

Southern California Railway

from the Mountains to the Desert, to the Sea

John R. Signor, General Manager

9-1-12

Scale: H0 standard gauge.

Size: 24 feet x 40 feet.

Era and Local: Southern California 1960-1965.

Theme: Freelance mainline linking the high desert of Southern California with the coastal basin via the pass at Encina. Jointly operated by Santa Fe Southern Pacific and Union Pacific.

Layout Style: Single level Linear walkaround with small segment of branch and staging yards on lower level.

Layout Height: 37 inches to 54 inches.

Track: Code 100 mainline, code 83 and code 70 in yards and on branches.

Maximum Grade: 2.2 percent.

Minimum Curve Radius: Mainline 36 inches, branch 24 inches.

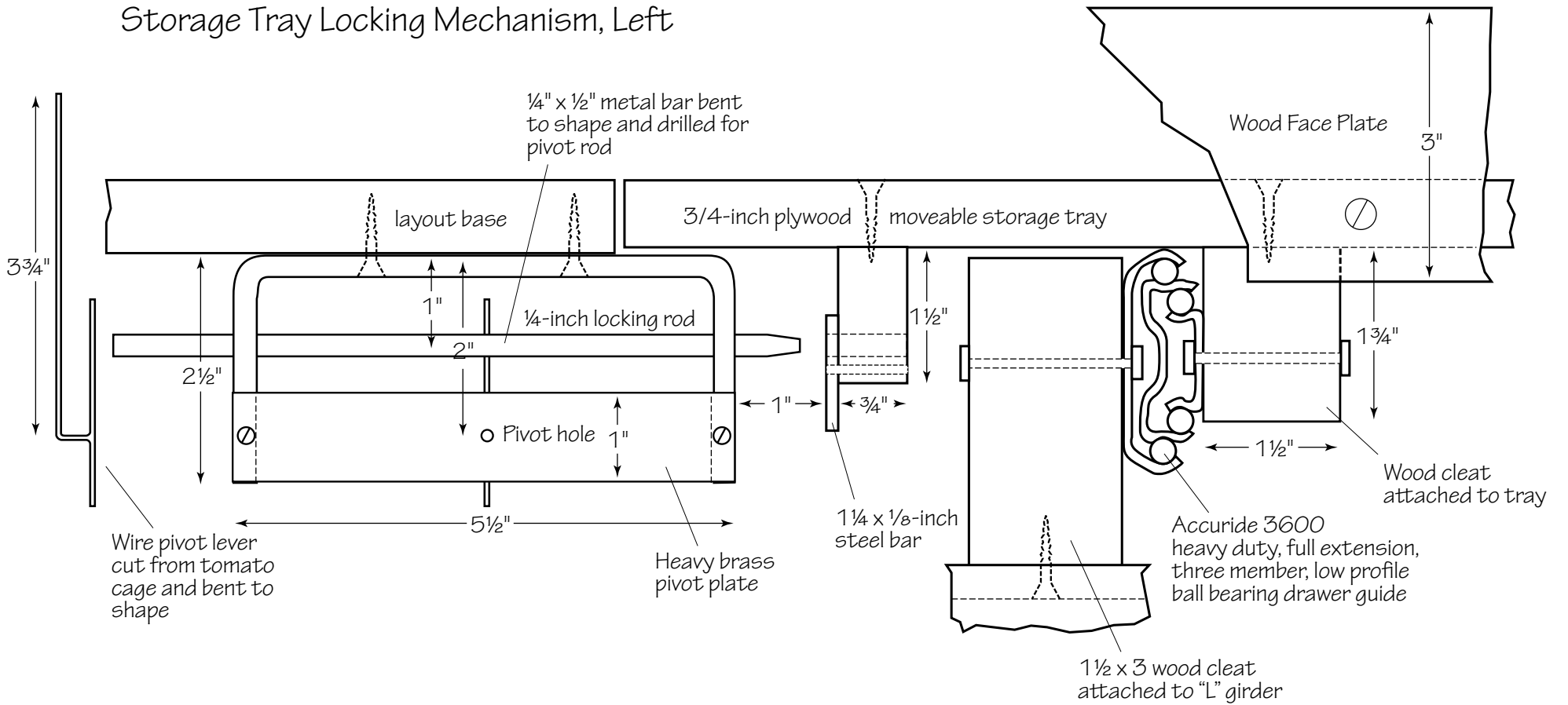
Control System: 255 channel Rail-Lynx Digital Command Control.

