



WV DOT Scanning Project



Presented By: WV GIS Technical Center
November 20, 2024





Table of Contents

01

Project Overview

Overview of our system design and application.

02

Project Operation

How we process plans at the WVGISTC.

03

Project Statistics

Current statistics for the project.



01

Project **Overview**



Project Goals ✦

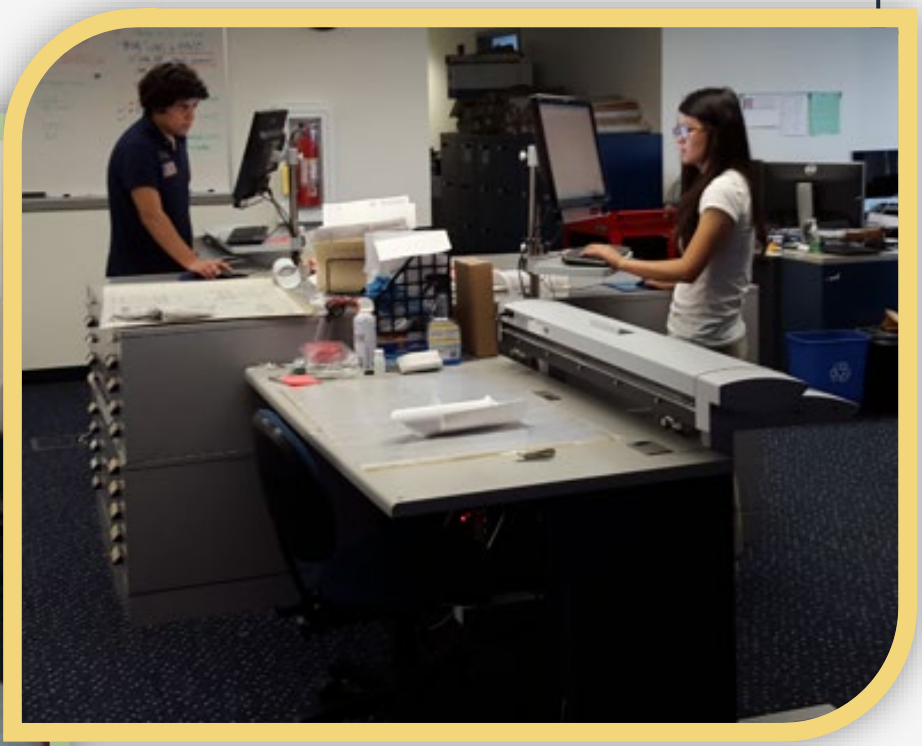
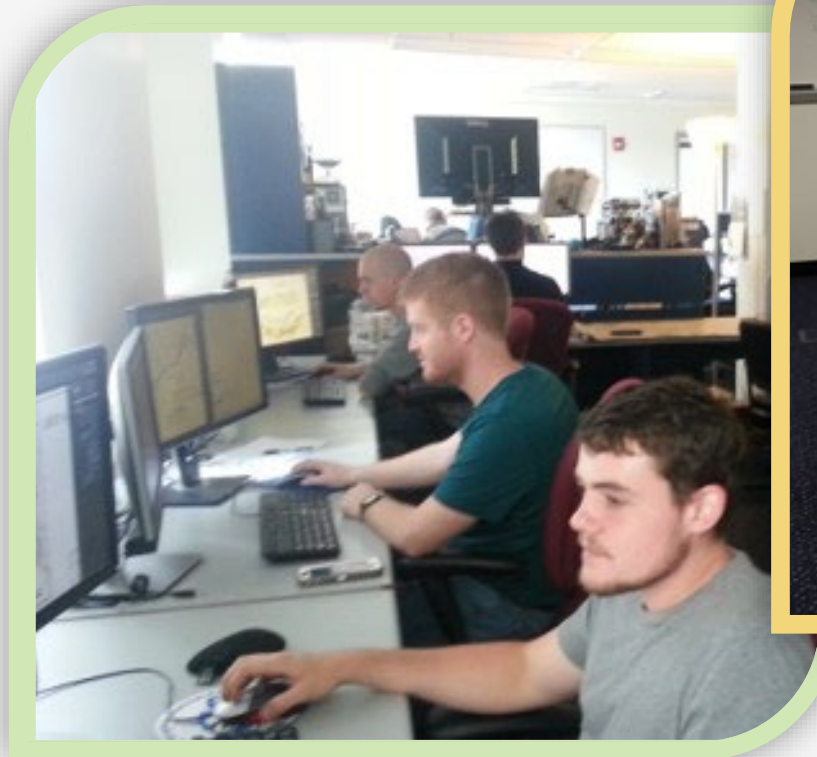


- **Improved Management and Archival System**
 - Electronic database manages plan sets and associated documents.
 - Eliminates lost drawings, misfiled drawings, and deterioration of drawings.
 - Consolidates record plan sets in one location in a digital database.

