APPENDIX A:
COST ESTIMATES AND CONSTRUCTION PHASING

No Action Alternative (Alternative 1) and Alternative 2 Cost Estimates and Construction Phasing

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION

Rehabilitate Runway 6/24

Existing Condition Full Length

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR108108	2 - 1/C #8 5 KV UG CABLE	FOOT	8,200	$ 10.00	$ 82,000.00
AR125416	MITL-BASE MOUNTED-LED	EACH	6	$ 3,000.00	$ 18,000.00
AR125505	MIRL, STAKE MOUNTED	EACH	37	$ 2,500.00	$ 92,500.00
AR125515	HIRL, BASE MOUNTED	EACH	1	$ 5,000.00	$ 5,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 130,000.00	$ 130,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	3,585	$ 150.00	$ 537,750.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	20,430	$ 12.00	$ 245,160.00
AR603510	BITUMINOUS TACK COAT	GALLON	2,451	$ 5.00	$ 12,255.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	19,895	$ 6.00	$ 119,370.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	10,218	$ 10.00	$ 102,180.00
AR620900	PAVEMENT MARKING REMOVAL	SQ FT	540	$ 8.00	$ 4,320.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 1,422,535.00**
				20% CONTINGENCY =	**$ 280,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 230,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 1,932,535.00**
				USE =	**$ 1,935,000.00**

Illinois Department of Transportation
Division of Aeronautics

C-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Rehabilitate Taxiway B

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR108108	1/C #8 5 KV UG CABLE	FOOT	2,800	$ 5.00	$ 14,000.00
AR125416	MITL-BASE MOUNTED-LED	EACH	65	$ 3,000.00	$ 195,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 49,000.00	$ 49,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	835	$ 150.00	$ 125,250.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	4,750	$ 12.00	$ 57,000.00
AR603510	BITUMINOUS TACK COAT	GALLON	570	$ 5.00	$ 2,850.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	3,195	$ 10.00	$ 31,950.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	6,090	$ 8.00	$ 48,720.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 533,770.00**
				20% CONTINGENCY =	**$ 110,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 110,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 753,770.00**
				USE =	**$ 760,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Rehabilitate Taxiway C

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR108108	1/C #8 5 KV UG CABLE	FOOT	400	$ 5.00	$ 2,000.00
AR125416	MITL-BASE MOUNTED-LED	EACH	13	$ 3,000.00	$ 39,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 12,000.00	$ 12,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	200	$ 150.00	$ 30,000.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	1,160	$ 12.00	$ 13,920.00
AR603510	BITUMINOUS TACK COAT	GALLON	140	$ 5.00	$ 700.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	860	$ 10.00	$ 8,600.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	1,200	$ 8.00	$ 9,600.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 125,820.00**
				20% CONTINGENCY =	**$ 30,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 40,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 195,820.00**
				USE =	**$ 200,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Taxiway F

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR108108	1/C #8 5 KV UG CABLE	FOOT	130	$ 5.00	$ 650.00
AR125416	MITL-BASE MOUNTED-LED	EACH	5	$ 3,000.00	$ 15,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 11,000.00	$ 11,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	175	$ 150.00	$ 26,250.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	1,020	$ 12.00	$ 12,240.00
AR603510	BITUMINOUS TACK COAT	GALLON	570	$ 5.00	$ 2,850.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	1,185	$ 10.00	$ 11,850.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	2,695	$ 8.00	$ 21,560.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 111,400.00**
				20% CONTINGENCY =	**$ 20,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 40,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 171,400.00**
				USE =	**$ 175,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Area 2

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 44,000.00	$ 44,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	1,745	$ 150.00	$ 261,750.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	9,930	$ 12.00	$ 119,160.00
AR603510	BITUMINOUS TACK COAT	GALLON	1,200	$ 5.00	$ 6,000.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	2,800	$ 10.00	$ 28,000.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	1,770	$ 8.00	$ 14,160.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 483,070.00**
				20% CONTINGENCY =	**$ 100,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 100,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 683,070.00**
				USE =	**$ 690,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - MAINTAIN PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Area 3

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 122,000.00	$ 122,000.00
AR401610	BITUMINOUS SURFACE COURSE	TON	4,880	$ 150.00	$ 732,000.00
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	27,800	$ 12.00	$ 333,600.00
AR510510	TIE DOWN	EACH	225	$ 100.00	$ 22,500.00
AR510900	REMOVE TIE DOWN	EACH	225	$ 80.00	$ 18,000.00
AR603510	BITUMINOUS TACK COAT	GALLON	3,350	$ 5.00	$ 16,750.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	5,230	$ 10.00	$ 52,300.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	3,930	$ 8.00	$ 31,440.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 1,338,590.00**
				20% CONTINGENCY =	**$ 270,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 220,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 1,828,590.00**
				USE =	**$ 1,830,000.00**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE RUNWAY 6/24

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR108108	2 - 1/C #8 5 KV UG CABLE	FOOT	8,200	1,650	5.0
AR125416	MITL-BASE MOUNTED-LED	EACH	6	*	*
AR125505	MIRL, STAKE MOUNTED	EACH	37	7	5.0
AR125515	HIRL, BASE MOUNTED	EACH	1	*	*
AR125525	HIRL, IN-PAVEMENT	EACH	8	*	*
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	3,585	1,200	3.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	20,430	10,000	2.0
AR603510	BITUMINOUS TACK COAT	GALLON	2,451	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	19,895	6,600	3.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	10,218	*	*
AR620900	PAVEMENT MARKING REMOVAL	SQ FT	540	*	*
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**18**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	30	17
Jul-25	2	1
TOTAL	**32**	**18**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **July 4, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **32**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE TAXIWAY B

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

			ENGINEER'S ESTIMATE		
ITEM NO.	**ITEM DESCRIPTION**	**UNIT**	**ESTIMATED QUANTITY**	**WORKLOAD FACTOR**	**ESTIMATED WORKING DAYS**
AR108108	1/C #8 5 KV UG CABLE	FOOT	2,800	925	3.0
AR125416	MITL-BASE MOUNTED-LED	EACH	65	22	3.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	835	835	1.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	4,750	2,350	2.0
AR603510	BITUMINOUS TACK COAT	GALLON	570	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	3,195	1,600	2.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	6,090	*	*
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**11**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	20	11
TOTAL	**20**	**11**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 22, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **20**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE TAXIWAY C AT RWY 6/24 END

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR108108	1/C #8 5 KV UG CABLE	FOOT	400	400	1.0
AR125416	MITL-BASE MOUNTED-LED	EACH	13	7	2.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	200	200	1.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	1,160	1,160	1.0
AR603510	BITUMINOUS TACK COAT	GALLON	140	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	860	860	1.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	1,200	*	*
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**6**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	11	6
TOTAL	**11**	**6**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 13, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **11**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE TAXIWAY F PARTIAL

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR108108	1/C #8 5 KV UG CABLE	FOOT	130	130	1.0
AR125416	MITL-BASE MOUNTED-LED	EACH	5	5	1.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	175	175	1.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	1,020	1,020	1.0
AR603510	BITUMINOUS TACK COAT	GALLON	570	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	1,185	600	2.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	2,695	*	*
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**6**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	11	6
TOTAL	**11**	**6**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 13, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **11**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE AREA 2

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	1,745	575	3.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	9,930	3,300	3.0
AR603510	BITUMINOUS TACK COAT	GALLON	1,200	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	2,800	1,400	2.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	1,770	*	*
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**8**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	15	8
TOTAL	**15**	**8**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 17, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **13**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: REHABILITATE AREA 3

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401610	BITUMINOUS SURFACE COURSE	TON	4,880	1,225	4.0
AR401653	BITUMINOUS PAVEMENT MILLING - 3"	SQ YD	27,800	5,600	5.0
AR510510	TIE DOWN	EACH	225	*	*
AR510900	REMOVE TIE DOWN	EACH	225	45	5.0
AR603510	BITUMINOUS TACK COAT	GALLON	3,350	*	*
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	5,230	1,750	3.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	3,930		*
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**17**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	30	17
TOTAL	**30**	**17**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **July 2, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **30**

Proposed Action (Alternative 3)
Cost Estimates and Construction Phasing

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Runway 6/24 East of Runway 16/34 & Convert Runway 6/24 to Taxiway West of Runway 16/34

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR125415	MITL-STAKE MOUNTED-LED	EACH	24	$ 3,000.00	$ 72,000.00
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	37	$ 750.00	$ 27,750.00
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	1	$ 2,000.00	$ 2,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 60,000.00	$ 60,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	12,230	$ 15.00	$ 183,450.00
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	6,900	$ 10.00	$ 69,000.00
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	8,600	$ 8.00	$ 68,800.00
AR620900	PAVEMENT MARKING REMOVAL	SQ FT	10,900	$ 3.00	$ 32,700.00
AR905530	TOPSOILING	CU YD	3,800	$ 27.00	$ 102,600.00
AR901510	SEEDING	ACRE	2.75	$ 5,000.00	$ 13,750.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	2.75	$ 5,000.00	$ 13,750.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 655,800.00**
				20% CONTINGENCY =	**$ 130,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 120,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 905,800.00**
				USE =	**$ 910,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Taxiway B

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	65	$ 750.00	$ 48,750.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 18,000.00	$ 18,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	4,750	$ 15.00	$ 71,250.00
AR905530	TOPSOILING	CU YD	1,200	$ 27.00	$ 32,400.00
AR901510	SEEDING	ACRE	1.00	$ 5,000.00	$ 5,000.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	1.00	$ 5,000.00	$ 5,000.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 190,400.00**
				20% CONTINGENCY =	**$ 40,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 50,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 280,400.00**
				USE =	**$ 285,000.00**

Illinois Department of Transportation
Division of Aeronautics

C-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Taxiway C

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	13	$ 750.00	$ 9,750.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 5,000.00	$ 5,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,160	$ 15.00	$ 17,400.00
AR905530	TOPSOILING	CU YD	300	$ 27.00	$ 8,100.00
AR901510	SEEDING	ACRE	0.25	$ 5,000.00	$ 1,250.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	0.25	$ 5,000.00	$ 1,250.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 52,750.00**
				20% CONTINGENCY =	**$ 11,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 20,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 83,750.00**
				USE =	**$ 85,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Taxiway F

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	13	$ 2,000.00	$ 26,000.00
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 7,000.00	$ 7,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,020	$ 15.00	$ 15,300.00
AR905530	TOPSOILING	CU YD	300	$ 27.00	$ 8,100.00
AR901510	SEEDING	ACRE	0.25	$ 5,000.00	$ 1,250.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	0.25	$ 5,000.00	$ 1,250.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 68,900.00**
				20% CONTINGENCY =	**$ 10,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 30,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 108,900.00**
				USE =	**$ 110,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Area 2

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 23,000.00	$ 23,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	9,930	$ 15.00	$ 148,950.00
AR905530	TOPSOILING	CU YD	2,300	$ 27.00	$ 62,100.00
AR901510	SEEDING	ACRE	2.25	$ 5,000.00	$ 11,250.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	2.25	$ 5,000.00	$ 11,250.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 266,550.00**
				20% CONTINGENCY =	**$ 50,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 70,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 386,550.00**
				USE =	**$ 390,000.00**

Illinois Department of Transportation
Division of Aeronautics

e-TIPS '25

ENIVRONMENTAL ASSESSMENT - REMOVE PAVEMENT ALTERNATIVE
ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS

Airport Name:	Chicago Executive Airport
Associated City:	Wheeling/Prospect Heights

PROJECT LOCATION
Remove Area 3

ITEM NO.	DESCRIPTION	UNIT	EST. QUANT.	EST. UNIT PRICE	TOTAL
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	$ 10,000.00	$ 10,000.00
AR150520	MOBILIZATION	L SUM	1	$ 67,000.00	$ 67,000.00
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	27,800	$ 15.00	$ 417,000.00
AR510900	REMOVE TIE DOWN	EACH	225	$ 80.00	$ 18,000.00
AR905530	TOPSOILING	CU YD	6,200	$ 27.00	$ 167,400.00
AR901510	SEEDING	ACRE	5.75	$ 5,000.00	$ 28,750.00
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	5.75	$ 5,000.00	$ 28,750.00
				TOTAL ESTIMATED CONSTRUCTION COST =	**$ 736,900.00**
				20% CONTINGENCY =	**$ 150,000.00**
				ESTIMATED ADMINISTRATION/ENGINEERING/MISCELLANEOUS =	**$ 140,000.00**
				TOTAL ESTIMATED PROJECT COSTS =	**$ 1,026,900.00**
				USE =	**$ 1,030,000.00**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Runway 6/24 East of Runway 16/34 & Convert Runway 6/24 to Taxiway West of Runway 16/34

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR125415	MITL-STAKE MOUNTED-LED	EACH	24	5	5.0
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	37	19	2.0
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	1	*	*
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	12,230	2,450	5.0
AR620520	PAVEMENT MARKING-WATERBORNE	SQ FT	6,900	1,370	5.0
AR620525	PAVEMENT MARKING-BLACK BORDER	SQ FT	8,600	*	*
AR620900	PAVEMENT MARKING REMOVAL	SQ FT	10,900	*	*
AR905530	TOPSOILING	CU YD	3,800	760	5.0
AR901510	SEEDING	ACRE	2.75	1.4	2.0
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	2.75	1.4	2.0
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**26**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jul-25	30	17
Jul-25	17	9
TOTAL	**47**	**26**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **July 19, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **47**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Taxiway B

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	65	22	3.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	4,750	1,600	3.0
AR905530	TOPSOILING	CU YD	1,200	600	2.0
AR901510	SEEDING	ACRE	1.00	1	1.0
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	1.00	1	1.0
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**10**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	17	10
TOTAL	**17**	**10**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 19, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **17**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Taxiway C at Runway 6/24 End Pavement

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	13	13	1.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,160	400	2.9
AR905530	TOPSOILING	CU YD	300	300	1.0
AR901510	SEEDING	ACRE	0.25	0.5	0.5
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	0.25	0.5	0.5
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**6**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	10	6
TOTAL	**10**	**6**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 12, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **10**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Taxiway F Pavement

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	13	13	1.0
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,020	500	2.0
AR905530	TOPSOILING	CU YD	300	300	1.0
AR901510	SEEDING	ACRE	0.25	0.5	0.5
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	0.25	0.5	0.5
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**5**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jun-25	9	5
TOTAL	**9**	**5**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 11, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **9**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Area 2 Pavement

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	9,930	2,500	4.0
AR905530	TOPSOILING	CU YD	2,300	760	3.0
AR901510	SEEDING	ACRE	2.25	1.1	2.0
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	2.25	1.1	2.0
	* ITEM ASSUMED NON-CONTROLLING		**TOTAL ESTIMATED WORKING DAYS =**		**11**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

	CAL DAYS	WORK DAYS
Jul-25	20	11
TOTAL	**20**	**11**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **June 22, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **20**

ENGINEER'S OPINION OF PROBABLE CONTRACT TIME

PROJECT: Remove Area 3 Pavement

AIRPORT: CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS

IL PROJ.:

BY: CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
550 NORTH COMMONS DRIVE, SUITE #116,
AURORA, IL 60504

DATE: 9/24/2024

ENGINEER'S ESTIMATE

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	WORKLOAD FACTOR	ESTIMATED WORKING DAYS
AR150510	ENGINEER'S FIELD OFFICE	L SUM	1	*	*
AR150520	MOBILIZATION	L SUM	1	*	*
AR401900	REMOVE BITUMINOUS PAVEMENT	SQ YD	27,800	3,475	8.0
AR510900	REMOVE TIE DOWN	EACH	225	*	*
AR905530	TOPSOILING	CU YD	6,200	1,250	5.0
AR901510	SEEDING	ACRE	5.75	1.9	3.0
AR908515	HEAVY-DUTY HYDRAULIC MULCH	ACRE	5.75	2.9	2.0
	* ITEM ASSUMED NON-CONTROLLING			**TOTAL ESTIMATED WORKING DAYS =**	**18**

STANDARD DAYTIME CONSTRUCTION SCHEDULE - CALENDAR DAY BASIS

ANTICIPATED CONSTRUCTION START DATE: **June 2, 2025**

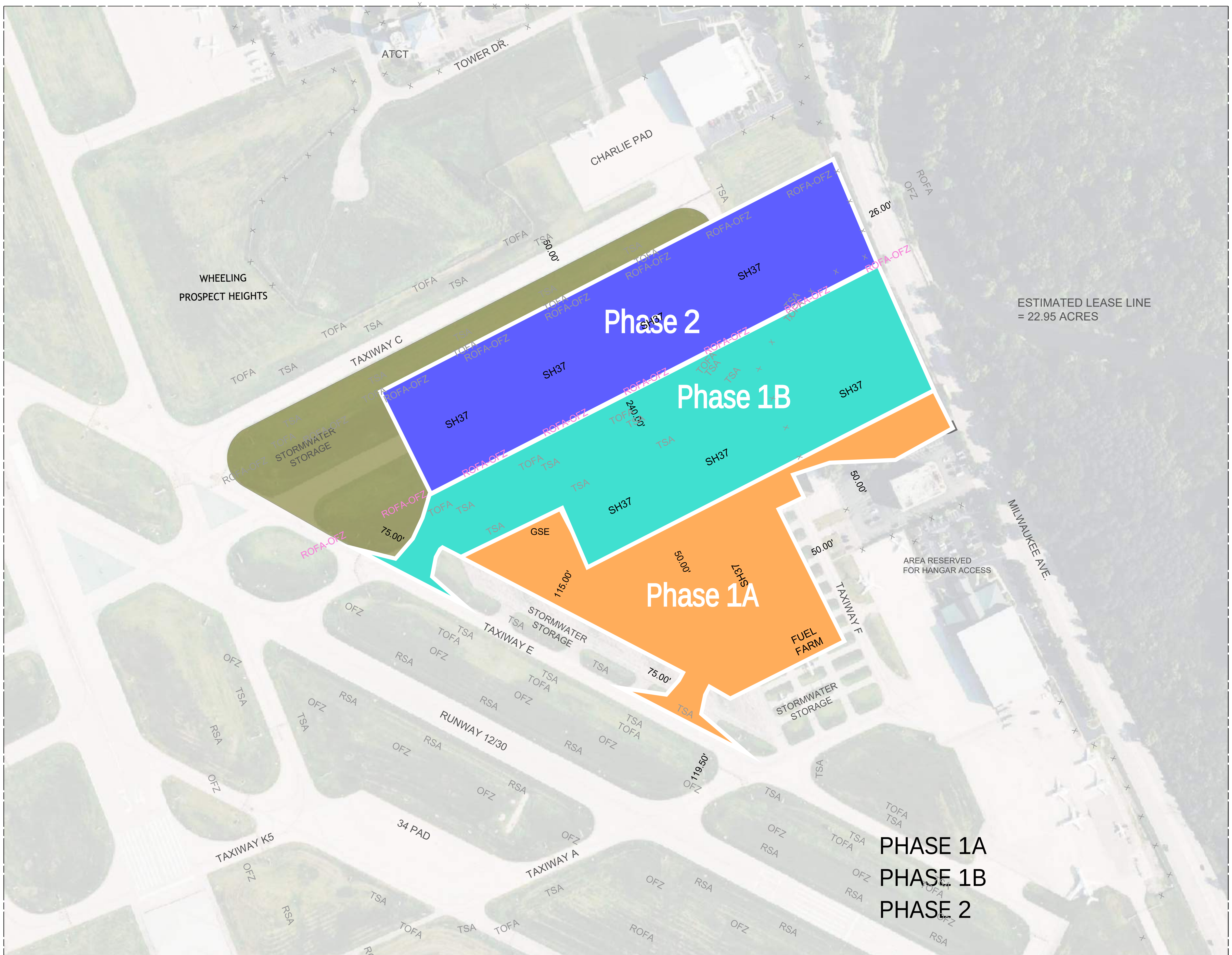
	CAL DAYS	WORK DAYS
Jun-25	30	17
Jul-25	2	1
TOTAL	**32**	**18**

ANTICIPATED CONSTRUCTION COMPLETION DATE= **July 4, 2025**

TOTAL ANTICIPATED CALENDAR DAYS = **32**

Draft Concept Estimate 10/28/24

DESCRIPTION	COST	
SITE PREPARATION	$	1,122,000.00
EARTHWORKS	$	2,736,000.00
PAVEMENTS	$	6,831,000.00
DRAINAGE / STORMWATER	$	2,835,000.00
AIRFIELD ELECTRICAL	$	210,000.00
UTILITIES	$	1,163,000.00
FUEL FARM	$	2,000,000.00
BUILDINGS	$	85,672,000.00
PROFESSIONAL FEES	$	7,180,000.00
PERMITS	$	300,000.00
TOTAL EST. COST =	**$**	**110,049,000.00**



Primera

LEGEND:

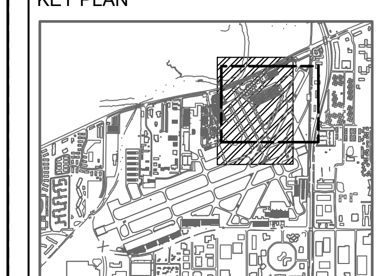
- FUTURE BUILDING
- FUTURE PCC APRON PAVEMENT
- FUTURE ROADWAY PAVEMENT
- FUTURE TURF
- LEASE AREA
- AIRPORT PROPERTY LINE
- TAXIWAY SAFETY AREA
- TAXIWAY OBJECT FREE AREA
- RUNWAY SAFETY AREA
- BUILDING RESTRICTION LINE
- OBSTACLE FREE ZONE

No.	Description	By	Chk.	App.	Date
	V4.2 PRELIMINARY SITE PLAN				9/30/24

Issues

SKY HARBOUR
HOME BASE CAMPUS

KEY PLAN



DRAWING TITLE

SKY HARBOUR PWK HOME BASE CAMPUS PHASING PLAN

SHEET NO. XXX

APPROVED XXX

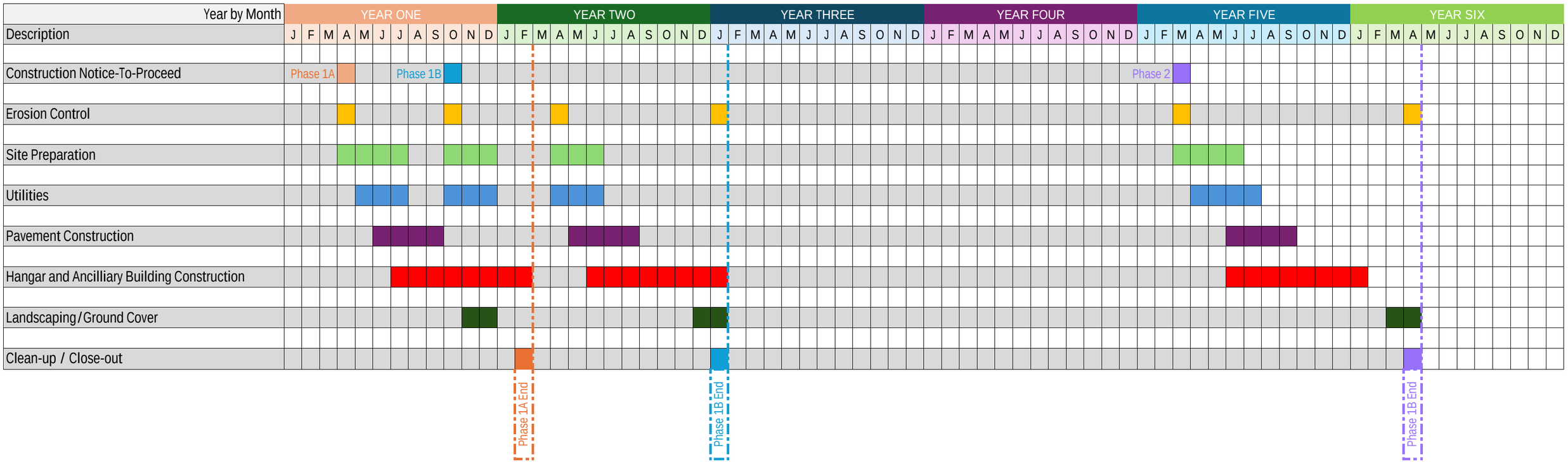
CHECKED XXX

DRAWN BY

DRAWING NO.

EXHIBIT 1 OF 3

SKYH @ PWK
Home Base Campus
Preliminary Construction Schedule for Environmental Documentation Purposes



Draft Project schedule is based upon early conceptual planning and is subject to change.

APPENDIX B

CONSTRUCTION EMISSIONS INVENTORY

Runway 6-24 Decommissioning and Aircraft Hangar Development

Chicago Executive Airport (PWK)

B.1 Construction Emission Inventory

The U.S. Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The USEPA identifies the following seven criteria air pollutants for which NAAQS are applicable: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and sulfur dioxide (SO_2). The USEPA describes these pollutants as "criteria" air pollutants because the agency regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels.[1]

According to the USEPA, Cook County, Illinois is classified as "Moderate" for 8-Hour Ozone (2015) and "Maintenance" for 8-Hour Ozone (2008), which is comprised of nitrogen oxide (NOx) and volatile organic compounds (VOCs).[2] The Project Study Area for the Chicago Executive Airport Runway Decommissioning and Hangar Development Project (Proposed Action) is located entirely in Cook County, Illinois.

This construction emission inventory (CEI) assessment was prepared for informational purposes to disclose the Proposed Action's potential construction-related air emissions. Construction of the Proposed Action is anticipated to occur in 2025, 2026 and 2029.

B.1.1 Construction Emissions Inventory Approach

Construction for the Proposed Action includes earthwork, grading, leveling, construction equipment storage, and movement activities that are sources of off-road, on-road, and fugitive dust emissions.

Non-road Emission Sources

Non-road sources associated with the Proposed Action's construction include exhaust from heavy construction equipment (e.g., dozers, and pavers) and fugitive dust emissions.

On-road Emission Sources

On-road emission sources associated with the Proposed Action's construction include material delivery vehicles (e.g., trucks carrying concrete) and passenger vehicles transporting construction personnel to and from the job site.

Fugitive Emissions

Paving or dust emission sources associated with the Proposed Action's construction include asphalt storage, material movement on paved and unpaved roads, soil handling, un-stabilized land, and wind erosion. Paving or dust emissions were based on the number of months for construction.

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1 U.S Environmental Protection Agency. Criteria Air Pollutants. Retrieved October 2024 from https://www.epa.gov/criteria-air-pollutants

2 U.S. Environmental Protection Agency, Green Book: Illinois Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Retrieved October 2024 from https://www3.epa.gov/airquality/greenbook/anayo_il.html

Construction emissions are estimated based on these factors: construction schedule; the number of construction vehicles and/or equipment; the types of construction vehicles and/or equipment; types of fuel used to power the equipment and vehicles; vehicle and equipment hourly activity/vehicle miles traveled; construction materials used and their quantities; and the duration of construction.

B.1.2 MOVES4

The EPA's MOtor Vehicle Emissions Simulator 4 (MOVES4.0) was used to analyze the Proposed Action's potential off-road and on-road construction emissions.

B.1.2.1 Construction Emissions Inventory Inputs

The Proposed Action's construction components are shown in **Table B-1**, and **Table B-2**, **Table B-3**, and **Table B-4** depict the typical construction equipment and operating hours needed to develop the CEI inputs. CEI inputs were coordinated with construction management engineers based on professional judgment and past experience with airport projects. MOVES4.0 emission factors and load factors were developed for the Proposed Action to determine the off-road and on-road emissions.

Table B-1: Proposed Action Construction Components

Component Name	Months
Removal of Runway 6-24	*June 2025 - 26 Days*
Removal of Taxiway B	*June 2025 - 10 Days*
Removal of Taxiway C	*June 2025 - 6 Days*
Removal of Taxiway F	*June 2025 - 5 Days*
Removal of Area 2 Pavement	*June 2025 - 11 Days*
Removal of Area 3 Pavement	*June 2025 - 18 Days*
Removal of Assorted Foundations/Pavement	*April 2025 - 7 Months*
Stormwater Storage Basins	*April 2025 - 12 Months*
Hangar (1x)	*July 2025 - 8 Months*
Hangar Office Building (1x)	*July 2025 - 8 Months*
Fuel Farm	*July 2025 - 8 Months*
Apron	*May 2025 - 4 Months*
Utilities	*May 2025 - 6 Months*
GSE Pad	*July 2025 - 8 Months*
Access Road/Parking	*July 2025 - 8 Months*
Apron	*May 2026 - 4 Months*
Hangars (3x)	*June 2026 - 8 Months*
Hangar Office Building (3x)	*June 2026 - 8 Months*
Access Road/Parking	*April 2026 - 3 Months*
Utilities	*April 2026 - 3 Months*
Hangar (4x)	*June 2029 - 8 Months*
Hangar Office Building (4x)	*June 2029 - 8 Months*
Apron	*June 2029 - 8 Months*
Access Road/Parking	*June 2029 - 8 Months*

Table B-2: 2025 Non-Road Construction Emissions Inventory Inputs

Equipment Type	Fuel Type	Horsepower	Operating Hours
40 Ton Crane	Diesel	300	154.70
90 Ton Crane	Diesel	300	744.80
Air Compressor	Diesel	100	52.40
Asphalt Paver	Diesel	175	8.30
Backhoe	Diesel	100	1,397.94
Chain Saw	Diesel	11	188.40
Chipper/Stump Grinder	Diesel	100	188.40
Concrete Pump	Diesel	11	44.69
Concrete Ready Mix Trucks	Diesel	600	366.39
Concrete Saws	Diesel	40	52.40
Concrete Truck	Diesel	600	382.40
Crane	Diesel	300	12.00
Curb/Gutter Paver	Diesel	175	48.00
Distributing Tanker	Diesel	600	37.80
Dozer	Diesel	175	3,176.90
Dump Truck	Diesel	600	679.80
Dump Truck (12 cy)	Diesel	600	5,209.00
Excavator	Diesel	175	2,302.00
Flatbed Truck	Diesel	600	460.00
Fork Truck	Diesel	100	3,887.34
Grader	Diesel	300	25.00
Grout Mixer for Mortar	Diesel	600	446.88
High Lift	Diesel	100	1,177.37
High Lift Fork Truck	Diesel	100	744.80
Hydroseeder	Diesel	600	68.20
Loader	Diesel	150	283.20
Man Lift	Diesel	75	2,598.25
Man Lift (Fascia Construction)	Diesel	75	524.23
Masonry Saw	Diesel	40	446.88
Material Deliveries	Diesel	600	34.95
Off-Road Truck	Diesel	600	68.20
Other General Equipment	Diesel	175	1,159.40
Pickup Truck	Diesel	600	4,762.20
Pumps	Diesel	11	62.80
Roller	Diesel	100	1,780.80
Rubber Tired Loader	Diesel	175	52.40
Scraper	Diesel	600	1,760.50
Skid Steer Loader	Diesel	75	134.60
Slip Form Paver	Diesel	175	52.40
Surfacing Equipment (Grooving)	Diesel	25	63.10
Survey Crew Trucks	Diesel	600	43.69
Tool Truck	Diesel	600	928.15
Tractor Trailer- Material Delivery	Diesel	600	840.77
Tractor Trailer- Steel Deliveries	Diesel	600	233.75
Tractor Trailer- Truck Delivery	Diesel	600	111.72
Tractor Trailers Temp Fac.	Diesel	600	17.47
Tractors/Loader/Backhoe	Diesel	100	315.90
Trowel Machine	Diesel	600	29.79
Vibratory Compactor	Diesel	6	96.00
Water Truck	Diesel	600	9,600.00
		Total	**47,857.05**

Source: RS&H 2024.

