



## The Wellfleet Bike & Walkways Committee Virtual Meeting – Zoom

Friday, January 15, 2021 at 9am

### Meeting Minutes

1. *Call to Order:* Pete calls the meeting to order at 9:05.
2. *Administrative matters:*
  - a. *Near-term committee meeting calendar:* The committee plans to meet bi-weekly, until March 26<sup>th</sup> at which point the intention is to move to monthly or every other month meetings.
    - i. *Truro Bike and Walkways Committee:* The Truro Committee replied to Pete's request for a joint meeting and proposed that we join their February 8 meeting.
    - ii. *Wellfleet Community Forum:* The forum is a good opportunity to answer questions and get public inputs on route alternatives as well as goals and objectives we should be considering as we evaluate potential routes. Pete will send an email proposing a meeting for the week of February 15.
    - iii. *Provincetown Bicycle Committee:* Pete contacted the Provincetown Committee email address, as well their DPW contact, and is waiting to hear back. Ned suggests that we include a Provincetown representative at the joint meeting with Truro as we've done in the past. Pete will check in with the Truro Committee about that.
  - b. *Meeting rules to invite public comment:* The committee invites public comment and input at the end of each agenda item with a one-minute limit for each speaker. We welcome more feedback through email, as well as proposals to the committee that can become future agenda items.
3. *Approve minutes from committee meeting on Friday, January 8, 2021 9:00 am:* Christie moves that we approve the January 8, 2021 minutes, Ned seconds, and all vote in favor.
4. *Committee organization*
  - a. *Review committee's official charge:* Pete reads the official Bike and Walkways Committee Charge that is posted on the [website](#) and below (see Attachment 1).
5. *Bikeway route through Wellfleet to Truro*
  - a. *Produce a draft list of route option based on known information (as a starting point for adding additional ideas from the public and others)*

*Note: The committee is identifying alternative routes to evaluate in a future methodical, objective evaluation. We will not be critiquing or evaluating any alternatives in this meeting. The public is encouraged to suggest alternative routes, or evaluation objectives, to the committee either at this meeting, at future public meetings to be announced soon, or via email to [bikeandwalkways@wellfleet-ma.gov](mailto:bikeandwalkways@wellfleet-ma.gov)*

- i. In order to maintain objectivity and neutrality, it has been recommended that we name the alternative routes by letter or number. Rebecca suggests that we adopt letters to avoid confusion during the scoring process. Rebecca moves that we utilize a letter system to identify potential route options, Ned seconds and all approve.

- ii. Pete suggests that many of the routes will share common segments. Today, we should look at each trail fully as well as identify the segments. The goal is to create a draft list for the Wellfleet Forum, and identify that it is a starting point for collecting input and feedback. *See Attachment 2 for a list of potential alternative bikeway routes (first draft)*. Note: This is a preliminary list drafted from community and committee input in an ongoing process. The routes are going to be broken down into their constituent segments for the analysis process.
- iii. *Attachment 3*: “Gameplan to develop bikeway recommendation for the Selectboard” chart is shared on the screen. We are currently taking historic, committee and public inputs as we seek to identify alternative routes. Our upcoming meeting with Truro and the Wellfleet Forum will continue our input process. Lance, who is notably absent, is working on the analysis methodology separately (firewalled), so the goals, objectives and criteria will not be influenced by the bikeway alternatives. The input process is also occurring for the Analysis Methodology as we seek to create a draft for the Selectboard’s approval (*see Attachment 3*).
- iv. *Attachment 4*: “Goals to be Assessed for Alternative Bikeway Routes through Wellfleet to Truro” is screen shared. Last week, there were four goals (Safety, Practicality, User Enjoyment and Connectivity) for alternative bikeways. However, as Lance looked at the “Practicality” goal, he noticed that there were many items to do with preservation, including conservation, avoiding private property, and preserving the town’s character. Therefore, he proposes that we split Practicality into two goals: Practicality and Preservation. The new draft goals would be: Safety, Practicality, Preservation, User Enjoyment and Connectivity. Pete moves that we accept the updated five goals as our working draft, Ned seconds, and all vote in favor.
- v. *Attachment 5*: “Methodology for analyzing alternative bikeway routes through Wellfleet to Truro” is screen shared to visually demonstrate the math of the scoring procedure, which was described last week. Various goals that are weighted break into similarly weighted objectives and then are further broken down into criteria, which are the actual measures that are considered in the analysis. Each route will be scored on a scale of 1-5, low to high, multiplied by each criteria’s weight. Each of the goals, objectives and criteria are non-overlapping. We will continue to get inputs on the methodology (as shown in *Attachment 3*) from parties like the Cape Cod Commission and offices in the Wellfleet Town Government, as well as the public. *Attachment 6* illustrates some of the inputs that have already informed the creation of a draft methodology.
- vi. Update on projects in other Cape towns: Barnstable is working with a contractor to create a weighted scoring process to identify alternatives with public input similar to ours. Rebecca and Pete were on a call with Barnstable yesterday. Helen asked if what was happening in Barnstable is occurring ahead of their process of working with the state? Rebecca answered that, yes, Barnstable is doing the work ahead of discussions with state agencies and she was struck by the monetary investment the Town is making to develop a methodology and collect public inputs to conduct a route analysis. Helen remarked that it’s a true positive that Wellfleet is now taking a similarly

