

Preliminary Engineering Study For Lyndale Drive Retaining Wall
Public Engagement Report



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BACKGROUND AND METHODOLOGY

In January 2016, the City of Winnipeg initiated a public engagement process to present stakeholders with project information on the Lyndale Drive Retaining Wall Study and issues related to riverbank stabilization for the Lyndale Drive park area between Claremont Avenue and Gauvin Street. HTFC Planning & Design led the public engagement process and facilitated two events, a Public Meeting and an Open House. Public were invited to come and learn about the project and provide feedback to the proposed design considerations regarding stabilization improvements, preferences for transition and retaining wall concepts, and pedestrian and cycling options. The public identified a number of issues and opportunities that were taken into consideration when developing the design options. In May 2016, public were invited back to an Open House to provide feedback on three (3) preliminary design options that were developed.

Project Website

In January 2016, a project website was developed to provide background information and the project timeline www.winnipeg.ca/LyndaleDrive. The Public Meeting and Open House events were promoted through the project website. Information presented at the Public Meeting and the Open House was posted to the website and available in both French and English. Effort was made to have information posted to the website at least ten days prior to the public events. Public feedback was collected at each event and a similar feedback survey was available on-line. The following describes the process and results of these public engagement events.

Stakeholder and General Public Notification

Notification of the Public Meeting and Open House events was made via the following methods:

- Canada Post direct home mail delivery (approx. 878 homes);
- CanStar Newspaper advertisement (Public Meeting: appeared in the Lance on January 27, 2016; Open House: appeared in the Lance on May 4, 2016);
- Emailed to Public Engagement News on January 8 to 4,183 subscribers, and April 29 to 4,335 subscribers;
- City of Winnipeg press release (Public Meeting: sent January 21, 2016; Open House: sent April 28, 2016 and a reminder was sent on May 11, 2016);
- Social Media through City of Winnipeg (Facebook and Twitter);
- Email notification to Public Meeting participants who provided contact information for the second public Open House event, (32 emails provided);
- Telephone and emails from the City Councillor, St Boniface Ward office.

Samples of the meeting and open house announcements are included in the Appendices.



Cards promoting the project website were made available at the public meeting and open house events.

PUBLIC ENGAGEMENT RESULTS

Public Meeting

Date: February 2, 2016
Location: Norwood Community Centre
Attendees: 51

A Public Meeting was held to inform area residents and general public about the need for riverbank stabilization along this section of Lyndale Drive and the primary considerations for the study. The consultant team provided information explaining the riverbank stabilization process and possible outcomes. The Public Meeting was an opportunity to answer questions and gain input from the public regarding their issues and concerns for construction as well as design preferences.



The consultant team developed a PowerPoint presentation (see Appendix B) explaining the geotechnical and design considerations. Following the presentation, attendees broke out into small round-tables of 8-10 participants to discuss the main considerations and pros and cons of the various options. A member of the consultant team facilitated at each conversation table. At the end of the evening each small group presented their thoughts and key points to the larger group. The group summary of main findings is presented in the following table:

Group 1	Facilitated by James Blatz
Access & Connections	Access to pathways on riverbank important Winter access to cross on river Connection to winter trail Canoe access in summer
Safety	Handrails as a safety issue – more aesthetically pleasing but critical Concerns around safety in a cantilever option Lower bank flooding
Aesthetics	Natural pathways – natural environment
Recreation	Sledding – path through the rip rap
Maintenance	Care for area is key Concern for graffiti on plain barrier walls
Parking	No parking on both sides of street
Cycling & Walking Pathways	Preference not to have bicycles sharing with pedestrians on pathways

Group 2	Facilitated by Rachelle Kirouac
Access & Connections	Tie into existing infrastructure for active transportation Facilitate future connection to Guay Park Lower bank trail access important Wheel chair access All season access to river Existing and future amenities and AT path connections important
Safety	Concerns for cantilever concept (vagrancy). Could be improved with dense vegetation, lighting, or screening a false wall
Aesthetics	Cantilever option offers a lookout point and opportunity to bring the pathway closer to the river
Recreation	Lots of dog walkers Access to river for fishing
Maintenance	Regular maintenance of pathway important
Parking	Some support to forgo parking on Lyndale to provide better options for riverbank stabilization
Cycling & Walking Pathways	<p>Need to separate cyclists and pedestrians (dog walkers)</p> <p>Shared Pedestrian/Cyclist Pathway Pros: opens the road up – better safety for cyclists Family usage Allows for quiet recreational cycling Wider pathway</p> <p>Cons: Ongoing maintenance Possible conflict between pedestrians and cyclists Dog walkers and cyclists Possibly higher cost for multi-use path</p> <p>Separated Pedestrians and Cyclists Pros: Safety for pedestrians and dogs Common courtesy Follows with City of Winnipeg’s AT mandate Better suited to heavy traffic location</p> <p>Cons: Riskier for cyclists – car conflicts</p> <p>Preference for separated bike lane but pedestrians with roller blades on wider ‘foot’ path. Asphalt path.</p>

Group 3	Facilitated by Glen Manning
Access & Connections	Lower bank trail – make it accessible Only acceptable if upper level walk remains Good connections & access from Gauvin Street to Community Centre needed
Safety	Fencing for security/safety Make site community oriented – don't attract a bunch of parkers Use CPTED for safety – lighting please, maybe solar Speeding on Lyndale, high traffic volume
Aesthetics	Fencing with lowest visual impact, existing traffic barrier, or glass rail Preference for no fencing but rather terraces – less than 2 feet Naturalized groundcover (2013 work smells horrible) Vancouver planted poppies No railing
Recreation	Lower bank trail a community resource River edge feature, dock, overlook or canoe launch, truck access ramp
Maintenance	Improve maintenance – especially litter is a concern
Parking	Parking on Lyndale should remain
Cycling & Walking Pathways	Cyclist on roadway generally preferred

Group 4	Facilitated by Maureen Krauss
Access & Connections	<p>Winter crossing from riverbank to Churchill high school</p> <p>Lower level pathway preferred to create a separation from upper traffic</p> <p>More intentional access to river to allow for recreation and views</p> <p>Edge of river rip rap hard to cross over</p> <p>Need to connect pathways with others along Lyndale</p>
Safety	<p>Steep bank a problem for getting down to river – especially in winter dangerous</p> <p>Concern for cantilever option – hiding spot for people, animals - not a good idea</p> <p>Is there a way to build in traffic calming?</p> <p>Lower level activity must be well lit</p>
Aesthetics	<p>Naturalized grasses and maybe some trees</p> <p>Move pedestrians and cyclists closer to the riverbank</p> <p>Climatic considerations lower down on riverbank – out of the wind, beautiful sunsets</p>
Recreation	<p>Preference for informal pathways that allow immersion in nature</p> <p>Opportunities for a dock for fishing or canoe launch</p>
Maintenance	<p>Look to option for riverbank stabilization that provides the longest-term benefit.</p> <p>You will always be fighting erosion. Find the solution that is most sustainable.</p> <p>Flooding a concern for lower riverbank pathway</p> <p>Pedestrian pathways and access to riverbank must be cleared in winter</p>
Parking	<p>No comments regarding parking</p>
Cycling & Walking Pathways	<p>Dedicated bike lane preferred for year-round cycling commuters</p> <p>Retain Sunday road closures for recreational cycling</p> <p>Prefer pathway with a safe zone between the roadway and pedestrians, especially for dog walkers, young families</p>

A Feedback Form was administered in conjunction with the discussion tables at the public meeting. The objective of the feedback tool was to capture stakeholders' opinions of their knowledge of the project, satisfaction of the process, importance of impact and design criteria, and general design preferences. Similar feedback questions were posted to the project website. The computer survey program, *Survey Monkey*, was used to collect on-line participation. A sample of the Feedback form is included in Appendix C.

Feedback Received

Forms At Public Meeting	33
On-line through City of Winnipeg project website	10

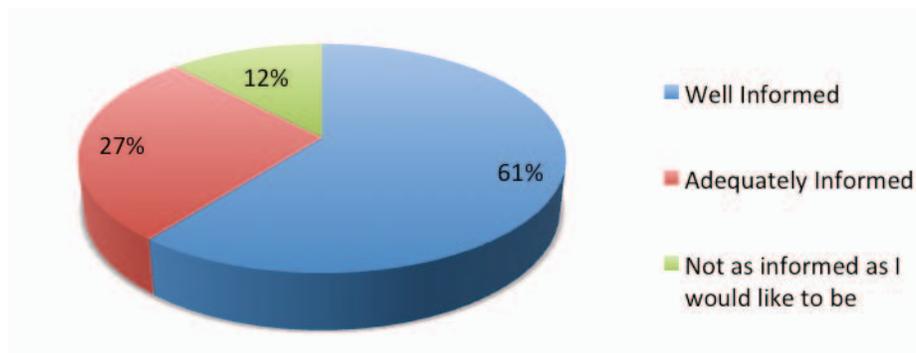
Since respondents of the feedback form are self-selecting, the results are not scientific and only provide a summary of the responses received. This means that no sampling of estimates of sampling error can be calculated and therefore not margin of error is attributed to the results in the report.

Feedback to Questions

Understanding of Information Presented

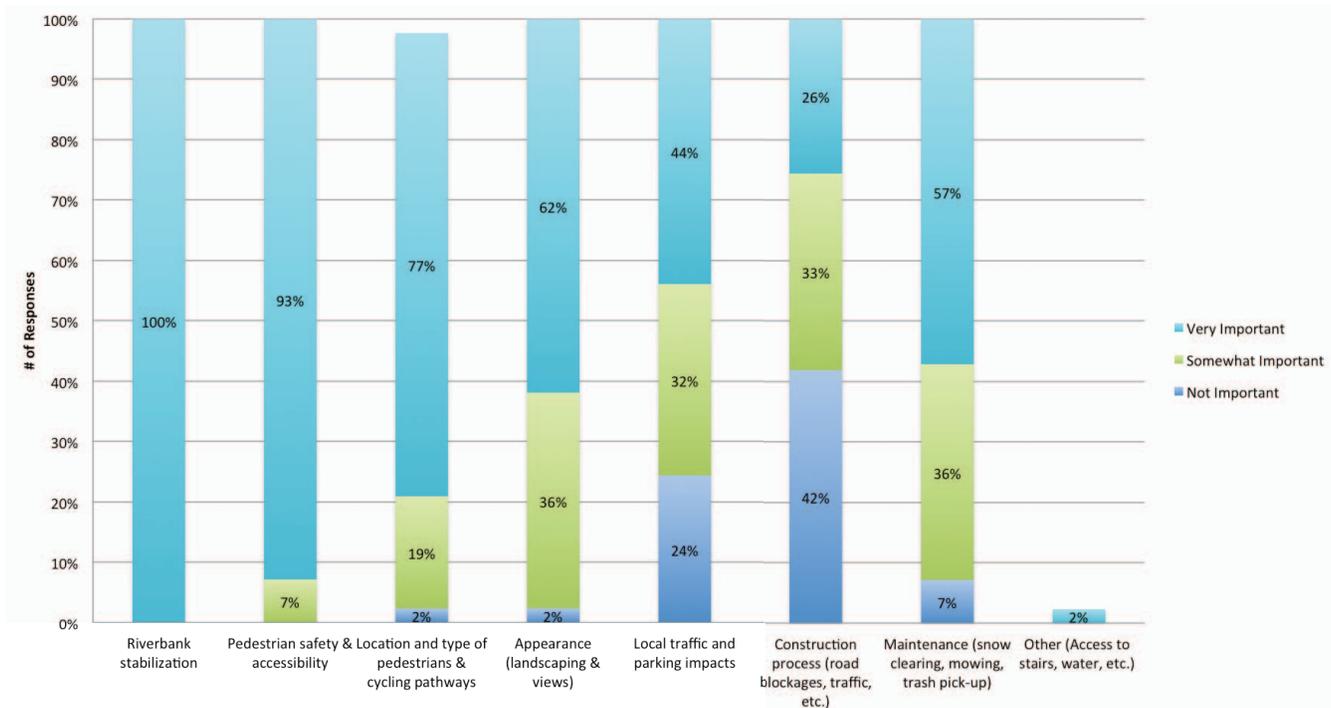
Most respondents were well-informed (60%), with one quarter (27%) feeling adequately informed and (12%) not as informed as they would like to be.

Q.1 How informed do you feel about the Lyndale Drive Retaining Wall Study? (n=33)



Seven project design considerations were identified and respondents were asked to comment on the level of importance of each topic. Riverbank stabilization overall was viewed to be most important with pedestrian accessibility and types of pedestrian and cycling pathways as also very important.

Q.2 How important to you are the following consideration for Lyndale Drive riverbank stabilization improvements? (n=43)



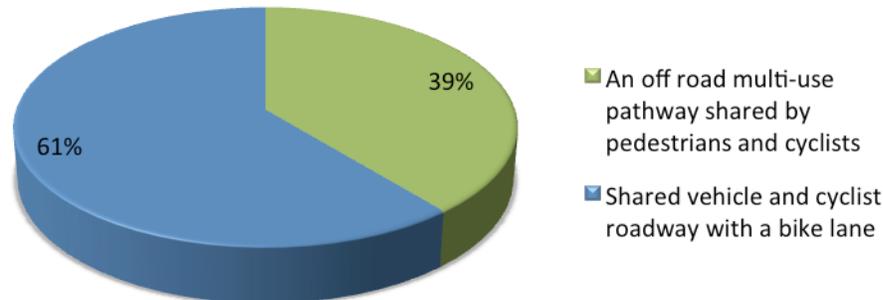
Q.3 Do you have a preference for any of the retaining wall designs shown? Please comment.

- "Most natural design - need more details"
- "Ideally a combination of cantilever as an outlook space along with tiered walls to create greater access down to river edge"
- "Cantilever option with wide pathway"
- "Not a fan of cantilever wall - access to riverbank very important, lighting, safety, pathway not too low as to be suspect to flooding"
- "Flooding is your priority"
- "Vegetated slope preferred"
- "Prefer vegetated slope or a segmental block or 45 degree green wall. Cantilever option least desired - could attract people & debris"
- "Need to create access to riverbank. Retaining wall cuts off access. Creates need for handrail and feels restrictive and industrial"
- "Low slope vegetated or cantilever design to allow for outlook"
- "No cantilever section; prefer straight section"
- "Structural retaining wall. No cantilever, but access to the river for canoe use"
- "Landscape wall"
- "Natural design - minus weeds"
- "All acceptable, mostly like the natural slope. Need access to riverbank"

- "No cantilever, creates secluded area. Need gently sloped access to river - useable by seniors, canoe or kayak carriers. Need lights."
- "Priority: #1 strength. #2 'natural design', #3 flood protection"
- "Concept 1 Segmented wall, 45 degree green slope second preference"
- "Prefer Vegetated slope"
- "Vegetated slope not cantilever"
- "Not cantilever" x2
- "Prefer structural retaining wall, no undercut"
- "45 degree green wall, terraced landscape wall"
- "Segmental or green wall"
- "Either concept 2B (not cantilever) or landscape wall (green wall)"
- "No cantilever, hopefully without a fence"
- "Non-cantilevered wall"
- "45 degree green wall with walkway/bikeway near wall at bottom. Possible pathway like the Forks."
- "Lower Bank Trail - access to and use of the lower bank"
- "Priority 1: stabilization of bank & safety of pedestrians and cyclists Priority 2: aesthetics of final design"
- "Brick retaining wall was attractive. Would like a lower walkway that connects to Guay Park along the river (low maintenance walk way)."
- "No. Cost benefit analysis to decide. Some stairway access to the bank would be optimal for walking in the summer and access to the river skating/walking trail in the winter."
- "I am unsure of the value of the deep rock fill holes. I believe concrete retaining wall may do a better long-term job."
- "Le concept de mur paysager ne semble pas une solution durable. On en a mis en place au Parc Happyland il y a plusieurs années, mais celui-là ne semble pas avoir marché. Il tombe en morceaux, dû autant à l'érosion qu'au vandalisme. Le mur de soutènement est une option favorable, mais il doit être assez coûteux. C'est ainsi que je serai d'accord avec soit le mur de soutènement, soit la pente végétalisée, mais il me faudrait plus d'infos pour choisir parmi ces deux options."

When asked about pathway preferences, the majority (61%) of respondents preferred the shared vehicle and cyclist roadway with a bike lane as compared to (39%) preferring an off-road multi-use shared pathway.

Q.4 "Which do you prefer?" (n=41)



Please comment:

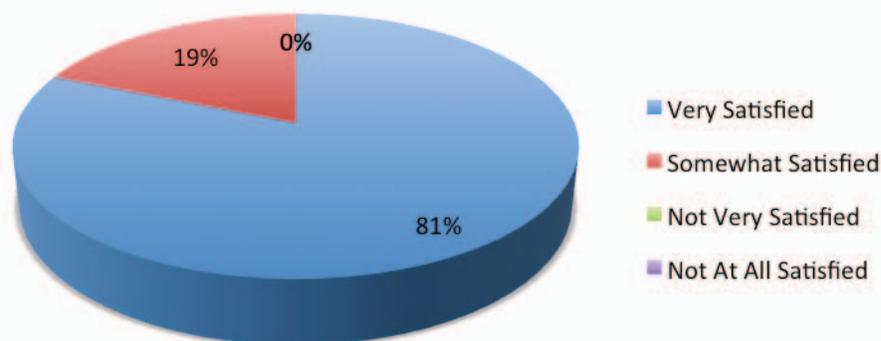
- "Bike lane not necessary. Parking on one side of Lyndale for cycle safety"
- "Parking one side only on street"
- "Walkers with dogs on leashes difficult for cyclist to get around"
- "Off road multi-use shared pathway safer for all"
- "Both options are reasonable to offer. People who use Lyndale as AT quicker on road, but casual cyclists better on shared pedestrian path"
- "I would like to see a separated bike path on the road"
- "Presently traffic on Lyndale not a safety issue for cyclists. Cyclist could pose a problem on shared path with dog walkers. Cycling on a bike lane encourages cyclists to follow traffic laws and customs"
- "Lyndale is not so busy that you need to keep separate. More conflict potential for dog walkers and cyclists. Shared vehicle and cyclist with no bike lane"
- "Shared bike lane with pedestrians" (X2)
- "Cyclists of all ages know how to negotiate in traffic or can learn. No need to separate cyclists or joggers and pedestrians"
- "Actually, don't mind either option - most important safety for pedestrians and traffic flow"
- "Cyclist roadway away from pedestrians will be safer on the riverside".
- "I don't think this is a problem for cyclists or vehicles that I know of"
- "Both options acceptable to me"
- "Safer for cyclists to keep them off the road"
- "Prefer a bike lane to encourage AT"
- "Road is wide enough for cycling. Pedestrians and cyclists don't mix"
- "Prefer bike lane on road for practical reasons"
- "Not safe for pedestrians when cyclists are sharing"
- "Safer to have cyclists on road than trying to share/predict movements of pedestrians. Separation between cars and cyclists."
- "Bike lane safer for cyclists and pedestrians"
- "Pedestrian pathway has small children which do not mix well with cycling at higher speeds"

- “Many children on sidewalks could be a risk regardless if there is a marked bike lane adjacent to sidewalk. Bicycle lane should be between road and sidewalk. This also creates a safety buffer b/w cars and people.”
- “I would also like a bike lane for commuting cyclists whereas the shared bike path/ped pathway would be recreational for families”
- “Lyndale drive is wide enough to accommodate lower pathway susceptible to flooding. Budget considerations.”
- “Roadway only due to streets like Balsam, Cedar, etc.”
- “Off road multi-use shared pathway safer for all ”
- “I am a resident living on Lyndale Drive (at Larchwood) and have limited access to my home (I need to use Lyndale Drive to get to my home). With the Sunday road closure my family and myself have experienced harassment and abuse from cyclists, pedestrians, etc., if I drive down my street in a Sunday. The restrictions with the vehicle traffic on Sundays during these months are ridiculous, in my opinion, given the fact that we can share the road with non-vehicular traffic for the 7 other months of the year on Sundays and the other 6 days of the week for 12 months of the year. In 'speaking' with those swearing at us, telling us we are breaking the law, riding or walking in front of our vehicles trying to block us, kicking or hitting our vehicle as we drive by, etc., it seems to be people who do not live in Norwood and certainly not on Lyndale Drive, who have the most problems with 'sharing' the road. We have lived like this for decades, have made our concerns known to 3 different city councillors, have spoken to the police a number of times, to no avail, but are certainly hoping not to have to deal with any further restrictions limiting us to accessing our home.”
- “I live on Lyndale Drive (at Larchwood) and since the Sunday road closure there has been nothing but conflict with pedestrians, cyclists, etc., despite the fact we have extremely limited access to our home and need to use Lyndale Drive. Regardless of the signage we are constantly harassed approximately 20 times every May to October (this is for 4 people living in this household).”
- “Maintenance free (or low maintenance) off-road path to Guay Park.”
- “I would prefer to have an off-road, shared pathway as I have 2 small children who I would rather not have go on the road at all (especially Lyndale, where drivers treat it as a speedway.”
- “There is a lot of walking traffic, including many people walking dogs, best to separate the pedestrians from vehicles. Please make a lower path that will connect to Guay Park adjacent to the river.”
- “Pedestrians need to be able to safely walk along Lyndale and there is no path on the other side of the road. It would be a retrograde step to make that section of Lyndale pedestrian unfriendly.”
- “Are you proposing closing Lyndale Drive to vehicle traffic? At present vehicles and pedestrians and cyclists share the road and I think it works well”
- “Lyndale is already great for the average cyclist - low traffic, wide roadway and decent road condition - and cyclists who are interested in a more leisurely pace already safely share the gravel path with pedestrians and will likely continue to do so whether there is a bike lane or not. But the high-speed cyclists who use Lyndale for exercise and/or training will never be able to safely share a space with pedestrians. As a long-time resident of the street, I can assure you that cyclist infrastructure on the roadway is the only option that makes sense for Lyndale”
- “It is safer for both cyclists and pedestrians”

- “La difference de vitesse de circulation entre cyclistes et piétons est aussi grande qu'entre cyclistes et conducteurs sur la promenade Lyndale. Ce n'est pas une route principale pour les automobilistes, et piétons comme tous les usagers veulent souvent prendre leur temps pour regarder autour. Une bande cyclable (ou encore mieux, une bande cyclable protégée, telle que sur l'avenue Assiniboine ou la rue Sherbrook) serait la meilleure choix pour la sécurité des piétons sans compromettre la liberté des cyclistes ni trop leur sécurité.”

The majority of respondents (84%) were satisfied with the public meeting.

Q.5 “Overall how satisfied are you with this public meeting?” (n=32)



Other Comments

Two out of three (66%) respondents provided additional comments.

“Please let us know any other comments or concerns you have about Lyndale Drive riverbank stabilization.”

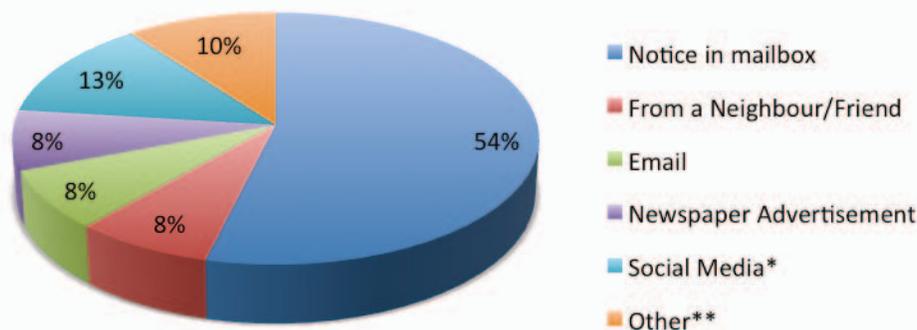
- “Lighting should be indirect downward facing - like Sedona Arizona”
- “Reduce weed like plants, Trees are good”
- “Need to work towards connections north along Lyndale Drive and south to St. Mary's Road & points south (upstream)”
- “Access for canoe essential, as is connecting existing path w/new proposed path. The section that exists now where the path leads to the river use winter path is dangerous. Those issues need resolving”
- “Vibrations from trains, flooding happens in low spots every few years, old trees and roots should not be removed”
- “Maintenance - tree care important”
- “Please consider access onto future AT paths following the Red to the south (along St. Mary's Road)”
- “For riverbank vegetation, it would be nice to implement prairie natural habitat, natural grasses”
- “Don't do 3 way stops on Lyndale if you think traffic calming. They suck for cyclists and motorists too.”
- “Keep the beautiful view, low natural grass or small trees for bank stabilization”
- “Hope to see it done ASAP”

- "I prefer long-term solutions even if more costly. If a fence/railing needs to be built/included, it must be more aesthetically pleasing than the one between Taché and Claremont in 2013. Black rails are better to disappear into the landscape."
- "Must consider tie in with existing AT network, trail under Norwood Bridge, Guay Park, Kingston Row"
- "Please - no fencing. Keep Lyndale Drive natural and aesthetically pleasing"
- "Loss of trees on riverbank"
- "Having access to river for launching canoe or kayak"
- "Overhanging wall may increase crime. Any trails or access to river should be lit. Would like a dock or some sort of maintained access to the river"
- "I would like the longest lasting solution picked as a priority with aesthetics and use considered second. It would have been helpful to have this in our discussions"
- "Need long view to stabilization closer to Queen Elizabeth Way Bridge"
- "The project must consider the movement of emergency vehicles into and out of the Norwood neighbourhood."
- "Cantilevered option has a homeless problem and would encourage crime."
- "Please consider having semi trucks of earth and rock access from either end of Lyndale Drive not Taché as done last time. Plumbing fixtures shake every time with passing heavy trucks." Taché Road surface wrecked even further. Hospital parking on Taché from Highfield to St. Mary's makes driving difficult without hazard of semi trucks too."

