A well designed transit system is all for naught if users cannot figure out how to use it. Transit agencies provide a range of printed and web material to help customers use the complicated systems. These materials are vital because they are portable, accurate, and independent from interaction with other entities.1 Transit providers can reference studies that have identified options for maximizing comprehension, best practice recommendations, and guidelines from other countries when designing these materials. Even so, the task is difficult and no design manual exists. 2

Over time, transit maps have seen a great amount of innovation. From color to GIS overlay, the maps serve different functions and provide different level of details to users. Researchers have attempted to recognize the best style of transit maps for user comprehension. Ease of use is defined by three essential concepts; Physical effort, cognitive effort, and affective effort. Physical effort relates to the actual physical activity needed on a trip. Cognitive effort is defined by the effort needed to gather and process navigation, orientation and trip planning. Affective effort defines the emotional effort used on a trip, dealing with service delays and safety.3 The most cost effective and often most reasonable control that a transit agency can have on these areas is to ease the cognitive effort of users. This can be achieved by adjusting schedules, maps, and wayfinding to meet the cognitive needs of the riders.

One study asked newcomers to look at 3 different kinds of bus maps and 3 different kind of rail maps in Dublin, Ireland. The survey found that the schematic map that generalized all bus routes was received much better. Most (75%) found the traditional overlay bus route map to be very bad or bad in quality. The study found that lack of quality information on the transit system deterred newcomers and new users. The newcomer satisfaction can be enhanced with improved at-stop information, maps, and schedules.4

The Central Ohio Transit Authority is undergoing a Transit System Redesign in May, 2017. All users will be faced with learning a completely new system, making the entire Central Ohio audience ‘newcomers.’ Without a careful look at the information materials, users could be left feeling dissatisfied and lost. The authors have provided two alternative examples of bus system maps for the 2017 COTA Transit System Redesign (TSR) system that apply these findings in map design.
Service Type

Frequency Legend

**Frequent**
- Operations throughout the day
- Departure times are every 15 minutes or better
  - High/Low
  - Mid-Tier
  - Mid-Tier Every 30 Mins
  - Mid-Tier Every 15 Mins
  - Morning/Evening

**Standard**
- Operations throughout the day
- Departure times are typically 15-30 minutes apart
  - High/Low
  - Mid-Tier
  - Mid-Tier Every 30 Mins
  - Mid-Tier Every 15 Mins
  - Morning/Evening

Rush Hour
- Operations Monday - Friday between 6:30 AM to 8:00 AM and 3:30 PM to 6:00 PM
- All lines begin or end downtown at the transit terminal
- The line list is on the system map

Not all serviced roads are marked on this map. If you have specific stop level questions, please find the schedules at cota.com or pick one up at your closest location.

*This map was created by Jamie Roberts for Ohio State University credit, it is not distributed or endorsed by COTA. Information accurate as of May 2017*

Please contact Jamie Roberts for edits and suggestions: jroberts37@gmail.com

COTA System Map & Information

Transit Map Redesign

Points of Interest

Minor

Major

Typically are served by more than one line

Not all services/modes are marked on the map. If you have specific stop level questions, please find the schedules at cota.com or pick one up at your closest location.

Rush Hour services are marked on the system map by their alignment. Rather, they are marked by where they can be accessed. All Rush Hour services will ultimately start or end downtown. Please see the appropriate schedules for more Rush hour service details. For more information please visit COTA.com or call customer service at (614) 228-1776.

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# Side One

Cover.indd 1

Cover.indd 2

Cover.indd 3
LATE NIGHT LINEUPS

Late night lineups are scheduled time when most major lines in Downtown are suspended to provide transfer opportunities. Useful for those working late on a Wednesday or holding an event downtown.

Lines with late night lineups:
1  Kenny/Livingston
2  E Main / N High
3  W High / Polaris Pkwy
4  S High / E Broad
5  N High / Polaris Pkwy
6  Columbus / Sullivant
7  Mt Vernon
8  Karl / S High
9  W Main / Broad
10  W Broad / Mound
11  S Main / Mound

COTA TRAVEL REMINDERS

- Sunday Schedules are on holidays.
- Be at your bus stop five minutes early.
- All buses are wheelchair accessible.
- Information is available in accessible formats.
- Fare parking is available at any COTA Park & Ride location.

BUS LINES by service area

Lines 1A-19: Run through Downtown

Lines 20-29: Run in the North & South Direction

Lines 30-39: Run in the East & West Direction

Lines 40-49: Serve Northwest Columbus

Lines 50-59: Serve Southeast Columbus

Lines 60-69: Serve Southwest Columbus

Lines 70-79: Serve Northeast Columbus

HOW TO RIDE with COTA

KNOW YOUR:
- Local number
- Departure time and location
- Destination

ARRIVE EARLY:
- Arrive at your bus stop five minutes before your bus is scheduled to leave. Check the next bus number.
- If you are late, your fare will be reduced.

