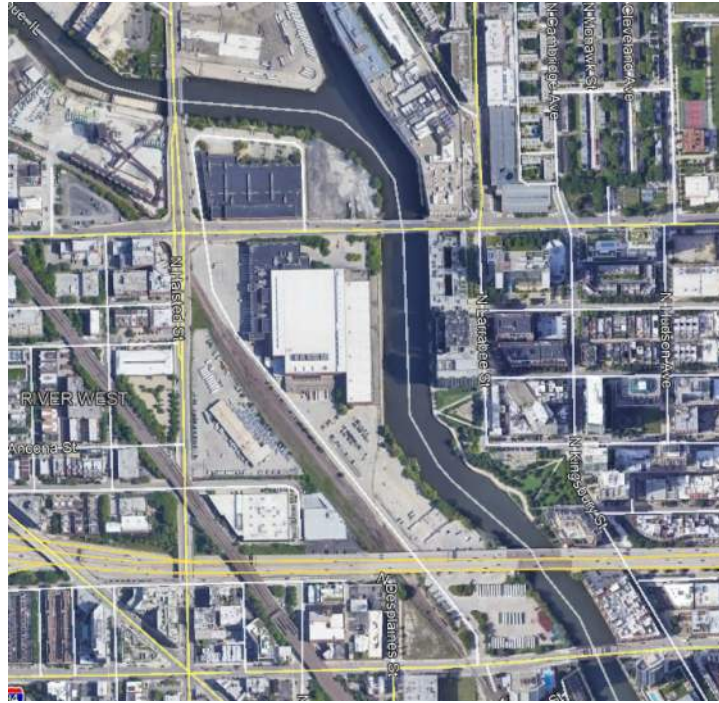


TRAFFIC IMPACT STUDY

REPORT FOR:

Bally's Corporation



TRIBUNE PERMANENT FACILITY
777 WEST CHICAGO AVENUE
CHICAGO, ILLINOIS

PREPARED BY:



V3 Companies
7325 Janes Avenue
Woodridge, Illinois 60517

V3 Project No. 210734

October 22, 2021



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I. INTRODUCTION

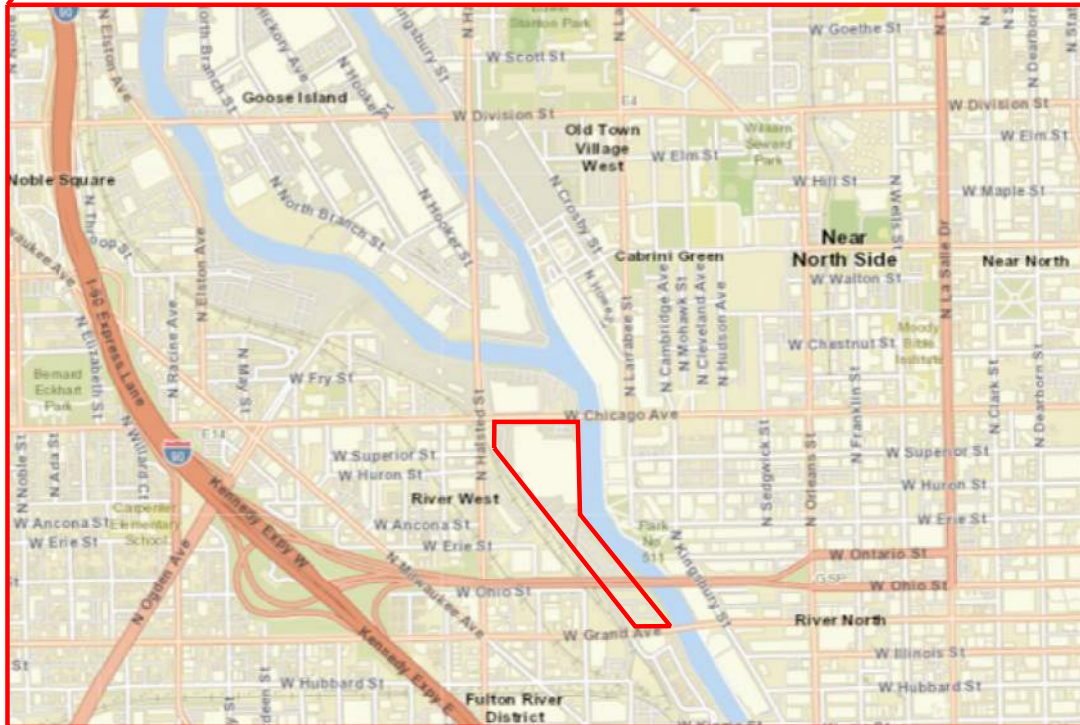
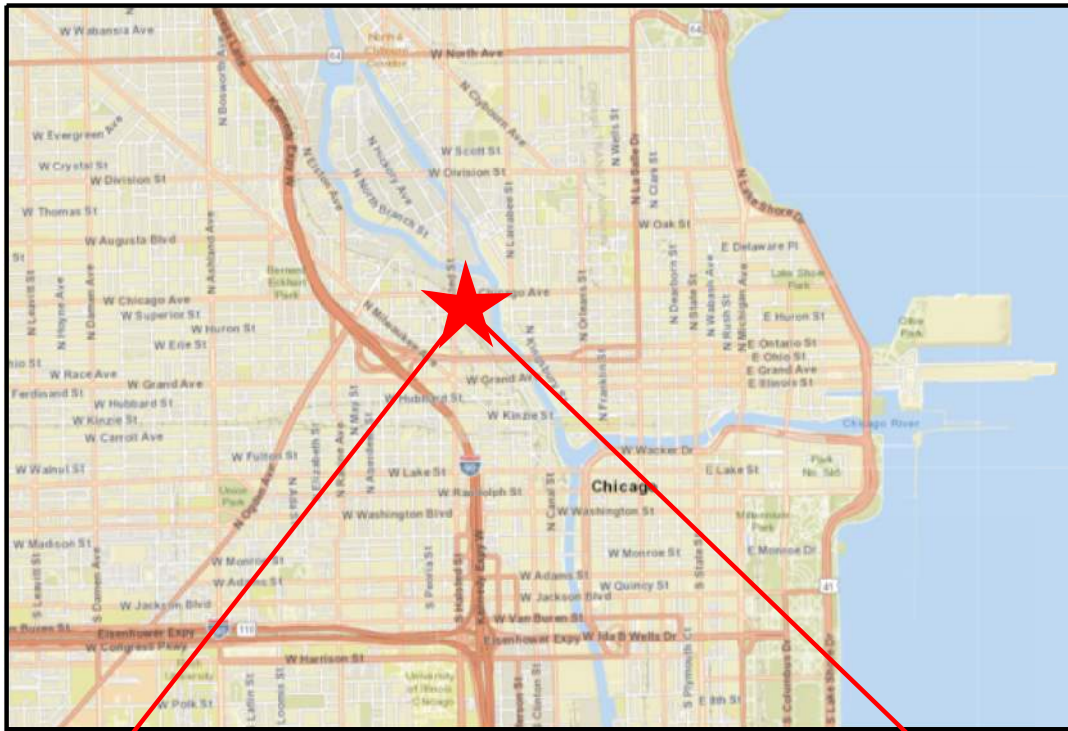
V3 Companies has been retained to evaluate the potential traffic impacts of a proposed entertainment district redevelopment located at the existing Tribune printing plant at 777 West Chicago Avenue. A previous redevelopment plan was proposed for the same site in 2018, the River District. The 30-acre site is bound by Chicago Avenue to the north, the Chicago River North Branch to the east, Grand Avenue to the south, and the Union Pacific Rail Spur to the west. A site location map is included as Figure 1.

It is our understanding that the proposed redevelopment consists of the demolition of the existing buildings within the site and a program that will include the following redevelopment elements. Figure 2 illustrates a conceptual site plan for the proposed redevelopment.

- Approximately 184,000 square feet of casino area with a total of 4,438 gaming positions
- 500 room hotel
- 66,498 square feet of restaurant and bar space
- 3,000 square feet of retail
- 72,000 square feet of entertainment with a 3,000-seat theatre

The proposed access plan will consist of a new north/south boulevard that will provide two travel lanes in each direction from Grand Avenue to the south to Chicago Avenue to the north. The southern intersection will align with the existing unsignalized intersection for the printing presses and is proposed to be signalized as part of this redevelopment project. The northern intersection will be located on Chicago Avenue between Halsted Street and the bridge over the Chicago River.

The purpose of this report is to evaluate the potential traffic impacts of the proposed entertainment district redevelopment. Traffic estimates are projected for 2031. This report includes a description of existing conditions, data collection and capacity analysis, evaluation of data, and conclusions. The intersection numbering scheme used through the report is illustrated in Figure 3.



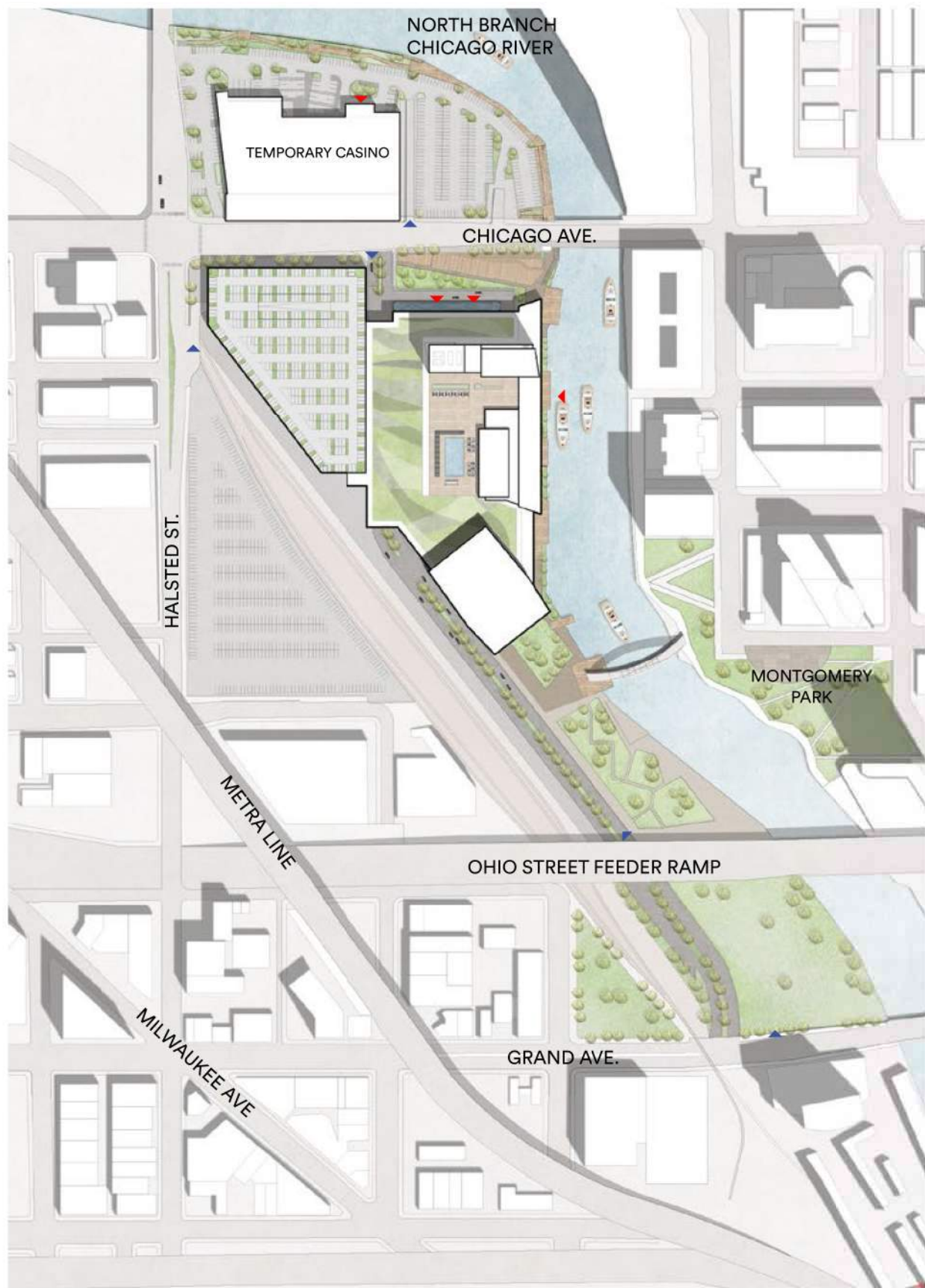
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**FIGURE 1
SITE LOCATION MAP**

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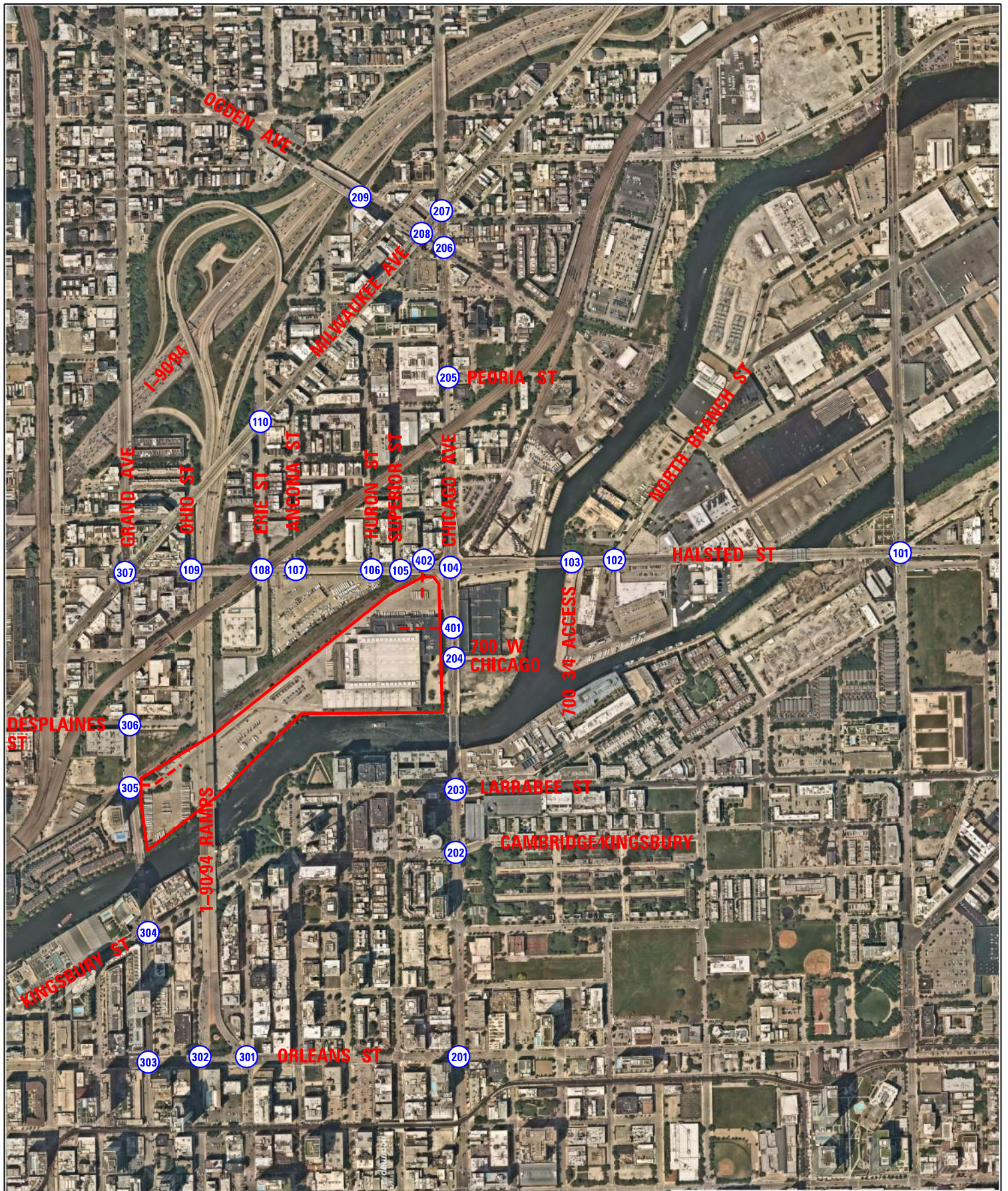
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**FIGURE 2
CONCEPTUAL SITE PLAN**

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**FIGURE 3
INTERSECTION NUMBERING
LEGEND**

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II. EXISTING TRANSPORTATION NETWORK

Land Uses

A variety of land uses exist near the project site, primarily consisting of high-density residential, office, commercial, and industrial land uses. The surrounding land uses are illustrated in Figure 4.

Roadway System

The characteristics of the roadways in the vicinity of the site are presented below. The existing lane configurations at the study area intersections are illustrated in Figure 5.

Primary Roadway Descriptions

Chicago Avenue is classified as a multi-lane minor arterial street that includes sidewalk and curb and gutter along the site frontage. A 30-mph speed limit is assumed, per City ordinance. To the west of Halsted Street, Chicago Avenue is typically a two-lane cross-section with a mix of on-street parking or CTA bus lanes in both the eastbound or westbound directions. East of Halsted Street, Chicago Avenue is typically a four-lane cross section with a striped median and a mix of CTA bus lanes or on-street parking on both sides of the roadway. Chicago Avenue narrows to one lane in the westbound direction and two lanes in the eastbound direction on the existing bridge over the Chicago River. There are no dedicated bicycle facilities incorporated along Chicago Avenue within the study area. Chicago Avenue is under the jurisdiction of the City of Chicago.

Halsted Street is classified as a two-lane minor arterial street that includes sidewalk and curb and gutter along the site frontage. A 30-mph speed limit is assumed, per City ordinance. Within the area around the site, Halsted Street typically consists of a two-lane cross-section with striped bike lanes and on-street parking in both the northbound and southbound directions. The striped bike lanes are omitted near the intersection of Chicago Avenue where space is limited. Bus stops can be found periodically on both sides of Halsted Street. Halsted Street is under the jurisdiction of the City of Chicago.

Grand Avenue is classified as a four-lane minor arterial street to Desplaines Street, where it then becomes a major collector heading west. Grand Avenue has sidewalk and curb and gutter throughout the study area. A 30-mph speed limit is assumed, per City ordinance. Within the area surrounding the site, Grand Avenue consists of a four-lane cross-section with on-street parking in both the eastbound and westbound directions. Grand Avenue narrows to one lane in the both directions on the existing bridge over the Chicago River. There are no dedicated bicycle facilities incorporated along Grand Avenue within the study area. Grand Avenue is under jurisdiction of the City of Chicago.

Division Street is classified as a four-lane major collector that includes sidewalk and curb and gutter. A 30-mph speed limit is assumed, per City ordinance. Within the study area, Division Street typically consists of a four-lane cross section with on-street parking provided on both sides of the road. Division Street narrows to one lane in both directions on the existing bridges over the Chicago River to the west of Halsted Street.



There are no dedicated bicycle facilities incorporated along Division Street within the study area. Division Street is under jurisdiction of the City of Chicago.

Orleans Street is classified as a major collector that includes sidewalk and curb and gutter. A 30-mph speed limit is assumed, per City ordinance. From Hubbard Street to Ohio Street, Orleans Street consists of an unbalanced four-lane cross section with three northbound lanes and one southbound lane. From Ohio Street to Chicago Avenue, Orleans Street consists of a four-lane cross-section with 2 lanes in each direction as well as on-street parking on both sides of the roadway. There are no dedicated bicycle facilities incorporated along Orleans Street within the study area.

Milwaukee Avenue is classified as a major collector that includes sidewalk and curb and gutter. A 30-mph speed limit is assumed, per City ordinance. Within the study area, Milwaukee Avenue typically consists of one travel lane in each direction, on-street parking, and buffered bike lanes. While the bike lanes typically have a physical buffer from vehicle travel lanes, the bike lane treatment varies between striping, offsets, and shared lanes through intersections and transitional areas. There are CTA bus stops along Milwaukee Avenue. Milwaukee Avenue is under jurisdiction of the City of Chicago.

Primary Intersection Descriptions.

The intersections of *Chicago Avenue, Milwaukee Avenue, and Ogden Avenue* are a cluster of three closely spaced signalized intersections in a triangle formation. The northwest bound and southeast bound approaches along Milwaukee Avenue consist of one left turn lane and one shared through/right turn lane. The eastbound and westbound approaches of Chicago Avenue consist of one through left turn lane, one through lane, and one shared bus/right turn lane. Along Ogden Avenue, the northeast bound approach consists of one left turn lane, one through lane, and one shared through/right turn lane. The southwest bound approach has one shared left turn/through lane and one shared through/right turn lane. The signals are pre-timed with 90 second cycle lengths. The pedestrian island in the middle of the intersection includes an entrance to a CTA blue line station.

The intersection of *Chicago Avenue and Halsted Street* is a four-leg, signalized intersection with signalized pedestrian crosswalks in all directions. Each leg of the intersection has a raised median in between each left turn lane and opposing traffic. The eastbound and westbound approaches of Chicago Avenue consist of one left turn lane, one through lane, and one shared through/right turn lane. The northbound approach of Halsted Avenue consists of one left turn lane, one through lane, and one shared through/right turn lane. Halsted Avenue's southbound approach consists of one left turn lane, two through lanes, and one right turn lane. The signal is pre-timed with 100 second cycle lengths.

The intersection of *Chicago Avenue and Larrabee Street* is a four-leg, signalized intersection with signalized pedestrian crosswalks in all directions. The eastbound and approach of Chicago Avenue consist of one left turn lane and two through lanes, while the westbound approach consists of two through lanes and one shared bus/right turn lane. The northbound approach of Larrabee Street consists of one shared left turn/through/right turn lane. Larrabee Street's southbound approach consists of one left turn lane and one right turn lane. The signal is actuated with 90 second cycle lengths.



The intersection of *Chicago Avenue and Cambridge Avenue/Kingsbury Street* is a four-leg, signalized intersection with signalized pedestrian crosswalks in all directions. The eastbound and westbound approaches of Chicago Avenue consist of one through left turn lane, two through lanes, and one shared bus/right turn lane. The northbound approach of Kingsbury Street consists of one shared left turn/through/right turn lane. The southbound approach of Cambridge Avenue consists of one shared left turn/through lane and one shared through/right turn lane. The signal is actuated with 75 second cycle lengths.

The intersection of *Chicago Avenue and Orleans Street* is a four-leg, signalized intersection with signalized pedestrian crosswalks in all directions. The eastbound and westbound approaches of Chicago Avenue consist of one through left turn lane, two through lanes, and one shared bus/right turn lane. The southbound and northbound approaches of Orleans Street both consist of one left turn lane, one through lane, and one shared through/right turn lane. The signal is pre-timed with 75 second cycle lengths.

The intersection of *Halsted Street, Milwaukee Avenue, and Grand Avenue* is a six-leg, signalized intersection with signalized pedestrian crosswalks in all directions. The northbound and southbound approaches of Halsted Avenue consist of one shared left turn/through/right turn lane, but provides enough room for through vehicles to go around queued left turning vehicles. The southeast bound approach of Milwaukee Avenue consists of one left turn lane, one through lane, and one right turn lane. The northwest bound approach of Milwaukee Avenue consists of one left turn lane and one shared through/right turn lane. The eastbound and westbound approaches of Grand Avenue each consist of one left turn lane, one through lane, and one shared through/right turn lane. The signal is actuated with 110 second cycle lengths.

The intersection of *Halsted Street and Erie Street* is a four-leg, signalized intersection with signalized pedestrian crosswalks in all directions. All approaches of this intersection consist of a single shared left turn/through/right turn lane. The signal is pretimed with 60 second cycle lengths.

The intersection of *Halsted Street and North Branch Street* is a three-leg, signalized intersection with signalized pedestrian crosswalks in all directions. The northbound and southbound approaches of Halsted Street consist of a shared left turn/through or a shared right turn/through lane, respectively. The eastbound approach of North Branch Street consists of one left turn lane and one right turn lane. The signal is actuated with 90 second cycle lengths.

The intersection of *Halsted Street and Division Street* is a four-leg signalized intersection with signalized pedestrian crosswalks in all directions. The northbound approach of Halsted Avenue consists of one left turn lane, one through lane, and one right turn lane, while the southbound approach consists of one left turn lane, one through lane, and one shared through/right turn lane. The eastbound and westbound approaches of Division Street both consist of one left turn lane, one through lane, and one shared through/right turn lane. The signal is actuated with 90 second cycle lengths.

The intersection of *Grand Avenue and Desplaines Street* is a four-leg, two-way stop-controlled intersection with pedestrian crosswalks in all directions. The eastbound and westbound approaches of Grand Avenue



are free-flow, with one shared left turn/through/right turn lane in both directions. The northbound and southbound approaches of Desplaines Street are stop-controlled, with one shared left turn/through/right turn lane in both directions.

The intersection of *Grand Avenue and Canal Street/Chicago Tribune Center Access* is a four-leg, all-way stop-controlled intersection with pedestrian crosswalks on the north, south, and east legs only. There is an existing railroad spur that goes through the west leg of the intersection at grade. The eastbound and westbound approaches of Grand Avenue consist of one shared left turn/through lane and one shared through/right turn lane in both directions. The northbound and southbound approaches of Canal Street/Chicago Tribune Center Access consist of one shared left turn/through/right turn lane in both directions.

The intersection of *Grand Avenue and Orleans Street* is a four-leg signalized intersection with signalized pedestrian crosswalks in all directions. The northbound approach of Orleans Avenue consists of one left turn lane, two through lanes, and one right turn lane, while the southbound approach consists of one left turn lane and one shared through/right turn lane. The eastbound approach of Grand Avenue consists of one left turn lane, one through lane, and one right turn lane. The westbound approach of Grand Avenue consists of left turn lane, one through lane, and one shared through/right turn lane. The signal is pre-timed with 75 second cycle lengths.

The intersection of *Orleans Street and Ohio Street/I-90/94 Exit Ramps* is a four-leg signalized intersection with signalized pedestrian crosswalks on the south and east legs of the intersection. The northbound approach of Orleans Street consists of three through lanes and one shared through/right turn lane, the north leg of Orleans Street is a one-way street in the northbound direction. The eastbound approach of the exit ramp consists of two left turn lanes, two through lanes, and one shared through/right turn lane. Additionally, the exit ramp feeds into Ohio Street which is a one-way on the east leg of the intersection. The signal is pre-timed with 75 second cycle lengths

The intersection of *Orleans Street and the Ontario Street/I-90/94 Entrance Ramps* is a five-leg signalized intersection with signalized pedestrian facilities on the north, east, and northwest legs of the intersection. The northbound approach of Orleans Street is a one-way facility with two left turn lanes, one through lane, and one shared through/right turn lane. The southbound approach consists of three right turn lanes onto the entrance ramp or onto Ontario Street. the westbound approach of Ontario Street consists of two left turn lanes, one shared through/left turn lane, and one right turn lane. The west leg of Ontario Street and the Entrance ramp are one-way streets in the westbound direction. The signal is pre-timed with 75 second cycle lengths

The intersection of *Ogden Avenue and the westbound I-90/94 entrance ramp* is an unsignalized three-leg intersection with a pedestrian crosswalk on the west side of Ogden Avenue. The northeast bound approach of Ogden Avenue has one left turn lane and two through lanes. The southwest bound approach of Ogden Avenue has two through lanes and one right turn lane.



Transit and Non-Automotive Transportation System

A number of non-auto modes of transportation are provided in the study area, including bus and rail transit, bicycle infrastructure, and Divvy bikeshare stations. The characteristics of these non-auto modes of transportation are summarized below.

Transit

The following CTA bus routes have stops that are within one half-mile of the proposed development:

- *Route 8 (Halsted)* provides service between Waveland Avenue and 79th Street. Northbound and southbound bus stops are located on Halsted Avenue at the intersections of Erie Street, Chicago Avenue, North Branch Street, and West Division Street.
- *Route 37 (Sedgwick)* provides service between the Fullerton Avenue Red/Brown/Purple Line station and the Clinton Blue Line station at Harrison Street. Northbound and southbound stops are provided at Orleans Avenue and Chicago Avenue.
- *Route 56 (Milwaukee)* provides service between the Jefferson Park Station and Michigan Avenue. Northwest bound and southeast bound bus stops are located on Milwaukee Avenue at the intersections of Chicago Avenue, Erie Street, and Grand Avenue near the study area.
- *Route 65 (Grand)* provides service between Nordica Avenue and Navy Pier. Eastbound and westbound stops are provided on Grand Avenue at Peoria Street, Desplaines Street, Kingsbury Street, and Franklin Street near the study area.
- *Route 66 (Chicago)* provides service between Austin Avenue and Navy Pier. Eastbound and westbound stops are provided on Chicago Avenue at Sangamon Street, Halsted Street, and Larrabee Street near the study area.

There are several CTA rail stations located within one mile of the site. There are two Blue Line stations within walking distance, one at Grand Avenue and Halsted Street and another at Chicago Avenue, Milwaukee Avenue, and Ogden Avenue. The Brown Line is located to the east of the site with a station at Franklin Street and Chicago Avenue. Additionally, the closest Red Line station is located at State Street and Chicago Avenue. The CTA bus routes previously identified provide transit stops at the rail stations and provide an opportunity to improve access between the rail station and the proposed redevelopment.

Additionally, there is a Chicago Water Taxi stop at Chicago Avenue and the Chicago River, immediately east of the proposed redevelopment. The water taxi serves the Downtown area and neighborhoods to the north and south. It also connects to Union Station and Ogilvie Station.

Figure 6 illustrates the CTA rail stations and bus routes located within the study area of the proposed entertainment district redevelopment.