Notice of Meeting

Respondents were asked about how they heard about the meeting. The majority heard about the meeting through the home-mail announcement delivery.

Q.6 "How did you hear about this public meeting?" (n=39)



*Social Media = Facebook Norwood Community Club Page & Matt Allard Page

** Other = Automated telephone call from Councillor's office

OPEN HOUSE RESULTS

An Open House was held to present three (3) design concepts to the public and gauge support for the options. Attendees were invited to view a total of 12 presentation boards that described the project objectives, past public meeting findings, information received from that meeting, and how public input along with other design factors was incorporated into the three (3) proposed design concepts. Members of the consultant team and City of Winnipeg project staff were on hand to answer questions and explain the distinguishing features of each concept.



Date: May 12, 2016
Location: Norwood Community Centre
Attendees: 61

“Dotmocracy” and Results

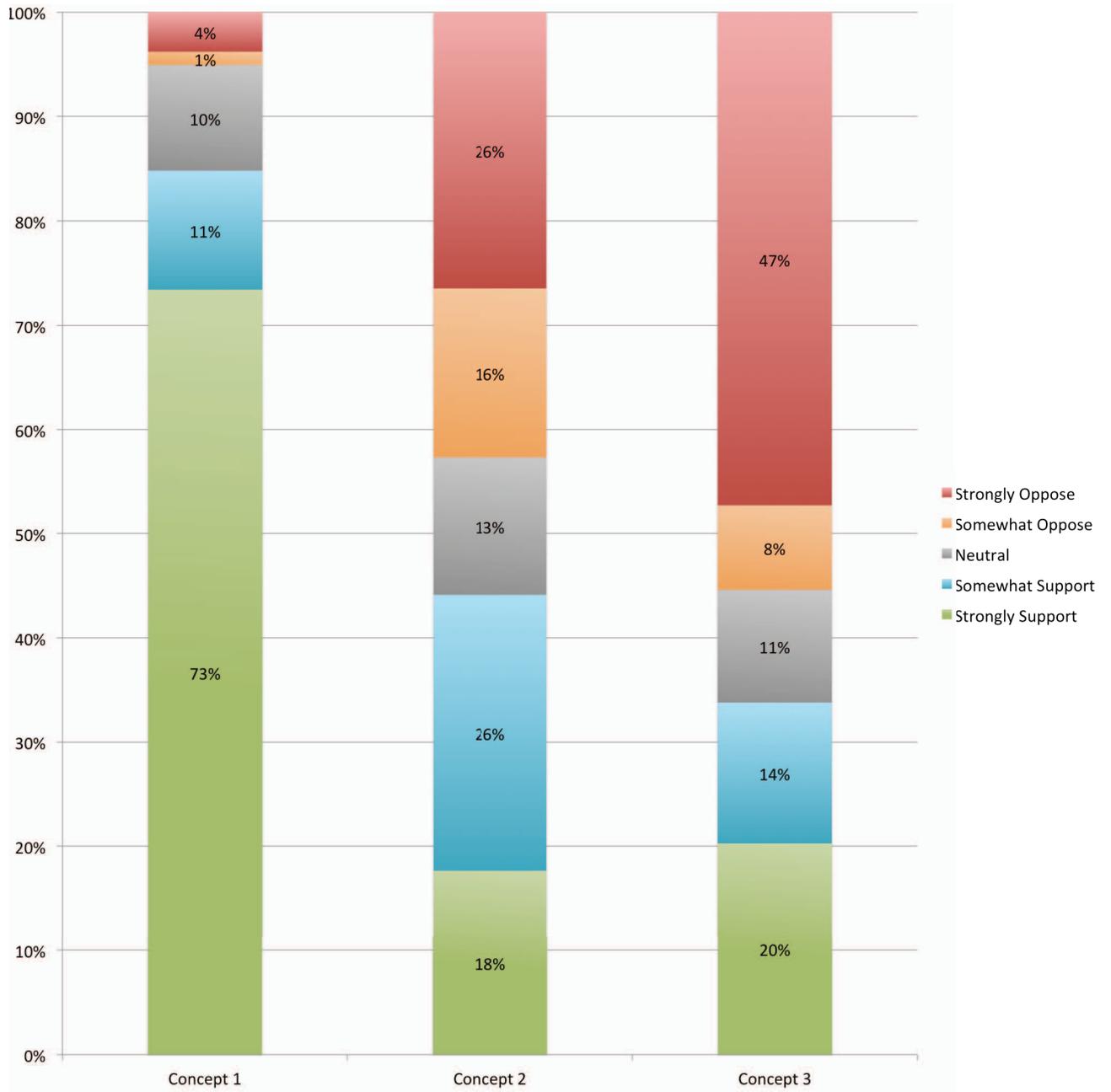
Participants were provided with three design concepts for the riverbank stabilization and asked to indicate their support of each by placing a circle (‘dot’) to their corresponding level of support. Five levels of support were provided: Strongly Support, Somewhat Support, Neutral, Somewhat Oppose, Strongly Oppose. The responses received were counted as votes. A value was applied to each level of support to determine a mean value. The scoring is as follows:

- 1 = Strongly Oppose
- 2 = Somewhat Oppose
- 3 = Neutral
- 4 = Somewhat Support
- 5 = Strongly Support

A mean score was determined based on the overall number of votes. The dotmocracy voting indicates Concept 1 was the most supported option while Concept 3 was the least supported option.

Total Responses	Strongly Support	Somewhat Support	Neutral	Somewhat Oppose	Strongly Oppose	TOTAL Responses	VALUE	MEAN
Concept 1	58	9	8	1	3	79	355	4.5
Concept 2	12	18	9	11	18	68	199	2.9
Concept 3	15	10	8	6	35	74	186	2.5

Support for Concepts 1, 2 & 3 ("Dotmocracy" Results)



Dotmocracy Additional Comments

In addition to indicating their support for each proposed design concept, participants were asked to share what they liked and/or disliked about each option and post it on the corresponding dotmocracy board. The following is a summary of comments from the Open House dotmocracy boards, comments received from the *Survey Monkey* survey, comments provided via email to lyndale@htfc.mb.ca and over the phone.



Concept 1

- "I like that cyclists aren't sharing the sidewalk with pedestrians"
- "Pedestrians will enjoy their walks much more if they don't have to worry about cyclists and vice versa"
- "Will taxes increase?"
- "Has any thought been given to lighting for the lower walk-way?"
- "Long-term maintenance of lower bank trail? Maybe delete trail."
- "No matter what concept is adopted, please carry through a trail at the ends of Lawndale, Ferndale, Birchdale Streets."
- "Do not like easy access to river along whole length of project. Steps down to the river with lower bank trail are sufficient access to get closer to the river."
- "I prefer Concept 1 & 2. The upper sidewalk being wider than the lower trail is also preferred."
- "What about ice protection (from river)."
- "I like this Option the "Best". It presents the best template for future riverbank stabilization and preserving the natural beauty of our riverbanks."
- "Best option and use of road and pathway."
- "Nice Option - 1 & 2 are best. Keep access open. Avoid pitfall of gabion/railing design."
- "Extra room on lower walkway for pedestrians and cyclists. Beautiful trail for joggers that are currently jogging in traffic on Lyndale. Maintains boulevard the way it is."
- "I find the whole "active transportation" highly insulting and excluding. There are people who cannot strap their wheelchairs on their backs and hop on a bicycle."
- "No mention of cycling"
- "I use Lyndale Drive several times a week as a vehicle driver, a cyclist and a walker. I live in Norwood Flats. Especially on Lyndale Drive -- cyclists and pedestrians do not mix. Often the cyclists are fast, commuting, while the pedestrians are wandering, talking, with children or dogs or wheelchairs taking up the entire walkway. Often the cyclists are families veering all over the place while the pedestrians are exercise walking, or talking or with dogs or strollers or friends. Cyclists on the road on Lyndale Drive are just fine whether fast or slow, taking a straight path or wandering over the road. The drivers are going at less than 50km and accommodate. Keep the vehicles, be they cars or bicycles, on the road. Keep the pedestrians happy and safe in their own space."
- "I don't like that there is not a separate bike lane. I like the use of shrubs, and other plants on the slope"

- "Likes: No clash between cyclists & pedestrians. Higher lower trail will be usable more & less likely to be overlain with sediments."
- "Taxpayers aren't on the hook dealing with homeowners who will be losing about a foot of front yard (if I interpret this correctly. If I don't then disregard). Cyclists that don't want to use the street will likely prefer the wider gravel path than the sidewalk. Least impact hopefully means least expense, but not because it's cheaping out, rather just because it's simple - no unnecessary retaining walls, fences, etc., but the bench along the lower level like in option No. 3 would be nice. Why is it not included?"
- "Like - lower trail wider, closer to road grade / less flood prone Dislike - narrow sidewalk - recipe for disaster re: cyclists, runners, roller bladers mixed with pedestrians using this paved pathway - too much user conflict in my view"
- "Sidewalk is too narrow"
- "I don't like that the sidewalk would be narrowed."
- "I like this design, however I feel that the upper paved path should be wider to accommodate strollers, families, etc."
- "Extra room on lower walkway for pedestrians and cyclists. Beautiful trail for joggers that are currently jogging in traffic on Lyndale. Maintains boulevard the way it is."
- "Impact minimal, mais encore accès pour les piétons et cyclistes. Préfère le design plus naturel."
- "Like the gradual slope"
- "Curb doesn't move is what I like about this one."
- "Like natural bank of trees"
- "Like no road shift"
- "Least impact, gradual slope, no railing and no shift of Lyndale."
- "Like protection of river bank"
- "I like that there is no railing and the view is clear."
- "Concept #1 is the least invasive plan with no movement of the roadway. Also like the gradual slope & no railing required."
- "We like that there our river view remains unimpeded, bicycles are still on the road (where they belong and we say this as avid cyclists), no road shift and no negative impact on our property value as would be the case with #2 or #3."
- "It looks like the least disruptive design."
- "I like that the road doesn't shift and agree that it's important we stabilize the river bank."

Concept 2

- "I don't like how cyclists will share the sidewalk with walkers"
- "Prefer not to have mixed shared use path for cyclists and pedestrians"
- "Would like this option best with cyclists on road"
- "Where will curb cuts be for wheelchair access? (upper trail)"
- "Do not agree with multi-use path"
- "No need for bikes on path, lots of room on the road"
- "Seating would be a benefit"
- "Best Option in my opinion. No road shift. Cheapest. Should focus on structure. "
- "What about ice protection (from river)"
- "Do not like the idea of shifting road north"

- "Do not like easy access to river along who length of project. Steps down to the river with lower trail is sufficient access to get closer to the river"
- "I am indifferent as to the Upper path being 3.5 or 2.6m. I do like the lower path, but it may not always be open to use due to the river."
- "Love to see a grass buffer strip between path and curb!"
- "Love the open concept. The railing cuts off the connection with the river. Limiting use. Multi-use trail is nice."
- "Multi-use sidewalk will accommodate in-line skating. This would be good."
- "Don't want to loose part of boulevard, will interfere with trees in my front yard. Cyclists who want to move quickly should remain on the road with vehicles, not on upper path."
- "I love that there is no railing. I like the multiuse paths. Also in winter this will be easy to sled down with the kids. Skating path will be earlier to access in the winter months."
- "Cycling allowance is somewhat acceptable."
- "I like that cyclists have their own space, and the use of shrubs and grasses on the slope (consider using native grasses and shrubs?)"
- "Will lead to frequent clashes between cyclists & pedestrians on upper sidewalk. Will not be safe or comfortable. There are lots of cyclists on Lyndale, mostly not commuter cyclists."
- "Wider sidewalk + narrower street + narrow gravel path = likely conflicts between cyclists and pedestrians on the sidewalk. Gonna be some pain in the ass involved with moving the street north."
- "Like - Assuming paved road level path is similar width to Dunkirk Drive width paved path this option is good . Dislike - lower trail too narrow to handle peds, runners, cyclists etc."
- "Love this one. Nice wide hard surface upper path. No ugly railing. The only thing missing is the seating along the lower trail. This is my favorite!!"
- "Encore accès pour les piétons et cyclistes. Préfère le design plus naturel."
- "Like the gradual slope. Don't like the road shift"
- "Don't like movement of curb."
- "Don't like road shift"
- "Like no wall or railing Don't like losing part of front yard."
- "Shift of roadway"
- "Oppose moving of road"
- "I don't like moving of the street. This will take away part of my front lawn."
- "I do not see value in a lower bank trail, it would be dark at night and possible safety concerns. The roadway shift is not my preference as a landowner on Lyndale Drive."
- "The road shift has a negative impact on our property value. Also not in favor of a shared sidewalk for cyclists and pedestrians. We are completely opposed to this option as are a number of other affected property owners."
- "A good design, I do not want Lyndale move 0.9M."
- "I don't like the road shift. The removes part of my front yard and will destroy my current landscaping."

Concept 3

- "Seating is positive. Railing is a temptation for skateboarders. Do not like to look at a railing."
- "Gabion walls are unsightly, although the lower one having potential for seating is nice. Railing needs to be black for aesthetics – aluminum is very ugly and obstructs visually."
- "Any option should connect with existing trails! Do not leave a few blocks out!"
- "River access points should be evenly spaced. The middle one should be between Taché and Crawford."
- "Redirect money and effort for the lower bank trail to road and stabilization."
- "Won't the light standards be damaged during flooding?"
- "Cuts off the riverbank. Haven for undesirable activity."
- "I don't like how the cyclists will share a sidewalk with walkers."
- "Like the gabion wall. Do not like shared pedi/bike pathway. Like cable-style railing. Like lower railing option least."
- "The railing provides better safety for my kids!"
- "Like gabion wall to sit on!"
- "Condition of Taché Ave. a concern for use during construction."
- "Concern for feeling secure on lower trail being less visible from the roadway and homes."
- "Fence is a big deal. Like the lower rock/bench area. Fine option."
- "Still crime issues with this one!"
- "Lyndale Drive is wide enough for cyclists to share the roadway. Cyclists and walkers should not share a pathway only promotes accidents."
- "Retaining wall will reduce the view of the river from Lyndale and my front yard. This will reduce the value of my property. Narrowing the boulevard will kill trees in my front yard. Will my property taxes go down?"
- "I favour the proposed design #1. The path has is wider and can better accommodate more two-way traffic, especially with cyclist utilizing this path. This plan departs from the street/bank/path in the park further down Lyndale is arranged. Thanks for asking. Best of luck."
- "It'll make the river skating path hard to access in the winter months"
- "Benches - you're just asking for parties and nighttime disturbances."
- "I like the seating on the lower walk way, i do not like the rail"
- "Do not like aesthetics of fence & wall. Wall enables secluded "hangouts" beneath it. Also like #2, will lead to frequent clashes between cyclists & pedestrians on upper sidewalk. Will not be safe or comfortable. There are lots of cyclists on Lyndale, mostly not commuter cyclists."
- "Wider sidewalk + narrower street + narrow gravel path = likely conflicts between cyclists and pedestrians on the sidewalk. Gonna be some pain in the ass involved with moving the street north. I like the idea of benches etc. along the lower path would be nice to incorporate that into the first option too."
- "Like - design and permanence of components, seating areas Dislike - narrow width of lower path."
- "Separation of the multi-use path and roadway provides needed "disconnect" from city life along the river. The retaining wall along the path is great build-in outdoor seating to converse, read, rest, or meditate; and keeps the bottom dry and dirt-free. Go for it!
- "I like that it provides seating at a lower level, so more functionality, the multi-use path remains at 3.5 m."

- "Love the seating wall but there is reduced visibility of lower area (room for kids to hide below the railing and smoke, etc). Also hate the railing. Think the whole project is more aesthetically pleasing without the railing."
- "Moins naturel et probablement plus coûteux à la longue avec les coûts de maintien."
- "Don't like the road shift. Don't like the retaining wall"
- "Don't like the 2.3 m fence or wall"
- "Don't like wall"
- "Don't like gabion retaining wall"
- "Roadway shift, guardrail obstruction of view from home, increased costs for gabion retaining wall."
- "Oppose visual obstruction of retaining wall"
- "Don't like the wall. "
- "I like the use of a Gabion retaining wall for strength. I oppose the 0.9M roadway shift unless the installation of a gabion wall would provide the best alternative for a permanent solution to the river bank instability."
- "We strongly oppose this option because it impedes our view, the road shift negatively impacts our property value, and the lower pathway is very close to the river and will obviously flood every year the same way as the Forks walkway. Safety along this walkway will also be an issue being this far away from traffic."
- "Lyndale is shifted 0.9M & the cost associated with the Gabion & fence construction."
- "The wall will take away my view of the river from my front porch. We paid top dollar for our house with a view of the river."

Feedback Forms Received

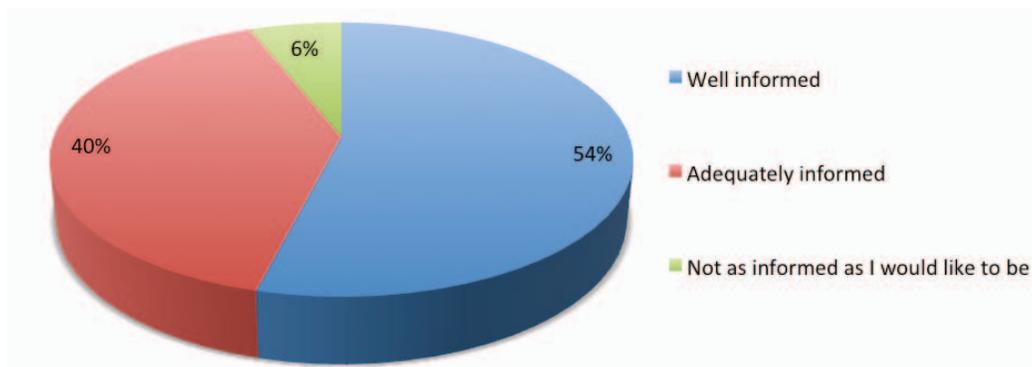
A Feedback Form was administered in conjunction with the “dotmocracy” boards at the Open House. The objective of the feedback tool was to capture stakeholders’ opinions of their knowledge of the recommended design options, satisfaction of the Open House event, and other general comments regarding the project. The computer survey program, *Survey Monkey*, was used to collect on-line participation to the same questions. A sample of the feedback form is included in Appendix C.



Forms At Open House	22
On-line through City of Winnipeg project website	28
Received via phone or email	4

Understanding of Information Presented

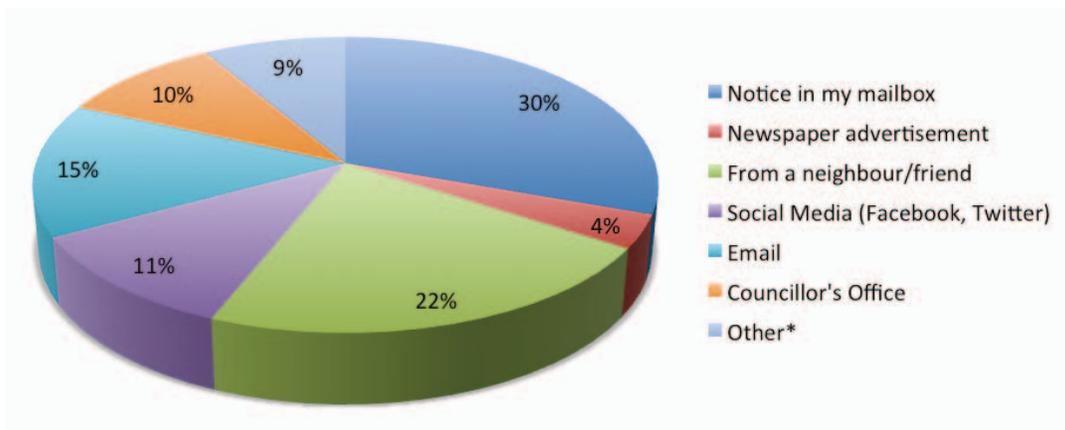
Q.1 “How informed do you feel about the Lyndale Drive Retaining Wall Study and the recommended design options?” (n=50)



Notice of Public Open House

Respondents were asked about how they heard about the open house. The majority heard about the meeting through the home-mail announcement delivery.

Q.2 "How did you hear about this public meeting?"

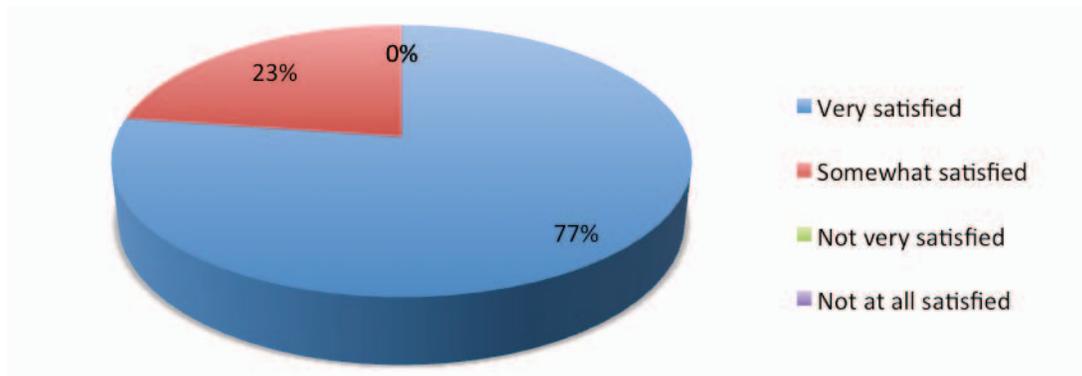


*Other = Accessibility meeting

Satisfaction with Open House

The majority of respondents (60%) were satisfied with the public meeting, the balance adequately informed, and one (1) respondent not as informed as they would like to be.

Q.3 "Overall, how satisfied are you with this public Open House?" (n=22)



Open House attendees were asked to provide any additional feedback about the project. 80% of the respondents provided additional comments noted below.

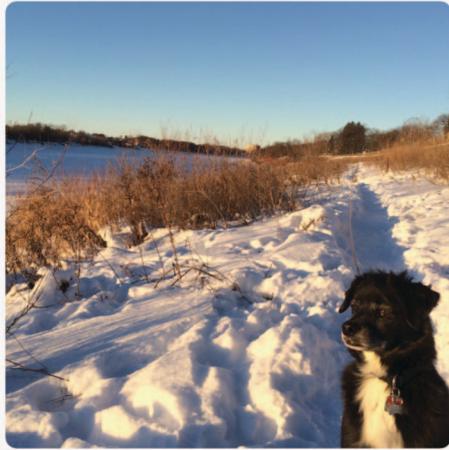
Q.4 "Please share with us any comments or concerns you may have about the project."

Other Comments

- "Very concerned about the aesthetics because the aluminum handrail is so unsightly. My preference is not to have a handrailing, but if it is required, then it should be black."
- "Wall is no big deal. People on Lyndale need to chill! Lower trail is great. Should connect to existing trail. Shifting road to accommodate bike/walk trail seems crazy. Huge cost for minor gain. All options acceptable – Option 2 with no road shift would be best."
- "Plant clover for the bee population. Like having access to the river trail in wintertime. Public dock for kayaking and canoes. Lighting for lower bank for safety, deter graffiti, overnight camping."
- "I am grateful to be included"
- "Lower bank trail should be left as informal as possible to avoid long term maintenance costs. Movement of bank and City's need to save money degrades any formal trail."
- "Safety issues for joggers and walkers, people with disabilities, if no lighting, lots of shubbing, Need more foot patrol to make sure no crime rate."
- "The sidewalk between Hemlock and Cedar that is accessible from Lyndale needs repair."
- "We appreciate being involved, thank you!"
- "Need access to the river for kayaking, fishing, viewing. Should have lighting on lower level."
- "Sounds great - happy to see it happening in a realistic timeline."
- "Only concern would be the construction traffic."
- "Trucks on Taché Ave have been a concern in past – shakes the house. Alternative route preferred or potholes fixed before work is started."
- "Any Option would be fine. My concern is cost over what else needs to be done for stabilization of Lyndale Drive. Can you find a way to a 'cheap' solution to provide funds for other needed projects."
- "Lower trail should be more informal (like a 'monkey' trail) Would prefer bikes on road rather than paths. Well done!"
- "Very concerned with construction equipment on Taché. House shakes when trucks hit potholes. Needs to be repaired prior to work."
- "What about river access during winter?"
- "Will bottom section flood? "
- "Is top section plowed now? "
- "The backlane of Lyndale Drive is scheduled to be paved in 2017. Resurfacing may conflict with the stabilization work being done on Lyndale Drive. This will create a very difficult situation for parking and general access to our home." (x2)
- "Concerned about poor condition of road surface on Taché (many patches) and re-routing of traffic and construction equipment will make it worse. Are there plans to redo the road?"
- "I am concerned about the narrowing of the city boulevard killing trees in my front yard and the retaining wall reducing visibility of the river."
- "There are disabled people in Winnipeg who suffer from incurable chronic pain conditions. They cannot walk, bike, or use bumpy and jerky public transit. They need smooth roads,

elimination of barriers such as speed bumps, and they need private vehicles and handicap parking spaces that are accessible.”

