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Memo:

To: Meta Brunzema and Dan Gutman
From: George Haikalis, President, Institute for Rational Urban Mobility, Inc.
Date: May 21, 2007
Re: **Preliminary Analysis of Benefits and Costs of Constructing and Maintaining Midday Car Storage Facilities for the LIRR**

Thanks for the opportunity to share some thoughts on the future of the LIRR West Side Yard and Sunnyside Yard A. These very preliminary findings are presented in the hope that a more detailed analysis of these concepts will be undertaken by MTA, which has the information and resources to explore them more fully.

I. Key Findings:

(1) MTA could maximize its gain from the sale of the LIRR West Side Yard if this property were cleared and sold as raw real estate for development. This gain would be further increased if two tracks were retained in the yard, and a new platform constructed, permitting a rail link between the yard site and Penn Station. In total, MTA's gain – ranging from $1.0 billion to $2.0 billion – far exceeds the "present worth" of the annual incremental operating cost of sending cars now stored in this yard to existing yards further east in Queens and Long Island. This increased operating cost is estimated at $8.2 million per year.

(2) MTA could reduce the cost of its LIRR East Side Access Project by dropping its plan to construct a new midday railcar storage yard at Yard A, just north of Amtrak's Sunnyside Yard in Queens. This large site, a former LIRR rail freight yard, could be sold as vacant real estate. It is unlikely that the sale of air rights over an active rail yard would produce any significant return to MTA. The site is particularly valuable as raw land because it is near the Queens Plaza subway station and immediately adjacent to the proposed Sunnyside Intermodal Station, a potential regional rail hub, with service from New Jersey, Westchester, Connecticut and Long Island. This gain would be offset by increased operating cost for moving non-revenue trains further east, as much as $8 million per year, should projected ridership growth occur.

(3) The sale of these two sites could be advanced very quickly, well before the completion of the LIRR East Side Access Project. A portion of the value realized by MTA from the sale of these yards could be set aside to advance much-needed LIRR capacity enhancement projects that are not currently funded. Construction could begin immediately on the new stations adjacent to these sites, so that the enhanced value that the stations add to these sites could be captured by MTA.

(4) The four-track mainline between Jamaica and Sunnyside and the two-track Port Washington Branch have adequate track capacity to handle additional reverse peak trains for existing trains now stored at the LIRR West Side Yard, and also for future demand generated by the LIRR East Side Access Project. The mainline, now operated three-and-one in the peak direction, would be

operated two-and-two to accommodate the increased train flow in the reverse direction. This would still provide adequate inbound capacity to meet future needs. In the longer term, should traffic exceed projections, provision can be made for a track connection to the little-used two-track Montauk Line between Jamaica and Long Island City to accommodate additional growth.

II. Background

Current operating practice for the LIRR is to store commuter rail cars overnight in rail yards in the suburbs and bring them to rail terminals in Manhattan, Brooklyn and Long Island City during the morning peak period. Most cars that are not used for reverse peak and midday service are stored and serviced during the day in close-in rail yards before making return trips to the suburbs in the evening period.

As New York City's economy has grown, the real estate occupied by these midday rail car storage facilities has become more valuable. Plans are being advanced to construct decks over these yards to permit massive new residential and office development. With construction costs rising rapidly, in many cases by 25% per year, it makes sense to consider alternatives to maintaining midday rail car storage in close-in locations. Two yards in particular are considered in this analysis – the existing LIRR West Side Yard west of Penn Station and the proposed yard to be built on the site of Yard A at Sunnyside, to provide midday car storage for the LIRR East Side Access Project.

III. LIRR West Side Yard

For 77 years, from 1910 to 1987, the LIRR operated into Penn Station without the benefit of the West Side Yard. Most rail cars that were not needed for reverse peak and daytime service were dispatched as non-revenue trains to outlying yards in Queens or Long Island. Cars were cleaned and serviced at these outlying locations and then returned to Penn Station in time for evening outbound revenue service.

Space for the West Side Yard became available when rail freight operations on Manhattan's West Side were shut down as the city's industrial and distribution activities declined and trucks became competitive with rail freight. In the 1970s, before MTA established its massive capital program of renewal and rehabilitation, LIRR rail car reliability reached a low point and rail officials viewed a new yard as critical to maintaining adequate service levels. LIRR officials gained political support for the new yard from Long Island-based State Senator John Caemmerer, who included an earmark for the yard in the 1979 statewide transportation bond issue. The yard was subsequently named after the senator. Senior management at MTA at first objected, arguing that a new yard was not a cost-effective investment. An August 26, 1974 internal memo calculated that the yard would only save about $900,000 in operating cost per year, a small gain considering the yard was expected to cost $100,000,000. When completed in 1987 the actual cost exceeded $200 million.

