Region 1 Active Transportation Needs Inventory

TAC Meeting #4

June 10, 2015

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Meeting Goals

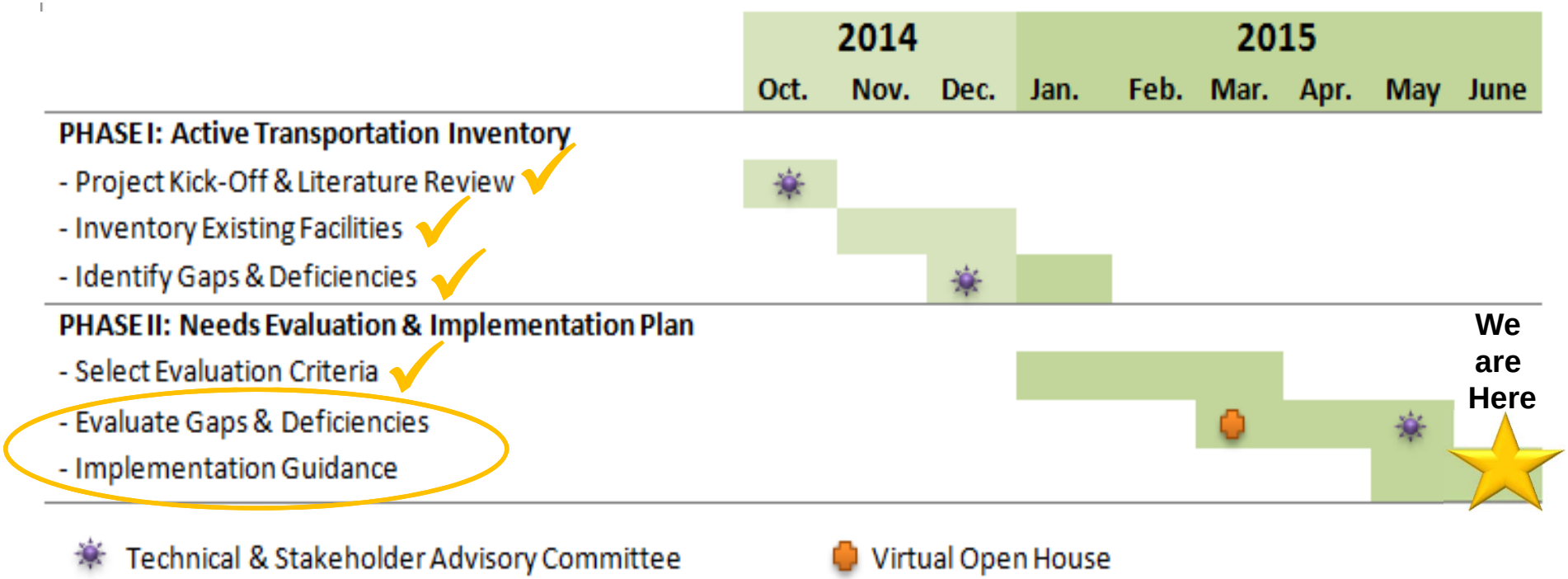
- TAC sign-off on initial criteria weighting and scaling
- Review draft evaluation results
- Input on next steps
  - Existing conditions criterion
  - Grouping segments
  - Feasibility analysis

Evaluation Criteria	Crash History	Crash Risk	Access to Transit
Crash History			
Crash Risk	Crash History or Crash Risk		
Access to Transit	Crash History or Access to Transit	Crash Risk or Access to Transit	
Access to Essential Destinations	Crash History or Access to Essential Destinations	Crash Risk or Access to Essential Destinations	Access to Transit or Access to Essential Destinations
Serves Transpo. Disadvantaged	Crash History or Serves Transpo. Disadvantaged	Crash Risk or Serves Transpo. Disadvantaged	Access to Transit or Serves Transpo. Disadvantaged
Fills a Gap	Crash History or Fills a Gap	Crash Risk or Fills a Gap	Access to Transit or Fills a Gap
In Local Plan	Crash History or In Local Plan	Crash Risk or In Local Plan	Access to Transit or In Local Plan

Charge of the TAC

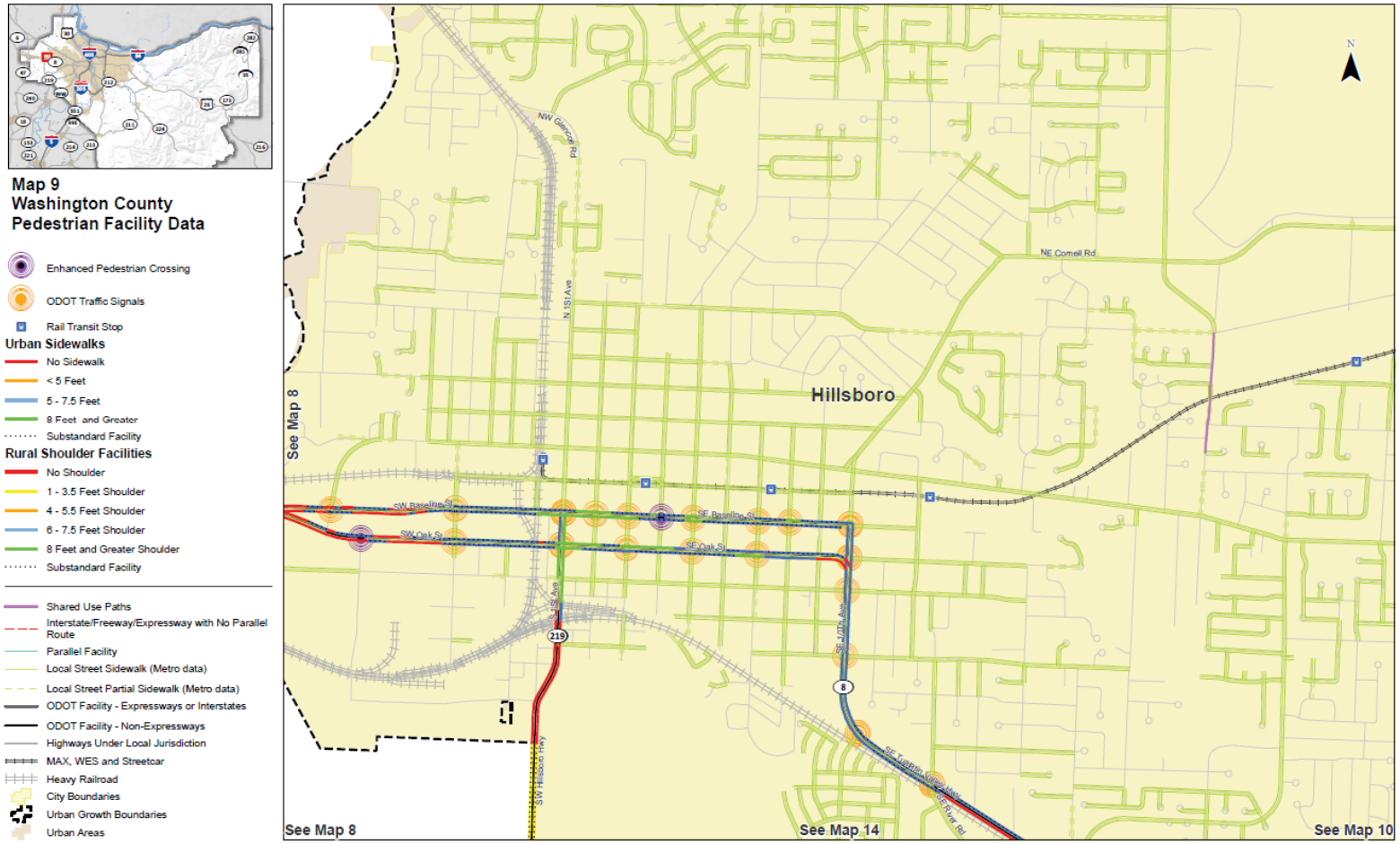
- Review and comment on deliverables
- Participate in 4 TAC Meetings
- Liaison to your Unit
  - Ensure products are useful and implementable
  - Develop awareness and buy-in
  - Provide technical guidance, as necessary

