US Army Corps
Of Engineers
Chicago District

# Public Notice

| Application No. | Comment Period Begins: |
|---|---|
| 408-LRC-2020-0022 | September 17, 2020 |
| | Comment Period Ends: September 24, 2020 |

## PROPOSED ALTERATION TO A FEDERAL CIVIL WORKS PROJECT

**REQUESTER:** Lake Forest Land Foundation

**AFFECTED PROJECT:** Lake Forest Ft. Sheridan Ravine & Coastal Section 506 Great Lakes Fishery and Ecosystem Restoration Project

**PROPOSED ALTERATION:** A multi-trail system is being proposed along the McCormick Ravine that also includes a realigned asphalt driveway and parking lot, stormwater best management practices, and abandonment of an old trail system that includes restoration of erosion within the trail corridor. The purpose and need of this project are to improve and expand a trail network system along the McCormick Ravine for public access, while protecting sensitive local ecology. The master plan for McCormick Ravine identifies three trails, designed to facilitate three different user experiences while protecting the unique plant communities on the site. The proposed conceptual corridor alignments support a sustainable recreational trail system.

Interested parties are hereby notified that a request has been received for permission for the activity described herein and as shown on the attached drawings. You are invited to provide your comments on the proposed work by the expiration date, which will become part of the administrative record and will be considered in the decision. A permission will be issued or denied under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408, “Section 408”).

Written comments should be emailed to Mr. Colin C. Smalley, PG, Section 408 Coordinator, at Chicago408@usace.army.mil or be mailed to:

U.S. Army Corps of Engineers, Chicago District
Attn: Colin Smalley (ORD-R)
231 South LaSalle Street, Suite 1500
Chicago, Illinois 60604-1437

**AUTHORITY:**
This request will be reviewed according to the provisions of Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408), and implementing regulations in Engineer Circular 1165-2-220.

**EVALUATION FACTORS:**
Proposed alterations are assessed to determine impacts to the *usefulness of the USACE Project*. The objective of this determination is to ensure that the proposed alteration will not limit the ability of the USACE project to function as authorized and will not compromise or change any authorized project conditions, purposes or outputs. All appropriate technical analyses including geotechnical, structural, hydraulic and hydrologic, real estate, construction, and operations and maintenance requirements, will be conducted, and the technical adequacy of the design will be reviewed.

Proposed alterations will also be reviewed to determine the probable impacts, including cumulative impacts, on the *public interest*. Evaluation of the probable impacts that the proposed alteration to the USACE project may have on the public interest requires a careful weighing of all those factors that are relevant in each particular case. The benefits that reasonably may be expected to accrue from the proposal must be compared against its reasonably foreseeable detriments. Factors that may be relevant to the public interest depend upon the type of USACE project being altered and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation.

The Corps of Engineers is also soliciting comments from the public, Federal, state and local agencies, Indian tribes, and other interested parties in order to consider and evaluate the potential impacts of the proposed activity. Once this office completes a review of the comments received, it will be determined whether to issue, modify, condition, or deny a permission for this proposal.

To prepare this decision, comments are taken into consideration to assess impacts on the public interest factors listed above, as well as endangered species, historic properties, water quality, and general environmental effects. The District has made preliminary determinations for all required environmental laws, regulations, and executive orders in the attached document.

# McCormick Ravine Public Access and Trails Design at Jean and John Greene Nature Preserve Lake Forest, Illinois

## Client:

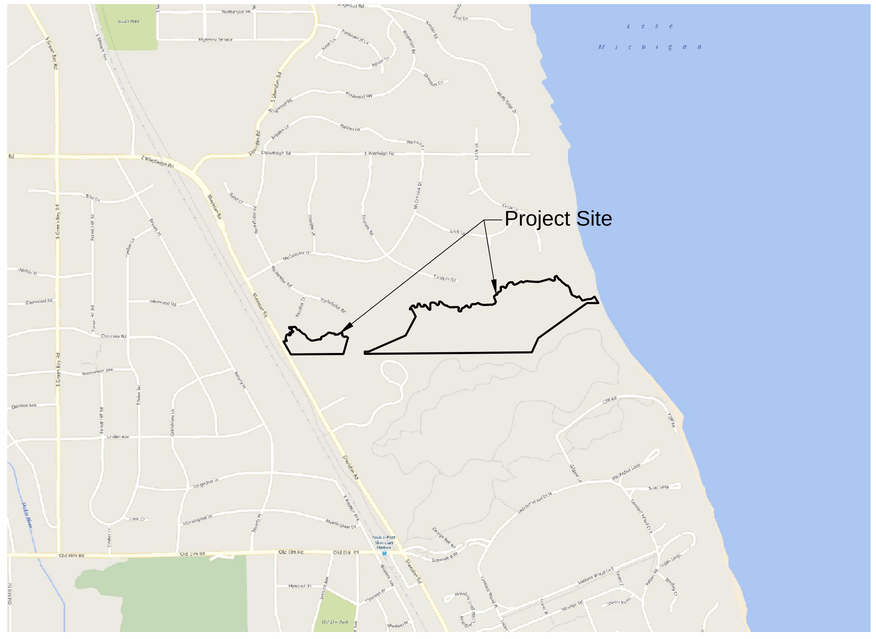

Lake Forest Land Foundation
Ryan London
350 N. Waukegan Road
Lake Forest, IL 60045
Office (847) 234-3880


## Engineer:


***Hey and Associates, Inc.***
*26575 West Commerce Drive, Suite 601*
*Volo, Illinois 60073*
*Office (847) 740-0888*
*Fax (847) 740-2888*


## Benchmark:

Arrow nut on fire hydrant on west side of Sheridan Road R.O.W. just north of nature preserve entrance
Elevation = 690.88 (NAVD 88)




Scale
1" = 1000'

Project Area

## Sheet Index: (Sheet # / Drawing # / Title)


1. C1.0 **Cover Sheet**
2. C1.1 **General Notes**
3. C1.2 **Key Plan**
4. C2.0 **Existing Conditions and Demolition Plan Public Access**
5. C2.1 **Existing Conditions and Demolition Plan Public Access**
6. C2.2 **Tree Inventory Table Public Access**
7. C2.3 **Existing Conditions and Demolition Plan Trails**
8. C2.4 **Existing Conditions and Demolition Plan Trails**
9. C2.5 **Existing Conditions and Demolition Plan Trails**
10. C2.6 **Existing Conditions and Demolition Plan Trails**
11. C2.7 **Existing Conditions and Demolition Plan Trails**
12. C2.8 **Existing Conditions and Demolition Plan Trails**
13. C2.9 **Existing Conditions and Demolition Plan Trails**
14. C2.10 **Existing Conditions and Demolition Plan Trails**
15. C3.0 **Grading, Layout and Materials Plan Public Access**
16. C3.1 **Grading, Layout and Materials Plan Public Access**
17. C3.2 **Grading, Layout and Materials Plan - Trail 1 (1-1 to 1-33)**
18. C3.3 **Grading, Layout and Materials Plan - Trail 1 (1-33 to 1-62)**
19. C3.4 **Grading, Layout and Materials Plan - Trail 1 (1-63 to 1-80), Trail 2 (2-1 to 2-6), Trail 5 (5-1 to 5-27) and Trail 6 (6-1 to 6-4)**
20. C3.5 **Grading, Layout and Materials Plan - Trail 2 (2-23 to 2-26) and Trail 6 (6-4 to 6-35)**
21. C3.6 **Grading, Layout and Materials Plan - Trail 3 (3-41 to 3-45), Trail 4 (4-1 to 4-7), Trail 6 (6-35 to 6-52) and Trail 9 (9-6 to 9-8)**
22. C3.7 **Grading, Layout and Materials Plan - Trail 4 (4-7 to 4-45)**
23. C3.8 **Grading, Layout and Materials Plan - Trail 3 (3-1 to 3-43), Trail 5 (5-53 to 5-58), Trail 7 (7-1 to 7-5) and Trail 8 (8-5 to 8-6)**
24. C3.9 **Grading, Layout and Materials Plan - Trail 2 (2-7 to 2-25) and Trail 5 (5-27 to 5-52)**
25. C4.0 **Soil Erosion and Sediment Control Plan Public Access**
26. C4.1 **Soil Erosion and Sediment Control Plan Public Access**
27. C4.2 **Soil Erosion and Sediment Control Plan - Trail 1 (1-1 to 1-33)**
28. C4.3 **Soil Erosion and Sediment Control Plan - Trail 1 (1-33 to 1-62)**
29. C4.4 **Soil Erosion and Sediment Control Plan - Trail 1 (1-63 to 1-80), Trail 2 (2-1 to 2-6), Trail 5 (5-1 to 5-27) and Trail 6 (6-1 to 6-4)**
30. C4.5 **Soil Erosion and Sediment Control Plan - Trail 2 (2-23 to 2-26) and Trail 6 (6-4 to 6-35)**
31. C4.6 **Soil Erosion and Sediment Control Plan - Trail 3 (3-41 to 3-45), Trail 4 (4-1 to 4-7), Trail 6 (6-35 to 6-52) and Trail 9 (9-6 to 9-8)**
32. C4.7 **Soil Erosion and Sediment Control Plan - Trail 4 (4-7 to 4-45)**
33. C4.8 **Soil Erosion and Sediment Control Plan - Trail 3 (3-1 to 3-43), Trail 5 (5-53 to 5-58), Trail 7 (7-1 to 7-5) and Trail 8 (8-5 to 8-6)**
34. C4.9 **Soil Erosion and Sediment Control Plan - Trail 2 (2-7 to 2-25) and Trail 5 (5-27 to 5-52)**
35. C5.0 **Restoration Plan Public Access**
36. C5.1 **Restoration Plan Public Access**
37. C5.2 **Restoration Plan - Trail 1 (1-1 to 1-33)**
38. C5.3 **Restoration Plan - Trail 1 (1-33 to 1-62)**
39. C5.4 **Restoration Plan - Trail 1 (1-63 to 1-80), Trail 2 (2-1 to 2-6), Trail 5 (5-1 to 5-27) and Trail 6 (6-1 to 6-4)**
40. C5.5 **Restoration Plan - Trail 2 (2-23 to 2-26) and Trail 6 (6-4 to 6-35)**
41. C5.6 **Restoration Plan - Trail 3 (3-41 to 3-45), Trail 4 (4-1 to 4-7), Trail 6 (6-35 to 6-52) and Trail 9 (9-6 to 9-8)**
42. C5.7 **Restoration Plan - Trail 4 (4-7 to 4-45)**
43. C5.8 **Restoration Plan - Trail 3 (3-1 to 3-43), Trail 5 (5-53 to 5-58), Trail 7 (7-1 to 7-5) and Trail 8 (8-5 to 8-6)**
44. C5.9 **Restoration Plan - Trail 2 (2-7 to 2-25) and Trail 5 (5-27 to 5-52)**
45. C5.10 **Old Crest Trail Restoration Plan**
46. C5.11 **Plant Species Lists**
47. C6.0 **Details**
48. C6.1 **Details**
49. C6.2 **Details**
50. C6.3 **Details**
51. C6.4 **Details**
52. C6.5 **Details**
53. C6.6 **Details**
54. C6.7 **Details**
55. C6.8 **Details**
56. C6.9 **Details**


Attachments


1. A **Trail Station Logs**
2. B **Suspension Bridge Plans**
3. C **Landscape Plans**


Call J.U.L.I.E. 1-800-892-0123 at least 48 hours before start of construction with the following:

County: Lake
City or Township: Lake Forest
Tier, Range & Section: T45N, R12E, Sec. 3

The information shown on this drawing concerning type and location of underground utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making his own determinations as to the type and location of underground utilities as may be necessary to avoid damage thereto.

