3.0 HISTORIC OVERVIEW

3.1 BEFORE THE DUPONT HIGHWAY

During the Colonial period, the major north-south road in Sussex County was one of several King's Highways, established by the courts in the last quarter of the seventeenth century (LCE 2000:3), but probably less developed in actuality on the ground. For most of the eighteenth century, the county remained heavily wooded, transected by drainages and overland passage was difficult. In 1752 a system of King's Highways was established by statute and reiterated a decade later. The latter statute of 1762 declared that "straight roads are a credit and ornament to a country as well as an ease and advantage to travelers"(quoted in Eckman et al. 1938:75).

The north-south King's Highway was established well east of the present-day Route 113 extending along the line of the head of tidal navigation. The road linked the small landing communities that developed at these strategic points. The road ran northwards from Lewes to Cedar Creek and St. Matthews Anglican Church (built in 1707), and from there to Dover and up country to Wilmington. From Lewes roads ran southwest through St. Georges Chapel to Warwick and the ferry crossing on the Indian River, and from Lewes southeast down the Atlantic Coast towards the Inlet. A side road extended down Angola Neck at St. Georges Chapel (built in 1719) (Munroe and Dann 1985). The roads were described as "very commodious for traveling, the land being level and generally sandy, so that the people usually come to Church Winter and Summer some 7 or 8 miles, and others 12 or 14 miles...."(Hancock 1962:140). The inland sections of the County were apparently not well served by major roads, although by the last quarter of the eighteenth century iron processing sites in the interior would have been linked by overland routes.

The construction of major north-south roadways in Sussex County began in the late eighteenth century. As Judith Quinn noted in her study of Delaware roads during the Federal period, during the eighteenth century the state was traversed by a small and rudimentary road network. This network was unevenly distributed. The north, which received the most traffic, contained the most extensive and established roadway and ferry system. The area south of Dover was more sparsely settled and roads were fewer as a result. The major existing road was the stage road from Dagsboro and Dover. Extensive travel in southern Sussex County was deterred by the Cedar Swamp and surrounding swamplands (Quinn 1988:40, 49).

By the late eighteenth century, a post road extended along the Delmarva peninsula from Horn Town in Virginia, through Snow Hill, Maryland, thence to Dagsborough, Milford, Dover, and Wilmington, Delaware to Marcus Hook, Chester, and Philadelphia, Pennsylvania (Munroe 1954:137). The first substantial road development in the study area vicinity occurred in the 1790s. Following the establishment of Georgetown as the county seat of Sussex County, a road was constructed from Milford and Georgetown south into Maryland. In 1796, an act was passed, establishing several state roads in Sussex County, consisting of a forty foot right-of-way with thirty feet cleared:

....the following roads in the said County of Sussex shall be laid out and straightened, to wit: a road to begin at Milford Bridge, and to run thence through Georgetown and Dagsborough, until it intersects the west line that divides the said county of Sussex from the State of Maryland; a road to begin at Lewistown, and to run thence through Georgetown until it intersects the north line that

divides the county aforesaid from Maryland; and a road to begin at Georgetown, and to run thence to the west line that divides the hundred of Little Creek in the said County from Maryland (Scharf 1888:416).

Although all of these roads were by definition state highways, the term "County Road" was apparently applied to the two roads extending east-west, while the term "State Road" was applied to the north-south road (LBA 1992:20). This nomenclature begins to appear in the Sussex County road petitions and returns by the early nineteenth century (for example, see SCRP 1801, 1808). The direct predecessor of the DuPont Highway was the north-south State Road established in 1796. Portions of this north-south road still exist and are generally located east of the DuPont Highway along alignment of present S.R. 213. Sussex County road petitions and returns in the collections of the Delaware Public Archives provide some hints concerning periods of development after the road's initial establishment. Two 1841 road papers refers to the State Road leading from Dagsborough to Snow Hill in Maryland, while an 1842 return depicts the State Road near Georgetown, and an 1845 road paper refers to the State Road between Georgetown and Milford (SCRP 1841a, 1841b, 1842, 1845). At least a portion of this road may have followed the alignment of the eighteenth century post road mentioned above. In any event, the road is depicted and identified as the State Road on Beers' Atlas of Delaware (1868). The DuPont Highway was envisioned as an improvement on the State Road, eliminating the curves and passages through towns and villages that slowed traffic on the earlier road.

3.2 1880-1940s URBANIZATION AND EARLY SUBURBANIZATION

The campaign for good roads predated the emergence of the automobile as a principal means of transportation. Proponents of improved farm transportation and increasing numbers of bicycle enthusiasts initiated the Good Roads Movement in the 1890s. As the automobile began to gain widespread acceptance, the cause was taken up by automobile clubs and motor vehicle dealers and attracted the support of national leaders such as William Jennings Bryan and President Theodore Roosevelt. Policy planks of supporters included state and federal aid for road and highway maintenance and construction (LCE 2000:8). In 1911, Charles Henry Davis, president of the American Road Machine Company, established the National Highways Association (NHA), whose slogan was "good roads everywhere." The chairman of the association's Board of Councilors was T. Coleman duPont of Delaware (Weingroff 2004). At the turn-of-the-century, the NHA's vision was of "a paved United States of America in our day" (quoted in Lewis 1997:99). The NHA, along with the American Automobile Association and the Society of American Military Engineers, were proponents of a network of highways connecting, and thus perpetuating and preserving, the nation (Lewis 1997:99).

The Delaware General Assembly responded to the Good Road Movement by enacting vehicle registration acts in 1903 and 1905. By 1910, nearly 1,000 vehicles were registered in the state. In addition, a 1903 State Aid Road Law appropriated \$30,000 for roads in matching funds divided equally among the three counties (LCE 2000:8). Franklin Clarkin, quoted in the *Sunday Morning Star*, attributed the idea of the DuPont Highway in part to an article about philanthropy published in the Appleton (Wisconsin) *Times*. This article, of which Coleman duPont had a copy, envisioned the possibility of a fortune, such as Andrew Carnegie's, used to fund a road (Clarkin 1913).

