

SR 400 (I-4) Project Development and Environment (PD&E) Study FM No.: 432100-1-22-01



Utility Impact Report

Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)

Orange County (75280), Florida

April, 2016

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1.0 Introduction

This report was commissioned by the Florida Department of Transportation's (FDOT) District Five Utility Office in conjunction with a FDOT roadway Project Development and Environment (PD&E) study on Interstate 4 (SR 400) in Polk, Osceola, Orange, Seminole, and Volusia Counties. FDOT requested that HNTB Corporation conduct engineering investigations to identify the status of any existing and proposed facilities that may require relocation to accommodate the proposed I-4 expansion. The report provides supplemental utility relocation cost information for evaluating the expansion of I-4 existing roadway under the FDOT Financial Project Number 4321001-1-22-01. HNTB developed and prepared this report using information gathered through the review of aerial photography from Aerial Cartographics of America (ACA) and coordination with utility owners. The I-4 project is separated into five major segments: Segment 1 covers Polk/Osceola County Line to SR 528, Segment 2 covers SR 528 to west of Kirkman Road, Segment 3 covers 1.0 mile east of SR 434 to US 17/92, Segment 4 covers from US 17/92 to 0.5 miles east of SR 472, and Segment 5 covers US 27 to the Polk/Osceola County Line. This Utility Impact Report focuses on Segment 2, SR 528 to west of Kirkman Road. It includes analysis on the I-4 corridor along with all major crossroads (SR 528, Sand Lake Road, Adventure Way, and Universal Blvd) where exits may be redesigned to accommodate the proposed improvements.

I-4's Segment 2 topography, through the study area, traverses east and west for 3.779 miles in urban Orange County. The study begins at the SR 528 (MP 5.650) and continues east to the existing Kirkman Road exit. The study terminates west of Kirkman Road in Orange County (MP 9.249). The existing right-of-way varies from 300-ft to 450-ft, and the segment is located in an extremely urbanized area of Orange County.

1.1 Study Background

HNTB's study began by overlaying existing right of way maps, from FDOT's Right-of-Way Map Department, with aerial photography gathered by ACA. A Sunshine State One Call was made to identify the utility companies present throughout the segment. Roadway plans were sent to each of the utility companies, and HNTB requested they mark-up their facilities and return the markups to HNTB. The markups collected from the utility companies were input into CAD (Computer Aided Drafting) and displayed on the roadway plan sheets. The plan sheets are included in Appendix B of this report. Possible conflicts were identified and facilities that are expected to require relocation were noted in the Utility Impact Section of this report. Preliminary relocation cost information was also requested from each of the utility companies and is summarized in Appendix A.

2.0 Preliminary Design and Engineering-Roadway

The FDOT's projected growth for the study area warrants expansion of the existing I-4 corridor from a six lane divided general use highway to a ten lane divided highway, six general uses lanes and four express (toll) lanes. Pavement widths on cross streets will also be increased as turn lanes are added at intersections and other applicable areas. Crossroads are to be reworked to accommodate the projected growth and ease congestion at entrance and exit ramps along Segment 2. Often, additional right-of-way is required to support an expanded roadway of this type.

Based on information gathered as part of the PD&E study conducted on the I-4 expansion for Segment 2 an additional 27.2 acres or right-of-way will need to be procured to accommodate roadway expansion and additional stormwater facilities.

2.1 Right-of-Way

I-4's main corridor has an existing right-of-way of 300-ft between SR 528 and Sand Lake Road. The right-of-way then varies from 400-ft to 450-ft between Sand Lake Rd. and Universal Blvd The right-of-way expands at the crossroads to accommodate the entrance and exit ramps. 0.2 miles east to 0.36 miles east of Sand Lake Rd the right-of-way increases on the westbound side to a total of 512-ft to accommodate a stormwater treatment pond for the I-4 Corridor.

The proposed improvements will require right of way for the roadway mainline improvements, storm-water management facilities and floodplain compensation sites. The total anticipated right of way impacts 31 parcels for a total of approximately 53 acres.

2.2 Environmental Issues

The I-4 corridor in Segment 2 is extremely urban and will have no impact to any threatened or endangered species. No environmental contamination areas exist on the main corridor in Segment 2. Little Sand lake is 150-ft off the existing centerline of Sand Lake Rd, 0.5 miles west of the I-4 overpass. The redesign of the Sand Lake Road exits may result in relocation of utilities. Utilities on Sand Lake Road that are required to be relocated within the vicinity of Little Sand Lake will have to go through the proper environmental and wetland permitting processes.

3.0 Utility Impact Scope

HNTB began the investigation of the I-4 roadway utilities in June 2013. Initial objectives included identifying and verifying owners of existing utilities located in and around the area of study. Other important objectives included in the study: uncovering major utility impacts from potential construction, determining utility owners proposed facilities within the study corridor, verifying utility owner's easements and obtaining an estimated cost of locating conflicting utilities. ITS along the project corridor is owned by FDOT. Therefore, relocation and cost associated with FDOT owned ITS was not included in this report. Refer to the Long Range Estimate (LRE) for further information on FDOT ITS relocation costs.

The process began by submitting design locate tickets to Sunshine State One Call (SSOC) for a list of utility contact information. SSOC returned a list of utilities located within the study area. Utility owners, confirmed by the FDOT's District Five Contact List, were sent a set of Segment 2 plans for utility markup on June 21, 2013. After receiving markups from the utility companies, HNTB compared utility locations with the proposed roadway design and determined any utilities that posed a possible conflict.