PROFESSIONAL SEAL

DAVID A. KRAUT
062-060860
LICENSED
PROFESSIONAL
ENGINEER
STATE OF ILLINOIS

Signature:
Date: July 24, 2020
License Expires: November 30, 2021

This document shall not be considered a valid technical submittal unless it bears an original seal and signature.

Base Survey Information provided by:

Bleck Engineering Company, Inc. (Public Access-east area) and Lake County GIS (Trails-west area)

| No. | Revision/Issue | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |


***Hey and Associates, Inc.***
Engineering, Ecology and Landscape Architecture
*26575 West Commerce Drive, Suite 601*
*Volo, Illinois 60073*
*Office (847) 740-0888*
*Fax (847) 740-2888*
*Volo@Heyassoc.com*

*Professional Design Firm*
*License No. 184-002429*


McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

Cover Sheet

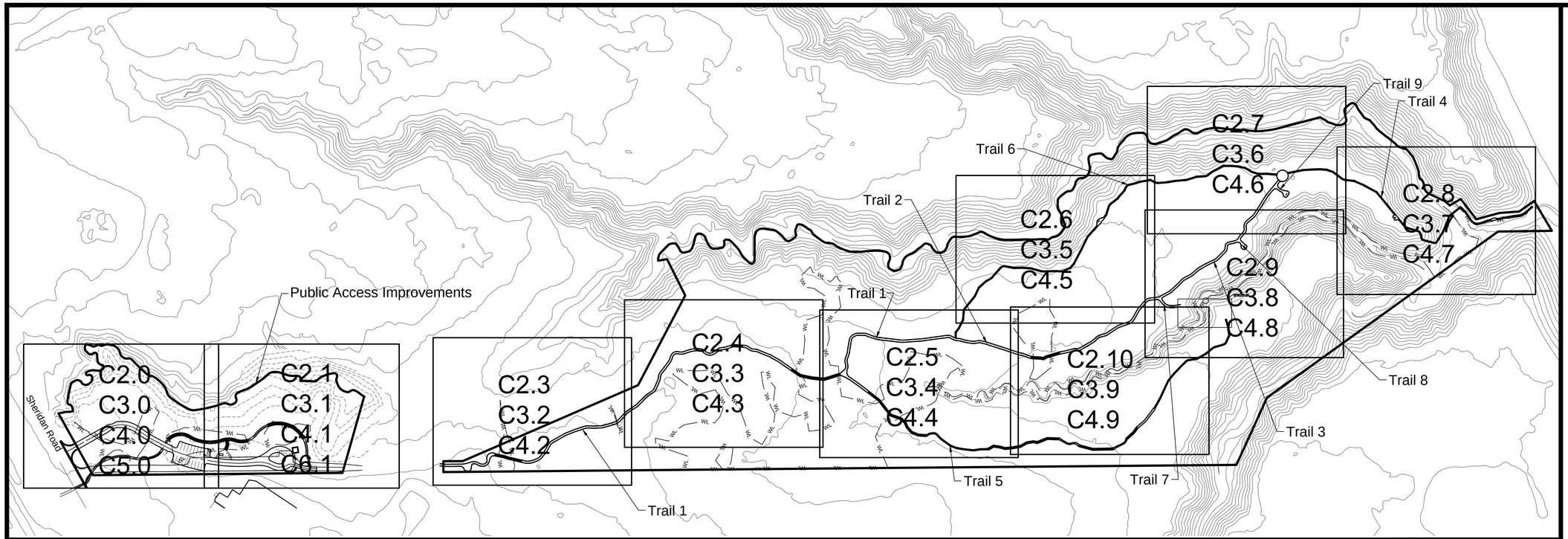
| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | TRP | C1.0 |
| DRAWN BY | MAA/CFR | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 1 OF 56 |

Permit Submittal


Copyright © 2020 Hey and Associates, Inc.



File: P:\19\0019-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERIOS CAD\19-0057 McCormick Ravine Public Access, Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




Scale bar measures 1" at full scale

0 1"

N

LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Trail Name | Section Number | Tread Width (FT) | Work Item | Tread Material | Approx. LF |
| 2 | Glacial Ridge Trail | 1 | 6 | Turnpike Trail (DSA) | DSA | 208 |
| 3 | Glacial Ridge Trail | 1 | 6 | Outslope with Uphill Retainer (DSA) | DSA | 38 |
| 4 | Glacial Ridge Trail | 1 | 6 | Outslope with Downhill Retainer (DSA) | DSA | 14 |
| 5 | Glacial Ridge Trail | 1 | 6 | Crowned Trail with Aggregate Tread (DSA) | DSA | 776 |
| 6 | Glacial Ridge Trail | 1 | 6 | Outslope Trail with Aggregate Tread (DSA) | DSA | 324 |
| 7 | Glacial Ridge Trail | 1 | 6 | Boardwalk with Toerails (A) | Structure | 211 |
| 8 | Glacial Ridge Trail | 1 | 6 | Boardwalk with Toerails (B) | Structure | 11 |
| 9 | Glacial Ridge Trail | 1 | 6 | Turnpike with Culvert (DSA)(B) | DSA | 23 |
| 10 | Glacial Ridge Trail | 1 | 6 | Turnpike with Culvert (DSA)(A) | DSA | 116 |
| 11 | Glacial Ridge Trail | 2 | 6 | Turnpike Trail (UATT) | UATT | 418 |
| 12 | Glacial Ridge Trail | 2 | 6 | Crowned Trail with Aggregate Tread (UATT) | UATT | 120 |
| 13 | Glacial Ridge Trail | 2 | 6 | Boardwalk with Toerails (A) | Structure | 82 |
| 14 | Glacial Ridge Trail | 3 | 6 | Crowned Trail with Aggregate Tread (UATT) | UATT | 377 |
| 15 | Glacial Ridge Trail | 3 | 6 | Turnpike Trail (UATT) | UATT | 113 |
| 16 | Glacial Ridge Trail | 4 | 6 | Crowned Trail with Aggregate Tread (UATT) | UATT | 464 |
| 17 | Glacial Ridge Trail | 4 | 6 | Box Steps | UATT | 62 |
| 18 | Glacial Ridge Trail | 4 | 6 | N/A | Existing | 173 |
| 19 | Woodland Trail | 5 | 6 | Crowned Trail with Aggregate Tread (DSA) | DSA | 91 |
| 20 | Woodland Trail | 5 | 3 | Crowned Trail with Mulch Tread | Mulch | 726 |
| 21 | Woodland Trail | 5 | 5 | Boardwalk with Toerails (A) | Structure | 123 |
| 22 | Woodland Trail | 5 | 5 | Boardwalk with Toerails (B) | Structure | 26 |
| 23 | Woodland Trail | 5 | 5 | Modular Boardwalk | Structure | 416 |
| 24 | Ravine Crest Trail | 6 | 3 | Crowned Trail with Aggregate Tread (UATT) | UATT | 289 |
| 25 | Ravine Crest Trail | 6 | 3 | Crowned Trail with Mineral Soil Tread | Mineral Soil | 362 |
| 26 | Ravine Crest Trail | 6 | 3 | Box Steps | Mineral Soil | 131 |
| 27 | Ravine Crest Trail | 6 | 3 | Puncheon | Structure | 114 |
| 28 | Ravine Crest Trail | 6 | 3 | Puncheon with Decking (A) | Structure | 96 |
| 29 | Ravine Crest Trail | 6 | 3 | Puncheon with Decking (B) | Structure | 39 |
| 30 | Ravine Crest Trail | 6 | 3 | Outslope Trail with Aggregate Tread (UATT) | UATT | 132 |
| 31 | Glacial Ridge Trail | 7 | 6 | Turnpike Trail (UATT) | UATT | 70 |
| 32 | Glacial Ridge Trail | 8 | 6 | Crowned Trail with Aggregate Tread (UATT) | Mineral Soil | 9 |
| 33 | Glacial Ridge Trail | 9 | 6 | Crowned Trail with Aggregate Tread (UATT) | Mineral Soil | 34 |

GENERAL NOTES:

1. A station log accompanies this plan set. if a conflict exists between the plan set and the station log, the plan shall supercede the station log.
2. Station ID Convention: [Section Number]-[Station Number].
3. Station numbers shall always be read in ascending order.
4. Trail element transition callouts always correspond to the beginning of the detailed trail element. Each element ends where the next begins, or where a note indicates the element ends.
5. Treadway lines on plan denote tread width.

| No. | Revision/Issue | Date |
|---|---|---|
| | | |


**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429


McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

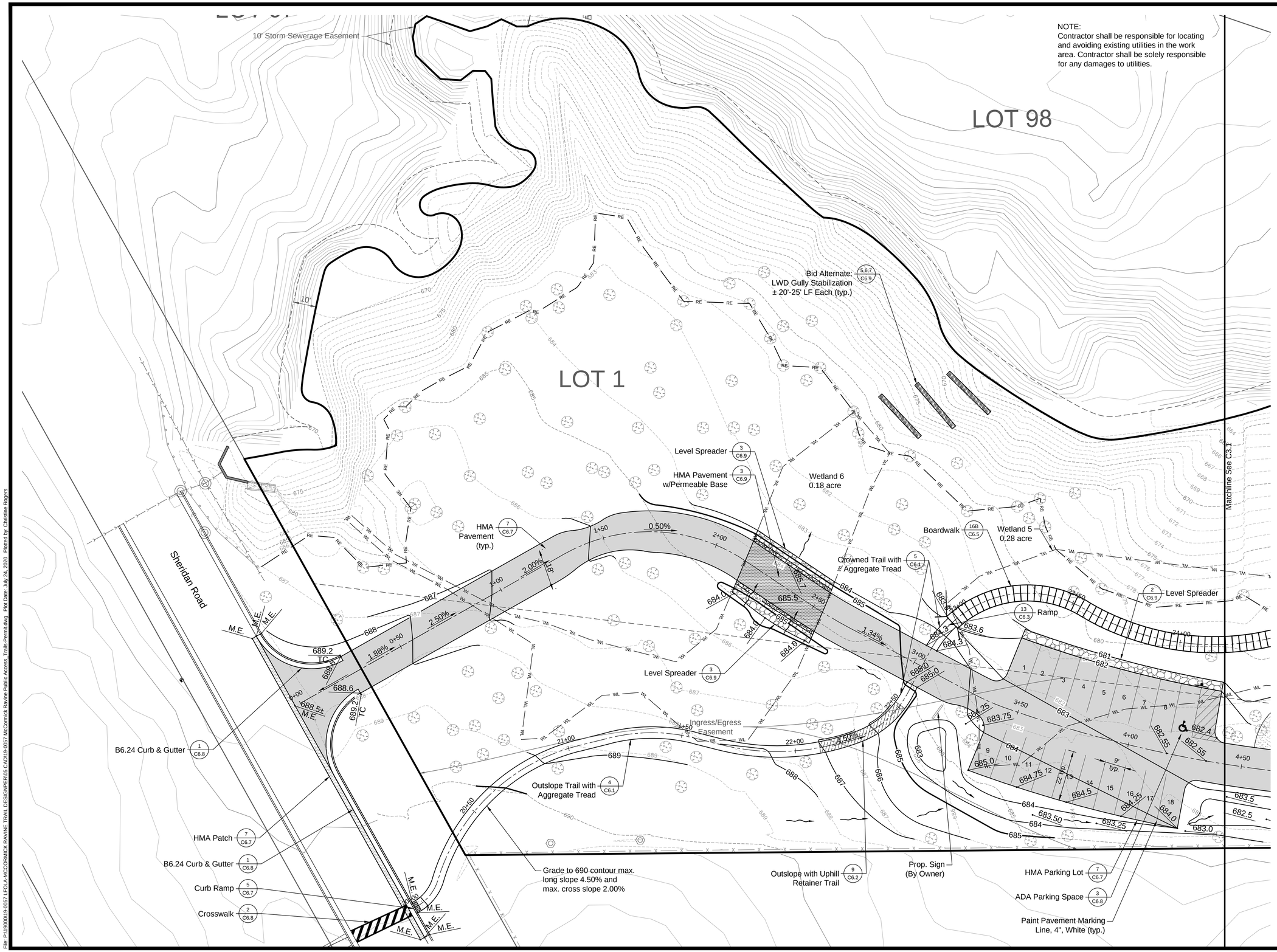
Key Plan

| | | | |
|---|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: | |
| DESIGNED BY | SRW | | C1.2 |
| DRAWN BY | SRW | | |
| CHECKED BY | TRP | | |
| APPROVED BY | DAK | SHEET NO: | |
| ISSUE DATE | 07/24/2020 | 3 OF 56 | |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057-LFOL-MCCORMICK-RAVINE-TRAIL-DESIGN\PREDVE-CAD\19-0057-McCormick-Ravine-Public-Access_Trails-Permit.dwg Plot Date: July 24, 2020, Plotted by: Christine Rogers