Project Schedule & Overview



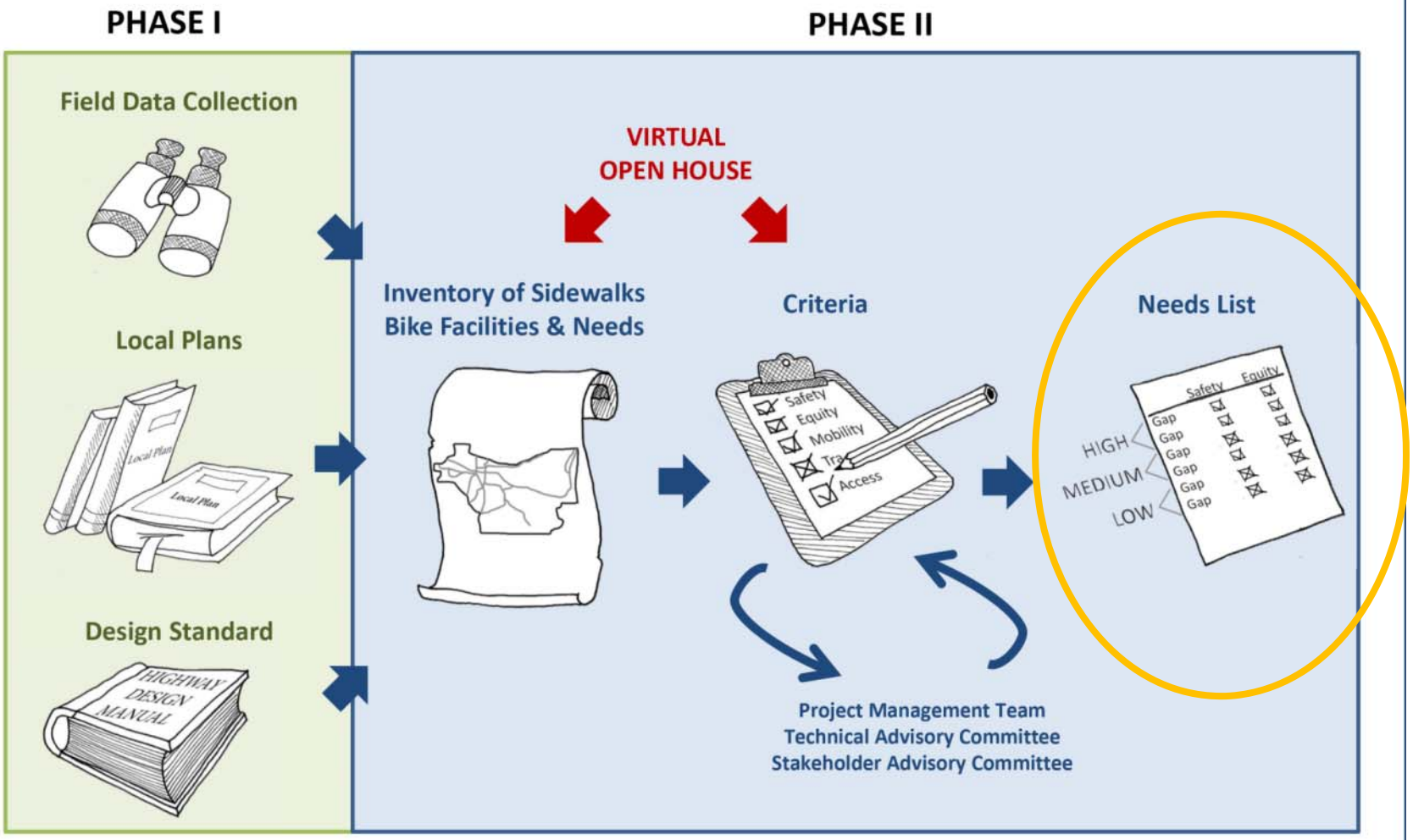
- End Products
  - Updated inventory of existing facilities, gaps, and deficiencies
  - Spreadsheet tool for grouping needs into “high”, “medium”, “low” categories
  - Implementation Guidance memo

Region 1 Ped/Bike Facilities Atlas



- Complete draft atlas posted on project website: www.oregon.gov/ODOT/ATNI
- TAC Comment log: \\7d1050jh\share\Active_Transportation

ACTIVE TRANSPORTATION NEEDS INVENTORY PROCESS



ATNI "Criteria" & NCHRP 7-17 "Factors"

Weight	NCHRP 7-17 Prioritization Factors	ODOT ATNI Evaluation Criteria
	Safety	Crash History
		Crash Risk
	Demand	Access to Transit
		Access to Essential Destinations
	Connectivity	Fills a Gap
	Equity	Transportation Disadvantaged
	Stakeholder Input	In Local Plan
	Existing Conditions	Gaps & Deficiencies Evaluation
	Compliance	*Could be added in future*
	Constraints	*Could be added in future*
	Opportunities	*Could be added in future*

