



Transit Power Rail For Third Rail and APM Systems

CONDUCTIX
wampfler
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3rd & 4th Rail • APM & PRT • Stinger Systems • Monorail



For over six decades, Conductix-Wampfler has built a worldwide reputation as a proven supplier of transit electrification products. We are your partner of choice when you need to power mass transit, people mover, monorail, and advanced light rail systems.

Our mission is to design and build cost effective, energy efficient products, and to provide dedicated engineering expertise and support services that meet or exceed your expectations.

We consistently meet your project needs in a variety of operating scenarios. Every component design is verified to meet the requirements of the application in our fully staffed test facility and through years of field experience. We set the standard for long term reliability and performance.

Conductix-Wampfler has the engineering know-how, practical experience, and testing capabilities to be a partner in your success!

You can choose from a wide variety of proven aluminum stainless conductor rail designs for mass transit systems. If you need a special rail design to meet unique and exacting criteria, Conductix-Wampfler can supply it!

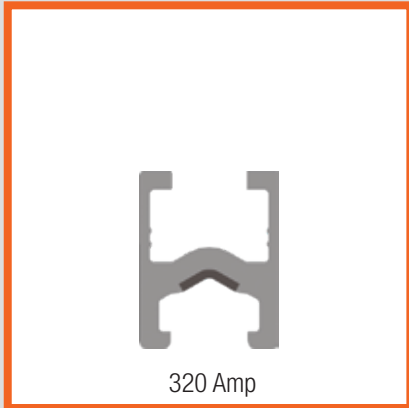
ISO9001:2008 Certified



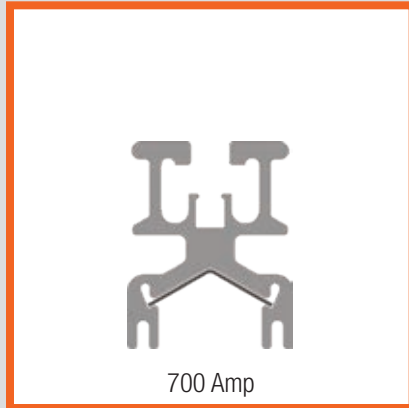
- Downtown People Movers
- Light Rapid Transit
- Automated People Movers

- Automated Guideway Monorails
- Amusement Park Scenic Rides
- Maintenance Stinger Systems

