

# New Carrollton - Police Response Data Dashboard (Phase II)



Team Members: Brendan Conners, Ben Lintjewas, Anthony Lopez,  
Javier Oyola

# Team Roles



Brendan Conners

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Project Manager



Anthony Lopez

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Data Analyst/Designer



Javier Oyola

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Data Analyst



Ben Lintjewas

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Client Communication Lead

# Introduction

- Project: The City of New Carrollton seeks a data dashboard to provide easy visualizations of its municipal needs, metrics and resources.
- Client: The City of New Carrollton
- Point of Contact: Andrew Facey and Mayor Katrina Dodro
- Key Requirements:
  - Take CSV files from the client and Visualize the data
  - Users must be able to customize data visualization
  - Option for new data to be inserted.



# Project Context

- **Problem Statement**

City residents often struggle to access clear and timely information about government activities, leading to reduced transparency, limited public trust, and lower civic engagement.

- **Proposed Solution**

An upgraded dashboard to provide more comprehensive, transparent, and accessible information to the public while supporting the city's commitment to accountability and open governance.

# Original Project Requirements

- Expand Data Scope: Integrate new datasets
- Automate Updates: Streamline spreadsheet-based data updates for efficiency.
- Refine Visualizations: Improve clarity, add advanced filtering, and enable comparisons.
- Ensure Accessibility: Maintain ADA compliance and user-friendly design.
- Must be ADA compliant
- Access the previous phase and update with new information.

# Changes to the Requirements

- Less focus on ADA compliance due to time constraints
- Include other departments for transparency including:
  - Code Enforcement
  - Public Works
  - Financial
- Include a user documentation manual
- Develop a new dashboard instead of modifying Phase 1's Tableau, allowing users to access and view previous data

# Data Cleaning

**OpenRefine** A power tool for working with messy data.

Create project Import project Language settings

Project name: Cleaned Data Calls For Service (D) Tags: Create project

	Date	Time	DOW	Incident Type	Location	Latitude	Longitude	Unit ID
1.	01/01/2024	00:11	Monday	MISSING PERSON	8300 Dorrough Dr	38.9747171	-76.881953	PPINC10
2.	01/01/2024	00:19	Monday	FAMILY DISPUTE	5904 Montana St	38.9647559	-76.878743	
3.	01/01/2024	01:36	Monday	THREATS COMPLAINT	5433 85th Ave Apt 102	38.9565255	-76.8669547	PPINC11
4.	01/01/2024	03:28	Monday	PREMISE CHECK	8481 Annapolis Rd Eb	38.957426	-76.8692574	PPINC10
5.	01/01/2024	03:59	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783	
6.	01/01/2024	04:09	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783	
7.	01/01/2024	04:33	Monday	PREMISE CHECK	8500 Annapolis Rd Wb	22.9867569	87.8549755	
8.	01/01/2024	04:35	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783	
9.	01/01/2024	05:58	Monday	CHECK WELFARE	8500 Annapolis Rd Wb	22.9867569	87.8549755	PPINC20
10.	01/01/2024	07:32	Monday	NOISE COMPLAINT	8500 Annapolis Rd Wb	22.9867569	87.8549755	PPINC20
11.	01/01/2024	08:45	Monday	LOUD MUSIC COMPLAINT	5522 Karen Elaine Dr	38.9572854	-76.8802155	PPINC20
12.	01/01/2024	09:13	Monday	PREMISE CHECK	8481 Annapolis Rd Eb	38.957426	-76.8692574	PPINC20
13.	01/01/2024	09:14	Monday	LOUD MUSIC COMPLAINT	5522 Karen Elaine Dr	38.9572854	-76.8802155	
14.	01/01/2024	09:46	Monday	PREMISE CHECK	5300 85th Ave, New Carrollton, MD 20784	38.9530489	-76.8693485	PPINC20
15.	01/01/2024	09:51	Monday	THEFT REPORT	7519 Riverdale Rd Eb Apt 1942	38.9582307	-76.8821958	PPINC20
16.	01/01/2024	09:54	Monday	NOISE COMPLAINT	7601 Fontainebleau Dr	38.957884	-76.8789723	
17.	01/01/2024	10:12	Monday	TRAFFIC COMPLAINT	Mallissa St / Cathedral Ave	38.9754489	-76.8778837	PPINC20
18.	01/01/2024	10:30	Monday	PREMISE CHECK	6412 Carrollton Ct	41.6032207	-73.087749	PPINC20
19.	01/01/2024	10:33	Monday	LOUD MUSIC COMPLAINT	5518 Karen Elaine Dr	38.9576435	-76.8799327	