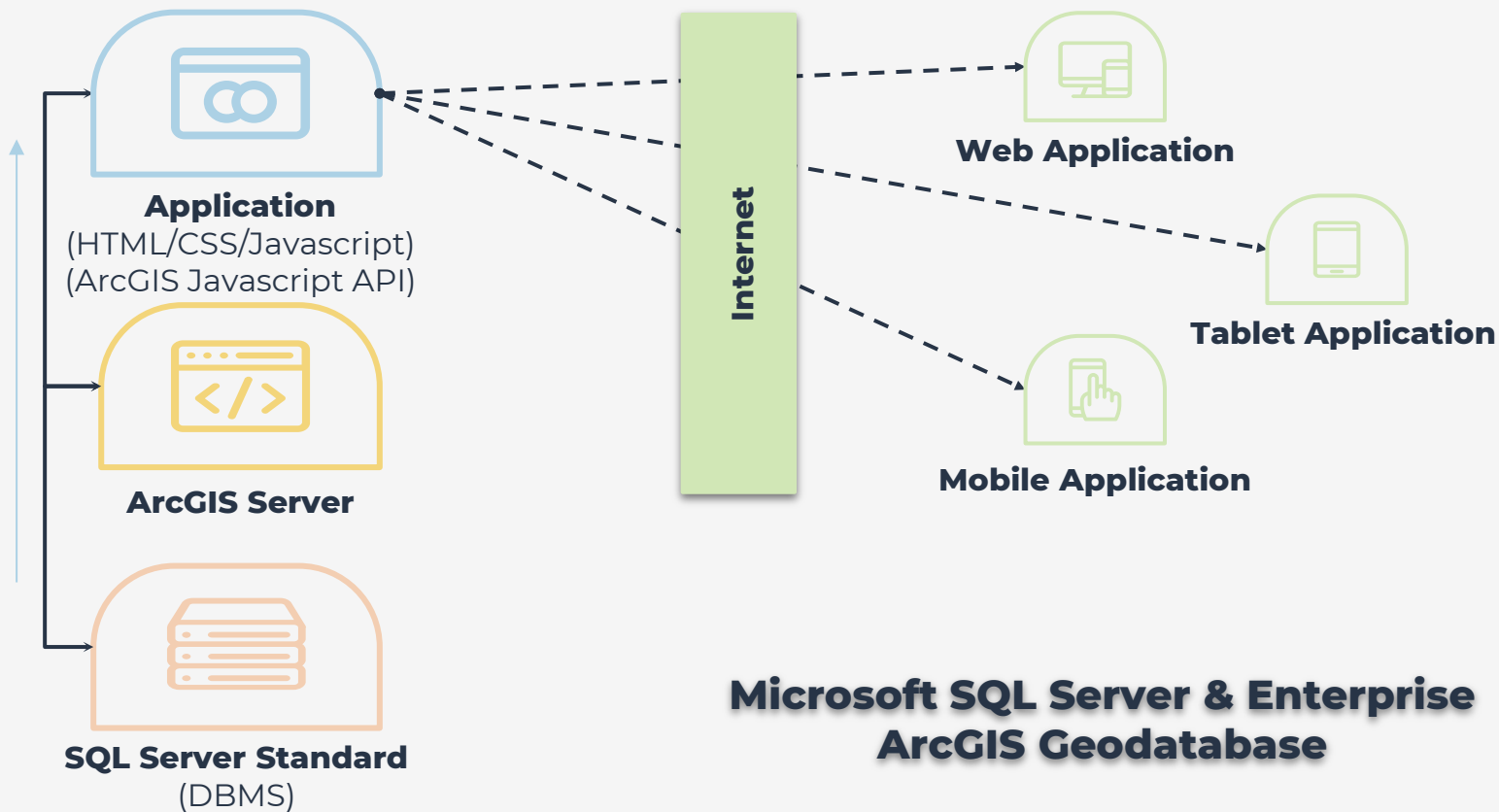
Project Goals

- **Faster and Easier Access to Drawings**
 - Accessible by anyone, at any time, from anywhere.
 - Improved document accessibility for both internal and external users.






