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## **1.0 Purpose of and Need for Action – Federal Highway Administration**

### **1.1 Proposed Action**

The City of Chicago (City) is proposing to close roadways within Jackson Park, Chicago, Illinois to meet the planning and development objectives for Jackson Park as described in the 2018 South Lakefront Framework Plan<sup>1</sup>. The permanent roadway closures include: Cornell Drive between 63<sup>rd</sup> Street and 57<sup>th</sup> Drive, the northbound section of Cornell Drive between 68<sup>th</sup> Street and 65<sup>th</sup> Street, Marquette Drive between Stony Island Avenue and Richards Drive, and the eastbound portion of Midway Plaisance between Stony Island Avenue and Cornell Drive. Closures of the eastbound Midway Plaisance and Cornell Drive between 63<sup>rd</sup> Street and 57<sup>th</sup> Street are necessary to accommodate the development of the Obama Presidential Center. The additional roadway closures will allow for continuous parkland within Jackson Park. The roadway closures do not require any Federal approvals and are therefore considered the baseline condition as well as the No-Action alternative.

The roadway closures may require roadway improvements to mitigate traffic impacts. The potential roadway improvements may be funded through the Federal Highway Administration (FHWA) Federal-Aid Highway Program, which would require approval from FHWA.

### **1.2 Study Area**

The Study Area is located in Chicago, Illinois, and encompasses Jackson Park, a portion of the Midway Plaisance and the surrounding Hyde Park, Woodlawn and South Shore neighborhoods. See Exhibits 1a, 1b and 2 in Appendix A. Jackson Park is bounded by 67<sup>th</sup> Street, Stony Island Avenue, 56<sup>th</sup> Street and Lake Michigan. See Exhibits 1 and 2 in Appendix A. Jackson Park is served by heavily travelled arterial roadways, including Lake Shore Drive (US Route 41) to the east and Stony Island Avenue to the west. Within Jackson Park, 57<sup>th</sup> Street carries east-west traffic from Lake Shore Drive to the Museum of Science and Industry. South of the Museum, 57<sup>th</sup> Street becomes Cornell Drive and carries north-south traffic from the Museum toward park recreational facilities and beyond to residential neighborhoods. These roadway facilities provide an important connection route for westbound morning commuters and eastbound evening commuters between major commuter expressways and the City's Central Business District. Collector roadways within Jackson Park include Hayes Drive and Marquette Drive. Lake Shore Drive north of 57<sup>th</sup> Street and Stony Island Avenue south of 57<sup>th</sup> Street are on the National Highway

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<sup>1</sup> The 2018 South Lakefront Framework Plan is currently under development and is expected to be finalized and approved by the Chicago Park District in 2018.

System, which consists of roadways that are important to the nation's economy, defense and mobility. The Lakefront Trail is parallel to the east side of Lake Shore Drive and serves recreational users, commuters, and tourists.

## **1.3 Project Background**

### **1.3.1 Jackson Park**

Jackson Park is a 547-acre park that is listed on the National Register of Historic Places. With an original design and early improvements dating back to 1871, Jackson Park and the Midway Plaisance (also listed on the National Register of Historic Places) became the site of the 1893 World's Columbian Exposition ("World's Fair"). Dozens of temporary buildings and pavilions were constructed in Jackson Park for the World's Fair. After the World's Fair, most of the buildings were dismantled or destroyed by fire, and Jackson Park underwent several redesigns. Some of the nation's most famous architects, landscape architects and sculptors contributed to the development of Jackson Park and the Midway Plaisance, including Daniel Burnham and Frederick Law Olmsted. Several historic structures can still be found in Jackson Park today, including the Museum of Science and Industry which originally served as the Palace of Fine Arts for the World's Fair.

Today, the historic significance, unique features, recreation facilities, and the Museum of Science and Industry draw regional visitors to Jackson Park. It serves several adjacent neighborhoods as a community park, including South Shore, Woodlawn, and Hyde Park. Recreational resources within the park are frequently used by youth in the area, including students from nearby schools.

