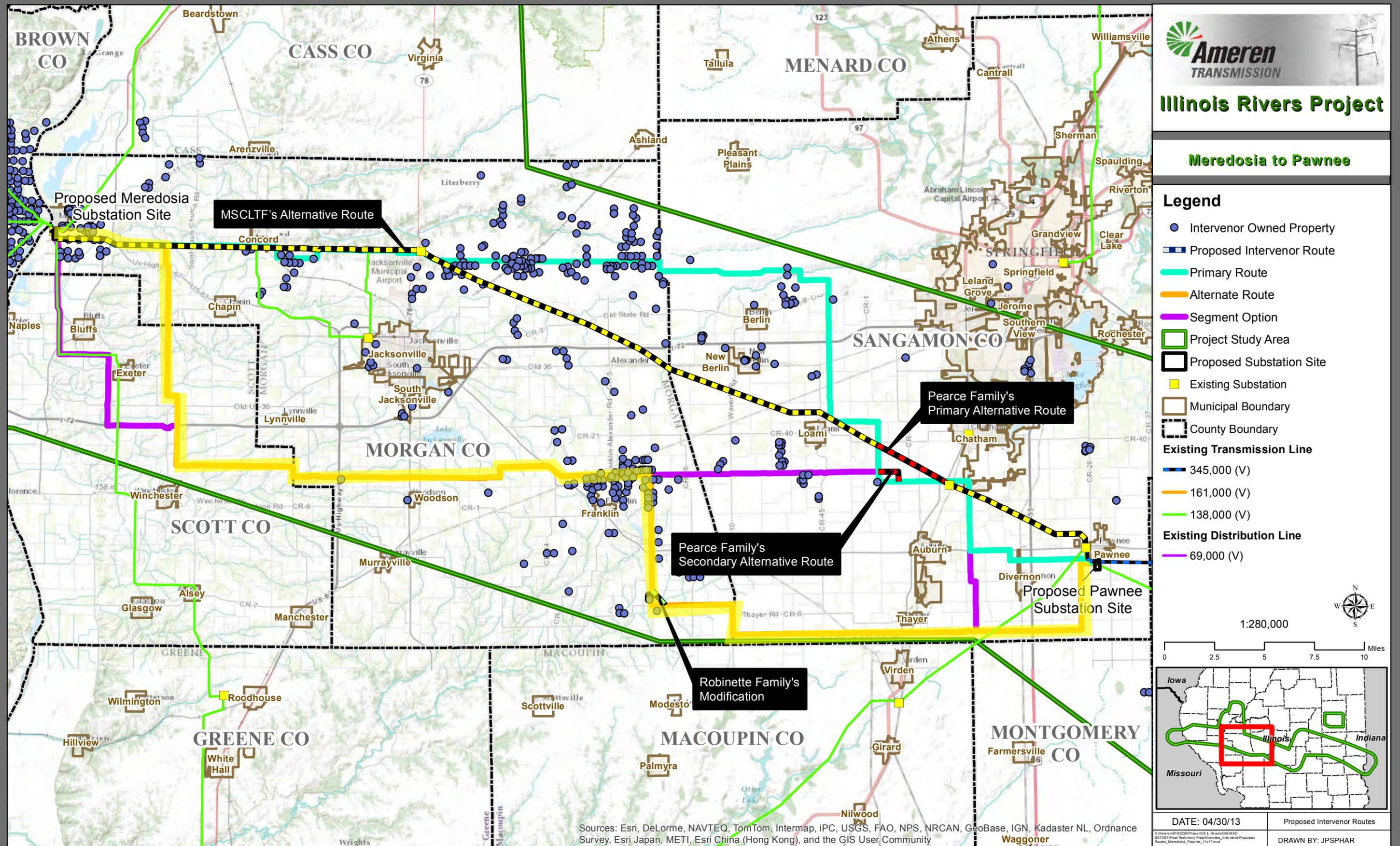


ATXI Figure 4: Meredosia - Pawnee

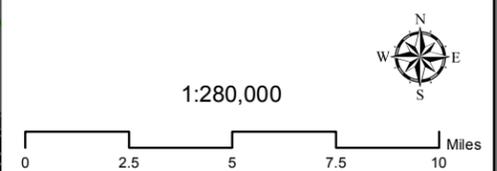


Illinois Rivers Project

Meredosia to Pawnee

Legend

- Intervenor Owned Property
- ▬ Proposed Intervenor Route
- ▬ Primary Route
- ▬ Alternate Route
- ▬ Segment Option
- ▭ Project Study Area
- ▭ Proposed Substation Site
- ▭ Existing Substation
- ▭ Municipal Boundary
- ▭ County Boundary
- Existing Transmission Line**
- ▬ 345,000 (V)
- ▬ 161,000 (V)
- ▬ 138,000 (V)
- Existing Distribution Line**
- ▬ 69,000 (V)



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

DATE: 04/30/13
Proposed Intervenor Routes
DRAWN BY: JPSPHAR

1. Length of the Line

	Stipulated / ATXI Alternate Route	ATXI Primary Route	ATXI Primary Route with Pearce Modification	MSCLTF Withdrawn Route
Estimated Length in Miles	75.6	67.7	66.5	57.3

(ICC Staff Ex. 1.0R, p. 27.)

2. Difficulty and Cost of Construction

	Stipulated / ATXI Alternate Route	ATXI Primary Route	ATXI Primary Route with Pearce Modification	MSCLTF Withdrawn Route
Estimated Baseline Cost	\$144.205 million	\$129.077 million	\$128.189 million	\$107.423 million

(ATXI Ex. 16.3, p. 4.)

Because the withdrawn MSCLTF alternative route parallels an existing 138 kV line, coordinated outages may be necessary in order to construct the route. (ATXI Ex. 12.0 (Rev.), pp. 4-10.) The Pearce Family’s modification may increase the difficulty of construction because it parallels an existing 138 kV line. (See ATXI Ex. 12.0 (Rev.), pp. 4-10.) While the baseline dollar cost for the Stipulated Route is greater, (ATXI Ex. 16.3 (Rev.), p. 4), that route has the most Intervenor support of the routes proposed for this portion of the Project. (Stip. Exs. 1; 2.) In addition, the Stipulated Route would avoid FutureGen’s carbon dioxide pipeline and storage facility, thereby alleviating concerns related to interference with underground monitoring equipment at the FutureGen facilities. (See FutureGen Ex. 1.0, pp. 2-5.)

3. Difficulty and Cost of Operation and Maintenance

There is no record evidence the Stipulated Route would be more difficult to operate and maintain or would be more costly to operate and maintain relative to the other routes proposed. The withdrawn MSCLTF alternative route parallels an existing 138 kV line, which poses

reliability concerns, including the fact that the existing lines must be removed from service during maintenance. (See ATXI Ex. 12.0, p. 10-11.) Additionally, a single pole failure could result in outages to both lines. (Id.) As such, the line may be more difficult and costly to operate and maintain than ATXI's Primary or Alternate Routes. The same would be true for the modifications proposed by the Pearce Family, to the extent that the modified routes parallel existing transmission facilities. The record otherwise contains no meaningful distinction between the proposed routes regarding the difficulty or cost of operating and maintaining each.

