GL INVESTMENT CO PTY LTD
ATF GL No.1 TRUST

TRANSPORT AND ACCESSIBILITY IMPACT ASSESSMENT FOR PROPOSED 161 SUSSEX STREET REDEVELOPMENT, SYDNEY

8 JUNE 2012

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EXECUTIVE SUMMARY

The site is located on the western side of Sussex Street, between King Street and Market Street, as shown on Figure 1. The site is occupied by the Four Point Sheraton Hotel, which extends over Slip Street and part of the Western Distributor located adjacent to the western boundary of the site.

The existing hotel provides some 696 guest rooms and function/banquet facilities of some 1,160m^2. Access to the site is provided via a porte cochere off Sussex Street and bus/coach and service facilities off Slip Street. No on-site parking is provided.

The proposed redevelopment of the site will include:-

- twenty five (25) storey tower, consisting of:
  - 231 new hotel rooms and suites in the lower 14 levels;
  - commercial office (some 5,775m^2 including commercial lobby) above the hotel levels;
- additional convention/banquet facilities and meeting rooms with associated pre function areas (some 1,905m^2 of additional convention/banquet area and some 895m^2 of additional pre function area);
- new/upgraded back of house areas to serve these new convention/banquet areas;
- an activated Slip Street;
- introduction of a vehicle hoist to service the convention/banquet level from Slip Street;
- extend the existing porte cochere on Sussex Street;
- a direct pedestrian through site link to Darling Harbour; and
- new breakout areas and dining areas to cater for the expanded hotel.

The site is well located to public transport services in the area. It is located within close walking distance to Wynyard and Town Hall railway stations, and bus services operating from Wynyard Park and Queen Victoria Building.

The proposed development is located adjacent to existing pedestrian and cycle links in the area. The existing through-site pedestrian link across the Western Distributor to Darling Harbour will be enhanced to improve pedestrian accessibility in the area.

To encourage the use of public transport, a travel demand management approach will be adopted, through a travel access guide to meet the specific needs of the site, hotel guests, employees, conference delegates and visitors.

No on-site parking is proposed in association with the proposed extensions to the hotel. Parking is available for hotel guests within the Secure car park located on the eastern side of Sussex Street (opposite the hotel).

Access arrangements for the hotel will be retained via the porte cochere off Sussex Street and bus/coach and service vehicle facilities off Slip Street. The porte cochere will be extended to provide additional capacity for the set-down and pick-up of hotel guests/conference delegates. The porte cochere will be managed and controlled by hotel personnel in the current manner.

The existing hotel bus and coach facility will be retained from Slip Street and will be managed and controlled by hotel personnel in the current manner. The facility is located on the lower ground floor of the hotel and has capacity for up to four coaches.

The hotel loading dock is located off Slip Street. The facility provides four loading bays and caters for service vehicles ranging from small commercial vehicles to large rigid trucks.

The convention/banquet level will be serviced by a materials hoist (6 metres by 3 metres). Trucks ranging from small commercial vehicles to large rigid trucks, transporting material to and from the new convention area, will do so from Slip Street. A traffic management plan will be implemented to manage and control the loading and unloading of vehicles adjacent to the hoist in Slip Street.

The Slip Street area is to be enhanced to activate the area and improve pedestrian amenity, as agreed with the City of Sydney and SHFA. Kerbs will be removed from the area and pedestrian delineation established by the use of bollards.

The additional traffic generated by the proposed redevelopment has been assessed using the SIDRA computer program. The SIDRA analysis found that the additional traffic will be able to be catered for on the surrounding road network. Intersections in the vicinity of the site will continue to operate at a good to satisfactory level of service during peak periods.

At this stage the overall construction methodology, process and staging has not been finalised. As outlined with RMS and as the subject of ongoing negotiations, an overall construction traffic management plan will be prepared prior to the commencement of work, taking into account matters raised and discussed with the authorities. Agreement in principle has been gained from the authorities for a construction works zone to be located in Sussex Street (north of Market Street). Work adjacent to and over the Western Distributor will be undertaken during the evening period.

The Director General's requirements are summarised in paragraph 1.4 and discussed in paragraphs 3.57 to 3.65 of Chapter 3 in the following report.

1. INTRODUCTION

1.1 Colston Budd Hunt & Kafes Pty Ltd has been commissioned by GL Investment Co Pty Ltd ATF GL No. 1 Trust to prepare the Transport and Accessibility Impact Assessment for the proposed redevelopment of 161 Sussex Street Sydney. The site is located on the western side of Sussex Street, between King Street and Market Street, as shown on Figure 1. The site extends over Slip Street and part of the Western Distributor, located adjacent to the western boundary of the site.

1.2 The existing four star hotel provides some 696 guest rooms and function/banquet facilities of some 1,160m^2. Access to the site is provided via a porte cochere off Sussex Street and bus/coach and service facilities off Slip Street. No on-site parking is provided.

1.3 The proposed redevelopment of the site will include:-

- twenty five (25) storey tower, consisting of:
  - 231 new hotel rooms and suites in the lower 14 levels;
  - commercial office (some 5,775m^2 including commercial lobby) above the hotel levels;
- additional convention/banquet facilities and meeting rooms with associated pre function areas (some 1,905m^2 of additional convention/banquet area and some 895m^2 of additional pre function area);
- new/upgraded back of house areas to serve these new convention/banquet areas;
- an activated Slip Street;
- introduction of a vehicle hoist to service the convention/banquet level from Slip Street;
- extend the existing porte cochere on Sussex Street;

- a direct pedestrian through site link to Darling Harbour; and
- new breakout areas and dining areas to cater for the expanded hotel.

1.4 The Director-General's Requirements with regards to transport and accessibility are as follows:-

"8. Transport and Accessibility (construction and Operation)

- ***Prepare a Transport & Accessibility Impact Assessment that:***
  - ***Estimates the total trips generated for all purposes by the proposal;*** *(refer to paragraphs 3.35 to 3.47)*
  - ***Assesses the impacts of additional traffic on the road network;*** *(refer to paragraphs 3.35 to 3.47)*
  - ***Identifies measures to manage travel demand that supports the use of public and non-car transport modes;*** *(refer to paragraphs 3.3 to 3.20)*
  - ***Assesses impacts regarding the proposed Haymarket to Circular Quay light rail corridor;*** *(refer to paragraphs 3.16 to 3.17)*
  - ***Provides for retention of the existing through-site pedestrian access across the Western Distributor to Darling Harbour, or an alternative through-site link.*** *(refer to paragraphs 3.10 to 3.15)*
- ***Consideration of the potential for sustainable travel initiatives for workers and visitors, particularly, the provision of end-of-trip facilities and on-site bicycle parking.*** *(refer to paragraphs 3.3 to 3.20)*
- ***Assessment and details of traffic impacts during construction and how these will be managed, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management approach;*** *(refer to paragraphs 3.48 to 3.56)*

- ***Assessment and details of the impact on the Western Distributor, in consultation with Roads and Maritime Services, to ensure the development (during construction and operation) does not adversely impact on its safe and efficient operation.*** *(refer to paragraphs 3.48 to 3.56)*

- ***Relevant Policies and Guidelines:***

  - ***Guide to Traffic Generating Development (RTA); and***
  - ***NSW Planning Guidelines for Walking and Cycling."***

1.5 Our assessment is set down through the following chapters:-

- Chapter 2 - Describing existing transport context;

- Chapter 3 - Setting down the transport and accessibility impact assessment, including addressing the Director-General's Requirements.

