A. Project Name/Title:

Transforming Hyde Park Village Center into a Net Zero Runoff Showcase Using Green Stormwater Infrastructure (a.k.a "Hyde Park Net Zero Showcase")

Contact information:

Organization: Town of Hyde Park, VT
Name of primary point of contact: Ron Rodjenski, Hyde Park Town Administrator
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Authorized Representative:

Same as Contact; Ron Rodjenski

Federal Tax ID Number: 03-0223475

DUNS Number: 158851998

NEIWPCC Code:

Funding Source:

LCBP Grant Award Amount: $50,000.00

Non-Federal Match: $0.00

Total Project Cost: $50,000.00

Project Location:

Middle Lamoille watershed project centered on Church Street & Main Street, Hyde Park, VT: -72.61703 / 44.59348

Project Description:

The Hyde Park Net Zero Showcase project will transform the Village of Hyde Park Village Center into a Net Zero Runoff condition by using established Green Stormwater Infrastructure ("GSI") and exploring incorporation of innovative stormwater collection and treatment systems. This study will provide methods and means to eliminate existing unmanaged and untreated stormwater generated by existing uses along "Main Street" and anticipate & facilitate future village center land development by providing comprehensive stormwater plan elements to be incorporated into private and public land development permits. With a densely developed area, and scoping plans underway for major public capital investments, the Net Zero showcase project will be completed public infrastructure projects are being constructed (Courthouse Pocket Park) and others are in scoping or preliminary design (sidewalk extensions, wastewater and water supply upgrades, and streetscape improvements in the Village Center centered on Church & Main). The Project will be the first step to design and implement a sustainable GSI system for the designated Village Center area within Hyde Park. The Project once implemented will reduce sediment, phosphorus, and stormwater volume to waters within the Lake Champlain Basin, and will help the Town increase resiliency to flooding in the face of more intense precipitation events. The Project goals are unique in the sense that there are no known Village Centers in Vermont that prevent polluted stormwater runoff from flowing to waters of the State. Given that village development predates stormwater controls and the highly constrained nature of the Village Centers to easily accept the installation of robust stormwater controls, the planning for new stormwater infrastructure is typically very challenging

The Town of Hyde Park is in the unique position of currently planning an overhaul of the Village Center's Main Street through a Vermont Better Connections Grant. This grant will evaluate economic opportunities related to transportation improvements primarily within the incorporated Village of Hyde Park but also identifying opportunities for the town to connect with neighboring communities and regional facilities. That current planning project, Connect Hyde Park, is internal roadway improvements for its Main St corridor with significant public input from stakeholders; more information is here: www.connecthydeparkvt.org. Connect Hyde Park's consultant team, led by Dubois-King, Inc. will produce a "Main Street Action" plan to guide capital investments to roadways, including stormwater, and economic development.

However, DuBois-King, Inc. has limited funding to explore stormwater and GSI possibilities, thus the need to seek additional funding at this critical time to define stormwater improvements to partner with upcoming bicycle/pedestrian, streetscape and economic development initiatives. Once the priorities from both planning projects are completed, the Town of Hyde Park and Village of Hyde Park, working with state and federal partners, will be ready to seek implementation funding in one comprehensive Village Center investment strategy.

Church & Main – westerly view on Main St (Library on Right) – Feb 2019

Sweet Crunch Bakery Sidewalk 2017 - Main St

Corner of Church & Main St - 2017

B. Introduction

The Hyde Park Net Zero project will seamlessly be integrated with an existing $85,000 grant project now underway under the VTrans/ACCD Better Connections Program. Dubois-King, Inc. is managing the BC scoping project with its final report due in December 2019. D-K tasks only included minimal funds fo the evaluation of existing stormwater conditions and proposals for GSI in specific locations in the Village Center. Major investments in the Village Center have recently occurred (elementary school and courthouse renovations) and in January 2019, a bond vote passed for major improvements to the Village of Hyde Park wastewater collection and treatment system. Hyde Park has set aside capital funds for sidewalks, roads and stormwater improvements in the Village Center which will ensure construction of the Net Zero recommendations with the priorities from the BC project over the next 5 – 10 years.

This Project will assist private land owners in both understanding GSI concepts can be implemented with both private and public landscape investments. Community outreach through the municipal website, this Project's meetings, and by one-on-one property owner connections will facilitate the public input into this Project and produce realistic outcomes for long-term community consideration over the years of Village Center redevelopment. The project designs will incorporate the *2017 Opportunities for Action Plan,* Objective III.B.1.b Task Area – Innovation Development. The preliminary plans and concept plans to be developed will include recommendations for future land development within the Village Center to reduce effective impervious surface areas; *2017 Opportunities for Action*; Strategy I.C.3, b.

