



The WHISTLE POST

The Official Publication of the Garden State Division of the NMRA Northeastern Region

INSIDE

TWO EVENTS IN TWO MONTHS .1

USRA WAR EMERGENCY
GONDOLA, PART I3

GSD MEETING MINUTES5

WHAT I LEARNED BUILDING
THREADWELL MILLS7

FALL AND WINTER MEETS ...9

EMPIRE JUNCTION 2008 ...12

SECOND MAP BOOK ADDED TO
RUTGERS SITE12

HOLIDAY TIMETABLE -
INFORMATION13

GSD ELECTIONS13

HOLIDAY TIMETABLE - DATES AND
TIMES14

MOTIVE POWER15



E-MAIL

gsdtrains@yahoo.com

WEBSITE

www.trainweb.org/nergsdl

Two Events in Two Months

In August and September, the Garden State Division held two very successful events.

Summer Barbecue

The first event was the annual summer Barbecue, hosted by the Garden State Model Railway Club and the Model Engineers Railroad Club of New Jersey, in North Haledon. Attendance was stronger, this year, with 53 people registering at the event in August.

Award presentations and clinics were given in addition to the hamburgers, hot dogs, chili, pasta salad, brownies, cakes, cookies, and soda.

Frank Russo received his Golden Spike Award. A Master Builder - Structures award was given to Bruce DeYoung. And, Tom Piccirillo received awards for



▲ **Bob Savino presenting his clinic on diode matrix circuits for Tortoise switch machines during the BBQ**

Master Builder - Motive Power, Chief Dispatcher, and Model Railroad Author. Congratulations to everyone!

Walter Johnson gave a clinic on how he is building catenaries for the Garden State Model Railway Club's HO scale layout. A second clinic was given by Bob Savino. Bob's clinic covered building diode matrices for Tortoise switch machines.

Many club members and GSD members donated their time and culinary talents to the success of the event. A special thank you goes to Bill Tierney, Joe Campbell, Ed O'Donnell, Ron Sandgran, Paul Dlugos, Bob & Greg Rycharski, Anthony Piccirillo, Kyle Demerest, Bruce DeYoung, and Bob Tumielewicz.

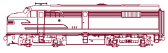


▲ **A tree made by a happy participant at Railroad Family Youth Day**

Railroad Family Youth Day

The second event was the annual Railroad Family Youth

"Two Events" continued on Pages 10



THE CAB

by President Tom Wortmann

Your Staff

Having worked with the staff of your division for the last few years, I think everyone needs to know what type of staff you really have. They are very dedicated people who will fix, or try to fix, the problems we have running the division.

When we have a staff meeting, they come prepared with ideas to solve our problems. I do wish most of you would attend these meetings to see them in action. They take it upon themselves to call every member that has been lost, verify membership mailing and e-mail addresses, and see how the member is doing. Your membership committee has spent many hours checking our copy of the NMRA database, finding and correcting problems. We find that many of you do not get renewal notices from the National headquarters since they have the wrong mailing or e-mail address, etc. Your staff gathers the information, sends it to the National headquarters, and then rechecks it the next time information from the NMRA database is provided to us.


Each summer many of them give up a day to help introduce our hobby to children and their families. They set up work stations

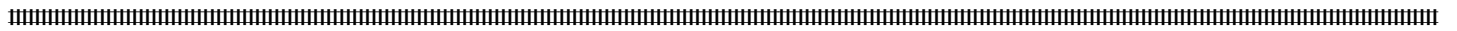
and layouts at Lake Mohawk for an all day affair where children not only watch the trains, but they set them up, run them, build a section of scenery, paint, and detail it. The staff helps build and detail a portable folding railroad which, at the end of the day, is raffled off. The money raised covers the cost of all the materials used.

None of these men are paid. They sacrifice a day with their families and friends to share our hobby with others. They see that we are an aging hobby and need new, young blood. This is one way of achieving that goal.

No one told them how to get new members, how to keep the current members or how to get children involved in our hobby. They just knew it had to be done and did it.

You should all be proud of these people because for me it is an honor to be their President.

The upcoming Fall and Winter Meets are an opportunity to meet your staff. I hope to see you there! 



THE CABOOSE

by Editor Chuck Diljak

Holiday Memories

The holidays always bring back fond memories for me. I received my first train set from Santa when I was five years old. It was an HO scale AHM set, featuring a Fairbanks-Morse C-liner decorated in Union Pacific colors. I ran that train into the ground...literally.

You see, I was just a child. And, it is a child's prerogative to satisfy their curiosity. I had to see how fast that train could go around an 18" radius oval. Sad to say, centrifugal force derailed the train, ran it off the table, and onto the floor. Fortunately, only minor repairs were required and the engine ran for many more years.

There was also an interval of time where I was not active in the hobby. I graduated from college, started a new job, got married, transferred to a second job, and moved to New Jersey. There were a lot of things going on in those seven years and I completely lost touch with model railroading.

In 1990, while visiting my parents for the holidays, I noticed some pictures they had taken during a recent trip to visit relatives in the Midwest. In the stack of photos were pictures of my uncle's HO scale layout. Until then, I never knew he had any interest in model trains. When I returned home, I got back into the hobby with a vengeance due to those photos. I subscribed to *Model Railroader* and *Railroad Model*


Craftsman. And, I joined the Ramapo Valley Model Railroad club, when it was located in Ramsey, NJ.

One of my favorite parts about my club membership was the annual holiday show. I enjoyed operating the club layout and answering questions. Seeing the many young faces light up when a train appears or after seeing something interesting to them was the highlight of the shows, for me.

Well, I no longer have that train from my youth. And, I am no longer a member of the Ramapo Valley Model Railroad club. But, I do have my memories.

And this is the time of year when you can add to your own memories. It is peak train season! It is the traditional time of the year when clubs open their doors to the public. Not only do model railroad clubs get into the act, but so do other organizations such as museums and businesses.

And, as editor, I have one more holiday item in my memory that needs to be committed to paper, ink, bits, and bytes:

I would like to wish everyone a safe holiday season. Enjoy family, friends and trains while adding to your own holiday memories. 

