

# Parker Storm Retention Basin

## Welcome to the City of Winnipeg Parker Storm Retention Basin Public Information Session

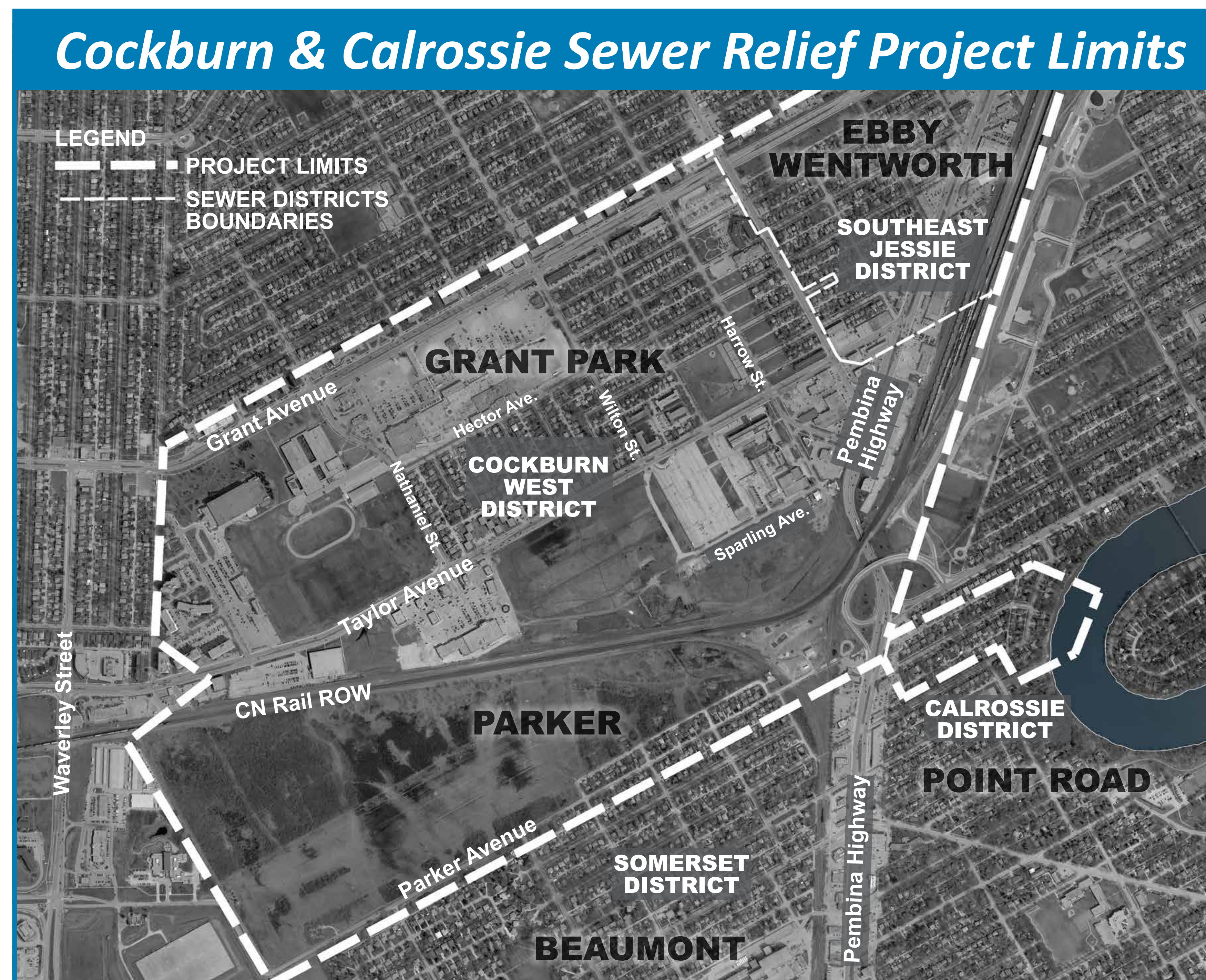
### *Please participate today by:*

1. Viewing the presentation boards for an update on the Cockburn & Calrossie Sewer Relief and Parker Storm Retention Basin Project.
2. Asking questions and talking with the consultants and City of Winnipeg staff.
3. Providing feedback on an exit survey.



