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September 4, 2023

Mr. Jeff Loftus
Community Planning Manager
Gulf Regional Planning Commission
1635 Popp's Ferry Road, Suite G
Biloxi, MS 39532

Re: Traffic Analysis for Kiln Delisle Road at Kapalama Drive and Edwin Ladner Road

Dear Mr. Loftus:

Per your request, I conducted an analysis of the existing intersections along Kiln Delisle Road, north of I-10. Kapalama Drive at Kiln Delisle Road is in unincorporated Hancock County, while Edwin Ladner Road at Kiln Delisle Road is in Harrison County. This letter is intended to provide traffic analysis information regarding the increase in crashes at the Kapalama Drive/Kiln Delisle Road intersection and also evaluate the adjacent intersection of Edwin Ladner Road at Kiln Delisle Road. The Neco's XP gas station was recently constructed on the south side of Kiln Delisle Road between Kapalama Drive and Edwin Ladner Road. The locations of the study intersections are shown in **Figure 1-Vicinity Map**. The graphics referenced in this letter are provided as attachments.

Existing Conditions

A field inventory of the study intersections was conducted to document the existing conditions of the intersections and traffic control within the project limits. Kiln Delisle Road and Kapalama Drive are both classified as Major Collector routes for the Biloxi-Gulfport urbanized area. Edwin Ladner Road is not a classified roadway. The cross section of Kiln Delisle Road is 26 ft in width of asphalt with 2 ft shoulders and 11 ft through lanes. The cross section of both Kapalama Drive and Edwin Ladner Road are both 22 ft wide with 11 ft through lanes.

Kapalama Drive at Kiln Delisle Road has a Stop sign with flashing red lights above the sign, along with an Intersection Ahead warning sign (W2-4) and Stop Ahead (W3-1). No "Stop" line exists and white striping is visible between opposing direction of travel lanes.





Above: Looking north on Kapalama Dr at Kiln Delisle Rd, and object markers. Marker on right is incorrect.
Below: Looking south on Kapalama Drive at object makers and centerline white striping on 2-way traffic. Marker on left is incorrect.



Object markers are placed on the right and left sides of Kapalama Drive in both directions. The OM3-R signs are on the left side and right side for northbound traffic, and OM3-L signs on both sides facing southbound. There should be one OM3-R and one OM3-L in each direction. The signs have diagonal lines that identify which side of the sign a vehicle is supposed to pass on. The north Neco's site driveway on Kapalama Drive is ± 56 ft wide, the south driveway is ± 65 ft wide and the driveways are spaced ± 55 ft apart at the maximum distance, and ± 20 ft apart from the driveway flares.



Above: Looking south on Kapalama Drive across Kiln Delisle Road.
Below: Looking east from Kapalama Drive at Kiln Delisle Road.





Above: Looking East on Kiln Delisle Road across Kapalama Drive (right) and Private Drive (left).
Below: Looking West on Kiln Delisle Road at Kapalama Drive (left) and Private Drive (right).



The private driveway (above on the right) is 115 ft wide at the intersection with Kapalama Drive. Kiln Delisle Road has raised pavement markers along the centerline.



Above: Looking East on Kiln Delisle Road at Kapalama Drive

Below: Looking north on Kapalama Drive at Kiln Delisle Rd intersection and white centerline striping/no stop line.





Above: Looking West on Kiln Delisle Road from Kapalama Drive
Below: Looking West on Kiln Delisle Road from Edwin Ladner Road





Above: Looking east from Kapalama Drive at Neco's XP gas station
Below: Looking East on Kiln Delisle Rd. from Edwin Ladner Road





Above: Looking North on Edwin Ladner Road from Neco's XP east driveway.
Below: Looking south on Edwin Ladner Road at Neco's XP east driveway.





Above: Looking South on Edwin Ladner Road at Kiln Delisle Road with obscured *Stop* sign.

Kiln Delisle Road has 1 Eastbound thru lane and 1 Westbound thru lane within 26 ft of asphalt, including 2 ft paved shoulders, and 11 ft travel lanes. The posted speed limit on Kiln Delisle Road is 45 mph in the eastbound direction and 35 mph in the westbound direction as the eastbound and westbound traffic approach both Edwin Ladner Road and Kapalama Drive.

Kapalama Drive has 1 Northbound thru lane and 1 Southbound thru lane within 22 ft of asphalt, which includes 11 ft travel lanes. The posted speed limit on Kapalama Drive is 30 mph in both the southbound and northbound directions. Existing striping displays a center white dashed line, when yellow striping is mandatory for two-way traffic.

Edwin Ladner Road has 1 Northbound thru lane and 1 Southbound thru lane within 22 ft of asphalt, which includes 11 ft travel lanes. The posted speed limit on Edwin Ladner Road is 40 mph in both the southbound and northbound directions. There is a R1-1 Stop sign on Edwin Ladner Road at Kiln Delisle Road. Striping is also faded on Edwin Ladner Road in the vicinity of Kiln Delisle Road.



Above: Looking southwest from Kiln Delisle Road/Edwin Ladner Rd intersection at Neco's XP gas station.



Traffic Counts

Traffic counts were conducted by GRPC at the Kapalama Drive/Kiln Delisle Road intersection and Edwin Ladner Road/Kiln Delisle Road intersection from 6 AM-7 PM on 8/23/23. Kiser Traffic recorded peak hour driveway volumes on 8/3/23. The existing (2023) peak hour traffic volumes are shown in **Figure 2**.

Crash data

Crash data was provided by MDOT from 1/1/16-12/31/22. There were 4 crashes at the Kiln Delisle Road/Edwin Ladner Road intersection and 11 crashes at the Kapalama Drive/Kiln Delisle Road intersection. The crash data is summarized in **Tables 1-3**.

Table 1 – Crashes by Year

Kiln Delisle Road Intersection with	Year							Total
	2016	2017	2018	2019	2020	2021	2022	
EDWIN LADNER ROAD		1		1	1		1	4
KAPALAMA DRIVE	1	2	1			1	6	11
Total	1	3	1	1	1	1	7	15

Source: MDOT, Kiser Traffic and Engineering, LLC, 2023.

With the opening of Neco’s XP gas station, there has been a significant increase in crashes at the Kapalama Drive/Kiln Delisle Road intersection.

Table 2 – Crash Type/Injuries

Kiln Delisle Road Crash Type:	Number Injured			Total Injured
	0	1	2	
<u>Kapalama Drive</u>				
Angle	3		3	6
Left turn same roadway		1	1	3
Overturn		1		1
Rear end slow or stop	4			0
Run off Road - Right		1		1
Run off Road - Straight		1		1
Subtotal	0	4	8	12
<u>Edwin Ladner Rd</u>				
Angle	1		1	2
Left turn same roadway		1		1
Run off Road - Right		1		1
Subtotal	0	2	2	4
Total	0	6	10	16

Source: MDOT, Kiser Traffic and Engineering, LLC, 2023.

In the reported crashes, there were 12 people injured in Kapalama Drive crashes and 4 injured at Edwin Ladner Road crashes. The majority of the injuries occurred in Angle crashes and left turn same roadway crashes at Kapalama Drive/Kiln Delisle Road.



Table 3 – Crash Type by Year

Kiln Delisle Road Crash Type	Crash Year							Total Crashes
	2016	2017	2018	2019	2020	2021	2022	
<u>Kapalama Drive</u>								
Angle	1	1					2	4
Left turn same roadway							1	1
Overturn		1						1
Rear end slow or stop						1	3	4
Run off Road - Straight			1	0	0			1
Subtotal	1	2	1	0	0	1	6	11
<u>Edwin Ladner Rd</u>								
Angle		1		1				2
Left turn same roadway							1	1
Run off Road - Right					1			1
Subtotal	0	1	0	1	1	0	1	4
Total	1	3	1	1	1	1	7	15

Source: MDOT, Kiser Traffic and Engineering, LLC, 2023.

Other crash data included:

	# Crashes	Percent
Crashes on dry pavement	15	100%
Crashes in daylight/dark	10/5	67%/33%
Alcohol Involved	2	13%
Single Vehicle Crash	3	20%

The crash frequency increased in 2022 from a 6 year average of 1.33 crashes per year to 7 crashes in 1 year.

Traffic Impacts

The intersection delays were evaluated using the information provided in the Highway Capacity Manual to evaluate the levels-of-service (LOS) for the study intersections. The intersections identified in this analysis include the Kiln Delisle Road/Kapalama Road and Kiln Delisle Road/Edwin Ladner Road. The capacity analysis sheets are provided as an attachment to this letter/report. The capacity analysis results are summarized in Table 4-2023 Existing Traffic.

Table 4 - Year 2023 Existing Traffic - Capacity Analysis Summary

Unsignalized Intersections	Time Period	Critical Movement Level of Service											
		Eastbound			Westbound			Northbound			Southbound		
		Lt	Th	Rt	Lt	Th	Rt	Lt	Th	Rt	Lt	Th	Rt
Kiln Delisle Rd/ Kapalama Road Private Drive	AM Peak	A	A	A	A	A	A	C	C	C	C	C	C
	Mid-Day	A	A	A	A	A	A	B	B	B	B	B	B
	PM Peak	A	A	A	A	A	A	C	C	C	B	B	B
Kiln Delisle Rd/ Edwin Ladner Rd Neco's XP Drive	AM Peak	A	A	A	A	A	A	B	B	B	C	C	C
	Mid-Day	A	A	A	A	A	A	B	B	B	C	C	C
	PM Peak	A	A	A	A	A	A	B	B	B	C	C	C

Source: Kiser Traffic and Engineering, 2023.

The existing traffic volumes are shown to be operating at acceptable levels of service.



Signal Warrant Analysis

The Manual on Uniform Traffic Control Devices (MUTCD) outlines the factors for justifying installation of a traffic control signal. Three of the 9 signal warrants are vehicular volume based warrants: 1) eight-hour vehicular volume, 2) four-hour vehicular volume and 3) peak hour. The MUTCD states that a traffic control signal should not be installed unless one or more of the warrants are met. Warrant #1, the eight-hour warrant, is intended for application at locations where a large volume of intersecting traffic is the primary reason to consider installing a traffic control signal. Warrant #2, the four-hour warrant, is intended where the volume of the intersecting traffic is the primary reason to consider installing a traffic control signal. Warrant #3, the peak-hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

The hourly traffic volumes at the intersection of Kiln Delisle Road/Edwin Ladner Road and Kiln Delisle Road/Kapalama Drive were compared to the MUTCD threshold volumes for Condition A – Minimum Vehicular Volume and for Condition B-Interruption of Continuous Traffic in Warrant 1, as well as the volume Warrants in #2 and #3. The detail of the hourly volumes and warrant analysis are provided in **Tables 5-7**.

**Table 5
Kiln Delisle Rd/Edwin Ladner Rd Signal Warrant Analysis – 2023 Existing Traffic**

Start Time	Approach						Warrant 1A		Warrant 1B		Warrant #2	Warrant #3
	EB	WB	EB+WB	SB Lt+Th	SB Rt	SB Total	Major-350	Minor-105	Major-525	Minor-53	Four Hour	Peak Hour
06:00 AM	202	72	274	78	51	129	-	Yes	-	Yes	-	-
07:00 AM	394	157	551	102	85	187	Yes	Yes	Yes	Yes	Yes	-
08:00 AM	283	174	457	46	77	123	Yes	Yes	-	Yes	-	-
09:00 AM	231	132	363	20	59	79	Yes	-	-	Yes	-	-
10:00 AM	204	156	360	31	48	79	Yes	-	-	Yes	-	-
11:00 AM	236	206	442	27	61	88	Yes	-	-	Yes	-	-
12:00 PM	270	202	472	38	71	109	Yes	Yes	-	Yes	-	-
01:00 PM	213	211	424	29	58	87	Yes	-	-	Yes	-	-
02:00 PM	193	182	375	37	69	106	Yes	Yes	-	Yes	-	-
03:00 PM	169	204	373	30	62	92	Yes	-	-	Yes	-	-
04:00 PM	216	326	542	32	74	106	Yes	Yes	Yes	Yes	-	-
05:00 PM	266	311	577	62	73	135	Yes	Yes	Yes	Yes	Yes	-
06:00 PM	175	153	328	34	56	90	-	-	-	Yes	-	-
Subtotal	3,052	2,486	5,538	566	844	1,410	11	7	3	13	2	0
Count date: 8/23/23	Warrant Met?						No	No	No	No	No	No

Source: GRPC, Kiser Traffic and Engineering, 2023.
Volumes are in vehicles per hour.