### **1.3.2 Roadways within Jackson Park**

The roadways within Jackson Park were originally under the jurisdiction of the South Park District and in 1934 were transferred to the Chicago Park District (CPD). Records show the jurisdiction of these roadways was transferred from the CPD to the City of Chicago in 1959. The date of jurisdictional transfer of Cornell Drive from the City to the Illinois Department of Transportation (IDOT) likely occurred in the mid-1960s when the roadway was widened to provide a linkage from Stony Island Avenue to the new I-90 Chicago Skyway. In the early 2000s, a corridor improvement project along Lake Shore Drive fully reconstructed the pavement between Marquette Drive and I-55 and improved the intersections of Marquette Drive, Hayes Drive, and 57th Street.

### **1.3.3 South Lakefront Framework Plan (SLFP)**

The South Lakefront Framework Plan (SLFP), originally authorized in 1999 by the Chicago Park District, includes three parks: Jackson Park, Washington Park and South Shore Cultural Center Park. The purpose of the SLFP was to "define the changing needs of these parks, to provide a plan to enhance each of the park's commitments to serving the neighboring communities and to preserve the intended historic character." Many of the improvements planned for in the 1999 SLFP have been completed and the Chicago Park District is currently working on an update to the 1999 SLFP which continues to provide a vision of the parks and their function as a whole. The 2018 SLFP will outline recommendations for land use and management over the next several years for Jackson and South Shore Cultural Center Parks. Recently, additional improvements and changes have been proposed to Jackson Park, including the construction of the Obama Presidential Center. These future improvements have provided an

opportunity to update the SLFP as it pertains to Jackson Park and South Shore Cultural Center Park and the transportation network that will support these improvements.

### 1.3.4 Obama Presidential Center (OPC)<sup>2</sup>

The Obama Foundation (Foundation) is privately funding the proposed OPC's design and construction. In late 2014, the University of Chicago submitted a proposal to locate the OPC on the City's South Side on sites in either Jackson Park or Washington Park (see Exhibit 1b). At that time, cities across the country were competing to host the OPC and had also submitted proposals. In March 2015, the Park District Board authorized the transfer of either of the two South Side sites to the City, and the City Council voted to accept the transfer. In May 2015, the Foundation announced the South Side proposal as the winner of the national competition, and a year later chose Jackson Park as the future home of the OPC. An agreement between the City of Chicago and the Foundation to build the OPC in Jackson Park will follow Chicago's planned development review and approval process and is expected to be finalized in 2018. The annual attendance of the OPC is estimated to be 820,000 visitors per year. Each day, the OPC is estimated to generate 700 car trips.

The OPC site is planned on the east side of Stony Island Avenue between 59th and 62nd Streets, and is approximately 20 acres in size. The site includes four buildings that will occupy approximately 3.5 acres of the site. Instead of a large single building placed in the park, the three main buildings have been designed as a campus around a central plaza. The northernmost building, which will house the OPC's museum, has been designed as a vertical experience so that the building itself can occupy a small footprint and take up as little parkland as possible. The middle building (the Forum) consists primarily of programming spaces available to the community and visitor amenity spaces. The southernmost building (the Library) is anticipated to house a new Chicago Public Library branch. The Forum and the Library each have two stories and will be partially below grade so that the park surface rolls up over the tops of the buildings and covers both with landscaped areas that will provide new opportunities for recreation. The remainder of the OPC site will include new public pathways for pedestrians and bicyclists, a nature walk along the lagoon, a sloped great lawn that can accommodate a sledding hill, a community garden and play areas. The fourth building is an indoor athletic facility at the southern edge of the OPC site that can increase opportunities for year-round activity in the park. An underground parking facility is proposed within Jackson Park, east of Stony Island Avenue between the indoor athletic facility and the Library. Closures of the eastbound Midway Plaisance and Cornell Drive between 63<sup>rd</sup> Street and 57<sup>th</sup> Street are necessary to accommodate the OPC buildings.