Criteria selected by TAC and SAC

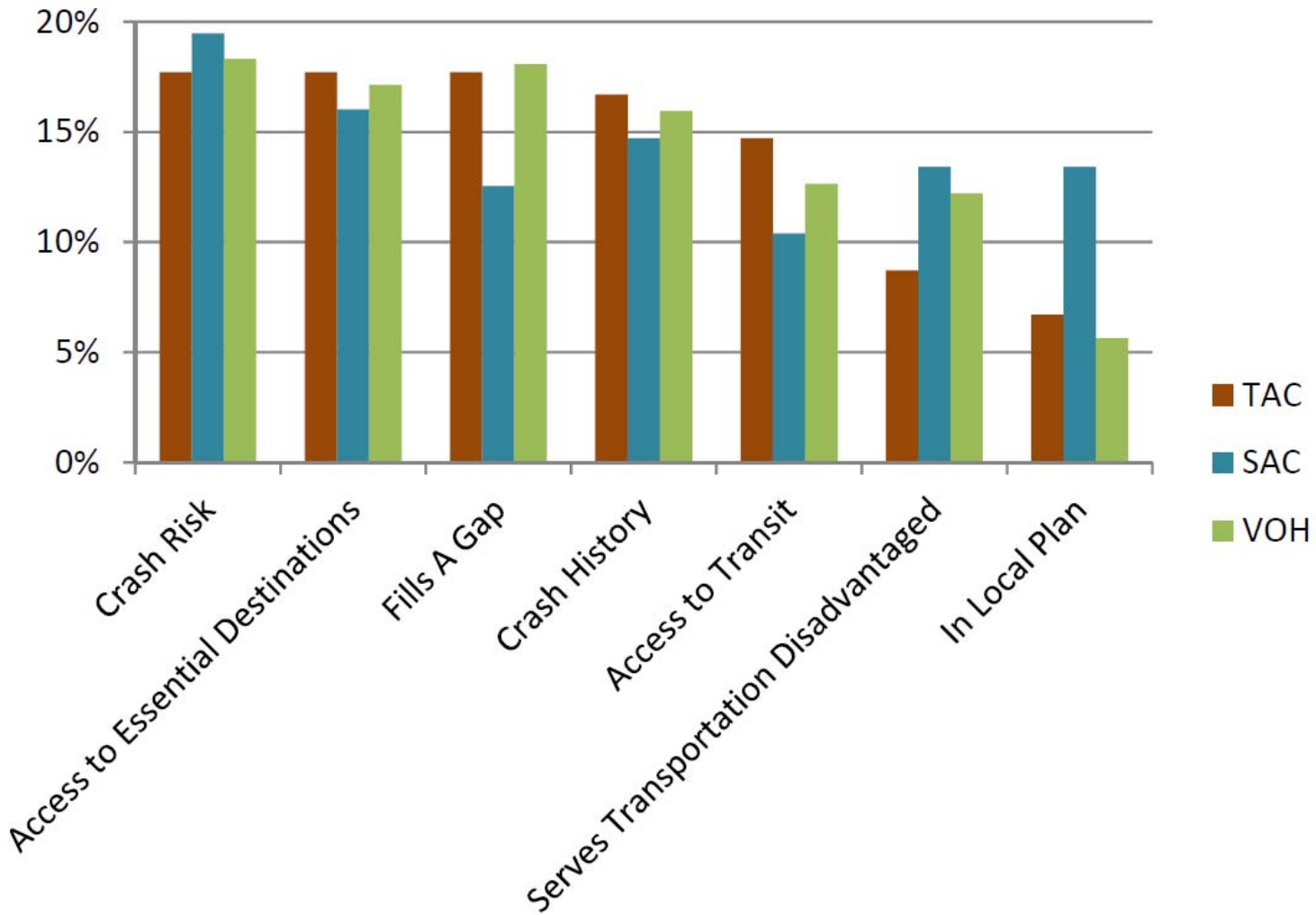
Potential Criteria

Weighting

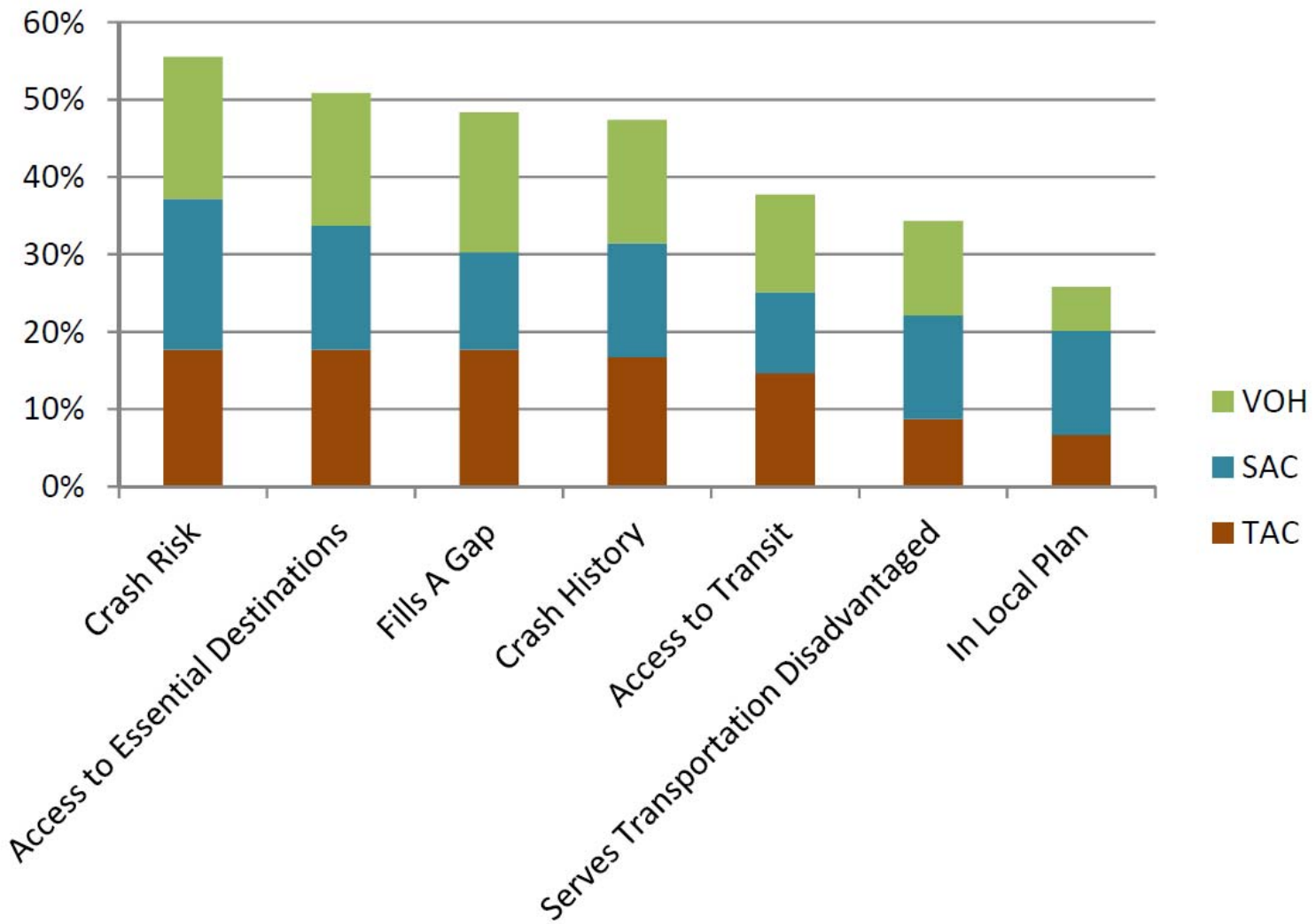
Four Factors
Equally Weighted

Four Factors
Factor 1 weighted more heavily

Weighting Exercise Results



Weighting Exercise Results



Proposed Initial Weighting

TAC Weight	SAC Weight	VOH Weight	Proposed Weight	APT Prioritization Factors	ODOT ATNI Evaluation Criteria
8*	7*	8*	8*	Safety	Crash History Crash Risk
8*	6*	7*	7*	Demand	Access to Transit Access to Essential Destinations
4	3	4	4	Connectivity	Fills a Gap
2	3	3	3	Equity	Transportation Disadvantaged
2	3	2	2	Stakeholder Input	In Local Plan

* Higher weights are used for factors with two evaluation criteria. The relative "weight" of each criterion under these factors is equal to half of the total factor weight.