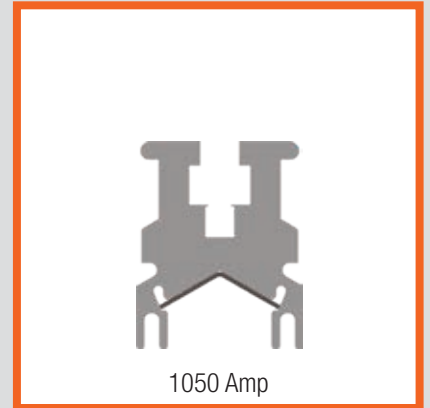
Casino People Mover, 700 Amp



320 Amp



700 Amp

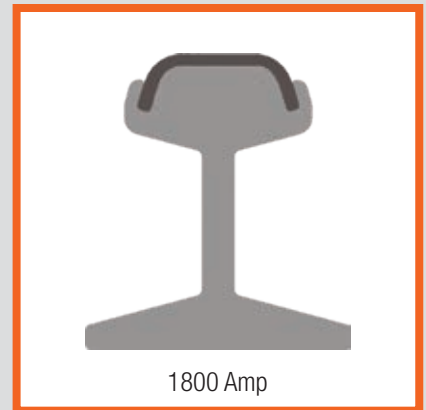
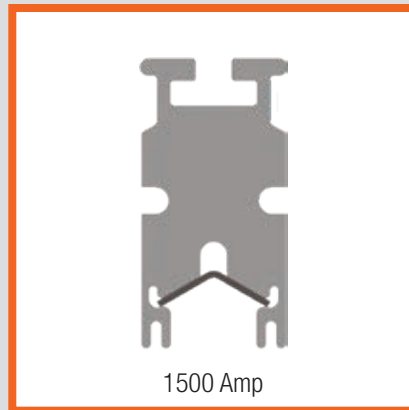
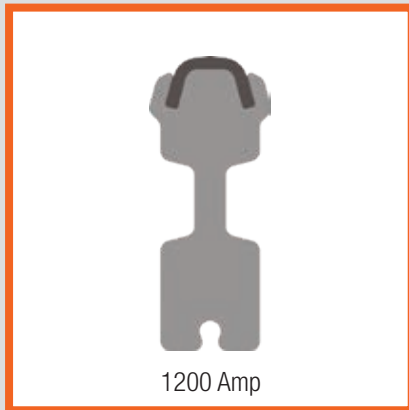
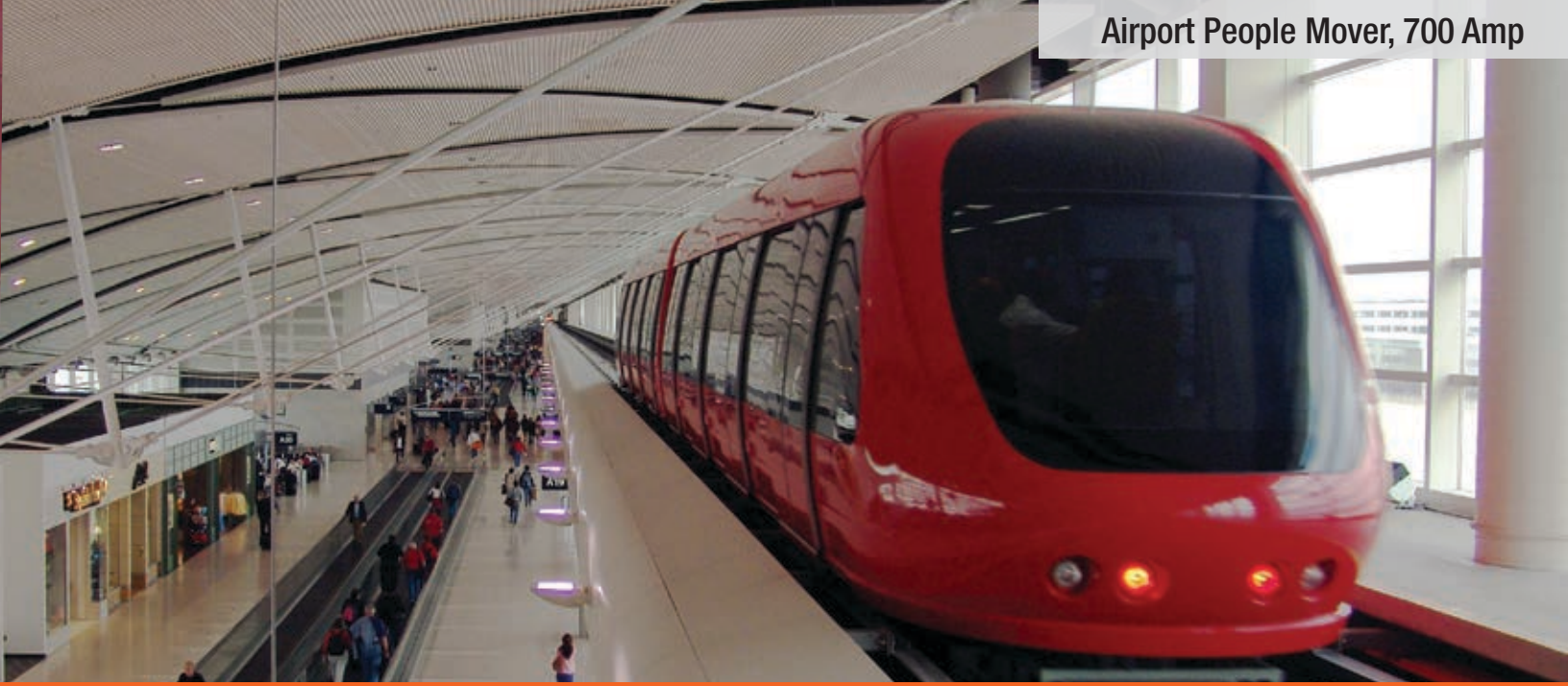


