

City of Coral Gables
Information Technology Department

*Smart Districts - Broadband
Infrastructure Expansion Project*

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CHIEF INNOVATION OFFICER / DIRECTOR OF INFORMATION TECHNOLOGY

JANUARY 2022

**CORAL
GABLES**[®]
THE CITY BEAUTIFUL



Smart Districts – Broadband Infrastructure Expansion Project

Smart and Connected Districts, Buildings and Facilities

Scope:

- Installation, connectivity and turnkey of:
 - 25 additional fiber optics corridor segments
 - 8 additional smart city poles (public Wi-Fi, cameras, sensors, lighting, incorporate Coral Gables industrial design & aesthetics)
- Connect multiple City Buildings/facilities:
 - Youth Center
 - Adult Activity Center
 - Museum
 - Mobility Hub
 - Parking Garages 2 (Museum Pkg) & 6
 - Fink Studio (Econ. Dev. Ofc.)
 - Ponce Circle

4 Phases:

1. Financial Corridor on Alhambra Cir
2. Ponce de Leon and University corridors
3. Mobility Corridor on Andalusia
4. Arts & Culture Corridor on Aragon,
+ Merrick Way

Funding & Execution:

- Funding: American Rescue Plan (ARPA) Funds allocated for broadband infrastructure
- City IT Team will do project management, planning, engineering, design, and systems integration and configuration in house, for cost savings and ROI
- RFP for fiber construction and pole installation
- Estimated completion time after procurement:
Phase 1: 9 months; Phase 2: 15 months
Phase 3: 9 months; Phase 4: 9 months

Benefits/Impact:

- High speed connectivity & capacity for city services
- Enhanced network/telecommunications resilience
- Digital services and public connectivity for residents, businesses/startups, students, visitors
- Quality of life, Enhanced citizen services
 - Public safety
 - Mobility
 - Digital inclusion, telehealth, tele-ed, telework
 - Situational awareness, visibility, urban analytics, automation, real-time actionable information (environmental, traffic, safety, economic)
- Economic, entrepreneurship & jobs opportunities
- Tech/innovation incubators, accelerators, P3s, scaleups, techno-parks, think-tanks, STEM research

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Funding & Execution:

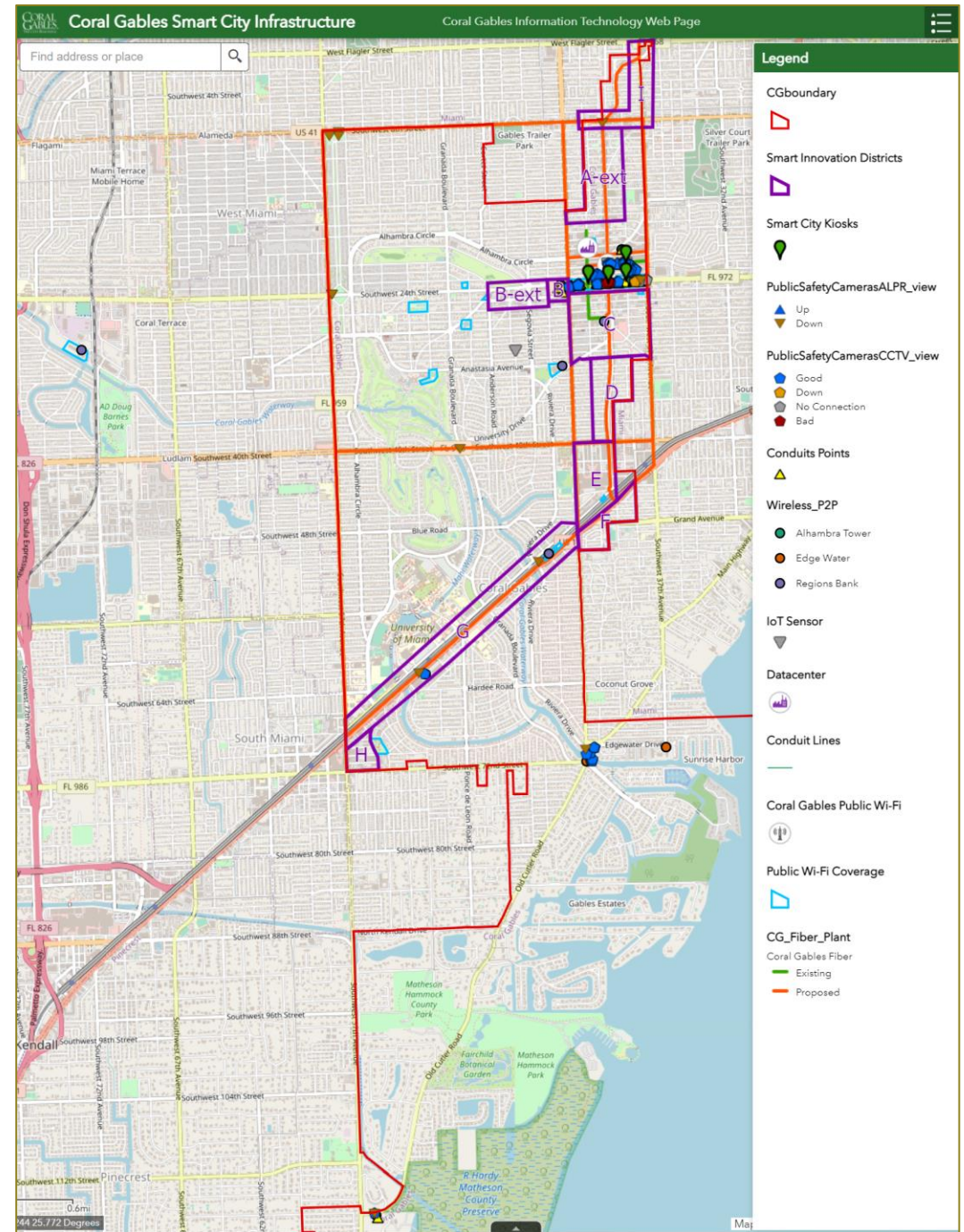
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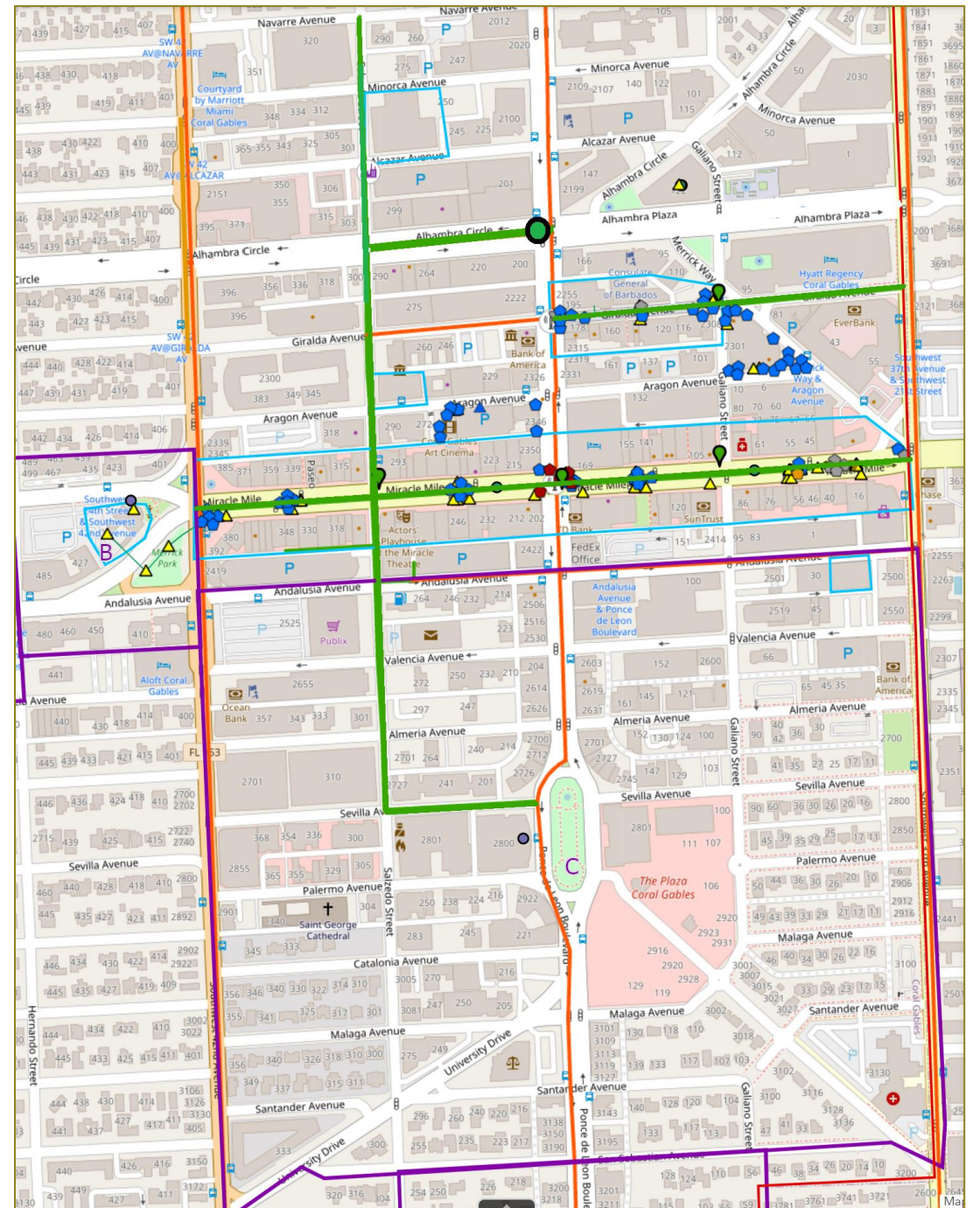
Existing City-Owned Broadband & Smart City Infrastructure Previous Projects Completed over multiple years:

- Smart Districts (A, B, ..., H, I) Infrastructure
- Fiber Corridors (20 segments):
 - Miracle Mile, Giralda Plz, Salzedo, Sevilla (1 blk), Andalusia (1 blk), Alhambra (1 blk)
 - Connected buildings: Police & Fire HQ, City Hall, Development Serv. Ctr, Parking Garages 1 & 4, Regions Bldg. Network Node
- Public Wi-Fi network (CBD/Downtown, Public Parks & Facilities)
- Wireless Point to Point network (redundancy)
- Public Safety cameras/sensors - CCTV, ALPR, Geofence
- IoT Sensors (traffic, safety, environmental, economic)
- Smart Lighting poles and controllers
- Smart city AI-powered pole (pilot)
- Smart city kiosks
- Smart & connected buildings, datacenters, network nodes, smart city hub / community intelligence center



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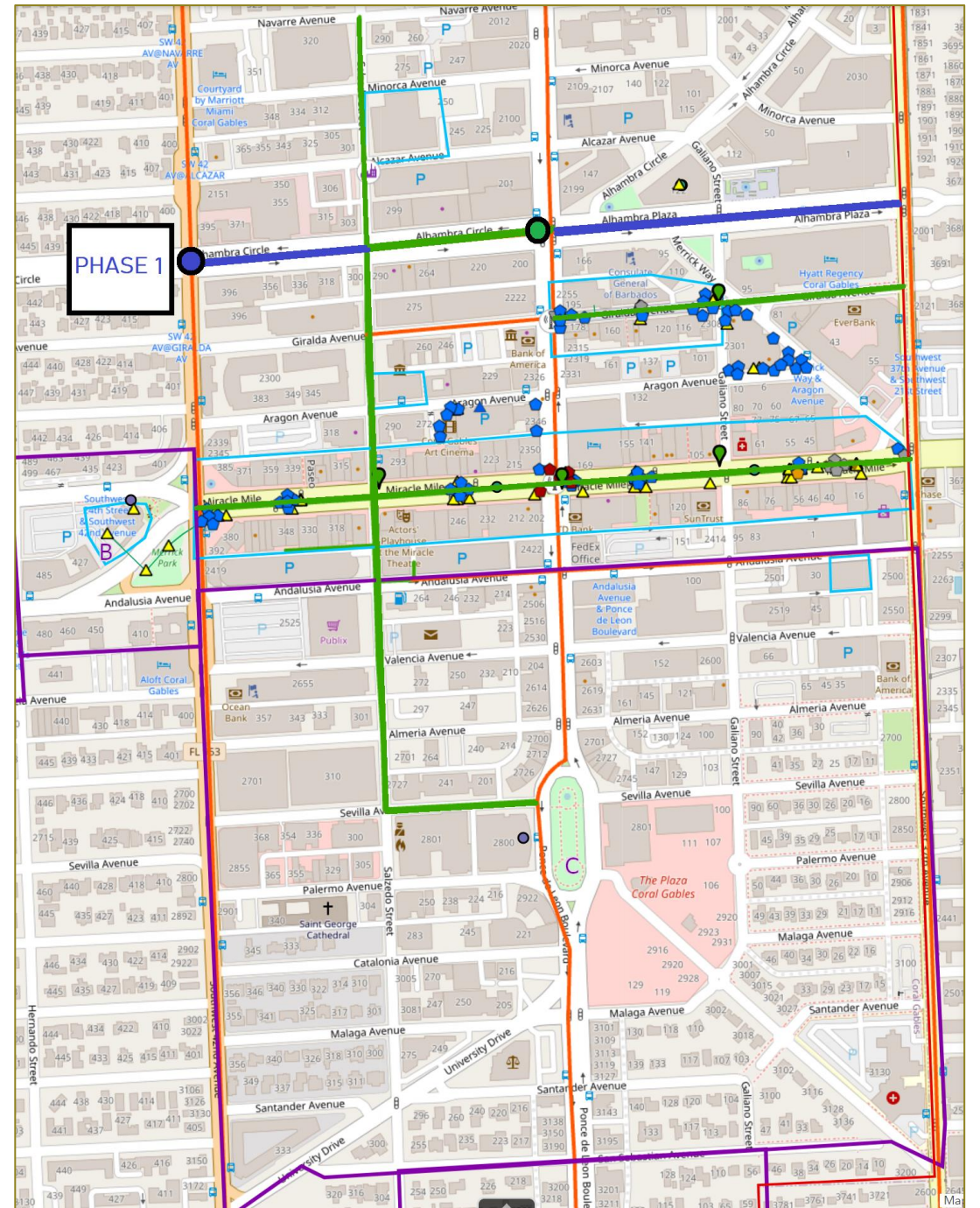
- Smart Districts (A, B, ..., H, I) Infrastructure
- **Fiber Corridors (20 segments):**
 - Miracle Mile, Giralda Plz, Salzedo, Sevilla (1 blk), Andalusia (1 blk), Alhambra (1 blk)
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- Smart Lighting poles and controllers
- **Smart city AI-powered pole (pilot)**
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New Project - Phase 1

Financial Corridor on Alhambra Cir:

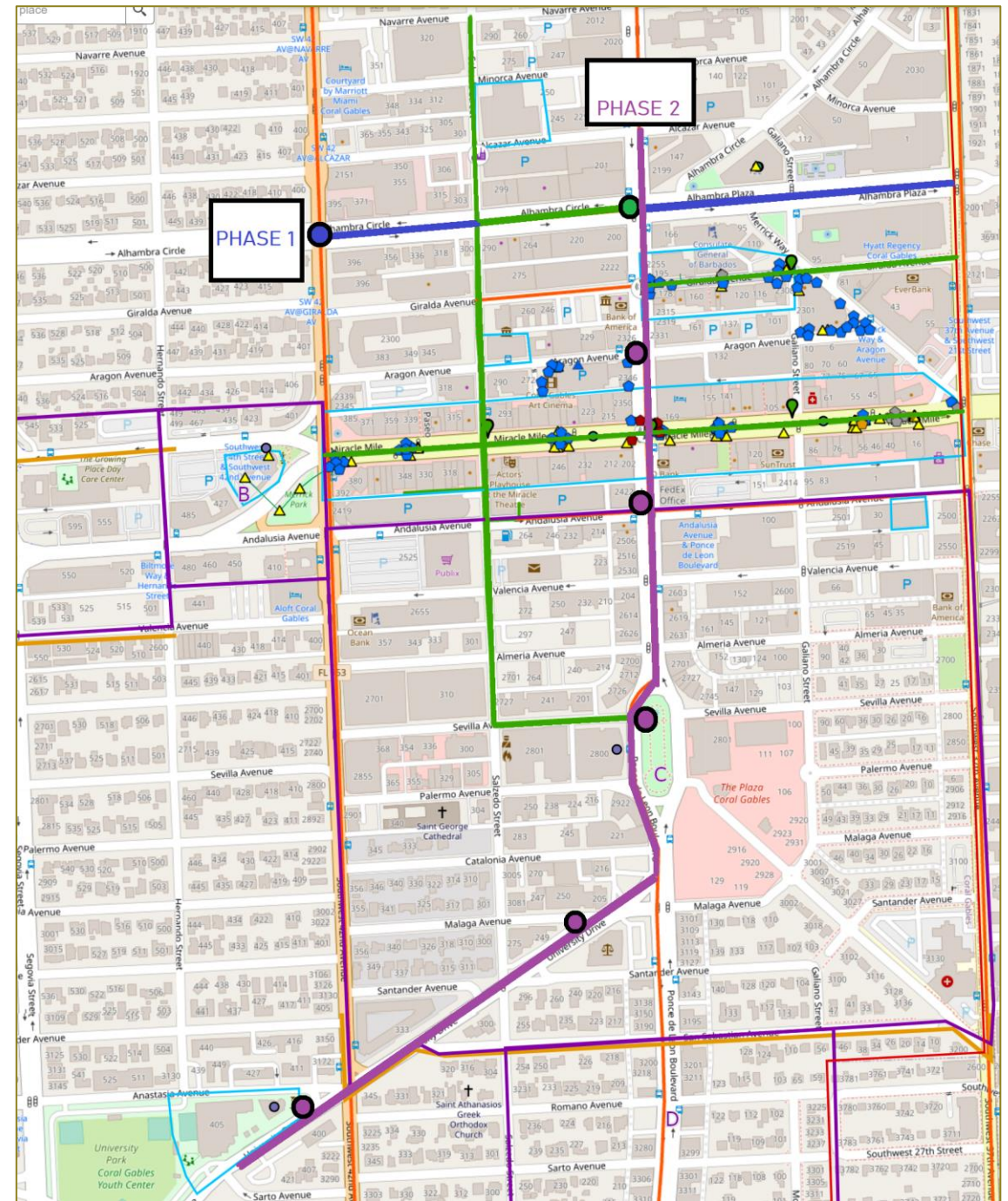
- 3 additional fiber block segments
 - Connects to existing fiber in Salzedo and Alhambra Cir
- 1 additional smart city pole: Le Jeune / Alhambra Cir



New Project - Phase 2

Ponce de Leon and University corridors:

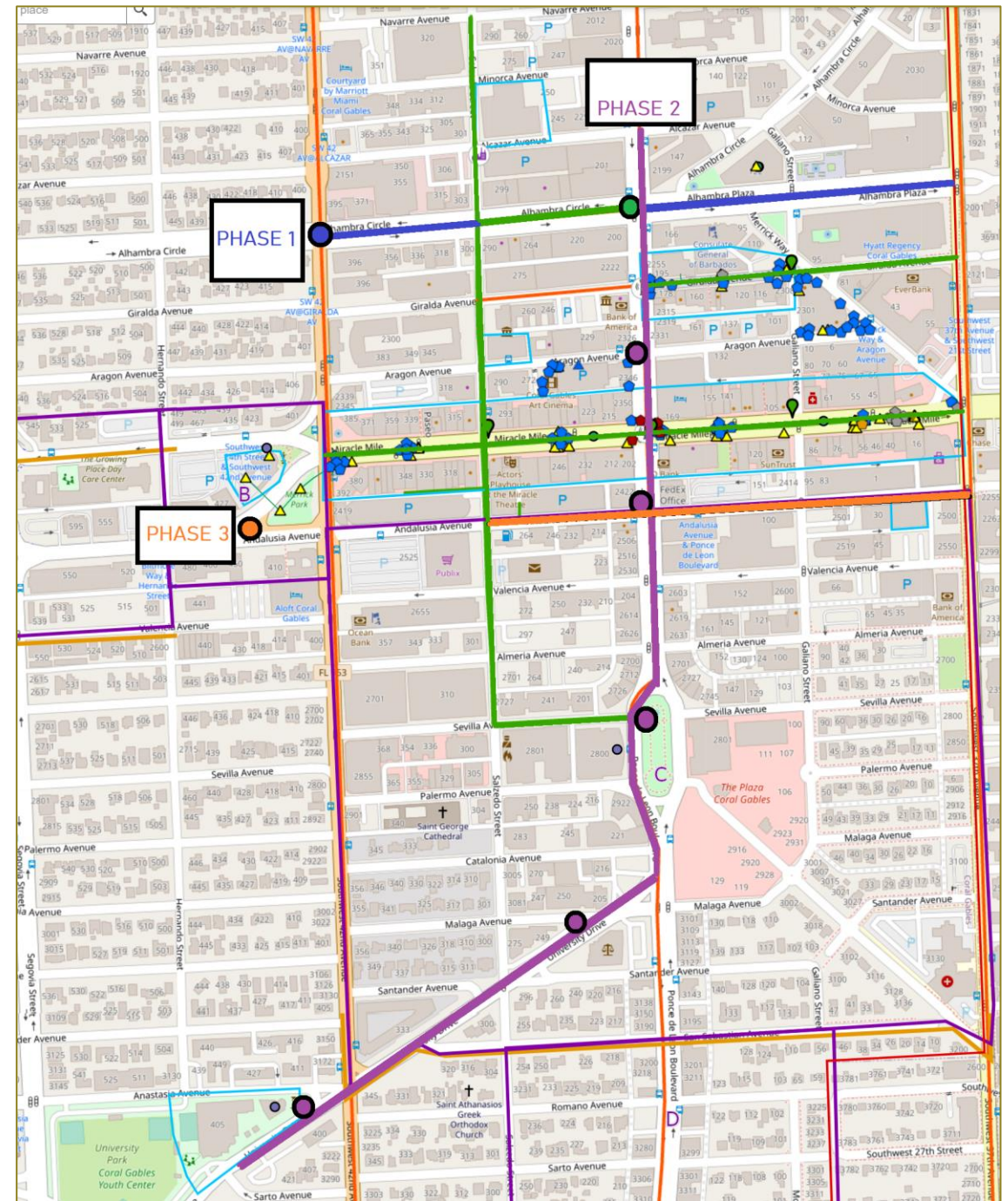
- 14 additional fiber block segments:
 - Ponce - 10 segments
 - Connects to existing fiber on Miracle Mile
 - University – 4 segments
 - Connects to the **Youth Center** building, **Fink Studio** (Econ. Dev. Ofc.) the **Ponce Circle**, and right-of-way adjacent to The Plaza building complex.
- 5 additional smart city poles:
 - Ponce / (Aragon, Andalusia, Ponce Circle)
 - University / (Malaga, LeJeune)



New Project - Phase 3

Mobility Corridor on Andalusia:

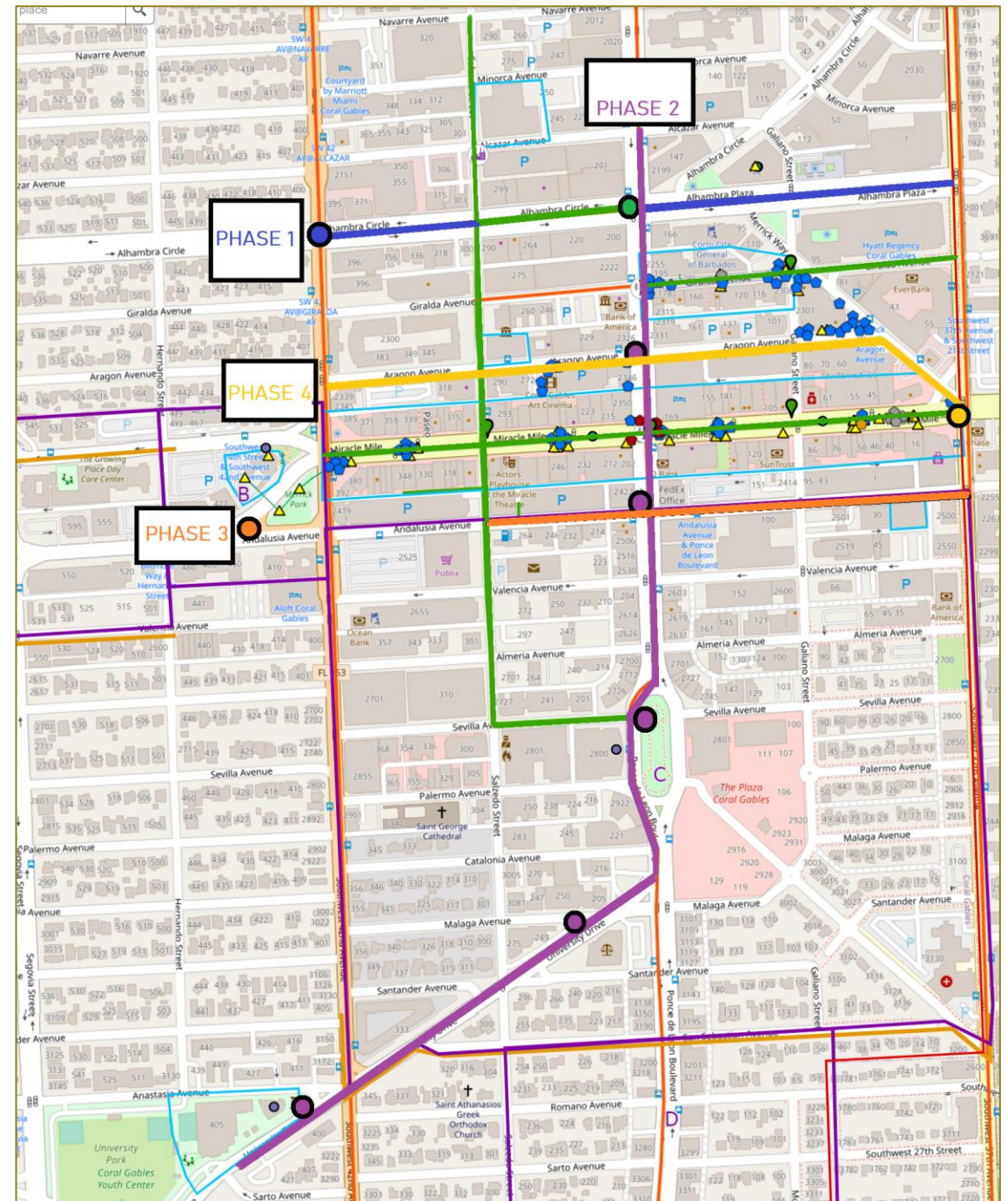
- 3 additional fiber block segments
 - Connects to existing fiber on Salzedo and Andalusia (**Mobility Hub** existing segments)
 - Connects to the **Adult Activity Center** building
- 1 additional smart city pole: **Merrick Park / Andalusia**, in front of **City Hall** and the **Development Services Center**



New Project - Phase 4

Arts & Culture Corridor on Aragon, and Merrick Way:

- 5 additional fiber block segments:
 - Aragon - 4 segments
 - Connects to existing fiber in Salzedo and Aragon
 - Connects to **Museum building, Parking Garage 2** (Museum Parking) building, **Parking Garage 6** building
 - Merrick Way - 1 segment
- 1 additional smart city pole: Merrick Way / Miracle Mile / Douglas



Smart City AI-Powered Pole Next Generation

Coral Gables Custom Design (current pilot, version 2):

Public Wi-Fi

Traffic Safety cameras and sensors

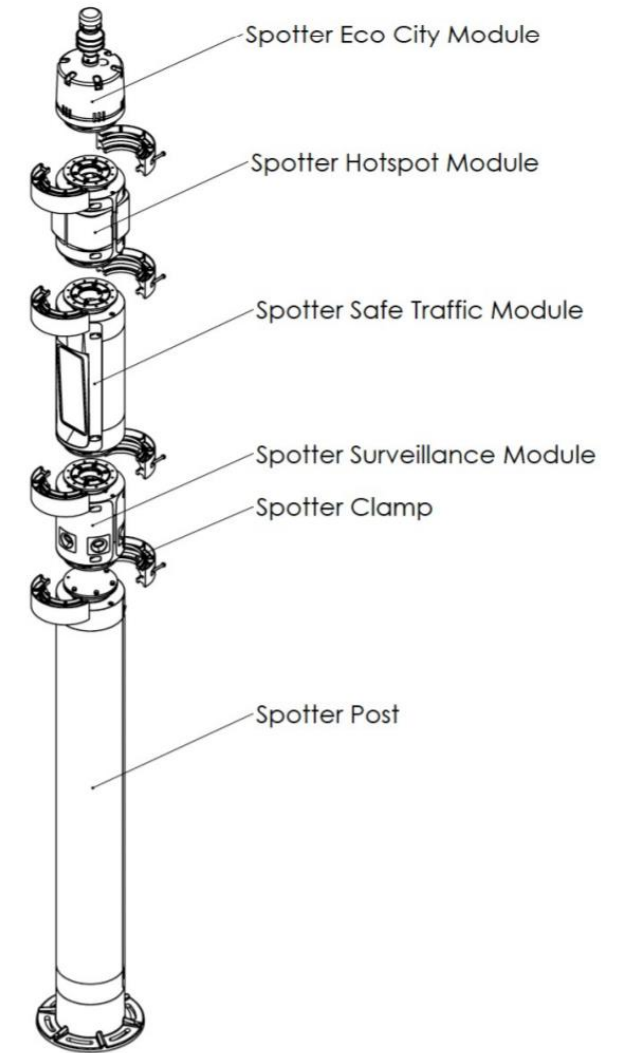
Traffic counters (multimode, vehicle, pedestrian...)