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<sup>2</sup> The National Park Service will determine whether the OPC uses constitute a conversion of Urban Park and Recreation Recovery Act designated parkland from recreation to non-recreation use and, if so, evaluate the environmental consequences and mitigation of the conversion in a separate environmental document.

## 2.0 Project Need

The FHWA Proposed Action relates to the potential roadway improvements necessary to address traffic impacts from roadway closures within Jackson Park, which may be funded through the FHWA requiring its approval. Improvement needs vary within the project area, but fall into two broad categories:

- Accommodate changes in travel patterns.
- Improve bicyclist and pedestrian access and circulation.

Needs were identified based on the effects of the No-Action scenario, which assumes the roadway closures as described in Section 1.1 are in place and the OPC is constructed in Jackson Park. See Exhibit 3. Stakeholder input was also considered. The following information was utilized as part of the No-Action conditions analysis:

- Chicago Metropolitan Agency for Planning (CMAP) 2040 No-Action Average Daily Traffic (ADT) volumes
- 2010 Active Transportation Alliance (ATA) lakefront access study.
- 1999 *South Lakefront Framework Plan*
- 1972 *Lakefront Plan of Chicago*
- 1969 *Report to the Chicago Plan Commission: Jackson Park, Burnham Park and Lake Shore Drive between 47<sup>th</sup> and 67<sup>th</sup> Streets*
- Stakeholder input.

### 2.1 Accommodate Changes in Travel Patterns

The City proposes to permanently close roadways within Jackson Park, as described in Section 1.1 and depicted on Exhibit 3. The closures will result in a change in travel patterns in the study area and will redistribute traffic to the surrounding roadway network. An initial study conducted by the Chicago Metropolitan Agency for Planning (CMAP) estimated approximately 24-28% of all vehicle trips will reroute to alternate roadways outside of the study area. As a result of closing Cornell Drive, some of the remaining vehicles within the network will divert to Stony Island Avenue to the west; however, the majority of the remaining vehicles will divert to Lake Shore Drive to the east. With the closure of Marquette Drive, many vehicles will reroute onto Hayes Drive to ultimately travel to and from Lake Shore Drive.

Transportation improvements typically analyze future traffic conditions to evaluate the operational performance of a potential improvement several years after construction. For Northeastern Illinois, these traffic projections are provided by the Chicago Metropolitan Agency for Planning (CMAP) using regional travel-demand analyses and comprehensive plans. The most current plan projects traffic to the year 2040 based on the CMAP *GO TO 2040 Comprehensive Plan*. Mobility at intersections is typically measured by calculating the average control delay per vehicle and relating it to Level of Service (LOS) benchmarks. LOS is a quantitative concept which has been developed to characterize degrees of congestion as perceived by motorists. Letter designations A through F have been correlated to quantitative measures based on the amount of delay experienced at an intersection. Level A represents the best conditions and Level F the worst. Intersection Levels of Service for 2040 projected traffic conditions of the No-Action Alternative as reported from Synchro traffic analyses are shown in Table 1.