2. EXISTING TRANSPORT CONTEXT

Site Location

2.1 The site is located on the western side of Sussex Street, between King Street and Market Street, as shown on Figure 1. The site extends over Slip Street and part of the Western Distributor located adjacent to the western boundary of the site.

2.2 The existing hotel provides some 696 guest rooms and function/banquet facilities of some 1,160m^2. Access to the site is provided via a porte cochere off Sussex Street and bus/coach and service facilities off Slip Street. No on-site parking is provided.

2.3 The site is bounded by Sussex Street to the east, the Western Distributor to the north and west, and the Market Street on-ramp to the Western Distributor to the south. A through-site pedestrian link is provided across the Western Distributor to Darling Harbour.

2.4 The area in the vicinity of the site is characterised by commercial and residential buildings of varying heights. Other significant uses in the area include Darling Harbour, Cockle Bay Wharf and Sydney Aquarium located to the west and south-west, Darling Park located to the south, King Street Wharf located to the north-west and Sydney CBD located to the east.

2.5 The site has good access to existing public transport and is close to major public transport nodes within the CBD. Wynyard and Town Hall railway stations are within some 5 to 10 minutes walking distance. These are major stations on the Cityrail network and provide two of the major stops within the CBD. All

suburban rail services to and through the City stop at one or both of these stations.

2.6 Numerous bus services operate along many of the streets within the vicinity of the site, with major bus facilities located at Wynyard Park and Queen Victoria Building bus terminus. Bus services provide links to areas north, east, inner west and south.

Road Network

2.7 The road network in the vicinity of the site includes Sussex Street, Market Street, King Street, Kent Street, Western Distributor, Slip Street and Wheat Road. Sussex Street is located adjacent to the eastern boundary of the site and provides the main frontage to the hotel. Adjacent to the site Sussex Street provides a one-way southbound carriageway south of King Street. North of King Street and south of Druitt Street, Sussex Street provides an undivided two-way carriageway. Adjacent to the site Sussex Street provides two southbound traffic lanes and kerbside parking permitted clear of intersections. The intersections of Sussex Street/King Street and Sussex Street/Market Street are traffic signal controlled intersections. Pedestrian crossings are provided across all approaches to the intersections.

2.8 King Street is located to the north of the site and provides a one-way eastbound carriageway between Sussex Street and Elizabeth Street. It provides direct access to the City from the Western Distributor. King Street provides three eastbound traffic lanes, clear of intersections. King Street intersects with Sussex Street, York Street and George Street at signalised intersections.

2.9 Market Street is located to the south of the site and provides a westbound one-way traffic route through the city. Between Sussex Street and Kent Street, Market Street provides a two-way road link. Market Street typically provides two westbound traffic lanes with direct access onto the Western Distributor from its signalised intersection with Sussex Street. In the vicinity of the site on-street parking is generally not permitted along Market Street.

2.10 Kent Street is located to the east of the site and combines with Sussex Street to provide a one-way pair traffic route through the western part of the city. Kent Street is one-way northbound between Liverpool Street in the south and Erskine Street in the north. North of Erskine Street, Kent Street provides an undivided two-way carriageway. In the vicinity of the site Kent Street provides a one-way northbound carriageway with two northbound traffic lanes and kerbside parking permitted, clear of intersections.

2.11 The Western Distributor is located adjacent to the western boundary of the site and provides a six lane divided carriageway with on and off freeway ramps at Market Street and King Street respectively. The northbound carriageway of the Western Distributor provides access to the Harbour Bridge and northern suburbs. The southbound carriageway provides access to Harbour Street, Victoria Road and City West Link.

2.12 Slip Street intersects with Sussex Street to the north of the site and extends to the south beneath King Street, Market Street and the Four Points Hotel to provide access at its southern end to Darling Park. Slip Street provides a two-way service road accessing loading docks and service areas for the Four Points Hotel and adjacent developments. Slip Street intersects with Sussex Street at an unsignalised intersection.

2.13 Wheat Street is located to the west of the site and provides a northbound one-way service road between Harbour Street in the south and Shelley Street in the north. It provides one northbound traffic lane with kerbs side/indented parking for services vehicles and buses/coaches permitted within restricted areas. Wheat Street provides service access to Cockle Bay Wharf and Sydney Aquarium.

2.14 There are strong pedestrian desire lines and pedestrian travel paths along Sussex Street and Market Street in the vicinity of the site. There is a through-site pedestrian link across the Western Distributor and a pedestrian bridge at Market Street linking to Darling Harbour and Cockle Bay.

Traffic Flows

2.15 In order to gauge traffic conditions, counts were undertaken during the morning and afternoon peak periods at the following intersections:-

- Sussex Street/Market Street;
- Sussex Street/King Street;
- Sussex Street/Slip Street; and
- Sussex Street/Erskine Street.

2.16 The results of the surveys are shown on Figures 2 and 3, and summarised in Table 2.1.

2.17 This table shows that Sussex Street, north of King Street, carried some 1100 to 1800 vehicles per hour two-way during the morning and afternoon peak hour periods. South of King Street, Sussex Street carries some 750 to 1550 vehicles per hour one-way during peak periods.

Table 2.1: Existing Two-Way (Sum of Both Directions) Peak Hour Traffic Flows		
Road/Location	**Weekday Morning**	**Weekday Afternoon**
Sussex Street		
- north of Erskine Street	1135	1135
- north of Slip Street	1495	1720
- north of King Street	1485	1805
- north of Market Street	1025(1)	1550(1)
- south of Market Street	985(1)	765(1)
Erskine Street		
- east of Sussex Street	465	650
- west of Sussex Street	440	380
King Street		
- east of Sussex Street	1435(1)	780(1)
Market Street		
- east of Sussex Street	1120	1510
Western Distributor On Ramp		
- west of Sussex Street	980(1)	2075(1)
Western Distributor Off Ramp		
- west of Sussex Street	2465(1)	1085(1)
Slip Street		
- west of Sussex Street	45	55

(1) One-Way Traffic Flow

2.18 Traffic flows on Market Street were some 1100 to 1500 vehicles per hour two-way during weekday peak periods. Traffic flows on King Street were some 750 to 1450 vehicles per hour one-way during peak periods.

