

- When considering the performance of the working alignments within Corridors B3 and B4 throughout the Study Area, projections for Design Concepts 1 and 2 show a similar VMT when compared to Design Concept 3. However, Design Concepts 1 and 2 show a decrease in overall VHT by approximately 1,000 hours per day.

Projected traffic volumes on IL-53 for the working alignment within Corridor A3S2 are approximately 21 percent higher for Design Concepts 1 and 2 between the working alignment within Corridor A3S2 and Mississippi Road when compared to Design Concept 3. The comparison of VMT and VHT for the working alignment within Corridor A3S2 show Design Concept 3 provides a reduced amount of miles and hours traveled through the entire Study Area.

Projected traffic volumes on IL-53 for the working alignment within Corridors B3 and B4 Design Concepts 1 and 2, are approximately 18 percent higher than Design Concept 3 between Laraway Road and the proposed working alignments within Corridors B3 and B4. However, projected volumes south of that point are 22 percent lower for Design Concepts 1 and 2 when compared to Design Concept 3. The comparison of VMT and VHT shows that Design Concepts 1 and 2 can move similar volumes more quickly throughout the Study Area than Design Concept 3.

3.2.11.6 Transportation System Mitigation

As part of the Tier Two NEPA studies, coordination with federal, state, and local jurisdictions will further identify and quantify impacts to the transportation network. This analysis will include a traffic management plan that will be developed and implemented during future engineering phases to ensure reasonable access for cars, trucks, freight rail traffic, and transit vehicles to residences, businesses, public facilities, community services, and local roads during construction. To the greatest extent possible, access to residences and businesses impacted by the construction will be maintained through construction scheduling, temporary driveway construction, and temporary connections.

3.3 Agricultural

This section describes the agricultural existing conditions, methodologies for assessing agricultural impacts, potential impacts to agricultural resources, and potential measures to minimize impacts.

3.3.1 Existing Conditions

3.3.1.1 Farm Operations

According to the *2007 Census of Agriculture*, agricultural land over time has shown an overall reduction in acreage and average size within the Study Area due to the pressure of development, except in Kankakee County. In Will County, the amount of land in farms was 325,227 acres in 1992 and 220,851 acres in 2007, a decrease of 32 percent. In Kankakee County the amount of land in farms was 358,920 acres in 1992 and 385,808 acres in 2007, an increase of 7 percent. In Lake County, the amount of land in farms was

144,305 acres in 1992 and 128,439 acres in 2007, a decrease of 11 percent. The average size of farms is also decreasing for the same time period, except in Kankakee County. In Will County, the average farm size decreased 22 percent from 308 acres to 252 acres. In Kankakee County, the average farm size increased 19 percent from 387 acres to 462 acres, and in Lake County, the average farm size decreased 3 percent from 299 acres to 291 acres.

In 2007, 72 percent of Illinois and 63 percent of Indiana consisted of farmland. In 2007, Illinois generated \$13.3 billion and Indiana generated \$8.3 billion in sales from agricultural products. Table 3-35 describes the major agricultural statistics for Will, Kankakee, and Lake counties.

Table 3-35. 2007 County Agricultural Statistics

Category	Will County, IL	Kankakee County, IL	Lake County, IN
Size of County (acres)	535,851	433,046	317,990
Number of Farms	877	835	441
Percent of County in Farmland	41.2%	89.1%	40.4%
Land in Farms (acres)	220,851	385,808	128,439
Total Cropland (acres / %)	208,874 / 94.6%	376,178 / 97.5%	121,424 / 94.5%
Pastureland (acres / %)	7,199 / 3.2%	4,406 / 1.1%	2,118 / 1.6%
Other ¹ (acres / %)	4,778 / 2.2%	5,224 / 1.4%	4,897 / 3.8%
Irrigated Land (acres)	1,912	15,950	9,684
Conservation Practices ² (acres)	1,046	2,598	2,619

¹ Other includes farmland in woodlands, farmsteads, buildings, livestock facilities, ponds, roads, and wastelands.

² Conservation practices include land enrolled in Conservation Reserve, Wetland Reserve, Farmable Wetlands, or Conservation Reserve Enhancement Programs (CREP).

Sources: USDA, NASS, 2007 Census of Agricultural, Illinois State and County Data, Volume 1, Issued February 2009, Updated December 2009; USDA, Natural Agricultural Statistics Service, 2007 Census of Agricultural, Indiana State and County Data, Volume 1, Issued February 2009, Updated December 2009.

Corridor A3S2 has 9,860 acres of farmland including row crops, hay, and pasture. Corridor B3 has 10,390 acres of farmland and Corridor B4 has 11,130 acres. Farmland includes farmed parcels as well as farmsteads where homes, barns, outbuildings, silos, and other farm related facilities are located.

3.3.1.2 Agricultural Soil

Soil types in Will, Kankakee, and Lake counties are generally associated with nearly level to moderately sloping topography. The soils throughout the counties vary from fine textured glacial drift to course glacial outwash. More rolling topography and sandy type soils are found along streams.

Prime Farmland

Prime farmland is federally recognized by the USDA under the Farmland Protection Policy Act. The CFR Title 7, Volume 6, Section 657.5(a) defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oil seed crops and is also available for these uses. Land does not have to be cleared to be considered prime farmland. Land that is urbanized, paved, or permanently under water is not considered prime farmland.

Within Will and Kankakee counties, prime farmland is uniformly distributed except for areas around developed communities such as Manteno, University Park/Monee, and Symerton. Within Lake County, the prime farmland is generally limited to the areas north of SR 2 with a higher density around Lowell and to the east. Prime farmland exists north of Cedar Lake, but in lesser concentrations. The Kankakee River valley soils are not classified as prime farmland; although they are now drained and in agricultural production.

Within the Study Area, 25,900 acres of prime farmland exists. Of the 25,900 acres of prime farmland, 16,000 acres occur in Will County, 4,800 acres occur in Kankakee County, and 5,100 occur in Lake County. Corridor A3S2 has 7,120 acres of prime farmland, Corridor B3 has 6,470 acres, and Corridor B4 has 6,170 acres. Figure 3-19 shows the location of prime farmland within the Study Area and the corridors.