1050 Amp

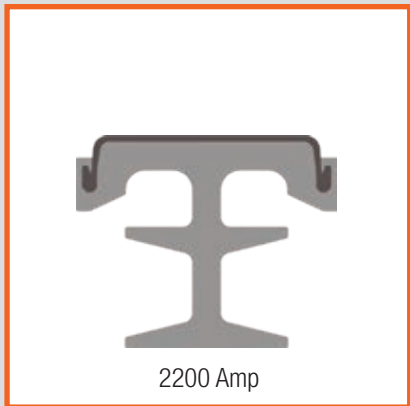


Downtown People Mover, 1500 Amp

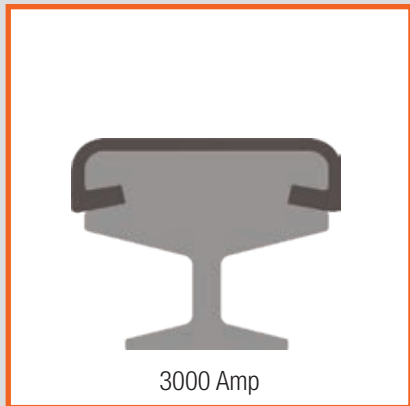
Airport People Mover, 700 Amp



3rd Rail Airport-Downtown People Mover, 4000 Amp



2200 Amp



3000 Amp



3500 Amp Crimped Cap

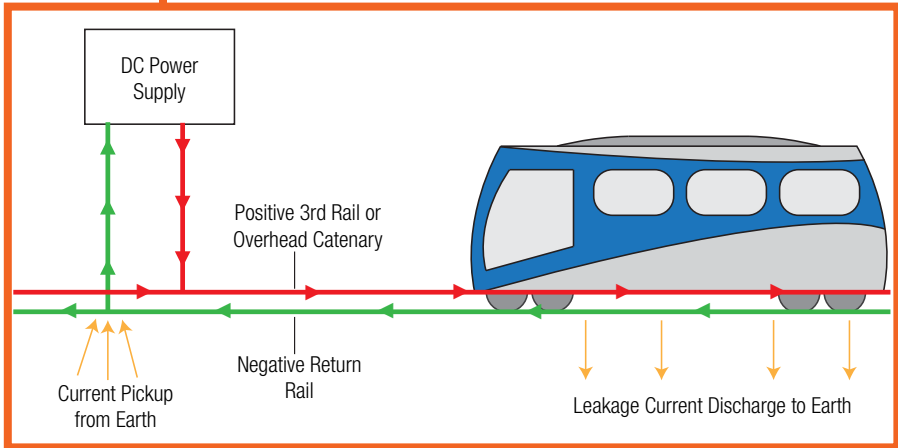


4500 Amp C



4th Rail Downtown People Mover, 4500 Amp

3rd Rail



Crimped Cap



4500 Amp Welded Cap

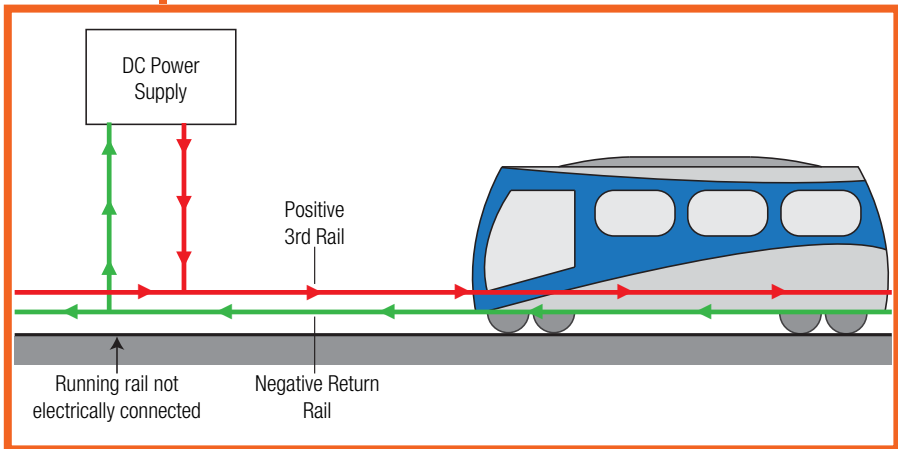


4500 Amp Crimped Cap



6000 Amp Welded Cap

4th Rail



Aluminum / Stainless Steel "Welded Cap" Rail

- Long-wearing 4 to 6 mm stainless steel cap
- Smooth, consistent running surface
- No seams on the rail surface, welds are on the sides of the rails

