

# Memorandum



DATE December 11, 2009

TO Honorable Members of the Quality of Life Committee: Pauline Medrano (Chair),  
Vonciel Jones Hill (Vice Chair), Carolyn R. Davis, Angela Hunt, Sheffie Kadane,  
David A. Neumann, Steve Salazar

  
Thru: Forest E. Turner  
Assistant City Manager

SUBJECT Hike and Bike Trails Emergency Locator System

Attached is the Hike and Bike Trails Emergency Locator System briefing which will be presented to the Quality of Life Committee on Monday, December 14, 2009.

If you have questions or need additional information, please call me at 214-670-4071.



Paul D. Dyer, Director  
Park and Recreation Department

cc: Honorable Mayor and Members of the City Council  
Mary K. Suhm, City Manager  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
Craig D. Kinton, City Auditor  
Judge C. Victor Lander, Judiciary  
Ryan S. Evans, First Assistant City Manager  
A.C. Gonzalez, Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
David K. Cook, Chief Financial Officer  
Helena Stevens-Thompson, Assistant to the City Manager

# Hike and Bike Trails Emergency Locator System



Quality of Life Committee  
December 16, 2009



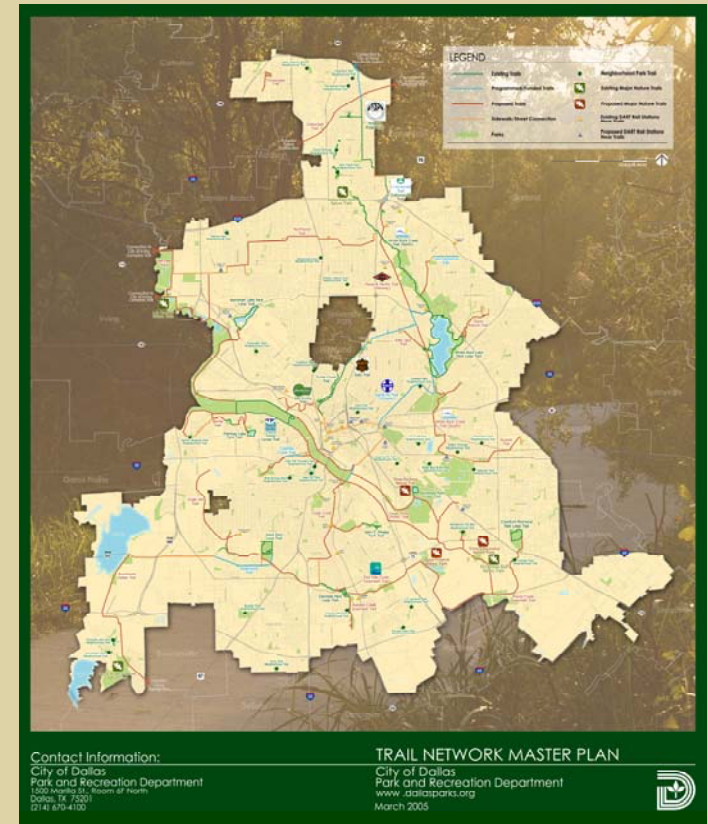
# Purpose of Briefing

- Provide background on the Trail Network Master Plan
- Discuss the need for an emergency locator system on the trails
- Review the alternative processes for addressing trails
- Discuss next steps



# Trail Network Master Plan

- The Trail Network Master Plan was adopted in March 2005
  - Trail projects in the 2003 Bond Program which are nearing completion
  - Trail projects in the 2006 Bond Program which are being implemented
  - New trail corridors



# Trail Network Master Plan

- Implementation

- The 2003 and 2006 Bond Programs allocated \$31 million for:

- Right-of-Way Acquisition
    - Matching Funds
    - Site Amenities
    - Trail Construction
    - Trail Reconstruction
    - Trail Planning