Dispatching: C-MRI based Centralized Traffic Control on mainline.

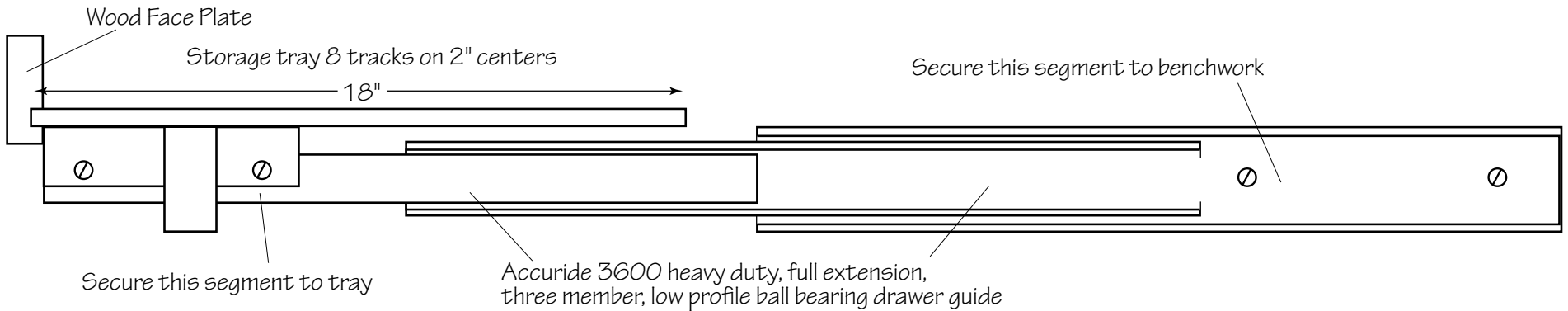
Web Site: www.johnsignor.com/modelrr/

The Southern California Railway has been Loderized

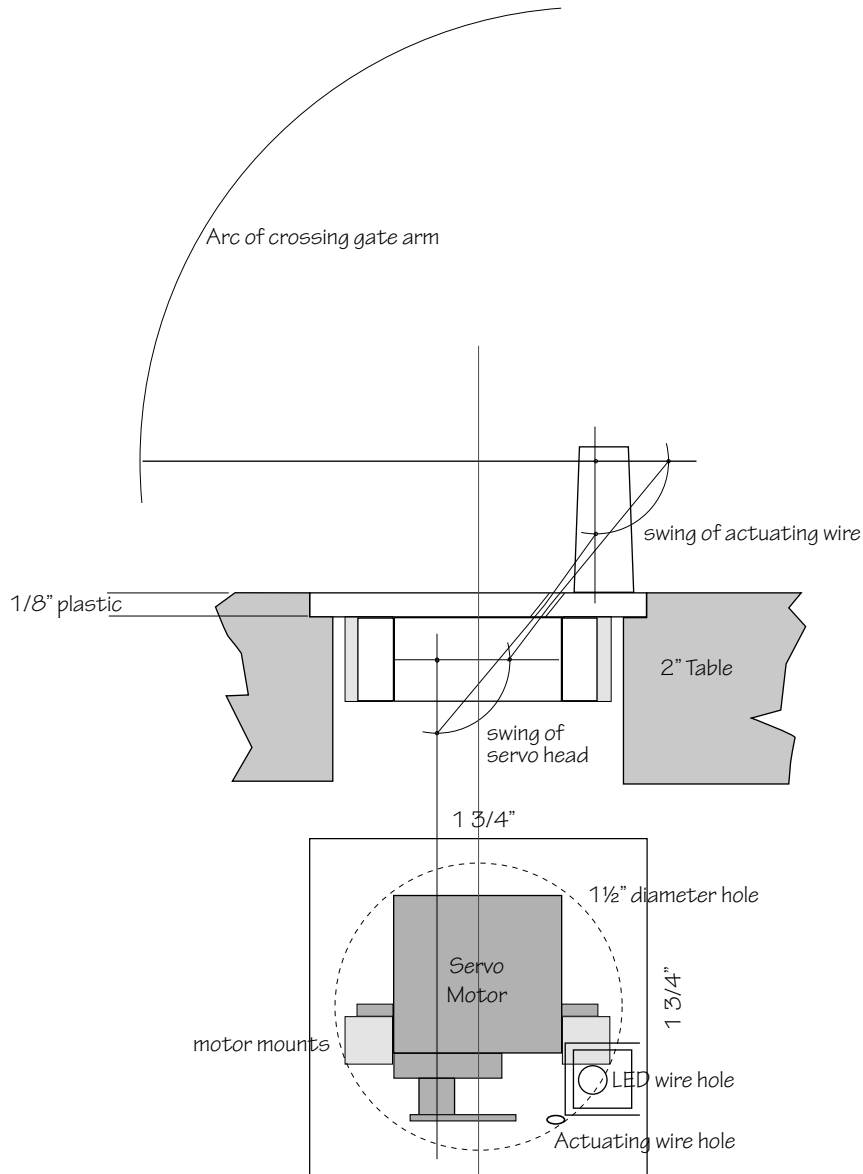