Pedestrian and Bicycle Facilities

The roadways within the study area and all the public roadways around the site provide sidewalks for pedestrians. Crosswalks are provided at most of the signalized intersection as previously discussed and



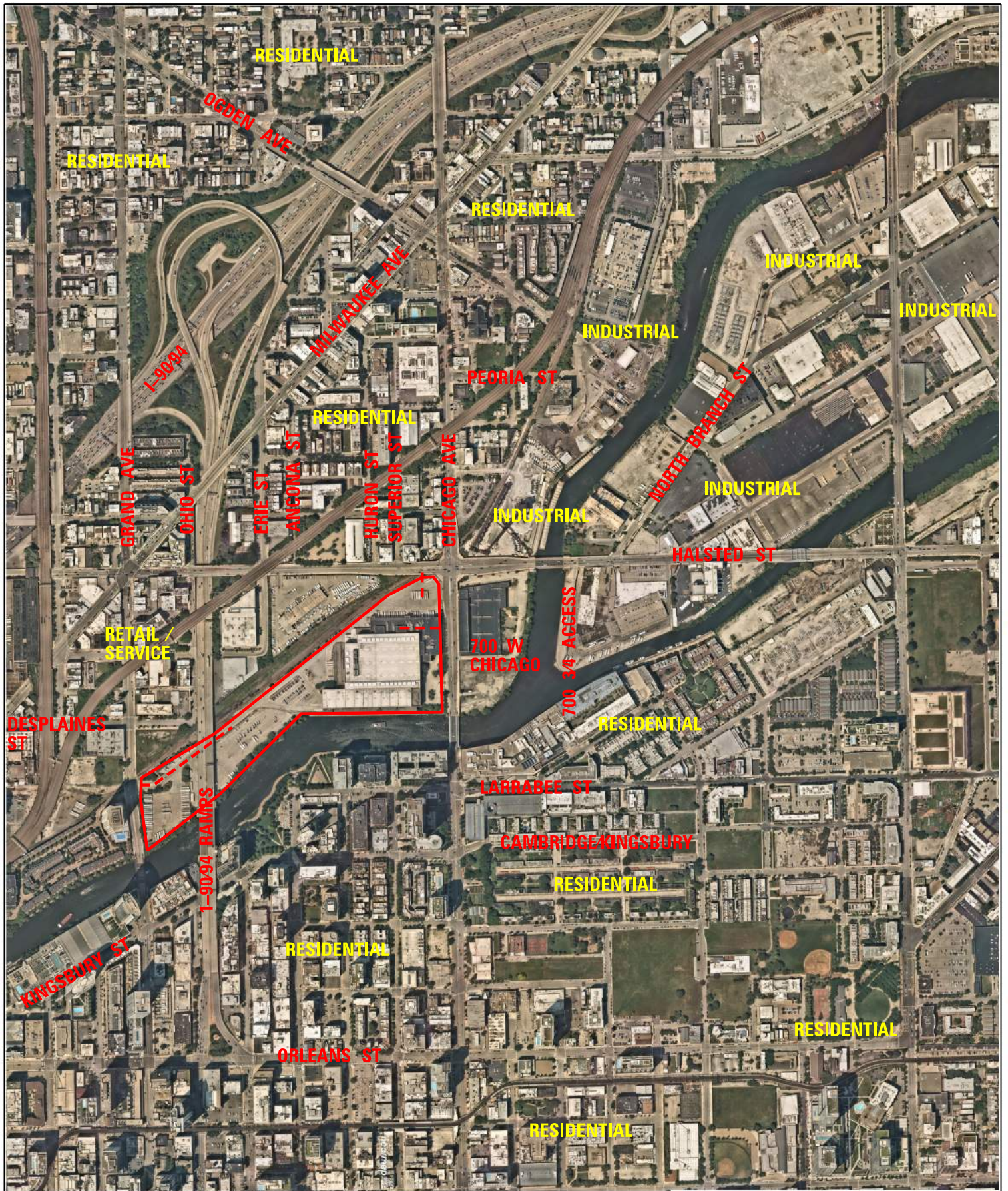
several unsignalized intersections. Additionally, pedestrian signals are provided at most of the signalized intersections where crosswalks are provided

The City of Chicago has been expanding the bicycle facilities within the city for a number of years. Chicago Avenue is signed bike route from Ogden Avenue east to the lakefront. Halsted Street provides a buffered bike lane south of Erie Street and a bike lane north of the Chicago River. Milwaukee Avenue provides a mix of protected and buffered bike lanes.

There are a number of Divvy stations located within the proposed redevelopment area. The nearest stations are located at:

- Grand Avenue and Milwaukee Avenue
- Chicago Avenue and Ogden Avenue
- Halsted Street and North Branch Street
- Erie Street and Kingsbury Street
- Larrabee Street and Kingsbury Street
- Division Street and Larrabee Street

Figure 7 illustrates the bicycle facilities located within the study area of the proposed entertainment district redevelopment.



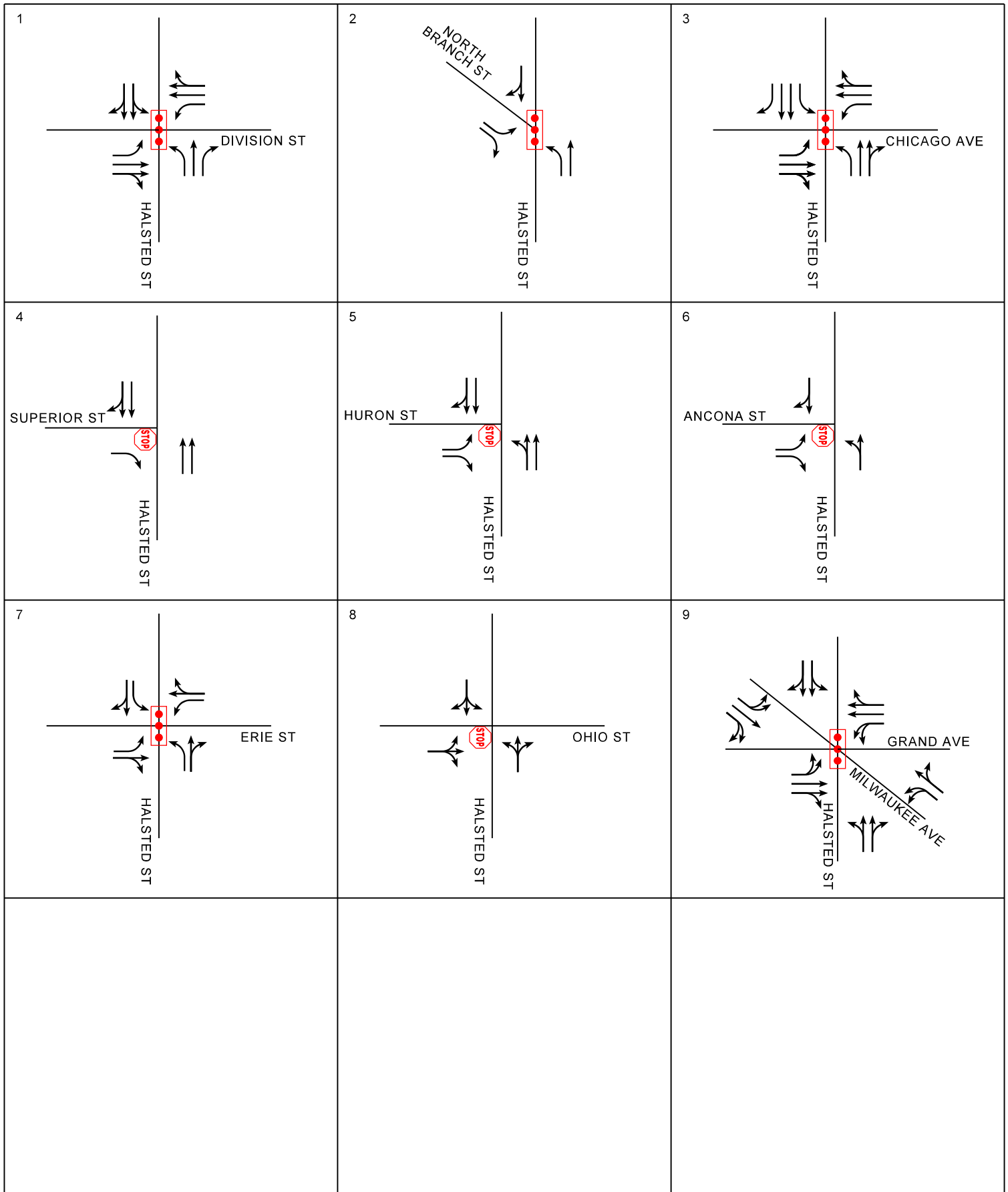
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**FIGURE 4
LAND USE MAP**

CHICAGO

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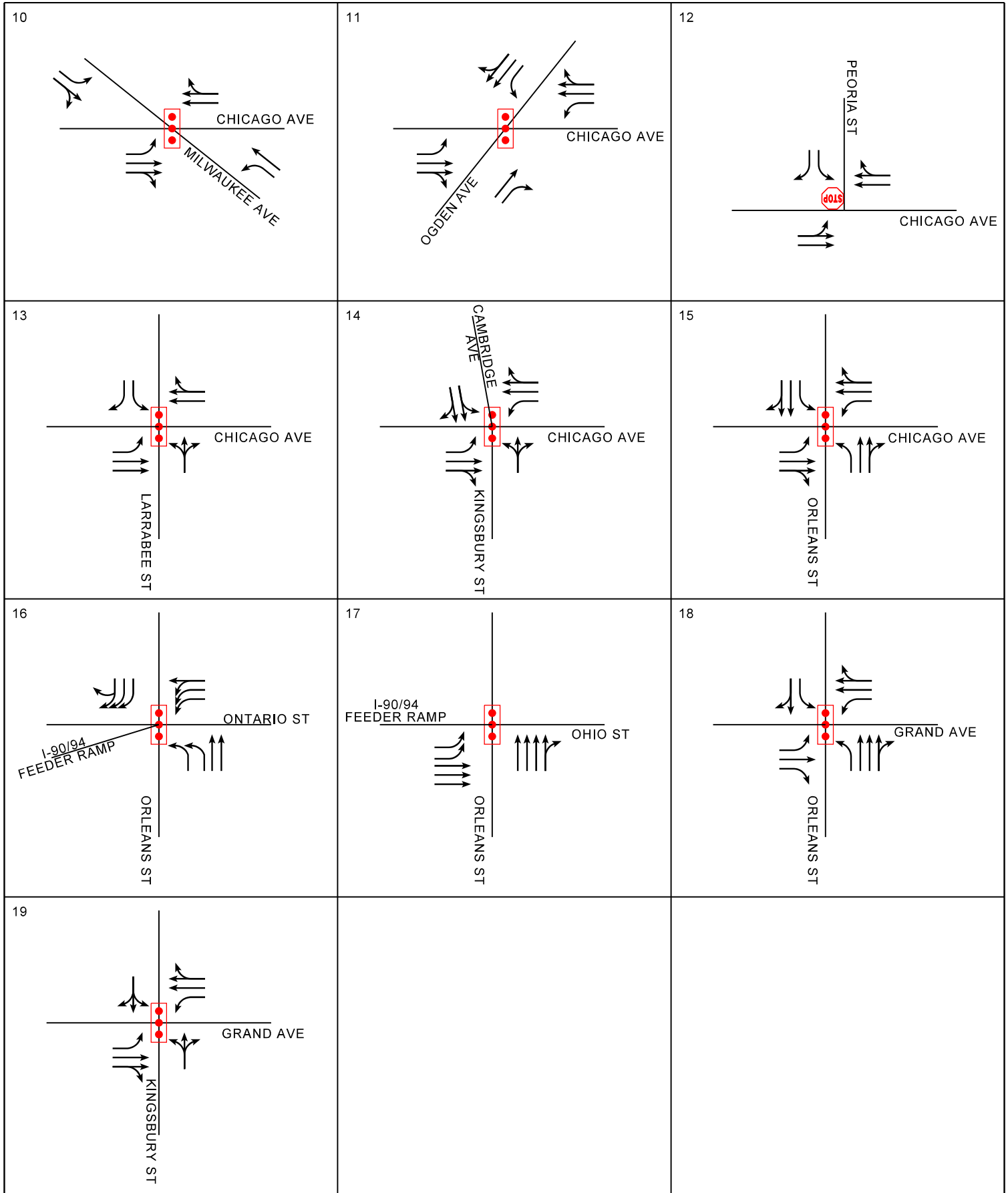
**TRIBUNE
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**FIGURE 5
EXISTING LANE CONFIGURATION**

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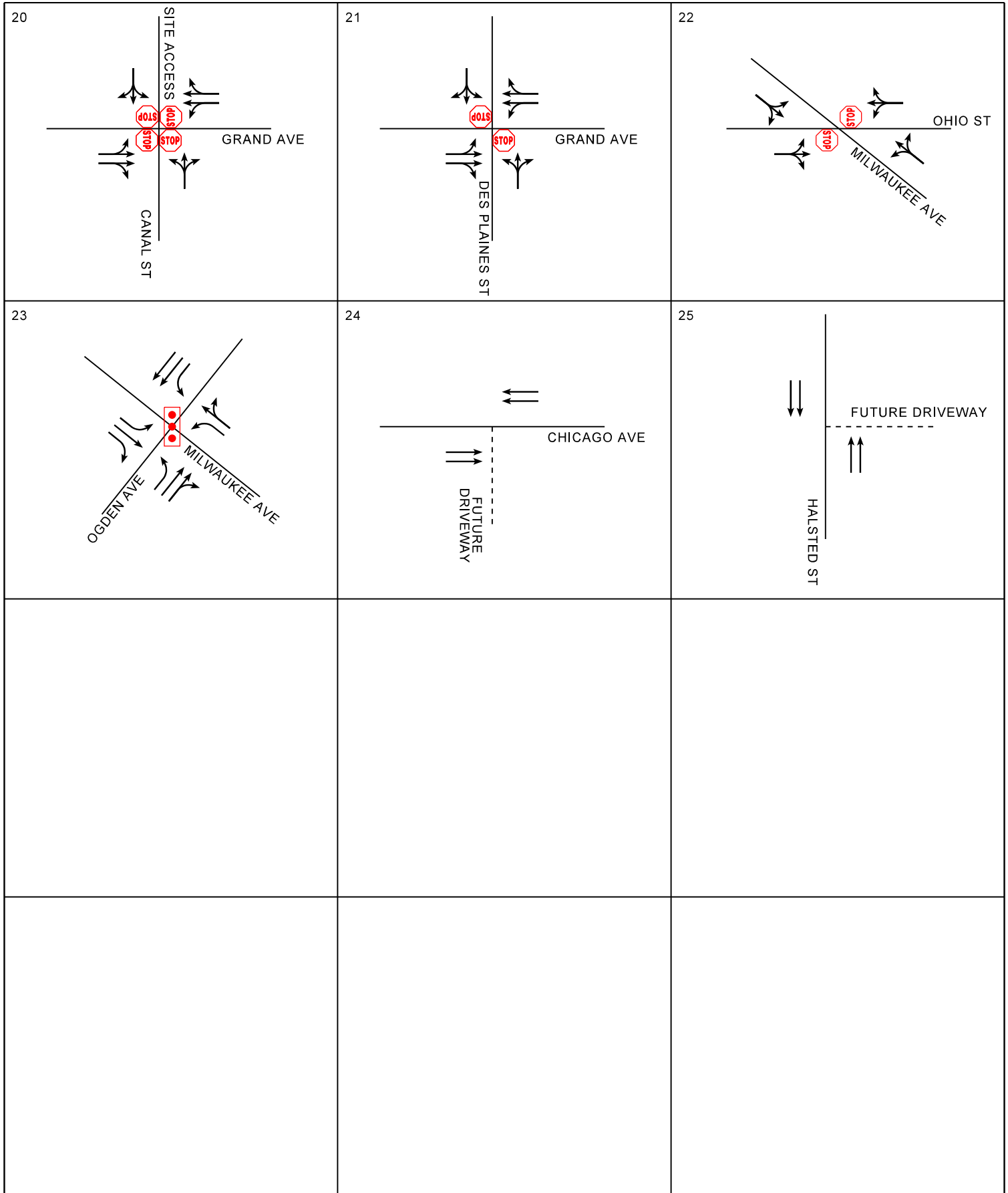
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 5
EXISTING LANE CONFIGURATION**

CHICAGO

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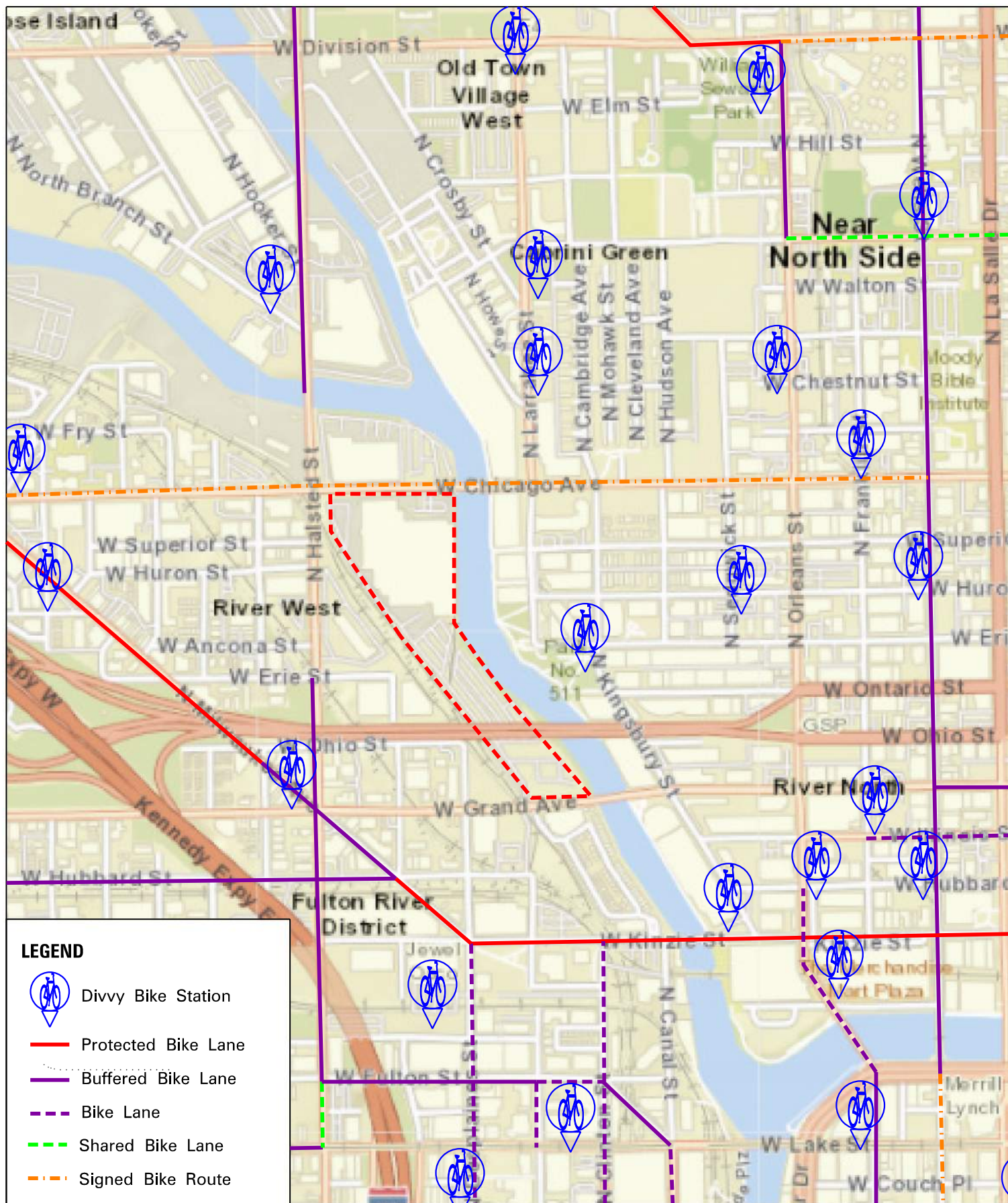
**TRIBUNE
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**FIGURE 5
EXISTING LANE CONFIGURATION**

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**FIGURE 7
EXISTING BICYCLE NETWORK**

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III. FUTURE BACKGROUND TRAFFIC VOLUMES

Existing Intersection Traffic Volumes

Weekday am and weekday pm peak hour traffic volumes have been obtained from *The River District Mixed-Use Development Traffic Impact Study* dated October 2018 by Sam Schwartz Consulting. This study evaluated the impact of that proposed redevelopment at 23 intersections around the site:

1. Halsted Street and Division Street
2. Halsted Street and North Branch
3. Halsted Street and Chicago Avenue
4. Halsted Street and Superior Street
5. Halsted Street and Huron Street
6. Halsted Street and Anaconda Street
7. Halsted Street and Erie Street
8. Halsted Street and Ohio Street
9. Halsted Street, Grand Avenue, and Milwaukee Avenue
10. Chicago Avenue and Milwaukee Avenue
11. Chicago Avenue and Ogden Avenue
12. Chicago Avenue and Peoria Street
13. Chicago Avenue and Larrabee Street
14. Chicago Avenue and Cambridge Avenue/Kingsbury Street
15. Chicago Avenue and Orleans Street
16. Orleans Street and Ontario Street (Ohio Street Feeder Westbound On Ramp)
17. Orleans Street and Ohio Street (Ohio Street Feeder Eastbound Off Ramp)
18. Orleans Street and Grand Avenue
19. Kingsbury Street and Grand Avenue
20. Existing Site Access/Canal Street and Grand Avenue
21. Desplaines Street and Grand Avenue
22. Milwaukee Avenue and Ohio Street
23. Milwaukee Avenue and Ogden Avenue

Based on the report, existing traffic volumes were collected at these intersections at various times in 2016, 2017, and 2018. Weekday am peak period data was collected from 7 am to 9 am while the pm peak period was collected from 4 pm to 6 pm. Based on the data collected, the peak hours were 8 am to 9 am and 5 pm to 6 pm which coincide with the typical weekday commuter peak periods.

Casinos typically generate the most site traffic during Friday evenings from 8 pm to 11 pm and on Saturday evenings from 8 pm to 11 pm. In order to estimate the intersection turning movements during the Friday casino peak period, 2018 daily traffic volumes on adjacent roadways were reviewed to estimate the percent reduction from the weekday pm peak hour to the casino peak hour. The two-way traffic volume on Chicago Avenue between Halsted Street and Orleans Street from 5 pm to 6 pm was 2,509 vehicles and from 8 pm to 9 pm was 1,279 vehicles, a 49 percent reduction. The two-way traffic volume on Halsted Street between Chicago Avenue and Randolph Street from 5 pm to 6 pm was 1,321 vehicles and from 8 pm to 9 pm was 705 vehicles, a 47 percent reduction. Since Friday evening volumes may be higher than a



typical weekday and to stay conduct a conservative analysis, a 35 percent reduction was applied to the weekday pm peak hour volumes to estimate the Friday evening casino peak hour volumes. The same volumes were then utilized for the Saturday evening casino peak period. The Chicago Avenue and Halsted Street daily traffic volumes are included in Appendix B.

Future 2031 Background Traffic Volumes

Background traffic volumes were developed using growth rates from the Chicago Metropolitan Agency for Planning (CMAP) and from other nearby traffic studies for proposed developments within the study area. A one percent growth rate was applied to the existing traffic volumes to account for general background growth at the study area intersections. Additional growth was added to Division Street west of Halsted Street, Larrabee Street north of Chicago Avenue, and Larrabee Street south of Chicago Avenue to account for additional CMAP growth.

Traffic generated from other developments in the area was also included in the background growth, including the following developments:

- 700 West Chicago Avenue: approximately 300 residential units, 1.2 million square feet of office space, and ancillary retail (This site is also the proposed Temporary Casino site)
- 1001 West Chicago Avenue (Gonnella Bread): 360 residential units, 26,000 square foot grocery store, and ancillary retail
- 742 North Aberdeen Street: 190 residential units and ancillary retail
- 1040 West Huron Street: 226 residential units, 30,000 square feet of office space, and ancillary retail
- 750 North Hudson Street: 240 residential units and 10,000 square feet of retail space
- 500 North Milwaukee Avenue: 225 residential units and 14,000 square feet of retail space
- 400 West Huron Street: 65 residential units with ancillary retail space

A mixed-use development was proposed at 700 West Chicago Avenue with approximately 300 residential units, 1.2 million square feet of office space, and ancillary retail space. This site is now proposed to be the temporary casino location. Therefore, the trips generated by the mixed-use development were not added to the background traffic volumes.

Future traffic volumes were estimated to the year 2031. To stay consistent with the previous study, the 2031 background traffic volumes from the River District study will be utilized as the base year study for the entertainment redevelopment.

The 2031 background weekday am peak hour, weekday pm peak hour, Friday evening casino peak hour, and Saturday evening casino peak hour traffic volumes are illustrated in Figures 8, 9, 10, and 11, respectively.

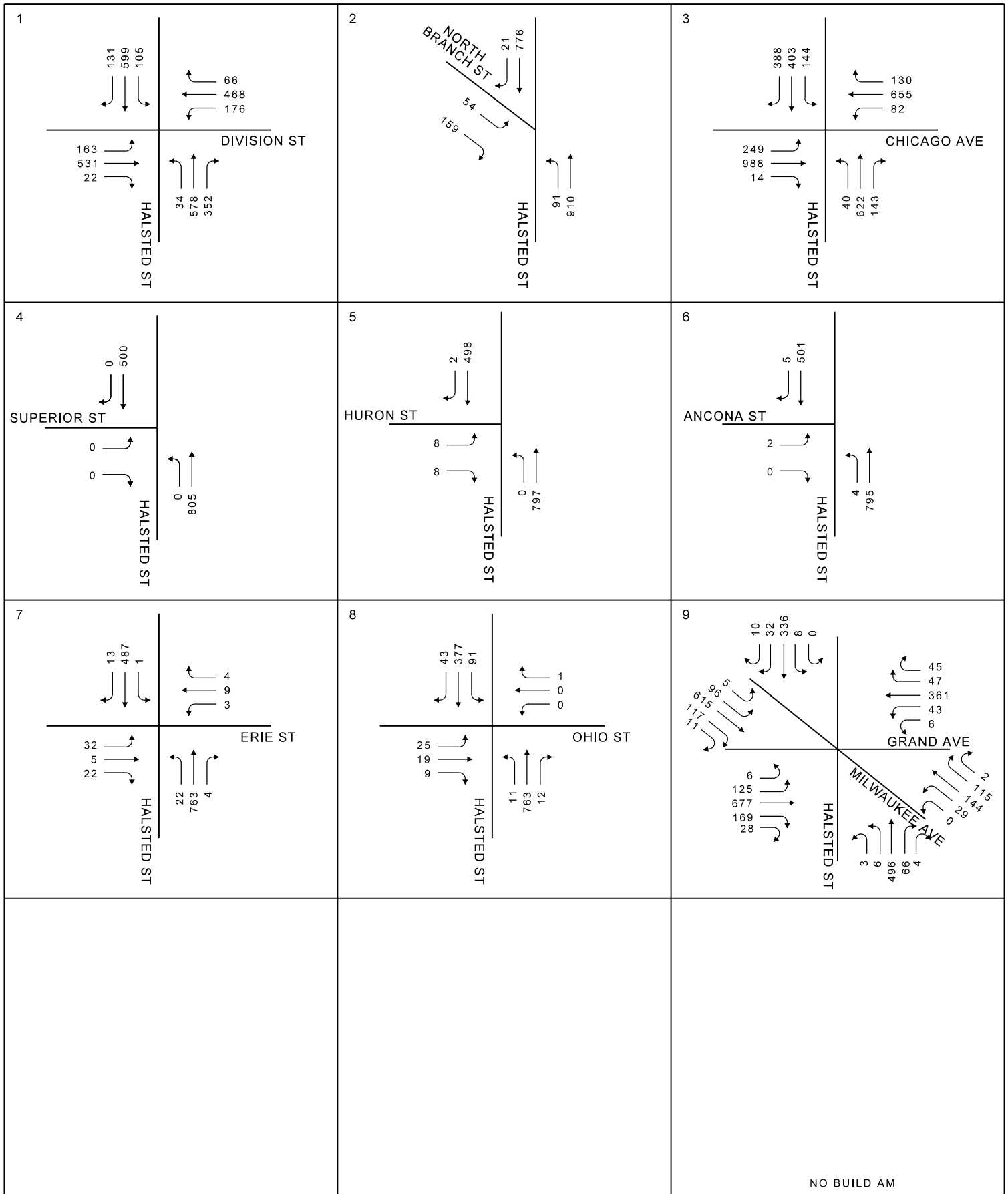
Future Non-Automotive Improvements

The City of Chicago Department of Planning and Development has been planning for proposed redevelopment within the North Branch Industrial corridor and documents proposed improvements in the North Branch Framework. A new transitway is proposed adjacent to the entertainment district



redevelopment and would connect the north neighborhoods directly with Union Station and Ogilvie Transportation Center and the various local and regional transit options Downtown. The transitway would also feature a trail to provide high-quality pedestrian and bicycle opportunities. The alignment of the transitway is still being studied and has a proposed timeline of five to 20 years. While this new transitway likely would significantly reduce vehicular traffic to and from the proposed redevelopment, any traffic reductions were not included as part of this study.

As part of the entertainment district redevelopment, a Riverwalk is proposed along the east side of the development along the Chicago River that will provide enhance pedestrian and bicycle facilities. This will connect to existing and planned riverfront paths adjacent to the site.