- “One general comment about all options: The immediate-to-the-river summer & winter access problem is one of a walkway down, and also the current problem of large limestone rocks along the entire edge. It is difficult to climb over these in winter, & it is very difficult to launch a canoe/kayak from these. We need one or 2 small spots where the gravel slopes gently to the edge of the water.”
- “There should be some consideration given to establishing some mountain bike “monkey trails” along the vegetated areas, preferably between the gravel path and the road so as not to be consistently flooded. Talk to Woodcock Cycle Works on Olympia on St. Mary’s for naming rights, talk to IMBA to build them sustainably. They’re there anyways, might as well capitalize on them.”
- “Preferred cantilever style design abandoned due to safety concerns re: hangout for supposed undesirables under cantilevers, and I suspect, cost to construct. Safety concern could have been addressed by putting chain link fence barrier around base of cantilever area.”
- “I don’t like that those of us most affected on Lyndale Drive didn’t receive better information ahead of time.”
- “I prefer Concept #1 as the choice with least impact. I would agree to concept #3 if the Gabion retaining wall would provide the best long term solution.”
- “I am concerned about having my front yard destroyed and losing my view of the river from my yard on Lyndale Drive.”
- With significant decisions like this, the City should be using their tax roll information and mailing this information out to affected homeowners. The communication strategy (?) used to relay this important information was not well thought through and poorly done given that the outcome of this process could be a decision that negatively impacts our property and our property values. There are a number of people who share our view. While full community consultation is important, the affected homeowners (who have the property value and pay the related taxes) should have the ultimate say. Cyclists should remain on the road and there seems to have been no consideration in terms of how these proposed plans intersect with our current Sunday and holiday street closure for cyclists, which our neighbourhood loves. The piled retaining wall that is presently in place was completely abandoned by the city, with trees were growing between the piles creating gaps in the boards. With proper maintenance, that wall would have lasted much longer. With this new plan, if it left unmaintained as the previous wall, there is no way it will last 75 years. We have significant safety issues in this city and, sadly, walkways along the river are not safe due to being further away from traffic. We also having an increasing presence of street-involved individuals towards the end of Lyndale Drive near the Norwood Bridge. This will allow these individuals to creep further into the neighbourhood further increasing safety concerns. The City should be concerned about policing requirements with these safety issues. For years, we have identified issues with our back lane and only after the last few years have we got action. I am amazed at how quickly the City has pulled this plan together given their history of speed (or lack thereof) and can only see this for what it is - ramming through their own agenda. Shame on you! Please note that despite being told that I would receive further updates if I had attended the meeting (that I wasn’t aware of) or by completing this survey, I note that no where on this survey do you ask for contact information.”
- “Nice, well planned and very informative, especially asking for resident feedback. This process should serve as a model for most other city government-resident interactions.”



"Thank you for the opportunity to review the proposed plans and provide feedback last evening. The area is already a beautiful place to enjoy a stroll all year round and we look forward to further preservation and beautification of this part of the riverbank."

Lyndale Drive Neighborhood Resident, Dog Walker & Open House Participant

Preliminary Engineering Study For Lyndale Drive Retaining Wall
APPENDICES



Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX A
Public Meeting Notice
Mailing and Newspaper Advertisement



Lyndale Drive Retaining Wall Study

Public Meeting Notice

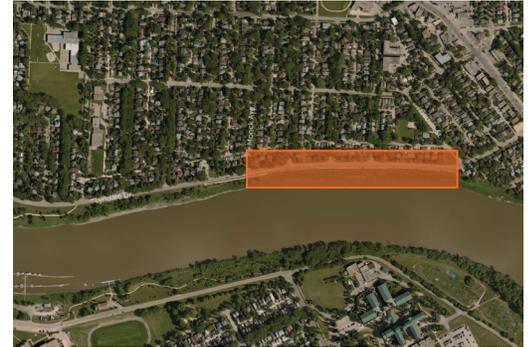
Winter 2016



The City of Winnipeg has retained a consultant team to provide professional services for a Preliminary Engineering Study for the Lyndale Drive Retaining Wall. This work is a continuation of riverbank assessment and stabilization projects for the Lyndale Drive Park area.

Project Study Area

The immediate study area is located between Monck Avenue and Gauvin Street along the existing timber retaining wall. As part of the project we will be considering impacts and opportunities upstream and downstream of this area.



Project Background

Lyndale Drive forms a portion of the City's primary diking system to defend against flooding along the Red River. This section of Lyndale Drive has had a history of riverbank instabilities. Early riverbank retaining wall construction began nearly 40 years ago and is now nearing the end of its life cycle and requires a rehabilitation or replacement plan. In 2013, deep-seated riverbank movement necessitated further emergency stabilization.



Project Objectives

The objectives of this project are to conduct an engineering study and preliminary design exercise to evaluate the need for riverbank stability improvements and structural retaining wall rehabilitation, replacement, or removal. Based on these findings, designs will be developed, taking public input into consideration, to improve the reliability of the primary dike, protect the road structure, and nearby utilities, while at the same time enhancing the riverbank area.

Upcoming Public Meeting

You are invited to a meeting to receive background information on the project and provide valuable input into the planning and design that will consider the broad range of transportation, environmental and community goals.

Date: Tuesday, February 2, 2016

Time: Registration: 6:00pm - 6:30pm
Presentation and Discussion: 6:30pm - 8:30pm

Location: Norwood Community Centre
87 Walmer Street

Please kindly RSVP to: lyndaledrive@htfc.mb.ca / (204)-944-9907

We look forward to hearing from you! If you have questions, please feel free to contact us at the above email address or phone number.

For More Info: www.winnipeg.ca/LyndaleDrive



Étude sur le mur de soutènement de la promenade Lyndale

Séance publique Hiver 2016



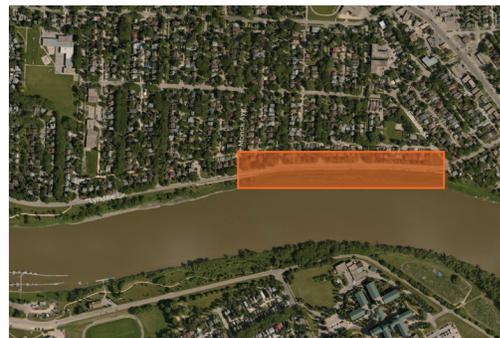
La Ville de Winnipeg a demandé à une équipe de consultants de procéder à une étude technique préliminaire portant sur le mur de soutènement de la promenade Lyndale. Cette étude découle des travaux d'évaluation et de stabilisation de la rive touchant le parc de la promenade Lyndale.

Zone d'étude du projet

La zone d'étude immédiate se situe entre l'avenue Monck et la rue Gauvin, le long du mur de soutènement en bois existant. Dans le cadre de notre étude, nous examinerons les effets et les possibilités d'un tel projet en amont et en aval de cette zone.

Historique du projet

La promenade Lyndale fait partie du réseau de digues d'origine de la Ville, qui sert à lutter contre les inondations le long de la rivière Rouge. Par le passé, on a constaté à plusieurs reprises que la rive était instable dans cette portion de la promenade Lyndale. La construction du premier mur de soutènement de cette rive avait été entreprise il y a environ 40 ans. Le mur arrive désormais à la fin de son cycle de vie. Il faut donc élaborer un plan pour le restaurer ou le remplacer. En 2013, il a fallu effectuer des travaux de stabilisation d'urgence parce que la rive bougeait en profondeur.



Objectifs du projet

Le but de la démarche qui nous concerne est de faire une étude technique et de dégager les étapes de conception préliminaires afin d'évaluer les besoins en termes d'amélioration de la stabilité de la rive et de restauration, remplacement ou suppression du mur de soutènement. On se basera sur les résultats de cette étude et on prendra en compte les réactions du public pour créer des dessins qui viseront à améliorer la fiabilité de la digue d'origine et à protéger la route et les installations de service publique avoisinantes tout en renforçant la zone riveraine.

Séance publique à venir

Nous vous invitons à une réunion qui vous permettra de récolter des informations sur l'historique de ce projet et de faire des commentaires qui nous seront très utiles lors de la planification et de la conception, lesquelles tiendront compte du vaste éventail des objectifs à atteindre en termes de transport et d'environnement ainsi que pour le quartier.

Date: Mardi 2 février 2016

Horaire: Inscription: De 18 h à 18 h 30
Présentation et discussion: De 18 h 30 à 20 h 30

Lieu: Centre communautaire de Norwood
87, rue Walmer

RSVP à: lyndaledrive@htfc.mb.ca / (204)-944-9907

Il nous tarde de connaître votre opinion. Si vous avez des questions, n'hésitez pas à communiquer avec nous à l'adresse électronique ou au numéro de téléphone indiqués ci-dessus.

Informations supplémentaires: www.winnipeg.ca/LyndaleDrive





Public Meeting Notice

Lyndale Drive Retaining Wall Study

Lyndale Drive forms a portion of the City's primary diking system to defend against flooding along the Red River. The current retaining wall is now nearing the end of its life cycle and requires a rehabilitation or replacement plan. You are invited to a meeting to receive background info on the project and provide input into the planning and design that will consider the broad range of transportation, environmental and community goals.

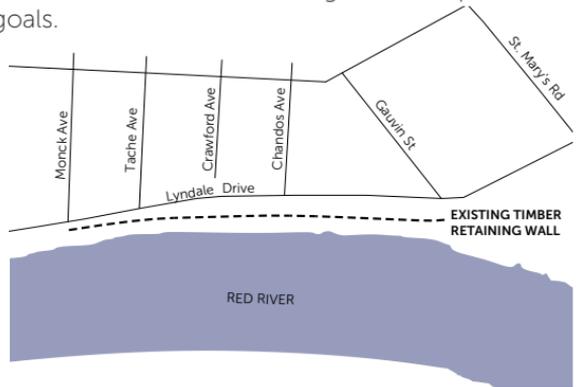
More Info:

www.winnipeg.ca/LyndaleDrive

Contact: HTFC Planning & Design

Email: lyndale@htfc.mb.ca

Phone: 204-944-9907



Date: Tuesday, February 2, 2016

Time: Registration: 6:00pm - 6:30pm
Presentation and Discussion: 6:30pm - 8:30pm

Location: Norwood Community Centre
87 Walmer Street

Please RSVP: lyndale@htfc.mb.ca





Séance publique

Étude sur le mur de soutènement de la promenade Lyndale

La promenade Lyndale fait partie du réseau de digues d'origine de la Ville, qui sert à lutter contre les inondations le long de la rivière Rouge. Le mur de soutènement actuel est délabré et a besoin d'être restauré ou remplacé. Nous vous invitons à une réunion lors de laquelle vous pourrez prendre connaissance de l'historique du projet et faire des commentaires sur la planification et la conception, lesquelles tiendront compte du vaste éventail des objectifs à atteindre en termes de transport et d'environnement, ainsi que pour le quartier.

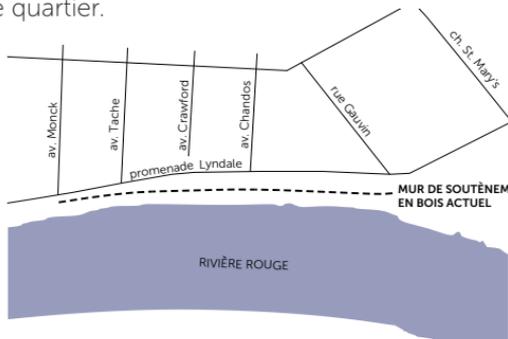
Renseignements supplémentaires:

www.winnipeg.ca/LyndaleDrive

Coordonnées: HTFC Planning & Design

Courriel: lyndale@htfc.mb.ca

Téléphone: 204-944-9907



Date: Mardi 2 février 2016

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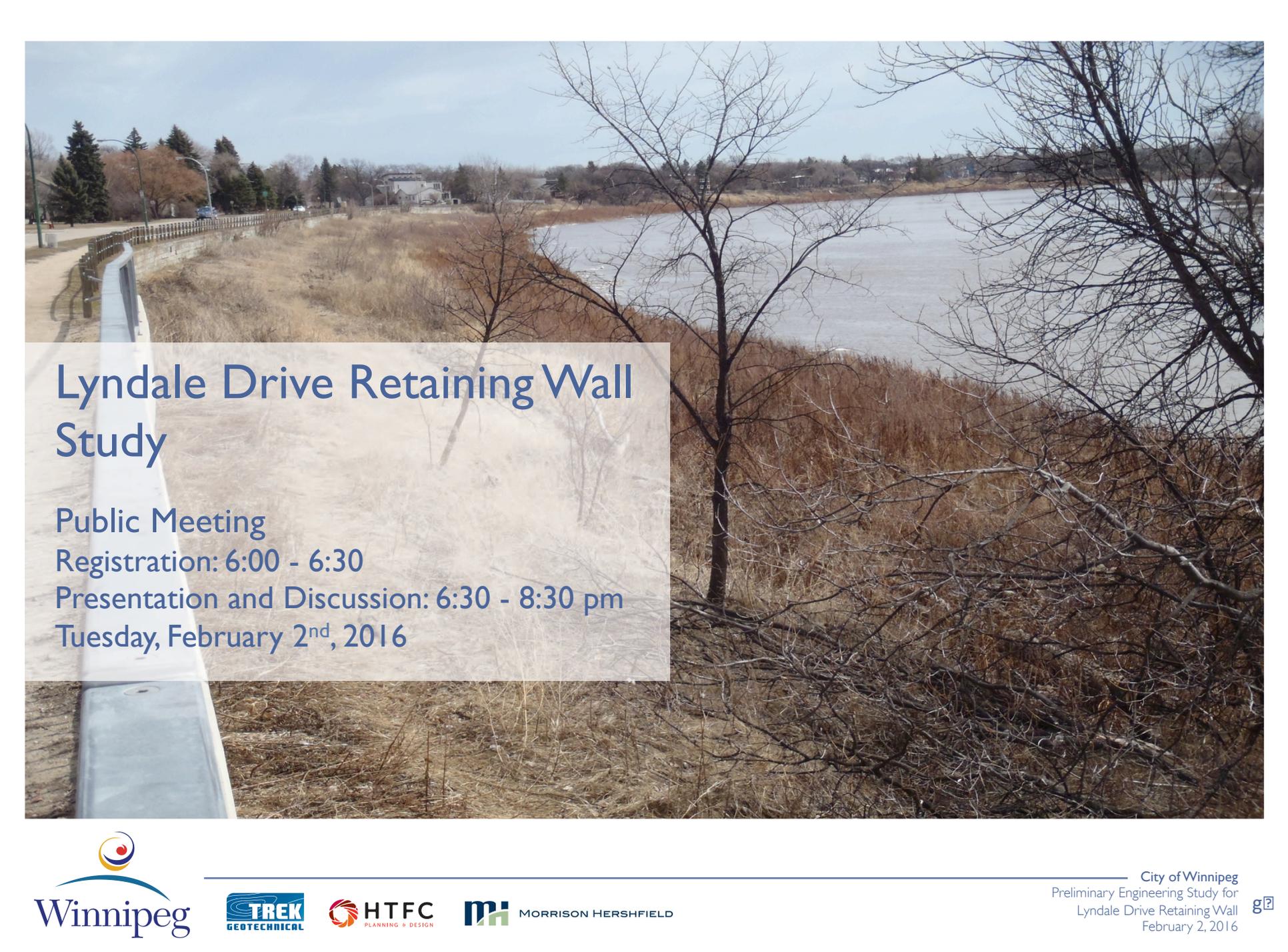
RSVP: lyndale@htfc.mb.ca



Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX B
Public Meeting Presentation Materials





Lyndale Drive Retaining Wall Study

Public Meeting

Registration: 6:00 - 6:30

Presentation and Discussion: 6:30 - 8:30 pm

Tuesday, February 2nd, 2016



Welcome

Thank you for attending tonight's public meeting for the Lyndale Drive Retaining Wall Study. This meeting is intended to provide you with a greater understanding of the project, to facilitate group discussions, and to hear back from the community on possible study outcomes.

Introductions

Project Manager:

Cam Ward, City of Winnipeg

Consultant Team:

James Blatz, TREK Geotechnical

Michael Van Helden, TREK Geotechnical

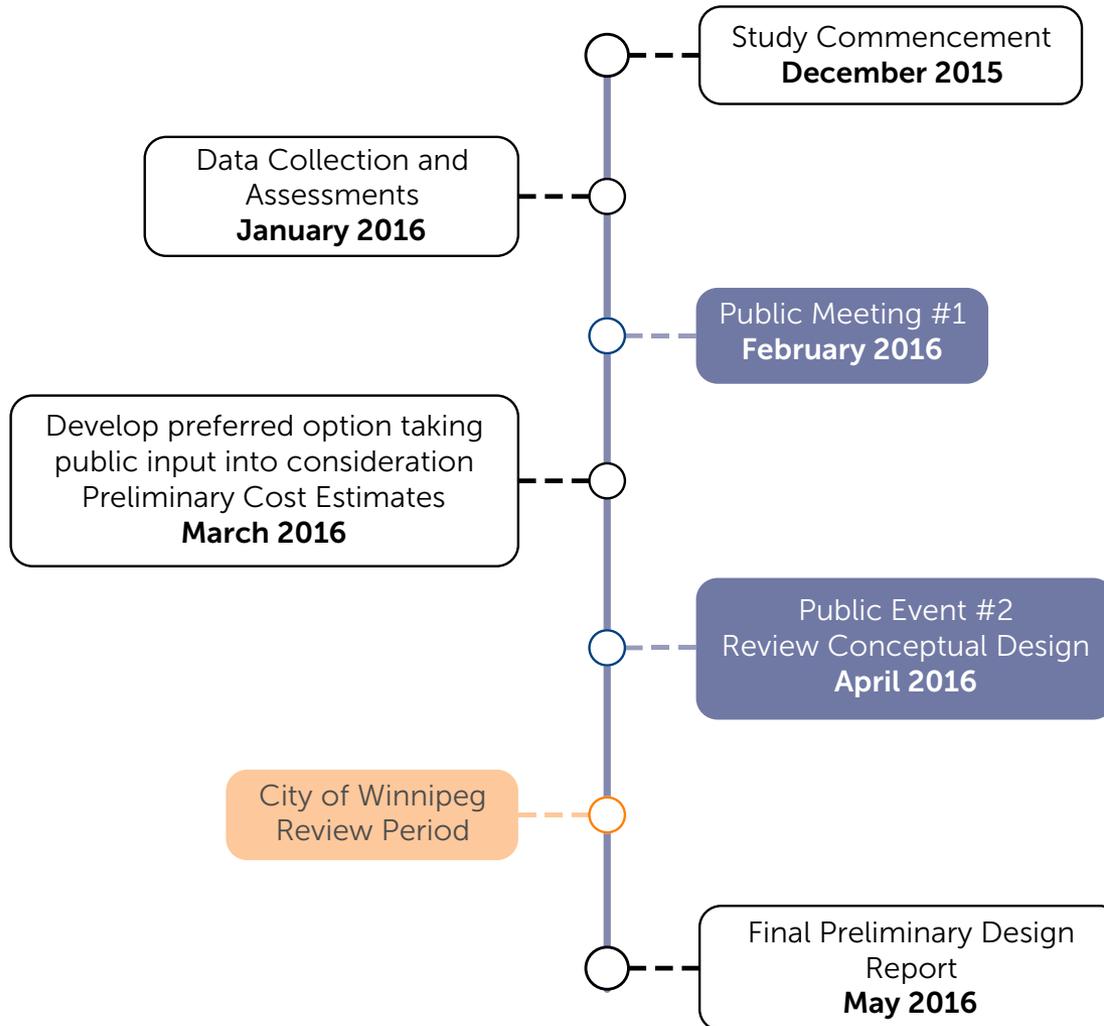
Bill Ebenspanger, Morrison Hershfield

Glen Manning, HTFC Planning & Design

Maureen Krauss, HTFC Planning & Design

Rachelle Kirouac, HTFC Planning & Design

Project Process & Timeline

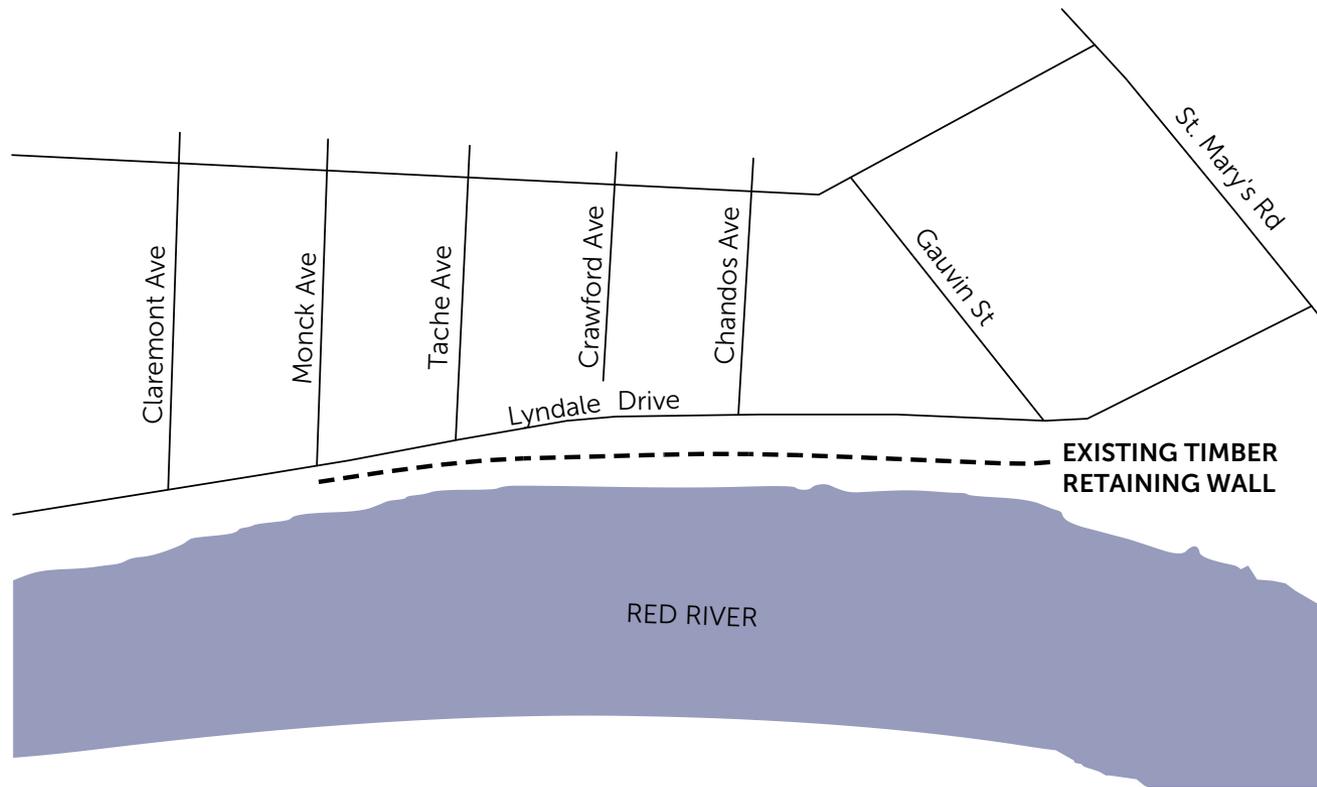


Tonight's Agenda

1. Study Background
2. Primary Study Considerations
 - Guiding factors in determining study outcomes
3. Riverbank Stability Explained
 - Geotech 101
4. Possible Outcomes
 - What can be done?
5. REFRESHMENT BREAK
6. Facilitated Discussion Tables
 - Conversation tables to discuss possible outcomes and receive input
6. Summary of Presentation and Discussion Table Input

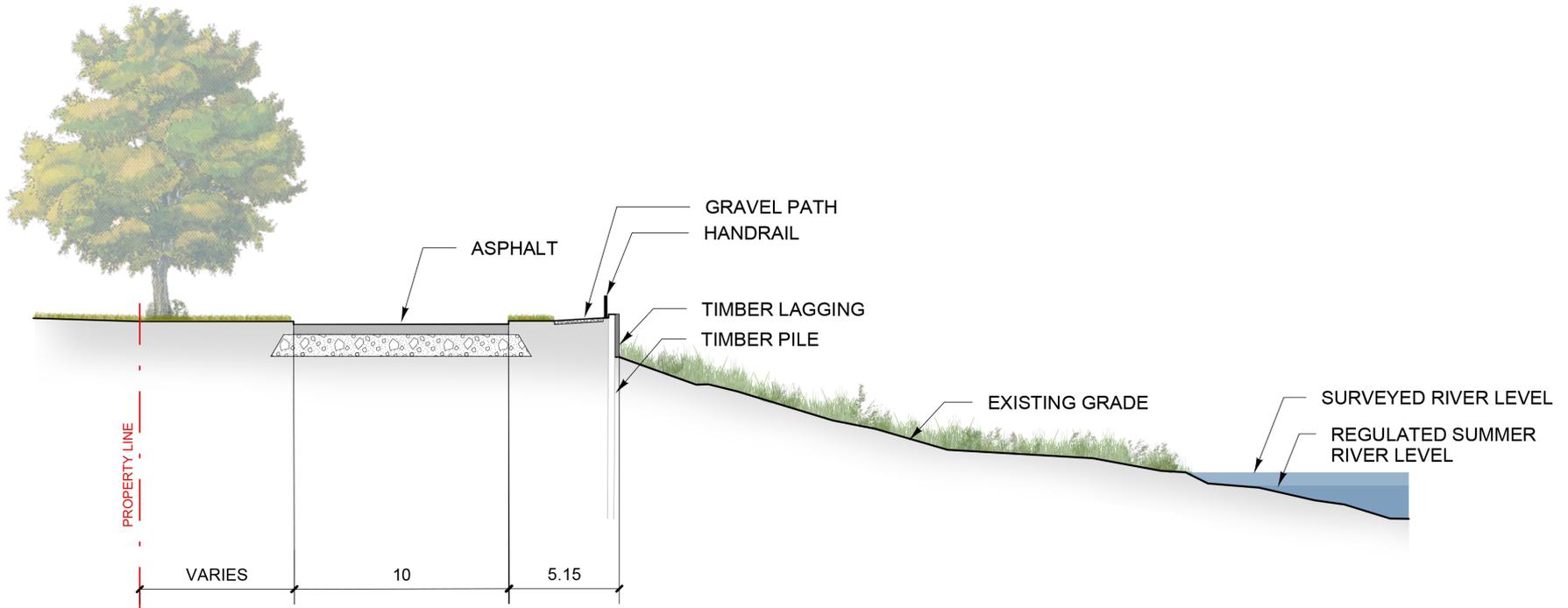
Study Background

The section of Lyndale Drive between Claremont Avenue and Gauvin Street has had a history of riverbank instabilities. Ongoing riverbank movements and deterioration of the retaining wall pose a risk to the road, dike, sewers, and other infrastructure at the top of the riverbank.