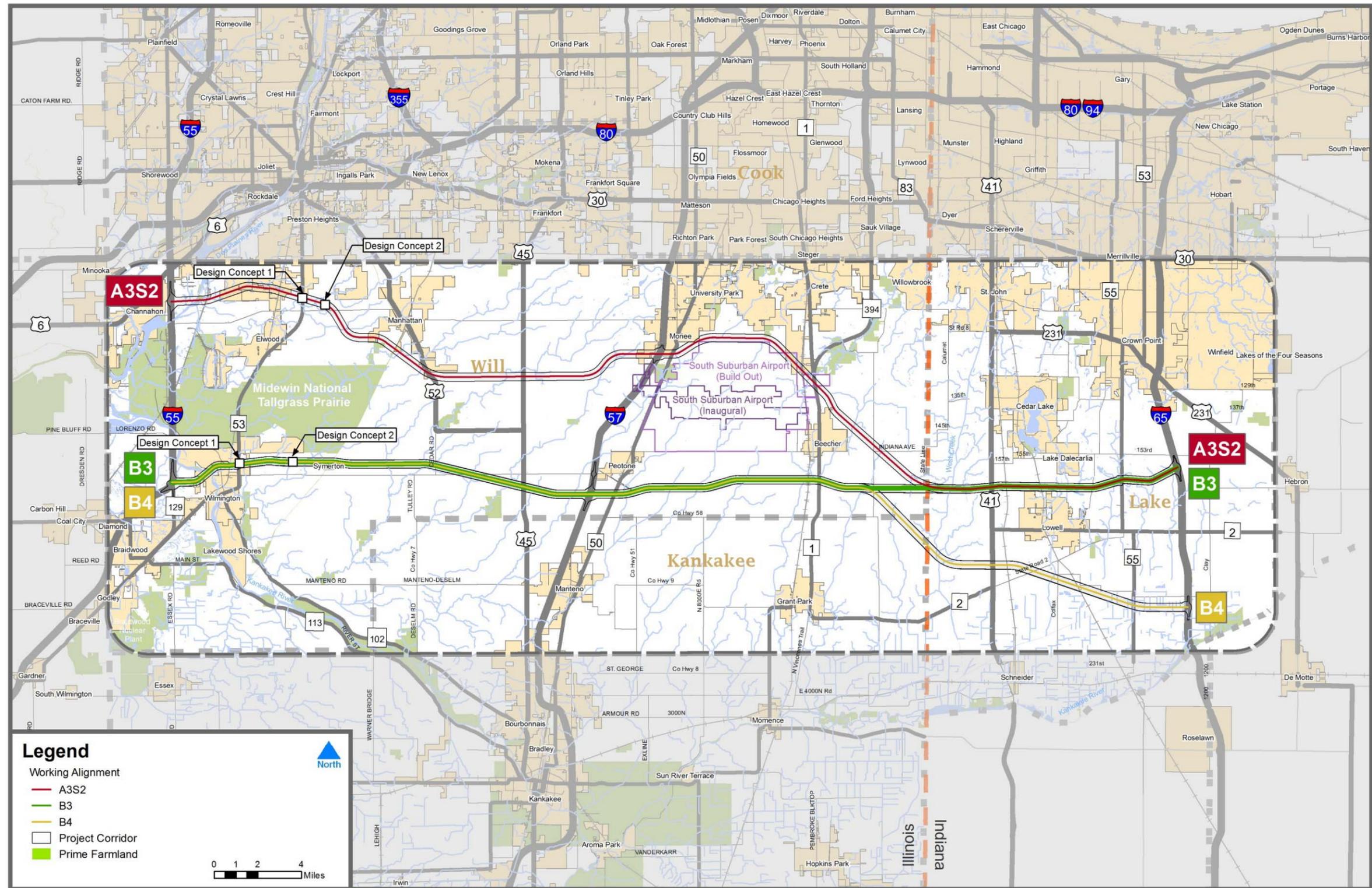
Soils of Statewide Importance

Soils of statewide importance are defined by the Natural Resources Conservation Service (NRCS) as “land, in addition to prime and unique farmland, that is of statewide importance for the production of food, fiber, forage, and oil seed crops. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.” Will County has 54,400 acres, Kankakee County has 72,500 acres, and Lake County has 27,300 acres of statewide important soil. Within the corridors, Corridor A3S2 has 540 acres of soils of statewide importance, Corridor B3 has 650 acres, and Corridor B4 has 1,140 acres. The location of these soils is shown in Figure 3-20.

3.3.1.3 Land Capability Groups

Land capability classification generally shows the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major, and generally expensive, land farming activities that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, woodland, or engineering purposes.