4. Environmental Impacts

MSSCLPG witness Mr. Bergschneider testified to certain alleged environmental and agricultural use impacts he foresees upon his property as a result of the Stipulated Route. (MSSCLPG Ex. 1.0, pp. 3-6.) However, Mr. Bergschneider admitted that he had not conducted or commissioned any formal studies of the relative impacts of the proposed routes, and agreed that the alleged impacts would occur on properties located across the state, regardless of the route chosen. (Tr. pp. 452-56, 461-65.) The modifications proposed by the Pearce Family would not decrease the environmental impact of the Project. (ATXI Ex. 13.0C (2d Rev.), pp. 31-32.)

There is otherwise no record evidence indicating that any route is superior to the Stipulated Route with respect to the best balance between environmental impacts and other considerations. (See ATXI Exs. 4.5, p. 3; 4.0, pp. 8-10.)

5. Impacts on Historical Resources

MSSCLPG witness Mr. Dodsworth alleged that his property is "archaeologically significant" and the "focus of documentation" by the Illinois State Archaeological Survey. (MSSCLPG Ex. 3.0, p. 3.) ATXI identified one known archaeological site within 75 feet of its Primary Route, and three known archaeological sites within 75 feet of its Alternate Route.

(ATXI Ex. 4.0, p. 37.) None of these sites are located on property owned by Mr. Dodsworth, and he did not provide documentation in support of his claim. However, the concerns, even if valid, do not suggest that the Stipulated Route should not be adopted. As discussed by ATXI witness Ms. Murphy, ATXI will consult with the Illinois Historic Preservation Agency to identify historical resources, address any concerns and minimize impacts through pole placement adjustments. (ATXI Ex. 4.0, p. 38; see also ATXI Ex. 16.0, pp. 4-5.) In the end, there is no record evidence to suggest these sites will be affected by the Stipulated Route.

6. Social and Land use Impacts

As described above, MSSCLPG alleges certain impacts of the Stipulated Route on agricultural land uses. (See, e.g. MSSCLPG Ex. 1.0, pp. 3-6.) However, as MSSCLPG admits (Tr. 461-65), these impacts are not unique to that route and will occur with equal frequency no matter what route is chosen. (ATXI Ex. 13.0C (2d Rev.), p. 35.) Such impacts can also be mitigated through pole placement during the line design phase and compensation as discussed above.

7. Number of Affected Landowners and other Stakeholders and Proximity to Homes and other Structures

Approximately 300 individuals own property within 250 feet on either side of the Stipulated Route. (ATXI Ex. 5.4 (Rev.), pp. 46-51.) Approximately 237 individuals own property within 250 feet on either side of ATXI's Primary Route. (ATXI Ex. 5.4 (Rev.), pp. 11-17.) There is no reliable information regarding the number of landowners impacted by MSCLTF's withdrawn alternative route proposal, since MSCLTF's request to supplement the list of landowners affected by that route was never granted and a supplement was never filed.

Neither the Stipulated Route nor ATXI's Primary Route would require displacement of any residences.

	Stipulated / ATXI Alternate Route	ATXI Primary Route	ATXI Primary Route with Pearce Modification	MSCLTF Withdrawn Route
Residences 0-75 feet from centerline	0	0	0	Not specified
Residences 75-150 feet of centerline	9	4	3	Not specified

(ATXI Exs. 4.5, p. 4; 13.0C (2d Rev.), pp. 31-32; see generally, ATXI Ex. 4.2.)

8. Proximity to Existing and Planned Development

ATXI’s Primary Route is located near the planned location of the FutureGen carbon dioxide pipeline and storage facility. (FutureGen Ex. 1.0, p. 5.) However, the Stipulated Route alleviates this concern entirely. There is no other record evidence concerning the proximity of any of the routes proposed for the Meredosia – Pawnee portion of the Project to existing or planned development that would favor adopting another route over the Stipulated Route.

9. Community Acceptance

The Stipulated Route has garnered the widest community acceptance, as evidenced support for the route provided by FutureGen, the Pearce Family, and the 41 individual members of MSCLTF.

10. Visual Impact

The visual impacts, if any, will be substantially the same for any route. There is no record evidence that the Stipulated Route is less preferable considering visual impact than any other route proposed for this portion of the Project.

11. Presence of Existing Corridors

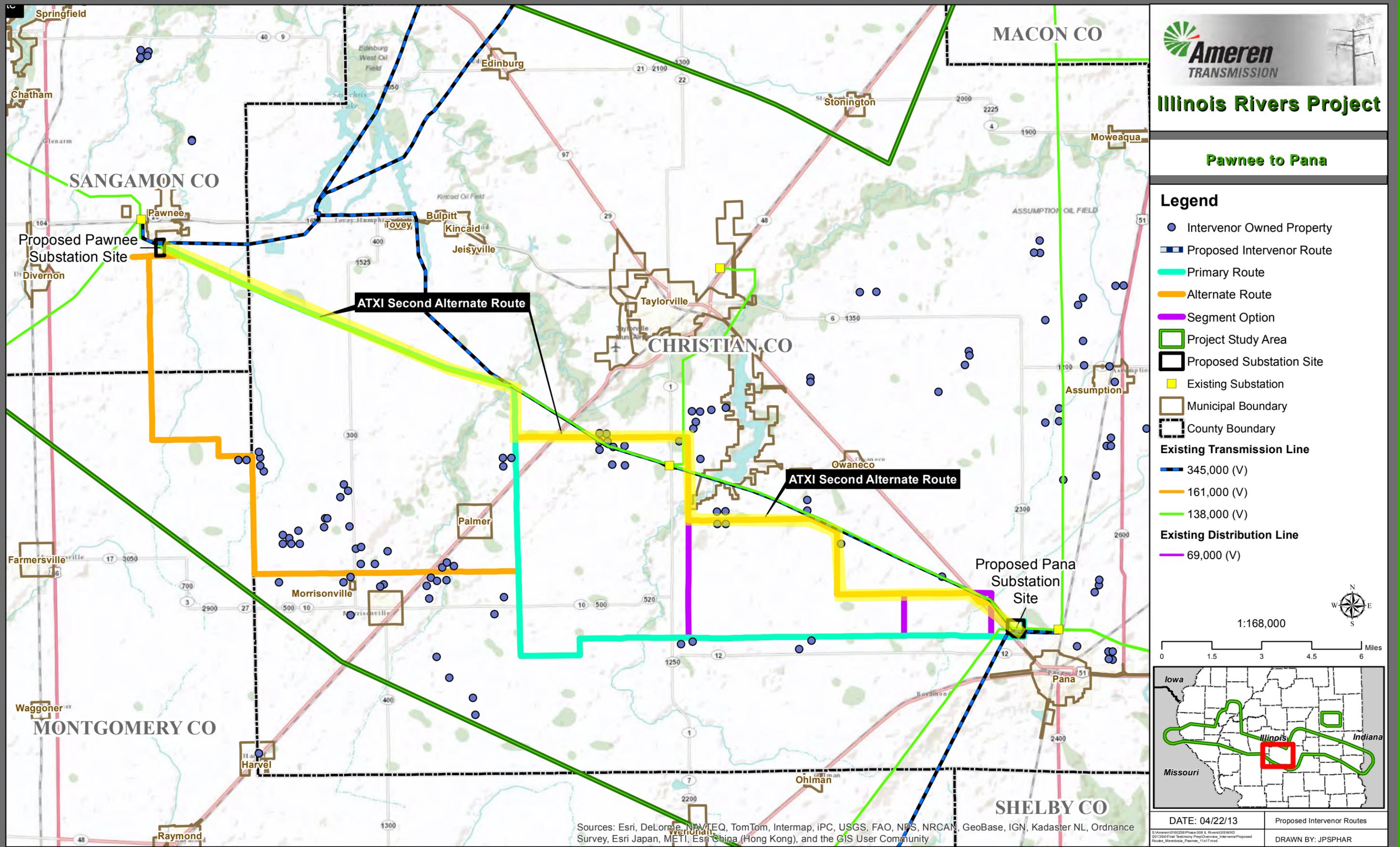
The Stipulated Route follows section lines and county roads. (See ATXI Ex. 4.6, part 5 of 10; see also ATXI Ex. 4.4 (listing all opportunities).) The withdrawn MSCLTF alternative