**Table 1**  
**2040 No-Action Alternative Intersection Levels of Service**

Intersection	Intersection Level of Service and Delay (sec./veh.)	
	A.M. Peak Hour	P.M. Peak Hour
<b>Lake Shore Drive</b>		
• Marquette Dr	C (21)	C (25)
• Hayes Dr	F (**)	F (**)
• Science Dr	B (17)	F (**)
• 57 <sup>th</sup> Street	B (14)	F (**)
<b>Stony Island Avenue</b>		
• 67 <sup>th</sup> St	F (**)	F (**)
• Marquette Dr	D (50)	B (16)
• 65 <sup>th</sup> Pl	F (**)	C (29)
• 64 <sup>th</sup> St *	F (**)	F (**)
• 63 <sup>rd</sup> St/Hayes Dr	F (**)	C (21)
• 60 <sup>th</sup> St	B (14)	B (11)
• Midway Plaisance (EB)	B (11)	F (**)
• Midway Plaisance (WB)	F (**)	F (**)
• 59 <sup>th</sup> St	D (44)	B (17)
• 57 <sup>th</sup> St	C (27)	C (23)
• 56 <sup>th</sup> St *	D (34)	D (29)
<b>Cornell Drive/57<sup>th</sup> Drive</b>		
• 67 <sup>th</sup> St	Closed	
• Marquette Drive	Closed	
• Hayes Dr	F (**)	F (**)
• Midway Plaisance (EB)	Closed	
• 57 <sup>th</sup> St/MSI Drop off	A (7)	C (24)
• Hyde Park Blvd	C (20)	B (15)
<b>67<sup>th</sup> St</b>		
• East End Ave *	B (12)	C (15)
• Cregier Ave *	B (13)	B (14)
• Jeffery Ave	B (19)	B (19)
• South Shore Dr	B (17)	B (19)
<b>Marquette Dr</b>		
• Richards Dr (West)	Closed	
• Richards Dr (East)	Closed	
• La Rabida Entrance	B (14)	A (7)
<b>Richards Drive</b>		
• Marquette Dr (North)	Closed	
• Hayes Dr *	A (9)	B (14)
<b>56<sup>th</sup> St</b>		
• Hyde Park Blvd *	B (12)	B (12)
• Everett Ave *	A (8)	A (7)

\*Indicates All-way Stop-Controlled Intersection

\*\* Indicates one or more movements operate over capacity (v/c>1). These intersections are listed with an LOS F per the Highway Capacity Manual definition.

Exhibit 4 provides a summary of the Intersection Levels of Service for the 2040 No-Action Alternative as developed from Synchro traffic analysis software. Under these conditions, nine signalized intersections and one stop sign controlled intersection experience an LOS F or operate over capacity during either the morning or the evening peak hour, with expected average vehicle delays of 1.5 minutes to as much as 4 minutes. These LOS F intersections are a result of traffic diversions and traffic redistribution caused by the roadway closures.

Along Stony Island Avenue, the closure of northbound Cornell Drive will increase the northbound through volume by 925 vehicles during the morning peak hour, causing the intersection at 67<sup>th</sup> Street to experience an overall increase in average vehicle delay of 2 minutes. Northbound vehicles continuing through this intersection that are destined for Lake Shore Drive will either turn right onto the remaining section of Cornell Drive at 65<sup>th</sup> Place to continue along Hayes Drive, or remain on Stony Island Avenue and turn right onto 57<sup>th</sup> Street. The increased northbound right turning volumes from Stony Island Avenue onto these roadways could cause substantial delays and result in the intersections operating over capacity.

During the evening peak hour, 915 additional southbound vehicles along Lake Shore Drive will turn right onto Hayes Drive under the No-Action alternative, adding 86 seconds of overall average vehicle delay to the intersection. Hayes Drive at Cornell Drive will be converted to a T-intersection with the closure of Cornell Drive on the north leg. The additional rerouted traffic increases westbound to southbound turning volumes by 780 vehicles, causing substantial delays at the intersection.

Without improvements, many intersections will experience considerable increases in delay and operate over capacity in the No-Action condition. Thus, there is a need to improve roadway and intersection facilities to accommodate the future changes in travel patterns and provide acceptable levels of intersection safety and operation.

## **2.2 Improve Bicyclist and Pedestrian Access and Circulation**

Jackson Park attracts many local residents, tourists, and recreational users each day as the home of the Museum of Science and Industry, an outdoor track and field facility, baseball and softball diamonds, a golf course and driving range, soccer fields, beaches, harbors, gardens, and natural spaces, among many other park amenities. An exhibit depicting the existing trail network within and surrounding the park is shown on Exhibit 5.

