

MEMORANDUM

DATE: January 30, 2013
TO: Kurt Seeman, P.E.
 City of Redmond
FROM: Jeff Schramm
 TENW
SUBJECT: Level 1 Traffic Analysis
 Kirkmond 35-Unit Single-Family Residential Development
 TENW Project No. 4673

This memorandum documents the Level 1 Traffic Analysis completed for the proposed Kirkmond 35-unit single-family residential project. This memo includes a project description, trip generation estimate, trip distribution estimate, and PM peak hour trip assignment for the proposed project.

Project Description

Kirkmond is a 35-unit single-family residential plat located on the east side of 134th Avenue NE and north of NE 100th Street in the newly annexed area of Redmond, as shown on the **Attachment A** vicinity map. There is one existing single-family home on the site that will be removed.

A preliminary site plan, which is provided in **Attachment B**, shows the layout of 35 single-family residential units. Access to the site is proposed at two locations onto 134th Avenue NE as shown in **Attachment B**.

Trip Generation

Using trip generation methodology from the ITE 9th Edition *Trip Generation Manual*, a 35-unit single-family residential project, less 1 existing residence, would generate 385 daily trips with 33 AM peak hour trips and 39 PM peak hour trips. The trip generation summary is provided in the table below, and the detailed trip generation calculations are included in **Attachment C**.

Table 1
Kirkmond 35-Unit Single-Family Residential
Trip Generation Summary

Time Period	Trips Generated		
	In	Out	Total
Weekday Daily	193	192	385
Weekday AM Peak Hour	8	25	33
Weekday PM Peak Hour	25	14	39

Trip Distribution and Assignment

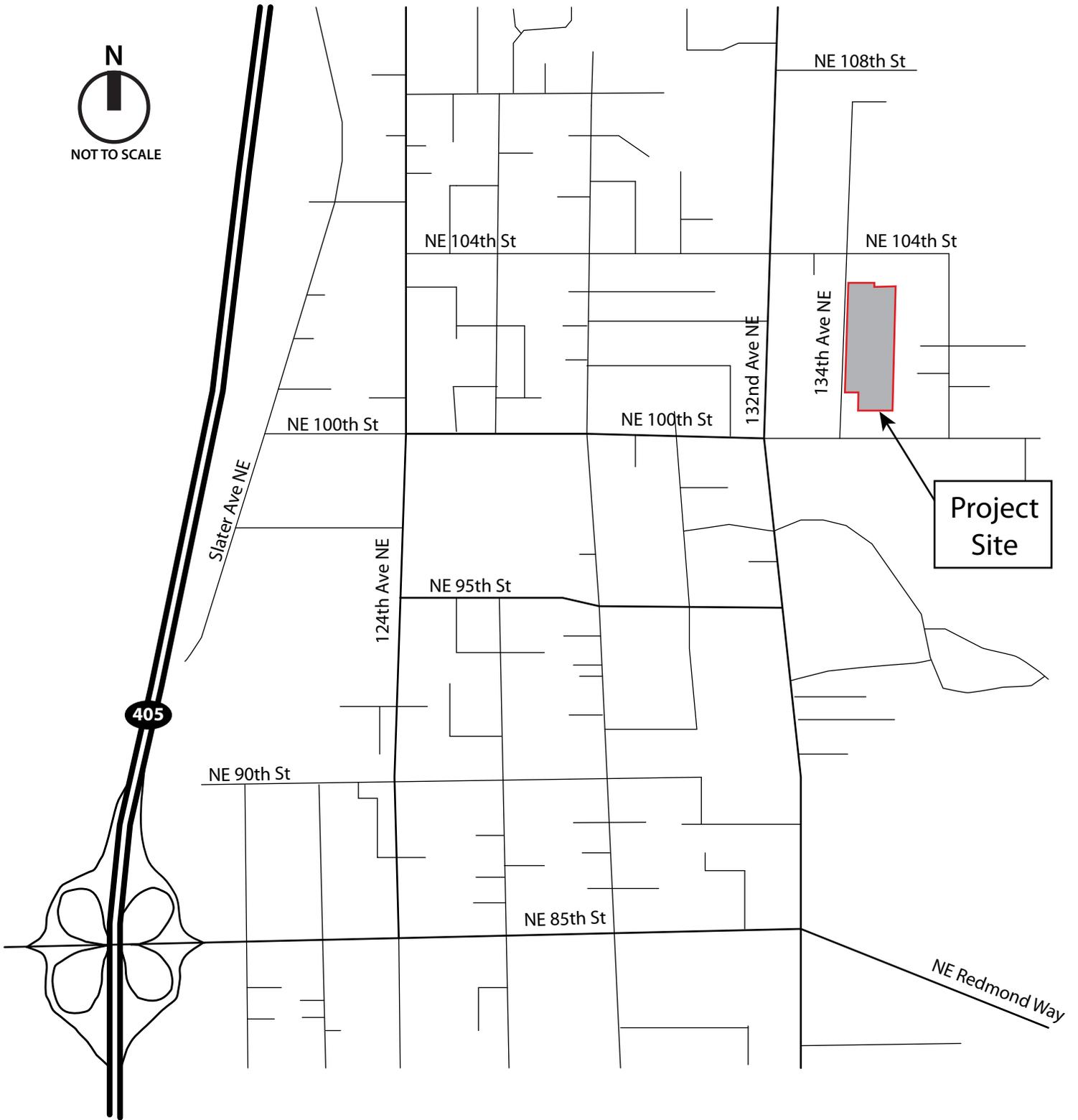
The distribution of project-generated traffic was estimated based on existing travel patterns, the location of population and employment areas in the vicinity of the site, and the location of the arterial roadway network. The nearest arterials to this site are 132nd Avenue NE, 124th Avenue NE, and NE 85th Street (Redmond Way). **Attachment D** illustrates the trip distribution estimate to/from these arterials.