Parse data as

Character encoding: US-ASCII Update preview

Disable auto preview

CSV / TSV / separator-based files

Line-based text files

Fixed-width field text files

PC-Axis text files

JSON files

MARC files

JSON-LD files

RDF/N3 files

RDF/N-Triples files

Columns are separated by

☒ commas (CSV)

☐ tabs (TSV)

☐ custom

☒ Use character " " to enclose cells containing column separators

☐ Trim leading & trailing whitespace from strings

Escape special characters with \

☐ Ignore first 0 line(s) at beginning of file

☐ Attempt to parse cell text into numbers

☒ Parse next 1 line(s) as column heads

☐ Column names (comma separated)

☐ Discard initial 0 row(s) of data

☐ Load at most 0 row(s) of data

- Used OpenRefine to clean the given datasets
- Ensuring data is formatted correctly

OpenRefine Cleaned Data Calls For Service (Detailed Rep csv) Preferences Help About

Open... Export Help

Extensions Wikibase

Show as: rows records Show: 5 10 25 50 100 500 1000 rows

« first « previous 1 next » last »

	Date	Time	DOW	Incident Type	Location	Latitude	Longitude	Unit ID
1.	Facet	Monday	MISSING PERSON	8300 Dorrough Dr	38.9747171	-76.881953		PPINC10
2.	Text filter	Monday	FAMILY DISPUTE	5904 Montana St	38.9647559	-76.878743		
3.	Edit cells	Monday	THREATS COMPLAINT	5433 85th Ave Apt 102	38.9565255	-76.8669547		PPINC11
4.	Edit column	Monday	PREMISE CHECK	8481 Annapolis Rd Eb	38.957426	-76.8692574		PPINC10
5.	Transpose	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		
6.	Sort...	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		
7.	View	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		
8.	Reconcile	Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		
9.		Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		
10.		Monday	911 DISCONNECT	8101 Quennin St	38.9682076	-76.8841783		

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started? Watch these screencasts