System Design



Online Highway Plan Locator

https://www.mapwv.gov/dotplans/ProjectDetails.php?scanID=6887



West Virginia
Department of Transportation

Project: P_24_2_0052_00_000_130_006887

Scan ID: 6887
 Project Title: Bottom Creek to LandGrant to Eckman to Keystone
 Federal Project: 2048-B
 State Project: McDowell
 County: 10
 District: Construction Plan
 Plan Type: U.S. Highway
 Sign System: 52
 Route: 0
 Mile: Archib
 Special ID:
 Bridges:
 Fiscal Year: 1930
 Supplemental Code ():
 Project Status: Final C
 Book Location: Tech C
 Scanning:
 PDF: PDF
 GeoTIFF: GeoTIFF
 Map: Show
 Comments:
 ProjectWise:

Query URL: <http://www.mapwv.gov/dotplans/ProjectDetails.php?scanID=6887>

Email Address:
Close



mapwv.gov/dotplans/index.php

Highway Plans Locator

Search and View Scanned Highway Plans

Enter one or more search criteria

Free Text:

County: Sign System: Project Title:

Route: (ends in mile) Project/Year: State Project:

Mile Marker: (starting mile) (Through) ending mile Project Key:

Fiscal Year: (starting year) (End Year) ending year Bridge:

Search Reset Filters Show first 100 matches only

Query URL: <https://www.mapwv.gov/dotplans/index.php?scanID=6887>

View Results in Map Viewer: [https://www.mapwv.gov/dotplans/index.php?scanID=6887&view=MapViewer](#)

More than 160 matches out of 1512 published scans

ID	Project Key	Project Title	Federal Project	State Project	County	Sign System	Year	Route	Mile	Bridge
141	E_02_2_0009_00_000_100146 (PWS)	Rampge Street Extension	AJ03-00560055	X302-0056-00-03	Bartholomew	County	2010	0	0	---
148	E_02_2_0009_00_000_100188 (PWS)	Rampge Street Extension	TP-00000070	X302-0000-00-02	Bartholomew	County	2010	0	0	10044-10045
150	E_02_2_0081_00_000_100150	Tabor Station Connector	EB-0818 (084)	X302-0818-00-02	Bartholomew	State	2008	01	0	10050
217	E_02_2_0011_00_000_100017	Industrial Park Access Road		0202-1000-00-00	Bartholomew	County	1998	11	1	---
218	E_02_2_0011_00_000_100018	Industrial Park Access Road	EDS-01-01-0014	X302-1010-00-00	Bartholomew	County	1998	11	0	---
219	E_02_2_0011_00_000_100019	Industrial Park Access Road	X302-1010-00-04		Bartholomew	County	1998	11	0	---
237	E_02_2_0001_00_000_100017	Hopewell & Eisenhower Bridges	00-02010001	0202-0117-00-00	Bartholomew	Interstate	2002	01	18	10023-10034-02047-1-02148-1
243	E_02_2_0009_00_000_100111	Rehoboth Turn Off over CSX RR	TP-00000090	X302-0000-00-04	Bartholomew	County	2010	0	0	10047-0
375	E_02_2_0081_00_000_100085	I-81 Bypass	00-0011040008	0202-01-00-05	Bartholomew	Interstate	1999	01	8	---
403	E_02_2_0009_00_000_100000	LuPond Interchange Bridge		0202-00-00-05	Bartholomew	State	1999	001	5	02160-0
505	E_02_2_0019_00_000_100005	Parsons Ford Bridge		0202-00-04-04	Bartholomew	State	1999	19	4	3762
690	E_02_2_0011_00_000_100095	Plan and Profile for Construction of Massive Retention Wall			Bartholomew	U.S.	1998	14	0	10020
718	E_02_2_0005_00_000_100018	Mission - Tabor Road	00001		Bartholomew	County	1948	5	0	---
730	E_02_2_0009_00_000_100020	Rehoboth Creek, Box Culvert	00F-00000000	0202-04-01	Bartholomew	State	1999	0	4	3002
732	E_02_2_0009_00_000_100022	WV Route Over York Creek	00F-00000000	0202-04-01	Bartholomew	State	1999	0	4	3002
1199	E_02_2_0009_00_000_100199	Tipton Valley Road	F 117 ()		Bartholomew	Other	1820	0	0	2545
1220	E_02_2_0011_00_000_100220	Delong Bridge Over Rte. 11	00-00100000		Bartholomew	U.S.	1998	0	0	4198
1802	E_02_2_0003_00_000_100182	W 33 Barbours	CH-00000000	X001-0121-00-01	Bartholomew	NAL	1802	33	22	1166-0
1803	E_02_2_0003_00_000_100183	Tipton Valley Floor Bridge	CH-00000000	X001-0121-00-05	Bartholomew	NAL	1802	33	22	1166-0
1198	E_02_2_0003_00_000_100180	W 33 Barbours	CH-00000000	X001-0121-00-09	Bartholomew	NAL	1802	33	22	1166-0
1307	E_02_2_0002_00_000_100130	WV 82 Bridge Over York Creek	00F-00000000	0202-00-10-14	Bartholomew	State	1998	02	19	1600-0
1444	E_02_2_0009_00_000_100444	Philips Bridge and Interchange	00F-00000000	0202-00-17-24	Bartholomew	U.S.	1979	200	17	---
1773	E_02_2_0008_00_000_100173	Carroll County Bridge No. 2013	001-200-17-24	0201-20-17-24	Bartholomew	County	2003	36	0	---
1979	E_02_2_0020_00_000_100197	Brown Creek - Justice	F 117(1)		Bartholomew	State	1998	200	0	---
2141	E_02_2_0002_00_000_100214	Reynolds Creek Bridge		0201-20-10-42	Bartholomew	State	1965	02	19	---
2020	E_02_2_0002_00_000_100202	WV Rte. 92 Over Sandy Creek Near Dent	00F-00000000	0201-02-20-20	Bartholomew	State	1994	02	26	4115
2023	E_02_2_0008_00_000_100203	Tipton South Fork Bridge	CH-00000000	0201-01-10-00	Bartholomew	County	1997	0	0	4230
2445	E_02_2_0011_00_000_100245	Falling Yellows Mill Bridge		0203-10-00-00	Bartholomew	County	2003	11	0	10411
2706	E_02_2_0009_00_000_100270	U.S. 91 Barbours County	JAFPS 310-011		Bartholomew	U.S.	1945	00	0	---
2728	E_02_2_0002_00_000_100228	WV 92 Over York Creek	00F-00000000	0201-02-10-14	Bartholomew	State	1998	02	19	1602
2729	E_02_2_0020_00_000_100229	Belington - Elbridge Rd.	A.E.P.A. 310-011		Bartholomew	U.S.	1945	20	0	---
2078	E_02_2_0020_00_000_100207	Carroll County Bridge & Approaches	0-00001	0474	Bartholomew	County	1991	20	0	---

