

# **Appendix 11**

## **Correspondence**

## Kieres, Lindsey

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**From:** Newby, Jeff <Jeff.Newby@hamilton-co.org>  
**Sent:** Thursday, January 25, 2018 12:56 PM  
**To:** Kieres, Lindsey  
**Cc:** Smallwood, Brian; Beck, Eric  
**Subject:** RE: Kenwood Development Traffic

See below in red.

I would suggest a Memorandum of Understanding be submitted to the County and ODOT to include the items below, plus growth rate, trip distribution, trip generation, etc.

Thank you,

**Jeff Newby, P.E.**  
Traffic Engineer

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**From:** Kieres, Lindsey [mailto:Lindsey.Kieres@Woolpert.com]  
**Sent:** Thursday, January 25, 2018 9:06 AM  
**To:** Newby, Jeff  
**Cc:** Smallwood, Brian; Beck, Eric  
**Subject:** RE: Kenwood Development Traffic

Jeff,

Thanks for getting back to me so quickly. I do have a few other items that I would like an idea on scope in order to let our client know your expectations.

1. What hours will need to be studied? AM/PM peaks? Count hours? Is weekend analysis required? **AM & PM peak hours plus weekend peak hour. If a traffic signal will be requested a traffic signal warrant will need to be completed, please note the traffic signal spacing requirements in the previous attached Hamilton County Access Management Regulations.**
2. Do you have counts for any of those noted intersections that we could utilize for the study? **No current counts or studies.**
3. Are there other developments that we would need to consider within the study? Any recent studies completed in the area? **No known developments and no studies.**
4. Are you looking for standard opening day and horizon year (+20 years) analysis? **Yes**
5. Are there any current planned roadway improvements in the area? (funded or not funded) **No.**
6. Is the county the governing jurisdiction for the review or ODOT? I understand including them in the review since Montgomery Road is a SR but just wondering if they need to be contacted at this stage for scoping purposes. **The County is the agency for Kenwood and ODOT is for Montgomery and for the traffic signal at Montgomery and Kenwood. I have informed Marc Grake with ODOT District 8 of the project.**

Feel free to give me a call today if it's easier to discuss these questions.

**Lindsey Kieres, PE, PTOE**  
Traffic Engineer | Transportation  
D: 937.531.1214  
[Lindsey.Kieres@Woolpert.com](mailto:Lindsey.Kieres@Woolpert.com)

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**From:** Newby, Jeff [<mailto:Jeff.Newby@hamilton-co.org>]  
**Sent:** Thursday, January 25, 2018 8:47 AM  
**To:** Kieres, Lindsey <[Lindsey.Kieres@Woolpert.com](mailto:Lindsey.Kieres@Woolpert.com)>  
**Cc:** Smallwood, Brian <[Brian.Smallwood@Woolpert.com](mailto:Brian.Smallwood@Woolpert.com)>; Beck, Eric <[Eric.Beck@hamilton-co.org](mailto:Eric.Beck@hamilton-co.org)>  
**Subject:** RE: Kenwood Development Traffic

Lindsey,

This project will require a Traffic Impact Study per the Hamilton County Access Management Regulations. Kenwood is a Major Arterial roadway and the improvements will need to follow Chart 2 in the Hamilton County Access Management Regulations.

The following existing intersection will need to be included in the study:

Kenwood and Galbraith  
Kenwood and Happiness Way  
Kenwood and Movie Theater/Kenwood Towne Center  
Kenwood and Orchard  
Kenwood and Montgomery (US 22 / SR 3)

ODOT will need to be included with the TIS.

Thank you,

**Jeff Newby, P.E.**  
Traffic Engineer

Office of the Hamilton County Engineer  
223 W. Galbraith Road  
Cincinnati, Ohio 45215

Ph. (513) 946-8421  
Fax. (513) 946-8424  
Email [jeff.newby@hamilton-co.org](mailto:jeff.newby@hamilton-co.org)

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**From:** Kieres, Lindsey [<mailto:Lindsey.Kieres@Woolpert.com>]  
**Sent:** Wednesday, January 24, 2018 11:08 AM  
**To:** Newby, Jeff  
**Cc:** Smallwood, Brian  
**Subject:** Kenwood Development Traffic

Jeff,

I just left you a voicemail on your office phone concerning a development I am working on for the Capital Investment Group. I believe Gregg Fusaro had previously discussed the project with you. I am working on scoping what will be required as far as any traffic analysis that may be required for the development's approvals. If you have a moment please give me a call at your convenience (my direct line is 937.531.1214).

Just to give you an idea of the anticipated trips we have preliminary estimated 440 AM peak hour trips and 560 PM peak hour trips. These estimates are still being tweaked as the site plan is being developed.

Hope to speak with you soon. Thanks!

**Lindsey Kieres, PE, PTOE**

Traffic Engineer | Transportation

D: 937.531.1214

[Lindsey.Kieres@Woolpert.com](mailto:Lindsey.Kieres@Woolpert.com)

**Woolpert**

4454 Idea Center Boulevard | Dayton, OH 45430

[woolpert.com](http://woolpert.com)

## Wiley, Jon

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**From:** Newby, Jeff <Jeff.Newby@hamilton-co.org>  
**Sent:** Thursday, March 22, 2018 12:50 PM  
**To:** Wiley, Jon  
**Subject:** RE: Kenwood Scope Mtg

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Jon,

There is a noon peak along the corridor and should be counted from 11am to 2pm. I am checking with ODOT about a weekend peak time.

I am checking with ODOT about the weekend peak time. The County has some counts that show the weekend peak from 12-6pm.

Thank you,

*Jeff Newby, P.E.*  
Traffic Engineer

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**From:** Wiley, Jon [<mailto:Jon.Wiley@Woolpert.com>]  
**Sent:** Thursday, March 22, 2018 11:09 AM  
**To:** Newby, Jeff  
**Subject:** RE: Kenwood Scope Mtg

Jeff,  
Thanks for meeting with us on such short notice.

I just wanted to confirm our hours for processing the counts as 7-11a and 3-7p, and Saturday 10-2p. Sound good?

Thanks!

**Jon Wiley, PE**  
Project Manager | Transportation  
D: 513.527.2560  
[jon.wiley@woolpert.com](mailto:jon.wiley@woolpert.com)

**Woolpert**  
1203 Walnut Street Second Floor | Cincinnati, OH 45202  
[woolpert.com](http://woolpert.com)

## Wiley, Jon

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**From:** Newby, Jeff <Jeff.Newby@hamilton-co.org>  
**Sent:** Friday, March 23, 2018 7:30 AM  
**To:** Wiley, Jon  
**Subject:** FW: Kenwood Development

See the growth factor below.

Thank you,

**Jeff Newby, P.E.**

Traffic Engineer

---

**From:** Tom.Makris@dot.ohio.gov [mailto:Tom.Makris@dot.ohio.gov]  
**Sent:** Friday, March 23, 2018 7:26 AM  
**To:** Marc.Grake@dot.ohio.gov; Newby, Jeff  
**Subject:** RE: Kenwood Development

Jeff,

Please use a 3% growth factor.

Thank you,

**Thomas G. Makris, P.E., M.B.A.**

*Permit Engineer*

District 8 Office of Permits

505 South State Route 741, Lebanon, Ohio 45036

(513) 933.6575

[transportation.ohio.gov](http://transportation.ohio.gov)



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**From:** Grake, Marc  
**Sent:** Thursday, March 22, 2018 12:53 PM  
**To:** Newby, Jeff <Jeff.Newby@hamilton-co.org>; Makris, Thomas <Tom.Makris@dot.ohio.gov>  
**Subject:** RE: Kenwood Development

Jeff,

I will Tom answer #1, but I can answer the other two questions:

2. I would like to see the holiday season study which basically consists of the black Friday MID and PM peak times. The MID plan runs from about 8am to 2pm, and then PM runs from 2pm to 10pm. I attached those syncro files.

3. I pulled TEC's signal system study from 2011, and it looks like the weekend peak hour looks to be 12pm to 1pm according to their traffic counts.

**Marc Grake, P.E.**

*Traffic Operations Engineer*

ODOT District Eight

505 South State Route 741, Lebanon, Ohio 45036

513-933-6607

[transportation.ohio.gov](http://transportation.ohio.gov)



**OHIO DEPARTMENT OF  
TRANSPORTATION**

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**From:** Newby, Jeff [<mailto:Jeff.Newby@hamilton-co.org>]

**Sent:** Thursday, March 22, 2018 12:38 PM

**To:** Grake, Marc <[Marc.Grake@dot.ohio.gov](mailto:Marc.Grake@dot.ohio.gov)>; Makris, Thomas <[Tom.Makris@dot.ohio.gov](mailto:Tom.Makris@dot.ohio.gov)>

**Subject:** Kenwood Development

Marc & Tom,

This morning I had a meeting with Jon Wiley from Woolpert and the developer about the project at the southwest corner of Kenwood and Happiness Way. The projected trips are 440 AM and 560 PM and will impact the Montgomery/Kenwood intersection.

