FINAL REPORT

SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY

September 11, 2003

Prepared for:

Village of Skokie
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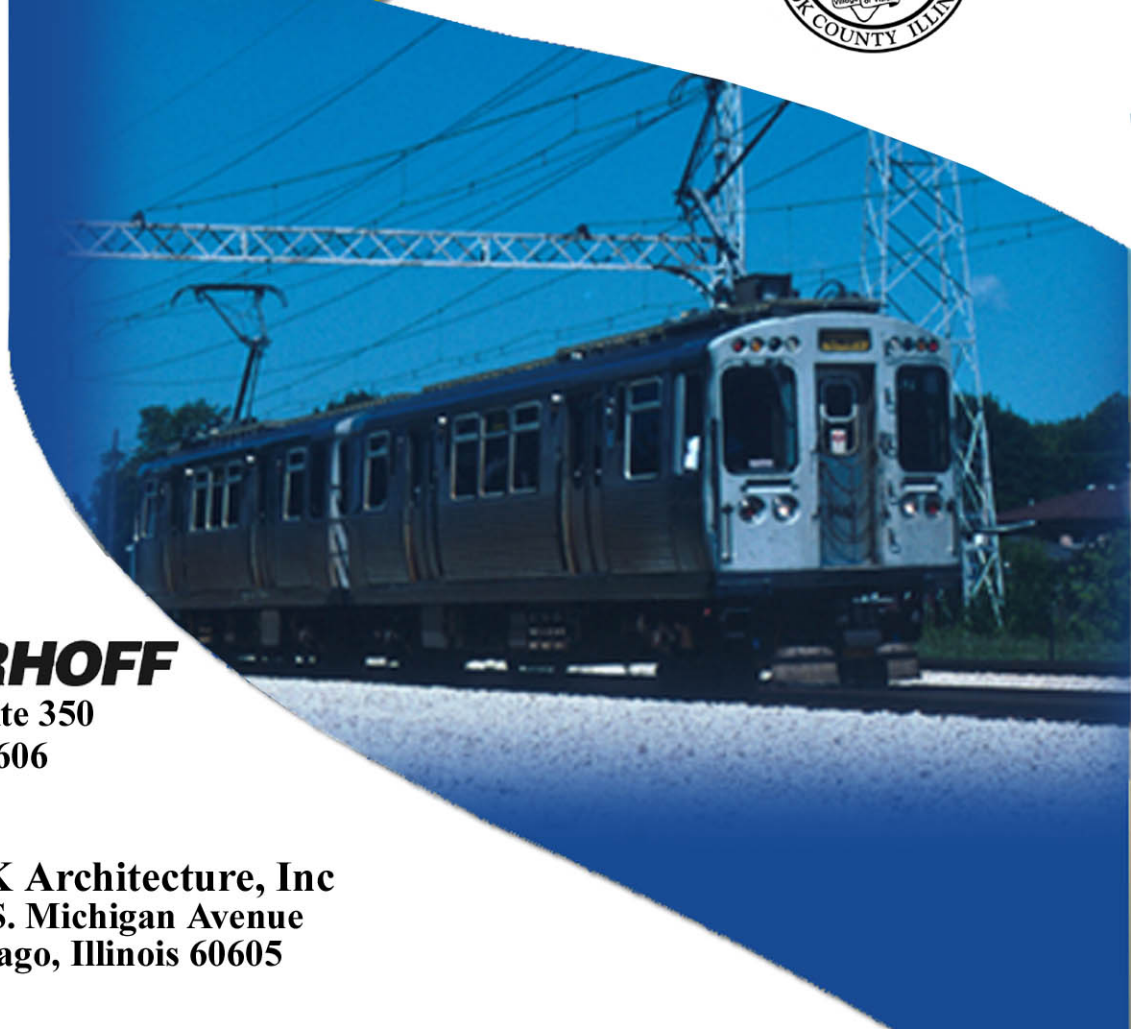

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SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
EXECUTIVE SUMMARY

The Village of Skokie has undertaken the Skokie Swift Station Location Feasibility Study to determine the feasibility of adding intermediate station(s) along the existing Chicago Transit Authority (CTA) Skokie Swift (also known as the CTA Yellow Line) rapid transit service and the potential extension from the existing north terminus at Dempster Street to the vicinity of Old Orchard Road. This study analyzed whether these proposed stations would be a cost-effective means to increase transit ridership, provide better transit access to residents and employees of Skokie, and maximize previous and programmed investments in the Skokie Swift. This study was funded by a grant from the Regional Transportation Authority's (RTA) Regional Technical Assistance Program (RTAP). The Village of Skokie is the lead agency for the grant. The RTA, CTA and Pace provided technical review and concurrence on study products.

SUMMARY OF FINDINGS

Intermediate Stations - Several potential intermediate station sites were examined. Of these, only one is recommended to be carried forward toward implementation – a site on the north side of Oakton Street. This recommendation is based on a number of factors, including projected ridership demand, which is comparable to other suburban, intermediate stations on the CTA rail system, as well as this site's stronger long-term development potential, based on re-zoning of nearby areas and the pending Downtown Skokie 2020 Land Use Study. The Oakton Street location also has the best access to connecting bus routes.

The Oakton Street Station would serve primarily residents and businesses within a ½-mile radius of the site. The station would be pedestrian-oriented and be justified even without the construction of commuter parking lots or garages. Users would be walkers, people transferring to and from connecting buses, bicyclists and "kiss-and-ride" vehicular drop-offs and pick-ups. The station could be designed with entrances on both Oakton Street and Searle Parkway. A conservative estimate of the cost of designing and constructing a station at this location is $18 million; however, this may be significantly reduced depending on the final design.

Of the five other sites examined, Crawford Avenue may also be feasible and worthy of additional future study. However, the Oakton site is superior for the reasons noted above.

North Extension - A similar approach was taken with regard to the line extension, in that several alternative terminal locations/routings were considered. Of eight possibilities studied, three are recommended for further study. These are:

- Alternative A – remaining on the UPRR ROW to Old Orchard Road
- Alternative B – UPRR ROW to east of Edens Expressway to north of Niles North High School, terminating opposite Bloomingdale's store at the Old Orchard Shopping Center
- Alternative E – UPRR ROW to east of Edens, terminating at Old Orchard Road

No recommendation is made at this time if the extended line would be at-, below-, or above-grade or some combination of these for each of the three alternatives. However, this study does examine the benefits, constraints and costs of each.

A station in the Old Orchard area would serve residents, businesses, and institutions near the station and automobile commuters. The station would require construction of parking facilities to accommodate commuters from the Edens Expressway and the local area. There is already a regional bus transfer facility at Westfield Shoppingtown Old Orchard, and the new station could act as a new Intermodal transportation center. Depending on the route location, construction type and grade of the track, the cost of the extension, station and parking would range from $154-$289 million.

HISTORY

The rail line that is today's Skokie Swift was constructed in the mid-1920s and the Chicago Rapid Transit (CRT) began operations on the line in March 1925. In 1926, interurban passenger trains of the Chicago North Shore & Milwaukee (CNS&M) began operating over the line. The Niles Center Branch of this era included several intermediate stations. Crawford, Kostner, Oakton, and Main each had a station, as well as several intersecting streets further to the east. The portion of the Niles Center line to the east of the CRT repair shops (near Hamlin Avenue) used third-rail electric power distribution, making it usable by all CRT (later CTA) cars. West of East Prairie Road, overhead catenary was used for electric power distribution.

In October 1947, the CTA took over CRT operations, including those on the Skokie line. In March 1948, a strike by operating employees of the CNS&M resulted in the suspension of the CTA's rapid transit service on the line. The rapid transit service was replaced by the CTA 97/Skokie bus route operating to/from Howard Street. All intermediate rail stations were abandoned at that time, with CNS&M trains operating non-stop between Howard and Dempster. In January 1963, the CNS&M ceased rail operations. The only train service on the line consisted of CTA non-revenue trains operating to/from the Skokie Shops.

The CTA, with assistance from the U.S. Department of Housing and Urban Development (HUD), determined that there was a market for express rapid transit service between Howard and Dempster Streets. The CTA received a HUD Demonstration Grant to rehabilitate the line, including new rapid transit cars and facilities, and to operate the service. The "Skokie Swift" service began operation in April 1964. The success of the service at the end of the two year demonstration program resulted in the line being retained as part of the CTA rail system.

In the early 1990s, considerable investment was made in the CTA Yellow Line/Skokie Swift. All ballasted track on the line was rebuilt in 1991. A new terminal station at Dempster Street was also constructed in 1992 and 1993, replacing the original 1964 facility. In 1993, all new dedicated rolling stock was placed in service, introducing modern, air-conditioned cars to the Yellow Line/Skokie Swift.

CURRENT OPERATIONS/OTHER AREA TRANSIT SERVICES

Today, a total of ten 3200-series cars are assigned to the Yellow Line, with scheduled regularly scheduled operation between 4:52 a.m. and 10:26 p.m. each weekday. During the peak period, the two-car trains run as often as every seven minutes and during the base period service is provided every 12 minutes. Layovers at Howard Street are six to ten minutes, while the layover at Dempster Street is between five and eight minutes. Four trains are required for peak period service. One-way running time is eight minutes at all times for the approximately five mile trip.

The Yellow Line's most recent ridership results show a slight drop off from the 5,200 riders per day reported in the first and second quarter of 2002. The most recent CTA station entering traffic report (June 2003) showed 5,046 daily riders on the Yellow Line, down about 4% from the previous year.

Yellow Line riders generally had access to one or more vehicles in the household and more than half had annual household incomes level in excess of $40,000. Over half of the riders use an automobile to access to a Yellow Line station while 17% walked. Trips to work and school activities comprise 88% of the Yellow Line riders.

Pursuant to an agreement with the Village of Skokie, the CTA is designing the replacement of the overhead catenary with third rail power distribution. This will make the entire Yellow Line compatible with all other CTA rail lines. When this change is made, likely during early 2004, the need for pantograph-equipped cars on the Yellow Line will be eliminated. This change will also make it possible to consider operation of Yellow Line trains through Howard Street to other points on the CTA rail system, such as downtown Chicago.

Other transit services in Skokie include nine Pace fixed route services (Routes 208, 210, 212, 215, 226, 250, 254, 422, and 626) and Pace demand-responsive accessible service for qualified users.

Two CTA bus routes (54A and 97) serve the study area. In addition to CTA and Pace, Greyhound intercity bus services also stop at the Dempster CTA station. The Greyhound office is open from 9:00 a.m. to 5:30 p.m. five days per week. Taxi companies (American, "303", etc.) have regularly staged cabs at the Dempster CTA station. Metra's Milwaukee District North Line has stations at Dempster and to the north of Golf Rd. The former, serving Morton Grove, is just about two miles from the Yellow Line Dempster terminal.

PHYSICAL CONDITION

There are two existing stations on the CTA Yellow Line. The Howard Street terminal station is not included in this study, and would not be fundamentally changed as a result of the outcome of this study. The other station is the north terminal station at Dempster Street. This station opened in 1993 and is generally in good condition.

There is one structure on the portion of the Yellow Line affected by this study: the through-girder bridge that carries the line over Skokie Boulevard. However, this structure would not change as a result of this project.

The CTA audio-frequency cab signal equipment is in operation along the Yellow Line. The current equipment was installed in the mid-1970s, and is approaching the end of its service life. It is possible that this equipment could be replaced as part of the extension design project, or that it would be replaced as part of another CTA capital improvement project.

Cab signal speeds on the Yellow Line are currently 55 mph at most locations, with the exception of the Oakton curve (between the Oakton and Kostner grade crossings) where train speed is limited to 35 mph. When the third rail is installed, this restriction can be removed. The other speed restrictions on the line are on approach to and on exiting the Dempster terminal. If the line were to be extended, these restrictions could be removed, depending on alignment specifics and station location.

Another aspect of the signal installation on the Yellow Line is the grade crossing warning equipment. This consists of auto and pedestrian gates, motorman warning lights (indicating status of gate deployment to the operator of a train approaching the grade crossing) and the other equipment required for a complete, functional installation. There are a total of seven grade crossings on the CTA Yellow Line. Of these, East Prairie, Kostner and Searle are two-lane streets, while Crawford, Oakton, Main and Niles Center are four-lane streets or wider. Replacement of the grade crossing warning equipment is now underway, and is scheduled for completion in late 2003/early 2004.

Communications equipment on the Yellow Line includes copper cable hung from the catenary towers. Operations, maintenance and management employees are equipped with personal, portable radios. At present, there are no plans to replace this cable or change this method of operation.

Three traction power substations serve the Yellow Line. The Howard substation is located on CTA property at the Howard Yard site, and serves the Red and Purple Lines in addition to the Yellow Line. The Hamlin substation, put in service in 1999, is located on the CTA's Skokie Shops property, and supplies the Yellow Line in addition to serving the shop complex. The Skokie substation is east of Niles Center Road and north of the Yellow Line grade crossing. The rectifier-transformer equipment dates to the 1990s. The CTA has indicated that augmentation of the transformer equipment at Hamlin substation and the replacement of the transformers, rectifiers, getaways and battery charger at the Skokie substation are expected to begin during 2006 and end in 2009.

The present method of traction power distribution is third rail east of Crawford Avenue and overhead catenary from this point west. The section between Crawford and East Prairie is equipped with both overhead catenary and third rail, as this is where trains make the transition between the distribution modes. East of East Prairie the line is equipped only with third rail. All the third rail was renewed during the 1991 reconstruction of the ballasted track on the line. CTA has completed most of the preparatory work for the installation of the third rail power distribution equipment to replace the catenary on the northernmost 2.2 miles of the Yellow Line. Present CTA plans call for the third rail to be installed and activated during the Spring of 2004.

The design of the replacement third rail includes provision for a station on the north side of Oakton Street. Third rail through this location will be located to the outside of both tracks. At non-station locations, the third rail is normally located inboard of the tracks.

The CTA plans to retain the catenary towers even after the overhead wire is removed, since the towers support the communications cable. Other than at proposed station sites, retention of the towers has no immediate affect on this study. Removal of the towers (for example, on the north side of Oakton Street) would likely be done as part of the station site preparation. The cost estimate for the construction of this station includes an allowance for the removal of those catenary towers.

The Yellow Line track is in good condition, having been rebuilt in 1991. Extension of the line north of Dempster would require reconfiguration of the existing track, which ends in a single-track stub. This would be replaced by double-track. Realignment of the line through this section is also possible. The UPRR track north of Dempster is not considered suitable for re-use. The cost estimates for the line extension include the cost of new track over the entire length of the extension.

GRADE CROSSING ACCIDENT ANALYSIS

The years 1999 and 2001 each had 26 reported accidents at the seven grade crossings on the Yellow Line, while there were 21 reported accidents at the crossings during 2000, for a total of 73 crashes. The average number of crashes per year is 24.

Of the at-grade crossings, Niles Center accounts for the most accidents with 27 reported during 1999-2001. Of these, 25 did not directly involve a CTA train. Half of the accidents directly involving a train occurred at this crossing during these three years. Oakton had the next highest number of reported accidents with 23 over the three years. None directly involved a train. Main had 13 of the reported accidents over this period. One accident directly involving a CTA train was recorded at this location. Five reported accidents occurred at Crawford, with none directly involving at CTA train. Searle had three reported accidents, one involving a CTA train and the only fatality among the reviewed reports. Finally, Kostner had two accidents, none of them directly involving a train.

UNION PACIFIC RAILROAD RIGHT-OF-WAY STATUS

On May 7, 2002 the UPRR applied to the Surface Transportation Board (STB) to abandon the 1.04-mile portion of the Skokie Industrial Lead between Dempster and Oakton Streets in the Village of Skokie. The carrier also applied to discontinue operations on the 8.06-mile line section north from Dempster Street to Valley Junction in Northfield. A discontinuance means that the track, signal and other railroad equipment would remain in place, whereas an abandonment allows these items to be removed (and allows the right-of-way to be sold). The Village of Skokie submitted a letter to the STB, dated May 29, 2002, requesting “issuance of a Public Use Condition as well as a Certificate or Notice of Interim Trail Use rather than an outright abandonment” for that portion of the line between Dempster and Oakton Streets. The Village also asked that the carrier be prohibited from disposing of the corridor for a period of 180 days from the effective date of the abandonment authorization, in order to allow the Village to begin acquisition negotiations with the railroad. The STB granted these requests in 2002. The 180-day period expired, and the Village will send a letter to the railroad indicating that it does not have the funding to purchase the property at this time.

DEMOGRAPHIC CHARACTERISTICS

According to the 2000 Census, the Village of Skokie had a population of 63,348, an increase of 6.6% from 1990. The median age of residents is 41.9 years, with more than 53% of the population between the ages of 20 and 64. The Village of Skokie is a mix of whites (68.9%), Asians (21.3%) and blacks (4.5%). There are more than 23,700 dwelling units, with 75% occupied by their owners and 25% rental property. The vacancy rate for dwelling units is 2.0%. The median household income (included retired individuals) is $57,375. Of the employed population 16 years and older, 46.3% are in management, professional and related occupations, with 29.1% in office and sales occupations.

Total employment in Skokie is estimated to be 36,700 jobs. The largest employers in the Village of Skokie are Federal Mogul (1,700) and Rush North Shore Medial Center (1,400). The Westfield Old Orchard shopping mall, with its mix of large retailers, is estimated to have about 2,000 workers. Pharmacia, previously another large employer, has closed both employment locations in the village. Other large employers are: Niles Township High School (635); Anixter Brothers (600); Klein Tools (496); the Village of Skokie (492); Rand McNally (425); Castwell Products (314); and Ohmite Manufacturing Co. (300). The CTA Skokie Shops employ approximately 350 workers.

NIPC's current adopted forecasts for population and employment are for 2020, and were prepared as part of the development of the Chicago Area Transportation Study's (CATS) 2020 Regional Transportation Plan Update. NIPC is currently developing population and employment forecasts for 2030, as part of the development of the CATS 2030 Regional Transportation Plan. It is anticipated that the CATS 2030 Regional Transportation Plan and the NIPC's 2030 population and employment forecasts will be formally adopted by the region in late October/early November 2003. Preliminary NIPC 2030 population and employment forecasts were obtained from CATS for this study. It should be emphasized that the 2030 population and employment forecasts for Skokie are preliminary and subject to change until final adoption. It should be noted that the Village of Skokie has identified discrepancies in the NIPC forecasts and any subsequent analysis should include a thorough review and refinement of these forecasts. The 2020 and preliminary 2030 forecasts are shown below.

Skokie Population, Households, and Employment Forecasts

Skokie	Population	Households	Employment (Estimated)
2000 Census	63,350	23,220	36,700
2020 NIPC	61,990	24,720	57,620
Prelim. 2030 NIPC	59,480	23,680	44,820

INTERMEDIATE STATION ANALYSIS

Six potential alternative intermediate station sites were initially identified and assessed. These potential intermediate station sites included:

- McCormick Boulevard
- Hamlin Avenue
- East Prairie Road
- Crawford Avenue
- south of Oakton Street
- north of Oakton Street

The following table summarizes the analysis of potential intermediate station sites.

Comparison of Intermediate Station Locations

Parameter	McCormick	Hamlin	East Prairie	Crawford	Oakton South	Oakton North
520 feet of level, tangent track	Yes[1]	Yes	No	Yes	No	Yes
ROW width for 18 foot platform	Yes	Yes	Yes	Yes	Yes	Yes
Direct street access	Yes	No[2]	Yes	Yes	Yes	Yes
Zoning compatibility	Yes	Yes[3]	No	No	Yes	Yes
Direct intermodal connections[4]	No	No	No	Yes (1)	Yes (3)	Yes (3)
Off-street bus facility possible	No	No	No	No	No	No[5]

Park-and-ride/kiss-and-ride possible	No	No	No	No	No	No[6]
Major generators within half-mile (number)	Yes (5)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)
2020 pop. & employ. within half-mile	7,950	6,870	6,870	6,870	10,550	10,550
Distance to Howard Street	2.0 miles	2.6 miles	2.8 miles	2.9 miles	3.9 miles	4.0 miles
Distance to Dempster Street	2.9 miles	2.3 miles	2.1 miles	2.0 miles	1.0 miles	0.9 miles
Recommended for further study	No	No	No	Yes	No	Yes

[1] Grade separation at McCormick will have substantial effect on station design and construction costs
[2] Must extend street from south of ROW; shop tail tracks are to north of rail line and can't be cut
[3] East side of Hamlin only
[4] Assumes no route diversions; number of routes are in parentheses
[5] Possible at Searle end of Oakton north, but route access would be difficult
[6] If a portion of Pharmacia parking structure becomes/is made available

As indicated in the table, there were a number of items reviewed prior to recommending further study of a potential station site. Based on the analysis of potential intermediate station sites, Oakton (north) and Crawford were recommended for more detailed study. Additional details developed included a ridership analysis and a review of right-of-way needs and availability.

For the ridership analysis, a 'boarding' is every time a person enters a transit vehicle. For right of way requirements, CTA length requirements include 180 feet for a station house plus 520 feet for an eight-car CTA train platform. Widthwise, the CTA indicated that an 18-foot center platform is sufficient for an at-grade station. Track requirements and clearance require an additional 24 feet, bringing the minimum right of way width at a station to 42 feet.

The following section discusses the advantages and disadvantages of the two intermediate station locations advanced for additional analysis.

Crawford Avenue

The area around the Crawford station is almost exclusively single-family residential and is zoned 'R2' (single family residential). None of the Village's top 10 employers are located within walking distance of this location.

Considering CTA right of way requirements, the only suitable station location is to the west of Crawford Avenue. East of Crawford, the distance to the East Prairie grade crossing is insufficient for this length of platform plus station house. West of Crawford, a station house and a 520-foot platform brings the station area to just shy of Kedvale Avenue.

The overall CTA right-of-way width is approximately 150 feet, much more than the minimum 42 feet required. Opposite Kedvale Avenue, a ComEd substation is located to the south of the right-of-way, extending 39 feet into the CTA right-of-way. The north fence of this substation is approximately 23 feet removed from the adjacent track centerline. Com Ed high-tension towers are located along the north and south limits of the right-of-way, extending approximately 18 feet into the right-of-way, resulting in a separation distance of between 40 and 44 feet from the closest track center. Therefore, an 18' wide platform could be accommodated within the existing track center spacing at this location.

Although there is sufficient space for the station house and platform, there is not space for bus loading and unloading or a park-and-ride facility. A possible kiss-and-ride lane running parallel to the tracks could be routed between the eastbound (south track) and the ComEd high tension towers on the south side of the CTA right-of-way. This lane would be entered/exited off South Mulford. Kiss-

and-ride patrons would have to cross the eastbound track to get to the station house/platform if this concept were to be used. This arrangement and the lack of bus pull-offs for loading and unloading compromises both the safety and utility of the facility.

Oakton Street

An Oakton Street station would serve downtown Skokie and area businesses, including two of the Village's top ten employers. The area is also highly commercial, making for an active environment for the proposed transit station. A five-story, 24-unit mixed use development now under construction at 4700 Oakton is within walking distance of the proposed station. Existing zoning is 'M2' (light industrial) along and immediately adjacent to the CTA tracks and 'B5' (downtown business district) either side of Oakton Street, west of the grade crossing.

The site has two potential constraints: the CTA track curves south of Oakton and the "Crafty Beaver" home improvement store and storage yard (immediately west of the CTA Yellow Line, north of Oakton) is an active business. Locating a station on a curve is not good design or operating practice, largely ruling out a location to the south of Oakton. North of Oakton the alignment is tangent. This section also has sufficient distance to the next grade crossing at Searle Parkway, which offers room for a station house and 520-foot long platform.

The "Crafty Beaver" store on the north side of Oakton may present a challenge. This facility currently affects street traffic patterns, as left turns out of the store can block westbound street traffic from clearing the grade crossing. Further, the store location impacts the ability to site any bus drop off or kiss-and-ride facilities immediately adjacent to the proposed station.

Track center spacing at Oakton Street was measured at 36 feet, widening out to 36 feet-10 inches within 330 feet of the crossing. This track center spacing is maintained up to the Searle Parkway grade crossing. At Searle Parkway, the overall CTA right-of-way width is 137 feet-6 inches. This track center spacing is sufficient to accommodate an 18-foot center platform, therefore conforming to CTA guidelines.

Providing a 4,320 sq. ft. station house (approximately 180 feet by 24 feet) set back from the north curb of Oakton Street and a 520-foot platform would mean that the north end of the platform would be approximately 850 feet north of Oakton Street. Searle Parkway is a further 250 feet, meaning that the station could also have an entrance at Searle Parkway. This arrangement would increase the capital cost of the station, but would increase access to the station for users located on Searle Parkway.

There are several existing installations that would need to be removed or relocated if a station were to be constructed at this location. A CTA signal relay house and grade crossing supply rack would have to be moved to accommodate the proposed station. These could be relocated to the east side of the right-of-way, set back far enough from Oakton in order to avoid affecting train operator, pedestrian or motorist site lines. Also affected by a potential station is the CTA emergency crossover, located about 600 feet north of Oakton Street. This crossover would have to be removed to accommodate the station. It is possible this crossover could be rebuilt north of the Searle grade crossing.

The catenary towers to the north of Oakton should be removed to facilitate construction of the station. Removal of the catenary towers at the Oakton site will be made easier by the fact that third rail power distribution is already in design by the CTA. Although the towers are expected to remain in place, they would be carrying only the communications cables at the time that station design and implementation is likely to occur, but could be relocated to buried conduit through the station site. In addition, the CTA has indicated that their design for third rail power distribution at this location will put the power rails outboard of the two tracks, making implementation of an intermediate station at this location easier.

The provision of a bus stop near this station is an issue. One possibility would be to acquire the parcel on the southwest corner of Searle Parkway and Skokie Boulevard (practical only if the station has an entrance at Searle Parkway). Use of the UPRR Skokie industrial lead right-of-way north from Oakton Street as a bus circulation lane is a possibility. However, this would require that bus boarding

and drop off area be 175 feet west of the station site. This bus station location would require transferring riders to cross the driveways for the "Crafty Beaver", which presents opportunities for conflicts between the pedestrians and vehicles.

Provision of kiss-and-ride and park-and-ride facilities at the Oakton site also requires further investigation. It is possible that the existing Village surface lots to the west of the proposed station site could be converted to parking structures, but these are some distance from the proposed station location. Another possibility is use of a portion of the existing Pharmacia parking structure (on the south side of Searle Parkway) for transit patrons. There may be some liability issues associated with such an arrangement; it is possible that the Village or CTA might have to purchase the structure outright or pursue other strategies, such as shared use.

Ridership Forecasts

The 2030 ridership projections for the proposed Oakton station are 900 to 1,200 boardings per average weekday. The 2030 ridership projections for the proposed Crawford station are 600 to 900 boardings per average weekday. These intermediate station ridership projections assume Yellow Line service from Howard to Dempster. It is anticipated that the Dempster Street station would show a slight ridership decrease of approximately 5% to 10% with the implementation of a new intermediate station(s).

Given the lack of available park-and-ride facilities for the Oakton and Crawford stations, it is expected that the ridership would be less than is currently exhibited at Dempster (approximately 2,500 boardings per average weekday). Also, given the land use around the Oakton and Crawford stations, it is also reasonable that the Oakton station have a higher ridership projection than the Crawford station, with the Oakton station area having mixed use and higher development densities in its station area. In addition, the Oakton station would have a greater potential for attracting work trips, given the land use and zoning in the station area.

Vehicle Requirements

Implementing either of the intermediate stations will add approximately one minute to the one-way travel time for a total of 9 minutes. This includes a 30-second dwell at the intermediate station, and would result in an average speed of 33.3 mph. Allowing five minutes layover at each end, the round trip time for each train would be 28 minutes in the peak. This would allow four trains to maintain the current peak period schedule; therefore, there would be no change over the current schedule requirements.

CTA's service standards allow a maximum of 90 riders per car before additional cars or trains are required. With either intermediate station, it is likely that boardings at Dempster will decrease slightly. With the Oakton station, an estimated total of 3,500 riders would enter the line's stations on a daily basis. At Crawford, an estimated total of 3,400 riders would board. If 40% of these trips are made in the morning peak period, the Oakton/Dempster combination would result in 1,400 riders, while the Crawford/Dempster combination would equal 1,360 riders. With the existing schedule, 19 southbound trips would operate through these stations in the AM peak. With a station at Oakton, the average load per train would be 74 riders, or 37 riders per car, while a station at Crawford would result in 72 riders per train, or 36 per car. Both will be within CTA guidelines, meaning that the existing service levels and load standards would be acceptable. Consequently, no additional vehicles are required over current line requirements with a new intermediate station.

Comparison of Operating Plan Car Requirements

Operating Plan	Peak Car Requirements	Spare Cars	Spare Ratio
Current	8	2	25%
With Intermediate Station	8	2	25%

Traction Power Requirements

In discussions with CTA Traction Power engineers, implementation of a new intermediate station on the Yellow Line would, at a minimum, require that the equipment complement at either Hamlin or Skokie substation be improved according to the following changes:

- The Skokie substation would require considerable reconstruction and expansion (including the installation of a second 2500 kW unit).
- The Hamlin substation is a comparatively new facility (having been built and put into operation in the late 1990s). However, to support expanded Yellow Line service, it would require relocation of the DC switchgear to facilitate installation of a second 2500 kW unit.

The timing of the implementation of the potential intermediate station will determine how the costs for the improvement of the Hamlin and Skokie substations are allocated. If the intermediate station is not implemented in the short-term, it is likely that the improvements will be carried out as part of the CTA's on-going capital improvement program.

Conceptual Station Plans

Design concepts were developed based on a potential station at Oakton Street. This station would be double-ended, providing an auxiliary entrance at Searle Parkway to provide more direct access for employers to the north of Oakton Street. The concepts are applicable to other stations as well.

Capital Costs

CTA Station cost information was used as a baseline for estimation of capital costs. A range of CTA unit pricing information was examined. The August 2002 CTA input for a typical at-grade station lists a unit price of $14 million. By contrast, using the CTA Engineering Condition Assessment (ECA) completed in early 1993 results in a typical station cost of $5.7 million (2003 dollars). Some difference in unit pricing may be due to differences in materials and construction methods.

Using the CTA ECA cost data, the proposed Oakton intermediate station (with an auxiliary entrance at Searle) would cost approximately $12 million and includes an expanded station length of 1,100 feet (vs. the minimum required 520 feet). Additionally, there are other costs associated with the construction of the Oakton station. A total of four ComEd high-tension towers and three ComEd wood poles will need to be relocated, with five catenary towers to be demolished at this site. The emergency crossover at Searle must be relocated to facilitate station construction. A total of $4 million is estimated for this additional site work at the Oakton Station.

A third, independent assessment of the station design and construction costs was provided by DLK, Inc., the subconsultant on the study. For the Oakton Street facility, the DLK estimate was $6.4 million, exclusive of the ComEd tower pole relocation and CTA emergency crossover removal/replacement. When those factors, along with the design/construction management allocation and the recommended contingency were included, the projected total cost for the Oakton Station would be around $11.3 million. This is within 20% of the unit price proposed by CTA, but this estimate includes additional site-specific items, which were not included in the CTA station unit price input.

In addition to construction costs, a design/construction management allocation of 16% of the total construction price, and a recommended contingency allowance of 30% were included in the station area costs.

As a worst-case scenario, the $14 million at-grade station unit price provided by CTA with the additional $4 million in additional site-specific requirements is used for a total estimate of $18 million. The $14 million cost estimate was also used for the proposed Crawford intermediate station.

Conservative Capital Cost Estimates Crawford and Oakton Intermediate Stations

Cost Element	Crawford Station	Oakton Station
Construction cost	$7.6 million	$9.7 million
16% design and construction management allocation	$2.2 million	$2.9 million
30% contingency	$4.2 million	$5.4 million
Total design/construction	$14 million	$18 million

Operating & Maintenance Costs

The CTA 2001 Rail Cost Model enumerated costs per station day and costs per car mile. For station costs, an estimate of $1,128.67 (2001 dollars) included the customer assistant, station appearance and security costs. Escalating this by 4% per year to 2003 dollars, the station cost per day would now be around $1,220.

For service 250 weekdays per year, the annual cost would be $305,000. For a full year's service (365 days), the total annual outlay would be $445,300.

Intermediate Station Evaluation and Recommendation

Based on the additional analysis for these stations, it is recommended that the proposed intermediate station at Oakton Street be advanced toward implementation, with the proposed Crawford Avenue station dropped from further consideration. The development potential at Oakton Street is greater than at Crawford Avenue. Furthermore, the ridership projections for the two stations indicate that the Oakton station would have slightly stronger demand, and greater integration with other transit services. These intermediate station recommendation factors are discussed below.

The table below compares the results of the factors evaluated for the Oakton and Crawford intermediate stations.

Comparison of Oakton and Crawford

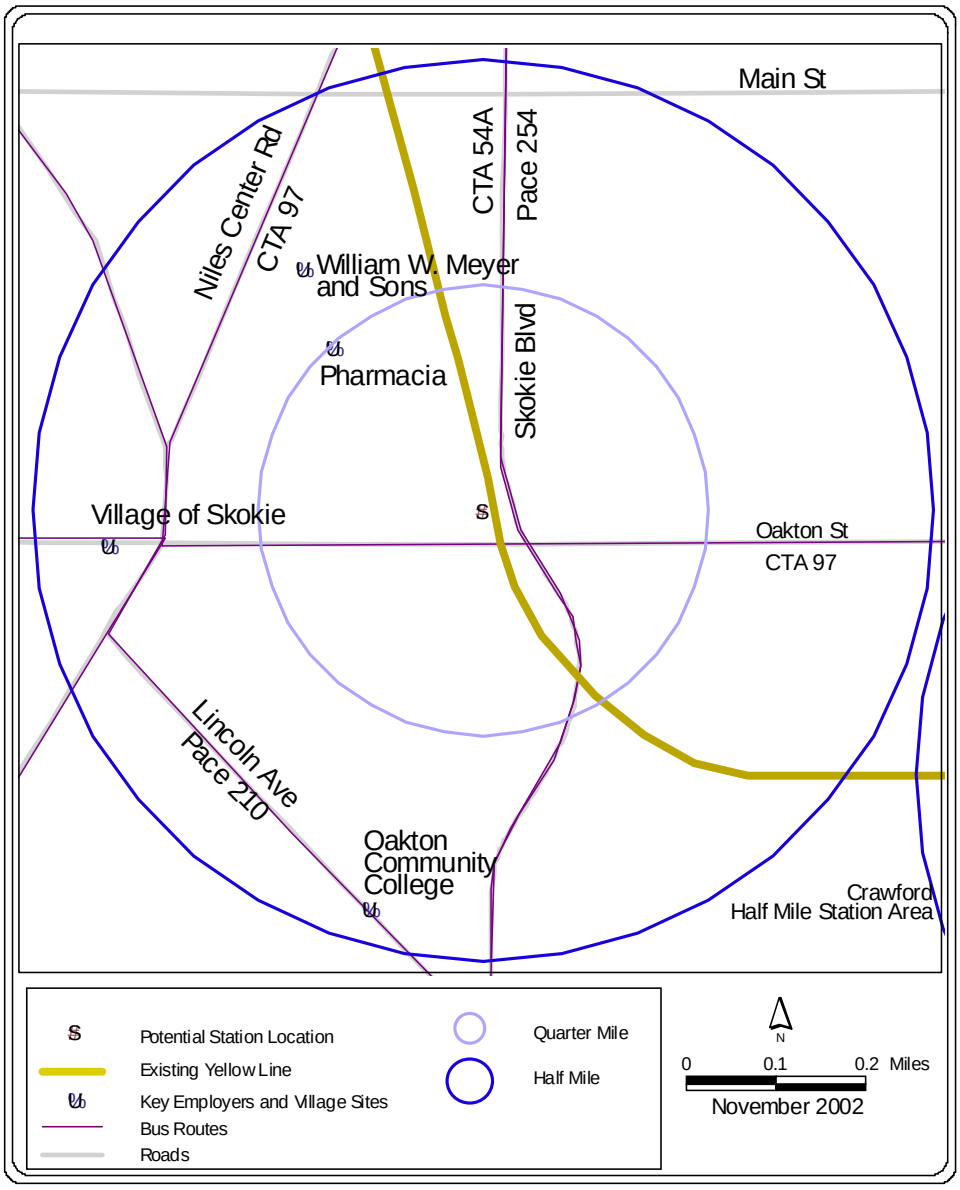
Evaluation Factor	Oakton	Crawford	Remarks
Service/operations impacts	Additional running time required	Additional running time required	Both stations are equal
Connections to other transit service	97, 54A and 254 bus routes	Pace route 215	Oakton is superior in terms of connections
Proximity to traffic generators	Four major employers within one-half mile	One major employer within one-half mile	Oakton is superior
Access considerations	Signals and crosswalks exist east and west of Oakton. Other studies may improve situation	No signalized intersections in close proximity. Access paths across Crawford required.	Oakton is currently in a more favorable situation. Pending studies may lead to further improvements.
Capital costs	$8M-$18M	$4M-$14M	Possible to lower capital cost at Oakton
O&M costs	+$0.3M annual	+$0.3M annual	Both stations are equal
Potential ridership	900-1,200 boardings	600-900 boardings	Oakton is superior
Development potential	Zoning and current developments favor higher density	Completely surrounded by single-family zoning	Oakton has greater long-term potential
Congestion impacts	ADT = 18,000 (1998)	ADT = 14,100 (1998)	Oakton is in a more congested area
Land use/ compatibility	Zoning and neighborhood are favorable	Zoning is entirely single-family residential	Both are suitable for station site; Oakton is more favorable

Safety aspects	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	Both stations are equal

On balance, Oakton is superior to Crawford as a proposed intermediate station site. While the capital costs for the Oakton station would be higher, it is possible to reduce the design and construction costs (by eliminating the auxiliary entrance at Searle, reducing the platform length, etc.) and can be addressed in a future phase of this study. The Oakton station site also has greater, long-term development potential.

Based on the analysis of the proposed new Yellow Line intermediate stations, the proposed Oakton station is recommended to be carried forward towards implementation. This site is expected to have reasonable ridership potential for a suburban location and would provide improved accessibility and mobility options for downtown Skokie and the surrounding community. The Oakton station site also has greater, long-term development potential, with the ability to attract transit supportive development compared to the other intermediate station sites that were examined.

Oakton Street Station Area



OLD ORCHARD ROAD EXTENSION ANALYSIS

In addition to intermediate station(s), the feasibility of an extension of the Yellow Line from Dempster to the vicinity of Old Orchard Road was analyzed.

Extension and North Terminal Alternatives

Eight options for a north extension of the Yellow Line, from Dempster Street to the vicinity of Old Orchard Road, were analyzed in terms of the possible routing and location of the extension's north terminal. The potential alternatives included:

- Alternative A – UPRR right-of-way to Old Orchard Road
- Alternative A1 – UPRR right of way to Golf Road
- Alternative B – North of High School
- Alternative C – South of High School
- Alternative D – Golf Road/shopping center south
- Alternative E – East of Edens
- Alternative F – East of Edens/curve into shopping center
- Alternative G – Single-track loop

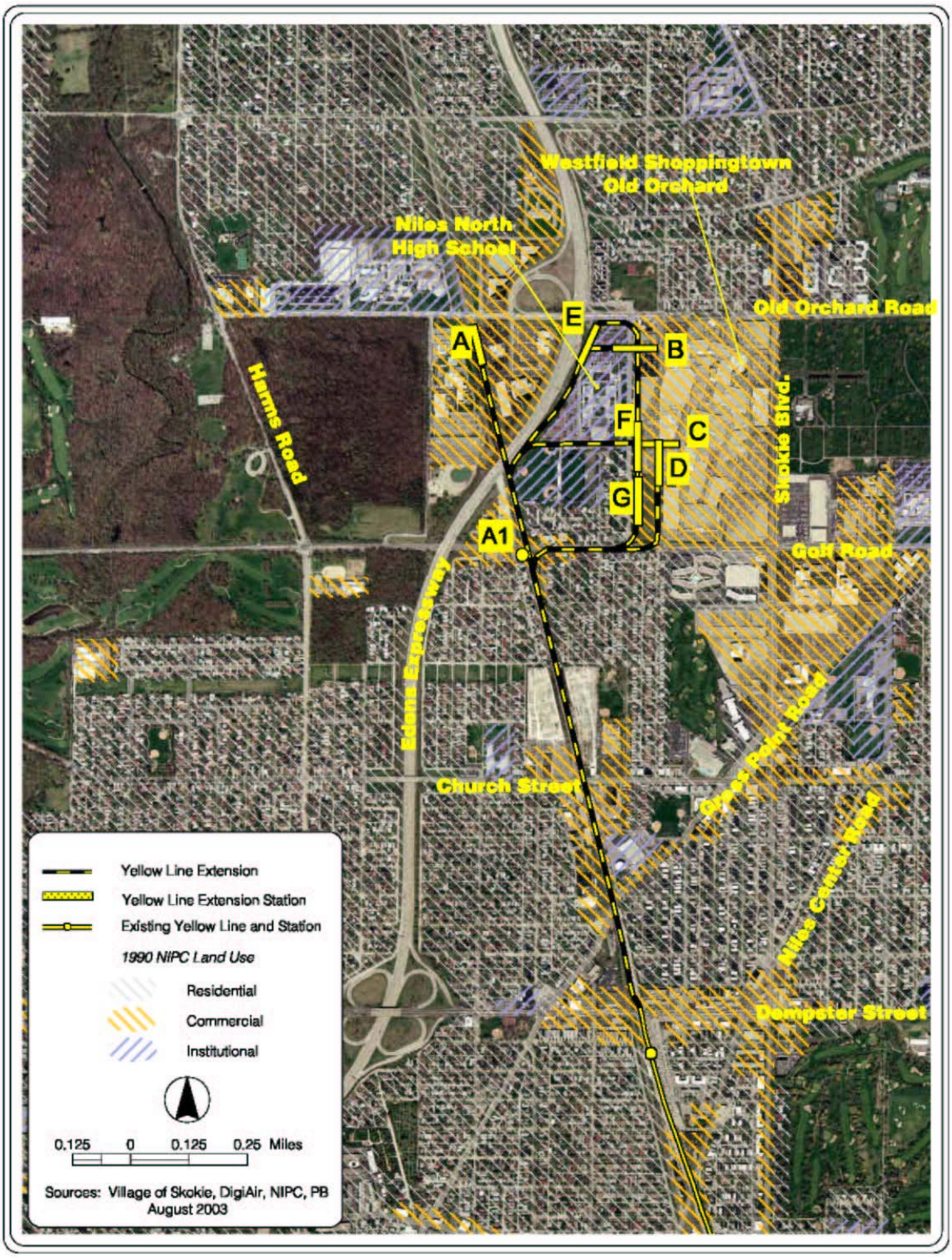
The following graphic displays the alternatives, and a table provides a summary and subjective assessment of some issues. The "Ease of Extension to North" category is based chiefly on the proposed orientation of the terminal station relative to a line extension further north. By this measure, those line extensions having the terminal oriented east-west would not be "extendable" without replacement of the proposed terminal station, and line realignment. In a similar context, alternatives F and G, where the line makes a 180-degree turn on approach to the terminal station would similarly require relocation/reorientation of the approach track and the terminal station in order to accommodate extension further to the north.

One category not included in the table is an assessment of bus service requirements to connect the proposed terminal location to area traffic generators. Each of the alternatives requires this service to some extent. By this measure alone, the worst-placed terminal station would be in Alternative A1 at the UPRR and Golf Road, since this is remote from virtually all of the potential traffic generators. Alternative E is also sufficiently remote to require bus service to link it to both the shopping center and to the offices and court complex. Each of the alternatives requires bus service to link it to some of the uses in the area. Access can be by dedicated shuttle bus service, by extending or rerouting some services or by coordinating fixed-route service schedules to provide convenient service frequency. All options will require some pedestrian infrastructure improvements for connections to the area land uses.

Summary Assessment of Alternatives

Alt.	Length from Dempster St. (miles)	2030 Estimated Population and Employment	Accessibility /Visibility from Edens	Displaced Parking: Commercial	Displaced Parking: NNHS	Ease of Extension to North
A	1.6	11,220	Good	No	No	High
A1	1.1	--	Poor	No	No	High
B	1.8	8,960	Fair	Yes	Yes	Low
C	1.7	9,290	Fair	Yes	No	Low
D	1.6	9,590	Fair	Yes	No	High
E	1.6	10,530	Excellent	No	Yes	High
F	2.0	10,190	Fair	Yes	Yes	Low
G	2.4	--	Fair	Yes	Yes	Low

Extension and North Terminal Alternatives



Land Use

The Old Orchard Road area includes a number of destination sites. A primary destination site is the Westfield Shoppingtown Old Orchard retail complex of about 100 acres, which includes a number of high-end anchor stores. In addition to the shopping center, there is other retail located to the south and east of the Old Orchard complex.

Besides the retail uses, there are a number of employers and other high activity sites in the area. Niles Township High School North and the Cook County Circuit Court are nearby. There are a number of multi-story office buildings. To the west is Harms Woods, part of the Cook County Forest Preserve system. The communities of Glenview and Wilmette are to the north and within the half mile station area.

From Dempster to Gross Point, residential use is predominant to the east of the rail corridor (separated by the station parking lot), while to the west the land immediately abutting the rail right-of-way is commercial, with residential usage further west of that. Between Gross Point and Church, and for approximately one-quarter mile north of Church, land use on either side of the rail right-of-way is commercial, industrial and institutional. Between Emerson and Golf Road, the area on either side of the rail line is residential in nature. There is a small band of commercial development on either side of Golf Road, which transitions to residential and then institutional uses to the east of the right-of-way. Remaining on the rail line north of the Edens Expressway, commercial uses border the right-of-way.

Vertical Profile Alternatives

Vertical profile options – at-grade, open cut (below grade), aerial structure and embankment/retained fill – were considered for the north extension of the Yellow Line, from Dempster Street to the vicinity of Old Orchard Road. Combinations of these alignment profiles are also possible. The choice of vertical profile for the extension is between continuing with the at-grade alignment or grade separating the line. General social, environmental, operating, and cost considerations are presented in the discussion of these options.

CTA design criteria were used in analyzing the vertical profile options for the extension profile. One CTA criterion specifies that the maximum grade should not exceed 4%, outside of station platforms and yard storage tracks. Therefore, for an aerial alignment 20 feet above (or a depressed alignment 20 feet below), the approach grade must begin 500 feet in advance of the point where the rail is to be at this elevation. On the Yellow Line extension, all of the road crossing-to-road crossing distances (for example, between Dempster Street and Gross Point Road) are greater than this 500-foot dimension, making it possible to accommodate a change in the rail line's profile without impacting either of the adjacent road crossings.

To conform to CTA design criteria, construction of a grade separation at Dempster Street would require that the approach grade begin within the limits of the existing station. This means that a new station house and platforms might be required at Dempster Street, should it be decided to grade separate this crossing. Even if the line were to remain at-grade through this location, the station would require substantial reconstruction due to the short platform lengths and other issues.

Each of the alternative profiles will have to consider utilities, both paralleling as well as crossing the path of the extension. In this context, the aerial structure, embankment and retained fill options could be expected to have the greatest impact on buried utilities. The embankment option would have the most impact on aerial utilities, given that its footprint at grade level would be broader than any of the other alignment profiles.

The following matrix, although subjective in the assessment, summarizes the key aspects of the alignment profiles. The "noise", "aesthetics", "traffic" and "safety" classifications are an assessment of the impacts of the rail line on the surrounding area. In the case of the "utilities" classification, this reflects the impact the rail line's construction would have on the area utility installations. The "cost" classification reflects the anticipated cost to construct the alignment.

Comparison of Profile Alternatives

Impact	At-Grade	Open Cut	Aerial Structure	Embankment
Noise	Medium	Low	High	Medium
Utilities	Low	High	Medium	High
Aesthetics	Medium	Low	Medium	High
Traffic	High	None	None	None
Safety	High	Medium	None	Medium
Cost	Low	High	Medium	High

In addition to the above vertical profile alternatives, underground subway is also a possibility. Subway sections would minimize impacts (except for construction impacts) in sensitive areas. However, construction costs for subway sections are very high, and are generally considered cost prohibitive (except for short sections) in suburban areas such as the Village of Skokie.

Right-of-Way Requirements

CTA design criteria specify that the required clearance in non-boarding areas for a double-track rail line is 25 feet-6 inches. This requirement does not presume the right-of-way alignment profile. If the proposed extension is grade separated (either above or below street level), there will be additional right-of-way requirements for retaining walls or for an aerial structure. If the proposed extension is run at grade, there will be some additional right-of-way requirements in the vicinity of grade crossings. If entirely at grade, there would be four new grade crossings: Dempster, Gross Point, Church and Golf. At each grade crossing, gate/flasher mechanisms are located outside the dynamic envelope [clearance] of the train. If the gates are located 15 feet from the adjacent track centerline, the right of way width at a grade crossing would be on the order of 45 feet-6 inches.

At crossovers, the right-of-way must widen out to include clearance around signal relay houses (55 feet long by 10 feet wide), switch machines (approximately 10 feet) and interlocking home signals. Relay houses are required approximately every mile, so between two and three relay houses will be needed for the proposed extension. Traction power substations, each with a required approximate one-mile spacing, are also needed The footprint for a substation and associated transformer yard, with an allowance of 10% for clearance around the building/yard and access to the site, will be on the order of 35,000 square feet. A 1.6-mile extension would require a maximum of two substations.

In determining right-of-way availability for the proposed extension, the Village provided maps, marked to show land ownership. Given current ownership and land use configurations, to provide a tangent alignment for the CTA extension north from Dempster, a portion of ComEd land will have to be used to link the CTA alignment to the UPRR alignment on the old North Shore Line right-of-way.

From Greenwood Avenue to south of Gross Point Road, the UPRR's land holdings are separated by a strip of ComEd right-of-way. The wider UPRR strip measures about 30 feet across and could accommodate a double-track transit line, exclusive of any structural arrangements (retaining walls, elevated structure, etc.) or other installations (grade crossing gates, relay houses, etc.). The ComEd strip to the west of it is approximately 15 feet in width. The west strip of UPRR is about 25 feet wide, but does not extend north of Gross Point.

To accommodate additional uses in this corridor would require an agreement on shared usage with ComEd. This is similar to an arrangement originally used by the North Shore Line and the utility when this right-of-way was first acquired. The two entities (then under the control of one owner) granted each other "cross rights" of purchase in the event that one or the other abandoned their respective uses. This right was carried forward when the C&NW bought the North Shore Line right-of-way in 1964. The utility's holding to the east of the UPRR strip is about 100 feet wide.

North of Church Street, the UPRR ownership comprises a 30-foot wide strip, surrounded by ComEd holdings. This right-of-way would be sufficient for a double-track transit line, but any other installations would require easement to or acquisition of ComEd-owned property. The same situation is found between Golf and Old Orchard roads.

If a new terminal station is built at Old Orchard Road and the UPRR right-of-way (alternative A), some utility facilities would need to be relocated. However, a terminal station at this location, along with other facilities (bus interchange, park-and-ride), would require considerable land requiring much of the area to the east of the UPRR to be cleared.

In summary, in no instance is the UPRR land holding of sufficient width for anything other than a "plain" double-track transit line. All relay houses, traction power substations, passenger stations and associated facilities will have to be located on land owned by others. The extent of these additional land requirements cannot be accurately determined until further study is conducted, in order to know the profile (at-grade, subterranean, or aerial) alignment configuration for the proposed extension. The use of ComEd right-of-way for some of the ancillary facilities required for a complete, functional extension of the Yellow Line must also be determined in more detailed studies.

In a similar context, the exact routing of an alignment into or near the Westfield Shoppingtown Old Orchard retail center and the right-of-way requirements will need additional study.

With an extension of the Yellow Line, the existing Dempster terminal becomes an intermediate station. Construction of the extension may require temporary relocation of the station (especially if Dempster Street is grade-separated). If required, there are several possible locations for the temporary station. A permanent station would follow CTA design criteria with a minimum 18-foot wide, center platform station and 520-foot length required at this location. It is assumed that the new station could be built on existing CTA-owned land, therefore pre-empting the need for additional right-of-way.

Ridership Projections

The 2030 ridership projections for the proposed Yellow Line extension are 1,900 to 2,300 boardings per average weekday at the new Old Orchard terminal station. These extension ridership projections assume a new intermediate station at Oakton or Crawford. It is anticipated that the Dempster Street station would show a ridership decrease of approximately 40% with the proposed extension. This diversion of riders from the Dempster station reflects the northerly orientation of the Dempster station users that would be diverted to a new station in the vicinity of Old Orchard Road.

Ridership forecasts for the individual north terminal station extension alternatives were not developed. Ridership projections for these alternatives would somewhat mirror the relative station area population and employment levels for the station areas. However, actual ridership projections will also be influenced by the convenience or ease of access to the alternative station sites. At this early stage, the ease of access to each station for pedestrian, auto, and bus/shuttle service is an unknown as these factors depend on the configuration of the station site.

Overall, 1,900 to 2,300 boardings on an average weekday show relatively strong demand for a station outside of downtown Chicago. These boardings are comparable to that of other CTA suburban terminal stations. From the November 2002 ridership report, the Linden/Evanston station (Purple Line) had 1,070 weekday boardings, and the Harlem/Lake station (Green Line) had 1,900. At the high end, the Forest Park/Congress station (Blue Line) had 3,750 weekday boardings. An Old Orchard Road station would fall in between this range. The Forest Park station has a very high level of accessibility, with both bus routes and high volume roads. Accessibility to a station at Old Orchard Road may be somewhat less than that of Forest Park, but is likely to be higher than that of Linden or Harlem.

Vehicle Requirements

Car requirements for several different operating plan scenarios were developed and car requirements for the various operating plan alternatives were compared to the existing Yellow Line requirements.

- Shuttle with intermediate station and line extension
- Peak period express service to the Loop via elevated
- Peak period express service to the Loop via subway

Comparison of Operating Plan Car Requirements

Operating Plan	Peak Car Requirements	Spare Cars	Spare Ratio
Current	8	2	25%
Shuttle with intermediate station and extension	12 to 14	2 to 4	17 to 29%
Peak express to Loop via elevated	72	14	20%
Peak express to Loop via subway	78	16	20%

The higher spare requirement for the shuttle operations is necessary due to the fact that all CTA cars are married pairs and that the total number of cars assigned to provide the service is small.

Yard capacities for the increased fleet size are a consideration. Yellow Line cars are currently stored and maintained out of Howard Yard, which also is responsible for cars assigned to the Purple and Red Lines. The other yards with responsibilities relative to these two lines are Linden (Purple Line) and 98th Street (Red Line). The CTA railcar assignment sheet that went into effect at the end of February 2003 was reviewed to determine the total number of cars currently assigned to these lines.

Since Purple and Red Line cars are assigned out of two facilities, some simplification has been made in the following chart. All Purple Line cars are listed as if assigned out of Linden Yard, when in fact they are divided between Howard and Linden. Similarly, the Red Line cars are shown as if divided half and half between Howard and 98th. This was done to allow the table to reflect the total cars assigned and then to project the available capacity between the three yards. Comparing the available capacity to the theoretical Yellow Line requirements, it can be seen that all the operating plan car requirements can be accommodated within the available capacity of these yards. To accommodate as many Yellow Line cars as might be required for the through Loop Express service (using six-car trains) at Howard Street might require some changes in Purple and Red Line car assignments/schedules compared to what is now in effect.

Comparison of Yard Capacities and Line Requirements

Yard	Total Capacity	Line Assignment	Available Capacity	Remarks
Howard	282	190	92	Assignment shown as if ½ Red and all Yellow
Linden	76	98	-22	Shown as if all Purple cars at this yard; some are at Howard
98th Street	234	180	54	Shown as if only ½ Red assigned here
Total	**592**	**468**	**124**	

Alternatively, if it were necessary to run eight-car trains on the Yellow Line Loop Express trains, the car requirements for this expanded service would consume most all of the available capacity at these yards, without allowing for any Purple or Red Line expansion. It might be necessary to transfer the Yellow Line assignment to either a new facility on the line, or to begin using CTA's Skokie Shops as a running repair and/or storage facility.

In summary, the projected car requirements for the proposed Yellow Line extension can easily be accommodated within the available capacity at Howard Yard.

Traction Power Requirements

The existing Yellow Line is fed from three substations: Calvary, Hamlin, and Skokie. In discussions with CTA, the following changes would be required to support the line extension on the Yellow Line:

- One new substation of 5000 KW capacity
- Skokie substation would require considerable reconstruction and expansion (including the installation of a second 2500 kW unit)

- Hamlin substation is a comparatively new facility (having been built and put into operation in the late 1990s). However, to support expanded Yellow Line service, it would require relocation of the DC switchgear to facilitate installation of a second 2500 kW unit)

The CTA estimated that these changes would be required to support six- or eight-car train operation, necessary for peak period Loop express service. Without this operational change, the extension would require only the new substation.

Conceptual Plans

Dempster as an Intermediate Station

Based on ridership projections, as long as the Yellow Line continues to operate as shuttle service to Howard, the existing two-car operation could be maintained. With this, the Dempster Street station would not necessarily have to be rebuilt (assuming an at-grade alignment profile for the extension north) until either through Loop express train operation begins or in response to increased ridership demands.

With a northbound extension, the current Dempster station layout is not suited to the handling of boarding northbound riders. Constructing a second track north through the station site would impact the proposed relocation of the bus facilities to the east of the present tail track. With the extension, it will be important to address the issues at Dempster by building a new station to accommodate longer-length trains, as well as support bi-directional ridership demands.

Should it be decided to construct the extension other than at-grade, construction of the ramp up or down would require demolition of the existing station and construction of a replacement facility.

Old Orchard Road Terminal Alternatives

The nature of the terminal facility depends on the alignment and profile to be used on the extension. All north terminal alternatives include a two-track station with an island platform. Except for Alternative G, the other alternatives would make provisions for a third track to improve headways as demand warrants. For Alternative G, (a probable subway, loop arrangement for the north terminal), CTA input on this terminal facilities suggested a two-track terminal station with an island platform. Bus terminal capacity for each of the north terminal alternatives was based on providing one bay for each route currently serving Westfield Shoppingtown Old Orchard, plus expansion.

Alternative A – UPRR Right-of-Way

Land use around the proposed terminal location is entirely commercial. Development to the north of Old Orchard Road is also present on either side of the UPRR right-of-way. However, the area immediately east of the UPRR track is currently vacant. This land is proposed for the north parking lot to provide a total capacity of around 600 spaces.

The conceptual station designs have many similarities to the existing Dempster Station layout. The alternatives provide parking lots adjacent to the terminal facility and across Old Orchard Road. The capital costs for flat lot and structured parking are based on providing 600 spaces, a capacity similar to that at Dempster Street, along with the assumption that most of the parking facility at Dempster will remain in service, even after the extension is implemented.

The parking capacity immediately adjacent to the station is constrained, due to limited available land. This led to another concept which incorporated a multiple-story parking facility on top of the station. This concept offers the advantage of increased parking capacity in immediate proximity to the station, as well as shielding the terminal operations from inclement weather.

Alternatives B through G – East of Edens Expressway

Land use surrounding each of these alternatives is a mixture of institutional (Niles North High School) and commercial (the shopping center and adjacent offices). There is also a residential area along Golf Road and to the east of the UPRR right-of-way. The east limits of this area front Lawler Avenue.

Design concept B is applicable in principle to Alternatives B through G. Concept B assumes an elevated alignment profile for the north terminal and associated approach trackage. As the terminal approach and facilities will displace existing parking (either at the high school or at commercial property) this alternative identifies "replacement" parking capacity as well as that for CTA employee and rider use. The capacity shown is indicative of what can be provided, and the structure would be designed for potential expansion. Cost estimates are based on 600 transit patron spaces, as well as including "replacement" parking for the commercial affected by the terminal.

The sample concept shows the use of skybridges to facilitate connections to adjacent stores/offices. If a subterranean approach and terminal were to be used, these connections could be made by underground walkways. It is expected that circulation details (tie-ins to the surrounding road network, etc.) would be developed in a future phase of the engineering effort.

Capital Costs

Detailed cost estimates were prepared for Alternative A (remaining on the UPRR right-of-way) for the at-grade, below-grade (open cut), subway and aerial structure alignment profiles. Unit prices per mile for each of these profiles are then derived. These alignment profile unit prices were applied to Alternatives B through G, as well as to the combinations of alignment profiles that might be possible for the extension. This leads to the identification of a range of costs per alternative.

Dempster Street Intermediate Station

The concept design plans show at-grade and above-grade station designs for Dempster. The basic station concept (island platform, etc.) could also be applied to a below-grade station, whether in open cut or subway. In addition to the costs for the construction of the final station, an allocation must also be made for the construction of a temporary terminal station to be used during the construction of the replacement facility.

The estimated cost for the temporary facility requires some comment. CTA's updated information (received in August 2003) indicates that the new station at Kedzie on the Brown line has an estimated total cost of $4 million, quite different from the estimates provided by CTA in 2002. It is proposed that the temporary station cost allocation of $5 million be retained at this time, but that it can be refined during a future phase of the study.

Using the 16% design/construction management allocation, the cost range for design and construction management is between $3.3 and $5.4 million for this station. The totals also include a 30% contingency, so the range for this allocation would be from $6.2 to $10.2 million. The total costs for the demolition, temporary operations and new construction work at Dempster are, by profile:

Dempster Station Cost Comparison (In Millions)

Cost Element	At-Grade	Open Cut	Aerial Structure	Subway
UPRR ROW acquisition	$0.6	$0.6	$0.6	$0.6
Temporary terminal construction	$5.0	$5.0	$5.0	$5.0
Demolish existing station	$0.4	$0.4	$0.4	$0.4
Design and construct new station	$14.5	$18.0	$20.0	$26.0
Total	**$20.5**	**$24.0**	**$26.0**	**$32.0**

DLK Inc. provided an order of magnitude cost for design and construction of the new Dempster aerial station. Their estimate, including the design/construction management allocation and the contingency is that this facility would cost approximately $18 million. This corroborates the above estimate of $20 million.

Alternatives A-G

Conceptual cost estimates for the various alignment profiles (at-grade, open cut, aerial structure and subway) were developed for Alternative A. The preparation of these estimates included review of ComEd drawings for above- and below-ground installations, review of UPRR high-range price estimates for the acquisition of the railroad's right-of-way north of Dempster Street, and the review of unit price data for application to this project.

Total cost by alignment profile for Alternative A was developed, and then unit prices by alignment profile were calculated.

Range of Costs (in Millions of Dollars) for Alternative A (UPRR ROW, 1.6 miles)

Alignment Profile	Total Cost (excluding terminal station)	Unit Price/Mile
At-grade	$72.9	$45.6
Open cut	$137.6	$81.0
Aerial structure	$137.5	$80.9
Subway	$190.3	$111.9

When all cost elements are considered (Oakton intermediate station, impacts on Dempster station, traction power improvements, additional cars and the cost of the construction of the extension) the results are shown below. The lowest-cost in the range will result when the at-grade alignment is applied where practical. The highest range of costs for each of the various alternatives results when the subway alignment is used.

Range of Costs for Alternative (Millions)

Alternative	Length from Dempster St. (miles)	Range of Estimated Cost
A	1.6	$154 to $289
B	1.8	$228 to $301
C	1.7	$220 to $289
D	1.6	$219 to $278
E	1.6	$212 to $278
F	2.0	$245 to $323
G	2.4	$250 to $320

Operations and Maintenance Costs

Based on CTA data, operating and maintenance (O&M) costs for a new station in 2003 dollars is approximately $1,220 per day. With 250 weekdays per year, the annual cost of a new terminal station would be $305,000; operating year round, the total annual outlay would be $445,300.

Projected ridership for the extension will warrant an increase in peak period train service, compared to the current operating plan. The one-way line length will increase to 6.7 miles (on average). With the extension, peak period service will increase to 22 round trips, or an addition of six trips per peak, 12 one way trips per day. The extension will add $0.8 million for 250 weekdays of operation to current service O&M costs. If the extended service operates 365 days per year, the additional cost over the current service would total $2.0 million.

In total, O&M costs for the extension and new terminal station are:

- For service 250 days/year: $1.1 million
- For service 365 days/year: $2.4 million

Discussions relative to bus route changes as a result of the proposed intermediate station or the extension of the Yellow Line north to Old Orchard Road have not occurred. A future study will need to address revisions to the bus O&M costs.

Evaluation and Recommendation

At the request of the Westfield Shoppingtown management, the alternatives that would use shopping center property to locate the terminal and ancillary facilities were dropped from further consideration. The shopping center is already constrained, in parking capacity and the ability to support other uses. This is especially true at times of peak shopping demand. Accordingly, Alternatives C, D, F and G are eliminated. However, it is appropriate to note that consideration of the alternatives recommended for elimination may be reversed (for other reasons) in a subsequent phase of this study.

Three alternatives – A, B and E – are recommended to be carried forward. Discussions with School District 219 (Niles North High School) also showed support for these options. Additional analysis was done on these three alternatives. The table below compares the results of the factors evaluated for the alternatives in this study.

Evaluation Factor	A	B	E	Remarks
Connections to other transit service	Equal	Equal	Equal	Location, alignment profile may affect schedules
Proximity to traffic generators	Cook County Court house, other office buildings	Niles North, Old Orchard (best in terms of access to north end of shopping center)	Niles North, Old Orchard	Supporting bus services important for connections along Old Orchard
Access considerations	May require signal for Old Orchard cross traffic; pedestrian access to offices needed	Lawler for vehicle entry; pedestrian environment will need to be improved	Lawler for vehicle entry; pedestrian environment will need to be improved (most visible from Edens)	I-94 (Edens Expressway) will be a significant barrier to land uses on the other side unless pedestrian environment is addressed
Capital costs	$154M-$289M	$228M-$301M	$212M-$278M	Conservative estimates; depends on alignment profile
O&M costs	+$1.1M annual	+$1.1M annual	+$1.1M annual	Equal (all exclude O&M cost for intermediate sta.)

Potential ridership	1,900-2,300 boardings	1,900-2,300 boardings	1,900-2,300 boardings	Must be refined
Development potential	Some opportunity	Greater Opportunity	Mid-range Opportunity	Redevelopment to higher densities possible at all locations, greater potential to east of expressway
Congestion impacts	Equal	Equal	Equal	Depends on alignment profile
Land use/ compatibility	Equal	Equal	Equal	Concern about residential real estate values along alignment; depends upon profile
Safety aspects	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	Preventive measures can be applied at station sites

Of the alternatives, A offers the best access to the locations to the west of the expressway, while B could serve to stimulate commercial traffic at the north end of the Old Orchard shopping center and E would have the best visibility in terms of attracting motorists off the Edens Expressway. It is noted that the greater potential for redevelopment lies to the east of the expressway, favoring Alternatives B and E.

From a capital cost standpoint, extending the line north using an at-grade alignment will result in the lowest design and construction costs. However, at-grade crossings at Dempster Street and Golf Road must be considered from the perspective of safety (train, motor vehicle and pedestrian), traffic impacts and other considerations. Additional questions on safety and traffic impact concerns were noted for the Gross Point Road and Church Street crossings, particularly related to school children crossing safety at Church Street.

For the alignment profile, Alternative A could remain at-grade all the way into and including the terminal station at Old Orchard Road. However, this is not practical for Alternatives B and E. In those cases, the terminal station must be on aerial structure. For the aerial guideway, there are issues of aesthetics and noise control that would have to be addressed in order to increase acceptability. Combinations of profiles for the north extension of the Yellow Line to Old Orchard Road should also be considered.

Lastly, Dempster Street is a Strategic Regional Arterial (SRA), which means that application to cross it at grade must be reviewed by the Illinois Commerce Commission (ICC), as well as the Illinois Department of Transportation (IDOT). This review process will be lengthy, with the potential for the two entities to deny the at-grade crossing.

PUBLIC INFORMATION MEETING

A public information meeting was held in the Village Hall (Council Chambers) on June 26, 2003. It presented an opportunity for the public to view and comment on the planned improvements for the CTA Yellow (Skokie Swift) line. About 50 persons attended the public meeting, including a mix of area residents, business owners and representatives of various agencies. Following a brief presentation by the project team, about a dozen attendees took the opportunity to clarify the information and provide comment.