Storage Tray Locking Mechanism, Left



Storage Tray Mechanism, Cross Section

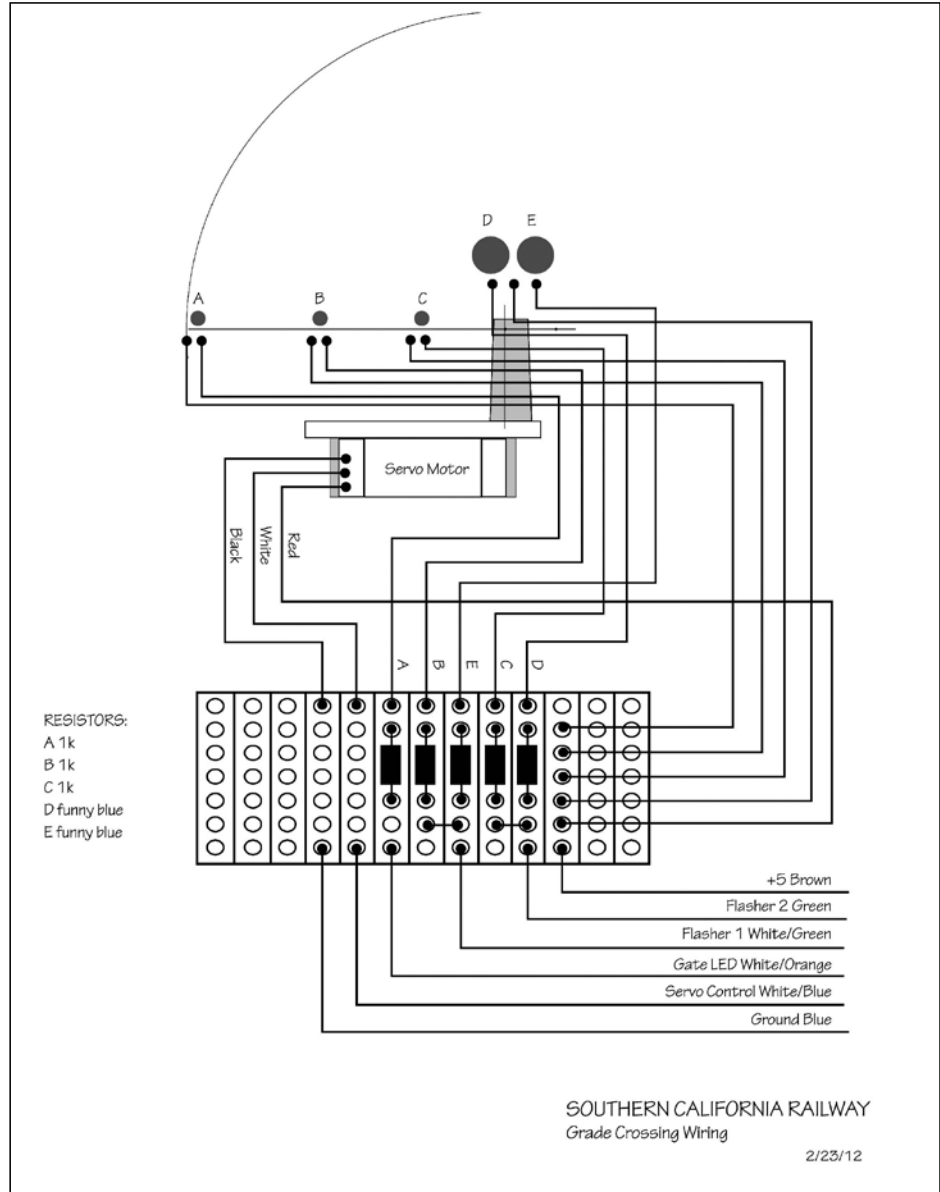


Crossing Gate Mechanism



SOUTHERN CALIFORNIA RAILWAY
 Grade Crossing Mechanism
 Exact Size

Revised 1/4/12



CTC MACHINE IOMBX LAYOUT - 6

10/5/11

CT(2)

