PEOPLE on the **STREETS**

Kelly McGillivray
Peoplecount

We set out to find…

HOW MANY
people
WALK
on streets?

We wanted to estimate…

24-hour mid-block count

2 sides of the street

2 directions of travel

Across an

ENTIRE

city!

I'm going to tell you…

HOW we did it

WHAT we created

WHY it's useful

HOW we did it

We did field work…

7 cities

560 pedestrian counts

60 km of sidewalk

FIELD TESTS

Chicago
New York
Philadelphia
San Francisco
Los Angeles
Atlanta
Dallas

3 COUNT SOURCES:

Stationary cameras

Mobile camera

Manual counts

Stationary cameras – 18 hour counts

Mobile camera – 12 hour counts

Manual counts – 5 min./block/hour

Chicago Pedestrian Counts

WHAT we created

CHALLENGES

- ✓ Economical
- ✓ Universal data sources
- ✓ Apply to **ANY** city

VARIABLES Tested

Local

Census

Spatial

LOCAL Variables

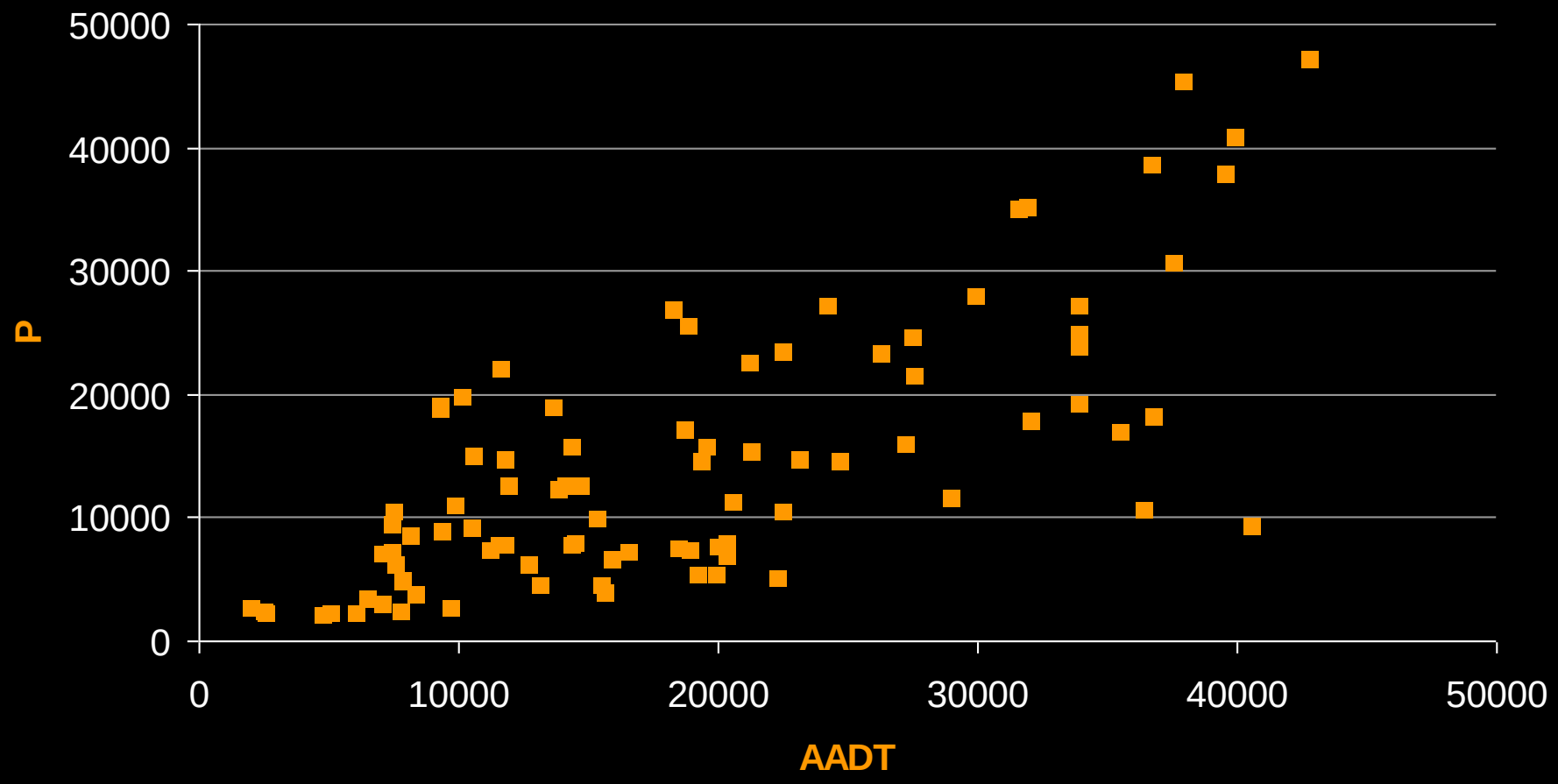
AADT

Road Class

Transit Stop

One Way

Pedestrian Volume vs AADT