Warrants are based on 70% volume warrant for speeds greater than 40 mph and community with less than 10,000 population, with 1 lane on the major street and 1 lane on the minor. With the minor street right turn volumes, the signal warrant is within 13 vehicles of meeting the 8 hour warrant (1A).

Kiln Delisle Road/Kapalama Dr Signal Warrant Analysis – 2023 Existing Traffic-No Rts

Start Time	Approach						Warrant 1A		Warrant 1B		Warrant #2 Four Hour	Warrant #3 Peak Hour	
	EB	WB	EB+WB	NB Lt+Th	NB Rt	NB Total	Major-350	Minor-105	Major-525	Minor-53			
06:00 AM	200	94	294	100	22	122	-	-	-	Yes	-	-	
07:00 AM	362	189	551	136	141	277	Yes	Yes	Yes	Yes	Yes	-	
08:00 AM	174	200	374	57	140	197	Yes	-	-	Yes	-	-	
09:00 AM	127	161	288	38	133	171	-	-	-	-	-	-	
10:00 AM	124	172	296	60	122	182	-	-	-	Yes	-	-	
11:00 AM	131	201	332	51	137	188	-	-	-	-	-	-	
12:00 PM	145	205	350	60	157	217	Yes	-	-	Yes	-	-	
01:00 PM	124	235	359	83	116	199	Yes	-	-	Yes	-	-	
02:00 PM	212	171	383	73	81	154	Yes	-	-	Yes	-	-	
03:00 PM	184	206	390	67	65	132	Yes	-	-	Yes	-	-	
04:00 PM	186	281	467	81	95	176	Yes	-	-	Yes	-	-	
05:00 PM	232	269	501	107	103	210	Yes	Yes	-	Yes	-	-	
06:00 PM	128	146	274	67	84	151	-	-	-	Yes	-	-	
Subtotal	2,329	2,530	4,859	980	1,396	2,376	8	2	1	11	1	0	
Count date: 8/23/23	Warrant Met?						No		No		No		No

Source: GRPC, Kiser Traffic and Engineering, 2023.
Volumes are in vehicles per hour.

No volume warrants are met at Kapalama Drive/Kiln Delisle Road with existing traffic when excluding the minor street right turning volumes. However, the analysis was also evaluated, including the minor street right turns, as shown in **Table 7**.

Table 7

Kiln Delisle Road/Kapalama Dr Signal Warrant Analysis – 2023 Existing Traffic-With Rts

Start Time	Approach						Warrant 1A		Warrant 1B		Warrant #2 Four Hour	Warrant #3 Peak Hour	
	EB	WB	EB+WB	NB Lt+Th	NB Rt	NB Total	Major-350	Minor-105	Major-525	Minor-53			
06:00 AM	200	94	294	100	22	122	-	Yes	-	Yes	-	-	
07:00 AM	362	189	551	136	141	277	Yes	Yes	Yes	Yes	Yes	Yes	
08:00 AM	174	200	374	57	140	197	Yes	Yes	-	Yes	Yes	-	
09:00 AM	127	161	288	38	133	171	-	Yes	-	Yes	-	-	
10:00 AM	124	172	296	60	122	182	-	Yes	-	Yes	-	-	
11:00 AM	131	201	332	51	137	188	-	Yes	-	Yes	-	-	
12:00 PM	145	205	350	60	157	217	Yes	Yes	-	Yes	Yes	-	
01:00 PM	124	235	359	83	116	199	Yes	Yes	-	Yes	Yes	-	
02:00 PM	212	171	383	73	81	154	Yes	Yes	-	Yes	-	-	
03:00 PM	184	206	390	67	65	132	Yes	Yes	-	Yes	-	-	
04:00 PM	186	281	467	81	95	176	Yes	Yes	-	Yes	Yes	-	
05:00 PM	232	269	501	107	103	210	Yes	Yes	-	Yes	Yes	-	
06:00 PM	128	146	274	67	84	151	-	Yes	-	Yes	-	-	
Subtotal	2,329	2,530	4,859	980	1,396	2,376	8	13	1	13	6	1	
Count date: 8/23/23	Warrant Met?						Yes		No		Yes		Yes

Source: GRPC, Kiser Traffic and Engineering, 2023.
Volumes are in vehicles per hour.

Including the minor street right turn volumes allows the intersection to meet all 3 vehicular volume based warrants.

Sight Triangle

Based on AASHTO’s Geometric Design of Highways and Streets, 2018, Intersection Sight Distance and clear sight triangles should be provided. Specified areas along intersection approach legs and across their included corners should be clear of obstructions that might block a driver’s view of potentially conflicting vehicles. This distance is measured from (a minimum) of 14.5 ft from the edge of travelled way, from a driver’s eye height of 3.5 ft to a height of object of 3.5 ft. *Where practical, it is desirable to increase the distance from the edge of the major-road traveled way to the vertex of the clear sight triangle from 14.5 ft to 18 ft.* (AASHTO, 2018) The posted speed limit is 35 mph westbound on Kiln Delisle Road, so for northbound left turns from Kapalama Drive, with a 45 mph design speed, Intersection Sight Distance (ISD) is 500 ft, which is approximately the distance between Kapalama Drive and Edwin Ladner Road.

There are 2 green signs that are Harrison County signs within this sight triangle that identifies that Hancock County Maintenance ends and you are entering Harrison County. There is also a utility/power pole adjacent to this 14.5 ft sight triangle. Relocating the green signs is recommended to the north side of Kiln Delisle Road to remove this obstruction from the sight triangle. The signs and utility pole are shown in the photo below.



Above: Green signs blocking view of approaching vehicle on Kiln Delisle Road at Kapalama Drive.



Above: Looking south on Edwin Ladner Road at Kiln Delisle Road with obscured Stop sign.

The Stop sign (R1-1) on the right side of the road is recommended to be located such that pole does not obscure sign visibility. The pole is not in the way from some distances, but it does block the view of approaching vehicles from the distance in the photo above. Additionally, minimum mounting height is 5 ft above the edge of pavement, and this sign is mounted just below the 5 ft elevation. A W3-1 (Stop Ahead) sign is recommended on Edwin Ladner Road in advance of the Stop sign at Kiln Delisle Road. Additionally, a second R1-1 Stop sign is recommended to be placed on the left side of Edwin Ladner Road at Kiln Delisle Road.

There are luminaires in the northwest and southeast quadrants of the intersection of Kiln Delisle Road/Edwin Ladner Road providing nighttime illumination of the intersection.

Neco's XP driveways

The width of the existing driveways for Neco's XP are:

- 40 ft at Edwin Ladner Road/Kiln Delisle Road
- 61 ft on Kiln Delisle Road, 130 ft west of Edwin Ladner Road
- 56 ft on Kapalama Drive, 100 ft south of Kiln Delisle Road
- 65 ft on Kapalama Drive, 55 ft south of the north Neco's driveway

Many jurisdictions (including MDOT) have a maximum driveway widths of 50 ft, to minimize the conflict area along the roadway and yet still provide sufficient width for vehicles (including fuel trucks/delivery trucks) to access the site. By providing 3 driveways with widths in excess of 50 ft, the conflict area along both roadways is expanded, and with driveways so close to adjacent intersections, turning traffic in/out of Neco's XP affects both Kapalama Drive and Kiln Delisle Road.



Above: Westbound left turning vehicle on Kiln Delisle Road at Neco’s blocking westbound thru vehicles.

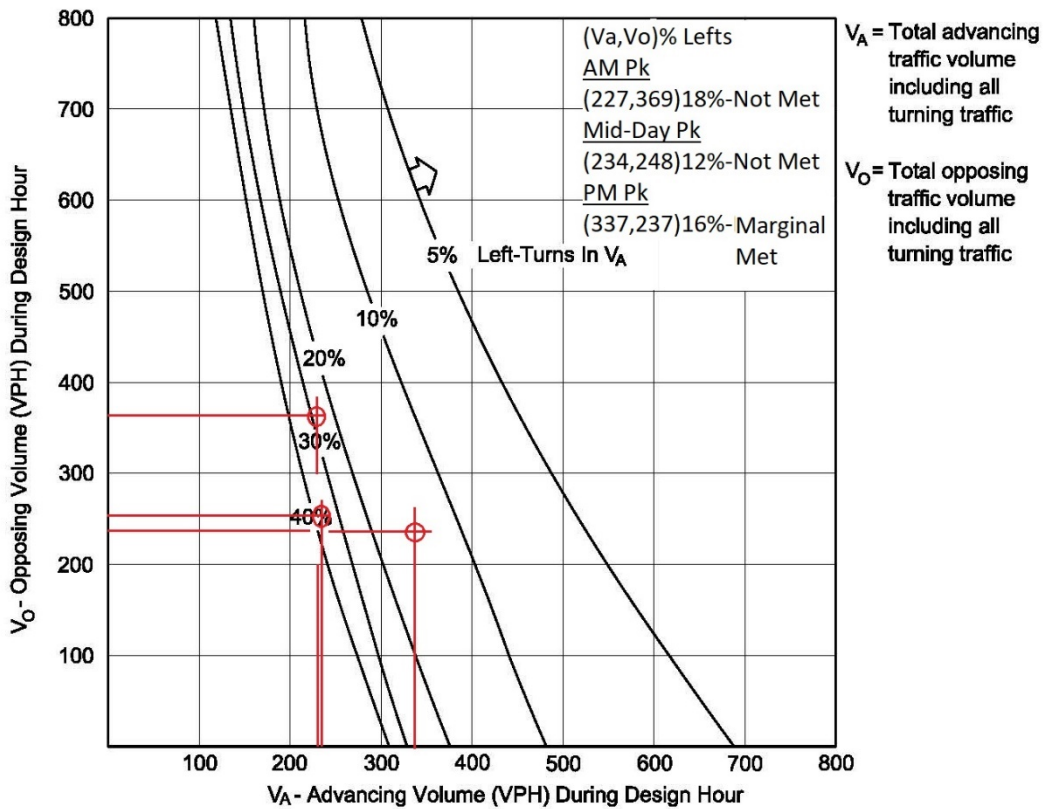
The southbound left turn movement into the north Neco’s driveway on Kapalama Drive and westbound left turn from Kiln Delisle Road into the west site driveway (shown above) both affect the adjacent intersection(s) when more than 4 vehicles are in the queue awaiting a gap for the left turning vehicle, causing through traffic to queue across the adjacent intersection.

Auxiliary Turn Lane Warrants

The need for auxiliary left turn/right turn lanes at the project site access driveways on Kiln Delisle Road and Kapalama Drive was evaluated. The NCHRP Report 457 includes graphs for determining if auxiliary left turn lanes/right turn lanes are justified. The left turn lane criteria are based on the volume advancing, percent of left turns in the volume advancing, and the volume opposing. The right turn lane criteria are based on the right turning volume and the total volume advancing/design hour volume. Existing project site driveways were evaluated using the existing traffic volumes and the turn lane graphs.

The right turn volumes counted during peak hours were under 40 vph at each site driveway, thus with an advancing volume of less than 600 vph, a right turn lane is not warranted at any of the site driveways for the data collected.

The left turn volumes were plotted on the graphics provided in the NCHRP Report 457 for *Left-Turn lanes at Non-Signalized Intersections on 2-Lane Roadways* for the west site driveway on Kiln Delisle Road.



LEFT-TURN LANES AT NON-SIGNALIZED INTERSECTIONS ON 2-LANE ROADWAYS (≤ 40 mph)
Source: NCHRP Report 457, Kiser Traffic and Engineering, 2023.

The graph identifies that during the PM Peak hour, the left turn lane warrant is met at the existing (western) Neco’s Site driveway on Kiln Delisle Road.

Recommendations

The crash frequency has increased in 2022, coinciding with the opening of the Neco’s XP gas station. The angle crashes and left turn same roadway crashes resulted in 75% of the injuries reported. Providing dedicated east/west left turn lanes is anticipated to reduce the intersection delays and decrease the angle/left turn crash frequency. Additional R1-1 Stop signs are recommended on the left side of the roadway(s) on Kapalama Drive at Kiln Delisle Road and on Edwin Ladner Road at Kiln Delisle Road. Additionally, a W3-1 Stop Ahead sign is recommended on Edwin Ladner Road for southbound traffic approaching Kiln Delisle Road, along with relocating the existing R1-1 Stop sign so it is not obscured by the utility pole(s) for approaching vehicles, and that the sign is mounted above the minimum mounting height of 5 ft above the adjacent pavement.

