

Steam Passenger Power On The Ashland-Louisville Line

From the 1930s Until Dieselization

by Eugene L. Huddleston

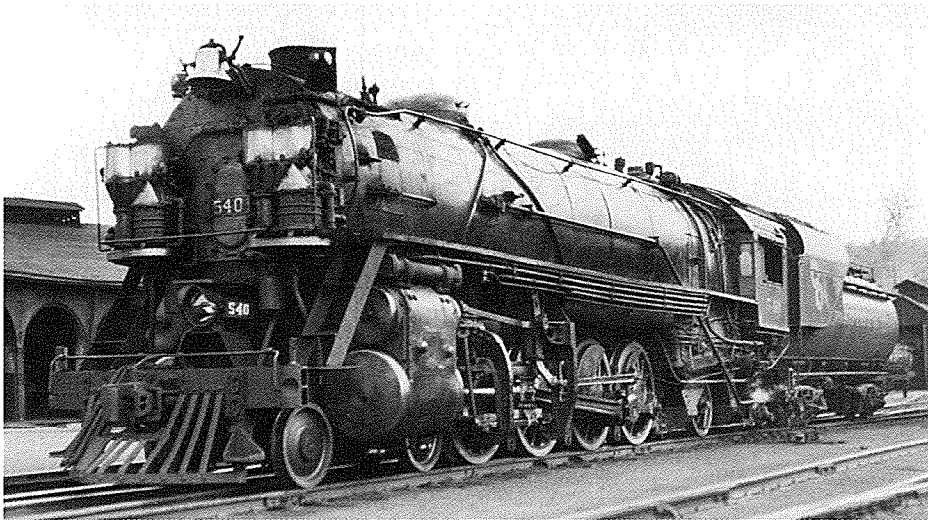
In the two decades before its passenger trains were dieselized in February 1952, the C&O line between Ashland and Louisville featured some of the finest steam passenger locomotives ever built – notably the classes J-2 (4-8-2) and F-20 (4-6-2). The J-2 originated in 1918-19 at the end of World War I as one of the most successful designs of the United States Railroad Administration. The ex-RF&P F-20s (along with C&O's nearly identical F-19s, which never saw service on the Lexington Division) marked the highest development of the Pacific type, outshopped in 1927, just before the appearance of the Hudson type (4-6-4).

Additionally, the line saw use of the J-1 (4-8-2), which in 1911 had originated the 4-8-2, or Mountain type. According to Phil Shuster in *C&O*

Power, C&O's J-1 was the most powerful two-cylinder locomotive built to that time. Other latter-day steam power on the Lexington Division exhibited extremes of size – namely, the F-15 (4-6-2) class, introduced in 1903, and the K-4 (2-8-4) of the 1940s. Apparently because of the Big Four's 85-foot turntable in Louisville, the F-15 light Pacifics remained in use – double-headed – from Lexington to Louisville until the advent of the F-20 Pacifics around 1949. The big K-4 class Kanawha engines (those equipped with steam heat appliances for passenger service) could not be used over the Illinois Central viaduct, but the 2-8-4s could haul Kentucky Derby specials into L&N's Union Station farther south.

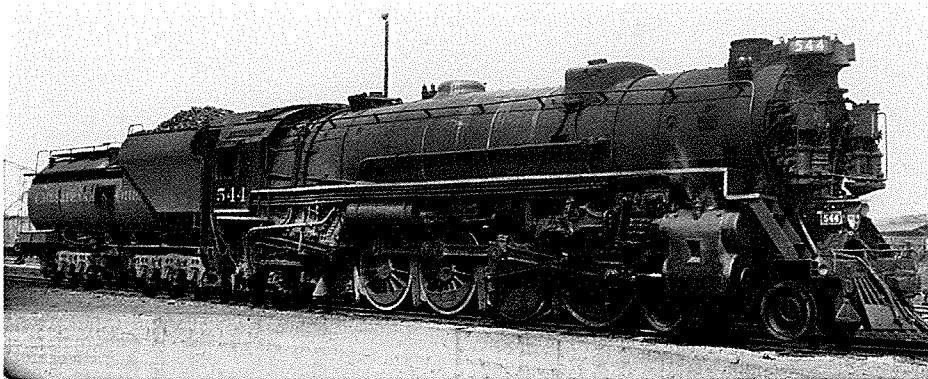
Three factors seemed to govern steam passenger power use on the

Ashland-Louisville run: (1) weight and clearance limitations; (2) gradient profile; and (3) a “hand-me-down” policy in assigning locomotives. Weight and clearance limitations applied only west of Lexington, where L&N tracks were used into Louisville. Although the viaduct leading to the Central Station was a rather old structure, it apparently did not restrict the size of locomotives using it, with the exception of the K-4 (2-8-4). The main problem seemed to be clearances: that 85-foot turntable used by C&O at the Big Four engine terminal. (The Big Four derived its name from the Cleveland, Cincinnati, Chicago, and St. Louis, and was later merged into New York Central). A second factor was hilly topography (especially between Ashland and Lexington) requiring locomotives of the size regularly assigned to mountain terri-



(left) J-1 540 (Alco, 1911), the first Mountain type ever built, awaits assignment to the Lexington-Louisville section of the *George Washington* or the *F.F.V.* at Ashland's passenger engine terminal (built originally for the Ashland Coal and Iron) on May 29, 1938, one year after 540's successful tests confirming that the *F.F.V.*'s schedule could be accelerated and that the *George Washington* could handle up to three additional cars without affecting its schedule. This photograph testifies that the report's recommendation on reducing tender size was carried through, and also reveals an interesting engine house in right background. The author remembers that in the late 1940s it housed an F-16 Pacific for use on the Big Sandy local, and later the Budd RDC used on the same run was kept there.

(Paul Prescott; E. L. Huddleston Collection)



(left) J-2 USRA heavy Mountain 544 is coaled up at the Big Four (New York Central) engine terminal on the Louisville riverfront, ready for service on the eastbound *F.F.V.* in the late 1940s. Double mechanical lubricators operated by cranks from the combination lever – one of the interesting details on this beautiful locomotive. The 544's total wheelbase is almost 90 feet, making it too long for the 85-foot turntable in foreground and forcing it to turn on a nearby wye.