C. Project Timeline

Task #	Task Title	Objective	Deliverable or Output	Timeline
1	Develop a QAPP	Tools including the Source Loading and Management Model (WinSLAMM) and HydroCAD will be utilized to size and design the GSI system.	QAPP Approval	May 2019
2	Project Kickoff	Review existing and in-progress engineering studies, notify stakeholders of project and obtain information on high priority concerns in the Village Center	Minutes of Meeting	June 2019
3	Develop Baseplan for Village Center	Meet with landowners to develop a new baseplan that will be the starting point for the GSI design with its project limits being the State-designated Village of Hyde Park Village Center, map attached. CAD/Drafting work will be needed to get the plan into a useable format for this effort.	Baseplan showing preferred transportation alternative	August 2019
4	Existing Conditions Assessment	An intensive soils investigation will be an important step to understand subsurface geology and limitations	Soil logs with infiltration testing results	October 2019
5	Runoff Quality and Modeling	Design and Size Stormwater Systems Delineate drainage areas using GIS to predict the pollutant loading, peak discharges and proposed scenarios.	Modeling Summary	December 2019
6	Preliminary Designs	Concept level plans with sufficient information to provide engineering feasibility accommodating transportation elements in Dubois-King Main Street Action Plan	Preliminary plans and details	February 2020
7	Cost Estimate	Engineers opinion of probable costs to be incorporated into private or public stormwater improvement projects	Cost spreadsheet	February 2020
8	Summary Report	Compile project summary, plans, maps, articles, photographs.	Final Report with Executive Summary	March 2020

Additionally, the project team will provide the required quarterly progress reports within 10 days of the last day of each calendar year quarter.

D. Task Descriptions

Task 1. QAPP - Describe quality assurance project plan procedures that will maintain project performance for the Project modeling tools including the Source Loading and Management Model (WinSLAMM) and HydroCAD to size and design the GSI system. Both of these modeling tools have been utilized in prior successful LCBP funded projects.

Task 2. Kickoff – The focus of this project is the state-designated Village Center area encompassing parcels on the north and south side of Main Street and for a short distance along side streets connecting to Main Street; see 2016 Lamoille Tactical Basin Plan, Page 8. Following approval of the QAPP a kickoff meeting with the , landowners and the consultant team will be scheduled to review project objectives and timelines and to discuss the status of the Main Street Action Plan being prepared through the Better Connections program by Dubois-King. A review of existing stormwater projects including the VT DEC IDDE - 2012, the 2016 Lamoille County Conservation District sub watershed study and basin installations on Depot Street and the 2018 VTrans Municipal Mitigation Grant #MM18/CA0539) will allow all stakeholders to assist in eliminating redundancies and clarify community priorities for inclusion in future roadway capital investments,

Task 3. **Baseplan –** The concept plan developed for the Main Street Action Plan will be utilized to develop a new baseplan that will be the starting point for the GSI design with its project limits being the State-designated Village of Hyde Park Village Center, map attached. CAD/Drafting work will be needed to get the plan into a useable format for this effort. The preliminary plans and concept plans to be developed will include recommendations for future land development within the Village Center to reduce effective impervious surface areas; *2017 Opportunities for Action*; Strategy I.C.3, b.

Task 4. Existing Conditions – An intensive soils investigation is proposed within the Project study area. This will be an important step to understand subsurface geology and opportunities/limitations due to infiltration capacity and impacts to existing structure foundations. Based on some prior subsurface work as well as NRCS maps, soils are anticipated to be conducive for infiltration. However, the specific rate of infiltration is unknown and given the goal of infiltrating all runoff the characterization of the soil conditions throughout the study area is critical. During soil investigations and field work within the Village Center, the on-site team will follow the invasive species spread prevention methods and guidance in the 2009 Lake Champlain Basin Rapid Response Action Plan for Aquatic Invasive Species, reporting newly formed or newly found infestations regardless of population size if discovered.

Task 5. Runoff Quality and Modeling – To begin the design of the GSI system drainage areas and landuses will be delineated using GIS. The water quality model, Source Loading and Management Model (WinSLAMM) will be used to predict the pollutant loading of the current Village stormwater system and then the proposed condition. Generators are roadways, sidewalks, County services (courthouse, sheriff's department, state's attorney, etc.), community service buildings (library, elementary school, post office, opera house), residences and small to mid-size businesses. The hydrologic & hydraulic model HydroCAD will be used to predict peak discharges in the current and proposed scenarios for the highest urban density area; the 2016 Lamoille Tactical Basin Plan identified as a priority for Middle Lamoille basin, Page 55.

