

**DOWNTOWN DEVELOPMENT AUTHORITY  
LOWER BOARDMAN RIVER LEADERSHIP TEAM  
LOWER BOARDMAN ZONING OVERLAY SUB-COMMITTEE**

**Wednesday, March 4, 2020**

**5:30 p.m.**

**400 Boardman Avenue, Lower Level Cafeteria, Traverse City, MI 49684**

**[www.dda.downtowntc.com](http://www.dda.downtowntc.com)**

Information and minutes are available from the DDA CEO, 303 East State Street, Suite C, Traverse City, MI 49684, (231) 922-2050. If you are planning to attend the meeting and are handicapped requiring special assistance; please notify the DDA CEO as soon as possible.

1. Review of Reaches Discussion and Important Elements
2. Discussion of Zoning Components
3. Next Steps and Reporting Out to the Leadership Team
4. Public Comment
5. Adjournment

Any interested person or group may address the Lower Boardman Zoning Overlay Sub-Committee of the Leadership Team on any agenda item when recognized by the presiding officer or upon request of any Leadership Team member. Also, any interested person or group may address the Lower Boardman Zoning Overlay Sub-Committee of the Leadership Team on any matter of concerning the Lower Boardman River not on the Agenda during the agenda item designated Public Comment. The comment of any member of the public or any special interest group may be limited in time. Such limitation shall not be less than three minutes unless otherwise explained by the presiding officer, subject to appeal by the Lower Boardman Zoning Overlay Sub-Committee Leadership Team.

**Office of the Downtown Development Authority, 303 E. State Street, Traverse City, MI 49684 (231) 922-2050**



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## MEMORANDUM

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**To:** Lower Boardman Leadership Team, Zoning Overlay Subcommittee

**From:** Harry Burkholder, DDA COO

**For Meeting Date:** March 4, 2020

**SUBJECT:** Sub-Committee Purpose and Expectations

As you recall, at the last Lower Boardman Leadership Team meeting, the Leadership Team established two working subcommittees: (1) Zoning Overlay Subcommittee; and (2) Unified Plan Subcommittee. The purpose of the two subcommittee's is to allow a smaller set of Leadership Team members to more closely review, discuss and formulate recommendations on important elements of the Unified Plan. Each subcommittee will then present their findings/recommendations to the full Leadership Team at the next meeting on March 18<sup>th</sup>.

The Zoning Overlay Subcommittee is charged with making recommendations related to zoning regulations along the Boardman River. These recommendations will likely address changes to several chapters within the City's current zoning ordinance and may (or may not) include establishing a new zoning overlay district. Some of the zoning elements noted in the preliminary Action Plan that should be addressed by the subcommittee include setbacks, buffers, vegetation, building form and design and public rights of way. There may be other elements that the subcommittee should address as the discussion progresses.

Items in this packet include the agenda, a summary of the reach-by-reach discussions (from the previous two months), the preliminary Action Plan (with the zoning elements highlighted) and the working buffer ordinance the City is working on.

Subcommittee Members Include:

- Christine Crissman (chair)
- Michael Vickery
- Tim Werner
- Russ Soyring
- Cindy Winslow

## Lower Boardman River Unified Plan

### **SUMMARY OF THE REACH BY REACH DISCUSSION**

#### Leadership Team Meetings

January 29 and February 19, 2020

The two meetings began with a discussion of Best Practices for development, habitat creation, and human recreational access along river corridors. These best practices were identified and shaped from previous public input for the project. See the attached presentation for best practices discussed.

The Leadership Team (LT) then reviewed each reach of the river, focusing on access and existing conditions. For each reach the LT identified opportunities for improvement, goals for future conditions, and guidelines for future change. These discussions are summarized below.

#### REACH 6

1. The existing coastal wetland at the mouth of the river is an excellent opportunity for habitat protection, enhancement and learning.
2. The quaint, low key, coastal village character of the development along the river gives this reach a unique character among other areas of downtown, almost “Fishtown” like.
3. Boats docking along the river in this area, leasing slips from the city, add to this coastal village character.
4. The public land on the north side of Front Street near the end of Boardman Avenue has a stable bank; however, the public land near the end of Wellington Street is eroding under the existing docks.
5. The landscape of this reach should not include manicured lawns along the river but should reflect a native coastal place to the extent possible.
6. Future improvements and developments should reflect the Coastal Village character-this area is a unique intersection of the bay, river, and town. Zoning should manage the heights of buildings in this area to reflect this desire.
7. The public land near the real estate office tends to be underutilized due to the noise from traffic on Front Street and the Grandview Parkway. MDOT improvements to the Grandview Parkway are expected in 2023, and the design of the Front Street intersection includes some traffic calming measures.
8. For this reach (and others) future designs should accommodate high water and increased water level fluctuation.
9. The Boat Launch on the north side of the river is well used, though current high-water levels inhibit some boat traffic getting out to the bay under the Murchie Bridge. The launch is often used by kayakers, especially when the waves on the bay are high. The launch parking lot was recently improved; some hazardous fill material may exist under the lot, so the asphalt is serving to seal the surface.
10. The improvements to the area should include helping to manage water quality from the Grandview Parkway (MDOT).

11. Overall, this area could benefit from greater connection to the waterfront along the bay. A question was raised about the potential to raise the Murchie Bridge to improve pedestrian and boat access to the bay.
12. There is a boardwalk on the north shore of this reach, and the need for a continuous boardwalk in this area was discussed. Boaters use this boardwalk as their rental slip; however, other means of accommodating boaters could be devised.
13. A suggestion was made to rip rap the sheet pile wall that extends into the bay (owner by MDOT) to make it more effective in managing wave energy, create fish habitat, and possibly provide access to the bay for anglers.

#### REACH 5

1. The street bridges in this area are low to the water, but raising them would be difficult while meeting grades at existing buildings, alleys, infrastructure etc. The bridges are also quite wide, and there was some discussion over how to better use the width or reduce it.
2. The 100 block along the river is the greatest opportunity for positive change, such as removing the wall, increasing landscape and habitat, and reducing parking along the river. The area could feel more like the promenade near Garland and Pine Street, and retail could face the promenade. Service could be better managed, the sanitary sewer relocated, and the pedestrian bridges updated.
3. On the north side of the river there has been discussions ongoing about improving the area for a renovated Farmer's Market, or even moving the Market to another place. The market lot is publicly owned, and is considered park land, meaning that the sale of such land would require a vote of residents. The lot directly adjacent to Union Street is also public owned but is not considered park land.
4. There are currently some problems with drains backing up into the lower level of buildings on Front Street in this reach, likely related to high water levels.