<http://mapwv.gov/dotplans/>

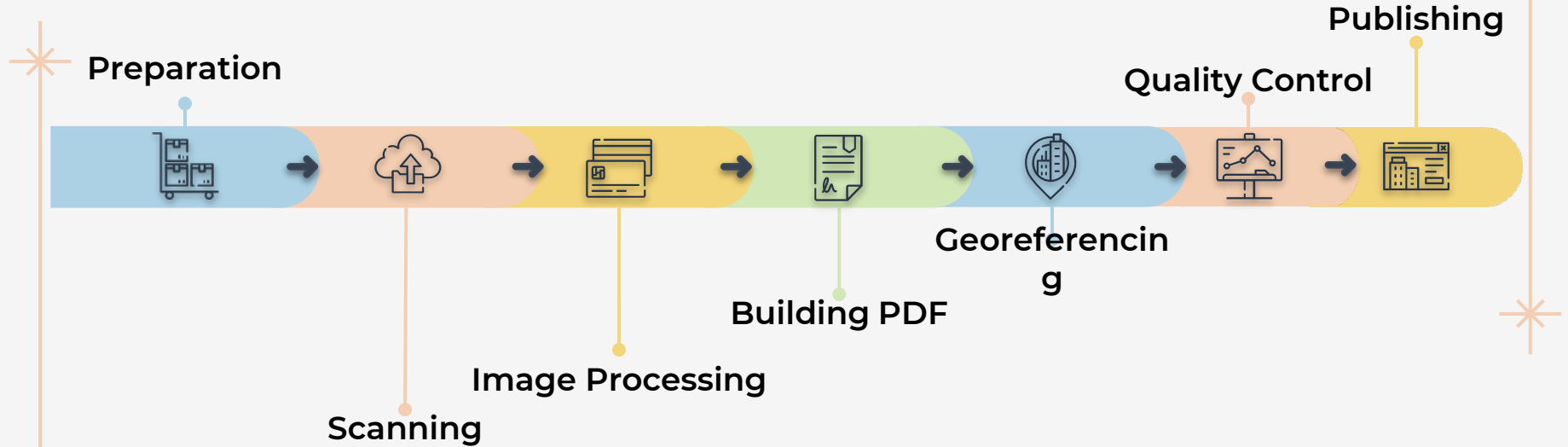


02

Project Operation



Operational Flow



Key Tools & Software



Adobe Photoshop



Adobe Acrobat



ArcGIS Pro



Network Drive



Script Based



Microsoft Access





Project Book Preparation



Unpacking

Plans given by the DOT are moved to the naming pile.



Sorting

Each folder is checked for organization and sorted.



File Naming

Plan information is entered into the Database.



