

CITY of NOVI CITY COUNCIL

Agenda Item F December 22, 2014

SUBJECT: Approval of traffic control orders 14-49 through 14-58 for the installation of traffic control signs on neighborhood streets in Summerlin of Novi, North Haven Woods and the northern West Lake Drive area.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division

CITY MANAGER APPROVAL:

BACKGROUND INFORMATION:

The City's sign replacement program was initiated in 2009 in response to new requirements from the Federal Highway Administration regarding retroreflectivity and new requirements in the Michigan Manual of Uniform Traffic Control Devices regarding sign sizes and font sizes to improve sign visibility for older drivers. Retroreflectivity is the ability of a surface to return light back to its source (i.e., signs and pavement markings reflecting light from headlights back to the driver's eyes). The changes were made to improve traffic safety and cause local agencies to replace older signs that are no longer effective or are difficult to see, which was the case in many parts of Novi at that time.

Engineering staff worked with the City's traffic consultant in late 2013 to review the existing traffic signs in Summerlin of Novi, North Haven Woods and a portion of West Lake Drive to determine if the traffic control signs installed met current standards, and to recommend any changes based on conditions in the field. The attached report supported several of the existing stop and yield signs that were currently installed, but also recommended the following changes:

- Install new yield signs for unsigned intersections in Summerlin of Novi for eastbound
 Summerlin at Tiverton and southbound Lagoon at Larkspur Lane.
- Add Keep Right signs to the boulevard entrance to Summerlin.
- Removal of the existing all-way stop at Lagoon Drive and Ludlow Drive, to be replaced with a yield sign for both directions of Lagoon at Ludlow.
- Addition of a 25 mph sign on Ludlow east of West Park Drive.
- Curve warning signs on Ludlow for the curve located near Faywood.

The installation of yield signs at the two uncontrolled intersections would be consistent with the approved site plan for this subdivision, but unfortunately the yield signs were never installed before the streets were accepted by the City in 2007. The installation of yield signs at uncontrolled intersections promotes consistency and improves traffic safety by affirmatively establishing which vehicle has the right-of-way. Similarly, the all-way stop at Lagoon and Ludlow in North Haven Woods was not shown on the approved site plan and was never formally reviewed by the City prior to acceptance of the streets in 2006. The all-way stop is not warranted based on the standards in the Michigan Manual of Uniform Traffic Control Devices (MMUTCD). The installation of yield signs for each direction of Lagoon at Ludlow would be consistent with the approved final site plan for North Haven Woods. The attached report from the traffic consultant provides additional information.

Engineering staff has contacted the Homeowners Association for Summerlin of Novi and North Haven Woods to notify them of the recommendations (there is no formal homeowners association representing the residents along West Lake Drive).

Many of the existing traffic control signs that are to remain are not supported by traffic control orders. Traffic control orders are required under the Uniform Traffic Code to enforce traffic control signs that have been installed on public streets. Therefore, staff has proposed the attached traffic control orders based on the recommendation of the consultant for approval by City Council.

TCO No.	Description
14-49	Southbound Bancroft Drive to yield at Ludlow Drive
14-50	Northbound Bancroft Drive to yield at North Haven Street
14-51	Northbound Lagoon Drive to yield at North Haven Street
14-52	Northbound Lagoon Drive to yield at Ludlow Drive*
14-53	Southbound Lagoon Drive to yield at Ludlow Drive*
14-54	Southbound Lagoon Drive to yield at Larkspur Lane**
14-55	Eastbound Summerlin Boulevard to yield at Tiverton Drive**
14-56	Westbound West Lake Drive to stop at Ludlow Drive
14-57	Northbound Lebenta Street to stop at Faywood Street
14-58	Southbound West Lake to Stop at Ludlow

Traffic Control Orders are for existing signs except as noted below:

All other existing signs in this area will be replaced including street name signs. The replacement signs are funded as part of the sign replacement program in the current year budget and will be scheduled for installation in early 2015. There will be additional study in the area of North Haven, Amis, West Lake and Rexton to identify the appropriate traffic control signs in the future.

RECOMMENDED ACTION: Approval of traffic control orders 14-49 through 14-58 for the installation of traffic control signs on neighborhood streets in Summerlin of Novi, North Haven Woods and the northern West Lake Drive area.

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Mayor Gatt				J-
Mayor Pro Tem Staudt				=
Council Member Casey				
Council Member Markham				

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Council Member Mutch				1
Council Member Poupard				1
Council Member Wrobel				

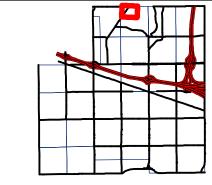
^{*}Replaces existing all way stop

^{**}New yield sign at uncontrolled intersection

Traffic Control Sign Installation Plan

Sumerlin of Novi, North Haven Woods and West Lake Drive Area





80 160

32

320

Feet

1 inch = 233 feet





City of Novi

Engineering Division
Department of Public Services
26300 Lee BeGole Drive
Novi, MI 48375
cityofnovi.org

Map Author: Brian Coburn Date: 12/15/14 Project: Version #:

Amended By: Date: Department:

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



MEMORANDUM

DATE: November 6, 2013

TO: Brian T. Coburn, P.E.

Engineering Manager, City of Novi

FROM: Rodney L. Arroyo, AICP, President

William A. Stimpson, P.E., Director of Traffic Engineering

SUBJECT: Traffic Sign Review for Northwest Lake Region

In response to your request of October 10, 2013, we inspected and evaluated 15 intersections along and east of West Park Drive, including seven in the North Haven Woods Subdivision and three in the Summerlin Subdivision (Figures 1-2). The primary purpose of the evaluation was to determine the appropriate form of right-of-way control sign (YIELD or STOP) based on existing conditions, RCOC methodology, and engineering judgment. Important related signing needs are also cited. Our recommendations are listed below and further summarized in Table 1, followed by a discussion of the methodology followed, location-specific results, and photos.

