

# STATION SCREENING & STATION SPACING ANALYSIS

## STATION SCREENING

To narrow the field of prospective Metra Station sites, an initial examination of alternative station locations was performed. Eight locations were initially identified, as shown in the table below and the map to the right.

#	LOCATION	DISTANCE TO UNION STATION
-	Prospect Heights Station	24.0
1	Central Road	22.1
2	Rand Road / Golf Road / Seegers Road	21.3
3	Northwest Highway	20.8
4	Thacker Street	20.2
5	Algonquin Road	19.7
6	Forest Avenue	19.4
7	Oakton Street	19.2
8	Howard Avenue	18.6
-	O'Hare Transfer Station	17.1

## RELEVANT METRICS

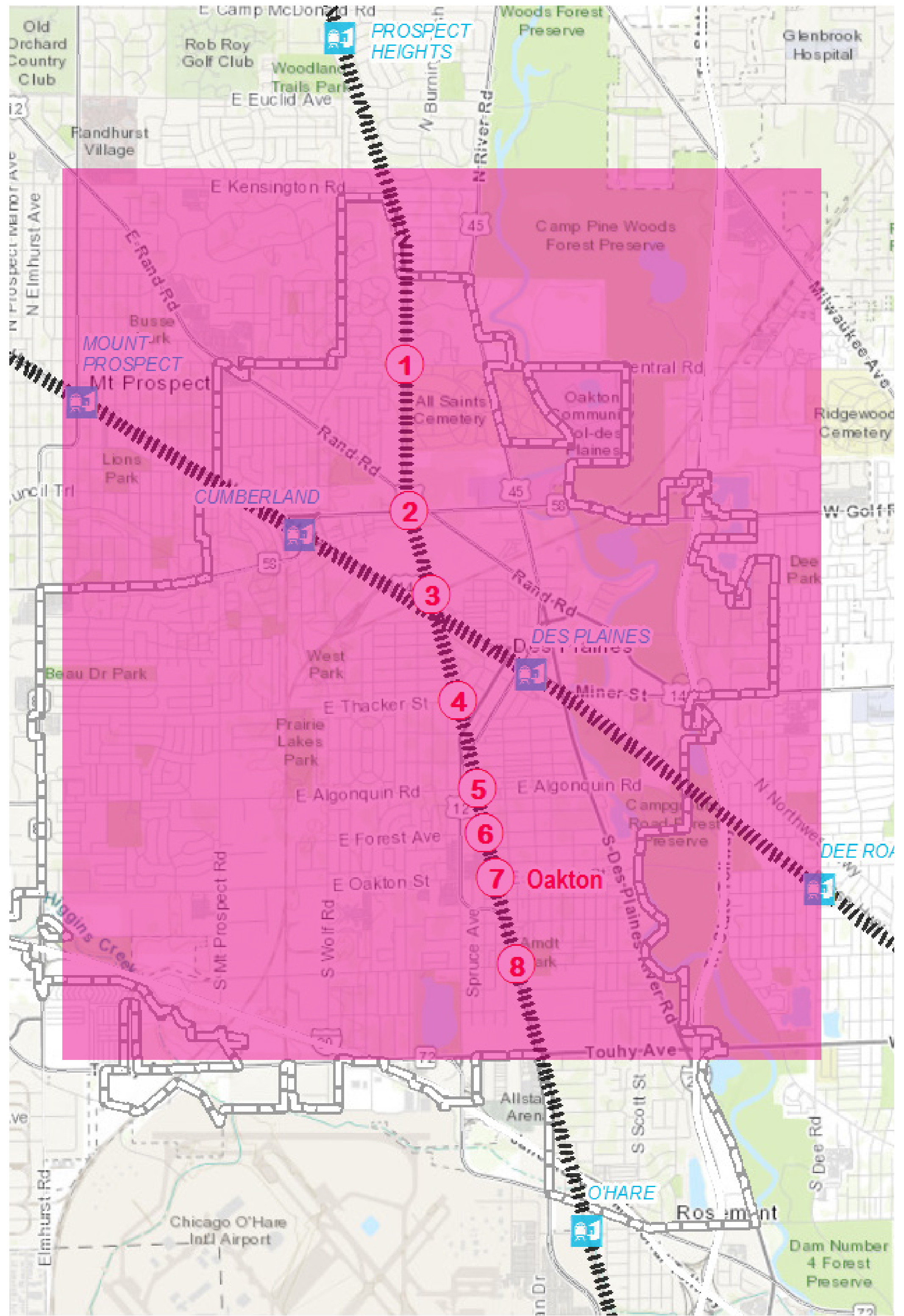
Important considerations in selecting a site include the opportunity to use development to **maximize the number of potential users who would be within walking distance of the station**, as well as other rail characteristics, such as the presence of double tracks or at-grade crossings. The table to the lower right outlines the suitability of each of the sites, including the following metrics:

- **WALK SCORE** | Walk Score is a commonly accepted metric for the pedestrian friendliness of a given location, with points awarded based on the walking distance to common amenities, as well as the pedestrian friendliness of infrastructure characteristics such as block length and intersection density. On a scale from 0 to 100, locations 50 or above are considered walkable.
- **MULTI-FAMILY UNITS** | Multi-family residential developments are more likely to achieve the densities that support transit ridership and minimize the need for auto-access infrastructure, parking, and also lessen traffic impacts at the station.
- **HOUSEHOLDS** | Using 2010 census data at the block level, the number of households within a half mile were estimated to further understand potential non-motorized access riders within the station area.
- **(RE) DEVELOPMENT AREA** | The estimation of potential redevelopment acreage was carried out by identifying large contiguous parcels of low-intensity land usage that could be acquired and redeveloped at a relatively low cost and with minimal impact to station area households.
- **PACE BUS ROUTES** | The presence of existing Pace Bus routes highlights a station area's potential to grow its ridership outside of the half-mile walkshed without relying on riders accessing the area by private automobile, as well as a larger potential market for commercial enterprises established as part of the TOD.

## OAKTON STREET

The Oakton Street site offers several key advantages over the other highly ranked sites, Algonquin and Forest, including good roadway access from the east and west, greater distance from existing UP-NW stations, and access to the Pace Pulse Dempster Line station. Additionally, the Mannheim/Lee intersection is 1,000 feet to the west, so the potential back-up from park-n-ride lots emptying would be less likely compared to the Algonquin and Forest sites. The vacant land to the east could be used for parking or a joint development project, and it is possible that commercial properties to the west may be ripe for redevelopment. **For these reasons, a site on the north side of Oakton Street was chosen to advance for more detailed study.**