Based on the estimated trip distribution travel patterns in the area, the 39 net new weekday PM peak hour trips (25 in, 14 out) were assigned to the adjacent street network. The resulting PM peak hour project trip assignment is illustrated on **Attachment D**.

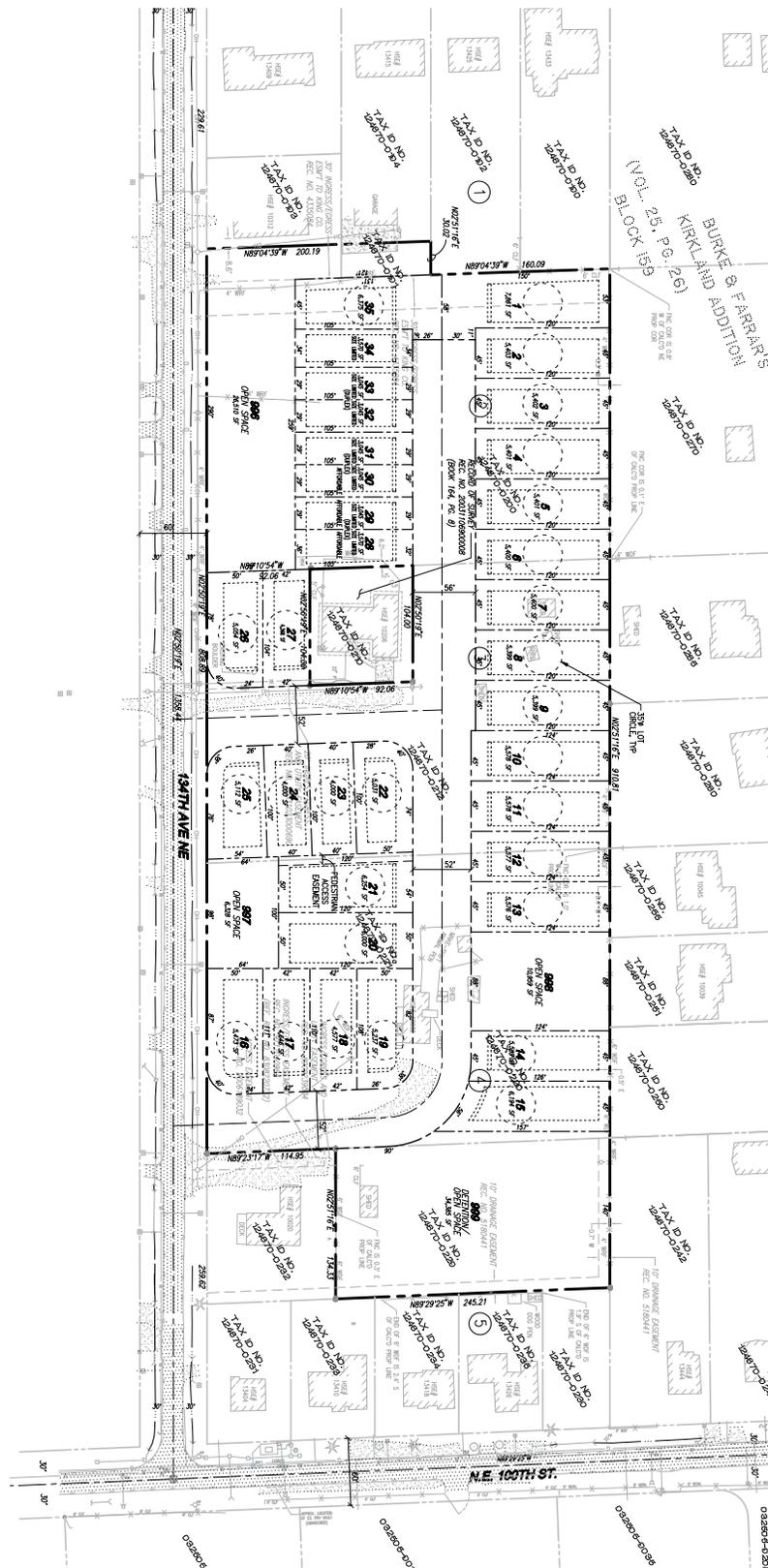
If you have any questions regarding the information presented in this memo, or require additional information, please contact me at (206) 396-8286 or schramm@tenw.com.

cc: Ogden Farms LLC
Jeff Haynie, P.E. - TENW

Attachments: A. Vicinity Map
B. Preliminary Site Plan
C. Trip Generation Calculations
D. PM Peak Hour Trip Distribution & Assignment



