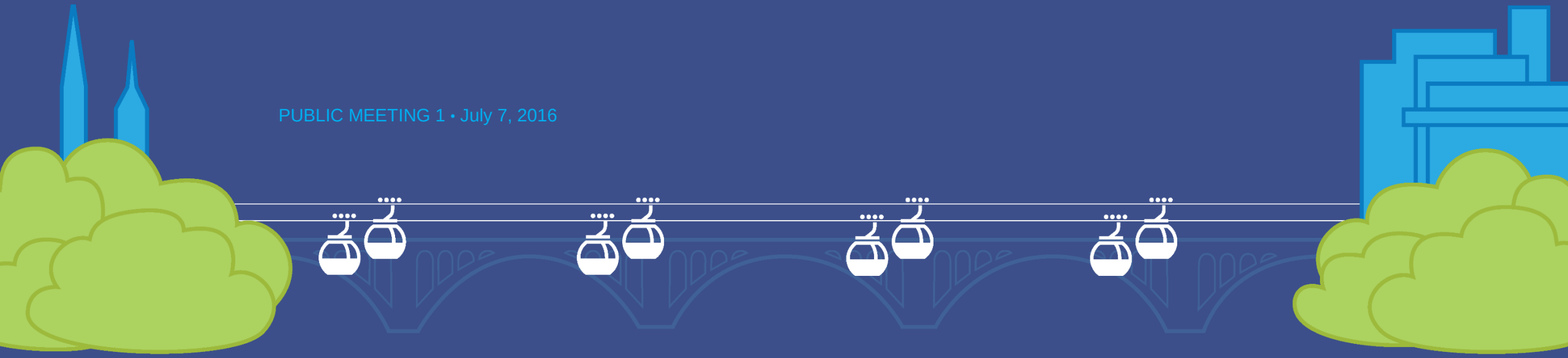
PUBLIC MEETING 1 • July 7, 2016



GEORGETOWN – ROSSLYN GONDOLA FEASIBILITY STUDY

ZGF
ZIMMER GUNSUL FRASCA ARCHITECTS LLP

Agenda

Introductions

Executive Committee

ZGF Team

The Feasibility Study

Study Area and Scope / Schedule Overview

Gondola 101

A Primer

Open House

Purpose : to collect input and answer questions

- **Station 1** · Feasibility Study Context
- **Station 2** · Design and Engineering (Gondola Examples)
- **Station 3** · Transportation (Base Information and Goals)
- **Station 4** · Development and Placemaking (Planning Projects and Goals)
- **Station 5** · The Regulatory Process (Agency Jurisdictions)

Welcome

EXECUTIVE COMMITTEE

- Georgetown and Rosslyn BIDS
- DC and Arlington County Agencies
- Georgetown University
- Private Sector Companies