### Potential Station Locations



2 Miles

### Station Suitability Analysis

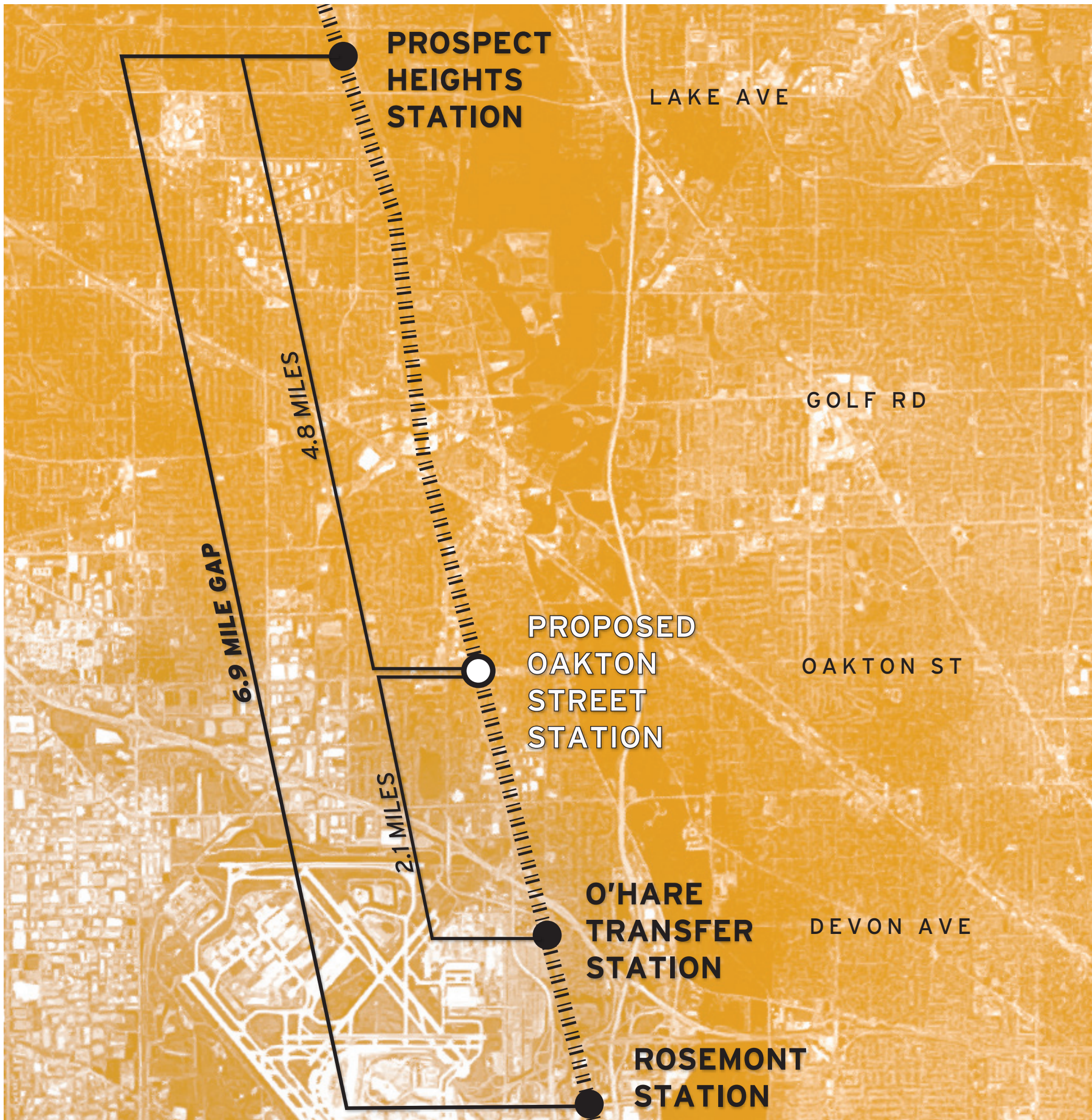
	CENTRAL ROAD	RAND/ GOLF	NORTH- WEST HIGHWAY	THACKER STREET	ALGONQUIN ROAD	FOREST AVENUE	OAKTON STREET	HOWARD AVENUE
Walk Score 50+	29	43	42	66	75	73	79	52
Multi-Family Units in 1/2 Mile	0	350	610	600	290	0	10	140
Households in a 1/2 Mile	2,600	1,800	4,600	6,700	4,900	4,200	4,800	5,000
(Re)Develop- ment acres	2.8	10.0	0.0	3.1	2.4	1.3	3.0	.08
Pace Bus Routes	none	Route 234	Route 208	Routes 226, 230, 250	Routes 226, 230, 250	Routes 226, 230, 250	Routes 226, 230, 250	Route 250
More than two miles from NCS Station	Serious Impact	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Serious Impact
More than one mile from UPNW Station	Suitable	Impact	Impact	Impact	Impact	Suitable	Suitable	Suitable
Double Track	Suitable	Serious Impact	Serious Impact	Serious Impact	Suitable	Suitable	Suitable	Suitable
At-Grade	Suitable	Suitable	Serious Impact	Suitable	Suitable	Suitable	Suitable	Suitable
<b>Total Score</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>4</b>

Green = 1 Yellow = 0 Red = -1

# STATION SCREENING & STATION SPACING ANALYSIS

## STATION LOCATION

The proposal is to add a new infill station between two existing stations on the NCS line— Prospect Heights and the O'Hare Transfer station. The site screening analysis identified Oakton as the preferred location for a station. Placing a station at this location would **fill the 6.9 mile gap** resulting in spacing of **4.8 miles to the Prospect Heights station** and **2.1 miles to the O'Hare Transfer station**.



