



**NORTHFIELD
RIDGE+RIVER
ROUTES
APPENDIX PACKAGE**

A P P E N D I X H

VTRANS COST SPREADSHEET

1. Roadway Characteristics

- a. Vermont Route 12
 - i. Two-lane major collector state highway
 - ii. Width: 26 FT to as wide as 49 FT in some areas,
 - iii. Travel Lanes: 11 FT wide
 - iv. Portion of Vermont 12 in the study area is Class I Town Highway
 1. From approximately just north of Houston Street (TH-419) in Northfield Village to just south of the intersection with VT Route 12A in Northfield Center.
 - v. Construction:
 1. Roadway constructed in the 1930s with concrete and surface treated gravel
 2. Eventually replaced with bituminous concrete.
 3. Route Logs indicate bituminous concrete paving during the 1990s for most of the study area
 4. Town Highway portion repaved in 2013
 - vi. Speed Limit
 1. 35 mph in Northfield Falls
 2. 30 mph in Northfield Village (extent of Class I Town Highway)
 3. 40 mph for the remainder of the study area (south of VT Route 12A)

2. Existing Data

AADT

Route	Segment	AADT
VT Route 12	White Rd to Cox Brook Rd	3,700
	Cox Brook Rd to Depot Square	4,200
	Depot Square to VT 12A	5,700
	VT Route 12A to VT 64	4,100
	VT Route 64 to Old Mill Hill	1,300
VT Route 12A	VT Route 12 to Lovers Lane	2,000
VT Route 64	VT Route 12 to Barrows Road	4,800

AADT (Annual Average Daily Traffic) is a measure of average daily motor vehicle traffic volume along roadway segments. AADT is computed by VTrans using the AASHTO Method. Per the 2019 VTrans Redbook (Continuous Traffic Counter Report), “This method computes an average day of week for each month, and then computes an annual average value from those monthly averages, before finally computing a single annual average daily value.”

The data is publicly available online in several formats, including the Annual VTrans AADT Report, a web-based map through the VTrans Transportation Data Management System, or GIS data from the VT Open Geodata Portal. AADT data was used in this study and referenced in the report under Opportunities and Challenges (criteria for crosswalks at uncontrolled intersection approaches) and Traffic Calming.

Turning Movement Counts

Unsignalized intersections on VT 12: Gould Rd, VT 12 A

GAP - Signalized intersection: No TMCs available for Vine Street

Crash Data

Crash data was used in this study to identify high crash locations and bicycle or pedestrian crash locations, helping to support the pursuit of transportation improvements in the project area. Crash data is referenced in the report under Chapter 1 Existing Conditions (Primary Roadway Analysis), and Chapter 6 Bringing Northfield Together. Crash data was obtained in multiple formats, including the VTrans High Crash Location Report (2012 to 2016), GIS data from the VT Open Geodata Portal, and the VT Public Crash Data Query Tool.

High Crash Locations (2012 to 2016)

	Cross Streets	HCL No.	AADT	Crashes	Fatalities	Injuries	Pedestrian - Involved Crashes	Bicycle - Involved Crashes	Actual/Critical Ratio	Severity Index
Intersections	VT 64	99	4,934	9	0	7	0	0	1.057	\$73,856
Segments	Trombly's Trailer Pk / VT 12A	300	4,200	8	0	1	1	0	1.523	\$20,950
	Crescent Ave / South St	713	5,800	7	0	4	0	0	1.048	\$57,029
	Prospect St / Dog River Br	182	5,775	12	0	7	0	0	1.802	\$59,158
	Dog River Br / Belknap St	701	5,700	7	0	6	0	0	1.061	\$82,314
	Falls Trailer Pk / Mill St	322	5,120	9	0	4	1	0	1.479	\$45,611

3. Bicycle & Pedestrian Facilities

- a. No on-road bicycle facilities exist along Vermont 12 in study area.
- b. Shoulder presence/width varies along Vermont 12 & 12A in study area
 - i. Mostly inadequate for bicycles
- c. Sidewalk limited outside of Northfield Village
- d. Downtown sidewalks near Depot Square recently upgraded
- e. Sidewalk on South Main Street (south of Depot Square) in poor condition
- f. Lack of sidewalks on Wall Street
- g. Uncontrolled rail crossing from Depot St to shared use path

4. Parking

- a. On-street
 - i. Intermittent in Northfield Falls
 - ii. Prevalent in downtown Northfield Village
 - 1. ~90 spaces at Depot Square and on Mayo block
 - iii. Allowed on most Village streets
 - iv. Traffic ordinance prohibits overnight parking during winter
- b. Off-street
 - i. 30 spaces in municipal parking lot behind American Legion, north of Depot Square
 - ii. Remaining off-street parking downtown is private
 - iii. Town Plan identifies lack of off-street parking
 - iv. No Park and Ride on Route 12

5. Previous Studies

- a. Bicycle and Pedestrian Facility Conceptual Alignment Analysis (2005)
 - i. Two alternatives to connect Memorial Park to Town Recreation Area
 - 1. Alternative 1: Overland Route (Dismissed)
 - a. Construct shared use path from Memorial Park to Whetstone Dr, to Doyon Rd, to Burnham Rd, to Town Recreation Area
 - i. Dismissed due to private property owners' rejection of use of their land
 - 2. Alternative 2: Route 12 Corridor (Recommended)
 - a. Maintain existing areas with adequate shoulders for bicycles; otherwise construct 10 FT shared use path adjacent to VT 12
- b. Northfield Town Plan (2019)
 - i. Shoulder presence/width varies along Vermont 12 & 12A in study area
 - 1. Mostly inadequate for bicycles
 - ii. Sidewalk limited outside of Northfield Village
 - iii. Need for better bicycle/pedestrian connectivity within and between Northfield Falls and Northfield Village
 - 1. From bike racks to shoulder expansion to shared use path
- c. Draft Northfield Walk Audit & Demo Project Review (2019)
 - i. Sidewalks
 - 1. Downtown sidewalks recently upgraded
 - 2. Some sidewalks along route from Common to Dog River Park need repair

3. Lack of sidewalks on Wall Street
4. Utility poles present within some sidewalk segments
- ii. Crosswalks
 1. Some crosswalks over wide pavement areas near the Common are long
 2. Lack of accessible crosswalks
 3. Lack of crosswalks at intersection of Wall St and Water St
 4. Lack of crosswalks to Dog River Park
- d. South Main Street Pedestrian Experience: Observations & Opportunities (2019)
 - i. Observations
 1. Included segment from Main Street from Wall Street to Central Street
 2. Sidewalk is granite curbed paved asphalt with concrete sections at curb cuts
 3. Sidewalk width varies from 4 FT to 5 FT
 4. Lawn and soil encroaching sidewalk in some areas
 5. Most sidewalk is in poor condition: cracked, heaved, uneven, with trip hazards
 - a. Sidewalk condition leads to pedestrians using roadway instead, particularly those with limited mobility
 - b. Sidewalk condition results in drainage issues, with large puddles or ice forcing pedestrians off sidewalk
 6. Concrete sidewalk at curb cuts is newer and in good condition
 7. Multiple instances of poor driver behavior near east-west crosswalk at Prospect Street
 8. Sidewalk along easterly side of Main Street dead ends at Crescent Ave with no crosswalk over Main Street
 9. Utility poles within sidewalk along easterly side of Main Street obstruct sidewalk plow, so snow piles are left in those areas
 10. Street lighting is vehicular scale and less beneficial for pedestrian travel

A P P E N D I X B

STORMWATER ANALYSIS AND BMP RECOMMENDATIONS

Memorandum



To: Northfield Ridge to River Project File

From: Andres Torizzo

Date: October 9, 2020

Re: ***Stormwater Analysis and Design for Slate Avenue Neighborhood –
Final Technical Summary***

Slate Street, Elm Street, and Prospect Street in the Town of Northfield (Slate Street Neighborhood) is within a combined sewer drainage area that presently contributes flow to the Town of Northfield wastewater treatment facility. The system currently contributes to the East Street combined sewer overflow (CSO #4), which is documented in the *Main Street Stormwater Separation and CSO Abatement Preliminary Engineering Report*, as prepared by Dufresne Group, dated January 28, 2019.

The purpose of the analysis completed by Watershed Consulting as part of the Town of Northfield Ridge to River project, lead by consultant S.E. Group, was to understand how green stormwater infrastructure (GSI) could be applied in this neighborhood to manage runoff that could, in the future, be disconnected from the combined sewer system thereby addressing the CSO issue.

Initially, an existing conditions analysis was completed to understand drainage patterns within the neighborhood and subsurface soil conditions. Existing subwatershed areas were mapped and four soil test pits were completed. Drainage areas have been identified on the attached drainage conditions plan (A-1). Within two of the test pits, infiltration testing was completed using a Johnson Permeameter. Soil test pit location are identified on the soil map (A-2). Soil characterization and infiltration testing results are provided in the soil summary (A-3).

The study area was modeled using HydroCAD to predict stormwater runoff for the existing condition. A proposed condition was then modeled assuming a suite of infiltration-based best management practices (BMPs) that could potentially be installed as part of, or after, a stormwater separation project to remove the neighborhood from the combined sewer area. The result of this modeling analysis supported that during the 1-year, 24-hour storm (2.02" of rainfall), there is the potential to remove approximately 640,000 gallons of runoff from the combined sewer and prevent that runoff from discharging to the Dog River by infiltrating the runoff into sand and gravel subsurface soils. HydroCAD modeling files are provided in the runoff modeling summary (A-4)

Next, a more intensive green stormwater infrastructure analysis was completed to understand how to translate this technical goal into a design that is compatible with the neighborhood and also takes advantage of the existing layout of streets, driveways, and residential and commercial properties. The basic conclusion from this analysis was that the neighborhood could be separated in areas of “flatter streets” and “steeper streets”, labeled as A and B respectively on the plan and detail sheet provided in the GSI summary (A-5). These two slope classifications were further broken down into A1/A2 and B1/B2 to provide surface and subsurface option for GSI.

The streets have ample green space in some locations for surface features as it appears historically the street widths have been wider. With shallower slopes the design options provide for less constraint by allowing for planted side slopes for the surface option (A1) and larger chambers for the subsurface option (A2). With steeper slopes the design options provide for the increased constraints by including a timber crib design for the surface feature concept (B1) and smaller chamber design for the subsurface concept (B2).

Many potential BMP locations would be within the public right-of-way, but some features have been conceptually cited on private land. As part of a final design, there would need to be discussions with specific landowners to understand the feasibility of locating this infrastructure outside of the public right-of-way. One important consideration will be to determine proper easements to access and maintain infrastructure that is not located in the public right of way.

Surface or subsurface options can both be designed to achieve the goal of reducing volume and providing water quality treatment through infiltration. These options will have unique operation and maintenance and aesthetic considerations that will need to be considered. Ultimately it will be a decision to be made by the Town of Northfield with input from residents on whether GSI features will be developed on the surface or subsurface, or most likely as a combination of both.

Sincerely,



Andres Torizzo
Principal

A P P E N D I X C

COMMUNITY ENGAGEMENT SUMMARY

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Community engagement is an integral part of the overall planning process for the Northfield Ridge + River Routes Master Plan. This document presents the results of the first phase of public engagement—including three public meetings, two surveys, and several stakeholder meetings.

Two public meetings were held on December 6, 2019—one at Norwich University and the second during the annual Northfield Common Spirit event. These events were aimed at introducing the project to the community and starting to collect feedback on pedestrian and bicyclist facilities, connectivity and safety improvements, as well as frequently used walking or biking routes.

Also on December 6th the community survey went live, allowing for broader engagement and more in-depth feedback about connectivity, commuting, and pedestrian and bicyclist facility improvements.

The first phase of the Ridge + River Routes Master Plan culminated in a public open house that presented initial observations and opportunities. Participants were able to learn about the project, review project goals, provide feedback on the opportunities presented, and share other ideas and thoughts about opportunities they may have.

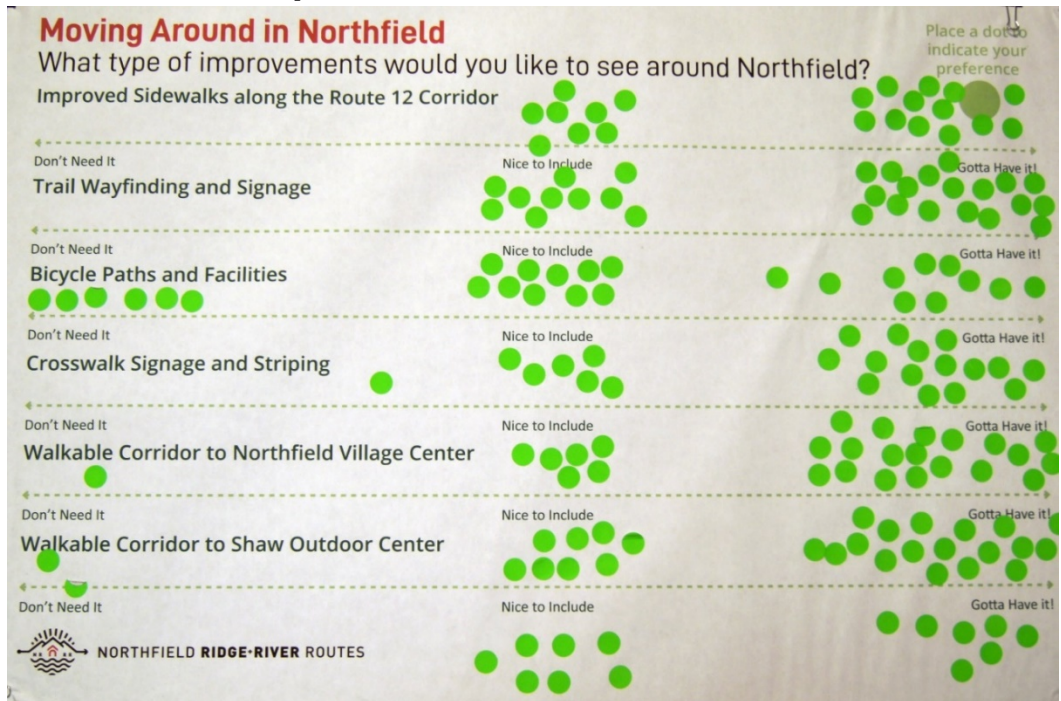
The open house results are presented in the photos of the public engagement “boards” completed by the community while the survey results are presented in tables of the combined survey responses. Key findings are reflective of both inputs, and areas of alignment and divergence are highlighted and analyzed.

DECEMBER 6 COMMUNITY ENGAGEMENT SESSIONS

On December 6th, SE Group hosted public engagement sessions at Norwich University and the Common Spirit Event held at the Northfield Common. The sessions allowed for students and community members to drop-by and learn about the project and provide feedback on their experience in Northfield and pedestrian safety improvements they would like to see. Additionally, the Common Spirit engagement session advertised the survey and Wikimap for community members to provide more detailed feedback about their desired routes, modes of transportation, bicyclist and pedestrian comfort levels, and trail use.

RESULTS

Norwich University Session



Experiencing Northfield

A word or phrase to describe your **EXISTING** experience:

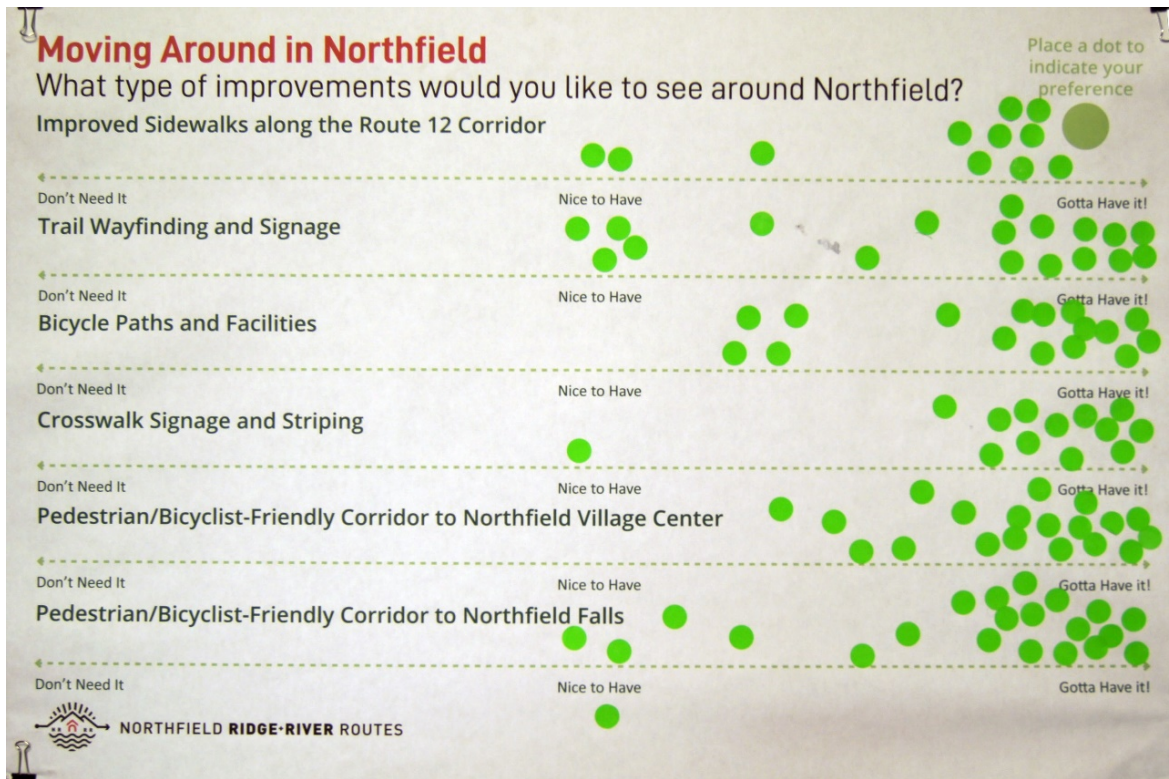
The sidewalks to town center and Shaw center work well
Crosswalk by Helliwell toward Shaw Center
Not enough transportation into town
O'Maddy's is a Great Restaurant
The Pizza place is good.
Deput has good pizza 😊

A word or phrase to describe your **DESIRED** experience:

- Parking at the water falls ✓
- Trash cans at the water falls ✓
- actual crosswalk signal or bump square
- More Parking ✓
- Sidewalk on Rt 12
- better transportation into town

NORTHFIELD RIDGE-RIVER ROUTES

Common Spirit Meeting



Experiencing Northfield

A word or phrase to describe your **EXISTING** experience:

often frustrating, increasingly hopeful

More trails/side walks

quiet, peaceful, homey

Good tracking Snow

GREAT NATURAL RESOURCES

A bit stagnate, w/ some energy happening

EVERY ONE SHOULD SET THEIR OWN BACK YARD

GOOD STUFF

GROWING, POSITIVE ENERGY, BUT GETS STUCK IN PAST

A word or phrase to describe your **DESIRED** experience:

walkability between the Falls + Northfield please! -PLEASE!

Safe Walking - running - biking experience

more sidewalks/paths

EASILY ACCESSED NATURAL RESOURCES

Vibrant engagement by wide range of ages + occupations, better use of existing resources

IT'S A Wonderful life!

SMALL VT TOWN w/ DEEP COMMUNITY INVOLVEMENT

~~ESTABLISHED~~ KEEP MINDS OPEN TO IMPROVEMENTS + GROWTH

NORTHFIELD RIDGE-RIVER ROUTES

COMMUNITY AND YOUTH SURVEY

An online survey was launched at the Common Spirit event on December 6, 2019 and remained open through February 7, 2020. The community was made aware of the survey through a variety of methods including flyers distributed around town, an informational mailing, press-releases, and email blasts and social media posts. In total, the survey received 470 responses.

A youth survey was launched on January 20, 2020 and remained open through February 7, 2020. The community was made aware of the survey through a school-wide newsletter mailing. The youth survey received 27 responses.

KEY FINDINGS:

- Survey respondents were well segmented; responses came from people of all ages and neighborhoods
 - 15% of respondents are students, 71% are year-round residents, and 5% are seasonal residents
- While there are respondents who stated they feel generally comfortable walking or biking along roads around where they live, the majority of respondents do not feel safe from vehicular traffic.
 - 85% of respondents walk for recreation and/or transportation around Northfield. 61% of those respondents don't feel safe from traffic while walking along roads where they live.
 - 61% of respondents stated they don't live in a good place for biking, 77% of respondents don't feel safe while biking along roads near where they live or stay.
- Respondents most often walk or bike to destinations within or proximate to Northfield Falls and Northfield Village such as the pharmacy, Post Office, general store, playground, Good Measure, Carrier Roasting, Norwich University, and Brown Public Library.
- Respondents most frequently commute to work in a car (63%) followed by walking (16%). 3% of respondents stated they bike to work.
- Northfield residents may walk or bike more if there were safe and well-maintained bike paths or sidewalks to the destinations they most often visit. However, the distances between residences and destinations may be prohibitive regardless of the facilities available
 - The most commonly cited reasons for not biking or walking more were "destinations too far apart", "sidewalks and/or bike paths not connected or in poor condition", and "traffic volume and speed (safety)"
 - 69% of respondents stated they prefer (37%) or need (32%) to bike on a separated bike lane to feel safe
 - Respondents stated that better maintaining existing facilities, improving safety, and adding trails, bikeways, and sidewalks would improve conditions for bicyclists and pedestrians
- Respondents stated their experience in Northfield would be substantially improved if more stores, restaurants and evening entertainment were added or improved.
 - Respondents stated they most-often visit restaurants and retail in Northfield yet state there is a desire for more of the same types of establishments.
 - Respondents stated a desire for a movie theater, bike lanes/paths, a community fitness center, more dining options, and general entertainment/nightlife options.

- Most respondents use the trails around Northfield (70%) to walk, hike, run, and snowshoe. 22% of respondents used the trails “frequently” (2-5+ times per week).
- There is a need to create easier, safer, and more visible trail access for both car users, bicyclists, and pedestrians.
 - 83% of trail users typically spend 30 minutes to two hours on the trails.
 - 58% of trail users arrive at the trails via car, and 52% walk to trail access points.
 - Distance, safety, and terrain were the most cited reasons that respondents were prevented from walking or biking to the trailhead.

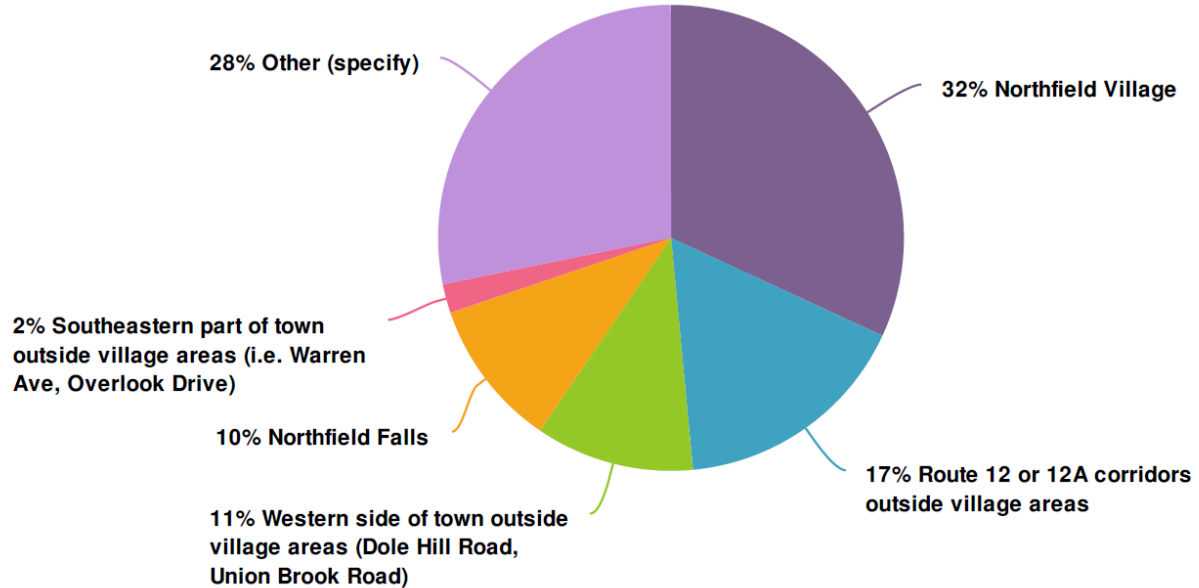
LOCATION SPECIFIC FINDINGS:

To identify location-specific opportunities and differences, survey results were separated by respondents given location.

- 24% of respondents from Northfield Falls stated they live in a good place for walking compared to 74% in Northfield Village, and 60% of overall respondents
- 10% of respondents who live in Northfield Falls stated they feel safe from traffic while walking along roads where they live. This is much lower than the compiled result of 38% and the results from Northfield Village (44%) and VTRoute 12 or 12a corridors outside of town (32%).
 - 76% of respondents from Northfield Falls state they feel unsafe while biking along roads where they live and 78% state they fell unsafe walking along roads where they live
- 68% of respondents from Northfield Falls and 69% of respondents from the western side of town commute to work by car, both populations commute by car more than the overall responses (63%) and Northfield Village (53%). The respondents who stated they live in the southeastern part of town commute to work by car as much as they walk to work (40%). This is likely because that area has a high percentage of people going to school or working at Norwich University.
- 68% of respondents from Northfield Falls stated they use the trails around Northfield which is slightly less than the overall responses (70%) and Northfield Village responses (80%) but more than those in the Western part of town (62%) and VTRoute12 or VTRoute12a corridors outside of village area (64%).
- 93% of respondents from VTRoute12 or VTRoute12a corridors outside of village area drive to recreate on the trails around Northfield, greater than 70% of respondents from Northfield Falls, 36% of respondents from Northfield Village, and 86% of respondents from the western side of town (dole hill rd., union brook rd.).

Results

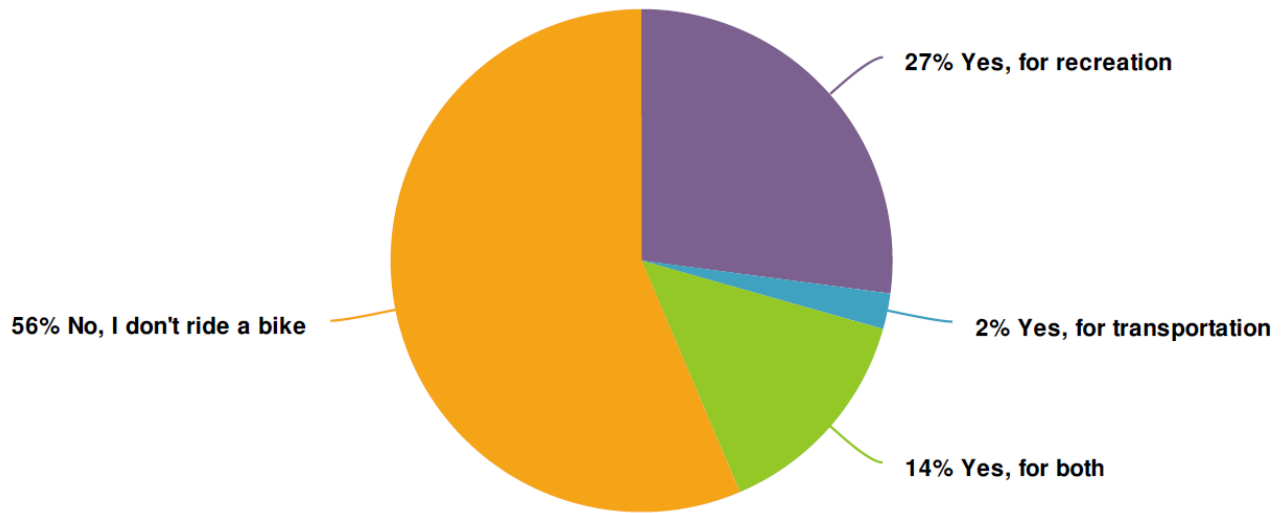
1. Where do you live?