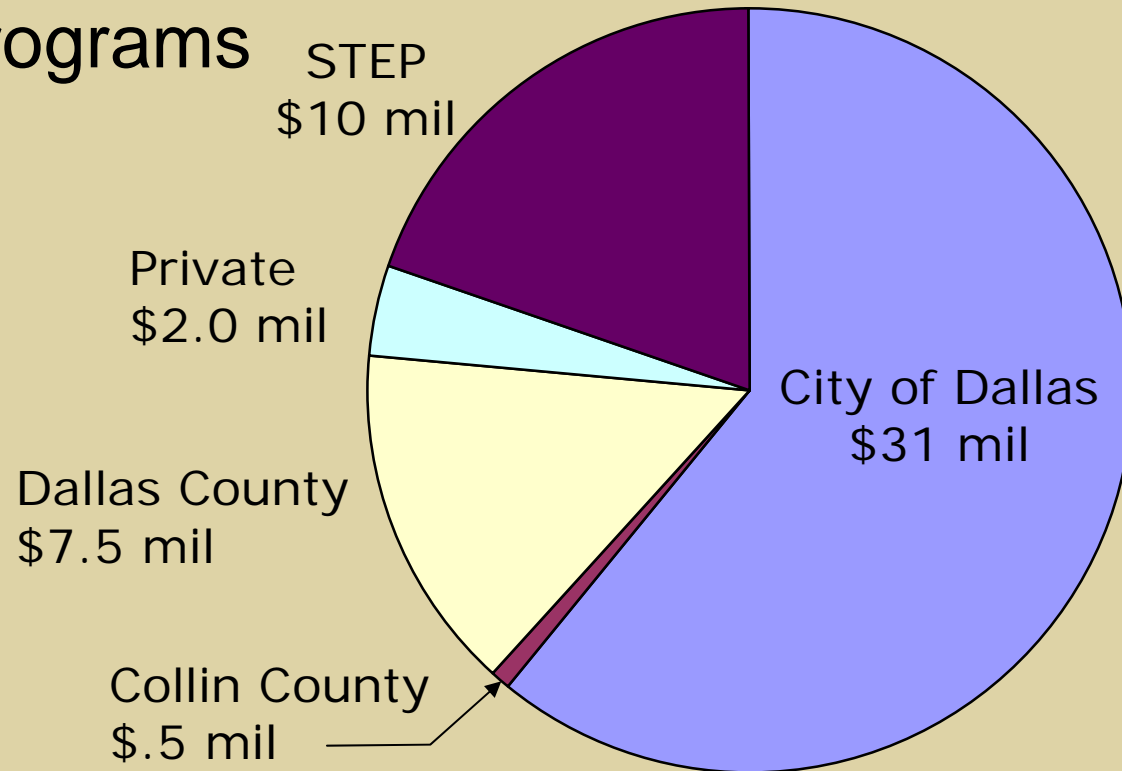


- 18 additional miles of trails funded



# Trail Network Master Plan

- The 2003 & 2006 Bond Programs leveraged an additional \$20 million through various grant and partnership programs



# Trail Network Master Plan

- Inventory of existing trails

	2005	2008	Existing and Funded Trails
Major Linear Trails	28.8 miles	34.9 miles	66.0 miles
Major Loop Trails	20.1 miles	20.7 miles	20.7 miles
Major Nature Trails	22.8 miles	23.0 miles	23.0 miles
Neighborhood Trails	13.8 miles	19.4 miles	19.4 miles
<b>Total Miles</b>	<b>85.5 miles</b>	<b>98.0 miles</b>	<b>129.1 miles</b>
<b>Additional Proposed Trails</b>	<b>144.0 miles</b>	<b>172.9 miles</b>	<b>141.8 miles</b>
<b>Plan Total</b>	<b>229.5 miles</b>	<b>270.9 miles</b>	<b>270.9 miles</b>



# Emergency Locator System

- As trail usage has increased so has the need for emergency responses:
  - Accidents and/or injuries
  - Crimes