The rail yard served a second very important function. With a route to the west, thru-running in the northern portion of Penn Station became possible. This reduced conflicts and increased capacity at the eastern end of the station. With the concurrent extension of electrification to Ronkonkoma, four additional morning peak hour trains were operated into Penn Station beginning in 1988.

Benefit-Cost Analysis

If the rail yard were abandoned and the former practice of returning rail cars to yards further east were re-instituted 29 trains, averaging ten cars each, would have to be sent to yards further to the east. The benefits of abandoning this yard must be compared with the increased cost of operating these non-revenue trains.

Enhanced Value to MTA Eliminating the West Side Yard

Development rights over the LIRR West Yard are soon to be sold to yield much needed revenues for MTA. If the yard were abandoned and sold as raw real estate the construction cost for a deck over the yard could be avoided. Cost estimates vary because some elements of the deck might be incorporated into the structures that would be built over the yard. City officials now estimate that the deck would cost $1.0 billion or more to construct. Without the yard below it, the parcel would become even more valuable, because utility rooms and other auxiliary facilities for the 12.4 million square feet of new residential, commercial and cultural buildings that are planned to be built over the yard could be built at ground level or underground, instead of on costly structures over the deck. Furthermore, this construction could be accomplished more quickly since it would not be constrained by the need to maintain existing train operations. More efficient buildings could be designed without the need to locate columns between existing tracks. These are important benefits that will increase the value to developers. Finally, if two tracks were left in the yard, and a modest platform constructed, LIRR service could be provided all day, linking Moynihan/Penn Station with the West Side Yard property. Access to this important hub, an important shortcoming of the current #7 subway extension plan, would further raise the value of this property. A number of civic groups have suggested constructing a people-mover link costing $0.5 billion, indicating that the property value gain might be an equivalent amount. The total potential gain to the MTA from abandoning the yard could range from $1.0 billion to $2.0 billion or more.

Incremental Operating Cost

The incremental operating cost of returning rail cars to yards further east in non-revenue moves can be estimated from existing published reports. Two key costs would be increased electric power cost and additional crew cost. The LIRR 2007 Budget provides $81.7 million for propulsion electric power. In 2004, the LIRR operated 58.2 million car-miles according to transportation statistics published by the New York Metropolitan Transportation Council (NYMTC). An estimated 85% of LIRR car-miles are electrically operated -- 49.5 million car-miles per year. The 290 rail cars now stored at the LIRR West Side Yard would be moved to yards to the east, adding an average of about 39.3 miles round trip per car, based on the earlier MTA analysis. These movements would only be required on weekdays, 260 per year. This amounts to 2.96 million car-miles added per year or an increase of 6.0%. Electric power cost would increase proportionately, or by $4.9 million per year.

A maximum of one new crew position would be required to move each train east and then bring it back for evening peak period service. While crewing rules may require more than one position per train, unused crew hours are available. For 29 new positions, at $113,741 per position including benefits, based on the LIRR 2007 Budget, a total of $3.3 million in added crew cost would occur. Other cost increases and cost savings are more difficult to estimate. Wheel and rail wear and other wear and tear on equipment would result from increased car-miles. The cost of

operating and maintaining the West Side Yard, including lighting, security, and switch and track maintenance would be avoided. Accurately estimating these costs would require careful analysis by MTA. For this preliminary analysis it is assumed that the gains and loses would cancel out, leaving a net annual operating cost increase of $8.2 million. As MTA increases revenue service to meet growing reverse peak demand, this estimate would be reduced.

The Bottom Line

Keeping the yard, and losing from $1.0 billion to $2.0 billion in increased sale value, produces an annual rate of return of only 0.4 to 0.8%. MTA would be much better off abandoning the yard.

Other Considerations

Several other factors should be considered. The LIRR has replaced all of its oldest electrically-powered rail cars with new cars that have shown a high level of reliability. A key measure of reliability, mean distance between failures (MDBF), for the new cars is 240,000 miles compared to 15,000 miles in the late 1970s. The LIRR operates its four-track mainline between Jamaica and Sunnyside in a three-and-one mode, with three tracks operated in the peak direction. Returning rail cars to points further east will require a two-and-two operation to provide sufficient capacity. The LIRR currently schedules 30 peak hour trains between Jamaica and Penn Station, and another four between Jamaica and Long Island City. This level of service can be maintained on two peak direction tracks. A skip stop pattern would improve performance on the local tracks in this segment.