The DuPont Highway, a roadway that extends the length of the state (present U.S. 13 between Wilmington and Dover and U.S. 113 between Dover and the Maryland state line), was the

brainchild of Thomas Coleman duPont (1863-1930), businessman, industrialist, and early highway advocate (Figure 1). T. Coleman duPont, a native of Louisville, Kentucky who attended Urbana University (Ohio) and Massachusetts Institute of Technology, began his career in coal mining, later branching out to mining engineering, steel production, and the operation of street railroads. In 1883, he entered the employ of the Central Coal and Iron Company, rising to the position of vice-president by the time he left in 1893. Relocating to Johnstown, Pennsylvania, he joined the Johnson Company, producers of equipment for street railways. During his six years there, he assumed management positions at street railways and a variety of company subsidiaries. In 1902, he assumed the presidency of the DuPont de Nemours Powder Company (later E.I. DuPont de Nemours & Company) after joining his cousins Alfred I. and Pierre S. duPont in taking over control of the company (Anonymous 1908; Bevan 1929:448-452; IV: Delaware Department of State 2005).

DuPont had become well-acquainted with the substandard roads and the poor economic conditions of the southern part of the state while traveling to and from Wilmington to his estate on the lower Eastern Shore of Maryland (Carter 2001:160-1). In a 1917 letter to the State Highway Department, duPont wrote of the inspiration for his vision:

With the advent of the automobile, I realized the wonderful development of which our little State is susceptible and that the first essential for this development is a well laid out system of highways traversing all the sections of the State. It was obvious from the beginning that the backbone of such a system must be a main North and South highway.

Familiarity with the great boulevards of Europe and those that have in recent years been constructed in this country was the foundation for the conception of a great longitudinal boulevard as the backbone of a highway system for our State, wide enough to carry a road for vehicular travel and, when the development that is bound to follow demands them, two roads, one for travel in each direction and also wide enough to carry the public utilities which must come with the development and increase in population (AR 1920:42).

DuPont also discussed the road in philanthropic terms:

Assuming that I have been more fortunate than some people in the matter of finances, why should not I let others benefit thereby? What better public improvement could I make than a modern highway and boulevard? I first thought of building a normal training school for boys, or endowing a large hospital, or erecting a fountain, but considered the farmer and all citizens would benefit more by a roadway the length of the state (Clarkin 1913).

DuPont's chief engineer cited the usefulness of the road in similar terms, describing it as:

...the gift which...so far as practical results are concerned, will be of much more benefit to the whole people of the State, than would be gifts of Universities, Art Galleries or Libraries, as it will go far toward making possible a development of the latent agricultural wealth of this portion of the Delmarva Peninsula (Williams n.d.:659).

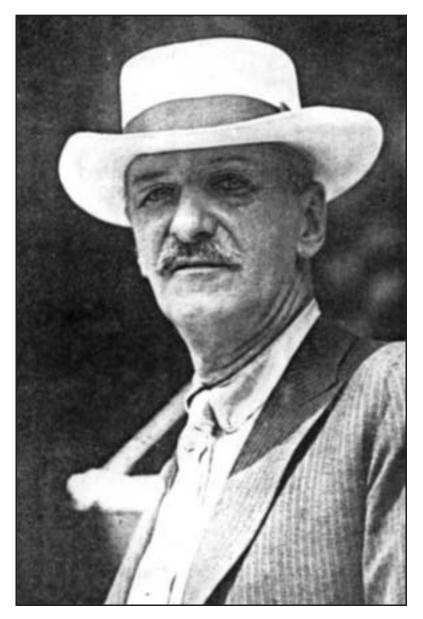


Figure 1. T. Coleman du Pont (AR 1920).

In 1908, duPont offered to construct the state's first superhighway without cost to the public. At the time, only about eight percent of Delaware's highways were rated as improved. In bad weather, Kent and Sussex counties were virtually isolated from the outside world (Rae 1975:172). DuPont proposed the establishment of a corporation to be authorized by the State of Delaware to acquire a 200 foot wide right-of-way. Contained within this right-of-way (Figure 2) would be a center 40 foot strip for high-speed automotive traffic; north and south trolley tracks on ether side of the roadway would be incorporated in 15 foot wide strips. To either side of the tracks would be roadways for heavy motor vehicle traffic. These roadways would be constructed within 30-foot strips. Outside these roadways would be unpaved roadways for horses, 15 feet wide. Utility lines would be laid beneath these unpaved strips. Finally, sidewalks would be constructed at the outer edges of the right-of-way. DuPont also envisioned the establishment of several agricultural experiment stations along the right-of-way to be supported by road revenues, and the placement of monuments 1,000 feet apart on the length of the road to serve as "base points" for future state surveys (Rae 1975:171-2; Anonymous 1912a). DuPont wrote of construction techniques to be used on the road in an article published in *Scientific American* in 1912:

The...road will be constructed of water bound macadam or concrete base, on top of which will be laid asphalt and stone mixed, or a surface composed of water bound macadam with a half-inch covering of asphalt and trap rock to make it dust and water proof (duPont 1912).

As soon as the road was completed or any section of at least ten miles in length was finished, the roadway was to be conveyed to the State, free of cost. The State would then assume responsibility for road maintenance (Rae 1975:173). An important guiding principal in duPont's road planning was that "a straight line is the shortest distance between two points" (duPont 1917:2). He envisioned his highway as providing the shortest direct route the length of the state eliminating the "twists and sinuosity" of the existing State Road (Anonymous 1912b).

By September 1912, duPont had backed away from his definite opinions of the arrangement of the 200-foot right-of-way. He indicated that the portion of the right-of-way unneeded for the highway might be occupied by a trolley or pipe line or other utility. Details would emerge as the project and the surrounding communities developed. DuPont also indicated that even were the remainder of the right-of-way not immediately developed, the land purchase would permit eventual roadway widening without the need to acquire additional land (Anonymous 1912e).

The width of the road was proposed to vary based on projected traffic volumes. The narrowest portion of the road would be 20 feet, 13 feet of which would be "metal." Flanking the road surface would be loose stone shoulders. Curves would be limited to five degrees and these used only in New Castle County (duPont 1912).