route parallels an existing 138 kV line, which presents reliability, operational and maintenance concerns as compared to the Stipulated Route. (ATXI Ex. 12.0 (Rev.), pp. 4-10.) The Pearce Family's proposed modification to ATXI's Primary Route also parallels an existing 138 kV line, and presents the same concerns. (ATXI Ex. 13.0C (2d Rev.), p. 31.)

E. Pawnee – Pana

ATXI identified three viable routes for the Pawnee to Pana portion of the Project: a Primary, a First Alternate and a Second Alternate. Staff recommends, and the Company agrees, that the Commission should approve ATXI's Second Alternate Route (the recommended route) along this segment. (Staff Ex. 1.0C, p. 38; ATXI Ex. 13.0C (2d Rev.), pp. 3, 37; see also ATXI Ex. 13.1 (Rev.)) That route is shown in teal, then orange on ATXI Exhibit 13.6 (Rev.), is highlighted on Figure 5, and was designated the "Rebuttal Recommended Route" in ATXI's rebuttal testimony. ATXI's Second Alternate Route avoids several residences and is shorter than either the Primary or First Alternate, meaning it will likely cost less to construct. (Staff Ex. 1.0, p. 38; ATXI Ex. 13.0C (2d Rev. (Murphy Reb.)), p. 38; ATXI Ex. 16.1.) The route does not affect any Intervenor, and no party opposes it. No other routes were proposed for this portion of the Project.

ATXI Figure 5: Pawnee - Pana



Illinois Rivers Project

Pawnee to Pana

Legend

- Intervenor Owned Property
- ▬ Proposed Intervenor Route
- ▬ Primary Route
- ▬ Alternate Route
- ▬ Segment Option
- ▭ Project Study Area
- ▭ Proposed Substation Site
- ▭ Existing Substation
- ▭ Municipal Boundary
- ▭ County Boundary

Existing Transmission Line

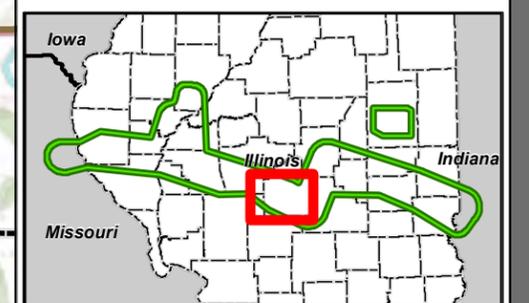
- ▬ 345,000 (V)
- ▬ 161,000 (V)
- ▬ 138,000 (V)

Existing Distribution Line

- ▬ 69,000 (V)

Scale: 1:168,000

0 1.5 3 4.5 6 Miles



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

DATE: 04/22/13
 Proposed Intervenor Routes
 DRAWN BY: JPSPHAR

1. Length of the Line

	ATXI Primary	ATXI's Alternate Route 1	ATXI's Alternate Route 2
Estimated Length (miles)	34.4	38.5	32.3

(ICC Staff Ex. 1.0R, p. 39.)

2. Difficulty and Cost of Construction

Portion	ATXI Primary	ATXI's Alternate Route 1	ATXI's Alternate Route 2
Pawnee - Pana	\$65,868,000	\$78,780,000	\$65,018,000

(ATXI Ex. 16.3 (Rev.), p. 5.) There is no record evidence indicating that the Second Alternate Route would be difficult to construct. To the contrary, as indicated by ATXI witness Ms. Murphy, "[t]he land use crossed by [the Second Alternate Route] is mostly agricultural with dispersed residential use and the terrain is mostly flat." (ATXI Ex. 4.2, Part 1 of 100, p. 14.)

3. Difficulty and Cost of Operation and Maintenance

There is no record evidence indicating that the Second Alternate Route would be more difficult to operate and maintain or that said route would be more costly to operate and maintain relative to the other routes proposed by ATXI along the Pawnee to Pana segment.

4. Environmental Impacts

The Second Alternate Route is expected to have minimal environmental impact. (See ATXI Ex. 4.0 (Murphy Dir.), pp. 8-10; see also ATXI Ex. 4.5, p. 3.) There is no record evidence indicating that the potential environmental impact resulting from construction of the Second Alternate Route would be greater than that resulting from construction of the other routes proposed by ATXI along the Pawnee to Pana segment.

5. Impacts on Historical Resources

There is no record evidence indicating that the Second Alternate Route from Pawnee to

Pana will substantially impact any historical resources. The Second Alternate Route will not impact any known archeological sites and ATXI is unaware of any other historical resources that would prevent construction of the route. (See ATXI Ex. 4.5, p. 2.). ATXI will work with the IHPA to address issues that may arise during the construction process, and will obtain required permits or approvals, if any, prior to construction. (ATXI Ex. 4.0, p. 42.)

6. Social and Land Use Impacts

The Second Alternate Route reflects an optimum location for the transmission line in that it would limit societal and land use impacts. (See ATXI Exs. 4.0, pp. 8-10; 4.5, p. 1.) Such is true of all of ATXI's proposed routes, as each such route resulted from a comprehensive siting study and review. (Id.) There is no record evidence indicating that the Second Alternate Route would create social or land use impacts greater than those created by the other routes ATXI proposed along the Pawnee to Pana segment.

7. Number of Affected Landowners and other Stakeholders and Proximity to Homes and other Structures

There are fewer landowners owning property within 250 feet of ATXI's Second Alternate Route from Pawnee to Pana than there are landowners owning property within 250 feet of either the Primary or First Alternate Routes along that same segment. (ATXI Ex. 5.4 (Rev.), pp. 17-20, 51-57.) The Second Alternate Route will not require displacement of any residences.

8. Proximity to Existing and Planned Development

There is no record evidence indicating that the Second Alternate Route from Pawnee to Pana is proximate to any existing or planned development.

9. Community Acceptance

The Second Alternate Route from Pawnee to Pana, as well as ATXI's Primary and First Alternate Routes, resulted from and pursuant to a lengthy public input process, during which

numerous public information sessions were held at various locations along the segment. (See ATXI Ex. 4.8, Part 1 of 106.) The Second Alternate Route does not directly impact any Intervenor in this matter and remains unopposed in testimony or evidence of record.¹¹ (See ATXI Ex. 13.0C (2d Rev.), p. 38.)

10. Visual Impact

Visual impacts, if any, will be substantially the same for any route along the Pawnee to Pana segment. There is no record evidence indicating that the recommended route is less preferable from a visual impact perspective.