The intermediate station at Oakton received almost totally positive comments. Concern was expressed relative to the number of projected riders and the costs, both capital and operating, for the intermediate station and the line extension. There was further concern about the ability of Old Orchard Road to accommodate additional vehicular traffic. Concern was expressed with regard to the extension's alignment profile and impacts on the surrounding neighborhood, including safety, noise and housing values. Explanations of the ridership forecasting, costing, and implementation

process were also provided. In summary, the verbal comments were fairly evenly split between the supportive and the negative regarding the extension.

CONCLUSION AND NEXT STEPS

Based on the analysis of the proposed new Yellow Line intermediate stations, the proposed Oakton station is recommended to be carried forward towards implementation. This station is expected to have reasonable ridership potential for a suburban location, would provide improved accessibility for downtown Skokie and the surrounding community, and has the greater, long-term development potential, with greater ability to attract transit supportive development than any other of the alternative intermediate station sites that were examined.

For the extension, three alternatives (A, B and E) are recommended for further study in a succeeding phase of this effort. Of these, A offers the best access to the locations to the west of the expressway, while B could serve to stimulate commercial traffic at the north end of the Old Orchard shopping complex and E would have the best visibility in terms of attracting motorists off the Edens Expressway. It is also noted that the greater potential for redevelopment lies to the east of the expressway, favoring Alternatives B and E.

An outline of items necessary to advance this project to the next phase was prepared. Different procedures will apply depending on if the Village of Skokie chooses to pursue only the new intermediate station at Oakton, or in addition, the extension from Dempster to the vicinity of Old Orchard Road.

Oakton Station

With the 2002 STB action on the UPRR and Village of Skokie requests regarding the UPRR's disposal of the corridor from Dempster to Oakton, the Village of Skokie should pursue negotiations with the railroad. In addition, with the closure of the Pharmacia properties, the Village should continue monitoring and reviewing any future development proposals for the site and attempt to negotiate public/private partnerships with the buyer that would facilitate new transit service at Oakton.

Because the proposed Oakton station is an intermediate station along an existing service, the implementation process has fewer steps than the process for the extension. In addition to preliminary engineering, final design, and system/schedule planning, funding and land use compatibility should be pursued. In the case of funding, the CTA will need to be a willing partner in the implementation of this station. There are a variety of funds (Section 5309, STP, CMAQ, other federal earmarks, future state funding programs, joint development, public/private partnerships, etc.) that can be used for this station but there will be a need to show that this station is a priority project for the CTA in a financially constrained environment.

For land use, the Village of Skokie should require that the nearby land uses to the proposed Oakton station are transit supportive. This may require changes to the Village of Skokie's zoning code to allow mixed use buildings, lower parking requirements for commercial or residential uses, or changes to the mix of allowed development types in the station area. The Village of Skokie is currently undertaking a Downtown Land Use Study that will examine these issues and ensure a strong transit supportive environment.

In all cases, it will be important to ensure public involvement in all steps of the planning process to ensure continuing support for the proposed Oakton station.

Old Orchard Road Extension

In the July 15, 2003 Draft for Work Program Committee Review of the CATS 2030 Regional Transportation Plan, the Yellow Line enhancements and extension to Old Orchard Road was included as recommendation in the Improvements to Existing Facilities as a Passenger Rail Upgrade and Extension project.

The extension project will have a longer lead time for implementation. On May 7, 2002 the UPRR applied to the STB to discontinue operations on the 8.06-mile line section north from Dempster Street to Valley Junction in Northfield. The Village of Skokie should continue to monitor STB filings for the ROW. Future preservation options could be explored.

New fixed guideway projects like the extension to Old Orchard represent significant capital investments. Much of the funding for these projects has typically been provided through the Federal Transit Administration's (FTA) Section 5309 New Starts program. However, competition for these funds is very intense. The New Starts Program consists of the conduct of an alternatives analysis, Draft Environmental Impact Statement (DEIS) or equivalent, and is typically developed concurrent with the alternatives analysis. The locally preferred alternative is identified during this process. The FTA then uses criteria to screen project applications. The FTA criteria will need to be addressed to ensure that this project receives the highest favorable rating to ensure federal funding.

FINAL REPORT

SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY

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1.0 BACKGROUND

This final report for the Skokie Swift Station Location Feasibility Study is a compilation and editing of the chapters that were submitted as draft technical memoranda for each of the four preceding tasks of this study. As such, these chapters may reference work in preceding tasks, or superseded submittals of documentation. The cross-reference of the tasks and their purpose is:

- Task 1 – Data Collection/Condition Assessment
- Task 2 – Development of Alternatives
- Task 3 – Refinement of Alternatives
- Task 4 – Evaluation and Recommendation

In the interest of reducing the size of this final report, superseded versions of documentation are not included. For example, the aerials of the line extension alternatives were developed as an iterative process. Only the final version aerials (reflecting that change) are included in the appendices.

1.1 Introduction

The Village of Skokie has undertaken the Skokie Swift Station Location Feasibility Study to determine the feasibility of adding intermediate station(s) along the existing Chicago Transit Authority's (CTA) Skokie Swift (also known as the CTA Yellow Line) rapid transit service and the potential extension from the existing north terminus at Dempster Street to Old Orchard Road. This study will assess whether these proposed stations would be a cost-effective means to increase transit ridership, provide better transit access to residents and employees of Skokie, and maximize previous and programmed investments in the Skokie Swift.

This study is being funded by a grant from the Regional Transportation Authority's (RTA) Regional Technical Assistance Program (RTAP). The Village of Skokie is the lead agency for the grant. The RTA and CTA are also providing technical review and concurrence on study products.

The findings of this study are:

- The recommended intermediate station site is on the north side of Oakton Street, adjacent to the Village's downtown area; and,
- With regard to the line extension, Alternatives A (remain on UPRR ROW), B (to north of Niles North High School) and E (East of Edens Expressway) are recommended for further study.

The following chapters of this report detail how we arrived at those recommendations.

1.2 Construction and Early Operations

The rail line that is today's Skokie Swift was constructed in the mid-1920s. The Chicago Rapid Transit (CRT) began operations on the line in March 1925. In 1926, interurban passenger trains of the Chicago North Shore & Milwaukee (CNS&M) began operating over the line. This service included through trains between Chicago and Milwaukee, as well as suburban trains, linking Chicago to Waukegan, Mundelein and other locations on the CNS&M. The interurban also operated freight trains over the line, serving on-line businesses, as well as interchanging carload freight with the Chicago & North Western in the industrial district of southeast Niles Center.

The Niles Center Branch of this era included several intermediate stations. Crawford, Kostner, Oakton (see Figure 1-1), and Main each had a station, as well as several intersecting streets further to the east. The CRT also had a major repair shop on the north side of the Niles Center Branch tracks, east of Hamlin Avenue. This maintenance facility was closed during the depression, but re-opened in the late 1930's and has remained in operation ever since.

Figure 1-1: Opening day (March 28, 1925) at the Oakton Street Station on the Niles Center rapid transit service. This is a typical station style.

The portion of the line to the east of the shops used third-rail electric power distribution, making it usable by all CRT (later CTA) cars. West of East Prairie Road, overhead catenary was used for electric power distribution. Only those CRT cars with trolley poles and CNS&M motor cars with poles could operate over that portion of the line (the interurban used a few trailers [non-powered cars] in its trains).

In October 1947, the CTA took over rapid transit operations on the line. In March 1948, a strike by operating employees of the CNS&M resulted in the suspension of the CTA's rapid transit service on the line. The rapid transit service was replaced by the CTA 97/Skokie bus route operating to/from Howard Street. All intermediate rail stations were abandoned at that time, with CNS&M trains operating non-stop between Howard and Dempster.

1.3 "Skokie Swift" Demonstration Project

In January 1963, the CNS&M ceased rail operations. The only train service on the line consisted of CTA non-revenue trains operating to/from the Skokie Shops. The CTA, with assistance from the U.S. Department of Housing and Urban Development (HUD), determined that there was a market for express rapid transit service between Howard and Dempster Streets. The CTA received a HUD Demonstration Grant to rehabilitate the line, including new rapid transit cars and facilities, and to operate the service.

The "Skokie Swift" service began operation in April 1964, using the CTA's four high-performance, single-unit cars. These cars operated with one person on-board, and featured automatic operation of the pan-trolley to change the power collection method at East Prairie Road. The new service was extremely successful; requiring additional cars from the very start. The success of the service at the end of the two year demonstration program resulted in the line being retained as part of the CTA rail system.

Initially, "Skokie Swift" service was provided Monday through Saturday. Trial Sunday services were provided when the Bears played football at Wrigley Field. More recently, weekend and extended weekday service periods have been provided during the "Taste of Chicago". Regular, scheduled Saturday service was eliminated in February 1992.

Figure 1-2: Opening day at Dempster Terminal, April 20, 1964. The cars shown are on the tail track north of the CTA station. To the right of the car is the old CNS&M Dempster station. A CTA bus looping around the old station is also visible.

1.4 Major Capital Investments in the Early 1990s

In the early 1990s, considerable investment was made in the CTA Yellow Line/Skokie Swift. All ballasted track on the line was rebuilt in 1991. This was accomplished by shutting down the service for an extended period (early July through late November of that year), which although expediting the construction work, did affect the line's ridership upon re-opening. A new terminal station at Dempster Street was also constructed in 1992 and 1993, replacing the original 1964 facility. In 1993, all new dedicated rolling stock was placed in service, introducing modern, air-conditioned cars to the Yellow Line/Skokie Swift.

Today, all trains on the Yellow Line are composed of a single-pair of 3200-series cars. Initially, 16 cars were delivered with pantographs to support the Yellow Line's schedule and maintenance requirements. However, as other lines equipped with 3200-series (non-pantograph-equipped) cars have experienced ridership increases, some of the pairs have had the pans removed and their assignment changed. Current CTA car assignments reflect a total of 10 cars (car numbers 3441-3450) assigned to Yellow Line service.

The last significant operational change to the Yellow Line occurred in mid-July of 1997 when the CTA's automatic fare collection (AFC) system was introduced on the Yellow Line.

1.5 Current Operations

As of this report, CTA Yellow Line operations are scheduled between 4:52 a.m. and 10:26 p.m. each weekday. During the peak period, the two-car trains run as often as every seven minutes. Layovers at Howard Street are six to ten minutes, while the layover at Dempster Street is between five and eight minutes. Four trains are required for peak period service.

In December 2001, CTA revised the base period schedule to provide service every 12 minutes (previously it had been every 15 minutes). This requires three trains. One-way running time is eight minutes in both directions for either the peak or base periods.

1.6 Future Outlook

Pursuant to an agreement with the Village of Skokie, the CTA is designing the replacement of the overhead catenary with third rail power distribution. This will make the entire Yellow Line compatible with all other CTA rail lines. When this change is made, likely during early 2004, the need for pantograph-equipped cars on the Yellow Line will be eliminated. This change will also make it possible to consider operation of Yellow Line trains through Howard Street to other points on the CTA rail system, such as downtown Chicago.

2.0 YELLOW LINE RIDERSHIP

2.1 Historical Perspective

Local transit service along the now-named Yellow Line began in 1925. At that time, there were a total of seven intermediate stations, plus the two terminal stations at Dempster and Howard Streets. In 1930, this service reached its maximum annual ridership of 733,000. In 1947, its last full year of operation, the service carried 593,034 riders. The nature of this operation is so different from today's express service that comparison with recent ridership data is not meaningful.

Non-stop express rapid transit service on the Yellow Line began in April 1964. Ridership on the line in 1964 was 503,375. In the late 1960s, the line reached its peak ridership, carrying over 1 million riders.

The automatic fare collection (AFC) system has allowed CTA to have entering traffic data available generally within 60 days of the end of a month. Exhibit 2-1 summarizes the data for January through June, 2002.

Exhibit 2-1
CTA Yellow Line Ridership, January to June 2002

Month	Entering Weekday Traffic	Change from Same Month in 2001	Year-to-Date Entering Traffic
January	2,521	0%	55,454
February	2,493	-2%	105,309
March	2,392	-4%	155,540
April	2,622	+1%	213,234
May	2,616	-3%	270,787
June	2,759	-1%	326,695
Trend	*+238*	*+9.4% (2002 only)*	

In the first six months of 2002, there has been a modest increase in ridership on the line. However, when compared to 2001 results, the month-to-month totals show more losses than gains to date. On an average daily traffic basis, the line's most recent ridership results represent an increase from the 5,200 riders per day total that it has had for the past 11 years.

2.2 Ridership Characteristics

CTA's 1996 North Corridor Passenger Travel Survey described rider characteristics for the Brown, Purple, Red and Yellow Line rapid transit routes, as well north side bus routes. Only the results for rail rapid transit passengers were included in this analysis. Overall, the survey shows that riders of the Yellow Line are quite different from typical North Side riders on CTA rail services.

Exhibits 2-2 and 2-3 show that typical CTA north corridor rail riders have zero or one vehicle in their household and have annual household incomes of less than $40,000. In contrast, Yellow Line riders generally had access to one or more vehicles in the household and more than half had annual household income level in excess of $40,000. At the highest income ranges ($75,001 and above), there were more than twice as many weighted responses from Yellow Line riders in comparison to all North Corridor rail rider responses.

Exhibit 2-2
Vehicles per Household

Response	North Corridor	Yellow Line
0	29%	9%
1	37%	33%
2	19%	40%
3	6%	12%
4	3%	2%
5 or more	1%	2%
Multiple Responses Given	0%	0%
No Answer	6%	3%

Exhibit 2-3
Annual Household Income

Response	North Corridor	Yellow Line
Under $10,000	10%	3%
$10,001 to $20,000	14%	8%
$20,001 to $30,000	15%	8%
$30,001 to $40,000	11%	10%
$40,001 to $50,001	9%	13%
$50,001 to $60,000	7%	9%
$60,001 to $75,000	6%	9%
$75,001 to $100,000	6%	10%
Over $100,000	5%	10%
Multiple Responses Given	1%	0%
No Answer	16%	20%

Exhibit 2-4 shows a rather substantial difference between Yellow Line riders and the rest of the north corridor passengers. Fifty two percent of Yellow Line responses selected “Drove” or “Got a Ride” as the mode of access to a Yellow Line station while 17% walked. In contrast, more than half of north corridor riders walked to a station and an additional 17% took another CTA service. This suggests that park-and-ride is fundamental to the Yellow Line’s ridership.

Exhibit 2-4
Station Mode of Access

Response	North Corridor	Yellow Line
Walked	54%	17%
Got a Ride	5%	13%
Drove	3%	39%
Other CTA Service	17%	9%
Rode Metra	1%	0%
Rode Pace	1%	4%
Other	14%	15%
Undefined	0%	2%
Undefined	1%	0%
Multiple Responses Given	1%	0%
No Answer	2%	0%

Exhibit 2-5 presents the type of activities taking place immediately before and after the trip. In most respects, the Yellow Line looks like the other north corridor rail lines. There are a few exceptions. Most notably, the Yellow Line is 19% higher (71% North Corridor vs. 90% Yellow Line) for trips originating at the home end. On the destination end, 10% more responded to making a trip to a work activity. Trips to work and school activities comprise 88% of the Yellow Line responses (vs. 68% for the north corridor lines).

Exhibit 2-5
Activities at Origins and Destinations

	Origin Activity		Destination Activity	
Response	**North Corridor**	**Yellow Line**	**North Corridor**	**Yellow Line**
Home	71%	90%	14%	3%
Work	11%	5%	54%	64%
Business Related	3%	0%	4%	2%
Social/Recreation	1%	1%	2%	1%
School	5%	0%	12%	22%
Shopping	1%	1%	1%	1%
Medical/Dental	1%	0%	2%	2%
Airport	0%	0%	0%	0%
Other	3%	4%	4%	2%
Multiple Responses Given	3%	0%	2%	0%
No Answer	2%	1%	4%	3%

These tables show that the typical Yellow Line rider is different than most other CTA rail riders in the north corridor. Unlike the rest of the north corridor rail lines, the Yellow Line riders typically have access to an automobile and drive that automobile (or are driven) to the station.

2.3 CTA Future Projections: 2003 to 2011

A CTA Data Services and Development document from December 2001 projects rail ridership for each of the CTA routes through the year 2011. For the Yellow Line, growth rates between 2.32% and 3.11% are anticipated. From 2002 to 2003, the projected increase in ridership was estimated at 2.51%; a peak growth rate of 3.11% is projected for 2004 while a minimum growth rate of 2.32% is projected for 2011. The 2003 to 2011 projection envisions an annualized growth rate for the Yellow Line of 2.58%.

These projections do not presume any substantial change in the Yellow Line service, nor do they reflect any alteration in running time, such as when the catenary power lines are replaced or if the current slow zone around a curve at Oakton is eliminated.

3.0 PHYSICAL CHARACTERISTICS

3.1 Right-of-Way and Field Measurements

The at-grade portion of the Yellow Line begins immediately east of the East Prairie Road grade crossing and extends a little over 2.2 miles to the north end of the tail track north of the Dempster Street station. The entire right-of-way (ROW) is fenced, except for the seven grade crossings (East Prairie, Crawford, Kostner, Oakton, Searle, Main and Niles Center) and the pedestrian crossing at the Dempster station.

The Parsons Brinckerhoff (PB) team conducted its field observations on the CTA Yellow Line on Saturday, May 18, 2002. The locations for the observations were at potential station locations or other sites where a significant change in the alignment may be anticipated (due to a future grade separation, for example). A summary of the field observations follows below.

Crawford Avenue-Kedvale Avenue

Overall ROW width at Crawford was observed to be 149 feet, including the two track openings, each 15 feet in width. ComEd high-tension towers were observed to extend into the CTA ROW by 13.5 feet to the north of the tracks and 18 feet to the south of the tracks. Track center distance at this location was observed to be 30 feet-10 inches.

Measurements were also taken to the west of Crawford, extending to the ComEd substation opposite Kedvale Avenue. That substation extends about 39 feet into the CTA ROW from the south fence line, and is about 880 feet west of the fence separating the west side of Crawford from the CTA ROW.

Figure 3-1: Looking west from Crawford Avenue. The catenary towers with the vertical supports outside of the tracks are prominent. Also evident are the various above-ground utilities on the ROW.

At the ComEd Kedvale Substation, the south CTA track is 62 feet-3 inches from the south fence line, meaning that it is about 23 feet-3 inches from the ComEd substation fence to the closest track centerline. The track center distance at this location is about 33 feet-4 inches, or slightly wider than what was observed at the Crawford Avenue grade crossing.

CTA catenary towers are spaced 67 feet to the west of the west fence at Crawford Avenue; and then approximately every 300 feet from there west. There are a total of three catenary towers between Crawford Avenue and the ComEd Kedvale Substation.

Oakton Street-Searle Parkway

The approximate intersection of the Union Pacific Railroad (UPRR) track and the north edge of Oakton Street is about 176 feet west of the west fence of the CTA ROW at Oakton Street. This is an approximate measurement, as the UPRR track no longer extends as far south as

Oakton Street. In between the UPRR and CTA ROW is the Crafty Beaver store and yard, which is an active business.

CTA ROW width on the north side of Oakton Street is 82 feet from fence to fence, including a 16 foot-6 inch opening for the southbound track and a 15 foot opening for the northbound track. The track center distance at this location is 36 feet.

The first catenary tower north of Oakton Street is the northernmost one with its vertical supports outside the tracks, north of this structure the supports are between the two tracks. That first structure is located 86 feet north of the ROW fence on the north side of Oakton Street. A typical tower with the supports between the tracks measures about 15 feet-6 inches from vertical support centerline-to-centerline.

Figure 3-2: Looking north along the west track at the Searle crossover. To the right of center, one of the catenary towers with the supports between the tracks is visible. Above ground utilities in this section of line are evident.

Track center spacing widens out to 36 feet-10 inches to accommodate the catenary towers with the supports between the tracks. Separation distance from the centerline of a vertical support to the track centerline is on the order of 10 feet-6 inches. The first of this style of tower is located 335 feet north of the ROW fence to the north of Oakton. The catenary towers are then spaced every 250 feet or so up to the Searle Parkway crossing. There are a total of five catenary towers between the Oakton and Searle grade crossings.

There are also ComEd high-tension towers on the CTA ROW in this section. The first pair of these (one between the two CTA tracks, the other off to the east of the easternmost track) is located about 500 feet north of the ROW fence on the north side of Oakton Street. Then it is a further 474 feet to the next set of ComEd high-tension towers.

The CTA has an emergency crossover between the two tracks, with northernmost point of switch located about 226 feet south of the ROW fence along the south side of the Searle grade crossing. At Searle Parkway, the CTA ROW width is about 137 feet-6 inches, including a southbound track opening of 15 feet and a northbound track opening of 14 feet-6 inches.

Dempster Terminal

Track center distance opposite the Dempster station house is 13 feet-7 inches. The length of the station building alongside the tracks is 112 feet-4 inches. From the north face of the station house to the point of switch for the tail track, the distance is about 116 feet-2 inches. The tail track extends a further 261 feet-10 inches beyond the point of switch. The bumper at the end of the tail track is about 71 feet south of the south curb of Dempster Street. Approximate track centerline distance between the CTA tail track and the UPRR track at Dempster is 75 feet.

Figure 3-3: Looking south at the Dempster tail track. Old and new catenary towers are evident. The square tower base to the left of the view once had a CRT terminal track passing under it, hence the unusual design.

North of Dempster Street

Field observations on this section of line were conducted on June 6, 2002. Data on the existing UP track, other right-of-way aspects, adjacent land uses, utility location information and other relevant features were taken.

Following the abandonment of the CNS&M in January 1963 and the beginning of the planning for the "Skokie Swift" about one year later, the Chicago & North Western moved to acquire the CNS&M ROW north of Dempster Street.

The UPRR track, which is about 75 feet west of the CTA track at Dempster Street makes the transition onto the former CNS&M ROW about 125 feet north of the north curb line of Dempster. About 12 feet east of the UPRR track there is a wood pole line. A further 51 feet to the east is a ComEd pole line.

To the north of Dempster, there is a remote parking lot for the Skokie Swift station. This extends from Dempster to Gross Point Road. The west fence of the lot is about 103 feet west of the UPRR track centerline. The parking lot itself is 92 feet-6 inches in width along the Dempster side. Another wood pole line and ComEd high-tension towers/lines run the length of the parking lot. Overall lot length (to the south curb line of Gross Point) is approximately 1,214 feet.

Figure 3-4: North from Dempster along the UPRR track. The transition of the UPRR onto the former CNS&M ROW is seen in the distance.

The curve onto the former CNS&M ROW ends about 100 feet south of the grade crossing at Gross Point. At that location the centerline of the UPRR track is about 67 feet east of the car wash on the south side of Gross Point. Separation distance from the track centerline to the west fence of the CTA parking lot is approximately 36 feet. If this ROW were to be used for the CTA extension, there is more than adequate space for a double track line.

Figure 3-5: Looking north across the Gross Point grade crossing. The west fence of the CTA parking lot is to the extreme right of the photo. To the right of center, the Village Yard and associated facilities can be seen.

North of Gross Point, there is a pole line to the west of the UPRR track (16 feet from the track centerline) and the boundary of the adjacent commercial concern is a further 6 feet west of that pole line. To the east of the UPRR a pole line is located about 12 feet from the track centerline. This pole line is in line (north-to-south) with the grade crossing flasher and relay case for the crossing.

An old culvert from the CNS&M construction is located north of Gross Point. This culvert is about 30 feet to the east of the UPRR track centerline. A former catenary tower base to the west of the UPRR track was located about 9 feet-6 inches from the track centerline.

The Village of Skokie's Yard is located about 325 feet north of Gross Point's north curb line, extending along the east side of the UPRR track about 630 feet to the north. The north end of the fenced yard is about 458 feet south of Church Street. There is an open material yard to the north of the fenced yard. In the fenced section, the fence is about 16 feet to the east of the track centerline. Industries to the west of the UP track are about 23 feet from the centerline.

ComEd high-tension towers continue to run to the east of the UPRR track in this area. The closest face of a tower is about 24 feet east of the track centerline.

Figure 3-6: Looking south of Gross Point. The Village Yard is in close proximity to the UPRR track and various utility lines.

Further north, a stub-end siding ends on the north side of Church Street to the west of the main track. This siding has not been used in some time. The track center-to-track center distance between the main track and the siding is about 40 feet-6 inches.

ComEd has extensive installations on the north side of Church Street. The facility to the west of the stub end siding has a fence about 23 feet from the track centerline. There is a pole line that runs approximately halfway between the siding and the main track.

North of Church Street the separation distance from the face of the high-tension tower to the UPRR track centerline is about 23 feet. There is also a wood pole line to the east of the UPRR track, approximately 44 feet-6 inches from the centerline. ComEd's yard to the east of the UPRR track is about 72 feet-6 inches from the track centerline.

In the vicinity of the north end of the siding, there are several ComEd poles and towers. There are five single poles and one double pole (plus the high-tension towers in this area). Many of these would require relocation in order to route a double-track rail line through this section.

Figure 3-7: The switch ties of an abandoned siding are barely visible towards the bottom left. New construction on the former siding alignment is to the left of the picture. The pickup truck about to cross the UPRR is eastbound on Church Street.

Figure 3-8: The stub-end siding, north of Church Street.

Figure 3-9: In the vicinity of the north end of the siding. Double tracking in this area would require relocation of many of these towers and poles.

As the UPRR ROW approaches Golf Road, there are pole lines to the east and west of the rail line. To the west, the pole line is 13 feet-6 inches from the track centerline. Beyond that there are wood fences separating the residential area from the tracks. These fences are about 23 west of the track centerline.

To the east of the track there is a high-tension pole line 17 feet-6 inches removed from the track centerline. Another high-tension line lies to the east of this first line. The closest face of a high-tension tower is 73 feet east of the track centerline at this location.

Figure 3-10: The 33-foot separation distance between the wood pole line and the first of the high-tension lines is sufficient for a double-track rail line, so long as this does not include station platforms.

North of Golf Road, there is an auto dealer to the west of the ROW, about 43 feet from the track centerline. At approximately 14 feet-6 inches west of centerline, a wood pole line is located. The side slope of the ROW to the west falls off sharply into a gully. At the time of inspection, the gully had standing water in portions of it.

East of the track, there is the high-tension line, again at 17 feet-6 inches from the track centerline. However, 50 feet north of Golf Road, there is a condominium parking lot to the east of the tracks. The east edge of this lot is within 13 feet-6 inches of the track centerline. This lot extends alongside the rail ROW for approximately 205 feet-6 inches. This would result in a clear ROW width of only 28 feet from the west pole line to the parking lot fence on the east side.

Approximately 880 feet north of Golf Road, the Edens Expressway (I-94) passes over the UPRR ROW. The bridge pier-to-bridge pier distance is 100 feet-6 inches, more than enough room to accommodate a double-track rail line. The bridge extends about 155 feet along the length of the rail line.

Figure 3-11: Looking north toward the Edens bridge. The former CNS&M catenary tower bases are intact and are located 11 feet west of the track centerline and 24 feet-6 inches to the east, giving a total separation distance of 35 feet-6 inches. These bases would be removed prior to any new line construction.

North of the Edens Expressway crossing, there is commercial development on either side of the rail line. To the west, the commercial development is separated by vegetation. Closer to the rail line, there is a wood pole line, 10 feet-6 inches from the track centerline.

East of the rail ROW, the commercial installations are further removed. A multi-level parking structure associated with the Northwestern Mutual Building is about 100 feet east of the track centerline. This structure is located about 1050 feet south of the grade crossing at Old Orchard Road.

The high-tension tower line remains about 73 feet east of the track centerline at this location (same separation distance as was noted at Golf Road). The high-tension pole line is 17 feet-6 inches to the east of the track centerline in this area. The first of the high-tension poles is about 70 feet south of the Old Orchard grade crossing, while the first high tension tower south of the crossing occurs at 59 feet.

At about 410 feet south of the grade crossing there is a ground access hatch to the fiber optic installation on the east side of the rail ROW. Buried fiber optic flags were noted all along the UPRR ROW in this section, but this was the only instance of an access hatch adjacent to the rail line noted during inspection.

Figure 3-12: A former CNS&M siding was located to the east of the main track at one time. At the time of inspection, wood poles with the span arms (once used to hang the trolley wire over the siding) were still in evidence.

North of Old Orchard Road, there is commercial development to the west of the rail line. Immediately to the east, the land is vacant, extending east to the intersection with Old Glenview Road.

3.2 Stations

There are two existing stations on the CTA Yellow Line. The terminal station at Howard Street is not included in this study, and would not be fundamentally changed as a result of the outcome of this study. It should be noted that many improvements are in progress in both the rail and bus facilities at this station as a result of other improvement projects currently in progress.

Operation of Yellow Line trains at this facility could change due to the replacement of the overhead catenary system with third rail power distribution equipment for the outer half of the Yellow Line. This may make it possible to implement through operation to other parts of the CTA rail system, such as downtown Chicago.

The other station is the north terminal station at Dempster Street. This station opened in 1993 and is generally in good condition. A station house is provided on the southbound platform, which includes the automatic fare collection equipment (vending machines and fare gates), pay slots for the parking lots, the customer assistance booth, information boards and

other amenities. Passengers must pass through this building to access the southbound platform.

Figure 3-13: Dempster Street. The southbound station house is to the right. No station house is provided on the northbound platform, as all riders are either dispersing to walk/ride away from the station, or to make connections to CTA, Pace and Greyhound buses or to local taxis. All buses load on the east side of the former CNS&M station, which is remote from the Yellow Line rail station.

If a north extension of the CTA Yellow Line is recommended as a result of this study, this facility may require modification. For example, through service to downtown Chicago (rather than just to Howard) may require longer train consists (i.e. more cars per train) than are currently operated on the Yellow Line. The platforms at Dempster are only long enough to accommodate a two-car CTA train, necessitating extension of the platforms.

Another possibility for station modification if the Yellow Line were extended north is a grade separation at Dempster Street. In this case, the approach ramps for either the aerial structure or the rail line underpass would begin about 1000 feet south of Dempster, or approximately 280 feet south of the south end of the existing southbound platform.

3.3 Structures

There is only one structure on the portion of the Yellow Line affected by this study: the through-girder bridge that carries the line over Skokie Boulevard. This structure would not change as a result of this project.

3.4 Signals and Communications

The CTA audio-frequency cab signal equipment is in operation along the Yellow Line. The current equipment was installed in the mid-1970s, and is approaching the end of its service life. It is possible that this equipment could be replaced as part of the extension design project, or that it would be replaced as part of another CTA capital improvement project.

The CTA is in the process of replacing the older cab signal installations on its rail system (those on the Dan Ryan [Red Line] and O'Hare [Blue Line] extensions), and it is reasonable to expect that the replacement program will next address the GRS-supplied equipment, used on Yellow Line (and others in the CTA rail system).

Cab signal speeds on the Yellow Line are currently 55 mph at most locations, with the exception of the Oakton curve (between the Oakton and Kostner grade crossings) where train speed is limited to 35 mph. This restriction is due to overhead catenary alignment problems, and 55 mph operation through the curve could be restored once third rail is installed and operational.

The other speed restrictions on the line are on approach to and on exiting the Dempster terminal. A 35 mph speed restriction takes effect north of Niles Center, while trains leaving the terminal are restricted to 25 mph, increasing to 55 mph within a few thousand feet of the station. If the line were to be extended, these restrictions could be removed, depending on alignment specifics and station location.

Another aspect of the signal installation on the Yellow Line is the grade crossing warning equipment. This consists of auto and pedestrian gates, motorman warning lights (indicating status of gate deployment to the operator of a train approaching the grade crossing) and the other equipment required for a complete, functional installation.

There are a total of seven grade crossings on the CTA Yellow Line. Of these, East Prairie, Kostner and Searle are two-lane streets, while the remainder (Crawford, Oakton, Main and Niles Center) are four-lane streets or wider.

Replacement of the grade crossing warning equipment is now underway. This project will also include installation of traction power duct lines across the grade crossings, to facilitate the future installation of third rail power distribution equipment. The grade crossing warning equipment replacement project is currently scheduled for completion in late 2003/early 2004.

Figure 3-14: Looking north across the Crawford Avenue grade crossing. The typical elements of the warning equipment (auto and pedestrian gates), flashers, etc., are visible. Note the residential nature of the surrounding neighborhood.

Communications equipment on the Yellow Line includes copper cable hung from the catenary towers in the section of interest to this project. Operations, maintenance and management employees are equipped with personal, portable radios. At present, there are no plans to replace this cable or change this method of operation.

3.5 Traction Power

There are three traction power substations serving the Yellow Line. The Howard substation is located on CTA property at the Howard Yard site, and serves the Red and Purple Lines in addition to the Yellow Line. This substation was rebuilt in the mid-1990s as part of the Howard Terminal reconstruction project. The Hamlin Substation is located on the CTA's Skokie Shops property, and supplies the Yellow Line in addition to serving the shop complex. This substation was put in service in 1999. The third substation is named Skokie, and is located to the east of Niles Center Road, north of the Yellow Line grade crossing. There has been a substation at this location since the Niles Center line was built, although the rectifier-transformer equipment now installed dates to the 1990s.

The CTA has indicated that replacement of the transformer equipment at Hamlin Substation has been programmed, as has replacement of the transformers, rectifiers, getaways and battery charger at the Skokie Substation. This work is currently expected to begin during 2006 and end in 2009. In the period 2018-2021, the CTA plans to replace the batteries and charger at Hamlin, and replace the AC and DC switchgear at Skokie. Other renewal and replacement needs on the line have been identified, but are not currently programmed.

The present method of traction power distribution is third rail east of Crawford Avenue and overhead catenary from this point west. The section between Crawford and East Prairie is equipped with both overhead catenary and third rail, as this is where trains make the transition between the distribution modes. East of East Prairie the line is equipped only with

third rail. All the third rail was renewed during the 1991 reconstruction of the ballasted track on the line.

When the traction power duct lines through the grade crossing have been completed, the CTA will begin to install the third rail power distribution equipment to replace the catenary on the northernmost 2.2 miles of the Yellow Line. To install third rail on the north portion of the line will require installation of the longer ties to support the third rail chairs that elevate the third rail above the height of the normal running rail. In addition, the rail, cables and other components will be installed at this time. Present CTA plans call for the third rail to be installed and activated during early 2004.

The design of the replacement third rail includes provision for a station on the north side of Oakton Street. Third rail through this location will be located to the outside of both tracks. At non-station locations, the third rail is normally located inboard of the tracks.

Figure 3-15: The Yellow Line section between Crawford and East Prairie is equipped with both third rail and overhead catenary. The third rail is evident on the outside of the tracks through the site of the former Crawford station platform, which is now used to accommodate a cab signal bungalow.

The CTA plans to retain the catenary towers even after the overhead wire is removed, since the towers support the communications cable. Other than at proposed station sites, retention of the towers has no immediate affect on this study. Removal of the towers (for example, on the north side of Oakton Street) would likely be done as part of the station site preparation, should an intermediate station be recommended for this location.

One new catenary tower (designated as Bridge 43) was included in the Dempster Terminal station. If the alignment of the line is substantially altered at this location, this and the older catenary towers in the area would likely be removed as a prelude to realigning the track/relocating the station.

3.6 Track

The Yellow Line track is in good condition, having been rebuilt in 1991. Extension of the line north of Dempster would require reconfiguration of the existing track, which ends in a single-track stub. This would be replaced by double-track. Realignment of the line through this section is also possible. The UPRR track north of Dempster is not considered suitable for re-use.

3.7 Utilities Along or Intersecting the Rail Line

ComEd

At the time of the construction of the initial rail line, both the rail carriers (CRT and CNS&M) and ComEd were under the control of the same company. It was logical to use the rail ROW for both purposes; that use has continued to the present day. For this study, ComEd provided drawings detailing its overhead and underground installations for the section from Dempster Street north to Old Orchard Road.

There are overhead lines on either side of the UPRR track at Dempster Street. At approximately Greenwood, located north of Dempster, the line to the east of the track ends, and the line on the west side of the UPRR passes over the track and runs on the east side from that point north. There is also an intersecting pole line running parallel to the south side of Gross Point Road. Another intersecting pole line runs along the south side of Church Street to the west.

Figure 3-16: Looking north at Church Street. The ComEd lines are on either side of the main track. A ComEd substation and numerous yard-located elements are to the east of the rail line.

At Golf Road, ComEd has pole lines either side of the track, in addition to the high-tension tower line to the east. These extend to Old Orchard Rd.

Underground ComEd installations include a line passing under the UPRR track approximately in line with Enfield (north of Dempster) and paralleling ducts to the east of the track as the line approaches Church Street. The closest of these underground duct installations is approximately 50 feet from the track, as per the ComEd drawings.

There are two underground lines running to the west under Church Street from the ComEd substation and these pass under the UPRR ROW. North of Church, underground ComEd installations include a paralleling duct line about 50 feet to the west of the UPRR track and an east-west line that crosses under the UPRR about 500 feet north of Church. The paralleling duct (to the west of the UPRR) begins about 140 feet north of Church and swings west away from the UPRR ROW around 1,050 feet north of the grade crossing.

Another underground line crosses the UPRR at an angle about 1,160 feet north of Church Street. Around Emerson a line passes under the ROW on an approximate east-west orientation. The next underground ComEd facility of interest is along the west side of the UPRR track about 1,050 feet south of Old Orchard Road and runs parallel to the north for a distance of about 85 feet, terminating in a cable terminal pole on the west side of the right-of-way. The distance between the underground line and the UPRR track is about 13 feet, per ComEd drawings.

Approximately 150 feet north of the termination of the aforementioned line (or, 900 feet south of Old Orchard Road) another line begins from a cable terminal pole passing east under the UPRR ROW. North of Old Orchard Road, there is a single underground duct running east-west along the north side of the road. This line is fed from a cable terminal pole to the west of the UPRR track.

Fiber Optics

No fiber optic flags were noted along the CTA ROW up to the Dempster Terminal. However, the UPRR ROW has fiber optic flags on either side of the ROW. These were noted at Dempster, Church and Old Orchard Road. In addition, one ground access hatch to the buried fiber optic installation was noted along the line.

Figure 3-17: The one fiber optic hatch observed during the site review is to the east of the UPRR track about 410 feet south of the Old Orchard Road grade crossing.

Water and Sewer

The Village of Skokie provided maps for locating water and sewer lines. They are summarized by street name/location.

Lines Crossing the Rail ROW

- East Prairie Road – one 42-inch sewer and one 12-inch water line, both running north to south
- Crawford Avenue – one 6-inch water line ,north to south
- Keeler Avenue – one 33-inch sewer, one 20-inch water line and one 24-inch water line, all running north to south
- Kostner Avenue – one 33-inch sewer, north to south
- Kolmar Avenue – one 30-inch sewer, north to south
- Kenton Avenue – one 15-inch sewer and one 8-inch water line, both running north to south
- Skokie Boulevard, west – one 66-inch storm sewer perpendicular to the CTA tracks
- Skokie Boulevard, north – one 30-inch sewer passing under the CTA line
- Oakton Street – one 30-inch sewer, a 42-inch storm sewer and one 12-inch water line, all running east to west
- Searle Parkway – one 24-inch sewer and one 12-inch water line, east to west
- Main Street – one 42-inch sewer line and one 12-inch water line, east to west
- Golf Road – one 60-inch sewer and one 12-inch water line, east to west, under the road.
- Old Orchard Road – one 10-inch sewer and one 8-inch water line running east to west

Lines Paralleling the Rail ROW

- Mulford Street (north of the CTA ROW) – various diameter sewer lines (21-inch to 27-inch) in three, three block segments between East Prairie and Kenton; a 6-inch water line from Hamlin to Karlov; an 8-inch line from Karlov to Keeler; a 12-inch line from Keeler to Kostner; and, an 8-inch line from Kostner to Kenton.
- Mulford Street (south of the CTA Yellow Line) – an 8-inch water line from Crawford to Keeler; and a 30-inch line from Keeler to Kenton.
- Oakton to Searle Parkway – an 8-inch water line runs to the west along the UPRR and is about 180 feet west of the CTA ROW at Oakton.
- Golf Road to Old Orchard Road – a 12-inch water main parallels the former C&NW track or about 75 feet west of the current UPRR track.

3.8 Utilities Along or Intersecting Golf Road and Access to Westfield Shoppingtown Old Orchard

In addition to considering a route that runs along the UPRR ROW, this study also looked at a more direct entrance to Westfield Shoppingtown Old Orchard. This section summarizes the utility information along Golf Road and in the vicinity of Westfield Shoppingtown Old Orchard.

ComEd

The utility's diagrams show an overhead power line running along the south side of Golf Road from Leamington Avenue to just short of Skokie Boulevard. From the available diagrams, there are underground lines running east-west from the railroad ROW about two blocks north of Golf (Payne Street). An underground line runs north-south along the east side of Lawler Avenue, with a branch running east from that street along the south side of Golf Road. There is a further branch off that line running north on Lavergne Avenue, on the west side of the street.

Water and Sewer

The Westfield Shoppingtown Old Orchard property has an extensive network of sewers and water lines, of varying dimensions and routing details. Other sites:

- Golf Road - one 60-inch sewer line and one 8-inch line; one 12-inch water line; all extend past the shopping center
- Leclaire Avenue – one 42-inch sewer line and one 8-inch water line
- Lawler Avenue – one 36-inch sewer line (progressively reducing in diameter further north, ending as a 15-inch line in front of Niles North High School). An 8-inch water line runs towards the west side of this street between Golf and Old Orchard Roads.
- Lavergne Avenue – one 12-inch water line runs north from Golf Road. Although not continuous as far south as Golf, another 42-inch sewer line runs along this street to Old Orchard Road.

4.0 TRAFFIC

4.1 Street Widths and Average Daily Traffic

This section details the width of the street, average daily traffic (ADT), and the source and year of the data. All streets are two lane unless otherwise noted.

Existing Yellow Line Grade Crossings

- East Prairie Road – 36 feet; ADT = 876 (Skokie, 1982 data)
- Crawford Avenue – 59 feet (4-lane, divided); ADT = 14,600 (Cook County, 1998 data)
- Kostner Avenue – 40 feet; ADT = 5,279 (Skokie, 1986 data)
- Oakton Street – 54 feet (4-lane with left turn bay); ADT = 18,100 (IDOT, 1998 data)
- Searle Parkway – 32 feet; ADT = 1,603 (Skokie, 1986 data)
- Main Street – 59 feet (4-lane, divided); ADT = 8,700 (Skokie, 1998 data)
- Niles Center Road – 36 feet; ADT = 7,900 (IDOT, 1998 data)

Extension Along UPRR ROW

- Dempster Street – 51 feet (4-lane with left turn bay); ADT = 37,800 (IDOT, 2001 data)
- Gross Point Road – 42 feet; ADT = 11,200 (IDOT, 1998 data)
- Church Street – 31 feet; ADT = 10,900 (IDOT, 1998 data)
- Golf Road – 65 feet; ADT = 23,700 (IDOT, 1998 data)
- Old Orchard Road – ADT = 28,650 (Cook County, 1994 data)

Along Golf into Old Orchard Mall

- Laramie Avenue – 26 feet; ADT = no data available
- Leamington Avenue – 32 feet; ADT = 214 (Skokie, 1995 data)
- Leclaire Avenue – 32 feet; ADT = 700 (Skokie, 1995 data)
- Lawler Avenue – 25 feet (44 feet north of Golf); ADT = 623 (Skokie, 1986 data)
- Lavergne Avenue – 29 feet; ADT = 708 (Skokie, 1988 data)

From this data, Dempster would have the highest ADT of any of the cross streets on either the existing Yellow Line or the proposed extension to the north. Old Orchard Road would rank second; Golf Road would rank third; while Oakton Street would rank fourth in ADT.

4.2 Accident Data for the Existing Grade Crossings

The Village of Skokie provided accident data for six of the seven grade crossings on the Yellow Line (no data was provided for East Prairie). This data covered the period from 1999 to 2001. In that timeframe, a total of 73 accidents were reported at the six crossings. The following section analyzes the accident reports, starting with the crossing that had the most reported accidents.

Niles Center

Of 35 accident reports for this crossing, one in1998, four in 2000 and three in 2001 were not in the immediate proximity of the grade crossing. This left a total of 27 reported accidents at this grade crossing during 1999-2001.

Of these, 11 (41%) occurred in 1999, with only one involving a CTA train; ten (37%) occurred during 2000, with no trains being involved; and six (22%) occurred in 2001, with one involving a train. The trend for this crossing seems to be one of a decreasing frequency of accidents. The two accidents involving CTA trains represented 7% of the total accidents reported over this period. However, these two occurrences are half of the total grade crossing accidents directly involving trains in those three years.

Oakton

A total of 27 accident reports were provided. Four reports for 2002 were not in proximity of the grade crossing leaving a total of 23 reported accidents at the grade crossing during 1999-2001. Of these, ten of the reports do not indicate if the gates were a factor in the accident but are left in the analysis.

Six accidents (26%) occurred in 1999, seven (30%) happened during 2000 and ten (44%) occurred in 2001. The trend at this crossing is one of increasing frequency of accidents. None of the reported accidents directly involved a CTA train.

Main Street

Of the 13 accident reports involving this crossing, five (38%) occurred in 1999, two (16%) happened in 2000 and six (46%) occurred during 2001. One accident (8% of the total) involved a CTA train and occurred in 2001. There were two reports where it was not clear if the gates were a factor in the accident, but these have been left in the analysis. There is no clear trend relative to accidents at this crossing over the three-year period.

Crawford

Five accident reports for this location were reviewed. Of these, two (40%) occurred in 1999, one (20%) happened in 2000 and two (40%) occurred during 2001. There is no clear trend over the three-year period. None of the reported accidents directly involved a CTA train.

Searle Parkway

Out of a total of three report incidents, two crashes (67%) occurred in 1999, although one of these did not appear to involve the rail line, other than in an incidental way. The third accident at this location occurred in 2001, involved a CTA train, and was the only recorded fatality among the reviewed reports.

Kostner

One accident at this location occurred in both 2000 and 2001. Neither directly involved a CTA train. The 2000 accident report does not appear to involve the rail line in any way.

Summary

The years 1999 and 2001 each had 26 (36%) reported accidents at the six grade crossings, while there were 21 (28%) reported accidents at the crossings during 2000, for a total of 73 crashes. The average number of crashes per year is 24. Three-fourths of the CTA train accidents (four total reported) occurred in 2001 with one recorded in 1999.

After factoring out the reports from other years, or those that were not in immediate proximity to the grade crossings, Niles Center still accounts for the most accidents with 27 (37%) reported during 1999-2001. Of these, 25 (95%) did not directly involve a CTA train. Half of the accidents directly involving a train occurred at this crossing during these three years.

Oakton had the next highest number of reported accidents with 23 (32%) over the three years. None directly involved a train. Main had 13 (17%) of the reported accidents over this period. One accident directly involving a CTA train was recorded at this location.

Five (7%) reported accidents occurred at Crawford, with none directly involving at CTA train. Searle had three (4%) reported accidents. One of these involved a CTA train and resulted in the only fatality among the reviewed reports. Finally, Kostner had two (3%) accidents, none of them directly involving a train.

5.0 AREA DEMOGRAPHICS

5.1 Socio-Economic Data

2000 Data

According to the 2000 Census, the Village of Skokie had a population of 63,348, an increase of 6.6% from 1990. The median age of residents is 41.9 years, with more than 53% of the population between the ages of 20 and 64. The Village of Skokie is racially diverse, with a mix of whites (68.9%), Asians (21.3%) and blacks (4.5%). There are more than 23,700 dwelling units, with 75% occupied by their owners and 25% rental property. The vacancy rate for dwelling units is 2.0%.

The median household income (including retired individuals) is $57,375. Of the population 16 years and older that is employed, 46.3% are in management, professional and related occupations, followed by 29.1% in office and sales occupations.

The largest employers in the Village of Skokie are Federal Mogul (1,700) and Rush North Shore Medical Center (1,400). The Westfield Shoppingtown Old Orchard, with its mix of large retailers, is estimated to have about 2,000 workers. Pharmacia, previously another large employer (1,300 employees), has closed both employment locations in the village. Other large employers are: Niles Township High School (635); Anixter Brothers (600); the Cook County Courthouse (600); Klein Tools (496); the Village of Skokie (492); Rand McNally (425); Castwell Products (314); and Ohmite Manufacturing Co. (300). The CTA Skokie Shops also employ approximately 350 workers. Oakton Community College employs around 290 persons (160 on a full-time basis) at its Skokie campus.

Year 2000 Census data for the Village of Skokie and for both the existing and proposed Skokie Swift station areas are shown in Exhibit 5.1. The station areas were estimated by using the Northeastern Illinois Planning Commission's (NIPC) July 2002 quartersection distribution of population, households and employment and incorporating those quartersections that fell within a half mile of the station. The proposed Old Orchard station area includes data from Wilmette, Glenview and unincorporated Cook County and is calculated for a station located south of Old Orchard Rd on the Union Pacific Railroad right-of-way.

Exhibit 5.1
NIPC Allocated 2000 Census Data

Area	Population	Households	Employment (Estimated)
Village	63,350	23,220	36,700
Crawford	5,450	1,870	1,410
Oakton	7,630	3,060	3,260
Old Orchard	1,600	560	7,240
Howard (existing)	17,620	6,730	2,440
Dempster (existing)	8,810	3,520	2,950

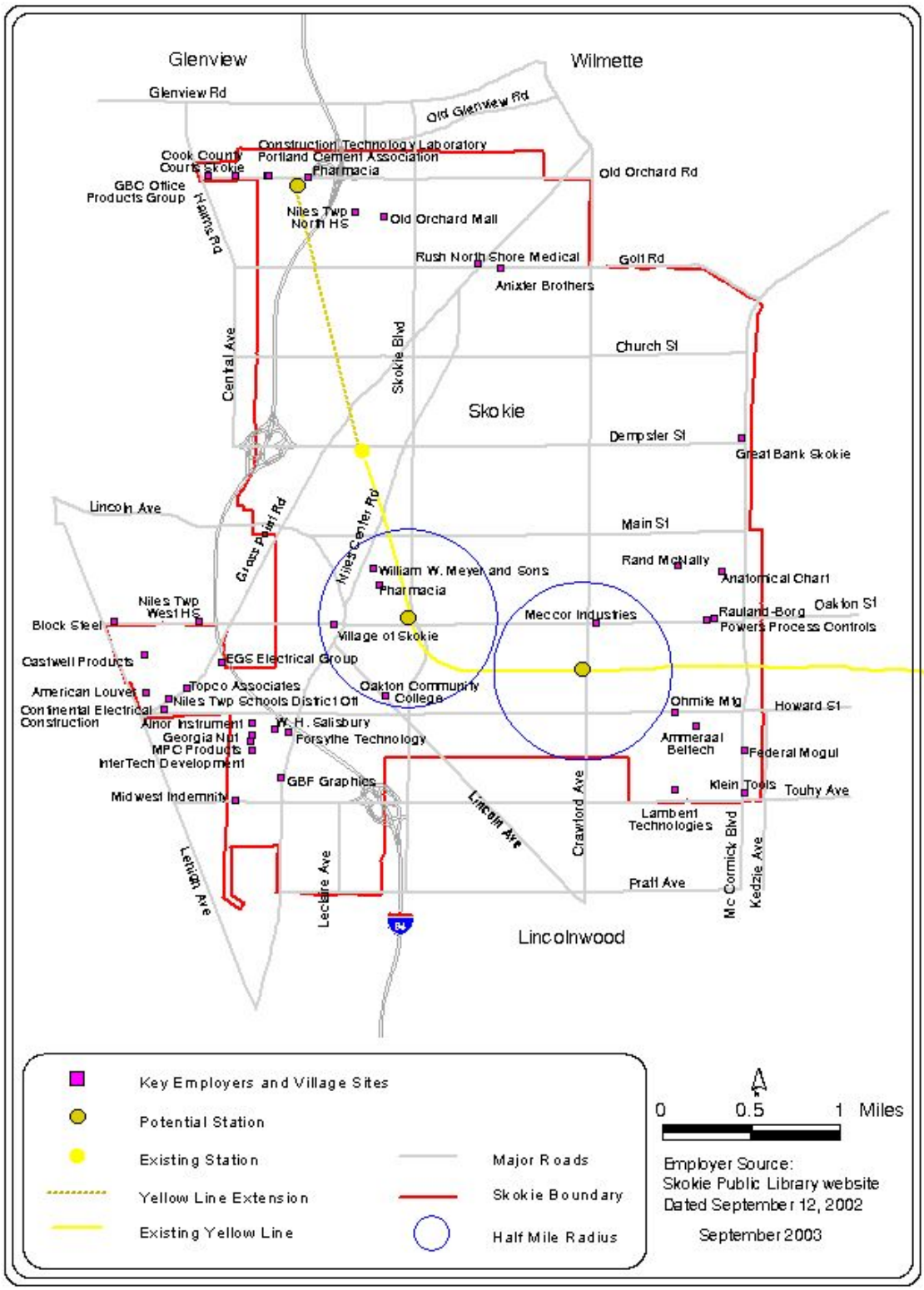
5.2 Land Use Characteristics

The Village of Skokie has a grid street network and a mix of employment, housing, business and commercial services, along with a regional shopping complex. The village is currently in the process of updating its land use map and its 1969/1982 comprehensive plan.

For transit to be successful, station areas need land uses that will provide a large pool of potential riders. As a general rule, rapid transit stations have a drawing area for walk trips to the station of about a half mile. This market area grows with feeder bus service and park-and-ride/kiss-and-ride to the stations.

Exhibit 5-2 is a map of Skokie with the regional road network, a number of private employers (although Pharmacia is no longer in existence), key village sites and half mile radius areas around the proposed stations. Existing land use is described for the potential station areas.

Exhibit 5-2
Skokie in Relation to the Proposed Intermediate Stations and the Line Extension



Crawford

This area is primarily a mix of housing, with some commercial development along Oakton and nearby industrial areas (to the east). The proposed station is bordered by single-family housing in all directions.

Oakton/Skokie Boulevard

This proposed station is near the well-established, increasingly vibrant, viable village center, which is just to the west of the station site. Skokie Boulevard borders the proposed station area to the immediate east. Oakton Park is on the southeast corner, with lower intensity commercial bordering Oakton to the east.

Land use near this proposed station is zoned for a mix of light industry, commercial services, civic uses, employment sites and general residential. The village has made changes to its zoning to allow for increased density along Oakton (and Dempster), and has approved a 5-story, 24-unit residential building at Oakton and Kilpatrick. The building dedicates 2,300 square feet of commercial space on the first floor. This is a step toward increasing the intensity and mix of uses near this station area and will hopefully encourage additional redevelopment in this corridor.

Within a quarter-mile to the north of the station area, the Pharmacia Corporation parking structure borders the Yellow Line alignment. Pharmacia is actively marketing the property.

Old Orchard Road

This area holds a number of destination sites. The Westfield Shoppingtown Old Orchard retail complex of about 100 acres includes a number of high-end anchor stores. In addition to the shopping center, there is other spin off retail, southeast of the general station site.

Besides the retail center, there are a number of employers and other high activity sites in the area. Pharmacia was located at 5200 Old Orchard Rd; Niles North High School and the Cook County Circuit Court are also within a ½ mile of the proposed station site. To the west of the station is Harms Woods, part of the Cook County Forest Preserve system. The communities of Glenview and Wilmette are to the north and within the half mile station area.

Exhibit 5-3 illustrates the current land-use patterns in the vicinity of the Dempster station and along the proposed route of the north extension. From Dempster to Gross Point, residential use is predominant to the east of the rail corridor (separated by the station parking lot), while to the west the land immediately abutting the rail right-of-way is commercial, with residential usage further west of that. Between Gross Point and Church, and for approximately one-quarter mile north of Church, land use on either side of the rail right-of-way is commercial, industrial and institutional.

Between Emerson and Golf Road, the area on either side of the rail line is residential in nature. There is a small band of commercial development on either side of Golf Road, which transitions to residential and then institutional uses to the east of the right-of-way. Remaining on the rail line north of the Edens Expressway, commercial uses border the right-of-way.

Exhibit 5-3
Existing Land Use

5.3 Future Outlook

NIPC Population, Household and Employment Forecasts

The Northeastern Illinois Planning Commission (NIPC) is responsible for preparing population and employment forecasts for the six-county northeastern Illinois region. NIPC's current adopted forecasts are for 2020, and were prepared as part of the development of the Chicago Area Transportation Study's (CATS) 2020 Regional Transportation Plan Update. These 2020 population and employment forecasts for the region include two airport scenarios. The first scenario assumes that the region's air capacity will be met through existing airport improvements. The second scenario assumes the addition of a south suburban airport into the forecasts.

NIPC is currently developing population and employment forecasts for 2030, as part of the development of the CATS 2030 Regional Transportation Plan. It is anticipated that the CATS 2030 Regional Transportation Plan and the NIPC's 2030 population and employment forecasts will be formally adopted by the region in late October/early November 2003. Preliminary NIPC 2030 population and employment forecasts were obtained from CATS. It should be emphasized that the 2030 population and employment forecasts for Skokie are preliminary and subject to change until final adoption. The 2030 projections have the benefit of the 2000 Census as the base year for the projections

For the Village of Skokie and in the station areas, NIPC's 2020 projections for two alternative airport scenarios differ by less than 1%. The forecasts cited in Exhibit 5-4 are for the existing airport improvement scenario, while Exhibit 5-5 reflects the preliminary 2030 forecasts. The estimated station area numbers were generated for a half-mile radius around the potential station area. In addition, since there are a number of alternatives generated for the Old Orchard station area, numbers were only generated for the alternative that follows the Union Pacific Railroad right-of-way (Alternative A).

Exhibit 5-4
NIPC 2020 Forecasts

Station Area	Population	Households	Employment
Skokie (all)	61,990	24,720	57,620
Crawford	5,180	2,000	1,690
Oakton	6,770	3,070	3,780
Old Orchard (A)	1,670	590	7,230
Howard (existing)	18.470	7,630	3,770
Dempster (existing)	8,440	3,730	3,540

Exhibit 5-5
NIPC Preliminary 2030 Forecasts

Station Area	Population	Households	Employment
Skokie (all)	59,480	23,680	44,820
Crawford	5,120	1,960	1,690
Oakton	7,080	3,200	4,010
Old Orchard (A)	1,620	570	10,600
Howard (existing)	18,770	7,600	2,850
Dempster (existing)	8,100	3,580	3,540

A comparison of 2000 Census data to the 2030 population and employment forecast reflects anticipated change for the village as a whole and within the proposed station areas (Exhibits 5-6 and 5-7). The comparison shows a significant increase in employment within the Village, and only minor losses in population. Again, the 2030 forecasts are preliminary and subject to change prior to adoption by NIPC.

Exhibit 5-6
Population Change

Area	2000	2030 Preliminary	Change (%)
Village	63,350	59,480	-3,870 (-6%)
Crawford	5,450	5,120	-330 (-6%)
Oakton	7,630	7,080	-550 (-7%)
Old Orchard A	1,600	1,670	70 (4%)

Exhibit 5-7
Employment Change

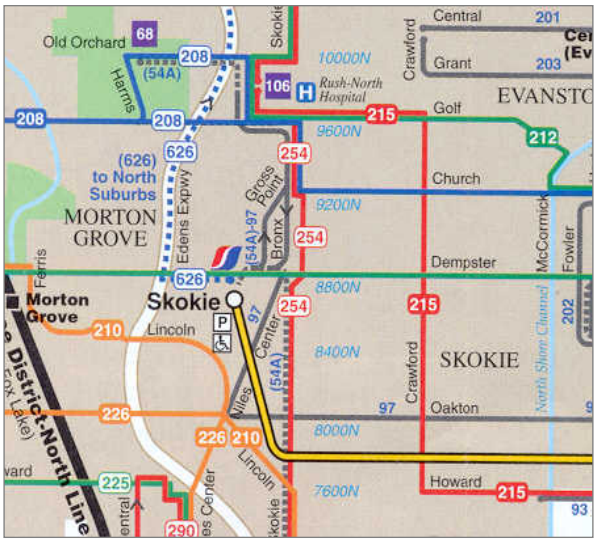
Area	2000	2030 Preliminary	Change (%)
Village	36,700	44,820	8,120 (22%)
Crawford	1,410	1,690	280 (20%)
Oakton	3,260	4,010	750 (23%)
Old Orchard A	7,240	10,600	3,360 (46%)

The population and employment forecasts developed by NIPC are based on municipal plans and ideas of the future. Instituting a transit investment like this project may change municipal development plans and result in planning, zoning and investment changes that allow for increases in population and employment in the nearby station areas.

6.0 OTHER TRANSIT SERVICES

Exhibit 6-1 is a map of existing (2002) transit services in the study area. Details of the existing services follow.

Exhibit 6-1
Existing Transit Service



6.1 Pace Buses

Nine Pace fixed route services operate in the study area. Pace also provides demand-responsive accessible service for qualified users. The fixed-route bus services are listed (including key service characteristics) in numerical order.

Route 208 operates via Church Street, Skokie Boulevard, Lavergne (west of Westfield Shoppingtown Old Orchard), Old Orchard Road, Harms Road and Golf Road, linking downtown Evanston to the Golf Mill Shopping Center in Niles. Off-peak trips continue beyond Golf Mill to the Des Plaines Metra station.

Service on route 208 is provided seven days per week. Weekday peak service is on the order of every 30 minutes; off-peak operates on one hour headways. Saturday service operates every 50 minutes, while the frequency on Sundays and holidays is every 90 minutes.

Pace winter 2000 survey data at the Old Orchard stop indicates on and off activity of 220 riders per day. The heaviest activity was during the afternoon peak period - 45% of the total - with more than half of that occurring on eastbound buses. The first quarter 2002 ridership survey shows total weekday ridership on this line of 944; Saturday ridership of 540; and Sunday/holiday ridership is at 161.

Pace's study of ridership habits indicates that nearly 35% of the route's riders are making work-related trips. The next highest user group (25%) makes shopping/restaurant-related trips. Of the surveyed riders, over 50% reported that they didn't drive, didn't have a license or had no car available to them. Approximately 25% of the riders also used a CTA bus in their travels, with an equal amount using a CTA train. Slightly less than 20% of the surveyed riders had also used another Pace route in the course of their journey. The majority of the surveyed riders indicated that they had begun their journey in one of the suburbs. This was true for all categories of origins/destinations.

Route 210 buses operate from the Western/Lincoln CTA station nominally via Lincoln Avenue to Niles Center to Lincoln to Dempster and continue north to the Glenview Metra station, Glenbrook Hospital and Glenbrook High School. Weekday peak period trips are extended south from the CTA station to downtown Chicago.

This line operates 6 days per week. Peak period service operates on a 30-minute headway; base frequency is 75 minutes. Saturday service is provided approximately every 90 minutes. The first quarter 2002 ridership survey shows a total weekday ridership of 856 and Saturday ridership of 298.

Route 212 operates via Golf to Lavergne (west of Westfield Shoppingtown Old Orchard) to Old Orchard to Skokie Boulevard to Glenview Road. It links downtown Evanston to several locations in Glenview and Northbrook, terminating at the Northbrook Court Shopping Center.

Service operates 6 days per week. Peak period service is provided every 30 minutes; off-peak headway is hourly. Saturday headways are approximately every hour.

Pace provided a variety of survey data for this route. The winter 2000 traffic count at Old Orchard indicated on and off traffic at this location of 202 riders per day. The bulk of this activity (44%) occurred in the afternoon peak period, with nearly equal flows between northbound and southbound buses. During the morning peak and base periods, most of the traffic was on the southbound service (30%). The first quarter 2002 ridership survey reports weekday ridership of 857 and Saturday ridership totaling 373.

Pace's survey of ridership habits showed that over 50% of the riders indicated that they were using the route for work-related travel. The next highest group (approximately 17%) was traveling to or from shopping/restaurants. About half the users responded that they didn't drive, didn't have a license or did not have access to a car. Just less than 40% of the respondents indicated they had used another CTA train in the course of their journey, while just over 20% had also used a CTA bus. The majority of route 212 users for all categories of trips began or ended their trip in a suburb.

Route 215 buses operate from the Howard CTA station to Westfield Shoppingtown Old Orchard via Howard, Crawford, Golf and Lavergne (west of the shopping center). The line provides service 7 days per week. Peak period service operates every 20 minutes while non-peak is provided every 40 minutes. Saturday, Sunday and holiday schedules are on a 40-minute headway.

The winter 2000 survey at Old Orchard indicates that on and off activity for this route totaled 360 riders per day. The survey showed that 61% of this traffic was on southbound buses, with the heaviest flow (141 riders, or 39% of the daily total) occurring during the afternoon peak period. The next heaviest period of rider activity was discharging riders off morning peak period service, accounting for 18% of the daily traffic at this location.

The first quarter 2002 ridership report shows a total of 1,598 weekday riders, 1,048 on Saturdays and 573 on Sundays/holidays. The ridership habits survey indicates that just fewer than 44% of the respondents were making a work-related trip. Less than 20% reported they had made the trip on account of shopping/restaurant. Nearly 40% of the respondents said that they were using the bus as they didn't drive, didn't have a license or had no access to a car.

Over 40% of the respondents had used a CTA train to make this trip, while just over 30% had also used a CTA bus. Unlike the survey results for routes 208 and 212, at least half the users started in Chicago, with trips starting from home in Chicago accounting for 61% of all users. Consistent with the other routes, a suburb was the destination of a majority of the users in all categories.

Route 226 operates from the Jefferson Park CTA station via Central/Niles Center to Oakton and then continues west in Mount Prospect, terminating west of Elmhurst Road. Service is provided only on weekdays. Peak period frequency is approximately 15 minutes, while the base service operates every 30 minutes or so. The first quarter 2002 ridership report shows 848 riders per day on this route.

Route 250 buses operate via Dempster Street from downtown Evanston to downtown Des Plaines. Westbound buses use the bus zone at the CTA Yellow Line station; eastbound, the stop is on Dempster, discharging at the shelter at the end of the tail track.

Service operates seven days per week. Weekday peak period service is provided on a 15- to 20-minute headway; base period service operates every 30 minutes. Saturday schedules call for service approximately every 30 minutes. On Sundays and holidays, buses operate every 30 to 60 minutes, depending on the time of day.

Ridership from the first quarter 2002 shows 2,414 weekday riders, a total of 1,198 on Saturdays and 700 on Sundays/Holidays.

Route 254 operates from the Irving Park CTA station nominally via Cicero/Skokie Boulevard to Westfield Shoppingtown Old Orchard. This service is provided Saturdays only, in place of the CTA 54A-North Cicero bus. The line operates every 30 minutes. The first quarter 2002 ridership report indicates that this line carries 515 riders.

Route 422 buses operate via Central Street, Lake Avenue and Skokie Boulevard, linking the Linden Avenue CTA station, Edens Plaza and Old Orchard Road. The service operates on weekdays and Saturday's only. Peak period service operates about every 15-20 minutes, with base service provided every 30 minutes. On Saturdays, the line runs every hour.

The winter 2000 activity survey indicates that a total of 149 riders got on or off at Old Orchard on a typical day. Of these, 54% were to eastbound buses. Peak traffic flows are onto eastbound buses in the AM peak (20%) and off westbound service during the PM peak (23%). The report shows 654 weekday riders and 211 passengers on Saturdays on the route.

The ridership habits survey indicates that just over 40% of the respondents were making a work-related trip. The next highest reason for travel was shopping/restaurant (nearly 17%), closely followed by personal business (nearly 14%). Just fewer than 50% of the respondents indicated they had used the bus as they didn't drive, didn't have a license or had no access to a car. Nearly 36% of the respondents had used a CTA train in the course of their trip, while 16% used a CTA bus. Another 16% walked to the bus. The majority of the users in all categories were either starting or ending their trip in another suburb.

Route 626 operates from the Dempster CTA station via Dempster, I-94, Skokie Road, Lake-Cook Road and Milwaukee Avenue (nominally) to several destinations in the Buffalo Grove/Lincolnshire area.

Route 626 runs only on weekdays. Morning and evening peak commuter service is provided between the CTA station and the Buffalo Grove park-and-ride lot. Reverse commute service operates during these periods to the Lincolnshire Destinations. Approximate headways for both services are 20-30 minutes. The first quarter 2002 ridership report shows 602 daily riders.

6.2 CTA Bus Service

Two CTA bus routes (54A and 97) serve the study area.

Route 54A/North Cicero operates predominantly on Cicero Avenue/Skokie Boulevard. It starts from the Irving Park station on the CTA Blue Line and terminates at the Skokie

Courthouse on Old Orchard Road, west of the shopping mall. En route, it serves the Dempster CTA Yellow Line station and Westfield Shoppingtown Old Orchard, stopping in the bus zone on the west side of the mall. CTA provides this service during weekday peak periods only. Service is every 15-30 minutes, depending on the time and direction.