Facet / Filter Undo / Redo 0/0

7039 rows

Facet

Common transforms

Trim leading and trailing whitespace

Collapse consecutive whitespace

Unescape HTML entities

Replace smart quotes with ASCII

To titlecase

To uppercase

To lowercase

To number

To date

To text

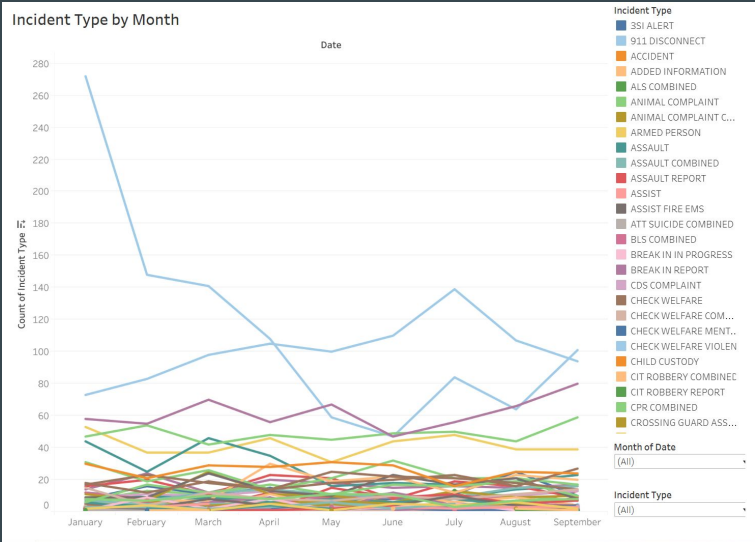
To null

To empty string

# Visualizations

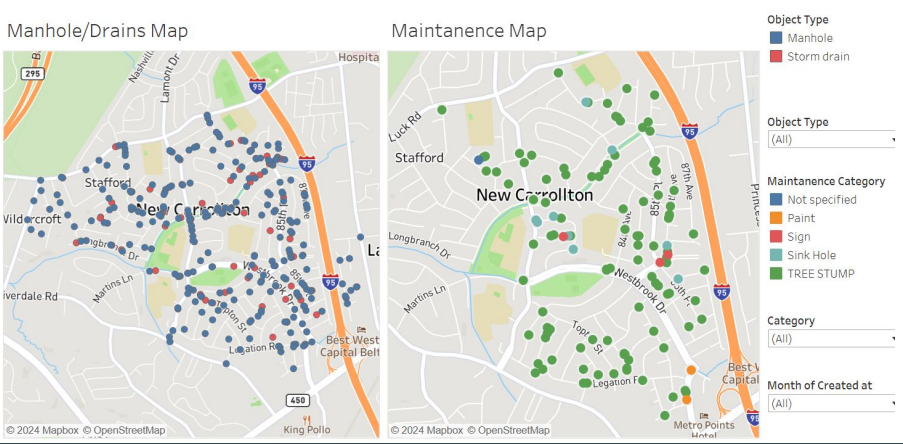
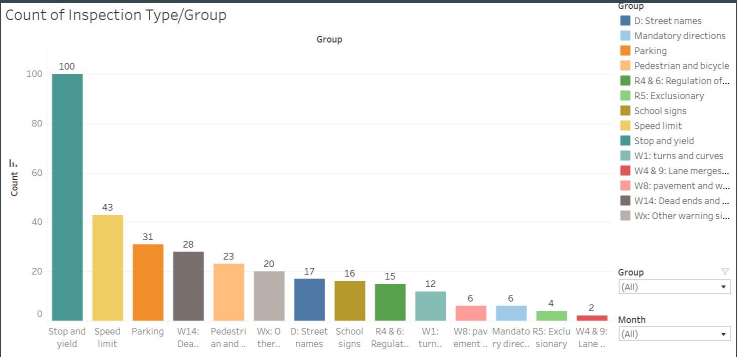
## Police Response