#### REACH 4

1. This reach of the river is known as a good place to fish. The river structure, currents, and fish weir result in fish tending to stage in this area as they move upriver. Many anglers and observers congregate near the fish weir in the fall during the salmon run. Increasing fish access in this reach is important. Some concern was expressed about how new development may inhibit angling in this area.
2. The riverbank in this reach is not particularly inviting, or conducive to universal access.
3. Existing utilities in the public owned strip of land on the north side of the river may inhibit substantial change.
4. The community is very happy with the Pine Street pedestrian bridge-it is both attractive and useful.
5. As with many riverbanks in downtown, much of the current shoreline is fill that was used to limit movement of the riverbank. This fill is often construction rubble and deleterious soils. The Unified Plan should consider where it may be prudent to leave existing vegetation in place, such as along the north shore of this reach, or replace the rubble with a better, healthier shoreline.
6. There was discussion related to the benefits and costs of pursuing public access on both banks of the river in this reach. Options will be explored and discussed further.

7. A suggestion was made that public easements could be sought as property develops along the river, and that the easements could be used for landscape and habitat, rather than only for public access.
8. Riverbank enhancements may include the removal of miscellaneous rip rap materials and replacement with more environmentally friendly materials.
9. The river frontage behind the Traverse City Light and Power site could be a good opportunity for habitat improvement.
10. A representative of the development team preparing plans for 309 Front Street gave a brief description of the proposed plan, including lower level parking, a 25-foot development setback, public access along the river, and mixed-use retail and residential development.

### REACH 3

1. Keep Hannah Park Green!! Residents like the low intensity use and green space character of the park. It is the most intact natural bank of the river in the study area.
2. The trail through the park that is a former rail bed is an official city trail. It could be better signed and improved.
3. There is great opportunity for habitat creation at the park, particularly on the west end. The park could maintain its "English Park" character on the eastern half and have more intensity improved habitat on the western half.
4. Fish also tend to stage near the Kidd's Creek structure. This structure could be improved to better allow habitat connectivity. There is skepticism that the structure works to impede the movement of lampreys.
5. The park does get used throughout the year, being a great place to sled in the winter. Not a lot of events occur at the park. SmithGroup will examine the city recreation plan to determine future plans for the park.
6. It would be good if the natural character of the park could transition and impact the Fish Pass and other adjacent areas.
7. There was discussion about the dead end of the boardwalk on the north side of the river west of Pine street, and the opportunities to connect to the path to the north and Front Street.
8. The public parking lot on State Street is designated park land, but parking may not be the best use for this property. Options should be explored.
9. Options were discussed for the parking area east of Union Street north of the dam, including reconstruction with current pervious paving technologies, and the use of the spaces for charging stations.
10. The post office presents a blank wall to the river, which could be a place for a public mural.

### REACH 2

1. The south boardwalk is not well used, which may be in part due to the perception that it is private property.
2. Signage and wayfinding are needed throughout the corridor, and this could help with the private property perception noted above.
3. The noise and energy from kayakers are especially felt in this reach due to the concentration of residents living along the waterfront.

4. The plan should consider long term uses and goals for the American Legion Park, even if in the short term the park is going to be more active due to a potential temporary kayak launch.
5. Consideration needs to be given on how to treat the homeless population as part of the long-term improvement strategy.
6. Dealing with the grade change at the Cass Street bridge is a challenge due to the design of the historic bridge. Options should be explored that may include a tunnel under the road, boardwalk out into the middle of the river, and/or extensive ramping.

#### REACH 1

1. The county is considering improvements at the government center which include barrier free access to the existing boardwalk area.
2. The city has an access easement along the frontage of Riverine Apartments and has plans to include a walkway underneath the Eighth Street Bridge on the west side of the river. The plan should explore whether a path in this easement make the best sense.
3. The parkland near the rail bridge could be upgraded and thought of as a gateway to downtown Traverse City. The Boardman Lake trails on either side of the lake meet at this point. There is a fair amount of trash and debris at the edge of the park that may require blight enforcement.
4. There is a slender piece of city owned land on the east side of the river extending from the MDOT rail corridor north toward Eighth Street. This land does not connect to Eighth Street, so use of this strip would include challenges to connect at Eighth on the north, and to connect through the rail right of way on the south.

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## Lower Boardman River Unified Plan

### *Action Plan*

December 9, 2019

#### **Introduction**

The Action Plan outlined in this report is a first set of recommendations for the Lower Boardman River, based on the extensive public input gathered in the summer and fall of 2019, the professional recommendations from the consultant team, and the guidance of the Leadership Team. The Action Plan is an initial draft to be utilized to solicit further input from the community, key stakeholder organizations, and the governmental agencies that will ultimately be responsible for the plan's implementation.

As evidenced by the content of the public input gathered to date, the community is moving toward a "water centric" perspective of the river and downtown. The values expressed by the public have been integrated into this Action Plan. The plan provides for both the human use of the river and the potential for preserving and enhancing the natural habitat.

The Action Plan is based on the premise that the environmental value of the river corridor is central to the community; this value should be reflected and reinforced through the management of change in downtown. When the community considers all users of the river (including nature) in the design process for future downtown and riverfront projects, then the Lower Boardman will reflect the value placed on water, land, nature, health, and wellness.

The "water centric" values, best practices, and development guidelines integrated into this plan will translate, over time, into better designs for public places, such as streetscapes, public park spaces, pathways, and transportation facilities, and for ensuring that new development creates a better interface between the urban fabric and the river.

#### **Core Values**

The Leadership Team developed a set of Core Values for the project prior to the formal planning process in order to frame the community's basic goals for the river corridor. These Core Values were discussed and tested through an open public process. During the planning process the community reaffirmed the Core Values and provided a set of diverse and substantial ideas that are consistent with the Core Values.

Each chapter of this report includes the Core Values that provided the basis of the recommendations of that chapter.

Two of the sixteen Core Values speak to the broad vision for the Unified Plan and the Lower Boardman River, and these are-

1. *Reflect the City's commitment to the river as a public resource and asset to be passed to residents and visitors in perpetuity.*

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- 2. Contain public goals for the river and City, in keeping with the community's visions about what the River is and can become as a centerpiece for downtown identity and ethos.*

Moving forward will necessitate the development of key partnerships within local government agencies, non-profits, advocacy groups, other key public stakeholders, and the greater Traverse City community. The Traverse City Downtown Development Authority (DDA) and the Leadership Team will continue to build partnerships through an open and transparent public planning process, and ongoing connections with stakeholders of all types. The planning process will continue to engage the community and take direction from their input and guidance.