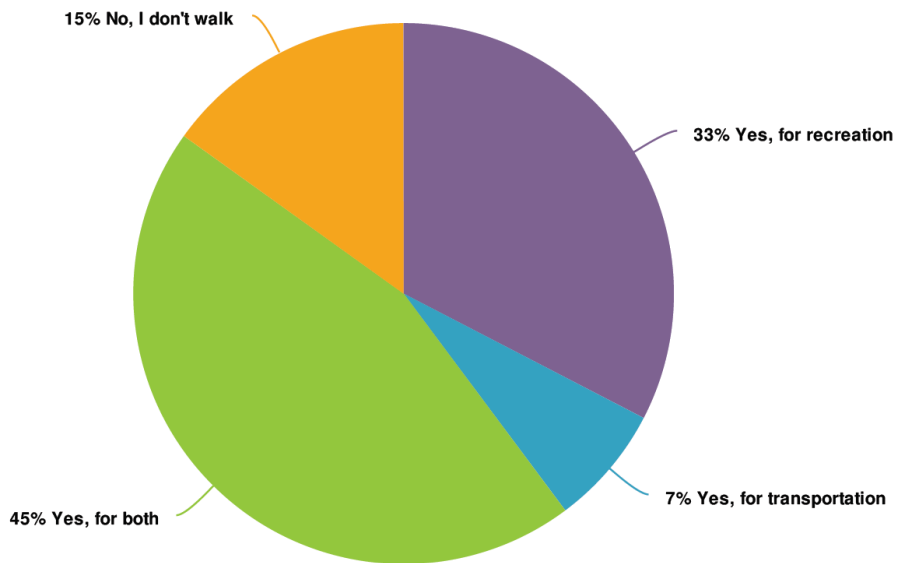
85 respondents answered "Other". Their responses included:

- Norwich University
- Montpelier
- Randolph Williston
- Barrows Road
- Cambridge
- East Brookfield
- East Montpelier
- Groton
- Middlesex
- Bailey Road Neighborhood
- Off Route 54
- Old Mill Hill Neighborhood
- Quebec
- Roxbury
- South Hero
- Windsor County

2. Do you ride a bike for recreation or transportation around Northfield?

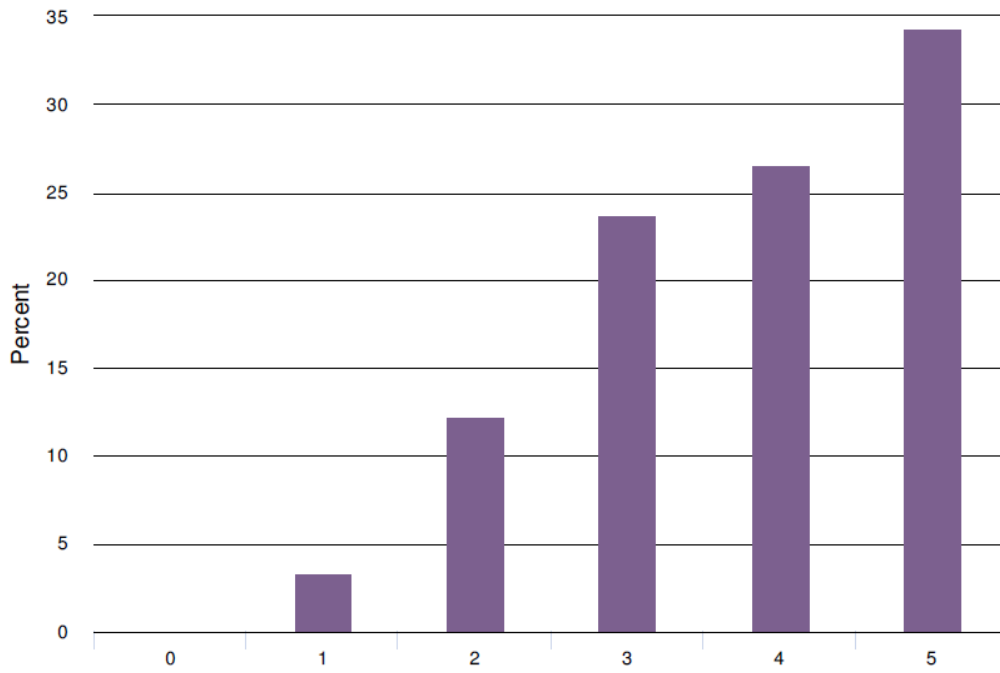


3. Do you walk for recreation or transportation around Northfield?

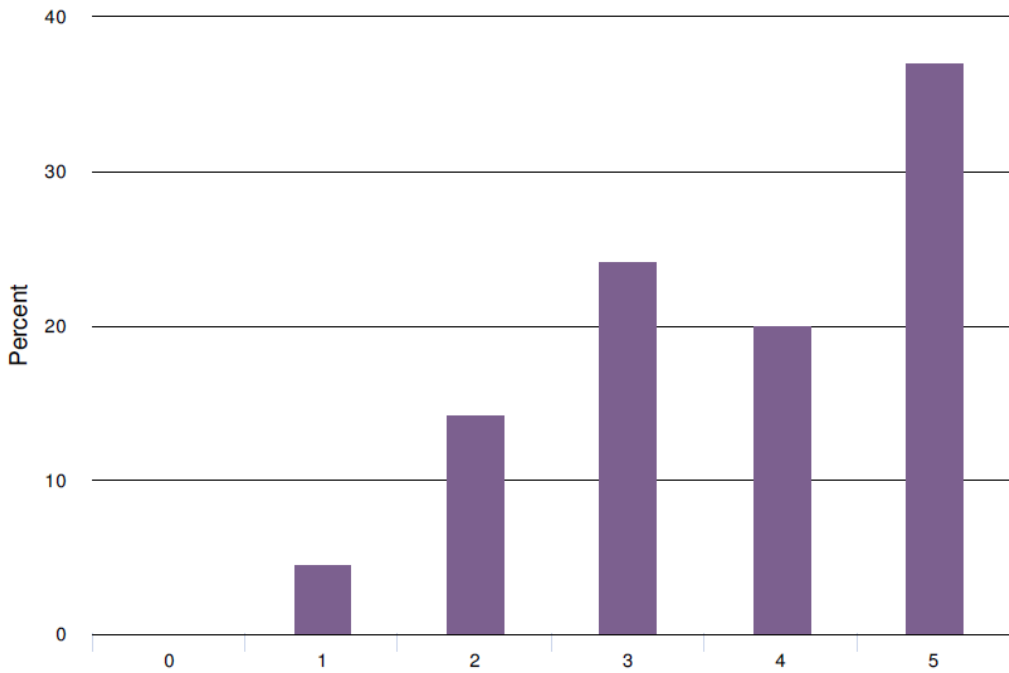


4. Please rank the following from 1 (Strongly Disagree) to 5 (Strongly Agree):

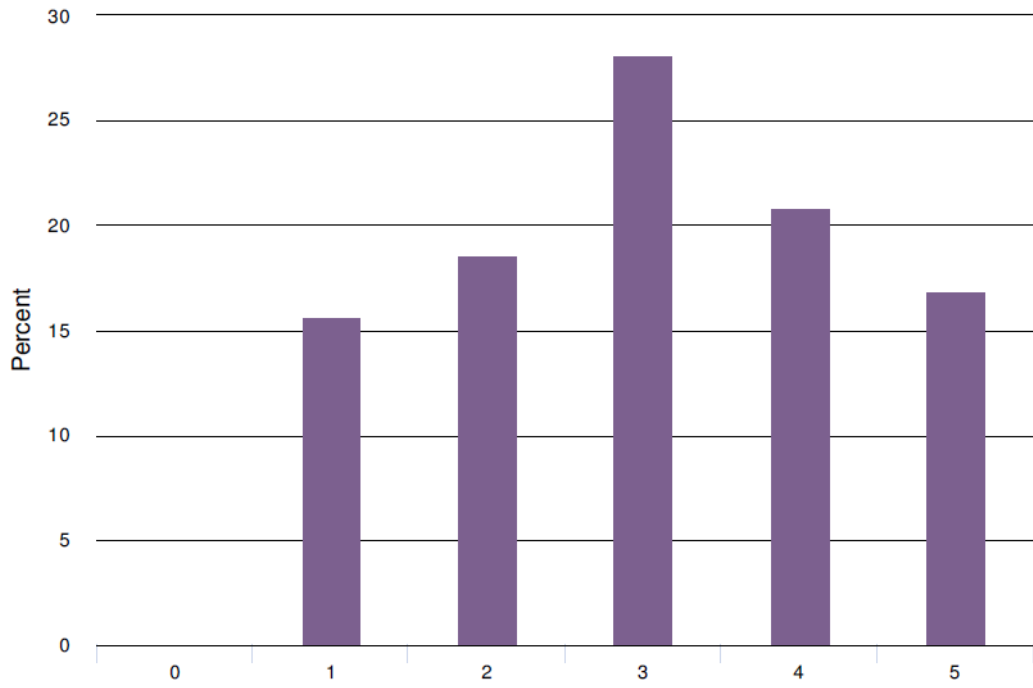
I live (or stay) in a good place for walking



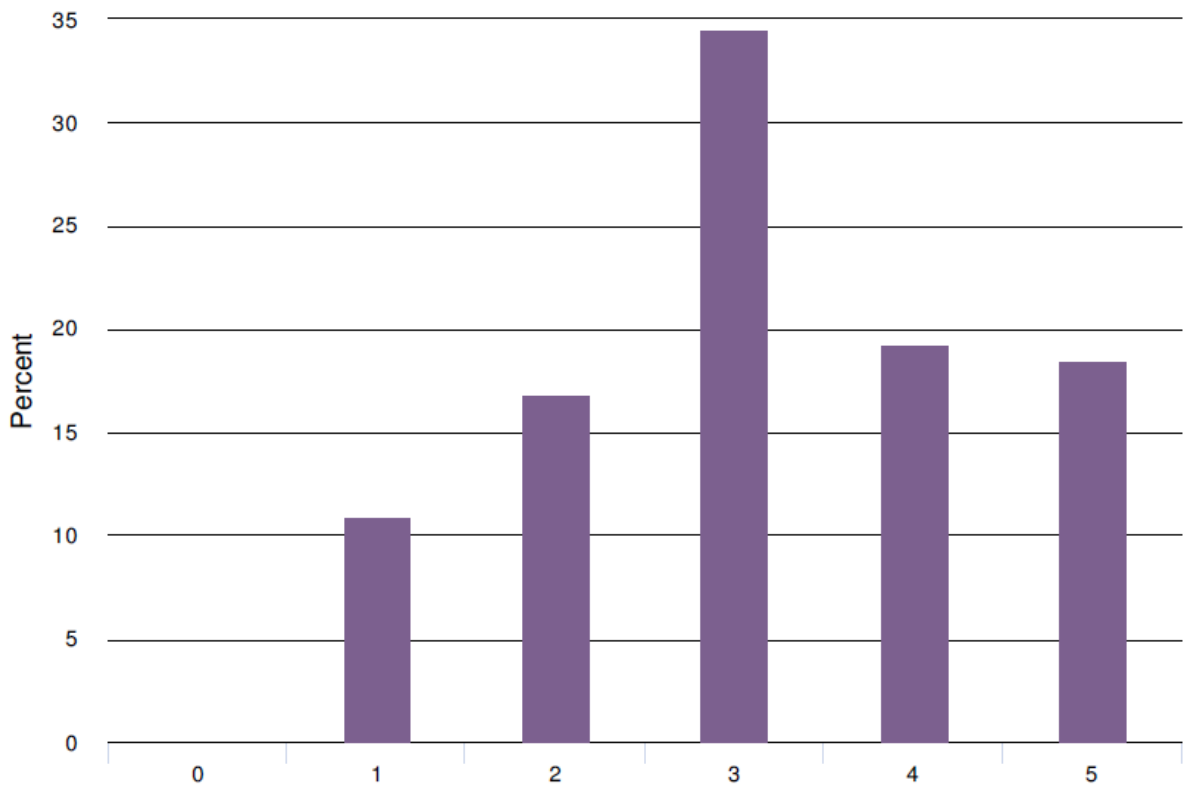
There are place (destinations) I want to visit within easy walking distance



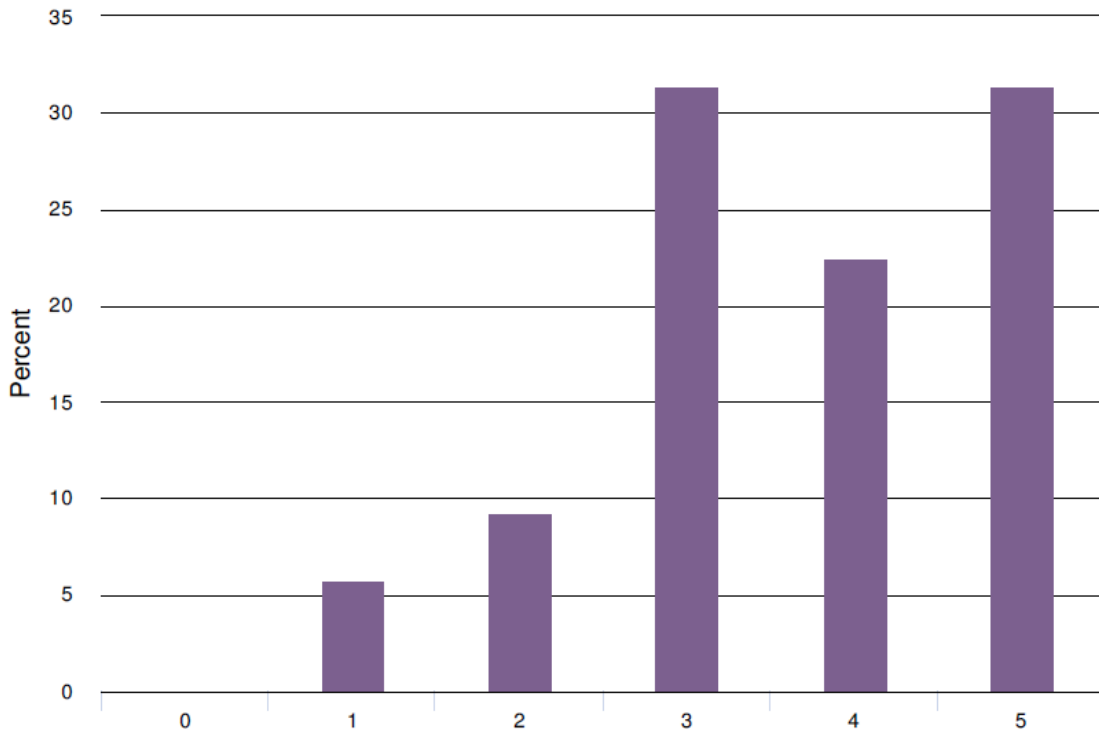
I feel safe from traffic while walking along roads near where I live



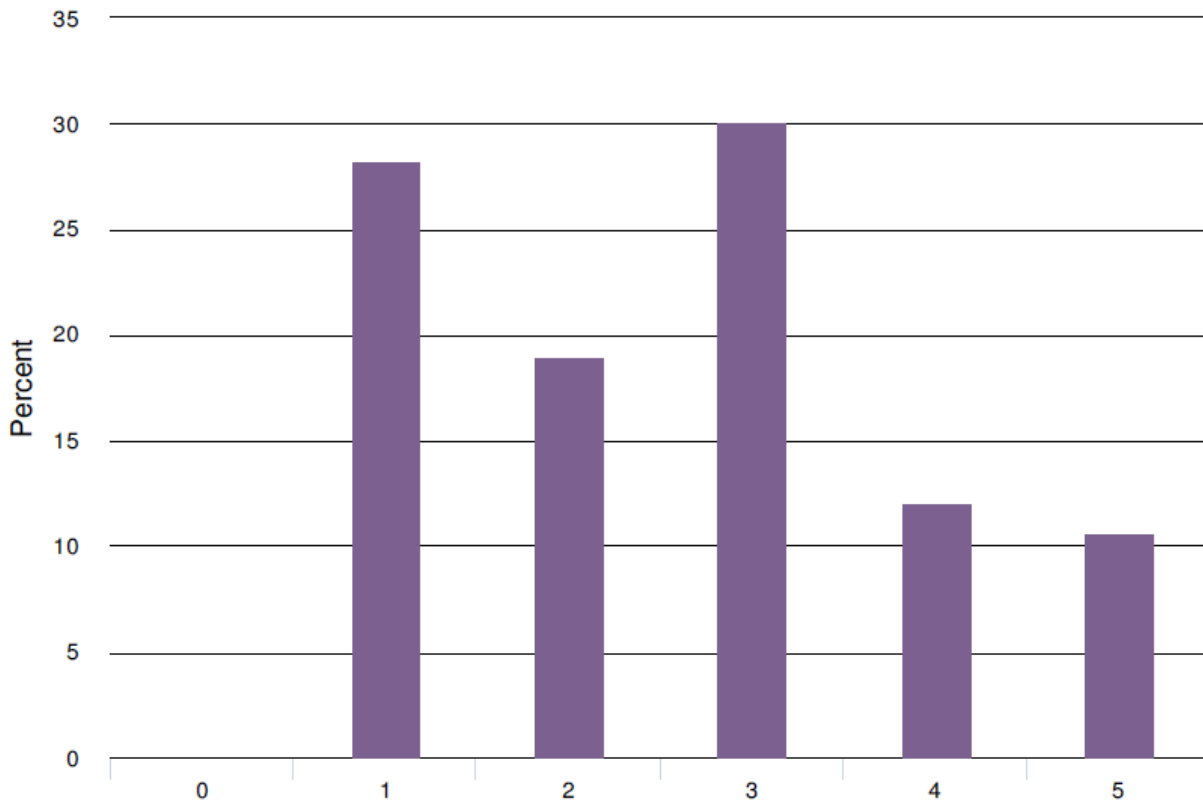
I live (or stay) in a good place for biking



There are places (destinations) within easy biking distance (10 -15 minutes) of where I live (or stay)



I feel safe from traffic while biking along roads near where I live (or stay)



5. What sort of places (destinations) do you most often bike or walk to (i.e. Memorial, Brown Public Library, Post Office, etc.)?



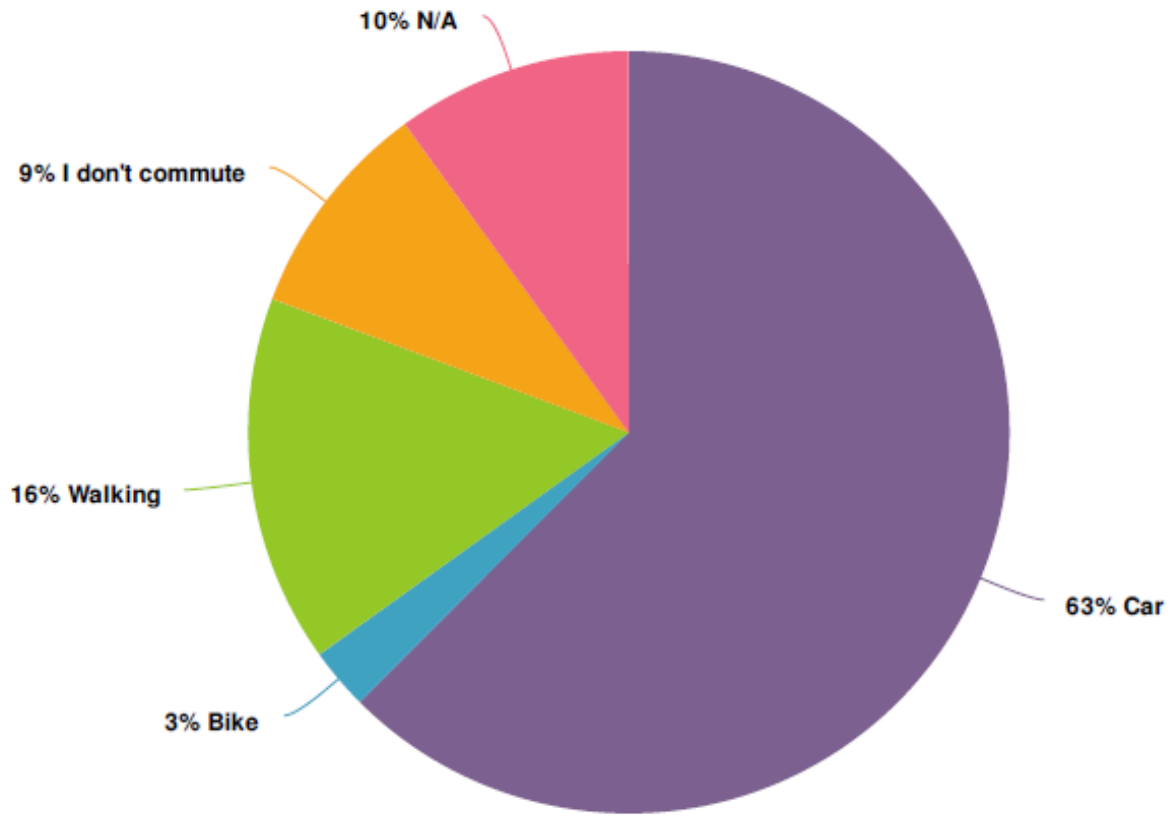
Answers included:

- Falls Post Office
- Falls General Store
- Community Promise Playground
- Falls covered bridges
- Northfield Falls Recreation Fields
- Businesses around the Common
- Around the village streets
- Paine Mountain
- Cheney Field
- Stony Brook- Smith Hill Loop
- Library
- Tops
- Central Street
- Water Street
- Shaw Center
- Dog River Park
- Good Measure
- Carrier
- Roxbury General Store
- Route 12-A outside of Northfield
- Hallstrom Road
- Chamberlin Road
- Corner Stone
- Pharmacy
- USPS
- Ace
- Barber Shop
- Elite Dental
- Playground
- Water Street Park
- Downtown area
- Various back roads
- Northfield Elementary School & High School
- Have to drive everywhere

6. How often do you walk or bike to the following places?

	Less than 1 time per month	1 to 3 times per month	About 1 time per week	2 to 4 times per week	5 or more times per week	Responses
Work or School Count Row %	145 59.7%	15 6.2%	8 3.3%	27 11.1%	48 19.8%	243
A service provider (bank, post office, barber, dentist) Count Row %	131 52.4%	52 20.8%	33 13.2%	26 10.4%	8 3.2%	250
A restaurant, bar or coffee shop Count Row %	102 41.6%	81 33.1%	27 11.0%	27 11.0%	8 3.3%	245
A retail store Count Row %	141 58.0%	66 27.2%	16 6.6%	18 7.4%	2 0.8%	243
The home of a friend or family member Count Row %	137 56.4%	56 23.0%	27 11.1%	14 5.8%	9 3.7%	243
Taking someone else to school or daycare Count Row %	209 91.7%	5 2.2%	4 1.8%	4 1.8%	6 2.6%	228
Norwich University Count Row %	109 45.0%	37 15.3%	13 5.4%	21 8.7%	62 25.6%	242
Town Common Count Row %	95 38.5%	55 22.3%	33 13.4%	41 16.6%	23 9.3%	247
Totals						1941 100.0%

7. What mode do you most frequently use to commute to work?



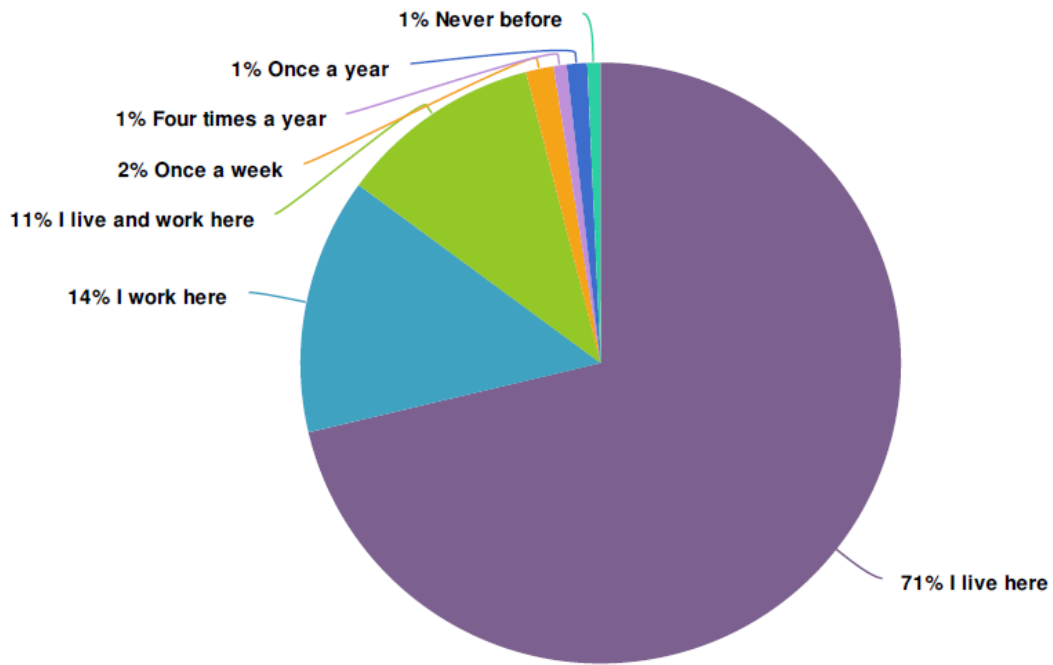
8. What prevents you or members of your household from biking or walking for commuting, shopping, etc.

	You	Members of your household	Total Checks
Don't like walking or biking Checks Row Check %	23 47.9%	25 52.1%	48
Destinations too far apart Checks Row Check %	109 61.9%	67 38.1%	176
Sidewalks and/or bike paths not connected or in poor condition Checks Row Check %	97 62.2%	59 37.8%	156
Difficult to cross street Checks Row Check %	46 62.2%	28 37.8%	74
Traffic volume and speed (safety) Checks Row Check %	74 60.7%	48 39.3%	122
Difficult to locate routes or lack of defined bike lanes Checks Row Check %	73 60.3%	48 39.7%	121
Unfavorable weather Checks Row Check %	81 60.9%	52 39.1%	133

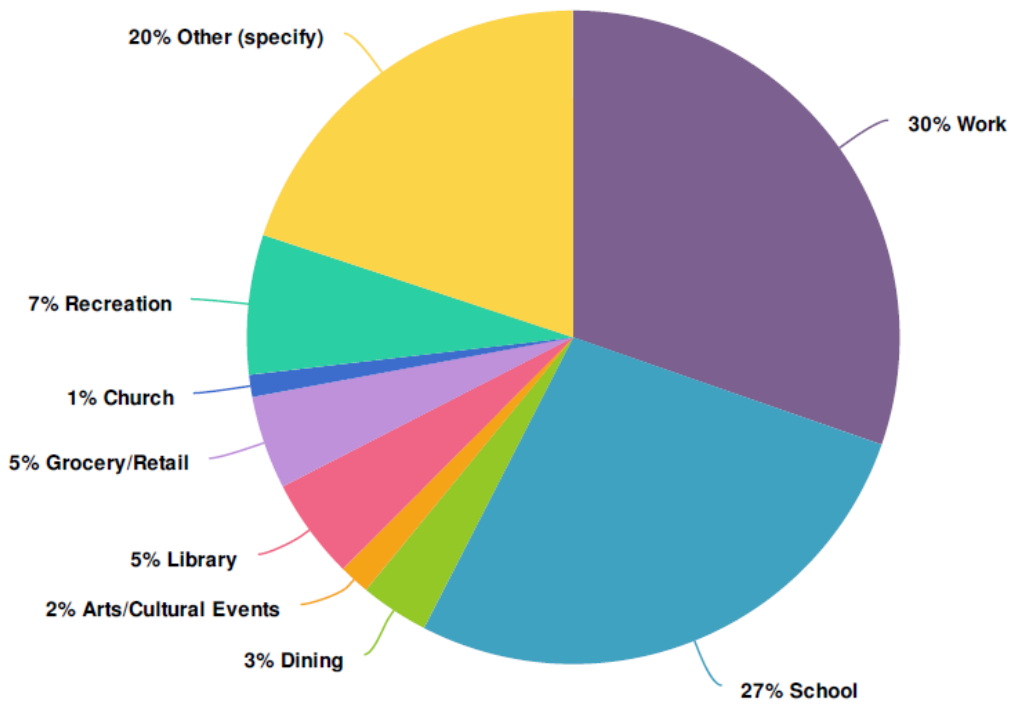
Other:

- Could use a consistent bus route
- Dirt Roads
- Not enough sidewalks to destination (falls)
- Winter sidewalks are problematic
- Dangerous
- Lack of safe routes
- Long distance from town center
- No shoulders
- No sidewalks
- Not enough parking to leave car and bike to places
- Poor sidewalk conditions
- Poorly paved roads
- Too far
- Road to elementary school doesn't have sidewalks
- Steep terrain

Approximately how frequently do you come to Northfield?



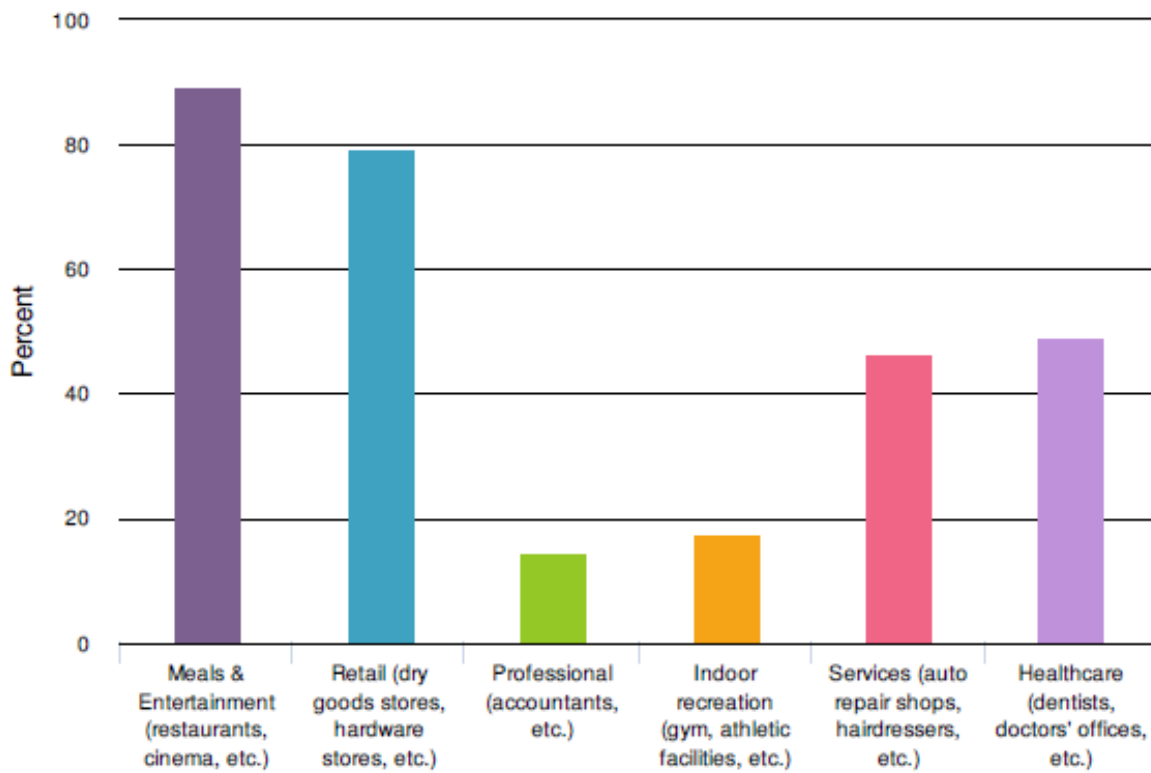
What activities bring you to Northfield?



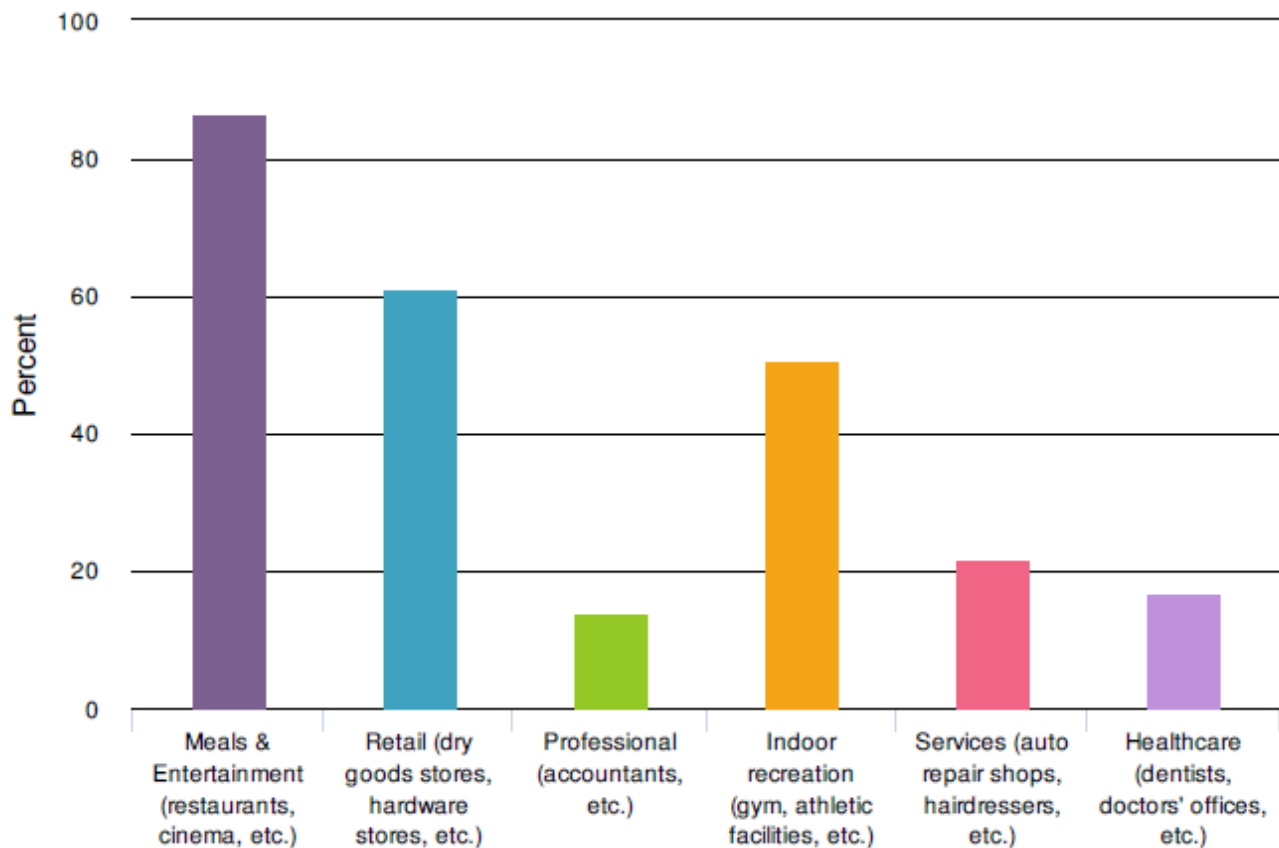
11. How would your experience in Northfield be impacted if the following amenities and facilities were added or improved?

