

CITY OF NORTH MIAMI

Bike, Park and Ride

A Plan for Connecting Bicycle
Parking and Transit

Prepared for



In conjunction with



Prepared by



Kimley-Horn
and Associates, Inc.



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Why Is Bicycle Parking Important?

- Accessing destinations
- Safety and security
- Extending the ride
- Encourages alternative transportation
- Requires less space than automobile parking
- Consistent with transportation demand management strategies
- Promotes sustainability



Examples of Bicycle Parking



Examples of Bicycle Parking



Examples of Bicycle Parking



Bicycle Parking at a Transit Station in France

Examples of Bicycle Parking



Central Train Station, Groningen, Netherlands

Example of a Bicycle Sharing Program



Vienna, Austria

Purpose

- Prepare a Transit-Oriented Bicycle Parking Master Plan
 - Inventory of existing bicycle parking facilities
 - Conduct a needs assessment of existing demand
 - Identify the feasibility of creating a bicycle oriented park-and-ride system at major public transit hubs
- Update the City's Future Bicycle Network concurrently
- Develop a Bicycle Parking Master Plan that is consistent with the proposed bicycle network

Background


 **CITY OF NORTH MIAMI**
TRANSPORTATION MASTER PLAN

Table of Contents

Executive Summary	1
I. Introduction	3
II. Mobility Report Card	6
III. Land Use and Transportation Plan	30
IV. Transportation Strategies	37
V. Transportation Strategies: Evaluation & Prioritization	50
VI. Conclusion	54
Figures	
Figure 1. Aerial of the City of North Miami	3
Figure 2. Existing Pedestrian Network	7
Figure 3. Existing Pedestrian LOS	8
Figure 4. Existing Bicycle Network	10
Figure 5. Existing Bicycle LOS	11
Figure 6. NoMi Express Routes and Stops	13
Figure 7. Location of MDT Routes Map	14

Figure 8. NoMi and MDT Bus Routes Within North Miami	18
Figure 9. Number of Lanes of Major Roadways	19
Figure 10. Functional Clarifications of Major Roadways	23
Figure 11. Existing Daily LOS	25
Figure 12. Peak Hour LOS	26
Figure 13. Daily 2025 LOS	29
Figure 14. 2025 Peak Hour LOS	32
Figure 15. CRA Redevelopment Plan Stage 2	36
Figure 16. Illustration of All Improvements	38
Figure 17. Missing Sidewalk Links	41
Figure 18. CRA Redevelopment Plan Stage 2, Proposed Bicycle Network	41
Figure 19. Proposed Realignment of NoMi Express Routes Modifications	43
Figure 20. Future NoMi System	44
Figure 21. Location of Public Schools	49