## COCKBURN & CALROSSIE SEWER RELIEF PROJECT INTRODUCTION

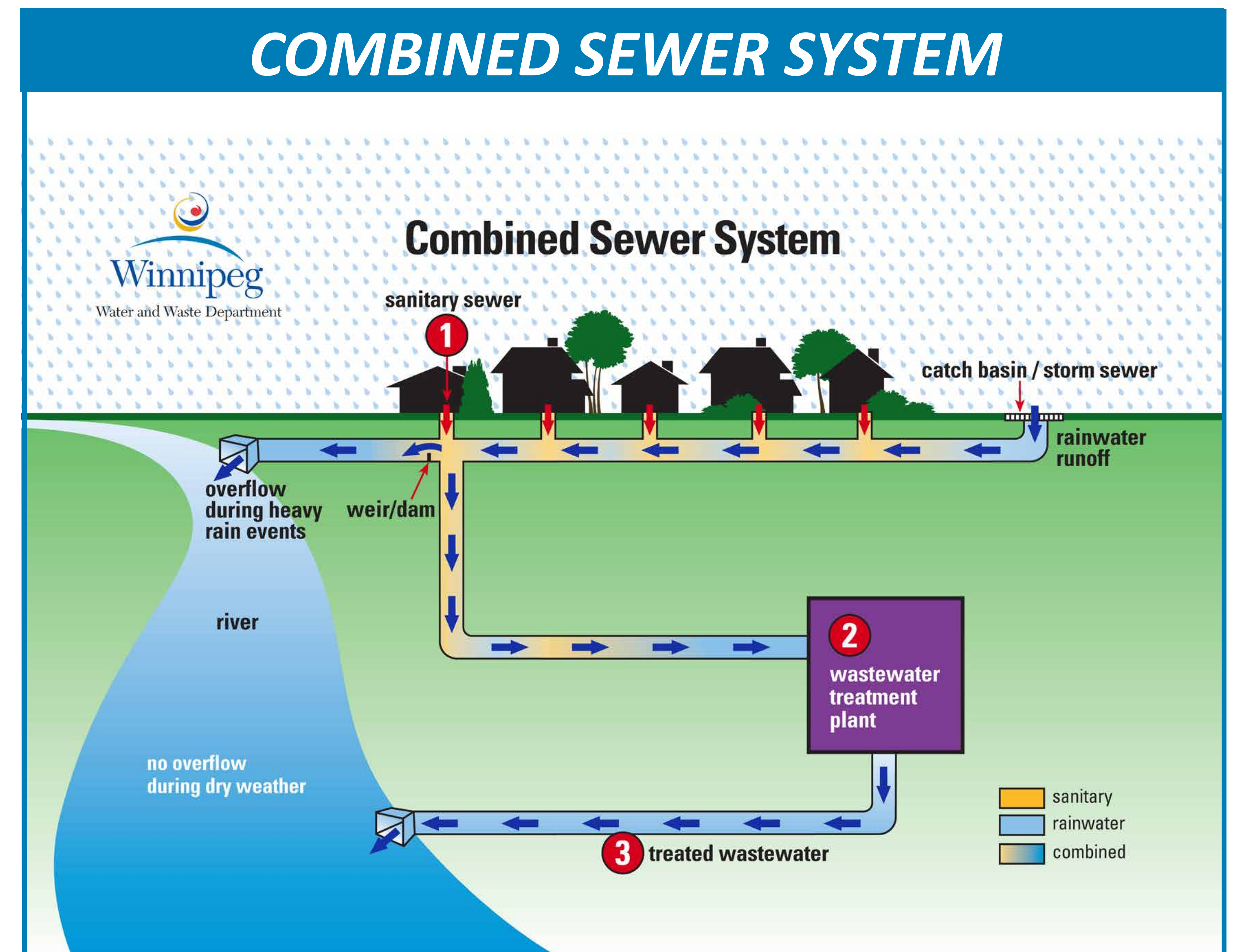
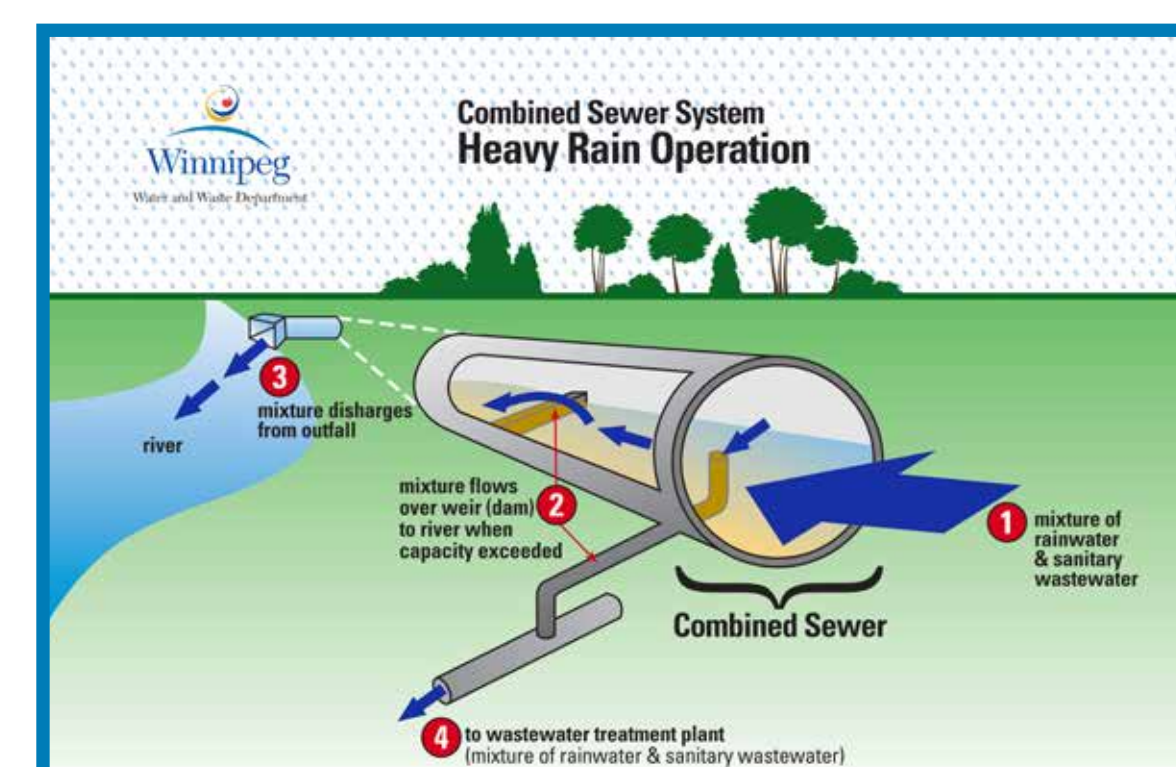
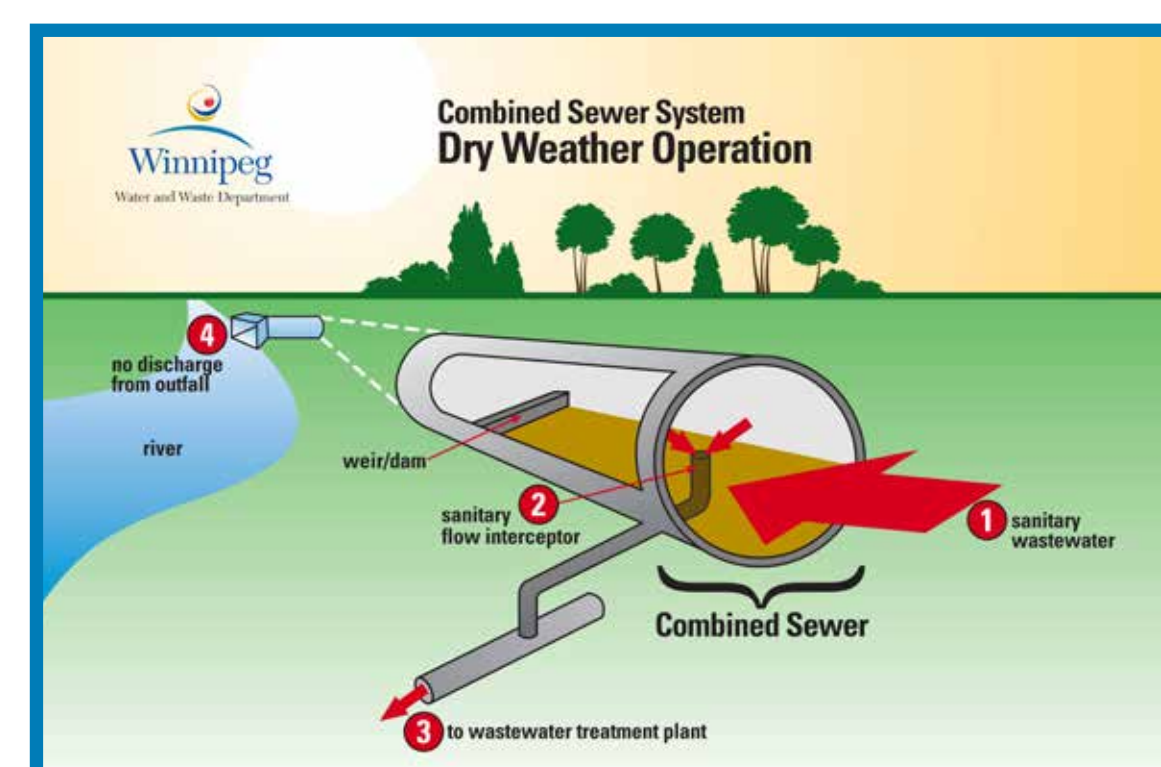
- In River Heights - Fort Garry, changes to the Cockburn West & Calrossie sewer districts are required to reduce the impacts of combined sewers, namely basement flooding and the release of diluted wastewater into local waterways due to combined sewer overflows.
- Project includes:
  - The complete sewer separation in several areas including: Cockburn West, Calrossie and Southeast Jessie Sewer Districts.
  - The creation of the Parker Storm Retention Basin (SRB).





