Pedestrian Railroad Crossings
Lessons Learned

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Presentation Overview

- Metrolink system facts
- Pedestrian treatments
  - Sidewalks
  - Station crossings
  - Rail-with-Trails
- Look at other rail properties
- Lessons learned
- Recommendations
Metrolink System

- Southern California Regional Rail Authority (SCRRRA) is a joint powers authority
- Formed in 1991 pursuant to SB 1402
- Members: LACMTA (Metro), OCTA, RCTC, SANBAG, VCTC
- Operating Name is Metrolink
- Purchase freight railroad R/W’s and upgraded infrastructure (including crossings)
- Started service on October 26, 1992
Metrolink Facts

- 7 Routes in 5 counties
- 55 Stations
- 512 Route miles
- 145 daily weekday trains
- Shared routes with freight and Amtrak
Pedestrian Treatments (Early Years)

- Change in railroad environment
- Sidewalk enhancements
- Construct stations with pedestrian crossings
- Rails-with-Trails
- Utilized existing freight standards
Sidewalk Enhancements
Zig-Zag Fencing (Astoria St.)

- Pilot project in early 1990’s
- Encourages pedestrians to look both ways
- No recorded incidents
Pedestrian Crossings at Stations

- Constructed at-grade crossings to connect platforms
- Early standard – crossing surface and signs
- Flashers & bells introduced later
- Limited initial capital investment
  - Installation costs from $100K to $200K
  - Maintenance costs from $3,000.00 to $6,000.00
Burbank Airport

- Low cost
- Built on existing infrastructure
  - No inter-track fence
- Flashers and bells
Burbank (Downtown) Station

- Widened track centers to allow for placement of inter-track fence
- Flashers and bells
Station Pedestrian Grade Separations

- Cost prohibitive in start-up
- Considered by local agencies with station expansion for service increase as funding is available
Overcrossings

- Long lead time for development
- Costs range from $2 million to $8 million
- ADA accessible (ramps & elevators)
- May not be appropriate near at-grade crossings
Irvine Transportation Center

- For side platforms with wide track centers
- Inter-track fence needed
- Great in high-speed, high density corridors
Downtown Pomona
Undercrossings

- Long lead time for development
- Costs range from $1.5 to $3.5 Million
- ADA accessible (ramps and elevators)
- Additional safety concerns
Laguna Niguel

- Lighting always encouraged
- Clear line of sight
- ADA access through ramps and elevators
Additional Undercrossings
Rails-with-Trails Crossings

- Public agency owned R/W
- Used by pedestrians and bicyclists
- Urban design opportunities
- Unique challenges
Santa Clarita Trail
San Fernando -- Mission City Trail
Mid-block crossings
(not recommended)
San Clemente Pedestrian Trail

- Access to State beach across 100 year old railroad tracks with limited access points
- Convenient unauthorized paths established
- Multi agency approvals
  - Many years in development
  - Partnering is key
Years of Trespassing
Mariposa Point (limited visibility)
Mariposa Point
new pedestrian boardwalk
Channelization & signage
Authorized pedestrian crossings
California Public Utilities Commission

“Guidance on Pedestrian Rail Crossing Design in California”

- CPUC has jurisdiction & safety oversight for all public crossings
- Draft document compiles what is used in California
- Some railroads not supportive
Federal Railroad Administration

“Compilation of Pedestrian Safety Devices in Use at Grade Crossings”

- FRA charged with developing an inventory of pedestrian warning devices result of US DOT Grade Crossing Safety Action Plan (Fox River Grove)
- Committee of peers working on final product
Review of Other Rail Systems
Pasadena Gold Line (Light Rail)
Caltrain Commuter Rail
(San Francisco to San Jose stations)
Caltrain Commuter Rail

- 16th Street crossing
- Effective striping, signs, pedestrian gates and swing gates
Caltrain commuter rail
Caltrain Station Signs at San Antonio Station

July 14th, 2007
Santa Clara Valley - VTA

- Station adjacent to street crossing
- Numerous signs warning pedestrians
- Quiet Zone – “NO TRAIN HORN” sign
Long Island Railroad

- No crossings at-grade
- High platforms as opposed to Metrolink’s low level
- Inter-track fence
- Pedestrian overcrossing
Long Island Railroad

Delineation of edge of roadway striping/pedestrian gates
Metro-North Commuter Rail

- No “standards or design criteria” for pedestrian crossings
- Most crossings at stations are grade separated
- Visited some at-grade in rural areas
- Pedestrian gates if sidewalk exists
New Jersey Transit

- No written standards or design criteria for pedestrian crossings
- Observed channelization of pedestrians (at stations and sidewalks)
- No quad gate systems
Lessons Learned

- Pedestrian treatments work well with proper channelization and signs.
- Pavement striping continued across the track portion of roadway is good visual and effective.
- Important to add extra pedestrian treatments near stations-- people run to catch trains.
- All crossings unique and need diagnostic reviews.
New Jersey Transit

- Channelization of pedestrians off the ends of platforms
- Effective signs
- Pedestrian gate at sidewalk
Sealed Corridor Initiative

- Federal focus on increasing safety around rails as a result of Glendale incident
- Modeled after North Carolina DOT initiative
- 65 miles of railroad
- 55 hwy.-rail grade crossings
- 4 private crossings
- 4 pedestrian crossings
OCTA Grade Crossing Program

- Board approved $60 million for grade crossing enhancements (53 crossings)
- Enhancements will include SSM’s for Quiet Zones – mitigation for more trains
- Will incorporate new SCRRA standards and design criteria
Metrolink’s Goal with Standard Development

- Establish consistency for design & approval of crossing enhancements on system
- Develop an effective diagnostic review procedure
- Provide local agencies with written design criteria and standards
Draft SCRRRA Grade Crossing Standards & Procedures

- Review other systems/attend TAG meetings
- 35% documents due early November 2007
- 65% documents due in December
- Final Design Criteria & Standards due in January 2008
- Incorporate into new designs first quarter 2008
Questions?