The Susquehanna Valley Line Railroad

Proudly serving the up steam communities with car float service

Layout Description – Setting and Scenic Details

The Susquehanna Valley Line (SVL) railroad is an HO-scale freelanced freight-only railroad set in my hometown of Williamsport, Pennsylvania, the home of Little League baseball, in the spring of 1952. This past winter the snow was unusually late and also very heavy. Williamsport resides in a valley along the north branch of the Susquehanna River in central Pennsylvania. The foothills of the Appalachian Mountains are a very predominant feature along the south side of the river. The SVL railroad exists to serve local industries in the Williamsport area and to provide car float service to those communities along the north branch of the Susquehanna River which do not have rail service at this time.

The SVL layout resides in a 12.5-ft by 15-ft former bedroom in our home. One end of the around the room design begins at the six-track hidden staging yard, representing the large Pennsylvania Railroad yard at Enola, PA. After a train makes two passes around the room it enters the Riverside Yard and adjacent Front Street Industrial Area which constitute the other end of the railroad. Along the mainline there is a long passing siding at Faxon, PA, a turnout leading to interchange tracks at Milton, PA, a junction point with a branch line leading up to the Newberry Industrial Area, a small industrial siding at Pine Street, and the residual of a spur formerly leading up to Lock Haven, PA and now just a line back to a farm implements store. A hinged swing-up bridge, with the two mainline tracks on it, provides access to the layout room without the need for a duck under.

The Riverside Yard has 5 storage / classification tracks, a service track, 4 whisker tracks plus the arrival and departure tracks, both which terminate at a turntable. On the right side of the lead into the Riverside Yard is a turnout leading to six industrial spurs. A car float approach track branches off of the drill track for the Riverside Yard. Adjacent to the Riverside Yard is a car float dock, apron, and a single reacher track. These last items are owned and managed by the Susquehanna River Navigation Company to which the SVL provides service.

The Newberry Industrial Area is the home of four industries, two team tracks and a local clean out track. The track design for the Newberry Industrial Area closely follows that of a yard by Don Mitchell for his Bekin United Railroad layout as presented in his book “Walkaround Model Railroad Track Plans”, page 7.

Trains leaving the main level of the layout heading towards the hidden staging yard travel along three walls of the room to reach the ladder for the long six-track tiered staging yard. Midway down the path is a John Armstrong “reverted loop” which allows the engineer to back each train into its staging track and thus have the train in a power forward position without the need for any fiddling between operating sessions.

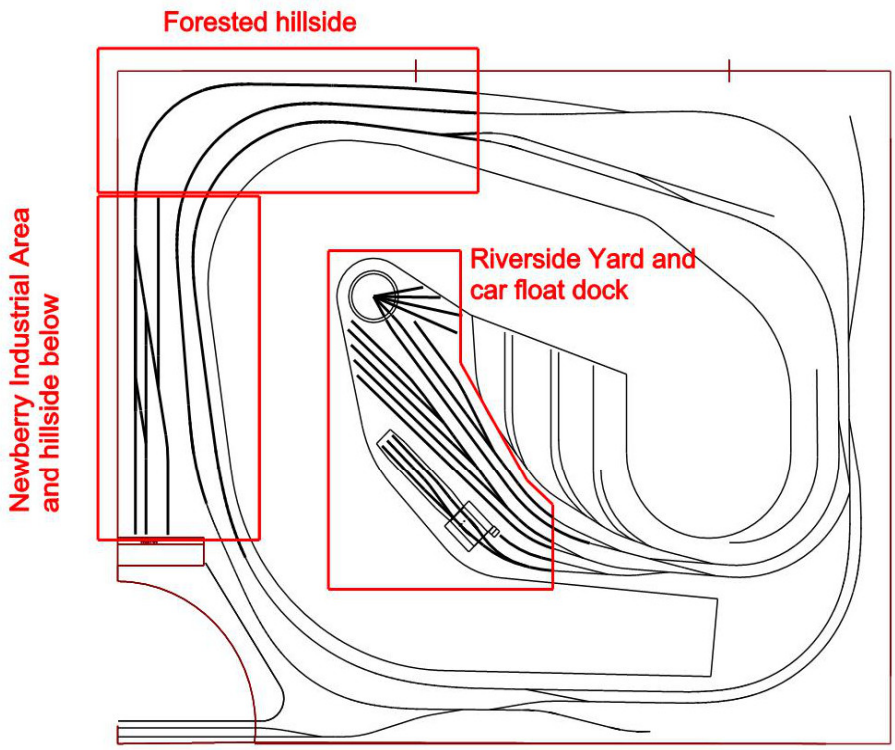
The SVL will be fifteen years old this coming August, and is reasonably financially stable given the stiff competition from both the Reading and Pennsylvania railroads which also have tracks in the Williamsport area. We have a little concern about our long term financial stability principally based on some of the campaign statements being made by the Republican candidate in the presidential election this fall. This candidate is suggesting the development of a country-wide network of high speed, limited-access roads which could in the long term make truck deliveries to our up steam communities more feasible.