Table B-3: 2026 Non-Road Construction Emissions Inventory Inputs

Equipment Type	Fuel Type	Horsepower	Operating Hours
40 Ton Crane	Diesel	300	464.09
90 Ton Crane	Diesel	300	2,234.40
Air Compressor	Diesel	100	82.80
Asphalt Paver	Diesel	175	3.50
Backhoe	Diesel	100	4,193.83
Chain Saw	Diesel	11	74.40
Chipper/Stump Grinder	Diesel	100	74.40
Concrete Pump	Diesel	11	134.06
Concrete Ready Mix Trucks	Diesel	600	1,099.16
Concrete Saws	Diesel	40	82.80
Concrete Truck	Diesel	600	426.00
Curb/Gutter Paver	Diesel	175	20.30
Distributing Tanker	Diesel	600	66.30
Dozer	Diesel	175	621.70
Dump Truck	Diesel	600	443.10
Dump Truck (12 cy)	Diesel	600	871.10
Excavator	Diesel	175	270.10
Flatbed Truck	Diesel	600	569.80
Fork Truck	Diesel	100	11,662.01
Grader	Diesel	300	30.00
Grout Mixer for Mortar	Diesel	600	1,340.64
High Lift	Diesel	100	3,532.11
High Lift Fork Truck	Diesel	100	2,234.40
Hydroseeder	Diesel	600	27.30
Loader	Diesel	150	219.00
Man Lift	Diesel	75	7,794.74
Man Lift (Fascia Construction)	Diesel	75	1,572.69
Masonry Saw	Diesel	40	1,340.64
Material Deliveries	Diesel	600	104.85
Off-Road Truck	Diesel	600	27.30
Other General Equipment	Diesel	175	1,200.90
Pickup Truck	Diesel	600	1,816.50
Pumps	Diesel	11	25.20
Roller	Diesel	100	407.30
Rubber Tired Loader	Diesel	175	82.80
Scraper	Diesel	600	115.30
Skid Steer Loader	Diesel	75	116.00
Slip Form Paver	Diesel	175	82.80
Surfacing Equipment (Grooving)	Diesel	25	87.30
Survey Crew Trucks	Diesel	600	131.06
Tool Truck	Diesel	600	2,784.45
Tractor Trailer- Material Delivery	Diesel	600	2,522.31
Tractor Trailer- Steel Deliveries	Diesel	600	701.26
Tractor Trailer- Truck Delivery	Diesel	600	335.16
Tractor Trailers Temp Fac.	Diesel	600	52.42
Tractors/Loader/Backhoe	Diesel	100	210.50
Trowel Machine	Diesel	600	89.38
Vibratory Compactor	Diesel	6	40.70
Water Truck	Diesel	600	1,680.00
		Total	**54,098.84**

Source: RS&H 2024.

Table B-4: 2029 Non-Road Construction Emissions Inventory Inputs

Equipment Type	Fuel Type	Horsepower	Operating Hours
40 Ton Crane	Diesel	300	618.79
90 Ton Crane	Diesel	300	2,979.20
Air Compressor	Diesel	100	29.60
Asphalt Paver	Diesel	175	8.30
Backhoe	Diesel	100	5,591.77
Chain Saw	Diesel	11	48.00
Chipper/Stump Grinder	Diesel	100	48.00
Concrete Pump	Diesel	11	178.75
Concrete Ready Mix Trucks	Diesel	600	1,465.55
Concrete Saws	Diesel	40	29.60
Concrete Truck	Diesel	600	450.70
Curb/Gutter Paver	Diesel	175	95.60
Distributing Tanker	Diesel	600	23.70
Dozer	Diesel	175	387.90
Dump Truck	Diesel	600	688.40
Dump Truck (12 cy)	Diesel	600	488.80
Excavator	Diesel	175	168.30
Flatbed Truck	Diesel	600	319.70
Fork Truck	Diesel	100	15,549.35
Grader	Diesel	300	19.60
Grout Mixer for Mortar	Diesel	600	1,787.52
High Lift	Diesel	100	4,709.48
High Lift Fork Truck	Diesel	100	2,979.20
Hydroseeder	Diesel	600	17.70
Loader	Diesel	150	262.40
Man Lift	Diesel	75	10,392.98
Man Lift (Fascia Construction)	Diesel	75	2,096.91
Masonry Saw	Diesel	40	1,787.52
Material Deliveries	Diesel	600	139.79
Off-Road Truck	Diesel	600	17.70
Other General Equipment	Diesel	175	954.40
Pickup Truck	Diesel	600	1,461.40
Pumps	Diesel	11	16.00
Roller	Diesel	100	267.80
Rubber Tired Loader	Diesel	175	29.60
Scraper	Diesel	600	64.70
Skid Steer Loader	Diesel	75	250.40
Slip Form Paver	Diesel	175	29.60
Surfacing Equipment (Grooving)	Diesel	25	40.20
Survey Crew Trucks	Diesel	600	174.74
Tool Truck	Diesel	600	3,712.59
Tractor Trailer- Material Delivery	Diesel	600	3,363.08
Tractor Trailer- Steel Deliveries	Diesel	600	935.01
Tractor Trailer- Truck Delivery	Diesel	600	446.88
Tractor Trailers Temp Fac.	Diesel	600	69.90
Tractors/Loader/Backhoe	Diesel	100	514.20
Trowel Machine	Diesel	600	119.17
Vibratory Compactor	Diesel	6	191.30
Water Truck	Diesel	600	3,840.00
		Total	**69,861.79**

Source: RS&H 2024.

The development of Vehicle Miles Traveled (VMT) is based on engineering judgment and past experience with airport construction projects. The calculation of VMT is developed by using the number of construction employees and the number of

expected equipment types during the construction of the Proposed Action. The distance traveled by employees and material deliveries for the Proposed Action are based on a 30-mile round trip per passenger car and a 40-mile round trip per material delivery that would originate from the Chicago region. The round-trip distance is applied to each passenger and material delivery vehicle and multiplied by each day of construction to develop the total VMT used for the on-road analysis from MOVES4.0. Refer to **Table B-5**, **Table B-6**, and **Table B-7** for the VMT used per construction year.

Table B-5: 2025 On-Road Construction Emissions Inventory Inputs

Equipment	Fuel Type	VMT*
Single Unit Short-haul Truck	Diesel	324,309.95
Combination Short-haul Truck	Diesel	2,165.81
Passenger Car	Gasoline	2,203,114.32

Note – VMT = vehicle miles traveled.
Source: MOVES4, RS&H 2024.

Table B-6: 2026 On-Road Construction Emissions Inventory Inputs

Equipment	Fuel Type	VMT*
Single Unit Short-haul Truck	Diesel	129,509.86
Combination Short-haul Truck	Diesel	4,253.43
Passenger Car	Gasoline	2,062,482.64

Note – VMT = vehicle miles traveled.
Source: MOVES4, RS&H 2024.

Table B-7: 2029 On-Road Construction Emissions Inventory Inputs

Equipment	Fuel Type	VMT*
Single Unit Short-haul Truck	Diesel	98,972.81
Combination Short-haul Truck	Diesel	6,046.25
Passenger Car	Gasoline	2,881,051.38

Note – VMT = vehicle miles traveled.
Source: MOVES4, RS&H 2024.

B.1.2.2 Construction Emissions Inventory Results

For informational purposes, **Table B-8**, **Table B-9**, and **Table B-10** shows the criteria pollutants, as well as the greenhouse gas emissions (GHGs) in tons per year during the Proposed Action's construction. The primary greenhouse gas emissions are Carbon Dioxide (CO2), Methane (CH4), and Nitrous Oxide (N2O).

Table B-8: 2025 Proposed Action Results (Tons Per Year)

							GHGs		
2025	CO	VOC	NOx	PM_{10}	$PM_{2.5}$	SOx	CO_2	CH_4	N_2O
NONROAD	1.12	0.22	3.64	0.21	0.20	0.02	6,389.02	N/A	N/A
ONROAD	8.35	0.20	1.43	0.07	0.06	0.00	985.69	0.03	0.03
FUGITIVE	0.15	2.23	0.01	1.11	N/A	0.00	N/A	N/A	N/A
TOTAL	9.62	2.65	5.07	1.38	0.26	0.02	7,374.71	0.03	0.03
De Minimis Levels	N/A	100	100	N/A	N/A	N/A	N/A	N/A	N/A

Note – N/A = not applicable. Totals may not sum due to rounding.
Source: MOVES4, RS&H 2024.

Table B-9: 2026 Proposed Action Results (Tons Per Year)

							GHGs		
2026	CO	VOC	NOx	PM_{10}	$PM_{2.5}$	SOx	CO_2	CH_4	N_2O
NONROAD	1.36	0.22	4.55	0.22	0.21	0.01	4,599.73	N/A	N/A
ONROAD	7.22	0.11	0.69	0.03	0.03	0.00	750.99	0.02	0.01
FUGITIVE	0.06	0.95	0.00	0.58	N/A	0.00	N/A	N/A	N/A
TOTAL	8.64	1.28	5.25	0.83	0.24	0.02	5,350.72	0.02	0.01
De Minimis Levels	N/A	100	100	N/A	N/A	N/A	N/A	N/A	N/A

Note – N/A = not applicable. Totals may not sum due to rounding.
Source: MOVES4, RS&H 2024.

Table B-10: 2029 Proposed Action Results (Tons Per Year)

							GHGs		
2029	CO	VOC	NOx	PM_{10}	$PM_{2.5}$	SOx	CO_2	CH_4	N_2O
NONROAD	0.96	0.20	4.92	0.17	0.16	0.02	5,891.73	N/A	N/A
ONROAD	8.77	0.09	0.47	0.02	0.01	0.00	932.97	0.02	0.01
FUGITIVE	0.14	2.22	0.01	0.92	N/A	0.00	N/A	N/A	N/A
TOTAL	9.88	2.51	5.40	1.11	0.18	0.02	6,824.70	0.02	0.01
De Minimis Levels	N/A	100	100	N/A	N/A	N/A	N/A	N/A	N/A

Note – N/A = not applicable. Totals may not sum due to rounding.
Source: MOVES4, RS&H 2024.

As shown in **Table B-8**, **Table B-9**, and **Table B-10**, NAAQS pollutants emissions from the construction of the Proposed Action are below *de minimis* thresholds identified by the USEPA.

Construction Emissions Inventory Calculations

Nonroad Emissions - 2025

Inputs							MOVES4 Emission Factors (g-hp-hr)							Emissions (Tons per Year)						
Year	Equipment Type	MOVES4 Equipment Type	Average Horsepower	Load Factor	Fuel Type	Operating Hours	CO	NOx	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2
2025	40 Ton Crane	Cranes	300	0.43	Diesel	154.70	0.078637	0.304626	0.001437	0.024821	530.9689	0.017794	0.01726	0.00173	0.000546	0.006701	0.000391	0.00038	3.16E-05	11.68012
2025	90 Ton Crane	Cranes	300	0.43	Diesel	744.80	0.078637	0.304626	0.001437	0.024821	530.9689	0.017794	0.01726	0.008328	0.002629	0.032263	0.001885	0.001828	0.000152	56.23478
2025	Air Compressor	Other Construction Equipment	100	0.59	Diesel	52.40	0.471667	1.241315	0.001635	0.04909	596.014	0.070196	0.06809	0.001607	0.000167	0.00423	0.000239	0.000232	5.57E-06	2.03117
2025	Asphalt Paver	Pavers	175	0.59	Diesel	8.30	0.122378	0.398835	0.001441	0.018496	536.7787	0.030688	0.029767	0.000116	1.75E-05	0.000377	2.9E-05	2.81E-05	1.36E-06	0.507072
2025	Backhoe	Tractors/Loaders/Backhoes	100	0.21	Diesel	1,397.94	2.140586	2.384212	0.002042	0.396328	694.8359	0.324702	0.314961	0.06927	0.012825	0.077154	0.010508	0.010192	6.61E-05	22.48524
2025	Chain Saw	Other Construction Equipment	11	0.59	Diesel	188.40	2.475544	4.184068	0.002183	0.83792	593.754	0.241842	0.234586	0.003337	0.001129	0.005639	0.000326	0.000316	2.94E-06	0.800274
2025	Chipper/Stump Grinder	Other Construction Equipment	100	0.59	Diesel	188.40	0.471667	1.241315	0.001635	0.04909	596.014	0.070196	0.06809	0.005779	0.000601	0.01521	0.00086	0.000834	2E-05	7.30291
2025	Concrete Pump	Other Construction Equipment	11	0.59	Diesel	44.69	2.475544	4.184068	0.002183	0.83792	593.754	0.241842	0.234586	0.000791	0.000268	0.001338	7.73E-05	7.5E-05	6.98E-07	0.189823
2025	Concrete Ready Mix Trucks	Off-Highway Trucks	600	0.59	Diesel	366.39	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.005746	0.001689	0.023286	0.001386	0.001344	0.000203	76.74612
2025	Concrete Saws	Other Construction Equipment	40	0.59	Diesel	52.40	0.307246	2.554479	0.001578	0.096626	595.8671	0.0266	0.025802	0.000419	0.000132	0.003482	3.63E-05	3.52E-05	2.15E-06	0.812268
2025	Concrete Truck	Off-Highway Trucks	600	0.59	Diesel	382.40	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.005997	0.001763	0.024303	0.001447	0.001403	0.000212	80.10048
2025	Crane	Cranes	300	0.43	Diesel	12.00	0.078637	0.304626	0.001437	0.024821	530.9689	0.017794	0.01726	0.000134	4.24E-05	0.00052	3.04E-05	2.95E-05	2.45E-06	0.906038
2025	Curb/Gutter Paver	Pavers	175	0.59	Diesel	48.00	0.122378	0.398835	0.001441	0.018496	536.7787	0.030688	0.029767	0.000669	0.000101	0.002179	0.000168	0.000163	7.87E-06	2.932467
2025	Distributing Tanker	Off-Highway Trucks	600	0.59	Diesel	37.80	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.000593	0.000174	0.002402	0.000143	0.000139	2.1E-05	7.917882
2025	Dozer	Crawler Tractor/Dozers	175	0.59	Diesel	3,176.90	0.091965	0.329516	0.001429	0.014135	536.7897	0.022374	0.021702	0.033252	0.005111	0.119145	0.00809	0.007847	0.000517	194.0905
2025	Dump Truck	Off-Highway Trucks	600	0.59	Diesel	679.80	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.010661	0.003134	0.043205	0.002572	0.002494	0.000377	142.3962
2025	Dump Truck (12 cy)	Off-Highway Trucks	600	0.59	Diesel	5,209.00	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.081694	0.024013	0.331059	0.019705	0.019114	0.002888	1091.118
2025	Excavator	Excavators	175	0.59	Diesel	2,302.00	0.072824	0.257207	0.001422	0.011459	536.7962	0.017281	0.016763	0.01908	0.003002	0.067388	0.004528	0.004392	0.000373	140.6408
2025	Flatbed Truck	Off-Highway Trucks	600	0.59	Diesel	460.00	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.007214	0.002121	0.029235	0.00174	0.001688	0.000255	96.35518
2025	Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	3,887.34	0.494406	1.234	0.001636	0.041503	596.0369	0.075325	0.073065	0.124995	0.010493	0.311979	0.019044	0.018472	0.000414	150.6898
2025	Grader	Graders	300	0.59	Diesel	25.00	0.052686	0.200611	0.001426	0.014203	536.7873	0.012362	0.011991	0.000257	6.93E-05	0.000979	6.03E-05	5.85E-05	6.96E-06	2.618316
2025	Grout Mixer for Mortar	Other Construction Equipment	600	0.59	Diesel	446.88	0.571644	1.47118	0.001577	0.080849	536.5918	0.078295	0.075946	0.099684	0.014099	0.256547	0.013653	0.013244	0.000275	93.57175
2025	High Lift	Rough Terrian Forklifts	100	0.59	Diesel	1,177.37	0.494406	1.234	0.001636	0.041503	596.0369	0.075325	0.073065	0.037858	0.003178	0.09449	0.005768	0.005595	0.000125	45.63994
2025	High Lift Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	744.80	0.494406	1.234	0.001636	0.041503	596.0369	0.075325	0.073065	0.023949	0.00201	0.059774	0.003649	0.003539	7.93E-05	28.87163
2025	Hydroseeder	Other Construction Equipment	600	0.59	Diesel	68.20	0.571644	1.47118	0.001577	0.080849	536.5918	0.078295	0.075946	0.015213	0.002152	0.039153	0.002084	0.002021	4.2E-05	14.28033
2025	Loader	Tractors/Loaders/Backhoes	150	0.24	Diesel	283.20	0.921847	1.801256	0.001839	0.29176	625.6919	0.188074	0.182431	0.010216	0.003233	0.019962	0.002084	0.002022	2.04E-05	6.934077
2025	Man Lift	Rough Terrian Forklifts	75	0.59	Diesel	2,598.25	0.415104	2.660832	0.001607	0.074468	595.9299	0.042809	0.041524	0.052609	0.009438	0.337223	0.005425	0.005263	0.000204	75.52577
2025	Man Lift (Fascia Construction)	Rough Terrian Forklifts	75	0.59	Diesel	524.23	0.415104	2.660832	0.001607	0.074468	595.9299	0.042809	0.041524	0.010614	0.001904	0.068039	0.001095	0.001062	4.11E-05	15.23827
2025	Masonry Saw	Other Construction Equipment	40	0.59	Diesel	446.88	0.307246	2.554479	0.001578	0.096626	595.8671	0.0266	0.025802	0.003572	0.001123	0.029697	0.000309	0.0003	1.83E-05	6.927219
2025	Material Deliveries	Off-Highway Trucks	600	0.59	Diesel	34.95	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.000548	0.000161	0.002221	0.000132	0.000128	1.94E-05	7.320599
2025	Off-Road Truck	Off-Highway Trucks	600	0.59	Diesel	68.20	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.00107	0.000314	0.004334	0.000258	0.00025	3.78E-05	14.2857
2025	Other General Equipment	Other Construction Equipment	175	0.59	Diesel	1,159.40	0.199597	0.542251	0.001472	0.042254	536.7077	0.045657	0.044288	0.026338	0.005576	0.071553	0.006025	0.005844	0.000194	70.82192
2025	Pickup Truck	Off-Highway Trucks	600	0.59	Diesel	4,762.20	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.074686	0.021954	0.302662	0.018015	0.017474	0.00264	997.5275
2025	Pumps	Other Construction Equipment	11	0.59	Diesel	62.80	2.475544	4.184068	0.002183	0.83792	593.754	0.241842	0.234586	0.001112	0.000376	0.00188	0.000109	0.000105	9.81E-07	0.266758
2025	Roller	Rollers	100	0.59	Diesel	1,780.80	0.397173	1.134953	0.00162	0.027675	596.0776	0.065021	0.06307	0.046	0.003205	0.131447	0.007531	0.007305	0.000188	69.03614
2025	Rubber Tired Loader	Tractors/Loaders/Backhoes	175	0.21	Diesel	52.40	0.921847	1.801256	0.001839	0.29176	625.6919	0.188074	0.182431	0.001957	0.000619	0.003824	0.000399	0.000387	3.9E-06	1.328176
2025	Scraper	Scrapers	600	0.59	Diesel	1,760.50	0.157547	0.447436	0.001465	0.027032	536.7509	0.026079	0.025296	0.108232	0.01857	0.307381	0.017916	0.017378	0.001007	368.7386
2025	Skid Steer Loader	Skid Steer Loaders	75	0.21	Diesel	134.60	4.969339	5.034002	0.002315	0.969166	693.1436	0.75221	0.729644	0.011613	0.002265	0.011764	0.001758	0.001705	5.41E-06	1.619778
2025	Slip Form Paver	Pavers	175	0.59	Diesel	52.40	0.122378	0.398835	0.001441	0.018496	536.7787	0.030688	0.029767	0.00073	0.00011	0.002379	0.000183	0.000178	8.59E-06	3.201276
2025	Surfacing Equipment (Grooving)	Other Construction Equipment	25	0.59	Diesel	63.10	1.497248	3.764063	0.002188	0.352246	595.1464	0.172278	0.16711	0.001536	0.000361	0.003862	0.000177	0.000171	2.25E-06	0.610593
2025	Survey Crew Trucks	Off-Highway Trucks	600	0.59	Diesel	43.69	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.000685	0.000201	0.002776	0.000165	0.00016	2.42E-05	9.150749
2025	Tool Truck	Off-Highway Trucks	600	0.59	Diesel	928.15	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.014556	0.004279	0.058989	0.003511	0.003406	0.000515	194.4172
2025	Tractor Trailer- Material Delivery	Off-Highway Trucks	600	0.59	Diesel	840.77	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.013186	0.003876	0.053435	0.003181	0.003085	0.000466	176.1143
2025	Tractor Trailer- Steel Deliveries	Off-Highway Trucks	600	0.59	Diesel	233.75	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.003666	0.001078	0.014856	0.000884	0.000858	0.00013	48.96375
2025	Tractor Trailer- Truck Delivery	Off-Highway Trucks	600	0.59	Diesel	111.72	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.001752	0.000515	0.0071	0.000423	0.00041	6.19E-05	23.40174
2025	Tractor Trailers Temp Fac.	Off-Highway Trucks	600	0.59	Diesel	17.47	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.000274	8.06E-05	0.001111	6.61E-05	6.41E-05	9.69E-06	3.6603
2025	Tractors/Loader/Backhoe	Tractors/Loaders/Backhoes	100	0.24	Diesel	315.90	2.140586	2.384212	0.002042	0.396328	694.8359	0.324702	0.314961	0.017641	0.003266	0.019649	0.002676	0.002596	1.68E-05	5.726318
2025	Trowel Machine	Other Construction Equipment	600	0.59	Diesel	29.79	0.571644	1.47118	0.001577	0.080849	536.5918	0.078295	0.075946	0.006646	0.00094	0.017103	0.00091	0.000883	1.83E-05	6.238117
2025	Vibratory Compactor	Plate Compactors	6	0.43	Diesel	96.00	2.547656	4.228258	0.002162	0.837267	587.9652	0.256628	0.248929	0.000696	0.000229	0.001154	7.01E-05	6.8E-05	5.9E-07	0.160527
2025	Water Truck	Off-Highway Trucks	600	0.59	Diesel	9,600.00	0.040191	0.16287	0.001421	0.011814	536.7937	0.009694	0.009403	0.150558	0.044256	0.61013	0.036316	0.035226	0.005322	2010.891
														Total						
														1.118868	0.219398	3.63657	0.208033	0.201792	0.017034	6389.025

Source: RS&H 2024

Nonroad Emissions - 2026

Inputs							MOVES4 Emission Factors (g-hp-hr)							Emissions (Tons per Year)						
Year	Equipment Type	MOVES4 Equipment Type	Average Horsepower	Load Factor	Fuel Type	Operating Hours	CO	NOx	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2
2026	40 Ton Crane	Cranes	300	0.43	Diesel	464.09	0.05902	0.2327	0.00142	0.01908	530.986	0.01405	0.01362	0.00389	0.00126	0.01536	0.00093	0.0009	9.4E-05	35.0415
2026	90 Ton Crane	Cranes	300	0.43	Diesel	2,234.40	0.05902	0.2327	0.00142	0.01908	530.986	0.01405	0.01362	0.01875	0.00606	0.07393	0.00446	0.00433	0.00045	168.71
2026	Air Compressor	Other Construction Equipment	100	0.59	Diesel	82.80	0.40095	1.16753	0.00162	0.04001	596.044	0.06054	0.05872	0.00216	0.00022	0.00629	0.00033	0.00032	8.7E-06	3.20972
2026	Asphalt Paver	Pavers	175	0.59	Diesel	3.50	0.09438	0.32994	0.00143	0.0145	536.789	0.02307	0.02237	3.8E-05	5.8E-06	0.00013	9.2E-06	8.9E-06	5.7E-07	0.21383
2026	Backhoe	Tractors/Loaders/Backhoes	100	0.21	Diesel	4,193.83	1.78135	2.12641	0.00201	0.33199	695.021	0.27486	0.26661	0.17294	0.03223	0.20643	0.02668	0.02588	0.00019	67.4737
2026	Chain Saw	Other Construction Equipment	11	0.59	Diesel	74.40	2.46739	4.18375	0.00218	0.83788	593.754	0.2402	0.233	0.00131	0.00045	0.00223	0.00013	0.00012	1.2E-06	0.31603
2026	Chipper/Stump Grinder	Other Construction Equipment	100	0.59	Diesel	74.40	0.40095	1.16753	0.00162	0.04001	596.044	0.06054	0.05872	0.00194	0.00019	0.00565	0.00029	0.00028	7.9E-06	2.8841
2026	Concrete Pump	Other Construction Equipment	11	0.59	Diesel	134.06	2.46739	4.18375	0.00218	0.83788	593.754	0.2402	0.233	0.00237	0.0008	0.00401	0.00023	0.00022	2.1E-06	0.56947
2026	Concrete Ready Mix Trucks	Off-Highway Trucks	600	0.59	Diesel	1,099.16	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.01372	0.00469	0.06046	0.00362	0.00351	0.00061	230.24
2026	Concrete Saws	Other Construction Equipment	40	0.59	Diesel	82.80	0.28971	2.53802	0.00157	0.09347	595.877	0.02303	0.02234	0.00062	0.0002	0.00547	5E-05	4.8E-05	3.4E-06	1.28353
2026	Concrete Truck	Off-Highway Trucks	600	0.59	Diesel	426.00	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00532	0.00182	0.02343	0.0014	0.00136	0.00024	89.2339
2026	Curb/Gutter Paver	Pavers	175	0.59	Diesel	20.30	0.09438	0.32994	0.00143	0.0145	536.789	0.02307	0.02237	0.00022	3.3E-05	0.00076	5.3E-05	5.2E-05	3.3E-06	1.24021
2026	Distributing Tanker	Off-Highway Trucks	600	0.59	Diesel	66.30	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00083	0.00028	0.00365	0.00022	0.00021	3.7E-05	13.8878
2026	Dozer	Crawler Tractor/Dozers	175	0.59	Diesel	621.70	0.081	0.28979	0.00143	0.01262	536.792	0.01942	0.01883	0.00573	0.00089	0.0205	0.00137	0.00133	0.0001	37.9825
2026	Dump Truck	Off-Highway Trucks	600	0.59	Diesel	443.10	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00553	0.00189	0.02437	0.00146	0.00142	0.00025	92.8158
2026	Dump Truck (12 cy)	Off-Highway Trucks	600	0.59	Diesel	871.10	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.01087	0.00372	0.04792	0.00287	0.00278	0.00048	182.469
2026	Excavator	Excavators	175	0.59	Diesel	270.10	0.06332	0.22039	0.00142	0.01015	536.801	0.01477	0.01432	0.00195	0.00031	0.00677	0.00045	0.00044	4.4E-05	16.5019
2026	Flatbed Truck	Off-Highway Trucks	600	0.59	Diesel	569.80	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00711	0.00243	0.03134	0.00188	0.00182	0.00032	119.356
2026	Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	11,662.01	0.41715	1.14588	0.00162	0.03292	596.062	0.06486	0.06291	0.31639	0.02497	0.8691	0.04919	0.04772	0.00123	452.089
2026	Grader	Graders	300	0.59	Diesel	30.00	0.04222	0.17379	0.00142	0.0127	536.792	0.01043	0.01011	0.00025	7.4E-05	0.00102	6.1E-05	5.9E-05	8.3E-06	3.142
2026	Grout Mixer for Mortar	Other Construction Equipment	600	0.59	Diesel	1,340.64	0.47507	1.25101	0.00155	0.06824	536.632	0.06477	0.06283	0.24853	0.0357	0.65446	0.03389	0.03287	0.00081	280.736
2026	High Lift	Rough Terrian Forklifts	100	0.59	Diesel	3,532.11	0.41715	1.14588	0.00162	0.03292	596.062	0.06486	0.06291	0.09583	0.00756	0.26323	0.0149	0.01445	0.00037	136.926
2026	High Lift Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	2,234.40	0.41715	1.14588	0.00162	0.03292	596.062	0.06486	0.06291	0.06062	0.00478	0.16652	0.00942	0.00914	0.00024	86.6186
2026	Hydroseeder	Other Construction Equipment	600	0.59	Diesel	27.30	0.47507	1.25101	0.00155	0.06824	536.632	0.06477	0.06283	0.00506	0.00073	0.01333	0.00069	0.00067	1.7E-05	5.71675
2026	Loader	Tractors/Loaders/Backhoes	150	0.24	Diesel	219.00	0.76895	1.52747	0.00181	0.24229	625.837	0.15811	0.15337	0.00659	0.00208	0.01309	0.00136	0.00131	1.5E-05	5.3634
2026	Man Lift	Rough Terrian Forklifts	75	0.59	Diesel	7,794.74	0.34667	2.62146	0.0016	0.06651	595.953	0.03422	0.03319	0.13181	0.02529	0.9967	0.01301	0.01262	0.00061	226.586
2026	Man Lift (Fascia Construction)	Rough Terrian Forklifts	75	0.59	Diesel	1,572.69	0.34667	2.62146	0.0016	0.06651	595.953	0.03422	0.03319	0.02659	0.0051	0.2011	0.00263	0.00255	0.00012	45.7166
2026	Masonry Saw	Other Construction Equipment	40	0.59	Diesel	1,340.64	0.28971	2.53802	0.00157	0.09347	595.877	0.02303	0.02234	0.0101	0.00326	0.08852	0.0008	0.00078	5.5E-05	20.782
2026	Material Deliveries	Off-Highway Trucks	600	0.59	Diesel	104.85	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00131	0.00045	0.00577	0.00035	0.00033	5.8E-05	21.962
2026	Off-Road Truck	Off-Highway Trucks	600	0.59	Diesel	27.30	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00034	0.00012	0.0015	9E-05	8.7E-05	1.5E-05	5.71851
2026	Other General Equipment	Other Construction Equipment	175	0.59	Diesel	1,200.90	0.17442	0.46471	0.00146	0.03538	536.728	0.04034	0.03913	0.02384	0.00484	0.06352	0.00551	0.00535	0.0002	73.3597
2026	Pickup Truck	Off-Highway Trucks	600	0.59	Diesel	1,816.50	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.02267	0.00775	0.09992	0.00598	0.0058	0.00101	380.501
2026	Pumps	Other Construction Equipment	11	0.59	Diesel	25.20	2.46739	4.18375	0.00218	0.83788	593.754	0.2402	0.233	0.00044	0.00015	0.00075	4.3E-05	4.2E-05	3.9E-07	0.10704
2026	Roller	Rollers	100	0.59	Diesel	407.30	0.26207	1.04524	0.0016	0.01935	596.1	0.04499	0.04364	0.00694	0.00051	0.02769	0.00119	0.00116	4.2E-05	15.7904
2026	Rubber Tired Loader	Tractors/Loaders/Backhoes	175	0.21	Diesel	82.80	0.76895	1.52747	0.00181	0.24229	625.837	0.15811	0.15337	0.00258	0.00081	0.00512	0.00053	0.00051	6.1E-06	2.09921
2026	Scraper	Scrapers	600	0.59	Diesel	115.30	0.13097	0.37537	0.00146	0.0237	536.76	0.02282	0.02214	0.00589	0.00107	0.01689	0.00103	0.001	6.6E-05	24.1501
2026	Skid Steer Loader	Skid Steer Loaders	75	0.21	Diesel	116.00	4.5896	4.81856	0.00228	0.88846	693.383	0.68996	0.66926	0.00924	0.00179	0.0097	0.00139	0.00135	4.6E-06	1.39643
2026	Slip Form Paver	Pavers	175	0.59	Diesel	82.80	0.09438	0.32994	0.00143	0.0145	536.789	0.02307	0.02237	0.00089	0.00014	0.00311	0.00022	0.00021	1.3E-05	5.0586
2026	Surfacing Equipment (Grooving)	Other Construction Equipment	25	0.59	Diesel	87.30	1.49246	3.76315	0.00219	0.35188	595.147	0.17123	0.16609	0.00212	0.0005	0.00534	0.00024	0.00024	3.1E-06	0.84477
2026	Survey Crew Trucks	Off-Highway Trucks	600	0.59	Diesel	131.06	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00164	0.00056	0.00721	0.00043	0.00042	7.3E-05	27.4524
2026	Tool Truck	Off-Highway Trucks	600	0.59	Diesel	2,784.45	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.03475	0.01188	0.15316	0.00917	0.00889	0.00154	583.256
2026	Tractor Trailer- Material Delivery	Off-Highway Trucks	600	0.59	Diesel	2,522.31	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.03148	0.01077	0.13874	0.00831	0.00806	0.0014	528.347
2026	Tractor Trailer- Steel Deliveries	Off-Highway Trucks	600	0.59	Diesel	701.26	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00875	0.00299	0.03857	0.00231	0.00224	0.00039	146.892
2026	Tractor Trailer- Truck Delivery	Off-Highway Trucks	600	0.59	Diesel	335.16	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00418	0.00143	0.01844	0.0011	0.00107	0.00019	70.2057
2026	Tractor Trailers Temp Fac.	Off-Highway Trucks	600	0.59	Diesel	52.42	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.00065	0.00022	0.00288	0.00017	0.00017	2.9E-05	10.981
2026	Tractors/Loader/Backhoe	Tractors/Loaders/Backhoes	100	0.24	Diesel	210.50	1.78135	2.12641	0.00201	0.33199	695.021	0.27486	0.26661	0.00978	0.00182	0.01168	0.00151	0.00146	1.1E-05	3.81675
2026	Trowel Machine	Other Construction Equipment	600	0.59	Diesel	89.38	0.47507	1.25101	0.00155	0.06824	536.632	0.06477	0.06283	0.01657	0.00238	0.04363	0.00226	0.00219	5.4E-05	18.7158
2026	Vibratory Compactor	Plate Compactors	6	0.43	Diesel	40.70	2.53154	4.21098	0.00216	0.83788	587.964	0.25435	0.24672	0.00029	9.7E-05	0.00049	2.9E-05	2.9E-05	2.5E-07	0.06806
2026	Water Truck	Off-Highway Trucks	600	0.59	Diesel	1,680.00	0.03198	0.14096	0.00142	0.01094	536.798	0.00844	0.00819	0.02097	0.00717	0.09241	0.00553	0.00537	0.00093	351.908
														Total						
														1.3624	0.22448	4.5523	0.21978	0.21319	0.01233	4599.73

