



## **Tabular Stormwater Report**

ERA Project W20131.A

### **Prepared for:**

Richmar Realty and Development

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Fabyan Parkway, Geneva

PINs 12-12-300-063; 12-12-400-029; 12-13-200-001; 12-13-100-040;  
12-13-100-013; 12-13-100-039; 12-12-300-067; 12-12-300-068;  
12-12-300-064; 12-13-100-012; 12-12-300-022; 12-12-400-004

March 2, 2023

Subject: Geneva Oaks Business Park

ERA is pleased to submit this report for the civil site design of Geneva Oaks Business Park. Enclosed you will find calculations, plans, exhibits and narratives describing the proposed work for this project.

All work has been completed by me or someone directly under my supervision, and this sheet signed and sealed will encompass all documents pertaining to the stormwater report.

I appreciate the opportunity for your review of this project.

Sincerely,



Nicholas A. Varchetto, P.E.  
Project Manager



Expires: November 30, 2023

## **TAB 1 – NARRATIVE**

Engineering Resource Associates, Inc. (ERA) prepared this stormwater permit submittal on behalf of Richmar Reality & Development. The project is located North of Fabyan Parkway on the corner of Fabyan and the Proposed Dawn Boulevard. The current lots are vacant except for parcels 12-12-400-004 and 12-13-200-001, which contains an existing commercial business. There are more commercial lots to the west, east, and south. There is one residential lot to the north and several vacant lots to the north. Exhibit 1 depicts this project location and Exhibit 4 provides aerial imagery of the site. ERA created this submittal in accordance with the Kane County Stormwater Management Ordinance.

## TAB 2 – STORMWATER MANAGEMENT

### PROPOSED CONDITIONS

The proposed project consists of the installation of all utilities (electric, water, sanitary, and stormwater), the construction of detention for the entire site, and extension of Dawn Boulevard to extend to all lots. Dawn Boulevard is to be built by others. Although no work is proposed to the individual lots, the detention has been designed to accommodate the maximum amount of impervious area on each lot. The proposed impervious area used to calculate the correct amount of detention is 569,322 s.f. The existing drainage patterns naturally have the runoff flowing from west to east. The proposed detention is proposed on the Proposed Lot 6, water will be directed to the detention pond with the use of the storm sewer system and swales.

Per Table 9-81 of the Kane County Stormwater Management Ordinance, when the proposed net new impervious area exceeds 5,000 s.f. and when the net new impervious area exceeds 25,000 s.f. detention is required. This project has a proposed net new impervious area of 569,322 sq. ft., therefore PCBMPs and Detention are required.

### PROPOSED DETENTION

The area of the proposed development is 19.83 acres and will contain 5 lots with one outlot for detention. In accordance with the Kane County Stormwater Ordinance and the City of Geneva, existing drainage patterns have been maintained where possible and or storm sewers were utilized to convey water to the detention facility. The proposed detention basin will have a high-water level of 779.5. Since the county has an allowable release rate of 0.1 cfs/acre the allowable rate for this rise is 1.98 cfs. The proposed control structure is to have an orifice of 5.4" diameter at an elevation of 730.0. In the event that the detention pond does not completely drain, there is a proposed weir in the structure at an elevation of 780 to allow for overtopping.

| Proposed Stage/Storage/Discharge Input Data: |             |            |           |
|--|-------------|------------|-----------|
| Elevation                                    | incremental | Cumulative | Discharge |
|  | Storage     | Storage    | Rate      |
| (ft)   | (ac. ft.)   | ac-ft      | (cfs)     |
| 773.00                                       | 0.0000      | 0.00000    | 0.000     |
| 773.50                                       | 0.0000      | 0.00000    | 0.408     |
| 774.00                                       | 0.0000      | 0.00000    | 0.685     |
| 774.50                                       | 0.7980      | 0.79800    | 0.879     |
| 775.00                                       | 0.8200      | 1.61800    | 1.037     |
| 775.50                                       | 0.8420      | 2.46000    | 1.174     |
| 776.00                                       | 0.8650      | 3.32500    | 1.297     |
| 776.50                                       | 0.8870      | 4.21200    | 1.409     |
| 777.00                                       | 0.9100      | 5.12200    | 1.513     |
| 777.50                                       | 0.9330      | 6.05500    | 1.610     |
| 778.00                                       | 0.9560      | 7.01100    | 1.701     |
| 778.50                                       | 0.9790      | 7.99000    | 1.788     |
| 779.00                                       | 1.0030      | 8.99300    | 1.871     |

|        |        |          |        |
|--------|--------|----------|--------|
| 779.50 | 1.0260 | 10.01900 | 1.950  |
| 780.00 | 1.0500 | 11.06900 | 2.026  |
| 780.50 | 1.4870 | 12.55600 | 44.526 |

The release rate at the high water level is 1.95 cfs, which is below the allowable rate of 1.98 cfs. Further studies were done using WinTR-20 in order to analyze how the detention pond would handle various 100-year storms. It was found that the allowable release rate would only be exceeded during the 100-year, 18-hour and 100-year, 24 hour storm events (See WinTR-20 output below). It is believed that these events would occur less than 1% of the time as they are only a portion of the 100-year storm events, meaning that this detention pond is within the regulations of the Kane County Stormwater Ordinance.