2.19 Traffic flows on Erskine Street were some 350 to 650 vehicles per hour two-way during the morning and afternoon peak periods.

2.20 Peak period traffic flows on the Western Distributor on and off ramps were some 950 to 2500 vehicles per hour one-way.

2.21 Traffic flows on Slip Street were some 40 to 60 vehicles per hour two-way during peak periods.

Intersection Operation

2.22 The capacity of the road network is largely determined by the capacity of its intersections to cater for traffic flows. The surveyed intersections shown in Figures 2 and 3 have been analysed using the SIDRA program.

2.23 The SIDRA program simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For roundabouts, give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.24 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.25 The SIDRA analysis found that the signalised intersections of Sussex Street/Market Street and Sussex Street/King Street are operating with average delays of less than 30 seconds per vehicle during the morning and afternoon peak periods. This represents a level of service B/C, which is a satisfactory level of intersection operation.

2.26 The signalised intersection of Sussex Street and Erskine Street is operating with average delays of less than 25 seconds per vehicle during peak periods. This represents a level of service B, which is a good level of intersection operation.

2.27 The SIDRA analysis found that the unsignalised intersection of Sussex Street and Slip Street is operating with average delays for all movements, with the exception

of the right turn out of Slip Street into Sussex Street, of less than 15 seconds per vehicle during the morning and afternoon peak periods. This represents a level of service A/B, which is a satisfactory level of intersection operation. It should be noted that the right turn movement out of Slip Street into Sussex Street is a small movement. This movement was observed to use gaps in the traffic stream created by up-stream and down-stream traffic signals.

Existing Hotel Traffic Generation

2.28 In addition to the intersection traffic counts, morning and afternoon peak period traffic counts were undertaken at the existing hotel porte cochere on Sussex Street and the bus/coach set-down and pick-up off Slip Street. The traffic counts found that the hotel porte cochere generated some 100 vehicles per hour two-way (50 vehicles in and 50 vehicles out) during the morning and some 60 vehicles per hour two-way (30 vehicles in and 30 vehicles out) during the afternoon peak period. During the evening period (7.00pm to 8.00pm) the porte cochere generated some 90 vehicles per hour two-way (45 vehicles in and 45 vehicles out).

2.29 The bus/coach set-down and pick-up area off Slip Street was found to generate some four buses during the morning (7.30am to 8.30am) and some two buses during the afternoon (4.30pm to 5.30pm) peak periods.

2.30 In regards to the use of the function/banquet facilities, the peak activity of these facilities was found to be during evening periods (typically Friday and Saturday evenings), which do not coincide with the on-road peak period. The size of the conference/functions was found to be range from some 20 to 150 guests during day-time functions, with larger function of some 300 to 400 guests occurring during the evening period.

2.31 The traffic generation of the functions/banquets are included in the existing traffic counts undertaken at the hotel porte cochere on Sussex Street and within the bus set-down/pick-up area off Slip Street.

Parking Conditions

2.32 The hotel does not provide on-site parking. Parking is available for hotel guests within the Secure car park located on the eastern side of Sussex Street (opposite the hotel). The hotel has an arrangement with the car park operator to issues parking permits to its guests for the use of the car park. The Secure car park provides some 745 parking spaces over a number of levels. In order to establish parking conditions within the car park, surveys were undertaken on a typical weekday (Thursday 15 March 2012). The surveys counted the number of vehicles parked in the car park between 7.30am and 9.30pm.

2.33 The results of the parking survey is summarised in Table 2.2. This table shows that the busiest time for the car park was during the middle of the day. At this time some 590 vehicles were parked within the car park (parking utlisation of some 79%). Some 155 vacant spaces were available.

2.34 It should be noted that on the day of the survey the hotel was 100% occupied (some 630 guest rooms) and some 76 parking permits (50 staff permits and 26 hotel guest permits) were issued.

Table 2.2: Secure Car Park Parking Surveys (Thursday 15 March 2012)	
Time	**Number of Vehicles Parked**
7.30am	155
9.30am	500
11.30am	590
1.30pm	575
3.30pm	490
5.30pm	385
7.30pm	230
9.30pm	170
Supply	**745 spaces**

Public Transport

2.35 The site is located close to major public transport routes and nodes within the CBD, as shown on Figure 4. Wynyard and Town Hall railway stations are within some 5 to 10 minutes walking distance. These are major stations on the Cityrail network and provide two of the major stops within the CBD. All suburban rail services to and through the City stop at one or both of these stations.

2.36 Rail services operate on the Airport and East Hills Line, Bankstown Line, Eastern Suburbs and Illawarra Line, Inner West Line, North Shore and Western Line, Northern Line and Southern Line.

2.37 Numerous bus services operate along many of the streets within the vicinity of the site, with major bus facilities located at Wynyard Park and Queen Victoria Building bus terminus. Bus services provide links to areas north, east, inner west and south. A number of services also operate along Market Street, King Street, Clarence Street and York Street.

2.38 Traffic signals in the CBD, including those close to the site at Sussex Street/King Street and Sussex Street/Market Street, include signalised pedestrian crossings. As previously discussed, there is also a through-site pedestrian link across the Western Distributor to Darling Harbour.

2.39 The City of Sydney bicycle network, as shown on Figure 5, includes a mix of on-road cycleways and shared cycle routes. In the vicinity of the site these routes include Sussex Street adjacent to the site, King Street to the north, Pyrmont Bridge to the west, and Kent Street and Clarence Street to the east.

2.40 There is a taxi rank on the western side of Sussex Street, close to the site. Thus the site is readily accessible by excellent public transport services, including rail, bus and taxi. It is also readily accessible by walking and cycling.

3. TRAFFIC AND ACCESSIBILITY IMPACT ASSESSMENT

3.1 The proposed redevelopment of the site will include:-

- twenty five (25) storey tower, consisting of:
  - 231 new hotel rooms and suites in the lower 14 levels;
  - commercial office (some 5,775m^2 including commercial lobby) above the hotel levels;
- additional convention/banquet facilities and meeting rooms with associated pre function areas (some 1,905m^2 of additional convention/banquet area and some 895m^2 of additional pre function area);
- new/upgraded back of house areas to serve these new convention/banquet areas;
- an activated Slip Street;
- introduction of a vehicle hoist to service the convention/banquet level from Slip Street;
- extend the existing porte cochere on Sussex Street;
- a direct pedestrian through site link to Darling Harbour; and
- new breakout areas and dining areas to cater for the expanded hotel.