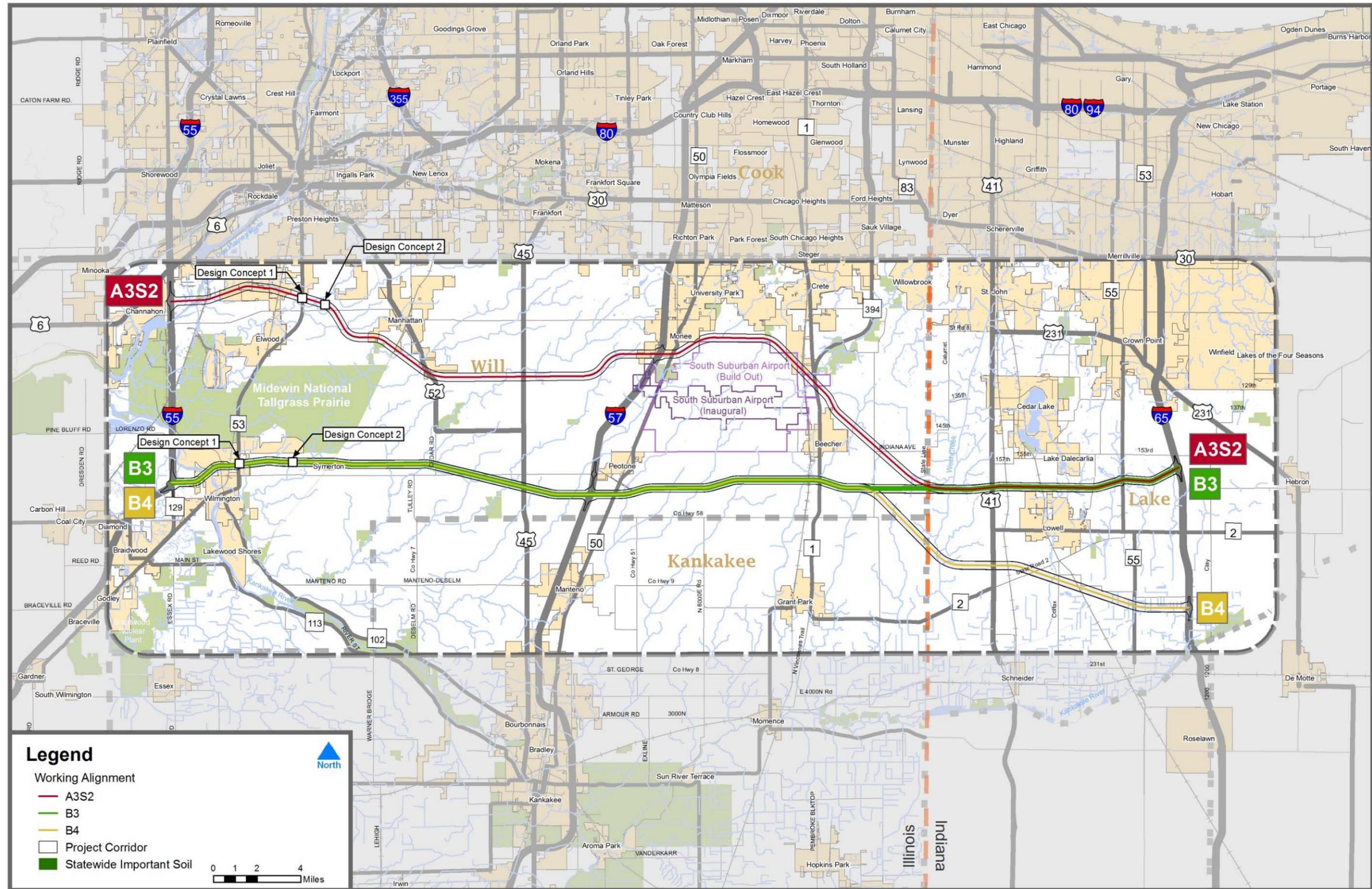
Figure 3-19. Location of Prime Farmland



Data Source: USDA NRCS Soil Data Mart, SSURGO database, obtained August 2011

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Figure 3-20. Location of Soils of Statewide Importance



Data Source: USDA NRCS Soil Data Mart, SSURGO database, obtained August 2011

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In the capability system, soils are generally grouped at three levels; capability class, subclass, and unit. Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined in Table 3-36.

Table 3-36. Land Capability Classifications

Soil Classification	Description
Class 1	Few limitations that restrict their use.
Class 2	Moderate limitations that reduce the choice of plants or that require moderate conservation practices.
Class 3	Severe limitations that reduce the choice of plants or that require special conservation practices, or both.
Class 4	Very severe limitations that reduce the choice of plants or that require very careful management, or both.
Class 5	Subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
Class 6	Severe limitations to make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
Class 7	Very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
Class 8	Limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Source: Soil Survey Staff, NRCS, USDA, Web Soil Survey, Available online at <http://websoilsurvey.nrcs.usda.gov/>, Accessed, December 21, 2011.

Table 3-37 describes the land capability by classification for Will, Kankakee, and Lake counties. Class 2 is the predominate classification in all three counties. Will County has a total of 438,739 acres of classified land capability, of which 374,034 acres (85 percent) are Class 2. Kankakee County has a total of 431,682 acres, of which 275,532 acres (64 percent) are Class 2. Lake County has a total of 313,251 acres of which 187,312 acres (60 percent) are Class 2. Table 3-38 describes the land capability by each classification that exists within the corridors. Figure 3-21 shows the location of the land capability groups by classification within the Study Area.

3.3.1.4 Drainage and Irrigation

Irrigation areas are located more prominently in the southwestern portion of the Study Area near the Kankakee River. Irrigated areas are located throughout the Kankakee River Basin, which covers most of the Study Area except for northern portions of Will and Lake counties. According to the *2007 Census of Agriculture*, 15,950 acres of farmland are irrigated in Kankakee County compared to 1,910 acres in Will County, and 9,680 acres in Lake County. The locations of irrigated farmland within the corridor(s) will be evaluated using the data and information available as part of the Tier Two NEPA studies.

Table 3-37. Land Capability by County

Land Capability Soil Classification	Will County, IL (acres)	Kankakee County, IL (acres)	Lake County, IN (acres)
Class 1	17,607	59,681	4,451
Class 2	374,034	275,532	187,312
Class 3	9,803	58,222	62,580
Class 4	19,957	30,363	12,281
Class 5	1,116	0	0
Class 6	11,032	5,571	10,747
Class 7	5,190	2,313	855
Class 8	0	0	35,025
Total	438,739	431,682	313,251

Source: USDA, NRCS, SSURGO database, obtained in August 2011.

Table 3-38. Land Capability within Corridors

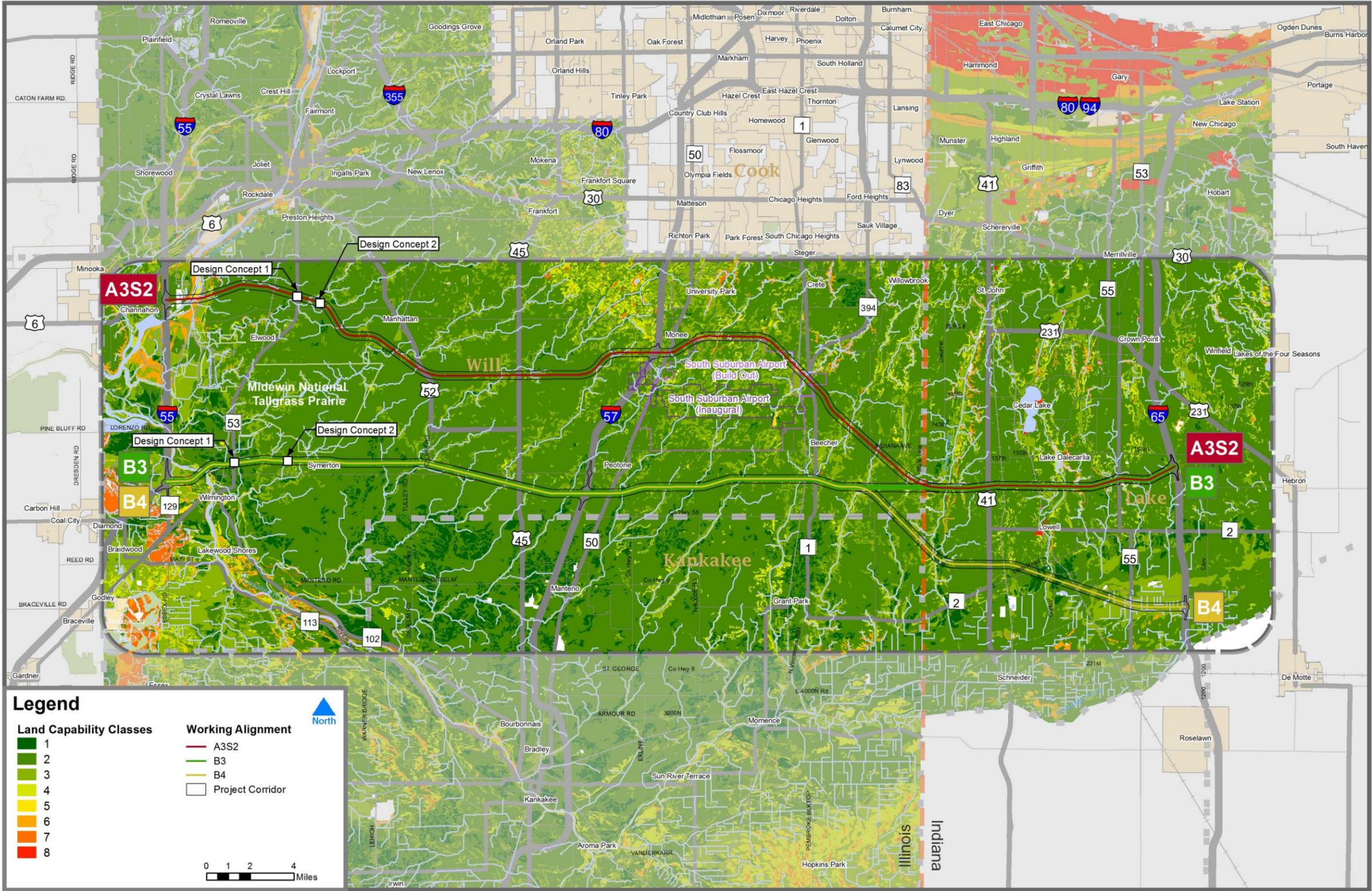
Land Capability Soil Classification	Corridor A3S2 ¹ (acres)			Corridor B3 ¹ (acres)			Corridor B4 (acres)			
	Will	Lake	Total	Will	Lake	Total	Will	Kankakee	Lake	Total
Class 1	32	0	32	348	0	348	348	14	255	617
Class 2	7,565	2,432	9,997	6,947	2,428	9,375	6,840	305	1,644	8,789
Class 3	1,605	269	1,874	1,330	265	1,595	1,330	99	1,205	2,634
Class 4	230	187	417	108	189	297	87	0	42	129
Class 5	25	0	25	0	0	0	0	0	0	0
Class 6	77	33	110	39	36	75	39	0	0	39
Class 7	14	0	14	3	0	3	3	0	0	3
Class 8	0	0	0	0	0	0	0	0	0	0
Total	9,548	2,921	12,469	8,775	2,918	11,693	8,647	418	3,146	12,211