CENSUS Variables

Population density

Employment density

Mode Choice

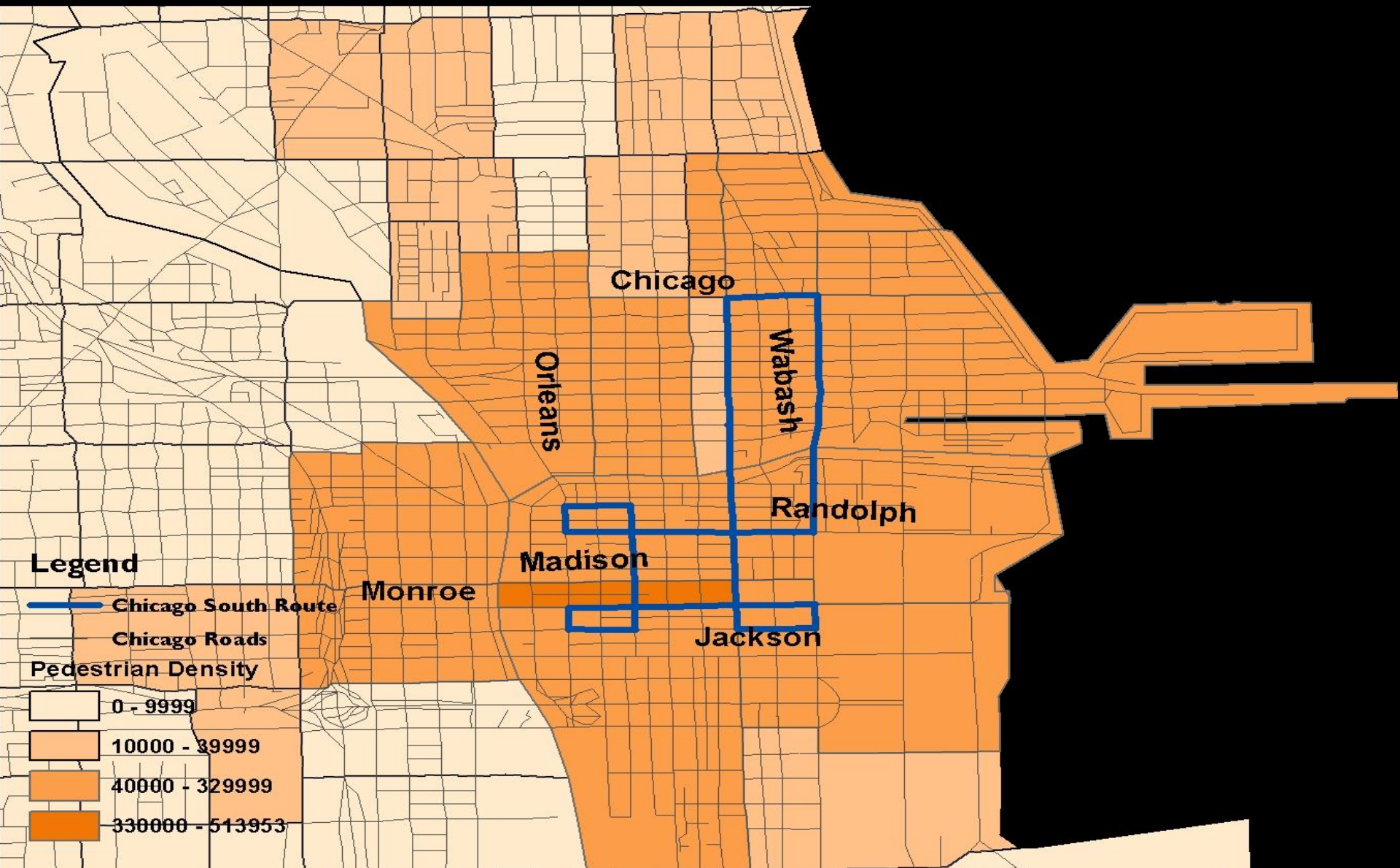
We created a new variable…

Pedestrian Density

= Daytime Population

X % Non-Drivers

Chicago Pedestrian Density



SPATIAL Variables

Axial line length

Average depth

What are spatial variables?

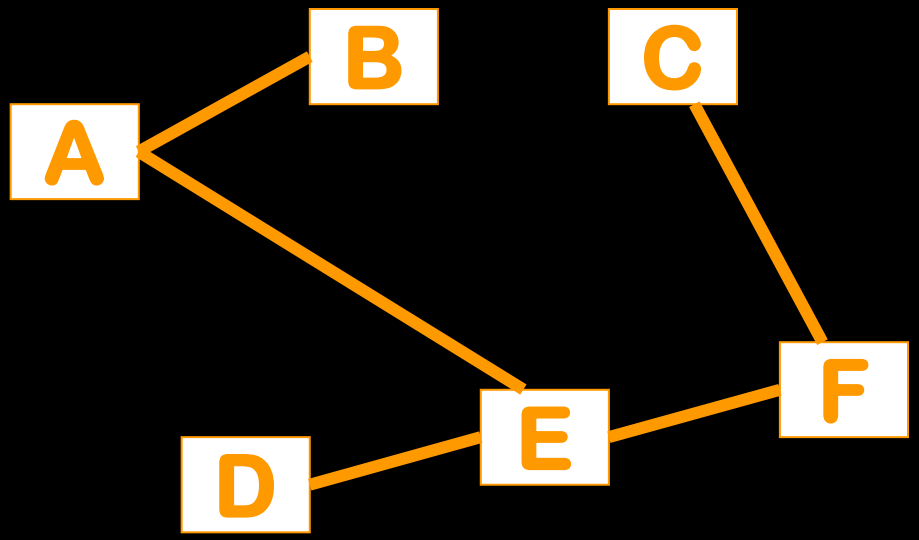
AXIAL Mapping

- ✓ Draw **lines of sight**
- ✓ 1 km buffer
- ✓ Analyze with software
- ✓ **13** integration variables