A couple of questions arose from the meeting and would like give you a chance to input your preference.

1. What growth factor would you like to see for the TIS?
2. Would you prefer to have the holiday season studied also? If so, are there traffic counts that could be shared with the consultant?
3. Do you know when the weekend peak hour occurs? The County does not have weekend counts.

Woolpert will be composing a MOU in the next week and I will send you a copy.

Any questions let me know.

Thank you,

**Jeff Newby, P.E.**

Traffic Engineer

Office of the Hamilton County Engineer

223 W. Galbraith Road

Cincinnati, Ohio 45215

Ph. (513) 946-8421

Fax. (513) 946-8424

Email [jeff.newby@hamilton-co.org](mailto:jeff.newby@hamilton-co.org)

## Kieres, Lindsey

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**From:** Wiley, Jon  
**Sent:** Tuesday, April 03, 2018 11:03 AM  
**To:** Kieres, Lindsey; Anderson, Keegan  
**Subject:** FW: Kenwood Development  
**Attachments:** Kenwood Cinema.pdf; Kenwood Orchard.pdf; Kenwood Galbraith.pdf

### Jon Wiley, PE

Project Manager | Transportation  
D: 513.527.2560  
jon.wiley@woolpert.com

### Woolpert

1203 Walnut Street Second Floor | Cincinnati, OH 45202  
[woolpert.com](http://woolpert.com)

---

**From:** Newby, Jeff [mailto:Jeff.Newby@hamilton-co.org]  
**Sent:** Tuesday, April 3, 2018 10:59 AM  
**To:** Wiley, Jon <Jon.Wiley@Woolpert.com>  
**Subject:** RE: Kenwood Development

Jon,

As requested the timings for the intersections. Kenwood and Montgomery is an ODOT signal.

Thank you,

### Jeff Newby, P.E.

Traffic Engineer

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**From:** Wiley, Jon [mailto:Jon.Wiley@Woolpert.com]  
**Sent:** Thursday, March 29, 2018 4:31 PM  
**To:** Newby, Jeff  
**Subject:** RE: Kenwood Development

Thanks Jeff,

We should have counts back tomorrow, so we'll use this to check our counts. We're planning to submit the MOU early next week.

Can you send us signal timing info?

- Kenwood – Galbraith
- Kenwood – Town Center entrance
- Kenwood - Orchard
- Kenwood - Montgomery

Also, when placing the counters, they noticed the Ped button on Orchard was not working.

Thanks!

Jon



**Jon Wiley, PE**

Project Manager | Transportation

D: 513.527.2560

[jon.wiley@woolpert.com](mailto:jon.wiley@woolpert.com)

**Woolpert**

1203 Walnut Street Second Floor | Cincinnati, OH 45202

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---

**From:** Newby, Jeff [<mailto:Jeff.Newby@hamilton-co.org>]

**Sent:** Tuesday, March 27, 2018 8:10 AM

**To:** Wiley, Jon <[Jon.Wiley@Woolpert.com](mailto:Jon.Wiley@Woolpert.com)>

**Subject:** RE: Kenwood Development

Jon,

Attached are detector counts for Kenwood and Galbraith. This does not include all of the traffic, as some movements do not have detection.

LOCATION	BLOCK	Det 1	Det 2	Det 3	Det 4	Det 5	Det 6	Det 7
Kenwood & Galbraith	8200	Ø1	Ø3	Ø5	Ø7	Ø2	Ø2	Ø4
		NBLT	EBLT	SBLT	WBLT	SB	SB	WB

Thank you,

**Jeff Newby, P.E.**

Traffic Engineer

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**From:** Wiley, Jon [<mailto:Jon.Wiley@Woolpert.com>]

**Sent:** Monday, March 26, 2018 11:21 AM

**To:** Newby, Jeff

**Subject:** RE: Kenwood Development

Jeff,

Have you had a chance to see if you have any previous traffic counts at Kenwood?

We did our counts on last Thurs-Saturday, and I'd like to have something to compare/verify our results.

Thanks!

Jon

**Jon Wiley, PE**

Project Manager | Transportation

D: 513.527.2560

[jon.wiley@woolpert.com](mailto:jon.wiley@woolpert.com)

**Woolpert**

1203 Walnut Street Second Floor | Cincinnati, OH 45202

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---

**From:** Newby, Jeff [<mailto:Jeff.Newby@hamilton-co.org>]  
**Sent:** Friday, March 23, 2018 7:30 AM  
**To:** Wiley, Jon <[Jon.Wiley@Woolpert.com](mailto:Jon.Wiley@Woolpert.com)>  
**Subject:** FW: Kenwood Development

See the growth factor below.

Thank you,

**Jeff Newby, P.E.**  
Traffic Engineer

---

**From:** [Tom.Makris@dot.ohio.gov](mailto:Tom.Makris@dot.ohio.gov) [<mailto:Tom.Makris@dot.ohio.gov>]  
**Sent:** Friday, March 23, 2018 7:26 AM  
**To:** [Marc.Grake@dot.ohio.gov](mailto:Marc.Grake@dot.ohio.gov); Newby, Jeff  
**Subject:** RE: Kenwood Development

Jeff,

Please use a 3% growth factor.

Thank you,

**Thomas G. Makris, P.E., M.B.A.**  
*Permit Engineer*  
District 8 Office of Permits  
505 South State Route 741, Lebanon, Ohio 45036  
(513) 933.6575  
[transportation.ohio.gov](http://transportation.ohio.gov)



---

**From:** Grake, Marc  
**Sent:** Thursday, March 22, 2018 12:53 PM  
**To:** Newby, Jeff <[Jeff.Newby@hamilton-co.org](mailto:Jeff.Newby@hamilton-co.org)>; Makris, Thomas <[Tom.Makris@dot.ohio.gov](mailto:Tom.Makris@dot.ohio.gov)>  
**Subject:** RE: Kenwood Development

Jeff,

I will Tom answer #1, but I can answer the other two questions:

2. I would like to see the holiday season study which basically consists of the black Friday MID and PM peak times. The MID plan runs from about 8am to 2pm, and then PM runs from 2pm to 10pm. I attached those syncro files.
3. I pulled TEC's signal system study from 2011, and it looks like the weekend peak hour looks to be 12pm to 1pm according to their traffic counts.

**Marc Grake, P.E.**

*Traffic Operations Engineer*

ODOT District Eight

505 South State Route 741, Lebanon, Ohio 45036

513-933-6607

[transportation.ohio.gov](http://transportation.ohio.gov)



**OHIO DEPARTMENT OF  
TRANSPORTATION**

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**From:** Newby, Jeff [<mailto:Jeff.Newby@hamilton-co.org>]

**Sent:** Thursday, March 22, 2018 12:38 PM

**To:** Grake, Marc <[Marc.Grake@dot.ohio.gov](mailto:Marc.Grake@dot.ohio.gov)>; Makris, Thomas <[Tom.Makris@dot.ohio.gov](mailto:Tom.Makris@dot.ohio.gov)>

**Subject:** Kenwood Development

Marc & Tom,

This morning I had a meeting with Jon Wiley from Woolpert and the developer about the project at the southwest corner of Kenwood and Happiness Way. The projected trips are 440 AM and 560 PM and will impact the Montgomery/Kenwood intersection.

A couple of questions arose from the meeting and would like give you a chance to input your preference.

1. What growth factor would you like to see for the TIS?
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Woolpert will be composing a MOU in the next week and I will send you a copy.

Any questions let me know.

Thank you,

**Jeff Newby, P.E.**

Traffic Engineer

Office of the Hamilton County Engineer

223 W. Galbraith Road

Cincinnati, Ohio 45215

Ph. (513) 946-8421

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Email [jeff.newby@hamilton-co.org](mailto:jeff.newby@hamilton-co.org)

## Wiley, Jon

---

**From:** Wiley, Jon  
**Sent:** Wednesday, April 4, 2018 5:37 PM  
**To:** 'Newby, Jeff'  
**Cc:** Kieres, Lindsey; Gregg Fusaro (gf@cigproperties.com); Marc.Grake@dot.state.oh.us; 'tom.makris@dot.ohio.gov'; Smallwood, Brian; Anderson, Keegan  
**Subject:** Kenwood Traffic MOU  
**Attachments:** 2018-04-03 MOU and Volume Submittal.pdf

Jeff,  
Please find our summary of data collection, assumptions, trip generation and peak hour distribution figures for your review and approval in the form of an MOU.  
Please feel free to call with any questions, or to discuss the attached information, or the project in general.  
Thanks!  
Jon

**Jon Wiley, PE**  
Project Manager | Transportation  
D: 513.527.2560  
jon.wiley@woolpert.com

**Woolpert**  
1203 Walnut Street Second Floor | Cincinnati, OH 45202  
[woolpert.com](http://woolpert.com)

## Wiley, Jon

---

**From:** Wiley, Jon  
**Sent:** Friday, May 4, 2018 6:37 AM  
**To:** Smallwood, Brian  
**Cc:** Kieres, Lindsey; Anderson, Keegan  
**Subject:** Kenwood TIS MOU comments  
**Attachments:** MOU\_withComments 5-4-2018.pdf; SitePlan.pdf

Brian,

Met with Hamilton Co. yesterday regarding the Kenwood Traffic MOU. Comments from are attached. They're pretty minor in nature, mostly rounding issues, etc.