AT THE THROTTLE

PRESIDENT

TOM WORTMANN
STATEN ISLAND, NY
miskyrails@msn.com

VICE PRESIDENT

NORMAN FROWLEY, MMR
SOUTH ORANGE, NJ
normanfrow@aol.com

TREASURER

ANTHONY PICCIRILLO
SPARTA, NJ
anthony13trains@embarq-mail.com

SECRETARY

CIRO COMPAGNO
STATEN ISLAND, NY
gsdsecretary@verizon.net

DIRECTORS AT LARGE

ANDREW BRUSGARD
UNION, NJ
ajb1102@comcast.net

TOM CASEY

HACKENSACK, NJ
tcasey@co.bergen.nj.us

ED FRAEDRICH

FAIRLAWN, NJ
edfred.one@verizon.net

ROGER OLIVER

DENVILLE, NJ
oliverr2@verizon.net

ROBERT TUMIELEWICZ

NEW BRUNWICK, NJ
rtumielew@aol.com

REGIONAL DIRECTOR

ROGER OLIVER
DENVILLE, NJ
oliverr2@verizon.net

EDITOR

CHUCK DILJAK
WAYNE, NJ
gsdwhistlepost@yahoo.com

USRA WAR EMERGENCY GONDOLA

by Tom Casey

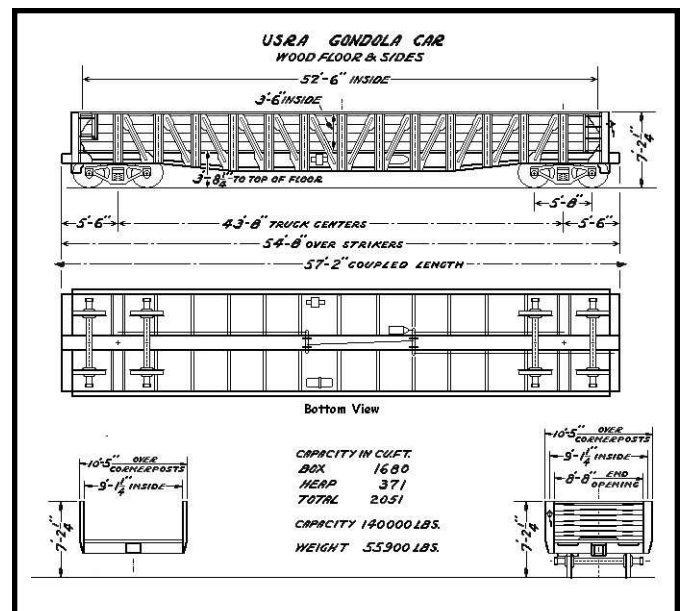
My purpose in writing this article is to share the techniques I used in this project in the hopes that the reader will be able to adapt some of them for a project of their choice. I started in this hobby in the mid 1960's and have worked predominately with plastic kits since then. While I did assemble an Ambroid wooden stock car kit early on, I was disappointed that it was much too light for operation and I was unable to hide the necessary weight to bring it up to the NMRA weight standard. Since then, this is the first car kit that I have tackled that involved wood and metal parts. As a result of this project I have a much greater appreciation of the modeling skills needed to build models of this nature.



Many years ago a friend of mine gave me a beautifully executed Ulrich CNJ composite Gondola. I have been intrigued by these cars ever since. I frequent as many swap meet / shows as I can, looking for items (mostly used) that trigger my interest. Over the years I have picked up several of these models in varying condition with the intention of rebuilding them. I usually pick up what might be called "basket cases" at these swap meets so I don't feel so bad about disassembling them. This project is the result of several such events. At one swap meet I was able to find an unassembled kit with instructions for a very reasonable price.

Prototype History

In order to reallocate steel to more critical war needs, the War Production Board directed that railroads reduce their need for steel. However, the railroads, which had not invested much in new rolling stock during the depression, needed more freight equipment to serve the increased transportation needs generated by the war effort. The Association of American Railroads (AAR) developed several war emergency designs that reverted to composite wood / steel designs from the standard mostly steel



"USRA Gondola" continued on Page 4

USRA War Emergency Gondolas														
Road	Class	Road Number	Length	Width	Height	# Built	Jan 1953	Jan 1957	July 1960	Apr 1966	Jan 1972	July 1976	Oct 1979	1984
AT&SF	Ga-61/63	169500-169899	55' 3"	10' 5"	7' 3"	400	362	313	313	297	104	88	35	0
CNJ		80000-80289					0	0	242	287	0	0	0	0
CNJ		81000-81124					0	0	0	298	26	0	0	0
CNJ		81125-81424					0	0	0	124	79	0	0	0
CNJ		86000-86999	53' 9"	10' 4"	7' 2"	1000	192	111	88	0	0	0	0	0
CRP		86000-86999					758	417	0	0	0	0	0	0
CNJ		87000-87999					47	465	503	4	0	0	0	0
							997	993	833	713	105	0	0	0
GTW		145400-145699	54' 6"	10' 3"	7' 2"	300	300	300	299	296	252	156	43	4
IHB		6000-6299	54' 7"	10' 4"	7' 2"	300	297	297	293	110	34	13	13	0
LV		32600-32849	54' 7"	10' 3"	7' 4"	250	247	247	247	103	0	0	0	0
NYC		711000-711699	54' 7"	10' 3"	7' 4"	700	699	697	694	446	9	0	0	0
N&W		70600-70699	54' 7"	10' 3"	7' 4"	100	100	85	77	0	0	0	0	0
PRR	G30	362384-363383	54' 6"	10' 3"	7' 4"	1000	997	996	995	28	12	12	1	0
RI		900-1299	54' 7"	10' 3"	7' 4"	400	397	396	140	138	29	12	4	0
						4450	4396	4324	3891	2131	545	281	96	4

car construction. One of these (the subject of the article) was for a 70-ton 52'6" mill gondola, which only used steel for the structural components and used wood for the flooring and on the sides. These cars were built to the general USRA design specifications by several manufactures and by some railroads themselves. Details such as trucks, brake hardware, etc. and their placement varied among the roads.

The Pennsylvania Railroad removed the steel floor and steel side panels from one of its G28 gondolas and replaced the floor with wood and the sides with a steel truss of stamped metal members with wood planking on the inside. With minor additional modifications this composite design became the war emergency gondola. Ten lots totaling 4,450 cars were built. Most were built with drop ends, the exception being the group built for the Grand Trunk Western, which had fixed ends. The group of cars built for the Central Railroad of New Jersey was unique in that they were built with Duryea Cushion underframes. After the war, some railroads replaced the wood sides with steel to increase both the inside width and the cubic volume. Most of these cars survived thru the 60's but disappeared off most rosters in the 70's. Refer to Table 1 for a listing of the railroad rosters.