3.1 Sunshine State One Calls

SSOC identified that the following utility companies maintain facilities in the area of study:

- American Traffic Solutions
- AT&T Florida
- Bright House Networks
- · City of Orlando
- Comcast Communications
- Duke Energy Distribution (Formerly Progress Energy)
- Duke Energy Transmission (Formerly Progress Energy)
- Florida Department of Transportation
- Level 3 Communications
- Orange County Utilities
- Orlando Utilities Commission (OUC)
- Smart City Solutions
- TECO Peoples Gas
- TW Telecom
- Verizon

4.0 Utility Impacts

After receiving utility markup plans from the utility companies provided by the SSOC, HNTB compared the facility locations of each company with the proposed roadway design. A summary of each company's facilities and conflicts with the I-4 expansion are provided below.

4.1 American Traffic Solutions

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	American Traffic Solutions	2" Conduit	Crossing at intersection of International Dr. & Kirkman Rd.	West side of intersection	53+63	55+16	No
Communication	American Traffic Solutions	2" Conduit	Crossing at intersection of International Dr. & Kirkman Rd.	East side of intersection	55+05	56+05	No
Communication	American Traffic Solutions	Underground Telephone	Crossing at intersection of International Dr. & Kirkman Rd.	East side of intersection	53+77	55+08	No
Communication	American Traffic Solutions	Underground Telephone	From 240-ft north to 240-ft south of intersection of International Dr. & Kirkman Rd.	East side of road	51+67	57+71	No
Water	American Traffic Solutions	Unknown Size Water Main	Crossing at intersection of International Dr. & Kirkman Rd.	South side of intersection	53+82	53+91	No

4.2 AT&T Florida

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	ATT	Underground Fiber Optic	Crossing at intersection of Sand Lake Rd & International Dr.	West side of intersection	80+10	80+63	No
Communication	ATT	Underground Fiber Optic	From intersection of Sand Lake Rd & I-4 eastbound ramp to Sand Lake Rd east to intersection of International Dr. & Sand Lake Rd	South side of road	67+23	84+88	Yes, adjust to run parallel to road
Communication	ATT	Underground Fiber Optic	From I-4 westbound ramp to Kirkman Rd northbound to 730-ft south of intersection of Major Blvd & Kirkman Rd	East side of road	94+45	103+47	No
Communication	ATT	Underground Fiber Optic	Two crossings of Kirkman Rd 730-ft south of intersection of Major Blvd & Kirkman Rd	N/A	103+36	103+68	No
Communication	ATT	Underground Fiber Optic	From 490-ft north to 1360-ft north of intersection of International Dr. & Kirkman Rd	East side of intersection	59+16	68+00	No

4.3 Bright House Networks

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Television	BrightHouse Networks	Underground CATV	Crossing at SR 528, International Dr. Underpass	West side of underpass	233+59	133+65	No
Television	BrightHouse Networks	Underground CATV	From station 2+00 on Sand Lake Rd east to intersection of Della Dr. & Sand Lake Rd	South side of road	2+00	13+75	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Della Dr. & Sand Lake Rd	West side of intersection	13+74	13+75	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Della Dr. & Sand Lake Rd	North side of intersection	13+74	15+37	No
Television	BrightHouse Networks	Underground CATV	From intersection of Della Dr. & Sand Lake Rd east to 1800-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road	15+37	41+06	No
Television	BrightHouse Networks	Underground CATV	From 1260-ft west of to 400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road	47+00	54+67	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Television	BrightHouse Networks	Underground CATV	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	South side of intersection	54+67	57+94	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Turkey Lake Rd & Sand Lake Rd	West side of intersection	57+94	58+00	No
Television	BrightHouse Networks	Underground CATV	Crossing of I-4 Corridor at Sand Lake Rd underpass	South side of underpass	64+14	74+54	Yes, adjust to accommodate ramp and bridge improvements
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Frontage Rd & Sand Lake Rd	South side of intersection	74+54	76+99	No
Television	BrightHouse Networks	Underground CATV	From 580-ft west of to intersection of Universal Blvd & Sand Lake Rd	South side of road	97+99	97+00	No
Television	BrightHouse Networks	Underground CATV	From station 2+00 to Station 4+90 on Sand Lake Road	North side of road	2+00	4+90	No
Television	BrightHouse Networks	Underground CATV	From intersection of Hollywood Way & Universal Blvd north 1600-ft on Hollywood Way	West side of road	68+96	84+66	No
Television	BrightHouse Networks	Underground CATV	Crossing of Universal Blvd 710-ft south of intersection of Major Blvd & Universal Blvd	N/A	84+66	84+81	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Universal Blvd	South side of intersection	33+20	33+44	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Universal Blvd.	East side of intersection	33+20	34+99	No
Television	BrightHouse Networks	Underground CATV	From 1370-ft south of to intersection of International Dr. & Universal Blvd	East side of road	19+84	33+20	No
Television	BrightHouse Networks	Underground CATV	From 990-ft south of to intersection of International Dr. & Kirkman Rd	West side of road	44+69	53+63	No
Television	BrightHouse Networks	Underground CATV	Crossing of Kirkman Rd 480-ft south of intersection of International Dr. & Kirkman Rd	N/A	49+49	49+59	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Kirkman Rd.	West side of intersection	53+63	55+18	No
Television	BrightHouse Networks	Underground CATV	From intersection of International Dr. & Kirkman Rd north for 680-ft on Kirkman Rd	West side of road	55+18	61+05	No
Television	BrightHouse Networks	Underground CATV	From 500-ft south of to intersection of International Dr. & Kirkman Rd	East side of intersection	49+59	55+48	No
Television	BrightHouse Networks	Underground CATV	From intersection of International Dr. & Kirkman Rd north for 550-ft on Kirkman Rd	East side of road	55+48	60+02	No
Television	BrightHouse Networks	Underground CATV	From 940-ft south to intersection of Major Blvd & Kirkman Rd	East side of road	101+40	110+17	No
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Major Blvd & Kirkman Rd	East side of intersection	110+17	111+62	No
Television	BrightHouse Networks	Underground CATV	Crossing at Sand Lake Rd, I-4 Corridor underpass	South side of underpass	64+14	76+88	Yes, adjust for bridge improvements
Television	BrightHouse Networks	Underground CATV	From station 1353+00 on the I-4 Corridor to station 1387+50 on the I-4 Corridor	West side of road	1353+00	1387+50	Yes, adjust to run parallel to road

