

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions

1. Name of Property

Historic name: Virginia Apple Storage Warehouse

Other names/site number: VDHR File 138-5120

Name of related multiple property listing:

N/A

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: 1955 Valley Avenue

City or town: Winchester State: VA County: Independent City

Not For Publication: N/A Vicinity: N/A

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,


I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

national statewide local

Applicable National Register Criteria:

A B C D

 Signature of certifying official/Title:	<u>8/1/2022</u> Date
<u>Virginia Department of Historic Resources</u> State or Federal agency/bureau or Tribal Government	
In my opinion, the property <input type="checkbox"/> meets <input type="checkbox"/> does not meet the National Register criteria.	
Signature of commenting official:	Date
Title : State or Federal agency/bureau or Tribal Government	

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4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:) _____

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

- Private:
- Public – Local
- Public – State
- Public – Federal

Category of Property

(Check only one box.)

- Building(s)
- District
- Site
- Structure
- Object

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Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u>2</u>	<u>0</u>	buildings
<u>0</u>	<u>0</u>	sites
<u>0</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>2</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

COMMERCE/warehouse
INDUSTRY/PROCESSING/EXTRACTION
AGRICULTURE/SUBSISTENCE/Storage

Current Functions

(Enter categories from instructions.)

COMMERCE/warehouse
INDUSTRY/PROCESSING/EXTRACTION

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7. Description

Architectural Classification

(Enter categories from instructions.)

NO STYLE

Materials: (enter categories from instructions.)

Principal exterior materials of the property: BRICK, CONCRETE, GLASS, TERRA COTTA

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The Virginia Apple Storage Warehouse is located at 1955 Valley Avenue in the city of Winchester, Virginia. Although historically there were additional detached packing buildings, employee cottages, and other small ancillary buildings, today there are two extant buildings within the complex: the primary warehouse/office built in 1929, as well as a smaller controlled atmosphere building constructed in 1971.¹ The primary warehouse is a large, five-story masonry building constructed with a reinforced concrete frame and clad in brick. The main block of the building is industrial in character with no discernable stylistic influences. The building was constructed by Virginia Apple Storage, Incorporated to store, package, and distribute apples, but was soon adapted for the production and sale of ice. During the mid-twentieth century, an Art Moderne-influenced office annex was appended to the front of the building. The original rear wing and a large, detached packing building were demolished and replaced by a ca. 1950, wide, one-story concrete block packing addition attached to the rear of the warehouse. The detached controlled atmosphere building was built in 1971 at the rear of the property in the vicinity of the original, detached packing building. The controlled atmosphere building exhibits a vernacular, utilitarian form seen on other contemporary cold storage facilities built throughout the region at this time. The building is composed of poured concrete walls with exterior buttresses or “ribbing.” Historically, a spur of the nearby railroad tracks extended along the north side of the 1929 warehouse building before bending around a detached packing building to the rear; however, that alignment has been removed and the corridor abandoned. Although the complex and individual buildings have undergone

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alterations, additions, and routine maintenance, these modifications were made to meet changing commercial practices and company operations. The loss of the associated detached packing buildings, employee dwellings, a chemical plant, and other ancillary buildings have affected the property's integrity of setting, design, and feeling. The 1929 warehouse/office that served as the central point of operations, however, has been retained, along with the 1971 controlled atmosphere building. Each of these resources has integrity of location, design, workmanship, materials, and feeling. Overall, the property's integrity of association has been maintained as a processing, storage, and shipping location for locally grown apples, which were a major cash crop in the Winchester area during the twentieth century.

Narrative Description

Setting

The Virginia Apple Storage Warehouse complex is located at 1955 Valley Avenue in the city of Winchester, Virginia. The complex is situated on an irregularly shaped 7.688-acre parcel set on the west side of the road that is bound generally by the Winchester & Western Railroad corridor and Abrams Creek with additional commercial development beyond to the northeast, by residential development to the northwest and west, and commercial development to the south. Other industrial and commercial properties are set across Valley Avenue to the east. Historically, a spur of the railroad extended along the north side of the warehouse building before bending around a detached packing building to the rear, although that alignment has been removed and the corridor abandoned.

The primary warehouse and office building is set roughly 185 feet back from the road with a landscaped grassy yard to the front. This grassy yard is level and well maintained, with shrubs and trees growing along the northern and western edges. A small grove of apple trees grows on the east side of the yard along the road. A paved circular driveway wraps around this yard with two entrances from Valley Avenue. Opposite the northern section of the driveway, a row of trees grows along the edge of the lot and provides a screen between the property and the railroad. Abrams Creek flows through the yard with short concrete bridges spanning it on both legs of the driveway. The portion of creek through the yard is mostly shallow with wetland grasses, although a slightly deeper section immediately abuts the driveway in front of the building. In this area, the creek is lined with concrete retaining walls with the remains of a small, unknown concrete structure on the west side. A short extension of the northern driveway leads along a loading dock on the northeast corner of the building but ends at an overgrown yard that extends farther along the north side of the building. The southern length of the driveway opens to a parking lot that extends along a loading dock along the south side of the building. This parking lot continues as a driveway downhill past the rear of the building and the foundation of the original attached rear packing wing before it meets a large, paved staging area that extends along the rear of the main building. Set across the rear staging area from the main building is the detached controlled atmosphere building constructed in 1971. A paved concrete pad extends along the south side of this building. The driveway then doglegs south and continues out of the property into the adjacent commercial property. While approximately half of the nominated acreage is either built upon or covered with

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a paved driveway and staging area, the northern edge of the parcel, where the railroad corridor historically ran, is now unimproved and wooded.

Primary Office/Warehouse (1929 with ca. 1950 rear addition; contributing building)

Exterior Description

The Virginia Apple Storage Warehouse is a large industrial building with no discernible style as originally constructed in 1929, although a mid-twentieth century office addition to the east façade reflects influences of the Art Moderne style. The building is composed of the five-story main warehouse block, with an original one-story mechanical annex on the east façade that is adjacent to the two-story office addition, a one-story office entry block added to the southeast corner between the original mechanical block and office annex in the mid-twentieth century, and a large ca. 1950 one-story addition on the west (rear) elevation. A one-story loading dock wraps completely around the east façade and the north and south sides of the building. The warehouse's walls are composed of brick laid in a 5:1 American bond and are topped by a flat roof with a wraparound parapet topped with terra cotta tiles.

The east elevation of the building serves as the primary façade. Attached to this façade is the original one-story mechanical annex as well as the later office additions. Above the mechanical annex and other additions on the upper portion of the main warehouse wall is a painted sign identifying the building as "Virginia Apple Storage, Inc." The original mechanical annex is a partial-width, offset one-story, four-bay appendage. This annex houses the cooling system for the warehouse, as well as an ice-making facility. The annex has a flat roof with parapet and terra cotta coping that matches the main warehouse. The metal shed roof that shelters the concrete loading dock is affixed to the wall just below the annex's parapet. Both the loading dock and roof wrap around the north side of the mechanical annex and continue along the east wall of the main warehouse block.

Three pairs of doors lead into the front of the mechanical annex. The main entrance into the mechanical wing consists of paired, metal doors, each with a four-light window in the upper half of the door. Two sets of windows are located in the center of the annex's east façade. The windows consist of three grouped, sixteen-light, fixed sash. The north side of the mechanical wing is pierced only by a single metal pedestrian door. The south wall of the mechanical wing is flanked by a two-story office addition added at an unknown date between the original construction in 1929 and 1938, when it is first depicted on Sanborn maps. This two-story office projects slightly beyond the plane of the south wall of the main warehouse. Set in the front corner between the mechanical annex and the office addition is a slightly later entry block. This entry block is one story in height and is built beneath the loading dock roof that wraps around the south wall. The one-story entry addition introduced an Art Moderne influence to the building and features a rounded corner with concrete coping on the parapet that emphasize its horizontality. The doorway is set on the rounded corner and is flanked by full-height panels of blonde brick laid in an all-header bond. The door is a paneled, wood door with a three-light window in place of the upper panel. The doorway is flanked by paired two-over-one, double-hung wood sash windows to each side.

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The covered loading dock wraps around to the warehouse's south (side) elevation, including the slightly projecting two-story office mass. The south wall of the office annex features two twelve-light wood sash windows on the first story two fifteen-light windows on the second story. On the main block's south elevation, several doors and openings pierce the lower wall alongside the loading dock, although the vast majority of the warehouse walls are blank panels of brick above the loading dock roof. A three-bay stair/elevator tower projects from the wall just off-center towards the west (rear) end. This tower, which is six stories in height, houses a stairwell and two elevators, including one to move freight between each floor of the warehouse and one specifically intended for apple barrels. On the tower's exterior, each bay and story are divided by concrete bands which add architectural interest and a slight Modern aspect as these reflect internal structural framing. Fenestration on each floor of the south tower consists of an eight-over-four, double-hung sash window on the first five stories and two windows of the same design on the sixth story. A cluster of cellular phone antennae array is affixed to the top of this tower. Three sets of doors lead into the stairwell and elevators on the first story of the tower, one of which is a large freight door that accesses the freight elevator. The central entry consists of a metal door with a four-light window, which leads into the stairwell. The central entry is flanked by paired, metal doors to the east, which lead into a second elevator. Flanking the tower to the west is a pair of metal doors that lead into the warehouse. The doors are accompanied by a device that seals them shut in order to maintain uniform temperature in the storage room on the interior side. A single door of the same design is situated closer to the mechanical wing to the east of the tower. A frame shed was added to the space between the east elevation of the tower and the exterior wall of the warehouse. This storage space is accessed by a central, metal door on the east side.

The north side of the warehouse is similar to the south, although with fewer openings. The loading dock wraps around from the front and extends the full-depth of the north wall, although is interrupted by a projecting elevator tower. Whereas the loading docks along the front and south side of the building appear to have been built for trucks or vehicular access, the north dock was originally served by a rail spur that extended along that side of the building. Unlike the elevator tower on the south side, the north tower is only one bay wide, although is similarly divided by concrete bands. The north tower houses a single elevator, which is accessed by a doorway on the first story. A single eight-over-four, double-hung sash window is located on the sixth floor of the tower. Additional entrances into the warehouse flank the tower to the east and west.

The west (rear) elevation of the building is simple in design. The five-story wall of the main warehouse is brick, interrupted only by a linear series of small window openings offset towards the north side. Attached to the lower portion of the rear wall is a large, ca. 1950, one-story packing wing. Because the ground level of the rear of the building is lower than the front and sides, the roof of the one-story packing wing adjoins the main building just below the roofline of the loading dock. This rear packing wing spans the entire width of the rear elevation of the warehouse and extends beyond the south wall. The ca. 1950 wing replaced an original rear packing area that was replaced with the present wing over three phases beginning in the 1950s. The earliest section is the north end that was originally nearly full-width as built, although was later expanded further south beyond the south wall of the warehouse. The north section of the rear wing is one story in

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height and has a flat roof. Its structural framework is cast concrete framing with inset concrete panels. Two loading doors lead into the building on the west elevation.

A small, lower, one-story office area is appended to the packing wing's rear wall at the northern end, and a similar mass is located within the interior of the rear wing on what would have originally been the exterior side of the north section. The exterior office block is one story in height with concrete block walls painted white and a flat roof. On the west elevation, the main entrance consists of an off-centered door at the northern end. The door is sheltered by a frame overhang. A window opening to the right of the door has been enclosed. On the other walls, fenestration consists of two-light, fixed sash windows. A frame shed was constructed along the office area's south elevation. The south section of the rear wing was constructed later using concrete block. On the west elevation of the wing's south section, an off-centered, metal door leads into the building. The door is flanked by a loading door on each side. Two loading doors are centered along the wing's south elevation. The south and east elevations are painted white.

Overall, the exterior of the building and all subsequent additions are simple in design and ornamentation, reflective of its industrial, utilitarian function. However, the building does exhibit subtle embellishments, mainly on the east façade. Some decorative elements were included in the structural makeup of the building: the bricks are laid in a 5:1 American bond and the tops of the walls have parapets with terra cotta tile coping. On the east elevation, the front sides of the loading dock are covered with vertical wood boards that extend from the deck to the ground. Additionally, a concrete belt course runs along the top edge of the windows and doors that are located on the mechanical wing. The Art Moderne-influenced front office corner entry is adorned with brick laid in a running bond on the sides and with brick laid with headers facing outward along the rounded corner. The latter portion of brick is tan in color, rather than red. On the north and south towers, concrete bands separate each story and bay and are reflective of the internal structural framing. While the east elevation has additional ornamentation beyond the brickwork and parapeted walls, the remaining elevations are simpler in design and do not feature additional decorative details.