Variations in the Ulrich Model

Ulrich produced model kits for these "War Emergency" gondolas using die-cast sides and brake hardware, stamped

metal ends and wood for the floors and underframe. The die-cast sides were remarkably well done and detailed for their period (mid 50's) and were the model's principal attraction to me. I acquired several of these Ulrich cars over the years at swap meets and have found that there were several modifications to the model over its production life. The principal variations involve the die-cast metal car sides. One version does not have any details cast into the side of the car side and no stirrup steps cast on the sides; a second version has interior details cast into the sides but no stirrup steps, third version has the stirrups step cast on to the sides; and a fourth version has the stirrup steps with a slot cast into the inside ends of the sides to accept the stamped metal ends slightly recessed form the end rather than attached to the ends of the car sides. Another variation is the introduction of four small mounting holes along the floor line of the side to aid in aligning the car's sides to the floor piece. These mounting holes are missing in the first two versions sited above. The other principle variation involves the wood floor width. Some kits had a floor 1.125" wide which results in a car too narrow; other kits had a floor 1.25" wide which results in a car close to the prototypical overall width of 10'3", 10'4" or 10'5" depending on the source. As long as the car sides did not have stirrup steps, the narrow floor did not limit the truck swivel. However, when the stirrups steps were added to the sides, they limited the truck swivel since the narrower floor was used. Some modelers compensated for this by shifting the trucks inboard toward the center. This is not an acceptable approach for me.

THE CLUB CAR

GARDEN STATE CENTRAL MODEL RAILROAD CLUB
607 8TH AVENUE
ASBURY PARK, NJ 07712
www.gardenstatecentral.com
100% NMRA CLUB

GARDEN STATE MODEL RAILWAY CLUB
575 HIGH MOUNTAIN ROAD
NORTH HALEDON, NJ 07508
www.gsmrrclub.org

MODEL ENGINEERS RAILROAD CLUB OF NEW JERSEY
569 HIGH MOUNTAIN ROAD
NORTH HALEDON, NJ 07508
www.angelfire.com/nj4/merrcnj

THE MODEL RAILROAD CLUB
295 JEFFERSON AVENUE
UNION, NJ 07083
www.tmrcki.com

NEW YORK SOCIETY OF MODEL ENGINEERS
341 HOBOKEN ROAD
CARLSTADT, NJ 07072
www.modelengineers.org

RAMAPO VALLEY RAILROAD CLUB
620 CLIFF STREET
HO-HO-KUS, NJ 07423
www.members.aol.com/rvrrclub

NEW JERSEY DIVISION OF THE NMRA MID-EASTERN REGION
www.njdivnmra.org

SEND CLUB INFORMATION TO
MEMBERSHIP AND CLUB CONTACT:
TOM CASEY
TCASEY@CO.BERGEN.NJ.US



MEETING MINUTES

BY SECRETARY CIRO COMPAGNO

Purpose:

Garden State Division (GSD) Meeting

Date/Time:

September 21, 2008 at 9:30 a.m.

Place:

Home of Tom Wortmann in Staten Island, NY

Attendees:

Andy Brusgard, Tom Casey, Ciro Compagno, Ed Fraedrich, Anthony Piccirillo, Bob Tumielewicz, and Tom Wortmann.

Open remarks by GSD President Tom Wortmann. The minutes of the June 1, 2008 GSD Staff Meeting were read by Secretary Ciro Compagno. Motion was made to accept those minutes followed by a second motion. There were no dissenting votes. Motion to accept the proposed agenda submitted by the Secretary was offered followed by second motion. There were no dissenting votes.

Treasurer's Report

Anthony Piccirillo presented a year-to-date transaction and net worth summary. Several suggestions were made to improve these summaries. Results of the GSD Summer Barbeque and Meet were also presented.

Education Committee and AP Reports

Not discussed during meeting.

Convention Committee Report

There was a group discussion on the past summer meet. Ed Fraedrich indicated that overall it was very successful. Highlights of the event included: clinics on diode matrix and HO scale catenaries, door prizes, and an operating session with the HO scale Garden State Model Railway Club.

Anthony Piccirillo and Ciro Compagno provide a brief summary of Youth Day at Lake Mohawk in Sparta, NJ on September 20, 2008. Although a lighter than expected turnout, overall the event was a success.

There was a group discussion on the upcoming Fall Meet:

-The meet will be hosted by the New York Society of Model Engineers in E. Rutherford, NJ on Saturday, October 25, 2008 at 10:00 a.m. This is being in conjunction with the "All Scale" Swap Meet and Train Show.

-Donations only accepted. There is a \$5.00 admission fee to the show

-Highlights of the event will include a clinic, door prizes, etc. Clinics are being solicited at this time. A weathering video and a slide presentation on a Union Pacific crossing could be used in place of no clinics.

-Volunteers are need in Friday, October 24, 2008 at 9:30 a.m. to help set-up. It usually lasts until 11:00 a.m.

-There is a hallway available for our use if we want it. Tom Casey will see it on the Friday before the meet.

Bob Tumielewicz briefly discussed possible GSD participation at two upcoming Greenberg's Train & Toy Shows at The New Jersey Convention and Exposition Center in Edison, NJ in November 2008, and the Garden State Exhibit and Convention Center in Somerset, NJ in January 2009.

Membership Report

There was a group discussion on the ongoing membership efforts by the GSD:

-Tom Wortmann and Norman Frowley wrote a resolution to address incorrectly assigned members, lost members, boundary issues, etc. Roger Oliver offered to previously offered to present this resolution at the August 3, 2008 Northeastern Region (NER) Staff meeting.

-Andy Brusgard has spent a significant amount of time telephone calling and e-mailing both the expired and active GSD members. His findings include: many missing and incorrect e-mail addresses, several deceased members, members who did not even know who the GSD was, etc. Many of the comments were very surprising to the group.

-After an e-mail address is confirmed by Andy Brusgard, a copy of the latest Whistle Post is emailed.

-Andy Brusgard continues to feed member information updates to Tom Casey.

-Tom Casey collects all revisions and processes them monthly.

