



Transit X presents a preliminary proposal for a sustainable micro-guideway network — a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

Charlestown, Boston, MA

This proposal is downloadable at transitx.com/proposals/Transit X for Charlestown, Boston, MA.pdf

High capacity · High speed · Nonstop · 24/7 Solar powered · Zero Wait · Door-to-door · Resilient

A companion Transit X Handbook is available at transitxhandbook.pdf



Proposal Overview



Transit X proposes to finance, build and operate a sustainable microguideway to carry passengers and freight for Charlestown that makes the Transit X service convenient to 95% of the population.

Transit X efficiently services both suburbs and cities and provides for a higher quality of life. See transitx.com for more details. This 3-minute video (transitx.com/video) describes our innovative solution.

Major benefits

- · Reduce congestion
- · Provide parking relief
- · Reduce pollution
- Improve safety

The Transit X Handbook (<u>transitx.com/</u> <u>transitxhandbook.pdf</u>) answers many questions about our service, the company, our technology, and the way we address: congestion, parking, road safety, pedestrian safety, ADA compliance, sustainability, fares,



solar+storage, construction, aesthetics, operations, economic development, quality of service, security, station footprint, equitability, carbon footprint, transit integration, resiliency, reliability, rights-of-way, and open space.

Congestion, parking, pollution, and safety

Most regions suffer from traffic congestion, limited parking, air pollution, and unsafe roads. Potential solutions are costly, but Transit X can solve these challenges without public funding. Transit X can integrate into the built environment, providing both short term relief and a long term solution.

High Capacity & High Speed

A single track carries 12,000 pods per hour (20,000 to 50,000 passengers per hour). Two boarding areas fit in a single car space and provide 2,000 boardings per hour. For urban commutes, pods trips are 3 times faster than car trips and the high-speed podway provides faster door-to-door trips than air travel for distances of 1,000 miles or less.

Zero Footprint and Minimal Disruption

Transit X features stops that don't interfere with pedestrians or other forms of transportation. We use easements alongside highway and roads and integrate utility lines and poles Non-stop interchanges fit above existing intersections. Factory-built tracks and posts enable fast installation with minimal disruption. There are options for long crossings using bridges or underground tunnels. Posts are typically spaced at 23 m (25 yds).

Low-cost Infrastructure & equitable fares

Transit X does not require government funding because our revenue from fares, freight, and advertising is greater than our costs. We have reduced or eliminated many costs of transportation including the cost of materials, land, construction, fuel, debt service, and labor. Our projects are typically financed by investment banks, private equity firms, banks, and governments.

Proven technology

Our team and partners have built fully automated systems that are now in operation around the world. Transit X may look unique, but the underlying design is very similar to systems that have been operating for 40 years with an exemplary safety record. The rollout and maiden flight occurred on Oct 29, 2018 in Leominster, Massachusetts. The first Transit X system will be demonstrated by the end of 2019.

Service Quality

Transit X provides on-demand, last-mile service that is superior to cars or buses. An operating agreement will guarantee high levels of availability and reliability. Our use of small vehicles (pods) makes this possible. By reducing car use, Transit X creates walkable and bike-friendly neighborhoods.

Less pollution: Air, Sound, Light, Visual, Water

Transit X offers a much higher quality of life by eliminating many forms of pollution. Pods are quiet, efficient and have zero emissions. Pods offer less visual impact than the existing roads and vehicles, and utility lines can be hidden within the track. At night, there is no light pollution from headlights or taillights. Water pollution from road runoff is significantly reduced. Parking lots and roadways can be converted into green space and community paths as they become unnecessary.

Sustainable and Efficient

Pods weigh only 55 kg (121 lbs) and achieve over 20 times the efficiency of electric cars. Solar, wind, and storage installed on our tracks and posts can provide 100% of the clean energy needed to power the system.

More Transit & Fewer Cars

Transit X provides the convenience and privacy that people value in cars, yet without the negative impacts of personal cars. Transit X combines the best of mass transit and personal transportation modes which will lead to greater use of public transit and fewer cars.

De-risking Projects

Transit X partners with large, established firms to provide fixed-price contracts for the engineering, certification, construction, and operations of a Transit X system. Theses partnerships enable Transit X to de-risk all of the major elements of the project, and provide performance guarantees. We work with local construction firms.

Jobs and Workforce Development

Many regional jobs will be created to build a new transportation infrastructure, as well many new types of jobs will be created from economic growth. The majority of

the construction jobs will be locally sourced and preferential hiring is given to those displaced by the transition.

Revenue Generator for Government

Not only does Transit X not require public financing, but the government and private easement owners receive 4-5% of gross revenue, which would be US\$4 million per year average over the first 10 years.