Interior Description

The interior of the Virginia Apple Storage Warehouse is reflective of the building's industrial use and is largely unfinished. The vast majority of the building's interior was used for cold storage and therefore consists of large, open spaces that facilitate the movement and storage of bulk produce. The packing and distribution areas are similarly open and unornamented. The front of the building holds the mechanical equipment and office areas in which the interiors are laid out and finished accordingly.

In general, there is limited interior connectivity between the different areas, with most accessed only from the exterior; this arrangement assured that closed, controlled environments were maintained. The primary warehouse has five floors of cold storage space above an additional cold storage floor in the basement. These spaces are accessed by stairs and elevators in the exterior towers, but do not have interior stairwells or doors, and do not directly connect to either the

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mechanical or office wings, although there is an interior connection to the rear packing wing from the first floor.

Each of the cold storage floors within the warehouse area have completely open spaces, divided only by a grid of structural columns. The floors and ceilings of each level are exposed poured concrete while the walls have a variety of treatments. Many are covered with panels of cork that were applied to assist with insulation, while others have more modern spray-foam insulation. Some still have no covering and are exposed concrete frame. The cold storage rooms were cooled by an ammonia compression system, which consists of pipes and gutters that run along the ceilings. The system functioned by releasing ammonia gas from compressors located in the mechanical wing. The gas then ran through the pipes before being released into the cold storage rooms. As the ammonia gas cooled, it removed heat from the surrounding space. Ice also built up on the pipes, furthering the cooling effect of the ammonia. Each floor has valves near the stairwell entrance, which control the output of ammonia into the building. The stairwell entrance to each floor is from the south stair/elevator tower and consists of a single air-lock metal doorway. Flanking the stairwell door on each floor is a small metal latched door for the adjacent barrel elevator that transported barrels to each floor from the loading docks on the first floor. On the other side of the stairwell door is a larger opening for the freight elevator. A second freight elevator opening is set on the opposite (north) wall of each floor.

Attached to the east side of the warehouse block but connected only by a system of pipes and valves is the mechanical annex. The interior of the mechanical area consists of one primary room with a small office and storage room off to the side. The floor level of the mechanical room is sub-grade while the full height of one story above creates a tall ceiling. The space is unfinished with concrete slab floor and exposed concrete framing and brick infill walls. The ceiling is also open with the concrete rafters and roof decking exposed. Set on the floor in half of the mechanical room are large compressors to pump ammonia throughout the warehouse cooling system. Beside the compressors in the other half of the mechanical room space is a large concrete vessel in which ice, as a by-product of the cooling system, was formed and stored. Through this process, steel boxes are housed below the floor and are filled with water. The boxes are then submerged in below-freezing water before being covered with wooden planks. The ice could then be extracted as blocks and transferred to the loading dock outside using a crane and a small hatch in the wall.

At the southeast corner of the building, the front office addition is the only finished area of the building. The one-story entry mass leads seamlessly into the two-story office block with rooms on both levels. On the first story, the addition houses a central lobby, restroom, closet, and private office. A carpeted stairwell leads up to the second story, which houses a meeting room. Other than the doors and windows, the majority of finishes and materials are modern replacements. The floors on the first floor are covered with vinyl tile and the second floor is carpeted. The bottom half of the walls are covered with painted beadboard with plaster above. In the second-floor meeting room, the walls are covered with wallpaper.

The interior of the ca. 1950 rear packing wing is unfinished and utilitarian and is divided into two primary spaces due to the phased construction of this block. The two sections are separated by

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what was originally an exterior wall with a shorter one-story office mass attached on what would have originally been the exterior side wall of the rear wing's earliest section. A large doorway next to this office block provides interior connection between the two sections of the rear wing. In general, the floors, walls, and ceilings throughout the entire rear wing are exposed structural materials. The floors are concrete slab, and the walls are concrete block. The ceilings are exposed metal truss rafters with corrugated metal decking above. At the northeast corner of the southern section, a pair of doors leads into the main warehouse. On the eastern wall of the north section, a door leads into the first floor of the main warehouse. The small office building that is located along the west elevation of the north section is connected to this section by a door along the west wall.

Controlled Atmosphere Building (Contributing)

The controlled atmosphere building, constructed in 1971, stands southwest of the warehouse. The building was constructed to maintain modern standards for temperature and air quality in the warehouse, as well as provide additional cold-storage space. It is a tall, one-story building with a primarily rectangular form, although a small two-bay projection is set centrally on the south side. Set at-grade on a slab foundation, the building's walls are poured concrete with narrow buttresses or "ribbing" and its flat roof has aluminum coping. Affixed to the upper portion of the south side is a cluster of piping that leads from compressors and pumps in the projecting bay into the interior. Two metal air-lock doors are spaced along the building's south façade to the east of the projecting central bay and three are spaced to the west. Each of these doors leads into a series of large, interior storage rooms, all of which are unfinished and full-height. The projecting central bay is the same height as the rest of the building but divided into two stories within. Access is provided by doors on the east side and an exterior metal stairwell. Four windows with one-over-one-over-one, triple-hung sash are along the south wall of the projecting bay. The interior houses modern refrigeration machinery, which regulates the temperature, oxygen, and carbon dioxide levels inside.

Integrity

The Virginia Apple Storage facility retains a high degree of historical integrity in all aspects, which allows the property as a whole to convey its significance. The warehouse continues to occupy its original ***location*** on the west side of Valley Avenue. Further, the plant's original loading docks, parking lots, and a variety of other features on the site remain in place today. These features contribute to the retention of the property's integrity of ***setting***. When the warehouse was constructed in 1929, it was located outside of the corporate limits of Winchester, southeast of the historic core of the city. Based on a 1938 Sanborn map, the facility was neighbored by six commercial buildings, a single-family dwelling, three apple-packing buildings, and two industrial facilities, all of which were constructed during the early twentieth century. Today, modern residential and commercial infill is located around the Virginia Apple Storage facility along Valley Avenue and West Jubal Early Drive. Of those buildings present on the 1938 map, the historic dwelling, two commercial buildings, and one industrial facility remain in place. The commercial buildings retain their historic use, while the industrial facility has changed ownership. The industrial plant, which was once owned by the O'Sullivan Rubber Company, is now operated by O'Sullivan Films. While a spur of the Winchester & Western Railroad once ran alongside the

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Virginia Apple Storage Warehouse's rear packing wing to the north, that element no longer remains in place. The main railroad line, however, still runs past the property along the northeastern edge of the lot. To the northwest, a modern subdivision has taken the place of what was historically an apple orchard. The historic Elm's Inn and Cottages, which stood to the south of the warehouse along Valley Avenue, was demolished; a motel stands in its place today. As such, the larger, overall setting of the property has changed over time and has become increasingly suburbanized in an area of mixed residential, commercial, and industrial use.

The property retains its integrity of *design*, as the main warehouse building's original form, massing, height, and setback has largely remained the same over time. While the ca. 1950 rear packing wing replaced an earlier packing area and has expanded over time, these changes occurred during the period of significance and reflect the evolution of the packing and shipping aspect of the business. The same is true of the east façade's mid-twentieth-century office addition that introduced an Art Moderne influence, reflecting a shift towards commercial optics during that period. The warehouse also retains many of its original and historic *materials* on both the exterior and interior. The original brick cladding, industrial windows, sealed metal doors, and concrete structural system remain intact. Additionally, few changes were made to interior of the warehouse over time. While the rear packing wing reflects more significant changes in terms of materials, its evolution is reflective of the shift from rail transportation to trucking during the mid-twentieth century, which relates to the facility's overall historical significance. In terms of *workmanship*, the warehouse reflects its utilitarian use and design, in that few stylistic details or examples of detailed workmanship are present. The building's American bond brickwork, parapeted outer walls topped with terra cotta tiles, and Art Moderne stylistic details on the front office have not been significantly altered. Similarly, the 1971 controlled atmosphere building is virtually unaltered on the exterior and interior. The purpose-built building's design, materials, and workmanship are indicative of its utilitarian purpose. The exterior concrete ribbing serves a functional purpose but also provides visual interest to what is otherwise a completely unadorned building.

These aspects of integrity help convey the property's *feeling* as an early- to mid-twentieth century industrial facility. The retention of the Virginia Apple Storage facility's historic character is notable and elicits the historic period in which it was constructed. Further, the property's continual use as a cold storage facility conveys its integrity of *association* with the industrial history of Winchester and the growth of the Shenandoah Valley apple industry during the twentieth century.

¹ While the 1971 controlled atmosphere building is located on the same 1955 Valley Avenue parcel as the 1929 warehouse, the 1971 building is addressed as 1975 Valley Avenue.

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

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Areas of Significance

(Enter categories from instructions.)

INDUSTRY
COMMERCE
ARCHITECTURE
ENGINEERING

Period of Significance

1929-1971

Significant Dates

1929
1960

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

Unknown

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Virginia Apple Storage Warehouse was constructed by Virginia Apple Storage, Inc., a cold storage warehousing business. The significant date of 1929 corresponds to the year of the company's founding. Virginia Apple Storage was one of four major cold storage businesses in Winchester during the early twentieth century. The facility, located at 1955 Valley Avenue on the south side of Winchester, Virginia, was constructed in 1929-1930 using state-of-the-art refrigeration technology developed at the turn of the century. Both the design of the building and the installation of a modern artificial refrigeration system were similar to that of the Winchester Cold Storage Company facility, the first and largest cold storage operation in the city. The architectural plans of engineer Van Rensselaer H. Greene, who specialized in the construction of cold storage buildings, inspired the design of buildings like the Virginia Apple Storage Warehouse. His technological designs were incorporated into its construction. In Winchester, the storage, packing, and distribution of apples in particular was an essential part of the city's cold storage industry through the twentieth century. Over time, Virginia Apple Storage, Inc. diversified and began storing other kinds of frozen goods in order to compete with overseas apple storage companies. The company also produced and sold ice from the facility as a by-product of the cooling process. Today, the warehouse is no longer in operation as a cold-storage facility although portions of the building are still utilized for storage and other commercial purposes. For these reasons, the Virginia Apple Storage Warehouse is locally significant under Criterion A, in the areas of Commerce and Industry, for its association with the apple industry in Winchester and the evolution of cold storage techniques and facilities. The property is also locally significant under Criterion C, in the areas of Architecture and Engineering, as a good example of an early-twentieth century cold storage warehouse in the region, few of which remain in use today. Further, the property exemplifies the incorporation of innovations in refrigeration technology developed during the early to mid-twentieth century. The building embodies the distinguishing characteristics of cold storage warehouses during this period, which utilized modern mechanical equipment and structural technology. The building was designed and engineered with the vital components needed to provide mass cold storage, including an efficient structural design, integrated fireproofing and insulation, advanced cooling equipment, and close proximity to transportation corridors. The building further characterizes the engineering developments made by the firm Van Rensselaer H. Greene. Although not attributed directly to Greene, the Virginia Apple Storage Warehouse building replicated a system designed by Greene for a nearby facility several years earlier. Meanwhile, the ca. 1950 rear packing wing was remodeled in 1960 to meet changing transportation and shipping methods. The 1971 controlled atmosphere building reflected another upgrade to incorporate technological improvements as well as additional space in the company's operations. Due to Virginia Apple Storage Warehouse's continued use and evolution throughout the twentieth century to maintain modern standards of cold storage and distribution, the property's period of significance extends from the building's construction in 1929 until 1971 when the modern controlled atmosphere building was constructed.

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Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Historical Background

During the 1730s, settlers moved into the Shenandoah Valley of Virginia and in 1744 Col. James Wood received a large land grant on which Fredericktown was founded. The name of the town would be changed to Winchester in 1752 when the Virginia General Assembly chartered the town.² Winchester was the first town to be chartered west of central (piedmont) Virginia's fall line.³

From its early stages of settlement and development, the town of Winchester became a major marketplace for farmers in Frederick County. While the surrounding area had a strong agricultural basis since the town's beginning, apple farming did not become central to the history of Winchester until after the Civil War. However, apple farming did have a strong basis in the colony of Virginia as early as the mid-seventeenth century. In 1639, the Virginia General Assembly enacted a law that required those who had obtained a patent for at least one hundred acres of land to establish a garden and an orchard. By the 1650s, numerous apple orchards had been planted for the purpose of producing cider.

As European colonists moved westward past central Virginia's fall line during the mid-eighteenth century, orchards sprang up throughout the region. During the 1740s, patents issued by Lord Fairfax required leaseholders to cultivate their land and to plant fruit trees. Following Lord Fairfax's direction, farmer John Massey planted one hundred apple trees in Frederick County in 1749. The growth of apples for cider was eventually followed by the growth of apples for eating, as those apples that were fit for eating were selected and bred at various cider orchards.⁴ During the nineteenth century, Dr. George Stephens developed the Newtown Pippins variety in the Shenandoah Valley.⁵

Winchester soon became a bustling town. Due to its road network, the town served as the region's primary market center as early as the 1750s.⁶ By the turn of the nineteenth century, it ranked as one of the largest towns in western Virginia.⁷ In 1826, Winchester became linked to Baltimore through Harper's Ferry following the creation of the Winchester & Potomac Railroad.⁸ This improved the Shenandoah Valley's farming economy, as the area became better connected to a major port town.⁹ As a result, the town was a major producer of grain for the state.