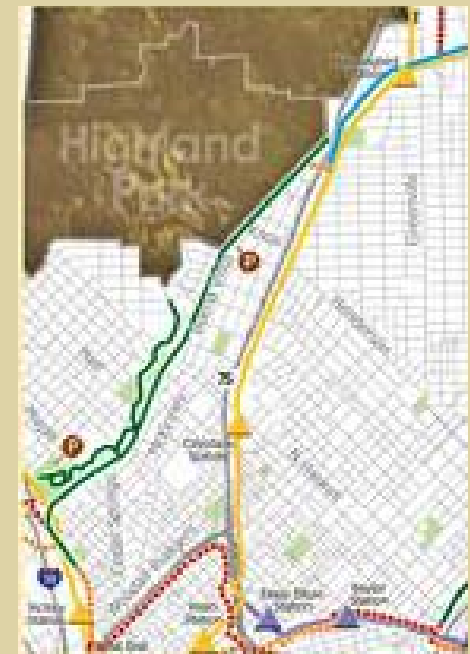
# Emergency Locator System

- Most of the major linear trails are in railway and utility easements with limited street access



# Emergency Locator System

- The Friends of the Katy Trail wanted to increase safety on the Katy Trail by placing Call Boxes along the trail
  - Call Boxes require a street address
    - Katy Trail does not front on streets, but is located behind residential and commercial properties
    - Most street crossings are grade-separated



# Emergency Locator System

- Issues:
  - How can trails fit into the 911 system?
  - Can trails have addresses similar to streets?
    - To fit in the 911 system, trails would have to be designated “pedestrian ways”
    - There are numerous streets in Dallas that are called trails



# Emergency Locator System

- What solutions are out there?
  - Staff was unable to find where any trail management agency was addressing this issue
- It was determined that Dallas would need to create its own solution to this issue.



# Emergency Locator System

- A coordinated city effort was required to address this issue
  - Park and Recreation Department
    - Planning
    - Maintenance
  - Dallas Fire-Rescue
  - Enterprise GIS
  - Computer Aided Dispatch personnel



# Emergency Locator System

- After reviewing several options the team determined that a unique “911” pole marker system was the best way to proceed.
- It was determined that it is imperative that the 911 pole markers:
  - Could be seen from any location on the trail
  - Would have a similar appearance on every trail throughout the City’s trail network
  - Could be purchased within current budget allocations



# Emergency Locator System

- The solution was to find a way to assign addresses to the pole markers
  - Each trail would be given initials to specify which trail
    - Example: Katy Trail = KT
    - Example: White Rock Lake Trail = WRT
  - Each pole marker would have an individual number