Recent improvements along Lake Shore Drive provided or improved underpasses for east-west bicycle and pedestrian access to the lakefront and the Lakefront Trail at several locations: Marquette Drive, Hayes Drive (63<sup>rd</sup> Street), 59<sup>th</sup> Street, 57<sup>th</sup> Street, and 55<sup>th</sup> Street (Promontory Point).



*Existing Pedestrian Underpass at Hayes Drive/63<sup>rd</sup> Street beneath Lake Shore Drive*

Other than the underpasses beneath Lake Shore Drive, no other grade separated bicyclist or pedestrian locations exist within the park. To circulate within the park, users must cross four to six lane heavily travelled roadways, either at signalized intersections or uncontrolled crosswalks, some of which are unmarked.



*Unmarked Crossing of Cornell Drive near 65<sup>th</sup> Street*

Crossing locations are typically spaced approximately 700 to 800 feet apart. One of the longest stretches within the park without a crossing location occurs along the six lane section of Cornell Drive between Hayes Drive and the Midway Plaisance, a length of over one-third of a mile. The Clarence Darrow Bridge, which provides an east-west connection over the Columbia Basin south of the Museum of Science and Industry, is in need of repair and is currently closed to all traffic due to its poor condition. Improvements to this structure are being studied as part of a separate project. Due to the current closure of the Clarence Darrow Bridge, pedestrians and bicyclists can only cross roadways at intersections or crosswalks in order to circulate within the park.



Input gathered from stakeholders at public meetings has indicated many of the trails within Jackson Park are in poor condition and in need of repair.



*Existing Trail Conditions along Hayes Drive, looking east*

The *Chicago Streets for Cycling Plan 2020* aims to provide safe bicycle accommodations within 0.5 miles of every resident for access to and from homes, businesses and recreational facilities. Neighborhood routes are generally located along residential streets and provide connections between local destinations. Crosstown routes are identified along collector and arterial streets to connect major destinations through a variety of land uses. These routes may include treatments such as barrier or buffer protected on-street bike lanes, striped bike lanes, marked shared bike lanes, or signed routes. Both classes of routes in the *Streets for Cycling Plan* have been identified along roadways bordering and terminating into Jackson Park and are depicted on Exhibit 5.

Divvy is Chicago’s bike share system, which allows users to rent bicycles for trips such as commuting to work, visiting Chicago’s landmarks or enjoying a ride along the lakefront. Bicycles can be picked up or dropped off at any station, typically located at major end points of user routes. The Divvy station locations within and surrounding Jackson Park are depicted on Exhibit 5.

With future plans to provide routes for local residents to the park, as well as several stations established for the Divvy program to provide bicycles for visitors to travel toward and within the park, there is a need to provide safe and frequent access points and to improve facility conditions that allow for better circulation within the park.