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Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Television	BrightHouse Networks	Aerial CATV	From intersection of Della Dr. & Sand Lake Rd east to 1500-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	South side of road	15+68	43+55	No
Television	BrightHouse Networks	Aerial CATV	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	North side of road	54+67	57+82	No
Television	BrightHouse Networks	Aerial CATV	From 1770-ft west to 1260-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road	41+06	47+00	No
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd, 400-ft west of intersection of Turkey Lake Blvd & Sand Lake Rd	N/A	54+66	54+67	No
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A	74+40	74+45	Yes, relocation of poles required
Television	BrightHouse Networks	Aerial CATV	From 650-ft west of intersection of International Dr. & Sand Lake Rd east to 1560-ft east of intersection of Universal Blvd & Sand Lake Rd	North side of road	74+41	114+33	No
Television	BrightHouse Networks	Aerial CATV	From 420-ft west of intersection of International Dr. & Sand Lake Rd east to 560-ft west of intersection of Universal Blvd & Sand Lake Rd	South side of road	76+99	97+98	Yes, adjust to run parallel to road
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side to center of intersection	98+84	99+08	No
Television	BrightHouse Networks	Aerial CATV	From intersection of Universal Blvd & Sand Lake Rd east 900-ft on Sand Lake Rd	Center of road	99+08	107+99	No
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd west bound 900-ft east of intersection of Universal Blvd & Sand Lake Rd	N/A	107+46	107+99	No
Television	BrightHouse Networks	Aerial CATV	From intersection of Carrier Dr. & Universal Blvd north 850-ft on Universal Blvd	East side of road	10+81	19+84	No
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Universal Blvd	North side of intersection	10+78	10+91	No
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Universal Blvd	Diagonally across intersection	9+86	10+82	No
Television	BrightHouse Networks	Aerial CATV	From 180-ft south of to intersection of Carrier Dr. & Universal Blvd	West side of road	8+06	9+86	No
Television	BrightHouse Networks	Aerial CATV	From 1040-ft south of to intersection of Carrier Dr. & Kirkman Rd	West side of road	25+61	35+65	No
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Kirkman Rd	South side of road	35+59	35+65	No
Television	BrightHouse Networks	Aerial CATV	From intersection of Carrier Dr. & Kirkman Rd north 870-ft north on Kirkman Rd	West side of intersection	36+00	44+69	No
Television	BrightHouse Networks	Aerial CATV	From intersection of International Dr. & Kirkman Rd north 2870-ft north on Kirkman Rd	East side of road following ramp	55+48	82+28	No
Television	BrightHouse Networks	Aerial CATV	From 1680-ft south to 940-ft south of intersection of Major Blvd & Kirkman Rd	East side of road following ramp	94+40	101+40	No
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Vineland Rd & Kirkman Rd	North side of intersection	129+86	129+87	No
Television	BrightHouse Networks	Aerial CATV	From 1260-ft east of SR 528 ramp to I-4 westbound to 1470-ft west of Sand Lake Rd, I-4 Corridor underpass	West side of road	1388+98	1465+68	No

4.4 CenturyLink

After reviewing the plan sheets sent on June 21, 2013, Mr. Mark Bullock, a representative with CenturyLink, determined that CenturyLink was not a service provider in the segment two project area. Mr. Bullock sent a letter of no facility on August 16, 2013.

