South Suburban Commuter Rail Feasibility Study
Phase 1A

Concept Engineering of Two Proposed Connections for the Potential SouthEast Service to Connect with Metra's Rock Island District Route

and

Preliminary Environmental Assessment of Four Key Locations on Various Alignment Options

Metra

and

Parsons Brinckerhoff

September 2000

Introduction

Several questions remained at the conclusion of the Phase I South Suburban Commuter Rail Feasibility Study, published in April of 1999. Most of them were anticipated as logical elements of Phase II. However, additional funds already had been provided by the South Suburban Mayors and Managers Association (SSMMA) to use at Metra's discretion to supplement Phase I work. Metra and Parsons Brinckerhoff (PB) teamed up to examine further some elements of the first Study to gain additional information and perhaps narrow some of the options prior to conducting Phase II.

The conclusion of the Phase I Feasibility Study identified four options for the potential SouthEast Service (SES) to access downtown by connecting with the Metra Rock Island District (RID). The first task was to provide a more in-depth look at how the grade-separated routes would connect for Metra SES operation, and provide a more site-specific cost estimate for comparison purposes:

- *Option 1*: Connect with the SouthWest Service/Norfolk Southern (NS) at 74th Street, then divert at 21st Street to/beside the Illinois Central to connect with the RID north of 16th Street
- *Option 2*: Connect to the RID at 79th Street, where the Norfolk Southern and the Belt Railway of Chicago (BRC) pass beneath the Metra route
- *Option 3*: Connect with the Chicago Rail Link (CRL) at Oakdale (90th Street), then west a half-mile to Gresham to connect with the RID; both connections would be at-grade
- *Option 4*: Connect with the Canadian National (CN) at Thornton Jct. in South Holland, then connect to the RID north of 139th Street in Blue Island (CN a.k.a. Grand Trunk Western)

The principal PB staff members had conducted the Phase I Study when employed by another consultant. Now they were asked to examine Options 2 and 4, the two connections which appeared would be the most difficult to achieve because of the grade separations between Metra and the respective freight lines. Option 3 is more straightforward (all at-grade, half-mile long); it remains as an option but was not examined here. Option 1 already has been discarded already because of more information regarding the impending closure of the St. Charles Air Line and the probable SWS connection to the RID at 74th Street that would send SWS trains into LaSalle Street Station.

The second task assigned to PB was a Preliminary Environmental Assessment of some critical locations along the various potential routes:

- *Site 1*: East around Yard Center in Dolton
- *Site 2*: Oakdale to 74th Street in Chicago
- *Site 3*: 79th Street Rail Connection in Chicago
- *Site 4*: Blue Island Junction in Blue Island

Note that Sites 3 and 4 coincide with the two grade-separated junctions and connecting tracks described above. The attached reports were written independent of each other, and have been compiled in this package for distribution to SSMMA members and any other interested parties.

Metra Staff

Metra's Potential SouthEast Service: 79th Street Connection to the RID

Concept Engineering Report

This report describes the conceptual engineering work of Parsons Brinckerhoff (PB) on the proposed connection between the Norfolk Southern (NS) Railway and the Metra Rock Island District (RID) near 79th Street in Chicago, Illinois. [As proposed, the SouthEast Service (SES) route would run on Union Pacific (UP) tracks from the south, but their ownership ends around 81st Street. Thus, the NS segment would be a critical link to making this connection viable.] This work is a more detailed follow-up regarding alternative physical connections from the potential SES route onto the existing Metra system via the RID, as suggested in Phase I of the South Suburban Commuter Rail Feasibility Study (April '99). This is part of Option 2 from that report.

Two separate track connections are portrayed on the aerial photo following this section. The Metra connection on the eastern side of the RID is shown as a burgundy line, while the two RID tracks are shown as red lines, the NS as dark blue, the Union Pacific (UP) as yellow [only on r-o-w map; left off aerial in error (it's just above light blue line)], and the Belt Railway of Chicago (BRC) as light blue. Also shown on the aerial photo for reference is a proposed SouthWest Service (SWS) connection to the RID, which at the moment is a separate topic of discussion regarding a proposal that would send all of the SWS trains into LaSalle Street Station. Simultaneous construction of interlocking(s) required in this area could save some capital. This proposed new connection is an orange line on the attached aerial. "Design Nine" of St. Louis, Missouri previously developed this connection while under contract with IDOT. PB appreciates the timely and helpful assistance that IDOT and Design Nine provided to support this effort.

Background Information

Currently, the RID operates as a two-track main line, passing above the single-track NS and the double-track Belt Railway of Chicago (BRC) near 79th Street. One connection would utilize the current main line on the NS. The other connection would expand the NS into a double-track main line at this point, thereby creating a double-track link between the SES (UP/NS) and the RID. A new 79th Street connection would be constructed in stages, with either connecting track built initially for bi-directional movement, with an associated crossover on the RID to access the other main. The second connecting track would be built later, when the number of SES trains might be increased.

From photographs and known required railroad clearances, the grade separation between the two railroads (top-of-rail to top-of-rail) is approximately 35 feet. This height is used to calculate the grades on the proposed new connections in this report. The grades are designed to be less than the RID's maximum grade of 1.71%, which is also the steepest grade anywhere on the Metra system. This grade just happens to occur over an approximately 1,000-foot section south of Gresham Station on the RID, a mile or so south of the potential new junction under discussion. Each connection would utilize No. 15 turnouts, track curvature of sufficient radii, and superelevations that would assure a minimum operating speed of 25 miles per hour through the proposed interlockings. (Note that No. 20 turnouts would permit speeds up to 35 miles per hour, which could be preferred.)

Connection One: Single Connecting Track East of the RID

This concept, as portrayed on the aerial photo, would construct a single connection on the eastern side of the RID. (Ignore the green line for now; it's not practical with single-track NS.) The connection would be bi-directional, which would likely be sufficient for the modest initial service levels (i.e., eight to ten trains per day, primarily in peak periods). The right-of-way associated with this proposed connecting track was the location of a former third main track on the RID. It could be used for the eastern-side connection just north of 79th Street. This would entail moving the RID's retaining wall further north, but it would require only a small piece of property just north of 79th Street between the RID and Fielding Street. The eastern link (burgundy line) would have a No. 15 turnout and 3.30° of curvature.

The average grade of this eastern-side connecting track could vary considerably because the turnout on the RID end could extend up to a mile north, parallel to the two existing mains.. Therefore, no specific turnout location is shown at its northern end; it could be located virtually anywhere that would be cost-effective. Keep in mind that as the grade is made more gradual, the costs for the associated new retaining wall, earth work, and track work will increase. The start of the grade on the east side also could be moved at least a half-mile south on the NS. For example:

- If the grade began at the signal bridge just north of 80th Street, the distance would be approximately 2,700 feet and the normally uphill grade would be 1.3%, which is less than the current Metra maximum.

- A gentler grade would place the RID turnout around 72nd Street, parallel with the northern boundary of Hamilton Park. The distance from the NS turnout would be 4,600 feet and the resulting average grade would be 0.77%.

- A lower grade could begin at the next signal bridge to the south on the NS, just north of Vincennes Avenue, with the turnout on the RID again located around 72nd Street. The distance would be approximately 7,200 feet and the resulting grade slightly less than 0.5%.

Connection Two: Second Connecting Track West of the RID

This concept, as portrayed on the right-of-way map, would construct a second connection on the western side of the RID. In this concept, the two connecting tracks (one on each side of the RID) and a NS double-track extension north of 79th Street would be built simultaneously. The NS single-track main line would be relocated to the west to allow the existing main line to become the access track to both the eastern and western SES links to the RID. The green line on the map represents the proposed connecting track to be located west of the RID, as well as the new second NS main track and the proposed new extended main to meet the existing NS siding south of 82nd Street. This effectively would provide NS with two main tracks through this area, which would help their freight movements but also be necessary with the additional trains run by Metra through here. Currently, there is ample room in the unused bays of the RID bridge over the NS and BRC to allow for this change. To accommodate the NS, this link would also have a relocated connecting track to the BRC.

The western connection would have No. 15 turnouts, a 4.5° maximum curvature, and ½-inch superelevation. The grade would be 1.6% which, if there are two connecting tracks, would be normally downgrade for SES trains. The grade of this western connecting track was determined from the northern end of the turnout on the NS to the southern end of the turnout on the RID, a distance of approximately 2,200 feet. This track would be used only for southbound trains.

Metra could moderate the grade by moving the RID's turnout connection further north. This movement would impact two design issues. First, the IDOT design for the proposed SWS connecting track would need to be extended further north before it could connect with the RID. Sufficient width in the original RID right-of-way seems like it could accommodate this alternative single-track SWS connection. There might even be room for a full double-track SWS connection in that configuration. Evaluation of the SWS connection, however, is outside the scope of this work and should be coordinated with IDOT.