NOTE:
Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Proposed Contours
- Wetland Boundary
- Proposed B6.24 Curb & Gutter
- Proposed Sign
- Ex. Deciduous Tree
- HMA Patch
- HMA Pavement
- HMA Pavement w/Permeable Base
- Permeable Base Aggregate
- Boardwalk or Puncheon
- Outslope with Uphill Retainer Trail

| No. | Revision/Issue | Date |
|---|---|---|
| | | |


**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429


# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

## Grading, Layout and Materials Plan Public Access

| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | TRP | C3.0 |
| DRAWN BY | MAA/CFR | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 15 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19\0019-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERIOD\CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers

NOTE:
Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

Matchline See C3.0

Bid Alternate: (5,6,7 / C6.9)
LWD Gully Stabilization
± 20'-25' LF Each (typ.)

Outslope Trail with Aggregate Tread (4 / C6.1)

Boardwalk (16B / C6.5)

Wetland 5
0.28 acre

Wetland 4
0.13 acre

LOT 1

LOT 2

LOT 3

10' storm sewerage easement by Doc. 1526830

Ramp (13 / C6.3)

Prop. Shed (By Owner)

Prop. Kiosk (By Owner)

Aggregate Pad (11 / C6.2)

Prop. Bike Rack (By Owner)

HMA Pavement (7 / C6.7)

Ingress/Egress Easement

Ex. Gravel Road

M.E.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Proposed Contours
- Wetland Boundary (WL)
- Proposed B6.24 Curb & Gutter
- Proposed Sign
- Ex. Deciduous Tree
- HMA Patch
- HMA Pavement
- HMA Pavement w/Permeable Base
- Permeable Base Aggregate
- Boardwalk or Puncheon
- Outslope with Uphill Retainer Trail

| No. | Revision/Issue | Date |
|---|---|---|


**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429


# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

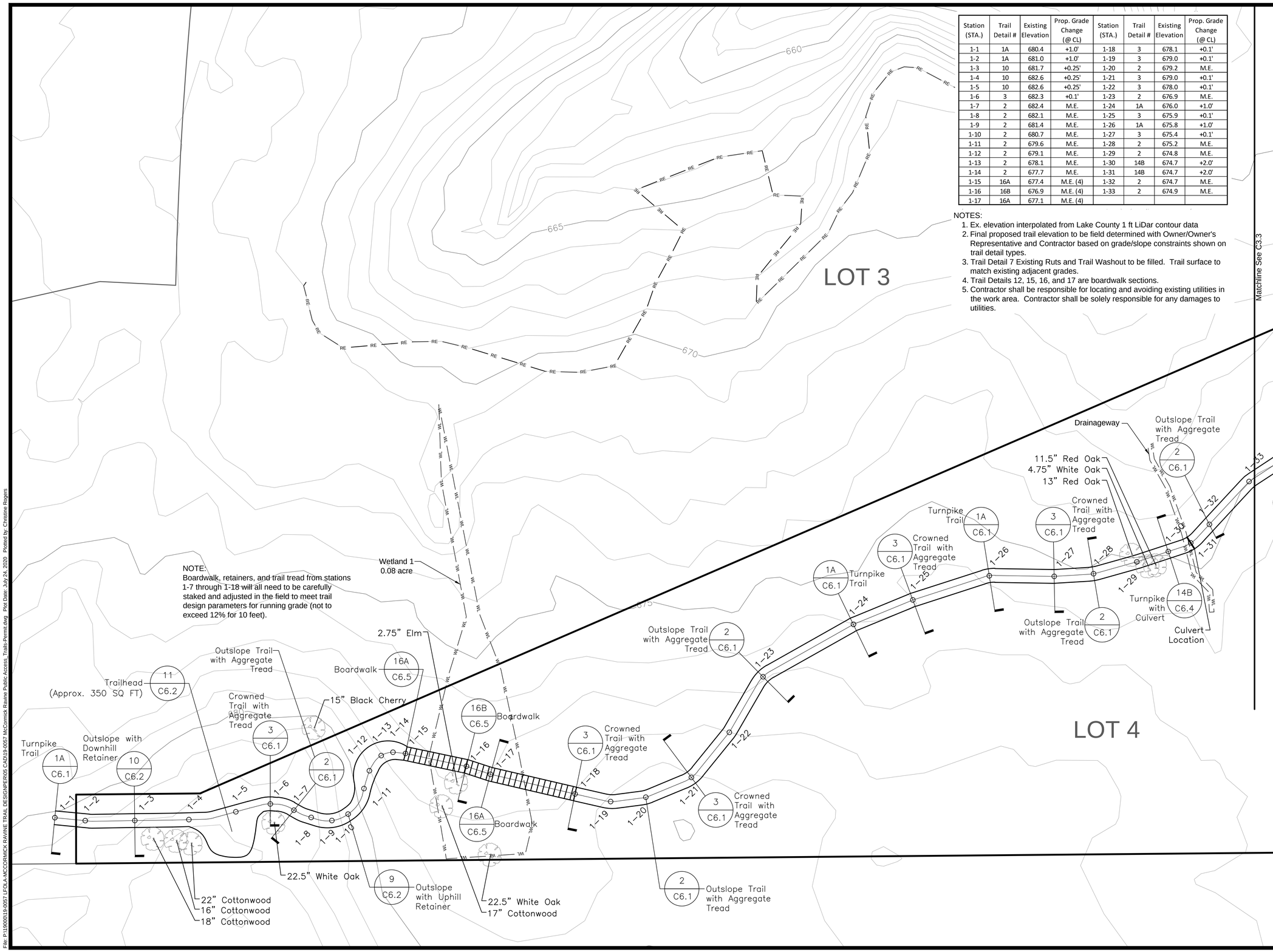
## Grading, Layout and Materials Plan Public Access

| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | TRP | C3.1 |
| DRAWN BY | MAA/CFR | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 16 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19\0019\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERIOS CAD\19-0057 McCormick Ravine Public Access, Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 1-1 | 1A | 680.4 | +1.0' | 1-18 | 3 | 678.1 | +0.1' |
| 1-2 | 1A | 681.0 | +1.0' | 1-19 | 3 | 679.0 | +0.1' |
| 1-3 | 10 | 681.7 | +0.25' | 1-20 | 2 | 679.2 | M.E. |
| 1-4 | 10 | 682.6 | +0.25' | 1-21 | 3 | 679.0 | +0.1' |
| 1-5 | 10 | 682.6 | +0.25' | 1-22 | 3 | 678.0 | +0.1' |
| 1-6 | 3 | 682.3 | +0.1' | 1-23 | 2 | 676.9 | M.E. |
| 1-7 | 2 | 682.4 | M.E. | 1-24 | 1A | 676.0 | +1.0' |
| 1-8 | 2 | 682.1 | M.E. | 1-25 | 3 | 675.9 | +0.1' |
| 1-9 | 2 | 681.4 | M.E. | 1-26 | 1A | 675.8 | +1.0' |
| 1-10 | 2 | 680.7 | M.E. | 1-27 | 3 | 675.4 | +0.1' |
| 1-11 | 2 | 679.6 | M.E. | 1-28 | 2 | 675.2 | M.E. |
| 1-12 | 2 | 679.1 | M.E. | 1-29 | 2 | 674.8 | M.E. |
| 1-13 | 2 | 678.1 | M.E. | 1-30 | 14B | 674.7 | +2.0' |
| 1-14 | 2 | 677.7 | M.E. | 1-31 | 14B | 674.7 | +2.0' |
| 1-15 | 16A | 677.4 | M.E. (4) | 1-32 | 2 | 674.7 | M.E. |
| 1-16 | 16B | 676.9 | M.E. (4) | 1-33 | 2 | 674.9 | M.E. |
| 1-17 | 16A | 677.1 | M.E. (4) | | | | |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

NOTE:
Boardwalk, retainers, and trail tread from stations 1-7 through 1-18 will all need to be carefully staked and adjusted in the field to meet trail design parameters for running grade (not to exceed 12% for 10 feet).

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary (WL)
- Ex. Sanitary Forcemain (Approx. Location) (FM)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID (1-49)
- Detail Number (X) / Detail Sheet Number (CX.X)
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|
| | | |

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

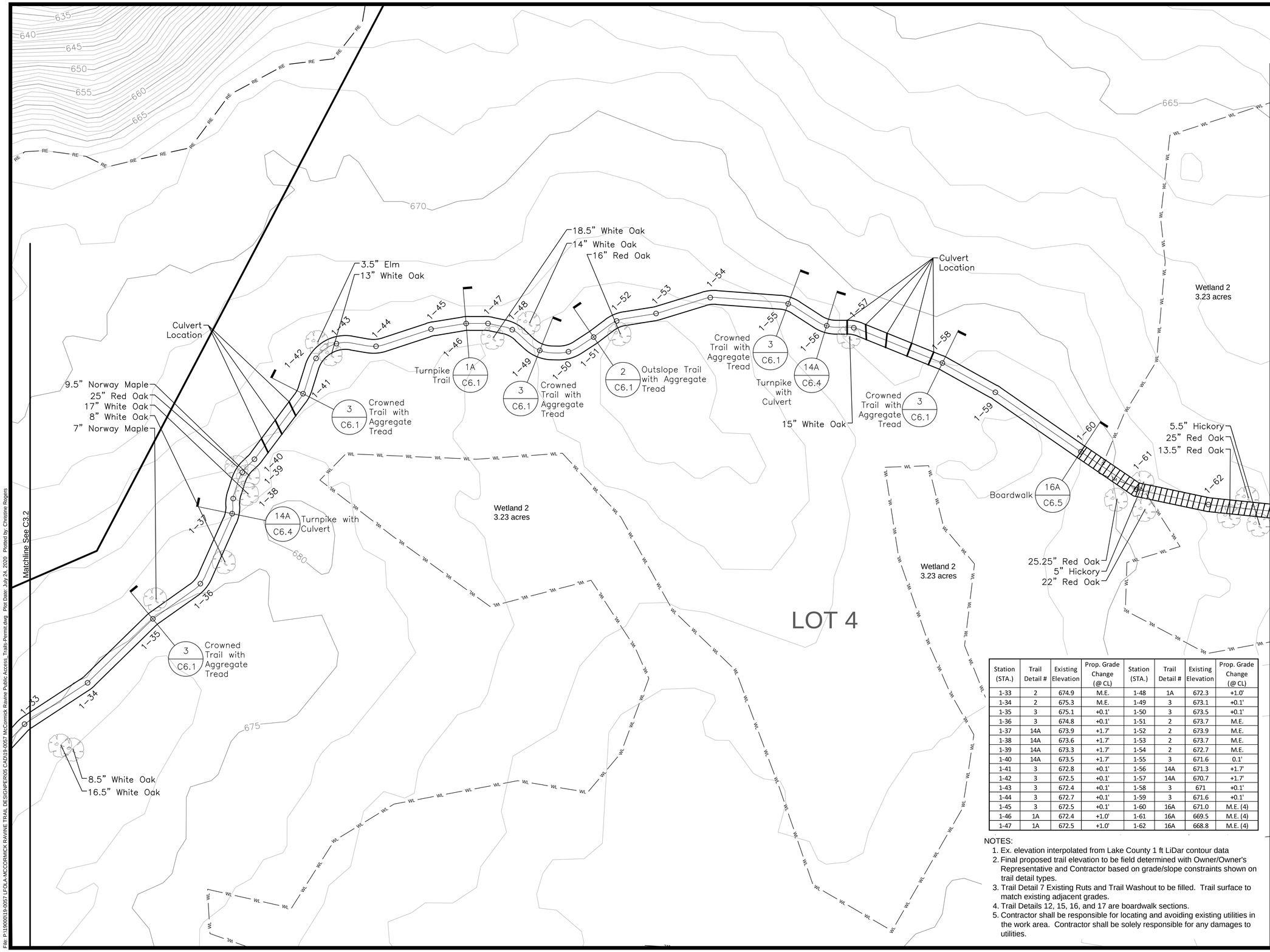
## Grading, Layout and Materials Plan
Trail 1 (1-1 to 1-33)