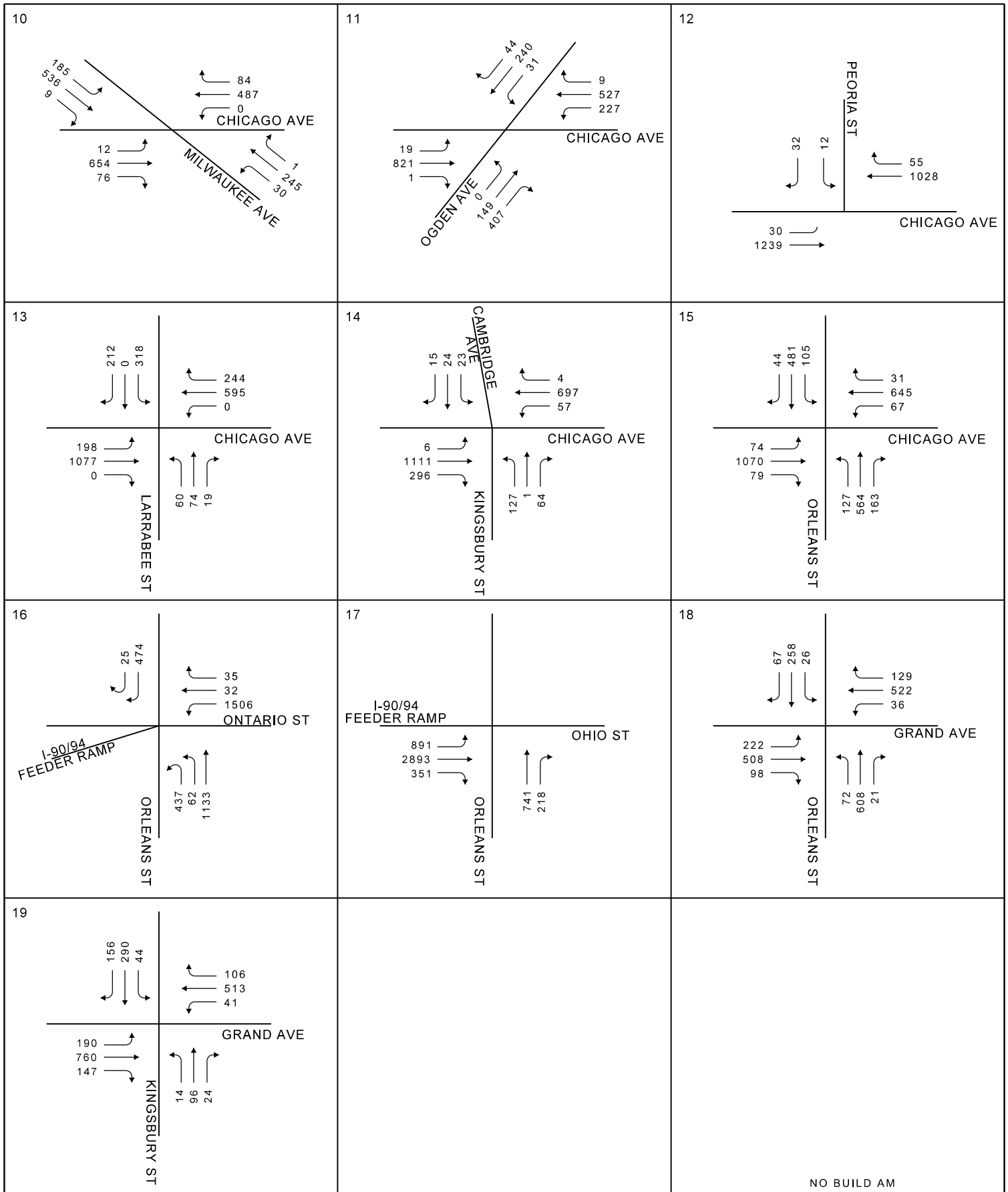
**TRIBUNE
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**FIGURE 8
BACKGROUND TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO

ILLINOIS





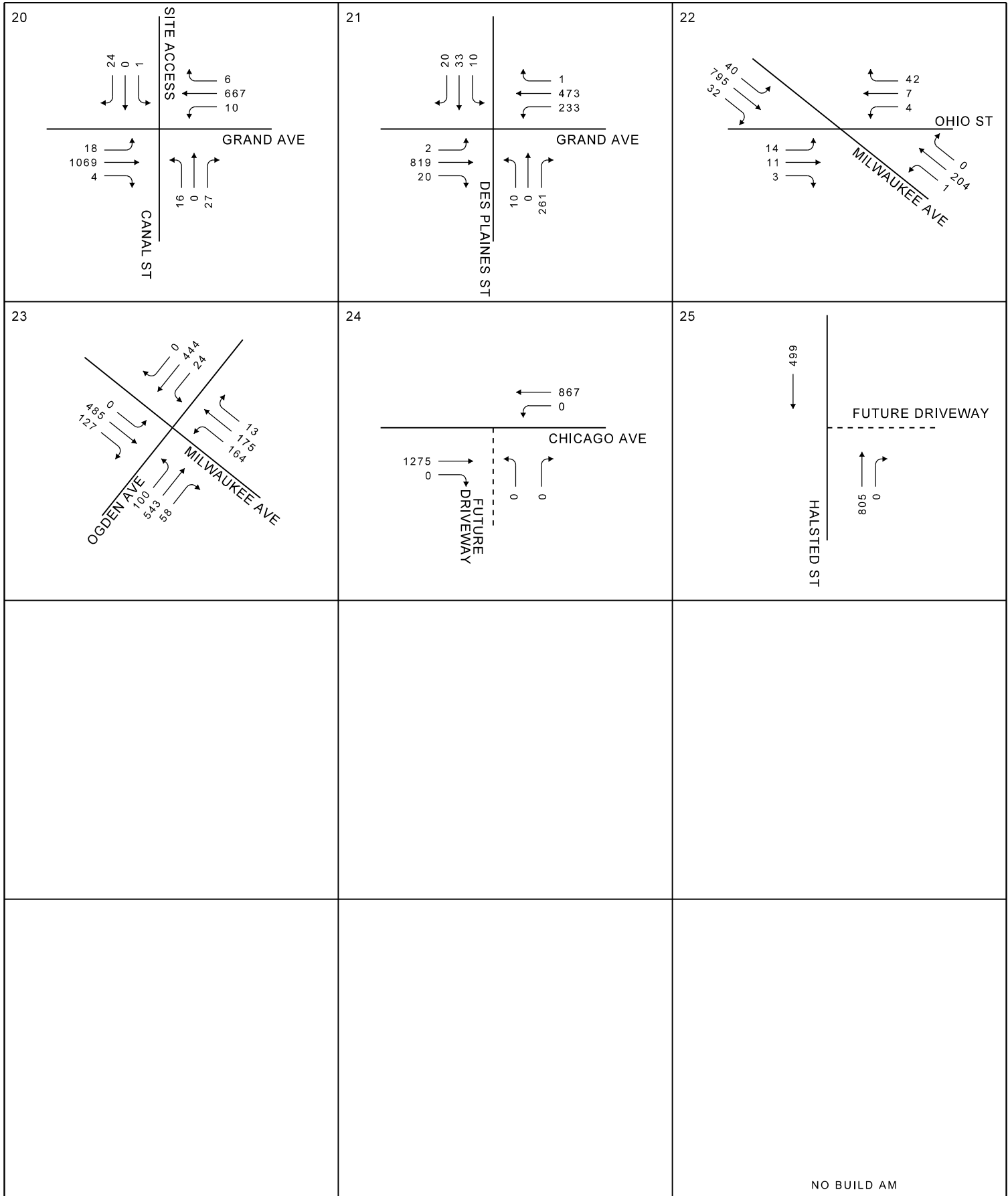
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 8
BACKGROUND TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO

ILLINOIS



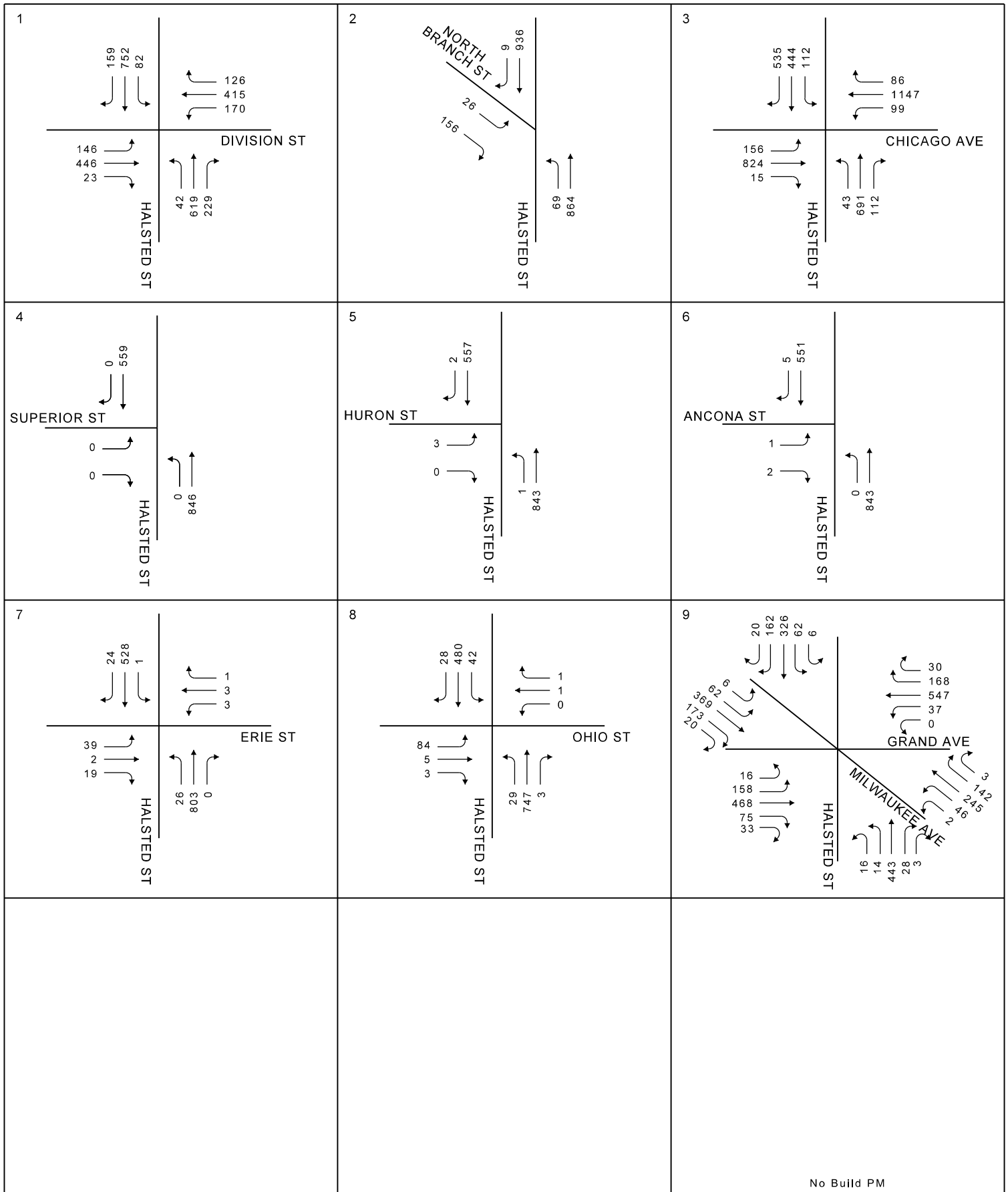


**TRIBUNE
PERMANENT FACILITY**

**FIGURE 8
BACKGROUND TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO ILLINOIS





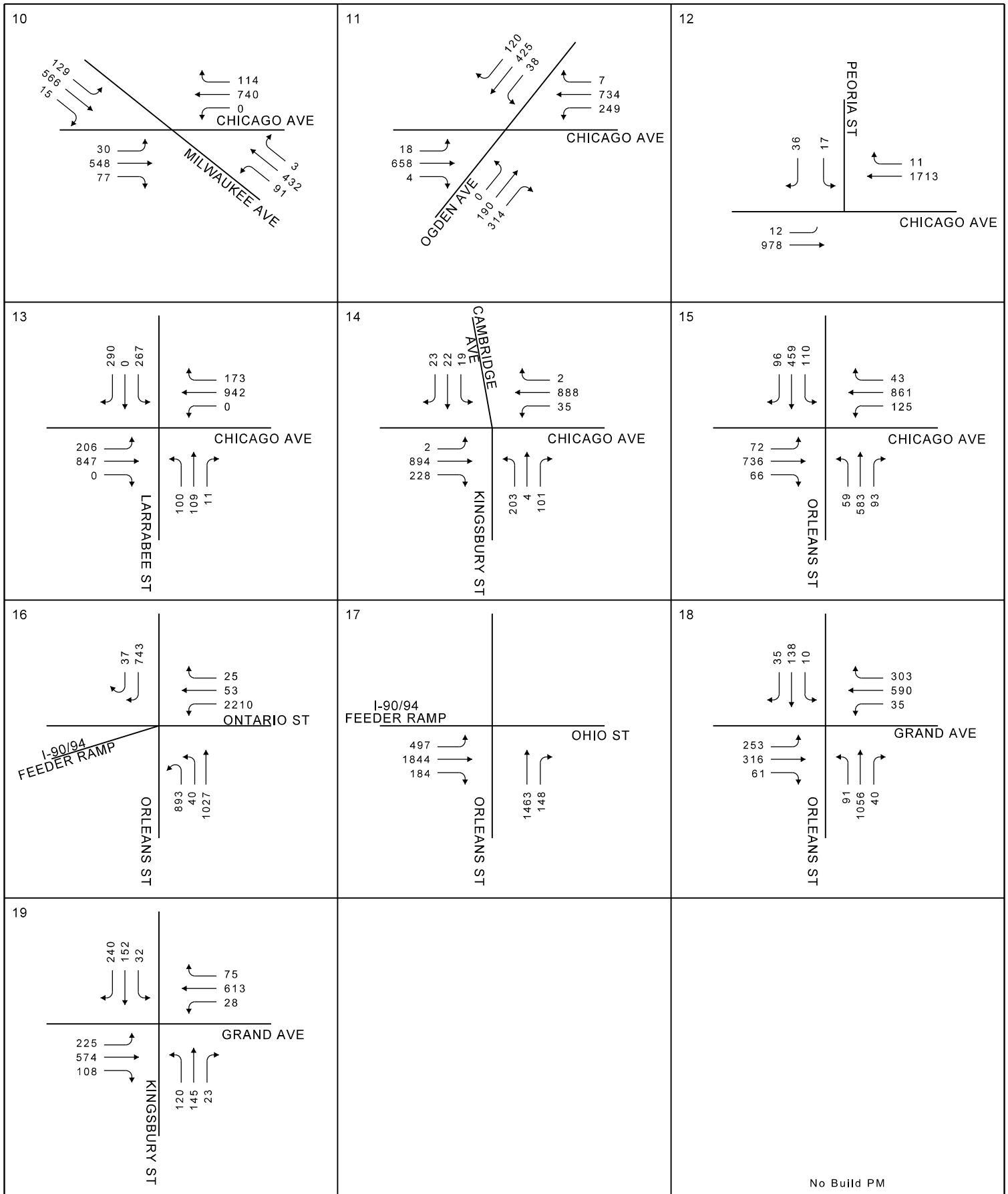
**TRIBUNE
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**FIGURE 9
BACKGROUND TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

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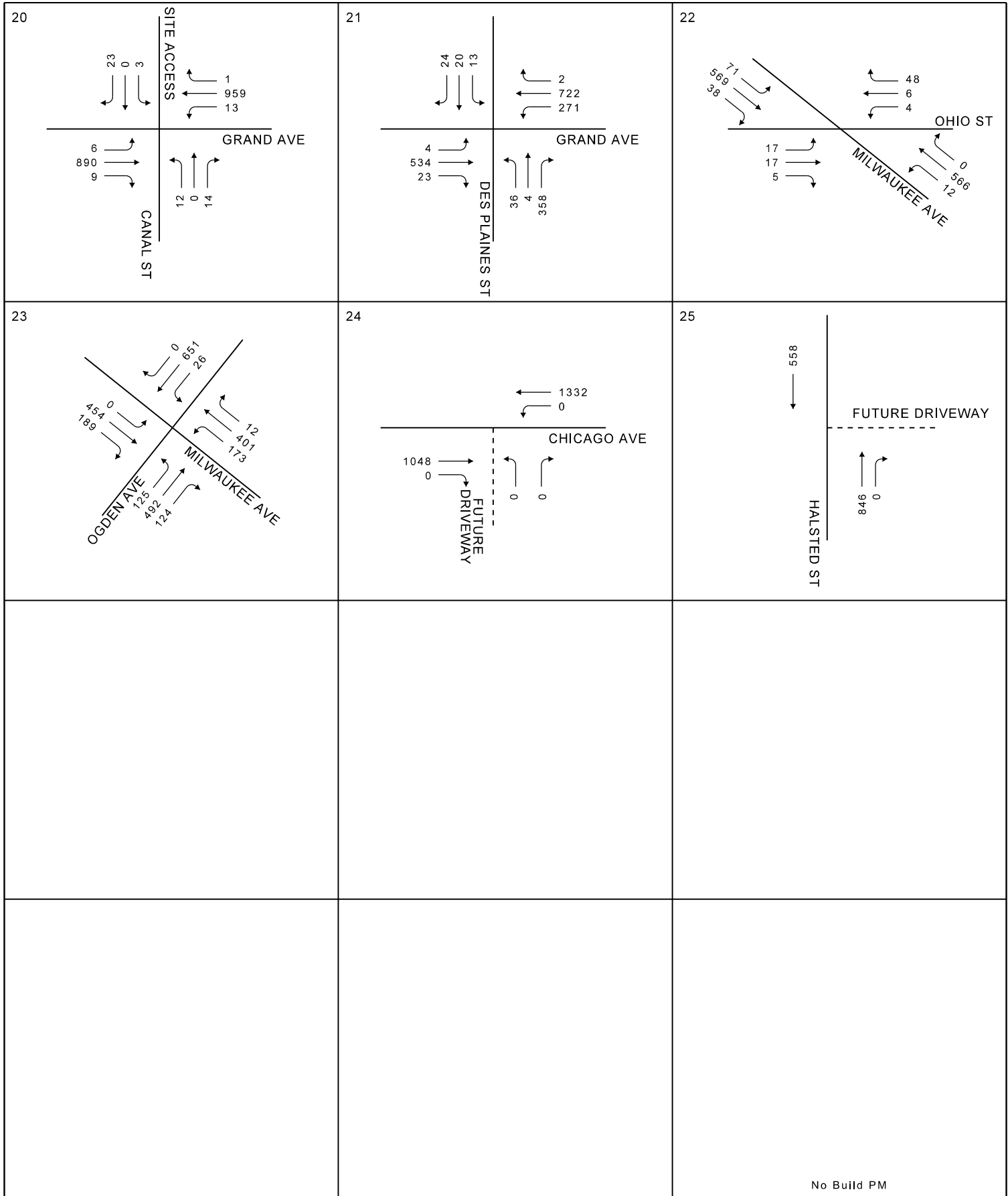
**TRIBUNE
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**FIGURE 9
BACKGROUND TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

CHICAGO

ILLINOIS





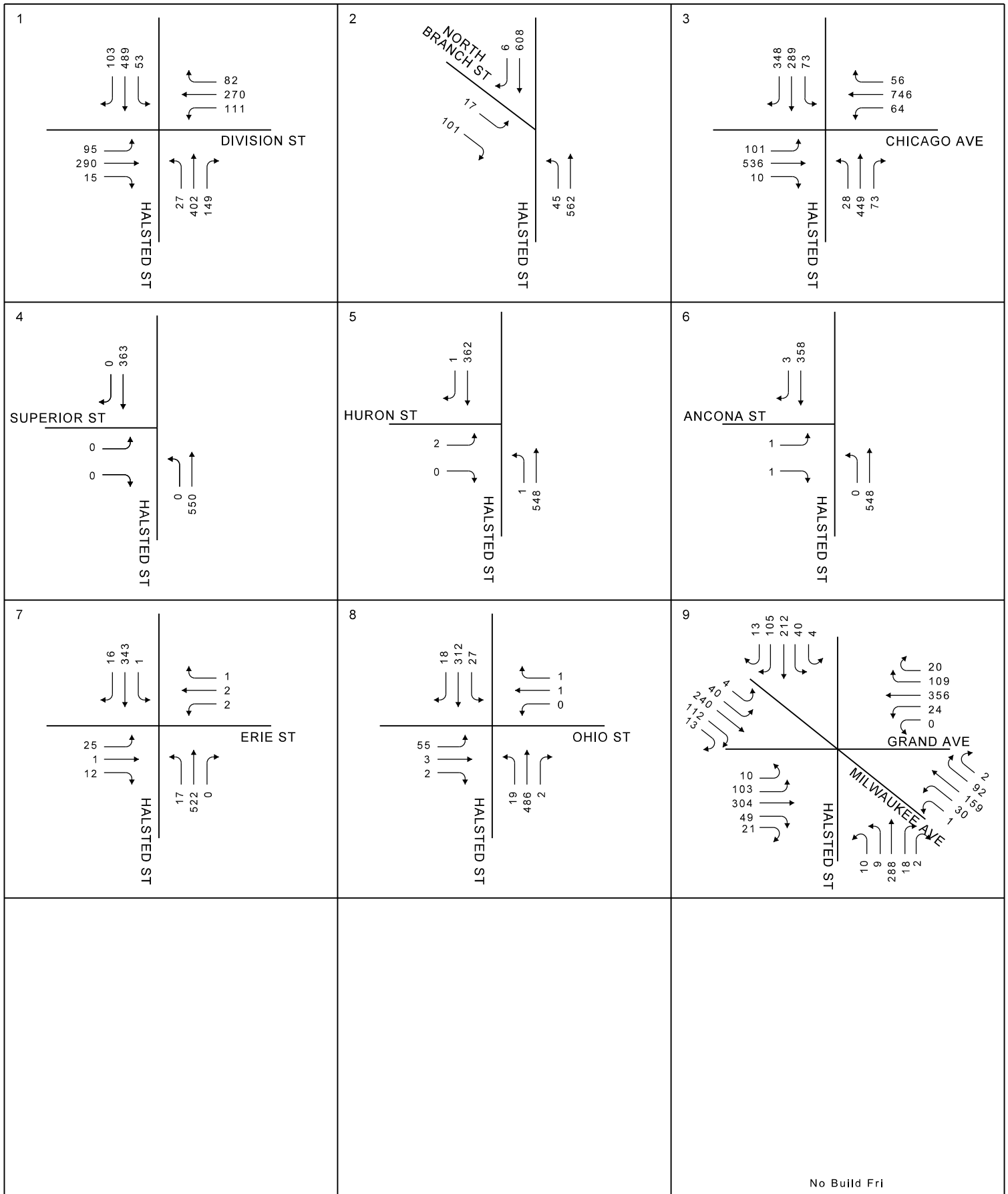
No Build PM

**TRIBUNE
PERMANENT FACILITY**

**FIGURE 9
BACKGROUND TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

CHICAGO ILLINOIS





No Build Fri

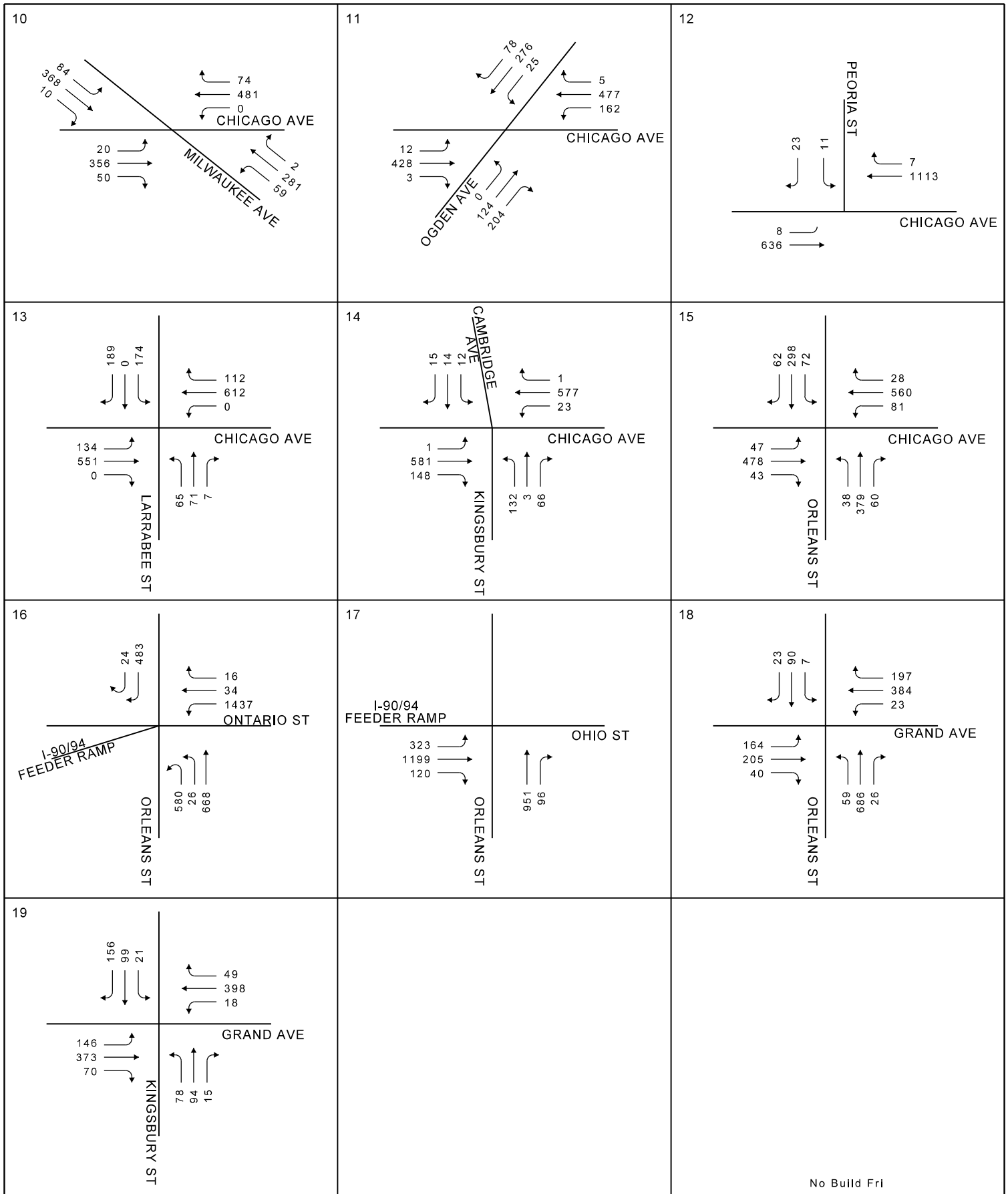
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 10
BACKGROUND TRAFFIC VOLUME
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





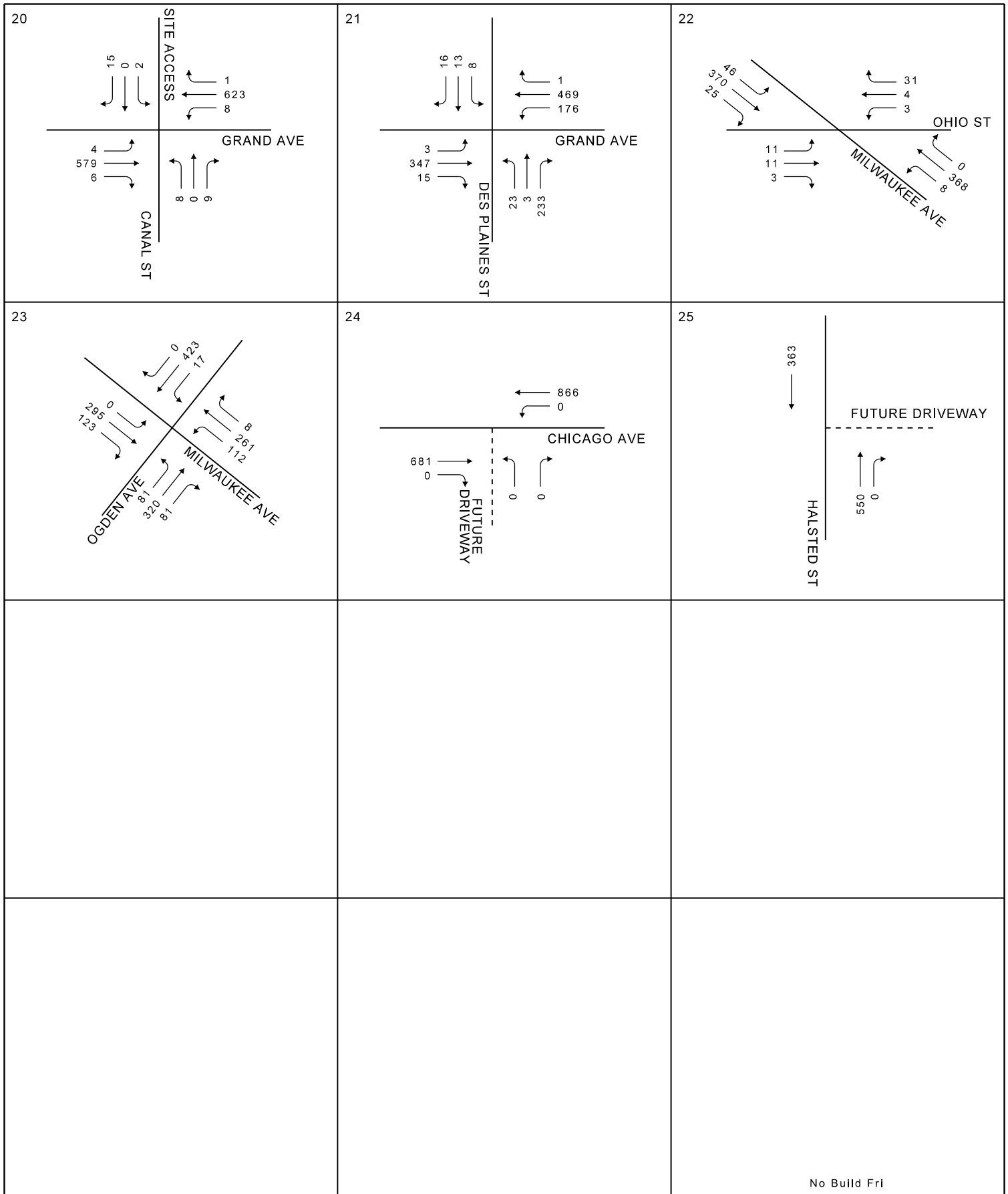
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 10
BACKGROUND TRAFFIC VOLUME
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





No Build Fri

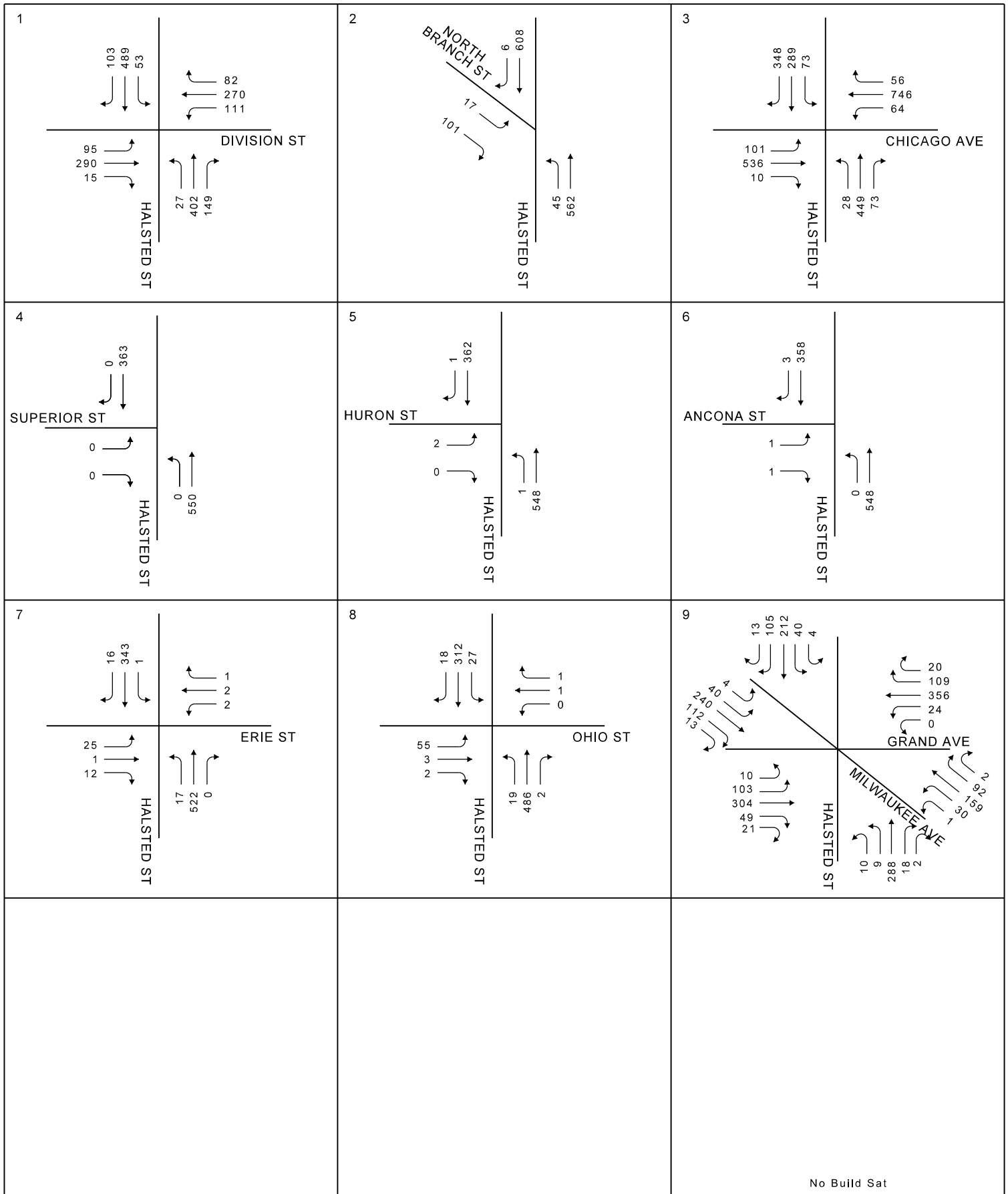
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 10
BACKGROUND TRAFFIC VOLUME
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS

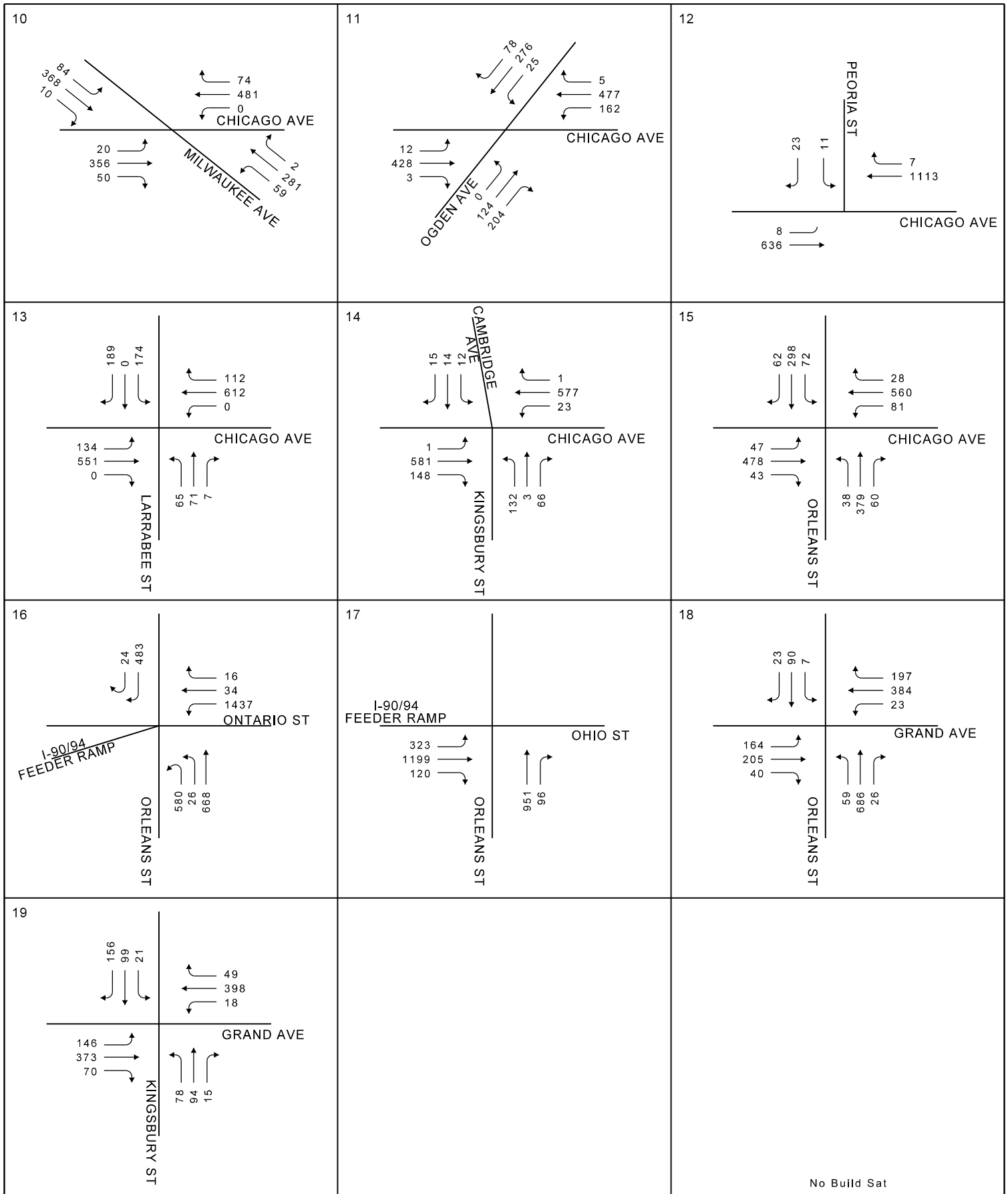




**TRIBUNE
PERMANENT FACILITY**

**FIGURE 11
BACKGROUND TRAFFIC VOLUME
SATURDAY CASINO PEAK HOUR**
CHICAGO ILLINOIS





No Build Sat

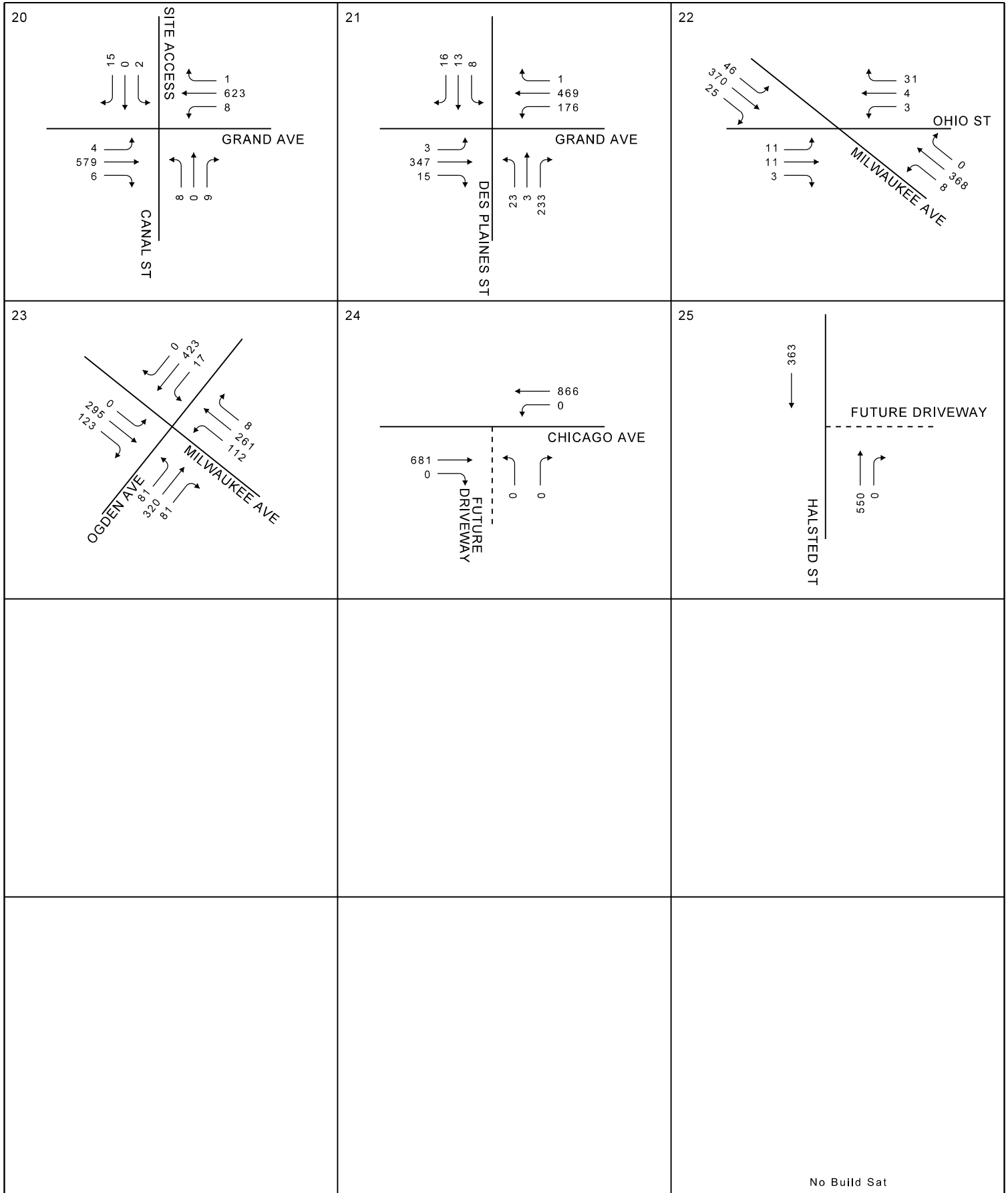
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 11
BACKGROUND TRAFFIC VOLUME
SATURDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





No Build Sat

**TRIBUNE
PERMANENT FACILITY**

**FIGURE 11
BACKGROUND TRAFFIC VOLUME
SATURDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





IV. SITE TRAFFIC FORECASTS

Trip Generation

The number of trips generated for each portion of the site was estimated and reviewed for potential reductions for non-vehicular travel such as transit, walking, and internal capture between various uses. Additionally, the number of taxi/rideshare trips was separately estimated as these trips generate entering and exiting trips for each pick up or drop off movement.

After estimating trips for each of the land uses, several adjustment factors have been considered. Internal capture between uses will likely be high for the casino to non-casino trips as visitors to the casino will likely use the other ancillary uses, such as a hotel guest visiting the casino. Trips by visitors using non-motorized options such as transit, walking, and biking will be considered for each land use. While several of the proposed land uses may include an adjustment factor for pass-by trips, this factor will not be considered for this study.

Casino

Trip generation for a proposed development is typically estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. ITE Land Use Code 473, Casino/Video Lottery Establishment is the closest land use with trip rates provided. However, the land use description explicitly states that the data provided does not include full-service casinos, those with food service, are not included. Therefore, it was determined that the ITE data provided is too limited and would not provide adequate estimates to the number of trips generated by the casino.

Therefore, a review of recent traffic studies was conducted for casinos within a similar urban context with nearby transit options to obtain trip rates during the casino peak periods. While several studies based the number of trips on the square footage of the casino, a majority of the studies developed trip rates based on the number of gaming positions. Gaming positions will be used as the independent variable to estimate the number of trips generated by the casino for this study.

Based upon the review of the trip generation rates from the various other studies, it was determined that there are three primary peak periods:

- Friday evening commuter peak, 4 pm to 6 pm
- Friday evening casino peak, 8 pm to 11 pm
- Saturday evening casino peak 8 pm to 11 pm

Based upon the review of the various trip rates and discussions with the potential operator, it is estimated that the casino will generate trip rates of 0.42 trips per gaming position during the Friday evening commuter peak (4 pm to 6 pm), 0.47 trips per gaming position during the Friday evening casino peak (8 pm to 11 pm), and 0.59 trips per gaming position during the Saturday evening casino peak (8 pm to 11 pm). Using these trip rates and the 4,438 gaming positions proposed as part of this entertainment redevelopment, the trip generation for the casino can be estimated.



It should be noted that the trip rate data collected was for a variety of casino sites, most of which had a number of ancillary uses such as hotel, retail, restaurants, drinking places, conference center/meeting space, and theatres. For the purposes of this study, it was assumed that the trip rates presented above are only for the casino area and that the ancillary components of the proposed redevelopment will generate additional trips to and from the site.

A 10 percent reduction was applied for non-vehicular traffic, including transit, walking, and biking for casino patrons and employees. After applying the reductions, it is estimated that the casino will generate 247 trips, 1,677 trips, 1,877 trips, and 2,356 trips during the weekday am peak hour, the weekday pm commuter peak hour, the Friday evening casino peak hour, and the Saturday evening casino peak hour, respectively, as illustrated in the attached trip generation tables. Table 1 provides a summary of the trip generation for the casino.

Table 1: Trip Generation – Casino

LAND USE	SIZE	Weekday AM			Weekday PM			Friday Casino Peak			Saturday Casino Peak		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Casino	4,438 Gaming Position	185	62	247	889	788	1,677	864	1,013	1,877	1,131	1,224	2,356
<i>Total Trips</i>		206	69	275	988	876	1,864	960	1,126	2,086	1,257	1,361	2,618
<i>Non-Auto Trip Reduction</i>		-21	-7	-28	-99	-88	-187	-96	-113	-209	-126	-137	-262
<i>Total Vehicle Trips</i>		185	62	247	889	788	1,677	864	1,013	1,877	1,131	1,224	2,356
<i>Self-Drive/Park</i>		93	31	124	445	394	839	432	507	939	566	612	1,178
<i>Taxi/Ride-Share</i>		92	31	123	444	394	838	432	506	938	565	612	1,178

Theater

Similarly, a site-specific trip generation analysis was conducted for the entertainment area with the 3,000-seat theater, which can also be used for conferences. An event with total attendance of 1,500 attendees arriving during the peak hour was assumed for the weekday am and weekday pm peak hours while a 3,000-person event was assumed for the Friday and Saturday casino peak hours. It is anticipated that the theater attendees will also utilize the casino and restaurants on the site during the same visit. Therefore, a 50 percent reduction was applied to the theater trips during each peak hour. It was also assumed that 10 percent of the theater attendees will arrive early and depart later to patronize the casino and restaurants outside of that particular peak hour. Additionally, a 10 percent reduction for non-vehicular trips was also applied.

After the reductions, the number of attendees that arrive and depart by vehicle can be calculated. A vehicle occupancy of 2.5 is applied to estimate the number of vehicular trips generated by the theater. It is assumed that 50 percent of the vehicle trips will be personal vehicles while the remaining 50 percent will be taxi and rideshare trips. A taxi and rideshare trip actually generates two trips, one entering the site to drop off or pick up and one exiting the site; therefore, a redundancy rate was also added to account for the exiting trip. The redundancy rate was half the original trip assuming that the taxi or rideshare driver will also wait for or pick up another passenger leaving the site. Table 2 provides a summary of the trip generation methodology for the theater.



Table 2: Trip Generation – Theater

LAND USE	SIZE	Weekday AM			Weekday PM			Friday Casino Peak			Saturday Casino Peak		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Theater	3,000 Seat	180	45	225	180	45	225	360	90	450	360	90	450
<i>Total Attendance</i>				1,500			1,500			3,000			3,000
<i>Internal Capture Reduction</i>				-750			-750			-1,500			-1,500
<i>Early/Late Reduction</i>				-150			-150			-300			-300
<i>Non-Auto Trip Reduction</i>				-150			-150			-300			-300
<i>Person Trips by Vehicle</i>				450			450			900			900
<i>Total Vehicle Trips</i>				180			180			360			360
<i>Self-Drive/Park</i>		90		90	90		90	180		180	180		180
<i>Taxi/Ride-Share</i>		90		90	90		90	180		180	180		180
<i>Taxi/Ride-Share Redundancy</i>			45	45		45	45		90	90		90	90
<i>Total Ride Share</i>		90	45	135	90	45	135	180	90	270	180	90	270

Hotel

The following land use category is used to determine trip generation from the ITE Trip Generation Manual:

Hotel (ITE Land Use Code 310) – Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. Some of the sites included in this land use category are actually large motels providing the hotel facilities noted above.

The *Trip Generation Manual, 10th Edition* assigns trip generation rates for each land use based on a peak period and an independent variable. In this case, rooms is the applicable variable for the hotel. The weekday am and weekday pm peak hour trip generation is calculated by either the average rate or fitted curve equation, when available and applicable. Using the hourly breakdown of trip rates in the Trip Generation Manual, the Friday casino peak hour is estimated at 51 percent of the weekday pm peak hour trip generation. The Saturday peak hour of generator was assumed to occur during the Saturday evening casino peak hour.

It is anticipated that a majority of the trips generated by the hotel will be patrons that will also utilize the casino, theatre, and restaurants on the site. Therefore, a 75 percent reduction was applied to the hotel trips during each peak hour. Additionally, a 10 percent reduction for transit trips was also applied. Of the remaining vehicle trips, it is assumed that 60 percent of the vehicle trips will be personal vehicles while the remaining 40 percent will be taxi and rideshare trips. A taxi and rideshare trip actually generates two trips, one entering the site to drop off or pick up and one exiting the site; therefore, a redundancy rate was also added to account for the exiting trip. The redundancy rate was half the original trip assuming that the taxi or rideshare driver will also wait for or pick up another passenger leaving the site. Table 3 provides a summary of the trip generation methodology for the hotel.



Table 3: Trip Generation – Hotel

LAND USE	SIZE	Weekday AM			Weekday PM			Friday Casino Peak			Saturday Casino Peak		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Hotel	500 Room	26	20	46	39	34	73	20	17	37	35	30	65
<i>Total Trips</i>		152	101	253	219	187	406	111	95	206	202	158	360
<i>Internal Capture Reduction</i>		-114	-76	-190	-164	-141	-305	-83	-72	-155	-152	-118	-270
<i>Non-Auto Trip Reduction</i>		-15	-10	-25	-22	-19	-41	-11	-10	-21	-20	-16	-36
<i>Total Vehicle Trips</i>		23	15	38	33	27	60	17	13	30	30	24	54
<i>Self-Drive/Park</i>		14	9	23	20	16	36	10	8	18	18	14	32
<i>Taxi/Ride-Share</i>		9	6	15	13	11	24	7	5	12	12	10	22
<i>Taxi/Ride-Share Redundancy</i>		3	5	8	6	7	13	3	4	7	5	6	11
<i>Total Ride Share</i>		12	11	23	19	18	37	10	9	19	17	16	33

Restaurant

The following land use category is used to determine trip generation from the ITE Trip Generation Manual:

Quality Restaurant (ITE Land Use Code 931) – This land use consists of high quality, full-service eating establishments with a typical duration of stay of at least one hour. Quality restaurants generally do not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires reservations and is generally not part of a chain. Patrons commonly wait to be seated, are served by a waiter/ waitress, order from menus and pay for meals after they eat. While some of the study sites have lounge or bar facilities (serving alcoholic beverages), they are ancillary to the restaurant.

The Trip Generation Manual, 10th Edition assigns trip generation rates for each land use based on a peak period and an independent variable. In this case, square footage is the applicable variable for the restaurant. The weekday am and weekday pm peak hour trip generation is calculated by either the average rate or fitted curve equation, when available and applicable. The weekday pm peak hour of generator was assumed to occur during the Friday evening casino peak hour. The Saturday peak hour of generator was assumed to occur during the Saturday evening casino peak hour. Of the overall 66,498 square feet of restaurant and bars, it is estimated that 24,998 square feet of this space will be ancillary to the casino and hotel guests. For instance, a coffee shop and a VIP lounge are proposed as restaurants but it is not anticipated that these will generate trips from outside of the proposed redevelopment. Therefore, the trip generation analysis will evaluate 41,500 square feet of restaurant space.

Similar to the hotel, it is anticipated that a majority of the trips generated by the restaurants will be patrons that will also utilize the casino and theater on the site. Therefore, a 75 percent reduction was applied to the restaurant trips during each peak hour. Additionally, a 10 percent reduction for transit trips was also applied. Of the remaining vehicle trips, it is assumed that 60 percent of the vehicle trips will be personal vehicles while the remaining 40 percent will be taxi and rideshare trips. A taxi and rideshare trip actually generates two trips, one entering the site to drop off or pick up and one exiting the site; therefore, a redundancy rate was also added to account for the exiting trip. The redundancy rate was half the original trip assuming that the taxi or rideshare driver will also wait for or pick up another passenger leaving the site. Table 4 provides a summary of the trip generation methodology for the restaurants.



Table 4: Trip Generation – Restaurant

LAND USE	SIZE	Weekday AM			Weekday PM			Friday Casino Peak			Saturday Casino Peak		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Quality Restaurant	41,500 Square Feet	0	0	0	36	24	60	36	27	63	45	36	81
<i>Total Trips</i>		0	0	0	217	107	324	210	134	344	261	182	443
<i>Internal Capture Reduction</i>		0	0	0	-163	-80	-243	-158	-100	-258	-196	-136	-332
<i>Non-Auto Trip Reduction</i>		0	0	0	-22	-10	-32	-21	-13	-34	-26	-18	-44
<i>Total Vehicle Trips</i>		0	0	0	32	17	49	31	21	52	39	28	67
<i>Self-Drive/Park</i>		0	0	0	19	10	29	19	12	31	23	17	40
<i>Taxi/Ride-Share</i>		0	0	0	13	7	20	12	9	21	16	11	27
<i>Taxi/Ride-Share Redundancy</i>		0	0	0	4	7	11	5	6	11	6	8	14
<i>Total Ride Share</i>		0	0	0	17	14	31	17	15	32	22	19	41

Table 5 provides a summary of the vehicle trip generation for each use and for the overall redevelopment. As illustrated, it is estimated that the redevelopment will generate 518 trips, 2,035 trips, 2,427 trips, and 2,952 trips during the weekday am, weekday pm, Friday evening casino, and Saturday evening casino peak hours, respectively.

Table 5: Trip Generation – Proposed Redevelopment

LUC	LAND USE	SIZE	Weekday AM			Weekday PM			Friday Casino Peak			Saturday Casino Peak		
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
-	Casino	4,438 Gaming Position	185	62	247	889	788	1,677	864	1,013	1,877	1,131	1,224	2,356
	Personal Auto		93	31	124	445	394	839	432	507	939	566	612	1,178
	Taxi/Ride Share		92	31	123	444	394	838	432	506	938	565	612	1,178
-	Theater	3,000 Seat	180	45	225	180	45	225	360	90	450	360	90	450
	Personal Auto		90	0	90	90	0	90	180	0	180	180	0	180
	Taxi/Ride Share		90	45	135	90	45	135	180	90	270	180	90	270
310	Hotel	500 Room	26	20	46	39	34	73	20	17	37	35	30	65
	Personal Auto		14	9	23	20	16	36	10	8	18	18	14	32
	Taxi/Ride Share		12	11	23	19	18	37	10	9	19	17	16	33
931	Quality Restaurant	41,500 Square Feet	0	0	0	36	24	60	36	27	63	45	36	81
	Personal Auto		0	0	0	19	10	29	19	12	31	23	17	40
	Taxi/Ride Share		0	0	0	17	14	31	17	15	32	22	19	41
Total Vehicle Trips:			391	127	518	1,144	891	2,035	1,280	1,147	2,427	1,571	1,380	2,952
Personal Auto Trips:			197	40	237	574	420	994	641	527	1,168	787	643	1,430
Taxi/Ride Share Trips:			194	87	281	570	471	1,041	639	620	1,259	784	737	1,522

Trip Distribution and Assignment

The direction from which traffic approaches and departs a site is a function of numerous variables, including location of residences, location of employment centers, location of commercial/retail centers, available roadway systems, location and number of access points, and level of congestion on adjacent road systems.



The proposed development is anticipated to draw a mix of both regional and local traffic due to the types of proposed uses on the site. Generated trips are anticipated to generally favor the southeast and northwest directions, as these directions are the most direct routes to I-90/94 and I-290. Notably, this includes the I-90/94 Feeder Ramps at Orleans Street. Although the ramps are located east of the proposed development, the ramps represent trips to and from I-90/94 west of the site. Somewhat smaller proportions of the generated trips are anticipated to occur to and from the north and east. Although these areas are densely populated, the lack of nearby connections to the regional highway system is expected to result in less demand.

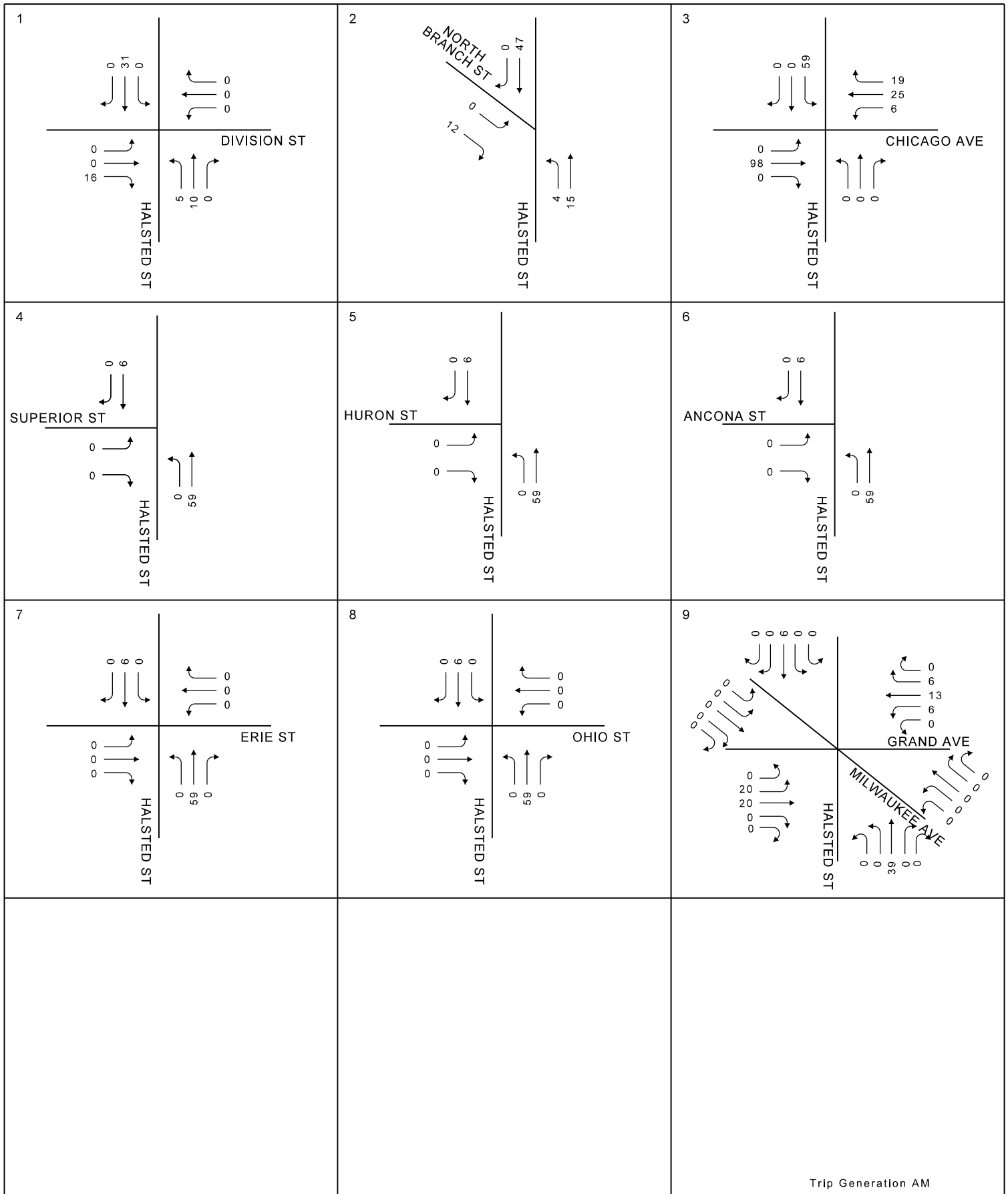
The overall trip distribution, including the street network distribution and the regional distribution is summarized in Table 6.

Table 6: Directional Distribution

Regional Distribution	Street Network Distribution	
15% To/From the North	8%	Halsted St - North of Division St.
	4%	Division St - West of Halsted St
	3%	North Branch - West of Halsted
15% To/From the East	4%	Orleans St - North of Chicago Ave
	3%	Chicago Ave - East of Orleans St
	4%	Grand Ave - East of Orleans St
	4%	Orleans St - South of Grand Ave
25% To/From the Southeast	5%	Desplaines St - South of Grand Ave
	10%	Halsted St - South of Grand Ave
	10%	Grand Ave - West of Halsted St
25% To/From the Northwest	10%	Ogden Ave - Southwest of Milwaukee
	5%	Chicago Ave - West of Milwaukee Ave
	10%	Milwaukee Ave - Northwest of Chicago Ave
20% To/From I-90/94 Feeder Ramps	20%	I-90/94 Feeder Ramps at Orleans St

Although inbound and outbound trips are anticipated to be largely symmetrical, the proposed partial access driveway on Halsted Street that provides direct access into the parking garage and the pattern of one-way and limited access intersections through the study result in some variations in the assignment of inbound and outbound trips at the movement level. Inbound trips to the proposed development can access the site via full-access intersections at Chicago Avenue and Grand Avenue, as well as a right-in only lane on Halsted Street. Outbound trips are performed through the full-access driveways on Chicago Avenue and Grand Avenue. No direct exiting access to Halsted Street is provided.

The directional distribution and assignment of project site traffic for the weekday am peak hour, weekday pm peak hour, Friday evening casino peak hour, and Saturday evening casino peak hour traffic volumes are illustrated in Figures 12, 13, 14, and 15, respectively.