Second, the more gradual grade might require a lower bridge over 76th Street rather than rehabbing the existing one. The westernmost portion of the bridge is on a grade that was used for the former industrial track that served the lumber yard (shown on the aerial, but the site has since been cleared) on the south side of 76th Street, sandwiched between the two railroad embankments. The reduced road clearance below that lower bridge should not be a problem, judging by the clearance under the NS and BRC, which cross the same street a block further west.

Conclusion

Both of the connecting tracks described in this report appear feasible and compatible with a proposed SWS connection to the RID. The grades associated with these connections are somewhat steep but they could be moderated. In any case, the steeper grade proposed is for what normally would be downhill movements. The profile would be 1.6% downgrade for SES trains, while the uphill grade would be only 1.3% on the eastern-side connection, which could be lessened if deemed necessary.

With two connecting tracks, each of them would link separately with the RID's northbound and southbound tracks, which would eliminate the need for SES trains to cross over to the other main track after reaching the RID. This is particularly important when trying to intersperse the SES trains with the RID train schedule, especially since they are all running "express" in this area. With proper scheduling, the SES trains could be blended into the existing schedule to mix with RID trains, none of which have any station stops between Gresham (87th Street) and LaSalle Street Station.

The cost estimates for Option 2 are $9.5 and $13.7 million for the single- and double-track scenarios, respectively. However, despite being considerably less expensive than the Option 4 design, this option is not recommended for further consideration. The potential for frequent delays owing to operational interference from the three freight railroads and the crossing maneuvers they must make with each other, plus an impending major redesign of the entire track arrangement here (Metra is part of this too), offer sufficient justification for that opinion. NS is on record (by letter) asking Metra to forego Options 1 and 2 in further SES studies, since they would worsen operational interference.

79th Street Connection
Conceptual Engineering Cost Estimate

		Single-Track Connection with Single-Track NS				
Category	**New ?**	**Unit**	**Unit Cost**	**Quantity**	**Cost**	**Remarks**
New Track (133/136# CWR) with grading	New	Track-mile	$1,500,000	0.5	$ 750,000	2,700-foot east connection
Turnouts (No. 15) *	New	Each	$ 130,000	4	$ 520,000	Join connection to existing mains and crossover on RID
Turnouts	Rehab	Each	$ 40,000	1	$ 40,000	Relocate yard crossover turnout
Interlockings	New	Each	$1,500,000	2	$ 3,000,000	One each for RID and NS
Main Line Signals / Bi-Directional CTC	New	Each	$ 450,000	1	$ 450,000	One bi-directional intermediate signal
Signal Interface	New	Each	$ 500,000	1	$ 500,000	Interface with existing signal system
Excavation / Grading (cut or fill)	New	Cubic Yard	$ 15	130,000	$ 1,950,000	2,500-foot cut and 200 feet of fill on east side
Subtotal					$ 7,210,000	
Contingency (20%)					$ 1,442,000	
Engineering, Design, and Construction Management (12%)					$ 865,200	
Total estimated capital cost (millions of 1999 dollars)					**$ 9,517,200**	
		Double-Track Connection with Double-Track NS				
Category	**New ?**	**Unit**	**Unit Cost**	**Quantity**	**Cost**	**Remarks**
New Track (133/136# CWR) with grading	New	Track-mile	$1,500,000	1.5	$ 2,250,000	2,700-foot east/2,200-ft west connections; 3,150-ft new NS main
Existing Track	Renew	Track-mile	$ 500,000	0.2	$ 100,000	Includes replacement of 60% of the crossties
Turnouts (No. 15) *	New	Each	$ 130,000	4	$ 520,000	Join connections to existing mains
Turnouts (No. 10)	New	Each	$ 110,000	2	$ 220,000	Renew and relocate yard lead and crossover turnouts
Turnouts	Rehab	Each	$ 40,000	2	$ 80,000	Relocate yard crossover turnouts
Interlockings	New	Each	$1,500,000	2	$ 3,000,000	One each for RID and NS
Main Line Signals / Bi-Directional CTC	New	Each	$ 450,000	2	$ 900,000	Two bi-directional intermediate signals
Signal Interface	New	Each	$ 500,000	1	$ 500,000	Interface with existing signal system
Bridges	Rehab	Linear Foot	$ 4,000	60	$ 240,000	76th Street
Excavation / Grading (cut or fill)	New	Cubic Yard	$ 15	170,000	$ 2,550,000	2,500-foot cut/200 feet of fill east side; 850 feet of fill west side
Subtotal					$10,360,000	
Contingency (20%)					$ 2,072,000	
Engineering, Design, and Construction Management (12%)					$ 1,243,200	
Total estimated capital cost (millions of 1999 dollars)					**$13,675,200**	

* No. 20 turnouts, which might be used to attain higher operating speeds if practical, are $150,000 each; add $80,000 to either scenario.

DESIGNED BY: LARRY BUELL
DRAWN BY: ALAN ANDERSON
CHECKED BY:
PROJECT MANAGER: DENNIS GARY

PB PARSONS BRINCKERHOFF
100 230 West Monroe Street Chicago, Illinois 60606

Metra

LEGEND

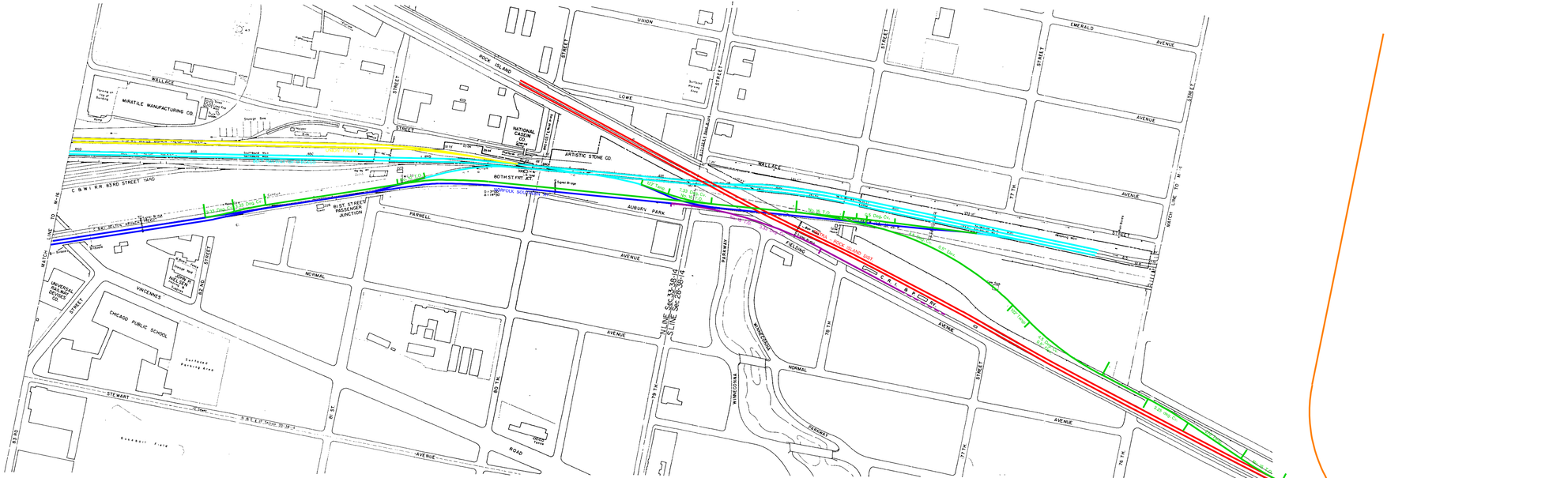
EXISTING:
- METRA ROCK ISLAND DISTRICT (RID)
- NORFORK SOUTHERN
- UNION PACIFIC
- BELT RAILWAY OF CHICAGO

PROPOSED:
- CONNECTION ON EAST
- CONNECTION ON WEST
- IDOT SWS CONNECTION TO RID (BY DESIGN NINE)

79TH STREET CONNECTION TO ROCK ISLAND DISTRICT (RID) SINGLE TRACK SOUTH OF RID

METRA SOUTHEAST SERVICE (SES) CONCEPT STUDIES

METRA CONTRACT NO. K 80093 – TASK C2
PARSONS BRINCKERHOFF PROJECT NO. 16716C
AUGUST 1999



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DRAWN BY: ALAN ANDERSON
CHECKED BY:
PROJECT MANAGER: DENNIS GARY

PARSONS BRINCKERHOFF
230 West Monroe Street Chicago, Illinois 60606

Metra

LEGEND

EXISTING:
- METRA ROCK ISLAND DISTRICT (RID)
- NORFORK SOUTHERN
- UNION PACIFIC
- BELT RAILWAY OF CHICAGO

PROPOSED:
- CONNECTION ON EAST
- CONNECTION ON WEST
- IDOT SWS CONNECTION TO RID (BY DESIGN NINE)

79TH STREET CONNECTION TO ROCK ISLAND DISTRICT (RID)
FULL METRA DOUBLE TRACK

METRA SOUTHEAST SERVICE (SES) CONCEPT STUDIES

METRA CONTRACT NO. K 80093 – TASK C2
PARSONS BRINCKERHOFF PROJECT NO. 16716C
AUGUST 1999

Metra's Potential SouthEast Service: Blue Island Connection to the RID

Concept Engineering Report

This report describes the conceptual engineering work of Parsons Brinckerhoff (PB) on the proposed connection between the Canadian National (CN) Railroad and the Metra Rock Island District (RID) near Blue Island, Illinois. This work is a more detailed follow-up regarding alternative physical connections from the potential SouthEast Service (SES) onto the existing Metra system via the RID, as suggested in Phase I of the South Suburban Commuter Rail Feasibility Study (April '99). This is part of Option 4 from that report.