| | | | |
|---|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: | C3.2 |
| DESIGNED BY | SRW | | |
| DRAWN BY | SRW | | |
| CHECKED BY | TRP | | |
| APPROVED BY | DAK | SHEET NO: | |
| ISSUE DATE | 07/24/2020 | 17 OF 56 | |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERIOS CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 1-33 | 2 | 674.9 | M.E. | 1-48 | 1A | 672.3 | +1.0' |
| 1-34 | 2 | 675.3 | M.E. | 1-49 | 3 | 673.1 | +0.1' |
| 1-35 | 3 | 675.1 | +0.1' | 1-50 | 3 | 673.5 | +0.1' |
| 1-36 | 3 | 674.8 | +0.1' | 1-51 | 2 | 673.7 | M.E. |
| 1-37 | 14A | 673.9 | +1.7' | 1-52 | 2 | 673.9 | M.E. |
| 1-38 | 14A | 673.6 | +1.7' | 1-53 | 2 | 673.7 | M.E. |
| 1-39 | 14A | 673.3 | +1.7' | 1-54 | 2 | 672.7 | M.E. |
| 1-40 | 14A | 673.5 | +1.7' | 1-55 | 3 | 671.6 | 0.1' |
| 1-41 | 3 | 672.8 | +0.1' | 1-56 | 14A | 671.3 | +1.7' |
| 1-42 | 3 | 672.5 | +0.1' | 1-57 | 14A | 670.7 | +1.7' |
| 1-43 | 3 | 672.4 | +0.1' | 1-58 | 3 | 671 | +0.1' |
| 1-44 | 3 | 672.7 | +0.1' | 1-59 | 3 | 671.6 | +0.1' |
| 1-45 | 3 | 672.5 | +0.1' | 1-60 | 16A | 671.0 | M.E. (4) |
| 1-46 | 1A | 672.4 | +1.0' | 1-61 | 16A | 669.5 | M.E. (4) |
| 1-47 | 1A | 672.5 | +1.0' | 1-62 | 16A | 668.8 | M.E. (4) |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number
- Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

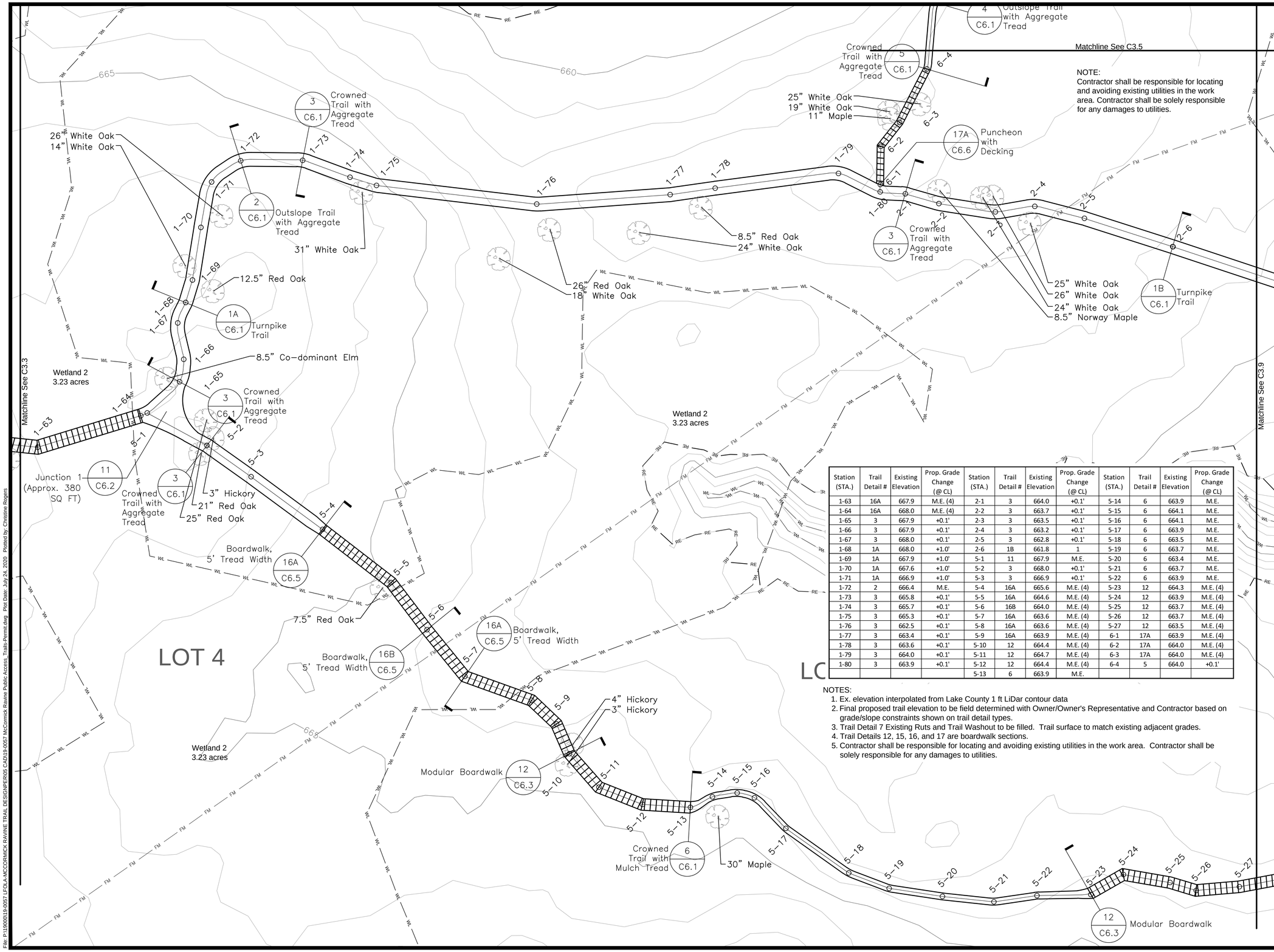
## Grading, Layout and Materials Plan Trail 1 (1-33 to 1-62)

| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | SRW | C3.3 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 18 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERMITS CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-63 | 16A | 667.9 | M.E. (4) | 2-1 | 3 | 664.0 | +0.1' | 5-14 | 6 | 663.9 | M.E. |
| 1-64 | 16A | 668.0 | M.E. (4) | 2-2 | 3 | 663.7 | +0.1' | 5-15 | 6 | 664.1 | M.E. |
| 1-65 | 3 | 667.9 | +0.1' | 2-3 | 3 | 663.5 | +0.1' | 5-16 | 6 | 664.1 | M.E. |
| 1-66 | 3 | 667.9 | +0.1' | 2-4 | 3 | 663.2 | +0.1' | 5-17 | 6 | 663.9 | M.E. |
| 1-67 | 3 | 668.0 | +0.1' | 2-5 | 3 | 662.8 | +0.1' | 5-18 | 6 | 663.5 | M.E. |
| 1-68 | 1A | 668.0 | +1.0' | 2-6 | 1B | 661.8 | 1 | 5-19 | 6 | 663.7 | M.E. |
| 1-69 | 1A | 667.9 | +1.0' | 5-1 | 11 | 667.9 | M.E. | 5-20 | 6 | 663.4 | M.E. |
| 1-70 | 1A | 667.6 | +1.0' | 5-2 | 3 | 668.0 | +0.1' | 5-21 | 6 | 663.7 | M.E. |
| 1-71 | 1A | 666.9 | +1.0' | 5-3 | 3 | 666.9 | +0.1' | 5-22 | 6 | 663.9 | M.E. |
| 1-72 | 2 | 666.4 | M.E. | 5-4 | 16A | 665.6 | M.E. (4) | 5-23 | 12 | 664.3 | M.E. (4) |
| 1-73 | 3 | 665.8 | +0.1' | 5-5 | 16A | 664.6 | M.E. (4) | 5-24 | 12 | 663.9 | M.E. (4) |
| 1-74 | 3 | 665.7 | +0.1' | 5-6 | 16B | 664.0 | M.E. (4) | 5-25 | 12 | 663.7 | M.E. (4) |
| 1-75 | 3 | 665.3 | +0.1' | 5-7 | 16A | 663.6 | M.E. (4) | 5-26 | 12 | 663.7 | M.E. (4) |
| 1-76 | 3 | 662.5 | +0.1' | 5-8 | 16A | 663.6 | M.E. (4) | 5-27 | 12 | 663.5 | M.E. (4) |
| 1-77 | 3 | 663.4 | +0.1' | 5-9 | 16A | 663.9 | M.E. (4) | 6-1 | 17A | 663.9 | M.E. (4) |
| 1-78 | 3 | 663.6 | +0.1' | 5-10 | 12 | 664.4 | M.E. (4) | 6-2 | 17A | 664.0 | M.E. (4) |
| 1-79 | 3 | 664.0 | +0.1' | 5-11 | 12 | 664.7 | M.E. (4) | 6-3 | 17A | 664.0 | M.E. (4) |
| 1-80 | 3 | 663.9 | +0.1' | 5-12 | 12 | 664.4 | M.E. (4) | 6-4 | 5 | 664.0 | +0.1' |
| | | | | 5-13 | 6 | 663.9 | M.E. | | | | |

NOTES:
1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number / Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

