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: State Highway Department Testing Laboratory
   Other names/site number: Oklahoma Veterans Memorial Building
   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: 2311 North Central Avenue
   City or town: Oklahoma City State: Oklahoma County: Oklahoma
   Vicinity: ____________

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  ___ state  ___ local
   Applicable National Register Criteria:
   ___ A  ___ B  ___ C  ___ D

   ____________________________
   Signature of certifying official/Title: Date
   ____________________________
   State or Federal agency/bureau or Tribal Government

   ____________________________
   Signature of commenting official: Date
   ____________________________
   Title: State or Federal agency/bureau or Tribal Government
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  X

Public – Federal

Category of Property

(Check only one box.)

Building(s)  X

District

Site

Structure

Object
**Number of Resources within Property**

(Do not include previously listed resources in the count)

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Number of contributing resources previously listed in the National Register: 0

6. **Function or Use**

**Historic Functions**
(Enter categories from instructions.)

- GOVERNMENT/government office

**Current Functions**
(Enter categories from instructions.)

- VACANT/NOT IN USE
7. Description

Architectural Classification
(Enter categories from instructions.)
MODERN MOVEMENT/Art Deco

Materials: (enter categories from instructions.)
Principal exterior materials of the property: BRICK

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

Built in 1934, the State Highway Department Testing Laboratory at 2311 North Central Avenue is located near the heart of the State Capitol Complex in Oklahoma City. It retains a high degree of historic integrity. The building is clad in blonde brick and has a distinct, T-shaped footprint. Other notable exterior features include a low-sloping barrel roof, cast stone parapet caps and details, and steel-framed, multilight industrial windows. The building’s setting and location place it squarely within the everyday operations of Oklahoma’s state government. The historic use of the facility by the State Highway Department, combined with the building’s architectural design and proximity to the Oklahoma State Capitol (NRIS #76001572), place it firmly within the context of Oklahoma politics and government during the mid-twentieth century.
Narrative Description

Site and Setting

The State Highway Department Testing Laboratory is located at 2311 North Central Avenue, approximately two miles north of downtown Oklahoma City and one-quarter of a mile west of the Oklahoma State Capitol (NRIS #76001572). It is situated within the State Capitol Complex on Lots 1-3 in Block 6 of the State Capitol Addition to Oklahoma City. The building is located on the southwest corner of the intersection of North Central Avenue, which has a north-to-south orientation, and Northeast 23rd Street, which extends east-to-west. There is a parking area directly in front of the Laboratory’s east-facing façade. A concrete sidewalk extends from the parking area to the main entrance, which is centered on the façade. The sidewalk has a slight incline and is flanked by metal railing. A grass lawn and a large tree are located on each side of this sidewalk. There is another sidewalk that extends parallel and adjacent to the south end of the façade. This sidewalk has a slight incline. There is a set of metal railings located at the intersection of this sidewalk and a paved driveway that extends east-to-west along the south side elevation of the building. A flagpole is located near the southeast corner of the property.

The Laboratory is closely associated with the everyday operations of Oklahoma’s state government. Several state government buildings, driveways, and parking lots are located to the west, south, and east of the Laboratory. Several other state government buildings are located further to the southeast along North Lincoln Boulevard, including the Office of the Attorney General, the Jim Thorpe Office Building (known historically as the State Capitol Office Building), the Oklahoma Department of Transportation, and the Wiley Post Historical Building (formerly the Oklahoma Historical Society Building, NRIS #90000124). Interstate 235/US Highway 77 (Centennial Expressway) is approximately 0.25 miles west of the Laboratory. Various fast food restaurants and small businesses line the north side of Northeast 23rd Street.

General Building Description

The State Highway Department Testing Laboratory is a one-story building with a partly exposed, cast-in-place concrete foundation. The building is clad in blonde brick laid up in a common bond with sixth course Flemish headers. The windows are painted, cold-rolled steel, multilight industrial units. There is a brick soldier course above and a cast stone subsill below each window. The building has a T-shaped footprint. The easternmost block, herein referred to as the east block, extends north-to-south parallel to North Central Avenue. The westernmost block, herein referred to as the west block, is centered on the west (back) elevation of the east block and extends east-to-west parallel to Northeast 23rd Street. Each block has a low-sloping barrel roof and cast stone parapets, which in turn are partially covered by painted metal caps.
The Laboratory has a symmetrical, east-facing façade. There are seven bays of equal width and spacing located on the façade. The bays are defined by brick pilasters. Each pilaster has a cast stone cap and a cast stone base. The pilasters are two brick courses taller than the top of the parapet. Directly below the roofline, there is a brick soldier course that extends the full width of each bay. Another brick soldier course extends the full width of each bay atop the concrete foundation. In the northernmost and southernmost bays, there is a metal collector head and downspout abutting the inner pilaster.

The primary entrance is located in the centermost bay. Unlike the rest of the façade, the roofline of this bay is pedimented. Cast stone volutes are atop the parapet cap and adjacent to the outer edges of the pilasters. A brick soldier course is located directly below the cast stone cap. The pediment is marked by cast stone polygons at each end and a keystone at the top that are aligned with the soldier course. A contemporary, plaque sign with metal framing is mounted to the building face below the soldier course. The sign reads, “OKLAHOMA VETERANS MEMORIAL BUILDING.” A flat, painted metal awning is located seven brick courses below the sign and is secured by a pair of painted iron cables with rectangular escutcheons at the building face. A pair of metal slab doors is located underneath the awning. A single column of stretcher brick flanks each side of the doors. A memorial plaque is mounted to the building face to the left of the doors.

