ABOUT THE ORANGELINE
HIGH SPEED MAGLEV
February 1, 2007

To: Public and Private Investors

Subject: About the Orangeline High Speed Maglev

This document describes the Orangeline Corridor Development Project. The project entails the construction of the 108-mile Orangeline High Speed Maglev, a transportation system for moving passengers and freight, coupled with station-area housing and related improvements. The Orangeline affords excellent public and private investment opportunities. The Project is uniquely positioned to service a tremendous market demand for new transportation, housing and public infrastructure development.

Growing urban areas such as Southern California need to invest billions of dollars to add capacity to their transportation infrastructure to support current and future development. Government funding sources are not adequate and thus there is a growing unmet need.

Over $12 million has been invested in engineering and financial feasibility studies to determine if a high-speed maglev passenger and freight transport network could be built in Southern California, using primarily private funds. Positive results of these studies have led to formation of the Orangeline Development Authority, a joint powers agency of 14 Southern California cities organized to pursue the Orangeline Corridor Development Project.

The Authority is partnering with a consortium of private firms led by ARCADIS, a global infrastructure development firm, to pursue development of the Orangeline High Speed Maglev. About the Orangeline High Speed Maglev describes the public and private investment opportunities created by this innovative transportation improvement program.

In Summary

Project Data: 108-mile transportation corridor development

Financial Impact: $36 billion+ in economic activity to build the transportation infrastructure and station-area real estate development

Jobs Impact: 40,000-80,000 jobs created from construction of the transportation infrastructure. Over 500,000 permanent jobs resulting from station area real estate development.

Program: Percent interest in transportation infrastructure and station-area real estate development revenue stream earnings

Capital Contribution: Up to $200 million (loans / loan guarantees) for predeployment planning

At least $24 billion for station-area real estate development

The Orangeline High Speed Maglev offers significant public and private investment opportunities. I look forward to discussing this information with you.

Sincerely,

Scott A. Larsen
Chairman
A privately funded transportation system
The Orangeline High Speed Maglev is a privately-funded transportation system that will connect key Southern California destinations. Passenger fares and cargo fees would cover all operating and capital costs.

Helping relieve traffic congestion
The Orangeline High Speed Maglev provides a safe and reliable, alternative to congested roadways and airports. It would carry passengers along an elevated monorail track at top speeds of 240 mph or more above existing highway and railroad corridors. It would connect population and employment centers and multimodal transportation centers, included airports and railroad terminals. It would provide a fast and convenient alternative to driving, thus helping to reduce traffic congestion.

A positive return on investment
The Orangeline High Speed Maglev offers public and private investment opportunities. For local cities, the system will serve as a catalyst for new station-area commercial, entertainment, recreation and residential development. For public and private investors, it promises a positive return on investment in the financing and operation of the system, and in station-area developments.

Attracting quality development around Orangeline stations
The Orangeline Development Authority is a joint powers agency. Its member agencies are local cities located along the Orangeline High Speed Maglev corridor. The Authority’s mission is to attract quality development and improve the economy and environment of its member cities through the deployment of the High Speed Maglev system. The Authority has set a goal of initiating service by 2013.

Creating a new industry and thousands of jobs
Construction of the $19 Billion Orangeline High Speed Maglev from Palmdale to Irvine, a distance of 108 miles, would generate thousands of jobs, and create a new transportation industry. Additional economic activity and jobs would be stimulated by an estimated $24 Billion or more in new housing and other real estate development around Orangeline High Speed Maglev stations.

This booklet contains:
- About the Orangeline High Speed Maglev
- Member Status
- California Regional Maglev
- Project Feasibility
- Investment Opportunities
- Maglev Operating in Germany and Shanghai
- Maglev Technology
As of February 2007, fourteen cities have joined the Orangeline Development Authority. Additional cities are currently considering joining the Authority. Six additional cities and regional agencies have endorsed the formation of the Authority and its project development program.
The Orangeline High Speed Maglev from Palmdale to Irvine is one line of a proposed Regional High Speed Maglev system, using the world’s most advanced magnetic levitation technology; it would connect major activity and transportation centers throughout Southern California. The system would support new housing, commercial and industrial development located around maglev stations and along feeder services provided by urban transit systems. Connections to current and newly located airports would help to address the region’s air travel demands. The system could also serve to carry freight, including cargo containers from sea ports to inland ports. The maglev lines shown are under various stages of development.

High Speed Maglev would help free up congested roadways and airports. When fully deployed, the High Speed Maglev system could create the basis for a 50-year regional surface transportation system for passengers and cargo. This system could offer a practical transportation alternative as significant to California as is the freeway network developed during the last 50 years.
Financial Feasibility

The Orangeline High Speed Maglev enables travel at speeds above 200 mph

The Orangeline High speed Maglev is being planned as a privately funded transportation corridor development project. Between 1999 and 2004, three independent teams of planning and engineering consultants engaged by the Southern California Association of Governments conducted four separate studies to assess the feasibility of building an intra-regional high-speed transportation network using state-of-the-art maglev technology.

