



April 22, 2011

Mr. Ed Wilmes  
Director of Public Works and Engineering  
Village of Orland Park  
15655 Ravinia Avenue  
Orland Park, Illinois 60462

On behalf of V3 Companies of Illinois, Ltd., we are pleased to submit this design/build proposal for the Village Hall South Basin. We have provided a narrative of our plan for this basin on the following pages along with the scope of work definition.

**Village Hall South Basin Scope of Work**

The scope of work for this project is provided in the attached Exhibits.

**Compensation**

<u>Service</u>	<u>Exhibit</u>	<u>Code</u>	<u>Fee</u>	
Basin Design, Survey and Oversight	I	R09	Pro Bono	
Seeding and Erosion Blanket Installation	II	R14	\$14,350	(Lump Sum Fee)
Native Plug Installation	III	R27	\$10,000	(Lump Sum Fee)
North Garden Installation	IV	R27A	\$6,000	(Lump Sum Fee)
Annual Management & Monitoring (2011)	V	R29A	\$6,000	(Lump Sum Fee)
Annual Management & Monitoring (2012)	V	R29B	\$4,000	(Lump Sum Fee)
Annual Management & Monitoring (2013)	V	R29C	\$3,000	(Lump Sum Fee)
Prescribed Burn	VI	R24	<u>\$3,500</u>	(Lump Sum Fee)
	<b>TOTAL</b>		<b>\$46,850</b>	(Lump Sum Fee)
Alternate – Basin Re-Grading	VII	R99	\$21,000	(Lump Sum Fee)
Alternate – Trail & Overlook Installation	VIII	R99A	\$33,500	(Lump Sum Fee)

We appreciate the opportunity to present this proposal and look forward to working with you on this project.

Sincerely,  
V3 COMPANIES, LTD.

Gregory V. Wolterstorff, P.E.  
Director of Natural Resources

GVW/jb

Accepted For:  
VILLAGE OF ORLAND PARK

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **Village Hall South Basin Narrative**

The Village Hall for the Village of Orland Park is surrounded by a stormwater basin that has degraded conditions and become invaded by noxious weeds such as thistle and teasel. It is difficult for the Village to encourage HOA's and developers to manage their stormwater basins with best management practices and with a focus on water quality, when this premier basin at the Village Hall is in such a degraded condition. Therefore, the Village would like to enhance the stabilization, aesthetics and water quality of the Village Hall South Basin through installation of native vegetation and basin enhancements.

### **Current Conditions:**

The slopes of the South Basin are dominated with undesirable species, mainly teasel and turfgrass. Little to no desirable native presence was observed. It could not be determined whether the South Basin's slopes had been naturalized but seems unlikely. Teasel dominates most of the slopes and is also present in the regularly mowed nearby turfgrass. The slopes are very steep (2:1 and 1:1 in some areas). It is evident that landscape mowers have a difficult time mowing the adjacent turf on the steeper slopes, as smeared soil/bare areas were present.

There is a very narrow to no wetland shelf and then water levels extend well beyond 2 feet deep to open water in basin. Observed desirable wetland species included red-rooted spike rush and swamp rose mallow. There is a good establishment of white water lily beds throughout the South Basin and sago pondweed, a good quality aquatic species, was also observed. Erosion was surprisingly low in the South Basin. The northeast corner was somewhat eroded but seemed to be eroding uniformly, likely due to wind/wave action.

Sediment deposits from an inlet on the south end of the basin were observed. It appears sediment is coming from the nearby baseball parks.

### **V3 Recommendations:**

The slopes on the Village Hall South Basin have been sprayed enough times to reduce the invasive species and turfgrass presence. The basin slopes will be reseeded with a native broad-spectrum prairie mix that incorporates a heavy presence of native grass species to aide in stabilization. Erosion control blanket will be required on the slopes to prevent erosion and improve the germination of the seed.

To enhance public use and the scenic views from the Village Hall, the top plateau on the north slope of the basin will have mulch, native trees and shrubs and showy plugs installed. An unmaintained circle garden area will also be enhanced with similar mulch and ornamental native plantings. This area is above the slopes, directly in the view path from the Village Hall and would tie into the naturalized basin nicely. Plant identification signs could be installed in the garden for educational purposes.

Management will be provided, including chemical weed control, for 3 years. One prescribed burn will be completed during the 3<sup>rd</sup> year management period. High mowing will be provided during the first two years, to enhance light to the native seeds and cut back invasive weed species.

