

Railroad Safety Projects



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City of Fort Worth

Texite Winter 2010
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Frisco, Texas



Fort Worth Railroad Safety Program

- ◆ 182 public at-grade crossings in the city
- ◆ Fort Worth RR Safety Program:
 - Railroad Signal Installation - TxDOT
 - Quiet Zone Program
 - Crossing Surface Improvement Program
 - Signs and Pavement Markings Program
 - Battery Backup Project
 - Railroad ITS Applications
 - Traffic Signal Preemption Program
 - Channelization Program



Railroad Signal Installations

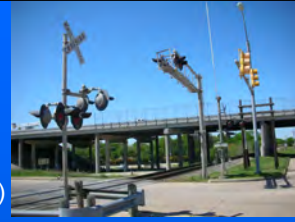
TxDOT Federal Signal Program (\$30M/yr)

- TxDOT call for projects November each year
- Priority Index Formula (ADT, Trains/day, Collisions)

TX Public Crossings = 10,045

TX Public Crossings w/ Gates: 48%

CFW Public Crossings w/Gates: 77%



Railroad Signal Installations

Installation of gates and lights alone does
NOT create a safe crossing!

45% of all collisions and fatalities occur at
crossings with gates and lights.



Quiet Zone Program

Federal Railroad Administration Data:

- 343 Quiet Zones (3072 Crossings)
- 189 Pre Rule and 154 New QZ
- Collisions at New QZ = 46 (after 37)

20% Reduction in Collisions



Quiet Zones In Fort Worth

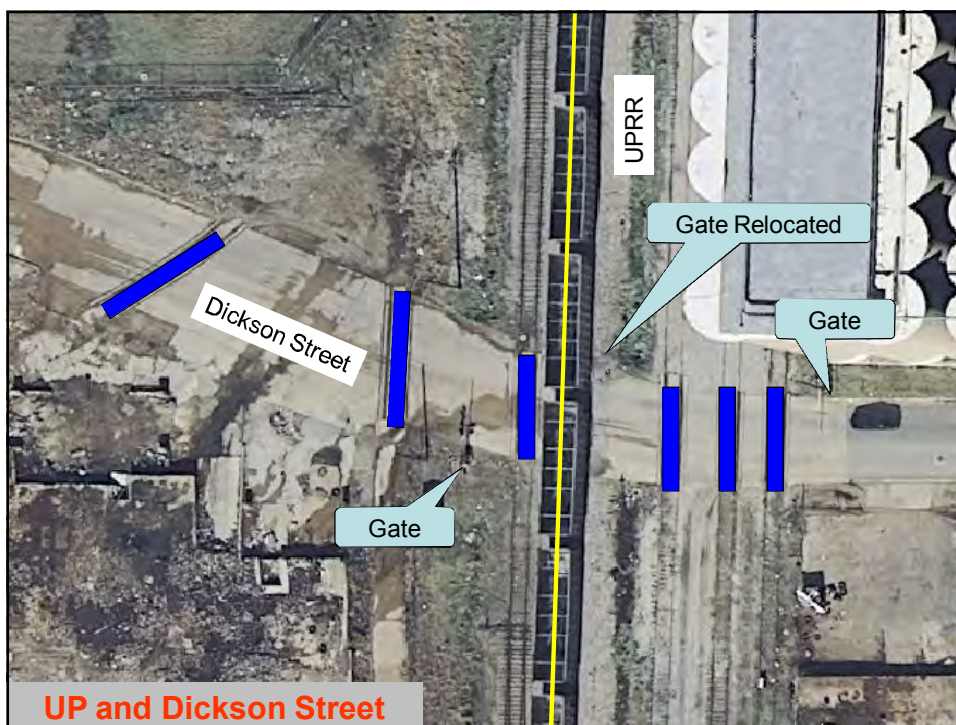
| |  |  |  |  |  |
|----------|---|---|---|--|---|
| | Street Closure | Median Barrier | Wayside Horn System | 4-Quadrant Gate System | One-Way Street Conversion |
| Existing | 7 | 4 | 0 | 3 | 0 |
| Planned | 10 | 16 | 3 | 1 | 2 |
| Total | 17 | 20 | 3 | 4 | 2 |



Crossing Surface Improvement Program

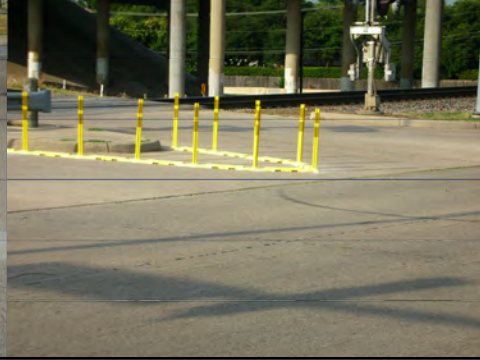


| Program | Amount | Crossings New | Crossings Upgraded | Tracks Removed |
|--------------|------------------|---------------|--------------------|----------------|
| 2007-08 | \$113,000 | 6 | 9 | 1 |
| 2009 | \$192,000 | 15 | 5 | 8 |
| TOTAL | \$305,000 | 21 | 14 | 9 |