Attachment A: Site Vicinity

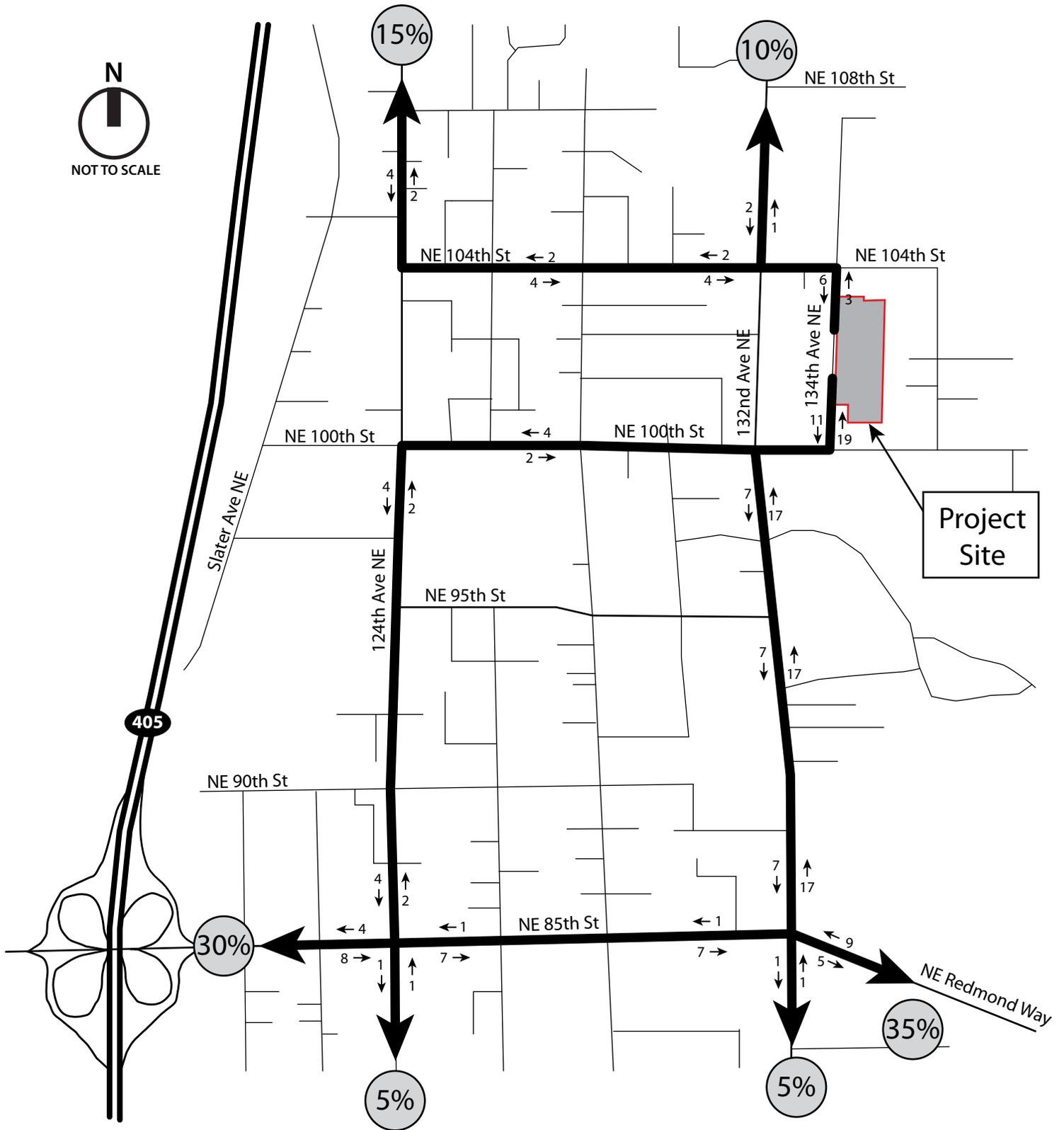


Preliminary site plan provided by Taylor Development January 4, 2013.

Attachment B: Preliminary Site Plan

Attachment C

Kirkmond Residential Trip Generation Summary									
Land Use	Size	Units ¹	ITE LUC ²	Directional Distribution		Trip Rate	Trips Generated		
				In	Out		In	Out	Total
Daily									
<i>Proposed Use:</i>									
Single Family	35	DU	210	50%	50%	equation	200	200	400
<i>Less Existing Use:</i>									
Single Family	1	DU	210	50%	50%	equation	-7	-8	-15
Net New Daily Trips =							193	192	385
AM Peak Hour									
<i>Proposed Use:</i>									
Single Family	35	DU	210	25%	75%	equation	8	26	34
<i>Less Existing Use:</i>									
Single Family	1	DU	210	25%	75%	0.75	0	-1	-1
Net New AM Peak Hour Trips =							8	25	33
PM Peak Hour									
<i>Proposed Use:</i>									
Single Family	35	DU	210	63%	37%	equation	26	15	41
<i>Less Existing Use:</i>									
Single Family	1	DU	210	63%	37%	equation	-1	-1	-2
Net New PM Peak Hour Trips =							25	14	39
Notes:									
¹ DU = Dwelling Units									
² Institute of Transportation Engineers, Trip Generation Manual, 9th edition Land Use Code.									



Attachment D: PM Peak Hour Project Trip Distribution and Assignment

MEMORANDUM

DATE: March 12, 2013
TO: Kurt Seeman, P.E.
 City of Redmond
FROM: Jeff Schramm
 TENW
SUBJECT: Revised Phase 1 Traffic Analysis
 Kirkmond 37-Unit Single-Family Residential Development
 TENW Project No. 4673

This revised memorandum documents the Phase 1 Traffic Analysis completed for the proposed Kirkmond 37-unit single-family residential project. This document includes a project description, revised trip generation estimate, trip distribution estimate, and PM peak hour revised trip assignment for the proposed project.