4.5 City of Orlando

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Wastewater/ Storm water	City of Orlando	16" Force Main	From station 9+00 on Universal Blvd to intersection of International Dr. & Universal Blvd	West side of road	9+00	33+38	No
Wastewater/ Storm water	City of Orlando	16" Force Main	Crossing at intersection of International Dr. & Universal Blvd.	West side of intersection	33+38	33+17	No
Wastewater/ Storm water	City of Orlando	14" Force Main	Crossing of I-4 at Adventure Way Exit	East side of exit	1533+74	1533+78	No
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	From 1830-ft east of to station 1579+00 on Segment 2, toward Kirkman Rd	West side of road	1534+45	1579+00	No
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	From 1800-ft south to intersection of intersection of Universal Blvd & International Dr.	Center of road	15+71	33+38	No
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	Crossing at intersection of Universal Blvd & International Dr.	South side of intersection	33+37	33+38	No
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	Crossing at intersection of Universal Blvd & International Dr.	East side of intersection	33+38	34+84	No
Wastewater/ Storm water	City of Orlando	20" Sanitary Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of intersection	91+29	91+38	No
Wastewater/ Storm water	City of Orlando	18" Sanitary Main	Crossing at intersection of Hollywood Way & Universal Blvd	Center of intersection	68+36	68+54	No
Wastewater/ Storm water	City of Orlando	18" Sanitary Main	From intersection of Hollywood Way & Universal Blvd north to intersection of Major Blvd & Universal Blvd	Center of road	68+54	91+29	No
Wastewater/ Storm water	City of Orlando	15" Sanitary Main	From station 9+00 to station14+00 on Universal Blvd	Center of road	9+00	14+00	No
Wastewater/ Storm water	City of Orlando	10" Sanitary Main	Crossing of Universal Blvd 920-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to west side of road	19+59	20+21	No
Wastewater/ Storm water	City of Orlando	10" Sanitary Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of road	91+45	91+46	No
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing at intersection of Carrier Dr. & Universal Blvd	Center of intersection	10+52	10+89	No
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 300-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to east side of road	13+30	13+51	No
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 170-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to west side	12+07	12+13	No
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 500-ft north of intersection of Hollywood Way & Universal Blvd	From center of road to west side of road	73+41	73+52	No
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 250-ft north of intersection of Hollywood Way & Universal Blvd	From center of road to west side of road	71+00	71+00	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Water	City of Orlando	24" Reclaim Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of intersection	91+38	91+42	No
Water	City of Orlando	20" Reclaim Main	Crossing at intersection of Hollywood Way & Universal Blvd	Center to south side of intersection	66+89	68+50	No
Water	City of Orlando	20" Reclaim Main	From intersection of Hollywood Way & Universal Blvd north to intersection of Major Blvd & Universal Blvd	Center of road	68+50	91+78	No
Water	City of Orlando	4" Reclaim Main	Crossing of Universal Blvd 600-ft north of intersection of Hollywood Way & Universal Blvd	N/A	74+73	74+86	No
Water	City of Orlando	4" Reclaim Main	Crossing of Universal Blvd 470-ft north of intersection of Hollywood Way & Universal Blvd	N/A	73+15	73+18	No

4.6 Comcast Communications

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	Comcast	Aerial Fiber Optic	From 230-ft east of intersection of Della Dr. & Sand Lake Rd east on Sand Lake Rd to 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	South side of road	17+00	30+63	No
Communication	Comcast	Aerial Fiber Optic	From 350-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd	North side of road	54+71	57+61	No
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	West side of intersection	57+61	57+61	Yes, relocation of poles required
Communication	Comcast	Aerial Fiber Optic	From 750-ft west of intersection of International Dr. & Sand Lake Rd to intersection of Universal Blvd & Sand Lake Rd	North side of road	73+61	80+59	No
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection	98+87	99+11	No
Communication	Comcast	Aerial Fiber Optic	From intersection of Universal Blvd & Sand Lake Rd east on Sand Lake Rd to 250-ft west to station 135+00 on Sand Lake Road	Center of road	99+11	135+00	No
Communication	Comcast	Aerial Fiber Optic	From Central Florida Parkway to Sand Lake Rd on Turkey Lake Rd	East side of Road	1345+48	1480+00	Yes, adjust to run parallel to proposed road
Communication	Comcast	Underground Fiber Optic	Crossing of I-4 Corridor at Sand Lake Rd, I-4 Corridor underpass	West side of underpass	66+79	73+59	Yes, adjust for bridge improvements
Communication	Comcast	Underground Fiber Optic	From 890-ft west to 230-ft east of intersection of Della Dr. & Sand Lake Rd.	South side of road	6+01	17+00	No
Communication	Comcast	Underground Fiber Optic	Crossing 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	N/A	30+62	30+63	No
Communication	Comcast	Underground Fiber Optic	From 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd to 290-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road	30+63	54+67	No
Communication	Comcast	Underground Fiber Optic	Crossing of Sand Lake Rd 750-ft west of intersection of International Dr. & Sand Lake Rd	N/A	73+59	73+61	Yes, extend across proposed Sand Lake Rd.

