



Orange County Transportation Multimodal Plan

PRIORITIZATION METHODOLOGY

Agenda

- Prioritization Survey results
- Bike Ped Score Calculation
- Transit Score Calculation
- New Roadway / Widening Score Calculation
- Intersections / Improvements Score Calculation
- Additional Points Calculation
- Mode Split
- Exceptions for special projects

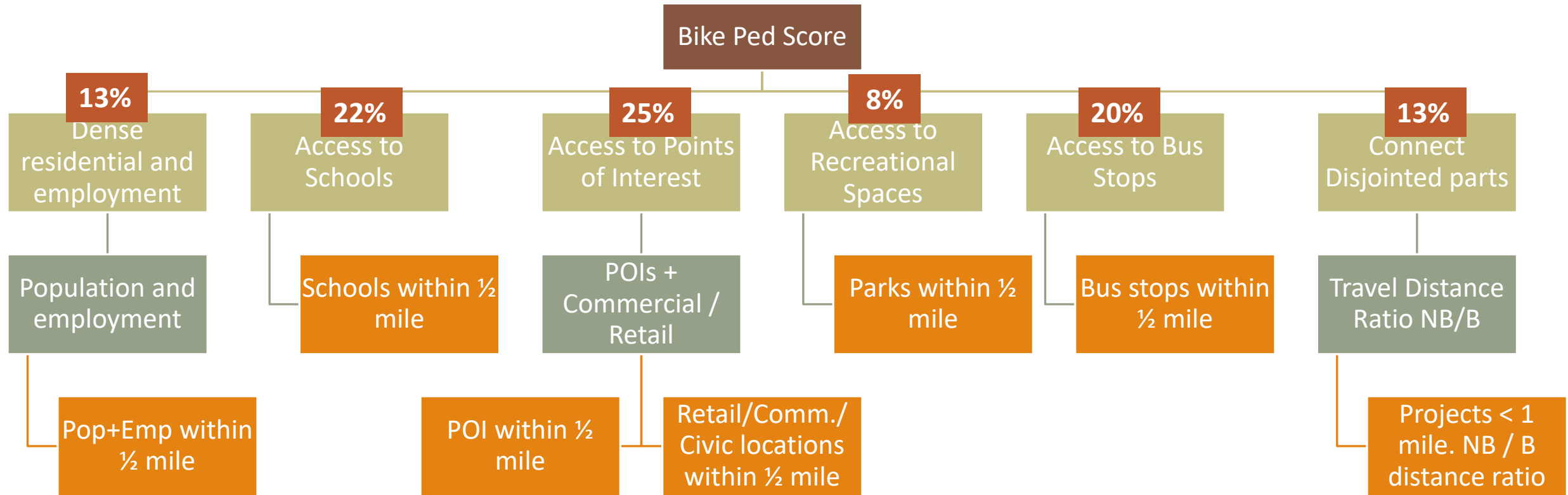
Prioritization – Survey Results

Final score = (Public Survey score + CTT Score + Orange County Score)/3

Input	Normalized scores
Roadway Improvements	0.23
Bicycle and Pedestrian Improvements	0.46
Transit and Rail Improvements	0.31
Roadway improvements priorities (n = 101)	
Improve access and connectivity	0.41
Manage congestion through technology solutions and roadway design	0.48
Improve freight movement efficiency	0.05
Improve pavement condition	0.06
Bicycle and pedestrian improvements priorities (n = 101)	
Serve regions with dense residential and employment centers	0.11
Provide access to schools (K through 12)	0.20
Provide access to points of interest (Civic, shopping, hospitals, etc.)	0.23
Increase access to recreational spaces	0.07
Provide access to bus stops	0.18
Connect disjointed parts of existing network	0.11
Improve Existing Pavement Condition	0.11