transparent approach and gathering input though it may be a belated start.  
We'll stay in touch with Barnstable.

- b. Other route issues: none*
- 6. *Other bikeway and walkway issues in Wellfleet: none.*
- 7. *Adjournment:* Pete moves to adjourn the meeting at 10:31, Rebecca seconds and all vote in favor.

Attachment 1: Bike and Walkways Committee Charge

Attachment 2: Working List of Route Alternatives

Attachment 3: Gameplan to develop bikeway recommendation for the Selectboard

Attachment 4: Goals to be Assessed for Alternative Bikeway Routes through Wellfleet to Truro

Attachment 5: Draft Methodology for Analyzing Alternative Bikeway Routes through Wellfleet to Truro

Attachment 6: Methodology for analyzing alternative bikeway routes through Wellfleet to Truro

Attachment 1:

**Bike and Walkways Committee, [bikeandwalkways@wellfleet-ma.gov](mailto:bikeandwalkways@wellfleet-ma.gov)**

#### **CHARGE**

The Bike and Walkways Committee is hereby established to consider ways to provide safe areas for biking and walking. The Board of Selectmen believes that these activities should be available seasonally and year-round as they are an important means of local transportation, are popular activities in the town, and promote good health.

The Bike and Walkway Committee is charged with the following tasks:

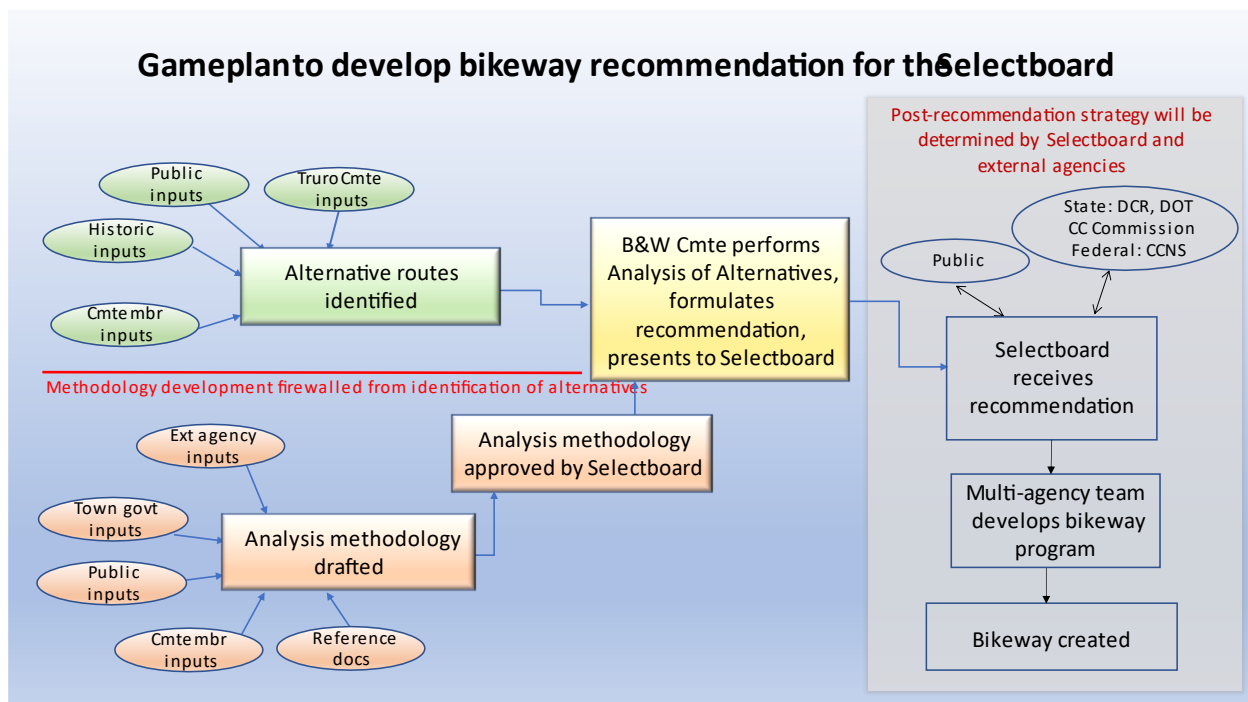
1. To work with the Cape Cod National Seashore, the Towns of Provincetown and Truro and the Cape Cod Commission to establish the continuation of the bike trail northward into Provincetown.
2. To prepare a plan for future bike and walking routes throughout the town of Wellfleet.

