


Unit 4 Lesson 1: ODOT FACS-STIP Mapping Tool

 **Course Navigation Tips:**

- To complete each lesson, you must interact with the audio narration at the top of each section.
- You may drag the toggle on the playback bar to the last 5 seconds and let it play. This will allow the system to note it as complete.
- You are encouraged to complete the entire unit before closing in case your progress is not saved.


 **You must click on all images before moving on to next Lesson.**



Start Audio Narration

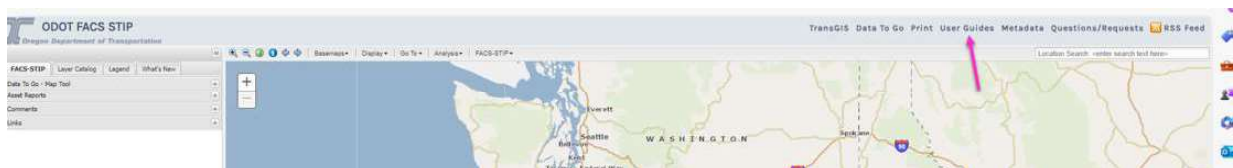
The following are instructions on how to retrieve data using the FACS-STIP mapping tool to fill out location data fields in the Curb Ramp Inspection Form.

The FACS-STIP (Features, Attributes and Conditions Survey - Statewide Transportation Improvement Program) mapping tool maintains and displays ODOT asset information. TransGIS and FACS-STIP are integrated and utilize the same general inventory data. However, FACS-STIP provides analysis tools for generating reports and additional inventory layers not available in TransGIS like crosswalk closures and design exceptions. It is recommended to use FACS-STIP as it includes ADA curb ramp asset inventory data layers that TransGIS does not have and is useful for inspecting curb ramps and push buttons.

 The data you provide in the Curb Ramp Inspection Forms will be used to update the asset inventory in FACS-STIP and so it is essential that the forms are filled out with accurate data.

The following sections will cover the steps for retrieving essential curb ramp location information in FACS-STIP for filling out the Curb Ramp, Closure/Removed Curb Ramp and Push Button Inspection Forms.

For additional guidance and advanced topics, the FACS-STIP User Guide can be found on ODOT's website within the application.



[Link to FACS-STIP User Guide](#)

Navigate to the [Traffic Assets & Inspection](#) webpage. Expand the information under “Accessing the Inventory” tab and click on the FACS-STIP User Guide link.

WEBSITE

FACS-STIP User Guide

USER GUIDE

Getting to the FACS-STIP Website

Open the FACS-STIP Tool on your web browser. There are many paths to the FACS-STIP Tool. One way is to Navigate through the **Traffic Assets & Inspection webpage**. Expand the information under **Access the Inventory** tab and click on **FACS-STIP** link. It is recommended to add the link to your computer bookmarks.

Traffic Assets & Inspection

ACCESSIBILITY AT ODOT

- Report an Accessibility Concern
- ODOT's Mission & Strategic Action Plan
- AOCIL Settlement Agreement
- ADA Transition Plan
- Accommodations at DMV
- Disabled Parking Permits

ACCESSIBLE INFRASTRUCTURE

- ADA Delivery Program
- Projects in Your Area
- Engineering for Accessibility
- Delivering ADA Program Projects
- Technical Bulletins and Advisories

RELATED PROGRAMS

- Pedestrian & Bicycle Program
- Public Transportation Advisory Committee

ADA Curb Ramp and Push Button Inspections

- General Resources +
- Curb Ramp Inspection Training +
- Inspection Forms +
- Form Submittal +
- Asset Collection User Guides +
- Accessing the Inventory** x

Inventory information on Traffic-Roadway assets can be accessed through [TransGIS](#) or [FACS-STIP](#).

TransGIS is a powerful web mapping tool designed for users of every skill level. TransGIS presents many levels of complex data in an interactive map format offering multi-level views of Oregon's transportation system needs and accomplishments.

Detailed information including transportation management system's data, asset

Contact Us

Curb Ramp Inventory & Inspections Contact

Melissa Borges
Roadway Statewide Asset Specialist
Phone: 503-986-3493

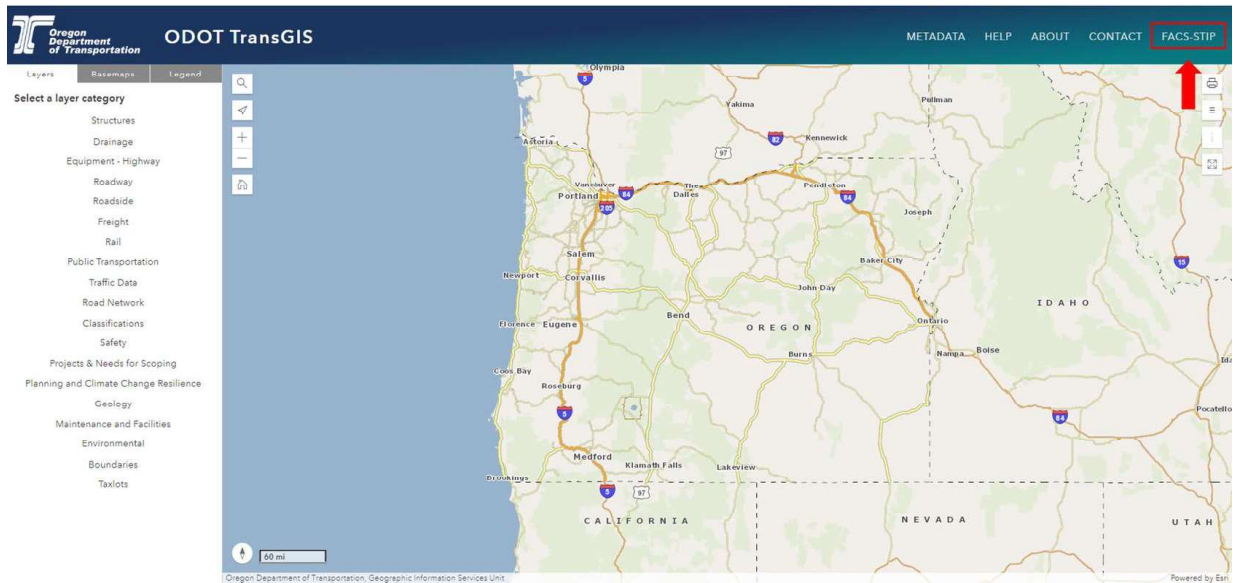
Curb Ramp Inspection Training

Reach us by email or
Call us at: 971-719-6840

Certification Program

Traffic Assets & Inspection Webpage: FACS-STIP Link in Accessing the Inventory Dropdown List

If you have been using TransGIS, you can access FACS-STIP by going to the TransGIS website. In the upper right-hand corner is the link to FACS-STIP.



Link to FACS-STIP from TransGIS



It is recommended that you save FACS-STIP link in your web browser now.



02:47

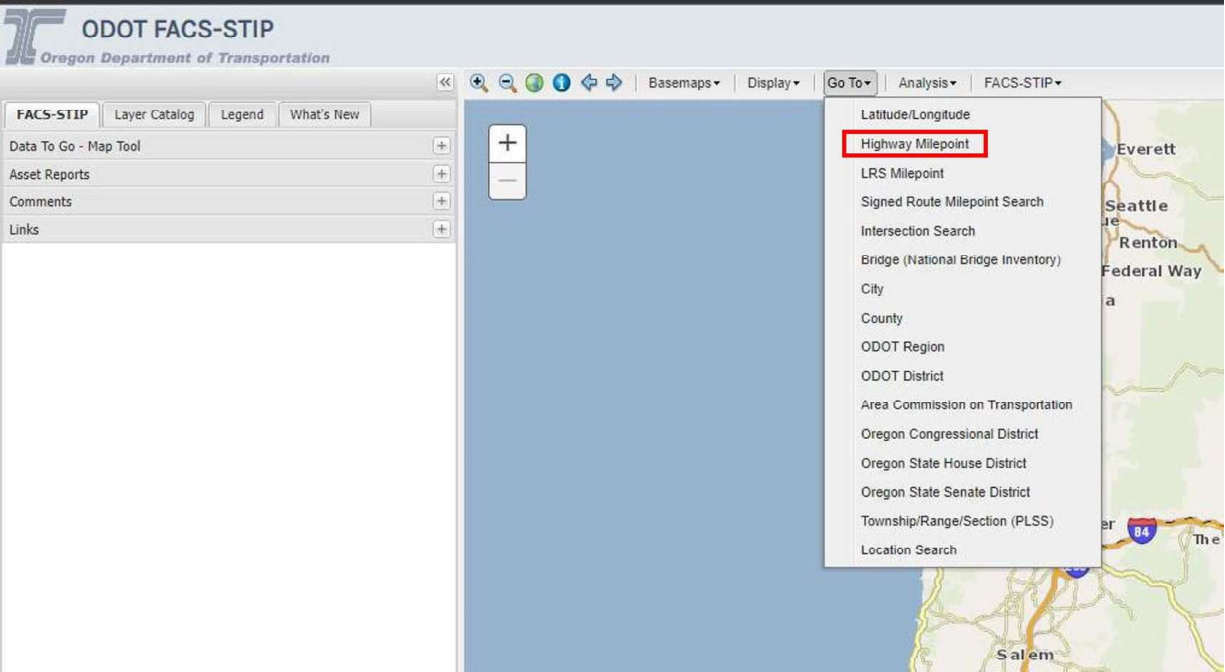
Continue Audio Narration

FACS-STIP Searching Tools

Location Search with known Linear Reference Method (LRM)