CTA ridership data from June 2001 to May 2002 was reviewed. Average May 2002 weekday boardings were 1,278. This represents a decrease of 8.4% from the peak daily boardings in the period (1,395 in September 2001) and a decrease of 4.7% from where the line's traffic was in June 2001 (1,341).

Route 97/Skokie operates on Howard, Dodge, Oakton, Niles Center, Dempster, Gross Point/Skokie Boulevard, Golf and Lavergne. It links the CTA Howard Street Station to Westfield Shoppingtown Old Orchard, providing service through the Skokie CBD and the Dempster CTA station en route. Not all trips run to the shopping center; some trips turn back at the Dempster Yellow Line terminal.

The line operates seven days per week. Weekday peak service is provided a minimum of every 10 minutes. In the base period, buses operate every 15 minutes. On Saturdays, trips are scheduled about every 20 minutes for most of the day. Sunday service runs every 30 minutes.

In May 2002, the average daily weekday boardings were 3,767. This is a decline of 7.4% from the peak weekday ridership in the preceding year (4,066 in August 2001). This also represents a decrease of 2.1% from the June 2001 average daily boardings of 3,846. Saturday boardings in May 2002 averaged 2,161. This is a 17.2% decrease from the previous year's peak, which was 2,641 in June 2001. The May 2002 Sunday/Holiday average boardings were 1,563. This represents a decline of 9.1% from the peak of the previous year, which was 1,719 in August 2001. However, the May 2002 Sunday boardings are a 4.2% increase over where the line was one year previous – 1,500 average Sunday boardings in June 2001.

6.3 Other Service Providers

Greyhound intercity bus services also stop at the Dempster CTA station. The Greyhound office is open from 9:00 a.m. to 5:30 p.m. five days per week. This office handles passenger ticketing as well as package express shipping and receiving. Current Greyhound schedules provide about 10 departures and a like number of arrivals on a daily basis. Most of these trips are local buses operating to destinations such as Milwaukee, Madison and other nearby cities.

The taxi companies (American, "303", etc.) regularly stage cabs at the CTA Dempster terminal, and it is not uncommon to see an arriving transit passenger go to the cab stand in lieu of waiting on one of the connecting transit services.

Metra's Milwaukee District North Line has stations at Dempster and Golf Rd. The Morton Grove station is just about 2 miles from the Yellow Line Dempster terminal.

7.0 PLANNED IMPROVEMENTS AND OTHER DEVELOPMENTS

7.1 Major Improvement Projects

From 2002 to 2007, the following major projects are underway or planned:

- Main Street Median and Streetscape Improvement Project. McCormick to Lincoln and therefore, intersecting the Yellow Line. A village-sponsored project.
- Skokie Transportation Center Projects. At the Dempster CTA station, including the relocation of the former CNS&M station building. IDOT/Village sponsored project.
- West Dempster Streetscape Improvement Project. From approximately Niles Center Road to Central Road and therefore intersecting the possible extension of the Yellow Line. This is a village sponsored project. A related effort is the improvements to the Dempster, Niles Center and Skokie Boulevard intersections sponsored by IDOT and the village.
- Old Orchard Road Sidewalk Improvements. Lockwood to Harms, therefore possibly intersecting the potential Yellow Line extension. A village project.
- Old Orchard Road Corridor Improvement Project. LaCrosse to Harms, sponsored by Cook County Highway Department, IDOT and the village.

There are other projects on the Skokie Engineering Department's capital improvement map, but these do not immediately intersect the existing Yellow Line or the proposed extension. In addition, the map notes that routine "local street resurfacing, water main and local maintenance projects" are not included.

7.2 CTA Capital Improvements

The CTA is in the process of replacing the grade crossing warning equipment at the seven at-grade crossings on the Yellow Line. Expected completion date for this work is late 2003 or early 2004. The CTA is also in process of designing for the replacement of the overhead catenary with third rail power distribution equipment. The anticipated completion date for this project is early 2004. Reconstruction of the Howard station will begin in 2005.

7.3 Union Pacific Railroad (UPRR) Line Status

On May 7, 2002 the UPRR applied to the Surface Transportation Board (STB) for exemption from the provisions of 49 USC 10903-05, to abandon the 1.04-mile portion of the Skokie Industrial Lead between Dempster and Oakton Streets in the Village of Skokie. The carrier has applied to discontinue operations on the 8.06-mile line section north from Dempster Street to Valley Junction in Northfield. A discontinuance means that the track, signal and other railroad equipment would remain in place, whereas an abandonment allows these items to be removed (and allows the right-of-way to be sold).

The Village of Skokie submitted a letter to the STB, dated May 29, 2002, requesting "issuance of a Public Use Condition as well as a Certificate or Notice of Interim Trail Use rather than an outright abandonment" for that portion of the line between Dempster and Oakton Streets. The village has also asked that the carrier be prohibited from disposing of the corridor for a period of 180 days from the effective date of the abandonment authorization, in order to allow the Village to begin acquisition negotiations with the railroad. The STB granted these requests in 2002.

7.4 Stakeholder Discussions

Meetings and discussions were held with some of the key stakeholders affected by this potential project. These stakeholders include the Cook County Courthouse Complex on Old Orchard Road, Oakton Community College, Westfield Shoppingtown Old Orchard, School District 219 (Niles North High School) and Pharmacia. These discussions are important to

determine stakeholder future plans as well as attitudes toward the possible transit improvements.

Oakton Community College

Oakton Community College's Skokie campus is located on the north side of Lincoln Avenue between Dobson and Niles streets. This puts the campus within the 0.5-mile catchment area of an Oakton Street intermediate station.

A mid-October 2002 telephone interview with Mr. George Chirempes of OCC provided the information that the Skokie campus has a technical center that will be expanded by approximately 55,000 square feet. This will facilitate an expansion of the computer labs at the Skokie facility, and is expected to increase student traffic to and from the facility, but not result in an increase in the overall student population, currently at approximately 2,250 students. Full-time faculty and staff in Skokie total 160; part-time faculty number around 130. In addition, there are about 1,300 persons (mainly senior citizens from the surrounding neighborhood) that participate in the College's "Alliance" program.

A 1998 Pace survey at Oakton's Des Plaines campus observed that 9% of the students used public transit for all or part of their journey, with an estimated faculty and staff usage of about 2.5% to 3% (based on PB's experience elsewhere). Using the current student population and the 9% factor, daily transit riders to and from this facility would be about 210 trips. This does not include an estimate of transit ridership from the "Alliance" program enrollees, as most are residents of the immediate area. The potential proximity of rail transit service, as represented by an Oakton Street Yellow Line station may be expected to boost the percent of public transit riders above that found at the Des Plaines campus.

Pharmacia Corporation

The consolidation process in the drug/pharmaceutical industry resulted in G.D. Searle & Co. becoming today's Pharmacia operation. This process is continuing with Pharmacia and Pfizer in the midst of merger proceedings. At the time that PB contacted Pharmacia (a telephone interview with the firm's Mr. Bob Kuhn in late October 2002), the due diligence process was underway, but plans for the retention of Skokie installations could not be discussed in any certainty. In mid-2003, the Village of Skokie reported that the firm had decided to close its facilities in Skokie, and would seek a buyer for them.

Pharmacia's operations in the Village included the office and research facilities in and around Searle Parkway (immediately north of the central business district), as well as an office installation at Old Orchard Road and Laramie. Both of these facilities are within 0.5 miles of either the proposed intermediate station location at Oakton or the various alternatives for a station at or near Old Orchard Road. According to Village data, Pharmacia's employment in October 2002 was around 1,300.

Pharmacia operated shuttle vans for its employees, serving the Dempster CTA station and the Morton Grove Metra station. In the fall of 2002, the firm had recently surveyed the users of its shuttle services. Daily ridership on them was about 40, with 2/3 of that (26 or so) destined for the CTA station. During the work day the vans were used on a shuttle service between the firm's Searle Parkway and Old Orchard Road installations. This operated about every 15 minutes between the hours of 9 am and 3 pm. On a daily basis, ridership on this service was about 60 persons. It is unknown whether a buyer for Pharmacia's facilities would acquire both the downtown-area installation and the space used at Old Orchard Road. Further, it is unknown if such a buyer would operate a shuttle van service similar to what Pharmacia had provided.

Cook County Courthouse Complex

The courthouse complex in Skokie is located on the north side of Old Orchard Road, west of the UPRR right-of-way. This complex is within a mile of any of the alternative north terminal locations for the Yellow Line extension.

Per a late October 2002 telephone interview with Judge Judy Slayers, there are approximately 600 employees at the courthouse complex. Although no formal survey has been completed, anecdotal observations estimate public transit usage by employees to be between 50 and 100 persons per day. However, public transit usage by visitors is estimated to be higher. Of 1,000 daily visitors, observations estimate usage around 15% (150) for access to the facility.

There is a possibility that this facility could handle additional cases; however, the lack of high-capacity public transit service to the site has been a deterrent in implementing this expansion. Current public transit service includes CTA Route 54A, which runs to the complex only during rush hours. Pace Route 208, operating from Evanston to the Golf Mill Shopping Center via Golf Road, is diverted to serve the complex on a headway that varies between 20 and 60 minutes depending on the time of day. Travel time from the courthouse to Evanston (connections to CTA and Metra services) is about 26 minutes. If a Yellow Line extension were to be brought within a mile of the complex, travel time by shuttle bus would likely be a few minutes. This service enhancement would improve connections to this facility, with a potential increase in transit ridership from staff and visitors.

Westfield Shoppingtown Old Orchard

A meeting with the Westfield Shoppingtown Old Orchard management was held on February 20, 2003. The initial response from the Westfield management was supportive of a transit extension to the general vicinity of the shopping center. However, in follow-up discussion, the management expressed concern about devoting a substantial amount of land area to the rail line extension and the terminal facilities. Similarly, there were concerns about the possibility of accommodating the terminal approach trackage, station and ancillary facilities (patron and employee parking, bus terminal, etc.) on the facility property. This concern stemmed from recognition that the full capacity of the shopping center's parking lots and structures approaches or exceeds 100% utilization during peak shopping demand periods.

This led the project team to eliminate Alternatives C, D, F and G from further consideration, since each of these would have required some portion of the shopping center property on which to construct the terminal facilities. However, it is recognized that these alternatives or similar ones could be examined in subsequent studies.

School District 219

Since five of the eight north terminal alternatives operated along the perimeter or across the Niles North High School campus, a meeting with the management of School District 219 was held on April 10, 2003. School District 219 management was highly supportive of the rail line extension, citing possible benefits of student access to and from residences, to after school jobs and to replace charter bus operations for field trips. They voiced particular support for Alternatives B, D, and E. However, as noted above, Alternative D would require Westfield property to construct the terminal facility and so was eliminated from further consideration.

Neither stakeholder voiced any objection to Alternative A (remaining on the UPRR right-of-way) to Old Orchard Road, but the distance of this location to the High School and shopping center should be noted. Conversely, this alternative has the best access to the Cook County Courthouse and the office complexes extending west along Old Orchard Road to Harms Road.

8.0 INTERMEDIATE STATION ALTERNATIVES

The original Niles Center rapid transit service, which began in 1925, had seven intermediate stations along the line between Dempster and Howard. These stations have been closed for many years, but several of these previous station locations were examined for possible re-opening. This section reviews a number of alternatives for intermediate station locations.

8.1 Possible Station Locations East of Crawford Avenue

McCormick Boulevard

The Yellow Line enters the Village of Skokie from the east at approximately Kedzie Avenue, between Oakton and Howard Streets. There is no street access to the rail line at this location, being located on an embankment on approach to the bridge that carries it over the North Shore Channel and the paralleling McCormick Boulevard to the west. Immediately after crossing McCormick, the line passes over the former right-of-way of an abandoned Chicago & North Western rail line (itself grade-separated from street level). After leaving the steel bridge, the Yellow Line operates on an earth embankment.

There is currently no transit service along McCormick Boulevard. While either or both the CTA 97 and Pace 215 bus routes could be diverted to serve this location, the terrain in the area would make locating a bus transfer facility, a kiss-and-ride or park-and-ride problematic. Further, the alignment of Yellow Line (grade-separated) would mean that a station at this location would require a substantial investment in vertical circulation elements (escalators, elevators.). These investments would be required to comply with the Americans with Disabilities Act (ADA) requirements.

While there are a number of larger employers within 0.5 miles of this site, there is no residential area close to the station. The surrounding area is zoned entirely for industrial uses. For these reasons, *this site is not recommended for further consideration*.

Hamlin Avenue

West of McCormick Boulevard, the Yellow Line is on an earth embankment. The height of this embankment decreases further west, with the line at grade level behind CTA's Skokie Shops complex, located east of Lawndale Avenue. Immediately south of the shops there are crossovers on the mainline tracks to facilitate train access to/from the facility.

There is a sufficient length of tangent, level track (approximately 700 feet) between Hamlin and East Prairie to allow a 520-foot island platform to be constructed. Access at this point would require pedestrians crossing the tracks at grade, so vertical circulation elements would be required to get passengers up above track level and then back down to grade/platform level on either side of the track. This would mean that the station house could be located either outboard of the tracks or as part of the between-track installation.

Zoning on the east side of Hamlin is "office assembly industry", while the west side of the street is single-family residential. Population in the 0.5-mile catchment area around the station may not be as dense as other intermediate station possibilities. To the north of the double-track rail line are two non-revenue tail tracks, used to accommodate trains entering and leaving the CTA shops, which precludes access to the Yellow Line from the north.

Hamlin Avenue stops short of the rail line due to the location and requirements of the Skokie Shops complex. If a station was located here, Hamlin would have to be extended to the rail line in order to provide suitable bus/auto access. This would change the volume and nature of the traffic on Hamlin, which may make it unacceptable to area residents. Further, to provide suitable bus interchange and other facilities (kiss-and-ride and park-and-ride) it is quite likely that some or all of Hamlin Park (on the east side of the street) would have to be removed. No transit service operates on Hamlin, but Pace's route 215 bus could be diverted

to serve a station at this location. However, this would involve many sharp turns, increasing the travel time as well as increasing the risk to safe operations. For these reasons, *this site is not recommended for further consideration*.

East Prairie Road

A section of platform from the old East Prairie Road station remains to this day. However, the distance between East Prairie and Crawford (about 400 feet) is insufficient to accommodate a 520-foot platform. Given that this restriction does not exist to the west of Crawford Avenue, *the East Prairie site is not recommended for further consideration*.

8.2 Possible Station Location at Crawford Avenue

Crawford Avenue was once a stop on the Niles Center service. In reviewing the possibility of a station at this location today, there is sufficient tangent, level track west of Crawford to allow a station house and 520-foot island platform to be built. There are some existing catenary towers and wood line poles would have to be relocated in order to facilitate station construction, but this is not a situation unique to this location. However, the CTA is designing the third rail traction power distribution system without provisions for a station at this location, which will increase the design and construction costs slightly if a station is built here.

Land use compatibility is another concern, as the surrounding neighborhood is entirely single-family residential. Only one large employer is within a half mile of the proposed station site. (Exhibits 8-1 and 8-2)

Pace bus route 215 operates past the site. A concern with this location is that there does not appear to be a way to reasonably accommodate other functions, such as kiss-and-ride and/or park-and-ride.

To its advantage, a station at this location would offer attractive station-to-station distances, compared to the existing Howard and Dempster stations on the Yellow Line. It is approximately 2.9 miles from Howard Street and 2.0 miles to Dempster Street.

This station is recommended for further study to examine potential ridership.

Exhibit 8-1
Crawford Avenue Aerial of Existing Land Uses

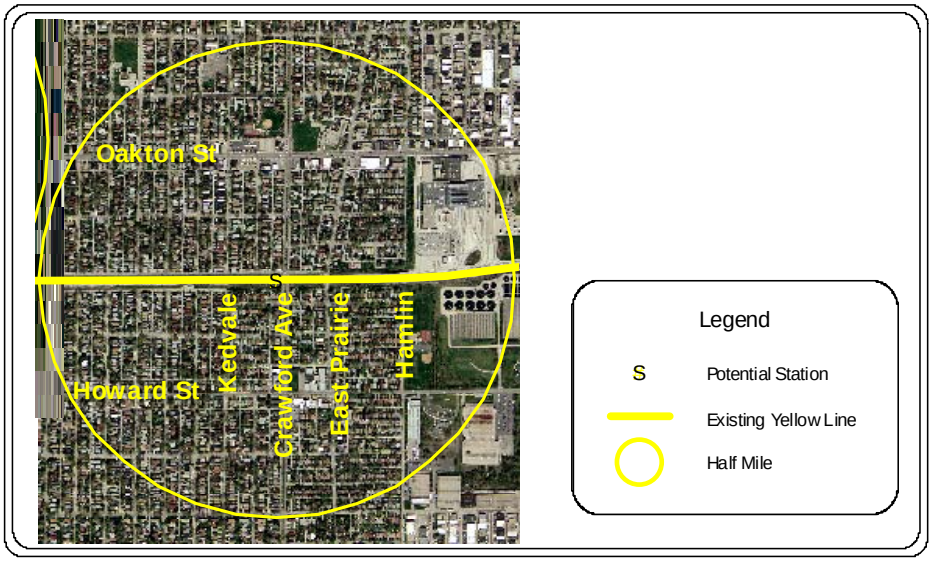
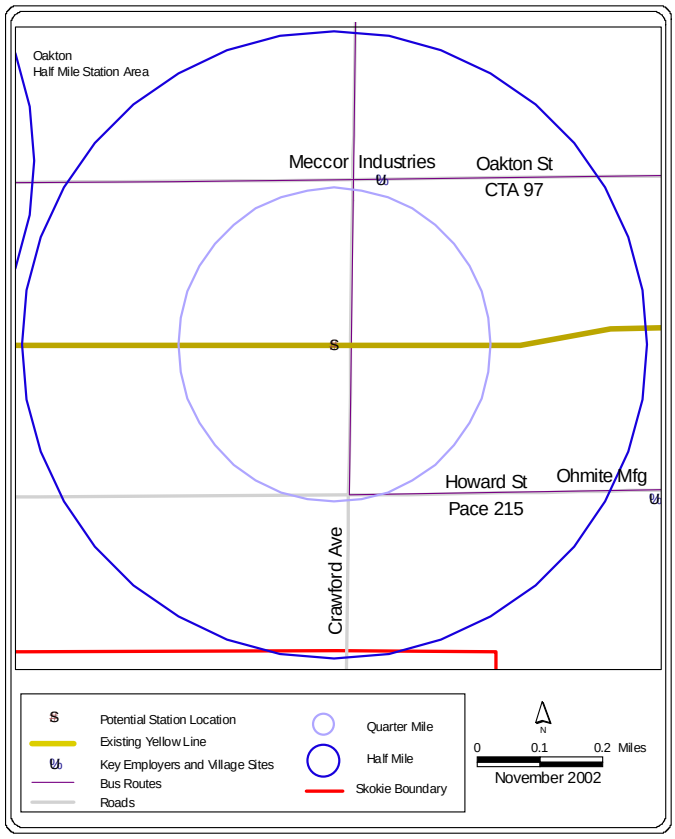


Exhibit 8-2
Crawford Avenue – Area Transit Services, Major Employers



8.3 Station South of Oakton Street

Modern rail rapid transit station design criteria calls for tangent track, not only over the length of the station platform, but also on approach/exiting the station. This offers better sight lines for the operator of a one-person train (regardless of train length) and also means that the separation distance between the cars and platform edge will be minimized, improving the boarding/alighting conditions.

A station located to the south of the Oakton Street grade crossing could not be located on tangent track. While stations with curves in the platforms do exist, this does not meet current design standards, and CTA would likely reject a plan that called for such a station design. Further, although the plans for a connection between the Blue and Yellow Lines are not currently on the list of projects for which CTA is pursuing concurrence and funding, it is likely that such a connection would join the Yellow Line trackage in the vicinity of Oakton curve. Therefore, in order to not preclude this junction, the station should not be located to the south of Oakton Street. Accordingly, *this site is not recommended for further consideration*.

8.4 Station North of Oakton Street

This station site bears further study. There is 1100 feet between the grade crossings at Oakton and Searle, which allows for easy accommodation of a station house and a 520-foot platform. It is also possible to make this station double-ended; that is, having an auxiliary entrance and exit at the Searle Parkway end of the platform. Extending the station all the way to Searle Parkway will require relocation of the emergency track crossover. There are several catenary towers and wood line poles that would have to be relocated to facilitate station construction.

CTA currently plans to make provisions for the future installation of a station at this location in its design for the third rail traction power distribution system. This includes locating the third rail on the outer side of the tracks, leaving the area between the tracks clear for the station house and platform. This conforms to CTA design practices.

With regard to operating practices and station site location, the station may need to be located further north of Oakton by some distance, thereby giving an accelerating train a long enough length of third rail to avoid gapping it in the grade crossing. If the station is too close to the Oakton grade crossing, it is possible that a two-car train could get "gapped" (isolated from the third rail) while traversing Oakton Street. Oakton is five lanes wide at this spot leading to a 75-80 foot gap between the third rail sections.

The former UPRR right-of-way between Oakton and Searle is going to be bought by others. With this property now apparently unavailable, bus circulation around the station may be difficult and time-consuming. Bus routes serving this location include CTA lines 54A and 97 and Pace line 254. Diversion of other bus routes in the area is possible, but not recommended owing to the lack of suitable off-street facilities. There is the possibility that a small off-street pull-in bay could be located on the north side of Oakton, on the west side of Skokie Boulevard (therefore, immediately east of the Yellow Line right-of-way). This would serve the southbound 54A/254 bus lines.

Currently there is not sufficient vacant/available land nearby to build a kiss-and-ride or park-and-ride facility associated with this station. It may be possible to acquire part or all of Pharmacia's Searle Parkway parking structure for transit patron parking.

Zoning in the immediate vicinity of the station is Downtown District/Light Industrial. There are several large employers in close proximity to the proposed station location, as shown Exhibits 8-3 and 8-4.

Exhibit 8-3
Oakton Street Aerial of Existing Land Uses

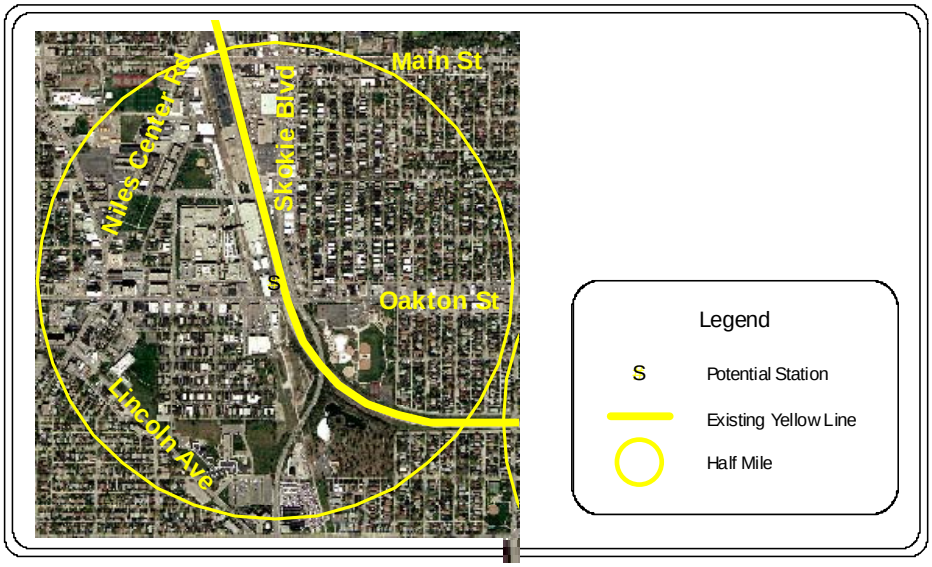
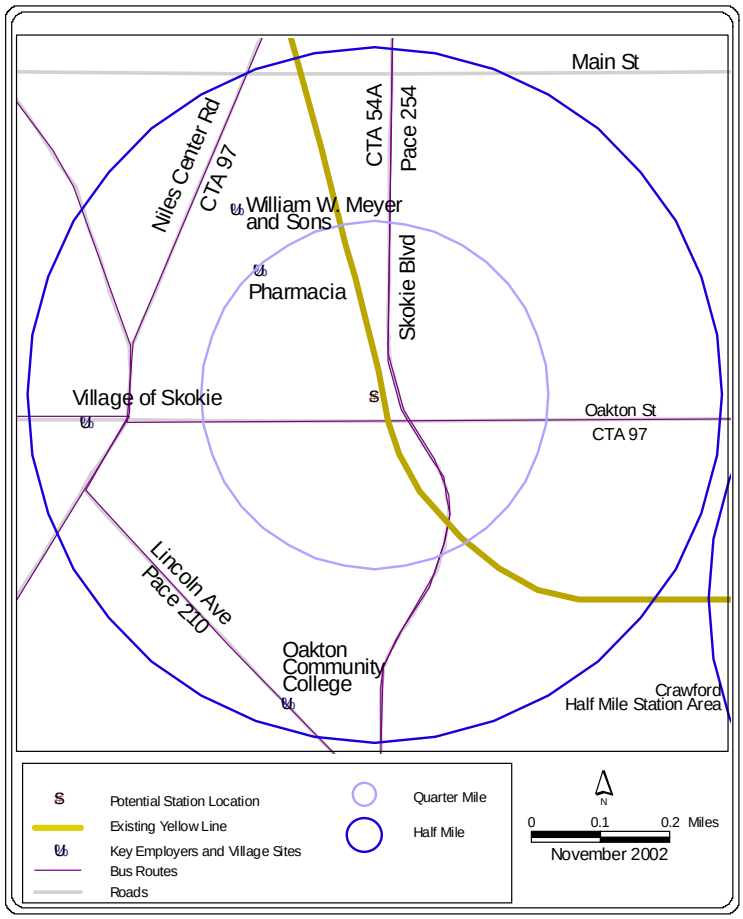


Exhibit 8.4
Oakton Street – Area Transit Services, Major Employers



In the lower right hand corner, note that the half-mile catchment area arc for the Crawford station nearly intersects this arc associated with the Oakton station. The distance between these two sites is 1.1 miles. Distance from Oakton to Dempster is approximately 0.9 miles.

This station was recommended for further study.

8.5 Comparison of Results

The possibilities for the intermediate stations have been evaluated according to several key factors. Results of this evaluation are summarized in Exhibit 8-5.

As a result of this evaluation, two intermediate station locations, to the west of Crawford Avenue and to the north of Oakton Street are recommended for further study.

Exhibit 8-5
Comparison of Intermediate Station Locations

Station Site / Parameter	McCormick	Hamlin	East Prairie	Crawford	Oakton South	Oakton North	Remarks
520 feet of level, tangent track	Yes	Yes	No	Yes	No	Yes	Grade separation at McCormick will have substantial effect on station design and construction costs
ROW width for 18 foot platform	Yes	Yes	Yes	Yes	Yes	Yes	
Direct street access?	Yes	No*	Yes	Yes	Yes	Yes	* Must extend street from south of ROW; shop tail tracks are to north of rail line and can't be cut
Zoning compatibility?	Yes	Yes**	No	No	Yes	Yes	** East side of Hamlin only
Direct intermodal connections?	No	No	No	Yes (1)	Yes (3)	Yes (3)	Assumes no route diversions; number of routes are in parentheses
Off-street bus facility possible?	No	No	No	No	No	No	Possible at Searle end of Oakton north, but route access would be difficult
Park-and-Ride/Kiss-and-Ride possible?	No	No	No	No	No	Yes***	*** If a portion of Pharmacia parking structure becomes/is made available
Major traffic generators within 0.5 miles of station site (number)?	Yes (5)	Yes (2) Meccor Industries, Ohmite	Yes (2) Meccor Industries, Ohmite	Yes (2) Meccor Industries, Ohmite	Yes (3) Oakton Community College, Village of Skokie, William W. Meyer	Yes (3) Oakton Community College, Village of Skokie, William W. Meyer	McCormick: Ammeraal Beltech, Federal Mogul, Ohmite Manufacturing, Powers Process Controls, Rauland-Borg
2020 Estimated population and employment within half mile	7,948	6,870	6,870	6,870	10,550	10,550	
Distance to Howard Street	2.0 miles	2.6 miles	2.8 miles	2.9 miles	3.9 miles	4.0 miles	
Distance to Dempster Street	2.9 miles	2.3 miles	2.1 miles	2.0 miles	1.0 miles	0.9 miles	
Recommended for further study?	No	No	No	Yes	No	Yes	

9.0 VERTICAL PROFILE ALTERNATIVES – LINE EXTENSION

This section considers options for a north extension of the Yellow Line, from Dempster Street to the vicinity of Old Orchard Road, in terms of the vertical profile – at-grade, open cut (below grade), aerial structure and embankment/retained fill. Combinations of these alignment profiles are also possible, and are discussed within the basic alignment sections.

The choice of vertical profile for the extension is between continuing with the at-grade alignment or grade separating the line. General social, environmental, operating, and cost considerations are presented in the discussion of these options.

One of the challenges with determining the vertical profile is the community acceptability of the project and choice. Transit planning experience indicates that most people, although supportive of improved transit service in concept, usually have concerns about noise, aesthetics, safety and security and how their property value might be affected when considering a particular investment. It is therefore important to get community support and buy-in for the project at an early stage in the project definition process, and retain this support through a continued program of public involvement.

9.1 CTA Design Criteria and Recent Practices

CTA design criteria were used in analyzing the vertical profile options for the extension profile. Article 4.4.2.1 of the CTA Design Criteria specifies that the maximum grade should not exceed 4%, outside of station platforms and yard storage tracks. Therefore, for an aerial alignment 20 feet above (or a depressed alignment 20 feet below), the approach grade must begin 500 feet in advance of the point where the rail is to be at this elevation. On the Yellow Line extension, all of the road crossing-to-road crossing distances (for example, between Dempster Street and Gross Point Road) are greater than this 500-foot dimension, making it possible to accommodate a change in the rail line's profile without impacting either of the adjacent road crossings.

To conform to CTA design criteria, construction of a grade separation at Dempster Street would require that the approach grade begin within the limits of the existing station. This means that a new station house and platforms might be required at Dempster Street, should it be decided to grade separate this crossing.

Other recent CTA rail construction projects have been entirely grade separated (Orange Line in the early 1990s, O'Hare Extension in the mid-1980s). Conversely, during the on-going reconstruction of the Blue Line-Douglas Branch and plans for the reconstruction of the Brown Line, existing grade crossings remain (ten on the Douglas, six on the Brown Line).

9.2 At-Grade Alignment

If the Yellow Line were to continue at-grade north from the existing Dempster station, improved grade crossings (compared to the existing warning equipment and crossing surfaces) would be constructed at Dempster Street, Gross Point Road, Church Street and Golf Road. The selection of the alignment at the north end of the proposed extension would determine whether or not there would be additional grade crossings between this point and the end of the line.

Average daily traffic (ADT) for Dempster Street was 37,800 vehicles according to IDOT 2001 data. This would make it the heaviest-volume street to be crossed at-grade on the Yellow Line. It would also make this the busiest at-grade crossing on the entire CTA system, exceeding the ADT at Cicero Avenue on the Blue Line-Douglas Branch, which was reported as 34,600 vehicles in 2001.

Interruptions of traffic flow due to trains crossing the Dempster Street grade crossing would cause traffic back-ups that may extend through one or more adjacent intersections. For example, the distance between the Dempster terminal traffic light and that at Bronx Avenue is

less than 500 feet; to Niles Center Road, it is only 1000 feet from the traffic light at the entrance to the terminal.

The interruption could extend for a considerable time when a train makes a station stop prior to traversing the grade crossing, meaning that the gates may be down for several minutes. This situation could occur if the Dempster Street station were to remain to the south of the grade crossing. An alternative approach is to require the northbound train to make its station stop before the gates are lowered. This is already done at the Cicero Avenue station on the Douglas Branch of the Blue Line. It serves to reduce the total time the gates are down.

From a traffic standpoint, delay would be introduced by crossing Dempster Street at-grade. Road maintenance requirements might also be impacted by this crossing. Operationally, the grade crossing will introduce additional safety risks. However, as was seen in the accident data for the existing grade crossings, there is no clear correlation between ADT through a crossing and the resulting accident record.

Historic CTA data for the 25 grade crossings on the rail system bears this out. The crossing with the highest incident rate (that is, incidents per one million train operations through that grade crossing) was Main Street on the Yellow Line, with an incident rate of 14.43. This was despite the fact that this crossing had the fifth highest ADT of the seven crossings on the Yellow Line. The next highest incident rate was at Rockwell Street on the Brown Line with an incident rate of 11.98. This street is not an arterial, but owing to building proximity to the grade crossing, sight lines are poor, leading to the high rate of incidents at this location.

The historic grade crossing incident data shows that the Yellow Line as a whole had the highest incident rate of any of the four CTA lines with grade crossings. This rate was despite a significantly lower volume of train operation per day. This may be explained by a different composition of drivers in the area around the Yellow Line. The infrequency of train operation (compared to other CTA lines) may be a contributing factor. At-grade crossing of the streets on the proposed Yellow Line extension is not desirable, but remains feasible. It is also possible that the line could be implemented with grade crossings, and then upgraded to grade-separations sometime in the future.

Regardless of the choice of alignment profile in the Dempster-to-Golf portion of the extension, an at-grade alignment would be appropriate for the line section north of Golf Road, if the extension remains on the UPRR right-of-way up to a terminal station at Old Orchard Road.

9.3 Open Cut

A portion of open cut exists on the Yellow Line through the Village of Evanston. Major streets cross the cut on bridges and two of these streets once included intermediate stations.

Figure 9-1: This construction-era photograph of the existing Yellow Line open cut through Evanston shows the angle of the side slopes.

Over time, operating experience has revealed some problems with this prior design. Mature trees have grown on the side slopes as well as at the top of the cut. These conditions have

led to sliding of trains owing to leaf fall and accumulation on the rail head, downed trees blocking the tracks following strong winds and flooding conditions brought on by blockage of drains due to leaf and branch accumulation for example. Also, for many years, vegetation control was an expense that was difficult to justify in light of budget constraints. Design of a new cut would be completely different in design, having more or less vertical slide slopes, to eliminate tree growth in such close proximity to the tracks. Careful control of vegetation on the side slopes over the operating life of the cut is also crucial.

There are some operating concerns to having the extension in a cut. These include removal of significant snow accumulation and the possibility that vandals could drop large objects onto the right-of-way (despite fencing of the overpasses and sides to the cut), resulting in damage to track and/or trains. Short of fencing all overpasses and both sides of the cut, there is no other effective means of preventing such actions. The fencing must be maintained to retain its effectiveness.

Snowfall could be dealt with by making the cut wider than the 25 feet-6 inch minimum right-of-way width. There are already operating locations where the right-of-way would have to increase to 65 feet-6 inches (at relay houses). Therefore, the cut could be made wider over its entire length to provide a place to move accumulated snow. However, this will significantly increase the cost of construction. This is due not only to removing more earth to make the cut, but also to relocating a greater number of utility poles and towers.

As an example, in the immediate vicinity of the ComEd Church Street Substation, this wider cut could result in a substantial construction cost impact, as there are five transmission towers and nearly 30 line poles or guy-wire poles within 35 feet of the centerline of the UPRR right-of-way. There are buried utilities that would also be affected by a line extension in open cut. The extent of these utility impacts is in direct proportion to the width and length of the cut. Since it is better to maintain alignment profiles between road crossings, if the cut is to be used under Dempster Street, this profile would be maintained at least to north of the crossing of Golf Road. Several of the north terminal alignment options effectively preclude continuation of the cut.

Of the seven principal north terminal options, six require an aerial structure, either to operate above public rights-of-way or well-established institutions and/or other land uses which cannot be relocated economically. When this requirement is in place, CTA design criteria guideline of a 4% maximum grade must also be taken into account. To go from open cut (top of rail approximately 20 feet below grade) to aerial structure (top of rail around 20 feet above grade) will require 1000 feet at a 4% rate of rise. There is insufficient distance between Golf Road and the Edens Expressway bridge in which to accommodate this transition. This issue depends on the particular alignment chosen for the north terminal of the extension.

Regardless, the open cut remains a viable option for the extension profile.

9.4 Aerial Structure

The Orange Line, linking Midway Airport and the southwest side of Chicago to the Loop is the most recent extension to the CTA system. It includes sections of aerial structure, which could be considered as a prototype for what might be used on the Yellow Line extension. This structure consists of a single column to grade supporting both tracks in a semi-cantilevered manner. High side walls are also used on this structure to keep wheel/rail noise from propagating into the surrounding area.

The need to accommodate an operating railroad and to facilitate construction staging precluded the use of this type of structure in the on-going reconstruction of the CTA Blue Line-Douglas Branch elevated structure. Since this restriction would not apply to the Yellow Line extension, it is safe to expect that the semi-cantilevered design would be used, should aerial structure profile be selected.

Use of the Orange Line aerial structure style would lead to the smallest footprint at grade level, by virtue of using the semi-cantilevered arrangement. However, aerial structures may be objectionable to some from an aesthetic perspective. There are also concerns that the elevation of the trains above surrounding structures and much of the vegetation allows noise to be transmitted over a broader range. For this reason, the sound containment walls were incorporated in the Orange Line structure design. Similar design features were used in the new section of structure at Addison Street on the Red Line, and will be included in the new structures required as part of the Belmont and Fullerton station replacement projects.

Figure 9-2: Construction details of the Orange Line aerial structure are shown in this view at Wentworth Avenue on the city's near south side. The concrete deck and sound walls were added after this photo and are supported by the steel stringers shown in the foreground.

As another example of noise mitigation, the Illinois Institute of Technology constructed a tube around the Green Line elevated structure between 33rd and 35th Streets in Chicago. The $45 million Campus Center passes underneath the elevated structure and the tube was built to control noise as well as blend the structure into the design of the Center. The 531-foot long structure surrounds the track, but has a slot on the top side to facilitate emergency access. However, the tube cost is estimated at $9 million. To apply a similar structure over the 1.5 miles of extension on the Yellow Line would cost on the order of $90 million, essentially doubling the cost of the extension.

The six north terminal alternatives that do not follow the UPRR right-of-way north of the Edens Expressway would each require aerial structure to attain their proposed terminal locations. This is due to the fact that the alternatives would each pass over public streets or established institutions that must remain in operation. This means that for the northernmost portion of the extension, most of the alternatives will require a section of aerial structure.

9.5 Embankment/Retained Fill

The existing Yellow Line includes a section of earth embankment on either side of the North Shore Channel/McCormick Boulevard bridge. This is not a retained fill; that is, it does not have side walls containing the fill. Consequently, the footprint at grade level is quite wide.

The embankment for the Yellow Line extension would be less substantial than that found at McCormick Boulevard. However, even a shorter fill requires a considerable footprint. Since the UPRR right-of-way is only 30 feet wide at some locations, an embankment for the extension would require a substantial portion of the paralleling ComEd right-of-way, which means relocation of many towers and poles. This acquisition and relocation would adversely affect the project design and construction costs.

In addition to cost, an embankment may be aesthetically objectionable to some, as it would effectively cut off the view across the right-of-way at grade level. Further, it may require sound walls or some other similar barriers in sensitive areas. Like the elevated structure, it would put the trains above the level of the surrounding structures/vegetation, introducing additional possibilities for noise propagation.

Retained fill reduces the footprint at grade level, compared to the earthen embankment, since it has the additional structural element of sidewalls to retain the fill material (an example of this style of construction can be found on the CTA Red Line south of Howard Street). However, like the embankment, the retained fill may be objectionable, cutting off the view

across the right-of-way at most locations. Like the embankment, it may require sound walls in sensitive areas.

9.6 Comparison of Results

Each of the alternative profiles will have to consider utilities, both those paralleling, as well as those crossing the path of the extension. In this context, the aerial structure, embankment and retained fill options could be expected to have the greatest impact on buried utilities. The embankment option would have the most impact on aerial utilities, given that its footprint at grade level would be broader than any of the other alignment profiles.

None of the four alternatives has an impact on CTA signal or traction power installations. Both signal and traction power can be installed and made safe/operational regardless of the line's profile. The at-grade profile would introduce additional grade crossings to the CTA rail system, which would increase the cost of design and procurement of this element. It would also introduce on-going maintenance responsibilities that the other profiles would not require.

If grade-separation at Dempster Street is selected, reconstruction of the Dempster Station will be required. Even if the line were to remain at-grade through this location, the station would require substantial reconstruction, owing to the short platform lengths and other issues.

Another project that would be affected by the Yellow Line extension is the in-progress reconfiguration of the terminal facilities adjacent to the existing station. Bus loading and the passenger waiting shelter are to be located adjacent to the existing Yellow Line tail track. The extension will be double-tracked through this area and may need to be realigned compared to its present location.

The following matrix (Exhibit 9-1), although subjective in the assessment, summarizes the key aspects of the alignment profiles. The "noise", "aesthetics", "traffic" and "safety" classifications are an assessment of the impacts of the rail line on the surrounding area. In the case of the "utilities" classification, this reflects the impact the rail line's construction would have on the area utility installations. The "cost" classification reflects the anticipated cost to construct the alignment.

Exhibit 9-1
Comparison of Profile Alternatives

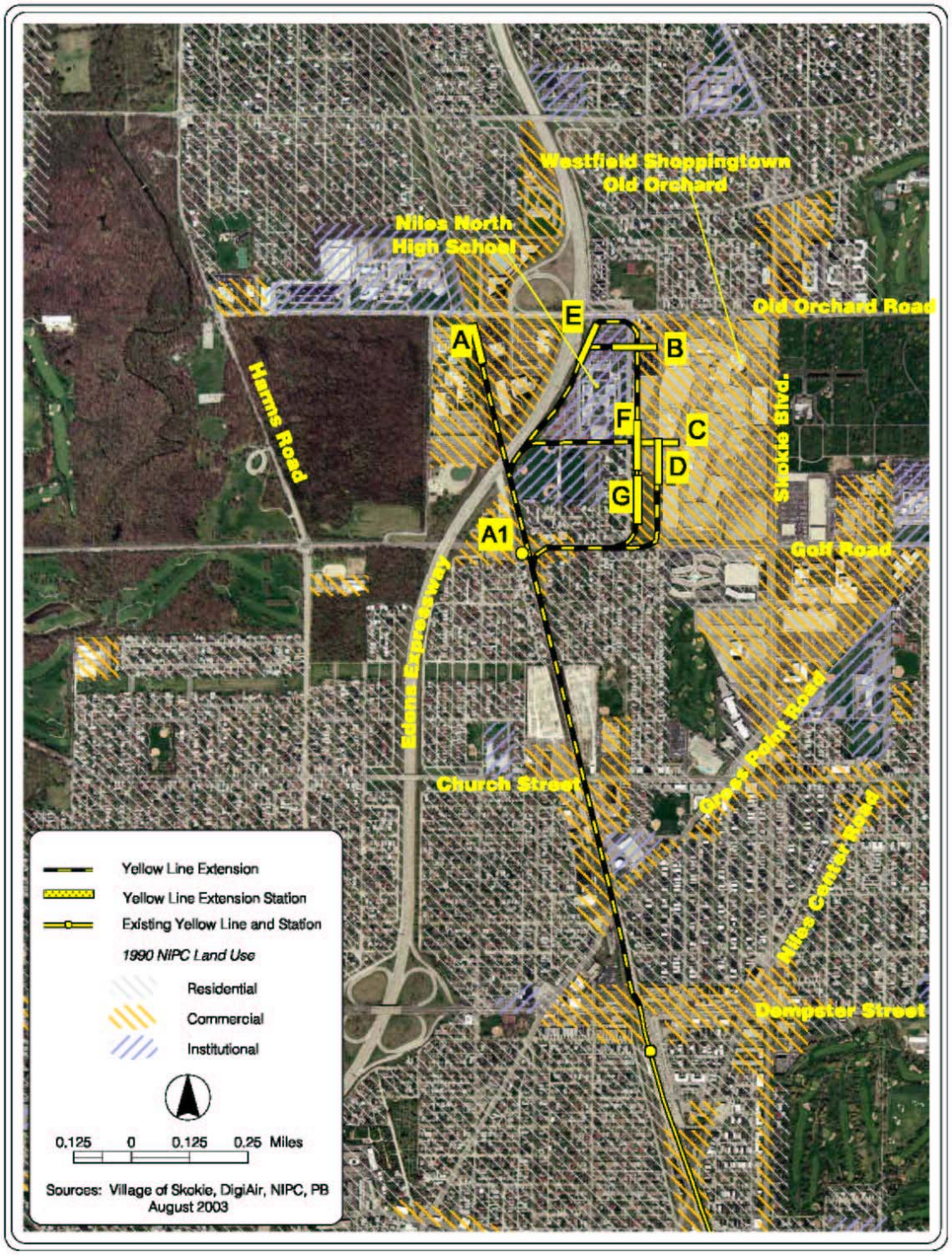
Impact	At-Grade	Open Cut	Aerial Structure	Embankment
Noise	Medium	Low	Medium	Medium
Utilities	Low	High	Medium	High
Aesthetics	Medium	Low	Medium	High
Traffic	High	None	None	None
Safety	High	Medium	None	Medium
Cost	Low	High	Medium	High

In addition to the above vertical profile alternatives, underground subway is also a possibility. Subway sections would minimize impacts (except for construction impacts) in sensitive areas. However, construction costs for subway sections are very high, and are generally considered cost prohibitive (except for short sections) in suburban areas such as the Village of Skokie.

10.0 NORTH TERMINAL ALTERNATIVES – LINE EXTENSION

This section considers options for a north extension of the Yellow Line, from Dempster Street to the vicinity of Old Orchard Road, in terms of the possible alternatives for the routing and location of the extension's north terminal. A total of eight alternatives were identified. Exhibit 10-1 reflects the terminal alternatives. The alternatives are discussed in detail in the following sections.

Exhibit 10-1
Skokie Swift Extension Alternatives



10.1 Alternative A – UPRR Right-of-Way to Old Orchard Road

Alternative A remains on the UPRR right-of-way to a north terminal station in the vicinity of Old Orchard Road. This alignment would avoid any additional land acquisition or usage agreements other than those required from the UPRR and ComEd, which would already be necessary for the extension between Dempster and Golf. As discussed in the previous chapter, this alignment could make the transition to at-grade operation north of the Golf Road crossings and remain at-grade into the terminal station. This would make this the least expensive alternative to implement. Total length of the extension would be approximately 1.6 miles.

This alternative would have the advantage of being in the most immediate proximity to the office developments and Cook County Court House complex to the west of the Edens Expressway, but would have the disadvantage of being the furthest removed from Westfield Shoppingtown Old Orchard. Providing access to the mall would require provision of shuttle bus service or the extension of the various CTA and Pace services to the rapid transit station. Ideally, the extension of these routes would be on a coordinated schedule to offer a reasonable distribution of bus trips throughout the peak and off-peak hours. Separation distance of the terminal from the court complex is about one-third of a mile. Additional investment in pedestrian facilities along Old Orchard Road would be warranted should this alternative be selected.

This alternative had the highest combined employment and population total according to the 2000 data and the future projections. Depending upon ridership, a parking lot or structure could be constructed as part of the terminal complex. Signage on the Edens Expressway on approach to the Old Orchard Road exits would alert motorists that this facility is available.

Figure 10-1: The approximate location for a terminal complex in the vicinity of Old Orchard Road is shown in this view looking northeast from the UPRR right-of-way.

10.2 Alternative A1 – UPRR Right of Way to Golf Road

This alternative is a truncation of the other alternatives stopping the extension at a terminal station near the intersection with Golf Road. It would conserve capital costs by being 0.5 to 0.9 miles shorter than any of the other alternatives (approximate distance from Dempster Street is 1.1 miles). Further capital cost reduction could be achieved by bringing it to grade after crossing Church Street, and terminating it on the south side of Golf Road. Historically, this location was the site of the Harmswoods station on the North Shore Line.

This alternative would be less attractive to most users because the developments at Old Orchard Road and the shopping center would be too far to walk to from the terminal. Therefore, operating expenses would be incurred by requiring shuttle bus service or coordinated fixed-route service to link the station to these developments. Imposing a transfer to reach a destination impedes the ridership potential for this option.

Locating the terminal in the vicinity of the Golf Road crossing will put it in immediate proximity to the residential areas either side of the rail line. Operation of trains through crossovers and other moves (coupling/uncoupling, etc.) that are frequently done at a terminal station may increase the amount of train noise propagated, rendering this option even more objectionable.

Figure 10-2: Looking northeast from the ComEd high tension tower to the intersection of Golf and Laramie. This site is a logical location for the terminal station and associated facilities, if the line were to be truncated at Golf Road. Residential properties to the right abut the right-of-way.

Figure 10-3: Looking southwest from Golf Road along the UPRR right-of-way. The immediate proximity of the residences to the rail line is evident in this view.

There is no access to or from the Edens Expressway at Golf Road. This would make access to a parking facility at a Golf Road terminal difficult for commuters coming off of the expressway.

10.3 Alternative B – North of High School

For this alignment, the extension would cross Golf Road, continuing to follow the UPRR right-of-way. Approximately one-tenth of a mile north of Golf Road, the alignment would curve to the east, paralleling the east side of the Edens Expressway. It would skirt the west edge of Niles North High School's (NNHS) baseball field, tennis courts, and recently-constructed maintenance building. North of the buildings, the alignment would enter a second, sharper curve to the east, which would carry it into the tangent alignment required for the 520-foot terminal station platform. The platform and station house would be built over the NNHS parking lot and the south lot of the Citibank/commercial building. The structure would end opposite the west side of the Bloomingdale's store in the Westfield Shoppingtown Old Orchard. Total length of this extension from Dempster Street is about 1.8 miles.

The universal crossover on approach to the terminal is located in the section along the east side of the Edens Expressway. This is due to the fact that there is a curve immediately to the west of the platform. Separation of the crossovers from the terminal station will reduce terminal throughput somewhat, but with current Yellow Line headways or slightly shorter intervals between trains, this restriction will barely be noticeable.

Figure 10-4: Looking north-northeast along the UPRR right-of-way to the approximate area where the alternative extension would curve and parallel the Edens Expressway. Many of the high tension towers would require relocation to facilitate construction of the extension.

This terminal location immediately west of Bloomingdale's will provide excellent access to the shopping center. It will also be possible to relocate one of the bus stops from the existing east-west access road around the corner in front of Bloomingdale's, in order to facilitate bus connections. Another possibility is that the bus facility could be relocated or the services rerouted to pass through an off-street facility on the south side of the rapid transit station.

Figure 10-5: Looking southwest at the new NNHS maintenance building. Use of the semi-cantilevered aerial structure on the extension would allow the column base(s) to be located between this building and the expressway embankment.

Parking is one consideration of this alternative. During recent construction at the high school, parking was disrupted resulting in students parking in the Citibank building lot. The location of the rapid transit structure and station will displace parking in both the NNHS and Citibank lots. Replacement parking could be created with a parking structure for both uses, as well as potentially offer additional shopping center parking. A structure for CTA users will also be required, but would result in displacement of shopping center parking in the remote lot to the south of the proposed station.

Figure 10-6: Looking east across the NNHS parking lot in the approximate location where the terminal station would be situated. In the distance is Bloomingdale's store. To the left is the Citibank Building, immediately west of the center.

Access from the Edens Expressway to the station would be good, given the close proximity to the expressway interchange. Connection to the Cook County Court House complex and the office developments along Old Orchard Road would require rerouting of some of the existing fixed route bus services to provide a coordinated, frequent service.

Figure 10-7: Looking west across the Citibank parking lot to Lawler Avenue and the NNHS campus.

The combined 2000 population and employment within a half mile of this location was estimated to total 6,570 and is projected to increase to 8,957 by 2030. Using the forecast as criteria, this terminal would rank lowest.

10.4 Alternative C – South of High School

This alternative envisioned that the rail line would leave the UPRR right-of-way north of Golf Road, curving to the east over the NNHS baseball fields, to line up with the access drive on the south side of the campus. It would pass immediately north of the football and track fields. Residences are located along the south side of the access drive from Leclaire to Lawler. Overall length of the extension via this alignment is approximately 1.7 miles.

Figure 10-8: Looking northeast from the UPRR right-of-way across the NNHS baseball field, which is beyond the fencing. The NNHS school building is in the distance.

The aerial structure would be to the south of the parking structure west of Marshall Field's in the shopping center. This would allow the rail line to penetrate the shopping center further to the east than any of the other alternatives under consideration.

Other considerations include the NNHS asking that the aerial structure be higher than the proposed 20 foot elevation to ensure continued use of the athletic fields. Further, the CTA would likely require protection of the structure to prevent a baseball or other object striking a passing train.

As with Alternative B, this alignment would displace parking, but only within the shopping center. This issue could be addressed with parking structures for both shoppers and transit users.

Figure 10-9: This view looks west-southwest from the access road to the south of NNHS and across the north end of the football and track fields, in the approximate location where the rail line would pass.

This station location, while providing superb access to the shopping center, would require bus service connections to the office developments and Courthouse complex on Old Orchard Road. Access from the expressway would again be facilitated by the existing interchange. The location of this station slightly further to the south (compared to the preceding alternatives) will require additional signage to help motorists locate it.

Figure 10-10: Looking east from the corner of the south access road and Lawler Avenue into the Westfield Shoppingtown – Old Orchard property.

Population and employment within a half mile of this terminal station were estimated at 6,843 in 2000. The 2030 projections estimate a combined total of 9,290 persons within the half-mile station area, a 35% increase. The 2030 population is estimated at 2,700.

10.5 Alternative D – Golf Road/Shopping Center South

This alternative would leave the UPRR right-of-way south of Golf Road, transitioning to an aerial structure turning east over Golf Road. A second curve is traversed, carrying the rail line over the west access road of the shopping center. It would pass west of the structure adjacent to Nordstrom's and terminate in a station located over the surface parking lot. The length of extension is estimated at 1.6 miles.

The location of the terminal station provides adequate access to the shopping center. This location would require a bus connection to the Old Orchard Road developments and the Courthouse complex. This alignment is somewhat more remote from the Edens Expressway, requiring more signage to guide motorists to the station. In addition, the station location proposed for this alignment would require motorists to use the shopping center's west access drive to get to the station.

Displacement of parking to accommodate the structure and terminal station would likely result in the project including the construction of a structure for mall patrons, as well as a separate one for transit users.

Figure 10-11: This view looks east along Golf Road; the UPRR track is in the foreground. Land use between this location and the shopping center is a mix of commercial and residential properties.

It must be recognized that residents and commercial tenants along Golf Road may object to the aerial structure extending past their property. It is possible to address this concern by constructing a subway on this section of line, but this will result in a substantial increase the capital cost for the extension.

Population and employment within the half mile of the station totaled approximately 7,050 in 2000. In 2000, this alternative had the highest population total of 2,650. The 2030 population and employment projections total 9,590, with population estimated at 2,700.

10.6 Alternative E – East of Edens

This alignment is similar to Alternative B, in that it diverges from the UPRR right-of-way north of Golf Road and runs parallel to the Edens Expressway along the west edge of the NNHS property. However, this alternative assumes a tangent alignment, terminating in a station east of the expressway and in the northwest portion of the NNHS property. Estimated length of this alignment from Dempster Street to the station is 1.6 miles.

For this alignment, the station would likely be located fronting on Old Orchard Road, to the north of the NNHS parking lot. There are some grade changes between the parking lot level and the road, but it is likely that the station would be built at the road grade level. The 520-foot platform would extend south from this location.

Displacement of NNHS parking would be required to construct this alignment, requiring the construction of a parking structure for the school, as well as one for transit patrons. This alternative does not enter the shopping center property, so there is no displacement of shopper parking.

The downside of this alternative is that it locates the station between the traffic generators and destinations in this area. Shuttle bus service (coordinated fixed route scheduling) would be required to link the station to the shopping center, the office developments and the Courthouse complex. However, visibility and access to and from the Edens Expressway would be the best of any of the alternatives.

Population and employment within a half mile of the terminal in 2000 were estimated at 7,656. The 2030 projected combined total is 10,532.

10.7 Alternative F – East of Edens / Curve into Shopping Center

This alternative is physically similar to Alternative E, in terms of deviating from the UPRR right-of-way and following the Edens Expressway right-of-way. Instead of terminating at Old Orchard Road however, a 300-foot radius curve would send trains heading back south into a station located over the west parking lot of the shopping center, on the east side of Lawler Avenue. Overall line length for this alternative is estimated to be 2.0 miles, the longest of any of the alternatives under consideration.

The sharp curve on approach to the station may be objectionable to the school, area employers and residents due to noise. This curve would be equipped with sound walls and would have "flange greasers", as a means of reducing the sharp squeal of the flanges against the railhead.

This alignment alternative would displace shopping center parking over the length of the remote lot on the west edge of the Westfield Shoppingtown Old Orchard property and would need to be replaced. This would be done by constructing separate parking structures for shoppers and CTA users. There would also be some parking loss – although insubstantial – in the NNHS flat lot, due to structural column footing locations.

This alignment would be removed from the Edens Expressway interchange, requiring signage to guide motorists to the station and parking facilities. Access to and from the station may also be an issue, as the most direct route would be via Lawler Avenue. Although there are stoplights at the intersections of Lawler and Old Orchard and Golf roads, activity on the lightly traveled road (623 vehicles/day) would increase.

The population and employment total within 0.5 miles of the terminal station was estimated at approximately 7,400 in 2000. Projections for 2030 anticipate an increase to a total of 10,189 persons.

10.8 Alternative G – Single-Track Loop

A combination of Alternatives D and F, Alternative G follows the routing of Alternative F, but instead of terminating, continues along Lawler Avenue to Golf Rd, turning west along Golf and connecting back to the UPRR right-of-way as in Alternative D. The proposed station location would be west of the Alternative D station location and south of the proposed Alternative F station site. The majority on this alternative would be single track.

This concept was discussed in general terms with CTA Rail Operations, given the operational considerations of such a configuration. The routing of this alignment (Golf Road on one side, and traversing the length of the mall) would most likely be by subway, so it is not practical to make provision for a future third track and separate platform in the station area. The station would be a double-track with an island platform, and a tail track would be located on approach to the station. This tail track (with a capacity of 10 cars) could be used to store a spare consist, or to remove a bad train from service.

In spite of having an overall loop length of approximately 2.4 miles, the east side of the loop (containing the tail track and station) is not long enough to allow the desired Number 12 switches to be used at all locations. Hence, Number 7 switches are used for the universal crossover between the tail track and the platform tracks. All other switches, which might be used by revenue (passenger-carrying) trains are Number 12s, allowing a higher train speed through them.

As this alternative was added on the basis of more recent stakeholder interview input, and given the similarity of this alignment and station location to Alternative F, no new population and employment numbers were generated.

10.9 Comparison of Results

In addressing the alternatives, a summary and subjective assessment of the issues raised during the analysis of the alternatives is provided in Exhibit 10-2. One category not included in the table is an assessment of bus service requirements to connect the proposed terminal location to area traffic generators. Each of the alternatives requires this service to some extent. By this measure alone, the worst-placed terminal station would be in Alternative A1 at the UPRR and Golf Road, since this is remote from virtually all of the potential traffic generators.

Alternative E is also sufficiently remote to require bus service to link it to both the shopping center and to the offices and court complex. Each of the alternatives requires bus service to link it to some of the uses in the area. Access can be by dedicated shuttle bus service, by extending or rerouting some services or by coordinating fixed-route service schedules to provide convenient service frequency. All options will require some pedestrian infrastructure improvements for connections to the area land uses.

Exhibit 10-2
Summary Assessment of Alternatives

Alt.	Length from Dempster St. (miles)	2030 Estimated Population and Employment	Accessibility /Visibility from Edens	Displaced Parking: Commercial	Displaced Parking: NNHS	Ease of Extension to North
A	1.6	12,220	Good	No	No	High
A1	1.1		Poor	No	No	High
B	1.8	8,957	Fair	Yes	Yes	Low
C	1.7	9,294	Fair	Yes	No	Low
D	1.6	9,591	Fair	Yes	No	High
E	1.6	10,532	Excellent	No	Yes	High
F	2.0	10,189	Fair	Yes	Yes	Low
G	2.4	--	Fair	Yes	Yes	Low

Although not discussed in the alternatives review, the “Ease of Extension to North” category is based chiefly on the proposed orientation of the terminal station relative to a line extension further north. By this measure, those line extensions having the terminal oriented east-west would not be “extendable” without replacement of the proposed terminal station, and line realignment. In a similar context, alternatives F and G, where the line makes a 180-degree turn on approach to the terminal station would similarly require relocation/reorientation of the approach track and the terminal station in order to accommodate extension further to the north.

11.0 RIGHT-OF-WAY NEEDS AND AVAILABILITY

11.1 Intermediate Stations

In siting an intermediate station, a location with traffic generators in close proximity and connections to bus routes and other services is desirable. In looking at the CTA Yellow Line and the bus services operating in Skokie, this criteria leads to likely station locations at Crawford Avenue (Pace route 215), Oakton Street (CTA route 97 and potentially CTA 54A and Pace 254) and Niles Center Road (CTA route 97). Of these, Niles Center is too close to the existing Dempster station to be attractive, leaving Crawford and Oakton as the logical places for a potential station.

Both sites have some constraints compared to what an ideal facility would require. This section discusses the advantages and disadvantages of both intermediate stations as well as right-of-way needs and availability.

Crawford Avenue

The area around the Crawford station is almost exclusively single-family residential, which is less conducive to a high volume station. The area around this proposed station site is zoned 'R2' (single family residential). None of the Village's top 10 employers are located within walking distance of this location. Pace's route 215 could provide the connection to these employers, but the need for an intermodal transfer site diminishes the attractiveness of the station, particularly considering that many riders have probably made one or more transfers prior to getting to the Yellow Line.

The site could accommodate a station house and center platform, but provisions for off-street bus bays, a kiss-and-ride or park-and-ride facility are limited at present and would require changing the area street pattern and/or the acquisition of adjacent residential parcels.

The only suitable location at Crawford Avenue, given right-of-way requirements for a station house plus 520-foot platform (eight-car CTA train), is to the west of Crawford Avenue. The distance from Crawford east to the East Prairie grade crossing is insufficient for this length of platform plus station house.

Figure 11-1: This picture was taken from east of the Crawford grade crossing, looking east toward East Prairie. The signal relay house mounted on the remnant of the CRT station platform is to the left of the view. This platform would fit a single CTA car.

Field observations made at Crawford indicate that the existing track center distances are a minimum of 30 feet-10 inches at Crawford. The overall CTA right-of-way width is approximately 150 feet. Com Ed high-tension towers are located along the north and south limits of the right-of-way, extending approximately 18 feet into the right-of-way, resulting in a separation distance of between 40 and 44 feet from the closest track center. Opposite Kedvale Avenue, a ComEd substation is located to the south of the right-of-way, extending 39 feet into the CTA right-of-way. Therefore, the north fence of this substation is

approximately 23 feet removed from the adjacent track centerline. At Kedvale, the track center spacing is about 33 feet-4 inches.

Figure 11-2: East of Crawford, looking west to the proposed station site. The proximity of the ComEd high-tension towers and wood pole lines to the CTA tracks and through the proposed station site can be observed.

CTA facilities planning input indicated that an 18-foot center platform is sufficient for an at-grade station. Therefore, a platform of this width could be accommodated within the existing track center spacing at this location. Providing a 3,240 sq. ft. station house (approximately 180 feet by 18 feet) set back from the west curb of Crawford Avenue and a 520-foot long platform, the west end of the platform would be just shy of Kedvale Avenue. The width of the proposed station house was determined using a 6-foot setback of the station house wall from the adjacent track centerline (as has been done at Kostner on the Douglas Branch).

In the distance from Crawford to Kedvale, there are three CTA catenary towers that span both tracks with their vertical supports outside of the tracks. These should be removed to facilitate station construction and avoid unnecessarily constraining the design. The communications cables supported off the north sides of the towers should be placed in buried conduit through the station construction zone.

Removal of the catenary towers should not be an issue at the time of possible station design and construction, as the CTA is currently in the process of designing for the replacement of the overhead catenary by third rail power distribution. This will render the catenary towers superfluous, except for support of the communications cables. Note that the third rail design through the Crawford Avenue area will locate the power rails on the inside of the two tracks, as opposed to outboard the tracks, which is normally required for a center platform station. Therefore, should this site be determined to be a feasible intermediate station, the third rail will have to be relocated as part of the design process.

There are two wood poles outboard of the CTA tracks just west of the Crawford grade crossing. While these might not be immediately impacted by station construction, they should be relocated closer to the edges of the CTA right-of-way to facilitate construction.

In addition, there are approximately 12 wood poles centered between the tracks in the approximate area that this station would require. These would have to be removed prior to station construction. The lines they carry should either be rerouted to the edge of the right-of-way, or placed in buried conduit through the station area.

It does not appear that there would be any affect on the ComEd high-tension towers or on the Kedvale substation if a station were to be located at this site.

This site provides sufficient space for the station house and platform, but not for bus loading and unloading. There is also no space for a park-and-ride facility at this location. A kiss-and-ride lane running parallel to the tracks could be routed between the eastbound (south track)

and the ComEd high tension towers on the south side of the CTA right-of-way. This lane would be entered/exited off South Mulford. Kiss-and-ride patrons would have to cross the eastbound track to get to the station house/platform if this concept were to be used. This is not an ideal arrangement and the lack of bus pull-offs for loading and unloading also compromises both the safety and utility of the facility.

Oakton Street

A station at Oakton Street would be within good proximity to downtown Skokie and area businesses (including two of the Village's top 10 employers). The area is also highly commercial, making for an active environment for the proposed transit station. A planned five-story, 24-unit mixed use development at 4700 W. Oakton is within walking distance of the proposed station. Existing zoning is 'M2' (light industrial) along and immediately adjacent to the CTA tracks and 'B5' (downtown business district) either side of Oakton Street, west of the grade crossing.

The site has two potential constraints: the CTA track curves south of Oakton and the "Crafty Beaver" home improvement store and storage yard (immediately west of the CTA Yellow Line, north of Oakton) is an active business.

Locating a station on a curve is not good design or operating practice, largely ruling out a location to the south of Oakton. Conversely, north of Oakton the alignment is tangent. This section also has sufficient distance to the next grade crossing at Searle Parkway, which offers room for a station house and 520-foot long platform.

The "Crafty Beaver" store on the north side of Oakton may present a challenge. This facility already affects street traffic patterns, as left turns out of the store can potentially block westbound street traffic from clearing the grade crossing. Further, the store location impacts the ability to site any bus drop off or kiss-and-ride facilities immediately adjacent to the proposed station.

Track center spacing at Oakton Street was measured at 36 feet, widening out to 36 feet-10 inches within 330 feet of the crossing. This track center spacing is maintained up to the Searle Parkway grade crossing. At Searle Parkway, the overall CTA right-of-way width is 137 feet-6 inches. This track center spacing is sufficient to accommodate an 18-foot center platform, therefore conforming to CTA guidelines.

Providing a 4,320 sq. ft. station house (approximately 180 feet by 24 feet) set back from the north curb of Oakton Street and a 520-foot platform would mean that the north end of the platform would be approximately 850 feet north of Oakton Street. Searle Parkway is a further 250 feet, meaning that the station could have also have an entrance (possibly unstaffed, using a high-barrier gate) at Searle Parkway. This arrangement would increase the capital cost of the station, but could be attractive, particularly if it were to be determined that a portion of the Pharmacia parking structure could be used for park-and-ride customers.

There are several existing installations that would need to be removed or relocated if a station were to be constructed at this location. A CTA signal relay house and grade crossing supply rack would have to be moved to accommodate the proposed station. These could be relocated to the east side of the right-of-way, set back far enough from Oakton in order to avoid affecting train operator, pedestrian or motorist site lines. There are several catenary towers, north of Oakton that should be relocated to facilitate construction. The communications cables they carry should be relocated to buried conduit through the station site.

Figure 11-3: This photo, north of Oakton and looking north, shows catenary towers that must be removed for station construction. For the station house and 520-foot platform configuration, there are a total of four catenary towers that would have to be removed. If the station were to extend to Searle, a total of five towers are affected. The Pharmacia parking structure is to the left.

Removal of the catenary towers at the Oakton site will be made easier by the fact that third rail power distribution is already in design by the CTA. Therefore, though the towers are expected to remain in place, they would be carrying only the communications cables at the time that station design and implementation is likely to occur. In addition, CTA personnel have indicated that their design for third rail power distribution at this location will put the power rails outboard of the two tracks, making implementation of an intermediate station at this location easier.