Sample Axial Map

AVERAGE DEPTH

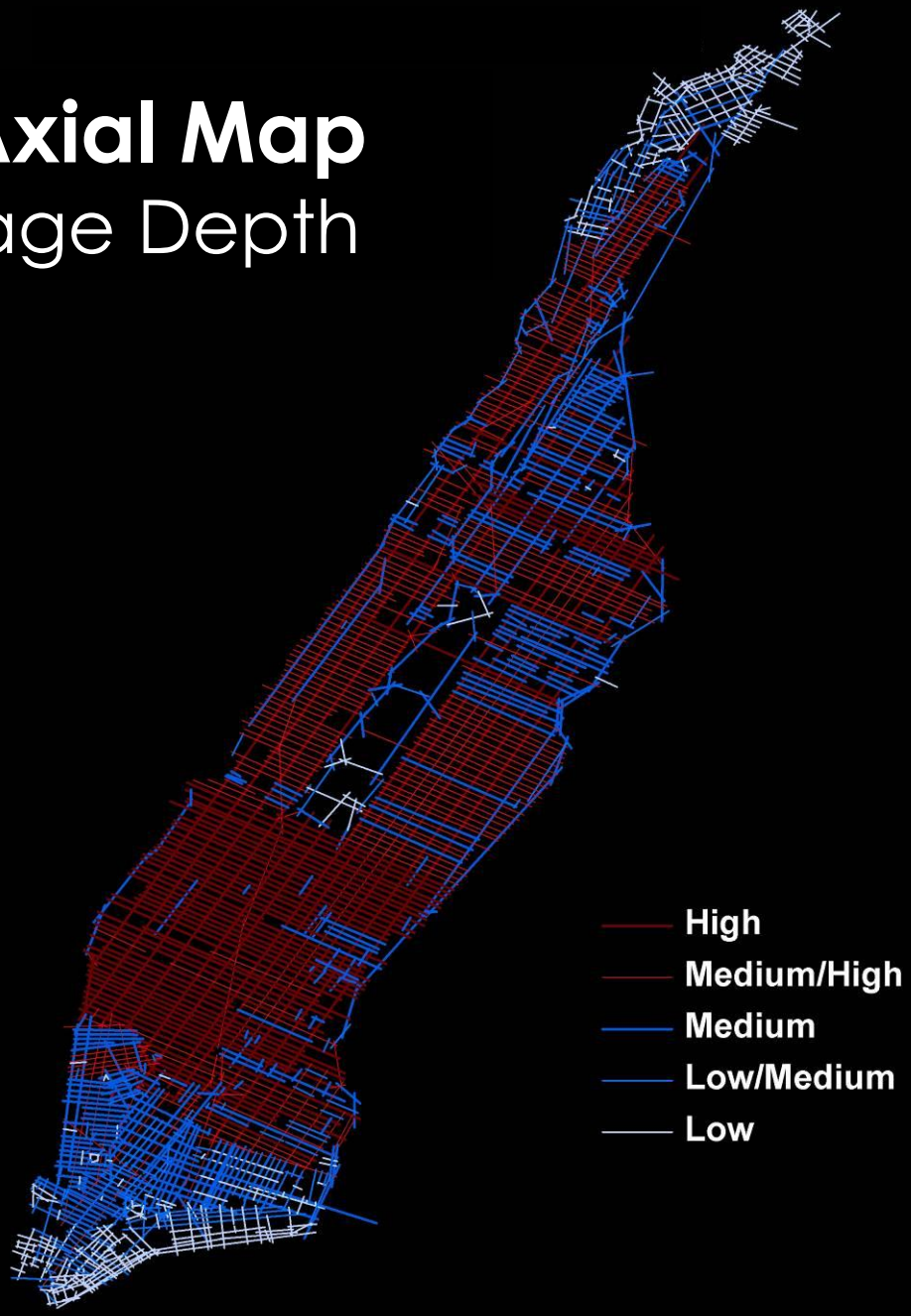
steps from one point in system **to all other points.**



