVES SHALL OPEN LEFT (COUNTER CLOCKWISE).
6. TAPPING SLEEVE SHALL BE MECHANICAL JOINT SUCH AS MUELLER H-615 OR EQUAL. TAPPING VALVE SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 SUCH AS MUELLER MODEL T-2360-19 OR APPROVED EQUAL. ALL TAPPING SLEEVES AND VALVES SHALL BE TESTED TO 150 PSI MINIMUM TESTING OF THE TAPPING SLEEVE AND VALVE MUST BE WITNESSED AND ACCEPTED BY THE TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO CUTTING INTO THE PIPE.
7. ALL WATER SERVICE LINES TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING. CORPORATION STOP SHALL BE MUELLER 300 SERIES BALL CORPORATION VALVE WITH COMPRESSION TYPE NUT OR APPROVED EQUIVALENT.
8. ALL PIPE INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF NEWBURGH WATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AS REQUIRED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT.
9. THE WATER MAIN SHALL BE TESTED, DISINFECTED AND FLUSHED IN ACCORDANCE WITH THE TOWN OF NEWBURGH REQUIREMENTS. ALL TESTING, DISINFECTION AND FLUSHING SHALL BE COORDINATED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT. PRIOR TO PUTTING THE WATER MAIN IN SERVICE, SATISFACTORY SANITARY RESULTS FROM A CERTIFIED LAB MUST BE SUBMITTED TO THE TOWN OF NEWBURGH WATER DEPARTMENT. THE TEST SAMPLES MUST BE COLLECTED BY A REPRESENTATIVE OF THE TESTING LABORATORY AND WITNESSED BY THE WATER DEPARTMENT.
10. PRESSURE LEAKAGE TESTS ARE REQUIRED AND SHALL BE DONE IN ACCORDANCE WITH AWWA C-600 STANDARDS.
11. DISINFECTION OF ALL NEW WORK SHALL BE DONE IN ACCORDANCE WITH AWWA C-651 - YEAR OF LATEST REVISION STANDARDS.
12. THE SERVICE CONNECTION SHALL BE INSTALLED AT A CONTINUOUS GRADE WITH NO ABRUPT HIGH POINTS OR LOW POINTS.
13. THE WATER LINE MAY BE DEFLECTED WITHIN PIPE SPECIFICATIONS OR LAID DEEPER IN AREAS WHERE CROSSINGS WITH THE SANITARY OR STORM WATER LINES OCCUR, TO ACHIEVE THE REQUIRED 15' VERTICAL SEPARATION DISTANCE AND 10' HORIZONTAL SEPARATION DISTANCE. REFER TO THE SANITARY/STORM SEWER-WATER LINE SEPARATION DETAIL, SHEET SD2.
14. ALL FACILITIES SHALL BE CONSTRUCTED WITH WATER CONSERVING PLUMBING FIXTURES.
15. BUILDING SHALL BE EQUIPPED WITH BACKFLOW PREVENTORS. BACK FLOW PREVENTORS SHALL BE REVIEWED AND APPROVED BY TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO INSTALLATION.
16. PROPOSED WATER METER TO BE LOCATED WITHIN THE BUILDING AND SHALL BE APPROVED BY THE TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO INSTALLATION.
17. WATERLINE SHALL NOT BE PLACED INTO SERVICE UNTIL SO AUTHORIZED BY THE TOWN OF NEWBURGH WATER DEPARTMENT.

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.6622
info@minutaarchitecture.com

SEAL

REGISTERED ARCHITECT JOSEPH J. MINUTA 028427-1 STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Mallad Nafash
S-B-L: 14-1-43
301 Route 32
Newburgh, New York 12550

For Planning Board Review- Not For Construction

Date: 09.03.14

Revisions:

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

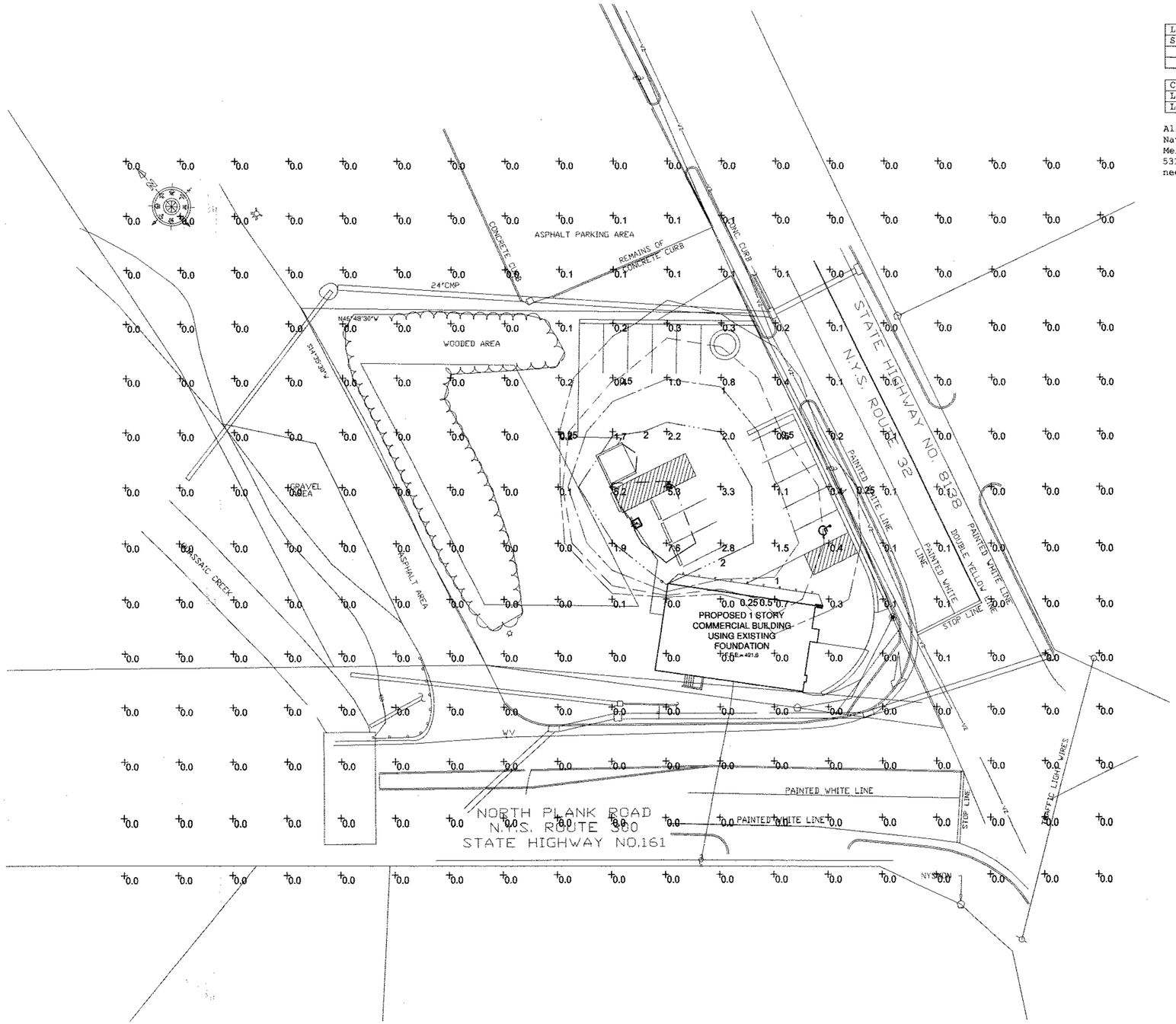
3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

Drawn By: JL, LC

S-5

7 of 11



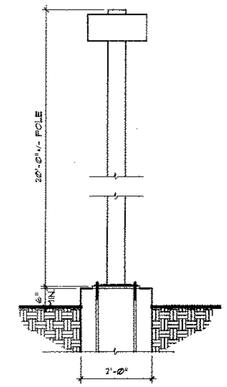
1 / L-1 Proposed Site Lighting Plan

Scale: 1" = 20'-0"

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊡	1	S4H	SINGLE	37000	0.800	SL350-PMH-DB-4-F-MT-LAMP-HSS

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LOT_Planar	Illuminance	Fc	0.2	7.6	0.0	N/A	N/A

All lighting fixtures are to be provided as specified through an established National Account Program with Villa Lighting Supply. Please contact Melanie Hurley,(National Accounts Dept.)800-325-0963(x462). Fax-314-531-8720. Pricing has been pre-negotiated and product is available to ship as needed at Villa Lighting Supply's Distribution Center in St. Louis, Mo.