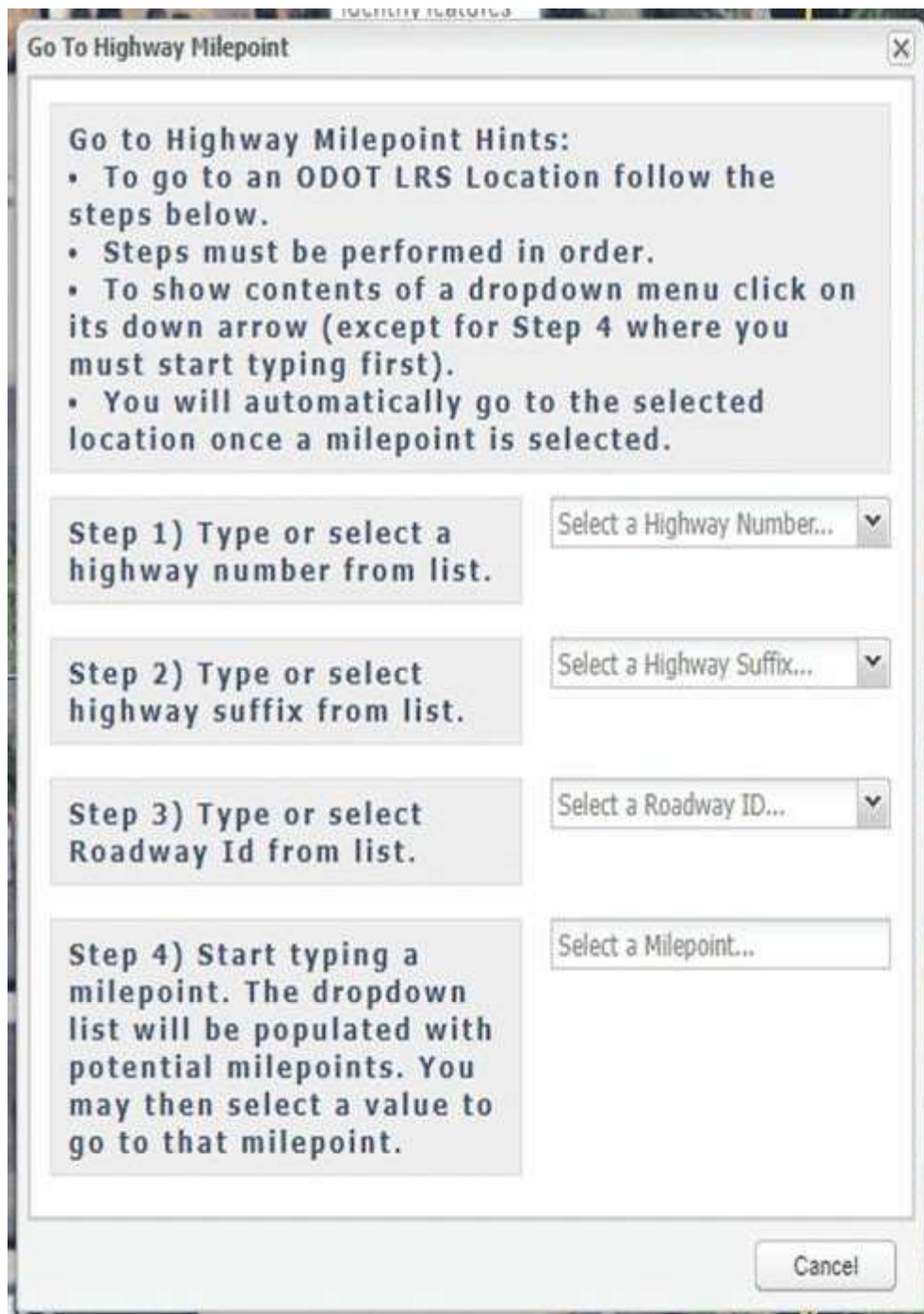
Once the application is open, navigate to the tab labeled **Go To** and select the arrow on the right to expand the dropdown menu on the banner at the top of the page. Then select **Highway**

Milepoint to search for an intersection. Refer to the figure below showing the menu options when the **Go To** tab is expanded.



The "Go-To" Drop Down List

The **Go To Highway Milepoint** dialog box will locate a specific intersection mile point (MP) on a map of the State Highway system. Note that you will need to know the Linear Reference Method (LRM) number and intersection Mile Point for this search. The LRM should be shown on curb ramp detail sheets in the title block.



Go to Highway Milepoint Dialog Box



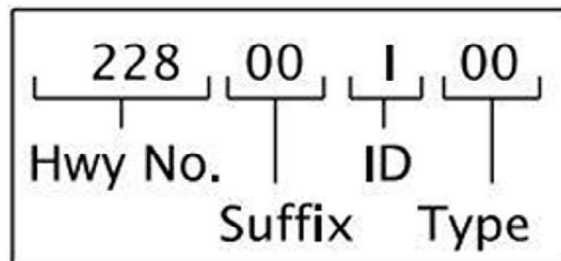
Linear Reference Method (LRM)

Hwy # – will always be three digits *e.g.* 001, 009, 243, etc.

Suffix – 00 is used for mainlines; connections & frontages will always use a two-lettered suffix.

Roadway ID – This is always either I (increasing) or D (decreasing)

Mileage Type – This will be 00 unless the milepoint is on a section of road listed as Z mileage (*i.e.* the road has been realigned)



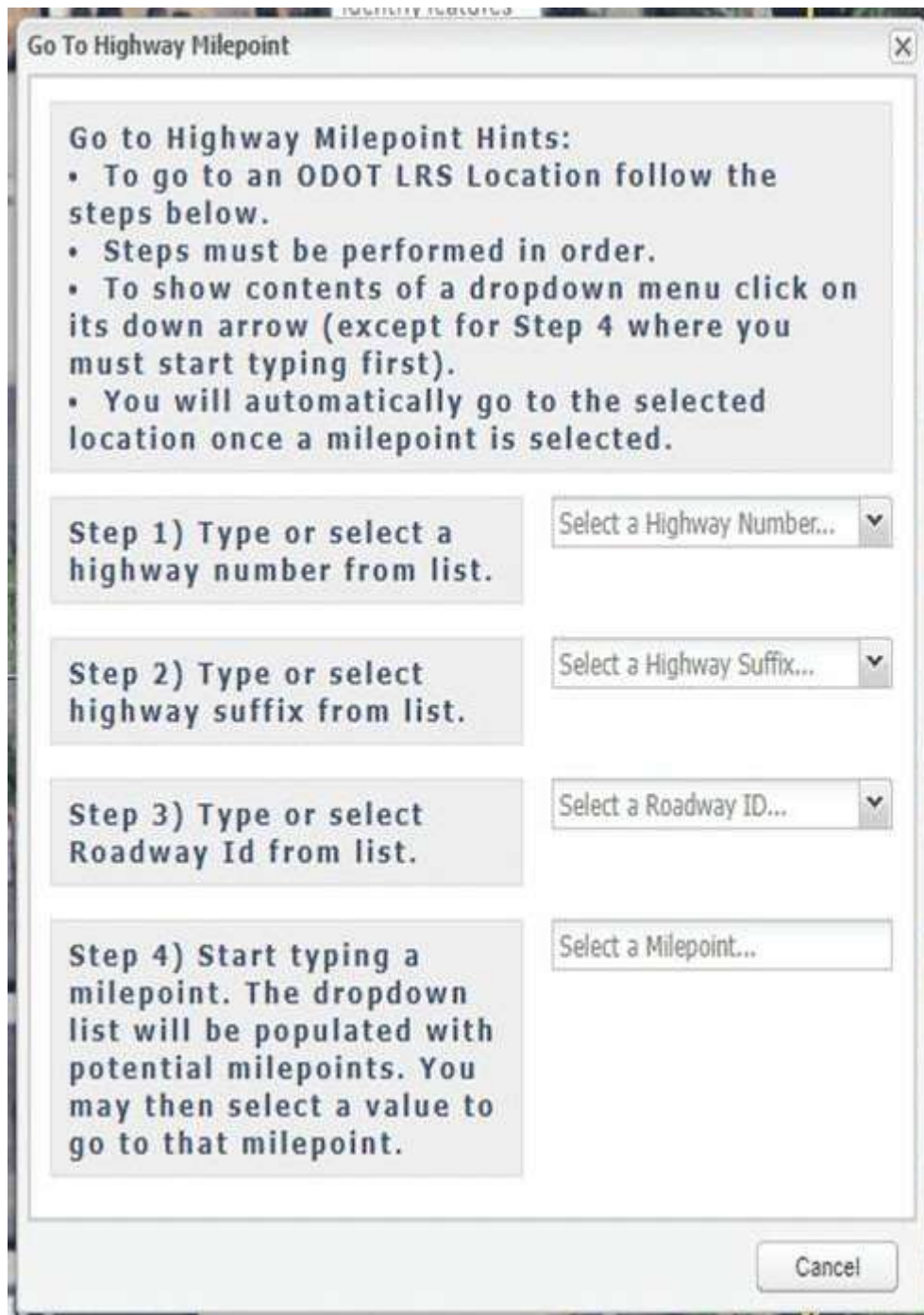
The Linear Reference Method (LRM) Description

