

# Final Project Transcript

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GIS 4043/L

## Slide 1 - Title Page - Bobwhite Transmission Line

"Hello fellow classmates and professors, my name is Kelsey Smela and I am in the Introduction to GIS course. I am grateful for this opportunity to really become diversified in the field of Geographical Information Systems. With that being said, I would like to move into my final project presentation for this course."

## Slide 2 - Bobwhite-Manatee Transmission Line : Project Background

"The Bobwhite-Manatee Transmission Line was first brought to light in November of 2006 by a company well known in Florida, Florida Power and Light of also known as FPL. This project was going to take place on the West Coast of Florida in Manatee County and crossing into Sarasota County. To the right is a map I created using ArcGIS to give you the best visualization of where in the state of Florida these two counties are."

## Slide 3 - Bobwhite-Manatee Transmission Line: The Objective of this project is to identify the best possible route for a new transmission line while considering the surrounding communities and ecologically fragile areas

"The objective of this project is to identify the best possible route for a new transmission line while considering the surrounding communities and ecologically fragile areas. This is where GIS comes in. GIS can be used to identify, visualize and analyze homes within proximity of the transmission line, schools within proximity of the transmission line, and environmentally sensitive land within proximity of the transmission line."

## Slide 4 - Bobwhite-Manatee Transmission Line:What role does GIS play in the process of this project

"While on the topic of GIS, I would like to explain the role GIS will play in the process of this project. As stated in the previous slide, GIS will be used in this project to identify homes, schools, and sensitive land within proximity of the transmission line. In doing so, we will have a visualization of where these locations are by geocoding tables or adding a point feature class. This will allow us to analyze these features and provide data and feedback to the community. GIS was imperative for this project to find the best possible route for the Bobwhite-Manatee Transmission Line."

## Slide 5 - Cartographic Model

"The Cartographic Model on this slide is what helped set me up for success for this final project. The model was basically a template to follow when creating each map. For example, I had a list of datasets before even opening ArcGIS. This gave me a plan to follow. I knew that my project was going to require the following datasets : Location of the possible transmission line, FPL's study area, Florida County Boundaries, Major roads, location of schools within proximity of the transmission line and Florida's wetland and conservation areas. By having a plan already made

up before beginning my project, I was also able to know what tools I was going to use such as: a buffer tool, select by attribute, select by location, calculate geometry, summary table and more. This also provided me with a reference to go back to when coming to the end and making sure I got the results for the right problem.

#### Slide 6 - Bobwhite-Manatee Transmission Line: Study Area

“This is where the fun begins! The map to the right gives you some examples of where the study area of the Bobwhite-Manatee Transmission Line takes place. Inside of this map layout, is the state of Florida and highlighted is Manatee County in green and Sarasota County in blue. Below that is generally the same map but set to a different reference scale to really get up close and personal with these two counties and mainly identify the study area. The larger map on the right side of the map layout shows the study area, major roads, the Manatee and Sarasota County line, and the preferred corridor of the transmission line. After careful consideration, planning, and evaluating 1,275 alternative routes, FPL decided that this was the best possible route for this transmission line.”

#### Slide 7 - Homes Within Proximity of the Transmission Line

“The image to the right is the map layout I created using ArcGIS to depict the homes within proximity of the proposed transmission line. By creating a 400 foot buffer zone on the outside of the preferred corridor (which can be seen in blue) and a new point features class, I was able to manually scan over the preferred corridor and the 400 foot buffer zone to plot points on the location of homes within proximity of the transmission line. In doing so, each home was set into one of two categories : within the preferred corridor, using a 1 in the attribute table, or within the 400 foot buffer zone, using a 2 in the attribute table. By doing this, I was able to get an overall count of homes, the total number of homes in the preferred corridor and the total number of homes within the 400 foot buffer zone.

The overall number of homes in Manatee and Sarasota County was 53.

The total number of homes in both Manatee and Sarasota County that were within the preferred corridor of the transmission line was 20.

The total number of homes in both Manatee and Sarasota County that were within the 400 foot buffer zone was 33.”

#### Slide 8- Schools Within Proximity of the Transmission Line

“The image on this slide is a map layout of the Schools within proximity of the transmission line. Before doing anything in ArcGIS, going to the Florida Department of Education’s website to download the list of schools in Sarasota County, Florida was the first step. (This was already done for schools in Manatee County in Module 5). The next step was to “clean up” the data for it to be applicable in ArcGIS. After adding the two tables for Manatee and Sarasota County and geocoding the tables to add location points to our map was next. Finally, after reviewing the

data, out of 157 schools between both counties, no schools fell into the area of the preferred corridor or the 400 foot buffer zone. This was a huge deal to FPL to have no schools in the path of the transmission line.”

#### Slide 9 - Environmentally Sensitive Land Within Proximity of the Transmission Line

“I want to make sure that it is known that when working with environmentally sensitive land it is imperative to know that you have to work alongside applicable federal and state government agencies. By using the select by attributes function in ArcGIS, I was able to differentiate the features of the wetlands. Also, by using the calculate geometry function in ArcGIS, I was able to get easy access to the results needed for this project.

When it comes to the environmentally sensitive land within the study area of the transmission line, there is about 10,395 acres within the study area.

The total amount of land affected by the transmission line within the preferred corridor is about 163 acres.

The percentage of wetlands within the preferred corridor affected by the transmission line is about 14%.”

#### Slide 10 - Bobwhite-Manatee Transmission Line: Conclusion

“In regards to the Bobwhite-Manatee Transmission Line, our three objectives to uncover were the homes within proximity of the transmission line, schools within proximity of the transmission line, and environmentally sensitive land within proximity of the transmission line. The Bobwhite-Manatee Transmission Line took place on the West Coast of Florida with the study area in Manatee County and crossing into Sarasota County.

- ❖ There are 20 homes within the preferred corridor and 33 homes within the 400 foot buffer zone of the transmission line
- ❖ There are zero schools within preferred corridor and 400 foot buffer zone of the transmission line
- ❖ Within the study area of the transmission line there is 10,395 acres of land, 163 acres will be directly impacted by the preferred corridor, and about 14% of wetlands will be affected by the preferred corridor

Thank you for taking the time to go through this presentation with me and I hope you enjoyed it!”

#### Slide 11- Work Cited

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- ❖ *FGDL Map Viewer.* (n.d.). Fgdl.org. <https://fgdl.org/fgdlmap/>
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