"Minutes" continued on Page 11

Ulrich cars

Model	Road Name	Notes
140	Atchison, Topeka & Santa Fe (red)	
141	Pennsylvania (red)	
142	Norfolk & Western (red)	
143	Lehigh Valley (red)	4
144	New York Central (red)	3
145	Grand Trunk Western (red)	3
146	Rock Island (red)	2, 8
147	Central Railroad of New Jersey (black)	1, 2, 9
148	Indiana Harbor Belt (red)	1, 2, 6
149	Pioneer (caboose red)	1, 2, 7
196	Undecorated	1, 2, 5

Notes:

1. Not listed in Polk's 1961 Catalog
2. Not listed in Walther's 1963 or 1966 Catalogs
3. Ceased to be listed in Walther's 1972 Catalog
4. Ceased to be listed in Walther's 1973 Catalog
5. First listed in Walther's 1978 Catalog
6. First listed in Walther's 1979 Catalog
7. First listed in Walther's 1980 Catalog
8. Ceased to be listed in Walther's 1981 Catalog
9. Ceased to be listed in Walther's 1982 Catalog

The 1970 Walther's Catalog listed kit numbers 140 thru 147. I don't have a Walther's 1971 Catalog in my collection but the 1972 Walther's Catalog listed Ulrich for the first time as a division of Wm. K. Walther's Inc. In the 1983 Walther's Catalog, all that remained listed were numbers 140, 141, 142 & 196. These cars were last listed in the 1984 Walther's Catalog and were gone from the 1985 catalog.

on these cars were 43"8", which scales out to roughly 6 inches in HO Scale.) The installation is done carefully as lead is soft and the threads can be easily stripped. The screws may have to be shortened so as not to protrude through the top of the centersill. The trucks used under these cars varied from road to road. In addition, some roads replaced the original trucks over the car's life. I decided to use Kadee's Bettendorf sprung trucks for the additional weight they provide but I could have used reconditioned Athearn or Model Die casting sprung trucks with Proto 2000 wheel sets. This truck / centersill assembly will be positioned and glued to the floor/side assemble of the car and needs to have a smooth top surface. The use of this cast lead centersill lowers the car's center of gravity and brings the car up to the NMRA recommended weight of 4.5 ounces for a car of this length.

Warning: Molten lead is very hot and can give you a nasty burn. Wear protective gloves and clothing. Wear eye protection. In addition, lead vapors are dangerous; work in a well-ventilated environment. Make sure the mold is dry; any moisture will explosively turn to steam. Only melt a little more lead than you need for a pour.

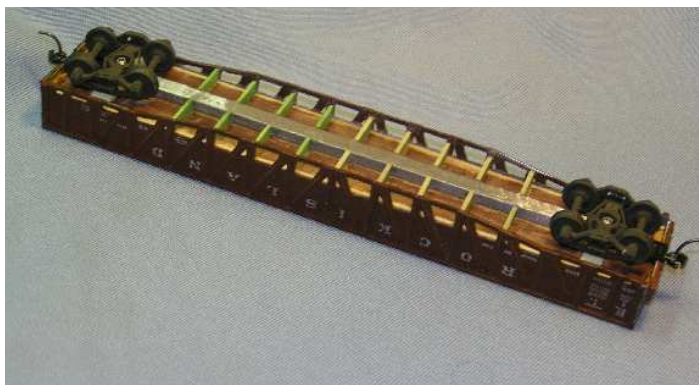
I got this idea from an old NMRA Bulletin in which the author carved a mold in wood to cast an odd shaped weight to fit in the bottom hoppers of a covered hopper car. My motivation here is to add weight. This is not a detailed casting. I created a mold using an available piece of 4" by 15" compressed wood as a working surface. I tacked strips of oak the same size as the centersill I wanted to make creating an open topped box mold longer than the length of the centersill I need. Minimize cracks in the mold between the framing members, as molten lead will flow thru these cracks. I used small levels to make sure the mold is level before I pour molten lead into it. Make sure the mold is stable before beginning a pour. The molten lead alloy solidifies quickly and will not flow the length of this narrow mold before solidifying. I carefully pour the molten lead into the mold by running the ladle along the length of the mold. Due to surface tension, the lead will not lie flat in the mold but tends to lens up a bit. In order to reduce the amount of filing necessary to

get a uniform height, while the casting is still molten I scrape off the excess lead above the top of the mold frame with a Popsicle stick. (A metal scraper will cause the lead to solidify and stick to the scraper.) Once the lead has solidified and cooled, remove it from the mold. The hardwood mold

Using a floor of the proper width eliminates this problem as long as the trucks are properly centered between the sides.

Cast Centersills

The assembled Ulrich car is light by NMRA standards. Having previously developed the ability to cast centersills to increase the weight of Varney plastic hopper cars, I decided to experiment with the Ulrich composite gondola to see if it could be brought up to the NMRA recommended weight of 4.5 ounces without having to place a payload in the car to achieve the desired weight. I cast a new centersill to roughly the same dimensions as the wooden centersill supplied with the kit from the lead alloy auto wheel balancing weights I find in roadway gutters. The centersill is cast longer than I need and then cut it down to roughly 6.5 inches. I position, center, drill, and tap (2-56) holes in the cast centersill six inches apart and mount the trucks using 2-56 Phillips head screws. (The truck centers



CONGRATULATIONS

GOLDEN SPIKE
TONY KOESTER
NEWTON, NJ

FRANK RUSSO
STATEN ISLAND, NY

MASTER BUILDER - MOTIVE POWER
THOMAS PICCIRILLO, NER 458
WARREN, NJ

MASTER BUILDER-SCENERY
THOMAS PICCIRILLO, NER 466
WARREN, NJ

MODEL RAILROAD ENGINEER-CIVIL
THOMAS PICCIRILLO, NER 467
WARREN, NJ

MODEL RAILROAD ENGINEER-
ELECTRICAL
THOMAS PICCIRILLO, NER 465
WARREN, NJ

* INDICATES FIRST CERTIFICATE OF
ACHIEVEMENT

PUBLISHED

CONGRATULATIONS TO TWO MEMBERS OF THE GARDEN STATE DIVISION:

TOM PICCIRILLO'S O SCALE SOMERSET COUNTY TRACTION SYSTEM IS FEATURED IN KALMBACH'S ANNUAL MAGAZINE, GREAT MODEL RAILROADS.

BRUCE DE YOUNG CO-AUTHORED AN ARTICLE THAT APPEARS IN THE OCTOBER ISSUE OF SCALE RAILS. THE AUTHORS DISCUSS HOW THEY BUILT THE SAME STRUCTURE WHILE SHARING PLANS, TECHNIQUES, AND IDEAS VIA THE INTERNET.



What I Learned

Building Threadwell Mills

by Norman Frowley, MMR

With every craftsman kit I build I learn something new either by design or as a function of necessity. That is to say, I always try to experiment or do something completely different on each project; but then there are times when the necessities of the project itself, as it progresses towards completion, causes me to rethink my approach and do something unique in order to accommodate the circumstances. My idea when I obtained the Threadwell Mills kit manufactured by South River Modelworks was to construct complete interiors for most of the structures and to light not only the interiors of the buildings but the exterior loading dock and outside stairway as well.

First, I had to decide what the interior of each floor would look like, conceptualize how to build the interior floors, walls and staircases and figure out where the lights would go and how I would hide the interior and exterior wiring to energize the lighting. Quite a task considering the fact the kit did not come with floors or floor plans, interior details or lighting. In this sense a significant portion of the kit would have to be scratch built in some manner or another.