## Grading, Layout and Materials Plan

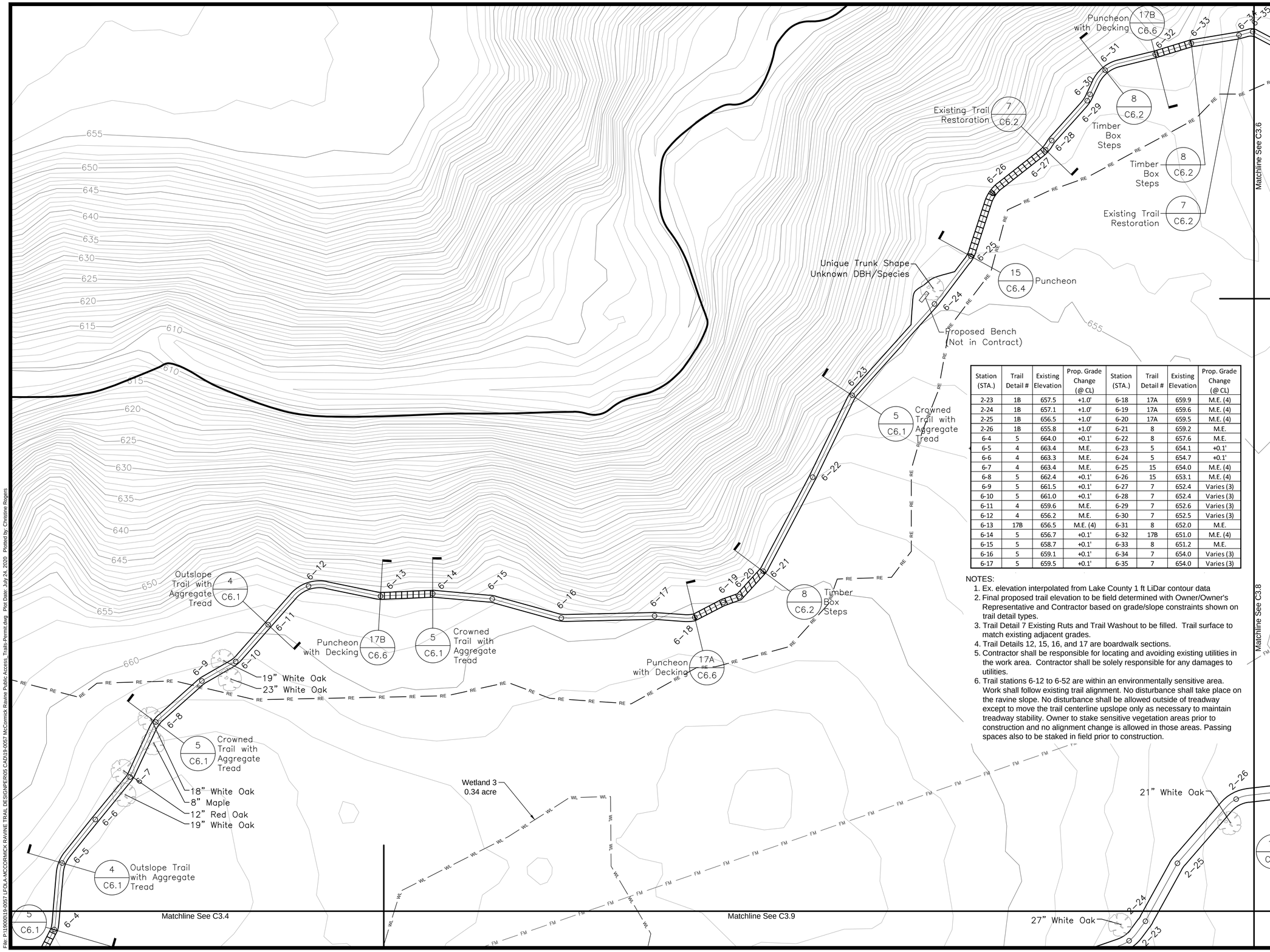
Trail 1 (1-63 to 1-80), Trail 2 (2-1 to 2-6), Trail 5 (5-1 to 5-27), and Trail 6 (6-1 to 6-4)

| | | |
|---|---|---|
| PROJECT NO: 19-0057 | | DRAWING NO: |
| DESIGNED BY | SRW | C3.4 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 19 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19\00\19-0057 LFOLA MCCORMICK RAVINE TRAIL DESIGN\PER\05 CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 2-23 | 1B | 657.5 | +1.0' | 6-18 | 17A | 659.9 | M.E. (4) |
| 2-24 | 1B | 657.1 | +1.0' | 6-19 | 17A | 659.6 | M.E. (4) |
| 2-25 | 1B | 656.5 | +1.0' | 6-20 | 17A | 659.5 | M.E. (4) |
| 2-26 | 1B | 655.8 | +1.0' | 6-21 | 8 | 659.2 | M.E. |
| 6-4 | 5 | 664.0 | +0.1' | 6-22 | 8 | 657.6 | M.E. |
| 6-5 | 4 | 663.4 | M.E. | 6-23 | 5 | 654.1 | +0.1' |
| 6-6 | 4 | 663.3 | M.E. | 6-24 | 5 | 654.7 | +0.1' |
| 6-7 | 4 | 663.4 | M.E. | 6-25 | 15 | 654.0 | M.E. (4) |
| 6-8 | 5 | 662.4 | +0.1' | 6-26 | 15 | 653.1 | M.E. (4) |
| 6-9 | 5 | 661.5 | +0.1' | 6-27 | 7 | 652.4 | Varies (3) |
| 6-10 | 5 | 661.0 | +0.1' | 6-28 | 7 | 652.4 | Varies (3) |
| 6-11 | 4 | 659.6 | M.E. | 6-29 | 7 | 652.6 | Varies (3) |
| 6-12 | 4 | 656.2 | M.E. | 6-30 | 7 | 652.5 | Varies (3) |
| 6-13 | 17B | 656.5 | M.E. (4) | 6-31 | 8 | 652.0 | M.E. |
| 6-14 | 5 | 656.7 | +0.1' | 6-32 | 17B | 651.0 | M.E. (4) |
| 6-15 | 5 | 658.7 | +0.1' | 6-33 | 8 | 651.2 | M.E. |
| 6-16 | 5 | 659.1 | +0.1' | 6-34 | 7 | 654.0 | Varies (3) |
| 6-17 | 5 | 659.5 | +0.1' | 6-35 | 7 | 654.0 | Varies (3) |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.
6. Trail stations 6-12 to 6-52 are within an environmentally sensitive area. Work shall follow existing trail alignment. No disturbance shall take place on the ravine slope. No disturbance shall be allowed outside of treadway except to move the trail centerline upslope only as necessary to maintain treadway stability. Owner to stake sensitive vegetation areas prior to construction and no alignment change is allowed in those areas. Passing spaces also to be staked in field prior to construction.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number / Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

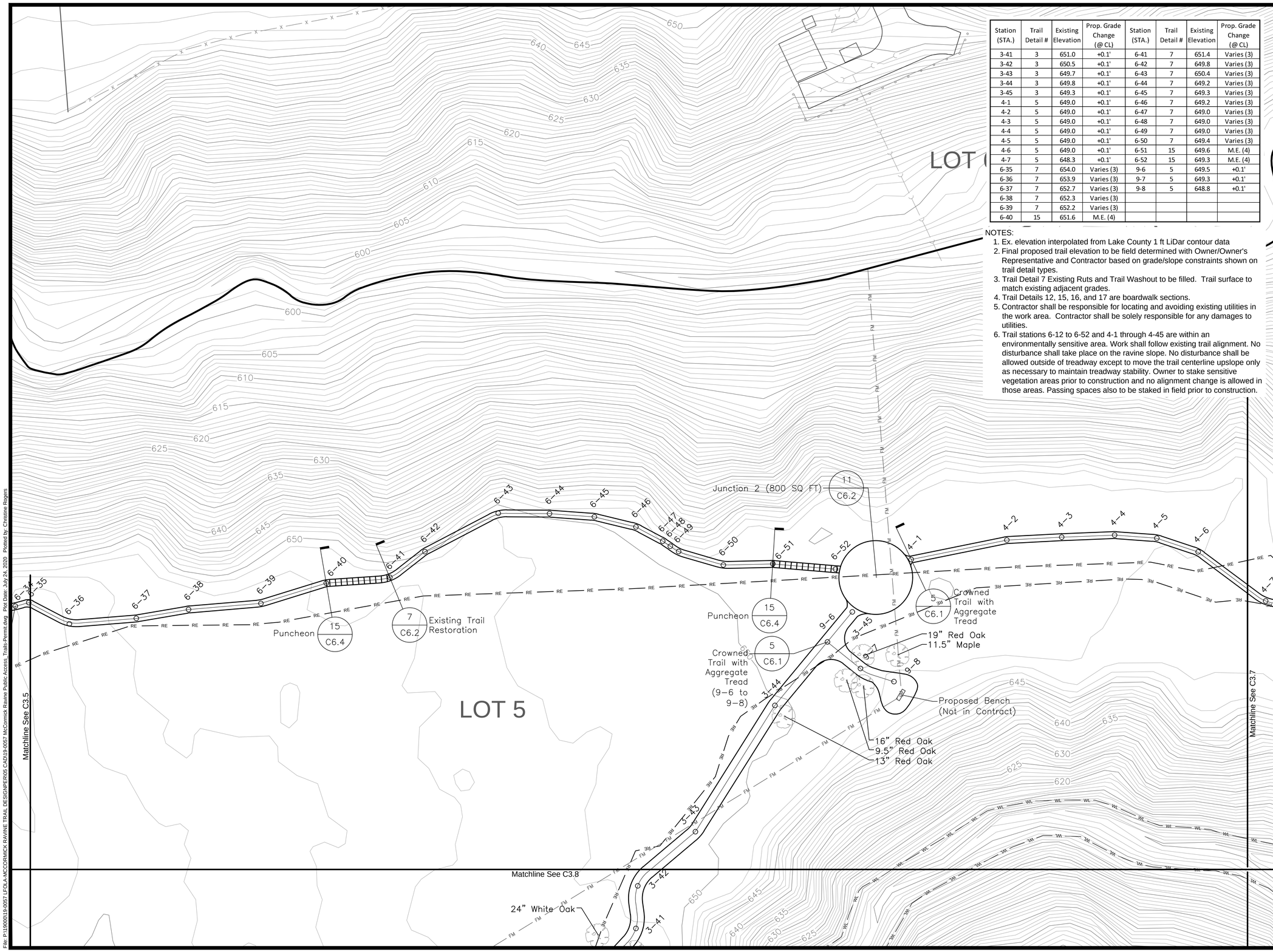
## Grading, Layout and Materials Plan Trail 2 (2-23 to 2-26) and Trail 6 (6-4 to 6-35)

| PROJECT NO: | 19-0057 | DRAWING NO: |
|---|---|---|
| DESIGNED BY | SRW | C3.5 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 20 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PERU5 CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 3-41 | 3 | 651.0 | +0.1' | 6-41 | 7 | 651.4 | Varies (3) |
| 3-42 | 3 | 650.5 | +0.1' | 6-42 | 7 | 649.8 | Varies (3) |
| 3-43 | 3 | 649.7 | +0.1' | 6-43 | 7 | 650.4 | Varies (3) |
| 3-44 | 3 | 649.8 | +0.1' | 6-44 | 7 | 649.2 | Varies (3) |
| 3-45 | 3 | 649.3 | +0.1' | 6-45 | 7 | 649.3 | Varies (3) |
| 4-1 | 5 | 649.0 | +0.1' | 6-46 | 7 | 649.2 | Varies (3) |
| 4-2 | 5 | 649.0 | +0.1' | 6-47 | 7 | 649.0 | Varies (3) |
| 4-3 | 5 | 649.0 | +0.1' | 6-48 | 7 | 649.0 | Varies (3) |
| 4-4 | 5 | 649.0 | +0.1' | 6-49 | 7 | 649.0 | Varies (3) |
| 4-5 | 5 | 649.0 | +0.1' | 6-50 | 7 | 649.4 | Varies (3) |
| 4-6 | 5 | 649.0 | +0.1' | 6-51 | 15 | 649.6 | M.E. (4) |
| 4-7 | 5 | 648.3 | +0.1' | 6-52 | 15 | 649.3 | M.E. (4) |
| 6-35 | 7 | 654.0 | Varies (3) | 9-6 | 5 | 649.5 | +0.1' |
| 6-36 | 7 | 653.9 | Varies (3) | 9-7 | 5 | 649.3 | +0.1' |
| 6-37 | 7 | 652.7 | Varies (3) | 9-8 | 5 | 648.8 | +0.1' |
| 6-38 | 7 | 652.3 | Varies (3) | | | | |
| 6-39 | 7 | 652.2 | Varies (3) | | | | |
| 6-40 | 15 | 651.6 | M.E. (4) | | | | |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.
6. Trail stations 6-12 to 6-52 and 4-1 through 4-45 are within an environmentally sensitive area. Work shall follow existing trail alignment. No disturbance shall take place on the ravine slope. No disturbance shall be allowed outside of treadway except to move the trail centerline upslope only as necessary to maintain treadway stability. Owner to stake sensitive vegetation areas prior to construction and no alignment change is allowed in those areas. Passing spaces also to be staked in field prior to construction.

