



## How stadiums can receive significant revenue from Personal Rapid Transit

**REQUIRED COVERSHEET FOR SUBMISSION OF INFORMATION  
FOR A STADIUM PROPOSAL**

Identify the Respondent by providing the names and addresses of each individual and/or entity participating in this submission:

Starting Line Foundation  
1121 Northwick Ridge  
Brooklyn Park, MN 55743

If the one of the entities listed above is a governmental entity formed under a joint powers agreement or an entity or organization which includes more than one public or private entity, please identify all of the entities or organizations which are members or participants of the Respondent:

This submission includes a proposal for a:

- Baseball Stadium
- Football Stadium
- Combined Facilities

Enable technology/functionality source

**CERTIFICATION AND WAIVER**

The Respondent acknowledges that the submissions and the information contained therein are not confidential and all of the information contained in the submissions or provided to the stadium screening committee may be given to the public, to members of the Pawlenty Administration and/or to other persons or entities as deemed appropriate by the Screening Committee or the Administration. Respondent affirmatively states that it has the legal right to submit the enclosed information to the Screening Committee without any restriction on the Screening Committee's future disclosure or use of the information. Respondent waives any copyright or any other claim of propriety, right of control, or limitation of use in relation to the information submitted. Respondent further agrees to hold the members of the Screening Committee, the State of Minnesota, its agents and employees, harmless from any and all claims or lawsuits that may arise from the Respondent's activities related to its submission, including any claim for negligence, breach of contract, or any other claims alleging wrongful acts or omissions by Respondent, or the Respondent's independent contractors, agents, employees or officers.

Starting Line Foundation, Inc.  
Respondent

By Robert Jacobz

Its President



*What's a transit technology doing as the focus of a stadium proposal? It's contributing to solving the finance problem.*

*You're looking at something called Skyweb Express. This is an example of an emerging technology called Personal Rapid Transit, or PRT for short.*

*It's so different, it changes how people think about transit, about civic architecture and about financing. PRT technology can facilitate millions of dollars in new revenues for the Twins and the Vikings, mostly by allowing more efficient utilization of existing community assets.*

*While this proposal is focused on the financial benefits that relate to integrating a PRT system with stadiums, you can learn more about the underlying technology by visiting <http://www.skywebexpress.com>.*

## Description

This proposal is for an enabling technology that can make a dramatic impact on the economic viability of any number of stadium proposals that fall within activity-rich zones in Minneapolis and St. Paul.

Minnesota has several choices regarding stadiums. We can do nothing. We can be among the last to build the “latest” generation of stadiums or we can be first to build the next generation of stadiums. We believe Minnesota should lead.

The technology that enables this leadership is Personal Rapid Transit. This technology is the lowest cost alternative of all potential transit solutions. It is flexible, fast, and rider-friendly. *It can make a significant contribution to the economic success of stadia to which it is integrated.* Placed in the right location, the inclusion of this technology is very low risk. For stadium economics, it can only help and can’t hurt.

<b>Current “State of the Art” Stadiums</b>	<b>New Generation Stadiums</b>
Activity largely limited to event days	Generate economic activity every day of the year
Contribute to congestion	Relieve congestion
Have no real lasting impact on economic development	Increase productivity, efficiency and economic development
Usually a big drain on local taxpayers	Minimal or no burden on local taxpayer
Generate profits for team owners	Generate even more profits for team owners
Require large swaths of land for parking	Limits immediate parking requirements, freeing land for higher and more productive uses, maximizing tax revenues for host cities

The following contributions of PRT to stadium finances will be discussed in greater detail in this document:

- Has the ability to capture parking “event” revenue from every single event patron, generating \$4-5 million per year for the Twins and \$2.8 million for the Vikings.
- Allows suites to be converted to hotel rooms, with management handled from an existing off-site hotel. This could generate \$1.9 million in gross dollars per year for the Twins and \$5 million per year for the Vikings.
- Allows direct, non-stop access to stadium shops and restaurants from a wide area, allowing economic activity every day of the week, not just event days.
- Can congregate bus passengers within stadia, turning stadiums into bus and rail transfer stations. This will not only relieve congestion in the core business districts, but also provides an additional stream of customers for in-stadium shops and restaurants. The millions of additional visitors per year through a stadium will also increase revenue from in-stadium advertising as well as corporate naming rights. With the primary traffic of stadium concourses being converted to transit passengers, this opens up a new potential funding source, the Federal Transit Administration.