Project Description

Kirkmond is a 37-unit single-family residential plat located on the east side of 134th Avenue NE and north of NE 100th Street in the newly annexed area of Redmond, as shown on the **Attachment A** vicinity map. There is one existing single-family home on the site that will be removed.

A revised site plan, which is provided in **Attachment B**, shows the layout of 37 single-family residential units. Access to the site is proposed at two locations onto 134th Avenue NE as shown in **Attachment B**.

Trip Generation

Using trip generation methodology from the ITE 9th Edition *Trip Generation Manual*, a 37-unit single-family residential project, less 1 existing residence, would generate 406 daily trips with 35 AM peak hour trips and 41 PM peak hour trips. The trip generation summary is provided in the table below, and the detailed trip generation calculations are included in **Attachment C**.

Table 1
Kirkmond 35-Unit Single-Family Residential
Trip Generation Summary

Time Period	Trips Generated		
	In	Out	Total
Weekday Daily	203	203	406
Weekday AM Peak Hour	9	26	35
Weekday PM Peak Hour	26	15	41

Trip Distribution and Assignment

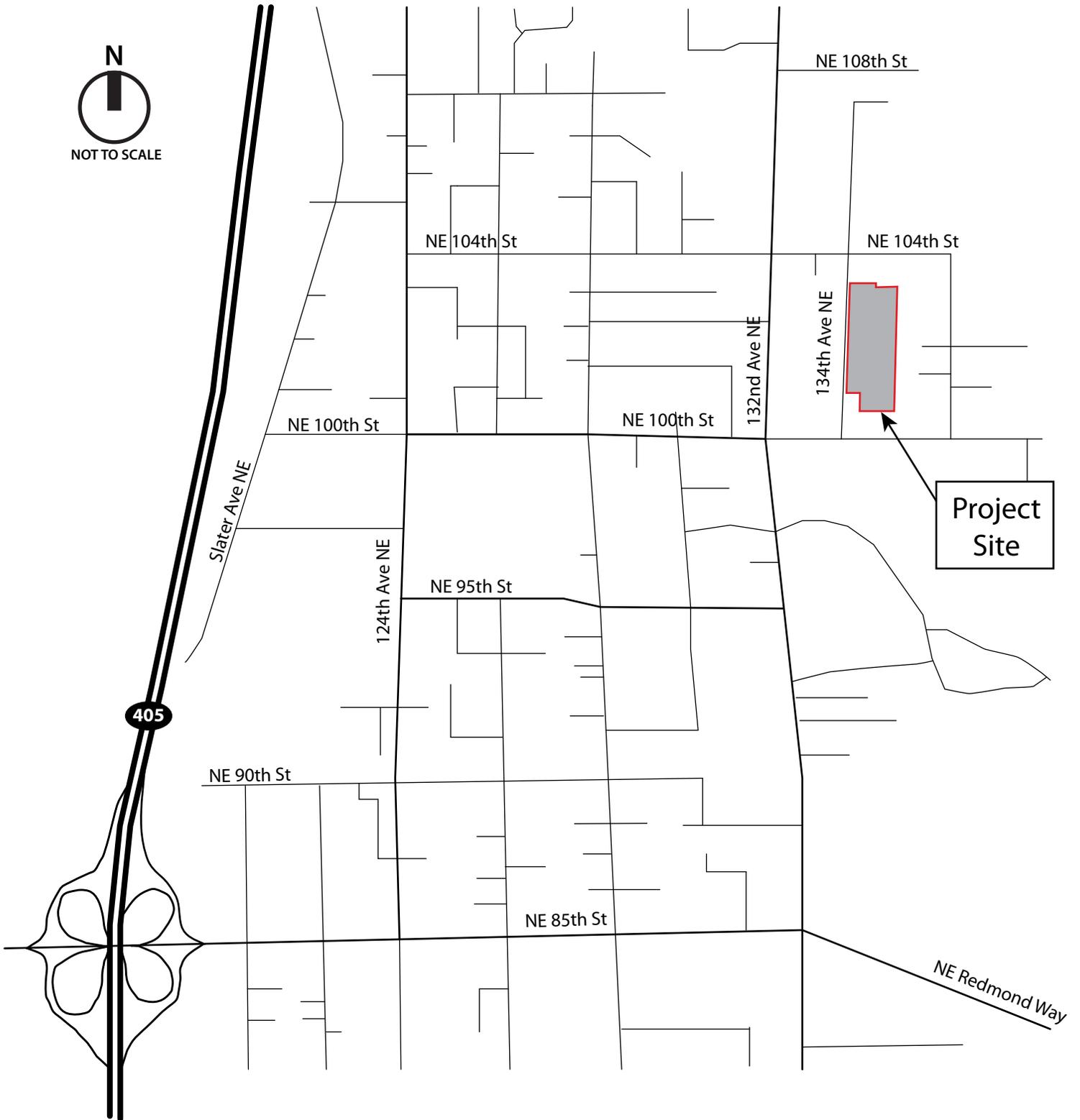
The distribution of project-generated traffic was estimated based on existing travel patterns, the location of population and employment areas in the vicinity of the site, and the location of the arterial roadway network. The nearest arterials to this site are 132nd Avenue NE, 124th Avenue NE, and NE 85th Street (Redmond Way). **Attachment D** illustrates the trip distribution estimate to/from these arterials.

