

Old Maps, Story Maps, and Aerial Photos

**How Oklahoma State University Library is
Bringing Oklahoma's Cartographic Past,
Present, and Future To Life**

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Outline

1. About Maps and Spatial Data
2. mapsOK
3. Stillwater from the Air
4. Georeferencing the Oklahoma Digital Maps Collection
5. MPSI Aerial Photo collection
6. Creating and supporting Story Maps at OSU
7. Virtually Reconstructing Williams Hall
8. OSU Digital Collections Tab

About Maps and Spatial Data

What we do

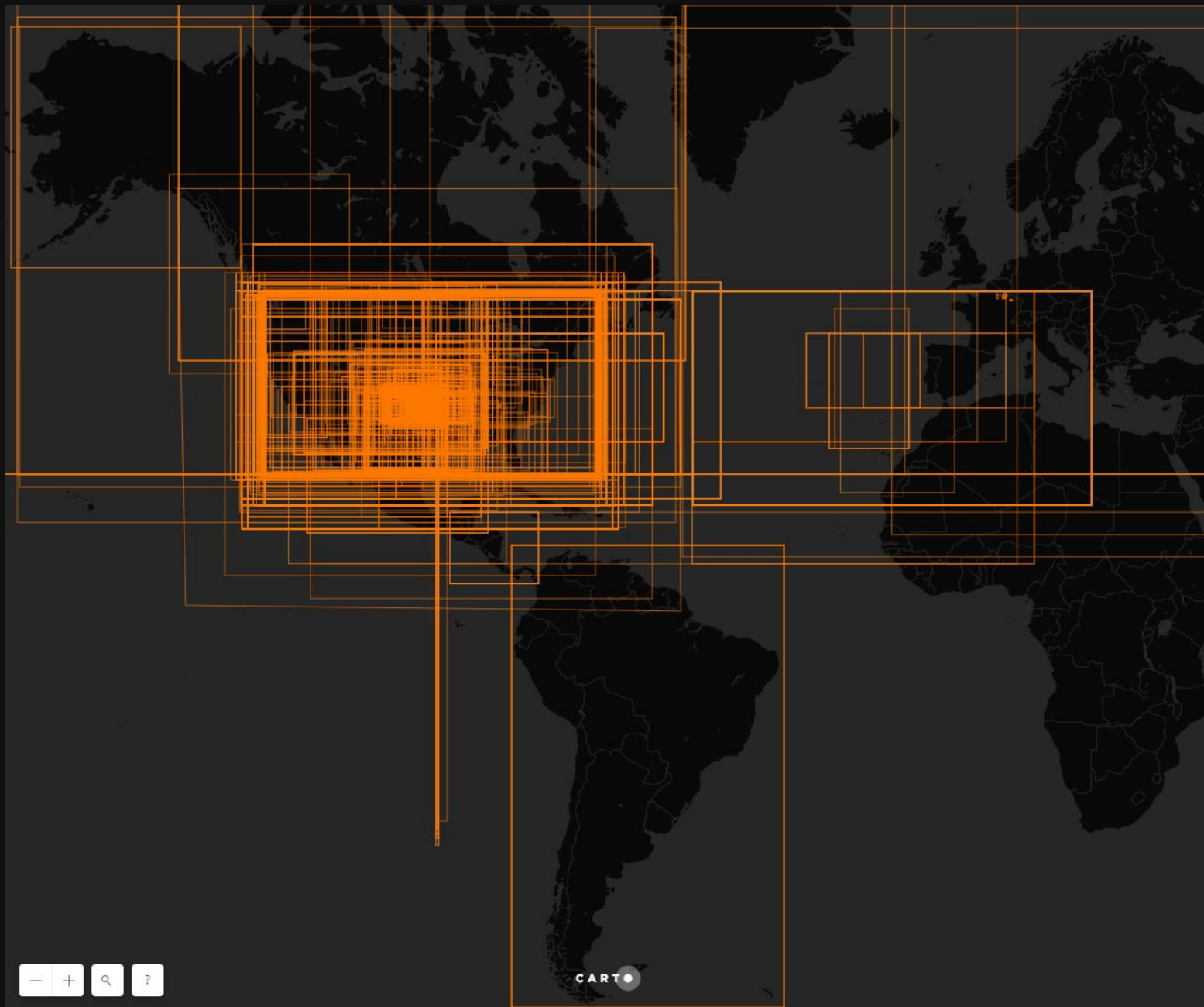
For today, the focus will be on the digital projects