2 / L-1 Typical Site Lighting & Post Detail

Scale: 1/2" = 1'-0"

PHOTOMETRIC CONTOUR LEGEND
5.0 FC
2.0 FC
1.0 FC
0.5 FC
0.25 FC
0.1 FC

SITE LIGHTING CRITERIA

1. FIXTURES SHALL BE EITHER 350W PULSE START METAL HALIDE (FULL CUT-OFF FIXTURES WITH SEGMENTED OPTICS AND VERTICAL BURN LAMPS). ENTIRE OPTICAL TRAIN IS FIELD ROTATE ABLE IN 90 DEG. INCREMENTS WITHOUT THE USE OF TOOLS OR 400W METAL HALIDE ALUMINUM HOUSING WITH ONE PIECE TEMPERED GLASS LENS - (2) CAPTIVE THUMB SCREWS THAT DISENGAGE THE LENS ASSEMBLY FROM HOUSING WITHOUT THE USE OF TOOLS. LENS WILL BE FLAT 3/16" CLEAR TEMPERED GLASS.
2. POLES ARE TO SQUARE STEEL, FINISHED IN A DARK BRONZE COLOR AND TO BE MOUNTED AT 20' OR 25' IN HEIGHT. THE POLE SHALL BE FURNISHED WITH (4) GALVANIZED ANCHOR BOLTS, NUTS & WASHERS, METAL TEMPLATE, HAND HOLE AND BASE COVER. VERIFY DIMENSIONS CONFORM TO ALL LOCAL CODE REQUIREMENTS AND RESTRICTIONS BEFORE PLACING ORDER.
3. UTILIZING POLE AND BUILDING LIGHTING, OVERALL MINIMUM SITE LIGHTING SHOULD BE 3-5 FOOTCANDLES. CIRCULATION AREAS, SIDEWALKS, DRIVE-THRU LANES AND LANDSCAPING SHOULD BE HIGHLIGHTED. SHARP CUT-OFFS (IDEALLY 1/2 F.C.) AT THE PROPERTY LINES NEED TO BE MAINTAINED.
4. THE DRIVE-THRU LANES SHOULD MAINTAIN 3-5 FOOTCANDLES THROUGHOUT WITH A MAXIMUM OF .5 FC AT THE BACK PROPERTY LINE. WALL PACKS SHALL BE 175W MH FULL CUT-OFF WITH SEGMENTED OPTICS; SOLID FRONT AND MEDIUM THROW LIGHT DISTRIBUTION. THESE SHOULD BE MOUNTED ON THE BUILDING @ 12-15' ABOVE GRADE.

NOTE: INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A PROPERTY SURVEY PREPARED BY DARREN J. STRIDIRON, P.L.S. NYS LIC. # 050481 FOR MR. NAFASH DATED: DECEMBER 17, 2013

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P. 845.565.0055 F. 845.565.5622
info@minutaarchitecture.com

REGISTERED ARCHITECT
JOSEPH J. MINUTA
026427-1
STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)
Michaud Nafash
S-B-L: 14-1-43
301 Route 32
Newburgh, New York 12550