LRM

The Linear Reference Method (LRM) is an 8-digit location identifier on the highway system. It consists of the Highway number, a suffix, a roadway ID and the mileage type.

- **State Highway Number (Hwy No.):** The ODOT, 3-digit number given to each state highway for identification purposes. Generally, this is not the same as the route number.
- **Suffix Code:** In ODOT's GIS, the suffix code is a two-digit highway suffix that differentiates mainline roads from connections and frontage roads with the same highway number. The mainline suffix is the numerical value 00. Connections and frontage roads each have a unique combination of two letters (AA to ZZ).

- **Roadway ID:** In ODOT's GIS, the roadway identifier code determines the alignment when there is a separated highway alignment such as a freeway. Code I (Increasing) is for the primary alignment that increases with the mile point. Code D (Decreasing) is for the alignment with the decreasing mile points. **This is either 1 for increasing (I) and 2 for decreasing (D) in the Go To Highway Milepoint dialogue box in FACS-STIP.**
 - **Mileage Type:** In ODOT's GIS, the mileage type code is when there are unique mile points along a highway. The 0 Code indicates regular mileage. The Z code indicates an overlap in the mile points. During realignment that change the length of the highway, an overlap in the mile points will result. The Z code indicates the repeated mile points.
-



Go To Highway Milepoint Dialogue Box

In the Go To Highway Milepoint dialog box,

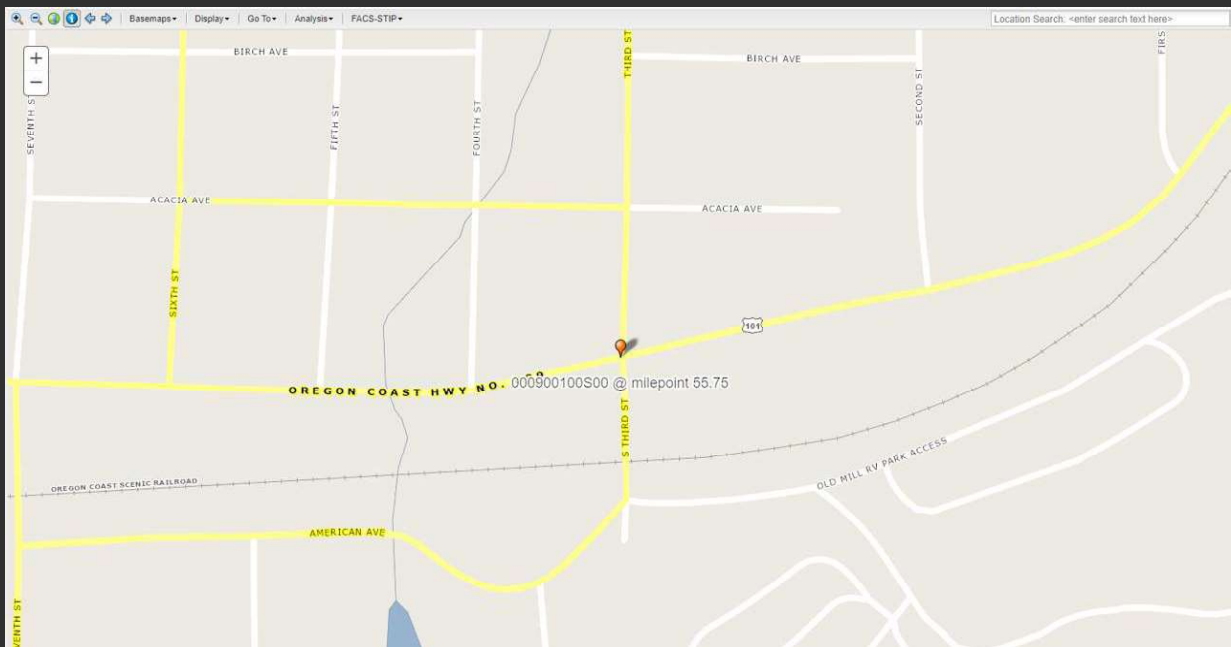
Step 1: Enter or select the 3-digit highway number (first three numbers of the LRM).

Step 2: Enter or select the highway suffix code.

Step 3: Enter or select the roadway ID in the dropdown.

- 1=I (Increasing mile points)
- 2=D (decreasing mile points)

Step 4: Enter in the desired mile point. The tool will zoom to the chosen location.



Highway Milepoint Search Results in FACS-STIP Example.