Based on the estimated trip distribution travel patterns in the area, the 39 net new weekday PM peak hour trips (25 in, 14 out) were assigned to the adjacent street network. The resulting PM peak hour project trip assignment is illustrated on **Attachment D**.

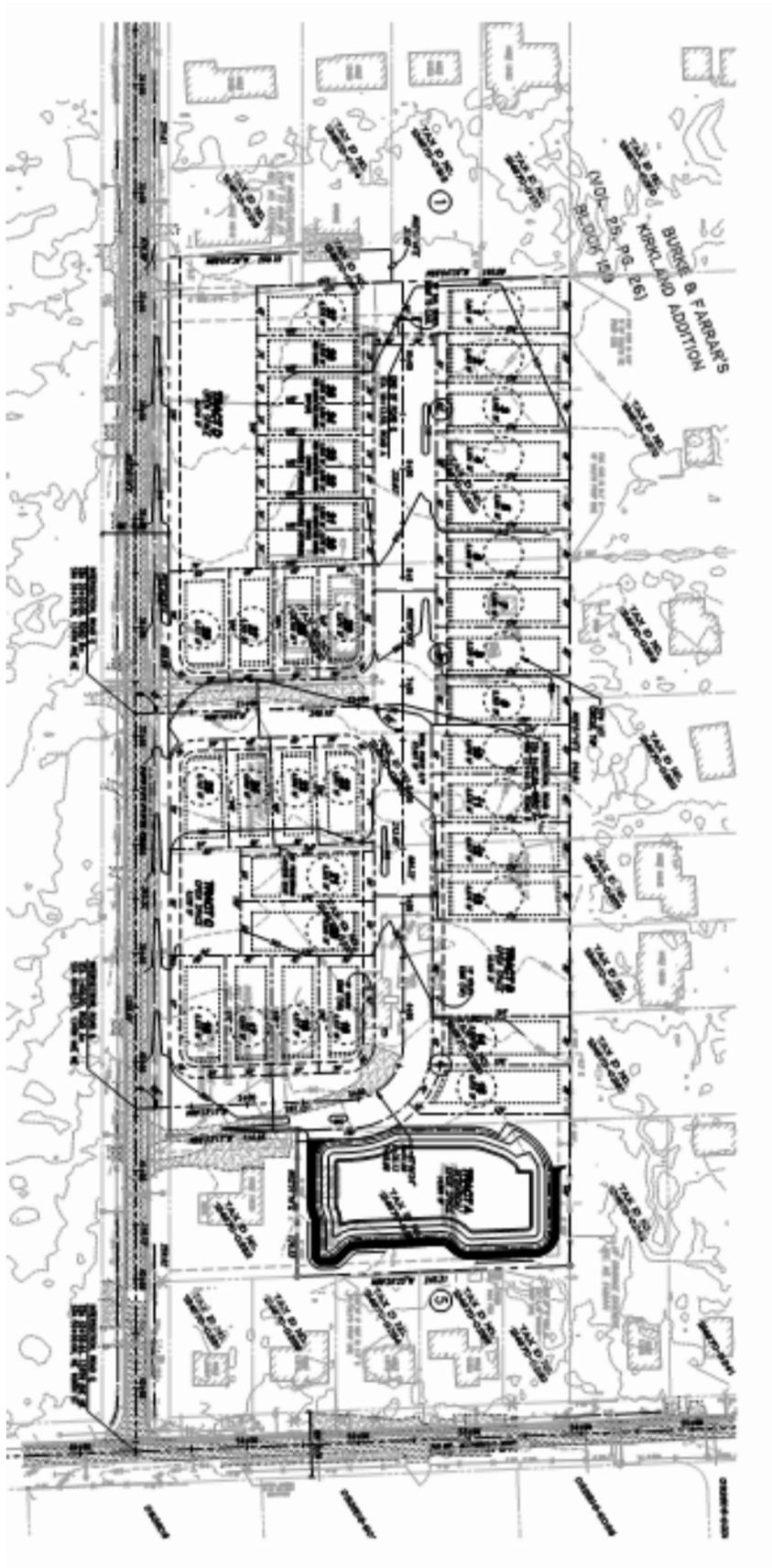
If you have any questions regarding the information presented in this memo, or require additional information, please contact me at (206) 396-8286 or schramm@tenw.com.

cc: Ogden Farms LLC
Jeff Haynie, P.E. - TENW

Attachments: A. Vicinity Map
B. Preliminary Site Plan – revised
C. Trip Generation Calculations – revised
D. PM Peak Hour Trip Distribution & Assignment – revised