Two most significant are noted on the Site Plan.

1. Center drive does not have sufficient spacing from the corner at Happiness Way to be considered for full access. They would prefer this drive be eliminated, but right-in/right-out is a possibility.
2. County thoroughfare plan calls for 60 ft. of R/W. Existing is 40 ft. Buildings encroach on 60 ft., and other sites along Kenwood all sit back. This really isn't a traffic issue, and should have been a comment in Zoning review.

ODOT has not yet commented, but no significant comments are expected from them at this time. The County has no objections to the MOU, and we are ok moving forward with the comments noted.

Jon

**Jon Wiley, PE**

Project Manager | Transportation

D: 513.527.2560

jon.wiley@woolpert.com

**Woolpert**

1203 Walnut Street Second Floor | Cincinnati, OH 45202

[woolpert.com](http://woolpert.com)

# Memorandum of Understanding

**To:** Jeff Newby, PE, Hamilton County Traffic Engineer  
**Cc:** Thomas Makris, PE, MBA, ODOT District 8 Permit Engineer  
Marc Grake, PE, ODOT District 8 Traffic Operations Engineer  
**From:** Jon Wiley, PE  
**Date:** April 4, 2018  
**Subject:** MOU for Proposed Kenwood Development along Kenwood Road, Hamilton County, Ohio

## Introduction

A traffic impact study (TIS) is required for a proposed Development located along Kenwood Road in Sycamore Township, Hamilton County, Ohio. The study will be based on the kick-off meeting held between Woolpert and Hamilton County on March 22, 2018 and follow up emails along with guidelines established by the Ohio Department of Transportation (ODOT) and the Institute of Transportation Engineers (ITE) Traffic Access and Impact Studies for Site Development. Woolpert, on behalf of Capital Investment Group, prepared this Memorandum of Understanding (MOU) documenting the following items for review and approval for the proposed Kenwood Road Development TIS: Data Collection, Trip Generation, Site Access, Directional Distribution, Growth Rate, Trip Assignment and Traffic Volumes.

The proposed Kenwood Development consists of a hotel, retail and restaurant space, office space, and low-rise multi-family residences. Parking will be provided for the site and for employees of the Jewish Hospital – Mercy Health located directly adjacent to the proposed site to the north. The development, shown below in **Figure 1**, is located on the west side of Kenwood Road in Sycamore Township, Hamilton County, Ohio. Refer to Attachment 1 for the conceptual site plan.



**Figure 1:** Site Area; Source: Google Earth, N.T.S.

## Data Collection

Video turning movement counts were conducted by Cummins Consulting Services for the proposed development. The video turning movement counts were conducted at seven (7) intersections for twelve (12) hours during the hours of 7:00 AM-7:00 PM on Thursday, March 22, 2018 and for four (4) hours during the hours of 12:00 -4:00 PM on Saturday, March 24, 2018 (unless otherwise noted below). The peak hours for the studied intersections will be used for analysis. The intersections counted are listed below and shown on **Figure 2** below. The turning movement count data sheets are included in Attachment 6.

1. Kenwood Road and Galbraith Road
2. Kenwood Road and Kenwood Mall/Hospital Driveway
3. Kenwood Road and Happiness Way (Weekday 24-hour count)
4. Kenwood Road and Kenwood Place/Towne Center
5. Kenwood Road and Orchard Lane
6. Kenwood Road and Montgomery Road (US 22/SR 3)
7. Happiness Way and Hospital Driveway



**Figure 2: Count Locations**

April 4, 2018

Page 3

## Trip Generation

Trip Generation was calculated using the ITE Trip Generation Manual, 10<sup>th</sup> Edition for the proposed Kenwood Road Development. The provided site plan included 259 units of Multifamily Housing (ITE Land Use Code 220), a 120-room hotel (ITE Land Use Code 310), a 108,000 SF office (ITE Land Use Code 710), 19,122 SF of restaurant space (ITE Land Use Code 932), and 3,250 SF of retail space (ITE Land Use Code 814). The site plan indicated that a portion of the restaurant space would be fast casual. However, the ITE Trip Generation Manual provides limited data for this land use type. Therefore, the fast-casual space was grouped with the other restaurant space and assumed to be high-turnover sit-down. Because the development is mixed-use, internal capture trip reductions were considered for trips beginning and ending within the development. The PM internal capture rate was utilized for the Midday and Saturday peak hours.

*Does not match site plan.*

Trip generation was performed for the site in the Weekday AM, Midday, PM, and Saturday peak hours. The ITE Trip Generation Manual provides data for the Weekday AM, PM, and Saturday peak hours; to calculate the Midday peak hour site trips, a time-of-day distribution was applied to the overall weekday trips for each land use. Furthermore, for the Midday peak hour, the pass-by percentage and directional distribution for the Saturday peak hour was utilized.

The Kenwood area has a concentration of retail uses, with a large Black Friday/Christmas holiday traffic peak. The ITE Trip Generation Manual does not provide data for holiday peak hours and ODOT's seasonal adjustment factors are not applicable to peak hour traffic, so separate holiday trips were not calculated. Since the AM peak hour site trips are higher than the Midday peak hour trips, the AM peak hour trips were added to the background counts for the Black Friday Midday scenario. The PM peak hour site trips were added to background counts for the Black Friday PM scenario.

Other considerations included the existing Multifamily Housing units at the site and the proposed relocation of hospital employee parking from the Kenwood Towne Center to the site. Trip generation was performed for the multifamily housing - approximately 24 buildings with four units per building - and was compared to the traffic counts at Intersection 7 (Happiness Way and Hospital Drive). Because the eastbound and westbound through movement volumes at Intersection 7 were approximately equal to the trip generated data for each peak hour, the existing site trips were subtracted from the proposed site trips to calculate the net impact. Subtracting the 96 existing units from the proposed 259 units yielded a net change of 163 units to be used in the trip generation.

The volume of hospital employees using the Kenwood Towne Center for parking was approximated using pedestrian counts across the Kenwood Road northbound leg at Galbraith Road (Intersection 1). Using engineering judgement, it was assumed that the pedestrian counts on the northbound leg at Galbraith Road accounted for approximately 60% of the hospital employee trips in each peak hour, with the remaining 40% at midblock locations and not captured in the counts. This assumption was verified by spot checks in the field on April 2, 2018.

The anticipated site trips for the Weekday AM, Midday, PM, and Saturday peak hours are shown in **Table 1**. The relocated hospital employee parking trips for the Weekday AM, Midday, PM, and Saturday peak hours are shown in **Table 2**. Trip generation is included in Attachment 2.



**Table 1: Site Trips**

Land Use Description	ITE Land Use Code	Unit	Opening Year (2020) and Horizon Year (2040)											
			AM Site Trips			Midday Site Trips			PM Site Trips			SAT Site Trips		
			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Multifamily Housing (Low-Rise)	LU 220	163 Units	76	18	58	65	41	24	91	57	34	143	90	53
Internal Capture Reduction			17	4	13	14	9	5	19	12	7	30	19	11
New Multifamily Housing (Low-Rise)			59	14	45	51	32	19	72	45	27	113	71	42
Hotel	LU 310	120 Rooms	55	32	23	45	25	20	64	33	31	87	49	38
Internal Capture Reduction			12	7	5	9	5	4	13	7	7	18	10	8
New Hotel (Primary trips)			43	25	18	36	20	16	51	26	24	69	39	30
General Office Building	LU 710	108,000 SF	128	110	18	119	64	55	122	20	102	57	31	26
Internal Capture Reduction			28	24	4	25	13	12	26	4	21	12	7	5
New General Office Building (Primary)			100	86	14	94	51	43	96	16	81	45	24	21
Variety Store	LU 814	3,250 SF	10	6	4	18	9	9	22	11	11	22	11	11
Internal Capture Reduction			2	1	1	4	2	2	5	2	2	5	2	2
Pass-By Reduction			8	5	3	6	3	3	7	3	4	8	4	4
New Variety Store (Prim.)						8	4	4	10	6	5	9	4.69	5
High-Turnover (Sit-Down) Restaurant	LU 932	19,122 SF	190	104	86	262	134	128	187	116	71	214	109	105
Internal Capture Reduction			42	23	19	55	28	27	39	24	15	45	23	22
Pass-By Reduction			148	81	67	95	50	45	68	52	16	77	40	37
New High-Turnover (Sit-Down) Restaurant														
<b>Total Primary Site Trips</b>			<b>358</b>	<b>211</b>	<b>147</b>	<b>284</b>	<b>157</b>	<b>127</b>	<b>297</b>	<b>144</b>	<b>153</b>	<b>313</b>	<b>179</b>	<b>134</b>
<b>Total Pass-By Trips</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>118</b>	<b>59</b>	<b>59</b>	<b>87</b>	<b>43</b>	<b>44</b>	<b>100</b>	<b>50</b>	<b>50</b>
<b>Total Site Trips (Driveway)</b>			<b>358</b>	<b>211</b>	<b>147</b>	<b>402</b>	<b>216</b>	<b>186</b>	<b>384</b>	<b>187</b>	<b>197</b>	<b>413</b>	<b>229</b>	<b>184</b>