Three windows are located within each of the three bays situated to the north and to the south of the entrance bay. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall.

The south side elevation of the east block is comprised of a single bay that is defined by a brick pilaster on each end. Each pilaster has a cast stone cap and a cast stone base. The pilasters are two brick courses taller than the abutting parapet. A brick soldier course is located directly below the cast stone cap. The cast stone-capped parapet has a modest and continuous arch that extends the full width of the bay, which is matched by the roofline behind it. The arch is marked by a cast stone polygon at the springing of each end and in line with the soldier course. A rectangular louver with a cast stone subsill is nearly centered horizontally and vertically on the bay between the parapet cap and the window heads. There are seven windows of equal width and spacing below the louver. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall.

The south side elevation of the west block is comprised of eight bays of equal width and spacing. The five easternmost bays were built in 1934. The three westernmost bays were constructed in 1949-1950. The brick exterior of the addition is a slightly darker color than the brick from the
original 1934 construction. Each bay is defined by brick pilasters. Each pilaster has a cast stone cap and a cast stone base. The pilasters are two brick courses taller than the cast stone-capped parapet. Between the pilasters and directly below the parapet cap, there is a brick soldier course that extends the full width of each bay. A metal collector head and downspout abut a pilaster in the easternmost, centermost, and westernmost bays.

There are eleven windows arranged in no apparent pattern in the five easternmost bays, with one two, or three openings per bay. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall.

There is a door opening in the center bay of the 1949-1950 addition. This opening was larger at one time and is partly infilled with a lighter colored brick. The opening contains a single metal slab door. A course of header brick is located above the door. The entrance is protected by a flat, painted metal awning. The awning is secured by a pair of painted iron cables with rectangular escutcheons at the building face. A window opening to the west of the door is infilled with a lighter colored brick.

There are two windows in each bay that is adjacent to the center bay. Each window opening contains a pair of casement windows with a fixed, 4-light transom panel above. Each transom window is 2 lights wide by 2 lights tall. Each casement sash is 1 light wide by 4 lights tall. One window opening in the bay located to the east of the center bay is infilled with a lighter colored brick.

A raised concrete platform extends from the westernmost end of the west block to the third bay from the intersection of the west and east blocks. There is a set of six concrete steps on each end of the platform. Near the westernmost end of the platform, there is a steep concrete ramp that descends to the basement. The ramp, steps, and platform all have painted iron pipe railings. There is a single metal slab door located at the bottom of the ramp. This entrance is covered by a fiberglass shed roof that extends the full width of the ramp. This roof tucks under the concrete platform.

West (Back) Elevation (Photos #0003-0004)

There are four bays on the west (back) elevation of the east block; two on each side of the block’s intersection with the west block. The bays are defined by brick pilasters. Each pilaster has a cast stone cap and a cast stone base. The pilasters are two brick courses taller than the top of the parapet. Directly below the roofline, there is a brick soldier course that extends the full width of each bay. There are three windows in each of the two innermost bays (bays located closest to the intersection with the west block) and one window in each of the two outermost bays. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall. A metal collector head and downspout abut a pilaster in both outermost bays.
The west (back) elevation of the west block is comprised of a single bay that is defined by a brick pilaster on each end. Each pilaster has a cast stone cap and a cast stone base. The pilasters are two brick courses taller than the top of the parapet. A brick soldier course is located directly below the cast stone cap. The roofline has a modest and continuous arch that extends the full width of the bay. The arch is marked by a cast stone polygon at the springing of each end and in line with the soldier course. A rectangular louver with a cast stone subsill is nearly centered horizontally and vertically on the bay between the parapet cap and the window heads. A set of six concrete steps with painted, iron pipe railing is located on the southernmost end of the block. This set of steps provides access to the raised concrete platform that extends along much of the south side elevation.

There are three windows on the west (back) elevation of the west block. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall. Three window openings and a larger opening (presumably an entrance) are infilled with a lighter colored brick. Five window openings located at basement level are similarly infilled.

North Elevation (Photo #0004-0005)

The north side elevation of the east block is comprised of a single bay that is defined by a brick pilaster on each end. The parapet and each pilaster have a cast stone cap. The pilasters also have a cast stone base. The pilasters are two brick courses taller than the top of the parapet. Between the pilasters, a brick soldier course is located directly below the parapet cap. Another brick soldier course extends the full width of each bay atop the concrete foundation. The parapet cap has a modest and continuous arch that extends the full width of the bay atop the concrete foundation. The parapet cap has a modest and continuous arch that extends the full width of the bay behind it. The arch is marked by a cast stone polygon at the springing of each end and in line with the soldier course. A rectangular louver with a cast stone subsill is nearly centered horizontally and vertically on the bay between the parapet cap and the window heads. There are six windows of equal width and spacing below the louver. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above. Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall.

The north side elevation of the west block is comprised of eight bays of equal width and spacing. The five easternmost bays were built in 1934. The three westernmost bays were constructed in 1949-1950. The brick exterior of the addition is a slightly darker color than that of the original 1934 construction. Each bay is defined by brick pilasters. Each pilaster has a cast stone cap and a cast stone base. The cast stone cap on each pilaster is two brick courses higher than the parapet on the roofline. Directly below the roofline, there is a brick soldier course that extends the full width of each bay. Another brick soldier course extends the full width of each of the five easternmost bays atop the concrete foundation. A metal collector head and downspout abut a pilaster in the easternmost, centermost, and westernmost bays.