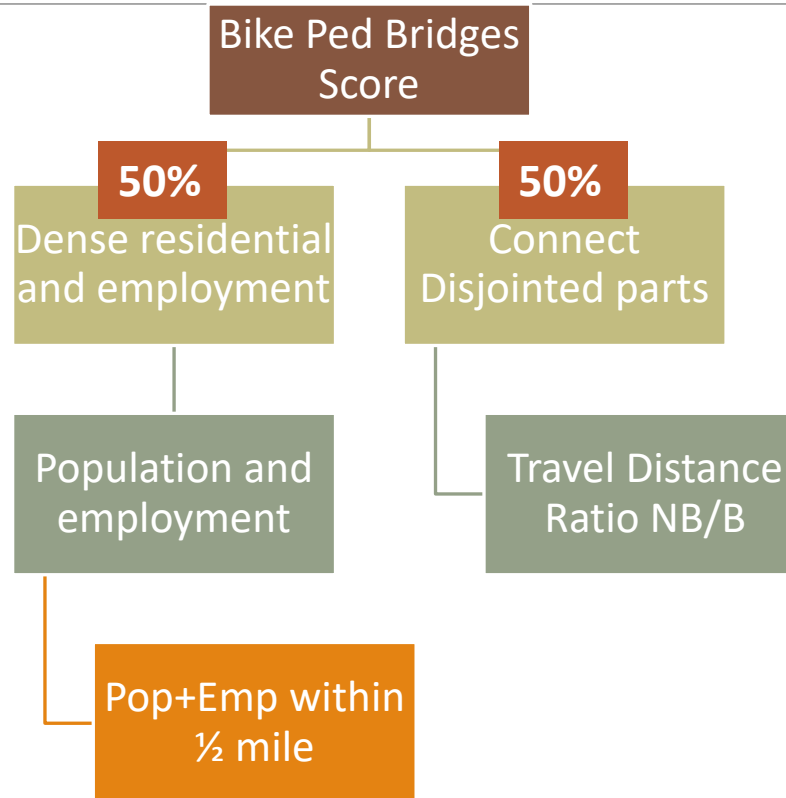
Input	Normalized Scores
Transit improvements priorities (n = 97)	
Increase local service (within County)	0.26
Increase regional service (outside of County)	0.12
Serve areas with higher density	0.21
Improve access to jobs/schools	0.21
Improve access to points of interest (Civic, shopping, recreation, etc.)	0.15
Improve access to hospitals / medical facilities	0.05
Environmental Justice considerations	0.27
Safety considerations	0.33
Cost considerations	0.10
Environmental considerations	0.00
Multimodal considerations (esp. for roadway projects)	0.30

Bike-Ped Segments Score Calculation



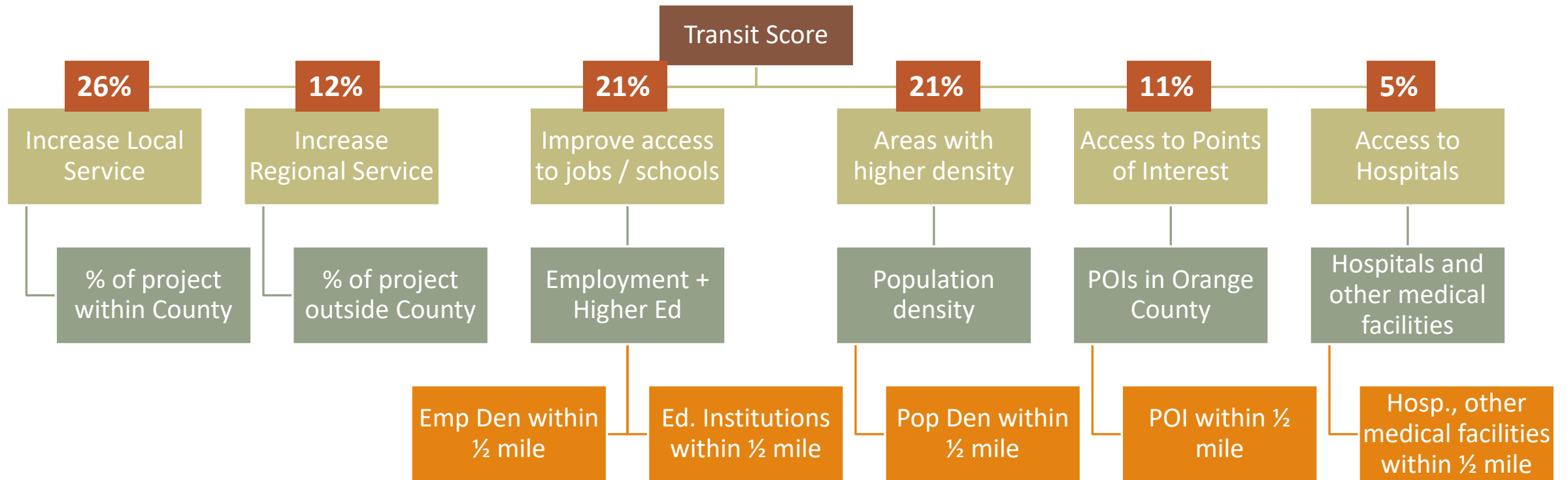
For projects longer than 1 mile, the metrics will be 'per mile'.
Maximum possible bike-ped score will be 100