The best places to build stadia are the best places to integrate PRT. The revenue streams available from PRT are a direct benefit to Minnesota taxpayers. The time to start is now. This effort will reduce tax burdens, create jobs across Minnesota, relieve congestion and increase tourism and convention business.

## Location

---

The best locations for stadiums is where they can best be served by a Personal Rapid Transit system. There are four activity-rich zones in which a preliminary look would suggest the possibility of a successful PRT system. These areas are:

- Downtown Minneapolis
- The East and West Bank of the University of Minnesota
- The St. Paul Campus of the University of Minnesota and State Fairgrounds
- Downtown St. Paul

All of these locations have merit as stadium locations.

These zones run in an east/west arc and could easily be connected. This would put virtually every major athletic facility, live theater and convention facility in the metro area into one integrated transit system.

Other areas in the Twin Cities may also be appropriate for a Personal Rapid Transit installation, but a connection to a larger system would unlikely be economical.

For the start of a PRT system, downtown Minneapolis seems to have the most advantages.

A July 16, 2001 transit study by SRF Consulting projected that an 8-mile PRT circulator in downtown Minneapolis could generate 73,400 trips each weekday, not including “event” or weekend traffic.

Downtown Minneapolis also has advantages in accessibility, parking and transit connections. These will be discussed separately.

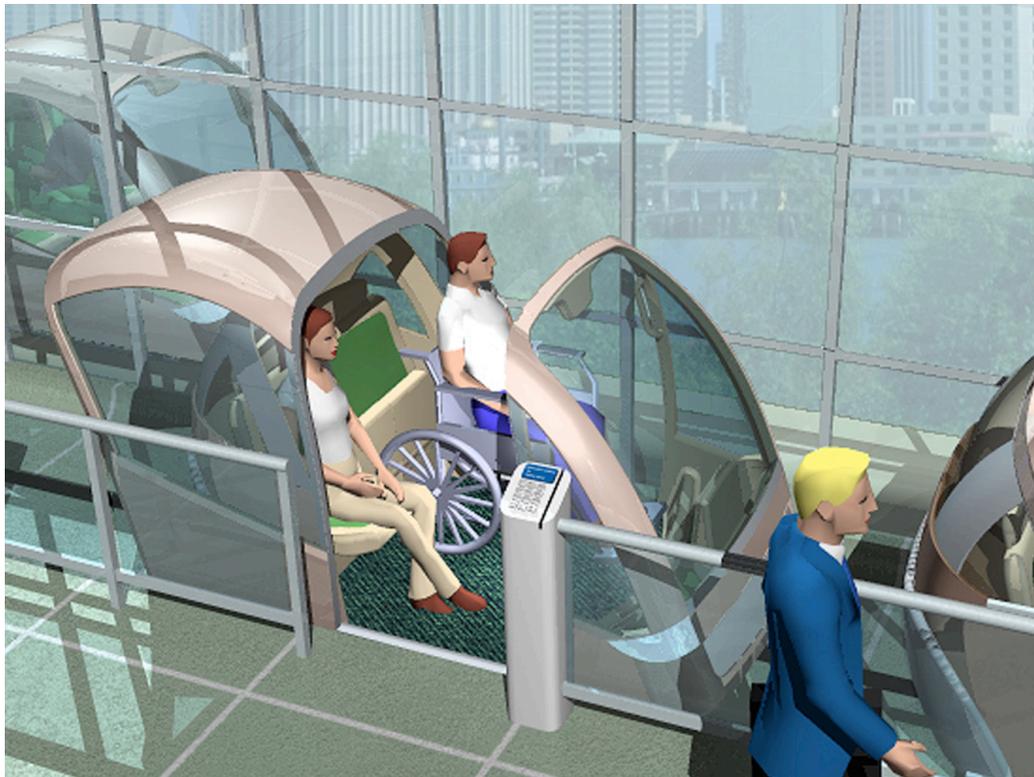
All zones discussed have the advantage of high-levels of bus traffic associated with them. This allows stadiums to serve double-duty as transit stations. This potentially opens up the opportunity for pro-rated Federal Transit Administration dollars to pay for the portion of stadia used for transit purposes. All major stadia are expected to be surrounded by PRT stations. For major stadia, such as a Twins or Vikings stadium, the guideways that carry PRT cabs would likely be at two levels. Transit would be integral to what stadiums are all about. The same capacity needed for big events would be put to use for rush-hour commuter traffic.