(Bill Schwartz; T.W. Dixon, Jr., Collection)

tory (but no corresponding “mountain territory” freight locomotive assignments). As Ron Flanary aptly put it, “This line had the misfortune of being an east-west route through an area where the drainage pattern was south to north.” Third, even though mountain power was required – that is, the types used between Hinton and Charlottesville – only those types which had passed from use on premier trains to locals were assigned to the Ashland-Louisville runs of the *George Washington* and the *F.F.V.* Thus, Northerns – specifically, the class J-3 4-8-4s, called Greenbriers on C&O – were never used on the Lexington-Louisville line.

WEIGHT AND CLEARANCE LIMITATIONS

At this late date – the 1990s – it is very difficult to find out just why light Pacifics were doubleheaded over the L&N from Lexington to Louisville when J-2 Mountain types

or K-4 Berkshires had brought the same train from Ashland to Lexington. Charles Castner, retired official in L&N's Publicity Department, when asked, wrote: “I'm wondering if the Big Four's smallish turntable was not the controlling factor as to what C&O engines came to Louisville. The class K-4 2700s ... probably were turned on the NYC's viaduct (that is, on the two legs of a wye leading to the Ohio River bridge).” Perhaps all C&O engines coming to Louisville – freight and passenger alike – were turned on this wye and not on the 85-foot turntable. For while the J-2s at first had short Vanderbilt tenders with four-wheel trucks, they later were seen daily with long Vanderbilts riding on six-wheel trucks, as were the K-3 Mikados used on freights.

It is quite possible (but with no way to confirm the notion) that the elevated tracks leading to the Central Station (over which few freights

passed) imposed an axle weight limit on engines using it. Central Station was a very old structure, and not much money, relatively speaking, had been allotted for its construction; hence it is quite likely that its Coopers rating was not very high. Ron Flanary, in the *C&O Historical Magazine*, January 1997, wrote “The Chesapeake Ohio & Southwestern had built the original Central Station some time in the 1880s.” Research into Collis P. Huntington's voluminous correspondence reveals Huntington had a difficult time building his “short line” through downtown Louisville; this difficulty with street crossings possibly explains the need for a viaduct, and Huntington's well known hesitation to spend on construction any more than he had to possibly accounts for it not being suited to modern, heavy steam locomotives

Charles B. Castner, answering the author's queries, reported that into



(above) J-2 number 543 is serviced in 1948 at NYC's Louisville coal dock (with L&N-supplied coal). This heavy Mountain was built for the U.S.R.A. at Alco's Richmond Works in 1918. The design was built only for the C&O and N&V. The great success this type enjoyed was probably due, in large part, to its high capacity boiler; for its boiler and firebox had essentially the same dimensions as the USRA light Santa Fe type (2-10-2).

(T.V. Dixon, Jr., Collection)

(below) J-2 545 (Alco-Brooks, 1918) leaves Ashland for Lexington with No. 23, the FFV, in 1948. Smokestacks in left background belong to Armco's Sixth Street Furnace, long gone, and twin stacks at right belong to engine terminal (built for AC&I) maintained for Lexington and Big Sandy Division passenger locomotives.

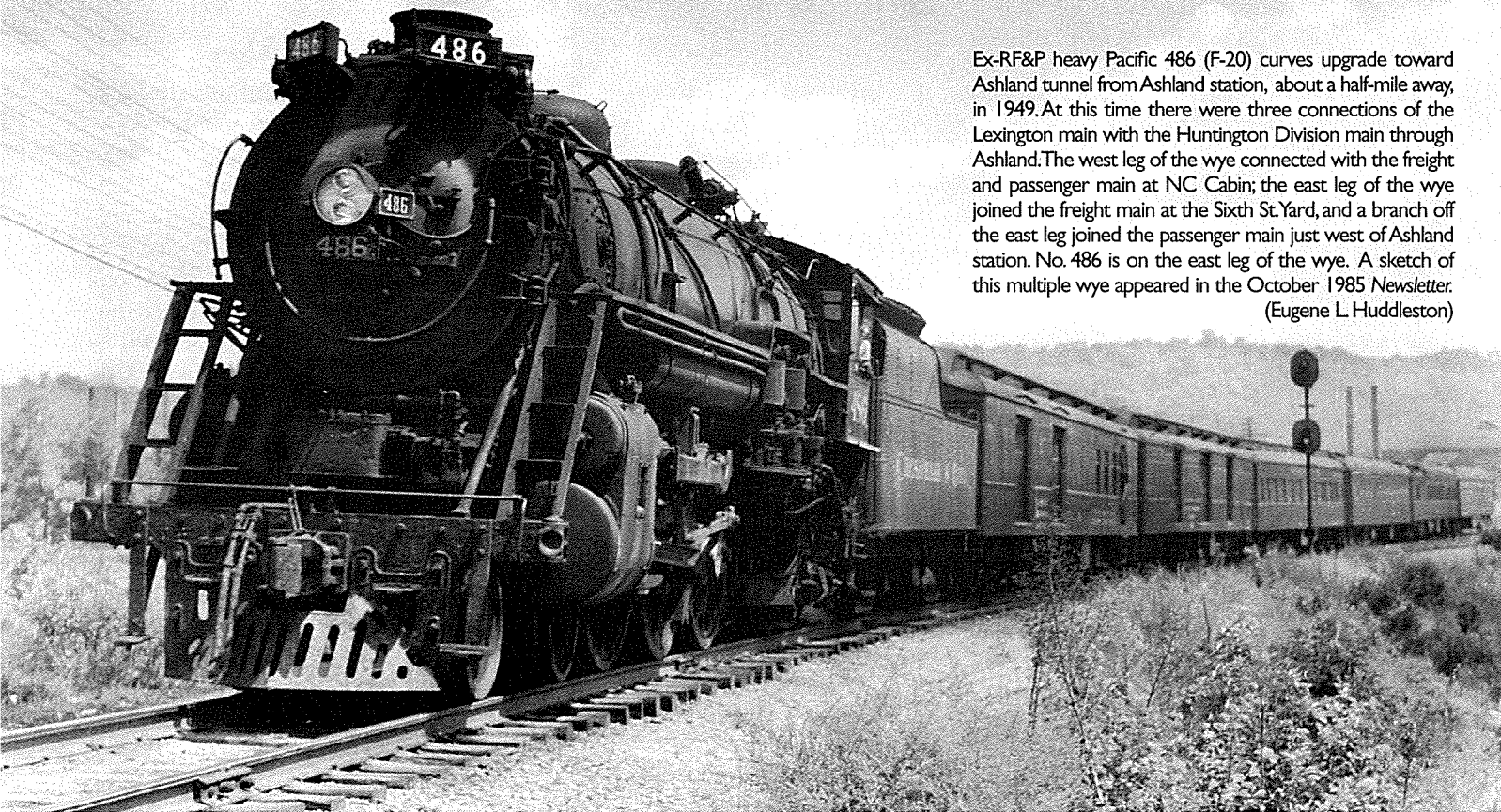
(Eugene L. Huddleston)

