Redesigning Nebraska Avenue

Group 3: Sustainable Urban Mobility
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Length: 5,311 ft (approx. 1 Mile)
Background (cont.)

Problems
- Traffic congestion
- Poor bicycle infrastructure
- Significant room for improvement in transit

Opportunities
- Surface parking lots
- Exiting transit system
- Lots of mixed use - About 9 different land uses along the selected corridor including light commercial, heavy commercial, industrial, and quasipublic with outer bands of single-family housing (Hillsborough County Existing Land Use Map).
- New development including Mermaid Tavern and multi-family housing units

Overall objective
Increase the quality of biking and transit infrastructure to reroute personal cars while maintaining the corridor as a significant source of traffic flow.
Almanac

Location:
- Nebraska Ave -0.50 miles (from Sligh Ave to Hanna Ave)
- Nebraska Ave -0.50 miles (from Hanna Ave to Hillsborough Ave)
- Intersection of Nebraska Avenue and Hillsborough Avenue

Safety:
- Total: 1.00 Miles
- Number of crashes: 500 (2014-2018)

Mobility:
- AADT: 19,000
- Transit
  - Hillsborough Area Regional Transit
  - MetroRapid Transit
  - 6 Bus Stops
- Bicycle
  - No bicycle lanes
  - No bicycle parking
- Pedestrian
  - Crosswalks at signalized intersections (0.50 mile distances)
  - Sidewalks on both sides of road

Sustainability
- No known sources of sustainability
Bus Stops
<table>
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<tr>
<th>Mode of Transportation</th>
<th>Distance (km, miles)</th>
<th>Time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile</td>
<td>3.3, 2.05</td>
<td>10</td>
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<tr>
<td>Cycling</td>
<td>1.8, 1.12</td>
<td>9</td>
</tr>
<tr>
<td>Walking</td>
<td>1.7, 1.06</td>
<td>21</td>
</tr>
<tr>
<td>Transit</td>
<td>1.7, 1.06</td>
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<tr>
<th>Mode</th>
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<tbody>
<tr>
<td>Automobile</td>
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<td>6</td>
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<tr>
<td>Cycling</td>
<td>1</td>
<td>11</td>
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<td>22</td>
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<tr>
<td>Transit</td>
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<td>11 (HART 400)</td>
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</table>

Leeghwaterstraat to Jumbo

Sligh to Hillsborough Ave
Sligh to Hanna Existing Conditions
Sligh to Hanna Proposed Solutions
Knollwood Intersection Existing Conditions
Dutch Design Inspiration
Knollwood Intersection Proposed Solution
Hanna to Hillsborough Existing Conditions
Problems/Challenges Between Hillsborough and Hanna Ave

- Random areas of space next to sidewalks
  - Wasteful, but can be reused
- Bus Stops without Bus Bays
  - Produces traffic when bus picks/drops off people
- No Bicycle Lanes
  - Cyclists are forced to ride on sidewalk = Not Safe!
Hanna to Hillsborough Proposed Solutions

- Demolish the sidewalk and extra areas of grass/concrete to add a Two Way Cycle Track and a Pedestrian Only Sidewalk
- Adapt all bus stops with Bus Bays
- Introduce a Bus Only Lane
South of Bearss Ave
North of Hillsborough, but South of E Hanna Ave
North of Hillsborough, but South of E Hanna Ave
Hanna to Hillsborough Proposed Dutch Inspiration
(Next to AMS Schiphol Airport)
Hanna to Hillsborough Existing Conditions
Hanna to Hillsborough Proposed Solution
Hanna to Sligh Existing Conditions
Dutch Inspiration
Proposed Solution
Overall Solution
Intersection of Nebraska Ave and Hillsborough Ave Existing Conditions
Dutch Design Inspiration
Intersection of Nebraska Ave and Hillsborough Ave Redesign
Proposed Nebraska Avenue

- 1.8 m Sidewalk
- 0.4 m Bus Lane
- 1.5 m Bike lane
- 1.5 m Bike Lane
- 2.5 m Transit shelter
- 3.6 m Bus lane
- 2.5 m Drive lane
- 1 m Drive lane
- 2.5 m Transit shelter
- 3.6 m Bus lane
- 2.4 m Transit shelter
- 1.5 m Bike lane
- 1.5 m Bike Lane
- 0.64 m Sidewalk
Ultimate Goal

▪ Reduce the number of automobiles on the road
▪ Increase number of pedestrians & cyclists
▪ Increase the use of public transit
▪ Keep Nebraska Avenue as a significant source of traffic flow
▪ Improve safety, health, and environmental quality through these moves from personal vehicles to transit and biking and pedestrian infrastructure
BEDANKT!