**BEST MANAGEMENT PRACTICES**

As the net new impervious area could be up to 569,322 s.f. once all lots are developed, a PCBMP will be required. The required storage is:

PCBMP STORAGE:  $569,322 \text{ S.F.} \times (1.0 \text{ in}/ 12) \text{ F} = 47,444 \text{ C.F.} = 1.09 \text{ acre-feet}$

The required PCBMP volume will be provided in the bottom of the proposed Detention Basin.

| Elevation<br>(ft) | Area               |       | Average<br>Area<br>(ac) | Incremental<br>Storage<br>(ac-ft) | Cummulative<br>Storage<br>(ac-ft) |
|-------------------|--------------------|-------|-------------------------|-----------------------------------|-----------------------------------|
|                   | (ft <sup>2</sup> ) | (ac)  |                         |                                   |                                   |
| 774.00            | 68,526             | 1.573 |                         |                                   | 0.000                             |
|                   |                    |       | 1.595                   | 0.798                             |                                   |
| 774.50            | 70,455             | 1.617 |                         |                                   | 0.798                             |
|                   |                    |       | 1.640                   | 0.820                             |                                   |
| 775.00            | 72,383             | 1.662 |                         |                                   | 1.617                             |

The amount of provided PCBMP is greater than the required amount.



|       |        |        |
|-------|--------|--------|
| 777.5 | 1.610  | 6.155  |
| 778.  | 1.701  | 7.128  |
| 778.5 | 1.788  | 8.126  |
| 779.  | 1.871  | 9.148  |
| 779.5 | 1.950  | 10.194 |
| 780.  | 2.026  | 11.265 |
| 780.5 | 44.526 | 12.555 |

RAINFALL DISTRIBUTION:

|           |      |      |      |      |  |
|-----------|------|------|------|------|--|
| Huff1Q-1  | 0.05 |      |      |      |  |
| 0.        | 0.16 | 0.33 | 0.43 | 0.52 |  |
| 0.60      | 0.66 | .71  | .75  | .79  |  |
| .82       | .84  | .86  | .88  | .9   |  |
| .92       | .94  | .96  | .97  | .98  |  |
| 1.        |      |      |      |      |  |
| Huff1Q-2  | 0.10 |      |      |      |  |
| 0.        | 0.16 | 0.33 | 0.43 | 0.52 |  |
| 0.60      | 0.66 | .71  | .75  | .79  |  |
| .82       | .84  | .86  | .88  | .9   |  |
| .92       | .94  | .96  | .97  | .98  |  |
| 1.        |      |      |      |      |  |
| Huff1Q-3  | 0.15 |      |      |      |  |
| 0.        | 0.16 | 0.33 | 0.43 | 0.52 |  |
| 0.60      | 0.66 | .71  | .75  | .79  |  |
| .82       | .84  | .86  | .88  | .9   |  |
| .92       | .94  | .96  | .97  | .98  |  |
| 1.        |      |      |      |      |  |
| Huff1Q-6  | 0.30 |      |      |      |  |
| 0.        | 0.16 | 0.33 | 0.43 | 0.52 |  |
| 0.60      | 0.66 | .71  | .75  | .79  |  |
| .82       | .84  | .86  | .88  | .9   |  |
| .92       | .94  | .96  | .97  | .98  |  |
| 1.        |      |      |      |      |  |
| Huff2Q-12 | 0.60 |      |      |      |  |
| 0.        | 0.03 | 0.08 | 0.12 | 0.16 |  |
| 0.22      | 0.29 | 0.39 | 0.51 | 0.62 |  |
| 0.70      | 0.76 | 0.81 | 0.85 | 0.88 |  |
| 0.91      | 0.93 | 0.95 | 0.97 | 0.98 |  |
| 1.        |      |      |      |      |  |
| Huff3Q-18 | 0.90 |      |      |      |  |
| 0.        | 0.03 | 0.06 | 0.09 | 0.12 |  |
| 0.15      | 0.19 | 0.23 | 0.27 | 0.32 |  |
| 0.38      | 0.45 | 0.57 | 0.70 | 0.79 |  |
| 0.85      | 0.89 | 0.92 | 0.95 | 0.97 |  |
| 1.        |      |      |      |      |  |
| Huff3Q-24 | 1.20 |      |      |      |  |
| 0.        | 0.03 | 0.06 | 0.09 | 0.12 |  |

|            |      |      |      |      |      |
|------------|------|------|------|------|------|
|            | 0.15 | 0.19 | 0.23 | 0.27 | 0.32 |
|            | 0.38 | 0.45 | 0.57 | 0.70 | 0.79 |
|            | 0.85 | 0.89 | 0.92 | 0.95 | 0.97 |
|            | 1.   |      |      |      |      |
| Huff4Q-48  | 2.40 |      |      |      |      |
|            | 0.   | 0.02 | 0.05 | 0.08 | 0.10 |
|            | 0.13 | 0.16 | 0.19 | 0.22 | 0.25 |
|            | 0.28 | 0.32 | 0.35 | 0.39 | 0.45 |
|            | 0.51 | 0.59 | 0.72 | 0.84 | 0.92 |
|            | 1.   |      |      |      |      |
| Huff4Q-72  | 3.60 |      |      |      |      |
|            | 0.   | 0.02 | 0.05 | 0.08 | 0.10 |
|            | 0.13 | 0.16 | 0.19 | 0.22 | 0.25 |
|            | 0.28 | 0.32 | 0.35 | 0.39 | 0.45 |
|            | 0.51 | 0.59 | 0.72 | 0.84 | 0.92 |
|            | 1.   |      |      |      |      |
| Huff1Q-0.5 | .25  |      |      |      |      |
|            | 0.   | 0.16 | 0.33 | 0.43 | 0.52 |
|            | .60  | .66  | .71  | .75  | .79  |
|            | .82  | .84  | .86  | .88  | .9   |
|            | .92  | .94  | .96  | .97  | .98  |
|            | 1.   |      |      |      |      |