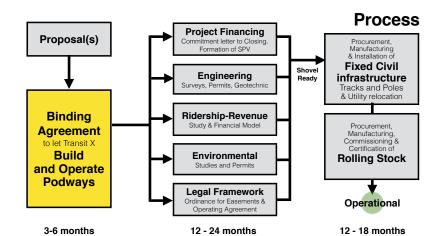
Short and Long Term Solution

A project could be operational within 24 months from the start of a project. Transit X offers a rapidly-deployable solution that provides long term benefits. We would form a local company to build, operate, and maintain the network. At least 75% of the profits would be invested back into the region.

Moving Forward

The diagram shows our process for a project. We submit a project proposal, then ask for a commitment for Transit X to build and operate a podway along rights-of-way easements. Example documents and a sample project schedule can be viewed at:

transitx.com/process



Evaluation

Please review our

preliminary proposal, and then ask us any questions. We would be happy to provide further information, address specific concerns, or meet with specific people or groups. Any routes or coverage areas shown on the map are only preliminary suggestions and actual routes would be determined based on needs, rights-of-ways, utility corridors, location of trees, and many other factors.

We expect this proposal to be reviewed by one or more committees or working groups. Familiar transportation options, such as buses, light rail, subways, and ridesharing services (including autonomous vehicles) may have already been considered. Very few options offer the convenience of cars with at least the capacity of buses, and most, if not all, require public funding and subsidies.

Private cars have a dominant mode share because people like the privacy and convenience of a car — despite the significant risks and negative impact associated with them. People won't give up their cars unless the alternative is both better and cheaper. That is what Transit X can provide.

We hope you agree that this proposal offers a way to address your challenges in both the short and long term, providing an option that is better and lower risk than any alternative — including continuing with the status quo.

We hope you will conclude that moving forward with Transit X is an excellent opportunity to meet your current and future challenges.

Once we agree to move forward, we look to receive a commitment for Transit X to build and operate a podway along rights-of-way easements.

Other Resources

The links below provide general information about Transit X:

- One minute video overview (transitx.com/video)
- 7 minute video presentation (https://vimeo.com/36606646/eac953c0cc)
- Transit X Handbook (transitx.com/transitxhandbook.pdf)
- Company profile (transitx.com/about.pdf)
- Other proposals (<u>transitx.com/proposals</u>)
- The process and templates for agreements (transitx.com/process)

Addendum

The remaining pages of this proposal provide project-specific details:

- Project Overview and Impact pages 6 and 7
- Taxes and Fees pages 8 and 9
- Fares page 10 and 11
- Financial Project Summary with Pro Forma pages 12 and 13

We look forward to working with you to improve the quality of life for Charlestown through better transportation.

Sincerely,



Email: hello@transitx.com

Telephone: +1 508-596-7024 (WhatsApp connected)