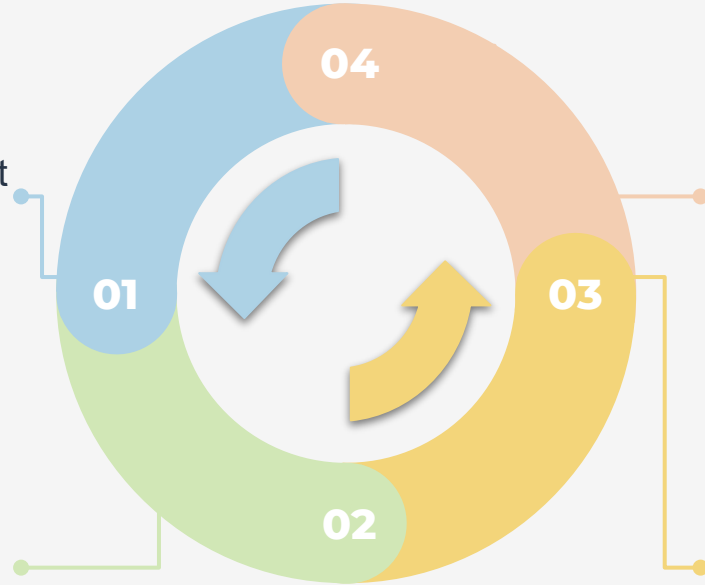
Project Book Scanning



Scanner is cleaned and set up.



Each page is cleaned and repaired as needed.



The original scans are relocated to the network drive.



Each sheet is scanned and checked for errors.