The proposed track connection is portrayed on the aerial photo following this section. The Metra connection in the southeast quadrant of the grade-separated CN/RID intersection is shown as a yellow line, while the two RID tracks are shown as red lines and the CN as a medium blue. [Note for reference that the CN route described here is more familiar (and referred to) locally as the Grand Trunk Western (GTW) or sometimes just Grand Trunk. The GTW has always been a wholly owned subsidiary of the parent company CN, which has been changing references to the corporate name. Canadian Pacific has been making similar changes with its Soo Line subsidiary.]

Background Information

Currently, the RID operates as a two-track main line passing above the CN double-track main line south of downtown Blue Island. At present, there is no track connection between them. There is a small storage yard consisting of several tracks on the south side of the main tracks. As shown in the drawing on the aerial photo attached to this report, the proposed single-track connection would traverse a vacant parcel of land that appears to have a high water table but no significant wetland areas. On the southern end, the connection would utilize the current lead track into the CN yard.

From photographs and known required railroad clearances, the grade separation between the two railroads (top-of-rail to top-of-rail) is approximately 35 feet. This height is used to calculate the grade on the proposed new connection in this report. The grade is designed to be less than the RID's maximum grade of 1.71%, which is also the steepest grade anywhere on the Metra system. This grade just happens to occur over an approximately 1,000-foot section south of Gresham on the RID.

The Connection and Some Options

The alignment of the connecting track would extend from the westerly CN main line through a realigned turnout near Western Avenue, then follow the long yard lead and diverge to run beside the switching lead for the sidings. Therefore, the new connection would start south of 139th Street as shown on the aerial photo, span Midlothian Creek (in a culvert) just past the yard and maintenance shed, and cross the open field in a sweeping curve to connect to the RID. The connection would utilize No. 15 turnouts and have a maximum 4.7° curvature with ½ " superelevation to assure a minimum operating speed of 25 miles per hour through the proposed interlockings. (Note that No. 20 turnouts would permit speeds up to 35 miles per hour, which could be preferred.)

The length of this connecting track was determined from the turnout at the southern end, which connects to the CN yard switching lead, to the turnout at the northern end on the RID, a distance of approximately 3,345 feet. The length of the grade, which can't begin to rise until clear of the 139th Street highway overpass, is approximately 2,900 feet; the resulting profile would be a 1.2% grade. This single-track connection is intended for bi-directional use.

Metra could moderate the grade, if desired, by moving the turnout connection on the RID further north. This would require a new bridge over the existing CN tracks, and possibly a second bridge over the CSX and Indiana Harbor Belt (IHB) tracks. The connecting track on these bridges would have to clear over the top of all these tracks at the same height as the RID currently does. However, several feet could be gained over the existing RID profile if a through-girder bridge would be used for the connection. This would reduce the top-of-rail-to-underside clearance of the bridge relative to that on the RID.

The first option would be very expensive. The second option would allow a lower embankment at first and a more gentle slope up to the RID, especially since the other end cannot be adjusted because of the highway overpass. However, it appears to be an expensive way to mitigate a non-fatal problem in the design, and therefore is not recommended.

From observations and conversations with railroad sources, PB has determined that the CN yard at Blue Island is seldom used. However, the long yard lead and yard tracks are regularly used to temporarily store blocks of cars. In view of that, the CN might require that the connection be independent of the yard lead. The southern turnout for the beginning of the connecting track would be relocated south of the present turnout on the CN main tracks, which would place it between Western Avenue and 143rd Street. Whichever option is used, a facing crossover would be needed on the CN east of the turnout near Western Avenue. This is a new crossover as shown on the map.

The parallel connection alignment could be constructed to pass under 139th Street utilizing the next set of piers just west of the yard lead. However, just south of 139th Street, there are two obstacles to overcome in building a new parallel track:

- A microwave tower which might have to be moved.
- An older single-family house, which would probably have to be acquired.

The degree of curvature and the ruling grade would not change appreciably under this scenario, although the same options for bridges and a gentler slope would still apply.

A pair of crossovers already exist on the RID between the Cal Sag Channel crossing and the proposed SES connection to the RID. These crossovers would be utilized to provide access between the new connection and both RID tracks, regardless of exactly where the connection is made.

Finally, while the above-described connection is single track, a double-track connection also would be possible. A double-track connection would have the same microwave-tower and single-family-house constraints south of 139th Street as would the single-track connection. It would also require a slightly modified alignment in the balloon track before connecting to the RID. This modification would allow a crossover to be installed between the two RID tracks before any bridges over the CN or the other railroads. The modified balloon alignment and the RID crossovers might be utilized for the initial installation, with the second track added later when ridership and service levels warrant it. However, there are undoubtedly cost savings to be gained by constructing the embankment and any bridges for the anticipated second track at the same time.

Conclusion

A single-track connection between the CN and the RID at Blue Island was laid out at a conceptual level. The grade associated with the connecting track is somewhat steep, but still meets Metra's minimum speed and train-size requirements. The grade could also be lessened by extending the connection lead over one or more of the freight lines while running parallel to the RID. The potential cost of a double-track connection was not developed, since it is felt that the single-track version would suffice for quite some time. Note that the cost estimates do not include any land acquisition, primarily the vacant parcel for the curving, sloped connecting track. Mitigating the grade or providing a double-track connection might require some additional property acquisition, but otherwise such a design would be feasible.

Once physically transferred onto the RID, SES trains would stop at Vermont Street Station in Blue Island to allow transfers to main line stations in either direction or to Beverly Branch stations. The SES trains would then run "express" over the main line north through Gresham to LaSalle Street Station, making no other station stops on the RID.

The proposed connection here is both unconventional and rather expensive, but it does appear to be feasible from a construction standpoint. The estimated cost is $15.1 million, increasing to $16.4 and $18.2 million, respectively, if one or more bridges would be required. More important, however, is the fact that the scenario of Option 4 is the only one that would avoid both Yard Center and Dolton Jct., with both expected to be operationally difficult to traverse. Avoiding freight interference in these areas with additional infrastructure might prove to be as much or more expensive than building the Option 4 connection. Option 3 between Oakdale and Gresham should be relatively inexpensive and easy to construct, but freight interference would appear to be the least intrusive in Option 4. Therefore, the recommendation is to further pursue Options 3 & 4 in Phase II, with now only two distinct options to compare saving a lot of time and effort, not to mention money.

Blue Island Connection
Conceptual Engineering Cost Estimate

Single-Track Connection

Category	New ?	Unit	Unit Cost	Quantity	Cost	Remarks
New Track (133/136# CWR) with grading	New	Track-mile	$ 1,500,000	0.6	$ 900,000	New connecting track
Existing Track	Replace	Track-mile	$ 1,500,000	0.8	$ 1,200,000	Existing yard lead track brought up to main line standards
Turnouts (No. 15) *	New	Each	$ 130,000	5	$ 650,000	CN crossover, Western Avenue,139th Street, tie-ins to RID
Turnouts	Rehab	Each	$ 40,000	4	$ 160,000	Relocate yard ladder-track turnouts
Interlockings	New	Each	$ 1,500,000	3	$ 4,500,000	CN crossover, yard lead, tie-in to RID
Main Line Signals / Bi-Directional CTC	New	Each	$ 450,000	2	$ 900,000	Two bi-directional intermediate signals
Signal Interface	New	Each	$ 500,000	1	$ 500,000	Interface with existing signal system
Crossing Protection	New	Each	$ 150,000	1	$ 150,000	Constant Warning Time Devices for yard-access roadway
Road Crossings	New	Each	$ 100,000	1	$ 100,000	Yard access, rubber or concrete
Bridges	New	Linear Foot	$ 10,000	0	$ -	(See note below)
Excavation / Grading (cut or fill)	New	Cubic Yard	$ 15	150,000	$ 2,250,000	2,900 feet of fill from 139th Street to RID connection
Culverts / Drainage	New	Site-specific	$ 50,000	1	$ 50,000	8-foot diameter reinforced concrete pipe, 90 feet long
Facilities	New	Site-specific	$ 100,000	1	$ 100,000	Contingency for yard buildings, parking lot, etc
Subtotal					$ 11,460,000	
Contingency (20%)					$ 2,292,000	
Engineering, Design, and Construction Management (12%)					$ 1,375,200	
Total estimated capital cost (millions of 1999 dollars)					**$ 15,127,200**	

Note: The curvature of the proposed connecting track was designed to join the RID main line south of the railroad bridge over the CN, as shown on the aerial photo. If a later engineering design would require a bridge over the CN before the connection joins the RID, add $1.3 million to the estimated cost. If the design would require running parallel to the RID over both the CN and IHB/CSX via bridges and new embankment before joining the RID, add $3.1 million to the estimated cost.