| H 12 | | | | |
|---------------|------|-----|-------|--------------------------------|
| CARD | PORT | PIN | PB | FUNCTION |
| DOUT32 CARD 4 | D | D7 | 44-LB | Storage Red |
| | | D6 | 44-LB | Storage Yellow |
| | | D5 | 44-LB | Storage Green |
| | | D4 | BELL | Bell circuit CTC machine |
| | | D3 | | |
| | | D2 | | |
| | | D1 | | |
| | | D0 | | |
| | C | C7 | UL-35 | Switch 35 Indio Unlock |
| | | C6 | UL-39 | Switch 39 Quantico Unlock |
| | | C5 | 395 | US 395 Crossing Circuit Ground |
| | | C4 | UL-92 | Unlock 92 Indio Yard |
| | | C3 | | |
| | | C2 | | |
| | | C1 | | |
| | | C0 | | |
| | B | B7 | | |
| | | B6 | | |
| | | B5 | | |
| | | B4 | | |
| | | B3 | | |
| | | B2 | | |
| | | B1 | | |
| | | B0 | | |
| | A | A7 | | |
| | | A6 | | |
| | | A5 | | |
| | | A4 | | |
| | | A3 | | |
| | | A2 | | |
| | | A1 | | |
| | | A0 | | |

| H 13 | | | | |
|--------------|------|-----|-------|----------------------------|
| CARD | PORT | PIN | PB | FUNCTION |
| DIN32 CARD 2 | D | D7 | 7-33 | Code Button Under 20 |
| | | D6 | 7-34 | Code Button Under 18 |
| | | D5 | 7-35 | Code Button Under 16 |
| | | D4 | 7-36 | Code Button Under 14 |
| | | D3 | 7-37 | Code Button Under 10 |
| | | D2 | 7-38 | Code Button Under 8 |
| | | D1 | 7-39 | Code Button Under 6 |
| | | D0 | 7-40 | Code Button Under 4 |
| | C | C7 | 7-41 | Right Signal Lever 38 |
| | | C6 | 7-42 | Left Signal Lever 38 |
| | | C5 | 7-43 | Right Signal Lever 40 |
| | | C4 | 7-44 | Left Signal Lever 40 |
| | | C3 | 7-45 | Right Signal Lever 42 |
| | | C2 | 7-46 | Left Signal Lever 42 |
| | | C1 | 7-47 | Right Signal Lever 44 |
| | | C0 | 7-48 | Left Signal Lever 44 |
| | B | B7 | 7-49 | Code Button Under 30 |
| | | B6 | 7-50 | Code Button Under 28 |
| | | B5 | 0S-42 | 0S Indio West Tail Track |
| | | B4 | 0S-43 | 0S Indio XOver ML #1 |
| | | B3 | 0S-44 | 0S Indio XOver ML #2 |
| | | B2 | 0S-45 | 0S Indio Yard West ML #1 |
| | | B1 | 0S-46 | 0S Indio Yard ML #2 |
| | | B0 | 0S-47 | 0S Indio Yard East ML #1 |
| | A | A7 | 0S-48 | 0S Quantico ML #2 |
| | | A6 | 0S-49 | 0S Quantico ML #1 |
| | | A5 | 0S-51 | 0S Quantico Ore Lead |
| | | A4 | SW-35 | Switch 35 position |
| | | A3 | SW-35 | Switch 35 handthrow Toggle |
| | | A2 | UL-92 | Unlock 92 handthrow toggle |
| | | A1 | SW-39 | Switch 39 position |
| | | A0 | SW-39 | Switch 39 handthrow toggle |