Recommendations

- 1. The existing STOP signs on the Summerlin Boulevard, Ludlow Drive, and North Haven Street approaches to West Park Drive are appropriate and should be retained.
- 2. The existing YIELD sign on the Bancroft Drive approach to Ludlow Drive is appropriate and should be retained.
- 3. The existing YIELD signs on the Bancroft Drive and Lagoon Drive approaches to North Haven Street are appropriate and should be retained.
- 4. The existing all-way stop control at Ludlow and Lagoon is not warranted by available intersection sight distance and should be replaced by YIELD signs on the two Lagoon approaches (per the 2002 subdivision engineering plans, relevant excerpts attached). To alert drivers to the change, a supplemental black-on-yellow CROSS TRAFFIC DOES NOT STOP (W4-4P) sign should be installed below each of Ludlow's YIELD signs. Also, to limit speeds on eastbound Ludlow in the absence of east-west STOP signs, a reverse-curve warning sign (W1-4) with a 15-mph advisory speed should be installed on the first lot line east of Lagoon.



- 5. A YIELD sign should be installed on Lagoon's southbound approach to Larkspur Lane.
- 6. A YIELD sign should be installed on Summerlin Boulevard's eastbound approach to Tiverton Drive. Also, a Keep Right (R4-7) sign facing Tiverton should be mounted below the street-name signs on the east end of the Summerlin landscape median (Figure 10).
- 7. Consistent with both the subdivision engineering plans (relevant excerpts attached) and standard practice, both a street-name sign for West Park Drive and a Keep Right (R4-7) sign should be placed on the west end of the Summerlin landscape median (joining the existing sign for Summerlin Blvd).
- 8. The existing STOP sign on Faywood's approach to Ludlow could be replaced by the warranted YIELD sign unless the City wants to continue reinforcing the clearly subsidiary nature of Faywood by retaining the STOP sign.
- 9. The existing STOP sign on West Lake Drive's westerly approach to Ludlow should be retained due to the awkward (acute-angle) viewing angle (when looking east).
- 10. At West Lake Drive's easterly intersection with Ludlow, the currently uncontrolled dead-end private drive (serving four houses and aligning with West Lake) should be controlled by a STOP sign. Once that STOP sign is installed, there will be a proper basis for retaining the existing STOP sign on the southbound approach.
- 11. At the currently unsigned intersection of West Lake Drive and West Lake Drive, a STOP sign should be installed on the eastbound approach.
- 12. The existing STOP signs on each end of Lebenta Street should be retained.