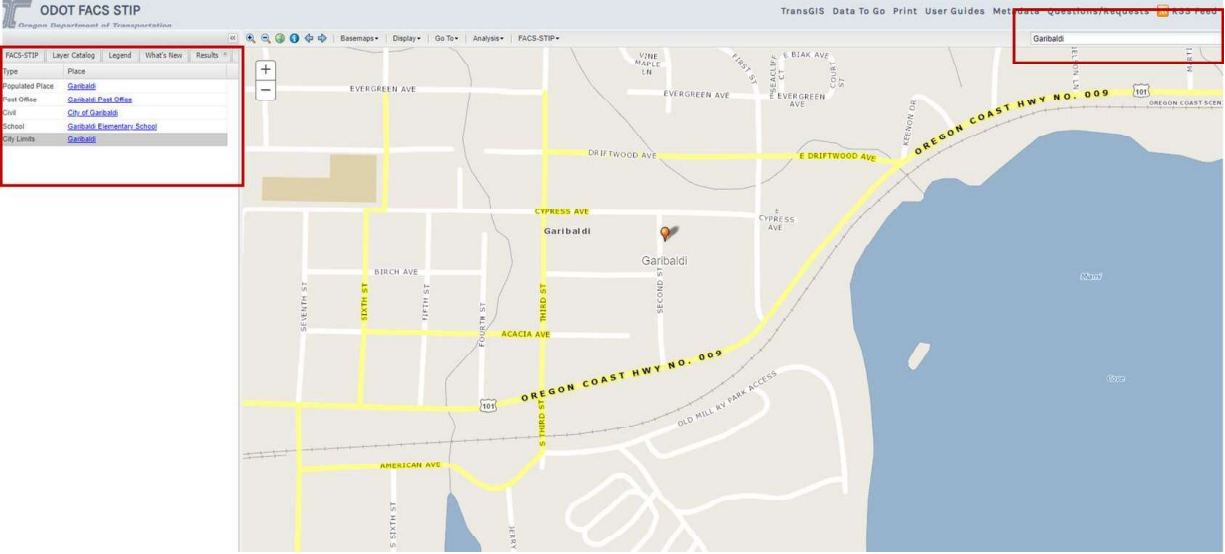


03:19

Continue Audio Narration

Location Search with Search Box

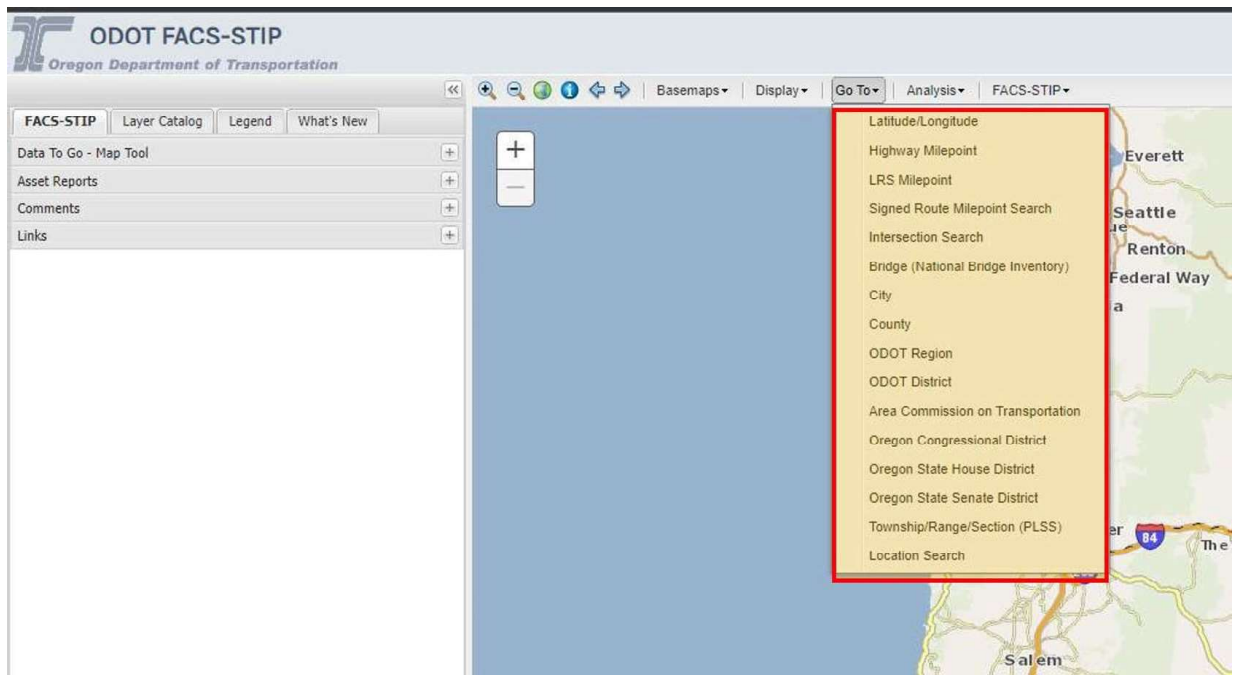
If you do not know the LRM but you know the location, you can enter the City, Town, feature, or cross street in the location search field in the upper right corner. A list results with that name will be available on the left-hand side of the mapping tool.



Location Search in FACS-STIP

Location Search Using the Go To Menu

Additionally, the Go To Menu provides alternative means of finding locations based on different known information. Take some time to explore the FACS-STIP tool application.



Go To Dropdown List in FACS-STIP

Choosing the Background Basemaps

The background basemap can be changed by selecting the **Basemaps** tab and expanding the dropdown menu options on the ribbon. ODOT Aerial Hybrid is recommended; however there are multiple options. Review the available options of basemaps. Scroll through the images below to see Basemap choices and to see what the recommended ODOT Aerial Hybrid basemap looks like.

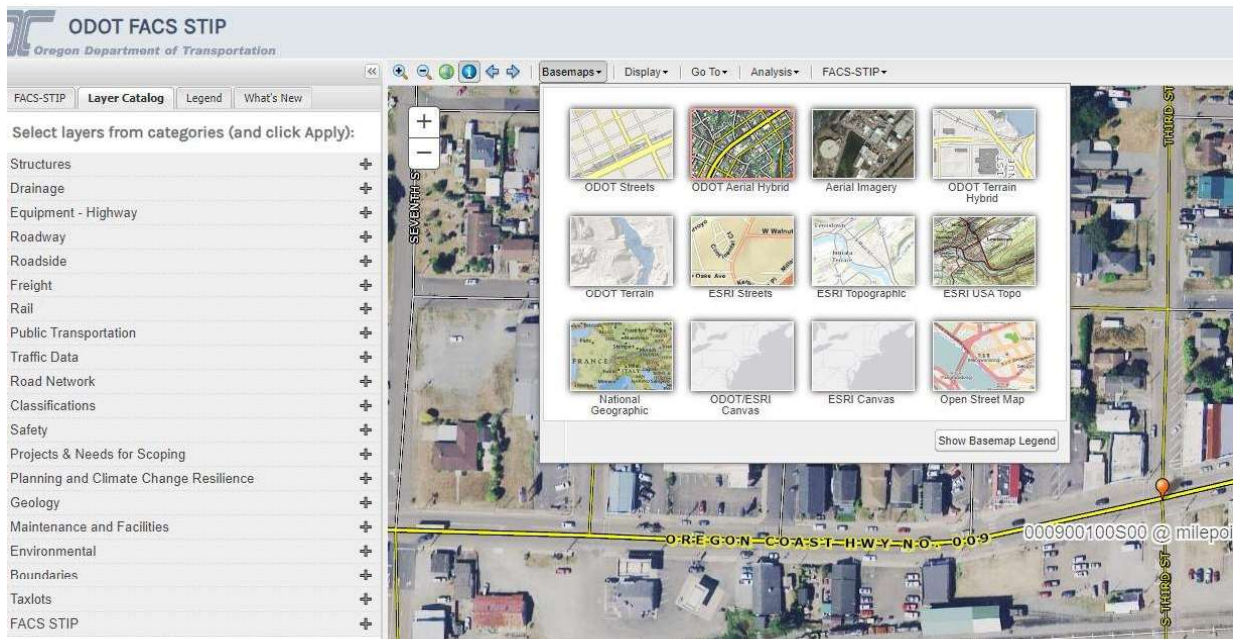
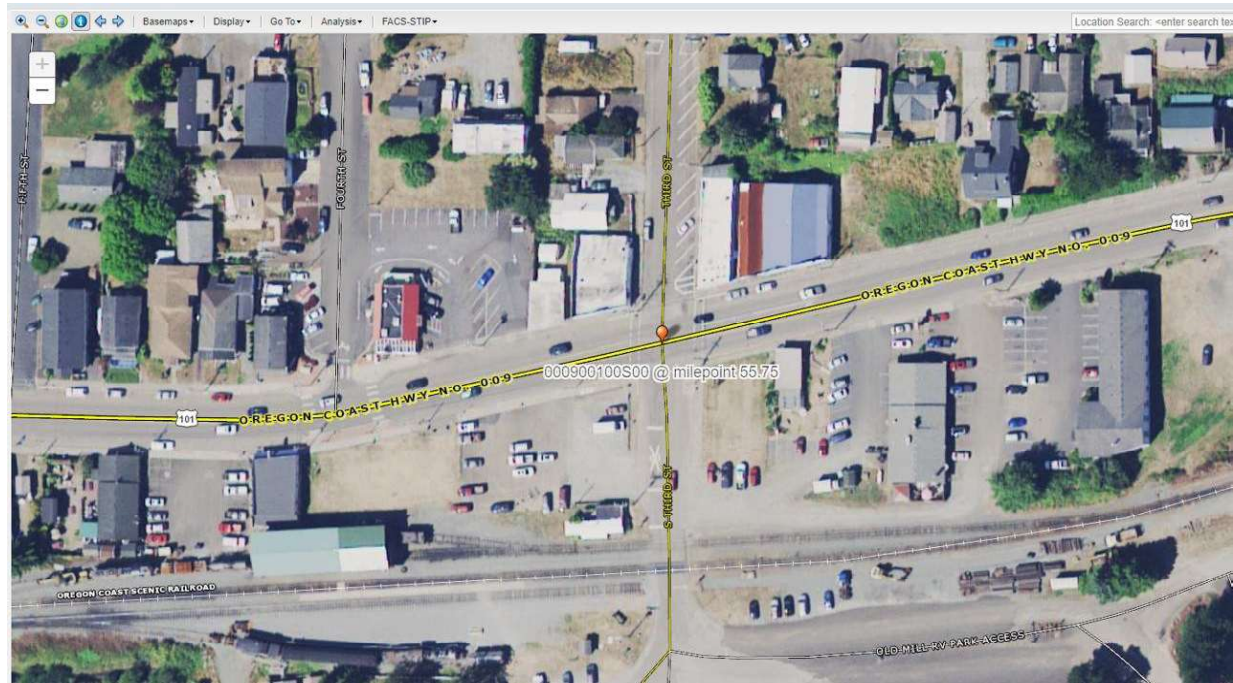


Image of the "Basemap" window.