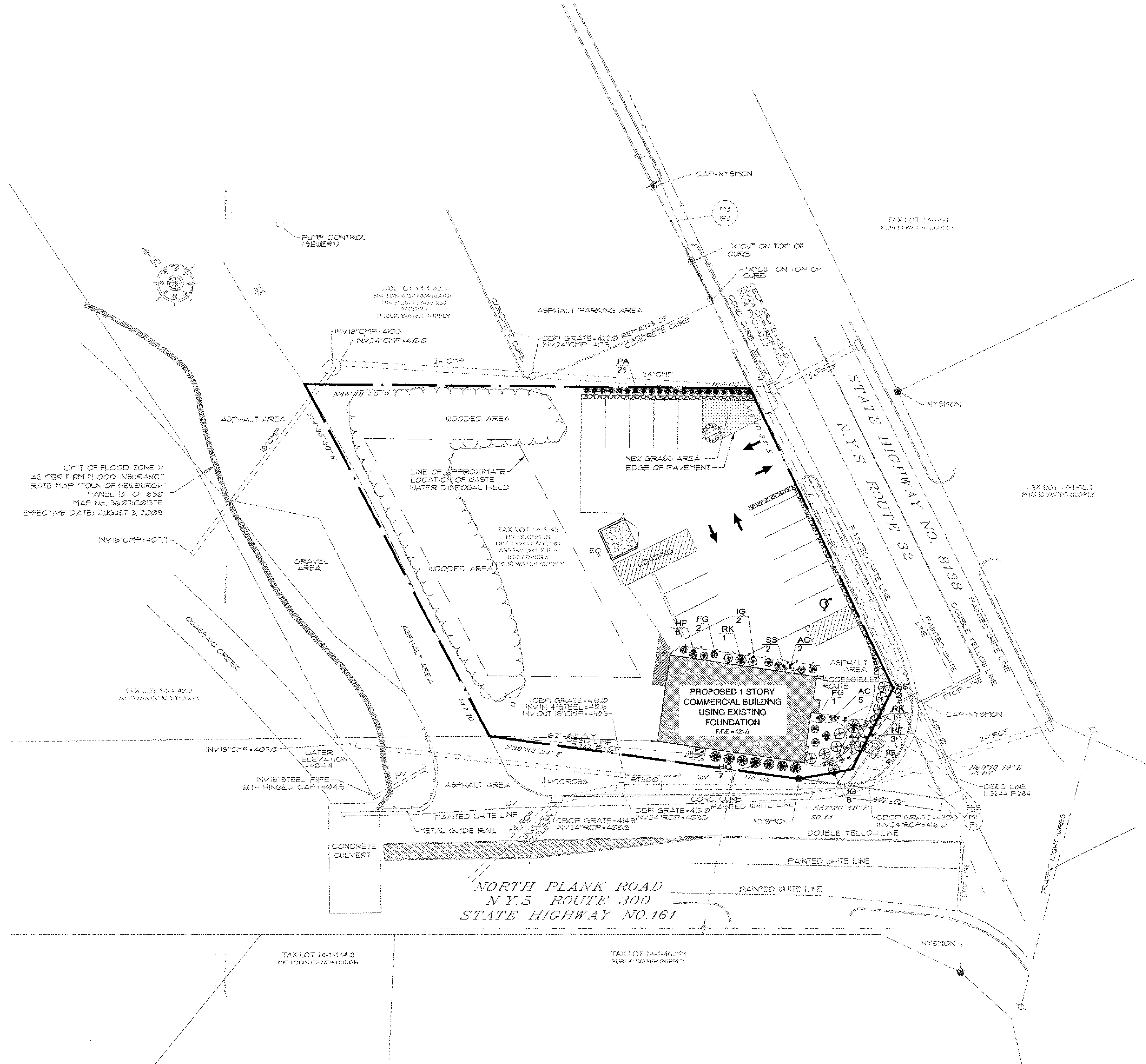
For Planning Board Review- Not For Construction

Date: 09.03.14
Revisions:

Drawn By: JL LC

L-1

8 of 11



NOTE: INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A PROPERTY SURVEY PREPARED BY DARREN J. STRIDIRON, P.L.S. NYS LIC. # 050481 FOR MR. NAFASH DATED: DECEMBER 17, 2013

1 / LS-1 Proposed Landscape Plan
Scale: 1" = 20'-0"