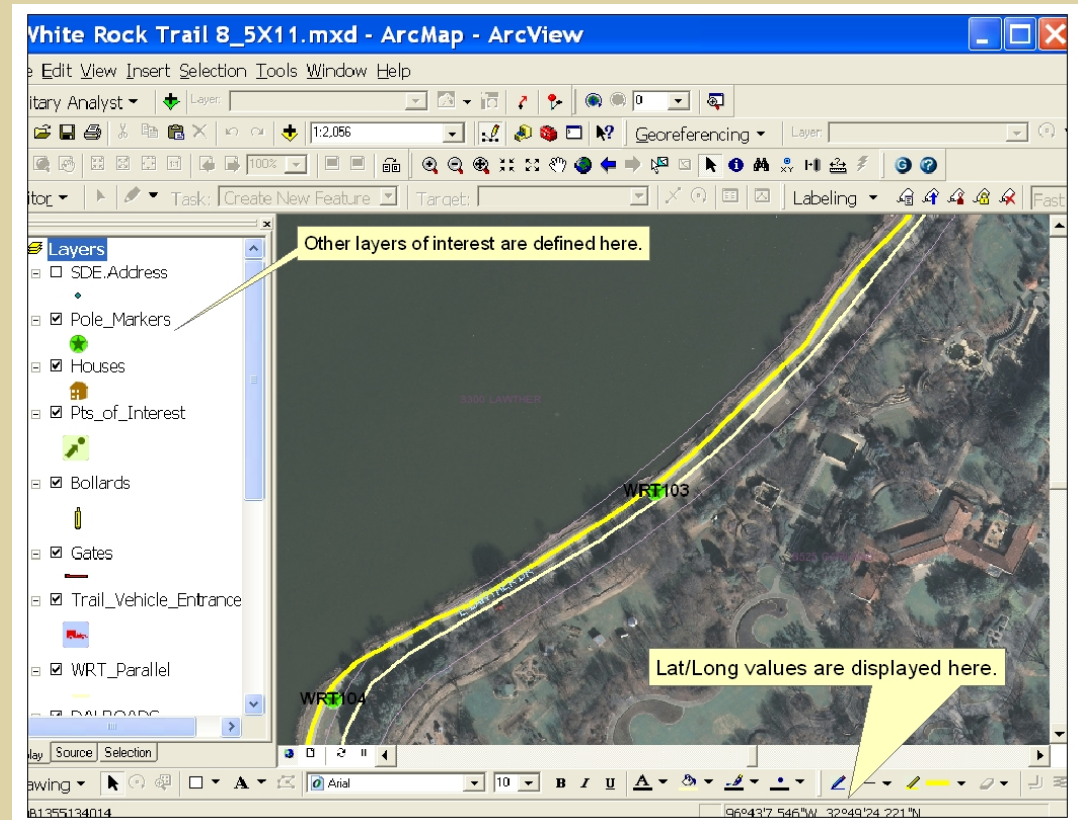
# Katy Trail

- Due to increased incidents on the Katy Trail, the Dallas Police Department requested that this trail be the pilot location
  - Park staff installed poles every 1/8<sup>th</sup> of a mile
  - DFR staff plotted each pole location on maps
  - DFR assigned each pole a unique number
    - KT 103, for Katy Trail marker number 103



# Katy Trail

- DFR gathered the data on each pole necessary to enter the location in a shapefile in ArcView
  - The data included latitude and longitude information



# Katy Trail

- Closest trail access for vehicular traffic
- Closest access for foot traffic



## Katy Trail Map Legend

Katy Trail Access & 911 Pole Marker Locations.mxd - ArcMap - ArcView

File Edit View Insert Selection Tools Window Help

Military Analyst Layer: 1:22,350 Georeferencing

Editor Task: Create New Feature Target: Labeling

Layers

- KatyMrker\_BladePosts
- 911 Pole Markers
- Vehicle / Walk In Access-West
- Vehicle / Walk In Access-East
- Vehicle / Walk In Access
- Pedestrian West Access
- Walk In Only Access
- Katy Trail
- Parallel Alley
- Dallas Trails
- Dalroads