## Attachment 2: List of Potential Alternative Bikeway Routes (First Draft)

1. Rail Trail to Route 6. Multi-use wide sidewalk along Route 6 to Main Street intersection. Widen Main Street for 450 ft. Add sharrow lanes from RT. 6 to Truro for experienced cyclists.
2. Boy Scout Camp Fire Rd. to Cahoon Hollow Rd., East on Cahoon Hollow Rd. to Interior/West side of Ocean View Dr., Interior/West side of Ocean View Dr. to Gross Hill Rd., Internal/South side of Gross Hill Rd. to Gull Pond Rd., Gull Pond Rd. to Old King's Highway, Old King's Highway to Collins Rd. in Truro.
3. Old County Road, on the Eastern side of the utility corridor through the National Seashore to the east of the power lines, this path would cross over Cahoon Hollow Rd., Long Pond Rd., Gross Hill Road and Gull Pond Rd. following the utility lines within the National Seashore property to Collins Rd. in Truro.
4. Inner Cape Corridor: (Along any route to town on the west side of Route 6) primarily a share the road route to connect to the Saltonstall Route – West Main Street to Pole Dike Rd., Bound Brook Island Rd., Old County Road up to Truro.
5. Old County Road (along utility route) to Cahoon Hollow Rd., proceed down Cahoon Hollow to Route 6, Route 6 to Truro.
6. Old County Road (through the woods behind the COA) to Cahoon Hollow Rd., proceed down Cahoon Hollow to Route 6, Route 6 to Truro.
7. Along Old County Road (road share) to Cahoon Hollow Rd., proceed down Cahoon Hollow to Route 6, Route 6 to Truro.
8. Old County Rd. to Cahoon Hollow, briefly West on Cahoon Hollow, take a route just East of the cemetery that connects to Old King's Highway, then to Long Pond Road. Then either follow Old Kings Highway or proceed to Route 6 using the available route segments (multiple options available) to Truro.
9. Old County Rd. to Cahoon Hollow Rd. by any route, follow Cahoon Hollow Road east to Forest Rd., Forest Rd. to Long Pond Rd, Long Pond Rd. to Old Long Pond Rd to Rt. 6 by the police station. Route 6 to Truro.
10. Old County Rd. to Cahoon Hollow Rd. by any route, follow Cahoon Hollow Road east to Forest Rd., Forest Rd. to Long Pond Rd, Long Pond Rd., Long Pond Rd. to Route 6 (by building a ramp). Route 6 to Truro.
11. Old County Rd. to Cahoon Hollow Rd. by any route, follow Cahoon Hollow Road east to Forest Rd., Forest Rd. to Long Pond Rd, Long Pond Road to Sapakonish Way to Gull Pond Rd. to Old King's Highway to Collins Road in Truro.
12. Old County Road to Cahoon Hollow Road by any route. CHR to Way 54 to Way 626 to LPR. Long Pond Rd. to Route 6 (by building a ramp). Route 6 to Truro.
13. Old County Road to Cahoon Hollow Road by any route. CHR to Way 54 to Way 626 to LPR. Long Pond Rd. to Old Long Pond Rd to Rt. 6 by the police station, Route 6 to Truro.

14. Old County Road to Cahoon Hollow Road by any route. CHR to Way 54 to Way 626 to LPR. LPR to Sapokonish Way to Gull, then to Old King's Highway to Collins Road in Truro.
15. Old County Rd. to Boy Scout Rd to Cahoon Hollow Rd. take Cahoon briefly east to Forest Rd. bear Northward just after Dyer Pond on fire road to the power lines, across LPR to Old King's Highway to Collins Road in Truro.
16. Utility Route from Old County Road, crossing Cahoon Hollow Road, Long Pond Road, Gross Hill Road, and Gull Pond Road all the way to Collins Road in Truro.
17. Old County Road (along utility route) to Cahoon Hollow Rd., continue on utility lines to Long Pond Rd. Old Kings Highway to Gross Hill Rd, then to Gull Pond Rd, then on to Collins Road in Truro.
18. Old County Rd. to Cahoon Hollow Rd. by any route, continue on utility lines to Long Pond Rd. LPR to Sapokonish Way to Gull Pond Rd, then to Old King's Highway to Collins Road in Truro.
19. Old County Rd. to Cahoon Hollow Rd. by any route, continue on utility lines to Long Pond Rd. Long Pond Rd. to Old Long Pond Rd to Rt. 6 by the police station. Route 6 to Truro.
20. Old County Rd. to Cahoon Hollow Rd. by any route, continue on utility lines to Long Pond Rd. Long Pond Rd. to Route 6 (by building a ramp). Route 6 to Truro.