LANDSCAPING LEGEND

SHRUBS

SYM	KEY	IMAGE	BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	NOTES
	HQ		HYDRANGEA QUERCIFOLIA	HYDRANGEA, SNOW QUEEN	AS SHOWN	5 GAL.	AS SHOWN, 30"-60" APART	-
	RK		RHODODENDRON x KOSTERANUM	AZALEAS MOLLIS HYBRID, ORANGE	AS SHOWN	3 GAL.	AS SHOWN, 36"-48" APART	-
	IG		ILEX GLABRA	INKBERRY, NORDIC	AS SHOWN	5 GAL.	AS SHOWN, 36"-48" APART	-
	RA		RIBES ALPINUM	DWARF ALPINE CURRANT, GREEN MOUND	AS SHOWN	2 GAL.	AS SHOWN, 36"-48" APART	-
	HF		HOSTA FRANCEE	HOSTA, FRANCEE	AS SHOWN	2 GAL.	AS SHOWN, 36"-48" APART	-
	PA		PENNISETUM ALOPECUROIDES	FOUNTAIN GRASS	AS SHOWN	2 GAL.	AS SHOWN, 24"-36" APART	-
	FG		FOTHERGILLA GARDENII	DWARF WITCH ALDER	AS SHOWN	3 GAL.	AS SHOWN, 36"-48" APART	-
	MP		MYRICA PENSYLVANIA	NORTHERN BAYBERRY	AS SHOWN	30" HGT. AND WIDTH	48" MAX	-
	SS		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM GRASS	AS SHOWN	1 GAL.	AS SHOWN, 12"-18" APART	GRASS TO BE CUT BACK YEARLY IN SPRING
	AC		AQUILEGIA CANADENSIS	WILD COLUMBINE, CORBETT	AS SHOWN	PLUGS	AS SHOWN, 16"-18" APART	-

MINUTA ARCHITECTURE
554 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.8622
info@minutaarchitecture.com

REGISTERED ARCHITECT · JOSEPH J. MINUTA · 026427-1 · STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Michael Nafash
S-B-L 14-1-43
305 Route 32
Newburgh, New York 12550

For Planning Board Review- Not For Construction

Date: 09.05.14
Revisions:

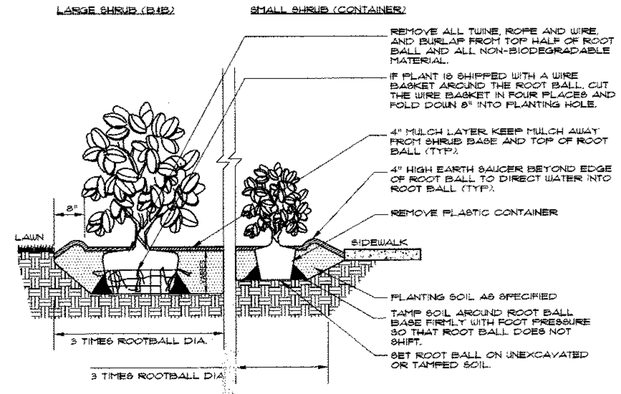
Drawn By: JL LC

Dig Safely. New York
Call Before You Dig
Wait The Required Time
Confirm Utility Response
Respect The Marks
Dig With Care
800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:
SIGNATURE
3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

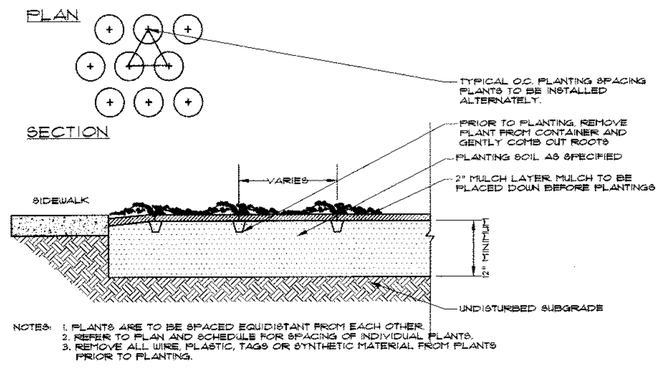
LS-1
8 of 11



NOTES: 1. ALL SHRUBS TO BE SET PLUMB.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

3 S-3 **Typical Shrub Planting Detail**

Scale: N.T.S.



NOTES: 1. PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
2. REFER TO PLAN AND SCHEDULE FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

5 S-3 **Typical Ground Cover Planting Detail**

Scale: N.T.S.