Vehicle / Walk In Access-West

Vehicle / Walk In Access-East

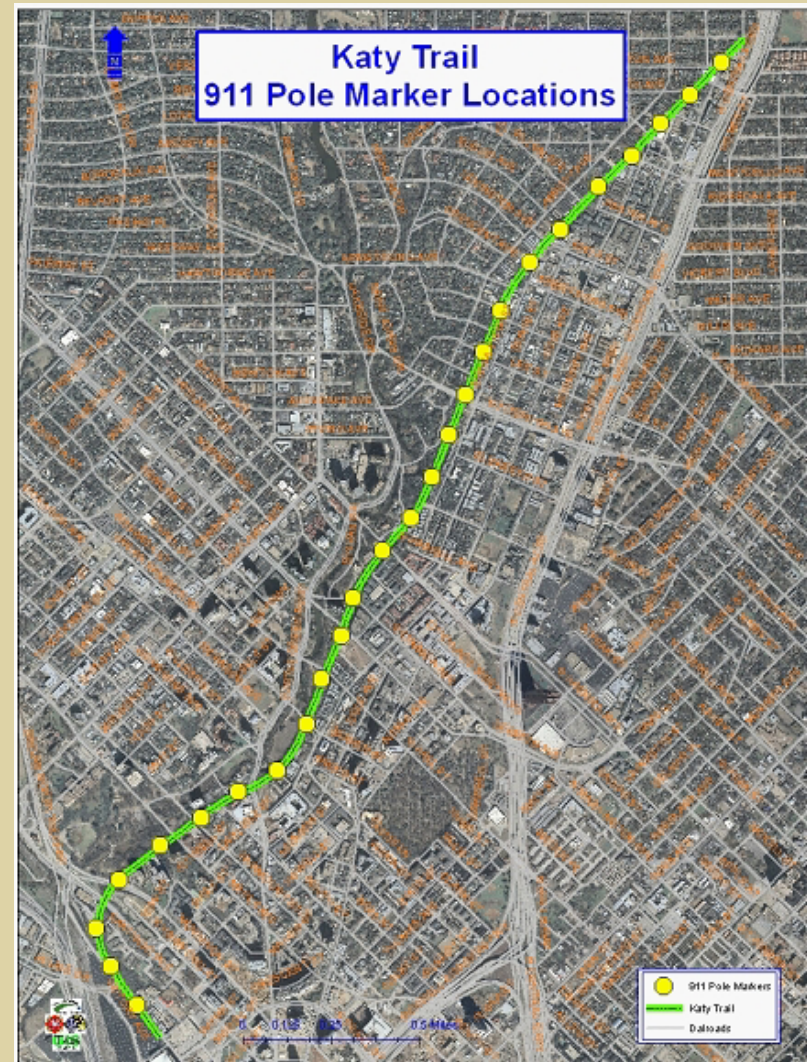
Walk In Only Access

911 Pole Markers

Katy Trail

Parallel Alley

# Katy Trail 911 Pole Markers



# Katy Trail

- By assigning addresses to each pole, CAD was able to dispatch to the coinciding address when the pole number was entered
- Caution Notes were then added to each of these linked dispatching coordinates
  - The Caution Notes would be transmitted to the Mobile Data Computers (MDC) on the emergency vehicles
  - The Caution Notes would supply directions along the trail to enable emergency crews to locate the pole and thus locate the emergency



# Katy Trail Caution Notes

## Attributes of 911 Pole Markers

POST	ACCESS_PT	Caution
125	Airline Rd and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 5399 McKinney Ave, go NE you're there. Foot access from alley west of trail. Alley access at 5001 Airline Rd, go SW. Bollards must be removed and returned at access point.
124	Harvard Ave and head north.	Nothing larger than a rescue allowed on trail. Rescues enter at 3198 Harvard Ave, go NE 1/8 mile. Foot access from alley west of trail. Alley access at 3198 Harvard Ave, go NE. Bollards must be removed and returned at access point.
123	Harvard Ave and head north.	Nothing larger than a rescue allowed on trail. Rescues enter at 3198 Harvard Ave, go NE 1/16 mile. Foot access from alley west of trail. Alley access at 3198 Harvard Ave, go NE. Bollards must be removed and returned at access point.
122	Harvard Ave and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3198 Harvard Ave, go SW 1/8 mile. Foot access from alley west of trail. Alley access at 3198 Harvard Ave, go SW. Bollards must be removed and returned at access point.
121	Knox St and head north.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go NE 1/8 mile. Foot access from alley west of trail. Alley access at 3198 Harvard Ave, go SW. Bollards must be removed and returned at access point.
120	Knox St and head north.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go NE, you're there. Bollards must be removed and returned at access point.
119	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 1/8 mile. Foot access at 4599 Buena Vista St, go south 1/32 mile. Bollards must be removed and returned at access point.
118	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 1/4 mile. Foot access at 3501 Cragmont Ave, marker pole just south. Bollards must be removed and returned at access point.
117	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 3/8 mile. Foot access at 3500 Edgewater St, marker pole just south. Bollards must be removed and returned at access point.
116	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 1/2 mile. Foot access at 3498 N Fitzhugh Ave, marker pole just north. Bollards must be removed and returned at access point.