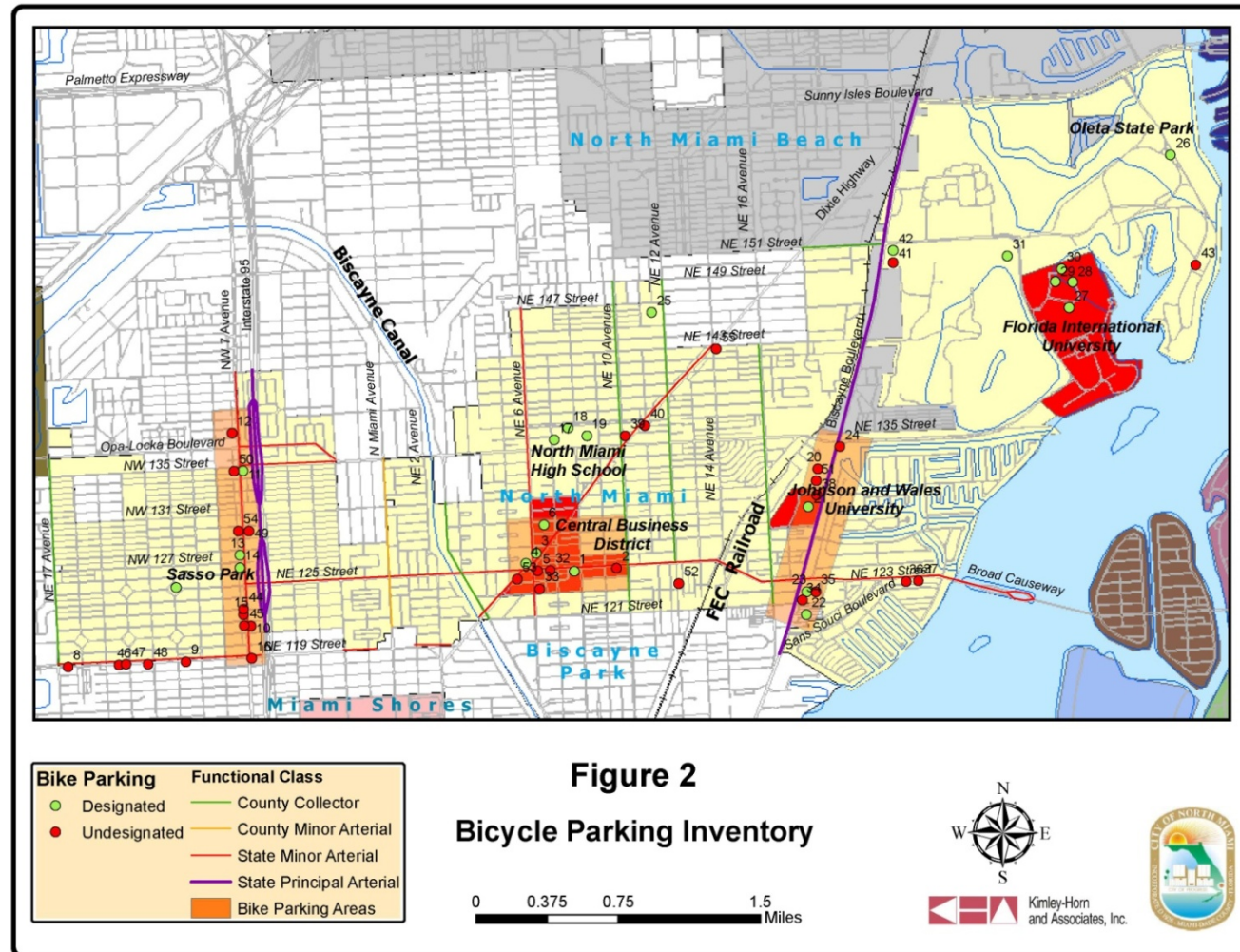
 **North Miami**
TRANSIT ORIENTED DEVELOPMENT FEASIBILITY STUDY

Table of Contents

Executive Summary	1
Introduction	3
What is a TOD?	6
TOD Literature Review	7
TOD Potential in North Miami	9
Conclusions	51
Recommendations	52
Appendix A — Literature Review/Bibliography	59
Appendix B — Transportation Element of the Comprehensive Plan Goals, Objectives, and Policies	76
Appendix C — TOD District Evaluations	91

Existing Bicycle Parking Inventory

- 3 days of bicycle parking counts
- “Designated” and “Undesignated” bicycle parking



Existing Bicycle Parking Inventory



Undesignated Bike Parking – NE 125th Street between NE 9th Avenue and NE 10th Avenue

Existing Bicycle Parking Inventory



Designated Bike Parking – Two bikes chained to a rack at Home Depot on Biscayne Boulevard and NE 121st Street

Existing Bicycle Parking Inventory



Undesignated Bike Parking – Three bikes at a bus stop pole on Biscayne Boulevard and NE 135th Street

Code Review

- North Miami is developing new guidelines/requirements for the provision of bicycle parking in vehicular parking lots that appear to be consistent with the County's Code