There are three windows of equal width and spacing in each of the five easternmost bays. Each window opening contains a pair of casement windows with a fixed, 8-light transom panel above.
Each transom window is 4 lights wide by 2 lights tall. Each casement sash is 2 lights wide by 4 lights tall.

There is a single, metal slab door in the center bay of the addition. A course of header brick is located above the door. There is a section of lighter colored brick infill between the course of header brick and a course of soldier brick above, presumably indicating a former window opening or transom. The door is located atop an unprotected, concrete landing and a set of six concrete steps that extend adjacent and parallel to the building. The steps and landing are framed by painted, iron pipe railing. To the left of the door, there is a window opening that contains a pair of casement windows with a fixed, 4-light transom panel above. The transom window is 2 lights wide by 2 lights tall. Each casement sash is 1 light wide by 4 lights tall. To the right of the door, there is a window opening infilled with a lighter colored brick. Two window openings located at basement level are similarly infilled.

There are three window openings of equal width and spacing in the east bay of the addition. Each window opening contains a pair of casement windows with a fixed, 4-light transom panel above. The transom window is 2 lights wide by 2 lights tall. Each casement sash is 1 light wide by 4 lights tall. Two window openings at basement level are infilled with a lighter colored brick. In the west bay of the addition, three window openings of equal width and spacing and three window openings located at basement level are similarly infilled.

**Interior (Photos #0007-0009)**

Many interior features reflect the renovated character to fit the needs of the Oklahoma Veterans Memorial Building during the late twentieth century. A central corridor extends from the primary entrance to a large room located at the westernmost end of the building. Smaller, subdivided spaces are located on each side of the corridor. Visible finishes for the corridor and smaller spaces include painted gypsum board or wood paneled walls. The corridor has a vinyl composition tile floor. The other spaces have carpet floors. Suspended acoustical tile ceiling systems with fluorescent lighting are located throughout the building.

**Known Alterations**

Besides the contemporary interior finishes noted in the description above, there are several known exterior alterations. The exterior brick walls retain their historic configuration, and most window openings remain extant. Some window and door openings have been infilled with brick, as noted in the description above. The concrete foundation is exposed on the north side elevation of the east block. A 2006 photograph from the *Oklahoman* indicates that the primary entrance to the building was comprised of a pair of metal-framed, full-light doors with flanking side lights at that time. A 1934 historic image indicates that the original doors may have been wood-framed with glass. This historic image also indicates that the contemporary, metal-framed plaque sign above the primary entrance is possibly covering an inset monument.
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.)

- [X] 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.
- [X] 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
State Highway Department Testing Laboratory

Areas of Significance
(Enter categories from instructions.)

POLITICS/GOVERNMENT
ARCHITECTURE

Period of Significance
1934-1950

Significant Dates
1934
1949-1950

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder
UNKNOWN
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 State Highway Department Testing Laboratory, herein referred to as the Testing Laboratory, is eligible for listing in the National Register of Historic Places under Criterion A at the state level of significance for Politics/Government and under Criterion C at the state level of significance for Architecture. The Testing Laboratory played a key role in the evolution of the State Highway Department as a “centralized authority” for the construction, maintenance, and administration of Oklahoma’s roads and bridges. Located at 2311 North Central Avenue, the Testing Laboratory was described as one of the most modern facilities of its time upon its construction in 1934. By the mid-twentieth century, state engineers and chemists conducted approximately 16,000 tests per month on all materials utilized in road building and upkeep. These tests ensured that Oklahoma’s highways adhered to federal standards and guidelines. In all, the Testing Laboratory was a lynchpin for the bureaucratic, regulatory framework that endeavored to provide safe and dependable roadways for car drivers throughout Oklahoma.

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

Historic Context

The City of Oklahoma City was formally incorporated on July 15, 1890. At that time, the city had approximately 4,000 residents. By the end of the decade, the combination of an agricultural boom in the surrounding countryside and the completion of five railroad lines to and from town limits transformed the city into a commercial hub. In June 1910, three years after Oklahoma achieved statehood, Oklahoma City became the political center of the state after voters approved the transfer of the capital from Guthrie, which had served as the territorial capital since 1890.¹

Upon the relocation of the capital to Oklahoma City, several prominent citizens sought to profit from the construction of new state government buildings. William Fremont Harn and John James Culbertson, who formed the State Capitol Building Company, were among these individuals.² Both men owned land northeast of downtown Oklahoma City and they offered forty acres from