11. Presence of Existing Corridors

The Second Alternate Route includes certain portions for which paralleling was determined to be appropriate. The Second Alternate Route “extends southeast from the Pawnee Substation along the north side of an existing 138 kV transmission line for approximately 11 miles...” (ATXI Ex. 4.2, Part 1 of 100, p. 14.) The Recommended Route also parallels 138 kV lines along two additional stretches before terminating at the Pana Substation. (Id.)

F. Pana – Kansas

1. Need for Mt. Zion Substation

The Mt. Zion substation is required to provide needed local reliability benefits in the Decatur, Illinois area. The proposed new Mt. Zion area substation will be located near existing 138 kV lines and its 345/138 kV transformer provides an additional source to serve load in Decatur. (ATXI Ex. 2.0 (Kramer Dir.), p. 23.) The new substation will relieve loading on

¹¹ The Morrisonville Group is the only Intervenor in this matter alleging a specific interest along the Pawnee to Pana Portion of the Project. This Intervenor presented no testimony nor did they offer or designate any alternate route. As explained by ATXI Witness Ms. Murphy, “[t]he Rebuttal Recommended Route will not directly impact property owned by members of the Morrisonville Group. Although this Intervenor group did not file direct testimony, I would assume that they would not oppose a route that does not impact their property.” (ATXI Ex. 13.0C (2d Rev.), p. 38.)

existing transmission facilities and enhance reliability in the Decatur area by providing transmission support for certain multiple contingency events, including certain Category C and Category D contingency events. This will reduce the exposure to dropping large amounts of customer load due to potential low voltage conditions. (Id., p. 28.) The Mt. Zion substation also provides benefits as a part of the whole Illinois Rivers Project. (ATXI Ex. 11.0 (Rev.) (Kramer Reb.), p. 14.) The MISO MVP projects (of which the Mt. Zion substation is a portion) were developed as a portfolio of projects to provide multiple benefits including: (1) increasing access to renewable energy, (2) increasing access to lower cost energy, and (3) addressing local reliability issues. (Id.)

Construction of the Mt. Zion substation and related facilities as part of the Project is the least-cost option to achieve those benefits. The Project receives the MVP cost allocation treatment, and therefore Ameren Illinois area customers will pay for approximately 9% of the total Project cost. (ATXI Ex. 11.0 (Rev.), p. 18.) This means that even though the Mt. Zion substation, Pana to Mt. Zion line, Mt. Zion to Kansas line, and two 138 kV connector lines to the Mt. Zion PPG substation cost approximately \$251.6 million, Ameren Illinois area customers will only pay approximately \$22.6 million of this cost. (Id.)

One of MCPO's proposed routes would eliminate the proposed Mt. Zion substation and connect Pana directly to Kansas. MCPO contended the Mt. Zion substation could be replaced by another system reinforcement option in the Decatur area, and that as a result the transmission line could be routed directly from Pana to Kansas. (ATXI Ex. 11.0 (Rev.), p. 12.) Crucially, MCPO identified no other options for replacing the Mt. Zion substation. (MCPO Ex. 1.0, pp. 53-60.) And even when making this proposal, MCPO did not dispute the need to address the future reliability issues that ATXI has identified in the Decatur area. And MCPO conceded that the

Project as designed can address these concerns. (Id., pp. 47, 51-42.) The record conclusively shows that the Commission cannot consider the MCPO option, because elimination of the Mt. Zion substation would prevent the Project from delivering its full benefits, and in particular the full reliability benefits to the Decatur area, and because MCPO's proposal would impose a higher cost burden on Ameren Illinois area customers.

MCPO's proposal discounts the importance of the benefits the Mt. Zion substation provides as a part of the whole Illinois Rivers Project. (ATXI Ex. 11.0 (Rev.), p. 14.) These benefits extend beyond Decatur and are not captured in a piecemeal analysis like the one conducted by MCPO witness Mr. Dauphinais.

The MCPO proposal is also an inferior solution to the Decatur area reliability concerns. The implementation of MCPO's proposed alternative Oreana 345/138 kV Reinforcement and installation of a power flow reactor as described by Mr. Dauphinais will significantly increase the likelihood of voltage collapse in Decatur and the loss of approximately 700 MW of load for the loss of the Oreana substation when compared to the Project. (ATXI Exs. 11.0 (Rev.), p. 16; 11.2.) The three 138 kV line configuration, as proposed by MCPO witness Mr. Dauphinais, would have these lines located within a few miles of each other, with a higher potential coincident exposure to major weather events and possible multiple outages. (Id.) Implementing the Project would eliminate this risk by providing a separate 345 kV supply to the Decatur area. (Id.) Accepting the additional risk of large loss of load that would result from MCPO's proposal is not consistent with Good Utility Practice, when the same reliability benefits can be obtained without this additional risk by implementing the Mt. Zion substation and Pana to Mt. Zion and Mt. Zion to Kansas portions of the Project, and at a lower cost to Ameren Illinois area customers. (ATXI Ex. 11.0 (Rev.), p. 17.)

Finally, the Project is the lower cost option as compared to MCPO's proposal. As discussed above, the Project receives the MVP cost allocation treatment, and therefore Ameren Illinois area customers will pay for approximately 9% of the total project cost. (ATXI Ex. 11.0 (Rev.), p. 18.) By comparison, the alternative reinforcements proposed by MCPO witness Mr. Dauphinais could be categorized at least in part as Baseline Reliability Projects by MISO. (MISO Ex. 2.0, p. 10.) These Baseline Reliability project costs would be allocated solely to Ameren Illinois area customers, who would then pay up to an additional \$179 million for the proposed alternative reinforcement. (ATXI Exs. 11.0 (Rev.), p. 18; 11.3.) This additional cost will not result in any additional benefits to Ameren Illinois area customers.

In the Stipulation between MCPO and ATXI, the parties agreed that "a substation at Mt. Zion as proposed by ATXI will deliver the full benefits of the Project," and that "the geographic location for the Mt. Zion substation proposed by ATXI is appropriate assuming the substation is built," and that the recommended route in this area of the Project connect Pana to Mt. Zion and Mt. Zion to Kansas. (Stip. Ex. 7.) Staff witness Mr. Rockrohr also agrees that the Commission should include the Mt. Zion substation in the certificate issued in this case. (Tr. 254.) Thus, the need for the Mt. Zion substation is no longer an issue in meaningful dispute. Because the record demonstrates that the Mt. Zion substation is needed, any route proposals that do not connect to a substation in Mt. Zion must be rejected, as discussed below.

Presumably due in part to the question on the need for and location of the Mt. Zion substation, Mr. Rockrohr also recommended in testimony that the Commission exclude the Pana to Mt. Zion and the Mt. Zion to Kansas segments from a certificate in this case, so a separate proceeding can occur to determine the best routing between Pana and Kansas. (ICC Staff Ex. 1.0R, p. 3.) Given the demonstrated need for the Mt. Zion substation and the stipulation between

MCPO and ATXI agreeing to a route from Pana to Mt. Zion and Mt. Zion to Kansas, breaking up the project approval in this manner is not appropriate. The Illinois Rivers Project is an integral part of the transmission upgrades needed to provide the full set of benefits from the MVP portfolio. All of the line segments that compose the Illinois Rivers Project, including Mt. Zion, were examined and analyzed simultaneously during the MTEP process. (ATXI Ex. 11.0 (Rev.), pp. 9-10.) As MISO witness Mr. Webb explains, consideration in a separate docket could require a process of re-design that could involve delay, additional costs (including the need for new generation), and impacts on transmission system reliability. (MISO Ex. 2.0, p. 14.)

