CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Final Utility Assessment Report July 2018



SR 408 Eastern Extension PD&E Study



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1 INTRODUCTION

The purpose of the SR 408 Eastern Extension Project Development and Environment (PD&E) Study is to develop a proposed improvement strategy that is technically sound, environmentally sensitive and publicly acceptable. Emphasis has been placed on the development, evaluation and documentation of detailed engineering and environmental studies including data collection, conceptual design, environmental analyses, project documentation and the preparation of a Preliminary Engineering Report.

The Central Florida Expressway Authority (CFX) is presently evaluating the potential to extend State Road (SR) 408 from its current eastern terminus at SR 50, locally known as East Colonial Drive, to the vicinity of the SR 50 and SR 520 interchange in northeastern Orange County. This new, approximately seven-mile eastern extension of SR 408 would constitute the first stage towards providing a east-west high-speed corridor with future connectivity to I-95, enhance safety, and increase capacity and mobility for the region and CFX's customers.

1.1 Project Background/Description

The vision of this enhanced east-west corridor has been documented in prior concept studies prepared by CFX including the SR 408 Eastern Extension Concept Development and Evaluation Study completed in 2008. This study evaluated potential corridors for a new limited-access facility between east Orange County and north Brevard County. The original study area generally parallels SR 50 from east of SR 434 to I-95. After a preliminary corridor evaluation, four viable corridors were determined to meet the criteria and were further evaluated. These corridors are shown on **Figure 1-1**. The results of the previous study indicated that "Corridor 3B (along SR 50) met the transportation need west of SR 520, providing relief of the existing and projected future traffic congestion along SR 50 from Alafaya Trail/SR 434 to SR 520. This alternative diverted the greatest number of trips, had the lowest estimated cost, and had the fewest potential impacts to environmental and community resources of any of the viable corridors considered at that time. This corridor also provided for a potential future extension of the proposed limited-



access facility southeast along either the SR 520 or SR 50 corridors, affording system linkage between east Orange County and Brevard County."

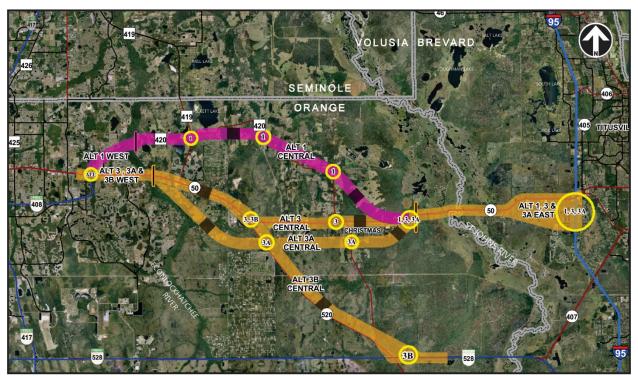


Figure 1-1 – 2008 Study Previously Identified Viable Corridors

As part of the SR 408 Eastern Extension PD&E Study, a preliminary corridor evaluation was initially performed in 2015, in which different viable alternatives were considered. Those alternatives that met the basic project objectives were further evaluated and presented in a final report which recommended that the proposed SR 408 extension be co-located within the existing SR 50 corridor. However, in May 2016, the Florida Department of Transportation (FDOT) notified CFX that there are issues with CFX utilizing FDOT right-of-way for the SR 408 extension. As a result, new transportation corridors were developed that avoid SR 50 and that will address the transportation needs while minimizing impacts to the natural, physical and cultural environments.

1.2 Project Purpose

The purpose of the proposed SR 408 Eastern Extension is to provide an east-west high-speed corridor with future connectivity to I-95, enhance safety, and increase capacity and mobility for the region and CFX's customers (see **Figure 1-2**). There are five



existing/projected corridor needs that serve as the main justification for the proposed improvements. These needs are: 1) providing additional capacity in the east-west direction to mitigate or eliminate capacity deficiencies; 2) providing additional emergency evacuation service to supplement the limited number of evacuation routes in this area of Central Florida; 3) providing improved transportation connectivity/linkage necessitated by the continued population growth and land use development reflected in various local comprehensive plans; 4) providing transit support; and 5) providing planning consistency. A brief description of each of these needs follows.

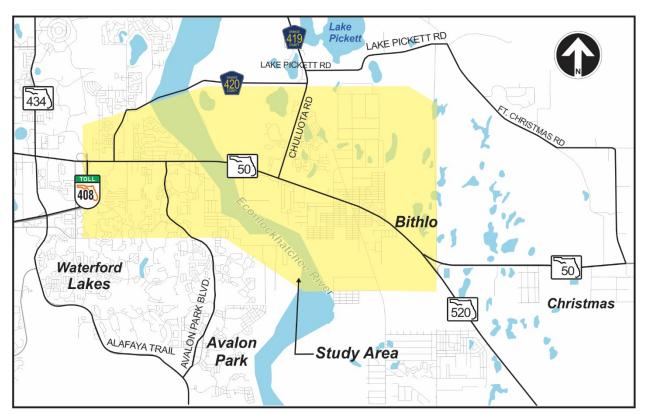


Figure 1-2 - Study Area



1.2.1 Capacity Deficiency

The planned project improvements are anticipated to accommodate the expected increase in traffic due to population and employment growth along the corridor. The preliminary No Build projections were run for years 2025, 2035 and 2045. The No Build SR 50 traffic projections along SR 50 will be increasing and a future SR 408 Eastern Extension to SR 520 would help alleviate this increase by diverting the traffic from SR 50 to SR 408. **Table 1-1** shows the Annual Average Daily Traffic (AADT) volumes for the year 2045.

Results of the preliminary No Build projections reflect that even with the planned widening of SR 50 to six lanes by FDOT, there is insufficient capacity in 2025 on the segment from SR 408 to CR 420 (Lake Pickett Road) and in 2035 from Lake Pickett Road to Avalon Park Boulevard. By the year 2045 the segment from Avalon Park Boulevard to Chuluota Road, although not over capacity, is projected to reach congested conditions. Unless additional capacity is provided along most project segments the vehicular mobility along this critical transportation link will be compromised.

Table 1-1 Future Traffic Volumes

Boodway	Lin	2045 AADT		
Roadway	From	То	SR 408	SR 50
	East of	-	87,800	
No Build	Econlockhatch	ee River Bridge	-	50,400
	West of	-	34,500	
	SR 408 existing eastern terminus	Bonneville Dr	33,700	66,500
	Bonneville Dr	Lake Pickett Rd	33,700	60,200
	Lake Pickett Rd	Pebble Beach Blvd	33,700	49,800
	Pebble Beach Blvd	Avalon Park Blvd	14,200	47,700- 67,100
Build	Avalon Park Blvd	Tanner Rd	14,200- 15,700	54,300- 55,700
	Tanner Rd	Future Lake Pickett Development	15,700	47,800
	Future Lake Pickett Development	Chuluota Rd	15,700	41,400- 51,800
	Chuluota Rd	N CR 13	3,000	45,300



1.2.2 Emergency Evacuation

The East Central Florida Region has been identified by the National Oceanic and Atmospheric Administration as a high hurricane vulnerable area within the United States and thus requires sufficient and efficient evacuation routes. SR 50 has been designated as a primary evacuation route for eastern Orange



and northern Brevard Counties. Along with SR 528 and SR 46 they provide the only east-west evacuation routes for the area.

A recent hurricane evacuation study conducted by the East Central Florida Regional Planning Council estimated that over 220,000 persons would potentially evacuate Brevard County during a Category 3 storm. Any future capacity deficiency along SR 50 (the main evacuation route) could seriously jeopardize the effectiveness of coastal evacuation from north Brevard County. The provision of an additional east-west facility will afford redundancy of the highway network and would greatly improve response and recovery efforts.

