ASTRoMaP
Atlanta Strategic Truck Route Master Plan

ARC

Draft
Identification
Criteria Matrix

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After completing the Data Collection/Needs Assessment task of the Atlanta Strategic Truck Route Master Plan (ASTRoMaP) the next step was to select cross regional corridors to comprise a seamless, connected truck-friendly network. Once selected and approved, this ASTRoMaP System, along with the interstates, railroads, and airport, will form the strategically important core of the freight infrastructure for the Atlanta Region. Following ASTRoMaP tasks such as the Strategies and Recommendations Report and the Final Report will proffer policies and capital projects meant to enhance goods movement and mitigate negative impacts of truck travel in the region.

Via an exhaustive and thorough documentation and outreach effort, the project team collected significant amounts of data that resulted in the Draft Needs Assessment Document. The data from that effort forms the foundation of the evaluation process which will ultimately yield the ASTRoMaP System.

Continuing the process of preparing recommendations, the following methodology was developed for prioritizing the routes and identifying those to be moved forward through the regional planning process. Weights and values are assigned to each attribute to help quantify the process.

In September 2009, a survey was conducted with public and private sector participants, to assess the priority for consideration of each data element (attribute). With completion of the data collection process, the survey results were reviewed and considered when determining the assignment of weights and values. Two attributes were added to the selection process; Level of Service and Level of Truck Volume. Level of Service described the capacities and flow of the given roadway, and had been collected but not presented as part of the Needs Assessment. The level of truck volume was seen as an indicator of "truck friendly" construction and the current ability of the roadway to provide access to freight generators. Six attributes, to be discussed in more detail, were used to form a secondary level of evaluation, as they were more qualitative in nature. Ten quantifiable attributes remained. In addition to the survey results, each attribute was ranked to signify the level of influence on truck navigation.

| ATTRIBUTE | PRIORITY | |
NAME	SURVEY	INFLUENCE
Functional Classification	1	1
Level of Service	-	2
Lane Width	4	3
Posted Speed	5	4
Truck Volume	-	5
Shoulder Width	6	6
At-Grade Crossing Presence	7	7
Bridge Shoulder Width	8	8
Bridge Posted Weight	2	9
Bridge Minimum Vertical	3	10

 Items such as functional class and lane width that weigh heavily on the ability of a truck to safely and successfully negotiate a route were viewed as having more influence. Attributes such as shoulder width and at-grade crossing presence, while still important regarding delay and safety, were seen as not detrimental to the assignment of trucks to the roadway. Two attributes, Minimum Vertical Clearance and Posted Weight Restrictions, in relation to bridges on a route, were seen as critical obstacles and thus assigned a point value of 100, compared to the normal 3, assigned to negative conditions. Where sub-standard heights or posted weight restrictions existed, presented

immediate barriers to the use of that segment, where they did not exist did not add to the value of the segment. Therefore, each of these was seen as least applicable during the selection process, unless negatively impacting the roadway. Ranked from one to ten, the attribute in the sixth position was assigned ten percent, as the value of ten; spread across all ten attributes would score a one hundred percent. A bell curve assessment for scoring was applied to the remaining values.

Recommendations will ultimately be based on the quantified results in conjunction with qualitative evaluation including planning judgment and experience. The methodology for prioritization included development and implementation of criteria/attributes that were identified and measured throughout the process and listed in the table below.

Prioritization Criteria

EXAMPLE: CRITERIA	COMMENT		Weight
SCORE	**SCORE**	**SCORE**	
CONDITION	CONDITION	CONDITION	

Functional class	Design attributes reflecting truck considerations		**15%**
3	2	1	
Local	Collector	Arterial	

Level of Service	Congestion and resultant recurring delays		**15%**
3	2	1	
E or F Designation	D Designation	A, B, or C Designation	

Lane width	Curb to curb		**12%**
3	2	1	
< 12 ft	NA	12 ft or greater	

Posted speed	MPH		**12%**
3	2	1	
< 35	35-44	>45	

Truck Volume (see text)	2010 Inbound plus outbound	Real-Time Truck Travel Analysis	**12%**

3	**2**	**1**
< 3,000 Travel time index < .8	>2,999 and < 5,796 Travel time index from .8 to 1.0	> 5,795 Travel time index > 1.0

Shoulder width	Ability to remove disabled or task assigned vehicle from flow	**10%**

3	**2**	**1**
<5 ft or no shoulder		5 ft or greater

Truck volumes at rail crossings		**7%**

3	**2**	**1**
In top 25		Not in top 25

Bridges with Pedestrian Services		**7%**

3	**2**	**1**
No curb or sidewalk		>5 feet on either side

Bridge Posting Requirements and Actual Postings		**5%**

100	**2**	**1**
> or equal to 20% below		<20% below or no posting

Minimum Vertical Clearance		**5%**

100	**2**	**1**
< 15ft-Minimum vertical clearance		15ft or greater

Truck Volume was indicative of current construction that lends the roadway to more "truck friendly" attributes. An ancillary correlation to the presence of higher truck traffic was the presence of freight intensive land uses. As identified in the Community Impact Mapping Analysis, where the "need" exists, truck access is granted without restriction. Meaning that if a truck has a pickup or delivery it has the right to travel to its destination via the most direct route. Therefore, trucks will always be on roads near warehousing, manufacturing, commercial retail, and similar areas of goods movement origins and destinations. In light of this fact, where the ASTRoMaP System could reflect this presence, the selection of that roadway segment would facilitate local access along with regional mobility, while not generating an additional roadway with increased truck volumes.

