

# *Sounder Transit*

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# Overall Problem

Target audience - people with limited English proficiency



# How to Ride Link

## Tickets & Fare

-  The cost of riding Link is based on distance traveled.
-  Buy ticket or ORCA card and load ORCA card at ticket machines.
-  Tap ORCA card at yellow card reader before and after your ride.
-  Have fare ready for inspection within the Fare-Paid Zone. A valid ticket or ORCA card tap is proof of payment.

## How to use ORCA

Use ORCA for easy transfers between buses, trains, streetscar and ferries. A Monthly Pass or E-purse can be loaded onto the card.

Adult ORCA cards can be purchased and reloaded at Link station ticket machines. Youth, Senior, Disabled and low-income (Link only) reduced fare ORCA cards can be purchased through customer service at a Transit Office. For locations and more information visit [orcard.com](http://orcard.com).

## Transfers

Tap your ORCA card prior to boarding; for buses, tap as you enter. The ORCA card calculates transfers automatically, and uses E-purse to cover the difference if your trip is higher than your pass value. The full transfer value is held on the card and will apply to the next bus or train if used within two hours.

Paper transfers are not accepted on any Sound Transit services. Link paper tickets do not transfer to buses, other trains, streetscar or ferries.

## Rider Information

If you have questions about Sound Transit fares, buses or trains, call 1-888-889-4368. TTY Relay 711 or visit us online at [soundtransit.org](http://soundtransit.org).

## Accessibility

- Sound Transit makes accessibility easy for riders with special needs.
- Link trains feature level boarding, so ramps or lifts are not needed.
- Doors open in front of each 6-foot-by-6-foot square of tilted tactile paving.
- Each Link car has two wheelchair priority areas.
- Set the brakes on your mobility device.

## Paratransit Service

King County Metro provides paratransit service for Link. For more information, call Metro's Accessible Services at 1-866-205-5001. TTY Relay: 1-877-349-4286.

## Lost & Found

For items lost on Link, call King County Metro at 206-553-3000. Found items will be held for 30 days at 201 S. Jackson Street. Sound Transit is not responsible for any lost, stolen or misplaced items.

## Language Services

Call 1-800-823-9230 during normal business hours to speak with Sound Transit in another language about traveling by train. Link Sign call or using an ORCA card.

中文 | Chinese [soundtransit.org/Chinese](http://soundtransit.org/Chinese)  
 Español | Spanish [soundtransit.org/Spanish](http://soundtransit.org/Spanish)  
 ភាសាខ្មែរ | Khmer [soundtransit.org/Khmer](http://soundtransit.org/Khmer)  
 ភាសាសិង្ហបុរី | Singaporean Malay [soundtransit.org/SingaporeanMalay](http://soundtransit.org/SingaporeanMalay)  
 Tagalog [soundtransit.org/Tagalog](http://soundtransit.org/Tagalog)  
 Tiếng Việt | Vietnamese [soundtransit.org/Vietnamese](http://soundtransit.org/Vietnamese)  
 1-800-823-9230

# Rider



## Passengers

- Hold personal items or store under the overhead rack.
- Give seats to disabled riders and senior citizens.
- Service animals and pets in small containers allowed.
- Turn audio volume down on the train.
- Shirts and shoes must be worn at all times.
- Do not lie down, place feet on seats or on places by putting items on seats.
- Do not harass other riders.
- Speak quietly with other riders.
- Keep your cell phone on vibrate.
- No eating.
- No hazardous, explosive or corrosive material.
- No unlawful weapons or firearms.
- No smoking.
- No loitering.
- Do not leave bags unattended.

## For Your Safety

- Never race a train.
- Look both ways before crossing.
- Remove headphones before walking up to Link stations. Trains are very quiet; you may not hear train coming.
- Stand behind the yellow line on the platform.
- Stand back when the doors open and close.
- Do not try to step the train after the doors have closed.
- Allow others to exit before boarding.

# Wordy Instruction at Station



**Confusing Payment System**



Bus and Link on the same platform



- ∞ Connections to other modes
- ✈ Airport
- Amtrak
- Ferries
- Monorail
- P Parking
- Sounder
- Streetcar



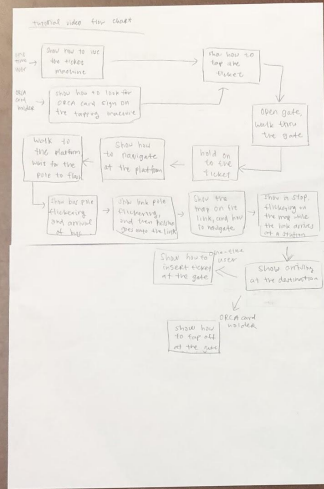
Lack of Use of Icons



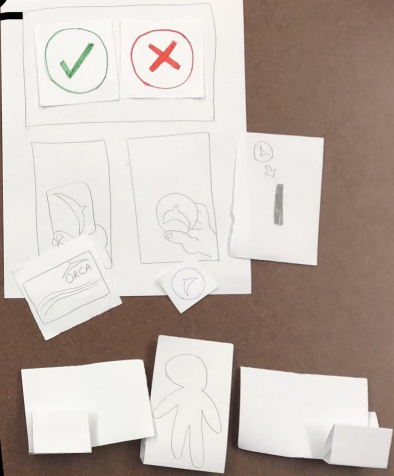
**Unclear Indication of Link Direction & Current Location**

# Initial Paper Prototype [Overview]

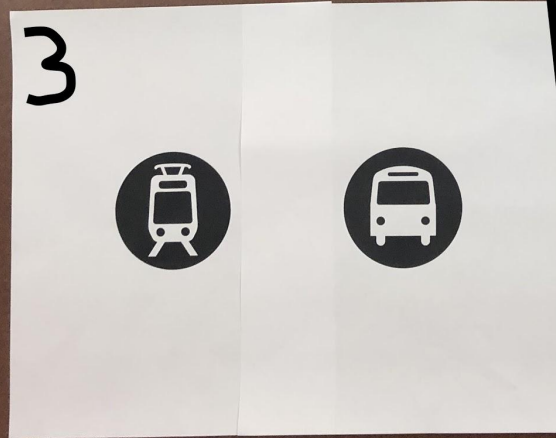
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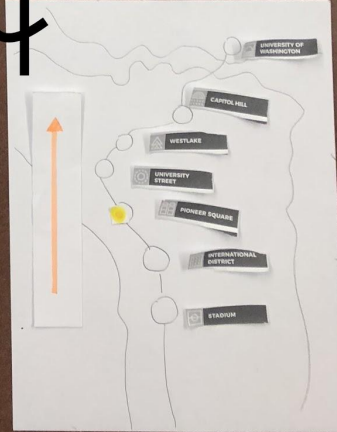
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3