Approximately $10 million was invested in these studies, which included a comparison of maglev technology to other transportation modes. The findings of all four studies indicated the advantages of maglev technology and the potential for funding both capital and operating costs from project revenues.

The study teams analyzed the feasibility of high-speed maglev services on the following four corridors:

1. LAX to March Inland Port in Riverside County
2. Los Angeles (LAX and Downtown) to Palmdale
3. Downtown Los Angeles to Orange County
4. LAX to Orange County

Results of these initial feasibility studies led to formation of the Orangeline Development Authority. The Authority and its development partner ARCADIS confirmed the financial viability of a high-speed maglev line from Palmdale to Orange County in a follow-up study completed in December 2006. The Authority and ARCADIS are seeking funding to complete a $200 million pre-construction engineering and financial planning program leading to the sale of bonds to finance construction of the 108-mile Orangeline High Speed Maglev system.

Key Financial Results

<table>
<thead>
<tr>
<th>Orangeline High Speed Maglev</th>
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<tbody>
<tr>
<td>Capital Construction Cost</td>
<td></td>
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<tr>
<td>Interest during construction</td>
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<tr>
<td>Beginning Debt in 2013</td>
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<tr>
<td>Begin Operation</td>
<td>2013</td>
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<tr>
<td>Base Year Ridership</td>
<td>53M</td>
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<tr>
<td>Debt Payoff</td>
<td>2044</td>
</tr>
<tr>
<td>Accumulated Revenues by 2050</td>
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The Economic Case for the Orangeline High Speed Maglev

Case study: Building a 100-mile high-speed maglev along the I-405 Freeway from Los Angeles via LAX to Irvine – a URS Corporation 2004 study.

Project cost: $13.5 billion (2011, at completion of construction)
Funding Source: Passenger and freight revenues
Beneficiaries: System users and reduced highway congestion for non-users.
Annual cost of capital: $1.5 billion (average over 30-year financing)
Annual Principal and O&M: $1.0 billion
Annual user fee revenue: $2.5 billion (2030)
Annual subsidy per user: $0.0

This case study, similar studies along other corridors, and the Authority-ARCADIS study completed in December 2006 confirm the potential feasibility of the Orangeline High Speed Maglev as a viable alternative to meeting transportation needs in the dense and growing urban corridors of Southern California and in similar corridors elsewhere.

Economics are diminishing the benefits of freeway widening in dense urban areas

Case study: Adding a single lane in each direction to a four-mile section of I-405 Freeway in West Los Angeles – Los Angeles Times story, 12/28/04
Project cost: $167 million ($167 million per 8-lane freeway mile)
Funding Source: Taxpayers – highway user funds and State general revenue funds
Beneficiaries: An estimated 28,000 people would use the new 4-mile lane segment over a 16-hour period each day.
Annual cost of capital: $5 million
Annual user fee revenue: $1.2 million (revenues generated from users)
Annual taxpayer subsidy: $3.8 million (revenues from non-users)
Annual subsidy per user: $136

To cover construction costs, taxpayers are paying $136 each year for each of the estimated 28,000 people who would use the new four-mile lane segment being added to the I-405 Freeway. In February 2006, it was estimated that widening a Southern California freeway would cost an estimated $312 million per 8-lane freeway mile. Extending the 710 Freeway to Pasadena is estimated to cost $1 billion per mile. Even with the November 2006 voter-approved infrastructure bond measure, the State’s freeway widening program alone cannot meet the region’s transportation needs, and address other goals for air quality, energy and urban development.

The opportunity exists for an alternative that provides high-speed, reliable service; one that derives its construction and operating costs from user fees, not taxpayer subsidies. The Orangeline High Speed Maglev shows strong potential to achieve those objectives.

Growth in shorter-distance air travel is congesting airports and airways, leading to billion-dollar proposals to expand airports in crowded urban areas. Cargo movement from San Pedro Bay ports is a key source of congestion and air pollution. The Orangeline High Speed Maglev can help resolve these issues by providing fast, convenient access to Southern California’s regional airports and connect the seaports in Los Angeles and Long Beach to inland inter-modal freight terminals in Palmdale and elsewhere.
INVESTMENT OPPORTUNITIES

$12 million has been invested to date
To date, approximately $12 million has been invested in the Southern California High Speed Maglev feasibility studies, including over $4,000,000 for the Palmdale-to-Orange County Maglev.

17 miles of former railroad right-of-way has been acquired
For the route segment between downtown Los Angeles and Orange County, the public has acquired about 17 miles of railroad right-of-way the Authority plans to use for the Orangeline High Speed Maglev, with an estimated value of over $150 million. The value of public rights-of-way for the 110-mile line from Palmdale to Irvine is projected to exceed $1 billion. The Orangeline High Speed Maglev is included in SAFETEA-LU, the federal transportation reauthorization act, as a national “High Priority Project”. State legislation was approved in 2006 to support the Orangeline High Speed Maglev project.