ON  CARD ADDRESS 10
OFF

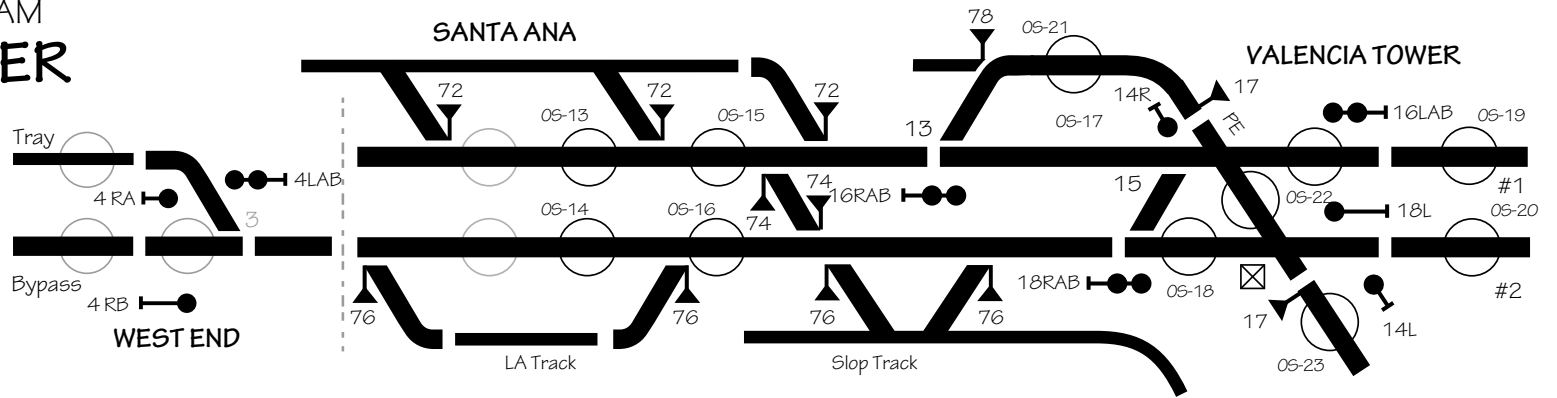
ON  CARD ADDRESS 11
OFF

SMINI CONNECTION DIAGRAM VALENCIA TOWER

USIC ADDRESS (SW 1)



Rev. 8-14-10



| VARIABLE | FUNCTION | PIN | PORT | CARD |
|----------|-------------------|---------------|------|------|
| 4-RA | Tray Red | A \emptyset | A | 1 |
| 4-RA | Tray Yellow | A1 | | |
| 4-RA | Tray Green | A2 | | |
| 4-RB | Bypass Red | A3 | | |
| 4-RB | Bypass Yellow | A4 | | |
| 4-RB | Bypass Green | A5 | | |
| UL-72 | Unlock 72 | A6 | B | 1 |
| UL-74 | Unlock 74 | A7 | | |
| 4-LA | Upper Red | B \emptyset | | |
| 4-LA | Upper Yellow | B1 | | |
| 4-LA | Upper Green | B2 | | |
| 4-LB | Lower Red | B3 | | |
| 4-LB | Lower Yellow | B4 | | |
| 4-LB | Lower Green | B5 | | |
| UL-76 | Unlock 76 | B6 | C | 1 |
| UL-78 | Unlock 78 | B7 | | |
| 16-RA | Upper Red | C \emptyset | | |
| 16-RA | Upper Yellow | C1 | | |
| 16-RA | Upper Green | C2 | | |
| 16-RB | Lower Red | C3 | | |
| 16-RB | Lower Yellow | C4 | | |
| 16-RB | Lower Green | C5 | | |
| SW-13 | Switch 13 Normal | C6 | C | 1 |
| SW-13 | Switch 13 Reverse | C7 | | |

| VARIABLE | FUNCTION | PIN | PORT | CARD |
|----------|-----------------------|---------------|------|------|
| 18-RA | Upper Red | A \emptyset | A | 2 |
| 18-RA | Upper Yellow | A1 | | |
| 18-RA | Upper Green | A2 | | |
| 18-RB | Lower Red | A3 | | |
| 18-RB | Lower Yellow | A4 | | |
| 18-RB | Lower Green | A5 | | |
| SW-15 | Switch 15 Normal | A6 | B | 2 |
| SW-15 | Switch 15 Reverse | A7 | | |
| 14-LA | PE West Red | B \emptyset | | |
| 14-LA | PE West Yellow | B1 | | |
| 14-LA | PE West Green | B2 | | |
| 14-RB | PE East Red | B3 | | |
| 14-RB | PE East Yellow | B4 | | |
| 18-LA | No. 2 Red | B5 | C | 2 |
| 18-LA | No. 2 Yellow | B6 | | |
| 18-LA | No. 2 Green | B7 | | |
| 16-LA | Upper Red | C \emptyset | | |
| 16-LA | Upper Yellow | C1 | | |
| 16-LA | Upper Green | C2 | | |
| 16-LB | Lower Red | C3 | | |
| 16-LB | Lower Yellow | C4 | | |
| 16-LB | Lower Green | C5 | | |
| UL-17 | Derail Valencia Tower | C6 | C | 2 |
| | | C7 | | |