A Public-Private Partnership

GEORGETOWN BUSINESS IMPROVEMENT DISTRICT

ROSSLYN

d. WE ARE WASHINGTON DC

ARLINGTON VIRGINIA

1789 GEORGETOWN UNIVERSITY

THE JBG COMPANIES

GOULD PROPERTY COMPANY

PENZANCE

The ZGF Team

A MULTIDISCIPLINARY APPROACH

- Design
- Engineering
- Transportation
- Real Estate
- Approvals

ZGF Architects

Project Lead
Urban Design and Architecture
National Expertise

Otto Condon
Lance Eubanks
Chris Somma

Engineering Specialties Group

Ropeway Engineering
International Expertise

Jamie Bunch
Mike Deiparine

Fehr & Peers DC

Transportation Planning
National Expertise

Nat Bottigheimer

Partners for Economic Solutions

Real Estate and Funding
Regional Expertise

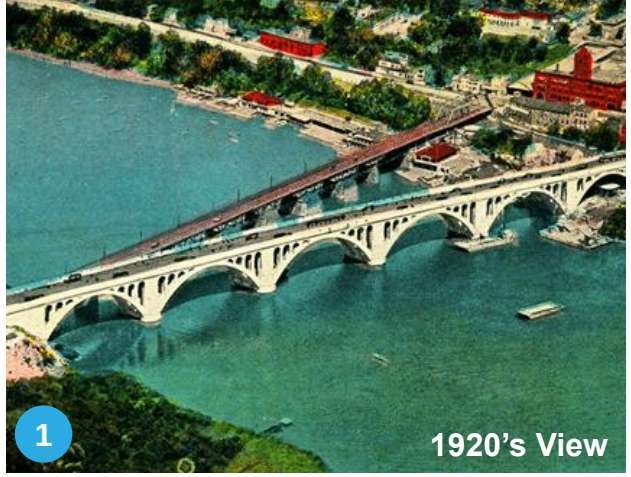
Anita Morrison

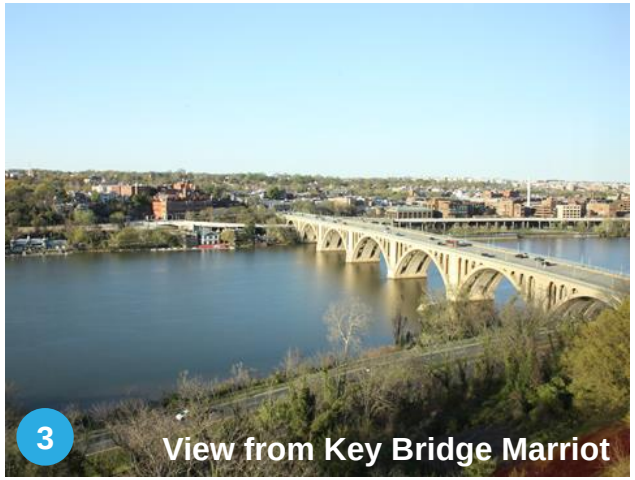
Livable City Group

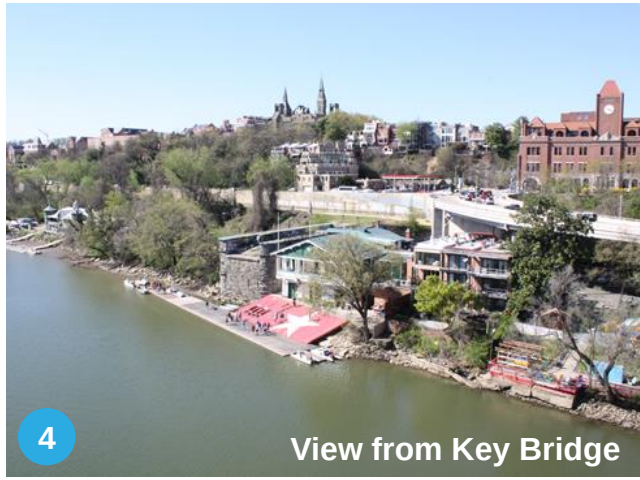
Planning and Approvals
Local Expertise

David Levy

Project Study Area







Feasibility Study

QUESTIONS TO ANSWER

How can the Georgetown – Rosslyn Gondola contribute toward a more **effective multi-modal transit system**?

How can it **enhance service** for **commuters, residents and tourists**?

How can a gondola **support economic development**, **complement current and planned investments**, and be **catalyst for related improvements**?

How can it be **designed to complement the public realm** on both sides of the river?

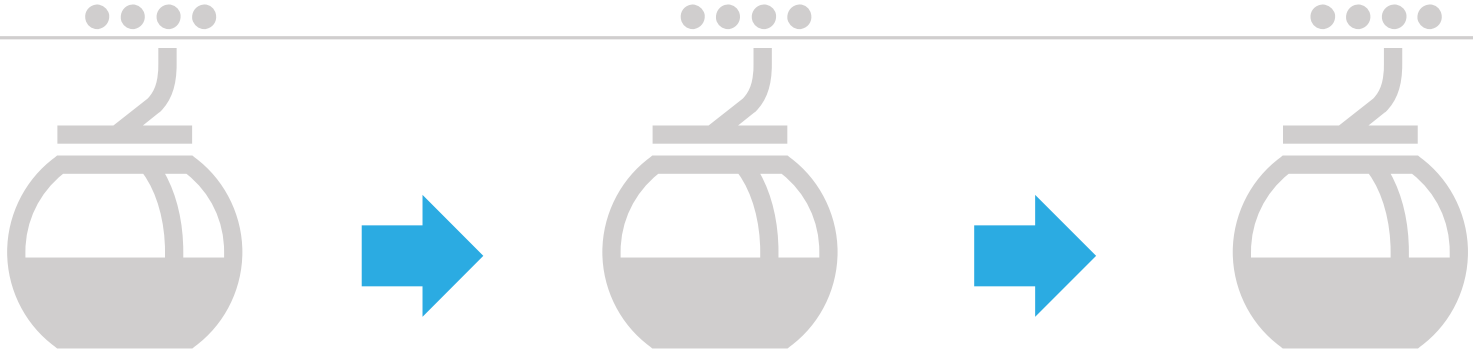
Can it be **approved / permitted** by the multiple agencies who have jurisdiction?