The County signs that are in the sight triangle are recommended to be moved from the south side of Kiln Delisle Road to the north side of the road, out of the sight triangle.

The section of Kapalama Drive south of Kiln Delisle Road is recommended to correct the object markers such that the signs are on the appropriate side of the road, and that the visible white centerline stripe is removed where yellow striping belongs between opposing directions of traffic, and a Stop line is provided for northbound traffic at the intersection with Kiln Delisle Road.



No signal warrants are not met with existing traffic volumes at the two-way stop controlled intersection of Kapalama Drive/Kiln Delisle Road when excluding the minor street right turn volumes. When including the minor street right turns, the 8-hour, 4-hour and peak hour vehicular volume warrants are met. The levels-of-service are currently at LOS C or better during the AM, Mid-day and PM peak hours. Signalization is not recommended at this time, as the crash history does not meet the crash warrant, and traffic signals typically increase crash frequency.

Auxiliary lane analysis of the Neco's XP identified that a left turn ingress lane is warranted on Kiln Delisle Road at this existing site driveway. The auxiliary left turn lane is recommended to extend between Kapalama Drive and Edwin Ladner Road as a center Two-Way Left Turn Lane (TWLTL), allowing for east/west left turn lanes at both Kapalama Drive, Edwin Ladner Road and Neco's XP driveways on Kiln Delisle Road.

The north approach to the Kiln Delisle Road/Kapalama Drive intersection is recommended to modify the existing driveway to provide a 50 ft maximum width (from the current 115 ft width), aligning with Kapalama Drive to narrow the conflict area for this private driveway. The County is recommended to adopt a maximum driveway width of 50 ft to reduce the conflict potential on adjacent roadways.

Slotted curb is recommended along the centerline of Kapalama Drive extending south of Kiln Delisle Rd to restrict southbound left turns at the north Neco's XP driveway. The prohibition of a southbound left turn at this north driveway would divert these turning vehicles south to the Neco's southern site driveway and increase storage from ± 100 ft to more than 200 ft, thus decreasing the potential for southbound vehicles to queue into Kiln Delisle Rd.

In my conversations with local officials and local residents, there had been some concern of cut-through traffic during peak hours through the gas station. On the video that I collected, there were a couple of vehicles that did cut through the gas station parking lot, including one school bus, but the volume of cut through traffic was minimal.

The recommended improvements are shown graphically in **Figure 4**. If you have any questions or comments regarding this analysis, please call me at (601) 720-0262.

Sincerely,

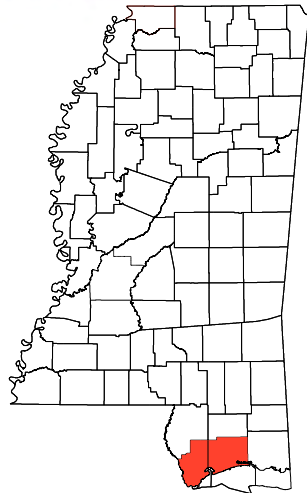
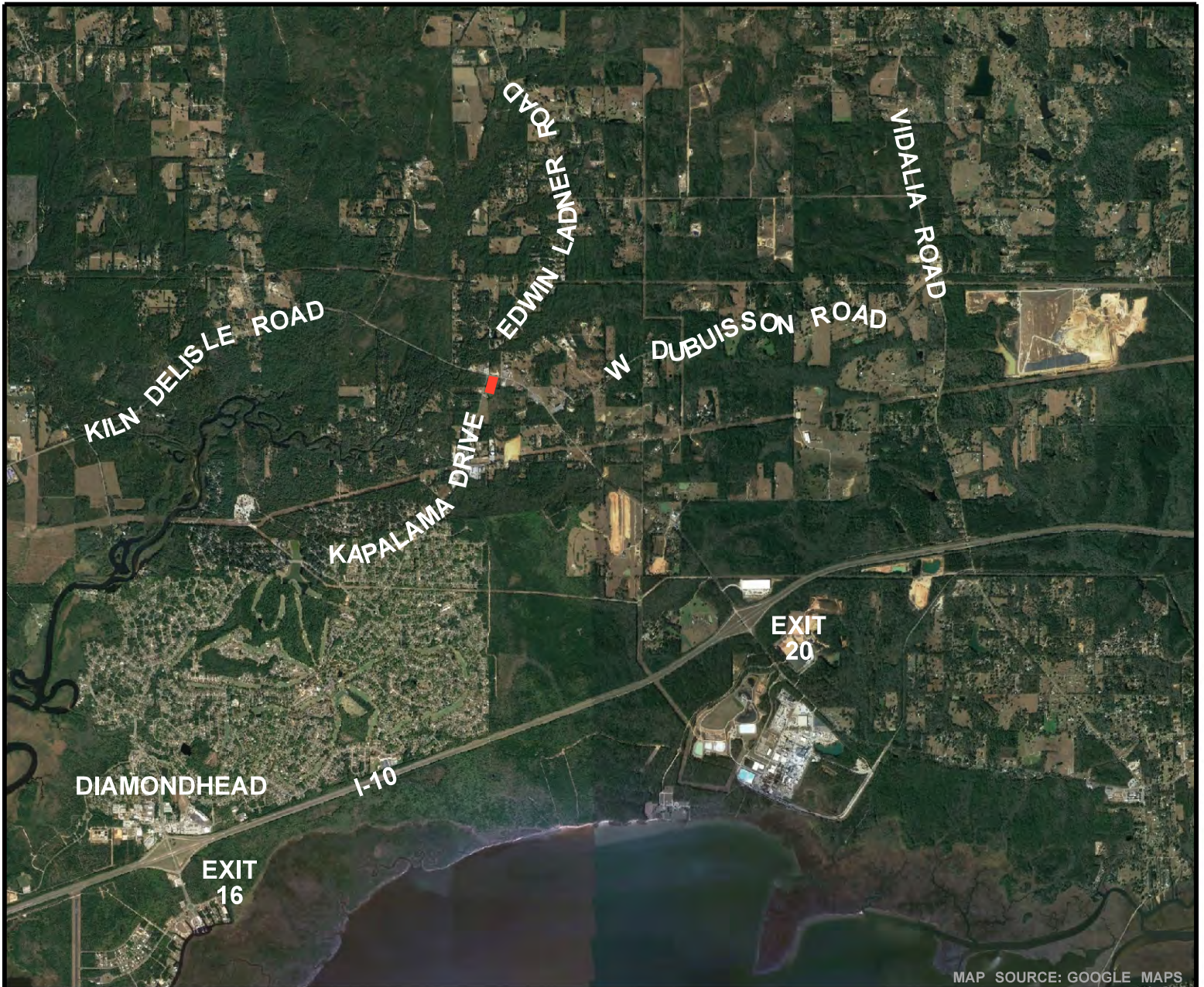
Kiser Traffic and Engineering, LLC

A handwritten signature in blue ink that reads "Jonathan Kiser".

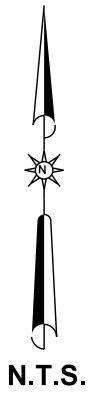
Jonathan A. Kiser, P.E., PTOE, PTP
Professional Traffic Engineer &
Transportation Planner

- Attachments: Figure 1 – Vicinity Map
Figure 2 – Site Plan
Figure 3 – Year 2023 Existing Traffic
Figure 4 – Recommended Improvements

Traffic counts – Kiln Delisle Rd/Kapalama Drive	A1-6
Kiln Delisle Rd/Edwin Ladner Rd	A7-12
Neco's XP Driveway Pk Hr counts	A13-15
HCM Capacity Analysis Sheets	A16-21



Project Location 



**HANCOCK COUNTY
& HARRISON COUNTY**



VICINITY MAP

FIGURE
1



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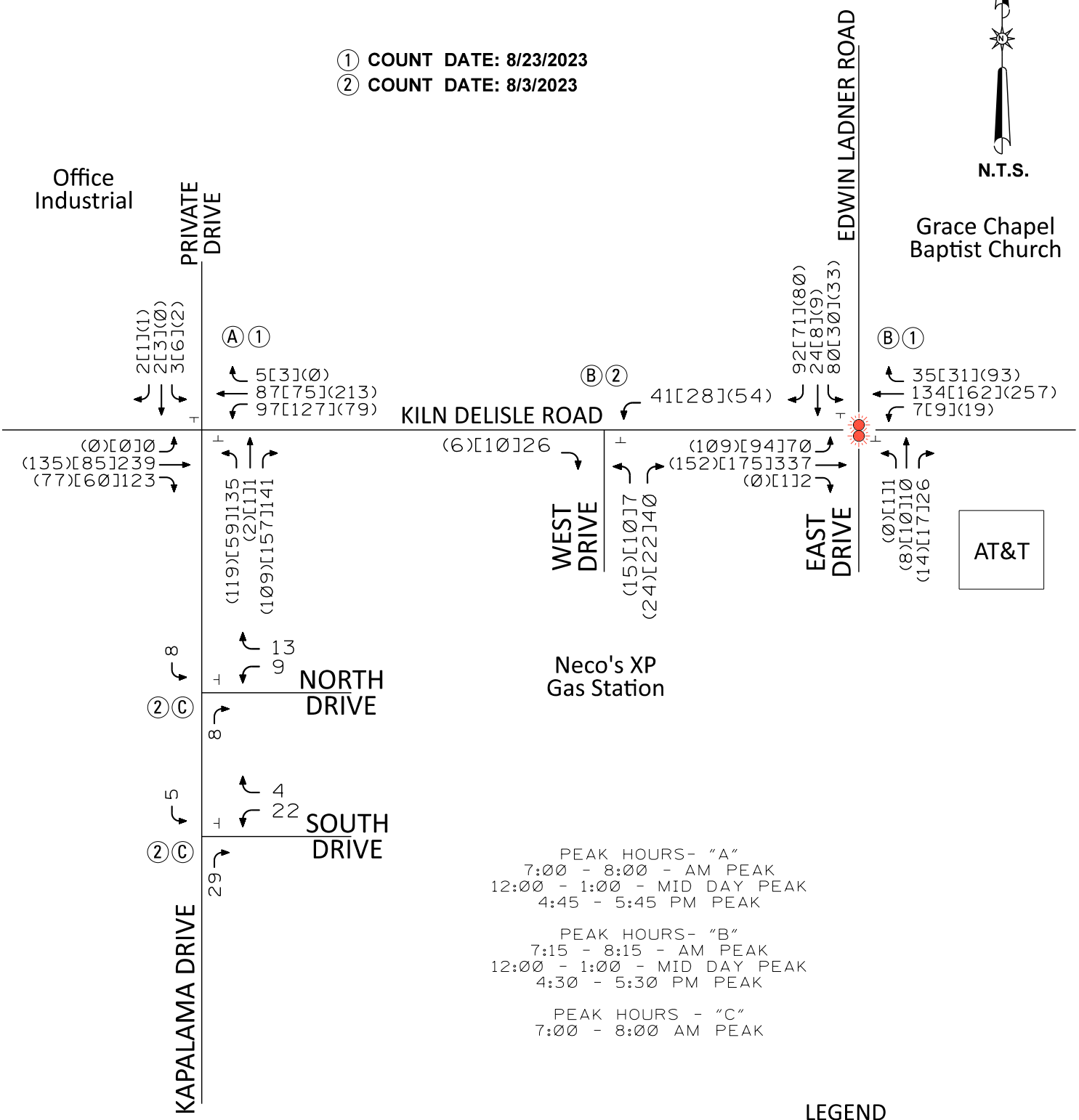
SITE PLAN

FIGURE
2



N.T.S.