Total Parking Spaces in a Lot	Required Number of Bicycle Parking Spaces
25 to 50	4
51 to 100	8
101 to 500	12
501 to 1000	16
Over 1000	Four (4) additional spaces for each 500 parking spaces over 1000

Best Practices Review

Comparison of Bike Parking Standards in Cities Reviewed

Criteria	Miami-Dade County, FL	Boca Raton, FL	Tallahassee, FL	Gainesville, FL	San Luis Obispo, CA	Denver, CO
Parking based on land use/zoning	No	Yes	Yes	Yes	Yes	Yes
Ratio based on motor vehicle parking spaces	Yes	Yes	Yes	Yes	Yes	Yes
Separate short-term and long-term parking requirements	No	No	No	No	Yes	No
Requires bicycle rack location criteria	Yes	Yes (lighting, site design, urban design)	Yes (lighting, site design, urban design)	Yes	Yes	Yes (lighting, site design, urban design)
Security Features	Bike storage required when more than 101 car parking spaces on site. Bike racks with "U" lock to lock frame and one wheel.	Fully enclosed lockable space for long term parking	Anti-theft requirements included	Individual locker spaces and racks required	Bicycle lockers required for long-term parking	Inverted U-type bicycle rack required. Other bicycle security criteria included
Incentives for additional bicycle parking	No	No	No	No	Yes. Reduction in car parking requirements	No
Salient Features	<ul style="list-style-type: none"> Location close to building entrance Requires existing developments to comply with bicycle parking requirements 	<ul style="list-style-type: none"> Bicycle routes connecting all bicycle parking facilities, both private and public 	<ul style="list-style-type: none"> Requirements to accommodate a range of bicycle shapes and sizes 	<ul style="list-style-type: none"> Reduction in bicycle parking is allowed on a case-by-case basis if other public parking is available nearby 	<ul style="list-style-type: none"> Bicycle racks for short-term parking Bicycle locker requirement for long-term parking Bicycle lockers or storage space requirement of 2 bicycles per residential unit 	<ul style="list-style-type: none"> Size, color & location requirement Rack requirement within 50 feet of building entrance