*PRT works great in activity-rich zones like downtown St. Paul. This is what a system might look like integrated into the Xcel Energy Center. You can see a video simulation of this same scene in the enclosed CD-ROM.*

*Ultimately, we'd like to see PRT connected to all the major athletic facilities in Minneapolis and St. Paul.*

*By the way, does that look like just a stadium to you? It can also serve as a transit station for buses. PRT can congregate downtown workers for the commute home, reducing the amount of bus stops and traffic in the downtown area. This also means more revenue for in-stadium advertising, restaurants, etc.*



*PRT makes cities more accessible in lots of ways. Not only can each guideway carry 6,000 cabs per hour—about the same capacity of three lanes of interstate highway—but they are also designed to be ADA compliant.*

*If you live in an area served by the system, everyone will be able to attend sporting events with equal convenience.*

## Accessibility

---

Downtown Minneapolis has the greatest accessibility of all major activity-rich zones. With connections to I-94, I-394, I-35W and the Hiawatha LRT line, downtown Minneapolis has a proven and expanding capacity to handle large event traffic. PRT can enhance the management of these traffic flows.

Because accessibility of the downtown Minneapolis area is already so great, this makes it an ideal location for the implementation of an initial PRT system. If there are any delays in the implementation of a system, the existing transportation system will continue to successfully serve major events.

PRT can also enhance the success of LRT. With the ability to bring passengers from throughout the downtown Minneapolis area, LRT will be more accessible for more people.

PRT also excels in another kind of accessibility—increased mobility for people with disabilities. All cabs are expected to be ADA compliant. For people who live in an area served by PRT, this means new levels of freedom. Individuals who now have to schedule rides from Metro Mobility can come and go as they please. A mature Twin Cities PRT system would allow people in wheelchairs to attend every major professional sporting event in town with ease.

For a football stadium built on the U of M East Bank campus, PRT allows for a significant reduction in congestion by allowing some event parking to take place in downtown Minneapolis with a quick PRT ride to the stadium. With limited space, PRT is an ideal solution for the U of M campus. The elevated nature of PRT and the small footprint of the footings mean precious space can be preserved for higher uses. The supporting posts for PRT guideways are only a little bigger than a typical lamppost.

## Parking Infrastructure

---

Maximizing utilization of parking infrastructure is where PRT excels. Regardless of the activity-rich zone in which PRT is installed, a PRT circulator will maximize parking utilization and parking revenue.

The following example for Minneapolis could also work with modifications for the U of M as well as St. Paul:

Currently, Minneapolis has approximately 24,000 city-owned parking spaces. 20,000 of them are in downtown ramps. These ramps are dispersed into three zones: near the Minneapolis Convention Center, near the Target Center and near the Metrodome. The area around the Metrodome has about 5,000 city-owned spaces. There are many competing private spaces in the same area.

By using PRT, the city of Minneapolis can make sure that it collects the parking revenue from every Twins and Vikings attendee. This will generate \$6.8 million or more per year, which could be applied toward stadium bonding.

Here's how this would work:

1. In exchange for integrating privately financed PRT connections to various civic structures, the city of Minneapolis would donate parking spaces in city ramps and lots for pro sports events. Ramps away from stadiums are typically underutilized at game time. In large part, the city would be giving away excess capacity.
2. Twins tickets would include a \$2 parking fee. Vikings tickets would include a \$4 parking fee. To avoid congestion at specific ramps, suggested ramps could be printed on the tickets. Since most people do not attend a game alone, the net cost to park would be comparable to current rates.
3. Assuming 2 million annual Twins fans and 700,000 Vikings fans, this would generate \$6.8 million annually. The novelty of PRT may increase attendance, particularly from people outside the metro area.
4. PRT cabs would transport fans from distant parking spaces directly to the stadium or an adjoining concourse or skyway. A corporate sponsor could potentially cover the cost of the ride to the stadium.
5. After the game, PRT can take fans back to their cars, dispersed throughout the downtown area. This dispersal should relieve congestion both before and after games.