What will be the most **cost effective** solution, how can it be **funded**, how can it be **self-sustaining for operations**?

Finally, is it a **good idea**?

Feasibility Study

PROCESS



Now

- Project Kick-off
- Defining Feasibility based on Measures of Success, including Ridership and Economic Development
- Beginning Preliminary Alignment Investigation and “Fatal Flaw Analysis”

Through Late Summer

- Development of potential alternatives responding to Measures of Success
- Design Studies and Visualization Testing
- Development of potential strategies for approvals, operations and funding

Early Fall

- Feasibility Findings
- Recommendations - if determined feasible

> **Public Meeting #2**

Gondola 101

A PRIMER

Basic System Terminology

Tramways and Gondolas

Systems and Examples

In the US and Internationally

Gondola 101

A PRIMER

Everyone is probably familiar with these…

Gondola 101

A PRIMER

Singapore

Though less familiar with Urban Gondolas.

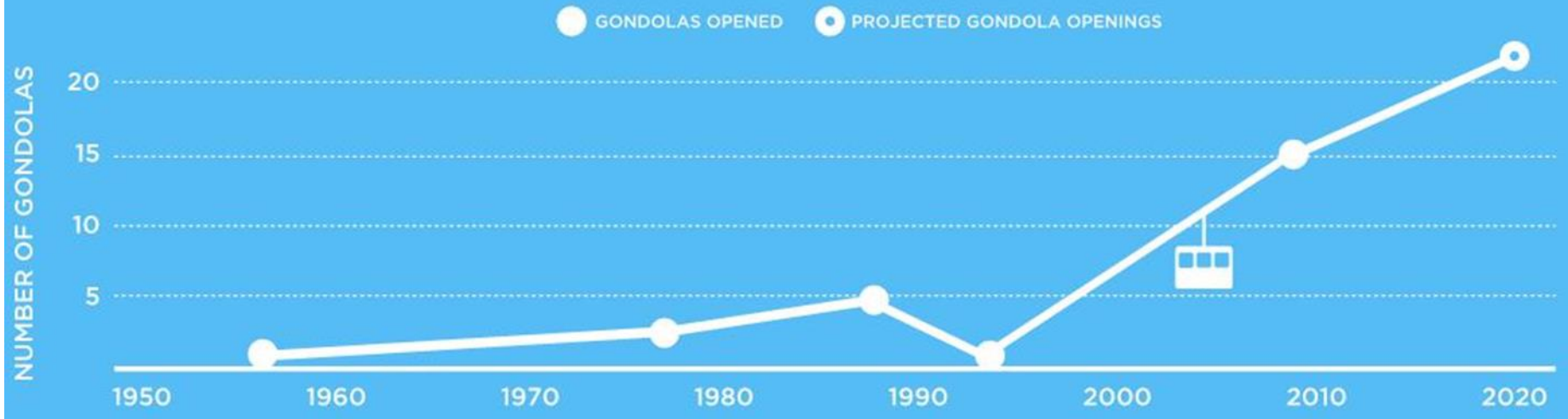
Gondola 101

A PRIMER

- Credit: Dan Levy

INCREASE IN URBAN GONDOLAS

SPIKE IN SYSTEMS BEGINNING IN 2000



1950's

1956 Téléphérique d'El Madania (Africa)
1956 Teleferico Warairareparo (Venezula)

1970's

1970 Montjuïc Cable Car (Spain)
1974 Singapore Cable Car (Singapore)
1976 Roosevelt Island Tram (NY, USA)

1980's

1983 Jialing Cable Car (China)
1984 Téléphérique de Notre Dame d'Afrique (Africa)
1986 Téléphérique du Memorial du Martyr (Africa)
1987 Téléphérique du Palais de la Culture (Africa)
1987 Yangtze Cable Car (China)