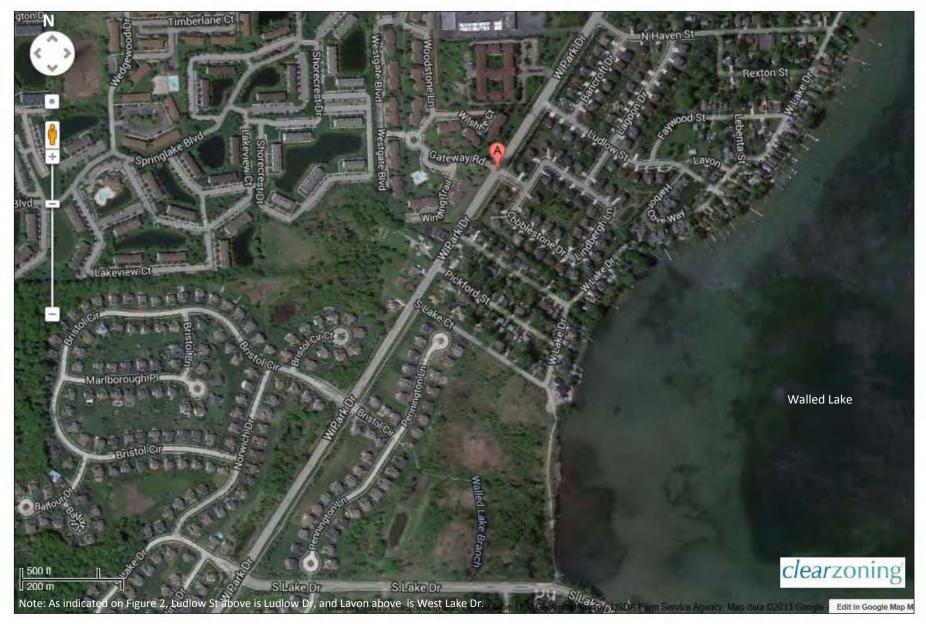


Figure 1. Vicinity Aerial – Northwest Lake Region

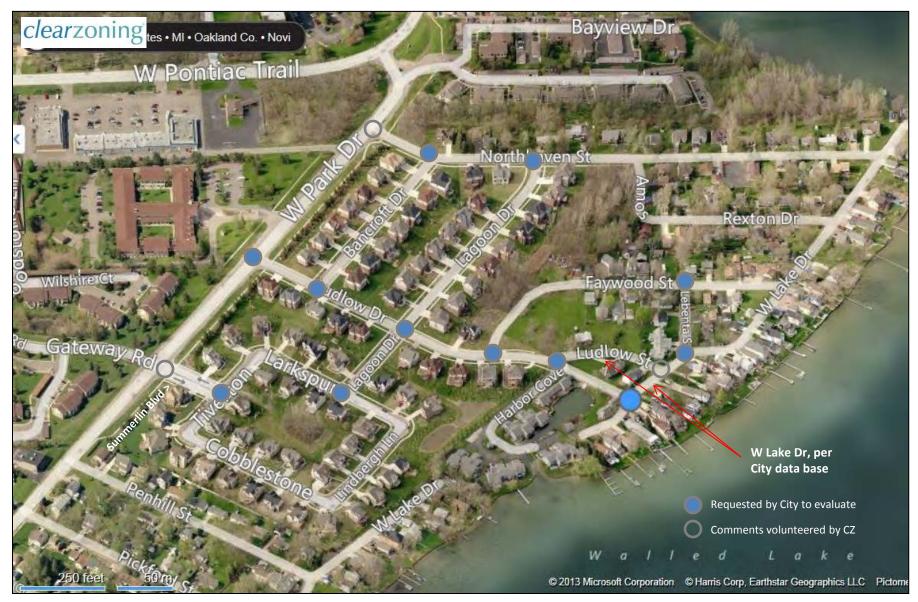


Figure 2. Site Aerial – Northwest Lake Region

Table 1. Northwest Lake Region Traffic Signs: Summary of Findings (11-06-13)¹

		Existing	Con-	Critical	Warranted Signs		igns	
Intersection	Figure	Sign	trolling Corner	Speed (mph)	None	YIELD	STOP	Comments
West Park Dr & Ludlow Dr	3	STOP	N/A	N/A			Х	Standard sign at a local street's intersection with a minor arterial.
Ludlow Dr & Bancroft Dr	4	YIELD	NW	> 30		X		Shrub at corner of house controls (at right edge of Figure 4).
North Haven St & Bancroft Dr	5	YIELD	SE	23		х		Northernmost shrub in planter near driveway limits sight distance.
North Haven St & Lagoon Dr	6	YIELD	SE	24		х		Landscape rock nearest intersection limits sight distance.
Ludlow Dr & Lagoon Dr	7	All-Way STOP	SE	28		X		AWS may have been (improperly) installed to limit speeds in area. See text for recommended new warning signs.
Lagoon Dr & Larkspur Ln	8	None	NE	21		х		Flowering shrub controls corner visibility.
Summerlin Blvd & Tiverton Dr	9, 10	None	NW	28		X		Large spruce tree nearest intersection controls corner visibility. Keep Right sign on Tiverton end of median is missing.
West Park Dr & Summerlin Blvd	11	STOP	N/A	N/A			X	Standard sign at a local street's intersection with a minor arterial. Keep Right sign on West Park end of median is missing.
Ludlow Dr & Faywood St	12	STOP	NE & NW	27		Х		Same critical speed across both corners. Existing STOP is optional.
Ludlow Dr & West Lake Dr (west intersection)	13	STOP	NE	N/A			Х	No significant sight obstructions, but angle justifies existing STOP.

Shaded row indicates that existing sign (or lack thereof) should be changed. *Italics* indicate additional signing recommendation.

Table 1. Northwest Lake Region Traffic Signs: Summary of Findings (10-31-13)¹, cont'd

lanka wa a aki a sa	Figure	Existing	Con- Critical	Warranted Signs		igns	Commonto	
Intersection	Figure	Sign	trolling Corner	Speed (mph)	None	YIELD	STOP	Comments
Ludlow Dr & West Lake Dr (east intersection)	14	STOP	N/A	N/A			Х	Shared drive intersecting Ludlow opposite West Lake warrants a STOP sign. Once that sign is placed, the existing STOP on West Lake is required.
West Lake Dr & West Lake Dr	15	None	NW	9			х	Large spruce tree and proximate bend in West Lake limit visibility.
West Lake Dr & Lebenta St	16	STOP	SE	5			х	See garden and power pole on inside of bend in West Lake (Figure 16).
Faywood St & Lebenta St	17, 18	STOP	NW, NE	< 10			х	Very limited visibility both east and west, but does not require AWS.

Shaded row indicates that the existing sign (or lack thereof) should be changed.

Criteria and Methodoloy

Right-of-Way Control Signs – The *Michigan Manual of Uniform Traffic Control Devices* (*MMUTCD*) establishes guidelines and standards applicable (by law) to all public roads and streets in the State. The current (2011) edition of the manual has language relative to right-of-way control signs, summarized below.

<u>Section 2B.04 – Right-of-Way at Intersections</u> – first defines the general rule-of-the-road regarding vehicles approaching an intersection from different streets at "approximately the same time": the driver of the vehicle on the left must yield to the driver of the vehicle on the right. The Manual then goes on to state that "the right-of-way can be modified at through streets or highways by placing YIELD signs or STOP signs on one or more approaches." The following guidance is provided relative to such sign installations:

"Engineering judgment should be used to establish intersection control. The following factors should be considered:

- A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
- B. Number and angle of approaches;
- C. Approach speeds;
- D. Sight distance available on each approach; and
- E. Reported crash experience."

A standard unique to the Michigan Manual, also appearing in this section, is that:

"YIELD or STOP signs shall not be used for speed control."

<u>Section 2B.06 – STOP Sign Applications</u> – presents additional pertinent guidance, similar to that previously appearing in Section 2B.05:

"At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs...

Lastly relative to the MMUTCD, "the use of STOP signs ... should be considered if engineering judgment indicates that a stop is always required because... a restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street..."

National experience has found that drivers tend to disregard clearly unwarranted STOP signs and roll through them as if they were YIELD signs. Mid-block speeds have been found to actually increase with STOP sign installation, as drivers attempt to "make up for lost time." Unwarranted STOP signs may also provide pedestrians (especially children) a false sense of security, in that they assume drivers will stop for a STOP sign when, in fact, they often do not.

Relative to the above criteria, the City of Novi has long applied the Road Commission for Oakland County's recommended procedure for evaluating the issue of "restricted view."

Measurements to corner sight obstructions are made, and a nomograph is applied to determine the Critical Approach Speed (CAS) on the minor approach (typically, the "stem" of a tee intersection). A STOP sign is required for Critical Speeds below 10 mph and often considered for Critical Speeds in the range of 10-15 mph. Ordinarily, a YIELD sign is more appropriate for Critical Speeds above 15 mph.

Findings by Location

West Park and Ludlow – The existing STOP sign (Figure 3) is appropriate, and there are no other signing needs at this intersection.

Ludlow and Bancroft – Relative to intersection sight distance, the more restricted of the two corners is the northwest. Given the excellent visibility (Figure 4), the existing YIELD sign is appropriate.

North Haven and Bancroft – The shrub at the north end of the landscape island near the driveway (near the right edge of Figure 5) limits the CAS at this intersection to 23 mph. The existing YIELD sign should be retained.

North Haven and Lagoon – Similar to the preceding intersection, landscaping (in this case, a large rock) limits the Critical Speed to 24 mph, and the existing YIELD sign should be retained.

Ludlow and Lagoon – The most sight-restricted corner is the southeast (Figure 7), and the CAS was found to be 28 mph. Per RCOC guidelines as well as the subdivision engineering plans (excepts attached), there should be YIELD signs on the northbound and southbound Lagoon approaches to Ludlow. The existing all-way stop control may have been added by the developer for traffic calming purposes, but as mentioned above, the MMUTCD expressly prohibits the use of STOP signs exclusively for speed control purposes. If speed control on eastbound Ludlow is a concern due to the upcoming curve and downgrade toward the sharp bend (into West Lake Drive) at the lake, a warning sign should be used (see Recommendations).

Ludlow and Faywood – Both corners at this T intersection were found to have a 27 mph Critical Speed, indicating that a YIELD sign on Faywood would normally be considered adequate (as called for by the subdivision engineering plans). However, given the existing STOP control and the fact that the viewing condition to the east (Figure 12) may appear uncertain due to the berm, the City may wish to retain the STOP sign.