Study Background

Existing Conditions:





Lyndale Drive – Road failures



Existing Timber Retaining Wall

Primary Study Considerations

- Riverbank Stabilization
- Safety and Accessibility
- Bikes and Pedestrians
- Local Traffic and Parking Impacts
- Cost
- Construction Process (road blockages, traffic etc)
- Maintenance (snow clearing, mowing, trash pick-up)
- Appearance (Plantings, Materials, Views)
- Environmental Impacts

Riverbank Stability Explained – Geotech 101



Bottom of Slope at Red River



Lyndale Drive Riverbank

2013 Riverbank Instability – Monck to Tache



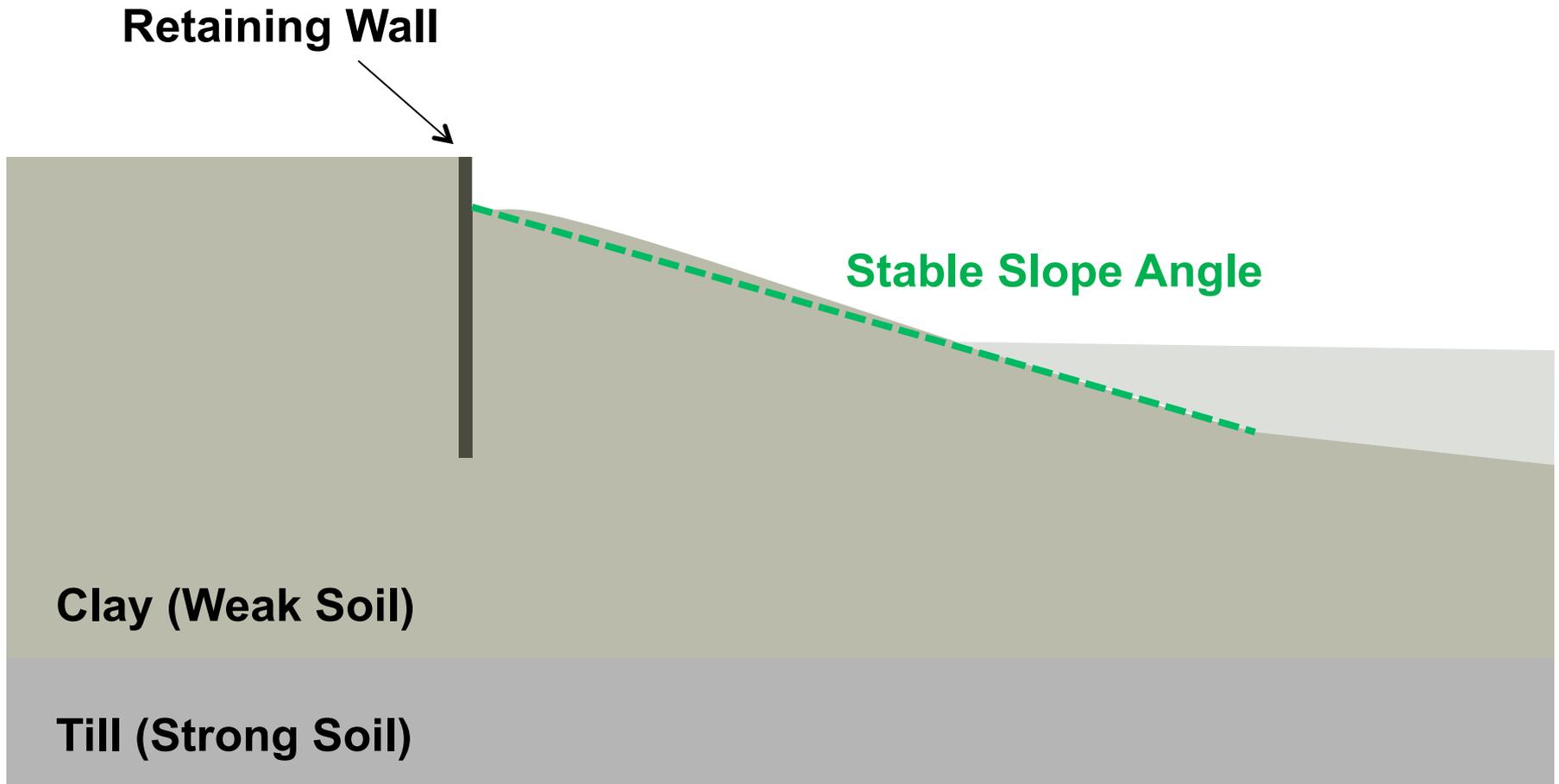
2013 Riverbank Instability – Monck to Tache