## COMBINED SEWER SYSTEM

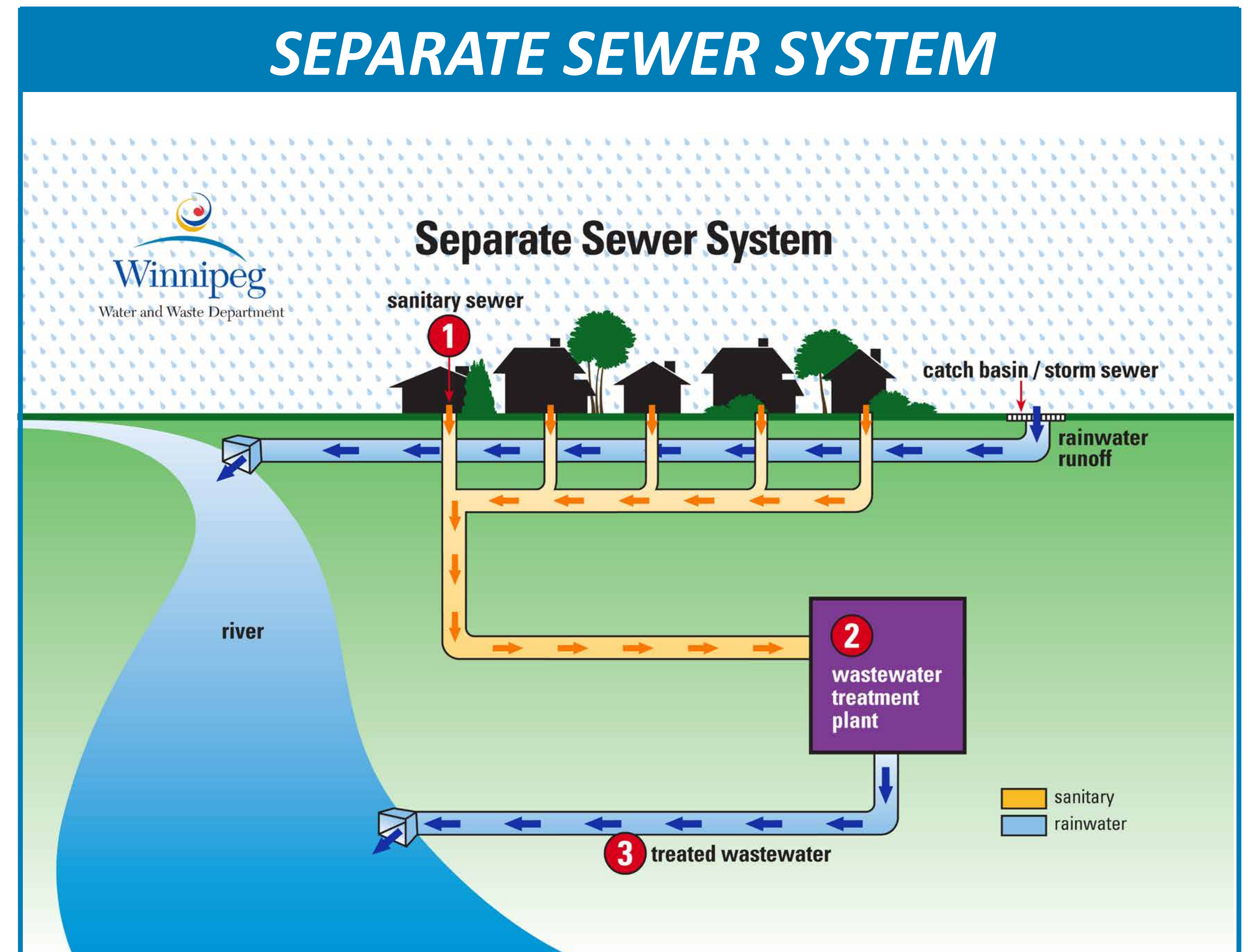
- Combined sewers are a single system of pipes that collect both wastewater from homes, businesses and industries as well as surface runoff from rainstorms and snow melt.
- During 'Dry Weather Operation' all combined flows are treated at one of the City's three treatment plants.
- During 'Heavy Rain Operation' diluted sewage overflows to local waterways without treatment to protect property, as intended.





## SEPARATE SEWER SYSTEM

- Separate sewer systems have two systems of pipes:
  - One pipe system carries sewage / wastewater to the wastewater treatment plant.
  - The second pipe system carries land drainage and surface runoff from rainstorms and snow melt directly to the river.
- Separate sewers eliminate the possibility of sewage overflow to the river system.





## COCKBURN & CALROSSIE SEWER RELIEF PROJECT BENEFITS

Overall Benefits of the Combined Sewer Separation Project include:

- Reducing combined sewer overflows from entering local waterways;
- Lowering water treatment costs by preventing rain water and snow melt from going to the treatment plant;
- Minimizing the risk of property damage due to basement flooding;
- Helping the City of Winnipeg meet requirements of Environment Act Licence No. 3042