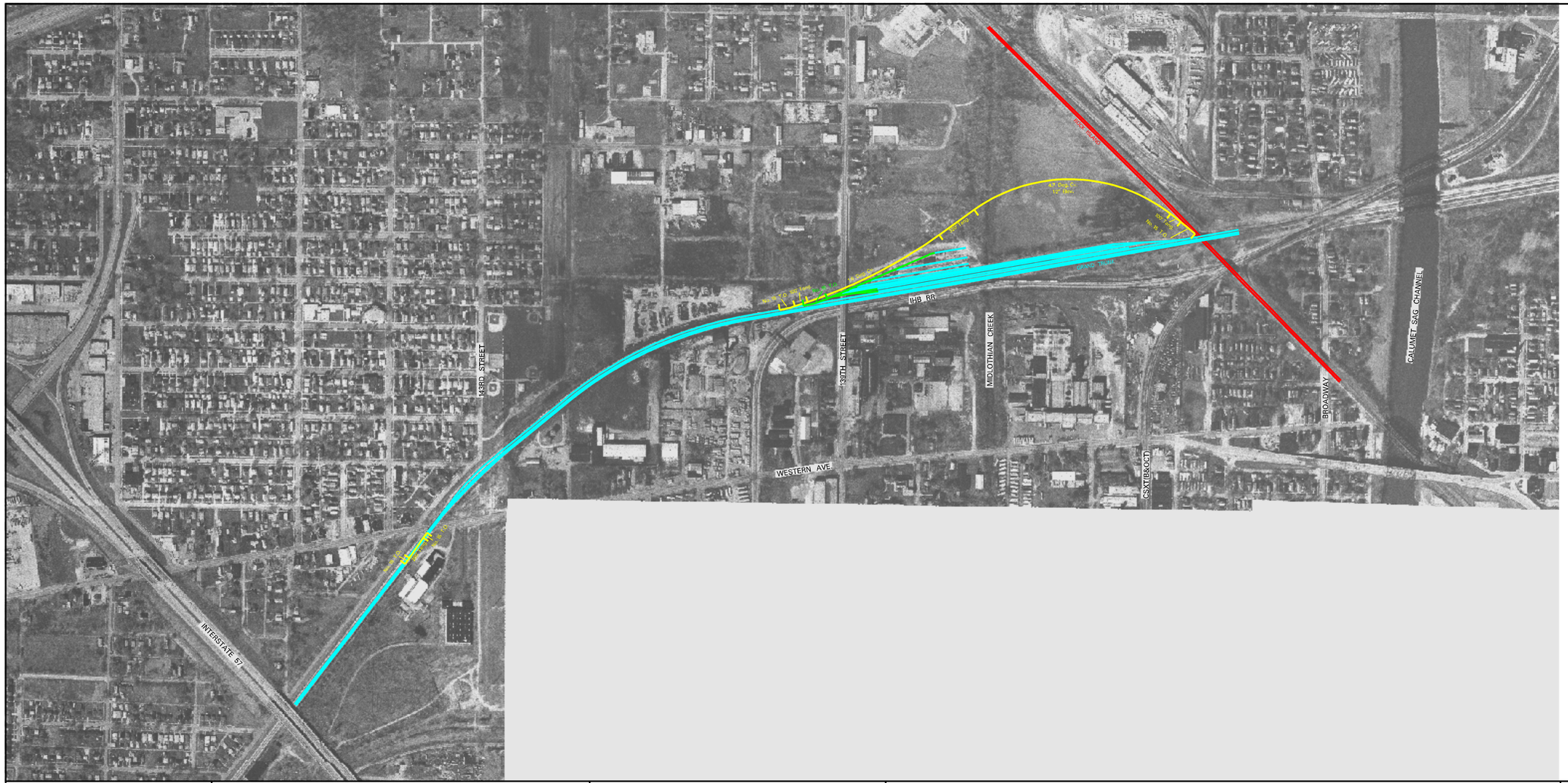
* No. 20 turnouts, which might be used to attain higher operating speeds if practical, are $150,000 each; add $100,000 to this scenario.

THESE COSTS DO NOT INCLUDE ANY ALLOWANCE FOR LAND ACQUISITION.

Double-Track Connection

Category	New ?	Unit	Unit Cost	Quantity	Cost	Remarks
New Track (133/136# CWR) with grading	New	Track-mile	$ 1,500,000	1.2	$ 1,800,000	Two new connecting tracks
Existing Track	Replace	Track-mile	$ 1,500,000	0.8	$ 1,200,000	Existing yard lead track brought up to main line standards
Turnouts (No. 15) *	New	Each	$ 130,000	7	$ 910,000	CN crossover, Western Avenue,139th Street, tie-ins to RID
Turnouts	Rehab	Each	$ 40,000	4	$ 160,000	Relocate yard ladder-track turnouts
Interlockings	New	Each	$ 1,500,000	3	$ 4,500,000	CN crossover, yard lead, tie-in to RID
Main Line Signals / Bi-Directional CTC	New	Each	$ 450,000	4	$ 1,800,000	Four bi-directional intermediate signals
Signal Interface	New	Each	$ 500,000	1	$ 500,000	Interface with existing signal system
Crossing Protection	New	Each	$ 150,000	2	$ 300,000	Constant Warning Time Devices for yard-access roadway
Road Crossings	New	Each	$ 100,000	2	$ 200,000	Yard access, rubber or concrete
Bridges	New	Linear Foot	$ 10,000	0	$ -	
Excavation / Grading (cut or fill)	New	Cubic Yard	$ 10	240,000	$ 2,400,000	2,900 feet of fill from 139th Street to RID connection
Culverts / Drainage	New	Site-specific	$ 80,000	1	$ 80,000	8-foot diameter reinforced concrete pipe, 150 feet long
Facilities	New	Site-specific	$ 100,000	1	$ 100,000	Contingency for yard buildings, parking lot, etc
Subtotal					$ 13,950,000	
Contingency (20%)					$ 2,790,000	
Engineering, Design, and Construction Management (12%)					$ 1,674,000	
Total estimated capital cost (millions of 1999 dollars)					**$ 18,414,000**	

* No. 20 turnouts, which might be used to attain higher operating speeds if practical, are $150,000 each; add $80,000 to either scenario.



GRAPHIC SCALE IN FEET

DESIGNED BY: LARRY BUELL
DRAWN BY: ALAN ANDERSON
CHECKED BY:
PROJECT MANAGER: DENNIS GARY

PARSONS BRINCKERHOFF
200 West Monroe Street Chicago, Illinois 60606

Metra

LEGEND

EXISTING:
- METRA ROCK ISLAND DISTRICT (RID)
- GRAND TRUNK WESTERN (GTW/CN)

PROPOSED:
- CONNECTION ON WEST
- REHAB /RELOCATED GTW/CN YARD TRACKS

BLUE ISLAND CONNECTION (GTW/CN RR) TO ROCK ISLAND DISTRICT (RID) SINGLE TRACK SOUTH OF RID

METRA SOUTHEAST SERVICE (SES) CONCEPT STUDIES

METRA CONTRACT NO. K 80093 – TASK C2
PARSONS BRINCKERHOFF PROJECT NO. 167116C
NOVEMBER 1999 (REV. 1)

South Suburban Commuter Rail
Feasibility Study, Phase IA

Task 2 Report:
Preliminary Environmental Assessment for:

Site #1: East Around Yard Center, Dolton
Site #2: Oakdale to 74th Street, Chicago
Site #3: 79th Street Rail Connection, Chicago
Site #4: Blue Island Junction, Blue Island

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Prepared for:
Metra
547 W. Jackson Boulevard
Chicago, IL 60661
Metra Contract No: K80093

Prepared by:
Parsons Brinckerhoff
230 West Monroe Street
Chicago, IL 60606
PB Charge No: 16716C

Summary

Under a station and parking lot blanket contract signed in May 1998, Metra requested Parsons Brinckerhoff Quade & Douglas (PB) to perform various tasks related to the feasibility of opening a new commuter rail line south of Chicago. The line would start in Beecher, IL, and generally run north along a line owned jointly by the Union Pacific (UP) and CSX railroads (UP/CSX). This line goes through Thornton Junction and the UP's Yard Center to Dolton Junction. The new commuter service would generally continue north along the UP and then other rail lines into Chicago.

The UP/CSX and UP sections of this route are the ex-Missouri Pacific and C&WI railroad line. It is currently also used by Amtrak's Cardinal (to/from Washington DC; Cincinnati, OH; and Indianapolis, IN) from Thornton Junction north to Chicago. The line parallels the Illinois-Indiana border about 6 miles inside Illinois.