	No Impact	Some Improvement	Major Improvement	N/A	Responses
Stores					
Count	19	110	134	7	270
Row %	7.0%	40.7%	49.6%	2.6%	
Restaurants					
Count	22	101	145	5	273
Row %	8.1%	37.0%	53.1%	1.8%	
Evening Entertainment					
Count	46	87	120	13	266
Row %	17.3%	32.7%	45.1%	4.9%	
Community facilities					
Count	51	102	101	9	263
Row %	19.4%	38.8%	38.4%	3.4%	
Parks					
Count	43	108	106	7	264
Row %	16.3%	40.9%	40.2%	2.7%	
Playgrounds					
Count	90	72	66	31	259
Row %	34.7%	27.8%	25.5%	12.0%	
Streetscape improvements (benches, flowers, lighting, etc.)					
Count	55	102	103	5	265
Row %	20.8%	38.5%	38.9%	1.9%	
Community events					
Count	39	118	97	10	264
Row %	14.8%	44.7%	36.7%	3.8%	
Signage/Wayfinding					
Count	87	101	64	11	263
Row %	33.1%	38.4%	24.3%	4.2%	
Parking					
Count	78	108	63	14	263
Row %	29.7%	41.1%	24.0%	5.3%	
Totals					
Total Responses					273

12. What types of businesses do you currently frequent in Northfield?



13. What types of businesses would you like to see more of in Northfield?

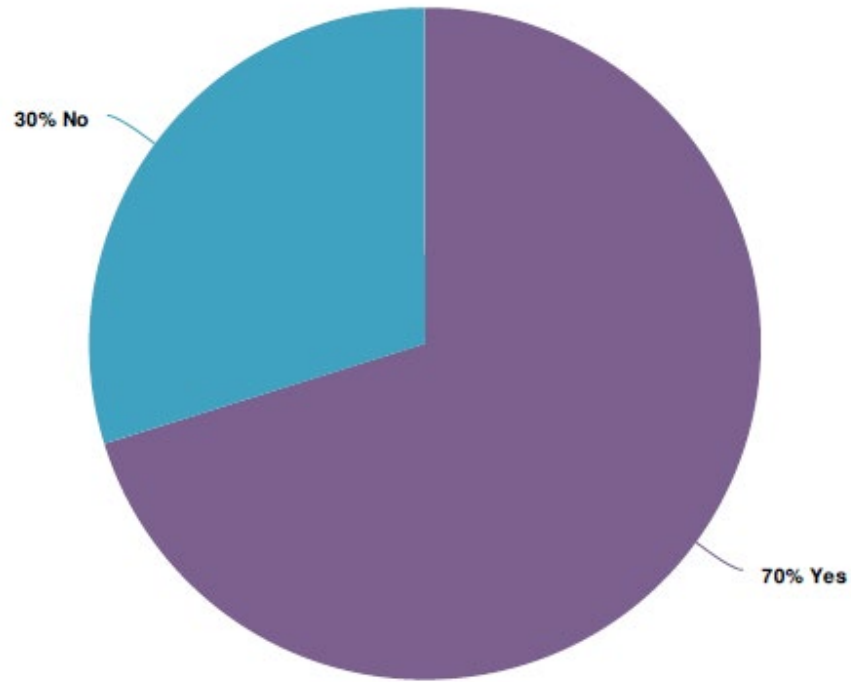


14. What kinds of recreation/entertainment specific opportunities would you like to see in Northfield?

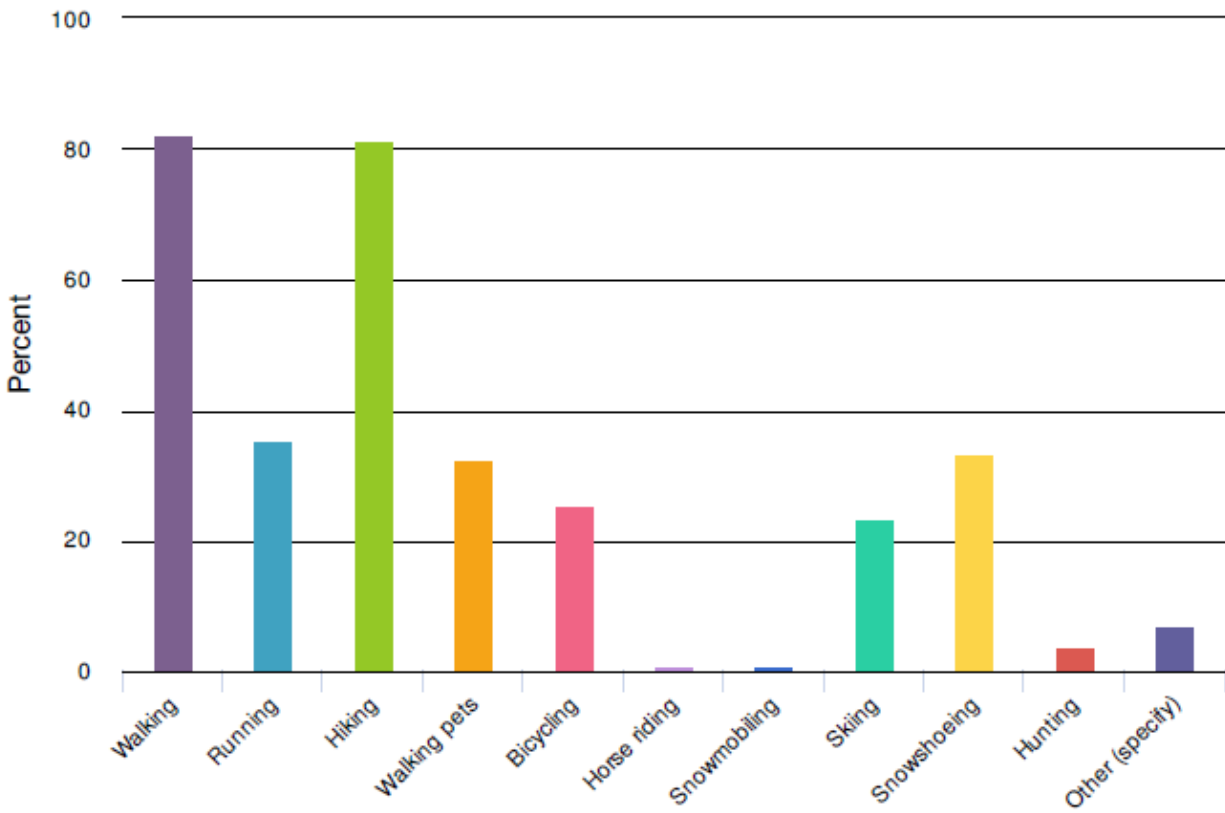


- Falls to Paine Mountain
- Community Rope Tow at Paine
- Dog Park
- More community use of Shaw Center
- better signage/ accessibility to the trail systems
- More events in town parks/greenspace
- Movies
- Tennis court
- Things to do with young kids in winter
- Indoor and outdoor tennis courts
- Bike lanes
- Trails by river
- Paine Mountain and Northfield Town Forest trail systems and access points north of town
- Ice skating rink
- Small movie theater
- Community fitness center
- Music venue
- Art galleries
- Concert hall
- Bike paths between Northfield and Montpelier
- Indoor community rec center
- Playgrounds for older kids
- Water play/splash pad
- Accessible and available parking areas to trails
- River Path to Montpelier
- Walking and jogging path with mile markers
- More dining options
- Entertainment options/nightlife
- Movie theater
- Grocery

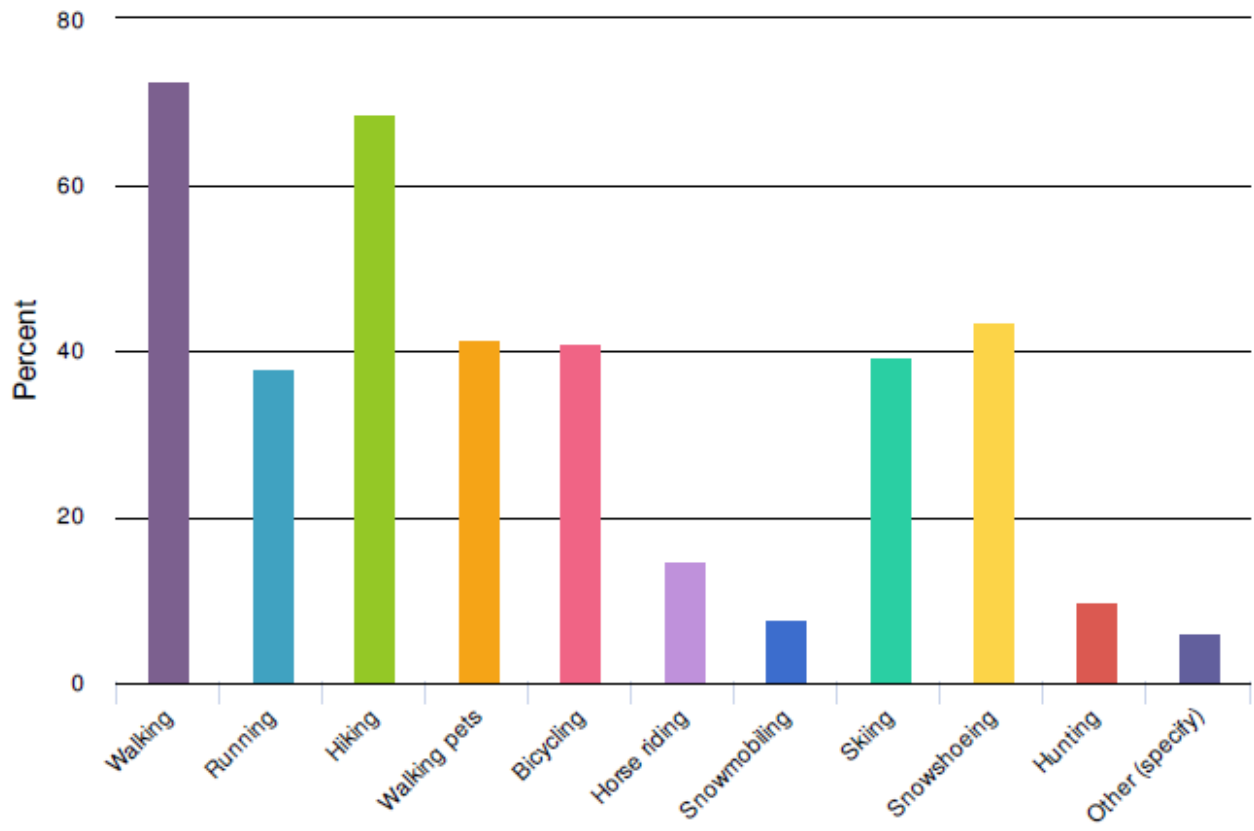
15. Do you use the trails around Northfield (Town Forest, Paine Mountain, or Shaw Center Trails)?



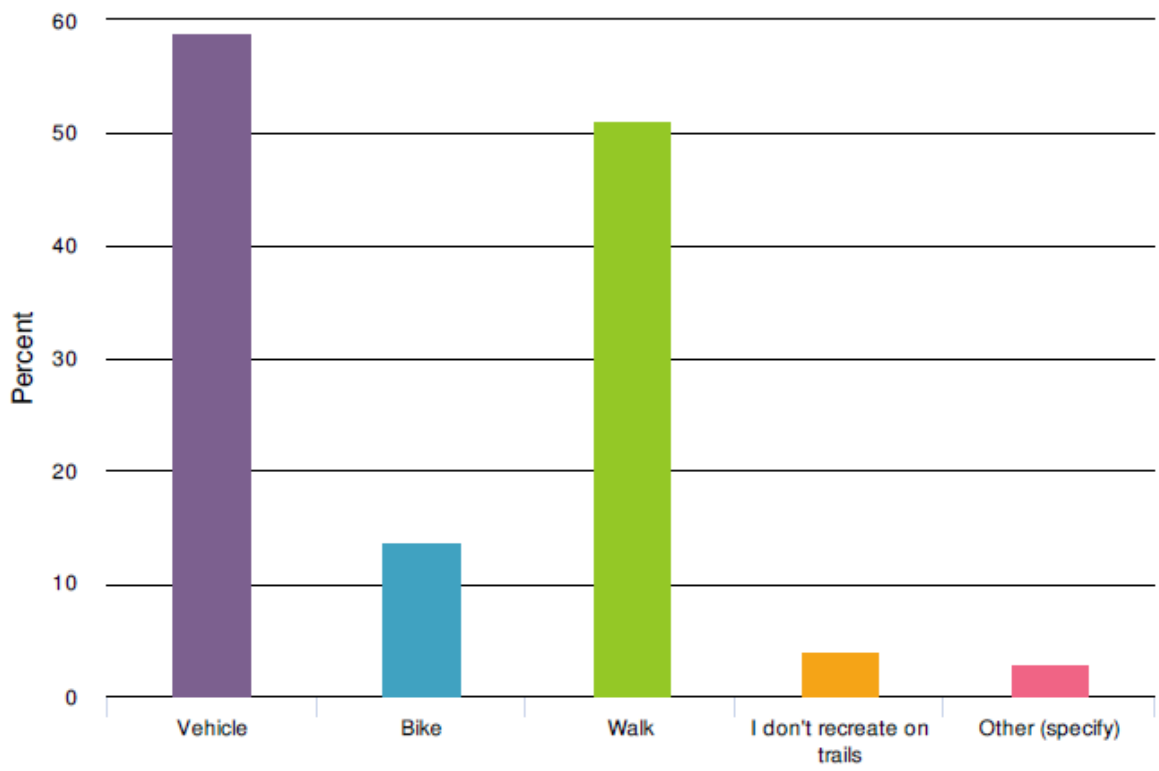
16. What activities do you currently engage in on trails around Northfield?



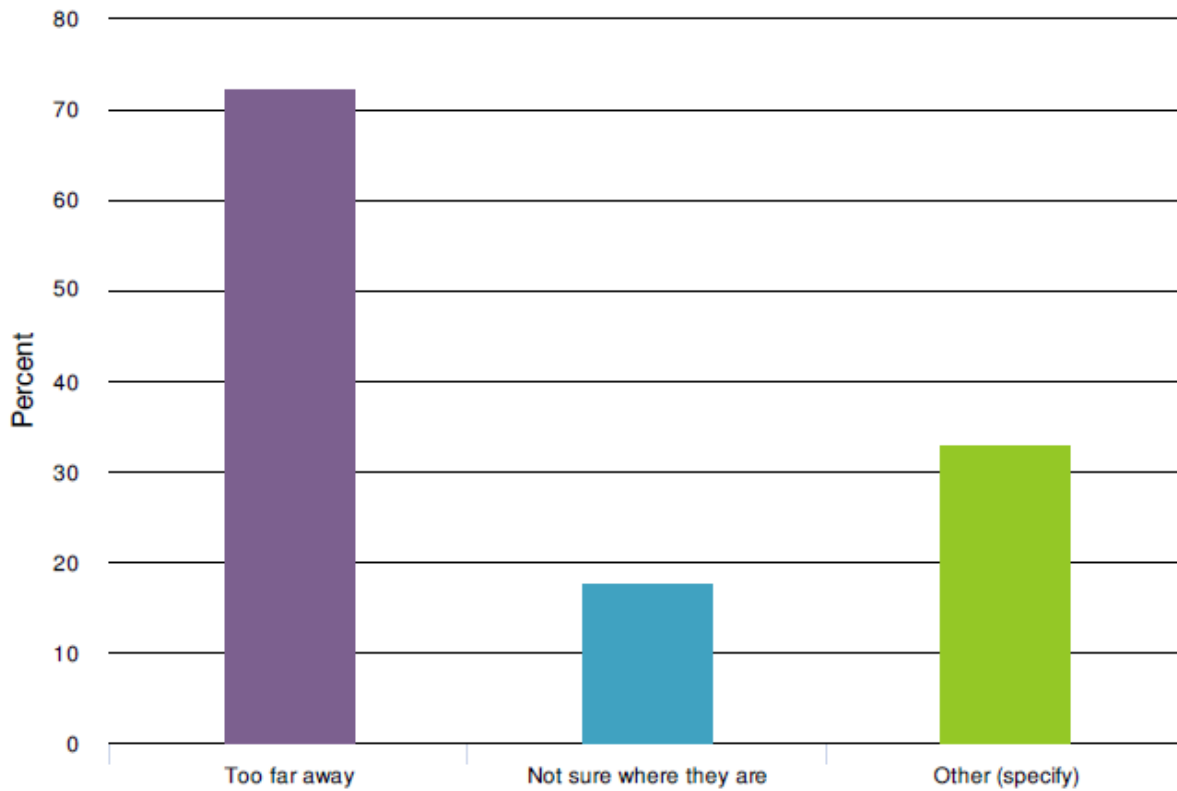
17. What activities would you like to engage in on trails around Northfield?



18. When you recreate on trails in Northfield how do you typically get to the trailhead?

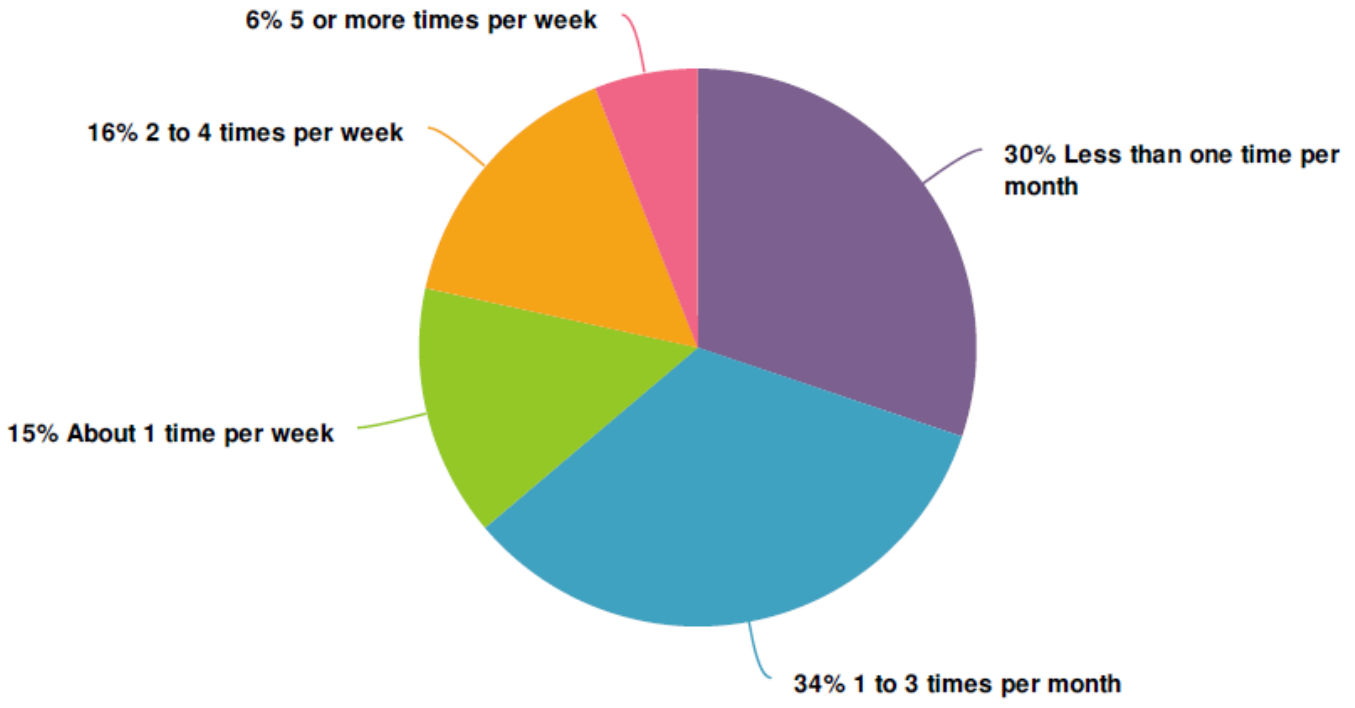


19. What prevents you from walking or biking to the trailhead?

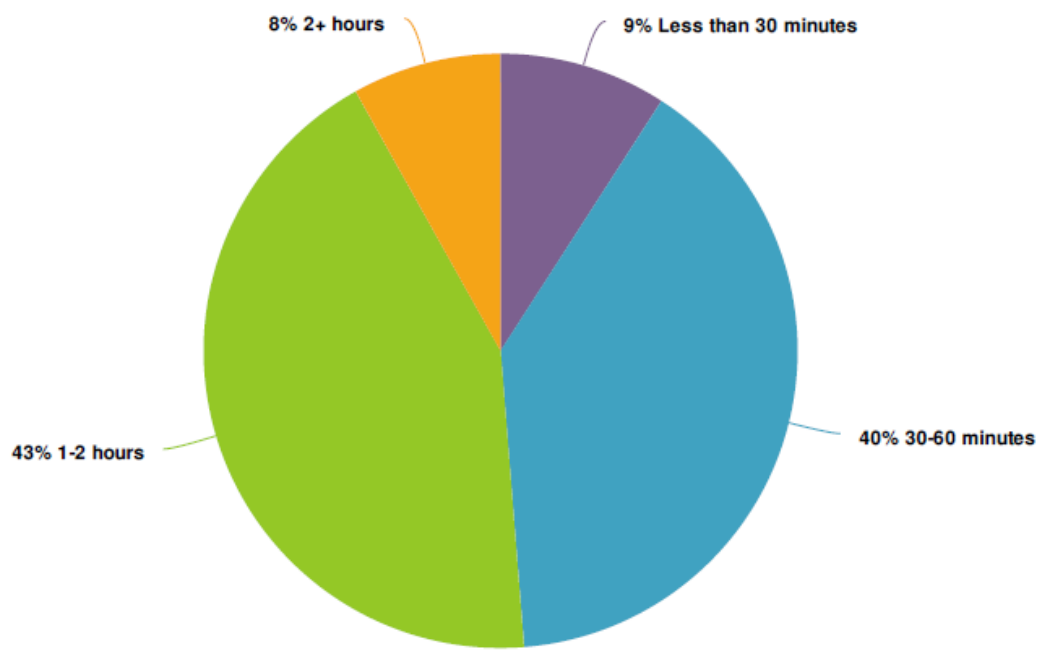


- Weather
- Equipment
- I don't feel safe
- It's not safe
- Need my car to carry kids and equipment
- No place to lock up bike
- Not safe
- Too far for young children to walk
- Steep terrain
- Too far

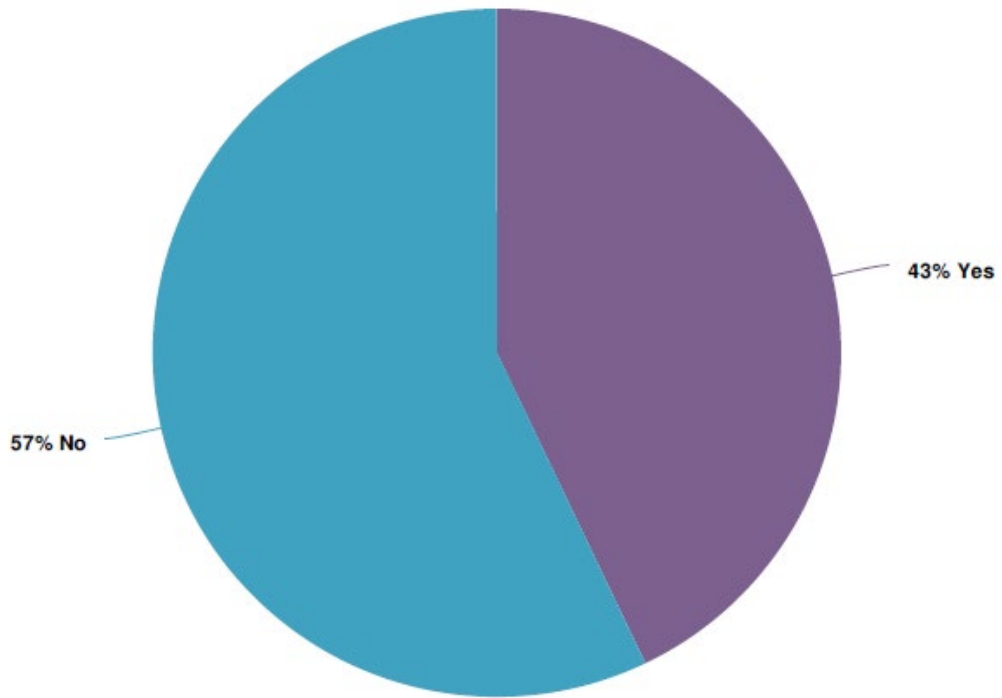
20. How often do you use the trails around Northfield?



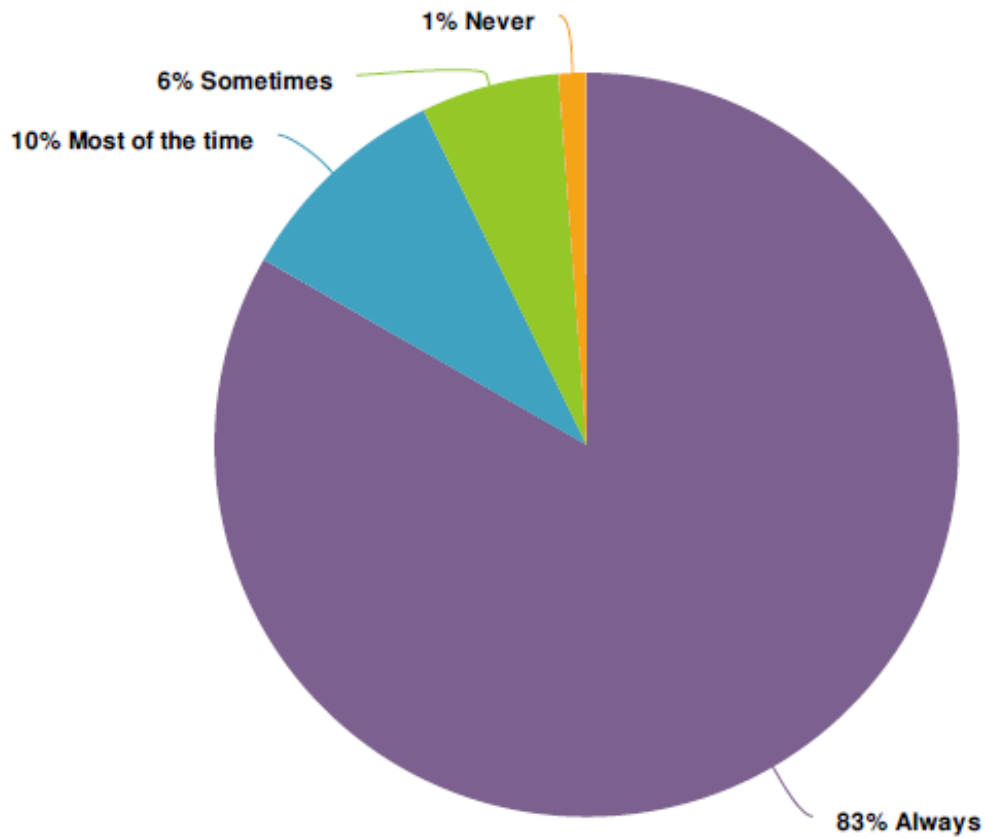
21. How long do you spend on the trail in a typical day?



22. Do you bring your dog(s) with you on the trails, roads and sidewalks around Northfield?



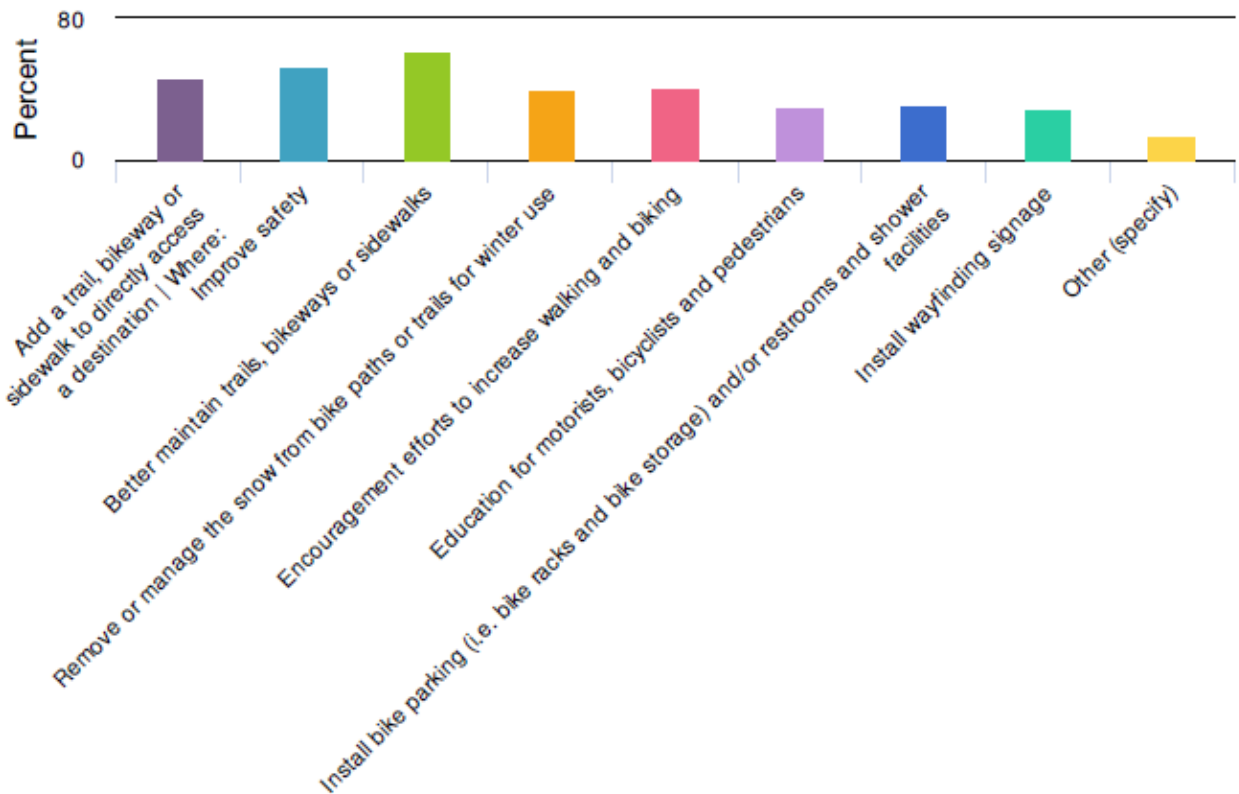
23. Do you clean up after your dog(s)?