I knew at the outset that the interior walls were to be covered with brick paper, which I would weather. I had seen pictures of old knitting and thread mills and most of them had exposed brick walls. Interior stairs were obtained from Grandt Lines, light bulbs and 32 gauge wire were secured, as well as Campbell brass shades. Research was done as to the overall construction and appearance of textile mills at the turn of the last century or thereabouts. Only then did I set about planning the interior layout of the mill.

Incidentally, interior stairs are very important in structures with multiple stories. Moreover, interior doors between rooms, and doors on the inside of a wall which has a door cast or otherwise appearing on the outside of the wall should not be overlooked.

Since there were multiple floors to the mill I decided that the rather complex roof of the



"What I Learned" continued on Page 8

“What I Learned” continued from page 7

building would remain in place and not be removable to show all of the interior details. Removing the roof would reveal only the attic portion of the building and not the two lower floors which were to contain, in my opinion, the more interesting details. The main building would thus have to be constructed like a doll house, leaving one of the walls off until the interior was completed. Why not leave one wall permanently removable so as to facilitate viewing of the interior, you ask? Good question. The kit's walls are Hydrocal castings. I have found that there is no way to leave a Hydrocal wall "loose" without leaving at the same time a noticeable gap or seam between the walls destroying the illusion of reality I wished to create.

After researching the various types of wooden and mechanical looms I could possibly replicate, I decided that building exact replicas would be burdensome. So I simulated mechanical looms using styrene strips, tubes and channels of sundry sizes and old watch gears. I constructed wooden hand looms out of various dimensions of strip basswood. I then turned my attention to the floors and ceilings and chose to build the second and third floors as frames made of strip wood, leaving the bottom side of the frame itself open to view and giving the appearance of floor joists "overhead." I covered the tops of the floor joists with scale 2 by 8's to form the flooring "above" the ceiling of the floor below. The lights are 1.5 volt grain of wheat bulbs inserted in Campbell brass shades. These shades were inserted into "beams" incorporated into the flooring/ceiling frame previously described. The wires for these lights were run through grooves cut in the tops of the floor joists and were then covered over by the planking for the flooring "above." I next painted the underside of the frame (the exposed floor joist side) with a dark brown paint which served two purposes. It concealed the wires, if any were visible to begin with, and made any imperfections on the underside of the frame essentially disappear.


Obviously, outer measurements of the frames were critical since the frame had to fit exactly between the three erected walls, leaving just enough room for the fourth wall to fit snugly in place. The frames were constructed on the bench and inserted in the building afterward. The frames, moreover, had to accommodate the peculiarities of the interior space. Not only were there corner supports for the walls which had to be taken into account, but I had used two plastic soda straws painted gray (simulating conduit) to carry the

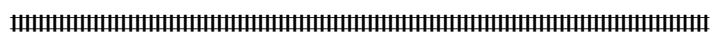
wiring to the bottom of the building. The frame had to fit around all of these items.



During installation of the lighting I discovered a problem. The Miniatronic 1.5 volt grain of wheat bulbs I had been using for years no longer suited my purposes. I had always used them in combination with the Campbell brass shades to create a realistic lighting fixture. The Miniatronic bulbs, however, were now being manufactured with a thicker neck (in the area where the bulb is connected to the lead wires) such that the


bulb could not be lowered into the shade and instead had to be left hanging below the shade, leaving an unacceptable appearance to the shade/bulb combination. I searched around for other bulbs and found that Walthers manufactured them. Indeed the Walthers bulbs had the same narrow neck I had become accustomed to and I used them. The only drawback is that the Miniatronic bulbs had been pricey but not ridiculous. The Walthers bulbs are over \$5.00 apiece. With some 30 odd lights throughout the model, the Threadwell Mill became a very, very expensive project.

Overall, though, I think the expense was worth it since the model, when fully lit in a dark room presents a number of interesting viewing possibilities both inside and outside of the various structures. I'd recommend to anyone building a substantial craftsman structure to take the additional time necessary to build an interior and add lighting. I think you'll find the result well worth the time and effort. 



“USRA Gondolas” continued from page 6

chars in the process but does not burn. It leaves a slightly granular surface on the casting. The charring does not change the dimensions of the castings significantly over several pours. Clean off any flash and file the centersills top to get a uniform height along its length. This is the only surface that needs to be smooth to facilitate gluing it to the car floor. Due to all the set up involved, I make multiple centersills and use the best ones. Defective castings are re-melted and re-cast. After handling these lead parts, wash your hands to remove any lead film you may have picked up during this process.

The next issue of *The Whistle Post* will conclude this upgrade to a classic car kit. The Winter 2009 issue will take you through the steps of disassembling, modifying, reassembling, and painting an Ulrich USRA war emergency gondola. 

UPCOMING DIVISION MEETS

DATE:
OCTOBER 25, 2008
10 AM

LOCATION:
ST. JOSEPH'S CHURCH
120 HOBOKEN ROAD
EAST RUTHERFORD, NJ

AGENDA:
DOOR PRIZES
CLINICS

COST:
\$5 GENERAL ADMISSION TO SWAP
MEET

DATE:
JANUARY 18, 2009
12 NOON

LOCATION:
RAMAPO VALLEY RAILROAD CLUB
620 CLIFF STREET
HO-HO-KUS, NJ 07423

DIRECTIONS:
THE CLUB IS ACCESSIBLE BY TRAIN
ON NJ TRANSIT. THE CLUB IS
LOCATED AT THE BOTTOM OF THE
HO-HO-KUS STATION PARKING LOT.
FOR DRIVING DIRECTIONS, VISIT
[HTTP://MEMBERS.AOL.COM/RVRRCLUB/](http://members.aol.com/RVRRCLUB/)

AGENDA:
ANNUAL ELECTIONS
BUSINESS MEETING
CLINICS
OPERATING SESSION

COST:
\$1 DONATION TO THE RAMAPO
VALLEY MODEL RAILROAD CLUB

CLINIC CONTACT:
IF INTERESTED IN PRESENTING A
CLINIC AT A DIVISION MEETING,
PLEASE CONTACT EVENT CHAIR:

ROBERT TUMIELEWICZ
rtumielew@aol.com



Come to the GSD Fall Meet on October 25 at:

Saint Joseph's Church in East Rutherford, NJ


Garden State Division members probably equate October and East Rutherford to the Giants and Jets football games. But there is one day in October where you should set down the remote control, get out of your arm chair, and head to East Rutherford for a different purpose.