The beneficial wetland vegetation that was observed in the South Basin will remain and emergent/deep emergent plugs will be installed to enhance the shoreline edge and provide more shoreline stabilization. Desirable aquatic species, such as white water lilies, will also be planted in areas not currently containing those species.

V3 Alternate:

Basin Re-Grading: There are certain zones around the South Basin where the banks are very steep and establishment of vegetation and long term soil protection can be difficult. If this alternate is chosen by the Village, V3 can re-grade these banks. Soil on the slopes will be prepped by grading the steep areas (steeper than 2:1 slopes) into a more gradual and maintainable slope. V3 will scrape and stockpile the topsoil, reshape the slopes and re-spread topsoil on the banks and graded areas.

Trail & Overlook Installation: It has been observed that a picnic table was placed on a flat area along the South Basin for public access and enjoyment of this water feature. Upon establishment of native vegetation along the basin slopes, it will be important to continue this public access and enjoyment, but in a controlled location so that trampling of native species does not occur and soil stabilization of the banks is protected. We have shown a potential access trail and overlook at an existing flat spot on the South Basin slopes where the architecture of the Village Hall building has provided an overview location for the open water area of the basin. Whether this location, or a location near the Recreation Building is chosen, we believe this feature would be a good addition to the South Basin in the future. This trail and overlook would be constructed with brick pavers to provide access for Village Hall staff and Village residents to this restored natural feature.

## **EXHIBIT I**

### **Naturalized Basin Design, Survey and Oversight**

#### **1. Naturalized Basin Design and Planting Plans**

V3 will design and prepare native landscaping plan drawing for the naturalized stormwater detention facility. The drawing will include proposed native species for installation which will be based on the anticipated soils and hydrologic conditions. Planting zones will be designated, and proposed seed mixes and plug species for each planting zone will be listed. V3 will prepare details and cross-sections as needed to obtain approval from the Village of Orland Park, if required. It is our understanding that this project will be considered maintenance and no permit is required. However, these services may be requested to document the plans and planting zones for the Villages information.

#### **2. Construction Layout Survey and As-Built Exhibit**

V3 will provide construction layout survey for the construction activities associated with the naturalized basin. Upon completion of the site improvements, an as-built exhibit with GPS location of general planting zones will be provided to the Village for record of the basin restoration that was completed.

#### **3. Construction Oversight**

V3 will provide construction oversight and management of the restoration activities associated with the naturalization of the basin. This includes providing a qualified supervisor on site during construction activities to oversee the work and communicate with the Village of Orland Park with any questions that arise. Upon request by the Village, a project summary will be provided to convey the progress of the basin naturalization.

## **EXHIBIT II**

### **Seeding and Erosion Blanket Installation 1.90 Acres Total**

#### **1. Boom Spray Basin Slopes**

This work will consist of one (1) herbicide application, if required, across all the slopes and upper banks of the South basin in order to eradicate the turf grass and noxious weeds which exist. The total area is 1.9 acres in size. The herbicide application will occur once, if required, before soil preparation and seeding activities commence. V3 will apply a non-selective herbicide (such as glyphosate) by either boom spraying from an ATV, or manual backpack spraying, depending on access to the steep slopes.

#### **2. Soil Preparation**

V3 will disk and rake the basin to smooth and level the surface in preparation of the seeding and planting, provided dry conditions are present. These soil preparation activities will facilitate the restoration of the soil that has been eradicated of vegetation and create a suitable seedbed. This work will be performed in the spring as soon as the basin slopes dry out.

#### **3. Cover Crop Seeding**

V3 will provide and apply a cover crop on the 1.90-acre basin slopes during the installation of the permanent native seed. The cover crop will provide quick establishment of the vegetation on the slopes and stabilize the earth while the native seed germinates.

#### **4. Prairie Seeding and Blanket Installation**

Following seedbed preparation, V3 will provide and install prairie seed and blanket in the 1.90-acre disturbed side slopes of the basin. The seed mix will be installed by drill seeder and by hand when conditions are judged to be suitable. Erosion blanket (North American Green DS-75) will be installed on the slopes after seeding.

## **EXHIBIT III**

### **Native Plug Installation 2,000 Total**

#### **1. Wetland Container Planting (2,000 Plugs)**

V3 will provide and install 2,000 plugs in the basin's side slopes at the normal water elevation. Container plants will be grown-out and have at least 12-inch shoot heights at the time of planting. V3 will install an enclosure around all plants to provide protection from geese and will remove and dispose of enclosures during the second growing season. Plant installation will occur between May 1<sup>st</sup> and July 15<sup>th</sup>, 2011 dependent on the site conditions.