The three areas of my SVL layout that I am presenting for Scenery Certificate evaluation total slightly over 39 square feet and present distinct scenery areas on the layout. An overall view of the scenery area is shown in Figure 2-1. Figure 2-2 shows where the three scenery areas reside with respect to the total SVL layout and also shows a calculation of the area under evaluation.

Figure 2-1 Overall view of the scenery area of the SVL railroad layout

The first area is the elevated Newberry Industrial Area and the hillside below. The second area is the Riverside Yard and the adjacent car float dock, apron, reacher and approach tracks. The third area is where the two mainline tracks and the branch line track pass through forested hills. The branch line track continues up to the Newberry Industrial Area and the two main line tracks continue below and in front of the elevated Newberry Industrial Area. Cuts in the mountain were made to accommodate these tracks. Each of these three areas is described in more detail on pages 2-5, 2-7 and 2-9.

Designated Scenery Areas



Scenery Area Size

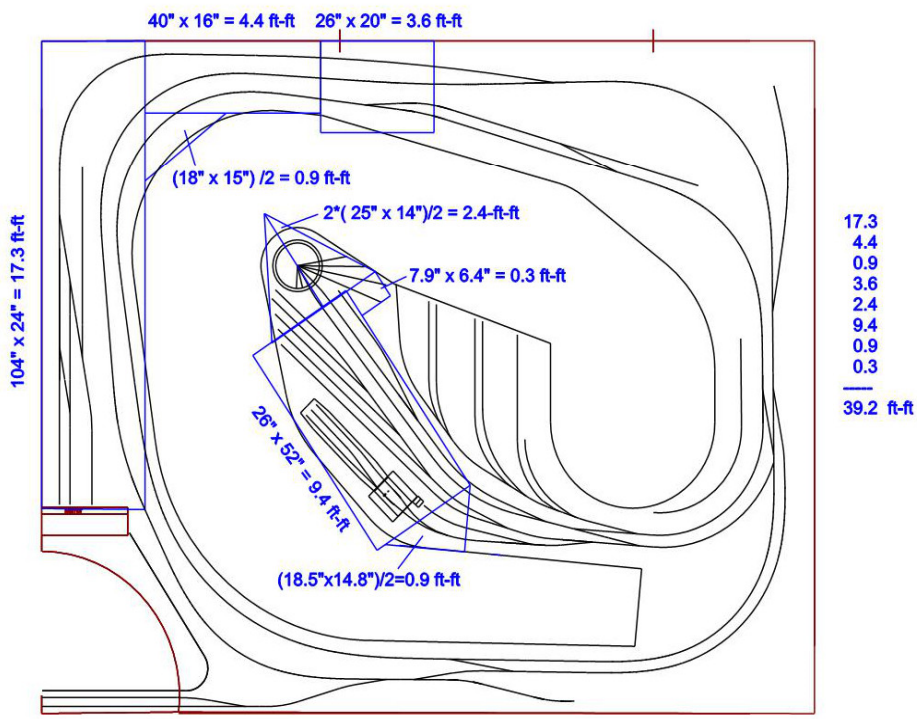


Figure 2-2 Scenery Areas and Scenery Area Calculation

Goals

During the scenery development activities over the past several years I have been guided by a small set of specific / detailed goals that I wished to achieve in addition to fulfilling the requirements for the NMRA Achievement Program Scenery certificate to a high level. I am comfortable to state that I have achieved with a high degree of success and satisfaction each goal. These goals in non-prioritized order and their status at the time of this scenery certificate evaluation are:

Goal-1: Minimize / eliminate the unreal gap between any structure or scenery element and its reflected image when the structure or scenery element is abutted to a reflective surface.

Status: I used a piece of 5-mil Grafix Dura-Lar® as a front surface reflective material and was able to completely eliminate the gap where the CA Reed paper products building abuts the wall at the end of the Newberry Industrial Area. A complete report of the research and analysis that led me to the selection of the Grafix material can be found in my article titled "*Glass Mirror Alternatives – How to Get Rid of the Gap*" that appeared in the September 2012 issue of the *NMRA Magazine*.

Goal-2: Maximize the non-uniformity of tie-to-tie coloration.

Status: All of the 4900+ ties in the scenery evaluation area have been painted a minimum of three times, and all of the mainline track ties being painted a fourth time. The result is an absolute non-uniformity in the appearance of adjacent ties. Some ties are darker than others reflecting their relative newness.

Lesson Learned: Read / reread instructions before embarking on a task. My tie painting process was based on an e-mail exchange with Lance Mindheim in which he identified the process he used to paint ties on the layouts he creates. He first painted all the ties with Model Master Light Gray paint. He then brushed on a wash of Burnt / Raw Umber acrylic paints. I successfully repeated his first step. Then, w/o re-reviewing his e-mail, I next painted the ties using various acrylic paints including Burnt and Raw Umber, Burnt Sienna, and Brown, and mixtures thereof. The result of my second painting pass was that the coloration of the ties was, as desired, highly non-uniform but much too strong / vivid. In order to tone down the colors I painted the ties with a 24:1 water / Dove Gray acrylic paint wash. The wash pass successfully reduced the strong colors of the ties yet preserved the tie-to-tie non-uniformity that I sought. The ballasting process had an effect on the tie colors making them much too gray and this necessitated a fourth pass on the mainline ties. In the fourth pass I used a wash of one part Burnt Umber to 4 parts water, and one part Raw Umber to 4 parts water. The mistake I made in following Lance's guidance was that he used a wash in his second pass whereas I used the acrylic paints full strength.

Goal-3: Show "work in progress" activity on the layout.

Status: There are five distinct vignettes where I present evidence of on-going or work in progress activity. These are:

1. New conduit pipes are ready to replace the aged and rusted pipes where the branch line track up to Newberry crosses the left stream.
2. Lumber has been delivered and the first four posts are in the ground where the walkway used by the stevedore crew to access the car float apron crosses the top end of the reacher track.
3. Barricade protecting the washout that occurred behind the retaining wall separating the Riverside Yard from the parkland area above the car float dock area. Repairs are scheduled soon. The barricade is scratch built.
4. A sidewalk section near the Newberry yardmaster's office has recently been replaced. The forms are still on site
5. Workmen have begun repainting the bumpers and cleats on the car float

Names

All industry and location names used on the SVL match those found in the Williamsport area except for the Riverside Yard name, and are consistent with the 1952 timeframe as identified in 20 pages of the 1952 City Directory provided to me by the Reference Librarian at the J.V. Brown Library in Williamsport.