Zoom e-room: https://zoom.us/j/8229009123

Website: transitx.com

Twitter: http://twitter.com/TransitXCorp

Mail: 1127 Commonwealth Ave #30, Boston, MA 02134 USA







	analon,			
1	Transit X network length	22	km	13.7 miles
2	People (resident-equivalent) in region	18,901	resident-equivalent p	opulation
3	Route density ratio (route length to service area)	5.82		
4	Number of stops	220		
5	Triple-speed route length	0	km	
6	Water crossing route length	1	km	1 miles
7	Cost of fixed infrastructure	\$91,045,102		
8	per person	\$4,817		
9	Mode share of travel on Transit X (28% after first year)	86%	after 10 years	
10	Distance traveled by passengers on Transit X, per year	145,589,931	km	90,428,529 miles
11	per day	398,877	km	247,749 miles
12	Daily potential energy generation with standard panels on tracks	169.7	MWh	
13	Sustainable energy use per day	2.7	MWh	2.0% of max capacity
14	Energy storage capital cost for 1 day(s) of supply at \$250 per kWh	\$676,119		
15	Size (rated power) of solar installation	629	KW	
16	Cost to generate sustainable energy (at \$1,000 per kW)	\$628,748		
17	Cost of buying sustainable energy at \$0.15 per kWh		per day	3% of OPEX
18	Daily passengers riding Transit X		customers	86% of the pop.
19	Distance per passenger per day		km	15.3 miles
20	Average distance per trip (assuming 3 trips per day)		km	5.1 miles
21	Single passenger fare for shared 8 km trip	\$1.96		
22	Passenger distance traveled during peak hour	79,775		49,550 miles
	· · · · · · · · · · · · · · · · · · ·			6% of expected and 32%
23	Breakeven	5,832	of people convenient	6% of expected and 32% to Transit X)
24	Boarding capacity	79,200	passengers per hour	(490% of customers)
25	Number of pods for peak demand	634	pods at 86% mo	ada shara
			podo di co /c ilic	Jue Silaie
26	Number of customers per pod			
26 27			and 30 people per	
	Number of customers per pod	25.5	and 30 people per km	
27	Number of customers per pod Distance per pod per year	25.5 168,155 697	and 30 people per $$km$ $\ m^2$$	pod 0.2% of car parking
27 28	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking)	25.5 168,155 697 \$4,121,000	and 30 people per km m ² is \$168 per person	pod 0.2% of car parking
27 28 29 30	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage	25.5 168,155 697 \$4,121,000	and 30 people per $$km$ $\ m^2$$	pod 0.2% of car parking
27 28 29 30	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Toject Finances	25.5 168,155 697 \$4,121,000 \$1,696,327	and 30 people per km m ² is \$168 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking) Cost of pods Capital cost of energy generation and storage *Toject Finances* Total Project Cost	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage *Toject Finances* Total Project Cost Project cost per km	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage *Toject Finances* Total Project Cost Project cost per km	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729	and 30 people per km m ² is \$168 per person is \$90 per person	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing Debt financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking) Cost of pods Capital cost of energy generation and storage *Toject Finances* Total Project Cost Project cost per km Equity financing Debt financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing Debt financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side-parking) Cost of pods Capital cost of energy generation and storage Toject Finances Total Project Cost Project cost per km Equity financing Debt financing	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Total Project Cost Project cost per km Equity financing Debt financing Debt service (per year) Yearly fees and taxes (US\$240 per capita)	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Total Project Cost Project cost per km Equity financing Debt financing Debt service (per year) Yearly fees and taxes (US\$240 per capita) OPEX + Debt service + Tex + Fees	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side—parking) Cost of pods Capital cost of energy generation and storage Total Project Cost Project cost per km Equity financing Debt financing Debt financing Project cost per capita) OPEXA Debt service (per year) Project costs — per person Number of motor vehicles displaced	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304 \$5,125 14,559	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side—parking) Cost of pods Capital cost of energy generation and storage Total Project Cost Project cost per km Equity financing Debt financing Debt financing Project cost per capita) OPEX + Debt cervice + Tex + Fees Project costs — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304 \$5,125 14,559 \$6,932	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Coject Finances Total Project Cost Project cost per km Equity financing Debt financing Debt financing Pearly fees and taxes (US\$240 per capita) OPEX Debt service (per year) Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304 \$5,125 14,559 \$6,932 \$0.03	and 30 people per km m² is \$168 per person is \$90 per person per km	pod 0.2% of car parking
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Total Project Cost Project cost per km Equity financing Debt financing Debt financing Pearly fees and taxes (US\$240 per capita) OPEX COSTS — per person Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km Full costs per passenger-km	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304 \$5,125 14,559 \$6,932 \$0.03 \$0.14	and 30 people per km m² is \$168 per person is \$90 per person per km	0.2% of car parking US\$7.1M per mi.
27 28 29 30 31 Pr 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Number of customers per pod Distance per pod per year Two-layer pod garage area (4% of route with side–parking) Cost of pods Capital cost of energy generation and storage Coject Finances Total Project Cost Project cost per km Equity financing Debt financing Debt financing Pearly fees and taxes (US\$240 per capita) OPEX Debt service (per year) Number of motor vehicles displaced Yearly cost of cars displaced — per person Operating costs per passenger-km	25.5 168,155 697 \$4,121,000 \$1,696,327 \$96,862,429 \$4,382,511 \$29,058,729 \$67,803,700 \$11,526,629 \$4,529,304 \$5,125 14,559 \$6,932 \$0.03	and 30 people per km m² is \$168 per person is \$90 per person per km motor vehicles	pod 0.2% of car parking





Impact of proposed network

1	Reduction in GHG emissions (metric tons CO2-eq)	14,377 MTCO2-eq annually
2	Estimated cost to maintain public roadways	\$3,915,551 annually
3	Reduced waste products	2,333 metric tons annually
4	Travel time saved (non-stop travel and congestion)	438 hrs/person annually
5	Cost savings from reduced car ownership	\$1,996 per person annually
6	Increase in household income (from time savings and car costs)	15%
7	Reported injuries avoided	90 annually
8	Lives saved (from safety)	1 annually
9	Land freed from parking (83 acres)	334,857 m ²
12	Temperature reduction (from heat island effect & GHG reductions)	0.5 to 2 °C
11	Health care savings (from pollution, injuries)	High