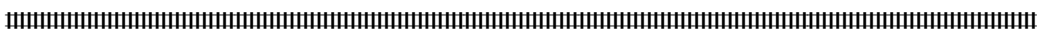
The New York Society of Model Engineers (NYSME) is holding their annual "All Scale" swap meet in the auditorium of St. Joseph's Church, in East Rutherford. The church is located two blocks away from the NYSME headquarters.

In conjunction with the swap meet, the

Garden State Division will conduct its fall meet at the church. Door prizes and clinics are planned for the event.

There will be a general admission fee of \$5 collected for the swap meet. However, wives and children under the age of 12 will be admitted for free. There will not be an additional charge to attend the GSD meet, but donations will be accepted. The GSD meet will be held in a separate location at the church, not in the auditorium.

Give that television a well deserved rest and come to the swap meet/GSD meeting on October 25! 



Come to the GSD Winter Meet on January 18 at:


Ramapo Valley Railroad Club in Ho-Ho-Kus, NJ

Are you thinking about your New Year's resolutions for 2009? Here is a suggestion: Become more active in the Garden State Division (GSD) in 2009.

In 2008, the GSD experienced increased attendance at its meets, great clinic topics ranging from history to modeling, and fun operating layouts. And, if you were active in 2008, make a resolution to remain active in 2009.

Many of you may not realize that if you are a member of the NMRA, living in northern New Jersey or Staten Island, you are automatically a member of the Northeast Region and the Garden State Division.

So, where is the best place to start participating in GSD events? Try Ho-Ho-Kus, NJ on January 18. This is the GSD's annual membership meeting. The Winter meeting is when officers are elected to the board and the annual business meeting is conducted. On page 13 in this issue, you will find the list of nominees for office in the GSD. The election and business meeting will be followed by clinics and an operating session on the Ramapo Valley Railroad Club's layout.

So take the train or drive your car to Ho-Ho-Kus. See you there! 



“Two Events” continued from page 1

Day, held in Lake Mohawk in September.


Like last year, all of the participants worked on small dioramas. The participants were able to add scenery to their dioramas, including trees that they made. They were also introduced to structure building.

Prior to the event, Anthony Piccirillo designed a small, simple structure using one of the available software programs available to model railroaders. This program allows you to use different textures for the siding and roof. In addition, you can add a variety of doors and windows. Then, the structure was printed on heavier cardstock by Anthony. The rest of the fun was up to the kids: Cutting and pasting!



▲ GSD and model railroad club members enjoying the company, food, and the weather during the summer BBQ

And, with an event named Railroad Family Youth Day, you can be sure that track was laid down and trains were run.

These activities would not have been a success without the many volunteers. A big thank you to them for making the day fun! 



▲ Norman Frowley presenting (from l. to r.) the Golden Spike Award to Frank Russo, A Master Builder - Structures to Bruce DeYoung, and Master Builder - Motive Power, Chief Dispatcher, and Model Railroad Author to Tom Piccirillo



▲ Diorama building during Railroad Family Youth Day, at Lake Mohawk

ABOUT THE WHISTLE POST

THE SUBMISSION DEADLINES FOR *THE WHISTLE POST*:

JANUARY 10
APRIL 10
JULY 10
OCTOBER 10

CONTRIBUTORS TO THIS ISSUE:

ANDY BRUSGARD
CIRO COMPAGNO
NORMAN FROWLEY
ED OLSZEWSKI
ANTHONY PICCIRILLO
TOM PICCIRILLO
TOM WORTMANN

THANK YOU!

MISSION STATEMENT:

THE WHISTLE POST, THE NEWSLETTER OF THE NMRA'S GARDEN STATE DIVISION, SEEKS TO SERVE AS A VEHICLE FOR COMMUNICATION AMONG THE DIVISION'S MEMBERSHIP, SHOWCASE ACTIVITIES OF THE MEMBERSHIP, AND PROMOTE THE HOBBY OF MODEL RAILROADING.

COPYRIGHT:

© 2008 GARDEN STATE DIVISION. ALL RIGHTS RESERVED. THIS NEWSLETTER MAY NOT BE REPRODUCED IN PART OR IN WHOLE WITHOUT WRITTEN PERMISSION BY THE EDITOR AT:
gsdwhistlepost@yahoo.com

SUBSCRIPTION COST:

\$10 PER CALENDAR YEAR

CONTRIBUTIONS CAN BE SENT TO:

CHUCK DILJAK
31 KUIKEN COURT
WAYNE, NJ 07470
gsdwhistlepost@yahoo.com

SEND ADDRESS CORRECTIONS TO:

ANTHONY PICCIRILLO
748 WEST SHORE TRAIL
SPARTA, NJ 07871
anthony13trains@embarq-mail.com

Photo Theme for the Next Issue: *Lineside Industries*



▲ *The Kingston Creamery on Norman Frowley's HO scale Jessica Valley Railroad.*

Photo Theme is a one or two page feature in each issue of *The Whistle Post*, based on a theme. Photos and captions can be e-mailed to gsdwhistlepost@yahoo.com.

"Minutes" continued from Page 5

-Tom Casey will continue sending the GSD membership reports. The purpose in sharing this information is to give Chuck Diljak consideration on how to possibly fit this information into the Whistle Post.

-Anthony Piccirillo will continue to send an e-mail announcing the latest Whistle Post to approximate 250 members. In the e-mail, there is an active link to download the Whistle Post from the GSD Website.

-Chuck Diljak e-mails complimentary issues to Superintendents and Presidents in the NER and New Jersey Division, NMRA Library, NMRA officers, and Jim Zinser, columnist of the NMRA publication *Scale Rails*."

Whistle Post Report

Not discussed during meeting.

New Business:

Preparations are being for the January 2009 GSD election:

-Tom Wortmann appointed Ed Fraedrich as the chairman of the Nominating Committee.

-Ed Fraedrich accepted the volunteer of Andy Brusgard to serve on the Nominating Committee.

-The Nominating Committee will prepare a slate of candidates for election at the Annual Meeting in January 2009, which will include at least one name for each elective office in accordance with Article 7 of the Constitution of the GSD.

-The Nominating Committee will provide the names of the candidates to the editor of the Whistle Post publication in the issue preceding the Annual Meeting.

Next Meeting:

To be determined.
Meeting adjourned around 2:00 pm

Respectfully submitted,

Ciro Compagno, Secretary 

The GSD at Empire Junction 2008

The Garden State Division is getting noticed around the region.