4.7 Duke Energy - Distribution (Formerly Progress Energy)

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 1090-ft west of to 730-ft west of International Dr., SR 528 underpass	North side of road	222+99	231+96	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two crossings of SR 528 Corridor at International Dr., SR 528 underpass	West side of underpass	233+61	233+69	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two lines running from 1000-ft east of to 1750-ft east of International Dr., SR 528 underpass	South side of road, following ramp	244+21	254+96	Yes, adjust to run parallel to ramp
Electricity	Duke Energy Distribution	13 KV Underground Electric	Three crossings of SR 528 Corridor 2070-ft east of International Dr., SR 528 underpass	N/A	255+05	255+21	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 880-ft west of intersection to intersection of Della Dr. & Sand Lake Rd on Sand Lake Rd	South side of road	6+01	13+97	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	From intersection of Della Dr. & Sand Lake Rd east to intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd	North side of road	15+48	25+07	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two lines from 900-ft west of to intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd	North side of road	17+00	23+37	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	From station 1339+00 on I-4 Corridor east to 1970-ft feet west of Sand Lake Rd, I-4 Corridor underpass	West side of road	1339+00	1459+01	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 2120-ft west of to Sand Lake Rd & I-4 Corridor underpass on I-4 Corridor	East side of road	1459+07	1478+63	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From Sand Lake Rd, I-4 Corridor underpass east on I-4 for 3290-ft	East side of road	1482+84	1513+85	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 120-ft east of SR 528 westbound ramp to I-4 westbound east on I-4 Corridor for 1540-ft	East side of road	1377+32	1379+02	No
Electricity	Duke Energy Distribution	13 KV Underground Electric	Crossing at intersection of Sand Lake Rd & I-4 westbound to Sand Lake Rd	Diagonally across intersection	1481+17	1479+64	Yes, extend across proposed Sand Lake Rd.
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Two lines from 730-ft west of to 250-ft west of International Dr., SR 528 underpass	North side of road	222+99	231+96	No
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Crossing of Sand Lake Rd, 300-ft west of intersection of Della Dr. & Sand Lake Rd	N/A	11+77	11+77	No
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	From 300-ft west of to intersection of Della Dr. & Sand Lake Rd	North side of road	11+77	14+27	No
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Crossing at intersection of Della Dr. & Sand Lake Rd	North side of intersection	14+27	15+48	No
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd, 300-ft west of intersection of Della Dr. & Sand Lake Rd	N/A	11+83	11+84	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From 300-ft west of to intersection of Della Dr. & Sand Lake Rd	North side of road	11+84	15+48	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From 880-ft west of to intersection of Della Dr. & Sand Lake Rd	South side of road	6+01	13+96	No
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd, 500-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	N/A	30+38	30+38	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From intersection of Dr. Phillips Blvd & Sand Lake Rd east on Sand Lake Rd for 1370-ft	North side of road	26+69	40+38	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Electricity	Duke Energy Distribution	120 V Underground Electric	From 500-ft east of to 1600-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	South side of road	30+38	41+42	No
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd 1600-ft east of intersection of Turkey Lake Rd & Sand Lake Rd	N/A	74+40	74+43	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From 260-ft west of to intersection of International Dr. & Sand Lake Rd	North side of road	78+45	80+42	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From 350-ft west of intersection to intersection of International Dr. & Sand Lake Rd	North side of road	74+59	78+97	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From 140-ft west of intersection to intersection of International Dr. & Sand Lake Rd	South side of road	79+50	80+48	No
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection	98+10	98+79	No
Electricity	Duke Energy Distribution	120 V Underground Electric	From intersection of Universal Blvd east on Sand Lake Rd for 350-ft	South side of road	98+22	100+95	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd 1500-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A	42+59	44+17	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd. 1400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A	44+17	44+77	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd, 400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A	54+68	54+69	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 1140-ft west of to 380-ft west of intersection of Turkey Lake Blvd & Sand Lake Rd on Sand Lake Rd	South side of road	47+00	54+69	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	North side of road	54+68	57+72	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Turkey Lake Rd & Sand Lake Rd	West side of intersection	57+48	57+49	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A	74+36	74+48	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 680-ft west of intersection of International Dr. & Sand Lake Rd. to 630-ft east of intersection of Canada Ave & Sand Lake Rd	North side of road	73+59	95+89	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of International Dr. & Sand Lake Rd	East side of road	81+47	81+53	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Canada Ave & Sand Lake Rd	North side of road	89+25	90+28	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Universal & Sand Lake Rd	West side of intersection	96+93	97+77	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Universal Blvd & Sand Lake Rd	North side of intersection	97+77	98+79	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Vineland Rd & Kirkman Rd	South side of intersection	128+27	128+44	No
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Two crossings at intersection of Vineland Rd & Kirkman Rd	North side of intersection	129+64	129+65	No
Electricity	Duke Energy Distribution	7.2 KV Aerial Electric	Crossing of SR 528, 2200-ft east of International Dr., SR 528 underpass	N/A	255+48	256+63	No
Electricity	Duke Energy Distribution	120 V Aerial Electric	From 880-ft west of to 540-ft west of intersection of Della Dr. & Sand Lake Rd. on Sand Lake Road	North side of road	6+01	9+29	No

4.8 Duke Energy - Transmission (Formerly Progress Energy)

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Electricity	Duke Energy Transmission	69 KV Underground Electric	Two crossings of Sand Lake Rd 370-ft east of intersection of Universal Blvd & Sand Lake Rd	N/A	100+78	101+88	No
Electricity	Duke Energy Transmission	230 KV Aerial Electric	Crossing of Kirkman Rd 130-ft north of intersection of Windhover Dr. & Kirkman Rd	Diagonally across road	140+37	141+00	No
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of SR 528 Corridor 1900-ft east of International Dr., SR 528 underpass	N/A	253+47	253+59	No
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of SR 528 Corridor 1960-ft east of International Dr., SR 528 underpass	N/A	254+00	254+08	No
Electricity	Duke Energy Transmission	69 KV Aerial Electric	From 370-ft east of intersection east to 720-ft east of Kirkman northbound, Sand Lake Rd underpass	Center of road	101+86	131+69	No
Electricity	Duke Energy Transmission	69 KV Aerial Electric	From intersection of Universal Blvd & Sand Lake Rd east 1600-ft on Sand Lake Rd.	North side of road	102+00	120+00	No
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of Kirkman Rd 140-ft north of intersection of Windhover Dr. & Kirkman Rd	Diagonally across road	138+87	142+00	No