Retaining a two-track station in the yard also retains the capacity enhancing thru-running feature at Penn Station. Another consideration would be the construction of a two-track connection to the Amtrak West Side Line to augment or replace the current single track tunnel under the yard. The current connection greatly limits the number of trains that can be operated on the West Side Line during peak hours, and precludes its effective use as a "Regional Rail" line serving city and suburban riders. An easement for a two-track connection would need to be preserved very soon, as two key parcels in its path are slated for redevelopment. Space should also be reserved for a station where the West Side Line passes under 42nd Street. This station could serve as an important access point for the northern portion of planned West Midtown development and as a transfer point for surface transit on 42nd Street, either the existing bus or future light rail, and for the #7 subway when the future Tenth Avenue Station is placed into service. Several track options for merging the two-track West Side Line and the spur to the proposed two-track station in the yard, using the existing four track tunnel under Tenth Avenue, are feasible and should be considered.

IV. LIRR Yard A at Sunnyside

A large midday car storage yard is planned adjacent to Sunnyside Yard as part of the LIRR East Side Access Project. To reach this yard, a separate tunnel must be constructed in Queens to connect to the 63rd Street tunnel lower deck that will be used by LIRR trains. An additional track will be constructed alongside the existing loop tracks that bring Amtrak and NJ Transit trains from Penn Station into the existing Sunnyside Yard for storage and servicing. Additional property must be acquired for this added track and several new structures must be constructed. The new LIRR yard will be constructed on what was formerly Yard A, a LIRR rail freight yard.

The new tunnel connection, loop track and yard tracks are included within the $6.3 billion budget for the East Side Access Project. To accurately estimate the cost avoided a detailed analysis by MTA would be needed.

Plans for developing new residential and commercial buildings over the existing Sunnyside Yard have been proposed through the years. Because of poor soil conditions and the high cost of constructing decks over the yard tracks these plans have not moved forward. The Yard A site could become the exception. Now cleared of its rail freight tracks, the yard could be sold by MTA as raw, vacant real estate.

This site is immediately adjacent to the proposed Sunnyside Intermodal Station that MTA plans to construct under the Queens Boulevard viaduct and a short distance from the Queen Plaza subway station. This hub could become an important gateway to the emerging Long Island City Business District that continues to attract new development. With thru-train service now under consideration by MTA and NJ Transit were put into place as part of a Regional Rail plan, this new station would be served by trains from New Jersey, and via the Hell Gate Line from the Bronx, Westchester and Connecticut as well as from points in Queens and Long Island. With these connections in place and by not encumbering the site with rail tracks, Yard A could be sold by MTA for a substantial amount.

With the completion of the East Side Access Project total LIRR peak period travel to Penn Station and Grand Central is expected to increase by 47.7% from 1995 to 2020, as described in the project's March 2001 Final Environmental Impact Statement. The proposed operating plan calls for an increase from 30 morning peak hour trains currently scheduled to use the mainline between Jamaica and Sunnyside to 48. Port Washington peak hour trains would increase from 6 at present to 12 in 2020. Even with these increases, peak hour service on the mainline can be accommodated on two inbound tracks. In the operating plan, 24 trains would be scheduled on the single LIRR inbound track to the East Side. LIRR trains bound for Long Island City could be routed on the little used two-track Montauk Line from Jamaica. To increase capacity in the longer term, a direct connection from this line to the East River tunnels could be considered.

Without a facility at Sunnyside Yard A, all rail equipment would be moved east for midday storage. Mainline track capacity is adequate to accommodate this flow, but operating cost would be higher. The proposed yard could hold 24 12-car trains. The incremental cost of moving these trains further east for storage would be about the same as was calculated for the West Side Yard – about $8 million per year. This annual cost savings can be compared with the investment for the yard and its enhanced value as raw real estate. Using the current yield of MTA bonds and assuming operating cost increases of 3% per year, the investment in the yard and the diminished value of the real estate if the yard were put into place would have to be less than $190 million to justify building the yard.

V. Recommendation

MTA should carefully review its need for preserving the West Side Yard and construction a new midday storage yard at Yard A in Sunnyside as part of its East Side Access Project. MTA should also explore the feasibility of retaining two tracks in the yard to permit a connecting LIRR service from Penn Station. Futhermore, MTA should consider the need for preserving an easement for a two-track connection to the Amtrak West Side Line and setting aside space for a new station on this line as it passes under 42nd Street.