#### **2. Post-Planting Inspections/Irrigation**

V3 will conduct post-planting inspections for two months following wetland planting activities (4 total inspections/irrigation events) to monitor hydrology and plant establishment in the basin. During these post-planting inspections, water levels will be evaluated to ascertain if adequate hydrology is present for successful plant establishment. V3 will irrigate the plants as necessary to promote establishment.

## **EXHIBIT IV**

### **North Garden Installation**

#### **1. Containerized Plantings (326 Plantings)**

V3 will provide and install three hundred (300) containerized native prairie plugs, six (6) native trees and twenty (20) native shrubs along the northern slope of the basin. This area has significant views from the Village Hall and this decorative planting is desired to provide a quick establishment of color, aesthetics and viewscape. This area will also provide a transition from the manicured lawn and landscaped areas along the northern slope to the prairie slopes of the naturalized basin. Container plants will be grown-out and have at least 12-inch shoot heights at the time of planting. Shrubs will be container grown with sufficient root and caliper size for this decorative planting purpose. Plant installation will occur between May 1<sup>st</sup> and July 15<sup>th</sup>, 2011 dependent on the site conditions.

#### **2. Post-Planting Inspections/Irrigation**

V3 will conduct post-planting inspections for two months following wetland planting activities (4 total inspections/irrigation events) to monitor hydrology and plant establishment in the basin. During these post-planting inspections, water levels will be evaluated to ascertain if adequate hydrology is present for successful plant establishment. V3 will irrigate the plants as necessary to promote establishment.

#### **3. Mulch Installation**

V3 will provide and install 500 square yards (sy) of mulch around the native prairie plugs, and native shrubs along the northern slope of the basin.

#### **4. Educational Signage**

V3 will install two (2) signs, which are provided by the Village of Orland Park, along the pathway which is adjacent to the decorative landscape area. These signs would not be monument type, but a type that is mounted to a post or pole. If the Village chooses to not install educational signage, V3 will provide and install three (3) signs which delineate no-mow and natural areas.

## **EXHIBIT V**

### **Annual Management and Monitoring Three (3) Years**

#### **1. Vegetative Management Tasks**

##### **A. First and Second Growing Season Prairie Mowings**

V3 will mow the vegetation in the prairie areas two (2) times during the first two years of the management period. Mowing will cut weed plants prior to seed-set and will increase the amount of sunlight reaching developing prairie seedlings.

##### **B. Weed Control Activities**

V3 will apply herbicides and/or conduct mechanical activities to control nuisance herbaceous vegetation in the wetland mitigation areas during the three-year period. Undesirable species such as Common Reed, Cattails, Reed Canary Grass, Field Thistle, Buckthorn, and Purple Loosestrife which should be targeted for control.

#### **2. Monitoring & Reporting**

##### **A. Vegetation Monitoring**

The wetland mitigation areas will be monitored to record the condition of the various plant communities for a three-year period, which begins following the completion of all planting. One annual site visit will be conducted to document site conditions and collect vegetation data. Qualitative data will be collected to determine native species presence and total coverage of the planting and seeding area. Species dominance will also be estimated during the quantitative inspection. In addition, photographic documentation will be obtained during the monitoring episodes.

##### **B. Vegetation Monitoring Report**

One letter report, documenting monitoring inspections, will be prepared and provided to the CLIENT at the end of each growing season of the three-year period (three reports). The monitoring report will include the results of the monitoring events and evaluate the status of the naturalized areas.



## **EXHIBIT VI**

### **Prescribed Burn**

#### **1. Prescribed Burn Management**

One prescribed burn will be conducted on the basin slopes during spring or fall during the final year of the management period. Please note that any fire department site assistance fees, if required, are not included under this contract.

##### **a. Burn Plan and Project Administration**

V3 will provide the following administrative services to prepare for the prescribed burn.

- 1) An Open Burning Permit for each of the sites will be secured from the Illinois Environmental Protection Agency (IEPA).
- 2) V3 will contact the local fire authority and obtain a burn variance or burn permit if required. Local fire authorities typically require IEPA approval, neighbor notification, and a Burn Plan before issuing the variance or permit.
- 3) V3 will prepare a detailed a Fire Prescription and Logistics Plan (Burn Plan) for each of the sites. The primary purpose of the plan is to encourage advance planning for maximum safety for the burn crew, the property, and any nearby structures. The plan is based on the U.S. Forest Service format and will include a general site description, with a legal description of the site location, permits required and agencies to be contacted for permits, the recommended crew complement and equipment needed, and a burn prescription. The burn prescription dictates the conditions under which a safe burn may be conducted.
- 4) V3 will prepare and distribute burn notification to residences, commercial properties, or industry located near the burn units. This information will include projected dates for a burn, why the burn is being conducted, and who to contact at V3 with concerns about the burn.