Another critical issue deals with fire and emergency services. In the recent past, the (open) natural lands generally abutting SR 50 east of SR 520 have been known to be an area prone to wildfires. This sometimes necessitates the closure of some key east-west facilities in the area due to visibility or safety concerns. The provision of an additional east-west facility would afford the desirable redundancy to accommodate diverted regional traffic due to natural or man-made emergencies.

1.2.3 Connectivity/Linkage

On November 1, 2013, Executive Order 13-319 was signed by Governor Rick Scott, creating the East Central Florida Corridor Task Force with the purpose to evaluate and



develop consensus recommendations on future transportation corridors serving established and emerging economic activity centers in portions of Brevard, Orange, and Osceola counties. The results of the East Central Florida Corridor Task Force Final Report recommended preserving and enhancing the existing SR 50/SR 405 (Columbia Boulevard) corridor from downtown Orlando and the University of Central Florida area to Cape Canaveral, including an extension of the State Road 408/East-West Expressway from its current terminus. The SR 408 Eastern Extension is one piece of Florida's strategic transportation investments to support future growth and create connections between global trade activities, from Orlando International Airport and the University of Central Florida, to Cape Canaveral.

Additionally, in 2008, the Orlando-Orange County Expressway Authority (OOCEA) (now known as CFX), completed the 2008 SR 408 Eastern Extension Concept Development and Evaluation Study for an eastward extension of SR 408. The conclusion of the study resulted in a recommendation that the SR 408 extend eastward from SR 50 to SR 520 (see **Figure 1-3**).

Within the project vicinity, SR 50 is functionally classified as a major arterial facility and provides an important connectivity function between the east Orlando area on the west and I-95 just south of Titusville on the east. As traffic continues to grow within the study corridor due to the rapid development projected within the area it is essential to maintain adequate mobility on this critical roadway link. A new expressway facility would improve mobility and the at-grade conflict points associated with traffic signals, and local access issues will shift to interchanges and grade separations by controlling conflict points through the use of ramps and bridges. In summary, the proposed SR 408 Eastern Extension will greatly enhance Central Florida's regional transportation needs and provide the initial phase of an ultimate vision of an expressway connection from east Orlando to I-95 north of SR 528.

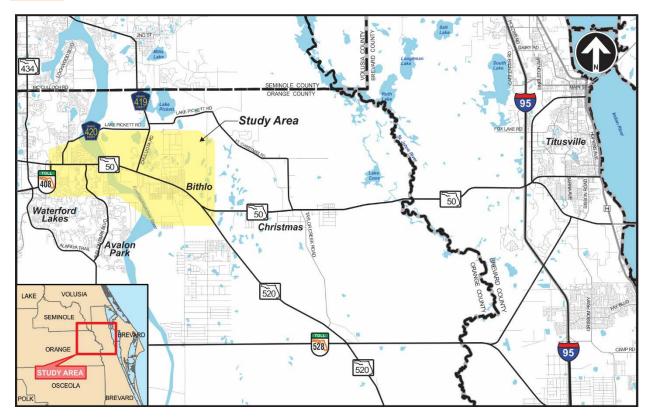


Figure 1-3 - Regional Map

1.2.4 Transit Plan Support

The Central Florida Regional Transportation Authority (LYNX) is conducting a study to enhance transit service along SR 50. The current preferred alternative is Bus Rapid Transit (BRT) service along SR 50 from the community of Oakland to SR 434/Alafaya Trail and north to UCF. The BRT corridor is identified in the LYNX Vision 2030.

A new limited-access facility could support inter-agency transit service between Orange and Brevard counties. The benefits of enhanced transit service are frequently lost when the buses must travel on heavily congested roadways. The proposed roadway would support improved regional travel times and provide realistic options for commuters and visitors traveling between the two counties.



1.2.5 Planning Consistency

All proposed improvements are consistent with the CFX 2040 Master Plan, CFX Five-Year Work Plan, and MetroPlan Orlando 2040 Long Range Transportation Plan (**Table 1-2**).

Table 1-2 Local Transportation Plans

Plan	Improvement
CFX 2040 Master Plan	SR 408 Eastern Extension PD&E Study
CFX 2018-2022 Five-Year Work Plan	Project Development & Environment Study – Funded 2017-2018
	15% Line & Grade – Design Funded 2019-2021
MetroPlan Orlando 2040 Long	Central Florida Expressway Authority - Unfunded
Range Transportation Plan	Needs
	SR 408 Eastern Extension Challenger Pkwy SR 520
	New 4 Lane Expressway

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2 PREFERRED ALTERNATIVE

A multiphase alternative development evaluation and selection process was employed to properly assess all alternatives considered for the proposed SR 408 Eastern Extension.

2.1 Project Segmentation

The project area was divided into distinct segments to ensure that the generated alternatives are more responsive to the needs of each segment rather than only to the generalized project's needs. Each segment has rather unique characteristics as well as potential differences in environmental, engineering, and socio-economic features.

<u>Segment 1</u> (from begin of project to Avalon Park Boulevard) is generally more urbanized and exhibits a higher traffic demand than Segments 2 and 3.

<u>Segment 2</u> (from Avalon Park Boulevard to CR 419 (Chuluota Road)) is more rural in nature and generally serves a lower density area with higher expected development growth.

<u>Segment 3</u> (from Chuluota Road to the eastern project terminus) has mostly industrial and low density residential development with a lower traffic demand.

2.2 Description of Recommendations

After a comprehensive evaluation process, one alternative was selected as being the most effective option for each of the project's segments. This alternative is illustrated on **Figure 2-1**. In general, these alternatives were the result of the generation of various typical sections and horizontal and vertical alignment combinations along the three project segments as well as various interchange configurations at each access point.

The typical sections for the preferred alternative are depicted on **Figure 2-2**.

A brief description of the preferred alternative per segment follows.

 Construction Segment 1 (from the Begin Project to Avalon Park Boulevard): Within Segment 1, the preferred alternative features a four-lane rural expressway typical section with 12-foot travel lanes, 12-foot outside shoulders, a 64-foot divided median, and a 94-foot border width. The section will feature several grade separations in order to provide access to local streets. There has also been a modification at the SR 408



and SR 50/Challenger Parkway interchange to provide full access between SR 50/Challenger Parkway and SR 408. There is an additional half interchange at Woodbury Road (Woodbury Road to Eastbound SR 408 and Westbound SR 408 to Woodbury Road). Based on the results of the traffic analysis, a single point urban interchange is proposed at Avalon Park Boulevard. **Figure 2-1** (top) shows some of the most distinctive features of this option within Segment 1, and **Figure 2-2** (top panel) shows the typical section. Eight (8) preferred ponds are located in Segment 1 (see **Table 2-1**).

- Construction Segment 2 (from Avalon Park Boulevard to Chuluota Road): Within Segment 2, the preferred alternative continues the same typical section previously described under Segment 1. Based on traffic projections and to minimize impacts to East River High School, County Road (CR) 419 (Chuluota Road) is extended westward to intersect with the SR 408 Eastern Extension with a full diamond interchange. The extension of Chuluota Road features an urban typical section with 11-foot travel lanes, curb and gutter, and 5-foot sidewalks on both sides of the roadway. Figure 2-1 (top panel) shows some of the most distinctive features of the alternative within Segment 2 and Figure 2-2 (top panel) shows the typical section for the SR 408 mainline and Figure 2-2 (bottom panel) shows the typical section for the Chuluota Road extension. Seven (7) preferred ponds are located in Segment 2 (see Table 2-1).
- Construction Segment 3 (from Chuluota Road to the eastern project terminus): Within Segment 3, the preferred alternative continues the same typical section previously described under Segment 1. Some of the most important attributes within Segment 3 are shown on Figure 2-1 (bottom panel) and Figure 2-2 (top panel) shows the typical section. Seven (7) preferred ponds are located in Segment 3 (see Table 2-1).