Trip Generation AM

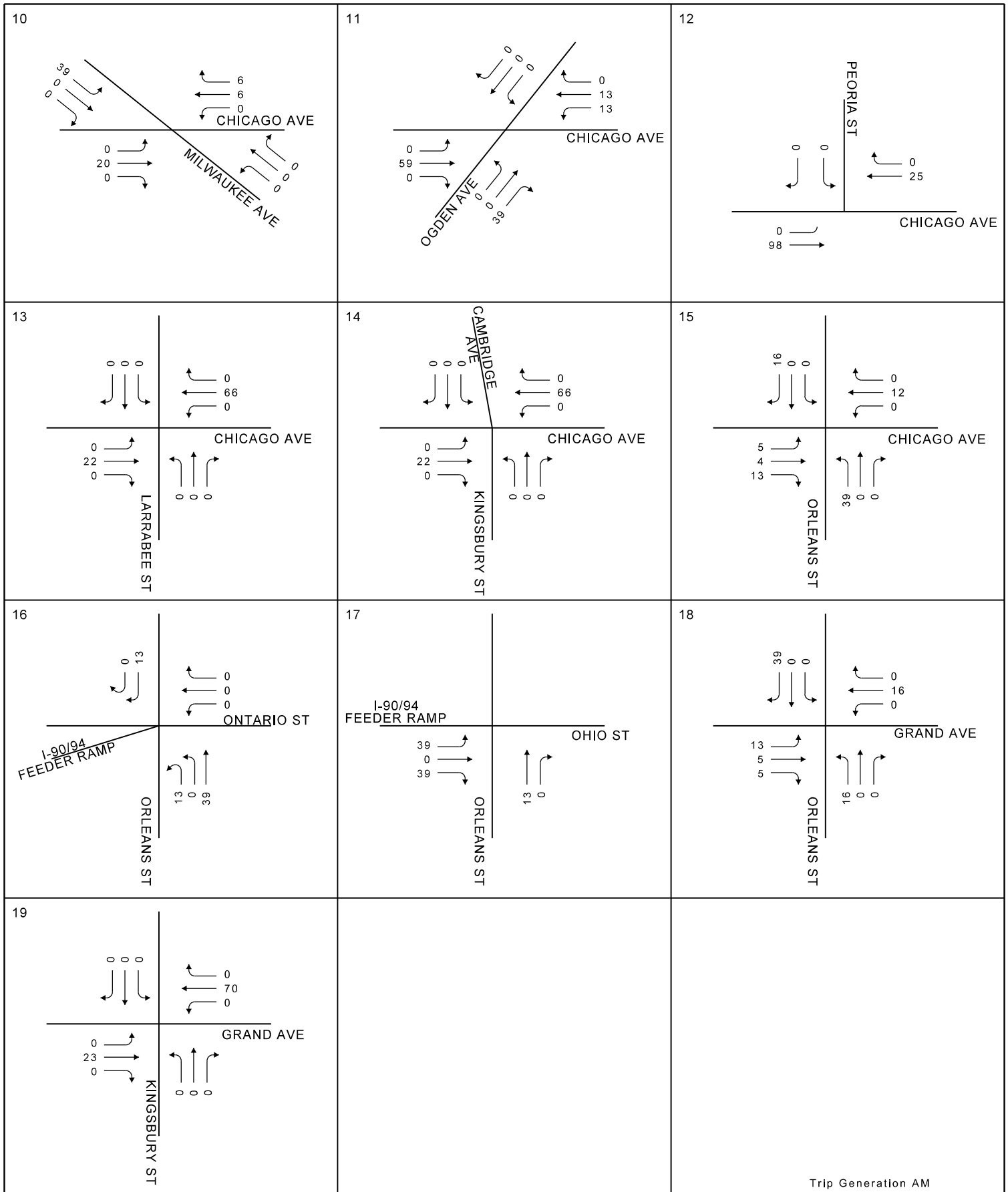
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 12
PROJECT SITE TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation AM

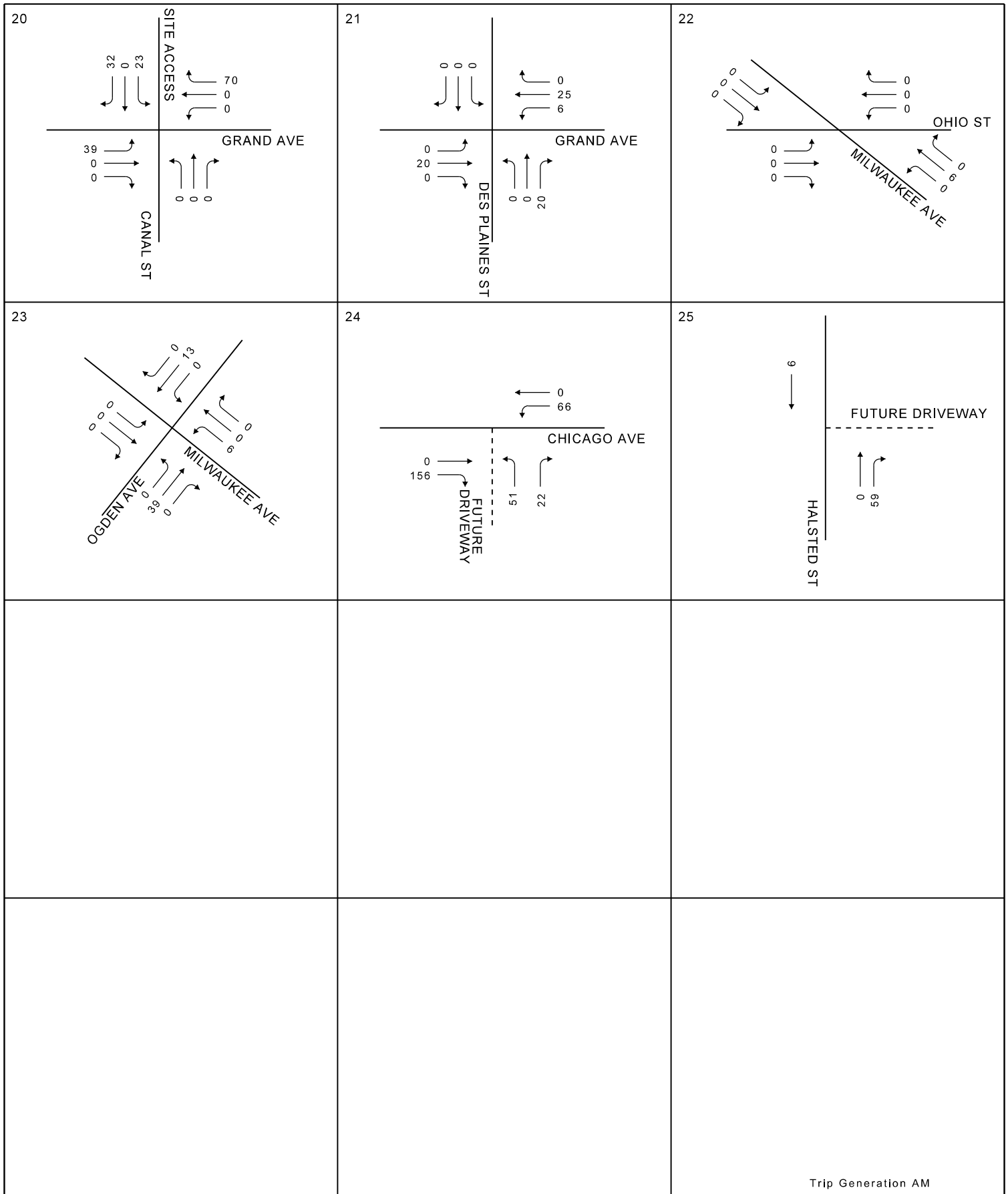
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 12
PROJECT SITE TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation AM

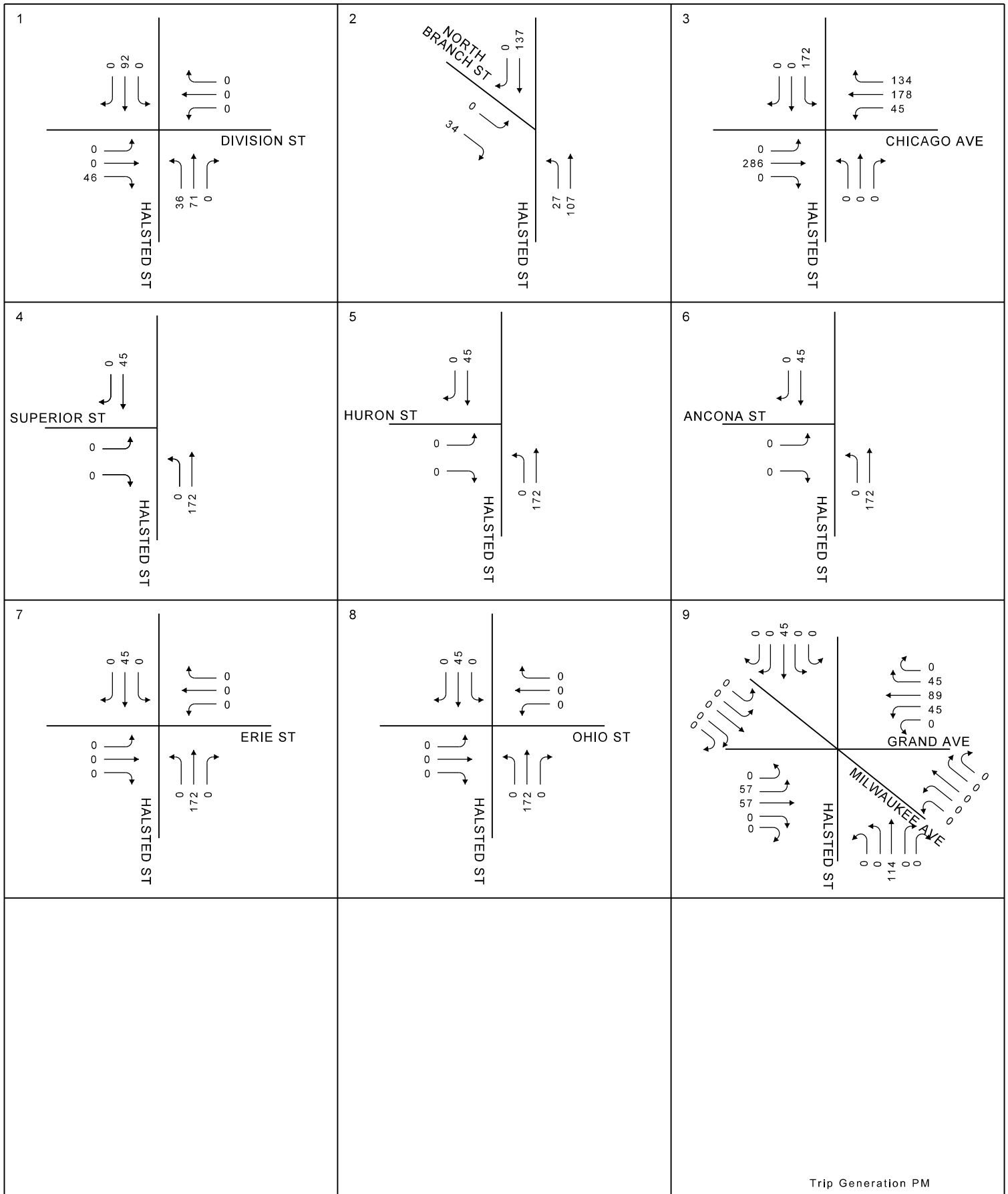
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 12
PROJECT SITE TRAFFIC VOLUME
WEEKDAY AM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation PM

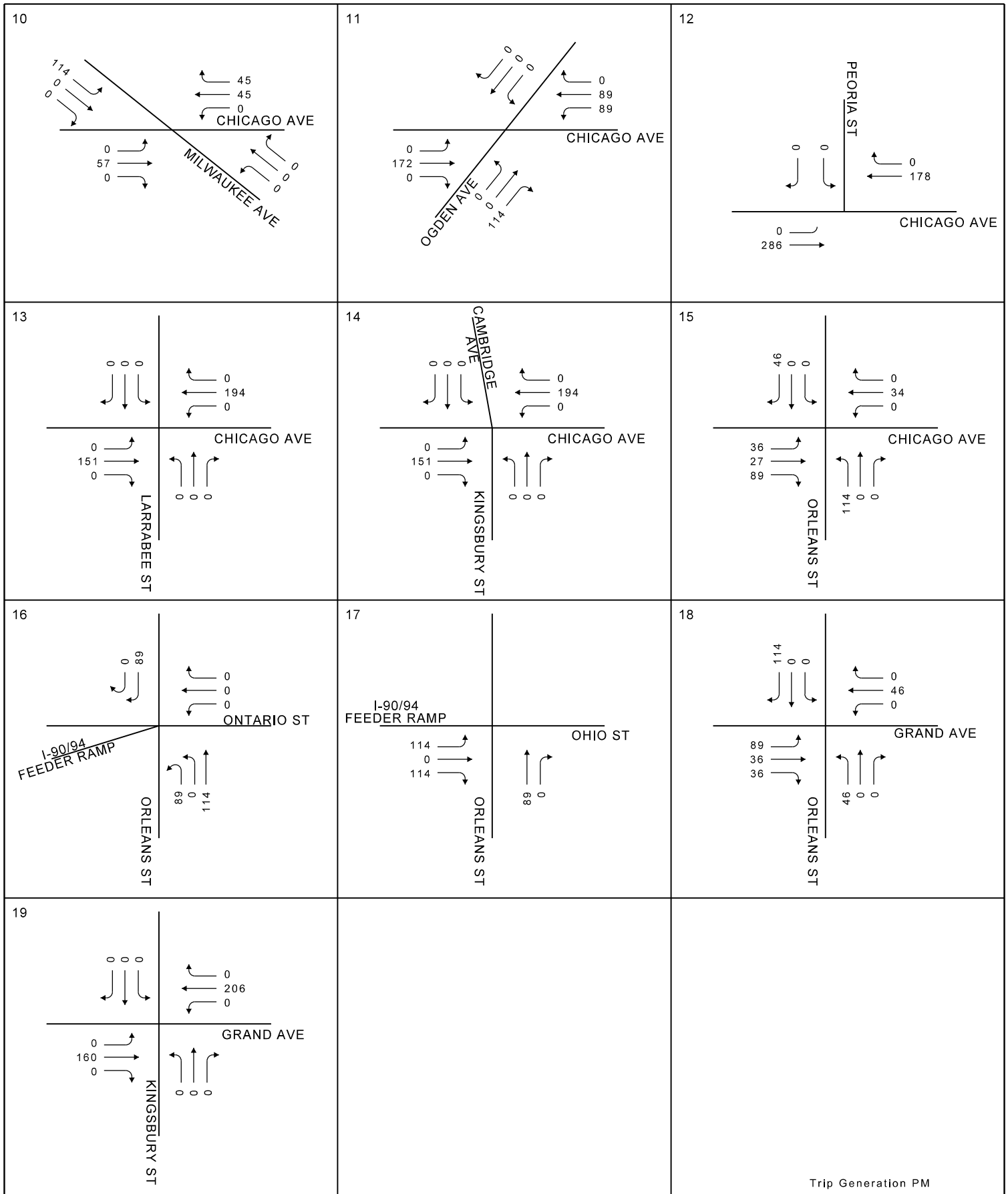
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 13
PROJECT SITE TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation PM

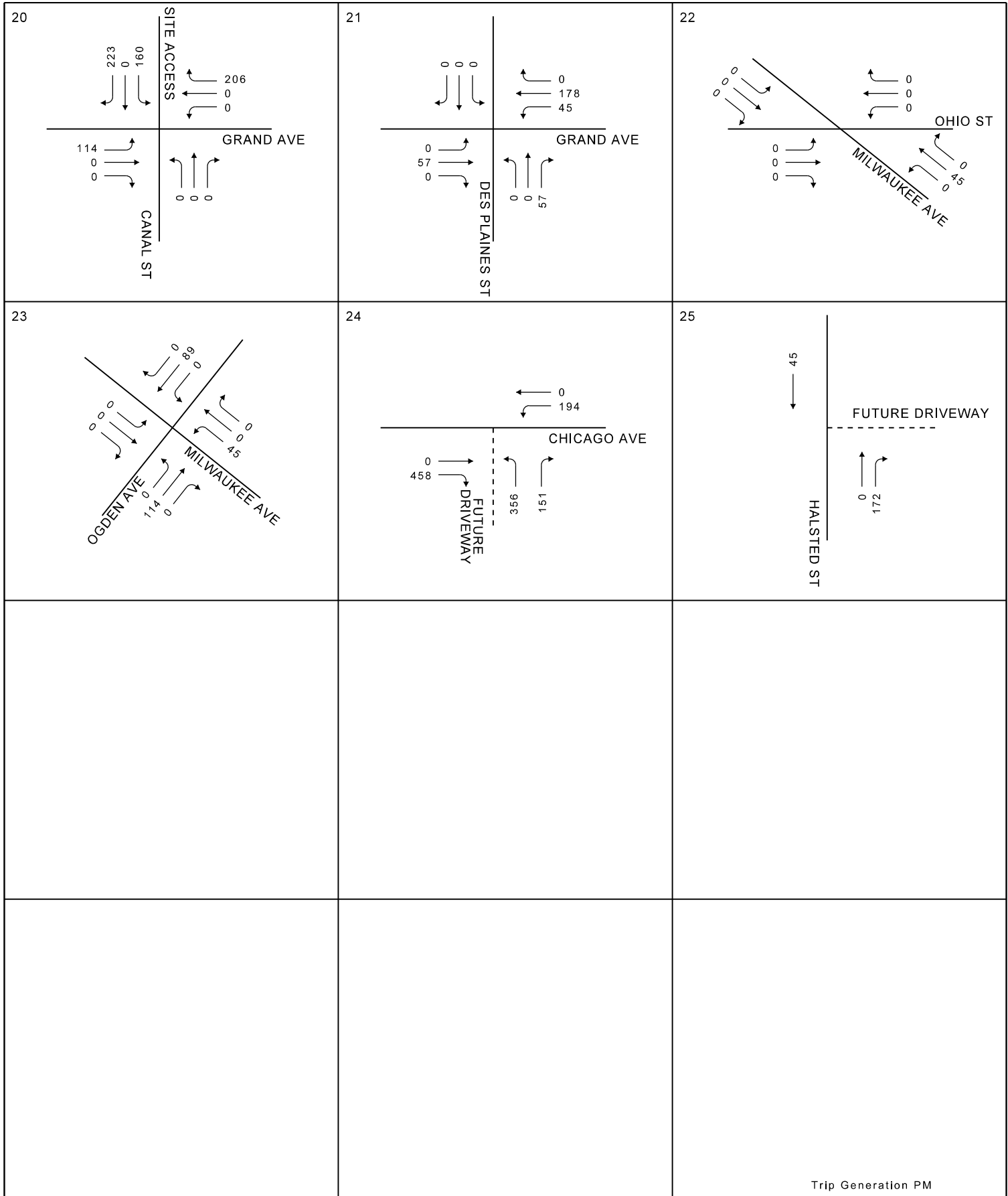
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 13
PROJECT SITE TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation PM

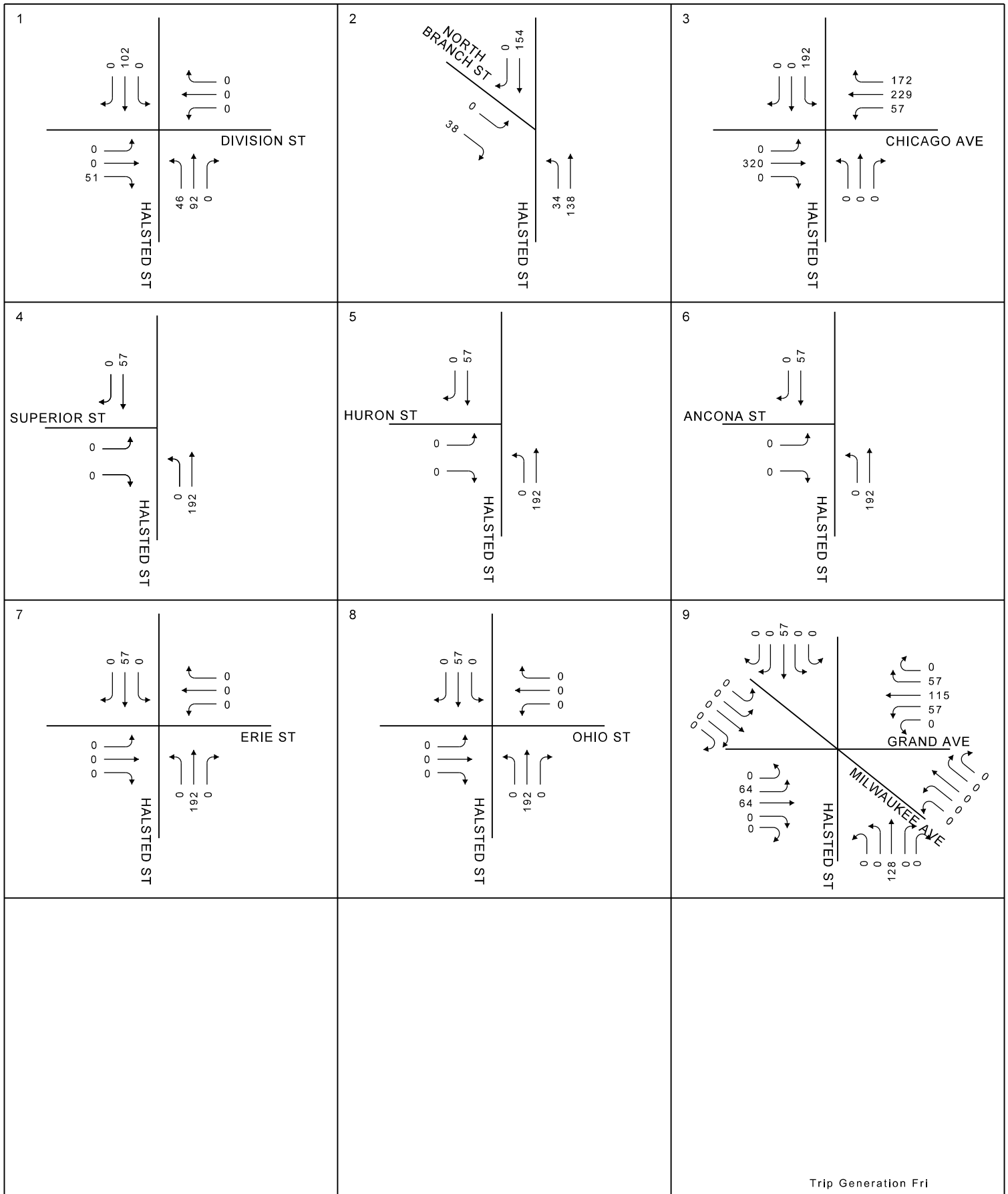
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 13
PROJECT SITE TRAFFIC VOLUME
WEEKDAY PM PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation Fri

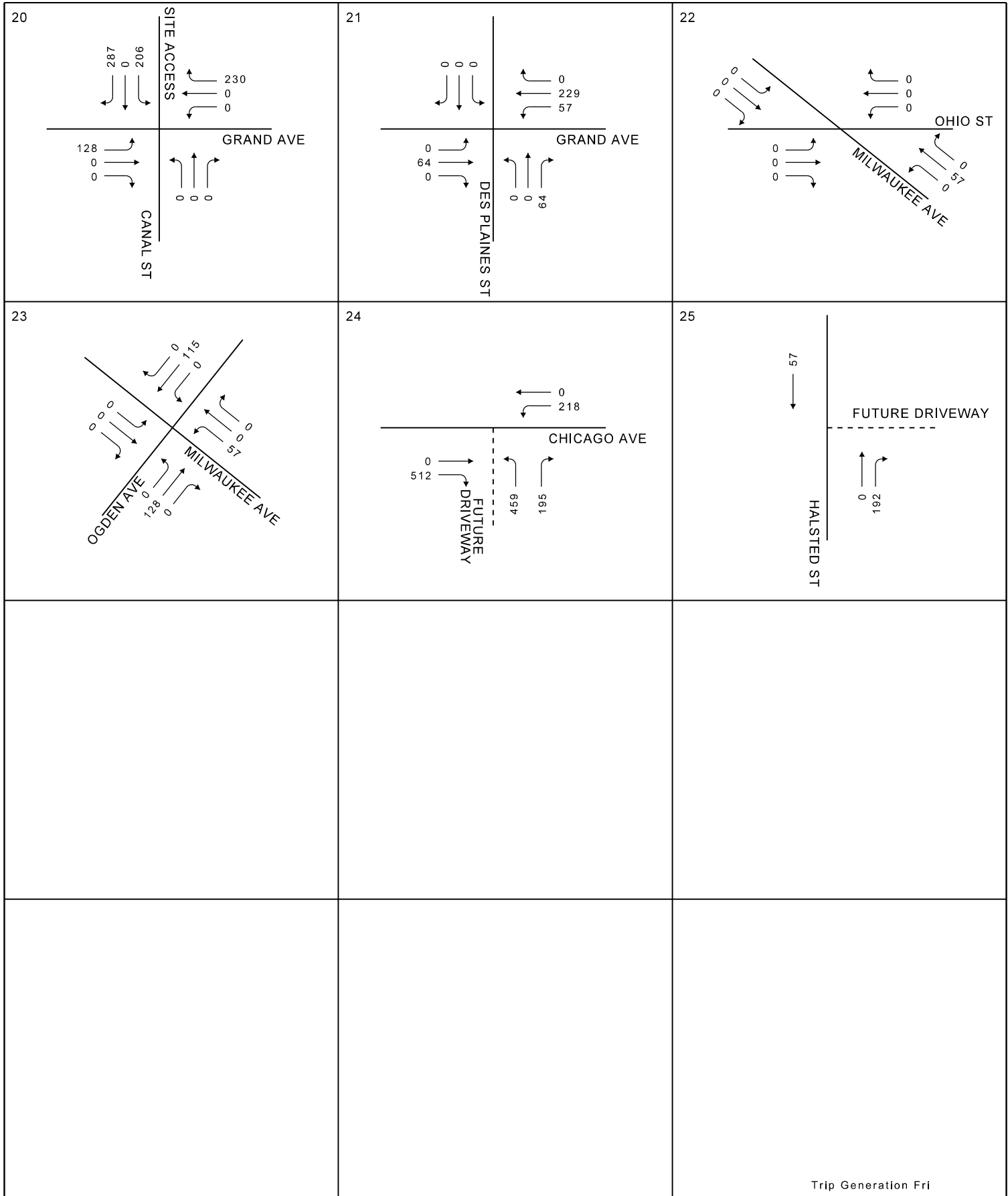
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 14
PROJECT SITE TRAFFIC VOLUME
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation Fri

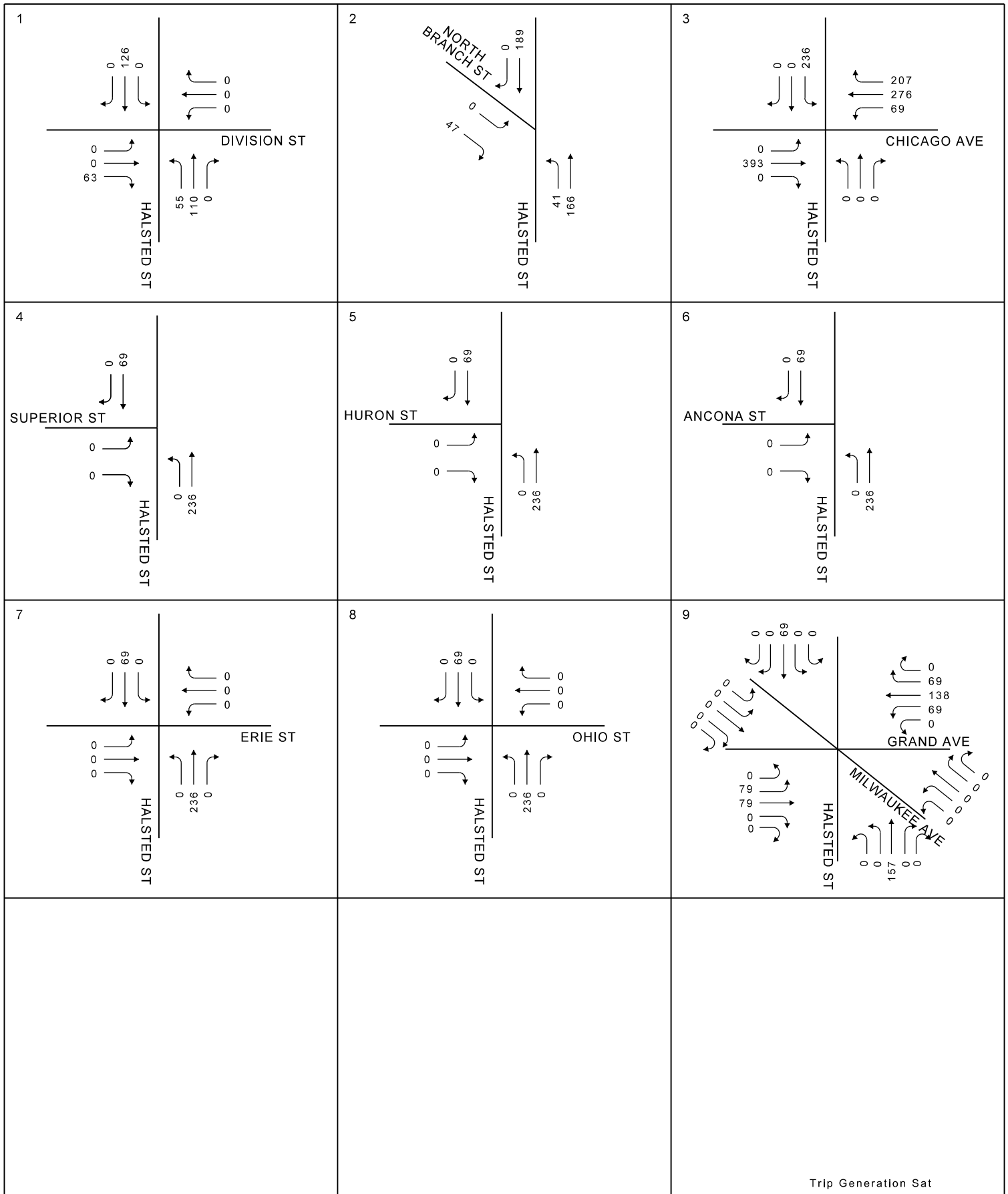
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 14
PROJECT SITE TRAFFIC VOLUME
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation Sat

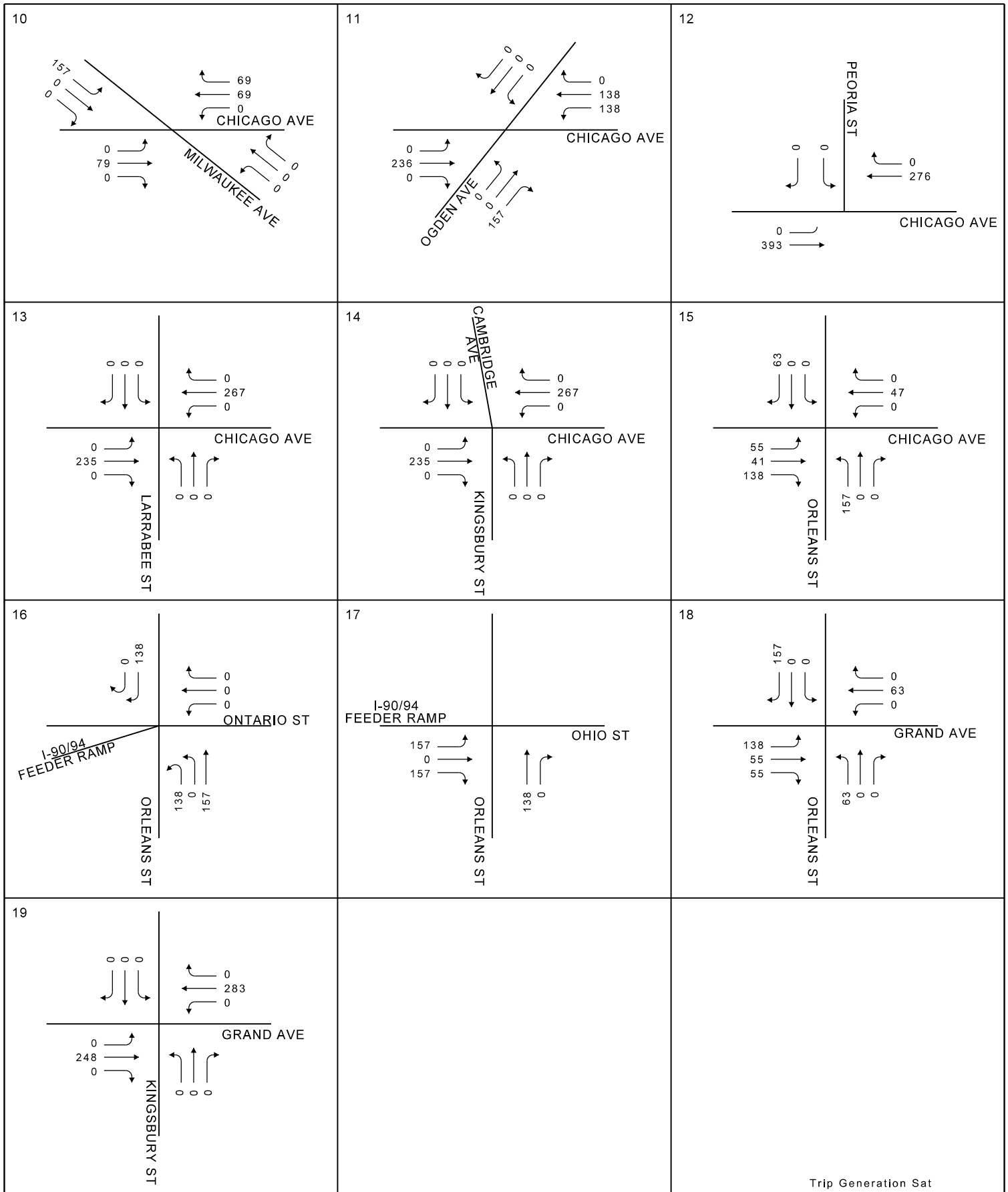
**TRIBUNE
PERMANENT FACILITY**

**FIGURE 15
PROJECT SITE TRAFFIC VOLUME
SATURDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





Trip Generation Sat

**TRIBUNE
PERMANENT FACILITY**

**FIGURE 15
PROJECT SITE TRAFFIC VOLUME
SATURDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





V. CAPACITY ANALYSIS

The operation of a facility is evaluated based on level of service (LOS) calculations obtained by analytical methods defined in the Transportation Research Board's Highway Capacity Manual (HCM), 6th Edition. The concept of LOS is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

There are six LOS letter designations, from A to F, with LOS A representing the best operating conditions and LOS F the worst.