At the conclusion of this initial study the Leadership Team and DDA will lead the charge in the adoption of the Unified Plan and the practices and values it promotes. As the plan moves into the implementation phase, the DDA and its partners will continue the process of measuring needs, identifying new opportunities, and establishing priorities for moving forward. Given the strong participation by the community in the Unified Plan, the community will be pleased when all new projects on the river reflect these values and considers the value of natural habitat, as well as human use!

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## I. River Conditions and Habitat

### A. Intro

The river conditions in the project area have been assessed as to their overall condition and relative habitat value. The project area includes the urban core of Traverse City where historic development patterns did not fully capitalize the river's potential for recreation and access or recognize its environmental value. The impact of development has left a large percentage of the corridor with vertical walls and hardened, steep slopes but has also created some interesting urban places that the community values, such as the boardwalk and the coffee shops and restaurants that overlook the river.

The river corridor in the project area also includes some areas of natural beauty and value. Some of these areas have been impacted by community development in limited ways, while others seemingly natural areas are urban fill masked over by trees and vegetative growth.

The river corridor through the project area has been categorized or divided into six distinct river reaches, based on the flow characteristics and bank conditions. Refer to the Existing Conditions Map for a summary of the river reaches.

Community feedback from online surveys and at public workshops has strongly supported the idea of "greening" the riverbanks through downtown to create riparian habitat and improve water quality of the river. While human access and use and preserving and creating habitat are not mutually exclusive, most residents who have participated in the planning process are in support of habitat as a priority over public access. This bias has several contributing factors-environmental stewardship values, the desire to maintain a passive and quiet setting along the river, and relative beauty of trees and landscape over walls and paving, to name a few.

The section below outlines the basic direction for preserving and creating natural habitat in the project area.

### B. Core Values

The following Core Values, established at the outset of the planning process, most align with the preservation and restoration of the environmental assets of the river:

1. *Be consistent with best riparian and aquatic science, best water and land management practices and must be harmonious with the river.*
2. *Be explicit to the commitment to improve, restore and protect the health and integrity of the riparian ecosystem of the lower river.*
3. *Manage invasive vegetation and protect and retain existing native vegetation and add native vegetation where possible.*
4. *Ensure that the natural flow of the river is enhanced and not curtailed or impeded by any element of the plan.*

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## C. Projects

The Unified Plan will include a physical illustrated plan that outlines public improvement projects within the project area, including both habitat and access/open space enhancements. This plan will be developed later in the planning process; however, there are ideas for several broad categories of projects that evolved out of community input, including:

1. *Improve degraded and hardened riverbanks on public property with green solutions and enhanced riparian habitat.*

The Unified Plan will identify key opportunities along the corridor for habitat improvement, based on public land ownership, slopes, bank conditions, flow and depth characteristics of river, adjacent land uses, public activity along the river, and the general condition of the plant communities.

As noted above, much of the existing riverbank, though covered in vegetation, is compromised in its value for habitat. Degraded banks of the river should be restored with bioengineering solutions where possible, and include consciously placed habitat structures, such as bird houses and hibernacula.

Other reaches, including existing floodplains and low slope banks, provide opportunities to create a diverse mix of habitat types (including wetlands).

Vertical retaining walls are located throughout the project area, typically where space is limited or where past need for land uses such as parking were considered very important. In some places these walls are necessary to support existing buildings and are in good condition. In other locations the walls are in poor condition and are being undermined by the river. Finally, in some areas walls were installed to create more land or for convenience, but are not particularly necessary. In each case, vertical walls (as designed) offer no real habitat benefit.

The ongoing assessment of the walls between Union and Park Streets should be expanded in the future to assess the condition and purpose of other existing vertical walls on public property in the project area.

The Unified Plan advocates for the removal of vertical walls, where feasible, replacing the walls with bioengineered riparian edges. In places where vertical walls are required, but must be replaced, there are innovative wall design techniques that retain soil while offering some habitat value.

2. *Where public land exists along the river corridor, create more green space with enhanced habitat and sustainable landscapes.*

The public strongly believes that surface parking is not as valuable along the river corridor as green space would be. While the need for parking to support the downtown

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and the bayfront amenities is clear, the existing parking lot sites are an excellent opportunity to create more natural riparian and wetland habitat.

To implement a change in parking along the river, the DDA will need to collaborate with the City, local stakeholders, and the farmer's market to consider the best and highest use for the land where parking lots exist along the river, emphasizing the value of creating habitat and protecting water quality. Further, the community should consider new parking facilities (not adjacent to the river) that could allow the development of more green space along the river.

In the near-term, interim sustainable improvements to parking lots could be implemented to manage impacts of stormwater, such as enhanced landscape buffers.

For all publicly owned river edges, the Unified Plan will recommend habitat improvements including ideas for improving fisheries and aquatic resources, riparian bank improvements for birds, mammals and reptiles, and the potential for creating floodplain and wetland types likely present in pre-settlement times.

3. Coordinate habitat enhancements with the FishPass (assuming implementation).  
The development of the FishPass Project, assuming it is implemented, offers an opportunity to enhance aquatic species habitat within the river, up and down-stream from the dam. These improvements should focus on the needs of the target fish species and contribute to the scientific research conducted by the FishPass. There is also an opportunity to improve riparian habitat between the Union Street and Cass Street bridges to balance any additional hardened edges built as part of the FishPass.

The DDA, Leadership Team, and City should continue to coordinate efforts with the FishPass project team.

4. Encourage private development to also protect and create habitat, as outline in Section IV. Community and Development Policies in this report.

## D. Guidelines

1. Use native landscape plants and habitat enhancement structures on new public projects.
  - a) Develop a plant palette of desired native plants, based on slope stabilization characteristics, urban conditions compatibility, aesthetic value, and habitat value (e.g. for pollinators).
  - b) Develop a list of target species and habitat structure types to be incorporated into the corridor (e.g., osprey nesting).
  - c) Incorporate native plants and habitat structures (where appropriate) into each project.

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2. Include in each public habitat project a requirement for pre- and post-construction assessment.
  - a) Assess pre-planning habitat conditions and population surveys for larger scaled projects (over 1 acre in size and/or one block length).
  - b) Include habitat enhancements into the design of improvements to target deficits discovered during the pre-planning assessment.
  - c) Re-assess habitat conditions and population surveys one year post construction to quantify habitat creation success.
  