Even with donated parking, the city of Minneapolis would likely see an increase in parking revenue.

1. Peripheral city-owned ramps would see greater use as commuters realize it's faster to park at the peripheral ramps and take PRT to their final destination.
2. PRT stations would be strategically placed to encourage greater use of city-owned ramps.

We believe this arrangement meets the spirit of local decisions to limit contributions to stadium funding. Net revenue should be increased and none of the revenue going to support stadia is coming from non-stadia related funds.

## Transit Connections

---

Personal Rapid Transit is a powerful transit connection that can bring 6,000 cabs per hour along a single guideway. This is the approximate capacity of a three-lane interstate highway.

In addition, it can maximize the benefit of other transit forms. For the University of Minnesota, this means PRT connections from the West Bank LRT station to the Huron Blvd. Parking Complex where an on-campus stadium is proposed. For big events, with multiple passengers per cab, this could move 16,200 passengers per hour—greater capacity than would be handled by LRT.

For downtown Minneapolis, PRT connections to LRT won't be as significant for stadium purposes, but will support greater ridership of LRT all the same.

With the high traffic capacity that would be built into and around stadiums, they would become ideal locations for bus stations. Bus congestion can be reduced with a portion of bus traffic routed to serve commuters using stadiums as transit stations. By congregating commuters at stadiums, bus traffic is dispersed, with buses needing to make fewer total stops in an activity-rich zone. This will speed service, reduce pollution and create greater efficiency. This design makes particular sense for a Vikings stadium where the team plays on Sundays and perhaps one or two Monday nights per year, creating little conflict with normal weekday bus traffic. Other events tend to be held in the evening, also providing little conflict with rush-hour bus traffic.

A stadium bus station could handle up to 12,000 passengers per hour. With peak service over two hours per day, 24,000 passengers per day from a stadium is not an unreasonable goal. This would mean 6 million passengers per year would pass through a stadium/transit station.

### Capacity

- Skyweb Express cabs can travel with only 1/2-second headway, or 7,200 cabs per hour. Real world capacity will be less as cabs enter and leave a direct path, creating occasionally longer headways. Assume about 6,000 cabs per hour.
- 6,000 cabs per hour x 2.7 passengers per cab for events = 16,200 passengers per guideway.
- 2 levels of guideways encircling major stadiums x 16,200 = 32,400 passengers directly connecting to stadium per hour. This would require 12 15-berth stations.
- Each 15-berth station can handle approximately 2,600 passengers per hour.
- Many passengers will drive and park within walking distance of stadia. Others will arrive by bus, LRT or possibly commuter rail.
- Some PRT passengers may at stations a block or two from the stadium.

If combined-location stadiums were developed for the Twins and the Vikings, PRT connections would be more tightly integrated, with shared, extended concourses serving PRT travelers across its entire length. Either through skyways or a combined-location concourse, the ideal is to have all connections to stadia enclosed.

## **Stadium Related Development**

---

A key benefit of Personal Rapid Transit is that it facilitates greater economic utility of expensive community assets—stadiums.

### **Transit-related Shops**

Middle and lower level concourses can serve as transit stations for buses. PRT would allow 6 million transit passengers per year (or more) to congregate at a stadium before a bus or rail departure. This may allow the ability to leverage some level of Federal Transit Authority funds for construction and operation.

6 million commuters is a great market for all kinds of shops and services, from florists and dry cleaners to newsstands and convenience stores.

### **Restaurants**

PRT connections allow for convenient access to stadium restaurants for business lunches and meetings. Business people don't have to get a car or park. If a PRT station is integrated into an office building, PRT may be a faster way to get to lunch than walking.

With financial support throughout the year, restaurants can offer a higher quality environment to stadium attendees.

### **Suites Converted to Hotel Rooms**

Suites in newer stadiums include such amenities as wet bars, private washrooms and flat-screen HDTVs. Build suites with a full bath and beds that fold out from walls and you have a high-quality luxury hotel room at an expense that is only incrementally greater than would normally be spent.