4.9 Level 3 Communications

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing of Sand Lake Rd. 670-ft west of intersection of International Dr. & Sand Lake Rd.	N/A	74+36	74+42	Yes, extend across proposed Sand Lake Rd.
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing at intersection of International Dr. & Sand Lake Rd.	North side of intersection	80+34	81+60	No
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing at intersection of Canada Ave. & Sand Lake Rd.	North side of intersection	89+14	90+08	No
Communication	Level 3 Communication	Aerial Fiber Optic	From intersection of Canada Ave. & Sand Lake Rd. to station 135+00 on Sand Lake Road	Varies from north to center to south side of road	90+08	135+00	No
Communication	Level 3 Communication	Aerial Fiber Optic	From 370-ft east of intersection of Universal Blvd. & Sand Lake Rd. to station 132+50 on Sand Lake Road	Center of road	99+11	132+50	No
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing on Sand Lake Rd. at station 132+50	N/A	132+50	132+50	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of intersection	58+16	59+27	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at SR 528, International Dr. Underpass	West side of underpass	233+62	233+64	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From intersection of Turkey Lake Rd. & Sand Lake Rd. to 500-ft west of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	North side of road	59+27	75+98	Yes, adjust for bridge improvements
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing 500-ft west of intersection of International Dr. & Sand Lake Rd.	West of intersection	72+92	75+98	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 500-ft west of intersection of International Dr. & Sand Lake Rd. to intersection of Universal Blvd & Sand Lake Rd. on Sand Lake Rd.	South side of road	81+45	96+82	Yes, adjust to run parallel to road

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Universal Blvd. & Sand Lake Rd.	West side of intersection	96+82	97+66	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Universal Blvd. & Sand Lake Rd.	West side of intersection	96+88	97+73	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Carrier Dr. & Universal Blvd	South side of intersection	9+00	10+00	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 600-ft south of intersection of International Dr. & Kirkman Rd. to Intersection of Carrier Dr. & Kirkman Rd.	East side of road	52+81	56+05	No
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	North side of intersection	129+75	129+77	No

4.10 Orange County Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Wastewater/ Storm water	Orange County Utilities	4" Abandoned Force Main	Crossing 350-ft east of intersection of International Dr. & Sand Lake Rd.	East of intersection	84+62	84+63	No
Wastewater/ Storm water	Orange County Utilities	48" Force Main	Crossing 2050-ft east of SR 528, International Dr. Underpass on SR 528	N/A	254+89	254+91	No
Wastewater/ Storm water	Orange County Utilities	42" Force Main	Crossing 3000-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A	1403+45	1404+30	Yes, extend across proposed I-4 and provide steel casing
Wastewater/ Storm water	Orange County Utilities	16" Force Main	Crossing 175-ft east of intersection of I-4 west bound ramp to Sand Lake Rd.	East of intersection	64+67	64+78	Yes, extend across proposed Sand Lake Rd.
Wastewater/ Storm water	Orange County Utilities	24" Force Main	From intersection of Canada Ave. & Sand Lake Rd. to station 136+00 on Sand Lake Road	Varies from north to center of road	1480+50	136+00	No
Wastewater/ Storm water	Orange County Utilities	24" Force Main	From station 2+00 Sand Land Rd. to 400-ft east of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	Varies from north to center of road	2+00	85+00	No
Wastewater/ Storm water	Orange County Utilities	14" Force Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection	80+37	80+38	No
Wastewater/ Storm water	Orange County Utilities	8" Force Main	Crossing at intersection of Canada Ave. & Sand Lake Rd.	East side of intersection	90+35	90+42	No
Wastewater/ Storm water	Orange County Utilities	6" Force Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	West side of road	11+17	14+30	No
Wastewater/ Storm water	Orange County Utilities	4" Force Main	Crossing on Sand Lake Rd. at Little Sand Lake	N/A	41+22	41+49	No
Wastewater/ Storm water	Orange County Utilities	4" Force Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection	80+37	80+38	No
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing at intersection of Dr. Phillips Blvd. & Sand Lake Rd.	West side of intersection	25+16	25+23	No
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing 290-ft east of intersection of Dr. Phillips Blvd. & Sand Lake Rd.	East of intersection	28+30	29+00	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing on Sand Lake Rd. at Little Sand Lake	N/A	43+20	43+47	No
Wastewater/ Storm water	Orange County Utilities	24" Sanitary Main	Crossing 310-ft east of intersection of Turkey Lake Rd. & Sand Lake Rd.	East of intersection	61+59	61+63	No
Wastewater/ Storm water	Orange County Utilities	Varying Size Force Main	From 330-ft west of intersection of Dr. Phillips Blvd & Sand Lake Rd to 380-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road	22+61	54+71	Yes, Relocation from center of road from Turkey Lake Road to International Drive
Water	Orange County Utilities	Abandoned Water Main, Unknown Size	From station 2+00 on Sand Land Rd. to 550-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	Center of road	2+00	53+31	No
Water	Orange County Utilities	36" Reclaim Main	Crossing 5300-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A	1428+08	1428+08	No
Water	Orange County Utilities	16" Reclaim Main	From station 2+00 on Sand Land Rd. to intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road	2+00	58+12	No
Water	Orange County Utilities	12" Reclaim Main	Crossing at SR 528, International Dr. Underpass	East side of underpass	235+27	235+44	No
Water	Orange County Utilities	12" Reclaim Main	Crossing 2000-ft east of SR 528, International Dr. Underpass on SR 528	N/A	254+27	254+30	No
Water	Orange County Utilities	12" Reclaim Main	Crossing 2050-ft east of SR 528, International Dr. Underpass on SR 528	N/A	254+66	254+68	No
Water	Orange County Utilities	12" Reclaim Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	East side of intersection	15+40	15+83	No
Water	Orange County Utilities	12" Water Main	From 2700-ft south to 2100-ft south of SR 528, I-4 Overpass on I-4 Corridor	West side of road	1347+79	1353+15	Yes, adjust to run parallel to road