- Confirmed by management
- Weighting can easily be adjusted in spreadsheet tool

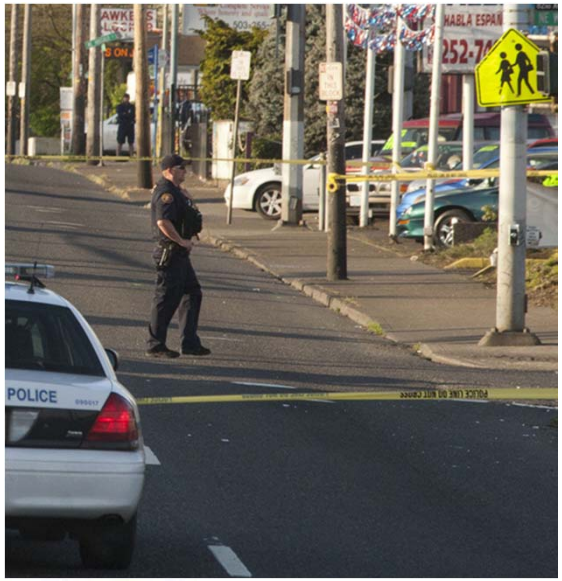
Proposed Initial Weighting

Weight	NCHRP 7-17 Prioritization Factors	ODOT ATNI Evaluation Criteria
8	Safety	Crash History
		Crash Risk
7	Demand	Access to Transit
		Access to Essential Destinations
4	Connectivity	Fills a Gap
3	Equity	Transportation Disadvantaged
2	Stakeholder Input	In Local Plan
	Existing Conditions	Gaps & Deficiencies Evaluation
	Compliance	*Could be added in future*
	Constraints	*Could be added in future*
	Opportunities	*Could be added in future*

Scaling

In Local Plan
Score: 0-1

Crash History
Score: 0-651



Proposed Scaling Method

Evaluation Criteria	Scaling
Crash History	Rank Order
Crash Risk	Proportionate
Access to Transit	Rank Order
Access to Essential Destinations	Rank Order
Fills a Gap	Rank Order
Transportation Disadvantaged	Proportionate
In Local Plan	No=0, Yes=10

- Proportionate
  - Adjusts raw values proportionately to fit the 0-10 scale
  - Use for data without outliers
- Rank Order
  - Ranks raw values, then adjusts proportionately to 0-10 scale
  - Use for data with outliers

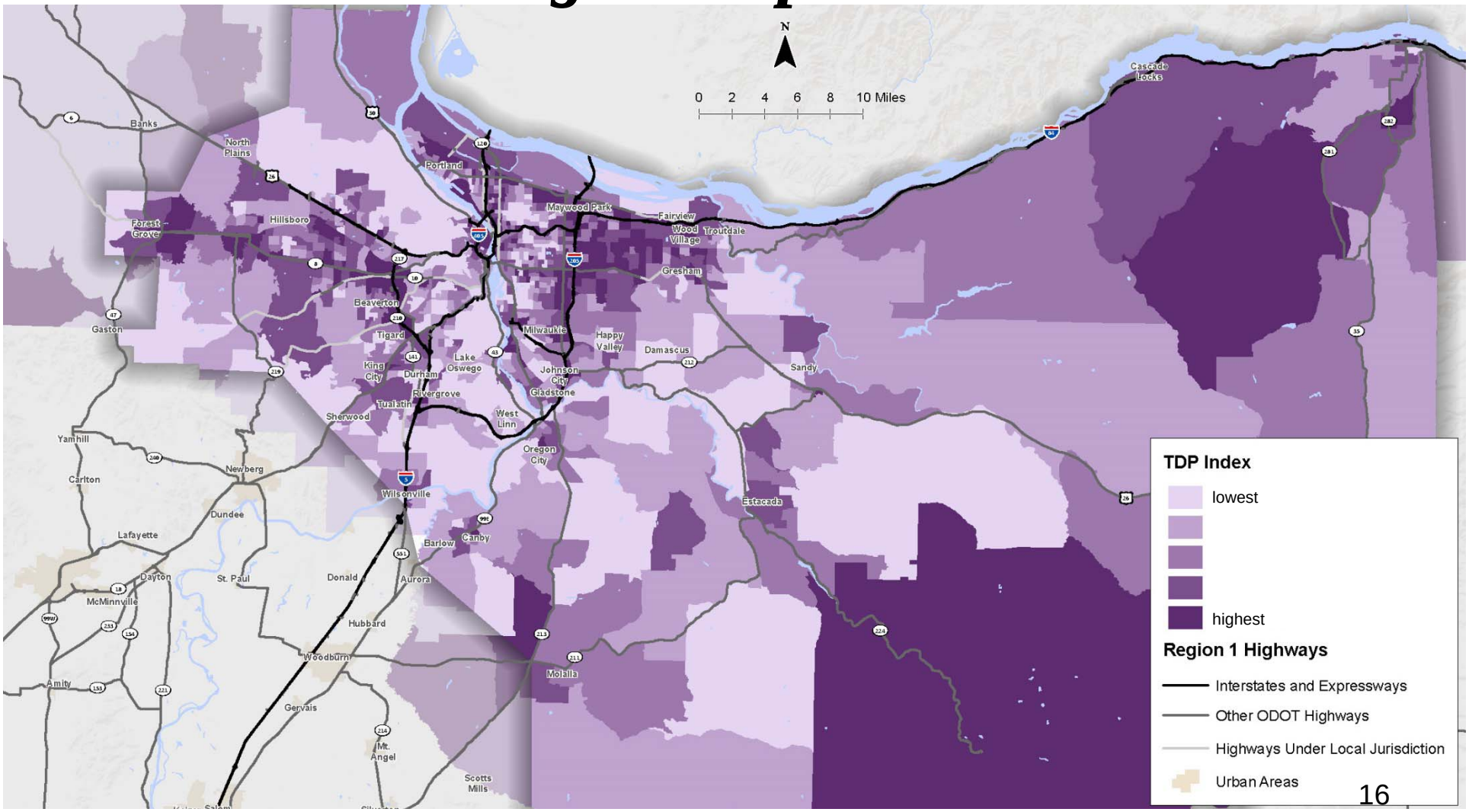
Applying the Evaluation Criteria

			Gap #1					Deficiency #1			Gap #2
	Segment milepost	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Criterion Score	Crash History	20	0	0	0	160	60	0	11	0	0
	Crash Risk	2	2.6	2.6	2.6	3.4	2.4	2.2	2	2	2
	Access to Transit	10	10	10	10	16	16	16	10	10	10
	Access to Essential Destinations	9	9	6	6	6	12	12	12	6	6
	Serves Transportation Disadvantaged	1.65	1.65	1.65	1.94	1.94	1.94	1.94	2.11	2.2	2.2
	Fills a Gap	0.5	0.5	0.5	0.8	0.5	0.5	0.5	0.3	0.3	0.3
	In Local Plan	1	1	1	1	1	1	1	1	0	0