PRT provides a low-risk way to capitalize on this potential. With a PRT station integrated into the lobby of a traditional hotel three to six blocks from a stadium, PRT cabs can serve as horizontal elevators, taking hotel guests to the stadium in just moments. Front desk operations, laundry, catering, etc. can be handled in a traditional location, with room service handled by a quick PRT ride to the stadium—with service times probably no longer than a ride up an elevator of a downtown high-rise hotel. With rooms located along a wide concourse, maid service (and express deliveries of “Double Death-by-chocolate” desserts at 11 p.m.) can be handled with quiet electronic motorized carts for greater efficiency.

For game days, the beds fold back into walls and the room is returned to use as an event suite.

Personal Rapid Transit allows just about every level of stadium concourse to be utilized to its fullest economic potential every day of the week.

### **Surrounding Development**

A PRT circulator in an activity-rich zone has the potential to increase development and property values throughout the area. In particular, hotels would benefit from a likely significant increase in tourism and convention business. Downtowns will be more attractive as corporate headquarters. Congestion will be reduced and the novelty of the integrated transit system will help attract the creative class. PRT has the potential to be a great economic development tool.

## **Combined Location**

---

To achieve sufficient capacity to fill two-thirds of a stadium via PRT, some stations will need to be up to several blocks away. A site with adjoining Twins and Viking stadiums would allow those stations to be integrated into shared concourses. A shared stadium design is not necessary, but adds elegance to a comprehensive, integrated solution.



*PRT cabs can go indoors! They're small and electric, so it's no problem.*

*As this simulation of a hotel lobby shows, PRT cabs can serve as "horizontal elevators," bringing guests directly to a stadium concourse. If it's a non-event day, stadium suites can be converted into hotel suites. All the services of the "base" hotel are just moments away.*

*This is another way PRT can maximize existing community assets, bringing in more money to help solve our stadium-financing problem. That's nearly \$2 million in hotel revenue per year (gross) from a Twins stadium and \$5 million in hotel revenue per year (gross) from a Vikings facility.*

## Financing

---

For the purpose of this presentation, financing needs to be divided into two main areas: How PRT can financially support stadiums and how PRT can be financed.

### **PRT Support for Stadiums**

Twins Ticket Transit Fee. Includes parking in a donated space and, if not near the stadium, a PRT ride to or near the stadium. \$2 per ticket. Assumes 2 million tickets per year. Donator of parking space makes up for lost revenue through greater use/value of lot/ramp with PRT connection.

*Total Twins Ticket Transit Fee revenue per year: \$4 million*

Vikings Ticket Transit Fee. Includes parking in a donated space and, if not near the stadium, a PRT ride to or near the stadium. \$4 per ticket. Assumes 700,000 tickets per year. Donator of parking space makes up for lost revenue through greater use/value of lot/ramp with PRT connection.

*Total Vikings Ticket Transit Fee revenue per year: \$2.8 million*

Twins Suite to Hotel Conversion Revenue. Current occupancy rates for luxury hotel rooms is 65 percent at around \$145 per night. With 81 event days per year, this translates to 284 available room days per year. 65 percent occupancy for those days would be 185 days per year. The Twins are proposing 72 suites. Marketing, staff and service costs will reduce total revenues, but would have to be determined based on negotiations with a hotel operational partner.

*Projected gross revenue from Twins Suite/Hotel Conversion per year: \$1,931,400*

Vikings Suite to Hotel Conversion Revenue. Current occupancy rates for luxury hotel rooms is 65 percent at around \$145 per night. With 10 event days per year, this translates to 355 available room days per year. 65 percent occupancy for those days would be 231 days per year. The Vikings are proposing 150 suites. Marketing, staff and service costs will reduce total revenues, but would have to be determined based on negotiations with a hotel operational partner.

*Projected gross revenue from Vikings Suite/Hotel Conversion per year: \$5,024,250*

Lease payments for in-stadium shops and restaurants.

*Unknown. Much greater than conventional stadium*

In-stadium advertising. This would reflect a measurable increase with 6 million transit customers passing through each year as well as significant increase in business luncheon visitors.

*Unknown. Greater than conventional stadium*

Stadium Naming Rights. This should see an increase in value due to a significant increase in stadium traffic as well as the likely internationally attention grabbing nature of a stadium surrounded by two levels of PRT guideways.