Attachment 3:



*DRAFT*  
Goals to be Assessed for Alternative Bikeway Routes through  
Wellfleet to Truro  
*14 January 2021*

1. **Safety:** The hazards of exposure to automobile traffic and bike path problems can be minimized. [An unsafe bike path will not be widely used]

*Objectives will be defined which reflect the following:*

The path will minimize users' direct exposure to the collision threats, stress, noise, pollution, and shoulders of high-velocity or high-volume roadways. Best-practices safety measures can be implemented for users when the path intersects with or route-shares on existing roadways. The bike path can have sufficient width, visibility, and signage to minimize user collisions, motor vehicle accidents, and other accidents, and provisions can be made for emergency response and other response if they do occur. The bike path will not expose the user to physical hazards or too-strenuous features. Users will have the perception that they are safe from traffic and path hazards, and that the occasional intersection with low-volume traffic is handled safely.

2. **Practicality:** The bike path can be built and maintained at reasonable cost, within reasonable timeframes. [An impractical path will never be built]

*Objectives will be defined which reflect the following:*

The path's features that suggest that it will be overly difficult or expensive to design or implement. The path's features which suggest it will be difficult or expensive to maintain. The path does not involve major foreseeable difficulties in obtaining all necessary approvals and legal actions within reasonable times. The path affords a basis for demonstrating, over the long term, the costs of the path are reasonable.

3. **Preservation:** The path will have minimum adverse impact on Cultural, Scenic, Community, or Environmental areas or values. [Paths with such impact will be legally and publicly curtailed]

*Objectives will be defined which reflect the following:*

The path will not foreseeably encourage masses of users to proceed to the Wellfleet Center such that the existing historical sidewalks and streets would be inadequate for such traffic or that Wellfleet's small-town character and cultural nature would be overwhelmed. The path will avoid instances in which could adversely affect adjacent properties. The path should not initially, or over time as usage increases, be foreseen to cause adverse impacts on any aspect of the scenery, the ponds streams or marshes, the National Seashore, cultural artifacts, or the environment, or the Town's plans for any of these. The expected construction of the path will avoid impacts to the views, noise

levels, or ambient light experience of abutters or others who can view or hear the path. The path will not have any features which can be foreseen to negatively affect the property values of abutters or neighboring private land.

4. **User Enjoyment:** The path will provide an interesting, satisfying and supportive experience for all the diverse intended users. [Uninteresting or distressing paths will not attract large usage]

Objectives will be defined which reflect the following:

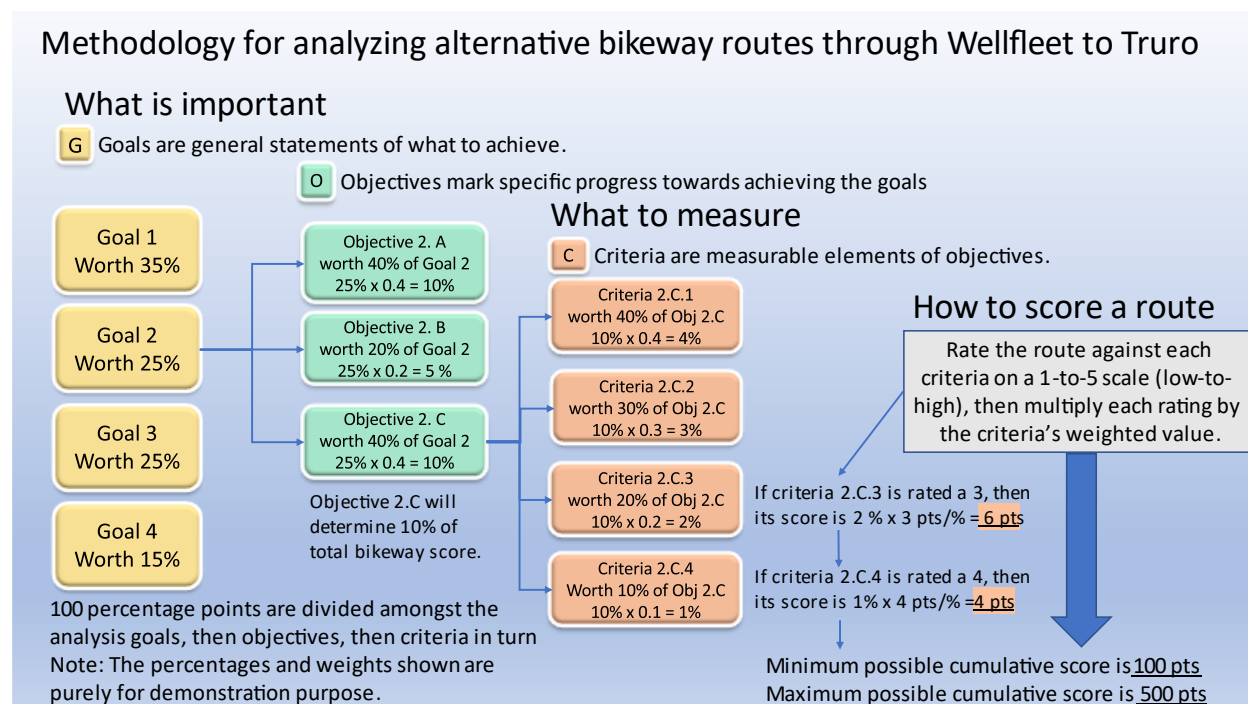
The path can be sufficiently wide, surfaced, and otherwise made accessible, to accommodate the easy joint passage of all types of recreational users including inexperienced or occasional bikers, walkers and joggers, people in wheelchairs or similar conveyances, parents with small children, adolescents and teenagers, and walkers with visual disabilities. The path exposes the users to a diverse abundance of the beautiful natural experiences Wellfleet has to offer. There can be regular emergency-reporting and rest and viewing areas for users to make repairs, get emergency assistance or stop to enjoy the scenery. The path can be marked with best-practice signage for rules, distances, and speed limits as well as information stations about the history, culture, and scenic sights. The path, and regulations concerning its use at certain times, should regularly facilitate traffic by the subset of users concerned with speedy and unhindered transit, commuting, and transport of goods and materials.

5. **Connectivity:** The path will facilitate high connectivity with cultural and community centers, off-path food and rest areas, and off-path established scenic areas, with all the necessary infrastructure to promote way-finding and to encourage increasing usage.

Objectives will be defined which reflect the following:

The path will identify connections to Wellfleet Center, the Town's scenic sights, to commercial sites of interest, medical facilities, the National Seashore sights and beaches, and similar nearby destinations in the neighboring towns. Where the path is in proximity to the above places but has no existing rideable pathway to them, there should be identifiable ways of making such connections that are cost-reasonable with low-impact or infringement on private property. The path will have the space to provide stopping at major off-path connections for users to read and understand the information provided about the nature of the connected site and the distances and directions.

Attachment 5:



Attachment 6:

*DRAFT*

**Draft Methodology for Analyzing Alternative Bikeway Routes  
through Wellfleet to Truro**  
*January 14, 2021*

**What is the purpose of this brief?**

This brief describes the Wellfleet Bike & Walkways Committee's draft methodology for conducting an analysis of alternative bikeway routes. This methodology provides a contextual framework and logical scheme to establish the study's validity and reliability, and to justify our chosen techniques.

The draft methodology will be presented to Town Government offices and other regional stakeholders for review and input. The updated methodology will subsequently be presented to the Wellfleet Select Board for review and feedback prior to the analysis being conducted.



## **Why is an analysis of alternatives necessary?**

Numerous previous studies of bikeway alternatives were conducted with state and regional sponsorship over many years. The Massachusetts Department of Transportation (MassDOT), and the Massachusetts Department of Conservation and Recreation (DCR), ultimately proposed route segments through Wellfleet that met public opposition, primarily over safety concerns but also over concerns about adversely impacting the town's character. The Wellfleet Select Board wrote to the Governor requesting the DCR plan be halted so alternative routes could be considered. DCR then deferred in writing to Wellfleet to conduct feasibility studies of alternative bikeway routes.

The Wellfleet Bike & Walkways Committee was established by the Wellfleet Select Board "to consider ways to provide safe areas for biking and walking." Specifically, the Committee is charged as follows:

1. "To work with the Cape Cod National Seashore, the Towns of Provincetown and Truro and the Cape Cod Commission to establish the continuation of the bike trail northward into Provincetown.
2. To prepare a plan for future bike and walking routes throughout the town of Wellfleet."