The LOS of an intersection is based on the average control delay per vehicle. For a signalized intersection, the delay is calculated for each lane group and then aggregated for each approach and for the intersection as a whole. Generally, the LOS is reported for the intersection as a whole. For an unsignalized intersection, the delay is only calculated and reported for each minor movement. An overall intersection LOS is not calculated.

There are different LOS criteria for signalized and unsignalized intersections primarily due to driver perceptions of transportation facilities. The perception is that a signalized intersection is expected to carry higher traffic volumes and experience a greater average delay than an unsignalized intersection. The LOS criteria for signalized and unsignalized intersections are provided in Table 7.

Table 7: Level of Service Definitions for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	< 10	≤ 10.0
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual 6th Edition, National Research Council, 2016.

Typically, various state and local governments adopt standards varying between LOS C and LOS E, depending on the area's size and roadway characteristics.

Capacity analysis is performed with Synchro 11.1 (11.1.0.8). Multiple scenarios are created to evaluate the no build and future with project traffic volumes for the pm peak hours. Results for the signalized intersections and unsignalized intersections are summarized in attached tables.



2031 Future With Casino: Weekday AM Peak Hour

The project traffic volumes generated during the weekday am peak hour is added to the background weekday am peak hour volumes to obtain the future traffic volumes for the study intersections. Future with project traffic volumes for the weekday am peak hour is depicted in Figure 16.

The capacity analysis results at the signalized intersections are summarized in Table 8 and at the unsignalized intersections in Table 9. Proposed mitigation at intersections that are impacted are also summarized in Table 8. Supporting capacity analysis worksheets are provided in Appendix B.

Table 8: Weekday AM Peak Hour Capacity Analysis Results: Signalized Intersections

Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
Halsted Street and Division Street	2031 No Build	39.3	D	41.7	D	14.9	B	20.9	C	27.8	C	
	2031 Casino	38.9	D	41.7	D	14.8	B	22.9	C	28.1	C	
	2031 Casino with Mitigation	38.9	D	41.7	D	14.8	B	22.9	C	28.1	C	
Halsted Street and North Branch	2031 No Build	21.6	C	-	-	7.0	A	6.0	A	8.1	A	
	2031 Casino	22.4	C	-	-	7.9	A	8.6	A	9.8	A	
	2031 Casino with Mitigation	22.4	C	-	-	7.9	A	8.6	A	9.8	A	
Halsted Street and Chicago Avenue	2031 No Build	38.0	D	16.9	B	28.3	C	50.7	D	34.3	C	Modernize Signal Actuated Controller Add Prot-Perm Phasing On All Lefts Add Southbound Right Turn Overlap 110 Second Cycle Length
	2031 Casino	43.0	D	19.0	B	27.8	C	99.0	F	48.3	D	
	2031 Casino with Mitigation	36.6	D	74.6	E	51.6	D	37.1	D	48.3	D	
Halsted Street and Erie Street	2031 No Build	23.2	C	25.5	C	12.7	B	11.0	B	12.7	B	
	2031 Casino	23.2	C	25.5	C	14.3	B	11.3	B	13.7	B	
	2031 Casino with Mitigation	23.2	C	25.5	C	14.3	B	8.6	A	12.7	B	
Orleans Street and Chicago Avenue	2031 No Build	50.3	D	25.6	C	18.0	B	20.6	C	31.5	C	
	2031 Casino	55.2	E	25.7	C	20.3	C	20.8	C	33.8	C	
	2031 Casino with Mitigation	55.2	E	25.7	C	20.3	C	20.8	C	33.8	C	
Kingsbury Street and Chicago Avenue	2031 No Build	19.2	B	3.7	A	32.3	C	18.8	B	15.4	B	Retime Signal
	2031 Casino	19.9	B	4.2	A	32.3	C	18.8	B	15.7	B	
	2031 Casino with Mitigation	19.9	B	4.2	A	32.3	C	18.8	B	15.7	B	
Larrabee Street and Chicago Avenue	2031 No Build	54.0	D	53.1	D	43.3	D	125.7	F	66.7	E	Retime Signal
	2031 Casino	54.7	D	69.5	E	43.3	D	125.7	F	71.8	E	
	2031 Casino with Mitigation	50.8	D	51.9	D	54.8	D	123.6	F	64.7	E	
Ogden Avenue and Chicago Avenue	2031 No Build	9.0	A	86.1	F	54.5	D	26.7	C	45.2	D	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left Add Northbound Right Turn Overlap
	2031 Casino	9.8	A	108.3	F	64.6	E	26.7	C	54.3	D	
	2031 Casino with Mitigation	21.1	C	26.8	C	19.9	B	25.5	C	23.1	C	
Milwaukee Avenue and Chicago Avenue	2031 No Build	17.7	B	5.3	A	23.1	C	37.8	D	21.6	C	Modernize Signal 110 Second Cycle Length
	2031 Casino	18.0	B	5.4	A	23.1	C	40.1	D	22.6	C	
	2031 Casino with Mitigation	26.2	C	10.9	B	20.5	C	53.1	D	30.4	C	

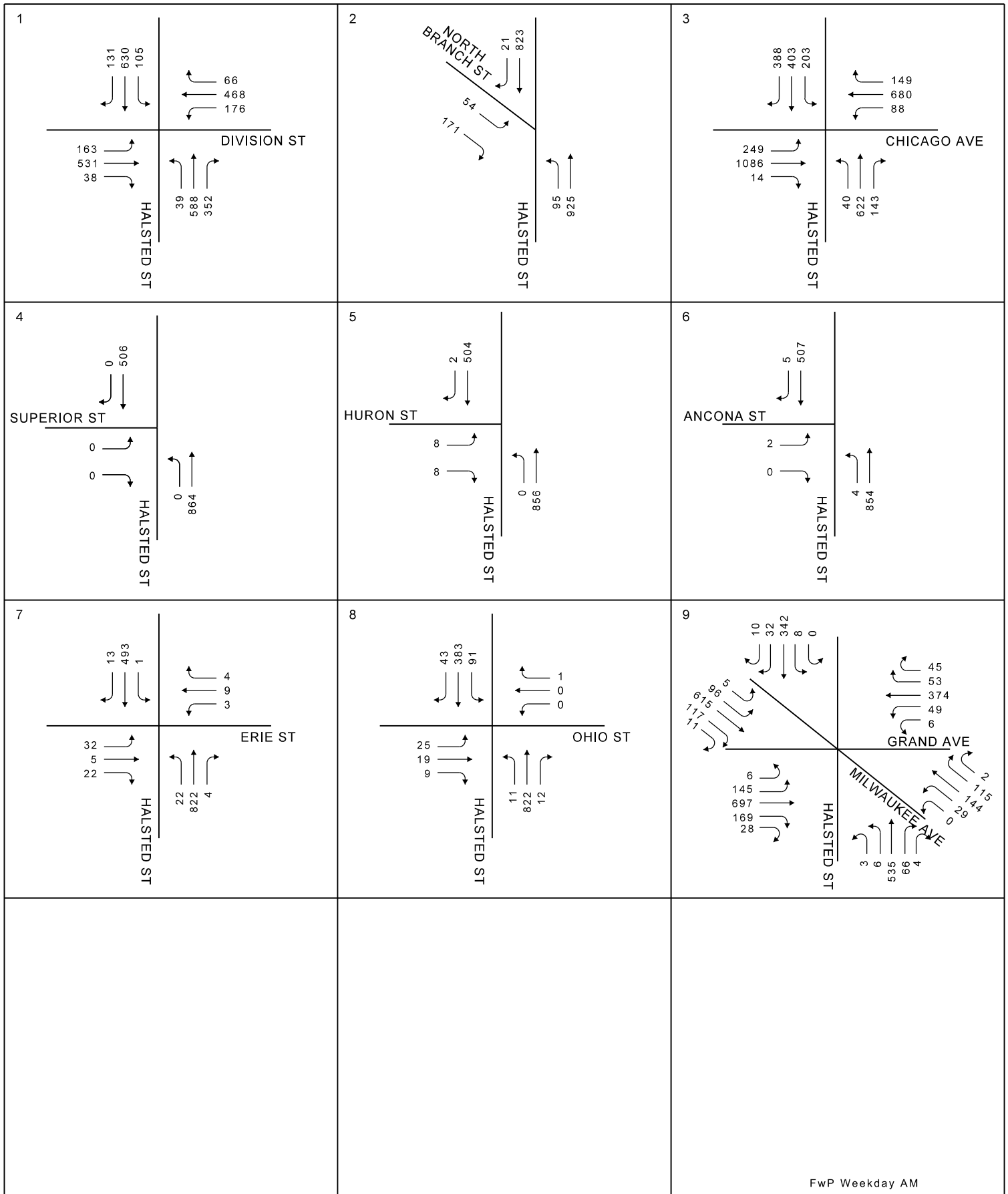


Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation				
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS					
Ogden Avenue and Milwaukee Avenue	2031 No Build	9.4	A	14.6	B	31.1	C	24.0	C	20.6	C	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left				
	2031 Casino	9.6	A	15.0	B	32.5	C	29.3	C	22.6	C					
	2031 Casino with Mitigation	70.4	E	33.6	C	28.4	C	19.6	B	39.0	D					
Orleans Street and Ontario Street (Ohio Street On Ramp)	2031 No Build	-	-	103.9	F	13.7	B	30.1	C	54.2	D	Retime Signal				
	2031 Casino	-	-	103.9	F	14.0	B	31.0	C	53.8	D					
	2031 Casino with Mitigation	-	-	85.8	F	14.8	B	31.0	C	46.7	D					
Orleans Street and Ohio Street Off Ramp	2031 No Build	59.9	E	-	-	32.0	C	-	-	54.6	D	Retime Signal				
	2031 Casino	64.8	E	-	-	34.0	C	-	-	59.0	E					
	2031 Casino with Mitigation	64.8	E	-	-	34.4	C	-	-	59.1	E					
Orleans Street and Grand Avenue	2031 No Build	21.2	C	20.9	C	15.0	B	10.2	B	17.9	B	Retime Signal				
	2031 Casino	25.1	C	21.3	C	15.3	B	11.0	B	19.4	B					
	2031 Casino with Mitigation	25.1	C	21.3	C	15.3	B	11.0	B	19.4	B					
Kingsbury Street and Grand Avenue	2031 No Build	20.8	C	16.3	B	14.8	B	40.7	D	23.3	C					
	2031 Casino	21.7	C	16.8	B	14.8	B	40.7	D	23.7	C					
	2031 Casino with Mitigation	21.7	C	16.8	B	14.8	B	40.7	D	23.7	C					
Clinton St / Access Drive and Grand Avenue	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	2.5	A	7.3	A	3.2	A	13.8	B	4.8	A					
	2031 Casino with Mitigation	2.0	A	7.3	A	3.2	A	13.8	B	4.5	A					
Desplaines St & Grand Ave	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	-	-	-	-	-	-	-	-	-	-					
	2031 Casino with Mitigation	2.3	A	1.3	A	45.1	D	47.6	D	9.8	A					
Halsted Street and Milwaukee Avenue and Grand Avenue	2031 No Build	172.9	F	42.4	D	38.1	D	33.0	C	105.5	F	161.5	F	48.9	D	Retime Signal
	2031 Casino	183.2	F	44.8	D	39.4	D	33.1	C	108.4	F	161.5	F	48.9	D	
	2031 Casino with Mitigation	183.2	F	43.7	D	39.4	D	33.1	C	108.6	F	162.9	F	48.9	D	
Chicago Avenue & Proposed Casino Entrance	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	2.9	A	2.2	A	37.9	D	-	-	3.7	A					
	2031 Casino with Mitigation	11.7	B	2.2	A	37.9	D	-	-	8.8	A					



Table 9: Weekday AM Peak Hour Capacity Analysis Results: Unsignalized Intersections

Intersection / Approach	Weekday AM Peak Hour					
	No Build		Build Without Mitigation		Build With Mitigation	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Halsted St & Huron St						
NB Left/Thru	0.0	A	0.0	A	0.0	A
EB Approach	23.0	C	24.0	C	24.0	C
Halsted St & Ancona St						
NB Left/Thru	9.0	A	9.1	A	9.1	A
EB Approach	36.9	E	40.4	E	40.4	E
Halsted St & Ohio St						
NB Left/Thru	8.9	A	8.9	A	8.9	A
EB Approach	70.6	F	83.4	F	83.4	F
SB Left/Thru	10.1	B	10.5	B	10.5	B
Milwaukee Ave & Ohio St						
NB Approach	10.0	B	10.0	B	10.0	B
EB Approach	38.6	E	39.0	E	39.0	E
WB Approach	17.4	C	17.5	C	17.5	C
SB Approach	8.3	A	8.3	A	8.3	A
Chicago Ave & Peoria St						
EB Left/Thru	12.2	B	12.4	B	12.4	B
SB Approach	60.0	F	81.9	F	81.9	F
Clinton St/Access Drive & Grand Ave						
NB Approach	13.2	B	Signalized		Signalized	
EB Left/Thru	10.2	B				
EB Thru/Right	226.1	F				
WB Left/Thru	27.0	D				
WB Thru/Right	26.2	D				
SB Approach	13.0	B				
Intersection	102.9	F				
Desplaines St & Grand Ave						
NB Approach	25.1	D	28.6	D	Signalized	
EB Left/Thru	8.7	A	8.8	A		
WB Left/Thru	14.0	B	14.5	B		
SB Approach	586.5	F	756.5	F		



FwP Weekday AM

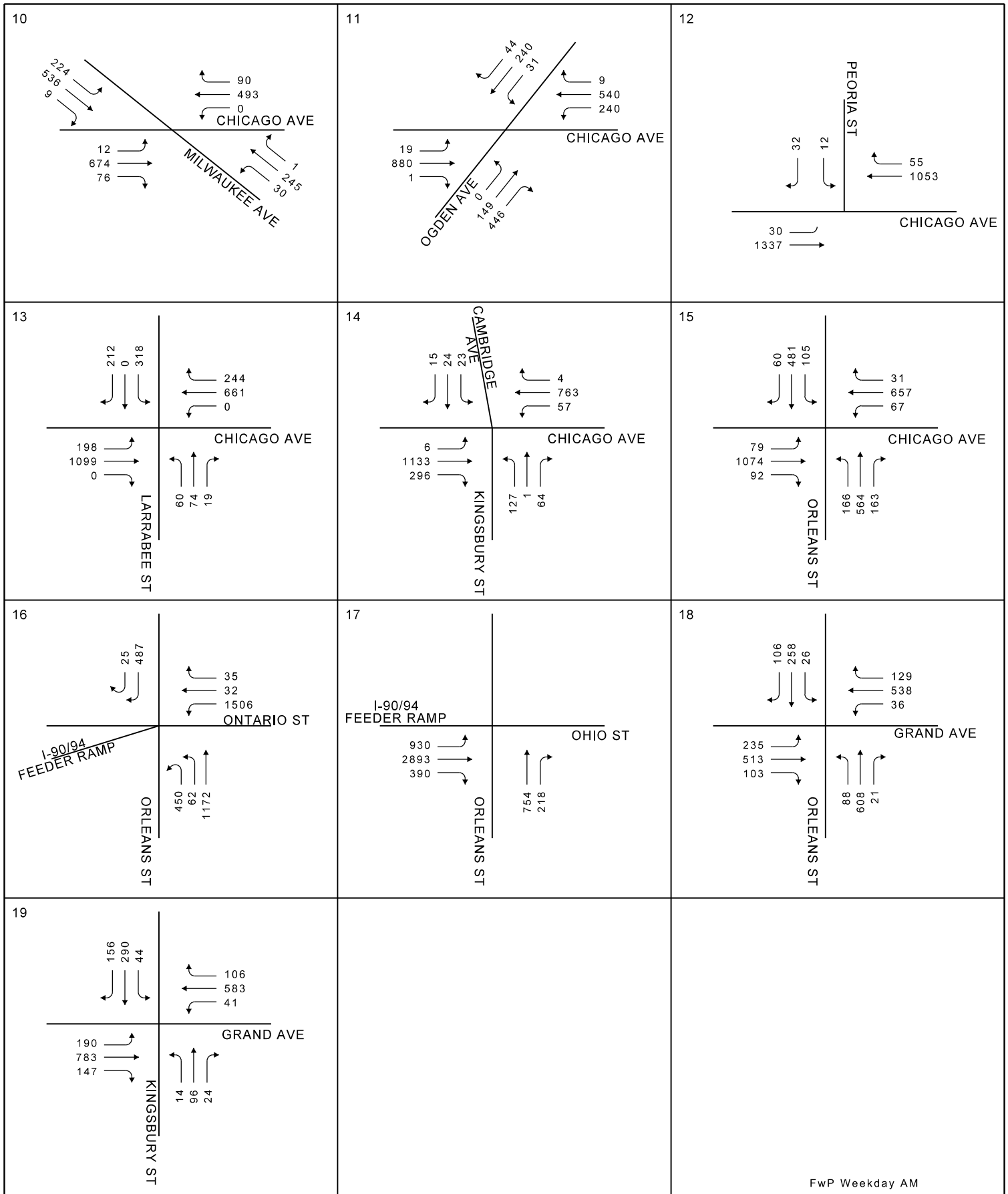
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**FIGURE 16
FUTURE WITH CASINO
WEEKDAY AM PEAK HOUR**

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FwP Weekday AM

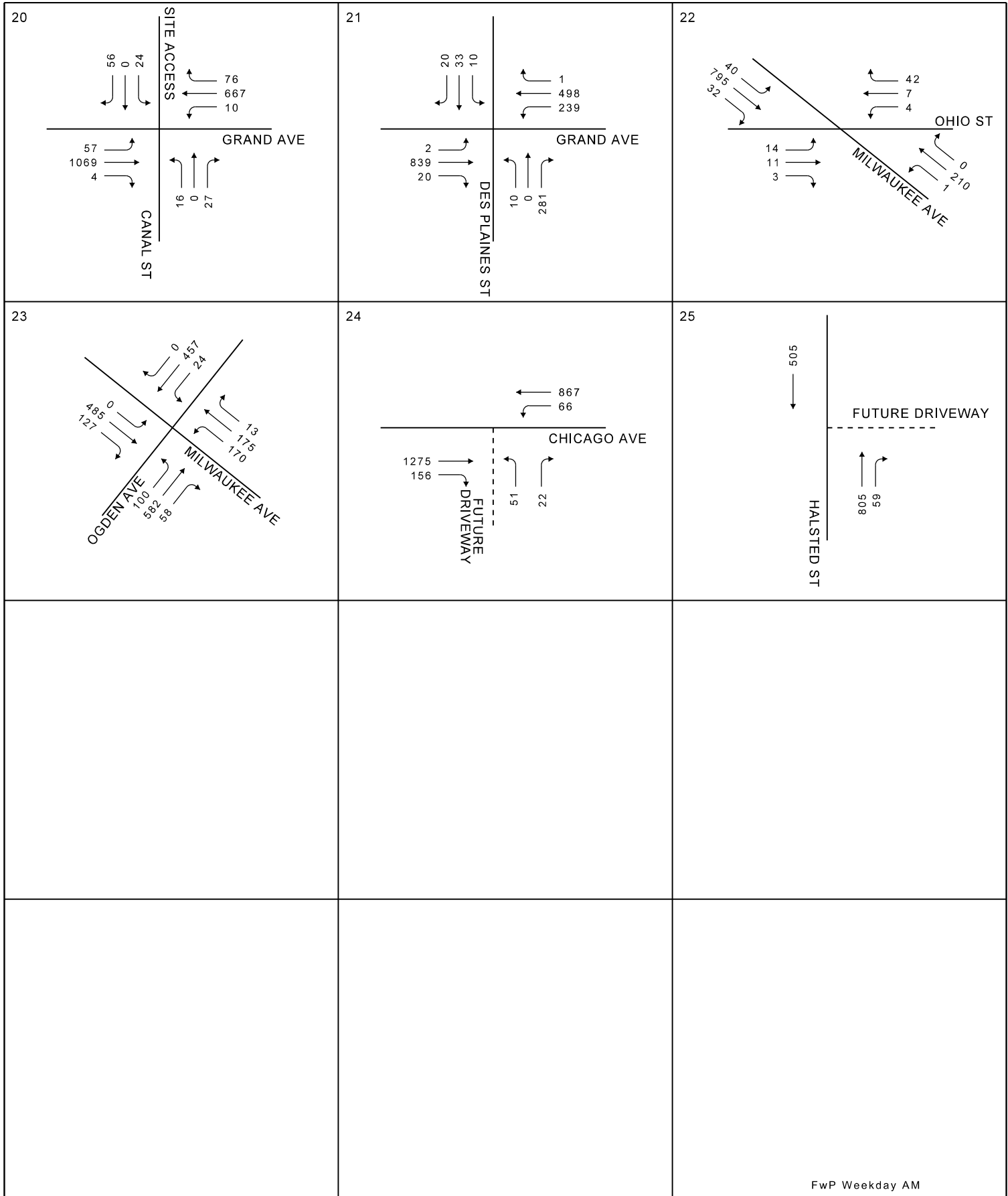
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**FIGURE 16
FUTURE WITH CASINO
WEEKDAY AM PEAK HOUR**

CHICAGO

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FwP Weekday AM

**TRIBUNE
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**FIGURE 16
FUTURE WITH CASINO
WEEKDAY AM PEAK HOUR**

CHICAGO

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2031 Future With Casino: Weekday PM Peak Hour

The project traffic volumes generated during the weekday am peak hour is added to the background weekday am peak hour volumes to obtain the future traffic volumes for the study intersections. Future with project traffic volumes for the weekday am peak hour is depicted in Figure 17.

The capacity analysis results at the signalized intersections are summarized in Table 10 and at the unsignalized intersections in Table 11. Proposed mitigation at intersections that are impacted are also summarized in Table 10. Supporting capacity analysis worksheets are provided in Appendix C.

Table 10: Weekday PM Peak Hour Capacity Analysis Results: Signalized Intersections

Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
Halsted Street and Division Street	2031 No Build	35.5	D	36.6	D	15.4	B	24.8	C	26.9	C	
	2031 Casino	36.4	D	38.5	D	16.5	B	39.3	D	32.0	C	
	2031 Casino with Mitigation	36.4	D	38.5	D	16.5	B	39.3	D	32.0	C	
Halsted Street and North Branch	2031 No Build	22.1	C	-	-	7.3	A	10.3	B	10.0	B	
	2031 Casino	24.8	C	-	-	12.1	B	28.2	C	20.6	C	
	2031 Casino with Mitigation	24.8	C	-	-	12.1	B	28.2	C	20.6	C	
Halsted Street and Chicago Avenue	2031 No Build	70.4	E	20.8	C	21.7	C	89.6	F	50.2	D	Modernize Signal Actuated Controller Add Prot-Perm Phasing On All Lefts Add Southbound Right Turn Overlap 110 Second Cycle Length
	2031 Casino	100.8	F	45.6	D	23.8	C	244.9	F	105.5	F	
	2031 Casino with Mitigation	43.2	D	84.1	F	53.1	D	113.9	F	76.0	E	
Halsted Street and Erie Street	2031 No Build	24.9	C	27.7	C	13.6	B	13.9	B	14.2	B	
	2031 Casino	24.9	C	27.7	C	21.3	C	12.8	B	18.4	B	
	2031 Casino with Mitigation	24.9	C	27.7	C	21.3	C	9.7	A	17.3	B	
Orleans Street and Chicago Avenue	2031 No Build	15.8	B	32.9	C	38.8	D	20.9	C	27.3	C	
	2031 Casino	29.1	C	44.9	D	43.2	D	21.6	C	35.5	D	
	2031 Casino with Mitigation	29.1	C	44.9	D	42.8	D	21.6	C	35.4	D	
Kingsbury Street and Chicago Avenue	2031 No Build	16.3	B	7.4	A	41.8	D	16.1	B	16.1	B	Retime Signal
	2031 Casino	20.0	C	8.3	A	41.8	D	17.5	B	17.6	B	
	2031 Casino with Mitigation	20.0	C	8.3	A	41.8	D	17.5	B	17.6	B	
Larrabee Street and Chicago Avenue	2031 No Build	57.4	E	128.9	F	47.8	D	97.5	F	91.3	F	Retime Signal
	2031 Casino	56.6	E	206.8	F	47.8	D	97.5	F	122.7	F	
	2031 Casino with Mitigation	51.8	D	134.8	F	63.4	E	128.6	F	98.6	F	
Ogden Avenue and Chicago Avenue	2031 No Build	4.4	A	69.6	E	22.2	C	32.2	C	37.0	D	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left Add Northbound Right Turn Overlap
	2031 Casino	5.1	A	172.7	F	68.1	E	32.2	C	82.9	F	
	2031 Casino with Mitigation	17.3	B	33.8	C	26.3	C	29.3	C	27.2	C	
Milwaukee Avenue and Chicago Avenue	2031 No Build	17.2	B	9.3	A	96.8	F	85.0	F	47.5	D	Modernize Signal 110 Second Cycle Length
	2031 Casino	17.9	B	11.7	B	96.7	F	125.9	F	59.3	E	
	2031 Casino with Mitigation	24.0	C	16.7	B	66.1	E	82.8	F	45.2	D	

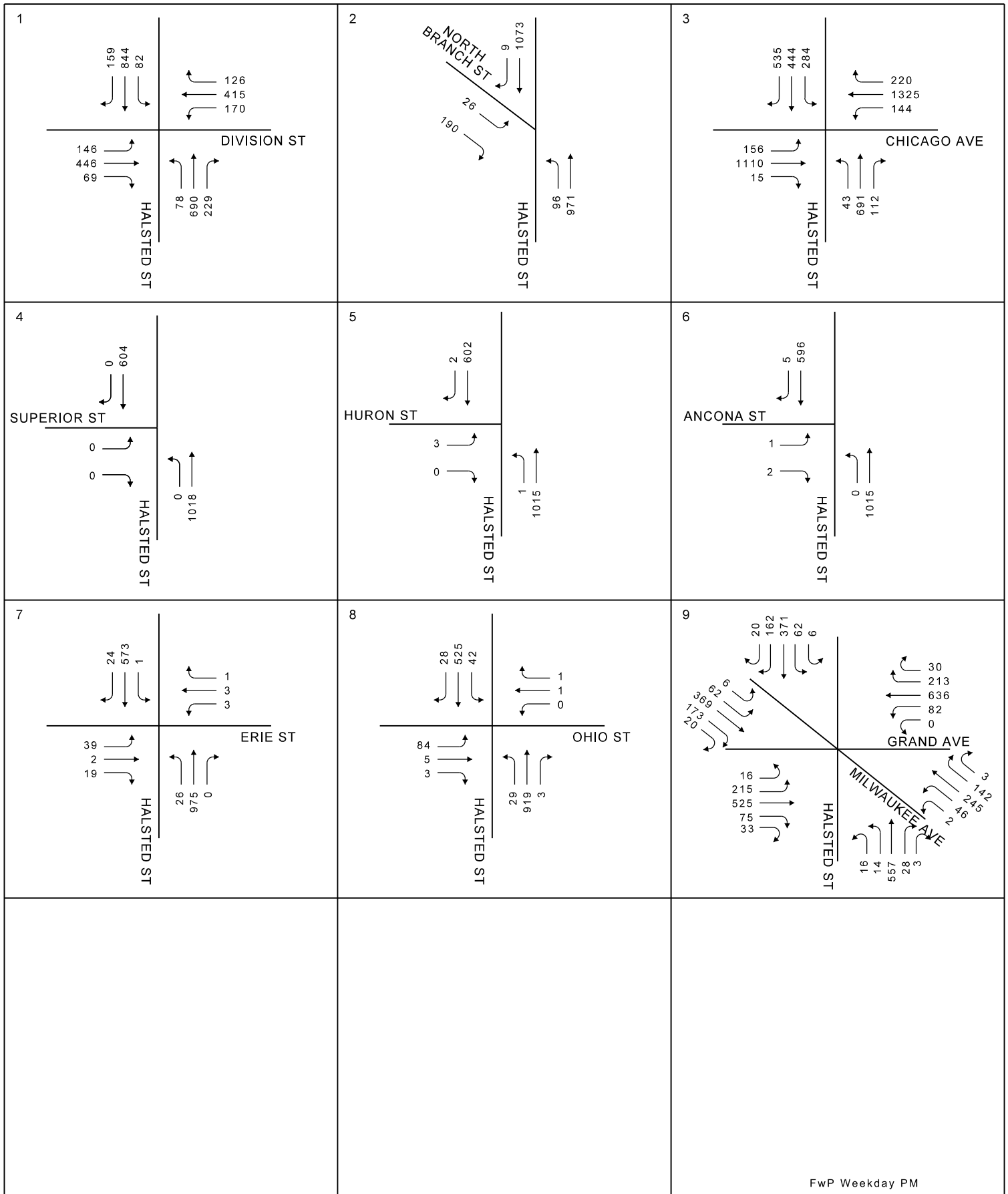


Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation				
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS					
Ogden Avenue and Milwaukee Avenue	2031 No Build	62.4	E	65.9	E	40.3	D	59.7	E	56.3	E	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left				
	2031 Casino	62.4	E	70.4	E	44.0	D	59.4	E	57.9	E					
	2031 Casino with Mitigation	64.4	E	36.7	D	39.1	D	39.1	D	44.2	D					
Orleans Street and Ontario Street (Ohio Street On Ramp)	2031 No Build	-	-	140.7	F	36.4	D	274.6	F	120.8	F	Retime Signal				
	2031 Casino	-	-	140.7	F	47.7	D	348.5	F	136.8	F					
	2031 Casino with Mitigation	-	-	158.8	F	57.5	E	242.8	F	131.3	F					
Orleans Street and Ohio Street Off Ramp	2031 No Build	43.9	D	-	-	11.7	B	-	-	31.3	C	Retime Signal				
	2031 Casino	62.1	E	-	-	13.1	B	-	-	43.4	D					
	2031 Casino with Mitigation	54.6	D	-	-	13.6	B	-	-	38.9	D					
Orleans Street and Grand Avenue	2031 No Build	89.9	F	44.7	D	15.8	B	16.0	B	40.9	D	Retime Signal				
	2031 Casino	181.3	F	54.6	D	16.4	B	20.2	C	67.6	E					
	2031 Casino with Mitigation	95.6	F	54.0	D	19.3	B	20.0	C	47.9	D					
Kingsbury Street and Grand Avenue	2031 No Build	18.2	B	11.7	B	44.1	D	34.5	C	22.4	C					
	2031 Casino	25.5	C	13.6	B	44.1	D	34.5	C	24.9	C					
	2031 Casino with Mitigation	25.5	C	13.4	B	44.1	D	34.5	C	24.8	C					
Clinton St / Access Drive and Grand Avenue	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	4.0	A	13.4	B	2.3	A	46.4	D	14.8	B					
	2031 Casino with Mitigation	5.7	A	13.4	B	2.3	A	46.4	D	15.4	B					
Desplaines St & Grand Ave	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	-	-	-	-	-	-	-	-	-	-					
	2031 Casino with Mitigation	8.3	A	4.1	A	39.5	D	38.4	D	12.9	B					
Halsted Street and Milwaukee Avenue and Grand Avenue	2031 No Build	72.4	E	159.8	F	34.7	C	80.0	F	98.6	F	69.7	E	173.8	F	Retime Signal
	2031 Casino	118.7	F	250.0	F	39.0	D	125.7	F	136.8	F	69.7	E	173.8	F	
	2031 Casino with Mitigation	126.6	F	185.8	F	41.1	D	145.7	F	129.6	F	74.9	E	192.9	F	
Chicago Avenue & Proposed Casino Entrance	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	9.9	A	11.4	B	41.4	D	-	-	15.0	B					
	2031 Casino with Mitigation	67.3	E	11.3	B	35.0	D	-	-	38.5	D					