## COCKBURN & CALROSSIE SEWER RELIEF PROJECT PHASING

### — Phase 1 (2014 - 2018)

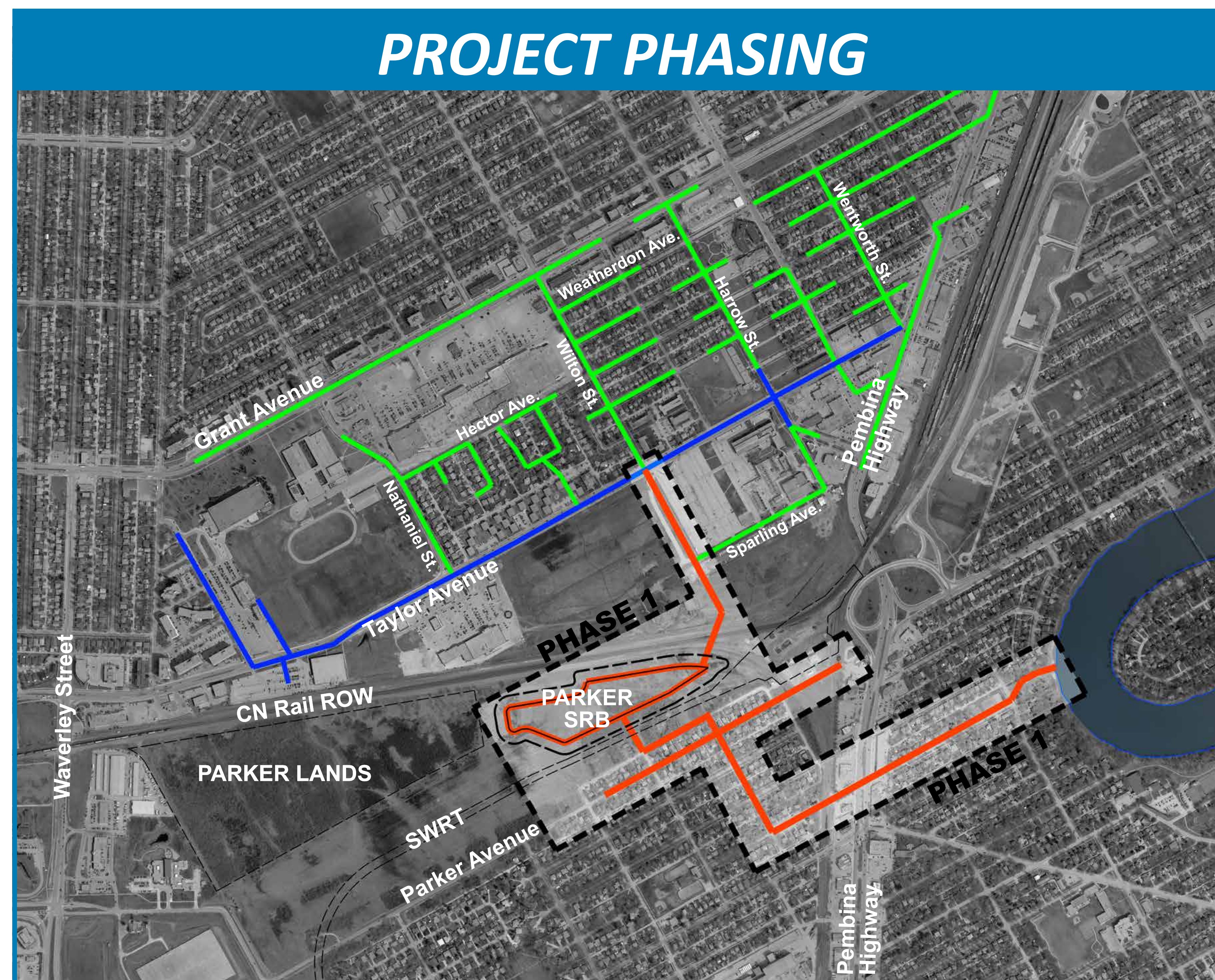
- Toilers Park Outfall (Completed 2014)
- Underground LDS Pipe Installations (Ongoing 2016 - 2017)
- Parker SRB (2017-2018)

### — Phase 2 (Est. 2018)

- Taylor Avenue Underground LDS Pipe Installations

### — Future Phases (2018 - 2025)

- Various Underground LDS Pipe Installations





## PARKER STORM RETENTION BASIN (SRB) LOCATION





## PARKER STORM RETENTION BASIN SITE PLAN





## PARKER STORM RETENTION BASIN BENEFITS

The storm retention basin will be a constructed wetland and will have numerous environmental benefits:

- Walking trails and shaded seating areas;
- Improved water quality of surrounding waterways due to the filtering out of impurities and pollutants in stormwater;
- The establishment of low maintenance native grasses can sequester significant amounts of atmospheric carbon (up to 15 times more compared to conventional sod);
- The planting of native perennials, including milkweed will provide an improved habitat for butterflies and other pollinator species.

The naturalized Parker SRB will result in no net loss of wetlands in the Parker Lands from the South West Rapid Transit and the Cockburn & Calrossie Sewer Relief projects combined, in accordance with environmental licensing requirements.