Stinger Systems

Power for Vehicles in Maintenance Facilities

Conductix-Wampfler offers customized solutions to provide power to vehicles parked in maintenance facilities. Economical Stinger Systems are available in many different designs. Solutions range from insulated conductor bar with vehicle connector drop leads to inexpensive festoon arrangements.

Stinger Systems:

- Remove the dangers and hazards associated with traditional live plugging of trains; no "live plugging"
- Prevent unintentional energizing of train circuits
- Eliminate arc flash when plugging and unplugging
- Provide operational flexibility by switching of individual trolleys
- Will automatic shutdown if there is no current draw from the equipment for a set period
- Include plugs are customized to your rolling stock and are equipped with interlock safety circuits
- Have removable key and spring return selector switch to prevent unauthorized energizing of train circuits
- Feature controlled separation of leads in the event of drive out condition
- Use finger-safe conductor bar and/or cable festoon systems

As an alternative to the above, economical conductor bar and festoon configurations are also available.

Contact us to discuss your requirements

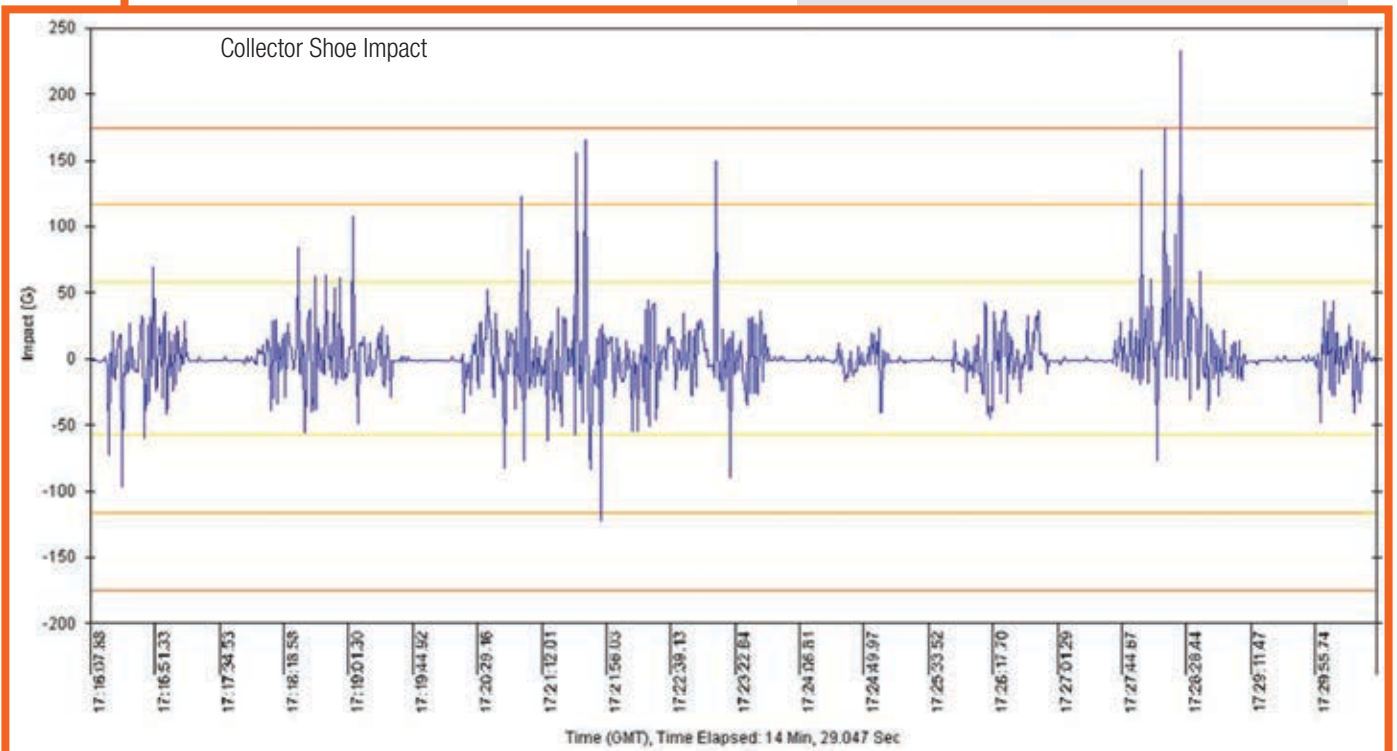


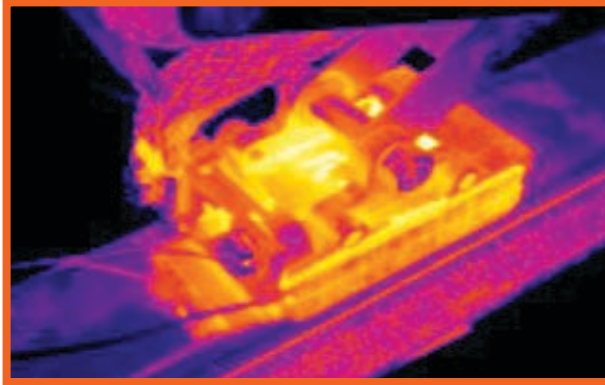


PRIAS

Power Rail Impact Analysis System

- PRIAS is a system diagnostic tool used to improve electrification system performance.
- PRIAS records collector impact and current draw and identifies the guideway location.
- PRIAS provides position resolution to within one meter.