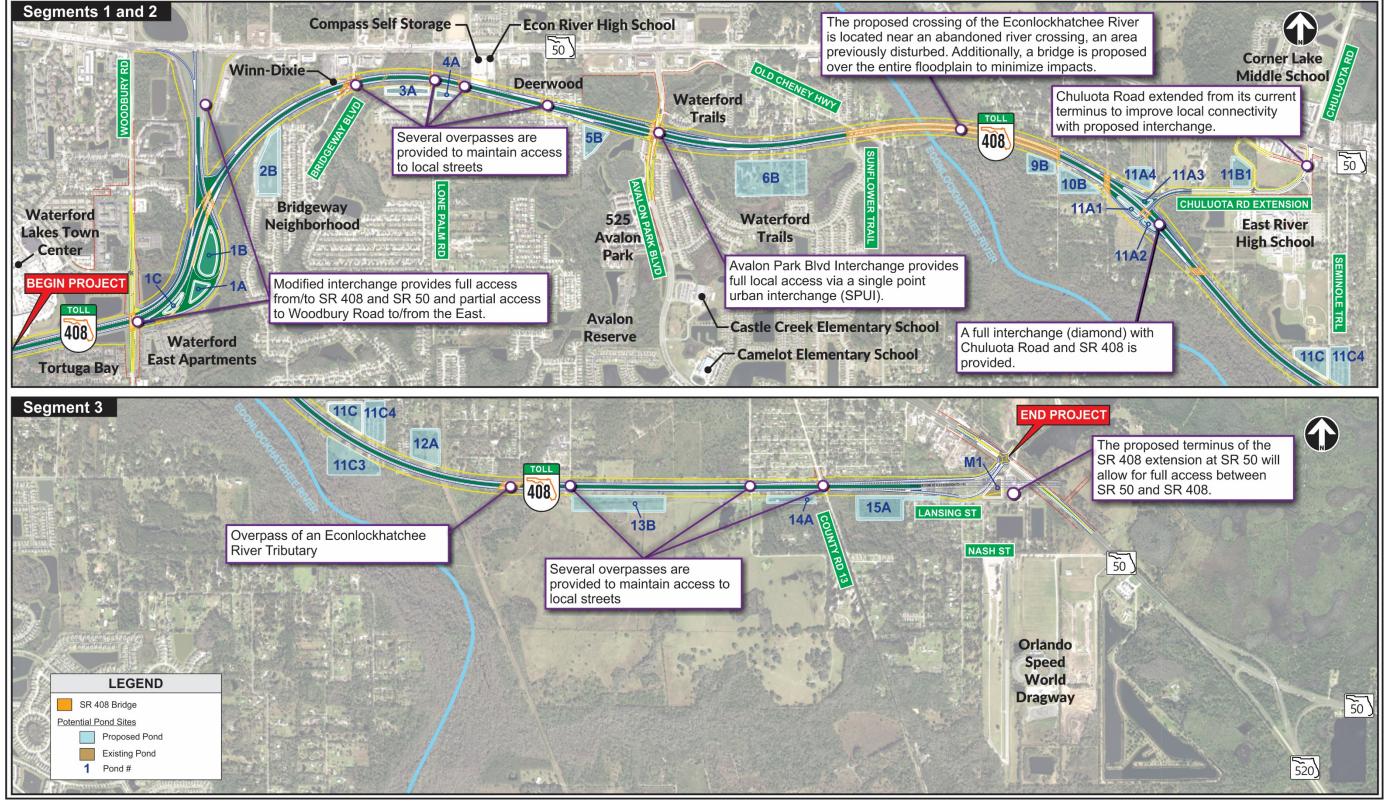


Figure 2-1 – Preferred Alternative



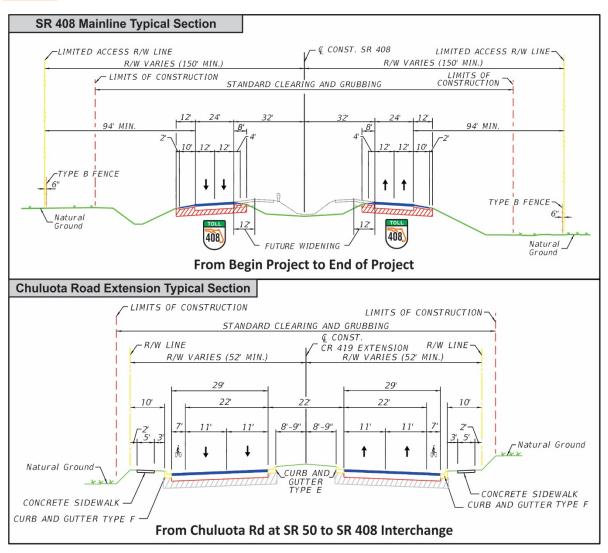


Figure 2-2 – Preferred Alternative Typical Sections



Table 2-1 Summary of Preferred Pond Sites

Segment	Basin	Pond Name	Preliminary Pond Site (ac)	Remarks
		Pond 1A	1.98	Existing CFX Pond expanded
	Basin 1	Pond 1B	5.06	Existing CFX Pond expanded
		Pond 1C	1.10	CFX Property
1	Basin 2	Pond 2B	10.23	Orange County School Board
	Pagin 2.4	Pond 3A	3.06	Private Property
	Basin 3-4	Pond 4A	1.80	Private Property
	Basin 5	Pond 5B	4.10	Private Property
	Basin 6-8	Pond 6B	19.73	Private Property
	Basin 9-10	Pond 9B	3.38	Private Property
	Dasin 9-10	Pond 10B	5.00	Private Property
		Pond 11A1	0.92	Private Property
2	Basin 11A	Pond 11A2	0.45	Private Property
	DaSIII I I A	Pond 11A3	1.16	Private Property
		Pond 11A4	3.24	Private Property
	Basin 11B	Pond 11B1	3.98	FDOT Property
		Pond 11C	5.70	Private Property
	Basin 11C	Pond 11C3	8.85	Private Property
		Pond 11C4	5.50	Private Property
3	Basin 12	Pond 12A	6.88	Private Property
	Basin 13	Pond 13B	10.45	Private Property
	Basin 14	Pond 14A	2.57	Private Property
	Basin 15	Pond 15A	8.92	Private Property



3 EXISTING UTILITIES

Utility companies with known facilities within the proposed project limits were contacted through letters informing them of the PD&E Study and requested that they mark one set of the base plans enclosed with their principal existing and proposed facilities. They were also requested to submit any general concerns and/or comments that would be useful in the evaluation process. The Utility companies and their contact information, along with the utility type are listed in **Table 3-1**.



Table 3-1 Existing Utilities

_		
Utility	Contact Information	Utility Type
Advanced Cabling Solutions Inc	Robert Ford – (407) 883-8881	Electric and Fiber Optic
American Traffic Solutions	Santiago Martinez - (480) 596 - 4595	Fiber Optic
AT&T / Distribution	Dino Farruggio - (954) 349 - 0558	Telephone, Fiber Optic
Central Florida Expressway Authority	Vu Vu - (407) 843 - 5120	Fiber Optic
Centurylink (f/k/a/ Qwest Communications)	George Mcelvain - (303) 992 - 9931	Fiber Optic
Charter Communications	Marvin Usry Jr – (407) 532-8509	Internet, Cable TV, Phone and Fiber
City of Orlando – Bureau Of Wastewater	David Breitrick - (407) 246 - 3525	Wastewater
Comcast Cable Communications	Wade Mathews - (352) 516 - 3824	CATV
Duke Energy Transmission / Distribution	Megan Vonstetina – (727) 893-9394	Electric
Duke Energy Fiber	Megan Vonstetina – (727) 893-9394	Fiber Optic
Fibernet Direct LLC	Danny Haskett - (305) 552 - 2931	Fiber Optic
Lovelace Gas Service	Garry Lovelace - (407) 277 - 2966	Gas
MCI	Dean Boyers - (972) 729 - 6322	Communication's / Fiber Optic
Orange County Public Works	Roger Smith – (407) 836-7900	Traffic Signals and Fiber Optic
Orange County Utilities – Waste Water	David Shorette - (407) 254-9764	Wastewater
Orange County Utilities	Marc Brown - (407) 836 - 6869	Water
Orlando Telephone Company	Jack Leopard – (407) 996-6297	Fiber and Telephone
Teco Peoples Gas	Deborah Frazier - (407) 420 - 6609	Gas
OUC Transmission	Adonis Willis – (407) 434-4134	Electric