Environmental sensors (air quality, weather...)

Hurricane wind resistant structural design

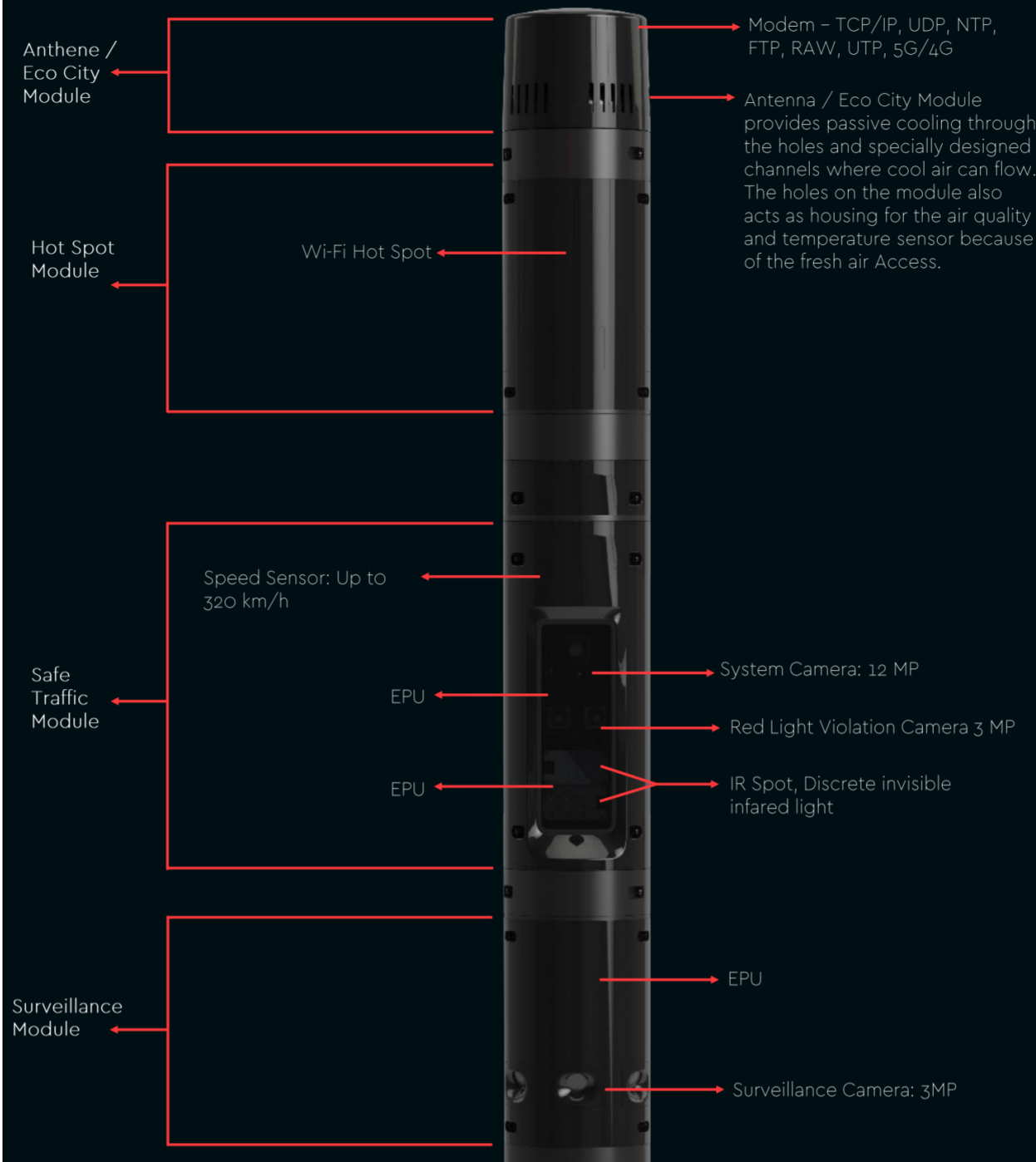
New Features/Modules (version 3):

Enhanced communications, enhanced cameras,
Coral Gables industrial design and aesthetics,
smart lighting, noise sensor, announcer...



Smart City AI-Powered Pole Next Generation

New Features: Enhanced communications (nano-hotspot), enhanced cameras, new modules: smart lighting, announcer...