2013 Riverbank Instability – Monck to Tache

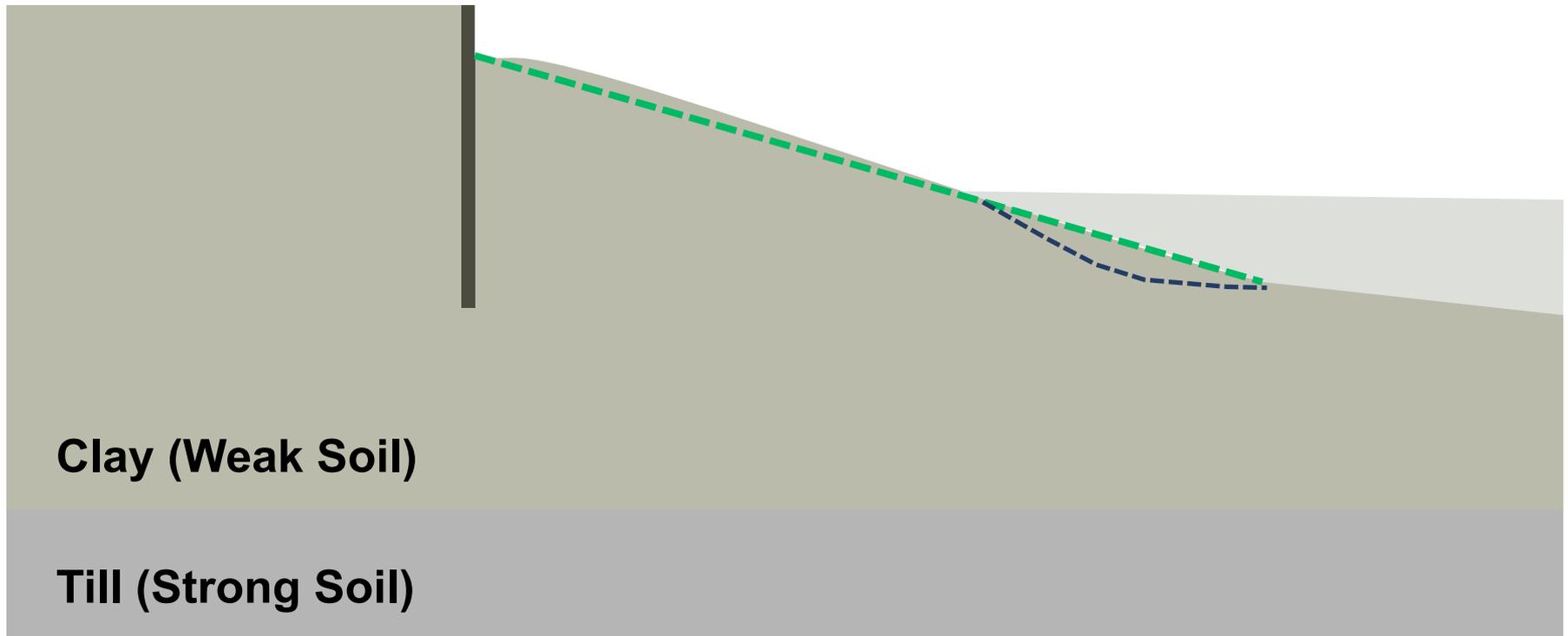


Riverbank Stability Explained



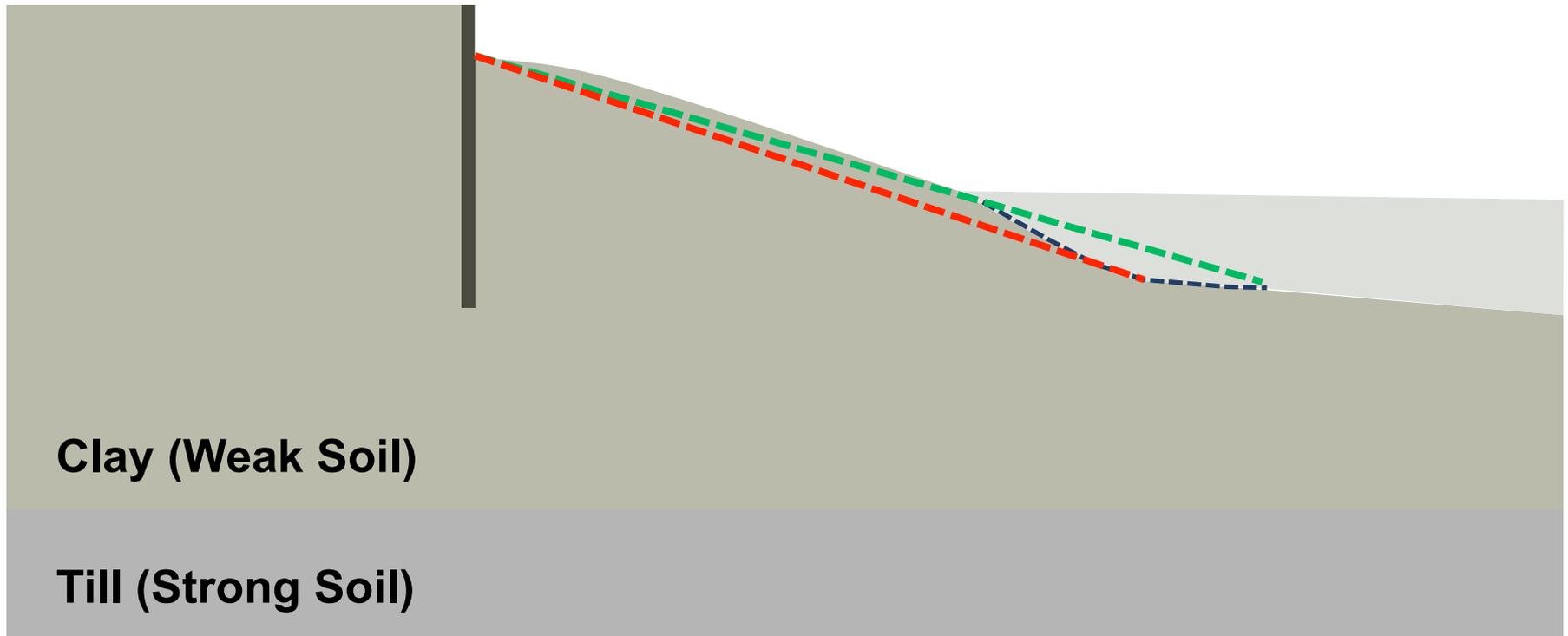
Riverbank Stability Explained

Erosion eats away soil near shoreline



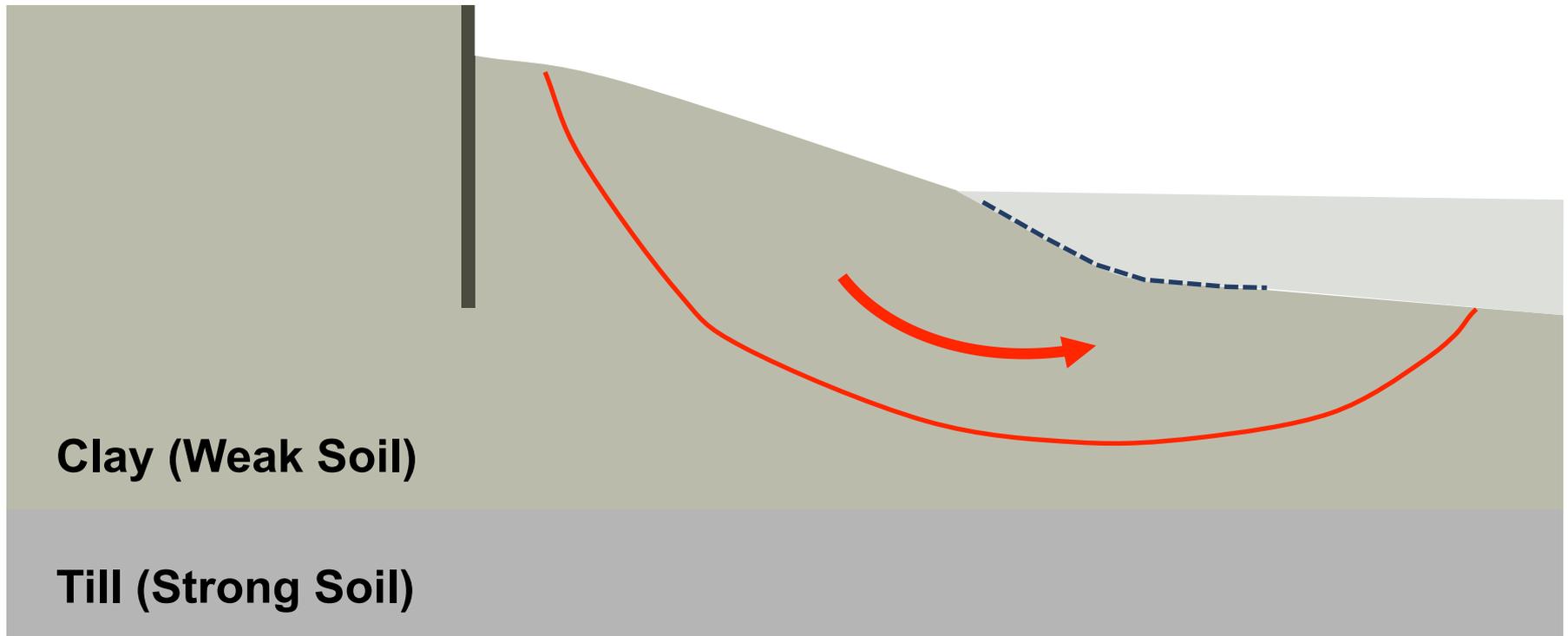
Riverbank Stability Explained

Unstable:
Slope angle becomes steeper than the stable
slope angle



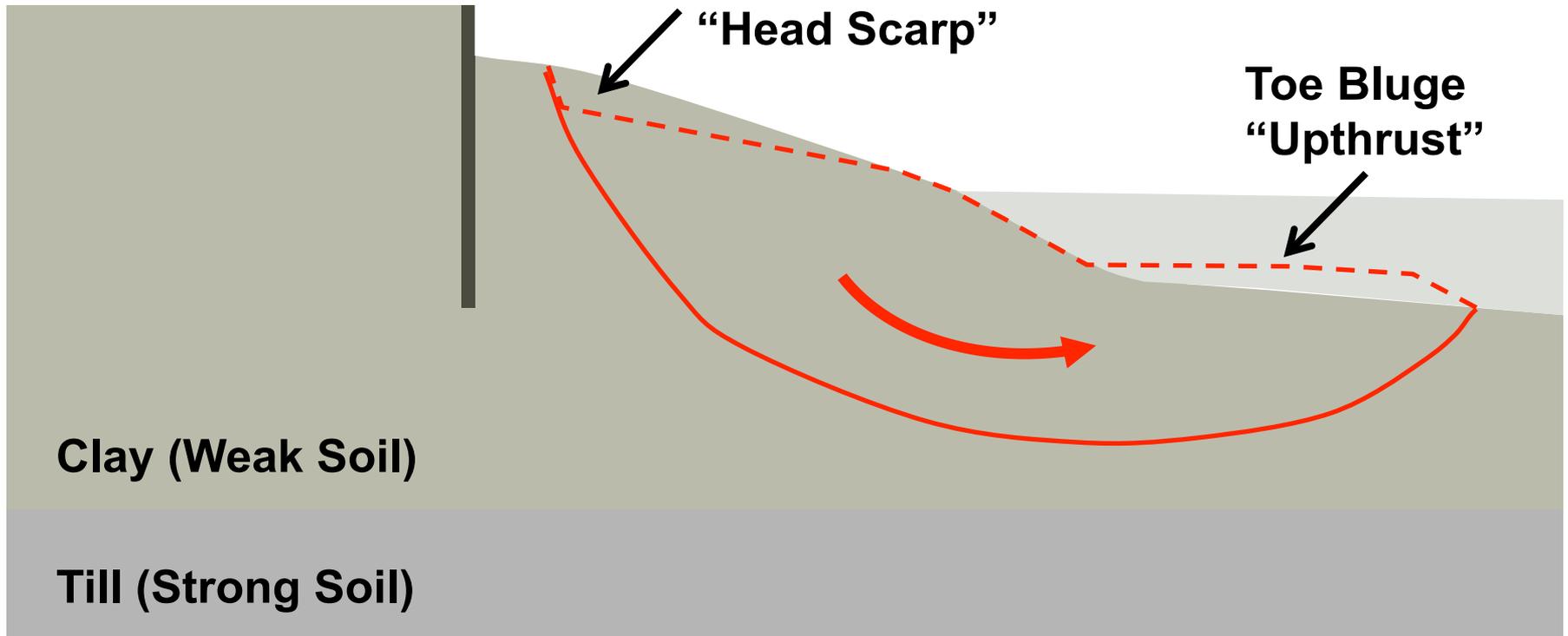
Riverbank Stability Explained

Riverbank Instability:
Imbalance in forces causes the
riverbank to move



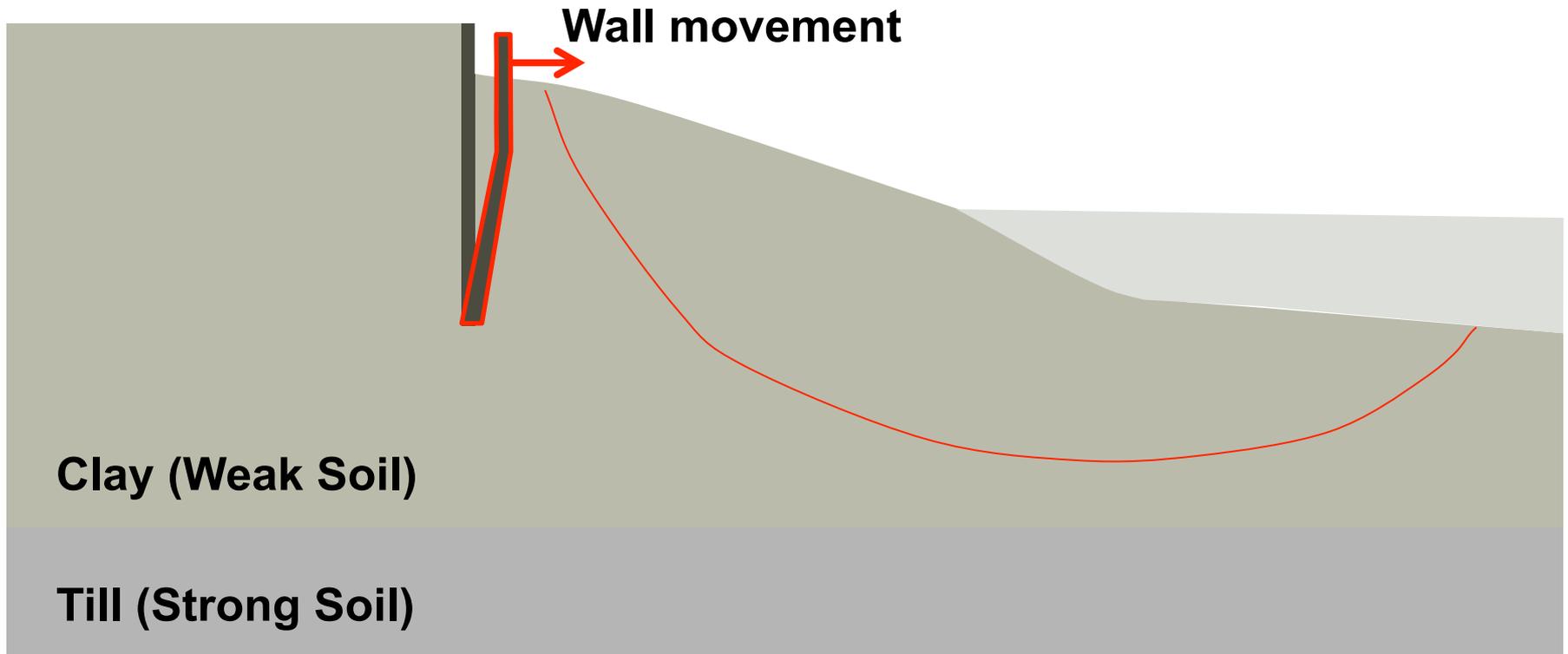
“Physics” of Riverbank Stability

Riverbank Instability:
Imbalance in forces causes a
“slide mass” to move



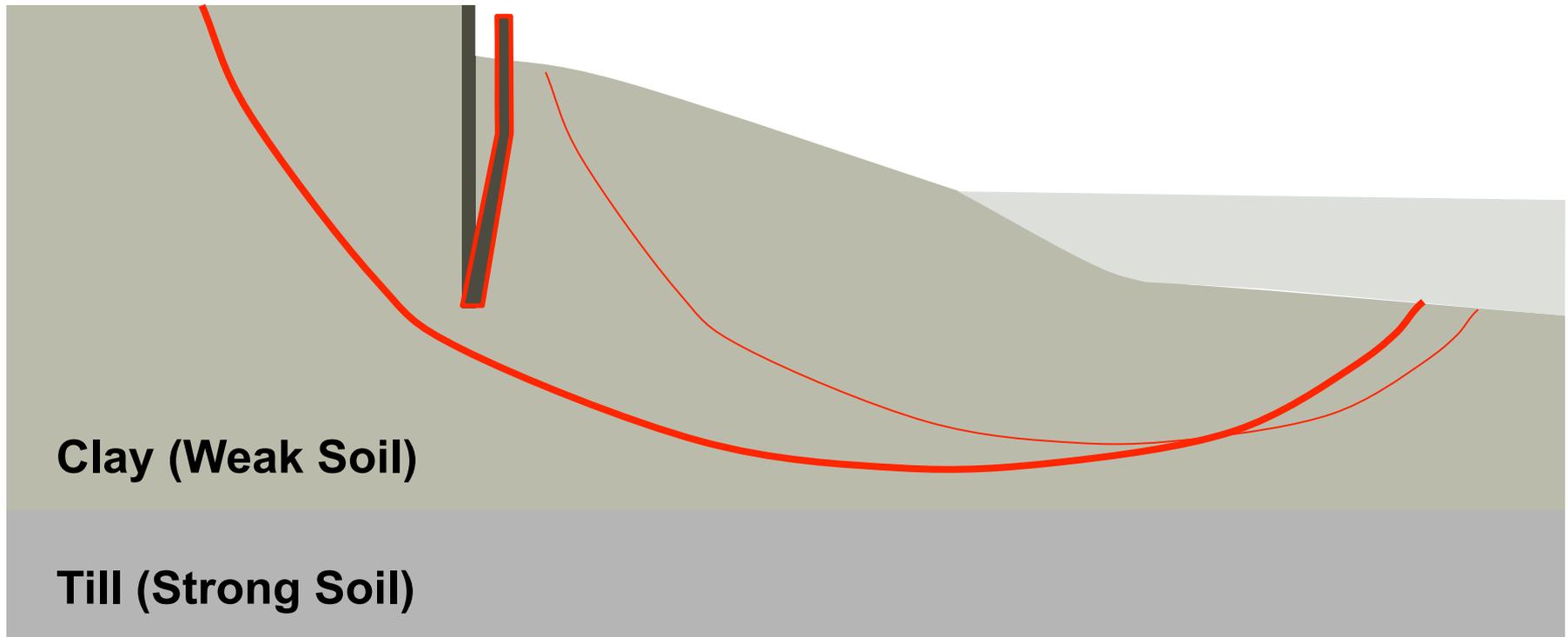
Riverbank Stability Explained

Riverbank movement can cause wall movement if not addressed



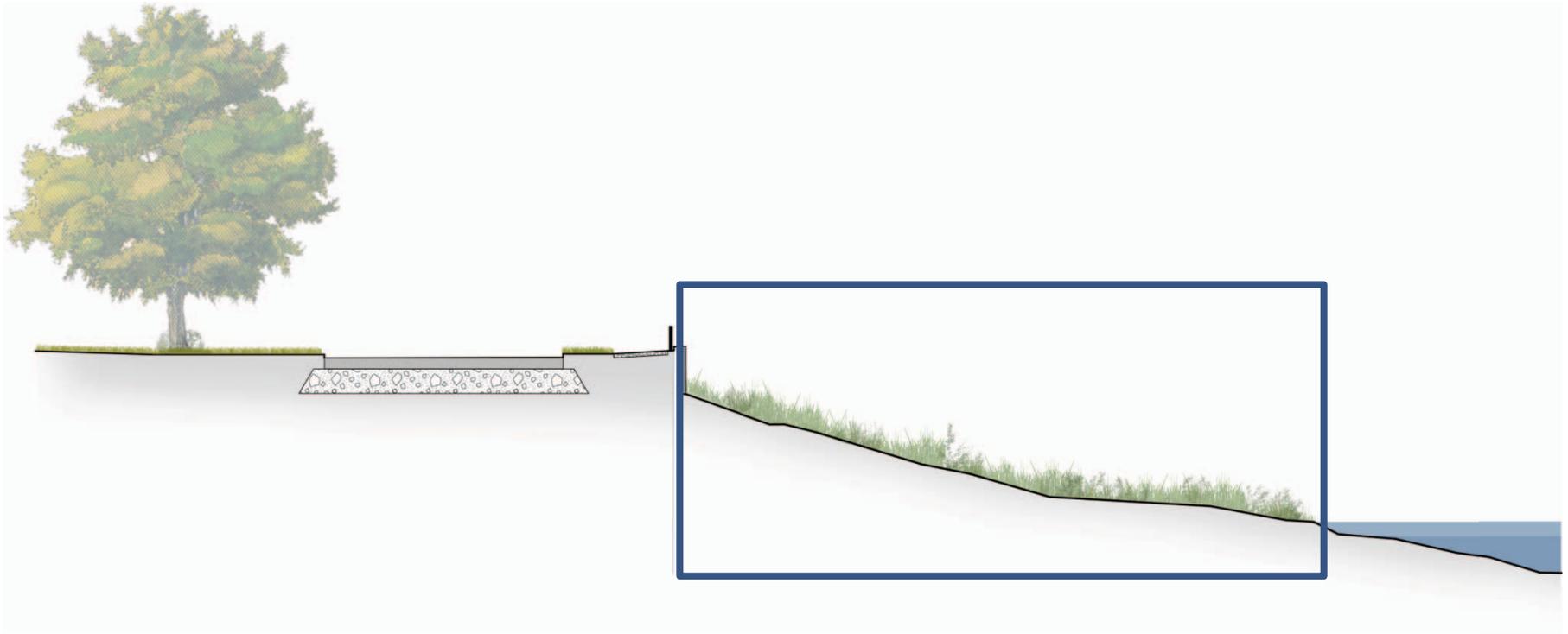
Riverbank Stability Explained

“Retrogression” is when the head scarp moves farther from river



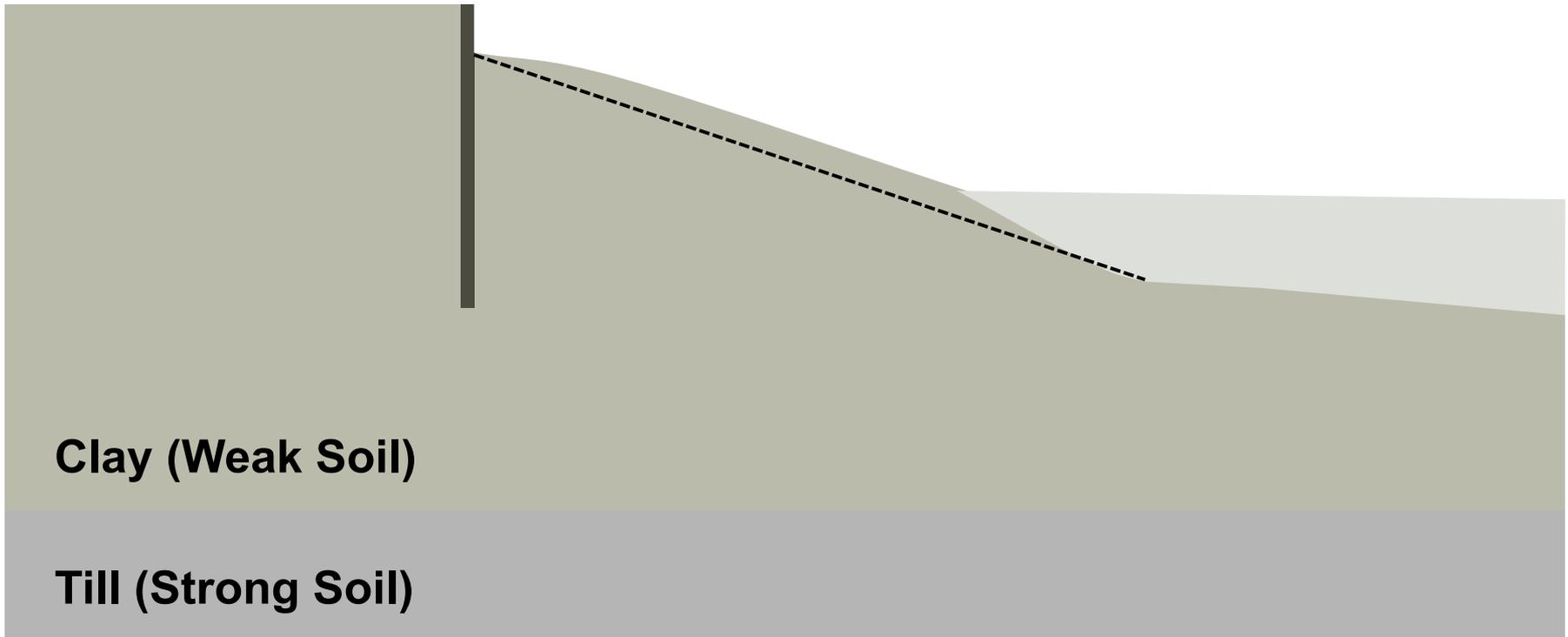
Possible Outcomes

Topic I: Riverbank Stabilization



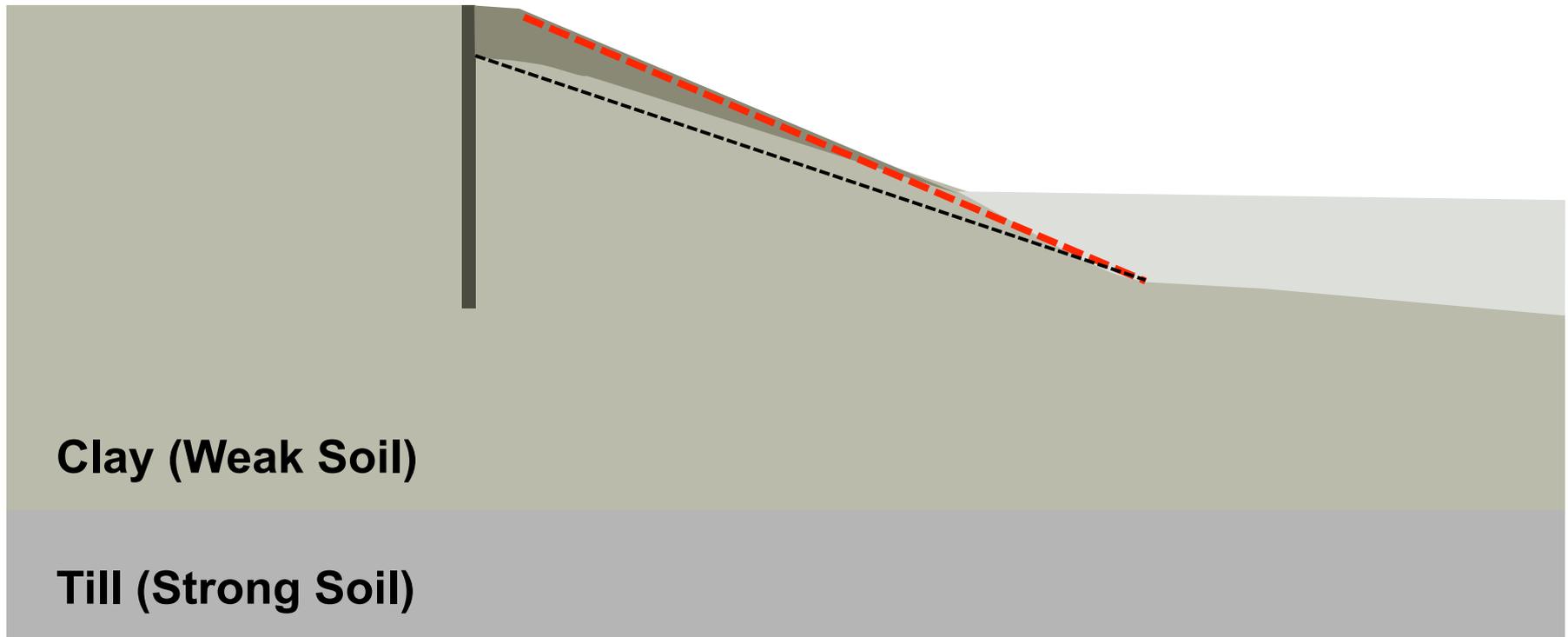
Riverbank Stabilization

**Fill Placement Steepens Slope Angle
Reduces Stability**



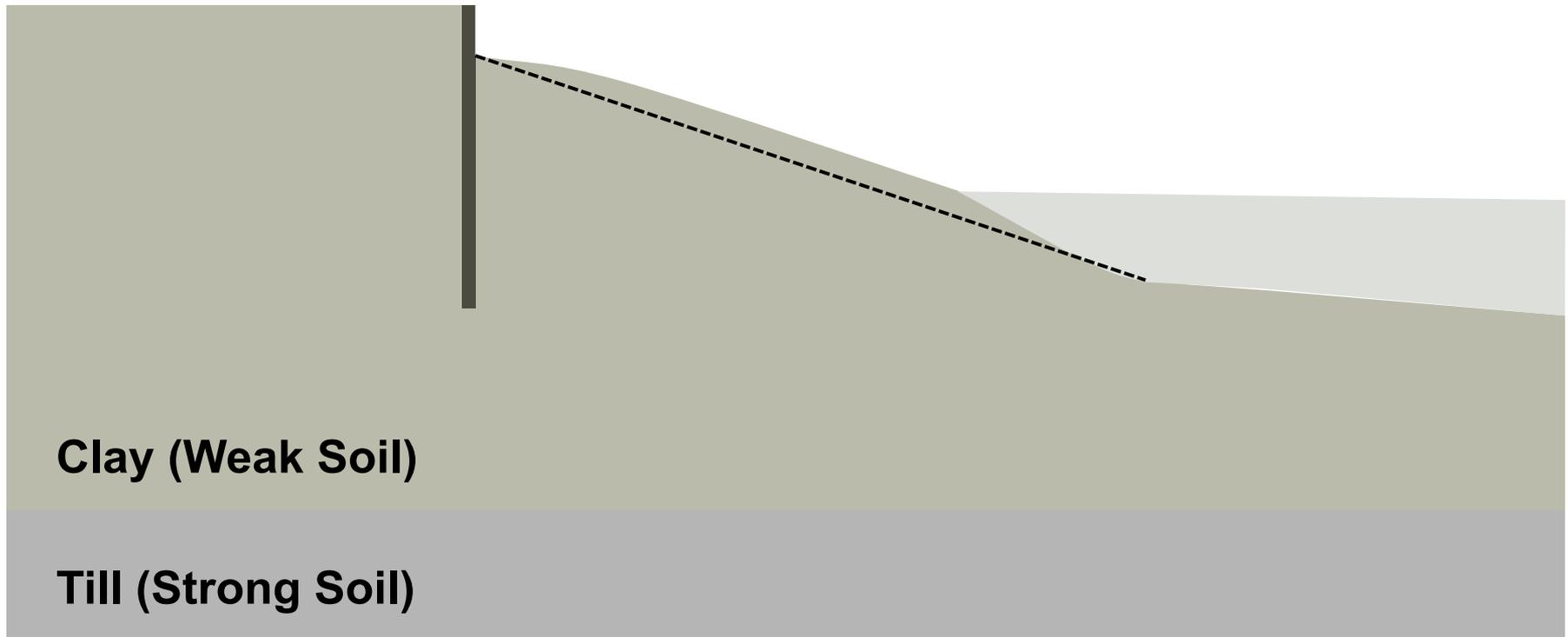
Riverbank Stabilization

**Fill Placement Steepens Slope Angle
Reduces Stability**



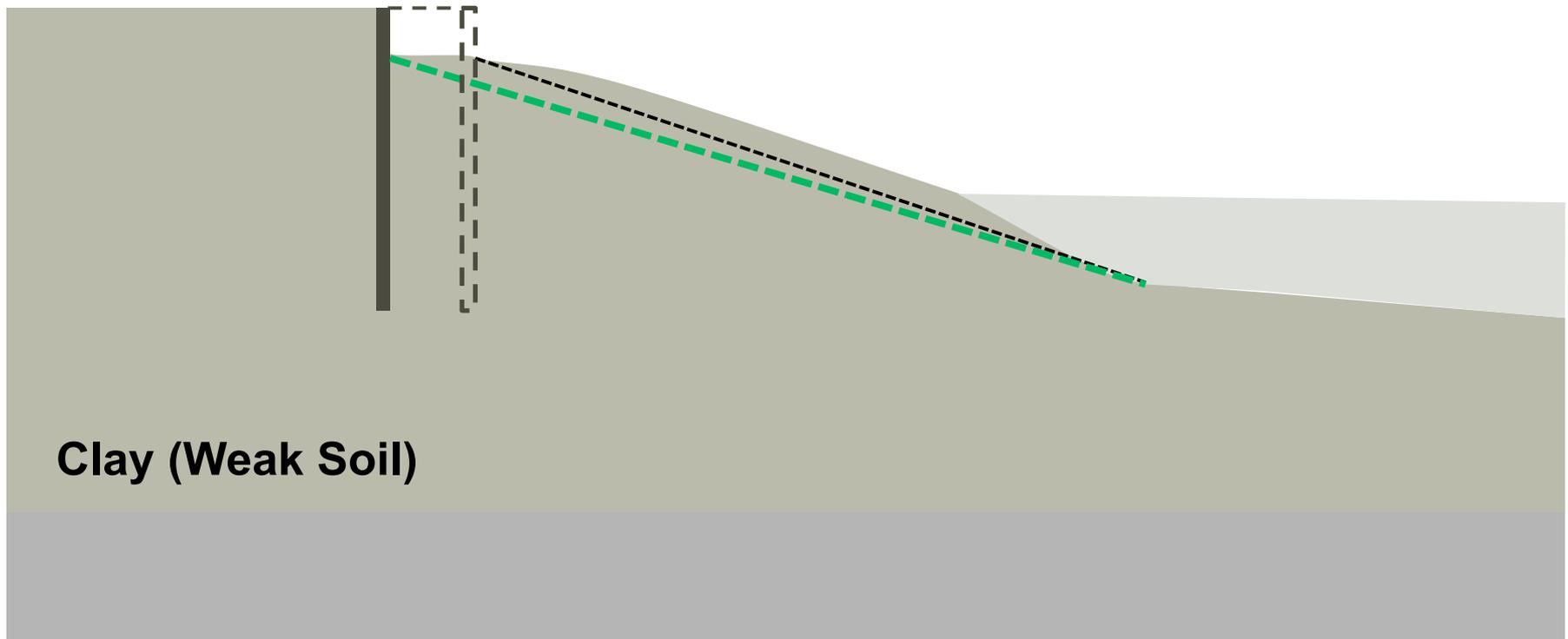
Riverbank Stabilization

**Soil Removal (from top of bank) “Offloads”
the riverbank, flattens the slope angle
Improves Stability**



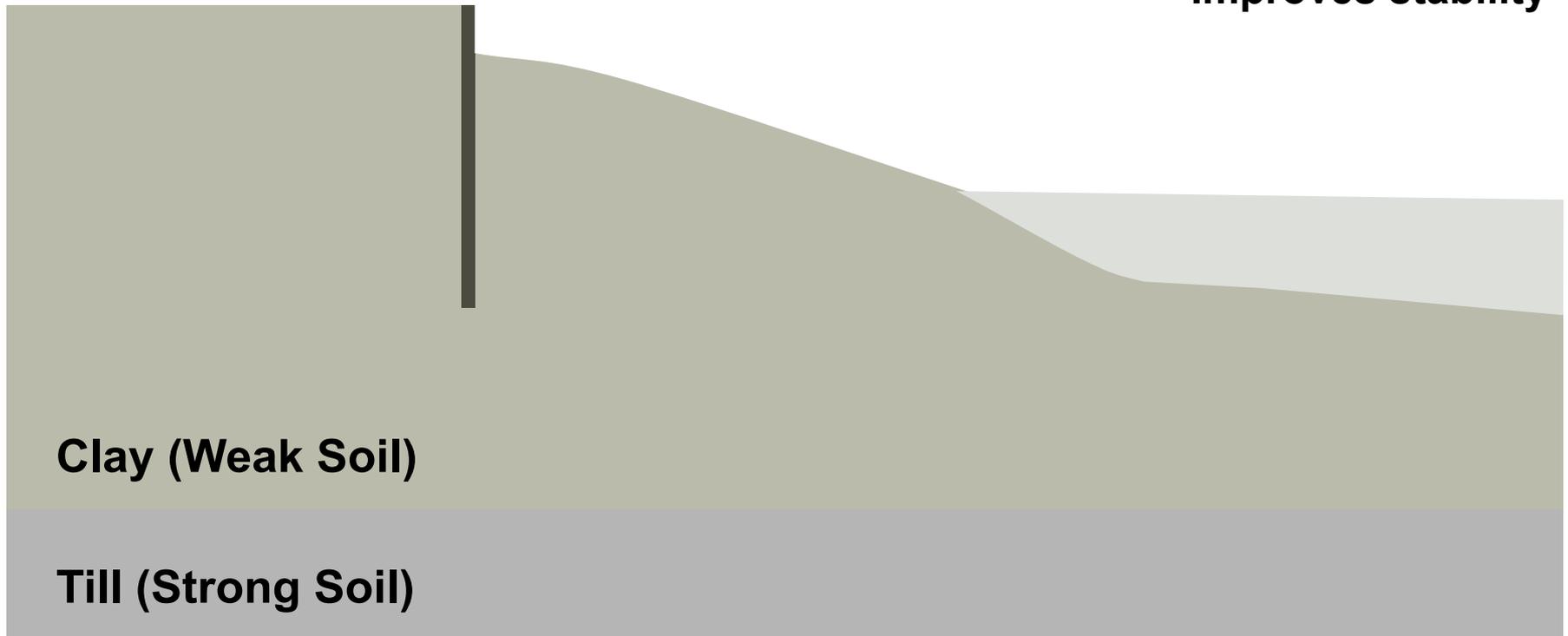
Riverbank Stabilization

**Soil Removal (from top of bank) “Offloads”
the riverbank, flattens the slope angle
Improves Stability**



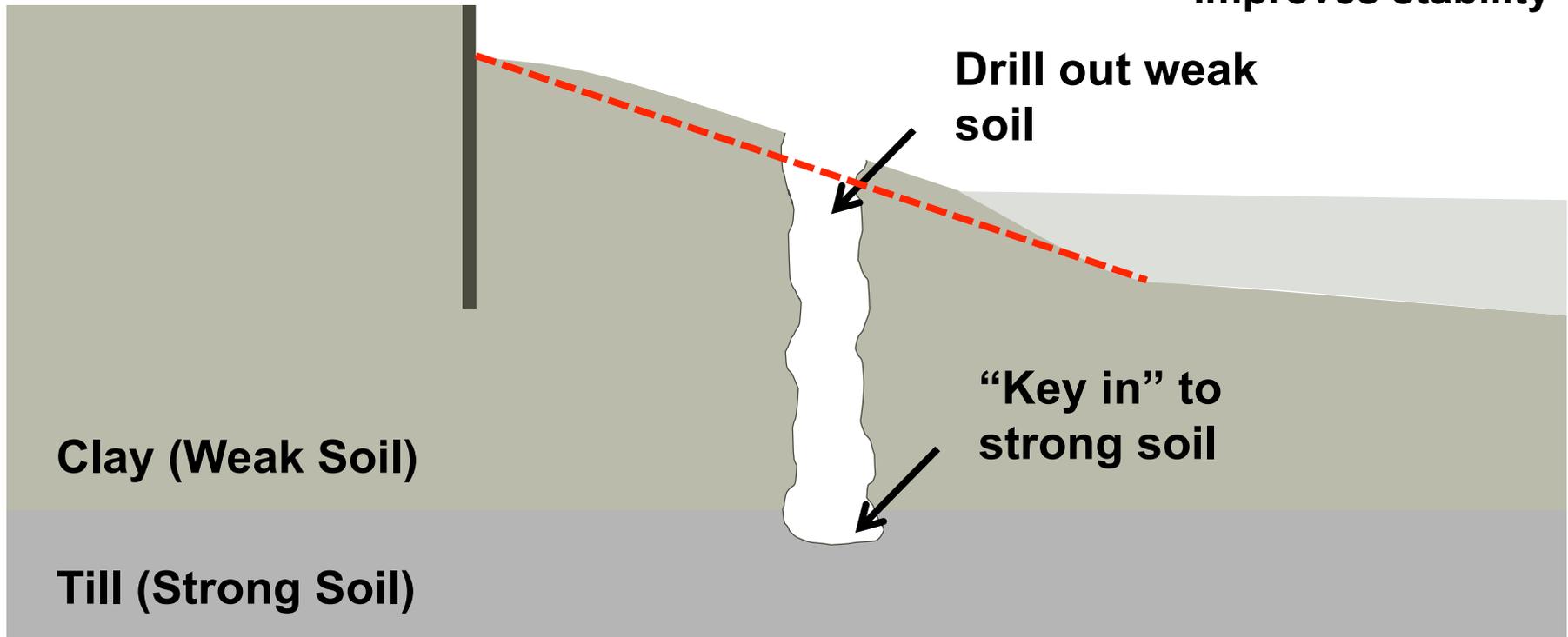
Riverbank Stabilization

**Rockfill Columns or Shear Keys
strengthen the soils
Steepens the “stable” slope angle
Improves stability**



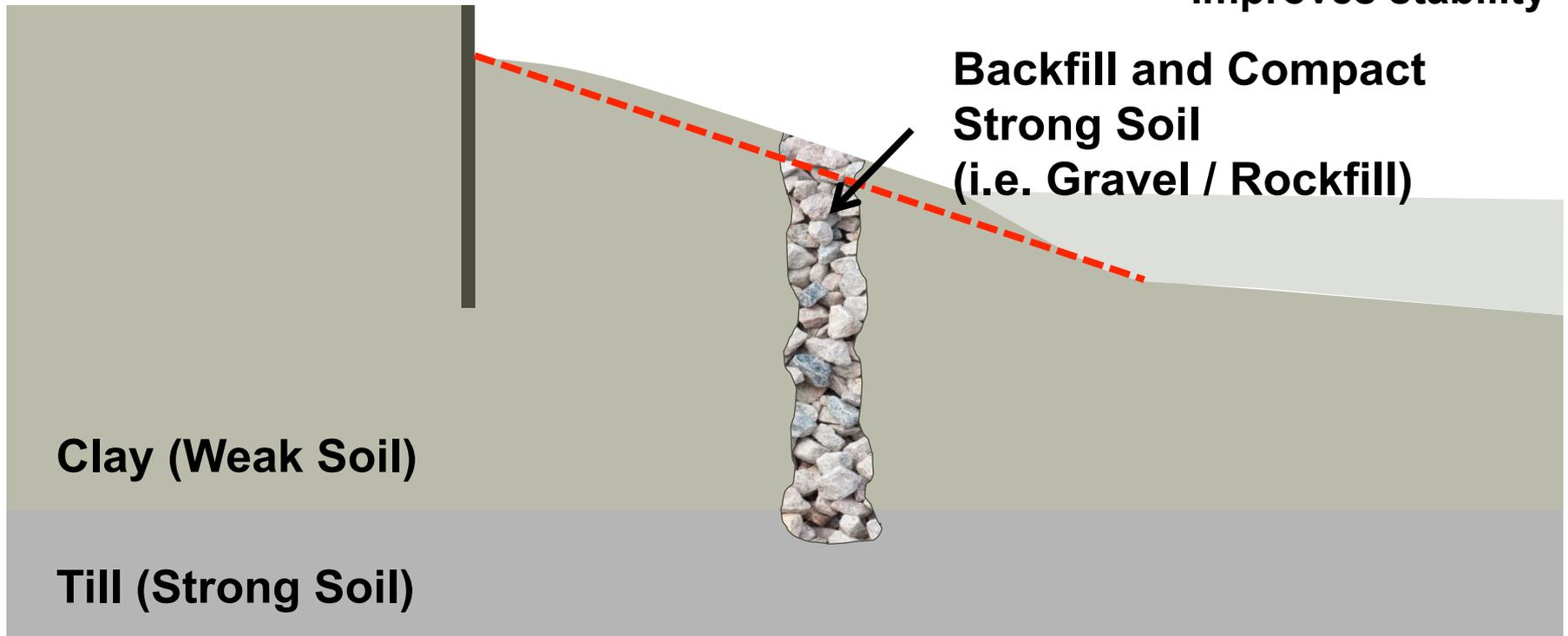
Riverbank Stabilization

**Rockfill Columns or Shear Keys
strengthen the soils
Steepens the “stable” slope angle
Improves stability**



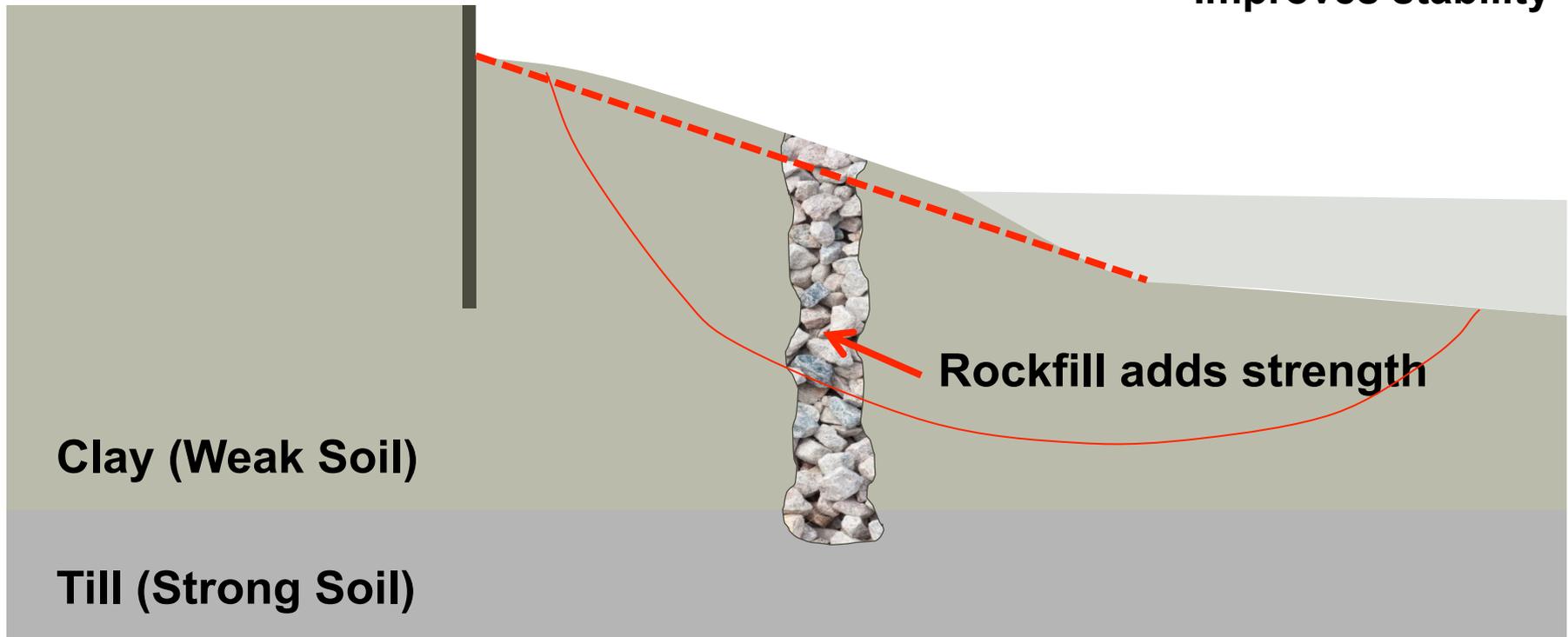
Riverbank Stabilization

**Rockfill Columns or Shear Keys
strengthen the soils
Steepens the “stable” slope angle
Improves stability**