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**Table 2: Hopsital Employee Parking Site Trips**

Rerouted Trips	AM Site Trips			Midday Site Trips			PM Site Trips			SAT Site Trips		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Hospital Employee Parking (Pedestrians)	47	24	23	14	7	7	29	15	14	0	0	0

*No trips?*

### Site Access

The proposed site access for the Kenwood Road Development consists of four (4) site access points along Happiness Way, along Kenwood Road, and in the Kenwood Place shopping center. The site access points are described and depicted in Figure 3 below. The conceptual site plan is included in Attachment 1.

Site Access 1 (Int. 7):

- Existing unsignalized intersection with the Hospital Driveway
- Full access along Happiness Way

Site Access 2 (Int. 8):

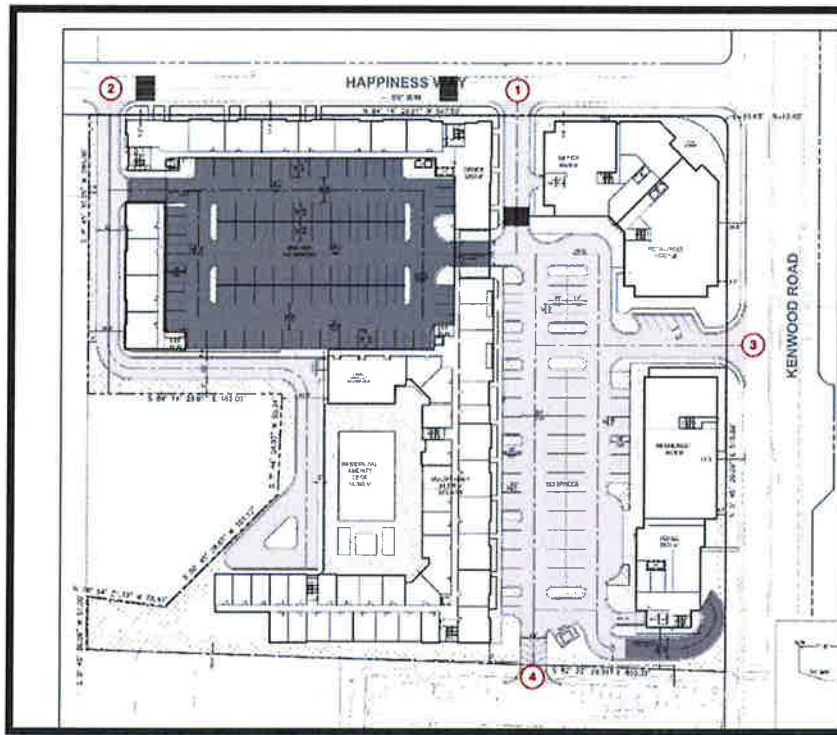
- Assumed to be restricted parking access for Hospital Employees only
- Full access along Happiness Way

Site Access 3 (Int. 9):

- Full access along Kenwood Road

Site Access 4 (Int. 10):

- Full access in Kenwood Place shopping center



**Figure 3: Site Access Locations. N.T.S.**

## Directional Distribution

An analysis of the turning movement counts and population distribution was considered in determining the directional distribution. The percentages are shown in Table 3 and are broken down roads within the study area. Directional Distribution Data is shown in Attachment 3. The limits of distributions were based upon the exterior boundary of the counts taken.

**Table 3: Directional Distribution Analysis**

Road (To/From Direction)	Distributions by Existing Traffic
Galbraith Road (West)	10%
Galbraith Road (East)	12%
Kenwood Road (North)	20%
Montgomery Road (West)	18%
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<b>Total Percentage</b>	<b>100%</b>

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ODOT indicated that a 3% linear growth rate would be applicable to the study area. The 3% linear growth rate was applied to the 2018 existing traffic counts to arrive at the 2020 and 2040 background traffic volumes. The background volumes are shown in Attachment 4 and 5.

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The trip generation shown in Table 1 and Table 2 was assigned to the surrounding roadways according to the directional distribution shown in Table 3. These volumes are shown in Attachment 4 and 5.

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The 2020 build traffic volumes were developed by the addition of the 2020 background volumes and the 2020 Kenwood Road Development opening year trips. The 2040 build traffic volumes were developed by the addition of the 2040 background volumes and 2020 Kenwood Road Development horizon year trips. The 2020 and 2040 build traffic volumes are shown in Attachment 4 and 5.

In the Black Friday scenarios, ODOT provided counts for the intersections of Kenwood Road with Orchard Lane and Montgomery Road. To produce Black Friday counts for the remaining intersections, the ratio of the existing counts to the Black Friday counts at Montgomery Road was applied to the existing counts at the remaining intersections.

## Further Analysis

The following assumptions will be utilized for continued analysis as part of the full Traffic Impact Study:

1. Capacity analysis using Synchro 10 will be completed for the Opening Year Background, Opening Year Background with Improvements (if applicable), Opening Year Build, Horizon Year Background, Horizon Year Background with Improvements (if applicable), and Horizon Year Build scenarios in the Weekday AM, Midday, PM, and Saturday, Black Friday Midday, and Black Friday PM peak hours.
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- ODOT Turn Lane Lengths are to be used  
check for backups due to thru traffic
- Signal warrant for 8 hours

April 4, 2018

Page 7

5. Based upon the analysis performed, recommendations will be developed (if needed) to mitigate any traffic impacts that the Proposed Development may have on the adjacent street network. Recommendations will be presented to meet an overall intersection Level of Service *D* or better. *unless existing is D*
6. A report summarizing the study process, conclusions and recommendations will be electronically submitted to Hamilton County and ODOT for review.

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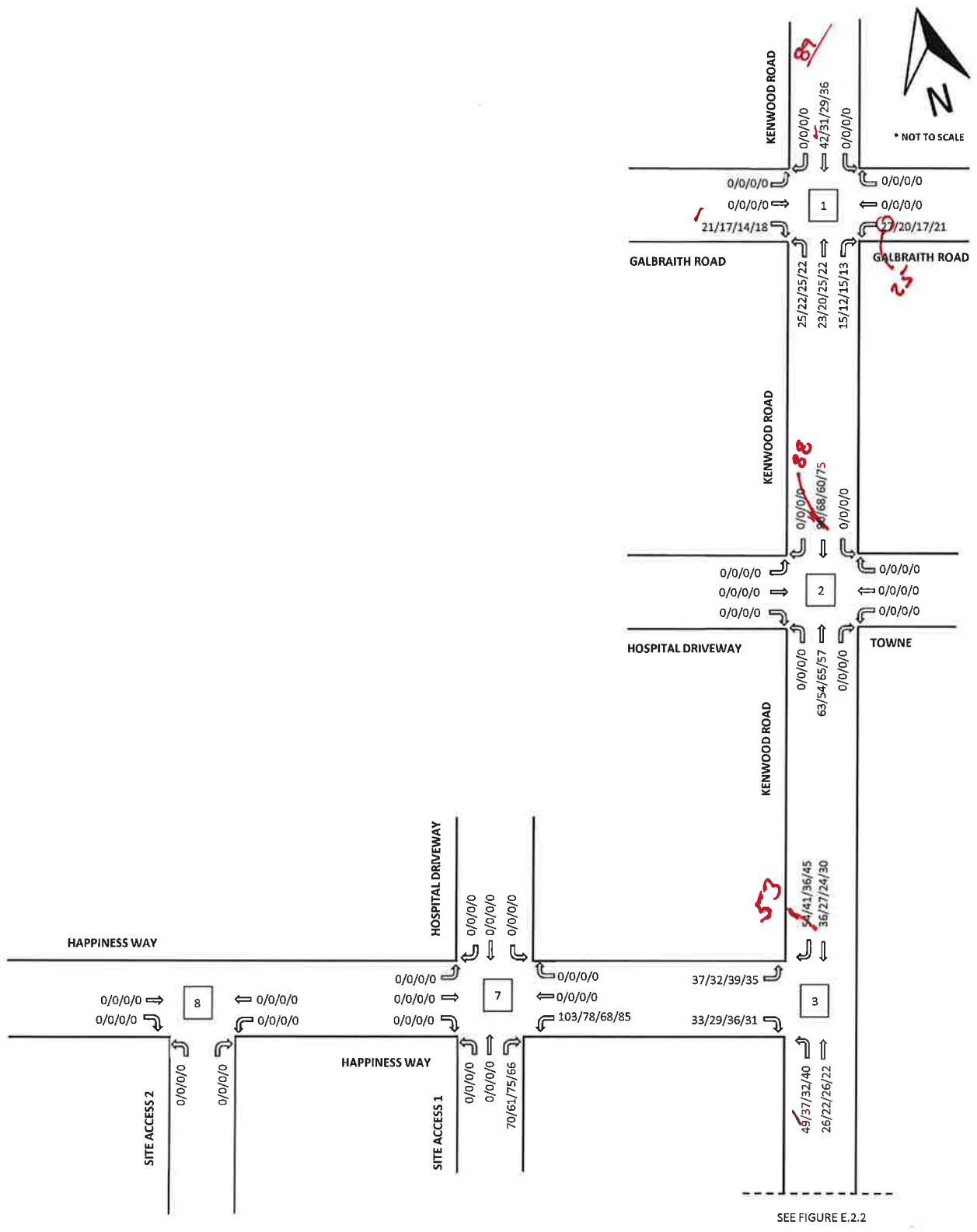
\_\_\_\_\_, on \_\_\_\_\_, 2018.