GLOBAL OUTPUT:

2      0.1      .5      NN   N      YN   N

WinTR-20 Printed Page File

End of Input Data List

Fabyan Parkway

Name of printed page file:

C:\Users\achaille\OneDrive - ERA\Desktop\FabyanParkway.out

STORM 100yr,1hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Flow Time (hr) | Peak Flow Rate (cfs) | Peak Flow Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|---------------------|----------------------|----------------------|
| R-1                      | 0.033                 | Upstream                 | 3.354              |                | 0.37                | 119.69               | 3672.48              |

|        |       |            |       |        |      |      |       |
|--------|-------|------------|-------|--------|------|------|-------|
| R-1    | 0.033 | Downstream | 3.354 | 777.24 | 1.50 | 1.56 | 47.85 |
| OUTLET | 0.033 |            | 3.354 |        | 1.50 | 1.56 | 47.85 |

STORM 100yr,2hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|------------|
| R-1                      | 0.033                 | Upstream                 | 4.278              |                | 0.42           | 98.55           | 3023.89    |
| R-1                      | 0.033                 | Downstream               | 4.278              | 778.01         | 2.43           | 1.70            | 52.23      |
| OUTLET                   | 0.033                 |                          | 4.278              |                | 2.43           | 1.70            | 52.23      |

STORM 100yr,3hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|------------|
| R-1                      | 0.033                 | Upstream                 | 4.792              |                | 0.46           | 85.44           | 2621.69    |
| R-1                      | 0.033                 | Downstream               | 4.792              | 778.39         | 3.41           | 1.77            | 54.27      |
| OUTLET                   | 0.033                 |                          | 4.792              |                | 3.41           | 1.77            | 54.27      |

STORM 100yr,6hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|------------|
| R-1                      | 0.033                 | Upstream                 | 5.723              |                | 0.69           | 63.96           | 1962.46    |
| R-1                      | 0.033                 | Downstream               | 5.723              | 778.98         | 6.35           | 1.87            | 57.30      |
| OUTLET                   | 0.033                 |                          | 5.723              |                | 6.35           | 1.87            | 57.30      |

STORM 100yr,12hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|------------|
| R-1                      | 0.033                 | Upstream                 | 6.745              |                | 4.84           | 30.44           | 934.03     |
| R-1                      | 0.033                 | Downstream               | 6.745              | 779.52         | 12.27          | 1.95            | 59.93      |
| OUTLET                   | 0.033                 |                          | 6.745              |                | 12.27          | 1.95            | 59.93      |

STORM 100yr,18hr



| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Flow Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|-----------------|
| R-1                      | 0.033                 | Upstream                 | 7.342              |                | 11.68          | 24.19           | 742.17          |
| R-1                      | 0.033                 | Downstream               | 7.341              | 779.76         | 18.29          | 1.99            | 61.03           |
| OUTLET                   | 0.033                 |                          | 7.341              |                | 18.29          | 1.99            | 61.03           |

STORM 100yr,24hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Flow Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|-----------------|
| R-1                      | 0.033                 | Upstream                 | 7.849              |                | 15.59          | 19.32           | 592.90          |
| R-1                      | 0.033                 | Downstream               | 7.849              | 779.85         | 24.26          | 2.00            | 61.45           |
| OUTLET                   | 0.033                 |                          | 7.849              |                | 24.26          | 2.00            | 61.45           |

STORM 100yr,48hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Flow Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|-----------------|
| R-1                      | 0.033                 | Upstream                 | 8.556              |                | 40.79          | 10.49           | 321.73          |
| R-1                      | 0.033                 | Downstream               | 8.556              | 779.59         | 48.30          | 1.96            | 60.24           |
| OUTLET                   | 0.033                 |                          | 8.556              |                | 48.30          | 1.96            | 60.24           |

STORM 100yr,72hr

| Area or Reach Identifier | Drainage Area (sq mi) | Rain Gage ID or Location | Runoff Amount (in) | Elevation (ft) | Peak Time (hr) | Flow Rate (cfs) | Flow Rate (csm) |
|--------------------------|-----------------------|--------------------------|--------------------|----------------|----------------|-----------------|-----------------|
| R-1                      | 0.033                 | Upstream                 | 9.123              |                | 61.18          | 7.43            | 227.88          |
| R-1                      | 0.033                 | Downstream               | 9.123              | 779.15         | 72.26          | 1.90            | 58.16           |
| OUTLET                   | 0.033                 |                          | 9.123              |                | 72.26          | 1.90            | 58.16           |