the Central, or Seventh St., Station ran passenger trains of the Illinois Central, Baltimore and Ohio, C&O, New York Central, and Southern. The "Short Route Railroad," which Huntington had built, ran for six blocks along the historic Louisville waterfront. C&O freights, however, did not use these tracks. From the L&N's main line into Louisville from the east, C&O had constructed its own steel viaduct leading from the ground-level L&N tracks to the bridge-level Big Four (New York Central) tracks. (The NYC crossed the Ohio from Indiana via a bridge no longer in use). Thus C&O shared with NYC not only its yard but also its engine terminal.

INFLUENCE OF COREY HILL ON LOCOMOTIVE USE

The factor of topography was primary in determining locomotive assignments between Ashland and Lexington. Corey Hill, the divide between Tygarts Creek and Little Sandy River drainage, had one mile of 2.67% westbound and three-quarters of a mile of 2.65% eastbound, with longer approach grades and with no chance in either direction to "run" the hill. A 2-6-6-2 pusher (apparently sometimes replaced at "monthlies" by K-2 or K-3 Mikes) assisted all freights up this hill from either Olive Hill, eastbound, or Aden, westbound, cutting off "on the





Ex-RF&P heavy Pacific 486 (F-20) curves upgrade toward Ashland tunnel from Ashland station, about a half-mile away, in 1949. At this time there were three connections of the Lexington main with the Huntington Division main through Ashland. The west leg of the wye connected with the freight and passenger main at NC Cabin; the east leg of the wye joined the freight main at the Sixth St. Yard, and a branch off the east leg joined the passenger main just west of Ashland station. No. 486 is on the east leg of the wye. A sketch of this multiple wye appeared in the October 1985 Newsletter. (Eugene L. Huddleston)

fly” at the top. Usually, pushers did not assist passenger trains. Assistance was undesirable for two reasons: 1) helper service, not being built into the schedule, would delay the train, typically for five minutes; 2) the helper could not assist from behind the caboose, as on freights. It would have to be coupled ahead of the stopped road locomotives and uncoupled at the bottom of the hill from the stopped locomotive. Federal regulations demanded that, for safety reasons, the helper not be coupled behind passenger coaches.

Other grades also were made necessary by the Lexington Division’s bisecting the Appalachian Plateau (known regionally as the Cumberland Plateau) and its climb to the limestone plateau surrounding the city of Lexington. The most demanding of these grades (after Corey Hill) was the ascent, from both east and west, to Williams Creek Tunnel. None required pushers like Corey Hill, but they did demand the use of big passenger engines if schedules were to be maintained at “mainline” standards. Thus, C&O assigned to the Ashland-

(below) At 5:30 on a July 1948 morning, K-4 Kanawha 2741 leaves Ashland for Lexington with No. 21, the *George Washington*. Engineer shortly will make a running air-brake test because of addition of cars from No. 2, which left Ashland for Cincinnati a couple of minutes ahead of No. 21. Fourth and fifth cars in train are original Chessie coaches (lunch counter-tavern-lounge series 1900-1902 and family coach series 1700-1702). Top of AX Cabin shows above third car.

(Eugene L. Huddleston; Herbert H. Harwood Collection)



Lexington run passenger power associated with truly mountainous territory; namely the Mountain type, classes J-1 and J-2, but only after they became "hand-me-downs" from the Alleghany and Mountain Subdivisions. Thus, after serving for many years between Hinton and Charlottesville, classes J-1 and later J-2 were sent to the Ashland-Lexington run; finally, before scrapping, these two classes were demoted to local passenger and work-train use on the main line in Virginia and West Virginia.

ARRIVAL OF THE FIRST MOUNTAINS

Engines 540-542 (class J-1) of 1911 became "hand-me-downs" in 1935 upon the receipt of five 4-8-4s, number 600-604 (which had names also) for use between Hinton and Charlottesville on the *George*, the *F.F.V.*, and the *Sportsman*. Henceforth, the J-2 Mountains and these new Northerns (class J-3) could handle the mainline mountain runs, and C&O motive power officials reassigned the three original Mountains (class J-1) to the Ashland-Lexington line. These engines weren't long in this service before C&O conducted a series of tests with them between Ashland and Lexington, using its dynamometer car DM-1. The purpose of these tests was to see if the class could haul more cars between Ashland and Lexington than the F-16 and F-17 classes currently in use on the named trains, and if they could keep to the schedule.

Undoubtedly, C&O believed that the J-1s were exceptional locomotives despite their age. Certainly, in 1911, the J-1 Mountains were revolutionary locomotives. So revolutionary that the American Locomotive Company issued a press release in September 1911 extolling their virtues: "...the American Locomotive Company presents a new type of passenger locomotive, the most powerful in the world. Two of

this design [the third would come in 1912] are in regular service on the Chesapeake & Ohio Railway. One of these locomotives can haul trains of 10 or 12 steel cars over a division [the Mountain] with 14- and 7-mile grades, 75 and 80 feet to the mile, at average speeds of 25-1/2 miles per hour, including from 7 to 13 stops. A 108-ton Pacific type cannot make this schedule with more than six cars ... From the service in which these locomotives are used, Mr. J.F. Walsh, Superintendent of Motive Power, has appropriately christened them the Mountain type ... In total weight it [the locomotive] exceeds any other locomotive of rigid frame construction. The weight on driving wheels of 239,000 pounds is the greatest ever placed on four pairs of driving wheels in any engine built by this company and gives an average weight per axle of about 60,000 pounds. Simple cylinders, 29x28 inches, are the largest ever applied to a single expansion locomotive. Other interesting details are the American Locomotive Company's latest arrangement of outside steam pipes; the new standard design of self-centering guide for the valve stem crosshead of the Walchaert [sic] gear, so constructed that adjustment for any wear may be most easily made; screw reversing gear; a six-hopper ashpan, the slides of which are all operated by one gear; locking grates, power operated and so arranged that the front and rear sections may be shaken independently or together, and a Street mechanical stoker."