Table 11: Weekday PM Peak Hour Capacity Analysis Results: Unsignalized Intersections

Intersection / Approach	Weekday PM Peak Hour					
	No Build		Build Without Mitigation		Build With Mitigation	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Halsted St & Huron St						
NB Left/Thru	9.5	A	9.7	A	9.7	A
EB Approach	29.4	D	35.3	E	35.3	E
Halsted St & Ancona St						
NB Left/Thru	0.0	A	0.0	A	0.0	A
EB Approach	21.6	C	26.1	D	26.1	D
Halsted St & Ohio St						
NB Left/Thru	9.4	A	9.6	A	9.6	A
EB Approach	174.2	F	364.2	F	364.2	F
SB Left/Thru	9.6	A	10.4	B	10.4	B
Milwaukee Ave & Ohio St						
NB Approach	9.5	A	9.5	A	9.5	A
EB Approach	105.1	F	121.6	F	121.6	F
WB Approach	30.0	D	33.1	D	33.1	D
SB Approach	10.0	B	10.3	B	10.3	B
Chicago Ave & Peoria St						
EB Left/Thru	16.8	C	19.2	C	19.2	C
SB Approach	197.4	F	591.4	F	591.4	F
Clinton St/Access Drive & Grand Ave						
NB Approach	13.2	B	Signalized		Signalized	
EB Left/Thru	10.5	B				
EB Thru/Right	159.5	F				
WB Left/Thru	69.4	F				
WB Thru/Right	62.5	F				
SB Approach	13.2	B				
Intersection	86.2	F				
Desplaines St & Grand Ave						
NB Approach	1012.7	F	ERR.	F	Signalized	
EB Left/Thru	10.0	B	10.9	B		
WB Left/Thru	11.1	B	12.3	B		
SB Approach	705.5	F	3073.6	F		



FwP Weekday PM

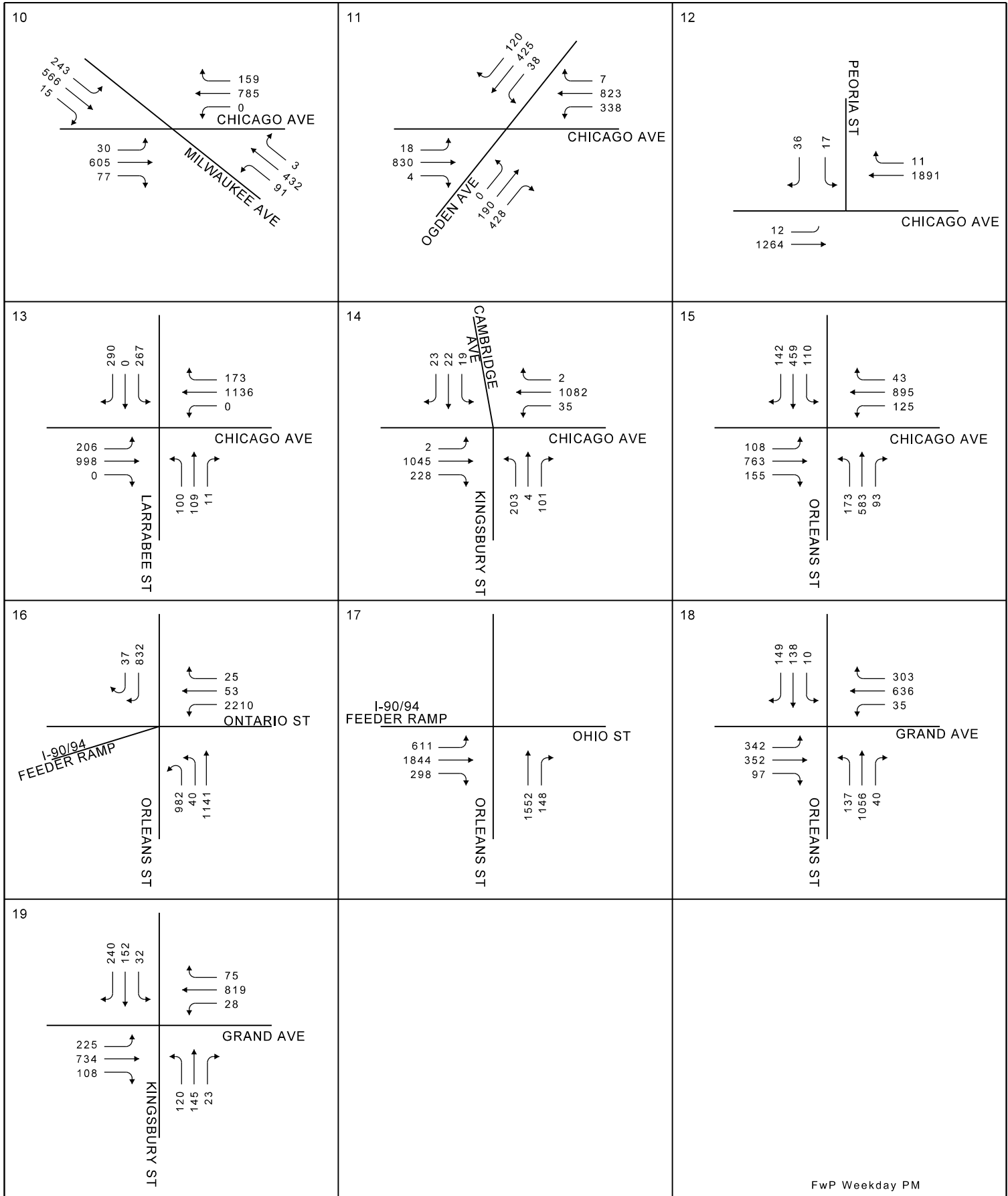
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**FIGURE 17
FUTURE WITH CASINO
WEEKDAY PM PEAK HOUR**

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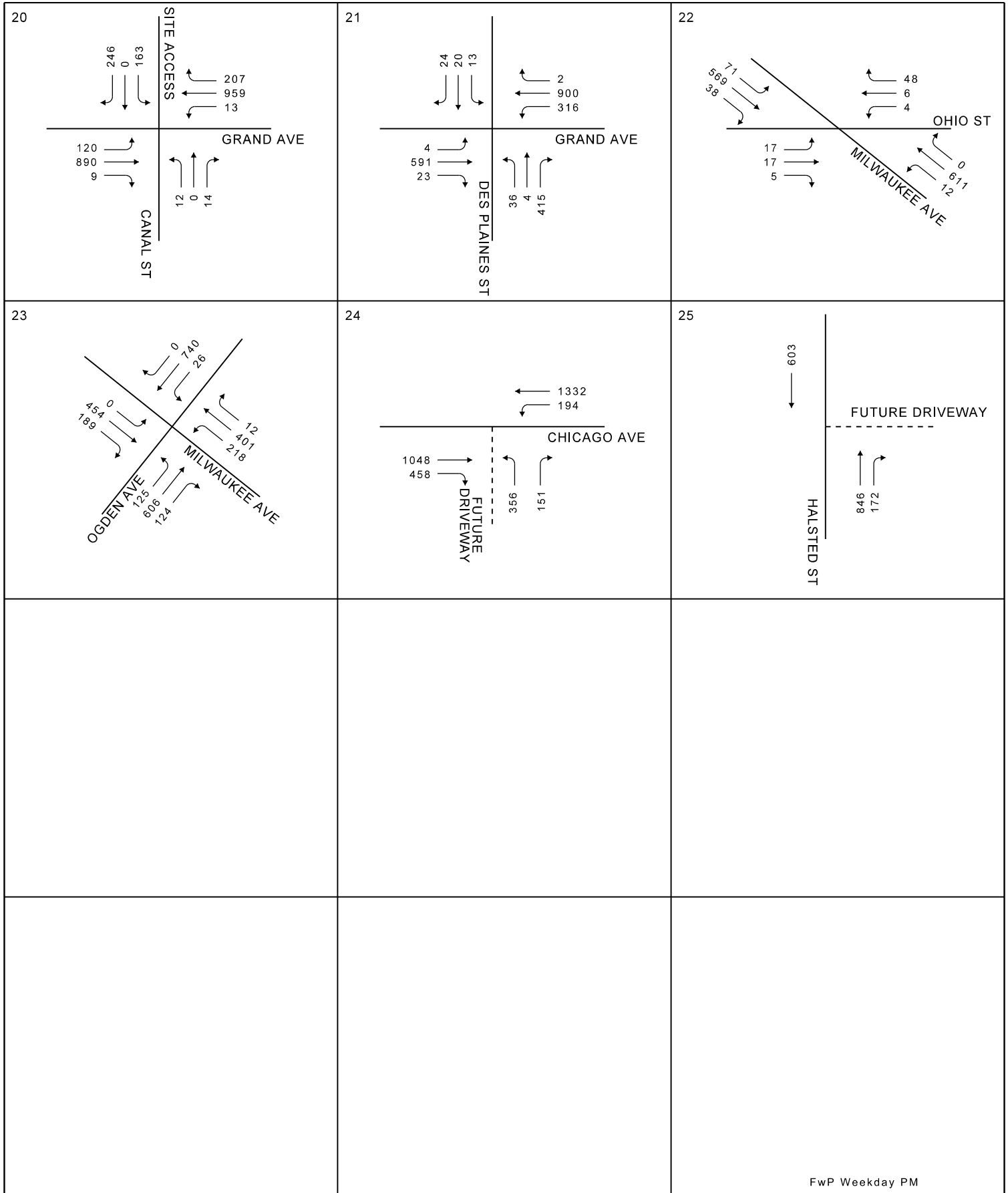
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**FIGURE 17
FUTURE WITH CASINO
WEEKDAY PM PEAK HOUR**

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**FIGURE 17
FUTURE WITH CASINO
WEEKDAY PM PEAK HOUR**

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2031 Future With Casino: Friday Evening Casino Peak Hour

The project traffic volumes generated during the weekday am peak hour is added to the background weekday am peak hour volumes to obtain the future traffic volumes for the study intersections. Future with project traffic volumes for the weekday am peak hour is depicted in Figure 18.

The capacity analysis results at the signalized intersections are summarized in Table 12 and at the unsignalized intersections in Table 13. Proposed mitigation at intersections that are impacted are also summarized in Table 12. Supporting capacity analysis worksheets are provided in Appendix D.

Table 12: Friday Evening Casino Peak Hour Capacity Analysis Results: Signalized Intersections

Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
Halsted Street and Division Street	2031 No Build	35.4	D	33.1	C	9.9	A	9.5	A	19.8	B	
	2031 Casino	35.5	D	33.1	C	10.5	B	10.5	B	19.7	B	
	2031 Casino with Mitigation	35.5	D	33.1	C	10.5	B	10.5	B	19.7	B	
Halsted Street and North Branch	2031 No Build	13.4	B	-	-	2.7	A	4.5	A	4.5	A	
	2031 Casino	15.3	B	-	-	4.3	A	10.3	B	8.0	A	
	2031 Casino with Mitigation	15.3	B	-	-	4.3	A	10.3	B	8.0	A	
Halsted Street and Chicago Avenue	2031 No Build	15.1	B	15.4	B	17.8	B	23.8	C	18.0	B	Modernize Signal Actuated Controller Add Prot-Perm Phasing On All Lefts Add Southbound Right Turn Overlap 110 Second Cycle Length
	2031 Casino	26.9	C	30.1	C	17.0	B	70.5	E	37.1	D	
	2031 Casino with Mitigation	16.8	B	70.7	E	47.5	D	54.3	D	49.4	D	
Halsted Street and Erie Street	2031 No Build	25.3	C	27.2	C	8.6	A	7.5	A	9.0	A	
	2031 Casino	25.3	C	27.2	C	11.6	B	6.6	A	10.3	B	
	2031 Casino with Mitigation	25.3	C	27.2	C	11.6	B	7.7	A	10.8	B	
Orleans Street and Chicago Avenue	2031 No Build	12.8	B	19.5	B	37.1	D	16.7	B	21.1	C	
	2031 Casino	13.7	B	20.5	C	41.2	D	17.4	B	22.8	C	
	2031 Casino with Mitigation	13.7	B	20.5	C	41.0	D	17.4	B	22.7	C	
Kingsbury Street and Chicago Avenue	2031 No Build	8.4	A	4.2	A	32.7	C	15.8	B	10.1	B	Retime Signal
	2031 Casino	10.2	B	4.7	A	32.7	C	15.8	B	10.3	B	
	2031 Casino with Mitigation	10.2	B	4.7	A	32.7	C	15.8	B	10.3	B	
Larrabee Street and Chicago Avenue	2031 No Build	20.9	C	30.5	C	43.6	D	35.2	D	28.9	C	Retime Signal
	2031 Casino	23.9	C	47.2	D	43.6	D	35.2	D	36.3	D	
	2031 Casino with Mitigation	23.2	C	41.6	D	44.7	D	39.0	D	34.4	C	
Ogden Avenue and Chicago Avenue	2031 No Build	5.0	A	29.0	C	13.8	B	26.9	C	19.8	B	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left Add Northbound Right Turn Overlap
	2031 Casino	6.2	A	88.6	F	26.0	C	26.9	C	44.1	D	
	2031 Casino with Mitigation	26.8	C	17.9	B	15.2	B	25.6	C	21.0	C	
Milwaukee Avenue and Chicago Avenue	2031 No Build	15.0	B	7.3	A	80.3	F	28.1	C	28.5	C	Modernize Signal 110 Second Cycle Length
	2031 Casino	15.5	B	7.2	A	80.1	F	35.1	D	28.9	C	
	2031 Casino with Mitigation	20.9	C	16.8	B	21.0	C	31.2	C	22.5	C	

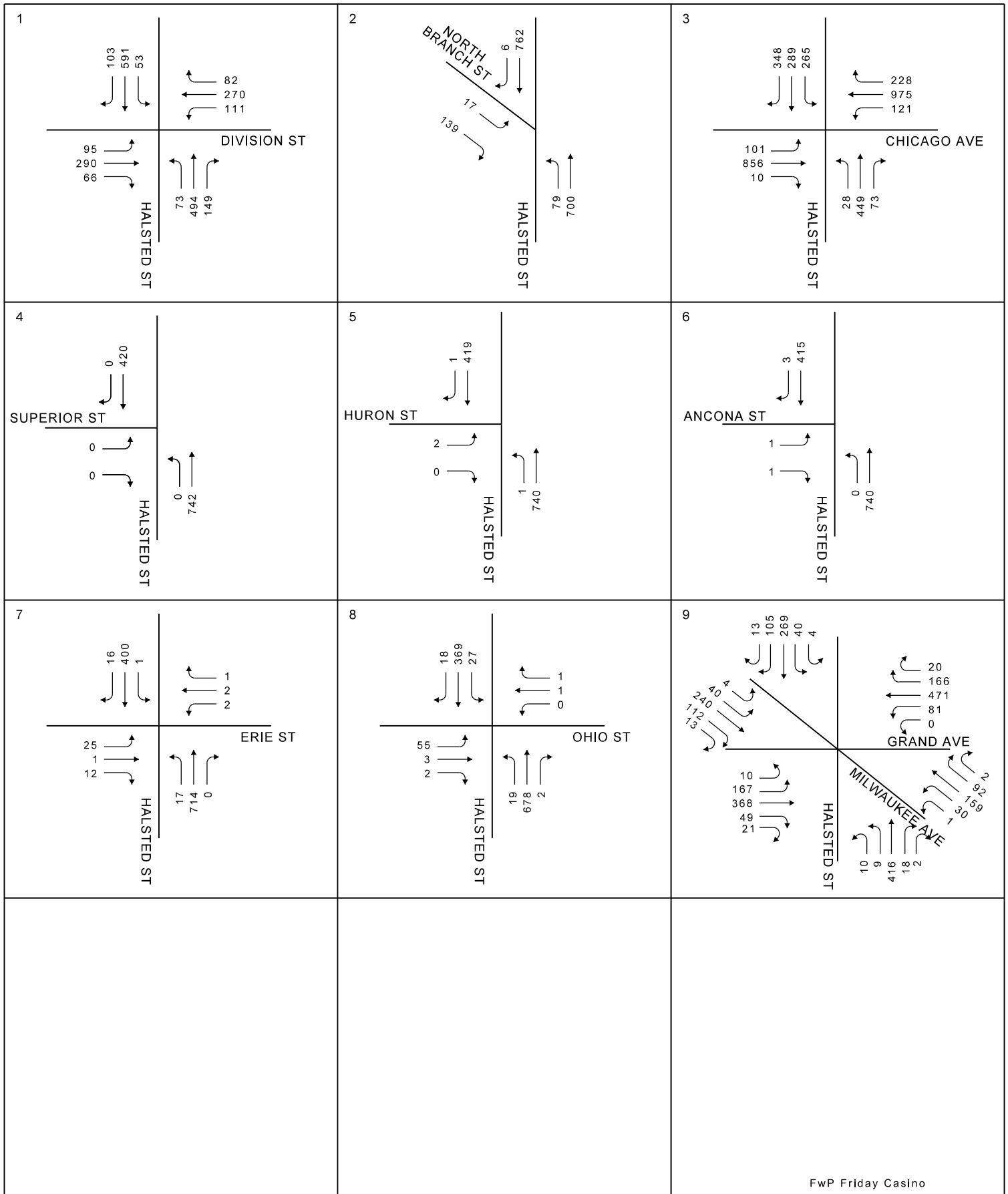


Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation				
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS					
Ogden Avenue and Milwaukee Avenue	2031 No Build	59.0	E	17.1	B	21.9	C	10.0	B	26.8	C	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left				
	2031 Casino	59.2	E	18.6	B	25.6	C	24.0	C	30.6	C					
	2031 Casino with Mitigation	14.9	B	29.6	C	21.3	C	15.9	B	20.3	C					
Orleans Street and Ontario Street (Ohio Street On Ramp)	2031 No Build	-	-	27.4	C	11.9	B	69.7	E	27.9	C	Retime Signal				
	2031 Casino	-	-	27.4	C	15.8	B	142.1	F	42.2	D					
	2031 Casino with Mitigation	-	-	33.1	C	15.8	B	77.3	E	33.5	C					
Orleans Street and Ohio Street Off Ramp	2031 No Build	16.6	B	-	-	10.0	B	-	-	14.0	B	Retime Signal				
	2031 Casino	17.6	B	-	-	12.0	B	-	-	15.5	B					
	2031 Casino with Mitigation	17.6	B	-	-	11.9	B	-	-	15.4	B					
Orleans Street and Grand Avenue	2031 No Build	21.4	C	20.7	C	13.7	B	17.7	B	17.8	B	Retime Signal				
	2031 Casino	72.4	E	22.9	C	14.1	B	18.8	B	32.4	C					
	2031 Casino with Mitigation	55.6	E	22.9	C	14.8	B	18.9	B	28.2	C					
Kingsbury Street and Grand Avenue	2031 No Build	11.8	B	12.0	B	20.2	C	16.7	B	13.8	B					
	2031 Casino	13.6	B	11.9	B	20.2	C	16.7	B	14.1	B					
	2031 Casino with Mitigation	13.6	B	11.8	B	20.2	C	16.7	B	14.0	B					
Clinton St / Access Drive and Grand Avenue	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	4.1	A	11.8	B	1.5	A	47.3	D	17.7	B					
	2031 Casino with Mitigation	7.0	A	11.8	B	1.6	A	47.3	D	18.7	B					
Desplaines St & Grand Ave	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	-	-	-	-	-	-	-	-	-	-					
	2031 Casino with Mitigation	2.6	A	1.6	A	36.9	D	38.8	D	9.3	A					
Halsted Street and Milwaukee Avenue and Grand Avenue	2031 No Build	41.4	D	50.6	D	30.2	C	34.5	C	41.9	D	35.7	D	59.6	E	Retime Signal
	2031 Casino	78.0	E	108.4	F	32.5	C	36.6	D	64.8	E	35.7	D	59.6	E	
	2031 Casino with Mitigation	85.9	F	73.8	E	33.5	C	38.2	D	59.8	E	44.0	D	64.7	E	
Chicago Avenue & Proposed Casino Entrance	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	9.6	A	9.6	A	34.5	C	-	-	15.2	B					
	2031 Casino with Mitigation	62.9	E	9.5	A	34.0	C	-	-	36.7	D					



Table 13: Friday Evening Casino Peak Hour Capacity Analysis Results: Unsignalized Intersections

Intersection / Approach	Friday Casino Peak Hour					
	No Build		Build Without Mitigation		Build With Mitigation	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Halsted St & Huron St						
NB Left/Thru	8.8	A	9.0	A	9.0	A
EB Approach	18.9	C	22.7	C	22.7	C
Halsted St & Ancona St						
NB Left/Thru	0.0	A	0.0	A	0.0	A
EB Approach	16.3	C	20.1	C	20.1	C
Halsted St & Ohio St						
NB Left/Thru	8.7	A	8.9	A	8.9	A
EB Approach	30.9	D	49.9	E	49.9	E
SB Left/Thru	8.6	A	9.3	A	9.3	A
Milwaukee Ave & Ohio St						
NB Approach	8.6	A	8.6	A	8.6	A
EB Approach	28.5	D	31.1	D	31.1	D
WB Approach	16.2	C	17.4	C	17.4	C
SB Approach	9.0	A	9.2	A	9.2	A
Chicago Ave & Peoria St						
EB Left/Thru	11.4	B	13.0	B	13.0	B
SB Approach	26.4	D	47.8	E	47.8	E
Clinton St/Access Drive & Grand Ave						
NB Approach	11.0	B	Signalized		Signalized	
EB Left/Thru	9.5	A				
EB Thru/Right	23.4	C				
WB Left/Thru	17.4	C				
WB Thru/Right	16.9	C				
SB Approach	11.4	B				
Intersection	18.2	C				
Desplaines St & Grand Ave						
NB Approach	45.8	E	129.4	F	Signalized	
EB Left/Thru	8.9	A	9.8	A		
WB Left/Thru	9.2	A	9.8	A		
SB Approach	40.8	E	136.3	F		



FwP Friday Casino

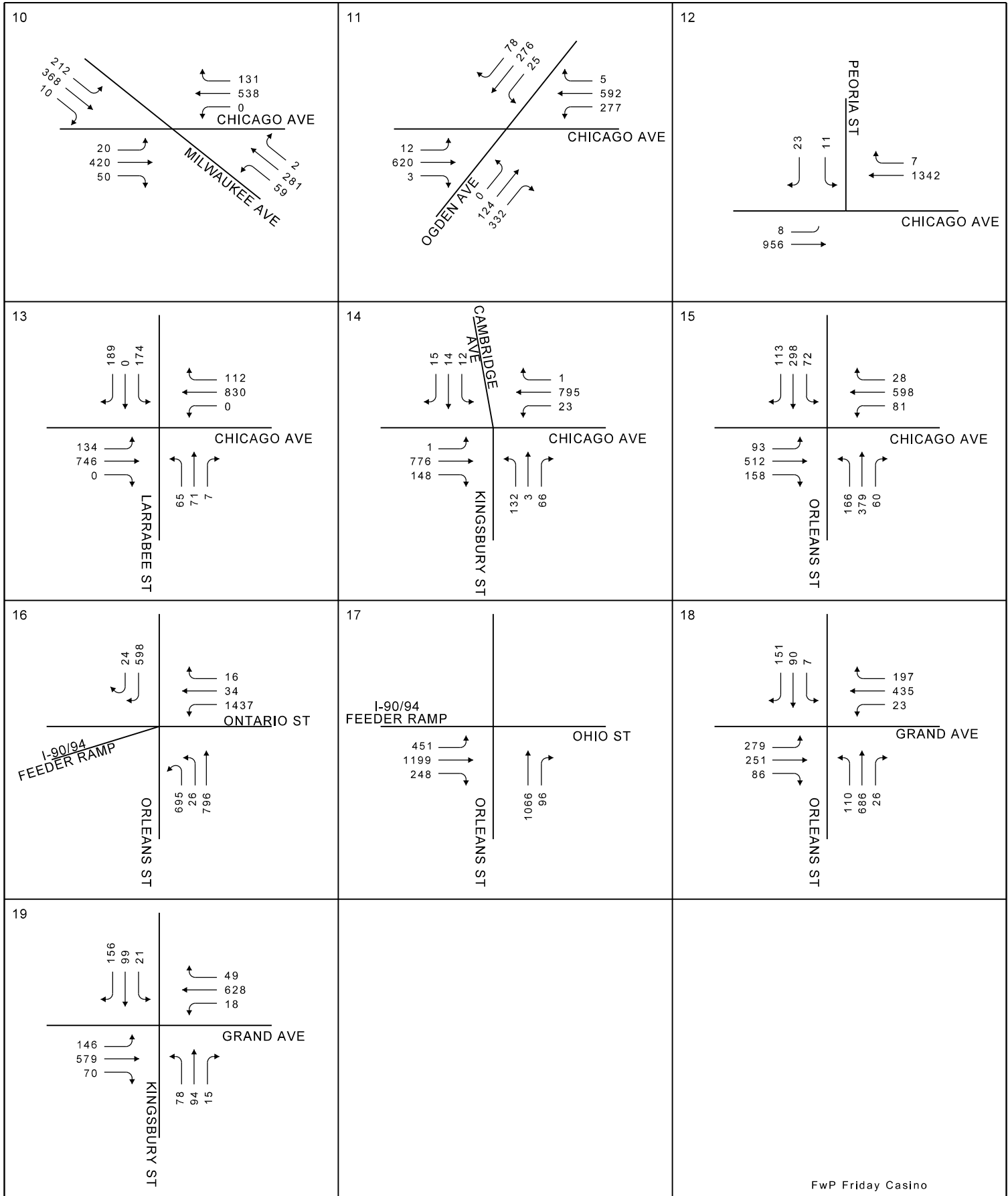
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**FIGURE 18
FUTURE WITH CASINO
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





FwP Friday Casino

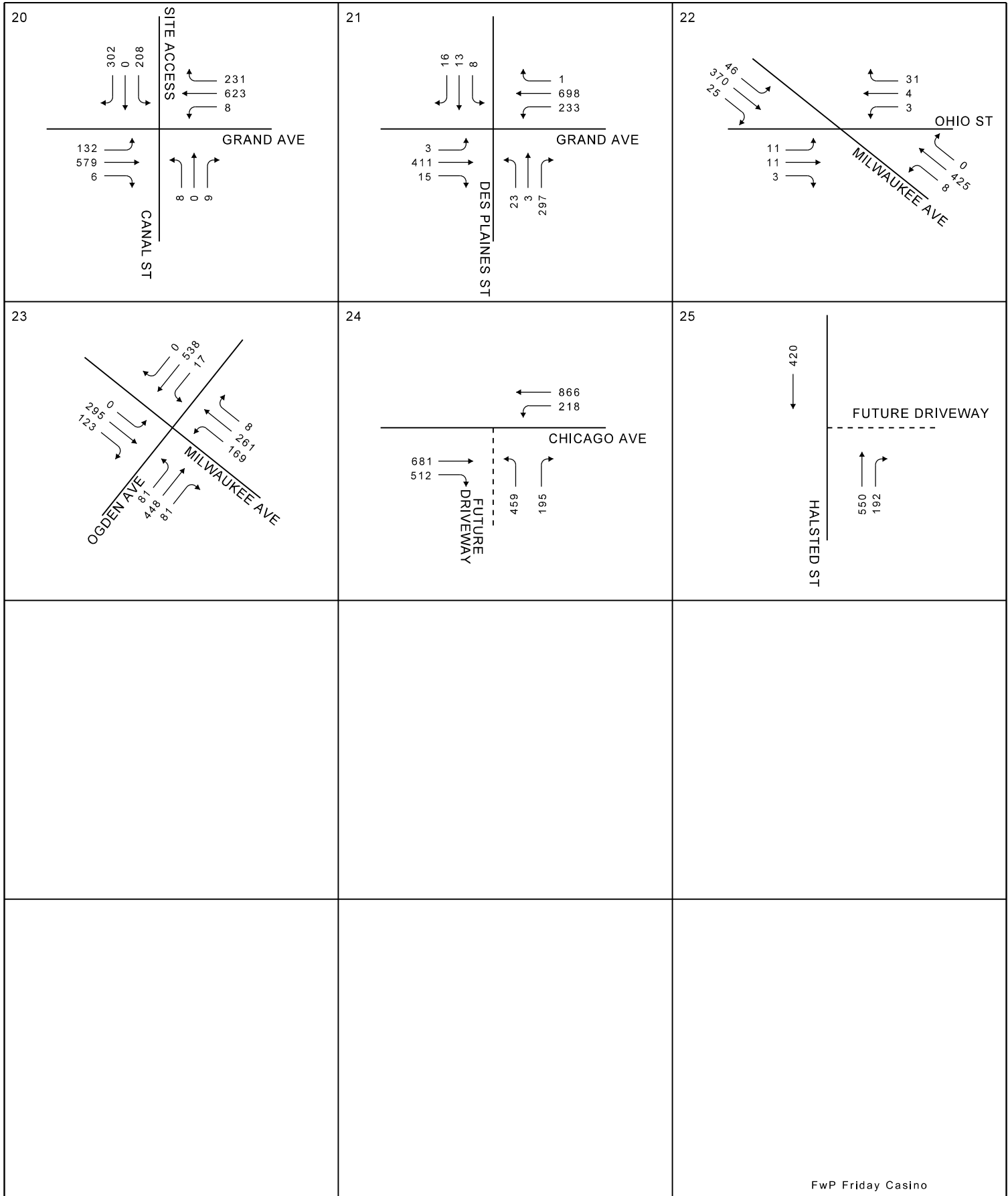
**TRIBUNE
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**FIGURE 18
FUTURE WITH CASINO
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





FwP Friday Casino

**TRIBUNE
PERMANENT FACILITY**

**FIGURE 18
FUTURE WITH CASINO
FRIDAY CASINO PEAK HOUR**

CHICAGO

ILLINOIS





2031 Future With Casino: Saturday Evening Casino Peak Hour

The project traffic volumes generated during the weekday am peak hour is added to the background weekday am peak hour volumes to obtain the future traffic volumes for the study intersections. Future with project traffic volumes for the weekday am peak hour is depicted in Figure 19.