Attachment A: Site Vicinity

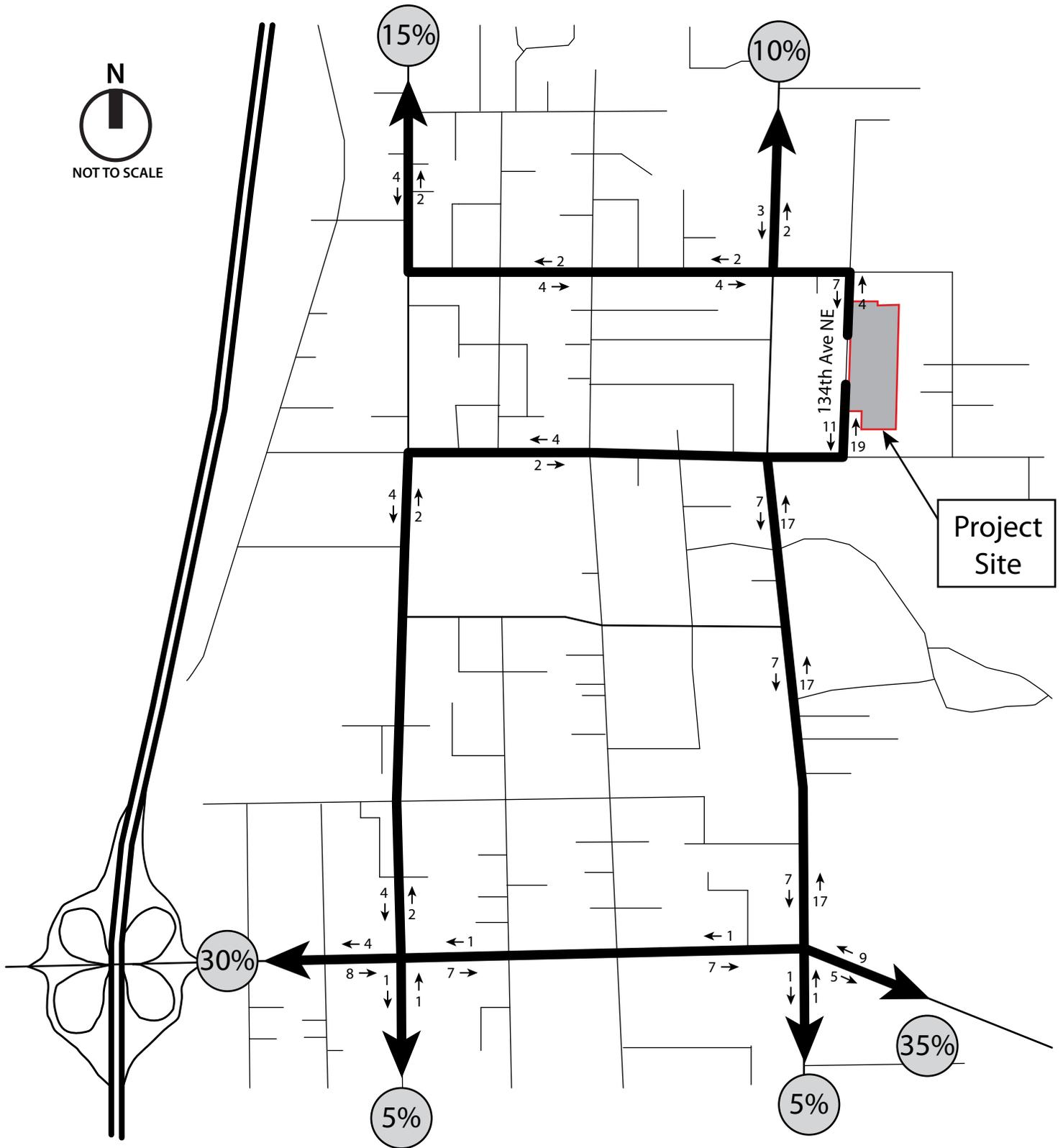


Revised site plan provided by Taylor Development January 4, 2013.

Attachment B: Revised Site Plan

Attachment C

Kirkmond Residential Trip Generation Summary									
Land Use	Size	Units ¹	ITE LUC ²	Directional Distribution		Trip Rate	Trips Generated		
				In	Out		In	Out	Total
Daily									
<i>Proposed Use:</i>									
Single Family	37	DU	210	50%	50%	equation	210	211	421
<i>Less Existing Use:</i>									
Single Family	1	DU	210	50%	50%	equation	-7	-8	-15
Net New Daily Trips =							203	203	406
AM Peak Hour									
<i>Proposed Use:</i>									
Single Family	37	DU	210	25%	75%	equation	9	27	36
<i>Less Existing Use:</i>									
Single Family	1	DU	210	25%	75%	0.75	0	-1	-1
Net New AM Peak Hour Trips =							9	26	35
PM Peak Hour									
<i>Proposed Use:</i>									
Single Family	37	DU	210	63%	37%	equation	27	16	43
<i>Less Existing Use:</i>									
Single Family	1	DU	210	63%	37%	equation	-1	-1	-2
Net New PM Peak Hour Trips =							26	15	41
Notes:									
¹ DU = Dwelling Units									
² Institute of Transportation Engineers, Trip Generation Manual, 9th edition Land Use Code.									



Attachment D: PM Peak Hour Project Trip Distribution and Assignment

MEMORANDUM

DATE: May 22, 2013

TO: Kurt Seeman, P.E.
City of Redmond

FROM: Jeff Schramm
TENW

SUBJECT: UPDATED Phase 1 Traffic Analysis
Kirkmond 41-Unit Single-Family Residential Development
TENW Project No. 4673

This memorandum is an update to the previous analysis to reflect a new site plan with 41 single-family residential units. This document summarizes the Phase 1 Traffic Analysis completed for the proposed Kirkmond 41-unit single-family residential project.

Project Description

Kirkmond is a 41-unit single-family residential plat located on the east side of 134th Avenue NE and north of NE 100th Street in the newly annexed area of Redmond, as shown on the Attachment A vicinity map. There is one existing single-family home on the site that will be removed.