Also affected by the station construction is the CTA emergency crossover, located about 600 feet north of Oakton Street. This crossover would have to be removed to accommodate the station. It is possible this crossover could be rebuilt north of the Searle grade crossing.

Figure 11-4: Looking north from Oakton, the emergency crossover and the cantilever style of catenary towers are pictured. Wood poles adjacent to the right-of-way may require relocation or rerouting, depending on the length of the station at Oakton Street. Pharmacia's parking structure is to the left.

The provision of a bus stop near this station is an issue. One possibility would be to acquire the parcel on the southwest corner of Searle Parkway and Skokie Boulevard (practical only if the station has an entrance at Searle). This site, in conjunction with the adjacent CTA right-of-way might provide a suitable off-street location. However, this may not be operationally desirable, as it requires a number of turns for the routes 97, 54A or 254 buses to access this site, depending on the direction of travel.

Use of the UPRR Skokie Industrial Lead right-of-way north from Oakton Street as a bus circulation lane is a possibility. However, this would require that bus boarding and drop off area be 175 feet west of the station site. This bus station location would require transferring riders to cross the driveways for the "Crafty Beaver" which presents opportunities for conflicts between the pedestrians and vehicles. There are other parties interested in this section of ROW, and there are also reports of potential environmental issues with this section of line, both of which may preclude the possibility to use it for bus circulation.

Figure 11-5: A possible site for an off-street bus facility is shown to the extreme left. The location of the ComEd high-tension towers relative to this site and the CTA right-of-way at this location would require further investigation.

Utility of this site as an off street bus facility may be compromised by the tight turn required to get into the site. Further, should it be decided that the station should not extend all the way to Searle; this facility would not be useful.

Provision of kiss-and-ride and park-and-ride facilities at the Oakton site also requires further investigation. It is possible that the existing Village surface lots to the west of the proposed station site could be converted to parking structures, but would have the disadvantage of a considerable physical separation from the actual station location.

Another possibility to be explored is use of a portion of the existing Pharmacia parking structure (on the south side of Searle Parkway) for transit patrons. There may be some liability issues associated with such an arrangement; it is possible that the Village or CTA might have to purchase the structure outright or pursue other strategies.

Dempster Street

If the extension of the Yellow Line is determined to be feasible, the existing Dempster terminal will become an intermediate station. Construction of the extension may require temporary relocation of the station (especially if a grade-separation is constructed at Dempster Street). Rebuilding of this station in final form would be assumed to follow the design criteria described above. A minimum 18-foot wide, island platform station (with a 520-foot length) is assumed to be required at this location. It is presumed that the new station could be built on existing CTA-owned land, therefore pre-empting the need for additional right-of-way. Another consideration includes the need for a third track in the facility with a separate side platform.

If required, there are several possible locations for the temporary station. It may be located on the CTA right-of-way to the north of Niles Center Road (though the history of grade crossing accidents at this location may render that impractical), or the ex-UPRR right-of-way to the west of the CTA line may be used for this purpose temporarily.

11.3 Right-of-Way in Non-Station Areas

CTA design criteria specify the required clearance in non-boarding areas. On a per-track basis, exclusive of other needs at crossovers, substations, etc., the right-of-way requirement is 12 feet-9 inches. For a double-track rail line this would be 25 feet-6 inches. Note that this requirement does not presume the type of right-of-way. If the proposed extension is grade separated (either above or below street level), there will be additional right-of-way requirements for retaining walls or for an aerial structure.

If the proposed extension is run at grade, there will be some additional right-of-way requirements in the vicinity of grade crossings. If entirely at grade, there would be four new grade crossings – Dempster, Gross Point, Church and Golf. At each grade crossing gate/flasher mechanisms are located outside the dynamic [clearance] envelope of the train.

If the gates are located 15 feet from the adjacent track centerline, the right of way width at a grade crossing would be on the order of 45 feet-6 inches.

At crossovers, the right-of-way must widen out to include signal relay houses. Each signal house requires a 550 sq. ft. footprint (55 feet long by 10 feet wide). In addition, the relay house should be set back 15 feet from the closest track centerline. A 10-foot clearance should be provided around the relay house on the no-track sides of the structure. Therefore, at a relay house the total right-of-way width would be on the order of 65 feet-6 inches. Relay houses are required approximately every mile. Depending on right-of-way availability, some elements such as a signal relay house, may be located between the tracks, although care must be taken to avoid interfering with train operator, pedestrian and motorist sight lines. For the proposed extension, it is likely that between two and three relay houses will be required.

Figure 11-6: An example of a between-tracks signal relay house installation is on the north side of Oakton. This example is a much smaller relay house footprint, compared to the 550 square foot requirement referenced in the text.

There are also additional right-of-way requirements at crossovers for clearance around switch machines (approximately 10 feet) and interlocking home signals. Depending on the exact location of the relay house relative to the crossing and other installations, these additional elements can easily be accommodated within the 65 feet-6 inch maximum right-of-way width referenced above.

Another major wayside installation is a traction power substation. Like the relay houses, these are required on approximate one-mile spacing. The footprint for a substation and associated transformer yard, with an allowance of 10% for clearance around the building/yard and access to the site, the total footprint will be on the order of 35,000 square feet. The 1.5-mile extension to the vicinity of Old Orchard Road/Shopping Center would require at most two substations.

In determining right-of-way availability for the proposed extension, the village provided maps, marked to show land ownership. North of Dempster, the remaining UPRR's right-of-way is about 80 feet wide. However, the centerline of the existing UPRR track is about 75 feet west of the centerline of the CTA tail track at Dempster Street. The land immediately north of the CTA terminal and tail track is owned by ComEd. The utility's land was used for the north parking lot at Dempster Street. Therefore, to provide a tangent alignment for the CTA extension north from Dempster, a portion of the ComEd land would have to be used to link the CTA alignment to the UPRR alignment on the old North Shore Line right-of-way.

Figure 11-7: Looking north of Dempster, ComEd wood poles run between the station parking lot and the UPRR track and would have to be relocated in order to provide a tangent transit right-of-way of suitable width for a double-track line. This view looks north from the end of the CTA tail track and shows that pole line to the left of center in the view.

The ComEd high-tension tower line to the right of the view would not require re-alignment at this location.

North from Greenwood Avenue (about midway between Dempster and Gross Point) to south of Gross Point Road, the UPRR's land holdings are in two strips, separated by a strip of ComEd right-of-way. The wider of these UPRR strips measures about 30 feet across and could accommodate a double-track transit line, exclusive of any structural arrangements (retaining walls, elevated structure, etc.) or other installations (grade crossing gates, relay houses, etc.). The ComEd strip to the west of it is approximately 15 feet in width. The west strip of UPRR is about 25 feet wide, but does not extend north of Gross Point.

To accommodate these additional uses would require coming to an agreement on shared usage with ComEd. This is much the same arrangement that was originally used by the North Shore Line and the utility when this right-of-way was first acquired. The two entities (both then under the control of Samuel Insull) granted each other "cross rights" of purchase in the event that one or the other abandoned their respective uses. This right was carried forward when the C&NW bought the North Shore Line right-of-way in 1964. The utility's holding to the east of the UPRR strip is about 100 feet wide.

North of Church Street, the UPRR ownership comprises a 30-foot wide strip, surrounded by ComEd holdings. This right-of-way would be sufficient for a "plain" double-track transit line, but any other installations would require easement from/acquisition of ComEd-owned property.

The same situation is found between Golf and Old Orchard roads. If the UPRR alignment is used for the proposed line extension, the location of relay houses and substations might be forced by the location of the adjacent ComEd high-tension poles.

Figure 11-8: On the south side of Golf Road, the high-tension pole line is 17 feet-6 inches to the west of the UPRR track centerline. The pole line runs approximately down the middle of this photo. The wood pole line to the west of the UPRR is about 13 feet-6 inches removed from the track center. This gives an overall width of 31 feet between the poles. This view looks south from the Golf Road grade crossing.

11.4 UPRR Alignment Terminal

If a terminal station is built at Old Orchard Road and the UPRR right-of-way, the first high-tension pole (about 549 feet south of the road) and the buried fiber optic lines in the area would need to be relocated. Other high-tension towers to the east of the UPRR line are 73 feet from the track centerline, so they would not appear to require relocation in order to build a terminal station at that location. However, a terminal station at this location, along with other facilities (bus interchange, park-and-ride) would require considerable land, requiring much of the area to the east of the UPRR to be cleared.

Figure 11-9: North along the UPRR, about 800 feet south of Old Orchard Road. The high-tension pole and tower lines, as well as the wood pole lines can be seen.

In summary, in no instance is the UPRR land holding of sufficient width for anything other than a "plain" double-track transit line. All relay houses, traction power substations, passenger stations and associated facilities will have to be located on land owned by others.

11.5 Non-UPRR Alignment

The preceding section discussed possible use of the ComEd right-of-way for some of the ancillary facilities required for a complete, functional extension of the CTA Yellow Line. The extent of these additional land requirements cannot be accurately determined until additional engineering investigations (in future phase of this project) are undertaken.

In a similar context the exact routing of an alignment into or near the Westfield Shoppingtown Old Orchard center cannot be determined at this time. Presumably, such an alignment would deviate from the UPRR/Com Ed rights-of-way on the south side of Golf Road, follow Golf to the east and enter the shopping center to a terminal station on the property. The nature of Golf Road and the area around the mall is such that an at-grade alignment is not practical. Similarly, any subterranean routing would require construction of a subway in this section, dramatically raising the cost of the extension. The remaining option is an aerial alignment, which, while more affordable, will likely be objectionable to the residents along Golf Road.

12.0 RIDERSHIP FORECASTS

This section presents the results of the ridership forecasting effort. The intermediate stations, as well as the line extension were considered in this process.

12.1 Ridership Forecasting Approach

The ridership projections for this feasibility study were based on the CATS regional travel demand forecasting model. CATS maintains a state-of-the-practice travel demand forecasting model that is used in the development of the regional transportation plan, air quality conformity analysis, and for developing travel forecasts for major project proposals in the northeastern Illinois region. This computerized travel demand forecasting model includes both highway and transit networks, and follows the traditional four-step modeling process that includes trip generation, trip distribution, mode choice, and trip assignment.

At the time of this study, CATS was in the process of developing a new 2030 Regional Transportation Plan for the northeastern Illinois region. As part of this process, CATS used preliminary NIPC 2030 population and employment forecasts as input to their travel demand forecasting model to estimate the demand for potential projects that were being considered for incorporation in the 2030 Regional Transportation Plan. The proposed new intermediate CTA Yellow Line stations (at Crawford and Oakton) and the extension from Dempster Street to Old Orchard Road were included in one of the 2030 test scenarios for the 2030 Regional Transportation Plan. CATS provided this information from the 2030 test scenario to the Parsons Brinckerhoff Team for use in development of ridership forecasts for the feasibility study.

It should be recognized that this information is based on preliminary 2030 NIPC population and employment forecasts that are subject to change prior to adoption in late October/early November 2003. In addition, the results assume that other proposed regional transportation improvements were included as part of the 2030 test scenario, although there were no proposed projects in the immediate vicinity of the proposed Yellow Line improvements. However, for the purposes of this feasibility study, the CATS 2030 test scenario information represents the latest travel forecasts based on the best available 2030 population and employment forecasts that were available at the time of the CATS test scenarios. Thus, the use of the CATS travel model information provides a reasonable and practical approach for the development of ridership forecasts for this feasibility study based on the latest planning information available at the time of this study.

12.2 Travel Forecasting Input Assumptions

The major assumptions for the development of ridership forecasts include the service characteristics of the proposed Yellow Line improvements (new intermediate stations and the extension from Dempster to the vicinity of Old Orchard Road) and the 2030 population and employment forecasts. For the service characteristics, the CATS 2030 test scenario used current Yellow Line headways (approximately 7 minute headways during peak periods and 12 minute headways during the base period) and transit fares ($1.50 base fare and $0.30 transfer fare). The in-vehicle travel times and distances for the proposed new intermediate stations at Crawford and Oakton and the proposed extension from Dempster to the vicinity of Old Orchard Road are shown in Exhibit 12-1. Given the size of the CATS transportation analysis zones in the Skokie area (one-square mile in size), further refinement of the travel times to the various alternatives for the north terminal stations in the vicinity of Old Orchard Road were not attempted because it would exceed the precision of the travel model.

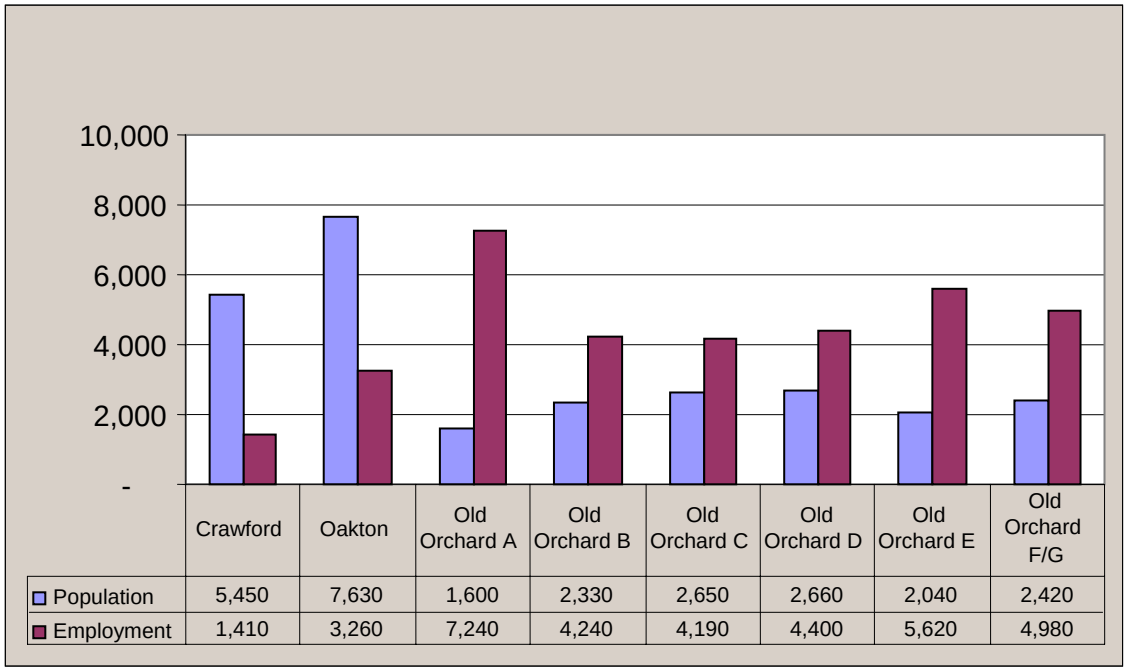
Exhibit 12-1
Yellow Line Travel Times and Distances

Station	Minutes from Howard	Miles from Howard
Howard	0	0.0
Crawford	5	2.9
Oakton	7	4.0
Dempster	9	4.9
Old Orchard	13	6.6

Standard network coding procedures were used in the CATS test scenarios to integrate the Yellow Line improvements in to the network. This includes the provision of walk access links to the new stations and the connection of existing Pace and CTA bus routes to the new stations, allowing transfers to occur. Auto access was also provided to the new north terminal station in the vicinity of Old Orchard Road, and at the proposed intermediate stations. Auto access was maintained at the Dempster station.

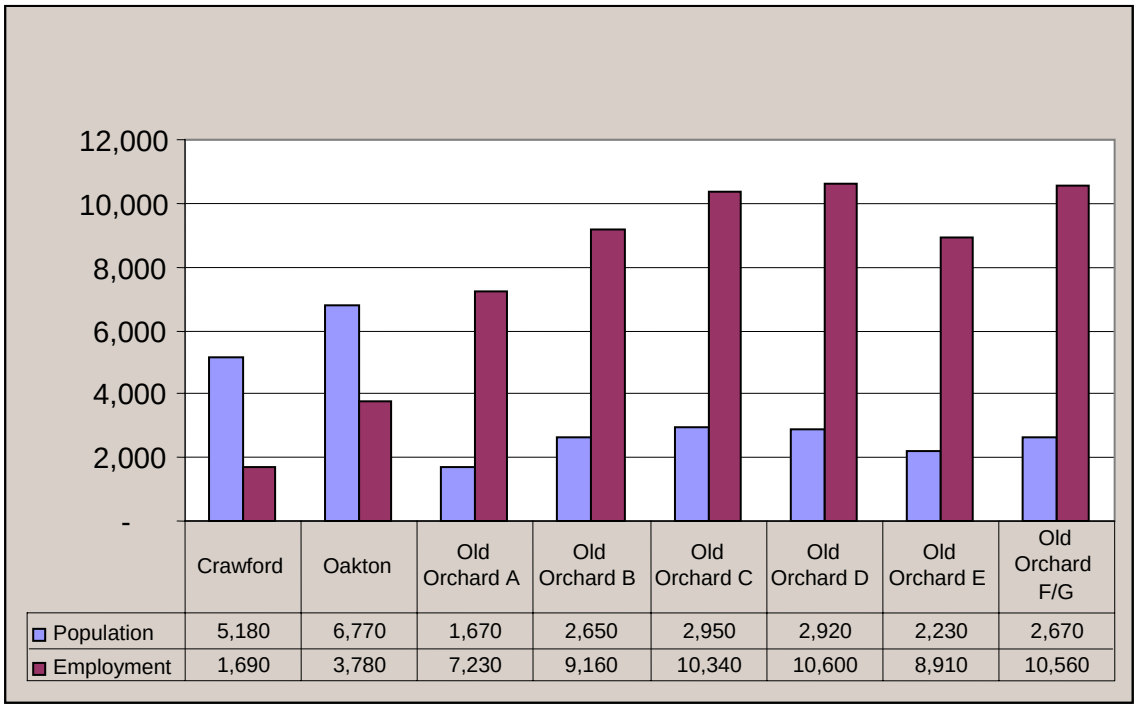
The other major assumptions for the development of ridership forecasts are the population and employment forecasts. As discussed in Section 5.3 – Future Outlook, NIPC has developed preliminary 2030 population and employment forecasts that were used by CATS for the analysis of their test scenarios. Although CATS was unable to provide usable 2000, 2020, or 2030 no action travel model runs for use in this feasibility study, the 2000 and NIPC forecast 2020 and preliminary 2030 population and employment forecasts for the Yellow Line station areas (one-half mile radius) are shown below in Exhibits 12-2 through 12-4.

Exhibit 12-2
2000 Population and Employment by Station Area



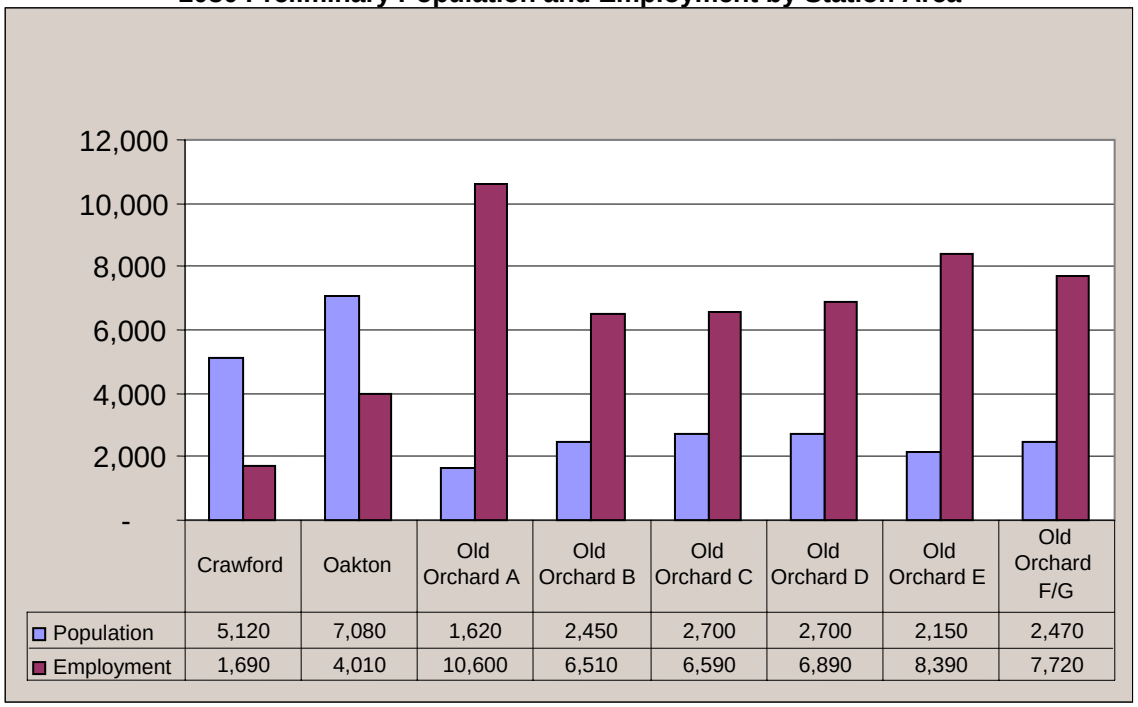
	Crawford	Oakton	Old Orchard A	Old Orchard B	Old Orchard C	Old Orchard D	Old Orchard E	Old Orchard F/G
Population	5,450	7,630	1,600	2,330	2,650	2,660	2,040	2,420
Employment	1,410	3,260	7,240	4,240	4,190	4,400	5,620	4,980

Exhibit 12-3
2020 Population and Employment by Station Area



	Crawford	Oakton	Old Orchard A	Old Orchard B	Old Orchard C	Old Orchard D	Old Orchard E	Old Orchard F/G
Population	5,180	6,770	1,670	2,650	2,950	2,920	2,230	2,670
Employment	1,690	3,780	7,230	9,160	10,340	10,600	8,910	10,560

Exhibit 12-4
2030 Preliminary Population and Employment by Station Area



	Crawford	Oakton	Old Orchard A	Old Orchard B	Old Orchard C	Old Orchard D	Old Orchard E	Old Orchard F/G
Population	5,120	7,080	1,620	2,450	2,700	2,700	2,150	2,470
Employment	1,690	4,010	10,600	6,510	6,590	6,890	8,390	7,720

12.3 Ridership Projections

The 2030 ridership projections for the proposed new intermediate stations and the extension to the vicinity of Old Orchard Road are presented below. These 2030 ridership projections are based on the 2030 CATS test scenario information. Manual adjustments were made by the Parsons Brinckerhoff Team to the ridership forecasts to account for conditions that were not reflected in the CATS information. These adjustments accounted for the lack of park-and-ride facilities at the proposed intermediate stations, scenarios in which only one of the two intermediate stations were present and scenarios in which the proposed north extension was not present.

12.3.1 Intermediate Station Ridership Projections

The 2030 ridership projections for the proposed Oakton station are 900 to 1,200 boardings (a boarding is counted every time a person enters a transit vehicle) per average weekday. The 2030 ridership projections for the proposed Crawford station are 600 to 900 boardings per average weekday. These intermediate station ridership projections assume Yellow Line service from Howard to Dempster (no extension). It is anticipated that the Dempster Street station would show a slight ridership decrease of approximately 5% to 10% with a new intermediate station(s).

Given the lack of available park-and-ride facilities for the Oakton and Crawford stations, it is expected that the ridership would be less than is currently exhibited at Dempster (approximately 2,600 boardings per average weekday). Also, given the land use around the Oakton and Crawford stations, it is also reasonable that the Oakton station have a higher ridership projection than the Crawford station, with the Oakton station area having mixed use and higher development densities in its station area. In addition, the Oakton station would have a greater potential for attracting work trips, given the land use and zoning in the station area.

12.3.2 Extension Ridership Projections

The 2030 ridership projections for the proposed Yellow Line extension are 1,900 to 2,300 boardings per average weekday at the new Old Orchard terminal station. These extension ridership projections assume a new intermediate station at Oakton or Crawford. It is anticipated that the Dempster Street station would show a ridership decrease of approximately 40% with the proposed extension. This diversion of riders from the Dempster station reflects the northerly orientation of the Dempster station users that would be diverted to a new station in the vicinity of Old Orchard Road.

No attempt was made to develop ridership forecasts for the individual north terminal station extension alternatives (Alternatives A through G). All things being equal, the ridership projections would somewhat mirror the relative station area population and employment levels shown in Exhibits 12-2 through 12-4 for the Old Orchard A through G station areas. However, the actual ridership projections will also be influenced by the convenience or ease of access to the alternative station sites. At this early feasibility stage, it is not possible to know the ease of access to each station for pedestrian, auto, and bus/shuttle service, since it would be dependent on the configuration of the station site.

Overall, 1,900 to 2,300 boardings on an average weekday show relatively strong demand for a suburban station. These boardings are comparable to that of other CTA terminal stations. From the November 2002 ridership report, the Linden/Evanston station had 1,070 weekday boardings, and the Harlem/Lake station had 1,900. At the high end, the Forest Park/Congress station had 3,750 weekday boardings. The Old Orchard station would fall in between this range, as should be expected. The Forest Park station has a very high level of accessibility – both from bus routes and an interstate highway. Old Orchard's accessibility is somewhat less than that of Forest Park, but higher than that of Linden or Harlem.

12.4 Ridership Summary

The proposed new intermediate stations on the existing Yellow Line segment show moderate ridership levels for a suburban location. The 2030 ridership projections for Oakton are 900 to 1,200 boardings per average weekday. The ridership projections for Crawford are one-third less at 600 to 900 boardings per average weekday. These proposed intermediate stations would also serve mostly commuter trips to Chicago. These trips would be predominantly from the area immediately adjacent to the station. The Oakton station would also attract work trips given the surrounding land use and zoning. Additionally, the Oakton and Crawford stations are assumed to be substantially independent. The stations are far enough apart that there would be little competition for riders.

The proposed Yellow Line Extension would serve two primary markets. The Old Orchard station would serve those traveling from Skokie and nearby surrounding communities to Chicago. This market is mostly a commuter (home-to-work) trip market. The extension would also serve those traveling in the reverse peak direction from their residence in Chicago and Evanston neighborhoods near the "L" (e.g., East Rogers Park, Edgewater, Uptown, Lake View, etc.) to destinations along Old Orchard Road. This latter market is also primarily a commuter trip market.

12.5 Transit and Retail Activities

During the course of the feasibility study, the review team requested that a review of regional shopping facilities similar to Westfield's Shoppingtown Old Orchard that are currently served by rail transit lines. Attempts were made to contact these properties (San Diego Trolley, WMATA, etc.) to determine if they had conducted any in-depth studies about the ridership to/from stations adjacent to these retail facilities. Of these properties, only San Diego Trolley, Inc. (SDTI) responded with any detailed information.

San Diego Trolley, Inc. Data and Service

Two particular shopping centers were considered on the SDTI system: Mission Valley on the San Ysidro-Mission San Diego (Blue) Line and Santee on the Bayside-Santee (Orange) service. The Mission Valley installation is of particular interest, since it is owned and operated by Westfield, the owners of Old Orchard.

In discussing the overall percentage of SDTI ridership that indicates shopping as a trip purpose, the agency reported that 7.2% of the daily ridership systemwide is stated to be for this purpose. With an average daily ridership of around 80,000, this percentage equates to about 5,800 riders/day.

In terms of total ridership at the SDTI Fashion Valley station (the station closest to the Mission Valley shopping center), the November 2003 ridership was reported as including 1,720 boardings and 2,060 alighting, for a daily total of 3,780 riders (SDTI surveys ridership on an annual basis). At Santee (which is the outermost station on the Orange Line), the total daily ridership in November 2003 was 1,290, of which 640 were boardings and the balance were alighting riders. It is reasonable to expect that the percentage of riders using the trolley for shopping related trips at these stations (particularly at Fashion Valley) would be higher than the 7.2% systemwide shopping related trip response, but unfortunately no site-specific, or purpose-specific data was available.

The current schedules in effect on the SDTI Blue and Orange Lines are:

- Fashion Valley Station on the Blue Line – 15 minutes travel time to downtown. Service is provided between approximately 5am and 1am weekdays. For the first few trips of the morning, service is provided every 30 minutes, then every 15 minutes throughout the remainder of the day until about 8pm, when the 30 minute interval is resumed. Saturdays, Sundays and Holidays service begins around 5:30 am with a 15-minute

interval maintained until around 10 pm. Operation on a 30-minute headway continues until about 2 am.

- Santee Station on the Orange Line – one-way travel time to the San Diego CBD is about 53 minutes. Weekdays, service starts around 5:30 am. Operation on a 15-minute interval is maintained until around 6pm, after which a 30-minute headway is in effect until the last trips around 9pm. The line operates short-turn service from El Cajon into San Diego until about 1am. Saturdays, Sundays and Holidays, the first trains to/from Santee are around 6:30 am. A 30-minute headway is in effect all day until the last train leaves around 9pm. As with the weekday service, short-turn trains from El Cajon continue to operate until around 1am.

Thus, the headways operated on the SDTI Blue Line have some similarity to the shuttle service that might be operated on the Yellow Line extension to Old Orchard (see Chapter 4).

Comparison of SDTI Results to CTA Survey Data

SDTI's 7.2% response indicating shopping as the trip purpose is a stronger demand than was reflected for this same purpose in the CTA North Corridor survey of 1996. The CTA survey results indicated that 1% of the trips were for the purpose of shopping, either as an origin or a destination, regardless of the North Corridor rail line being surveyed.

A further comparison to [more-recent] CTA data may be found in the preliminary results of "The 2000 CTA Traveler Behavior and Attitude Survey". This survey was conducted via telephone in the fall of 2000. Unlike the north corridor survey reported on earlier in this chapter, it was not specific to a portion of the CTA system, and it included bus and rail rider results. The 2000 survey reflects the results of a total of 2,768 random surveys, encompassing 1,353 CTA rider households and 1,415 non-rider households. In this survey the percentage of frequent CTA riders stating that their trip purpose was for shopping was 3% (as opposed to 1990 survey results for this purpose of 8% and in 1993 of 6%). Infrequent CTA riders responding to the survey also showed a decline in the percent responding that shopping was the purpose of their trip over the period 1990 to 2000. These results indicate that shopping is decreasing in importance as a trip purpose for CTA riders.

A study of the "Financial Impacts of Transit Ridership on Outlying Retail Centers" for CTA was completed in August of 2002. Three malls, only one of which is directly served by the CTA rail system, were considered in this study. A total of 1,373 usable surveys were collected in this study.

In the case of this study, 41% of the entire sample indicated that shopping was the purpose of their trip (not surprising, considering that the survey was distributed inside each of the three malls). When the study results are confined to CTA riders, 31% of them went to the three shopping facilities for work, indicating the importance of transit access to these job markets.

The catchment area of the three malls was found to be on the order of five to six miles, with some overlap reported between the two south side malls (87th/Chatham Ridge [at 87th/Lafayette – adjacent to the CTA Red Line] and Ford City [79th/Cicero]).

In the case of the rail-served mall, nearly 26% of the transit user access was by the rail line, while 32% arrived by bus (there are seven bus stops in close proximity to this facility). The remainder, (42%) were non-transit shoppers. Over half the CTA riders responding to the survey at this facility were under the age of 30. Just 4% of the CTA riders at the 87th/Chatham Ridge mall reported an income in excess of $75,000. More than three-quarters of the CTA riders responding to the survey at this mall indicated that they did not have access to an automobile. Over 60% of the CTA riders responding at Chatham Ridge noted that they visit this shopping area four days per week or more.

Another interesting question asked in this survey regarded the mode of access when traveling to another shopping area. Of the CTA rider respondents at all three malls, 12% indicated they would use the CTA rail system to access these other shopping areas, while 57% would use a CTA bus route for this access. A combination of CTA bus and rail system access was selected by 14% of the CTA rider respondents, while "other transit" access was indicated by 4% of the CTA rider respondents.

Comparison of Pace and SDTI Survey Results

The SDTI systemwide response with shopping stated as the trip purpose is slightly below the survey results that Pace provided for its routes serving Old Orchard. Pace's survey combined the trip purposes of "shopping" and "restaurants". Nearly one-quarter of the respondents on Route 208 indicated this was the purpose of their trip, while approximately 17% of respondents indicated this trip purpose when surveyed on Routes 212, 215 and 422.

Westfield and Facilities and Transit Access

Another aspect that is of interest is the initial response of the local Westfield management at Old Orchard to the general subject of having the Yellow Line extended to the shopping center. The initial response was positive, however subsequent to the initial meeting the Westfield management expressed concern over any transit facilities that might impinge on the land available for shopping center uses.

In general, Westfield is supportive of transit access to their facilities elsewhere in the US. The closing pages of this chapter include excerpts from Westfield's website listings for Old Orchard and Mission Valley. In the latter case, note the reference to the trolley stop, as well as the mention of the bus services to this facility. These listings are typical of the presentation used for other Westfield facilities having rail access (Meridian, CT; Montgomery, MD; and, San Francisco Centre).

Fox Valley
Hawthorn
Old Orchard
- News & Events
- Directory
- Shopping Hours
- How to get there
- Customer Service
- Job Opportunities
- Special Offers

Westfield Shoppingtown Old Orchard

SEARCH:

Gift Cards
Locate a Center
Locate a Store
Email Newsletters
Email this page
Contact Us

View Center Directory

Major Attractions:
Westfield Shoppingtown Old Orchard presents

- Two Cinemas and Two Children's Play Areas
- Over 150 Specialty Stores
- 7 Full-service Restaurants and a 10-Eatery Food Court

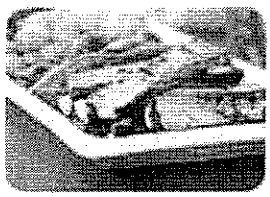
Address:

34 Old Orchard Center, Skokie, IL 60077
Tel: 847-673-6800
Fax: 847-674-7083
Email: oldorchard@westfield.com

Selected services

Our range of customer services are specifically chosen to help you shop with ease.

Shopping,food & entertainment



- Homeware
- Fashion
- Essentials for Kids
- Gifts

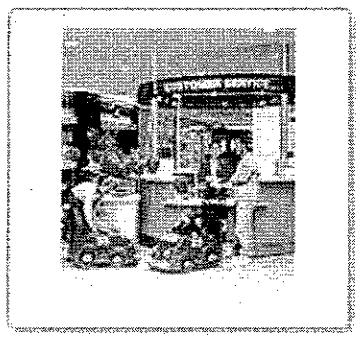
What's New ?
Stop by the Old Orchard Market, now open in the Arcade. ...more

On Show
Visit the Chicago's North Shore Convention & Visitors Bureau in the Arcade! ...more

Our Latest...

Win A Family 6 Ticket Package - Visit Customer Service for details!

...and Greatest



Visit the folks in red at Customer Service and pick up free balloons for your younger shoppers everyday.

Major Retaile

NORDSTROM
SAKS FIFTH AVENUE
bloomingdales
Marshall Fields

A World of Service and Style

Fox Valley
Hawthorn
Old Orchard
- News & Events
- Directory
- Shopping Hours
- How to get there
- Customer Service
- Job Opportunities
- Special Offers

How to get there

34 Old Orchard Center, Skokie, IL 60077
Tel: 847-673-6800

MAP

Car

Edens Expressway (I-94)
Coming from the North, Take (I-94) East to Old Orchard Road.
Turn left heading East on Old Orchard Road.
The Center is on the Right hand side less than 1/4 mile from the exit.
The Old Orchard Center is approximately 12 miles before Downtown Chicago and approximately 7 miles after (I-94/I-294) split at Deerfield Road.

Coming from the South, take (I90/I94) West past Downtown Chicago until (I-90/I-94) split off.
Remain on (I-94) East and exit at Old Orchard Road. The Center is on the right hand side less than 1/4 mile from the exit.

I-294 From the North take (I-294) South, exit at Golf Road.
Turn left heading East on Golf Road. Continue on Golf Road to Skokie Blvd. The Center is located on the left hand side.

From the South, Take (I-294) North. Exit at Dempster.
Turn right heading East on Dempster continue until Waukegan Road.
Turn left on Waukegan Road and two blocks later turn right on Golf Road.
Continue East on Golf Road to Skokie Blvd. The Center is Located on the left hand side.

I-190 Leaving O'Hare Airport terminal area, you are on (I-90).
Exit to (I-294) South. Take (I-294) and exit at Dempster.
Turn right head East on Dempster. Continue until Waukegan Road.
Turn left on Waukegan and two blocks later turn right on Golf Road.
Continue East on Golf Road to Skokie Blvd. The Center is located on the left hand side.

I-55 Leaving Midway Airport terminal area turn left on Cicero heading North.
Continue on Cicero to (I-55) North to Chicago. Take (I-55) to (I-90/I-94) West.

SEARCH:

Gift Cards
Locate a Center
Locate a Store
Email Newsletters
Email this page
Contact Us

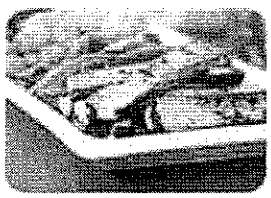
ON OFFER AT O ORCHARD

- Kiddie Kruzzers
- Wheelchairs
- Gift Cards
- Free Balloons

Selected services

Our range of customer services are specifically chosen to help you shop with ease.

Shopping,food & entertainment



- Homeware
- Fashion
- Essentials for Kids
- Gifts

Coming from the South, Take (I-90/I-94) West past Downtown Chicago until (I-90/I94) split off.
Remain on (I-94) East and exit at Old orchard Road approximately 7 miles further.
Turn right heading East on Old Orchard Road. The Center is on the right hand side, less than 1/4 mile from the exit.

Bus

For Bus Information Please Call Pace Passenger Service at 847-364-7223.

Taxi

For Taxi Information Please Call Three o Three Cab Co. at 847-475-3408

Train

For Train Information Please Call Metra Train Service at 312-322-6777

A World of Service and Style

Century City
Downtown Plaza
Eagle Rock
Eastland
Fashion Square
Fox Hills
Galleria at Roseville
Horton Plaza
MainPlace
Mission Valley
News & Events
Directory
Shopping Hours
How to get there
Customer Service
Job Opportunities
Special Offers
Mission Valley West
North County
Oakridge
Palm Desert
Parkway
Plaza Bonita
Plaza Camino Real
Promenade
San Francisco
Santa Anita
Solano
Topanga
UTC
Valley Fair
West Covina

Westfield Shoppingtown Mission Valley

SEARCH:

View Center Directory

Major Attractions:
Westfield Shoppingtown Mission Valley presents:

- 94 specialty stores
- Macy's, Robinsons-May, Target, Nordstrom Rack, Bed Bath & Beyond, Sport Chalet
- Over 6336 car parking spaces
- AMC 20 Theatres

Address:

1640 Camino del Rio North, San Diego , CA 92108-1506
Tel: (619) 296-6375
Fax: (619) 692-0555
Email: missionvalley@westfield.com

Gift Cards
Locate a Center
Locate a Store
Email Newsletters
Email this page
Contact Us

What's New ?
Show your AAA Card and save at Mission Valley...
...more

On Show
For the latest updates on new stores and promotions at Westfield Shoppingtown Mission Valley, click here..
...more

Major Retaile

ROBINSONS-MA

Bed, Bath & Beyond | Loehma
Macy's Home & Furniture | Michael
Nordstrom Rack

Our Latest...

Westfield Shoppingtown Gift Cards are the perfect gift for any occasion!

...and Greatest

Complimentary Kiddie Kruzzer and wheelchair rentals for your shopping convenience!

A World of Service and Style

Century City
Downtown Plaza
Eagle Rock
Eastland
Fashion Square
Fox Hills
Galleria at Roseville
Horton Plaza
MainPlace
Mission Valley
News & Events
Directory
Shopping Hours
How to get there
Customer Service
Job Opportunities
Special Offers
Mission Valley West
North County
Oakridge
Palm Desert
Parkway
Plaza Bonita
Plaza Camino Real
Promenade
San Francisco
Santa Anita
Solano
Topanga
UTC
Valley Fair
West Covina

How to get there

1640 Camino del Rio North, San Diego , CA 92108-1506
Tel: (619) 296-6375

MAP

Car

Westfield Shoppingtown Mission Valley is located at 1640 Camino del Rio North, San Diego, CA 92108

We are conveniently located off Interstate 8 and Highway 163. Take Interstate 8 to Mission Center Road and exit North. Mission Valley West is located directly to your left and Mission Valley is to your right on Camino del Rio North.

A trolley stop is located directly across the street. Just take the blue line to the Mission Valley stop and we are located directly across Camino de la Reina.

Bus

A trip to Westfield Shoppingtown Mission Valley is easy on Bus Lines 6, 13 or 81. All three of these lines run directly to Macy's at Westfield Shoppingtown Mission Valley.

Taxi

Westfield Shoppingtown Mission Valley is located at
1640 Camino del Rio North
San Diego, CA 92108
All local taxi lines are familiar with the location of our Shoppingtown.

SEARCH:

Gift Cards
Locate a Center
Locate a Store
Email Newsletters
Email this page
Contact Us

ON OFFER AT MIS VALLEY

- Free Kiddie Kru
- Gift cards
- Wheel chairs
- Free balloons
- Disabled parkin
- Family Restroon
- Electric Car Cha

13.0 OPERATING PLANS

The current CTA Yellow Line schedule (with a December 2001 effective date) calls for the one-way, 5-mile trip to be made in 8 minutes. This equates to an average speed of 37.5 mph, the highest average on the CTA rail system. This high average speed is no surprise, given that the line operates non-stop over the 5-mile journey. Service is provided between 5:00 a.m. and 10:00 p.m. weekdays only, although CTA has operated weekend and holiday service on the line during the "Taste of Chicago" and provided weekend service last year between Thanksgiving and Christmas.

Weekday peak period headways are a minimum of 7 minutes in both directions. In the morning peak period, six trains operate southbound on this headway. Either side of this peak, trains operate every 8 minutes. A total of four southbound trains operate on this headway. For the three hours from 6:00 to 9:00 a.m., there are 19 southbound departures and 21 northbound trips. The average headway southbound is 9.5 minutes, while northbound averages out to 8.6 minutes between trains. Between 9:00 a.m. and 2:00 p.m., five trips per direction per hour are provided – a 12-minute headway being maintained in both directions.

Afternoon peak period service (between 4:00 and 7:00 p.m.) consists of 20 trips per direction, for an average headway of 9 minutes. After the afternoon rush, there are two hours of 15-minute headways.

Per discussion with CTA-Operations Planning personnel, the extension of the Yellow Line down to the O'Hare Branch of the Blue Line is no longer part of the immediate rail system expansion plans. Therefore, the possible impacts of such a line are not considered in terms of the service planning, terminal or yard capacities for the Yellow Line.

13.1 Yellow Line Shuttle with Intermediate Station

Implementing either of the intermediate stations (Crawford or Oakton) will add about one minute to the one-way travel time – a total of 9 minutes. This includes a 30-second dwell at the intermediate station, and would result in an average speed of 33.3 mph.

Allowing five minutes layover at each end, the round trip time would be 28 minutes in the peak. This would allow four trains to maintain the current peak period schedule; therefore, there would be no change over the current schedule requirements.

Ridership and CTA's service standards must be considered. In the previous chapter, the ridership forecasts for the implementation of an intermediate station and for the line extension were presented. If we say that the entering traffic through Dempster will decrease slightly on implementation of an Oakton Street station (they are one mile apart, so this result is reasonable), it is realistic to expect that the entering traffic on the line at the Dempster and Oakton stations would be around 3,500 per day. If 40% of these trips are made in the morning peak period, that would total 1,400 riders. Maintaining the existing schedule, 19 southbound trips would operate through these stations in that peak. Therefore, the average load per train would be 74 riders, or 37 riders per car. This is well within the 90 riders per car loading standard that was adopted by the CTA Board in September 2001, so no increase in frequency of the shuttle trains appears warranted.

If the Crawford station were to be implemented, the likely boardings at this station and Dempster would total 3,400 per day. The morning peak total (40% of the day's boardings at those stations) would be 1,360 riders. Divided out over the 19 peak period trips, this would work out to 72 riders per train, or 36 per car. Once again, this is well within the load standards adopted for the CTA rail system.

SUMMARY: no additional equipment required over current line requirements

13.2 Yellow Line Shuttle with Intermediate Station and Line Extension

Starting again from the existing Yellow Line average speed of 37.5 mph, we can estimate the running time for the line extension. The average length of the line extensions is 1.7 miles. Adding in 60 seconds for a grade/curve allowance (at this point, the line profile north of Dempster Street has not been established), the one-way travel time on the extension would be four minutes. When this is added to the 9 minute travel time for the existing line with the addition of one intermediate station, the overall travel time becomes 13 minutes.

If six minutes layover is given at each end of the line, six sets of equipment are required to maintain the existing seven-minute peak headway. That is, two trains (totaling four cars, since the CTA cars are in pairs) over and above what the current schedule requires.

However, the projected ridership and service standards must be taken into account. As shown in Chapter 3, the extended line with an intermediate station at Oakton Street could be expected to attract as many as 5,000 boardings per day from the Old Orchard, Dempster and Oakton stations. If we once again say that 40% of this traffic occurs during the morning peak period, it would total 2,000 boardings. Dividing this total over the 19 peak period trips provided by the current schedule results in an average load of 105 riders per train, or approximately 53 riders per car. This would be within the load standards in effect for the CTA rail system.

Note that any increase in the terminal layover time over and above that discussed previously would require a seventh peak period train to cover the schedule. Providing approximately 20% spare cars (the current spare ratio on the Yellow Line is 25%) would lead to a total car requirement of between 14 and 18 cars.

SUMMARY: depending on terminal layover, between two and three additional two-car trains would be required for revenue service and to remain within CTA service standards

13.3 Peak Period Through Express Service to the Loop via Elevated

In a study review meeting, it was agreed that running time and car requirements for a through operation to the loop should also be estimated. It was further agreed that the existing Purple Line express hours of operation, frequency and running time (where appropriate) should be used for this estimate.

Using the estimated trip times for the extended Yellow Line (above), the current Purple Line weekday schedule and other CTA documentation, the following trip time was determined:

Old Orchard Road – Howard Street	13 minutes
Howard Street – Merchandise Mart SB	26 minutes
Merchandise Mart SB – Tower 12	7 minutes
Tower 12 – 14th Center Track	4 minutes
TOTAL	50 minutes

Operating the through express trains on a 10-minute headway in the peak, and allowing 10 minutes recovery time at each end of the run, a total of 12 sets of equipment would be required. If six-car trains were used (as is now operated on the Purple Line express service) the schedule would require 72 cars, plus spares to cover maintenance, etc. If 20% spares are provided (to be consistent with the calculations above) the total requirement to support this service would be 86 cars.

Note: Capital costs for the rolling stock to support a loop express service are not included in the estimates in Chapter 16 – only those additional cars required to support the extended Yellow Line shuttle operation have been included.

13.4 Peak Period Through Express Service to the Loop via Subway

The running time via the subway was estimated to see if this would reduce the car requirements over those presented in the preceding section. In this case the turn back location would be the 37th Street center track on the Green Line.

Using similar sources to estimate the running time as was done for the Loop via Elevated option, the following are estimated:

Old Orchard Road – Howard Street	13 minutes
Howard Street – Fullerton	12 minutes (one additional minute to cross over at Clark Junction)
Fullerton – Roosevelt/State	19 minutes
Roosevelt/State – 37th Center Track	9 minutes (two additional minutes to connect to elevated and access Green Line tracks)
TOTAL	53 minutes

Providing this service on a 10-minute headway, and allowing 8 minutes layover at each end, 13 sets of equipment would be required. Operating 6-car trains would lead to 78 cars being needed to cover the schedule. Adding 20% spares to this total, the total car requirement would be 94 cars. As with the Loop via Elevated service, the capital costs for the cars required to support the Loop via Subway option are not included in the capital cost estimates in Chapter 16.

13.5 Comparison of Results

Car requirements for the various operating plan alternatives are compared to the existing Yellow Line requirements.

Exhibit 13-1
Comparison of Operating Plan Car Requirements

Operating Plan	Peak Car Requirements	Spare Cars	Spare Ratio
Current	8	2	25%
Shuttle with Intermediate Station	8	2	25%
Shuttle with Intermediate Station and Extension	12 to 14	2 to 4	17 to 29%
Peak Express to Loop via Elevated	72	14	20%
Peak Express to Loop via Subway	78	16	20%

The higher spare requirement for the shuttle operations is necessary due to the fact that all CTA cars are married pairs and that the total number of cars assigned is so small.

Yard capacities for the increased fleet size are a significant consideration. Yellow Line cars are currently stored and maintained out of Howard Yard, which also is responsible for cars assigned to the Purple and Red Lines. The other yards with responsibilities relative to these two lines are Linden (Purple Line) and 98th Street (Red Line). The CTA railcar assignment sheet that went into effect at the end of February was reviewed to determine the total number of cars currently assigned to these three lines. CTA rail system track maps dating to July 1999 were used to ascertain the total yard capacities at these three locations.

Exhibit 13-2
Comparison of Yard Capacities and Line Requirements

Yard	Total Capacity	Line Assignment	Available Capacity	Remarks
Howard	282	190	92	Assignment shown as if ½ Red + all Yellow
Linden	76	98	-22	Shown as if all Purple cars at this yard – some are at Howard
98th Street	234	180	54	Shown as if only ½ Red assigned here
Total	**592**	**468**	**124**	

Due to the fact that Purple and Red Line cars are assigned out of two facilities, some simplification has been made in the presentation above. All Purple Line cars are listed as if assigned out of Linden Yard, when in fact they are divided between Howard and Linden. Similarly, the Red Line cars are shown as if divided half and half between Howard and 98th. This was done to allow the table to reflect the total cars assigned and then to project the available capacity between the three yards. Comparing the available capacity to the theoretical Yellow Line requirements in Table 13-1, it can be seen that all the operating plan car requirements can be accommodated within the available capacity of these yards. To accommodate as many Yellow Line cars as might be required for the through Loop Express service (using six-car trains) at Howard Street might require some changes in Purple and Red Line car assignments/schedules compared to what is now in effect.

On the other hand, if it were determined to be necessary to run eight-car trains on the Yellow Line Loop Express trains, the car requirements for this expanded service would consume most all of the available capacity at these yards, without allowing for any Purple or Red Line expansion. This is not a realistic situation to project, so in that circumstance, it might be necessary to transfer the Yellow Line assignment to either a new facility on the line, or to begin using CTA's Skokie Shops as a running repair and/or storage facility.

As far as capital and operating costs are concerned (see Chapter 16), this study is confined to those associated with the shuttle operation on the existing plus extended line. The preceding tables have shown that the projected car requirements for those operating plans can easily be accommodated within the available capacity at Howard Yard.

14.0 TRACTION POWER IMPACTS AND REQUIREMENTS

The existing Yellow Line is fed from three substations – Calvary, a large (7500 kW) facility adjacent to the Howard Yard, which supports the yard and shop at Howard Street, as well as portions of the Purple, Red and Yellow Lines; Hamlin, on the Skokie Shops property, which has a capacity of 2500 kW; and Skokie Substation, near the intersection of the Yellow Line and Niles Center Road, which has a capacity of 2500 kW, but requires extensive modernization, regardless of what happens relative to the intermediate station and the Yellow Line extension. The timing of the implementation of the intermediate station and the line extension will determine where the costs for the improvement of the Hamlin and Skokie Substations are borne. If these projects are not implemented in the short-term, it is likely that the improvements will be carried out as part of the CTA's on-going capital improvement program. Otherwise, a succeeding phase of this assignment may be responsible for these improvements. The capital cost estimates in Chapter 16 include the costs for the improvements to these substations, in the interest of providing a conservative result.

In discussions with CTA Traction Power engineers, the following changes would be required to support expanded service on the Yellow Line:

- The 1.7-mile average length of the extension would require one new substation of 5000 KW capacity. The cost for this facility is included in the tabulations in Chapter 16.
- Skokie Substation would require considerable reconstruction and expansion (including the installation of a second 2500 kW unit). Costs for this work are included in Chapter 16.
- Hamlin Substation is a comparatively new facility (having been built and put into operation in the late 1990s). However, to support expanded Yellow Line service, it would require relocation of the DC switchgear to facilitate installation of a second 2500 kW unit). These costs are included in Chapter 16.

Implementation of a new intermediate station on the Yellow Line would at minimum require that the equipment complement at either Hamlin or Skokie Substation be improved according to the description above.

The CTA estimated that the above changes would be required to support 6- or 8-car train operation, such as might be required for the peak period Loop express service. In the absence of this operational change, the extension alone would require the new substation identified above. Depending on alignment profile, this facility could be located above the subway, under the elevated structure or adjacent to another of the possible profiles. A standard unit cost (provided by CTA in response to a data request) has been applied for this facility (plus an allowance for land acquisition and site preparation). In the case of the improvement work to the Hamlin and Skokie Substations, this has been reflected as a lump-sum allotment, essentially equal to the price of a new substation.

The enhanced substation capacities and spacing of substations listed previously (including implementation of one new installation on the proposed extension) will meet current Authority standards for handling longer-length trains, including the simultaneous starting of these trains. Providing two 2500 kW units at each of the three substations will allow six or eight-car trains to be operated on a headway much tighter than that currently in effect on the Yellow Line.

As noted in prior chapters, CTA is making provision for the future construction of an intermediate station at Oakton Street in its design of the third rail replacement traction power distribution system for the Yellow Line. This would not be the case for a station at Crawford Avenue. Therefore, additional costs must be included for the relocation of the third rail to the non-platform side of the tracks, and this allocation is included in the cost estimates in Chapter 16. Otherwise, the design of the third rail replacement power distribution system for the Yellow Line is believed to impose no limitations in terms of train operations, so long as the substations feeding the line are augmented in capacity and spacing as previously delineated.

Discussion of the intermediate station conceptual design in Chapter 8 notes that the train stop locations at both ends of the Oakton station have been set back from the adjacent sidewalk to ensure that a starting train has built up sufficient speed before hitting the gap in the third rail at either

adjacent street crossing to allow that train to operate across the gap to the next section of third rail and resume operation under power. The issue here is that the CTA expressed concern that the length of the gap (particularly across Oakton Street) might result in a train being isolated from the third rail and trapped in the gap as a result. If this project proceeds into the design phase, and if in that phase it is determined that additional set back over and above the 200 feet now provided is required, that could be accomplished without affecting the total train length that could be accommodated at the Oakton Station. This is due to the fact that the clear platform length (assuming the station extends to an auxiliary entrance at Searle Parkway) is now 700 feet versus 520 feet required to accommodate a 10-car train. Therefore, up to 90 additional feet of stop location setback could be included at each end of this station without impacting station capacity.

A similar design concept could be applied at Crawford Avenue, though this station would only be single-ended (having its entrance/exit at the east end of the station).

The station design proposed for the intermediate stations would have no impact on design speeds (other than recognizing that trains would be stopping on approach to third rail gaps for at-grade operation, which would be dealt with by the proposed stop location setbacks), third rail ramp designs or safety fencing requirements. CTA has several stations at grade on its Blue, Brown and Purple Lines, and many of these are adjacent to or between grade crossings. These have been successfully operated for many years with equipment (both operational and safety) similar to that proposed for the Yellow Line intermediate station.

It should also be noted that beginning in mid-March 2003, CTA personnel started on the installation of longer-length ties to support the chairs that support the third rail.

15.0 CONCEPTUAL PLANS

This chapter presents the conceptual plans for an intermediate station, for Dempster Street as an intermediate station, for the extension routing alternatives to the Old Orchard Road terminal and for the terminal station alternatives.

15.1 Intermediate Station

The design concepts on the following pages are based on the potential station at Oakton Street, which is the more complicated of the two. It is more complicated in the sense that it might be double-ended, providing an auxiliary entrance at the Searle Parkway end of the station to provide more direct access for Pharmacia and other employers to the north of Oakton Street. This facility has the further complication of needing to remove and relocate the existing emergency crossover in order to extend the platform to Searle Parkway.

At Crawford the platform would only extend the 520 feet required to berth a 10-car train. This is also possible at Oakton, should it be decided to not extend the facility to an auxiliary entrance at Searle Parkway.

The Oakton site has many positive aspects. First, it would serve downtown Skokie, and from the ridership projections in Chapter 3, can be expected to attract more riders on a per-day basis than the Crawford site. In addition, it has greater potential for future transit-oriented development within its catchment area, as the mixed-use project at 4700 W. Oakton demonstrates. This station site has a greater concentration of the Village's key employers within a one-half mile radius, as compared to the Crawford site. In terms of implementation, Oakton will also have the advantage that the site will be prepared for station installation during the third rail power distribution replacement project (by others) by having the third rail installed on the non-platform side of the tracks.

Both sites are hindered by the fact that there are no available parcels nearby to accommodate an off-street bus facility, or to provide for kiss-and-ride facilities. Possible sites near the proposed Oakton station included the oil change facility at Searle/Skokie Blvd. and the commercial building west of the CTA tracks on the south side of Oakton Street. Both are viable, active concerns so the purchase price can be expected to compensate the owners accordingly. The Searle/Skokie Blvd. site is hampered in terms of parcel shape and size, and is also constrained in terms of a possible off-street terminal for bus access.

The commercial enterprise on Oakton is across the street and slightly to the west of the proposed station entrance, and would require considerable investment to provide safe pedestrian access to the station entrance (a bridge or similar would be required). When last observed the commercial enterprise signage indicated it was "100% Leased". In addition, this site is complicated by the fact that Crafty Beaver has storage facilities to the south of the office building, and that there are access roads on either side of the building. The most recent indications are that the Crafty Beaver operation continues to be profitable and there are no plans to end the operation of this facility.

Nevertheless, the development around the proposed Oakton site is more compatible with a transit station. As shown in previous technical memoranda, the Crawford site surroundings are residential in all directions, while the Oakton site is in the midst of the various commercial concerns of downtown Skokie.

15.1.1 Crawford Avenue Site – Surrounding Land Use

This alternative is in a residential neighborhood. Figures 15-1 and 15-2 show the general area surrounding the proposed station site.

Figures 15-1 and 15-2 (below): Looking north on Crawford across the Yellow Line grade crossing. This view was taken from in front of the residences on the east side of Crawford and shows the houses north of the tracks on the west side of the street In figure 6-2, below the camera looks west along the Yellow Line tracks, showing the residences to the north of the Yellow Line. The land use pattern is the same to the south of the tracks.

The site is also limited in terms of available land adjacent to the tracks that could be used for kiss-and-ride or bus facilities. The only bus route to serve this site, Pace Route 215, operates northbound and southbound on Crawford Avenue past the proposed site. The residential nature of the area and general street pattern (the next grade crossing to the west is at Kostner Avenue) would make bus circulation problematic and likely objectionable to area residents.

15.1.2 Oakton Street Site – Surrounding Land Use

The proposed station location is in a commercial area. Although taken some time ago, Figure 15-3 is taken from a slight down-on perspective (from the inspection platform on the roof of the CTA line [wire maintenance] car) and shows the general surroundings.

Figure 15-3: This view looks north along the CTA tracks from the south side of Oakton Street. To the west of the CTA tracks (left in this view) the material/lumber company that was a predecessor to today's Crafty Beaver store is visible. The irregular parcel to the east of the CTA tracks remains undeveloped today.

North of the Crafty Beaver, Pharmacia has built a parking structure. As discussed in previous project technical memoranda, depending on the outcome of the Pharmacia due diligence process, this structure might become available. If this does happen, the structure should be acquired for future use by transit patrons.

Figure 15-4: The Pharmacia parking structure is shown to the left of the Yellow Line tracks in this view taken looking north from Oakton Street. Some of the Com Ed high-tension towers that will require relocation for station construction are also in this view, as are CTA catenary towers that would have to be removed to facilitate construction.

15.2 Dempster as an Intermediate Station

From the ridership projections in Chapter 12, it can be seen that the existing two-car operation could be maintained as long as the Yellow Line operating plan continues to call for shuttle service to/from Howard Street. This would mean that the Dempster Street station would not necessarily have to be rebuilt (assuming that an at-grade alignment profile is used for the extension north from Dempster Street) until such time as it is decided to implement either through Loop express train operation, or in anticipation of increased ridership demands as the shuttle operation matures.

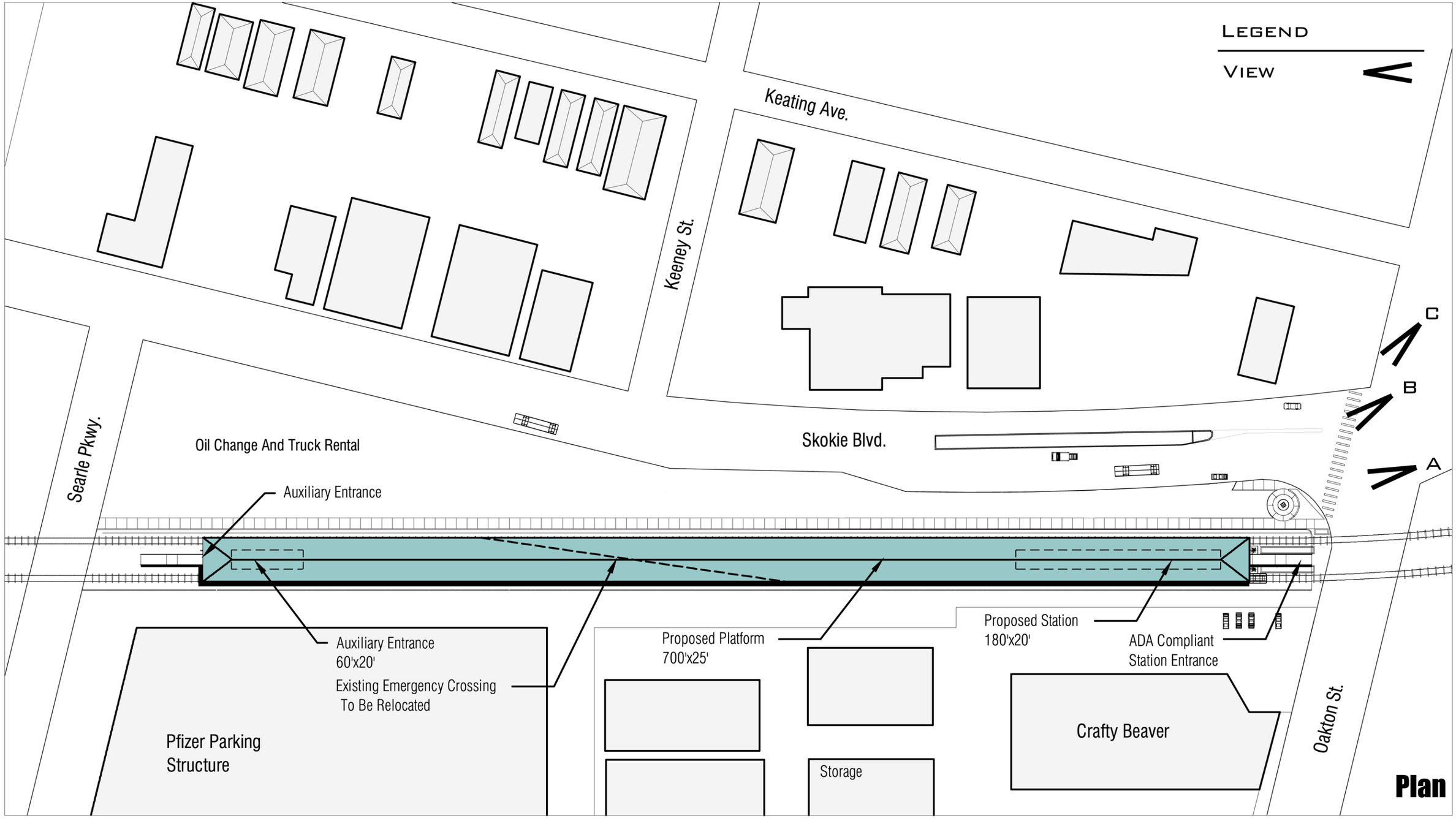
However, it must be recognized that the current Dempster station layout is not suited to the handling of boarding northbound riders. This could be addressed by installing high-barrier type faregates on the northbound platform and by closing off the mid-platform exit from that same platform. Alternatively, a rotogate could be installed to permit exit only. Relocation of the parking lot payment box would also be required to make it more readily accessible to both northbound and southbound riders using the parking lot.

Another issue is that constructing a second track north through the station site would impact the proposed relocation of the bus facilities to the east of the present tail track.

Once it is decided to implement the extension to the north, it makes a great deal of sense to properly address the issues at Dempster Street by building a new station that will accommodate longer-length trains, as well as supporting ridership demands in both directions. Further, as noted in Chapter 12, the construction of the intermediate station and the north extension may both result in a decrease in demand for parking at the Dempster Street site, which may facilitate the reconstruction of the site. Two possible concept sketches for this site appear on the following pages. They represent the station as an at-grade facility and as an above-ground station.

The concept sketches were reviewed during the course of this study. As part of that review, CTA facilities planning personnel observed that private vehicle parking should not be in the same area where buses are circulating. DLK, Inc. looked at the impacts this change would have and concluded it could be accommodated within the conceptual layouts. As noted above, given that parking demands at Dempster might be reduced with the opening of the line extension, this revision to the facility layout should be readily accommodated. Revision of the concept sketches along these lines is an appropriate activity for a future phase of the study.

As discussed in the previous project technical memoranda, should it be decided to construct the extension with either a below- or above-ground alignment profile, construction of the ramp up or down would require demolition of the existing station and construction of a replacement facility. The cost estimates in Chapter 16 include construction of a temporary terminal as well as replacement of this station, appropriate to the particular alignment profile.



Oakton Street Station - Design Concept

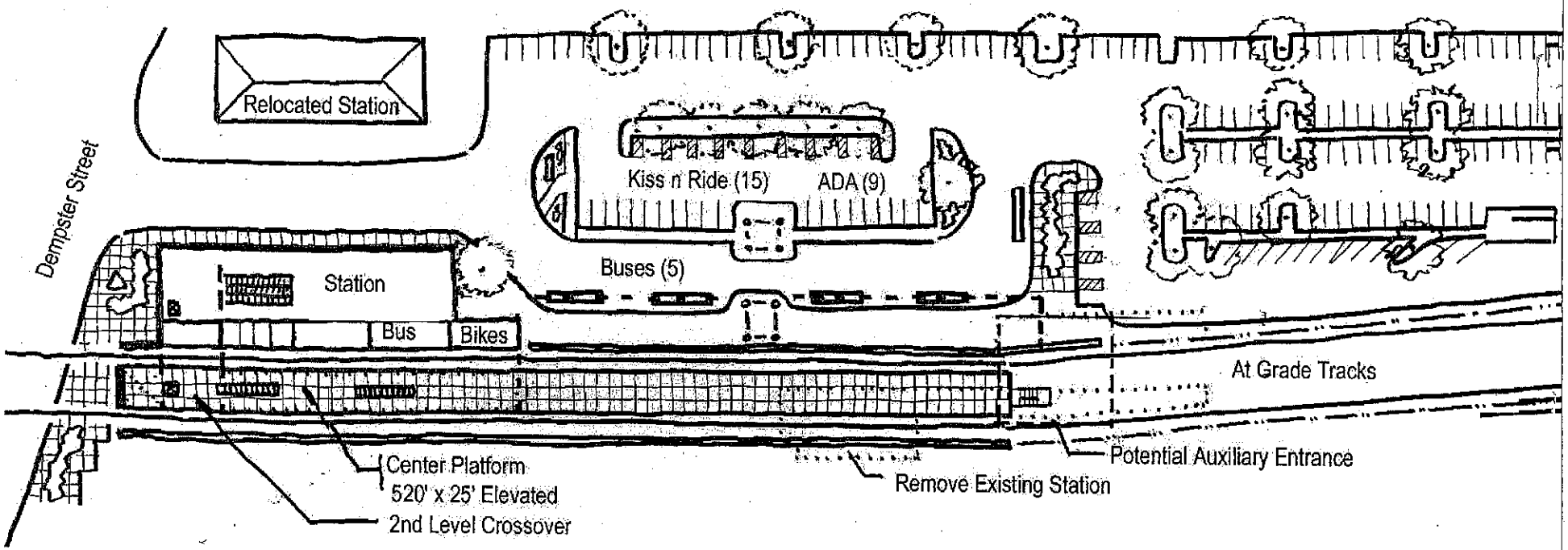
THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY

THE VILLAGE OF SKOKIE

0 50 100

NOTE: This drawing illustrates a preliminary architectural concept. Various architectural features and safety-related devices have not been shown, or have been included for conceptual purposes only.