0 20 40
Scale in Feet

N

## LEGEND

Project Boundary

Lotline Line

1 ft Existing Contours-Surveyed

1 ft Existing Contours-County

Wetland Boundary

Ex. Sanitary Forcemain (Approx. Location)

Ex. Deciduous Tree

Boardwalk or Puncheon

Center Line, Station, and Station ID

Detail Number
Detail Sheet Number

Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|
| | | |

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

## Grading, Layout and Materials Plan

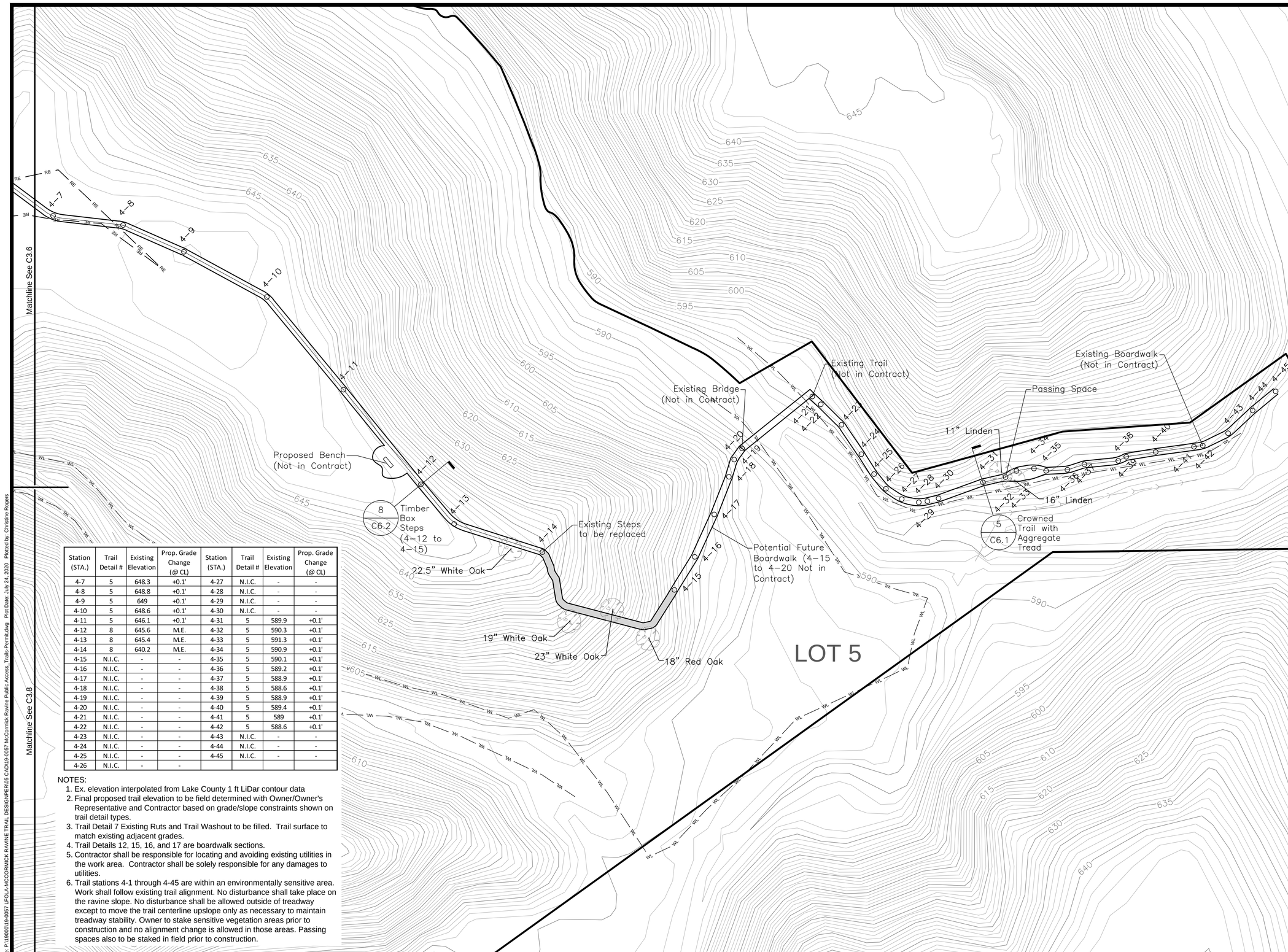
Trail 3 (3-41 to 3-45), Trail 4 (4-1 to 4-7), Trail 6 (6-35 to 6-52), and Trail 9 (9-6 to 9-8)

| | | |
|---|---|---|
| PROJECT NO: 19-0057 | | DRAWING NO: |
| DESIGNED BY | SRW | C3.6 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 21 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PER\05 CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 4-7 | 5 | 648.3 | +0.1' | 4-27 | N.I.C. | - | - |
| 4-8 | 5 | 648.8 | +0.1' | 4-28 | N.I.C. | - | - |
| 4-9 | 5 | 649 | +0.1' | 4-29 | N.I.C. | - | - |
| 4-10 | 5 | 648.6 | +0.1' | 4-30 | N.I.C. | - | - |
| 4-11 | 5 | 646.1 | +0.1' | 4-31 | 5 | 589.9 | +0.1' |
| 4-12 | 8 | 645.6 | M.E. | 4-32 | 5 | 590.3 | +0.1' |
| 4-13 | 8 | 645.4 | M.E. | 4-33 | 5 | 591.3 | +0.1' |
| 4-14 | 8 | 640.2 | M.E. | 4-34 | 5 | 590.9 | +0.1' |
| 4-15 | N.I.C. | - | - | 4-35 | 5 | 590.1 | +0.1' |
| 4-16 | N.I.C. | - | - | 4-36 | 5 | 589.2 | +0.1' |
| 4-17 | N.I.C. | - | - | 4-37 | 5 | 588.9 | +0.1' |
| 4-18 | N.I.C. | - | - | 4-38 | 5 | 588.6 | +0.1' |
| 4-19 | N.I.C. | - | - | 4-39 | 5 | 588.9 | +0.1' |
| 4-20 | N.I.C. | - | - | 4-40 | 5 | 589.4 | +0.1' |
| 4-21 | N.I.C. | - | - | 4-41 | 5 | 589 | +0.1' |
| 4-22 | N.I.C. | - | - | 4-42 | 5 | 588.6 | +0.1' |
| 4-23 | N.I.C. | - | - | 4-43 | N.I.C. | - | - |
| 4-24 | N.I.C. | - | - | 4-44 | N.I.C. | - | - |
| 4-25 | N.I.C. | - | - | 4-45 | N.I.C. | - | - |
| 4-26 | N.I.C. | - | - | | | | |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.
6. Trail stations 4-1 through 4-45 are within an environmentally sensitive area. Work shall follow existing trail alignment. No disturbance shall take place on the ravine slope. No disturbance shall be allowed outside of treadway except to move the trail centerline upslope only as necessary to maintain treadway stability. Owner to stake sensitive vegetation areas prior to construction and no alignment change is allowed in those areas. Passing spaces also to be staked in field prior to construction.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number / Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

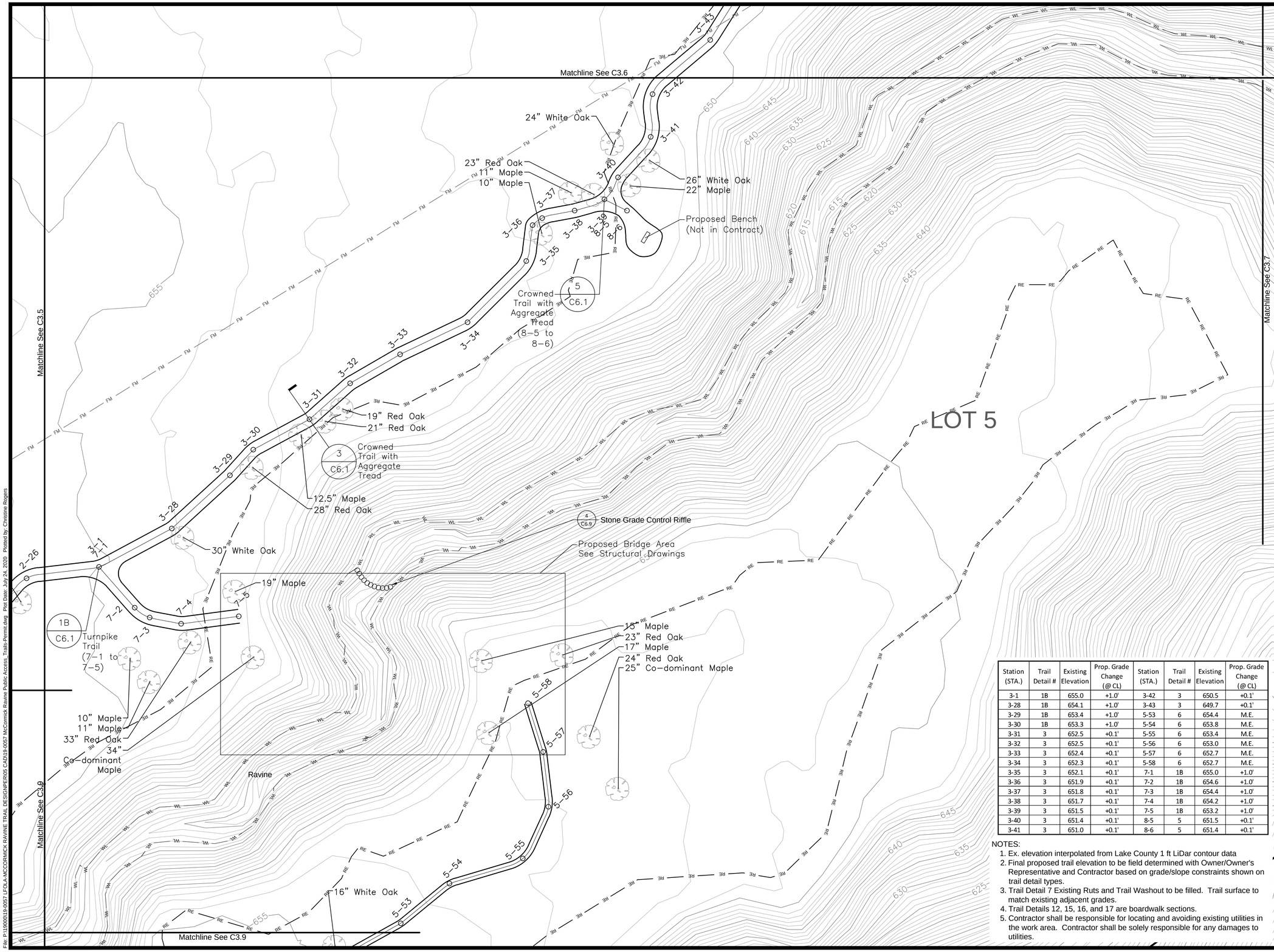
## Layout and Materials Plan
## Trail 4 (4-7 to 4-45)

| | | |
|---|---|---|
| PROJECT NO: 19-0057 | | DRAWING NO: |
| DESIGNED BY | SRW | C3.7 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 22 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19\00019-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PER\05 CAD\19-0057 McCormick Ravine Public Access_Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|
| 3-1 | 1B | 655.0 | +1.0' | 3-42 | 3 | 650.5 | +0.1' |
| 3-28 | 1B | 654.1 | +1.0' | 3-43 | 3 | 649.7 | +0.1' |
| 3-29 | 1B | 653.4 | +1.0' | 5-53 | 6 | 654.4 | M.E. |
| 3-30 | 1B | 653.3 | +1.0' | 5-54 | 6 | 653.8 | M.E. |
| 3-31 | 3 | 652.5 | +0.1' | 5-55 | 6 | 653.4 | M.E. |
| 3-32 | 3 | 652.5 | +0.1' | 5-56 | 6 | 653.0 | M.E. |
| 3-33 | 3 | 652.4 | +0.1' | 5-57 | 6 | 652.7 | M.E. |
| 3-34 | 3 | 652.3 | +0.1' | 5-58 | 6 | 652.7 | M.E. |
| 3-35 | 3 | 652.1 | +0.1' | 7-1 | 1B | 655.0 | +1.0' |
| 3-36 | 3 | 651.9 | +0.1' | 7-2 | 1B | 654.6 | +1.0' |
| 3-37 | 3 | 651.8 | +0.1' | 7-3 | 1B | 654.4 | +1.0' |
| 3-38 | 3 | 651.7 | +0.1' | 7-4 | 1B | 654.2 | +1.0' |
| 3-39 | 3 | 651.5 | +0.1' | 7-5 | 1B | 653.2 | +1.0' |
| 3-40 | 3 | 651.4 | +0.1' | 8-5 | 5 | 651.5 | +0.1' |
| 3-41 | 3 | 651.0 | +0.1' | 8-6 | 5 | 651.4 | +0.1' |