## **Employing Analytical "Best Practices" and Factoring in Local Concerns**

This methodology is guided by inputs from three types of sources:

- 1) Our state and regional partners. The state and regional agencies which regularly propose and evaluate bike trail solutions on Cape Cod, including: MassDOT, DCR, and the Cape Cod Commission (CCC), which are guided by US federal guidelines and MA state guidelines. The proposed analysis methodology has benefited greatly from and is consistent with these agencies' wealth and breadth of knowledge and experience. A major lesson from studying these agencies' prior analytical approaches is how crucial to success and community acceptance is the pre-planning stage of carefully applying a rigorous approach for evaluating alternatives against goals and inviting community participation.

Preliminary references include the following, and additional references are under review:

- Federal Highway Administration Separated Bike Lane Planning and Design Guide  
[https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/publications/separated\\_bikelane\\_pdg/page04.cfm](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/page04.cfm)
- <https://www.mass.gov/lists/design-guides-and-manuals#design-guides-and-manuals->
- <https://www.mass.gov/lists/separated-bike-lane-planning-design-guide>

- Study from the National Seashore in August 2010 -- Executive Summary ([capecodcommission.org](https://www.capecodcommission.org)): "Study Integrated Bicycle Plan for Cape Cod Bicycle Feasibility Study In Partnership with the Cape Cod Commission"  
[https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2Ftr%2FReference%2FBike-Ped%2F2010\\_CCNS\\_Bike\\_Feasibility.pdf](https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2Ftr%2FReference%2FBike-Ped%2F2010_CCNS_Bike_Feasibility.pdf)
- Cape Cod Commission 2011 report for bike lanes in all the 15 Cape towns - [https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2FWebsite\\_Resources%2Ftransportation%2FBikePedPlanningRecReport\\_Sept2011.pdf](https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2FWebsite_Resources%2Ftransportation%2FBikePedPlanningRecReport_Sept2011.pdf)
- 2016 Cape Cod Regional Transportation Plan ([capecodcommission.org](https://www.capecodcommission.org))  
[https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/tr/Transportation%20Plans/RTP/2016\\_RTP/Final%20Report/Cape%20Cod%202016%20Regional%20Transportation%20Plan%20-%20without%20Appendices%20\(Endorsed%207-20-15\).pdf](https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/tr/Transportation%20Plans/RTP/2016_RTP/Final%20Report/Cape%20Cod%202016%20Regional%20Transportation%20Plan%20-%20without%20Appendices%20(Endorsed%207-20-15).pdf)
- Outer Cape Bicycle and Pedestrian Master Plan | Cape Cod Commission  
[https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/Website\\_Resources/initiatives/OuterCapeBikePedPlan/OCBPMPFinalReport9-2016UpdateFeb2017.pdf](https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/Website_Resources/initiatives/OuterCapeBikePedPlan/OCBPMPFinalReport9-2016UpdateFeb2017.pdf)
- Massachusetts Bicycle Transportation Plan Public Engagement Results, 2019  
<https://www.mass.gov/doc/bike-plan-public-engagement-results/download>
- MassDOT MUNICIPAL RESOURCE GUIDE FOR BIKEABILITY, 2019  
[https://www.mass.gov/files/documents/2019/06/13/2019\\_Municipal\\_Resource\\_Guide\\_for\\_Bikeability.pdf](https://www.mass.gov/files/documents/2019/06/13/2019_Municipal_Resource_Guide_for_Bikeability.pdf)
- Massachusetts Bicycle Transportation Plan, 2019  
<https://massdot.maps.arcgis.com/apps/MapJournal/index.html?appid=c80930586c474a3486d391a850007694>

2) Successful municipal bikeways around the globe. Selected published reports of municipalities and regional authorities across the US and in Europe who have analyzed alternative bikeway routes. Whether on crowded city streets, on rough mountainous terrain, or through pristine landscapes, these bikeway studies demonstrated that the best results come from neutral objective approaches which carefully and rigorously consider all the alternatives against a set of carefully developed goal-evaluating criteria, with abundant input from the community. These analyses consistently preserved traceability between analysis goals and evaluation criteria, thus guaranteeing the criteria were indeed reflected in the goals.