The economic growth of Winchester was halted by the outbreak of the Civil War in 1861. During the war, Winchester was the site of numerous battles. The town also changed hands between Union and Confederate forces over seventy times. After four years of stagnation and destruction, the town of Winchester was forced to rebuild amidst the collapse of Virginia's slavery-based agricultural economy. While farmers continued producing grain, competition with the Great Plains region ultimately led Frederick County to diversify its economy into fruit production. Many farmers in and around Winchester began planting apple orchards during the postwar era.¹⁰ Over time, the area became one of the leading producers of apples in the state.

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As the market for apples grew, businesses related to the production of apples sprang up in Winchester during the late nineteenth and early twentieth century, including the Winchester Cold Storage Company in 1917.¹¹ Winchester's road network and its access to a major railroad facilitated the success of the local apple industry. As the company expanded during the 1920s, the Winchester Cold Storage Company soon became the largest apple warehouse in the world. Other companies such as the National Fruit Product Company, which opened in Winchester in 1918, produced fruit byproducts.¹² In 1929, Virginia Apple Storage, Inc. was established and began construction of their cold storage facility on Valley Avenue that year.

During the 1920s, Frederick County produced over one million bushels of apples each year, making it the largest producer of apples in Virginia.¹³ The success of apple-related businesses in Winchester during the early twentieth century carried over into the social atmosphere of the town. In celebration of the apple industry's success, the first Winchester Apple Blossom Festival was held in 1924, a tradition which continues to the present day. Following the rise of the apple industry in Winchester, the city earned the nickname "Apple Capital of the World."

Criterion A: Commerce and Industry – Virginia Apple Storage, Inc. and the Apple Industry in Winchester

Established in 1929, Virginia Apple Storage, Inc. was one of four major cold storage businesses in Winchester during the early twentieth century, along with the Winchester Cold Storage Company, Old Mill Storage, and the C.L. Robinson Ice and Cold Storage Corporation (NRHP 2022; 138-5140).¹⁴ The rise of cold storage facilities in the city occurred in connection with the industrialization of the city as a whole.¹⁵ All four businesses were centered around the growing apple industry in Frederick County during this time. Farmers from across the country utilized these facilities for the storage of their crops, which in turn led Winchester to become the center of fruit processing on the U.S. east coast.¹⁶

The first apple cold storage plant to open in Winchester was the C.L. Robinson Ice and Cold Storage Corporation in 1905 on North Market Street.¹⁷ World War I led to massive growth of the cold storage industry and the need for more such facilities. While the war brought on a period of thrift and stagnation to various industries, the demand for fresh produce increased.¹⁸ Due to the growing utilization of effective cold storage facilities, apple-related businesses increased in Winchester during and after the war.¹⁹

The C.L. Robinson Ice and Cold Storage Corporation responded with the construction of a new fireproof cold storage building in 1916, increasing the plant's storage capacity to 180,000 barrels.²⁰ The following year, they were joined by a new company, the Winchester Cold Storage Company, which constructed a state-of-the-art facility on North Loudoun Street. With the construction of these cold storage plants, Winchester became a nexus to new markets all over the country as these facilities received shipments from as far away as the U.S. west coast.²¹ By the time that the Winchester Cold Storage warehouse opened in 1917, local farmers also were selling to overseas markets.

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When the Winchester Cold Storage Company facility was built in 1917, the *Winchester Star* predicted that the Winchester Cold Storage Company would “be one of the most up-to-date industries in the valley and will be equipped with every modern device to facilitate the handling and care of fruit.”²² One of the paramount features of the building was a cooling system designed by engineer Van Rensselaer H. Greene of New York City, who specialized in the design of refrigerating plants.²³ The *Winchester Star* boasted that the Winchester Cold Storage Company’s plant had a refrigeration system that “is entirely new in this section of the country” and was an example of the community’s success in “managing their various business enterprises.”²⁴

Although early refrigeration systems were immediately successful at preventing rot in fresh produce, improvements to the plant and refrigeration system quickly followed. Managers of the plant consulted with the U.S. Department of Agriculture with hopes of enlarging the company’s ventilation system. The *Winchester Star* reported that the owners kept “in touch with modern methods, so that the new storage will maintain its present position of having one of the best and most improved cold storage buildings and equipments [sic] in the United States.”²⁵ In April of 1919, the Winchester Cold Storage Company reported that, with its latest improvements, the temperature in the facility’s cold storage rooms had not deviated by more than one degree since January.²⁶

In connection with the success of the apple growing and apple storage business, the local community began to celebrate apple farming as a major part of life in Winchester. Other apple-related businesses in Winchester, such as the National Fruit Products Company (established in 1915), thrived.²⁷ Due to the large supply of apples in Winchester, representatives of the Heinz Preserving Company visited the city in 1917, looking at a possible site to build a new vinegar plant there.²⁸ The plant was later constructed on the opposite side of Valley Avenue from the Virginia Apple Storage facility.²⁹

In 1929, Virginia Apple Storage, Inc., was founded to capitalize upon the growth of the apple industry and expand the cold storage capabilities in Winchester.³⁰ In the design of the new facility, the company and its founder, Llewellyn “Lou” Jackson, looked to the nearby Winchester Cold Storage complex and the success it had enjoyed over the previous decade. During that period, the refrigeration system designed by Van Rensselaer H. Greene had become the industry standard for cold storage facilities. Consequently, Virginia Apple Storage was quick to employ the technology in its plant.

The firm’s new facility was constructed on a 28-acre tract of land at the southern end of Winchester.³¹ Its location was driven by proximity to regional transportation networks, including Valley Avenue (U.S. 11) and the recently-built Winchester & Western Railroad. Valley Avenue, which was known as Valley Pike at the time of the facility’s construction, was the primary north-south highway in the region and connected Winchester to other communities and farms throughout the lower Shenandoah Valley. The Winchester & Western Railroad was a spur line of the Baltimore & Ohio Railroad and connected Winchester to Wardensville, West Virginia. Construction of the railroad spur began in 1919 and was completed in 1921. The line provided passenger service between the two cities until 1928.³²

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The Virginia Apple Storage Warehouse was one of the first of its type and size to be constructed at the city's outskirts and to tap into both the road and rail networks. Proximity to the highway allowed for trucks to easily come and go from the complex without having to navigate the more congested streets in downtown Winchester, while railroad access linked it to a larger transportation network. As such, a small spur of the Winchester & Western Railroad was constructed alongside the Virginia Apple Storage Warehouse to allow the delivery and shipment of goods directly to and from the complex.³³

At the time of its completion in 1930, the Virginia Apple Storage Warehouse was a 111,000-square-foot building capable of storing 325,000 bushels of apples, making it the second largest apple warehouse in Winchester at the time.³⁴ The warehouse was refrigerated using an ammonia compression system, similar to that used and heralded by the Winchester Cold Storage Company. Through this system, ammonia compressors released ammonia gas into the storage rooms through pipes that ran along the ceilings from the mechanical wing. As the ammonia gas cooled, it pulled heat from the surrounding space. Ice also built up on the pipes, providing additional cooling.

When shipments arrived by rail to the warehouse, the apples were placed in barrels, which were then moved to the upper floors of the storage warehouse by an integral barrel elevator. Once inside of the warehouse, the apples were stored by type.³⁵ Space inside the warehouse was rented to various growers. The type of apples stored at the warehouse was not limited to local varieties. Rather, farmers from across the United States paid to store their apples in Winchester's cold storage facilities. Many kinds of apples were stored at the Virginia Apple Warehouse, including Red Delicious, Golden Delicious, Rome, Gala, Winesap, York, and Stayman.³⁶

Ice produced in the warehouse's ice-making facility was used to keep apples cold while in route to their destination. The large blocks of ice were also used to cool the floors of the storage rooms. However, the company produced more ice than it could practically use. The company began selling the surplus ice commercially soon after it had begun storage operations. Artificial refrigeration systems were not readily available for domestic use at the time. Further, purchasing ice that had been harvested from frozen bodies of water proved ineffective in Virginia where winter temperatures often were mild.³⁷ As such, the availability of commercially produced ice for sale from cold storage facilities allowed individuals in the area to have access to readily-available ice. Early on, Virginia Apple Storage had a fleet of twelve ice-delivery trucks that delivered to customers within the local community. The fleet hauled an average of fifteen tons of ice each day.³⁸ By the 1960s, however, the demand for ice declined as refrigerators intended for domestic use increased in popularity. Nonetheless, ice was available for purchase at the warehouse into the 1970s.

In 1940, Virginia Apple Storage made a notable improvement to the warehouse's interior, which allowed the company to diversify in terms of the types of materials it stored. According to the *Blue Ridge Herald*, a "new fireproof, vermin proof and burglar proof cold storage vault" was added to the warehouse. The controlled temperature inside of the vault was best for the storage of animal fur garments, according to the company. Customers could store their furs in the vault in order to

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protect their “substantial investments.”³⁹ Other food products also were occasionally stored inside of the Virginia Apple Storage Warehouse. According to a 1954 advertisement placed in the *Winchester Evening Star*, local deer hunters could store their game inside the warehouse.⁴⁰ However, apples continued to serve at the company’s main source of business into the late twentieth century.

While the main core of the warehouse contained cold storage space, packing and shipping were carried out in a rear wing built along the railroad spur.⁴¹ The rear wing, devoted to packing and shipping, was leased to local farmers who managed the movement of apples out of the facility.⁴² In contrast to larger enterprises such as Winchester Cold Storage, the relatively smaller size of the Virginia Apple Storage enabled the company to work more readily with smaller, associated industries such as packing companies.⁴³ These arrangements and ongoing relationships with the various individuals and companies that leased the building’s rear packing wing through the mid-twentieth century provided an important link between Virginia Apple Storage and the local community.⁴⁴

The earliest known lessee of the Virginia Apple Storage ca. 1950 packing wing was local apple farmer Fred Glaize, Jr. The rear wing was known as the Glaize Apple Packing House, according to a 1947 photograph of the facility.⁴⁵ Once apples were packed, they were moved onto rail cars for transport. By the early 1950s, Edward W. Barr began leasing the packing wing. Advertisements for the E.W. Barr Packing House appeared in local newspapers as late as 1955. He also operated a packing house at the Winchester Cold Storage facility.⁴⁶ When Barr retired from the apple packing business, Virginia Apple Storage sought to lease the packing wing to another company. In July of 1960, American National Growers, Inc., negotiated a lease with Virginia Apple Storage for use of their rear packing wing. That same year, the original wing was remodeled.⁴⁷ Eventually, the packing wing was leased to the Winchester Apple Growers’ Association, who continued to oversee packing and shipping operations.⁴⁸

Around the same time that the company began leasing its packing wing to local farmers, company leaders also became involved in educational efforts. In 1951, the Business Industry Education Day program was started, which allowed students to learn more about industrial jobs and the operation of businesses within their community. The Virginia Apple Storage facility was among those establishments toured by school children as a part of this program.⁴⁹ Other examples of community engagement carried out by Virginia Apple Storage was its participation in local parades and fairs. The company often entered a parade float in the Winchester Apple Blossom Festival.⁵⁰

Improvements made to refrigeration systems during the 1960s allowed for better control of temperature and atmospheric conditions within cold storage facilities. The ammonia compression system of the early twentieth century remained in use but was improved upon during this time. While the system within the original warehouse was retrofitted, in 1971 Virginia Apple Storage, Inc. increased their capacity through construction of a detached controlled atmosphere building that incorporated modern cooling equipment coupled with improved construction methods and materials that include reinforced concrete walls with exterior ribbing. The mechanical room inside

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of this building contained ammonia tanks and additional mechanical equipment that better regulated the temperature, oxygen, and carbon dioxide inside of the warehouse.