² Harn arrived in Oklahoma in 1891 as an agent of the General Land Office. In 1897, he purchased a 160-acre farm approximately two miles northeast of downtown Oklahoma City, between present-day Northeast 13th Street and Northeast 23rd Street. Harn House (NRIS #73001566), a two-story, Queen Anne style building, was constructed on the farm in 1904. By the time the capital relocated to Oklahoma City in 1910, Harn was practicing law and speculating in real estate. For more information on Harn, see Don Green, “Harn, William Fremont (1859-1944),” The Encyclopedia of Oklahoma History and Culture, https://www.okhistory.org/publications/enc/entry.php?entry=HA027, accessed January 15, 2019. and National Register of Historic Places, “Harn House, Oklahoma City, Oklahoma County, Oklahoma,” NRIS #73001566, available at http://nr2_shpo.okstate.edu/pdfs/73001566.pdf.
their respective landholdings (eighty acres in all) to the state for the location of the state capitol building. A state commission approved Harn and Culbertson’s donation and, in 1911, the State Capitol Building Company platted the State Capitol Addition to Oklahoma City between present-day Northeast 21st Street and Northeast 23rd Street.3 “Capitol Square,” located in the center of the addition, indicated the site of the new Oklahoma State Capitol building (NRIS #76001572).4 Much of the eastern half of the addition, along with the Lincoln Terrace Addition to the south, became a premier residential area in Oklahoma City.5 Meanwhile, in 1915, the State Capitol Building Company conveyed much of the western half of the addition, specifically Blocks 6, 7, and 8, to the state of Oklahoma.6 The state formally assumed ownership of these blocks in 1917.7 Two years later, the state created a Capitol Improvement District, which authorized the State Board of Public Affairs to oversee the construction and maintenance of any government buildings or structures on state-owned land located within one mile of the Capitol.8

Prior to statehood in 1907, governmental responsibilities associated with road construction and maintenance were relegated to counties and townships. Overland travel on roads and trails was slow, subject to the season, and dependent largely upon animal power (especially horses). Transportation was particularly inefficient in rural areas. As Bill Corbett notes, “[F]armers and others frequently battled mud, washouts, and bank-full streams in their travels.”9 Although motor vehicles had been invented in the late nineteenth century, they remained a rare luxury. As historian David Danbom writes, “In 1900 there were only a few thousand automobiles in the

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4 Construction on the State Capitol Building began in 1914 and was completed in 1917. According to the National Register nomination, Harn and Culbertson initially disagreed on the location of the state capitol building within their addition. The dispute was settled by a judge who ruled that the west half of Capitol Square would derive from land originally owned by Harn and that the east half would derive from land originally owned by Culbertson. Quit Claim Deed to State of Oklahoma, Oklahoma County Clerk, Book 173, Page 71, June 22, 1914, records J. J. Culbertson relinquishing his claim to the east half of Capitol Square. Also see National Register of Historic Places, “Oklahoma State Capitol, Oklahoma City, Oklahoma County, Oklahoma,” NRIS #76001572, available at http://nr2_shpo.okstate.edu/pdfs/76001572.pdf and Cynthia Savage, “Oklahoma Capitol,” The Encyclopedia of Oklahoma History and Culture, accessed January 15, 2019, https://www.okhistory.org/publications/enc/entry.php?entry=OK080.

5 The Lincoln Terrace Addition was platted by John James Culbertson in 1926. Much of the addition is incorporated in the Capitol-Lincoln Terrace Historic District (NRIS #76001569).

6 Warranty Deed to State of Oklahoma, Oklahoma County Clerk, Book 182, Page 248, February 12, 1915.

7 Quit Claim Deed, Oklahoma County Clerk, Book 196, Pages 135-138, September 27, 1917.


entire nation, most of them the playthings of wealthy hobbyists.”10 A national highway system did not exist. As a result, road conditions varied widely in Oklahoma and throughout the United States during the late nineteenth and early twentieth centuries.11

Building and maintaining highways became among the most important responsibilities of Oklahoma’s state government. In 1907, the state constitution authorized the creation of a “Department of Highways” to administer a public highway system within Oklahoma. Four years later, in 1911, the state legislature gave the governor the authority to appoint a commissioner to lead the department.12 Sidney Suggs, the first Oklahoma Highway Commissioner, was a chief proponent of the “Good Roads Movement” and he traveled across the state under the promotional slogan, “A good road for tire and hoof.”13 Local good roads associations, municipal officials, county commissioners, and many others supported Suggs by arguing that improved road conditions would better facilitate commerce, tourism, and travel throughout the state.14

Greater federal involvement in the construction of highways, increased state tax revenue and appropriations, and the growing popularity of the automobile helped foster the evolution of the Oklahoma State Highway Department “into a centralized authority in road construction.”15 Beginning in 1916, the federal government passed a series of Federal Aid Highway Acts. These measures distributed federal money in the form of matching grants to any state highway construction or improvement project that was approved by the federal Office (later, Bureau) of Public Roads.16 At the state level, the Oklahoma legislature began appropriating up to $1 million for highway projects in 1917. The levying of a state gasoline tax in 1924, along with implementing automobile registration and drivers’ license fees, provided additional revenue that worked in concert with federal money and expertise “to ensure that the best roads and bridges were constructed where and when they were needed.”17 These roads and bridges accommodated

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13 Quoted in ibid., History of Oklahoma, 521.


15 Report of the State Highway Commission For the Years 1929 to 1930 Inclusive to the Governor of Oklahoma (Oklahoma City, Oklahoma, December 31, 1930), 11.