DuPont also envisioned his boulevard as pioneering a scheme for funding road construction and maintenance. He wrote:

My object in building the road is not only to provide a good highway where it is badly needed, but also to work out in a practical way a problem that will, if successful, revolutionize the building of roads in the United States. The problem is how can a free country road be built to make it pay its original cost, cost of maintenance and a fair return on the money invested? (duPont 1912)



Figure 2. View of planned 200-foot width of DuPont Highway (du Pont 1912).

DuPont's solution was a situation of graduated assessment, arranged so that all who received direct benefit from the road bore their share of expense at the outset. These same parties would be recompensed by rentals of the unused portions of the right-of-way. Revenues from the road would be derived from trolley franchises, from water, telephone, telegraph and sewer right of way rentals, and from the rental of that part of the twenty-six acres per mile not actually used for road construction (Anonymous 1912a).

Under the provisions of an enabling act passed by the Delaware Legislature in 1911, T. Coleman duPont organized the "Coleman DuPont Road, Inc.," to construct a highway the length of the state and began construction in that same year (Delaware State Highway Department 1948:26). The road would be nearly 100 miles in length (Figure 3). As duPont described it: "I will build a monument a hundred miles high and lay it on the ground" (quoted in Lewis 1997:100). Beginning at the state line at Selbyville, he attempted to acquire a 200-foot wide strip of land the length of Sussex County. Property owners donated 80 percent of this land (Ostroski 2000a:6).

At the time of initial planning, much of the highway corridor in Sussex County and the Milford vicinity was lightly developed. The 1911 maps of the portion between Selbyville and Georgetown depicted about five dwellings and four farms along the stretch of road. Between Georgetown and Milford, most of the land was in agricultural use. Ten orchards, either apple or peach, were shown, as were seven general farms, four poultry farms, and one mill (Coleman DuPont Road, Inc. 1911).

Opposition to the road rose from the Chesapeake and Delaware Canal Company. An amendment to the road company enabling legislation required the canal company to erect and maintain a bridge across the canal at the place where the roadway met the canal.

Downstate Delawareans also viewed the proposal with suspicion (Figure 4). Though railroads took advantage of their monopoly by overcharging Kent and Sussex County farmers and manufacturers, there were few automobiles in the southern part of the state to take advantage of the road. Sussex County historian Richard Carter also attributes part of the suspicion to the state of philanthropy in Delaware. The first great American philanthropic foundations were in their infancy, and in Delaware, the only sizable philanthropic endeavor prior to that time had been the wealthy Bancroft family's role in establishing the Wilmington public library and parks system. Philanthropy had not yet touched the southern portions of the state (Carter 2001:159-160).

Sussex County businessman John G. Townsend, Jr., was among the greatest advocates of the road and convinced duPont to begin his road at the state line in Selbyville. He also helped with rightof-way acquisition through his partnership in the Peninsula Real Estate Company, Inc. As thanks for his efforts, duPont proposed him as a candidate for governor, and he won the office in 1916 (Carter 2000:16, 2001:170; Williams 1985).

In a compromise with road opponents, duPont offered several concessions: the acceptance of a 100-foot right-of-way instead of the 200 feet originally envisioned, the awarding of five times the assessed valuation of a farm five years after the road was finished to anyone whose farmland the road passed through, and the proposal of a public commission to establish rentals for the use of the boulevard by utility companies. He also offered to turn over to the state all profits from the land not used for travel after development and maintenance expenses had been paid. DuPont did not receive a reply (Rae 1975:176).

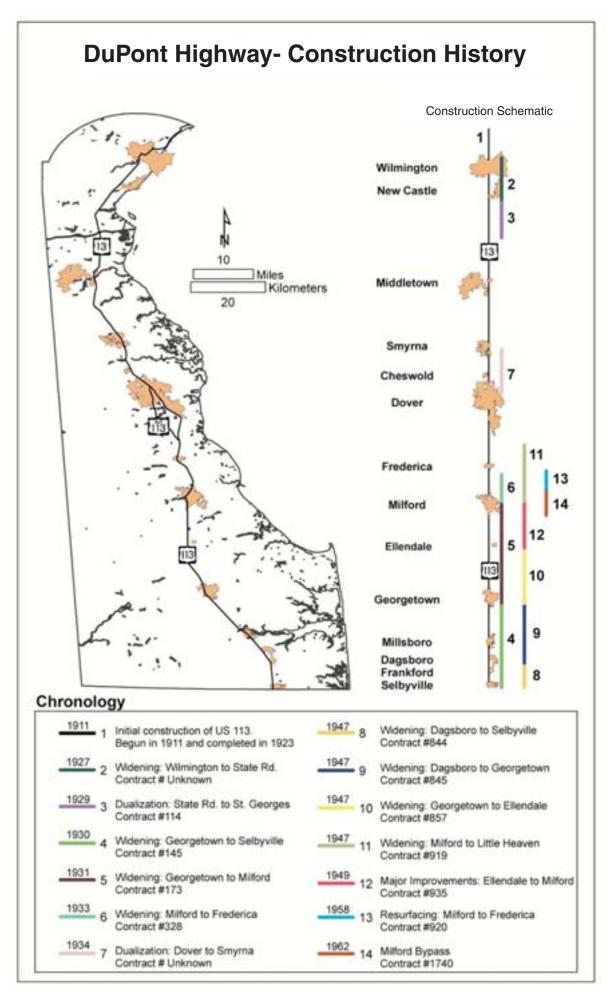


Figure 3. Chronology of the construction of U.S. 113 (DuPont Highway).