Moreover, the sequencing of the construction of the Project line segments is very important. Consideration in a separate docket would cause delay for the Pana to Mt. Zion 345 kV line, which would place the 2016 in-service date for this part of the Project at risk. (ATXI Ex. 11.0 (Rev.), p. 10.) This in turn would jeopardize the timely achievement of the reliability and other benefits and leave the Decatur area at risk for a greater period of time. (Id.) Without proper sequencing of in-service dates, temporary system overloads could be created which would impact system operations. (Id.) Additionally, proper sequencing will help reduce the creation of system congestion that could potentially affect the economic benefits of the energy market. (Id.) Therefore MISO and ATXI have determined the preferred construction sequence, as shown on ATXI Exhibit 2.4, will help minimize the disruption of the transmission system during construction and commissioning of the Project. The Pana to Mt. Zion line segment needed in-service date is 2016, which is in the first year of the overall Project construction schedule. (ATXI Ex. 2.4.)

2. Location of Mt. Zion Substation

Staff witness Mr. Rockrohr was of the opinion that it is more economical for AIC to

extend two 138 kV lines to a Mt. Zion substation that has been relocated southward¹² (on a proposed 345 kV line that connects Pana substation to Kansas substation) than for ATXI to extend two 345 kV lines north to supply the Mt. Zion substation at the location proposed by ATXI. (ICC Staff Ex. 1.0R, pp. 39-40.) His proposal, however, is inferior from a reliability standpoint. ATXI performed a preliminary analysis to determine if the proposed relocation of the Mt. Zion substation farther south along a hypothetical Pana substation to Kansas substation 345 kV line, coupled with two 138 kV lines extending northward to the Mt. Zion PPG substation, is a viable option to address the future reliability issues in the Decatur area. (ATXI Ex. 11.0 (Rev.), p. 7.) The analysis indicated that this Mt. Zion South substation with two longer 138 kV lines connected to the Mt. Zion PPG substation did not address the future Decatur reliability concerns as effectively as the ATXI Project with the Mt. Zion substation located where ATXI had proposed. (Id., p. 8.) Due to the increased impedance of the long 138 kV lines, the voltage support provided by the Mt. Zion South substation is inadequate to return certain post-contingency voltages above the 95% threshold. The voltage issues would become even more severe than indicated when expected additional ADM load is served. (Id.) For these reasons, constructing the Pana to Kansas direct line and relocating the Mt. Zion substation farther south as suggested by Mr. Rockrohr is not a viable solution to the future reliability issues in the Decatur area and should not be considered by the Commission.

3. Route Location

a. Pana – Kansas (if Mt. Zion substation deemed unnecessary)

Because the Mt. Zion substation is necessary, the Commission cannot consider a direct

¹² The Village of Mt. Zion submitted an alternate route proposal locating the Mt. Zion substation south of the site proposed by ATXI. However, no party presently supports or otherwise recommends approval of the Village's proposal. ATXI addresses Staff's proposal of a more southern location of the Mt. Zion substation in Section IV.F.2.

Pana – Kansas line as a feasible option. Given that, the transmission line route must run from Pana to Mt. Zion and Mt. Zion to Kansas. ATXI and MCPO have entered into a Stipulation to resolve their concerns regarding the route of the transmission line from Pana to Mt. Zion and from Mt. Zion to Kansas. ATXI and MCPO support the Stipulated Route for the Pana – Mt. Zion – Kansas portions as the combination of ATXI’s Primary Route from the Pana to Mt. Zion substations and MCPO’s route alternative from the Mt. Zion to Kansas substations. (Stip. Ex. 7.) The Stipulated Route is the same as that identified by MCPO as MCPO-P-MZK. (MCPO Ex. 1.0, p. 8.) The following other parties also support the Stipulated Route for Pana – Mt. Zion – Kansas: Shelby County Landowners’ Group and Gan Properties, LLC. (Shelby County Land Owners’ Group Exs. 1.1 (Amended) – 3.4; ATXI Cross Ex. 3 (agreeing that Gan Properties’ concerns will be resolved by the Stipulated Route).)

MCPO originally recommended a direct route from Pana to Kansas, based on the assertion that the reliability benefits of the Project for the Decatur area could be delivered through certain system reinforcements that would not require a substation in Mt. Zion. As discussed above, however, MCPO’s alternative reinforcements are an inferior and higher cost choice for resolving the reliability issues in Decatur and elimination of the Mt. Zion substation would prevent the Project from delivering its full benefits. (MISO Ex. 2.0, p. 8-10; ATXI Ex. 11.0 (Kramer Reb.), pp. 8-12.)

Staff witness Mr. Rockrohr also initially proposed a more southerly location for Mt. Zion substation, apparently on a line from Pana to Kansas.¹³ (Staff Ex. 1.0R, p. 39.) However as discussed above, his proposal does not address the future Decatur reliability concerns as well as the ATXI Project with the Mt. Zion substation located where ATXI had proposed, and has a

¹³ ATXI understood Staff witness Mr. Rockrohr to envision a straight line from west to east between Pana and Kansas, but his testimony provides no detail regarding the location of the transmission line along this route.

higher cost. (ATXI Exs. 11.0, p. 9; 11.3.) Also, Shelby County Landowner's Group provided testimony in opposition to any route from Pana to Kansas. (Shelby County Land Owners' Exs. 1.1 (Amended) – 3.4.) It is not appropriate or feasible to consider any route that goes from Pana to Kansas that does not include the Mt. Zion substation because of the planning and reliability issues discussed above.

(i) Length of the Line

MCPO's proposed Pana – Kansas alternate route is 76.4 miles. (MCPO Exs. 1.0, p. 11-1.4.)

(ii) Difficulty and Cost of Construction

The estimated baseline cost to construct MCPO's Pana – Kansas alternate route, not accounting for various contingencies and risks (such as unanticipated changes in soil characteristics, material pricing and inclement weather (see ATXI Ex. 12.0 (2d Rev.) (Hackman Reb.), p. 19), is \$139,585,000. (ATXI Ex. 16.3 (Rev.), p. 7.) However, as explained above, the alternative reinforcements proposed by Mr. Dauphinais could be categorized as Baseline Reliability Projects by MISO (MISO Ex. 2.0, p. 10), and thus 100% of these project costs could be allocated solely to Ameren Illinois area customers. (ATXI Exs. 11.0 (Rev.), p. 18.) Thus, a Pana – Kansas route could cost customers up to *nine times* the amount of the Project as proposed by ATXI.

(iii) Difficulty and Cost of Operation and Maintenance

A portion of this route parallels an existing 138 kV transmission line. As explained by ATXI witness Mr. Hackman, paralleling should only be done in limited circumstances because of reliability and operational concerns, as discussed above. Further, this route presents operational and maintenance concerns because it crosses an existing line due east of the Pana substation. (MCPO Ex. 2.0, pp. 9-10.) This crossing increases the reliability risks associated

with one or more of the following: common structure, shield wire failure affecting lower conductors, conductor or insulator failure resulting in conductor vertical displacement, and external common-mode failure events. (See e.g. ATXI Ex. 12.0 (Rev.), p. 42.)