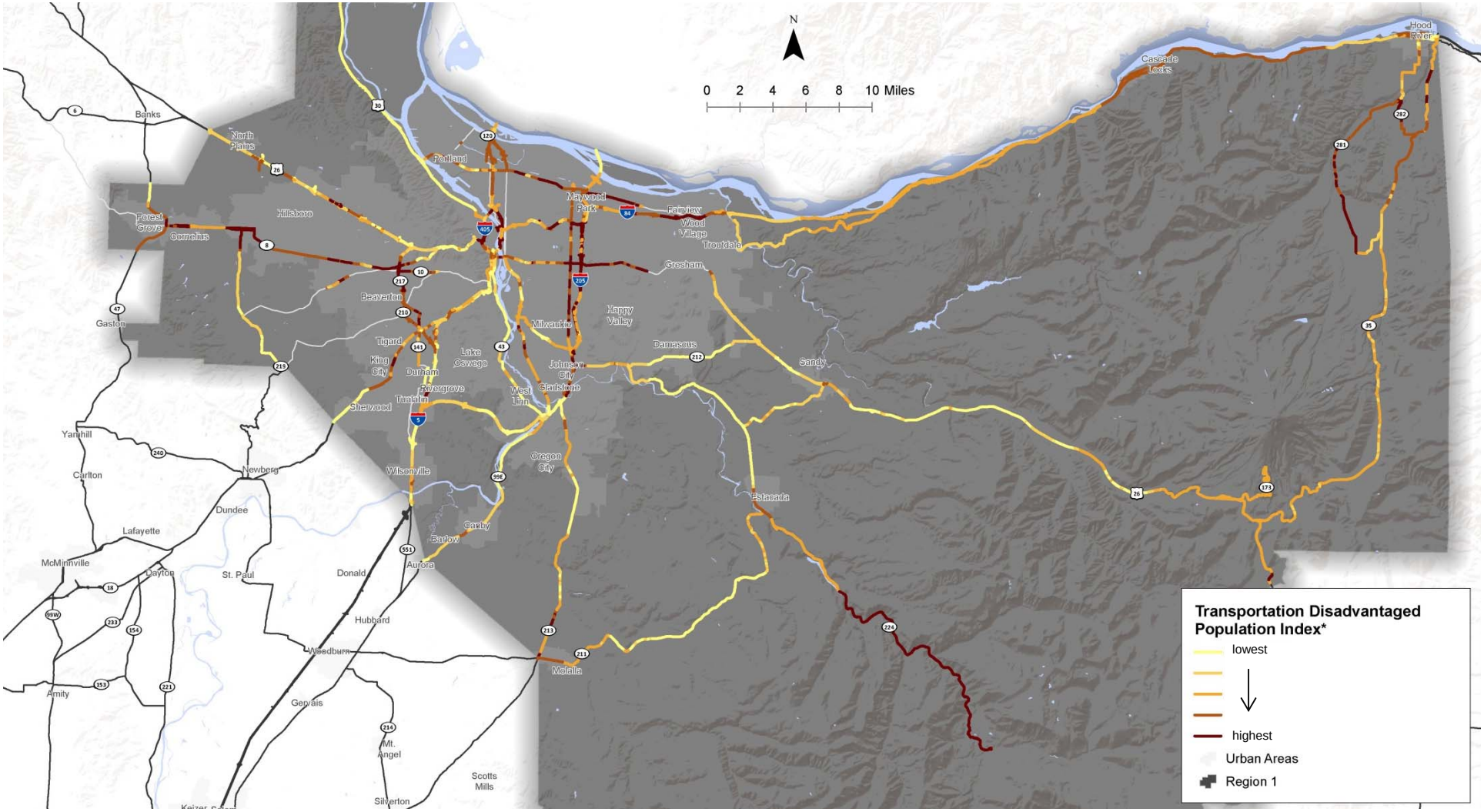
Example data, for demonstration purposes only.
For evaluation process, criteria will be scaled so that they are comparable and weights will be applied.

REPLACE WITH ACTUAL DATA OR CLIPS OF SPREADSHEETS?