The Tech Center's **Scanning Room**

Finished
Plans

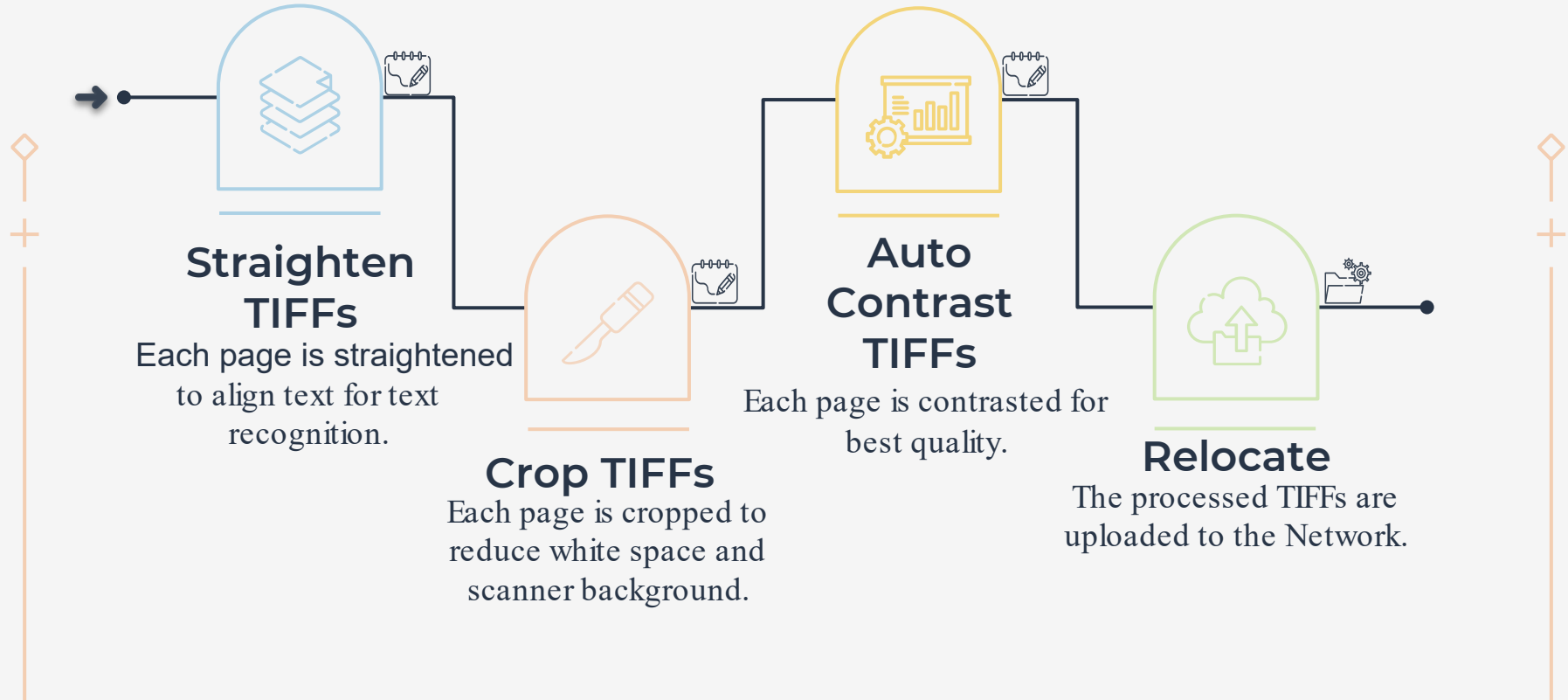
Plans
Needing
Named

Plans
Ready to
Scan

Scanning
Stations



Image Processing



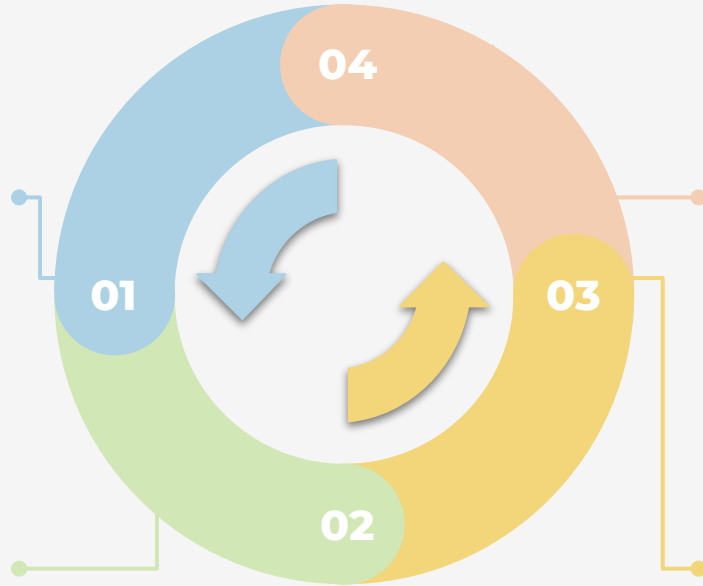
Building the PDF



TIFFs are combined into a single document.



Text Recognition is performed on the document.



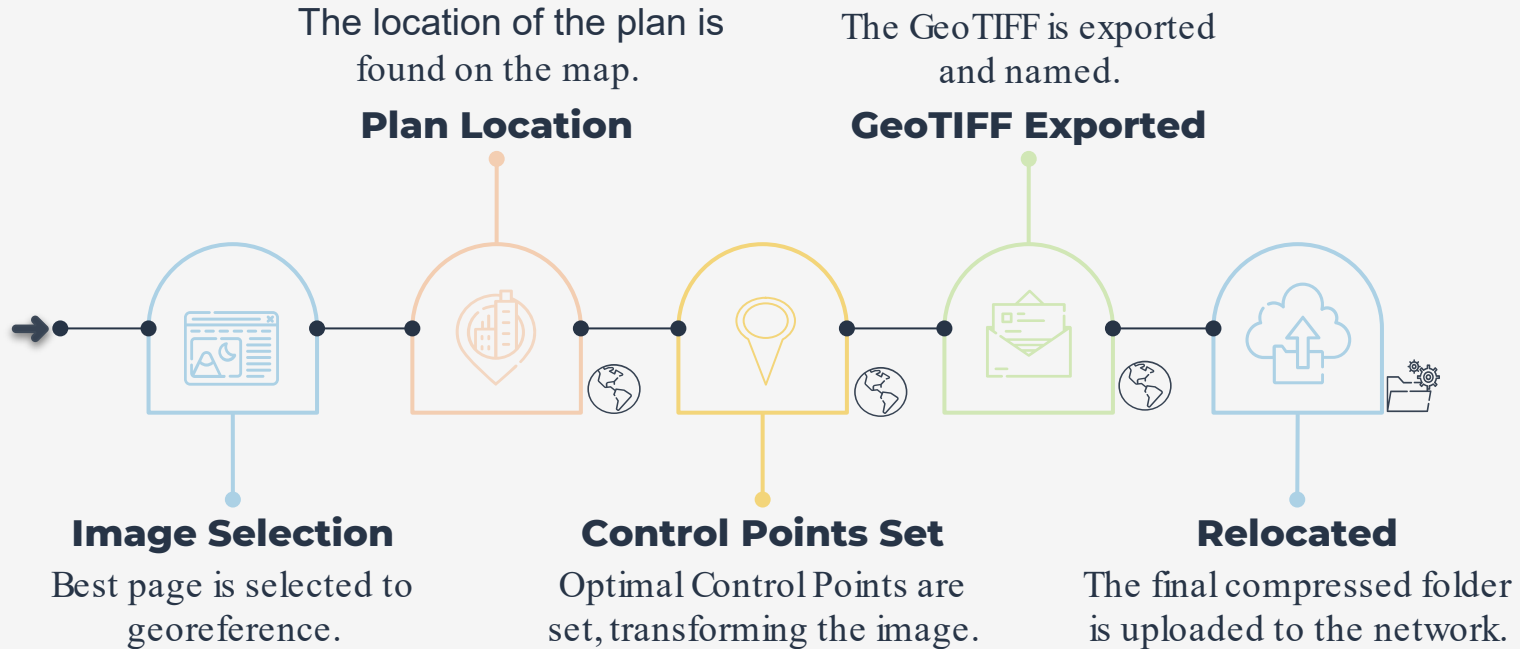
The PDF is relocated to the network drive.