Unfortunately, almost as soon as this building was completed, the regional apple industry in Virginia slowed in the 1970s as overseas markets began to outcompete smaller local businesses like the Virginia Apple Storage, Inc. Over time, the company was forced to diversify as regional growers began to lose out to larger companies in Washington State and in China.⁵¹ The loss of local apple orchards to development as well as the consolidation of major food retailers only worsened prospects for the company.⁵² During the late twentieth century, the company began to store other goods such as plants, meat, and chemicals.⁵³ Additionally, advertisements spread the word about the company's aging facility for beef and game, lockers for meat storage, and a quick-freeze facility.⁵⁴ The plant continues to store apples today, although apple storage claims a much smaller portion of their business now than in the earlier decades of its operation.⁵⁵

The Virginia Apple Storage Warehouse began to serve new needs as the regional apple industry declined during the late twentieth century. In 1982, the company donated space inside of the warehouse to the Blue Ridge Area Food Bank for a period of three months. The organization reached out to local food stores and food processing companies to collect surplus food for the local community.⁵⁶ In 2004, a group of artists in Winchester also reached out to Virginia Apple Storage to store their artwork there, which consisted of a collection of fiberglass apples that are displayed around Winchester today.⁵⁷

As Winchester's apple industry continue to decline through the late twentieth century, the rural landscape outside of the city's core also began to change. More and more commercial and residential development began to appear within the vicinity of the Virginia Apple Storage facility over time. The change was largely prompted by the construction of a multimillion-dollar residential development, known as Meadow Branch. Plans for the one-thousand-home neighborhood introduced to the city in 1989 included a twenty-year-long timeline. The neighborhood was constructed roughly one mile north of the Virginia Apple Storage property.⁵⁸ With new residential growth came additional commercial growth and an overall decline in industry, including the capabilities of the Virginia Apple Storage complex.

While originally located on 29.757 acres, the Virginia Apple Storage Warehouse property was later reduced to 13.993 acres. In 2004, the *Winchester Star* reported that plans were in place for the development of the Park Place subdivision on what was once part of Virginia Apple Storage property.⁵⁹ The neighborhood is located to the north and west of the warehouse property today.

Today, only two of the four original cold storage companies in Winchester remain in operation, the Winchester Cold Storage Company and Virginia Apple Storage, Inc. In 1972, the Old Mill Storage company closed after filing for bankruptcy.⁶⁰ Four years later, the C.L. Robinson Ice and Cold Storage Company purchased Zeropack, a company that had been leasing the historic plant since 1932. Zeropack later went out of business in 1998.⁶¹ In 2011, the Winchester Cold Storage Company rebranded itself as WCS Logistics following major changes to how the company's storage space is used and the company continues in operation.⁶² Today, Virginia Apple Storage,

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Inc. no longer stores apples in bulk, but continues to operate the 1929 warehouse as a general-purpose cold storage facility.

As such, Virginia Apple Storage, Inc. is among just a few historic businesses of its kind in Winchester today. While the cold storage business has experienced many changes in modern times, it contributed to the industrialization and growth of Winchester throughout the early-to-mid-twentieth century. Through the use of artificial refrigeration systems developed at the turn of the twentieth century, cold storage facilities such as Virginia Apple Storage revolutionized the production of apples and apply byproducts, allowing Winchester to become the center of the apple industry in Virginia. Due to its role as a major cold storage facility and its association with the apple industry in Winchester during the early-to-mid-twentieth century, the Virginia Apple Storage Warehouse is locally significant under Criterion A in the areas of Commerce and Industry.

Criterion C: Architecture and Engineering – Virginia Apple Storage Warehouse as a Representation of an Early-Twentieth Century Cold Storage Building

Implementation of Modern Refrigeration Technology

The creation of climate-controlled, bulk cold storage was made possible by improvements in refrigeration around the turn of the twentieth century. These improvements, coupled with expansion of transportation systems, allowed perishable goods to be transported farther and stored for longer periods of time.⁶³ Until the late nineteenth century, produce and other foods were transported by rail in freight carts and stored in buildings with no system of artificial cooling. As a result, a significant portion of each crop was lost to rot before getting to market.⁶⁴

Prior to the development of cold storage facilities, produce storage houses were cooled through the use of passive systems. Storage houses utilized ice and were constructed with well-insulated walls and good ventilation that together slowed decay, but only for a limited period of time.⁶⁵ These storage facilities were classified as “common storage.” Later storage houses that were cooled using artificial refrigeration became known as “cold storage.” Common storage buildings were less effective in southern states like Virginia, where summertime humidity and heat limited growers’ ability to store produce for long periods of time.⁶⁶ Further, access to natural sources of ice was limited in warmer climates.

An example of a common storage building from the early-twentieth century was a storage house owned by Charles Green in Maine.⁶⁷ Built in 1903, the building had a large cellar. The granite cellar walls were lined with bricks, and the exterior walls were covered with paper and then with clapboard siding. Two layers of studding were used to create an air pocket in the walls. Additionally, two floors separated the upper and lower rooms. Each room had double doors and windows with interior shutters. The purpose of the additional layers of cladding, studding, and flooring was to produce a well-insulated space. Storage houses similar to this were commonplace prior to the advent of modern refrigeration.

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During the late-nineteenth century, early refrigeration machines that relied on liquid gas were developed.⁶⁸ In 1870, German engineer Carl Paul Gottfried Linde published groundbreaking work on refrigeration technology. He developed a vapor-compression machine that used ether as a refrigerant. By 1877, he had switched to an ammonia-based system due to ammonia's durability.⁶⁹ Ammonia absorption and compression systems soon became the dominant form of refrigeration.⁷⁰ In 1881, an engineer in Chicago secured rights to manufacture Linde's system in the United States. Linde later formed the Linde Air Products Company in New York in 1907.⁷¹

What resulted from this period of innovation was the creation of the country's first "cold chain," a process in which various industries and actions became linked in a system to transport perishable food from production to consumption.⁷² New uses for refrigeration were found in many different industries at this time as the technology became more accessible and more diverse in its application. The ammonia compression technology coincidentally produced ice as a by-product, which could then be used to keep perishable goods cold during transport before arriving at cold storage facilities. As a result, ice manufacturing became intertwined with the cold storage business.⁷³

The rise of the cold storage warehousing business took hold as mechanisms for refrigeration improved. Initially, cold storage facilities were usually located in larger cities or in areas closer to major markets.⁷⁴ The first cold storage building cooled by mechanical refrigeration opened in Boston in 1881.⁷⁵ Growers could send their goods to a refrigerating house in the city, where spaces were then rented out by the facility's owner. The operators of cold storage facilities ensured a uniform temperature that would prevent each buyer's crop from rotting.⁷⁶ Ammonia-based systems became the dominant form of refrigeration used in such facilities. These systems required the use of pipe coils placed along the walls and ceilings. As the liquid ammonia evaporated, it took heat away from the surrounding space.⁷⁷

By the early twentieth century, the market for cold storage facilities expanded from major commercial markets to smaller cities and towns as well. In 1904, there were 620 cold storage warehouses in the United States. By 1925, the number rose to over 1,700.⁷⁸ These facilities not only provided bulk cold storage for local agriculture, but most of them also produced and sold ice as a by-product, thus making home cold storage more accessible during a period when electrified household refrigerators were not widely available.⁷⁹

A number of companies opened in Winchester during this period, including the C.L. Robinson Ice and Cold Storage Corporation, followed by the Winchester Cold Storage Company.⁸⁰ While the C.L. Robinson Corporation focused on the production of commercial ice, the Winchester Cold Storage Company's primary business was the mass storage of apples, which had become one of the primary crops in the region.

In terms of the impact that modern refrigeration had on the apple industry in particular, the use of cold-storage facilities for apple storage led to greater success in the transport and sale of a fresh product. A major outcome of cold storage was the extension of apple growing from a seasonal to a year-round endeavor.⁸¹ In 1903, the U.S. Department of Agriculture reported that cold storage

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could be credited for creating “more steady markets and uniform prices” and “a more stable fruit business.”⁸² Between 1898 and 1902 alone, the number of barrels of fruit stored in cold storage facilities rose from 800,000 to 2,978,000.⁸³

When the Winchester Cold Storage Company opened in 1917, it was the largest facility of its kind. To provide the most state-of-the-art cooling technology, the company hired noted refrigeration engineer Van Rensselaer Greene to design its system. The system that the firm designed relied upon ammonia compressors with an extensive network of pipes placed throughout the building. The ammonia pipes were capable of cooling massive interior spaces. An advertisement listed in the *Shenandoah Herald* in 1923 noted that the company’s building had “the most improved type of refrigeration” and could store 300,000 barrels of apples.⁸⁴

The design was so effective and received such praise from newspapers that, in 1923, the Terminal Refrigerating and Warehouse Company in Washington, D.C. employed Van Rensselaer Greene to install a similar system in their new facility.⁸⁵ While the Van Rensselaer Greene firm published various works, was a frequent contributor to trade and scientific journals on refrigeration, and was nationally influential in the field of refrigeration engineering, the D.C. and Winchester warehouses were the only two projects completed by the firm.⁸⁶

While not directly attributed to the Van Rensselaer Greene firm, the Virginia Apple Storage Warehouse replicated Greene’s refrigeration system employed at the nearby Winchester Cold Storage facility.

Design of the Virginia Apple Storage Warehouse

Although the 1929 Virginia Apple Storage Warehouse appears as a typical, early-twentieth century industrial building, the design and construction incorporate a variety of features and components that made it one of the most modern cold storage facilities for its time. The basic characteristics of cold storage warehouses have remained the same over time. According to a 1956 pamphlet on the design of cold storage warehouses, the “walls, floors, and ceilings of cold-storage warehouses or of small private cold rooms” were to be “of sturdy, tight construction” in order to maintain a constant temperature within the storage space.⁸⁷ These buildings consisted of “a structure within an envelope of insulating and moisture-proofing material.” The buildings were frequently clad in brick to further insulate the interior. This allowed the interiors to retain a constant temperature, while also limiting the likelihood of fire. The interiors were typically “divided into a number of rooms that are maintained at a pre-determined temperature by use of adequate refrigeration equipment.”⁸⁸ As refrigeration technology and transportation have changed over time, additional aspects of cold storage buildings have changed.

Twentieth-century cold storage buildings can be typified by their overall arrangement: cold storage warehouses of the early twentieth century were arranged vertically while those built during the mid-to-late-twentieth century were arranged horizontally. Generally, early cold storage buildings had multiple stories and were designed to freeze and store a certain type of product. By the 1950s,

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cold storage warehouses had largely been reduced to a single story and were intended to store a variety of products.⁸⁹

The Virginia Apple Storage Warehouse reflects these aspects of early-twentieth century cold storage buildings through its engineering, architectural design, and construction methods and materials. In terms of form, the building is five stories tall with multiple freight and barrel elevators connecting each floor. The barrel elevator is oval-shaped and uses a pulley-system to pull barrels up and down. Most multistory cold storage warehouses consisted of a basement and three to twelve floors, depending on the size and specific needs of a given business. The main reasons behind the multistory design of such buildings included the high cost of land within densely-populated towns, typical construction techniques of the time period, low cost of labor, and limited refrigeration transportation facilities.⁹⁰ At the time of its construction in 1929, the Virginia Apple Storage building was constructed on a 28-acre lot. In order to use space more effectively, the construction of a multistory building was likely the most practical and affordable option.

Further, the construction of most multistory warehouses preceded the development of power lift trucks.⁹¹ According to the 1956 pamphlet, the average height of storage rooms within early warehouses was between ten to twelve feet, with piling heights of seven-and-a-half to ten feet. This allowed boxes to be stacked by hand.⁹² In the Virginia Apple Storage building, the height of the ceilings in storage rooms does not exceed ten feet. As forklifts came into use during the 1920s, pallets were often sized based on the spacing of the columns and doorways within a specific building. As a result, the method of unloading boxes into these early warehouses evolved to integrate the use of forklifts.⁹³

As for structure, the Virginia Apple Storage Warehouse has a reinforced concrete structural system clad with brick. The roof and floors were also made of concrete. Between the brick curtain walls and the concrete structural system underneath, a layer of 12-inch tile was added between the brick facing and concrete structure to better insulate the storage rooms.⁹⁴ Additional interior insulation was added by the adhesion of cork panels to the interior walls.

Two additional features of the building that contributed to the cooling of the storage rooms were the location of machinery and the design of the exterior doors. The ammonia tanks and ice-making machinery used to cool the building were housed in a separate wing of the building to limit interference with the temperature of the storage rooms. Further, by housing this machinery in a separate wing, more storage space was available inside of the warehouse. Ice available for transport into town could also be loaded onto trucks from the loading dock along the front of the wing. To further insulate the interior, the exterior doors installed in the building were especially thick and were accompanied by large latches to keep air from moving in and out.

In terms of the design of the building's exterior, the facility's proximity to the railroad was carefully considered. A railroad spur was constructed alongside the warehouse to make the transportation of goods easier. The facility's rear packing wing was constructed in an arched shape that mirrored the shape of the railroad spur. The packing wing's proximity to the spur so meant that apples ready for transport could be moved out of the wing and onto train cars with greater

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efficiency. Barrels being transported into the main warehouse for storage were unloaded from train cars and moved by truck to the loading docks, which extended along each side of the building. The area around the warehouse was paved to provide large staging areas.