Even though the 1937 tests were favorable, the J-1s did not last long hauling the *F.F.V.* and *George* over the Lexington Division. Perhaps an unanticipated reliability or clearance problem developed with them. Nevertheless, they were used on mainline locals over the Alleghany and Mountain Subdivisions until the big cuts in C&O passenger service made late in 1949.

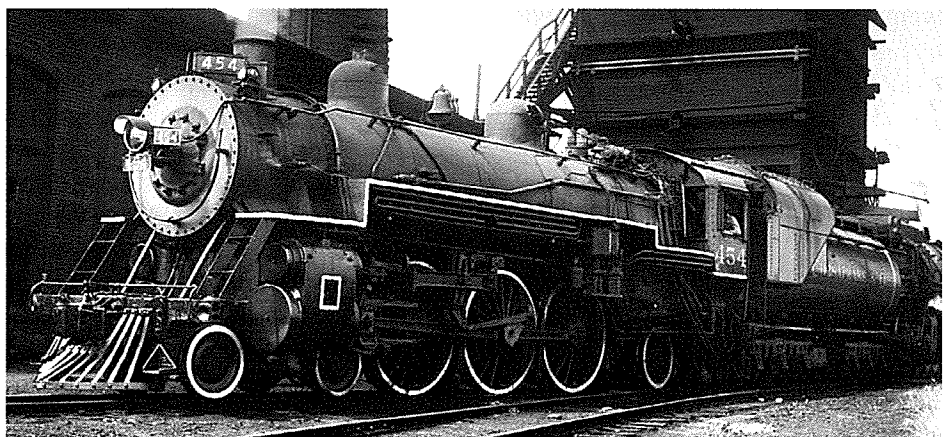
Whatever else the tests did, they

demonstrated the importance of Corey Hill in determining locomotive assignments on the Lexington line. An abridged version of the official report is reproduced here: "Engine 540 used on this test was outshopped at Huntington 4-10-37 after receiving class 3 repair. A number of changes were made, the most important of which were as follows: (1) cylinder diameter reduced from 29" to 27-1/2"; (2) piston valve diameter reduced from 16" to 14"; (3) boiler pressure increased from 180 lbs. to 200 lbs.; (4) 16,000 Gal. V.C. tender applied in place of 12,000 Gal. V.C. tender." In its discussion of the test results, the report gets to the heart of the matter: "inasmuch as it is impossible to pass scheduled points ahead of time, no definite or accurate figure could be obtained as to how much time could be cut from the schedule. However, on [test] run 2660 Train No. 23 [the *F.F.V.*] with 10 cars, which is four more than the regular train, the scheduled time between Ashland and Lexington was not only maintained but also 11 minutes were made up between Winchester and Lexington, a distance of 18 miles. This would indicate that a reduction can be made in the schedule of this train." The report continued with the performance of engine 540 on Corey Hill: "Engine 540 with ten cars had no difficulty at any time in maintaining the scheduled time and at no time was it necessary to use a pusher over the ruling grade. The minimum speed westbound on the ruling grade with ten cars was 7-3/4 mph. The minimum speed eastbound on the ruling grade with ten cars was 8-1/2 mph. With the present power used on this division it is necessary to use a pusher both east and west over the ruling grade if train exceeds 6 cars with a Class F-15 engine, and 7 cars with a Class F-16 engine. By eliminating the use of the pusher engine, approximately 5 minutes can be saved."

The test people also came up with recommendations for some fine tun-



ing to improve the performance of the modified J-1. To eliminate a pulsating exhaust and to reduce cylinder back-pressure, they recommended changes in the "lap and lead" of the cylinder valves. "After the first four round trips were completed, the valve lead was increased from $3/16$ " to $1/4$ " and the exhaust clearance was increased from $1/8$ " to $3/16$ ", the change being made on account of the high back pressure obtained when working engine to capacity and on account of pulsations noticed when accelerating. After this change there appeared to be a reduction in back pressure but due to the fact that the operation of the locomotive was not the same on each run on account of different engineers it is impossible to determine exactly how much the back pressure was reduced. The pulsations, however, were eliminated. Upon the completion of the two round trips with this set-up, the lead was reduced $1/16$ " giving the valve $3/16$ " lead which was the same as when outshopped; however, the exhaust clearance remained at $3/16$ ".



(top) F-20 488 is at the Big Four (NYC) roundhouse in Louisville, circa 1949. It has the full C&O modifications, except that the tires are no longer kept whitened.