SEPTEMBER 12, 2003



Concept C1

Dempster Street At Grade Station Concept

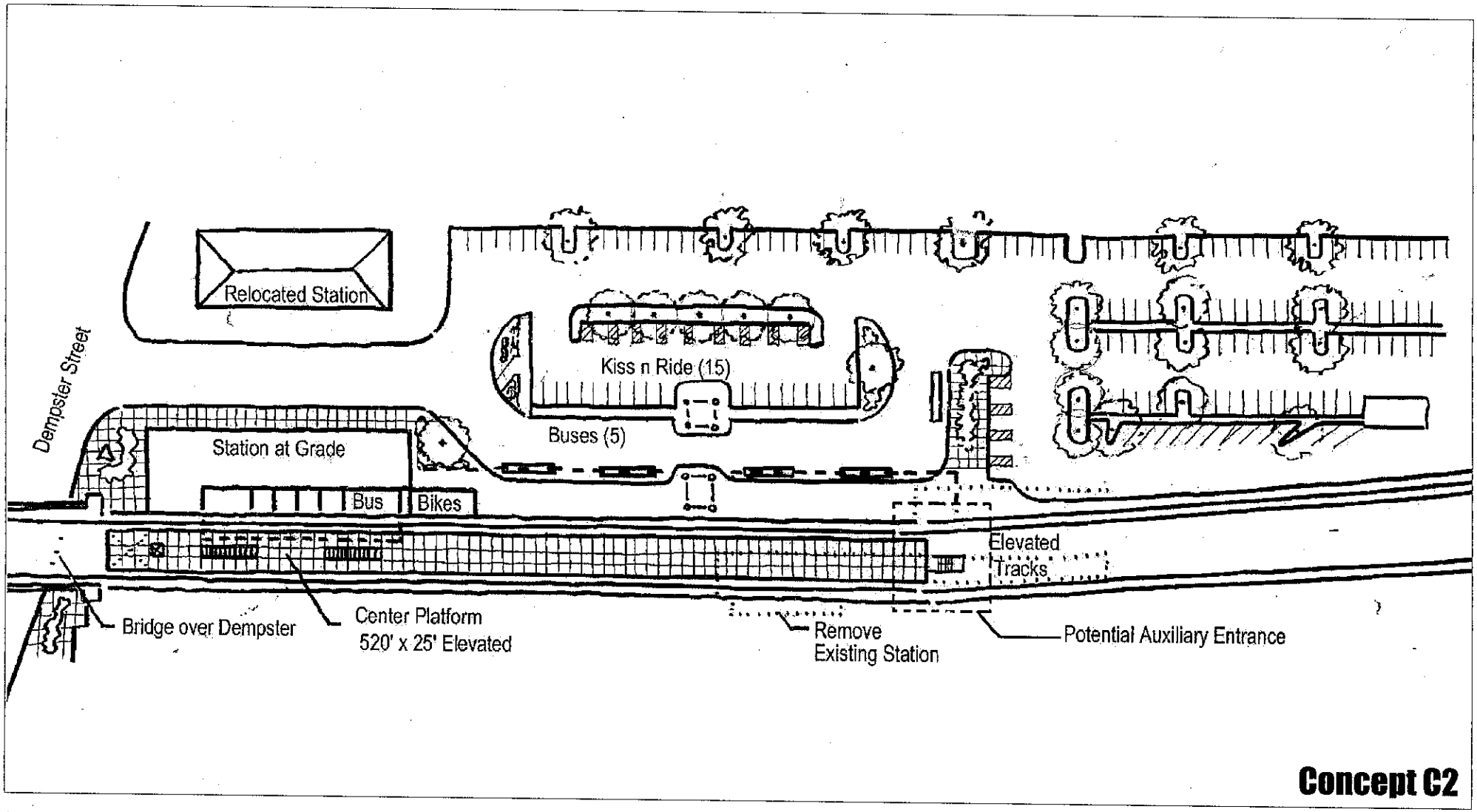
THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 15 30 60

NORTH

MARCH 25, 2003

DLK ARCHITECTURE PLANNING LANDSCAPE DESIGN/BUILD



Concept C2

Dempster Street Elevated Station Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 15 30 60 NORTH

MARCH 25, 2003

DLK ARCHITECTURE PLANNING LANDSCAPE DESIGN/BUILD

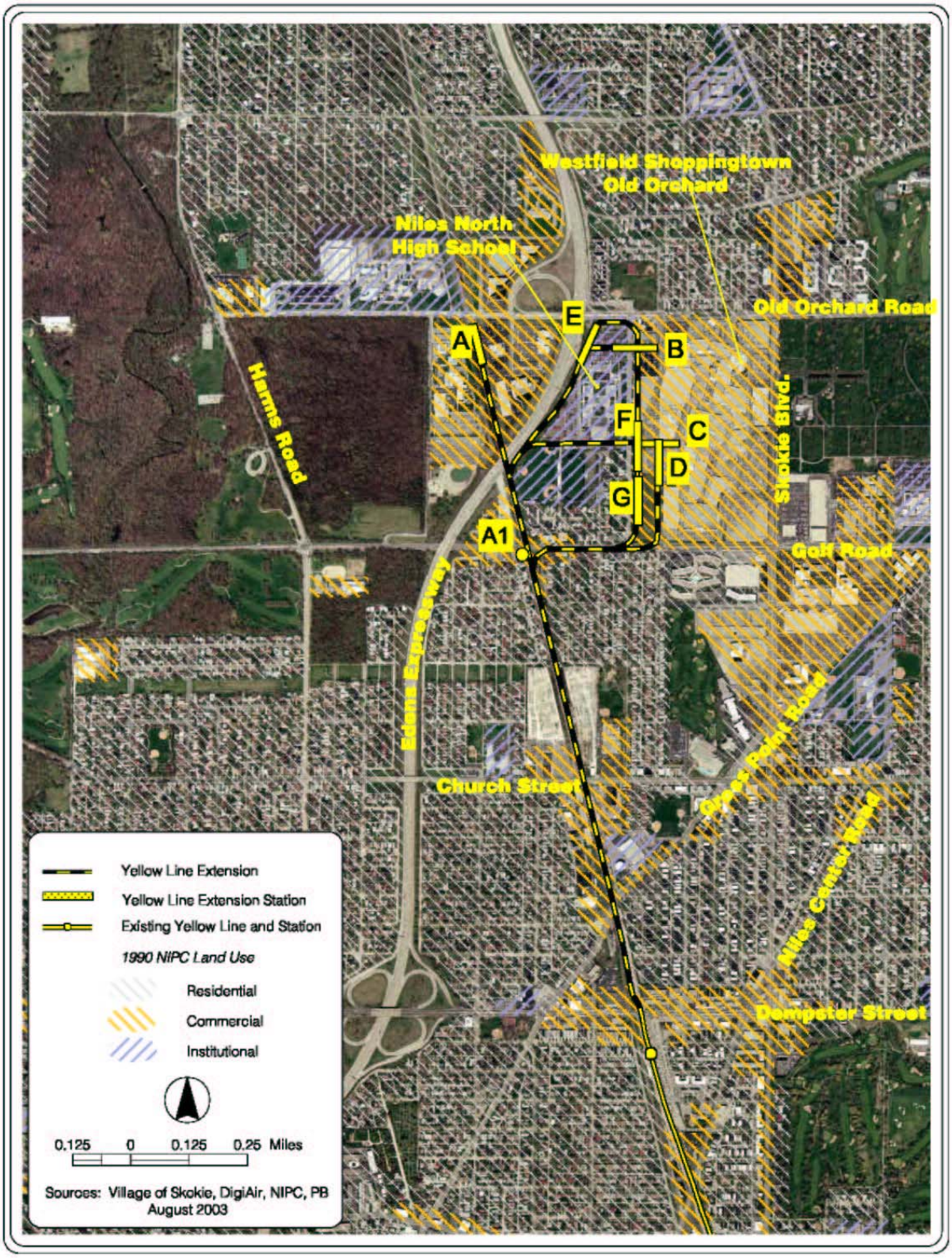
Land uses in the vicinity of the Dempster station are a mixture of commercial and residential. The commercial concerns tend to be on either side of Dempster Street both east and west of the CTA station. However, the area on the south side of Dempster and west of the CTA tracks is predominantly residential. There is also a residential area to the east of the parking lots serving the CTA station, both north and south of Dempster Street.

Figure 15-5: Looks north along the UPRR track north of Dempster Street, showing the car dealership to the west (left) of the track.

An undeveloped area exists to the east (right) of the track and to the east of this is the north lot for the CTA station.

There is retail development along both sides of Dempster Street, east of the north lot for the CTA station.

Exhibit 15-1
Land Use and Potential Terminal Stations



15.3 Old Orchard Road Terminal Alternatives

The nature of the terminal facility depends to a great extent on the alignment and profile to be used on the extension. This section is split into two discussions: the first addressing Alternative A where the terminal would be located on the UPRR right-of-way at Old Orchard Road with the second addressing those concepts which might be applicable to Alternatives B through G, where the terminal station would be located on or adjacent to mall property.

Regardless of the alignment specifics, all north terminal alternatives include a two-track station with an island platform. For Alternatives A through F, there would be future provision to install a third track with a side platform. The third track would be constructed only in anticipation of reducing headways on the line beyond what the two-track terminal could reasonably be expected to handle. For example, the Kimball terminal on the Brown Line currently dispatches trains on a three-minute headway during the peak. This terminal has three tracks. By contrast, Harlem terminal on the Green Line supports train operation on a minimum headway of every seven minutes. Two tracks are sufficient at this location. This recommendation is per a CTA Rail Operations review of the alternatives after the end of the Task 2 effort.

For Alternative G (a probable subway, loop arrangement for the north terminal), CTA input on this terminal facilities suggested a two-track terminal station with an island platform. North of the station area, a side track with a capacity for 10 cars was provided. No future third track is foreseen given these other provisions.

Bus terminal capacity for each of the north terminal alternatives was based on providing one bay for each route currently serving Westfield Shoppingtown Old Orchard, plus expansion. However, in Concept A2, it was not possible to provide enough bays. In this case, it is possible that the buses could circulate through the rail station (as opposed to taking terminal time at this location), allowing more than one route to share a bay. The operational limitations this arrangement would impose are recognized, and this design detail could be addressed in a future engineering phase, should the project be advanced.

15.3.1 Alternative A – UPRR Right-of-Way

The conceptual station designs shown on the following three pages have many similarities to the existing Dempster Station layout. The alternatives provide parking lots adjacent to the terminal facility and across Old Orchard Road. In Chapter 16, the capital costs for flat lot and structured parking are based on providing 600 spaces, more or less equal to that now provided at Dempster Street, along with the assumption that most of the parking facility at Dempster will remain in service, even after the extension is implemented.

However, the parking capacity opposite the station in Concepts A1 and A2 is constrained, due to limited available land. This led to the development of Concept A3, which incorporates a multiple-story parking facility on top of the station. This concept offers the advantage of increased parking capacity in immediate proximity to the station, as well as shielding the terminal operations from inclement weather.

Concepts A1 and A2 provide bus circulation via an extension of existing internal development road networks which discharge onto Old Orchard Road opposite Laramie Avenue. These details could be developed should it be decided to progress the project into the next phase of design.

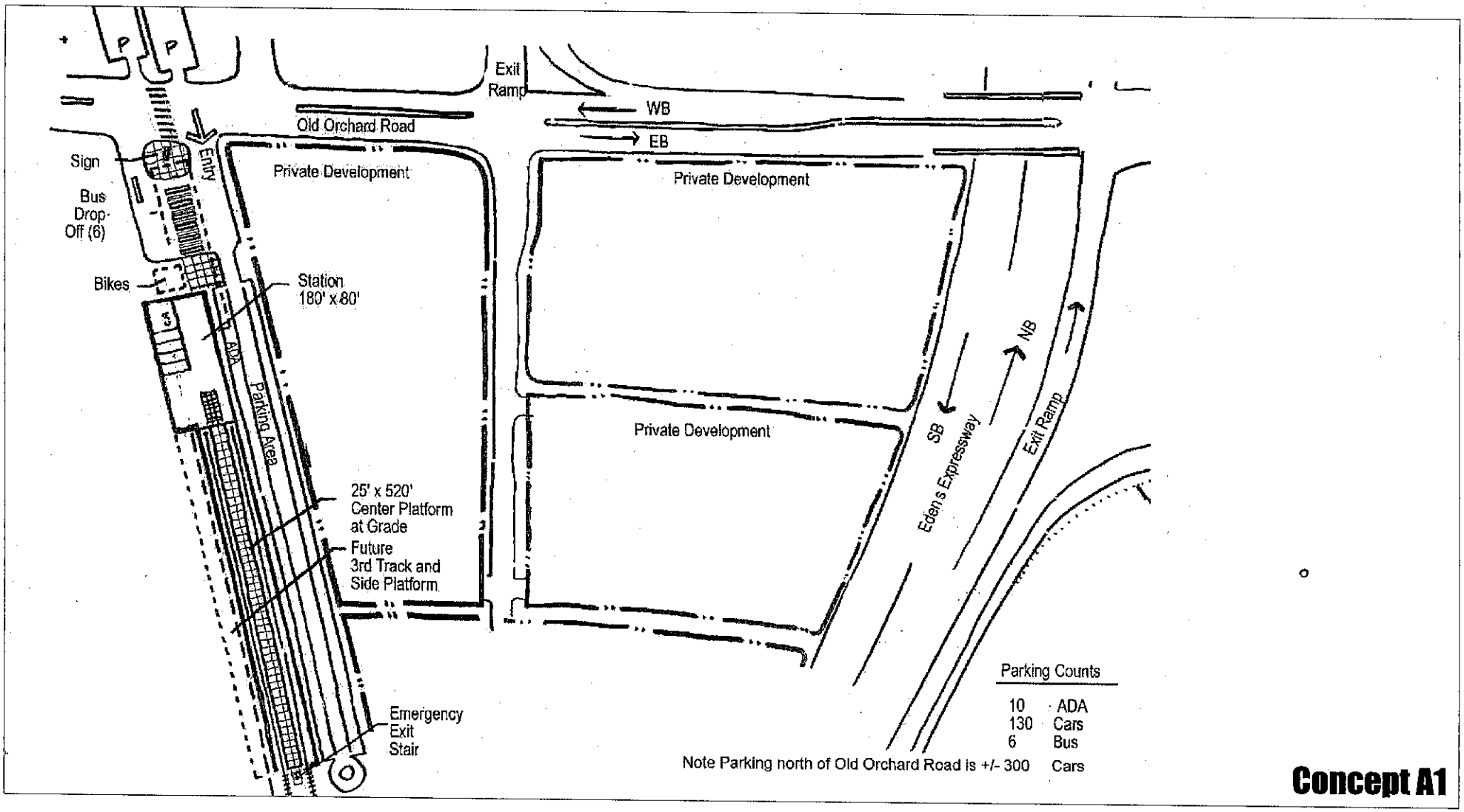
It is also possible that a portion or all of the adjacent single-story office court could be acquired to improve site circulation or to increase the parking capacity adjacent to the station. However, the cost estimates in Chapter 16 are not predicated on such an acquisition. Once again, this is a detail that could be examined in greater detail in a future phase of project engineering.

Land use around the proposed terminal location is entirely commercial. This is true on either side of Old Orchard Road and on both sides of the UPRR right-of-way. Figure 15-6 addresses this area with regard to land usage.

Figure 15-7 shows the development to the east of the UPRR track on the south side of Old Orchard Road.

Figure 15-6: Looks northeast from the UPRR right-of-way towards Old Orchard Road. The parking structure associated with one of the developments fronting on the west side of the Edens Expressway is visible to the right of the view. The single-story office court mentioned in the text is concealed by the vegetation to the left of the parking structure.

Development to the north of Old Orchard Road is also present on either side of the UPRR right-of-way. However, the area immediately east of the UPRR track is currently vacant and was once used as a team (freight) track for the North Shore Line. It is this land that is proposed for the north parking lot in concepts A-1 through A-3.



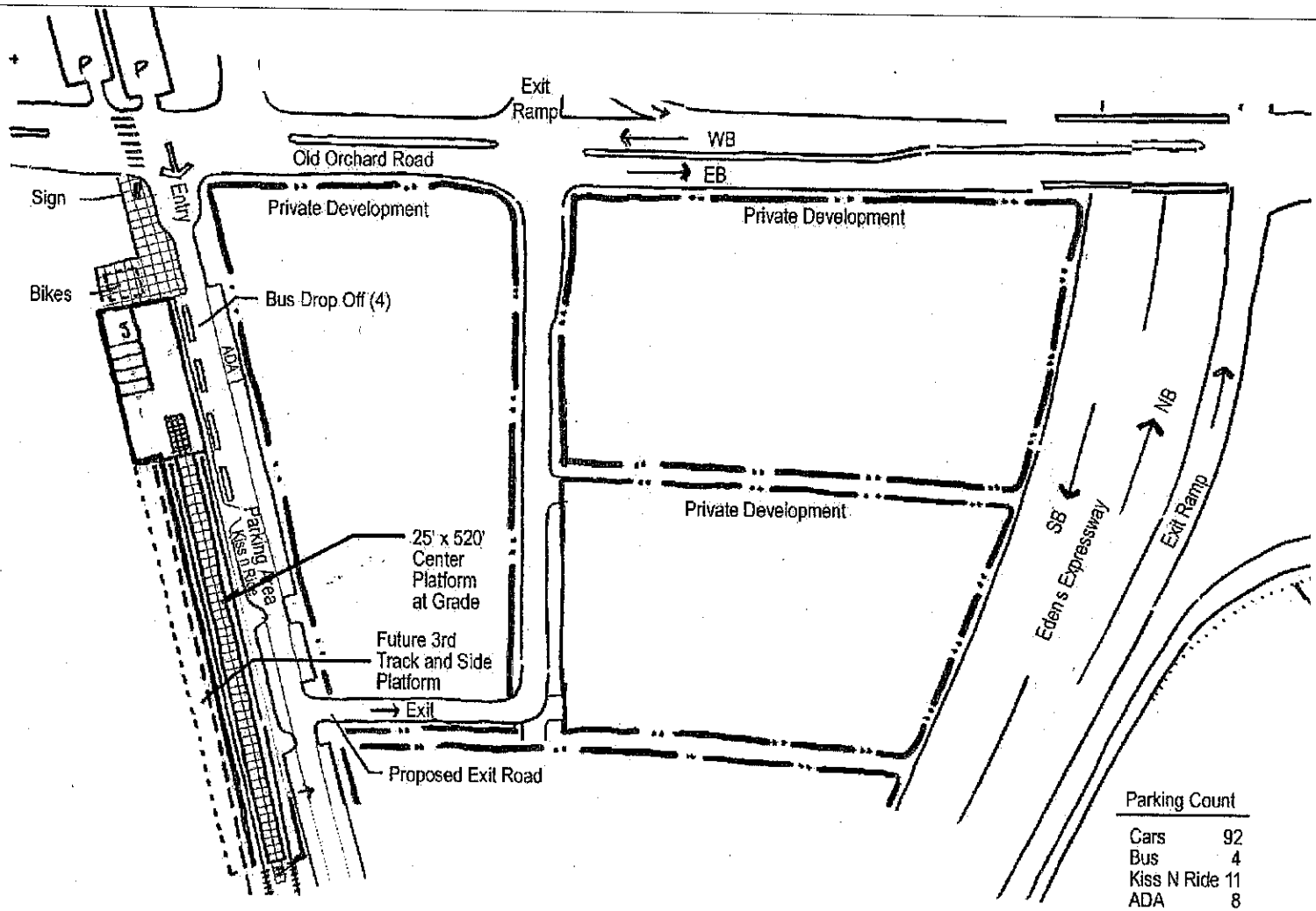
Old Orchard Road Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 30 60 120

NORTH

MARCH 25, 2003



Concept A2

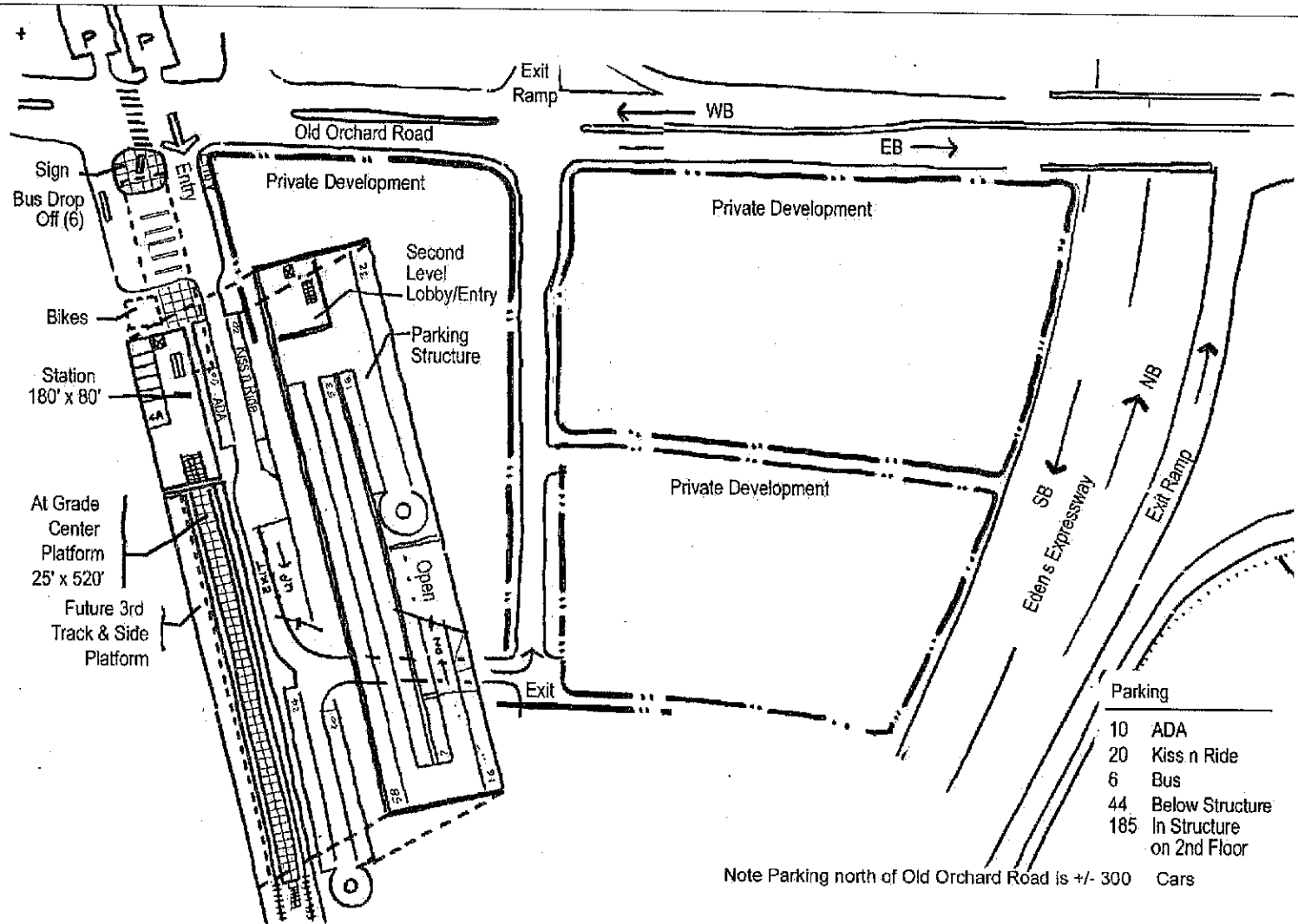
Old Orchard Road Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 30 60 120

NORTH

MARCH 25, 2003



Concept A3

Old Orchard Road Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 30 60 120 NORTH

MARCH 25, 2003

15.3.2 Alternatives B through G – On or Adjacent to Mall Property

Design concept B (following page) is applicable in principle to Alternatives B through G. It is drawn on the basis of an elevated alignment profile being used for the north terminal and associated approach trackage. As the terminal approach and facilities will displace existing parking (either at the high school, commercial concerns and/or on the mall property) this alternative identifies "replacement" parking capacity as well as that for CTA employee and rider use. The capacity shown is indicative of what can be provided, and the structure would be designed for potential expansion. The cost estimates in Chapter 16 are based on 600 transit patron spaces, as well as including "replacement" parking for the commercial uses that would be affected by the implementation of the transit terminal.

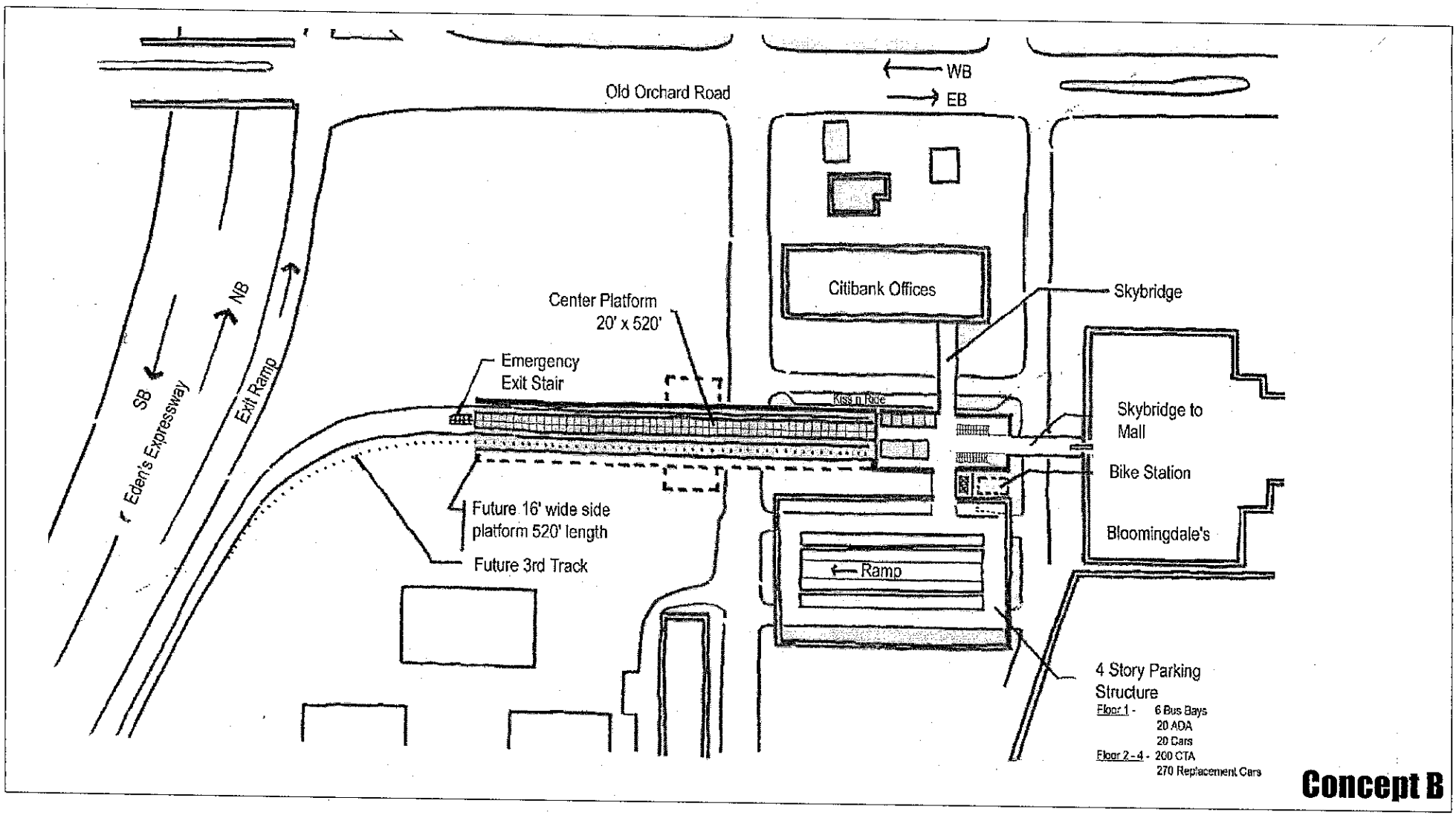
The sample concept shows skybridges to facilitate connections to adjacent stores/offices. If a subterranean approach and terminal were to be used, these connections could be made by underground walkways. It is expected that circulation details (tie-ins to the surrounding road network, etc.) would be developed in a future phase of the engineering effort.

Land use surrounding each of these alternatives is a mixture of institutional (the high school) and commercial (the mall and adjacent offices). There is also a residential area along Golf Road and to the east of the UPRR right-of-way. The east limits of this area front Lawler Avenue. See also Figure 15-6.

Specific views of land use in this area are shown in Figures 15-8 and 15-9.

Figure 15-7: Looking east across the Niles North parking lot towards Bloomingdale's store at Old Orchard. The construction barriers to the right of the view separate traffic flows on the high school property during its expansion project. At the extreme left of this view, a portion of the office building fronting Old Orchard Road to the west of the mall can be seen.

Figure 15-8: This view shows the commercial area on the south side of Golf Road to the east of the UPRR track. Immediately beyond the commercial structures the land use shifts to residential on both sides of the street, extending up to the shopping district to the east of Lawler Avenue.



Old Orchard Mall Site

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

0 60 120

NORTH

MARCH 25, 2003

15.4 Revised Extension Alternatives A Through F

The detailed aerial views for the extension alternative alignments were revised (see the appendices) to incorporate comments received from CTA Rail Operations during the course of the study. The changes were:

- Switch size for the terminal crossovers has been changed from a Number 7 switch to a Number 12.
- Each of the terminal concepts shows a third track and associated side platform as a future installation. As that platform would have to have the full complement of accessible vertical circulation elements, etc., a 16-foot platform width is reflected.

15.5 New Extension Alternative G – Single-Track Loop

In the meeting with the Village and Westfield's local manager for Old Orchard on February 20, 2003 a suggestion was made to consider a north terminal arrangement which was essentially a combination of Alternatives D and F. This is presented as Alternative G.

Given the operational considerations of such a configuration, the concept was discussed in general terms with CTA Rail Operations. The routing of this alignment (extending under Golf Road on one side, as well as traversing the length of the mall) would most likely be in subway, so it is not practical to make provision for a future third track and separate platform in the station area. As a result of discussions with CTA Rail Operations representatives, it was agreed that the terminal station would be shown as a double-track with an island platform, and that a tail track would be located on approach to the station. This tail track (with a capacity of 10 cars) could be used to store a spare consist, or to remove a bad-order train from service.

In spite of having an overall loop length of approximately 1.4 miles, the east side of the loop (containing the tail track and station) is not long enough to allow the desired Number 12 switches to be used at all locations. Hence, Number 7 switches are used for the universal crossover between the tail track and the platform tracks. All other switches, which might be used by revenue (passenger-carrying) trains are Number 12s, allowing a higher train speed through them.

As with Alternatives A through F, this alignment configuration was reviewed during the stakeholder interview session with the District 219 management. The results of this review can be found in Chapter 7.

16.0 CONCEPTUAL COSTS

A key input to this task was the receipt of selected unit price information from the CTA on August 2, 2002 (the information as received from CTA is reproduced on the following page). Another source used in the development of the capital cost information in this chapter has been PB's work for the Chicago Department of Transportation (CDOT), which has considered possible extension of the Red Line to a terminal at approximately 130th Street, Chicago. In addition, other PB transit capital costing efforts have been reviewed for possible applicability to this assignment.

Those costs received from CTA have been used as a baseline in this report. However, one observation that should be made is that some of the unit pricing information received from CTA seems high, compared to what might be predicted using other sources. For example, the August 2002 CTA input relative to a typical at-grade station lists a unit price of $14 million. By contrast, using the results of the CTA Engineering Condition Assessment (ECA), completed in early 1993, the following steps would be taken to arrive at a comparative price for a typical at-grade station:

- Use the "Total Renewal Program Costs" (generally, the maximum cost of the various investment strategies presented in the ECA)
- Take this cost for the four at-grade stations on the Ravenswood Branch (including the large terminal station at Kimball [with multiple platforms as well as transportation offices and other facilities])
- The average station cost (including E&H provisions) in 1990 Dollars was $3.6 million
- Escalate that result by 4% per year to 2003 Dollars and the average becomes $5.7 million

Of course, some difference in unit pricing may be due to differences in materials and construction methods. Even during the ECA, there was considerable debate on alternative platform materials, etc.

If the Oakton Yellow Line intermediate station (with an auxiliary entrance at Searle) is used to test the results from the ECA, the typical station cost must be increased to cover the expanded station length at Oakton (1,100 feet vs. 520 required). This works out to a factor of 2.1 (conservatively applied to the entire station, even though some elements may not change to the same extent). When the $5.7 million typical station cost is multiplied by that length factor the price for the Oakton facility would be approximately $12 million.

However, there are exceptional costs associated with the construction of the Oakton station. A total of four ComEd high-tension towers will need to be relocated. These tower relocations will cost $600,000 (details on the price derivation can be found in the following section of this chapter). There are also three ComEd wood poles to relocate, at a total price $225,000. In addition, the emergency crossover at Searle must be relocated to facilitate station construction. The new emergency crossover (non-interlocked, as is the existing installation) would cost $250,000 per the unit pricing information received from CTA in August 2002. Further, there are five catenary towers to be demolished at this site. A total of $100,000 is allowed for this work. So, these additional costs will total $1.2 million, leading to a theoretical total of $13.2 million for the Oakton Station. This is not that far removed from the August 2002 CTA unit price of $14 million, but as shown above this total would include a number of exceptional (site-specific) cost elements.

An independent assessment of the station design and construction costs was provided by DLK, Inc., our specialty subconsultant on this assignment. In the case of the Oakton Street facility, their estimate was $6.4 million, exclusive of the ComEd tower pole relocation and CTA emergency crossover removal/replacement (see the preceding paragraph). When those factors, along with the design/construction management allocation and the recommended contingency were included, the projected total cost for the Oakton Station would be around $11.3 million. Once again, this is within 20% of the unit price proposed by CTA, but again this estimate includes the site-specific items, which could not have been envisioned in the generation of the CTA unit price input.

To be conservative in the results we have taken the $14 million at-grade station unit price provided by CTA and increased it to $18 million for the Oakton station for the additional site-specific requirements. A similar approach is taken for the "conversion" of the Dempster Station to an intermediate station,

but the exact costs for this station are dependent on the alignment profile for the Yellow Line extension.

Detailed cost estimates have been prepared for Alternative A (remaining on the UPRR right-of-way) for the at-grade, below-grade (open cut), subway and aerial structure alignment profiles. Unit prices per mile for each of these profiles are then derived (eliminating the costs associated with the terminal station which would skew the results). It is the resulting unit prices by alignment profile that are then applied to Alternatives B through G, as well as to the combinations of alignment profiles that might be possible for the extension. This leads to the identification of a range of costs per alternative.

Finally, this chapter concludes with an analysis of likely operating cost changes for the various service plans. CTA O&M cost input is applied to the rail shuttle plans, but not to the through express service to the Loop alternatives, since those costs should not be borne by the feasibility study.

No detailed discussions relative to bus service revisions have been conducted with either CTA or Pace, making it difficult to estimate the revisions in bus service O&M costs. It is possible that a route such as the 54A or 254 (assuming rail service is extended to the weekends) would be truncated at the Oakton Station, but once again the lack of suitable off-street bus facilities at this site has to be taken into account. That is not to say that these buses couldn't layover at an on-street location, or that the schedule could be rewritten so that all layover is taken at the south end of the route. However, offsetting this truncation would be the provision of an Old Orchard area circulator or shuttle service, as was discussed with Pace at a study review meeting. This new service is felt to offset any savings due to the possible truncation of the 54A/254 services.

Transit Unit Prices

CTA Input - Rec'd 2 Aug 2002

Line #	Item Description	Quantity	Unit	Unit Price
1	Track Work (Surface - Ballasted)	1	LF	$ 310
2	Single Universal Crossover (Special Track Work) Ballasted	1	Each	$ 420,000
3	Third Rail (Straight Track)	1	LF	$ 155
4	Third Rail (Single Universal Crossover)	1	LS	$ 140,000
5	Traction Power Substation (Two Track)	1	Each	$ 5,500,000
6	Signal System - Bidirectional (Main Line)	1	Mile	$ 2,400,000
7	Signal System (Single Universal Crossover)	1	LS	$ 2,250,000
8	Grade Crossing Surface (Road & Pedestrian) Two Track	1	LS	$ 90,000
9	Grade Crossing Warning Equipment	1	LS	$ 350,000
10	At Grade Station	1	Each	$ 14,000,000
11	Right -of-Way Fencing	1	LF	$ 50
12	Parking Space at Grade	1	Space	$ 5,000
	All costs are estimated for 2002			
	Legend of Abbreviations:			
	LF = Lineal Foot			
	LS = Lump Sum			

Bibliography
Ref. No: 58

16.1 Crawford and Oakton Intermediate Stations

The general derivation of design and construction costs for the Oakton station was discussed in the opening section of this chapter. We have also provided two alternate methods for estimating the cost of this facility, both of which indicate that the unit pricing provided by CTA in August 2002 is conservatively high.

To summarize, the at-grade station unit price information from CTA indicates that $14 million should be allowed. It is assumed that this would apply to a station with a 520-foot platform and a single entrance.

However, deriving the unit price for the typical at-grade station from other sources (specifically, the station renewal program cost estimates developed for the CTA Engineering Condition Assessment) leads to a unit price in 2003 Dollars of around $6 million. This is less than half the total price recommended by the CTA in August of 2002. As noted previously, some of the difference may be due to use of higher-cost materials and other treatments, as well as general design changes in station facilities that have occurred since the time of the ECA estimates.

To be conservative, we will apply the higher CTA unit price directly to the Crawford station. Site-specific costs: relocation of third rail to the non-platform side of the tracks; and, demolition of catenary towers are assumed to be covered in the CTA unit price.

Corroboration of our derived price for the at-grade Oakton Station was provided by our architectural subconsultant, DLK Inc. Their order of magnitude estimate, including the site-specific factors (1100-foot long station with auxiliary entrance, relocation of ComEd towers/poles, etc.) and including the design/construction management allocation and contingency, leads to a total price for this station of approximately $11 million.

As noted in the opening section of this chapter, to be conservative for the Oakton station the CTA unit price is increased to $18 million to cover those aforementioned site-specific issues.

The input from ComEd was received in August 2002. At that time the utility estimated that relocation of a high-tension tower would cost $150,000. Although a relocation price for wood poles was also requested, no response was received. Therefore, a conservatively high estimated pole relocation cost of $75,000 is used in these estimates.

With regard to design and construction management allocations, as well as a project contingency to reflect the preliminary nature of these efforts, it is anticipated that these are included within the $14 million unit price and the $18 million cost allocation for the Oakton facility. The design/construction management allocation which PB recommends using is 16% of the total construction price. Our recommended contingency for this level of conceptual design is 30%. These allocations are applied to the remainder of the capital cost estimates in this section.

Exhibit 16-1
Magnitude of Design/Construction Management Allocation and Contingency for Crawford and Oakton Intermediate Stations

Cost Element	Crawford Station	Oakton Station
Total Design/Construction	$14 million	$18 million
Includes a design and construction management allocation of 16%	$2.2 million	$2.9 million
Includes contingency (30%)	$4.2 million	$5.4 million
Construction Cost	$7.6 million	$9.7 million

16.2 Dempster Street Intermediate Station

As discussed previously, the cost for this station is dependent on the alignment profile used for the extension. Previous project technical memoranda have noted that transitioning to an above- or below-grade alignment at or around Dempster Street would require relocation and replacement of the station site in order to be at the desired elevation prior to crossing Dempster Street. Once it is determined to be necessary to replace this station the platform length should be increased to 520-feet to allow for operation of longer-length trains (as might be required for through express operation to the Loop) on the Yellow Line.

The conceptual plans in Chapter 15 show at-grade and above-grade station designs. The basic station concept (island platform, etc.) could also be applied to a below-grade station, whether in open cut or subway. In addition to the costs for the construction of the final station, an allocation must also be made for the construction of a temporary terminal station to be used during the construction of the replacement facility. As has been discussed in previous project meetings, the UPRR right-of-way adjacent to the existing station could be used for this construction staging.

Demolition of the existing Dempster Station is estimated to cost $400,000. Based on the "high estimated land value" price information for the UPRR right-of-way (as provided by the Village in October 2002), acquisition of the UPRR right-of-way from Niles Center to Dempster would cost approximately $625,000 in 2003 Dollars.

Construction of a temporary Dempster facility is estimated at $5.0 million.

An at-grade Dempster station is estimated to cost $14.5 million; a station in open cut at this site is estimated to cost $18 million; an elevated station at this location is estimated to cost $20 million; and, a subway station at Dempster is estimated to cost $26 million. So the total costs for the demolition, temporary operations and new construction work at Dempster are:

Exhibit 16-2
Dempster Station Cost Comparison

Cost Element	At-Grade	Open Cut	Aerial Structure	Subway
UPRR ROW Acquisition	$0.6 million	$0.6 million	$0.6 million	$0.6 million
Temporary Terminal Construction	$5.0 million	$5.0 million	$5.0 million	$5.0 million
Demolish Existing Station	$0.4 million	$0.4 million	$0.4 million	$0.4 million
Design and Construct New Station	$14.5 million	$18.0 million	$20.0 million	$26.0 million
Total	**$20.5 million**	**$24 million**	**$26 million**	**$32 million**

Using the 16% design/construction management allocation, the above cost range implies design and construction management costs of between $3.3 and 5.4 million for this station. The above totals also include a 30% contingency, so the range for this allocation would be from $6.2 to $10.2 million.

DLK, Inc. also provided an order of magnitude cost for design and construction of the new Dempster aerial station. Their estimate, including the design/construction management allocation and the contingency is that this facility would cost around $18 million. This corroborates the above estimate of $20 million.

The estimated cost for the temporary facility also requires some comment. In Section 18.1.5, we report on CTA's updated information that indicates the new station at Kedzie on the Brown line has an estimated total cost of $4 million, quite different from the estimates

provided by CTA in 2002. It is proposed that the temporary station cost allocation of $5 million be retained at this time, providing a conservative estimate which can be refined during a future phase of this study.

16.3 Estimated Costs for Alternative A

Detailed cost estimates for the various alignment profiles (at-grade, open cut, aerial structure and subway) were developed for Alternative A (remaining on the UPRR right-of-way to Old Orchard Road). The preparation of these estimates included review of ComEd drawings for above- and below-ground installations (particularly to determine the extent to which towers and poles would have to be relocated), review of UPRR high-range price estimates (received through the Village) for the acquisition of the railroad's right-of-way north of Dempster Street, and the review of unit price data (from CTA, ComEd and other PB projects) for application to this project. Specific commentary relative to substation improvements and other capital improvements can be found in the preceding chapters of this memorandum.

Total prices by alignment profile for Alternative A were developed, and then unit prices by alignment profile were calculated. These unit prices are then applied in the following section of this chapter to Alternatives B through G. This results in a range of costs for each of the various alternatives which are summarized in this chapter.

The detailed cost estimates by alignment profile for Alternative A are included on the following pages.

Exhibit 16-3
Range of Costs for Alternative A (UPRR ROW)

Alignment Profile	Total Cost (excluding terminal station)	Unit Price/Mile
At-grade	$72.9 million	$45.6 million
Open Cut	$137.6 million	$81.0 million
Aerial Structure	$137.5 million	$80.9 million
Subway	$190.3 million	$111.9 million

Application of the unit prices to the succeeding alternatives (B through G) is intended to provide a range of costs, as opposed to being exhaustive in covering all possible combinations of alignment profiles.

16.4 Range of Costs: Alternative B

Alternative B would leave the UPRR right-of-way north of Golf Road and pass to the west and north of Niles North High School, ending in a terminal station opposite the Bloomingdales' Old Orchard store. The alignment once off the UPRR right-of-way considerably limits the options.

Exhibit 16-4
Range of Costs for Alternative B

Alignment Details	Estimated Cost
At grade Dempster to north of Golf Road (1.1 miles); Aerial structure to terminal (0.7 miles)	$107.3 million
Open cut Dempster to Golf (1.1 miles); Aerial structure to terminal (0.7 miles)	$145.8 million
Aerial structure throughout (1.8 miles)	$145.8 million
Subway Dempster to north of Golf Road (1.1 miles); aerial structure to terminal (0.7 miles)	$179.9 million
Subway throughout (1.8 miles)	$201.6 million

16.5 Range of Costs: Alternative C

This alternative passes to the south of the high school after leaving the UPRR right-of-way. Pending review of the north terminal alternatives with the school, the aerial and subway options north of Golf Road are carried forward. However, it is likely that the school will not accept the aerial alignment passing over their ball fields.

Exhibit 16-5
Range of Costs for Alternative C

Alignment Details	Estimated Cost
At grade Dempster to north of Golf Road (1.1 miles); Aerial structure to terminal (0.6 miles)	$99.2 million
At grade Dempster to north of Golf Road (1.1 miles); Subway to north terminal (0.6 miles)	$117.8 million
Open cut Dempster to north of Golf Road (1.1 miles); Subway to terminal (0.6 miles)	$156.3 million
Aerial structure throughout (1.7 miles)	$137.7 million
Subway throughout (1.7 miles)	$190.4 million

16.6 Range of Costs: Alternative D

Alternative D would leave the UPRR right-of-way south of Golf Road and head east to around Lawler Avenue, where it would then turn north to enter the Mall property. The aerial in the appendix reflects this alignment being over the west access drive of the Mall. Alternatively, as was discussed in a study comment review meeting, this alignment could be run over the retention basin on the west limits of the Mall property, and extend directly into the parking lot on the east side of Lawler Avenue. The alignment via Golf Road and into the Mall property limits the reasonable alignment profiles for this extension.

Exhibit 16-6
Range of Costs for Alternative D

Alignment Details	Estimated Cost
At grade Dempster to south of Golf Road (0.9 miles); Aerial structure to terminal (0.7 miles)	$98.1 million
At grade Dempster to south of Golf Road (0.9 miles); Subway to terminal (0.7 miles)	$119.8 million
Aerial structure throughout (1.6 miles)	$129.6 million
Open cut to south of Golf Road (0.9 miles); Subway to north terminal (0.7 miles)	$151.3 million
Subway throughout (1.6 miles)	$179.2 million

Skokie Swift Feasibility Studies - Conceptual Cost Estimate

Alternative A (UPRR ROW) - At-Grade from Dempster to Old Orchard

					1.6 Route-Miles	
Line No.	**Cost Category**	**Quan.**	**Units**	**Unit Cost**	**Total Cost**	**Remarks**
1	New - Track - 115#, CWR	10050.00	track-foot	$310	$3,115,500	CTA 8/02 Unit Prices
2	New - Universal Crossover	2.00	each	$420,000	$840,000	CTA 8/02 Unit Prices
3A	New - Third Rail	10050.00	track-foot	$155	$1,557,750	CTA 8/02 Unit Prices
3B	New - Third Rail at Universal Xover	2.00	each	$140,000	$280,000	CTA 8/02 Unit Prices
4	New - Traction Power Substation	1.00	each	$5,500,000	$5,500,000	CTA TP Estimate
5	Improvements to Hamlin & Skokie Substations	1.00	lot	$5,500,000	$5,500,000	PB Estimated based on req'd improve.
6A	New - mainline ATC	1.60	mile	$2,400,000	$3,840,000	CTA 8/02 Unit Prices
6B	New - ATC at Crossovers	2.00	each	$2,300,000	$4,600,000	CTA 8/02 Unit Prices
7	New - Grade Crossing Surfaces	4.00	each	$90,000	$360,000	CTA 8/02 Unit Prices
8	New - Grade Crossing Warning Equipment	4.00	each	$350,000	$1,400,000	CTA 8/02 Unit Prices
9	New - Right of way fencing	10050.00	l-f	$50	$502,500	CTA 8/02 Unit Prices
10	Old Orchard Road Terminal Station	1.00	lot	$20,000,000	$20,000,000	
11	600-space parking lot at terminal	1.00	lot	$3,000,000	$3,000,000	
12A	Relocation of ComEd Towers	94.00	each	$150,000	$14,100,000	ComEd 8/02 est.
12B	Relocation of ComEd Wood Poles	32.00	each	$75,000	$2,400,000	Based on ComEd tower estimate
13A	Right of way acquisition - UPRR	1.00	lot	$1,700,000	$1,700,000	UPRR High land value - 10/02
13B	ROW acquisition - other	283750.00	s.f.	$9	$2,468,625	Substation site, parking lot, bus terminal, kiss & ride
14	Right of way preparation	1.60	mile	$102,000	$163,200	Clearing/grubbing; demo. of UPRR track
15	Environmental Remediation	1.60	mile	$70,000	$112,000	
16	Base excavation/grading	1.60	mile	$314,000	$502,400	
SUBTOTAL					$71,941,975	
UTILITY RELOCATION (EXCLUDING COM ED TOWERS/POLES) - 10%					$7,194,198	
DESIGN, CONSTRUCTION MGMT., ETC. 16% OF SUBTOTAL					$11,510,716	
CONTINGENCY 30% OF SUBTOTAL					$21,582,593	AVG. COST/MILE
TOTAL					**$112,229,481**	**$70,143,426**

NOTES AND ASSUMPTIONS All costs are in 2003 Dollars

Track quantity is for double-track extension, including doubling of track north of Dempster Station

Land acquisition component quantities are: substation 35,000 s.f.; terminal station parking lot - 225,000 s.f.; terminal station bus bays and access - 17,730 s.f.; and, terminal station kiss & ride area - 6,000 s.f.

TOTAL COST WITH ALL ALLOCATIONS EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $72,973,717

AVERAGE COST PER MILE EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $45,608,573

Skokie Swift Feasibility Studies - Conceptual Cost Estimate

Alternative A (UPRR ROW) - Open-Cut from Dempster to Golf Road; At-Grade North of Golf Road

					1.7 Route-Miles	
Line No.	**Cost Category**	**Quan.**	**Units**	**Unit Cost**	**Total Cost**	**Remarks**
1	New - Track - 115#, CWR	9000.00	track-foot	$310	$2,790,000	CTA 8/02 Unit Prices
2	New - Universal Crossover	2.00	each	$420,000	$840,000	CTA 8/02 Unit Prices
3A	New - Third Rail	9000.00	track-foot	$155	$1,395,000	CTA 8/02 Unit Prices
3B	New - Third Rail at Universal Xover	2.00	each	$140,000	$280,000	CTA 8/02 Unit Prices
4	New - Traction Power Substation	1.00	each	$5,500,000	$5,500,000	CTA TP Estimate
5	Improvements to Hamlin & Skokie Substations	1.00	lot	$5,500,000	$5,500,000	PB Estimated based on req'd improve.
6A	New - mainline ATC	1.70	mile	$2,400,000	$4,080,000	CTA 8/02 Unit Prices
6B	New - ATC at Crossovers	2.00	each	$2,300,000	$4,600,000	CTA 8/02 Unit Prices
9	New - Right of way fencing	10050.00	l-f	$50	$502,500	CTA 8/02 Unit Prices
10	Old Orchard Road Terminal Station	1.00	lot	$20,000,000	$20,000,000	
11	600-space parking lot at terminal	1.00	lot	$3,000,000	$3,000,000	
12A	Relocation of ComEd Towers	94.00	each	$150,000	$14,100,000	ComEd 8/02 est.
12B	Relocation of ComEd Wood Poles	32.00	each	$75,000	$2,400,000	Based on ComEd tower estimate
13A	Right of way acquisition - UPRR	1.00	lot	$1,700,000	$1,700,000	UPRR High land value - 10/02
13B	ROW acquisition - other	283750.00	s.f.	$9	$2,468,625	Substation site, parking lot, bus terminal, kiss & ride
14	Right of way preparation	1.70	mile	$102,000	$173,400	Clearing/grubbing; demo. of UPRR track
15	Base grading north of Golf Road	0.50	mile	$314,000	$157,000	
16	Envrionmental Remediation	1.60	mile	$70,000	$112,000	
17	Excavation - each approach	18600.00	c.y.	$25	$465,000	
18	Excavation - open cut	300000.00	c.y.	$25	$7,500,000	Factored to account for wider cut at relay house/xover
19	Solider piles along open cut	278000.00	s.f.	$80	$22,240,000	
20	Tie backs	1860.00	each	$3,000	$5,580,000	
21A	Temporary road crossings	400.00	l.f.	$1,200	$480,000	
21B	Permanent road bridges	400.00	l.f.	$10,000	$4,000,000	
SUBTOTAL					$109,863,525	
UTILITY RELOCATION (EXCLUDING COM ED TOWERS/POLES) - 15%					$16,479,529	
DESIGN, CONSTRUCTION MGMT., ETC. 16% OF SUBTOTAL					$17,578,164	
CONTINGENCY 30% OF SUBTOTAL					$32,959,058	AVG. COST/MILE
TOTAL					**$176,880,275**	**$104,047,221**

NOTES AND ASSUMPTIONS All costs are in 2003 Dollars

Track quantity is for double-track extension, including doubling of track north of Dempster Station

Land acquisition component quantities are: substation 35,000 s.f.; terminal station parking lot - 225,000 s.f.; terminal station bus bays and access - 17,730 s.f.; and, terminal station kiss & ride area - 6,000 s.f.

TOTAL COST WITH ALL ALLOCATIONS EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $137,624,511

AVERAGE COST PER MILE EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $80,955,595

Skokie Swift Feasibility Studies - Conceptual Cost Estimate

Alternative A (UPRR ROW) - Aerial Structure from Dempster to Golf Road; At-Grade North of Golf Road

					1.7 Route-Miles	
Line No.	**Cost Category**	**Quan.**	**Units**	**Unit Cost**	**Total Cost**	**Remarks**
1	New - Track - 115#, CWR	9000.00	track-foot	$310	$2,790,000	CTA 8/02 Unit Prices
2	New - Universal Crossover	2.00	each	$420,000	$840,000	CTA 8/02 Unit Prices
3A	New - Third Rail	9000.00	track-foot	$155	$1,395,000	CTA 8/02 Unit Prices
3B	New - Third Rail at Universal Xover	2.00	each	$140,000	$280,000	CTA 8/02 Unit Prices
4	New - Traction Power Substation	1.00	each	$5,500,000	$5,500,000	CTA TP Estimate
5	Improvements to Hamlin & Skokie Substations	1.00	lot	$5,500,000	$5,500,000	PB Estimated based on req'd improve.
6A	New - mainline ATC	1.70	mile	$2,400,000	$4,080,000	CTA 8/02 Unit Prices
6B	New - ATC at Crossovers	2.00	each	$2,300,000	$4,600,000	CTA 8/02 Unit Prices
9	New - Right of way fencing	10050.00	l-f	$50	$502,500	CTA 8/02 Unit Prices
10	Old Orchard Road Terminal Station	1.00	lot	$20,000,000	$20,000,000	
11	600-space parking lot at terminal	1.00	lot	$3,000,000	$3,000,000	
12A	Relocation of ComEd Towers	94.00	each	$150,000	$14,100,000	ComEd 8/02 est.
12B	Relocation of ComEd Wood Poles	32.00	each	$75,000	$2,400,000	Based on ComEd tower estimate
13A	Right of way acquisition - UPRR	1.00	lot	$1,700,000	$1,700,000	UPRR High land value - 10/02
13B	ROW acquisition - other	283750.00	s.f.	$9	$2,468,625	Substation site, parking lot, bus terminal, kiss & ride
14	Right of way preparation	1.70	mile	$102,000	$173,400	Clearing/grubbing; demo. of UPRR track
15	Base grading north of Golf Road	0.50	mile	$314,000	$157,000	
16	Environmental Remediation	1.60	mile	$70,000	$112,000	
17	Aerial Structure	268000.00	s.f.	$150	$40,200,000	36' wide x 7450' long
SUBTOTAL					$109,798,525	
UTILITY RELOCATION (EXCLUDING COM ED TOWERS/POLES) - 15%					$16,469,779	
DESIGN, CONSTRUCTION MGMT., ETC. 16% OF SUBTOTAL					$17,567,764	
CONTINGENCY 30% OF SUBTOTAL					$32,939,558	AVG. COST/MILE
TOTAL					**$176,775,625**	**$103,985,662**

NOTES AND ASSUMPTIONS All costs are in 2003 Dollars

Track quantity is for double-track extension, including doubling of track north of Dempster Station

Land acquisition component quantities are: substation 35,000 s.f.; terminal station parking lot - 225,000 s.f.; terminal station bus bays and access - 17,730 s.f.; and, terminal station kiss & ride area - 6,000 s.f.

TOTAL COST WITH ALL ALLOCATIONS EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $137,519,861

AVERAGE COST PER MILE EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $80,894,036

Skokie Swift Feasibility Studies - Conceptual Cost Estimate

Alternative A (UPRR ROW) - Subway from Dempster to Golf Road; At-Grade North of Golf Road

					1.7 Route-Miles	
Line No.	**Cost Category**	**Quan.**	**Units**	**Unit Cost**	**Total Cost**	**Remarks**
1	New - Track - 115#, CWR	9000.00	track-foot	$310	$2,790,000	CTA 8/02 Unit Prices
2	New - Universal Crossover	2.00	each	$420,000	$840,000	CTA 8/02 Unit Prices
3A	New - Third Rail	9000.00	track-foot	$155	$1,395,000	CTA 8/02 Unit Prices
3B	New - Third Rail at Universal Xover	2.00	each	$140,000	$280,000	CTA 8/02 Unit Prices
4	New - Traction Power Substation	1.00	each	$5,500,000	$5,500,000	CTA TP Estimate
5	Improvements to Hamlin & Skokie Substations	1.00	lot	$5,500,000	$5,500,000	PB Estimated based on req'd improve.
6A	New - mainline ATC	1.70	mile	$2,400,000	$4,080,000	CTA 8/02 Unit Prices
6B	New - ATC at Crossovers	2.00	each	$2,300,000	$4,600,000	CTA 8/02 Unit Prices
9	New - Right of way fencing	10050.00	l-f	$50	$502,500	CTA 8/02 Unit Prices
10	Old Orchard Road Terminal Station	1.00	lot	$20,000,000	$20,000,000	
11	600-space parking lot at terminal	1.00	lot	$3,000,000	$3,000,000	
12A	Relocation of ComEd Towers	94.00	each	$150,000	$14,100,000	ComEd 8/02 est.
12B	Relocation of ComEd Wood Poles	32.00	each	$75,000	$2,400,000	Based on ComEd tower estimate
13A	Right of way acquisition - UPRR	1.00	lot	$1,700,000	$1,700,000	UPRR High land value - 10/02
13B	ROW acquisition - other	283750.00	s.f.	$9	$2,468,625	Substation site, parking lot, bus terminal, kiss & ride
14	Right of way preparation	1.70	mile	$102,000	$173,400	Clearing/grubbing; demo. of UPRR track
15	Base grading north of Golf Road	0.50	mile	$314,000	$157,000	
16	Environmental Remediation	1.60	mile	$70,000	$112,000	
17	Excavation - each approach	18600.00	c.y.	$35	$651,000	
18	Excavation - subway	300000.00	c.y.	$35	$10,500,000	Factored to account for wider cut at station/xover
19	Solider piles along open cut	278000.00	s.f.	$80	$22,240,000	
20	Tie backs	1860.00	each	$3,000	$5,580,000	
21A	Subway Roof - Steel	6975000.00	lb.	$4	$24,412,500	50' span every 8'
21B	Subway Roof - Concrete Reinforc.	8500.00	c.y.	$550	$4,675,000	
21C	Subway - Reinforcing Steel	1020000.00	lb.	$1	$1,020,000	
22	Temporary road crossings	400.00	l.f.	$1,200	$480,000	During construction
23	Permanent Road Crossings	400.00	l.f.	$2,000	$800,000	
SUBTOTAL					$139,957,025	
UTILITY RELOCATION (EXCLUDING COM ED TOWERS/POLES) - 18%					$25,192,265	
DESIGN, CONSTRUCTION MGMT., ETC. 16% OF SUBTOTAL					$22,393,124	
CONTINGENCY 30% OF SUBTOTAL					$41,987,108	AVG. COST/MILE
TOTAL					**$229,529,521**	**$135,017,365**

NOTES AND ASSUMPTIONS All costs are in 2003 Dollars

Track quantity is for double-track extension, including doubling of track north of Dempster Station

Land acquisition component quantities are: substation 35,000 s.f.; terminal station parking lot - 225,000 s.f.; terminal station bus bays and access - 17,730 s.f.; and, terminal station kiss & ride area - 6,000 s.f.

TOTAL COST WITH ALL ALLOCATIONS EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $190,273,757

AVERAGE COST PER MILE EXCLUDING TERMINAL STATION AND ASSOCIATED FACILITIES: $111,925,739

16.7 Range of Costs: Alternative E

This alternative leaves the UPRR right-of-way north of Golf Road, remaining to the east of the Edens Expressway up to a terminal at Old Orchard Road. On account of its alignment to the west of the high school's facilities, the north terminal alignment profiles are limited to aerial structure and subway.

Exhibit 16-7
Range of Costs for Alternative E

Alignment Details	Estimated Cost
At grade Dempster to north of Golf Road (1.1 miles); Aerial structure to terminal (0.5 miles)	$91.1 million
At grade Dempster to north of Golf Road (1.1 miles); Subway to terminal (0.5 miles)	$106.6 million
Aerial structure throughout (1.6 miles)	$129.6 million
Open cut to north of Golf Road (1.1 miles); Subway to north terminal (0.5 miles)	$145.1 million
Subway throughout (1.6 miles)	$179.2 million

16.8 Range of Costs: Alternative F

Alternative F is similar to alternative E, except that the line makes a 180-degree turn to the north of the high school, and ends in a terminal parallel and to the west of Lawler Avenue, facing to the south. On account of this U-loop, this alternative is longer than the preceding ones, having a total length from Dempster Street of 2.0 miles. The configuration of the extension north of Golf Road limits the allowable alignment profiles.

Exhibit 16-8
Range of Costs for Alternative F

Alignment Details	Estimated Cost
At grade Dempster to north of Golf Road (1.1 miles); Aerial structure to terminal (0.9 miles)	$123.5 million
At grade Dempster to north of Golf Road (1.1 miles); Subway to terminal (0.9 miles)	$151.4 million
Aerial structure throughout (2.0 miles)	$162.0 million
Open cut Dempster to north of Golf Road (1.1 miles); Subway to terminal (0.9 miles)	$189.9 million
Subway throughout (2.0 miles)	$224.0 million

16.9 Range of Costs: Alternative G

As shown in the appendix, this alternative combines elements of alternatives D and F to form a loop for the north terminal. Discussions with CTA-Rail Operations on the feasibility of this arrangement indicated that portions of the loop could be single-track, so long as a storage track was provided close to the station, and the station was constructed with an island platform. The length of the single track loop is 0.9 miles, while the double-track portion is 0.4 miles, giving a loop length of 1.3 miles. This when added to the 0.9 miles from south of Golf to Dempster Street, gives an overall extension length of 2.2 miles. The loop arrangement, similar to alternative D, limits the feasible alignment profiles for the north terminal. For cost estimating purposes, the single track aerial structure or subway is estimated at 75% of the unit price of the double-track variant.

Exhibit 16-9
Range of Costs for Alternative G

Alignment Details	Estimated Cost
At grade Dempster to south of Golf Road (0.9 miles); Aerial structure to terminal (1.3 miles)	$128.5 million
Aerial structure throughout (2.2 miles)	$160.0 million
At grade Dempster to south of Golf Road (0.9 miles); Subway to terminal (1.3 miles)	$161.8 million
Open cut Dempster to south of Golf Road (0.9 miles); Subway to north terminal (1.3 miles)	$193.3 million
Subway throughout (2.2 miles)	$221.2 million

16.10 Average Costs for the Extension Alternatives

In the interest of simplifying the combinations of investment options that are presented in the section below (as well as providing some form of comparison between the alternatives), average investments for the seven line extension alternatives have been developed.

Exhibit 16-10
Average Costs for Extension Alternatives

Extension Alternative	Extension Length	Average Estimated Cost
A	1.6 miles	$134.6 million
B	1.8 miles	$156.2 million
C	1.7 miles	$140.2 million
D	1.6 miles	$135.6 million
E	1.6 miles	$130.4 million
F	2.0 miles	$170.2 million
G	2.2 miles	$173.0 million

The table also includes the extension length, which can be seen to have an influence on the average estimated cost for the particular extension. Another key factor in this determination is the restrictions that a particular routing may place on the alignment profiles that can be applied to the north terminal of the extension. Commentary on those sorts of restrictions was included in the preceding sections where the range of costs for the alternatives were developed.

16.11 Estimated Total Capital Costs

As noted previously, the unit prices for the various alignment alternatives specifically excluded costs for the terminal station or any related facilities, to avoid skewing the results. Therefore, the total capital costs for the various alternatives must add in station and related facility costs, as well as rolling stock (only for the shuttle services to/from Howard Street) and the intermediate station costs.

Intermediate Stations Alone

A preceding section of this chapter indicated that $14 million is being allocated for the Crawford Station and $18 million is recommended for the Oakton station. When these stations are implemented without the extension there is no change in vehicle requirements for the Dempster-Howard rail service, nor is there any immediate need to increase the platform length at Dempster. However, the costs for Crawford and Oakton are based on either of these stations having a 520-foot platform (capable of handling a 10-car train) installed. Some modification of either Hamlin or Skokie Substation may be necessary to support either station, and that allocation is estimated to be around $2 million. Therefore, the minimum capital cost investment would be in the range of $16 million to $20 million.

Intermediate Station plus Extension – No Through Loop Service

The next highest capital cost investment would be to implement one of the intermediate stations and the line extension, but not to expand the line to handle longer-length trains as would be required for the through Loop express service.

In this case the $14 or $18 million station investment, plus the $2 million existing substation improvement cost is also required. Note that this reflects an intermediate station capable of handling a longer-length train, but no change to the Dempster platform length. The line extension with terminal station would be implemented, along with all the associated costs (additional substation on the extension, longer-length platform at the terminal station, terminal station amenities [similar to those at Linden Avenue, Wilmette], etc.). The extension alignment profile is assumed to be at-grade throughout, presenting a result for the lower range of costs

Exhibit 16-11
Low Range of Costs – Alternative A; No Change to Dempster

Investment Category	With Crawford	With Oakton
Intermediate Station	$14 million	$18 million
Existing Substation Mods.	$2 million	$2 million
Line Extension – At-Grade	$72.9 million	$72.9 million
Terminal Station with flat lot parking (600 spaces)	$35.9 million	$35.9 million
Four new cars at $1.5 million	$6 million	$6 million
TOTAL	**$130.8 million**	**$134.8 million**

When structured parking is substituted for the flat lot at the terminal station, this would be expected to increase the terminal station cost by $4.4 million (including all allocations and contingencies). Therefore, the total low-range cost investment would increase to between $135.2 and $139.2 million.

At the upper range of the costs for Alternative A is an all-subway alignment, but retaining the at-grade terminal station. The cost for the extension would increase to $190.3 million. Inserting that alignment cost in the above calculations, the cost with the intermediate station at Crawford would be $248.2 million, while with Oakton the total would be $252.2 million. When structured parking is substituted for the terminal station, the cost for the “Crawford option” increases to $252.6 million, and for the “Oakton option” to $256.6 million.

As shown in Exhibit 16-3, the range of investments for the other extension alignment profiles for this alternative falls between these upper and lower bounds.

Intermediate Station plus Extension – Longer Length Platforms at All Stations

This investment option considers what happens when it is decided that all stations should have platforms capable of handling 10-car trains. Therefore, the Dempster station must be replaced, and the full complement of improvements made to the existing substations in order to support an increase in the level of train service.

As shown in Exhibit 16-12, the range of the Dempster station costs (including acquisition of the UPRR right-of-way from Niles Center to Dempster, construction of a temporary facility and the demolition of the existing station) is between $20.5 and $32 million. The average prices per alignment alternative are applied to this estimate to keep the range of options manageable.

Exhibit 16-12
Estimated Total Cost – Alternative A with Crawford Intermediate Station, Replacement of Dempster Station and Line Extension

Investment Element	At-Grade Extension	Extension in Open Cut	Aerial Struct. Extension	Subway Extension
Crawford Station	$14 million	$14 million – (Note A)	$14 million – (Note A)	$14 million – (Note A)
Dempster Station	$21 million	$24 million	$26 million	$32 million
Alternative A	$73 million	$138 million	$138 million	$190 million
Terminal Station	$36 million	$37 million	$40 million	$43 million
New Cars	$6 million	$6 million	$6 million	$6 million
TOTAL	$150 million	$219 million	$224 million	$285 million

Note A – Only at-grade alternative is practical for intermediate station. This cost applied to all extension alignment profile investment options.