4

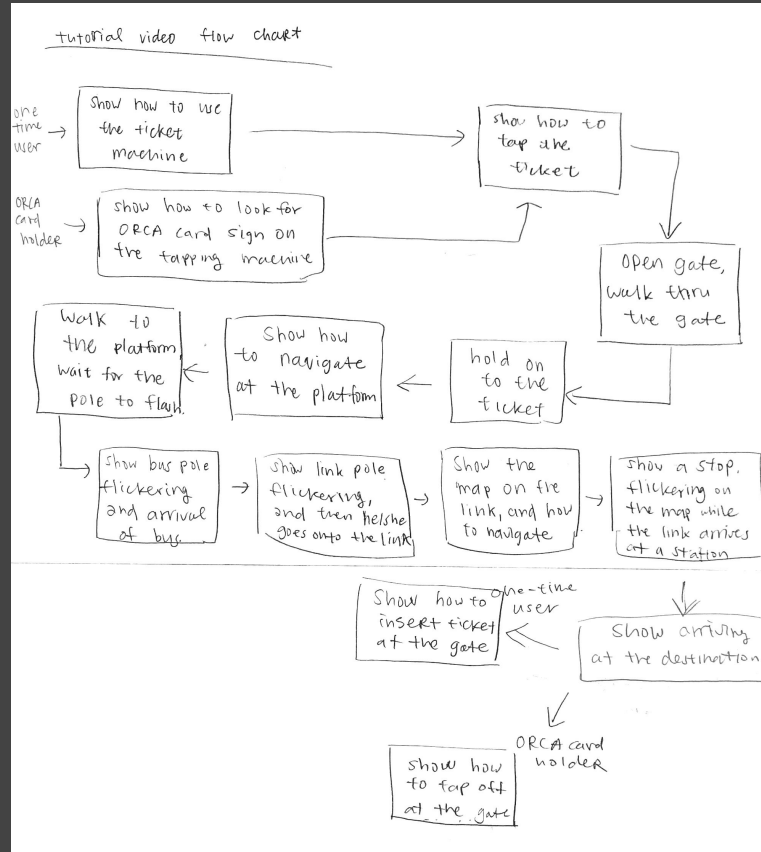




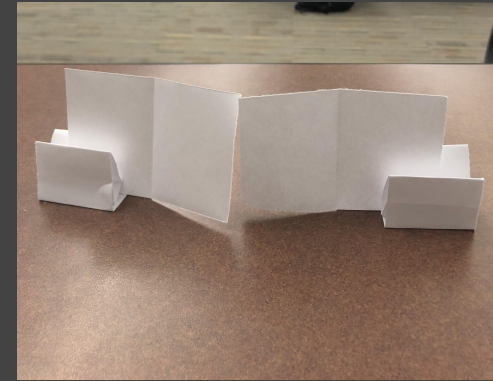
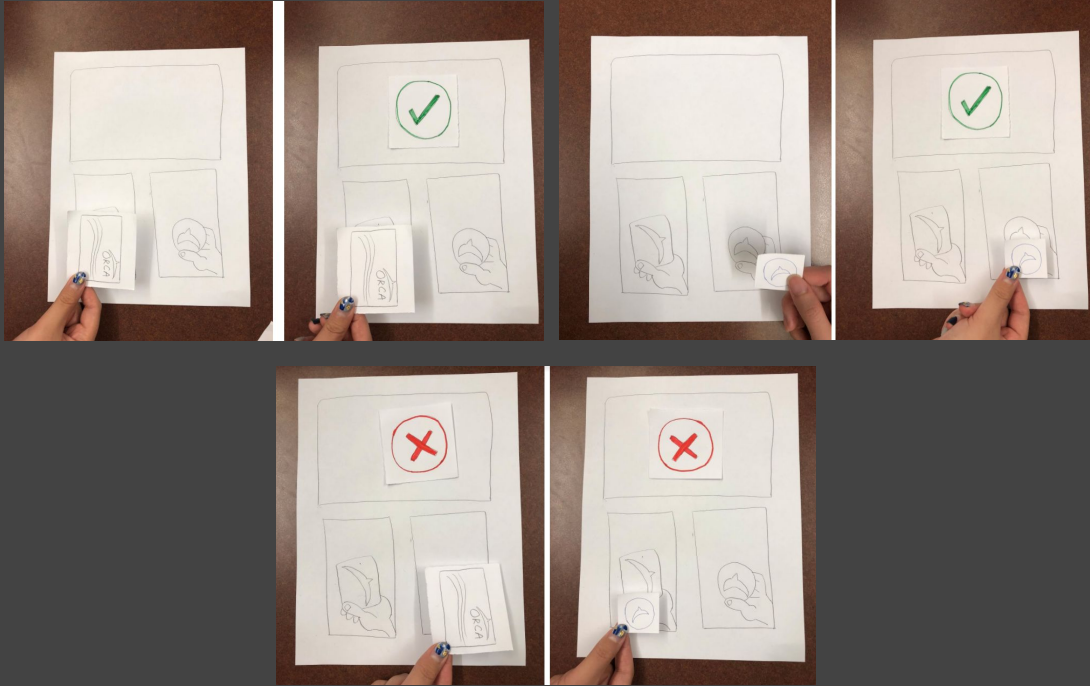
# Task 1