¹ Corridors A3S2 and B3 do not impact Kankakee County.

Source: USDA, NRCS, SSURGO database, obtained in August 2011.

The topography in the Study Area is flat to gently sloping. The typical farming practice in both Illinois and Indiana is to use field tile to drain cropland fields. The tiles typically outlet to naturally flowing small tributaries and creeks or manmade drainage ditches that eventually connect to larger streams, rivers, and other bodies of water such as the Kankakee River. Drain tiles and drainage patterns will be evaluated as part of the Tier Two NEPA studies to determine if any impacts would occur. Alternative drainage routes would be considered where impacts are unavoidable.

Figure 3-21. Land Capability by Classification



Data Source: USDA NRCS Soil Data Mart, SSURGO database, obtained August 2011

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3.3.1.5 Specially Designated Agricultural Areas

Within the Study Area, protected agricultural areas are generally located near forest preserves and along the Kankakee River. Small percentages of the total amount of farmland are enrolled in federal or state agricultural conservation protection or reserve programs. According to the *2007 Census of Agriculture*, in Will County, 1,050 acres of farmland, which is 0.5 percent of the total, is enrolled in conservation programs. In Kankakee County, 2,600 acres of farmland, which is 0.7 percent of the total farmland, is enrolled in some type of conservation program. In Lake County, 2,620 acres, which is 2.0 percent of the total farmland, is enrolled in conservation programs.

Within the corridors, the amount of land enrolled in conservation programs was only available for Will and Kankakee counties. The amount of land enrolled in conservation programs within the corridors in Lake County is not available, and was only available at the county level.⁷ In Will County, 29 acres are enrolled in conservation programs in Corridor A3S2, 18 acres are enrolled in conservation programs in Corridor B3, and 13 acres are enrolled in Corridor B4. The Kankakee County portion of Corridor B4 does not include any land enrolled in conservation programs. The amount of farmland enrolled in conservation programs being potentially impacted will be further evaluated as part of the Tier Two NEPA studies.

Centennial farms are farms that have been in a family for over 100 years. According to the *2007 Census of Agriculture* there are 111 centennial farm registries for Will County, 105 centennial farm registries for Kankakee County, and 44 centennial farm registries for Lake County. Some of these farms may also be registered as sesquicentennial farms (150 years or more) or bicentennial farms (200 years or more). Centennial farms are sensitive resources and are considered in the decision making process, but there are no federal or state laws that protect registered centennial farms. Locations of the centennial farms potentially impacted will be evaluated in the Tier Two NEPA studies.

3.3.1.6 Farmland Production

Agriculture is an important part of the economy for both Illinois and Indiana. Based on the *2007 Census of Agriculture* data, the annual market value of agricultural products sold in Illinois was over \$13 billion and in Indiana was over \$8 billion. This is in addition to the billions generated by agribusinesses supporting the farming industry. Both Illinois and Indiana rank among the top states in agriculture, ranking 6th and 10th, respectively, in market value of agricultural products sold. Table 3-39 summarizes some of the statewide statistics.

Within the Study Area, agriculture is predominantly in Kankakee County which is comprised of approximately 89 percent farmland. Will and Lake counties are both approximately 40 percent farmland. This compares to 75 percent and 64 percent statewide, for Illinois and Indiana respectively. Farmland production in the Study Area includes both crop production and livestock. Based on the *2007 Census of Agriculture*, crop sales accounted for 95 percent of the total market value of projects sold in Will County, 89 percent in Kankakee County, and 91 percent in Lake County. The four top

⁷ The Department of Agriculture Indiana Farm Service Agency stated in their October 7, 2011 letter that Section 1619(b) of the Food, Conservation and Energy Act of 2008 prohibits disclosure of the information requested.

Table 3-39. 2007 Census of Agriculture Crop Production Data, State Data

Item	Illinois		Indiana	
	Value	US Rank	Value	US Rank
Total Value of Agricultural Products Sold	\$13,329,107,000	6	\$8,271,291,000	10
Total Value of Crops	\$10,876,415,000	2	\$5,319,019,000	8
Total Value of Livestock	\$2,452,692,000	23	\$2,952,272,000	21

Source: USDA, NASS, 2007 Census of Agricultural, County Profile, Will County, Illinois, and Lake County, Indiana, Fact Sheet.

crop items for these counties include corn (for grain), soybeans, forage (hay), and wheat for grain and account for 96 percent of farmland in Kankakee County and 91 percent in Will and Lake counties. Figure 3-22 depicts the crop land acres for the Study Area. Table 3-40 summarizes the crop production acres based on the *2007 Census of Agriculture*.