When the same investments are considered with the substitution of the Oakton Station for the Crawford facility, the results are:

Exhibit 16-13
Estimated Total Cost – Alternative A with Oakton Intermediate Station, Replacement of Dempster Station and Line Extension

Investment Element	At-Grade Extension	Extension in Open Cut	Aerial Struct. Extension	Subway Extension
Oakton Station	$18 million	$18 million – (Note A)	$18 million – (Note A)	$18 million – (Note A)
Dempster Station	$21 million	$24 million	$26 million	$32 million
Alternative A	$73 million	$138 million	$138 million	$190 million
Terminal Station	$36 million	$37 million	$40 million	$43 million
New Cars	$6 million	$6 million	$6 million	$6 million
TOTAL	$154 million	$223 million	$228 million	$289 million

Note A – Only at-grade alternative is practical for intermediate station. This cost applied to all extension alignment profile investment options.

Following a similar calculation for the other extension alignment alternatives, the range of the estimated total costs would be:

Exhibit 16-14
Comparison of High- and Low-Range Total Costs by Alternative

Alternative	With Crawford	With Oakton
A	$150 to $285 million	$154 to $289 million
B	$224 to $297 million	$228 to $301 million
C	$216 to $285 million	$220 to $289 million
D	$215 to $274 million	$219 to $278 million
E	$208 to $274 million	$212 to $278 million
F	$241 to $319 million	$245 to $323 million
G	$246 to $316 million	$250 to $320 million

The generation of these investment ranges by alternative reflects the limitations on the terminal station alignment profile. For example, only an aerial structure or subway station would work for the terminals for alignments B through G. For alignment A, the low-range profile is at-grade throughout. In all cases, a subway alignment is the high-range alternative.

It is important to recall that this is a feasibility study, and that the level of detail required for the extensions has generally been expected to be less than that for the intermediate stations. This is part of the reason for defining average investments per alternative and then

developing the ranges of investments as has been done in this chapter. However, it is difficult to embrace all the options possible per alignment, whether one is considering the station at Dempster, or the specifics of the profile of the extension between Dempster and Golf Road or to the north of Golf.

16.12 Estimated Operations and Maintenance Costs

CTA provided data on its 2001 Rail Cost Model during the course of the Task 1 (data collection) effort. This enumerated costs per station day and costs per car mile (among others).

In terms of the costs per station day, this was estimated at $1128.67 (including the customer assistant, station appearance and security costs) in 2001 Dollars. Escalating this by 4% per year to 2003 Dollars, the station cost per day would now be around $1220.

Applying this result to 250 weekdays per year, the annual cost would be $305,000. If this is applied on the basis of 365 days per year, the total annual outlay would be $445,300.

So for the intermediate station, the added operational cost would be between $305,000 and $445,300 per year. When the terminal station is added, this doubles to between $610,000 and $890,600 on an annual basis for the two new stations. This presumes that no additional security costs have been added to the station cost model in the time since it was received.

In the case of the train operation costs, with the intermediate station only, there would be no change from the current Yellow Line annual operating cost.

When the extension is added to the Yellow Line, as noted in Chapter 13, it appears that the projected ridership for the extended line will warrant an increase in peak period train service, compared to the current operating plan.

The one-way line length will increase to 6.7 miles (on average). The current weekday schedule provides 190 one-way trips. As noted in chapter 4, peak period service would be increased to 22 round trips, or an addition of six trips per peak, 12 one way trips per day.

These 202 trips would equate to 2,707 revenue car miles per day. If 10% is added to this total to cover non-revenue movement (to/from the yard, etc.), the daily total becomes approximately 2,980 car-miles. The 2001 cost model estimated that the per-car mile cost was $3.30. If this is increased by 4% per year to 2003 Dollars, the per-car mile cost would be $3.63. Applied to the 2,980 car miles per day, the total cost would be $10,820.

When this is applied over the 250 weekdays per year, the annual vehicle-mile O&M cost for the extended Yellow Line becomes $2.7 million. If the service were to be provided 365 days per year, the annual cost would be $3.9 million.

However, as in the case of the station costs, we need to examine the additional cost due to the extension and increased service, not just the total cost of the extended line. The existing service consists of 190 five-mile trips, for a daily total (including a 10% non-revenue allocation) of 2,090 car-miles. At a per-car mile cost of $3.63, the current service would cost $7,590 per day. Over the 250 weekdays per year, this service would cost $1.9 million.

Therefore, the additional cost of the extended service over the current schedule would be $0.8 million. If the extended service operates 365 days per year, the additional cost over the current service would total $2.0 million.

So, the total additional operating costs for the intermediate station and the extended line are:

- Intermediate station plus extension, operated 250 days/year: $1.4 million
- Intermediate station plus extension, operated 365 days/year: $2.9 million

As was noted in the introductory comments to this Chapter, there have been no detailed discussions relative to bus route changes as a result of the proposed intermediate station or the extension of the Yellow Line north to Old Orchard Road. This makes it impossible to estimate the revisions to the bus O&M costs.

It is possible that routes 54A or 254 (if rail service is extended to the weekends) would be truncated at the Oakton station. However, offsetting this truncation would be the provision of an Old Orchard area circulator or shuttle service, as was discussed with Pace at a study review meeting. This new service is felt to offset the likely savings due to the possible truncation of the 54A/254 services.

It is also possible that the implementation of the rail service would allow reductions in the frequency of operation of CTA route 97 north of Dempster Street, and on Pace route 215. Again, no detailed discussions have occurred in this regard.

As part of a future assignment on the continued study of the intermediate station and the line extension these sorts of detailed discussions with each of the service boards ought to occur.

17.0 PUBLIC INFORMATION MEETING

The public informational meeting was held in the Village Hall (Council Chambers) on the evening of June 26, 2003. It presented an opportunity for the public to view and comment on the planned improvements for the CTA Yellow (Skokie Swift) Line. Handouts and comment forms were distributed at this meeting and presentation boards were displayed.

Meeting notices were sent out through the Village's Community Development Department and its Public Information Office. The means of notification included distribution of a form letter to various businesses in the Old Orchard area, specific notification to members of the Skokie Chamber of Commerce, legal notices in area newspapers, and a press release.

About 50 persons attended the public meeting, including a mix of area residents, business owners and representatives of various agencies. Following a brief presentation by the project team, about a dozen attendees took the opportunity to clarify the information and provide comment.

Comments on the study were mixed in support of the project. Particular concern was expressed relative to the number of projected riders and the costs, both capital and operating, for the intermediate station and the line extension. There was further concern about the ability of Old Orchard Road to accommodate additional vehicular traffic. In addition, concern was expressed with regard to the extension's alignment profile and impacts on the surrounding neighborhood, including safety, noise and housing values.

The project team responded to each question. With regard to the ridership forecasting, it was noted that these were developed using NIPC population and housing projections for the Village and that these projections have been at issue for some time now. Specifically, the Village noted that employment figures for the Old Orchard area were considerably understated in the NIPC data, perhaps by as much as a factor of four. Further to this issue, new developments planned/under construction over the duration of this study were not reflected in the NIPC projections.

A conservative approach was used to develop the capital costs. This was done to lessen the chance of additional funding needs as the project progressed. Possible reduction of the length of the Oakton Station as well as deletion of the auxiliary entrance was noted as one way of reducing the construction costs.

The study team also clarified the process by which this project would proceed. The implementation process was explained, noting that this was just one of several regional projects competing for funding, and that the region's endorsed projects would then compete with those from other parts of the country. The timeframe for the construction of the intermediate station and the line extension was questioned, with the study team representatives noting that the intermediate station could be constructed in as little as 10 years, while the line extension might have a 20-year schedule leading to operations.

In summary, the verbal comments were fairly evenly split between the supportive and the negative regarding the extension. The intermediate station at Oakton received almost totally positive comments.

In addition, a reporter for the "Skokie Review" attended the meeting, and a report on the proceedings was included in the July 3, 2003 edition of the newspaper. This report was also picked up by other sources, including the website "Chicago-L.org", which reports on current and past happenings on the CTA rail system.

Written comments were accepted for a two week period following the meeting. Written comments, phone calls and electronic comments were received from 10 citizens and 5 businesses with one anonymous comment. Documentation of the comments and letters are included in the appendix.

18.0 INTERMEDIATE STATION EVALUATION

Based on the feasibility study analysis, it is recommended that the proposed intermediate station at Oakton Street be advanced toward implementation. The proposed intermediate station at Crawford Avenue is recommended to be dropped from further consideration. The Oakton Street station has stronger, long-term development possibilities compared to the Crawford Avenue station, which is located in a stable neighborhood of single-family residences. Furthermore, the ridership projections for the two stations indicate that the Oakton station would have slightly stronger demand and greater integration with other transit services. These intermediate station recommendation factors are discussed below.

18.1 Factors Evaluated

Several factors were considered in developing the intermediate station recommendations, including:

- Service and operation impacts
- Opportunities for connections to other transit services
- Proximity to potential major traffic generators
- Access considerations
- Conceptual costs (both capital and operations)
- Potential ridership
- Development potential
- Congestion impacts
- Land use and neighborhood compatibility
- Safety aspects

18.1.1 Service and Operation Impacts

From a service and operations standpoint, the two potential intermediate stations have similar impacts. Implementing either station would result in an increase of one minute to the one-way running time, resulting in an end-to-end travel time of nine minutes from Howard to Dempster.

A unique operating concern at the proposed Oakton Street station is the location of the southbound train stop relative to the gap in the third rail across Oakton Street. This concern can be addressed by locating the train stop further to the north than normal from the south end of the station platform. Even if the station did not have an auxiliary entrance at Searle Parkway, a platform of sufficient length could be built to accommodate the longest-length revenue service trains. However, this would only become an issue if through express operation to the Loop is implemented. The ridership projections indicated that the existing two-car train operation would be sufficient for the rail shuttle service between Howard and Dempster (or Old Orchard).

18.1.2 Connections to Other Transit Services

As currently configured, one bus route serves the proposed Crawford Avenue station and three bus routes would serve the proposed Oakton Street station. As was discussed in previous technical memoranda, there are no suitable sites at the proposed Crawford Avenue location to facilitate construction of an off-street bus terminal. Currently, the same situation prevails at the Oakton Street site. Section 18.1.9 discusses potential sites that could be used to construct off-street bus interchange facilities in the future.

18.1.3 Proximity to Major Traffic Generators

There is only one major traffic generator within one-half mile of the proposed Crawford Avenue station. One facility that was not previously mentioned in this context (owing to not being one of the top 10 employers in the Village) is the CTA Skokie Shops complex. This facility would be within one-half mile of the proposed Crawford station. Current (August 2003) employment at this facility is estimated to be 350 persons, most of which commute by private automobile.

Currently, there are four major traffic generators within this same distance of the proposed Oakton Street station. Of these, Pharmacia has recently announced that it will close its Skokie facilities. The firm is currently looking for potential buyers for these facilities. It is our understanding that the firm has considered using the possibility that there will be a new rail station at Oakton Street as a selling-point for its facilities. The proposed Oakton Street station site has the further advantage that the zoning within one-half mile of the site is conducive to further major development taking place. This is not true for the proposed Crawford Avenue station location where the surrounding zoning is for single-family residential use.

18.1.4 Access Considerations

At a study review meeting, the Village of Skokie noted that its bicycle study and the Central Area Land Use Study will address access in and around the proposed Oakton Street station. Therefore, the results of these studies may be expected to improve on the current situation which is described below.

Considering the major employers within one-half mile of the Oakton station, two are located to the north and west of the station (Pharmacia and William W. Meyer), one is located west of the proposed station location (the Village Hall) and one is to the south (Oakton Community College). Access from the north may be facilitated by provision of an auxiliary station entrance at Searle Parkway. Improvements to the pedestrian access along Searle Parkway may be required to enhance the attractiveness of this facility.

Lamon and Niles Avenues represent the logical routes by which Oakton Community College (OCC) students and staff would reach Oakton Street in order to reach the proposed station. The intersection at Lamon/Oakton has crosswalks on the west and south sides. There is no cross street on the north side of Oakton. Figure 18-1 shows this intersection as it currently exists.

Figure 18-1: This view looks southwest along Oakton at Lamon. Crosswalks radiate out from the southwest corner of this intersection. Lamon does not continue across Oakton Street to the north, so no crosswalk is required on the north side of Oakton. If access from OCC via this street were to be promoted, signalization of the intersection may be warranted.

Niles Avenue extends either direction from its intersection with Oakton. The intersection is signalized and crosswalks have been provided in all four quadrants.

Figure 18-2: Looking west along Oakton to the intersection with Niles Avenue. Although already signalized and having crosswalks in all four quadrants, signal cycle times may require adjustment if this route is promoted as an access path between OCC and the proposed CTA station.

The closest intersection to the proposed Oakton station is at LaCrosse and Oakton. LaCrosse does not extend north of Oakton similar to the configuration at Lamon, one block to the west.

However, the intersection is signalized, with an access driveway from the public parking lot and the Walgreens' store on the north side of Oakton. Striped crosswalks have been provided on the north side of Oakton and on the west side of LaCrosse. Current cycle times favor Oakton Street, given the heavier volume of traffic on the east-west street.

Figure 18-3: Looking west along the north side of Oakton at LaCrosse. The van to the right is waiting to exit the driveway from the public parking lot/Walgreens', which is in the background. As noted in the text, cycle times for traffic from the driveway can be quite long. If pedestrian access across Oakton is to be promoted, as a means of getting to the rail station, these cycle times may require adjustment.

Pedestrian access provisions at Oakton/Skokie Boulevard to the east of the CTA right-of-way were also inspected. Striped crosswalks are provided on either side of Oakton Street, but not across Oakton. Therefore, access from the south side of Oakton (from either the public park or the residential area to the east) must be made at an intersection to the east of Skokie Boulevard.

Figure 18-4: This view looks east along the north side of Oakton Street at Skokie Boulevard. The striped crosswalk is prominent.

Access to existing bus routes should also be considered in this context. Westbound CTA Route 97 buses stop at LaCrosse/Oakton, as do eastbound buses. The westbound stop is shown in Figure 4-3. However, this stop is quite distant from the proposed Oakton station site. While these stops could be relocated closer to the proposed station, access across Oakton (to/from the eastbound buses) is an issue, as would be the impacts on traffic and bus route safety of stopping closer to the Oakton/Skokie intersection.

The combination of the stoplight at Oakton/Skokie and the periodic lowering of the CTA crossing gates on Oakton Street was observed to create traffic queues extending back to and beyond LaCrosse for eastbound traffic in the peak period. Stopping an eastbound bus closer to the CTA tracks would aggravate this condition. While it might be possible to provide a pull-out bay for the bus, this could also have adverse affects on scheduled operation, as the bus may be delayed whiling pulling out into the main traffic lanes on Oakton.

Again, it must be emphasized that the two other studies, referenced previously, may alter the conditions described above.

As the proposed Oakton Station is being recommended over a station at Crawford Avenue, access provisions for the proposed Crawford station were not considered in detail. Access parallel to Crawford would not be as great an issue as that across Crawford. In particular, facilitating access to/from a northbound Pace Route 215 bus would require the provision of crosswalks, and perhaps signalization to hold auto traffic on Crawford.

18.1.5 Conceptual Costs

The proposed Oakton station would have a higher capital cost than the Crawford Avenue station, even if both stations were similar in size and configuration (single-ended). This is due to the style of catenary towers used through the Oakton station site that would have to be removed to facilitate construction. It is possible that the catenary towers might also have to be removed at the Crawford station site, but the fact that the vertical members are outside the track area means that only partial removal might be necessary. However, with the planned conversion of the CTA Yellow Line to third rail propulsion, these costs would be dependent on the implementation timing.

There are also Com Ed high-tension towers between the tracks at the Oakton station site that must be relocated (depending on platform/facility length, which is discussed below). During the public meeting of June 26, 2003, some suggestions were made relative to styles of towers that could be used to minimize these costs (single-support towers in lieu of the traditional style now found along the Yellow Line right-of-way, etc.). These suggestions could be examined in a subsequent phase of this project (such as during preliminary engineering). For now, the conservative estimate was retained, as it does not limit any options.

Another capital cost difference between the two intermediate station locations arises in that the Oakton station may be lengthened to include an auxiliary entrance at Searle Parkway. The larger station and second entrance, coupled with the need to relocate an existing emergency crossover clear of the construction zone add to the capital costs.

As has been noted elsewhere, provision of this auxiliary entrance, while increasing the cost of construction and operations, does have the positive aspect that it may make selling or leasing of the Pharmacia properties on Searle Parkway easier to sell.

Of course, the capital costs for the Oakton Station may be lowered by deferring the construction of the auxiliary entrance at Searle. In this case the platform would be about half as long (520 feet), with provision made to extend it in the future. Therefore, the only cost difference between Oakton and Crawford would be related to the catenary and high-tension tower relocations at Oakton Street (one pair of high-tension towers would still require relocation with this shorter platform length. Design and construction of such a facility is estimated to cost around $8.5 million. As commented upon in the preceding paragraph, deferring the construction of the auxiliary entrance will reduce the utility of the station with respect to any future buyer of the Pharmacia installation on Searle Parkway.

Other alternatives were discussed at the study review meeting. Given that the Yellow Line will probably not go to through loop train operation immediately, it is possible that the platform length could be further truncated to 260 feet, providing sufficient platform length to handle a four-car consist. When this design change is made, the cost of constructing the station would drop to around $4 million. This short platform length would avoid relocation of any of the ComEd towers, but would still require removal of the CTA catenary towers at the construction site. Another design refinement suggested in the comment review meeting was that a walkway could connect the auxiliary entrance to the Oakton station platform, as opposed extending the high-level platform construction over the full 1100-foot length. This too could reduce design and construction costs, and should be considered in a future phase of this assignment.

The subject of a suitable design/construction price for a new at-grade station was one which caused considerable concern to the PB Team during the Task 3 effort. In the Task 4 comment review meeting, the CTA representatives noted that the cost estimate for the reconstruction of the Kedzie station on the Brown Line (capable of berthing an 8-car train, and including an auxiliary entrance at the Spaulding Avenue end of the facility) is estimated to cost around $4 million. This is considerably different from the CIPM-provided estimate for a 520-foot platform, at-grade station ($14 million). Adding the cost of catenary tower removal, ComEd tower relocation and reconstruction of the emergency crossover clear of the station site, the estimated cost for the Oakton station would be around $8 million. This is highly dependent on the cost for relocation of the ComEd high-tension towers. The cost for tower relocations should be pursued in a future phase of this study allowing for refinement of the estimated cost for the intermediate station.

Neither of the intermediate station designs or cost estimates currently includes any station area amenities (off-street bus facilities, kiss-and-ride, or park-and-ride spaces, etc.). This is due to the fact that both sites are constrained and there are no available properties in close proximity to the proposed station sites. Future enhancement of the station design is possible, and should be encouraged.

18.1.6 Potential Ridership

A major concern at the Task 3 comment review meeting was the estimation of a ridership projection for the Oakton station in the absence of any line extension. Members of the PB Team prepared this estimate based on information provided by CATS. The potential ridership through the Crawford station in the absence of a line extension was also estimated.

Under these estimates, Oakton is projected to be the busier station of the two, having daily boardings in the range of 900 to 1,200, while Crawford would have been 600 and 900 boardings per day. These projections are comparable to the daily boardings reported at other intermediate, suburban stations on the CTA rail system. Consider the May 2003 traffic data for the following stations:

- Main Street/Evanston – 1,257 boardings/day
- Dempster Street/Evanston – 750 boardings/day
- South Boulevard/Evanston – 786 boardings/day
- Austin/Congress – 1,285 boardings/day
- Ridgeland/Lake – 1,312 boardings/day

However, it must be noted that each of the above-listed stations offers one-seat service to the loop at peak travel times (the Evanston stations) or at all times of operation (Congress and Lake stations). In contrast, the projected ridership for the Oakton station is based on continuation of the shuttle service operation. Provision of through service could be expected to stimulate the demand at this station, as well. Diversion of riders from the Dempster facility to the Oakton station is estimated to be between 5 and 10%, at most.

Another comment that must be made with regard to the ridership estimates is the level of confidence in the source data. The Village has made comment several times about the concerns they have over the NIPC population and employment data for the area. When these projections are corrected, this can be expected to result in additional demand for the rail service, compared to that currently projected. When these factors are taken into account, it appears that the proposed Oakton Street station is warranted, when compared to other similar stations on the CTA rail system.

Note that provision of an intermediate station is anticipated to increase the overall Yellow Line ridership, by making more destinations readily accessible, superseding the current transit access routes which either require an all-bus trip, or back-tracking from the Dempster Station, using CTA bus Route 97. The proposed Oakton station would increase the daily boardings on the Yellow Line by around 40 percent, while the proposed Crawford station would contribute an estimated increase in line boardings of approximately 35 percent.

Per a request from the Village, a rough estimate of revenue generated from the Oakton station (as well as the Old Orchard station) is included as an appendix.

18.1.7 Development Potential

The zoning around the proposed Oakton station site is a combination of business, commercial, downtown district, light industry, and general residential, depending on the specific area being considered. As has been reported in previous chapters, the zoning along Oakton Street to the east is such that multiple-use buildings are now under construction. The proximity to a future transit station should support this pattern, leading to greater potential ridership at the Oakton station than is currently predicted.

The area surrounding the proposed Crawford station site is zoned entirely for single-family residential use. While it is true that the zoning around the proposed Crawford station site could also be changed, this would not be compatible with the surrounding land use or consistent with what the area road network could support.

18.1.8 Congestion Impacts

Estimation of current and future level of service (LOS) for the area roads was not part of the work scope for this feasibility study. Continuation of the existing Yellow Line shuttle service from Howard to Dempster is not expected to result in a change in frequency of the trains during the peak or base periods. However, the presence of an additional station stop may result in longer crossing gate down-times at the adjacent cross streets. As the CTA noted in

a previous task comment review meeting, cycling of the gates can be handled in such a way to minimize the impact on pedestrian/highway traffic.

Other possible congestion impacts include possible bus stop relocations closer to the station site and/or the provision of bus pull-off lanes to accommodate these stops. Either of these possible approaches could result in negative traffic impacts as well as slowing down the existing bus operation.

In previous task reports, the use of the UP Railroad right-of-way between Oakton and Searle as a bus circulation lane was considered. As was then noted, this has two negatives impacts associated with it – remoteness from the transit station and an increase in bus turning movements. The increase in turning movements would adversely affect the safety of the operations and would also increase the running time for the bus service.

18.1.9 Land Use and Neighborhood Compatibility

Zoning issues were briefly described in the section on development potential. While it is true that rail transit stations can be located in purely residential areas (there are other such examples on the CTA rail system today), the greatest potential for long-term station growth is where the development promotes higher-density land use. In this context, the proposed Oakton station site is favored over the Crawford station site.

Another aspect to be considered is the potential for future enhancement of the transit facilities at a given station site. While a rail station can be built without off-street bus facilities or kiss-and-ride/park-and-ride facilities, there is no question that these can enhance ridership. However, neither Oakton nor Crawford currently has any vacant land in close proximity. It is recognized that this situation may change over time.

Given that Oakton is recommended over Crawford for the intermediate station site, some of the adjacent properties were examined for their potential to augment the proposed Oakton station facility. These properties are identified in Figure 18-5.

The most attractive site in terms of size and proximity to the proposed Oakton Station is the Crafty Beaver site immediately to the west of the CTA right-of-way. All indications are that this is a viable business and per the Village, there are no plans to close the operation down. However, the site should be monitored as any subsequent Skokie Swift studies proceed. The site has sufficient land that it could be used to provide off-street bus facilities alongside the station. A possible further enhancement would be to provide an auxiliary aerial entrance from the bus area to the rail station, passing over the inbound track.

However, it should be noted that there are concerns about locating bus facilities proximate to the traffic lights at Skokie Boulevard and LaCrosse (as well as the Yellow Line grade crossing), since the buses need clear and easy access/egress from this facility. While the bus entrance/exit could be protected by another traffic signal, making sure that the street was clear to allow buses to enter/exit Oakton Street would certainly result in additional congestion on the thoroughfare. However, this may be less than or equal to the existing auto traffic for the store.

Figure 18-5: Sites of possible future interest for the enhancement of the Oakton Street station are shown in this aerial.

Figure 18-6: The Crafty Beaver parking lot and store immediately west of the Skokie Swift right-of-way are shown in this view looking north from the north curb of Oakton Street.

In terms of proximity to the station site, the next site to be kept on the watch list is the Crafty Beaver office building on the south side of Oakton Street (4811 W. Oakton). This site is of sufficient size that off-street bus facilities could be provided.

Figure 18-7: Looking south from Oakton Street into the property at 4811 W. Oakton. The queue of traffic on Oakton shown in this view resulted from the combination of traffic light cycles and the passing of a northbound Yellow Line train prior to the picture.

As has been discussed in previous task reports, a concern for this site is providing safe pedestrian access to the proposed rail station on the other side of Oakton Street. While this could be done with a bridge over Oakton Street, the cost impacts (including ensuring Americans with Disabilities Act compliance) should be recognized. As with the Crafty Beaver store site, ensuring bus access to/from the off-street facilities, as well as possible impacts on the flow of traffic on Oakton Street must also be considered.

The next highest-priority in terms of potential sites near the proposed Oakton station is the Elite Oil and Truck Rental site at Skokie and Searle. As shown in Figure 18-5, this is an irregular shaped parcel, but could be used if an auxiliary entrance at Searle is provided. The site could be used for off-street bus facilities, or for a kiss-and-ride drop-off area. Figures 18-8 and 18-9 show this site in the context of its surroundings.

Figure 18-8: This view looks southwest at the Elite site. A northbound 54A bus is approaching on Skokie Boulevard.

As shown in Figure 18-8, this site is in immediate proximity to the CTA 54A and Pace 254 bus routes. Other concern stems from the number of turning movements required to get the CTA 97 and other buses to Skokie/Searle and then back to their normal route.

Figure 18-9: Looking northwest along Skokie Boulevard at the Elite site. The irregular shape of the parcel is due to the Yellow Line being aligned on a slight angle to the northwest while Skokie Boulevard is oriented north-south at this location.

Use of the site for a kiss-and-ride facility is also possible. Using it for a park-and-ride site would result in a very small lot size. If it is decided to provide park-and-ride at this location, a better choice would be to acquire/lease the Pharmacia parking structure (approximately 4811 W. Searle), should it become available. This facility is shown in Figure 18-5, as well as in the background of some of the other illustrations. It has a high parking capacity, with the potential for joint/shared parking arrangements. In combination with the large park-and-ride lots at the Dempster station (and planned for Old Orchard Road station, if the line is extended), this would far exceed the projected demand for parking on the Yellow Line. Conversion of a portion of the structure to provide off-street bus facilities is possible, but this facility is remote to all bus routes, and so must be considered in the context of bus access, safety and running time impacts. Finally, there is the question of the cost of adapting a portion of the structure to a bus terminal.

18.1.10 Safety Aspects

The existing CTA Yellow Line grade crossings at Oakton Street and Crawford Avenue have accommodated train operation more-or-less continuously for almost 75 years. Chapter 4 includes the safety record of these crossings. Oakton Street had the second-highest number of reported accidents of the six Yellow Line grade crossings in the period 1999-2001. The trend over those three years reflected an increasing number of accidents at this location per year. However, none of these accidents directly involved a CTA train. Further, nearly half the reported accidents at this location did not indicate whether or not the grade crossing gates were a factor in the accident.

In the case of Crawford, it was in the bottom half of the Yellow Line crossings in terms of reported accidents between 1999 and 2001. With only five accidents over these three years, there was no clear trend in terms of accidents per year at this location. None of the reported accidents directly involved a CTA Yellow Line train.

How a new station at these proposed locations might affect safety is a subject for a possible future phase of this study. However, as discussed among the project team at the Task 1 comment review meeting, it is possible to interface the train stop and gate activation with the intersection signals (at Oakton/Skokie), such that the gates-down duration is minimized. This will affect the speed at which a train passing through the station without stopping might operate, but that situation is considered to be the exception. A similar situation exists on the Douglas Branch of the CTA Blue Line at the Cicero station, where eastbound trains must wait for gates to be activated before leaving the station. The gates are interfaced with the nearby traffic signals at Cicero/Cermak.

In the case of Crawford Avenue, there are no nearby signalized intersections, so train-dwell in the station and the interface with the crossing gate activation would be simpler.

For both locations, the time that the gates are down would be longer than currently exists, as a train either approaching or leaving the station would operate at a lower speed than the trains which now pass through these locations without stopping.

The proposed station set-back from Oakton (which could also be implemented at any other location, such as the auxiliary entrance at Searle) means that there should not be any adverse impacts in terms of the train operator's line-of-sight when approaching the grade crossing. The reduced speed on leaving or approaching a station will also give the operator more time to observe conditions on approaching the grade crossing.

Replacement of the overhead catenary by third rail at Crawford and Oakton will occur regardless of whether or not the intermediate stations are implemented, so this issue is not a factor particular to this study. The standard CTA provisions for right-of-way fencing, cattle guards and other required safety devices would be necessary at these locations. These would be provided regardless of the intermediate station's construction, so they are not factors specific to this study. The method for handling pedestrian access at an at-grade station adjacent to a major thoroughfare is shown in Figure 18-10.

Figure 18-10: Cicero Avenue end of the Cicero/Douglas station as it appeared when new in 1979. Highway and pedestrian gates are down. Note that the station enclosure extended up to sidewalk line at this location.

Another method of handling a station entrance is shown in Figure 18-11.

Figure 18-11: The entrance to the Francisco station on the Brown Line is shown. The cattle guards and other safety elements at the pedestrian crossing are shown in the foreground of the view. Although pre-dating ADA requirements, the set-back of this station is somewhat similar to what is proposed for the Yellow Line intermediate station.

In terms of increasing grade crossing safety for vehicles and pedestrians, there are other possibilities that could be examined, but which are beyond the scope of this study. For example, cantilevers over the traffic lanes could be installed with flashers and other active safety devices to call further attention to the grade crossing. These sorts of improvements are not specifically related to the implementation of the intermediate stations, and so are outside the scope of this project.

18.2 Comparison of Results

The table below compares the results of the factors evaluated for the two intermediate stations in the previous section.

Exhibit 18-1
Evaluation Summary of Oakton and Crawford as Potential Station Sites

Evaluation Factor	Oakton	Crawford	Remarks
Service/operations impacts	Additional running time required	Additional running time required	Both stations are equal
Connections to other transit service	97, 54A and 254 bus routes	215 bus route	Oakton is superior in terms of connections
Proximity to traffic generators	Four major employers within one-half mile	One major employer within one-half mile	Oakton is superior
Access considerations	Signals and crosswalks exist east and west of Oakton. Other studies may improve situation	No signalized intersections in close proximity. Access paths across Crawford required.	Oakton is currently in a more favorable situation. Pending studies may lead to further improvements.
Capital costs	$8M-$18M	$4M-$14M	Possible to lower capital cost at Oakton (see section 18.1.5)
O&M costs	+$0.3M annual	+$0.3M annual	Both stations are equal
Potential ridership	900-1,200 boardings	600-900 boardings	Oakton is superior
Development potential	Zoning and current developments favor higher density	Completely surrounded by single-family zoning	Oakton has greater long-term potential
Congestion impacts	ADT = 18,000 (1998)	ADT = 14,100 (1998)	Oakton is in a more congested area
Land use/ compatibility	Zoning and neighborhood are favorable	Zoning is entirely single-family residential	Both are suitable for station site; Oakton is more favorable
Safety aspects	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	

On balance, Oakton is superior to Crawford as a proposed intermediate station site. While the capital costs for the Oakton station would be higher, it is possible to reduce the design and construction costs (by eliminating the auxiliary entrance at Searle, reducing the platform length, etc.). The Oakton station site also has the greater, long-term potential. Therefore it is recommended as the intermediate station site for the Yellow Line.

There are certain design aspects (length of high-level platform to be constructed, type of ComEd tower to replace the existing ones, etc.) that can be examined in a future phase of this study as a means of further reducing capital costs.

18.3 Oakton Station – Conceptual Design

The project work scope called for the preparation of a "3-D wire-frame perspective rendering" for the proposed Old Orchard Road terminal facility. Preparation of this rendering was deferred while the extension alternatives were being reviewed. The PB Team and the Village agreed that it was more appropriate to prepare the "3-D wire frame perspective rendering" for the intermediate station, given that it had always been the expectation that the intermediate station design would be taken to a higher level of detail, compared to that for the line extension.

In previous discussions with the Village, the PB Team had proposed that consideration be given to adopting some of the style of the original Oakton Street station. On reviewing some of the photographs of the old station, as well as the Village's experience with the relocation and restoration of the Dempster Street station, the Village agreed that this would be an appropriate design to reflect in the proposed new intermediate station.

Figure 18-12: The original CRT Oakton Street station is shown in 1930. The "Prairie School" design theme used in many of the Niles Center Line intermediate stations is evident.

PB's architectural subconsultant, DLK, Inc., prepared several concept views of the proposed Oakton Street station. These are included in the Appendix. It is important to note that these architectural renderings do not include the grade crossing warning equipment and other safety elements (taller right-of-way fencing, etc.). These have been omitted to provide a clearer view of the station facility in the renderings, and are not intended to convey that this protective equipment would not be included in the actual installation. The renderings also include architectural styling elements that may or may not be included when the actual station is constructed.

The proposed station design includes many elements from the original station architecture. It is important to remember that these are conceptual renderings, and so many other design elements (CTA station signage, etc.) are not included in these views. These details would be developed in a later phase of the study.

18.4 Intermediate Station Recommendation

Based on the above analysis of the proposed new Yellow Line intermediate stations, the proposed Oakton station is recommended to be carried forward towards implementation. The proposed Oakton station is expected to have reasonable ridership potential for a suburban location and would provide improved accessibility and mobility options for downtown Skokie and the surrounding community. The Oakton station site also has the greater, long-term potential, with greater ability to attract transit supportive development than any other of the alternative intermediate station sites that were examined.

19.0 OLD ORCHARD ROAD EXTENSION EVALUATION

Three extension alternatives to Old Orchard Road are recommended for further study: Alternative A (UP Railroad right-of-way to Old Orchard Road); Alternative B (north of Niles North High School campus); and Alternative E (east of Edens Expressway). An at-grade alignment can be used for the terminal station in Alternative A, while either aerial or subway alignment can be used for the terminal station for Alternatives B and E.

19.1 Alternatives Eliminated

At the request of the Westfield Shoppingtown management, all alternatives that would use shopping center property to locate the terminal and ancillary facilities are dropped from further consideration. This is because the shopping center is already constrained, in terms of parking capacity and the ability to support other uses. This is especially true at times of peak shopping demand. Accordingly, Alternatives C, D, F and G are eliminated.

While it is true that legal means could be used to perpetuate the presentation and future consideration of these alternatives, this may not be the best use of funding or resources. In addition, it may not result in a productive relationship between the Village, sponsoring agencies and the shopping center.

However, it is appropriate to note that consideration of the alternatives recommended for elimination may be reversed (for other reasons) in a subsequent planning effort. Of the four, Alternative D could be implemented with the least impact on the shopping center, but it would have the greatest impact on the residences and businesses fronting on Golf Road.

19.2 Alternatives Recommended for Further Study

Four of the seven extension alternatives to Old Orchard Road would have located some portion of their terminal facilities on Westfield shopping center property. This leaves three remaining alternatives – A, B and E - to be carried forward.

These recommendations coincide with the results of the School District 219 stakeholder meeting with one exception. At that meeting Alternative D was also recommended; however, as it would use shopping center property for its terminal complex, it was also eliminated.

19.3 Viable Alignment Profiles

From a capital cost standpoint, extending the line north using an at-grade alignment will result in the lowest design and construction costs. However, as noted in the Task 3 comment review meeting, at-grade crossings at Dempster Street and Golf Road must be considered from the perspective of safety (train, motor vehicle and pedestrian), traffic impacts and other considerations.

Given that Dempster Street is a Strategic Regional Arterial (SRA), application to cross it at grade must be reviewed by the Illinois Commerce Commission (ICC), as well as the Illinois Department of Transportation (IDOT). This review process will be lengthy, and at the end of the process the potential exists for the two entities to turn down the application for the at-grade crossing.

In addition, safety and traffic impact concerns were raised at the project public information meeting on June 26, 2003 for the crossings at Gross Point Road and Church Street, particularly related to crossing safety for school children at Church Street. These are items that can and should be addressed in the course of Preliminary and Final Engineering.

If Alternative A were to be selected, this could remain at-grade all the way into and including the terminal station at Old Orchard Road. However, this is not practical for Alternatives B and

E. In those cases, the terminal station must be on aerial structure (the only other option would be in subway, which is considered to be cost-prohibitive).

For the aerial guideway, there are issues of aesthetics and noise control that would have to be addressed in order to increase acceptability. Once again, these are items that can be addressed in detail during Preliminary and Final Engineering.

It is also feasible to continue to consider combinations of profiles for the north extension of the Yellow Line to Old Orchard Road. These include an aerial alignment through and including the Dempster Station, or open-cut construction. Each profile has associated issues which must be addressed during engineering, in order increase neighborhood understanding of and support for the proposed alignment.

19.4 Evaluation Factors

The same factors that were applied to the intermediate station (see Chapter 4) are applied to the proposed line extension alternatives.

19.4.1 Service and Operation Impacts

The three alternatives are virtually identical in terms of overall length, ranging between 1.6 and 1.8 miles, one-way. This translates into a negligible difference in terms of the one-way travel time, with each alternative adding about four (4) minutes to the one-way travel time. When added to the additional running time for the intermediate station, this would result in a one-way travel time on the order of 13 minutes. The extended running time would require additional trainsets in order to provide service at the same headway as is currently provided for the Yellow Line. At this headway, the per-train loadings would remain within the CTA service standards.

For the at-grade crossing of Dempster Street, the timing of the grade crossing gates may be interfaced to the adjacent traffic signals. There might be some additional delay while a train waits for the gates to come down because of a signal change. However, this delay is likely to be negligible and is a detail that can be worked out during engineering for the proposed extension.

19.4.2 Connections to Other Transit Services

All three extension alternatives would offer the same transit connectivity. This is due to the fact that the area bus routes, as well as any routes to be developed in the future could be diverted to serve any one of the proposed terminal station locations. In the absence of extending the line onto the Westfield shopping center property, each of the alternatives will require bus shuttle (or coordinated schedules on the fixed-route services) to provide access to the shopping center and the other area traffic generators. As planning for the extension progresses, Pace's offer to consider the operation of an area shuttle service from the terminal station should be developed in further detail.

Connections at Dempster Street do not depend on the alignment profile, although an at-grade crossing at that location may affect bus running times (due to delay by crossing trains, as well as the signal cycle time for buses leaving the off-street bus facility). This scheduling detail will be studied in greater detail during Preliminary and Final Engineering.

For the proposed Old Orchard Road station, the connections again are not dependent on the alignment profile. The terminal station location may affect bus routing and running time. For example, using Alternative A, and routing all bus routes currently serving Westfield shopping center to the new rail station will increase the running time of those routes. Conversely, it will allow CTA and Pace to improve the rest facilities for their operators, over and above what is now provided.

Regardless of the alternative alignment, it is expected that the Pace 626 bus would be diverted to the Old Orchard Road station, reducing the one-way route length and running time, although not by a substantial amount.

19.4.3 Proximity to Major Traffic Generators

Alternative A offers the most convenient connections to the Cook County Court House and the employers along Old Orchard Road to the west of the rail right-of-way, while Alternative B offers the most direct connections to Westfield shopping center. Alternatives B and E have the best proximity to Niles North High School, while Alternative E has the potential for the best visibility for drivers on the Edens Expressway. However, note that the level of such expressway intercepts in the projected ridership has been assumed to be fairly low, in order to provide a conservative result.

The three alternatives are more or less equal in terms of the number of major traffic generators within one-half mile of the proposed terminal station location. As noted in the preceding section, coordination of fixed-route bus schedules and/or the provision of an area shuttle bus service should be considered in future planning, to improve the connectivity to the area traffic generators.

One concern raised during the public meeting on June 26, 2003, is the ability of Old Orchard Road to absorb additional traffic related to the transit extension. In addition to the signal/ crossing timing issues at Dempster Street, this issue should be studied during the Preliminary and Final Engineering phases.

Lastly, to facilitate pedestrian activity at the terminal stations, a range of pedestrian improvements should be considered for both sides of Old Orchard Road east and west of the transit station location (depending on the alternative), allowing those that wish to walk safely to/from the transit station. This may include extension/construction of sidewalks, provision of walk/don't walk lights at intersections/driveways, sidewalk lighting, etc.

19.4.4 Access Considerations

This section addresses the issues of transit vehicle access, private vehicle access and pedestrian access in more depth. Access by all modes of transportation, as well as by pedestrians, must be maintained during construction of the extension. This includes cross street access and access to the existing Dempster station. Given that the line will be constructed parallel to key utility alignments, access for utility company maintenance and emergency crews must be maintained during construction. Maintenance of traffic (including pedestrians) is a matter to be considered in an engineering phase of the project.

Transit vehicle access includes routing the bus services to/from the terminal station, as well as the planned diversion of the Pace 626 route to connect to the rapid transit line at Old Orchard Road (superseding the existing routing to/from the Dempster station). Providing transit vehicle access to the terminal includes not just the means by which the buses access the station site, but also provision of traffic lights to facilitate entering/leaving the bus terminal.

Increasing the number of turns a bus makes in the course of a trip has an effect on safety and running time requirements. These factors will have to be considered as the planning for the extension progresses.

For private vehicles, the issues include accessing the kiss-and-ride and park-and-ride facilities at the proposed terminal station, as well as the issues of maintaining traffic flow on expressway entrance/exit ramps and on the existing road network. As with bus access to the terminal, the volume of movements (including a high number of turning movements) dictates that the terminal station driveway entrance/exit is protected by a traffic signal.

Pedestrian access issues include the ability to get to the station site from local traffic generators, as well as the circulation within the transit facilities. As with the other factors discussed in this section, these details can be developed during the Preliminary and Final Engineering phases.

19.4.5 Conceptual Costs

The range of costs for Alternatives A, B and E is unchanged from that presented in Chapter 16. Total costs for the extension, excluding the intermediate station and assuming replacement of the Dempster station to accommodate a 10-car train are:

Alternative A:	$135 million (at-grade)	to	$210 million (aerial)
Alternative B:	$170 million (at-grade)	to	$218 million (aerial)
Alternative E:	$154 million (at-grade)	to	$202 million (aerial)

Note that the subway alternative is not carried forward in this comparison due to its high cost.

There are several factors that could reduce the capital costs for the line extension, which should be considered in a future engineering phase. These include:

- Reduction of the overall right-of-way width (outside of stations) to reduce the number of ComEd towers and poles that must be relocated; and
- Information the Village provided in June 2003, indicating that the cost to relocate ComEd towers may be as high as $1.5 million. This is considerably higher than the information that was provided by ComEd to PB in August 2002, at which time the estimated cost to relocate a transmission tower was stated to be no more than $200,000 per tower.

The latter item could have a significant effect on total capital costs, making it more of a priority to investigate the possibility of implementing the design criteria change implied in the first item. As stated previously, these efforts are appropriate refinements of the conceptual work done during the feasibility study.

There is no change to operating costs, compared to those described in Chapter 16. The components of the operating costs will be those of the stations (intermediate and extension) as well as the cost of providing the extended service. As was described in the Chapter 16, if this service is provided weekdays only, the additional operating and maintenance costs on an annual basis will be $1.1 million (excluding Oakton). If provided on a 365-days per year basis, those additional O&M costs will total $2.4 (excluding Oakton) million annually.

No estimate of the changes in bus operating costs can be made at this time. It is appropriate to make such an estimate once the plans for the rail service and the resultant changes to the area's bus routes are more fully developed.

19.4.6 Potential Ridership

There is no change to the ridership estimates provided in the Draft Task 3 Technical Memorandum. In that report, the range of ridership for the Old Orchard station was estimated to range between 1,900 and 2,300 boardings per day. Project team meetings have previously discussed the on-going differences between the Village and the Northeastern Illinois Planning Commission over the population and employment projections. Recent information from the Village indicates that there is a substantial difference between the current actual and projected employment totals in the Old Orchard area, for example. If this proves true throughout the area, it could have a substantial effect on the ridership projection process and results. Refinement of the ridership projections for the terminal station is a standard part of the planning process as a project advances through more detailed engineering phases.

Another point about this facility is that it will serve as both an origin and destination point for transit trips. The study team is aware that there are some transit users that reverse commute using the Yellow Line to access a car left in the Dempster Station parking lot. From there, they continue their trip northward via private auto. It is likely that similar commuting patterns will be noted at the Old Orchard station.

19.4.7 Development Potential

Joint development of the terminal station sites is possible for any of the three extension alternatives. Beyond that, most of the area around Old Orchard is already well-developed, although the access to fast, frequent rail service in the area could serve to stimulate the replacement of lower-density development with high-rise complexes, should the overall market warrant this sort of development.

As in the comments for the intermediate station in the preceding chapter, there is at least one property that should be considered for possible acquisition to augment the proposed transit facility. This would apply only to Alternative A, and the property in question is the single-story office court to the east of the UP Railroad right-of-way on the south side of Old Orchard Road. This is currently an active complex.

If this site were to become available, it should be considered for acquisition, in order to be able to locate all parking within close proximity to the proposed terminal location. This could negate the need to provide parking north of Old Orchard Road in order to obtain the desired capacity at this location. Note that this same site is also a potential site which could be developed in a denser manner, compared to the single-story office court currently occupying the site.

There is also one site within the complex of office towers to the west of the Edens Expressway that remains available for development. In general, the greater possibility for development/re-development exists to the east of the expressway, in closer proximity to the shopping center. For example, the office building at Lawler/Old Orchard (immediately in front of the proposed terminal station for Alternative B) could be redeveloped as a higher-density facility, as part of the station construction. Note that Alternative B would also improve access to the north end of the shopping center, which has historically been the part of Old Orchard with lower traffic levels.

19.4.8 Congestion Impacts

Traffic congestion was not considered in detail in this feasibility study. As with the intermediate station, estimating levels of service on the arterials is beyond the scope of this study, but is an activity appropriate for a future phase. Comment was made during the public meeting about congestion on cross-streets including Golf and Old Orchard Roads, and about what could result if a grade-crossing were reintroduced at Golf Road. In addition, particular mention was made about the effect that locating the transit station could have on traffic flows along Old Orchard Road.

In this same context, queuing of traffic on the entrance/exit ramps to from the Edens Expressway at Old Orchard Road should be included in the future phases. This should consider the existing situation, as well as the projection for what would happen if the line extension were to be built.

19.4.9 Land Use and Neighborhood Compatibility

Of most immediate concern here is the effect the line extension could have on the residential area surrounding the proposed extension to the north of Church Street. The at-grade line can be fenced and receive other safety devices at grade crossings to reduce the possibility of trespassing (some of these devices are shown in the station photos in the preceding chapter). As for the aerial structure, it can be equipped with sound walls and curve greasers

(where appropriate) to contain this noise, but there are also aesthetic issues that must be addressed. Lastly, the open cut can also be fenced on all perimeters, but even this action may not make such construction palatable to the neighborhood.

Specific mention was made by the School District 219 management about equipping the Edens Expressway with sound walls opposite the Niles North High School campus. This is not specifically a part of the Skokie Swift Feasibility Study, but it should be considered as a possible enhancement to this project should Alternatives B or E be implemented.

Concern about land values was expressed by some of the homeowners attending the public meeting. Studies by the Regional Transportation Authority and other transit agencies have indicated that the presence of rail transit can lead to an increase in home values, and that it can serve to induce commercial tenants to move into a particular area. Further study of the experience elsewhere should be made as the planning for this project advances.

There is no particular incompatibility with the surroundings for any of the north terminal locations. As was discussed in the Task 3 report, any loss in existing surface parking due to the construction of the rail terminal and associated facilities can be offset by providing additional capacity (over and above that required for transit patrons) in a parking structure.

19.4.10 Safety Aspects

Previous sections have addressed some of the safety concerns associated with the line extension. The safety issues associated with the extension will become more focused once the alignment, profile, and station terminal have been determined.

However, this is an issue which must be addressed to ensure community support. Comments at the public information meeting and submitted to the Village expressed concern about school children crossing the tracks, if the extension is at grade or open cut, so this issue will need to be addressed.

19.5 Comparison of Results

Alternatives C, D, F and G were eliminated from further consideration based on discussions with the Westfield Shoppingtown management, the affected land owner. Discussions with School District 219 showed support for the remaining alternatives (A, B and E) so these alternatives are recommended for further analysis. Additional analysis will be needed to determine the locally preferred alternative, but the table below compares the results of the factors evaluated for the alternatives.

Exhibit 19-1
Evaluation Summary of Potential Terminal Stations Sites

Evaluation Factor	A	B	E	Remarks
Connections to other transit service	Equal	Equal	Equal	Location, alignment profile may affect schedules
Proximity to traffic generators	Cook County Court house, other office buildings	Niles North, Old Orchard (best in terms of access to north end of shopping center)	Niles North, Old Orchard	Supporting bus services important for connections along Old Orchard
Access considerations	May require signal for Old Orchard cross traffic; pedestrian	Lawler for vehicle entry; pedestrian environment will need to	Lawler for vehicle entry; pedestrian environment will need to	I-94 (Edens Expressway) will be a significant barrier to land uses on the other side unless

	access to offices needed	be improved	be improved (most visible from Edens)	pedestrian environment is addressed
Capital costs	$135M-$210M	$170M-$218M	$154M-$202M	Conservative estimates; depends on alignment profile; subway and Oakton station not included
O&M costs	+$1.1M annual	+$1.1M annual	+$1.1M annual	Equal (all exclude O&M cost for intermediate sta.)
Potential ridership	1,900-2,300 boardings	1,900-2,300 boardings	1,900-2,300 boardings	Must be refined
Development potential	Some opportunity	Greater opportunity	Mid-range opportunity	Redevelopment to higher densities possible at all locations, greater potential to east of expressway
Congestion impacts	Equal	Equal	Equal	Depends on alignment profile
Land use/ compatibility	Equal	Equal	Equal	Concern about residential real estate values along alignment; depends upon profile
Safety aspects	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	Standard CTA design elements can be incorporated	Preventive measures can be applied at station sites

Additional study may reveal some unknown problems, barriers or challenges that may change the situation.

19.6 Old Orchard Road Extension Recommendations

Based on the preceding analysis, three of the extension alternatives (A, B and E) are recommended for further study in a succeeding phase of this effort. Of these, A offers the best access to the locations to the west of the expressway, while B could serve to stimulate commercial traffic at the north end of the Westfield Shoppingtown Old Orchard complex (therefore, desirable to the management of the shopping center) and E would have the best visibility in terms of attracting motorists off the Edens Expressway. It is noted that the greater potential for redevelopment lies to the east of the expressway, favoring Alternatives B and E.

However, this recommendation should not be taken to mean that consideration of the other alternatives (C, D, F and G) is terminated at this point. Consideration of any of these may be revived in the future. Of these four, Alternative D would have the least impact on the shopping center's operation; conversely it would have the greatest impact on the residences and commercial establishments along Golf Road to the west of the shopping center.

20.0 NEXT STEPS

This section presents an outline of items necessary to advance this project to the next phase as well as a summary of items listed throughout this document to be considered during the next phases. However, different procedures will apply depending on if the Village of Skokie chooses to pursue only the new intermediate station at Oakton, or also the extension from Dempster to the vicinity of Old Orchard Road.

General items to be addressed to advance both options for the project include environmental impact analysis, preliminary and final engineering, cost refinement, and other aspects such as funding, land use and public involvement.

20.1 Ridership Forecasting Refinements

It is recommended that a more detailed ridership analysis be performed in any subsequent studies. For future studies, a more detailed modeling approach could incorporate some or all of the following:

- Population and employment forecast review and refinement. The Village of Skokie has recently found that the base population and employment forecasts have a 3,000 job discrepancy. It is recommended that a thorough review of the base and final NIPC 2030 adopted population and employment forecasts be conducted.
- Disaggregation of CATS transportation analysis zones. The CATS transportation analysis zones in this area are section (one square mile) in size. It is recommended that the zone system be disaggregated to quarter-sections (one-half mile by one-half mile) to allow greater detailing of information.
- Model refinements. Given how fundamental drive access is to Yellow Line ridership, better reflecting the choices travelers make in choosing a station could be an appropriate refinement. Also, calibrating or re-estimating parameters to a sub-regional level may result in a more accurate representation of the disutility experienced by a traveler and therefore travel patterns that better reflect actual trip making.
- Bus service. Given the proximity to the Edens Expressway, the new Old Orchard station could make an excellent transportation center for Pace and CTA bus routes. The development of new bus services from the north could increase the boardings at Old Orchard. This could include feeder service as well as reverse commute service to employment centers to the north, such as the Lake-Cook Road area.
- Sensitivity analysis. The ridership on the Yellow Line service is very dependent upon the travel time to downtown Chicago via either the Red Line or the Purple Line Express. A sensitivity analysis would show the effects of decreasing travel time to downtown on ridership levels. The replacement of the overhead catenary by third rail power distribution on the Yellow Line, as well as the lengthening of the Dempster station platform will allow through service (by longer train lengths) south of Howard in the future. Introduction of such a service would likely increase demand at all Yellow Line stations. (Estimating this through route ridership to downtown Chicago was not a part of this study.)

20.2 Oakton Station

On May 7, 2002, the UPRR applied to the Surface Transportation Board (STB) for exemption from the provisions of 49 USC 10903-05, to abandon the 1.04-mile portion of the Skokie Industrial Lead between Dempster and Oakton Streets in the Village of Skokie. An abandonment allows the track, signal and other railroad equipment to be removed (and allows the right-of-way to be sold). The Village of Skokie submitted a letter to the STB, dated May 29, 2002, requesting “issuance of a Public Use Condition as well as a Certificate or Notice of Interim Trail Use rather than an outright abandonment” for that portion of the line between Dempster and Oakton Streets. The village also asked that the carrier be prohibited from disposing of the corridor for a period of 180 days from the effective date of the abandonment authorization, in order to allow the Village of Skokie to begin acquisition negotiations with the railroad. The STB granted these requests in 2002. However, the 180-

day period has expired and the Village has indicated it will send the UPRR a letter stating that it does not have the funding to purchase the property at this time. Should this situation change, the Village should pursue these negotiations with the railroad.

In addition, with the closure of the Pharmacia properties, the village should continue monitoring and reviewing any future development proposals for the site and attempt to negotiate public/private partnerships with the buyer that would facilitate new transit service at Oakton. For example, a shared use arrangement for the parking structure would provide needed park-and-ride access for the Oakton station.

Because the proposed Oakton station is an intermediate station along an existing service, the implementation process has fewer steps than the process for the extension. In addition to preliminary engineering, final design, and system/schedule planning, funding and land use compatibility should be pursued.

In the case of funding, the CTA will need to be a willing partner in the implementation of this station. The CTA has the experience of adding a new intermediate station in conjunction with the City of Chicago with the construction of the Conservatory – Central Park station on the Green Line. The continued planning of the Oakton station will likely need to be a joint effort of the Village of Skokie and the CTA. There are a variety of funds (Section 5309, STP, CMAQ, other federal earmarks, future state funding programs, joint development, public/private partnerships, etc.) that can be used for this station but there will be a need to show that this station is a priority project for the CTA in a financially constrained environment.

For land use, the Village of Skokie should require that the nearby land uses to the proposed Oakton station are transit supportive. This may require changes to the Village of Skokie's zoning code to allow mixed use buildings, lower parking requirements for commercial or residential uses, or changes to the mix of allowed development types in the station area. The Village of Skokie is currently undertaking a downtown land use study that will examine these issues and ensure a strong transit supportive environment.

In all cases, it will be important to ensure public involvement in all steps of the planning process to ensure continuing support for the proposed Oakton station.

20.3 Old Orchard Road Extension

Given the magnitude of the extension project, it is expected that a much longer lead time will be required for implementation than the new intermediate station at Oakton. On May 7, 2002 the UPRR applied to the STB to discontinue operations on the 8.06-mile line section north from Dempster Street to Valley Junction in Northfield. A discontinuance means that the track, signal and other railroad equipment would remain in place. The Village of Skokie should continue to monitor STB filings for the ROW. Future preservation options, such as the following could be explored.

- Pre-Abandonment Preservation Options
  - Negotiations with Carriers
    - Direct Acquisition
    - Rights-of-First Refusal
    - Options Agreements
    - Railbanking
    - Lease Arrangements
  - Protests of Abandonment
  - Public Use Filings
- Post-Abandonment Preservation Options
  - Acquire ROW
  - Lease ROW
  - Eminent Domain
  - Option Agreements

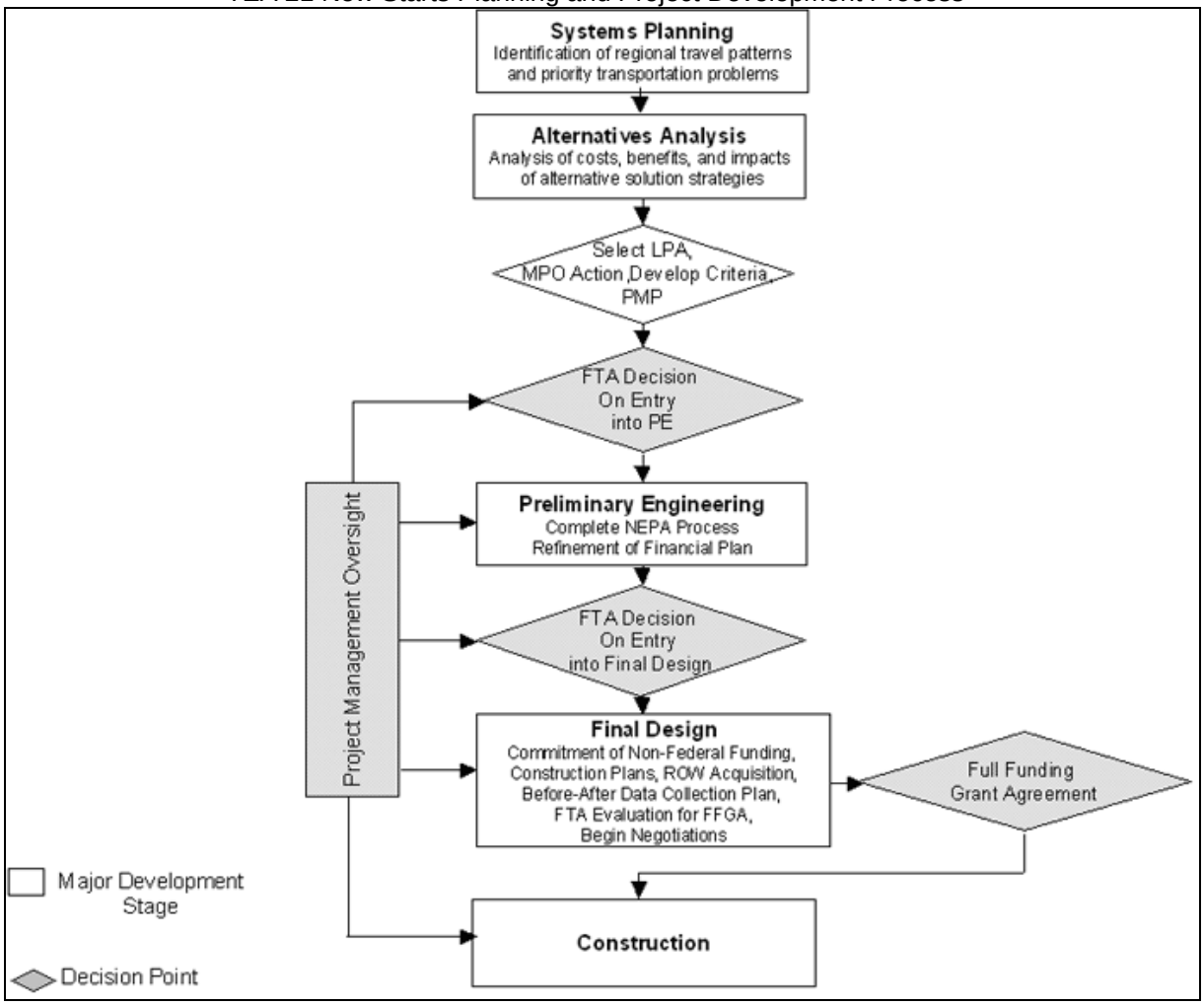
- Transferable Development Rights
- Public Lands Exchange
- Joint Development
- Offers of Financial Assistance

New fixed guideway projects like the extension to Old Orchard represent significant capital investments. Much of the funding for these projects has typically been provided through the Federal Transit Administration's (FTA) Section 5309 New Starts program. However, because of the rising popularity of fixed guideway transit as a means to improve mobility and a community's quality of life, competition for these funds is very intense.

The federal New Starts process is graphically displayed in Figure 20-1 and all projects seeking funding under this program must complete these steps. This process was designed to provide decision makers with the information needed to make investment choices when addressing a defined problem. It will be necessary to align this project to the FTA study process.

The first component of this process is to identify regional travel patterns and to prioritize transportation investments in the planning area, called systems planning. This usually happens during the development of the regional transportation plan (RTP) which is completed every three years by the Chicago Area Transportation Study (CATS).

Exhibit 20-1
TEA 21 New Starts Planning and Project Development Process



Source: Federal Transit Administration

In the July 15, 2003 Draft for Work Program Committee Review of the CATS 2030 Regional Transportation Plan, the Yellow Line enhancements and extension to Old Orchard Road was included as recommendation in the Improvements to Existing Facilities as a Passenger Rail Upgrade and Extension project. Final adoption of the CATS 2030 Regional Transportation Plan is scheduled for October/November, 2003.

20.3.1 Alternatives Analysis

The alternatives analysis is a key phase in the approval process. It is an intensive process and involves a number of components. Potential solutions must be identified and measured to ensure that the best response to the problem is identified. The alternatives analysis also includes conceptual design, operating plan development, costing, and development of a financial plan. In addition, a Draft Environmental Impact Statement (DEIS) or equivalent is typically developed concurrent with the alternatives analysis.

With the enactment of the last federal surface transportation bill, the FTA was directed to develop criteria to use to screen project applications. The FTA uses these criteria to judge the benefit of a project and support its decision to proceed with preliminary engineering and invest in a project through a full funding grant agreement. The criteria and associated measures used by the FTA are:

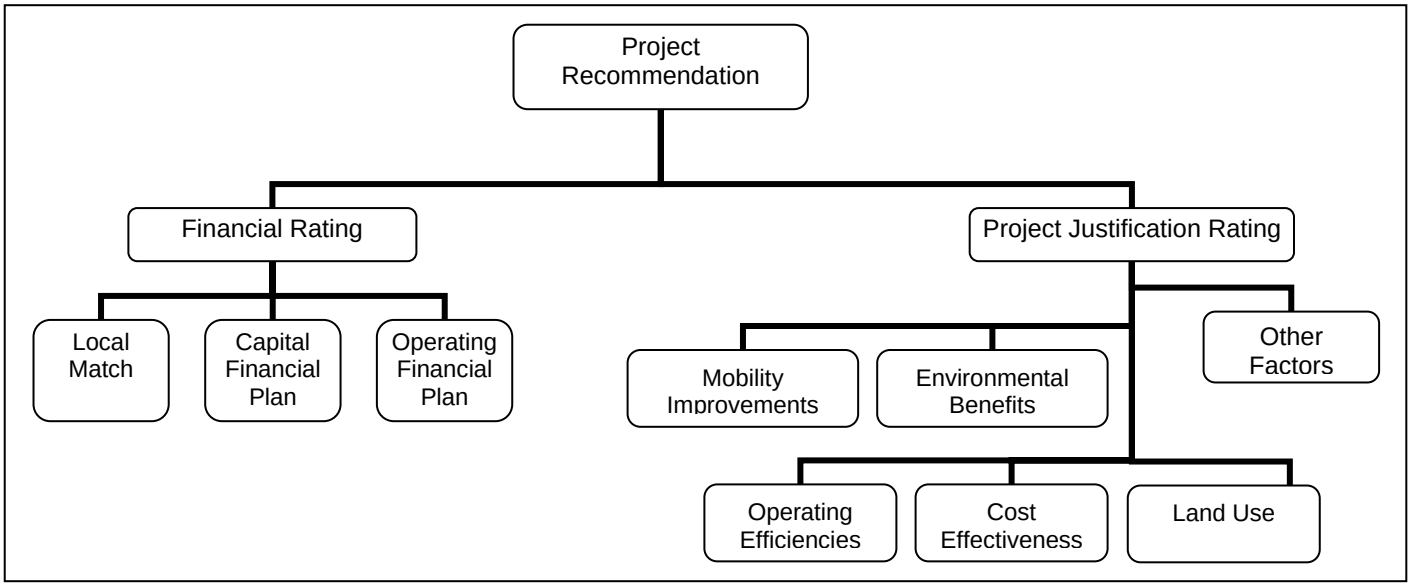
- Mobility improvements;
  - Hours of transportation system user benefits
  - Low-income households served
  - Employment near stations
- Environmental benefits;
  - Changes in regional pollutant emissions
  - Changes in regional energy consumption
  - EPA air quality designation (region)
- Operating efficiencies;
  - Operating cost per passenger mile
- Cost effectiveness;
  - Incremental cost per hour of transportation system user benefit
- Transit supportive land use and future patterns;
  - Existing land use
  - Transit supportive plans and policies
  - Performance and impacts of the policies
  - Other considerations
- Other factors, which are identified project benefits not reflected by other criteria; and
- Local financial commitment.
  - Stability and reliability of capital financing plan
  - Stability and reliability of operating financing plan
  - Local share of project costs

It should be noted that the FTA uses the same criteria as it rates each project at each decision point in the process. By final design, the standard for meeting the criteria is higher than at the beginning of the process. This allows the planning partners time to refine the plans and take steps toward implementing land use related changes and the local financial commitment. Figure 20-2 reflects the ratings process.

For the Yellow Line extension, the first four criteria (mobility improvements, environmental benefits, operating efficiencies and cost effectiveness) are items that would be calculated by the CTA and the Chicago Area Transportation Study. However, the land use criteria and other factors are sometimes addressed by the host municipality since they, rather than the transportation agency, most often have control over land use decisions. The local financial

commitment is also generated by the municipality, in conjunction with the regional transportation agencies.

Exhibit 20-2
The FTA 'New Starts' Project Rating Process



20.3.1.1 Transit Supportive Land Use and Future Patterns Criteria

The success of a transit service depends on a number of items, one of which is the surrounding land use. The FTA clarifies the land use criteria with the use of measures and incorporates a number of supporting factors to guide the project planning in the area of land use. The measure and associated factor(s) are below. Suggested documentation for each factor is also listed.