4 MITIGATION RECOMMENDATIONS

The majority of overhead and buried utilities run along some of the major side streets such as Woodbury Road, existing SR 408/Challenger Parkway, Avalon Park Boulevard, and SR 50. As a result of the construction of the preferred alternative, most utilities located within the major intersections/interchanges where reconstruction may occur (such as Avalon Park Boulevard and SR 50 at the end terminus) will be impacted and will need to be relocated. Additionally, the preferred alternative encroaches on the Duke Energy utility easement that is located south of SR 50 approaching Avalon Park Boulevard for approximately 1700-feet. Due to this encroachment there are approximately five transmission poles that are being impacted. There are also impacts to the Orlando Utilities Commission (OUC) transmission lines with the preferred alternative crossing this easement at approximately STA 648+50 and directly impacting 300 feet of the utility easement and three (3) transmission poles. There is an Orange County Utilities Pump Station that is located west of Avalon Park Boulevard that is being directly impacted by the preferred alternative and will need to be relocated. See Appendix A for more details.

CFX will continue to coordinate with FDOT and utility owners during Final design and Construction.

APPENDIX A Potential Utility Conflicts

Table A-1 - Existing Utilities

Utility & Contact Information	Utility Type	Description	Remarks
Advanced Cabling Solutions Inc Robert Ford (407) 883-8881	Electric and Fiber	No Response	No Response
American Traffic Solutions Santiago Martinez (480) 596 - 4595	Communications/ Electric	No Response	No Response
AT&T Distribution Dino Farruggio (561) 997-0240	Telephone	Aerial Cable Buried Cable	Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 486 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 461 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 461 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 517 Runs perpendicular to SR 408 at approximately SR 408 Baseline STA 517 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 534 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 551 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 599 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 599 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 599 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 692 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 790 Runs along south side of SR 408 from approximately SR 408 Baseline STA 730 to STA 738 Runs along south side of SR 408 from approximately SR 408 Baseline STA 730 to STA 738 Runs along south side of SR 408 from approximately SR 408 Baseline STA 730 to STA 738 Runs along south side of SR 408 from approximately SR 50 Baseline STA 500 to STA 5030 Runs along south side of SR 408 at approximately SR 50 Baseline STA 500 to STA 5030 Crosses perpendicular to SR 408 at approximately SR 50 Baseline STA 500 to STA 5030 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 500 to STA 5030 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 500 to STA 2009 to STA 2019 then runs perpendicular at STA 2020 Runs along seat side of Woodbury Rd from approximately SR 408 Baseline STA 2000 to STA 2009 to STA 2019 then runs perpendicular at STA 2020 Runs along seat side of Chuluota Rd. from approximately Woodbury Rd Baseline STA 4015 to STA 4031 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 411 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 411 Crosses perpendicular to SR 408 at approximately SR 408 Bas
			 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 715 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 731

Table A-1 - Existing Utilities (Continued)

Utility & Contact Information	Utility Type	Description	Remarks	
AT&T Distribution Dino Farruggio (561) 997-0240	Telephone	Buried Cable	 Runs along south side of SR 408 from approximately SR 408 Baseline STA 738 to STA 750 Runs along north side of E. Colonial Dr. from approximately SR 50 Baseline STA 5000 to STA 5003 Runs along north side of E. Colonial Dr. from approximately SR 50 Baseline STA 5000 to STA 5030 Runs along south side of E. Colonial Dr. from approximately SR 50 Baseline STA 5000 to STA 5030 Crosses perpendicular to SR 408 at approximately SR 50 Baseline STA 5019 Crosses perpendicular to SR 408 at approximately SR 50 Baseline STA 1060 Runs along east side of Woodbury Rd. from approximately Woodbury Rd Baseline STA 2000 to STA 2009 Runs along east side of Woodbury Rd. from approximately Woodbury Rd Baseline STA 2021 to STA 2029 Runs along west side of Woodbury Rd. from approximately Woodbury Rd Baseline STA 2030 to STA 2030 Runs along west side of Woodbury Rd. from approximately Woodbury Rd Baseline STA 2036 to STA 2040 Runs along west side of Avalon Park Blvd. from approximately Avalon Park Blvd Baseline STA 3000 to STA 3011 Runs along west side of Avalon Park Blvd. from approximately Avalon Park Blvd Baseline STA 3011 to STA 3019 Runs along east side of Chuluota Rd. from approximately Chuluota Road Extension Baseline STA 4034 to STA 4037 	
Central Florida Expressway Authority Vu Vu (407) 843-5120	Fiber Optics	No Response	No Response	
Centurylink George Mcelvain (303) 992-9931	Telephone	No Response	No Response	
Charter Communications Marvin Usry Jr (407) 532-8509	Internet, Cable T.V., Phone, Fiber	No Response	No Response	
City of Orlando – Wastewater David Breitrick (407) 246-3525	Wastewater/ Reclaim Water	No Response	No Response	
Comcast Cable Communications Wade Mathews (352) 516-3824	CATV	No Response	No Response	
Duke Energy Megan Vonstetina (727) 893-9394	Electric/Transmission	OE 69kV (FTR) OE 230 kV (SPBX)	 Runs along north side of SR 408 from approximately SR 408 Baseline STA 443+60 to STA 457+91 Crosses perpendicular to SR 408 at approximately SR 408 Baseline STA 1055 	
Duke Energy Megan Vonstetina (727) 893-9394	Fiber	No Response	No Response	
Fibernet Direct Danny Haskett (305) 552-2931	Fiber	Fiber	 Runs along north/west and south/east side of the existing SR 408 from approximately SR 408 Baseline STA 355 to STA 400, SR 408 Baseline (along proposed EB off ramp) STA 1000 to STA 1060 Crosses perpendicular the proposed SR 408 eastern extension mainline approximately from SR 408 Baseline STA 385 to STA 403 and STA 408 Crosses perpendicular the existing SR 408 approximately at SR 408 Baseline STA 1043 and STA 1048 Runs along the west side of Avalon Park Boulevard approximately from Avalon Park Blvd Baseline STA 3000 to STA 3020 	
Lovelace Gas Service Garry Lovelace (407) 277-2966	Gas		No existing utilities located within the project limits	
MCI Dean Boyers (469) 886-4238	Communications/ Fiber Optic	No Response	No Response	
Orange County Public Works Roger Smith (407) 836-6869	Traffic Signals & Fiber	No Response	No Response	
Orange County Utilities – Waste Water David Shorette (407) 254-9764	Wastewater	No Response	No Response	

Table A-1 - Existing Utilities (Continued)