| VARIABLE | FUNCTION | PIN | PORT | CARD |
|----------|----------------------------|---------------|------|------|
| 05-13 | 05 Lemon St. ML#1 | A \emptyset | A | 3 |
| 05-14 | 05 Lemon St. ML#2 | A1 | | |
| 05-15 | 05 Palmyra St. ML#1 | A2 | | |
| 05-16 | 05 Palmyra St. ML#2 | A3 | | |
| 05-17 | 05 Valencia Tower ML #1 | A4 | | |
| 05-18 | 05 Valencia Tower ML #2 | A5 | | |
| 05-19 | 05 Valencia Tower E. ML #1 | A6 | | |
| 05-20 | 05 Valencia Tower E. ML #2 | A7 | B | 3 |
| 05-21 | 05 PE Cutoff | B \emptyset | | |
| 05-22 | 05 PE Diamond | B1 | | |
| SW-13 | Switch 13 position | B2 | | |
| SW-13 | Switch 13 handthrow Toggle | B3 | | |
| SW-15 | Switch 15 position | B4 | | |
| SW-15 | Switch 15 handthrow Toggle | B5 | | |
| UL-72 | Unlock 72 handthrow Toggle | B6 | C | 3 |
| UL-74 | Unlock 74 handthrow Toggle | B7 | | |
| UL-76 | Unlock 76 handthrow Toggle | C \emptyset | | |
| UL-78 | Unlock 78 handthrow Toggle | C1 | | |
| UL-17 | Unlock 17 Derail Toggle | C2 | | |
| 05-23 | 05 PE | C3 | | |
| | | C4 | | |
| | | C5 | | |
| | | C6 | | |
| | | C7 | | |

Resources and Suppliers

Manual Ground Throws #B-4001 Bitter Creek Models

<http://bittercreekmodels.com>

Arduino Crossing Gate Controller assembly and parts list

<https://sites.google.com/site/avrtrainload/arduinoagate>

Setting gate speed and position

www.youtube.com/watch?v=RZ9dqSV8N9M

Southern California Railway C-MRI Code, version 1.44

www.johnsignor.com/modelrr/signaling.php (check under Documentation)

NJ International #1161 Crossing Gate Signal "A" Type

www.njinternational.com/hoscale1.htm

LEDs for signals, locomotive headlights and marker lights

www.richmondcontrols.com/

Rail-Lynx Infra Red Digital Command Control System

www.rail-lynx.com/system_description.htm

BLMA Searchlight Signal Heads part #4001

www.blmamodels.com/cgi-bin/webstore/shop.cgi?ud=CAMGBAoJDgOCBxQUEBEcHA4NAQcCAgwECQkTEQAA&t=main.blue.htm&storeid=1&cols=1&categories=01001-00025&&c=detail.blue.htm&t=main.blue.htm&itemid=4001

Capital letter typewriter font for dispatcher and telegraph messages

<http://www.dafont.com/usis-1949.font>

Ikea "Summera" Computer Keyboard Tray part #500-866.90

www.ikea.com/us/en/catalog/categories/departments/workspaces/

Miniature hi-definition digital RD32II 1080p .h264 Sport Cam

www.dx.com or EBay

Chubb C-MRI System

<http://www.jlcenterprises.net/>

CTC Machine construction and parts Mike Burgett

www.ctcparts.com/index.html

Assembly & Testing C-MRI kits - Don Wood Easee Interfaces

www.easeeinterfaces.com/default.htm

Accuride 3600 Stowaway Slide Mount

www.cabinetparts.com/g/3600-stowaway-slide-accuride

Switchmaster stall motor switch machines

www.builders-in-scale.com/bis/sm-home.html

Southern California Railway

www.johnsignor.com/modelrr/

Mexican Fan Palms Custom made by Dave Haehn

mtecmodels@frontier.net