Bike-Ped Bridges Score Calculation



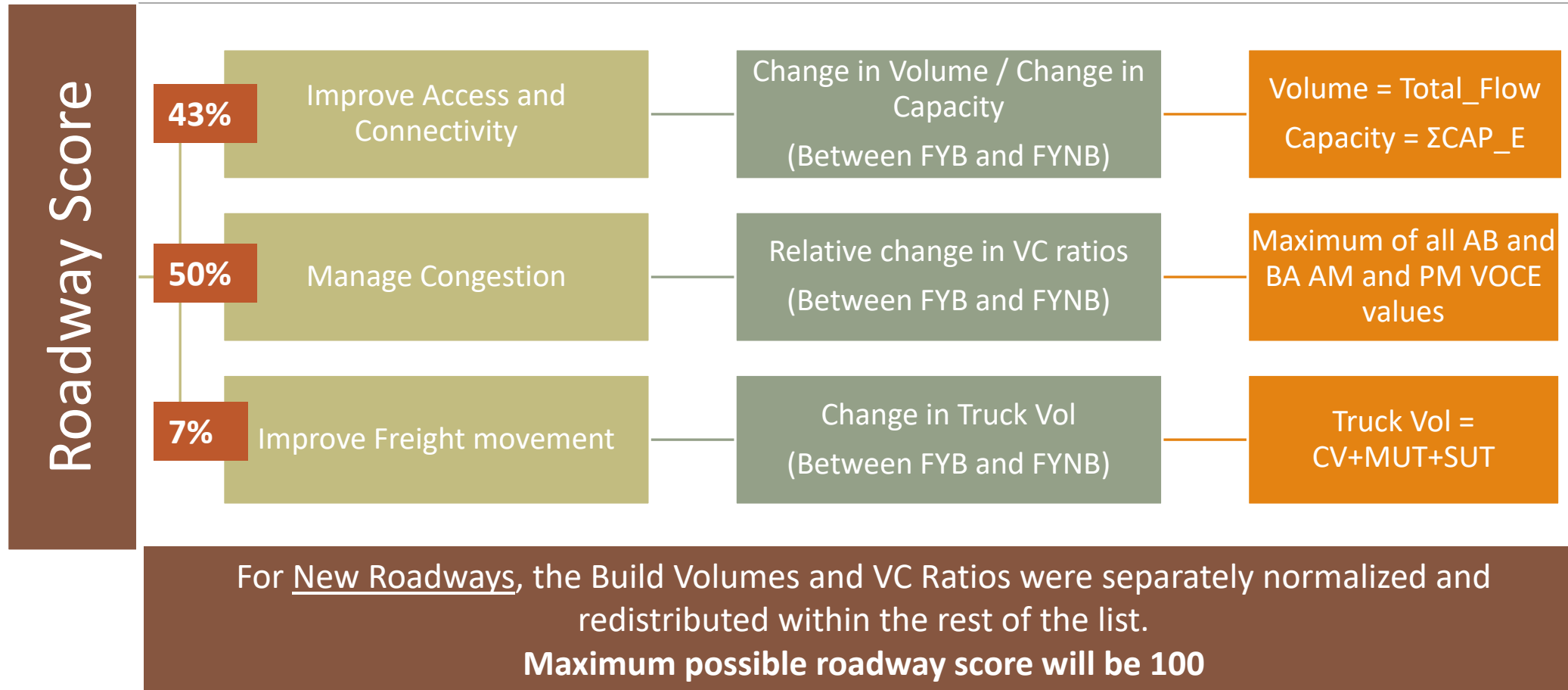
Maximum possible bike-ped bridges score will be 100