17 Oklahoma Depression-era Road-related Resources, 5. By the end of the 1920s, all revenue for the State Highway Department derived from a combination of state appropriations, state automobile registration and license fees, the state gasoline tax, and allocations provided by the federal government and by individual counties in Oklahoma. Also
an ever-growing number of cars. Most notably, the mass production of the Model T by the Ford
Motor Company made automobile ownership available to many Americans and opened new
opportunities for work, travel, and recreation. Between 1918 and 1926, the number of registered
vehicles in Oklahoma increased from 127,000 to 500,000. By 1929, over 23 million automobiles
traveled on the nation’s roadways.18

Politics/Government Significance

When highway officials and engineers assessed the benefits of state and federal cooperation in
the construction of “better roads,” one criterion they used was whether a state highway
department had established a testing laboratory. Frederick E. Everett, president of the American
Association of State Highway Officials, noted that in 1917, only five states had facilities to test
“local road building materials.” By April 1932, however, Everett commented that “nearly every
state has an efficient laboratory.” According to Everett, a rigorous testing system, along with
federal aid and oversight in road construction and maintenance, increased the quality of
highways that Americans drove upon. “Before the introduction of federal aid,” Everett said,
“there was a decided tendency [among state highway departments] to obtain mileage at the
sacrifice of quality. The states have adopted the federal precept that roads should be designed
and built [to] be adequate for the traffic and at the same time be marked with the lowest possible
maintenance cost.” Thomas MacDonald of the federal Bureau of Public Roads concurred by
saying, “Federal road aid has been a large factor in bringing constructive economy into our
expenditures for improved highways.”19

According to a department report, the Oklahoma State Highway Department Testing Laboratory
was “founded and equipped” by July 1, 1924.20 Department officials described the laboratory’s
first location as a “small wooden building” situated southwest of the State Capitol building in
Block 10 of the State Capitol Addition, near the intersection of Northeast 21st Street and North
Central Avenue. Initially headed by engineer Frank Herrmann, the laboratory’s activities were
divided into two research areas: physical and chemical. The “physical laboratory” tested
materials such as cement and aggregate (i.e. concrete). The “chemical laboratory” examined the
composition of asphalt, paints, and oils.21 Taken together, laboratory research was “equipped to
make both physical and chemical tests on practically all materials used in highway construction
and maintenance.…”22

The primary purpose of the Testing Laboratory was to make the inspection of all highway
materials cheaper and more efficient. One of its first projects involved examining the
composition of asphalt used in paving sections of Oklahoma Highway 4 in Cleveland County.

see Report of the State Highway Commission For The Years 1927 To 1928 Inclusive to the Governor of Oklahoma
(Oklahoma City, Oklahoma, January 1, 1928), 2-3.
18 See Corbett, “Transportation”; Danbom, Born in the Country, 166-67; and McShane, “Motor Vehicles”.
19 “Federal Aid Great Factor In Building Better Roads,” Daily Oklahoman, April 17, 1932, 14-C.
20 Annual Report of the State Highway Commission for the years 1919 to 1924 Inclusive to the Governor of
Oklahoma (Oklahoma City, Oklahoma, January 1, 1925), 4
On previous projects like this, the Department contracted with a commercial laboratory to complete the work. State engineer Herrmann noted that a commercial laboratory typically charged $450 per month for asphalt tests. He also estimated that a commercial laboratory would have cost the department over $3,300 for the project in Cleveland County. However, the State Testing Laboratory completed the work for half the cost, or approximately $1,900. With this statistic in mind, Herrmann predicted that the Testing Laboratory would become an integral facet in the everyday work of the State Highway Department. He also commented that rigorous inspection from the Testing Laboratory ensured that Oklahoma’s roadway projects would continue to adhere to federal regulations and guidelines.

In addition to tests conducted at its Oklahoma City facility, Testing Laboratory technicians could establish a field laboratory at any highway construction or maintenance project. For example, if a project involved paving a stretch of roadway with asphalt, a field chemist tested all incoming materials, designed the asphalt mixture, and examined it routinely as work progressed. Similarly, full-time or part-time laboratory employees inspected cement manufacturing facilities throughout the state and submitted samples to the Testing Laboratory in Oklahoma City. In all, any material utilized in road building was subject to visual observations, chemical analyses, and various tests to determine its resiliency in relation to certain variables such as pressure and temperature. This combination of inspection, experimentation, and supervision reinforced the expanded role that the state government had assumed in overseeing Oklahoma’s roadways.

After approximately two years in operation, the Testing Laboratory was operating at full capacity and ensured that the best possible materials went into the construction of roads and bridges without substantially increasing the cost of these projects. At the end of 1926, the Department reported that the state highway system comprised of over 5,700 miles of roadway, the surfaces of which were “kept in the best condition possible for the use of the public travel at all times.”

Department officials went on to comment that “the very efficient functioning of the Highway Department Testing Laboratory,” combined with rigid enforcement by the Department’s engineers in the field, increased in “the quality of materials” used in highway construction. The Department also noted an overall decrease in construction costs in the years since the Testing Laboratory had been in operation.

By the end of 1926, the Testing Laboratory had outgrown its original space and was searching for a new location. By this time, the Highway Department noted that laboratory equipment was “obsolete” and in need of repair or replacement. Laboratory technicians and engineers were also...

23 *Annual Report of the State Highway Commission...1919 to 1924*, 52, 103.
24 Ibid., 104.
25 *Report of the State Highway Commission for the Years 1925 to 1926 Inclusive to the Governor of Oklahoma* (Oklahoma City, Oklahoma, January 1, 1927), 158-62 includes a detailed list of the variety of materials tested by the laboratory.
26 Ibid., 1.
27 Ibid., 2-3. There are other possible reasons why highway construction costs decreased during this period, the most notable of which being the Highway Department’s utilization of prison laborers. The cited report mentioned that two “convict camps” were in operation by the end of 1926. The same report recommended the continued use of incarcerated persons for road construction. See ibid., 3-4.
working in unhealthy conditions, as officials noted that the laboratory building required the installation of ventilation “to remove irritating and corrosive fumes….” In addition to outdated equipment and dirty air, work space was tight to the point that personnel had constructed additional office and storage space on site in their “spare time.”