115	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 5/8 mile. Foot access at 3498 N Fitzhugh Ave, go south 1/8 mile. Bollards must be removed and returned at access point.
114	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 3/4 mile. Foot access at 3499 Cambrick St, go north 1/16 mile. Bollards must be removed and returned at access point.
113	Knox St and head south.	Nothing larger than a rescue allowed on trail. Rescues enter at 3399 Knox St, go SW 7/8 mile. Foot access at 3499 Cambrick St, go south 1/16 mile. Bollards must be removed and returned at access point.
112	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 7/8 mile. Foot access at 3499 Cambrick St, go south 3/16 mile. Bollards must be removed and returned at access point.
111	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 3/4 mile. Foot access at 3299 Carlisle Pl, go north 1/8 mile. Bollards must be removed and returned at access point.
110	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 5/8 mile. Foot access at 3299 Carlisle Pl, go north 1/16 mile. Bollards must be removed and returned at access point.
109	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 1/2 mile. Foot access at 3299 Carlisle Pl, go south 1/8 mile. Bollards must be removed and returned at access point.
108	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 3/8 mile. Foot access at 3299 Carlisle Pl, go south 1/4 mile. Bollards must be removed and returned at access point.
107	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 1/4 mile. Bollards must be removed and returned at access point.
106	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go NE 1/8 mile. Bollards must be removed and returned at access point.
105	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go SW 1/8 mile. Bollards must be removed and returned at access point.
104	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go SW 1/4 mile. Bollards must be removed and returned at access point.
103	Routh St from the east and head	Nothing larger than a rescue allowed on trail. Rescues enter from the east side of trail at 3136 Routh St, go SW 3/8 mile. Foot access at 1862 Goat Hill, go NE 1/16 mile. Bollards must be removed and returned at access point.
102	All Star Way at Houston St from t	Nothing larger than a rescue allowed on trail. Rescues enter the Katy Trail from 2740 N Houston St north of All Star Way, go NW 3/8 mile. Foot access at 1862 Goat Hill, go SE 1/16 mile. Bollards must be removed and returned at access point.
101	All Star Way and head north.	Nothing larger than a rescue allowed on trail. Rescues enter the Katy Trail from 2740 N Houston St north of All Star Way, go NW 1/4 mile. Bollards must be removed and returned at access point.
100	All Star Way and head north.	Nothing larger than a rescue allowed on trail. Rescues enter the Katy Trail from 2740 N Houston St north of All Star Way, go NW 1/8 mile. Bollards must be removed and returned at access point.