An earlier Phase I feasibility study of this service by another consulting firm resulted in a draft report, *South Suburban Commuter Rail Feasibility Study* (SSFS). As of December, 1998, the most recent draft of that SSFS report is dated November 7, 1997. The following PB work is referred to as Phase IA.

Metra received a grant to fund this Phase IA work from the managers and mayors association of suburban cities along the rail line. Task two of this work was authorized on August 30, 1998. It is to conduct an environmental assessment of new connecting and run-around tracks that were proposed in the Phase I draft report.

Introduction

Four sites south and southwest of Chicago were evaluated for the presence of known environmental conditions. These sites are:

Site #1 East Around Yard Center, Dolton
Site #2 Oakdale to 74th Street, Chicago
Site #3 79th Street Rail Connection, Chicago
Site #4 Blue Island Junction, Blue Island

Sites #2 and #3 overlap, and so they were evaluated as one for purposes of this report.

Standard environmental data sources were consulted, and a site reconnaissance was conducted. While this report represents a diligent search and analysis of recognized environmental conditions, it cannot wholly eliminate uncertainty regarding the presence or absence of conditions.

Sources of information that were consulted for this report include a variety of public records and maps as well as a site walkover. Public records consulted include federal, state, and local sources as identified herein. Maps include Rand McNally's Chicago City Map (1996), National Wetland Inventory (NWI) maps provided by the Illinois Department of Conservation, Sanborn fire insurance maps, and proprietary maps prepared by Environmental Data Resources, Inc. (EDR).

Standard environmental record sources were searched within approximate minimum search distances as per (or better than) ASTM E 1527. These include:

List	Radius mi (km)
Federal National Priorities List (NPL) sites	1.0 (1.6)
Federal Comprehensive Environmental Response, Compensation, and Liability Information system (CERCLIS) list	0.5 (0.8)
Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) TSD facilities list	1.0 (1.6)
Federal RCRA non-CORRACTS TSD facilities list	0.5 (0.8)
Federal RCRA generators list	property and adjoiners
Federal Emergency Response Notification System (ERNS) list	property only
State lists of hazardous waste sites identified for investigation or remediation:	
State-equivalent NPL	1.0 (1.6)
State-equivalent CERCLIS	0.5 (0.8)
State landfill and/or solid waste disposal site lists	0.5 (0.8)
State leaking underground storage tanks (LUST)	0.5 (0.8)
State registered USTs	property and adjoiners

Non-ASTM lists were searched as well. Federal lists include Biennial Reporting System (BRS), Superfund Consent Decrees (CONSENT), Facility Index System (FINDS), Hazardous Materials Information Reporting System (HMIRS), Material Licensing Tracking System (MLTS), NPL Liens, PCB Activity Database System (PADS), RCRA Administrative Action Tracking System (RAATS), Record of Decision (ROD), Toxic Chemical Release Inventory System (TRIS), and Toxic Substances Control Act (TSCA). State lists include Solid Waste Landfill Inventory (NIPC). Other misc. databases include Former Manufactured Gas (coal gas) sites, deleted NPL sites, No Further Remedial Action Planned (NFRAP), public water systems (PWS), PWS Violation and Enforcement Data (PWS ENF), area radon information, EPA radon zones, oil/gas/pipelines/electrical transmission lines, sensitive receptors, US Geological Survey (USGS) water wells, flood zone data, National Wetland Inventory (NWI), epicenters, water dams, county well data in Illinois, Illinois private well database and Public, Industrial, Commercial Survey (PICS), Illinois State Geological Survey water wells. As such, the public records search was both comprehensive and complete.

The records search was performed by EDR—a known provider of environmental risk management data. The data from EDR's report contains information obtained from a variety of public sources only, and field checks were not made. Therefore, the data is only as accurate as the public records from which it is derived. Detailed findings are available in PB-Chicago project files.

Much of the property under consideration is former rail property, which could indicate additional environmental risk considerations. Care should be taken by the contractor during construction to properly identify, handle, and remediate (as necessary) any hazardous substances encountered during construction.

As a result of research efforts, no unusually difficult environmental (wetlands and/or hazardous waste) problems were discovered within these sites that would preclude them from further consideration for new rail lines. Potential environmental issues that were identified within each site and will warrant further detailed attention during subsequent phases include:

Site #1	No known environmental issues in the alignment. There are wetlands, floodplains, utilities, and environmental risk/hazardous waste considerations adjacent to the alignment. In addition, there are potential wetland and hazardous waste impacts associated with constructing the new rail line and/or with moving the access road to the east.
Sites #2/3	There are potential environmental risk/hazardous waste conditions due to the industrial use of the northern end of the site. Additional environmental review including soil borings will be necessary to characterize the site more fully.
Site #4	There are wetlands, floodplains, and utilities on-site, and potential environmental risk/hazardous waste sites nearby.

Detailed findings of the evaluations are presented herein.

Site #1: East Around Yard Center, Dolton

Introduction

This section describes the information collected as part of the preliminary site assessment conducted for "Site #1: East Around Yard Center, Dolton." The site is shown in the figure on the following page. The environmental conditions described include, as appropriate, the presence or likely presence of any hazardous substances on the site as well as the presence of other natural and man-made features on or adjacent to the site.

General Site Description

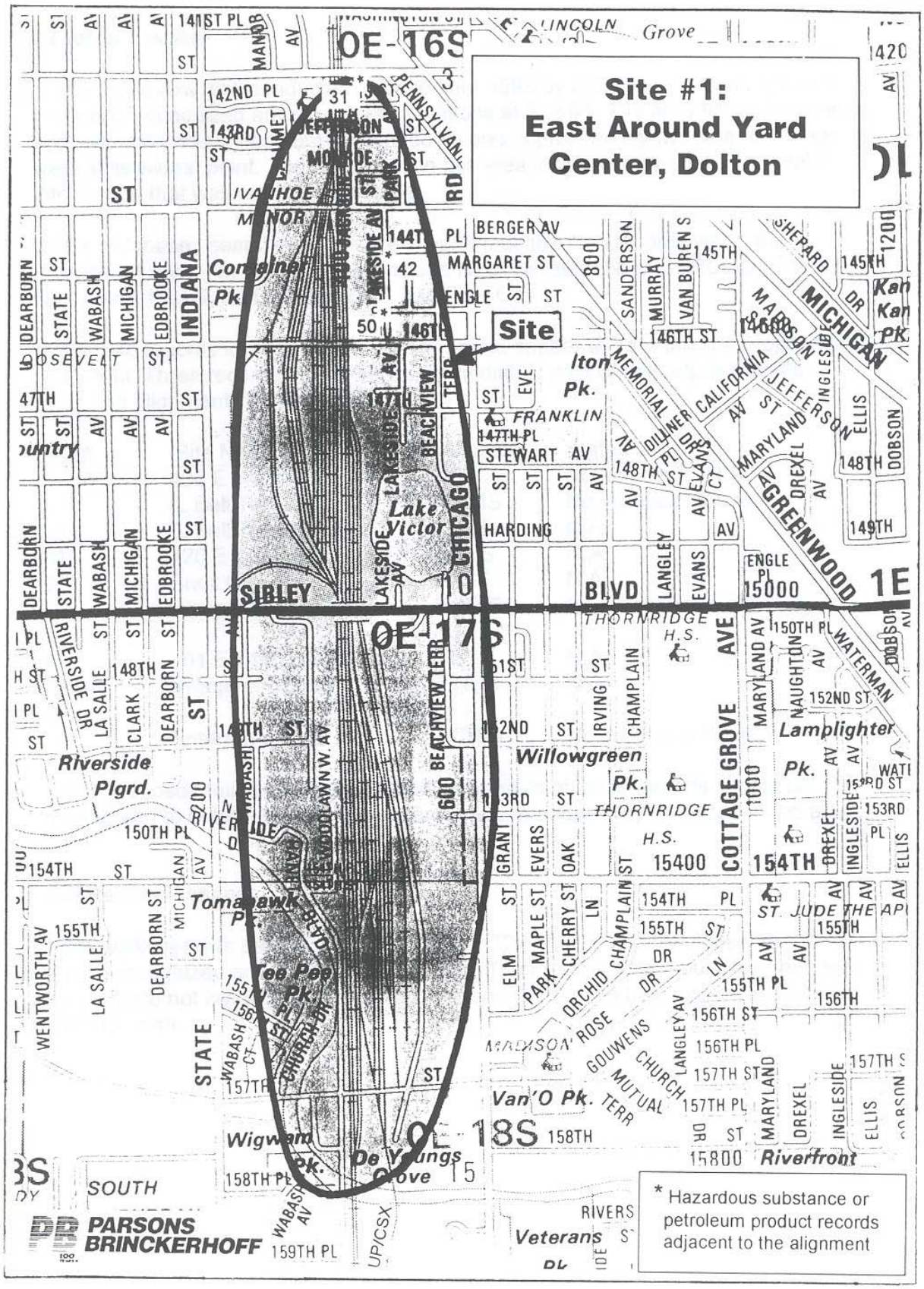
Site #1 is a long, linear site adjacent to an existing rail line and yard. The site is surrounded by a variety of land uses. To the west is an existing rail yard throughout most of the site's length. At the south end of the site is the Little Calumet River (north of US Route 6). To the east, north of US 6, is established residential development. Two blocks north of that and adjacent to the site is a property that has been used as a lumberyard. Farther north, on either side of E. Sibley Boulevard, the property immediately to the east is undeveloped, and further east is commercial property. To the west, north of Sibley, is a rail yard and intermodal terminal, and further north and west is the diesel shop/fueling facility. Toward the north end of the proposed alignment, property to the east becomes industrial. The site ends at approximately 142nd Street in the Town of Dolton.

