



Department of  
Transportation

# ARNOLD, GIS and the LHI

# ARNOLD

All Roads Network of Linear (Referenced) **Data**

2012 Requirement of the FHWA  
(Federal Highway Administration)

All Public Roads

NYSDOT at +/- 15,600 Centerline Miles  
Town, Village, City, and County at  
+/- 97,000 CL Miles

# Local Highway Inventory

Listing of roads & streets under the responsibility of the towns, cities, villages, and counties of New York State.

As early as 1957

Linked to Current Funding since 1981

# Sources

Statewide “**Streets**” from GIS Program Office

- System used for E-911, address ranges
- Often used in county tax mapping

## Local Highway Inventory

**Aerial photography** and Geographic Information System (GIS) for editing

# Tools

County highway & other published maps

Commercial Internet-based mapping tools

- Google Earth, Maps, and Street View
- Bing Maps, Birds Eye View, Streetside

NYS aerial photography

Online county tax mapping

NYS planimetric quadrangle mapping

# Process

Match appropriate arcs from “Streets” to roads from Local Highway Inventory (LHI)

“Build” GIS route

Use aerial photography to measure road lengths

Edit GIS Street and/or LHI record to match measured length

Confirm With Municipality

# Edits

**Name** - try to match common names, particularly those which can be seen on road signs such as on Google Street View

**From/To descriptions** – preferably reflect visible features primarily using cross streets

**Length changes** – aerial photography used to validate

# Measurements

## Centerline to Centerline





# Network Finds



- Is it finished?
- Is it approved?
- Is there a dispute?
- Is it Public?

# Purpose – Data Delivery

## Planning

- Safety, Traffic, Travel Demand, Corridor Planning

## Program Development/Delivery

- EIS, TIP, Design, ROW, Construction

## Operations

- Public Info, Winter Maintenance, Permitting, Emergency Dispatch

## Asset Management

- Pavement/Bridge/Highway Inventory, Signs/Signals/Markings, Photolog

## Data, Data, Data. . . . (DRIP)

**“If you build it,  
they can place data on it”**

# Highway Data Services Bureau

## New York State Department of Transportation

50 WOLF ROAD, 4-2  
ALBANY, NY 12232  
518 457-1965

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# Public Road

Federal Highway Administration  
Highway Performance Monitoring System

... any road or street owned and maintained by a public authority ... open to public travel ... available, except during scheduled periods, extreme weather or emergency conditions, passable by four-wheel standard passenger cars, and open to the general public for use without restrictive gates, prohibitive signs ...