Table 3-40. 2007 Census of Agriculture Crop Production Data, County Data

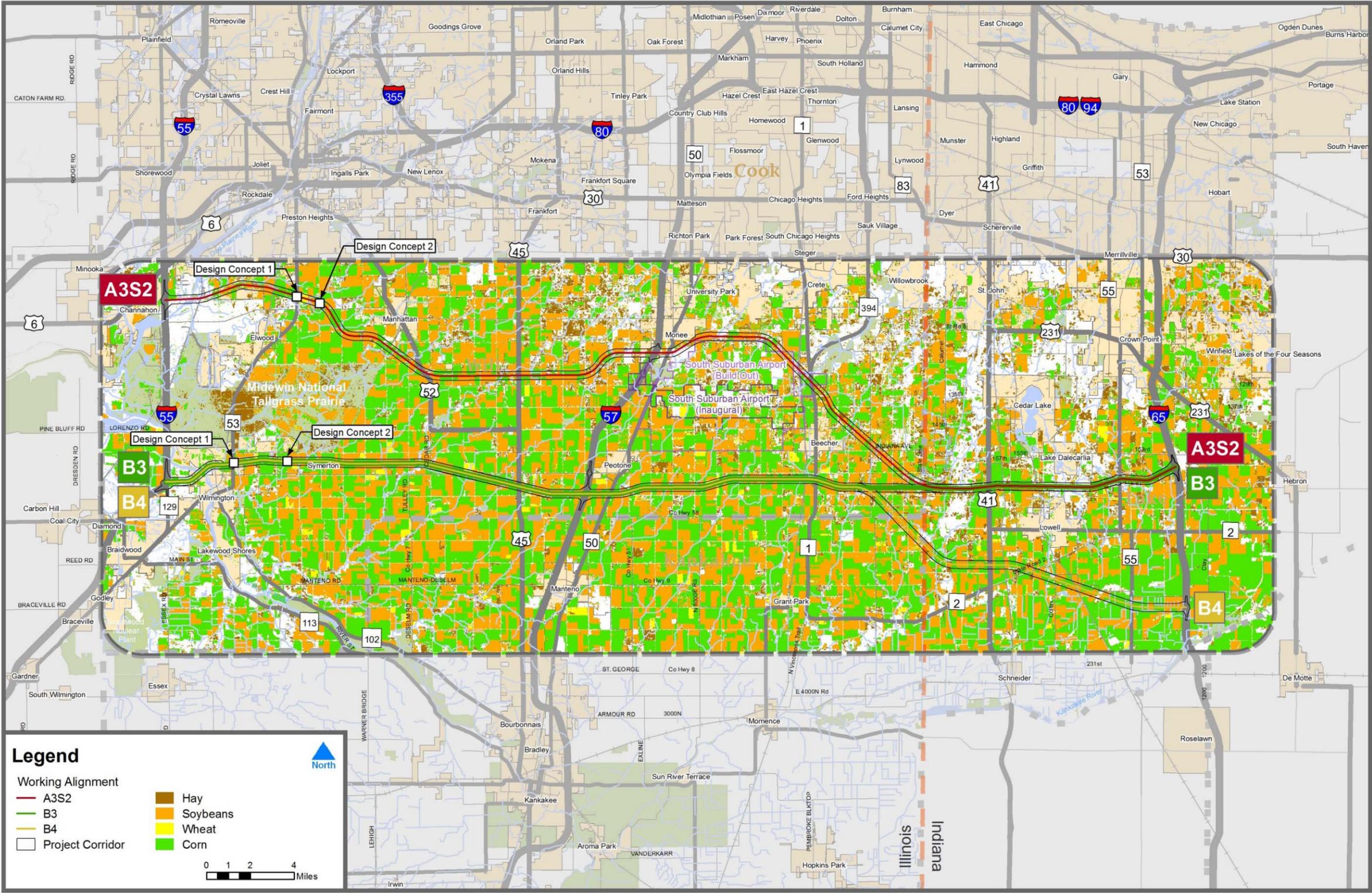
Crop Production	Will County, IL		Kankakee County, IL		Lake County, IN	
	Acres	Percent of Total	Acres	Percent of Total	Acres	Percent of Total
Total Farmland	220,851	--	385,808	--	128,439	--
Corn for Grain	103,864	47%	229,212	59%	67,849	53%
Soybeans	87,243	40%	118,866	33%	44,642	35%
Forage (Hay)	5,486	2%	2,174	1%	2,654	2%
Wheat	5,303	2%	10,295	3%	1,742	1%
Total	--	91%	--	96%	--	91%

Source: USDA, NASS, 2007 Census of Agricultural, County Profile, Kankakee County, Illinois, Will County, Illinois, and Lake County, Indiana, Fact Sheet.

The average crop cash receipts were determined for the three counties based on the county production rates and the statewide average crop sale prices. Cash receipts for corn, soybeans, hay, and wheat, which represent over 90 percent of the farmed land in Will, Kankakee, and Lake counties, were determined using the most recent 3 years of available data from the USDA, National Agricultural Statistics Service (NASS). Table 3-41 summarizes the county crop production data for the counties traversed by the three corridors.

Crop price data for the most recent 3 years was available at the state level from the USDA, NASS based on statewide production rates and statewide market value. Table 3-42 summarizes the unit crop prices for Illinois and Indiana.

Figure 3-22. Crop Land Areas



Data Source: USDA, National Agricultural Statistics Service, pub. 1/10/2011

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Table 3-41. Summary of Most Recent Three Years County Crop Production

Crop	Unit	Year			Average
		2010	2009	2008	
Will County, Illinois					
Corn	Acres Harvested (acres)	107,000	102,100	98,300	102,467
	Production (bushels)	16,936,000	16,131,800	17,399,100	16,822,300
	Yield (bushels/acre)	158	158	177	164
Soybeans	Acres Harvested (acres)	93,200	98,800	96,500	96,167
	Production (bushels)	4,383,000	4,643,600	4,439,000	4,488,533
	Yield (bushels/acre)	47	47	46	47
Hay	Acres Harvested (acres)	1,700	1,800	1,700	1,733
	Production (bushels)	5,000	4,860	4,080	4,647
	Yield (tons/acre)	2.9	2.7	2.4	2.7
Wheat ¹	Acres Harvested (acres)	12,600	5,100	15,400	11,033
	Production (bushels)	869,400	249,900	1,185,800	768,367
	Yield (bushels/acre)	69	49	77	65
Kankakee County, Illinois					
Corn	Acres Harvested (acres)	203,000	204,500	207,500	205,000
	Production (bushels)	30,361,000	33,947,000	36,727,500	33,678,500
	Yield (bushels/acre)	149.6	166	177	164.2
Soybeans	Acres Harvested (acres)	114,500	112,800	115,700	114,333
	Production (bushels)	5,162,000	5,188,800	5,437,900	5,262,900
	Yield (bushels/acre)	45	46	47	46
Hay ²	Acres Harvested (acres)	2,200	2,300	2,600	2,367
	Production (bushels)	7,600	9,660	7,800	8,353
	Yield (tons/acre)	3.5	4.2	3.0	3.6
Wheat ³	Acres Harvested (acres)	12,800	14,500	10,500	12,600
	Production (bushels)	729,600	1,261,500	798,000	929,700
	Yield (bushels/acre)	57	87	76	73
Lake County, Indiana					
Corn	Acres Harvested (acres)	62,400	61,300	59,100	60,933
	Production (bushels)	9,746,000	9,910,000	9,722,000	9,792,667
	Yield (bushels/acre)	156	162	165	161
Soybeans	Acres Harvested (acres)	46,300	48,700	48,700	47,900
	Production (bushels)	2,134,000	2,183,800	2,158,900	2,158,900
	Yield (bushels/acre)	46	45	45	45
Hay	Acres Harvested (acres)	1,430	1,200	NA	1,315
	Production (bushels)	3,030	1,800	NA	2,415
	Yield (tons/acre)	2.1	1.5	NA	1.8

**Table 3-41. Summary of Most Recent Three Years County Crop Production
(continued)**

Crop	Unit	Year			Average
		2010	2009	2008	
Wheat ¹	Acres Harvested (acres)	4,500	1,900	5,800	4,100
	Production (bushels)	295,800	121,500	453,800	290,367
	Yield (bushels/acre)	66	64	78	69

¹ The most recent 3 years of wheat data for Will and Lake counties are 2006, 2007, and 2008.