**Help Rider Understand Payment System Without Using English**

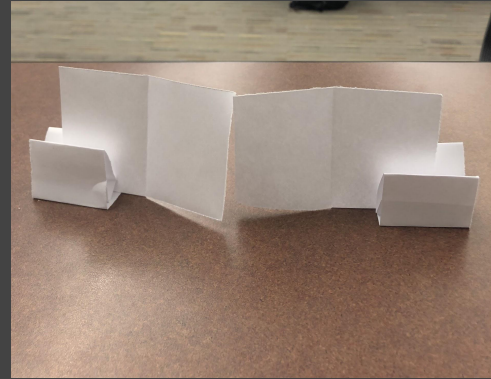
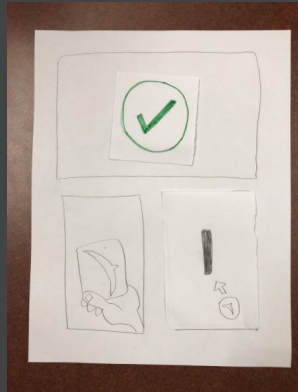
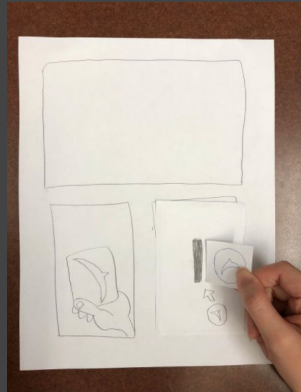
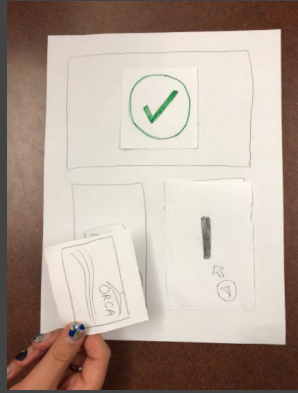
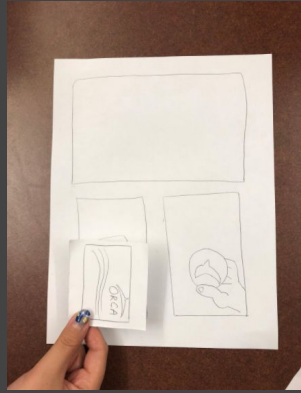
# Instructional Video Flowchart



# Entrance



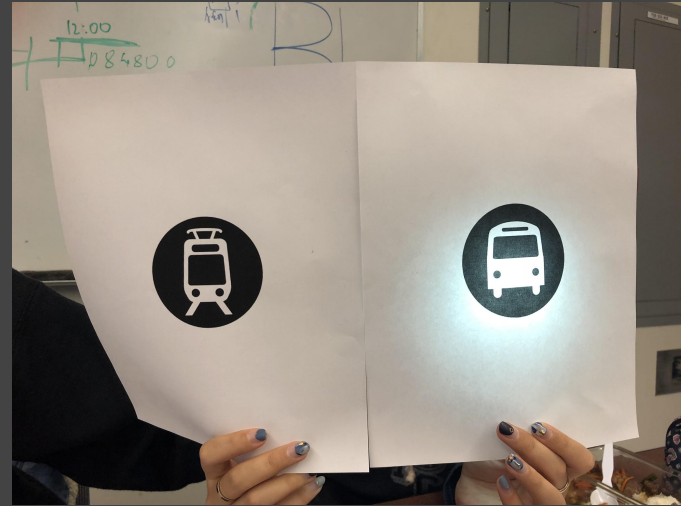
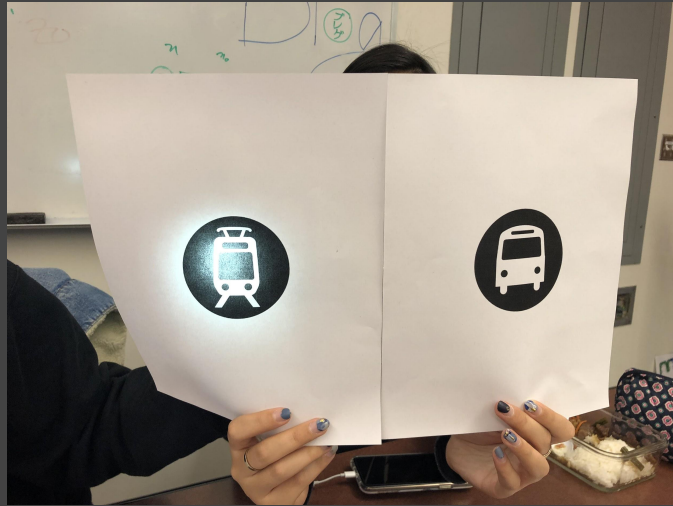
# Exit



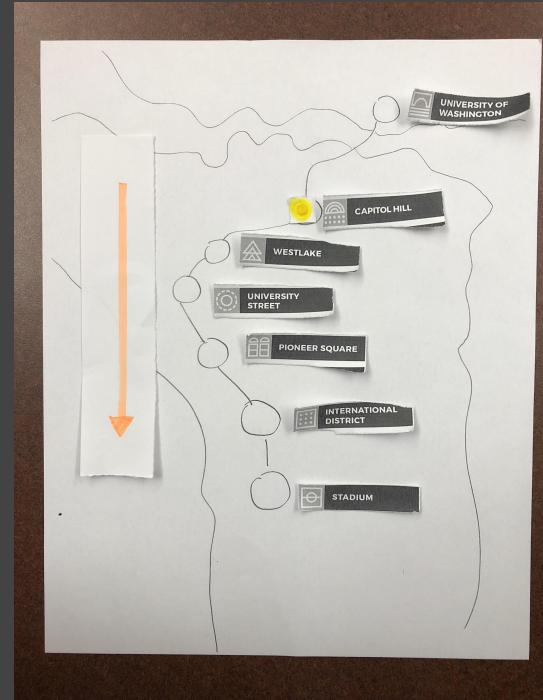
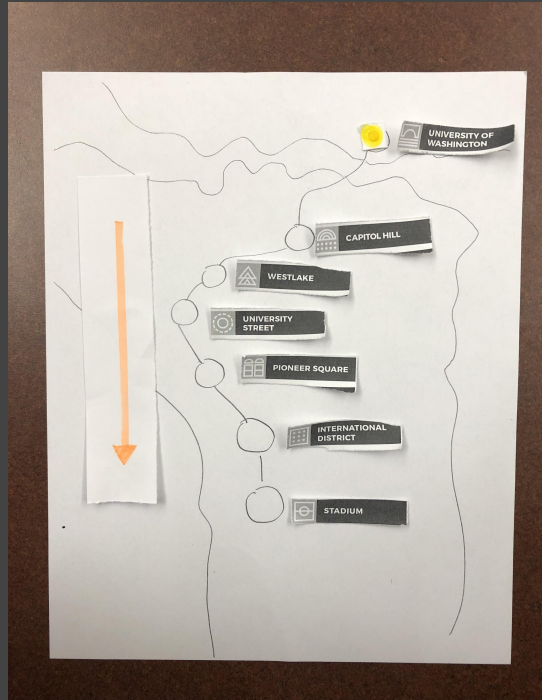
# Task 2