Therefore, in early 1930, the Testing Laboratory relocated from its original, small wooden building to an “adjacent brick building, formerly used as a Federal Equipment warehouse.” According to the Department, this building “afforded considerably more floor space and has greatly improved the general working conditions.” Polk’s Oklahoma City Directory lists the location of this building near the intersection of Northeast 22nd Street and North Walnut Avenue. By this time, the State Highway Department had approximately 2,800 employees. These individuals oversaw the construction and maintenance of an over 6,400-mile-long state highway system with an annual budget of over $18.5 million.

Just four years later, however, on the morning of February 14, 1934, this brick building was destroyed by a fire. According to Department investigators, the fire “was caused either by defective wiring or by combustion of chemicals.” Regardless of its cause, the fire rendered the facility unusable and the damage was assessed at $30,000. One day after the fire, Department engineers insisted that the laboratory be rebuilt. Indeed, engineer Charles L. Wilson argued that a reconstructed Testing Laboratory was essential if Oklahoma’s highway construction projects were to remain under federal compliance.

Construction of the State Highway Department Testing Laboratory at 2311 North Central Avenue was completed by the end of 1934. The biennial report of the State Highway Commission published in December 1934 included a photograph of the new building. The address of the new building was originally listed at the intersection of Northeast 23rd Street and North Walnut Avenue. This address changed in 1942, when the Polk’s directory listed the Testing Laboratory at the intersection of Northeast 23rd Street and North Central Avenue. In 1944, the Polk’s directory listed the Laboratory at 2315 North Central Avenue. The Polk’s directory continued to list the Laboratory at this location until 1970, when it listed the building at 2311 North Central Avenue.

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28 Ibid., 155.
30 Polk’s Oklahoma City Directory (Kansas City: R. L. Polk & Co., 1930). This is the first time that the State Testing Laboratory appeared in Polk’s directory.
31 Report of the State Highway Commission…1929 to 1930, 12.
32 Report of the Oklahoma State Highway Commission For the Calendar Years 1933 to 1934 Inclusive to the Governor of Oklahoma (Oklahoma City, Oklahoma, December 31, 1934), n.p. The report does not provide any information on the architect, builder, or construction costs.
33 “Road Laboratory Must Be Rebuilt,” Daily Oklahoman, February 15, 1934, 3.
34 According to Polk’s directory, North Central Avenue extended north only to Northeast 13th Street at this time, which could explain why the new building was initially listed at the intersection of Northeast 23rd and North Walnut. By the mid-1940s, North Walnut Avenue was closed between Northeast 16th and Northeast 23rd streets.
Shortly after the new building’s completion, the *Daily Oklahoman* called it “one of the most modern testing laboratories in the nation….” It contained the office of the chief Testing Engineer and accommodated the work of thirty engineers and chemists. Within the first two years of operation at this location, these individuals examined over 680,000 bins of cement, over 1,000 samples of aggregate, and over 950 samples of sand utilized in highway construction projects throughout the state. By the late 1940s, the Testing Laboratory supported approximately 16,000 tests per month. These tests covered every aspect of highway building and maintenance, including investigating soil samples from construction sites, assessing the integrity of concrete or asphalt, and evaluating the quality of steel cables, paints/oils, or any other material utilized to maintain the stability and durability of a highway. The *Daily Oklahoman* commented on the extensive nature of the work involved at the building by stating, “Everything from the finest cement for an intercity highway to the gravel which might be used on a farm-to-market road goes through… the [highway] department’s materials testing laboratories at NE 23[rd] and Central.” The same article went on to endorse the repetitive and rigorous nature of the tests involved, commenting, “It’s next to impossible to slip an inferior product through the laboratories and have it come out with the engineers’ approval.” The completion of a one-story addition (plus a basement) to the westernmost end of the building by 1950 expanded the capabilities of the Testing Laboratory even further.

In 1976, the Highway Department was reorganized into the Oklahoma Department of Transportation (ODOT). That same year, employees from the Testing Laboratory relocated to the Department of Transportation building located at 200 Northeast 21st Street. Governor David Boren re-dedicated the Testing Laboratory at 2311 North Central Avenue as the Oklahoma Veterans Memorial Building. Converted to a new use, the building went on serve as the headquarters of the Oklahoma Veterans Affairs Department and housed state offices for the Veterans of Foreign Wars, the American Legion, and the Disabled Veterans of America.

By the early twenty-first century, the former Testing Laboratory building had fallen into disrepair. In 2006, the *Oklahoman* described it as an “out-of-the-way,” deteriorating facility located “off a dead-end street just west of the state Capitol….” The newspaper also quoted Veterans Affairs director Philip Driskell as stating, “It’s not a healthy work environment for any of the people that are here,” with employees and visitors subject to a leaking roof, inadequate

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36 “30 Experts Keep Watch Over Quality,” *Daily Oklahoman*, March 29, 1936, 8A.
37 *Report of the Oklahoma State Highway Commission for the Calendar Years 1935 and 1936 to the Governor of Oklahoman* (Oklahoma City, Oklahoma, December 31, 1936), 117-18.
38 “Test System Checks State Road Materials,” *Daily Oklahoman*, October 26, 1947, 6A.
39 According to the 1949-1950 biennial report, the Highway Department authorized the construction of the addition in 1949 and recorded a construction cost of $61,871. The report does not provide information on the architect, builder, or completion date. *Report of the State Highway Commission and Director to the Governor of Oklahoma for the period January 1, 1949 to December 31, 1950* (Oklahoma City, Oklahoma, January 16, 1951), 110.
plumbing, and crumbling walls. In 2017, the Department of Veterans Affairs vacated the building and relocated to the Vezey Veterans Complex at 2132 Northeast 36th Street.