Riverbank Stability Explained

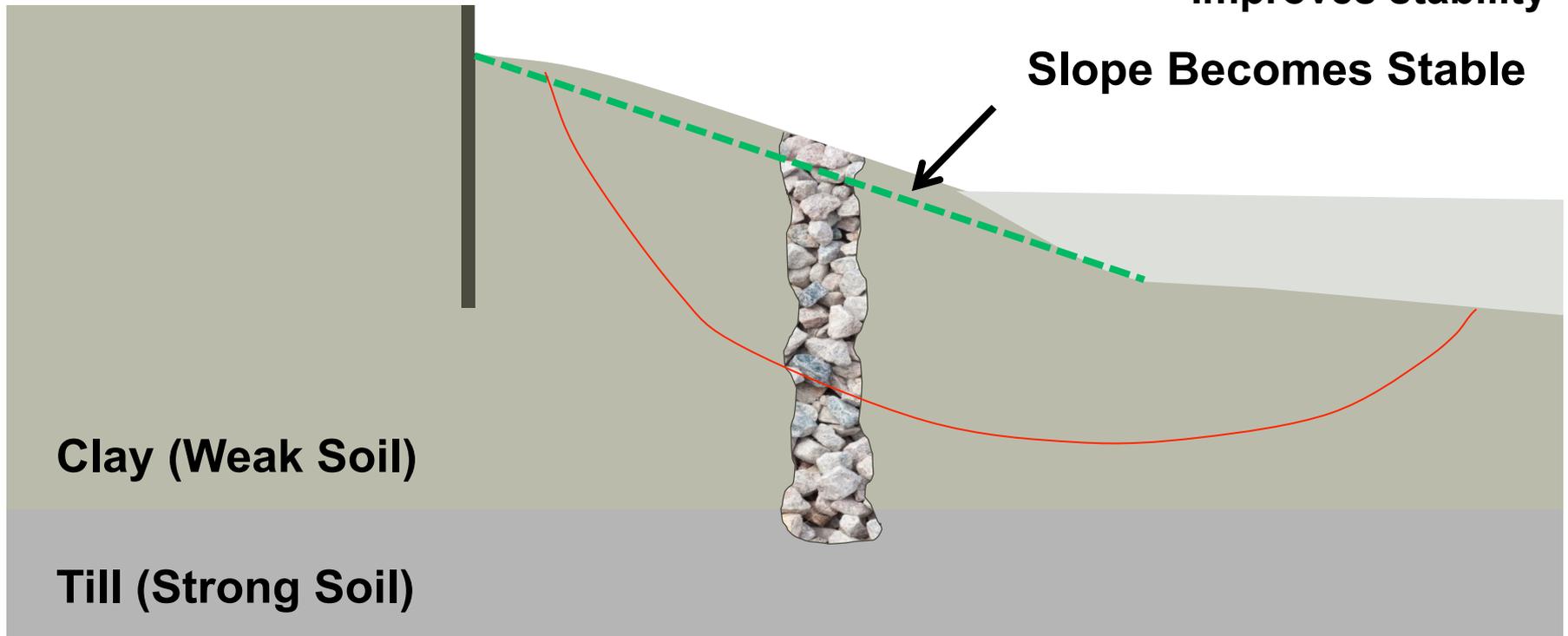
**Rockfill Columns or Shear Keys
strengthen the soils
Steepens the “stable” slope angle
Improves stability**



Riverbank Stability Explained

**Rockfill Columns or Shear Keys
strengthen the soils
Steepens the “stable” slope angle
Improves stability**

Slope Becomes Stable



2013 Emergency Stabilization between Monck and Tache



2013 Emergency Stabilization between Monck and Tache

Rockfill Column Construction



2013 Emergency Stabilization between Monck and Tache



2013 Emergency Stabilization between Monck and Tache



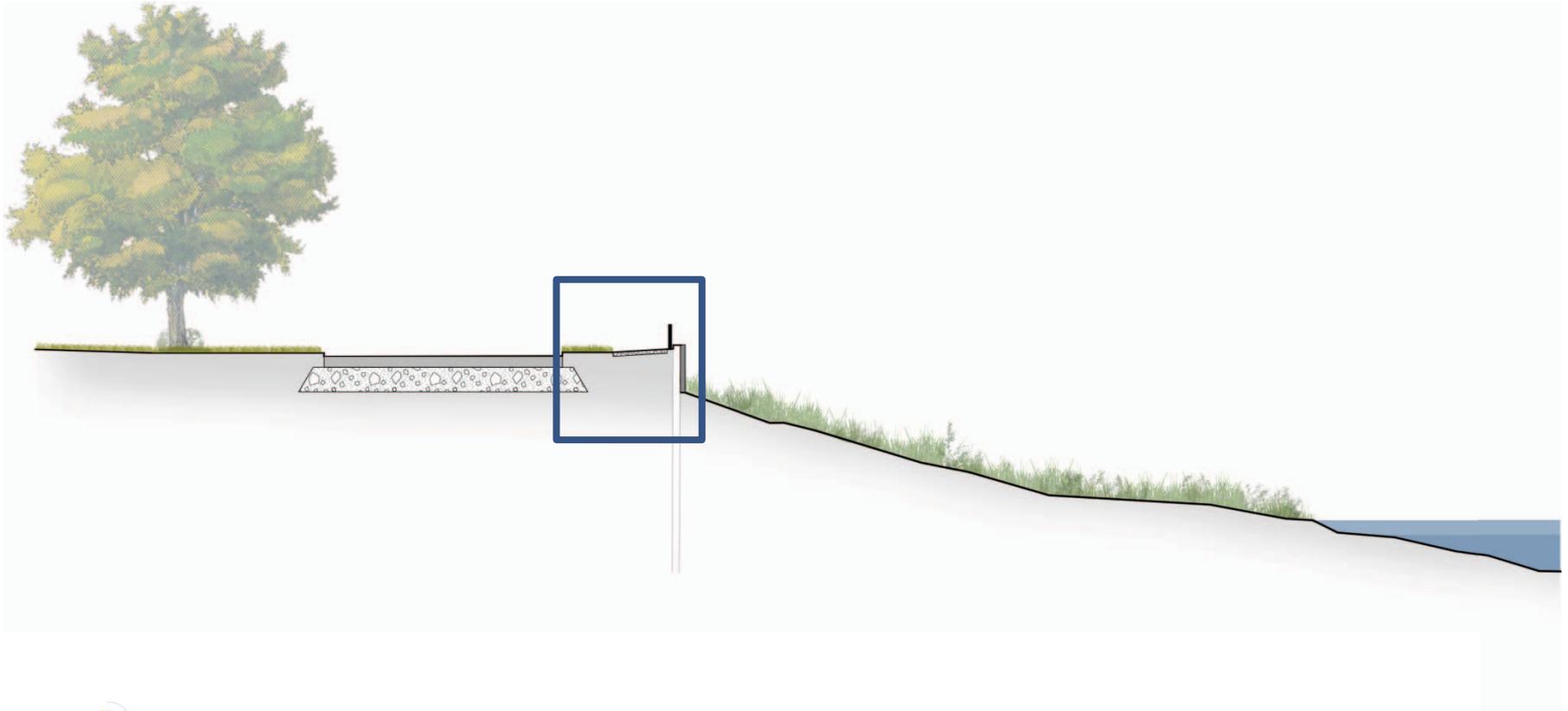
Riverbank Stability Improvement Along Lyndale

Potential Solutions

- Offload or flatten slope
 - Move wall towards the road
 - Replace soil with lightweight materials
- Strengthen the slope
 - Rockfill columns
 - Eliminate Retaining Wall
- New stronger wall

Possible Outcomes

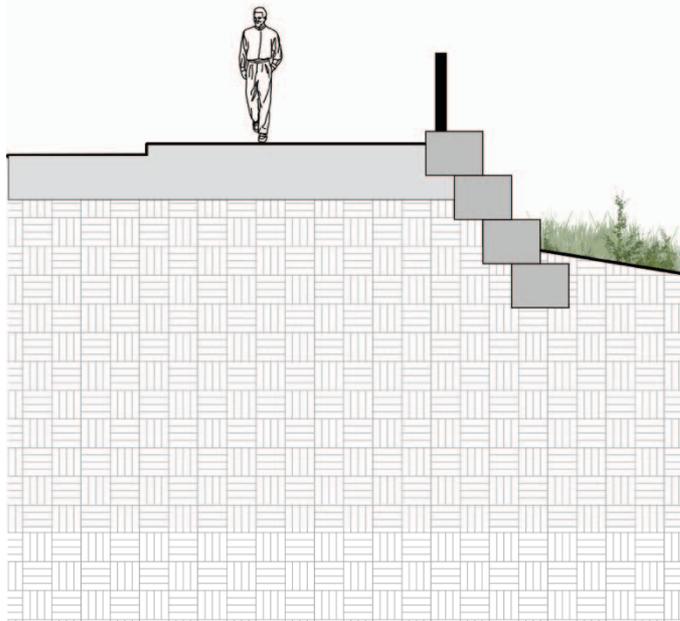
Topic 2: Transition Concepts



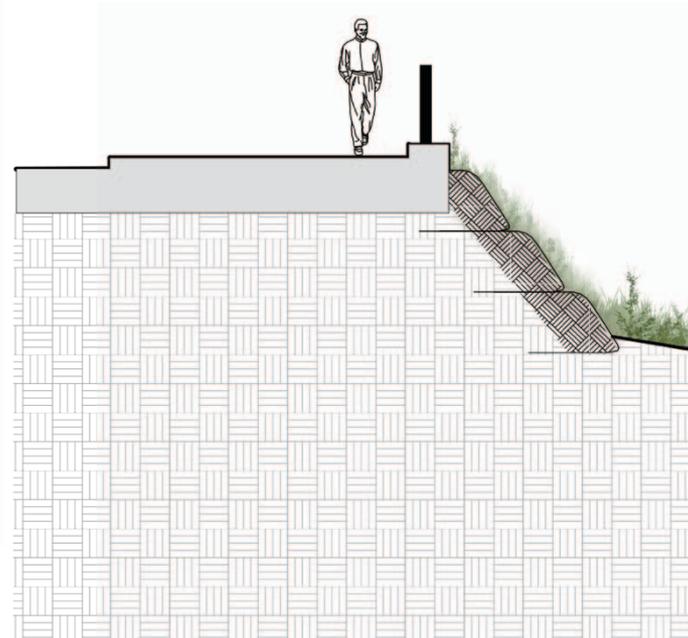
Transition Concepts

Concept I: Landscape Wall

Segmental Block Retaining Wall



45° Green Wall



Transition Concepts

Concept I: Landscape Wall

Segmental Block Retaining Wall



<http://www.pondnpatio.com/hardscaping.htm>

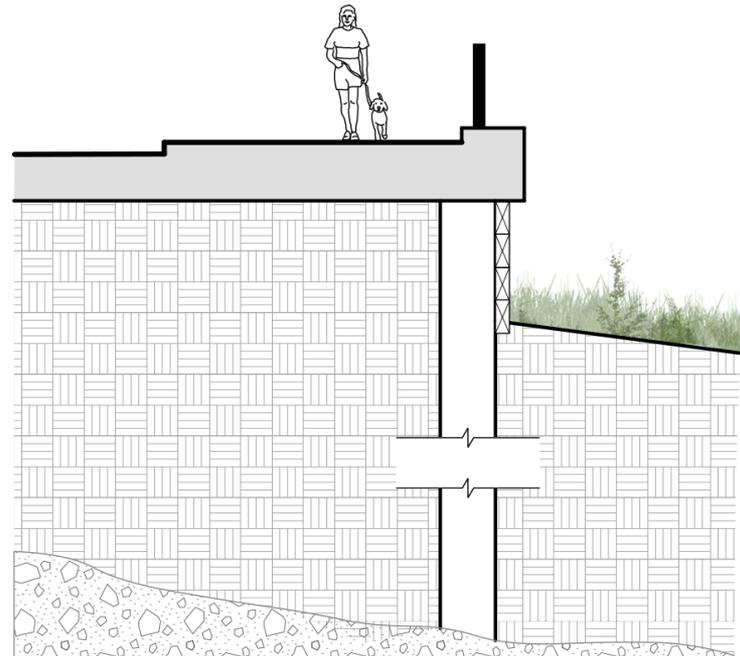
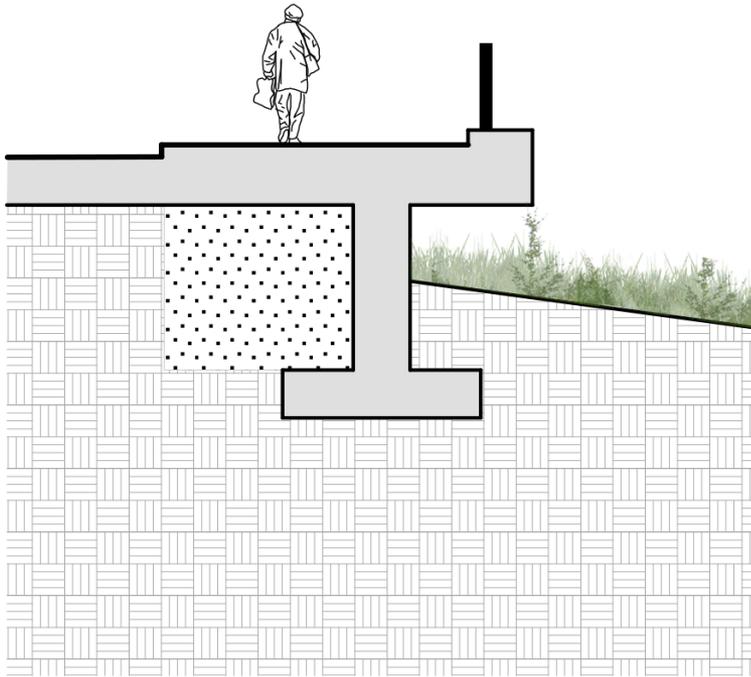
45° Green Wall



<http://nilex.com/sites/default/files/Nilex-Presentation-TAC-2014-Supporting-Highway-Infrastructure-on-the-Canadian-Landscape.pdf>

Transition Concepts

Concept 2: Structural Retaining Wall



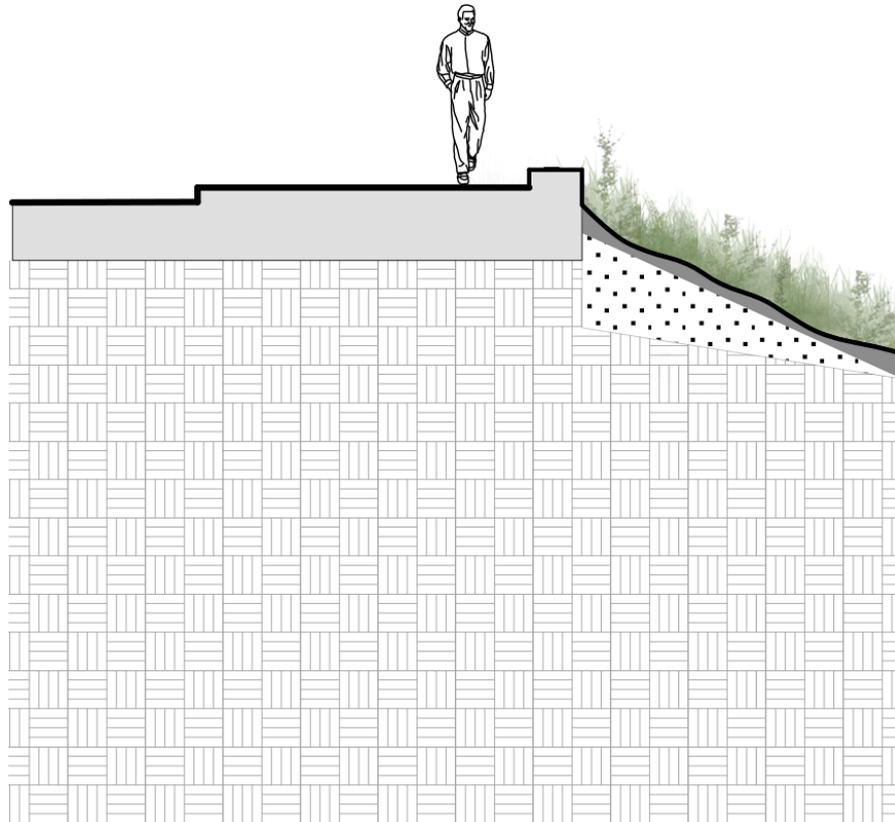
Transition Concepts

City of Winnipeg Standard Handrail



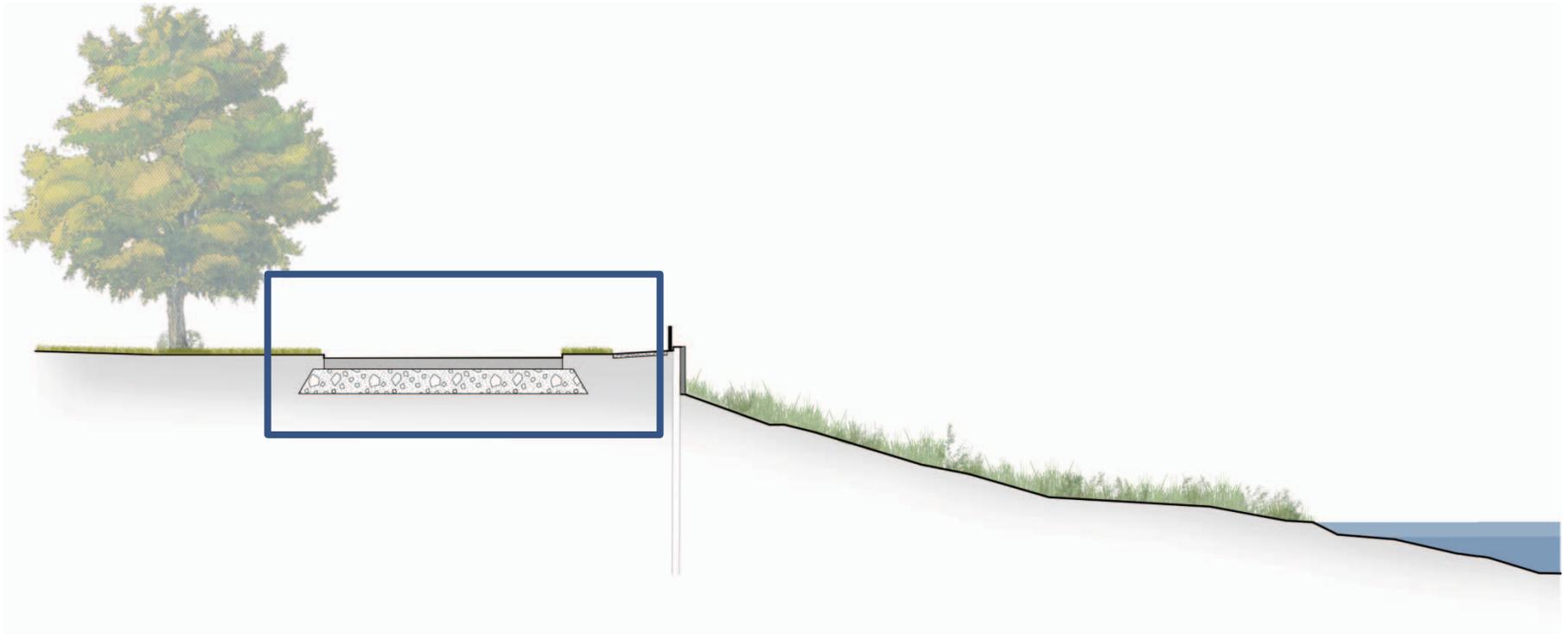
Transition Concepts

Concept 3: Vegetated Slope



Possible Outcomes

Topic 3: Pedestrians and Cyclists



Pedestrians and Cyclists

Concept 1: Shared Pedestrian and Cyclist Path



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Pedestrians and Cyclists

Concept 2: Shared Vehicle and Cyclist Roadway



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Pedestrians and Cyclists



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****REFRESHMENT BREAK****

Things to think about:

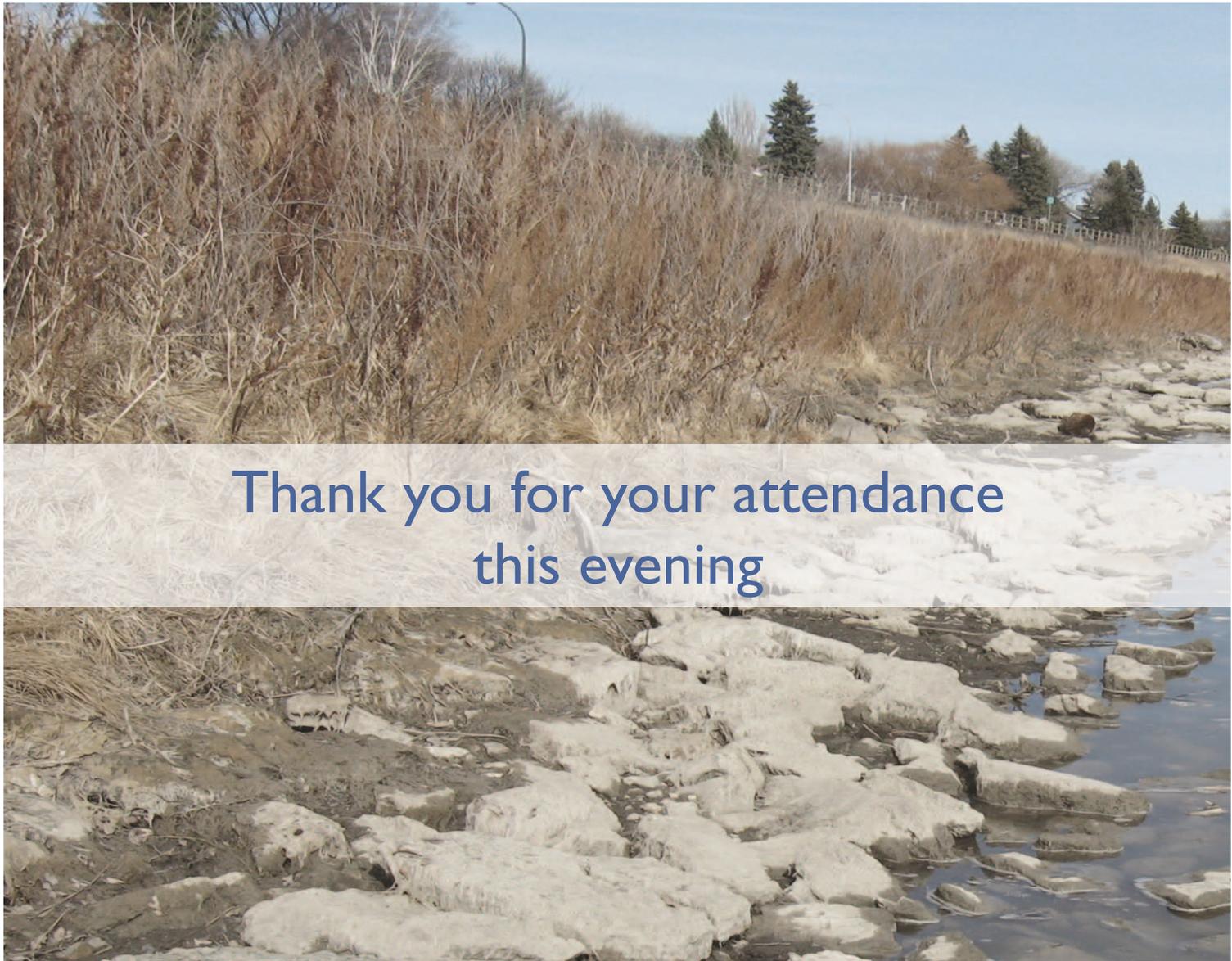
- Pedestrian Safety / Handrails
- Access to and use of the lower bank
- Crime prevention through Environmental Design
- Location and type of pedestrian and cycling pathways
- Landscaping
- Impacts on Lyndale Drive width and parking considerations
- Sunday closures, Manitoba Marathon



DISCUSSION TABLES



PRESENTATION SUMMARY AND REVIEW OF GROUP DISCUSSIONS



Thank you for your attendance
this evening

Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX C
Public Meeting Feedback Form





LYNDALE DRIVE RETAINING WALL STUDY PUBLIC MEETING FEEDBACK FORM

1. How informed do you feel about the Lyndale Drive Retaining Wall Study

Well informed	Adequately informed	Not as informed as I would like to be
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How important to you are the following considerations for Lyndale Drive riverbank stabilization improvements?

	Not Important	Somewhat Important	Very Important	Don't know
a) Riverbank stabilization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Pedestrian safety & accessibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Location and type of pedestrians & cycling pathways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Appearance (landscaping, views)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Local traffic and parking impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Construction process (road blockages, traffic, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Maintenance (snow clearing, mowing, trash pick-up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Do you have a preference for any of the retaining wall designs shown? Please comment:

4. Which do you prefer:
- a) an off road multi-use pathway shared by pedestrians and cyclists
 - b) shared vehicle and cyclist roadway with a bike lane

Why do you prefer this option?

5. Overall, how satisfied are you with this public meeting?
- Very satisfied
 - Somewhat satisfied
 - Not very satisfied
 - Not at all satisfied

Please let us know any other comments or concerns you have about Lyndale Drive riverbank stabilization.

6. How did you hear about this public meeting?
- | | |
|--|---|
| <input type="checkbox"/> Notice in my mailbox | <input type="checkbox"/> Newspaper advertisement |
| <input type="checkbox"/> From a neighbour/friend | <input type="checkbox"/> Social Media (Facebook, Twitter) |
| <input type="checkbox"/> Email | Other _____ |

Thank you for your feedback.

Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX D
Open House Notice
Mailing and Newspaper Advertisement



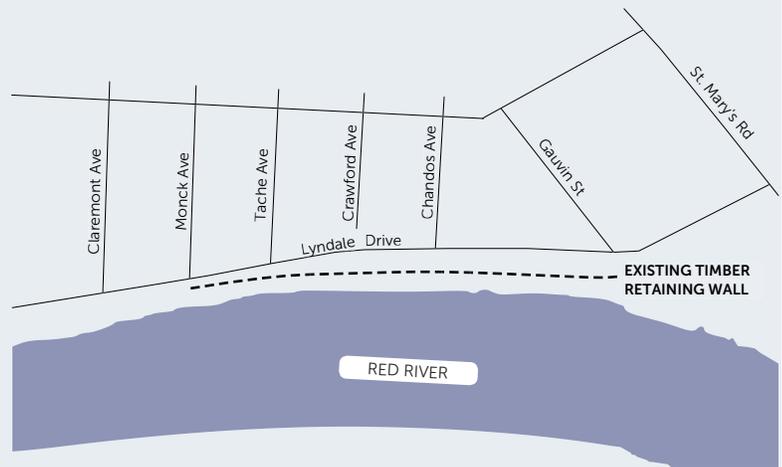
Lyndale Drive Retaining Wall Study



Open House

May 12, 2016
4:30pm – 7:30pm
Drop-in anytime

Norwood
Community Centre
87 Walmer Street



Lyndale Drive is part of the City's primary diking system, which defends against flooding along the Red River. The current retaining wall is now nearing the end of its life cycle and requires rehabilitation or replacement. With community input and further analysis, the City of Winnipeg and consultant team have refined a selection of design and stabilization techniques for this section of riverbank, including new active transportation facilities. You are invited to attend a public open house to review and provide feedback on these design concepts.

We look forward to hearing from you!
To RSVP, and if you have questions, please contact:
lyndale@htfc.mb.ca / 204-944-9907

For more info, to view design options, or if you are unable to attend the open house and would like to provide feedback online, please visit:

www.winnipeg.ca/LyndaleDrive



Promenade Lyndale

Étude sur le mur de soutènement



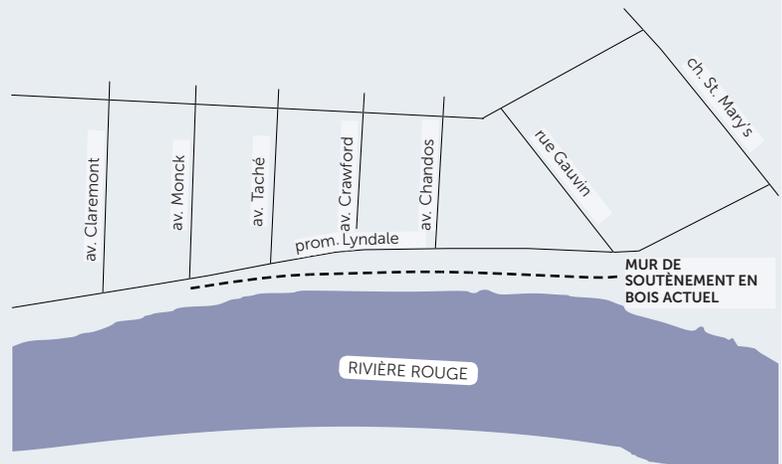
Portes ouvertes

Le 12 mai 2016

De 16 h 30 à 19 h 30

Entrée libre

Centre
communautaire
de Norwood
87, rue Walmer



La promenade Lyndale fait partie du réseau de digues d'origine de la Ville, qui sert à lutter contre les inondations le long de la rivière Rouge. Le mur de soutènement actuel est délabré et a besoin d'être restauré ou remplacé. La participation du public et une analyse approfondie ont permis à la Ville de Winnipeg et à l'équipe de consultants de raffiner les options de dessin et les techniques de stabilisation pour cette partie de la rive, tout en intégrant de nouvelles installations de transport actif. Nous vous invitons à assister à des portes ouvertes au cours desquelles vous pourrez revoir et faire des commentaires sur ces nouveaux concepts.

Nous avons hâte de connaître votre opinion!

RSVP et questions :

lyndale@htfc.mb.ca / 204-944-9907

Pour de plus amples renseignements, pour voir les différents dessins, ou si vous ne pouvez pas assister aux portes ouvertes et que vous voulez faire des commentaires, veuillez visiter :

www.winnipeg.ca/LyndaleDrive



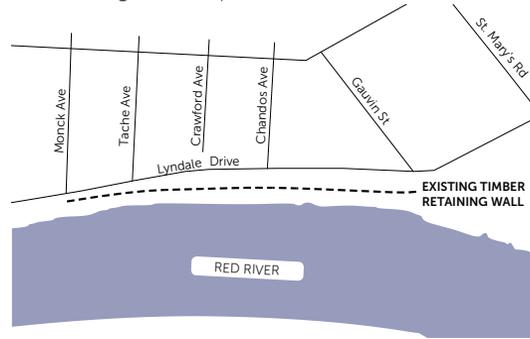


Lyndale Drive Retaining Wall Study Public Open House

Lyndale Drive is part of the City's primary diking system, which defends against flooding along the Red River. The current retaining wall is now nearing the end of its life cycle and requires rehabilitation or replacement. With community input and further analysis, the City of Winnipeg and consultant team have refined a selection of design and stabilization techniques for this section of riverbank, including new active transportation facilities. You are invited to attend a public open house to review and provide feedback on these design concepts.

For more info, to view design options, or if you are unable to attend the open house and would like to provide feedback online, please visit:

www.winnipeg.ca/LyndaleDrive



Date: Thursday, May 12, 2016
Time: 4:30pm - 7:30pm (drop-in anytime)
Location: Norwood Community Centre
87 Walmer Street
Please RSVP: lyndale@htfc.mb.ca
204-944-9907

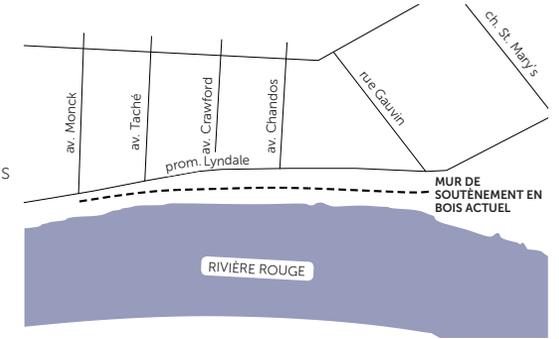


Étude sur le mur de soutènement de la promenade Lyndale Portes ouvertes

La promenade Lyndale fait partie du réseau de digues d'origine de la Ville, qui sert à lutter contre les inondations le long de la rivière Rouge. Le mur de soutènement actuel est délabré et a besoin d'être restauré ou remplacé. La participation du public et une analyse approfondie ont permis à la Ville de Winnipeg et à l'équipe de consultants de raffiner les options de dessin et les techniques de stabilisation pour cette partie de la rive, tout en intégrant de nouvelles installations de transport actif. Nous vous invitons à assister à des portes ouvertes au cours desquelles vous pourrez revoir et faire des commentaires sur ces nouveaux concepts.

Pour de plus amples renseignements, pour voir les différents dessins, ou si vous ne pouvez assister aux portes ouvertes et que vous voulez faire des commentaires, veuillez visiter :

www.winnipeg.ca/LyndaleDrive



Date : Le jeudi 12 mai 2016
Heures : De 16 h 30 à 19 h 30 (entrée libre)
Lieu : Centre communautaire de Norwood
87, rue Walmer
RSVP : lyndale@htfc.mb.ca
204-944-9907



Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX E
Open House Presentation Boards



Site Plan & Features



Basswood Tree



Big Bluestem



Wild Prairie Rose



Gabion as foundation for plantlife



Golden Alexander



Milkweed



Switchgrass



Red Osier Dogwood



Saskatoon



Common Snowberry



Sandbar Willow



Lyndale Drive



Seine River



Limestone blocks for fishing and canoe/kayak launch



Gabion Wall

Plant recommendations provided by the City of Winnipeg Naturalist Services.

Welcome



Welcome to the Open House for the City of Winnipeg's

Lyndale Drive Retaining Wall Study

We want to hear from you. Please feel free to:

- View the recommended design concepts and information presented
- Ask questions and talk with study representatives
- Show support for your preferred concepts. Provide feedback on concepts

1 Project Background

About the Study

This study is a continuation of riverbank assessment and stabilization projects for the Lyndale Drive Park area.

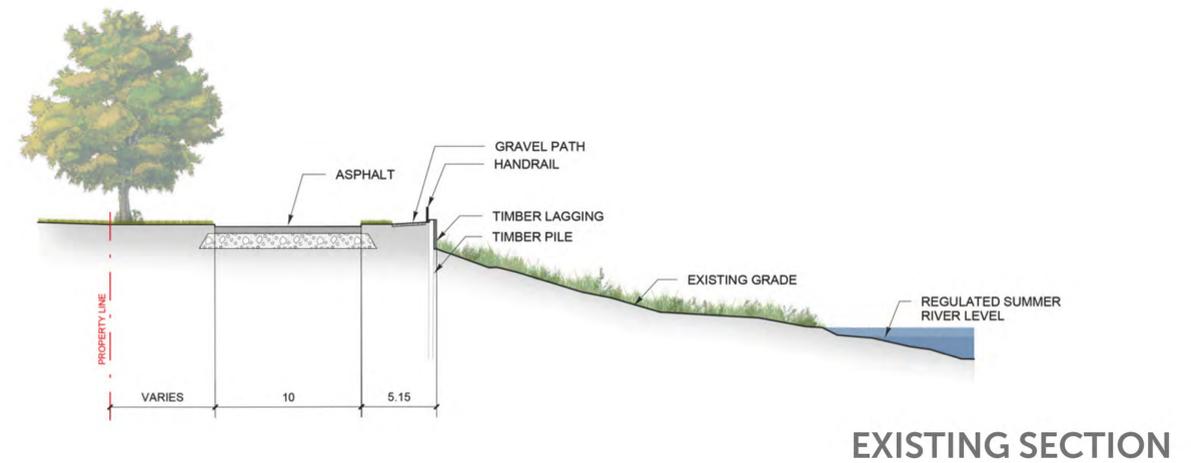
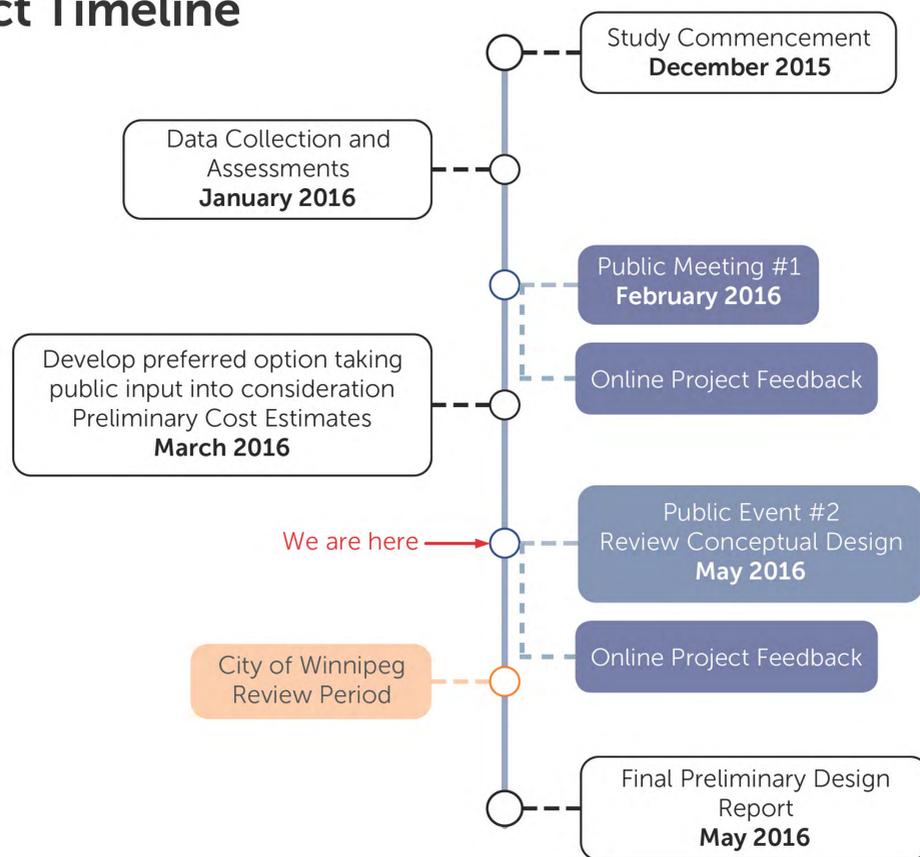
The section of Lyndale Drive between Claremont Avenue and Gauvin Street has had a history of riverbank instabilities. Ongoing riverbank movements and deterioration of the retaining wall pose a risk to the road, dike, sewers, and other infrastructure at the top of the riverbank.

Study Considerations

The project consists of an engineering study and preliminary design exercise. Based on public input from Public Meeting #1, the following are important design considerations:

- Safety and Accessibility
- Riverbank Stabilization
- Bikes and Pedestrians
- Local Traffic and Parking Impacts
- Cost
- Construction Process (road blockages, traffic, etc.)
- Maintenance (snow clearing, mowing, trash pick-up)
- Appearance (Plantings, Materials, Views)
- Environmental Impacts

Project Timeline

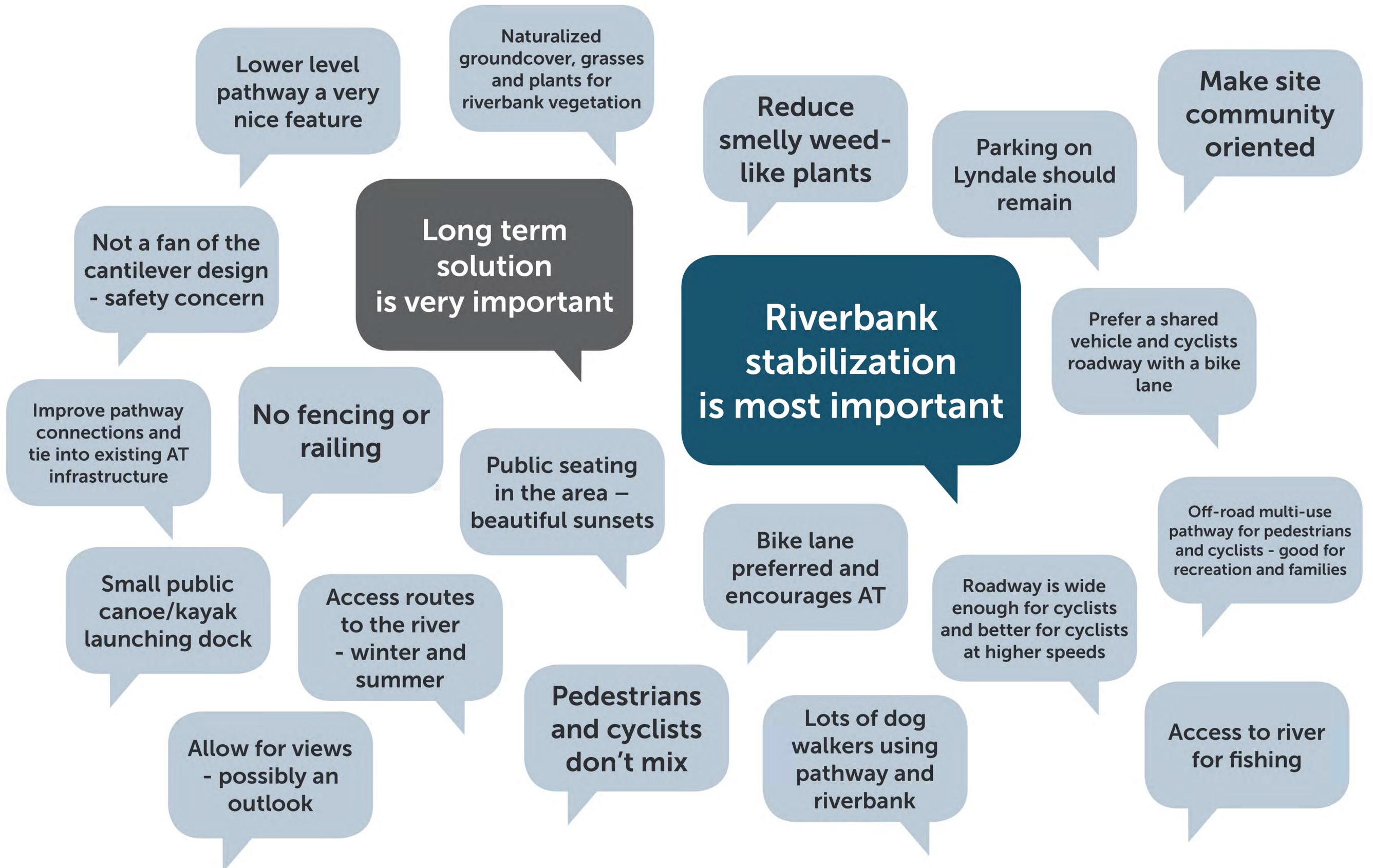


RIVERBANK INSTABILITY - MONCK TO TACHE

The three preliminary design options developed were evaluated on the following criteria:

CRITERIA & DESCRIPTION

Pedestrian Experience	Cyclist Experience	Aesthetics	Neighbourhood Impacts	Project Management
<ul style="list-style-type: none"> ▪ Walkway width ▪ Shared multi-use pathway vs. pedestrian only ▪ Lower bank trail accessibility ▪ Access points and proximity to river ▪ Visibility and safety 	<ul style="list-style-type: none"> ▪ Upper pathway shared with pedestrians ▪ Cycling on roadway (AT) ▪ Lower trail for slower/recreation cycling ▪ Connectivity and Linkages 	<ul style="list-style-type: none"> ▪ Hand rail design ▪ Retaining wall design ▪ Naturalized landscapes ▪ Views from roadway and paths ▪ Public seating options ▪ Maintenance requirements and ease 	<ul style="list-style-type: none"> ▪ City boulevard ▪ Road construction ▪ Construction Process: <ul style="list-style-type: none"> ▪ noise and traffic; ▪ duration and extent of disturbance; ▪ local traffic and parking. 	<ul style="list-style-type: none"> ▪ Feasibility ▪ Costs ▪ Schedule risk (river level) ▪ Duration ▪ Season for construction



The recommended design options were selected to reflect the public's concerns and feedback in the following ways:

Improved Riverbank Stability

All Options include permanent riverbank stabilization using rockfill columns and new riprap erosion protection along the shoreline.

Options 1 & 2 – infilling of slope eliminates the wall and handrail, but increases the degree of riverbank stabilization required.

Option 3 – gabion wall structure with handrail reduces fill on the riverbank and also the degree of stabilization works required.

Long-Term Solution

All Options are designed to satisfy long-term riverbank stability requirements to preserve the park and top of bank infrastructure. New riprap along the shoreline will provide erosion protection to prevent future loss of bank and instability. Rockfill columns will result in a permanent improvement to riverbank stability. The gabion wall structure will be selected to satisfy a design life of 75 years.