Fabyan Parkway

| Area or Reach Identifier | Drainage Area (sq mi) | ----- Peak Flow by Storm ----- |                 |                 |                 |                  |
|--------------------------|-----------------------|--------------------------------|-----------------|-----------------|-----------------|------------------|
|                          |                       | 100yr,1hr (cfs)                | 100yr,2hr (cfs) | 100yr,3hr (cfs) | 100yr,6hr (cfs) | 100yr,12hr (cfs) |
| Sub 1                    | 0.033                 | 119.69                         | 98.55           | 85.44           | 63.96           | 30.44            |
| R-1                      | 0.033                 | 119.69                         | 98.55           | 85.44           | 63.96           | 30.44            |
| DOWNSTREAM               |                       | 1.56                           | 1.70            | 1.77            | 1.87            | 1.95             |
| OUTLET                   | 0.033                 | 1.56                           | 1.70            | 1.77            | 1.87            | 1.95             |

| Area or Reach Identifier | Drainage Area (sq mi) | ----- Peak Flow by Storm ----- |                  |                  |                  |       |
|--------------------------|-----------------------|--------------------------------|------------------|------------------|------------------|-------|
|                          |                       | 100yr,18hr (cfs)               | 100yr,24hr (cfs) | 100yr,48hr (cfs) | 100yr,72hr (cfs) | (cfs) |
| Sub 1                    | 0.033                 | 24.19                          | 19.32            | 10.49            | 7.43             |       |
| R-1                      | 0.033                 | 24.19                          | 19.32            | 10.49            | 7.43             |       |
| DOWNSTREAM               |                       | 1.99                           | 2.00             | 1.96             | 1.90             |       |
| OUTLET                   | 0.033                 | 1.99                           | 2.00             | 1.96             | 1.90             |       |

## **TAB 3 – FLOOD PLAIN**

### **FLOOD PLAIN and FLOODWAY**

There are no floodplains identified at the Geneva Oaks Business Park according to the Flood Insurance Rate Map (FIRM) (See Exhibit 6).

TBD

## **TAB 4 – WETLANDS / WETLAND BUFFER**

## **TAB 5 – SOIL EROSION AND SEDIMENT CONTROL**

### **EROSION AND SEDIMENT CONTROL SCHEDULE OF IMPLEMENTATION**

1. Sediment and Erosion Control measures will be installed prior to the commencement of work.
2. The disturbed areas of the property shall be stabilized with seed and blanket immediately after ground disturbances.

NOTE: All erosion control items shall be maintained throughout the project duration and until all areas are permanently stabilized.

### **EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE**

*Other:*

1. Sediment should be removed from the roadway after each rainfall.
2. Fix any damage that may occur to roadway or turf outside project limits.
3. Except as prevented by inclement weather conditions, all disturbed areas to remain inactive for more than fourteen days will be stabilized by seeding, sodding, mulching, covering, or by other equivalent erosion control measures within seven days. Permanent soil stabilization shall be provided within seven days after final grade is established.
4. All temporary erosion and sediment control practices shall be removed and disposed of within thirty days after site stabilization is achieved or after the temporary practices are no longer needed. Trapped sediment shall be permanently stabilized to prevent further erosion.
5. All disturbed areas are to be stabilized with sod or turf seed within 7 calendar days of grades being finalized.

### **COMMITMENT AND RESPONSIBILITY**

The client will be the responsible entity for the long-term funding, operation, and maintenance activities for stormwater facilities, as described in this document.

### **CONSTRUCTION TIMELINE**

1. **Fall 2023** – Install erosion control measures at locations as indicated on plans.
2. **Fall 2023** – Strip existing topsoil and stockpile.
3. **Fall 2023** – Provide silt fence or sediment trench around stockpile.
4. **Fall 2023** – Perform mass grading on site.
5. **Fall 2023** – Perform landscaping and soil stabilization.