(iv) Environmental Impacts

MCPO witness Mr. Reinecke admits this route impacts more woodlands than ATXI's routes. (MCPO Ex. 2.0, p. 15, 17-18.) In fact, MCPO's Pana-Kansas route impacts 150 more acres of woodlands than does the Stipulated Route from Pana – Mt. Zion – Kansas (304.1 vs. 153.4). (MCPO Ex. 2.5.) This route also crosses the Kaskaskia River, Embarras River, and the West Branch natural areas. (Id.) MCPO's Pana – Kansas route also impacts significantly more floodplains than any of ATXI's Proposed Routes from Pana to Mt. Zion to Kansas¹⁴, and more than 20 acres more floodplain than the Stipulated Route. (ATXI Ex. 4.5, p. 3; MCPO Ex. 2.4, p. 3.)

(v) Impacts on Historical Resources

MCPO's Pana – Kansas alternate route would not impact any historical resources. (MCPO Exs. 2.0, pp. 18-19; 2.3, p. 2.) However, there are two known archaeological site within 500 feet of this route. (Id.) In comparison, there are zero known archaeological sites within the easement area of ATXI's Primary Route from Pana to Mt. Zion and ATXI's Primary and Alternate Routes from Mt. Zion to Kansas. (ATXI Exs. 4.0, p. 37; 4.5, p. 2.)

(vi) Social and Land use Impacts

The Shelby County Landowners' Group oppose MCPO's Pana – Kansas alternate route based on concerns the line would interfere with their farming and timber operation, and would

¹⁴ The breakdown of impacted floodplains (in acres) is as follows: MCPO's Pana-Kansas alternate (159.2); ATXI Pana-Mt. Zion Primary (44.4), Alternate (6.8); ATXI Mt. Zion-Kansas Primary (69.9), Alternate (65.7); Stipulated Route (138.3).

impact recreation at the Kaskaskia River near Shelbyville. (CSLPG Ex. 1.0, ll. 123-126.) Mr. Larry Durbin testifies the MCPO Pana – Kansas line will “pass through the Kaskaskia River bottoms and across the River, a major tourist spot in Central Illinois. Many individuals own river front property wherein they maintain cabins. Also, many [sic] visitors, and residents alike, travel the river to fish, hunt, and boat on the river.” (*Id.*) In addition, Shelby County Landowners’ Group witness Mr. Joseph Woodall testifies MCPO’s Pana – Kansas alternate route would run directly above the City of Shelbyville’s water fields, which are used to supply the City with potable water for its residents. (CSLPG Ex. 3.0, ll. 53-60.)

(vii) Number of Affected Landowners and other Stakeholders and Proximity to Homes and other Structures

As the table below shows, MCPO’s Pana – Kansas alternate route would require displacement of at least two (2) residences. (ATXI Ex. 13.0C (2d Rev.), p. 47.)

	Residential Structures within 0-75 feet	Residential Structures within 75-150 feet
MCPO Pana to Kansas Alternate Route	2 ¹⁵	3

(ATXI Ex. 13.0C (2d Rev.), p. 47; MCPO Ex. 2.3.)

The Stipulated Route also has the least residences within 150 feet as compared to all other route combinations using any route proposed by either ATXI or MCPO from Pana-Mt. Zion-Kansas, *including* MCPO’s Pana-Kansas alternate route. (MCPO Ex. 1.5.)

(viii) Proximity to Existing and Planned Development

Mr. Durbin testifies the MCPO Pana-Kansas alternate route “will be in close proximity to (if not on top of) [his] new, state of the art feedlot for cattle” which is currently under

¹⁵ ATXI and MCPO disagree on the number of residences within 75 feet of the centerline of MCPO’s Pana to Kansas alternative route.

construction. (cite Larry Durbin (lines 40-48)).

(ix) Community Acceptance

Both ATXI and the Shelby County Landowners Group oppose this route. MCPO now supports the Stipulated Route from Pana to Mt. Zion (ATXI's Primary Route), including the location of the substation as proposed by ATXI, and from Mt. Zion to Kansas (MCPO alternative MZK). (Stipulation Ex. 7, p. 5.) Thus, this factor does not support a Pana – Kansas alternate Route.

(x) Visual Impact

Visual impacts, if any, will be substantially the same for any route. There is no record evidence that MCPO's Pana to Kansas alternate route is more preferable considering visual impact than any other route proposed for this portion of the Project.

(xi) Presence of Existing Corridors

MCPO's Pana – Kansas alternate route utilizes section lines, the Moultrie – Shelby county line and parallels an existing transmission line in Shelby and Christian counties. (MCPO Ex. 2.0, pp. 9-10.) This route must also cross an existing line west of the proposed Pana substation. (Id.) As discussed above, parallel lines should may present reliability and operational concerns. (ATXI Ex. 12.0, p. 10.)

b. Pana – Mt. Zion

ATXI's recommended route for the Pana to Mt. Zion segment is the route designated in ATXI's application as the Primary Route, as shown in teal on ATXI Exhibit 13.7 and highlighted on Figure 6 and designated as the rebuttal recommended route. MCPO has stipulated to this route. (Stipulation Ex. 7.) Staff and Shelby County Land Owners also support this "Stipulated Route." (Staff Ex. 1.0R, pp. 41-42; Shelby County Landowners' Group Exs. 1.1 (Amended) –

3.4.) The Stipulated Route will also resolve the concerns of Gan Properties, LLC. (ATXI Cross Ex. 3.) Mr. Corzine is the only party opposing this route, and the route he proposes in the alternative is not preferable.