MINUTA ARCHITECTURE
564 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.6622
info@minutaarchitecture.com

SEAL

REGISTERED ARCHITECT
JOSEPH J. MINUTA
028427-1
STATE OF NEW YORK

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

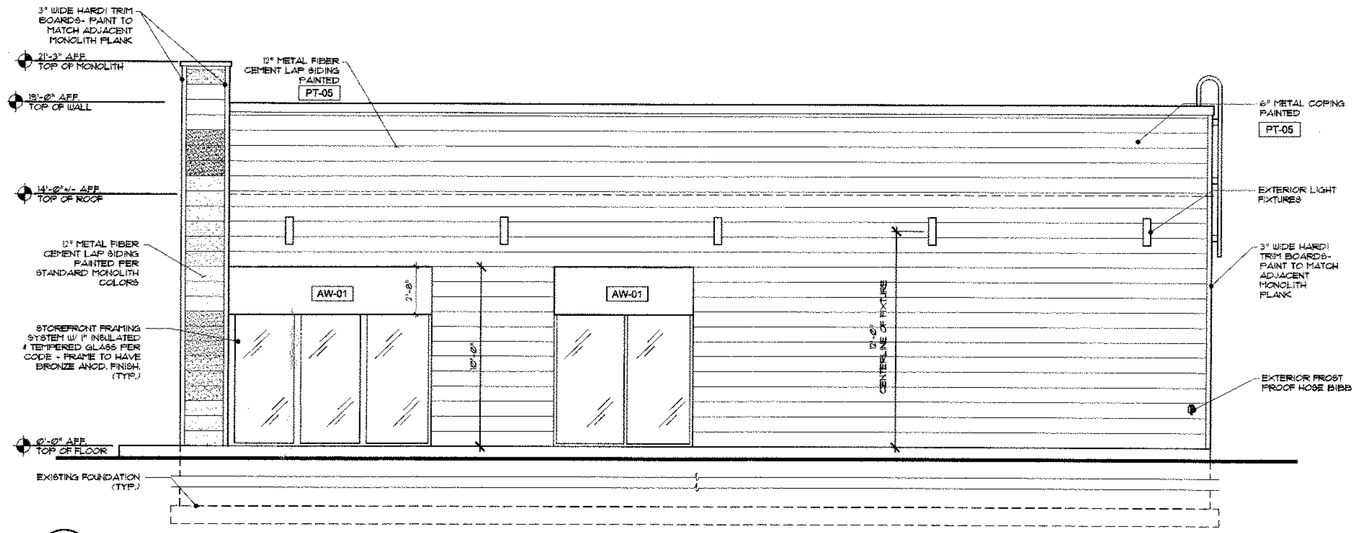
Michael Nafash
S-B-L: 14-1-43
300 Route 32
Newburgh, New York 12550