Exhibit 20-3
FTA New Starts Land Use Evaluation Criteria

Measure	Factor	Documentation
Existing land use	Existing corridor and station area development	Corridor and station area population, housing units, and employment Listing and description of high trip generators
	Existing corridor and station area development character	Descriptions of the existing land use mix and pedestrian environment in corridor and station areas Maps and photos (ground level or aerial) of station area with land uses and building shown
	Existing station area pedestrian facilities, including access for persons with disabilities	Maps identifying pedestrian facilities and provisions for users with disabilities Plans and accomplishments in compliance with ADA regulations
	Existing corridor and station area parking supply	Existing parking spaces/square foot for commercial and/or residential in station area Parking spaces per employee in major region-wide employment centers Land area within ½ mile of station for parking Average daily parking cost in the CBD and/or other areas

Measure	Factor	Documentation
Transit supportive plans and policies: growth management	Concentration of development around established activity centers and regional transit	Regional plans or policies that promote development in established urban centers and activity centers, and/or limits to development outside of urban/activity centers Regional plans or policies to concentrate development around major transit facilities Local comprehensive plans or capital improvement plans that give priority to infill development and/or provide for opportunities for high density redevelopment
	Land conservation and management	Growth management plans with maps Policies that allow for transfer of development rights from open space or agricultural land to urban areas
Transit supportive plans and policies: transit supportive corridor policies	Plans and policies to increase corridor and station area development	Adopted public agency plans/policies and Private sector plans and initiatives that promote development in the transit corridor and station areas
	Plans and policies to enhance transit-friendly character of corridor and station area development	Public agency plans, policies and programs/funding that promote transit-friendly character of corridor and station area development (mixed use, housing, transit-oriented retail, vertical zoning, façade improvements) Private sector plans and initiatives consistent with the public plans
	Plans to improve pedestrian facilities, including facilities for persons with disabilities	Requirements, policies, design guidelines or manuals and funding programs for pedestrian connections and facilities in the station area, with attention to access and accommodations for persons with disabilities
	Parking policies	Allowance for shared parking Plans, policies or zoning which reduce parking requirements or cap parking in station areas Documentation of taxes or other fees for parking in the station area
Transit supportive plans and policies: supportive zoning near stations	Zoning ordinances that support increased development density in transit station areas	Maps and zoning text reflecting existing zoning (allowable uses and densities) as well as changes to allow transit supportive uses and densities in the station area Special transit district overlay allowances Incentives for increased development in station areas
	Zoning ordinances that enhance transit-oriented character of station area development and pedestrian access	Zoning regulations, design guidelines and implementation and enforcement tools to address building footprints and setbacks, pedestrian facilities, façade treatments, mixed uses.
	Zoning allowances for reduced parking and traffic mitigation	Existing parking requirements for residential and commercial development in station areas as well as changes to reduce parking requirements

Measure	Factor	Documentation
Transit supportive plans and policies (tools to implement land use policies)	Outreach to government agencies and the community in support of land use planning	Activities by and/or inter-jurisdictional agreements by public agencies in support of coordinated, transit supportive station area planning Actions of other stakeholders (private industry or community) in support of efforts Materials used during public outreach efforts
	Regulatory and financial incentives to promote transit supportive development	Zoning regulations, incentives and programs for development near transit stations Requirements for traffic mitigation Other revitalization strategies/economic development for station areas or in the corridor
	Efforts to engage the development community in station area planning and transit supportive development	Outreach, education, and involvement activities targeted at the development community or letters or other activities indicating support of project from the development community Transit-oriented market studies Joint development programs and proposals
	Public involvement in corridor and station area planning	Public involvement process documents and materials used during activities Land use planning activities in the station area(s) and corridor Participation level and support by the general public and community groups in land use planning activities
Performance and impacts of policies (performance)	Demonstrated cases of development affected by transit supportive policies	Recently built projects consistent with transit-oriented design principles (increased density, street orientation, pedestrian access) or that mix uses or increase housing near transit
	Station area development proposals and status	Descriptions and plans for new development with details on size, uses, expected implementation dates
Performance and impacts of policies (potential impact of transit investment on regional land use)	Adaptability of station area land for development	Listing of vacant or available land near stations and anticipated amount of development at the sites Projected timeline of implementation for station area developments Ratio of development at build-out to existing
	Corridor economic environment	Regional and corridor economic conditions and growth projections Development market trends in existing corridors and station areas (for areas with existing transit) Demonstrated market support for higher-density and transit/pedestrian-oriented development Locations of major employment centers in the region, and expected growth in these centers Projected population, employment, and growth rates in corridor or station areas compared to region

Measure	Factor	Documentation
Other land use considerations (optional)	Other unidentified or unusual circumstances, conditions, or constraints under which the transit agency operates and which influence local and regional land use policies, plans, and implementation	Documents reflecting a unique project purpose, exceptional historic, environmental or community preservation or enhancement, brownfields redevelopment, a designation as a federal Enterprise Zone of Empowerment Community, an intermodal facility or a special type of transit market

20.3.1.2 Local Financial Plan Criteria

A well developed local financial plan is important, given the competition for funds and the fact that a 'low' rating on the financial plan guarantees a 'not-recommended' project rating. Although current law allows for an 80% federal 'New Starts' grant, most projects that are funded provide a larger 'local' share, which reduces the 'New Starts' share. This 80/20 split is likely to change with the impending reauthorization of the federal transportation legislation to a 50/50 split.

The local financial plan criteria's associated measures include an analysis of the capital financial plan, the operating financial plan and the local contribution. The 'local' share can be a combination of funds from other federal programs, state monies or community funds. The FTA looks for a minimum twenty year funding stream and provides a funding worksheet for applicants to submit as part of the grant application.

20.3.1.3 Locally Preferred Alternative

As a result of the alternative analysis, the locally preferred alternative is identified and begins the process of preliminary engineering, final design and the full funding grant agreement, which leads to construction. The locally preferred alternative must be included in the Regional Transportation Plan, which is updated every three years.

20.3.2 Next Steps: Preliminary Engineering, Final Design and Construction

Once the locally preferred alternative has been selected and been included in the Regional Transportation Plan, the application for preliminary engineering can be submitted. During this phase, the required final environmental impact statement (or equivalent) must be completed and the financial plan and costs refined. In addition, refinement of the project criteria is important to ensure that efforts to meet the goals are progressing, as the project will again go through the FTA ratings process.

If the project proceeds into final design, all of the remaining pre-construction requirements must be completed: right-of-way acquisition, final engineering plans, establishing the funding sources for the 'local' share, implementation of the zoning changes to affect land use and refinement of the other criteria requirements. If this project passes the evaluation process, then negotiations with FTA for the full funding grant agreement can begin.

APPENDICES TO THE FINAL REPORT

SOURCE BIBLIOGRAPHY

Village of Skokie - Skokie Swift (CTA Yellow Line) - Intermediate Stations and Extension Feasibility Study
PB Project No. 16787

Reference Number	Trackwork	Signaling	Power Distribution	Property ROWs	Other	Maps	Traffic Levels	Other	Growth	Land Use	Ridership	Other	1 CTA	2 Pace	4 UPRR	3 Other	4 Village of Skokie	5 Other Munis.	6 Cook County	7 State of Illinois	CATS, RTA	Com Ed	Other	Document	Newspaper	Drwgs or Maps	E-mail/digital	Video, Other	Date Received	Title and Comments
	Technical Content Categories (Select all applicable.): Transit/Railroad					Roads			Planning				Source: RR/Transit				Governments							Medium						
1					X						X			X										X					25-Apr-02	Winter 2000 Ridership by direction by time of day for Pace Routes 208, 212, 215 and 422
2					X						X			X													X		16-May-02	Weekday/Saturday/Sunday ridership, hours and costs for Pace Routes 208, 210, 212, 215, 226, 245, 246, 250, 254, 422 and 626 (saved on w: drive)
3					X							X		X										X					16-May-02	Pace maps and timetables for routes 208, 210, 212, 215, 226, 245, 246, 250, 254, 422 and 626
4					X					X			X											X					16-May-02	CTA March 2002 bus and rail ridership reports (excerpts for Skokie-area routes, only)
5					X						X			X										X					22-May-02	Survey results for Pace Route 208
6					X						X			X										X					22-May-02	Survey results for Pace Route 212
7					X						X			X										X					22-May-02	Survey results for Pace Route 215
8					X						X			X										X					22-May-02	Survey results for Pace Route 422
9*												X						X										X	14-Jun-02	Aerial photo of Wilmette in that portion adjacent to the north border of Skokie
10									X	X								X						X					14-Jun-02	"Village of Wilmette - 2000 Comprehensive Plan" (adopted 28 November 2000)
11										X		X						X						X					14-Jun-02	"Village of Wilmette - Zoning Ordinance" (updated through 11 September 2001)
12*												X						X								X			14-Jun-02	Map of the Village of Wilmette (last updated, 22 Oct 1996)
13	X	X															X											X	14-Jun-02	Set of six (6) undated photos taken at Oakton CTA crossing, showing Oakton/Skokie Blvd. intersection and broken gate arms in ROW
14												X					X										X		14-Jun-02	CD of digital orthos of intermediate station locations
15												X					X									X			14-Jun-02	"National Flood Insurance Program" Map Indices Sheets 1, 2 and 3 of 3 for Cook County and Incorporated Areas, current to 6 Nov 2000
16												X					X							X					14-Jun-02	"Profile of General Demographic Characteristics: 2000" for the Village of Skokie (four [4] pages total)
17*								X									X									X			14-Jun-02	"Village of Skokie - Street Width Map" (undated)
18*							X										X									X			14-Jun-02	"Village of Skokie - Average Daily Traffic Levels Map" (print date: 7 Jun 02)
19							X										X									X			14-Jun-02	IDOT "Annual Average Daily Traffic" map (print date: 6 Jun 02)
20				X													X							X					14-Jun-02	RTA "1994 Rail ROW Preservation Study"
21					X												X							X					14-Jun-02	"Skokie Swift Extension Feasibility Report" (an Interagency Staff Report), Final Draft, dated 18 March 1981
22					X												X							X					14-Jun-02	"Capital Cost Study North Shore Swift" (done for Nortran), dated June 1988
23												X					X							X					14-Jun-02	List of Ten Largest Employers in Village of Skokie (undated)
24												X					X							X		X			14-Jun-02	Westfield Shoppingtown (Old Orchard) customer demographics information, current to 13 Mar 2002 (20 pages total)
25										X		X					X							X					14-Jun-02	"Village of Skokie Amended Zoning Ordinance", current to 7 Jan 02
26									X			X					X							X					14-Jun-02	"The Comprehensive Plan - Skokie, Illinois", dated September 1969
27					X			X				X					X							X					14-Jun-02	"Village of Skokie - Transportation Safety Study" - October 1988 (one volume plus addendum [separately bound])
28					X			X									X							X					14-Jun-02	Accident data for the past three years for each of the grade crossings on the CTA Yellow Line - handwritten summary plus copies of accident reports
29												X					X							X					14-Jun-02	Cook County Property Tax Information
30				X								X					X									X			14-Jun-02	Marked-up Sidwell maps along the proposed extension (8 sheets total)
31*						X		X				X					X									X			14-Jun-02	"Location Map of Current and Projected Major Improvement Projects, 2002 - 2007"
32*										X		X					X									X			14-Jun-02	"Village of Skokie - Official Zoning Map", current to 4 Mar 2002
33*												X					X									X			14-Jun-02	Village of Skokie water and sewer maps, nineteen (19) sheets total
34				X													X									X			14-Jun-02	Marked-up Sidwell aerials of Yellow Line extension (seven [7] sheets total) - TO BE RETURNED TO VILLAGE AT END OF STUDY
35					X										X								X						17-Jun-02	UP response letter (via Village of Skokie) - no data provided

SOURCE BIBLIOGRAPHY

Village of Skokie - Skokie Swift (CTA Yellow Line) - Intermediate Stations and Extension Feasibility Study

PB Project No. 16787

Reference Number	Technical Content Categories (Select all applicable.) – Transit/Railroad: Trackwork	Signaling	Power Distribution	Property ROWs	Other	Roads: Maps	Traffic Levels	Other	Planning: Growth	Land Use	Ridership	Other	Source – RR/Transit: CTA (1)	Pace (2)	UPRR (4)	Other (3)	Governments: Village of Skokie (4)	Other Munis. (5)	Cook County (6)	State of Illinois (7)	CATS, RTA	Com Ed	Other	Medium: Document	Newspaper	Drwgs or Maps	E-mail/digital	Video, Other	Date Received	Title and Comments
36					X						X		X											X					28-Jun-02	CTA April 2002 bus and rail ridership reports (excerpts for Skokie-area routes, only)
37					X								X											X					2-Jul-02	CTA 2001 Bus and Rail Cost Models
38					X						X		X											X					2-Jul-02	CTA Rail System Entering Traffic Data, 1979 to 2001
39					X						X		X											X					2-Jul-02	CTA April 2002 Rail Ridership Data
40					X						X		X											X					2-Jul-02	CTA Rail Ridership Forecasts by Line for 2001-2011
41					X								X											X					2-Jul-02	CTA Yellow Line Supervisor Guide
42					X								X											X					2-Jul-02	CTA Purple Line Supervisor Guides (weekday, Saturday and Sunday)
43					X								X											X					2-Jul-02	CTA Red Line Supervisor Guides (weekday, Saturday and Sunday)
44					X								X											X					2-Jul-02	CTA Employee Route Maps for 54, 54A and 97 bus routes
45					X						X		X											X					2-Jul-02	CTA April 2002 Bus Ridership Data
46					X								X											X					2-Jul-02	CTA 54/Cicero Supervisor Guides (weekday, Saturday and Sunday)
47					X								X											X					2-Jul-02	CTA 54A/North Cicero Supervisor Guide
48					X								X											X					2-Jul-02	CTA 97/Skokie Supervisor Guides (weekday, Saturday and Sunday)
49					X																	X				X			16-Jul-02	Com Ed System Standard for Clearances from buildings, railroads, etc. (three pages)
50*					X																	X				X			16-Jul-02	Com Ed Overhead line and pole location drawings for Skokie (7 sheets)
51*					X																	X				X			16-Jul-02	Com Ed Underground facility location drawings for Skokie (20 sheets)
52				X									X											X					16-Jul-02	CTA Aerial Photos of existing Yellow Line (Howard-Dempster); 23 sheets, dated 1 May 1999; 100-scale
53				X									X											X					16-Jul-02	CTA Aerial Photos of Yellow Line extension (Dempster-Lake-Cook Road); 7 sheets, dated 20 March 1999; 500-scale
54*				X									X													X			16-Jul-02	Plan and elevation As-Built views of CTA Dempster station (three sheets), dated 22 June 1995
55*	X												X													X			16-Jul-02	Drawings of the ballasted track renewal on the CTA Yellow Line (35 sheets, dating to 13 June 1991)
56					X								X											X					2-Aug-02	"Draft Final Report - Green Line Station Location Study" - February 2002
57	X	X	X										X											X					2-Aug-02	July 3, 2002 internal memorandum detailing short- and long-term capital improvement projects on the Yellow Line
58	X	X	X		X								X											X					2-Aug-02	June 28, 2002 table of "Transit Unit Prices", prepared by the CTA-PMO
59					X																	X		X					29-Aug-02	Copy of ComEd e-mail regarding ultimate capacity of various high-tension lines paralleling the UPRR ROW
60					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 138 kV line No. 8803
61					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 138 kV line No. 8805
62					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 138 kV line No. 8809
63					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 138 kV line No. 8810
64					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 138 kV line No. 11416
65					X																	X		X		X			29-Aug-02	Com Ed Structure Locations for 345 kV line No. 15925
66*				X											X											X			2-Oct-02	UPRR ROW Valuation Maps from Skokie to Northbrook (nine sheets total)
67*				X													X									X			2-Oct-02	Aerial photo from Main to Dempster, showing ROW limits

* = oversize original - kept in project flat file

D:\[Bibliog r2.xls]Sheet1

SKOKIE BLVD

WESTFIELD SHOPPINGTOWN OLD ORCHARD

NILES NORTH HIGH SCHOOL

OLD ORCHARD ROAD

GOLF ROAD

CHURCH STREET

DEMPSTER STREET

EDENS EXPRESSWAY

0 100 500 1000

SCALE

PARSONS BRINCKERHOFF

MARCH 2003

SKOKIE SWIFT
FEASIBILITY STUDY

ALTERNATIVE A

SKOKIE BLVD

WESTFIELD SHOPPINGTOWN OLD ORCHARD

NILES NORTH HIGH SCHOOL

DEMPSTER STREET

CHURCH STREET

OLD ORCHARD ROAD

GOLF ROAD

Dc = 8°

EDENS EXPRESSWAY

0 100 500 1000

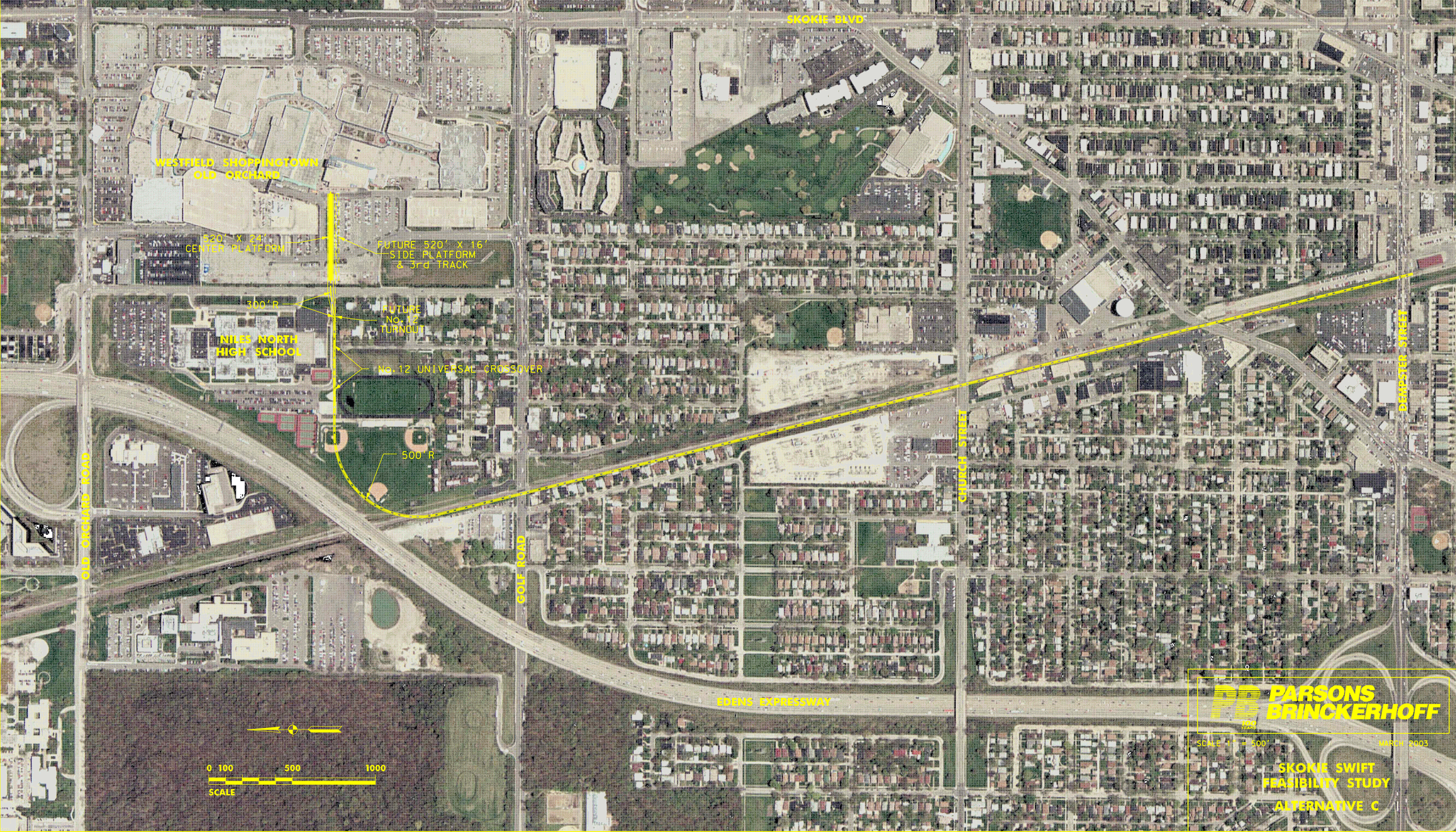
SCALE

PARSONS BRINCKERHOFF

MARCH 2003

SKOKIE SWIFT FEASIBILITY STUDY

ALTERNATIVE B


SKOKIE BLVD
WESTFIELD SHOPPINGTOWN OLD ORCHARD
520' X 24' CENTER PLATFORM
FUTURE 520' X 16' SIDE PLATFORM & 3rd TRACK
300' R
FUTURE No. 12 TURNOUT
NILES NORTH HIGH SCHOOL
No. 12 UNIVERSAL CROSSOVER
500' R
OLD ORCHARD ROAD
GOLF ROAD
CHURCH STREET
DEMPSTER STREET
EDENS EXPRESSWAY
0 100 500 1000
SCALE
PARSONS BRINCKERHOFF
SCALE 1" = 500'
MARCH 2003
SKOKIE SWIFT
FEASIBILITY STUDY
ALTERNATIVE C

SKOKIE BLVD

WESTFIELD SHOPPINGTOWN OLD ORCHARD

820' X 24' CENTER PLATFORM

FUTURE 820' X 16' SIDE PLATFORM & 3rd TRACK

FUTURE No. 12 TURNOUT

300' R

NILES NORTH HIGH SCHOOL

NO. 12 UNIVERSAL CROSSOVER

300' R

OLD ORCHARD ROAD

GOLF ROAD

CHURCH STREET

DEMPSTER STREET

EDENS EXPRESSWAY

0 100 500 1000

SCALE

PARSONS BRINCKERHOFF

SCALE 1" = 500'

MARCH 2003

SKOKIE SWIFT FEASIBILITY STUDY

ALTERNATIVE D

SKOKIE BLVD

WESTFIELD SHOPPINGTOWN OLD ORCHARD

NILES NORTH HIGH SCHOOL

OLD ORCHARD ROAD

GOLF ROAD

CHURCH STREET

DEMPSTER STREET

EDENS EXPRESSWAY

0 100 500 1000

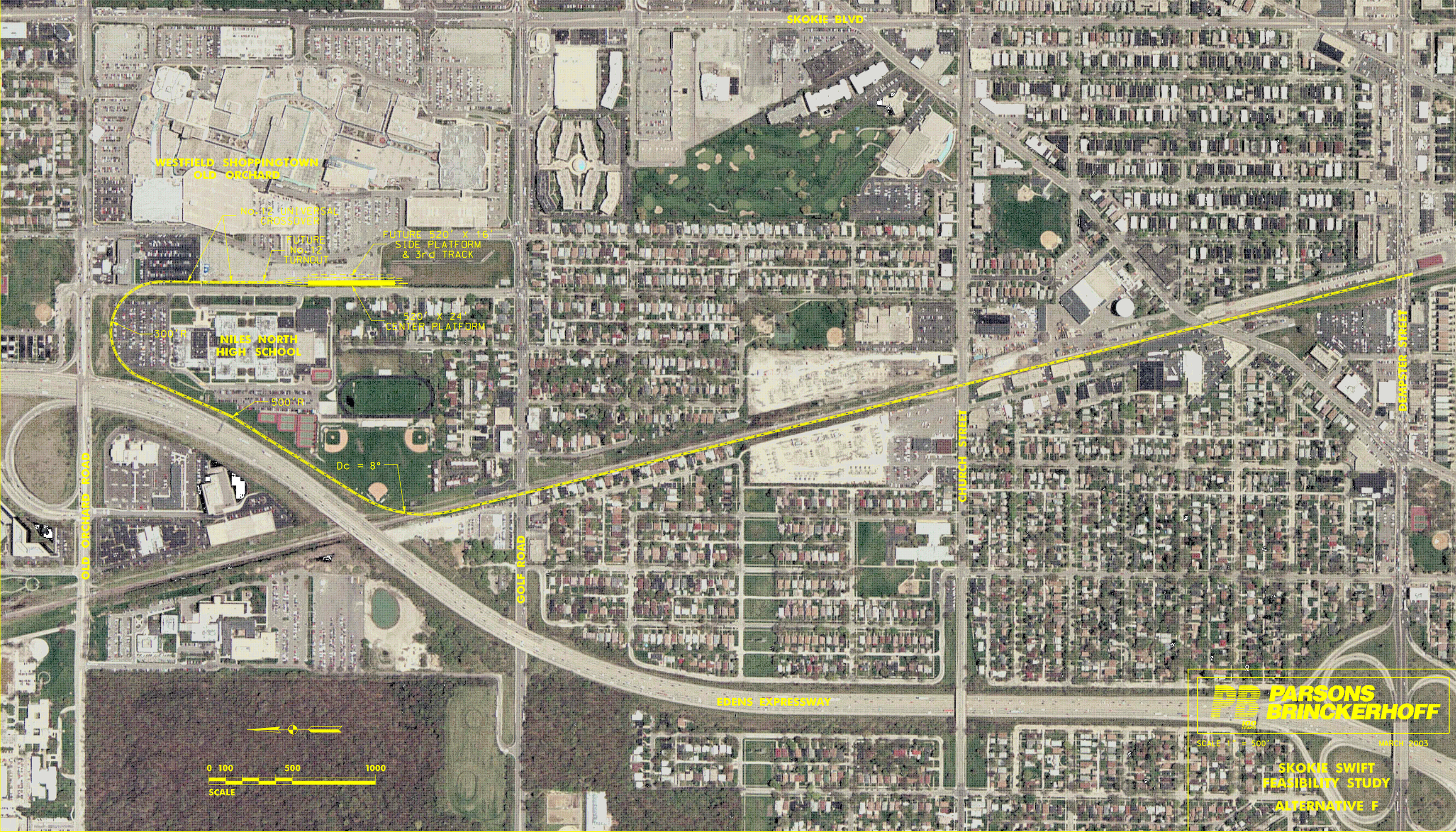
SCALE

PARSONS BRINCKERHOFF

MARCH 2003

SKOKIE SWIFT FEASIBILITY STUDY

ALTERNATIVE E


SKOKIE BLVD
WESTFIELD SHOPPINGTOWN OLD ORCHARD
No. 12 UNIVERSAL CROSSOVER
FUTURE No. 12 TURNOUT
FUTURE 520' X 16' SIDE PLATFORM & 3rd TRACK
500' X 24' CENTER PLATFORM
300' R
NILES NORTH HIGH SCHOOL
500' R
Dc = 8°
OLD ORCHARD ROAD
GOLF ROAD
CHURCH STREET
DEMPSTER STREET
EDENS EXPRESSWAY
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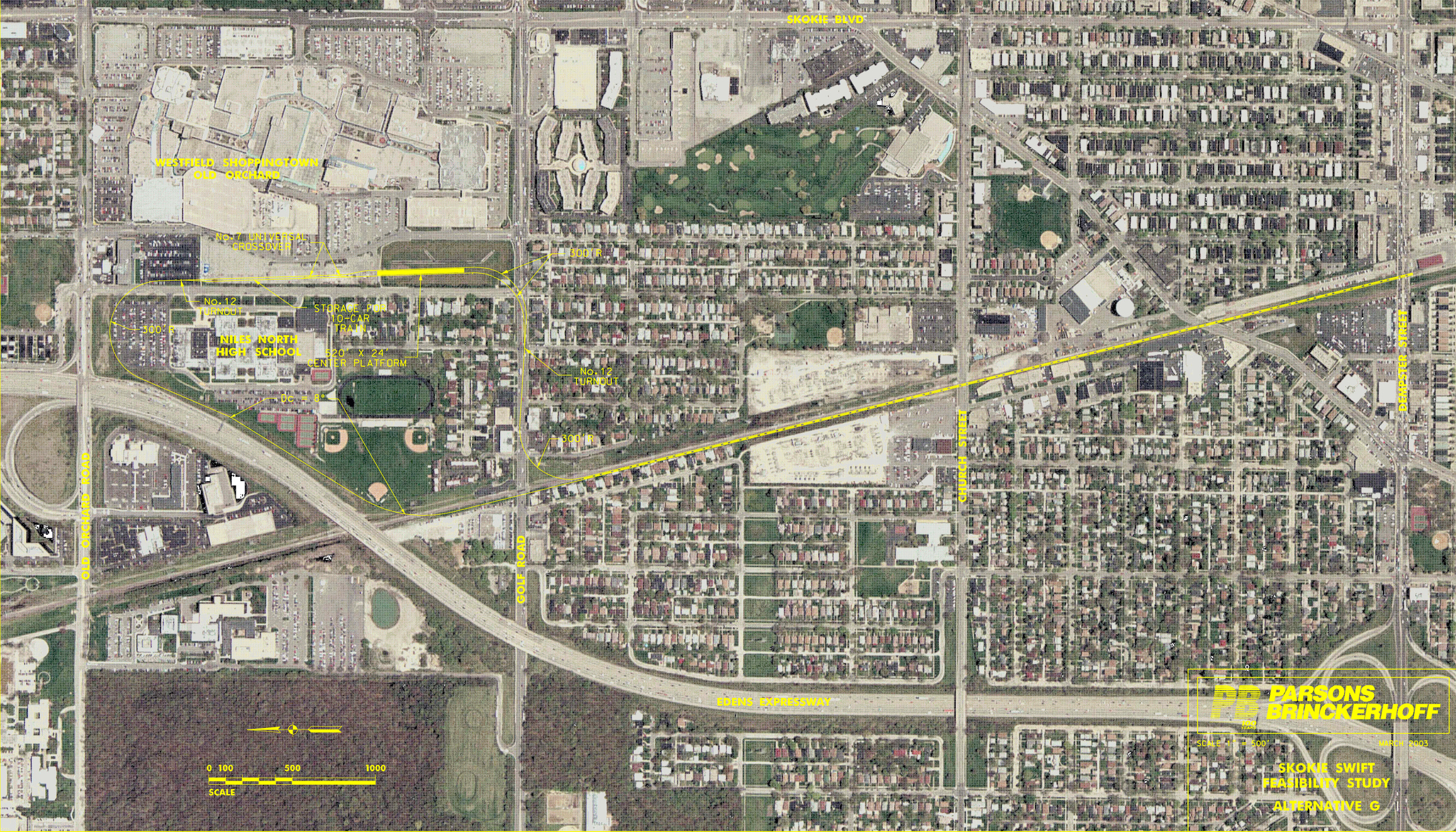
MARCH 2003
SKOKIE SWIFT
FEASIBILITY STUDY
ALTERNATIVE F


SKOKIE BLVD
WESTFIELD SHOPPINGTOWN OLD ORCHARD
No. 7 UNIVERSAL CROSSOVER
No. 12 TURNOUT
300' R
STORAGE FOR 10-CAR TRAIN
NILES NORTH HIGH SCHOOL
520' X 24' CENTER PLATFORM
Dc = 8°
300' R
No. 12 TURNOUT
300' R
OLD ORCHARD ROAD
GOLF ROAD
CHURCH STREET
DEMPSTER STREET
EDENS EXPRESSWAY
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MARCH 2003
SKOKIE SWIFT
FEASIBILITY STUDY
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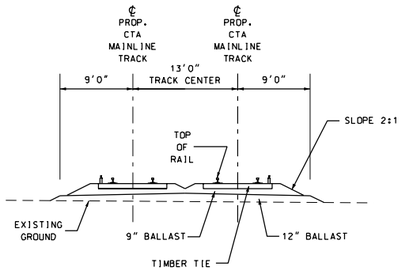
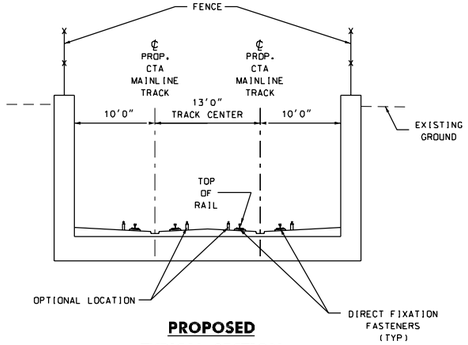


PROPOSED
TYPICAL SECTION
AT-GRADE



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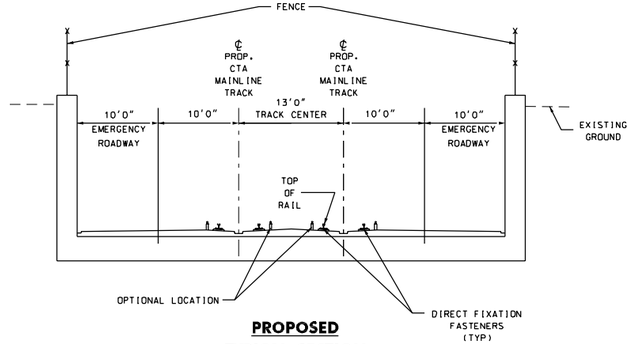
(MINIMUM WIDTH)



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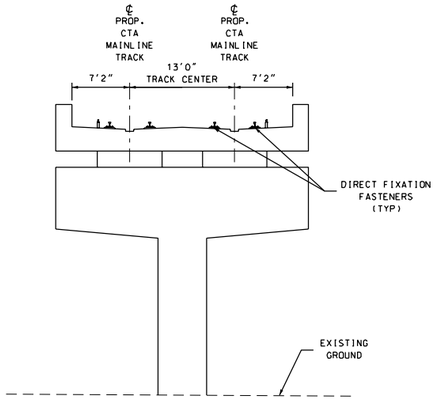
(PREFERRED WIDTH)



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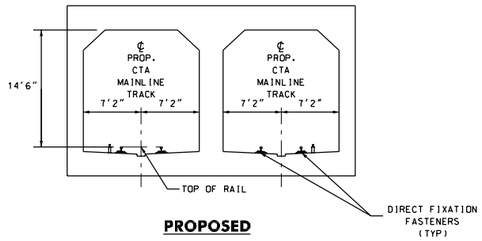
TYPICAL SECTION
AERIAL STRUCTURE



PROPOSED
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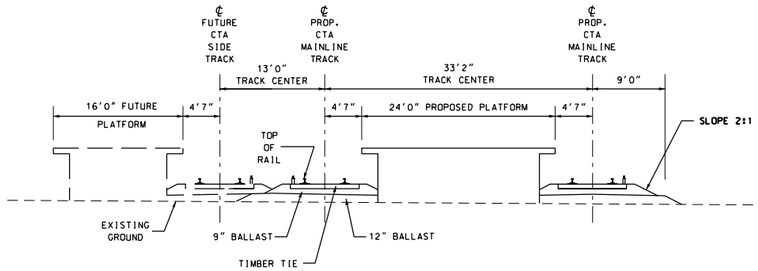
SUBWAY



PROPOSED
TYPICAL SECTION
AT-GRADE ISLAND
PLATFORM STATION

NOTE: EXISTING TRACK CENTERS, WALLS, AND GROUND LINES ARE ESTIMATED AND SCALED FROM AERIAL MAPPING.

VILLAGE OF SKOKIE
1888
Village of Vision
COOK COUNTY ILLINOIS

DLK
ARCHITECTURE
PLANNING
LANDSCAPE
DESIGN/BUILD

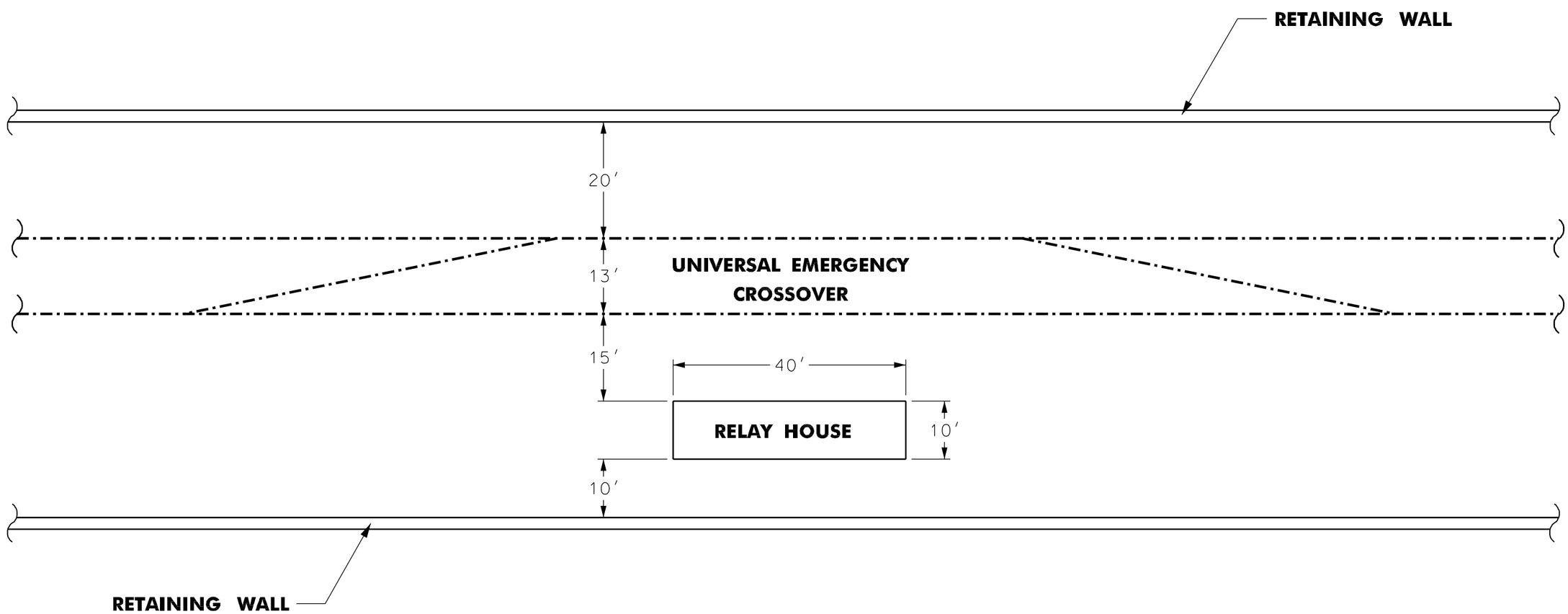
PB PARSONS BRINCKERHOFF
100 YEARS

JUNE 2003

SKOKIE SWIFT
FEASIBILTY STUDY

TYPICAL SECTIONS

SHEET 1 OF 1



DLK
ARCHITECTURE
PLANNING
LANDSCAPE
DESIGN/BUILD

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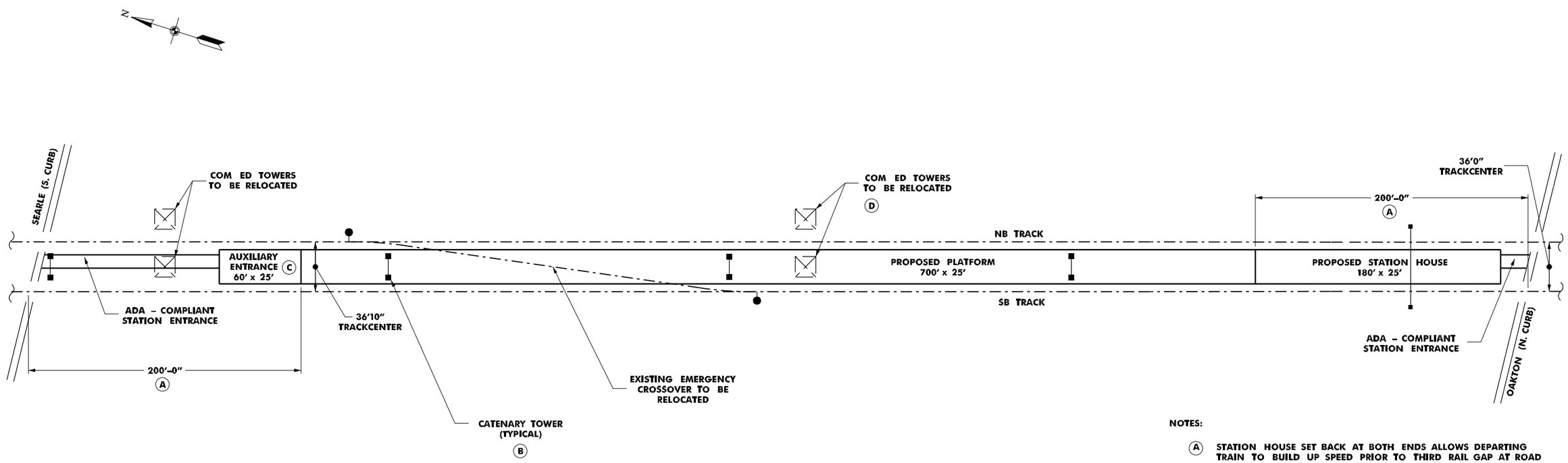
MARCH 2003

SKOKIE SWIFT
FEASIBILTY STUDY

EMERGENCY CROSSOVER
SCHEMATIC DIAGRAM

SHEET 1 OF 1



NOTES:

(A) STATION HOUSE SET BACK AT BOTH ENDS ALLOWS DEPARTING TRAIN TO BUILD UP SPEED PRIOR TO THIRD RAIL GAP AT ROAD CROSSING. PARTICULAR CONCERN IS THE LONGER GAP CROSSING OAKTON STREET.

(B) ALL 5 CATENARY TOWERS IN THIS SECTION TO BE REMOVED TO FACILITATE STATION CONSTRUCTION. COMMUNICATIONS CABLES WOULD BE IN CONDUIT THROUGH THE STATION SITE.

(C) AUXILIARY STATION ENTRANCE WOULD HAVE HIGH – BARRIER GATE FARE COLLECTION EQUIPMENT. CUSTOMER ASSISTANT'S KIOSK (AND OTHER ANCILLARY FACILITIES) WOULD BE IN THE STATION HOUSE AT OAKTON STREET.

(D) ALTHOUGH NOT SHOWN, THERE ARE ALSO FIVE COM ED WOOD POLES THAT ARE ANTICIPATED TO REQUIRE RELOCATION TO FACILITATE STATION CONSTRUCTION.

VILLAGE OF SKOKIE
COOK COUNTY ILLINOIS
1888
Village of Vision

DLK
ARCHITECTURE
PLANNING
LANDSCAPE
DESIGN/BUILD

PB PARSONS BRINCKERHOFF
100 YEARS

MARCH 2003

SKOKIE SWIFT FEASIBILTY STUDY

OAKTON STREET STATION CENTERLINE DIAGRAM

SHEET 1 OF 1

View A - North at Oakton Street

Oakton Street Station - Design Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

NOTE: This drawing illustrates a preliminary architectural concept. Various architectural features and safety-related devices have not been shown, or have been included for conceptual purposes only.

JUNE 3, 2003

DLK

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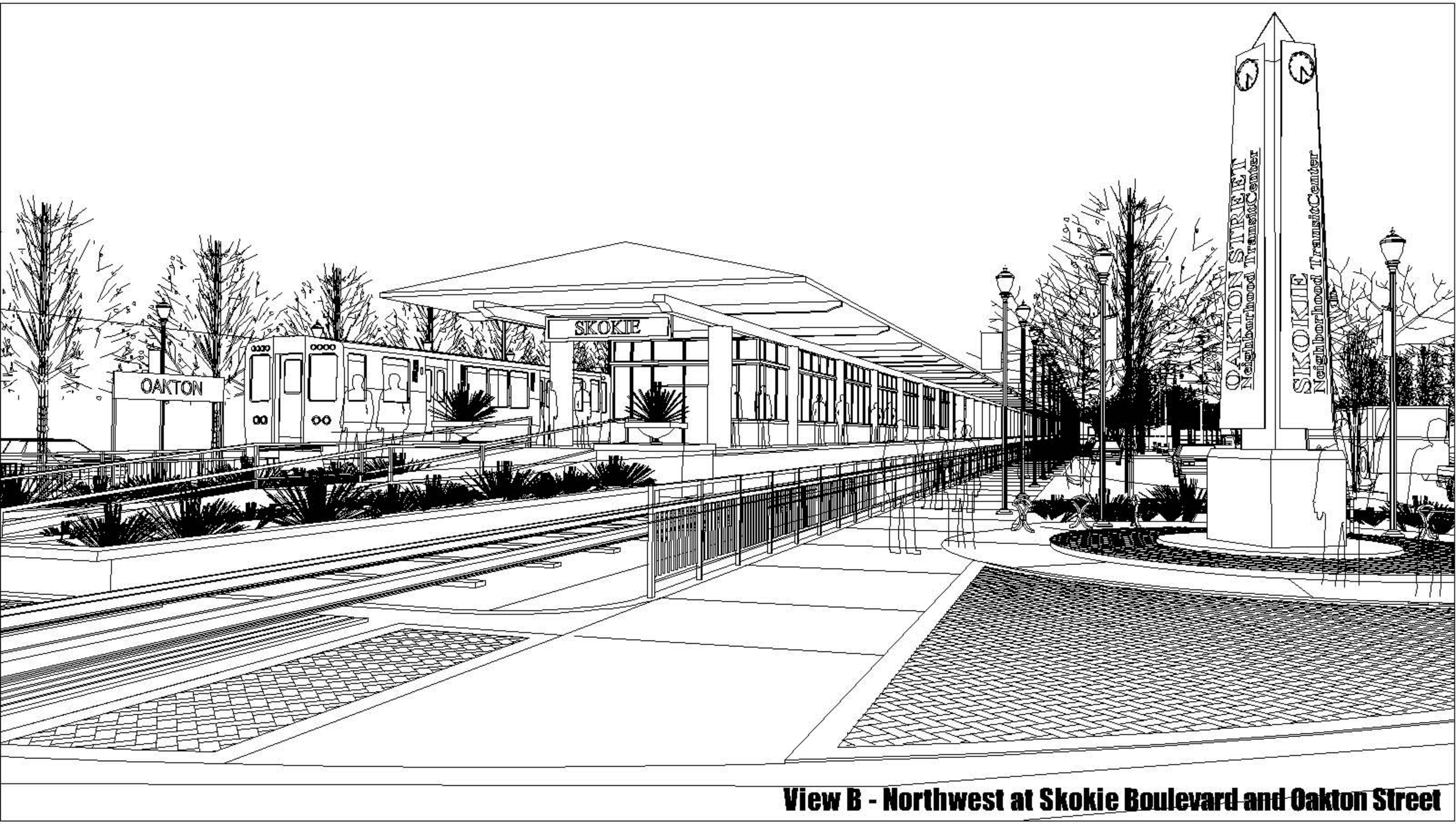

View B - Northwest at Skokie Boulevard and Oakton Street

Oakton Street Station - Design Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY
THE VILLAGE OF SKOKIE

NOTE: This drawing illustrates a preliminary architectural concept. Various architectural features and safety-related devices have not been shown, or have been included for conceptual purposes only.

JUNE 3, 2003

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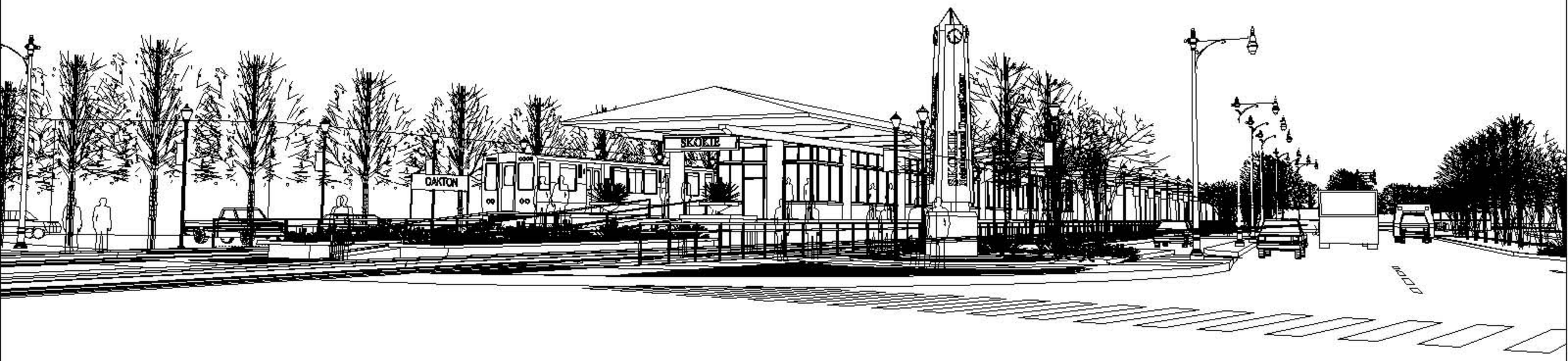


View C - Northwest at Skokie Boulevard and Oakton Street

Oakton Street Station - Design Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY

THE VILLAGE OF SKOKIE

NOTE: This drawing illustrates a preliminary architectural concept. Various architectural features and safety-related devices have not been shown, or have been included for conceptual purposes only.

JUNE 3, 2003

16 September 2003

Mr. Fred Schattner
Director of Engineering
Village of Skokie
5127 W. Oakton Street
Skokie, IL 60077

SUBJECT: Skokie Swift Station Location and Extension Feasibility Study – Revised Estimate of Station Revenue Generation

Dear Mr. Schattner:

As you will recall from the Task 3 Comment Review Meeting, the CTA's representative commented that revenue generation potential for a station is not as much of a determining factor of feasibility as is the estimated ridership through a particular facility.

Nevertheless, I realize the Village's interest in having a rough estimate of the revenue generation for the proposed intermediate station and for the terminal station on the proposed extension.

Based on the refined ridership estimating work for the case of the implementation of the intermediate station with no line extension, the proposed station at Oakton Street is expected to attract between 900 and 1,200 daily boardings. In mid-June 2003, CTA's Mr. Peter Fahrenwald provided the recent systemwide average fare data - $0.825. This average fare calculation takes into account the distribution of reduced fare riders, as well as riders making one or more transfers in the course of their one-way trip.

When this is applied to the 900-1,200 daily boardings at Oakton Street, the daily average revenue would be on average $866.25. Applying this result for 250 days of operation per year, the annual revenue at the proposed station would total around $216,563.

However, as noted in the Final Report for this study, the ridership at Oakton is expected to result in some diversion of riders from the existing Dempster station. The average of these anticipated diversions is around 7.5%. Therefore, the revenue projections for the proposed Oakton station should be multiplied by a factor of 0.925 to arrive at the revenue due to new riders. When this is done the daily average revenue would be approximately $801 and the 250-day estimated total revenue would be around $200,320.

For the proposed terminal station at Old Orchard Road, the range of projected ridership was between 1,900 and 2,300 boardings per day. Using the same systemwide average fare of $0.825, the daily revenue at this station could be expected to average $1,732.50. Applying this result to 250 days of operation per year, the annual revenue for the proposed Old Orchard Road station would be $433,125.

Once again, the effect of diversions from the existing Dempster Street station must be recognized. The final report estimates that the diversions due to the Old Orchard extension could be as high as 40%. When a factor of 0.60 is applied to the daily and annual revenue for the Old Orchard terminal, these totals become $1,040 and $259,875, respectively.

I must emphasize that these are extremely rough estimates of the revenue at each of the proposed stations. A more rigorous financial analysis is an appropriate task for a future study phase.

Thank you for the opportunity to submit this information. As always, if you should have any questions, please do not hesitate to contact me (312) 803-6508.

Sincerely,

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

Art Peterson
Project Manager

xc: Mr. Peter Fahrenwald – CTA

Skokie Swift Feasibility Study Public Information Meeting

Village of Skokie

June 26, 2003

Skokie Swift Feasibility Study – Purpose

Determine the feasibility of and recommend further actions by the Village of Skokie, CTA, Pace, and the RTA on the desirability of:

- New stations along the existing Skokie Swift and
- Extending the Skokie Swift to Old Orchard Road

Skokie Swift Feasibility Study – Oakton St. Station

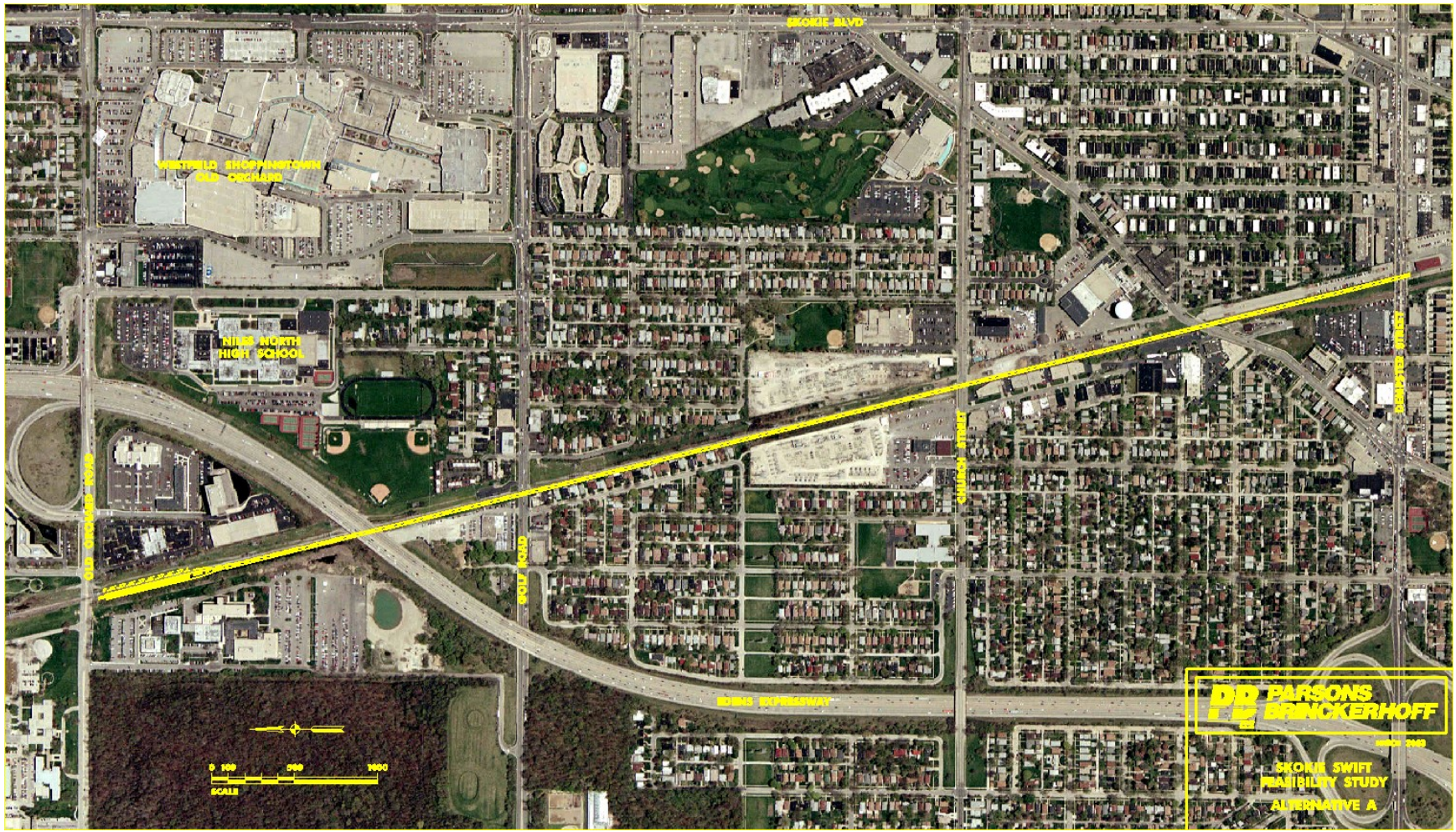
Orange circle is ½ mile in radius from potential station site

Skokie Swift Feasibility Study – North Extension Alternatives

Skokie Swift Feasibility Study – 2000 Demographics and 2030 Projected Ridership

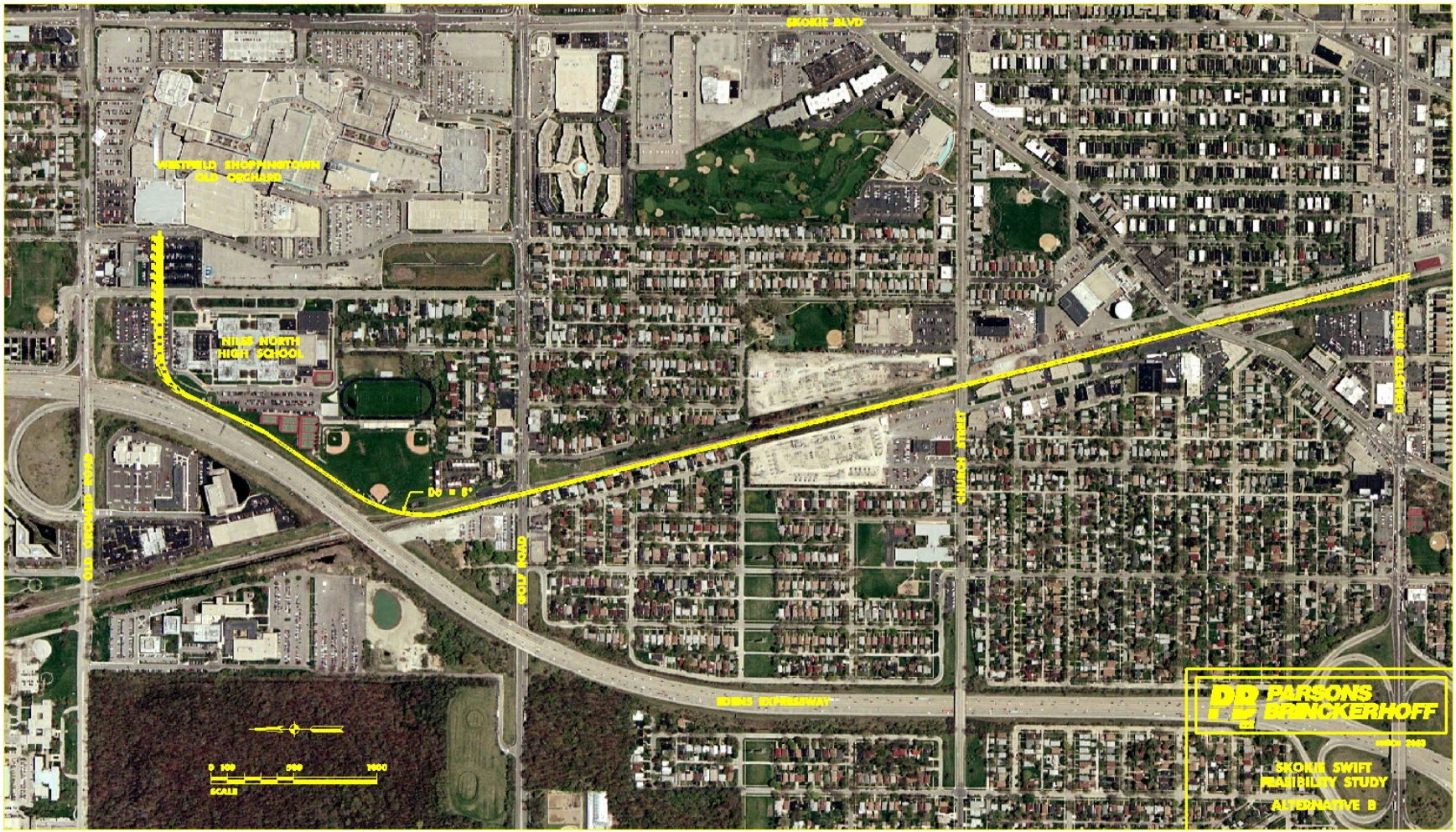
- Oakton
  - 7,600 people in 3,100 households
  - 3,300 employees
  - Ridership: 900 -1,200
- Dempster
  - 8,400 people in 3,500 households
  - 3,500 employees
  - Ridership: 1,000 -1,300
- Old Orchard
  - 2,300 people in 870 households
  - 5,000 employees
  - Ridership: 1,900 -2,300

Skokie Swift Feasibility Study – Recommended Alternative A – North Extension and Station



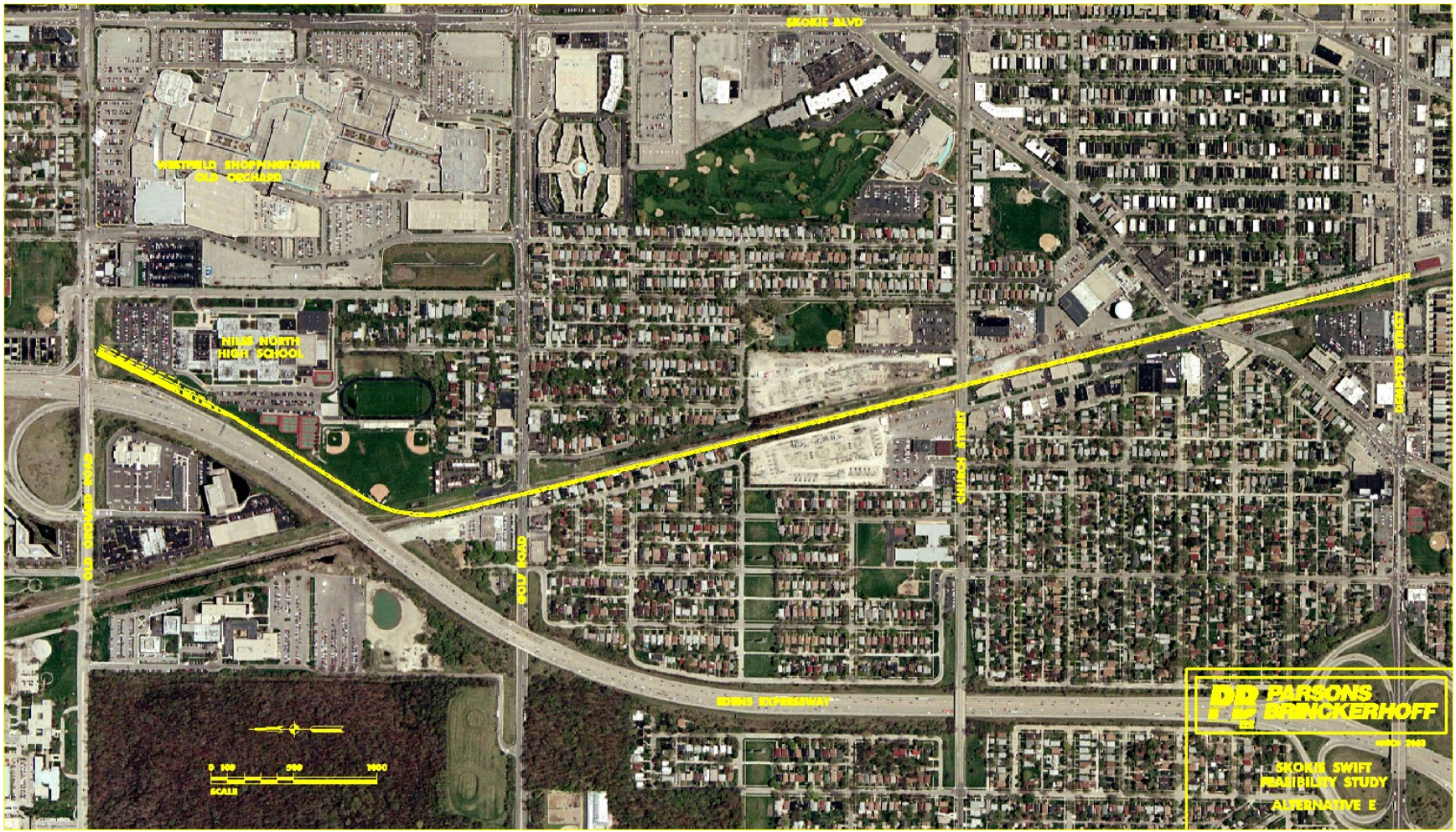
Skokie Swift Feasibility Study – Recommended

Alternative B – North Extension and Station



Skokie Swift Feasibility Study – Recommended

Alternative E – North Extension and Station



Skokie Swift Feasibility Study – Capital Costs (2003 dollars in millions)

- Station:

  Oakton - $18

  Dempster - $21 to $32

  Old Orchard - $36 to $43

- Depend on alignment profile

Skokie Swift Feasibility Study – Capital Costs (2003 dollars in millions)

- Old Orchard Extension Alternatives:

  A - $208 to $231

  B - $235 to $254

  E - $216 to $234

- Combination of alignment profiles
- Includes stations and additional cars

Skokie Swift Feasibility Study – Operating Costs (2003 dollars)

- New Station

  Weekdays only (250 days): $305,000

  Year round (365 days): $445,300

- New Service to Old Orchard

  Weekdays only (250 days): $800,000

  Year round (365 days): $2,000,000

- Costs are in addition to existing operations

Skokie Swift Feasibility Study – Next Steps

- Respond to meeting comments
- Make recommendations on intermediate station(s)
- Make recommendations on Skokie Swift extension to Old Orchard Rd
- Identify additional issues
- Complete final report

Skokie Swift Feasibility Study
Public Information Meeting

Information Brochure

Village of Skokie
5127 Oakton St.
Skokie, IL 60077

Welcome to the public information meeting for the Skokie Swift Feasibility Study.

This public information meeting is being held so that the Village of Skokie can present information about the Skokie Swift Feasibility Study and provide an opportunity for you to review the initial study results, make comments and ask questions.

Your input on this study is important. There are a number of ways to ask questions and provide comment.

- Personnel from the Village of Skokie and the study consultant are at this meeting and ready to answer your questions and hear your remarks;
- A tape recorder is available to record your comments;
- A comment form is contained in this brochure that you can fill out and place in the box provided, or you can return by fax (847) 673-0525 or mail at:

  Mr. Fred Schattner
  Village of Skokie
  5127 Oakton St.
  Skokie, IL 60077

Thank you for attending this public information meeting and for your interest in this study.

Study Purpose
The purpose of conducting the Skokie Swift Feasibility Study is to recommend further action by the Village of Skokie, CTA, Pace, and RTA on the desirability of:

- New intermediate station(s) in the Village of Skokie along the existing CTA Skokie Swift/Yellow Line rapid transit service
- An extension of the CTA Skokie Swift/Yellow Line rapid transit service from Dempster St. to the vicinity of Old Orchard Rd.

Study Goals
The goals for improving the Skokie Swift/Yellow Line service are to increase transit ridership on the line, to maximize the benefits of existing and future investments in the Skokie Swift/Yellow Line, and to assist in meeting the mobility and economic development goals of Skokie residents and businesses.

Study Approach
The major tasks in this feasibility study include:

1. Collect data and assess existing conditions;
2. Develop alternatives;
3. Analyze alternatives;
4. Develop recommendations; and
5. Prepare a final report.

The first three tasks have been completed and are summarized below. We are seeking your input in developing the recommendations.

Task 1: Existing Conditions
The Skokie Swift began service in April 1969. The existing Skokie Swift/Yellow Line is a five-mile, non-stop, weekday and special event rapid transit service from Dempster St. to Howard St. Average speed between Howard and Dempster is 37.5 mph, resulting in an eight-minute travel time. Current ridership is approximately 2,400 boardings per weekday at the Dempster station. To standardize the Skokie Swift/Yellow Line power supply, the CTA is in the process of designing the replacement of the overhead catenary system with the third rail power distribution system that is used on all other CTA rapid transit services.

Task 2: Develop Alternatives
An initial set of alternatives were developed for new intermediate station sites and the extension to Old Orchard Rd.

New Intermediate Station(s)
Within the Village of Skokie, five potential intermediate station sites were identified and evaluated. These sites included McCormick Blvd., Hamlin Ave., East Prairie Rd., Crawford Ave., and Oakton St. The Oakton intermediate station site was recommended

for analysis in Task 3 (see Figure 1) due to its proximity to downtown Skokie, the station area land use characteristics, and right-of-way considerations.

Old Orchard Rd. Extension
In addressing the extension from Dempster St. to the vicinity of Old Orchard Rd., several possible alternatives were identified and evaluated. All the alternatives extend north from Dempster St. to Golf Rd. via the Union Pacific Railroad (UPRR) right-of-way. These extension alternatives have differing routes from Golf Rd. and differing termini in the vicinity of Old Orchard Rd. Seven alternatives (A through F, in Figure 2) were identified for study. These alternatives are:

- **A** UPRR to Old Orchard Rd. west of I-94 (the Edens Expressway);
- **B** East of I-94 (Edens Expressway) to north of Niles North High School;
- **C** East of I-94 (Edens Expressway) to south of Niles North High School;
- **D** Along Golf Rd. to Old Orchard Mall (south);
- **E** East of I-94 (Edens Expressway) to Old Orchard Rd.;
- **F** East of I-94 (Edens Expressway) to Old Orchard Shopping Mall (north); and
- **G** East of I-94 (Edens Expressway) in a loop.

Another consideration was the vertical profile of the alternatives, or whether the tracks would be at-grade, underground as a subway, in a trench (open cut), an aerial structure, or on a raised embankment. Each option has a mix of impacts and costs, with the subway and aerial structure being the higher cost options.

Task 3: Analyze Alternatives
The new intermediate station site at Oakton St. and all extension alternatives from Dempster St. to the vicinity of Old Orchard Rd. were then analyzed. As part of the analysis, ridership forecasts and conceptual designs and costs were developed.

As the results of the analysis phase were learned, study stakeholders proposed that Alternatives A, B and E advance for further study.

Ridership Forecasts
Preliminary 2030 population, household and employment forecasts for the six-county region were developed by the Northeastern Illinois Planning Commission (NIPC). These forecasts were used as input into the Chicago Area Transportation Study (CATS) travel demand forecasting model.

New Intermediate Station
The 2030 ridership forecasts for a new intermediate station at Oakton (without the extension of the Old Orchard Rd. area) range from 900 to 1,200 boardings per day.

Old Orchard Rd. Extension
2030 ridership estimates for the extension to the vicinity of Old Orchard Rd. ranged from a low of 1,900 to a high of 2,300 boardings on an average weekday. Using current boarding data at Dempster, the extension and new stations are estimated to increase ridership on the line between 75% and 95%.

Conceptual Design
Conceptual designs were completed for the Oakton intermediate station and Dempster St. (as the existing station would need to be redeveloped to accommodate the extension). Also completed were designs for the extension terminal stations for Alternatives A and B. The station area design for B is applicable to Alternative E.