² The most recent 3 years of hay data for Kankakee County are 2007, 2008, and 2010.

³ The most recent 3 years of wheat data for Kankakee County are 2005, 2006, and 2007.

Source: USDA, NASS Data and Statistics;

http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp, Accessed December 20, 2011.

Table 3-42. Annual Average Statewide Crop Prices

Crop	Illinois			Indiana			Overall Average
	2010	2009	2008	2010	2009	2008	
Corn, \$/bushel	\$5.50	\$3.53	\$4.01	\$5.50	\$3.66	\$4.10	\$4.38
Soybeans, \$/bushel	\$12.40	\$9.80	\$10.20	\$11.80	\$9.80	\$10.20	\$10.70
Hay, \$/ton	\$86	\$90	\$108	\$84	\$90	\$107	\$94
Wheat, \$/bushel	\$5.60	\$4.04	\$5.89	\$5.35	\$4.27	\$5.91	\$5.18

Source: USDA, NASS Data and Statistics;

http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp, Accessed March 22, 2012.

3.3.2 Methodology

Farmland data for the Study Area were collected from the USDA Natural Resources Conservation Service (NRCS), US Geological Survey (USGS), and the USDA Soil Survey Geographic Database (SSURGO). The information includes the location of farmland, types of land cover, agricultural use (row crops, hay, etc.), and farmland enrolled in federally or state protected farming programs such as the Conservation Reserve Program (CRP).

Agricultural impacts were determined by identifying the total number of acres of farmland that would be converted to a different use, determining the acres of prime farmland within the converted farmland being impacted, estimating the number of diagonal agriculture parcel severances, and determining the potential loss in crop production. Impacts to land capability groups, protected agricultural areas, and farmland productions were identified by determining the acres for each corridor using a GIS. Agriculture parcel severances were estimated based on visual review of the working alignments within the corridors relative to parcel mapping.

3.3.3 Impacts

Potential agricultural impacts were evaluated for each working alignment within Corridors A3S2, B3, and B4. Impacts to farms, agricultural soils, land capability, drainage and irrigation, specially designated agricultural land, and farmland production are described in the following sections for each corridor.

3.3.3.1 Farm Operations

The number of farm parcels, amount of diagonally severed farm parcels, amount of farmland, and anticipated farmstead relocations that would be impacted by the working alignments within the corridors are presented in Table 3-43. Depending on the design concept, the working alignment within Corridor A3S2 would impact between 322 and 325 farm parcels, the working alignment within Corridor B3 would impact between 359 and 363 farm parcels, and the working alignment within Corridor B4 would impact between 344 and 348 farm parcels. The number of agricultural parcels that would be diagonally severed is 81 for the working alignment within Corridor A3S2 and 83 for the working alignment within Corridor B4. Due to the mostly perpendicular or parallel orientation of the working alignment within Corridor B3, there are no diagonally severed agricultural parcels.

Table 3-43. Farm Impacts

Farm Operations	A3S2 ¹ Working Alignment			B3 ¹ Working Alignment			B4 ¹ Working Alignment			
	Will	Lake	Total	Will	Lake	Total	Will	Kankakee	Lake	Total
Number of Farm Parcels ²	218-221 ³	104	322-325 ³	257-261 ⁴	102	359-363 ⁴	253-257 ⁴	11	80	344-348 ⁴
Number of Agricultural Land Diagonal Parcel Severances	81	0	81	0	0	0	---	---	---	83 ⁵
Farmland (acres)	1,745-1,775 ⁴	709	2,453-2,483	1,958-2,017 ³	708	2,667-2,725 ³	1,928-1,987 ³	82	758	2,768-2,827 ³
Farmstead Relocations	19-22 ³	8	27-30 ³	21-22 ³	7	28-29 ³	20-21 ³	0	4	24-25 ³

¹ The range provided for working alignments within the corridors accounts for the range in impacts associated with the three design concepts.

² Represents the number of farmed parcels. The number of farms impacted would be less as a farm may be comprised of one or more parcels.

³ Design Concept 1 has the greatest impact for this resource.

⁴ Design Concept 2 has the greatest impact for this resource.

⁵ The breakdown of agricultural parcel severances was not generated by county. However, the majority of the severances for the working alignment within B4 would be in Lake County.

The working alignment within Corridor A3S2 would impact 2,453 to 2,483 acres of farmland. The working alignment within Corridor B3 would impact 2,667 to 2,725 acres of farmland. The working alignment within Corridor B4 would impact 2,768 to 2,827 acres of farmland. The number of farmsteads anticipated to be relocated is 27 to 30 for the working alignment within Corridor A3S2, 28 to 29 for the working alignment within Corridor B3, and 24 to 25 for the working alignment within Corridor B4. Relocated farmsteads include groups of buildings that may or may not include residences.

3.3.3.2 Agricultural Soils

The working alignments within the corridors would impact prime farmland and farmland of statewide importance as described in Table 3-44. Depending on the design concept, the working alignment within Corridor A3S2 would impact between 1,788 and 1,813 acres of prime farmland, the working alignment within Corridor B3 would impact between 1,567 and 1,607 acres, and the working alignment within Corridor B4 would impact between 1,432 and 1,472 acres. Impacts to prime farmland are shown in Figure 3-19.

Table 3-44. Agricultural Soil Impacts

Farm Operations	A3S2 ¹ Working Alignment			B3 ¹ Working Alignment			B4 ¹ Working Alignment			
	Will	Lake	Total	Will	Lake	Total	Will	Kankakee	Lake	Total
Prime Farmland ² (acres)	1,407-1,432	381	1,788-1,813 ³	1,184-1,224	383	1,567-1,607 ⁴	1,170-1,210	68	194	1,432-1,472 ⁴
Statewide Important Farmland ² (acres)	136	11	147 ⁵	266	11	277 ⁵	259	0	229	488 ⁵

¹ The range provided for the working alignments within the corridors accounts for the range in impacts associated with the three design concepts.

² Farmland reported herein represents all areas identified in the GIS database as prime farmland or statewide important farmland. This includes paved, developed, riverine, and wetland areas. The evaluation to be conducted in the Tier Two NEPA studies would remove areas permanently out of farm production once the final alignment has been determined.