1990's

1993 Maçka Gondola (Turkey)

2000's

2003 Langkawi Cable Car (Kedah Malaysia)
2004 Medellin Line K (Columbia)
2005 Eyüp Gondola (Turkey)
2005 Teleférico Olesa-Esparraguera (Spain)
2006 Portland Aerial Tram (Oregon, USA)
2006 Ngong Ping 360 (Hong Kong)
2007 Montjuïc Cable Car (upgrades) (Spain)
2008 Medellin Line J (Colombia)
2008 Piatra Neamt Telegondola (Romania)
2008 Keçiören Gondola (Turkey)
2008 Constantine Telecabine (Africa)
2009 Funivia del Renon (Italy)
2009 Cable Aereo Manizales (Colombia)
2009 Tlemcen Telecabine (Africa)
2009 Skikda Telecabine (Africa)

2010's

2010 Koblenz Rheinseilbahns (Germany)
2010 Caracas Metro Cable (Venezula)
2011 Vetruse Cable Car (Czech Republic)
2011 Teleferico do Alemao (Brazil)
2011 Teleferico de Gala (Portugal)
2012 Ordu Boztepe Gondola (Turkey)
2012 Tbilisi (Soviet Georgia)
2012 Emirates Air Line (England)
2012 Nizhny Novgorod Cable Car (Russia)
2012 Mariche Tramo Expreso (Venezula)
2014 Teleferico da Providencia (Brazil)
2014 Mi Teleferico (Boliva)

CONSTRUCTION IN-PROGRESS

2015 Lagos (Africa)
2018 Teleférico Bicentanario (Chile)

Gondola 101

A PRIMER

- Gondola Transit Systems
- Historic and Contemporary Contexts


Singapore


Barcelona


Italy

Koblenz, Germany

Gondola 101

A PRIMER

- System Types

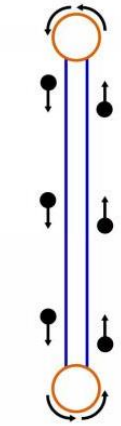

New York


Tblisi, Georgia

Aerial Trams

- Vehicles shuttle back and forth
- Generally larger cabins, 50-200 passengers
- Comparatively longer headways
- System Capacity: up to 2,000 pphpd (persons per hour per direction)
- Approximately 12 mph

Gondolas



- Vehicles continuously circulate
- Generally smaller cabins, 8-15 passengers
- System Capacity: >3,000+ pphpd (persons per hour per direction)
- Approximately 11 mph