Ludlow and West Lake (west intersection) – Although it may not be obvious from the view shown in Figure 13, there are no significant corner sight obstructions for which a Critical Speed can be determined. However, given the acute angle of the intersection and the resulting difficulty of looking to the left while approaching Ludlow on West Lake – as well as the clearly subsidiary nature of West Lake – the existing STOP sign should be retained.

Ludlow and West Lake (east intersection) – The two major traffic flows – southbound on West Lake and eastbound on Ludlow – follow a relatively sharp bend between the two paved streets. Only the southbound approach to the bend is controlled by a STOP sign, however (Figure 14), indicating that that sign was likely installed for traffic calming purposes. Strangely, the opposing shared drive (gravel and serving four homes) intersects this bend but has no formal traffic control. Strictly speaking, State law dictates that drivers approaching on that shared drive must stop and yield to traffic on the "cross road." However, given the bend in the pavement and the existing southbound STOP sign, this legal stopping requirement may not be obvious to some drivers. To reinforce this requirement and justify retention of the existing STOP sign, it is recommended that an opposing STOP sign be installed on the shared drive.

West Lake and West Lake – This intersection currently has no signing of any type. Given the CAS of only 9 mph on the minor stem of this T intersection – and the proximity of the West Lake/Lebenta intersection – the installation of at least a STOP sign on the eastbound West Lake approach would be appropriate.

West Lake and Lebenta – As can be seen in Figure 16, the garden and power pole on the south corner severely restrict corner sight distance (CAS is only 5 mph). Hence, the existing STOP sign on the westbound West Lake approach is appropriate.

Faywood and Lebenta – The sight distance across both corners is severely limited by the existing vegetation (Figure 17), and the existing STOP sign on Lebenta is fully justified. After stopping for that sign, a driver is able to pull forward and look each way for approaching Faywood traffic before actually beginning a turn (the more restricted view to the west is shown in Figure 18); hence, potential upgrading to all-way stop control is unnecessary.



Figure 3. Ludlow at West Park



Figure 4. Looking West Across NW Corner of Ludlow and Bancroft



Figure 5. Looking NE Across SE Corner of North Haven and Bancroft



Figure 6. Looking NE Across SE Corner of North Haven and Lagoon



Figure 7. Looking East Across Southeast Corner of Ludlow and Lagoon



Figure 8. Looking South Across NE Corner of Lagoon and Larkspur



Figure 9. Looking East Across NW Corner of Summerlin and Tiverton

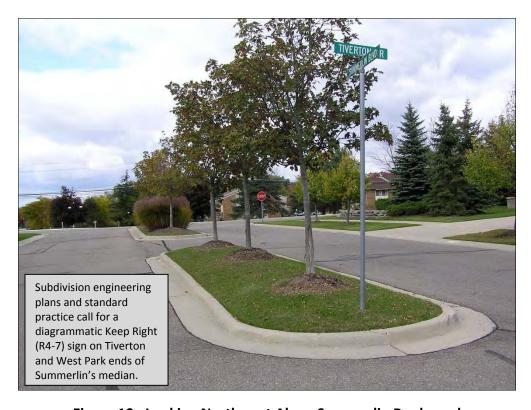


Figure 10. Looking Northwest Along Summerlin Boulevard

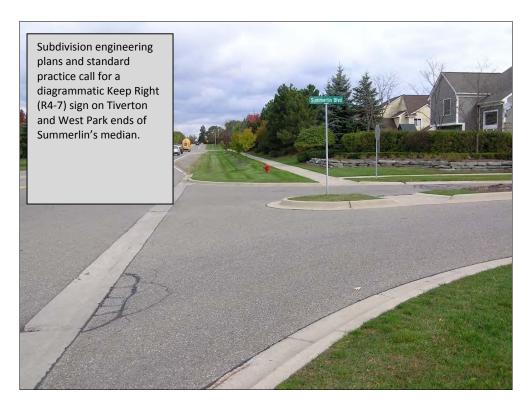


Figure 11. Looking Northeast Along West Park at Summerlin



Figure 12. Looking Generally East from Faywood to Ludlow



Figure 13. West Lake Approach to Ludlow – West Intersection



Figure 14. West Lake Approach to Ludlow – East Intersection



Figure 15. Looking East at Intersection of West Lake and West Lake



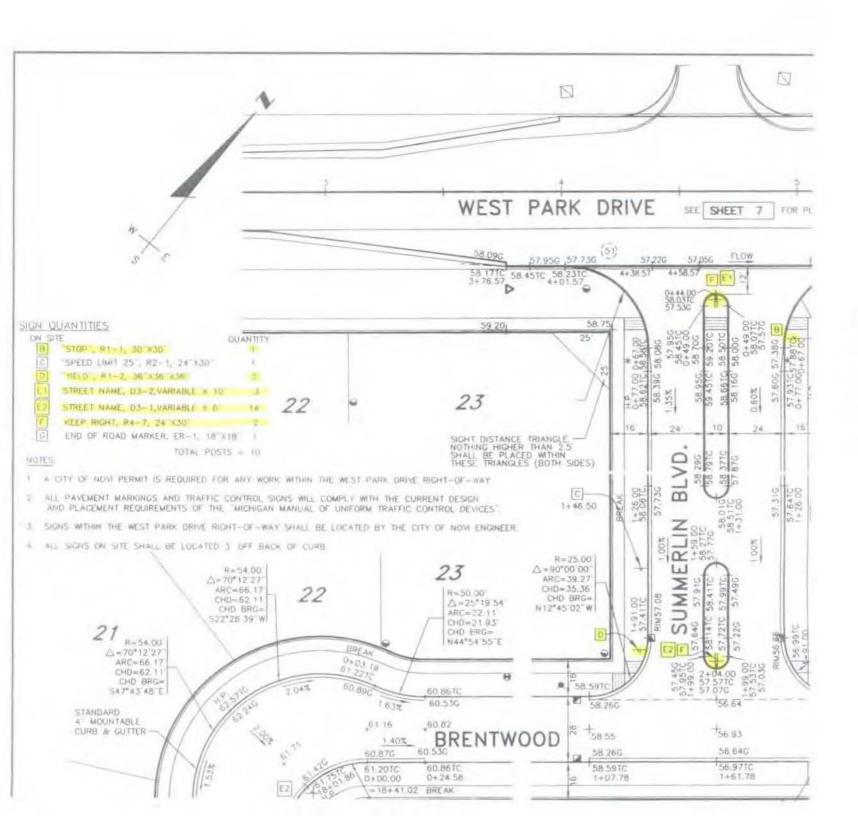
Figure 16. Looking Southwest Across Bend in West Lake from Lebenta