Model Inputs

15	Ratio of road length to track length	4		
16	Walking speed	4.9	km/h	3 mph
17	Width of convenient swath along track	0.16		0 mile
18	Fixed cost per km (track & posts)	\$2,790,000	Tall	0 111110
19	Water crossing: additional cost per km	\$8,370,000		
20	Triple-speed: additional cost per km	\$5,580,000		
21	Rate factor for water crossings or high-speed links.	2.2		
21	Average distance traveled per person per year	2.2		
22	(for trips under 1600 km)	10,000	km	6,211 miles
23	Average distance per day per person	27	km	
24	Mode share % of people convenient to Transit X	85%	at 5 min walk.	
25	Percentage of daily demand during peak hour	20%		
26	Maximum capacity per track	23,598	pph	
27	Average dwell time during peak hour		seconds	
28	% of pods traveling on route with highest demand	18%		
29	Average speed of pod	72	km/h	45 mph
30	Average # of trips for a daily customer	3	per day	
31	Average passengers per pod during peak hours		passengers	
32	Average passengers per pod		passengers	
02	Average discount per passenger	18%	passonigers	
33	Maximum passengers per pod		passengers	
34	Empty pods: Percentage non-revenue	25%	paccongoro	
35	Ex-Factory cost per pod	\$5,000		
36	Worldwide Median Income per Household (US\$)	10,000		
37	Average number of residents per household	2.3		
38	Base fare per km	\$0.40		
39	(per mile)	\$0.40		
40	O&M as % of project cost	5%		
41	Percentage debt financed	70%		
42	Length of loan/debt		years	
43	Interest rate for debt	7%	yours	
43	kg CO2 emissions per liter of gasoline	2.37		
45	Monetary value of 1 hour personal time (USD)	\$13.75		
46	Eat. roadway maintenance per year per km	\$51,000		
	Area of one parking lot space		m²	247 sf
47	Commercial income of land (annual)		per m ²	247 51
48	Distance from roadway that is convenient	0.05	•	
	Stops per km	10.03	KIII	
50			nnh	
51	Boarding capacity per stop	360 2.0	ppn	
52	Solar panel area per meter of track		LAA/I-	
53	Cost of sustainable energy and storage		per kWh	
54	Global Horizontal Irradiance (GHI)		kWh/m²/day	
55	Cost to generate sustainable energy		per kW kWh	
56	Storage per column			44
57	Typical span	23		44
58	Energy storage cost		per kWh	
59	Energy storage capacity		days	
60	Area of parked pod	2.20	m²	
61	Distance discount at max distance	40%		

Model Inputs (continued)

68	Name of region or project	Charlestown, Boston,
69	Currency name	
70	Equal to US\$1	1
71	Sustainable energy/electricity generation & storage as	CAPEX
72	Land area of region (sq. km)	4
73	Number of residents in region	18,901
74	% travel within region	90%
75	% of land area served by roads	95%
76	Coverage: % of pop. convenient (1 min walk) to Transit X	95%
77	Annual median household income (US\$)	\$55,000
78	Convenient walk time to stop (min)	1
79	Triple-speed route length (km)	0
80	Water crossing route length (km)	1.0
81	Visitors per year	0
82	Average length of visit (days)	2
83	Solar production ratio	1.57
84	Regional Fare Factor	1.0
85	EPC costs & contingency	30%
86	Triple-speed (km/h)	242
87	Daily Passengers Adjustment	100%
88	Number of Stops Adjustment	100%
89	Mode Share Adjustment	100%

Pod & Car

		Pod	Car
87	Service life (years)	20	12
88	Full cost of vehicle per year	\$200	\$9,000
89	Public cost to maintain infrastructure (per km)	\$0	\$100,000
90	Energy consumption (MPGe)	3564	24
91	Energy consumption (liters/100km)	0.07	9.8
92	Energy consumption (Watt-hours/km)	9	1375
93	mass of CO2 per vehicle per km (kg)	0	0.09875
94	Vehicle mass (kg)	45	1950
95	Average speed of urban travel (km/h)	72	16
96	Typical travel time (in minutes) for 8 km trip	7	31
97	Fare/cost per km	\$0.40	\$0.62
98	Number of deaths per 100M passenger-km	0.00001	1
99	Number of injuries per 100M passenger-km	0.0006	62
100	Volume to park (cubic meters)	5.7	70.9

Shared Pod Compartment Discount

Max usage discount at 10,000 km per capita

62

63

64

65

Max distance discount

Shared Pod Discount

500 km

50%

20%

40%

67%



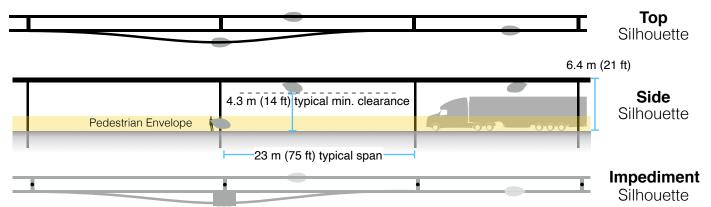
5% of gross revenue is paid for air rights and local taxes.