3. Monitor water quality over time, as well as the efficacy of river habitat improvements.
  - a) Obtain and analyze water quality samples annually to establish a baseline, and monitor trends in water quality.
  - b) Prepare a base line assessment of riparian and aquatic habitat for the entire project area, including habitat quality and species population and extent.
  - c) Assess habitat improvement for each substantial project as outlined in "Best Practices."
  
4. Develop design and maintenance guidelines for riparian landscape for use in maintaining public sites and guiding private landowners.
  - a) Benchmark other communities' efforts to promote native landscape in the public and private realms.
  - b) Develop guidelines for design and maintenance based on Unified Plan and input from stakeholders.
  - c) Promote use of native landscape and guidelines through local advocacy organizations, garden clubs and related organizations.

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## II. Access, Open Space and the Built Environment

### A. Intro

There is a need to expand facilities on the river corridor to accommodate access, movement along the riverbank, and on-river recreation. However, actions to meet this need must be tempered within the larger desires to maintain a natural character of the river corridor (where it exists).

### B. Core Values

The following Core Values, established at the outset of the planning efforts, most align with providing public access and open space along the river:

1. *Identify/prioritize opportunities for multi-modal access to the river.*
2. *Integrate existing river walks and pathways with new connections between sites and destinations that link the river to the City in ways that are physical, visual, aesthetic and psychological.*
3. *Enhance ecological and aesthetic river conditions, take advantage of and integrate iconic structures, and identify new sites and structures that serve as destination or centers of programming to attract year-round access.*
4. *Make nature-based stormwater best management practices (BMP's) a priority.*

### C. Projects

The Unified Plan will include a physical illustrated plan that outlines public improvement projects within the project area, including access and open space enhancements. This plan will be developed later in the planning process; however, there are ideas for several broad categories of projects that evolved out of community input, including:

1. *Provide a clear, legible connected path system that allows users to find their way along the corridor, while providing for moments of discovery that feel unique.*

Currently there are gaps in the river trail system that dead end or leave the visitor confused as to how to continue their exploration of the river and community.

The DDA is currently establishing a wayfinding/water-trail signage plan that provides the visitor guidance, as well as information about the community and its history.

While wayfinding systems are an important component to a linear greenway, the path itself must be legible and clear, offering visual/physical clues that direct people to continue their exploration. The community is very clear in their desire to maintain contiguous stretches of the river that are not developed with paths but focus on natural habitat with limited human intervention. Having paths on both sides of the river would make the system very clear, but not as friendly to non-human species. In addition, such an approach would leave the river corridor looking excessively urban, which is not a community goal.

The challenge is to develop a path system that allows some continuity along the river but may move from one side of the river to the other in an adjacent segment. Such a

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system should also provide some diversity in experience where a path is provided, allowing for areas that are boardwalk over the river, walks along the top of the bank, and places where the public street is integrated.

When designing a particular path segment, the Unified Plan needs to consider the least impactful locations for new paths relative to riparian and aquatic habitat. This allows for the diversity of path experience noted above and honors the community's goal of providing meaningful natural habitat.

2. Connect the river path system to adjacent neighborhoods, downtown, bayfront, TART, and BATA stops.

The Unified Plan will identify key connection points along the river corridor that should be integral with a linear path system and develop strategies to improve connectivity to these community assets.

As each segment of the river is improved for public access, the Unified Plan must provide physical/universal access to the river corridor from community linkage points (e.g. the TART) as part of each improvement project.

The alley, service and parking area on the south side of the Boardman at the 100 and 200 block of Front Street is a critical segment where there is a need for vehicle use, as well as large volumes of pedestrians that desire access along the river and connection to Front Street. A creative solution that manages this blend of users, develops an interesting civic space and "greens" the banks of the river for habitat is required.

3. Consider a range of open space nodes and amenities along the river corridors of varying sizes, purposes, and characters, including:

- a) Water use amenities identified by the Boardman River Water Trail Study, such as accessible kayak launches, kayak racks (as needed), portage points (e.g., at Fish Weir) and marketing materials.
- b) Site furnishings such as trash and recycling stations, lighting, drinking water and water bottle filling stations, bicycle parking and signs to provide a safe and clean environment.
- c) Public restroom facilities along the corridor, and/or better wayfinding to publicly available restrooms at places like the Government Center and the TC Visitors Center.
- d) Fishing access points located at known places of angler activity. These places typically function the best when segregated from through pedestrian movement along the linear path.
- e) Resting and viewing places, spaced at key points of natural or architectural beauty, and where people watching is likely.
- f) Small scale community gathering places where groups can gather for photos, lunches, small performances, etc.
- g) Art installations at bridges and other key public areas along the river.

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4. Improve streets and bridges to create a more pedestrian friendly downtown and improve access to the river.

The DDA has coordinated with the City Engineering Department to review and collaborate on planned bridge improvement projects, and the projects have considered the need for pedestrian access. For example, the proposed bridge at Front Street will include a pedestrian underpass on the east side of the river, and the Eighth Street bridge will have an underpass connection on the west side of the river.

The downtown bridges that cross the river north of Front Street are limited in their ability to provide consistent underpass access due to the low bridge and road grades, which cannot be amended due to existing buildings and related constraints.

As the planned bridge improvements are made, the City and DDA should consider pedestrian access improvements in the area of the bridges as a priority to gain efficiencies in construction and phasing and enhance connections at-grade with the street and the available underpasses.

In addition, the City and DDA should consider the potential for creating sculptural gateways at the bridges to highlight the presence of the river and the removal of parking on bridges to increase pedestrian space. The sculptural gateways would not need to be directly attached to the bridge in order to be effective.

The planned reconstruction of the Grand View Parkway by MDOT provides a great opportunity to work with MDOT to make pedestrian safety, access, and crossing the corridor prominent features of the project.

## **D. Guidelines**

1. Ensure universal access and consciously designed experiences for a range of abilities and aptitudes.

Universal access to facilities and experiences on the river is a baseline assumption.

Several facilities which offer access to the riverbank do not meet current guidelines for universal access, some of which is due to the significant constraints of land area and grades. As new (universal access conforming) facilities are put online, attention must also be paid to retrofitting existing paths, bridges, access points and overlooks.

Projects must consider universal access needs at all stages of the work, from the beginning of design to the final installation of railings. Even before design work is starting, the cost implications of universal access must be included in establishing project budgets.

In addition, the goal of universal access goes beyond providing safe and easy access, but includes providing facilities that engage all users and abilities.

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## 2. Establish design guidelines for public path facilities.