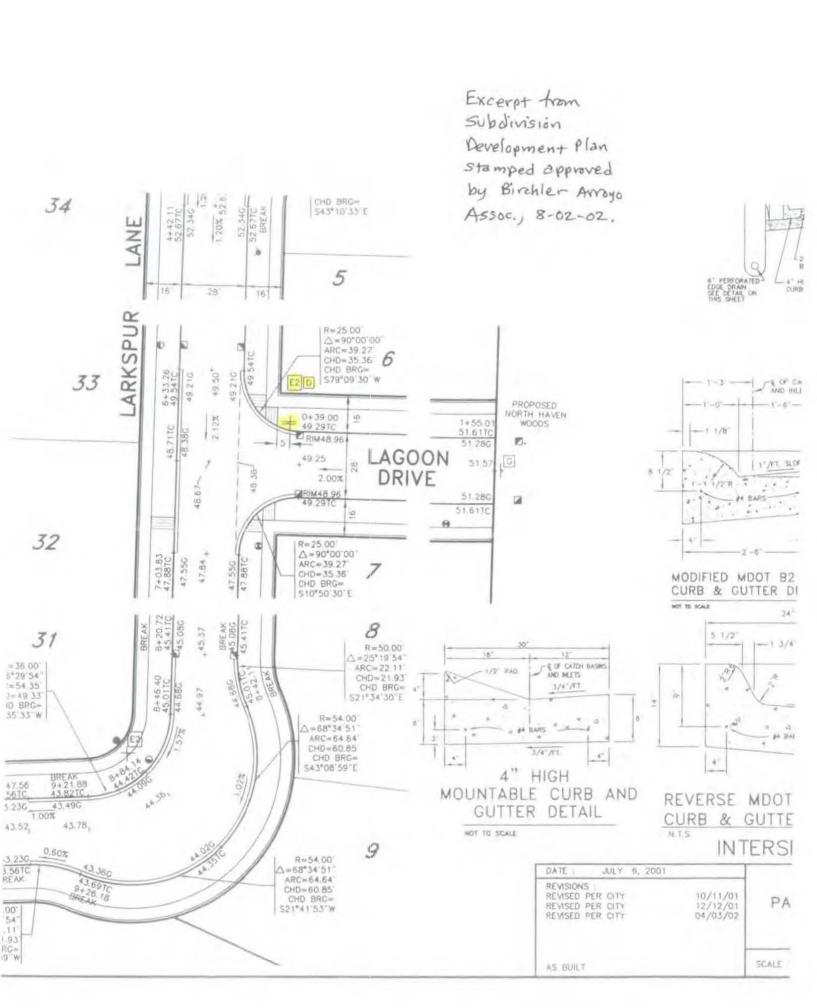
Figure 17. Lebenta Approach to Faywood



Figure 18. Looking West at Faywood from Forward Point on Lebenta



Excerpt from
Subdivision
Development Plan
Stamped approved
by Birchler Arroyo
Assoc., 8-02-02.



CALE

TY UNIT

59 LF 65 LF 12 EA

1 EA

30 LF

39 LF

15 LF

13 LF

LF

LF

EA EA

EA

5 EA

5 EA

46 LF

18 LF

9 - EA 7 EA

O SYD

14 LF

16 SYD

8 LF

5 SYD

3 SYD 0 LF

2 EA

5 SYD

L.S.

L.S.

EA

+1P PEAK FLOW = 15,400 X 4.19 = 64,526 GPD = 0.100 CFS

8" @ 0.40% IS 0.76 CFS

Excerpt from Subdivision Development Plan Stamped approved by BA, 8-02-02.

SIGN QUANTITIES

ON S	SITE	QUANTITY	POSTS
В	"STOP", R1-1, 30"X30"	2 EA	2
C	"SPEED LIMIT 25", R2-1, 24"X30"	2 EA	2
D	"MELD", R1-2, 36"X36"X36"	6 EA	6
E	"STREET NAME", D3-2, VARIABLE X 10"	4 EA	0
EZ	"STREET NAME", D3-1, VARIABLE X 6"	10 EA	0
G	END OF ROAD MARKER, ER-1, 18" X 18"	1 EA	1
Н	"ROAD ENDS", W14-2a, 30" X 30"	1 EA	1

TOTAL POSTS = 12 SEE SHEET 12 FOR SIGNS IN RAW OF WESTPHAL DRIVE WEST PARK

INDEX OF SHEETS

- DEVELOPMENT PLAN
- NORTH HAVEN SANITARY SEWER & WATER MAIN
- BAY DRIVE SANITARY SEWER & WATER MAIN
- LAGOON DRIVE SANITARY SEWER & WATER MAIN
- LUDLOW DRIVE & FAYWOOD SANITARY SEWER & WATER MAIN 5.
- NORTH HAVEN STORM SEWER & PAVEMENT
- BAY DRIVE STORM SEWER & PAVEMENT
- LAGOON DRIVE STORM SEWER & PAVEMENT 8.
- LUDLOW DRIVE STORM SEWER & PAVEMENT 9.
- FAYWOOD DRIVE- STORM SEWER & PAVEMENT 10.
- WEST PARK DRIVE GRADING PLAN 11.
- WEST PARK DRIVE LAYOUT, MARKING & STRIPING PLAN 12.
- 13. INTERSECTIONS AND DETAILS
- LUDLOW & FAYWOOD INTERSECTION 14.
- GRADING PLAN & SUMP DISCHARGE PLAN NORTH 15.
- GRADING PLAN & SUMP DISCHARGE PLAN. SOUTH 16.
- WETLANDS, SOIL EROSION AND SEDIMENTATION PLAN 17.
- 18. WETLANDS, SOIL EROSION AND SEDIMENTATION DETAILS
- DRAINAGE CALCULATION PLAN