## TAB 6 – SECURITY

| ENGINEER'S OPINION OF PROBABLE COST                            |          |      |             |                     |
|--|----------|------|-------------|---------------------|
| <b>SCHEDULE I - STORMWATER IMPROVEMENTS</b>                    |          |      |             |                     |
| <b>A. GENERAL STORMWATER WORK IMPROVEMENTS</b>                 |          |      |             |                     |
|  | QUANTITY | UNIT | UNIT COST   | TOTAL COST          |
| Mobilization   | 1        | LUMP | \$25,000.00 | \$25,000.00         |
| Topsoil Stripping Excavation (6") & Stockpiling                | 15,996   | C.Y. | \$4.50      | \$71,982.00         |
| Topsoil Respread 6"  | 5,453    | C.Y. | \$4.50      | \$24,538.50         |
| Seeding Basin Mix  | 2,000    | ACRE | \$8,500.00  | \$17,000.00         |
| EC Blanket (If seasonably necessary)                           | 10,279   | S.Y  | \$4.50      | \$46,255.50         |
| Stabilization Side Slopes                                      | 1        | LUMP | \$1,500.00  | \$1,500.00          |
| Earth Excavation   | 17,893   | C.Y. | \$4.50      | \$80,518.50         |
|  |          |      | SUBTOTAL =  | \$266,794.50        |
| <b>B. STORMWATER FACILITY IMPROVEMENTS</b>                     |          |      |             |                     |
|  | QUANTITY | UNIT | UNIT COST   | TOTAL COST          |
| PVC Storm Sewer  | 992      | L.F. | \$42.00     | \$41,664.00         |
| RCP Flared End Section w/ grate                                | 3        | EACH | \$1,200.00  | \$3,600.00          |
| Inlet. Type A - 24"  | 4        | EACH | \$1,200.00  | \$4,800.00          |
| Catchbasin, Type A - 48" Dia.                                  | 5        | EACH | \$1,800.00  | \$9,000.00          |
| Control Structure, Special Detail                              | 1        | EACH | \$25,000.00 | \$25,000.00         |
| Trench Backfill  | 423      | C.Y. | \$50.00     | \$21,150.00         |
|  |          |      | SUBTOTAL =  | \$105,214.00        |
| <b>TOTAL SCHEDULE I - EXCAVATION AND GRADING IMPROVEMENTS</b>  |          |      |             |                     |
| <b>SCHEDULE II - SOIL EROSION CONTROL IMPROVEMENTS</b>         |          |      |             |                     |
| <b>A. EROSION CONTROL</b>                                      |          |      |             |                     |
|  | QUANTITY | UNIT | UNIT COST   | TOTAL COST          |
| Storm Sewer Inlet Protection                                   | 11       | EACH | \$150.00    | \$1,650.00          |
| Silt Fence   | 2,400    | L.F  | \$2.50      | \$6,000.00          |
| SESC Maintenance   | 1        | LUMP | \$7,500.00  | \$7,500.00          |
| Construction Entrance  | 1        | EACH | \$1,200.00  | \$1,200.00          |
|  |          |      | SUBTOTAL =  | \$16,350.00         |
| <b>TOTAL SCHEDULE II - EXCAVATION AND GRADING IMPROVEMENTS</b> |          |      |             |                     |
| <b>SUBTOTAL SCHEDULES I-II=</b>                                |          |      |             | <b>\$388,358.50</b> |
| <b>10% CONTINGENCY FOR LOC =</b>                               |          |      |             | <b>\$38,835.85</b>  |
| <b>TOTAL LETTER OF CREDIT =</b>                                |          |      |             | <b>\$427,194.35</b> |