\_\_\_\_\_, on \_\_\_\_\_, 2018.

Comments:

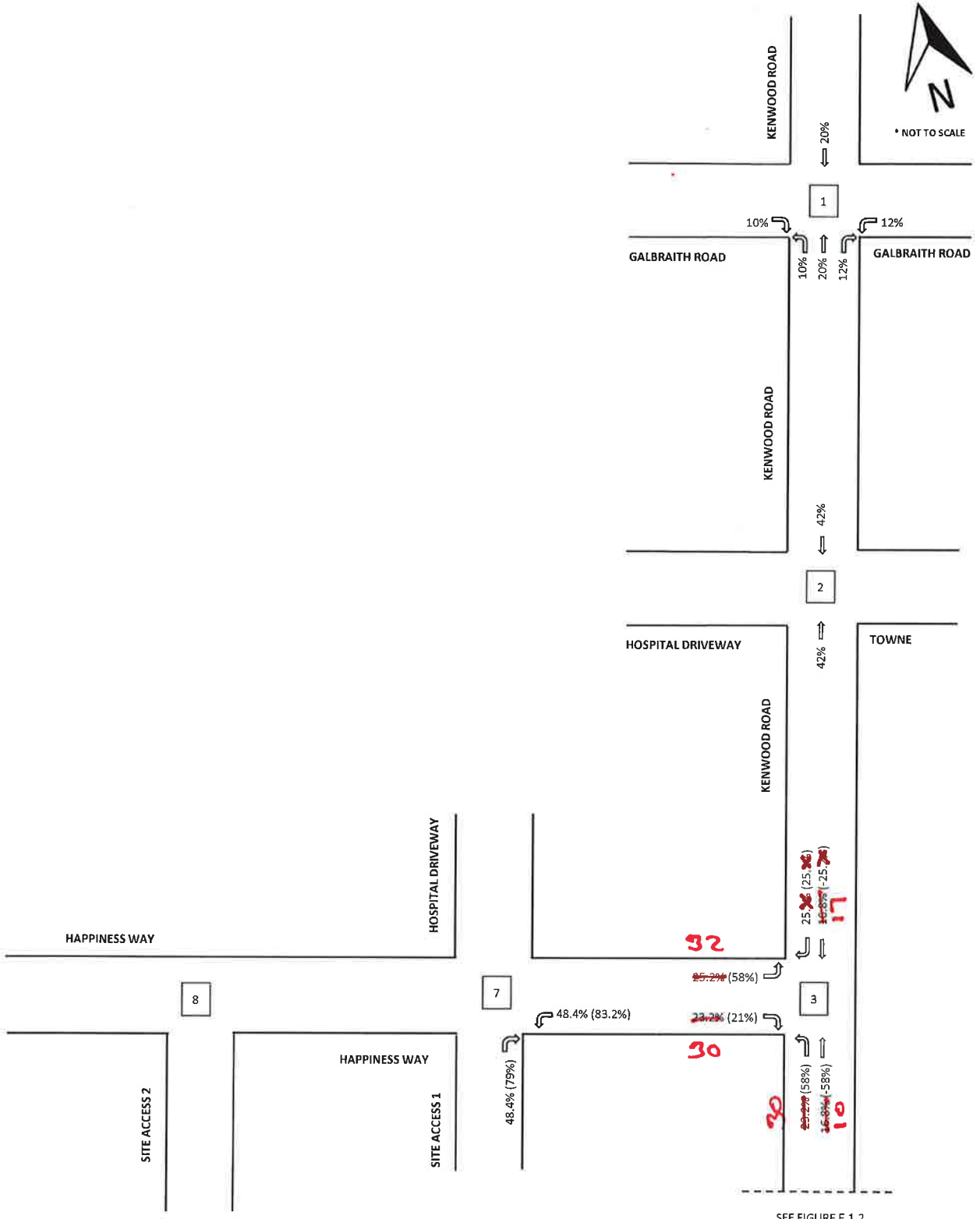
## Attachments

1. Conceptual Site Plan
2. Trip Generation
3. Directional Distribution/Trip Assignment
4. Traffic Volumes
5. Traffic Volume Figures
6. Turning Movement Counts