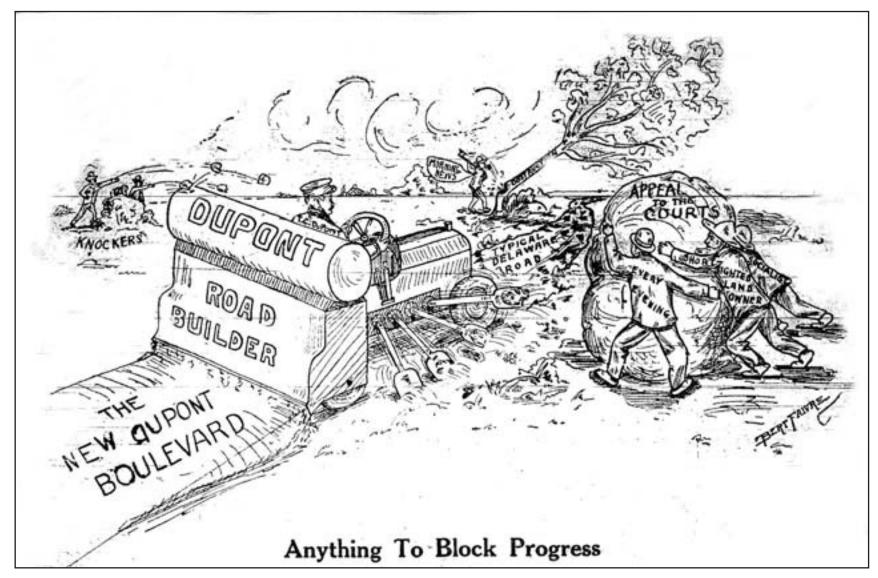


Figure 4. Editorial cartoon concerning the DuPont Boulevard. From the Sunday Star (Wilmington, DE). March 24, 1912.

Progress was delayed by legal actions challenging both the constitutionality of the enabling legislation and offers of land for the right-of-way. An April 1912 *Evening Journal* article indicated that construction had ceased pending a court opinion. DuPont, expressing his frustration, noted: "...today I really don't know whether the people of Delaware want the road or not, but [I] know if they don't want it, I certainly don't want to spend the money necessary to give it to them" (Anonymous 1912c).

In July 1912, the State Supreme Court ruled that the law establishing the boulevard company was constitutional and that a 200-foot strip of land could be taken for the right-of-way provided the land was devoted to a public highway and operation of public utilities and that the land be used within a "reasonable time" (Anonymous 1912d). Opponents immediately appealed the ruling to the United States Supreme Court.

The pros and cons of the road were a source of lively debate among Delaware editorial writers and informed citizens. The Wilmington newspapers split in their opinion. The *Sunday Morning Star* was a major booster, while the *Evening Journal* was a prominent opponent. An undated, unsourced article in the T. Coleman duPont scrapbooks discussed some of the objections to the road raised by Sussex County property owners. One farmer objected to the construction of a road cutting across his property indicating that it would not improve it. He proposed that the boulevard company acquire the entirety of his farm. Others objected to acquisition of a 200-foot right-of-way when only a narrow highway was initially planned. The article noted that one of the initial sections of the road, near Georgetown, was fourteen feet wide, built with a concrete foundation, and paved with a composition "similar to the material used on city streets." On either side of the roadway was ordinary earth with ditches on the sides. The surface between the ditches was less than 30 feet wide in many places (Anonymous n.d.).

DuPont's frustration over the litigation became public in 1913. In an unsourced article published in January 1913, he was quoted as saying:

The people of Delaware have made the Boulevard cost me a half a million dollars more than it ought, and I shall not contribute a dollar to any public purpose, no matter how worthy, until this half million has been made up by withholding donations to that amount (Anonymous 1913a).

Later the same month, duPont asked the Legislature to either repeal the law authorizing the construction of the boulevard and return the \$50,000 deposited with the state by the Coleman DuPont Road, Inc., or signal their support of the road by failing to repeal the legislation (Anonymous 1913b). The legislature did not repeal the legislation and construction planning proceeded.

Initially Coleman duPont served as his own chief engineer but soon turned that responsibility over to Frank M. Williams, former chief engineer of the New York State Highway Department. Two European highway engineers were brought in as consultants: Ernest Storms from Brussels, Belgium, and Thomas Aitken from Cupar, Fife, Scotland. Both visited the project and made suggestions as to methods of construction and materials. They also studied subsoil conditions and monitored sections of experimental road. To undertake construction of the road, duPont hired a sizable staff. The engineering department consisted of a chief engineer, an assistant engineer, and a division engineer for each county, a chief draftsman, a testing engineer, fourteen assistant engineers and a full complement of instrument men, rodmen, chainmen, axemen, and draftsmen. DuPont's engineering staff included Charles M. Upham, who later became chief engineer of the

Delaware Highway Department, and C. Douglas Buck, future duPont son-in-law and future Delaware governor (1929-1937) and senator (Catts and Jessup 1999:6; Rae 1975:175-176; Williams n.d.:659-660).

The large field force was necessary because of the uncertainties of the routing in Sussex County. The road was planned to be where the greatest numbers of residents wanted it. It had, therefore, been necessary to run numerous preliminary lines of potential alignments. The remainder of the organization consisted of a construction department, a financial department, and a right-of-way department (Williams n.d.:660).

By 1917, the Coleman DuPont Road, Inc., had completed the DuPont Boulevard from the southern Delaware border to a point near the Appenzellar farm, five miles south of Milford (Figure 5). DuPont made an offer to the state to dissolve the company and to finance the construction of the highway north to Wilmington at a cost not to exceed \$44,000 per mile. The proposition made by duPont and accepted by the State required:

- 1. Completion of the road between the Appenzellar Farm and Milford along the lines as surveyed and laid down by the DuPont Boulevard Corporation.
- 2. Completion of the road North of Milford along lines laid down and selected by the State Highway Department.
- 3. The entire cost of construction to be paid for personally by duPont including the cost of all new rights of way that it may be necessary to acquire, but excluding the cost of a new bridge, across the Delaware and Chesapeake Canal. This stipulation was included because under its charter, the Canal Company was required to build such a bridge.

Agreement was officially reached with the State Highway Department on July 20, 1918. State Highway Department engineers noted that the existing portion of the highway between Selbyville and Milford served as a trunk line for nearby communities to its east and recommended that the same type of alignment be continued further north:

In many instances it is better to have the trunk roads laid out near the towns rather than through the towns. This would be more convenient for the through traffic and less dangerous for the residents of the towns. This seems to be the latest approved method of dealing with the increasing trunk line traffic (AR 1920: 19-20, 23).