3.2 This chapter examines the transport implications of the proposed extensions through the following sections:-

- policy context;
- public transport, walking and cycling;
- light rail;
- travel access guide;
- parking provision;

- access arrangements;
- service vehicle and coach parking arrangements;
- traffic generation and effects;
- principles of construction traffic management;
- Director-General's requirements; and
- conclusion.

Policy Context

Metropolitan Transport Plan

3.3 The Metropolitan Transport Plan – Connecting the City of Cities has four key policy objectives:

- commuting to work easily and quickly;
- transport and services accessible to all members of the community;
- an efficient, integrated and customer focused public transport system; and
- revitalised neighbourhoods with improved transport hubs.

3.4 It includes a target of 28 per cent of trips to work in the Sydney Metropolitan Region to be undertaken by public transport by 2016, compared to some 22 per cent in 2006.

3.5 To help achieve these objectives, it identifies, in conjunction with the metropolitan strategy, key areas of future housing and employment growth in Sydney to 2020 and 2036. Additionally, it outlines a 10 year funding program to 2020 for the following transport projects:-

- rail line extensions for more platforms at CBD stations;
- rail lines to north-west and south-west Sydney;

- light rail in the CBD and further extension to the Inner West;
- more air conditioned train carriages;
- 1,000 additional buses;
- completion of the 43 strategic bus corridors across Sydney;
- completion of the highest priority missing links in the Sydney Strategic Cycleway Network.

NSW 2021

3.6 NSW 2021: A Plan to Make NSW Number One sets targets to increase the proportion of commuter trips made by public transport for various areas within Sydney by 2016, including:-

- 80 per cent in the Sydney CBD;
- 50 per cent in the Parramatta CBD;
- 20 per cent in the Liverpool CBD; and
- 25 per cent in the Penrith CBD.

3.7 It also has targets to:-

- improve road safety and reduce fatalities to 4.3 per 100,000 population by 2016;
- double the mode share of bicycle trips made in the metropolitan area by 2016; and
- increase the proportion of the population living within 30 minutes by public transport of a city or major centre in the metropolitan area.

Integrated Land Use and Transport Policy Package (ILUT)

3.8 These policies aim to ensure that urban structure, building forms, land use locations, development designs, subdivision locations and street layouts help achieve the following planning objectives:-

(a) improve accessibility to housing, employment and services by walking, cycling, and public transport;

(b) improve the choice of transport and reducing dependence solely on cars for travel purposes;

(c) moderate growth in the demand for travel and the distances travelled, especially by car; and

(d) support the efficient and viable operation of public transport services.

3.9 The following sections discuss how the proposed development satisfies these objectives and the measures proposed to achieve them.

Public Transport, Walking and Cycling

3.10 As previously discussed, the site is well located to public transport services in the area. It is located within close walking distance to Wynyard and Town Hall railway stations. All suburban rail services to and through the city stop at one or both of these stations.

3.11 Bus services from major bus facilities located at Wynyard Park and Queen Victoria Building also link the site to areas to the north, east, inner west and south. A

number of services also operate along Market Street, King Street, Clarence Street and York Street.

3.12 The proposed development provides opportunities to strengthen demand for these public transport services. Public transport services offer viable alternatives to travel by modes other than car.

3.13 The proposed development is located adjacent to existing pedestrian and cycle links in the area. The existing through-site pedestrian link across the Western Distributor to Darling Harbour will be enhanced to improve pedestrian accessibility in the area.

3.14 The proposed development is close to existing public transport services, and will therefore be readily accessible by public transport. To support accessibility by bicycles, appropriate bicycle parking and end-of-trip facilities will be provided in accordance with Council and DGR's requirements.

3.15 The proposed development will therefore satisfy the objectives of the Metropolitan Transport Plan, NSW 2021 and Integrated Land Use and Transport policy package as follows:-

- enabling employees and hotel guests to readily access buses close to the site, for journeys to work and other travel (Metropolitan Transport Plan objectives);

- providing pedestrian connections within and through the site, to improve accessibility for employees, hotel guests as well as the general public (Metropolitan Transport Plan objectives);

- no on-site parking is proposed. This will encourage public transport use and increase the proportion of journey to work trips by public transport (Metropolitan Transport Plan objectives);

- provide hotel accommodation and conference facilities close to transport facilities to reduce dependence on travel by car (ILUT principle);

- being located within the CBD, which is readily accessible by public transport (ILUT principle);

- greater employment density will provide more potential customers for the existing public transport services and hence support their efficient and viable operation ((Metropolitan Transport Plan objectives); and

- provision of a bus/coach set-down and pick-up area within the proposed develop will encourage the use of public transport (Metropolitan Transport Plan objectives).

Light Rail

3.16 While there have been many discussions and reports prepared on light rail for the CBD, including a route along Sussex Street to Barangaroo, there are no formal or endorsed designs or plans for the route. The Sussex Street route included a one-way loop service running along Sussex Street, Hickson Road and George Street. The route would pass directly in front of the site and would connect to major transport facilities. The proposed development is set back behind the Sussex Street footpath alignment and as such will not conflict with any future light rail route along Sussex Street.

3.17 The light rail route will provide a high frequency, high capacity service through the CBD linking to Barangaroo, The Rocks, Circular Quay, Wynyard, Town Hall and Central. The proposed facility will enhance and improve access to public transport services.

Travel Access Guide

3.18 To encourage travel modes other than private vehicle, a travel demand management approach should be adopted, through a travel access guide to meet the specific needs of the site, hotel guests, employees, conference delegates and visitors. The specific requirements and needs of the employees and hotel guests/conference delegates will be incorporated in the work place travel plan and transport access guide to support the objectives of encouraging the use of public transport.

3.19 The principles of the work place travel plan and travel access guide will include the following:-

- encourage the use of public transport, including rail services through Wynyard and Town Hall, and bus services through the CBD;
- work with public transport providers to improve services;
- encourage public transport by employees, hotel guests and conference delegates through the provision of information, maps and timetables;
- raise awareness of health benefits of walking (including maps showing walking and cycling routes, including through and adjacent to the site);

- encourage cycling by providing safe and secure bicycle parking, including the provision of lockers and change facilities;

- provide a restrictive parking provision (limited car parking within the Secure car park located opposite the site) consistent with Council's controls and the government's objective of reducing traffic generation.

3.20 The travel access guide should be developed in accordance with the principles identified by Transport NSW and RMS, and distributed with marketing material for the hotel. The travel access guide would assist in delivering sustainable transport objectives by considering the means available for reducing dependence solely on cars for travel purposes, encouraging the use of public transport and supporting the efficient and viable operation of public transport services.

Parking Provision

3.21 No on-site parking is proposed in association with the proposed extensions to the hotel. Parking is available for hotel guests within the Secure car park located on the eastern side of Sussex Street (opposite the hotel).