Preliminary references include the following, and additional references are under review:

- Billerica MA evaluation of bikeway alternatives  
(<http://www.town.billerica.ma.us/DocumentCenter/View/3539/Yankee-Doodle-Bike-Path-Alternative-Analysis?bidId=>) .
  - Cupertino CA study, listing 7 criteria: <https://altago.com/wp-content/uploads/Cupertino-Bicycle-Transportation-Plan-6.pdf>
  - Sunnyvale CA study  
<https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=23225>
  - Marin County CA study of routes, listing 13 criteria (pp3-3 and 3-4):  
[http://walkbikemarin.org/documents/mv\\_cm\\_study/FINAL%20Study/3%20Alternatives%20Evaluation.pdf](http://walkbikemarin.org/documents/mv_cm_study/FINAL%20Study/3%20Alternatives%20Evaluation.pdf)
  - Santa Clara CA study giving 12 general criteria but a wealth of information and perspectives about the methodologies of choosing alternative paths:  
[https://www.stevenscreektrail.org/Resources/LosAltos/LA\\_SCT\\_FeasibilityStudy/Alta\\_FinalReport/SCT%20FINAL%20FEASIBILITY%20STUDY.pdf](https://www.stevenscreektrail.org/Resources/LosAltos/LA_SCT_FeasibilityStudy/Alta_FinalReport/SCT%20FINAL%20FEASIBILITY%20STUDY.pdf)
  - Portland OR study of improving a city bike lane that lists 8 general criteria: <https://www.portlandoregon.gov/transportation/article/702764>
  - A Florida study that lists 8 general criteria (p4): [https://www.ecrc.org/document\\_center/Programs/Bay%20County%20TPO/Plans%20and%20Documents/DRAFT%20Bay%20TA%20Scoring%20Criteria%20.pdf](https://www.ecrc.org/document_center/Programs/Bay%20County%20TPO/Plans%20and%20Documents/DRAFT%20Bay%20TA%20Scoring%20Criteria%20.pdf)
  - Meta-study by Texas looking at how other states evaluate options for bike routes (and other things), and then what they would recommend for TX  
<https://static.tti.tamu.edu/tti.tamu.edu/documents/3988-1.pdf>
  - 2020 National Cycling Plan for Germany <https://nationaler-radverkehrsplan.de/en/federal-initiatives/national-cycling-plan-nvp-2020>
  - How the European Union (EU) approaches selection, design, operation, and maintenance of bike paths: [https://ec.europa.eu/transport/themes/clean-transport-urban-transport/cycling\\_en](https://ec.europa.eu/transport/themes/clean-transport-urban-transport/cycling_en)
  - A Greek (Thessaloniki) study of alternative bike routes with 8 criteria:  
[https://www.researchgate.net/publication/236630986\\_The\\_implementation\\_of\\_a\\_cycle\\_network\\_in\\_the\\_city\\_of\\_Thessaloniki-Greece\\_Evaluation\\_remedial\\_proposals\\_and\\_policies](https://www.researchgate.net/publication/236630986_The_implementation_of_a_cycle_network_in_the_city_of_Thessaloniki-Greece_Evaluation_remedial_proposals_and_policies)
- 3) The stakeholders of a Wellfleet bikeway. The citizens of Wellfleet and other interested parties who have made open meeting inputs, written correspondence to the Select Board, and online written inputs to State agencies; the intended users of the bikeway, as represented through the committee's research on community needs and preferences; the Wellfleet Select Board and other relevant Town of

Wellfleet departments, boards and committees; other organizations with vested interests, such as the Cape Cod National Seashore, the corresponding bike & walkways committee in Truro, and the aforementioned DCR, DOT, and CCC.

## **Steps to develop and apply the analysis methodology**

### Fundamental guidelines

- 1) Be open and transparent in all analysis efforts and communications
- 2) Seek close coordination with municipal, state, and federal level stakeholders
- 3) Use the extensive work of our state agencies as a guide

### Identify candidate routes for the analysis

Separately from the development of the evaluation method, compile the set of candidate routes through Wellfleet which have been identified through past and current efforts.

### Develop the elements and computational process of the methodology

- 1) Articulate in a few words the overall vision of the Cape Cod Bike Trail as given by state agencies.
- 2) Identify clear goals (derived from the town and state agencies) to be satisfied by the route. These goals should fully reflect the intent of the vision and cover the primary common concerns for having the best possible path. The goals should overlap as little as possible.
- 3) Arrange the goals in order of priority and then quantify this ordering by further assigning to each goal a percentage of the total importance.
- 4) For each goal in turn, develop specific measurable objectives that underly that goal (using prior relevant efforts if possible). The objectives should adequately represent all that is intended by the wording of the goal, and they should not overlap.
- 5) Arrange the specific objectives under each goal in order of their judged importance, keeping mind that they all may be found to be equally important. Given this arrangement, allot the percentage points given for the goal among the goal's different objectives. If the goal's objectives are all equally important, then the goal's percentage points will be divided equally among all the goal's objectives. More computation is required if the objectives are judged not to be of the same importance. For example, if, for three objectives among whom 35 points from this goal are to be distributed, the first objective is judged twice as important as the 2<sup>nd</sup> objective, and the 2<sup>nd</sup> twice as important as the third, then the first objective should be given 20 of those 35 points, the 2<sup>nd</sup> given 10, and 3<sup>rd</sup> 5. (The *Sensitivity Analysis* below can be used to judge whether assigning the points differently would make much of a difference).
- 6) For every goal objective, select at least two, but preferably 3-5, clear criteria that reflect how well the objective was met by an alternative route.
  - a. The criteria must be chosen so that in the aggregate they fully capture how well the objective was met by an alternative route. However, the criteria should measure clearly different things and not overlap.