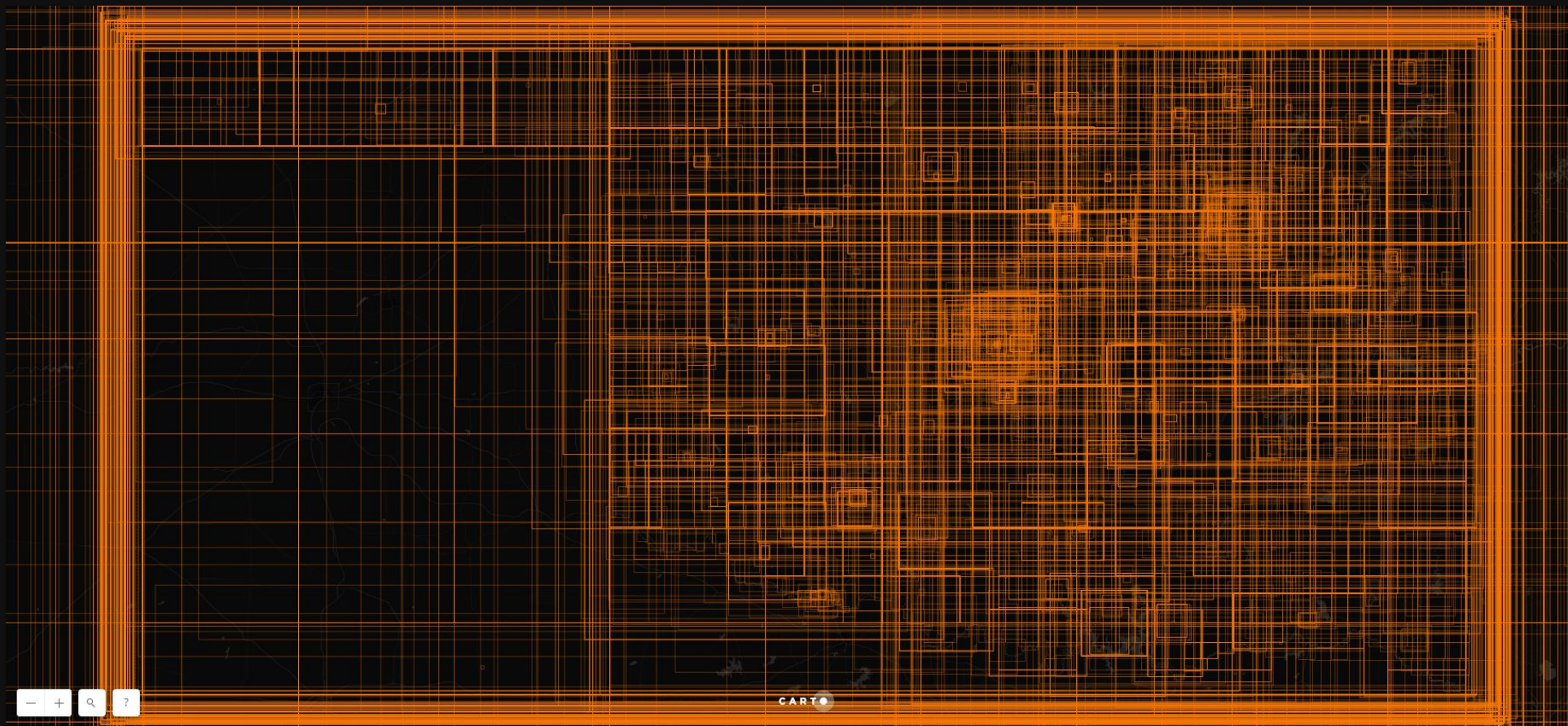
mapsOK

Finding the maps you need, using a map!

Open source technologies, including Leaflet, Carto,
Bootstrap

Relies on bounding boxes hand-crafted for each map in our collection.





As pretty as they are, the boxes aren't visible to users.

They are used to filter results based on the position of the map. Zoom the map to Stillwater, you'll see maps of Stillwater. Scroll down the results list and you'll start to see mainly maps of Payne County.

Maps



Search by text



Stillwater,
Oklahoma
Payne County

1970



City of
Stillwater,
Okla.
Copyrighted,
not able...

1951

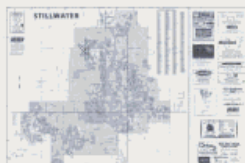


Stillwater,
Oklahoma



Map of Payne
County with
Stillwater,
Perkins...