A Robust Foundation of High-Speed, High-Capacity, Secure, Smart & Resilient Communications Infrastructure

Enables and facilitates:

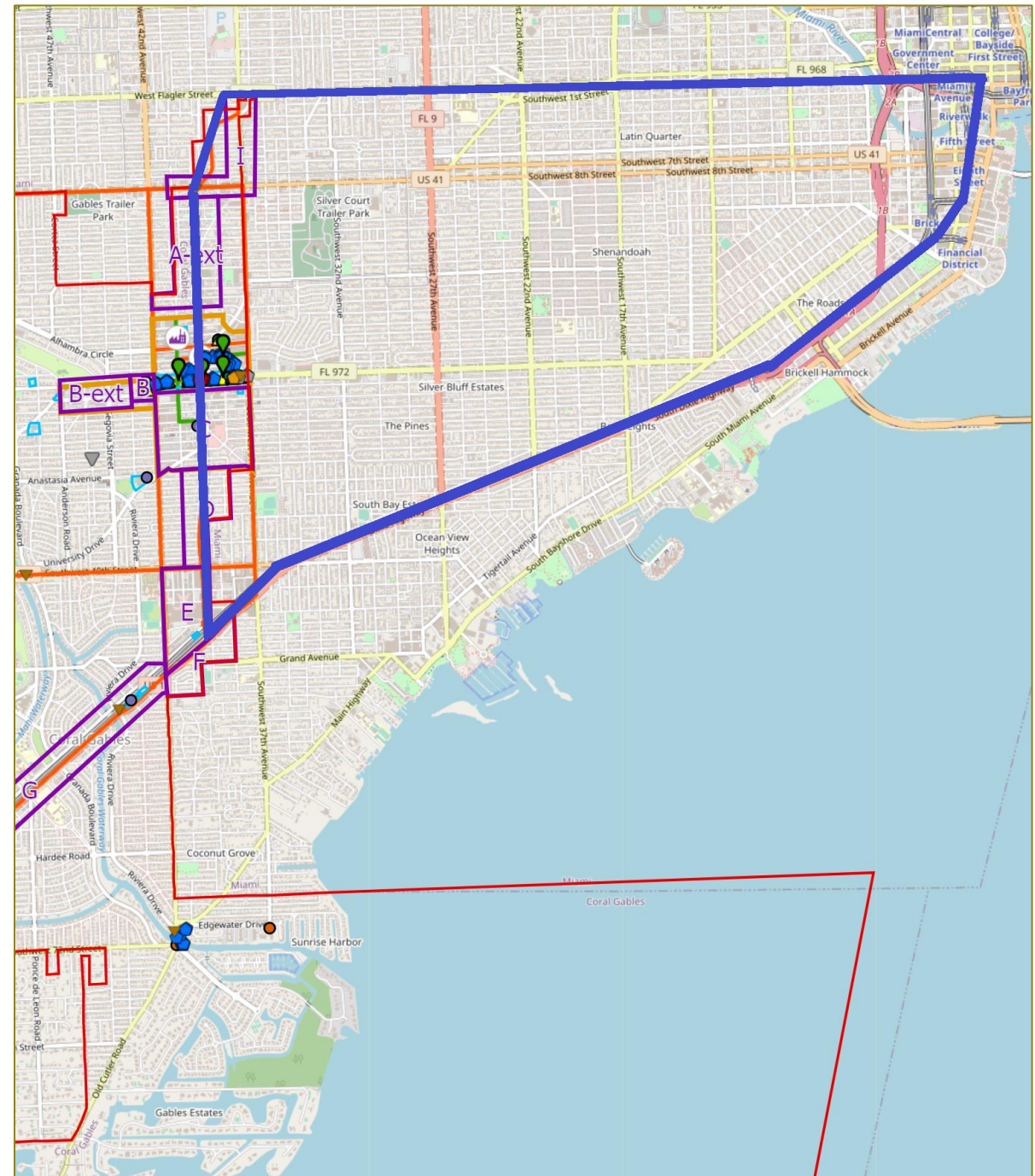
- Real-time urban, environmental, and economic visibility
For emergency responders, urban planners, residents, businesses, students & researchers...
- Actionable information and analytics
From connected sensors, devices, vehicles, and other systems & interfaces...
- Access to scalable, highly-available clouds and mobile platforms
That facilitate anywhere/anytime access, collaboration, data sharing, content & value creation
- The delivery of services, tools, enterprise applications, and actionable data to a Smart City Ecosystem of:
 - People (residents, visitors, employees, customers & stakeholders...)
 - Businesses (SMBs, corporations, multinationals, entrepreneurs, incubators, startups...)
 - Organizations (education, healthcare, community, nonprofit, trade/consular, all sectors...)
 - Smart/Autonomous systems (platforms, machines, digital personas...)
- Alignment with strategic goals, mission and vision of excellence
 - Continual improvement of customer services and quality of life
 - Citizen engagement, collaboration, crowdsourcing, innovation & economic growth
 - Mobility, transparency, inclusion, accessibility



Long-Term Regional Collaboration Broadband Vision:

● Innovation and Research Triangle

- Connecting Coral Gables smart districts with the Underline/Metrorail corridor to the South and the Flagler corridor to the North
- Provides last-mile connectivity for other N-S and E-W broadband and technology/innovation corridors
- Regional Data Sharing and Research Collaboration
- Inter-agency mutual network redundancy, hurricane/disaster recovery and resilience
- Quality-of-life Collaboration Projects (mobility, safety, education, healthcare, jobs, recreation, community programs, sustainability & environmental conservation, resilience, digital inclusion...)
- Tech-driven Economic Zones
- High-tech smart cities centers of excellence
- Job creation, Upskilling
- Regional STEM projects
- Attracting high-tech employers





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Thank you

www.coralgables.com/smartcity