24. What type of bicycle rider(s) are you and/or the members of your household?

	You	Members of your household	Total Checks
STRONG AND FEARLESS - Bicycling is a strong part of your identity and you are generally undeterred by poor roadway conditions Checks Row Check %	34 64.2%	19 35.8%	53
ENTHUSED AND CONFIDENT - You are comfortable sharing the roadway with automobile traffic but prefer to do so operating on bicycle facilities such as bicycle lanes and secondary roads. Checks Row Check %	95 64.2%	53 35.8%	148
INTERESTED BUT CONCERNED - You are curious about bicycling and enjoy riding a bicycle, but do not want to ride in the presence of motor vehicles. Checks Row Check %	80 54.4%	67 45.6%	147
NO WAYNO HOW - You are currently not interested in bicycling at all due to inability or lack of interest, regardless of the facilities provided. Checks Row Check %	46 59.7%	31 40.3%	77
Total Checks Checks % of Total Checks	255 60.0%	170 40.0%	425 100.0%

25. How can Northfield improve conditions for bicyclists and pedestrians?



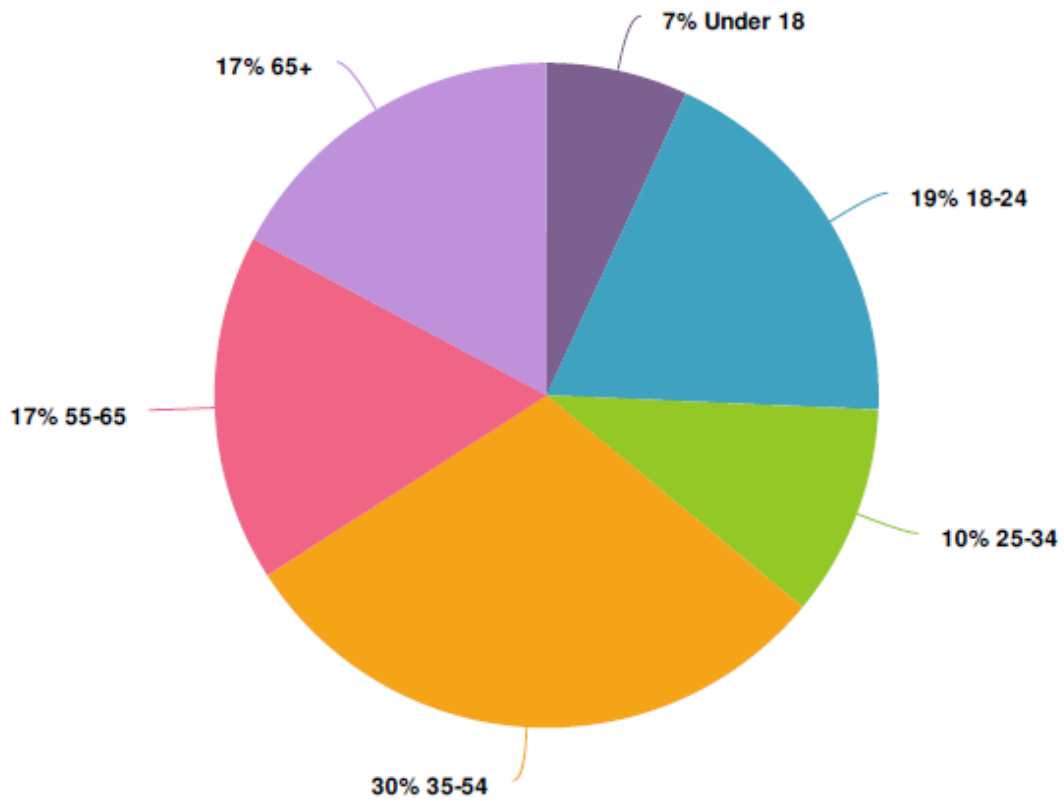
Add a trail, bikeway, or sidewalk to directly access a destination:

- Northfield Falls
- Montpelier
- Rt. 12
- 12A to NU
- Falls General Store
- Along the river
- Along Route 12 from South Northfield to the Falls
- Along the Dog River
- Bike lane from Montpelier along Route 12
- Crosswalk light in front of Falls General Store
- Bike rack at Falls
- Bike lane to the playground and rec fields from post office
- Trail from promise community playground to Paine Mountain trail system
- Northfield Falls to Shaw
- Sidewalks on Rt. 12 on South Main Street must be added
- Literally anywhere

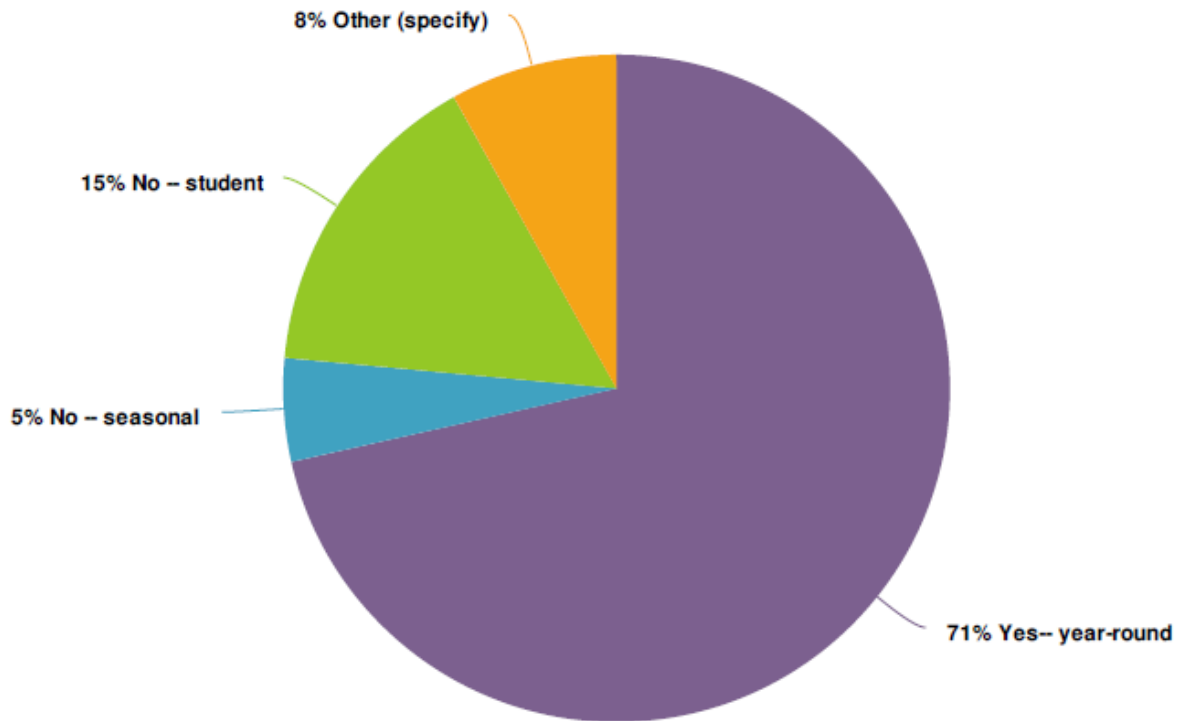
Other:

- Improve snow removal on sidewalks
- Parking at trailheads
- Repave Route 12
- create ways to patronize local businesses without requiring a vehicle

26. What is your age?

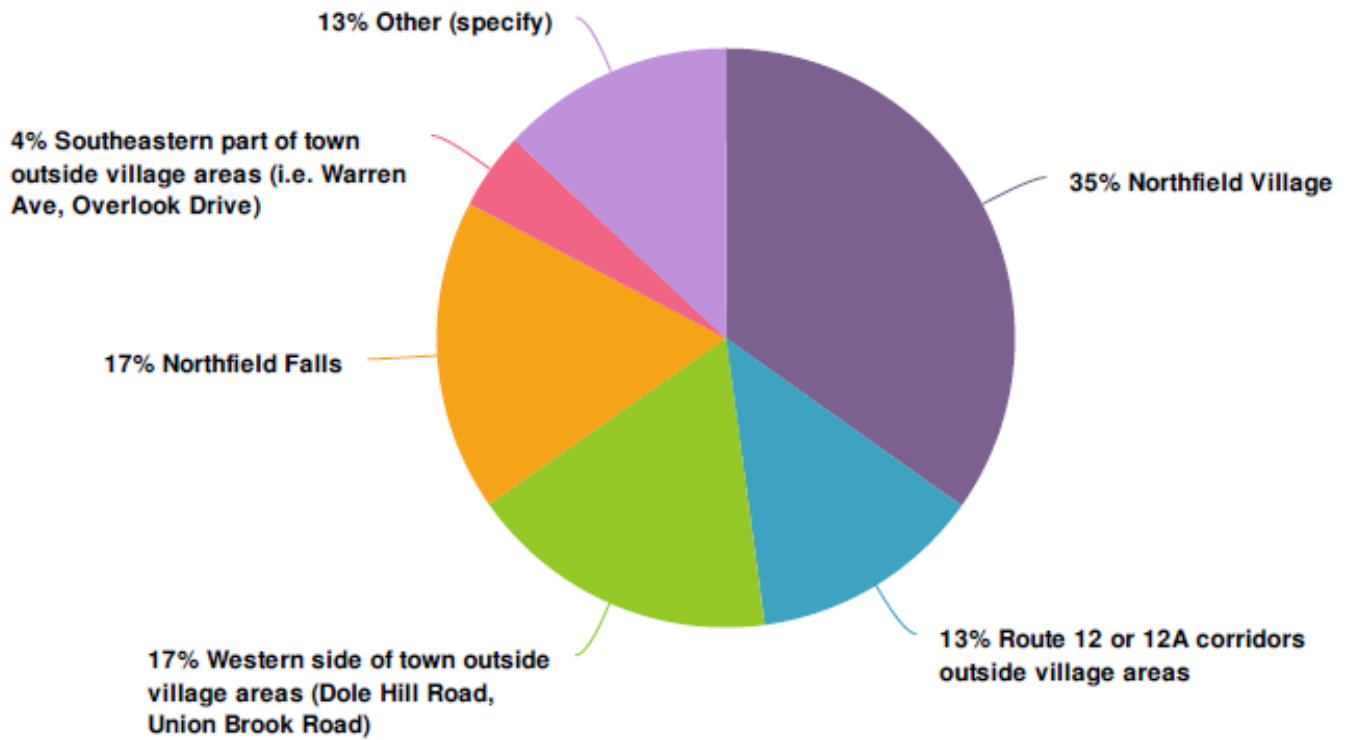


27. Are you a full-time resident?

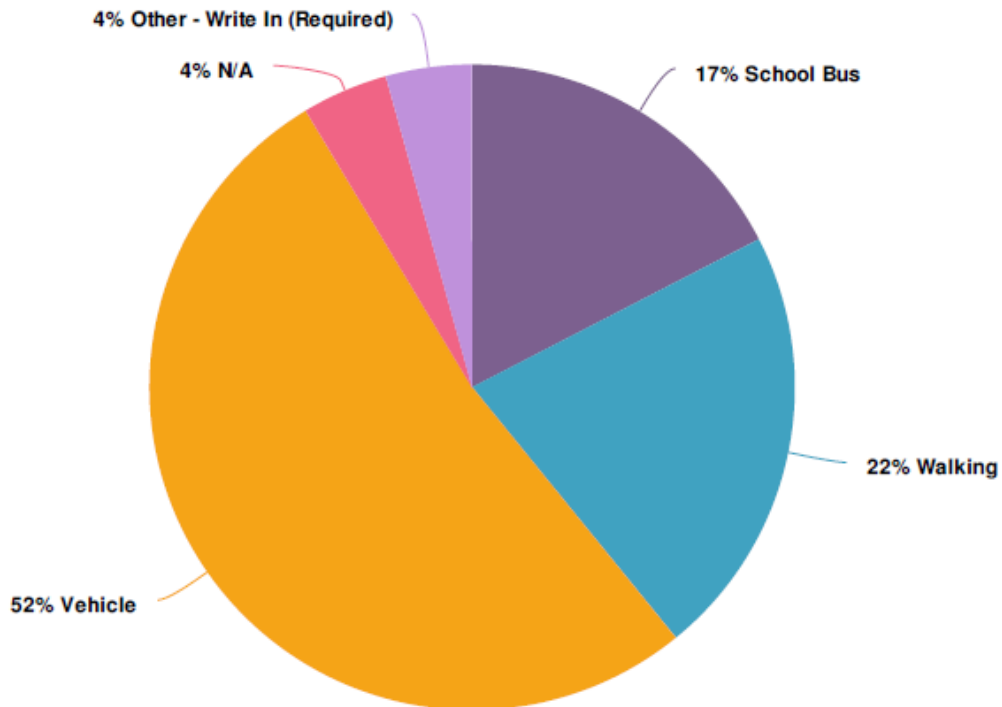


YOUTH SURVEY

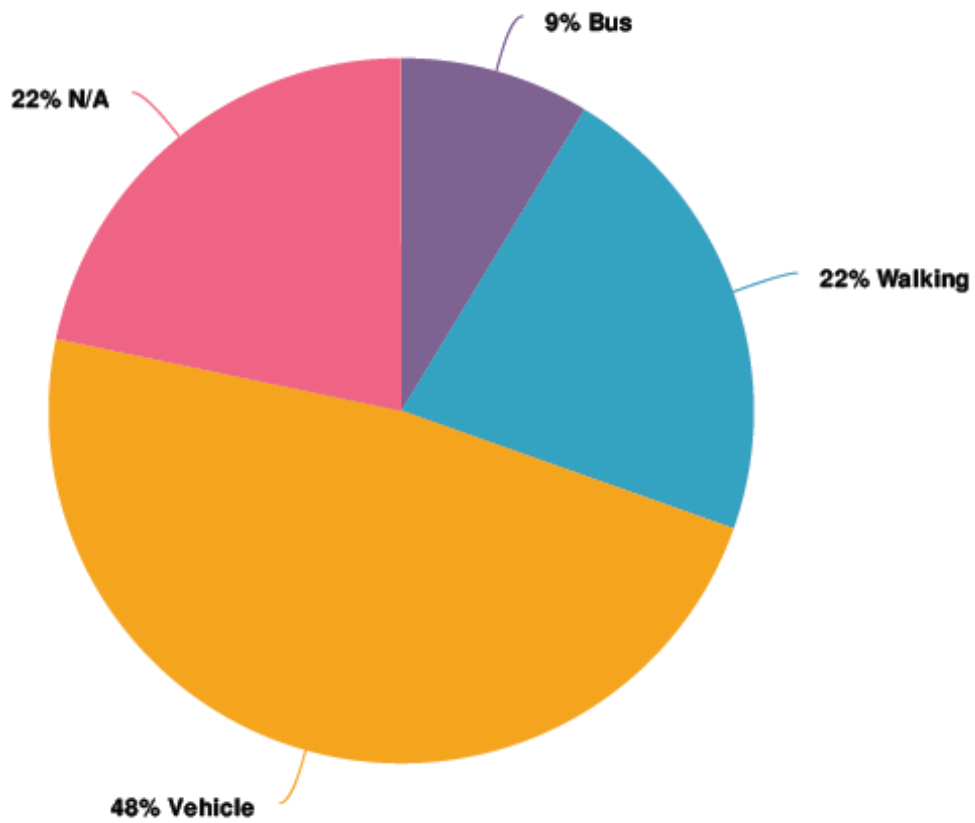
1. Where do you live?



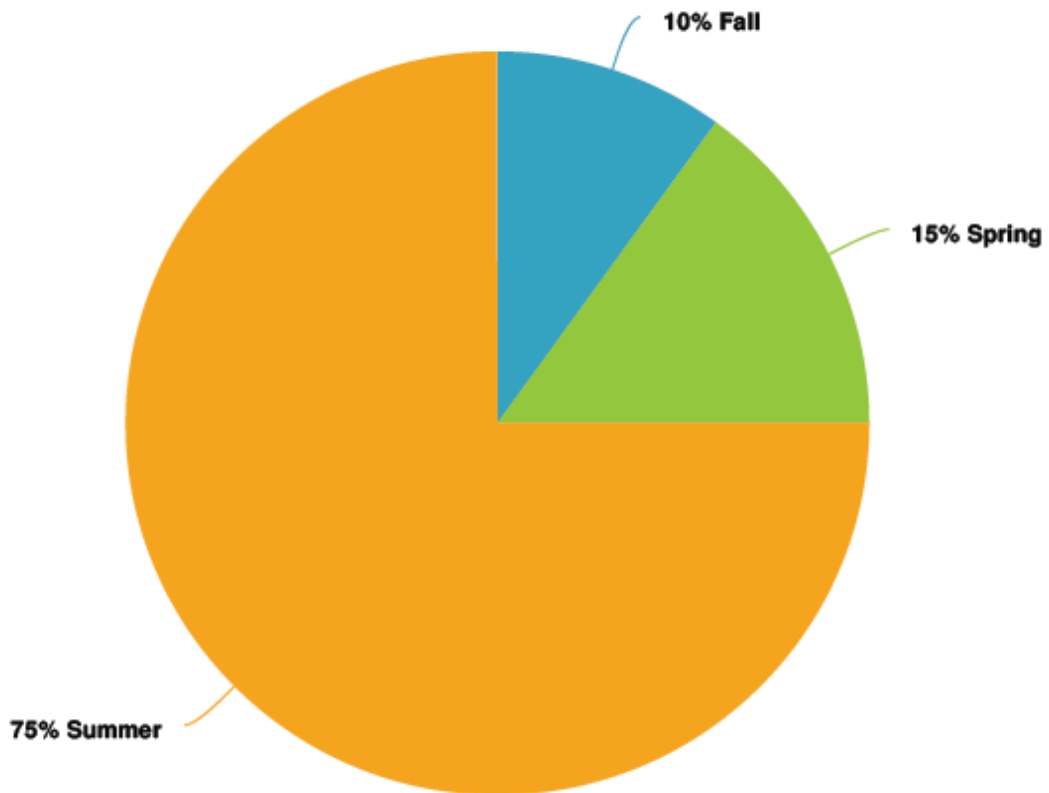
2. How do you typically get to school?



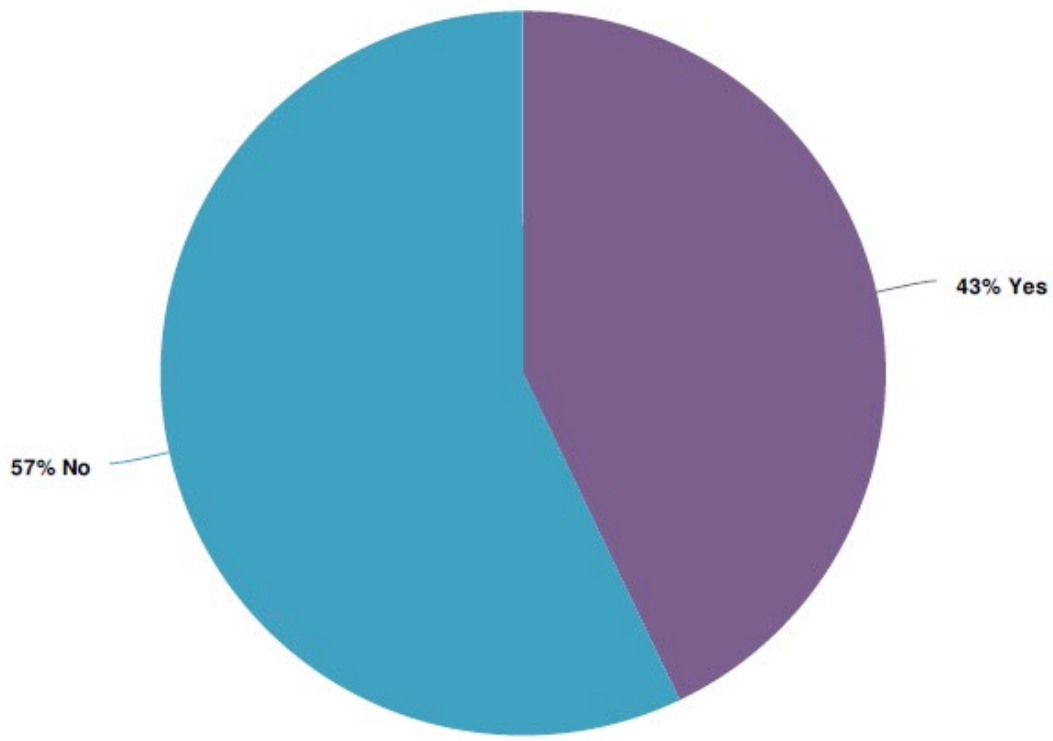
3. How do you typically get to afterschool activities?



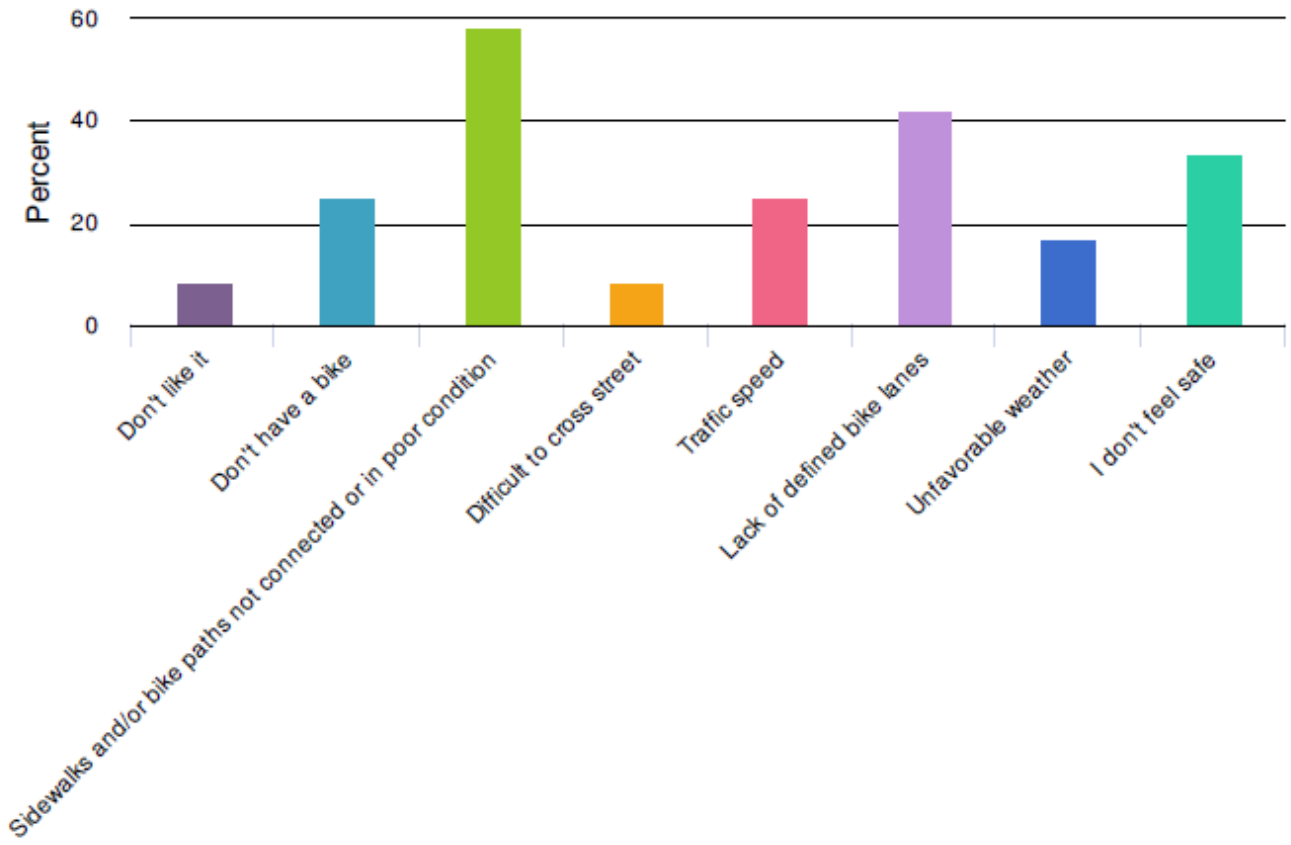
5. When do you visit these areas most often?



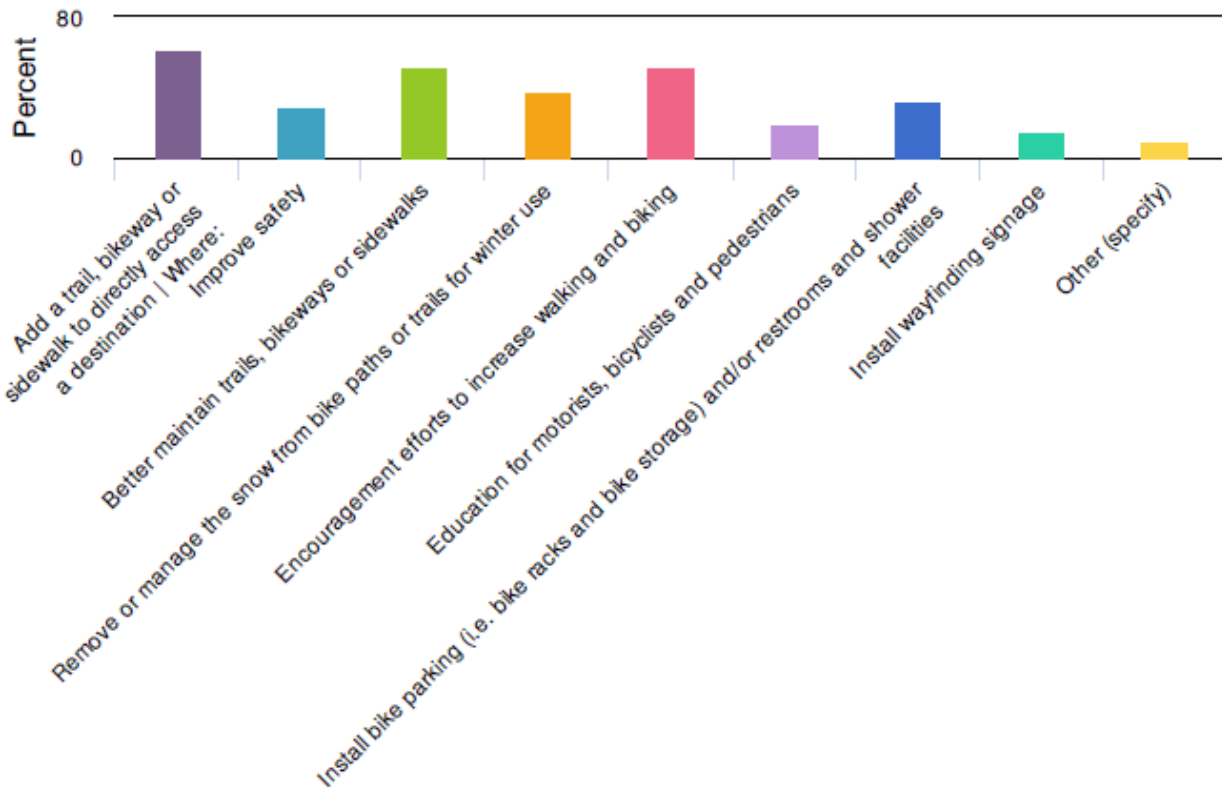
6. Do you bike around Northfield?



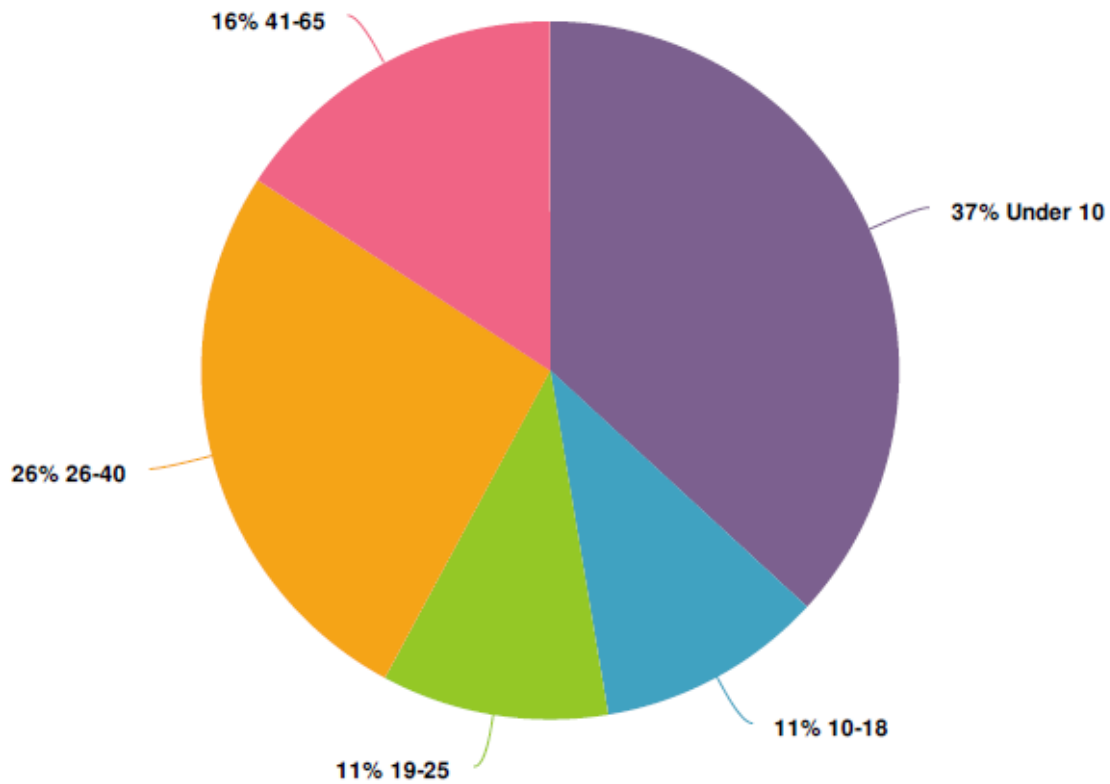
7. What prevents you from biking?



8. How can Northfield improve conditions for bicyclists and pedestrians?



9. What is your age?

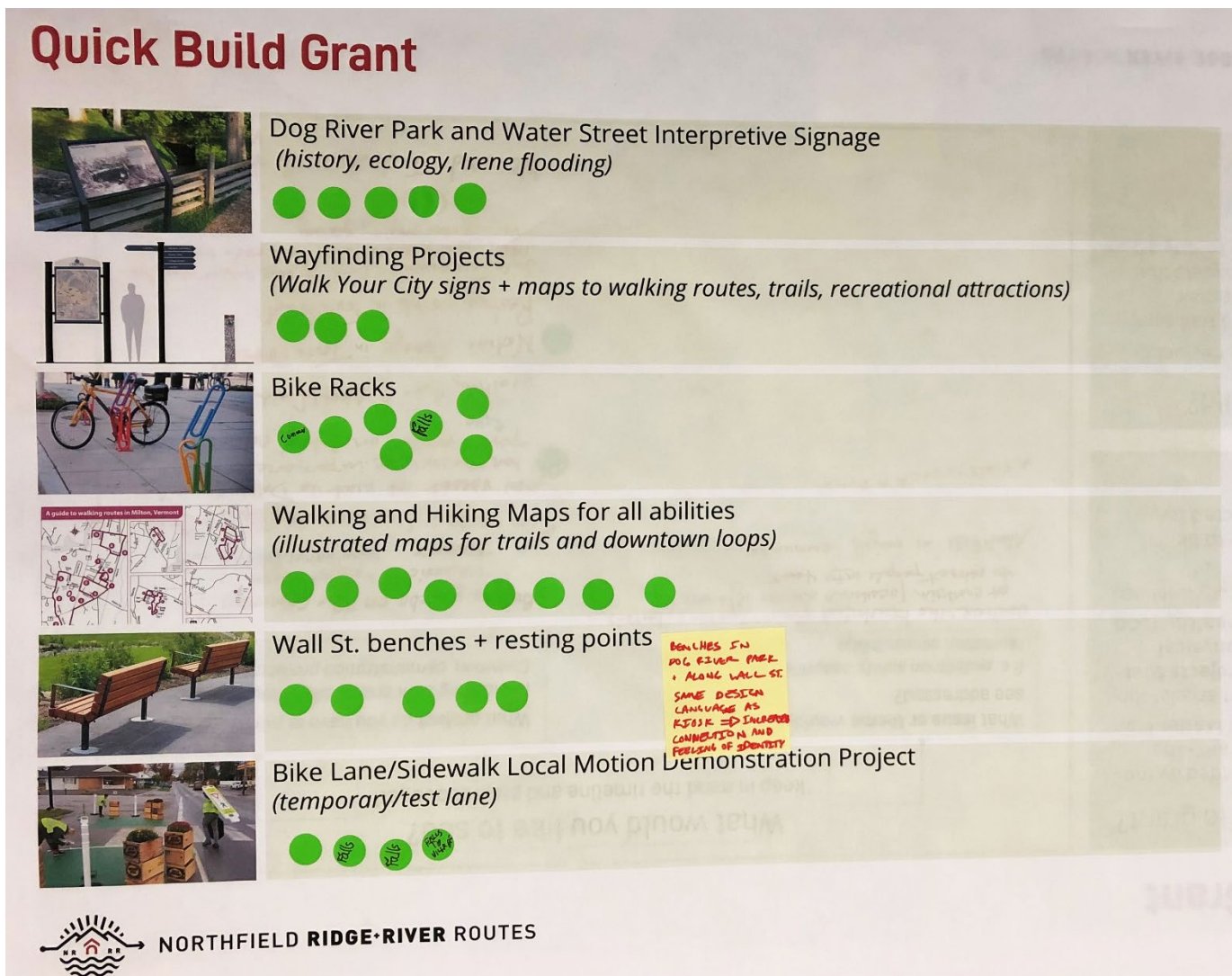


JANUARY SUMMIT OPEN HOUSE

On January 30, 2020 the Northfield Ridge + River Routes planning team hosted an Open House at the Brown Public Library Community Room in Northfield, VT.