Source: RS&H 2024

Nonroad Emissions - 2029

Inputs							MOVES4 Emission Factors (g-hp-hr)							Emissions (Tons per Year)						
Year	Equipment Type	MOVES4 Equipment Type	Average Horsepower	Load Factor	Fuel Type	Operating Hours	CO	NOx	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2
2029	40 Ton Crane	Cranes	300	0.43	Diesel	618.8	0.033038	0.152377	0.001407	0.012681	531.0047	0.008856	0.00859	0.002907	0.001116	0.013408	0.000779	0.000756	0.000124	46.72364
2029	90 Ton Crane	Cranes	300	0.43	Diesel	2979.2	0.033038	0.152377	0.001407	0.012681	531.0047	0.008856	0.00859	0.013996	0.005372	0.064553	0.003752	0.003639	0.000596	224.9543
2029	Air Compressor	Other Construction Equipment	100	0.59	Diesel	29.6	0.19745	0.979884	0.001592	0.018333	596.1042	0.032569	0.031592	0.00038	3.53E-05	0.001886	6.27E-05	6.08E-05	3.06E-06	1.147552
2029	Asphalt Paver	Pavers	175	0.59	Diesel	8.3	0.070226	0.243552	0.001421	0.011156	536.7998	0.016518	0.016022	6.63E-05	1.05E-05	0.00023	1.56E-05	1.51E-05	1.34E-06	0.507092
2029	Backhoe	Tractors/Loaders/Backhoes	100	0.21	Diesel	5591.8	1.184468	1.69321	0.001948	0.218019	695.3629	0.183117	0.177623	0.15332	0.028221	0.219172	0.023703	0.022992	0.000252	90.00916
2029	Chain Saw	Other Construction Equipment	11	0.59	Diesel	48.0	2.458431	4.183328	0.002183	0.837695	593.7549	0.238375	0.231224	0.000844	0.000288	0.001437	8.19E-05	7.94E-05	7.5E-07	0.203892
2029	Chipper/Stump Grinder	Other Construction Equipment	100	0.59	Diesel	48.0	0.19745	0.979884	0.001592	0.018333	596.1042	0.032569	0.031592	0.000616	5.72E-05	0.003059	0.000102	9.86E-05	4.97E-06	1.860895
2029	Concrete Pump	Other Construction Equipment	11	0.59	Diesel	178.8	2.458431	4.183328	0.002183	0.837695	593.7549	0.238375	0.231224	0.003144	0.001071	0.00535	0.000305	0.000296	2.79E-06	0.759293
2029	Concrete Ready Mix Trucks	Off-Highway Trucks	600	0.59	Diesel	1465.5	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.01168	0.005513	0.065062	0.003705	0.003593	0.000809	306.9886
2029	Concrete Saws	Other Construction Equipment	40	0.59	Diesel	29.6	0.277922	2.528299	0.001569	0.092394	595.8831	0.020196	0.01959	0.000214	7.11E-05	0.001947	1.56E-05	1.51E-05	1.21E-06	0.458851
2029	Concrete Truck	Off-Highway Trucks	600	0.59	Diesel	450.7	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.003592	0.001695	0.020009	0.001139	0.001105	0.000249	94.40841
2029	Curb/Gutter Paver	Pavers	175	0.59	Diesel	95.6	0.070226	0.243552	0.001421	0.011156	536.7998	0.016518	0.016022	0.000764	0.000121	0.00265	0.00018	0.000174	1.55E-05	5.840726
2029	Distributing Tanker	Off-Highway Trucks	600	0.59	Diesel	23.7	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.000189	8.91E-05	0.001052	5.99E-05	5.81E-05	1.31E-05	4.964454
2029	Dozer	Crawler Tractor/Dozers	175	0.59	Diesel	387.9	0.058889	0.202064	0.001417	0.009556	536.8023	0.013544	0.013138	0.0026	0.000422	0.008921	0.000598	0.00058	6.26E-05	23.69904
2029	Dump Truck	Off-Highway Trucks	600	0.59	Diesel	688.4	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.005486	0.002589	0.030561	0.00174	0.001688	0.00038	144.1996
2029	Dump Truck (12 cy)	Off-Highway Trucks	600	0.59	Diesel	488.8	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.003895	0.001839	0.0217	0.001236	0.001199	0.00027	102.3892
2029	Excavator	Excavators	175	0.59	Diesel	168.3	0.050751	0.171176	0.001414	0.008442	536.804	0.011313	0.010974	0.000972	0.000162	0.003279	0.000217	0.00021	2.71E-05	10.28245
2029	Flatbed Truck	Off-Highway Trucks	600	0.59	Diesel	319.7	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.002548	0.001203	0.014193	0.000808	0.000784	0.000176	66.96776
2029	Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	15549.3	0.148827	0.93159	0.001584	0.012957	596.1199	0.026763	0.02596	0.150506	0.013103	0.942097	0.027065	0.026253	0.001602	602.8431
2029	Grader	Graders	300	0.59	Diesel	19.6	0.025262	0.124938	0.001416	0.010416	536.7987	0.007498	0.007273	9.66E-05	3.98E-05	0.000478	2.87E-05	2.78E-05	5.42E-06	2.052803
2029	Grout Mixer for Mortar	Other Construction Equipment	600	0.59	Diesel	1787.5	0.30763	0.854903	0.001504	0.045998	536.694	0.043081	0.041789	0.21458	0.032085	0.596318	0.03005	0.029149	0.001049	374.3583
2029	High Lift	Rough Terrian Forklifts	100	0.59	Diesel	4709.5	0.148827	0.93159	0.001584	0.012957	596.1199	0.026763	0.02596	0.045584	0.003969	0.285336	0.008197	0.007951	0.000485	182.5852
2029	High Lift Fork Truck	Rough Terrian Forklifts	100	0.59	Diesel	2979.2	0.148827	0.93159	0.001584	0.012957	596.1199	0.026763	0.02596	0.028836	0.002511	0.180502	0.005186	0.00503	0.000307	115.5026
2029	Hydroseeder	Other Construction Equipment	600	0.59	Diesel	17.7	0.30763	0.854903	0.001504	0.045998	536.694	0.043081	0.041789	0.002125	0.000318	0.005905	0.000298	0.000289	1.04E-05	3.706891
2029	Loader	Tractors/Loaders/Backhoes	150	0.24	Diesel	262.4	0.501627	1.054915	0.001754	0.16006	626.0767	0.106553	0.103357	0.005151	0.001644	0.010832	0.001094	0.001061	1.8E-05	6.428746
2029	Man Lift	Rough Terrian Forklifts	75	0.59	Diesel	10393.0	0.217443	2.555806	0.001574	0.053149	595.9904	0.019855	0.019259	0.110231	0.026943	1.295651	0.010065	0.009763	0.000798	302.1337
2029	Man Lift (Fascia Construction)	Rough Terrian Forklifts	75	0.59	Diesel	2096.9	0.217443	2.555806	0.001574	0.053149	595.9904	0.019855	0.019259	0.022241	0.005436	0.261414	0.002031	0.00197	0.000161	60.95926
2029	Masonry Saw	Other Construction Equipment	40	0.59	Diesel	1787.5	0.277922	2.528299	0.001569	0.092394	595.8831	0.020196	0.01959	0.012924	0.004296	0.11757	0.000939	0.000911	7.3E-05	27.70962
2029	Material Deliveries	Off-Highway Trucks	600	0.59	Diesel	139.8	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.001114	0.000526	0.006206	0.000353	0.000343	7.71E-05	29.28279
2029	Off-Road Truck	Off-Highway Trucks	600	0.59	Diesel	17.7	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.000141	6.66E-05	0.000786	4.47E-05	4.34E-05	9.77E-06	3.70763
2029	Other General Equipment	Other Construction Equipment	175	0.59	Diesel	954.4	0.102355	0.274935	0.001434	0.018113	536.7776	0.024291	0.023562	0.011118	0.001968	0.029865	0.002639	0.002559	0.000156	58.3071
2029	Pickup Truck	Off-Highway Trucks	600	0.59	Diesel	1461.4	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.011647	0.005497	0.064878	0.003694	0.003583	0.000806	306.1204
2029	Pumps	Other Construction Equipment	11	0.59	Diesel	16.0	2.458431	4.183328	0.002183	0.837695	593.7549	0.238375	0.231224	0.000281	9.59E-05	0.000479	2.73E-05	2.65E-05	2.5E-07	0.067964
2029	Roller	Rollers	100	0.59	Diesel	267.8	0.130918	0.929216	0.001581	0.012008	596.1214	0.024528	0.023793	0.00228	0.000209	0.016184	0.000427	0.000414	2.75E-05	10.38255
2029	Rubber Tired Loader	Tractors/Loaders/Backhoes	175	0.21	Diesel	29.6	0.501627	1.054915	0.001754	0.16006	626.0767	0.106553	0.103357	0.000602	0.000192	0.001265	0.000128	0.000124	2.1E-06	0.750729
2029	Scraper	Scrapers	600	0.59	Diesel	64.7	0.061891	0.200322	0.00143	0.014857	536.7858	0.013373	0.012972	0.001563	0.000375	0.005058	0.000338	0.000328	3.61E-05	13.55237
2029	Skid Steer Loader	Skid Steer Loaders	75	0.21	Diesel	250.4	3.078359	3.997614	0.002121	0.590362	694.2571	0.450537	0.437021	0.013383	0.002566	0.017379	0.001959	0.0019	9.22E-06	3.018156
2029	Slip Form Paver	Pavers	175	0.59	Diesel	29.6	0.070226	0.243552	0.001421	0.011156	536.7998	0.016518	0.016022	0.000237	3.76E-05	0.000821	5.56E-05	5.4E-05	4.79E-06	1.808426
2029	Surfacing Equipment (Grooving)	Other Construction Equipment	25	0.59	Diesel	40.2	1.487516	3.762279	0.002188	0.351583	595.1479	0.170075	0.164973	0.000972	0.00023	0.002459	0.000111	0.000108	1.43E-06	0.389
2029	Survey Crew Trucks	Off-Highway Trucks	600	0.59	Diesel	174.7	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.001393	0.000657	0.007758	0.000442	0.000428	9.64E-05	36.60349
2029	Tool Truck	Off-Highway Trucks	600	0.59	Diesel	3712.6	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.029587	0.013965	0.164819	0.009385	0.009103	0.002049	777.6793
2029	Tractor Trailer- Material Delivery	Off-Highway Trucks	600	0.59	Diesel	3363.1	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.026802	0.012651	0.149303	0.008501	0.008246	0.001856	704.4666
2029	Tractor Trailer- Steel Deliveries	Off-Highway Trucks	600	0.59	Diesel	935.0	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.007452	0.003517	0.041509	0.002363	0.002293	0.000516	195.8577
2029	Tractor Trailer- Truck Delivery	Off-Highway Trucks	600	0.59	Diesel	446.9	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.003561	0.001681	0.019839	0.00113	0.001096	0.000247	93.60823
2029	Tractor Trailers Temp Fac.	Off-Highway Trucks	600	0.59	Diesel	69.9	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.000557	0.000263	0.003103	0.000177	0.000171	3.86E-05	14.6414
2029	Tractors/Loader/Backhoe	Tractors/Loaders/Backhoes	100	0.24	Diesel	514.2	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.000274	0.000129	0.001526	8.69E-05	8.43E-05	1.9E-05	7.200937
2029	Trowel Machine	Other Construction Equipment	600	0.59	Diesel	119.2	0.30763	0.854903	0.001504	0.045998	536.694	0.043081	0.041789	0.014305	0.002139	0.039755	0.002003	0.001943	6.99E-05	24.95722
2029	Vibratory Compactor	Plate Compactors	6	0.43	Diesel	191.3	2.467286	4.184546	0.002162	0.83756	587.9673	0.240464	0.233251	0.001342	0.000456	0.002277	0.000131	0.000127	1.18E-06	0.319885
2029	Water Truck	Off-Highway Trucks	600	0.59	Diesel	3840.0	0.020423	0.113768	0.001414	0.00964	536.801	0.006478	0.006283	0.030603	0.014445	0.170475	0.009707	0.009415	0.002119	804.3672
														Total						
														0.958702	0.201886	4.920313	0.167153	0.162138	0.015638	5891.734

Source: RS&H 2024

Onroad Emissions - 2025

Inputs						MOVES4 Emission Factors (g/miles)									Emissions (Tons per Year)								
Year	Equipment Type	MOVES4 Equipment Type	On-Road Activity	Fuel Type	Vehicle Miles Traveled	CO	NOx	CH4	N2O	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2	CH4	N2O
2025	Asphalt 18 Wheeler	Combination Short Haul Truck	Urban Unrestricted Access	Diesel	871.00	2.46169	6.470583	0.015313	0.146017	0.005432	0.291905	1590.319	0.2471	0.227332	0.002364	0.00028	0.006213	0.000237	0.000218	5.21501E-06	1.526894	1.47E-05	0.00014
2025	Cement Mixer	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	4272.50	1.59262	3.090348	0.009927	0.069275	0.002953	0.312602	859.5717	0.163733	0.150634	0.07509	0.014739	0.145706	0.00772	0.007102	0.000139232	40.52783	0.000468	0.003266
2025	Cement Truck for Fencing	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	101440.00	1.59262	3.090348	0.009927	0.069275	0.002953	0.312602	859.5717	0.163733	0.150634	0.178085	0.034955	0.34556	0.018309	0.016844	0.000330206	96.11648	0.00111	0.007746
2025	Dump Truck	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	148654.00	1.59262	3.090348	0.009927	0.069275	0.002953	0.312602	859.5717	0.163733	0.150634	0.260973	0.051224	0.506396	0.02683	0.024683	0.000483896	140.8527	0.001627	0.011352
2025	Dump Truck - Asphalt	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	1233.00	1.59262	3.090348	0.009927	0.069275	0.002953	0.312602	859.5717	0.163733	0.150634	0.002165	0.000425	0.0042	0.000223	0.000205	4.01364E-06	1.168293	1.35E-05	9.42E-05
2025	Dump Truck Subbase Material	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	30210.45	1.59262	3.090348	0.009927	0.069275	0.002953	0.312602	859.5717	0.163733	0.150634	0.053037	0.01041	0.102913	0.005453	0.005016	9.83405E-05	28.62502	0.000331	0.002307
2025	Passenger Car	Passenger Car	Urban Unrestricted Access	Gasoline	2203114.32	3.202675	0.126954	0.010304	0.001223	0.001259	0.03573	277.782	0.002435	0.002154	7.777793	0.086771	0.308313	0.005913	0.005231	0.003058251	674.602	0.025023	0.002971
2025	Tractor Trailer	Combination Short Haul Truck	Urban Unrestricted Access	Diesel	1294.81	2.46169	6.470583	0.015313	0.146017	0.005432	0.291905	1590.319	0.2471	0.227332	0.003514	0.000417	0.009235	0.000353	0.000324	7.75253E-06	2.269851	2.19E-05	0.000208

Source: RS&H 2024

Total								
8.353019	0.199221	1.428536	0.065036	0.059624	0.004126906	985.689	0.028609	0.028085

Onroad Emissions - 2026

Inputs						MOVES4 Emission Factors (g/miles)									Emissions (Tons per Year)								
Year	Equipment Type	MOVES4 Equipment Type	On-Road Activity	Fuel Type	Vehicle Miles Traveled	CO	NOx	CH4	N2O	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2	CH4	N2O
2026	Asphalt 18 Wheeler	Combination Short-Haul Truck	Urban Unrestricted Access	Diesel	369.00	2.354297	5.985982	0.015287	0.152134	0.005366	0.265026	1574.372	0.221635	0.203904	0.000958	0.000108	0.002435	9.02E-05	8.29E-05	2.18E-06	0.640384	6.22E-06	6.19E-05
2026	Cement Mixer	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	82,081.51	1.541206	2.95031	0.009642	0.071188	0.002901	0.291853	845.5227	0.155244	0.142825	0.139448	0.026407	0.266944	0.014046	0.012923	0.000262	76.50277	0.000872	0.006441
2026	Dump Truck - Asphalt	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	523.00	1.541206	2.95031	0.009642	0.071188	0.002901	0.291853	845.5227	0.155244	0.142825	0.000889	0.000168	0.001701	8.95E-05	8.23E-05	1.67E-06	0.487454	5.56E-06	4.1E-05
2026	Dump Truck Subbase Material	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	46,905.34	1.541206	2.95031	0.009642	0.071188	0.002901	0.291853	845.5227	0.155244	0.142825	0.079687	0.01509	0.152544	0.008027	0.007385	0.00015	43.71738	0.000499	0.003681
2026	Passenger Car	Passenger Car	Urban Unrestricted Access	Gasoline	2,062,482.64	3.073692	0.106877	0.009104	0.001116	0.001242	0.028796	273.9809	0.00232	0.002052	6.988069	0.065467	0.242987	0.005275	0.004666	0.002824	622.8984	0.020698	0.002538
2026	Tractor Trailer	Combination Short-Haul Truck	Urban Unrestricted Access	Diesel	3,884.43	2.354297	5.985982	0.015287	0.152134	0.005366	0.265026	1574.372	0.221635	0.203904	0.010081	0.001135	0.025631	0.000949	0.000873	2.3E-05	6.741268	6.55E-05	0.000651
															Total								
															7.219131	0.108375	0.692242	0.028477	0.026012	0.003263	750.9876	0.022147	0.013414

Source: RS&H 2024

Onroad Emissions - 2029

Inputs						MOVES4 Emission Factors (g/miles)									Emissions (Tons per Year)								
Year	Equipment Type	MOVES4 Equipment Type	On-Road Activity	Fuel Type	Vehicle Miles Traveled	CO	NOx	CH4	N2O	SO2	VOC	CO2	PM10	PM2.5	CO	VOC	NOx	PM10	PM2.5	SO2	CO2	CH4	N2O
2029	Asphalt 18 Wheeler	Combination Short-Haul Truck	Urban Unrestricted Access	Diesel	867.00	2.067207	4.084066	0.014984	0.16782	0.00516	0.195022	1521.732	0.134541	0.123778	0.001976	0.000186	0.003903	0.000129	0.000118	4.93111E-06	1.454333	1.43E-05	0.00016
2029	Cement Mixer	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	58,945.02	1.32569	2.01712	0.009075	0.077817	0.002751	0.225791	805.972	0.088559	0.081474	0.086138	0.014671	0.131065	0.005754	0.005294	0.000178778	52.36892	0.00059	0.005056
2029	Dump Truck - Asphalt	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	1,229.00	1.32569	2.01712	0.009075	0.077817	0.002751	0.225791	805.972	0.088559	0.081474	0.001796	0.000306	0.002733	0.00012	0.00011	3.72751E-06	1.091889	1.23E-05	0.000105
2029	Dump Truck Subbase Material	Single Unit Short-Haul Truck	Urban Unrestricted Access	Diesel	38,798.79	1.32569	2.01712	0.009075	0.077817	0.002751	0.225791	805.972	0.088559	0.081474	0.056698	0.009657	0.086269	0.003788	0.003485	0.000117675	34.47027	0.000388	0.003328
2029	Passenger Car	Passenger Car	Urban Unrestricted Access	Gasoline	2,881,051.38	2.712563	0.06957	0.007392	0.001003	0.001192	0.019448	262.8895	0.001866	0.001651	8.614643	0.061764	0.220942	0.005926	0.005243	0.003784911	834.8928	0.023476	0.003185
2029	Tractor Trailer	Combination Short-Haul Truck	Urban Unrestricted Access	Diesel	5,179.25	2.067207	4.084066	0.014984	0.16782	0.00516	0.195022	1521.732	0.134541	0.123778	0.011802	0.001113	0.023317	0.000768	0.000707	2.94573E-05	8.687827	8.55E-05	0.000958
															Total								
															8.773053	0.087698	0.468228	0.016485	0.014956	0.00411948	932.966	0.024566	0.012793

Source: RS&H 2024

Fugitive Emissions - 2025

Year	Project	Fugitive Type	Variable	Units	Pollutants
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	53.7	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000006381	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	39.4	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	12.3	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	26.9	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000003197	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	22.7	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	7.148	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	5.191	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	6.166E-07	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	6.339	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	2.042	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	15.3	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000001816	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	13	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	4.084	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	50.6	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00000601	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	39.2	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	12.3	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	142.1	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00001688	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	105	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	32.7	PM10
2025	Demolition - Asphalt	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	84.9	PM10
2025	Demolition - Asphalt	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00007061	PM10
2025	Demolition - Asphalt	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	66.8	PM10
2025	Demolition - Asphalt	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	20.9	PM10
2025	Detention Basin	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000354	PM10
2025	Detention Basin	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	109	PM10
2025	Detention Basin	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0	PM10
2025	Detention Basin	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	248.3	PM10
2025	Hangar Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	63.6804	PM10
2025	Hangar Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	59.584	PM10
2025	Hangar Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	175.4004	PM10
2025	Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	11.0221641	PM10
2025	Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	10.313136	PM10
2025	Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	30.3592941	PM10
2025	Fuel Tanks	Concrete Mixing/Batching	PM10 = 0.037 x V	23.4	PM10
2025	Fuel Tanks	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	52.7	PM10
2025	Fuel Tanks	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	16	PM10
2025	Fuel Tanks	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00000737	PM10
2025	Fuel Tanks	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	7.755	PM10
2025	Apron (GA)	Concrete Mixing/Batching	PM10 = 0.037 x V	213.9	PM10
2025	Apron (GA)	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	103.6	PM10
2025	Apron (GA)	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	31.9	PM10
2025	Apron (GA)	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00003362	PM10
2025	Apron (GA)	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	70.8	PM10
2025	Drainage System	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	4.664	PM10
2025	Drainage System	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0	PM10
2025	Drainage System	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	8.069E-07	PM10
2025	Drainage System	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	1.132	PM10
2025	Apron (GA)	Concrete Mixing/Batching	PM10 = 0.037 x V	4.399	PM10
2025	Apron (GA)	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	47.6	PM10
2025	Apron (GA)	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	16	PM10
2025	Apron (GA)	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000001383	PM10
2025	Apron (GA)	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	1.455	PM10
2025	Access Road	Asphalt Drying	VOC = A x AR x VD x EF x D	4451.7	VOC
2025	Access Road	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	19.9	PM10
2025	Access Road	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	290.3	CO
2025	Access Road	Asphalt Storage and Batching	NOx = (0.025) x T	18.1	Nox
2025	Access Road	Asphalt Storage and Batching	SOx = (0.0046) x T	3.336	Sox
2025	Access Road	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	8.992	VOC
2025	Access Road	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	78.4	PM10
2025	Access Road	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	23.9	PM10
2025	Access Road	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.00003228	PM10
2025	Access Road	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	34	PM10

Source: RS&H 2024

Fugitive Emissions - 2026

Year	Project	Fugitive Type	Variable	Units	Pollutants
2026	Apron (GA)	Concrete Mixing/Batching	PM10 = 0.037 x V	383.1000	PM10
2026	Apron (GA)	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	171.3000	PM10
2026	Apron (GA)	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	51.9000	PM10
2026	Apron (GA)	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.0001	PM10
2026	Apron (GA)	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	126.7000	PM10
2026	Hangar Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	63.6804	PM10
2026	Hangar Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	59.5840	PM10
2026	Hangar Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	175.4004	PM10
2026	Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	11.0222	PM10
2026	Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	10.3131	PM10
2026	Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	30.3593	PM10
2026	Access Road	Asphalt Drying	VOC = A x AR x VD x EF x D	1886.9000	VOC
2026	Access Road	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	8.4280	PM10
2026	Access Road	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	123.1000	CO
2026	Access Road	Asphalt Storage and Batching	NOx = (0.025) x T	7.6840	NOX
2026	Access Road	Asphalt Storage and Batching	SOx = (0.0046) x T	1.4140	SOX
2026	Access Road	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	3.8110	VOC
2026	Access Road	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	30.0000	PM10
2026	Access Road	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	9.0510	PM10
2026	Access Road	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.0000	PM10
2026	Access Road	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	14.4000	PM10
2026	Drainage System	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	6.9970	PM10
2026	Drainage System	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.0000	PM10
2026	Drainage System	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.0000	PM10
2026	Drainage System	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	1.6980	PM10

Source: RS&H 2024

Fugitive Emissions - 2029

Year	Project	Fugitive Type	Variable	Units	Pollutants
2029	Hangar Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	254.721600	PM10
2029	Hangar Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	238.336000	PM10
2029	Hangar Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	701.601600	PM10
2029	Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	44.088656	PM10
2029	Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	41.252544	PM10
2029	Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	121.437176	PM10
2029	Apron (GA)	Concrete Mixing/Batching	PM10 = 0.037 x V	137.100000	PM10
2029	Apron (GA)	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	79.400000	PM10
2029	Apron (GA)	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	23.900000	PM10
2029	Apron (GA)	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000043	PM10
2029	Apron (GA)	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	45.400000	PM10
2029	Access Road	Asphalt Drying	VOC = A x AR x VD x EF x D	4434.700000	VOC
2029	Access Road	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	19.800000	PM10
2029	Access Road	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	289.200000	CO
2029	Access Road	Asphalt Storage and Batching	NOx = (0.025) x T	18.100000	NOX
2029	Access Road	Asphalt Storage and Batching	SOx = (0.0046) x T	3.323000	SOX
2029	Access Road	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	8.957000	NOX
2029	Access Road	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	82.000000	PM10
2029	Access Road	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	23.900000	PM10
2029	Access Road	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.000032	PM10
2029	Access Road	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	33.800000	PM10

Source: RS&H 2024

APPENDIX C:
SECTION 106 CONSULTATION

Coordination Letters to Tribal Communities with an interest in Cook County

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Tracy Wind
Tribal Historic Preservation Officer
Citizen Potawatomi Nation, Oklahoma
1601 S. Gordon Cooper Drive
Shawnee, OK 74801

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Tracy Wind:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Luke Heider
Tribal Historic Preservation Officer
Forest County Potawatomi Community
5320 Wensaut Lane PO Box 340
Crandon, WI 54520

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Luke Heider:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Kenneth Meshigaud
Chairperson
Hannahville Indian Community
N14911 Hannahville B1 Road
Wilson, MI 49896

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Kenneth Meshigaud:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Darwin Kaskaske
Chairman
Kickapoo Tribe of Oklahoma
105365 South Highway 102
Mcloud, OK 74851

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Darwin Kaskaske:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Melissa Wiatrolik
Tribal Historic Preservation Officer
Little Traverse Bay Bands of Odawa Indians
7500 Odawa Circle
Harbor Springs, MI 49740

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Melissa Wiatrolik:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

David Grignon
Tribal Historic Preservation Officer
Menominee Indian Tribe of Wisconsin
P.O. Box 910
Keshena, WI 54135

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear David Grignon:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Logan York
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Logan York:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

1020 South Plant Road
Wheeling, Illinois 60090
847.537.2580
www.chiexec.com

November 20, 2024

Raphael Wahwassuck
Tribal Historic Preservation Officer
Prairie Band Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

RE: Chicago Executive Airport (PWK), Chicago, Cook County, IL
Runway 6-24 Decommissioning and Hangar Development Project

Dear Raphael Wahwassuck:

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The FAA is examining the environmental impacts of Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport (PWK or Airport). The proposed project and its associated actions are subject to the National Historic Preservation Act (NHPA) and its implementing regulations under 36 Code of Federal Register (CFR) part 800 (as amended) as well as the National Environmental Policy Act (NEPA).