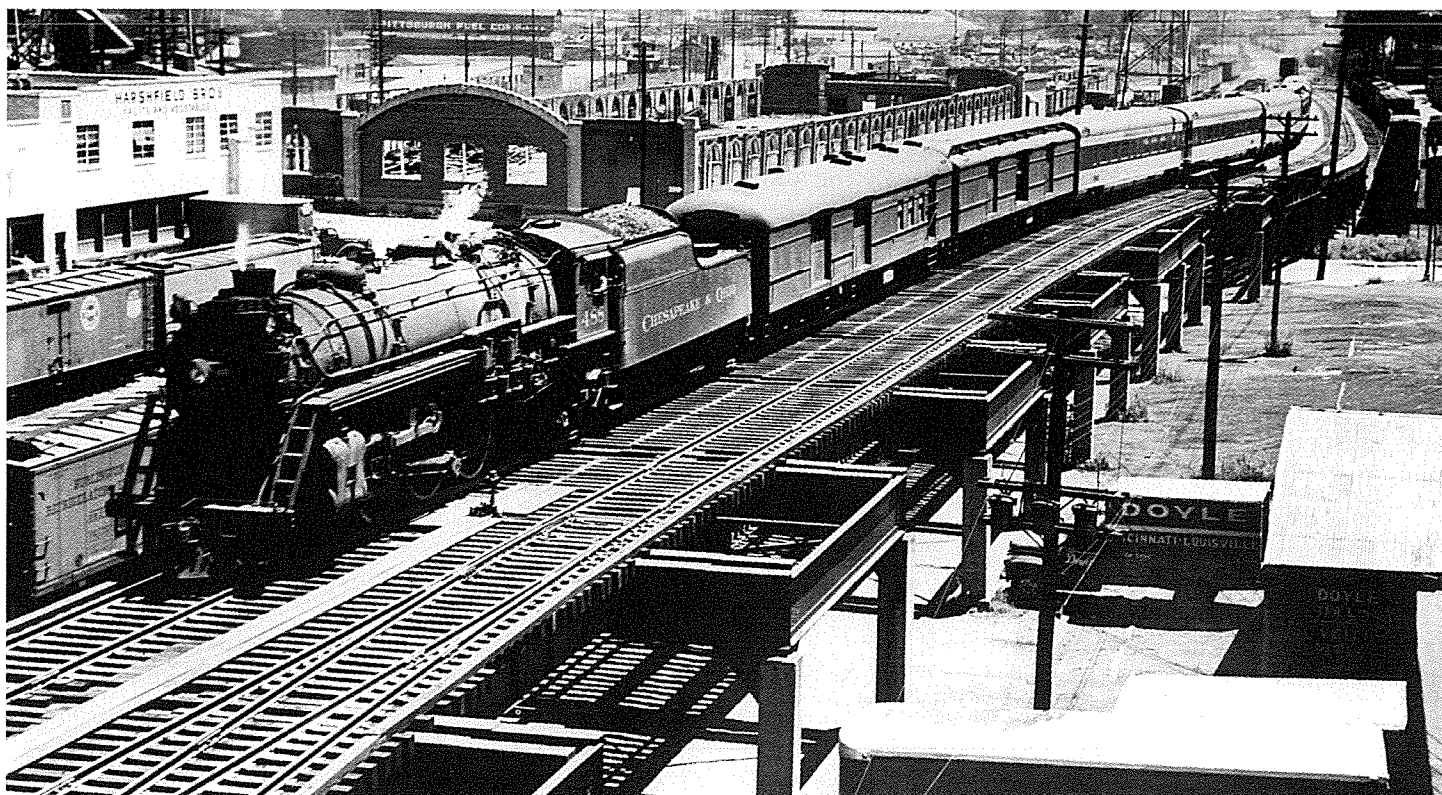
(T.W. Dixon, Jr., Collection)

(above) F-15 number 454 and a C&O Mikado are serviced at Louisville circa 1945. Maintaining white trim on passenger power required work.

(C&OHS Collection)

(below) In May 1951, F-20 488 brings the *George Washington* into Louisville near the eastern end of the "Short Route" viaduct. Judging from the height of the pile in the tender; engine 488 appears to have been rather easy on coal consumption – but the question is: where did 488 last take on coal?

(Ray E. Tobey; T.W. Dixon, Jr., Collection)



One round trip was made with this arrangement, during which the pulsations previously noticed when accelerating again became evident.” In summary, the report noted, “Engine 540 clearly demonstrated its ability to make and exceed the present schedule with four more cars than the regular train on trains No. 23 and 24. Although only one more car than the regular train was hauled on trains No. 21 and 22, it is our opinion that the schedule could be maintained with three additional cars.”

RESULTS OF TESTS ON TENDER SIZE

A final “Comments” section clarifies the tender size needed on the runs: “If it is desired to reduce the amount of coal and water consumed and to increase the minimum speed on the ruling grade, a 12,000 gallon tender could be used in place of the present 16,000 gallon tender because the maximum amount of water used eastbound between stations with a ten car train was 9,736 gallons consumed between Mt. Sterling and Ashland. The maximum amount of water consumed westbound between stations with ten cars was 7,958 gallons from Morehead to Lexington. Since with the present schedule both Morehead and Mt. Sterling are regular station stops and since water can be taken while doing the station work, thereby causing no extra delay, 12,000 gallon tender would have sufficient capacity for a ten-car train.” Whether the report’s recommendations on train length were implemented is unknown; however the reduction in tender size apparently was, for class J-1 and J-2 (4-8-2) locomotives assigned to the Lexington Division prior to dieselization had the smaller Vanderbilts, at least for a time.

CONFIRMATION OF POLICY ON TRAIN LENGTH

Interesting confirmation of the policy noted in the report regarding train

length on the ruling grade (Corey Hill) comes from one of S. Kip Farrington’s books. The report (see above) said pushers were required if train length exceeded six cars with class F-15, and 7 cars with an F-16. Farrington’s notation, made in his log late in 1941, records that while riding the cab of engine 462 (F-16) between Louisville and Ashland on No. 24 with eight cars, the train picked up a helper, class K-3 (2-8-2) freight engine, between Olive Hill and Mt. Savage, located 17 miles east of Olive Hill. Everything in Farrington’s log is consistent with what is known about steam operations over Corey Hill except the territory of the helper has been stretched, eastbound, from Olive Hill to Aden to include Mt. Savage. Perhaps the siding at Aden was in use that night. If that was the case, then the passing siding at Hitchens would also have had to be in use, for that was the next siding east of Aden. The other mode of operation not consistent with what is known about the Corey Hill helper (a “pusher” on freights) is that the locomotive assigned is much less powerful than the one usually assigned – a 2-6-6-2 compound Mallet. Perhaps it was a case of locomotive shortages induced by the increase in traffic just prior to the entry of the United States into World War II. (There were no “Big Mikes” – the class K-4 2-8-4s – on the roster then.) Often when the regular pusher engine went to Russell for its “monthly,” it was relieved by whatever power was available.

ARRIVAL OF THE J-2 USRA MOUNTAINS

Motive power on the C&O was in very short supply in 1941 – especially passenger power. The situation was relieved somewhat in 1942 by the arrival of two heavy Northerns (designated Greenbriers by C&O), raising the total number of 4-8-4s on the roster from four to six. These six J-3s, the only modern C&O power to have names, could

handle the first sections of the *George, F.F.V.*, and *Sportsman* over the mountains between Hinton and Charlottesville, if the consist was 12 cars or under. Previously, seven J-2 Mountains had held down these assignments with help from F-16 Pacifics. The arrival of the J-3s released several J-2s for service on the Lexington Division. Thus the same “hand-me-down” policy was followed with the J-2s as with the J-1s. The earlier J-3s themselves never became “hand-me-downs” because in 1948 when five new (unnamed) Greenbriers went into service, the road had just purchased four “used” locomotives from RF&P, this initiating a “second-hand” policy! (See explanation below).