Norman Frowley, the Achievement Program chairman for the Garden State Division, received two awards at the Northeast



▲ Tom Griffiths (r) and ▼ Tony Koester (r) receiving their awards at the NER convention



Region's 2008 convention, Empire Junction, in Liverpool, N.Y. Norman's version of Threadwell Mills, a South




▲ Norman Frowley entered multiple models, including Kendall's, by South River Model Works

River Model Works kit, received first place in the Masters category for structures. His Threadwell Mills structure can be seen in photos that accompany the article entitled, "Building Threadwill Mills" in this issue. His Kendall's, also by South River Model Works, received second place in the same category.

Tom Griffiths received first place in the craftsman category for structures. Tom's model of Hoboken Terminal, shown in the Summer 2008 issue of *The Whistle Post*, received a merit award with 116 points out of 125. Tom also received two special awards with his entry. Tom received the Sunrise Trail Award for highest point score by a new modeler. Tom also received the HUB award for the model with the second highest point total, overall.

In addition to the contest winners, Tony Koester received his Golden Spike Award at the convention banquet.

Next year, there will not be a regional convention since the region is hosting the national convention. Since it is in our backyard, we hope the Garden State Division will be well represented there, too. 

Second Map Book Added to Rutgers Site

by Andy Brusgard

The Rutgers University Historic Map Collection recently added a second map book in their collection, thanks to the members of the New York Society of Model Engineers. The book is available on-line at:

http://mapmaker.rutgers.edu/HudsonCoAtlas/_Cover/

Although there are no dates in the book, it is believed that it dates from the early 1870s. Pages 34-35 and 38-39 display the railroad terminals on the Hudson River. The railroad terminal shown on pages 34-35 is at Exchange Place in Jersey City. It is identified as the New Jersey Railroad Terminal. The New Jersey Railroad predates the Pennsylvania Railroad in this location. The Pennsylvania Railroad took over the New Jersey Railroad in 1871. After the takeover, it was known as the New York Terminal of the Pennsylvania Railroad, despite being in Jersey City.


The images from the book use a program called Zoomify. The program may be slow to load the images when you zoom in. That is because each page is a very large file. However, your patience will be rewarded once the image clears up. This is because the names of every property owner becomes visible as you zoom in.

The link to the first book, which covers Jersey City in the 1920's is available on-line at:

http://mapmaker.rutgers.edu/JCplat_book/Frontpage/

The link to the Rutgers Historic Map Site home page is:

<http://mapmaker.rutgers.edu/MAPS.html>

There are hundreds of maps going back to the earliest days of New Jersey. 

MODELING TIP

PROBLEM:

Many craftsman kit manufacturers include finishing and weathering tips in their instructions. But, if you scratchbuild a structure, what are some of the techniques that you can use?

SOLUTION:

A few of the kit manufacturers and other organizations include this information on-line. Try some of the techniques shown on these pages:

www.rustystumps.com/HowToArticles.asp

www.sierrawestscalemodels.com/clinic/clinic.html

www.cccrow.com/main-pages/how-to.html#how-2-list

www.gatewaymra.org/scenery.htm

www.rrmodelcraftsman.com/mow_resin.php

MODELING TIPS CAN BE SENT TO
ACHIEVEMENT PROGRAM CHAIR:
NORMAN FROWLEY, MMR
normanfrow@aol.com

HOLIDAY TIMETABLE - INFORMATION

Amherst Railway Society Railroad Show

Eastern States Exposition Fairgrounds (The Big E)
West Springfield, MA
www.railroadhobbyshow.com
Adults \$10, Children 15 and under Free, parking \$5

Craftsman Structure Show

Holiday Inn, 31 Hampshire Street
Mansfield, MA
www.css08.com
See website for details

Essex Steam Train Santa Special

One Railroad Avenue
Essex, CT
www.essexsteamtrain.com/santa.html
Coach: \$17, Parlor: \$34

Great Scale Model Train Show

Maryland State Fair Grounds
2200 York Road
Timonium, MD
www.gsmts.com
Adults \$9, Children 15 and under Free, Family \$15

Garden State Model Railway Club

575 High Mountain Road
North Haledon, NJ
www.gsmrrclub.org

Greenberg Show in Edison, NJ

New Jersey Expo Center, 97 Sunfield Avenue
Edison, NJ
www.trainshow.org
Adults \$7, Children under 12, Free

Greenberg Show in Somerset, NJ

Garden State Exhibit Center
Somerset, NJ
www.trainshow.org
Adults \$7, Children under 12, Free

Model Railroad Club, The

295 Jefferson Avenue
Union, NJ
www.tmrcl.com
Adults \$7, Children \$5, Children under age 13 Free,
Seniors over age 59 \$6, \$1 discount on advanced tickets.

New Hope & Ivyland Railroad

32 West Bridge Street
New Hope, PA
www.newhoperailroad.com
Weekend and Weekday rates vary

New York Society of Model Engineers

341 Hoboken Road
Carlstadt, NJ
www.modelengineers.org
Adults \$5, Children \$1, Children under 5, Free

Northwest Jersey Train-O-Rama

Dover High School, 100 Grace Street
Dover, NJ
www.dovertrainshow.com
\$5 if preregistered or \$6 at the door

Ramapo Valley Railroad Club

620 Cliff Street
Ho-Ho-Kus, NJ
members.aol.com/rvrclub
Adults \$4, Children \$1, family maximum \$10

Station at Citigroup Center

53rd and Lexington
New York, NY
www.dunhamstudios.com/cititour.htm

Garden State Division Officer

Nominations and Elections by Ed Fraedrich

To date, the following names have been nominated for office in the Garden State Division. The election of officers will take place during the annual Winter meet on January 18, 2009 at the Ramapo Valley Railroad club in Ho-Ho-Kus, NJ.

