Problems Observed
Atlantic High School - South Daytona, FL

Location 1:
- Back-up entering the school
- Back-up exiting the school
- Drivers exiting force two lanes

Location 2:
- Back-up entering the school
- Under use of loop
Base Case Model

Current Situation

Proposed Situation
Proposed Solution Model

- Average Speed: 5.45 MPH
- Delay Time: 7.07 Minutes per Mile
- By isolating turns we have maximized all available space and eliminated any need for a separate turn lane
- Right turn into West entrance has 26 feet of clearance
- Left turn out of West entrance has 18 feet of clearance
  - Not enough space for two lanes as used now
- Left turn into East entrance has 27 feet of clearance
- Right turn out of East entrance has 16 feet of clearance
Inform Parents

Control Exit
- Left and Right Turn Only Signs
- One at the east and west exit
- Cost: $15-$20

Restrict Entrances
- Blocks unwanted turn movements
- Cones Cost:$10-$20 based on weight
- Barrier Poles Cost: $20
Conclusion

Pros:
- Easy implementation
- Low Cost
- Prevents the creation of two lane exit

Cons:
- Increase in delay time
- Increase in total vehicles per mile

The proposed solution prevents accidents.

<table>
<thead>
<tr>
<th>Results</th>
<th>Base Model</th>
<th>Solution Model</th>
<th>Alternative Solution Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Number of Vehicles in Network</td>
<td>55</td>
<td>119</td>
<td>71</td>
</tr>
<tr>
<td>Total Vehicle Miles</td>
<td>264.97</td>
<td>368.35</td>
<td>335.33</td>
</tr>
<tr>
<td>Average Speed (mph)</td>
<td>12.08</td>
<td>5.45</td>
<td>7.81</td>
</tr>
<tr>
<td>Delay Time (min)</td>
<td>1.41</td>
<td>7.07</td>
<td>3.92</td>
</tr>
<tr>
<td>Near Misses</td>
<td>36</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

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