## PARKER STORM RETENTION BASIN FEATURES

### Wetland Planting and Habitat

- Wetlands and wetland vegetation slow the flow of surface water and improve water quality.
- Wetland systems can filter pollutants and impurities (such as phosphorus, nitrogen, pesticides and hydrocarbons) from the surface water, resulting in cleaner water being discharged into the rivers.
- Wetlands (both natural and constructed) also provide important habitat for many plants and animals.
- Naturalized wetland layout may reduce nesting urban goose population that is often associated with conventional storm water basins, while supporting a richer biodiversity.





## PARKER STORM RETENTION BASIN FEATURES

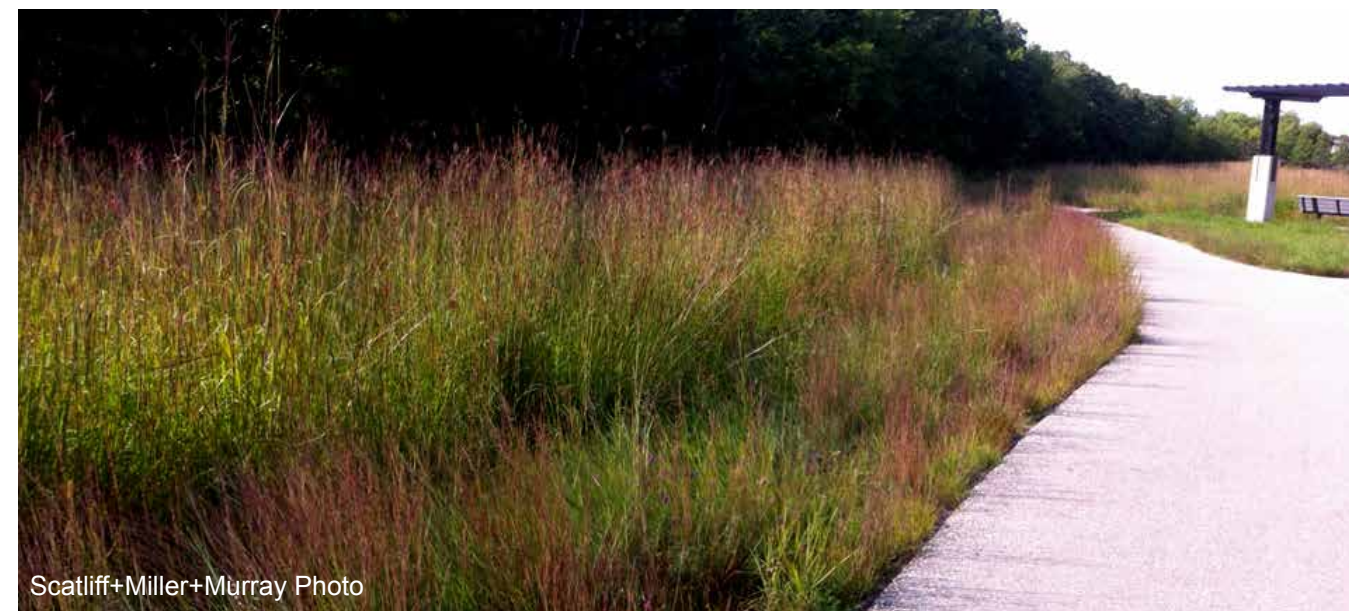
### Native Upland Grass and Butterfly Habitat

- Upland grass species planted around the SRB will be native to the region and well suited to the local climate and soils.
- These plant species develop deep root systems that allow them to withstand extended periods of drought and thrive without the input of fertilizer or irrigation.
- Native perennials, including milkweed, will be planted to attract butterflies and other pollinator insects.
- The habitat will attract pollinator insects, which are critical components of healthy plant communities. Their abundance and diversity can be an indicator of ecosystem health.