Channelization Program

- Add centerline median or channelization material to prevent gate “drive-arounds”
- Other geometric improvements





Fort Worth Preemption Program

Phase 1 – General Field Investigation

Phase 2 – Detailed Field Investigation

Phase 3 – Final Report and Recommendations

Phase 4 – Develop City Policy, Training & Inspection Program

Phase 5 – System Upgrade, Standardization, and Modernization



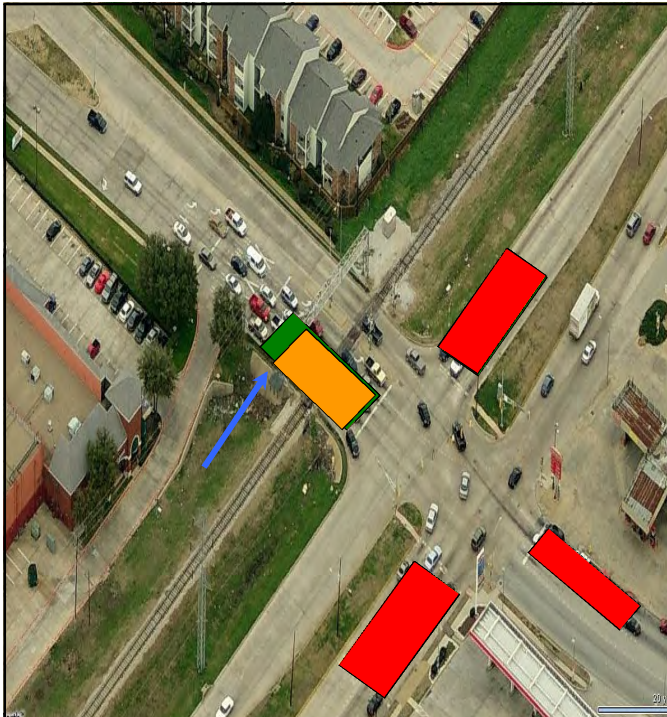
PHASE I – RESULTS

INSPECT AND FIELD TEST PREEMPTION

18 Preempted Crossings

- 8 Sites required adjustments.

- Three Constant Warning Time Adjustment
- Two Track Clearance Green Adjustments
- Three Locations not working at all



T = 15

Design:
WT = 25 sec
APT = 23 sec
TWT = 48 sec

HXP3 Settings:
WT = 30 sec
TWT = 31 sec
Equals APT

Deer Ave Starts to Slow Down!

**Simultaneous
Versus
Advanced
Preemption**

Do you have Preemption? Or The appearance of preemption?



MAINTENANCE ISSUES

Traffic Signal Maintainer's Trouble Report:

Intersection locked in Preemption.

Found Preemption switch in test position.

Turned it OFF.

"WORKING FINE"

!!!



Laminated Card in Traffic Signal and Railroad Cabinets

!! WARNING !!

This location has an Interconnection to the Highway Traffic Controller from the Railroad Grade Crossing Signal system.

BNSF & Intermodal Pkwy DOT# 020 644G

This Interconnection provides **19** seconds of ADVANCED PREEMPTION.

RAILROAD, DO NOT MODIFY the Warning Time as designed for the Crossing Signals or Advanced Preemption time.

CITY, DO NOT MODIFY any Railroad Preemption Data as designed in the Traffic Signal Controller.

If preemption is disabled or not working, notify the railroad dispatch **immediately** at the number provided below.

The following personnel must be notified and authority received before any changes are made.

| | | |
|--------------|-------------------|---------------------|
| City: | Dispatch | 817-392-8100 |
| | Tim Oster | 817-944-0864 |
| | Russ Wiles | 817-999-7915 |

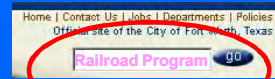
| | | |
|------------------|-----------------|---------------------|
| Railroad: | Dispatch | 800-861-3657 |
|------------------|-----------------|---------------------|

FRA Collision Report

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| No. of Collisions | 5 | 5 | 7 | 5 | 3 | 10 | 11 | 2 | 1 | 2 |



- For more info:
www.fortworthgov.org



Website Items:

- RR Program Overview
- Guideline for Project Selection
- QZ Establishment Process
- Sample NOI & NOE



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