A minimum payment is based on the Footprint and the Transit X Commercial Rate (TXCR).

1	Air-rights and Local Taxes		(for calculating m	ninimums)
2	Total commercial land (estimated)	380,000	m²	94 acres
3	Total commercial gov't revenue (US\$)	\$418,000		
4	TXCR (Transit X Commercial Rate)	\$1.10	per m ² (estimated)	
5	TXCR is the yearly tax rate per land area. Calculation: total land area of commercial properties in the governmental region, divided by all the governmental income generated by those properties. The TXCR is used to calculate the minimum tax/fee.	\$11.84	per sf (estimated)	
6				
7	Private Easement Fees	For exam	ole	
8	4% of gross revenue	\$40.99	per route-meter	\$12.50 per route-foot
9	Minimum per year	\$1.63	per route-meter	\$0.50 per route-foot
10	Transit X payment to Gover	nment		
11	% of route on government easements	98%	estimated	_
11	% of route on government easements Total air-rights and local taxes	98% \$4,456,836		
12	Total air-rights and local taxes	\$4,456,836	per year	
12 13	Total air-rights and local taxes per resident	\$4,456,836 \$236	per year	
12 13 14	Total air-rights and local taxes per resident	\$4,456,836 \$236 \$36,133	per year	
12 13 14 15	Total air-rights and local taxes per resident with a minimum of	\$4,456,836 \$236 \$36,133	per year	
12 13 14 15	Total air-rights and local taxes per resident with a minimum of Other financial benefits to 0	\$4,456,836 \$236 \$36,133 Government	per year	
12 13 14 15 16	Total air-rights and local taxes per resident with a minimum of Other financial benefits to C Less road maintenance from lower VMT	\$4,456,836 \$236 \$36,133 Government	per year	

Footprint calculations for minimum fee

Yearly fees and taxes



Pod landing area: 1.5m x 2.5m with 3m minimum spacing

1	Footprint Calculations	Metric		Imperial	
2	Track width	0.30	m	11.8	inches
3	Track height	0.60	m	23.6	inches
1	Post diameter	0.3	m	11.8	inches
5	Post cross section	0.07	m^2	0.8	sf
3	Stop landing area	<u>3.75</u>	m ²	40.4	sf
7	width	<u>1.5</u>	m	59.1	inches
3	length	<u>2.5</u>	m	98.4	inches
9	Ramp length	21		68.9	
10	Typical Span	<u>23</u>		75.5	
11	Number of posts per unit length	<u>43.5</u>	poles per km	70.0	poles per mile
12	Post height	<u>6</u>	m	19.7	feet
13					
14	Single track	1022.1	m ²	10998	sf
15	Area of Side Silhouette	678.3	m^2	7298	sf
16	Area of Top Silhouette	313.1	m ²	3369	sf
17	Impediment Area (adjusted)	30.7	m ²	331	sf
18	· , , ,				
19	Dual track	1322.1	m ²	14226	sf
20	Area of Side Silhouette	678.3		7298	
21	Area of Top Silhouette	613.1		6597	-
22	Impediment Area (adjusted)	30.7		331	
23	,				
24	Stop	82.1	m ²	883	sf
25	Area of Side Silhouette	25.2		271	
26	Area of Top Silhouette	19.4		208	
27	Impediment Area (adjusted)	37.5	m^2	404	sf
28					
29	Stops with dedicated landing areas	2	stops per km	3.2	stops per mile
30	% of dual track	100%			' '
31					
32	Average area per unit length	1,486	m² per route-km	25,793	sf per route-mile
33					
34	Contract values				
35	% gross revenue for government on private prop.	1%			
36	% gross revenue for private easement	4%			
37	% gross revenue for government easement	5%			
38	Impediment Factor	10			



Fair Fare Formula

Summary

The average commute would be 3.5 times faster saving each commuter 295 hours per year.*

At 0.39 USD per mile, a typical commute on Transit X is 17% less than public transit and 74% less than a Taxi.*

			Trip Length	
All prices in USD		1 mile	6 mile	25 mile
	Transit X	0.48 to 0.80 2 min., 3.6x faster	2.36 to 3.95 8 min., 3.6x faster	9.05 to 15.42 33 min., 3.4x faster
F	Public transit average	2.67	4.25	6.23
səpou	Taxi	3.70 2 to 6 minutes	16.13 8 to 30 minutes	62.71 30 to 120 minutes
Common public modes	Uber/Lyft	2.82 2 to 6 minutes	11.61 8 to 30 minutes	44.58 30 to 120 minutes
non pı	Public Bus 2.15 3 to 12 minutes		2.15 15 to 60 minutes	3.30 60 to 240 minutes
Comr	Train	3.23 2 to 12 minutes	3.80 8 to 60 minutes	5.95 30 to 240 minutes
Personal car		3.10 2 to 6 minutes	9.75 8 to 30 minutes	34.69 30 to 120 minutes