³ Design Concept 1 has the greatest impact for this resource.

⁴ Design Concept 2 has the greatest impact for this resource.

⁵ Design Concepts 1, 2, and 3 have the same impact on this resource.

The working alignment within Corridor A3S2 would impact 147 acres of statewide importance, the working alignment within Corridor B3 would impact 277 acres, and the working alignment within Corridor B4 would impact 488 acres, regardless of the design concept. Impacts to soils of statewide importance are shown in Figure 3-20.

3.3.3.3 Land Capability Groups

The corridors would impact capability classified land. Table 3-45 describes the impacts to the eight classifications of land capability, described previously in Section 3.3.2.3. Depending on the design concept, the working alignment within Corridor A3S2 would impact 3,149 to 3,188 acres, the working alignment within Corridor B3 would impact 3,029 to 3,091 acres, and the working alignment within Corridor B4 would impact 3,127 to 3,189 acres. Impacts to land capability groups are shown in Figure 3-21. The working alignments within the corridors have the most impact to Class 2 soils, impacting anywhere from 2,076 to 2,532 acres depending on the design concept and corridor. There are no impacts to Class 8 soils.

Table 3-45. Land Capability Impacts

Land Capability Soil Classification	A3S2 ¹ Working Alignment			B3 ¹ Working Alignment			B4 ¹ Working Alignment			
	Will	Lake	Total	Will	Lake	Total	Will	Kankakee	Lake	Total
Class 1	9	0	9 ²	92-107	0	92-107 ³	92-107	1	49	143-157 ³
Class 2	1,832-1,871	661	2,493-2,532 ³	1,673-1,721	660	2,333-2,380 ³	1,650-1,698	60	365	2,076-2,124 ³
Class 3	414	73	487 ²	449-455	73	521-528 ⁴	441-447	23	416	879-886 ⁴
Class 4	77	49	126 ²	21	49	70 ²	15	0	6	21 ²
Class 5	4	0	4 ²	0	0	0 ²	0	0	0	0 ²
Class 6	22	5	27 ²	6	5	11 ²	6	0	0	6 ²
Class 7	3	0	3 ²	1	0	1 ²	1	0	0	1 ²
Class 8	0	0	0 ²	0	0	0 ²	0	0	0	0 ²
Total	2,361-2,400	787	3,149-3,188 ³	2,242-2,304	787	3,029-3,091 ³	2,206-2,268	84	837	3,127-3,189 ³

¹ The range provided for the working alignments within the corridors accounts for the range in impacts associated with the three design concepts.

² Design Concepts 1, 2, and 3 have the same impact on this resource.

³ Design Concept 1 has the greatest impact for this resource.

⁴ Design Concept 2 has the greatest impact for this resource.

Source: USDA, NRCS, SSURGO database, obtained in August 2011.

3.3.3.4 Drainage and Irrigation

The overall impacts to drainage and irrigation will be evaluated during the Tier Two NEPA studies once a preferred alignment(s) is identified and detailed drainage and irrigation information is available.

3.3.3.5 Specially Designated Areas

Based on the GIS information provided by the Illinois DOA, there are 7 acres of CRP land that would be impacted by the working alignment within Corridor A3S2 under all three design concepts in Will County. The working alignment within Corridor B3 would impact 4 acres of CRP land under all three design concepts in Will County. The working alignment within Corridor B4 would impact 3 acres of CRP land in Will County under all three design concepts. No information is available for the corridors in Lake County to determine CRP land impacts.

Additional coordination with the USDA would occur during the Tier Two NEPA studies. In addition, NRCS Form AD-1006 and Form CPA 106 would be completed as part of the Tier Two NEPA studies to document and coordinate agricultural impacts in Illinois and Indiana, respectively. The two forms are very similar. An evaluation of the number of centennial farms impacted will also be conducted in the Tier Two NEPA studies. Centennial farms are sensitive resources and are considered in the decision making process; however, there are no federal or state laws that protect centennial farms.

3.3.3.6 Farmland Production

The working alignments within the corridors would directly impact farmland production with the conversion of farmland to transportation right-of-way. The inability to cultivate the farmland would result in the reduction of crop cash receipts. The reduction in crop production and resultant market value reduction was estimated based on the anticipated number of cropland acres converted to transportation right-of-way. The crops considered include corn, soybeans, hay, and wheat, which represents over 90 percent of the crops produced in Will, Kankakee, and Lake counties.

Depending on the design concept, the working alignment within Corridor A3S2 would impact a total of 2,146 to 2,171 acres of farmland crops, the working alignment within Corridor B3 would impact 2,275 to 2,331 acres, and the working alignment within Corridor B4 would impact 2,518 to 2,574 acres as shown in Figure 3-22. These crop acres would be removed from production when the project is constructed and the farmland is converted to transportation right-of-way. The loss in crop cash receipts for each crop is estimated using the 3 year average crop unit prices. Table 3-46, Table 3-47, and Table 3-48 summarize the estimated average loss for each type of crop for each working alignment within the corridors.

The cropland converted to transportation right-of-way represents approximately 0.8 percent of Will County and approximately 0.4 percent of Lake County for the working alignments within Corridors A3S2 and B3. On a crop cash receipts basis, the overall market value reduction for the working alignment within Corridor A3S2 is anticipated to be \$1,253,194 to \$1,256,744, depending on the design concept. The overall market value reduction for the working alignment within Corridor B3 is anticipated to be \$1,352,351 to \$1,388,870. For the working alignment within Corridor B4, the cropland converted to right-of-way represents approximately 0.002 percent of Kankakee County, 0.8 percent of Will County, and 0.60 percent of Lake County. The overall market value reduction for the working alignment within Corridor B4 is anticipated to be \$1,465,932 to \$1,502,452, depending on the design concept.

Table 3-46. Crop Cash Receipt Reductions – Corridor A3S2¹

Crop	Harvested Acres Converted		Yield, per acre	Crop Production Loss	Average Crop Unit Price	Crop Cash Receipt Loss	
	Acres	Percent of County Land				\$	Percent of County Receipts
Illinois – Will County							
Corn, bu	762-783 ²	1%	164	125,902-128,751	\$4.38	\$548,806-\$563,931 ²	0.7-0.8%
Soybeans, bu	722-723 ³	1%	47	33,693-33,740	\$10.70	\$360,519-\$361,018 ³	0.8%
Hay, tons	103-104 ²	6%	3	279-281	\$94.08	\$26,226-\$26,478 ²	6.0-6.1%
Wheat, bu	31-33 ²	<1%	65	2015-2145	\$5.18	\$10,438-\$11,111 ²	0.30%
Illinois Total	1,618-1,643 ³	---	---	---	---	\$945,989-\$962,538 ³	0.8%
Indiana – Lake County							
Corn, bu	310	1%	161	49,931	\$4.38	\$218,696	0.5%
Soybeans, bu	164	<1%	45	7,413	\$10.70	\$79,317	0.3%
Hay, tons	54	4%	2	98	\$94.08	\$9,193	4.1%
Wheat, bu	0	0%	69	0	\$5.18	\$0	0%
Indiana Total	528	---	---	---	---	\$307,206	0.5%
Overall Total	2,146-2,171 ³	---	---	---	---	\$1,253,194-\$1,296,744 ³	---

¹ The range provided accounts for the range in impacts associated with the three design concepts. There are no impacts in Kankakee County for this corridor.