## **EXHIBITS**

Exhibit 1: PROJECT LOCATION MAP

Exhibit 2: NATIONAL WETLAND INVENTORY MAP

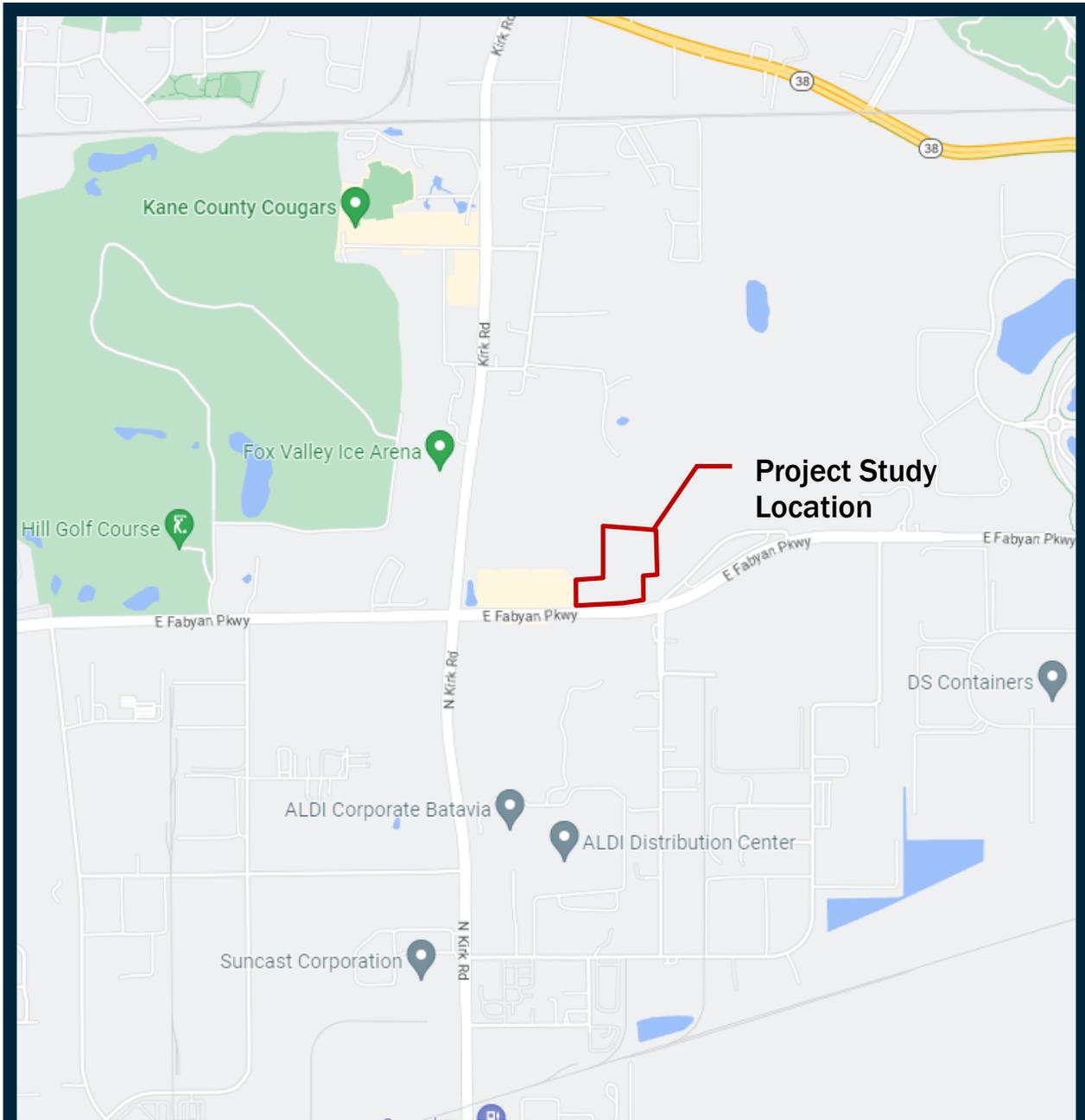
Exhibit 3: Kane County ADID Map

Exhibit 4: AERIAL MAP

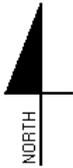
Exhibit 5: NRCS SOILS MAP

Exhibit 6: FLOOD INSURANCE RATE MAP

Exhibit 7: USGS TOPOGRAPHY MAP



**Exhibit 1**  
**Location Map**  
 Lat/Long: 41.870549°, -88.272678°  
 — Project Study Location



Client: Richmar Realty & Dev.  
 Project Name: Geneva Oaks Business Park  
 ERA Project #: W20313.A0  
 Source : Google Maps

**Not to Scale**



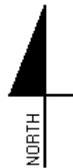
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**Exhibit 2**  
**National Wetland Inventory Map**  
 Lat/Long: 41.870549°, -88.272678°

— Project Study Location



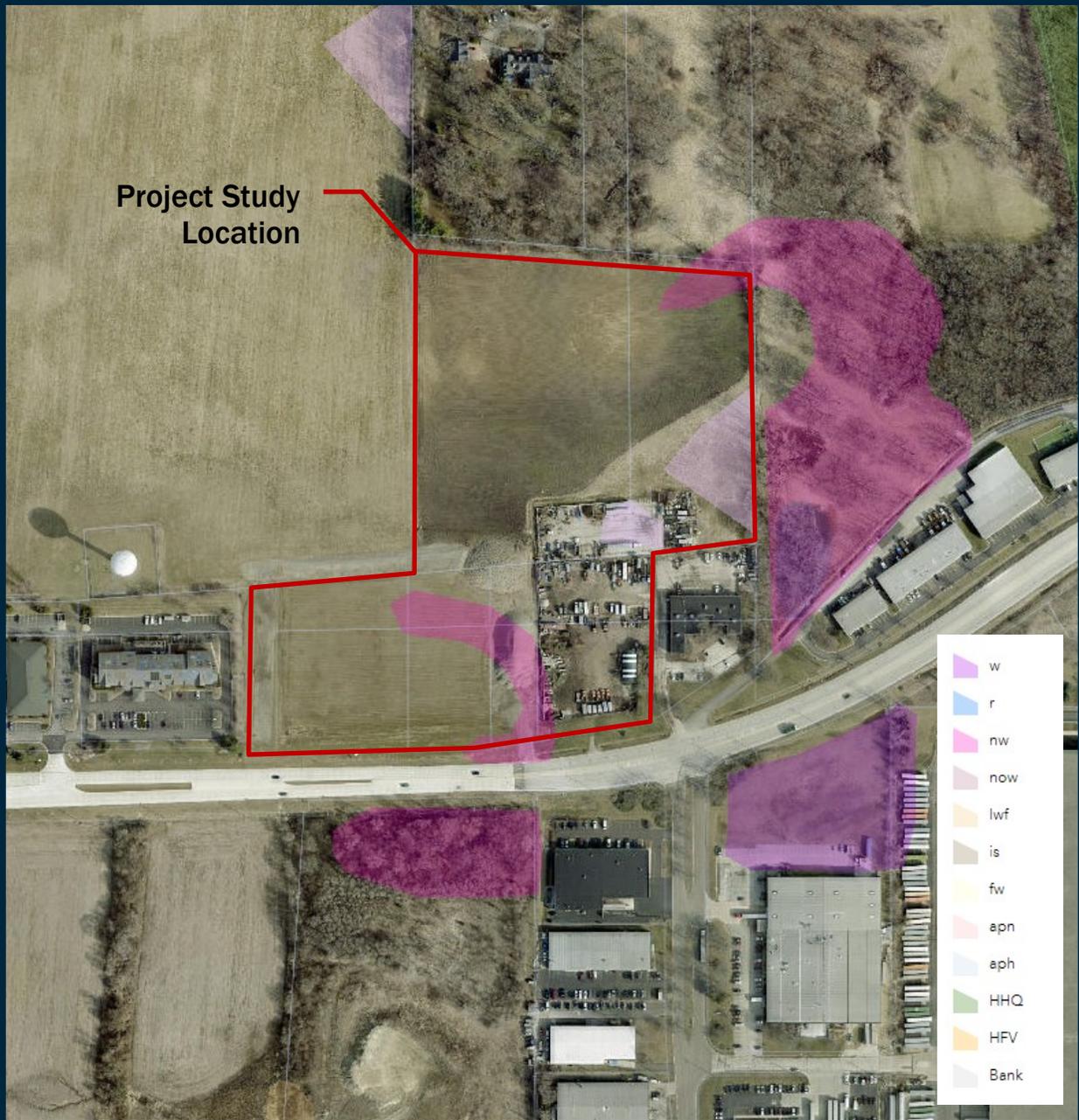
Client: Richmar Realty & Dev.  
 Project Name: Geneva Oaks Business Park  
 ERA Project #: W20313.A0  
 Source : USFWS