## **2.3 Project Purpose**

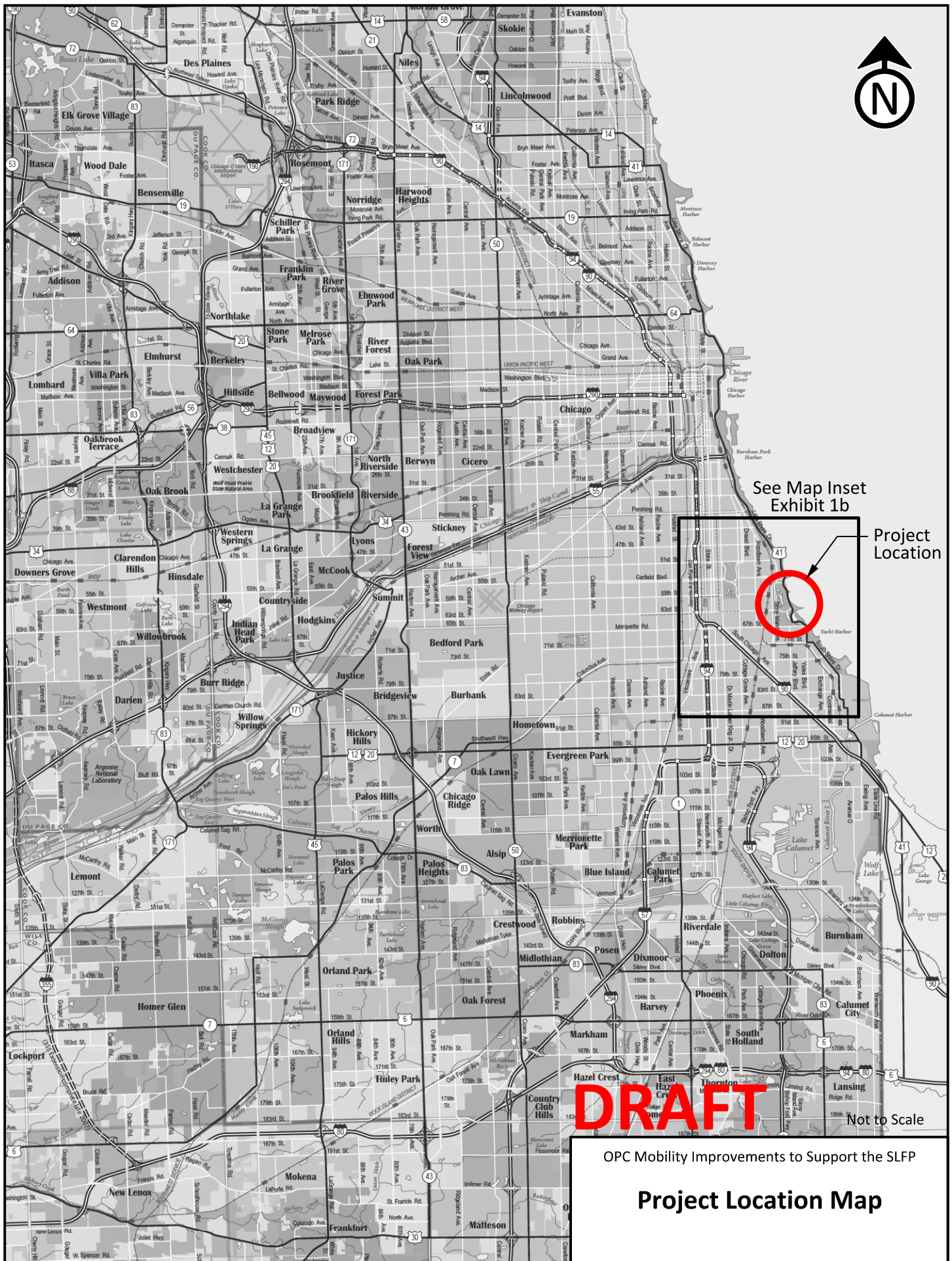
The project purpose is to (1) address changes in travel patterns resulting from closing roadways in Jackson Park and (2) improve bicycle and pedestrian access and circulation.



## Appendix A

### EXHIBITS

DRAFT



See Map Inset  
Exhibit 1b

Project Location

**DRAFT**

Not to Scale

OPC Mobility Improvements to Support the SLPF

### Project Location Map





OPC Mobility Improvements to Support the SLFP

### Location Map Inset








February 2018

Exhibit 1b





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- |   |              |   |                           |
|---|--------------|---|---------------------------|
|  | Study Limits |  | Lakefront Trail           |
|  | Parkland     |  | Other Paths               |
|  | Structures   |  | Existing Traffic Signal   |
|   |              |  | Obama Presidential Center |

OPC Mobility Improvements to Support the SLFP

**Study Area Map**

February 2018

**Exhibit 2**





**DRAFT**

0' 400' 800'

OPC Mobility Improvements to Support the SLFP

**No-Action Alternative**

February 2018





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OPC Mobility Improvements to Support the SLFP