The meeting was a drop-in anytime, open house format with questions about preferred routes, points of interest, and areas of concern. Participants were able to provide feedback on various “Opportunity Boards” that were created specific to each population center within Northfield. In addition, participants voted on and wrote-in answers concerning their preferred option for the Quick Build project—funded by the Vermont Department of Health. Members of the project team were available for one-on-one chats with attendees, and a general comment box was provided for open-ended feedback. The project goals and timeline were included in the presentation, along with existing conditions analyses of VTRoute 12, stormwater opportunities, and Northfield demographics. 35 people signed in and an estimated 50 people were in attendance.

RESULTS



Quick Build Grant

- Bike Racks and Walking and Hiking maps for all abilities received the most sticker dot votes
- One participant specified they would like to see benches in Dog River Park and along Wall Street that followed the design language of the kiosk so as to increase connection and feeling of identity.

What issue or theme would you like to see addressed?

- Continue the beautiful flowers/ gardens/ barrels at certain locations outside of town to attract people into town
- Northfield as unique community
- A place to lock a bike

What project do you have in mind?

- Build a gazebo on the common (live music, puppet shows, speakers)
- Water feature public can use
- Can we have bike racks like Barre (Creative!)
- Mow vacant lot next to Dollar General, have benches, etc. in park area, paint murals on tall columns

- Walking tour of Northfield
- Nature signage in Town Forest
- Resting point in Town Forest
- Safe crosswalk in front of falls general store, bike rack, walking, biking hiking, trail map and kiosk, demonstration project, gateway
- T-shirts with the cool new logo!

Northfield Village – Opportunities

- Stop sign needed on right side of south bend, vine street corner w/cross street. (near elementary school)
- VDAT River walk (See VDAT report)
- Signage needed around Common to indicate No Idling especially on summer or warm nights
 - Also needs overnight parking notices
- Kids walking to pool—dangerous narrow curve (East to King Street)
- Turkey Hill Road too narrow right after King Street
- Super Cool Pedestrian Bridge just south of Wall Street bridge would create exciting promenade from depot square to dog river park
- Ensure handicap access for all sidewalks/crosswalks
- Improve handicap accessibility/usability of the Common (too many wheelchair/trip hazards)
- Trail from elementary school soccer field to vine street for ski/hike
- No idling signage needed around schools, cemetery, vine street
- King street and Turkey Hill road intersection is tricky
- Places to lock bikes needed in Depot Square/Mayo block areas
- Loop trail opportunity to connect downtown, dog river park, rugby field, new bridge?

Northfield Opportunities

- The off-road path should connect often to main road
- Route 12 path should include ped enhanced bike/ped route (not everyone has off-road bike)
 - This improvement would allow active transport opportunities for kids to school and visitors biking through to Montpelier
- Bike/Ped lane on Route 12 could be plowed for winter bike connection—much harder for off-road trails
- Slate Ave and Prospect St sidewalks are in very poor conditions

Northfield Center

- Parking needed by cheney farm access
- Wellfield lane to old vast trail for ski/hike needs loop
- VTRoute 12 sidewalks and 12a sidewalks

Northfield Falls

- Bike racks by bus stop, hitching post
- We need more outdoor dining options
- Flashing light at cross walk by falls needed
- Some stairs down to river by covered bridge
- Pedestrians want to be on the main road and feel vulnerable alone on trails
- Walking for transit not just recreation

- Bicyclists and pedestrians need a lane which is plowed in winter and separated from the traffic on VT Route 12
- Rec path good for bikes and strolling (off-road)
- VT Route 12 path can be more of a utility path (A to B)
- White Road to Paine Summit connection
- Covered bridges are terrific photo opps for visitors

Areas of Concern

- VT route 12 from Village to Falls
- Covered Bridge access
- Need sidewalks to falls
- Memorial Park path to falls
- No sidewalks on King street
- Need parking on Cheney Farm Road (said several times)
- Official Public parking needed for Rugby fields Water Street
- Wall Street and Water Street dangerous intersection
- Norwich to Shaw Center Crossing and sidewalks between winter and paine mountain drive
- Intertown trail on East side of VT Route 12 from Falls to South Northfield
- Off road trail from Falls to Village (see photo below)

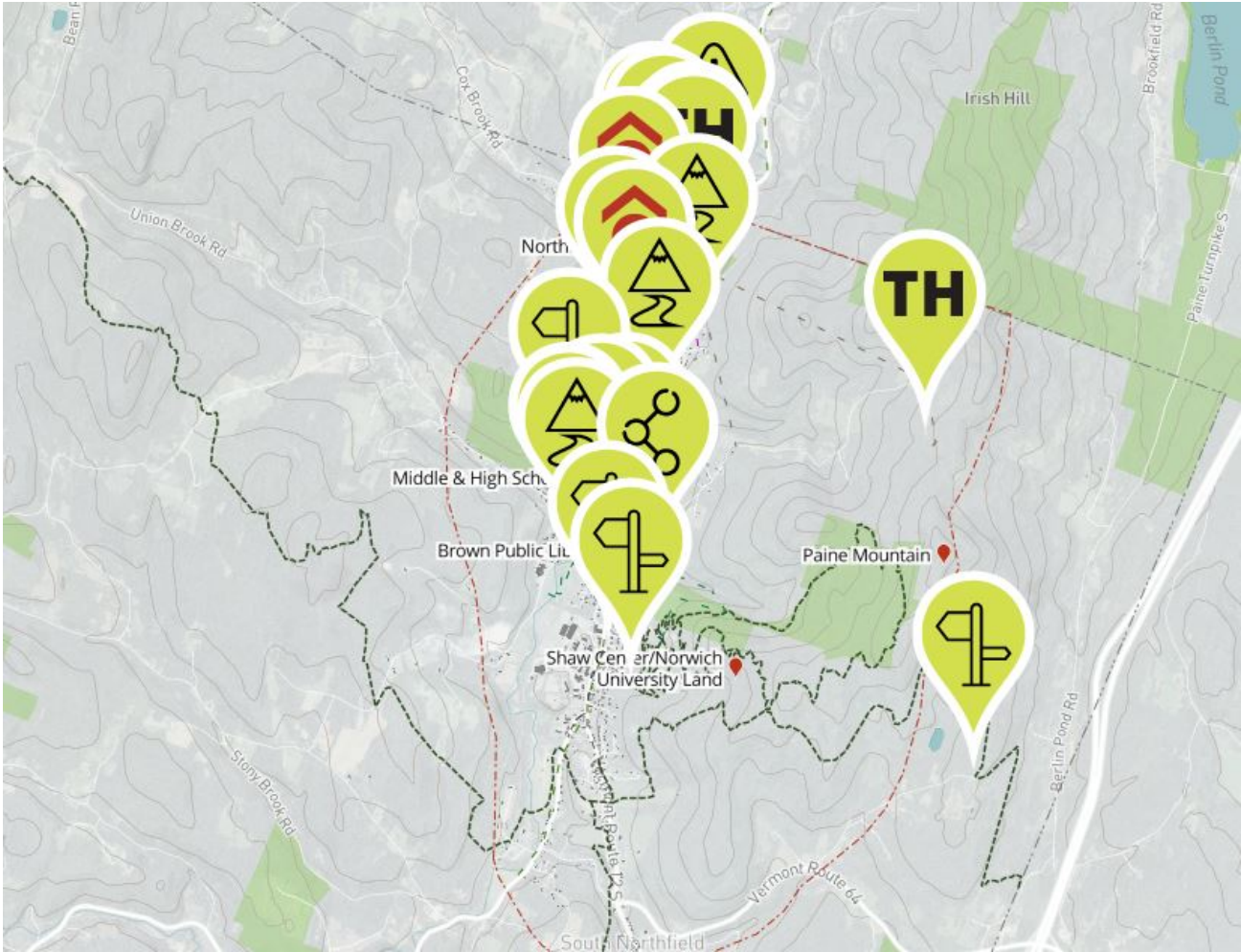


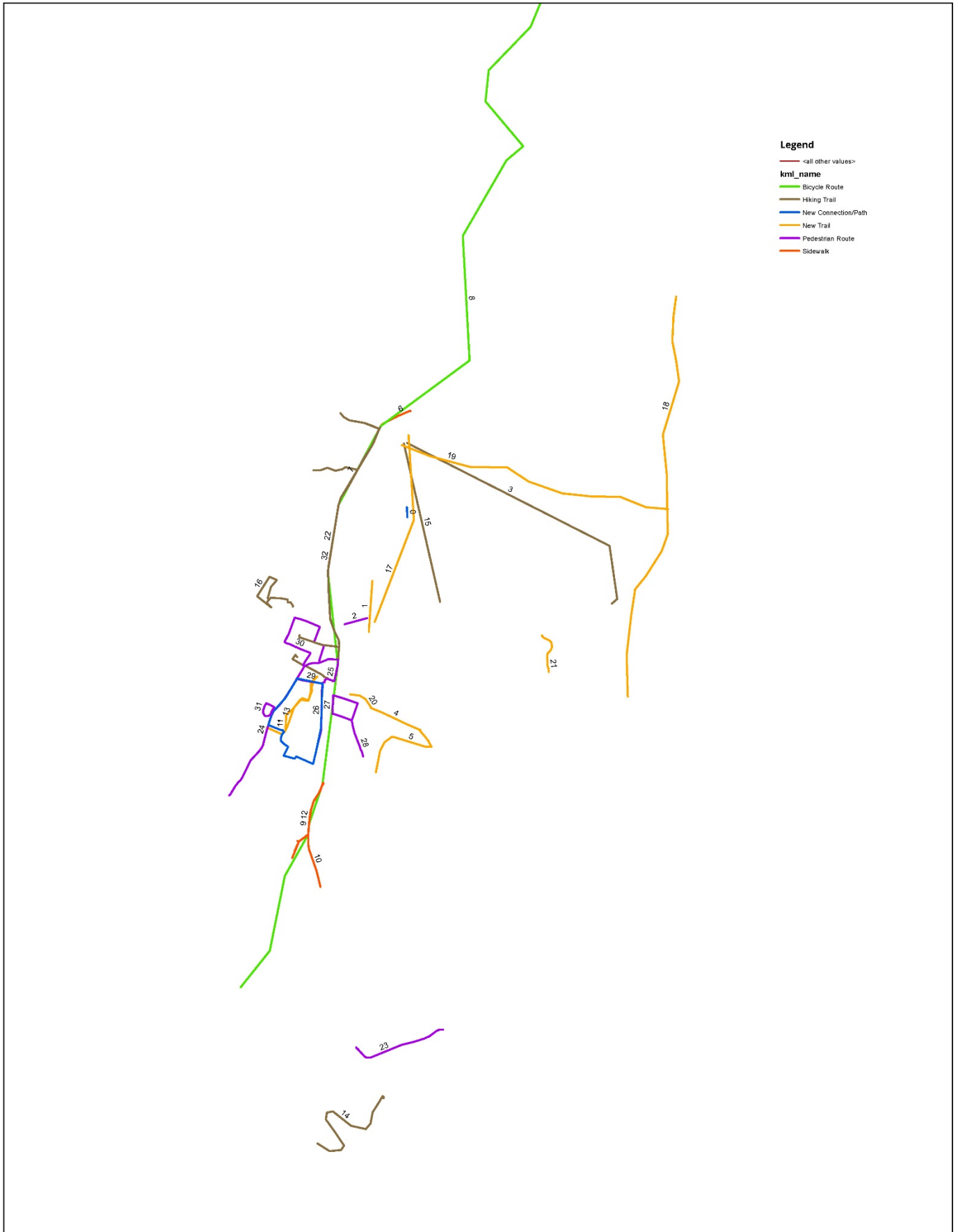
Comment Box:

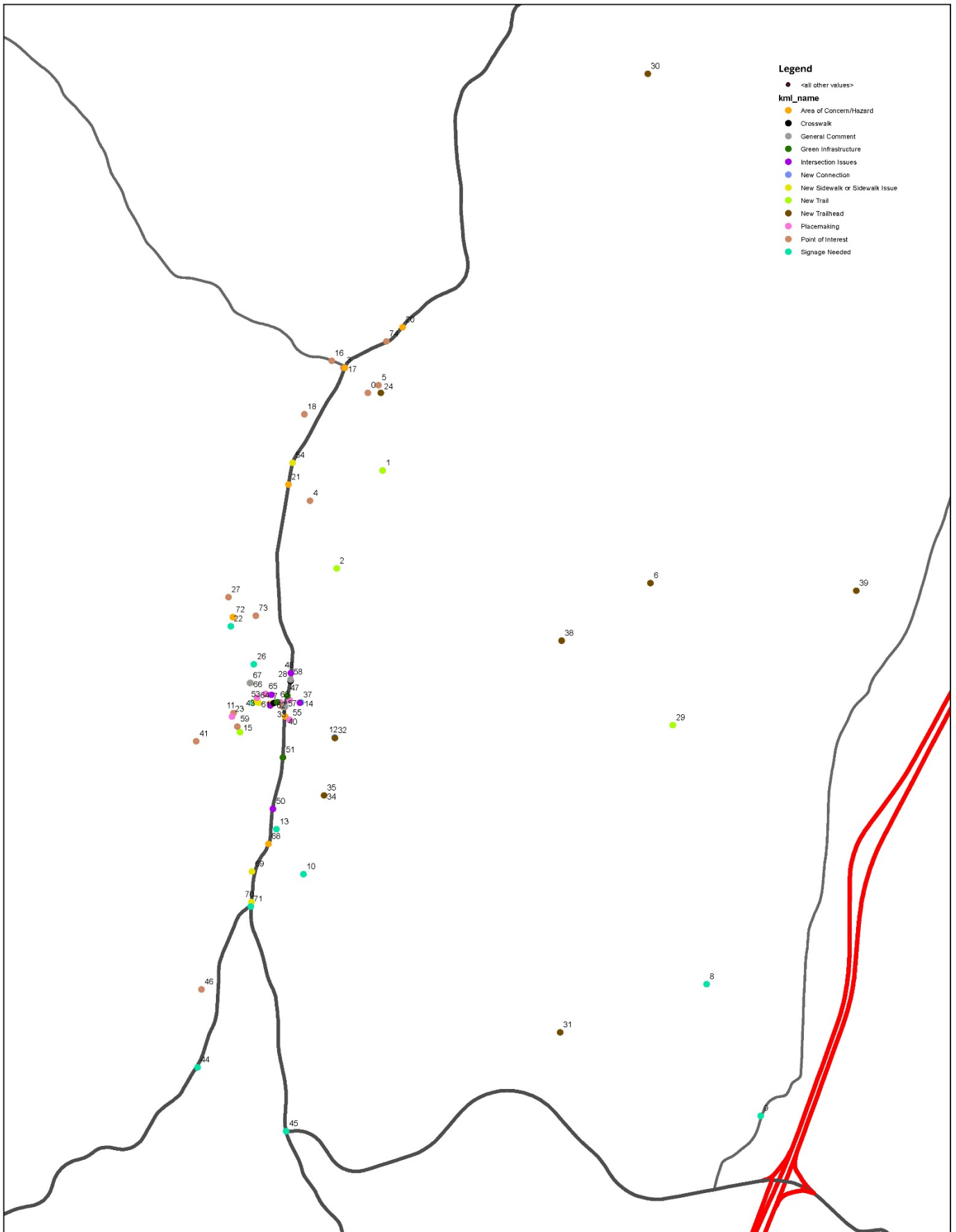
- Multi-use bike trail from Water Street Park to the falls. I'm afraid of cars there aren't enough sidewalks.
- Safety for bikes on 12 going north and south—road widened to make adequate space
- Sidewalks on route 12, wear bright clothes people in road
- There is no parking to walk through covered bridges
- Any bike trail anywhere
- NU maintains sidewalks well in winter, Town could do better in winter
- No sidewalks from the crescent to 12a intersection, NU students walk here
- Possible easier incline walking path from senior center/wall street to post office.
- Central street up to right of way into Methodist church, around north side of church to sidewalk
- Look into invasive species – Japanese knotweed along river (control/eradicate)
- Cigarette box and sign are a good idea

Wikimap Results

108 people left points or routes on the Wikimap. These results included information about routes they would like to see formalized or made safer, as well as points of interest or concern.







ID	Type	Category	Initial Comment	Comment
1 point	Point of Interest	Point of Interest	Promise Community Playground	
2 point	New Trail	New Trail	Bike path connector trail	I Agree. Definitely! This is an integral piece for a safe walking/biking route from the Falls to Memorial Park to Depot Square.
3 point	New Trail	New Trail	Path from Darn Tough factory to Memorial Park	I Agree. Also, connect Doyon Road to Davis Ave.
4 point	Point of Interest	Point of Interest	Falls General Store and Falls Yoga Studio	
5 point	Point of Interest	Point of Interest	Doyon Soccer Fields	
6 point	Point of Interest	Point of Interest	Soccer and baseball fields	
7 point	New Trailhead	New Trailhead		
8 point	Area of Concern/Hazard	Area of Concern/Hazard	no sidewalk/crosswalk to continue from village common down wall street	I Agree. A walk or bike path here would be highly desirable.
9 point	Area of Concern/Hazard	Area of Concern/Hazard	no sidewalk/crosswalk to continue from village common down wall street	A walk or bike path would be desirable because it would be much safer.
10 point	Signage Needed	Signage Needed	no signage to indicate trail access	I Agree
11 point	Signage Needed	Signage Needed	no signage to indicate trail access	
12 point	Signage Needed	Signage Needed	suggestion for more signage on trail systems, maps along the trail, or intersection signs that indicate most direct routes to summit/back to shaw center.	I Agree!
13 point	Signage Needed	Signage Needed	suggestion for more signage on trail systems, maps along the trail, or intersection signs that indicate most direct routes to summit/back to shaw center.	I Agree Community Herb Garden idea for "Quick Build" grant. Initiating walking to get fresh herbs and more draw to shared green space. Encourage with farmers market and schools for educational purposes.
14 point	Point of Interest	Point of Interest	Playground/Gazebo/Picnic Area	I Agree
15 point	New Connection	New Connection	access to trails from slate ave/signage needed	I Agree! Trail Maps or Kiosk need as well. Another option for the "Quick Build" grant.
16 point	Signage Needed	Signage Needed	more signage needed in town to draw attention to trail access points	I Agree. I think there's a sign but it's not easy to see.
17 point	Signage Needed	Signage Needed	signage needed to indicate direction to park, pool, ballfields, etc.	
18 point	New Trail	New Trail	With landowner permission, create a walking trail along the east side of the Dog River from Wall St, south on Freightyard Way to rugby field footbridge. This will create a walkable loop across the rugby field to Water St. extension, then north to the Dog River Park and a return to Wall Street. Start and stop points may begin at Depot Square. This could be a simple, enjoyable walk starting or ending at a Depot Square eatery. Trail development would be very easy because there is a utility trail following the power lines along the east side of the river. The only section for improvement would be where the trail crosses a stream just south of Northfield Wood Products.	
19 point	Point of Interest	Point of Interest	Covered bridge and access point to swimming hole.	I Agree. A better crosswalk option out from the store towards the post office and green spaces would be much improved.
20 point	Area of Concern/Hazard	Area of Concern/Hazard	Walking is incredibly dangerous in the Falls. There's no room for pedestrians and drivers act like they don't need to share the road.	I Agree
21 point	Point of Interest	Point of Interest	Swimming Hole	
22 point	Point of Interest	Point of Interest	Scragg Mountain trailhead. Great hiking route! Scragg Mountain offers the best views for hiking in Northfield.	I Agree
23 point	Point of Interest	Point of Interest	Scragg Mountain trailhead. Great hiking route! Scragg Mountain offers the best views for hiking in Northfield.	On private land. Not clear to public whether they are welcome to use this trail or not.
24 point	Area of Concern/Hazard	Area of Concern/Hazard	Speed limit increase from 35-50 immediately before a blind drive with no breakdown lane, and poor retaining wall. Pinch point for motorists and everyone else (e.g., cyclists, runners, walkers, fisherman). Speed limit should be reduced, and breakdown lane added for vehicle and bicycle commuter safety.	I Agree!
25 point	Area of Concern/Hazard	Area of Concern/Hazard	Speed limit increase from 35-50 immediately before a blind drive with no breakdown lane, and poor retaining wall. Pinch point for motorists and everyone else (e.g., cyclists, runners, walkers, fisherman). Speed limit should be reduced, and breakdown lane added for vehicle and bicycle commuter safety.	I Agree, The speed limit should not go up to 50 until after Ellie's
26 point	Area of Concern/Hazard	Area of Concern/Hazard	Very dangerous "pinch point" for walking or biking to get to tops from the Falls.	

27 point	Signage Needed	Safe walking routes to schools. Suggestion for "Quick Build" grant. Community Herb Garden idea for "Quick Build" grant. Initiating walking to get fresh herbs and more draw to shared green space. Encourage with farmers market and schools for educational purposes.	
28 point	Placemaking		
29 point	New Trailhead	Trail Head to link the Falls with Paine Mountain Trail system.	I Agree
30 point	Signage Needed	Crosswalk signs needed at crosswalk	
31 point	Signage Needed	Stop sign needed at School & Pearl	
32 point	Point of Interest	NMHS disc golf course	
33 point	Crosswalk	Many People cross between the DG and Champlain Farms	
34 point	New Trail	Create official trail from Paine Summit to Irish Hill	
35 point	New Trailhead	Darling Road/Irish Hill West access	
36 point	New Trailhead	Kingston Road trail access. Lots of trails here not indicated on map.	
37 point	New Trailhead	Slate Avenue trail head	
38 point	Point of Interest	Use treehouse as community trail engagement area with maps/scavenger hunt/info on outdoor gear lending library	
39 point	General Comment	Need parking for Byam Hill access to town forest	
40 point	New Trailhead	New Paine Mountain Trail trailhead	
41 point	Placemaking	Placemaking event to celebrate Northfield's "hip" arts/food/culture district	I Agree
42 point	Intersection Issues	Improvements needed for pedestrian safety at intersection	
43 point	New Trailhead	New limited trailhead at existing gate	
44 point	New Trailhead	Inquire about parking/access to Paine Mountain from East using private trails. Also, good connector to Onion River Rd and MAMBA trails.	
45 point	Area of Concern/Hazard	There should be a crosswalk in front of the post office (or closer to the library). I understand the sight line issues for autos, but people do cross from library/post office to United Church/apartment houses very frequently, and it is dangerous!	
46 point	Point of Interest	Mayo Healthcare	
47 point	Area of Concern/Hazard	While some cars yield to pedestrians in the crosswalk, I have often encountered cars going too fast or those unwilling to stop. It would be great to have a sidewalk that extends all the way down Wall street instead of simply starting at the bridge. I walk from the parking next to the car wash towards the Town Common and frequently encounter cars who do not seem to notice the pedestrian traffic.	
48 point	New Sidewalk or Sidewalk Issue		
49 point	Signage Needed	This intersection is a critical information opportunity in the winter. There is a large amount of ski traffic that gets off of I-89 and turns south here to go to Sugarbush/Mad River Valley. Traffic also tends to return this way rather than going downtown. Could we have signage to direct people to the downtown to advertise businesses? We have great reasons for people to stop downtown before getting on the highway to go home after skiing	
50 point	Signage Needed	Opportunity for signage - to get ski traffic to head downtown rather than take Lovers Lane to the Mad River Valley	
51 point	Point of Interest	Lovely Town-owned well-field. Could it be used in the winter for (groomed?!) cross country ski trails?	
52 point	Green Infrastructure	Lets add street trees along this main street corridor!	
53 point	Intersection Issues	The road is too wide here. The crosswalk is in a tricky spot as people drive down the hill.	
54 point	Intersection Issues	Re-route path and stop RR crossings here - OR make it an official pedestrian crossing with formal pedestrian train warnings and safety systems.	
55 point	Intersection Issues	Terrible intersection. Sidewalk on east side ends and there is no crosswalk for students to get from east to west unless they walk over the grass/cross Crescent Ave to get down to ID White Drive	

56 point	Green Infrastructure	Main street is lovely to drive though, but not great to walk on - the building infrastructure is nice, but the road is noisy and it feels like pedestrians are on -show for cars. Add a buffer and street trees to define and separate the pedestrian and vehicular spaces here.
57 point	Placemaking	The Common is the heart of Northfield. Let's consider redesigning it and making it work for Northfield in the 21st Century. We can honor history and tradition while making a nicer park. Current park is lovely in concept but is in need of maintenance and infrastructural upgrades.
58 point	New Sidewalk or Sidewalk Issue	Let's connect the sidewalks here! We need accessible sidewalks to connect the Water Street community and the senior population to downtown Northfield
59 point	New Sidewalk or Sidewalk Issue	We need a sidewalk here to connect to the downtown sidewalks. Very unsafe place to walk for pedestrians. This should be high priority.
60 point	Placemaking	Treehouse - opportunity for placemaking and community gathering
61 point	Point of Interest	Lovely united church lawn. Could we incorporate the hill and Common into a larger central park space?
62 point	General Comment	Let's get more, comfortable and modern benches around town and along sidewalks. We need a consistent street furniture language
63 point	General Comment	Poor pedestrian lighting along most of Main Street. We need better lighting at night and not just vehicular-scaled lights
64 point	Point of Interest	Nice spot to access the river
65 point	Intersection Issues	Dangerous intersection - only for cars - we need a pedestrian-scale intersection here.
66 point	Crosswalk	We need a crosswalk here
67 point	Crosswalk	We need a crosswalk here - perhaps squeeze the vehicular lane around the Common?
68 point	Green Infrastructure	Opportunity for stormwater management! Rain gardens! Etc.
69 point	Placemaking	Nice opportunity for benches and a park space
70 point	Placemaking	Open space owned by town/senior housing
71 point	Point of Interest	Nice bridge. Community-known spot. Can feed the ducks from here.
72 point	General Comment	Improved access to river needed. Currently a steep, un-maintained footpath
73 point	Area of Concern/Hazard	Really need a sidewalk here for community connectivity and NU students & staff safety
74 point	New Sidewalk or Sidewalk Issue	Sweet new Gold Star Memorial. Needs ADA sidewalks for access.
75 point	New Sidewalk or Sidewalk Issue	A sidewalk here would be nice. Old photos may show that one used to be here.
76 point	Signage Needed	Opportunity for signage to get people to visit the downtown shops
77 point	Area of Concern/Hazard	Difficult intersection at school. Lots of moving parts at drop-off and pick-up. Not enough parking - more streetside parking would be all that is really needed (wider buffers?)
78 point	Point of Interest	We have nice cemeteries in town. Perhaps we could make better use of these as contemplative public spaces or destinations to walk through?
79 point	Point of Interest	Welcome to Northfield sign is here. Would love a safe sidewalk to the FGS and Post Office.

ID	Type	Category	Initial Comment
1 line	New Connection/Path		Connecting Davis Road to Doyon Rd for bike route off Rt. 12
2 line	New Trail		soccer and baseball fields adjacent to volleyball fields
3 line	Pedestrian Route		Connecting the Falls to the schools and town center with Memorial Park
4 line	Hiking Trail		
5 line	New Trail		
6 line	New Trail		
7 line	Sidewalk		A safe walking path is needed in the Falls, especially for children that have to walk to a bus stop.
8 line	Sidewalk		
9 line	Bicycle Route		A safe biking route is needed for bicycling commuters. This route would improve safety and increase home and real estate value along sidestreets.
10 line	Sidewalk		
11 line	Sidewalk		A sidewalk extending along Route 12A and Route 12 south would decrease the need to drive to trailheads or or downtown. This route would be easy to create. The primary length of it would simply require bush hog maintenance.
12 line	New Trail		
13 line	Sidewalk		This section of 12 South and 12A is currently dangerous for cyclists and pedestrians. The 12A section of sidewalk would ensure safe entry to 12A, which is commonly used for biking and running.
14 line	New Trail		With landowner permission, create a walking trail along the east side of the Dog River from Wall St, south on Freightyard Way to rugby field footbridge. This will create a walkable loop across the rugby field to Water St. extension, then north to the Dog River Park and a return to Wall Street. Start and stop points may begin at Depot Square. This could be a simple, enjoyable walk starting or ending at a Depot Square eatery. Trail development would be very easy because there is a utility trail following the power lines along the east side of the river. The only section for improvement would be where the trail crosses a stream just south of Northfield Wood Products. This is a challenging, steep grade hike. It's nice for backcountry downhill skiing/snowboarding in the winter. Roughly 850 feet vertical rise with the steepest slope in the area. I think, back in the 1950s, there was a Northfield Outdoor Club which proposed a ski trail here.
15 line	Hiking Trail		
16 line	Hiking Trail		Hiking trail from Promise Community Playground to Turkey Hill Road. Eventually this can lead to TH on Turkey Hill. This Hiking trail would like the Falls to Paine Mountain trail system.
17 line	Hiking Trail		Rough estimate of trails from Garvey Hill Trail Head

18 line	New Trail	Path connecting the Falls Playground to Memorial Park
19 line	New Trail	Ridge Trail multi-use, multi-season, utilize established informal trail
20 line	New Trail	New trail to connect The Falls to the Ridge Trail
21 line	New Trail	Find route to connect existing trail to downtown businesses/parking
22 line	New Trail	Link Forest Road to Butternut Junction/Paine Mountain Trail
23 line	Hiking Trail	Walking trail Lovely road to walk on. Could we continue a route up Mill Hill Road? I think this old road is closed off to cars.
24 line	Pedestrian Route	Lovely, flat walk near the river, park, wetlands and fields
25 line	Pedestrian Route	Nice, flat walk. The more unpleasant part of the experience is the stretch along Main Street. Needs street trees & pedestrian amenities
26 line	Pedestrian Route	Nice road to walk on
27 line	Pedestrian Route	Nice route near old lovely homes
28 line	Pedestrian Route	Steep, but nice walk up to Cheney Field. Can choose to go right to the field or through slate quarry area.
29 line	Pedestrian Route	Nice route, varying terrain. Would be nice to know if Norwich minds if the public walks through here to make a loop
30 line	New Connection/Path	Nice walk through neighborhood
31 line	Pedestrian Route	Nice ADA walking path around Mayo Healthcare for residents
32 line	Pedestrian Route	Add hiking or sidewalks to Falls, no sidewalks or bike path from gas station to falls. Very dangerous year-round with traffic.
33 line	Hiking Trail	

PHASE 2 COMMUNITY ENGAGEMENT SUMMARY

This document presents the results of the second phase of public engagement— a Virtual and “in person” Walking Tour. The walking tour was available from Monday June 22 to Monday July 6 and the virtual tour was available from Monday June 22 to July 31. Both versions of the tour presented draft connectivity concepts as well as character imagery of concept elements. Respondents were asked to provide feedback on the concepts and share anything they particularly liked or were concerned about. Respondents were also asked to prioritize different streetscape components (bike infrastructure, pedestrian infrastructure, public gathering spaces, etc.) at each tour location. The survey received 70 total responses as of 7/27/2020.