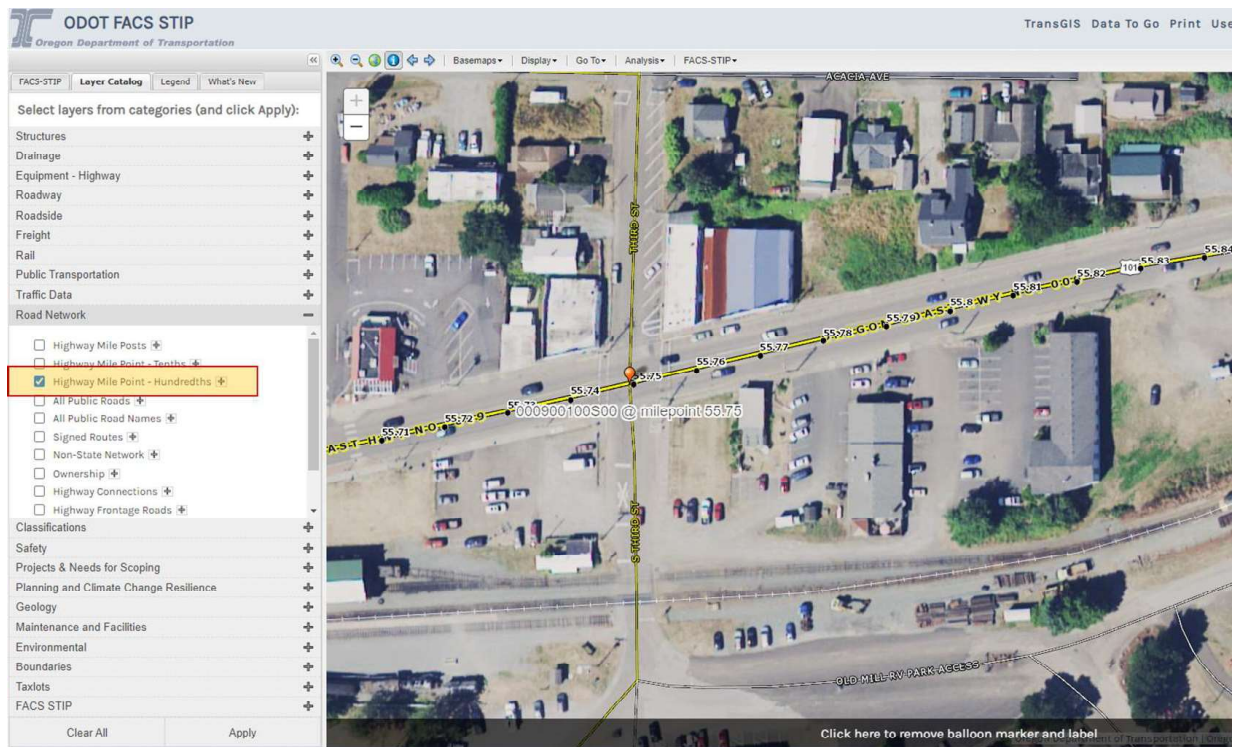


Aerial Hybrid Base Map

Displaying Mile Points

Next, display the mile points.

1. Select the **Layer Catalog** tab on the left column.
2. Expand the **Road Network** category tab. Review the available layers.
3. Check the box next to the layer information you want displayed on your view. Check the **Highway Mile Point - Hundredths** and click **apply**. The map will add mile points to the second decimal.



FACS-STIP Highway Mile Point- Hundredths Layer



ODOT FACS STIP

Oregon Department of Transportation



FACS-STIP

Layer Catalog

Legend

What's New

Select layers from categories (and click Apply):

Structures +

Drainage +

Equipment - Highway +

Roadway +

Roadside -

- ADA Ramps
- ADA Push Button
- ADA Corners
- ADA Crosswalk Closure
- ADA Design Exception
- Approaches
- Stand Alone Impact Attenuator
- Sound Barrier
- Marked Crosswalks (no connecting ADA ramps)
- Marked Crosswalks (connecting ADA ramps)
- Sidewalk
- Sidewalk Accessibility

Freight +

Rail +

Public Transit +

Traffic Data +

Road Network +

Classifications +

Safety +

Projects & Needs for Scoping +

Planning and Climate Change Resilience +

Geology +

Maintenance and Facilities +

Environmental +

Boundaries +

FACS STIP +

Clear All

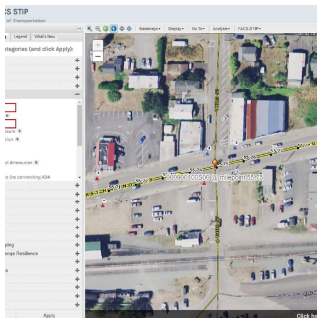
Apply

The "Layer Catalog" with the "Roadside " tab expanded.

Displaying Curb Ramp and Corner Information

1. Select the **Layer Catalog** tab on the left column.
2. Expand the **Roadside** category tab. Review the available layers.
3. Check the box next to the layer information you want displayed on your view. Check the **ADA Ramps** and **ADA Corners** and click apply. The map will populate with curb ramp and corner locations with a triangle icon and its corner number, following the curb ramp numbering convention. Refer to Unit 3 for information on corner and curb ramp numbering conventions.
4. Expand the **Legend** tab for an explanation of the icon colors.

Click on images below to see ADA Ramp and ADA Corner layer Icons and the ADA Ramp and ADA Corner Icon Legend.



ADA Ramp and Corner
Layer Icons on Map

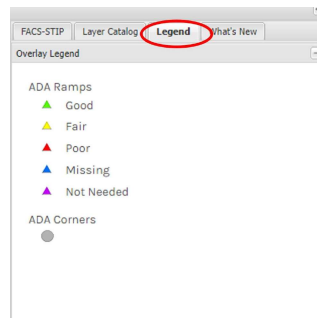
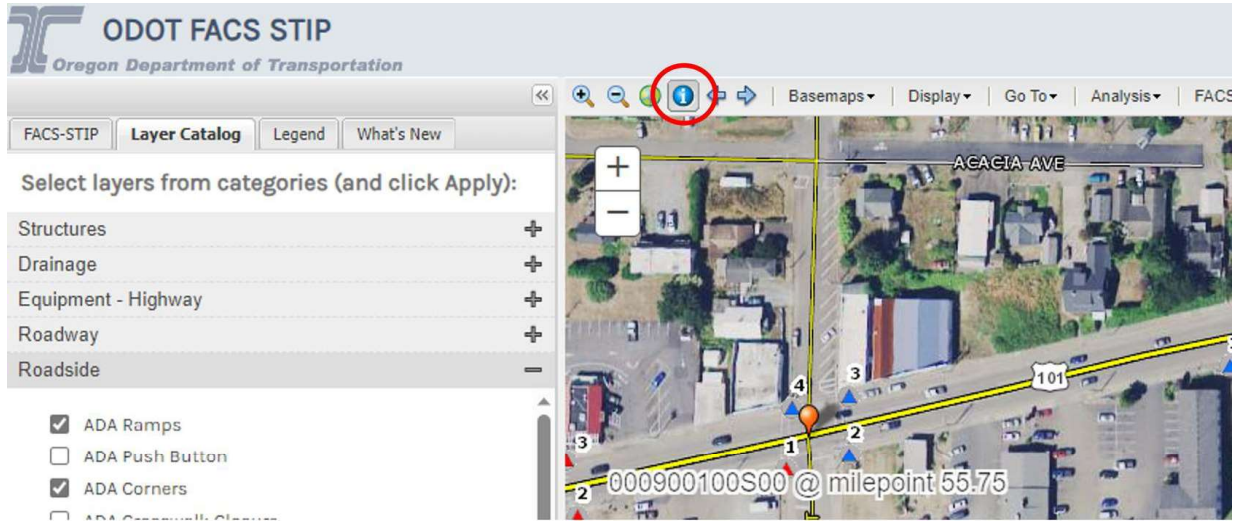


Image of the "Legend" for
ADA Ramps and Corners

Displaying the data using Identify Map Features

1. Click the blue circle “i” button on the banner (top left) to retrieve detailed information for the layer assets chosen.
2. Click on a triangle icon for the curb ramp/corner you are inspecting.
3. A dialog box will appear with **multiple pages** of data for each of the layers chosen.



FACS-STIP "Identify Features" Button

After clicking, curb ramp location icon, at the top of the dialog box you will see “Identify Map Features (# of #).” Showing number of pages of data available for the layers activated. Use Arrow at top right to navigate between pages.