Utility & Contact Information	Utility Type	Description	Remarks
		4" PVC Force Main	 Runs perpendicular to the SR 408 eastern extension at approximately SR 408 Baseline STA 456 (runs along the east side of Lone Palm Road) Runs along Woodbury Road on the east side approximately from Woodbury Rd Baseline STA 2020 to 2027 Crosses Woodbury Road at approximately Woodbury Rd Baseline STA 2020 Runs across Old Cheney Highway at Chuluota Road Extension STA 4500 Runs along Columbia School Road approximately from Chuluota Road Extension STA 4032 to East River High School entry
Orange County Utilities		6" PVC Force Main	Runs perpendicular to Woodbury road at approximately Woodbury Rd Baseline STA 2000
Marc Brown (407) 836-6869	Water	8" PVC Force Main	 Runs along the north of existing SR 408 from approximately SR 408 Baseline STA 352 to STA 367 Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 441 (runs along the east side of Bridgeway Boulevard) Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 477 (runs along Pel Street) Runs along the median of Avalon Park Boulevard approximately from Avalon Park Blvd Baseline STA 3006 to STA 3015
		12" PVC Force Main	Runs along the west side of Avalon Park Boulevard approximately from Avalon Park Blvd Baseline STA 3012 to STA 3020
		16" PVC Force Main 24" PVC Force Main	 Runs along Old Cheney Highway and crosses the proposed SR 408 eastern extension approximately from SR 408 Baseline STA 531 to STA 536 (Sunflower Trail) Crosses perpendicular Woodbury Road at approximately Woodbury Rd Baseline STA 2020
			Runs along the south side of Old Cheney Highway and crosses the proposed SR 408 eastern extension approximately SR 408 Baseline STA 548 to STA 554
	Water	8" PVC Gravity Main	 Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 477 (runs along Pel Street) Runs along Avalon Park Boulevard approximately from Avalon Park Blvd Baseline STA 3007 to STA 3016 Runs perpendicular to Avalon Park Boulevard approximately at Avalon Park Blvd Baseline STA 3007 and at STA 3016 Runs along the east side of Woodbury Road approximately from Woodbury Road Baseline STA 2035 to STA 2040 Runs along Old Cheney Highway approximately from Chuluota Road Extension Baseline STA 4500 to STA 4509 Crosses the proposed Chuluota Road Extension approximately at Chuluota Road Extension Baseline STA 4034 to STA 4032
Orange County Utilities		8" PVC Water Main	 Runs along west side of Woodbury Road approximately from Woodbury Rd Baseline STA 2034 to STA 2040 Runs perpendicular to Avalon Park Boulevard at Avalon Park Blvd Baseline STA 3016
Marc Brown (407) 836-6869		10" PVC Water Main	 Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 441 (runs along the west side of Bridgeway Boulevard)
		12" PVC Water Main	 Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 456 (runs along the west side of Lone Palm Road) Runs on the east side of Avalon Park Boulevard approximately from Avalon Park Blvd Baseline STA 3006 to STA 3020 Runs perpendicular to Avalon Park Boulevard at Avalon Park Blvd Baseline STA 3008
		16" PVC Water Main	 Runs along Columbia School Road approximately from Chuluota Rd Extension Baseline STA 4032 to STA 4037 Crosses Woodbury Road at approximately Woodbury Rd Baseline STA 2020
		24" DI Water Main	 Runs along Old Cheney Highway and crosses the proposed SR 408 eastern extension approximate from SR 408 Baseline STA 532 to STA 537 and STA 548 to STA 554 Runs perpendicular to the proposed SR 408 eastern extension approximately at SR 408 Baseline STA 382 (runs on the east side of Woodbury Road) Runs along the east side of Woodbury road from approximately Woodbury Rd Baseline STA 2000 to STA 2040
		Pump Station F3051	Located at Avalon Park Boulevard approximately at Avalon Park Blvd Baseline STA 3012
		Pump Station F3102	Located at Old Cheney Highway approximately at Chuluota Rd Extension Baseline STA 4500
Orlando Telephone Company Inc Jack Leopard (407) 996-6297	Fiber Optics	Underground FOC	 Runs perpendicular to the proposed SR 408 eastern extension at approximately SR 408 Baseline STA 496 (runs along the west side of Avalon Park Blvd), SR 408 Baseline STA 517 (runs along the west side of Caudle Street) Runs on the north side of SR 50 from SR 50 Baseline STA 5000 to STA 5030

Table A-1 - Existing Utilities (Continued)

Utility & Contact Information	Utility Type	Description	Remarks
OUC Transmission Adonis Willis (407) 434-4134	Electric/ Transmission	Transmission Lines	No response but crosses perpendicular SR 408 at approximately SR 408 Baseline STA 648+50
Teco Peoples Gas Deborah Frazier (407) 420-6609	Gas	2" Coated Steel Gas line	 Runs along SR 408 Baseline STA 440 to STA 442 (along Bridgeway Boulevard) Runs along the south side of the SR 408 eastern extension along Woodbury Road approximately Woodbury Rd Baseline STA 2000 to 2002

APPENDIX B Utility Responses



AT&T

AT&T FLORIDA FACILTIES ADDED TO ROADWAY PLANS DATED 8/24/17, ON 12/14/17 BASED ON INTERNAL RECORDS AND ARE NOT TO SCALE. THIS INFORMATION IS FOR PLANNING PURPOSES ONLY. NO AT&T FLORIDA FACILITIES ON THIS SHEET FIELD LOCATES SHOULD BE MADE TO IDENTIFY ACTUAL FIELD LOCATIONS PRIOR TO ANY CONSTRUCTION. SR 408 365 N 76° 3p' 36" E 355