Criteria Maps – Transportation Disadvantaged Population Index



Criteria Maps – Transportation Disadvantaged Population Index

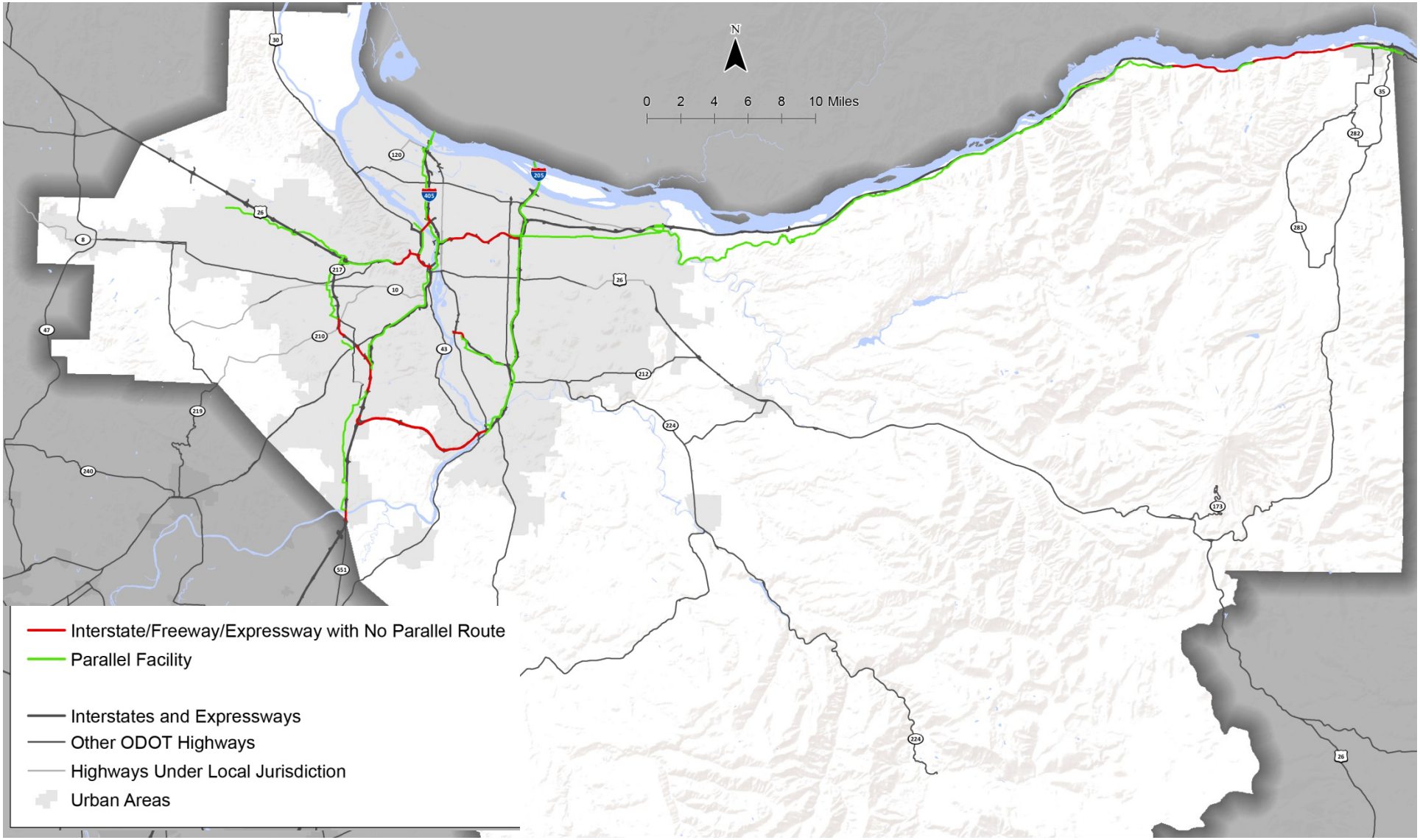


Draft Evaluation Results

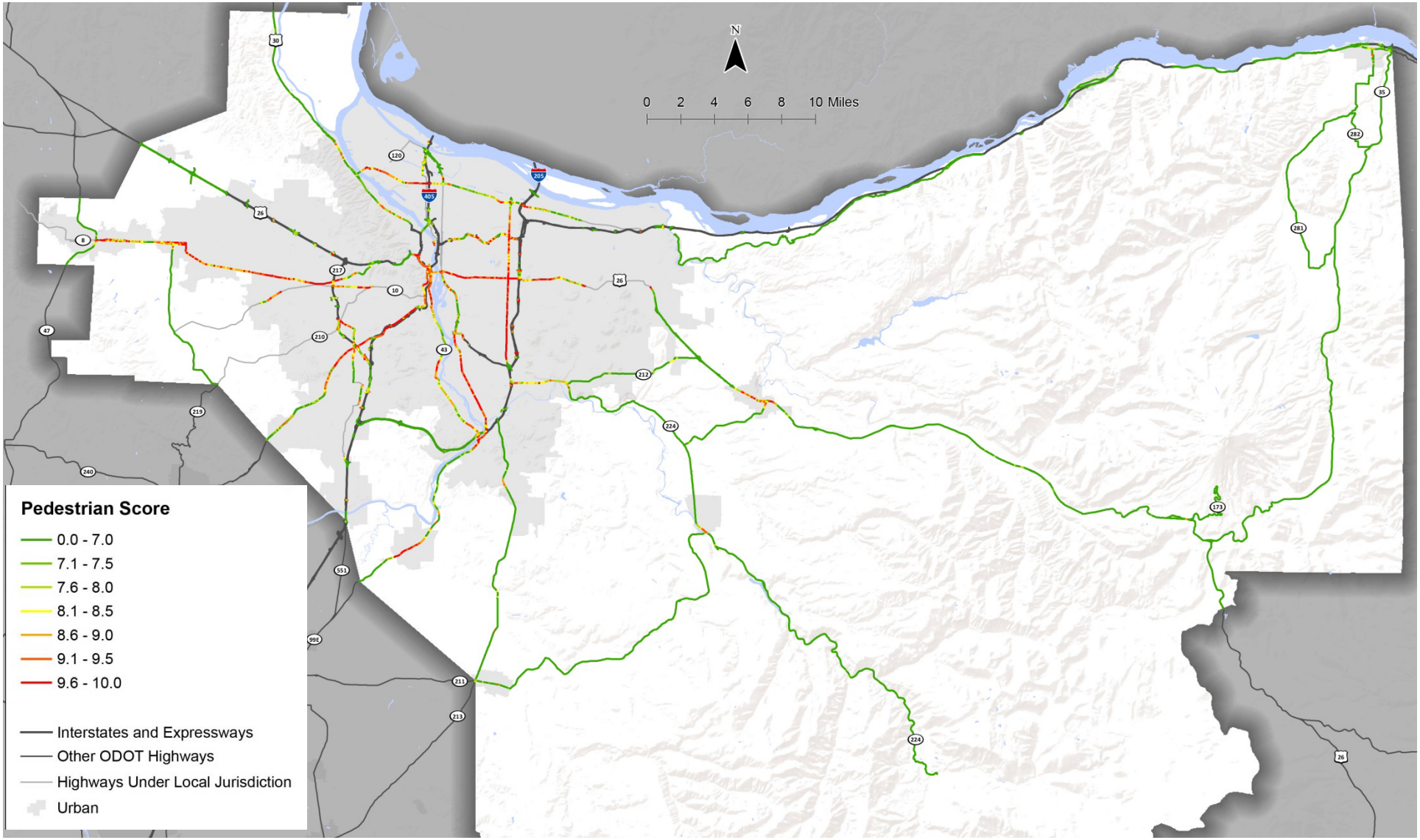
- Complete network evaluation
  - >9,000 tenth mile highway segments
  - Includes gaps, deficiencies, and existing facilities

- Mode specific
  - Pedestrian score
  - Bicycle score
  - Combined score

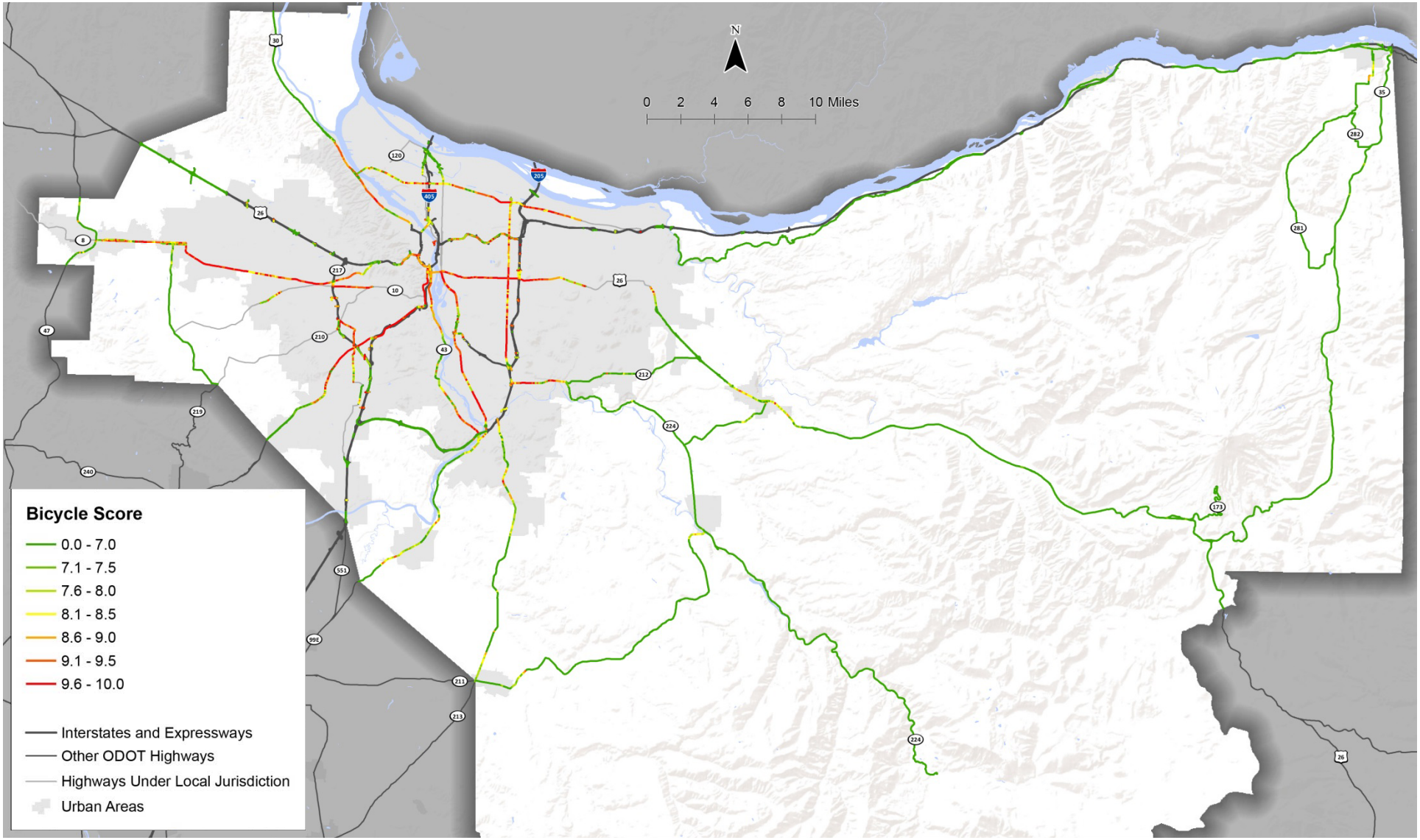
Interstates/Expressways and Parallel Routes