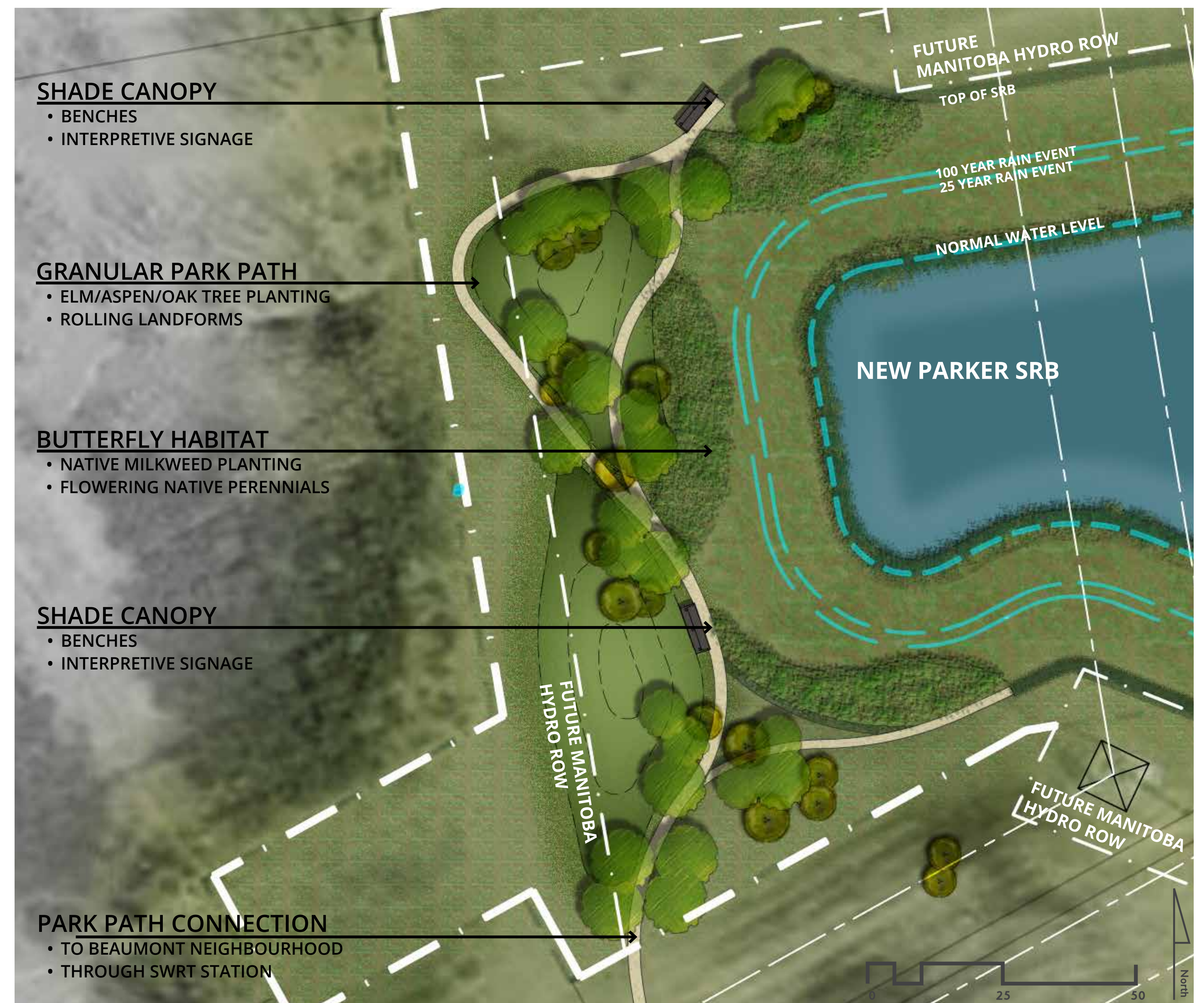
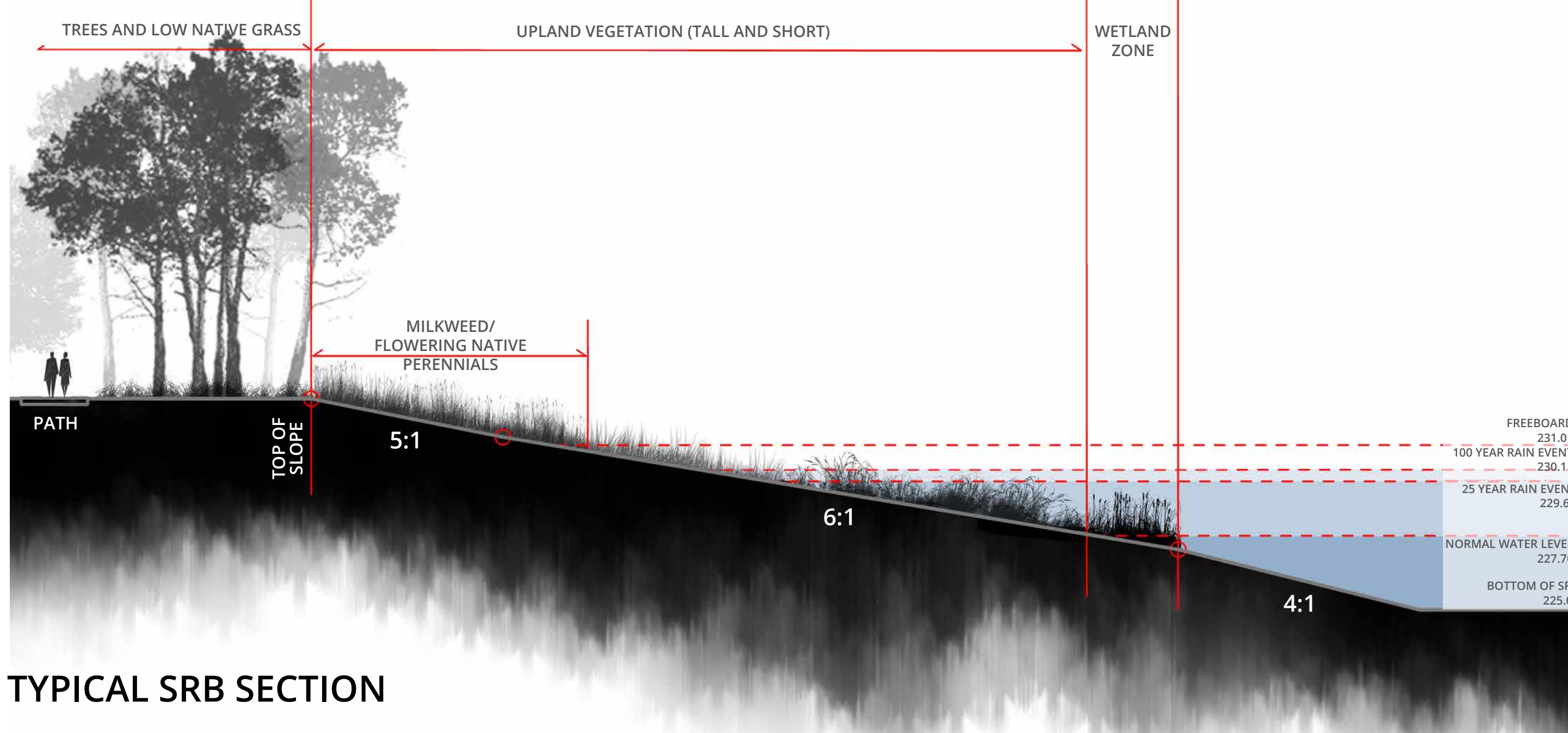
## PARKER STORM RETENTION BASIN FEATURES