- PRIAS displays the magnitude and position of collector impact and current demand on a color-coded map.





TECHNICAL SERVICES

Our **Technical Services Group** has extensive experience with all aspects of electrification systems for transit applications, including product engineering and design, proof of concept testing, system design, and system installation.

We have the services you need to ensure a successful project, every time!

Engineering Capabilities

- Power rail design consulting
- Three dimensional component prototyping
- Independent testing of components and systems
- System design and layout
- Project management - at your location
- On-site installation support and training
- System commissioning
- System inspection and optimization
- Other engineering services as required

Testing Services

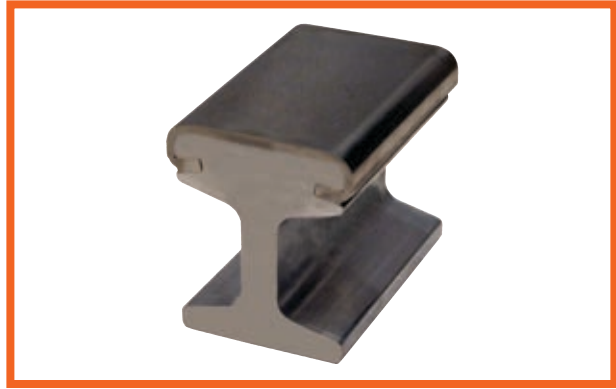
Our fully staffed testing facility offers:

- Collector shoe wear testing
- Wind Tunnel analysis
- Heat rise testing to 10,000 amps
- Thermal imaging
- High moisture isolation
- Electrical panel evaluation
- Fault force / short circuit evaluation
- Mechanical properties of materials testing
- Dielectric testing
- Electrical resistance and impedance testing
- Custom power rail design and performance testing services

COMPONENTS

Transit Conductor Rails

- Diverse range of aluminum-stainless steel rails - efficient and long-wearing
- Designed and configured for the application
- Capacities from 320 to 6,000 Amps
- Third and Fourth rail systems or multiple conductors for power and control



