

MEMORANDUM



DATE: June 17th 2025
TO: Aladdin Husain, Village of Orland Park
FROM: Dan Free
CC: Khurshid Hoda, Village of Orland Park
RE: **Costco Wholesale Stormwater Pond Improvements**

This memo is regarding the proposed improvements to the stormwater management pond south of the Costco warehouse at 9915 W 159th Street. The property is owned by Costco and pond improvements are to be performed by Pulte Homes as part of the “Estates at Ravinia Meadows” residential development to the south.

The stormwater pond is on Lot 3 of the Costco Orland Park development and provides detention volume for approximately 56.7 acres under existing conditions including Lots 1, 2, and 3 of the Costco development plus Ravinia Avenue south of 159th Street and approximately 20 acres of offsite undeveloped area to the south. The property to the south is currently proposed for single-family residential development by Pulte Home Corporation (Pulte). The area of the residential development tributary to the Costco basin will be reduced to 19.20 acres in the proposed condition. Restoration of the side slopes in the basin’s southeast corner is also proposed to offset detention volume that has been lost due to sedimentation in the pond. Additionally, a volume control shelf is proposed at the southeast corner of the basin to provide 0.80 ac-ft of volume control storage per MWRD requirements. This volume control shelf has different performance standards than the pond and is therefore excluded from the pond maintenance recommendations.

Under existing conditions, the undeveloped property to the south sheet drains north into the Costco basin. Since its construction the pond has been subject to sediment washing in with runoff from this property. Sedimentation is primarily evident in the southeast corner of the pond and has reduced the available stormwater detention volume. Based on a topographic survey of the pond performed on February 5, 2025 by V3 Companies, 24.75 ac-ft of volume is currently provided. Under the original Costco development, 25.30 ac-ft of storage was required between the NWL and Orland Park HWL of 689.00, half a foot below the emergency overflow spillway elevation at the northwest corner of the basin. This represents a loss of 0.55 ac-ft of storage volume in the basin.

A stormwater pond evaluation and restoration plan was prepared by V3 Companies to address Village concerns with the performance, function, and overall health of the basin. Work on the basin is to be performed by Pulte as part of the proposed single-family residential development neighboring Costco to the south. Drain tiles on this property leading to the Costco basin will also be removed as part of the development. Approximately half an acre will be deeded by Costco to Pulte for the proposed volume control shelf at the southeast corner of the pond. Below is a summary of the proposed restoration and ongoing maintenance recommendations for the basin:

Excavation/Dredging

Excavation of the pond side slopes is proposed in the southeast corner where sedimentation is most apparent. Grading work in this area will be performed in conjunction with the construction of the proposed volume control shelf at the southeast corner of the pond property which will be tied into the existing pond with an overflow berm at elevation 688.7'. Based on proposed contours provided by Cemcon, Ltd. and stage-storage calculations, 25.99 ac-ft of storage will be provided in the basin once the sediment has been removed and side slopes pulled back by the excavation. This represents a detention volume increase of 1.24 ac-ft from the existing condition including 0.07 ac-ft of storage in the proposed BMP shelf, between the berm at elevation 688.7' and the HWL of 689.00. In addition to the pond excavation, rills or gullies that have formed on the side slopes over time will also be filled in and seeded.

Native Seeding

Basin slopes should be seeded with native vegetation once the sediment has been removed to stabilize the new side slopes and reduce future sedimentation into the pond. Installation of erosion control blanket on the affected slopes may be necessary for temporary stabilization while the seed germinates.

Establishment of native vegetation in the affected areas will help prevent further sedimentation into the pond, and reduce the need for irrigation, aeration, fertilization, and chemical treatment compared to maintained turf grass, as well as provide a water quality benefit. Native prairie vegetation also provides better soil stabilization than turf grass to help limit any future erosion of the side slopes. An overseeding event with a mesic prairie seed mix throughout the entire basin slopes is recommended. Overseeding should occur in the spring or fall to best establish the native vegetation.