000900100S00 @ mile

SECO

THIRD ST

TH-W-Y

Identify Map Features (1 of 3)

ADA Ramps

Linear Reference Method Key	00900I00
Milepoint	55.75
Cross Street Name	3RD ST.
Corner Position	3
Corner Type Desc	Incomplete
Ramp Position	2
Ramp Need Status Desc	Constructed & In Place
Ramp Style Desc	Perpendicular
Ramp Physical Condition Desc	Fair
Condition Desc	Poor
Reason Not Compliant	CLEAR WIDTH; COUNTER SLOPE; CURB RUNNING SLOPE; DETECTABLE WARNING; LANDING WIDTH X; LIP HEIGHT; RUNNING SLOPE 1
Inspection Year	2017
Settlement Remediation Year	Null
ADA Settlement Flag	Y
Effective Date	2022
GIS Process Date	06/14/2023

Click on map to identify features

[Zoom to](#)

Identify Map Features. Note Number of Pages.



Expand all figures and advance audio to the end before moving on.

Unit 4 Lesson 2: Filling Inspection Forms with FACS-STIP Data



You must click on all images before moving on to next Lesson.



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Continue Audio Narration

At the end of an inspection, finalized curb ramp inspection forms will be used to update the curb ramp data in FACS-STIP. Having accurate location information on the inspection forms will greatly reduce processing time for your contract. Using the Map Features data in FACS-STIP to fill out your form will minimize errors, and your submitted form will be less likely to be returned for corrections. The following describes the process for retrieving data in FACS-STIP used in the curb ramp inspection forms.

Highway Number, Milepoint (MP), and Cross Street Name

Highway No.	MP	Cross Street Name

Highway Number, Milepoint (MP), and Cross Street Name on Curb Ramp Inspection Form

To fill in the highway number, milepoint and cross street name, copy the information from the **Identify Map Features** dialog box for ADA Ramps into the Curb Ramp Inspection Form.

Copy and paste the Cross Street Name so that the spelling of the cross street in the Curb Ramp Inspection Form exactly matches the description in FACS-STIP. Some cross street names won't be recognizable to the average person as it's described by the frontage road name, connection name, or other. Do not use the Google Maps Name or other mapping applications information for the cross street data field.

Use the entire Linear Reference Method Key number for the Highway Number data field. In the case that you are inspecting local jurisdiction curb ramps with an ODOT contract, the segment of road may not have a LRM highway number. For local roadways, you would use the local street names. For locations which have been transferred or are pending transfer from ODOT jurisdiction; contact the ODOT Asset Team for the LRM and Milepoint.

Click on the images below. The left side image shows the Linear Reference Method Key (LRM), Mile Point (MP), and Cross Street Name on Map Features ADA Ramps Layer. The right side image shows the correct format of FACS-STIP data entered into the Curb Ramp Inspection Form.

Map Features (1 of 3)		
Ramps		
Reference Method Key	00900100	Use for Highway No.
int	55.75	
Street Name	3RD ST.	
* Position	3	
* Type Desc	Incomplete	
Position	2	
Need Status Desc	Constructed & In Place	
Style Desc	Perpendicular	
Physical Condition Desc	Fair	
Functional Condition Desc	Poor	
	CLEAR WIDTH; COUNTER SLOP	

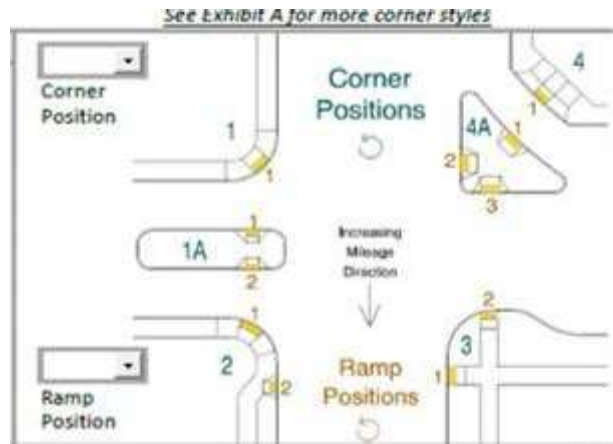
0900100	55.75	3RD ST.
Highway No.	MP	Cross Street Name

1 Not Compliant
CURB RUNNING SLOPE;
DETECTABLE WARNING: LAND

*Linear Reference
Method Key (LRM),
Mile Point (MP), and
Cross Street Name
on Map Features
ADA Ramps Layer*

*Correct format of
FACS-STIP data
entered into the
Curb Ramp
Inspection Form*

Corner and Curb Ramp Position Numbers



Corner and Curb Ramp Position Numbers on Curb Ramp Inspection Form

The ADA Inspection forms require the Corner Position and Curb Ramp Position Numbers.

The Corner and curb ramp position numbers should be on the Curb Ramp Detail Sheets or in the Construction Documents in the Contract Plans.

Use FACS-STIP to cross check curb ramp corner and curb ramp position numbers. Refer to Unit 3, Curb Ramp Location to determine curb ramp number assignments. If numbering on the plan sheet is in conflict, utilize numbering in FACS-STIP layers or check with the State Asset Specialist.



Intersection with ADA Corner Numbering in FACS-STIP

Use the **ADA Corners** layer to verify the curb ramp corner numbers. The triangles may be slightly out of place with the actual physical construction of the curb ramp.



Complicated Intersection with ADA Corner Numbering in FACS-STIP

Offset, skewed, interchange, and multiple road intersections can cause corner numbering confusion. If there are any discrepancies in curb ramp numbering, or confusion, contact the ODOT Inventory and Asset Unit to verify curb ramp numbering.

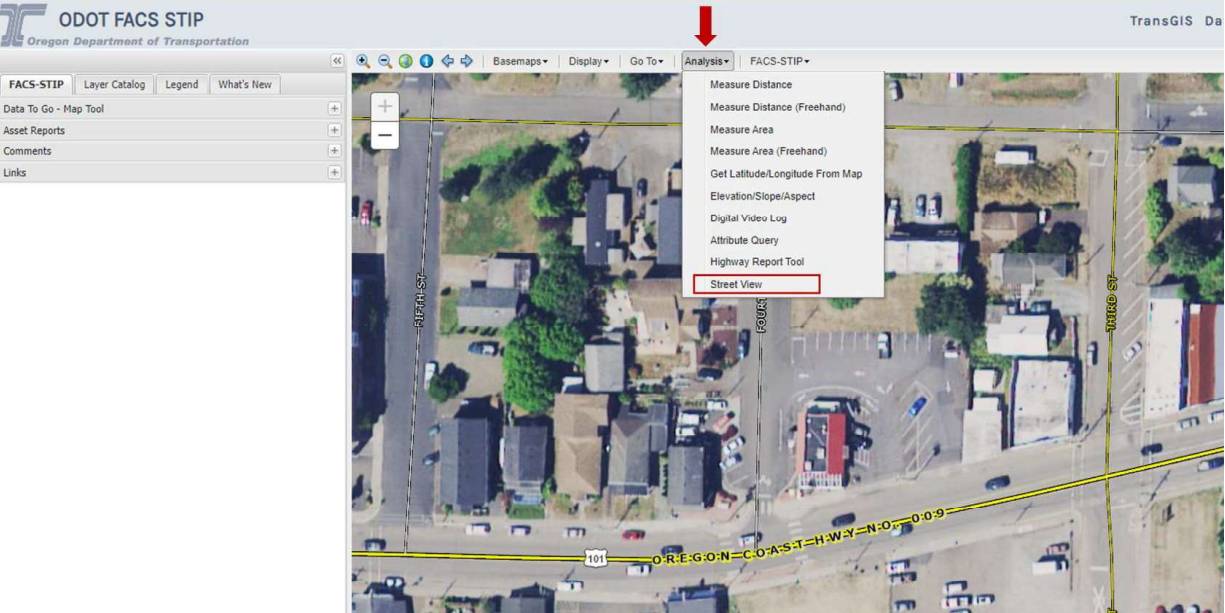
Google Maps

Investigating the site in Google Maps can be useful in verifying that the curb ramp position numbers are correct and in the correct location. Exploring the intersection in Street View can also be used to prepare for the on-site inspection. Be aware that if you are preparing to inspect newly constructed curb ramps, in most cases, the curb ramps in google maps will be outdated and show pre-construction conditions.

- a. Go to the top tool bar and click on the **Analysis** dropdown list.

- b. Choose **Street View**.

c. A note next to the cursor will ask you to choose the location. Click on the intersection. A new window with **Click to open Google Street View** will appear and click on the text. The street view image at the intersection will appear.