The linear path and public spaces along the river corridor currently include segments that are asphalt path, concrete walks, unit pavers, gravel, and wood boardwalks.

Further, several different light fixtures and site furnishing styles exist along the river.

The intent of the Unified Plan is not to impose strict conformity over the use of materials; however, some basic standardization is important to create enough consistency to provide visitors with the visual clues necessary to follow the corridor.

- a) Establish pavement material standards and width requirements.
- b) Identify typical locations where safety railings should be assumed, such as stairs, ramps, high volume walks along the water, intersections of paths, where fall potential exists over 30 inches.
- c) Consider the potential impacts of climate change and water level fluctuation in the design of new facilities. Examine the feasibility of floating docks, where possible, to provide flexible access and connections. Design walks and related facilities that are at a fixed elevation to include additional design freeboard than typically has been considered.
- d) Public launch/portage facilities should accommodate contemporary forms of non-motorized watercraft.
- e) Incorporate night sky lighting best practices into public and private improvement projects. The Unified Plan recommends that the City and DDA consult with lighting designers to create guidelines for required light levels for both private and public improvements in the river corridor and identify fixture types for typical locations.
- f) Consider value of trees and leafy vegetation to reduce heat island effect and in carbon sequestration and provide for human comfort.

## 3. Manage stormwater on new projects consistent with current best practices to protect the water quality of the river and the bay.

Simply put, all private and public developments should be designed to eliminate direct stormwater flow into the river and be required to use best practices to cleanse and filter stormwater such as rain gardens, stormwater treatment structures, pervious pavements, and landscape buffers.

A key element to achieving this directive is to adopt and follow the guidelines in the forthcoming "TIF 97 Stormwater Management Plan" for all projects within downtown.

For public improvement projects, the standard should be higher than "do not increase impervious surfaces and stormwater volume," such that each public project include best practices to avoid, where possible, point source contributions to the river in favor of ground water infiltration and filtered overland flow, to improve water quality released to the river and reduce the time of concentration and volume of water.

As public projects reconstruct the riverbanks and adjacent areas, existing roof drain outfalls into the river should be intercepted and treated. Projects should also consider the potential for storage and reuse of stormwater for irrigation.



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## III. History, Culture and Learning

### A. Intro

The development of a cohesive path system and improved habitat along the river is an incredible opportunity to engage the community and visitor in history, culture and learning focused on the downtown and the Lower Boardman River. The potential for learning and highlighting the uniqueness of the community should be integral into the early design stages for each reach of the river, so that the historic, cultural and natural assets drive the location the improvements made, when appropriate.

Efforts to fully develop the Lower Boardman River need to go beyond typical interpretive signage approaches and include thoughtful displays and landscape that engage the visitor in an active way. This approach to learning reaches the public in a deeper way and helps create a more exciting place to visit.

### B. Projects

As the Unified Plan is implemented the projects described below are recommended:

1. *Honor the First People's heritage and cultural legacy through meaningful interpretive experiences throughout the project area.*

The first effort is to build on the existing knowledge base about the First People's relationship with the land along the Lower Boardman. Current sources of data should be reviewed, as well as developing an inventory of existing sites where the history and culture of the First People has been recognized. Cultural Resource specialists can assist in identifying additional sites of significance within the project area, and further defining the historic use of the area.

Once the study and data gathering are complete, the City and DDA should create a thematically linked interpretive system, consistent with the recent water-trail signage plan, located at sites of cultural significance.

A more ambitious goal to celebrate the First People's presence in the Traverse City area is to create a Tribal Cultural Center within the project area. In the months ahead the Unified Plan will identify potential alternative locations for a cultural center.

The City and DDA could coordinate with local tribal groups to develop the architectural, educational and funding program for the center, and locate and obtain an appropriate site.

2. *Note and interpret key sites of European settlement, and the role of the river for industry and transportation.*

Maps and related historic resources tell us much about the community through the early years of European settlement and industrial growth. As part of a comprehensive interpretive learning program, the City and DDA should coordinate with local historians to identify high priority sites for learning and the interpretive messaging.

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3. Provide interpretive theme about geology, the formation of the river, and the connection to lake levels.

As noted elsewhere in this Action Plan, one of the key steps moving forward is the full assessment of the current conditions related to aquatic and riparian habitat. For purposes of developing an interpretive learning program this natural features inventory would provide data on specific locations of rare and endangered species, and habitats of notable interest.

Knowledge of existing conditions will help guide future habitat goals and plans, and assist in the development of design ideas for displaying information and encouraging hands-on learning.

Other key goals in the learning program is to integrate water literacy into the public education outreach and provide interpretive themes about water stewardship and the impact of water quality on human and environmental health. In addition to discussing the Boardman's impact on safe and accessible drinking water, the interpretive education program can highlight measures the City has taken to promote water quality; e.g., the Waste Water Treatment Plants' membrane system.

## C. Guidelines

1. Include cultural resource investigations into each publicly funded construction project.

A Cultural Resources Assessment should be prepared as a baseline understanding of the potential sites where it is likely that encampment areas and places of intense use by First Peoples may exist. This study will be helpful in developing the interpretive learning program discussed above, and it can be used to flag key areas of concern along the river where historic artifacts may be uncovered by projects that involve excavation of soils.

During the design and planning for projects being built, future project teams can identify potential construction impacts on historic cultural artifacts, determine where further investigation is required prior to construction, and monitor construction for potential discovery of cultural resources.

2. Continue to integrate the provision of art along the river corridor as it is improved.

During project planning, future design teams should consider art in locations identified in Unified Plan, as well as new suitable locations based on the attributes of the project area.

Efforts to place art should be coordinated with the Traverse City Arts Commission.

3. Engage the local learning community in using the LBR and FishPass for research and learning.

Given the great opportunity to use the Lower Boardman River as a source of learning, the City and DDA should create an outreach campaign to local educational institutions that encourages visits to the river and collaboration on learning objectives and curricula.

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Outreach partnerships could also include research, cultural resource investigations, and habitat monitoring that could be performed by, or with, local learning institutions.

4. Actively manage the interpretive system of the district to reflect new information and special programs and meets the needs of all users.

Interpretive learning systems are most effectively when they are flexible and change over time to reflect new data and understanding of the subject matter. We recommend a regular assessment of the efficacy of interpretive displays and facilities, and the use of interpretive learning systems that can be modified or adapted to new learning objectives and curricula, in addition to more permanent displays.