REVISIONS

DESCRIPTION

DESCRIPTION

DATE

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

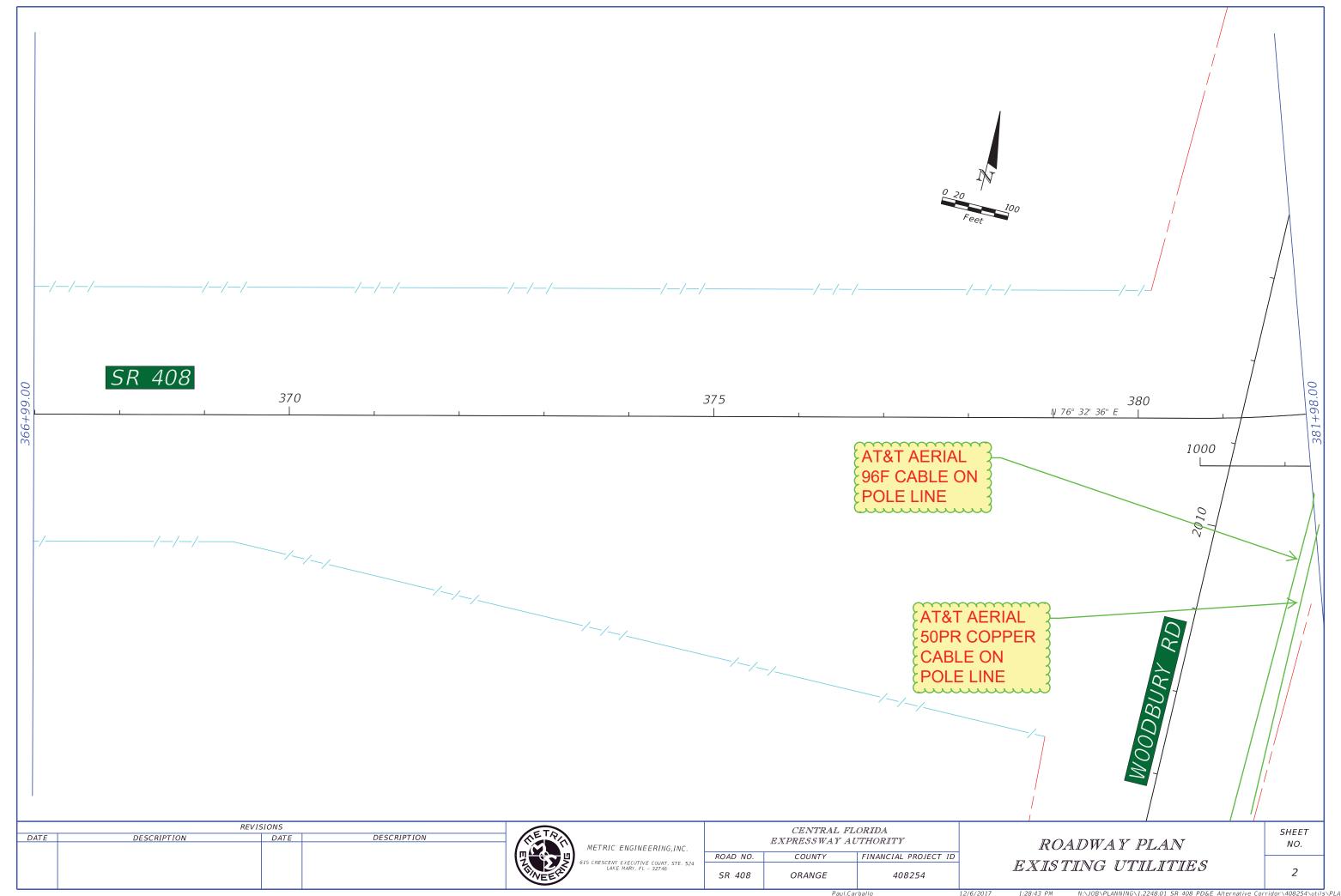
ROAD NO. COUNTY FINANCIAL PROJECT ID

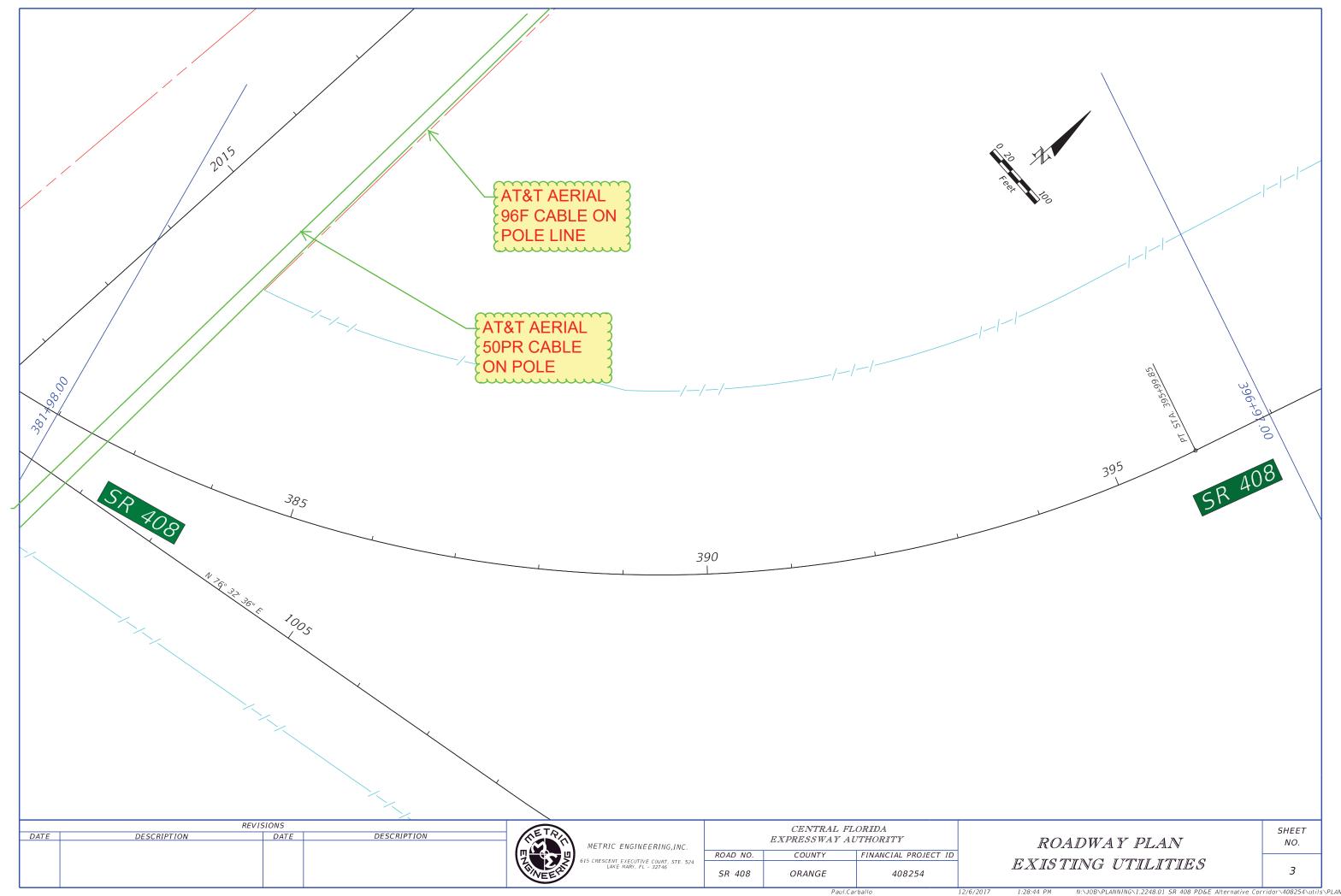
SR 408 ORANGE 408254

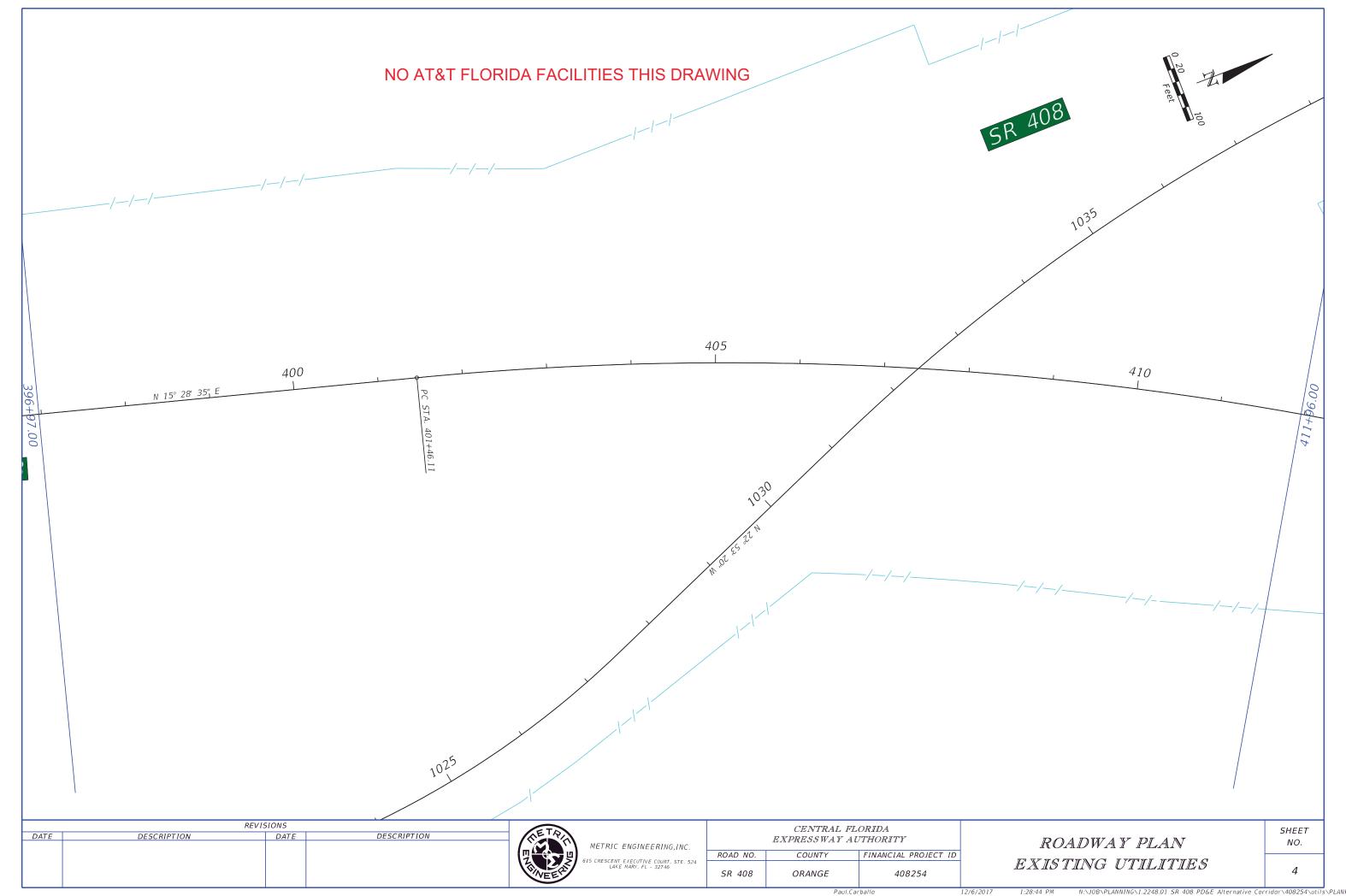