Newberry Scenery Description

The buildings in the Newberry Industrial Area are Walthers Background Building kits with the addition of interior and exterior lighting. The CA Reed paper products building is the well-known Walthers Heritage Furniture building with extensive modification on the end that abuts the wall. The modification involved installing a half-width full-height window wall column so that coupled with the reflected image one would see one full width column of windows. The Lowery Electric building started out as the Walthers Arrowhead Ale background building; however the size of that small building didn't justify rail service. So a three story warehouse section was added to the basic kit to provide room for the electrical components sold by Lowery Electric. The Rischel Furniture building is the Walthers Armstrong Electric background building. The Weldon Manufacturing building was constructed using Walthers modular kit parts and reflects a recent expansion as the sales of pajamas has increased in recent years. All these buildings have foundations below grade level. Figure 2-3 shows a representative building in Williamsport from the era of the SVL layout.

KingMill Enterprises background building digital prints were used to extend the Newberry industrial scene backwards. Each digital print building is situated on its own foundation.

Figure 2-4 shows the buildings in the Newberry Industrial Area. In the years immediately preceding 1952 there was a significant increase in the traffic heading up to the Newberry Industrial Area resulting in a need for some expansion. The expansion involved reshaping of the hillside below Newberry so that a second team track could be provided, as well as the installation of a much needed clean out track in order to eliminate the long trek back to Enola, PA for car cleaning purposes. The cinder ballast under these two new tracks is solid black as compared to the older track area of area of Newbery in which some brown cinder representing dirt has been mixed with the original black cinder ballast. A 6-foot high fence, see Figure 2-5, adjacent to the clean out track protects loose debris from

Figure 2-3 Era specific representative building in Williamsport

coming down the hillside. The expansion also required the need for a new lower concrete panel retaining wall to be installed as shown in Figure 2-5. At this point in time most of the low level landscaping on the newly re-shaped hillside below Newberry has taken hold and is growing well, see Figure 2-6 above. Trees are still fairly sparse in this area. A Boy Scout has created a trail from the edge of the Newberry Industrial Area down the hillside to near the (to be installed) bridge across the Susquehanna River. There are three flat drain grates throughout the Newberry Industrial Area.

Figure 2-4 Newberry Industrial Area and hillside below

Figure 2-5 Fence along new clean out track and new lower concrete panel retaining wall

Figure 2-6 Newly reshaped hillside below Newberry and Boy Scout trail

The runoffs on the hillside for two of the drains, as seen in Figure 2-6 above, were made from measurements taken from a similar style runoff located at the former Mystic gasoline station at the corner of Alafaya Trail and Chapman Road just north of my house in Orlando.

Riverside Scenery Description

The Riverside Yard is a flat yard located along the Susquehanna River. Figures 2-7, 2-8 and 2-9 show three views of the Riverside Yard. The drainage system for the yard is an underground French drain system. The turntable at the end of the arrival and departure tracks is a Diamond Scale 75-foot long turntable. The pit of the turntable has been modified to be sloped from the ring rail towards the center to improve drainage through the two drain grates in the bottom of the pit. The runoff tracks off the end of the turntable provide ready access for wheel sets or trucks. The 4 whisker tracks adjacent to the turntable are for engine storage. A rail storage rack, newly delivered box of knuckle couplers, maintenance equipment / storage box, ash pit, ash pit shovel rack, trash, box of mu hoses, barrel of nuts and bolts, pallet of broken couplers, men reviewing construction plans, men at work signs, water column, and an air hose pipe can be seen around the yard.

The sand house along the service track in the Riverside Yard is a scratch built 8-ft x 10-ft structure. The sand storage bin and the sand delivery tower are also scratch built. The adjacent coal tipple is also scratch built and is derived from a Cadrail ™ file of the D&RGW coal tipple at Charma, New Mexico minus the office at the base and the elevated pulley house. Figure 2-11 shows a photo of the coal tipple at Charma New Mexico. The initial Cadrail ™ design was widened to accommodate the track center spacing between the service track and the arrival track on the SVL. The water column is a Durango Press product, and the trackside oil tank and accessories are from a Model Power kit. The fire hose equipment shed is scratch built.