**Not to Scale**

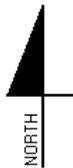


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**Exhibit 3**  
**Kane County ADID Map**  
 Lat/Long: 41.870549°, -88.272678°  
 — Project Study Location



Client: Richmar Realty & Dev.  
 Project Name: Geneva Oaks Business Park  
 ERA Project #: W20313.A0  
 Source : DuPage GIS

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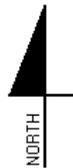
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Project Study Location

**Exhibit 4**  
**Aerial Photograph**  
Lat/Long: 41.870549°, -88.272678°

— Project Study Location



Client: Richmar Realty & Dev.  
Project Name: Geneva Oaks  
Business Park  
ERA Project #: W20313.A0  
Source : Kane County GIS

Not to Scale



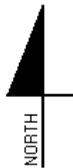
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**Exhibit 5**  
**NRCS Soils Map**  
 Lat/Long: 41.870549°, -88.272678°  
 — Project Study Location



Client: Richmar Realty & Dev.  
 Project Name: Geneva Oaks Business Park  
 ERA Project #: W20313.A0  
 Source : USDA

Not to Scale

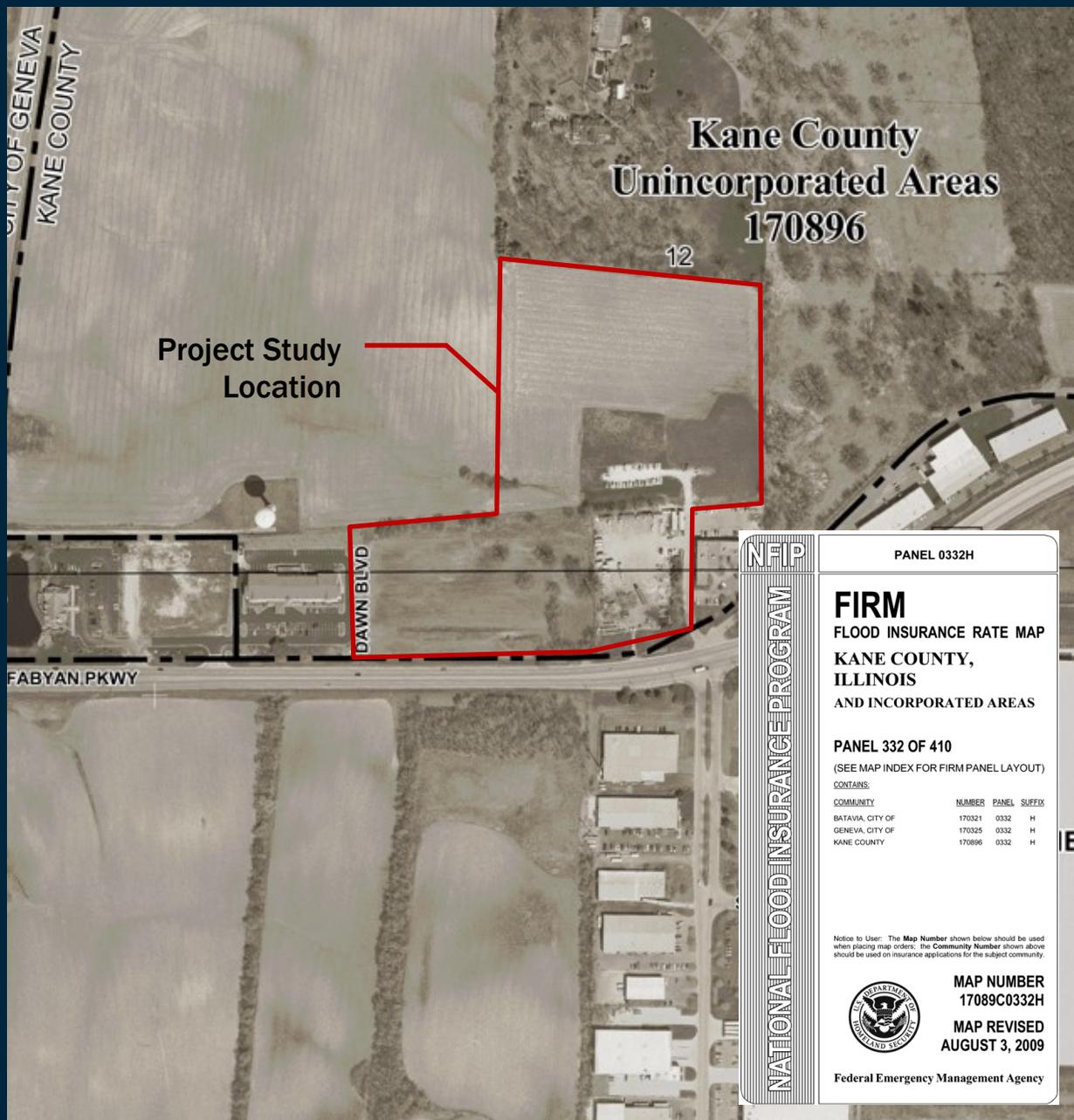


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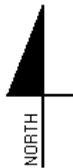
## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                    | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 152A                               | Drummer silty clay loam, 0 to 2 percent slopes   | 6.3          | 35.3%          |
| 232A                               | Ashkum silty clay loam, 0 to 2 percent slopes    | 0.1          | 0.4%           |
| 530C2                              | Ozaukee silt loam, 4 to 6 percent slopes, eroded | 4.6          | 25.8%          |
| 530E                               | Ozaukee silt loam, 12 to 20 percent slopes       | 3.5          | 19.5%          |
| 531B                               | Markham silt loam, 2 to 4 percent slopes         | 3.4          | 19.1%          |
| <b>Totals for Area of Interest</b> |  | <b>17.9</b>  | <b>100.0%</b>  |