3.22 As discussed in Chapter 2, the hotel has an arrangement with the car park operator to issue parking permits to its guests for the use of the car park. Surveys undertaken at the hotel (100% occupied) found that some 76 parking permits (50 staff permits and 26 hotel guest permits) were issued on the day. Based on this rate the proposed 231 additional guest rooms would result a parking demand of some 28 spaces.

3.23 In regards to the proposed convention/banquet facilities, the peak activity will be during Friday and Saturday evenings. During the weekday daytime period the

function and banquet facilities are expected to be used by smaller groups of some 200 to 550 guests. Conference delegates/guest attending functions at the hotel would use existing public car parks within the CBD or travel to/from the site by taxi, coach and/or public transport. A proportion of the delegates/guests would also be staying at the hotel. Functions of 550 guests would be expected to have a parking demand of some 50 to 60 spaces.

3.24 Surveys of the Secure car park (discussed in Chapter 2) found that the parking demand of the additional hotel guest rooms and the proposed convention/banquet facilities could be accommodated within the 155 vacant spaces during the daytime. At other times, such as weekday evenings, the car park had substantially more car parking spaces (in excess of 500 vacant spaces after 7.30pm). These spaces will cater for the larger hotel functions, which occur during the evenings.

3.25 In regards to the proposed commercial area, no parking will be provided. This will encourage public transport use and increase the proportion of journey to work trips by public transport.

Access Arrangements

3.26 Access arrangements for the proposed extended hotel will be retained via the existing porte cochere off Sussex Street and bus/coach and service vehicle facilities off Slip Street. The porte cochere will be extended to provide additional capacity for the set-down and pick-up of hotel guests/conference delegates. The modified facility will provide a drive through and passing lane arrangement.

3.27 Separate entry and exit driveways have been designed to cater for cars, taxis and hire cars (including stretched limousines), with appropriate sight lines for entering and exiting traffic. The existing taxi rank and waiting area will be retained on the

southern side of Sussex Street on approach to the porte cochere. Taxis will be hailed from the adjacent rank to pick-up guests/delegates from the hotel porte cochere.

3.28 The porte cochere will be managed and controlled by hotel personnel in the current manner. These staff will assist guests/delegates in and out of waiting vehicles from the kerbside lane of the porte cochere, assist with the transfer of luggage, manage the movement of vehicles through the facility and ensure that vehicles do not park for extended periods within the porte cochere.

3.29 The proposed porte cochere and access arrangements onto Sussex Street have been designed in accordance with the Australian Standard for Parking Facilities Part 1: Off-street car parking (AS2890.1-2004).

Service Vehicle and Coach Parking Arrangements

3.30 The existing hotel bus and coach facility will be retained from Slip Street. The facility is located on the lower ground floor of the hotel and has capacity for up to four coaches. Buses and coaches will approach the facility from the north along Slip Street, turn around at the southern end of Slips Street (at Darling Park) and then drive through/reverse into one of the bus bay. On exit buses and coaches would drive out of the facility in a forward direction onto Slip Street. The bus and coach facility is considered appropriate for the expanded hotel configuration and has been provided in accordance with the Australian Standard for Parking facilities Part 2: Off-street commercial vehicle facilities (AS2890.2-2002).

3.31 The bus and coach facility caters for hotel tour groups and visiting conference groups staying at or visiting the hotel. It provides the main arrival and departure point for large groups of guests/delegates without the need for these groups to

access the hotel via the Sussex Street porte cochere. A separate hotel lobby and reception area is provided on the lower ground floor to cater for these larger groups. This allows for improved management, operation and control of the main porte cochere on Sussex Street.

3.32 The bus and coach facility will be managed and controlled by hotel personnel in the current manner. These staff will assist guests/delegates in and out of waiting coaches, direct visitors to the hotel lobby and reception area, assist with the transfer of luggage, manage the movement of vehicles through the facility and ensure that buses/coaches do not park for extended periods within the facility.

3.33 In addition to buses and coaches, the facility will also cater for taxis to transport conference delegates/visitors at the end of major functions being held at the hotel. Visitors and delegates leaving the function will be directed by hotel staff to waiting taxis at the lower ground floor reception area.

3.34 In regards to service vehicles, the hotel loading dock is located off Slip Street. The facility provides four loading bays and caters for service vehicles ranging from small commercial vehicles to large rigid trucks. The proposed facility is considered appropriate and has been provided in accordance with the Australian Standard for Parking facilities Part 2: Off-street commercial vehicle facilities (AS2890.2-2002).

3.35 The convention/banquet level will be serviced by a materials hoist (6 metres by 3 metres). Trucks ranging from small commercial vehicles to large rigid trucks, transporting material to and from the new convention area, will do so from Slip Street. A traffic management plan will be implemented to manage and control the loading and unloading of vehicles adjacent to the hoist in Slip Street. The loading

and unloading of vehicles and the movement of general traffic along Slip Street will be managed and controlled by qualified traffic marshals.

3.36 The Slip Street area is to be enhanced to activate the area and improve pedestrian amenity, as agreed with the City of Sydney and SHFA. Kerbs will be removed from the area and pedestrian delineation established by the use of bollards.

Traffic Generation and Effects

3.37 Traffic generated by the proposed redevelopment will have its greatest effects during weekday morning and afternoon peak periods. As discussed in Chapter 2, the existing hotel porte cochere generated some 100 vehicles per hour two-way (50 vehicles in and 50 vehicles out) during the morning and some 60 vehicles per hour two-way (30 vehicles in and 30 vehicles out) during the afternoon peak period.

3.38 The bus/coach set-down and pick-up area off Slip Street was found to generate some four buses during the morning (7.30am to 8.30am) and some two buses during the afternoon (4.30pm to 5.30pm) peak periods.

3.39 The expected traffic generation of the proposed hotel expansion would be some 40 additional vehicles per hour two-way during the morning and some 30 additional vehicles per hour two-way during the afternoon peak periods.

3.40 In regards to the additional function/banquet facilities and pre function space, the peak activity will be during Friday and Saturday evenings and hence will not coincide with the morning and afternoon on-road peak periods. Conference delegates/guest attending functions at the hotel would use existing public car parks within the CBD or travel to/from the site by taxi and/or public transport.

3.41 The function and banquet facilities are expected to be used by groups of some 200 to 550 guests during the morning and some 200 guests during the afternoon. Functions of 550 guests would be expected to generate some 170 vehicles per hour two-way during the morning peak period. Functions of 200 guests could generate some 60 per hour two-way during the afternoon peak periods.