- ① COUNT DATE: 8/23/2023
- ② COUNT DATE: 8/3/2023



PEAK HOURS- "A"
7:00 - 8:00 - AM PEAK
12:00 - 1:00 - MID DAY PEAK
4:45 - 5:45 PM PEAK

PEAK HOURS- "B"
7:15 - 8:15 - AM PEAK
12:00 - 1:00 - MID DAY PEAK
4:30 - 5:30 PM PEAK

PEAK HOURS - "C"
7:00 - 8:00 AM PEAK

LEGEND
AM PEAK HOUR - XX
MID DAY PEAK HOUR - [XX]
PM PEAK HOUR - (XX)

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YEAR 2023 EXISTING TRAFFIC

FIGURE
3



- NOTES:**
1. Add supplemental R1-1 Stop signs on the left side of the roadway(s) on Kapalama Drive at Kiln Delisle Road and on Edwin Ladner Road at Kiln Delisle Road.
 2. Add a W3-1 Stop Ahead sign on Edwin Ladner Road for southbound traffic approaching Kiln Delisle Road.
 3. Relocate the existing R1-1 Stop sign on Edwin Ladner Road so it is not obscured by the utility pole(s) for approaching vehicles, and raise the sign to (min) 5 ft above the adjacent pavement.
 4. Relocate the County signs that are in the sight triangle from the south side of Kiln Delisle Road to the north side of the road.
 5. Replace the incorrect object markers on Kapalama Drive south of Kiln Delisle Road.
 6. Obliterate white centerline stripe and replace with yellow striping.
 7. Add a Stop line for northbound traffic at the intersection with Kiln Delisle Road.
 8. Construct a Two-Way Left Turn Lane (TWLTL) between Kapalama Drive and Edwin Ladner Road, allowing for east/west left turn lanes at both Kapalama Drive, Edwin Ladner Road and Neco's XP driveways on Kiln Delisle Road.
 9. The north approach to the Kiln Delisle Road/Kapalama Drive intersection is recommended to modify the driveway to provide a 50 ft maximum width, aligning with Kapalama Drive.
 10. Slotted curb is recommended along the centerline of Kapalama Drive extending south of Kiln Delisle Rd to restrict southbound left turns at the north Neco's XP north driveway.

C:\Kiser\CADD\#2014\plan\recommend.dgn



RECOMMENDED IMPROVEMENTS

FIGURE
4

Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 1

Groups Printed- All Veh

Start Time	OFFICE/PRIVATE DR Southbound					KILN DELISLE RD Westbound					KAPALAMA DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00 AM	0	0	1	0	1	6	10	1	0	17	13	0	7	0	20	0	37	9	0	46	84
06:15 AM	0	0	0	0	0	4	10	0	0	14	13	0	6	0	19	1	39	9	0	49	82
06:30 AM	0	0	0	0	0	4	26	0	0	30	28	0	3	0	31	0	58	5	0	63	124
06:45 AM	0	0	0	0	0	11	21	1	0	33	46	0	6	0	52	0	31	11	0	42	127
Total	0	0	1	0	1	25	67	2	0	94	100	0	22	0	122	1	165	34	0	200	417
07:00 AM	1	1	0	0	2	15	24	1	0	40	65	0	8	0	73	0	63	32	0	95	210
07:15 AM	1	0	0	0	1	15	25	1	0	41	42	0	12	0	54	0	68	50	0	118	214
07:30 AM	1	0	2	0	3	27	16	2	0	45	13	1	55	0	69	0	66	25	0	91	208
07:45 AM	0	1	0	0	1	40	22	1	0	63	15	0	66	0	81	0	42	16	0	58	203
Total	3	2	2	0	7	97	87	5	0	189	135	1	141	0	277	0	239	123	0	362	835
08:00 AM	1	1	0	0	2	39	16	2	0	57	9	2	47	0	58	0	33	12	0	45	162
08:15 AM	0	1	0	0	1	24	15	0	0	39	12	3	28	0	43	0	32	10	0	42	125
08:30 AM	2	0	0	0	2	36	14	0	0	50	13	3	30	0	46	0	25	15	0	40	138
08:45 AM	0	2	0	0	2	37	17	0	0	54	15	0	35	0	50	0	31	16	0	47	153
Total	3	4	0	0	7	136	62	2	0	200	49	8	140	0	197	0	121	53	0	174	578
09:00 AM	0	1	0	0	1	25	17	1	0	43	5	0	36	0	41	0	20	9	0	29	114
09:15 AM	0	1	0	0	1	20	13	1	0	34	9	1	40	0	50	1	21	9	0	31	116
09:30 AM	0	1	2	0	3	24	15	1	0	40	11	1	28	0	40	0	21	13	0	34	117
09:45 AM	0	0	0	0	0	25	18	1	0	44	9	2	29	0	40	1	21	11	0	33	117
Total	0	3	2	0	5	94	63	4	0	161	34	4	133	0	171	2	83	42	0	127	464
10:00 AM	0	3	0	0	3	26	12	0	0	38	11	1	41	0	53	0	18	7	0	25	119
10:15 AM	2	0	0	0	2	34	22	0	0	56	8	1	35	0	44	0	21	17	0	38	140
10:30 AM	2	1	2	0	5	32	14	0	0	46	21	1	21	0	43	2	16	11	0	29	123
10:45 AM	1	3	0	0	4	17	15	0	0	32	17	0	25	0	42	0	15	17	0	32	110
Total	5	7	2	0	14	109	63	0	0	172	57	3	122	0	182	2	70	52	0	124	492
11:00 AM	1	2	0	0	3	30	16	1	0	47	13	0	34	0	47	0	16	16	0	32	129
11:15 AM	1	0	0	0	1	38	23	0	0	61	10	1	34	0	45	0	23	18	0	41	148
11:30 AM	1	0	0	0	1	30	16	1	0	47	15	0	36	0	51	0	21	12	0	33	132
11:45 AM	1	0	0	0	1	27	19	0	0	46	12	0	33	0	45	0	16	9	0	25	117
Total	4	2	0	0	6	125	74	2	0	201	50	1	137	0	188	0	76	55	0	131	526
12:00 PM	2	1	0	0	3	33	19	1	0	53	18	0	45	0	63	0	24	12	0	36	155
12:15 PM	0	1	0	0	1	34	20	1	0	55	15	0	39	0	54	0	25	21	0	46	156
12:30 PM	2	1	1	0	4	35	18	1	0	54	13	1	41	0	55	0	17	14	0	31	144
12:45 PM	2	0	0	0	2	25	18	0	0	43	13	0	32	0	45	0	19	13	0	32	122
Total	6	3	1	0	10	127	75	3	0	205	59	1	157	0	217	0	85	60	0	145	577
01:00 PM	0	0	0	0	0	26	20	1	0	47	17	0	31	0	48	0	19	7	0	26	121
01:15 PM	1	0	0	0	1	42	24	0	0	66	18	1	21	0	40	0	21	14	0	35	142
01:30 PM	0	1	0	0	1	33	33	2	0	68	26	0	36	0	62	0	21	10	0	31	162
01:45 PM	0	0	1	0	1	33	21	0	0	54	20	1	28	0	49	1	22	9	0	32	136
Total	1	1	1	0	3	134	98	3	0	235	81	2	116	0	199	1	83	40	0	124	561
02:00 PM	1	0	0	0	1	22	24	0	0	46	21	0	18	0	39	1	15	18	0	34	120

Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

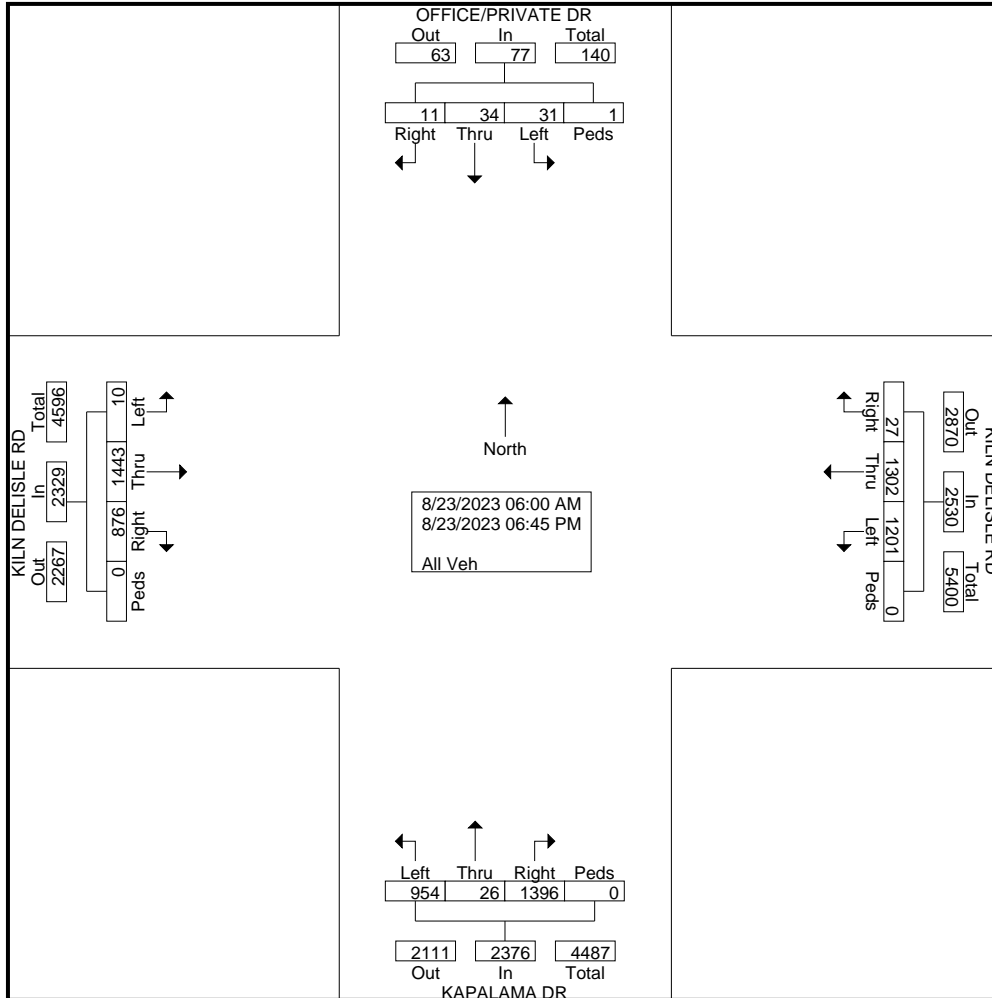
File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 2

Groups Printed- All Veh

Start Time	OFFICE/PRIVATE DR Southbound					KILN DELISLE RD Westbound					KAPALAMA DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
02:15 PM	0	0	0	0	0	20	22	1	0	43	24	0	26	0	50	0	23	15	0	38	131
02:30 PM	1	2	0	0	3	12	27	1	0	40	13	0	20	0	33	0	41	58	0	99	175
02:45 PM	1	1	0	0	2	20	20	2	0	42	15	0	17	0	32	0	20	21	0	41	117
Total	3	3	0	0	6	74	93	4	0	171	73	0	81	0	154	1	99	112	0	212	543
03:00 PM	1	0	0	0	1	9	32	0	0	41	17	0	15	0	32	0	27	24	0	51	125
03:15 PM	0	0	0	0	0	15	35	1	0	51	16	0	16	0	32	0	29	28	0	57	140
03:30 PM	1	1	0	0	2	19	26	0	0	45	18	1	21	0	40	1	28	16	0	45	132
03:45 PM	0	2	0	0	2	34	35	0	0	69	15	0	13	0	28	1	17	13	0	31	130
Total	2	3	0	0	5	77	128	1	0	206	66	1	65	0	132	2	101	81	0	184	527
04:00 PM	0	3	0	0	3	16	41	0	0	57	17	1	19	0	37	1	27	23	0	51	148
04:15 PM	0	0	0	1	1	18	52	0	0	70	15	1	24	0	40	0	31	27	0	58	169
04:30 PM	0	0	0	0	0	15	52	0	0	67	14	0	24	0	38	0	21	20	0	41	146
04:45 PM	1	0	0	0	1	19	68	0	0	87	32	1	28	0	61	0	19	17	0	36	185
Total	1	3	0	1	5	68	213	0	0	281	78	3	95	0	176	1	98	87	0	186	648
05:00 PM	1	0	0	0	1	22	46	0	0	68	35	0	39	0	74	0	44	17	0	61	204
05:15 PM	0	0	0	0	0	25	55	0	0	80	26	0	18	0	44	0	43	24	0	67	191
05:30 PM	0	0	1	0	1	13	44	0	0	57	26	1	24	0	51	0	29	19	0	48	157
05:45 PM	1	0	0	0	1	14	49	1	0	64	19	0	22	0	41	0	32	24	0	56	162
Total	2	0	1	0	3	74	194	1	0	269	106	1	103	0	210	0	148	84	0	232	714
06:00 PM	0	2	1	0	3	23	26	0	0	49	20	1	27	0	48	0	18	16	0	34	134
06:15 PM	0	1	0	0	1	19	28	0	0	47	18	0	21	0	39	0	17	14	0	31	118
06:30 PM	0	0	0	0	0	10	18	0	0	28	14	0	20	0	34	0	22	13	0	35	97
06:45 PM	1	0	0	0	1	9	13	0	0	22	14	0	16	0	30	0	18	10	0	28	81
Total	1	3	1	0	5	61	85	0	0	146	66	1	84	0	151	0	75	53	0	128	430
Grand Total	31	34	11	1	77	1201	1302	27	0	2530	954	26	1396	0	2376	10	1443	876	0	2329	7312
Apprch %	40.3	44.2	14.3	1.3		47.5	51.5	1.1	0		40.2	1.1	58.8	0		0.4	62	37.6	0		
Total %	0.4	0.5	0.2	0	1.1	16.4	17.8	0.4	0	34.6	13	0.4	19.1	0	32.5	0.1	19.7	12	0	31.9	

Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

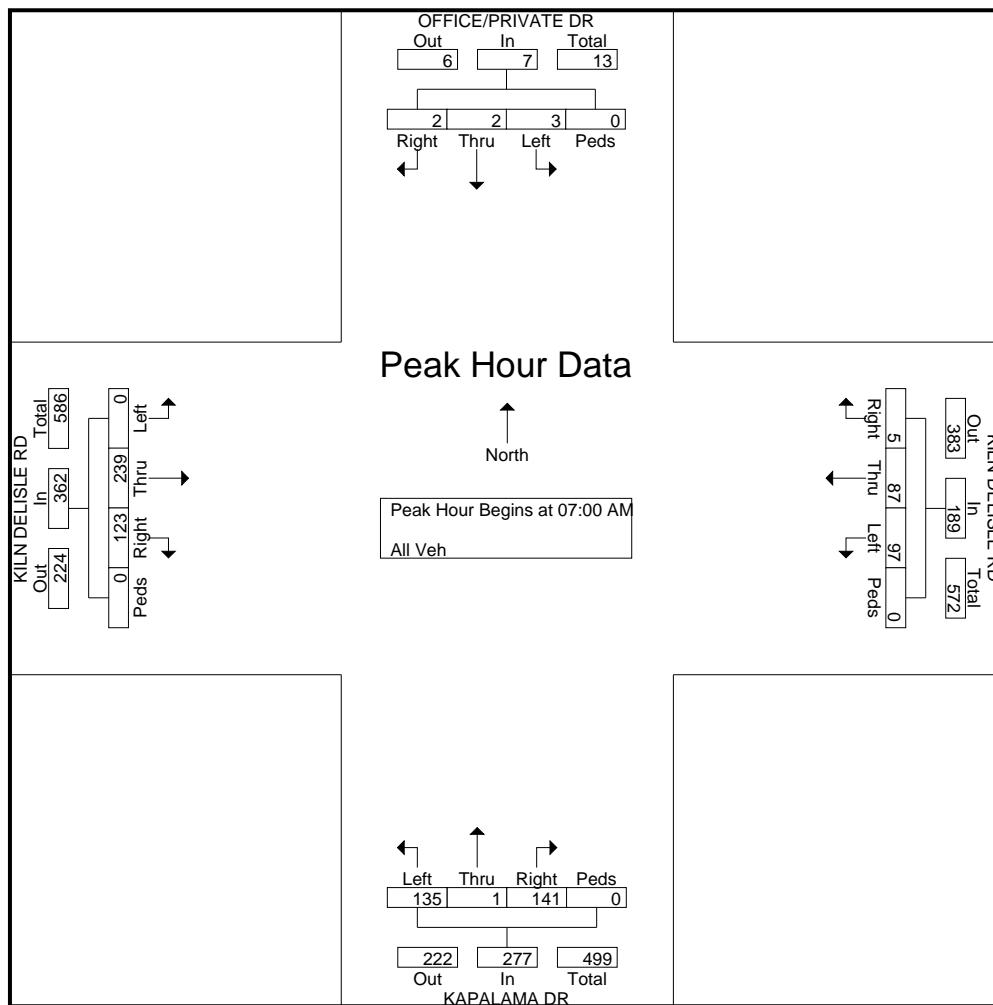
File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 3



Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 4

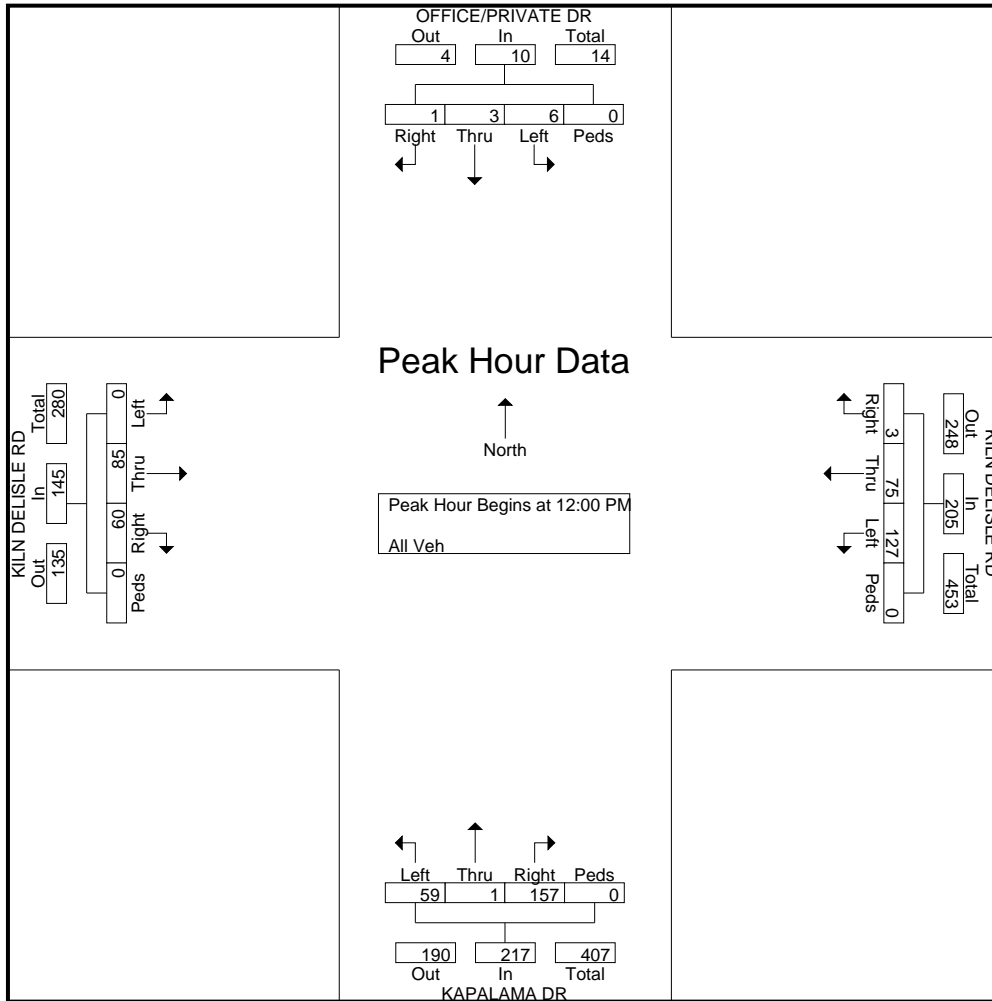
Start Time	OFFICE/PRIVATE DR Southbound					KILN DELISLE RD Westbound					KAPALAMA DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	1	1	0	0	2	15	24	1	0	40	65	0	8	0	73	0	63	32	0	95	210
07:15 AM	1	0	0	0	1	15	25	1	0	41	42	0	12	0	54	0	68	50	0	118	214
07:30 AM	1	0	2	0	3	27	16	2	0	45	13	1	55	0	69	0	66	25	0	91	208
07:45 AM	0	1	0	0	1	40	22	1	0	63	15	0	66	0	81	0	42	16	0	58	203
Total Volume	3	2	2	0	7	97	87	5	0	189	135	1	141	0	277	0	239	123	0	362	835
% App. Total	42.9	28.6	28.6	0		51.3	46	2.6	0		48.7	0.4	50.9	0		0	66	34	0		
PHF	.750	.500	.250	.000	.583	.606	.870	.625	.000	.750	.519	.250	.534	.000	.855	.000	.879	.615	.000	.767	.975



Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 5

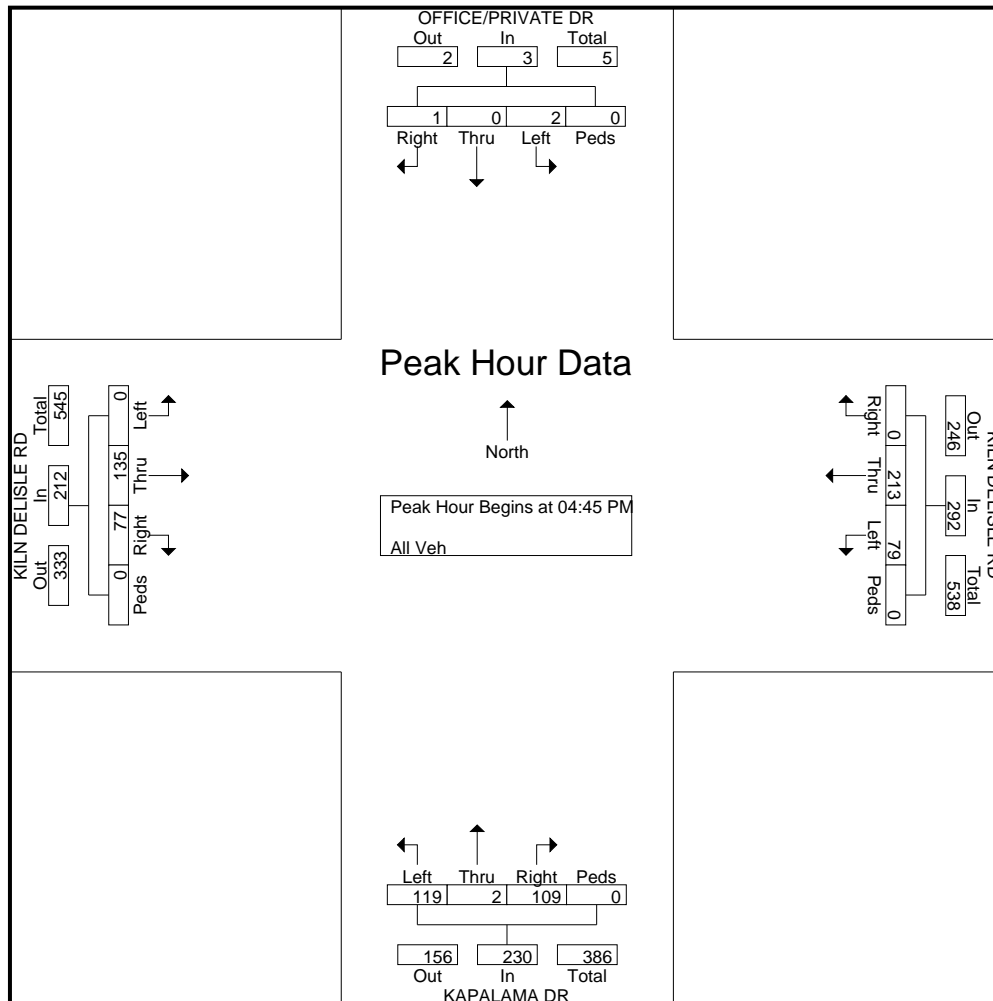
Start Time	OFFICE/PRIVATE DR Southbound					KILN DELISLE RD Westbound					KAPALAMA DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	2	1	0	0	3	33	19	1	0	53	18	0	45	0	63	0	24	12	0	36	155
12:15 PM	0	1	0	0	1	34	20	1	0	55	15	0	39	0	54	0	25	21	0	46	156
12:30 PM	2	1	1	0	4	35	18	1	0	54	13	1	41	0	55	0	17	14	0	31	144
12:45 PM	2	0	0	0	2	25	18	0	0	43	13	0	32	0	45	0	19	13	0	32	122
Total Volume	6	3	1	0	10	127	75	3	0	205	59	1	157	0	217	0	85	60	0	145	577
% App. Total	60	30	10	0		62	36.6	1.5	0		27.2	0.5	72.4	0		0	58.6	41.4	0		
PHF	.750	.750	.250	.000	.625	.907	.938	.750	.000	.932	.819	.250	.872	.000	.861	.000	.850	.714	.000	.788	.925



