

# PASCO CDMS

## **April Bean, Traffic Statistician Pasco Sheriff's Office**

### OVERVIEW

#### *Safe Routes To School (SRTS)*

- SRTS is a program that will promote students to walk or ride their bike to school rather than being driven
- SRTS's Main Goals:
  - Less traffic flow
  - Lower number of crashes
  - Higher number of healthy, active children
- Need statistical data to prove program need
- Pasco Crash Data Management System is accessed using ArcMap
- Pasco Sheriff's Office purchased this software. Crash data is currently obtained through Traffic Operations Division. Tindale-Oliver and Associates provided consulting services.

### PASCO CDMS (ArcMap)

#### *What are some things that ArcMap can create?*

- Maps
- Buffers (parameters)
- Filters
- Layers on Map
- Tables
- Graphs (time of day, day of week, causation of crash)
- Summary Reports

### ArcMap and SRTS

#### *How is ArcMap helpful in promoting SRTS?*

- Buffer is set around a specific node
- Total number of crashes within that buffer are calculated (identifies what type of crashes are occurring and when they are occurring)
- Schools that have a high crash rate can be focused on by law enforcement
- Also helps FDOT identify which schools may be in need of physical construction (ie. Sidewalks)

## ArcMap and SRTS (con't)

HIGH CRASH RATE=  
NEED FOR SAFE ROUTES TO SCHOOL FOR  
STUDENTS=  
**MORE STUDENTS WALKING**

### TOOLBAR

- Tools include: Zoom In/Out, Full Extent, Go Back, Select Features, Identify, Find, Measure, Filter, Export, Chart, Location, CDMS Database Form, and Symbology

### MAP

- Map includes Table of Contents and Countywide Map
- Zoom in and select node on map
- Once node is selected, set buffer (1/2 mile radius is used in SRTS project) and select all nodes within buffer

### FILTER PROPERTIES

- Filters For SRTS
  - Date
  - Time
- Other Filter Selections
  - Harmful Event
    - Angle, Rear End, Backed Into, Collision w/parked car
  - Site Location
    - At intersection, Influenced by Intersection, parking lot
  - Weather Conditions / Lighting
  - Pedestrian or Bicyclist
  - DUI
  - Injuries / Fatalities
  - Type of Vehicle
    - Automobile, Medium Truck, Van, Motorcycle, Bus

## LAYERS

- Layers include the following types of crashes:
  - Total
  - Night
  - Pedestrian
  - Bicyclist
  - Disregard Signal
  - Aggressive
  - Speed
  - Truck
  - DUI

## LAYERS (con't)

- Layers also include the following qualitative information:
  - Direction from Intersection
  - Site Location
  - Crash Type
  - City names
  - Lakes
  - Streets
- Each layer can be given quantitative or qualitative symbology which can then be represented on the map

## REPORT MAP

- Map generated includes:
  - Legend
  - North Arrow
  - Graphic symbology representing total number of crashes within ½ mile parameter of school at each intersection
  - School name and address

## TABLE

- Table generated includes, but is not limited to the following:
  - Case ID and GIS Node
  - Streets 1 and 2
  - Date/Time
  - Distance and Direction from Intersection
  - First and Second Harm
  - Lighting and Weather
  - Road Surface and System Type
  - Type of Traffic Control
  - Site Location
  - Total Injury, Fatality, and Vehicle Count
  - Vehicle information (damage, causation, direction, type)
  - Involvement of bicyclist, pedestrian, truck, DUI subject

## FINAL REPORT

### *What is included on the CDMS report?*

- Top 10 Nodes (includes number of Crashes, Fatalities, and Injuries that occurred at each node/intersection)
- Map with Legend & Memo (memo provides a brief description of what the reader is viewing \*\*\* “Data includes crashes that occurred within ½ mile radius of listed school during 2005” \*\*\*)
- Site Location (graph)
- Year(s) included in the report (graph)
- Number of crashes that occurred on each day of the week (graph)
  - Also includes number of fatalities and injuries
- Number of crashes that occurred at each hour of the day (graph)
  - Also includes number of fatalities and injuries

## FUTURE GOALS

- Correlate Crash Rates with Student Enrollment
- Identify High Crash Segments in School List (Identify SRTS)
- Isolate Pedestrian School Aged Children
  - Time of Day
  - Pedestrian Age
  - Month

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