JUNE WALKING TOUR – KEY TAKEAWAYS

Stormwater

- A combination of subsurface chamber infiltration and open bio-retention areas are favored as they can provide adequate mitigation capacity while also providing aesthetic and ecological benefits.

Dog River Park

- Respondents liked the idea of an off-road path around Dog River park as it may bring more people to the area and create a more welcoming riverfront environment.
- Sidewalks and accessibility to parks will enhance the area for all users
- A combination of wayfinding and interpretive signage is important in this area to direct community members to the park and to tell the parks unique flood mitigation and adaptation story

Shaw Center and Northfield Town Forest

- Off-road path from Falls to Memorial Park and Town Forest trail system with kiosk at New Promise Community Park
- Improve the on-trail experience with landmark signage (i.e. 4 miles to Shaw Center or 1.2 miles to Northfield Falls) benches and resting points
- Improve the trailhead experience with trailhead signage (management and wayfinding information) and public facilities (bathroom, changing area, water)
- Parking (expand current lots/ take advantage of existing lots and add signs)
- Steep access points are deterring users
- Consider co-management by Town and Norwich

Falls General Store

- Improvements around Falls General Store (crosswalks, sidewalks, signage) are high priority but there may already be space and parking issues
- New Promise Community Park is a great opportunity to utilize existing parking and space
- River access would require sustainable trail building and erosion control strategies
- Capitalize on covered bridges
- Look to expand trails to surrounding towns

East Street

- Create a linger-friendly downtown: outdoor dining, bike racks, benches, planters, lighting
- Formalized river access south of Dollar General
- Covered outdoor space on Common could provide space for gatherings, concerts
- Public art opportunities

Central Street

- Traffic speeds are perceived as an issues here, streetscape improvements can help slow traffic
- Questions on bike lane use by community/students

Wall Street

- Benches and pocket park close to senior center would help activate the area. Need to include senior center in this conversation.
- Public art opportunities and spaces in this area would help draw residents to the area and extend the family-friendly and whimsical nature of Dog River Park

JUNE WALKING TOUR RESULTS

Stormwater Comments

- I am placing comments about Storm Drainage around Site 1 on this page as there wasn't a link attached at that point. The force of water that comes down from the mountain during a heavy rain is tremendous, and it carries lots of debris including good sized rocks on occasion. Slate, Elm and Prospect Street, combine with the streets above to create a giant water slide park - lots of solid downhill pavement. Bio-retention appeals to me as a mitigation strategy for this situation. I don't know where or how these could be created in the three-street area and above, but it seems like the best solution. The plantings keep the area confined to its task and provide a safe resting spot for wildlife. Like the rest of our natural environment, they provide beauty and make life better.
- I have already completed the survey but am adding comments about the storm drain issues that end up at the Library which I added to this same section in my previous survey. I favored the open bio-retention ideas for the area and I still do. However, I have just finished walking the area in a downpour and have reconsidered. Perhaps a combination of bio-retention and subsurface is needed to mitigate the quantity of water that rushes down the streets. Green swales, orange pipes - maybe we need both.
- There is a need for improved storm water infrastructure on the east side of S Main. The Brown Public Library station offers three models for water retention. Of the three, I heavily prefer the Open Bioretention option. I question the safety and durability of the Timber Crib Retention system - if the current Central Street structure is a good example. I'm concerned about the safety of young children around the structure, don't find the structure attractive, and don't like the trash and odors that can gather there. A well-landscaped open bioretention system seems like a better alternative.
- The storm water collects on the west side of Central Street and causes a pedestrian to walk in the street around several driveways if not wearing muck boots. The present stormwater mitigation beside the old Town Hall doesn't seem to help with that issue.
- The plantings beside the present stormwater installation make it look nice, but there have been a number of times when standing water has been present for longer than seems right, and I have been concerned about mosquitos breeding or a kid falling into the structure.
- I fear that the underground mitigation strategies will be susceptible to clogging and breakage and will require periodic digging for repair which is disruptive and damaging to everything around it. "Out of sight, out of mind" probably won't fix the issue. I don't see the timber crib retention as particularly resident friendly. They seem awkward to fit into a small residential area.

I find that I try not to look at the one on Central Street for fear of seeing a drowned animal or swarming mosquitoes. I can see how they would work well in a more industrial setting, but my up-close experience has not been positive.

Dog River Park

What do you like most about the ideas presented?

- I like the idea of having an off-road path loop by the river with river access. I think that would invite more people to recreate there and incentive to walk/ride there. I like the idea of creating more off road multi use paths in general in our town and creating a more bike friendly town in general. I love the idea of being able to use the off-road path from the Falls and link up to Dog River Park and vice versa. I think sidewalk and crosswalk improvements would be important for water street and from the schools make sense too.
- pedestrian improvements, loop to NU and schools
- I like the proposed opportunities for off-road paths to connect the Park to the village center, and to make the river more accessible. There is also a need for improved sidewalks.
- trying to connect park with route to/from school and university
- Connections! Creating walking loops. Improving the walk ability to Dog River Park from schools.
- I am most excited about improved sidewalks and access to the park for those who would need to use walkers or wheeled devices. I already visit the park frequently and can walk down to the river easily, but I would love for everyone to have access. These improvements would in no way diminish the natural beauty of the park.
- I am also delighted by the idea of an off-road path close to the river.
- The improvements thus far have combined bits of human art and whimsy with the natural river, tree and wildflower environment and it is wonderful.
- The off-road paths are really awesome. Both to memorial park and one to Dog River Park. People love walking loops. These routes would give more options for creating pleasant and safe walking routes through town.
- River access is also a high priority and is a destination for walkers and bikers.
- Safe routes to school are very important. A significant number of kids walk/bike to and from school.
- Pedestrian connections!
- The path from Wall Street and the path to school

What would improve these ideas?

- skateboard park
- There should also be signage to direct people to the park and to welcome people there, direct them to the river, etc.
- Signage that showed topography and names of hills/ mountains in the background beyond river.
- Make sure to include a route to Norwich from Dog River Park.
- Bike lanes
- A bench by the river makes sense here as does a bike rack.
- Add a bridge at dog river park.
- Add a mural spot on the abandon mill/factory

What concerns do you have about these ideas?

- town willingness to take on maintenance
- None. I like them all.

Comments

- High priority would be creating an off-road path loop around Dog River Park, maybe that is included in improving pedestrian flow? I also think again making it more bike friendly will link our villages and create more opportunities. Having outdoor public spaces and outdoor dining are also important factors to draw in amenities and boost economy.
- I think that Dog River Park is one of the most beautiful flood mitigation projects I have ever seen.

Shaw Center and Northfield Town Forest

What do you like most about the ideas presented?

- I would absolutely love to see an off-road path from the Falls that can link up to Memorial Park and the Town Forest and Paine Mountain trail system. There is parking available at the baseball fields and the New Promise Community Park and a Kiosk there or way finding signage makes sense as does sharing information at the Falls General Store and Village Center. This would be one good way to use existing parking to link up to the recreation areas and trail systems. If we continue to make recreation areas and trails more accessible via walking or bike from villages then that would eliminate the need for more parking.
- Improved signage
- I like the idea of signage and tackling the parking situation. Seating areas would greatly enhance this area.
- multi-use off-road path connecting Norwich, Depot Sq. and Northfield Falls would truly unite the three communities and encourage use/visits to all three.
- Individual trail signage has improved recently but could be improved, e.g. by delineating connecting points and distances, creation of new paths/connectors.
- I like the ideas for formal trailheads and signage to highlight these trails and encourage their use. Improving accessibility to the trails, more than just from the Shaw Center will allow more people to get to them by walking from the village. I like the ideas for signs that provide mileage and direct people to specific landmarks (Cheney field, Paine Mtn summit, back to Shaw Center or other connecting roads, etc.). These would be much more helpful than trail names or color-coded trails.
- Off trail connections and the potential for upgrading the trailheads.
- I would love to see increased access to the Cheney Meadow and Town Forest. I love walking up there, but the most strenuous part of the walk is getting up to the trail head. There is no parking at the top and walking from South Main Street to the entrance saps the energy that could be used by a moderate walker to enjoy the trails above.
- Improved guide maps and signage with distances and a clue to elevation changes would help a walker choose the most appropriate trails.
- Trailhead at Byam and/or more parking and signage at Shaw Center.
- Off road path!!
- Better signage.
- Signage to encourage responsible use. Off road connections.
- I am excited about the off-road trails from the village and the falls to the trails on Paine Mountain.
- Trail signage and trail information at Shaw

What would improve these ideas?

- I wonder what the general store thinks about having a kiosk on their property as parking can sometimes be an issue there and I would think a Kiosk and parking go hand in hand. I think if we are encouraging more cyclists to use the trails from the Promise Community Park and make it more walk/bike friendly to the access the General Store and swimming holes it would be better

than adding or encouraging more parking near the store in terms of stormwater and river health. I also wonder if also using existing parking at the university and having way finding signage and better accessibility to the Town Forest trails and Norwich trails would also be good. So, improving crosswalks and having bike lanes from Norwich. I currently don't have any problem parking at the Shaw Center and sometimes park at the Health Center but rarely need to. There are occasions I wish I had easy access to the Town Forest trails so a way finding sign or kiosk and limited parking at Bigham Rd. may be advantageous.

- Someplace to change out of riding clothes would be nice.
- I think a clear entrance with the rules especially regarding dogs and signs marking the start of the trails.
- The walking and biking options afforded by the mountains/forests could be a major draw to visitors and new residents. The recreational options need to be well advertised and expanded, e.g., nature hikes for families, a range of winter targeted at different groups.
- It would be nice to have public facilities at the Shaw Center that are accessible (water, toilets) and seating areas for resting, congregating.
- It would be wonderful for the town and the Shaw Center to work together to manage these parcels and develop signage and maps together.
- Art on the trails. More events like story walks.
- Trailhead at Slate Ave as well.
- Picnic tables and/or benches at Shaw Center or up in Cheney.
- Beginners mtn bike loop (like Tootsie Roll in Warren)- perhaps starting from new trailhead at Cheney. Also, could be used in winter for xc-skiing/snowshoe
- Making it happen sooner than later.
- I think it would be best to make one formalized trailhead and kiosk at Shaw Center (rather than multiple trailhead entry points) as it has paved access and already established parking that can be expanded without impeding on the privacy of surrounding residents.

What concerns do you have about these ideas?

- There are many bikers the park at Shaw Center and I wonder how many would opt to park from the Falls instead?
- I wouldn't want more than one or two parking spots up at Bingham Rd.
- Increase in traffic from inexperienced mountain bikers
- I live on winter street that dead ends onto a small path with a bridge that crosses the creek right next to the Shaw center. People frequently walk or bike by our house to use the trail. The path is very steep, and I find that it is a little dangerous going through that way and would love it if there were steps or handrails to help use that path.
- Parking is a compelling need for town forest access, but many hurdles exist to doing this.
- Although I would love to be able to park near a trail head, I am concerned that it would be an issue for those living in the proximity. A limited number of spaces might work, or perhaps someone might like to run a shuttle service to the trail head.
- None
- Why Byam? We are concerned about a formalized trail head at Byam Hill as there is no parking and no area for parking that wouldn't impede on the surrounding residents. There is already issues with parking as is and there has been issues for years which is why it needs to be made clearer that the trailhead is at Shaw. Still, Byam and Shaw would be two trailheads close together. Why not consider two trailheads (if there needs to be two trailheads) further apart such as Turkey Hill (for access to town forest) or off Rt. 64 to the red trail?

Comments

- Connecting up to the Shaw Center via off road path from the falls takes priority. Creating bike friendly town to link villages. Kiosk at New Promise Community Playground. Creating safer

crossing from Norwich and using existing parking lots. Trail heads and wayfinding at Shaw Center and Bingham Rd.

- These questions don't seem as relevant to the proposed opportunities here.
- Thanks!
- These multiple-choice questions don't align well with every station. Too bad they didn't change with the category you chose. Outdoor dining and Shaw Outdoor center don't have a connection.

Falls General Store

What do you like most about the ideas presented?

- I love the outdoor dining area at the Falls General Store with bike racks and the idea of a trail to slaughterhouse bridge which I think would highlight the many amazing swimming holes in the area. Stormwater infrastructure would be important in this case. A Kiosk drawing people here (as opposed to my suggestion to have it at New Promise Community Park at the start of the off road path to TC and Trails) would also make sense because it is centrally located to the swimming holes as well as to possible off road trails to Town Center and Paine mountain trails. Sidewalk and crosswalk improvements are very much needed in this area to make it more walkable. I am definitely a proponent of having a sidewalk start from the welcome to Northfield sign all the way to where you have marked on the picture. However, having clearly defined sidewalk around the Falls General Store and a crosswalk on Gould rd. would take priority. It would also be nice for a sidewalk to the post office.
- All of the ideas presented would be useful and generate more interest and income. The off-road options would, hopefully, be a real draw for visitors and residents. Signage, seating, kiosks etc. would make the area more of a stop-and-enjoy experience than a quick drive-through.
- I like the ideas for outdoor seating and the walking path to make the general store and covered bridge more of a destination and a place to meet, sit and enjoy lunch, etc.
- The Kiosk and a connection from Falls to Common.
- I like the emphasis on safe pedestrian walking and crossing to access a great village area. Increased safe parking or pedestrian access from Northfield Village would be such a draw to stopping at the store and visiting the covered bridges. I would love to be able to use an off-road path for walking near the river. The green erosion control would make it more likely that the pedestrian improvements withstand our tricky weather.
- Safe walkways to Northfield village and crosswalk are a fantastic idea
- Improved crossing of Rt 12
- Making it walkable for local residents
- Improved info/kiosk/seating area by bridges
- Off road path, picnic area, crosswalk
- I'm excited about sidewalks but mostly about the trailhead.

What would improve these ideas?

- We'd love to be able to ride bikes to the swimming holes. We usually walk from the welcome sign or come from Gould rd. as it is slightly safer route than biking on 12. I think giving priority to bike lanes would be appreciated especially from the baseball fields and New Promise Community Park if that might also be a possible place and central location for a Kiosk/parking and start to off road path leading to Town Center and Town Forest/Norwich Trails. Would bike lanes on Cox Brook Rd. slow traffic because traffic speed can also be an issue on that road.
- Is there anything that could be done to capitalize more on the presence of the covered bridges?
- Fast traffic is a huge issue there. Even though the speed is posted, there are still drivers who maintain the 50 mph. Perhaps a large "You are entering a village - slow down to 35!" sign would help.
- Wayfinding to the new promise community playground.

- Trails up to ridgeline and over to Berlin from Falls.
- Easier access to swimming areas near bridges.
- River access wherever possible.
- If the sidewalks could go from Tops to the Falls General store that would be great. Then kids can walk to school.
- Wouldn't having a grander gateway entrance near the welcome to Northfield sign slow traffic both for the general store and pedestrians/bikers? I feel like that would help solidify sense of arrival, linking the Villages instead of making the gateway closer to Town Center. Also, stormwater issues could be addressing from the welcome sign to the general store and at the general store itself highlighting how amazing our town is with stormwater mitigation. Traffic speed can also be an issue on Cox Brook Rd, would bike lanes on Cox Brook Rd. also slow traffic? Bench at bus stop across from the store. Bike rack at store and Slaughterhouse Bridge.

What concerns do you have about these ideas?

- Would the trail to Slaughterhouse Bridge be on someone's property? I followed the Horse lane rd. and it ended as a driveway to someone's house. Would we also need to get permissions for the off-road path from the Falls to Town Center and to the trail systems?
- Is there a need for more designated parking for folks who want to linger, make use of the walking paths, etc.
- Everyone says better sidewalks or an off-road connection Falls to Common is impossible
- I didn't think there was a way to make a path without going through multiple private properties. I hope I am wrong.
- I think you are trying to do too much. There is already a problem at the falls with people parking in the home-owner's driveway next to the 3rd bridge and leaving dog poop in their lawn. The area at the FGS has room for only the two tables that are there. The beaches underneath the bridge also often have trash and dog poop.

Comments

- I feel like I'm just reaching clarity on priorities in this area and may need to consider it again at a later date. I think having the off-road path (biking) to get from the Falls (New Promise Community) to Town Center and to the trail systems is a top priority. I feel like having a Kiosk at the New Promise Community Park highlighting all the routes would be good because there is already enough parking there for out of town visitors. Bike lanes that go from there to also the Fall General Store with outdoor seating, stormwater infrastructure, bike racks and another way finding sign about the covered bridges and off-road path to Slaughterhouse bridge would be ideal. Secondly, I thought it a little selfish at first (because I live right at the welcome sign), but I do think creating a sense of arrival would help slow traffic and link villages. I feel like linking our villages in this bike friendly way will be a really positive step for the future of Northfield and our economy.
- Thanks!
- Thank you, love the ideas!
- The path seems to be the easiest to prioritize if you have permission from landowners as it could be a dirt path and there would not be the large cost element.

East Street

What do you like most about the ideas presented?

- In the picture, I really like the off-road path that connects downtown to the Falls and community parks. I also really like the seasonal outdoor dining with bike racks and benches as I think that would help revitalize downtown. I think a path leading down to the river with benches is also a great idea (almost as much as outdoor dining). I personally would like to picnic by a river close

to downtown. I think that would be a great option for visitors. I'm having a hard time visualizing where that path would be exactly. Finally, I like the gateway and signage to enhance arrival and slow traffic and better sidewalks where needed.

- pedestrian and bicycle friendly infrastructure should be prioritized because it is a safety issue. Route 12 through town feels dangerous. The suggestion to create multi use paths that circumvent route 12 is a good idea. These improvements will attract new business downtown as people come to Northfield for mountain biking and cycling.
- Making East St and the surrounding area a place that's comfortable not just to visit, but to linger. Outdoor tables and benches, planters, signage, etc. will make the locale more attractive.
- The outdoor pedestrian and seating. With more green space.
- The proposed outdoor dining space is a great opportunity for the businesses here and the temporary set-up for the covid-19 response has already been shown to be successful just in a short period of time. This should be carried on into the future.
- All would make this area more welcoming and be good for businesses.
- East Street has an interesting, more intimate look than the rest of the village and the ideas that enhance the walking, biking, stopping and dining don't detract from that at all. They make it more welcoming and make the walk to Memorial Park safer and more enjoyable. The outside dining is very appealing and lights up that side of the street which sometimes seems to live in the shadow of the Mayo building.
- refining the area to be more inviting & attractive
- enhanced pride for our community
- The idea of a parklet or permanent outdoor seating on East Street and the trail connecting the current trail network to Memorial Park and beyond.
- River access, off road trail and outdoor dining.
- I love them all especially the outdoor dining! I also think bike parking would be great, and I would love to see trails/seating down by the river along with the connector to Northfield Falls.

What would improve these ideas?

- Where would the path to the river start? Are there also good sidewalks leading there. Would parking then be relocated to make room for outdoor dining? A kiosk at East street showcasing trail options.
- A gazebo on the common that could be used for seasonal concerts and events.
- Direct access to East Street from walking trails.
- Development of seasonal events/activities that would make the area attractive for all seasons.
- If traffic from king street and turkey hill road were rerouted behind the Northfield Savings Bank and came out between the bank and Town offices, to give more space to a pedestrian zone, outdoor seating, and green space.
- The Town's Area wide plan provided a beautiful vision for this street which included lighting, trees, outdoor dining, and still retained some parallel parking rather than the existing diagonal parking spots.
- Adding additional parking for these businesses. Getting rid of dirt parking lot at end of East St.
- It is hard to imagine activity during these pandemic times, but a continued community commitment to patronize local establishments would help. Also, a positive and clear expression of expectations for residents, visitors and students could keep these enhancements enjoyable for a reasonable amount of time.
- can traffic be routed behind the bank opening up the entire street as a pedestrian only street?
- Adding public art on buildings or on the bridge or Common.
- More plantings and street trees.
- Add a couple playful features to include kids.
- A space for rotating community art or citizen display area.

- Currently there is temporary outdoor seating. It would be great to make this permanent and fully integrate it with the bike racks & benches to be added.

What concerns do you have about these ideas?

- Access with making an off-road path. Costs involved in sidewalks and gateway signage.
- Outdoor dining will subtract parking spaces from downtown, making the downtown area a less desirable to be. Plus, it rains and snows so much that outdoor seating isn't useful most of the year. For this reason, outdoor dining should be a low priority.
- That traffic from King Street and Turkey Hill will detract from any idea unless rerouted.
- None, there is plenty of parking in the downtown to allow outdoor dining on East Street and this will greatly benefit the businesses there and attract people to the Town.
- Funding them.
- I probably expressed my concerns in the previous section on improvements, but I do hope that careful use and maintenance can keep these areas in good shape.
- the east street dining outdoors would be very hot in summer
- I have some concerns about pedestrian safety on East street. If we add some of these elements, we may need to make changes to traffic flow.
- Long term maintenance costs
- Very limited parking for access to laundromat.
- None!

Comments

- Most importantly, I think main priority is to have places to bike and walk to. Therefore, outdoor dining and recreation spots are top priorities, especially now. I think that is how Northfield will be able to move forward and thrive.
- I think if we want to promote more biking between communities and have an off-road path then that would make sense to enhance bicyclist experience, but also too for those biking on the roads. I feel like it is mostly walkable in the area already but making it even more inviting to walk would be ideal, especially if there were more places linked to recreate.
- Perhaps create opportunity for more outdoor seasonal stalls, semi-permanent structure for events (concerts, community movie night, street festival)
- I feel like stormwater mitigation infrastructure makes everything else more of an option.
- Thanks for all this forward-thinking work!

Central Street

What do you like most about the ideas presented?

- I think having bike lanes and an improved crosswalk will better connect Norwich to town center.
- they are do-able. like bike lane.
- Improved crosswalks from the Common and wall street. This intersection is confusing because it is unclear where to cross and the road is so wide for traffic.
- improved crosswalks
- Completing this street to make it truly multi-functional. Improving walking, biking & route to NU.
- The walking and bike lane improvements are important to me, especially the pedestrian crossing situation at the foot of Central Street.
- Making the connection to NU and the Village stronger and more appealing. Crosswalks at the intersection of Central and Wall.
- Traffic calming on Central street by adding bike path and amenities.
- Norwich/downtown connection
- The bike lanes

What would improve these ideas?

- Wasn't there talk of a path to Northfield Historical Society?
- more trees
- Having crosswalk signage similar to what is now installed by East Street and Norwich
- painted lanes for cars and crosswalk
- Maybe some sort of street mural location/space for rotating mural/art/chalk drawings
- I am not sure if better signage would control the speed on Central Street, but for such a tiny street, the high speed travel which has lessened during the pandemic, is frightening, especially given the number of children that use that street.
- Asphalt art at the intersection of Central and Wall St.
- Changes to the stormwater retention. It is potentially dangerous and collects garbage. The plantings are coming out into the sidewalk and they are thorny roses. The railing around it is not sufficient to keep kids from falling in or climbing on it. It leaks out into the street. Very supportive of stormwater projects, would just like to see them more thoughtfully installed.
- Making sure that changes help slow down traffic on Central to make it safer for pedestrians/cyclists. Lots of kids and people use Central street instead of Main St because it is quieter and safer, but many cars still speed on this street.
- Looks good to me
- I'd like to push for some speed bumps or humps on Central Street, not only to decrease speeds but to discourage folks from using Central Street as a thruway to Wall St or Main St. Folks that use Central St as a means to avoid the Depot are not as invested in looking out for the many young roaming children on Central Street.

What concerns do you have about these ideas?

- I'm not sure lighting makes as much sense because that would be nighttime walking and I'm not sure what nightlife we have in Northfield. I'm also not quite sure about benches here and how that would make sense. I wonder if benches make sense for student family visits and walkers enjoying a stroll to town?
- town may not act on them
- Funding
- Getting landowners along Central street on board with these ideas.
- The speed of the cars and the poor condition of the street that needs paving.

Comments

- I wonder how many university students ride vs walk or would ride vs walk into town? This might be a good survey for university students and faculty (if not already done).
- I've taken this survey and wondered about what the university students and faculty would say if they were asked about how many would bike vs walk into town. That answer would then take priority in my mind. I retook the survey because I realized I was aggregating my priorities from the last survey (Easy Street) and realized after taking the next survey that it is talking about just this area.

Wall Street

What do you like most about the ideas presented?

- Wow so many ideas. I really think having better sidewalks and bike lanes to Dog River Park is a good idea both for connecting from town center and as a walking route for the senior center.
- I also like benches and a community garden pocket park close to the senior center. Having an impressive rain garden (if really needed) showcased along the route would be neat. Finally, an off-road path makes sense if you are going to have a pocket park near senior center.
- Integration of west side with depot square.
- Sidewalks and dedicated bicycle lane to make walking safer/more accessible.
- Pocket parks and community gardens.
- improved sidewalk improvements
- Improving the sidewalks and creating defined pedestrian paths to get from the Common to Dog River Park.
- path closure
- community garden
- Sidewalk connections & community gardens.
- This is an area that I walk frequently and having safe crossings and well-defined pedestrian areas would be wonderful. The pocket park and community garden beside the fire station sounds like a wonderful resting spot that would not be an expensive investment. I have walked to the Senior Center many times and it doesn't feel safe. It was safer when the temporary paint was on the road last summer.
- Adding sidewalks to Wall Street. This is important and basic to connecting the downtown to the Senior Center, schools, water street neighborhood and Dog River Park.
- Creating a space/park/garden next to the fire station. There was a proposal to create a playground here that was turned down by the Select board. Many community members felt like this was a missed opportunity. The recreation committee tried to put a skating rink here this past winter. It would be good to consider how to utilize this nice space for seniors and others both in the summer and winter.
- Community garden space!
- Bike lanes and a path to the Dog River Park

What would improve these ideas?

- What about having the community garden at Dog River Park? Would that be more incentive for senior who can walk/bike there, assuming they can.
- even more sidewalks - also bike lane. (what is sharrows?)
- Adding more defined cross walks at the corner by Center Street so both sides can be safely utilized by pedestrians the entire length of the road.
- a pedestrian crossing that went over or under the train tracks
- Public art on Wall Street Bridge or along Wall Street.
- Wayfinding to Dog River Park from Common

- I don't know
- Bike lanes instead of just designating the street as both car and bike?
- emphasize signage
- Some rail fencing to further limit train crossing in town. Another opportunity for art.
- No
- sidewalks on both sides
- Maybe some sort of street mural location/space for rotating mural/art/chalk drawings

What concerns do you have about these ideas?

- I'm curious to know what the senior center thinks about these ideas. Would it make more sense for the community to come to them via a pocket park or would they like to be able to walk with greater incentives and safety measures in place?
- closing railroad crossing
- the train tracks are always a concern
- Funding
- None

Comments

- I wonder what the senior center would say in a survey. Also, I know there was something on front porch forum regarding how much interest there was in a community garden. I wonder what the response was.
- would love Community garden (though children playground would have been better - could be moved)
- This area could be a beautiful focus of walk ability for our town.
- This is a wonderful part of town in which to relax. It's close enough to the Square and Farmer's Market, but a little bit quieter.
- The garden idea sounds good too.

Prioritization

Dog River Park - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority			XXXXX	XX	XX
Moderate Low			XX		
Neutral		XXX	XX	XX	XXXX
Moderate High	XX	XX	X	XXXX	XXX
High Priority	XXXXXXXXX	XXXXX		X	X

Shaw Center & Northfield Town Forest - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority	X	X	XXX	XX	XXX
Moderate Low			XX		
Neutral	XX	XXXX	XX	XXX	XXX
Moderate High	X	X	XX	XXXX	XXXX
High Priority	XXXXXX	XXXXX	XX	XX	X

Falls General Store - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority	X	X	X	XX	XXX
Moderate Low				X	X
Neutral		X	X	XX	X
Moderate High	X	XXX	XXXX	XXX	XXX
High Priority	XXXXXXXXXX	XXXXXXXXX	XXXXXX	XXXX	XXX

East Street - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority			X	X	
Moderate Low	X	X	X		
Neutral	XX	XXXXX		X	XXXX
Moderate High	XXXXX	XXX	XXXXX	XXXXX	XXXXX
High Priority	XXXXX	XXXX	XXXXXX	XXXXXX	XX

Central Street - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority			XXXXX	XX	XX
Moderate Low				X	
Neutral	XX	X	XXXX	XXXXXXXX	XXXXX
Moderate High	XXXXX	XXXXXX	X		X
High Priority	XXXX	XXXX	X	X	XXXX

Wall Street - Which of following components should be prioritized in this area?

	Improving pedestrian experience	Enhancing the bicyclist experience	Creating new outdoor dining spaces	Creating new outdoor congregation/seating spaces	Integrating stormwater mitigation infrastructure
Low Priority			XXXXX		
Moderate Low			X	XX	
Neutral		X	XXX		XXXX
Moderate High	X	XXXX		XXXXXXXX	XX
High Priority	XXXXXXXXXX	XXXXX		X	XXX

A P P E N D I X D

BUSINESS
OUTREACH
MEMORANDUM



Main Office:
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Portland, ME
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Richmond, VA
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MEMORANDUM

To: SE Group and the Town of Northfield
From: Rachel Selsky, Vice President Camoin 310
Date: 6/15/2020
Re: **Town of Northfield – Recovery Guidance**

Introduction

On March 13, Governor Phil Scott declared a State of Emergency in Vermont and initiated steps to prevent the spread of the novel coronavirus through the Stay Home, Stay Safe executive order. This included the closure of all non-essential businesses as well as restrictions on travel and lodging. For communities all around Vermont, this meant that the majority of businesses closed their doors for a period of two months, while others worked hard to figure out how to accommodate online ordering, new curbside pick-up infrastructure, and all businesses managed the loss of a significant amount of sales. Overall, residents and business owners understood the need to act in the best interests of public health and found new ways to connect, accommodate day to day tasks, and continue to support the local business owners. However, the economic impact of the lost business and the fiscal impact of the lost tax revenue for Northfield is concerning.

In May 2020, as part of the Northfield Ridge + River Routes project, Camoin 310 was asked to connect with local business owners to better understand how the coronavirus and associated closures impacted their business, is expected to continue to impact their business, and any role that the Town can play in mitigating losses or challenges. The following is a summary of the interviews conducted with business owners, followed by a series of examples of what other communities are doing for economic recovery, and a list of those individuals interviewed.

Key Findings

The following are key findings and consistent themes from the business interviews.