PAY FARE:
- Pay for your fare or use your pass the fastest when you board. You must have exact fare in bills or coins.
- If you will transfer, ask the bus operator for a transfer pass before you pay your fare.
- Transfers are valid and sold for two hours from the time of issue. Transfers are non-refundable. This means you cannot use your transfer to continue your trip in one direction.

SIGNAL TO STOP:
- When the bus is approaching your stop, push the yellow strip or pull the cord located by the window near your seat to stop the bus.
- When the bus arrives, wait to cross the street until the red light is on.

FARES:

- Single trip options:
  - REGULAR: Standard & Frequent $2.00
  - Rush Hour (6:00-9:30 AM, 3:00-6:30 PM): $3.75
  - RapidRide: Free
  - Transfer: Free
  - 2-Trip Ticket ($5): $4.00
- Reduced options:
  - Discount: $3.00
  - Child: Free under age 3, valid only to the first stop.
- Unlimited trip options:
  - Day Pass ($5): $4.00
  - 7-Day Pass ($5): $25.00

This map was created by Jamie Roberts for course credit at Ohio State University. It is not endorsed or distributed by COTA. Information is accurate as of May 2017.

COTA TRANSFER INFORMATION

TRANSFER STOP

Locations

ZONE 1:
- W Spring St & N Front St
- N High St & E Long St
- N High St & W Long St
- W Long St & N High St
- N Front St & W Long St

ZONE 2:
- S Front St & W Broad St
- N Front St & W Broad St
- N High St & W Broad St
- S High St & E Broad St
- S 3rd St & E Broad St
- 4th St & S Capital St

ZONE 3:
- S High St & S High St
- S High St & W Main St
- W High St & S High St
- E High St & S High St
- S High St & W Mound St
- S High St & W Mound St

TRANSFERS:
- Example 2: Bus Transfer Focus, Melinda vonstein
- Columbus Transfer Center

EXTRA SERVICES:
- Transfer reminders
- Travel ideas

EXAMPLE 1: LONDON TUBE STYLE Z-MAP (FOLDED PAMPHLET) JAMIE ROBERTS

Side Two
Central Ohio Transit Authority: Bus Network Transfers

Downtown Local Routes
1. Kenny / Livingston
2. E Main / N High
3. N High / Polaris Pkwy
4. Northwest / Harrisburg
5. Indianola / Lockbourne
6. W 5th Ave / Refugee
7. Cleveland / Sullivant
8. Mt Vernon
9. Karl / S High
10. W Mound / Brentnell
11. E Broad / W Broad
12. Bryden / Maize

Crosstown Routes
21. Hilliard Rome
22. Rickenbacker / OSU
23. James / Stelzer
24. Hamilton
25. Brice
26. Hudson
27. North Broadway
28. Henderson
29. Morse

Suggested Transfer Zones
A. Easton Transit Center
B. Ohio Health Westerville
C. Bush & Shapter
D. High St & View Ave
E. Morse Rd & Indianola Ave
F. Morse Rd & Karl Rd
G. Morse Rd & 161
H. Carriage Place Shopping Ctr
I. Hilliard Cemetery Rd P&R
J. Kingsdale Shopping Ctr
K. Riverside Hospital
L. Oakland Park & Mcguffey
M. Cleveland & Hudson
N. The Ohio State University
O. Renner Rd & Hilliard Rome
P. Grandview Yard
Q. E 5th Ave & Joyce Ave
R. Hamilton Rd & Airport
S. VA Hospital

For DOWNTOWN transfers - see Downtown Transfer Map

Map Design: Melinda Vonstein | Update: 4/24/2017
Central Ohio Transit Authority: Downtown Transfers

Map Design: Melinda Vonstein | Update: 4/24/2017

Downtown Local Routes

1. Kenny / Livingston
2. E Main / N High
3. N High / Polaris Pkwy
4. Nationwide Blvd / Hickory St
5. Long St / Broad St
6. Broad St / Front St
7. Main St / Mound St
8. Mound St / Brentnell
9. Town St / Rich St
10. Rich St / Fulton St
11. Fulton St / Livingston Ave
12. Livingston Ave / Spring St

Suggested Transfer Intersections

A. High St & Spring St
   - 4092: High & Nationwide Blvd
     1. To Kenny
     2. To N High
     3. To Downtown

B. High St & Long St
   - 5910: High & Gay
     1. To Kenny
     2. To N High

C. High St & Main St
   - 4085: High & Rich
     1. To Kenny
     2. To N High
     3. To Cleveland

D. Broad St & Front St
   - 4228: Mound & High
     1. To S High
     2. To Lockbourne

E. Broad St & High St
   - 4227: Mound & High
     1. To S High
     2. To Lockbourne

F. Broad St & 3rd St
   - 4149: Spring & Wall
     1. To E Main
     2. To South Terminal

G. Broad St & 4th St
   - 4144: Mound & High
     1. To E Main
     2. To South Terminal

Key

- One-way Road
- Suggested Transfer Stop
- Suggested Transfer Intersection

EXAMPLE 2: BUS TRANSFER MAP, MELINDA VONSTEIN

Side Two