## SPACING METHODOLOGY

Transportation systems must choose between:

**Wider Spacing**  
*Minimal Stops*  
**FASTER SERVICE**

OR

**Closer Spacing**  
*More Stops*  
**GREATER ACCESS**

More stops also allow for stations that are easier to walk to. This walkability goes hand-in-hand with developing the station area to maximize the use of transit. If the station is to serve local destinations, opportunities to connect station area workers to their employers through a shuttle type program could be explored. The current Lake Cook Road Shuttle Bug program is a strong example of a such a system.

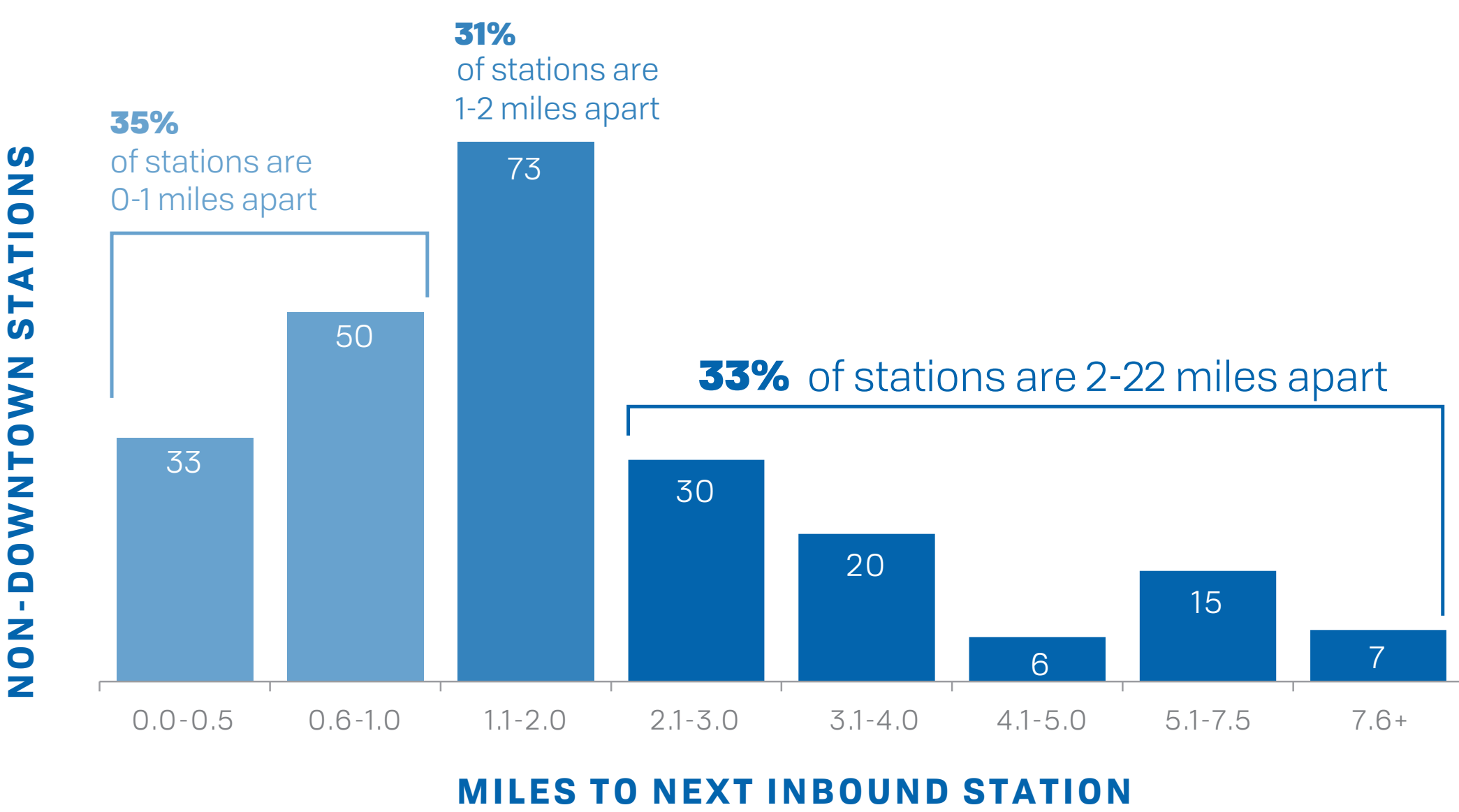
### Station Spacing Across the U.S.