While duPont's original scheme called for a 200-foot right-of-way, highway engineers advocated a 60-foot right-of-way as sufficient for the needs of a single highway. When ultimately completed, this would be made up of a 32-foot-wide roadway with shoulders and ditches extending to the 60-foot limits (AR 1920:24). In 1917, a portion of the highway near Selbyville became the first American highway to employ a white center line (Frank 1965:19).

The portion of the highway north of Milford was reduced to a conventional two-lane concrete highway, a roadway still superior to most of the road mileage of the United States. The planning, location and construction of this segment was done entirely by the Delaware State Highway Department (Rae 1975:178).

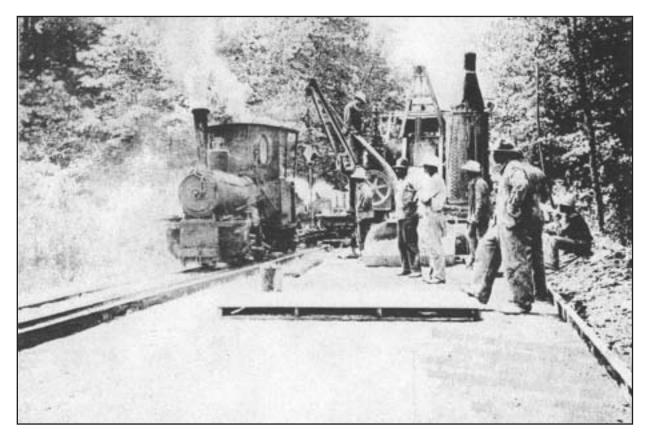


Figure 5. DuPont Highway construction near Ellendale, 1918. Note narrow gauge railroad engine. Delaware Public Archives. RG 1540. Box 11, Folder 4. Photograph 1081pn. The last foot of the original concrete highway was poured in 1923 (Figures 6, 7, 8 and 9). The total cost of the 98.1306 mile long road was \$4,856,098.20. One of the last portions to be completed was 1,300 feet at Drawyers Creek north of Odessa whose completion was delayed due to unstable foundations. The highway was completed the following year and was formally celebrated in a ceremony in Dover on July 2nd attended by duPont, Governor William D. Denney, Judge Gray of Wilmington and Chief Justice James Pennswill (Figures 10, 11, and 12) (Anonymous 1924). DuPont was presented with a silver and gold plaque (now on exhibit at the Delaware Public Archives) honoring his contributions to the state. In 1925, the DuPont Highway was officially added to the United States highway system as U.S. 13 and U.S. 113 (AR 1925:17; AR 1948:26).

In the view of a writer for the *New York Times*, Coleman duPont and his cousin Pierre Samuel duPont were largely responsible for moving a state, "still associated with whipping posts, indentured children, bad roads, poor schools and other evidence of backwardness" to its place among the "best company." The article noted that until the road was completed southern and central Delaware were served only by dirt highways and branch lines of the railroad and that population and property values in Kent and Sussex counties had remained stationary or declined (Duffus 1924: 8:4).

By the end of 1925, a total of over 40,000 vehicles were registered in the state of Delaware. Of these, almost 44 percent were registered in Kent or Sussex counties (AR 1925:26). In response to the unexpected rate of traffic growth on the northern portion of the highway (Figure 13) the chief engineer recommended that all sections of the boulevard between Wilmington and Dover built with a pavement width of less than 18 feet be widened to 20 feet. A portion of the traffic growth was attributed to summer and holiday traffic en route to the Delaware shore and additional traffic generated by the New Castle-New Jersey ferry and new through roads to Pennsylvania and Maryland (AR 1925:22-23).

The first widening, between Wilmington and State Road, where present U.S. Routes 13 and 40 separate, occurred as early as 1927 (Figure 14).¹ This section of the road was widened from 18 to 38 feet. In widening the highway, the old slab was used wherever possible, and it was widened to conform to contemporary standards of two-lane width. Where super elevation on curves was deemed necessary and where the old alignment was considered too dangerous, new concrete was built (Anonymous 1941:3; Rae 1975:179).

By the late 1920s, capacity on the northern portion of the DuPont Highway was increased with the completion of a divided highway on a 7.67 mile stretch between State Road and St. Georges (Figure 3). A 20-foot-wide concrete pavement was built parallel to and fifty feet east of the original highway (Figure 14). The land between the two roadways was planned to be a landscaped median. The dualization (Contract #114), undertaken by Old Line Construction Company of Chestertown, Maryland, cost approximately \$360,000 (AR 1929:19-20).

In a 1929 report Warren W. Mack, chief engineer of the Highway Department, commented on the southernmost part of the highway, the portion from Milford to Selbyville. He noted that the road, though paved, was only 14 feet in width, making it the only through highway in the state less than 16 feet wide. The narrowness of the road posed a problem particularly due to heavy truck traffic. Mack concluded:

¹ Delaware State Highway Department annual reports were consulted to verify the sequence of construction. Table 1 lists construction contracts associated with the portion of the highway studied.