Intersection: Kiln Delisle/Kapalama Dr
 Counter: GRPC
 County/State: Hancock/MS
 Weather: Clear/Dry

File Name : KilnD-Kapalama
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 6

Start Time	OFFICE/PRIVATE DR Southbound					KILN DELISLE RD Westbound					KAPALAMA DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	0	0	0	1	19	68	0	0	87	32	1	28	0	61	0	19	17	0	36	185
05:00 PM	1	0	0	0	1	22	46	0	0	68	35	0	39	0	74	0	44	17	0	61	204
05:15 PM	0	0	0	0	0	25	55	0	0	80	26	0	18	0	44	0	43	24	0	67	191
05:30 PM	0	0	1	0	1	13	44	0	0	57	26	1	24	0	51	0	29	19	0	48	157
Total Volume	2	0	1	0	3	79	213	0	0	292	119	2	109	0	230	0	135	77	0	212	737
% App. Total	66.7	0	33.3	0		27.1	72.9	0	0		51.7	0.9	47.4	0		0	63.7	36.3	0		
PHF	.500	.000	.250	.000	.750	.790	.783	.000	.000	.839	.850	.500	.699	.000	.777	.000	.767	.802	.000	.791	.903



Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 1

Groups Printed- All Veh

Start Time	EDWIN LADNER RD Southbound					KILN DELISLE RD Westbound					NECOS XP E DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00 AM	20	0	10	0	30	2	13	4	0	19	0	2	5	0	7	7	39	0	0	46	102
06:15 AM	19	4	13	0	36	1	7	4	0	12	0	3	3	0	6	6	51	0	0	57	111
06:30 AM	15	2	11	0	28	0	19	1	0	20	0	2	10	0	12	6	54	0	0	60	120
06:45 AM	18	0	17	0	35	0	21	0	0	21	1	0	6	0	7	4	35	0	0	39	102
Total	72	6	51	0	129	3	60	9	0	72	1	7	24	0	32	23	179	0	0	202	435
07:00 AM	16	4	19	0	39	2	30	2	0	34	1	2	1	0	4	9	61	0	0	70	147
07:15 AM	25	8	21	0	54	2	21	5	0	28	0	1	7	0	8	18	78	0	0	96	186
07:30 AM	24	5	24	0	53	3	32	8	0	43	1	3	6	0	10	22	96	0	0	118	224
07:45 AM	14	6	21	0	41	1	42	9	0	52	0	3	7	0	10	11	97	2	0	110	213
Total	79	23	85	0	187	8	125	24	0	157	2	9	21	0	32	60	332	2	0	394	770
08:00 AM	17	5	26	0	48	1	39	13	0	53	0	3	6	0	9	19	66	0	0	85	195
08:15 AM	6	2	19	0	27	0	27	0	0	27	0	5	3	0	8	16	52	0	0	68	130
08:30 AM	8	1	14	0	23	0	44	5	0	49	0	0	3	0	3	18	40	0	0	58	133
08:45 AM	5	2	18	0	25	1	41	3	0	45	0	0	4	0	4	12	60	0	0	72	146
Total	36	10	77	0	123	2	151	21	0	174	0	8	16	0	24	65	218	0	0	283	604
09:00 AM	5	0	17	0	22	0	32	2	0	34	0	4	1	0	5	15	43	0	0	58	119
09:15 AM	3	0	13	0	16	1	22	3	0	26	0	1	2	0	3	16	50	1	0	67	112
09:30 AM	8	1	18	0	27	0	28	2	0	30	1	1	3	0	5	12	39	0	0	51	113
09:45 AM	3	0	11	0	14	3	35	4	0	42	0	3	1	0	4	16	39	0	0	55	115
Total	19	1	59	0	79	4	117	11	0	132	1	9	7	0	17	59	171	1	0	231	459
10:00 AM	5	1	15	0	21	2	24	3	0	29	0	0	0	0	0	13	45	0	0	58	108
10:15 AM	8	1	14	0	23	3	43	6	0	52	0	2	6	0	8	16	46	0	0	62	145
10:30 AM	6	2	11	0	19	0	36	1	0	37	0	1	0	0	1	15	26	0	0	41	98
10:45 AM	7	1	8	0	16	2	30	6	0	38	0	2	4	0	6	12	31	0	0	43	103
Total	26	5	48	0	79	7	133	16	0	156	0	5	10	0	15	56	148	0	0	204	454
11:00 AM	5	3	21	0	29	7	39	6	0	52	0	3	8	0	11	15	43	0	0	58	150
11:15 AM	8	2	15	0	25	5	54	5	0	64	0	2	11	0	13	17	46	0	0	63	165
11:30 AM	4	0	15	0	19	0	41	3	0	44	0	4	4	0	8	23	33	1	0	57	128
11:45 AM	3	2	10	0	15	3	37	6	0	46	0	1	2	0	3	28	30	0	0	58	122
Total	20	7	61	0	88	15	171	20	0	206	0	10	25	0	35	83	152	1	0	236	565
12:00 PM	7	2	21	0	30	3	41	10	0	54	0	2	5	0	7	33	45	0	0	78	169
12:15 PM	16	3	20	0	39	3	43	7	0	53	0	3	3	0	6	19	55	0	0	74	172
12:30 PM	3	1	23	0	27	2	39	5	0	46	1	3	5	0	9	20	41	1	0	62	144
12:45 PM	4	2	7	0	13	1	39	9	0	49	0	2	4	0	6	22	34	0	0	56	124
Total	30	8	71	0	109	9	162	31	0	202	1	10	17	0	28	94	175	1	0	270	609
01:00 PM	3	1	9	0	13	4	35	5	0	44	0	2	5	0	7	15	39	0	0	54	118
01:15 PM	3	1	21	0	25	0	48	6	0	54	0	1	2	0	3	7	42	0	0	49	131
01:30 PM	4	2	14	0	20	0	53	8	0	61	0	3	1	0	4	16	36	0	0	52	137
01:45 PM	13	2	14	0	29	1	43	8	0	52	0	2	1	0	3	18	40	0	0	58	142
Total	23	6	58	0	87	5	179	27	0	211	0	8	9	0	17	56	157	0	0	213	528
02:00 PM	3	1	17	0	21	2	37	13	0	52	1	4	2	0	7	13	22	0	0	35	115

Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

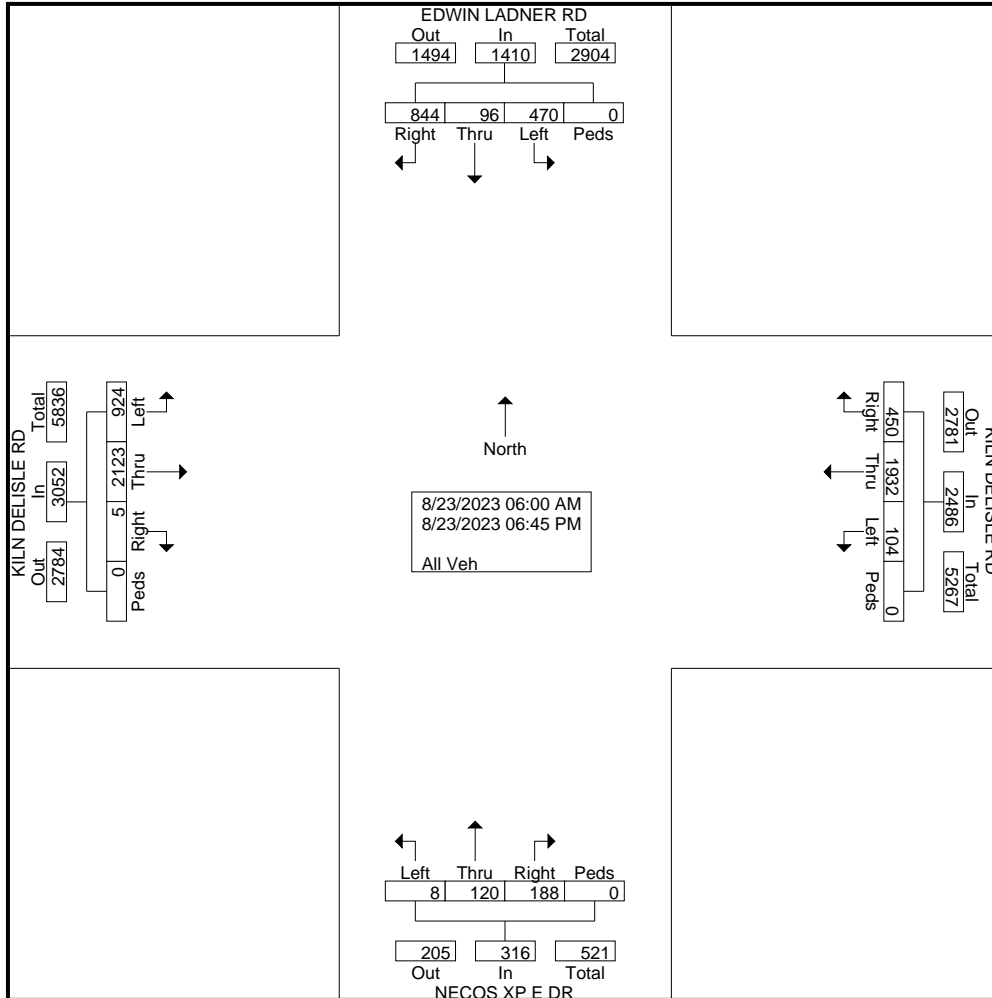
File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 2

Groups Printed- All Veh

Start Time	EDWIN LADNER RD Southbound					KILN DELISLE RD Westbound					NECOS XP E DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
02:15 PM	10	4	20	0	34	0	26	7	0	33	0	2	2	0	4	22	31	0	0	53	124
02:30 PM	7	0	17	0	24	1	31	19	0	51	0	6	1	0	7	27	34	0	0	61	143
02:45 PM	10	2	15	0	27	5	28	13	0	46	0	4	3	0	7	18	26	0	0	44	124
Total	30	7	69	0	106	8	122	52	0	182	1	16	8	0	25	80	113	0	0	193	506
03:00 PM	9	0	5	0	14	1	35	6	0	42	0	2	1	0	3	22	22	0	0	44	103
03:15 PM	7	1	14	0	22	3	37	10	0	50	1	3	5	0	9	13	28	0	0	41	122
03:30 PM	3	1	14	0	18	0	33	19	0	52	0	2	4	0	6	20	35	0	0	55	131
03:45 PM	7	2	29	0	38	5	39	16	0	60	0	3	4	0	7	12	17	0	0	29	134
Total	26	4	62	0	92	9	144	51	0	204	1	10	14	0	25	67	102	0	0	169	490
04:00 PM	8	0	17	0	25	5	43	14	0	62	0	5	3	0	8	23	24	0	0	47	142
04:15 PM	6	1	21	0	28	2	61	14	0	77	0	4	5	0	9	26	39	0	0	65	179
04:30 PM	4	1	15	0	20	8	62	28	0	98	0	0	1	0	1	31	26	0	0	57	176
04:45 PM	8	4	21	0	33	7	69	13	0	89	0	4	5	0	9	18	29	0	0	47	178
Total	26	6	74	0	106	22	235	69	0	326	0	13	14	0	27	98	118	0	0	216	675
05:00 PM	13	3	20	0	36	4	62	36	0	102	0	2	6	0	8	35	54	0	0	89	235
05:15 PM	8	1	24	0	33	0	64	16	0	80	0	2	2	0	4	25	43	0	0	68	185
05:30 PM	21	1	13	0	35	3	49	15	0	67	0	1	3	0	4	20	34	0	0	54	160
05:45 PM	10	5	16	0	31	4	50	8	0	62	0	1	2	0	3	23	32	0	0	55	151
Total	52	10	73	0	135	11	225	75	0	311	0	6	13	0	19	103	163	0	0	266	731
06:00 PM	10	1	17	0	28	0	38	14	0	52	0	1	1	0	2	24	26	0	0	50	132
06:15 PM	9	1	16	0	26	1	35	8	0	44	1	4	5	0	10	20	21	0	0	41	121
06:30 PM	5	1	11	0	17	0	19	16	0	35	0	2	1	0	3	22	17	0	0	39	94
06:45 PM	7	0	12	0	19	0	16	6	0	22	0	2	3	0	5	14	31	0	0	45	91
Total	31	3	56	0	90	1	108	44	0	153	1	9	10	0	20	80	95	0	0	175	438
Grand Total	470	96	844	0	1410	104	1932	450	0	2486	8	120	188	0	316	924	2123	5	0	3052	7264
Apprch %	33.3	6.8	59.9	0		4.2	77.7	18.1	0		2.5	38	59.5	0		30.3	69.6	0.2	0		
Total %	6.5	1.3	11.6	0	19.4	1.4	26.6	6.2	0	34.2	0.1	1.7	2.6	0	4.4	12.7	29.2	0.1	0	42	

Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

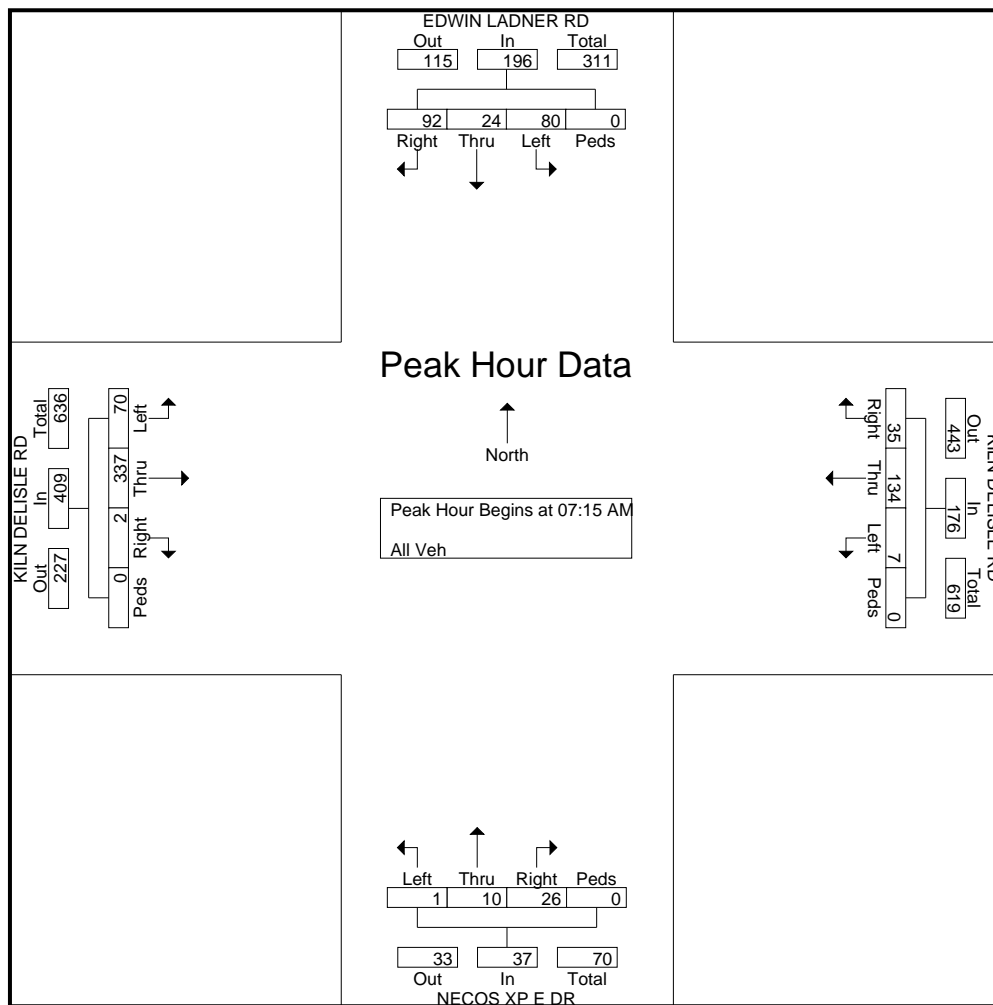
File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 3



Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 4

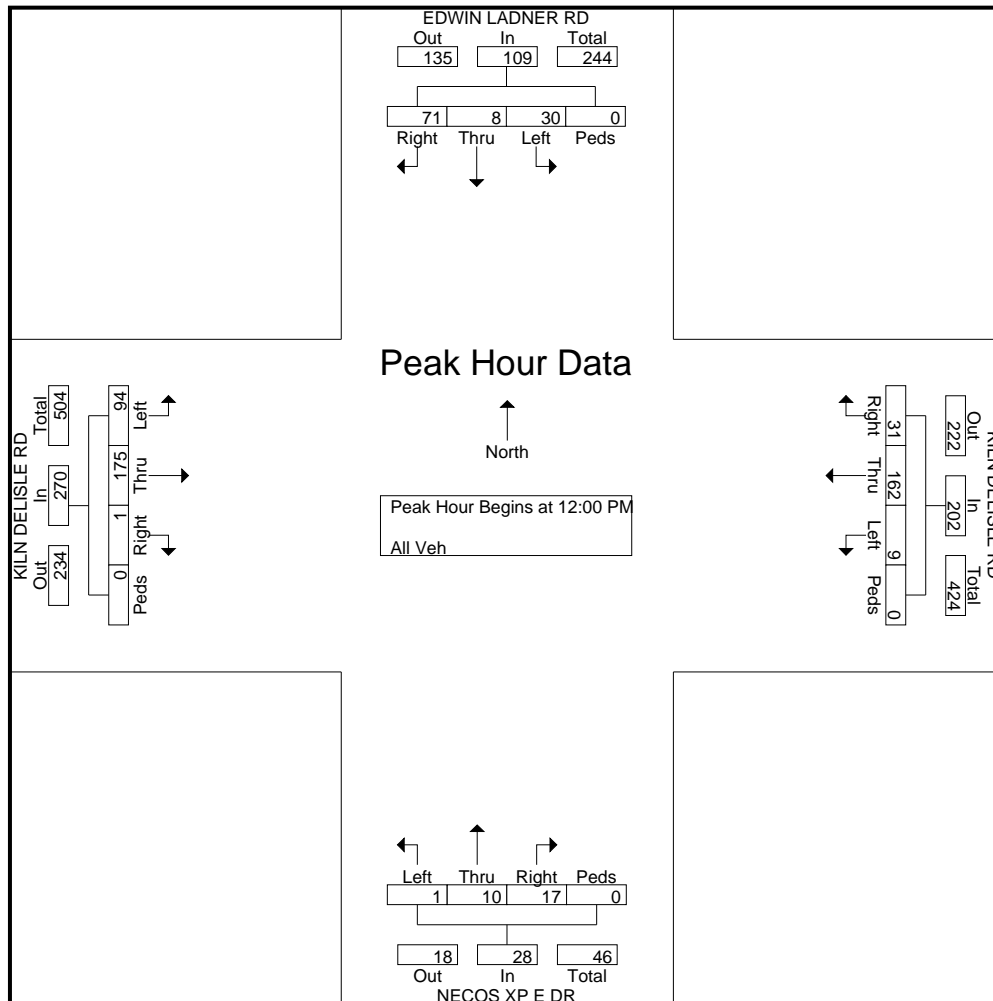
Start Time	EDWIN LADNER RD Southbound					KILN DELISLE RD Westbound					NECOS XP E DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	25	8	21	0	54	2	21	5	0	28	0	1	7	0	8	18	78	0	0	96	186
07:30 AM	24	5	24	0	53	3	32	8	0	43	1	3	6	0	10	22	96	0	0	118	224
07:45 AM	14	6	21	0	41	1	42	9	0	52	0	3	7	0	10	11	97	2	0	110	213
08:00 AM	17	5	26	0	48	1	39	13	0	53	0	3	6	0	9	19	66	0	0	85	195
Total Volume	80	24	92	0	196	7	134	35	0	176	1	10	26	0	37	70	337	2	0	409	818
% App. Total	40.8	12.2	46.9	0		4	76.1	19.9	0		2.7	27	70.3	0		17.1	82.4	0.5	0		
PHF	.800	.750	.885	.000	.907	.583	.798	.673	.000	.830	.250	.833	.929	.000	.925	.795	.869	.250	.000	.867	.913



Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 5

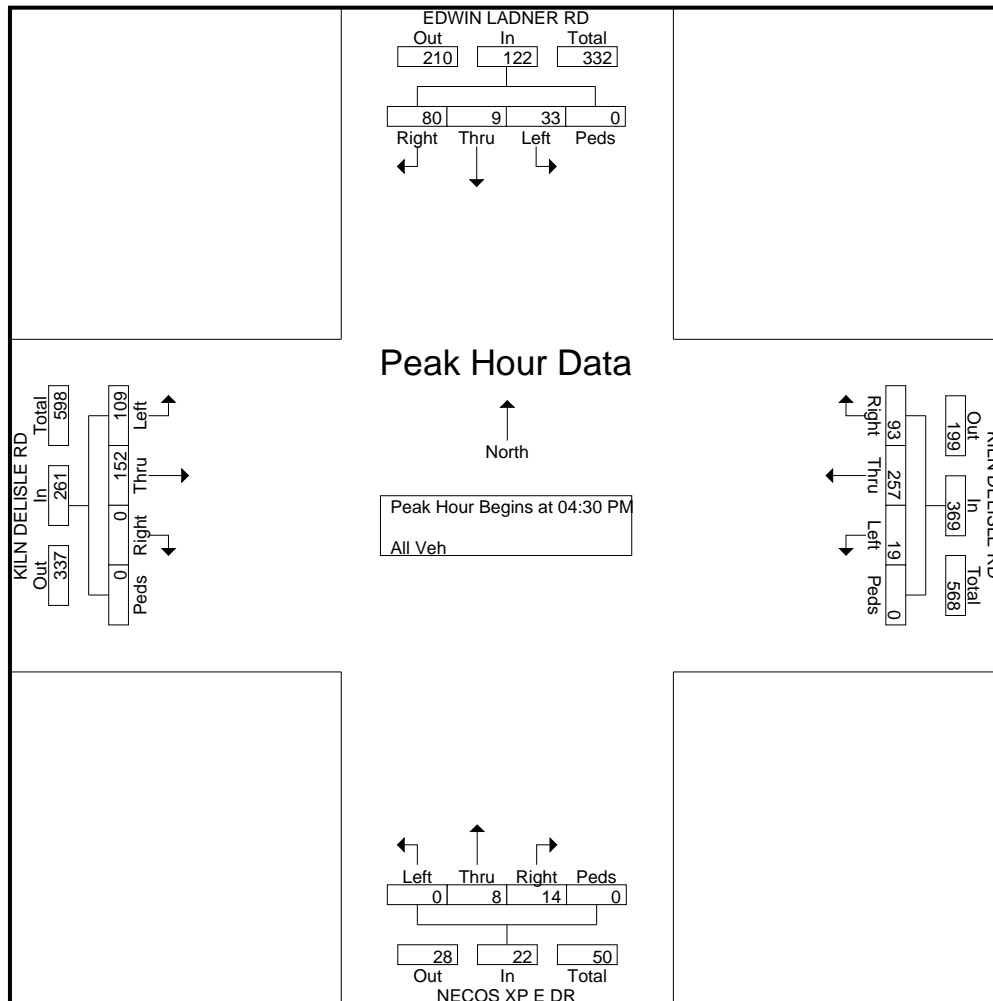
Start Time	EDWIN LADNER RD Southbound					KILN DELISLE RD Westbound					NECOS XP E DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	7	2	21	0	30	3	41	10	0	54	0	2	5	0	7	33	45	0	0	78	169
12:15 PM	16	3	20	0	39	3	43	7	0	53	0	3	3	0	6	19	55	0	0	74	172
12:30 PM	3	1	23	0	27	2	39	5	0	46	1	3	5	0	9	20	41	1	0	62	144
12:45 PM	4	2	7	0	13	1	39	9	0	49	0	2	4	0	6	22	34	0	0	56	124
Total Volume	30	8	71	0	109	9	162	31	0	202	1	10	17	0	28	94	175	1	0	270	609
% App. Total	27.5	7.3	65.1	0		4.5	80.2	15.3	0		3.6	35.7	60.7	0		34.8	64.8	0.4	0		
PHF	.469	.667	.772	.000	.699	.750	.942	.775	.000	.935	.250	.833	.850	.000	.778	.712	.795	.250	.000	.865	.885