Mowing/Weed Control

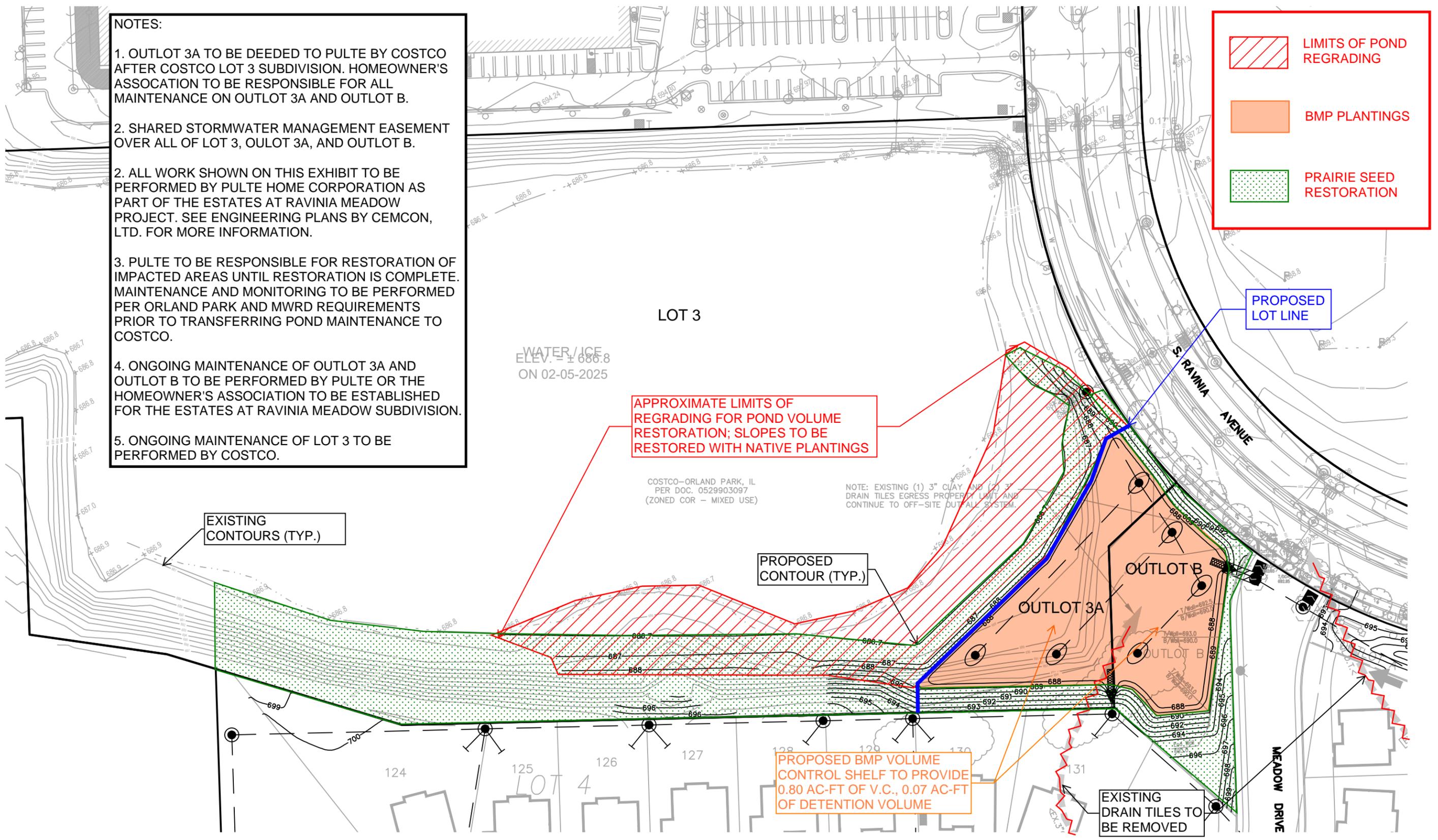
Mowing or selective cutting should occur for the first two growing seasons after the native mesic prairie seed mix has been applied. Mowing or selective cutting of the vegetation to a height of 6"-9" throughout the growing season will allow new prairie seedlings to grow while also controlling growth of annual weeds. Selective application of herbicide should also be used to control aggressive invasive plant species that would displace native species and reduce the performance/function of the stormwater pond.

It is recommended that this work be carried out by a firm experienced in ecological restoration and maintenance of native vegetation. Traditional landscape companies may not have the staff and knowledge of native vegetation which can adversely affect the basin and prolong the basin from achieving its goals.

NOTES:

1. OUTLOT 3A TO BE DEEDED TO PULTE BY COSTCO AFTER COSTCO LOT 3 SUBDIVISION. HOMEOWNER'S ASSOCIATION TO BE RESPONSIBLE FOR ALL MAINTENANCE ON OUTLOT 3A AND OUTLOT B.
2. SHARED STORMWATER MANAGEMENT EASEMENT OVER ALL OF LOT 3, OUTLOT 3A, AND OUTLOT B.
2. ALL WORK SHOWN ON THIS EXHIBIT TO BE PERFORMED BY PULTE HOME CORPORATION AS PART OF THE ESTATES AT RAVINIA MEADOW PROJECT. SEE ENGINEERING PLANS BY CEMCON, LTD. FOR MORE INFORMATION.
3. PULTE TO BE RESPONSIBLE FOR RESTORATION OF IMPACTED AREAS UNTIL RESTORATION IS COMPLETE. MAINTENANCE AND MONITORING TO BE PERFORMED PER ORLAND PARK AND MWRD REQUIREMENTS PRIOR TO TRANSFERRING POND MAINTENANCE TO COSTCO.
4. ONGOING MAINTENANCE OF OUTLOT 3A AND OUTLOT B TO BE PERFORMED BY PULTE OR THE HOMEOWNER'S ASSOCIATION TO BE ESTABLISHED FOR THE ESTATES AT RAVINIA MEADOW SUBDIVISION.
5. ONGOING MAINTENANCE OF LOT 3 TO BE PERFORMED BY COSTCO.

	LIMITS OF POND REGRADING
	BMP PLANTINGS
	PRAIRIE SEED RESTORATION



COSTCO POND IMPROVEMENTS
ORLAND PARK
ILLINOIS

MAINTENANCE/RESTORATION EXHIBIT
DATE: 06-16-25
SCALE: 1"=80'