		Mileage of		Construction		
Contract #	Location	Improvement	Date	Cost	Contractor	Description
8-48C	Length of DuPont	98.1306	1917-1920	\$3,846,519.13	Coleman DuPont Road,	Original portions of DuPont
(selected)	Highway				Inc.	Highway
49	Ellendale	1.010	10/15/24	\$32,523.20	Highway Engineering	DuPont Road, 16 foot pl. st.
			(opening)		& Const. (Selbyville)	con.
CS 40	Lincoln City	1.09	4/22/25	\$34,693.75	Old Line Const. Co.	DuPont Road, Lincoln City.
			(opening)		(Chestertown, MD)	16 foot pl. st. con.
CS 44	Stockley	1.10	8/19/25	\$29,809.25	Old Line Const. Co.	DuPont Road, Stockley, 14
			(opening)			pl. slag con.
114	St. Georges-State Road	7.66	1929	\$359,854.50	Old Line Const. Co.	Dual 20 foot concrete
117	Milford-Ellendale	6.01	1929	\$136,798.50	Highway Engineering	Widening and repaying, 15
					& Const. (Selbyville)	foot concrete
145	Selbyville-Georgetown	18.9	1930	\$241,131.40	Highway Engineering	16.4 miles: 4 ft. concrete
					& Const.	shoulders; 2.4 miles, 4 ft.
						shoulders and 14' and 16'
						Amiesite
173	Georgetown-Milford	16.34	3/9/31	\$133,875	Old Line Const. Co.	4 foot concrete widening
			(awarded)	(bid)		
328	Milford-Frederica	7.387	9/15/33	\$47,135.75	W.W. Truitt (Lincoln	4 foot concrete widening
			(awarded)		City)	
329	Frederica-Dover	10.09	9/15/33	\$71,775.50	George & Lynch	4 foot concrete widening
			(awarded)	(bid)	(Dover)	
285	Smyrna dualization	1.7	4/5/34	\$161,269.50	W.W. Truitt (Lincoln	46 to 65 feet concrete
			(awarded)	(bid)	City)	
732	Frederica-Little Heaven	2.472	4/10/41	\$45,028 (bid)	Amiesite Construction	23 foot bit. concrete
			(awarded)		Co. (Mt. Vernon, NY)	(widening and reconstruct.)
857	Georgetown-Ellendale	9.137	4-14-47	\$368,069.40	Standard Bitulithic Co.	Concrete resurfacing
	(federal aid)		(awarded)	(bid)	(NY)	

Table 1. Construction contracts for the Du Pont Highway. Information taken from Delaware Department of Highways Annual Reports (1912-1975). Blank items are not indicated in the construction contract data tables in the annual reports.

Table	1.	(Continued)
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919	Milford-Little Heaven (federal aid)	9.772	4/29/47 (awarded)	\$353,209 (bid)	George & Lynch (Wilmington)	Bit. conc. resurfacing
845	Dagsboro-Georgetown	10.245	1/19/48 (awarded)	\$468,046.60 (bid)	George & Lynch	C.C. widening and hot asphalt resurface
935	Ellendale-Milford	7.206	5/26/48 (awarded)	\$355,336 (bid)	George & Lynch	C.C. widening and hot mix resurface
920 (Fed. F-116 (6))	Milford-Frederica	5.8 (approx.)	1960-1961	\$777,778 (award) Federal: \$425K		
1740	Milford Bypass to Walnut Street extension	3.867	Begun 1961-2	\$770,503 (award)		
66-03-008	US 113 intersection improvements-Sussex County	various				
	US 113 from Maryland line to Rd. 432	14.7 (approx.)	Completed 1967-1968			
65-07-012	US 113 from Georgetown to Rd. 432	4.1 (approx.)	Completed 1969-1970	\$1,474,794.80	Henry C. Eastburn	
67-08-008	Milford Bypass	3.9 (approx.)	Completed 1973-1974	\$5,738,706.30		
71-05-004	Frederica-Little Heaven	2.5 (approx.)	Completed FY 1975	\$1,669,381.51		



Figure 6. DuPont Highway near Georgetown. 1920. Note narrow width of original road. Delaware Public Archives. RG 1540. Box 11, Folder 7. Photograph 685p.



Figure 7. DuPont Highway at Shawnee Road intersection. September 1923. Buildings of North American chicken laying contest at left. Note Texaco staion at right. Delaware Public Archives RG 1540. Box 12, Folder 4. Photograph 741p.



Figure 8. DuPont Highway between Georgetown and Milford. Looking North. September 24, 1923. Delaware Public Archives. RG 1380.006. Agricultural glass negatives. Negative #92.



Figure 9. DuPont Highway, Sussex County. Uptdated photogrtaph showing concrete used to construct shoulders on highway. Delaware Public Archives RG 1540. Box 11, Folder 7. Photograph 894p.



Figure 10. Coleman duPont and family, State House steps. July 2, 1924. Delaware Public Archives. RG 1380.006. Agricultural glass negatives. Negative #182.



Figure 11. Old powder wagon in parade, Coleman duPont Road celebration, Dover. July 2, 1924. Delaware Public Archives. RG 1380.006. Agricultural glass negatives. Negative #189.



Figure 12. Shovel used in dedication of Coleman duPont Road. July 2, 1924. Delaware Public Archives. RG 1380.006. Agricultural glass negatives. Negative #193.