	Avg. Speed	Low Speed	High speed				Min Dist	Max Dist.	Time cost	Mode 6%	shar 70%	
Travel mode	km/h	km/h	km/h	Base	Includ es km	Over per-km	km	km	per min	2	10	40
Taxi	30	20	80	2.15	1	1.08	0.5	100	0.96	5%	4%	1%
Uber/Lyft	30	20	80	1.72	1	0.86	0.5	100	0.48	10%	10%	2%
Public Bus	15	10	40	2.15	20	0.06	0.5	50	0	50%	50%	40%
Train	30	10	80	3.23	2	0.07	2	100	0	35%	36%	57%
Transit X	72	72	72	0	0	0.24	0.1	50	0	-	-	-
Personal car	30	20	80	1.43	0	0.72	0.1	400	0.23	-	-	-

^{*} All numbers on mode shares, speeds, and costs are rough estimates..

Base fares are set for first 5 years, then adjusted by formula. A 20% discount on a shared pod and a 40% discount on a shared compartment. Trips are discounted proportional to their length reaching a maximum of a 40% discount on a 500 km trip. No congestion–based pricing. Fares are proportional to the median income of the area and inversely proportional to per capita use, so the more use of Transit X, the lower the base fare up a to 50% discount. The amount of market–rate fares must be less than the amount of discounted fares. Transit X Fair Fare Formula and Fair Freight Formula is universal and applies to all regions and all times.



Fair Fare Formula

Fare rates are updated annually using this formula

	Name	Value	Units	Description of the value or model input
1	GlobalIncome	10,000	USD	Global median household income. Updated annually based on most recent standard published data.
2	AllTravel	23,000	km	Travel distance per household per year on any mode for trips under 1600 km. A global constant
3	PercentIncomeForTr ansport	20%		% of median household income for all transportation under 1600 km trips. A global constant.
4	GlobalRate	0.09	USD/km	Global rate: GlobalIncome * PercentIncomeForTransport / AllTravel
5	IncomeFirst	\$55,000	USD	Median household income at first stop (per person per day). External input. Based on reliable public data source updated annually.
6	IncomeDest	\$82,500	USD	Median household income at destination per trip. External input. Based on reliable public data updated annually.
7	RegionalRate	0.48	USD/km	Regional rate based on median income: MedianIncomeFirst * PercentIncomeForTransport / AllTravel
8	UnderIncomeRate	0.00	USD/km	Under global income adjustment: if (RegionalRate < GlobalRate, GlobalRate - RegionalRate, 0)
9	NominalRate	0.48	USD/km	Nominal rate: RegionalRate + UnderIncomeRate
10 11	RegionalFactor AdjustedRate	1.00	LICD/I	Regional Fare Factor. Negotiated upfront to make network financially viable.
13	Population	0.48 18,901	USD/km	Regional adjusted rate: NominalRate * RegionalFactor Population in region. Updated annually based on trusted public data source.
12	UsageMaxDiscount			Fare Discount when Transit X travel per household equals AllTravel. Global constant.
14	PassengerTravel	145,589,931	km	Total passenger distance traveled previous calendar year. Based on expected mode share for first 3 years. Based on actual passenger trips. Audited.
15	ModeShare	33%		Percent of Total Travel Per Capita on Transit X: PassengerTravel / (Population x AllTravel)
16	BaseRate	0.40	USD/km	Base rate for single-passenger pod (without discounts) (1 - UsageMaxDiscount x min(1,ModeShare)) x AdjustedRate
17	SpecialRateFactor	2.20		Rate factor for water crossings or high-speed links. Global constant.
18	SpecialBaseRate	0.88	USD/km	Base rate for high-speed travel or water crossings: BaseRate * SpecialRateFactor
19	DistanceDiscount	40%		Distance discount at max distance. Global constant.
20	MaxDistanceDiscou nt	500	km	Max distance discount. Global constant.
21	DistanceDiscountPe rKm	0.000319	USD/km	Discount amount per km: BaseRate x DistanceDiscount / MaxDistanceDiscount
22	SeniorDiscount	20%		Senior discount set according to local regulations
23	StudentDiscount DisabilityDiscount	20%		Student discount set according to local regulations
24	DiscountBaseRate	20% 0.32	USD/km	Disability discount set according to local regulations Discounted base rate: BaseRate x (1 - SeniorDiscount)
25	SharedPodDiscount	20%	USD/KIII	Discount for requesting a shared pod. 15% minimum and 30% maximum.
26	SharedPodRate	0.32	USD/km	
27	SharedCompartment Discount		OOD/KIII	Discount for requesting a shared compartment. 25% minimum and 40% maximum. At least 10 percentage points higher than SharedPodDiscount.
28	SharedCompartment Rate	0.24	USD/km	Rate for shared compartment
29	SingleOccupancyMa		HCD/km	BaseRate x (1 - SharedCompartmentDiscount)
29	xDistance	0.27	USD/km	
30	Senior + SharedCompartment Rate	0.11	USD/km	Rate for a Senior taking a 500 km trip in a shared compartment. BaseRate x (1 - SeniorDiscountAmount) x (1 - SharedCompartmentDiscount) x (1 - MaxDistanceDiscount)
31	50PctIncomeAtDest	25%		% Higher fare rate if Destination has 50% higher median income than First (IncomeDest / IncomeFirst - 1) / 2
32	DistanceBase	107,736,549	km	Passenger distance under base fare. Audited value from operational data.
33	PercentBase	74%		Percent of passenger distance under base fare: DistanceBase / PassengerTravel
34	BaseRevenue	35,156,309	USD	Annual revenue from all travel under base rate. Audited value from operational data.
35	AverageDiscount	18%		Average fare discount from Base Rate: 1 - (BaseRevenue / (DistanceDase x BaseRate))
36	MarketFactor	1.0		Market rate factor. Negotiated value for setting ratio of AverageDiscount
37	MarketRateCap	18%		Cap on passenger travel distance at market rate: AverageDiscount x MarketFactor
38	MarketTravelCap	19,443,032	km	Cap on passenger travel distance at market rate: DistanceBase x MarketRateCap

