QUEENSBURY ASCT STUDY

Benefit Cost Analysis | Cluster 1

A Benefit Cost Analysis was performed to assist the Town and Adirondack/Glens Falls Transportation Council (A/GFTC) in evaluating solutions to address congestion in the corridor. The analysis evaluated three alternatives – Coordinated Signal System (Signal Timing Optimization), a NYSDOT operated Adaptive Signal Control Technology (ASCT) and a Town operated ASCT.

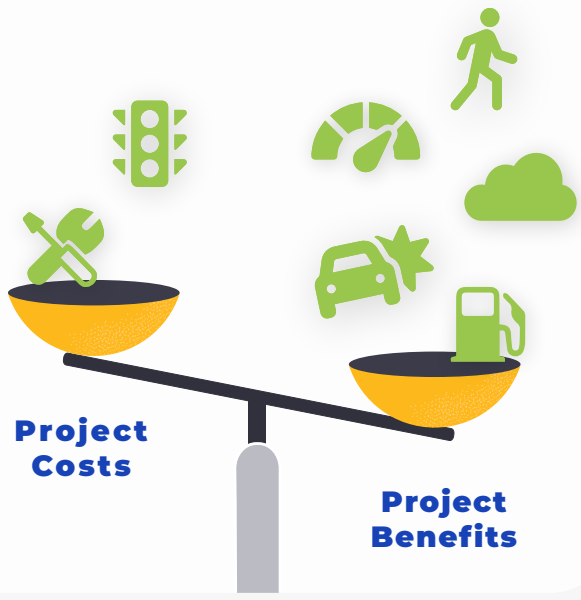
Benefit Cost Analysis (BCA) is a way to compare costs to benefits to determine whether an improvement is justified.

What are the Benefits of Improved Signal Technologies?

- **Improved** mobility for motorists, pedestrians and bicyclists
- **Fewer** gallons of fuel consumed and emissions emitted into the atmosphere
- **Fewer** crashes

What are the Costs associated with Improved Signal Technologies?

- More equipment leading to additional capital costs
- Operations and Maintenance costs are required to maintain the quality of the signal technology



Results

The Benefit Cost Ratio (BCR) is a measure of the return on investment for an alternative by monetizing and comparing the expected benefits and costs. The results of the BCA indicate that while all alternatives show a positive return on investment, a NYSDOT operated ASCT is more cost effective than a Town operated ASCT or a Coordinated Signal System.

	Benefit Cost Ratios
Proposed Action	**Cluster 1**
Coordinated Signal System	19.47
Adaptive Signal Control Technology (NYSDOT Operated)	**21.59**
Adaptive Signal Control Technology (Town Operated)	16.90

The corridor will experience:

Safety

4 fewer crashes annually with ASCT

2 fewer crashes annually with Coordinated System

The transportation system will experience:

Mobility

12,900 fewer hours of delay with ASCT

8,100 fewer hours of delay with Coordinated System

Motorists will save:

Fuel Consumption

2,400 gallons of gas yearly with ASCT

1,500 gallons of gas yearly with Coordinated System

Collectively, motorists and passengers can expect:

Travel Time Savings

$550,000 in annual benefits with ASCT

$340,000 in annual benefits with Coordinated System

Motorists will emit:

Greenhouse Gases (GHG)

21 fewer tons of GHGs into the atmosphere with ASCT

13 fewer tons of GHGs into the atmosphere with Coordinated System

AKRF | Town of Queensbury

For more information please contact:

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QUEENSBURY ASCT STUDY

Benefit Cost Analysis | Cluster 2

A Benefit Cost Analysis was performed to assist the Town and Adirondack/Glens Falls Transportation Council (A/GFTC) in evaluating solutions to address congestion in the corridor. The analysis evaluated three alternatives – Coordinated Signal System (Signal Timing Optimization), a NYSDOT operated Adaptive Signal Control Technology (ASCT) and a Town operated ASCT.

Benefit Cost Analysis (BCA) is a way to compare costs to benefits to determine whether an improvement is justified.

What are the Benefits of Improved Signal Technologies?

- **Improved** mobility for motorists, pedestrians and bicyclists
- **Fewer** gallons of fuel consumed and emissions emitted into the atmosphere
- **Fewer** crashes

What are the Costs associated with Improved Signal Technologies?

- More equipment leading to additional capital costs
- Operations and Maintenance costs are required to maintain the quality of the signal technology

Results

The Benefit Cost Ratio (BCR) is a measure of the return on investment for an alternative by monetizing and comparing the expected benefits and costs. The results of the BCA indicate that while all alternatives show a positive return on investment, a NYSDOT operated ASCT is more cost effective than a Town operated ASCT or a Coordinated Signal System.