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## IV. Community and Development Policies

### A. What needs to change and why

Recognizing an explicit commitment to the principles of public trust in the protection of the river as a community commons, regulatory policies that guide building and development in the downtown area should be amended to reflect the vision and values of the Lower Boardman River Unified Plan.

Modifying public policy will impact private land development, as these are the regulations and guiding documents that shape the use of the land in our community. However, the intent in modifying these regulations and guiding documents is also to establish standards by which public improvements must abide.

### B. Core Values

The following Core Values, established at the outset of the planning efforts, most align with the management of private and public development along the river:

1. *Help ensure that new or rehabilitated developments along the river are compatible with the City's renewable energy goals.*
2. *Establish that development sites, destinations and structures must protect the health, aesthetics, accessibility and health of the relationship between the river and residents/visitors.*
3. *Use the natural and cultural values of the river as a guide for decisions about the commercial, economic or utilitarian values to be leveraged for the public good.*
4. *Prohibit further hardening of the shorelines that are inconsistent with the Unified Plan.*

### C. Zoning Ordinance Changes

1. *Adopt changes to zoning in collaboration with changes being considered by the Planning Commission.*

Currently the Planning Commission is reviewing potential changes to two ordinance sections-

- a) Landscaping and Trees Amendments which would modify various subsections of Part 13 Zoning Code to protect existing trees and require planting of new trees; and,
- b) Riparian Buffer Zone Ordinance, a new ordinance that would regulate activity within 10 feet of the Ordinary High-Water Line along the Boardman River and Boardman Lake.

The City and DDA should actively participate in the adoption process of these ordinances to represent the values of the community as enumerated by the Unified Plan.

2. *The Unified Plan supports the modification of zoning ordinances to manage the scale, placement and site improvements of new development consistent with the Core Values of the Unified Plan.*

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As part of the proposed Riparian Buffer Zone Ordinance or as a stand-alone ordinance, the Unified Plan advocates for the creation of a LBR Overlay District to manage development in the project area. The City and DDA should collaborate with the Planning Commission to propose a LBR overlay zoning district and modification of other zoning sections (in Part 13 Zoning Code) to manage setbacks, open space requirements, approval processes, and development practices.

The specifics of these changes required thoughtful debate and consideration. The following is recommended as a starting place:

- a) Through the Planning Commission, establish a new building setback, ranging from 15- to 40-feet depending on the reach of the river. Clarify allowed use of setback.
- b) As part of Chapter 1366, Site Plans and Site Development Standards, require the assessment of impacts to water quality and habitat for each new development project, mitigation for impacts, and establish criteria for approval.
- c) Encourage multi-story buildings (within zoning limits) to reduce building footprints along the river. This could also be accomplished through impervious surface limits and open space requirements.
- d) Amend the zoning ordinance to establish frontage recommendations (i.e.; buildings oriented to river with access, windows, and/or well-designed facades) for buildings adjacent to the river, to activate the river corridor and expose more downtown visitors to the river.
- e) Restrict the creation of public and private parking within the river corridor, create a (TBD) setback for parking from the OHW line, restrict direct stormwater flow from lots into the river, and/or reduce or eliminate parking space requirements for all riverfront (and DDA district?) developments.
- f) Adopt incentives to encourage the use of sustainable building materials, energy efficiency and production, and reuse of building water.
- g) Encourage the use of native plants (from preferred list within the riparian overlay district) and the preservation of healthy existing native trees.
- h) Establish policy in City development regulations that prohibit vertical wall construction as shoreline stabilization treatment, where feasible, and encourage habitat enriched walls where they are unavoidable.

**D. Amend the Community Master Plan to be consistent with the findings and recommendations of the Lower Boardman River Unified Plan.**

When adopting or modifying new ordinances, it is critical that the Community Master Plan supports the values and guidelines that are reflected in the new ordinances. This can be accomplished in one of the following ways:

- Adopt the Unified Plan as a "Sub Area Master Plan" as provided by the Michigan Planning Enabling Act, Act 33 of 2008; or
- Integrate key findings of the Unified Plan into the next update of the Traverse City Comprehensive Plan, and incorporate the Unified Plan by reference; or
- Create a new Downtown Plan as a Sub Area Master Plan, integrating the Unified Plan.

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## **E. Regulatory Ordinance changes**

A great deal of the public input gathered during the planning process supported ideas that are best implemented through changes to the Codified Ordinances of Traverse City. These ordinances are considered “regulatory,” since they are local laws enacted to regulate activity or set standards for the use and development of public facilities such as streets. These ordinances are adopted by the City Commission and are outside of Zoning Ordinances which are focused on regulating the use of land.

Recommended regulatory ordinance modifications for consideration include:

- Integrate lighting guidelines into the appropriate sections of the Codified Ordinances of Traverse City, under Part Ten-Streets, Utilities and Public Services, and Part Fourteen-Building and Housing Code.
- Amend the Codified Codes of Traverse City, Part 13 Zoning Code, Chapter 1372 Landscaping to reflect use of native plants and preservation of trees.
- Consult with City Attorney, Clerk, and Manager on the alternative approaches to regulating river use. Propose and conduct a fair and open process, working in cooperation with licensees. Propose and adopt changes to the Codified Codes of Traverse City, Part Ten Streets, Utilities and Public Services Code, chapter 1064 Parks, and related codes. Code changes could include volume limitations placed on licensees, Quiet Zones along the corridor, limitation on the use of alcohol, hours of operations, and disorderly conduct.
- As the need may arise, consider establishing outdoor eating guidelines for private use of public space, similar to those used by many communities for managing sidewalk dining.

## **F. Community Recreation Plan Changes**

Funding grants through the Michigan Department of Natural Resources (DNR) are available for many of the projects outlined in the Unified Plan. To be fully eligible for these potential grants, the planned projects should be reflected in the Recreation Plan for Traverse City. Per DNR guidelines, the Recreation Plan is updated every five years, which in Traverse City’s case would be in 2021.

The Recreation Plan should include the Unified Plan recommendations to improve public parks in the project area and proposed trail connections. The City and DDA will need to coordinate Recreation Plan changes with the Parks and Recreation Commission.

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## V. Implementation and Management

### A. Intro

The City and DDA should establish a strategic plan to pursue the implementation of the Unified Plan, manage development of the public river corridor, monitor river conditions and development, and maintain the river corridor.