Bridges with Pedestrian Services reflect the current and future expectation that bridge spans will incorporate bicycle and pedestrian access. As this applies to truck route designation, safety is the intended evaluation.

The two values with an assignment of five percent were identified as having a near crippling effect on the route, where present. To ensure that these conditions would be highly, a heightened value of 100 points was assigned. When roadways were not limited by these restrictions, a favorable score of one would be assigned. An alternative scoring, utilizing a higher percentage of weight or importance was discounted, so that future evaluations would appreciate the specificity of the condition.

Six additional values were assigned to the post quantitative evaluation. These were applied to roadways identified in the quantitative analysis; to order possible alternatives should these lend the roadway or segment of roadway to be excluded.

Community input
Results of community outreach support or opposition to project

3	2	1
Comments opposed to truck use	No comments	Comments in favor of truck use

Private industry input
Results of meetings with private industry

3	2	1
Comments opposed to truck use	No comments	Comments in favor of truck use

Jurisdictional input
Results of meetings with ARC jurisdictions (TCC members)

3	2	1
Comments opposed to truck use	No comments	Comments in favor of truck use

Connectivity
Planning judgment coupled with data analysis to determine corridors that most efficiently connect destinations

3	2	1
Results in little or no connectivity	Moderate connectivity	Required to provide significant connectivity

Land Use
Proximity to features

3	2	1
Conflicts with trucking operations	No relation to trucking operations	Conforms with trucking operations

Environmental Justice

Proximity to features

3	2	1
Conflicts with trucking operations	No relation to trucking operations	Conforms with trucking operations

An illustration of the performance of the matrix, when assigned precedence and scores assessed, can be seen below.
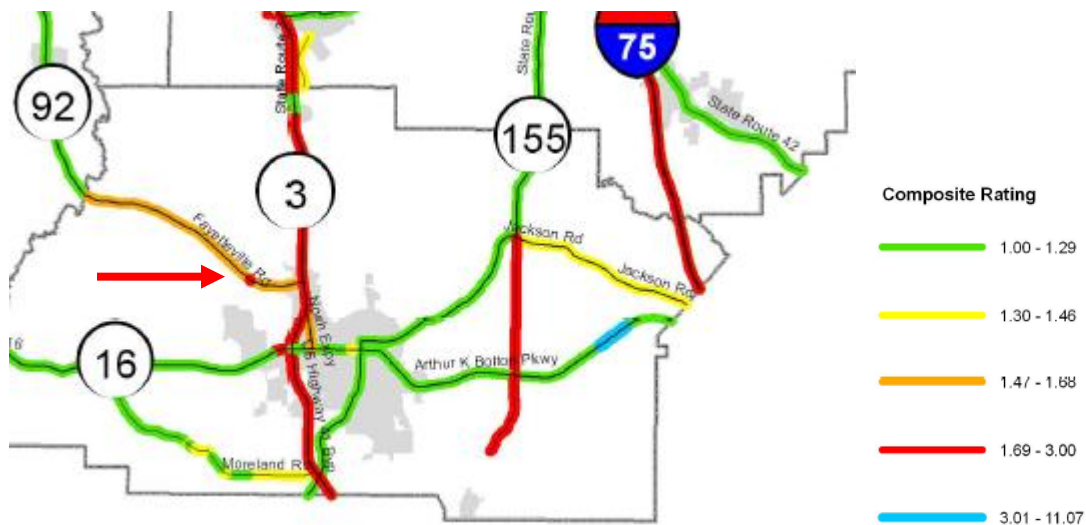
The capacity to illustrate alternatives is also shown. Instances where critical effects, such as a posted weight restriction of 30 to 39.9 percent of design load, can be identified (Eastern segment of GA-16), a more circuitous but efficient path can be observed. The decision to assign the corridor to the alternative, on a permanent basis, can be made by the collective stakeholder group.

Candidate project identification can be assisted by this process. Should the segment of GA-92, shown in orange, be selected, the specific "red" segment noted encapsulated by the larger "orange" segment may reflect a "quick win" or short term improvement project versus the greater or long term project correcting the roadway segment as a whole.

The Composite Scoring for the entire candidate roadway network is presented in the document entitled ASTRoMaP System along with the corridors that were selected for inclusion.