**Exhibit 6**  
**Flood Insurance Rate Map**  
Lat/Long: 41.870549°, -88.272678°

 **Project Study Location**



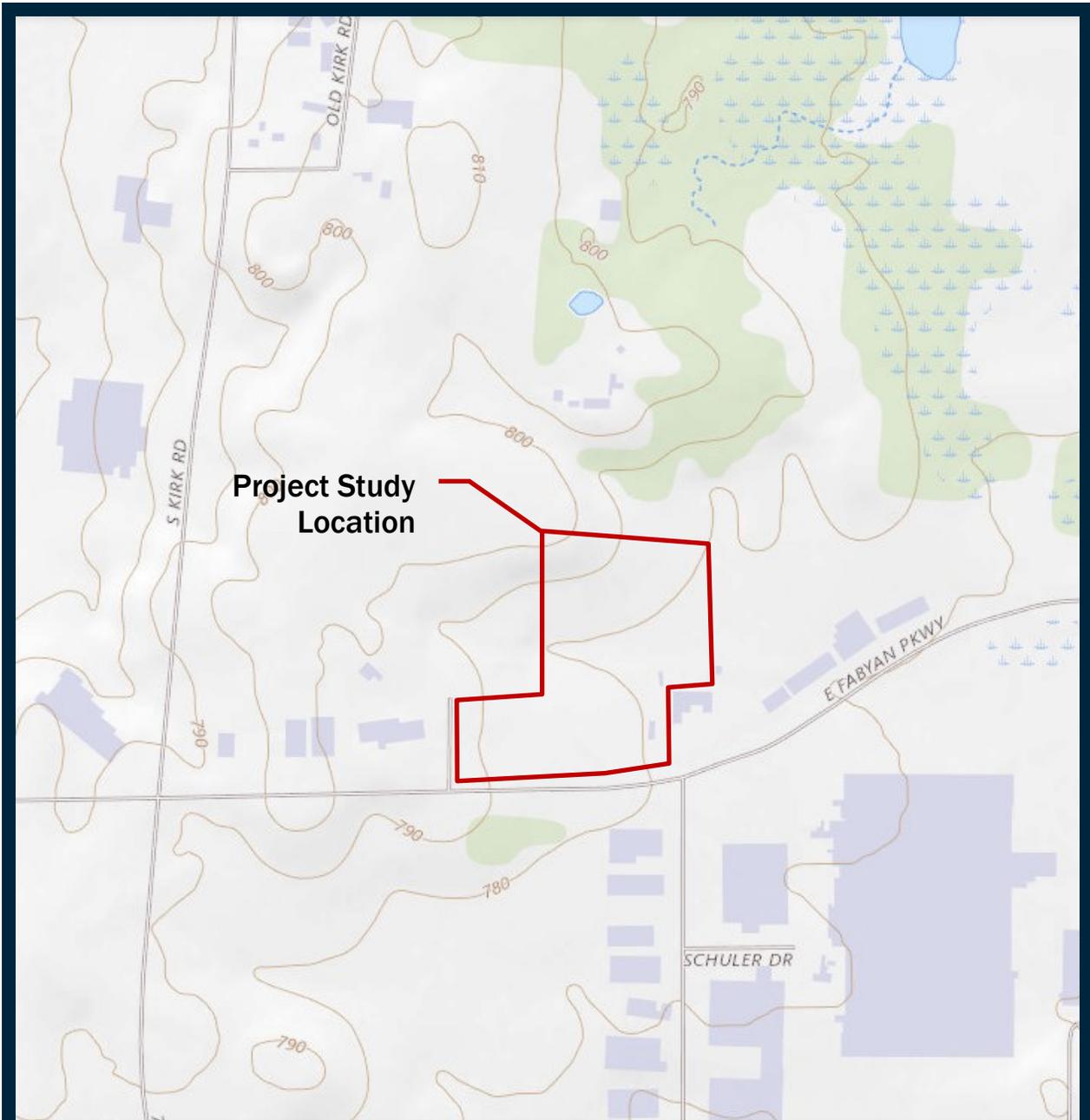
**Client:** Richmar Realty & Dev.  
**Project Name:** Geneva Oaks Business Park  
**ERA Project #:** W20313.A0  
**Source :** FEMA

**Not to Scale**

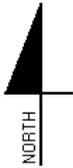


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**EXHIBIT 7**  
**USGS Topographic Map**  
 Lat/Long: 41.870549°, -88.272678°  
 ——— Project Study Location



Client: Richmar Realty & Dev.  
 Project Name: Geneva Oaks Business Park  
 ERA Project #: W20313.A0  
 Source : USGS

**Not to Scale**



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