As focus shifted from rail transport to trucking during the mid-to-late-twentieth century, the way in which the outside space was used changed drastically. In 1960, the ca. 1950 rear packing wing was remodeled and enlarged.⁹⁵ The northernmost section of the wing was removed, as goods were no longer being transported by rail. Rather, additional loading doors were added along the renovated packing wing. The main loading area shifted from the north elevation of the packing wing to the south. This provided tractor trailers with better access from nearby Valley Road. Boxes were loaded directly into the trucks from the loading area.

Little emphasis was placed on the embellishment of both the exterior and interior of the warehouse. As the building had a solely utilitarian function, more focus was placed on its layout. However, the use of Art Moderne stylistic details on the front office block reflects a shift in the company's priorities over time. The office was constructed sometime after the building's initial construction, which suggests that the company's leaders were initially devoted to getting their business off of the ground.⁹⁶ Their concern likely shifted to business optics as competition increased and as, perhaps, meetings with prospective clients increased. The use of additional embellishment on the office likely served to reinforce its function as an outward-facing, public space.

By the 1950s, the multistory cold storage building had become obsolete due to changes in refrigeration and building technologies, transportation, and the frozen food industry. By the mid-twentieth century, handling equipment had improved, and the cost of product handling increased. As a result, one-story cold storage warehouses emerged.⁹⁷ The benefits of a multistory building were quickly outweighed by rising costs and the comparatively slow movement of products. Also during this time, the demand for frozen foods increased. New warehouses were designed to store different types of products rather than just one specific type, such as apples. The location of such warehouses shifted outside of cities to take advantage of larger transportation facilities and cheaper land.⁹⁸

Although on a smaller scale, the rear controlled climate building constructed the Virginia Apple Storage property in 1971 reflects this pattern. The building is just one story in height, although it has soaring ceilings that allow for mechanical stacking of a large quantity of goods. The annex increased the overall storage capacity at the facility, while incorporating modern technology and limiting construction costs.

Conclusion

The Virginia Apple Storage Warehouse played an important role in the development of Winchester as an industrial town as well as the development of modern refrigeration methods at the turn of the twentieth century. The building was similar to other cold storage facilities in Winchester that were constructed during the early-twentieth century. During its construction, builders incorporated state-of-the-art refrigeration technology, which subsequently dictated aspects of the building's

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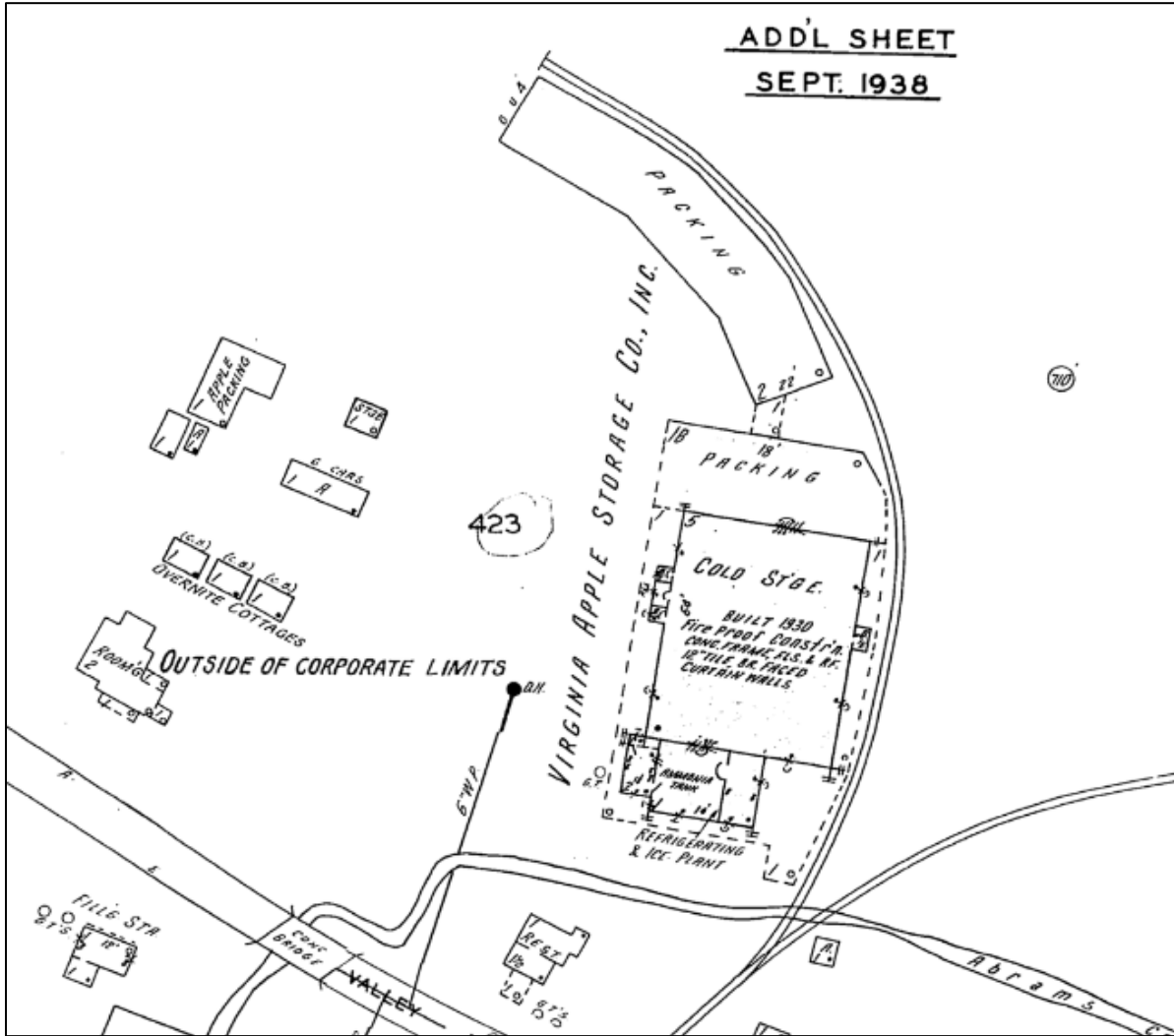
design. These aspects reflect the impact that the Van Rensselaer H. Greene architectural firm had on the design and engineering of refrigerated industrial buildings.

Throughout the twentieth century, the Virginia Apple Storage Warehouse evolved to meet changing needs in cold storage and distribution, which is reflected through alterations made to the building and construction of the controlled atmosphere building in 1971. By the late-twentieth century, Virginia Apple Storage had shifted its focus away from apples and began storing a greater variety of products in order to keep up with changing consumer needs and demands. Today, the building is still used as a storage facility for a variety of goods and materials, while retaining key features from its earlier use as an apple storage warehouse. As such, the property is considered locally significant in the areas of Architecture and Engineering as it embodies advances in cold storage technology across the early to mid-twentieth century.

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Historic Maps and Images



1938 Sanborn Map, depicting Virginia Apple Storage, Inc. on Valley Avenue.

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Shenandoah Valley Apple Cider and Vinegar Co. along the Railroad at 601 Fairmont Avenue, Winchester, c.1926. Source: Library of Virginia.

Virginia Apple Storage Warehouse
Name of Property

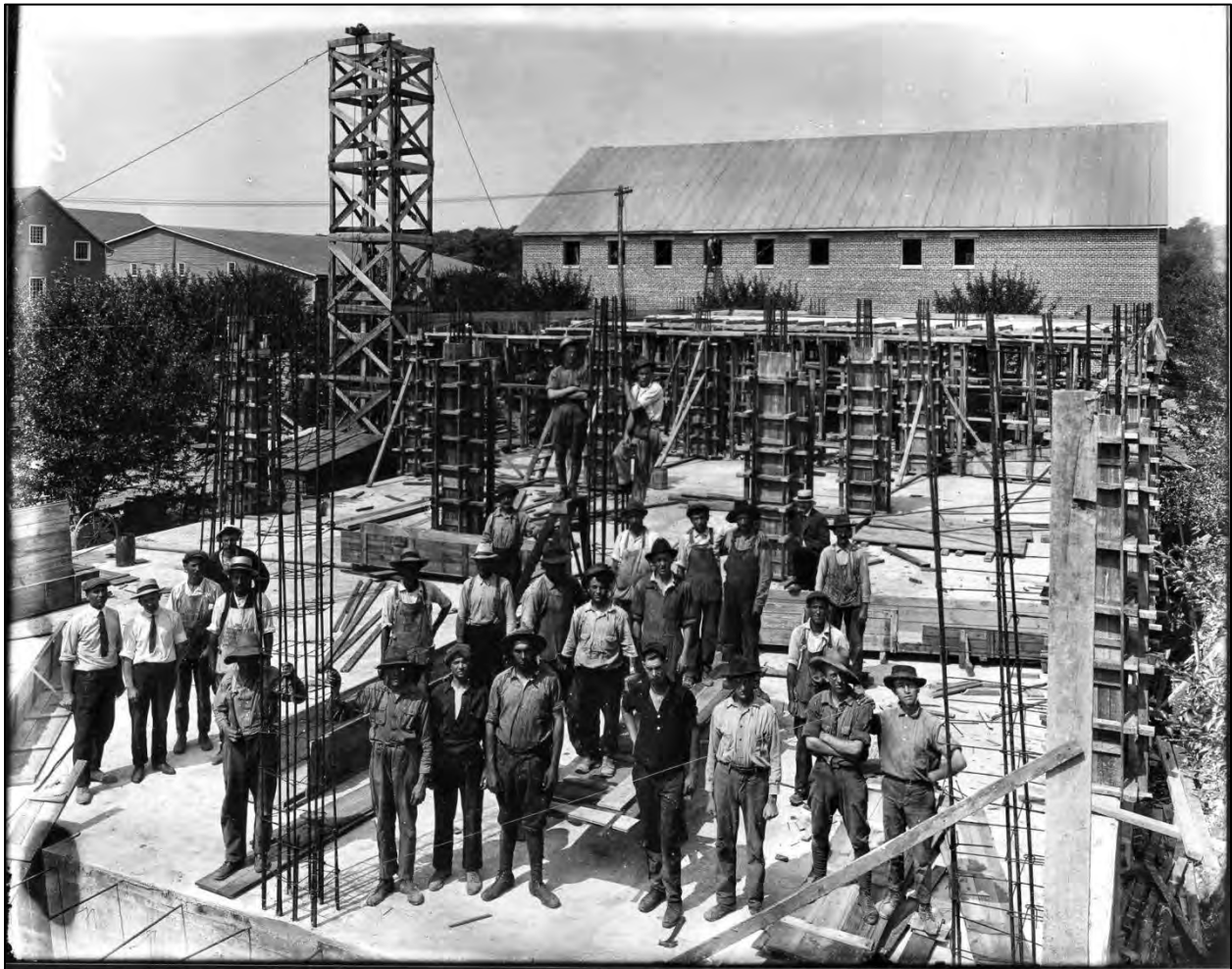
City of Winchester, VA
County and State



Aerial Photograph of Winchester Cold Storage Company Facility on North Loudoun Street, circa 1930. Source: Stewart Bell Jr. Archives.

Virginia Apple Storage Warehouse
Name of Property

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Construction of the Virginia Apple Storage Warehouse, 1929. Source: Stewart Bell Jr. Archives.

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Virginia Apple Storage Warehouse, 1930. Source: Stewart Bell Jr. Archives.

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Virginia Apple Storage Float at the Winchester Apple Blossom Festival, circa 1950. Source: Stewart Bell Jr. Archives.

Virginia Apple Storage Warehouse
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ENDNOTES

Notes: Section 8

² Timothy A. Youmans, Email correspondence, 26 April 2022.

³ Stewart Bell, Jr., "Winchester," in *The Story of Frederick County*, edited by Sam Lehman, n.p.: 1989.

⁴ "Early History of the Shenandoah Apple," *Shenandoah Applelore* (blog), accessed October 2021, <https://shenandoahappleloreblog.wordpress.com/history-of-the-shenandoah-apple/>.

⁵ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation," accessed November 2021.

⁶ J.E. Norris, ed., *History of the Lower Shenandoah Valley Counties of Frederick, Berkeley, Jefferson and Clarke* (Chicago, IL: A. Warner & Co., 1890).

⁷ Dutton + Associates, LLC, *Phase I Cultural Resource Survey of the Bartonsville Solar Project Area*, December 2020, manuscript on file at Virginia Department of Historic Resources.

⁸ Ibid.

⁹ Charlie Grymes, "Key Treaties Defining the Boundaries Separating English and Native American Territories in Virginia," *Virginia Places*, accessed October 2021, <http://www.virginiaplaces.org/settleland/treaties.html>.