FEDERAL INVOLVEMENT
Because this project is receiving funding from the FAA as well as approval of the Airport Layout Plan (ALP) for PWK, it is an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966.

DESCRIPTION OF THE PROPOSED UNDERTAKING
The Chicago Executive Airport is located within the municipal boundaries of Wheeling and Prospect Heights in Cook County, Illinois (see **Exhibit 1**). The Airport is owned and operated jointly by the Village of Wheeling and the City of Prospect Heights (Airport Sponsor). The proposed undertaking would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3). The proposed undertaking would include land acquisition of 4.4 acres and the construction of eight (8) aircraft hangars and associated infrastructure at the east end of the decommissioned runway. Refer to **Exhibit 2** for the proposed undertaking project components.

AREA OF POTENTIAL EFFECTS (APE)
For this EA, the Project APE is approximately 38 acres and encompasses the proposed limits of construction/ground disturbance and adjacent developed areas. From west to east, the boundary extends along the length of Runway 6-24 to Taxiway E, then extends to Taxiway C to the northwest, S. Milwaukee Avenue and Taxiway F to the northeast, Taxiway A to the southeast, and Taxiway E to the southwest (see **Exhibit 2**).

SECTION 106 CONSULTATION
The Project APE includes airfield infrastructure (e.g., runways, taxiways, aprons, access roads, and utilities) and adjacent graded land with maintained grass. The land proposed for acquisition is the location of the former (now demolished) Ramada Hotel and includes paved parking lots,

foundations of the former hotel, landscaping, and graded land with maintained grass. The Project APE is characterized as heavily disturbed as it is entirely developed, paved, and/or graded.

Based on the extent of prior ground disturbance and no structures existing within the Project APE, it was determined that a Section 106 finding of ***No Historic Properties Affected*** is applicable for the proposed undertaking.

Please provide any comments or information to me within 30 days at the address below or via email at jmiller@chiexec.com. Please feel free to contact me by email or at 224-279-2061 if you have any questions.

Sincerely,

Jeffery J. Miller, A.A.A., ACE
Executive Director
Chicago Executive Airport
1020 South Plant Road
Wheeling, Illinois 60090

Attachments:
1: Project Location
2: Proposed Undertaking Exhibit

Cc: Mr. Craig Pullins, Environmental Protection Specialist, Chicago Airports District Office, FAA
Mr. Viraj A. Perera, Environmental & Planning Manager, Illinois DOT

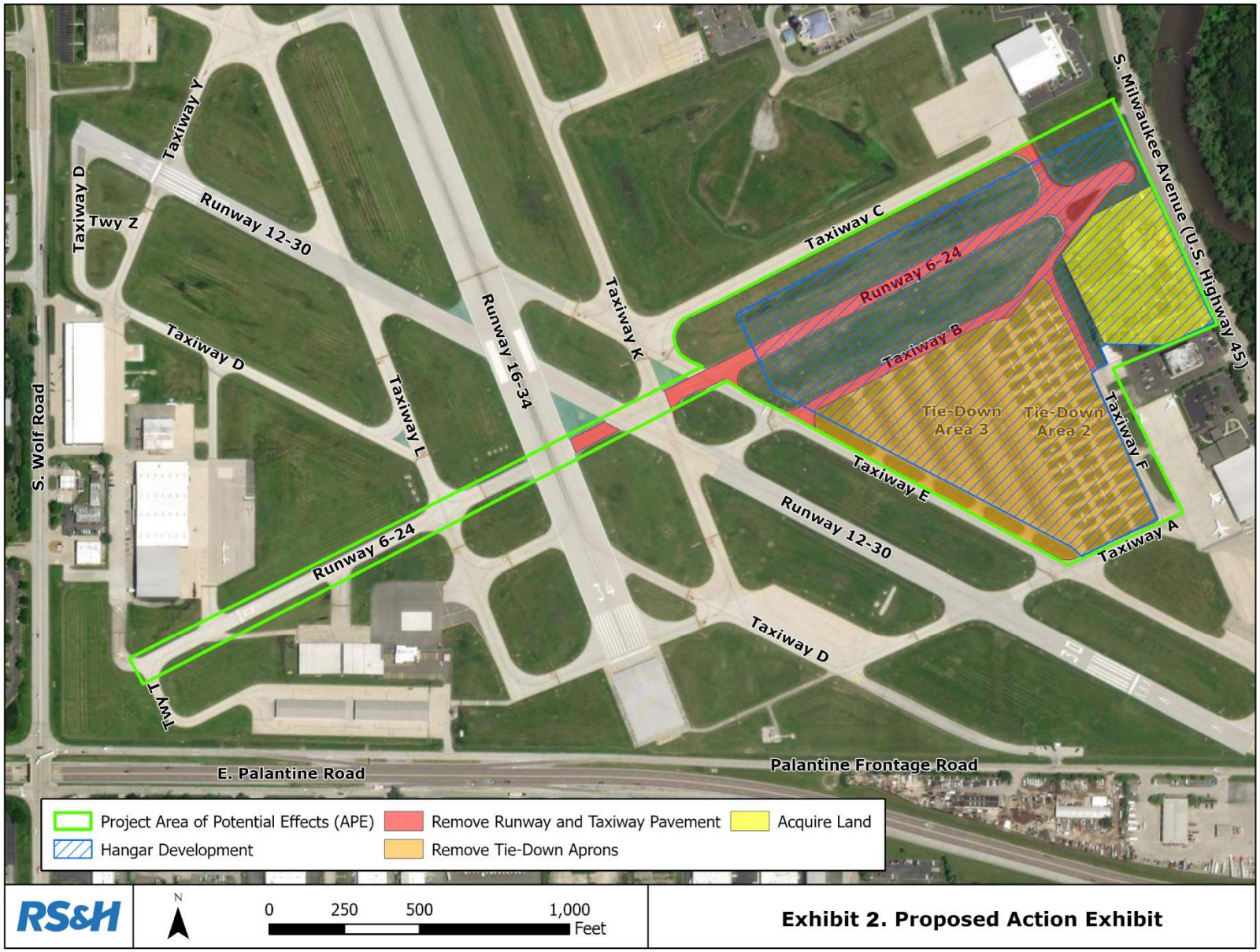
Attachment 1. Project Location

Location Map

CHICAGO EXECUTIVE AIRPORT

Exhibit 1

Attachment 2. Proposed Undertaking Exhibit



Forest County Potawatomi Community
Tribal Historic Preservation Office Response

Binggeli, Tamsen

From: Jeffrey Miller <jmiller@chiexec.com>
Sent: Monday, December 9, 2024 9:51 AM
To: Full, David; Binggeli, Tamsen
Cc: George Sakas; Jason Griffith; Andrew Wolanik
Subject: [External] FW: KPWK - Section 106 Letter

External Sender: Please use caution with links and attachments.

From: Luke Heider <Luke.Heider@fcp-nsn.gov>
Sent: Monday, December 9, 2024 10:50 AM
To: Jeffrey Miller <jmiller@chiexec.com>
Subject: RE: KPWK - Section 106 Letter

EXTERNAL EMAIL

*This email was sent from someone outside of Chicago Executive Airport. Always **use caution** when opening attachments or clicking links from unknown senders or when receiving unexpected emails.*

Pursuant to consultation under Section 106 of the National Historic Preservation Act (1966 as amended) the Forest County Potawatomi Community (FCPC), a Federally Recognized Native American Tribe, reserves the right to comment on Federal undertakings, as defined under the act.

The Tribal Historic Preservation Office (THPO) staff has reviewed the information you provided for the project. Upon review of site data and supplemental cultural history within our Office, the FCPC THPO is pleased to offer a finding of No Historic Properties affected of significance to the FCPC, however, **we do wish to remain as a consulting party for this project.**

As a standard caveat sent with each proposed project reviewed by the FCPC THPO, the following applies. In the event an Inadvertent Discovery (ID) occurs at any phase of a project or undertaking as defined, and human remains or archaeological materials are exposed as a result of project activities, work should cease immediately, and the Tribe(s) must be included with the SHPO in any consultation regarding treatment and disposition of the find.

Thank you for protecting cultural and historic properties and if you have any questions or concerns, please contact me at the email or number listed below.

Best,

Luke Heider | Tribal Historic Preservation Officer | Land & Natural Resources
Forest County Potawatomi | 5320 Wensaut Lane | PO Box 340, Crandon, WI 54520
P: 715-478-7354 | C: 715-889-0202 | Main: 715-478-7222
www.fcpotawatomi.com | luke.heider@fcp-nsn.gov
Please note the office hours are Monday – Thursday: 7:00 am – 5:00 pm. Our office is closed on Fridays

From: Jeffrey Miller <jmiller@chiexec.com>
Sent: Thursday, November 21, 2024 12:41 PM
To: Luke Heider <Luke.Heider@fcp-nsn.gov>
Cc: Pullins, Craig K (FAA) <Craig.K.Pullins@faa.gov>; Viraj.Perera@Illinois.gov
Subject: KPWK - Section 106 Letter

Good Afternoon Luke,

Please accept this letter on behalf of the Federal Aviation Administration (FAA) and State of Illinois Department of Transportation (DOT) and in compliance with the Illinois State Block Grant Program. The proposed undertaking is subject to Section 106 of the National Historic Preservation Act (NHPA) and includes Runway 6-24 decommissioning and subsequent hangar development at the Chicago Executive Airport in Wheeling, Illinois. Please refer to the attached letter for more details and the proposed Section 106 determination for the project. Please provide your response, comments, or recommendations to jmiller@chiexec.com or at 224-279-2061.

Thank you,

Jeffrey J. Miller A.A.A., ACE
Executive Director
Chicago Executive Airport - PWK
Office Direct: 224-279-2061
jmiller@chiexec.com

Illinois Department of Transportation (IDOT) and Illinois State Historic Preservation Office (SHPO) Section 106 Consultation

Illinois Department of Transportation

Memorandum

To:	David Salgado	ATTN: Viraj Perera	
From:	Jack Elston	By:	Joseph Galloy
Subject:	Cultural Resources – No Historic Properties Affected Clearance		
Date:	January 28, 2025		

Cook County
Wheeling, Prospect Heights
Chicago Executive Airport
Runway Decommission and Hangar Construction
IDOT Sequence # 26661
SHPO Log # 001123024
IDOT Sequence # 26661

For the above referenced undertaking, IDOT's qualified cultural resources staff hereby make a **"No Historic Properties Affected"** finding pursuant to Section 106 of the National Historic Preservation Act. This finding concludes the Section 106 process.

No further cultural resources coordination is required for this project, unless design modifications or new information indicate that historic properties may be affected. If so, then, additional coordination with my office is required.

Joseph M. Galloy
Cultural Resources Unit Manager
Bureau of Design and Environment

JG:cc

Illinois Department of Natural Resources
JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Cook County
Wheeling
Runway Decommission and Hangar Construction
1020 Plant Rd., Wheeling, Section:13-Township:42N-Range:11E
Hotel - 1090 S. Milwaukee Ave., Hangar Building
IDOT Seq #-26661
SHPO Log #001123024

January 17, 2025

Dr. Joseph Galloy
Illinois Department of Transportation
Bureau of Design and Environment
2300 S. Dirksen Parkway
Springfield, IL 62764

We have reviewed the documentation submitted for the referenced project(s) in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

If you have any further questions, please contact Rita Baker, Cultural Resources Manager, at (217) 785-4998 or at Rita.E.Baker@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic Preservation Officer

APPENDIX D:
BIOLOGICAL RESOURCES DOCUMENTATION

U.S. Fish and Wildlife Service
Information for Planning and Consultation (IPaC)
Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800

In Reply Refer To: 11/24/2025 22:42:42 UTC
Project Code: 2024-0078465
Project Name: Runway 6-24 Decommissioning and Aircraft Hangar Development

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing

determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chicago Ecological Service Field Office
1511 47th Ave
Moline, IL 61265-7022
(309) 757-5800

PROJECT SUMMARY

Project Code: 2024-0078465
Project Name: Runway 6-24 Decommissioning and Aircraft Hangar Development
Project Type: Airport - New Construction
Project Description: The Proposed Action would decommission Runway 6-24; remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3); acquire 4.4 acres of land; and construct a hangar development project at the east end of the decommissioned runway.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.113059449999994,-87.90137757759936,14z

Counties: Cook County, Illinois

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

REPTILES

NAME	STATUS
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

INSECTS

NAME	STATUS
Hine's Emerald Dragonfly *Somatochlora hineana* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7877	Endangered
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea* No critical habitat has been designated for this species.	Threatened

NAME STATUS

Species profile: https://ecos.fws.gov/ecp/species/601

Leafy Prairie-clover *Dalea foliosa* Endangered

Population:

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/5498

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Tamsen Binggeli
Address: 5215 Wiley Post Way, Suite 510
City: Salt Lake City
State: UT
Zip: 84116
Email tamsen.binggeli@rsandh.com
Phone: 2088305257

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Transportation

Illinois Department of Natural Resources
Ecological Compliance Assessment Tool (EcoCAT)
Species List

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: RS&H Inc.
Contact: Tamsen Binggeli
Address: 5215 Wiley Post Way, Suite 510
Salt Lake City, UT 84116

IDNR Project Number: 2413523
Date: 04/22/2024

Project: PWK Decommission Runway 6-24, Relocate Taxiway D, and Construct Hangars
Address: 1020 Plant Rd., Wheeling

Description: The Proposed Action would decommission and remove Runway 6-24, remove Taxiway B and Taxiway Z, relocate Taxiway E and Taxiway D, and remove portions of Taxiway Y. These projects would correct non-standard airfield geometry conditions and allow construction of new aircraft hangars at the east end of Taxiway C.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Blackchin Shiner *(Notropis heterodon)*
Eastern Massasauga *(Sistrurus catenatus catenatus)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:
42N, 11E, 13

IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

EcoCAT Receipt

Project Code 2413523

APPLICANT	DATE
RS&H Inc. Tamsen Binggeli 5215 Wiley Post Way, Suite 510 Salt Lake City, UT 84116	4/22/2024

DESCRIPTION	FEE	CONVENIENCE FEE	TOTAL PAID
EcoCAT Consultation	$ 25.00	$ 1.00	$ 26.00

TOTAL PAID $ 26.00

Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
217-785-5500
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RS&H

Illinois Department of Transportation
Natural Resources Review

Illinois Department of Transportation

Memorandum

To:	John Obrien	Attn: Viraj Perera
From:	Jack A. Elston	By: Shawn Wilcoxson
Subject:	Natural Resources Review	Shawn Wilcockson
Date:	December 3, 2024	

Chicago Executive Airport
T42N/R11E/S13
Cook County
Seq. # 26661

The proposed project involves decommission of Runway 6-24; remove all or parts of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons; acquire 4.4 acres of land; and construct hangars at the end of the decommissioned runway at Chicago Executive Airport.

There will be no new acres of land acquisition. There will not be in-stream work. There will be no tree removal required. Land cover in the vicinity of the proposed improvement is primarily airport property and mowed turf grass.

Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

The Illinois Natural Heritage Database contains a record the of State-listed Eastern Massasauga Rattlesnake and Black Chin Shiner located east of the improvement. The current land use is commercial airport with 4 lane highway bordering the record locations. Mowed grass around airport facilities is the dominant landscape. We conclude no suitable habitat for either species within the limits of the proposed improvement. There are no Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under Part 1075 is terminated**.

This review for compliance with 17 Ill. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

Review for Illinois Interagency Wetland Policy Act – Part 1090

The National Wetlands Inventory does not show wetlands in the vicinity of the project location. The soils are mapped as Orthents, Loamy, undulating which is non-hydric. Due to lack of hydric soils, we conclude absence of wetlands within the limits of the proposed improvement. **Therefore, the wetland review under Part 1090 is terminated**.

Review for Endangered Species Act - Section 7

The proposed improvement was reviewed in fulfillment of our obligation under Section 7(a)2 of the Endangered Species Act. Our review included use of the US Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) web-based review tool. Through IPaC, an official species list was generated. The list contains the endangered, threatened, proposed and candidate species and proposed and designated critical habitat that may be present within or in the vicinity of the proposed improvement. The following species are listed**:** Tricolored bat, northern long-eared bat (NLEB), Rufa Red Knot, Eastern Massasauga, Hine's Emerald Dragonfly, Leafy prairie-clover, and eastern prairie fringed orchid. No proposed or designated critical habitat is listed. Under 50 CFR 402.12(e), **the accuracy of the species list is limited to 90 days.**

We cross-referenced the preferred habitat of each of the listed species with our knowledge of the project area and determined that the proposed improvement will have no effect on those species.

Should the proposed improvement be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination should be initiated.

VH

Sequence #:26661

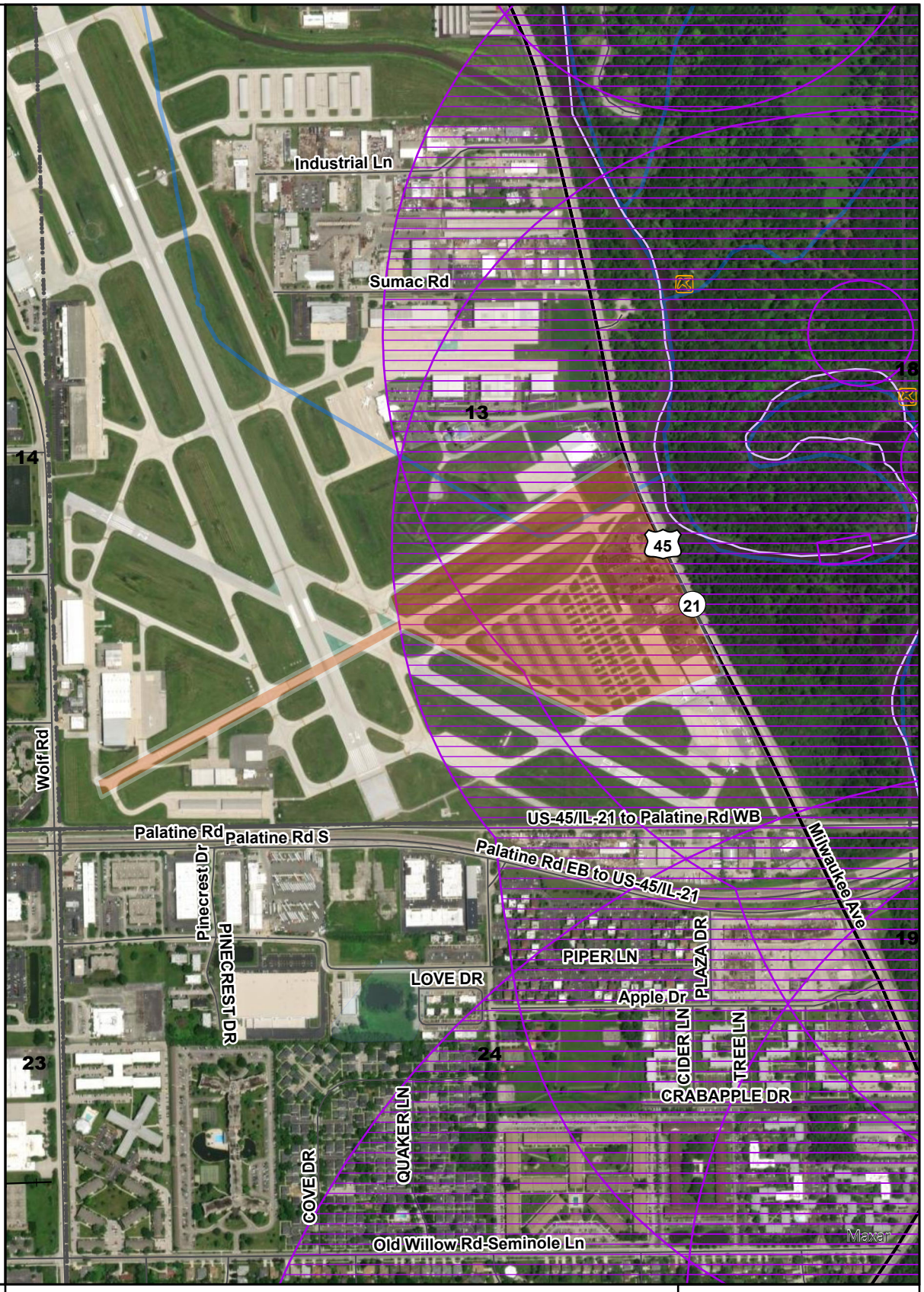
Chicago Executive Airport

Resource in Vicinity of Project
*T&E
*National Wetlands Inventory

INAI & NP within 1 mile
*none found

No Resource Found
*Nature Preserve
*INAI
*INHS Wetlands
*Roadside Prairie Inventory
*RPBB HPZ
*National Rivers Inventory
*0.5 Mile Bat Hibernacula

County: COOK
Section (PLSS): 3 42N11E13
Area:
0.07413 square miles
47.44532 acres



Nature Preserve
INAI
T&E
National Wetlands Inventory
INHS Wetlands
Roadside Prairie Inventory
0.5 Mile Bat Hibernacula
National Rivers Inventory
RPBB HPZ

Transportation Review for Ecological Compliance
Report of Possible Resource Conflicts

0 0.07 0.15 0.3 0.45 0.6 Miles

N

Source: Illinois Natural Heritage Database

D-18

Created by: Vincent Hamer

Printed 12/3/2024 10:07:33 AM

RS&H

APPENDIX E

SURFACE WATERS AND FLOODPLAIN ANALYSIS

Runway 6-24 Decommissioning and Aircraft Hangar Development

Chicago Executive Airport (PWK)

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E.1 Introduction

Chicago Executive Airport (PWK) is a public use airport located 18 miles northwest of Chicago located jointly in the City of Prospect Heights, Illinois and the Village of Wheeling, Illinois. The City of Prospect Heights and the Village of Wheeling jointly own and operate the airport.

This report evaluates the hydrologic impact of the Proposed Action under the Environmental Assessment (EA) for the PWK Runway 6-24 Decommissioning and Aircraft Hangar Development. The Proposed Action would decommission Runway 6-24 and remove all or portions of Runway 6-24, Taxiway B, Taxiway F, and two tie-down aprons (Area 2 and Area 3), referred to as "Tie-Down Aprons". The Proposed Action would also acquire 4.4 acres of land and construct a hangar development project, referred to as "Sky Harbour," at the east end of the decommissioned runway. The Proposed Action would correct non-standard airfield geometry conditions that create airfield safety hazards. See **Figure E-1** below for the Proposed Action.

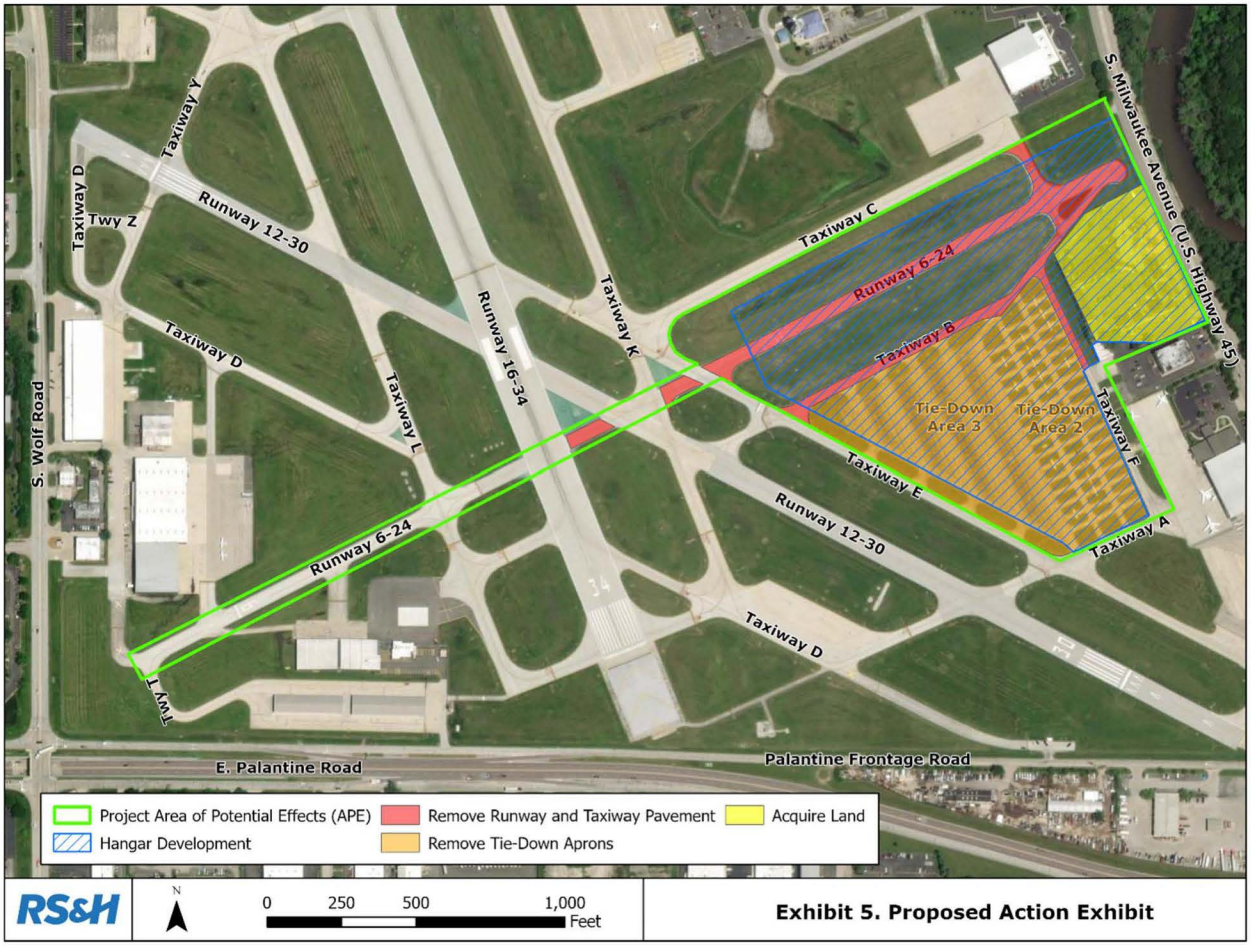

Figure E-1: Proposed Action

RS&H has reviewed and documented existing floodplains in the Project Study Area and evaluated potential impacts from encroachment or alterations of the floodplains. RS&H also evaluated City of Prospect Heights, Village of Wheeling, and Metropolitan Water Reclamation District of Greater Chicago Ordinances pertaining to compensatory flood storage requirements to determine the volume of storage necessary to offset floodplain impacts from the Proposed Action.

RS&H analyzed the changes in peak runoff flow rates and runoff volumes between existing and proposed conditions under the Proposed Action. Drainage analysis within this report was performed following the Metropolitan Water Reclamation District of Greater Chicago (MWRD) Watershed Management Ordinance (WMO).