The J-2 Mountains of 1918 had marked a meaningful increase in power and speed over the original Mountains of 1911. For example, the diameter of the drivers was 62 inches for the J-1 and 69 inches for the J-2, yet the starting tractive effort on the J-2 was over 60,000 lbs., 2,000 more than the J-1. As for influences on design of the U.S.R.A. heavy Mountain itself, it seems in a class by itself, and it proved highly successful for the two roads that adopted it – the Norfolk and Western and C&O. The automatic stoker (Duplex type) with which it was equipped, along with a combustion chamber and generous heating surfaces otherwise, made for a high horsepower boiler. That the heavy Mountain was indeed big is indicated by its sharing boiler and firebox dimensions with the light Santa Fe type (2-10-2) developed by the United States Railroad Administration. Although the heavy 4-8-2 and light 2-10-2 had the same boiler and firebox dimensions, the center line of the boiler of the Mountain was five inches higher than the Santa Fe’s, to compensate for the height of the drivers of the Mountain, which was five inches higher than the Santa Fe’s. To meet the 15-foot vertical clearance limit imposed by the

(right) F-16 number 467 was one of a class of eight medium Pacifics built for C&O by Baldwin in 1913 that, from the 1930s until 1952, were used mostly on the Charlottesville-Newport News and Ashland-Louisville sections, or between Columbus and Toledo. This late 1930s photo shows 467 crossing the diamond at HV Junction, Columbus, with train number 35. The F-16 in this photo looks bigger than it actually was.

(W.R. Osborn; E.L. Huddleston Collection)



U.S.R.A., the steam dome, sand dome, and stack were shorter than on the Santa Fe type. The lowered domes and the big boiler gave the heavy Mountains a compact appearance.

The success of the U.S.R.A. heavy Mountain design is attested to by N&W and C&O repeating orders for it, even after dissolution of the U.S.R.A. (Florida East Coast also bought 23 copies in 1926). On both N&W and C&O, the Mountains' appearance was altered significantly over the years. The N&W's ex-U.S.R.A. Mountains ended up streamlined and were quite similar in appearance to their famous class J 4-8-4s. In the 1930s, C&O restyled the front end and cabs of its conventionally utilitarian looking government locomotives. In order to make room for two air pumps, the smokebox front was utilized – creating the famous “flying pumps” effect which was the trademark of much C&O steam power. (The U.S.R.A. Mountains originally came with only one air pump). Further enhancing the “big boiler” effect of the front end was the relocation of the headlight from the smokebox front down to a platform on the pilot.

EFFECT OF ARRIVAL OF K-4 FREIGHT LOCOMOTIVES

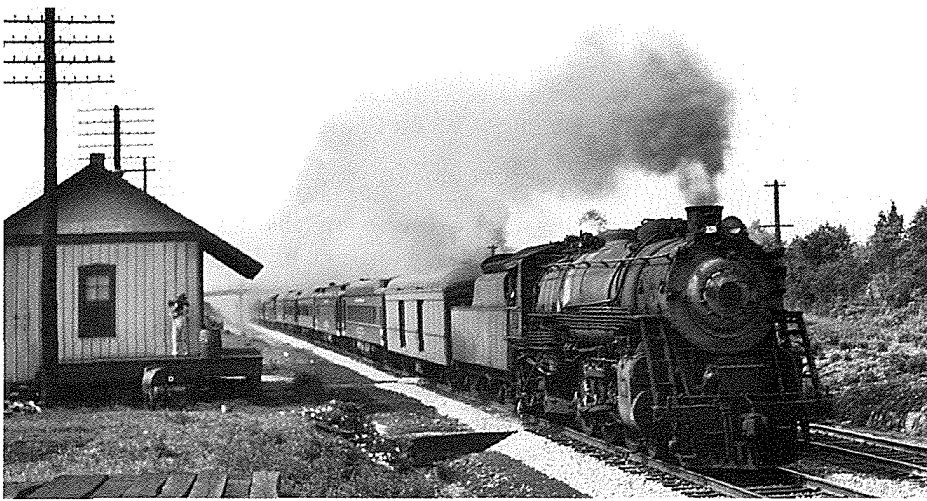
Passenger locomotive policy on the Lexington Division trains was also

affected by the assignment to the *George Washington* of 2-8-4 Berkshires (designated as Kanawhas on C&O). In the initial 1943 order of forty 2-8-4s, only the last ten, 2730-2739, were equipped with steam heat lines and communications; they went into service at Clifton Forge, where they could be used in mountain passenger service. They were also equipped with automatic train control. Only in 1947, when all ninety 2-8-4s were in service, did C&O have enough Kanawhas with steam heat lines to spare the power necessary to hold down the run of the *George* between Ashland and Lexington. (These engines were assigned from the pool of K-4s stabled at Russell, and were not kept at Ashland as were the 4-8-2s assigned to the *F.F.V.* on the Lexington Division).

With the classy K-4 Berkshires (or Kanawhas) pulling the *George Washington*, and heavy Mountains designed by the U.S.R.A. on the head end of the *F.F.V.*, the Lexington Division between Ashland and Lexington assumed a special status among C&O branch lines in Appalachia, for this crooked and very hilly path through the deepest part of backwoods Kentucky became the route of some of the best-equipped and best-maintained “varnish” in the United States.