3.42 In regards to the proposed commercial area, no on-site parking will be provided. This will encourage public transport use and increase the proportion of journey to work trips by public transport. As a result, the proposed commercial area would have a small traffic generation of some 20 vehicles per hour two-way during peak periods. Commercial tenants and employees could use existing public car parks within the CBD or travel to/from work using existing public transport services.

3.43 The proposed alterations and additions to the exiting hotel would therefore generate some 230 additional vehicles per hour two-way during the morning and some 110 additional vehicles per hour two-way during the afternoon peak periods. The additional development traffic has been assigned to the road network and combined with existing traffic flows, as shown on Figures 2 and 3, and summarised in Table 3.1.

3.44 Table 3.1 shows that flows on Sussex Street would increase by some 40 to 115 vehicles per hour during the morning and by some 20 to 60 vehicles per hour during the afternoon peak periods. Traffic flows on Sussex Street north of Erskine Street would increase by some 20 to 40 vehicles per hour during peak periods.

3.45 Traffic flows on other streets in the vicinity of the site would be some 20 to 40 vehicles per hour during peak periods.

Table 3.1: Existing Two-Way (Sum of Both Directions) Peak Hour Traffic Flows Plus Development Traffic				
Road/Location	**Weekday Morning**		**Weekday Afternoon**	
	Existing	**Plus Development**	**Existing**	**Plus Development**
Sussex Street				
- north of Erskine Street	1135	+40	1135	+20
- north of Slip Street	1495	+75	1720	+40
- north of King Street	1485	+75	1805	+40
- north of Market Street	1025(1)	+115	1550(1)	+60
- south of Market Street	985(1)	+40	765(1)	+20
Erskine Street				
- east of Sussex Street	465	+35	650	+20
- west of Sussex Street	440	-	380	-
King Street				
- east of Sussex Street	1435(1)	-	780(1)	-
Market Street				
- east of Sussex Street	1120	+35	1510	+20
Western Distributor On Ramp				
- west of Sussex Street	980(1)	+40	2075(1)	+20
Western Distributor Off Ramp				
- west of Sussex Street	2465(1)	+40	1085(1)	+20
Slip Street				
- west of Sussex Street	45	-	55	-

(1) One-Way Traffic Flow

3.46 The intersections previously analysed in Chapter 2 were re-analysed with the additional traffic shown on Figures 2 and 3.

3.47 The SIDRA analysis of the expanded development found that the signalised intersections of Sussex Street/Market Street and Sussex Street/King Street would continue to operate with average delays of less than 30 seconds per vehicle during the morning and afternoon peak periods. This represents a level of service B/C, which is a satisfactory level of intersection operation.

3.48 The SIDRA intersection analysis found that the signalised intersection of Sussex Street and Erskine Street would continue to operate with average delays of less than 25 seconds per vehicle during peak periods. This represents a level of service B, which is a good level of intersection operation.

3.49 The SIDRA analysis found that the unsignalised intersection of Sussex Street and Slip Street will operate with average delays for all movements, with the exception of the right turn out of Slip Street into Sussex Street, of less than 15 seconds per vehicle during the morning and afternoon peak periods. This represents a level of service A/B, which is a satisfactory level of intersection operation. As discussed in Chapter 2, the right turn movement out of Slip Street into Sussex Street is a small movement. This movement would continue to use gaps in the traffic stream created by up-stream and down-stream traffic signals.

Principles of Construction Traffic Management

3.50 As outlined with RMS and as the subject of ongoing negotiations, construction of the development will commence with site preparation works, establishment of work zone requirements and the commencement of construction of the development over the Western Distributor. The extension of the development over the freeway will require the drilling and construction of piles and supporting structure adjacent to the northbound and southbound carriageways of the freeway to support the extension of the development.

3.51 Work adjacent to and over the Western Distributor will be undertaken during the evening period and will require the temporary closure of part of the northbound and southbound carriageways of the freeway, adjacent to the construction activity. Where possible, the closure of the Western Distributor, will be staged so as to maintain as far as possible access to/from the Harbour Bridge.

3.52 During construction, when the full closure of either the northbound or southbound carriageways of the Western Distributor are required. traffic will be diverted along the following routes:-

- northbound traffic diversion

  - Western Distributor northbound closed at the King Street off-ramp with northbound traffic diverted via King Street, Kent Street and Clarence Street;
  - Harbour Street northbound carriageway to be closed at Bathurst Street with northbound traffic diverted via Bathurst Street and Kent Street;

- southbound traffic diversion

  - Western Distributor southbound on-ramp closed at the Bradfield Highway (Harbour Bridge) with southbound traffic diverted via York Street, Market Street, Sussex Street and Bathurst Street.

3.53 Following the completion of the piling and construction of the supporting structure, including the erection of the construction platform over the Western Distributor, the closure of the Western Distributor and the diversion of traffic though the city will no longer be required.

3.54 Construction on-street work zones will be established in Sussex Street and Slip Street. Two work zones will be provided in Sussex Street, at the northern and southern ends of the development, and one work zone in Slip Street at the southern end of the site. The provision of the on-street work zones in Sussex Street will need to take into consideration the proximity of the existing traffic lights at the intersection of Sussex Street/Market Street and the use of the

kerbside lane at the northern end of the site as a taxi zone. The on-street work zones will be carefully managed and controlled by qualified traffic controllers at all times, when the work zones are in use. These personnel will manage the movement of construction vehicles to and from the site and pedestrian movements adjacent to the construction activity.

3.55 Pedestrian footpaths adjacent to the site in Sussex Street will be maintained during the construction period. A Class B construction hoarding will be erected along the Sussex Street frontage of the site and a steel gantry will be erected over Slip Street at the southern end of the site. Class A construction fencing and overhead protection will be provided around the balance of the site, where required.

3.56 Openings in the construction fencing and the construction access driveways will be managed and controlled by traffic controllers. The movement of trucks entering and exiting the site will be managed and controlled by traffic controllers.

3.57 The overall principles for traffic management during construction will be:-

- provide a convenient and appropriate environment for pedestrians;
- minimise effects on pedestrian movements and amenity;
- maintain appropriate capacity for pedestrians at all times along Sussex Street;
- maintain convenient access and circulation for public transport services;
- provide appropriate safe fencing/hoardings around the perimeter of the construction site;

- manage and control construction traffic movements to and from the site and on the adjacent road network;

- construction work adjacent to and over the Western Distributor to be carried out during the evening period. This work will require the temporary closure of the freeway during these times and traffic diverted to alternative routes;

- the temporary closure of the freeway adjacent to the site and the diversion of traffic to alternative routes through the city, will be subject to approval by RMS and Council;

- manage and control traffic diversions during the temporary closure of the Western Distributor;

- maintain traffic capacity at intersections and mid block in the vicinity of the site;

- provide on-street work zones in Sussex Street and Slip Street where required;

- minimise loss of on-street parking;

- maintain access to existing facilities in the vicinity of the site;

- restrict construction vehicle activity to designated truck routes through the area (to be identified by the appointed builder);

- construction vehicles to enter and exit the site in a forward direction;

- construction activity to be carried out in accordance with approved hours of construction;

- maintain safety for workers;

- maintain access to public transport and encourage workers to travel to/from the site by these services;

- the preparation of the construction traffic management plan, signage detail, control of pedestrians and control and management of construction activity/vehicles in the vicinity of the site will be the responsibility of the appointed builder.