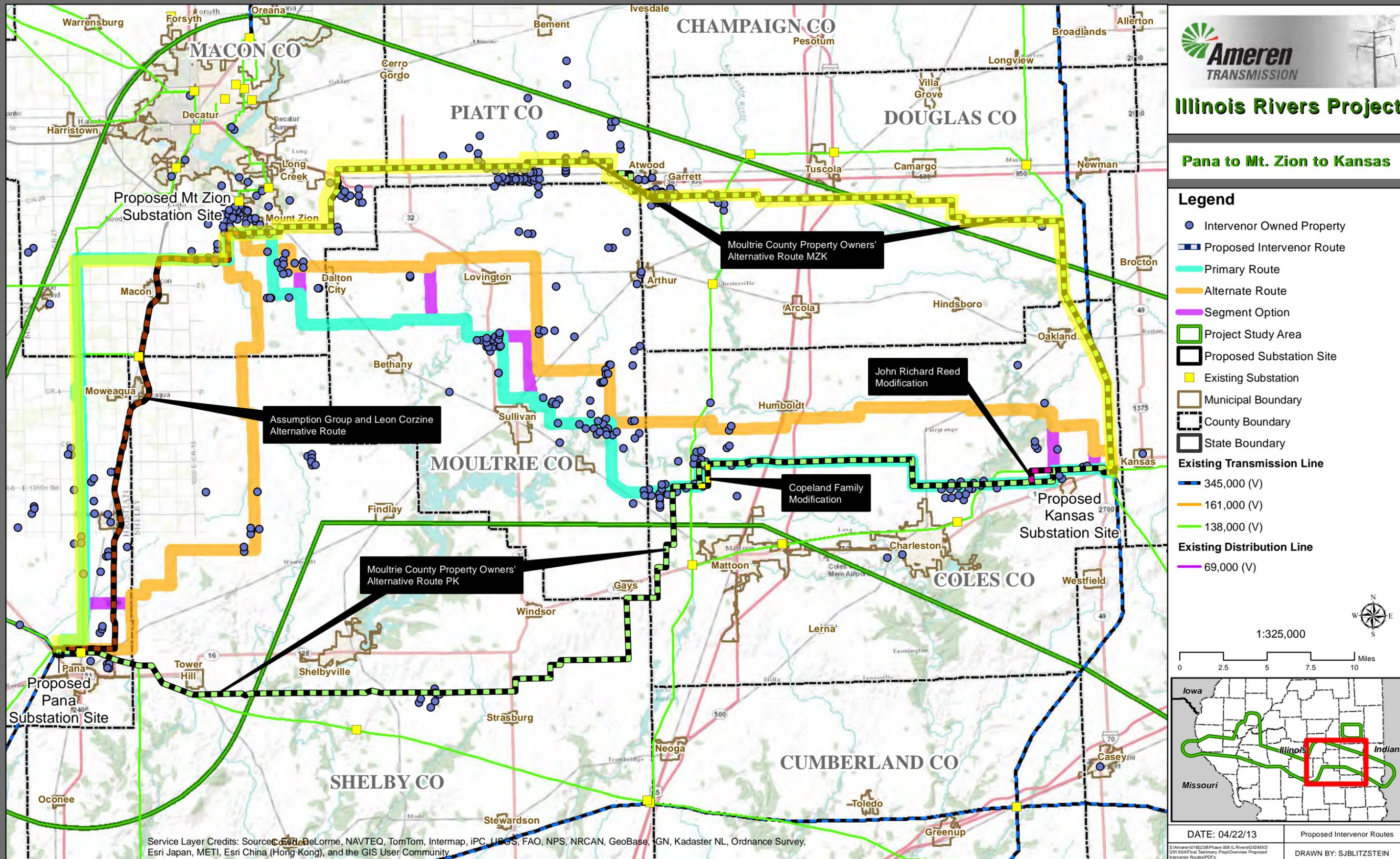
The Stipulated Route represents the best route option from Pana to Mt. Zion for several reasons. It is shorter and costs approximately \$10 million less than ATXI's Alternate Route. (ATXI Exs. 3.4 (3d Rev.); 16.3.) It requires less angles structures and will therefore cost less than the Alternate Route following Highway 51 advocated by Mr. Corzine. (ICC Staff Ex. 1.0R, p. 46, Tbl. 6.) The Stipulated Route also impacts the fewest landowners and residences as compared to both the Alternate and Highway 51 alternate route. (ATXI Exs. 4.5, p. 4; 5.0 (Trelz Dir.), pp. 20-21; 13.0C (2d Rev.) (Murphy Reb.), p. 50.) Overall, The Stipulated Route is the preferred route from Pana – Mt. Zion – Kansas because it has fewer residential structures within 500 feet than any combination of ATXI's Proposed Routes from Pana to Mt. Zion to Kansas. (MCPO Ex. 2.5.) There are 31 fewer residences within 500 feet of the Stipulated Route (33) than ATXI's Rebuttal Recommended Routes (64). (ATXI Ex. 4.5; MCPO Exs. 1.5, 2.4.) Furthermore, it best reduces the potential for environmental impact, will require less tree removal and best reflects input received during the public process. (ATXI Exs. 4.3 (Part 2 of 5), p. 5; 13.0C (2d Rev.), p. 50.)

Mr. Corzine opposes the Stipulated Route because he is concerned about the impact on farms he owns, including aerial spraying and the functionality of farming equipment and technology. (Corzine Ex. 1.0, ¶ 8.) Mr. Corzine's concerns are not unique – they are concerns that will be present with *any* route, including the Highway 51 route he recommends. These concerns can be at least partially mitigated during the detailed design of the route. (ATXI Ex. 16.0 (Rev.) (Murbarger Reb.), p. 5.) As explained by Mr. Murbarger, ATXI will seek to

coordinate with *each* landowner on placement of the poles, and will adjust pole placement where feasible and appropriate to address specific landowner concerns. (Id.)

With respect to the Mr. Corzine's proposed Highway 51 route, as acknowledged by Staff, this route is within very close proximity to several residences south of Assumption. (ATXI Ex. 13.0C (Rev.), p. 50; Staff Ex. 1.0R, p. 42.) This route would also require a significant increase in the number of angle structures, therefore increasing the cost of the route. (ATXI Ex. 13.0C (2d Rev.), p. 49.) ATXI evaluated and rejected this route for these very reasons. (Id., p. 50.) Mr. Corzine admitted at hearing that, while the Stipulated Route goes through predominantly agricultural land, his proposed alternate route impacts farms as well as residences, businesses, grain bins, a factory and a church. (Tr. 285 – 92.) Thus, Mr. Corzine's tradeoff for reducing impacts to his farmland is to increase the impacts to homes, businesses, and churches. While ATXI can construct any of the three proposed routes from Pana to Mt. Zion, the Stipulated Route is the best option.

ATXI Figure 6: Pana - Mt. Zion - Kansas

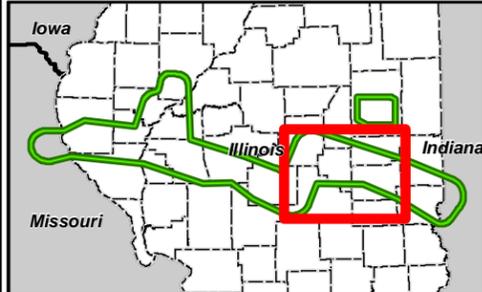
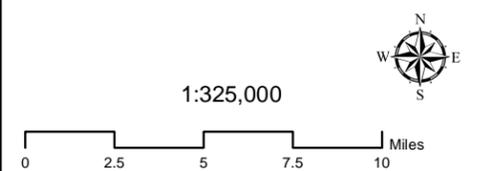


Illinois Rivers Project

Pana to Mt. Zion to Kansas

Legend

- Intervenor Owned Property
- Proposed Intervenor Route
- Primary Route
- Alternate Route
- Segment Option
- Project Study Area
- Proposed Substation Site
- Existing Substation
- Municipal Boundary
- County Boundary
- State Boundary
- Existing Transmission Line**
- 345,000 (V)
- 161,000 (V)
- 138,000 (V)
- Existing Distribution Line**
- 69,000 (V)



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, IIGCS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

(i) Length of the Line

	Stipulated / ATXI Primary Route	ATXI Alternate Route	Assumption Group/Corzine Highway 51
Estimated Length in Miles	35.40	38.62	31.4

(ATXI Ex. 3.4 (3d Rev.); ICC Staff Ex. 1.0R, p. 42, Tbl. 6.)

(ii) Difficulty and Cost of Construction

	Stipulated / ATXI Primary Route	ATXI Alternate Route	Assumption Group/Corzine Highway 51
Estimated Baseline Cost	\$62,869,000	\$72,182,000	Not specified

(Id.; ATXI Ex. 13.0C (2d Rev.), p. 50; ICC Staff Ex. 1.0R, pp. 42-43, Tbl. 6.)

There is no record evidence the Stipulated Route would be difficult to construct. The record otherwise contains no meaningful distinction between the routes proposed as to the difficulty, if any, associated with their construction.