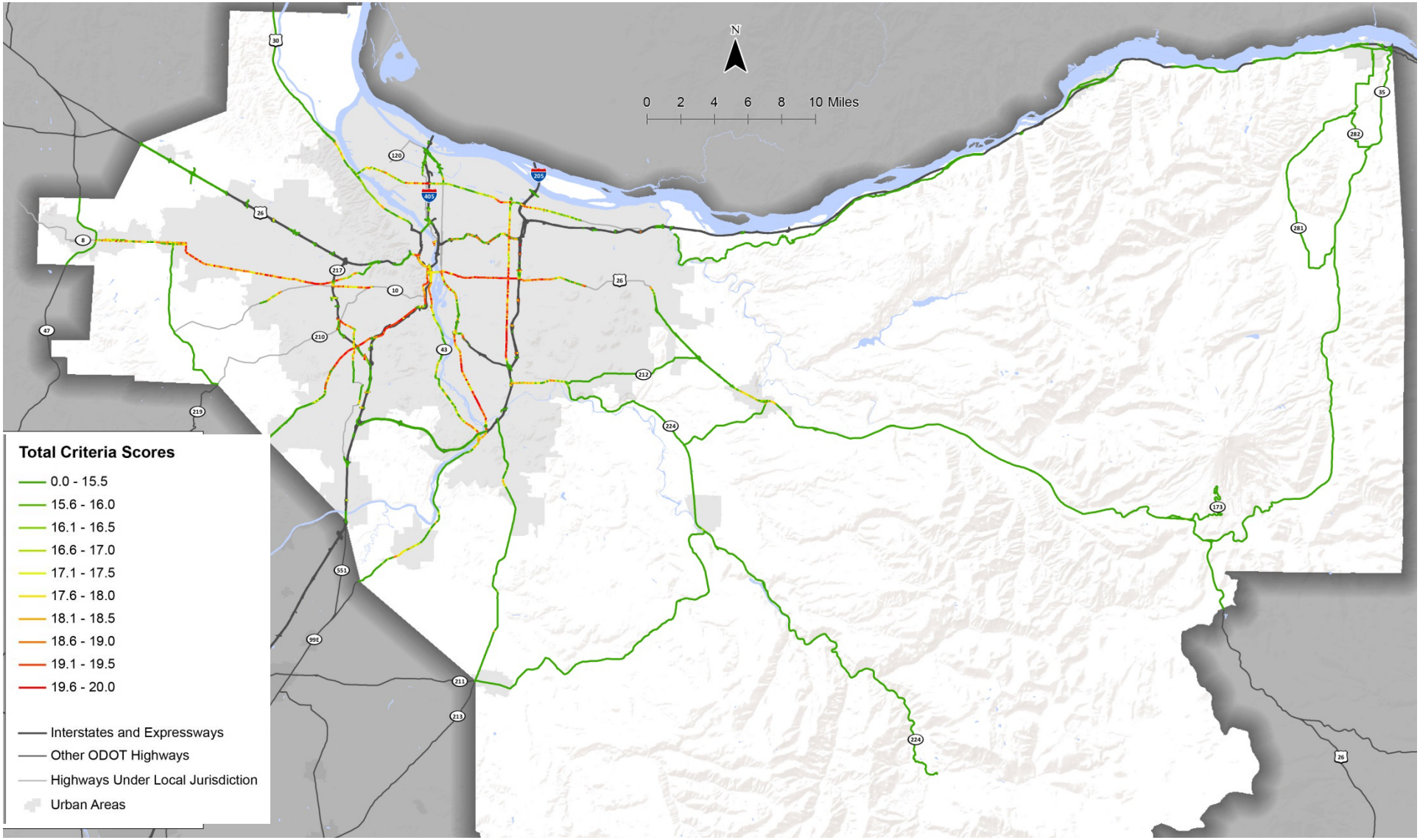
Pedestrian Score with Seven Evaluation Criteria



Bicycle Score with Seven Evaluation Criteria



Total Scores with Seven Evaluation Criteria



Discussion Questions

- How to incorporate the existing facilities inventory?
  - Option 1: Add Criterion under “Existing Conditions”
  - Option 2: Screen out areas that meet standards
  - Option 3: Keep “as is” (rely only on “fills a gap” criterion to identify gaps).

Option 1: Add Criterion under "Existing Conditions"

Weight	NCHRP 7-17 Prioritization Factors	ODOT ATNI Evaluation Criteria
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		Crash Risk
7	Demand	Access to Transit
		Access to Essential Destinations
4	Connectivity	Fills a Gap
3	Equity	Transportation Disadvantaged
2	Stakeholder Input	In Local Plan
	Existing Conditions	Gaps & Deficiencies Evaluation
	Compliance	*Could be added in future*
	Constraints	*Could be added in future*
	Opportunities	*Could be added in future*

- How would it be scored and weighted?

Example Scores:
Gap = 2 points
Deficiency = 1 point
Meets Standard = 0 points

Weight: 1 to 10?

Option 2: Screen out areas that meet standards

Prioritization Score	Hwy Name	Hwy	Start MP	End MP	City	Count	Urban / Rural	Bike Facility Left	Bike Facility Right	Ped Facility Left
36.5	I-84 US-30	002	25.2	25.3	Unincorpc	M			Parallel Facility	Parallel Facili
120.2	OR-43	003	9.8	9.9	West Linn	C			Sub Standard	Gap
21.9	OR-35	026	71.92	72.02	Unincorpc	H			Sub Standard	Sub Standard
137.0	US-26	026	5.9	6	Portland	M			Sub Standard	Sub Standard
46.3	I-84	002	63.1	63.2	Hood Rive	H			Parallel Facility	Parallel Facili
21.9	OR-35	026	69.82	69.92	Unincorpc	H			Sub Standard	Sub Standard
21.9	OR-35	026	67.12	67.22	Unincorpc	H			Meets Standard	Meets Standa
84.9	NE HOLLADAY ST. CONN.		1.29	1.38	Portland	M			Parallel Facility	Parallel Facili
41.0	US-26	026	47.72	47.82	Unincorpc	C			Sub Standard	Sub Standard
81.3	US-26	026	24.12	24.22	Sandy	C			Sub Standard	Sub Standard
17.3	BONNEVILLE DAM CONN. NC		40.27	40.37	Unincorpc	M			Parallel Facility	Parallel Facili
77.6	I-5	001	297.26	297.36	Portland	M			Parallel Facility	Parallel Facili
27.0	I-84 US-30	002	49.5	49.6	Unincorpc	H			Parallel Facility	Parallel Facili
96.4	US-26	026	26.92	27.02	Unincorpc	C			Sub Standard	Sub Standard
58.8	I-5	001	287.36	287.46	Unincorpc	W			Parallel Facility	Parallel Facili
39.1	US-26	026	30.62	30.72	Unincorpc	C			Meets Standard	Meets Standa
44.0	I-84 US-30	002	55.3	55.4	Unincorpc	H			Parallel Facility	Parallel Facili
13.6	HUBBARD INTCHG. CONN. N		282.96	283.06	Unincorpc	C			Parallel Facility	Parallel Facili
81.1	I-5	001	292.56	292.66	Tigard	W			Parallel Facility	Parallel Facili