COMMUTER RAIL AGENCY	PRIMARY CITY SERVED	ANNUAL UNLINKED TRIPS	ROUTE MILES	NUMBER OF STATIONS	AVERAGE SPACING (MILES)
MTA Long Island Rail Road	New York	103,196,857	319.1	124	2.6
New Jersey Transit Corporation	New York	90,872,267	500.9	165	3.0
Metro-North Commuter Railroad Company	New York	86,297,511	272.9	112	2.4
NE IL Regional Commuter Railroad Corp (Metra)	Chicago	72,289,606	487.7	241	2.0
Southeastern Pennsylvania Transp. Authority	Philadelphia	36,187,570	223.5	155	1.4

The five largest commuter rail agencies are older, legacy systems. These commuter rail systems contain comparatively close spacing of stations, many with averages falling below three miles.

## COMPARISONS ACROSS METRA SYSTEM

### Metra Non-Downtown Stations by Miles to the Next Inbound Station



Metra's average spacing is two miles, including 83 stations within one mile of the next inbound station. Our research has found that **there is not a strong correlation between station spacing and station ridership**—too many other factors are at play influencing station performance.

### Infill Metra Stations Added Since 1983

STATION	LINE	MILE POST	OPENING YEAR	DISTANCE TO NEXT IB STATION	DISTANCE TO NEXT OB STATION	GAP FILLED	2016 BOARDINGS
Palos Heights	SWS	19.2	2004	1.0	1.1	2.1 *	238
Rosemont	NCS	15.6	2006	0.8	1.5	2.3 *	35
Schiller Park	NCS	14.8	2006	1.8	0.8	2.6 *	36
Lake Cook Road	MD-N	23.0	1996	1.9	1.2	3.1 *	1,271
Belmont Ave./ Franklin Park	NCS	13.0	2006	1.6	1.8	3.4 *	32
Glen of North Glenview	MD-N	18.8	2001	1.4	2.3	3.7 *	1,070
Hickory Creek	RID	27.5	1993	2.4	2.1	4.5 *	999
Pingree Road	UP-NW	41.7	2005	3.1	1.5	4.6 *	751
Washington St./ Grayslake	NCS	43.9	2006	3.2	2.0	5.2 *	110
Prairie Crossing/ Libertyville	MD-N	39.2	2004	3.7	1.8	5.5 *	422
Romeoville	HC	29.2	2018	3.9	3.7	7.6	n/a
Route 59	BNSF	31.6	1989	3.1	5.9	9.0	5,781
35th St.	RID	3.1	2011	3.1	6.7	9.8	227

New infill stations that have been added to the Metra network have filled **gaps ranging from 2.1 to 9.8 miles**, and *the distance between stations filled has not had an obvious effect on performance.*

\* Station gap filled less than 6.9 miles of NCS gap to be filled by the Des Plaines Oakton Street Metra Station