**Help Rider Navigate to Their Destination**

# Pole Indication of Bus and Link



# Map & Icons



# Testing Process & Results



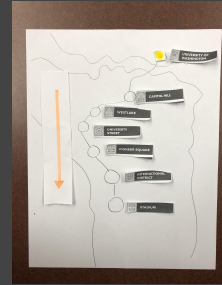
# Heuristic Evaluation

- **Visibility of System Status**

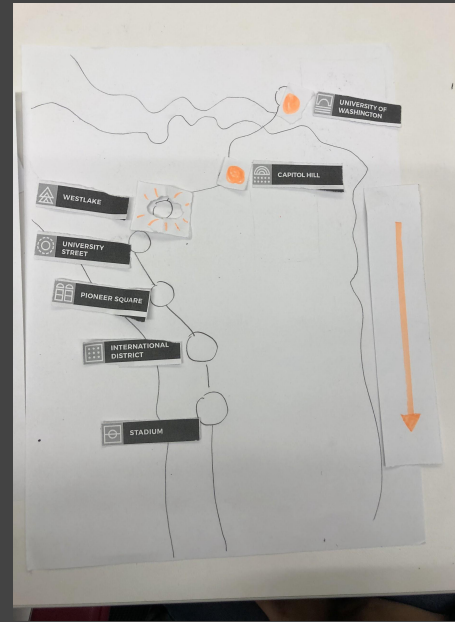
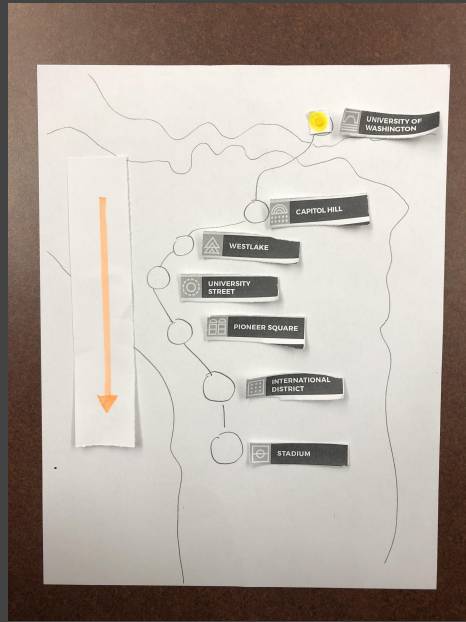
- current station or next station?
- Users may not know blinking light means the transportation is arriving soon

- **Match Between System and Real World**

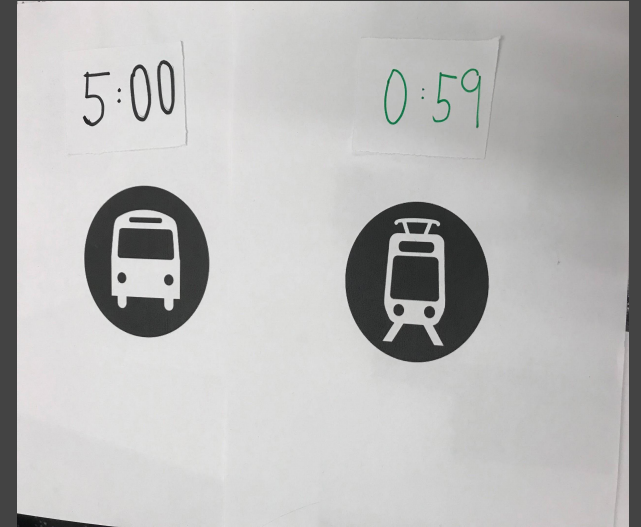
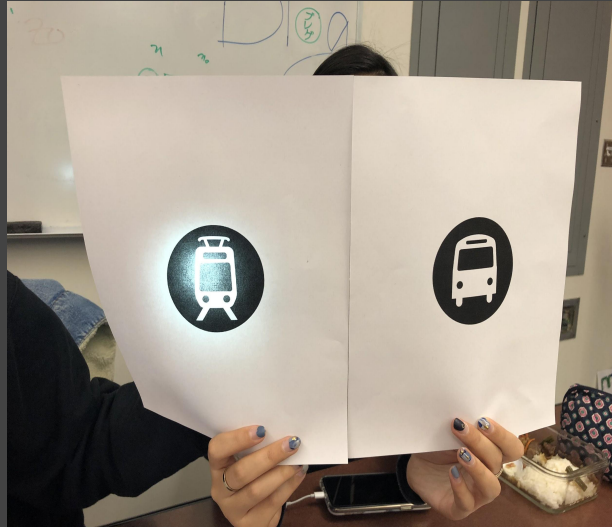
- Hard to relate station icons to the actual stations



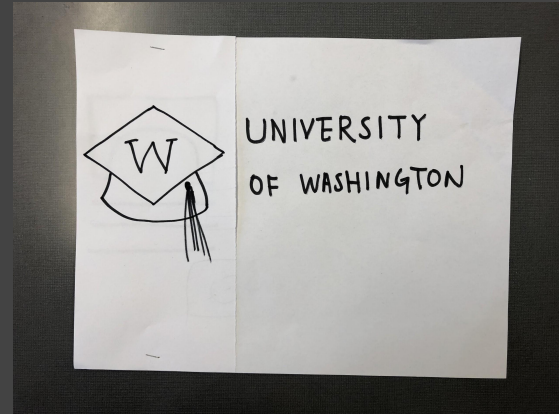
# Heuristic Evaluation - Refinements



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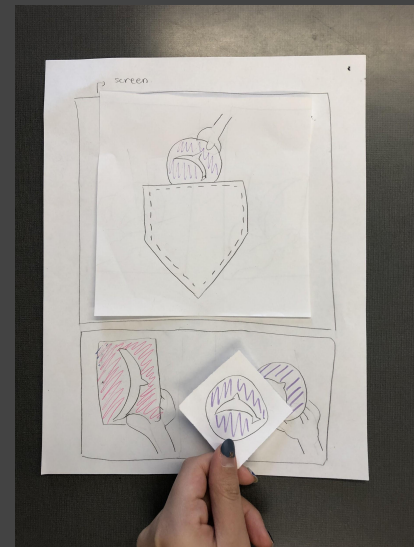
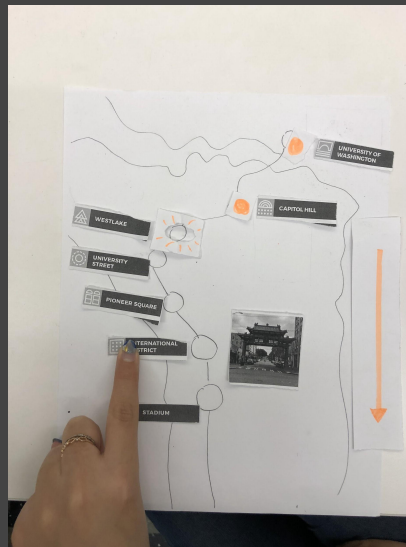