A revised site plan, which is provided in Attachment B, shows the layout of 41 single-family residential units. Access to the site is proposed at two locations onto 134th Avenue NE as shown in Attachment B.

Trip Generation

Using trip generation methodology from the ITE 9th Edition *Trip Generation Manual*, a 37-unit single-family residential project, less 1 existing residence, would generate 447 daily trips with 37 AM peak hour trips and 45 PM peak hour trips. The trip generation summary is provided in the table below, and the detailed trip generation calculations are included in Attachment C.

Table 1
Kirkmond 35-Unit Single-Family Residential
Trip Generation Summary

Time Period	Trips Generated		
	In	Out	Total
Weekday Daily	224	223	447
Weekday AM Peak Hour	9	8	37
Weekday PM Peak Hour	29	16	45

Trip Distribution and Assignment

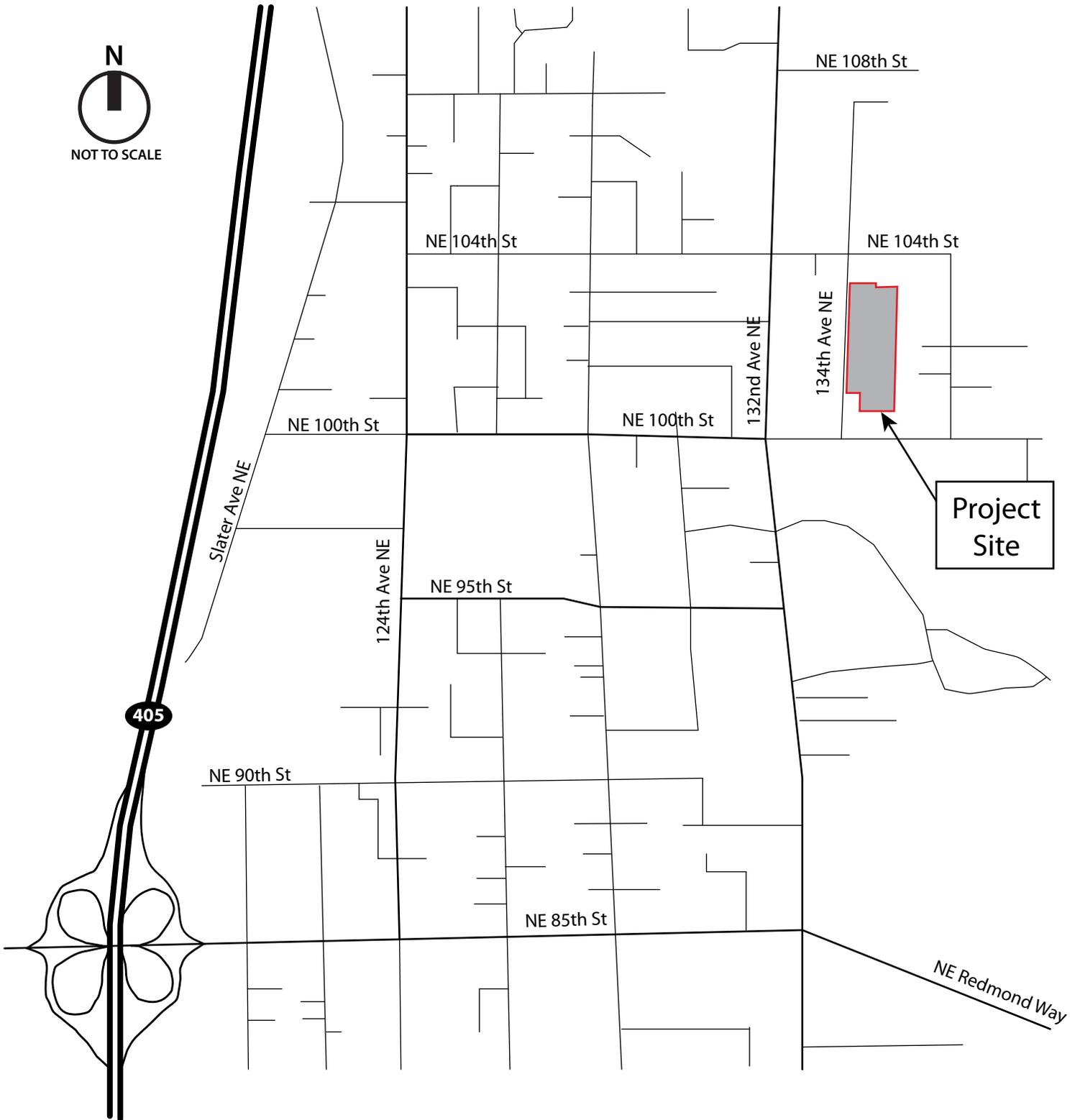
The distribution of project-generated traffic was estimated based on existing travel patterns, the location of population and employment areas in the vicinity of the site, and the location of the arterial roadway network. The nearest arterials to this site are 132nd Avenue NE, 124th Avenue NE, and NE 85th Street (Redmond Way). Attachment D illustrates the updated trip distribution estimate to/from these arterials.

Based on the estimated trip distribution travel patterns in the area, the 45 net new weekday PM peak hour trips (29 in, 16 out) were assigned to the adjacent street network. The resulting PM peak hour project trip assignment is illustrated on Attachment D.