NOTES:
1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number / Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENN TRAILS
PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

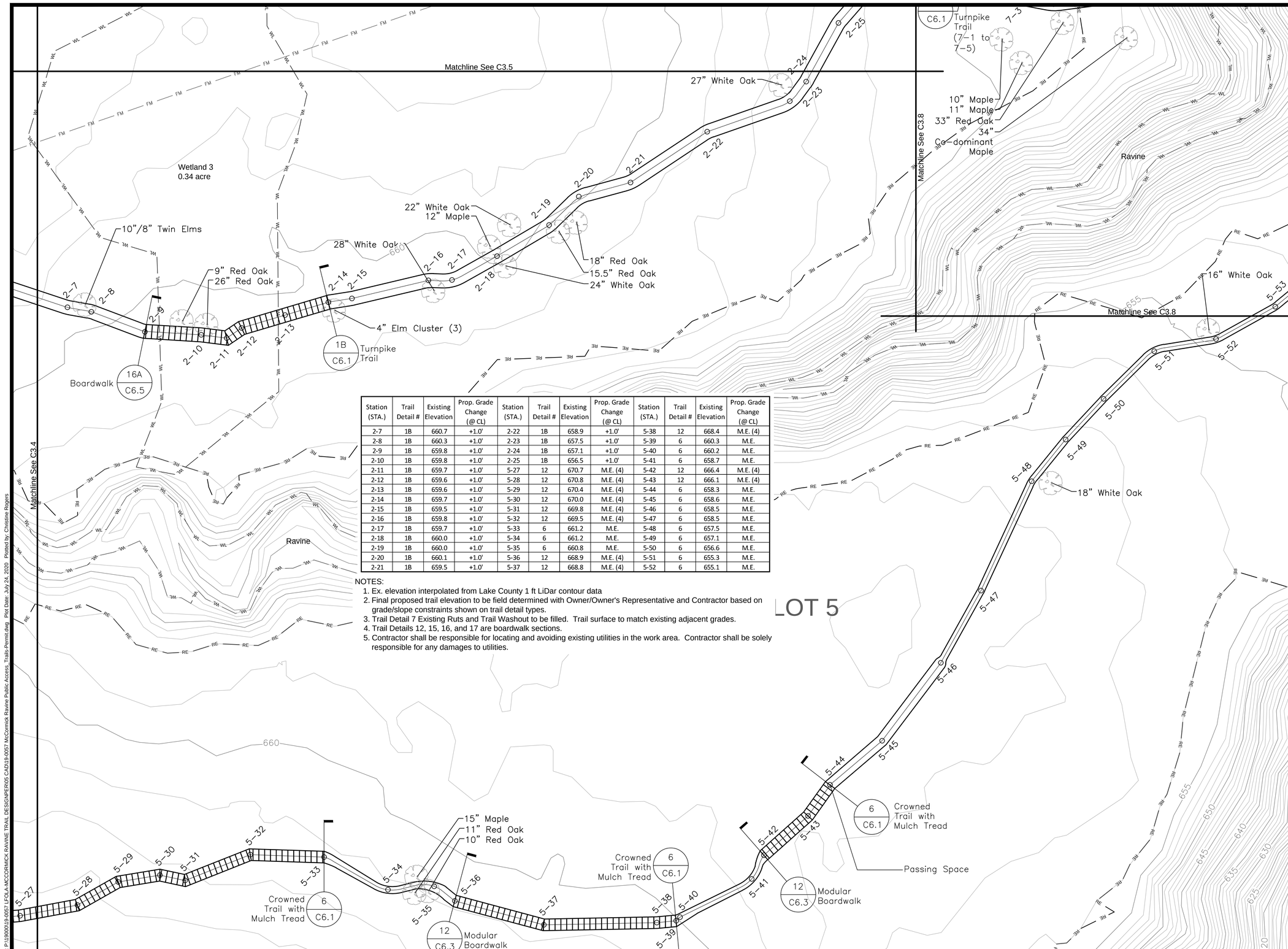
## Grading, Layout and Materials Plan
Trail 3 (3-1 to 3-43), Trail 5 (5-53 to 5-58), Trail 7 (7-1 to 7-5), and Trail 8 (8-5 to 8-6)

| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | SRW | C3.8 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 23 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PER05 CAD\19-0057 McCormick Ravine Public Access, Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers




| Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) | Station (STA.) | Trail Detail # | Existing Elevation | Prop. Grade Change (@ CL) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-7 | 1B | 660.7 | +1.0' | 2-22 | 1B | 658.9 | +1.0' | 5-38 | 12 | 668.4 | M.E. (4) |
| 2-8 | 1B | 660.3 | +1.0' | 2-23 | 1B | 657.5 | +1.0' | 5-39 | 6 | 660.3 | M.E. |
| 2-9 | 1B | 659.8 | +1.0' | 2-24 | 1B | 657.1 | +1.0' | 5-40 | 6 | 660.2 | M.E. |
| 2-10 | 1B | 659.8 | +1.0' | 2-25 | 1B | 656.5 | +1.0' | 5-41 | 6 | 658.7 | M.E. |
| 2-11 | 1B | 659.7 | +1.0' | 5-27 | 12 | 670.7 | M.E. (4) | 5-42 | 12 | 666.4 | M.E. (4) |
| 2-12 | 1B | 659.6 | +1.0' | 5-28 | 12 | 670.8 | M.E. (4) | 5-43 | 12 | 666.1 | M.E. (4) |
| 2-13 | 1B | 659.6 | +1.0' | 5-29 | 12 | 670.4 | M.E. (4) | 5-44 | 6 | 658.3 | M.E. |
| 2-14 | 1B | 659.7 | +1.0' | 5-30 | 12 | 670.0 | M.E. (4) | 5-45 | 6 | 658.6 | M.E. |
| 2-15 | 1B | 659.5 | +1.0' | 5-31 | 12 | 669.8 | M.E. (4) | 5-46 | 6 | 658.5 | M.E. |
| 2-16 | 1B | 659.8 | +1.0' | 5-32 | 12 | 669.5 | M.E. (4) | 5-47 | 6 | 658.5 | M.E. |
| 2-17 | 1B | 659.7 | +1.0' | 5-33 | 6 | 661.2 | M.E. | 5-48 | 6 | 657.5 | M.E. |
| 2-18 | 1B | 660.0 | +1.0' | 5-34 | 6 | 661.2 | M.E. | 5-49 | 6 | 657.1 | M.E. |
| 2-19 | 1B | 660.0 | +1.0' | 5-35 | 6 | 660.8 | M.E. | 5-50 | 6 | 656.6 | M.E. |
| 2-20 | 1B | 660.1 | +1.0' | 5-36 | 12 | 668.9 | M.E. (4) | 5-51 | 6 | 655.3 | M.E. |
| 2-21 | 1B | 659.5 | +1.0' | 5-37 | 12 | 668.8 | M.E. (4) | 5-52 | 6 | 655.1 | M.E. |

NOTES:

1. Ex. elevation interpolated from Lake County 1 ft LiDar contour data
2. Final proposed trail elevation to be field determined with Owner/Owner's Representative and Contractor based on grade/slope constraints shown on trail detail types.
3. Trail Detail 7 Existing Ruts and Trail Washout to be filled. Trail surface to match existing adjacent grades.
4. Trail Details 12, 15, 16, and 17 are boardwalk sections.
5. Contractor shall be responsible for locating and avoiding existing utilities in the work area. Contractor shall be solely responsible for any damages to utilities.

0 20 40
Scale in Feet

N

## LEGEND

- Project Boundary
- Lotline Line
- 1 ft Existing Contours-Surveyed
- 1 ft Existing Contours-County
- Wetland Boundary
- Ex. Sanitary Forcemain (Approx. Location)
- Ex. Deciduous Tree
- Boardwalk or Puncheon
- Center Line, Station, and Station ID
- Detail Number / Detail Sheet Number
- Trail Element Transition (Begin New Element)

PENNTRAILS

PENN TRAILS LLC
PO BOX 1337 | CARLISLE, PA 17012
717-486-4455 | info@penntrails.com
www.PennTrails.com

| No. | Revision/Issue | Date |
|---|---|---|
| | | |

**Hey and Associates, Inc.**
Engineering, Ecology and Landscape Architecture
26575 West Commerce Drive, Suite 601
Volo, Illinois 60073
Office (847) 740-0888
Fax (847) 740-2888
Volo@Heyassoc.com

Professional Design Firm
License No. 184-002429

# McCormick Ravine Public Access and Trails Design

Lake Forest, Illinois

## Grading, Layout and Materials Plan
## Trail 2 (2-7 to 2-25) and Trail 5 (5-27 to 5-52)

| | | |
|---|---|---|
| PROJECT NO: | 19-0057 | DRAWING NO: |
| DESIGNED BY | SRW | C3.9 |
| DRAWN BY | SRW | |
| CHECKED BY | TRP | |
| APPROVED BY | DAK | SHEET NO: |
| ISSUE DATE | 07/24/2020 | 24 OF 56 |

Permit Submittal

Copyright © 2020 Hey and Associates, Inc.

File: P:\19000\19-0057 LFOLA-MCCORMICK RAVINE TRAIL DESIGN\PER\05 CAD\19-0057 McCormick Ravine Public Access, Trails-Permit.dwg Plot Date: July 24, 2020 Plotted by: Christine Rogers

# NEPA Analysis to alter a US Army Corps of Engineers Civil Works Project pursuant to 33 USC 408

Date: 08/20/2020

## Environmental Assessment

Request Number: 20-22

Requester: Lake Forest Open Lands Association

Proposed Action:

A multi-trail system is being proposed along the McCormick Ravine that also includes a realigned asphalt driveway and parking lot, stormwater best management practices, and abandonment of an old trail system that includes restoration of erosion within the trail corridor.The purpose and need of this project are to improve and expand a trail network system along the McCormick Ravine for public access, while protecting sensitive local ecology. The master plan for McCormick Ravine identifies three trails, designed to facilitate three different user experiences while protecting the unique plant communities on the site. The proposed conceptual corridor alignments support a sustainable recreational trail system.

The environmental assessment for this permit application has been prepared in accordance with the policy and procedures set forth in the National Environmental Policy Act (NEPA) at Title 40 of the Code of Federal Regulations Part 230.