2009



Stillwater,
Oklahoma
Copyrighted,
not able to

2010

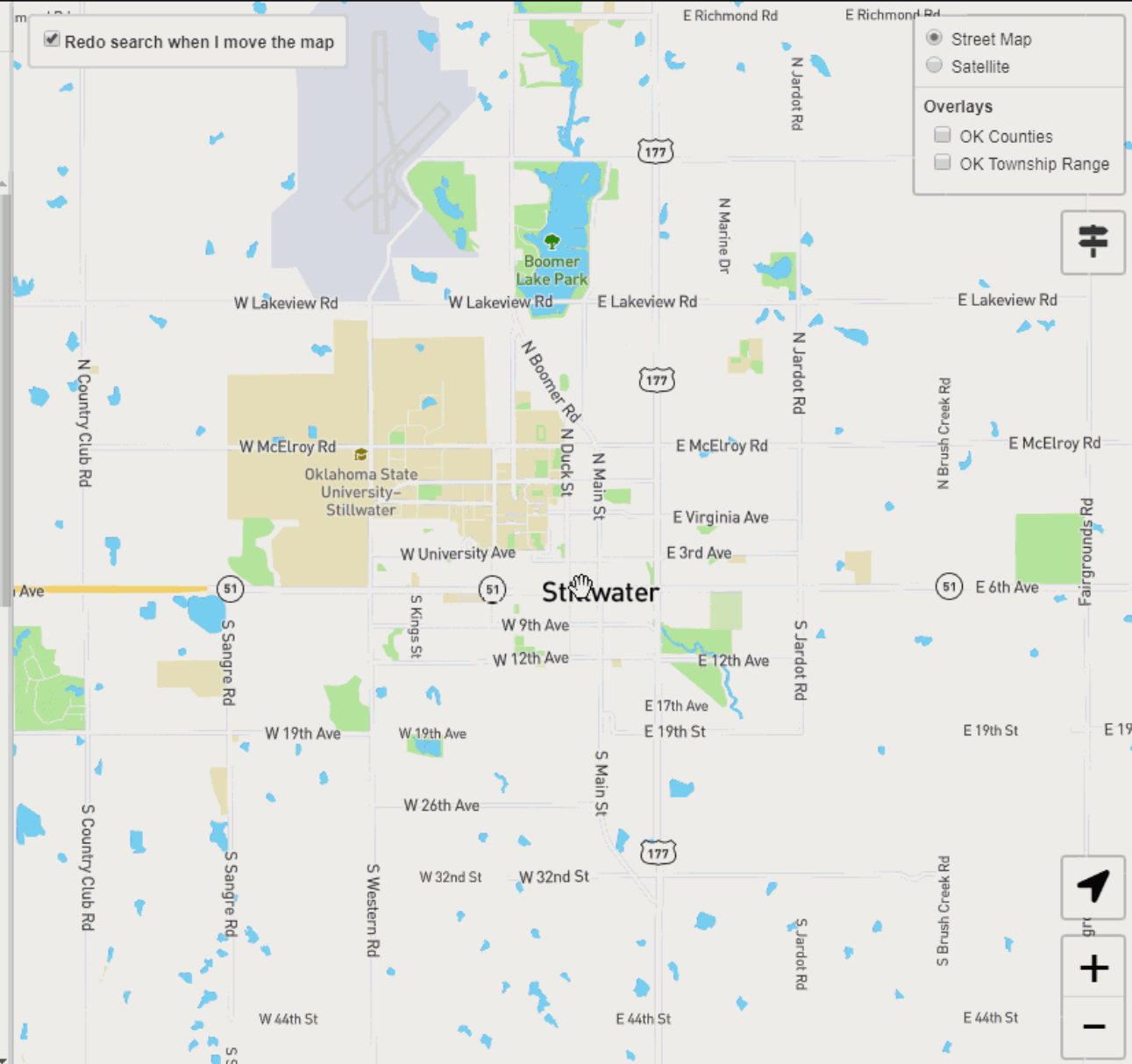


☒ Redo search when I move the map

- ☒ Street Map
- ☐ Satellite

Overlays

- ☐ OK Counties
- ☐ OK Township Range



The filtering is accomplished using querying available in the PostgreSQL spatial extension (PostGIS).

Nerdy interlude

```
SELECT cartodb_id FROM {{table_name}} WHERE {{nonspatial_filt}}

ST_GeomFromText('{{bbox_wkt}}', 4326) && the_geom

ORDER BY
(
CASE
WHEN ST_Contains( St_Transform(St_geomfromtext('{{bbox_wkt}}',
4326),3857), the_geom_webmercator)
THEN area
WHEN ST_Within( St_Transform(St_geomfromtext('{{bbox_wkt}}',
the_geom_webmercator)
THEN ST_Area(St_Transform(St_geomfromtext('{{bbox_wkt}}',
ELSE
ST_Area(ST_Intersection(
St_Transform(St_geomfromtext('{{bbox_wkt}}', 4326),
the_geom_webmercator)
```

Another fun (to me at least!) feature of mapsOK is the direct integration of zoomable/pannable versions of each map, utilizing the IIF protocol.

Maps



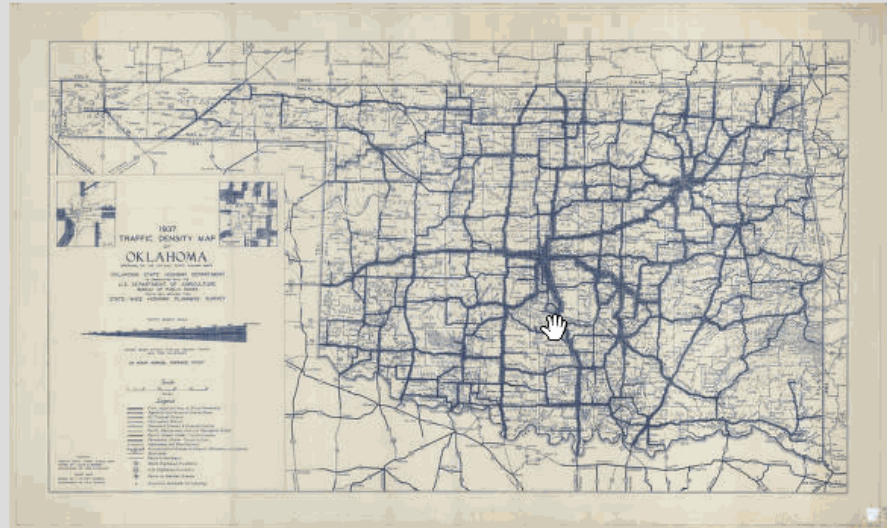
traffic density

1937 Traffic Density Map of Oklahoma



1937 Traffic Density Map of Oklahoma

<https://cdm17279.contentdm.oclc.org/cdm/ref/collection/OKMaps/id/8393>



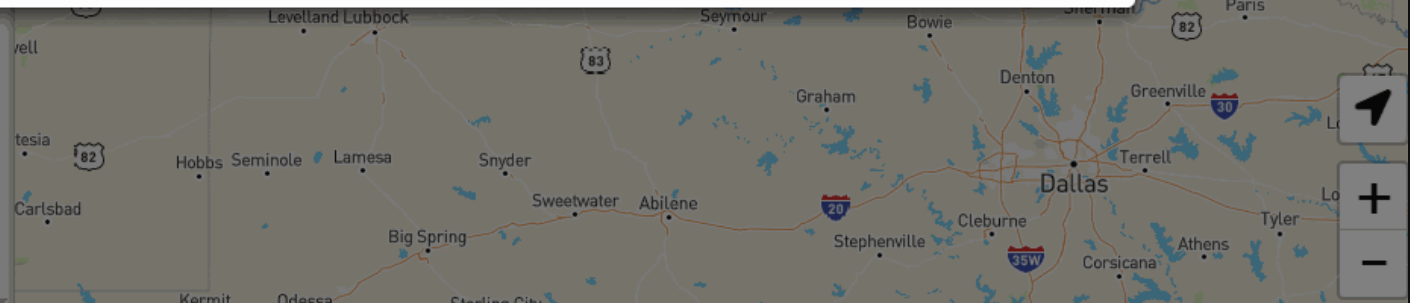
Leaflet

Close

Rail Traffic
Density, 1974

1937 Traffic
Density Map
of Oklahoma

1939 Traffic
Density Map
State
Highway
System...



Fullscreen!