CITY OF NOVI DETAILS

SANITARY SEWER A, B & C WATER MAIN

STORM SEWE

D & E

M.D.E.Q. SANITARY SEWER 029103 M.D.E.Q. WETLAND PERMIT NO.: 01-63-0184-P

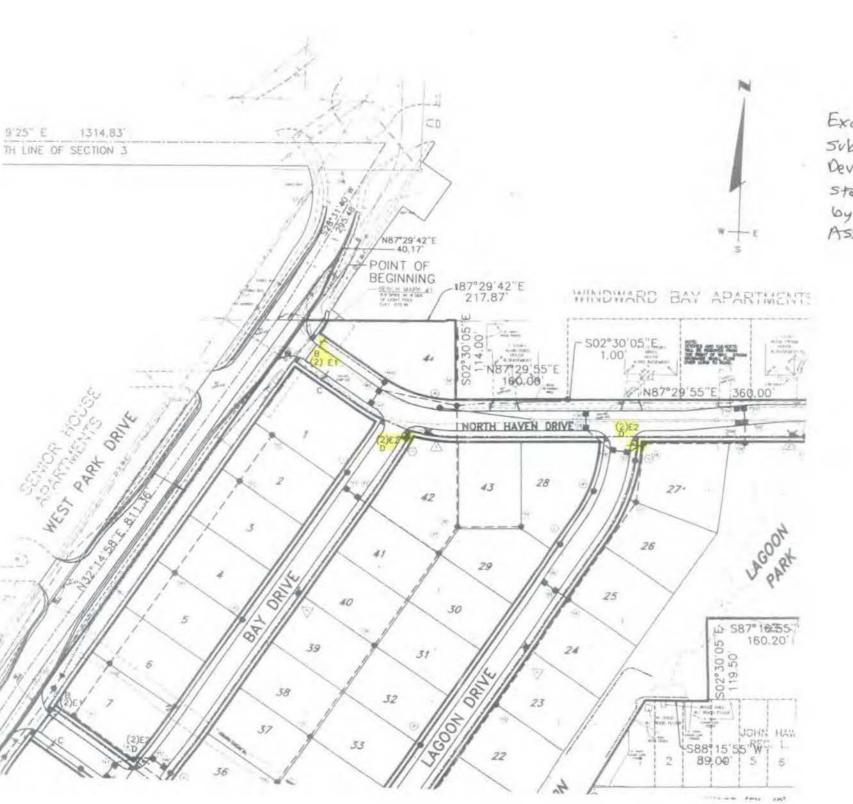
M.D.E.Q. WATER PERMIT NO.: W024172

D.W.S.D. NO.: C-19644

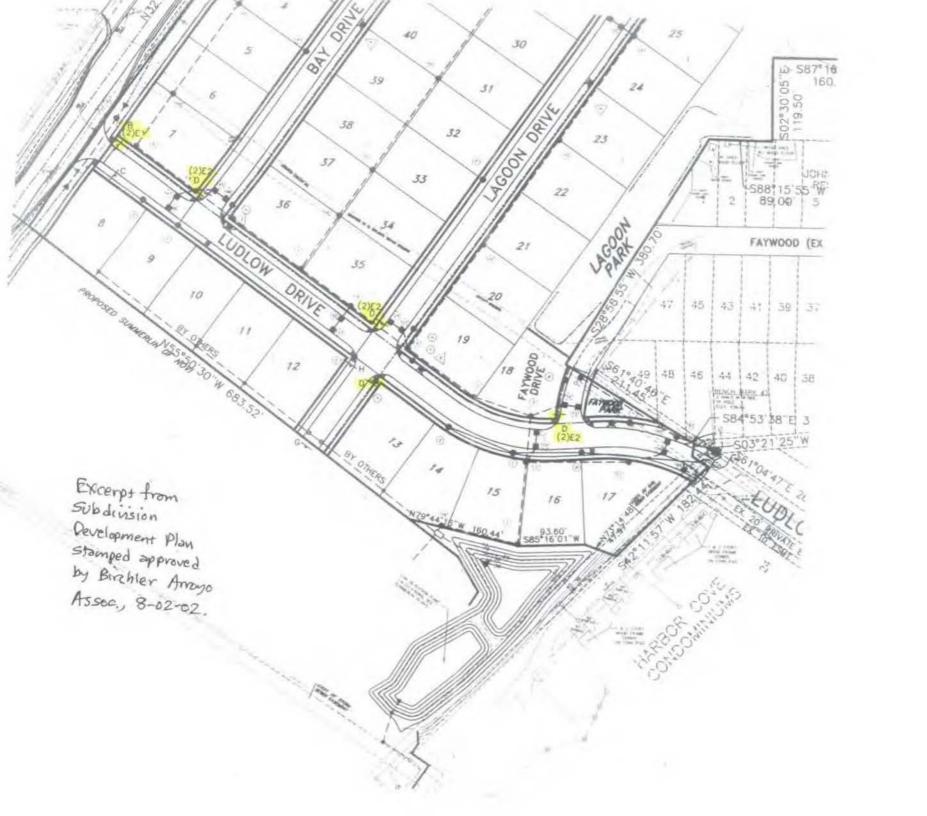
CITY OF NOVI R.O.W. PERMIT NO.: 0332/02

CITY OF NOVI S.E.C. PERMIT NO. : SE 01-0047





Excerpt from
Subdivision
Development Plan
Stomped approved
by Birchler Arroyo
Assoc., 8-02-02.



SPEED	DATE OF ORDER:	12/15/2014
PARKING OTHER	CONTROL NUMBER:	14-49
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUIDULY AUTHORIZED AS TRAFFIC ENGINEER, B	FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVE ED BY BRIAN COBURN, E	DWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER
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SOUTHBOUND BANCROFT DRIVE TO YIELD A	T LUDLOW DRIVE	
	BCC	
	Brian Coburn, P.E. Dated: 12/1	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-49 H CITY OF NOVI, MICHIGAN FOR STUDY AN HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	Y APPROVED AND IT IS
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
SOUTHBOUND BANCROFT DRIVE TO YIELD AT	LUDLOW DRIVE	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By:Robert J. Gatt,	Mayor
	By: Maryanne Corr	nelius, Clerk

SPEED SA PRINCE	DATE OF ORDER;	12/15/2014
PARKING OTHER	CONTROL NUMBER:	14-50
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, B	FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVI ED BY BRIAN COBURN, E	OWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER,
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NORTHBOUND BANCROFT DRIVE TO YIELD A	T NORTH HAVEN STREET	
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	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-50 H CITY OF NOVI, MICHIGAN FOR STUDY AT HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREE ORDER BE FILED IN THE C	BY APPROVED AND IT IS OFFICE OF THE CITY CLERK
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
NORTHBOUND BANCROFT DRIVE TO YIELD A	T NORTH HAVEN STREET	
ADOPTED AT THE REGULAR MEETING OF	By:	
CITY COUNCIL ON <u>12/22/2014.</u>	Robert J. Gatt,	Mayor
	Ву:	
	Maryanne Cor	nelius, Clerk