- b. Each criterion must be phrased so that a reasonable person can apply it to an alternative route and have high confidence the result is valid (correct).
- c. Each criterion will be defined identically for each alternative route, and an identical scoring system used for each alternative route, e.g. with 5-to-7 possible answers for any given criterion, ranged from low to high, where low is undesired and high is most desired, and every possible answer is carefully and clearly defined.
- d. Once the 2-5 criteria for a particular objective have been so defined, the points for that objective, will be divided among the criteria according to their relative importance in capturing the presence of that objective. If, they are all judged to be of equal importance, then each criteria will be allocated an equal share of the objective's points. If the criteria are unequal in importance, then the objective's points will be distributed proportionally among the criteria.
- e. Once an objective's criteria have been defined and the objective's points are divided among the objective's criteria, the criteria scoring set needs to be reviewed for flaws, according to the best practices for this type of alternative rating approach: If one criterion has most of the points then something is wrong – usually, the criterion is too inclusive and needs to be subdivided; if two criteria tend to give highly correlated answers if one imagines applying them, then they are overlapping and need to be redefined; do the criteria as a whole seem to *overemphasize* some characteristic that isn't really in the goals or is there any evidence of systematic bias; and so forth. Similarly, each of the answers must be reviewed and tested to ensure it is understandable and can be easily determined. All of the careful work of defining and ordering goals, and deriving objectives from them, can be wiped out by a poor or flawed set of criteria.
- f. As a final test, each criteria will be field tested by deciding on 2-3 arbitrary paths between two points in Wellfleet (e.g., Wellfleet Library and Wellfleet Police Station). The committee will apply all the criteria to those paths and then discuss in a full meeting the problems encountered in using the criteria. Redefine the criteria and/or score measures to correct any problems.

**7) Notes:**

- a. The Bike & Walkways Committee has the computational and Excel programming skills to ensure that these computational processes can be applied and tested and are correct.
- b. In practice, criteria scores will be entered into Excel spreadsheets which will automatically compute the score for each path. In this way, the possibility of arithmetic errors, or erroneous distribution of points, or other similar "human-error" problems can be eliminated. Anyone can examine these sheets to see how the results were computed and tabulated.
- c. To remove the possibility of biased criteria, the committee member leading the development of criteria will do so without knowledge of the alternative routes being identified for evaluation, according to the firewall principle being followed by the committee. Identification of alternatives will be

conducted in a manner which prevents the methodology developer from obtaining any route knowledge while the methodology is developed.

#### Apply the methodology to analyze alternative routes

- 1) A quorum of the Bike & Walkways Committee will score the alternative routes according to the analysis criteria determined using the processes described above.
- 2) The Committee will enter the ratings onto the prepared spreadsheets and compare them for consistency. If the same paths are rated wildly differently by two or more individual raters then there is a problem somewhere in the definition of criteria and answers. Identify and correct the problem and re-rate that criteria for all the path alternatives.
- 3) Determine each alternative route's total score against all the various criteria
- 4) Rank alternatives according to their total score.
- 5) If the scores among paths are widely spread out, or is there is one path which is head and shoulders above the others then these are clear-cut and can be presented.
- 6) Do a sensitivity analysis if any of the top paths are rated very close to each other – by changing the weights and seeing if this changes the ranking. If not, then present the results; if so, then these two paths need to be further evaluated.

#### Present to the Wellfleet Select Board

Present the results with a recommendation either to adopt the far-and-away winner or, in a close outcome, propose how to choose a finalist from the top two or three.

#### **Limitations of this methodology**

The proposed analysis of alternatives is being led by a volunteer town committee without the resources of a funded municipal, state, or federal effort.

*Mitigation:* We are researching regional, state, national, and international source documentation, and applying the common best practices used in government studies. We are also incorporating local interests unique to the Outer Cape, so that our effort should be the best fit for the analysis case at hand.