The site is shown on two US Geological Survey (USGS) maps, including Lake Calumet, IL and Calumet City, IL. Bodies of water within the site include Lake Victory just north of E. Sibley Boulevard to the east of the rail yard and the Little Calumet River in the southwest and south portions of the site. NWI maps indicate the lake as palustrine, open water/unknown bottom, permanently flooded, excavated (POWHx); NWI maps indicate the river as riverine, lower perennial, open water/unknown bottom, permanently flooded (R2OWH). NWI maps do not show any other wetlands within the vicinity (however, see discussion of the site reconnaissance for additional information). Federal and state permitting restrictions would apply to activities within wetlands.

The 100-year floodplain lies adjacent to and east of the proposed rail alignment, between approximately 160th Street and E. Sibley Boulevard. If construction within the floodplain is proposed, then appropriate state and municipal approvals and restrictions would apply.

Sanborn fire insurance maps for four years (1975, 1966, 1950, and 1911) were available for a small portion of the alignment near 144th Street, east of the rail lines. The earliest maps show an onion set warehouse and mushroom growing warehouse south and north of Engle Street, respectively. The 1950 and 1966 maps show Dolton Foundries, Inc. and a woodworking/machine shop north and south of Engle Street, respectively. The 1975 map identifies the foundry as vacant. Maps were not found for the remainder of the property.

Site #1: East Around Yard Center, Dolton



Records Review

A records review was conducted in December 1998 by EDR to obtain and review public records of recognized environmental conditions at Site #1. The area reviewed extends approximately four miles from north to south and approximately two miles from east to west at its widest point. The review within this area included only publicly available information that was readily reviewable.

Of the databases searched, there are several that listed no records within the designated area. For site #1, these include NPL, Delisted NPL, CERCLIS, SWF/LF, NPL Liens, MLTS, ROD, CONSENT, and Coal Gas.

Of the 548 records identified within site #1, none appear to be within the proposed rail alignment. Three records, however, are immediately east of and adjacent to the proposed alignment. These include:

Rec #	Site Name	Database	Status/Info.
31	420 E 142nd St	UST	Not available (N.A.)
31	IL Bell Tel Co	RCRIS	No violations found
31	IL Bell Tel Co	LUST	N.A.
31	426 E 142nd St Unit 13	ERNS	N.A.
31	Shell Oil Co	LUST	N.A.
31	Wallner Oldsmobile	RCRIS	No violations found
42	401 E 144th Street	UST	N.A.
42	Village of Dolton	FINDS	N.A.
50	Enterprise Tape Inc.	RCRIS	No violations found

As the proposed rail alignment is refined, the details of these records should be investigated to determine whether hazardous substances may be encountered at site #1.

Site Reconnaissance

A site walkover was performed on September 22, 1998 to visually inspect the site and identify recognized environmental conditions. The interiors of any buildings that may be on-site were not investigated. The walkover and description below generally follow from south to north.

Site #1: East Around Yard Center, Dolton

This vacant site parallels an existing rail corridor and yard. A number of important observations were made:

- The proposed alignment consists of a paved road, albeit in poor condition. Gravel subgrade was evident and, in some cases, appeared to mark the edges of wetlands. Wetlands are discussed further, below.
- Electric lines on poles parallel the site, along the paved road.
- Miscellaneous paper and plastic garbage was noted strewn around toward the south end of the site.
- Near the Sibley underpass a buried fiber optic cable is identified (Sibley flag, #800).
- The American Baking Company is located north of the Sibley underpass, on Lakeside Drive, in an industrially developed area. The building contains several large vats and numerous blue drums (as observed from the exterior). On the south side of the building is an above-ground, exposed tank (see photograph). The contents of the tank are unknown.
- Farther north, along the east side of the proposed alignment to its northern terminus, is part of the municipal maintenance yard, small warehouse buildings, and concrete barriers.

Site #1: East Around Yard Center, Dolton

East of and immediately adjacent to the proposed alignment numerous wetlands were identified based on vegetation and hydrology. Vegetation observed at the time included rushes, willow, silver maple, rhubarb, golden rod, and sumac. In addition, standing water was noted in several locations. Federal and state permitting restrictions would apply to activities within wetlands.

Findings and Conclusions

No unusual environmental or wetland problems were discovered that would preclude this site from further consideration for a new rail line. Potential issues associated with site #1 include wetlands and floodplains along the eastern edge of the property, potential hazardous waste sites (although few are recorded immediately adjacent to the proposed rail line), and existing utilities. The proposed rail line is adjacent to an existing rail corridor, which could indicate additional environmental risk considerations. Care should be taken by the contractor during construction to properly identify, handle, and remediate (as necessary) any hazardous substances encountered during construction.

Site #2/3: Oakdale to 74th Street / 79th Street Rail Connection, Chicago

Introduction

This section describes the information collected as part of the preliminary site assessment conducted for "Site #2: Oakdale to 74th Street, Chicago" and "Site 3: 79th Street Rail Connection, Chicago." These sites are shown in the figure on the following page. The environmental conditions described include, as appropriate, the presence or likely presence of any hazardous substances on the site as well as the presence of other natural and man-made features on or adjacent to the site.

General Site Description

Site #2/3 is primarily a long, linear vacant site flanked by existing rail lines. The site is shown on three US Geological Survey (USGS) maps, including Englewood, IL, Blue Island, IL, and Lake Calumet, IL. There are three small bodies of water within the site that are identified as wetlands on NWI maps. These adjacent wetlands are located just east of the rail line, between 77th and 79th Streets, within Auburn Park. They are identified as pallustrine, open water/unknown bottom, permanently flooded, excavated (POWHx). The NWI maps do not indicate other wetlands within the vicinity (however, see site reconnaissance, below, for additional information). Federal and state permitting restrictions would apply to activities within wetlands. No 100-year floodplains are identified within site #2/3.

Sanborn fire insurance maps were available for 1992, 1975, 1951, 1924, and 1897, and were provided by EDR. Observations for site #2 are for those *adjacent* to the corridor and make up the bulk of those listed below. Observations at and adjacent to the corridor are as follows:

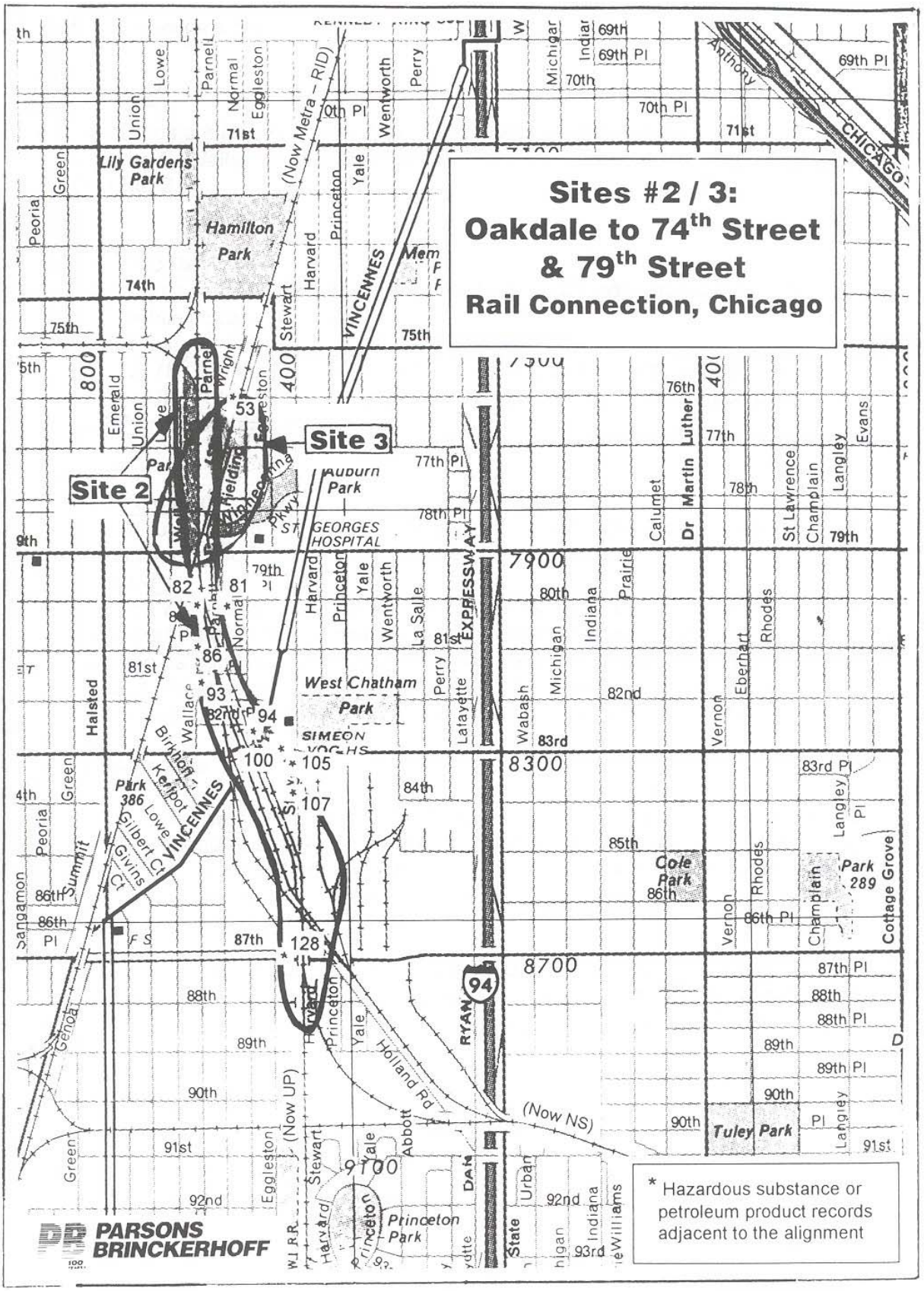
1992:

Site to be crossed:

- Site #3, south of 76th Street between the NS and RID rail lines: various wood manufacturers and light industry within "76th Street Industrial District." The site also includes rail spurs from the south that terminate on the property and buried water lines.

Adjacent sites:

- Northwest quadrant of 79th / Wallace, adjacent to the rail lines, is identified as a junk yard.
- 80th Street adjacent to and east of the rail lines is identified as "semi-mill construction."
- South of 83rd Street, east of Vincennes is identified as "Universal Devices Railway Equipment Assembly."
- At the south end of site #2, between the rail line and S. Stewart Avenue, is the "Carwell Westinghouse Company" (hand brake facility, etc.).
- There is a filling station west of the rail lines, just north of 87th Street Boulevard.
- A & Lub. Oil Warehouse, which includes four tanks, is located between Wallace and the rail line, just south of S 82nd Street.


Sites #2 / 3:
Oakdale to 74th Street
& 79th Street
Rail Connection, Chicago
Site 2
Site 3
Hamilton Park
Lily Gardens Park
Auburn Park
West Chatham Park
Cole Park
Tuley Park
Princeton Park
ST GEORGES HOSPITAL
SIMEON VOC HS
(Now Metra - RID)
(Now UP)
(Now NS)
VINCENNES
CHICAGO
RYAN
EXPRESSWAY
Holland Rd
* Hazardous substance or petroleum product records adjacent to the alignment
PARSONS BRINCKERHOFF

1975: Observations are, in most cases, similar to those for 1992.

1951:
Adjacent sites:
- Coal sheds are located north of 76th Street, between the rail lines.
- Between S. Wallace and the rail lines, south of 81st Street, is the James Coal Co. Yard No. 2.

1924:
Site to be crossed:
- Site #3, just south of 76th Street between the two railroads: Studebaker Corporation (automobile storage buildings).

Adjacent sites:
- North of 78th Street, just east of the rail lines, are several large lumber piles.
- South of 82nd Street, between the rail lines and Wallace is "International Harvester Co. of America—Weber Works."

1897:
Site to be crossed:
- Site #3, just south of 76th Street between the two railroads: "Stave & Abbott Manufacturing Co." warehouses.

Adjacent sites:
- Between 79th and 80th Streets, just east of the rail lines, is the "J M Schorling Coal and Wood Yard" and large coal sheds on south of the main building.
- Between 79th and 80th Streets and between the rail lines and coal shed is the C&WI rail yard and shop facilities. Although on-site maintenance buildings are not shown on the map, buildings are known to have been present until 1914-1920.

Records Review

A records review was conducted on 15 December 1998 by EDR to obtain and review records of recognized environmental conditions at site #2/3. The area reviewed extends approximately four miles from north to south and approximately two miles from east to west at its widest point. The review within this area only included publicly available information that was readily reviewable.

Of the databases searched, there are several that listed no records within the designated area. For site #2/3, these include NPL, Delisted NPL, RCRIS-TSD, SHWS, CERCLIS, CORRACTS, SWF/LF, RAATS, HMIRS, PADS, NPL Liens, MLTS, ROD, CONSENT, and Coal Gas.

Of the 336 record numbers identified within the site #2/3 alignment, ten are within or are immediately adjacent to the proposed rail alignment. These include:

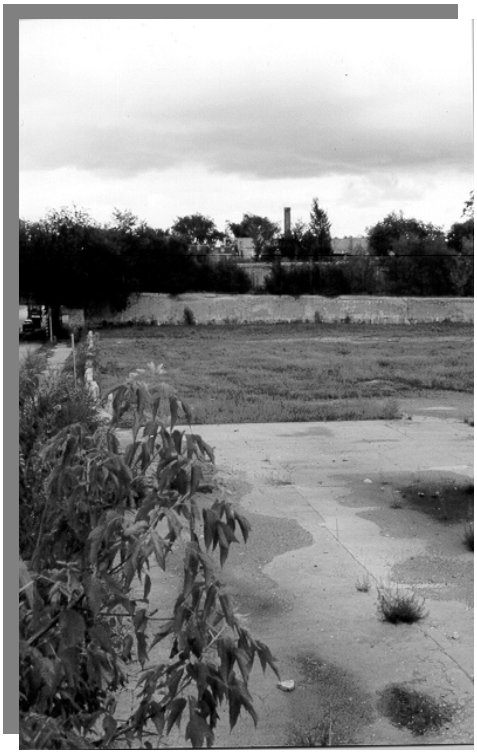
Rec #	Site Name	Database	Status/Info.
53	Rual Product Company	TSCA	N.A.
53	United Products Intl.	FINDS	Civil judicial & admin. enforcement case against facility
81	552 W 80th St	ERNS	N.A.
82	National Casein Co Inc.	FINDS,	Facility is monitored/permitted for air emissions under CAA
		RCRISS-LQG, TSCA	No violations found
86	Hansen-Sterling Drum Co.	FINDS,	Facility is monitored/permitted under the CAA
		RCRIS-LQG	No violations found
86	Awmco Inc.	FINDS	Facility is monitored/permitted under the CAA
86	Hansen-Sterling Drum Co.	RCRIS-SQG, FINDS	No violations found
86	81st/Wallace Ave	Plan Comm	N.A.
93	Abitibi Corp	FINDS	Facility is monitored/permitted under the CAA
93	Small Business Admin. LUST	N.A.	
94	Neal F. Simeon Voc. HS	FINDS	N.A.
100	Cardwell/Universal	TRIS	N.A.
100	Cardwell Westinghouse FINDS,		
		RCRIS-LQG	No violations found
105	Ryerson Joseph….	RCRIS-SQG, FINDS	No violations found
107	Cardwell Westinghouse	FINDS, RCRIS-LQG	No violations found
107	Cardwell Westinghouse	RCRIS-SQG	No violations found
128	440 W. 87th St	UST	N.A.

As the proposed rail alignment is refined, the details of these records should be investigated to determine whether hazardous substances may be encountered at site #2/3.

Site Reconnaissance

A site walkover was performed on September 22, 1998 to visually inspect the site and identify recognized environmental conditions. The interiors of any buildings that may have been located on-site were not investigated. The walkover and description below focus on the area between 76th and 78th Streets and rail lines, where the property widens out as one moves north.

South of 76th Street, site #3 is a large, formerly industrial site. Because the rail lines are elevated, the street level is relatively depressed, with a retaining wall lining the western and eastern edges of the site. Beyond the retaining wall to the west are rail lines and, farther west, residential development. There is also an old power line west of the site. An elevated rail line borders the site's eastern edge. The remnants of an industrial track still exist. That track transitioned from the eastern borderline down to local grade via a retained fill. The northern edge of the site is lined with concrete median barriers, and apartments/homes are located on the north side of 76th Street. Cracked concrete at-grade floors on-site are littered with brick debris. Short, grassy vegetation covers undeveloped areas. On the eastern side of the site, minor striations are visible in the vegetation, indicating prior development or use. Debris on the south end of the parcel includes glass, plastic, and retaining wall remnants. Taller vegetation including poplar, maple, and ash is present on the south portion of the parcel, near 78th Street. Treed areas are littered with railroad ties, stones, and brick debris.