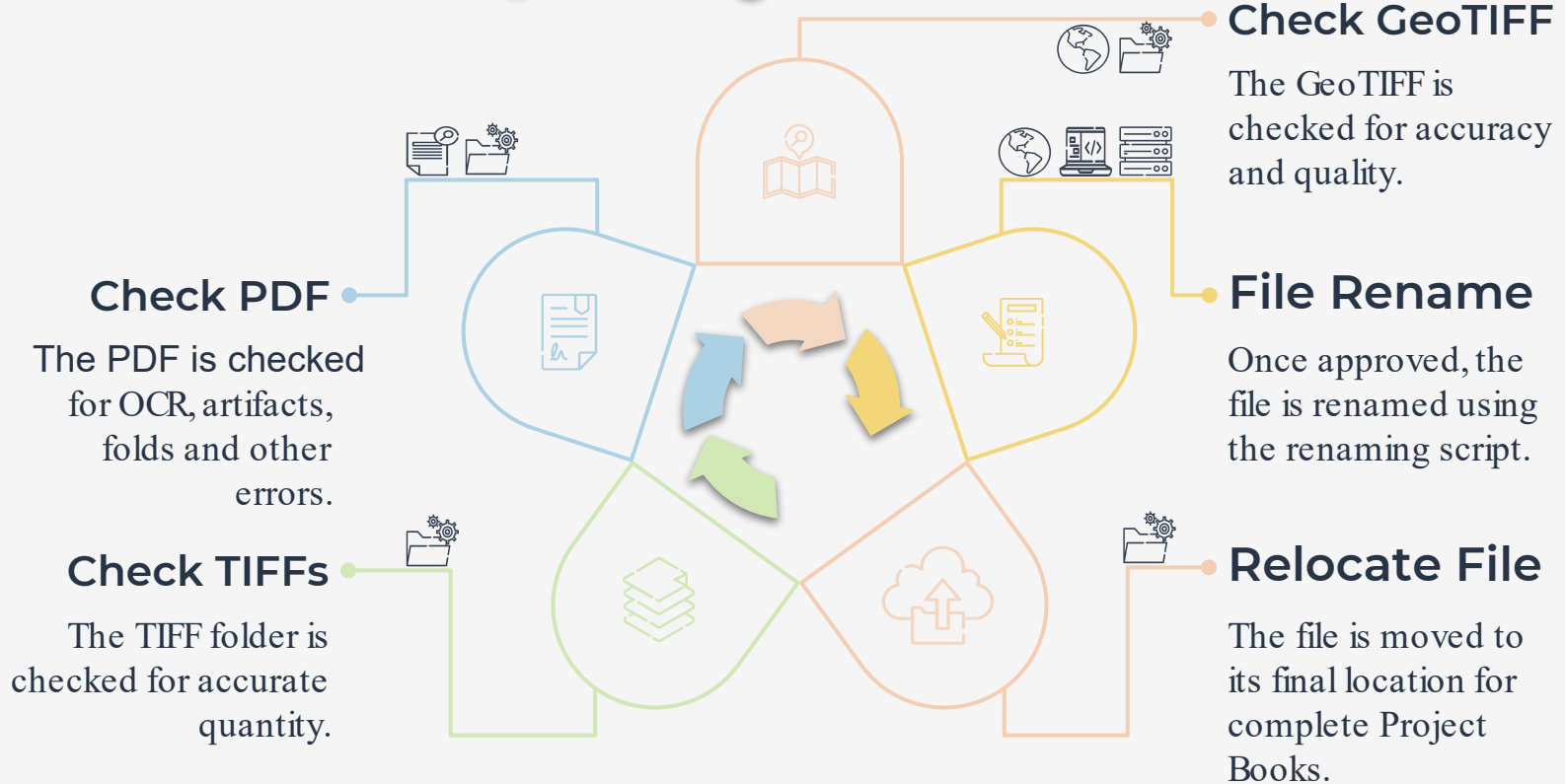
The final product is checked for errors and compressed.



Georeferencing



Quality Control





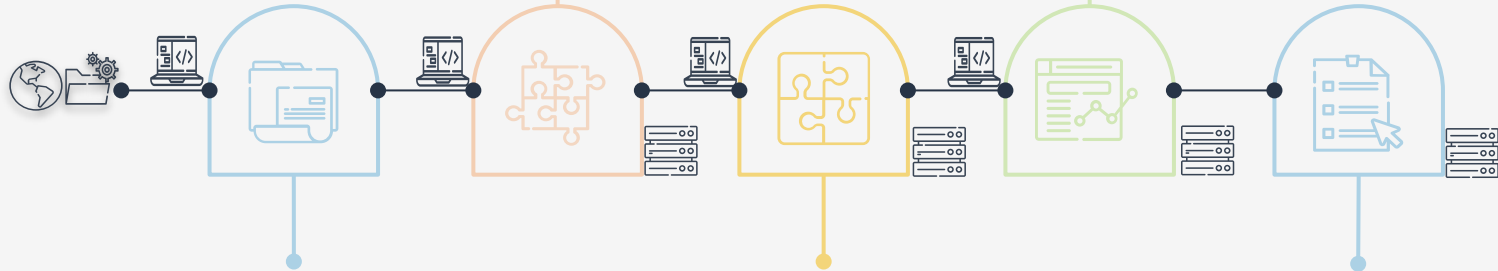
Publishing

The extracted GeoTIFFs are added to the whole raster mosaic.

