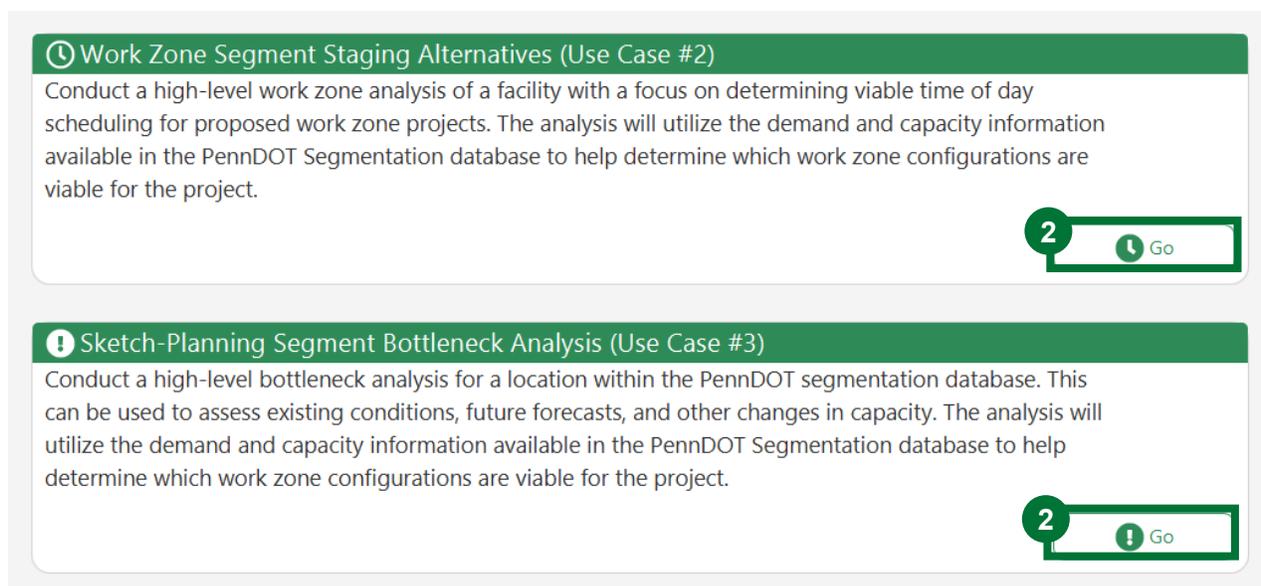


1 From any screen select **Planning** from the left toolbar

1 **Optional:** From the Home screen, under Project Independent Sketch-Planning Analysis, select **Go**



2 Select **Go** for either the work zone segment staging alternatives or the segment bottleneck analysis

- 1 Enter the **Bidirectional AADT**
- 2 Use the slider to select the **Directional Split**
- 3 Select the **Demand Profile**
- 4 Enter the **Percent Trucks**
- 5 Select the **Terrain Type**
- 6 Enter the **Base Per Lane Capacity**
- 7 Use the slider to select the **Number of Lanes**
- 8 Click **Update Analysis**
- A **Computed Directional AADT, Total Segment Capacity, 24-Hour Demands vs Project Capacities, and Existing Conditions** will update
- 9 **Optional:** To view the **Congestion Assessment** in a table format, select the table button
- 10 Select the **Arrow** or **Growth Scenarios** to proceed

- 1 Enter a **Name** for the work zone configuration
- 2 Select the **Type**
- 3 Use the slider to select the **Work Zone Capacity Adjustment**
- 4 Click **Update Analysis**
- A **Computed Capacity, 24-Hour Demands vs Project Capacities, and Congestion Assessment** will update
- 5 **Optional:** To view only one scenario, select the appropriate **Checkbox** then select **Update Analysis** (4)
- 6 **Optional:** To view the **Congestion Assessment** in a table format, select the table button
- 7 Select the **Arrow** or **Diversion Scenarios** to proceed

Freeval-PA > Sketch-Planning > Work Zone Segment Staging Alternatives

1. Existing Conditions > 2. Work Zone Configuration > 3. Diversion Scenarios

### Diversion Scenario Inputs

5 #  #2

1 Name: Medium Low Diversion

2 Diversion Level: Custom

3 Scenario Demand Adj.: 0.00 0.20 0.40 0.60 0.80 1.00

High Diversion High (20%) 0.00 0.20 0.40 0.60 0.80 1.00

4 Update Analysis

### 24-Hour Demands vs Project Capacities

Demand (veh/hr) vs Time of Day

Base Demand, Diversion Scenario #1, Diversion Scenario #2, Existing Capacity, Work Zone #1, Work Zone #2

### Viable Active Hours Assessment

Existing Conditions, Diversion Scen #1, Diversion Scen #2

Existing Conditions, Shoulder Closure, Lane Closure

6

7

Demand to Capacity (D/C) Thresholds: Under (D/C < 0.95), Near (D/C < 0.95), Over (D/C > 0.95)

Back to Planning

Enable Dark Mode

- 1 Enter a **Name** for the future build scenario
- 2 Select the **Diversion Level**
- 3 **Optional:** If the **Diversion Level** "Custom" was selected, select the number of **Scenario Demand Adjustment Factor**
- 4 Click **Update Analysis**
- A **Computed Capacity, 24-Hour Demands vs Project Capacities,** and **Congestion Assessment** will update
- 5 **Optional:** To view only one scenario, select the appropriate **Checkbox** then select **Update Analysis** (4)
- 6 **Optional:** To view the **Congestion Assessment** in a table format, select the table button
- 7 To view the impact of each build scenario on the **Congestion Assessment,** select the desired scenario