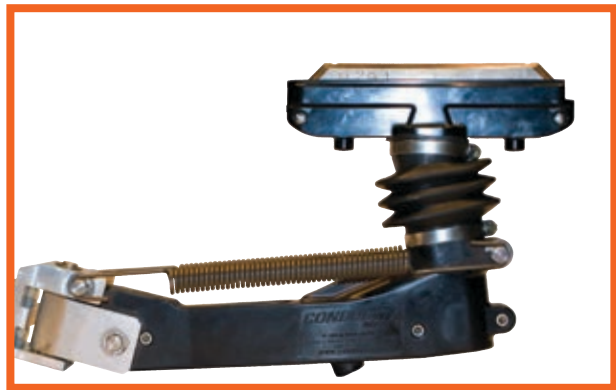
Transit Collector Designs

- Wide variety of rugged, high impact collector designs precisely suited to the application
- Unique articulating collector arms assure superior tracking and positive contact under demanding conditions
- Enclosed cables avoid interference with the shoe
- Easy replacement collector shoes



Insulator Supports

- For Third Rail, Fourth Rail, or AC systems with multiple conductors
- Accommodate a wide variety of mounting profiles
- Comply with electrical short circuit demands
- Made from rugged UV resistant materials



Other Components

- Pick-up Guides to match the profile of the conductor with the profile of the collector
- Expansion Sections with electrically isolated supports for thermal expansion
- Isolation Sections to control power disruption
- Conductor Covers made with PVC, polycarbonate, ABS / polycarbonate blend, or fiberglass





Global Transit Experience - Page 1 of 2

Owner/Representative (Vehicle OEM)	System Type	Location	Power Rail Type	Year of Award(s)
Orlando Airport South Terminal	Airport People Mover	Orlando, FL, USA	1200A DC 2-Pole	2015
Orlando Airport Airside Terminal	Airport People Mover	Orlando, FL, USA	1500A AC 3-Pole	2016
Ashgabat APM (Intamin)	APM System	Ashgabat, Turkmenistan	700A DC, 2-pole	2015
Metro-North Railroad	Downtown Subway, Park Ave Tunnel	New York, NY, USA	6000A DC, 3rd Rail	2015
LK Comstock/Railworks	Downtown Subway, 2nd Avenue	New York, NY, USA	6000A DC, 3rd Rail	2014
Mitsubishi Heavy Industries	LRT System	Macau, China	1200A DC, 2-pole	2014, 2015
Suncheon Bay Garden Expo (Vectus PRT)	PRT/Urban Transport	Suncheon Bay, Korea	700A AC, 3-pole	2012
Sao Paulo Metro Line 15 (OAS/Bombardier)	High Volume Monorail	Sao Paulo, Brazil	4500A DC 2-pole	2013, 2016
Expo Line (Translink/SNCL)	Downtown People Mover (LRT)	Vancouver, BC, Canada	4500A DC 2-pole (4th Rail)	2012, 2013
Expo Line Extension (Translink/SNCL)	Downtown People Mover (LRT)	Vancouver, BC, Canada	4500A DC 2-pole (4th Rail)	2015
Hong Kong Airport (IHI)	Airport People Mover	Hong Kong, China	1200A DC 2-pole+ground	2012, 2013
Phoenix Skytrain (Bombardier)	Airport People Mover	Phoenix, AZ, USA	1200A	2012, 2013
Munich Airport (Bombardier)	Airport People Mover	Munich, Germany	1200A DC 2-pole+ground	2013
Jeddah Airport (Bombardier)	Airport People Mover	Jeddah, Saudi Arabia	1200A DC 2-pole+ground	2012
King Abdullah Financial District (Bombardier)	Downtown People Mover	Riyadh, Saudi Arabia	2200A DC, 2-pole	2010, 2011
MiaMover (Mitsubishi Heavy Industries)	Airport People Mover	Miami, FL, USA	1200A	2010
NYCT	Test Track	New York, NY, USA	6000A DC, third rail	2009
Kelena Jaya Maintenance Extension	Depot	Kuala Lumpur, Malaysia	3500A	2008
CONRAC (Mitsubishi Heavy Industries)	Airport People Mover	Atlanta, GA, USA	1200A DC 2-Pole	2007
Canada Line (SNC-Lavalin)	Downtown People-Mover	Vancouver, BC	4000A DC 3rd Rail	2007
Pearson Airport (DCC)	Airport People Mover	Toronto, Canada	500A	2004
Lisbon Oerias Airport (POMA-OTIS)	Airport People Mover	Lisbon, Portugal	700A	2003
Copenhagen	Downtown People Mover	Copenhagen, Denmark	4500A	2002
Dallas-Ft. Worth Airport (Bombardier-Pittsburgh)	Airport People Mover	Dallas, TX, USA	400A, 1200A	2002
Indiana University Health (Schwager-Davis)	Hospital People Mover	Indianapolis, IN, USA	700A	2001
Las Vegas Consortium (Bombardier)	Downtown People Mover	Las Vegas, NV, USA	1500A	2001
Bangkok MRTA (Alstom)	Downtown People Mover	Bangkok, Thailand	4500A	2001
Minneapolis Airport (POMA-OTIS)	Airport People Mover	Minneapolis, MN, USA	700A	1999
Detroit Airport (POMA-OTIS)	Airport People Mover	Detroit, MI, USA	700A	1999