Figure 2-7 Riverside Yard looking along approach track at the head house, apron and car float

Figure 2-8 Riverside Yard looking down the A/D tracks. Classification tracks are on the right

Figure 2-9 Riverside yard looking at sand bin, sand house, sand tower, and coal tipple

Figure 2-10 Pier retaining wall and dolphin

Figure 2-11 Prototype coal tipple at Charma NM

The detailed water-level retaining wall, see Figure 2-10 above, was created from seven Low Tide Pier Retaining Wall pieces from Model Railstuff. The mooring dolphin and the berthing pilings are scratch built.

The car float and the car float apron are both Walthers kits. The car float dock along the Susquehanna River is shown in Figure 2-12. The texture of the water is modeled after a photo I took in June of 2009 along the Susquehanna River in Williamsport, see Figure 2-13.

Figure 2-12 Susquehanna River at car float dock

Figure 2-13 Susquehanna River - prototype

Forested Hillside Scenery Description

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Figure 2-14 shows an overhead view of the third area.

Figure 2-14 Forested hillside area

The background around the forested hillside and the entire layout is a continuous piece of pattern felt that has been painted sky blue with gradual white / haziness towards the horizon. The clouds on the backdrop were created using New London Industries cloud stencils. All the corners of the layout room have coved Masonite behind them to eliminate all unrealistic 90-degree corners.

I characterized the foothills of the Appalachian Mountains around the Williamsport area as having “running ridges” versus peaks and valleys. The photo in Figure 2-15 taken from a position partially up a hill on the north of Williamsport illustrates my term –“running ridge”. The mountain tops on the SVL replicate this scenery feature, as shown in Figure 2-16.

The color of the paint used to represent dirt on the layout was color matched at a local Home Deport from a photograph taken of a recently plowed field in Central Pennsylvania and is of a consistent color throughout the layout area. See Figure 3-8.

Figure 2-15 Mountain ridge - prototype

Figure 2-16 Mountain ridge - layout

The forested hillside area has two streams which come down from the mountains on the backdrop to the edge of the fascia. The two streams are shown in Figures 2-17 and 2-18. Photographs of actual streams were attached to the backdrop at the top of the two streams in order to show the streams extending back up into the hills