Both conceptual designs and costing analyses incorporated plans for 600 parking spaces and bus circulation. For Alternative A, the design assumed an at-grade station. The initial design for Alternative B assumed an elevated alignment profile. However, the alignment profile for Alternatives B and E is undecided and will affect the station design. For instance, an elevated structure and station will have different station design needs than an at-grade facility. The alignment profile decision is ongoing, so additional designs will be drawn once the profile determination is made.

Conceptual Costing
The conceptual costing analysis included developing station and extension unit cost estimates. For the extension, the construction costs of tracks, right-of-way, power supply, signals, safety equipment, parking and other associated items were

included. The Oakton station cost estimate also included the cost to relocate ComEd towers, which are currently located in the proposed alignment.

In developing the unit costs, there were a range of estimated prices, so a choice was made to use conservative (higher price) costing. The unit prices were applied to all station alternatives and extensions. Cost ranges for the extensions and the Dempster station included all alignment profile options. A contingency factor of 30% was used to account for unforeseen cost items at this early planning stage, as well as a 16% design/construction management allocation. The estimated conceptual cost for each alternative in 2003 dollars is shown below:

Intermediate Station
- Oakton: $18 million

Old Orchard Rd. Extension
- Dempster St. station: $21 to $32 million
- Alternative A: $73 to $190 million
- Alternative B: $107 to $202 million
- Alternative E: $91 to $179 million
- Old Orchard station: $36 to $43 million

The costs for the Dempster St. station depend upon the selected profile (subway, open cut, at-grade or aerial/elevated). The estimates also include costs for right-of-way acquisition and a temporary station, to allow continued transit operation during the construction phase.

Another cost is for the new rapid transit cars needed to provide service along the extended line. The cost of the additional cars is estimated to be $6 million.

Additional Improvements

Additional improvements for the station areas will need to be done as the station area is developed. These additional improvements include connections to the road network and pedestrian connections to nearby land uses. These costs have not been developed and will be identified in future studies, if warranted.

Another change that will need to be made is bus coordination with the new service. If the extension is warranted, some of the existing bus services may be changed to reduce duplication, and connections between the rail and bus systems will need to be timed to ensure reasonable connections between the two.

Next Steps

Based on the results of these study items, recommendations on the intermediate station(s) and for the proposed extension will be made. The recommendations will:

- Determine whether an intermediate station is warranted, and if so, the station location;
- Provide concept plans for the recommended station site so that the Village can pursue funding for design and implementation; and
- Identify key issues for further study related to the extension and, if warranted, identify actions for right-of-way protection and provide guidance to the Village for land use planning in the study corridor.

Work left to do in this study is to summarize the comments on the alternatives and other study issues from this meeting, complete the recommendations and write the final report.

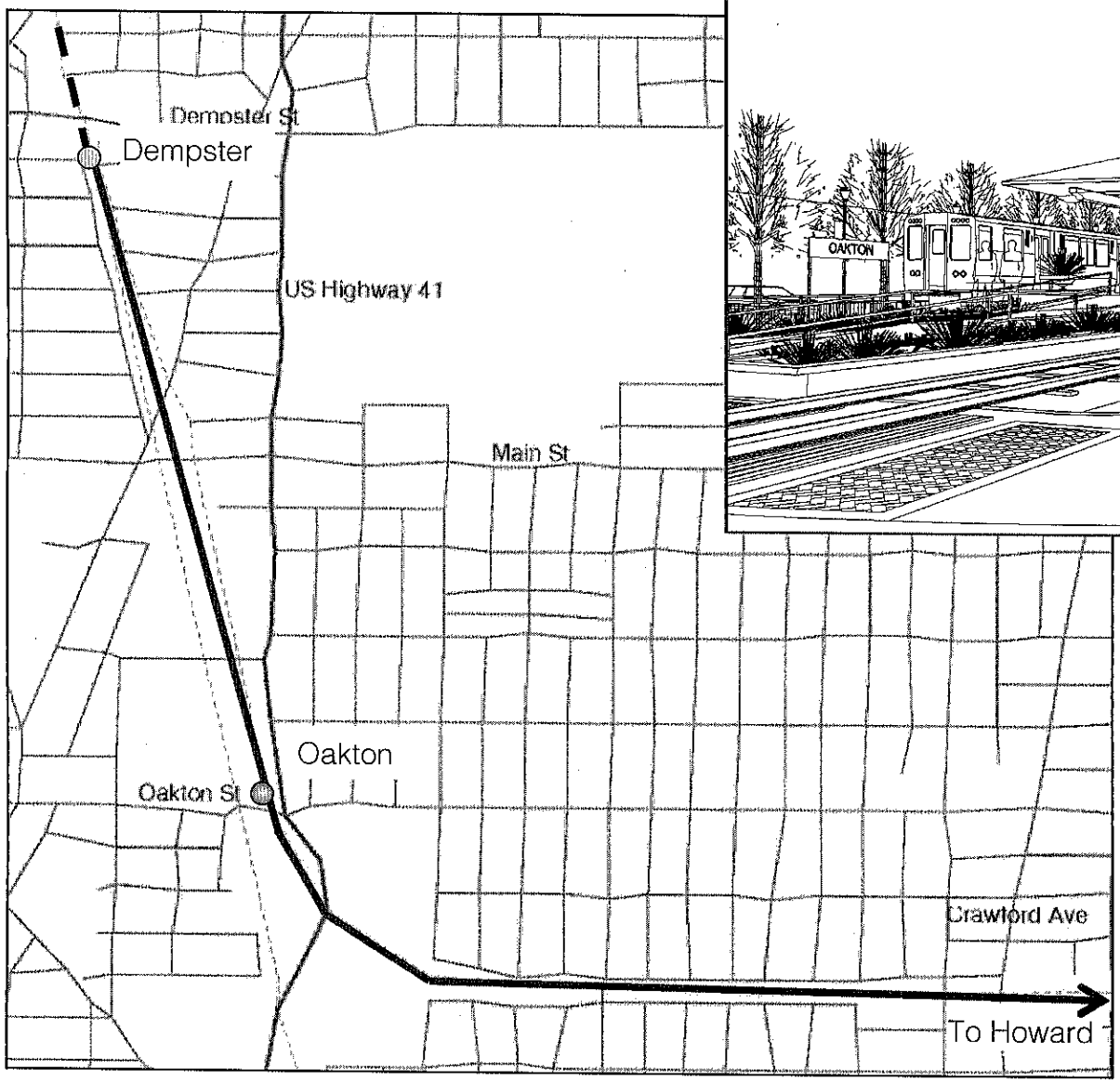
Future Phases

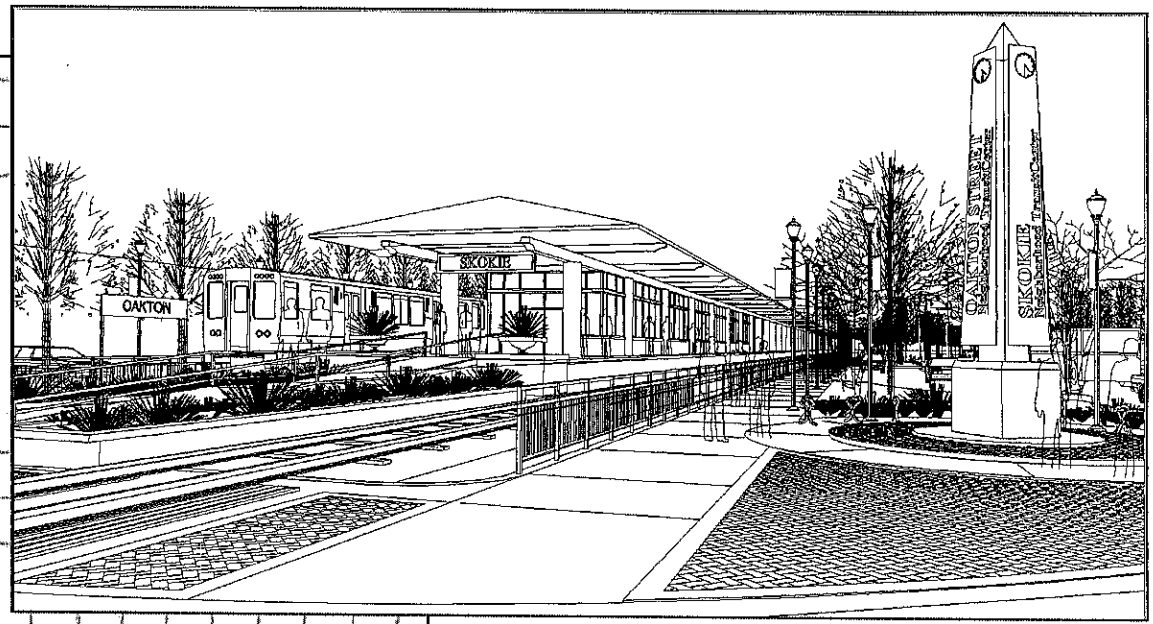
If warranted and supported, future work on this project will include analysis of environmental impacts, if needed, and conduct detailed engineering, including updating of the costs as the designs progress.

At this point, no additional funding has been identified for any further studies, which are needed prior to construction. This project has been submitted for inclusion in the region's long range transportation plan. The project must be included in this plan if the Village will ask for federal funds.

Thank you for attending this open house. We appreciate your comments on the results of this study.

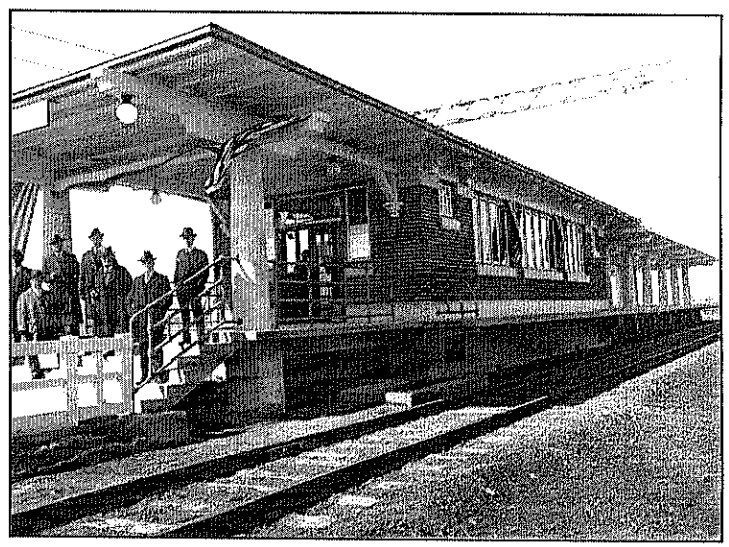
Skokie Swift Feasibility Study
Intermediate Station



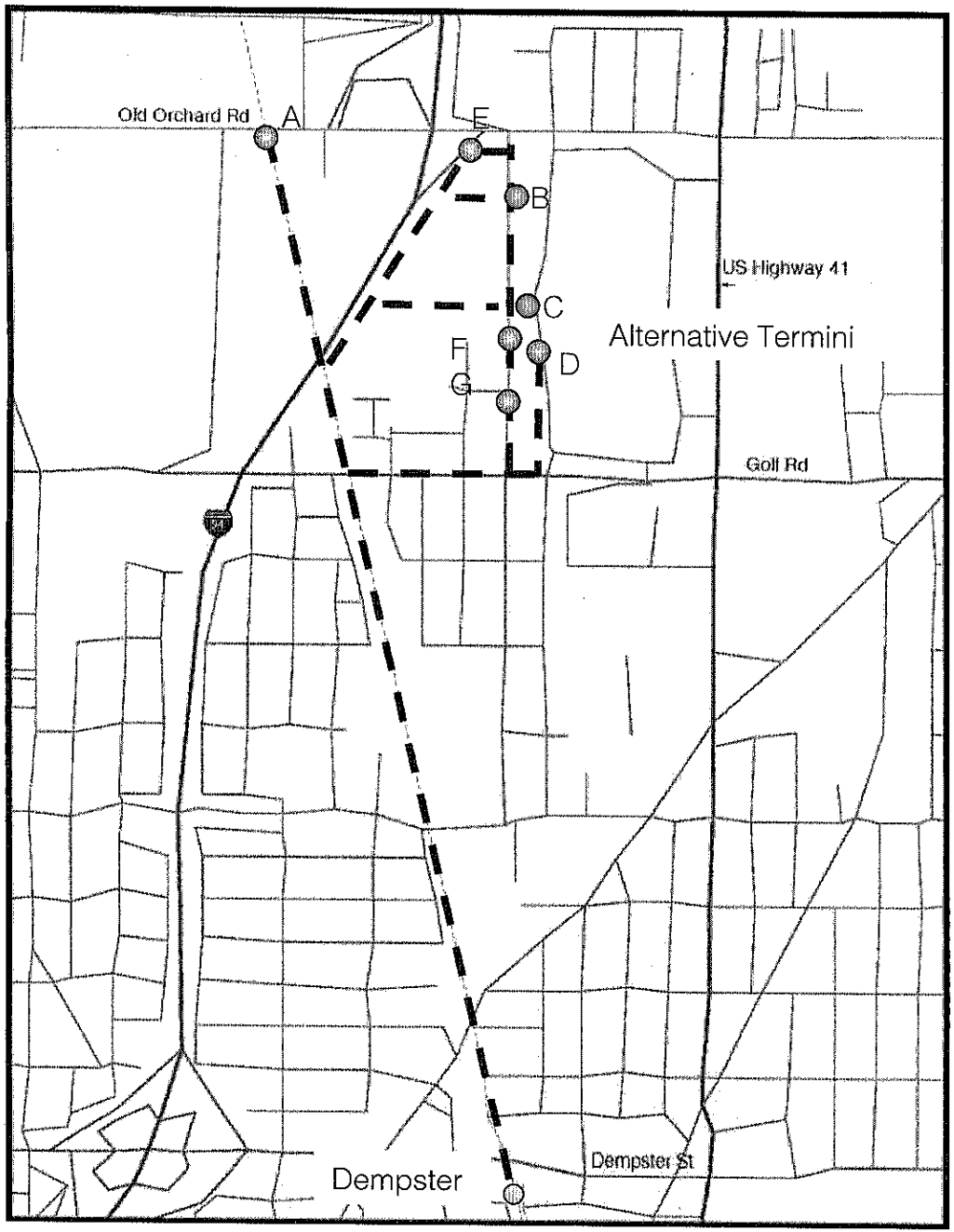


Future Oakton Station, Potential Design

Oakton Station, March 1925



Skokie Swift Feasibility Study
Extensions and Termini



Alternatives preliminarily recommended for further analysis:

- Alternative A: Union Pacific Railroad right-of-way to Old Orchard Rd.
- Alternative B: Union Pacific Railroad right-of-way to Golf Rd., then east of I-94 (Edens Expressway) to north of Niles North High School.
- Alternative E: Union Pacific Railroad right-of-way to Golf Rd., then east of I-94 (Edens Expressway) to Old Orchard Rd.

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

_____

_____

_____

_____

_____

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_____

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_____

_____

_____

(Optional – Please Print)

Name _____

Affiliation _____

Address _____

City/State _____ Zip Code _____

Phone No. (___)_____

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

Public Transportation is a global high priority. Locally thinking, the Skokie Swift Project makes sense to balance the viability of Skokie business & retail base. It extends a line of access from the city of Chgo & area by suburbs. This is a plus for labor, business owners & the local tax base.

Sincerely,

(Optional – Please Print)

Name Randy D. Podolsky

Affiliation Podolsky Northern Realty Partners

Address 4711 Golf Rd.

City/State Skokie Zip Code [redacted]

Phone No. (___) 847-444-5788

RECEIVED
JUL 21 2003
PARSONS BRINCKERHOFF
CHICAGO, IL

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

POSSIBLY GET WEST WILMETTE/GLENVIEW/NORTHBROOK INVOLVED. SEEMS LIKE A WASTE TO ONLY GO AS FAR AS O.O. SHOULD GO AT LEAST TO LAKE AVE. RIGHT OF WAY ~~SHOULD~~ SHOULD GO OPEN CUT STARTING AFTER SEARLE PKWY. TRACK SHOULD BE HEAVY DUTY - 155 lb. RAIL - TRAINS SHOULD BE ABLE TO DO AT LEAST 65 M.P.H - PRESENT CARS (ALL CTA EQUIP.) ARE CAPABLE OF 70 M.P.H. RIGHT NOW (THIS IS THE 21ST CENTURY! LET'S GO!) KEEP STATIONS AS SIMPLE AND UTILITARIAN AS POSSIBLE - PUT MONEY INTO KEEPING THE SWIFT "SWIFT". IF THEY WANT TO ADD MORE STATIONS BETWEEN DEMPSTER + HOWARD - THE SPEED MUST BE INCREASED. IT CAN BE DONE SAFELY. THIS EXTENSION WILL BE USED BY MANY - CHECK OUT THE SUCESS OF THE CTA ORANGE (MIDWAY) LINE AND METRA NORTH CENTRAL/(N.C) LINE TO ANTIOCH. BOTH OVER WHELMING SUCESSES. SKIP THE 'WINE + CHEESE' STATIONS. SIMPLE AS POSSIBLE. THIS WILL WORK! THANK YOU. Fred H. Zimmermann

(Optional – Please Print)
Name FRED H. ZIMMERMANN
Affiliation SKOKIE RESIDENT (8½ YRS)
Address 9323 KEDVALE
City/State SKOKIE Zip Code 60076
Phone No. (847) 329-7863

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

There seems to be a lack of cost consciousness on the part of the estimators working on this study. Taxpayers and riders alike would benefit from a "value engineering" approach. Take the expected revenue at the proposed Oakton St. station for a year, multiply it by 3, and tell the engineers that's all the money they have. See what they come up with. Telling them they have $18 million to spend will just produce a grandiose plan with many un-needed features.

(Optional – Please Print)

Name Peter Nicholson
Affiliation Evanston's Transportation Future
Address 1500 Oak Ave.
City/State Evanston, IL Zip Code 60201
Phone No. (847) 475-2258

RECEIVED
JUL 14 2003
VILLAGE OF SKOKIE
ENGR. DIV.

RECEIVED
JUL 1 0 2003
VILLAGE OF SKOKIE
ENGR. DIV.

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

My name is Phillip D. Riskin and I am the Human Resources Director for the Portland Cement Association located at 5420 Old Orchard road - next to the court house. Our president, John P. Gleason, Jr. has asked me to send you our comments on the Skokie Swift Feasibility Study. We had our manager of Building Services, Edward Krozka, attend the public information meeting. PCA very much supports the extension of the Skokie Swift. Alternative A would bring the station closest to the court house which serves thousands of people weekly. The number of potential users appears on the low side per what was provided in the public informational meeting. Please let us know anything we may do to help support and push this project along. Thank you very much

(Optional – Please Print)

Name Phillip Riskin
Affiliation HR Director for Portland Cement Association
Address 5420 Old Orchard Rd.
City/State Skokie IL Zip Code 60077
Phone No. (847) 972-9122

PCA Portland Cement Association

Phillip D. Riskin
Director, Human Resources

5420 Old Orchard Road
Skokie, Illinois 60077-1083
847.972.9122 Fax 847.966-0280
priskin@cement.org

www.cement.org

PCA
Portland Cement Association

June 17, 2003

Mr. Peter W. Peyer
Community Development Director
Village of Skokie
5127 Oakton Street
Skokie, IL 60077

Dear Mr. Peyer,

I enjoyed speaking to you regarding the Public Hearing on the Skokie Swift extension and the construction plans on Woods Drive behind the ENH building. As I mentioned, unfortunately a representative from Portland Cement Association will not be able to attend the public hearing being held June 26.

We do very much support the extension of the Skokie Swift to the Old Orchard Road area. With approximately 250 employees we have several staff who take public transportation each day. Extending the Skokie Swift to the Old Orchard Road area would save our employees having to catch a bus from the Skokie Swift to our building. With the extension this might increase the number of staff that would take public transportation, which would help to ease congestion and cut down on pollution (car emissions).

I was also happy to hear that with the Holocaust Foundation and other structures that will be constructed off of Woods Drive this would expedite the installation of a stoplight at Old Orchard Road and Woods. With the opening of Life Time Fitness this intersection has become very congested. Many of our employees have commented how unsafe this intersection has become and the need for a stoplight.

If there is anything else Portland Cement Association can do to show its support for the Skokie Swift extension please do not hesitate to contact me.

Sincerely,

Phil Riskin

Phillip D. Riskin
Director Human Resources

CC: John P. Gleason, Jr, President of PCA

5420 Old Orchard Road
Skokie, Illinois 60077-1083
847.966.6200 Fax 847.966.8389

www.cement.org

SKOKIE SWIFT FEASIBILITY STUDY
PUBLIC INFORMATION MEETING COMMENT FORM

We would like your input and comments on the Skokie Swift Feasibility Study. Please return your comment forms in the box marked COMMENTS; or fax to (847) 673-0525; or fold, stamp, and mail by Friday, July 11, 2003.

I would like to offer the following comments on this study:

I would suggest That while our Schools are in Financial crisis, our economy in bad Shape, to spend money on a study such as this is a Shame. Our priorities must first be education for our Children, health care (affordable) and health Insurance for those who cant afford.

Another negative if an extension to Old Orchard went through would be devalued property For those living in the area. Not to mention Safety, traffic Congestion and noise. Two hundred million tax dollars would be much better spent on our schools, health care, and prescription drugs than to extend a train track 1¼ miles.

(Optional – Please Print)

Name _____

Affiliation _____

Address _____

City/State _____ Zip Code _____

Phone No. (___)_____

January 27, 2002

Mayor George Van Dusen
Skokie Village Hall
5127 Oakton St.
Skokie, IL 60077

Dear Mayor Van Dusen:

We read about the upcoming feasibility study to extend the Skokie Swift and have many questions that we hope this study will address or perhaps you can answer:

1. Will the Skokie Swift run on a one-way track? If not, is there room to add another track because there is a two-block residential area on Terminal Ave. where the houses and Commonwealth Edison power lines are built alongside of the tracks.

2. Will crossing gates be added on Church Street and will there be a crossing guard at the tracks to assist the children who walk to Jane Stenson School? When the Chicago and Northwestern train operated, they purposely scheduled the trains so they did not run doing the hours when the children were going to or from school.

3. If the Skokie Swift is extended to Old Orchard Road will there be a bus to the Skokie Courthouse and/or Old Orchard Shopping Center because it will still be too far for most people to walk to either place from where the Skokie Swift would stop.

We do not understand, Mayor Van Dusen, why you want to extend the Skokie Swift and suggest that it would be more feasible and economical to run a shuttle bus from the Dempster Street station to Old Orchard Shopping Center and/or the Skokie Courthouse.

We would appreciate your comments on this matter.

Sincerely,

Mr. and Mrs. Howard Frank
9425 N. Terminal Ave.
Skokie, IL 60077
(847) 967-7421

Memorandum
Manager's Office

TO: Steve Marciani, Planner
Fred Schattner, Traffic Engineer

FROM: Albert J. Rigoni, Village Manager

DATE: August 17, 2000

SUBJECT: SWIFT EXTENSION

For your files, Mrs. Frank, 9425 Terminal, contacted my office expressing opposition to any Skokie Swift extension. Her home abuts the Union Pacific tracks and is concerned about the noise and vibration of a Swift train every 8 minutes in contrast to the present utilization of the Rail Road.

c: Mayor Van Dusen

AR:lg

48568

Karen Glennemeier
5225 Old Orchard Rd, Suite 37
Skokie, IL 60077

847-965-1150

June 20, 2003

Village of Skokie
Attn: Planning Department
5127 Oakton
Skokie, IL 60077

Dear Planning Department:

I will be unable to attend the public meeting on Thursday, June 26, where citizens will be discussing the feasibility of extending the Skokie Swift line north to Old Orchard Mall. I hope my written comments can be submitted as a formal public comment on this matter.

In short, I heartily support such an extension. I work across the highway from Old Orchard Mall and regularly use the bus services for commuting to work and getting to other, nearby suburbs. One of the major limitations of our location, however, is that there is no convenient way to get into the city of Chicago by public transit. Access to the El would allow our office to attend meetings, receive clients, and, for some of us, get to work, by public transit. It would improve the quality of our lives, both personally and professionally.

Thank you for the opportunity to comment on this exciting new possibility. I hope our community can continue to excel in the area of public transit.

Sincerely,

Karen Glennemeier

Director Human Resources

CC: John P. Gleason, Jr, President of PCA

5420 Old Orchard Road
Skokie, Illinois 60077-1083
847.966.6200 Fax 847.966.8389

www.cement.org

JOSEPH REAL ESTATE SERVICES, LTD.

June 24, 2003

Mr. Peter W. Peyer
Director of Community Development
Village of Skokie
5127 Oakton Street
Skokie, IL 60077

Dear Peter,

In regards to the study being done for the expansion of the Skokie Swift, our firm feels it would be an advantage for our tenants at 5225 Old Orchard Road to have this service expanded to Old Orchard Road. Our office building is just West of Edens Expressway and east of the railroad tracks, so this would be a perfect spot for a station.

Thank you for your information.

Very truly yours,

JOSEPH REAL ESDTATE SERVICES, LTD.

Patricia J. Cohan

cc: Donald R. Joseph
Wendy Treptow

666 Dundee Road, Suite 303
Northbrook, Illinois 60062
(847) 564-1600 FAX (847) 564-2494

June 26, 2003

Mr. Peter Peyer
Community Development Director
Skokie Village Hall
5127 Oakton Street
Skokie, IL 60077

Dear Mr. Peyer:

I am a citizen of Skokie, who cannot attend tonight's meeting concerning the proposal to extend the Skokie Swift line to Old Orchard Road. Therefore, I would like to present my comments in this letter.

I live in a townhouse on the 8900 block of La Crosse. It is a relatively quiet street, one block west of Skokie Boulevard, and between Greenwood and Grove. Most town homes in Skokie are on main streets, so the quiet of this block was very important to my husband and me when we bought our home 23 years ago.

Since we are within earshot of two surface crossings, (north of the Swift Station on Dempster and Gross Point Road, just south of Grove,) I am very concerned about a potential noise problem. I probably would not hear the train itself, but rather the high pitch whistle that the Swift uses. In addition, I seem to recall that the whistle is blown three or more times at Skokie crossings.

I am quite sure that there are many, many Skokie residents who would be impacted by the noise created in a northern extension of the Swift. I urge all those involved in this plan to strongly consider the impact of noise.

Sincerely,

Betty Butler

Betty Butler
847.674.3499

DISTRICT 219
NILES TOWNSHIP HIGH SCHOOLS

July 1, 2003

Mr. Fred Schattner
Skokie Swift Feasibility Study
Village of Skokie
5127 Oakton Street
Skokie, IL 60077

Dear Mr. Schattner,

Representatives from Niles Township High School District 219 were present at the public informational meeting held in Skokie on June 26, 2003 to hear the presentation and the thoughtful public comments on the study.

Niles Township High School District 219 supports and encourages the continued study and investigation into the expansion opportunities for the Skokie Swift. The further study and refinement of opportunities for the Skokie Swift will encourage open public discussion and debate on the matter while providing both policymakers and the public with further information and facts needed to make the decision on whether to proceed or not. The District supports and applauds the Village for taking the leadership role in providing these facts to the region and community and will continue to support educating our constituents on this important matter.

As a property owner involved in two of the three possible Old Orchard transit station locations, the District welcomes the continued study and discussion on these possible sites. The impacts of noise, security and the possible disruption to school activities from the proposed expansion are areas for further study that the District is interested in reviewing and discussing.

Again, District 219 supports the continued study of the expansion possibilities and encourages further public education, discussion and debate on this matter.

Respectfully,

Neil Codell

Neil C. Codell
Superintendent

Administrative Center • 7700 Gross Point Road • Skokie, IL 60077 • 847/626-3000 • fax: 847/568-3999 • www.niles-hs.k12.il.us

WESTMORELAND BUILDING
9933 LAWLER AVENUE
SKOKIE, IL 60077
(847) 673-1171

July 3, 2003

Mr. Peter W. Peyer
Community Development Director
Village of Skokie
5127 Oakton St
Skokie, IL 60077

Dear Peter:

Thanks for having invited me to the June 26 presentation of the current studies to date to determine the feasibility of extending the Skokie Swift to Old Orchard Road.

It was evident that the consulting firm had developed a lot of pro and con information for each of the seven alternatives identified for study. I assume that all of the alternatives except A, B and E are not to be considered. Therefore, I shall only direct my comments to A, B and E.

Alternative A:
This is apparently the least costly and is also at grade level, which is advantageous because this location would much better serve the handicapped who may not be able to use either B or E because they would be elevated. However, a grade level station may still not attract most handicapped people because they would still have to contend with stairs at their destination stations.

Alternative A would better serve the Cook County Courthouse, but my strong visual impression is that the large preponderance of people going to the Courthouse drive cars to it or take a bus. Very few walk from Old Orchard. Also, most of the visitors to the Courthouse are probably making just a one-time visit to it rather than going to it daily, as contrasted with office workers or employees of retail stores in Old Orchard.

Alternatives B and E:
I assume both of these would be elevated stations with elevated approaches to the stations so the construction cost of each would be much higher than Alternative A. The obvious problem for people with handicaps I addressed in Alternative A.

A further and important problem, for both B and E would be the visual appearance of the elevated tracks and of the station itself. I suspect that the sound of the trains at heights is much greater than at grade level.

Summary:
Assuming there is sufficient land at Alternative A without directly impacting any of the existing buildings, it appears this would be the easiest alternative to use. However, it is quite questionable if it would help much, if any, in serving the transportation needs of people going to buildings to the east of the site, such as the High School, Old Orchard or the Westmoreland Building. A shuttle bus might serve the needs of some, but it would be a considerable added cost for every day of operations forever into the future.

I could support Alternative E if Niles North High School could also support it, but for visual considerations and handicapped accessibility it would have to be at a near grade level.

I doubt I could support B for the foregoing reasons. Also, this location might appear to some as being something which was created at taxpayer expense solely to benefit the Old Orchard Shopping Center.

I'm glad such a thorough study is being made.

Sincerely,

Daniel F. McCarthy

DFM:jy

I am a resident of Skokie for 16 years and live in the northwest quadrant between Church Street and Golf Road. I am concerned about the prospect of an extension of the CTA line for three reasons.

1. Traffic Congestion

Over the years as the former Old Orchard was revitalized and expanded to the now Westfield Shopping Town, and with the recent development of additional commercial businesses at Skokie Blvd, the use of Golf Road has become extreme. The reality is that there is significant east-west traffic not north-south traffic also due to the amount of business activity done in the Evanston area and in the western suburbs. This traffic would not benefit by a CTA line extension. During rush hour in the morning, cars back-up from LaVergne Ave west to Leamington Ave making it challenging to leave our neighborhood when heading North. In the late afternoon rush, cars are backed up sometimes as far east as Lawler Ave all the way west to Harms Road. With the potential of crossing lights and gates for train access, there will be even more of a back-up, not to mention the added inconvenience of regular train crossings during all hours of the day.

Our neighborhood has already experienced added cut-through traffic due to the increase in congestion around Westfield and as access to and from Niles North High School, so much so that we have had speed limits reduced, stop signs added, and crosswalks marked. We are concerned that this traffic will increase further and create potential safety issues as there is a large park, Emerson Park in the midst which attracts many neighborhood children.

2. Adverse Effect on Property Values

Because we live in a primarily single family, residential neighborhood convenient to all attractions and schools, quiet and well maintained, we

have enjoyed a steady and attractive appreciation to property values. With the addition of unsightly trains, noise and added traffic, this extension of the CTA will pose a deterrent to potential buyers for this location, increase market time to sell our homes, and negatively affect the value of our property.

3. Noise and Unsightliness

The elevated CTA line would have a significant negative effect on our inalienable right to the quiet enjoyment of our property. It's operation begins very early in the morning and ends late at night. The regularity of it's service will be a constant aggravation to the peace we now enjoy. In order to operate this train, electrical cables are suspended over the train to allow the current to activate its use. Barriers will need to be constructed to prevent public access and prevent injury. Many of these barriers will be built near the back yard lot lines of some of the properties in this neighborhood, but nothing can absorb the noise.

I would like to know how the survey was conducted in 2000 which shows how many jobs around the immediate area of Westfield could benefit from the CTA extension. Undoubtedly those statistics have changed. The old North Shore train line was abandoned years ago for a good reason. There was no demand for it. What about the residents who have chosen to live here and would have little need to use the system yet would suffer from the adverse affects that come from the addition of a public train line?

Thank you.

Julie Naumann
9415 LeClaire
Skokie

We do however support the potential station in downtown Skokie — not an extension to Old Orchard.

VILLAGE OF SKOKIE

Citizen Request For Service Report

Request Number: 30840 **Date of Request:** 7/11/03
Received by: VAN ELZEN, N. - MANAGER'S OFFICE **Time of Request:** 10:21 AM
How: INFO@SKOKIE **First Request:** **Returned Call Requested:**

Directed to: SCHATTNER, F. - ENGINEERING

Name: PATERA ALEXANDRA Mr. Mrs. Ms.
Company:
Address: **Unit:** **Zip Code:**
Phone: **Other:** sacha-patera@mindsp **Ext/Other:**

Request: **Type of Service:** TRAFFIC

To Whom It May Concern:
My name is Alexandra Patera and a Skokie homeowner for 5 years. I am writing to express my concerns about the Swift expansion. Our family will be substantially impacted by the proposed plans and much of the impact will be negative. We live in district 68, west of the train tracks, and our children attend Jane Stenson School
First and foremost it's an issue of safety! All the children living in the Jane Stenson School district will be putting themselves at risk EVERYDAY, crossing the train tracks. Those living west of the tracks will need to cross to go to Old Orchard Junior High and Niles North High School, and those living east of the tracks will need to cross to get to Jane Stenson Elementary. There are already problems with kids crossing a virtually unused track to get to Jane Stenson. If the tracks are going to have substantial traffic and a third rail, undoubtedly there are going to be children injured if not killed!

Second, there is the issue of traffic congestion! The intersections of Church/Gross Point/Skokie Blvd are already very congested and getting worse all the time. And everybody knows to avoid the area by the Old Orchard Mall (I will not call it by whatever name it has now but that is another matter) unless absolutely necessary! Does the Village really think that adding trains will aid in this matter! (Take a look at the Metra crossing at Lake Ave and Greenbay Rd, in Wilmette!)

Third, you cannot tell me that sandwiching our neighborhood on three sides between the Edens, the train and the power lines is going to raise property values. Schools that are unsafe to walk to will bring home values down. Of course, condominium developers would love to see public transport by their developments. But they don't live in their developments, do they?!

Fourth, the argument for better public transport to this area to minimize car usage is flawed. The cheap and swift solution to make the Malls and Courthouse more accessible is to increase the Swift schedule including weekends (for shoppers) and then add several shuttles that will

go directly to Old Orchard Mall or to the Courthouse. This is done at airports to get car rentals, and I've seen this in California between malls. Does Skokie not have the STAR buses that are barely in use? Maybe

VILLAGE OF SKOKIE

Citizen Request For Service Report

Location Info Address #: **Location Info Street Name:**

this could be the ticket. The beauty of this solution is that it could be

Curb/Intersection: implemented tomorrow and cost MILLIONS less than the $300 million projected

Location Area: today, for work to be completed in a decade!

And who is to pay for these millions? If we can't get a tax increase for

Assigned Name: schools passed, do you think there is community support for this? I would **Date:** _____ bet not!

Written Field Notes In summary, I speak for many of my neighbors when I say a resounding NO to

this proposed expansion of the Skokie Swift.

Thank you for your attention

Alexandra Patera

Follow-up Needed **Date of Follow-up:**

EMPLOYEE: _____ **DATE COMPLETED:** _____ **TIME:** _____

VILLAGE OF SKOKIE

Citizen Request For Service Report

Request Number: 30625
Received by: VAN ELZEN, N. - MANAGER'S OFFICE
How: INFO@SKOKIE **First Request:**

Date of Request: 7/ 8/03
Time of Request: 4:54 PM
Returned Call Requested:

Directed to: SCHATTNER, F. - ENGINEERING

Name: WEISSMAN KELLY Mr. Mrs. Ms.
Company: PTA PRES - JANE STENSON
Address: **Unit:** **Zip Code:**
Phone: **Other:** randkweissman@juno. **Ext/Other:**

Request: **Type of Service:** TRAFFIC

Dear Mr. Schaffner,

I am a resident of Skokie who currently resides on Arcadia Street half a block west of Terminal Avenue. I recently received an e-mail from a concerned citizen regarding the proposed expansion of the Skokie Swift and wished to voice my concerns.

As a resident of Skokie for nearly 15 years, I have noted with pride the progress that the village has made toward renovating our downtown area, the library, and the mall formerly known as Old Orchard. (Shoppingtown? I'd rather die than be caught shopping at a mall named Shoppingtown. Talk about degrading!) The proposed Skokie Swift expansion, however, leaves an ominous feeling in the pit of my stomach. Maybe, instead of the money that my husband and I have already spent and planned to spend to upgrade our residence, we should be looking to move elsewhere? We already receive more than our share of noise from both the Edens Expressway and from the small businesses that operate only one lot away from my bedroom windows. The addition of a train system less than half a block from our residence will make the noise situation unbearable. (It's bad enough that I work off shifts and have a difficult time sleeping at odd hours of the day and night; add the additional noise and I might as well forget about ever getting any rest.)

As a parent and current president of the Jane Stenson PTA, my overwhelming concern is for the safety of every child who might be impacted negatively by the train line expansion. We just finished paying several thousand dollars to a notable traffic consultant to conduct a safety study of our school site and the area immediately surrounding Jane Stenson School. We are attempting to do everything in our power to make our school a safe one for our children (several of whom have been injured just trying to get to and from school). What needs to happen before the Village of Skokie and the County of Cook realize the potential for tragedy by expanding a perfectly sufficient transportation system into our residential neighborhoods? How do you plan to deal with the increase in traffic snarls on residential streets that are already overburdened

VILLAGE OF SKOKIE

Citizen Request For Service Report

with speeders and careless drivers? How much money can the Village and the County afford to settle the lawsuits that will certainly result from the injuries and fatalities that WILL occur when you mix young, curious, and incautious children with rapid transit solely for the convenience of shoppers and high school students? (And let's not forget the increase in truancy that may occur with our high school students who decide to skip class to go downtown for an afternoon of "partying.")

As a property owner and taxpayer, I believe I have just cause to be concerned about the negative impact of expansion to both my property value and my tax bill. Looking at the "conservative" cost estimates listed in the Skokie Review, I fail to see where the funds will come from to pay for this proposed expansion other than from our residents' pockets. My husband and I work hard as it is to ensure that our children will be able to attend quality schools, have pleasant and safe parks in which to play, and grow up in a community that (I thought) cares for each and every person in our neighborhood. I fail to see how we can continue to keep paying more and more taxes for a proposed whim of some selfish shoppers who can't spend 15 minutes on a bus to go to Shoppingtown. Why are you so concerned about their well being and so blatantly unconcerned about ours?

Location Info Address #: **Location Info Street Name:**

Curb/Intersection: As a rational being, I see little justification for the proposed expansion, other than convenience for shoppers. You can rest assured that

Location Area: my family and friends will vote a resounding NO to any resolution regarding this expansion, and will use any means within our capabilities

Assigned Name: to defeat it. Please do your part to keep Skokie beautiful and safe for **Date:** _____ its residents, and stop being so concerned about people who couldn't care

Written Field Notes less about the impact that Skokie Swift expansion may have on us. Thank you.

Kelly Weissman
PTA President, Jane Stenson School

Proud Skokie resident for 14+ years

VILLAGE OF SKOKIE

Citizen Request For Service Report

Request Number: 30504 **Date of Request:** 7/ 7/03
Received by: VAN ELZEN, N. - MANAGER'S OFFICE **Time of Request:** 4:42 PM
How: INFO@SKOKIE **First Request:** **Returned Call Requested:**

Directed to: SCHATTNER, F. - ENGINEERING

Name: ELARDE LINDA Mr. Mrs. Ms.
Company:
Address: 5216 EMERSON ST **Unit:** **Zip Code:**
Phone: (847) 965-4554 **Other:** **Ext/Other:**

Request: **Type of Service:** TRAFFIC

Dear Mr. Schattner,
I am emailing in regard to the proposed continuation of the railroad line from Dempster to the Old Orchard Shopping Center. I am opposed to such a plan for a number of reasons. The tremendous financial cost of such a project would not, I believe, render commensurate benefits to the community. In fact, I do believe that many adjacent neighborhoods would suffer such negative impacts as noise pollution, increased hazard along the line through residential areas (especially in regard to children accessing parks, riding bikes and walking to school), a marked decrease in aesthetic quality of the suburban landscape in Skokie, increased crowding and urbanization of the area and a resultant negative impact on property values. I think that some sort of shuttle arrangement that would transport commuters from the Skokie Swift terminal at Dempster to the Mall would achieve comparable results without the accompanying negative effects. In addition, the financial and non-financial costs to the community would be greatly reduced. I have been living in this community for 20 years...Skokie is a fabulous place to raise children and to participate in a wide variety of recreational, intellectual, cultural, and social activities. I cannot imagine that such a tremendous financial commitment as this rail line would be of benefit. I hope that comprehensive impact studies would be initiated before such a project would even be considered. I am concerned that the negatives of such an undertaking would far outweigh the positives over the long term.

Location Info Address #: **Location Info Street Name:**
Curb/Intersection:
Location Area:

Assigned Name: **Date:** _____

Written Field Notes

VILLAGE OF SKOKIE

Citizen Request For Service Report

Request Number: 30449 **Date of Request:** 7/ 7/03
Received by: VAN ELZEN, N. - MANAGER'S OFFICE **Time of Request:** 2:22 PM
How: INFO@SKOKIE **First Request:** **Returned Call Requested:**

Directed to: SCHATTNER, F. - ENGINEERING

Name: MCNALLY JULIA Mr. Mrs. Ms.
Company:
Address: **Unit:** **Zip Code:**
Phone: **Other:** Jyana3@aol.com **Ext/Other:**

Request: **Type of Service:** TRAFFIC

Mr. Fred Schattner:

I am a Skokie resident, living near the Old Orchard Shopping Mall. I am writing to express my discontent with the thought of having the Skokie Swift coming to Old Orchard Mall.

Although on the surface it appears that having the Skokie Swift will provide transportation to and from the mall, it will, in reality, cause so much more congestion, due to extra parking space needed by the riders. Parking will spill over into the streets in the residential area, causing unnecessary inconvenience and a high volume of traffic on the side streets.

In addition, placing the Swift on the existing tracks will pose a hazard for young children walking and riding their bikes on Church Street, not to mention tremendous noise for nearby residents. This not only poses a hardship for residents in the present but may also decrease the value of homes in the area.

Please reconsider your decision to stretch the Swift to Old Orchard. In the last 20 years that I've lived in Skokie, I have had no problem getting to the Swift at Dempster, parking my car and heading downtown, whenever I've needed to. Bringing the train closer to Old Orchard wil only cause more congestion, on top of the existing one which we're already dealing with.

Thank you for your assistance in this matter.

Location Info Address #: **Location Info Street Name:**
Curb/Intersection:
Location Area:

Assigned Name: **Date:** _____

Written Field Notes

Skokie Swift Station Location Feasibility Study Planning Commission Presentation

Village of Skokie

September 18, 2003

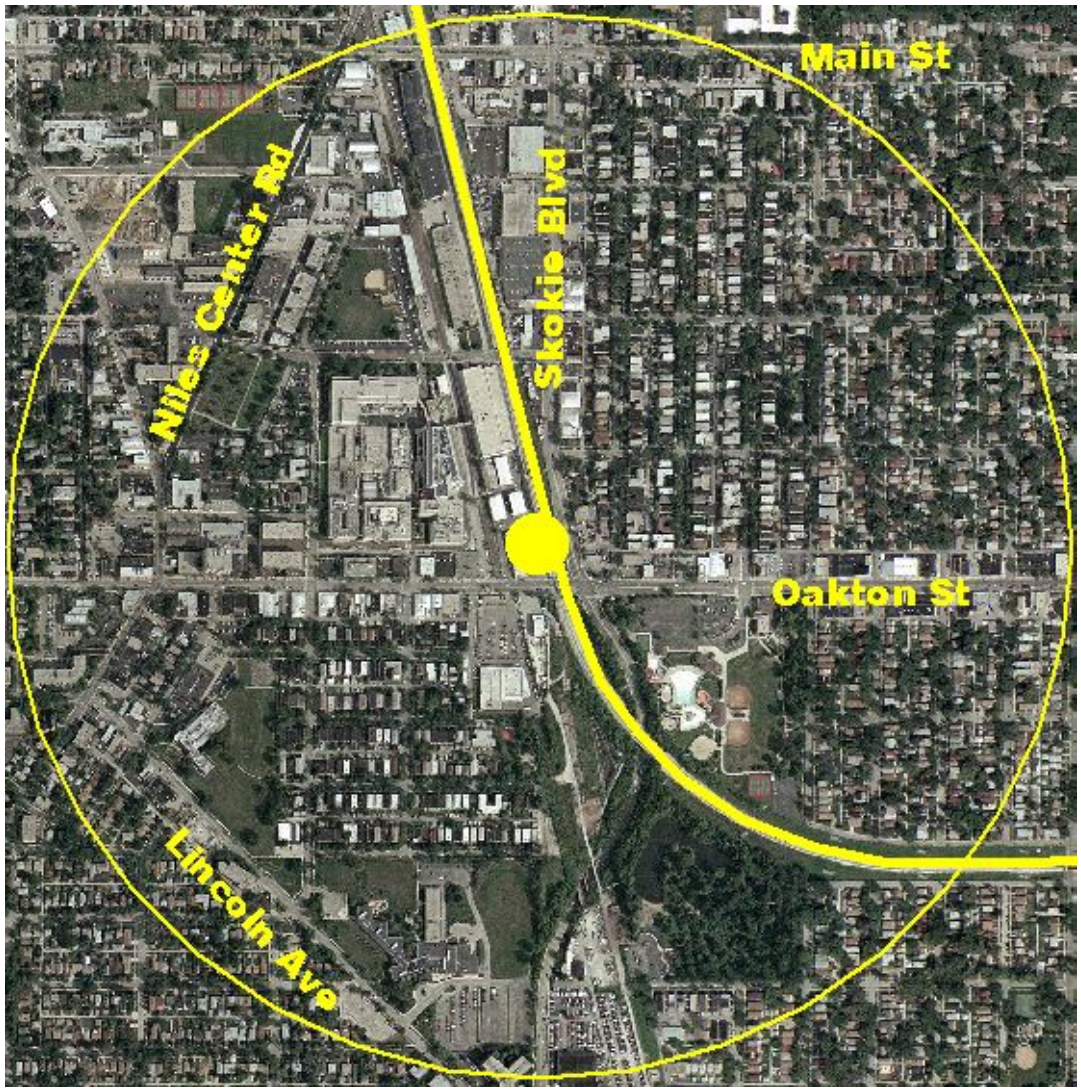
Study Purpose

Determine the feasibility of and recommend further actions by the Village of Skokie, CTA, Pace, and the RTA on the desirability of:

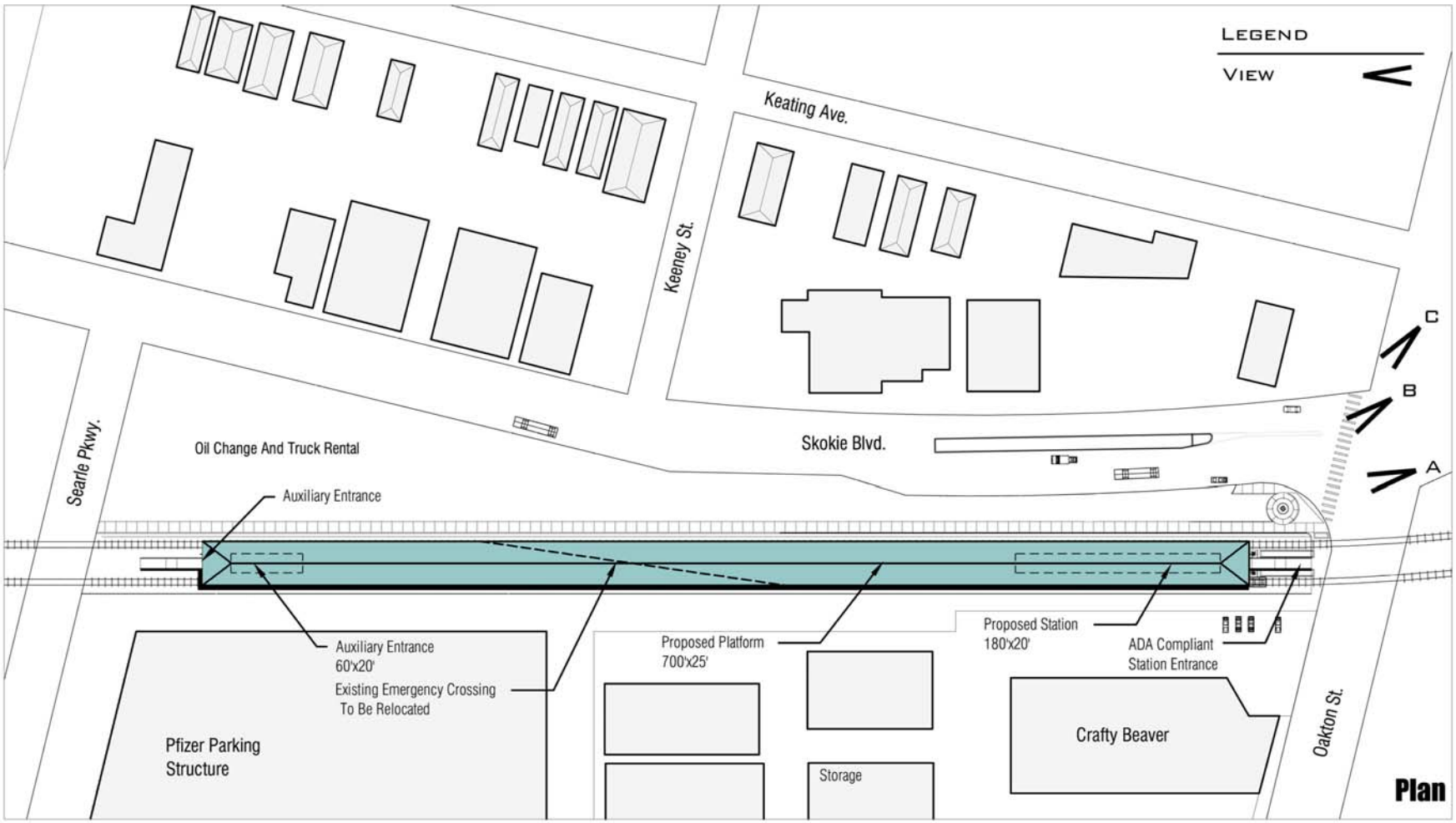
- New stations along the existing Skokie Swift and
- Extending the Skokie Swift to Old Orchard Road

Recommended Intermediate Station at Oakton St.

Yellow circle is ½ mile in radius from potential station site



Oakton Design Concept



Oakton Street Station - Design Concept

THE SKOKIE SWIFT STATION LOCATION FEASIBILITY STUDY

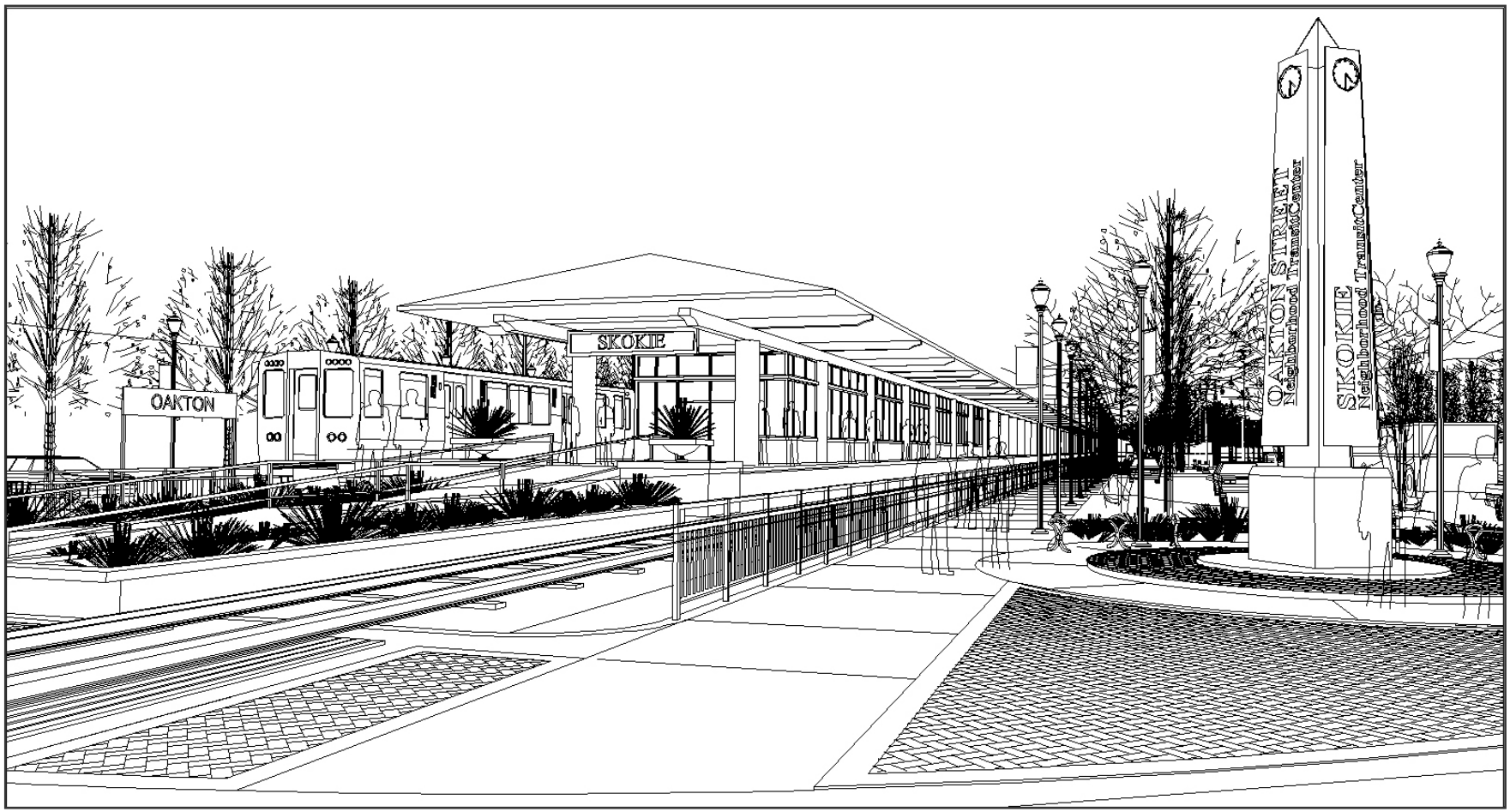
THE VILLAGE OF SKOKIE

0 50 100

NOTE: This drawing illustrates a preliminary architectural concept. Various architectural features and safety-related devices have not been shown, or have been included for conceptual purposes only.

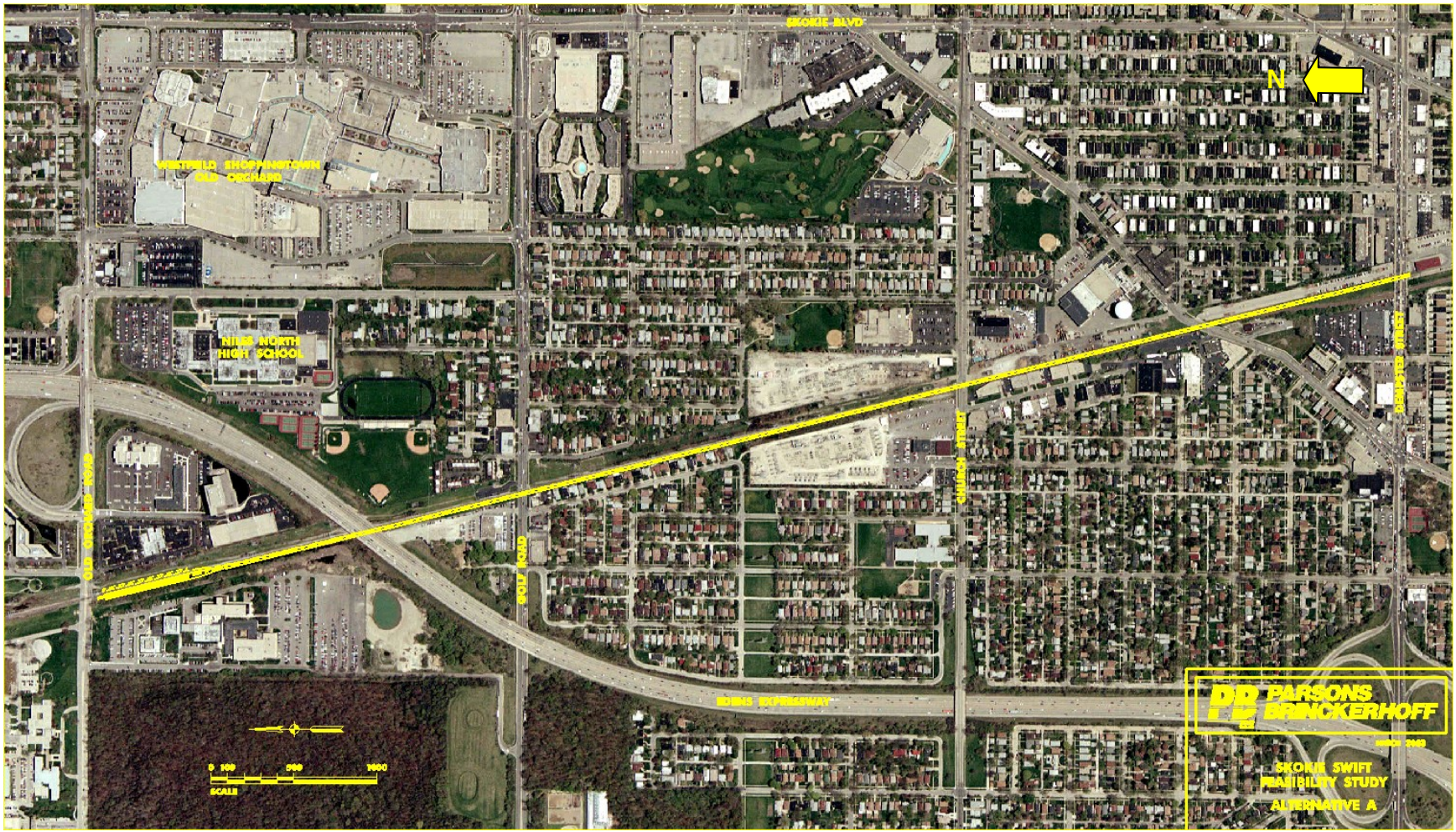
SEPTEMBER 12, 2003

Oakton Design Concept

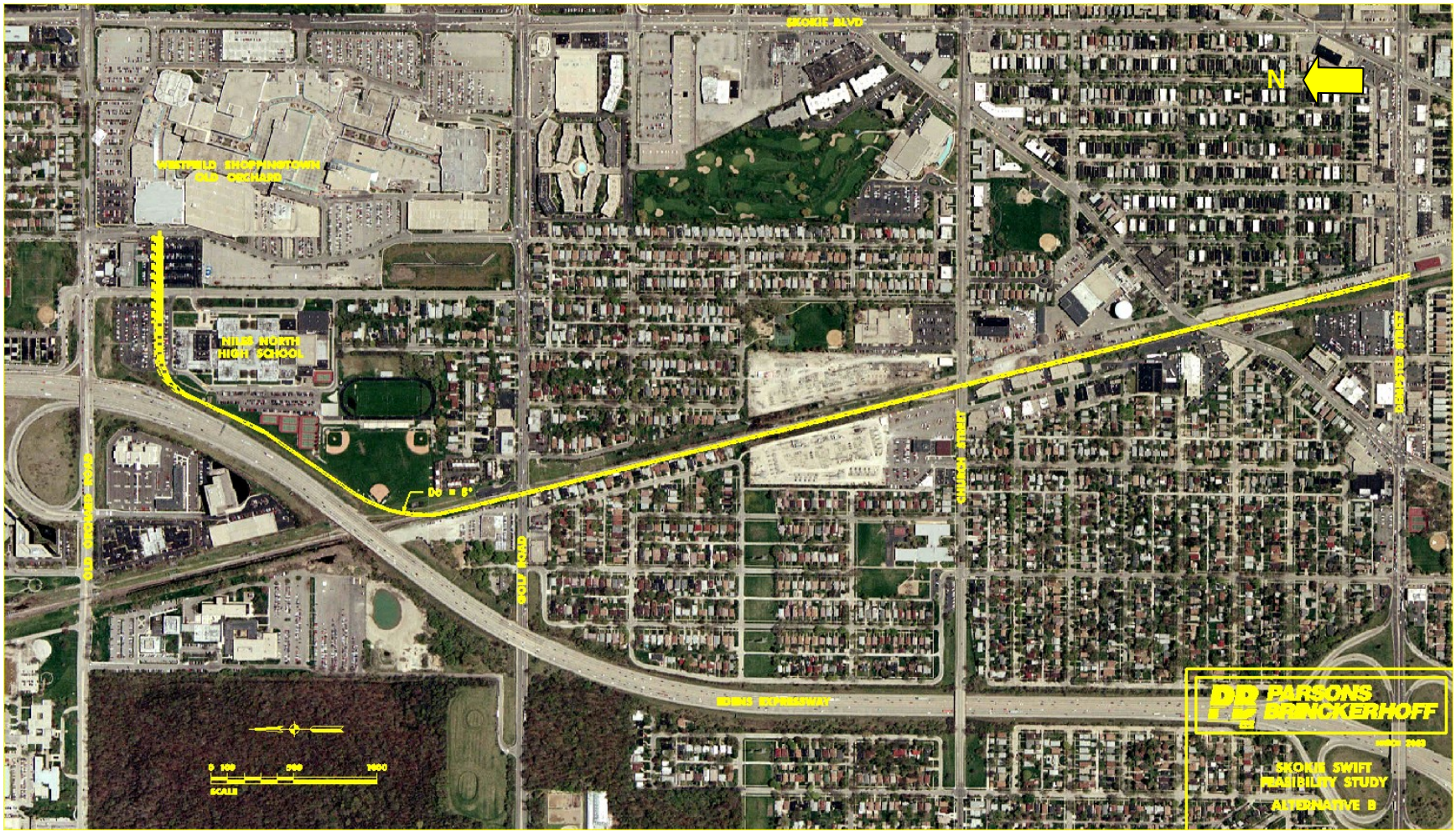


North Extension Alternatives

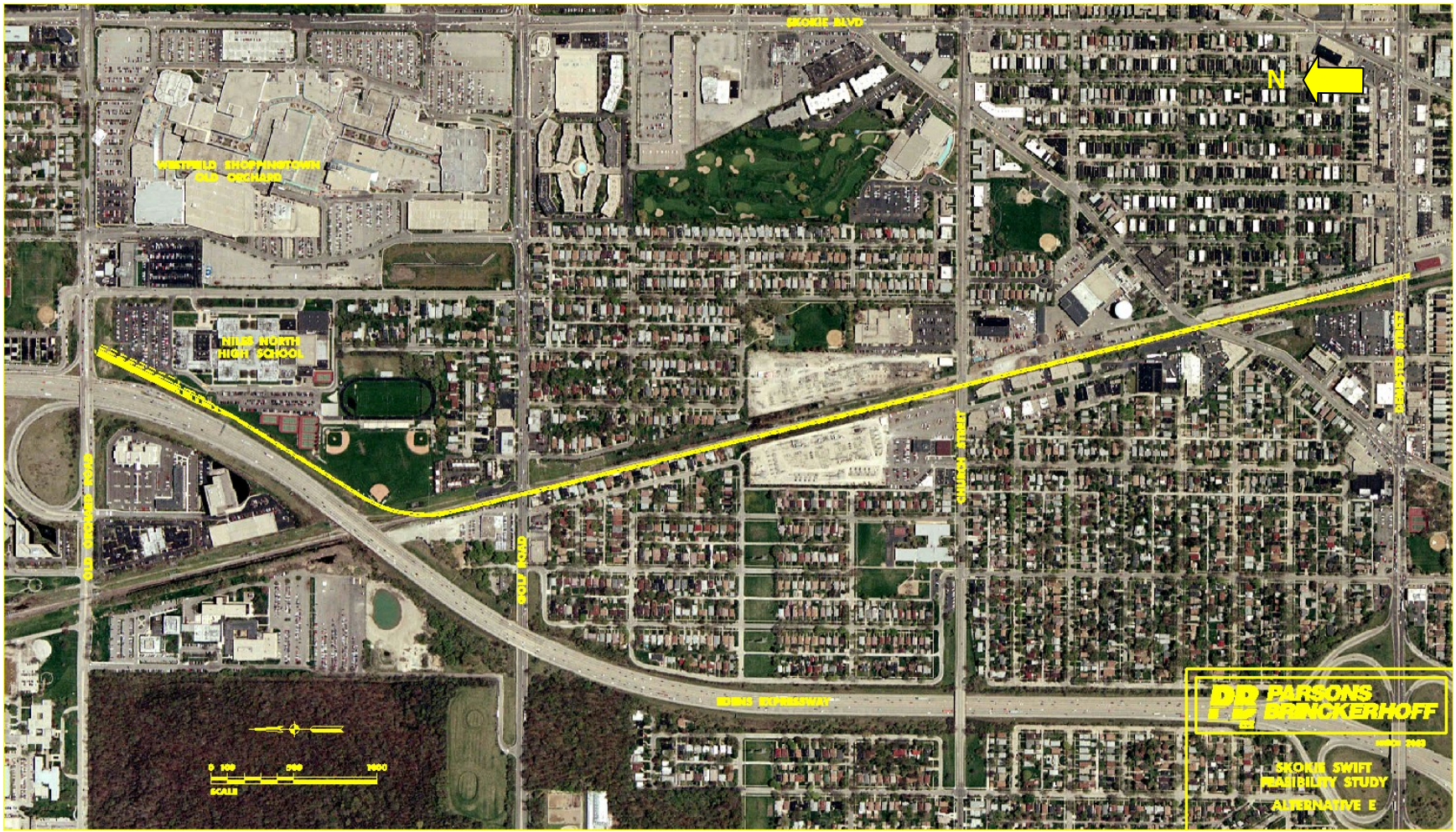
Recommended Alternative A – North Extension and Station



Recommended Alternative B – North Extension and Station



Recommended Alternative E – North Extension and Station



2000 Demographics and 2030 Projected Ridership

- Oakton
  - 7,600 people in 3,100 households
  - 3,300 employees
  - Ridership: 900 -1,200 boardings per day
- Dempster
  - 8,400 people in 3,500 households
  - 3,500 employees
  - Ridership: 1,000 -1,300 boardings per day
- Old Orchard
  - 2,300 people in 870 households
  - 5,000 employees
  - Ridership: 1,900 -2,300 boardings per day

Extension Issues and Concerns

- R-O-W acquisition (UPRR, ComEd)
- ComEd tower/pole relocation
- Other utility impacts
- At-grade crossings (Dempster, Golf)
- Dempster station potential reconstruction
- Possible road congestion
- Neighborhood concerns/impacts (vary by alignment, profile)

Capital Costs (in 2003 dollars)

- Stations:

  Oakton - $18 million

  Dempster - $21 to $32 million

  Old Orchard - $36 to $43 million

- Oakton costs can be reduced (shorter, single-end platform)

- Dempster and Old Orchard costs depend on alignment profile

Capital Costs (in 2003 dollars)

- Old Orchard Extension Alternatives:

  A - $154 to $289 million

  B - $228 to $301 million

  E - $212 to $278 million

- Combination of alignment profiles

- Includes stations and additional cars

Annual Operating Costs (in 2003 dollars)

- New Intermediate Station
  - Weekdays only (250 days): $305,000
  - Year round (365 days): $445,300
- North Extension to Old Orchard
  - Weekdays only (250 days): $800,000
  - Year round (365 days): $2,000,000
- Costs are in addition to existing operations

Public Meeting

- Held June 26, 2003
- Support for Oakton station
- Mixed reaction to north extension

Next Steps

- Refine ridership projections
- Partner with CTA to advance Oakton station
- Act to preserve extension right-of-way
- Conduct north extension alternatives analysis and select locally-preferred alternative (LPA)