Global Transit Experience- Page 2 of 2

Owner/Representative (Vehicle OEM)	System Type	Location	Power Rail Type	Year of Award(s)
Journey to Center of the Universe (MHI)	Theme Park	Disney-Tokyo	700A	1999
Jacksonville Skyway Express (Bombardier)	Downtown People Mover	Jacksonville, FL, USA	1050A, 700A, 400A	1996, 1999
BC Transit - SkyTrain (UTDC)	Downtown People Mover	Vancouver, BC, Canada	3200A, 4500A	1986, 1993
Detroit People Mover (UTDC)	Downtown People Mover	Detroit, MI, USA	3200A	1986, 1999
Toronto Transit - Scarborough (UTDC)	Downtown People Mover	Toronto, ON, Canada	3200A	1986, 1999, 2004
DFW TRAAM - Dallas Airport Operating Authority	Airport People Mover	Dallas-Fort Worth, TX, USA	800A	1980, 1998
Disney World Monorail	Theme Park	Orlando, FL, USA	1500A	1974, 1999
Bellagio APM (Yantrak)	Casino People Mover	Las Vegas, NV, USA	400A	1997
Prima Donna-Buffalo Bill (Schwager-Davis)	Casino People Mover	Primm, NV, USA	700A	1997
GM Test Track (Disney Imagineering)	Theme Park	Orlando, FL, USA	700A	1997
Kuala Lumpur LRT II (SNC-Lavalin, Inc.)	Downtown People Mover	Kuala Lumpur, Malaysia	3500A, 4500A DC 2-Pole (4th Rail)	1996
Marlborough Test Track (Raytheon)	PRT/Urban Transport	Marlborough, MA, USA	1050A	1995
MGM Grand-Bally Monorail (VLS)	Casino People Mover	Las Vegas, NV, USA	1500A	1995
Newark APM (Adtranz)	Airport People Mover	Newark, NJ, USA	900A	1994
Newark APM Refurbishment (Bombardier)	Airport People Mover	Newark, NJ, USA	900A	2013
Narita APM (Nippon-Otis)	Airport People Mover	Narita, Japan	1000A	1992
Busch Gardens Animal Park	Theme Park	Tampa, FL, USA	400A	1988
Dallas Zoo (Von Roll)	Theme Park	Dallas, TX, USA	400A	1988
Waikoloa Monorail (Von Roll)	Hotel Monorail	Waikoloa, HI, USA	500A	1988
Caracas Subway	Rapid Transit	Caracas, Venezuela	3500A	1983
San Francisco BART (Rohr Industries)	Rapid Transit	San Francisco, CA, USA	3000A 6000A 3rd Rail	1978
Bronx Zoo	Theme Park	New York, NY, USA	500A	1978
Dept. of Transportation (Rohr Industries)	Test Track	Pueblo, CO, USA	1600A	1974
San Diego Zoo	Theme Park	San Diego, CA, USA	500A	1972

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