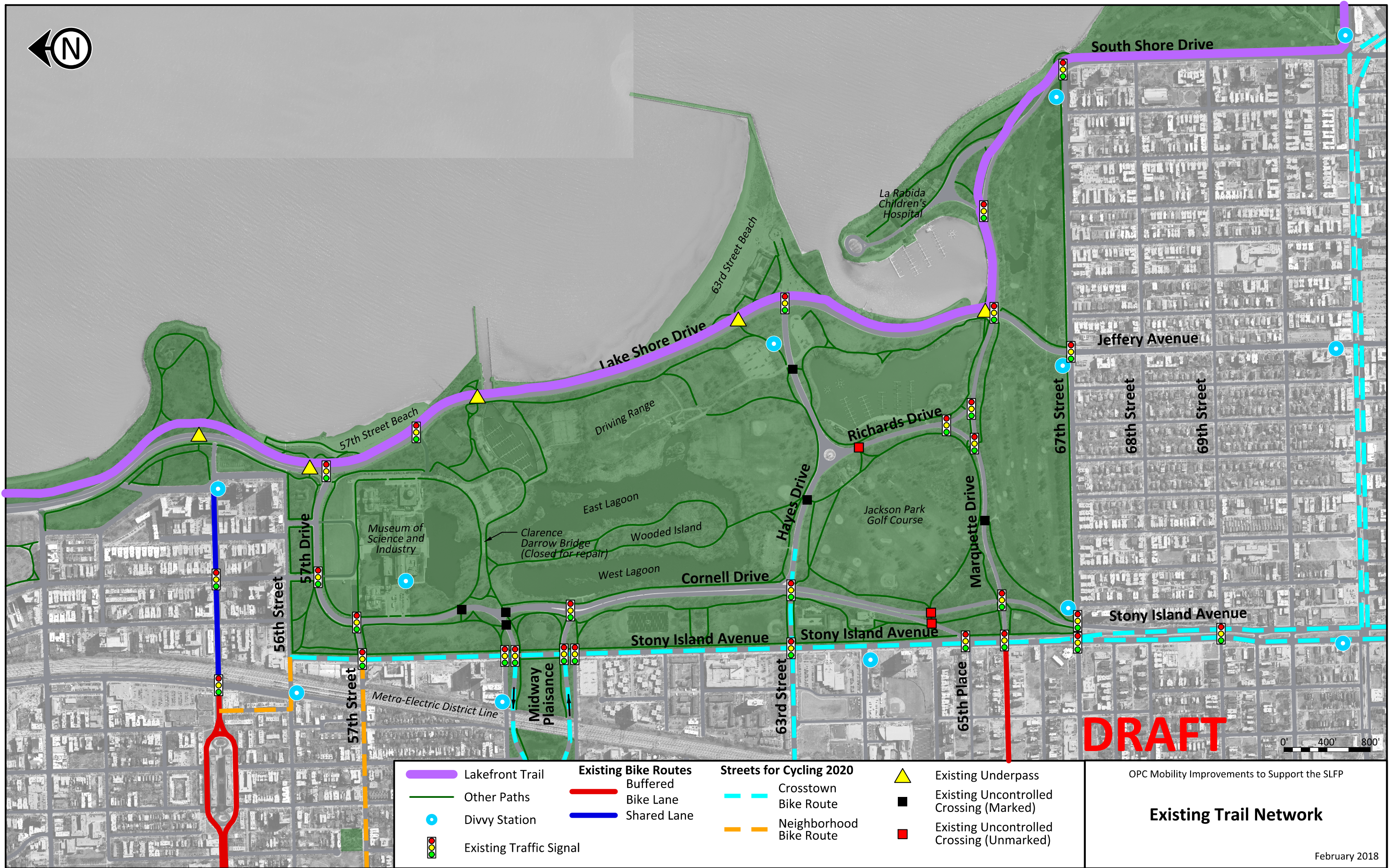
**No-Action Alternative**

2040 Intersection Levels of Service

February 2018

**Exhibit 4**





**DRAFT**

0' 400' 800'

OPC Mobility Improvements to Support the SLFP

### Existing Trail Network

February 2018

Exhibit 5