3.58 At this stage the overall construction methodology, process and staging has not been finalised. As outlined with RMS and as the subject of ongoing negotiations, an overall construction traffic management plan will be prepared prior to the commencement of work, taking into account matters raised and discussed with the authorities. These matters include:-

- the extent, staging and duration of construction activity adjacent to or on the Western Distributor;

- the approved hours of construction activity for work adjacent to or on the Western Distributor. This work will be undertaken during the evening period and will require the temporary closure of part of the northbound and southbound carriageways of the freeway, adjacent to the construction activity;

- during construction, when the full closure of either the northbound or southbound carriageways of the Western Distributor are required, traffic will

be divert along approved alternative routes through the city (subject to approval by RMS and Council);

- the location and hours of use of the proposed on-street work zones in Sussex Street, at the northern and southern ends of the development. Agreement in principle has been gained from the authorities for a construction works zone to be located in Sussex Street (north of Market Street). The location of the works zone will be subject to approval by RMS and will need to take into consideration the proximity of the existing traffic lights at the intersection of Sussex Street/Market Street and the use of the kerbside lane at the northern end of the site as a taxi zone; and

- the restriction of construction vehicle activity to designated truck routes through the area.

Director-General's Requirements

3.59 Requirement No.8 is as follows:-

"8. Transport and Accessibility (construction and Operation)

- ***Prepare a Transport & Accessibility Impact Assessment that:***

  - ***Estimates the total trips generated for all purposes by the proposal;***
  - ***Assesses the impacts of additional traffic on the road network;***
  - ***Identifies measures to manage travel demand that supports the use of public and non-car transport modes;***
  - ***Assesses impacts regarding the proposed Haymarket to Circular Quay light rail corridor; and***

- ***Provides for retention of the existing through-site pedestrian access across the Western Distributor to Darling Harbour, or an alternative through-site link."***

3.60 Traffic generation and traffic effects are discussed in paragraphs 3.35 to 3.47. Reference to the transport policy documents to support the use of public transport and non-car transport modes are discussed in paragraphs 3.3 to 3.20.

3.61 The proposed light rail route and the impact of the proposed development are discussed in paragraphs 3.16 to 3.17.

3.62 The retention of the through-site pedestrian link across the Western Distributor to Darling Harbour, or alternative through-site link is discussed in paragraphs 3.10 to 3.15.

- ***"Consideration of the potential for sustainable travel initiatives for workers and visitors, particularly, the provision of end-of-trip facilities and on-site bicycle parking."***

3.63 Public transport is discussed in paragraphs 3.3 to 3.15. Pedestrians and cycling is discussed in paragraphs 3.10 to 3.15. The proposed light rail is discussed in paragraphs 3.16 to 3.17. The travel access guide is discussed in paragraphs 3.18 to 3.20.

- ***"Assessment and details of traffic impacts during construction and how these will be managed, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management approach."***

3.64 The principles of construction traffic and pedestrian management during construction are discussed in paragraphs 3.48 to 3.56. An overall construction traffic management plan will be prepared prior to the commencement of work, taking into account RMS and Council's requirements and relevant consent conditions.

- ***"Assessment and details of the impact on the Western Distributor, in consultation with Roads and Maritime Services, to ensure the development (during construction and operation) does not adversely impact on its safe and efficient operation."***

3.65 Discussions have been held with RMS and the City of Sydney in relation to the principles of construction traffic management. These discussions have included the proposed construction over the Western Distributor to be undertaken during the evening period and will require the temporary closure of part of the northbound and southbound carriageways of the freeway, adjacent to the construction activity. Where possible, the closure of the Western Distributor will be staged so as to maintain as far as possible access to/from the Harbour Bridge.

3.66 During construction, when full closure of either the northbound or southbound carriageways of the Western Distributor are required, traffic will be diverted during the evening period though the city. Following the completion of construction of the supporting structure, including the erection of the construction platform over the Western Distributor, the closure of the Western Distributor and the diversion of traffic through the city will no longer be required.

- ***"Relevant Policies and Guidelines:***

  - ***Guide to Traffic Generating Development (RTA); and***
  - ***NSW Planning Guidelines for Walking and Cycling."***

3.67 The transport and accessibility impact assessment has been prepared in accordance with these documents.

Conclusion

3.68 In conclusion, the main points relating to the transport and accessibility impact assessment for the proposed development are as follows:-

i) the proposed development is close to existing public transport services and is consistent with government policy objectives to reduce private car travel and encourage public transport use;

ii) a travel access guide will be implemented for the site;

iii) no on-site parking is proposed;

iv) access arrangements, internal circulation, and servicing will be provided in accordance with AS2890.1-2004 and AS2890.2-2002;

v) the convention/banquet level will be serviced by a materials hoist (6 metres by 3 metres) from Slip Street;

vi) a management plan will be prepared and implemented to manage and control the loading and unloading of service vehicles located adjacent to the hoist in Slip Street;

vii) the road network will be able to cater for the additional traffic from the proposed development;

viii) the Director General's requirements are discussed in paragraphs 3.57 to 3.65.