President:

Tom Wortmann

Treasurer:

Anthony Piccirillo

Vice President:

Norman Frowley

Directors at Large:


Bob Tumielewicz

Ed Fraedrich

Bruce De Young

Secretary:

Ciro Compagno

Other names may be nominated for office by e-mailing me at edfred.one@verizon.net 

HOLIDAY TIMETABLE - DATES AND TIMES

Daily, Nov. 13 to Nov. 15	Times vary by day	Craftsman Structure Show	www.css08.com
Daily, Nov. 21 to Dec. 23	See website for times	New Hope & Ivyland Railroad	www.newhoperrailroad.com
Friday, Nov. 21	7-10 PM	New York Society of Model Engineers	www.modelengineers.org
Saturday, Nov. 22	1-6 PM	New York Society of Model Engineers	www.modelengineers.org
Sunday, Nov. 23	1-6 PM	New York Society of Model Engineers	www.modelengineers.org
Daily, Nov. 28 to Jan. 2	Monday- Saturday, 10 AM-6 PM Sunday, Noon-5 PM	Station at Citigroup Center Station at Citigroup Center	www.dunhamstudios.com/cititour.htm www.dunhamstudios.com/cititour.htm
Friday, Nov. 28	Noon-10 PM 1 PM and 2:30 PM 7-10 PM 7-10 PM	Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club New York Society of Model Engineers	www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org www.modelengineers.org
Saturday, Nov. 29	10 AM-4 PM 10 AM-8 PM 1 PM and 2:30 PM 1-5 PM 1-6 PM 1-4 PM	Greenberg Show in Edison, NJ Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club New York Society of Model Engineers Ramapo Valley Railroad Club	www.trainshow.org www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org www.modelengineers.org members.aol.com/rvrrclub
Sunday, Nov. 30	10 AM-4 PM 11 AM-6 PM 1 PM and 2:30 PM 1-5 PM 1-6 PM	Greenberg Show in Edison, NJ Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club New York Society of Model Engineers	www.trainshow.org www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org www.modelengineers.org
Friday, Dec. 5	7-10 PM 7-10 PM 7-10 PM	Garden State Model Railway Club Model Railroad Club, The New York Society of Model Engineers	www.gsmrrclub.org www.tmrcki.com www.modelengineers.org
Saturday, Dec. 6	10 AM-8 PM 1 PM and 2:30 PM 1-5 PM 1-6 PM	Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club New York Society of Model Engineers	www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org www.modelengineers.org
Sunday, Dec. 7	9 AM-3 PM 11 AM-6 PM 1 PM and 2:30 PM 1-5 PM 1-6 PM	Northwest Jersey Train-O-Rama Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club New York Society of Model Engineers	www.dovertrainshow.com www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org www.modelengineers.org
Friday, Dec. 12	7-10 PM 7-10 PM	Garden State Model Railway Club Model Railroad Club, The	www.gsmrrclub.org www.tmrcki.com
Saturday, Dec. 13	10 AM-8 PM 1 PM and 2:30 PM 1-5 PM 1-4 PM	Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club Ramapo Valley Railroad Club	www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org members.aol.com/rvrrclub
Sunday, Dec. 14	11 AM-6 PM 1 PM and 2:30 PM 1-5 PM 1-4 PM	Model Railroad Club, The Essex Steam Train Santa Special Garden State Model Railway Club Ramapo Valley Railroad Club	www.tmrcki.com www.essexsteamtrain.com/santa.html www.gsmrrclub.org members.aol.com/rvrrclub
Saturday, Dec. 20	1 PM and 2:30 PM	Essex Steam Train Santa Special	www.essexsteamtrain.com/santa.html
Sunday, Dec. 21	1 PM and 2:30 PM	Essex Steam Train Santa Special	www.essexsteamtrain.com/santa.html
Saturday, Dec. 27	1 PM and 2:30 PM	Essex Steam Train Santa Special	www.essexsteamtrain.com/santa.html
Sunday, Dec. 28	1 PM and 2:30 PM 1-4 PM	Essex Steam Train Santa Special Ramapo Valley Railroad Club	www.essexsteamtrain.com/santa.html members.aol.com/rvrrclub
Saturday, Jan. 3	10 AM-4 PM	Greenberg Show in Somerset, NJ	www.trainshow.org
Sunday, Jan. 4	10 AM-4 PM	Greenberg Show in Somerset, NJ	www.trainshow.org
Saturday, Jan. 24	9 AM-5 PM	Amherst Railway Society Railroad Show	www.railroadhobbyshow.com
Sunday, Jan. 25	10 AM-5 PM	Amherst Railway Society Railroad Show	www.railroadhobbyshow.com
Saturday, Jan. 31	9 AM-4 PM	Great Scale Model Train Show	www.gsmts.com
Sunday, Feb. 1	10 AM-4 PM	Great Scale Model Train Show	www.gsmts.com

TO HAVE A SHOW OR MEET LISTED, PLEASE E-MAIL THE INFORMATION TO gsdwhistlepost@yahoo.com

SUPPORTING HOBBY SHOPS

THE BIG LITTLE RAILROAD SHOP
 63 WEST MAIN STREET
 SOMERVILLE, NJ 08876
 PHONE: 908-685-8892
 E-MAIL: blrrs@crisp.net
 www.biglittle.com
 TUES-FRI11AM - 7PM
 SAT11AM - 5PM

F&M HOBBIES
 DENBROOK SHOPPING VILLAGE
 3118 RT. 10 WEST
 DENVILLE, NJ 07834
 PHONE: 973-361-0042

JACKSON HOBBY SHOP
 2275 W. COUNTY LINE RD.
 BENNETTS MILLS PLAZA
 JACKSON NJ 08527
 PHONE: 732-364-3334
 www.jacksonhobby.com
 TUES, WED, THURS 10AM - 6PM
 FRI10AM - 8PM
 SAT10AM - 5PM
 SUN, MONCLOSED

THE MODEL RAILROAD SHOP
 290 VAIL AVE.
 PISCATAWAY, NJ 08854
 PHONE: 732-968-5696
 www.themodelrailroadshop.com
 DAILY10AM - 6PM
 WED AND FRI10AM - 9PM
 SUNCLOSED

THANK YOU!

THE JACKSON HOBBY SHOP SUPPORTS THE NMRA BY PROVIDING A 10% DISCOUNT ON TRAINS AND TRAIN SUPPLIES WHEN YOU SHOW YOUR NMRA CARD. THE REMAINING HOBBY SHOPS SUPPORT THE GARDEN STATE DIVISION BY PROVIDING DOOR PRIZES FOR OUR MEETINGS.



Motive Power

▼ *Somerset County Traction System no. 17, a wood-bodied steeplecab, prepares to leave Lambertville with interchange traffic for the Easton & Amboy*



Railroad at Bound Brook. Tom Piccirillo of Warren, NJ, scratchbuilt the O scale motor (traction locomotive) with 8-wheel dual-flywheel drive and equalized trucks for good pulling power. Yes, it is powered by the overhead wire. Photo by Tom Piccirillo.

A Broadway Limited SD40-2 on Tom Kehoskie's layout in the Central New York Division. Photo by Ed Olszewski. ►



◀ *A Big Boy on Norman Frowley's HO Marklin layout*

An SW-1, decorated in Lehigh Valley colors, in Towanda, PA. The year? 2004. ►





Chuck Diljak
31 Kuiken Court
Wayne, NJ 07470

The date in the mailing label corner identifies
when your subscription ends ⇔ 1/09

Subscriptions run from January to January



SEASON'S



GREETINGS