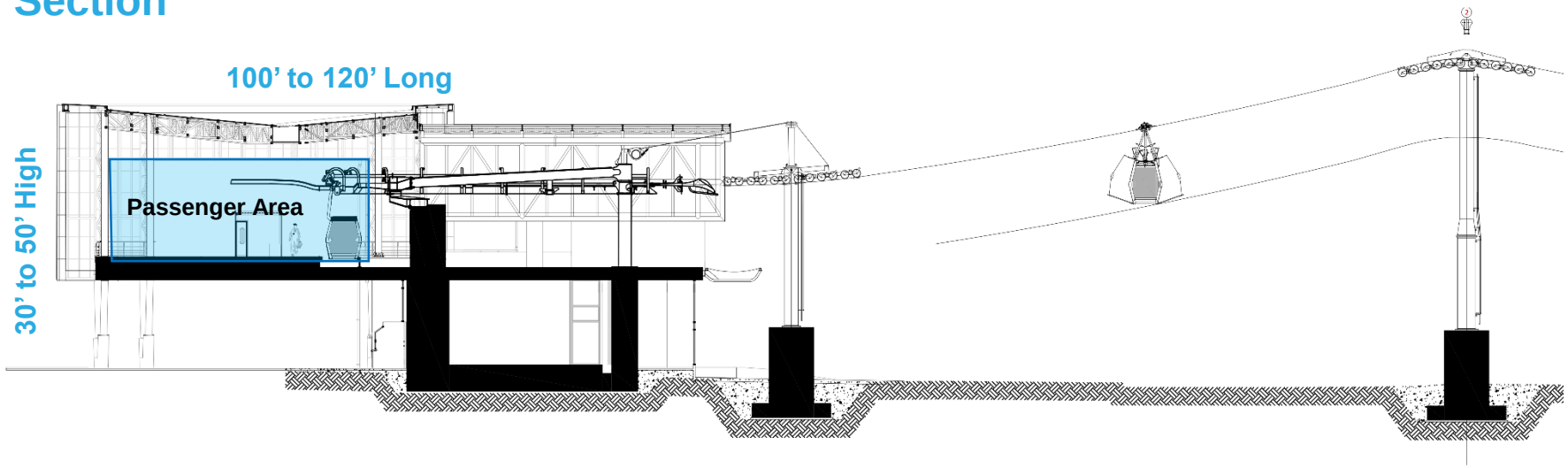
Diagram Credited : The Gondola Project

Gondola 101

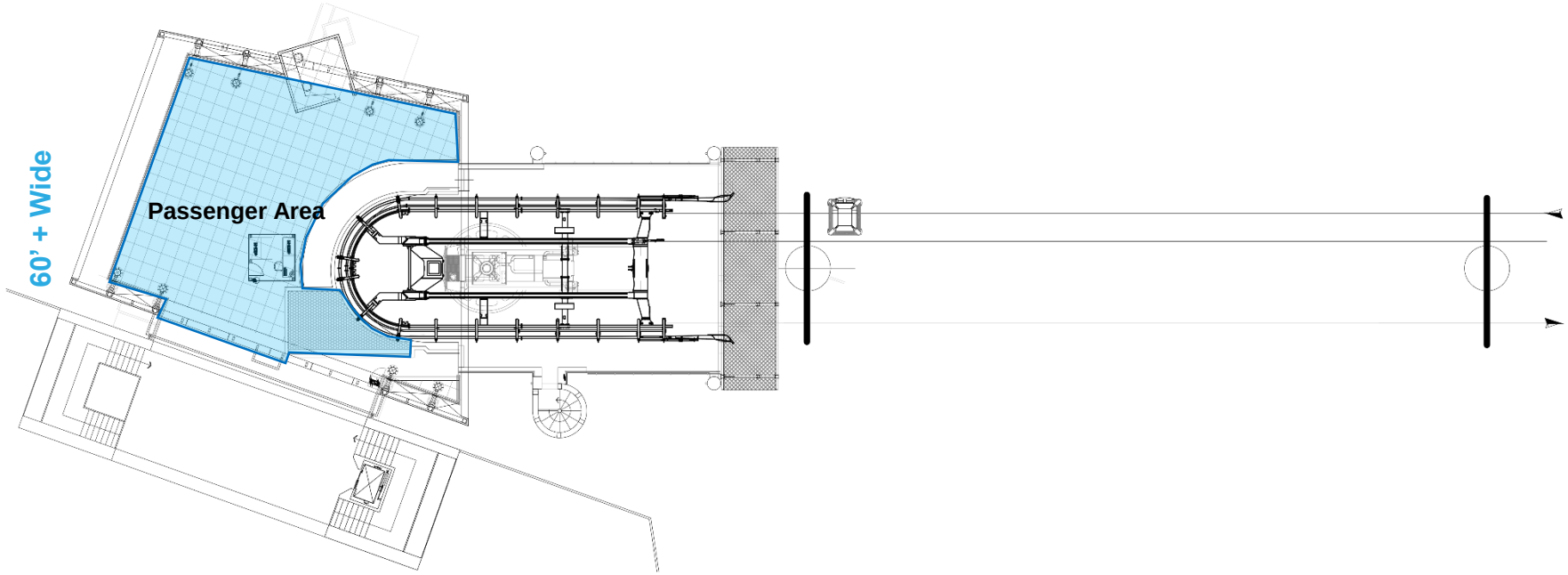
A PRIMER

- Example of a Gondola Drive Station

Section



Plan



Gondola 101

A PRIMER

- Rider Experience

Aerial Trams

Gondolas

Gondola 101

A PRIMER

- Station Loading – cabins are typically moving at 1’/sec
- Fully Accessible
- Can stop for special loading if needed

Gondola 101

A PRIMER

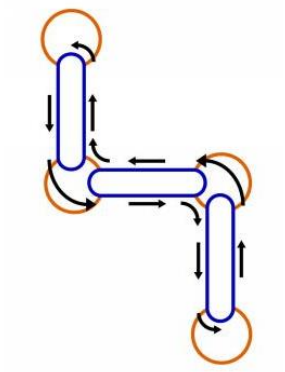
- System Types

Ankara, Turkey

Medellín, Columbia


Ankara, Turkey

Gondola with Angle Stations



- Angle stations may be used for passenger access or to just accommodate turns
- Angle stations allow for continuous ride, no need to change cabins