E.2 Past Drainage Studies

Portions of the Proposed Action are based on the *Chicago Executive Airport Master Drainage Study Comprehensive Study of Airport Drainage Patterns and Improvements* (PWK MDS), dated September 20, 2024, by Primera. The PWK MDS describes stormwater and floodplain improvements necessary for development identified in the approved Airport Layout Plan (ALP), which includes development consistent with the Proposed Action. RS&H utilized this study for existing and proposed conditions and relevant regulations as detailed in **Section E.3** below.

RS&H also utilized the topographic data provided by the PWK MDS, which is based on publicly available Cook County 1-foot contours from 2017 referencing the North American Vertical Datum of 1988 (NAVD88), which was updated with newer Airport developments and their associated grading contours, and supplemented with corrected data from topographic surveys conducted in 2023.

E.3 Stormwater Criteria

Chicago Executive Airport must comply with various federal and local agencies regarding stormwater design and floodplain management. Standards relevant to the Airport include:

- Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5320-5D, Airport Drainage Design dated 8/15/2013
- The Metropolitan Water Reclamation District of Greater Chicago (MWRD) Watershed Management Ordinance (WMO)
- MWRD Technical Guidance Manual (TGM)
- Village of Wheeling Floodplain and Stormwater Ordinances
- City of Prospect Heights Floodplain and Stormwater Ordinances

Table E-1 below summarizes relevant floodplain and drainage requirements from the standards listed above. In cases where there are discrepancies between agency requirements, the most stringent must be followed. Emphasis has been added to the most stringent criteria applicable to the Proposed Action.

Table E-1: Floodplains and Stormwater Criteria Summary

Criteria	Federal Aviation Administration (FAA)	Metropolitan Water Reclamation District of Greater Chicago (MWRD)	Village of Wheeling	City of Prospect Heights
Allowable Release Rate*	-Follow state and local ordinances.	-0.20 cubic feet per second (cfs)/acre	-Max release rate of 0.15 cfs/acre. -Drawdown of less than 72 hours for 100-year storm storage plus designed release rate.	-Lesser value between existing runoff rate of the 3-year storm OR 0.15 cfs/acre
Flow Attenuation and Water Quality	-Follow state and local ordinances.	-Provide volume control storage for the first inch of runoff over impervious areas for development >= to 0.10 acres. Detention basins sized to attenuate 100-year storm ǂ	-Erosion and sediment control plan required during construction	-City Floodplain document references stormwater facilities identified by the MWRD Watershed Management Ordinance (WMO)
Floodplains	-Minimize adverse impacts to human safety, health, natural and beneficial floodplain values, and welfare	-Finished floor elevation (FFE) minimum 2 feet above established 100-year Base Flood Elevation (BFE); this is defined as the Agency's Flood Protection Elevation (FPE). - No increase in 100-year BFE nor decrease flood conveyance capacity	-FFE minimum one foot above 100-year BFE, which is the Village's FPE	-FFE minimum 2.5 feet above the established 100-year BFE; defined as the City's FPE ǂ -Floodproofing required up to FPE.
Floodplain Compensatory Storage	-No specific regulations	-Each cubic yard (CY) of fill in the floodplain shall be compensated by provided 1.1 cubic yards of storage (-1.1:1)	-Each CY of fill in the floodplain shall be compensated with 1.5 CY of storage (1.5:1)ǂ -Flood storage lost below 10-year BFE must be replaced below 10-year BFE; storage lost above 10-year BFE must be replaced above 10-year BFE ǂ -Excavation for compensatory storage shall be constructed to drain freely to the waterway.	-Each CY of fill in the floodplain shall be compensated with 1.5 CY of storage (1.5:1)ǂ -Flood storage lost below 10-year BFE must be replaced below 10-year BFE; storage lost above 10-year BFE must be replaced above 10-year BFE ǂ -Excavation for compensatory storage shall be constructed to drain freely to the waterway.

* Due to high tailwater, PWK MDS assumed all stormwater generated from future Airport development should be retained on-site up to the 100-year storm event.
ǂ Most stringent criteria utilized for analysis of the Proposed Action.

E.4 Soils and Groundwater

Soil type and land cover within the Project Study Area impact the amount of runoff produced by rainfall. RS&H utilized Natural Resources Conservation Service (NRCS) Soil Survey resources to determine the types of soil found on-site at the Airport.

Soils on-site consist of Drummer silty clay loam, Symerton silt loam, Mundelein silt loam, Grays silt loam, and loamy Orthents. The soils are part of Hydrologic Soil Group (HSG) B/D and C. Soils in HSGs B, C, and D typically have moderately low infiltration rates. Based on the NRCS Soil Survey, the average depth to groundwater is 42 to 60 inches in the location of the Proposed Action. See **Attachment E-1** for NRCS Soils Survey.

E.5 Hydrologic Analysis

RS&H performed a hydrologic analysis of the site to evaluate potential impacts to nearby surface waters. The Chicago Executive Airport is located within the Des Plaines River Watershed, which covers 1455 square miles (931,489 acres) in northeastern Illinois and southeastern Wisconsin. More specifically, the airport is located just south of the confluence of the Wheeling Drainage Ditch and the west bank of the Des Plaines River in Cook County, Illinois. The site discharges directly to the Des Plaines River via storm pipe.

This hydrologic analysis only considers the area enclosed with the Sky Harbour development area, bound by Taxiway A, C, E, and F, and does not consider the decommissioning of Runway 6-24, as runoff from the Sky Harbour development is expected to be detained separately from areas where pavement would be removed.

E.6.1 Peak Runoff

RS&H utilized the Rational Method to determine the difference in peak flow rate resulting from the Proposed Action for the 5-year and 100-year storm events. These events were selected as they represent the FAA design storm as well as the most stringent design storm as outlined in the relevant criteria. The Rational Method is an accepted method for projects over 200 acres in size. RS&H utilized runoff coefficient (C) values of 1.0 for stormwater retention facilities, 0.95 for impervious surfaces, 0.50 for pervious surfaces as listed in the Section 3.04C of the *Village of Wheeling Manual of Practice for the Design of Public and Private Improvement*. The surface area of the retention ponds was included in a preliminary layout of the Sky Harbor development. The rainfall intensities (i) were determined from the Illinois State Water Survey (ISWS) Bulletin 75, *Precipitation Frequency Study for Illinois*. A time of concentration (t_c) was determined utilizing the NRCS Runoff Method, with overland flow paths determined through the elevation data mentioned in **Section E.2**. Pervious areas were classified as short prairie grass and minimum t_c was assumed to be 10 minutes in accordance with MWRD TGM, Section 5.6.1.1. The pervious and impervious areas for existing conditions and the Proposed Action is presented in **Figure E-2**. **Table E-2** and **Table E-3** provide a summary of changes in hydrologic conditions for the 5-year and 100-year storms, respectively. Additional detail for Rational Method calculations can be found in **Attachment E-2.**

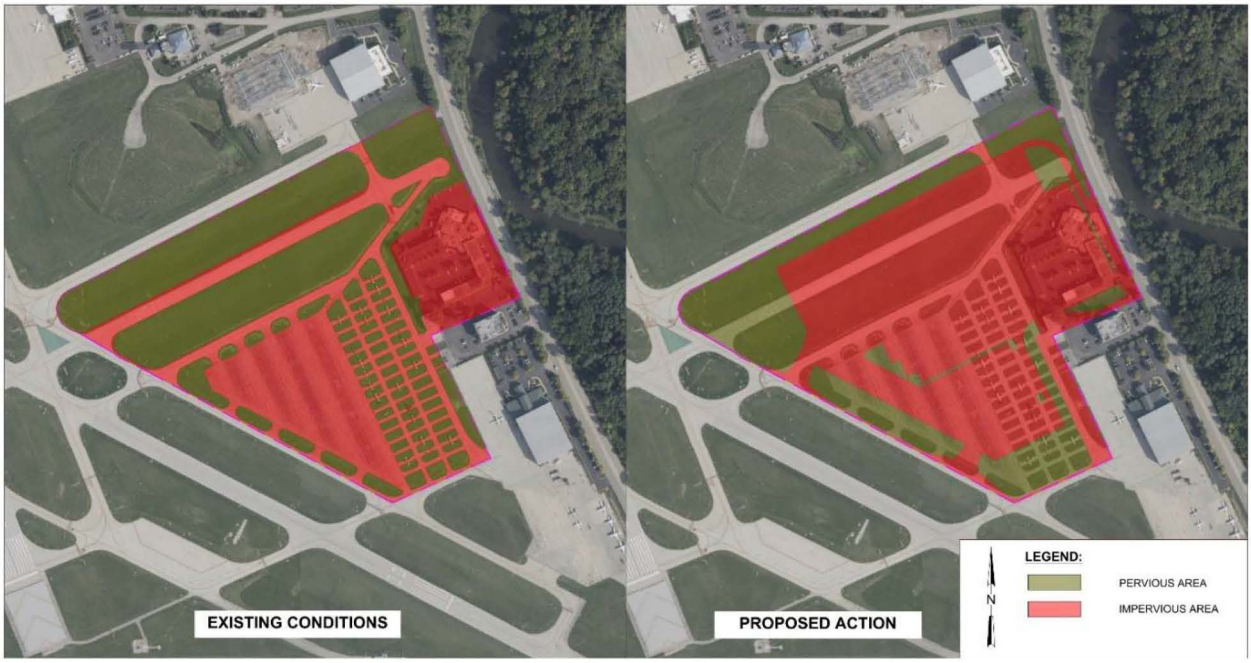

Figure E-2: Land Cover

Table E-2: 5-year Peak Runoff Rates

Condition*	Percent Impervious	C Value	Time of Concentration (minutes)	Intensity (inches/hour)	Peak Flow Rate (cubic feet per second [cfs])
Existing	50.1	0.73	13.90	4.75	**117.41**
Proposed	70.2	0.94	10‡	5.40	171.87
Net Change	20.1	-	-	-	+54.46

* Total area of 33.86 acres does not change between existing and proposed conditions.
‡ Minimum tc assumed to represent most conservative scenario.

Table E-3: 100-year Peak Runoff Rates

Condition*	Percent Impervious	C Value	Time of Concentration (minutes)	Intensity (inches/hour)	Peak Flow Rate (cubic feet per second [cfs])
Existing	50.1	0.73	13.90	9.50	**234.82**
Proposed	70.2	0.94	10‡	10.80	343.74
Net Change	20.1	-	-	-	+108.93

* Total area of 33.86 acres does not change between existing and proposed conditions.
‡ Minimum tc assumed to represent most conservative scenario.

Due to the increase in the peak flow rate associated with the Proposed Action, permanent stormwater facilities are required to mitigate impacts to receiving waters. The increased runoff resulting from the Proposed Action would be captured and detained so that receiving surface waters are not adversely affected.

Although local requirements allow a release rate of 0.15 cubic feet per second (cfs) per acre of tributary area, due to the high tailwater of the 100-year (1-percent-annual-chance) base flood elevation (BFE) of the Des Plaines River (in **Section E.3**), RS&H assumed the effective allowable release rate, up to the 100-year storm event, from the development associated with the Proposed Action to be zero. As mentioned in **Section E.3**, this is consistent with the methodology of the PWK MDS which also elected to utilize a zero-release rate for proposed stormwater improvements and all runoff from storm events up to the 100-year event would be retained on-site.

RS&H utilized MWRD standard nomographs to calculate the required detention for the Proposed Action utilizing a zero release rate.[1] This is an industry-standard method of determining required detention. The nomograph for this area indicates that 34,009 cubic yards (21.08 acre-feet) detention volume would be required for the Proposed Action. RS&H conservatively estimated the provided detention volume across the site by assuming ponds with a 4:1 side slope and a depth of 3 feet. Results of this approximation indicated that the Proposed Action incorporates 34,541 cubic yards (21.71 acre-feet) of detention. Therefore, the local criterion for detention volume is met.

Proposed permanent stormwater facilities should be designed to not interfere with known groundwater elevations and to limit standing water requirements to those outlined in the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5200-33C, *Hazardous Wildlife Attractants on or Near Airports*.

[1] At the preliminary level of the pond design, RS&H utilized the nomograph using the 0.00 cfs/acre release. At final design, per MRWD WMO § 504 8 (D), alternative methods of modeling will need to be performed to determine the final detention volume.

E.6.2 Water Quality

Local regulations dictate that water quality treatment must be provided for the first inch of runoff over the site impervious area. Per the WMO, this volume is calculated with the following equation:

$$Vc = d * Ai * Uc$$

Where:

Vc = Volume, acre-feet

d = 1-inch

Ai = impervious area, acres

Uc = 1-ft / 12-inch, unit conversion factor from inches to feet

Water Quality calculations are based on 1 inch of rainfall over the impervious area. The Proposed Action results 1.98 acre-feet of required water quality volume. This requirement is achievable through the following measures:

- Infiltration trenches and basins
- Bioretention facilities
- Dry wells
- Bioswale with check dams
- Storage below the outlet of a detention facility

As mentioned in **Section E.3,** due to high tailwater associated with the project area, the Proposed Action is expected to retain stormwater runoff on-site and have zero release to nearby surface waters. With the relatively high groundwater table in the storage area, geotechnical exploration should be conducted prior to final design to determine if infiltration techniques could be utilized for water quality. The final design would determine the specific measures and strategies to employ to satisfy water quality requirements.

E.6 Floodplain Analysis

E.6.1 Existing Floodplain Conditions

The Des Plaines River is located approximately 200 feet east of the Project Study Area at its nearest point, on the other side of U.S. Highway 45. The Proposed Action is located in Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 17031C0207J, dated August 19, 2008. The Proposed Action is located within Zone AE, which is defined as the 100-year (1-percent-annual-chance) floodplain where BFEs are established. The 100-year (1-percent-annual-chance) BFE at the southeast corner of the airport is 640.0 feet NAVD88. The 100-year (1-percent-annual-chance) BFE increases to 640.2 NAVD88 in the northern portions of the airport and along the Wheeling Drainage Ditch. See **Figure E-3** below for the existing floodplains.

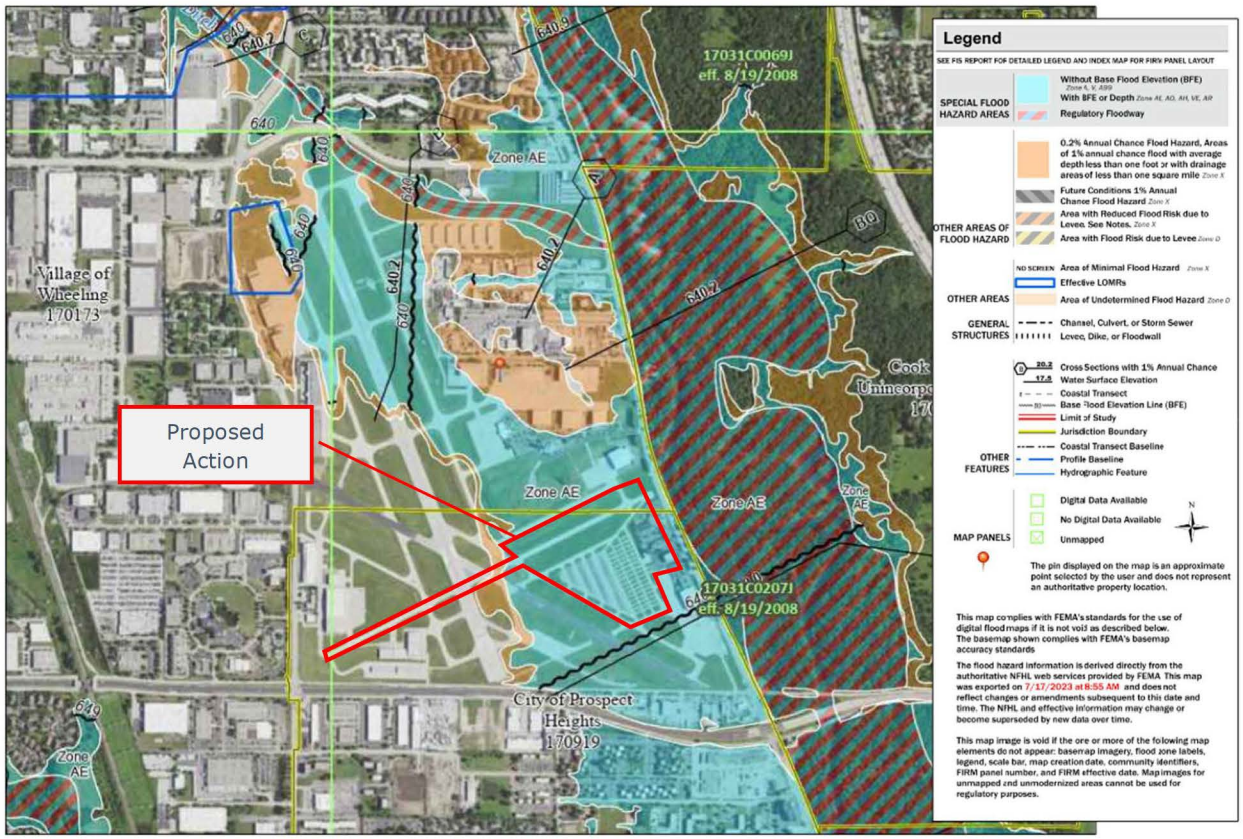

Figure E-3: FEMA Delineated Floodplains
Source: FEMA, 2008

E.6.2 Compensatory Storage Methodology

RS&H analyzed volume surfaces between the existing topographic data, proposed grading from the PWK MDS, the established 10-year (10-percent-annual-chance) BFE at elevation 638.0 NAVD88, and the established 100-year (1-percent-annual-chance) BFE at elevation 640.0 NAVD88. These elevations were determined from the flood profiles for the Des Plaines River in the Flood Insurance Study for Cook County at cross section BP **(Attachment E-3)**. Using these surfaces, RS&H derived the volume of fill requiring compensatory storage by taking the storage volume within the floodplain below the respective BFEs under existing conditions and subtracting the storage volume available below the respective BFEs under the Proposed Action as indicated by the proposed surface. This calculation ensures that fill that is above the 100-year (1-percent-annual-chance) BFE is not counted in the compensatory storage calculations as the fill would not displace floodwater from the regulatory flood event. The volume analysis excluded land to be acquired by the Proposed Action, as development on this land would not be altered by the Proposed Action and is above the 100-year (1-percent-annual-chance) BFE under the existing condition.

Through the volume surface analysis described above, the Proposed Action would result in 48,630 cubic yards (30.1 acre-feet) of fill in the 100-year floodplain, and applying the 1.5x compensatory storage multiplier, 72,945 cubic yards (45.2 acre-feet) of flood storage is required. Grading to be conducted in final design would maintain that there is no net loss in flood storage above nor below the 10-year (10-percent-annual-chance) flood elevation in accordance with local criteria. Additionally, it should be noted that storage in ponds about the High Water Elevation (HWL) may act as floodplain storage, thus requiring less additional storage provided by excavation of other areas. The precise volume available in site detention ponds would be determined in final design. **Figure E-4** depicts how the compensatory storage would be allotted under these circumstances.

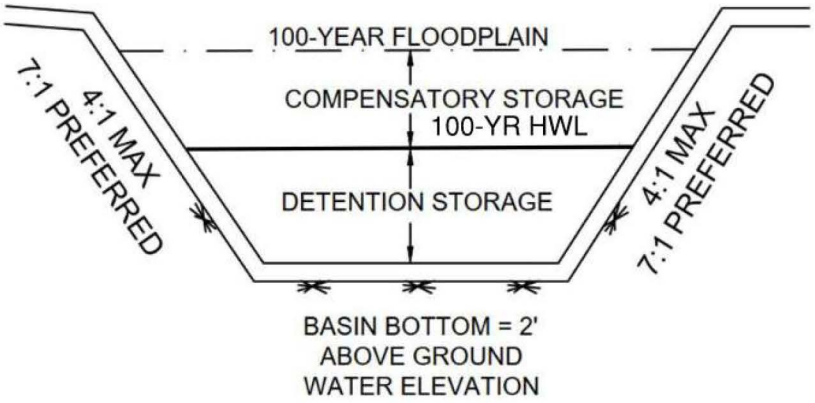

Figure E-4: Floodplain Storage Within Detention Pond

Table E-4 and **Table E-5** provide the fill and compensatory storage calculations for the 100-year and 10-year flood elevations, respectively. See **Attachment E-3** for detailed earthwork and flood storage calculations.

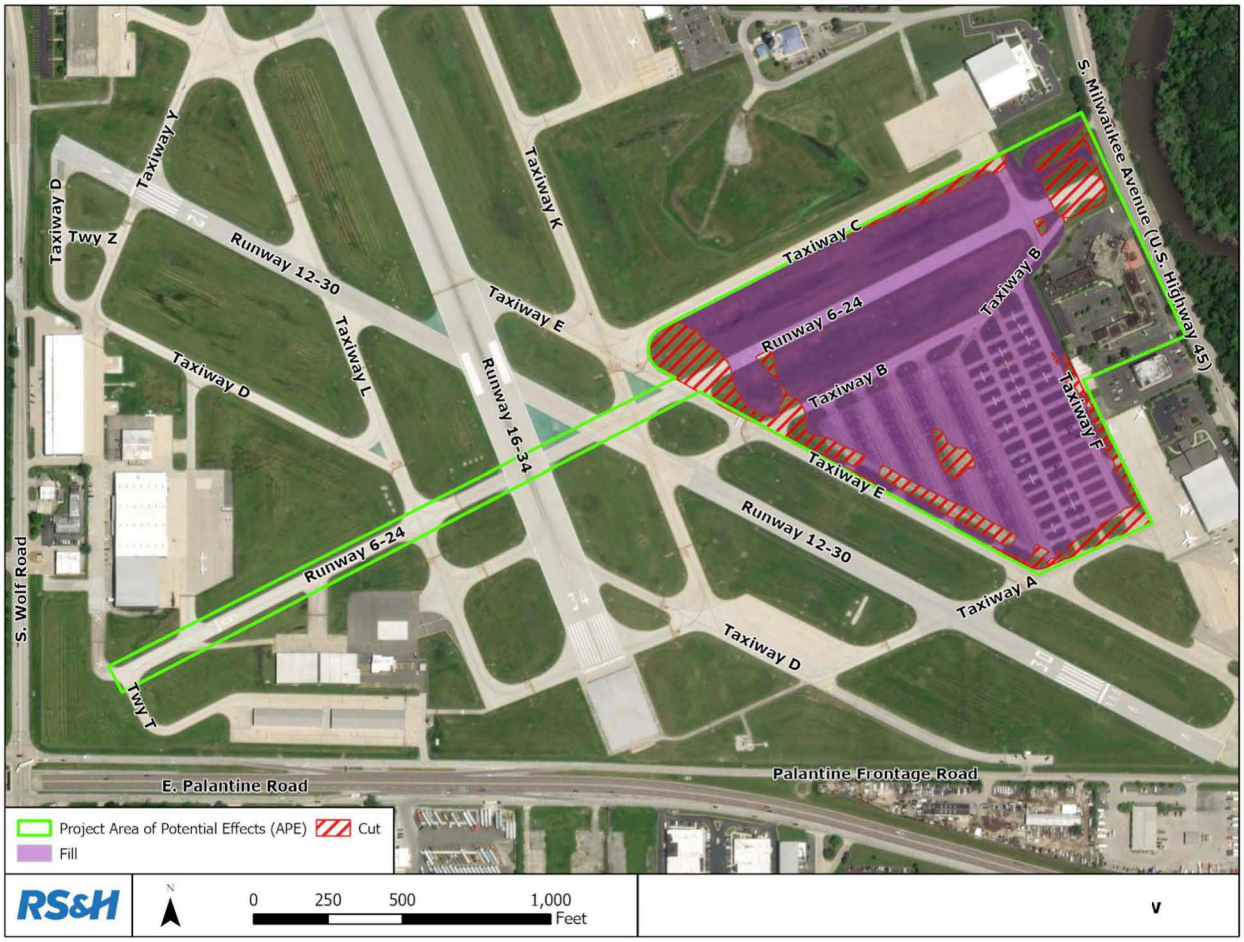

Figure E-5: Proposed Action Areas of Cut and Fill

Table E-4: Proposed Action Floodplain 100-year Net Earthwork Calculations

Storage Below Base Flood 100-year Elevation (BFE) in Existing Conditions (cubic yards [cy])	Storage Below 100-year BFE Under Proposed Action* (cy)	Proposed Fill Below 100-year BFE (cy) (a-b)*	Required Compensatory Storage (cy) (1.5 x c)‡
a	b	c	**d**
70,372	21,742	48,630	**72,945**

* Fill above 100-year (1-percent-annual-chance) BFE not considered for floodplain compensation as floodwater from the regulatory 100-year (1-percent-annual-chance) flood event would not be displaced.

‡ Per Village of Wheeling and City of Prospect Heights criteria, 1.5x compensatory storage required for fill placed within the 100-year (1-percent-annual-chance) floodplain.

^ Detention volume provided per assumed detention basin methodology as outlined in Section E.6.1.

Table E-5: Proposed Action Floodplain 10-Year Net Earthwork Calculations

Storage Below 10-year Base Flood Elevation (BFE) in Existing Conditions (cubic yards [cy])	Storage Below 10-year BFE under Proposed Action* (cy)	Fill From Proposed Action Below 10-year BFE (cy) (g-h)*	Required Compensatory Storage Above 10-year BFE (cy) (d-1.5 x i)‡	Required Compensatory Storage Below 10-year BFE (cy) (d-j)‡
g	h	i	j	k
27,798	10,014	17,784	**46,269**	**26,676**

‡ Per Village of Wheeling and City of Prospect Heights criteria, 1.5x compensatory storage required for fill placed within the 100-year (1-percent-annual-chance) floodplain.

As indicated in the calculations, the proposed detention ponds do not provide sufficient storage to meet the floodplain compensatory storage requirements. To address this deficiency, portions of the site would need to be regraded or excavated to create areas capable of holding floodwater during high flows. In final design, locations for additional floodplain storage would be determined which could include future Airport stormwater ponds identified in the 2024 PWK MDS. Additionally, according to the City of Prospect Heights, excavation for compensatory storage must be designed to drain freely to the waterway. Since the detention ponds are designed with outlet structures that limit the flow rate of runoff, a variance may be required for any proposed flood storage areas that rely on detention pond storage.

E.6.3 Freeboard Value Approach Analysis

As the Proposed Action is located entirely within the 100-year (1-percent-annual-chance) floodplain and consists of several vertical elements, RS&H utilized the FVA approach to assess floodplain resiliency. The Proposed Action would include a fuel farm that would store jet fuel, which would constitute a critical action as failure of this facility due to flooding would pose a risk to adjacent properties. Vertical components of the Proposed Action, including the FFE of buildings and the lowest members of fuel storage tanks, would be designed to be 2.5 feet above the established BFE to meet the City of Prospect Heights requirements, the most stringent criteria (see **Table E-1**). However, there may be a need for an additional variance if the design team opts to place the fuel storage tanks underground, as this could potentially conflict with local regulations. Under the City of Prospect Heights code [7-1-10 A(1)], storage of hazardous materials and flammable liquids is not allowed in floodplains below the local Flood Protection Elevation (FPE, which is 2.5 feet above the established 100-year BFE). This ordinance would require the fuel farm to be in elevated above-ground storage tanks.

Additionally, the proposed infrastructure below the resulting FVA BFE would be appropriately floodproofed and certified by a qualified licensed professional,

meeting local jurisdiction requirements for designing the FFE at or above the FPE. As a result, human safety, health, and welfare would not be affected because of the implementation or operation of the Proposed Action.

E.7 Conclusion

Additional runoff from the Proposed Action would be retained and treated in proposed detention ponds in accordance with federal, state, and local criteria. Therefore, impacts to surface waters as a result of the Proposed Action would be minimal and would not exceed water quality standards that are set forth by any local, state, or federal jurisdictions, nor contaminate surface waters that are used for the public water supply. In the final design, stormwater detention ponds receiving additional stormwater runoff from the Proposed Action would need verification that the increase in stormwater runoff volume would comply with relevant Federal Aviation Administration (FAA) drawdown criteria.