Project Summary

Project A fully-automated, solar-powered, micro-**Description** guideway network. A transportation utility.

Project type Sustainable Transportation Infrastructure

Design, Build, Finance, Own, Operate, Maintain

(DBFOOM)

Project equity US\$29 million (30% of total)

Cost to Gov't \$0

Structure Privately financed equity and debt

Debt term 10 years @ 7%

Equity terms A waterfall profit distribution per year with:

1. 90% until capital payback,

2. then 50% until Target% is reached

then 10%

Taxes & Fees \$4,456,836 per year

Benefits to

society and Extremely high environment

Estimated return 30% average IRR at 5 yrs 38% average IRR at 10 yrs

Financials (US\$ in millions)	Year 1	Total Years 1-12
Gross Revenues	30	866
Taxes and fees	2	43
Debt service	\$5	\$52

ESG (Environmental, Social, Governance) Benefits

Clean Energy	yes	Improve Resiliency	yes
Energy security	yes	Sustainable	yes
Zero Emissions	yes	Equitable	yes
Zero GHG	yes	Recyclable Materials	yes
Lowers Pollution	yes	Affordable Housing	yes
Clean Water	yes	Improved Health	yes
Improved Safety	yes	Economic Development	yes
Add Green Space	yes	Access to Food	yes
Accessible	yes	Add Quality Jobs	yes

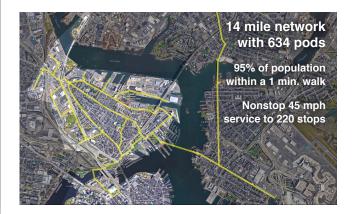




Transit X presents a preliminary proposal for a sustainable micro-guideway network a fleet of automated electric vehicles (pods) for passengers and freight on a local and regional podway providing equitable public transportation for

Charlestown, Boston, MA

High capacity · High speed · Nonstop · 24/7 Solar powered · Zero Wait · Door-to-door · Resilient



About Transit X

Transit X finances, designs, builds, and operates solar-electric micro-guideway public transit podways to supplant buses, trains, cars, and trucks. Transit X offers its service to governments and commercial developers. Maiden Flight was on Oct 29, 2018 and pilot projects started in 2018. First pilots will break ground in 2019 and begin operations in 2020. Transit X is a privately held company founded in 2015, based in Boston, Massachusetts.