### B. Core Values

The Core Values established at the outset of the planning efforts that most align with the implementation and management of the Unified Plan include:

1. *Foster and sustain partnerships with shared responsibilities among public and private stakeholders who share the value that the Boardman is a “common resource” that connects everyone.*
2. *Provide that the recommended initiatives contained in the Unified Plan will account for the impact of those initiatives on residents, habitats and the ecological status of the river.*

### C. Assignment of Responsibilities

One of the most important set of decisions to be made in the planning process is the assignment of responsibilities for the future development, management, and maintenance of the Lower Boardman River district.

The City and DDA will need to collaboratively review the anticipated needs of the district and designate which government entity or sub-entity will provide management and maintenance oversight and assist in the funding of projects and maintenance.

Considerations include:

1. Who will define issues and establish criteria for managing and adapting the plan going forward?
2. Who will “own” the plan and the responsibility for its implementation, adaptation and success?
3. How will decision making responsibilities be distributed and coordinated?
4. How will enduring and adaptive structures for stakeholder involvement be established and ensured?

As a starting point for discussion we should consider the existing governmental structures in place to complete this work, as follows:

1. DDA
  - Parking (Part of City and DDA??)
  - Farmer's Market Advisory Board
  - Traverse City Arts Commission
  - Lower Boardman River Leadership Team
2. City Planning
  - Zoning and Development Regulations

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- Economic Development
- 3. Department of Municipal Utilities
  - Storm Sewers
  - Water
  - Sanitary Sewers and plant
- 4. Traverse City Light and Power
- 5. Department of Public Services (management and maintenance)
  - Parks and Recreation
  - Streets
  - Sidewalks
- 6. City Engineering (Design and Construction)
  - Street, Parking, and Bridge- Design and Implementation
  - Parks Implementation Administration
  - Traffic and Multi-jurisdictional outreach
- 7. City Police-public safety and emergency response
- 8. City Fire-public safety and emergency response

## **D. Funding of Improvements and Management**

The City and DDA will need to engage sources for funding the construction and maintenance of improvements in order to implement the Unified Plan. There are three important tracks for this pursuit.

As the Unified Plan is being completed, the Leadership Team needs to identify potential grant sources, criteria for selection, and applicability to proposed projects, and then match these potential grant sources to the priority projects for implementation. Sources of grants may be non-profits, federal and state programs, community donations, or philanthropic individuals and organizations. To successfully implement the projects outlined in the Unified Plan, there will be a need for multiple grant sources and to manage the application for, and use of, the grants on an ongoing basis.

Prior to adoption of the Unified Plan, the DDA and City will need to determine how the Lower Boardman River project will move forward in terms of financial and management responsibilities, as noted elsewhere in this report. As part of this process, the DDA will need to consider how TIF funding can be used to fund improvements and management.

Each year the Planning and City Commissions develop a Capital Improvement Plan (CIP) which outlines anticipated budgetary spending for Traverse City. Some of the projects may be funded, at least in part, through the City, and so there needs to be effort invested to coordinate as the CIP is prepared each year.

## **E. Maintenance**

The community is concerned about how the river corridor facilities and landscape will be maintained, citing two concurrent ideas- not wanting to burden government services and



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taxpayers, while also ensuring a safe, clean, healthy, and welcoming Lower Boardman. Recommendations for maintenance include:

1. *Provide for regular and timely maintenance to manage waste and cleanliness.*

Significant interest exists for the development of an "Adopt a River Reach" or "Friends of the LBR" program to encourage public and private partnerships to keep the riparian district clear of trash and otherwise well maintained. Organizations like this have been implemented in many communities to reduce the impact on city services, while creating a civic presence of active citizens on the riverfront.

Even with the presence of an active volunteer organization, the City and DDA may remain responsible for maintaining general trash, waste management stations, and bathrooms; the cost of providing these services needs to be considered.

To assist in managing trash in the corridor, the City and DDA should consider public outreach to promote responsible visitor behavior and take measures such as the prohibition on the use of plastic bottles within the Lower Boardman District.

2. *Maintain landscape plantings to provide shade, thriving plant communities, invasive control, recreation use, and views of the water.*

The community is ready to accept a native landscape along the river, (in lieu of manicured lawns.) However, this approach to landscaping is not free of maintenance requirements. The City and DDA should develop maintenance procedures and protocols consistent with community expectations and determine who will be responsible for this work. In some communities, maintenance of native landscapes is completed through volunteer organizations as discussed above, in other communities the work is completed through merchant associates.

Trees blocking access through the river corridor by kayaks and related craft can be an issue, particularly in the spring. In collaboration with kayak licensees, the City and DDA should set basic parameters which can guide tree maintenance to allow recreational use of the river without losing the value of shaded water and downed snags which enhance fish habitat.

Whether the landscape is maintained in a partnership with volunteer organizations or managed by the City and/or DDA, we recommend that the services of a trained arborist be retained to provide emergency services, as well as regular tree assessment, trimming, and maintenance.

3. *Maintain the condition of boardwalks and related facilities on a regular basis and ensure ADA compliance.*

Similar to trash, cleaning and landscape maintenance, the City and DDA must establish or assign an entity to be responsible for facility maintenance and should consider partnerships with private and non-profit community focused organizations.

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The goal is to develop maintenance procedures and protocols so that repairs are completed on a timely basis and facilities remain universally accessible.

Other communities have established a long-term, reliable and consistent funding stream for maintenance, based on steady governmental funding or endowments, or through a combination of sources.

4. *Implement snow and ice maintenance plans which limit the impacts on water quality and habitat.*

Visitors and community members are expected to use the walks and facilities along the river on a year-round basis. The City and DDA should identify current practices for maintaining walks and streets in downtown and along river, review the efficacy of current practices, and establish priorities for the future. As part of this assessment, the City and DDA should consider and test alternative means of snow maintenance, and logical limits for winter maintenance on paths and boardwalks.

Priorities for establishing future snow practices include pedestrian and user safety and the impact to water quality and the river environment. Consideration of planned maintenance practices should be considered and integrated into each improvement project for the river corridor.

**F. Public Outreach**

Community members have been actively engaged in the planning process and continue to guide the outcomes of the Unified Plan. As the plan is implemented, each key project and milestone should be completed with the expectation that the community engagement is a critical part of a successful project and community.

Community engagement should include an invitation to participate in the planning and design of future improvements; however, a public engagement strategy can go beyond involvement in specific projects, as outlined below.

The City and DDA can collaborate with existing education efforts in the local community in terms of best practices (e.g., not dumping fall leaves and parking lot snow in river, adopt a CB program.) In a similar educational vein, a website for the LBR should be maintained to promote open communication and information sharing with the public. The website should be utilized to regularly post technical data from the monitoring of habitat and water quality efforts on the river, including information coming out of the FishPass project.