The Proposed Action would add fill into the 100-year (1-percent-annual-chance) floodplain that would require additional compensatory storage per local criteria. To address this, portions of the site would need to be regraded or excavated to create areas capable of holding floodwater during high flows through the expansion of detention ponds or excavation of areas outside of the Proposed Action that are within the floodplain. Additionally, due to local resiliency requirements, the FFE of vertical elements would be required to be elevated to 2.5 feet above the established 100-year (1-percent-annual-chance) BFEs. The Proposed Action would not exceed established FAA significance thresholds, as defined in FAA Order 1050.1F *Environmental Impacts: Policies and Procedures*.[2]

E.8 References

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Attachment E-1: NRCS Soil Survey

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cook County, Illinois

November 25, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map


87° 54' 14" W
87° 53' 24" W
42° 6' 57" N
42° 6' 33" N
425300
425400
425500
425600
425700
425800
425900
426000
426100
426200
426300
426400
4663000
4662900
4662800
4662700
4662600
4662500
4662400
4662300
698B
698B
152A
294B
442A
802B
152A
Des Plaines River
45
Ramp
Soil Map may not be valid at this scale.
Map Scale: 1:5,220 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 50 100 200 300
Feet
0 250 500 1000 1500
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 18, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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	11.0	16.7%
294B	Symerton silt loam, 2 to 5 percent slopes	2.8	4.2%
442A	Mundelein silt loam, 0 to 2 percent slopes	13.3	20.1%
698B	Grays silt loam, 2 to 4 percent slopes	0.4	0.7%
802B	Orthents, loamy, 1 to 6 percent slopes	38.4	58.3%
Totals for Area of Interest		**66.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cook County, Illinois

152A—Drummer silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ssrz
Elevation: 490 to 1,020 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 160 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Drummer, drained, and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Drummer, Drained

Setting

Landform: Stream terraces on outwash plains, stream terraces on till plains, swales on outwash plains, swales on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Loess over stratified loamy outwash

Typical profile

Ap - 0 to 14 inches: silty clay loam
Btg - 14 to 41 inches: silty clay loam
2Btg - 41 to 47 inches: loam
2Cg - 47 to 60 inches: stratified sandy loam to clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow, R111XD020IN - Wet Outwash Mollisol, R108XA013IL - Wet Outwash Prairie
Hydric soil rating: Yes

Minor Components

Peotone, drained

Percent of map unit: 3 percent
Landform: Depressions on outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Harpster, drained

Percent of map unit: 3 percent
Landform: Depressions on outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R110XY025IL - Ponded Calcareous Sedge Meadow
Hydric soil rating: Yes

294B—Symerton silt loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ytdr
Elevation: 510 to 900 feet
Mean annual precipitation: 35 to 40 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 159 to 174 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Symerton and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Symerton

Setting

Landform: Ground moraines, lake plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess over loamy outwash over till and/or lacustrine deposits

Typical profile

Ap - 0 to 15 inches: silt loam

Bt1 - 15 to 19 inches: silty clay loam
2Bt2 - 19 to 35 inches: clay loam
3BCk - 35 to 39 inches: silty clay loam
3C - 39 to 79 inches: silty clay loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R110XY007IL - Moist Glacial Drift Upland Prairie
Hydric soil rating: No

Minor Components

Ashkum

Percent of map unit: 3 percent
Landform: Ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Reddick

Percent of map unit: 3 percent
Landform: Till-floored lake plains, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Varna

Percent of map unit: 2 percent
Landform: Ground moraines, end moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R110XY007IL - Moist Glacial Drift Upland Prairie
Hydric soil rating: No

Urban land

Percent of map unit: 1 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

442A—Mundelein silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 31307
Elevation: 510 to 1,020 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Mundelein and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mundelein

Setting

Landform: Stream terraces, lake plains, outwash plains
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty material or loess over outwash

Typical profile

Ap - 0 to 17 inches: silt loam
Bt - 17 to 31 inches: silty clay loam
2BC - 31 to 42 inches: silt loam
2C - 42 to 79 inches: stratified sandy loam to silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B/D
Ecological site: R110XY007IL - Moist Glacial Drift Upland Prairie
Hydric soil rating: No

Minor Components

Drummer, drained

Percent of map unit: 4 percent
Landform: Stream terraces on outwash plains, stream terraces on till plains, swales on outwash plains, swales on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow, R111XD020IN - Wet Outwash Mollisol, R108XA013IL - Wet Outwash Prairie
Hydric soil rating: Yes

Pella

Percent of map unit: 2 percent
Landform: Lake plains, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

Urban land

Percent of map unit: 1 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Orthents, loamy

Percent of map unit: 1 percent
Landform: Outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

698B—Grays silt loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 28shb
Elevation: 510 to 1,020 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Grays and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Grays

Setting

Landform: Outwash plains, stream terraces, lake plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess or other silty material and in the underlying outwash

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 11 inches: silt loam
H3 - 11 to 34 inches: silty clay loam
H4 - 34 to 42 inches: loam
H5 - 42 to 60 inches: stratified loamy sand to silt loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna

Hydric soil rating: No

Minor Components

Orthents, loamy

Percent of map unit: 2 percent
Landform: Outwash plains, ground moraines, lake plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

Drummer

Percent of map unit: 2 percent
Landform: Outwash plains, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie, R108XA013IL - Wet Outwash Prairie
Hydric soil rating: Yes

Pella

Percent of map unit: 2 percent
Landform: Outwash plains, ground moraines, lake plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

Urban land

Percent of map unit: 2 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

802B—Orthents, loamy, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2ytf6
Elevation: 510 to 930 feet
Mean annual precipitation: 34 to 40 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 158 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Orthents, loamy, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orthents, Loamy

Setting

Landform: Outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy human-transported material

Typical profile

^A - 0 to 6 inches: loam
^C - 6 to 79 inches: clay loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: No

Minor Components

Orthents, clayey, undulating

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: No

Urban land

Percent of map unit: 2 percent
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: No

Orthents, loamy-skeletal, undulating

Percent of map unit: 2 percent
Landform: Outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: No

Drummer, drained

Percent of map unit: 1 percent
Landform: Stream terraces on outwash plains, stream terraces on till plains, swales on outwash plains, swales on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow, R111XD020IN - Wet Outwash Mollisol, R108XA013IL - Wet Outwash Prairie
Hydric soil rating: Yes

Houghton, drained

Percent of map unit: 1 percent
Landform: Depressions on outwash plains, depressions on lake plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Pella

Percent of map unit: 1 percent
Landform: Outwash plains, ground moraines, lake plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

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Attachment E-2: Rational Method Calculations

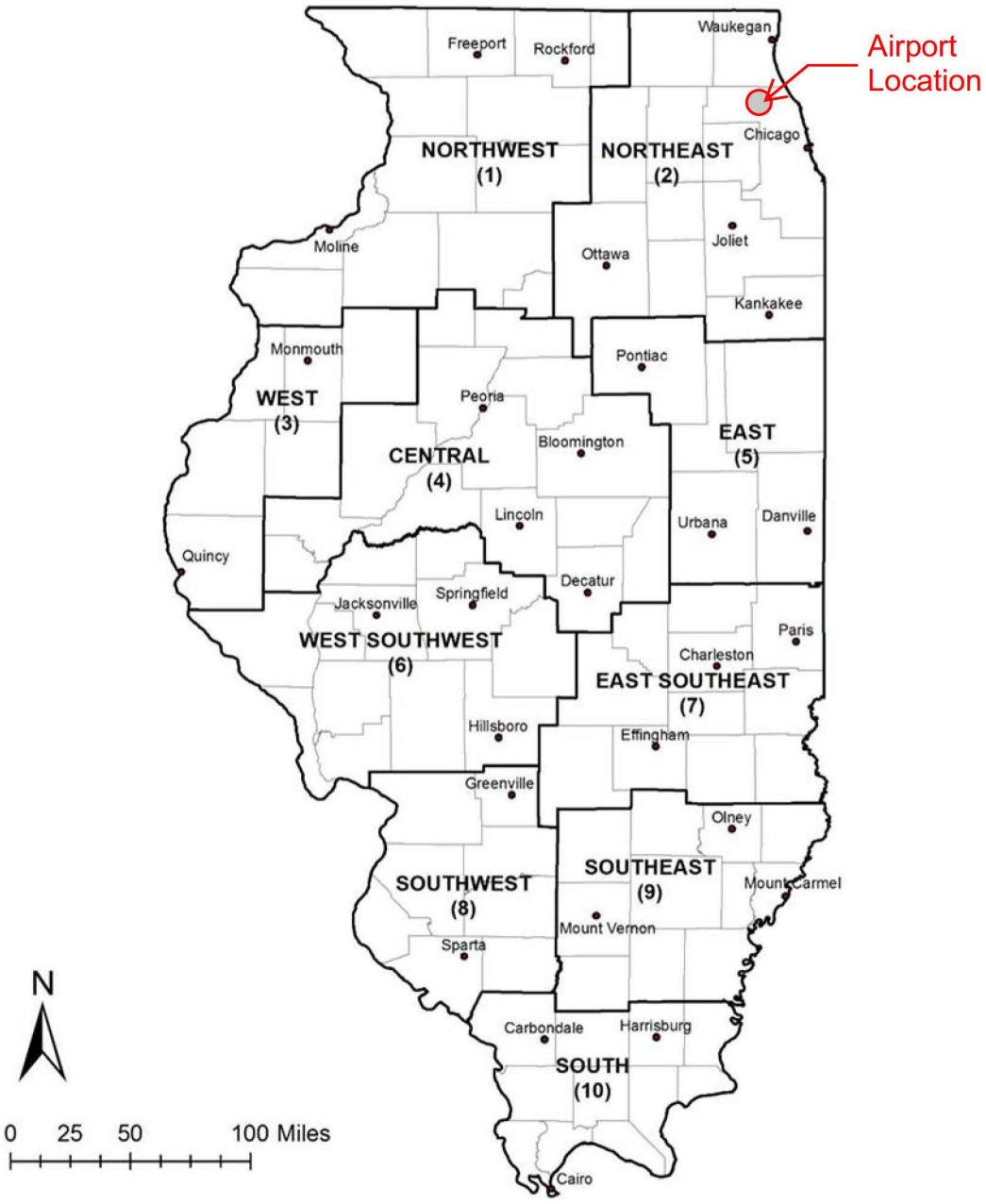


Figure 2. Climatic sections used in developing Illinois frequency estimates

Table 7. Rainfall (inches) for Given Recurrence Interval for Section 2 (Northeast)

Storm Duration	2-month	3-month	4-month	6-month	9-month	1-year	2-year	5-year	10-year	25-year	50-year	100-year	500-year
5 minutes	0.19	0.22	0.24	0.27	0.31	0.33	0.40	0.52	0.62	0.77	0.90	1.03	1.35
10 minutes	0.33	0.38	0.41	0.47	0.53	0.58	0.70	0.90	1.08	1.35	1.58	1.80	2.36
15 minutes	0.42	0.49	0.53	0.61	0.69	0.75	0.90	1.16	1.39	1.74	2.03	2.32	3.04
30 minutes	0.58	0.66	0.73	0.83	0.94	1.03	1.24	1.59	1.91	2.39	2.78	3.17	4.16
1 hour	0.74	0.84	0.93	1.05	1.20	1.30	1.57	2.02	2.42	3.03	3.53	4.03	5.28
2 hours	0.91	1.04	1.14	1.30	1.48	1.61	1.94	2.49	2.99	3.74	4.35	4.97	6.52
3 hours	1.00	1.15	1.26	1.44	1.63	1.77	2.14	2.75	3.30	4.13	4.80	5.49	7.20
6 hours	1.18	1.35	1.48	1.68	1.91	2.08	2.51	3.23	3.86	4.84	5.63	6.43	8.43
12 hours	1.37	1.56	1.71	1.95	2.21	2.41	2.91	3.74	4.48	5.61	6.53	7.46	9.78
18 hours	1.48	1.69	1.85	2.11	2.39	2.61	3.14	4.04	4.84	6.06	7.05	8.06	10.57
24 hours	1.57	1.80	1.97	2.24	2.55	2.77	3.34	4.30	5.15	6.45	7.50	8.57	11.24
48 hours	1.72	1.97	2.16	2.46	2.79	3.04	3.66	4.71	5.62	6.99	8.13	9.28	12.10
72 hours	1.87	2.14	2.34	2.67	3.03	3.30	3.97	5.08	6.05	7.49	8.64	9.85	12.81
120 hours	2.08	2.38	2.61	2.97	3.37	3.67	4.42	5.63	6.68	8.16	9.39	10.66	13.81
240 hours	2.63	3.01	3.30	3.76	4.27	4.65	5.60	7.09	8.25	9.90	11.26	12.65	16.00

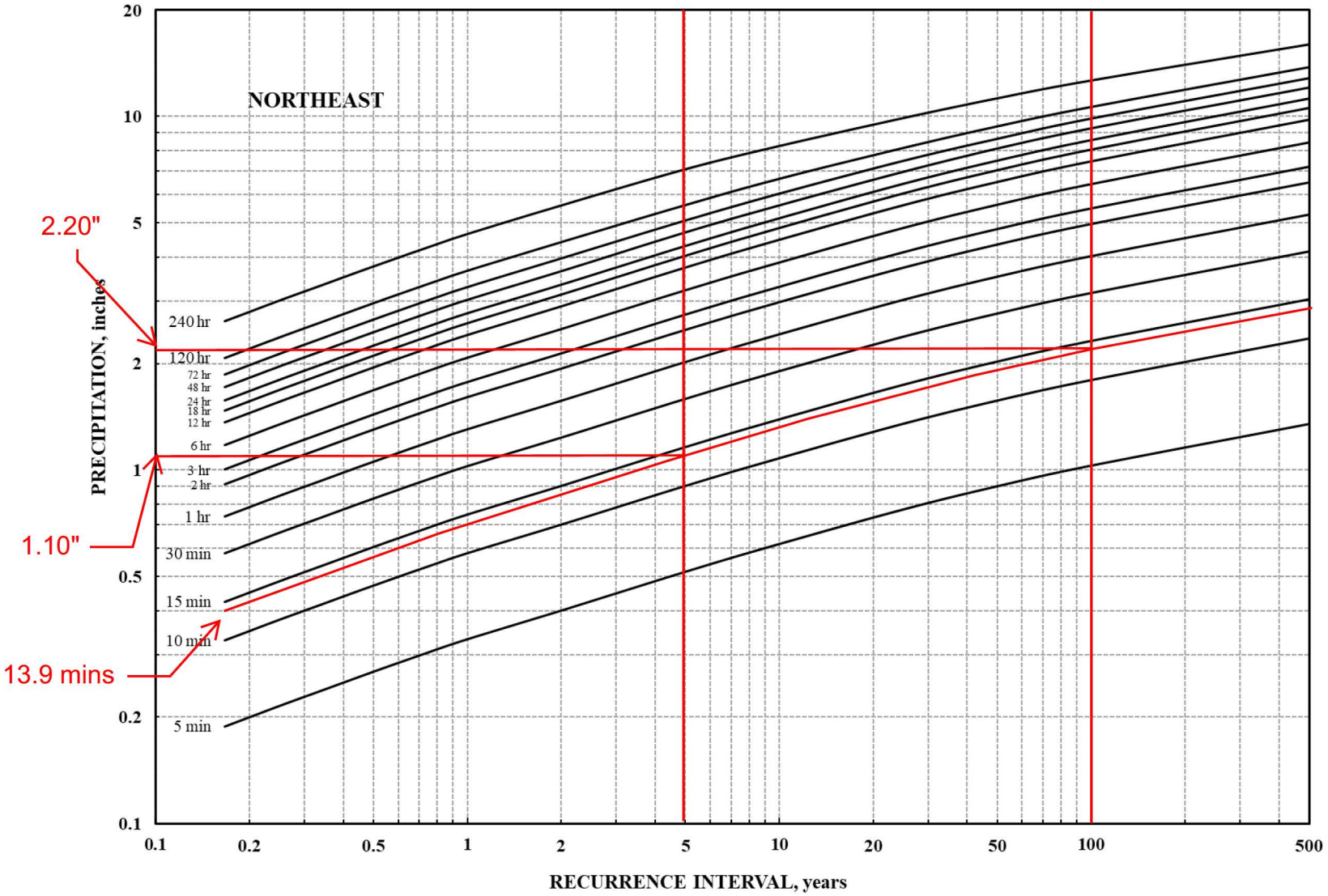


Figure 10. Precipitation frequency estimates for Section 2 (Northeast)

NRCS TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

PROJECT: PWK EA **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/11/2024

CONDITION (SELECT FROM DROP-DOWN)

___ PROPOSED CONDITION X EXISTING CONDITION

SHEET FLOW

1. Segment ID		A						
2. Surface description		Short Prairie Grass						
3. Manning's roughness coefficient, *n*		0.15						
4. Flow length, *L* (≤ 100 ft)		100	ft					
5. 2-year, 24-hr rainfall, P_2		2.81	in	2.81				
6. Land slope, *s*		0.010	ft/ft					
7. Travel time, T_t	$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}s^{0.4}}(60)$	13.80	+		=	13.80	min	

SHALLOW CONCENTRATED FLOW

8. Segment ID		B						
9. Surface description (drop-down list)		Unpaved						
10. Flow length, *L*		37	ft					
11. Watercourse slope, *s*		0.146	ft/ft					
12. Average velocity, *V*		6.16	fps					
13. Travel time, T_t	$T_t = \frac{L}{60V}$	0.10	+		=	0.10	min	

OPEN CHANNEL FLOW

14. Segment ID								
15. Cross-sectional flow area, *A*			ft^2					
16. Wetted Perimeter, P_w			ft					
17. Hydraulic radius, *R*			ft					
18. Flow Length, *L*			ft					
19. Channel slope, *S*			ft/ft					
20. Manning's roughness coefficient, *n*								
21. Average velocity, *V*	$V = \frac{1.486}{n}R^{\frac{2}{3}}S^{\frac{1}{2}}$		fps					
22. Travel time, T_t	$T_t = \frac{L}{60V}$		+		=		min	

TIME-OF-CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

23. Time-of-Concentration, *Tc*, or Travel Time, *Tt*	$T_c, T_t = \sum T_t$	=	**13.90**	min

COMPOSITE RUNOFF COEFFICIENT (*C*)

PROJECT: PWK EA **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 9/15/2025

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

___ UNRESTRICTED AREA

___ UPSTREAM AREA

___ MAJOR STORMWATER SYSTEM

___ OTHER:

CONDITION (SELECT WITH DROP-DOWN)

___ PROPOSED CONDITION

X EXISTING CONDITION

RUNOFF COEFFICIENT

Surface Description	C	Area (acres)	Product (C)(Area)
Impervious	0.95	16.97	16.12
Pervious	0.50	16.89	8.45
TOTALS:		33.86	24.57

COMPOSITE RUNOFF COEFFICIENT

$$\text{Composite C} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{24.57}{33.86} \rightarrow \text{Composite C} = \mathbf{0.73}$$

COMPOSITE RUNOFF COEFFICIENT (*C*)

PROJECT: PWK EA **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 10/7/2025

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

___ UNRESTRICTED AREA

___ UPSTREAM AREA

___ MAJOR STORMWATER SYSTEM

___ OTHER:

CONDITION (SELECT WITH DROP-DOWN)

X PROPOSED CONDITION

___ EXISTING CONDITION

RUNOFF COEFFICIENT

Surface Description	C	Area (acres)	Product (C)(Area)
Impervious	0.95	23.77	22.58
Pervious	0.50	1.93	0.97
Stormwater Retention Facillity	1.00	8.16	8.16
TOTALS:		33.86	31.71

COMPOSITE RUNOFF COEFFICIENT

$$\text{Composite C} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{31.71}{33.86} \rightarrow \text{Composite C} = \mathbf{0.94}$$

COMPOSITE RUNOFF CURVE NUMBER (*CN*)

PROJECT: PWK EA **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/5/2024

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

___ UNRESTRICTED AREA

___ UPSTREAM AREA

___ MAJOR STORMWATER SYSTEM

___ OTHER:

CONDITION (SELECT WITH DROP-DOWN)

X PROPOSED CONDITION

___ EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious	C	98	23.77	2329.46
Pervious	C	74	10.09	746.66
TOTALS:			33.86	3076.12

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{3076.12}{33.86} \rightarrow \textbf{Composite CN} = \textbf{90.85}$$

NOMOGRAPH: BULLETIN 75 RAINFALL DATA

PROJECT: PWK EA **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/5/2024

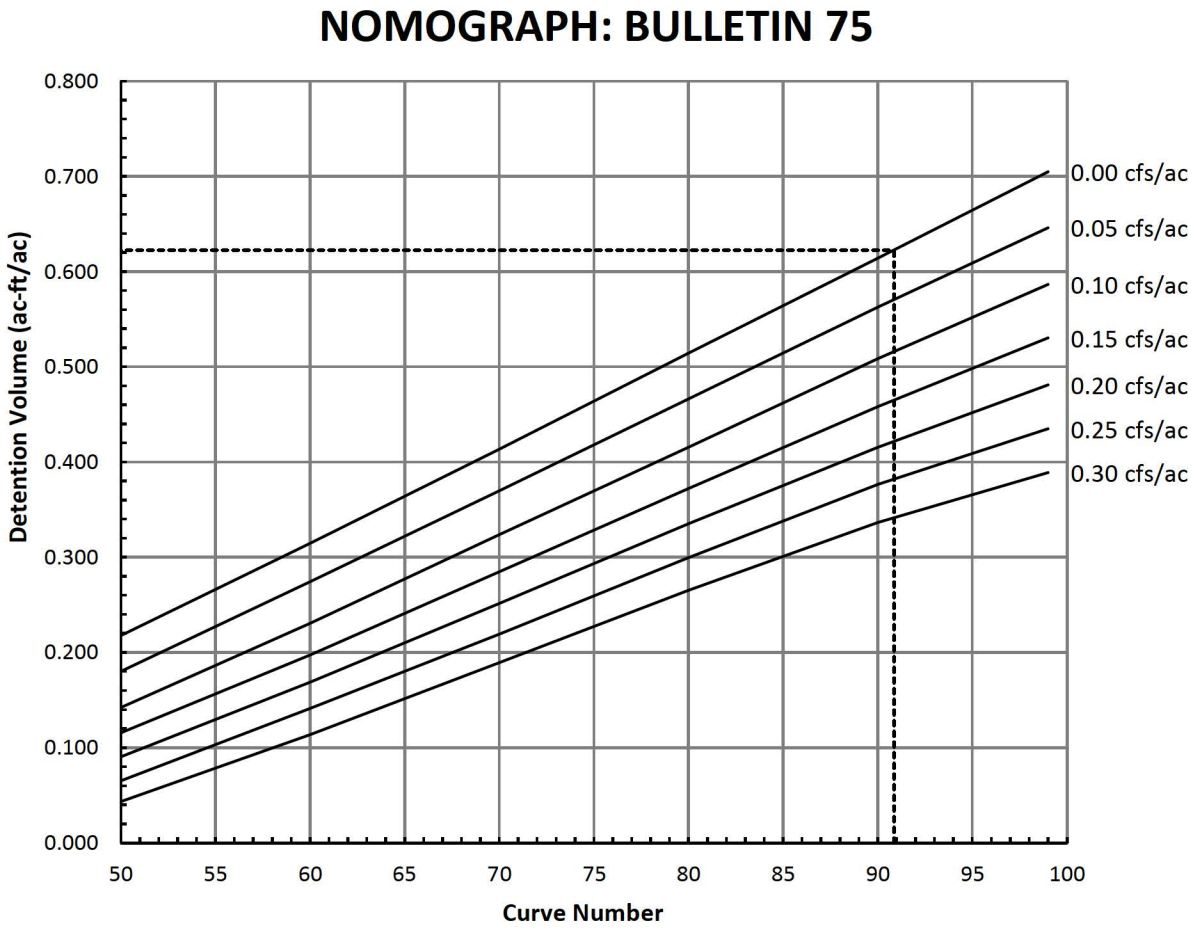
DEVELOPMENT INFORMATION

1.	Detained Area	33.860	acres
2.	Curve Number	90.85	
3.	Actual Release Rate	**0.000**	cfs

REQUIRED DETENTION VOLUME

4.	Required Detention Volume	**21.083**	ac-ft

NOMOGRAPH



DETENTION VOLUME PROVIDED

PROJECT: PWK EA - Pond 1 **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/5/2024

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft^2

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft^2)	Average Area (ft^2)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
0.00	163662.00			0.00
		170029.00	3.90	
1.00	176396.00			3.90
		182815.50	4.20	
2.00	189235.00			8.10
		195708.50	4.49	
3.00	202182.00			12.59

STORM SEWER DETENTION VOLUME

Diameter (in)	Length (ft)	Volume (ac-ft)

TOTAL DETENTION VOLUME

Pond / Vault / Surface Detention Volume (ac-ft)	12.59
Storm Sewer Detention Volume (ac-ft)	0.00
Total Detention Volume (ac-ft)	**12.59**

DETENTION VOLUME PROVIDED

PROJECT: PWK EA - Pond 2 **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/5/2024

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft^2

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft^2)	Average Area (ft^2)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
0.00	45981.00			0.00
		48760.00	1.12	
1.00	51539.00			1.12
		54376.50	1.25	
2.00	57214.00			2.37
		60108.00	1.38	
3.00	63002.00			3.75

STORM SEWER DETENTION VOLUME

Diameter (in)	Length (ft)	Volume (ac-ft)

TOTAL DETENTION VOLUME

Pond / Vault / Surface Detention Volume (ac-ft)	3.75
Storm Sewer Detention Volume (ac-ft)	0.00
Total Detention Volume (ac-ft)	**3.75**

DETENTION VOLUME PROVIDED

PROJECT: PWK EA - Pond 3 **PERMIT NUMBER:**

LOCATION: Wheeling, IL **DATE:** 12/5/2024

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft^2

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft^2)	Average Area (ft^2)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
0.00	65959.00			0.00
		69920.00	1.61	
1.00	73881.00			1.61
		77898.00	1.79	
2.00	81915.00			3.39
		85986.50	1.97	
3.00	90058.00			5.37

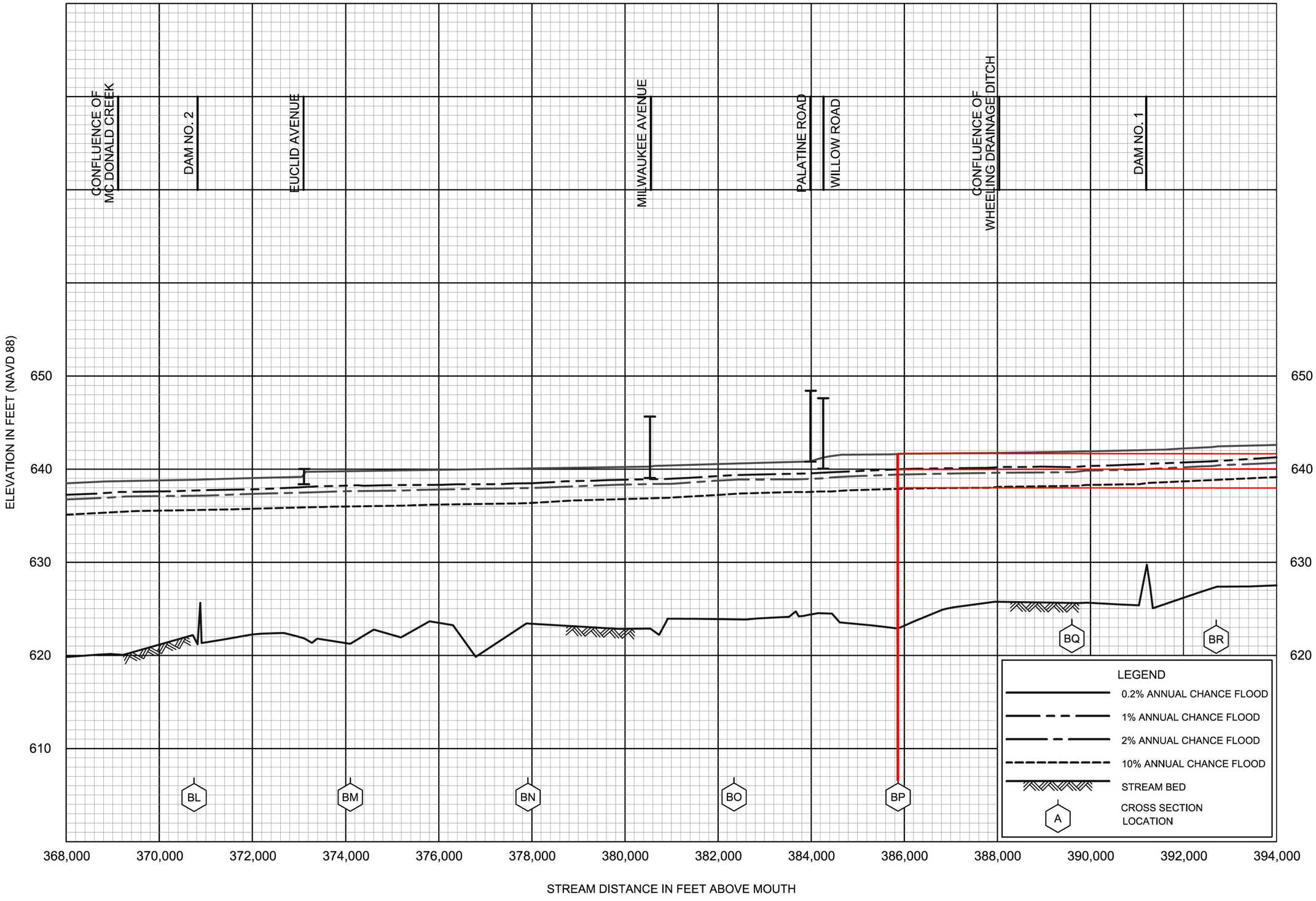
STORM SEWER DETENTION VOLUME

Diameter (in)	Length (ft)	Volume (ac-ft)

TOTAL DETENTION VOLUME

Pond / Vault / Surface Detention Volume (ac-ft)	5.37
Storm Sewer Detention Volume (ac-ft)	0.00
Total Detention Volume (ac-ft)	**5.37**

Attachment E-3: Floodplain Compensatory Storage Calculations



FLOOD PROFILES

DES PLAINES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL

AND INCORPORATED AREAS

119P

Cut/Fill Report

EG = Existing Grade
FG = Future Grade

Generated: 2024-11-27 11:23:01

By user: HendersE

Drawing: P:\Chicago_Executive_Airport\10130210000_PWK_EA_to_Decomm_RW_6_24_Reloc_TW_D\03.00 Project Execution\03.05 Dwgs_Models\CAD\P:\Chicago_Executive_Airport\10130210000_PWK_EA_to_Decomm_RW_6_24_Reloc_TW_D\03.00 Project Execution\03.05 Dwgs_Models\CAD\PWK Floodplain.dwg

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
VOL. EX VS. FG	full	1.000	1.000	1264935.18	13409.74	119121.11	105711.37<Fill>
VOL. 10-YEAR BFE VS. FG	full	1.000	1.000	1265167.99	10013.89	143563.20	133549.31<Fill>
VOL. 10-YEAR BFE VS. EG	full	1.000	1.000	1264934.19	27798.41	55625.71	27827.30<Fill>
VOL. 100-YEAR BFE VS. EG	full	1.000	1.000	1264935.18	70372.73	4501.16	65871.58<Cut>
VOL. 100-YEAR BFE VS. FG	full	1.000	1.000	1265167.99	21741.82	61575.08	39833.26<Fill>

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	6325140.54	143336.60	384386.25	241049.66<Fill>

* Value adjusted by cut or fill factor other than 1.0

APPENDIX F

AIRCRAFT NOISE TECHNICAL REPORT

Runway 6-24 Decommissioning and Aircraft Hangar Development

Chicago Executive Airport (PWK)

Table of Contents

Figures

Tables

F.1 Introduction

This technical report presents the aircraft noise analysis for the Proposed Action. The noise analysis was prepared to comply with the National Environmental Policy Act (NEPA) of 1969; Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*;[1] and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.[2] This report describes the regulatory background, noise analysis methods, model input data, and noise exposure results.