Status

	Now	Prior to close
Project financing	Available	Yes
Outdoor Test Track	Nov 2019	Yes
Rider-Revenue study	Preliminary	Yes
Environmental study	Per region	Yes
Air rights	Per project	Yes
Permitting	Per project	Yes
Safety certification	Per country	Yes
Construction firm	Per project	Yes
Design and major subs	Per project	Yes
Operations & Maint	Partners	Yes
Utility relocation	Per project	Agreements

General information available at transitx.com. Detailed information and references can be provided under appropriate nondisclosure/non-compete/non-circumvent agreements. Contact: Mike Stanley, CEO, Transit X, mike@transitx.com, 508-596-7024



Model Inputs and Assumptions

Route length (km) 22

Starting number of pods 209

Projected revenue growth 15%

Project Cost (Privately funded) \$96,862,429

% Debt financed 70%

Debt \$67,803,700

Equity \$29,058,729

Debt payment (per year) \$4,746,259

Travel per year per pod (km) 168,155

Revenue per vehicle-km (US\$) 0.85

OPEX as % of project cost 5%

Debt Interest rate 7%

Debt term (yrs) 10

Profit share when below capital return 90%

Profit share when below Target IRR 50%

Profit share when above Target IRR 10%

Pro Forma

	Years	0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue		0	29,861,976	34,341,272	39,492,463	45,416,333	52,228,783	60,063,100	69,072,565	79,433,450	91,348,467	105,050,737	120,808,348	138,929,600
5% RoW÷tax÷fee	•	0%	1,493,099	1,717,064	1,974,623	2,270,817	2,611,439	3,003,155	3,453,628	3,971,672	4,567,423	5,252,537	6,040,417	6,946,480
Debt service		0	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259	\$4,746,259
Investor share		0	15,211,392	18,069,772	5,860,037	6,280,060	6,763,087	7,318,567	7,957,369	8,691,992	9,536,808	10,508,347	11,625,616	12,910,476
Investor share (%))		90%	90%	25%	22%	21%	19%	18%	17%	16%	15%	14%	14%
Share / Orig Capita	al	0%	52%	62%	20%	22%	23%	25%	27%	30%	33%	36%	40%	44%
IRR to date		loss	(48%)	9%	19%	26%	30%	33%	35%	37%	38%	38%	39%	39%

Important Notices

The information contained in this document is not an offer to sell or a solicitation to buy any security. These materials and documents and information from which they are derived or which are referred to by or accessible from them may contain forward looking statements within the meaning of Section 27A of the Securities Act of 1933, Section 2E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward looking statements and are subject to risks and uncertainties. Forward looking statements generally can be identified by the use of forward looking terminology such as "may," "will," "expect," "intend," "estimate," "project," "anticipate," "believe" or "plan" or the negative thereof or variations thereon or similar terminology. Although Transit X believes that the expectations reflected in such forward looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. All forward looking statements speak only as of the date made. Except as required by law, Transit X undertakes no obligation to update any forward looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of anticipated or unanticipated events or circumstances. These materials and documents and information from which they are derived or which are referred to by or accessible from them represent Transit X's best estimate as to the allocation of the funding proceeds based upon its present business plan and financial condition. The costs and expenses to be incurred in pursuing the Company's business plan cannot be predicted with certainty. There can be no assurance that unforeseen events will not occur or that the Company's business plan will be achieved or that it will not be changed, and it is possible that the funding proceeds may be applied in a manner other than that described herein.

Jobs Report*

This would create 400 new jobs in manufacturing, construction, and operations. About 200 existing transportation jobs would be impacted — of which 0 workers would need significant retraining. Improving the transportation infrastructure will boost the economy overall and lead to 200 new jobs. Lowering the cost of transportation and reducing travel times will raise household income by 15%.

1	Annual median household income (US\$)	\$55,000	
2	CAPEX		
3	Average gross CAPEX salary (% of median HH)	125%	
4	Average gross CAPEX salary	\$68,750	
5	% of CAPEX as salary	15%	
6	Years of CAPEX	2	
7	# of CAPEX jobs	110	
8	% of jobs that are manufacturing vs. construction	75%	
9	Manufacturing jobs	80	
10	Construction jobs	30	
11	Supply chain jobs factor	3	
12	Jobs in supply chain	330	
13	Average gross OPEX salary (% of median HH)	115%	
14	Average gross OPEX salary	\$63,250	
15	% of OPEX as salary	30%	
16	Operations and Maintenance jobs	20	
17	Secondary-effect jobs factor	7%	
18	Secondary effect jobs	220	
19	Job transitioning and training		
20	Expected mode share at 10 years (from page 6, line 9)	86%	
21	% of population with a full-time job	60%	11,341
22	jobs in transportation	10%	1,134
23	jobs impacted with this proposed network	20%	227
24	jobs requiring significant retraining	20%	45
25	Jobs needing retraining with this proposed network (over 10 years)	0.4%	40
26	Training cost per person as % of salary (from line 13)	100%	\$63,250
27	Number of years that training is divided across	10	
28	Ratio (as %) of training costs vs. gov't revenue from Transit X	6%	\$253,000

^{*} Numbers are approximations based on a universal model. A regional study could analyze data based on local conditions.