15th Street Redesign

Group 1
Sustainable Urban Mobility In Netherlands
Andi, Cody, Heather, Tatiana
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Vision of Corridor Redesign

- Redesign the 15th St corridor from Fowler Ave to Fletcher Ave to include separated bike paths and a bi-directional pedestrian path to promote safe traveling for all modes of transportation.
Cycling in Florida

- In 2016 the mode share for biking to work in Florida was 0.6% - why so low?
- 500+ bike fatalities between 2007 and 2011
- 20,000 injuries in bicycle-related accidents
- Hillsborough County had the 4th highest number of fatalities in the state
Almanac

Location:
- 15th St From E. Fowler Ave to E. Fletcher Ave

Safety:
- 2014 – 2018 crashes: 38
- Total Injuries: 21

Mobility:
- AADT: Approx. 10,500 (Peak: 1,050 (10%))
- Transit: 9 bus stops
  - 30 min frequency
- Bicycle: No bike infrastructure
- Pedestrian: Limited sidewalks and cross-walks at intersections

Figure 2 – 15th Street Between Fowler and Fletcher Avenue

Figure 3 – Traffic Rates
Existing Land Use and Demographics

Road Segment Includes
- Mainly Multi-Family and Two-Family housing
- Mixed commercial and public facilities
  - Restaurants
  - Retirement Homes
  - Nursery
  - Public Lots
  - Doctors Office
  - Grocery and convenient stores

Figure 4 – Land Use Map
Safety

01/20/2014 - 11/02/2018

Bike Crashes: 13
- 0 Fatalities
- 5 Injuries

Pedestrian Crashes: 25
- 0 Fatalities
- 16 Injuries

Most Dangerous Intersections
(By Injuries)
- 15th St @ 122nd Ave: 3 Pedestrians
- 15th St @ Fowler Ave: 2 Cyclists, 1 Pedestrian
- 15th St @ 131st Ave: 3 Pedestrians
- 15th St @ Fletcher Ave: 2 Cyclists, 7 Pedestrians

Figure 5 & 6 – Traffic Accident Information
Existing Roadway Conditions

Includes

- 2-way undivided roadway
- 4-foot continuous sidewalk on the east side
- 4-foot discontinuous sidewalk on the west side
- Multiple bus stops
- Access to residential and commercial buildings

Figure 7, 8, & 9 – Typical Roadway Conditions
Existing Intersection Conditions

Includes

➢ Two un-signalized intersections at 122nd and 127th streets
➢ One signalized intersection at 131st street

Figure 10 – Intersection at 122nd Street

Figure 11 – Intersection at 131st Street
Issues With Current Design

Because of high density vehicular and foot traffic, this road presents many issues under its current design.

• Restricted sidewalks on both sides of the road have led to many high traffic foot paths along the side of the road.
• Crosswalks only present at intersections, which can lead to more J-Walking accidents.
• Poor markings
• Faded bike lane lines
• Inadequate lighting

Figure 12 – High Traffic Foot Path
Opportunities for Improvement

- 15th Street allows for many improvement opportunities due to the adequate right of way alongside the corridor.
- Minimal curves in corridor allow for simplicity of redesign.
- Corridor is a part of a larger grid system.

Figure 13 – Wide of Typical Roadway Section
Un-signalized Redesigned Intersection

- Segregated, marked bicycle path
- Bi-directional pedestrian path with crossings
- Artistic element
- Protected Intersection

Figure 15 – Re-Designed Un-Signalized Intersection
Signalized Redesigned Intersection

- Segregated, marked bicycle path
- Increased green space
- Bi-directional pedestrian paths with crossings
- Roundabout with priority for cyclist

Figure 16 – Re-Designed Signalized Intersection
Typical Roadway Sections

Figure 17 – Existing Roadway Cross-section

Figure 18 – Re-Designed Roadway Cross-section
Resources

- Commuting Trends in Florida: A Special Report from FDOT Forecasting and Trends Office
- http://www.planhillsborough.org/traffic-counts/
- https://www.areavibes.com/temple+terrace-fl/demographics/
- Streetmix
- Google Maps