F.1.1 Regulatory Guidelines and Aircraft Noise Model

The noise analysis was developed using the FAA's Aviation Environmental Design Tool (AEDT) Version 3e.[3] The AEDT is the required FAA tool to evaluate potential noise impacts from actions subject to NEPA. The AEDT produces aircraft noise contours that delineate areas of equal day-night average sound level (DNL). The DNL is a 24-hour time-weighted sound level that is expressed in A-weighted decibels. The FAA and other federal agencies use DNL as the primary measure of noise impact because it correlates well with the results of attitudinal surveys regarding noise; increases with the duration of noise events; and accounts for an increased sensitivity to noise at night by increasing each noise event that occurs during nighttime hours (i.e., 10:00 p.m. to 6:59 a.m.) by 10 decibels (dB).

The AEDT defines a network of grid points at ground level around an airport. The model then selects the shortest distance from each grid point to each flight track and computes the noise exposure generated by each aircraft operation, along each flight track. Customizations are applied for atmospheric acoustical attenuation, acoustical shielding of the aircraft engines by the aircraft itself, and aircraft speed. The noise exposure levels for each aircraft are then summed at each grid location. The cumulative noise exposure levels at all grid points are then used to develop aviation noise exposure contours for selected values (e.g., DNL 65, 70 and 75).

Guidelines regarding the compatibility of land uses within various DNL contour intervals are specified in Appendix A of 14 Code of Federal Regulations (CFR) Part 150.[4] As shown in **Table F-1**, the FAA identifies, as a function of annual (365-day average) DNL values, land uses which are compatible and land uses which are not compatible in an airport environ. The FAA determined all the land uses listed in the table are compatible with aircraft noise exposure below the 65 DNL contour. When evaluating land use compatibility, attention is therefore focused on land uses within the 65 DNL contour or greater.

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1 Federal Aviation Administration. 2015. Order 1050.1F, Environmental Impacts: Policies and Procedures. Retrieved May 2024 from https://www.faa.gov/documentlibrary/media/order/faa_order_1050_1f.pdf

2 Federal Aviation Administration. 2006. National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. Retrieved May 2024 from https://www.faa.gov/documentLibrary/media/Order/5050.4B.pdf

3 Federal Aviation Administration. 2022. Aviation Environmental Design Tool (AEDT) Version 3e. Retrieved May 2024 from https://aedt.faa.gov/3e_information.aspx

4 Title 14 Code of Federal Regulations Part 150 – Airport Noise Compatibility Planning. Retrieved May 2024 from https://www.ecfr.gov/current/title-14/chapter-I/subchapter-I/part-150

Table F-1: FAA Land Use Compatibility Guidelines - 14 CFR Part 150

Category	Land Use	Below 65 DNL	65 70 DNL	70 75 DNL	75 80 DNL	70 85 DNL	Over 85 DNL
Residential	Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Residential	Mobile home parks	Y	N	N	N	N	N
Residential	Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use	Schools	Y	N(1)	N(1)	N	N	N
Public Use	Hospitals and nursing homes	Y	25	30	N	N	N
Public Use	Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Public Use	Governmental services	Y	Y	25	30	N	N
Public Use	Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Public Use	Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use	Offices, business and professional	Y	Y	25	30	N	N
Commercial Use	Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use	Retail trade—general	Y	Y	25	30	N	N
Commercial Use	Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use	Communication	Y	Y	25	30	N	N
Manufacturing and Production	Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Manufacturing and Production	Photographic and optical	Y	Y	25	30	N	N
Manufacturing and Production	Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Manufacturing and Production	Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Manufacturing and Production	Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational	Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Recreational	Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Recreational	Nature exhibits and zoos	Y	Y	N	N	N	N
Recreational	Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Recreational	Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Table Notes: SLUCM=Standard Land Use Coding Manual. Y (Yes) = Land Use and related structures compatible without restrictions. N (No) = Land Use and related structures are not compatible and should be prohibited. NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35=Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.
(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often

stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems. (2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low. (3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low. (4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low. (5) Land use compatible provided special sound reinforcement systems are installed. (6) Residential buildings require an NLR of 25. (7) Residential buildings require an NLR of 30. (8) Residential buildings not permitted.
Source: 14 CFR Part 150

F.2 Existing Noise Exposure

In the development of DNL contours, the AEDT uses both default and airport-specific factors. The default factors include meteorological data, engine noise levels, thrust settings, aircraft arrival and departure flight profiles and aircraft speed. The airport-specific factors include the number of aircraft operations, the types of aircraft, runway use, the assignment of aircraft operations to flight tracks, operational time (day/night), and, for departures, the stage (i.e., trip) length. The 2022 DNL contours in this technical report were prepared previously as part of the PWK Federal Aviation Regulation Part 150 Noise Exposure Map Report (February 2024). The following sections describe the data used to develop the 2022 DNL contours.

F.2.1 Meteorological Data

The AEDT accounts for the influences of meteorological conditions on aircraft performance and atmospheric sound absorption. Meteorological conditions affect the transmission of aircraft noise through the air. Humidity and temperature materially affect the transmission of air-to-ground sound through absorption associated with the instability and viscosity of the air. The AEDT uses temperature and relative humidity to calculate atmospheric absorption coefficients, which in turn are used to adjust aircraft performance and noise propagation. The 10-year (2012-2021) average meteorological conditions included in the AEDT for PWK are:

- Temperature: 50.5° Fahrenheit
- Barometric pressure: 1017.2 millibars
- Relative humidity: 69.1%

F.2.2 2022 Aircraft Operations and Fleet

The aircraft operations[5] modeled for 2022 were obtained from the data in the FAA's Air Traffic Activity System (ATADS)[6] for fiscal year 2022 (October 1, 2021, through September 30, 2022). These data, by aircraft category, are provided in **Table F-2**.

[5] An operation is defined as one arrival or one departure.
[6] Federal Aviation Administration. Air Traffic Activity System (ATADS): Airport Operations. Accessed May 2024 from https://aspm.faa.gov/opsnet/sys/airport.asp

As shown, the 2022 annual operations totaled 98,507, which is an average of 270 operations per day.

Table F-2: 2022 Annual Aircraft Operations

Air Carrier	Air Taxi / Commuter	General Aviation	Military	Total
22	19,398	78,958	129	98,507

Source: FAA ATADS

For the purposes of preparing DNL contours, operational data were segregated by aircraft type. Aircraft operations and flight track data for fiscal year 2022 were obtained from FAA's Office of Performance Analysis National Offload Program (NOP) Repository. The data included the specific aircraft type, the actual radar flight track, and the time at which the operation occurred. The data was reviewed, and each aircraft type was assigned the corresponding AEDT aircraft type. The 2022 modeled aircraft operations and fleet are provided in **Table F-3**.

Table F-3 2022 Aircraft Operations and Fleet

Category	Representative Aircraft Type (s)	AEDT Aircraft	2022 Operations
Jet	Bombardier Challenger 300/350/600	CL600	5,585
	Learjet 35/40/45/60/75, Hawker 800	LEAR35	5,179
	Cessna Sovereign/Latitude/Longitude	CNA680	5,209
	Citation II/Bravo, PC-24, Phenom 300	CNA55B	4,544
	Cessna 525 Citation Jet CJ1/CJ3/CJ4`	CNA525C	2,803
	Cessna 560 Citation XLS	CNA560XL	2,730
	Cessna 750 Citation X, G200, Falcon 2000	CNA750	2,438
	Citation Mustang, Phenom 100, Legacy 450	CNA510	1,978
	Dassault Falcon 50/900	FAL900EX	1,818
	Cessna 560 Citation V	CNA560E	1,807
	Beechjet 400, HondaJet, Mitsubishi MU-300	MU3001	1,267
	Gulfstream G280	CL601	1,135
	Gulfstream G400, Falcon 7X/8X	GIV	1,091
	Gulfstream GV	GV	902
	Bombardier Global 7500 / Global Express	BD-700-1A10	752
	Gulfstream G100/G150	IA1125	409
	Eclipse 500, Cessna Citation Mustang	ECLIPSE500	358
	Cessna 650 Citation III	CIT3	321
	Falcon 20	FA20	146
	Bombardier Global 5000	BD-700-1A11	139
	Embraer Legacy 600/650, Embraer ERJ 1305	EMB145	95
	Cessna 500 Citation I	CNA500	69
	Canadair Regional Jet CRJ-200	CRJ9-ER	55
Turboprop	Pilatus PC12, Cessna 208, Socata TBM7	CNA208	6,862
	Beech Super King Air 200/300/350	DHC6	4,829
	Cessna 425/441, Socata TBM-850	CNA441	913
Piston	Cessna 172/177	CNA172	10,638
	Beechcraft Bonanza, Piper Malibu, Mooney M-20	GASEPV	9,753
	Piper PA-28 Cherokee, Cessna 150/152	GASEPF	9,472

Category	Representative Aircraft Type (s)	AEDT Aircraft	2022 Operations
	Cirrus SR20/22	COMSEP	7,457
	Cessna 182/185	CNA182	4,800
	Beech 55/ 58, Cessna 310/340/421	BEC58P	2,500
	Piper PA-30/44, Diamond DA-62	PA30	237
	Cessna 206	CNA206	84
Military	Boeing F-15E Strike Eagle	F15E29	44
	F-16 Fighting Falcon	F16PW0	44
	Boeing F/A-18 Hornet	F-18	44
	Total		98,506

Source: FAA NOP; RS&H, Inc.

F.2.3 Time of Day

Aircraft operations modeled in the AEDT are assigned as occurring during daytime (7:00 a.m. to 9:59 p.m.) or nighttime (10:00 p.m. to 6:59 a.m.). The DNL calculation includes an additional weight of 10 dB for those aircraft events occurring at night. The modeled time-of-day percentages by aircraft category for arrivals and departures are shown in Error! Reference source not found.

Table F-4 2022 Percent Time of Day By Category

Operation Type	Jet	Turboprop	Piston	Military	Overall
Arrivals					
Day	96%	87%	98%	94%	96%
Night	4%	13%	2%	6%	4%
Departures					
Day	94%	76%	96%	94%	93%
Night	6%	24%	4%	6%	7%

Source: FAA NOP; RS&H, Inc.

F.2.4 Runway Use

Runway use refers to the frequency with which aircraft utilize each runway end for departures and arrivals. The more often a runway is used, the more noise is generated in areas located off each end of that runway. Wind direction and speed primarily dictate the runway directional use (or flow) of airports. Modeled runway use by aircraft category are included in **Table F-5**.

Table F-5 2022 Modeled Runway Use

Operation	Category	Runway 16 End	Runway 34 End	Runway 12 End	Runway 30 End	Runway 6 End	Runway 24 End	Total
Arrival	Jet	65%	35%	-	-	-	-	100%
	Turboprop	65%	30%	3%	2%	-	-	100%
	Piston	59%	20%	7%	10%	2%	2%	100%
	Military	50%	50%	-	-	-	-	100%
Departure	Jet	54%	45%	-	1%	-	-	100%
	Turboprop	54%	41%	-	5%			100%
	Piston	57%	31%	3%	4%	2%	3%	100%
	Military	50%	50%	-	-	-	-	100%

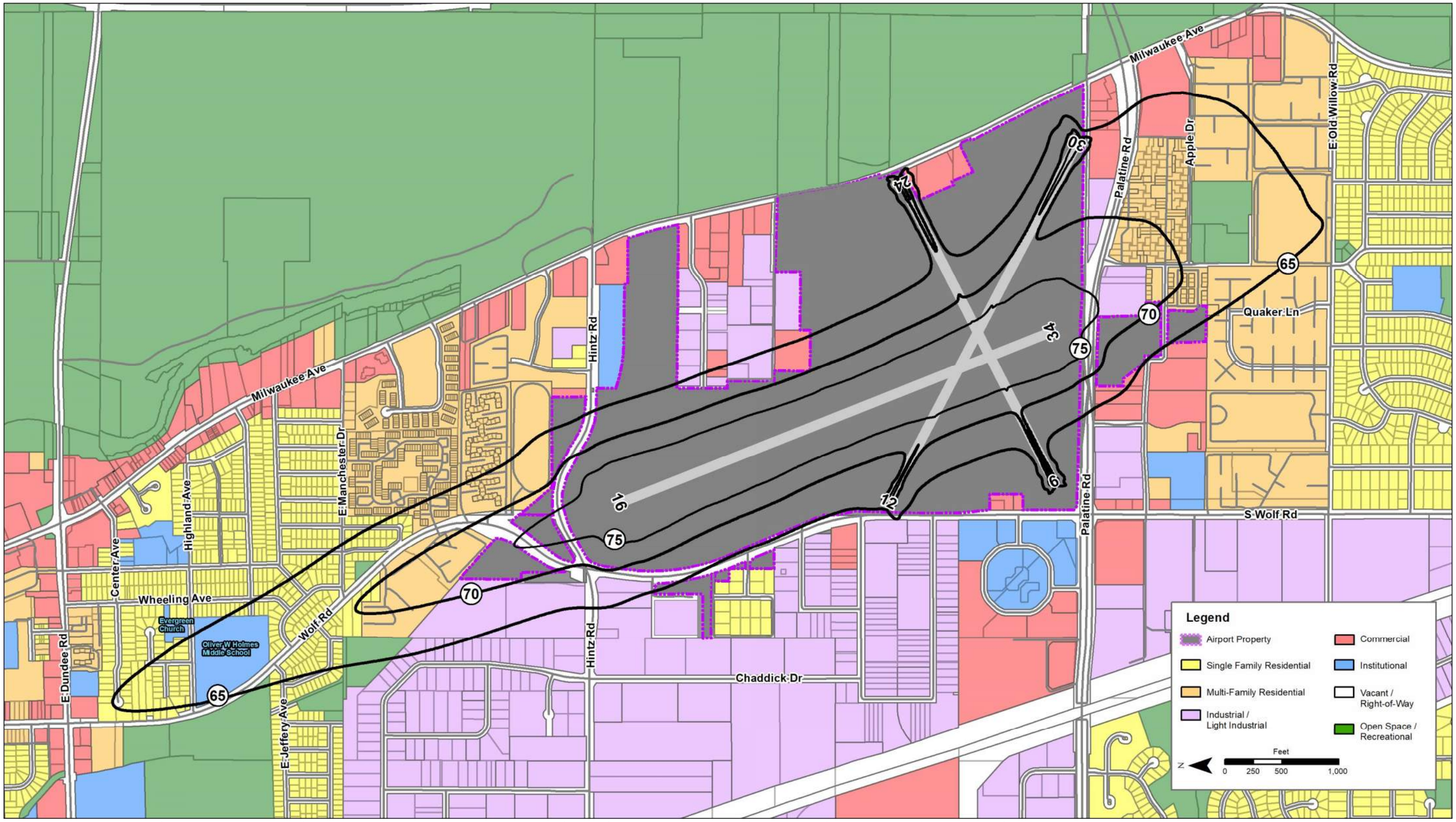
Source: FAA NOP; RS&H, Inc.

F.2.5 2022 DNL Contours

Figure F-1 presents the 2022 65, 70, and 75 DNL contours on a land use base map. The 65 DNL contour extends the farthest off the ends of Runway 16/34 because it is the most used runway at the Airport. The wide size of the 65 DNL contour south of the airport is reflective of aircraft departing Runway 16 to the south and executing an immediate left-turn, which is needed to keep the departing aircraft away from the airspace for Chicago O'Hare International Airport. The 65 DNL contour at the ends of Runways 12/30 and 6/24 remain primarily within the limit of the Airport property boundary. This is due to the minimal use of these runways, which are not typically used by the high-performance aircraft (jets).

Incompatible land uses (single family residential and multi-family residential) located within the 2022 65 DNL contour were identified by overlaying the contours on parcel-level land use map. The 2022 65 DNL contour contains approximately 126.7 acres of incompatible land uses and one school, the Oliver W. Holmes Middle School.

Figure F-1 2022 DNL Contours



Source: ESRI, 2023; Cook County GIS, 2023; Chicago Executive Airport: Airport Master Plan Update & Airport Layout Plan, 2021; Chicago Metropolitan Agency for Planning, 2022; RS&H, Inc.

F.3 Future Noise Exposure

This section describes the methods, significance thresholds pertaining to noise and compatible land uses, and potential effects that the Proposed Action would have on aircraft noise exposure compared to the No Action Alternative for 2026 and 2031.

F.3.1 Methodology and Significance Threshold

Per FAA Order 1050.1F, "a significant noise impact would occur if the action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is [already] exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe." Noise sensitive areas include residential neighborhoods; educational, health, and religious facilities; and cultural and historic sites.

The methodology for assessing noise exposure included preparing DNL contours for the No Action and Proposed Action for the years 2026 and 2031. The contours were developed to assess if a significant noise impact would occur.

F.3.2 Future No Action Alternative Aircraft Operations

The 2026 and 2031 No Action Alternatives operations were obtained from the FAA's Terminal Area Forecast (TAF) issued in January 2024. The 2026 and 2031 No Action Alternatives aircraft fleet mixes were determined by multiplying the percentages by aircraft type that occurred in 2022 by the FAA TAF operations forecast to occur in 2026 and 2031. The runway use, flight tracks, flight track use, and time of day modeled for the 2026 and 2031 No Action Alternatives are the same as those modeled for the 2022 DNL contours. The 2026 and 2031 modeled aircraft operations and fleet are shown in **Table F-6**.

F.3.3 2026 No Action Alternative DNL Contours

The 2026 No Action Alternative 65, 70, and 75 DNL contours are depicted on **Figure F-2.** The size and shape of the 2026 No Action Alternative DNL contours is very similar to the 2022 contours. The 2026 No Action Alternative 65 DNL contour includes 158.03 acres of incompatible land uses. One school, the Oliver W. Holmes Middle School, and one place of worship, the Evergreen Presbyterian Church, are located within the 2026 No Action Alternative 65 DNL contour.

F.3.4 2031 No Action Alternative DNL Contours

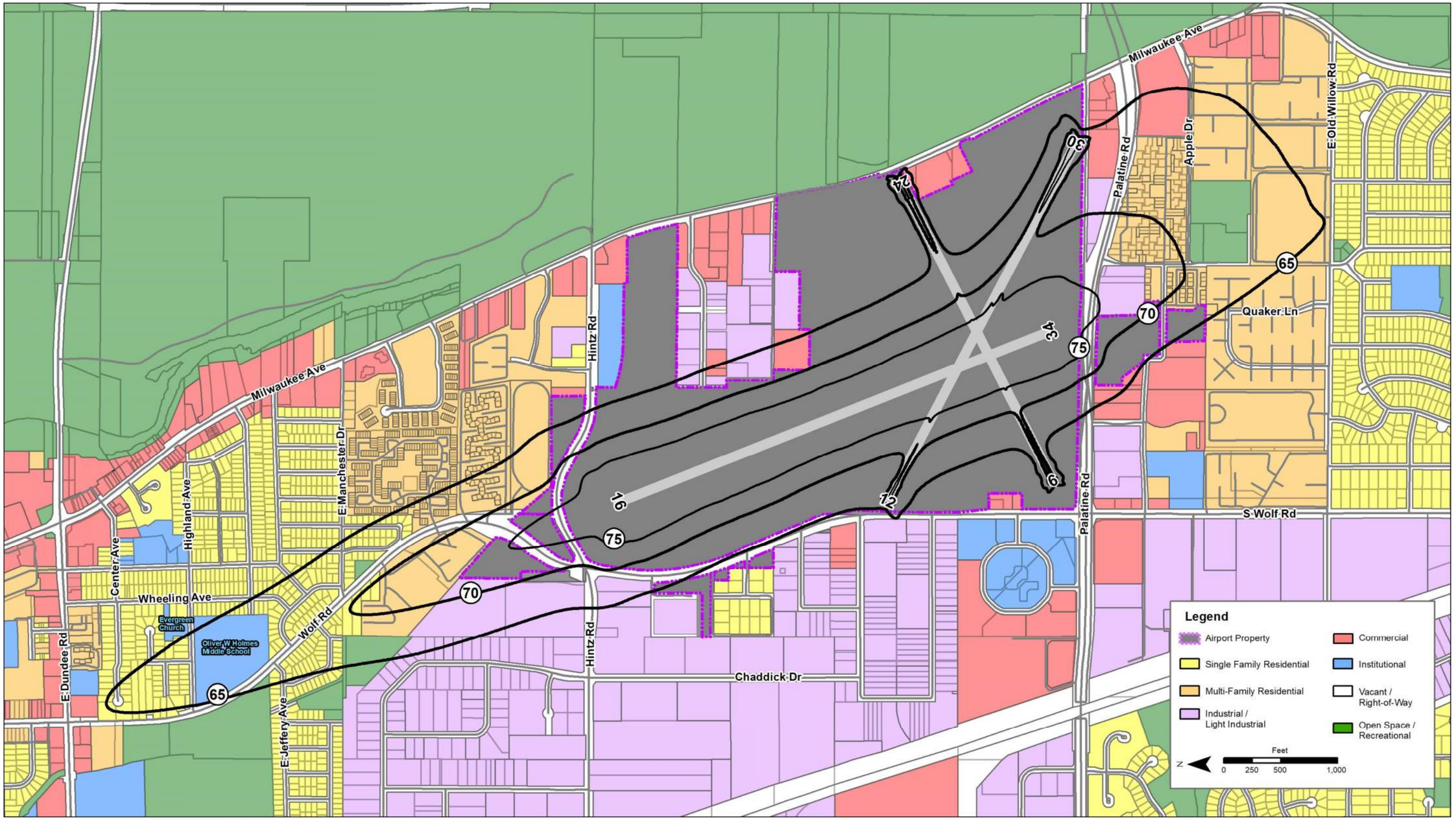
The 2031 No Action Alternative 65, 70, and 75 DNL contours are depicted on **Figure F-3.** The 2031 No Action Alternative 65 DNL includes 159.22 acres of incompatible land uses. The Oliver W. Holmes Middle School and the Evergreen Presbyterian Church are located within the 2031 No Action Alternative 65 DNL contour.

Table F-6 2026 and 2031 No Action Alternative Aircraft Operations and Fleet

Category	Representative Aircraft Type (s)	AEDT Aircraft	2026 Annual Operations	2031 Annual Operations
Jet	Bombardier Challenger 300/350/600	CL600	5,370	5,451
	Learjet 35/40/45/60/75, Hawker 800	LEAR35	4,979	5,054
	Cessna Sovereign/Latitude/Longitude	CNA680	5,009	5,085
	Citation II/Bravo, PC-24, Phenom 300	CNA55B	4,370	4,436
	Cessna 525 Citation Jet CJ1/CJ3/CJ4`	CNA525C	2,695	2,735
	Cessna 560 Citation XLS	CNA560XL	2,624	2,664
	Cessna 750 Citation X, G200, Falcon 2000	CNA750	2,346	2,382
	Citation Mustang, Phenom 100, Legacy 450	CNA510	1,902	1,931
	Dassault Falcon 50/900	FAL900EX	1,746	1,773
	Cessna 560 Citation V	CNA560E	1,737	1,763
	Beechjet 400, HondaJet, Mitsubishi MU-300	MU3001	1,217	1,236
	Gulfstream G280	CL601	1,092	1,109
	Gulfstream G400, Falcon 7X/8X	GIV	1,049	1,065
	Gulfstream GV	GV	865	879
	Bombardier Global 7500 / Global Express	BD-700-1A10	724	735
	Gulfstream G100/G150	IA1125	393	399
	Eclipse 500, Cessna Citation Mustang	ECLIPSE500	344	349
	Cessna 650 Citation III	CIT3	310	314
	Falcon 20	FA20	140	143
	Bombardier Global 5000	BD-700-1A11	134	136
	Embraer Legacy 600/650, Embraer ERJ 1305	EMB145	92	94
	Cessna 500 Citation I	CNA500	66	67
	Canadair Regional Jet CRJ-200	CRJ9-ER	52	53
Turboprop	Pilatus PC12, Cessna 208, Socata TBM7	CNA208	6,600	6,699
	Beech Super King Air 200/300/350	DHC6	4,645	4,715
	Cessna 425/441, Socata TBM-850	CNA441	879	892
Piston	Cessna 172/177	CNA172	11,373	11,426
	Beechcraft Bonanza, Piper Malibu, Mooney M-20	GASEPV	10,422	10,472
	Piper PA-28 Cherokee, Cessna 150/152	GASEPF	10,125	10,170
	Cirrus SR20/22	COMSEP	8,478	8,478
	Cessna 182/185	CNA182	5,131	5,155
	Beech 55/ 58, Cessna 310/340/421	BEC58P	2,361	2,396
	Piper PA-30/44, Diamond DA-62	PA30	224	227
	Cessna 206	CNA206	80	81
Military	Boeing F-15E Strike Eagle	F15E29	43	43
	F-16 Fighting Falcon	F16PW0	43	43
	Boeing F/A-18 Hornet	F-18	43	43
	Total		99,703	100,693

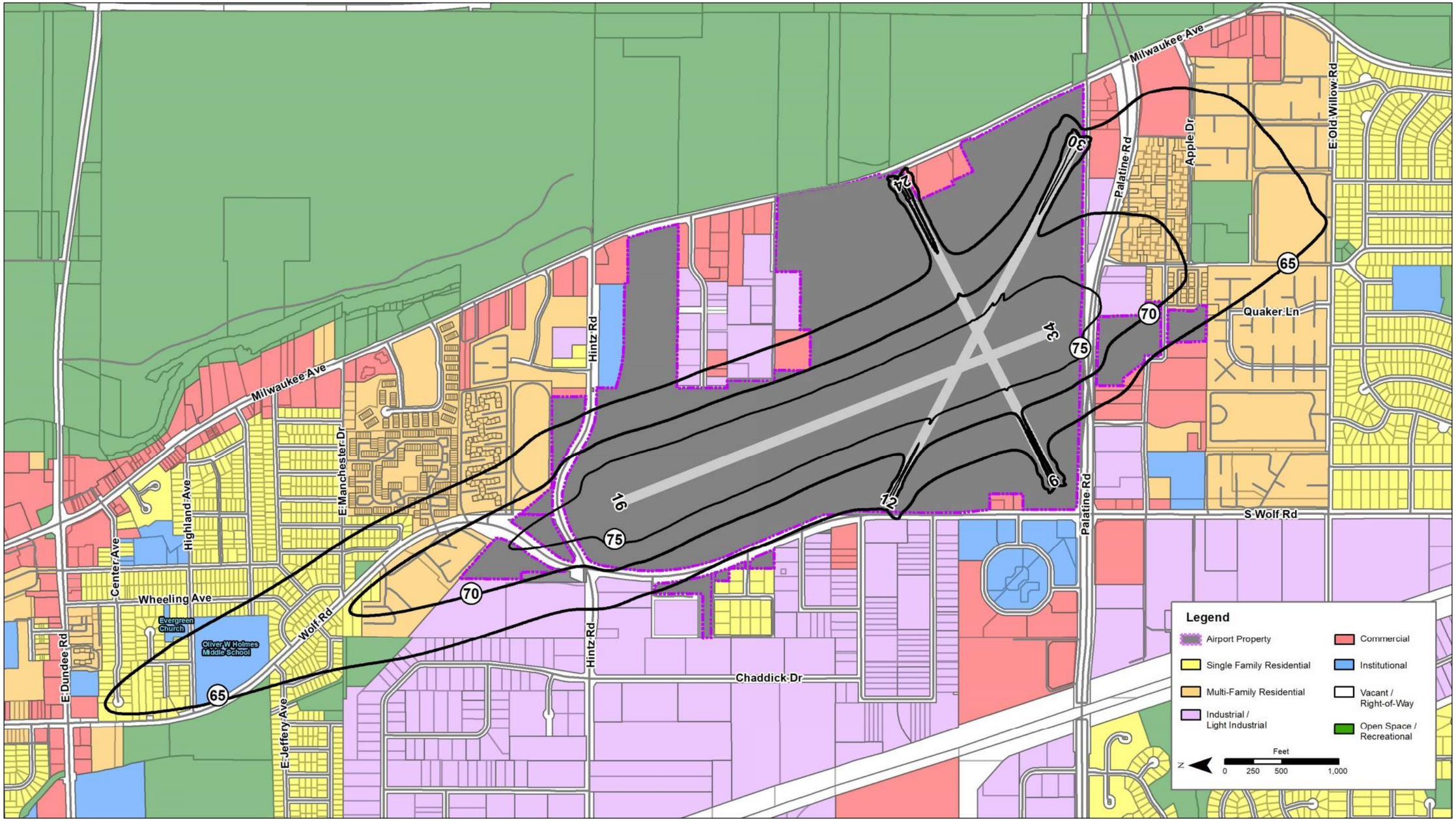
Source: FAA TAF; RS&H, Inc.

Figure F-2 2026 No Action Alternative DNL Contours



Source: ESRI, 2023; Cook County GIS, 2023; Chicago Executive Airport: Airport Master Plan Update & Airport Layout Plan, 2021; Chicago Metropolitan Agency for Planning, 2022; RS&H, Inc.

Figure F-3 2031 No Action Alternative DNL Contours



Source: ESRI, 2023; Cook County GIS, 2023; Chicago Executive Airport: Airport Master Plan Update & Airport Layout Plan, 2021; Chicago Metropolitan Agency for Planning, 2022; RS&H, Inc.

F.3.5 Proposed Action

The elements of the Proposed Action that will change the noise exposure surrounding PWK include the decommissioning of Runway 6-24 and construction of additional hangars. For the noise modeling of the Proposed Action DNL contours, 96% of the operations that occurred on Runway 6-24 in the No Action Alternative have been reassigned to Runway 16-34 and 4% of the operations that occurred on Runway 6-24 in the No Action Alternative have been reassigned to Runway 12-30.