ARRIVAL OF SECOND-HAND HEAVY PACIFICS

C&O Pacific (4-6-2) types, even the heaviest, were not used on the Lexington Division between Lexington and Ashland after it was decided in the mid-1930s to use “hand-me-down” mountain territory power. The class F-15 light Pacific and the class F-16 medium Pacific, in use prior to the testing of the class J-1, had required helpers (as noted earlier) even with relatively short trains. The object of passenger power assignment being to avoid the use of helpers over Corey Hill, C&O was not inclined to use Pacifics, which were generally considered “level” territory power and which could not take long trains over Corey Hill without requiring helpers. But by 1948, several factors worked against their continued prohibition. One was that C&O then had an excess of heavy Pacifics and another was that passenger train length, due to decreased ridership, was going down. Also contributing was the fact that the premier train over the line, the daily *George Washington*, was by 1948 assigned a magnificent K-4 Kanawha type (2-8-4), a design equally adept on mountain territory passenger or freight assignments. This left only the *F.F.V.*, which was shorter and hence lighter than the *George*. (In the last two years of passenger operation on the Lexington Division, the



(left) RF&P heavy Pacific 328, which in three more years would become C&O 489, is at speed at Franconia, Virginia, running north toward Washington in July 1945. The unusual consist suggests a special movement, probably military. (E.L. Thompson; Herbert H. Harwood Collection)

(below) F-20 486 is on the Huntington Division ready track at Russell in September 1948. This quite accidental spotting was the author's first view of an F-20, an entirely new class. A comparison of this engine with RF&P 328 (left) reveals the 486 is still purely RF&P in appearance, except for white trim on tires. Subsequent modifications by C&O would include a new pilot and lowered headlight. (Eugene L. Huddleston; C&OHS Collection)

trains would become even lighter following the complete replacement of heavyweight cars with lightweight equipment from the famous Pullman-Standard order of 1950). The *F.F.V.* was ready for new power because the J-2 Mountains of 1918-1919, powerful as they were, had grown old and their chance of breakdowns on the road was increasing.

The C&O had an excess of "level land" power at the beginning of 1948 because the projected daylight streamliner between Washington and Cincinnati, with side sections to Louisville and Norfolk, had not gone into service yet. Power to protect these runs had already been ordered from C&O's own

Huntington Shops, and five new L-2 Hudsons (4-6-4) were under construction at Baldwin in Philadelphia. In 1947, at the Huntington Locomotive Shops, all five F-19 heavy Pacifics (built in 1926) had been converted into Hudsons for use on the Louisville and Norfolk sections of the stillborn *Chessie*. At the time, this left a shortage of premier "level land" passenger power. To alleviate this shortage, also caused by the inability to purchase new passenger power during World War II, C&O purchased the five new Hudsons from Baldwin, and four used heavy Pacifics from the Richmond, Fredericksburg & Potomac, a road in which C&O owned a one-sixth interest. After the

new Hudsons arrived and following the failure of the *Chessie* to go into service, C&O was left with five premier passenger locomotives for which it had little use, and the four second-hand RF&P heavy Pacifics. Oddly enough, the L-1 Hudsons, rebuilt from C&O's premier Pacifics, the F-19 class, did not go into service on C&O's Lexington Division, even though they had been rebuilt especially to handle, in part, the Ashland-Louisville sections of the aborted *Chessie*. Instead, the four ex-RF&P Pacifics, given C&O classification F-20, handled the *F.F.V.* all the way from Ashland to Louisville. This is not to say that the three L-1 streamlined (and one unstreamlined) Hudsons were



barred from the Lexington Division, for Charles Castner reports that one came into Louisville's Central Station on a display train.

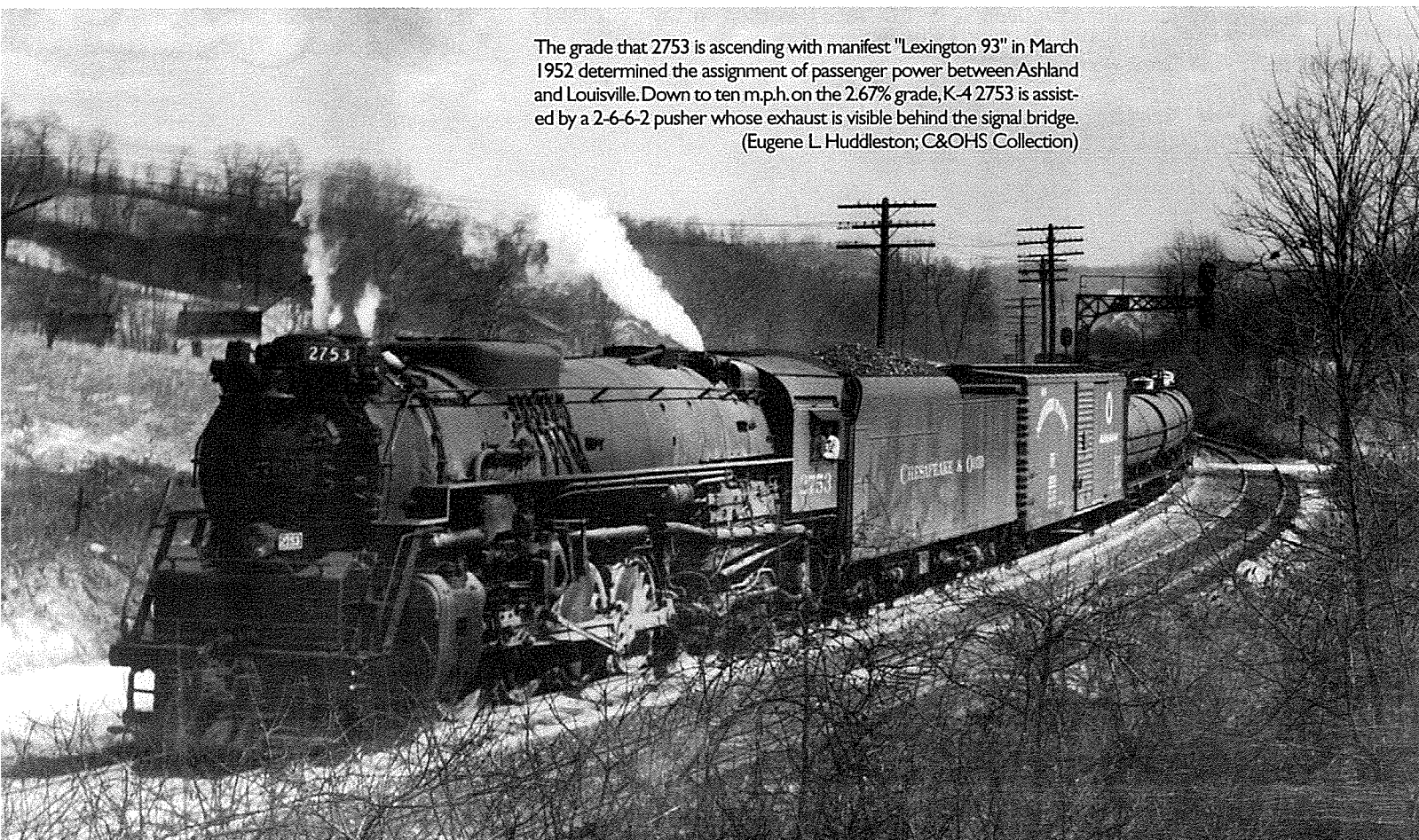
That C&O by 1947 was interested in acquiring RF&P passenger locomotives, made surplus by the end of the East Coast travel surge created by World War II, is attested to by the author's sighting of an RF&P Mountain (4-8-2) in 1946 hauling C&O local No. 13 near Big Bend Tunnel in West Virginia. Apparently, C&O liked the four heavy Pacifics better than the four RF&P heavy Mountains of 1924-25. And the RF&P Pacifics, numbers 325-328, were heavy, powerful, fast, and the most modern of their type. Because of their similarity in design to C&O's F-19 class, they were well-suited to replace the F-19s (490-494) rebuilt in 1947 to L-1 Hudsons for service on the *Chessie*. Both classes were built a year apart – the F-19 in 1926 and the F-20 in 1927. Cylinder bore and stroke were essentially the same: 27x28 for the F-19 and 26x28 for the RF&P. Driver diameter at 74 and 75 inches,