¹⁰ Gray & Pape, Inc., *Phase I and II Cultural Resource Investigations Route 37 Frederick County, Virginia*, March 1997, manuscript on file at Virginia Department of Historic Resources.

¹¹ Ibid.

¹² Timothy Youmans, "Industrian Heritage," City of Winchester, accessed October 2021, <https://www.winchesterva.gov/industrian-heritage>.

¹³ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation," accessed November 2021.

¹⁴ "Apples Fill Storage Space in Valley," *Richmond Times-Dispatch*, October 30, 1940. The Old Mill Storage facility had been located directly across from the Virginia Apple Storage Warehouse complex at 2024 Valley Avenue. It was demolished in December of 1995. Youmans, Email.

¹⁵ Youmans, "Industrian Heritage."

¹⁶ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation," accessed November 2021.

¹⁷ C.L. Robinson Ice and Cold Storage Records Collection, Stewart Bell Jr. Archives, Handley Regional Library, Winchester, Virginia.

¹⁸ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: Virginia Apple Storage Warehouse," accessed October 2021; Todd Kosmerick, "World War I and Agriculture," NC State

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University Libraries, August 18, 2017, accessed November 2021, <https://www.lib.ncsu.edu/news/special-collections/world-war-i-and-agriculture>.

¹⁹ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: Virginia Apple Storage Warehouse," accessed October 2021.

²⁰ "New Building Winchester," WCS Logistics, accessed October 2021, <http://wcslogistics.com/archives-new-building-winchester/>.

²¹ *The Winchester Star*, October 22, 1921. In October of 1921, the Winchester Cold Storage received a shipment of apples from Oregon. Other records of shipments to Winchester's cold storage facilities from various areas in the United States can be found in local newspapers from Winchester and Richmond.

²² *The Winchester Star*, June 26, 1917.

²³ *The Winchester Star*, April 26, 1917.

²⁴ "Fruit Received at New Storage," *The Winchester Star*, September 20, 1917.

²⁵ Ibid.

²⁶ "Temperature in New Storage is Uniform," *The Winchester Star*, April 7, 1919.

²⁷ Youmans, "Industrian Heritage."

²⁸ Priscilla Lehman, "Out of the Past...from the archives of The Winchester Star," *The Winchester Star*, October 30, 2017.

²⁹ Sanborn Map Company, *Winchester, Virginia, 1927-1947, Sheet 31*, accessed April 2022, Library of Virginia.

³⁰ "Charters," *Richmond Times-Dispatch*, April 9, 1929.

³¹ *Winchester Evening Star*, July 5, 1976, accessed November 2021, *NewspaperArchive*.

³² P.E. Morris, Jr., "A Little Boy's Dream Come True," *Winchester Star*, June 15, 1973, 15.

³³ Sanborn Map Company, *Winchester, Virginia, 1927-1947, Sheet 31*, accessed April 2022, Library of Virginia. Based on the 1938 map of Winchester, only two industrial properties were located within the vicinity of the Virginia Apple Storage facility, the O'Sullivan Rubber Company and the H.J. Heinz Company Vinegar Plant. The warehouse was also neighbored by three apple packing buildings, one dwelling, and six commercial buildings.

³⁴ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: Virginia Apple Storage Warehouse," accessed October 2021.

³⁵ Ibid.

³⁶ Ibid., 5.

³⁷ Ibid., 175.

³⁸ P.E. Morris, Jr., "The Ice Industry-Past and Present," *The Winchester Star*, August 23, 1972, 27.

³⁹ "Va. Apple Storage, Inc.," *Blue Ridge Herald*, May 16, 1940, 7.

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⁴⁰ “Notice to Deer Hunters,” *The Winchester Evening Star*, November 17, 1954, 1; *The Winchester Star*, November 20, 1972, 30.

⁴¹ Virginia Department of Historic Resources, “Preliminary Information Form for Individual Properties: Virginia Apple Storage Warehouse,” accessed October 2021.

⁴² Ibid.

⁴³ “33,000 Bushels Of Apples Still On Storage Here,” *Winchester Evening Star*, June 19, 1951, 1.

⁴⁴ “Attention Fruit Growers,” *Winchester Evening Star*, August 21, 1951, 9; “E.W. Barr Packing House,” *Winchester Evening Star*, April 29, 1953, 1; “Blue Goose In Large Apple Packing Deal at Winchester,” *Hagerstown Daily Mail*, July 11, 1960, 1; “A&P National Produce,” *Winchester Evening Star*, September 22, 1973, 5.

⁴⁵ Virginia Department of Historic Resources, “Preliminary Information Form for Individual Properties.”

⁴⁶ “E.W. Barr Packing House,” *The Winchester Evening Star*, April 29, 1953, 1.

⁴⁷ “‘Blue Goose’ In Large Apple Packing Deal At Winchester,” *Hagerstown Daily Mail*, July 11, 1960, 1.

⁴⁸ Virginia Department of Historic Resources, “Preliminary Information Form for Individual Properties.”

⁴⁹ “Schools Close Early Tomorrow for First B.I.E. Day Tours.” *Winchester Evening Star*, November 6, 1951, 1.

⁵⁰ While the Virginia Apple Storage company entered many parade floats in local fairs, one example was at Winchester’s annual fair in 1946; Alex Preston, “3-Mile Parade Marks Close of Winchester Annual Apple Festival,” *Washington Evening Star*, May 4, 1946, 12.

⁵¹ Hill Vaden, “Still the Apple of Their Eye: Area Cold Storages Diversify, But Save Room for Apples,” *The Winchester Star*, November 19, 2005.

⁵² Virginia Department of Historic Resources, “Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation,” accessed November 2021.

⁵³ Ibid.; *Winchester Evening Star*, July 5, 1976, 23.

⁵⁴ “Virginia Apple Storage, Inc.,” *The Winchester Evening Star*, July 5, 1976, 47.

⁵⁵ Hill Vaden, “‘A’ Is For... Adaptable: Cold Storage Forced To Diversity As Valley’s Apple Share Shrinks,” *Winchester Star*, December 30, 2005.

⁵⁶ Cathy Sims, “New Food Bank Will Serve Needy Through Agencies,” *The Winchester Star*, July 31, 1982, 7.

⁵⁷ Andrew Martel, “Blank Apple Canvases Will Soon Come to Life,” *The Winchester Star*, December 6, 2004, 10.

⁵⁸ Chris Fordney, “Multimillion-Dollar Development Seeks High Quality in All Phases,” *The Winchester Star*, January 27, 1989, 12.

⁵⁹ “Housing,” *The Winchester Star*, September 2, 2004, B4; “Park Place,” *The Winchester Star*, September 2, 2004, 12.

⁶⁰ “Trustee’s Sale,” *The Winchester Star*, April 14, 1972, accessed November 2021. *NewspaperArchive*.

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Name of Property

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⁶¹ Virginia Department of Historic Resources, "Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation," accessed November 2021.

⁶² Sarah Greenhalgh, "Cold Storage: Local Company Isn't Just for Apples Anymore," *The Winchester Star*, September 24, 2011.

⁶³ EHT Tracerics, Inc., National Register of Historic Places Inventory – Nomination Form. "Terminal Refrigerating and Warehousing Company," Department of the Interior, National Park Service, Washington, D.C., August 29, 2014, 21.

⁶⁴ G. Harold Powell and S.H. Fulton, *The Apple in Cold Storage* (Washington, D.C.: Government Printing Office, 1903), 9.

⁶⁵ F.A. Waugh, *The American Apple Orchard* (New York: Orange Judd Company, 1917), 172.

⁶⁶ *Ibid.*, 175.

⁶⁷ The following information about Charles Green's common storage house was obtained from: F.A. Waugh, *The American Apple Orchard* (New York: Orange Judd Company, 1917), 173-74.

⁶⁸ Carroll Gantz, *Refrigeration: A History* (Jefferson, NC: McFarland & Company, Inc., 2015), 66.

⁶⁹ *Ibid.*, 66-67.

⁷⁰ George C. Briley, "A History of Refrigeration," *ASHRAE Journal* (November 2004), 832.

⁷¹ Gantz., 68-69.

⁷² *Ibid.*, 71-72.

⁷³ EHT Tracier, Inc., "Terminal Refrigerating and Warehousing Company," 21-22.

⁷⁴ Waugh, 177.

⁷⁵ EHT Tracier, Inc., "Terminal Refrigerating and Warehousing Company," 21.

⁷⁶ *Ibid.*

⁷⁷ Powell et al., 13.

⁷⁸ EHT Tracier, Inc., "Terminal Refrigerating and Warehousing Company," 21.

⁷⁹ EHT Tracier, Inc., "Terminal Refrigerating and Warehousing Company," 21-22; C.L. Robinson Ice and Cold Storage Records Collection, Stewart Bell Jr. Archives, accessed October 2021.

⁸⁰ EHT Tracier, Inc., "Terminal Refrigerating and Warehousing Company," 21-22; C.L. Robinson Ice and Cold Storage Records Collection, Stewart Bell Jr. Archives, accessed October 2021.

⁸¹ Waugh, 175, 180.

⁸² Powell et al., 9.

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⁸³ Ibid., 12.

⁸⁴ “Storage Space,” *Shenandoah Herald*, October 5, 1923, 1, accessed October 2021, *Chronicling America: Historic American Newspapers*, Library of Congress.

⁸⁵ EHT Tracier, Inc., “Terminal Refrigerating and Warehousing Company,” 15-18, 24.

⁸⁶ Ibid., 24.

⁸⁷ Ibid.

⁸⁸ Ibid, 7.

⁸⁹ Fish and Wildlife Service, *Cold Storage Design and Refrigeration Equipment: Refrigeration of Fish, Part 1*, Fishery Leaflet 427, June 1956, United States Department of the Interior, PDF, <https://spo.nmfs.noaa.gov/sites/default/files/legacy-pdfs/leaflet427.pdf>, 1, 12.

⁹⁰ Fish and Wildlife Service, *Cold Storage Design and Refrigeration Equipment*, 9.

⁹¹ “Forklift History: The Complete Story,” January 10, 2022, *Conger* (webpage), accessed April 2022, <https://www.conger.com/forklift-history/>.

⁹² Fish and Wildlife Service, *Cold Storage Design and Refrigeration Equipment*, 10.

⁹³ Ibid, 11.

⁹⁴ Sanborn Map Company, *Winchester, Virginia, 1927-1947, Sheet 31*, accessed April 2022, Library of Virginia.

⁹⁵ “‘Blue Goose’ In Large Apple Packing Deal At Winchester,” *Hagerstown Daily Mail*, July 11, 1960, 1.

⁹⁶ Sanborn Map Company, *Winchester, Virginia, 1927-1947, Sheet 31*, accessed April 2022, Library of Virginia. The office addition was present on a 1938 map of Winchester, but was not present when the building was first completed in 1930.

⁹⁷ Fish and Wildlife Service, *Cold Storage Design and Refrigeration Equipment*, 12.

⁹⁸ Ibid.

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9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Bell, Stewart, Jr. "Winchester." In *The Story of Frederick County*. Edited by Sam Lehman. N.p.: 1989.

Blue Ridge Herald. "Va. Apple Storage, Inc." May 16, 1940.

Briley, George C. "A History of Refrigeration." *ASHRAE Journal* (November 2004): 831-34.

C.L. Robinson Ice and Cold Storage Records Collection. Stewart Bell Jr. Archives, Handley Regional Library, Winchester, Virginia.

Dutton + Associates, LLC. *Phase I Cultural Resource Survey of the Bartonsville Solar Project Area*, December 2020. Manuscript on file at Virginia Department of Historic Resources.

"Early History of the Shenandoah Apple." *Shenandoah Applelore* (blog). Accessed October 2021. <https://shenandoahappleloreblog.wordpress.com/history-of-the-shenandoah-apple/>.

EHT Tracerics, Inc. National Register of Historic Places Inventory – Nomination Form. "Terminal Refrigerating and Warehousing Company." Department of the Interior, National Park Service, Washington, D.C., August 29, 2014.

Fish and Wildlife Service. *Cold Storage Design and Refrigeration Equipment: Refrigeration of Fish, Part 1*. Fishery Leaflet 427, June 1956. United States Department of the Interior. PDF. <https://spo.nmfs.noaa.gov/sites/default/files/legacy-pdfs/leaflet427.pdf>.

Fordney, Chris. "Multimillion-Dollar Development Seeks High Quality in All Phases." *The Winchester Star*. January 27, 1989.

Foreman, David. "Winchester Cold Storage Turns 80." *The Winchester Star*. August 12, 1997.

"Forklift History: The Complete Story." January 10, 2022. *Conger* (webpage). Accessed April 2022. <https://www.conger.com/forklift-history/>.

Gantz, Carroll. *Refrigeration: A History*. Jefferson, NC: McFarland & Company, Inc., 2015.