- 1 Enter the **Bidirectional AADT**
- 2 Use the slider to select the **Directional Split**
- 3 Select the **Demand Profile**
- 4 Enter the **Percent Trucks**
- 5 Select the **Terrain Type**
- 6 Enter the **Base Per Lane Capacity**
- 7 Use the slider to select the **Number of Lanes**
- 8 Click **Update Analysis**
- A **Computed Directional AADT, Total Segment Capacity, 24-Hour Demands vs Project Capacities, and Existing Conditions** will update
- 9 **Optional:** To view the **Congestion Assessment** in a table format, select the table button
- 10 Select the **Arrow** or **Growth Scenarios** to proceed

The screenshot shows the 'Future Growth Scenario Inputs' section with the following elements:

- Scenario #1:** Name: 10 Year Outlook, Growth Level: Custom, Scenario Demand Adj: 1.20
- Scenario #2:** Name: 20 Year Outlook, Growth Level: Medium (10%), Scenario Demand Adj: 1.20
- Buttons:** #1 checkbox, #2 checkbox, Update Analysis, and a right arrow.

The '24-Hour Demands vs Project Capacities' chart shows Demand (veh/hr) on the y-axis (0 to 6,500) and Time of Day on the x-axis (0:00am to 1:00am). It includes lines for Base Demand, Growth Scenario #1, Growth Scenario #2, Existing Capacity, Build Scenario #1, and Build Scenario #2.

The 'Congestion Assessment' section shows three donut charts for Existing Conditions, 10 Year Outlook, and Municipality Development. A legend below indicates Demand to Capacity (D/C) Thresholds: Under (D/C < 0.95), Near (D/C = 0.95), and Over (D/C > 0.95).

- 1 Enter a **Name** for the future growth scenario
- 2 Select the **Growth Level**
- 3 **Optional:** If the **Growth Level** of “Custom” was selected, use the slider to adjust the demand
- 4 Click **Update Analysis**
- A **24-Hour Demands vs Project Capacities** and **Congestion Assessment** will update
- 5 **Optional:** To view only one scenario, select the appropriate **Checkbox** then select **Update Analysis** (4)
- 6 **Optional:** To view the **Congestion Assessment** in a table format, select the table button
- 7 Select the **Arrow** or **Growth Scenarios** to proceed

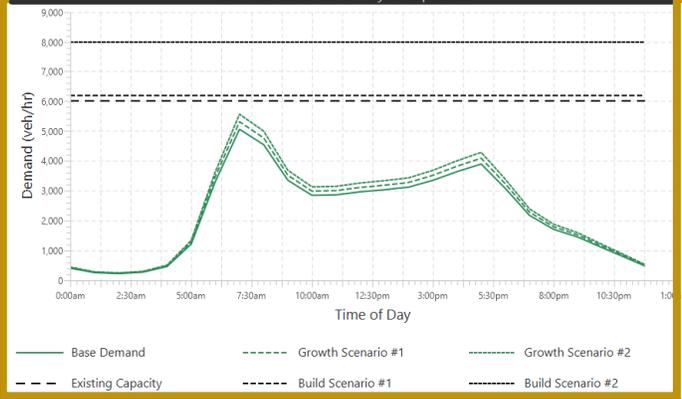
Freeval-PA > Sketch-Planning > Planning-Level Segment Bottleneck Analysis

1. Existing Conditions > 2. Growth Scenarios > 3. Build Scenarios

**Build Scenario Inputs**

#	Name	Type	Build Capacity Adj.	Build Lane Add.	Computed Capacity
#1	Connected Vehicle Infrastructure	Capacity Improv...	1.00	0 Lanes	6,180 veh/hr, 3 In open
#2	Additional Lane	Lane Addition	1.00	1 Lane	8,000 veh/hr, 4 In open

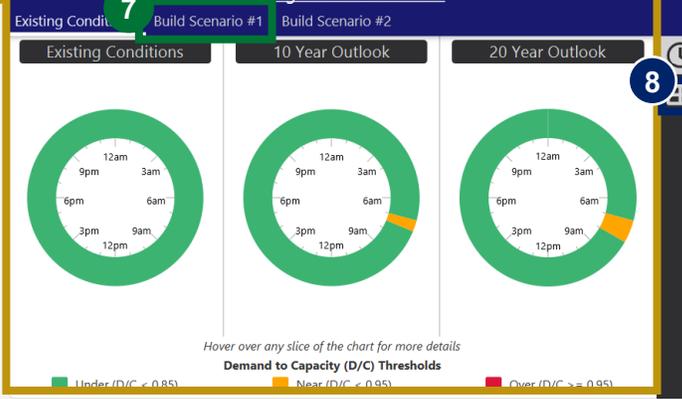
**24-Hour Demands vs Project Capacities**



**Congestion Assessment**

Existing Conditions | Build Scenario #1 | Build Scenario #2

Existing Conditions | 10 Year Outlook | 20 Year Outlook



Hover over any slice of the chart for more details

**Demand to Capacity (D/C) Thresholds**

- Under (D/C < 0.85)
- Near (D/C < 0.95)
- Over (D/C > 0.95)

Back to Planning

Enable Dark Mode

- 1 Enter a **Name** for the future build scenario
- 2 Select the **Type**
- 3 Use the slider to select the **Build Capacity Adjustment Factor**
- 4 **Optional:** If the **Type** "Lane Addition" or "Custom/Other" was selected, select the number of **Build Lane Additions**
- 5 Click **Update Analysis**
- A **Computed Capacity, 24-Hour Demands vs Project Capacities, and Congestion Assessment** will update
- 6 **Optional:** To view only one scenario, select the appropriate **Checkbox** then select **Update Analysis** (5)
- 7 To view the impact of each build scenario on the **Congestion Assessment**, select the desired scenario
- 8 **Optional:** To view the **Congestion Assessment** in a table format, select the table button