Successful urban places often focus on encouraging community engagement with their waterfront through the programming of civic activity. Program activities along the river corridor can encourage appropriate use of the river, offer educational instruction, entertain visitors in creative ways, and promote the civic value of the space. A good first step is to establish a policy for events and activities along the river, bearing in mind the community value of the river as a quiet respite.

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Moving forward the City and DDA could collaborate with existing event organizations to further integrate the river corridor into the events. Also, the creation of a “friends” group that assists with activities and programming for the river should be explored, further expanding the role a volunteer organization could play.

Finally, the City and DDA should consider the use of enforcement officers or river guardians to help visitors orient to the community and to manage inappropriate behavior on the river (e.g., over-indulging in alcohol).

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## RIPARIAN BUFFER ZONE

1. The purpose of this chapter is to preserve areas that intercept and filter surface water runoff and improve water quality while also providing community scenic and recreational values. A riparian buffer zone protects critical shoreline and floodplain areas by providing for the establishment of deep-rooted native vegetation. A riparian buffer zone shall be established and maintained to enhance property on **all** waterfront lots on the Grand Traverse Bay, Kids Creek and Boardman Lake. The riparian buffer zone shall include all land located within twenty-five (25) feet of the ordinary high water mark of Grand Traverse Bay and Boardman Lake abutting the lot, and ten (10) feet of the ordinary high water mark of Kids Creek abutting the lot. A slope value of 40% or more shall be excluded when calculating the buffer width. **"All" would seem to include public walkways and parks**

As used in this section:

Compliance Required.

Any parcel or development within the riparian buffer zone for Grand Traverse Bay, Kids Creek and Boardman Lake must meet the requirements of this chapter.

Standards.

1. No development, permanent structures (including fences) or parking area(s) shall be allowed within the riparian buffer zone. The following exceptions are permitted, as described in #s 2 and 3 below: temporary structures and storage, pathways.
2. Existing vegetation shall be preserved in the riparian buffer zone within twenty- five (25) feet of the ordinary high water mark of Grand Traverse Bay and Boardman Lake abutting the lot, and ten (10) feet of the ordinary high water mark of Kids Creek abutting the lot. A slope value of 40% or more shall be excluded when calculating the buffer width. A mowed lawn to the water's edge is prohibited in the riparian buffer zone. If the natural vegetation is removed in violation of this section or if replacement of the natural vegetation is necessary due to disease or other factors, then that vegetation shall be replaced with similarly sized native or native cultivar trees and other woody vegetation that is effective in retarding water runoff, preventing erosion, and preserving the natural beauty of the area.
3. Existing healthy trees located within the riparian buffer zone shall be preserved. Existing healthy trees located within required water setbacks shall be preserved.
4. Dead, diseased woody vegetation, unsafe or fallen trees, and noxious plants, including poison ivy, poison sumac, poison oak, and other plants regarded as a common nuisance in Section 2,

Public Act of 359 of 1941, as amended, being MCL 247.62, may be removed from the riparian buffer zone. Any tree listed on the State of Michigan Invasive Species list that has been identified as such by a Certified Arborist may be removed provided the stump and roots are treated and left in place. For each invasive tree removed a similarly sized replacement tree shall be planted within the riparian-buffer zone area. The removal of more than one tree or more than 25 square feet of vegetation requires a consultation with a Certified Arborist. If natural vegetation is removed in violation of this section, or if replacement of the natural vegetation is necessary due to disease or other factors, then that vegetation shall be replaced with similarly sized native or native cultivar trees or other woody vegetation that is effective in retarding water runoff, preventing erosion, and preserving the natural beauty of the area.

2. No permanent structure, including fences, shall be allowed within the riparian buffer zone. Temporary structures, such as XXXXX (Temporary structure: permeable floor / XX feet above ground / removed in winter or when not in use.)
3. Pathways may be constructed within the riparian buffer zone area if all of the following requirements are met: 1) The pathway is perpendicular to the waterfront; 2) The pathway is constructed of permeable material that does not allow surface water to drain directly into the lake, river, creek or bay. A maximum of two (2) pathways are permitted per lot. The total width of all pathways on a parcel shall not exceed the greater of 10 feet or 20% of the width of the lot. Construction of a permeable pathway may not remove existing healthy trees in the riparian buffer zone area without the Planning Director's, or his or her designee's, approval.
5. If a **dwelling** is sited on a waterfront lot, an area of the riparian buffer zone equal to no more than 1 1/2 times the principal structure width facing the waterfront may be selectively pruned to provide a filtered view of the water. Prior to any pruning, the property owner shall consult with the Planning Director, or his or her designee, to establish the acceptable amount of pruning allowed. No clear cutting within the riparian buffer zone shall be permitted. If the natural vegetation has been removed in violation of this section or if replacement of the natural vegetation is necessary due to disease or other factors, , then that vegetation shall be replaced with similarly sized native or native cultivar trees or other woody vegetation that is effective in retarding water runoff, preventing erosion, and preserving the natural beauty of the area.
6. Soil and erosion measures and procedures will be employed in accordance with Michigan regulation standards and the City of Traverse City Ground-Water Protection and Storm-Water Runoff Control. (needs hyperlink)
7. Fertilizers, manures, and chemicals shall not be used, stored, or located within the riparian buffer zone area. No unsightly, offensive, or potentially polluting material, including but not limited to, compost piles, lawn clippings, leaves, garbage, trash, refuse, and animal pens shall be used, stored, or located within the riparian buffer zone area.

8. No breakwalls, seawalls, bulkheads, broken concrete, rubble, rock riprap, or other shoreline hardening materials shall be located within the riparian buffer zone.
  
9. Reduction. In the event that the application of the riparian buffer zone standards of this Section, together with any other dimensional restrictions applicable under this Ordinance, results in a legal parcel that cannot be reasonably developed for permitted land uses in the district within which the property is located, a waiver, variance, modification, exception or similar provision shall be determined by the Board of Zoning Appeals.

Definitions. (to be completed)

“Pruning” means the targeted removal of diseased, damaged, dead, non-productive, structurally unsound, or otherwise unwanted tissue from growing plants. Pruning will maintain the crown form of canopy trees. Pruning does not include removing, harming, or damaging a tree to prevent regrowth. The removal of trees or vegetation is not considered pruning.

we suggest adopting water setbacks for Kids Creek at the same time as the riparian buffer chapter. Our May 2, 2019 letter (attached) proposed amendments to provide for water setbacks along Kids Creek in all the districts through which this stream runs.