Recommended Code Revisions

2. Quantity of bicycle parking spaces required

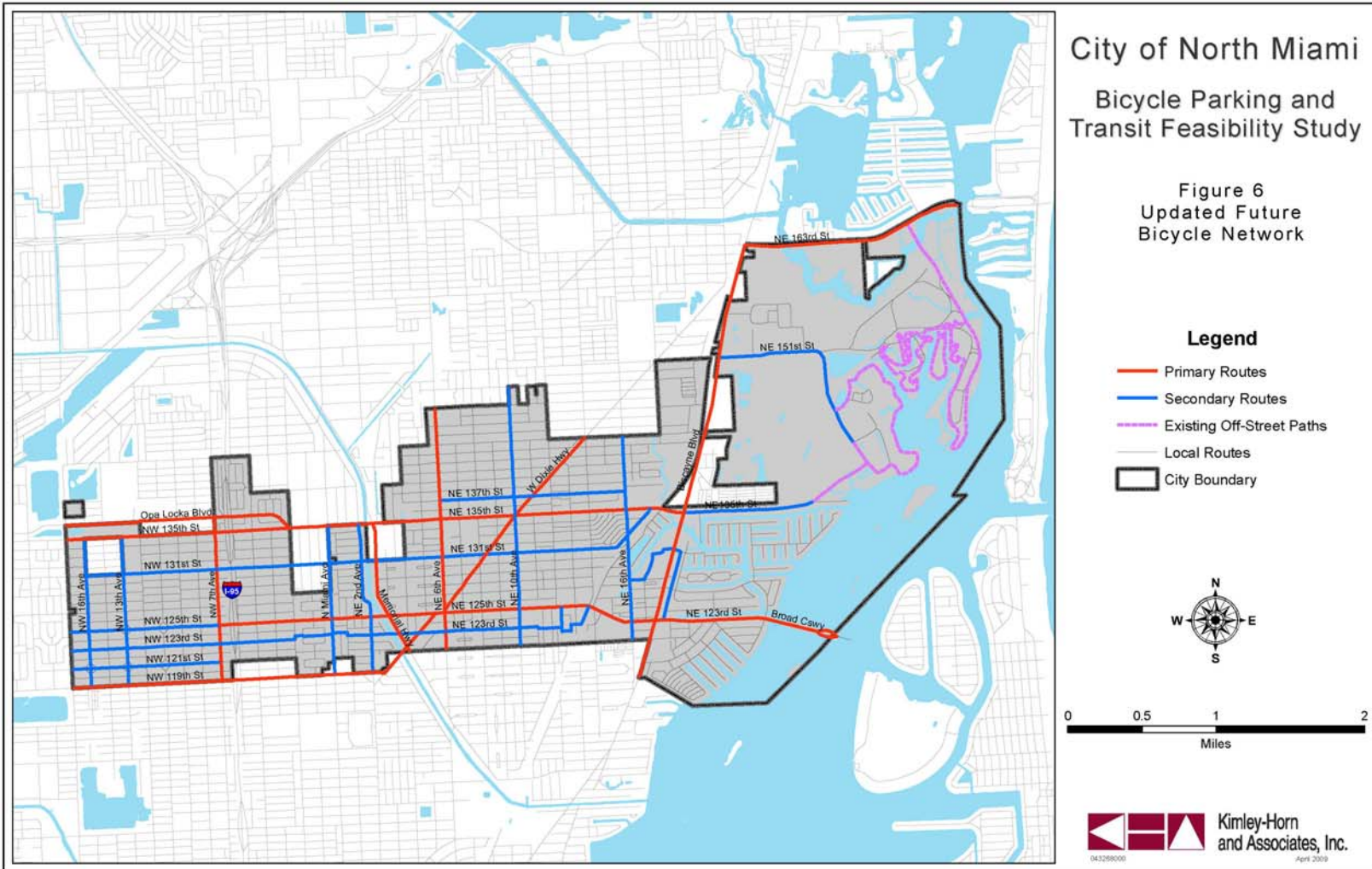
a. For all land uses except the ones listed under 2b, the following bicycle parking requirements shall apply:

Total Parking Spaces in Lot	Required Number of Bicycle Parking Spaces
1 to 25	2
26 to 50	4
51 to 100	8
101 to 500	12
501 to 1,000	16
over 1,000	four (4) additional spaces for every 500 parking spaces over 1,000

b. For the uses listed under this subsection the following bicycle parking requirements shall apply:

- Elementary schools, Middle schools, Senior high schools, vocational or trade schools, colleges, public, private or parochial – 100 percent of the required number of motor vehicle parking
- Dormitories, fraternities and sororities – 50 percent of the required number of motor vehicle parking
- Public or private transportation facilities – 20 percent of the required number of motor vehicle parking
- Sports and Recreation Facilities (parks, playgrounds, bowling alleys, racquetball, tennis and similar court facilities) – 20 percent of the required number of motor vehicle parking

Updated Future Bicycle Network Map



Bicycle Boulevards

- Bicycle Boulevards
 - A hybrid bicycle facility that uses various methods and forms to improve **bicycle safety, convenience and connectivity** to make bicycling a preferred option through a variety of improvements
 - Bicycle boulevards enhance “share the road” facilities



Bicycle Boulevards

- Bicycle Boulevards
 - Unique signing
 - Pavement markings
 - “Reverse” the Stop Signs
 - Combine with Traffic calming