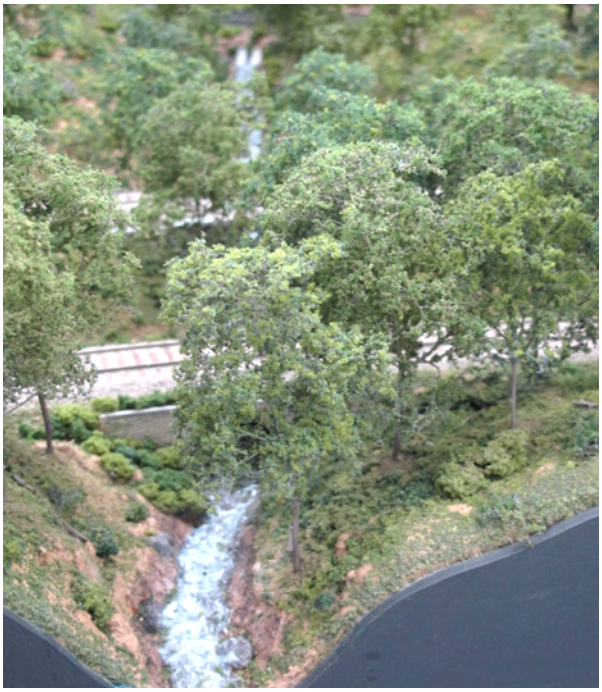

Figure 2-17 Left stream

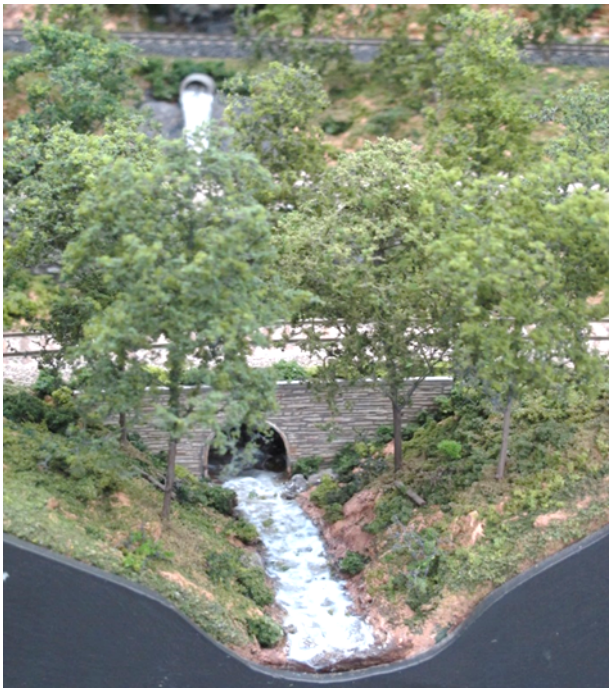

Figure 2-18 Right stream

The six principle species of trees in the mountains around the Williamsport, as identified by hunters in the area, are: White Oak, Maple, Hemlock, Pine, Spruce, and Ash. Figure 2-19 shows a typical old growth tree stand from the Williamsport area. The trees immediately in front of the backdrop are old

growth trees as shown in Figure 2-20. The trees below the branch line track heading to the Newberry Industrial Area, between the two main line tracks, and between the front main line track and the fascia are new growth trees following the large cuts made in the mountain during the construction of the railroad. Photos of trees in these areas, taking during the tree planting process, are shown in Figures 2-21 and 2-22.

Figure 2-19 Typical old growth tree stand

Figure 2-20 Trees along backdrop

Figure 2-21 Trees in front side of cut

Figure 2-22 Tree between the two mainline tracks

Additional scenery description details

Fence

A Walthers chain link fence, see Figure 2-23, separates the Riverside yard from the Front Street Industrial Area which is presently under construction. Wedding veil tuele was used to create the chain link fence.

Walls

In the early part of the twentieth century Williamsport was the lumber capital of the world. The significant impact of this historical note is that for the most part it was not necessary to use “used” lumber or ties on the SVL railroad. The residual effect of the abundance of lumber in the immediate area was that when lumber was needed for construction projects around the SVL railroad, such as the many low wooden retaining walls, it was possible to order custom sized new lumber. Figure 2-24 shows a section of one of the numerous wooden retaining walls on the layout built with new Northeastern Scale lumber.

Figure 2-23 Chain link fence

There are two different style non-wooden retaining walls on the SVL layout. The first is a natural rock wall that was dynamited in creating the cut for the branch line track up to the Newberry Industrial Area. A lower section of the rock wall was not dynamited; but shows sever cracks resulting from the dynamite process. Figure 2-25 shows the dynamited wall as installed along the branch line track up to Newberry.

Figure 2-24 Wooden retaining wall

Figure 2-25 Dynamited rock wall along branch line

The second style of wall is a paneled concrete wall. There are two walls of this style as shown in Figures 2-26 and 2-27. The first is along the upper end of the branch line leading to the Newberry Industrial Area and was built as part of the original construction of the railroad. The second wall was more recently installed as a result of the track expansion along the front of the Newberry Industrial Area and protects the inner main line track. Each wall has drain holes along the lower edge to allow drainage from the gravel backfill behind the wall. Broken pieces of rock and weeds are at the base of each wall.

Figure 2-26 Original concrete panel wall

Figure 2-27 Newer concrete panel wall

Bridge Culverts

The two main line tracks each cross the streams shown in Figures 2-17 and 2-18 twice. These main line tracks cross the steams on bridge culverts shown in Figure 2-28.

Figure 2-28 Bridge culverts[1]

[1] Bridge culvert photograph was taken before the streams shown in Figures 2-17 and 2-18 were installed

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List of Scenery Details

This list of scenery details is not meant to be a scavenger hunt; but simply as a long term point of reference for what details I added to increase the realism of the SVL layout.