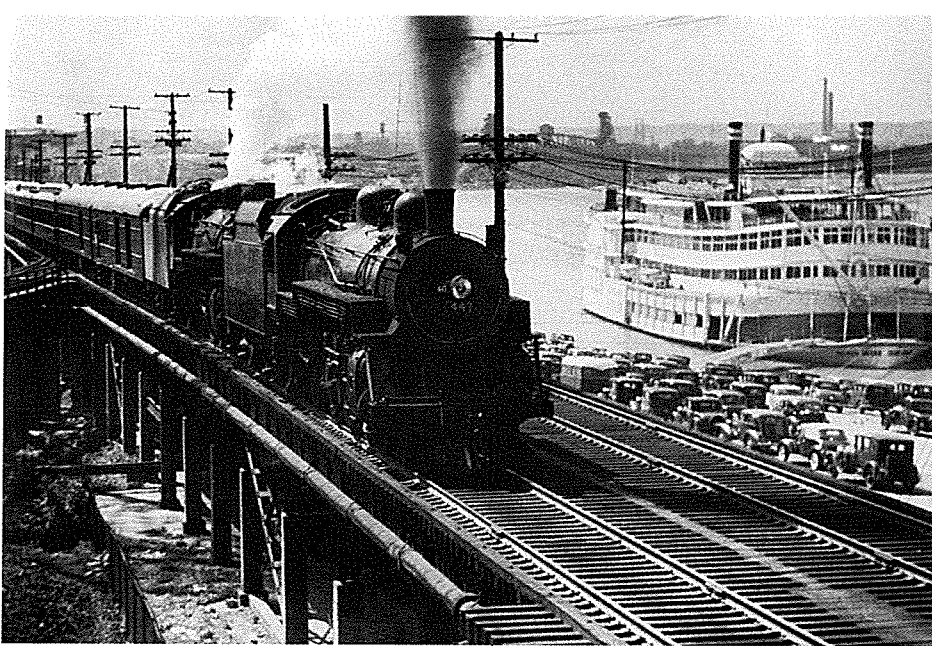
respectively, gave both classes the capability of high speeds. Engine weights of 331,500 and 342,600 lbs, respectively, meant that both classes were capable of high boiler horsepower and sure-footed traction. All in all, though, the F-20 was a better choice for the Ashland-Lexington-Louisville run than the F-19 would have been (and its virtual twins in major dimensions, the F-17 and F-18 Pacifics) because the F-20 achieved an extra punch in power needed to conquer Corey Hill without a helper; namely, higher starting tractive effort – 52,050 lbs. – which RF&P had achieved by raising the boiler pressure of Pacifics 325-328 to 225 psi. while they were in service on the RF&P. This increase in power made them a better bet for success over Corey Hill than even the L-1 Hudsons, rebuilt from the F-19s, for the L-1s' starting T.E. was only 49,200 lbs. Another advantage of the F-20 for the Ashland-Louisville run was a small tender relative to the C&O heavy Pacifics and rebuilt Hudsons – 16 tons and 10,000 gallons, giving a total wheel-base length of approximately 75

feet, providing plenty of clearance on Louisville's 85-foot turntable.

Steam passenger power went out in style on the Lexington Division, with graceful former RF&P heavy Pacifics leading the *F.F.V.* and the big Van Sweringen Berkshires holding down the *George Washington*. In the spring of 1952, the "Peavine," as employees affectionately called the Ashland-Louisville line, was dieselized with F7s on through freights, GP7s on the local freight, and FP7s (8000-8015) on the *George* and *F.F.V.* The FP7s served in a passenger pool at Ashland (utilizing the old AC&I engine terminal) for both Lexington Division passenger trains and the Big Sandy local to Elkhorn City. This pool was continued for perhaps five years before other diesel power took over. The EMD FP7s looked very much like the F7 freighters, except they were four feet longer to make room for enlarged steam generator water tanks, and they had the yellow, blue, and silver paint scheme to match the new Pullman-Standard passenger equipment. 6

The grade that 2753 is ascending with manifest "Lexington 93" in March 1952 determined the assignment of passenger power between Ashland and Louisville. Down to ten m.p.h. on the 2.67% grade, K-4 2753 is assisted by a 2-6-6-2 pusher whose exhaust is visible behind the signal bridge.
(Eugene L. Huddleston; C&OHS Collection)





The George Washington

(left) C&O Train No. 22, the George Washington, leaving Seventh Street Station in Louisville on Derby Day, 1938, with double-headed F-15 Pacifics.

(C&OHS Collection)

(right) C&O's Ashland - Louisville line, circa 1938.

(below) Profiles of the Lexington Sub-Division and Louisville Sub-Division.

(Both, C&OHS Collection)