**FIGURE E.2.1**  
**PRIMARY SITE TRIPS**  
**KENWOOD TIS, KENWOOD, OHIO**  
**XX/XX/XX/XX - AM/Midday/PM/SAT**





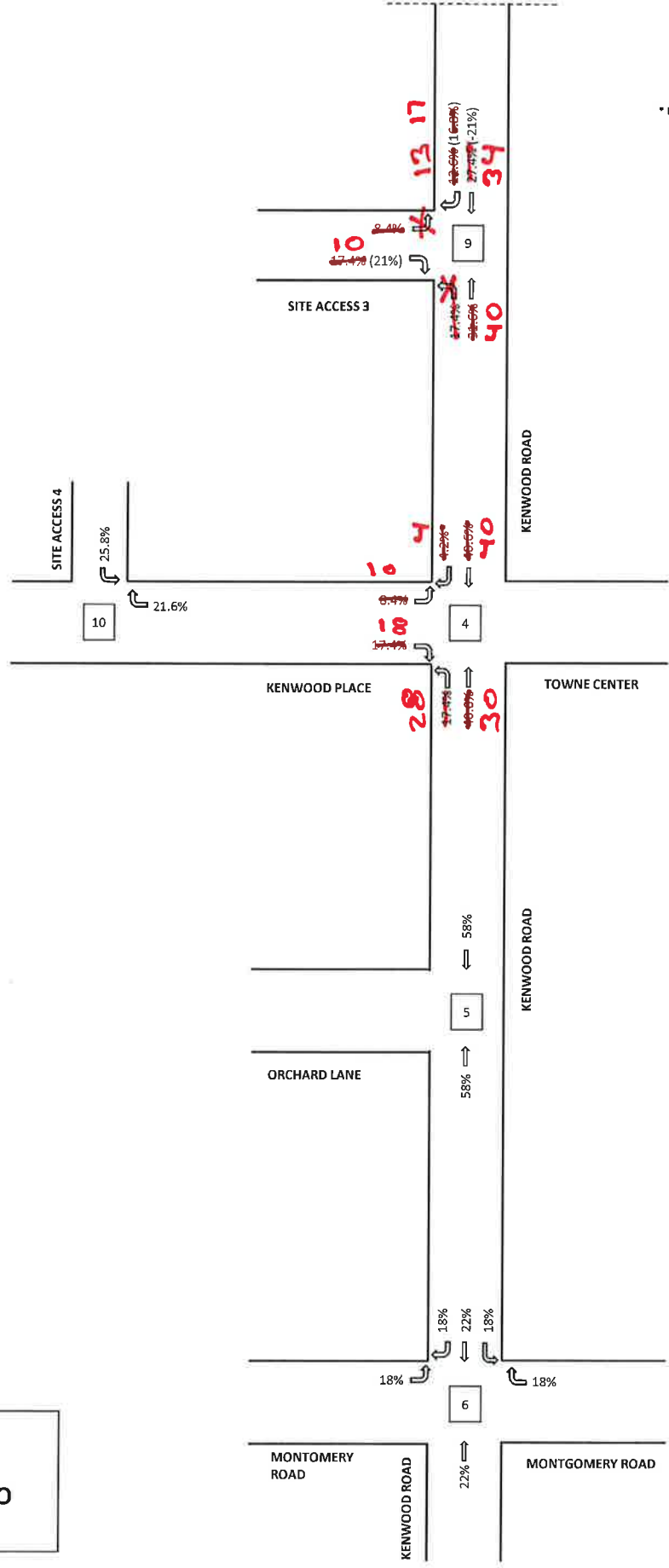
SEE FIGURE E.1.2

**FIGURE E.1.1**  
**TRIP DISTRIBUTION**  
**KENWOOD TIS, KENWOOD, OHIO**  
**XX%(XX%) - Primary(Pass-By)**



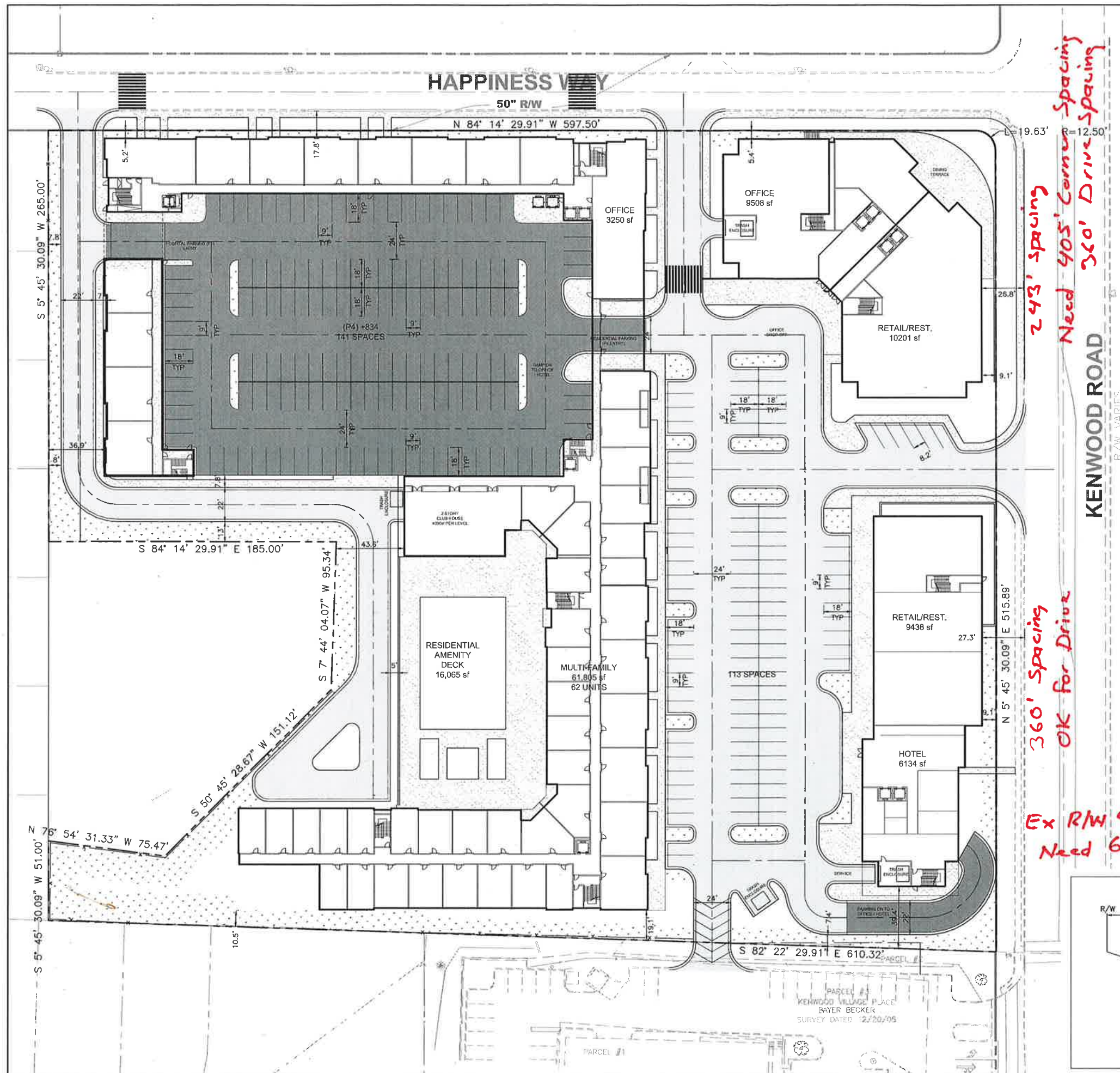


SEE FIGURE E.1.1

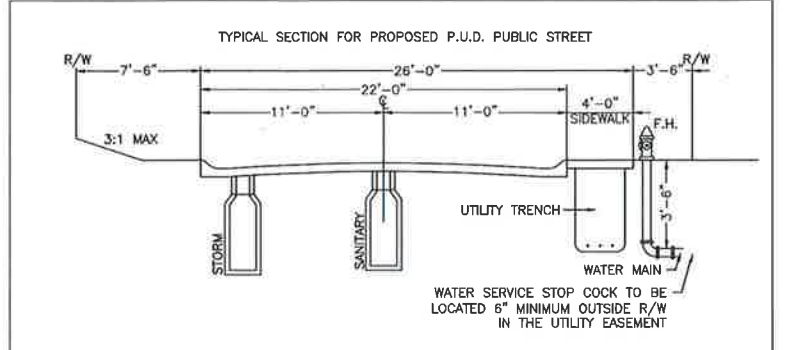
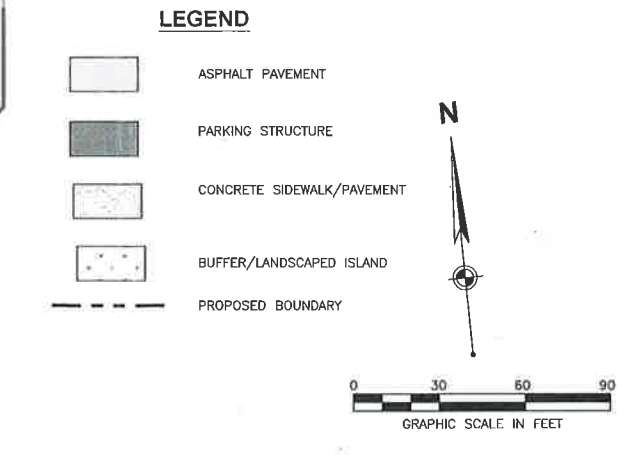


**WOOLPERT**  
ARCHITECTURE | ENGINEERING | GEOSPATIAL

**FIGURE E.1.2**  
**TRIP DISTRIBUTION**  
**KENWOOD TIS, KENWOOD, OHIO**  
**XX%(XX%) - Primary(Pass-By)**



SITE DATA	
PROPOSED ZONING	PUD
SITE AREA (NET)	6.55 AC
ZONE AREA (GROSS)	7.45 AC
LAND USE	
MULTI FAMILY (259 UNITS)	302,323 SF
OFFICE	18,499 SF
RESTAURANT	19,122 SF
HOTEL	6,134 SF
PARKING REQUIRED	
APARTMENT (1.5 SP PER 1 BEDROOM, 2 SP PER 2+ BEDROOM)	428 SPACES
OFFICE (4 SP PER FIRST 1,000 SF, 1 SP PER 400 SF OVER 1,000 SF)	273 SPACES
RESTAURANT (1 SP PER 100 SF)	191 SPACES
HOTEL (1 SP PER UNIT)	127 SPACES
HOSPITAL	368 SPACES
RESTAURANT SEATING CAPACITIES	
FAST CASUAL (25 SEATS PER 1000 SF., 1,530 SF.)	38 SEATS
MEDIUM RESTAURANT (30 SEATS PER 1000 SF.) 3,824 SF.	115 SEATS
LARGE RESTAURANT (40 SEATS PER 1000 SF.) 13,385 SF.	535 SEATS
PARKING SPACE REQUIRED	9' X 18'
PARKING SPACE PROVIDED	9' X 18'
TYPICAL PARKING AISLE	24' WIDE (B/B)
TYPICAL ACCESS AISLE	24' WIDE (B/B)
PARKING PROVIDED	
SURFACE PARKING	102 SPACES
P1-RESIDENTIAL	107 SPACES
P2-RESIDENTIAL	146 SPACES
P3-RESIDENTIAL	143 SPACES
P4-OFFICE	164 SPACES
P5-OFFICE-GF	159 SPACES
P6-HOSPITAL	178 SPACES
P7-HOSPITAL	184 SPACES
DEDICATED HOTEL	127 SPACES
TOTAL	1,290 SPACES
IMPERVIOUS SURFACE RATIO (5.61 ACRES IMPERVIOUS AREA)	86%



REVISION	NO.	DATE
PROJECT No: 78265	DATE	
	DES.	
	DR.	
	CKD.	
 CAPITAL INVESTMENT GROUP INC. APPLICANT	KENWOOD PARTNERS, LLC OWNER	
	 WOOLPERT ENGINEER/PREPARED	
<b>KENWOOD DEVELOPMENT</b> <b>PUD II SUBMITTAL</b> KENWOOD RD & HAPPINESS WAY CINCINNATI, OH		
<b>PROPOSED FEATURES</b>		
SHEET NO.		
<b>C200</b>		



## Wiley, Jon

---

**From:** Newby, Jeff <Jeff.Newby@hamilton-co.org>  
**Sent:** Monday, May 7, 2018 1:22 PM  
**To:** Wiley, Jon  
**Subject:** FW: Kenwood Traffic MOU

See below.