Intersection: Kiln Delisle/Ed Ladner
 Counter: GRPC
 County/State: Harrison/MS
 Weather: Clear/Dry

File Name : KilnD-Edwin-Lad
 Site Code : 00000000
 Start Date : 8/23/2023
 Page No : 6

Start Time	EDWIN LADNER RD Southbound					KILN DELISLE RD Westbound					NECOS XP E DR Northbound					KILN DELISLE RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	1	15	0	20	8	62	28	0	98	0	0	1	0	1	31	26	0	0	57	176
04:45 PM	8	4	21	0	33	7	69	13	0	89	0	4	5	0	9	18	29	0	0	47	178
05:00 PM	13	3	20	0	36	4	62	36	0	102	0	2	6	0	8	35	54	0	0	89	235
05:15 PM	8	1	24	0	33	0	64	16	0	80	0	2	2	0	4	25	43	0	0	68	185
Total Volume	33	9	80	0	122	19	257	93	0	369	0	8	14	0	22	109	152	0	0	261	774
% App. Total	27	7.4	65.6	0		5.1	69.6	25.2	0		0	36.4	63.6	0		41.8	58.2	0	0		
PHF	.635	.563	.833	.000	.847	.594	.931	.646	.000	.904	.000	.500	.583	.000	.611	.779	.704	.000	.000	.733	.823



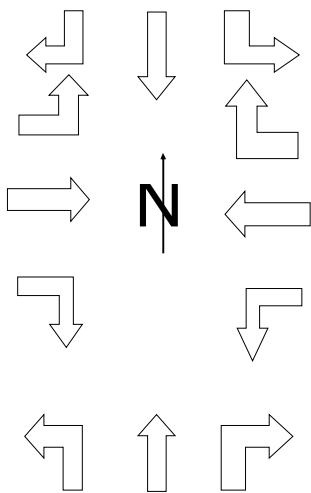
Recorder: J. Kiser
 Count Date: 8/3/2023
 Weather: Clear/Dry

Intersection: Kapalama Drive/Neco's north drive
 City/County: Hancock County

Start

7:00		2
7:15		1
7:30		3
7:45		2
12:00		
12:15		
12:30		
12:45		
16:45		
17:00		
17:15		
17:30		

Roadway: Kapalama Road



1												
3												
4												
6												

Start

Roadway: Neco's N. Drive

Start

7:00												
7:15												
7:30												
7:45												
12:00												
12:15												
12:30												
12:45												
16:45												
17:00												
17:15												
17:30												

Roadway: N/A

Start

7:00		2
7:15		2
7:30		2
7:45		2
12:00		
12:15		
12:30		
12:45		
16:45		
17:00		
17:15		
17:30		

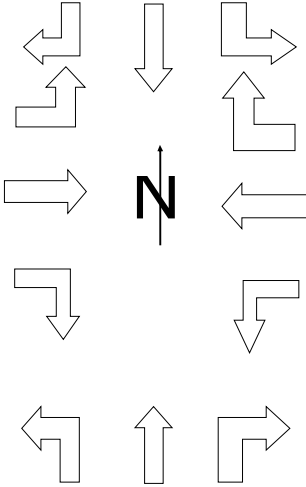
Roadway: Kapalama Road

Recorder: J. Kiser
Count Date: 8/3/2023
Weather: Clear/Dry

Intersection: Kapalama Drive/Neco's south drive
City/County: Hancock County

Start		
7:00		0
7:15		3
7:30		0
7:45		2
12:00		
12:15		
12:30		
12:45		
16:45		
17:00		
17:15		
17:30		

Roadway: Kapalama Road



	1	2	0	1					
	1	5	8	8					

Roadway: Neco's S. Drive

Start
7:00
7:15
7:30
7:45
12:00
12:15
12:30
12:45
16:45
17:00
17:15
17:30

Roadway: N/A

Start
7:00
7:15
7:30
7:45
12:00
12:15
12:30
12:45
16:45
17:00
17:15
17:30

Start		
7:00		7
7:15		5
7:30		8
7:45		9
12:00		
12:15		
12:30		
12:45		
16:45		
17:00		
17:15		
17:30		

Roadway: Kapalama Road

A15

Recorder: J. Kiser
 Count Date: 8/3/2023
 Weather: Clear/Dry

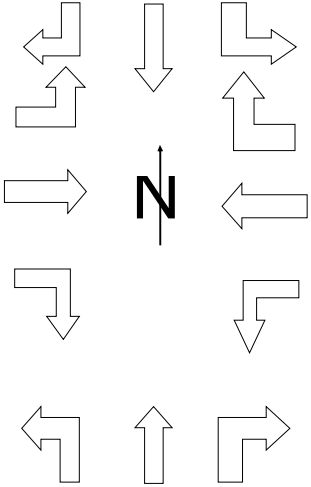
Intersection: Kiln Delisle Rd/Neco's west drive
 City/County: Harrison County

Start	7:15	7:30	7:45	8:00	12:00	12:15	12:30	12:45	16:30	16:45	17:00	17:15			
	9	9	6	2	1	1	5	3	0	5	0	1			

Roadway: Kiln Delisle Rd

Start												
7:15												
7:30												
7:45												
8:00												
12:00												
12:15												
12:30												
12:45												
16:30												
16:45												
17:00												
17:15												

Roadway: _____



Start	7:15	7:30	7:45	8:00	12:00	12:15	12:30	12:45	16:30	16:45	17:00	17:15			
	11	9	11	10	6	8	8	6	15	9	13	17			

Roadway: Neco's W. Drive

Start															
7:15	1								14						
7:30	3								10						
7:45	1								12						
8:00	2								4						
12:00	2								4						
12:15	2								5						
12:30	2								4						
12:45	4								9						
16:30	3								4						
16:45	8								6						
17:00	2								6						
17:15	2								8						

HCM 6th TWSC

100: Kapalama Drive/Office/Industrial Drive & Kiln Delisle Rd

Intersection

Int Delay, s/veh 9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	239	123	97	87	5	135	1	141	3	2	2
Future Vol, veh/h	0	239	123	97	87	5	135	1	141	3	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	260	134	105	95	5	147	1	153	3	2	2

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	100	0	0	394
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1493	-	-	1165
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1493	-	-	1165
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	24.2	15.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	481	1493	-	-	1165	-	-	348
HCM Lane V/C Ratio	0.626	-	-	-	0.091	-	-	0.022
HCM Control Delay (s)	24.2	0	-	-	8.4	0	-	15.6
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	4.2	0	-	-	0.3	-	-	0.1

HCM 6th TWSC
200: Neco's XP/Edwin Ladner Rd & Kiln Delisle Rd

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	70	337	2	7	134	35	1	10	26	80	24	92
Future Vol, veh/h	70	337	2	7	134	35	1	10	26	80	24	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	366	2	8	146	38	1	11	28	87	26	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	184	0	0	368	0	0	763	719	367	720	701	165
Stage 1	-	-	-	-	-	-	519	519	-	181	181	-
Stage 2	-	-	-	-	-	-	244	200	-	539	520	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1391	-	-	1191	-	-	321	354	678	343	363	879
Stage 1	-	-	-	-	-	-	540	533	-	821	750	-
Stage 2	-	-	-	-	-	-	760	736	-	527	532	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1191	-	-	252	327	678	302	335	879
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	327	-	302	335	-
Stage 1	-	-	-	-	-	-	503	496	-	764	744	-
Stage 2	-	-	-	-	-	-	645	730	-	460	495	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.3			12.7			20.4		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	508	1391	-	-	1191	-	-	444
HCM Lane V/C Ratio	0.079	0.055	-	-	0.006	-	-	0.48
HCM Control Delay (s)	12.7	7.7	0	-	8	0	-	20.4
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	2.5

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	85	60	127	75	3	59	2	157	6	3	1
Future Vol, veh/h	0	85	60	127	75	3	59	2	157	6	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	65	138	82	3	64	2	171	7	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	85	0	0	157	0	0	487	486	125	571	517	84
Stage 1	-	-	-	-	-	-	125	125	-	360	360	-
Stage 2	-	-	-	-	-	-	362	361	-	211	157	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1512	-	-	1423	-	-	491	481	926	432	462	975
Stage 1	-	-	-	-	-	-	879	792	-	658	626	-
Stage 2	-	-	-	-	-	-	657	626	-	791	768	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1512	-	-	1423	-	-	449	432	926	324	415	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	449	432	-	324	415	-
Stage 1	-	-	-	-	-	-	879	792	-	658	562	-
Stage 2	-	-	-	-	-	-	586	562	-	643	768	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			4.8			12.5			14.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	713	1512	-	-	1423	-	-	374
HCM Lane V/C Ratio	0.332	-	-	-	0.097	-	-	0.029
HCM Control Delay (s)	12.5	0	-	-	7.8	0	-	14.9
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.5	0	-	-	0.3	-	-	0.1

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	109	152	0	19	257	93	0	8	14	33	9	80
Future Vol, veh/h	109	152	0	19	257	93	0	8	14	33	9	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	165	0	21	279	101	0	9	15	36	10	87

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	380	0	0	165	0	0	821	823	165	785	773	330
Stage 1	-	-	-	-	-	-	401	401	-	372	372	-
Stage 2	-	-	-	-	-	-	420	422	-	413	401	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1178	-	-	1413	-	-	293	309	879	310	330	712
Stage 1	-	-	-	-	-	-	626	601	-	648	619	-
Stage 2	-	-	-	-	-	-	611	588	-	616	601	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1413	-	-	226	270	879	268	288	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	270	-	268	288	-
Stage 1	-	-	-	-	-	-	557	535	-	577	607	-
Stage 2	-	-	-	-	-	-	518	577	-	530	535	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3.5		0.4		12.8		16.1	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1178	-	-	1413	-	-	457
HCM Lane V/C Ratio	0.05	0.101	-	-	0.015	-	-	0.29
HCM Control Delay (s)	12.8	8.4	0	-	7.6	0	-	16.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	1.2

HCM 6th TWSC

100: Kapalama Drive/Office/Industrial Drive & Kiln Delisle Rd

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	135	77	79	213	0	119	2	109	2	0	1
Future Vol, veh/h	0	135	77	79	213	0	119	2	109	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	147	84	86	232	0	129	2	118	2	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	231	0	0	594	593	189	653	635	232
Stage 1	-	-	-	-	-	-	189	189	-	404	404	-
Stage 2	-	-	-	-	-	-	405	404	-	249	231	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1337	-	-	417	418	853	380	396	807
Stage 1	-	-	-	-	-	-	813	744	-	623	599	-
Stage 2	-	-	-	-	-	-	622	599	-	755	713	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1336	-	-	1337	-	-	393	387	853	307	367	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	393	387	-	307	367	-
Stage 1	-	-	-	-	-	-	813	744	-	623	555	-
Stage 2	-	-	-	-	-	-	575	555	-	648	713	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.1			17.8			14.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	528	1336	-	-	1337	-	-	387				
HCM Lane V/C Ratio	0.473	-	-	-	0.064	-	-	0.008				
HCM Control Delay (s)	17.8	0	-	-	7.9	0	-	14.4				
HCM Lane LOS	C	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	2.5	0	-	-	0.2	-	-	0				

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	109	152	0	19	257	93	0	8	14	33	9	80
Future Vol, veh/h	109	152	0	19	257	93	0	8	14	33	9	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	165	0	21	279	101	0	9	15	36	10	87

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	380	0	0	165	0	0	821	823	165	785	773	330
Stage 1	-	-	-	-	-	-	401	401	-	372	372	-
Stage 2	-	-	-	-	-	-	420	422	-	413	401	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1178	-	-	1413	-	-	293	309	879	310	330	712
Stage 1	-	-	-	-	-	-	626	601	-	648	619	-
Stage 2	-	-	-	-	-	-	611	588	-	616	601	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1413	-	-	226	270	879	268	288	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	270	-	268	288	-
Stage 1	-	-	-	-	-	-	557	535	-	577	607	-
Stage 2	-	-	-	-	-	-	518	577	-	530	535	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3.5		0.4		12.8		16.1	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1178	-	-	1413	-	-	457
HCM Lane V/C Ratio	0.05	0.101	-	-	0.015	-	-	0.29
HCM Control Delay (s)	12.8	8.4	0	-	7.6	0	-	16.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	1.2