- Phone interviews were conducted with eight people, representing ten different businesses or organizations in Northfield ranging from producers to restaurants, and essential good providers to educational institutions.
- The businesses all faced varying levels of economic losses as a result of the closure and continue to face challenges during this period of recovery and reopening. Businesses were forced to lay off employees, manage significant declines in sales, and make investments in infrastructure to connect with customers and train employees to address public health concerns.

- Essential goods providers (food stores and pharmacies) experienced stable or elevated levels of sales throughout the period of closure but did have to institute significant procedural changes to ensure customer and employee safety.
- Businesses expressed that customers have been flexible and accommodating to the changes, but that these economic losses will not soon be made up and are expected to have significant impacts on their business and business model moving forward. Businesses are primarily using social media, newsletters, email, and website to remain in communication with their customers during this time. Guidance, assistance, and resources will be needed to help make it through the transition.
- Even with the loosening of restrictions, allowing for curbside pickup, outdoor and some in-door dining, it will be difficult for the restaurants to return to full capacity (employee and sales figures), as there are less people going out, less people traveling, Norwich University being closed, and limited capacity requirements.
- The closure of Norwich University had a big impact on many businesses as they rely on the 2,500 college students, faculty, and visitors to their businesses. The future of the university and what will happen in Fall 2020 is unknown and preparations are being made for a number of different scenarios, ranging from all distance, fewer students, or full enrollment. Although plans are being made, many colleges and universities throughout New England are dealing with the reality that a disruption of this kind is financially devastating.
- In general, town residents are perceived by businesses as supportive. However, it was noted that town government officials were not always as active or engaged with local businesses as they could be. It was recognized that they all have a lot to do, but that making it a priority to check in with business owners, ask about any issues or needs, and show that they care was important and would be appreciated.

Immediate Actions

The following are actions that the Town could play a role in to address the current and ongoing critical needs of the business community. These recommendations are ranked based on priority (high to low) level.

- 1) **Initiate and Maintain Dialogue with Businesses:** The first step to figuring out how to help businesses remain viable during this period of uncertainty is to ask and maintain open dialogue. This may require local officials to walk around town and be prepared to listen to the needs, concerns, and ideas of businesses. Continue frequent communications with businesses on existing email lists with updates on resources and the role that the Town will be assuming during recovery. The needs of businesses will be a moving target as this crisis progresses, so there must be ongoing communication – both digitally as well as appropriate socially distanced in-person. Creating this dialogue will show business owners that the town government cares about them, appreciates them, and is open to finding solutions that will be mutually beneficial. Strengthening these relationships now will support a longer term Business Retention & Expansion (BRE) program that will develop resiliency for the businesses and economy in Northfield.
- 2) **Tent and Outdoor Seating:** Having protected space for outdoor dining will be of the utmost importance to restaurants being able to remain open, profitable, and safe this summer. Having protection from the elements will increase the likelihood that patrons will come and enjoy a more pleasurable experience. With many tent companies experiencing their own loss of business from event and festival cancellations, there may be an opportunity to rent tents, chairs, tables, lighting,

etc., that could help create an outdoor dining oasis for Northfield establishments. This could be completed either as a communal group dining space (no table service, just extra seating for takeout/curbside customers) or allocated to individual businesses for service.

- 3) **Community and Business Education Around Online and Social Media Shopping:** Many businesses have been forced to showcase their goods and services online, including posting photos of products, listing menu options, and promoting their ability to order unique items. Business owners are attempting to transition their customers from being familiar with shopping in-person to instead look online at what is available and then make purchases through the phone or email for pickup/delivery. The Town should work with business owners and residents to design a training program that will provide customers more comfort with this new technology and help businesses continue to make sales. Additionally, training for business owners on how to take photos, post their goods, improve communication, and overall increase customer satisfaction with this new buying approach will make a difference in the long-term viability as restrictions continue.
- 4) **East Street Reorganization:** Finding ways to shift the transportation infrastructure to temporarily accommodate increased outdoor seating will make it possible for businesses to continue to serve their customers and follow the new regulations. This may include making East Street one way, allowing for on-street seating or beautification efforts (creating parklets out of parking spaces), more public art to make it a nicer atmosphere, or ideas that can be designed and executed by the local community. Providing flexibility in regulations and permitting during this time will encourage businesses to get creative and find new ways back.
- 5) **Consider Fee or Tax Waiver:** Business owners and property owners mentioned that any way that the Town could play a role in reducing their operational costs would increase their chances of remaining viable. From property taxes to utilities, finding ways to work to reduce those costs during this period would make a significant difference in the businesses' future in Northfield. Beyond the need for immediate assistance, there should also be consideration towards opportunities to entice new commercial investment to Northfield to fill vacant spaces and increase overall economic vitality in the town. Additionally, any ability to advocate for limited liability for business owners around customers/employees contracting COVID would help ease the unpredictability associated with reopening.
- 6) **Shared Curbside Pick Up Location:** To continue to serve their customers many businesses have instituted curbside pickup. This has been especially critical for food service businesses as they had to shut down their dining rooms. Establishing a convenient, shared curbside pickup location that offers some shelter and weather protection will be important as we go into the months as well as provide infrastructure if restrictions continue into the winter. Providing joint space for similar businesses in a convenient location for automobile traffic and out of the way of outdoor dining will be important to make this a simple and pleasant experience. Communicating with the businesses that provide this service will help clarify the space needs, desired location, and partnership opportunities.
- 7) **Advocate for Safe Student Return:** Norwich University is working tirelessly to prepare for the fall when officials hope students will be able to return. The student community plays an important role

supporting Town of Northfield businesses and advocating for their return to campus (with reasonable safety regulations in place) is critical to making it possible for businesses to plan for the future if they can count on increased customers in August. Finding ways to make it safe for students, safe for faculty, and safe for the larger community are all necessary but doable and coordinating efforts with the town to pursue clarity from state government is an important first step. Open a dialogue with residents, businesses, and the university to find an approach that is mutually beneficial and reasonably safe. Formalize and communicate a range of solutions with state government and other officials to narrow down the most reasonable options.

- 8) **Establish Gift Card Purchasing Program:** Many businesses are looking to gift card sales as a way to boost income, while recognizing that many customers are not ready to be shopping or eating out as they once had. Encourage local residents to buy gift cards to their favorite establishments that can be used once they are ready to go back out.

- 9) **Pursue Bike and Pedestrian Connections and Signage:** Businesses are dealing with immediate concerns, but interviewees recognized that increased bike and pedestrian connections throughout Northfield enhance general economic development and quality of life for residents. Several initiatives supported by business owners include: increasing signage along bike trails, including Northfield in biking related promotional materials, and creating a more bike friendly environment in town. The town can work regionally to increase Northfield's recognition in the cycling community and establish stronger networks and systems between downtown and recreational assets.

Resources

The following are some resources that may be helpful to Northfield, including guidance documents and example initiatives from other places.

- [Vermont Guidelines on Using Public Highways for Gathering Spaces](#): Guidance on how state or town public highway can be used for outdoor eating, retail activities, and social gatherings on a temporary basis to achieve social distancing recommendations. The City of Burlington is promoting a new initiative called "[Making Space](#)" that provides guidance around allowances for more outdoor dining and curbside pickup.
- [Reopen Main Street](#): Provides reopening strategies, ideas, and tips for businesses, business districts, and organizations entering COVID-19 recovery phase.
- [National League of Cities](#): Recommendations on how Local Government can support small businesses during COVID-19.
- [Town of Brattleboro, VT](#): In Brattleboro, the downtown business organization kicked off a [48-hour Gift Card Challenge](#) where every gift card purchased for a downtown business would be matched with a \$5,000 contribution from a local donor. This challenge was met within 2 hours and within the same week additional donors stepped up to make similar challenges, including one that was only to be used at non-restaurant/bar establishments to support the retail and service providers in town.

- City of Rutland, VT: Using the pandemic and public health concerns as a way to move the needle on a project that has been discussed for years, the City of Rutland is considering a [realignment of Center Street](#) to narrow the driving lane and allow restaurants and stores to use the sidewalk for their products or service. Piloting the project could give it a chance to be permanent if it is deemed successful.
- City of Saco, ME: In order to help Saco businesses impacted by COVID-19, the City's Planning & Economic Development Department established a [COVID-19 Emergency Loan Fund](#). This new fund will offer loans of up to \$10,000 for Saco businesses and non-profits with 500 employees or less. To help support businesses as quickly as possible, the review and application process has been streamlined, all payments will be deferred for six months, and 50% of the loan may be forgiven after five years. This was funded with TIF revenue.
- Greene County, NY: When the COVID-19 Pandemic hit, Greene County was in the process of updating its economic development strategy. As they pivoted to provide emergency support for businesses and the economy, the central initiatives within the strategy are guiding immediate, near-term and longer-term actions for economic response and recovery. In response to the COVID-19 crisis, Greene County launched a comprehensive economic and business development response and recovery initiative:
 - [An online business resource center](#) with links to resources and guidelines, updated daily with the most current information available and distributed on multiple communications platforms.
 - An [emergency loan fund](#) to assist negatively affected local businesses.
 - A special Buy In Greene '[Open During the Pause](#)' Campaign connecting consumers to searchable online listings of local businesses providing goods and services during the pandemic.
 - A Reopening After the Pause online survey of over 650 Greene County Businesses resulting in a comprehensive industry sector breakdown of responses was provide to NYS in advance of their issuance of guidance for re-opening by region.
 - Accelerated investment and expansion of their [Virtual Main Street program](#) featuring aerial views, street level video and 360 virtual tours of local businesses and community assets on BuyInGreene.com

Individuals Interviewed

- Andrea Melville - Arts, Etc.
- Nirmala Devi – Falls General Store and Falls River Yoga
- Jeremy Down - Cardinal Printing
- Jill Donahue - Northfield Pharmacy
- Doug Judd – Tops Market
- Keith Paxman - Cornerstone
- Ross Evans - Carrier and Good Measure
- Tracey Poirier - Norwich University

A P P E N D I X E

TRAIL COUNT SUMMARY

NORTHFIELD TRAIL COUNTER MEMORANDUM

131 Church St. Suite 300 Burlington, VT 80443

Office: 802.862.0098 | www.segroup.com

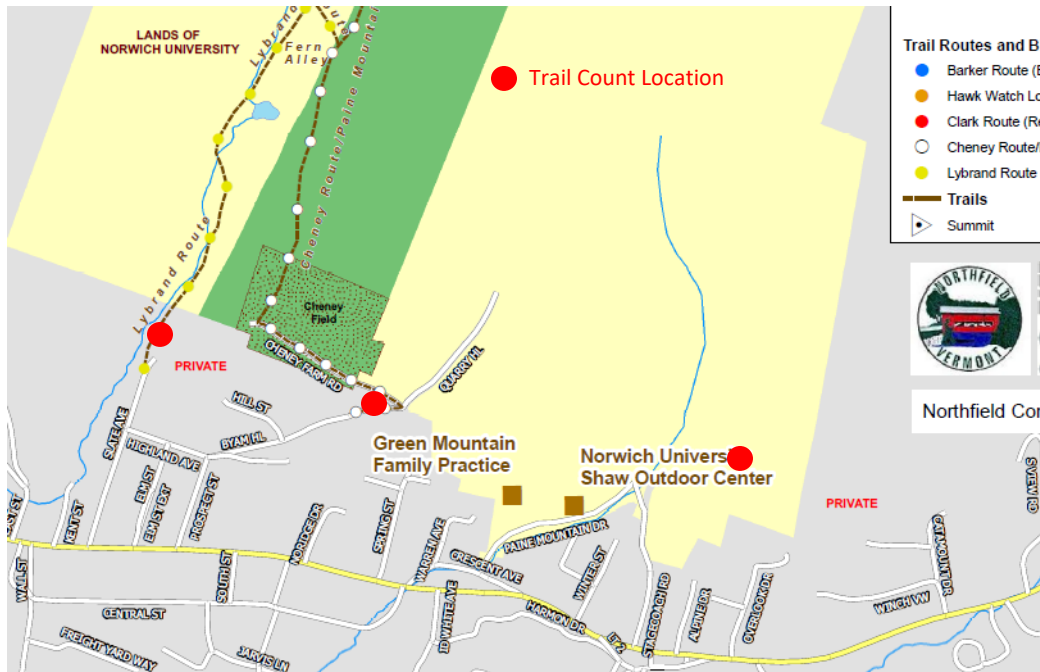
NORTHFIELD WINTER TRAIL COUNTING

Three TrafX automated trail counters were placed in Northfield, VT at entry points to the Northfield Town Forest and Shaw Outdoor Center to better understand trail use. These counters were placed on 12/06/19 and removed on 1/30/20.

Trail counters were placed at the following locations:

1. Shaw Outdoor Center – at Blue Trail entrance
2. Top of Byam Hill Road
3. Slate Ave -- Town Forest access point

Estimates for Average Daily Traffic (ADT), Peak Day Trail Traffic, Annual Trail Traffic Volume, Trail Traffic Volume by Day of the Week, and Trail Traffic Volume by Hour of the Day are provided in the charts below. Estimates of Trail Traffic Volume by Day of the Week, Trail Traffic Volume by Hour of the Day, Average Daily Traffic, Annual Trail Traffic Volume and Peak Day Trail Traffic are directly calculated from the trail count data.



SUMMARY OF FINDINGS - WINTER

Busiest Day of the Week and Hour of the Day

At all three trail count locations, Saturday saw the most traffic. At the Shaw Outdoor Center Saturdays had the most traffic (24.2%) although Tuesday was also a well trafficked day (21.5%). At Slate Ave, Saturday and Sunday traffic, 27.1% and 22.5% respectively, made up almost half of total traffic. Byam Hill Road also sees high weekend traffic—making up around a third of total traffic at the site.

The busiest hour varies by location. At the Shaw Outdoor Center, the busiest time of day is in the early afternoon—traffic peaks at 2PM. At Slate Ave, the busiest time was between 12PM and 1PM. The peak time at Byam Hill was 1PM followed closely by 11AM and 4PM.

Peak Use

The peak day for Byam Hill and Slate Ave was on Saturday December 28 when 26 and 28 trail users were recorded, respectively. The peak day for the Shaw Outdoor Center during the counting period was on Tuesday January 28 when 177 trail users were recorded. The second highest count at Shaw Outdoor Center is 94 trail users.

Average Daily Visitation

Average daily visitation is 25 at the Shaw Outdoor Center, 6 at Slate Ave, and 8.5 at Byam Hill Road. Average Saturday visitation is 11 at Byam Hill Road, 9 at Slate Ave, and 25 at Shaw Outdoor Center. Average Sunday visitation is 28 at Shaw Outdoor Center, 7.5 at Slate Ave, and 8.1 at Byam Hill.

Total Trail Traffic Volume

Total trail traffic volume is extrapolated from the nearly two months of trail count data. The total annual trail traffic volume is highest at the Shaw Outdoor Center (9,200 trail users) followed by Byam Hill Road (3,086 trail users) and Slate Ave (2,123).

Norwich University Influence

The Shaw Outdoor Center is owned by Norwich University. Students, staff, and faculty have access to community gear for free, and outdoor events (rock climbing, sledding, snowshoeing, fat biking, etc.) are advertised frequently. Trail count data from the Shaw Outdoor Center counter indicated a much higher ADT count in January (when students were back on campus) than in December (when students were taking final exams and leaving for winter break). ADT increased from 13.5 in December to 36.8 in January.

SHAW OUTDOOR CENTER – BLUE TRAIL

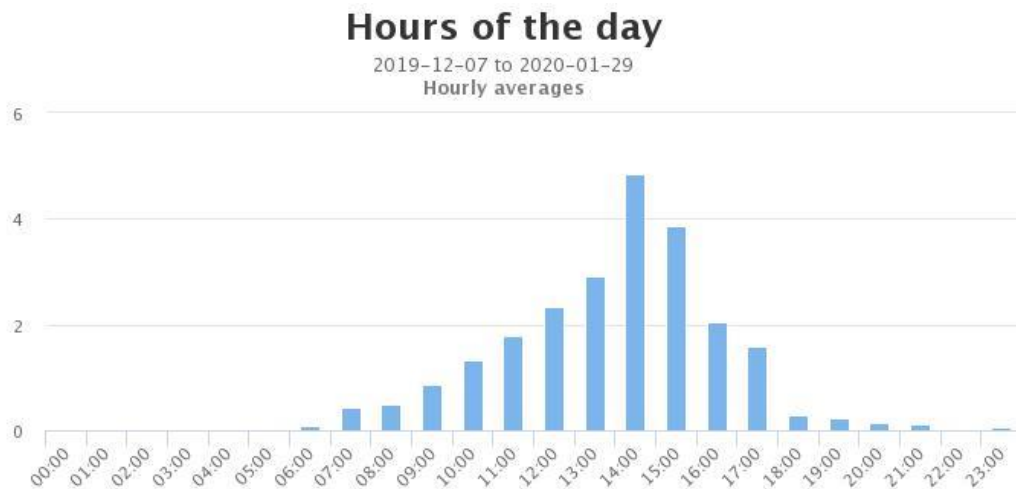
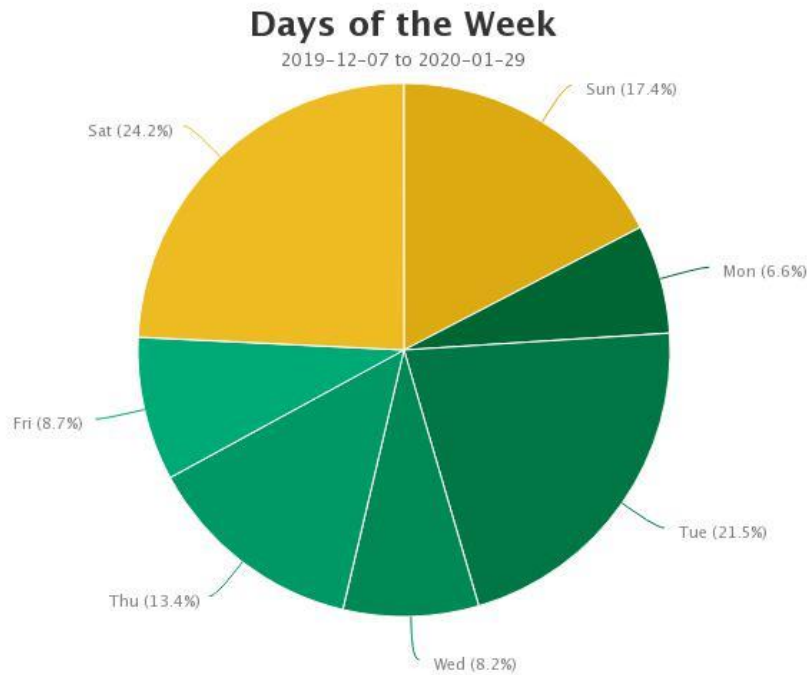
Average Daily Traffic: 25 trail users per day

Average Saturday Daily Traffic: 39 trail users per day

Average Sunday Daily Traffic: 28 trail users per day

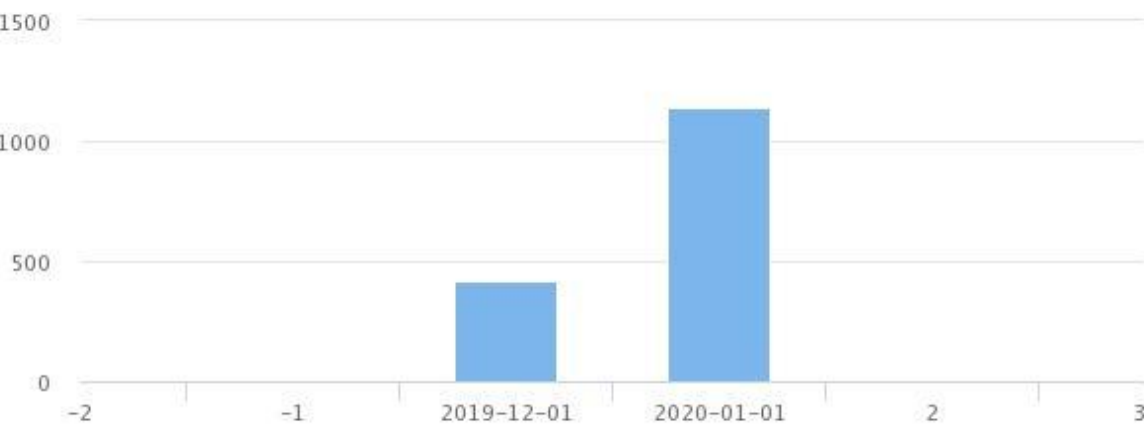
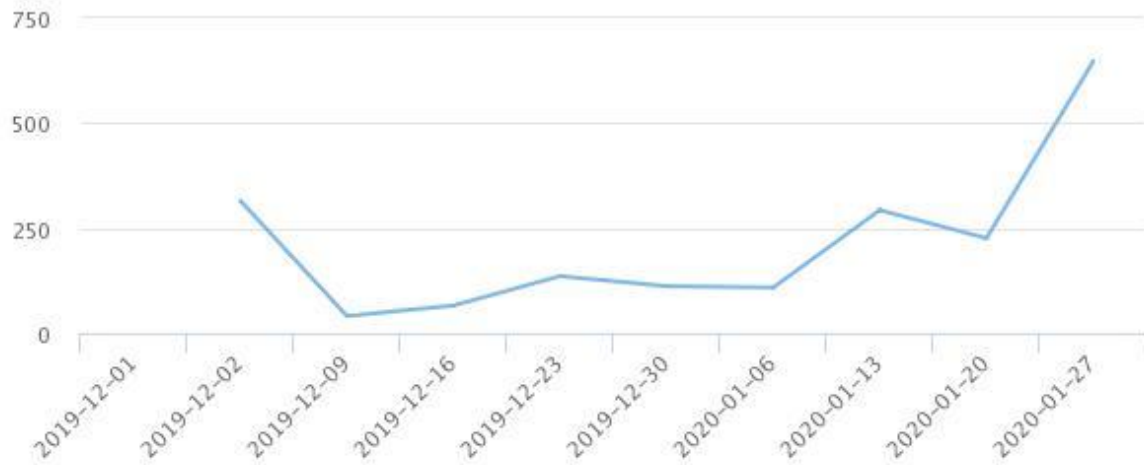
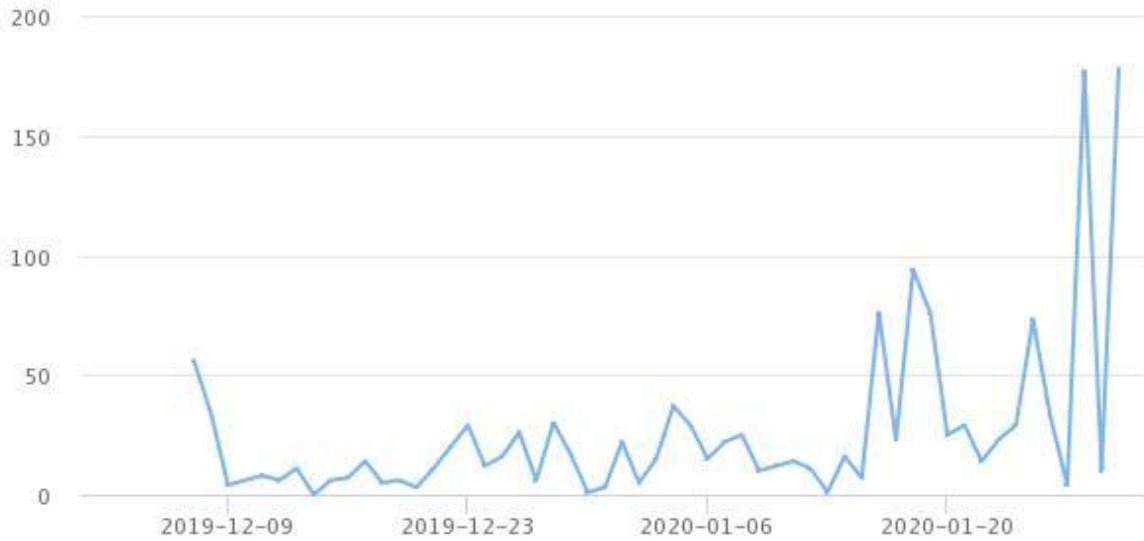
Peak Daily Trail Traffic: 177 trail users (1/28/2020)

Annual Trail Traffic Volume: 9,200 trail users per year



Daily/Weekly/Monthly totals

2019-12-01 to 2020-01-31 (62 days)



● Northfield - Shaw Center

BYAM HILL ROAD

Average Daily Traffic: 8.5 trail users per day

Average Saturday Daily Traffic: 11 trail users per day

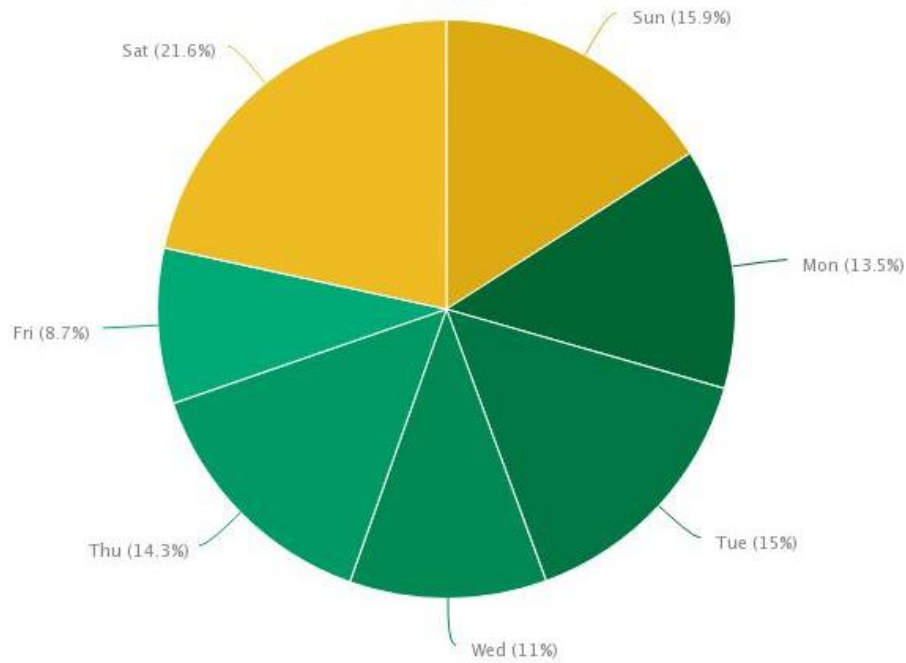
Average Sunday Daily Traffic: 8.1 trail users per day

Peak Daily Trail Traffic: 26 trail users (12/28/2019)

Annual Trail Traffic Volume: 3,086 trail users per year

Days of the Week

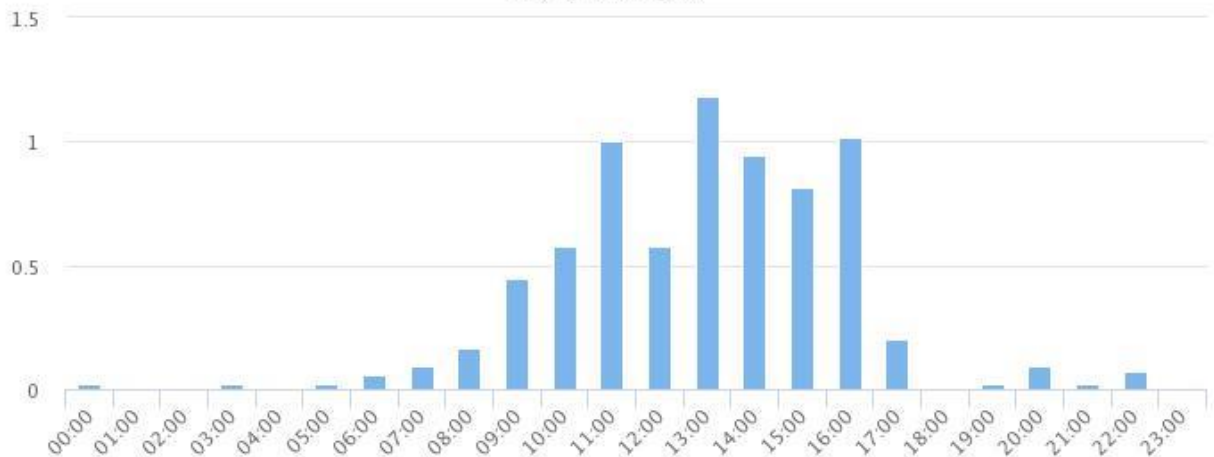
2019-12-07 to 2020-01-29



Hours of the day

2019-12-07 to 2020-01-29

Hourly averages



SLATE AVE TRAIL ENTRANCE

Average Daily Traffic: 6 trail users/day

Average Saturday Daily Traffic: 9 trail users per day

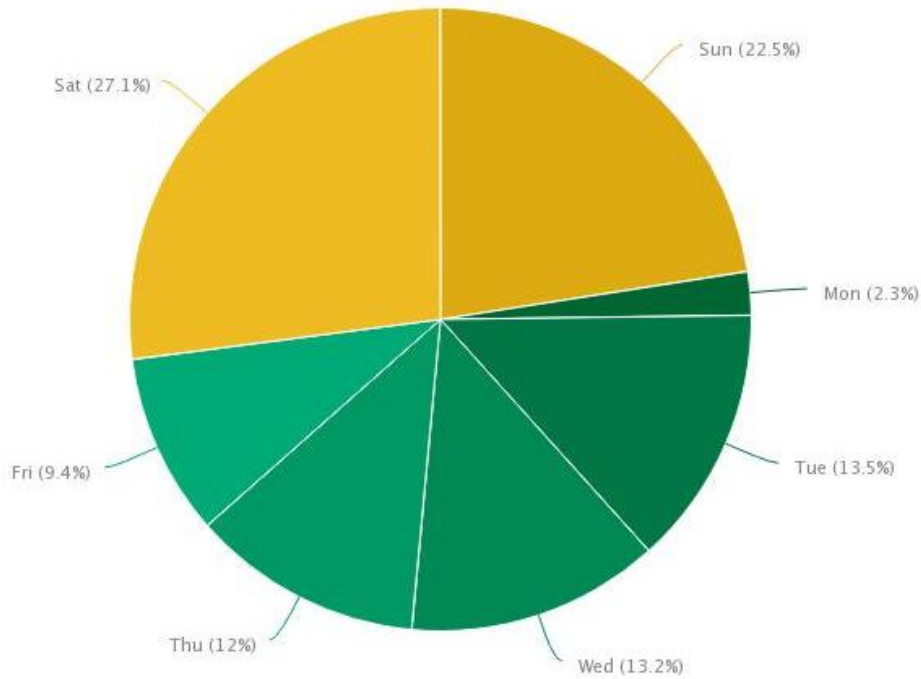
Average Sunday Daily Traffic: 7.5 trail users per day

Peak Daily Trail Traffic: 28 trail users (12/28/2019)

Annual Trail Traffic Volume: 2,123 trail users per year

Days of the Week

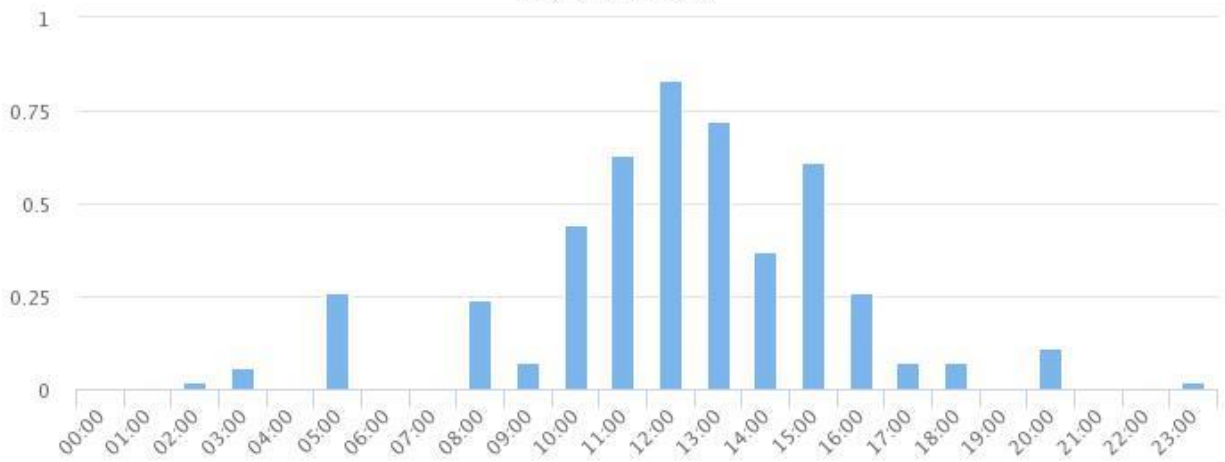
2019-12-07 to 2020-01-29



Hours of the day

2019-12-07 to 2020-01-29

Hourly averages



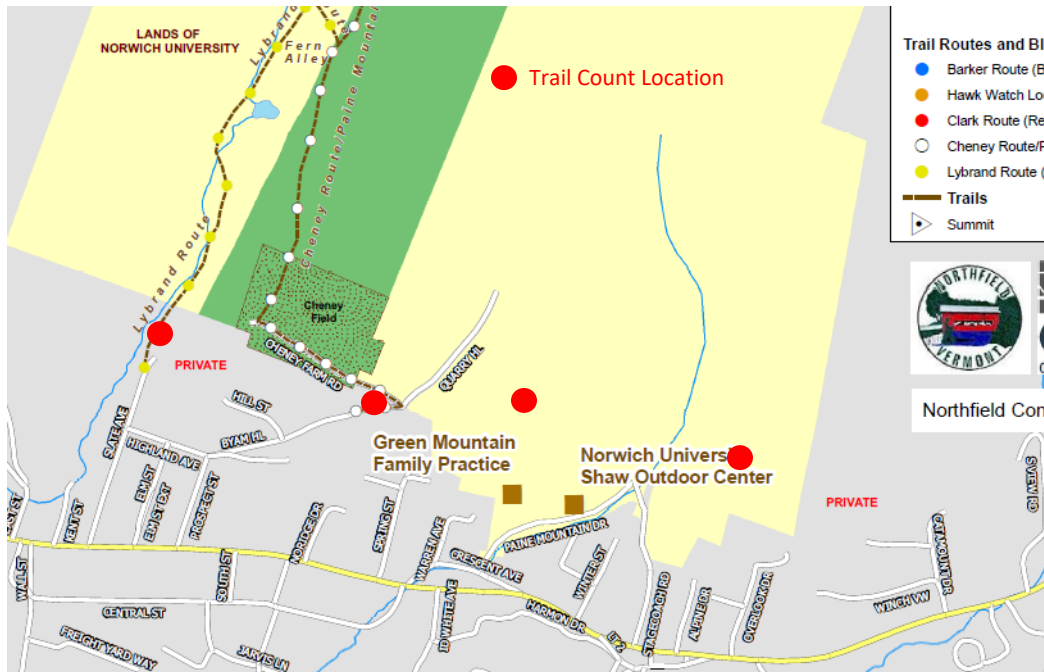
NORTHFIELD SPRING TRAIL COUNTING

Four TrafX automated trail counters were placed in Northfield, VT at entry points to the Northfield Town Forest and Shaw Outdoor Center to better understand trail use. These counters were placed on 05/11/2020 and removed on 05/22/2020.