Location Plan

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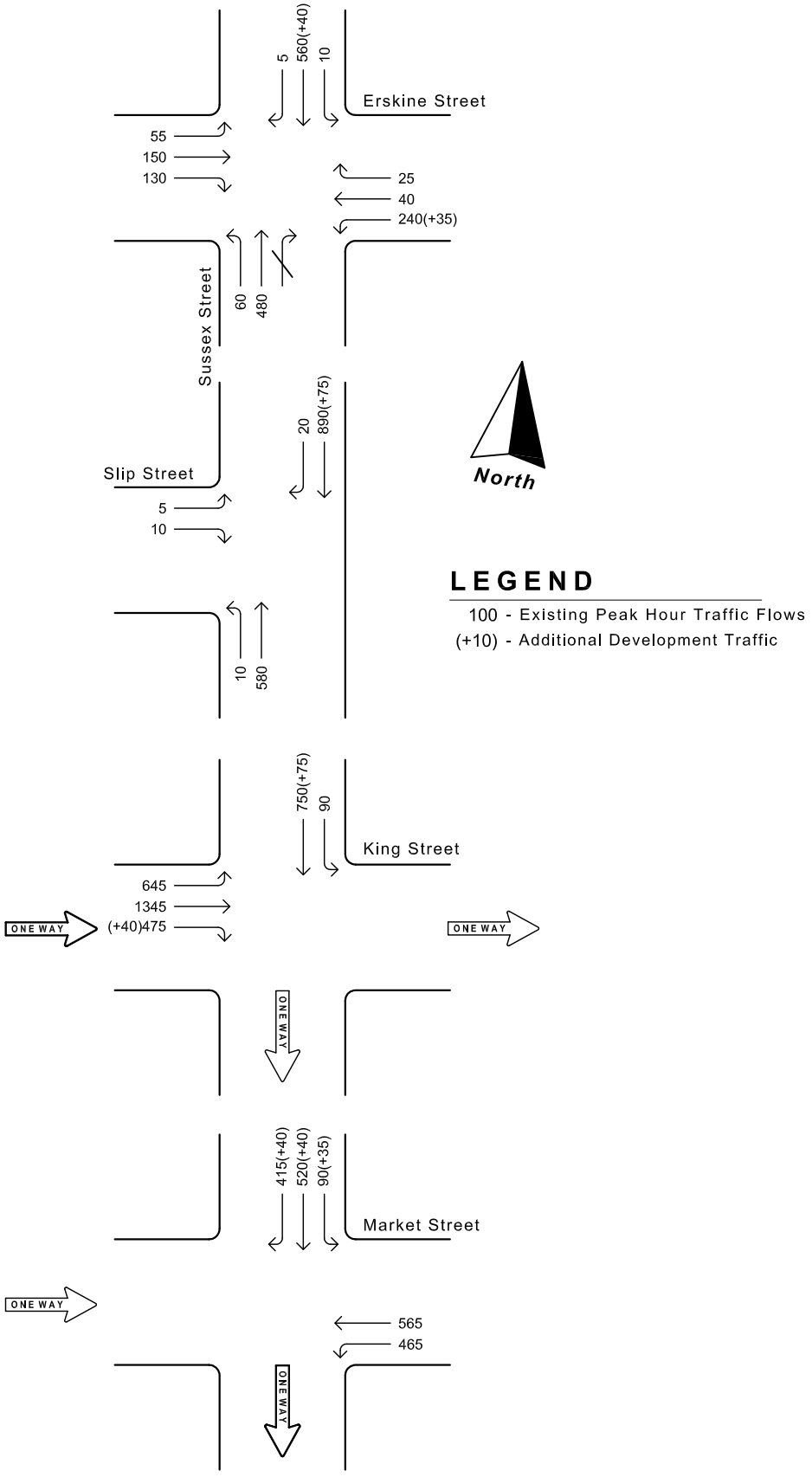
Figure 1



Existing weekday morning peak hour traffic flows plus development traffic

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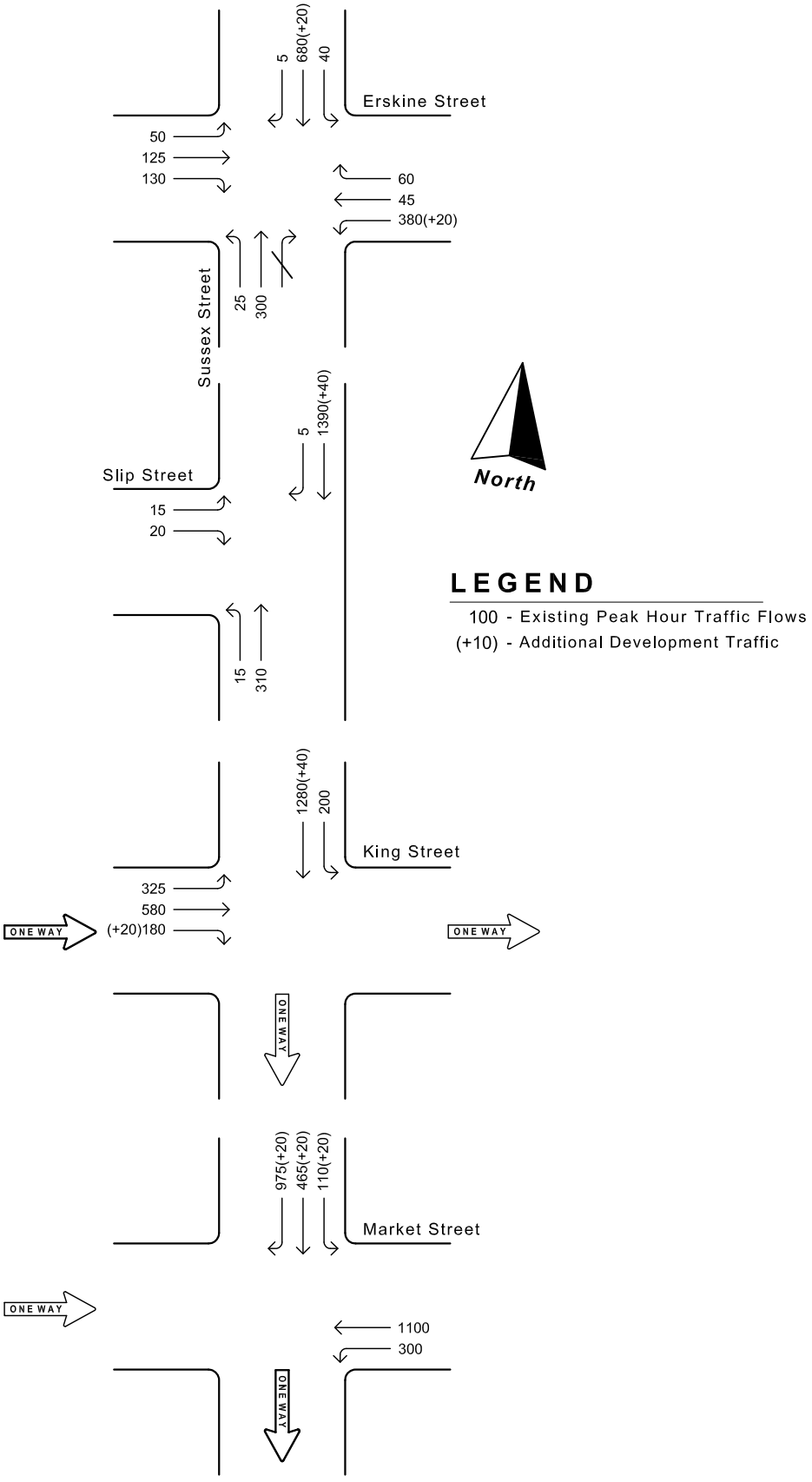
Figure 2



Existing weekday afternoon peak hour traffic flows plus development traffic

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Figure 3