Thank you,

**Jeff Newby, P.E.**  
Traffic Engineer

---

**From:** Tom.Makris@dot.ohio.gov [mailto:Tom.Makris@dot.ohio.gov]  
**Sent:** Monday, May 07, 2018 1:18 PM  
**To:** Newby, Jeff; Marc.Grake@dot.ohio.gov  
**Subject:** RE: Kenwood Traffic MOU

Jeff,

I am sorry for the late reply.

I do not have comments pertaining to Kenwood MOU.

Thank you,

**Thomas G. Makris, P.E., M.B.A.**

*Permit Engineer*

District 8 Office of Permits

505 South State Route 741, Lebanon, Ohio 45036

(513) 933.6575

[transportation.ohio.gov](http://transportation.ohio.gov)



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**From:** Newby, Jeff [mailto:Jeff.Newby@hamilton-co.org]  
**Sent:** Wednesday, May 2, 2018 2:26 PM  
**To:** Grake, Marc <Marc.Grake@dot.ohio.gov>; Makris, Thomas <Tom.Makris@dot.ohio.gov>  
**Subject:** FW: Kenwood Traffic MOU

Do either of you have any comments about the MOU that was sent last month for Woolpert? I am meeting with Jon Wiley tomorrow at 2.

# Memorandum of Understanding

**To:** Jeff Newby, PE, Hamilton County Traffic Engineer  
**Cc:** Thomas Makris, PE, MBA, ODOT District 8 Permit Engineer  
Marc Grake, PE, ODOT District 8 Traffic Operations Engineer  
**From:** Jon Wiley, PE  
**Date:** May 9, 2018  
**Subject:** Revised MOU for Proposed Kenwood Development along Kenwood Road, Hamilton County, Ohio

All changes to the initial MOU that was submitted on April 3, 2018 are underlined. These changes are revised as of May 9, 2018.

## Introduction

A traffic impact study (TIS) is required for a proposed Development located along Kenwood Road in Sycamore Township, Hamilton County, Ohio. The study will be based on the kick-off meeting held between Woolpert and Hamilton County on March 22, 2018 and follow up emails along with guidelines established by the Ohio Department of Transportation (ODOT) and the Institute of Transportation Engineers (ITE) Traffic Access and Impact Studies for Site Development. Woolpert, on behalf of Capital Investment Group, prepared this Memorandum of Understanding (MOU) documenting the following items for review and approval for the proposed Kenwood Road Development TIS: Data Collection, Trip Generation, Site Access, Directional Distribution, Growth Rate, Trip Assignment and Traffic Volumes.

The proposed Kenwood Development consists of a hotel, retail and restaurant space, office space, and low-rise multi-family residences. Parking will be provided for the site and for employees of the Jewish Hospital – Mercy Health located directly adjacent to the proposed site to the north. The development, shown below in **Figure 1**, is located on the west side of Kenwood Road in Sycamore Township, Hamilton County, Ohio. Refer to Attachment 1 for the conceptual site plan.

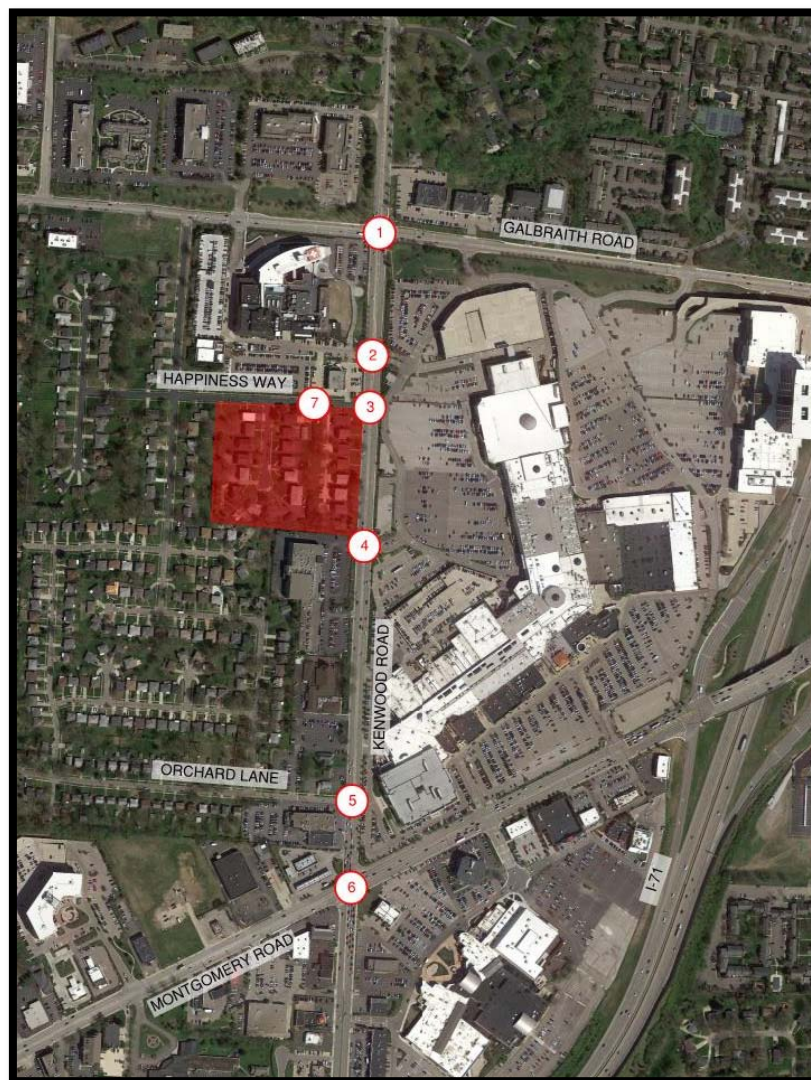


**Figure 1:** Site Area; Source: Google Earth, N.T.S.

## Data Collection

Video turning movement counts were conducted by Cummins Consulting Services for the proposed development. The video turning movement counts were conducted at seven (7) intersections for twelve (12) hours during the hours of 7:00 AM-7:00 PM on Thursday, March 22, 2018 and for four (4) hours during the hours of 12:00 -4:00 PM on Saturday, March 24, 2018 (unless otherwise noted below). The peak hours for the studied intersections will be used for analysis. The intersections counted are listed below and shown on **Figure 2** below. The turning movement count data sheets are included in Attachment 6.

1. Kenwood Road and Galbraith Road
2. Kenwood Road and Kenwood Mall/Hospital Driveway
3. Kenwood Road and Happiness Way (Weekday 24-hour count)
4. Kenwood Road and Kenwood Place/Towne Center
5. Kenwood Road and Orchard Lane
6. Kenwood Road and Montgomery Road (US 22/SR 3)
7. Happiness Way and Hospital Driveway



**Figure 2: Count Locations**

## Trip Generation

Trip Generation was calculated using the ITE Trip Generation Manual, 10<sup>th</sup> Edition for the proposed Kenwood Road Development. The provided site plan included 259 units of Multifamily Housing (ITE Land Use Code 220), a 120-room hotel (ITE Land Use Code 310), a 108,000 SF multi-level office (ITE Land Use Code 710), 19,122 SF of restaurant space (ITE Land Use Code 932), and 3,250 SF of retail space (ITE Land Use Code 814, shown as Office on site plan). The site plan indicated that a portion of the restaurant space would be fast casual. However, the ITE Trip Generation Manual provides limited data for this land use type. Therefore, the fast-casual space was grouped with the other restaurant space and assumed to be high-turnover sit-down. Because the development is mixed-use, internal capture trip reductions were considered for trips beginning and ending within the development. The PM internal capture rate was utilized for the Midday and Saturday peak hours.