Gray & Pape, Inc. *Phase I and II Cultural Resource Investigations Route 37 Frederick County, Virginia*. March 1997. Manuscript on file at the Virginia Department of Historic Resources.

Virginia Apple Storage Warehouse
Name of Property

City of Winchester, VA
County and State

Greenhalgh, Sarah. "Cold Storage: Local Company Isn't Just for Apples Anymore." *The Winchester Star*. September 24, 2011.

Grymes, Charlie. "Key Treaties Defining the Boundaries Separating English and Native American Territories in Virginia." *Virginia Places*. Accessed October 2021. <http://www.virginiaplaces.org/settleland/treaties.html>.

Hagerstown Daily Mail (Hagerstown, MD). "'Blue Goose' In Large Apple Packing Deal at Winchester." July 11, 1960.

"Harry F. Byrd (1887-1966)." *Encyclopedia Virginia* (website). Accessed October 2021. <https://encyclopediavirginia.org/entries/byrd-harry-f-1887-1966/>.

Kosmerick, Todd. "World War I and Agriculture." NC State University Libraries. August 18, 2017. Accessed November 2021. <https://www.lib.ncsu.edu/news/special-collections/world-war-i-and-agriculture>.

Krikorian, Mark. "Winchester Cold Storage at 75 Years." *The Winchester Star*. April 16, 1992.

Lehman, Priscilla. "Out of the Past...from the archives of The Winchester Star." *The Winchester Star*. October 30, 2017.

Mangino, Stephanie. "Winchester Cold Storage Leaves Ice Behind." *The Winchester Star*. February 1, 2007.

Martel, Andrew. "Blank Apple Canvases Will Soon Come to Life." *The Winchester Star*. December 6, 2004.

Morris, P.E., Jr. "The Ice Industry – Past and Present." *The Winchester Evening Star*. August 23, 1972.

_____. "A Little Boy's Dream Come True." *The Winchester Star*. June 15, 1973.

Mullinax, Melanie. "The Versatility of Ice: It's Pretty Cool." *The Winchester Star*. May 24, 2005.

"New Building Winchester." WCS Logistics. Accessed October 2021. <http://wcslogistics.com/archives-new-building-winchester/>.

Norris, J.E., ed. *History of the Lower Shenandoah Valley Counties of Frederick, Berkeley, Jefferson and Clarke*. Chicago, IL: A. Warner & Co., 1890.

Powell, G. Harold, and S.H. Fulton. *The Apple in Cold Storage*. Washington, D.C.: Government Printing Office, 1903.

Virginia Apple Storage Warehouse
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City of Winchester, VA
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Preston, Alex. "3-Mile Parade Marks Close of Winchester Annual Apple Festival." *Washington Evening Star* (Washington, D.C.). May 4, 1946.

Richmond Times-Dispatch. "Winchester Storage Company to Build An Additional Unit." January 14, 1929.

_____. "Winchester Firm Will Have Greatest Plant."

_____. "Charters." April 9, 1929.

_____. "Further to Expand Great Plant." July 16, 1935.

_____. "Apples Fill Storage Space in Valley." October 30, 1940.

Sanborn Map Company. *Winchester, Virginia, 1927-1947, Sheet 31*. Map. Accessed April 2022. Library of Virginia.

Shenandoah Herald. "Storage Space." October 5, 1923.

_____. September 25, 1925.

Sims, Cathy. "New Food Bank Will Serve Needy Through Agencies." *The Winchester Star*. July 31, 1982.

Vaden, Hill. "Still the Apple of Their Eye: Area Cold Storages Diversify but Save Room for Apples." *The Winchester Star*. November 19, 2005.

_____. "'A' Is For... Adaptable: Cold Storage Forced To Diversity As Valley's Apple Share Shrinks." *The Winchester Star*. December 30, 2005.

Virginia Department of Historic Resources. "Preliminary Information Form for Individual Properties: C.L. Robinson Ice and Cold Storage Corporation." Accessed November 2021.

Virginia Department of Historic Resources. "Preliminary Information Form for Individual Properties: Virginia Apple Storage Warehouse." Accessed October 2021.

Warden, William E. *Blue Ridge Cold Storage Plant, Short Street, July 4, 1978*. Photograph. Accessed November 2021. Library of Virginia.

Waugh, F.A. *The American Apple Orchard*. New York: Orange Judd Company, 1917.

The Winchester Evening Star. "33,000 Bushels of Apples Still On Storage Here." June 19, 1951. *Newspaper Archive*.

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- _____. "Attention Fruit Growers." August 21, 1951.
- _____. "Schools Close Early Tomorrow For First B.I.E. Day Tours." November 6, 1951.
- _____. "E.W. Barr Packing House." April 29, 1953.
- _____. "Notice to Deer Hunters." November 17, 1954.
- _____. "A&P National Produce." September 22, 1973.
- _____. "Virginia Apple Storage, Inc." July 5, 1976.
- _____. "Two Public Hearings at Council Meeting Tomorrow." May 9, 1977.
- The Winchester Star*. "Will Erect Large Cold Storage Here. April 26, 1917.
- _____. June 26, 1917.
- _____. "New Storage Nearing Completion." September 5, 1917.
- _____. "Fruit Received at New Storage." September 20, 1917.
- _____. "Found No Scald at New Storage." February 11, 1919.
- _____. "Temperature in New Storage is Uniform." April 7, 1919.
- _____. "Winchester Completes Apple Storage Plant." October 17, 1920.
- _____. October 22, 1921.
- _____. "Trustee's Sale." April 14, 1972.
- _____. November 20, 1972.
- _____. "Housing." September 2, 2004.
- Winchester, Virginia." *Mount Vernon* (website). Accessed October 2021. <https://www.mountvernon.org/library/digitalhistory/digital-encyclopedia/article/winchester-virginia/>.
- Youmans, Timothy. "Industrian Heritage." City of Winchester. Accessed October 2021. <https://www.winchesterva.gov/industrian-heritage>.
- _____. Email Correspondence. 26 April 2022.

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Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
 - Other State agency
 - Federal agency
 - Local government
 - University
 - Other
- Name of repository: Virginia Department of Historic Resources, Richmond

Historic Resources Survey Number (if assigned): DHR #138-5120

10. Geographical Data

Acreage of Property 7.688

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

1. Latitude: 39.166287 Longitude: -78.182423

Or

UTM References

Datum (indicated on USGS map):

NAD 1927 or NAD 1983

1. Zone: Easting: Northing:

2. Zone: Easting: Northing:

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3. Zone: Easting: Northing:

4. Zone: Easting : Northing:

Verbal Boundary Description (Describe the boundaries of the property.)

The Virginia Apple Storage Warehouse is located at 1955 Valley Avenue in Winchester, Virginia, and its parcel is recorded by the City of Winchester as Tax Map #251-01--5. The true and correct historic boundary is shown on the attached Location Map, Sketch Map, and Tax Parcel Map.

Boundary Justification (Explain why the boundaries were selected.)

The historic boundary includes the remaining 7.688 acres of the 29.757-acre property purchased by Virginia Apple Storage, Inc. in 1929. The facility was originally situated on the outskirts of the city. The original parcel was subdivided during the early twenty-first century. The historic boundary is drawn to encompass the extant resources and their historic setting within the acreage still associated with the property.

11. Form Prepared By

name/title: Madelyn Shiflett, Dara A. Friedberg, and Robert J. Taylor, Jr.
organization: Dutton + Associates, LLC
street & number: 1115 Crowder Drive
city or town: Midlothian state: VA zip code: 23113
telephone: 804-897-1960
date: May 2022

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo

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date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Virginia Apple Storage Warehouse

City or Vicinity: Winchester State: VA

County: Independent City

Photographer: Robert J. Taylor, Jr.

Photo 1 of 33: Virginia Apple Storage Warehouse

Front oblique, view northwest

Date Photographed: July 21, 2021

Photo 2 of 33: Virginia Apple Storage Warehouse

Rear oblique, view northeast

Date Photographed: July 21, 2021

Photo 3 of 33: Virginia Apple Storage Warehouse

East façade, view west

Date Photographed: July 21, 2021

Photo 4 of 33: Virginia Apple Storage Warehouse

South elevation, view north

Date Photographed: July 21, 2021

Photo 5 of 33: Virginia Apple Storage Warehouse

West (rear) elevation, view east

Date Photographed: July 21, 2021

Photo 6 of 33: Virginia Apple Storage Warehouse

North elevation, view south

Date Photographed: July 21, 2021

Photo 7 of 33: Virginia Apple Storage Warehouse

Small office block on rear wing, view northeast

Date Photographed: July 21, 2021

Photo 8 of 33: Virginia Apple Storage Warehouse

Cellular equipment storage on roof, view northwest

Date Photographed: July 21, 2021

Photo 9 of 33: Virginia Apple Storage Warehouse

South stair/elevator tower penthouse, view south

Date Photographed: July 21, 2021

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Photo 10 of 33: Virginia Apple Storage Warehouse
East façade, 1-story addition, view northwest
Date Photographed: July 21, 2021

Photo 11 of 33: Virginia Apple Storage Warehouse
Detail of main entrance, view west
Date Photographed: July 21, 2021

Photo 12 of 33: Virginia Apple Storage Warehouse
Detail of loading dock across south elevation, view east
Date Photographed: July 21, 2021

Photo 13 of 33: Virginia Apple Storage Warehouse
Detail of doors on south elevation, view north
Date Photographed: July 21, 2021

Photo 14 of 33: Virginia Apple Storage Warehouse
Ice block cutter, view west
Date Photographed: July 21, 2021

Photo 15 of 33: Virginia Apple Storage Warehouse
Representative cold storage floor
Date Photographed: July 21, 2021

Photo 16 of 33: Virginia Apple Storage Warehouse
Ammonia pipes and gutters in cold storage area
Date Photographed: July 21, 2021

Photo 17 of 33: Virginia Apple Storage Warehouse
Detail of elevator shaft
Date Photographed: July 21, 2021

Photo 18 of 33: Virginia Apple Storage Warehouse
Detail of ammonia pipes in storage room
Date Photographed: July 21, 2021

Photo 19 of 33: Virginia Apple Storage Warehouse
Representative cold storage area on first floor
Date Photographed: July 21, 2021

Photo 20 of 33: Virginia Apple Storage Warehouse
Stairwell and barrel elevator doors
Date Photographed: July 21, 2021

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Photo 21 of 33: Virginia Apple Storage Warehouse
View of cold storage area
Date Photographed: July 21, 2021

Photo 22 of 33: Virginia Apple Storage Warehouse
Detail of ice boxes in floor of mechanical wing
Date Photographed: July 21, 2021

Photo 23 of 33: Virginia Apple Storage Warehouse
Ice block transfer bucket
Date Photographed: July 21, 2021

Photo 24 of 33: Virginia Apple Storage Warehouse
Ice hatch from mechanical room to loading dock
Date Photographed: July 21, 2021

Photo 25 of 33: Virginia Apple Storage Warehouse
Detail of ammonia compressors in mechanical wing
Date Photographed: July 21, 2021

Photo 26 of 33: Virginia Apple Storage Warehouse
Office area within interior of rear wing
Date Photographed: July 21, 2021

Photo 27 of 33: Virginia Apple Storage Warehouse
Interior of northern section of rear wing from main warehouse
Date Photographed: July 21, 2021

Photo 28 of 33: Virginia Apple Storage Warehouse
Detail of stairwell in front office
Date Photographed: July 21, 2021

Photo 29 of 33: Virginia Apple Storage Warehouse
Meeting room in second floor of office block
Date Photographed: July 21, 2021

Photo 30 of 33: Virginia Apple Storage Warehouse
Detail of front office
Date Photographed: July 21, 2021

Photo 31 of 33: Controlled Atmosphere Building
Front oblique, view northwest
Date Photographed: July 21, 2021

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Photo 32 of 33: Controlled Atmosphere Building
Detail of storage room
Date Photographed: July 21, 2021

Photo 33 of 33: Controlled Atmosphere Building
Compressor in controlled atmosphere building
Date Photographed: July 21, 2021

Paperwork Reduction Act Statement: This information is being collected for nominations to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.). We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

Estimated Burden Statement: Public reporting burden for each response using this form is estimated to be between the Tier 1 and Tier 4 levels with the estimate of the time for each tier as follows:

- Tier 1 – 60-100 hours
- Tier 2 – 120 hours
- Tier 3 – 230 hours
- Tier 4 – 280 hours

The above estimates include time for reviewing instructions, gathering and maintaining data, and preparing and transmitting nominations. Send comments regarding these estimates or any other aspect of the requirement(s) to the Service Information Collection Clearance Officer, National Park Service, 1201 Oakridge Drive Fort Collins, CO 80525.