# Heuristic Evaluation - Refinements



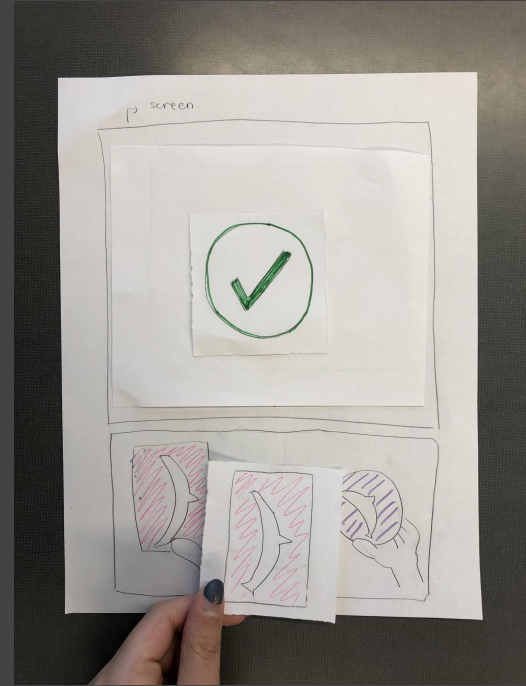
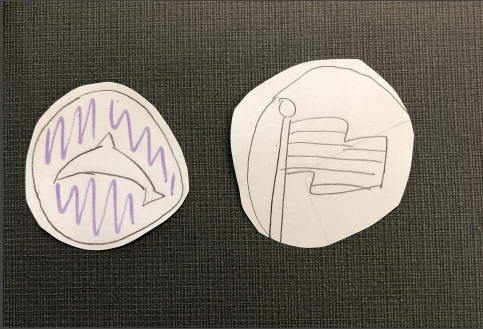
# Usability Test 1 - Refinements

- Map's ability to interact
- Reminder to keep the ticket



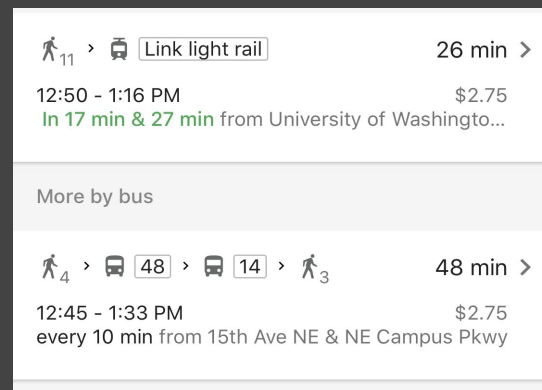
# Usability Test 2- Refinements

- Inflexibility in Tapping Machine
- Destination icon in the back of the ticket
  - To remind user where to get off

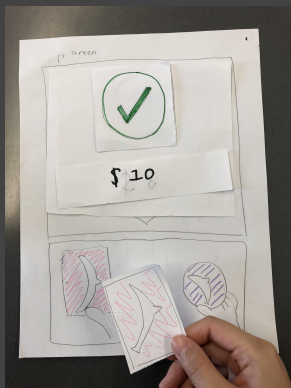


# Usability Test 3- Refinements

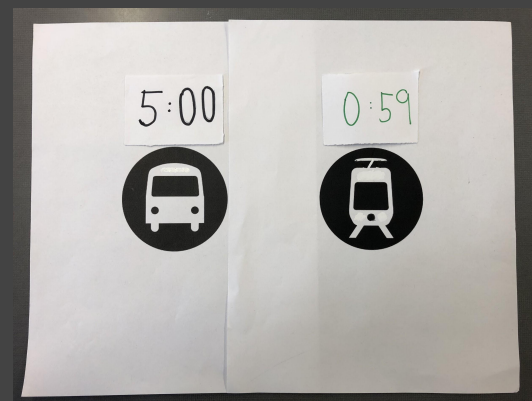
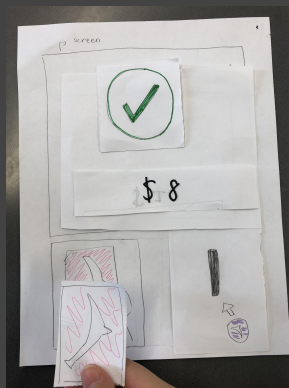
- Synchronization with Google Map icons
- Show balance in ORCA card