Trail counters were placed at the following locations:

1. Shaw Outdoor Center – at Blue Trail entrance
2. Shaw Outdoor Center – Family Practice Trail
3. Byam Hill Road Trail Access Point
4. Slate Ave Trailhead

Estimates for Average Daily Traffic (ADT), Peak Day Trail Traffic, Annual Trail Traffic Volume, Trail Traffic Volume by Day of the Week, and Trail Traffic Volume by Hour of the Day are provided in the charts below. Estimates of Trail Traffic Volume by Day of the Week, Trail Traffic Volume by Hour of the Day, Average Daily Traffic, Annual Trail Traffic Volume and Peak Day Trail Traffic are directly calculated from the trail count data.



SLATE AVE TRAIL ENTRANCE

Average Daily Traffic: 28.2 trail users/day
Average Saturday Daily Traffic: 19 trail users per day
Average Sunday Daily Traffic: 46 trail users per day
Peak Daily Trail Traffic: 51 trail users (05/14/2020)
Annual Trail Traffic Volume: 10,321 trail users per year

SHAW OUTDOOR CENTER – BLUE TRAIL

Average Daily Traffic: 48 trail users/day
Average Saturday Daily Traffic: 44 trail users per day
Average Sunday Daily Traffic: 78 trail users per day
Peak Daily Trail Traffic: 78 trail users (05/17/2020)
Annual Trail Traffic Volume: 17,605 trail users per year

BYAM HILL ROAD

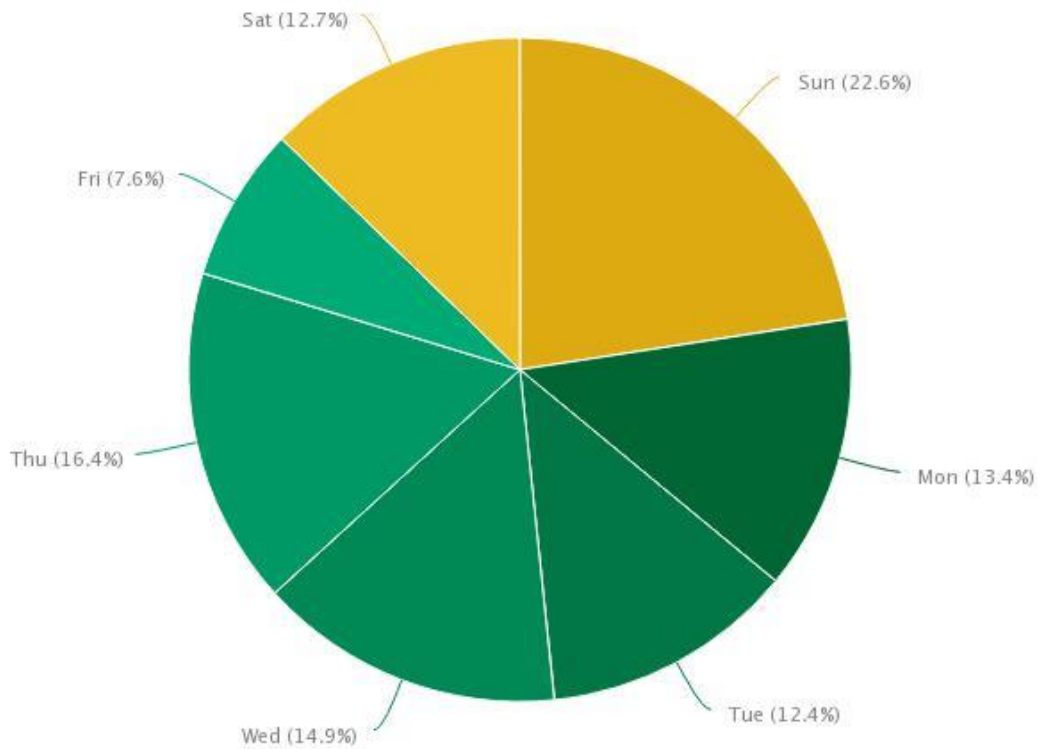
Average Daily Traffic: 23 trail users/day
Average Saturday Daily Traffic: 19 trail users per day
Average Sunday Daily Traffic: 27 trail users per day
Peak Daily Trail Traffic: 30 trail users (05/14/2020)
Annual Trail Traffic Volume: 8,308 trail users per year

SHAW CENTER BIKE TRAIL

Average Daily Traffic: 53.7 trail users/day
Average Saturday Daily Traffic: 53 trail users per day
Average Sunday Daily Traffic: 88 trail users per day
Peak Daily Trail Traffic: 88 trail users (05/17/2020)
Annual Trail Traffic Volume: 19,471 trail users per year

Days of the Week

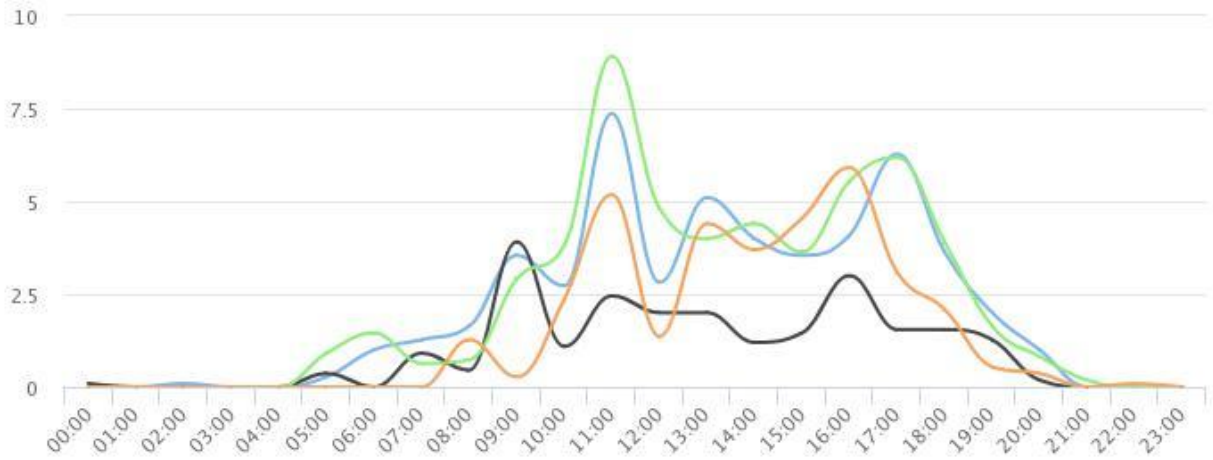
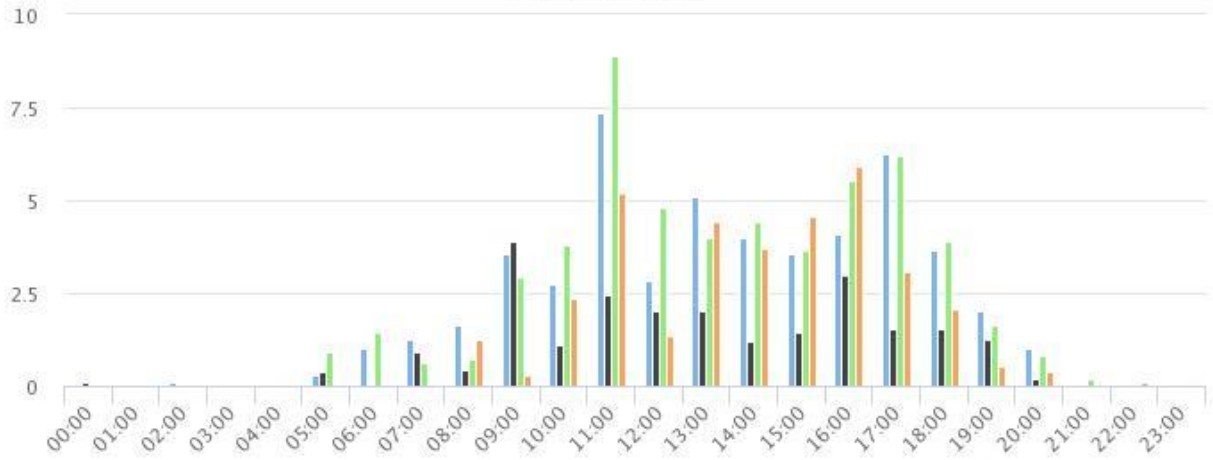
2020-05-11 to 2020-05-22



Site Name	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Northfield Blue Trail Spring	47	35	46.5	56.5	36	44	78
Northfield Byam Spring	27	27.5	20	23	13	19	27
Northfield Shaw New Spring	56	47.5	52.5	56	23	53	88
Northfield Slate Spring	12	21	39	38.5	8	19	46

Hours of the day

2020-05-11 to 2020-05-22
Hourly averages

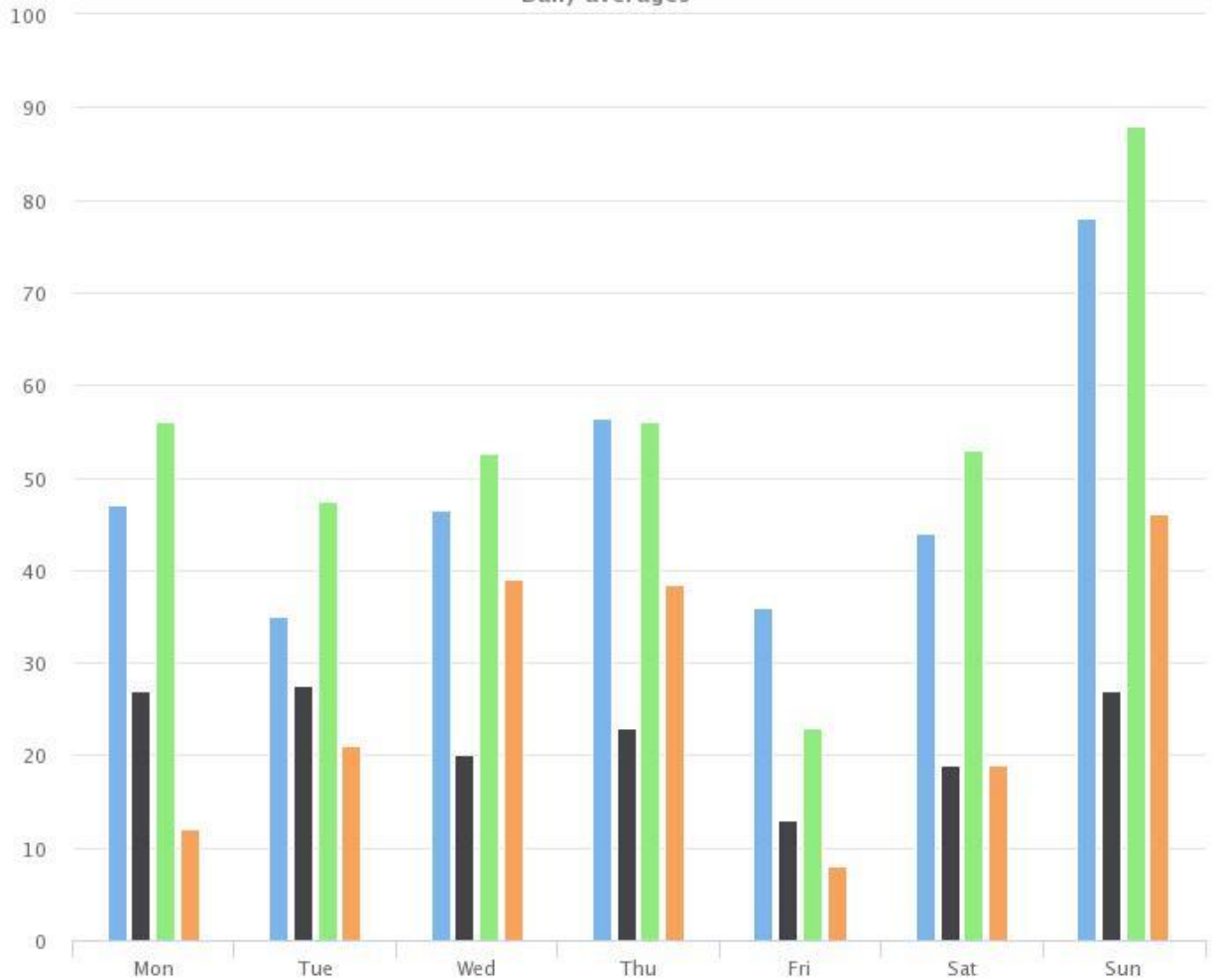


Site Name	Average	Median	STDV	Min	Max
Northfield Blue Trail Spring	3.0	2.8	2.0	0.1	7.4
Northfield Byam Spring	1.5	1.4	1.0	0.1	3.9
Northfield Shaw New Spring	3.2	3.6	2.3	0.2	8.9
Northfield Slate Spring	2.5	2.2	1.9	0.1	5.9

Days of the week

2020-05-11 to 2020-05-22

Daily averages



Site Name	Average	Median	STDV	Min	Max
Northfield Blue Trail Spring	49.0	46.5	13.6	35.0	78.0
Northfield Byam Spring	22.4	23.0	5.0	13.0	27.5
Northfield Shaw New Spring	53.7	53.0	17.6	23.0	88.0
Northfield Slate Spring	26.2	21.0	13.7	8.0	46.0

A P P E N D I X F

RECREATIONAL ACCESS GUIDANCE

The following is a brief outline of strategies that may be employed by towns to enhance access to their municipal lands or create new trail connections or recreational access across private lands. When looking to improve/create access to a town forest parcel with no road access, the town should reach out to all adjacent property owners for access opportunities.

For broader trail connections across private lands, land access conversations should be as open and informal as possible at the beginning. As the Vermont Trails and Greenways Council Trails Manual explains, “It is only through the willingness or generosity of landowners that a trail idea can become a reality. Many landowners may be apprehensive about the idea of a trail or recreation paths on their property, and how it might impact their property value, liability, safety and privacy. They may be concerned about how enforcement or maintenance will be accomplished. These are all valid concerns, and you will need to eventually address them satisfactorily. However, it is not necessary to have answers to all of these concerns right at the beginning. Use your discussions with landowners and the public to solicit ideas, or come up with alternatives as the trail project moves forward.”

As you engage landowners in access conversations, it is helpful to understand the many different pathways to allowing access (easements, land acquisition, etc. – see full list below), in order to find a suitable option for the landowner.

Access Easement

Where trails and potential access points cross privately owned lands, an access easement may establish public ingress and egress to the town forest or the ability to cross the land with a public trail. As described by the VT Trails and Greenways Council, an access easement is a “permanent right-of-way, usually a long, narrow strip of land through which a trail is maintained, and the public may pass” through to get to a destination. Like other easements, the land ownership would not change, however the access would be conveyed to the town or a qualified entity such as a trail group or land trust. This agreement can occur via gift or purchase and could convey the land owner certain tax benefits. For a detailed discussion of this and conservation easements broadly, see the Land Conservation Guidance.

Land Acquisition via Donation or Purchase

Acquiring access to private land may require the outright purchase in fee. This is a costly alternative, however it would provide a permanent means of access to the lands to be utilized as the town desires. This option would require the town to work with a willing landowner who is considering the sale of their property, in whole or in part. Securing the right of first refusal is one

suitable strategy as landowners are then required to offer the sale to the town first if they do decide to sell their property. In pure happenstance, a land owner may put a property up for sale that meets the access needs. In these instances, towns should be prepared to move quickly and organize the necessary funds to acquire the land before it is sold to other entities. Working with the Vermont Housing and Conservation Board, the Conservation Alliance, The Trust for Public Land and the Vermont Land Trust has been a successful way to raise funds quickly in the past. Keeping a well-financed town Conservation Fund can be incredibly helpful in these circumstances. Please see the Grants and Funding Resources List for more information.

Private land owners have gifted land to towns on occasion. Many of these land grants are the origin of town forests throughout the state. For this reason, towns should keep access points to their town forests and other desired properties in mind and maintain an open line of communication with private land owners who may be able to contribute to town land use planning goals. Private land owners may be navigating their estate planning, moving to a new part of the state, or considering subdividing their property to diminish challenging property taxes. Depending on the size of the potential land donation, the land owner may consider placing a conservation easement on the property to qualify the donation as a tax-deductible gift. In these instances, towns should work with a qualified land trust to draft easement language that meets the access needs of the town. See the Land Conservation Guidance for more information on conservation easements.

Informal “Hand Shake” Access Agreements

This form of access agreement is suitable when an easement or purchase in fee is not supported by the town or the property owner. Working with the property owner whose land must be crossed, the municipality, trail group or land trust would strike a verbal agreement as to the terms of public access across the property. This agreement has also taken the form of a simple letter from the landowner, deeming it “ok” for the public to cross their private land. This is the least permanent form of access agreements and is not legally binding, which means that the property owner reserves the right to deny trail access at any point and for any reason. Hand shake deals can often be easier for landowners to agree to, especially at first, and can often lead to more formalized access easements after trail use and management is satisfactory to the landowner. In addition to and as a result of the lack of permanence in the agreement, trails whose access depends “hand shake” deals are often not eligible for many grant programs.

Boundary Line Adjustment

A Boundary Line Adjustment (BLA) is the process used to change property lines of existing parcels, altering their shape or size, but not creating a new number of parcels. A BLA requires a property to

be surveyed by a Vermont licensed land surveyor. Copies of the survey would then be submitted to the Development Review Board with an attached application to adjust the parcels boundary line. The resulting lots would need to satisfy the districts' zoning laws where evident and conform with other state and municipal land use requirements. Upon the completion of the boundary line adjustment, landowners are responsible for filing the updated deeds of the affected lands in the municipal land records. While adjustments require a permit and an application to complete the process, some projects can apply for an exception by submitting a boundary line exemption form. This access strategy is useful for towns who need only to extend their ownership slightly, to allow a corridor for public access to town forest lands or to resolve disputes about land ownership and historical access patterns. Surveys and BLAs are generally very expensive and timely, however have proven successful in Vermont.

Annual Lease and Licenses

For accesses that require crossing private property, a lease or license may be a suitable strategy. Necessary land for trail access can be leased from the property owner on an annual basis. This strategy should be offered to landowners who are not interested in selling the land but would like to receive some monetary compensation. This agreement would be documented in a contract lease agreement, providing the general public to use said parcel. This option can be limiting in many ways such as conducting trail maintenance or infrastructure upgrades. If the town intended to do so, it would need to include that in the lease agreement. License agreements have been utilized by Vermont Association of Snow Travelers (VAST) by organizing agreements with landowners and documenting their use rights. A license is similar to an easement however it is considered a terminable right, i.e. the access agreement is temporary in nature. As described by the VT Trails and Greenways Council, license agreements usually “include the location of the trail, types of use, hours of use or other conditions that the landowner would like to see.”

A P P E N D I X G

SCOPING STUDIES

To:	Mark Kane	From:	Sean Neely
	SE Group, Burlington, VT		Stantec, South Burlington, VT
File:	179450078	Date:	October 14, 2020

Reference: Northfield Transportation Improvement Scoping Opportunities

Many transportation improvement concepts for Northfield, from the Better Connections Project, can be addressed as part of future scoping studies, broken down below.

VT Route 12 Transportation Improvement Scoping Study: Northfield Falls

- Realignment of Mill Street intersections with VT Route 12 to T-intersections
 - Remove island at northeasterly Mill Street intersection with VT 12
- Sidewalk construction along the south side of VT 12 from Moody Lane to Cox Brook Road
 - Impacts to aerial utilities along the north side of VT 12 can be avoided
 - Quantify impacts to private property
- Sidewalk segment construction along the east side of VT 12 from Mill Street to Cox Brook Road to connect Mill Street neighborhood to Gould Road and General Store. Add crosswalk across Cox Brook Road at VT 12
- Upgrade of unmarked crossing from the corner of Gould Road to the corner of Cox Brook Road to a marked crossing with lighting
- Sidewalk construction along the west side of VT 12 from Cox Brook Road to Slaughterhouse Road
 - Impacts to aerial utilities along the east side of VT 12 can be avoided
- Gould Road & Davis Avenue
 - Shared road markings for pedestrians/bicycles to provide more visible biking/walking option to access New Promise Community Playground
 - Local roads off of VT 12 are likely walkable given low traffic volumes
- New crosswalks on VT 12 at Davis Avenue and Falls Trailer Park
 - Need approval from VTrans
- Opportunities for access management along corridor

VT Route 12 Transportation Improvement Scoping Study: Dogwood Glen to Dog River Bridge

- Sidewalk construction along west side of VT 12 (Stated owned portion) from Dogwood Glen to existing sidewalk across from Cumberland Farms
- Opportunities for access management along Class 1 Town Highway portion of VT 12 corridor north of the common
- Intersection improvements at Fiske Drive
 - Crosswalk across Fiske Drive with pedestrian refuge
 - Replace diagonal crosswalk from northerly corner of Fiske Dr to Belknap Ave with a crosswalk perpendicular to VT 12 from southerly corner of Fiske Drive
 - Extend sidewalk on westerly side of VT 12 north to southerly corner of Fiske Drive
 - Consider closing driveway access to VT 12 for property at corner of Cole Ave and Fiske Dr
 - Reduce width of Fiske Drive at VT 12
- Intersection improvements at Vine Street / VT 12
 - Potential new crosswalk on north leg
 - Reduction of corner radii for safer pedestrian crossings, especially for children walking to/from school

October 14, 2020

Mark Kane

Page 2 of 3

Reference: Northfield Transportation Improvement Scoping Opportunities

- Assessment of compliance with Americans with Disabilities Act (ADA) for traffic signal system and pedestrian facilities
 - Orientation of pedestrian push buttons
 - Curb ramp landing areas
 - Detectable warning surfaces for WB approach
 - Pedestrian signal heads for crossing WB approach
- Opportunities for access management along corridor
- Sidewalk assessment along VT 12
 - Prioritize and upgrade segments that have deteriorated or do not meet ADA
- Sidewalk assessment along Vine Street
 - Prioritize and upgrade segments that have deteriorated or do not meet ADA
 - Work with Local Motion to consider process for Safe Routes to Schools exercise with emphasis on Vine Street
 - Dedicate bicycle route(s) from core residential areas to the grade schools
 - Prioritize these routes by working with schools and community to map them, raise awareness of them (branding, education), and improve conditions such as new signing/markings, and new off-road path infrastructure where feasible
- Traffic calming strategies along VT 12
 - Curb extension installments at crosswalks to reduce crossing distances and increase visibility for pedestrians

Northfield Village Center Core Bicycle & Pedestrian Scoping Study

- Depot Square/Common
 - Crosswalks to Common
 - Bike racks on Common
 - Close pedestrian railroad crossing from Common to path
 - Add path west of RR crossing to connect to existing path to Water Street
- Wall Street
 - Add sidewalk on southerly side of Wall Street connecting Central Street to Water Street and Dog River Park
 - Improve pedestrian crossing at railroad tracks: detectable warning surfaces at RR crossing and rail gap fillers
- Water Street
 - Crosswalk and sidewalk improvements at intersections with Wall Street and Pearl Street
- Pearl Street
 - Sidewalk improvements along Pearl Street
- Pedestrian Bridge
 - Consider widening pedestrian bridge to 12 FT upon replacement

Northfield Village Center South Bicycle & Pedestrian Scoping Study

- Central Street
 - Replace degraded sidewalk along easterly side of Central Street from Wall Street to Washington St
 - Extend sidewalk to terminus of sidewalk near campus

October 14, 2020

Mark Kane

Page 3 of 3

Reference: Northfield Transportation Improvement Scoping Opportunities

- Some private property impacts
- Sidewalk assessment along VT 12
 - Prioritize and upgrade segments that have deteriorated or do not meet ADA
- Traffic calming strategies along VT 12
 - Curb extension installments at crosswalks to reduce crossing distances and increase visibility for pedestrians
- Consider crosswalk from Central Street to Crescent Avenue if current desire line
 - Class 1 Town Highway portion gives Town flexibility for adding crosswalk
 - Meets VTrans crossing spacing guidelines (>200 FT from nearest crosswalk)

VT Route 12 Northfield Center Transportation Improvement Scoping Study

- Realignment of Crescent Avenue South intersection with VT 12 to eliminate skewed intersection
 - May impact corner of parcel owned by Norwich
- Sidewalk connection from Crescent Ave greenspace to Paine Mountain Drive
- Wayfinding from VT 12 to Shaw Outdoor Center
- Sidewalk assessment along VT 12
 - Prioritize and upgrade segments that have deteriorated or do not meet ADA
- Sidewalk construction along the south side of VT 12 from Crescent Avenue to VT 12A
- Realignment of Park Ave intersection with VT 12 to eliminate skewed intersection
 - Could start as pilot with large concrete planters and striping
- Realignment of VT 12A intersection with VT 12 to eliminate skewed intersection
 - Could be done simply with restriping
 - May reduce current impacts to private property

South Northfield

- Realignment of Old Mill Hill intersection with VT 12 to eliminate skewed intersection
 - Private property impacts
- Intersection of VT Route 64 with VT 12 is High Crash Location
 - Assess opportunities for improvements to reduce crashes

Stantec Consulting Services Inc.

Sean Neely

Civil Engineering Designer

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Attachment: Attachment

c. Ayden Eickhoff, Greg Goyette

A P P E N D I X H

VTRANS COST SPREADSHEET

Cost Analysis for Reclassification of VT Route 12 in Northfield

A: Moody Lane to current limit of C1TH (just north of Houston St)

B: ---

C: ---

Town Revenue	Scenario: A		
	Current		Proposed
	miles	\$ per mile	Revenue
Class 1	2.188	\$ 11,213.23	\$ 24,534.55
Class 2	4.81	\$ 4,119.96	\$ 19,817.01
Class 3	67.36	\$ 1,521.72	\$ 102,503.24
	74.358		\$ 146,854.79

Town of Northfield - Paved Road Maintenance

Item	Total Budget	Cost per Mile	Annual Electricity Costs	Total Highway Budget	Total Town Highway Miles	Total Cost per Mile
Signs	\$ 2,000	\$ 27	\$ -	\$ 1,032,360.00	74.358	\$ 13,883.64
Salt/Sand	\$ 130,000	\$ 1,748	\$ -			
Striping	\$ 8,000	\$ 108	\$ -			
Sweeping	\$ 8,000	\$ 108	\$ -			
Paving	\$ 125,000	\$ 3,362				
Culvert	\$ 6,000	\$ 81				
Total	\$ 279,000	\$ 5,433				

\$ 14,577 Increase in Revenue

Town Costs

Winter Maintenance

Allowance	Item
\$ 100	per hour of plowing
80	average storms per year
0.3	hour plowing per storm
\$ 3,409	Sand/Salt Allowance
\$ 6,009	Winter Maintenance

Scenarios:	Miles:	Culverts:	Signals:	Electricity Cost
A Moody Ln to current C1TH (just north of i	1.3	14	0	\$ -
B ---				\$ -
C ---				\$ -

Assumed ratio maintenance per mile on VT 12 over other town roads:

Salt/Sand	1.5
Striping	2
Signs	2

Summer Maintenance

Allowance	Item	Notes
\$ 280	Striping	VTrans marks centerline, Town will be responsible for all other markings
\$ 140	Sweeping	Annually
\$ 2,100	Culvert/Drainage Maintenance	Annually
\$ -	Lights	Town will take on electric bill of any VTrans streetlights. LED conversion would reduce cost
\$ -	Signal Maintenance	Contracted out to RYG Signals or comparable; assumed \$3000 per signal; highly variable
\$ 70	Signs	Replaced when damaged or removed
\$ 1,950	Pavement repairs (patching, crack sealing)	Annually
\$ 4,540	Summer Maintenance Costs	

\$ 10,549 TOTAL

72% Ratio Costs per Revenue