1. Categorical Exclusion:
   - [x] Applicable
   - [ ] Not Applicable

   Additional Comments (Description of Categorical Exclusion).

   Per ER 200-2-2, Activities at completed Corps projects which carry out the authorized project purposes are categorically excluded. Examples include routine operation and maintenance actions...erosion control...replacement of existing structures and facilities...

2. Anticipated Physical and Chemical Changes:

   a. Substrate impacts:
      - [ ] Not applicable
      - [x] Not significant
      - [ ] Significant

      Additional Comments

      b. Currents, circulation or drainage patterns:
      - [x] Not applicable
      - [ ] Not significant
      - [ ] Significant

      Additional Comments

DRAFT

c. Suspended particulates; turbidity:
- [x] Not applicable
- [ ] Not significant
- [ ] Significant

Additional Comments

d. Water Quality:
- [x] No appreciable effect on water quality
- [ ] Beneficial effect on water quality
- [ ] Minor short-term effect on water quality
- [ ] Minor long-term effect on water quality
- [ ] Other probable effect:

Additional Comments

e. Flood control functions:
- [ ] No appreciable effect
- [x] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other probable effect:

Additional Comments

Stormwater best management practices are included to treat and attenuate stormwater runoff to impervious areas. Bioswales included to divert and treat runoff. The project results in a net reduction in impervious surface for the access based upon the realigned and improved access road and parking lot.

f. Erosion and accretion patterns (soils):
- [ ] No appreciable effect
- [ ] Beneficial to soil stabilization
- [x] Minor short-term adverse effect on erosion during construction phase of the project
- [ ] Minor long-term adverse effect on erosion
- [ ] Minor short-term adverse effect on accretion
- [ ] Minor long-term adverse effect on accretion
- [ ] Other probable effect:

Additional Comments

The Lake County Watershed Development Ordinance will guide erosion and sediment control efforts at the site. The soil erosion and sediment control sheets are provided in the engineering plans.

DRAFT

g. Aquifer recharge:
- [x] No appreciable effect
- [ ] Beneficial effect on groundwater quality
- [ ] Beneficial effect on groundwater quantity
- [ ] Minor adverse effect on groundwater quality
- [ ] Minor adverse effect on groundwater quantity
- [ ] Other probable effect:

Additional Comments

h. Baseflow:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other probable effect:

Additional Comments

3. Anticipated Biological Changes:

a. Habitat for fish and other aquatic organisms:
- [x] No appreciable effect
- [ ] Minor short-term beneficial effect
- [ ] Minor long-term beneficial effect
- [ ] Minor short-term adverse effect
- [ ] Minor long-term adverse effect
  - Acres of aquatic habitat would be lost
  - Acres of aquatic habitat would be created
- [ ] Other effect:

Additional Comments

DRAFT

b. Special aquatic sites (wetlands, mudflats, coral reefs, pool and riffle complexes, vegetated shallows, sanctuaries, and refuges as defined in 40 CFR Part 230.40-45):

- [ ] No appreciable effect on any special aquatic sites
- [ ] Beneficial effect on wetland quality
- [ ] Beneficial effect on wetland quantity
- [x] Minor adverse effect on wetland quality
- [ ] Minor adverse effect on wetland quantity

Acres of wetland would be directly affected

Additional Comments

The amount of wetland has increased recently due to restoration efforts that have been implemented through invasive tree/shrub removal. This decrease in evapotranspiration losses along with increases in local rainfall volumes has caused wetland resources to expand on the property.

c. Types of wetland directly affected (indicate acreage):

- [ ] No appreciable effect
- [x] Forested wetland
- [ ] Monotypic cattail
- [ ] Vegetated shallows
- [ ] Wooded swamp
- [ ] Bog
- [ ] Fen
- [ ] Seep
- [ ] Prairie/sedge meadow
- [ ] Deep marsh
- [ ] Scrub-shrub swamp
- [ ] Hemi marsh
- [ ] Farmed wetland
- [ ] Reed canary meadow
- [ ] N/A--Jurisdictional waters of the United States

Additional Comments

Will necessitate the unavoidable impact of 0.12-acre of wetland under the U. S. Army Corps of Engineers' (USACE) jurisdiction as a result of constructing the realigned parking lot and driveway with associated level spreaders and the installation of sonotube footings for the boardwalks.

d. Terrestrial habitat:

- [ ] No appreciable effect
- [ ] Minor short-term beneficial effect
- [x] Minor long-term beneficial effect
- [x] Minor short-term adverse effect
- [ ] Minor long-term adverse effect

Acres of terrestrial habitat would be lost

Acres of terrestrial habitat would be created

- [ ] Other effect:

Additional Comments

Native plant materials and stormwater BMPs are proposed for the project areas. The natural planting plan is included with the Civil Engineering Plans. Also, any temporary impacts to resources will be overseeded with a native seed mix.

DRAFT

e. Habitat diversity and interspersion:
- [ ] No appreciable effect
- [x] Beneficial effect on habitat diversity
- [ ] Beneficial effect on habitat interspersion
- [ ] Minor adverse effect on habitat diversity
- [ ] Minor adverse effect on habitat interspersion
- [ ] Other probable effect:

Additional Comments

The proposed trails seek to veer people off existing desire paths going through sensitive habitats causing erosion and instead keep people on designated trails.

f. Other wildlife impacts (breeding, cover, food, travel, general):
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other probable effect:

Additional Comments

g. Biological productivity:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other probable effect:

Additional Comments

h. Threatened and endangered species:
- [x] No effect
- [ ] See attached documentation for discussion of effect

Additional Comments

There would be no effect on listed species.

i. Biological availability of possible contaminants in dredged or fill material:
- [x] Proposed discharge material will not introduce, relocate or increase contaminants
- [ ] Proposed discharge material will introduce, relocate or increase contaminants

Additional Comments

DRAFT

4. Human Use Characteristics and Impacts:

a. Existing and potential water supplies; water conservation:
- [x] No appreciable effect on water supplies
- [ ] Beneficial effect on water supplies
- [ ] Minor adverse effect on water supplies
- [ ] No appreciable effect on water quality
- [ ] Water conservation benefits
- [ ] Minor adverse effect on water conservation policies and practices
- [ ] Other effect:

Additional Comments

b. Recreational fisheries:
- [x] Not applicable
- [ ] Not significant
- [ ] Significant

Additional Comments

No recreational fisheries within the project area.

c. Recreational boating
- [x] No appreciable effect
- [ ] Increased boating opportunities for the applicant
- [ ] Increased boating opportunities for the general public
- [ ] Minor decrease in boating opportunity for the public
- [ ] Other effect:

Additional Comments

No recreational boating within the project area.

d. Other water related recreation:
- [x] No appreciable effect
- [ ] Increased recreational opportunity for the applicant
- [ ] Increased recreational opportunity for the general public
- [ ] Minor decrease in recreational opportunities for the general public
- [ ] Other effect:

Additional Comments

DRAFT

e. Aesthetic values:
- [ ] No appreciable effect
- [x] Beneficial effect on aesthetic values
- [ ] Minor short-term adverse visual effect
- [ ] Minor long-term adverse visual effect
- [ ] Minor short-term release of odors
- [ ] Minor long-term release of odors
- [ ] Other effect:

Additional Comments

f. Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

5. Anticipated Social Effects:

a. Traffic/transportation patterns:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

b. Public health and safety:
- [ ] No appreciable effect
- [ ] Improved public health conditions
- [x] Improved public safety conditions
- [ ] Minor adverse effect on factors of public health
- [ ] Minor adverse effect on factors of public safety
- [ ] Other effect:

Additional Comments

Proposed trails will keep people on designated trails away from eroding ravine crests where desire paths currently exist.

DRAFT

c. Air Quality:
- ☐ No appreciable effect
- ☐ Beneficial effect
- ■ Minor short-term adverse effect during construction phase of the project, caused by exhaust from earthmoving machinery
- ☐ Minor long-term adverse effect
- ☐ Other effect:

Additional Comments

d. Noise:
- ☐ No appreciable effect
- ☐ Noise levels would be decreased
- ■ Minor short-term increase during construction activities
- ☐ Minor long-term increase
- ☐ Other effect:

Additional Comments

e. Historic Properties:
- ■ No appreciable effect
- ☐ Phase 1 survey conducted; no materials found
- ☐ Other effect:

Additional Comments

No historic properties present.

f. Land use classification:
- ■ No appreciable effect
- ☐ Agrees with county and local land use plans
- ☐ Minor conflict with county or local land use plans
- ☐ Other effect:

Additional Comments

DRAFT

g. Consideration of private property:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other probable effect:

Additional Comments

h. Business and home relocation:
- [x] No appreciable effect
- [ ] businesses would be relocated
- [ ] homes would be relocated
- [ ] Other effect:

Additional Comments

No business or home relocation will be necessary.

i. Public facilities and services:
- [ ] No appreciable effect
- [x] Improved public facilities
- [ ] Improved public services
- [ ] Minor adverse effect on public facilities
- [ ] Minor adverse effect on public services
- [ ] Other effect:

Additional Comments

This trail design would provide a user friendly, universally accessible, sustainable, and environmentally sound recreational pedestrian trail within the McCormick Ravine.

6. Economic Impacts:

a. Property values:
- [x] No appreciable effect
- [ ] Increased property values for the applicant
- [ ] Increased property values for the public sector
- [ ] Minor decrease in property values for sectors of the public
- [ ] Other effect:

Additional Comments

DRAFT

b. Tax revenues:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

c. Regional Growth:
- [x] No appreciable effect
- [ ] Promotes regional growth
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

d. Employment:
- [ ] No appreciable effect
- [x] Benefit to temporary employment
- [ ] Long-term benefit to employment
- [ ] Minor adverse effect to temporary employment
- [ ] Minor adverse effect to long-term effect to employment
- [ ] Other effect:

Additional Comments

e. Business activity
- [x] No appreciable effect
- [ ] Beneficial effect:
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

DRAFT

f. Prime and unique farmlands

- [x] No appreciable effect
- [ ] Beneficial effect on farmland
- [ ] Beneficial effect on food supplies
- [ ] Minor adverse effect on food supplies
  - Acres of prime/unique farmland would be lost
  - Acres of prime/unique farmland would be preserved
- [ ] Other effect:

Additional Comments

No prime or unique farmlands present within project area.

g. Commercial navigation:

- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

No commercial navigation within the project area.

h. Commercial fisheries:

- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

No commercial fisheries within the project area.

i. Energy consumption or generation:

- [ ] No appreciable effect
- [x] Minor short term decrease of energy resources
- [ ] Minor long-term decrease of energy resources
- [ ] Decrease of energy needs
- [ ] Increase of energy resources
- [ ] Other effect:

Additional Comments

DRAFT

j. Mineral needs:
- [x] No appreciable effect
- [ ] Beneficial effect
- [ ] Minor adverse effect
- [ ] Other effect:

Additional Comments

7. 10 of the 17 Points of Environmental Quality, not considered above (Section 122 of PL 91-611)

Impacted Points identified below. Details provided in comment section below.

- [ ] Displacement of People
- [ ] Community Cohesion
- [ ] Displacement of Farms
- [ ] Manmade Resources
- [ ] Natural Resources

Additional Comments:

No points identified.

8. Compliance with Executive Orders.
- [x] Compliant
- [ ] Non-Compliant, List E.O., and describe below:

Additional Comments

9. Appropriate local, state and federal permits to be obtained to ensure that the work does not violate environmental regulations.
- [x] Compliant, appropriate permits to be obtained
- [ ] Non-Compliant, List missing requirements and describe below:

Additional Comments

10. Summary of Secondary and Cumulative Effects: Any anticipated secondary and cumulative effects as a result of this project should be minimal.

No negative secondary or cumulative effects.

DRAFT