Record: 14 | 0

Show: All Selected

Records (0 out of 26 Selected)

Options



# Katy Trail Caution Notes

Post	Access PT	Caution
124	Harvard Ave and head north	Nothing larger than a rescue allowed on trail. Rescues enter at 3198 Harvard Ave, go NE 1.6 mile. Foot access from alley west of trail. Alley access at 3198 Harvard Ave. go NE. Bollards must be removed and returned at access point.
101	All Star Way and head north	Nothing larger than a rescue allowed on trail. Rescues enter the Katy Trail from 2740 N Houston St. north of All Star Way, go NW 1.4 mile. Bollards must be removed and returned at access point.



# Katy Trail

- The markers have been in use for just over a year
  - DFR and DPD have responded to several calls and have not had any issues in finding locations



# White Rock Lake Trail

- Far more complicated than Katy Trail



# White Rock Lake Trail

- Tried a different approach
  - DFR used ArcView to plot the points along the trail
  - Using ArcView's geo-referencing capabilities, DFR added lat/long coordinates to the attribute table
  - DFR wrote preliminary caution notes to go with the points, to be verified once the poles were in the ground



# Attributes of Pole\_Markers

FS	Address	Features	Pole_Nu	Latit	L	Caution
0	3240 W Lawther Dr	Tee Pee Hill.	WRT124	96 4	3	Turn south on White Rock West Park, by restrooms across from White Rock Boathouse.
1	3240 W Lawther Dr	Tee Pee Hill.	WRT125	96 4	3	Turn south on White Rock West Park, enter trail straight ahead past restrooms, head east 320 ft.
2	3240 W Lawther Dr	Tee Pee Hill.	WRT126	96 4	3	Turn south on White Rock West Park, enter trail straight ahead past restrooms, head east 320 ft (WRT125), then head north 5
3	3240 W Lawther Dr	Tee Pee Hill.	WRT127	96 4	3	Access from W Lawther Dr 190 ft east of the parking lot, 45 ft south of W Lawther Dr.
4	3240 W Lawther Dr	Tee Pee Hill.	WRT123	96 4	3	Turn south on White Rock West Park, enter trail on right, head south 150 ft.
5	2999 White Rock Rd		WRT122	96 4	3	Enter trail here, head north 725 ft along trail.
6	2999 White Rock Rd		WRT121	96 4	3	North of Boat Storage near north end of 2900 block of White Rock Rd.
7	2900 White Rock Rd		WRT120	96 4	3	North end of building at 2900 White Rock Rd.
8	2100 Winsted Dr		WRT118	96 4	3	Enter trail here, head north 3275 ft along trail.
9	2100 Winsted Dr		WRT117	96 4	3	Enter trail here, head north 2525 ft along trail.
1	2100 Winsted Dr		WRT116	96 4	3	Enter trail here, head north 1675 ft along trail.
1	2100 Winsted Dr		WRT114	96 4	3	Enter trail here, head north 1050 ft along trail.
1	2100 Winsted Dr		WRT113	96 4	3	Enter trail here, head north 610 ft along trail.
1	8001 Garland Rd		WRT111	96 4	3	15 ft NW of Garland Rd.
1	8101 Garland Rd		WRT110	96 4	3	28 ft NW of Garland Rd.
1	8143 Garland Rd		WRT109	96 4	3	32 ft north of Garland Rd.
1	8255 Garland Rd		WRT108	96 4	3	7 ft NW of Garland Rd.
1	8335 Garland Rd		WRT107	96 4	3	30 ft NW of E Lawther Dr.
1	1181 E Lawther Dr		WRT106	96 4	3	50 ft SW of E Lawther Dr.
1	1147 E Lawther Dr		WRT105	96 4	3	70 ft west of E Lawther Dr.
2	1113 E Lawther Dr		WRT104	96 4	3	40 ft NW of E Lawther Dr.
2	1079 E Lawther Dr		WRT103	96 4	3	14 ft NW of E Lawther Dr.
2	1045 E Lawther Dr		WRT102	96 4	3	12 ft NW of E Lawther Dr.
2	1011 E Lawther Dr		WRT101	96 4	3	75 ft west of E Lawther Dr.
2	889 E Lawther Dr		WRT100	96 4	3	Access trail at 846 E Lawther Dr at Emerald Isle Dr, head west 3020 ft. 120 ft west of E Lawther Dr.
2	883 E Lawther Dr	Winfrey Point	WRT183	96 4	3	SW side of E Lawther Dr, 2375 ft WSW of Emerald Isle Dr, 365 ft west of parking lot on south side of Winfrey Point.
2	875 E Lawther Dr	Winfrey Point	WRT182	96 4	3	West side of E Lawther Dr, 1550 ft west of Emerald Isle Dr, west side of Winfrey Point.
2	869 E Lawther Dr	Winfrey Point	WRT181	96 4	3	North side of E Lawther Dr, 835 ft west of Emerald Isle Dr, north side of Winfrey Point.
2	848 E Lawther Dr	Face east, west, and	WRT180	96 4	3	At the SW corner of E Lawther Dr and Emerald Isle Dr.
2	920 Emerald Isle Dr		WRT179	96 4	3	Access trail at 920 Emerald Isle Dr, 320 ft south of E Lawther Dr. Head east 20 ft.
3	842 E Lawther Dr	By Sunset Bay	WRT177	96 4	3	Access trail at south entrance on circle at Sunset Bay, 842 E Lawther Dr. Head south 30 ft.
3	836 E Lawther Dr	East of Sunset Bay	WRT175	96 4	3	24 ft south of E Lawther Dr. Trail may be accessed at 9106 Poppy Dr and head SW 1075 ft. May also be accessed from the
3	9106 Poppy Dr		WRT174	96 4	3	Access trail at 9106 Poppy Dr. Head SW on trail 440 ft. 135 ft SE of E Lawther Dr.
3	798 E Lawther Dr		WRT173	96 4	3	50 ft east of E Lawther Dr. May access trail from 9105 Poppy Dr 133 ft south of pole.

White Rock Trail is not just a linear trail, with easily defined access points. This has made the writing of caution notes more challenging.

# White Rock Lake Trail

- Using the map created by DFR, Park staff installed poles



# White Rock Lake Trail

- DFR confirmed the accuracy of the caution notes
  - Rewrote as necessary
  - Data was entered into CAD
- Test runs were made to reduce confusion
- 911 signs installed August 2009
- Dispatching began almost immediately



# White Rock Lake Trail

- Within the first two weeks there was a medical emergency on the trail near Big Thicket
  - Emergency responders were able to access the individual without delay



# Next Steps

- DPD has already requested signage for White Rock Creek Trail and Bachman Lake Trail
- Work with adjacent cities whose trails will connect to Dallas' trail network
- Look at modifying this system to work in large parks for identifying areas within the park