Navigating to Google Street View in FACS-STIP



Google Maps Streetview



Expand all figures and advance audio to the end before moving on.

CONTINUE

Unit 4 Lesson3: Other Useful FACS-STIP Searches



You must click on all images before moving on to next Lesson.

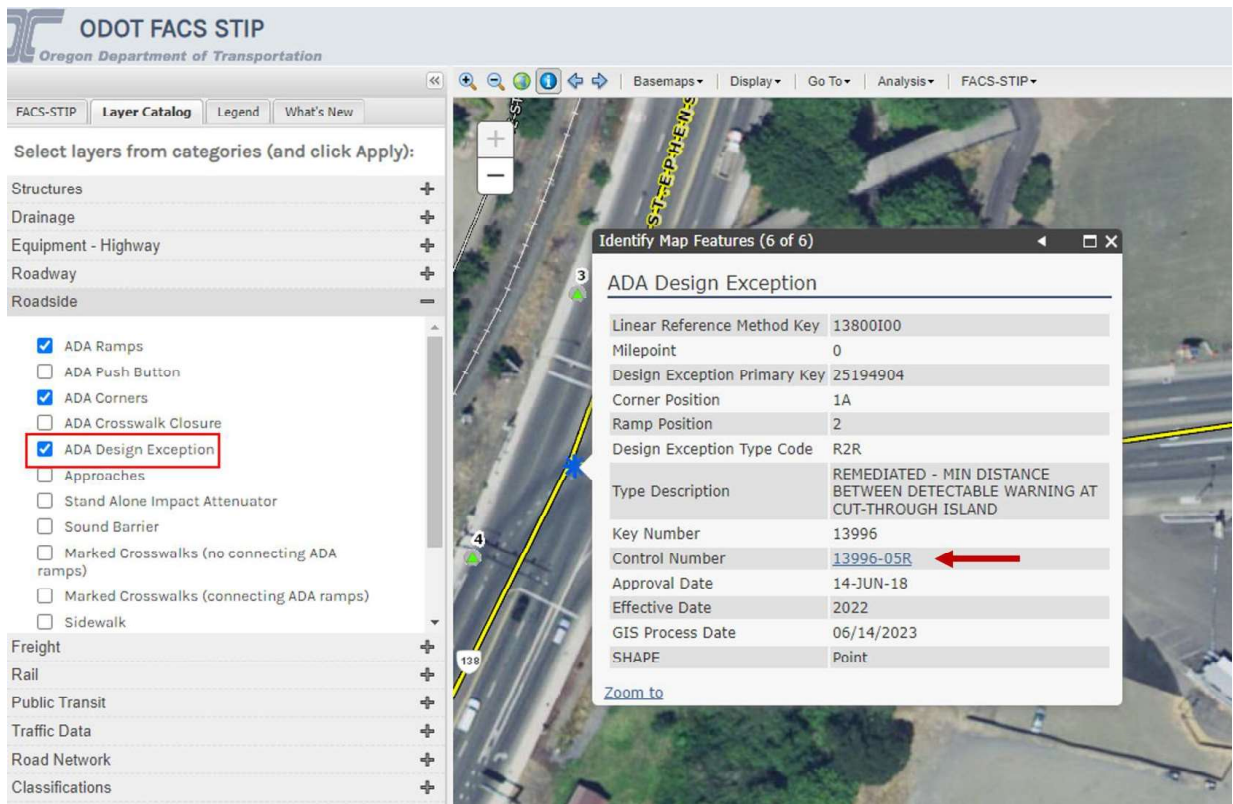


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Continue Audio Narration

ADA Curb Ramp Design Exceptions

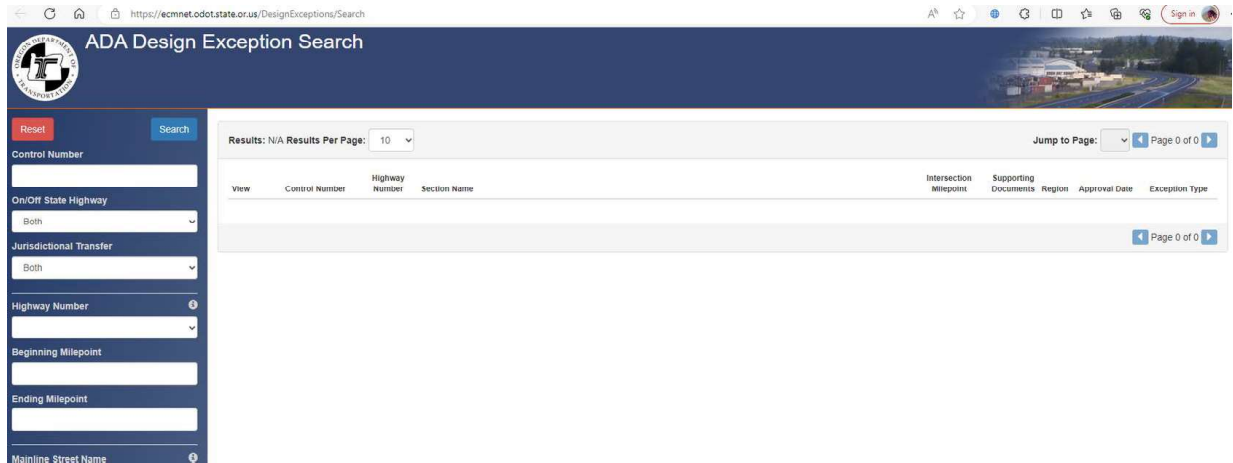
ADA Curb Ramp Design Exception approval information is available in FACS-STIP. In the **Layer Catalog** tab under the **Roadside** category there is a layer for **ADA Design Exception**. Data and a link to the approved ADA Curb Ramp Design exception is provided in the Identify Map Features Dialog box.



ADA Design Exception Layer Dialog Box with Link to Design Exception

Note: FACS-STIP asset data is uploaded every 6 months so information that is recently approved may not be uploaded in the database at the time of inspection.

If the FACS-STIP Design Exception Layer is not current, you can also access ADA design exceptions by going to the ADA Design Exception Search. You can type in the project key number or use other fields like the highway number and mile point to find approved ADA Curb Ramp Design Exceptions. Data is loaded nightly for this database, and generally documents are available within the next week that they are processed and approved.



ADA Design Exception Search

ADA Design Exception Search

For internal ODOT Staff

ADA DE INTERNAL

ADA Design Exception Search

For External Consultants, Contractors and Local Jurisdictions

ADA DE EXTERNAL

ODOT Design Exception Webpage

For Design Exception information, guidance and forms

DESIGN EXCEPTIONS

General Design Exceptions

There may be general design exceptions for certain ADA curb ramp design features such as alternative detectable warning surfaces color, grouted durable rock, or stamped concrete rock on your projects. There is a separate layer for general design exceptions; however, the data set is not complete at this time. You can review the data for the general design exceptions for your project in FACS-STIP.

In the **Layer Catalog** tab under the **Roadside** category there is a layer for **General Design Exceptions** (You might have to scroll down to see it). Data for the document is provided in the Identify Map Features Dialog box. Retain the Control Number to request a general design exception document from ODOT Traffic-Roadway Unit or your Transportation Project Manager. In the Identify Map Features Dialog box there is a link in the supporting documentation which will have to be accessed by ODOT Staff.

The screenshot shows the ODOT FACS-STIP web application interface. The 'Layer Catalog' is open, showing the 'Roadside' category with 'General Design Exception' selected. An 'Identify Map Features' dialog box is open over a map, displaying details for a 'General Design Exception' with a control number of 18567-02 and a supporting documentation link.

General Design Exception	
Linear Reference Method Key	03900100
Begin Milepoint	45.57
End Milepoint	52.71
GDE Type	ALGNMT; WIDTH
Key Number	18567
Control Number	18567-02
Approval Date	2017/07/11
Contract Plan V Number	Null
Supporting Documentation	\\sdata\rdwyshar\8_PLAN_REVIEW\DE_02_039_45.57_52.71.pdf
Note	Null
GIS Process Date	8/1/2023
Effective Date	2023
SHAPE	Polyline

Crosswalk Closure Approval Letters

Crosswalk closure information is also available in FACS-STIP. In the **Layer Catalog** tab under the **Roadside** category there is a layer for **ADA Crosswalk Closure**. Data for the crosswalk closure is provided in the Identify Map Features Dialog box. Retain the Closed Crossing ID to request crosswalk closure details from ODOT Traffic-Roadway Unit or your Transportation Project Manager. If the project team does not provide copies, email TRAdminSupport@odot.oregon.gov with a list of closure document numbers.