*Unknown. Greater than would otherwise be the case*

Federal Transit Administration Section 5307 Funding. With 65-90 percent of all traffic passing through the stadiums being transit related, the possibility of pro-rated matching funding for those construction and operation costs that benefit transit riders needs to be explored.

*Unknown. New funding mechanism.*

## Funding PRT

---

While we envision an expanding system that would eventually serve all the activity-rich zones in Minneapolis and St. Paul, we need to get started with a smaller system. Because we have an existing transit study for downtown Minneapolis, this is logical place from which to draw some cost estimates as well as calculate funding sources.

### Size and scope

To serve our needs, a downtown Minneapolis circulator would connect to city-owned downtown ramps, all professional athletic stadia, the Minneapolis Convention Center and various hotels, office buildings, shopping centers and high-rise condominiums. The system would be approximately 14 miles long.

### Annual Operating Costs

Operating costs: 25¢ per mile x 20 million miles	<i>\$4 million</i>
Marketing Costs: 15 percent of daily fare revenue	<i>\$3 million</i>
Administration: 7 percent of fare revenue	<i>\$1.4 million</i>

### Capital Costs

Projected Capital Cost for 14 mile system:	<i>\$140 million</i>
--	----------------------

### Annual Revenue Sources

**Fares:** A July 16, 2001 transit study by SRF Consulting projects 73,400 weekday trips with a \$1 fare. This translates into 19 million trips and \$19 million in revenue. This does not include weekend traffic or event traffic related to special events or conventions. This estimate is based on a conceptual 8-mile system, not the larger 14 mile system we propose. With event and weekend traffic, we conservatively project total revenue of...

*\$20 million*

**System Naming Rights:** Just as stadiums now bear corporate monikers, we believe we can sell corporate naming rights for this transit system, i.e., “The Acme Widget Express.” Stadiums and stadium complexes are selling corporate naming rights for as much as \$10 million per year. While there are quantifiable reasons for these kinds of valuations, much also depends on the marketplace and finding a fit with an appropriate sponsor. We believe the naming rights to the transit system we’re proposing will have as much or greater value as those of any stadium.

Every sports fan attending an event served by a connected stadium will be exposed to the sponsoring corporate brand.

Every TV establishment shot of a professional sporting event that shows the exterior of a stadium will also show the branded PRT cabs encircling the stadium. In other words, sponsors get exposure from not just one team’s activities, but from every team on the transit network.

If built in downtown Minneapolis, a projected 19 million rides per year will be made in branded cabs—more when including weekend and event traffic. 165,000 downtown office workers will be exposed to the sponsor’s brand every day.

Less quantifiable but significant benefits include the value of a sponsor’s brand being directly associated with what will become an international transit icon. This is a “Goodyear Blimp” that is accessible to everyone. When the world thinks of the Minneapolis-St. Paul area (and they will), they’ll associate our transit icon with our community, in the same way that cable cars, red double-decker buses and gondolas are associated with other cities. From the sponsor’s perspective, people who make a connection between our transit icon and city will also be making a connection with their brand.

A sponsorship has little value if the association between the brand and the transit system isn't positive. The transit system we propose has the positive attributes sponsors are looking for. It's smart, leading edge, fast, efficient, fun, clean, quiet, friendly and economical.

The publicity from this transit system will easily transcend the exposure available from sporting events. It will likely see significant exposure in the national press as a business, travel and technology story. In short, it is probably one of the best corporate sponsorship opportunities of this generation. Annual value in a long-term contract...

*\$10 million-plus*

**Joint Station Development Fees.** PRT cabs are small and fumeless. This allows them to come directly to buildings or even inside buildings. Integrating a station into a building is something for which we would charge a license fee. This fee would vary based on the kind of building, its size and location.

As an illustrative example, for hotels, we might structure our prices so that the total licensing cost was approximately \$1 per night per room. This would allow hotels to easily make back their investment by selling all-day transit passes to guests. Passes would be purchased at wholesale and sold at retail. More significantly, we would expect to see an increase in both room and occupancy rates. Out of town guests could go from the lobby of their hotel to the concourse of a Twins or Vikings game without stepping outside.