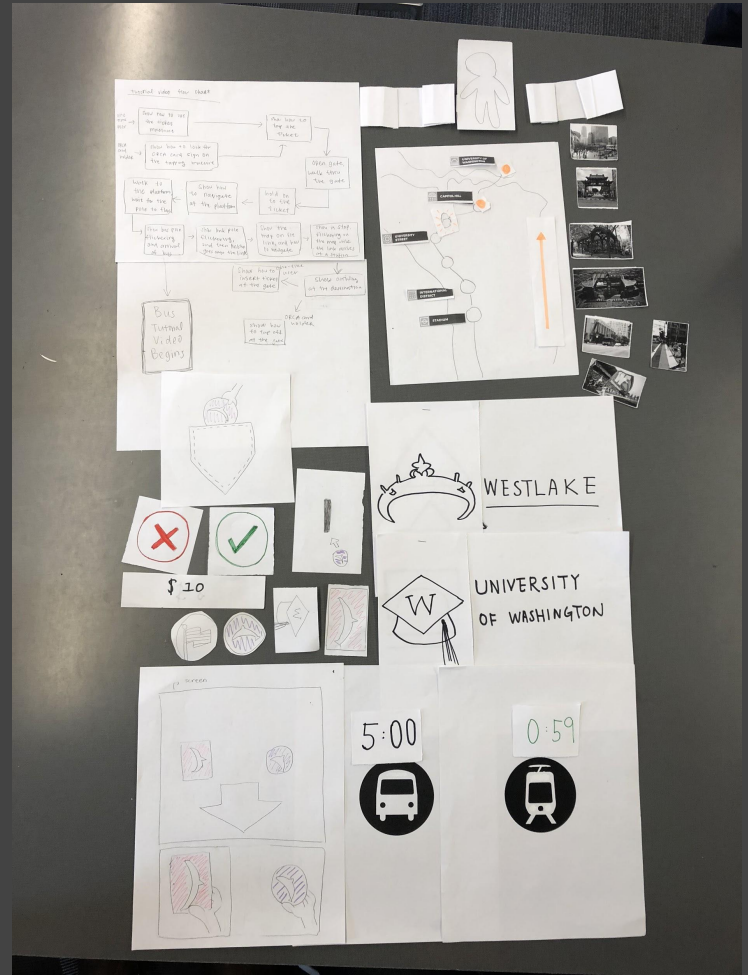
ENTER



EXIT



# Final Paper Prototype [Overview]

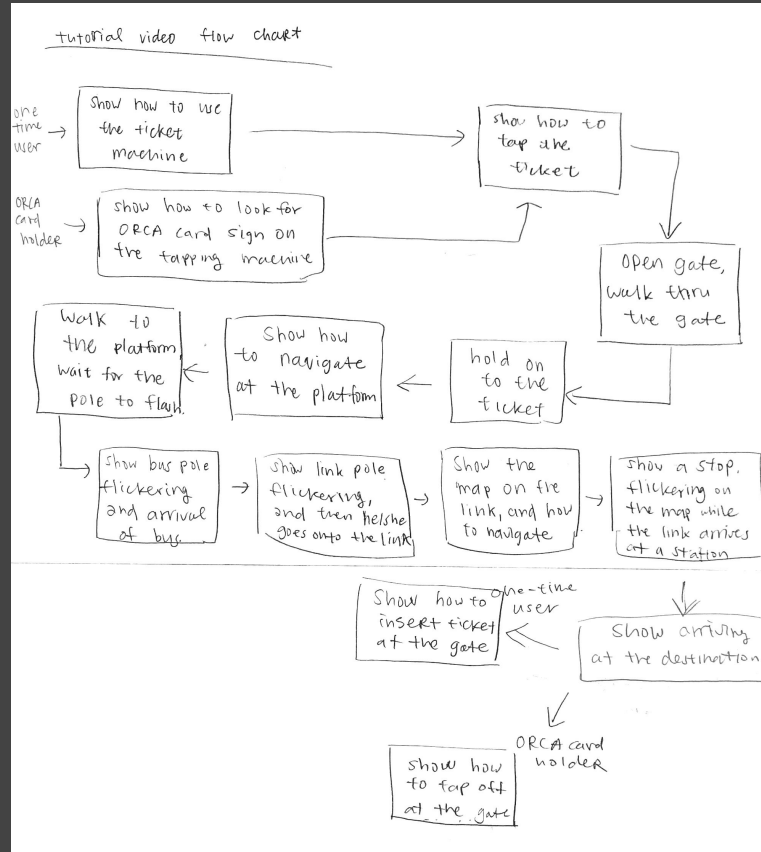




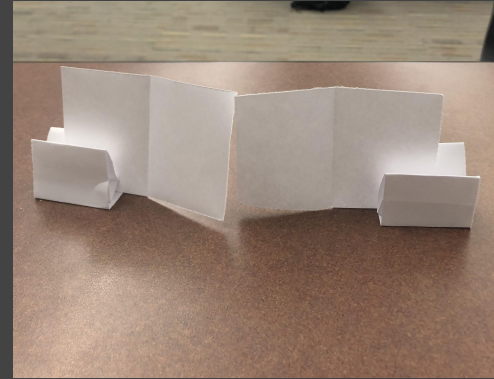
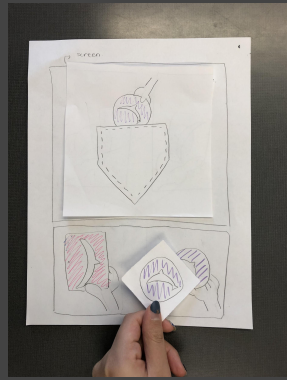
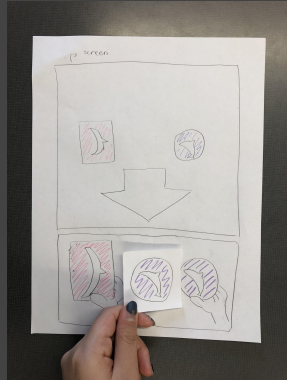
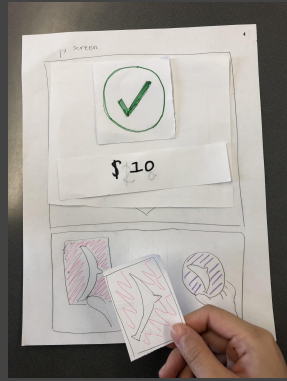
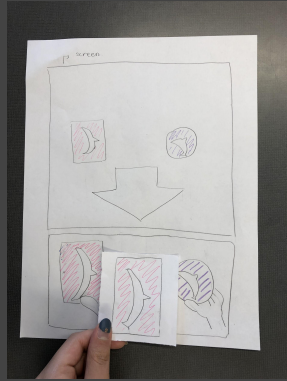
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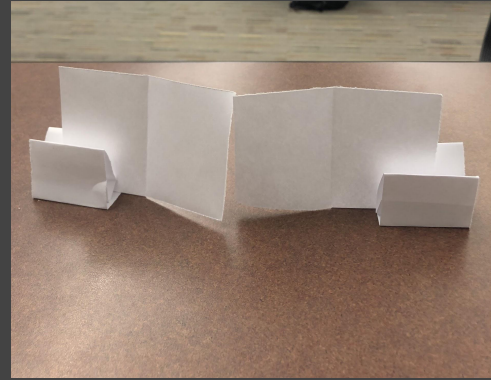
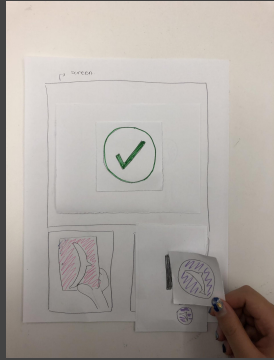
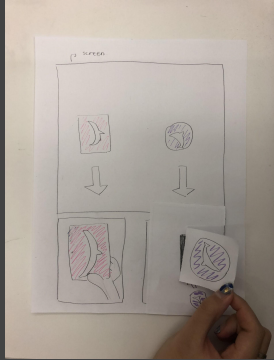
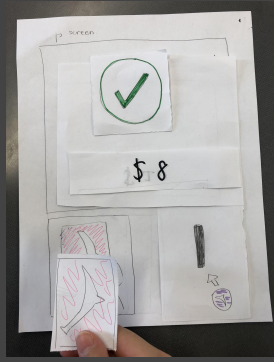
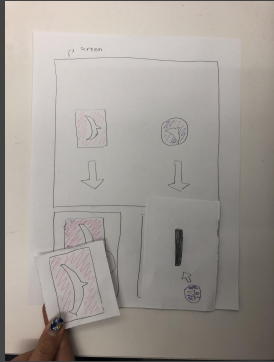
# Instructional Video Flowchart