4.11 Orlando Utilities Commission (OUC)

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Water	Orlando Utilities Commission	20" Water Main	Crossing at intersection of Major Blvd. & Universal Blvd on Universal Blvd	South side of intersection 91+44		91+52	No
Water	Orlando Utilities Commission	20" Water Main	Crossing at Universal Blvd. Bridge, 350-ft north of intersection of Major Blvd. & Universal Blvd	West side of road	94+54	96+61	No
Water	Orlando Utilities Commission	16" Water Main	Crossing at SR 528, International Dr. Underpass	Center of underpass	233+53	234+31	No
Water	Orlando Utilities Commission	16" Water Main	From 340-ft north to 550-ft south of intersection of International Dr. & Kirkman Rd.	Center of road	49+19	58+01	No
Water	Orlando Utilities Commission	16" Water Main	Crossing 450-ft south of intersection of International Dr. & Kirkman Rd.	From center to east side of road	49+35	49+36	No
Water	Orlando Utilities Commission	16" Water Main	Crossing 340-ft north of intersection of International Dr. & Kirkman Rd.	From center to east side of road	58+01	58+02	No
Water	Orlando Utilities Commission	16" Water Main	Crossing 820-ft south of intersection of Major Blvd & Kirkman Rd. on Kirkman Rd.	N/A	102+84	102+85	No
Water	Orlando Utilities Commission	12" Water Main	Crossing 2100-ft north of Sand Lake Rd., I-4 Overpass on I-4 Corridor	N/A	1501+91	1505+91	No
Water	Orlando Utilities Commission	12" Water Main	Crossing 160-ft south of intersection of Vineland Rd. & Universal Blvd. on Universal Blvd.	South of intersection	112+12	112+13	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Water	Orlando Utilities Commission	12" Water Main	From intersection of International Dr. & Universal Blvd to 580-ft south on Universal Blvd.	East side of road	28+01	33+50	No
Water	Orlando Utilities Commission	12" Water Main	Crossing at intersection of Major Blvd. & Kirkman Rd.	North side of intersection	11+48	111+50	No
Water	Orlando Utilities Commission	8" Water Main	From intersection of Hollywood Way & Adventure Way to end of I-4 west bound to Adventure Way ramp	South side of road	99+43	116+09	No
Water	Orlando Utilities Commission	8" Water Main	Crossing 270-ft west of end of I-4 westbound ramp to Adventure Way on Adventure Way	N/A	107+89	107+92	No
Water	Orlando Utilities Commission	8" Water Main	Crossing at intersection of International Dr. & Universal Blvd.	South side of intersection	33+33	33+53	No

4.12 Smart City Solutions

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	SmartCity Solutions	Unknown Size Underground Fiber Optic	Crossing at SR 528, International Dr. Underpass	East side of underpass	233+62	233+65	No

4.13 TECO Peoples Gas

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at SR 528, International Dr. Underpass	West side of intersection	233+70	233+74	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection	79+76	79+77	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From station 2+00 on Sand Lake Rd. to intersection of International Dr. & Sand Lake Rd.	South side of road	2+00	79+77	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of International Dr. & Sand Lake Rd. to intersection of Canada Ave. & Sand Lake Rd., on Sand Lake Rd.	Center of road	79+77	89+11	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Universal Blvd.	North side of intersection	34+71	34+76	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of International Dr. & Universal Blvd. south on Universal Blvd. for 425-ft	West side of road	30+50	34+74	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of Vineland Rd. & Kirkman Rd	North side of intersection	129+68	129+79	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of Vineland Rd. & Kirkman Rd. to intersection of Major Blvd. & Kirkman Rd.	East side of road	110+13	111+55	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of Major Blvd. & Kirkman Rd.	East side of intersection	111+55	129+79	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From 400-ft north of intersection of International Dr. & Kirkman Rd. to 1025-ft south of intersection of International Dr. & Kirkman Rd. on Kirkman Rd.	West side of road	43+53	59+04	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Kirkman Rd.	North side of intersection	55+09	55+18	No

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing 560-ft south of intersection of International Dr. & Kirkman Rd.	South of intersection	49+55	49+57	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From 560-ft south to 1050-ft south of intersection of International Dr. & Kirkman Rd.	East side of road	43+55	49+55	No
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From 340-ft west of intersection to intersection of International Dr. & Sand Lake Rd.	North side of road	77+63	80+70	No
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 1120-ft west of intersection of Della Dr. & Sand Lake Rd.	West of intersection	3+57	3+59	No
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	East side of intersection	15+47	15+59	No
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 270-ft west of Little Sand Lake on Sand Lake Rd.	N/A	39+49	39+50	No
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 440-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	N/A	54+20	54+21	No

4.14 TW Telecom

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	TW Telecom	2.25" Underground Fiber Optic	Two Crossings at intersection of International Dr. & Universal Blvd	South side of intersection	33+54	33+56	No

4.15 Verizon

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required
Communication	Verizon (MCI)	Unknown Size Underground Fiber Optic	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection	97+88	98+89	No
Communication	Verizon (MCI)	Unknown Size Underground Fiber Optic	Crossing at intersection of Carrier Dr. & Universal Blvd	East side of intersection	10+09	10+72	No
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From end of project limit on Universal Blvd north to intersection of Carrier Dr. & Universal Blvd	East side of road	7+73	10+17	No
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From 1120-ft north of intersection of International Dr. & Kirkman Rd north to I-4 Corridor	East side of road	66+00	82+31	No
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From 730-ft north of Kirkman Rd, I-4 Corridor north to intersection of Major Blvd & Kirkman Rd	East side of road	94+33	110+07	No
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	South side of intersection	128+39	128+41	No
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	West side of intersection	128+39	129+71	No

5.0 Summary

The appendix contains utility plan sheets showing existing utilities within the corridor of the project, as well as a detailed breakdown of the estimated cost of utilities requiring relocation. Our research has concluded utility relocation and adjustment costs will be in the range of \$1,226,000.