##### **b. Burn Implementation**

For safety reasons, V3 will ignite the prescription burns in accordance with their respective Burn Plans, only when burn conditions match the burn prescription. V3 will provide an experienced burn crew and crew leader equipped to safely conduct the burn. The Burn Plan will be followed in the execution of the burn. Conditions outside the burn prescription will be cause for stopping the burn, at the sole discretion of the burn leader. V3 will extinguish embers after fuel at the site has been consumed. V3 reserves the right to extinguish the burn at any time if conditions depart from the burn prescription and become untenable. Once the burn is declared over, the local fire authorities will be informed of V3's departure from the site. Prescription burns are weather dependent, so if acceptable weather conditions do not occur in the time frame designated for the burn, V3 reserves the right to postpone the burn until a later date.

## **EXHIBIT VII**

### **Alternate - Basin Re-Grading**

#### **1. Slope Re-Grading**

V3 will regrade the basin slopes which have been determined to be too steep to support restoration activities. This grading is anticipated along the northeast slopes and southwest slopes at steep locations. The earth will be pushed back to flatten the slopes in these areas. The soil will not be exported, but will be spread on-site and stabilized as part of the vegetative restoration.

#### **2. Sedimentation Removal**

V3 will remove the significant sedimentation deposit which has accumulated at the outlet from the storm sewer which drains the adjacent baseball fields to the south. This sediment will be spread on the upper banks and stabilized along with the vegetative restoration.

## **EXHIBIT VIII**

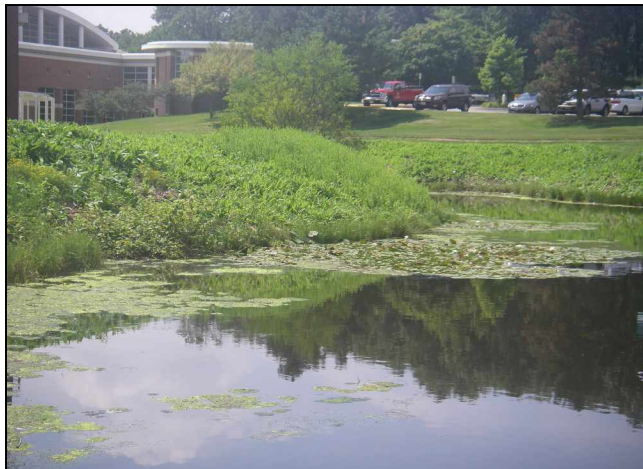
### **Alternate - Trail & Overlook Installation**

#### **1. Install Brick Pavers (2000 Square Feet)**

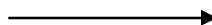
V3 will provide and install two thousand (2000 sf) square feet of brick pavers for an access trail and overlook location. Location proposed by V3 is at the current architectural feature overlook at the Village Hall building, but may be changed and redesigned by the Village.

Installation includes excavation for trail and overlook area, installation of six (6") inch integral color PCC banding, installation of eight (8") inch depth CA-6 aggregate base, and two thousand (2,000 sf) square feet of brick paver installation with color to be determined by the Village.