Architectural Significance

At the time of its construction, the State Highway Department Testing Laboratory was notable for its clean look and modest, geometric touches inspired by the Art Deco architectural style. According to the guidebook Identifying American Architecture, “Art Deco is characterized by a linear, hard edge or angular composition often with a vertical emphasis and highlighted with stylized decoration.” The building is clad in blond brick, which, along with limestone, was a popular building material among Art Deco-inspired architecture throughout Oklahoma, including the Fire Alarm Building in Tulsa (NRIS #3000879). The Laboratory also conveys a “vertical emphasis” even though it is only one-story in height. It achieves this by having its exterior subdivided into bays of equal width and spacing. Each bay is framed by brick pilasters with cast stone caps and bases. Several modestly “stylized” decorative elements are present within each bay, including brick soldier courses directly below the roofline and, in several bays, cast stone polygons and keystones geometrically arranged within the courses. The most notable decorative element is the pedimented roofline above the building’s main entrance. This roofline has a cast stone cap and is flanked by cast stone volutes. These geometric elements, combined with the symmetrical orientation of the Testing Laboratory as a whole, reflect Art Deco’s emphasis on linear form and details.

Conclusion

When driving east towards the State Capitol building, one would not likely think about the modest, one-story brick building located on the corner of Northeast 23rd Street and North Central Avenue. Yet this building, and the engineers and chemists who worked within it, were key contributors to the formation of a statewide love affair with automobiles by the mid-twentieth century. The Testing Laboratory subjected all highway construction or maintenance materials to rigorous and extensive testing within its walls. In turn, this system ensured that drivers traveled upon safe and stable roadways throughout Oklahoma. Whereas in the early twentieth century, when road quality varied significantly and highway travel was a slow undertaking, the Testing Laboratory contributed to the evolution of the American roadway experience to one of speed, quality, and convenience. Although most Oklahomans did not consider the amount of testing and analysis involved with the road materials that their automobiles drove upon, this work was essential for the creation of a modern car culture that embraced consumption, innovation, and progress.

9. Major Bibliographical References

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

Books


Government Records and Publications


Oklahoma County Assessor. Oklahoma City.

Oklahoma County Clerk. Oklahoma City.


Newspapers

*Daily Oklahoman (Oklahoman)*. Oklahoma City. 1922-2006.
Reference Collections and Databases


Websites


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: ___________________________

Historic Resources Survey Number (if assigned): __________________________

10. Geographical Data

Acreage of Property 0.70 acres MOL

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: 35.492895  Longitude: -97.507646

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

The boundary includes less than one acre within the State Capitol Complex, beginning at the southeast corner of Lot 1 in Block 6 of the State Capitol Addition, extending west approximately 235 feet to the southwest corner of the building, then north approximately 135 feet to the sidewalk that extends along the south side of Northeast 23rd Street, then east for approximately 235 feet to the northeast corner of Lot 1, then south to the point of beginning.
Boundary Justification (Explain why the boundaries were selected.)

The State Highway Department Testing Laboratory is situated on Lots 1-3 in Block 6 of the State Capitol Addition. The State Board of Public Affairs did not confine development to the platted lots after this block was conveyed to the state. Therefore, the boundaries are limited to the area directly related to the Laboratory.

11. Form Prepared By

name/title: Catherine Montgomery AIA, President; Matthew A. Pearce, Ph.D., Historian
organization: Preservation and Design Studio, PLLC
street & number: 616 Northwest 21st Street, Suite 114
city or town: Oklahoma City state: Oklahoma zip code: 73103-1861
e-mail: cm@PandDStudio.com
telephone: 405-601-6814
date: May 3, 2019

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 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: State Highway Department Testing Laboratory
City or Vicinity: Oklahoma City
County: Oklahoma  State: Oklahoma
Photographer: M. Pearce; Preservation and Design Studio, PLLC
Date Photographed: February 2019; March 2019

Description of Photograph(s) and number, include description of view indicating direction of camera:

<table>
<thead>
<tr>
<th>Number</th>
<th>Subject</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>East-facing façade.</td>
<td>West</td>
</tr>
<tr>
<td>0002</td>
<td>South side elevation (left) and east-facing façade (right).</td>
<td>Northwest</td>
</tr>
<tr>
<td>0003</td>
<td>West elevation (left) and south side elevation (right).</td>
<td>Northeast</td>
</tr>
<tr>
<td>0004</td>
<td>North side elevation (left) and west elevation (right).</td>
<td>Southeast</td>
</tr>
<tr>
<td>0005</td>
<td>East-facing façade (left) and north side elevation (right).</td>
<td>Southwest</td>
</tr>
<tr>
<td>0006</td>
<td>Exterior of main entrance.</td>
<td>West</td>
</tr>
<tr>
<td>0007</td>
<td>Central corridor.</td>
<td>West</td>
</tr>
<tr>
<td>0008</td>
<td>Typical smaller space.</td>
<td>Southwest</td>
</tr>
<tr>
<td>0009</td>
<td>Conference room, west end of building.</td>
<td>North</td>
</tr>
</tbody>
</table>