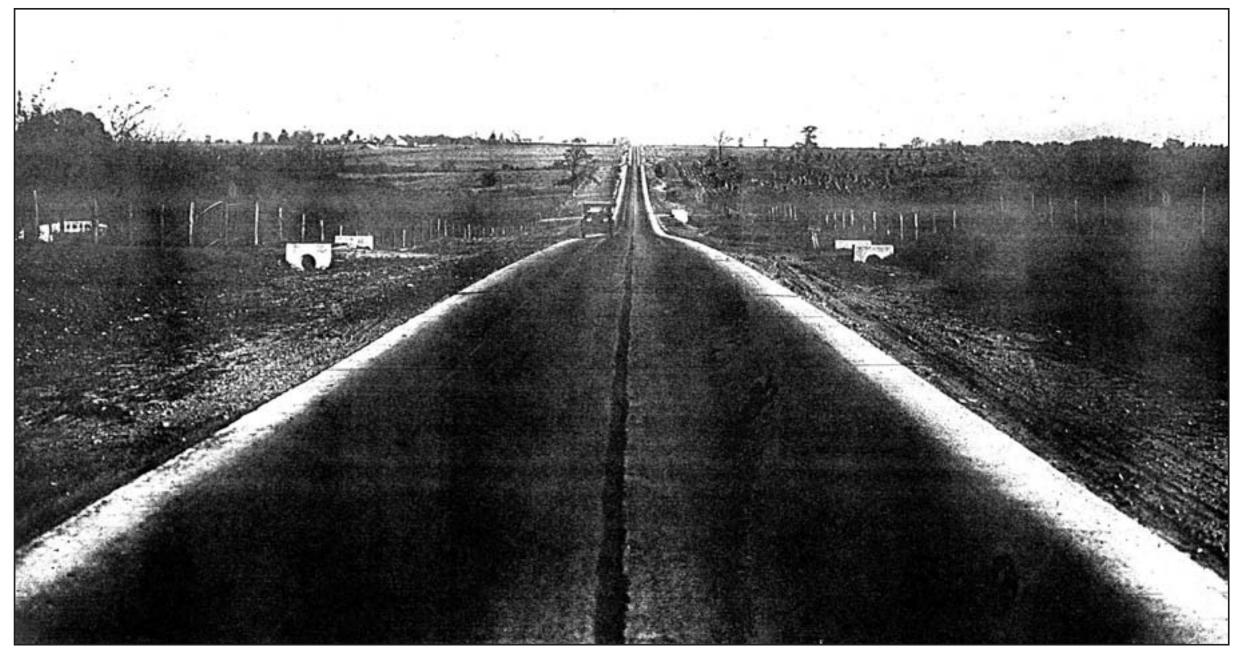


Figure 13. DuPont Highway near Wilmington, New Castle County. November 9, 1925. Delaware Public Archives. Agricultural glass negatives. RG 1380.006. Image 381.



Figure 14. Dual highway near Wilmington, New Castle County. November 3, 1931. Delaware Public Archives. Agricultural glass negatives. RG 1380.006. Image 1315.

This road, some of which was constructed in 1912, is of lighter section than is now standard. While there is no evidence of failure, which is striking evidence of the quality of the original construction, it is certain that it is stressed nearly to the limit with the constantly increasing loads to which it is subjected. I would, therefore, recommend that this road be widened its entire length as soon as possible (AR 1929:29).

Mack recommended that the widening be started in 1930 on the 18.891 mile section south of Georgetown (AR 1929:29). The widening took place in 1930 with construction of 4-foot concrete strips on either side the road (Figure 9). At the same time, the existing 14-foot-wide pavement was reshaped to a new cross-section and was surfaced with a 2-inch course of amiesite. Six-foot-wide dirt shoulders were constructed to either side of the paved surface. The project (Contract #145), completed at a cost of \$241,131.40, was undertaken by the Highway Engineering and Construction Company of Selbyville (AR 1930:18).

In 1931, plans were approved for the widening of the 16.340 mile stretch of the highway between Georgetown and Milford (Contract #173). The contract, totaling \$133,875, was awarded to the Old Line Construction Company of Chestertown, Maryland. This widening took the same form as that approved under Contract #145 (Figure 3). Widening of the portion of the highway between Dover and Milford was completed in 1933 (AR 1933:36).

The success of the DuPont Highway in uniting southern and northern Delaware led to the growth of the state highway network under the auspices of the State Highway Department. By the late 1930s, the state could boast a greater ratio of concrete road mileage to population than any other state. Improved roads totaled 1,068 miles at the end of 1933, over 27% of the state's mileage of rural highways. Of these highways, 780 miles were paved in concrete (Reed 1939:103-104).

By 1934, the portion of the boulevard between Dover and Smyrna was dualized with a wide median planted in grass and frequent crossovers. This 1.7-mile dualization project was undertaken by W.W. Truitt of Lincoln City at a cost of \$161,269.50 (AR 1934) (Figure 15). This segment completed the divided highway between Wilmington and Dover, a total of 48 miles (Figure 3). The final segment of the dualization set a construction speed record with an average of 1,600 linear feet laid per 10 hour day. This section was built by Vincent Schiavi of Buffalo, New York (AR 1948:30). The new road was laid in three parallel concrete sections of 10, 11 and 10 feet, respectively (Anonymous 1933).

3.3 1940-1960s SUBURBANIZATION AND EARLY EXURBANIZATION

In 1947, plans were approved for resurfacing and widening an 8.579 mile segment of the highway between the Maryland state line and Dagsboro (Figure 3). This project included a four-foot widening of the concrete roadway on its west side (Contract #844). In the same year, plans were approved for improvements to the 10.245 mile stretch between Dagsboro and Georgetown. These plans included resurfacing of the existing roadway and construction of a four-foot concrete widening on its west side (Contract #845). The \$468,046.60 contract was awarded to George & Lynch of Wilmington. Resurfacing and widening of the 9.135 mile stretch of highway between Georgetown and Ellendale was included in Contract #857 approved in 1946. This \$368,069.40

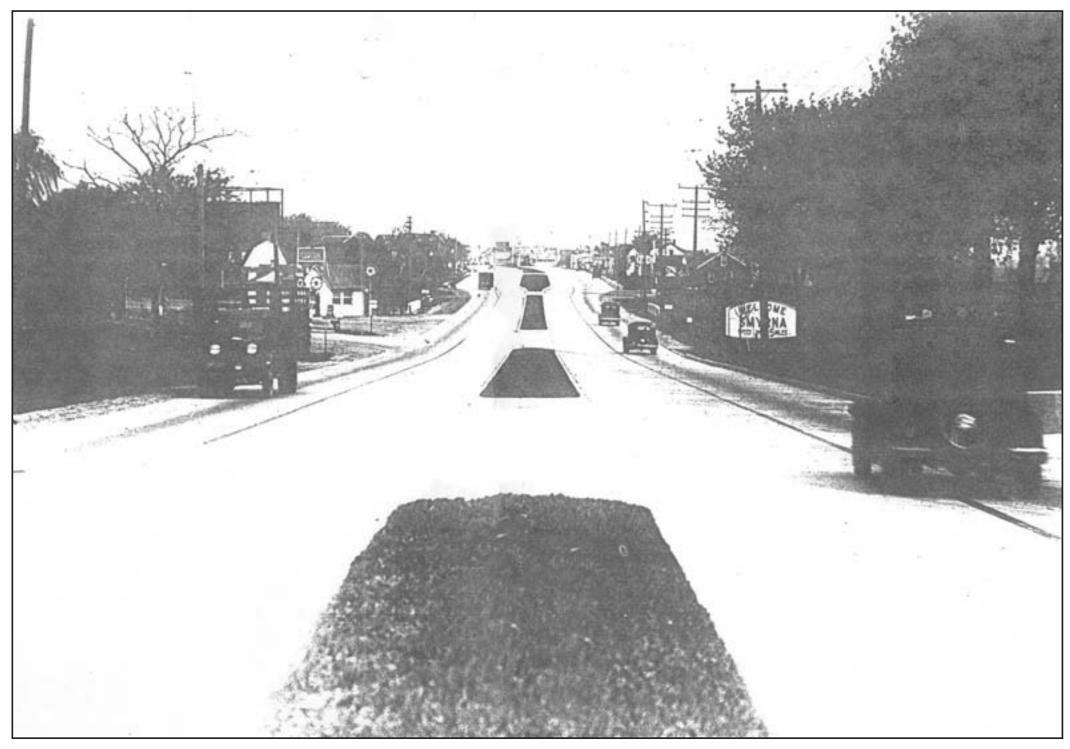


Figure 15. Dual highway through Smyrna, Kent County. April 21, 1936. Delaware Public Archives. Agricultural glass negatives. RG 1380.006. Image 1829.