In downtown Minneapolis, there are 6,500 hotel rooms. Based on the interest rate, this could generate from \$22.7-29.2 million in license fees if all hotels participate (see chart). While undoubtedly some hotels will chose not to be connected to the system, the figures below paint a picture of the kind of private revenue that might be available to cover the capital costs of a local PRT system.

License Fee Per Room	Interest Rate	Revenue Potential
\$3,500	8	\$22.7 million
\$3,850	7	\$25 million
\$4,200	6	\$27.3 million
\$4,500	5	\$29.2 million

Include potential revenue from office towers, condominium high-rises, and shopping centers and it's not hard to find reasonable scenarios in which \$25-50 million in Joint Station Development Fees might be obtained.

*\$25-50 million*

**Advertising.** There are numerous advertising opportunities beyond System Naming Rights. Each cab has a built-in LCD monitor. As part of a computerized system that knows where you're coming from and where you're going, the time and the kind of transit pass used, a pretty good profile can be developed that allows extremely well targeted commercial messages. As an example, if you're heading toward a mall with a food court at noon, it can play a message from a restaurant in the vicinity of your destination. If you're using a student pass, it might promote one kind of restaurant, another for senior pass holders, and another for someone using an all-day pass (probably a tourist or out-of-town business traveler).

Additional opportunities exist for signage in the cab, at ticket kiosks and at pass-readers. In all, we expect 10 percent of revenue to come from advertising. This amounts to about 10¢ per cab ride.

*\$2 million*

**FTA Section 5307 Funding.** This fund has covered approximately half the cost of the Hiawatha LRT project. For budgeting purposes, we've listed it here as covering half the cost of the system; however, the transit bill under which funding would be made available is in the process of being rewritten. This level of money may not be available in the future.

*\$70 million*

## **PRT Financial Summary (Theoretical Minneapolis System)**

---

### **One-time Revenue Sources**

Joint Station Licensing Fees	\$25-50 million
FTA Section 5307 Funding	\$70 million
<i>Total</i>	<i>\$85-120 million</i>

### **Recurring Annual Revenue Sources**

Fares	\$20 million
System Naming Rights	\$10 million
Advertising	\$2 million
<i>Total</i>	<i>\$32 million</i>

### **Amount to Finance, Including FTA Dollars**

Capital cost	\$140 million
Less One-time revenue	\$85-120 million
<i>Total to finance</i>	<i>\$20-65 million</i>

### **Amount to Finance, Without FTA Dollars**

Capital cost	\$140 million
Less One-time revenue	\$25-50 million
<i>Total to finance</i>	<i>\$90-115 million</i>

## **Public or Private Financing**

---

PRT is a good investment.

We believe it's possible that PRT installed in activity-rich zones can be operated at a surplus through the private sector. The Starting Line Foundation is currently exploring the legal and financial aspects of this approach as a potential participant in a private effort. If pursued, surplus dollars from our involvement would go toward early childhood development and amateur athletic facilities through a series of related initiatives that are under development.

## Questions

---

### **Isn't it risky to integrate a stadium into a new transit technology?**

No. With a location in downtown Minneapolis, the existing transportation infrastructure has proven itself capable of the demands of professional sporting events. What Skyweb Express adds to the equation is better utilization of existing infrastructure. This will result in enhanced financial support for stadia. If implementation of a Skyweb Express system is delayed for any reason, the only loss to stakeholders is a delay in additional revenue that would not be available using other methods.

### **How can small, three-passenger cabs fill up an entire stadium?**

Stadiums are filled today using less efficient but similar capacity automobiles. The average passenger load for event-based car traffic is 2.7. This should be the same with Skyweb Express as it is with cars. With automatic routing, Skyweb Express promises greater efficiency than automobiles.

### **Every public transit system today requires public subsidies. How can Skyweb Express be financially supporting stadiums? Shouldn't all revenue generated go toward paying down the capital costs of the transit system?**

Normal operations of Skyweb Express in activity-rich zones, such as a downtown, are expected to break even or generate a surplus. Traditional transit systems typically entail high operational costs, such as the large number of staff to run a bus system, or very high capital costs, such as Light Rail. Skyweb Express is an automated system, so labor costs are very low. Skyweb Express is much lighter and smaller than LRT, so the capital costs are reasonable. As an elevated system with a small footprint, right-of-way costs are minimal.