Transit Score Calculation

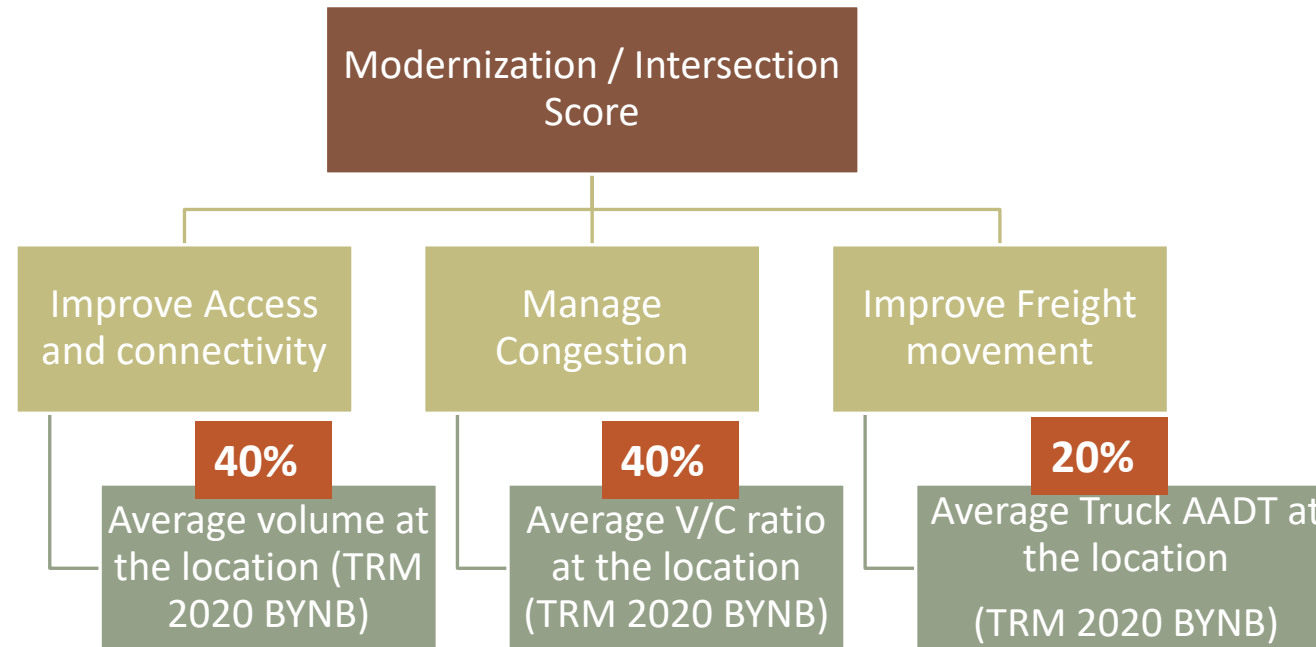


For projects longer than 1 mile, the metrics will be 'per mile'.
Maximum possible transit score will be 100

New Roadway / Widening Score Calculation



Modernization / Intersection Score Calculation



Average *metric* for Intersection = *metric* for all legs / number of legs
Average metric for segment = $\Sigma(\text{length of subsegment} \times \text{metric of subsegment}) / \text{Total length of segment}$
Maximum possible roadway score will be 100

Additional points Calculation

Category	Survey Weight	BPW	Bike-Ped	TW	Transit	RW	Roadway
Environmental Justice	27%	38%	Average Adjusted [#] TDI score	73%	Average Adjusted [#] TDI score	27%	Negative Average Adjusted [#] TDI score
Safety	33%	48%	$\Sigma(\text{BP Crash} \times \text{Severity})$		-	33%	Weighted Section Safety Score
Cost (Inverse Ranking)	10%	14%	Acres $[\text{Ground Area} + (24 \times \text{Bridge Area}) + (\text{Par} \times 10)] / \text{Mile}$	27%	Buses required $(\text{Roundup}(\text{length} \times 2 / 25) + 1) + \text{Stop frequency factor}$	10%	Acres $[\text{Ground Area} + (24 \times \text{Bridge Area}) + (\text{Par} \times 1000)] / \text{Mile}$
Multimodal (for roadway projects)	30%	-	-	-	-	30%	$\Sigma (\text{Percentage of project} \times \text{Multimodal multiplier}^{**})$

***Severity multiplier** : No Injury or Unknown = 1, Possible injury = 2, Suspected Minor Injury = 4, Suspected Serious Injury = 7, Killed = 10

**** Multimodal Multiplier** : Road = 0, bike or ped = 1, bike and ped = 2

Average TDI scores were adjusted considering the minimum score in the list as 0.

For projects longer than 1 mile, the metrics will be 'per mile'.

Mode Split

Each mode will have its own project list, ranked by score.

3 ways to combine the modes and create overall prioritization list

The overall prioritization can be in 4 Bike Ped / 3 Transit / 2 Roadway projects succession e.g.
BP1, BP2, BP3, BP4, T1, T2, T3, R1, R2, BP5, BP6, BP7, BP8, T4, T5, T6, R3, R4.....

Exceptions

Certain projects didn't render themselves to score calculations using these methods

E.g. Transit Facilities, Very short road connections, certain bike-ped projects

These projects will be included in a separate list and their prioritization can be determined at Orange County's discretion.

Questions?