ROADWAY PLAN
EXISTING UTILITIES

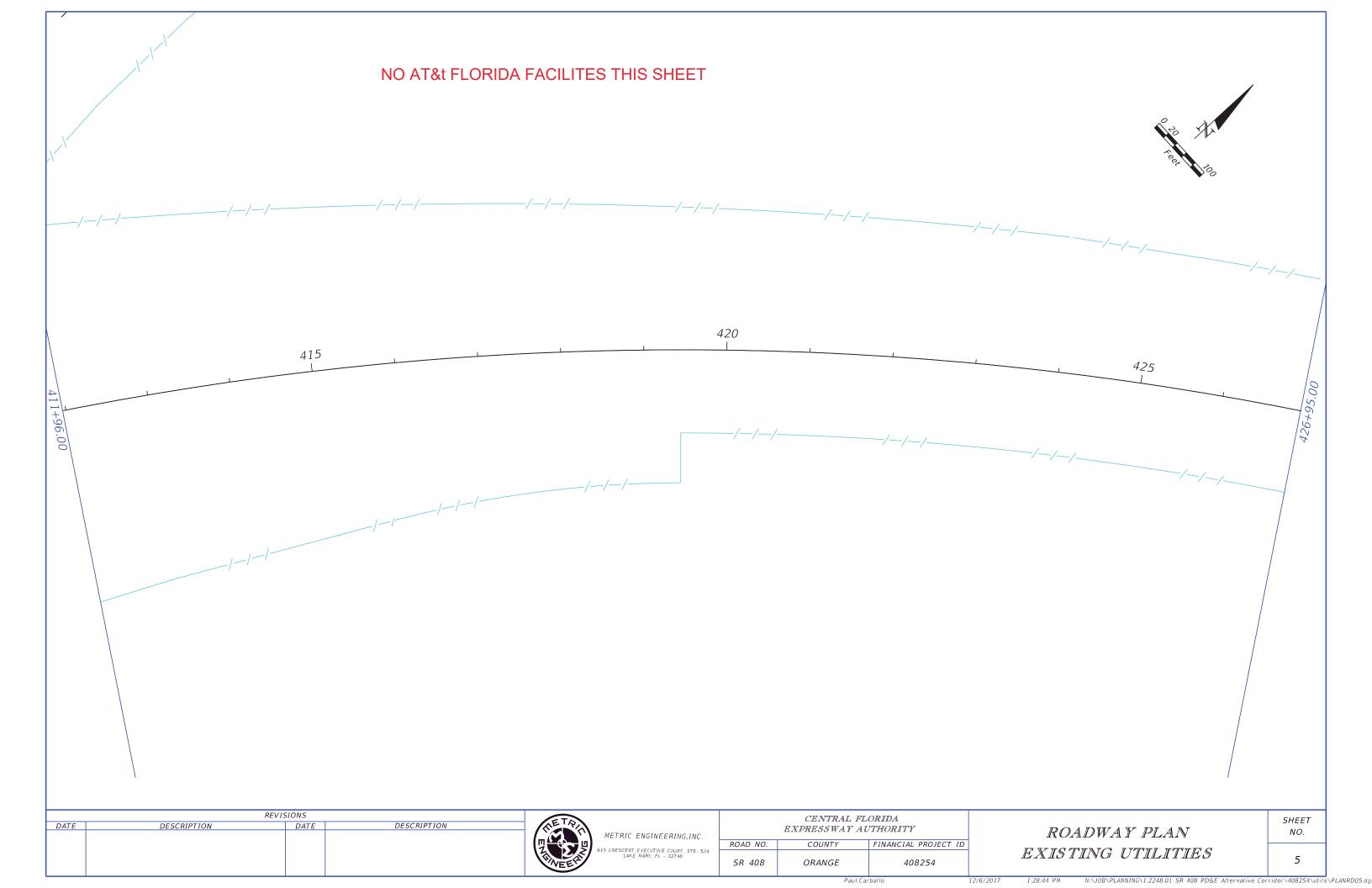
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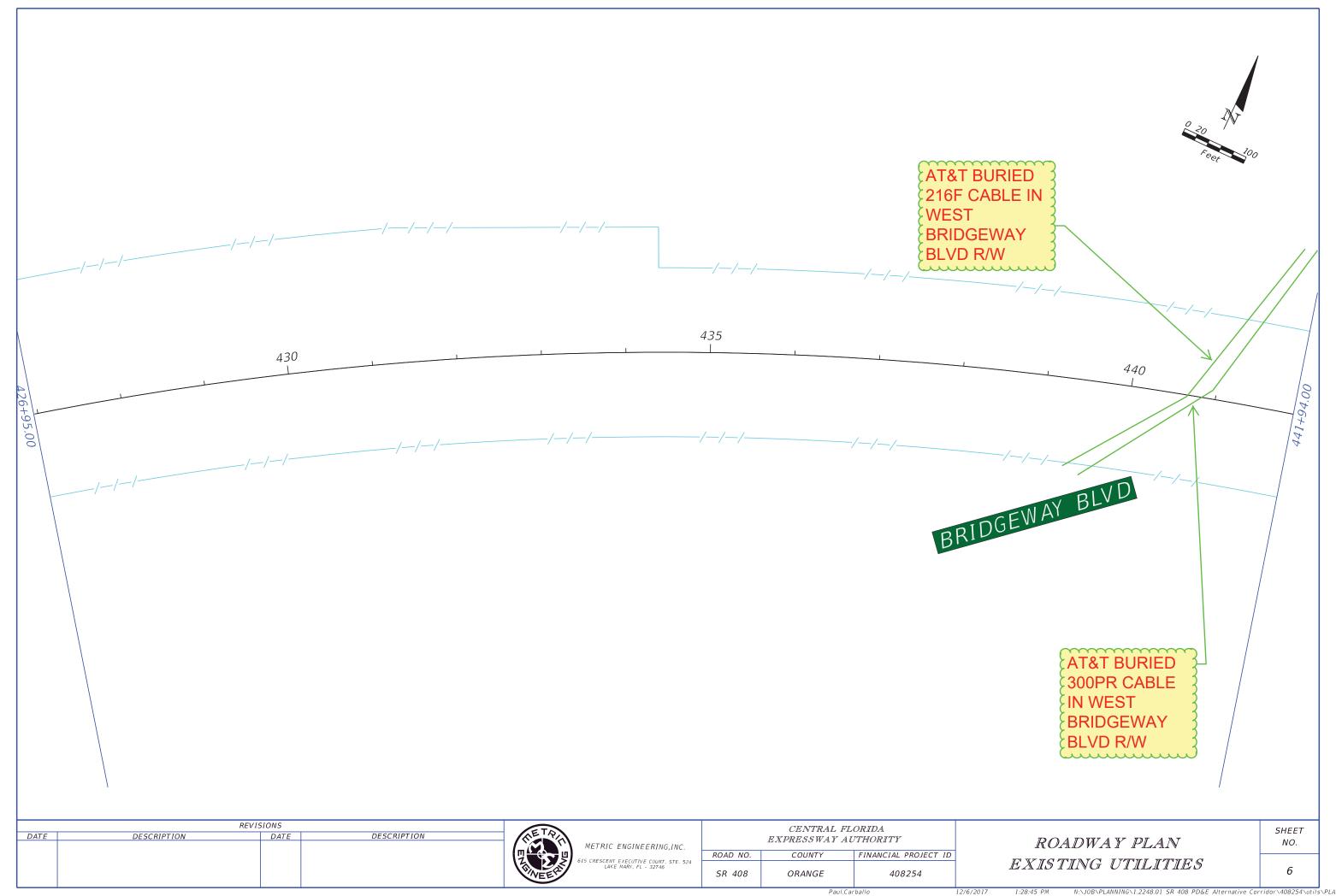
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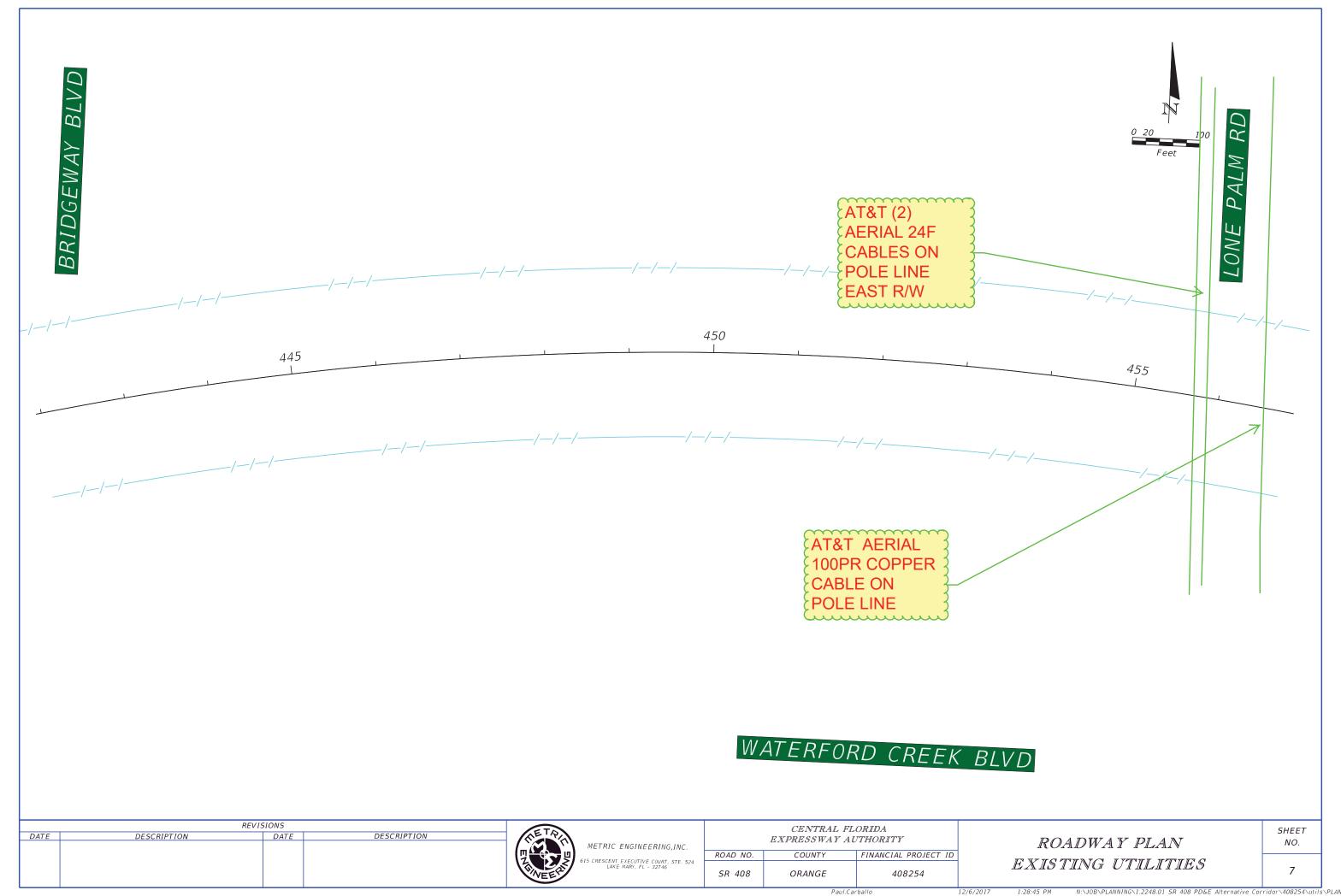