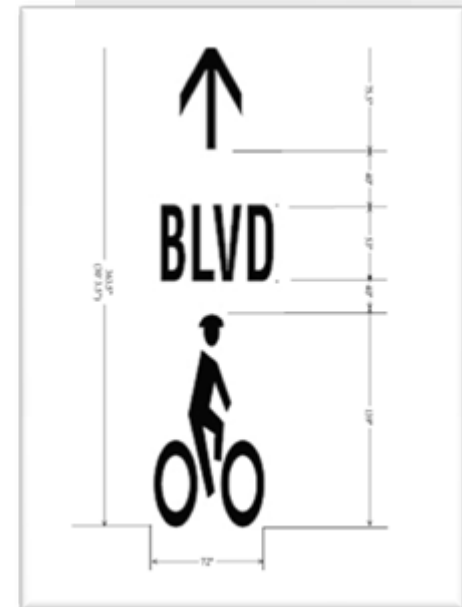
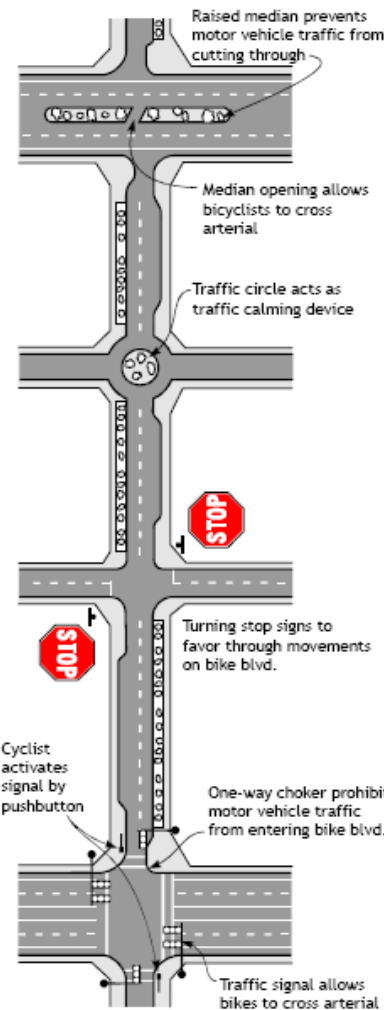
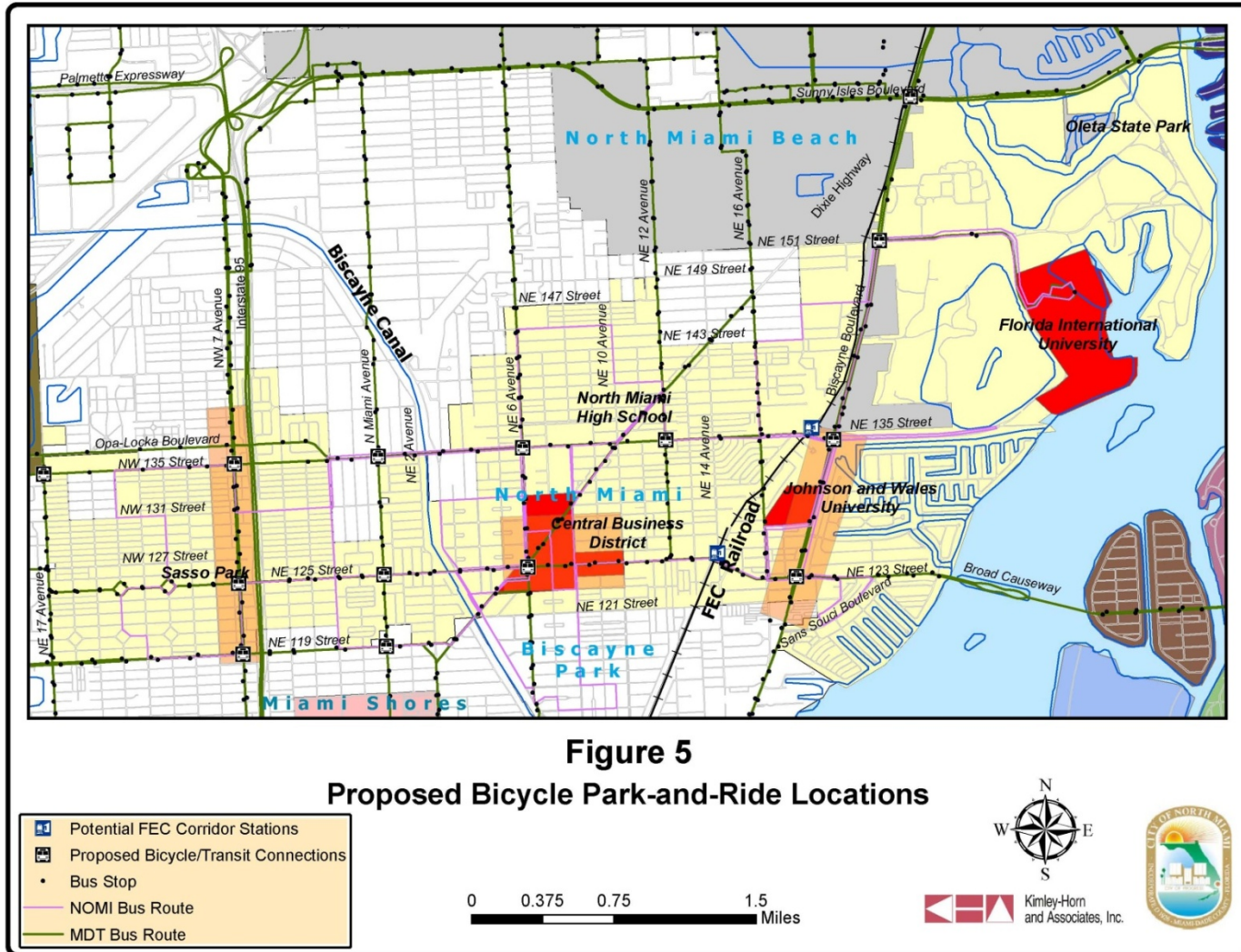