Trip generation was performed for the site in the Weekday AM, Midday, PM, and Saturday peak hours. The ITE Trip Generation Manual provides data for the Weekday AM, PM, and Saturday peak hours; to calculate the Midday peak hour site trips, a time-of-day distribution was applied to the overall weekday trips for each land use. Furthermore, for the Midday peak hour, the pass-by percentage and directional distribution for the Saturday peak hour was utilized.

The Kenwood area has a concentration of retail uses, with a large Black Friday/Christmas holiday traffic peak. The ITE Trip Generation Manual does not provide data for holiday peak hours and ODOT's seasonal adjustment factors are not applicable to peak hour traffic, so separate holiday trips were not calculated. Since the AM peak hour site trips are higher than the Midday peak hour trips, the AM peak hour trips were added to the background counts for the Black Friday Midday scenario. The PM peak hour site trips were added to background counts for the Black Friday PM scenario.

Other considerations included the existing Multifamily Housing units at the site and the proposed relocation of hospital employee parking from the Kenwood Towne Center to the site. Trip generation was performed for the multifamily housing - approximately 24 buildings with four units per building - and was compared to the traffic counts at Intersection 7 (Happiness Way and Hospital Drive). Because the eastbound and westbound through movement volumes at Intersection 7 were approximately equal to the trip generated data for each peak hour, the existing site trips were subtracted from the proposed site trips to calculate the net impact. Subtracting the 96 existing units from the proposed 259 units yielded a net change of 163 units to be used in the trip generation.

The volume of hospital employees using the Kenwood Towne Center for parking was approximated using pedestrian counts across the Kenwood Road northbound leg at Galbraith Road (Intersection 1). Using engineering judgement, it was assumed that the pedestrian counts on the northbound leg at Galbraith Road accounted for approximately 60% of the hospital employee trips in each peak hour, with the remaining 40% at midblock locations and not captured in the counts. This assumption was verified by spot checks in the field on April 2, 2018.

The anticipated site trips for the Weekday AM, Midday, PM, and Saturday peak hours are shown in **Table 1**. The relocated hospital employee parking trips for the Weekday AM, Midday, PM, and Saturday peak hours are shown in **Table 2**. Trip generation is included in Attachment 2.

**Table 1: Site Trips**

Land Use Description	ITE Land Use Code	Unit	Opening Year (2020) and Horizon Year (2040)											
			AM Site Trips			Midday Site Trips			PM Site Trips			SAT Site Trips		
			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Multifamily Housing (Low-Rise)	LU 220	163 Units	76	18	58	65	41	24	91	57	34	143	90	53
<i>Internal Capture Reduction</i>			17	4	13	14	9	5	19	12	7	30	19	11
New Multifamily Housing (Low-Rise)			59	14	45	51	32	19	72	45	27	113	71	42
Hotel	LU 310	120 Rooms	55	32	23	45	25	20	64	33	31	87	49	38
<i>Internal Capture Reduction</i>			12	7	5	9	5	4	13	7	7	18	10	8
New Hotel (Primary trips)			43	25	18	36	20	16	51	26	24	69	39	30
General Office Building	LU 710	108,000 SF	128	110	18	119	64	55	122	20	102	57	31	26
<i>Internal Capture Reduction</i>			28	24	4	25	13	12	26	4	21	12	7	5
New General Office Building (Primary)			100	86	14	94	51	43	96	16	81	45	24	21
Variety Store	LU 814	3,250 SF	10	6	4	18	9	9	22	11	11	22	11	11
<i>Internal Capture Reduction</i>			2	1	1	4	2	2	5	2	2	4	2	2
<i>Pass-By Reduction</i>						6	3	3	7	3	4	8	4	4
New Variety Store (Prim.)			8	8	4	4	10	6	5	10	5	5	5	5
High-Turnover (Sit-Down) Restaurant	LU 932	19,122 SF	190	262	134	128	187	116	71	214	109	105	109	105
<i>Internal Capture Reduction</i>			42	55	28	27	39	24	15	45	23	22	23	22
<i>Pass-By Reduction</i>						112	56	56	80	40	40	92	46	46
New High-Turnover (Sit-Down) Restaurant			148	95	50	45	68	52	16	77	40	37	40	37
<b>Total Primary Site Trips</b>			<b>358</b>	<b>211</b>	<b>147</b>	<b>284</b>	<b>157</b>	<b>127</b>	<b>297</b>	<b>144</b>	<b>153</b>	<b>314</b>	<b>179</b>	<b>135</b>
<b>Total Pass-By Trips</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>118</b>	<b>59</b>	<b>59</b>	<b>87</b>	<b>43</b>	<b>44</b>	<b>100</b>	<b>50</b>	<b>50</b>
<b>Total Site Trips (Driveway)</b>			<b>358</b>	<b>211</b>	<b>147</b>	<b>402</b>	<b>216</b>	<b>186</b>	<b>384</b>	<b>187</b>	<b>197</b>	<b>414</b>	<b>229</b>	<b>185</b>

**Table 2: Hospital Employee Parking Site Trips**

Rerouted Trips	AM Site Trips			Midday Site Trips			PM Site Trips			SAT Site Trips		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Hospital Employee Parking (Pedestrians)	47	24	23	14	7	7	29	15	14	0	0	0

## Site Access

The proposed site access for the Kenwood Road Development consists of four (4) site access points along Happiness Way, along Kenwood Road, and in the Kenwood Place shopping center. The site access points are described and depicted in Figure 3 below. The conceptual site plan is included in Attachment 1.

### Site Access 1 (Int. 7):

- Existing unsignalized intersection with the Hospital Driveway
- Full access along Happiness Way

### Site Access 2 (Int. 8):

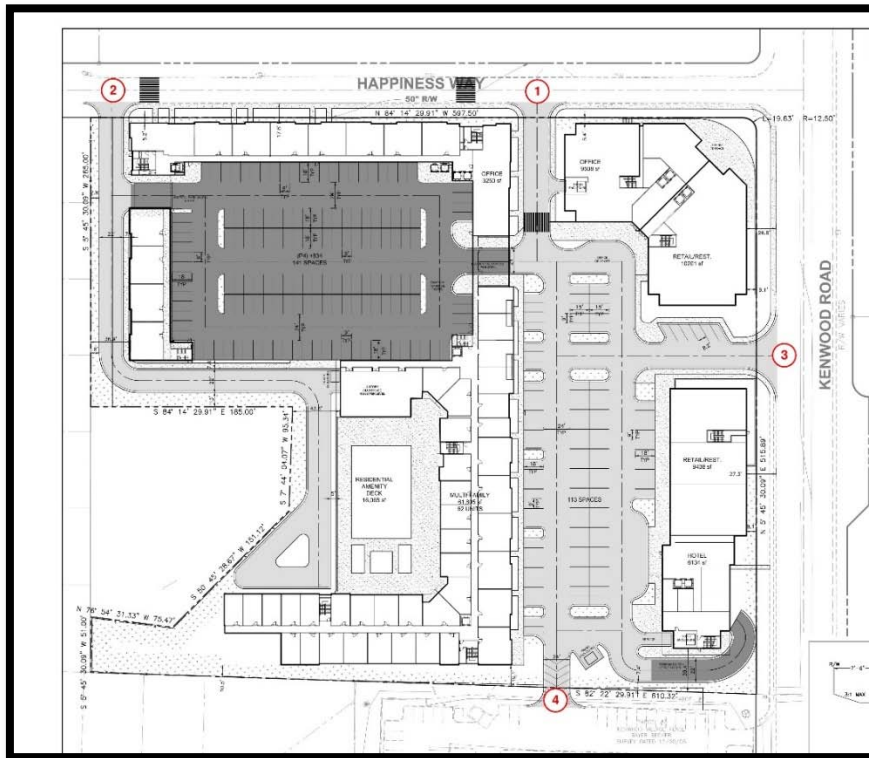
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**Figure 3: Site Access Locations. N.T.S.**

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5. Based upon the analysis performed, recommendations will be developed (if needed) to mitigate any traffic impacts that the Proposed Development may have on the adjacent street network. Recommendations will be presented to meet an overall intersection Level of Service C or better, unless the existing Level of Service is D.
6. A report summarizing the study process, conclusions and recommendations will be electronically submitted to Hamilton County and ODOT for review.

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**In order to complete the Traffic Impact Study for the proposed Kenwood Development, Woolpert is formally requesting approval from Hamilton County and ODOT on the provided Data Collection, Trip Generation, Site Access, Directional Distribution, Growth Rate, Trip Assignment, and Traffic Volumes.**

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\_\_\_\_\_, on \_\_\_\_\_, 2018.

\_\_\_\_\_, on \_\_\_\_\_, 2018.

Comments:

## Attachments

1. Conceptual Site Plan
2. Trip Generation
3. Directional Distribution/Trip Assignment
4. Traffic Volumes
5. Traffic Volume Figures
6. Turning Movement Counts