# Entrance



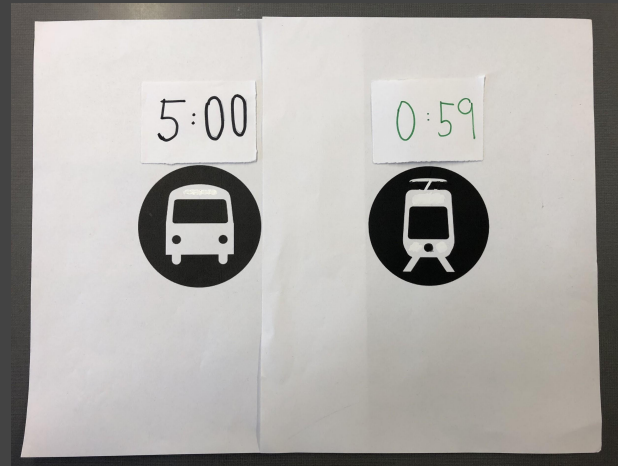
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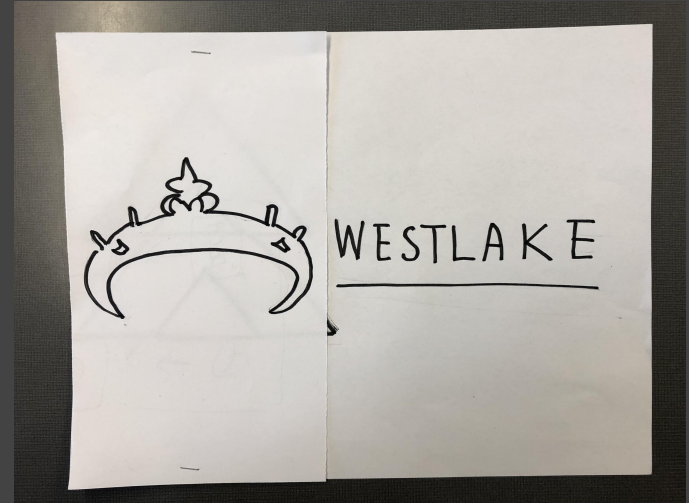
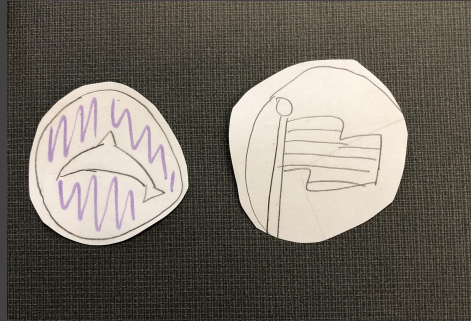
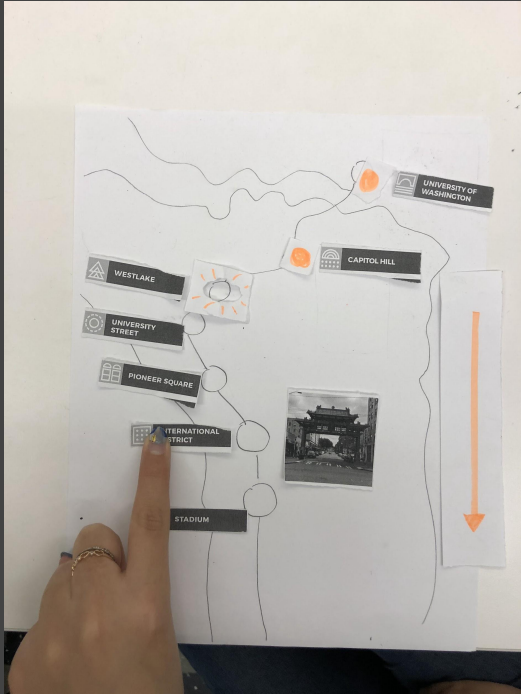
# Task 2