Task 6. **Preliminary Plans –** Preliminary concept level plans will be developed for the stormwater system. The plans will include enough information to provide engineering feasibility and will contain key elevations and will also contain key construction details. The preliminary design will accommodate proposed transportation elements provided in the Hyde Park Main Street Action Plan (Dubois-King). The preliminary plans will include concepts for the entire Village Center, applicable in general village settings (roadway and private landowner GSIs), but more detailed plans for specific roadway segments will be applicable to selected recommendations in the Main Street Action Plan. One public meeting will be held during this task to update the community on Project status and receive comment. This Project will assist private land owners in both understanding GSI concepts can be implemented with both private and public landscape investments. Community outreach through the municipal website, this Project's meetings, and by one-on-one property owner connections will facilitate the public input into this Project and produce realistic outcomes for long-term community consideration over the years of Village Center redevelopment. The 2017 Opportunities for Action Plan, Objective III.B.1.b Task Area – Innovation Development.

Task 7. Cost Estimate – A cost estimate will be developed by itemizing construction materials. This cost will be able to be factored into the overall cost of Main Street redevelopment projects on public and private parcels and can be utilized for future grant funding efforts.

Task 8. Final Report – A final summary including all deliverables will be prepared at the completion of the Project. Hyde Park will be able to achieve their goal of eliminating stormwater runoff from the Hyde Park Village Center area by implementing the plans and design developed by this Project. Implementation of the plan will reduce P loading, reduce volume of stormwater, reduce peak discharge of stormwater, and increase recharge of groundwater, improving the water quality of downstream brooks and the Lamoille River. This Project's timing creates a natural "two-step" with the LCBP grant schedule able to incorporate the recommendations from Connect Hyde Park, which is due in October 2019, into this Project's Summary Report, due in March 2020. The proposed Project will require working with the Dubois-King team during their on-going work to maintain awareness of the outcomes in their forthcoming Main Street Action Plan. The public input from Connect Hyde Park, and this Project's own public input, will help guide the final stormwater improvement options for a robust GSI based stormwater design that will infiltrate Main Street runoff thereby eliminating at least two highly eroded discharge points and help to restore preexisting hydrology. The process and design will be a model for how other Village centers in Vermont can retrofit our valuable Village Centers using a comprehensive roadway and GSI based approach.

E. Detailed Budget

Budget Spreadsheet for LCBP Local Grants: Line Item by Task/Deliverable											
Line Item	Task 1- QAPP	Task 2- Kickoff	Task 3- Develop Main St Action Plan	Task 4- Existing Conditions Assessment	Task 5 Modeling	Task 6 - Preliminary Designs	Task 7 - Cost Estimate	Task 8 - Summary Report	Line Item Totals for All Tasks	Proposed Match (if any)	Line Item Totals + Proposed Match
Personnel									$0		$0
Fringe	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0
Travel									$0		$0
Supplies									$0		$0
Professional Services	$2,500	$1,000	$3,000	$15,000	$8,000	$12,200	$3,000	$5,300	$50,000		$50,000
Total Direct	$2,500	$1,000	$3,000	$15,000	$8,000	$12,200	$3,000	$5,300	$50,000	$0	$50,000
Indirect	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL BUDGET	**$2,500**	**$1,000**	**$3,000**	**$15,000**	**$8,000**	**$12,200**	**$3,000**	**$5,300**	**$50,000**	**$0**	**$50,000**

F. Budget Justification

- **Personnel:** Town staffing for grant administration or support in work tasks will not be billed and only professional services are proposed to be charged against LCBP funding support. However, any personnel costs that are incurred will be shown in the quarterly reports as local match and would be from non-federal sources.
- **Fringe:** Fringe will be shown if personnel time is incurred as local match and would be from non-federal sources.
- **Travel and Supplies:** If incurred by the municipality, costs will be reported as local match and would be from non-federal sources.
- **Professional Services:** Hiring a subcontractor for all work tasks.
- **Indirect:** No indirect costs are necessary as grant funds are designated for professional services and municipal indirect funds are minimal, if any, or would be shown in personnel, fringe, travel or supplies.

Site Map for Project – Limits of Hyde Park Village Center