Findings and Conclusions

No unusual environmental or wetland problems were discovered that would preclude this site from further consideration for a new rail line. Potential issues associated with site #2/3 include numerous potential hazardous waste sites. The proposed rail line is adjacent to an existing rail corridor, which could indicate additional environmental risk considerations. Care should be taken by the contractor during construction to properly identify, handle, and remediate (as necessary) any hazardous substances encountered during construction.

Site #4: Blue Island Junction, Blue Island

Introduction

This section describes the information collected as part of the preliminary site assessment conducted for "Site #4: Blue Island Junction, Blue Island." This site is shown in the figure on the following page. The environmental conditions described include, as appropriate, the presence or likely presence of any hazardous substances on the site as well as the presence of other natural and man-made features on or adjacent to the site.

General Site Description

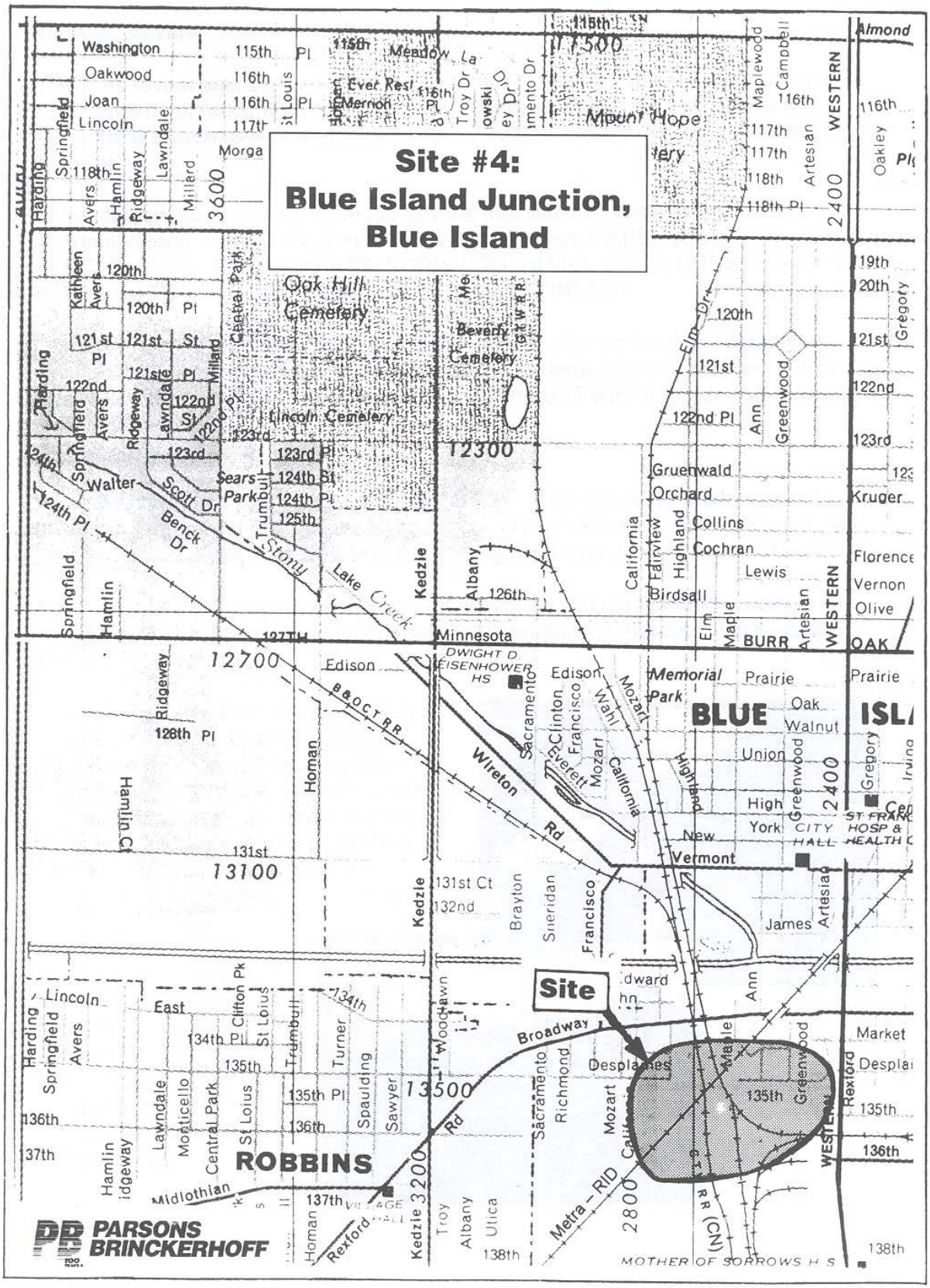
Site #4 is a relatively small site in Blue Island, near Western Avenue and 135th Street. The site contains a maintenance shop, rail lines, and vacant property. Large piles of debris related to rail and maintenance shop operations are scattered in several locations on the southern and eastern portions of the property.

The site is shown on one US Geological Survey (USGS) map: Blue Island, IL. Wetlands are identified on site #4, including those associated with a stream and those farther north, just south of the CRI&P (Metra) rail line and west of the GTW (CN) rail line. Wetlands associated with the stream are identified as palustrine, forested, broad-leaved deciduous/emergent, temporarily flooded, partially drained/ditched (PFO1/EMAd). The other on-site wetland is identified as palustrine, forested broad-leaved deciduous, temporarily flooded (PFOIA) and palustrine, emergent, temporarily flooded (PEMA). The NWI map does not indicate other wetlands within the vicinity (however, see site reconnaissance discussion for additional information). Federal and state permitting restrictions would apply to any activities within wetlands.

The 100-year floodplain affects the site just west of the proposed rail alignment. If construction within the floodplain is proposed, then appropriate state and municipal approvals and restrictions would apply.

Sanborn fire insurance maps were reviewed for the area east of the site, but were not available for site #4.

Site #4: Blue Island Junction, Blue Island



Records Review

A records review was conducted on 15 December 1998 by EDR to obtain and review public records of recognized environmental conditions at site #4. The review within appropriate search radii only included publicly available information that was readily reviewable.

Of the databases searched, there are several that listed no records within the designated radii. For Site #4, these include NPL, Delisted NPL, RCRIS-TSD, SHWS, CERCLIS, CERC-NFRAP, RAATS, NCRIS-LQG, HMIRS, PADS, ERNS, FINDS, TRIS, NPL Liens, TSCA, MLTS, Plan Comm, ROD, and CONSENT.

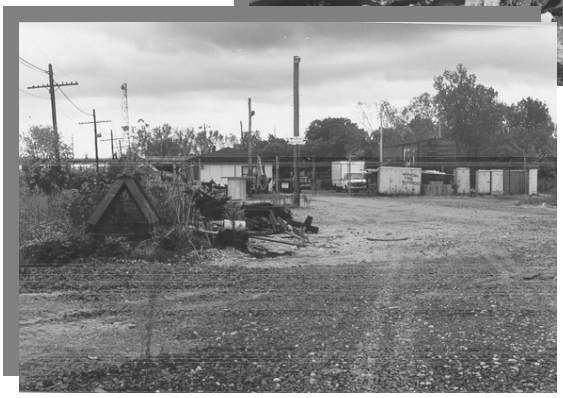
Of the 29 records identified within the site #4 search area, none of the databases identified any records of concern on site #4. One underground storage tank (UST) was identified within 1/8-mile of the site and one leaking UST was identified within ¼-mile.

Site Reconnaissance

A site walkover was performed on September 22, 1998 to visually inspect the site and to identify recognized environmental conditions. The interiors of any buildings on-site were not investigated. The walkover and description below follow from south to north.

The predominantly vacant site contains an active railroad maintenance building and yard, piles of debris, rail lines, and undeveloped property. A number of important observations were made:

- On the south side of the property is a private home, a Grand Trunk (CN) maintenance facility, an Ameritech antenna, utility poles, a fence, a box car used for storage, and scattered piles of debris, including one labeled “Warning Junk Batteries.” At the time, the maintenance building posted a sign indicating that Envirotech was removing asbestos.
- Immediately to the north, are additional piles of misc. debris such as railroad ties and full black garbage bags with unknown contents.



- Farther north, a creek filled with debris and a blue sheen on its surface crosses the property.
- A Sprint fiber optic cable is identified on the south side of the railroad bridge. A petroleum pipeline is identified and overhead utility lines are visible.
- A slightly foul, garbage-like odor filled the air at the time of the visit.
- To the west of the existing GTW (CN) rail yard were numerous piles of railroad ties. Some piles had obviously been burned.
- Undeveloped land to the north and west may contain wetlands. Potential wetland hydrology and dark soil were observed during the site visit, but soil conditions were not investigated.

Findings and Conclusions

No unusual environmental or wetland problems were discovered that would preclude this site from further consideration for a new rail line. Potential issues associated with site #4 include wetlands along the north edge of the property and along the stream, floodplains, nearby hazardous waste records, and on-site utilities. The proposed rail line is adjacent to an existing rail corridor, which could indicate additional environmental risk considerations. Care should be taken by the contractor during construction to properly identify, handle, and remediate (as necessary) any hazardous substances encountered during construction.