Maps



geologic

Oklahoma
and Indian
Territories 1906

Map of
Oklahoma's
State
Highway
System 1952

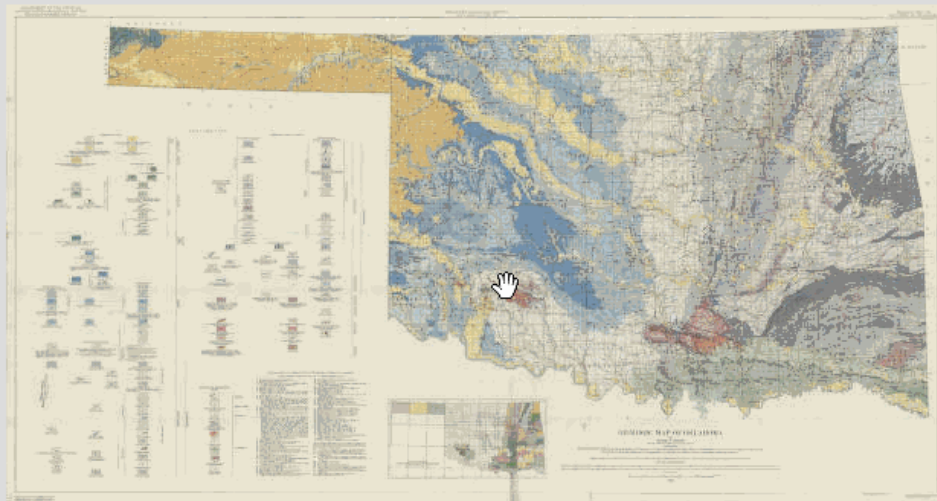
Highways of
Oklahoma 1954

Oklahoma
Highways
1957

Geologic Map of Oklahoma



Geologic Map of Oklahoma

<https://cdm17279.contentdm.oclc.org/cdm/ref/collection/OKMaps/id/4147>

Leaflet

Close

- ☒ Street Map
- ☐ Satellite

Overlays

- ☐ OK Counties
- ☐ OK Township Range



mapsOK is accessible from our website
(<https://info.library.okstate.edu/map-room/mapsok>).



Search by text



Filter options

Untitled



Turnpike routes
into and thru
Oklahoma

1963

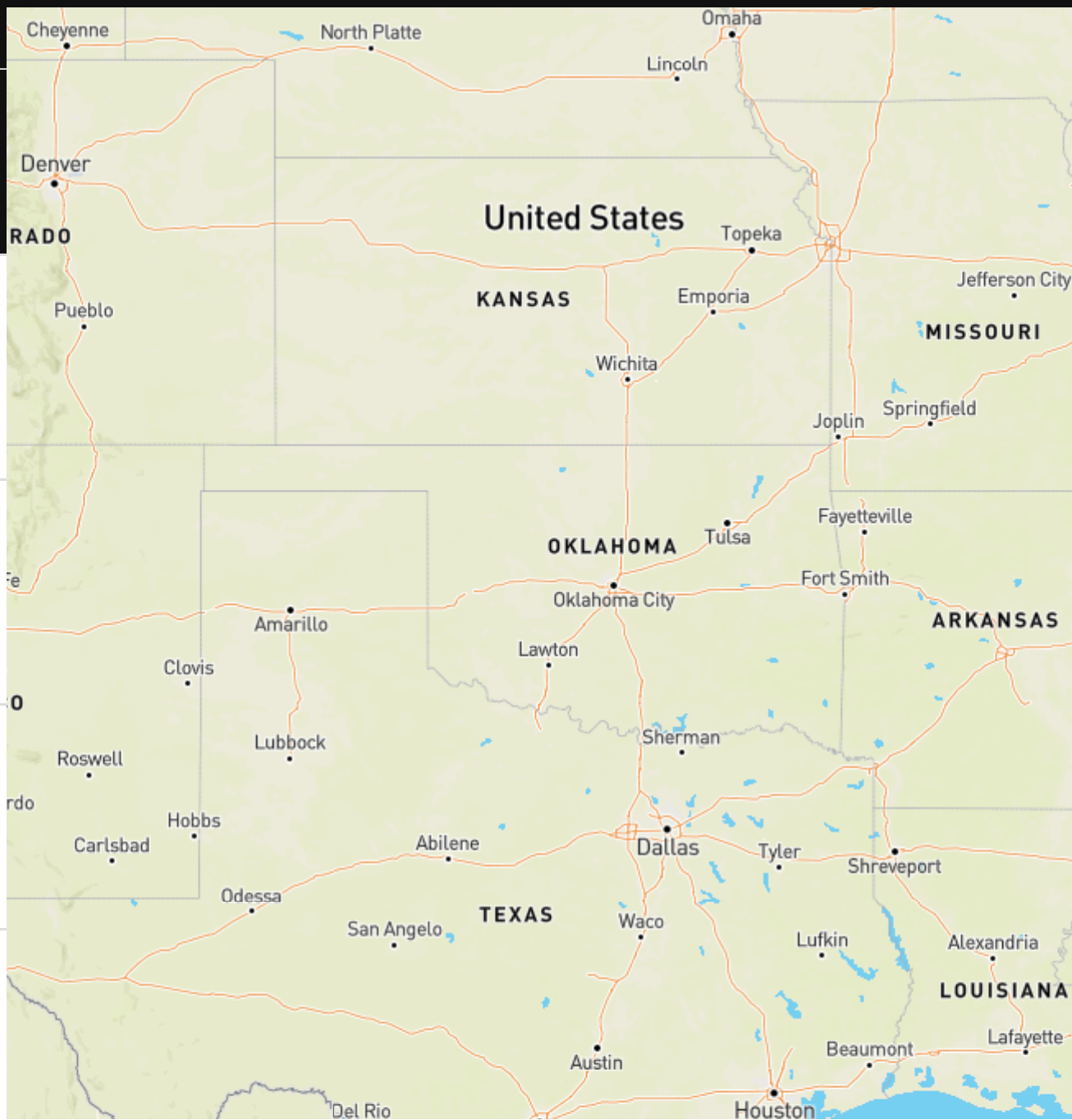


Rand, McNally &
Company's
Indexed Atlas...