Even assuming the system doesn't break-even, using revenues related to a specific event is normal. Revenues from Skyweb Express are little different than "event" parking fees collected at city-owned ramps. Those fees help support payments on the Target Center, yet gas taxes don't cover the cost of roads.

### **How much would a ride in PRT cost?**

Pricing is something that would be determined by the owner/operator of the system. For normal use, we anticipate a charge of \$1 per trip within downtown areas. Based on a preliminary ridership study by SRF Consulting, this could be a profitable system at that pricing structure.

### **Who would own the Personal Rapid Transit system in Minneapolis?**

Ideally, it would be owned and operated privately or through a public/private partnership.

### **How would a Skyweb Express PRT system integrate with existing transit?**

We believe a Skyweb Express system in a downtown would strengthen both the bus service and, in the case of Minneapolis, LRT. By making it more convenient for LRT riders to get to and from their final downtown destination, we expect LRT ridership will be greater than it otherwise would be. By integrating bus stations into stadiums, we provide riders with a climate controlled environment that is much more comfortable. Additionally, without having to make multiple stops in the downtown area, bus service should be faster.

### **If the stations are integrated into the superstructures of stadia, how much in Federal transit dollars could we collect?**

This kind of physical and financial structure has never been seen before. The amount of Federal dollars potentially available for this is unknown. What we do know is this:

1. The Hiawatha Line LRT has received approximately 50 percent of its funding from Federal sources. This includes the cost of stations.
2. PRT stations integrated into Twins or Vikings stadiums located on the edge of downtown Minneapolis could well see greater use as bus and LRT transit stations than as stations serving sporting events. These are legitimate transit stations.
3. If the same stations were built across the street from stadia, there would likely be little question about their validity as a transit expense. We have a legitimate argument that local taxpayers shouldn't be economically punished for simply making the best use of their Federal transit dollars. The PRT system owner/manager should argue forcefully for a full 50 percent match on the portion of the stadia dollars used for transit purposes.

## Conclusion

---

The time to start planning for a Personal Rapid Transit system is now. The sooner we get started, the faster we can use it to enhance the financing of stadiums throughout the Minneapolis-St. Paul area.

PRT will relieve congestion and increase convention and tourism business while increasing property values and broadening our tax base. A PRT circulator system in a high-traffic area will operate at a lower cost than any reasonable alternative and even has the prospect of operating at a surplus.

The leading developer of this technology is Taxi 2000, based in Fridley, Minnesota. Vendors from across the state will benefit from the construction of this system. The University of Minnesota will receive royalties for every mile of guideway installed and every cab built. Everyone benefits.

With so much to gain and so little to risk, it's a smart move for the legislature to support efforts to move Personal Rapid Transit development forward.

Here's what public leaders can do to support Personal Rapid Transit:

1. Support legislation allowing for local bonding of PRT systems.
2. Support legislation bonding for a Personal Rapid Transit proving ground.
3. Place new stadiums in activity-rich zones that can reasonably be served in an efficient way by PRT. This includes downtown Minneapolis, the U of M East and West Bank campuses, the St. Paul campus of the U of M and adjoining State Fairgrounds, and downtown St. Paul.

## Contact Information

---

Robert Jacobs  
Starting Line Foundation  
9101 Nantwick Ridge  
Brooklyn Park, MN 55443  
763 425-7007  
rjacobs@teamcreative.com

## Credits

---

Computer rendering of Skyweb Express cab found on page 1 is courtesy of the Red Group.

The composite image of Skyweb Express at the Xcel Energy Center found on page 3 and in the Quicktime™ video in the accompanying CD-ROM is courtesy of the Art Institutes International, Minneapolis.

VFX Supervisor/Animator: Shannon Gilley

Producer: Pete Patsiavos

Modeler: Vance Palodichuk

Compositors: Zach Mandt, Tim Philippi

Computer rendering of Skyweb Express station and cab with rider in a wheelchair found on page 5 is courtesy of Taxi 2000 and Bob Brodbeck.

Computer rendering of Skyweb Express station in a hotel lobby found on page 9 is courtesy of Taxi 2000 and Bob Brodbeck.