(iii) Difficulty and Cost of Operation and Maintenance

There is no record evidence the Stipulated Route would be difficult to operate and maintain or would be more costly to operate and maintain relative to the other routes proposed.

(iv) Environmental Impacts

There is no record evidence the potential environmental impacts resulting from construction of the Stipulated Route would be greater than those resulting from the other proposed routes. Rather, the evidence suggests the Stipulated Route will have minimal environmental impacts. (ATXI Ex. 4.5, p. 3 ATXI Ex. 4.0 (Murphy Dir.), pp. 8-10.) Such impacts will occur regardless of the route approved by the Commission, in any event. No environmental assessment was performed for the Highway 51 route.

(v) Impacts on Historical Resources

The Stipulated Route would not impact any archeological or historical sites. (ATXI Ex. 4.5, p. 2.) No other historical resources would prevent construction of that route. ATXI will work with the IHPA to address issues that may arise during the construction process, and will obtain required permits or approvals, if any, prior to construction. (ATXI Ex. 4.0, p. 42.) The same holds true for ATXI's Alternate Route.

(vi) Social and Land use Impacts

The Stipulated Route reflects an optimum location for the transmission line in that it would limit societal and land use impacts, as would ATXI's Alternate Route. (ATXI Exs. 4.0, pp. 8-10; 4.5, p. 1.) As discussed by Ms. Murphy, cemeteries, churches, prime farmland and schools were identified as highly sensitive during the Phase 1 public meetings. (ATXI Ex. 4.0, p. 17.) There are the same number of cemeteries and churches within 500 of both Primary and Alternate Routes. (ATXI Ex. 4.5.) While ATXI's Primary Route (the Stipulated Route) impacts more prime farmland, there is one less school and 106.2 fewer acres of cultivated crop/hay within 500 feet compared to the Alternate Route. (Id.) The impacts of the Stipulated Route are primarily to farming land, which can be addressed through detailed design of the route, construction mitigation measures, and easement and damage compensation discussed above. Mr. Corzine's 51 route will also impact farmland, however, it will also impact residential areas and businesses along Highway 51. (Tr. 281-94.) There is no record evidence indicating the societal and land use impacts of the Highway 51 proposed route are such that it would be a preferred choice.

(vii) Number of Affected Landowners and other Stakeholders and Proximity to Homes and other Structures

There are approximately 112 landowners and other stakeholders with property on or

within 250 feet of either side of the Stipulated Route. (ATXI Exs. 5.0 (Trelz Dir.), p. 20; 5.4 (Rev.), pp. 22-25.) There are approximately 140 landowners and other stakeholders with property on or within 250 feet of either side of ATXI’s Alternate Route. (ATXI Exs. 5.0, p. 4; 5.4 (Rev.), pp. 65-69.)

The Stipulated Route would not require displacement of any residences. Nor would ATXI’s Alternate Route. Both routes run within 150 feet of a limited number of residential and nonresidential structures:

	Residential Structures within 0-75 feet	Residential structures within 75-150 feet
Stipulated / ATXI Primary Route	0	1
ATXI Alternate Route	0	2
Assumption Group/Corzine Highway 51	Not specified	Not specified

(ATXI Ex. 4.5, p. 4.)

The Highway 51 alternate would impact more residences. (ATXI Ex. 13.0C (Rev.), p. 50; Staff Ex. 1.0R, p. 42.)

(viii) Proximity to Existing and Planned Development

There is no record evidence the Stipulated Route (or ATXI’s Alternate Route) is proximate to any existing or planned development.

(ix) Community Acceptance

The Stipulated Route emerged from the public process as a preferred route, as did ATXI’s Alternate Route. (ATXI Ex. 4.0, p. 8.0.) The number of intervenors who have stipulated to or support the route demonstrates the Stipulated Route has garnered community acceptance.

(x) Visual Impact

The visual impacts, if any, will be substantially the same for any route. There is no

record evidence that the Stipulated Route is less preferable considering visual impact than any other route proposed for this portion of the Project

(xi) Presence of Existing Corridors

ATXI's Primary Route – the Stipulated Route – emerged, in part, from an evaluation of opportunities and stakeholder input as to preferred opportunities. (ATXI Ex. 4.0, pp. 5, 7.) As a result, that route, in substantial part, utilizes county roads and property lines and parallels an existing 138 kV transmission line. (ATXI Exs. 4.2 (Part 1 of 100), p. 15; 13.7, p. 1.) The Alternate Route also utilizes roads and property lines. (Id.) Mr. Corzine's alternate parallels Highway 51, which impacts more residences, businesses and churches, as discussed above. That alternate route was rejected during ATXI's rigorous routing analysis because of the increase impacts to residences and increased cost. (ATXI Ex. 13.0C (Rev.), p. 50.)

c. Mt. Zion – Kansas

ATXI recommends the Commission approve the route originally designated as MCPO Potential Route 1, pursuant to the Stipulation between ATXI and MCPO (Stip. Ex. 7). The route is shown as the black and green striped line on ATXI Exhibit 13.7 and highlighted on Figure 7 and referred to in this section as the "Stipulated Route". The record shows the differences in length and cost of ATXI's Primary, Alternate and Stipulated Routes are nominal – less than 3 miles and \$3 million. (ATXI Exs. 3.4 (3d Rev.); MCPO Ex. 1.4.) Of these three routes, however, the Stipulated Route is the least cost. (ATXI Exs. 3.4 (3d Rev.); 16.3 (Rev.); MCPO Ex. 1.4) It also impacts the fewest residences as compared to ATXI's Primary and Alternate Routes. (Tr. 559.) MCPO witness Mr. Dauphinais testifies that while the Stipulated Route is longer than ATXI's Alternate Route, it requires fewer angle structures. (Tr. 574-76; see also ICC Staff Ex. 1.0, Attachment H.) Mr. Dauphinais testifies that the Stipulated Route was a preferred alternative if MCPO's Potential Route 2 (Pana – Kansas) were not selected (and, as

discussed above, a direct Pana – Kansas route is not a feasible). (MCPO Ex. 1.0, pp. 29-31.)

MCPO witnesses Mr. Dauphinais and Mr. Reinecke also testified that there are 31 fewer residential structures within 500 feet of the Stipulated Routes from Pana to Mt. Zion to Kansas, when compared to ATXI’s Recommended Rebuttal Route from Pana to Mt. Zion and Mt. Zion to Kansas. (MCPO Ex. 1.5; MCPO 2.5.)

The Stipulated Route also resolves the concerns of the clear majority of the parties affected by the various routes proposed for the Pana – Mt. Zion and Mt. Zion – Kansas portions of the Project.¹⁶ Of the 15 parties who own property along any of the routes proposed from Mt. Zion to Kansas, only one party provided testimony opposing the Stipulated Route from Mt. Zion to Kansas. (See generally, PDM Exs. 1-3.)

In light of the stipulation between ATXI and MCPO, and its support by other parties as well, ATXI considers the Stipulated route from Pana – Mt. Zion to Kansas to best represent the balance of the interests of the parties and as best supported by the overall record.

¹⁶ The Copeland Family and the Reed Family and Trust also proposed modifications to ATXI’s Primary Route, however no other party currently recommends approval of those modifications. Moreover, the Stipulated Route resolves their concerns. Janet Roney also submitted, but then later withdrew an alternate route proposal.