For Planning Board Review- Not For Construction

Date 09.03.14
Revisions

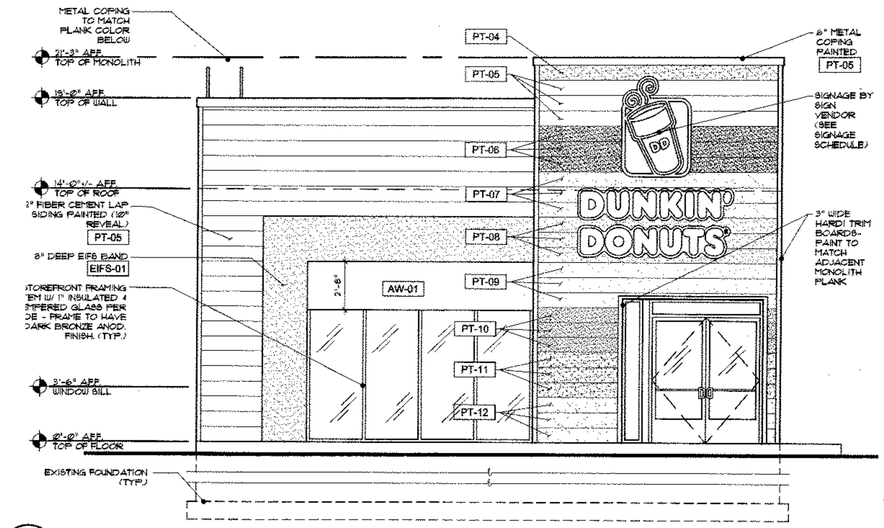
Drawn By: JL LC

LS-2



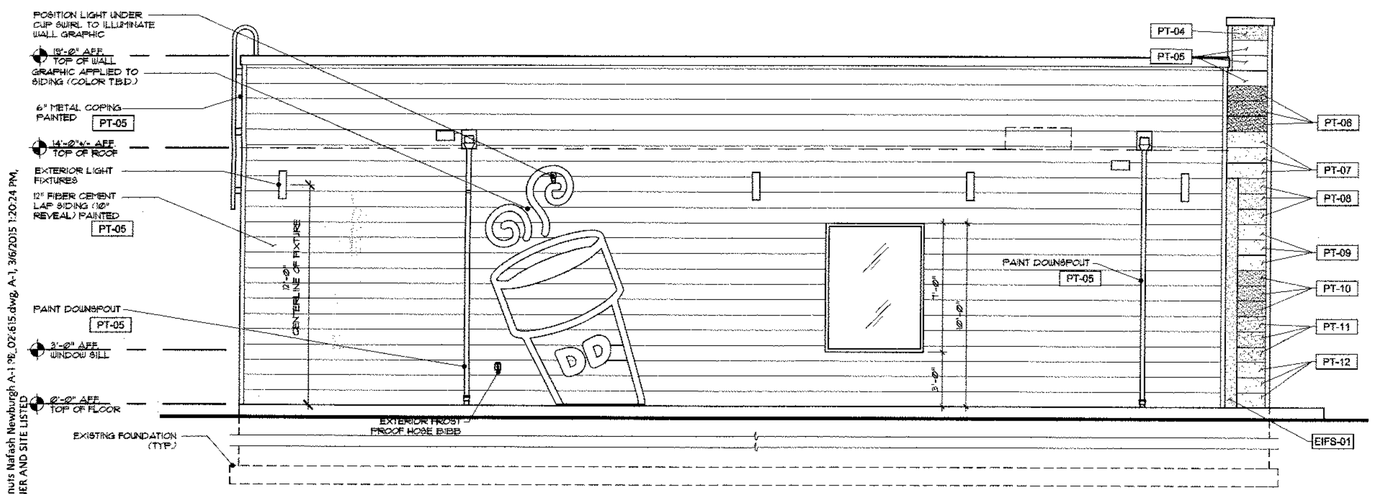
1 A-1 **New North Elevation**

Scale: 1/4" = 1'-0"



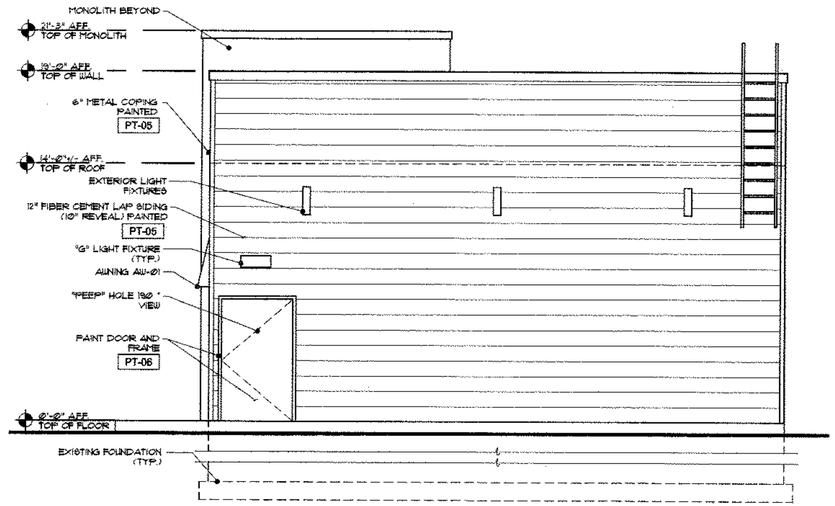
2 A-1 **New East Elevation (Route 32)**

Scale: 1/4" = 1'-0"