Legend

 County Boundaries

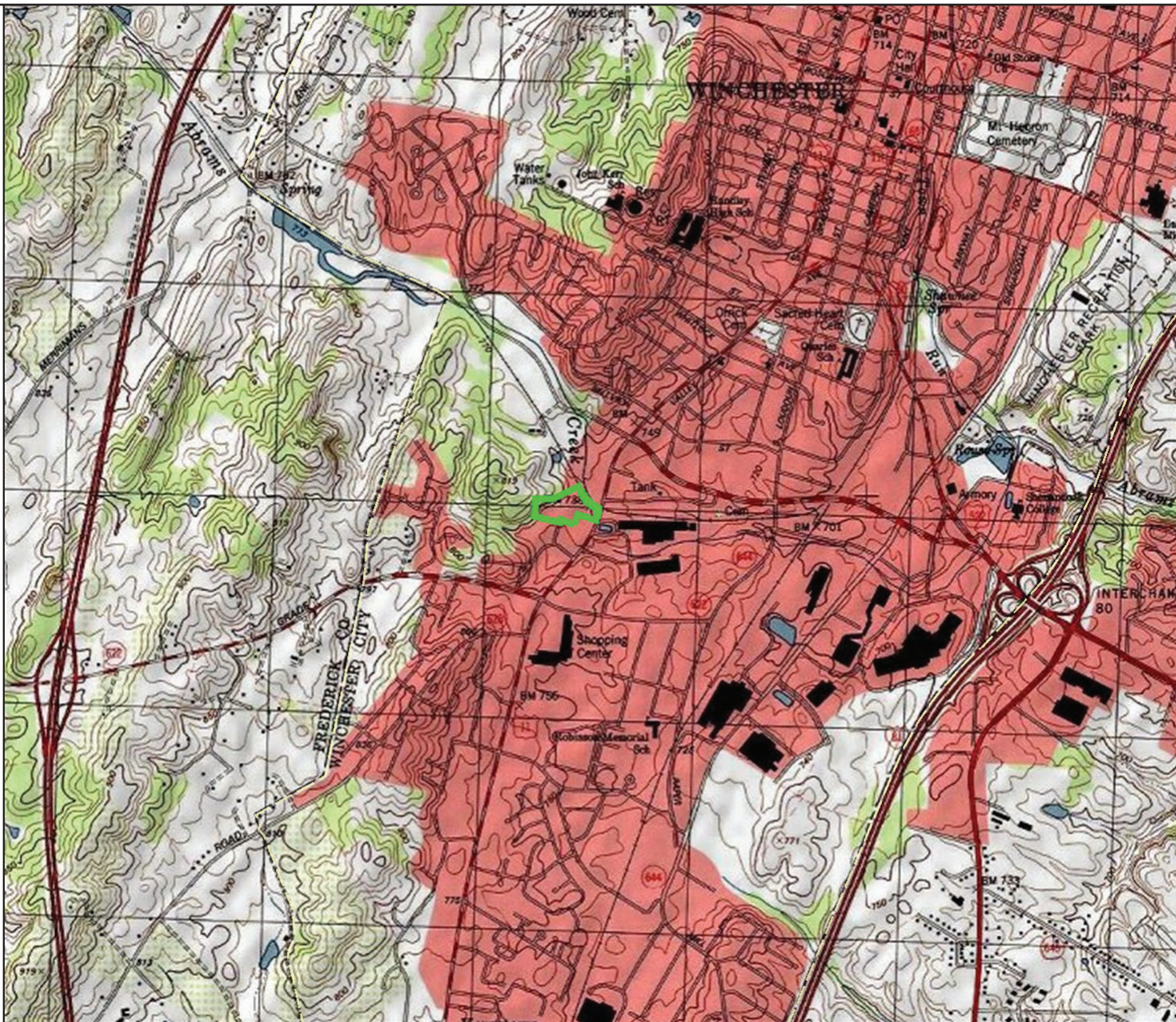
TOPOGRAPHIC MAP

Virginia Apple Storage Warehouse

City of Winchester, VA

DHR No. 138-5120

 Historic Boundary



Feet

0 600 1200 1800 2400

1:36,112 / 1"=3,009 Feet

Title:

Date: 5/19/2022

DISCLAIMER: Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions. The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.

Notice if AE sites: Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

LOCATION MAP



Map: Google Earth

Virginia Apple Storage Warehouse, City of Winchester, Virginia

VDHR# 138-5120

Latitude: 39.166287

Longitude: -78.182423

 **Historic Boundary**

SKETCH MAP



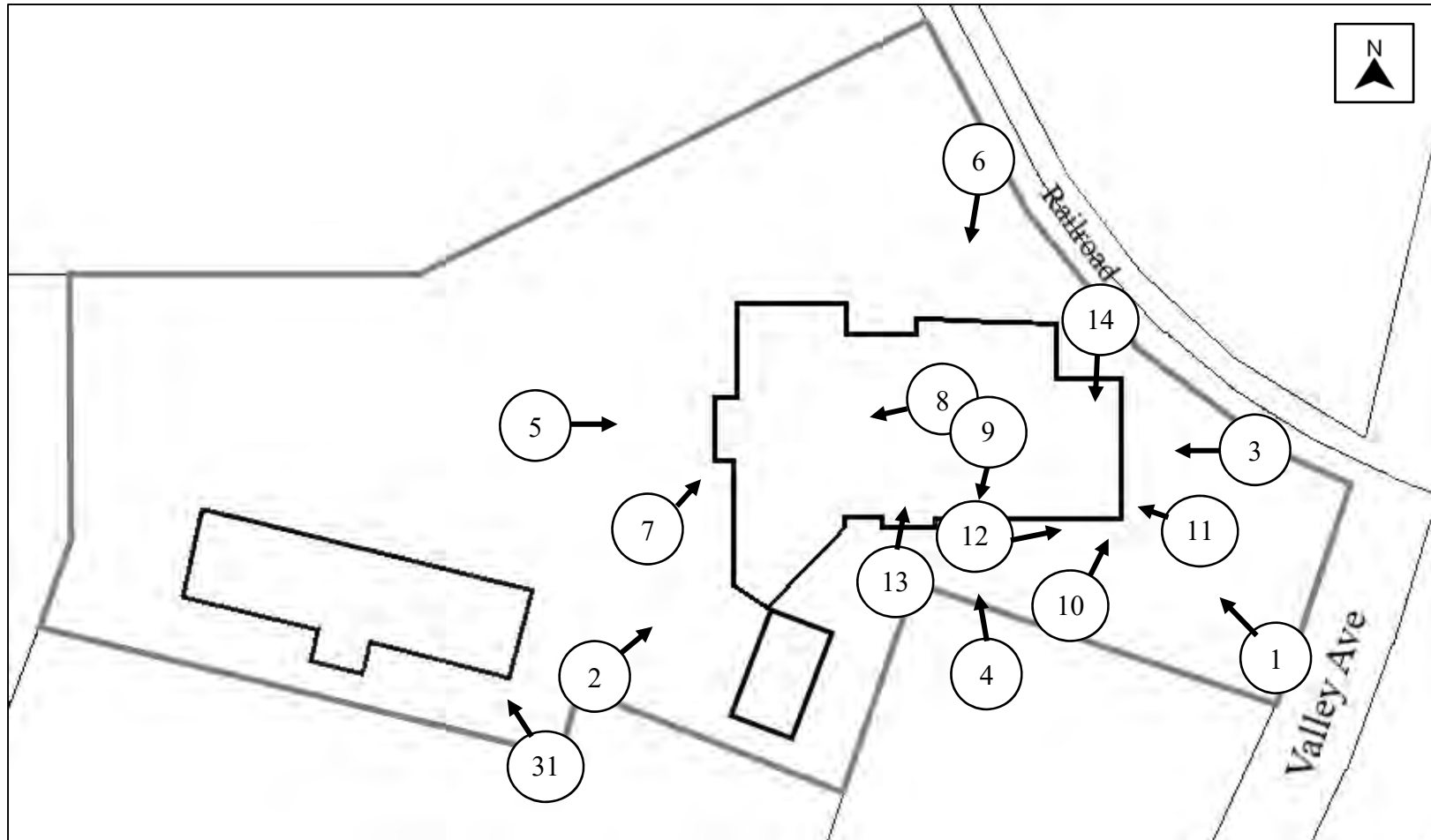
Map: Google Earth

Virginia Apple Storage Warehouse, Winchester, Virginia, 2021

VDHR# 138-5120

- Historic Boundary
- 1929 Warehouse/Office and ca. 1950 Rear Wing (contributing building)
- 1971 Controlled Atmosphere Building (contributing building)
- Site of Chemical Plant (demolished)

PHOTO KEY



**Virginia Apple Storage Warehouse, City of Winchester, VA
VDHR# 138-5120**

Interior Photos: Photo #s 15-30, 32-33


 Virginia Apple Storage Warehouse Historic Boundary

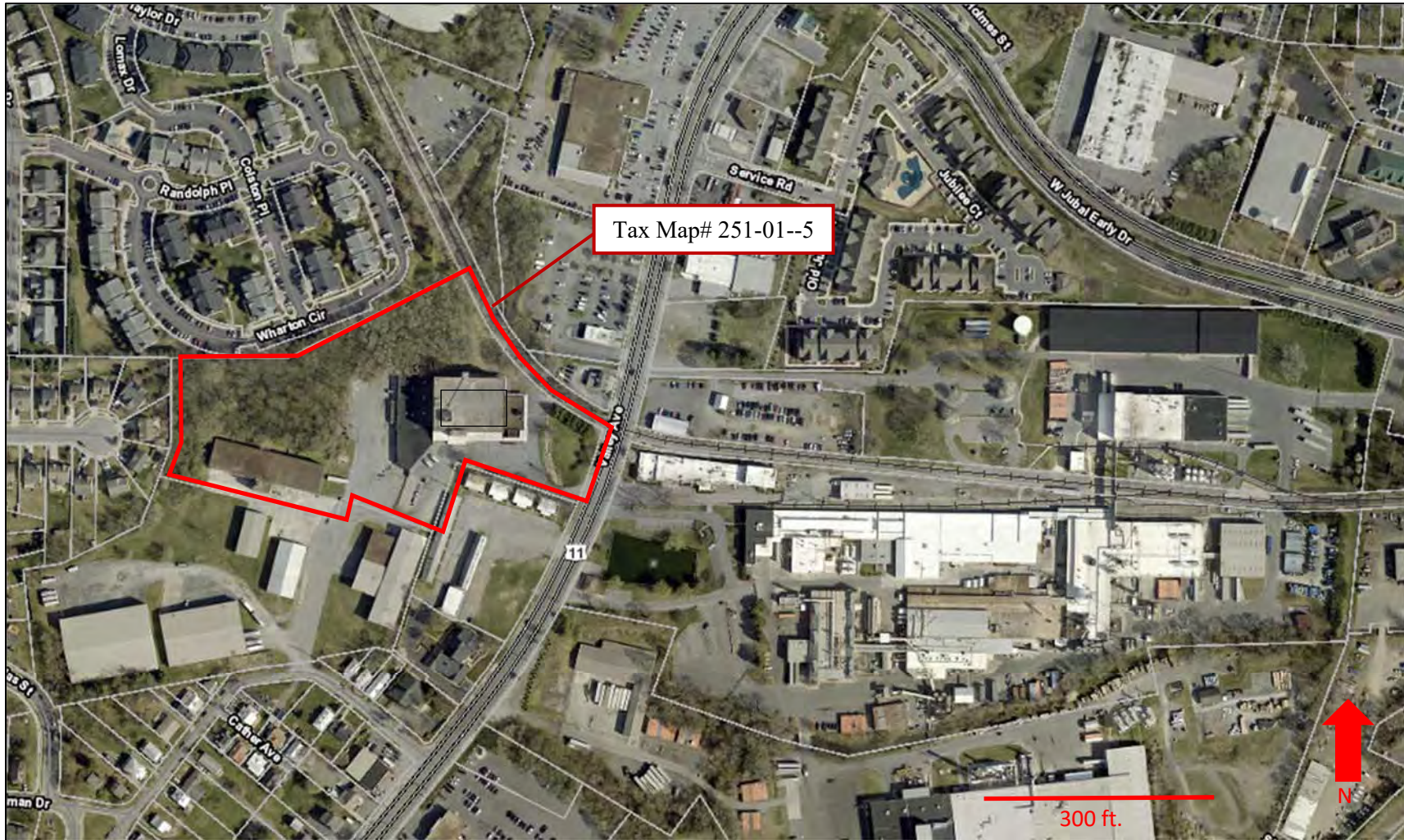
 Photo Direction

TAX PARCEL MAP

Virginia Apple Storage Warehouse

City of Winchester, Virginia

DHR #138-5120



<https://gis.winchesterva.gov/taxparcelmapping/>

Accessed 4/29/2022