Figure 14-12. Illustration. Typical elements of a bicycle boulevard.
Source: *Oregon Bicycle and Pedestrian Plan*⁽¹⁾

Transit Park-and-Ride Feasibility



Transit Park-and-Ride Feasibility



Implementation Strategies

- Short-Term Bicycle Parking (on-street)
 - Within the Central Business District (Downtown North Miami)
 - Along major roadway corridors with heavy retail and office
 - At proposed transit-bicycle park-and-ride locations
- Short-Term and Long-Term Bicycle Parking (site-specific)
 - At public buildings and facilities
 - At all parks and recreational facilities
 - At future rail transit station

Implementation Strategies

- Preferred Short-Term Bicycle Parking
 - Inverted-U
 - Post-and-ring



Inverted-U rack (2 parking spaces)



Post-and-ring rack (2 parking spaces)

Implementation Strategies

- Bicycle-Transit Park-and-Ride Examples



On-street bicycle parking near bus stops



Implementation Strategies

- On-street bicycle parking “corrals”



On-street bicycle parking replaces automobile parking

Implementation Strategies

- Preferred Long-Term Bicycle Parking
 - Bike rooms
 - Bike lockers



Bike Rooms



Bike Lockers

Installation Mistakes to Avoid

- Examples of Bad Bike Rack Design
 - Installed too close to obstacles
 - Only one point of contact between the bicycle and rack
 - The rack only supports one bicycle wheel



Serpentine rack too close to obstacles



The “Wheel Bender”

Implementation Strategies

- Estimated Costs

Item	Estimated Quantity	Unit Cost	Estimated Budget
Bicycle Racks	146	\$300	\$43,800
Bicycle Lockers	10	\$4,000	\$40,000
Signage	100	\$300	\$30,000
Advertising Costs / Brochures	(20%)		\$22,760
TOTAL			\$136,560



Thank You

- Upcoming Steps
 - Submit Final Report
 - Present to City Council



Stewart Robertson, P.E.
Kimley-Horn and Associates, Inc.
5200 NW 33rd Avenue, Suite 109
Fort Lauderdale, FL 33309

(954) 535-5100

stewart.robertson@kimley-horn.com