1885



Rand, McNally &
Co's Indian
Territory

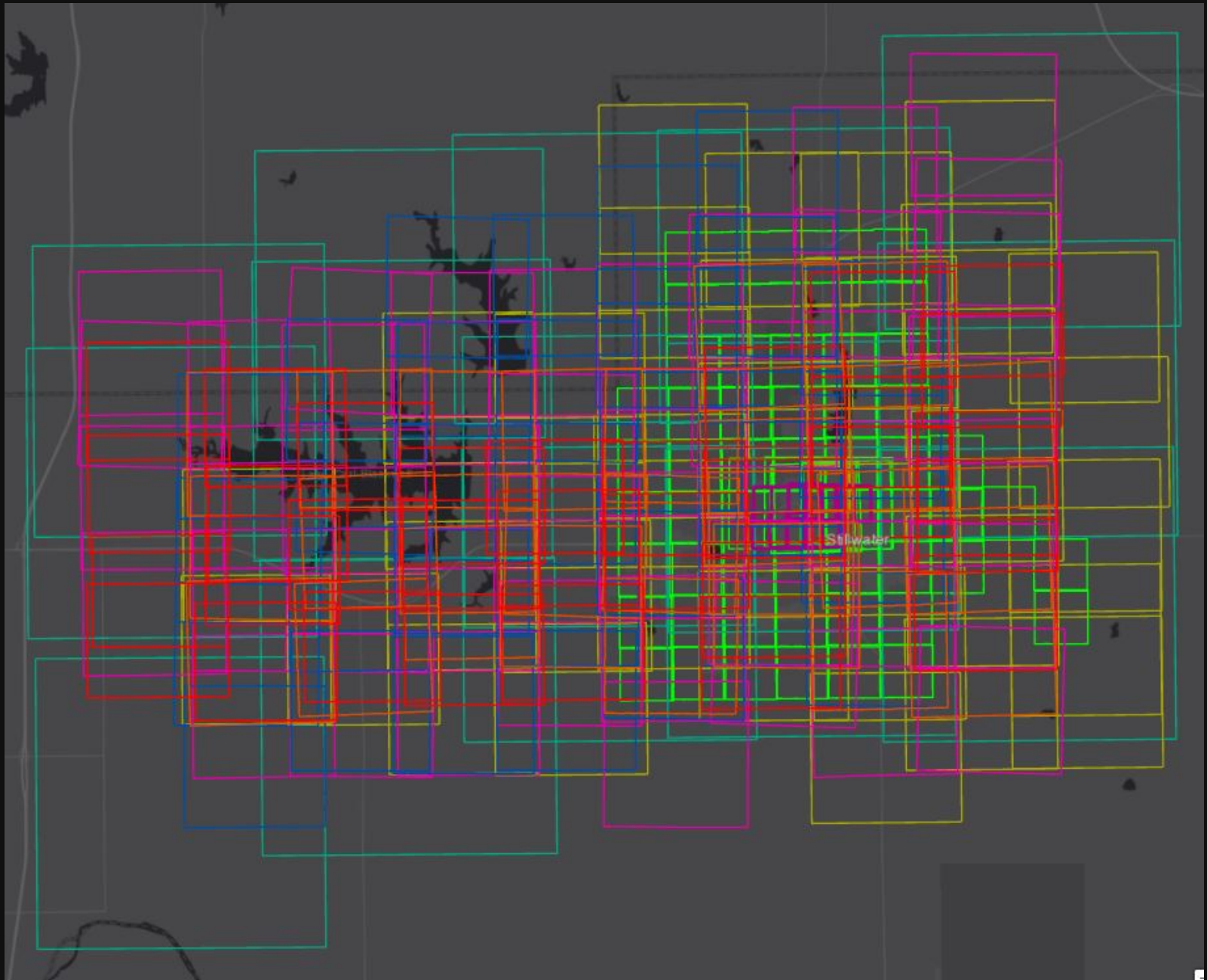




Stillwater from the Air

In the summer of 2017, a stalwart group of student employees undertook a project to 1) locate, 2) scan, and 3) **georeference** aerial photographs showing the town of Stillwater and the surrounding area.

In the end we produced layers covering every decade between the 1930s and 1990s.



I took the need to create a web interface for our work as an opportunity to dig into recent advances in JavaScript development practices.

Things such as:

- React
- ES6
- Webpack
- Babel

This approach involved a greater initial investment of time, but the effort will pay dividends in the longer term.

STILLWATER FROM THE AIR



☒ Map Labels

Search for a Stillwater address



While comparing eight different layers on a "normal" screen is not entirely practical, it makes for intriguing possibilities using larger displays.

STILLWATER FROM THE AIR

Welcome to Stillwater from the Air!

With this website you can see how Stillwater and Oklahoma State University have changed over the years.

Click or tap on one of the years at the bottom of the screen. You can select up to 8 at a time. Click or tap it again to turn it off.