SPEED	DATE OF ORDER:	12/15/2014
PARKING OTHER	CONTROL NUMBER:	_14-51
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRADE MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, B	AFFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVE ED BY BRIAN COBURN, E	OWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER,
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NORTHBOUND LAGOON DRIVE TO YIELD AT	NORTH HAVEN STREET	
	BC	2
	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-51 H CITY OF NOVI, MICHIGAN FOR STUDY AT HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	Y APPROVED AND IT IS
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		지나가 이 경기에게 되었다. 그렇게 되어 얼마나면 하나 이 보고를 모르게 되었다. 그래 없었다.
NORTHBOUND LAGOON DRIVE TO YIELD AT	NORTH HAVEN STREET	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By: Robert J. Gatt,	Mayor
	By: Maryanne Corr	nelius, Clerk

SPEED	DATE OF ORDER:	12/15/2014
Y OTHER	CONTROL NUMBER:	14-52
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTTRAFFIC CONTROL ORDER IS HEREBY ISSUEDULY AUTHORIZED AS TRAFFIC ENGINEER, B	FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVE ED BY BRIAN COBURN, E	DWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING INGINEERING MANAGER,
ISSUANCE OF THIS TRAFFIC CONTROL ORD OF TRAFFIC CONDITIONS ON THE FOLLOWING MICHIGAN.		
LAGOON DRIVE		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERE ACCORDANCE WITH THE MICHIGAN MAN REQUIRED BY SEC. 33-51 OF THE AFORESAI FOLLOWING DETERMINATION:	ECT AND MAINTAIN TO	HE YIELD SIGN (S) IN C CONTROL DEVICES AS
NORTHBOUND LAGOON DRIVE TO YIELD AT	LUDLOW DRIVE	
	BC	
	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-52 H CITY OF NOVI, MICHIGAN FOR STUDY AN HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREE ORDER BE FILED IN THE C	Y APPROVED AND IT IS
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		IN THE COLUMN TO SHEET HE SHE
NORTHBOUND LAGOON DRIVE TO YIELD AT	UDLOW DRIVE	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By:Robert J. Gatf,	Mayor
	By: Maryanne Corr	nelius, Clerk

SPEED	DATE OF ORDER:	12/15/2014
Y PARKING X OTHER	CONTROL NUMBER:	14-53
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUIDULY AUTHORIZED AS TRAFFIC ENGINEER, B	FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVI ED BY BRIAN COBURN, E	OWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER
ISSUANCE OF THIS TRAFFIC CONTROL ORD OF TRAFFIC CONDITIONS ON THE FOLLOWING MICHIGAN.		
LAGOON DRIVE		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERE ACCORDANCE WITH THE MICHIGAN MAN REQUIRED BY SEC. 33-51 OF THE AFORESAI FOLLOWING DETERMINATION:	ECT AND MAINTAIN T UAL OF UNIFORM TRAFFI	HE YIELD SIGN (S) IN C CONTROL DEVICES AS
SOUTHBOUND LAGOON DRIVE TO YIELD AT	LUDLOW DRIVE	
	610	7
		- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-53 H CITY OF NOVI, MICHIGAN FOR STUDY AN HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREE ORDER BE FILED IN THE C	BY APPROVED AND IT IS DEFICE OF THE CITY CLERK
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
SOUTHBOUND LAGOON DRIVE TO YIELD AT L	UDLOW DRIVE	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By:Robert J. Gatt,	Mayor
	By: Maryanne Cor	

SPEED	DATE OF ORDER:	12/15/2014
PARKING X OTHER	CONTROL NUMBER:	14-54
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, BUSUANCE OF THIS TRAFFIC CONTROL ORD OF TRAFFIC CONDITIONS ON THE FOLLOWIR	CODE OF ORDINANCES FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVE ED BY BRIAN COBURN, E Y SEC. 33-51 OF THE AFOR ER WAS PRECEDED BY ST	OF THE CITY OF NOVI DWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER RESAID CHAPTER.
MICHIGAN.	NO PODEO NO PO ON NO	NOON, THE ONLOT HOW
LAGOON DRIVE		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERI ACCORDANCE WITH THE MICHIGAN MAN REQUIRED BY SEC. 33-51 OF THE AFORESA FOLLOWING DETERMINATION:	ECT AND MAINTAIN TI UAL OF UNIFORM TRAFFI	HE YIELD SIGN (S) IN C CONTROL DEVICES AS
SOUTHBOUND LAGOON DRIVE TO YIELD AT	LARKSPUR LANE	
	210	,
	Brian Coburn, P.E.	- Traffic Engineer
	Dated: <u>12/</u>	15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-54 H CITY OF NOVI, MICHIGAN FOR STUDY AT HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	Y APPROVED AND IT IS
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
SOUTHBOUND LAGOON DRIVE TO YIELD AT I	ARKSPUR LANE	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By:Robert J. Gatt,	Mayor
	By: Maryanne Cori	nelius, Clerk

	SPEED	DATE OF ORDER:	12/15/2014
X	PARKING OTHER	CONTROL NUMBER:	14-55
OF MIC TRAFFIC	NT TO CHAPTER NO. 33 OF THE SAN, SAME BEING THE UNIFORM TRACHIGAN AND IN THE INTEREST OF PUR CONTROL ORDER IS HEREBY ISSUUTHORIZED AS TRAFFIC ENGINEER, B	AFFIC CODE FOR CITIES, TO IBLIC SAFETY AND CONVE ED BY BRIAN COBURN, E	DWNSHIPS AND VILLAGES NIENCE THE FOLLOWING NGINEERING MANAGER,
	CE OF THIS TRAFFIC CONTROL ORD FFIC CONDITIONS ON THE FOLLOWI FAN.		
SUMME	RLIN BOULEVARD		
DEPART ACCOR REQUIRE	FTER SAID INVESTIGATION, IT IS MENT OF PUBLIC SERVICES ER DANCE WITH THE MICHIGAN MANED BY SEC. 33-51 OF THE AFORESAVING DETERMINATION:	ECT AND MAINTAIN THULAL OF UNIFORM TRAFFI	HE YIELD SIGN (S) IN C CONTROL DEVICES AS
EASTBO	UND SUMMERLIN BOULEVARD TO YII	ELD AT TIVERTON DRIVE	
		BUL	
		Brian Coburn, P.E. Dated: 12/1	- Traffic Engineer 5/2014
TRAFFIC CITY OF HEREBY	CED BY CITY COUNCIL CONTROL ORDER NUMBER 14-55 FOR NOVI, MICHIGAN FOR STUDY AID ORDERED AND DIRECTED THAT THIS COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	Y APPROVED AND IT IS FFICE OF THE CITY CLERK
BEING F	THER ORDERED AND DIRECTED TH ILED WITH THE CLERK AND UPON EF TENCE OF AFORESAID,		지하는 경기에 살아가 되는 경기를 하는 그렇게 되는 사람이 되었다. 그리고 아내는 것은 것이다.
EASTBOL	JND SUMMERLIN BOULEVARD TO YIE	LD AT TIVERTON DRIVE	
	D AT THE REGULAR MEETING OF UNCIL ON <u>12/22/2014.</u>	By:Robert J. Gatt,	Mayor
		20	
		By:	polius Clork