Ex: Incident Type by Month



## Public Works

Ex: Count of Inspection Type & Manhole and Maintenance Maps



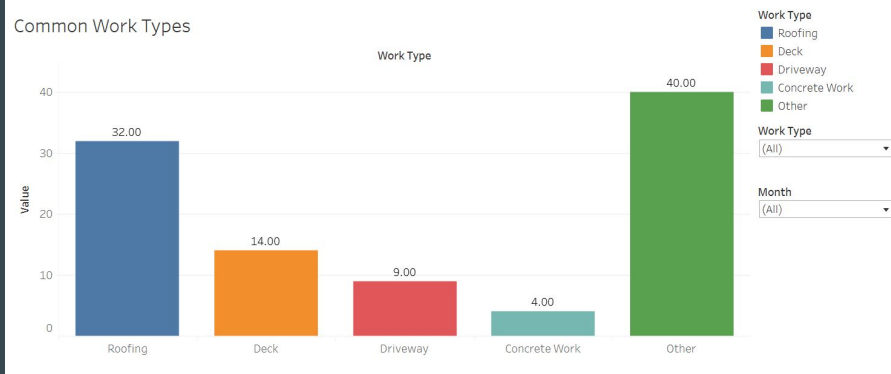


# Visualizations cont.

## Code Enforcement Ex: Permits and Licenses

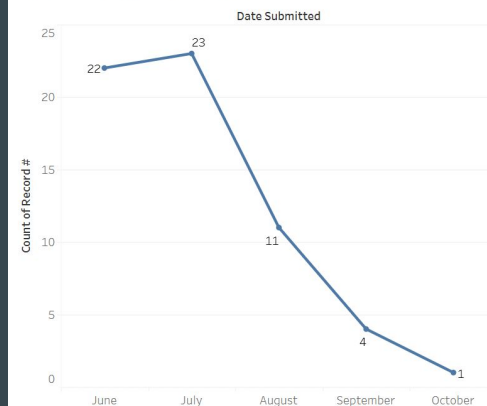
### Building Permits

Common Work Types

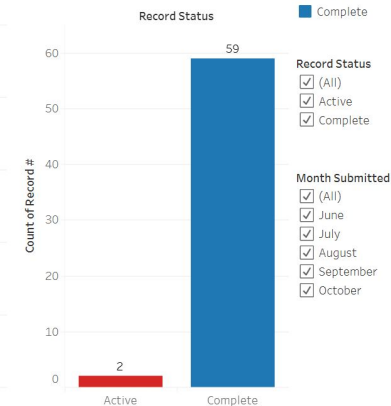


### Business Licenses

License Submission Trend

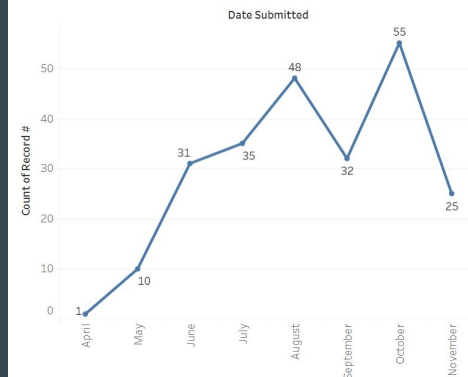


License Status Distribution

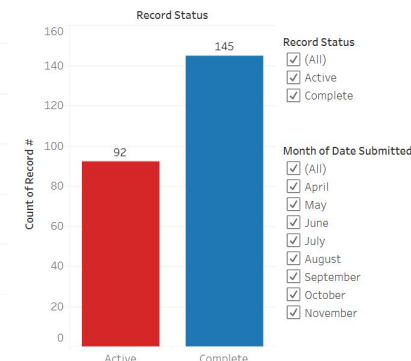


### Rental Licenses

Rental License Submission Trend



Rental License Status Distribution

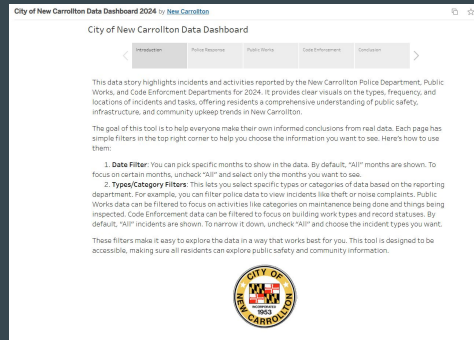


# Challenges vs. Opportunities

- **Time Management** : Coordinating tasks and meeting deadlines.
- **Data Complexity** : Integrating diverse and large datasets.
- **Resource Allocation** : Managing limited time and personnel.
- Utilize project management tools like Agile boards for better tracking and organization.
- Utilize data cleaning tools including OpenRefine
- Foster collaboration and optimize team roles for efficient task execution.

# Deliverables

- Tableau
  - Accessible Data Dashboard
- Github repository
- User documentation
  - User manual
  - Project report
- Updated Timeline and Presentation



## PRODUCT USER'S MANUAL

1. Clean Datasets
  - a. There are multiple options to clean data, including using Excel, Tableau Prep, Programming process such as using Pandas Library within Python.
  - b. We used OpenRefine, Search [OpenRefine](#) on Google and Download
  - c. Open OpenRefine and it should open in your Web Browser
  - d. Create a project and you can upload a dataset file that you want to clean and click next



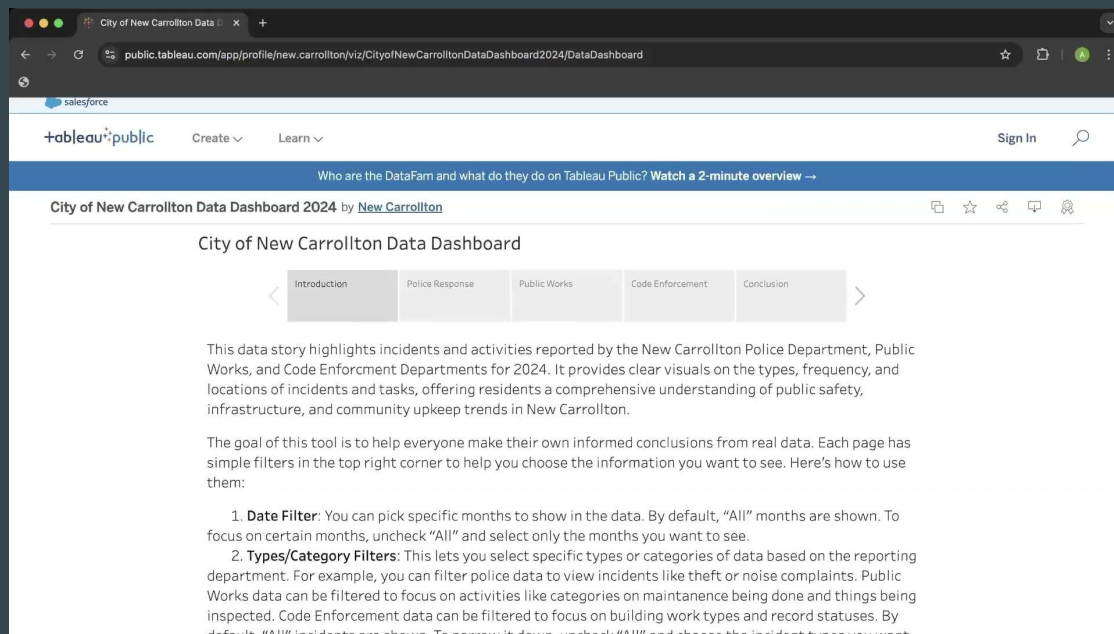
- e. Make sure the data is showing clearly in the table.
  - i. If there are issues, you can change the 'Columns are separated by'
- f. Click Create Project in the Top Right corner