Georeferencing Maps

from the Oklahoma Digital Maps Collection

We've begun a *longterm* project of georeferencing the 10,000 (and growing) maps in our digital collection.



We're initially focusing on the 2,000 maps that comprise the McCasland Collection. These maps are all sourced from the U.S. Congressional Serial Set. As largely federal government publications, these maps are free of copyright concerns.

Georeferenced Maps - Oklahoma Digital Maps Collection

 Enter search terms

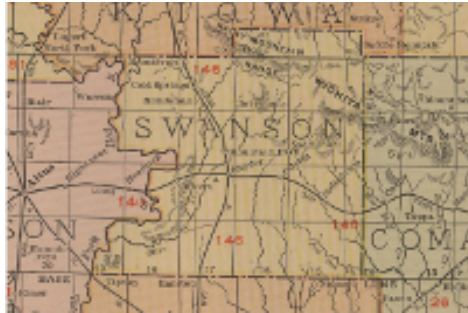
 Grid

 Relevance


 Filter

 Sign In

38 items



Swanson County

 Web Mapping Application by [lib_map](#)

Updated: 9/16/19

A story map introducing Oklahoma's "lost" county.

[View item details](#) 



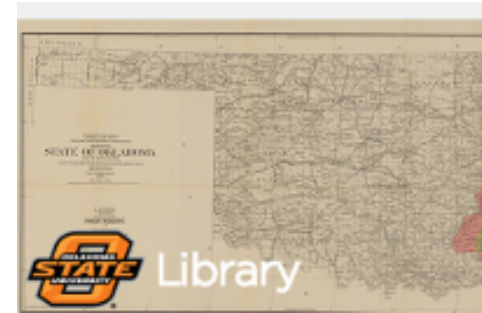
oksm_brawley_005a

 Tile Layer by [krdyke](#)

Updated: 3/29/19

Georectified version of Colton's Indian Territory, published 1873. Part of the Russal Brawley

[View item details](#) 



oksm_SS_5154_p20c

 Tile Layer by [lib_map](#)

Updated: 3/26/19

Map illustrating proposed State of Oklahoma, Act of June 16, 1906, Proposed forest reserve in

[View item details](#) 



MPSI Aerial Photos

In the early 1990s the OSU Library received a donation of thousands of large scale, high quality aerial photos (many of which are in color) of urban areas all over the US, as well as several international locations.

We're now beginning the process of digitizing/georeferencing this widely ranging collection. Our first test run was of Phoenix, AZ in 1990.



Story mapping at OSU

Making story maps within the Library and
supporting story map creation across the
University.

Swanson County

The life and times of Oklahoma's "lost" county

Virtually Reconstructing Williams Hall

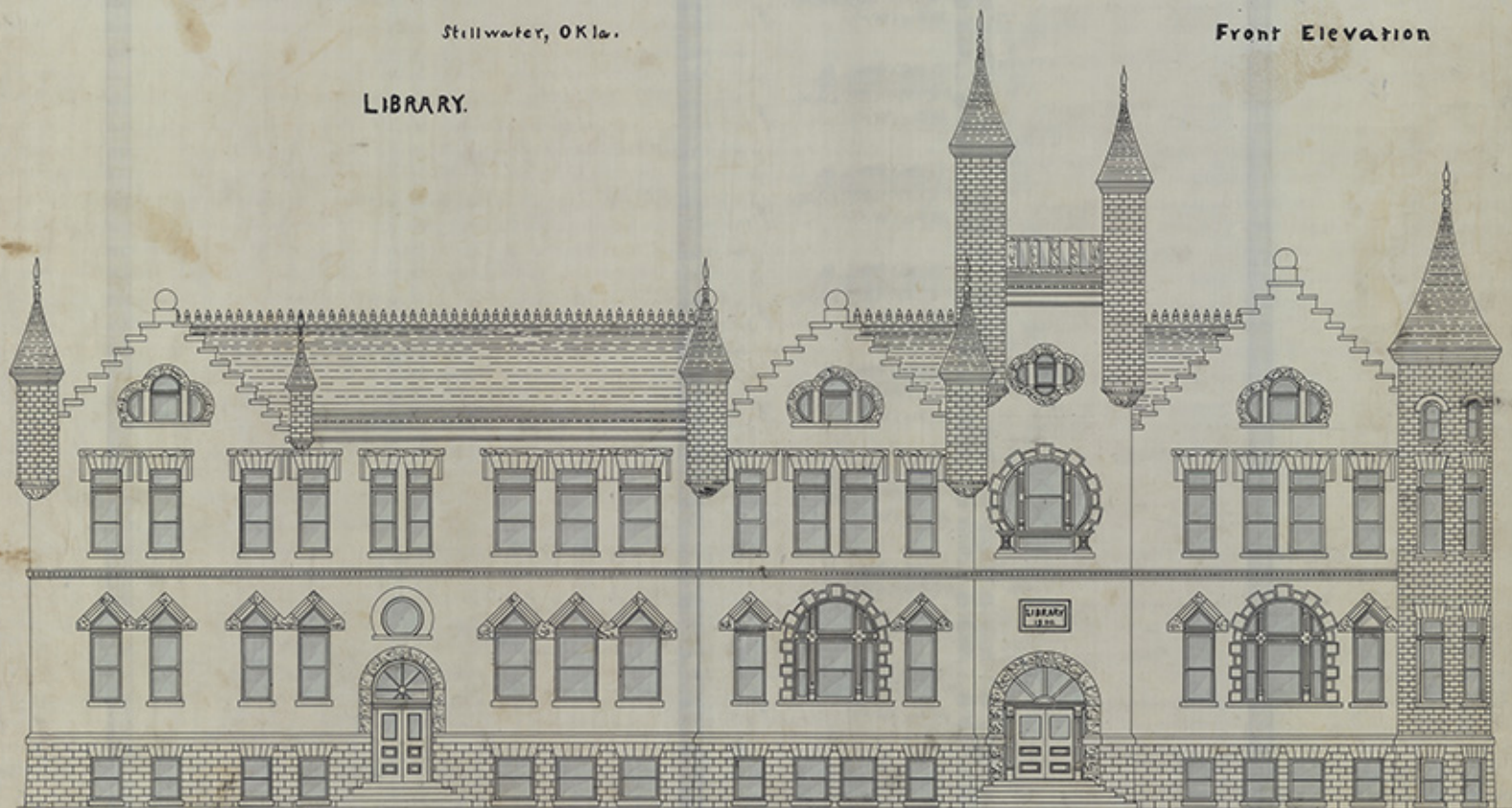
The OSU Library Archives houses floorplans, schematics, and photographs for nearly every building that has stood on campus.