Traffic Roadway Administrative Support email

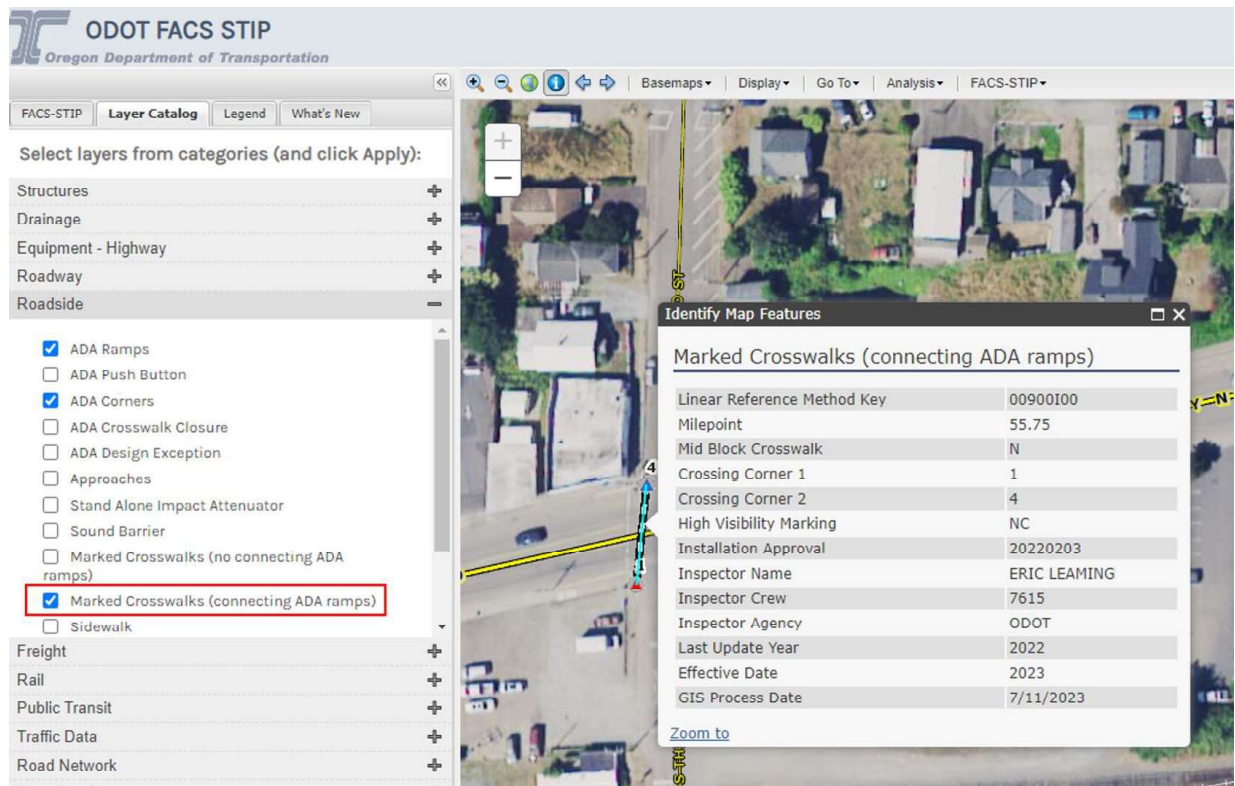
EMAIL

The screenshot displays the ODOT FACS STIP web application interface. On the left, the 'Layer Catalog' is open, showing a list of layers under the 'Roadside' category. The 'ADA Crosswalk Closure' layer is selected and highlighted with a red box. The main map area shows an aerial view of a road intersection with a yellow line indicating a crosswalk closure. A dialog box titled 'Identify Map Features (1 of 2)' is open, displaying a table of data for the selected feature. A red arrow points to the 'Closed Crossing ID' field in the table.

ADA Crosswalk Closure	
Linear Reference Method Key	13800I00
Milepoint	0
Closed Crossing Primary Key	25197465
Corner Position	1A
Ramp Position	3
Closed Crossing ID	2015-024
Sign and/or Barriers Required	N
Closure ODOT Approved Date	02/05/2015
Effective Date	2022
GIS Process Date	06/14/2023
SHAPE	Point

Marked Crosswalk Approvals

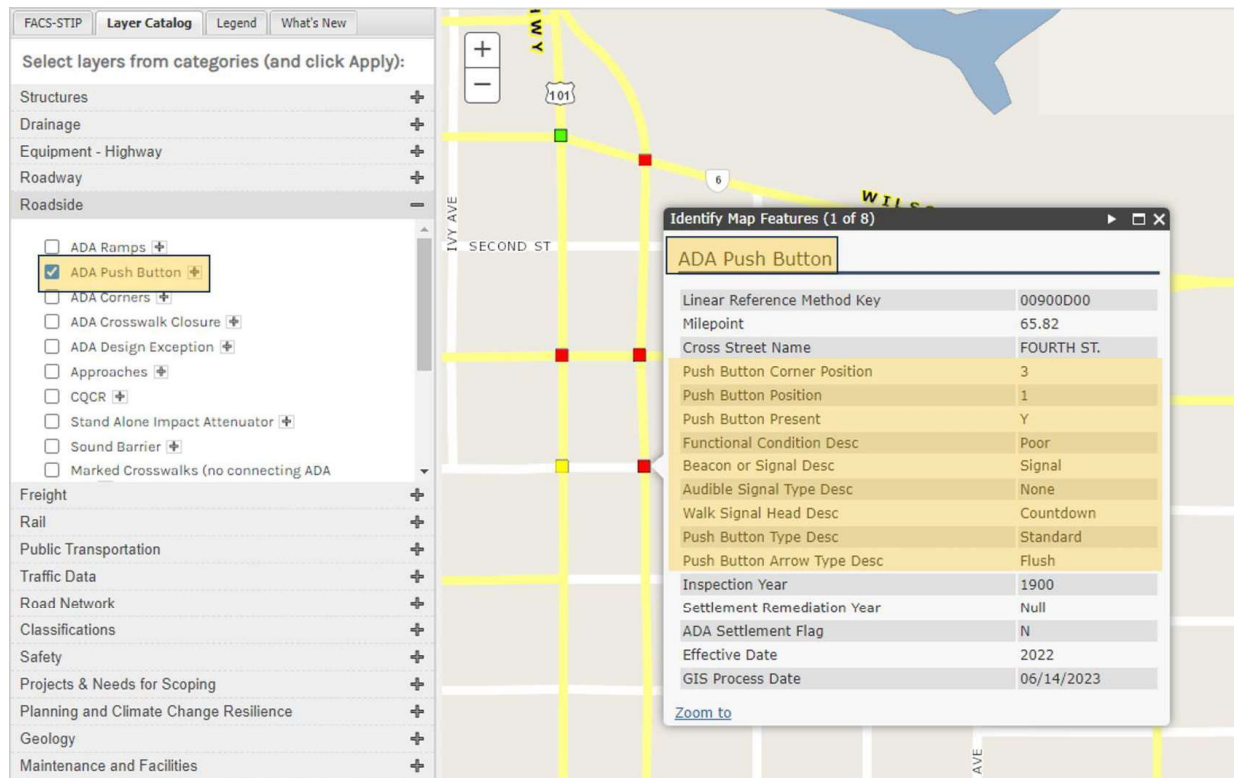
Marked crosswalk information may also be useful for your inspection and is available in FACS-STIP. In the **Layer Catalog** tab under the **Roadside** category there is a layer for **Marked Crosswalks (connecting ADA ramps)**. Data for the marked crosswalks is provided in the Identify Map Features Dialog box including an installation approval number.



Marked Crosswalks Layer Dialog Box with Crosswalk Data and Installation Approval Number

Push Buttons

An ADA Push Button layer is also in FACS-STIP. In the **Layer Catalog** tab under the **Roadside** category there is an **ADA Push Button** layer. Detailed data for marked push buttons is provided in the Identify Map Features Dialog box and includes Push Button Position, Beacon or Signal description, Audible description, Walk Signal Head and Push Button Arrow Type. These features will be described in later Units.



Push Button Layer in FACS-STIP and Identify Map Features Dialog Box with Push Button Data

i **Reminder:** The Identify Map Features dialog box has multiple pages and is indicated at the top stating, for example, "Identify Map Features (1 of 2)". Each Layer has one or more pages of information in the dialog box. If you have multiple layers selected, you will have multiple pages. Select the next page with arrow on the right of bar next to the expand

and close page symbols. If the bar states (1 of 3), then there are three pages of information to review.



Expand all figures and advance audio to the end before moving on. A learning Activity is on the next screen