contract was awarded to Standard Bitulithic Company of New York. Resurfacing and widening of the 9.772 mile section between Milford and Little Heaven was included in Contract #919 approved in 1947. This \$353,209 contract was awarded to George & Lynch of Wilmington.

In 1949, plans (Contract #935) were developed for the improvement of the 7.206 mile stretch of highway between Ellendale and Milford (Figure 3). Included in these improvements was the widening of the 18-foot-wide pavement with four-foot-wide concrete slabs on either side of the existing pavement. On the outside of the new pavement, land was to be filled to provide 10-foot-wide shoulders on either side of the road. The entire road was to be paved in four inch thick, compacted, hot mix, asphaltic concrete. In addition, culverts were to be constructed at selected points to facilitate drainage. This \$355,336 contract was awarded to George & Lynch of Wilmington (AR 1949).

The Sussex County portion of the DuPont Highway helped spur the region's economic development. The broiler chicken industry required a good highway to move the chickens to market, and the DuPont Highway was that road (Ostroski 2000b:6). Native son and Delaware governor John G. Townsend, Jr., spoke of the highway's impact on Sussex County:

...no one thing since the building of the railroad has done so much for the development of this section of our commonwealth as the construction of this road. It is no idle boast that Sussex County has the greatest road in the U.S. (as cited in Ostroski 2000b:6).

In a 1941 article, the Coleman DuPont Highway was called "Delaware's No. 1 Farm-to-Market Road." In a single year, over a million crates of poultry, approximately 20 million birds, were transported on the road. Other produce carried on the road included more than 213,000 bushels of peaches, more than 1,120,000 crates of cantaloupes, 950,000 crates of strawberries, and 2 million bushels of potatoes. The maximum traffic on the highway was in the vicinity of New Castle County's State Road where daily volumes averaging 37,000 vehicles were recorded (Anonymous 1941:4).

The highway also opened formerly remote portions of the state to visitors. An anonymous *Sunday Star* writer mentioned Sussex County's Ellendale Swamp "...formerly one of the worse spots in the State for the traveler, where during the winter months, horses and men and automobiles became so deeply mired that they were continually having to be rescued." In a bit of hyperbole, the writer noted that the swamp had become one of the "beauty spots of the East" compared by tourists to portions of Yellowstone National Park (Anonymous 1934:7).

Delaware is centrally located in what was known as the "Middle Atlantic Trucking Region," a region extending from the coast of Maine to South Carolina. Averaging 50 miles in width, this truck farming corridor owed its existence to three primary factors: the existence of a string of large cities and towns along the East Coast that were a ready market for crops, soil ideally suited for the cultivation of fruits and vegetables, and a "mild, semi-marine climate" (Doerrfeld, et al. 1993:11). Delaware truck farming was greatly facilitated by the DuPont Highway.

The importance of the DuPont Highway as a transportation route increased as Delaware's railroad network decreased in importance. During World War II, the railroads had been the only form of transportation capable of handling the tremendous demand for passenger and freight traffic. At the end of the war, with the end of rationing passenger traffic dropped precipitously as people returned to their automobiles. Local passenger train service ceased entirely in the 1960s (Hayman 1979:139-142).

Freight service on the Pennsylvania Railroad's Delmarva lines was reputed to be profitable until the 1930s. Perishable agricultural commodities that had once filled thousands of freight cars represented cargo most vulnerable to competition from trucks. With improvements in the highway system, much of the agricultural shipment was switched to motor carriers, vehicles that could carry products from door to door (Hayman 1979:137, 142).

In 1960, Frank V. duPont gave the state the stock of the Coleman DuPont Road, Inc. With this gift, Delaware acquired title to approximately 542 acres of land representing right-of-way along Route 113 from Milford south to the Delaware-Maryland border. The 35-mile ribbon of land varied in width from 160 feet at the northern end to 70 feet in places further south. Included in the transfer were rentals and franchise agreements on portions of the land. The land transferred was west of the Route 113 roadway from south of the Milford town limits to about 11.5 miles south of Ellendale Forest (Lieberman 1960:3).

In 1962, construction contract #1740 was approved for a 3.867 mile section of the highway including the Milford bypass (Figure 3). This project, designed by the Baltimore engineering firm of Rummel, Klepper & Kahl, included construction of a new roadway west of the former road. The bypass began north of Milford. The road varied in width from 34 feet to 48 feet. The latter configuration also included a four-foot concrete median. This initial contract was awarded for a bid of \$777,778 with an additional \$425,000 in funds appropriated. The Milford Bypass project was completed during the 1973-1974 fiscal year at a total cost of \$5,738,760.30 (AR 1974).

Other sections of Route 113 were also improved during the 1960s. The southern end, from the Maryland state line to Road 432 was upgraded in a project completed during the 1967-1968 fiscal year. Improvements to the section between Georgetown and Road 432 were completed during the 1969-1970 fiscal year at a cost of \$1,474,794.80. The contractor for the latter project was Henry C. Eastburn (AR 1968, 1970).

In recent years, the highway's role has changed somewhat. With the construction of Delaware Route 1, through traffic from north of Milford to Interstate 95 has largely shifted to that limited access highway. The DuPont Highway in that area is largely used for local traffic and access to roadside businesses. But the remainder of the historic highway, from Milford to the Maryland state line, continues to function as Delaware's major inland north-south route.