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Bike Facility Left"
Filter by Color
Text Filters
Search
(Select All)
Gap
Meets Standard
No need
Parallel Facility
Parallel Facility GAP
Sub Standard
OK
Cancel

- How would areas that meet standards but have local desires for enhanced facilities be included?
- How would we treat areas with gaps for one mode and complete facilities for the other?

Option 3: Rely on "fills a gap" criterion to identify gaps (keep "as is")

- Does not consider "substandard" facilities differently than "meets standard".
- May be appropriate with grouping method to account for this.

Discussion Questions

- Is a location with no bike/ped facilities a higher priority than a location with facilities for one mode?

Discussion Questions

- How should we "package" the detailed analysis into larger, more useful chunks?
  - Group by length
    - Block
    - ½ mile segment
    - Corridor
    - Manual grouping based on length and score
  - Group by condition
    - Gap
    - Deficiency
    - Average score?

Discussion Questions

- Spreadsheets will be used as tool to help inform ODOT decision-making.
- How should we adapt them to make them most useful?
  - For ODOT processes?
  - For local jurisdictions?
  - For advocacy orgs and general public?

BREAK

Feasibility-related criteria:

- Planning Level Cost
- Availability/Proximity of Alternate Route

Both were suggested in the virtual open house.

Feasibility Analysis

- Planning Level Cost estimates
  - Rural areas
    - Widen shoulder
      - Asphalt and striping
  - Urban areas
    - Convert shoulder to Bike Lane
      - Striping and pavement markings
    - Add/widen sidewalk on segment with existing bike facility
      - Concrete walk and curb

Feasibility Analysis

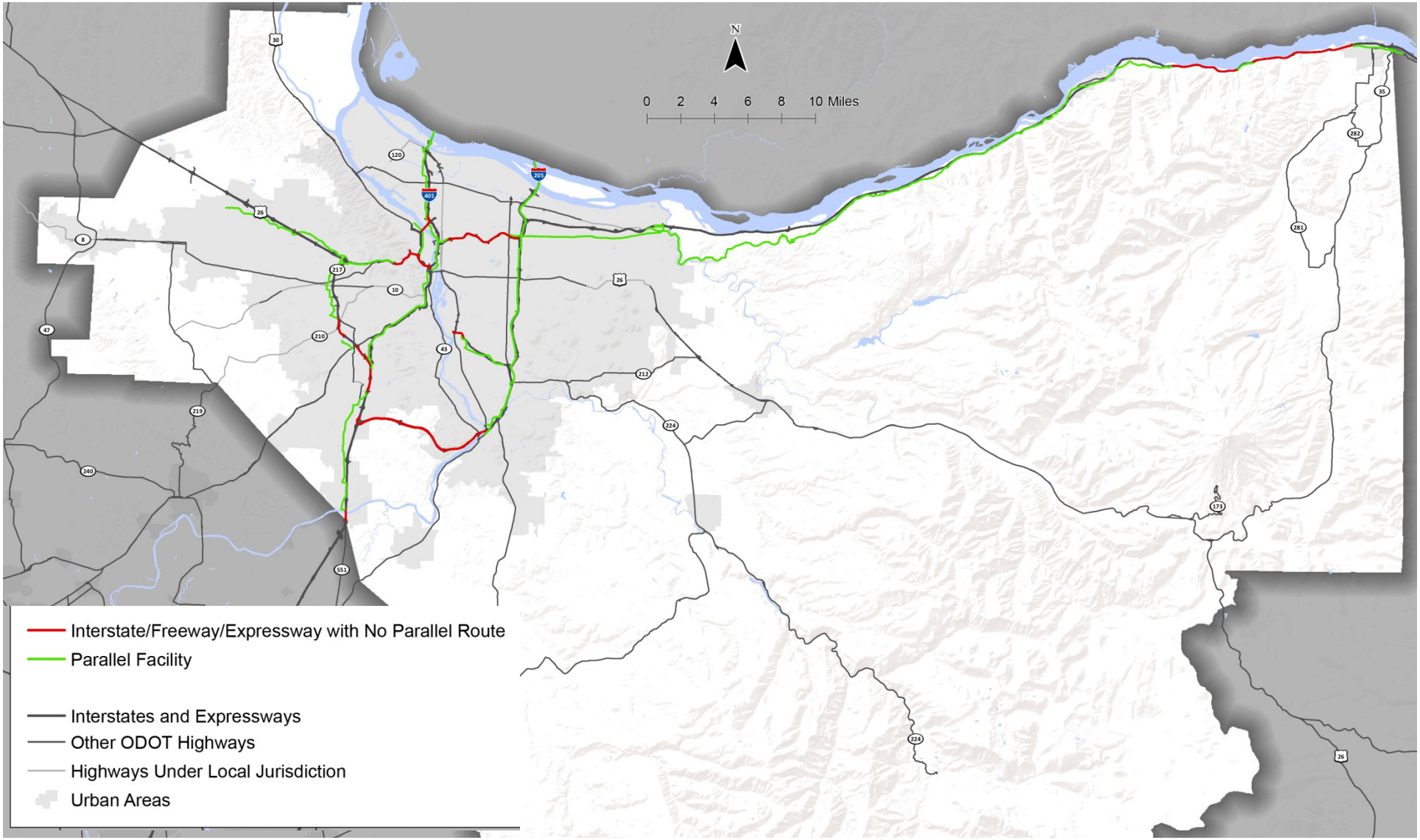
- Planning Level Cost estimates
  - Urban areas
    - Add Bike Lane on segment with existing sidewalk
      - Should cost estimate account for reconstructing curb and sidewalk?
    - Add sidewalk on segment without bike facility
      - Should cost estimate include adding bike facility?
  - Other Considerations?
    - Right of Way
    - Structures
    - Building impacts
    - Topography

Feasibility Analysis

- Alternate Route Screening
  - How to define acceptable alternate routes?
    - Freeways and expressways –standard is to rely on a parallel bike/ped route.
    - Other highways

- Should other highways without alternate routes be scored as higher-level needs?

Interstates/Expressways and Parallel Routes



Next Steps

- SAC Meeting
- Revise evaluation spreadsheet
- Implementation Guidance Memo & Final Report
- Continue refinement after June 30

Questions?

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