**Help Rider Navigate to Their Destination**

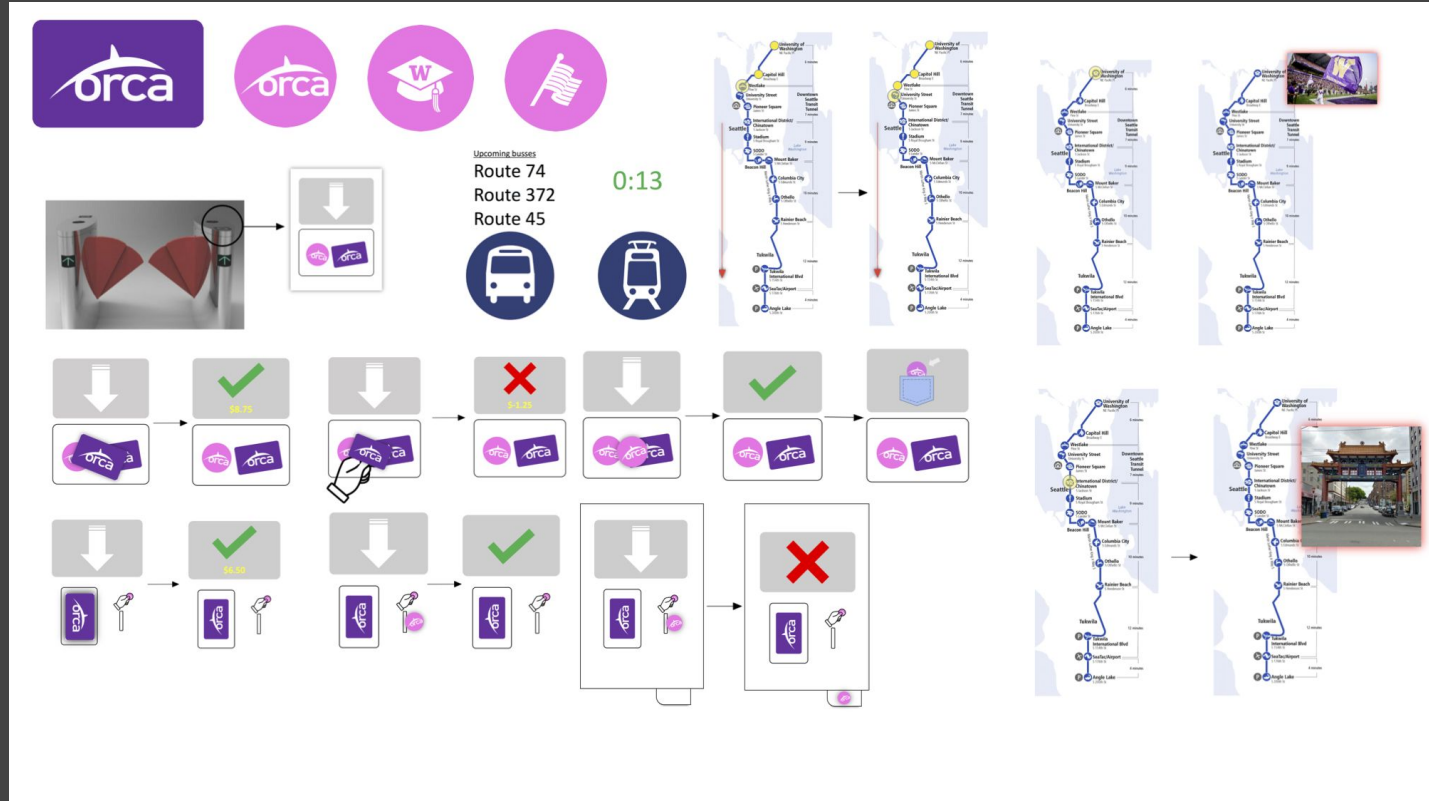
# Pole Indication of Bus and Link



# Map & Icons



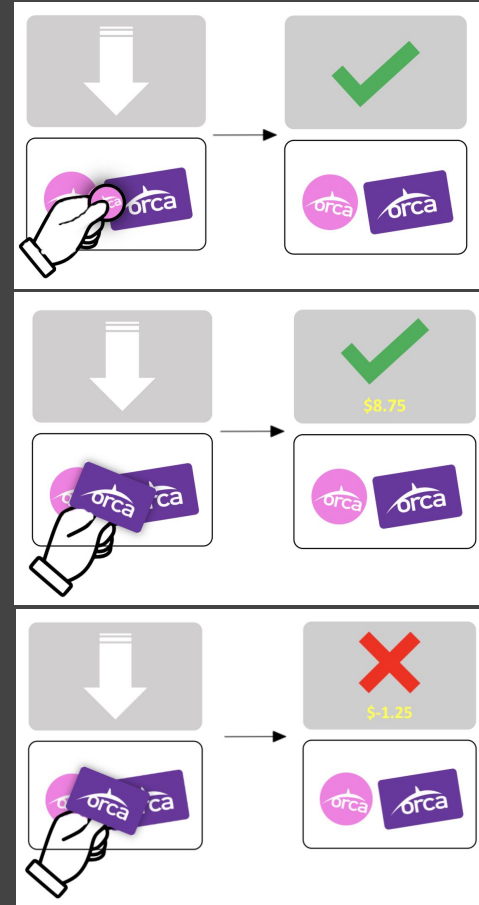
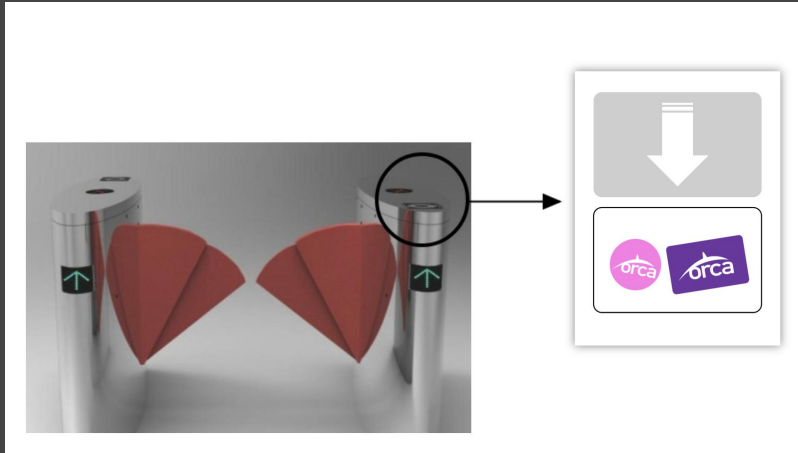
# Digital Mockup





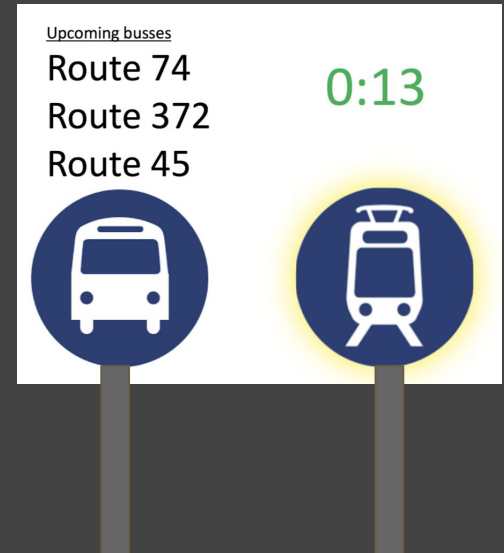
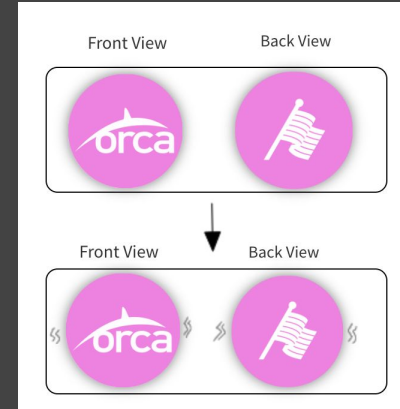
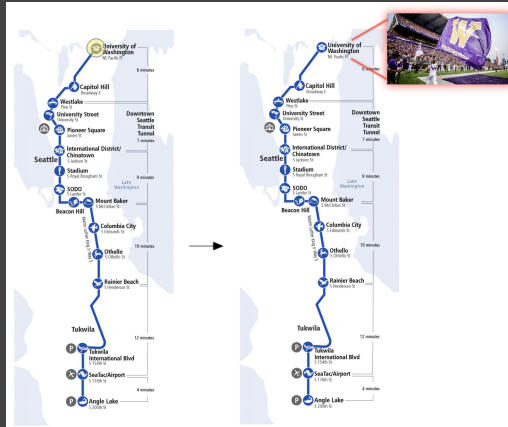
# Task 1

- Tutorial Video with only graphics
- Gates & Panel



# Task 2

- Responsive Map
- Vibrating Ticket
  - Icon shown in the back of the ticket
  - Vibrates when near the destination
- Pole with timer



# Summary

- **Defining** a problem space early is important for exploring the solution space
- It is good to **explore** a wide variety of solutions in the initial process
- Doing usability testing as **realistic** as possible takes practice
- Getting constant **feedback** throughout the process can enable an engaging and iterative design process
- **Observing** user behavior can provide as much value as getting feedback.

# Thank You

Questions?