# Current – South Basin

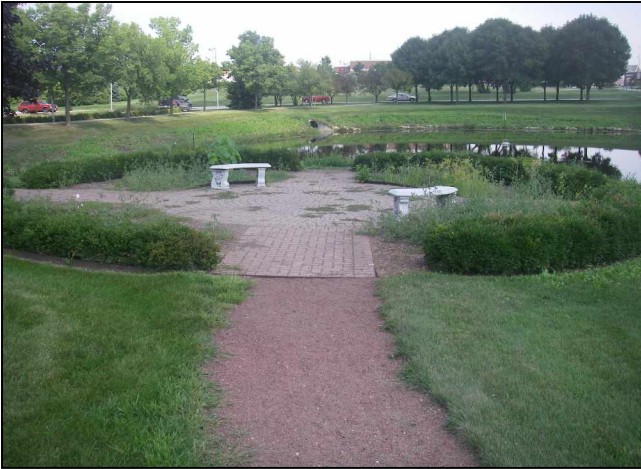


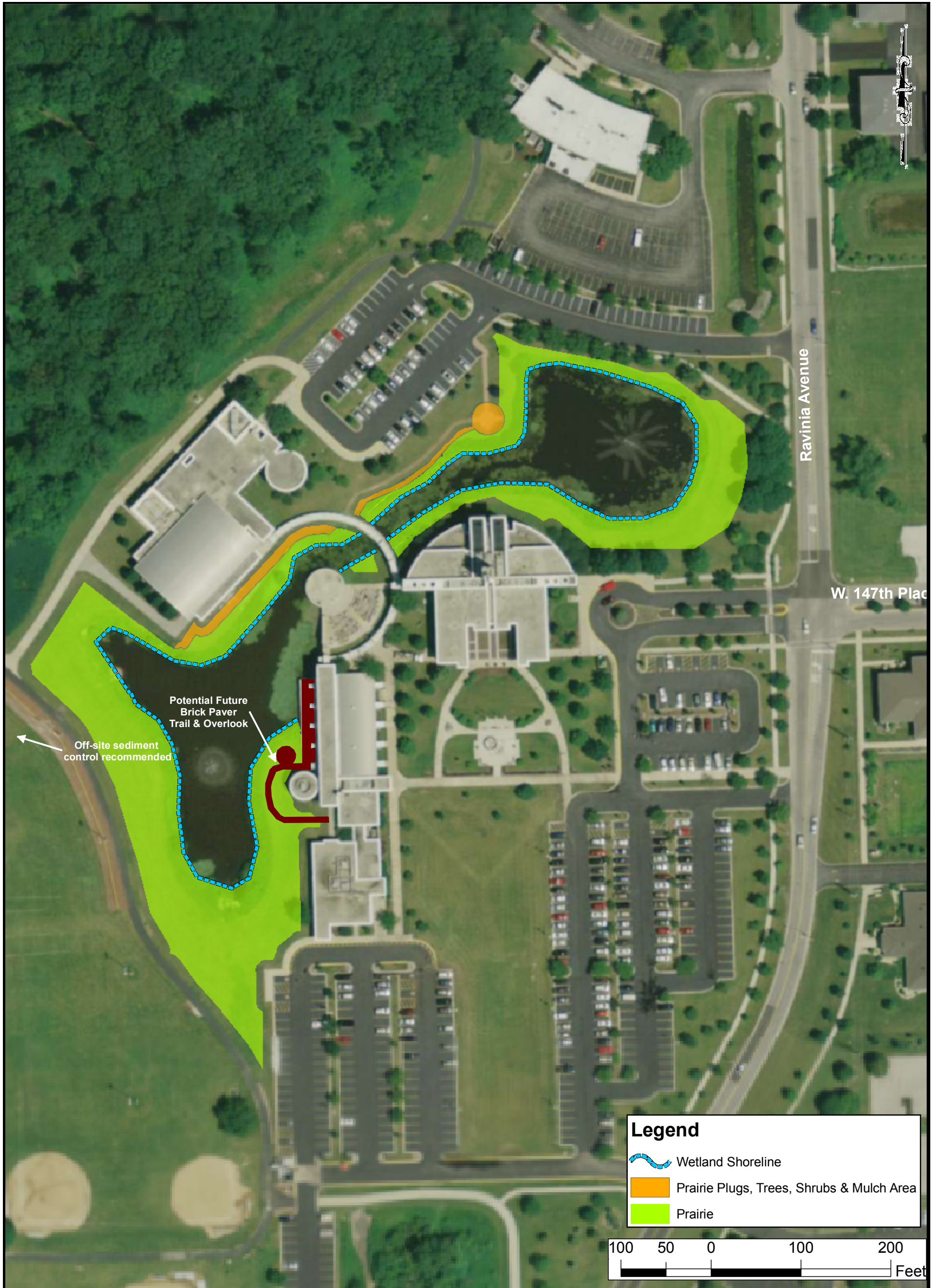
# Proposed



**Current – South Basin**

**Proposed**





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TITLE :	<b>South Basin: Proposed</b>	PROJECT AND SITE LOCATION : <b>Village Hall Orland Park, IL, Cook County</b>		
BASE LAYER :	AirPhoto USA 2008	PROJECT NO. PROP	FIGURE : II	SHEET : OF: 1 1
CLIENT :	<b>Village of Orland Park Village Hall 14700 Ravinia Avenue Orland Park, Illinois 60462</b>	QUADRANGLE : n/a	DATE : 9/1/10 revised 4/15/11	SCALE : See scale bar