Ankara, Turkey

Diagram Credited : The Gondola Project

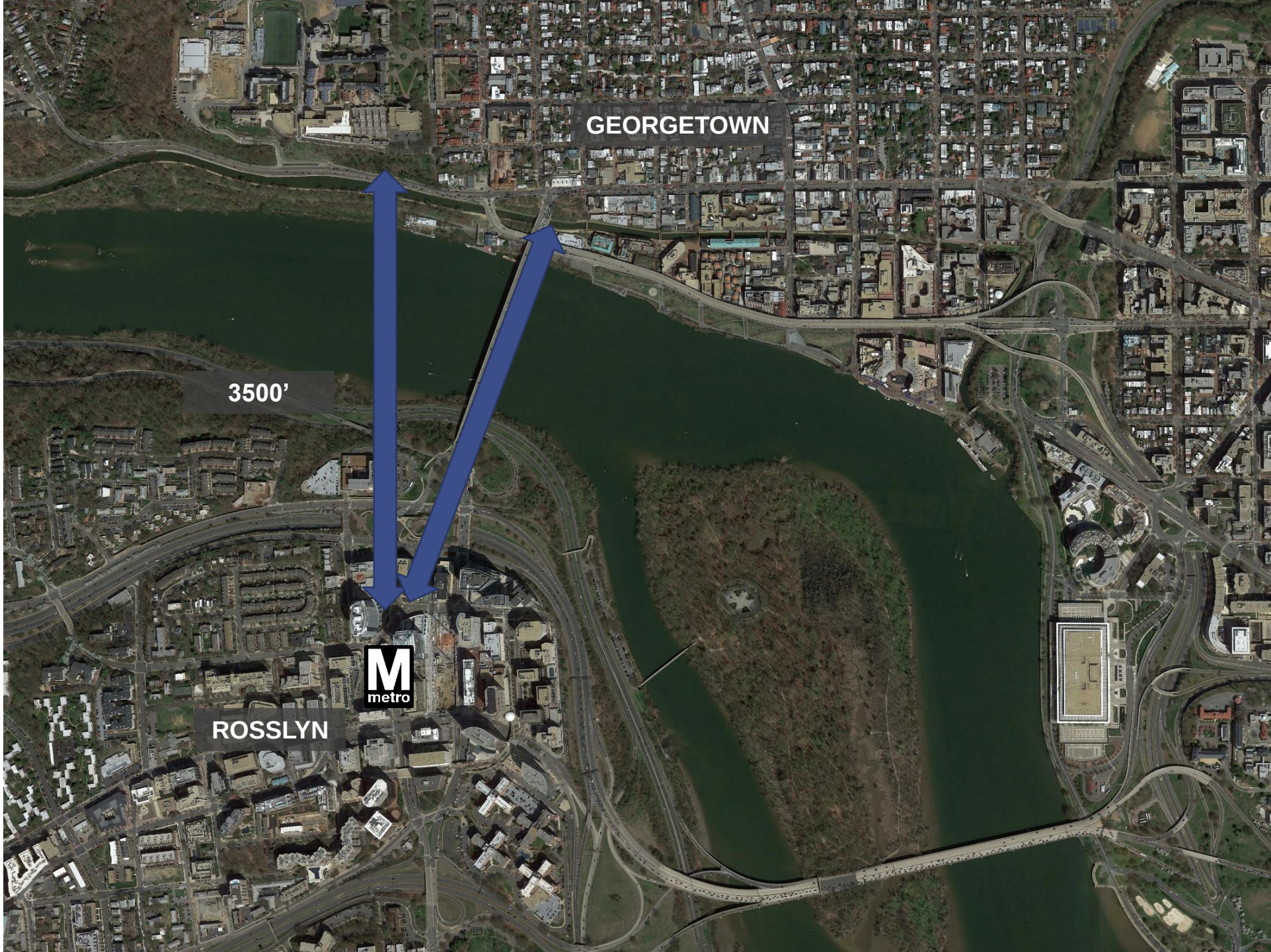
Gondola 101

A PRIMER

- Tower Structures
- Variety of Types

Gondola 101

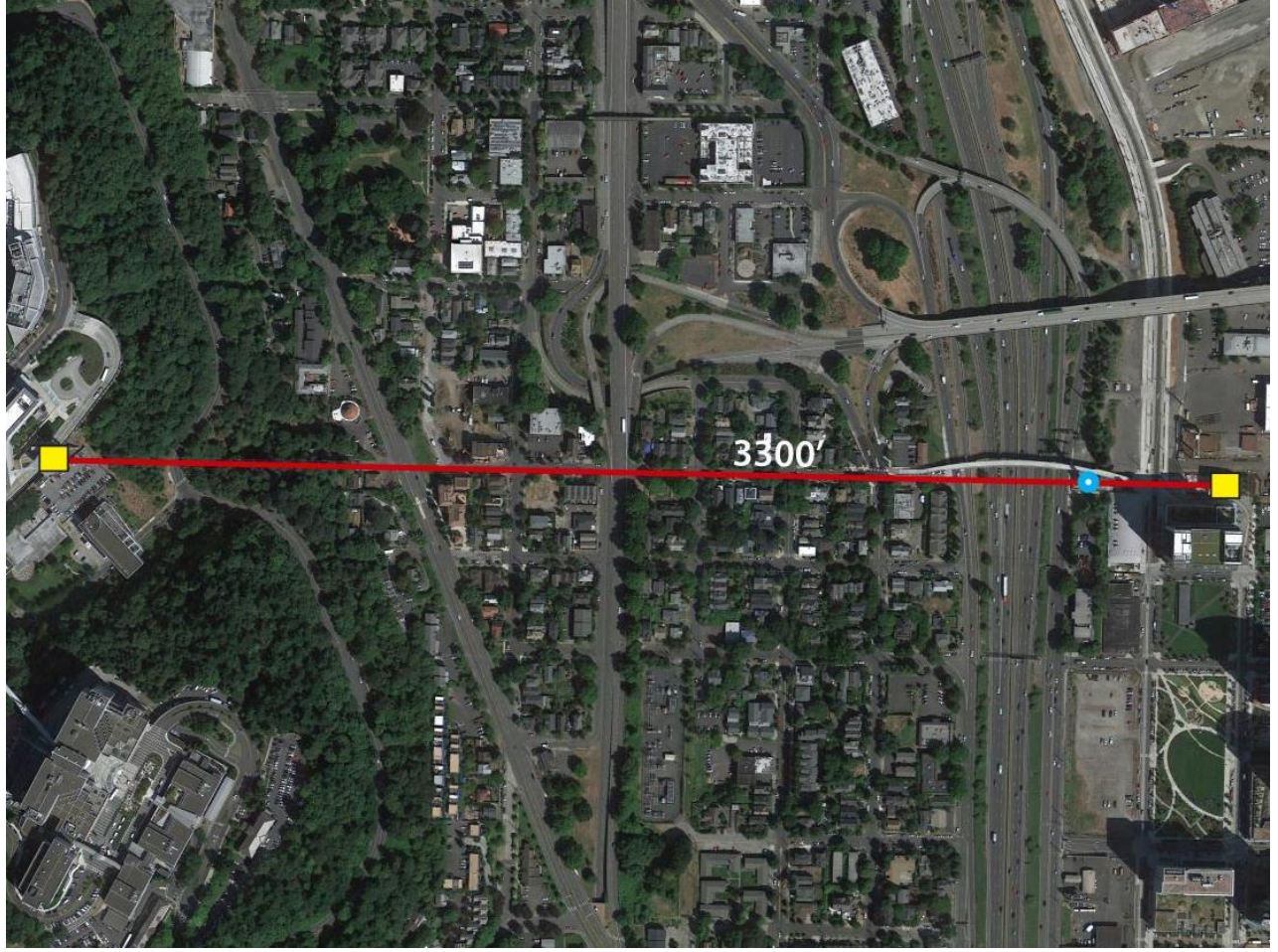
A PRIMER



Gondola 101

A PRIMER

- Portland, Oregon “Jigback” Tramway
- 1.4M Annual Riders



Gondola 101

A PRIMER

- Roosevelt Island, New York
- Dual-Haul Tramway
- 3M Annual Riders

Gondola 101

A PRIMER

- London, UK
- Monocable, Detachable Gondola

Gondola 101

A PRIMER

- Transit Systems in South America
- Metrocable, Medellin, Columbia
- Line K, 12M Annual Riders
- La Paz, Bolivia

Open House Overview

Purpose

Collect input and advice

Answer your questions

Format

Each station includes members of the ZGF team

All are welcome to add your thoughts on the boards

Station 1 • Feasibility Study Context
Station 2 • Design and Engineering (Gondola Examples)
Station 3 • Transportation (Base Information and Goals)
Station 4 • Development and Placemaking (Planning Projects and Goals)
Station 5 • The Regulatory Process (Agency Jurisdictions)