3 A-1 **New South Elevation (Route 300)**

Scale: 1/4" = 1'-0"



4 A-1 **New West Elevation**

Scale: 1/4" = 1'-0"

EXTERIOR FINISH MATERIAL SCHEDULE:

EXTERIOR FINISH MATERIAL SCHEDULE

CODE	MATERIAL	MANUFACTURER	PRODUCT #	DESCRIPTION	REMARKS
AW-01	AWNING	ARLON	DD FRESH BREW AWNING	BROWN AWNING WITH FRESH BREW MESSAGING	STANDARD AWNING FOR COMBO DESIGNS
AW-02	AWNING	ARLON	DD FRESH BREW AWNING	ORANGE AWNING WITH FRESH BREW MESSAGING	ALTERNATE AWNING FOR FB DESIGNS WHERE ORANGE BAND IS NOT ALLOWED OR PRACTICAL TO OVERALL DESIGN
BC-1	BOLLARD COVERS	IDEAL SHIELD	8C1-CC-4-52-S	4"W X 52"H ORANGE BOLLARD SLEEVE	
EIFS-01	EIFS	DRYVIT SYSTEMS, INC	DUDO-10-1020QP	MATCH DD ORANGE PMS 165C	ORANGE BAND MATERIAL
EIFS-02	EIFS	DRYVIT SYSTEMS, INC	DUDO-10-1020QP	PAINT COLORS TO MATCH MONOLITH SCHEME	*ALTERNATE MATERIAL TO HARDIPLANK BOARDS ON MONOLITH
EIFS-03	EIFS	DRYVIT SYSTEMS, INC	DUDO-10-1020QP	MATCH SHERWIN WILLIAMS 7536 "BITTERSWEET STEM"	*ALTERNATE BUILDING MATERIAL TO HARDIPLANK FIELD SIDING (NON-MONOLITH).
PT-01	PAINT	SHERWIN WILLIAMS	6372	"INVITING IVORY"	SATIN
PT-02	PAINT	SHERWIN WILLIAMS	6884	"OBSTINATE ORANGE"	GLOSS (EXTERIOR)
PT-03	PAINT	SHERWIN WILLIAMS	6140	"MODERATE WHITE"	SATIN
PT-04	PAINT	SHERWIN WILLIAMS	7517	"CHINA DOLL"	SATIN
PT-05	PAINT	SHERWIN WILLIAMS	7536	"BITTERSWEET STEM"	SATIN
PT-06	PAINT	SHERWIN WILLIAMS	6100	"PRACTICAL BEIGE"	SATIN
PT-07	PAINT	SHERWIN WILLIAMS	7714	"OAK BARREL"	SATIN
PT-08	PAINT	SHERWIN WILLIAMS	6096	"JUTE BROWN"	SATIN
PT-09	PAINT	SHERWIN WILLIAMS	6097	"STURDY BROWN"	SATIN
PT-10	PAINT	SHERWIN WILLIAMS	6090	"JAVA"	SATIN
PT-11	PAINT	SHERWIN WILLIAMS	6069	"FRENCH ROAST"	SATIN
PT-12	PAINT	SHERWIN WILLIAMS	6006	"BLACK BEAN"	SATIN

MINUTA ARCHITECTURE
556 TEMPLE HILL ROAD
NEW WINDSOR, NY 12553
P: 845.565.0055 F: 845.565.6622
info@minutaarchitecture.com

SEAL

REGISTERED ARCHITECT JOSEPH J. MINUTA 028427-1 STATE OF NEW YORK

LZL Equities / Dunkin Donuts (Town of Newburgh Project # 2014-02)

Michael Nafash
S-B-L: 143-43
301 Route 32
Newburgh, New York 12550

For Planning Board Review- Not For Construction

Date 09.05.14

Revisions

Dig Safely. New York
- Call Before You Dig
- Wait The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care

800-962-7962
www.digsafelynewyork.com

THE OWNER HAS REVIEWED AND IS IN CONCURRENCE WITH THE PLAT:

SIGNATURE

3/9/15
DATE

PLANNING BOARD APPROVAL
SECT: 14; BLK: 1; LOT: 43

Drawn By: JL, LC

A-1

11 of 11