SPEED	DATE OF ORDER:	12/15/2014
PARKING X OTHER	CONTROL NUMBER:	14-56
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRA OF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, BURNELL OF THE PROPERTY O	AFFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVI ED BY BRIAN COBURN, E Y SEC. 33-51 OF THE AFOI	OWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER, RESAID CHAPTER.
OF TRAFFIC CONDITIONS ON THE FOLLOWING MICHIGAN.		
WEST LAKE DRIVE		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERECT A WITH THE MICHIGAN MANUAL OF UNIFORM 33-51 OF THE AFORESAID CHAPTER, SAID DETERMINATION:	ND MAINTAIN THE STOP SI I TRAFFIC CONTROL DEVI	GN (S) IN ACCORDANCE CES AS REQUIRED BY SEC.
WESTBOUND WEST LAKE DRIVE TO STOP AT L	UDLOW DRIVE AT THE WES	T INTERSECTION
	BU	
	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-56 H CITY OF NOVI, MICHIGAN FOR STUDY AI HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREE ORDER BE FILED IN THE C	BY APPROVED AND IT IS OFFICE OF THE CITY CLERK
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
WESTBOUND WEST LAKE DRIVE TO STOP AT LI	UDLOW DRIVE AT THE WES	TINTERSECTION
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By: Robert J. Gatt,	Mayor
	Ву:	
	Manuanna Car	nolius Clark

SPEED	DATE OF ORDER:	12/15/2014
PARKINGX OTHER	CONTROL NUMBER:	14-57
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRAOF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, B	AFFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVE ED BY BRIAN COBURN, E	OWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING ENGINEERING MANAGER,
ISSUANCE OF THIS TRAFFIC CONTROL ORD OF TRAFFIC CONDITIONS ON THE FOLLOW! MICHIGAN.		
LEBENTA STREET		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERECT A WITH THE MICHIGAN MANUAL OF UNIFORM 33-51 OF THE AFORESAID CHAPTER, SAID DETERMINATION:	ND MAINTAIN THE STOP SI I TRAFFIC CONTROL DEVI	GN (S) IN ACCORDANCE CES AS REQUIRED BY SEC.
NORTHBOUND LEBENTA STREET TO STOP AT F	AYWOOD STREET	
	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-57 F CITY OF NOVI, MICHIGAN FOR STUDY AT HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	IAVING BEEN PRESENTED ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	TO THE COUNCIL OF THE Y APPROVED AND IT IS FFICE OF THE CITY CLERK
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		
NORTHBOUND LEBENTA STREET TO STOP AT F	AYWOOD STREET	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014,	By:Robert J. Gatt,	Mayor
	By: Maryanne Corr	nelius, Clerk

SPEED	DATE OF ORDER:	12/15/2014
PARKINGX OTHER	CONTROL NUMBER:	14-58
PURSUANT TO CHAPTER NO. 33 OF THE MICHIGAN, SAME BEING THE UNIFORM TRAOF MICHIGAN AND IN THE INTEREST OF PUTRAFFIC CONTROL ORDER IS HEREBY ISSUDULY AUTHORIZED AS TRAFFIC ENGINEER, BUSUANCE OF THIS TRAFFIC CONTROL ORD	FFIC CODE FOR CITIES, TO BLIC SAFETY AND CONVI ED BY BRIAN COBURN, E Y SEC. 33-51 OF THE AFOI	DWNSHIPS AND VILLAGES ENIENCE THE FOLLOWING INGINEERING MANAGER RESAID CHAPTER.
OF TRAFFIC CONDITIONS ON THE FOLLOWII MICHIGAN.	NG PUBLIC ROAD OR RO.	ADS IN THE CITY OF NOVI,
WEST LAKE		
AND AFTER SAID INVESTIGATION, IT IS DEPARTMENT OF PUBLIC SERVICES ERECT AI WITH THE MICHIGAN MANUAL OF UNIFORM 33-51 OF THE AFORESAID CHAPTER, SAID DETERMINATION:	ND MAINTAIN THE STOP SI TRAFFIC CONTROL DEVIC	GN (S) IN ACCORDANCE CES AS REQUIRED BY SEC.
SOUTHBOUND WEST LAKE TO STOP AT LUDIO	<u>w</u>	
	BLE	2
	Brian Coburn, P.E. Dated: 12/	- Traffic Engineer 15/2014
APPROVED BY CITY COUNCIL TRAFFIC CONTROL ORDER NUMBER 14-58 F CITY OF NOVI, MICHIGAN FOR STUDY AN HEREBY ORDERED AND DIRECTED THAT THIS AND A COPY THEROF IN THE OFFICE OF THE	ND APPROVAL, IS HEREB ORDER BE FILED IN THE O	Y APPROVED AND IT IS
IT IS FURTHER ORDERED AND DIRECTED TH BEING FILED WITH THE CLERK AND UPON ER THE EXISTENCE OF AFORESAID,		전 (2015년 1일 2015년 1일 전 2015년 1일 2015년
SOUTHBOUND WEST LAKE TO STOP AT LUDLO	<u>w</u>	
ADOPTED AT THE REGULAR MEETING OF CITY COUNCIL ON 12/22/2014.	By:Robert J. Gatt,	Mayor
	By: Maryanne Corr	nelius, Clerk