Pedestrians & Cyclists

Option 1 - includes an upper sidewalk with a lower bank gravel trail.

Option 2 & Option 3 - include an upper hard surface multi-use path with a lower bank gravel trail.

All Options - roadway width remains consistent at 10m to easily accommodate cyclists.

Community-Oriented Site

All Options provide opportunities to enjoy and use the riverbank that include walking and running, recreational and commuter cycling, dog walking, canoe launching, public seating and access to winter River Trail. East and west connections from the lower bank trail will improve connectivity along Lyndale Drive.

The recommended design options were selected to reflect the public's concerns and feedback in the following ways:

Hand Rail & Fencing

Option 1 & Option 2 - gradual vegetated in-filled slope is designed to public safety standards and do not require a railing.

Option 3 will require a handrail along the top of the wall for safety reasons.

Naturalized Riverbank

All Options include naturalized riverbank consisting of perennial grasses, hardy shrubs and wildflowers approved by City Naturalist. Plants that enhance riverbank stabilization.

Improve Connections

Lower bank trail at the east and west ends (Monck Street and Gauvin Street) will connect to the upper pathway and roadway in the future.

Access to River

All Options include gravel surface lower bank trail meeting the City of Winnipeg's Accessibility Design standards.

Option 3 - lower bank river trail as close to the riverbank as functionally possible.

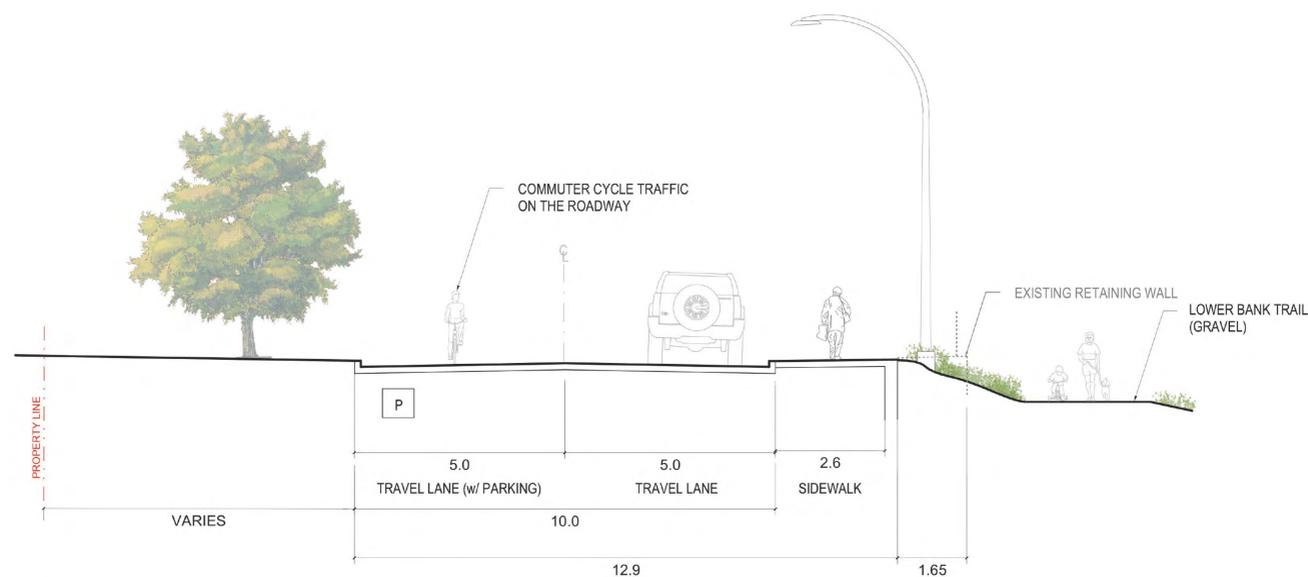
Option 3 - gabion structures allows for informal seating along lower riverbank.

Common to **All Options** is the addition of limestone blocks at the river edge to allow for fishing, canoe or kayak launching point.

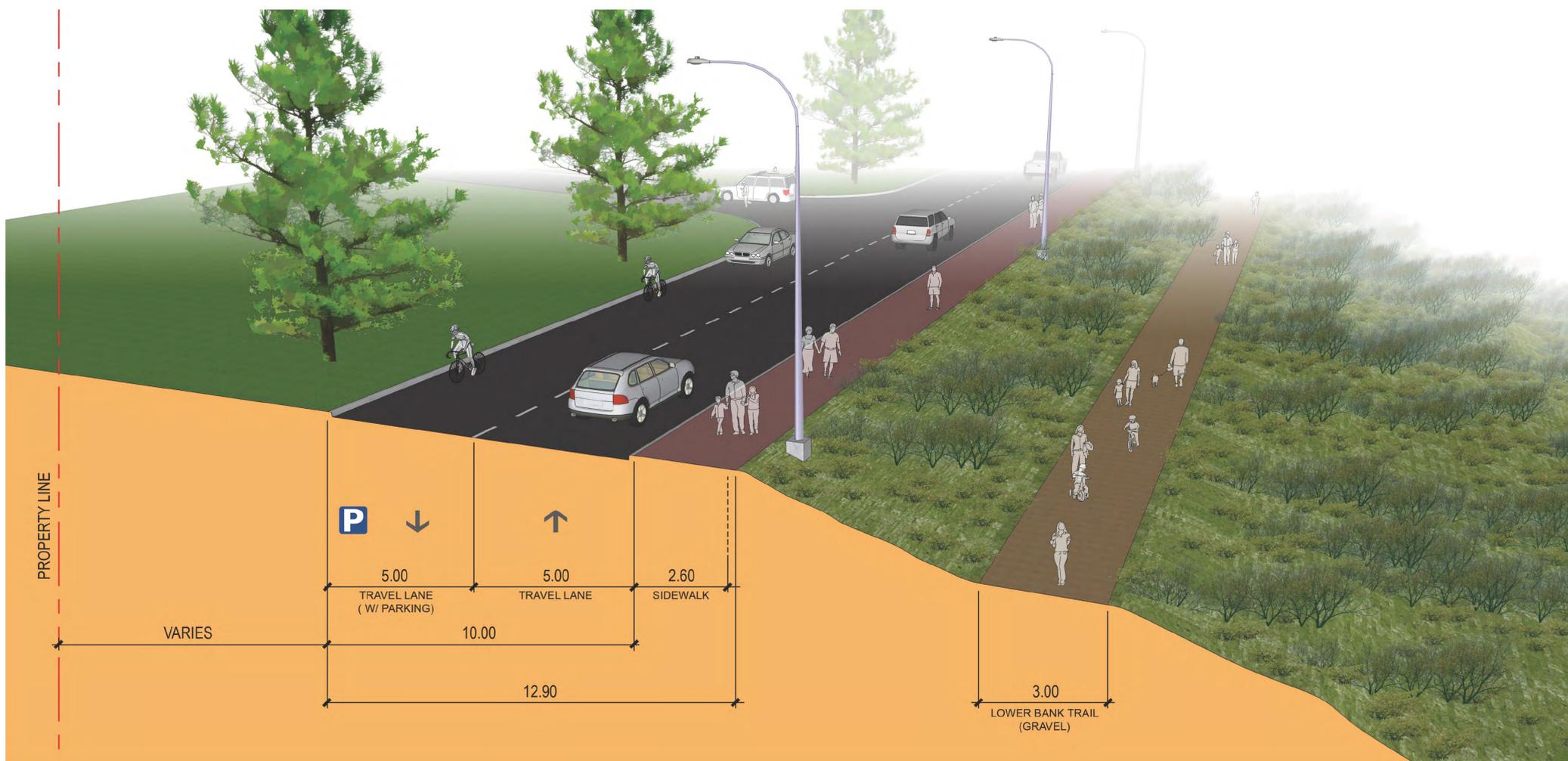
Safety

All Options have been designed with Crime Prevention Through Environmental Design (CPTED) best practices in mind. The cantilevered upper pathway design option initially shown was abandoned based on public feedback as a possible safety concern. Lower bank trail is designed for visibility from roadway and upper pathway.

- Least impact – no road shift
- Curb on north side of road does not move
- In-filled gradual vegetated slope - naturalized bank of shrubs, grasses, trees
- No railing required
- Sidewalk narrowed – 2.6m pedestrian only sidewalk
- Accessible lower bank trail with gravel surface
- Lower trail higher to roadway, less flood prone
- 10m roadway width accommodates commuter cyclists



Proposed Concept #1 Section



Please place a dot in the column that best indicates your support for the recommended design option.

Concept #1



strongly support

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somewhat support

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neutral

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somewhat oppose

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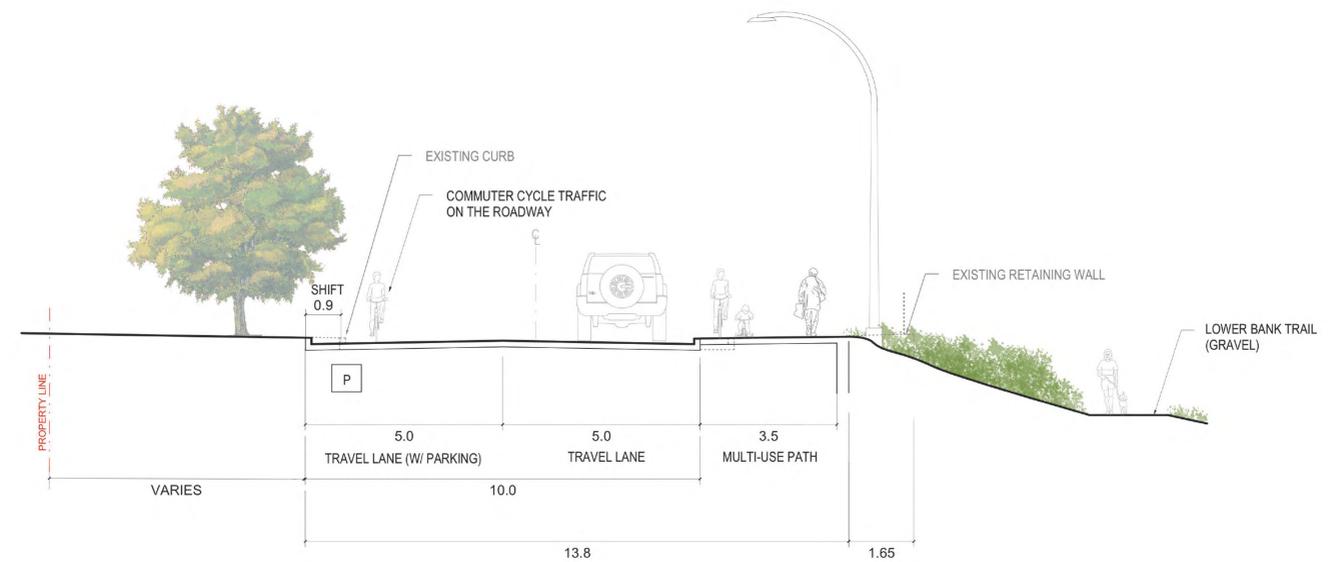


strongly oppose

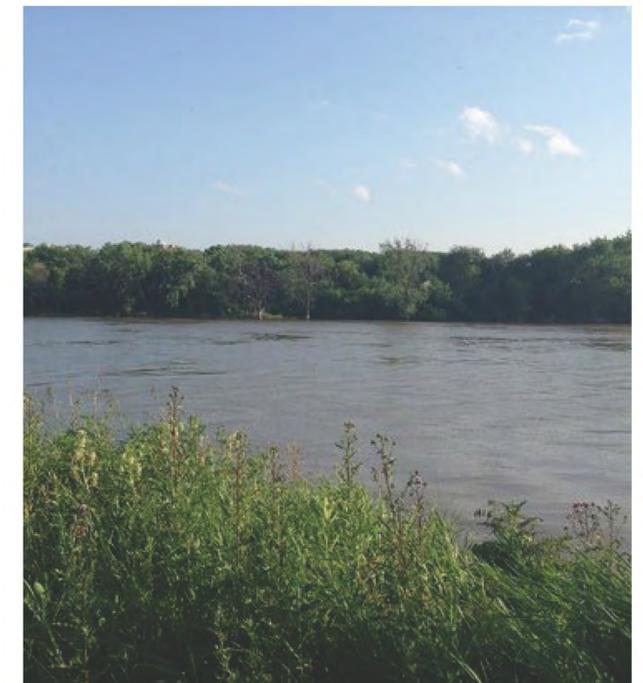
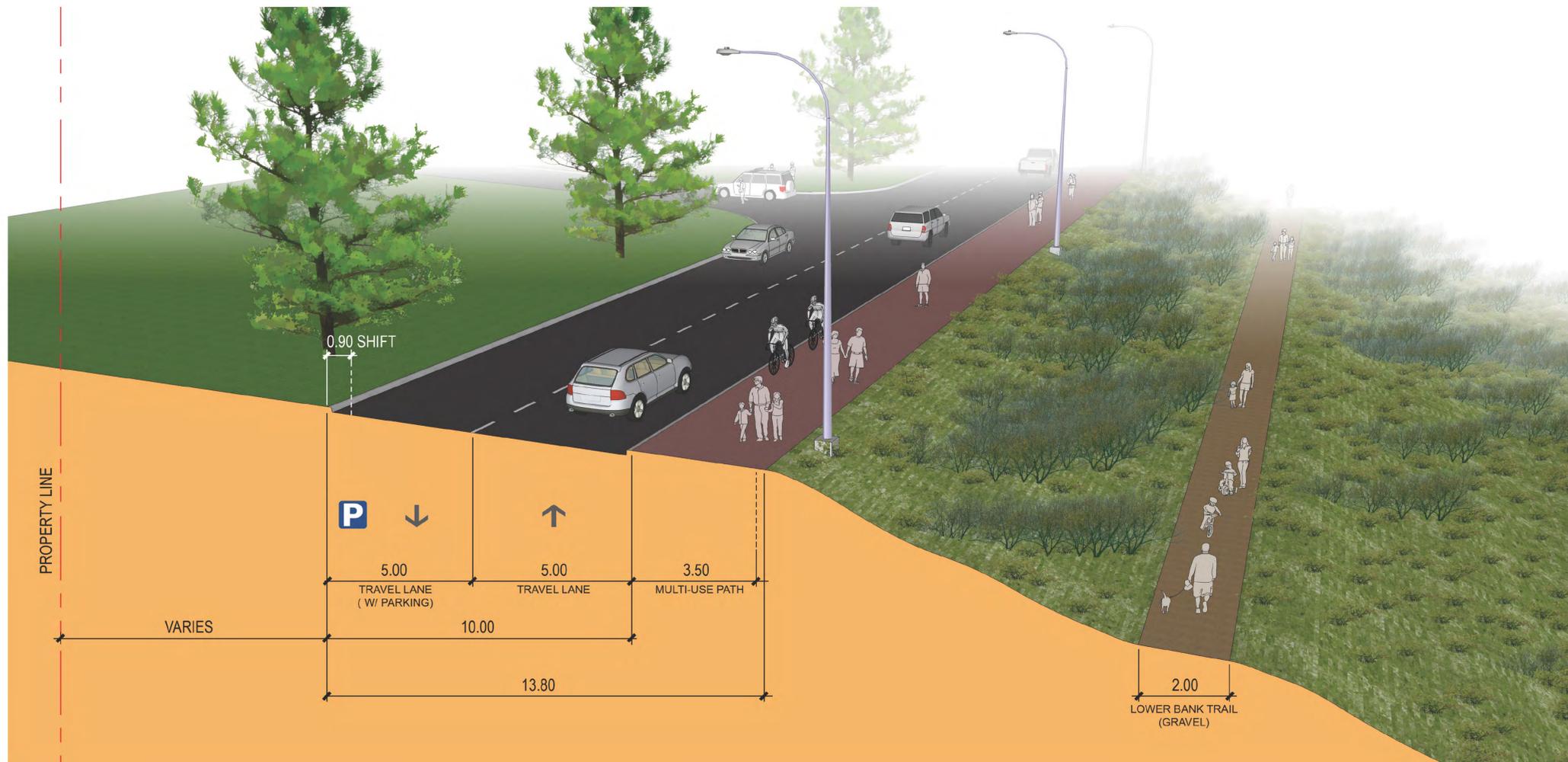
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Please write any additional comments on a Post-It and place them below.

- City boulevard narrows - curb on roadway shifts north 0.9m
- In-filled gradual vegetated slope - naturalized bank of shrubs, grasses
- No railing required
- 3.5m multi-use path
- Accessible multi-use lower bank trail (gravel)
- 10m roadway width accommodates commuter cyclists



Proposed Concept #2 Section



Please place a dot in the column that best indicates your support for the recommended design option.

Concept #2



strongly support

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somewhat support

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neutral

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somewhat oppose

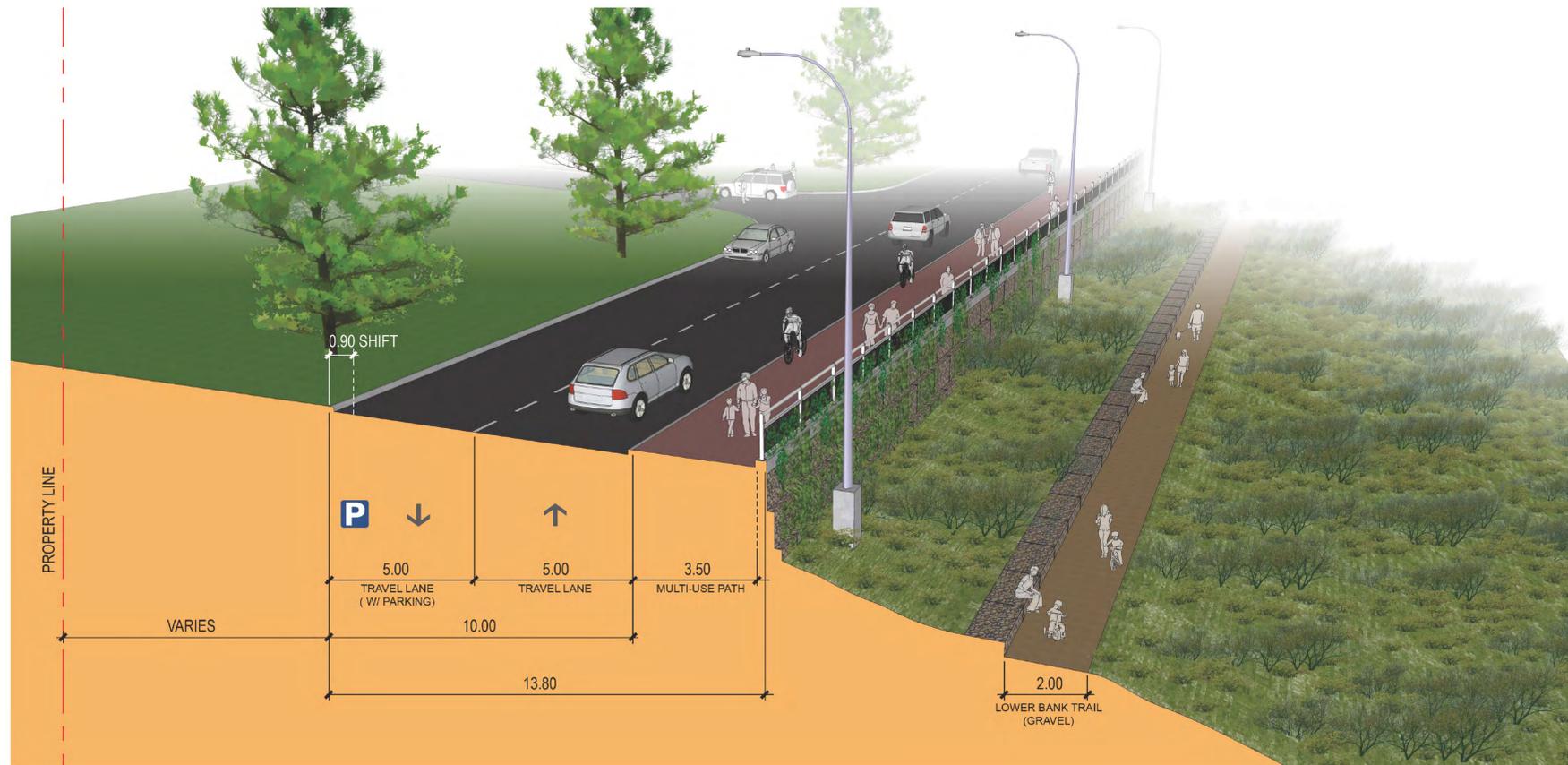
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strongly oppose

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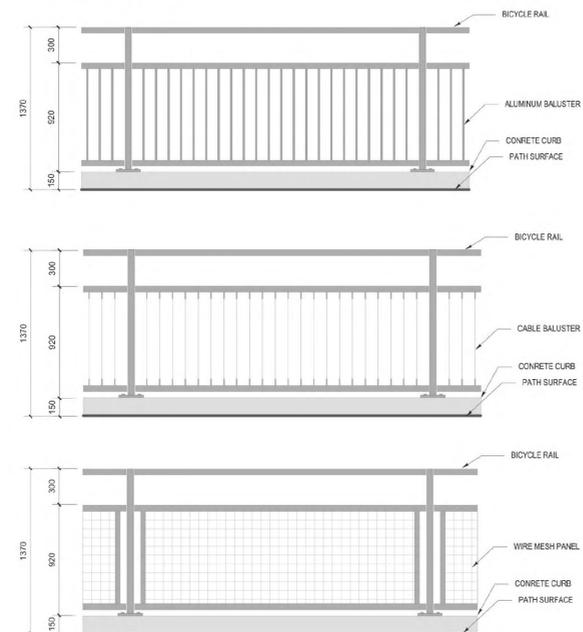
Please write any additional comments on a Post-It and place them below.



- City boulevard narrows - curb on roadway shifts north 0.9m
- 2.3m high gabion retaining wall
- Potential to allow vines to climb the gabion wall structure
- Naturalized bank of shrubs, grasses
- Second lower gabion strip potential for public seating along trail
- Accessible lower bank trail with gravel surface at lower elevation closer to river
- 3.5m multi-use path
- 10m roadway width accommodates commuter cyclists



HAND RAIL STUDIES



Proposed Concept #3 Section

Please place a dot in the column that best indicates your support for the recommended design option.

Concept #3



strongly support

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somewhat support

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neutral

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somewhat oppose

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strongly oppose

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Please write any additional comments on a Post-It and place them below.

Post-Project Timeline

Design Team provides a final recommendation to the City of Winnipeg Administration

Detailed Design throughout summer of 2016

Tendering process fall of 2016

Stabilization works winter of 2016-2017

Surface and street works summer of 2017

How long will construction take?

- Construction is expected to occur over the winter of 2016-2017, with final street and surface work being completed in the summer of 2017.

What is the budget for this project?

- Past budgets forecasted \$5M for construction. More detailed cost estimates are under development as part of this study.

How will the construction process affect local traffic?

- The City will work to mitigate construction impacts as much as possible. During the slope stabilization work, the primary impact will be the need for construction equipment to access the riverbank. Residents should expect increased truck traffic, and the potential for delays when travelling through the construction areas. Temporary impacts may include partial or short term closure of some sections of Lyndale Drive along with parking restrictions.

What will be the route for construction vehicles?

- Under current City Bylaws, trucks are only required to use designated truck routes up to the closest intersection to the point of delivery. Past experience indicates that Taché Avenue will be the primary access point to the site for construction traffic.

What about the impact of heavy construction equipment and vehicles on the street?

- The City acknowledges that the presence of construction traffic in the neighborhood is not ideal. The design team will work to mitigate any impacts by limiting the traffic to certain times of the day.

When will the rest of the sidewalk or shared use trail be built?

- The sidewalk and trail will be constructed in the summer of 2017 as part of street and surface works.

Thank You



Thank you for your participation.

Please provide your comments by filling out a **Feedback Form** before you leave.

For updates on the project, please visit:

www.winnipeg.ca/LyndaleDrive

For any further questions or comments, please contact:

lyndale@htfc.mb.ca
204-944-9907



Preliminary Engineering Study For Lyndale Drive Retaining Wall

APPENDIX F
Open House Feedback Form





**LYNDALE DRIVE RETAINING WALL STUDY
OPEN HOUSE FEEDBACK FORM**

1. How informed do you feel about the Lyndale Drive Retaining Wall Study and the recommended design options?

- | | | |
|--------------------------|--------------------------|--|
| Well informed | Adequately informed | Not as informed
as I would like to be |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. How did you hear about this public meeting?

- | | |
|--|---|
| <input type="checkbox"/> Notice in my mailbox | <input type="checkbox"/> Newspaper advertisement |
| <input type="checkbox"/> From a neighbour/friend | <input type="checkbox"/> Social Media (Facebook, Twitter) |
| <input type="checkbox"/> Email | <input type="checkbox"/> Councillor's Office |
| <input type="checkbox"/> Other | |

3. Overall, how satisfied are you with this public Open House?

- Very satisfied
- Somewhat satisfied
- Not very satisfied
- Not at all satisfied

4. Please share with us any comments or concerns you have about the project.

Thank you for your feedback.