The Orangeline High Speed Maglev has attracted private investments
In August 2005, the Authority and a private development team led by ARCADIS, a global infrastructure development firm, entered into a public-private partnership agreement. The consortium of 22 firms invested $1,100,000 in the just completed Phase 1 preliminary engineering studies. The Authority is seeking additional public and private investment in the project. The potential benefit to private investors is the opportunity to earn a reliable, long-term income stream from bond or equity investments in the planning, construction and operation of the Orangeline High Speed Maglev system, as well as from investment or direct participation in station-area developments. The total capital investment to be raised for the Orangeline Maglev and related real estate developments is expected to exceed $36 billion.

Project phasing and incremental reviews will reduce risks
Investment in the project would be phased to reduce risks and to ensure that the project achieves a high degree of success. The next phase will complete the pre-deployment planning tasks prior to construction of the Orangeline High Speed Maglev system. Depending on the length of line selected for initial construction, the cost of this phase is estimated to be as much as $200 million.

Investment opportunities exist for public and private entities
Current investment opportunities exist in financing the pre-deployment planning studies leading to a detailed project definition and completion of environmental reviews. The subsequent investment opportunity will be in the purchase of project revenue bonds for construction. The Authority hopes to sell bonds to finance construction during 2009 to 2012. Bonds sales will be predicated on investment-grade ridership and revenue estimates. It is anticipated that financing will include tax-exempt bonds and other credit instruments. State and Federal loan guarantees are being sought to help reduce investor risk and thus lower borrowing costs.
Potential State/Federal and Private Investment Opportunities

Planning Phase

- Up to $200 million Capital Investment (loans and or loan guarantees) for preliminary design and engineering, environmental reviews and project financing.

- Investment payback plus interest upon successful subscription of project construction financing in late 2009.

Construction Phase

- Up to $24 billion Capital Investment (loans and/or loan guarantees) for project construction and construction-period financing costs.

- Investment payback plus interest beginning upon successful completion of initial route segment and initiation of system operation in 2013 continuing to 2042.

Station-area Development

- Over $24 billion Capital Investment for construction of housing, commercial, retail and other mixed-use developments.

Note:

The Authority is pursuing federal, state and local investment contributions, as well as private investments. The investment levels identified above are what are required to implement the 108-mile transportation corridor development project. State/Federal participation in financing the Orangeline High Speed Maglev could be at the total levels indicated or at lesser levels depending upon the level of local and private investments in the project.

State/Federal investment in the Planning Phase will assist in securing private investment, due to the private sector’s higher perceived risks associated with the completion of environmental reviews and government approvals leading to construction.

Risk mitigation is a key element of the implementation plan. Financial risks are managed through project phasing and review to verify progress and continued project viability at each level of financial commitment.

State/Federal capital investment in the Orangeline High Speed Maglev (loans or loan guarantees), while not without risk, would lessen the demand for government grant funding normally associated with major transportation projects.

The Orangeline High Speed Maglev is included in federal SAFETEA-LU transportation legislation as a “High Priority Project" with an initial earmark for preliminary engineering.

The added public investment provisions identified in this report could enhance prospects for favorable private financing and accelerate project completion by several years.

The Orangeline High Speed Maglev offers significant private sector investment opportunity.

In addition to a long-term, reliable income stream from passenger fares and cargo revenues, station-area real estate development offers the potential for additional investment returns.

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The first operational maglev system in an urban setting, shown in the top and bottom photos, went into revenue service on December 29, 2003. Connecting Shanghai with Pudong Airport at top speeds of over 260 mph, the 30 km system was built in record time. To date, the Shanghai Maglev has carried over 9 million passengers.

Under development for more than 25 years, the Transrapid maglev has been operational at the Emsland, Germany test facility, shown at the right, since 1984, and has carried over 600,000 passengers.
MAGLEV TECHNOLOGY

Magnets on-board Maglev vehicles interact with guideway magnets to lift and propel the vehicle along the track.

The maglev vehicle wraps around the elevated monorail guideway, adding an extra measure of safety by precluding derailments.

An electric current generates a travelling electromagnetic field in the windings which pulls the vehicle along by way of its levitation magnets.

Maglev can also carry freight on modified standard vehicles, or sea-borne cargo containers on specially designed cargo vehicles.
## Orangeline High Speed Maglev Development Partners

<table>
<thead>
<tr>
<th>Corporate Headquarters</th>
<th>Company Name</th>
<th>Principle Business</th>
<th>Company Offices</th>
</tr>
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<tbody>
<tr>
<td>Netherlands</td>
<td>ARCADIS</td>
<td>Infrastructure Development</td>
<td>World-wide</td>
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<td>Maglev Technology Supplier</td>
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<td>Germany</td>
<td>Siemens</td>
<td>Technology</td>
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- Maryland
- Technology Systems and Science
- World-wide

- Dallas
- Urban Development
- United States

- Arizona
- Engineering
- United States

- Germany
- Infrastructure Development
- World-wide

- Los Angeles
- Transportation Planning
- California

- San Diego
- Real Estate Development
- California

- Los Angeles
- Structural Engineering
- California

- El Segundo
- Real Estate Development Services
- World-wide

- Los Angeles
- Investments, Securities, Financings
- United States

- Diamond Bar
- Public Outreach, Media Relations
- California

- Germany
- Technology
- World-wide