Paperwork Reduction Act Statement: This information is being collected for applications 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.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

Location Map

35.492895, -97.507646
State Highway Department Testing Laboratory
Name of Property: Oklahoma County, Oklahoma
County and State: N/A
Name of multiple listing (if applicable)

Photo Key

1. 1934 CONSTRUCTION
2. 1949-1950 ADDITION
The State Highway Department Testing Laboratory is located at 2311 North Central Avenue, approximately two miles north of downtown Oklahoma City. It is closely associated with the everyday operations of Oklahoma's state government. The Oklahoma State Capitol building (NRIS #76001572) is located approximately one mile east of the Laboratory. The Oklahoma City National Guard Armory is located less than 0.1 miles to the west. Many state government buildings are located to the northeast and southeast along North Lincoln Boulevard, including the Will Rogers Building, the Office of the Attorney General, and the Jim Thorpe Office Building (historically, the State Capitol Office Building). Various businesses, including several fast food restaurants, are located along the north side of Northeast 23rd Street. The Centennial Expressway (Interstate 235/US Hwy 77) is approximately 0.25 miles west of the Laboratory.
Built in 1934 and 1949-1950, the State Highway Department Testing Laboratory is a one-story brick building that spans Lots 1-3 in Block 6 of the State Capitol Addition to Oklahoma City. It has an east-facing façade. Northeast 23rd Street extends the full length of the building’s north side elevation. Large, paved parking lots are located along the west (back) and south side elevations of the building.
The State Capitol Addition to Oklahoma City was platted by the State Capitol Building Company in 1911. In 1915, the company conveyed all of Blocks 6, 7, and 8 to the state. Although the state did not confine development to the platted lots, Lots 1-3 in Block 6 would become the site of the Testing Laboratory.
The State Highway Department Testing Laboratory was constructed in 1934 at the intersection of Northeast 23rd Street and North Central Avenue. The property first appears in the updated edition of the 1922 Sanborn maps published in 1949.
Close Up: 1949, Volume 2, Map #209
(Sanborn Fire Insurance Maps)

A closer view of the 1949 edition of the Sanborn map provides more details about the Laboratory. It is a one-story building that resembles the shape of a “T”. It has a brick-faced exterior and a clay tile block interior. The walls are 12 inches thick. The roof is supported by steel trusses and has an 18-inch-tall parapet.
The 1950 edition of the Sanborn map does not indicate any major changes in the immediate vicinity of the State Highway Department Testing Laboratory.
(Sanborn Fire Insurance Maps)

A closer view of the 1950 edition of the Sanborn map indicates no changes to the Laboratory.
The Big Picture: 1955, Vol. 2, Map #209
(Sanborn Fire Insurance Maps)

The 1955 edition of the Sanborn map illustrates the continued development of the State Capitol Complex.
A closer view of the 1955 edition of the Sanborn maps illustrates the completion of a square addition to the westernmost end of the Laboratory. The addition has a wood roof with an 18-inch-tall parapet. The Sanborn also notes that the Laboratory has a suspended ceiling system. Finally, this edition of the Sanborn maps lists the physical address of the Laboratory as 2317 North Central Avenue. This address differs from the Polk’s directory, which listed the physical address of the Laboratory as 2315 North Central Avenue until 1970, when it changed to 2311 North Central Avenue.
1934

View of the State Highway Department Testing Laboratory building shortly after its construction in 1934. (Report of the Oklahoma State Highway Commission For the Calendar Years 1933 to 1934 Inclusive to the Governor of Oklahoma, December 31, 1934)

1936

Two chemists at work in the State Highway Department Testing Laboratory. (“30 Experts Keep Watch Over Quality,” Daily Oklahoman, March 29, 1936, 8A)
This aerial photograph shows the location of the State Highway Department Testing Laboratory directly west of the Oklahoma State Capitol building. (Map Room, Oklahoma State University Library)

G. K. Goodrich, a physical testing engineer at the Testing Laboratory, examines a sample of cement after subjecting it to over 85,000 pounds of pressure. (“Test System Checks State Road Materials,” Daily Oklahoman, October 26, 1947, 6A)
Engineer Ray R. Miller examines a sample of asphalt in the Testing Laboratory. ("Test System Checks State Road Materials," *Daily Oklahoman*, October 26, 1947, 6A)

In 1976, the State Highway Department Testing Laboratory building was re-dedicated as the Oklahoma Veterans Memorial Building. By 2006, the *Oklahoman* described the building as rundown and deteriorating. Photograph by John Clanton. (Michael McNutt, “Agency Seeks Building Funds,” *Oklahoman*, December 27, 2006, 13A)
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0001
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0002
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

Section number _11_ Page _17_

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0004
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0005
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0006
State Highway Department Testing Laboratory
Name of Property
Oklahoma County, Oklahoma
County and State
N/A
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OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0008
State Highway Department Testing Laboratory

Name of Property
Oklahoma County, Oklahoma
County and State
N/A
Name of multiple listing (if applicable)

OK_OklahomaCounty_StateHighwayDepartmentTestingLaboratory_0009