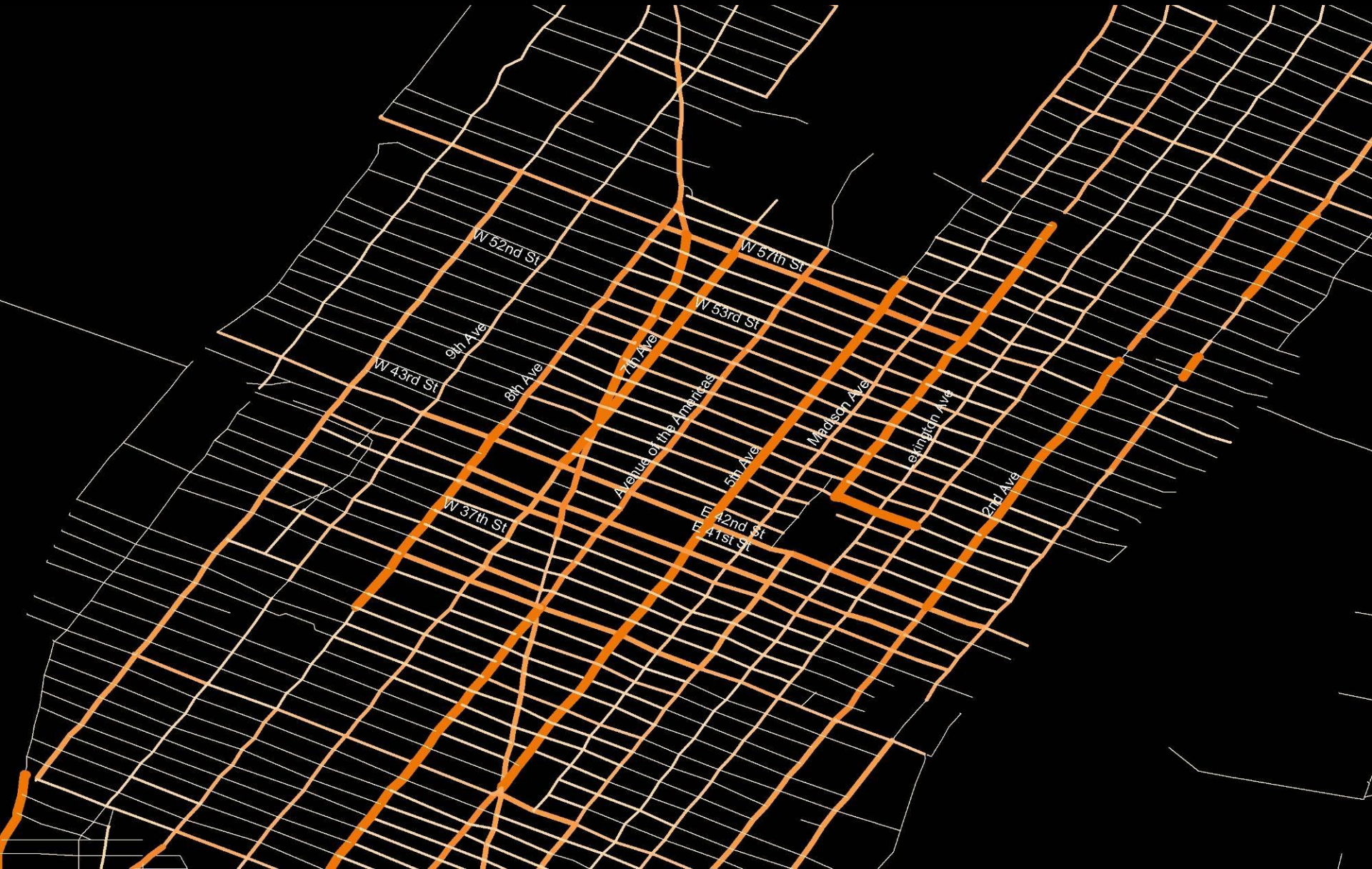
A → B	1
A → E	1
A → D	2
A → F	2
A → C	3

Avg Depth of A
= 9/6 = **1.5**

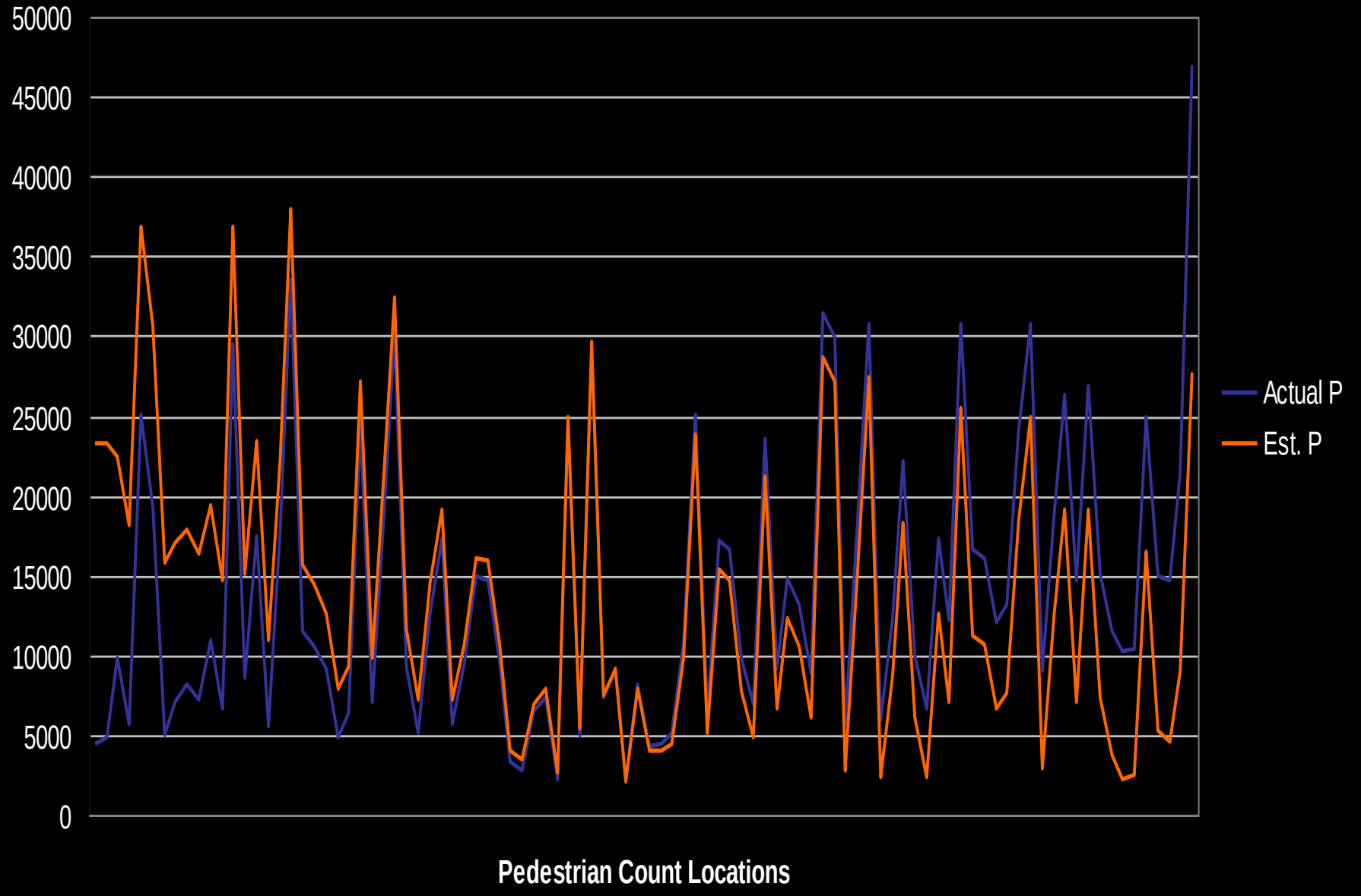
Manhattan Axial Map
Showing Average Depth



Manhattan Estimated Pedestrian Volumes



Pedestrian Model Accuracy



WHY it's useful

USES FOR PED MODEL?

COMMERCIAL

- ✓ location analysis
- ✓ retail
- ✓ real estate
- ✓ outdoor ads
- ✓ BIAs

PLANNING

- ✓ cheap counts
- ✓ ped LOS
- ✓ ped signals
- ✓ ped crossings
- ✓ accident rates

LIMITATIONS

- ✓ Granularity – 1 to 5 blocks
- ✓ Anomalies – tourist areas
- ✓ Seasonality – not adjusted

WHAT'S NEXT?

Pedestrian Paths Modelled Now

Neighbourhood Level Detail

Sample Mall Axial Map

Get to know YOUR
PEOPLE on the STREET

peoplecount

“Thank you.”

Kelly McGillivray, P.Eng.
President & Chief Methodologist
kelly@peoplecount.biz