# Project Timeline

Month	Key Milestones & Activities
September	<ul style="list-style-type: none"><li>- Project assigned and team formed</li><li>- Reviewed existing dashboard and datasets</li><li>- Redefined project scope and goals</li></ul>
October	<ul style="list-style-type: none"><li>- Began refining existing dashboard</li><li>- Integrated new data received from Police Department</li><li>- Enhanced visualizations with stakeholder input</li></ul>
November	<ul style="list-style-type: none"><li>- Integrated new data received from Departments of Public Works and Code enforcement</li><li>- Prepared Documentation for future updates and maintenance</li></ul>
December	<ul style="list-style-type: none"><li>- Finalized Dashboard and Deliverables</li><li>- Project Outcomes Presented</li></ul>

# Project Demonstration

## New Carrollton Data Dashboard

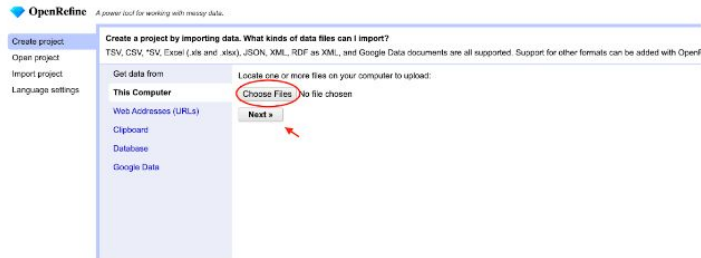


# User Manual

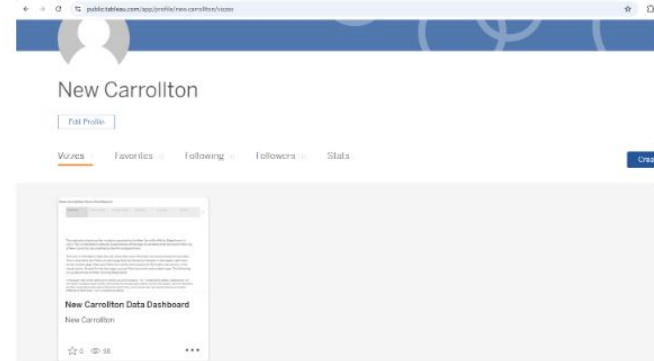
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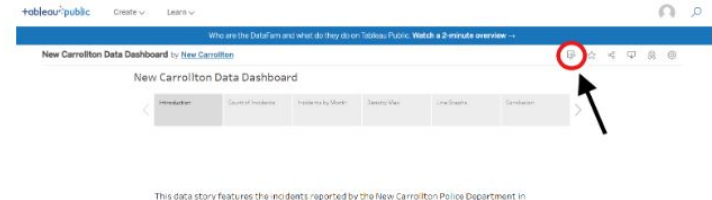
- Make sure the data is showing clearly in the table,
  - If there are issues, you can change the 'Columns are separated by'
- Click Create Project in the Top Right corner



- Click on the Vizz you want to update

### 5. Editing Tableau

- In the top right you will see an edit button, click that.



# Future Scope

- Additional data from other departments, such as Finance, can be incorporated to enhance the analysis.
- Future development could involve transitioning from Tableau to another platform for greater functionality or customization.
- Focus on embedding the visualizations directly into the City of New Carrollton's website for broader accessibility.

Questions?