WALKING PATHS

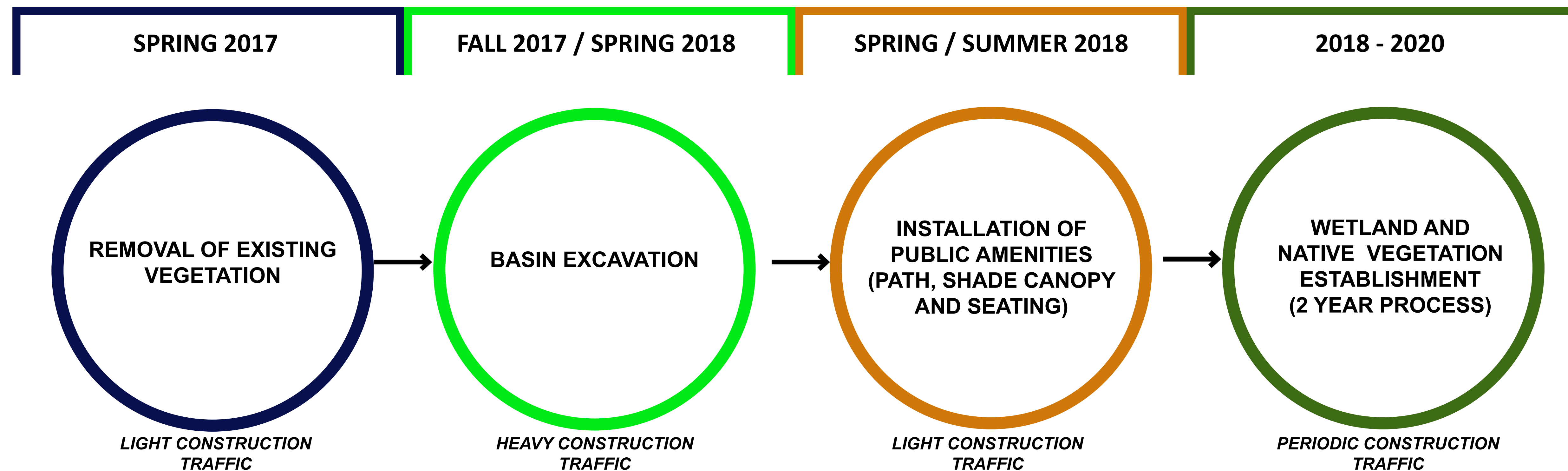


SHADE CANOPIES AND SEATING





## PARKER STORM RETENTION BASIN CONSTRUCTION TIMELINE





## STORM RETENTION BASIN NATIVE PLANT DEVELOPMENT

### YEAR 1

**REMOVAL OF EXISTING VEGETATION  
ON SRB SITE**



**BASIN EXCAVATION**

### YEAR 2

**UPLAND SITE PREPARATION AND  
COVER CROP PLANTING**



**INSTALLATION OF WETLAND  
PLANT MATERIAL**

### YEAR 3

**SEEDING OF UPLAND  
NATIVE GRASSES**



**WATER LEVEL MANIPULATION TO  
ENCOURAGE WETLAND PLANT  
ESTABLISHMENT**

### YEAR 4+

**UPLAND NATIVE GRASS  
ESTABLISHMENT**



**ESTABLISHED WETLAND  
PLANT MATERIAL**



## THANK YOU

Thank you for attending today's information session.  
Please complete an exit survey before you leave.

For more information please visit:  
*[winnipeg.ca/parkersrb](http://winnipeg.ca/parkersrb)*