² Design Concept 1 has the greatest impact for this resource.

³ Design Concept 2 has the greatest impact for this resource.

Table 3-47. Crop Cash Receipt Reductions – Corridor B3¹

Crop	Harvested Acres Converted		Yield, per acre	Crop Production Loss	Average Crop Unit Price	Crop Cash Receipt Loss	
	Acres	Percent of County Land				\$	Percent of County Receipts
Illinois – Will County							
Corn, bu	871-912 ²	1%	164	143,221-149,963	\$4.38	\$627,310-\$656,839	0.9%
Soybeans, bu	793-826 ³	1%	47	37,007-38,547	\$10.70	\$395,971-\$412,449	0.8-0.9%
Hay, tons	63 ⁴	4%	3	169	\$94.08	\$15,887	3.6%
Wheat, bu	20 ⁴	<1%	65	1,300	\$5.18	\$6,734	0.2%
Illinois Total	1,747-1,803	---	---	---	---	\$1,045,902-\$1,082,422 ²	0.8-0.9%
Indiana – Lake County							
Corn, bu	308	1%	161	49,609	\$4.38	\$42,986,761	0.5%
Soybeans, bu	165	<1%	45	7,458	\$10.70	\$79,801	0.3%
Hay, tons	55	4%	2	98	\$94.08	\$223,855	4.1%
Wheat, bu	0	<1%	69	0	\$5.18	0	0%
Indiana Total	527	---	---	---	---	\$306,499	0.5%
Overall Total	2,275-2,331 ²	---	---	---	---	\$1,352,351-\$1,388,870 ²	---

¹ The range provided accounts for the range in impacts associated with the three design concepts.

There are no impacts in Kankakee County for this corridor.

² Design Concept 1 has the greatest impact for this resource.

³ Design Concept 2 has the greatest impact for this resource.

⁴ Design Concepts 1, 2, and 3 have the same impact on this resource.

Table 3-48. Crop Cash Receipt Reductions – Corridor B4¹

Crop	Harvested Acres Converted		Yield, per acre	Crop Production Loss	Average Crop Unit Price	Crop Cash Receipt Loss	
	Acres	Percent of County Land				\$	Percent of County Receipts
Illinois – Will County							
Corn, bu	847-888 ²	1%	164	139,275-	\$4.38	\$610,025-\$639,554 ²	0.8-0.9%
Soybeans, bu	788-820 ³	1%	47	36,773-	\$10.70	\$393,475-\$409,453 ³	0.8-0.9%
Hay, tons	60 ⁴	3%	3	161	\$94.08	\$15,130	3.5%
Wheat, bu	21 ⁴	<1%	65	1,365	\$5.18	\$7,071	0.2%
Illinois – Kankakee County							
Corn, bu	12	<1%	164	1,970	\$4.38	\$8,630	0.01%
Soybeans, bu	51	<1%	47	2,348	\$10.70	\$25,120	0.04%
Hay, tons	5	<1%	3	18	\$94.08	\$1,671	0.2%
Wheat, bu	6	<1%	65	440	\$5.18	\$2,279	0.1%
Illinois Total	1,789-1,845 ²	---	---	---	---	\$1,063,401-\$1,099,921 ²	0.8-0.9%
Indiana – Lake County							
Corn, bu	422	1%	161	67,970	\$4.38	\$297,709	0.7
Soybeans, bu	288	1%	45	13,018	\$10.70	\$139,288	0.6%
Hay, tons	19	1%	2	34	\$94.08	\$3,234	1.4%
Wheat, bu	0	0%	0	0	\$5.18	0	0%
Indiana Total	729	---	---	---	---	\$440,232	0.5%
Overall Total	2,518-2,574 ²	---	---	---	---	\$1,465,932-\$1,502,452 ²	---

¹ The range provided accounts for the range in impacts associated with the three design concepts.

² Design Concept 1 has the greatest impact for this resource.

³ Design Concept 2 has the greatest impact for this resource.

⁴ Design Concepts 1, 2, and 3 have the same impact on this resource.

3.3.4 Measures to Minimize Impacts

Agricultural resource impacts will be coordinated with the NRCS, the Illinois DOA, and the Indiana DOA using the NRCS Forms AD-1006 and/or CPA-106. This process will be conducted as part of the Tier Two NEPA studies when more detailed information is available. As part of the NEPA process, agricultural impacts will be reviewed to determine measures or actions to avoid and minimize impacts or disruption to agricultural operations. These include considering alignment locations that follow

existing parcel lines to reduce the number of farm severances. Where severances are unavoidable, parcels will be traversed where possible, such that point rows or uneconomical remnants are not created. Other measures to avoid or minimize impacts to agricultural resources include:

- Utilize existing right-of-way where practicable and consistent with planned land uses.
- Set alignments parallel to property lines.
- Design alignments to utilize frontage (or access) roads to decrease out of distance travel, landlocked parcels, and severance of farm operations.
- Construct field access points for farm machinery, where practical.
- Widen field entrances, when requested, to allow room for semi-trucks and large agricultural implements to enter and exit from the fields.
- Maintain existing surface and subsurface drainage and work proactively with landowners prior to construction to locate existing field tiles. Re-establish drainage following construction of roadway.
- Arrange informational meetings with the Illinois and Indiana Departments of Agriculture, local agricultural agencies, and local Farm Bureaus to obtain knowledge and awareness of both favorable and unfavorable impacts to agricultural practices in the Study Area.
- Consider the use of acquired uneconomical remnants and landlocked parcels when choosing locations for project elements, such as storm water quality improvements or mitigation.

3.4 Cultural Resources

This section discusses the presence of and potential impacts to cultural resources, which include historic properties, historic/cultural landscapes, and archaeological resources, within the Study Area, corridors, and area of potential effects (APE) as defined in Section 3.4.4.

In the Tier One NEPA studies, identification of historic and archaeological resources within the Study Area was limited to database and records searches for known historic and archaeological properties listed in or eligible for inclusion in the NRHP or previously identified as meeting the 50 year age criterion in previous surveys. No field survey work was completed to identify additional cultural resources and no determinations of eligibility for resources meeting the 50 year age criterion were completed in Tier One. Additional historic and archaeological resources will likely be identified during the Tier Two NEPA studies when field surveys will be conducted to identify any resources more than 45 years of age located in the APE that were not identified in the Tier One database and records searches as previously documented or evaluated for NRHP eligibility. The additional surveys, determinations of eligibility, and effects assessments will be conducted and coordinated with the respective State