Add Rasters

The new footprint coordinates are added to the database.

Update Footprints



Publish GeoTIFFs

GeoTIFFs are extracted from their compressed folders.

Build Footprints

Using the added rasters, footprint symbology is built for each.

Publish to Website

Each plan is toggled to 'Published', allowing the website to display them.



03

Project **Statistics**



500,000

Estimated sum of Phase III deliverables. An estimated **27,405** sheets remain till reaching the projected end of Phase III.

435,892

Sheets Scanned

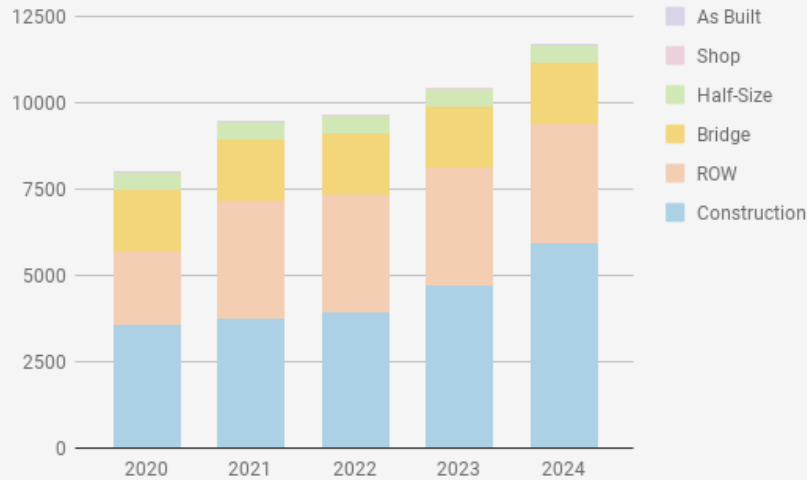
11,505

Plans Scanned

11,448

Plans Published

Plan Type Breakdown



Total Plans as of October 2024:

11,505

Construction Design

Total: 5,907

Right of Way

Total: 3,427

Bridge

Total: 1,787

Half-Size

Total: 497

Shop Drawing

Total: 22

As Built

Total: 17

File Size Breakdown

Uncompressed TIFF Files

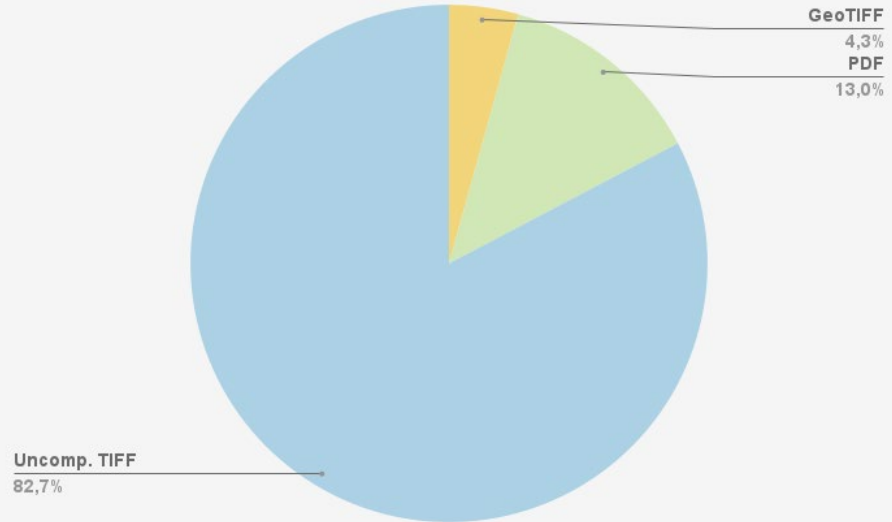
Loose, processed scan files. Does not include the original scans but does include the unzipped GeoTIFF files.

PDF Files

The PDF's consist of all the individual pages which make up a project book. Needed for the website.

Compressed GeoTIFF Files

This is the amount of storage the compressed GeoTIFF folders make up. This is needed for publishing.



Our main folder currently holds approximately 7TB of data.



Thank you!



Any questions or feedback?