Appendix A: Estimate Relocation Costs

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required	Relocation Cost
Communication	АТТ	Underground Fiber Optic	From intersection of Sand Lake Rd & I-4 eastbound ramp to Sand Lake Rd east to intersection of International Dr. & Sand Lake Rd	South side of road	67+23	84+88	Yes, adjust to run parallel to road	\$50,000
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	West side of intersection	57+61	57+61	Yes, relocation of poles required	\$3,000
Communication	Comcast	Aerial Fiber Optic	From Central Florida Parkway to Sand Lake Rd on Turkey Lake Rd	East side of Road	1345+48	1480+00	Yes, adjust to run parallel to proposed road	\$300,000
Communication	Comcast	Underground Fiber Optic	Crossing of I-4 Corridor at Sand Lake Rd, I-4 Corridor underpass	West side of underpass	66+79	73+59	Yes, adjust for bridge improvements	\$85,000
Communication	Comcast	Underground Fiber Optic	Crossing of Sand Lake Rd 750-ft west of intersection of International Dr. & Sand Lake Rd	N/A	73+59	73+61	Yes, extend across proposed Sand Lake Rd.	\$2,000
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing of Sand Lake Rd. 670-ft west of intersection of International Dr. & Sand Lake Rd.	N/A	74+36	74+42	Yes, extend across proposed Sand Lake Rd.	\$2,000
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From intersection of Turkey Lake Rd. & Sand Lake Rd. to 500-ft west of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	North side of road	59+27	75+98	Yes, adjust for bridge improvements	\$10,000
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 500-ft west of intersection of International Dr. & Sand Lake Rd. to intersection of Universal Blvd & Sand Lake Rd. on Sand Lake Rd.	South side of road	81+45	96+82	Yes, adjust to run parallel to road	\$10,000
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two lines running from 1000-ft east of to 1750-ft east of International Dr., SR 528 underpass	South side of road, following ramp	244+21	254+96	Yes, adjust to run parallel to ramp	\$30,000
Electricity	Duke Energy Distribution	13 KV Underground Electric	From station 1339+00 on I-4 Corridor east to 1970-ft feet west of Sand Lake Rd, I-4 Corridor underpass	West side of road	1339+00	1459+01	Yes, adjust to run parallel to road	\$50,000
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 2120-ft west of to Sand Lake Rd & I-4 Corridor underpass on I-4 Corridor	East side of road	1459+07	1478+63	Yes, adjust to run parallel to road	\$25,000
Electricity	Duke Energy Distribution	13 KV Underground Electric	From Sand Lake Rd, I-4 Corridor underpass east on I-4 for 3290-ft	East side of road	1482+84	1513+85	Yes, adjust to run parallel to road	\$30,000
Electricity	Duke Energy Distribution	13 KV Underground Electric	Crossing at intersection of Sand Lake Rd & I-4 westbound to Sand Lake Rd	Diagonally across intersection	1481+17	1479+64	Yes, extend across proposed Sand Lake Rd.	\$20,000
Television	BrightHouse Networks	Underground CATV	Crossing of I-4 Corridor at Sand Lake Rd underpass	South side of underpass	64+14	74+54	Yes, adjust to accommodate ramp and bridge improvements	\$8,000
Television	BrightHouse Networks	Underground CATV	Crossing at Sand Lake Rd, I-4 Corridor underpass	South side of underpass	64+14	76+88	Yes, adjust for bridge improvements	\$8,000
Television	BrightHouse Networks	Underground CATV	From station 1353+00 on the I-4 Corridor to station 1387+50 on the I-4 Corridor	West side of road	1353+00	1387+50	Yes, adjust to run parallel to road	\$100,000

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Sta.	End Sta.	Relocation Required	Relocation Cost
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A	74+40	74+45	Yes, relocation of poles required	\$5,000
Television	BrightHouse Networks	Aerial CATV	From 420-ft west of intersection of International Dr. & Sand Lake Rd east to 560-ft west of intersection of Universal Blvd & Sand Lake Rd	South side of road	76+99	97+98	Yes, adjust to run parallel to road	\$10,000
Wastewater/ Storm water	Orange County Utilities	42" Force Main	Crossing 3000-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A	1403+45	1404+30	Yes, extend across proposed I-4 and provide steel casing	\$50,000
Wastewater/ Storm water	Orange County Utilities	16" Force Main	Crossing 175-ft east of intersection of I-4 west bound ramp to Sand Lake Rd.	East of intersection	64+67	64+78	Yes, extend across proposed Sand Lake Rd.	\$22,000
Wastewater/ Storm water	Orange County Utilities	Varying Size Force Main	From 330-ft west of intersection of Dr. Phillips Blvd & Sand Lake Rd to 380-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road	22+61	54+71	Yes, Relocation from center of road from Turkey Lake Road to International Drive	\$310,000
Water	Orange County Utilities	12" Water Main	From 2700-ft south to 2100-ft south of SR 528, I-4 Overpass on I-4 Corridor	West side of road	1347+79	1353+15	Yes, adjust to run parallel to road	\$96,000
Estimated Total Cost								\$1,226,000

Appendix B: Existing Utility Plan Sheets





