The additional hangars being constructed as part of the Proposed Action are expected to accommodate 17 aircraft. Some of the 17 aircraft are currently based at the Airport and some would be new to the airport; for conservative noise modeling purposes, operations generated by all 17 aircraft have been modeled as part of the Proposed Action. It has been estimated that each of the 17 aircraft would generate 6 operations per month, or 1,224 operations on an annual basis. For the noise modeling, the 1,224 additional annual operations resulting from the Proposed Action have been added to the 99,703 operations forecast to occur in 2026. For the 2031 Proposed Action, the 1,224 annual operations were increased to 1,284 based on FAA's TAF growth rate for the air taxi and itinerant general aviation categories from 2026 to 2031 at PWK.

The new hangars would be able to accommodate a variety of large business jets. Examples of the jets that the hangars can accommodate were provided by a potential developer. The additional annual operations estimated to occur in 2026 and 2031 were distributed among these aircraft. The additional annual operations modeled for the 2026 and 2031 Proposed Actions by aircraft types are shown in **Table F-7**.

Table F-7 Addition Operations Resulting from the Proposed Action

Potential Aircraft Types	2026	2031
Embraer ERJ135 Legacy Business	94	99
Dassault Falcon 7x, 8X 10x	282	296
Bombardier Global 5000	94	99
Bombardier Global 6000, 7000, 7500	283	296
Gulfstream G450	94	99
Gulfstream G550	94	99
Gulfstream G650, 700, 800	283	296
Total	1,224	1,284

Source: PWK Airport Personnel

F.3.6 2026 Proposed Action DNL Contours

The 2026 Proposed Action 65, 70, and 75 DNL contours are depicted on **Figure F-4.** The 2026 Proposed Action DNL contours most notably reflect the decommissioning of Runway 6/24.

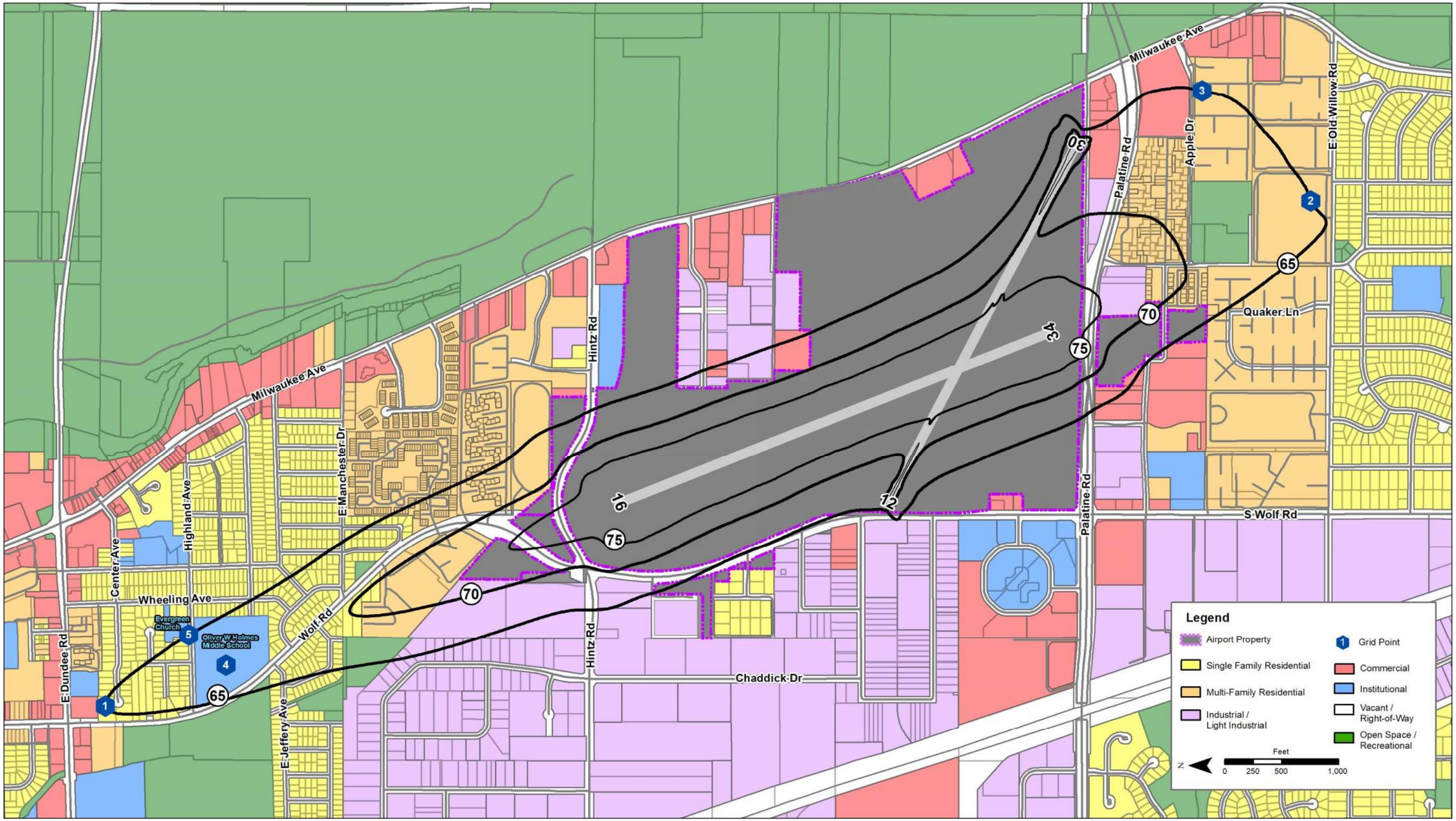
The 2026 Proposed Action 65 DNL contour includes 159.26 acres of incompatible land uses, an increase of 1.23 acres over the 2026 No Action Alternative 65 DNL contour. This represents a 0.78% increase in the acres of incompatible land use over the No Action Alternative. The Oliver W. Holmes Middle School and the Evergreen Presbyterian Church are located within the 2026 Proposed Action 65 DNL contour. Grid points in the AEDT were placed at the school, church, and at residential sites north and south of the Airport to determine if a significant noise impact would occur. The five grid points are shown on **Figure F-4**. **Table F-8** identifies the DNL values at these grid points for the 2026 No Action Alternative and the 2026 Proposed Action. As shown in the table, the increase in DNL values when comparing the Proposed Action to the No Action Alternative is 0.02 DNL. The 0.02 DNL increase is well below the significance threshold of 1.5 DNL and, therefore, no significant noise impacts would occur as a result of the Proposed Action.

Table F-8 2026 No Action Alternative and Proposed Action DNL Values at Grid Points

ID	2026 No Action Alternative DNL	2026 Proposed Action DNL	Increase In DNL
1	64.98	65.00	0.02
2	64.98	65.00	0.02
3	64.98	65.00	0.02
4 (School)	67.37	67.39	0.02
5 (Church)	65.00	65.02	0.02

Source: RS&H, Inc.

Figure F-4 2026 Proposed Action DNL Contours



Source: ESRI, 2023; Cook County GIS, 2023; Chicago Executive Airport: Airport Master Plan Update & Airport Layout Plan, 2021; Chicago Metropolitan Agency for Planning, 2022; RS&H, Inc.

F.3.7 2031 Proposed Action DNL Contours

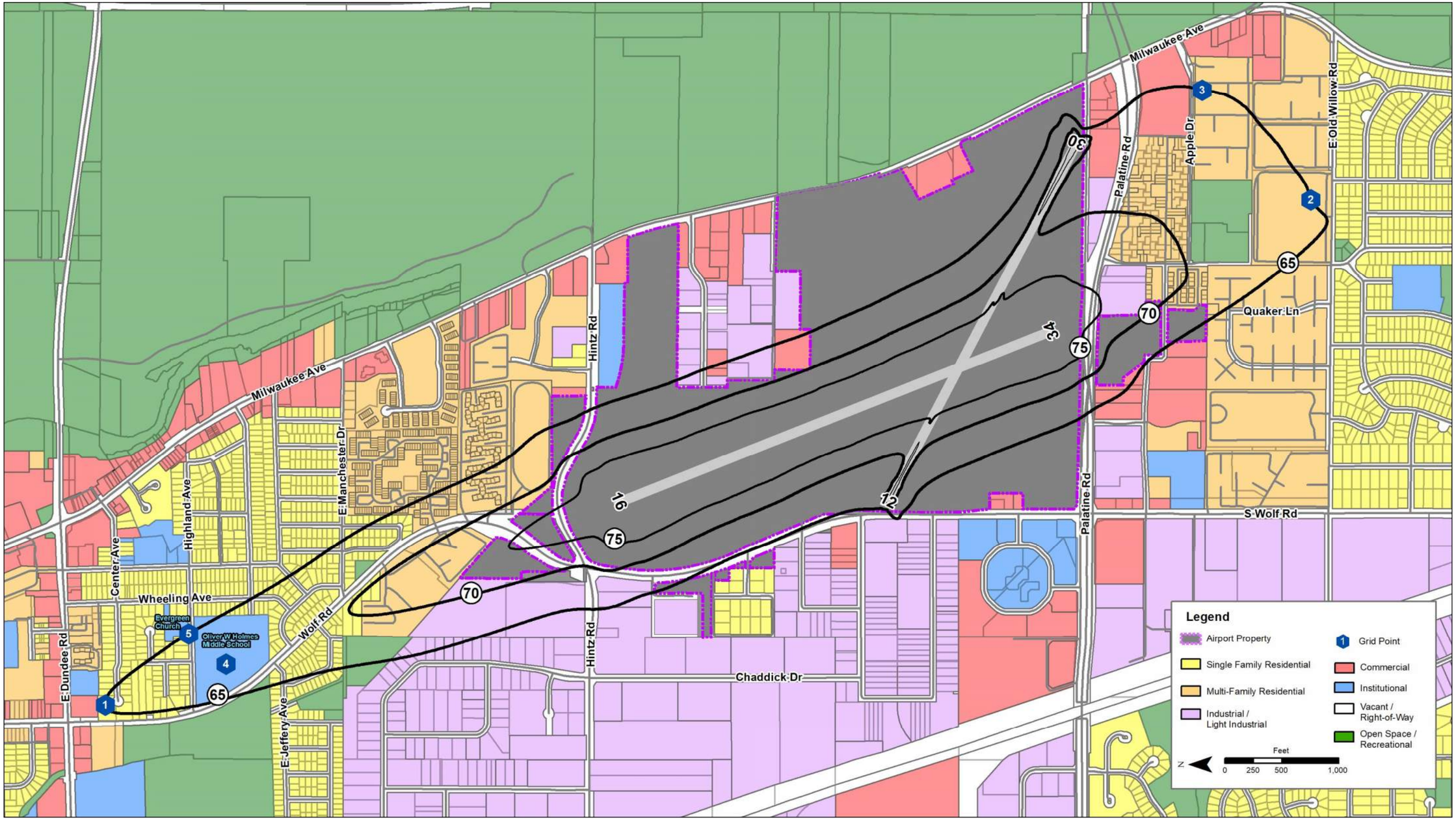
The 2031 Proposed Action 65, 70, and 75 DNL contours are depicted on **Figure F-5.** The 2031 Proposed Action 65 DNL contour includes 160.49 acres of incompatible land uses, an increase of 1.27 acres over the 2031 No Action Alternative 65 DNL contour. This represents a 0.80% increase in the acres of incompatible land use over the No Action Alternative. The Oliver W. Holmes Middle School and the Evergreen Presbyterian Church are located within the 2031 Proposed Action 65 DNL contour. Grid points in the AEDT were placed at the school, church, and at residential sites north and south of the Airport to determine if a significant noise impact would occur. The five grid points are shown on **Figure F-5**. **Table F-9** identifies the DNL values at these grid points for the 2031 No Action Alternative and the 2031 Proposed Action. As shown in the table, the increase in DNL values when comparing the Proposed Action to the No Action Alternative ranges between 0.02 and 0.3 DNL. These increases are well below the significance threshold of 1.5 DNL and, therefore, no significant noise impacts would occur as a result of the Proposed Action.

Table F-9 2031 No Action Alternative and Proposed Action DNL Values at Grid Points

ID	2031 No Action Alternative DNL	2031 Proposed Action DNL	Increase In DNL
1	65.00	65.03	0.03
2	65.01	65.03	0.02
3	65.00	65.03	0.03
4 (School)	67.39	67.41	0.02
5 (Church)	65.01	65.04	0.03

Source: RS&H, Inc.

Figure F-5 2031 Proposed Action DNL Contours



Source: ESRI, 2023; Cook County GIS, 2023; Chicago Executive Airport: Airport Master Plan Update & Airport Layout Plan, 2021; Chicago Metropolitan Agency for Planning, 2022; RS&H, Inc.

APPENDIX G:
PUBLIC INVOLVEMENT
AND
AGENCY COORDINATION

RS&H

Illinois Department of Natural Resources (IDNR)
Office of Water Resources
Coordination

Binggeli, Tamsen

From: Binggeli, Tamsen
Sent: Friday, October 3, 2025 10:54 AM
To: Binggeli, Tamsen
Subject: FW: [External] Fwd: Sky Harbour Hangar Development (IDNR/OWR Application No. N20250162)
Attachments: N20250162 Fee-DEE letter.pdf

Tamsen N. Binggeli, AICP
Planner, Aviation Environmental
5215 Wiley Post Way, Suite 510, Salt Lake City UT 84116
208-830-5257

From: Jeffrey Miller <jmiller@chiexec.com>
Sent: Friday, September 12, 2025 5:20 PM
To: Full, David <David.Full@rsandh.com>; Binggeli, Tamsen <Tamsen.Binggeli@rsandh.com>
Subject: [External] Fwd: Sky Harbour Hangar Development (IDNR/OWR Application No. N20250162)

Begin forwarded message:

> **From:** "Kessen, James" <James.Kessen@illinois.gov>
> **Date:** September 12, 2025 at 5:06:46 PM CDT
> **To:** Jeffrey Miller <jmiller@chiexec.com>
> **Cc:** david.full@rsandh.com
> **Subject: Sky Harbour Hangar Development (IDNR/OWR Application No. N20250162)**
>
> **EXTERNAL EMAIL**
>
> *This email was sent from someone outside of Chicago Executive Airport. Always **use caution** when opening attachments or clicking links from unknown senders or when receiving unexpected emails.*
>
> ---
>
> Mr. Miller,
> The Illinois Department of Natural Resources, Office of Water Resources (IDNR/OWR) received your application for the project referred to as the "Sky Harbour Hangar Development" (IDNR/OWR Application No. N20250162). The IDNR/OWR will review the proposed project to ensure its compliance with the Rivers, Lakes and Streams Act, 615 ILCS 5. The attached letter provides information regarding the review process and required application review fee. If you have any questions, please contact me at (847) 608-3116.
>
> Thank you.
>
> James F. Kessen, P.E.
> Illinois Department of Natural Resources

Office of Water Resources
2050 W. Stearns Road
Bartlett, IL 60103
(847) 608-3116
James.Kessen@Illinois.gov

Binggeli, Tamsen

From: Binggeli, Tamsen
Sent: Friday, October 3, 2025 9:16 AM
To: Binggeli, Tamsen
Subject: RE: [External] RE: Chicago Executive Airport - Two Questions

Tamsen N. Binggeli, AICP
Planner, Aviation Environmental
5215 Wiley Post Way, Suite 510, Salt Lake City UT 84116
208-830-5257

From: Kessen, James <James.Kessen@Illinois.gov>
Sent: Tuesday, September 23, 2025 12:56 PM
To: Full, David <David.Full@rsandh.com>
Subject: [External] RE: Chicago Executive Airport - Two Questions

Hello Dave,
Here are the responses to your questions:

RESPONSE TO "FIRST QUESTION":
We recommend the following language for the EA (see bold italicized text):

"A permit is required from the Illinois Department of Natural Resources, Office of Water Resources (IDNR/OWR) prior to initiating construction for work within the floodway. Furthermore, the IDNR/OWR will consult the IDNR's Division of Ecosystems and Environment (DEE) to perform a review under the Illinois Endangered Species Protection Act, 520 ILCS 10/11, the Illinois Natural Areas Preservation Act, 525 ILCS 30/17 and the Illinois State Agency Historic Resources Preservation Act, 20 ILCS 3420/4."

Limiting the review to the Part 3700 Rules is premature since we have not had an opportunity to review the design drawings and how the project impacts the Unnamed Tributary to the Des Plaines River, the Des Plaines River, and any proposed impoundments/dam structures associated with the proposed storage within the floodway.

We recommend that you become familiar with the IDNR/OWR's regulations so that you understand how they might influence the design and permitting of your project (see the link below).

https://dnr.illinois.gov/waterresources/permitprograms.html

RESPONSE TO "SECOND QUESTION":

We cannot refund the $3440 review fee. It may be possible for the IDNR/OWR to provide a credit to the applicant (Chicago Executive Airport) in the future, but we cannot guarantee that a credit will be applied at this time. The future applicant would have to reference the credit amount when applying for a permit. At that time we will determine the required fee and whether a credit is still possible.

Please don't hesitate to contact me with questions.

Thank you.

James F. Kessen, P.E.
Illinois Department of Natural Resources
Office of Water Resources
2050 W. Stearns Road
Bartlett, IL 60103
(847) 608-3116
James.Kessen@Illinois.gov

From: Full, David <David.Full@rsandh.com>
Sent: Friday, September 19, 2025 10:27 AM
To: Kessen, James <James.Kessen@Illinois.gov>
Subject: [External] Chicago Executive Airport - Two Questions

James,
I am traveling today so the best way to ask you these two questions is via email.

First question. My intent is to include language in the Environmental Assessment for the project at Chicago Executive Airport indicating that prior to construction that a permit will be obtained from the Illinois Department of Natural Resources (IDNR) in compliance with Rule 3700. Please confirm that you are good with that approach.

Second question. Chicago Executive Airport has provided a payment of $3,440 for the application regarding obtaining a permit in compliance with Rule 3700. However, the actual permit will be obtained by a third party (the developer of the hangar project at Chicago Executive Airport). Can the $3,440 be refunded to Chicago Executive Airport? If not, can the application fee be applied (and credited) to the third party developer? If that is the case, Chicago Executive Airport would request payment from the third party developer.

Thanks. Have a great weekend.
Dave

David Full, AICP
VP | National Discipline Leader, Aviation Environmental
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O 415-780-4602 | M 415-609-4706
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rsandh.com | LinkedIn | Instagram | Facebook | Podcast

RS&H

Village of Wheeling Coordination

Binggeli, Tamsen

From: Full, David
Sent: Monday, September 15, 2025 9:51 AM
To: Kyle Goetzelmann
Cc: jmiller@chiexec.com; George Sakas; Binggeli, Tamsen; Dan Kaup
Subject: RE: [External] RE: Chicago Executive Airport - Request for Concurrence Regarding Floodplain Analysis

Kyle,
Thank you for the comments. We will modify the report accordingly.
Happy Monday.
Dave

David Full, AICP
VP | National Discipline Leader, Aviation Environmental
311 California St., Suite 720, San Francisco CA 94104
O 415-780-4602 | M 415-609-4706

From: Kyle Goetzelmann <KGoetzelmann@wheelingil.gov>
Sent: Friday, September 12, 2025 8:47 AM
To: Full, David <David.Full@rsandh.com>
Cc: jmiller@chiexec.com; George Sakas <gsakas@chiexec.com>; Binggeli, Tamsen <Tamsen.Binggeli@rsandh.com>; Dan Kaup <DKaup@wheelingil.gov>
Subject: [External] RE: Chicago Executive Airport - Request for Concurrence Regarding Floodplain Analysis

David,

After reviewing this in detail I'll generally say that we're fine with the methodology for compensatory storage and floodplain management that was outlined in this surface water and floodplain analysis. We do have some comments regarding the storm water detention methodology. I've attached a redlined markup of the analysis you provided and will provide comments point by point below.

1. Page E-3: The Village of Wheeling has an allowable release rate of 0.15 cfs/acre.
2. Page E-3: The Village has identical compensatory storage requirements to Prospect Heights. For ex: Storage lost between 0-10 years must be compensated for in the 0-10 elevation range at 1.5:1. Same for 10-100 year. These first two comments don't change the calculations but it should be corrected for accuracy.
3. Page E-4: Runoff Coefficients in the Village of Wheeling are as follows: C=0.95 for impervious, C=0.50 for pervious, and C=1.0 for retention facilities.
4. Page E-4: The Village utilizes Bulletin 75 rainfall data which appears to be stricter than the NOAA Precipitation Frequency Data
5. Page E-5: On Table E2 the C values will need to be corrected to account for the more strict runoff coefficients.
6. Page E-5: On Table E2 the intensity values used should match that of the Bulletin 75. There was a conversion needed as B75 utilizes depth instead of intensity but those calcs were provided on the markup.

These were the big items. We agree with the zero release rate due to tail water condition which is necessary due to the elevation compared to the BFE. These comments are going to impact the total detention storage required.

Kyle Goetzelmann, P.E.
Village Engineer
Village of Wheeling
2 Community Blvd. | Wheeling, IL | 60090
Office (847) 499-9053 | Cell (847) 344-0784

From: Full, David <David.Full@rsandh.com>
Sent: Wednesday, September 3, 2025 10:33 AM
To: Kyle Goetzelmann <KGoetzelmann@wheelingil.gov>
Cc: jmiller@chiexec.com; George Sakas <gsakas@chiexec.com>; Binggeli, Tamsen <Tamsen.Binggeli@rsandh.com>
Subject: Chicago Executive Airport - Request for Concurrence Regarding Floodplain Analysis

Kyle,
On behalf of Chicago Executive Airport (PWK), I am reaching out to initiate coordination and request concurrence regarding floodplain impacts for the PWK Runway 6-24 Decommissioning and Hangar Development Project. The Proposed Action is subject to Federal Aviation Administration (FAA) approval and an Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) is being prepared. The State of Illinois Department of Transportation, Division of Aeronautics has reviewed the EA and agrees with the floodplain analysis. The FAA also has reviewed the EA and has requested that concurrence be provided from the City of Prospect Heights and from the Village of Wheeling. Thus, the reason for this email (a separate email is being sent to the City of Prospect Heights).

The Proposed Action would decommission Runway 6-24, remove existing pavement, construct new hangars (Sky Harbour Development), and include above-ground stormwater detention basins. Please refer to the Proposed Action and Sky Harbour Exhibits, attached.

The Proposed Action is located within the FEMA-mapped Zone AE 100-year floodplain, but outside of the designated floodway (refer to the FEMA Floodplain Map). A hydrologic and compensatory storage analysis was conducted for the project, which demonstrated that above-ground stormwater basins (located within the project area and elsewhere on Airport property) would provide sufficient detention and flow attenuation to meet FAA, Metropolitan Water Reclamation District of Greater Chicago (MWRD), and Village of Wheeling standards. Buildings would be constructed at least 2.5 feet above the base flood elevation per City Code. A Floodplain Development Permit would be obtained by the City of Prospect Heights prior to construction.

We respectfully request your written concurrence on the following:

1. The Proposed Action, as described and mitigated, would not significantly affect floodplains in the Village of Wheeling.

2. The proposed above-ground storage basins are sufficient to mitigate floodplain impacts, pending final design and permitting.

Please let us know if you have questions or require additional information. We appreciate your response or concurrence at your earliest convenience, as it will aid in the completion of the NEPA process.

Happy Wednesday.
Dave

Attachments:

1. Rwy 6-24 Proposed Action Exhibit
2. Sky Harbour Exhibit
3. FEMA Floodplain Map
4. Surface Waters and Floodplain Analysis Report

David Full, AICP
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City of Prospect Heights
Coordination

City of Prospect Heights
Department of Engineering
8 North Elmhurst Road, Prospect Heights Illinois, 60070-6070
Office:847/398-6070 x 210-FAX: 847/590-1854
www.prospect-heights.il.us

October 6, 2025

Mr. David Full, AICP
VP | National Discipline Leader, Aviation Environmental
RS&H
311 California St. Suite 720
San Francisco, CA 94104

Re: Chicago Executive Airport – Sky Harbour
Request for Concurrence Regarding Floodplain Analysis

Dear Mr. Full:

We have received your submittal related to your request for concurrence regarding floodplain impacts for the PWK Runway 6-24 Decommissioning and Hangar Development project.

Based on our review we understand that Chicago Executive Airport (PWK) intends to decommission Runway 6-24, remove existing pavement, construct new hangars (Sky Harbour Development), and include above-ground stormwater detention basins. We understand as part of the proposed development, above-ground stormwater basins will be constructed to provide detention and flow attenuation to meet FAA, Metropolitan Water Reclamation District of Greater Chicago (MWRD), and City of Prospect Heights standards.

The City of Prospect Heights concurs that as described and mitigated, the proposed action will not significantly affect floodplains in the City of Prospect Heights and that the proposed above ground storage basins will be sufficient to mitigate floodplain impacts, pending final design and permitting.

Sincerely,
City of Prospect Heights

Daniel J. Strahan, P.E., CFM
City Engineer
dstrahan@gha-engineers.com

cc: Dan Peterson, City of Prospect Heights
Andrew Hart, City of Prospect Heights

Draft Condensed Environmental Assessment
Notice of Availability
Publication

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NOTICE OF AVAILABILITY OF DRAFT CONDENSED ENVIRONMENTAL ASSESSMENT FOR PUBLIC REVIEW, NOTICE OF OPPORTUNITY FOR A PUBLIC MEETING, AND NOTICE OF FLOODPLAIN ENCROACHMENT

Runway 6-24 Decommissioning and Aircraft Hangar Development
Chicago Executive Airport (PWK)
Draft Condensed Environmental Assessment (Draft Condensed EA)

Wheeling, Illinois

Notice of Draft Condensed EA

This public notice is hereby given by the Federal Aviation Administration (FAA) and the Village of Wheeling and the City of Prospect Heights (Airport Sponsor) that a Draft Condensed EA has been prepared to evaluate the potential environmental effects for the proposed Runway 6-24 decommissioning and aircraft hangar development (Proposed Action) at the Chicago Executive Airport (PWK or Airport) and is available for review.

The Proposed Action includes the following components:

- Decommissioning of Runway 6-24, removal of Runway 6-24 east of Runway 16-34, and conversion of Runway 6-24 to a taxiway west of Runway 16-34.
- Removal of Taxiway B
- Removal of portions of Taxiway F
- Removal of tie-down aprons (Area 2 and Area 3)
- Acquisition of 4.4 acres of land east of Taxiway F
- Construction of aircraft hangar development
- Construction of above-ground stormwater detention basins.

The Draft Condensed EA evaluates the potential environmental effects of the Proposed Action and the No Action Alternative and has been prepared pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) and FAA Order 1050.1F, *FAA National Environmental Policy Act Implementing Procedures.*

FAA is the lead federal agency to ensure compliance with National Environmental Policy Act (NEPA) for airport development actions, and the Village of Wheeling and the City of Prospect Heights are the Airport Sponsor. The Draft Condensed EA includes an analysis of reasonable alternatives, potential environmental impacts, and mitigation measures, as appropriate.

Pursuant to FAA Order 1050.1F and Executive Order 11988, Floodplain Management, notice is given that the Proposed Action constitutes an encroachment into the 100-year floodplain. The potential impacts and compensation measures are described in the Draft Condensed EA. Impacts are anticipated to be minor, and the Proposed Action conforms to applicable state and/or local floodplain protection standards.

Draft Condensed EA Availability. Beginning on Wednesday, December 10, 2025, the Draft Condensed EA will be available for public review through Monday, December 29, 2025. The Draft Condensed EA can be available for public review electronically on the Airport's website: https://chiexec.com/news/. A printed hard copy of the Draft Condensed EA will be available during regular business hours at the administrative offices of Chicago Executive Airport at 1020 South Plant Road, Wheeling, IL 60090.

Comments. Comments on the Draft Condensed EA will help the FAA make informed decisions about the Proposed Action. Written comments may be submitted to Dave Full by email to David.Full@rsandh.com or by U.S. mail to RS&H, 311 California Street, Suite 720, San Francisco, CA 94104. If requested by a member of the public, PWK will host an in-person public meeting regarding the Draft Condensed EA using an open house format. To request a public meeting, please contact Dave Full by email at David.Full@rsandh.com by Monday, December 29, 2025, and use the email subject line "Public Meeting Request – Chicago Executive Airport Runway 6-24 Decommissioning and Aircraft Hangar Development."

All comments must be received by 5:00 p.m. Central Standard Time on Monday, December 29, 2025, to be considered for this Draft Condensed EA.

Before including your address, phone number, email address, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Comments received on the Draft Condensed EA and the responses to those comments will be disclosed in the Final Condensed EA.

CERTIFICATE OF PUBLICATION

DES PLAINES JOURNAL, INC., a corporation organized and existing under and by virtue of the laws of the State of Illinois, does hereby CERTIFY that it is the publisher of the:

Journal & Topics Newspapers
AKA Des Plaines Journal, Inc.
622 Graceland Ave.
Des Plaines, IL 60016-4556

and that said newspaper(s) is a secular newspaper of general circulation and has been published weekly in the

(Village) (Town) (City) (Township) of WHEELING

(●) ( ) ( ) ( )

County of COOK

and State of Illinois, continuously for more than one year prior to date of the first publication of the notice attached hereto, and that said newspaper(s) complies with the requirements of Paragraphs 5 and 10, Chapter 100, of the Illinois Revised Statutes.

Further, that the notice, of which the attached is a true copy, was published THREE times in the said newspaper(s), namely once each week for THREE successive week(s) and that the first publication of said notice was made on the 10TH day of DECEMBER, A.D. 20 25., and the last publication thereof was made on the 24TH day of DECEMBER, A.D. 20 25.

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Notary Public, State Of Illinois
Commission No. 532167
My Commission Expires August 06, 2029

Mary Alice Wenzl

IN WITNESS WHEREOF, **THE DES PLAINES JOURNAL, INC.,** has caused this certificate to be signed and its corporate seal affixed hereto at Des Plaines, Illinois this 24TH day of DECEMBER A.D., 20 25.

By Todd Wessell

President
Title of Corporate Officer

County of Cook
State of Illinois

Subscribed and sworn to before me this 24TH day of DECEMBER A.D., 20 25.

My commission expires the 6TH day of AUGUST A.D., 20 29.