The capacity analysis results at the signalized intersections are summarized in Table 14 and at the unsignalized intersections in Table 15. Proposed mitigation at intersections that are impacted are also summarized in Table 14. Supporting capacity analysis worksheets are provided in Appendix E.

Table 14: Saturday Evening Casino Peak Hour Capacity Analysis Results: Signalized Intersections

Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
Halsted Street and Division Street	2031 No Build	35.4	D	33.1	C	9.9	A	9.5	A	19.8	B	
	2031 Casino	35.1	D	32.8	C	10.7	B	10.9	B	19.6	B	
	2031 Casino with Mitigation	35.1	D	32.8	C	10.7	B	10.9	B	19.6	B	
Halsted Street and North Branch	2031 No Build	13.4	B	-	-	2.7	A	4.5	A	4.5	A	
	2031 Casino	17.2	B	-	-	4.9	A	12.0	B	9.3	A	
	2031 Casino with Mitigation	17.2	B	-	-	4.9	A	12.0	B	9.3	A	
Halsted Street and Chicago Avenue	2031 No Build	15.1	B	15.4	B	17.8	B	23.8	C	18.0	B	Modernize Signal Actuated Controller Add Prot-Perm Phasing On All Lefts Add Southbound Right Turn Overlap 110 Second Cycle Length
	2031 Casino	35.3	D	40.4	D	17.3	B	102.8	F	50.8	D	
	2031 Casino with Mitigation	21.4	C	76.6	E	54.8	D	60.8	E	55.3	E	
Halsted Street and Erie Street	2031 No Build	25.3	C	27.2	C	8.6	A	7.5	A	9.0	A	
	2031 Casino	25.3	C	27.2	C	12.6	B	6.4	A	10.9	B	
	2031 Casino with Mitigation	25.3	C	27.2	C	12.6	B	7.8	A	11.4	B	
Orleans Street and Chicago Avenue	2031 No Build	12.8	B	19.5	B	37.1	D	16.7	B	21.1	C	
	2031 Casino	14.6	B	20.8	C	43.8	D	17.5	B	23.8	C	
	2031 Casino with Mitigation	14.6	B	20.8	C	43.3	D	17.5	B	23.7	C	
Kingsbury Street and Chicago Avenue	2031 No Build	8.4	A	4.2	A	32.7	C	15.8	B	10.1	B	Retime Signal
	2031 Casino	10.6	B	5.1	A	32.7	C	15.8	B	10.5	B	
	2031 Casino with Mitigation	10.6	B	5.1	A	32.7	C	15.8	B	10.5	B	
Larrabee Street and Chicago Avenue	2031 No Build	20.9	C	30.5	C	43.6	D	35.2	D	28.9	C	Retime Signal
	2031 Casino	24.2	C	59.2	E	43.6	D	35.2	D	41.3	D	
	2031 Casino with Mitigation	23.4	C	51.0	D	44.7	D	39.0	D	38.3	D	
Ogden Avenue and Chicago Avenue	2031 No Build	5.0	A	29.0	C	13.8	B	26.9	C	19.8	B	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left Add Northbound Right Turn Overlap
	2031 Casino	6.3	A	114.9	F	40.6	D	26.9	C	56.8	E	
	2031 Casino with Mitigation	25.6	C	27.2	C	20.1	C	25.6	C	25.1	C	
Milwaukee Avenue and Chicago Avenue	2031 No Build	15.0	B	7.3	A	80.3	F	28.1	C	28.5	C	Modernize Signal 110 Second Cycle Length
	2031 Casino	15.7	B	7.2	A	80.1	F	41.3	D	30.5	C	
	2031 Casino with Mitigation	21.1	C	16.7	B	21.8	C	42.8	D	26.0	C	

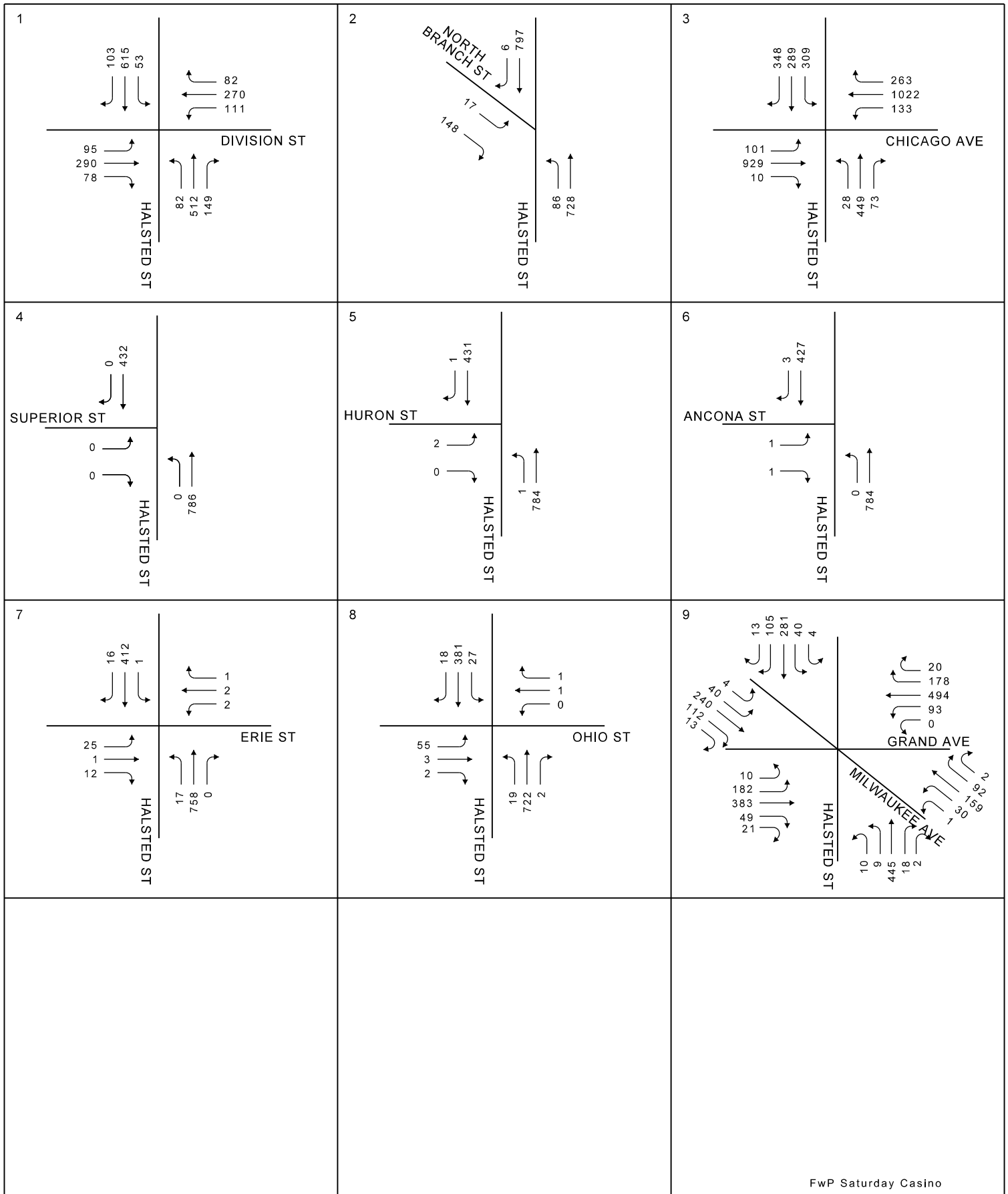


Intersection	Scenario	Eastbound		Westbound		Northbound		Southbound		Intersection		Mitigation				
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS					
Ogden Avenue and Milwaukee Avenue	2031 No Build	59.0	E	17.1	B	21.9	C	10.0	B	26.8	C	Modernize Signal 110 Second Cycle Length Add Perm-Prot Phasing on Westbound Left				
	2031 Casino	59.3	E	19.1	B	26.8	C	36.1	D	34.2	C					
	2031 Casino with Mitigation	15.0	B	29.9	C	24.4	C	46.9	D	30.0	C					
Orleans Street and Ontario Street (Ohio Street On Ramp)	2031 No Build	-	-	27.4	C	11.9	B	69.7	E	27.9	C	Retime Signal				
	2031 Casino	-	-	27.4	C	16.8	B	160.0	F	46.0	D					
	2031 Casino with Mitigation	-	-	37.0	D	17.7	B	66.5	E	34.0	C					
Orleans Street and Ohio Street Off Ramp	2031 No Build	16.6	B	-	-	10.0	B	-	-	14.0	B	Retime Signal				
	2031 Casino	17.8	B	-	-	12.4	B	-	-	15.7	B					
	2031 Casino with Mitigation	17.8	B	-	-	15.4	B	-	-	16.9	B					
Orleans Street and Grand Avenue	2031 No Build	21.4	C	20.7	C	13.7	B	17.7	B	17.8	B	Retime Signal				
	2031 Casino	94.3	F	23.2	C	14.3	B	19.1	B	38.9	D					
	2031 Casino with Mitigation	59.3	E	24.0	C	15.6	B	9.5	A	29.0	C					
Kingsbury Street and Grand Avenue	2031 No Build	11.8	B	12.0	B	20.2	C	16.7	B	13.8	B					
	2031 Casino	14.0	B	12.5	B	20.2	C	16.7	B	14.4	B					
	2031 Casino with Mitigation	14.0	B	20.1	C	20.2	C	16.7	B	17.2	B					
Clinton St / Access Drive and Grand Avenue	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	6.2	A	14.5	B	1.6	A	47.6	D	20.5	C					
	2031 Casino with Mitigation	9.7	A	14.5	B	1.6	A	47.6	D	21.7	C					
Desplaines St & Grand Ave	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	-	-	-	-	-	-	-	-	-	-					
	2031 Casino with Mitigation	2.2	A	1.7	A	37.1	D	38.8	D	9.2	A					
Halsted Street and Milwaukee Avenue and Grand Avenue	2031 No Build	41.4	D	50.6	D	30.2	C	34.5	C	41.9	D	35.7	D	59.6	E	Retime Signal
	2031 Casino	83.2	F	129.9	F	33.0	C	37.5	D	72.0	E	35.7	D	59.6	E	
	2031 Casino with Mitigation	96.7	F	101.1	F	33.0	C	37.5	D	68.9	E	43.0	D	64.7	E	
Chicago Avenue & Proposed Casino Entrance	2031 No Build	-	-	-	-	-	-	-	-	-	-	Install Traffic Signal				
	2031 Casino	11.1	B	14.9	B	77.1	E	-	-	28.5	C					
	2031 Casino with Mitigation	66.6	E	14.8	B	41.9	D	-	-	42.4	D					



Table 15: Saturday Evening Casino Peak Hour Capacity Analysis Results: Unsignalized Intersections

Intersection / Approach	Saturday Casino Peak Hour					
	No Build		Build Without Mitigation		Build With Mitigation	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Halsted St & Huron St						
NB Left/Thru	8.8	A	9.0	A	9.0	A
EB Approach	18.9	C	23.8	C	23.8	C
Halsted St & Ancona St						
NB Left/Thru	0.0	A	0.0	A	0.0	A
EB Approach	16.3	C	21.1	C	21.1	C
Halsted St & Ohio St						
NB Left/Thru	8.7	A	8.9	A	8.9	A
EB Approach	30.9	D	57.3	F	57.3	F
SB Left/Thru	8.6	A	9.4	A	9.4	A
Milwaukee Ave & Ohio St						
NB Approach	8.6	A	8.6	A	8.6	A
EB Approach	28.5	D	31.8	D	31.8	D
WB Approach	16.2	C	17.7	C	17.7	C
SB Approach	9.0	A	9.3	A	9.3	A
Chicago Ave & Peoria St						
EB Left/Thru	11.4	B	13.4	B	13.4	B
SB Approach	26.4	D	56.1	F	56.1	F
Clinton St/Access Drive & Grand Ave						
NB Approach	11.0	B	Signalized		Signalized	
EB Left/Thru	9.5	A				
EB Thru/Right	23.4	C				
WB Left/Thru	17.4	C				
WB Thru/Right	16.9	C				
SB Approach	11.4	B				
Intersection	18.2	C				
Desplaines St & Grand Ave						
NB Approach	45.8	F	167.3	F	Signalized	
EB Left/Thru	8.9	A	10.1	B		
WB Left/Thru	9.2	A	10.0	B		
SB Approach	40.8	E	193.3	F		

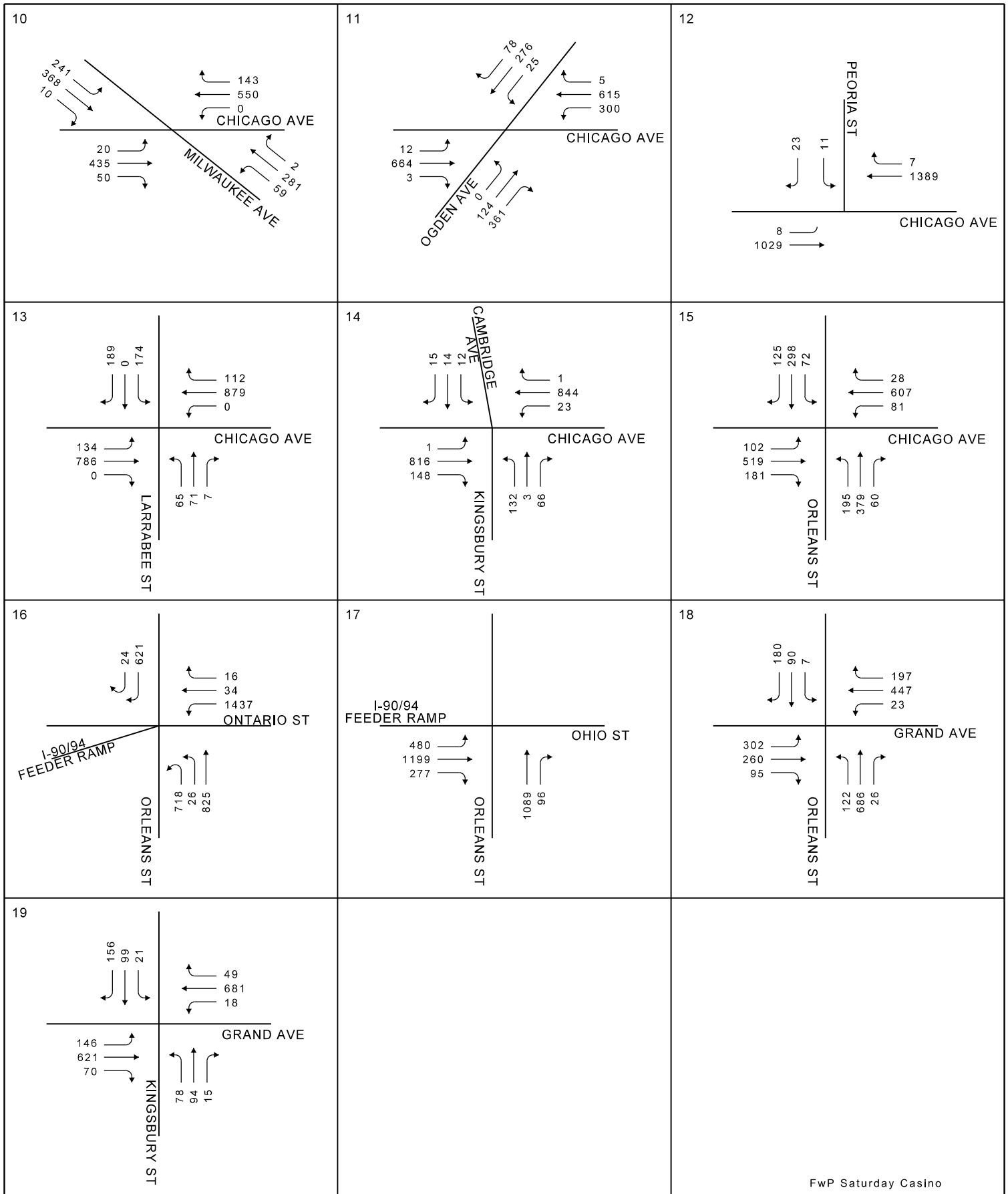


FwP Saturday Casino

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**FIGURE 19
FUTURE WITH CASINO
SATURDAY CASINO PEAK HOUR**
CHICAGO ILLINOIS



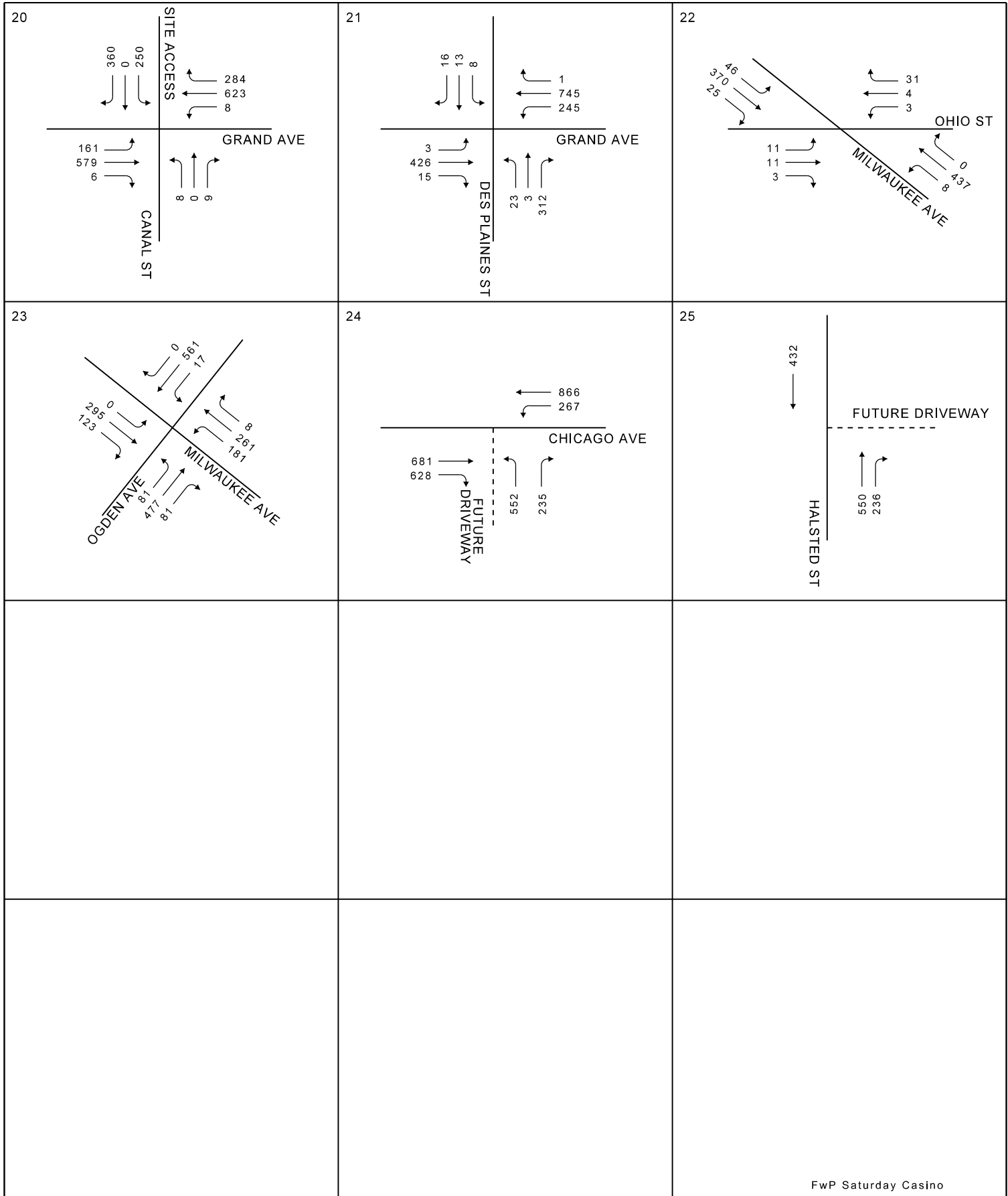


FwP Saturday Casino

**TRIBUNE
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**FIGURE 19
FUTURE WITH CASINO
SATURDAY CASINO PEAK HOUR**
CHICAGO ILLINOIS





FwP Saturday Casino

**TRIBUNE
PERMANENT FACILITY**

**FIGURE 19
FUTURE WITH CASINO
SATURDAY CASINO PEAK HOUR**
CHICAGO ILLINOIS





VI. CONCLUSIONS

Delays increase with the addition of the casino traffic at most intersections during each of the four analysis time periods. Mitigation options have been proposed to decrease delays and increase efficiency of the intersection, balancing delays across all movements. The following is a summary of the proposed mitigation options at the impacted intersections:

Halsted Street and Chicago Avenue

- Modernize traffic signal with actuated controller
- Add protected/permitted left turn phasing for all approaches
- Add southbound right turn overlap
- Modify cycle length to 110 seconds

Kingsbury Street and Chicago Avenue

- Retime traffic signal

Larrabee Street and Chicago Avenue

- Retime traffic signal

Ogden Avenue and Chicago Avenue

- Modernize traffic signal
- Add protected/permitted left turn phasing for westbound approach
- Add northbound right turn overlap
- Modify cycle length to 110 seconds

Milwaukee Avenue and Chicago Avenue

- Modernize traffic signal
- Modify cycle length to 110 seconds

Ogden Avenue and Milwaukee Avenue

- Modernize traffic signal
- Add protected/permitted left turn phasing for westbound approach
- Modify cycle length to 110 seconds

Orleans Street and Ontario Street (Ohio Street On Ramp)

- Retime traffic signal

Orleans Street and Ohio Street Off Ramp

- Retime traffic signal

Orleans Street and Grand Avenue

- Retime traffic signal

Clinton Street/Access Drive and Grand Avenue

- Install traffic signal

Desplaines Street and Grand Avenue

- Install traffic signal

Halsted Street and Milwaukee Avenue and Grand Avenue

- Retime signal

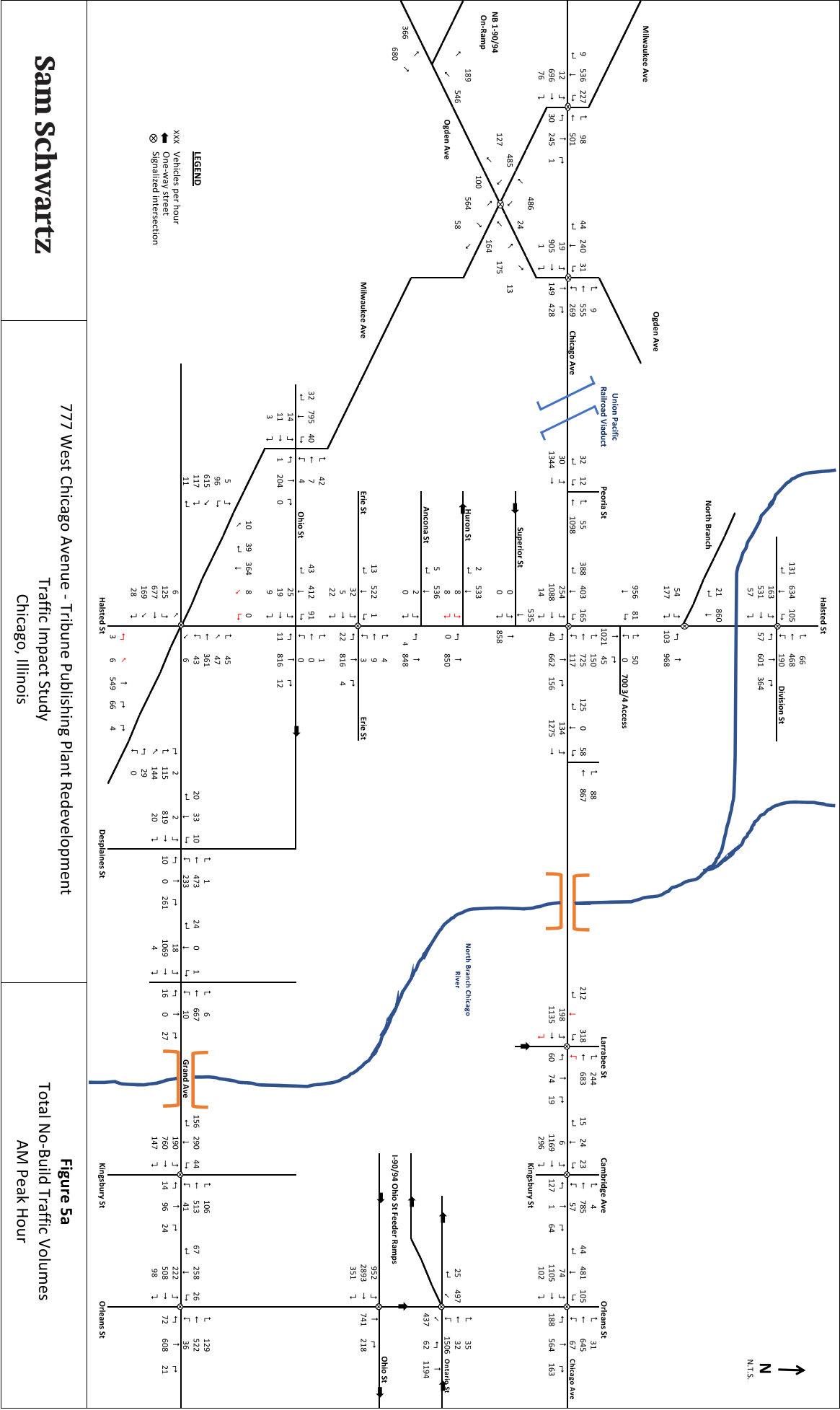
Chicago Avenue and Proposed Casino Entrance

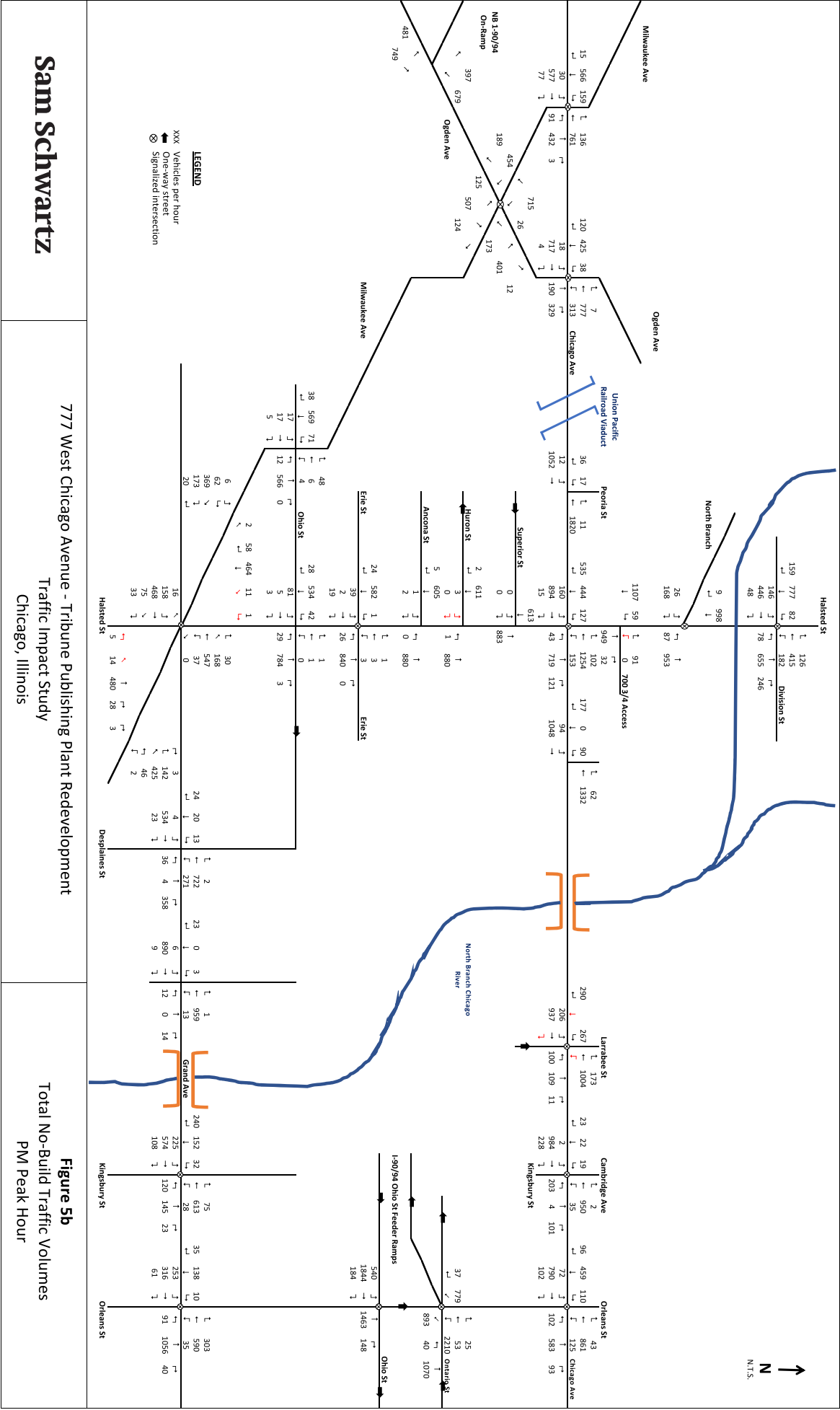
- Install traffic signal
- Construct eastbound right turn lane
- Restripe westbound approach with two through lanes and one left turn lane



APPENDIX A

The River District Traffic Impact Study Excerpts





Sam Schwartz



APPENDIX B

Daily Traffic Volumes