	Benefit Cost Ratios
Proposed Action	**Cluster 2**
Coordinated Signal System	8.57
Adaptive Signal Control Technology (NYSDOT Operated)	**12.35**
Adaptive Signal Control Technology (Town Operated)	9.81

The corridor will experience:

Safety

4 fewer crashes annually with ASCT

1 fewer crashes annually with Coordinated System

The transportation system will experience:

Mobility

6,900 fewer hours of delay with ASCT

3,300 fewer hours of delay with Coordinated System

Motorists will save:

Fuel Consumption

1,300 gallons of gas yearly with ASCT

600 gallons of gas yearly with Coordinated System

Collectively, motorists and passengers can expect:

Travel Time Savings

$300,000 in annual benefits with ASCT

$140,000 in annual benefits with Coordinated System

Motorists will emit:

Greenhouse Gases (GHG)

12 fewer tons of GHGs into the atmosphere with ASCT

6 fewer tons of GHGs into the atmosphere with Coordinated System

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QUEENSBURY ASCT STUDY

Benefit Cost Analysis | Cluster 3

A Benefit Cost Analysis was performed to assist the Town and Adirondack/Glens Falls Transportation Council (A/GFTC) in evaluating solutions to address congestion in the corridor. The analysis evaluated three alternatives – Coordinated Signal System (Signal Timing Optimization), a NYSDOT operated Adaptive Signal Control Technology (ASCT) and a Town operated ASCT.

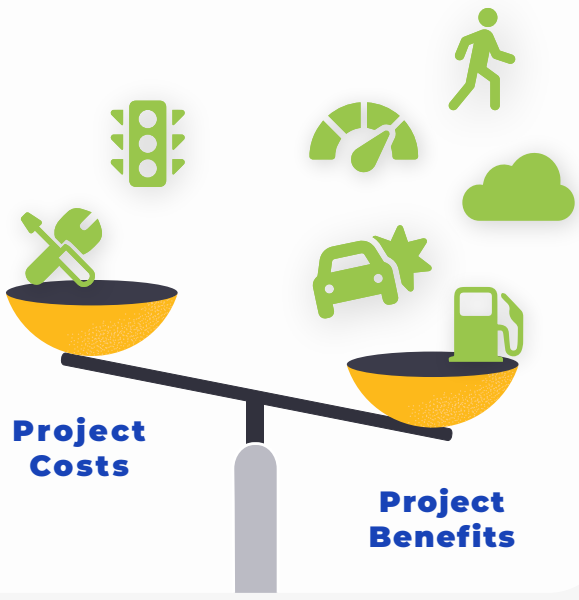
Benefit Cost Analysis (BCA) is a way to compare costs to benefits to determine whether an improvement is justified.

What are the Benefits of Improved Signal Technologies?

- **Improved** mobility for motorists, pedestrians and bicyclists
- **Fewer** gallons of fuel consumed and emissions emitted into the atmosphere
- **Fewer** crashes

What are the Costs associated with Improved Signal Technologies?

- More equipment leading to additional capital costs
- Operations and Maintenance costs are required to maintain the quality of the signal technology



Results

The Benefit Cost Ratio (BCR) is a measure of the return on investment for an alternative by monetizing and comparing the expected benefits and costs. The results of the BCA indicate that while all alternatives show a positive return on investment, a Coordinated Signal System is more cost effective than a NYSDOT operated or Town operated ASCT.

	Benefit Cost Ratios
Proposed Action	**Cluster 3**
Coordinated Signal System	**23.18**
Adaptive Signal Control Technology (NYSDOT Operated)	9.69
Adaptive Signal Control Technology (Town Operated)	7.29

The corridor will experience:

Safety

2 fewer crashes annually with ASCT

1 fewer crashes annually with Coordinated System

The transportation system will experience:

Mobility

2,600 fewer hours of delay with ASCT

8,000 fewer hours of delay with Coordinated System

Motorists will save:

Fuel Consumption

500 gallons of gas yearly with ASCT

1,500 gallons of gas yearly with Coordinated System

Collectively, motorists and passengers can expect:

Travel Time Savings

$110,000 in annual benefits with ASCT

$340,000 in annual benefits with Coordinated System

Motorists will emit:

Greenhouse Gases (GHG)

4 fewer tons of GHGs into the atmosphere with ASCT

14 fewer tons of GHGs into the atmosphere with Coordinated System

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