If you have any questions regarding the information presented in this memo, or require additional information, please contact me at (206) 396-8286 or schramm@tenw.com.

cc: Ogden Farms LLC
Jeff Haynie, P.E. - TENW

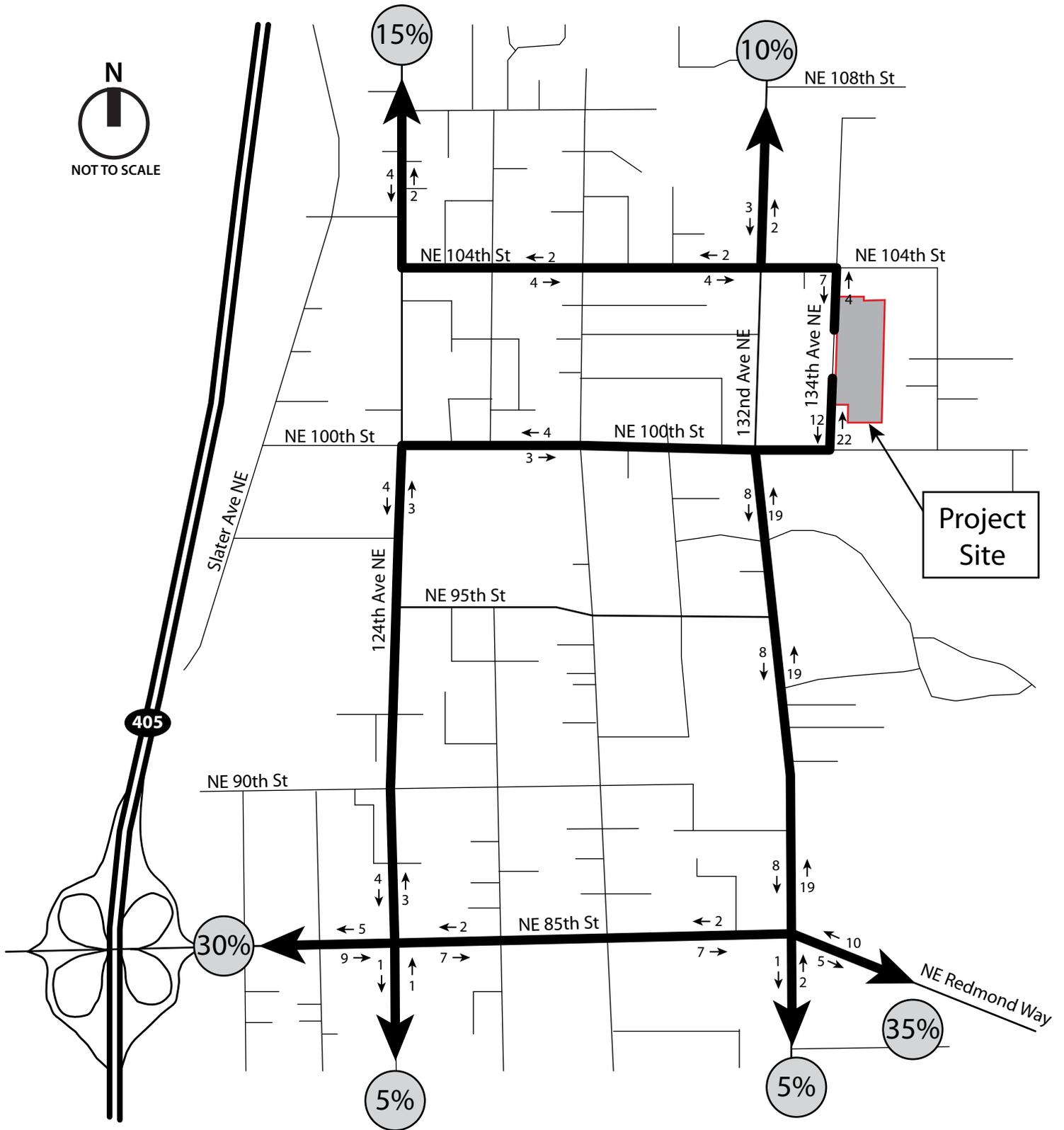
Attachments: A. Vicinity Map
B. Preliminary Site Plan – updated
C. Trip Generation Calculations – updated
D. PM Peak Hour Trip Distribution & Assignment – updated



Attachment A: Site Vicinity

Attachment C

Kirkmond Residential Trip Generation Summary									
Land Use	Size	Units ¹	ITE LUC ²	Directional Distribution		Trip Rate	Trips Generated		
				In	Out		In	Out	Total
Daily									
Proposed Use:									
Single Family	41	DU	210	50%	50%	equation	231	231	462
Less Existing Use:									
Single Family	1	DU	210	50%	50%	equation	-7	-8	-15
Net New Daily Trips =							224	223	447
AM Peak Hour									
Proposed Use:									
Single Family	41	DU	210	25%	75%	equation	9	29	38
Less Existing Use:									
Single Family	1	DU	210	25%	75%	0.75	0	-1	-1
Net New AM Peak Hour Trips =							9	28	37
PM Peak Hour									
Proposed Use:									
Single Family	41	DU	210	63%	37%	equation	30	17	47
Less Existing Use:									
Single Family	1	DU	210	63%	37%	equation	-1	-1	-2
Net New PM Peak Hour Trips =							29	16	45
Notes:									
¹ DU = Dwelling Units									
² Institute of Transportation Engineers, Trip Generation Manual, 9th edition Land Use Code.									



Attachment D: PM Peak Hour Project Trip Distribution and Assignment - Updated