A. and M. COLLEGE

Stillwater, Okla.

LIBRARY.

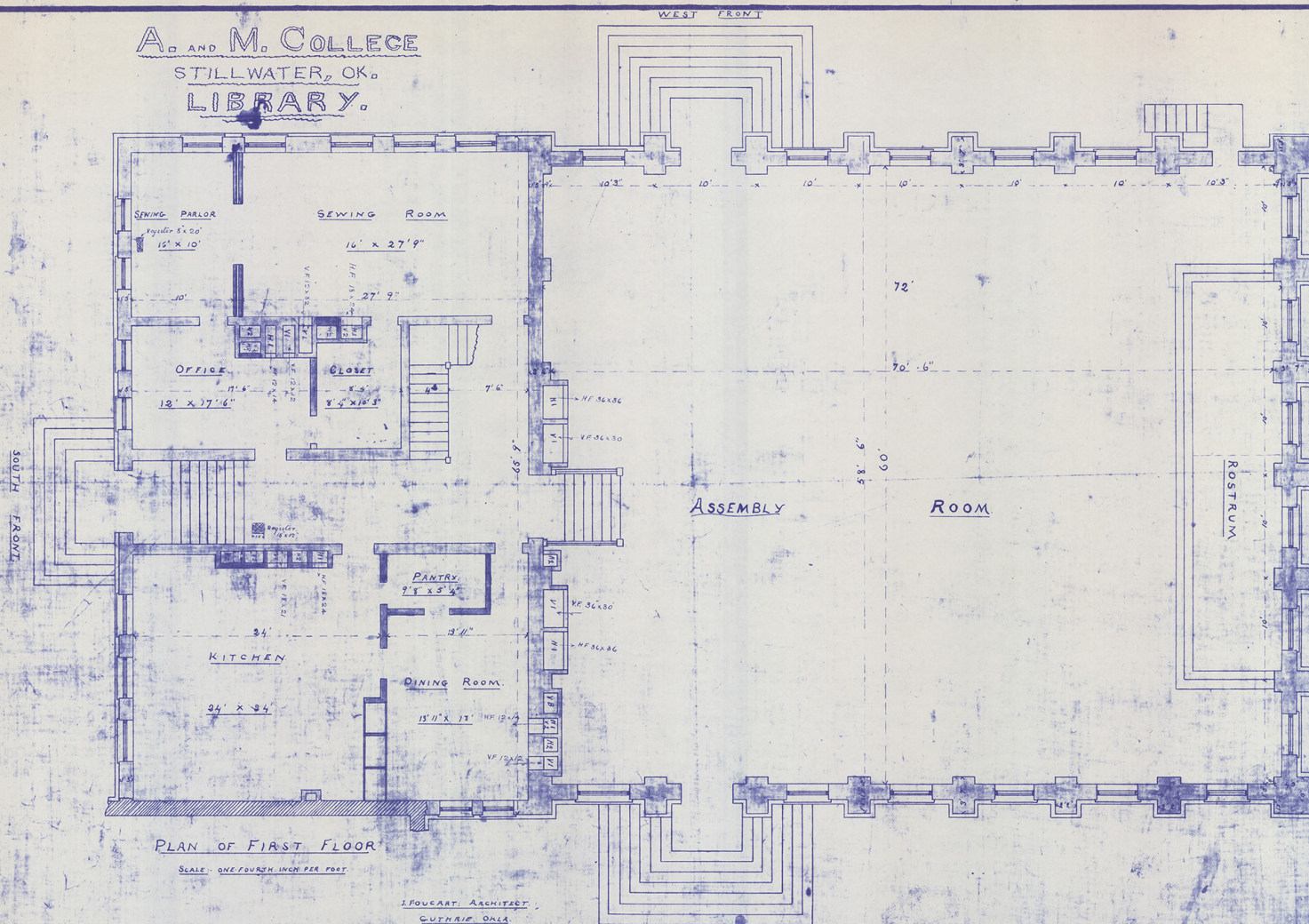
Front Elevation

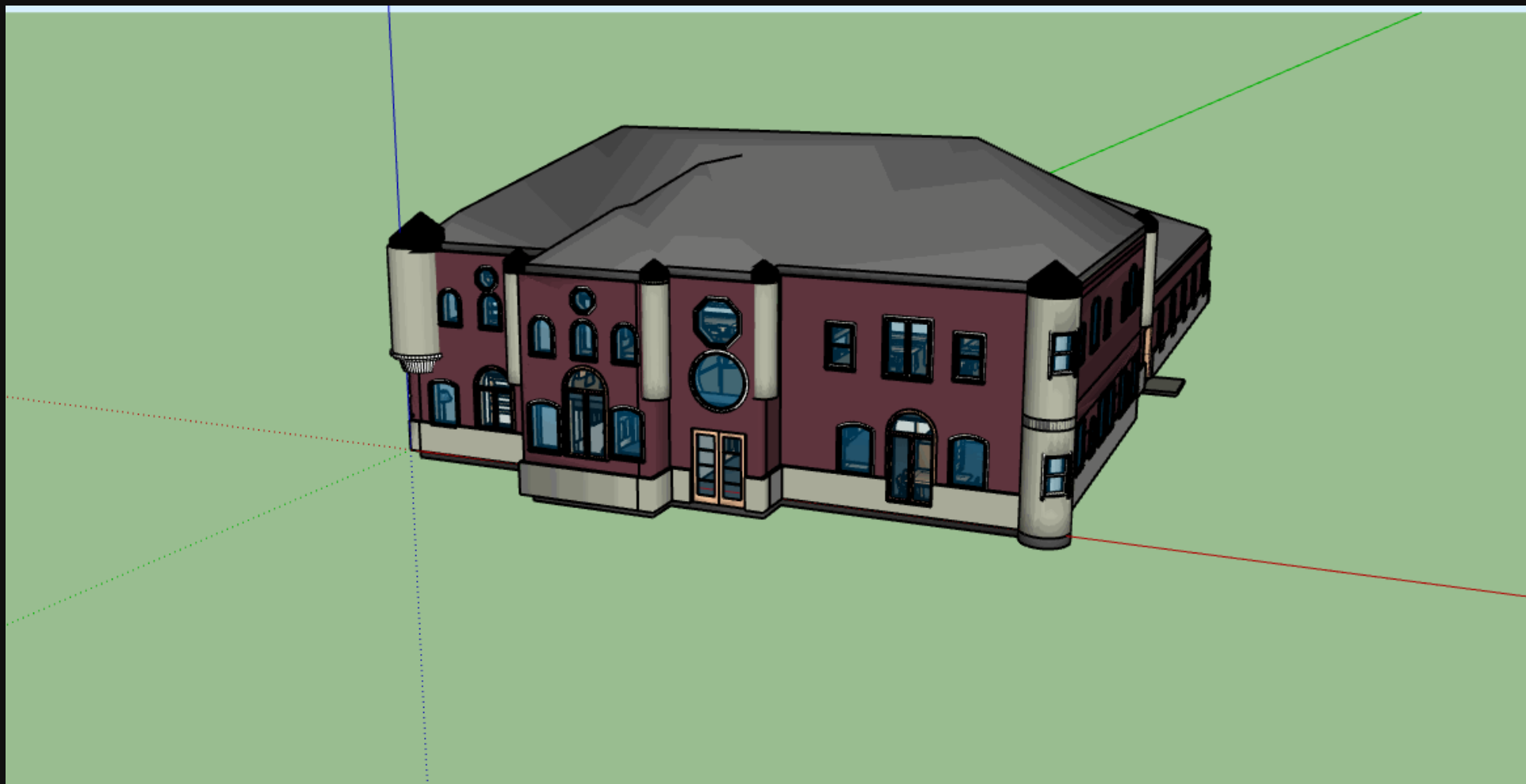


Scale $\frac{1}{4}$ inch per Foot

J. FOUCART ARCHITECT
GUTHRIE, OKLA.

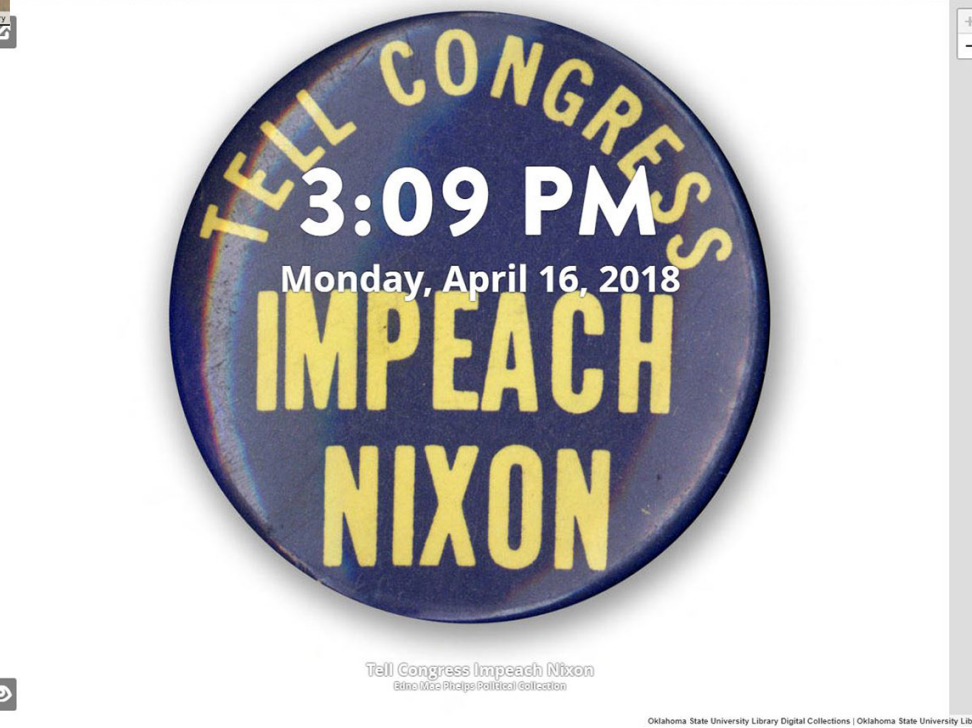
A. AND M. COLLEGE
STILLWATER, OK.
LIBRARY.





OSU Digital Collections Tab

IIIF and the opening of OSU collections.



Available as an extension for both **Chrome** and
Firefox.

Wrapping up

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