1. Ballast
    a. Cinder along branch line track
    b. Rock along main line and A/D tracks
    c. Black and Brown cinder in the older part of the Newberry Industrial Area
    d. Black and Brown cinder in the Riverside Yard
    e. Black cinder in the newest part of the Newberry Industrial Area
2. Water diverting wing wall at top end of all under-the-track pipes
3. Stone / gravel below outflow end of pipes under main line tracks
4. Scratch built
    a. Coal tipple,
    b. Sand house, sand bin, and tower,
    c. Fire hose equipment shed,
    d. Knuckle coupler shipping box
    e. Concrete panel retaining walls.
    f. Bench on car float apron
    g. Picnic table
    h. Wooden retaining walls
    i. Park benches overlooking the car float apron, w/people
    j. Hand rails on stairs on either side of the Weldon Manufacturing building
    k. Wooden pallets and skids
    l. Team track loading platform
5. Drain holes at the base of each concrete panel retaining wall to allow for gravel/rock backfill to drain
6. Stones and vegetation along base of concrete panel retaining walls
7. Vines on face of concrete panel retaining walls
8. Stream photos used to extend streams back into the hills
9. Square brass drain grates
    a. 7 in Riverside Yard near coal tipple
    b. 3 in Newberry Industrial Area
    c. 2 in turntable pit
10. Refuse / trash
    a. Along ring rail of turntable pit
    b. Along fence adjacent to clean out track
    c. Along fence separating Riverside Yard and Front Street Industrial Area
    d. Along area between the pier retaining wall and the Riverside Yard.
    e. Under / around industrial loading docks and loading platform

11. Static SVL-1 style and style SVL-1a switch stands with painted target faces
12. Nuts and bolts on all wooden retaining wall support posts
13. Severely rusted 20-inch diameter corrugated pipes under branch line track leading to the Newberry Industrial Area. New pipes stacked nearby.
14. Mileposts
15. Interior and exterior lights
16. Trash barrels, bins, and garbage cans
17. Power lines
18. Fire hydrants

Riverside Yard

19. Ash pit with real ashes
20. Ash pit shovels on rack
21. Coal pit under coal tipple
22. Auger at bottom of coal pit
23. Four coal tipple pit doors removed from over the coal pit because of late April – early May time frame (i.e. no snow anticipated)
24. Tie plates under rails over ash pit and coal pit
25. Gage bars between rails over ash pit and coal pit
26. Splice plates on sides of 4x4 legs supporting the piping between the sand shed and the sand tower
27. Yellow posts protecting anchor point for guy wire from power pole
28. Barricade protecting wash out hole along edge of Riverside Yard
29. Air hose pipe with angle cock
30. Posts to keep fence gates open
31. Conduit pipes for power wires on the outside of last power pole at coal tipple, water column light pole, fire hose equipment shed power pole, turntable light pole, and yardmaster light pole
32. Barrel of nuts and bolts
33. Box of new and broken mu hoses
34. Pallet of broken knuckle couplers
35. Water shut-off lever, pull chain and weight chain on water column
36. Kadee couplers on bumpers on car float
37. Men at Work blue signs
38. Riverside Yard drainage pipes projecting along the lower edge of the pier retaining wall. Evidence of weed growth along the top of some pipes.
39. Rack of new rail sections
40. Spare trucks and axels off end of turntable
41. Diesel fuel pump
42. Wheel blocks on car float
43. Tie down chain of car float
44. Mooring dolphin
45. Stevedore warming shed
46. Bolt heads as door knob on fire hose equipment shed doors

47. Pulley rig on porch of head house
48. Alignment strings on stevedore boardwalk section that is presently still under construction

Newberry Industrial Area

49. Lintel on underside of brick wall behind CA Reed building
50. Foundation on all digital print background kit buildings
51. Downspouts on all background kit buildings
52. Safety reflectors on fence near Newberry team track
53. Trail marker sign
54. Exit signs
55. Equipment moving dollies
56. Recently replaced section of sidewalk with forms still in place
57. Boarded up broken windows

Hillside Below Newberry Industrial Area

58. Boy Scout constructed trail
59. Benches along trail
60. Lady sitting on bench along trail