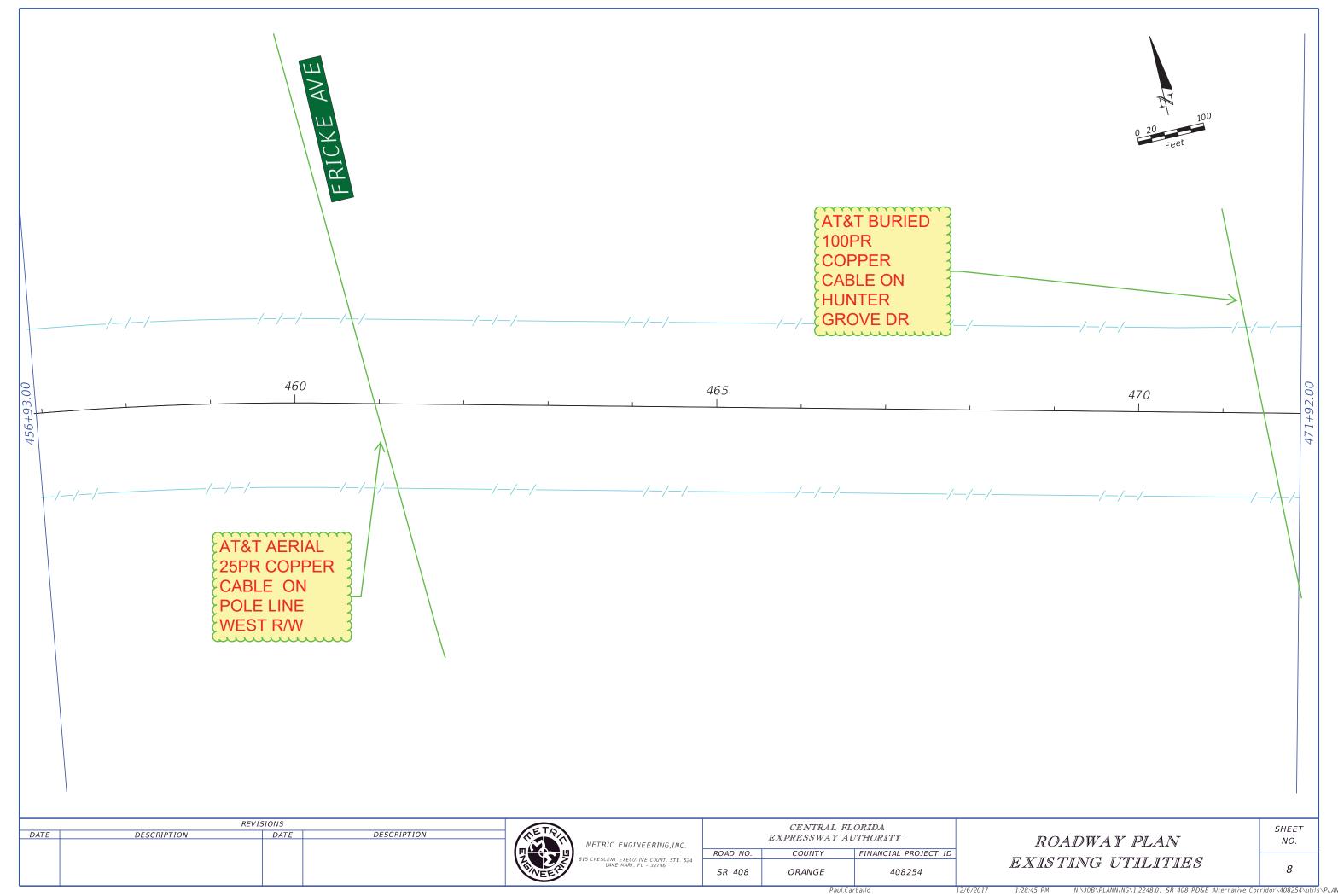


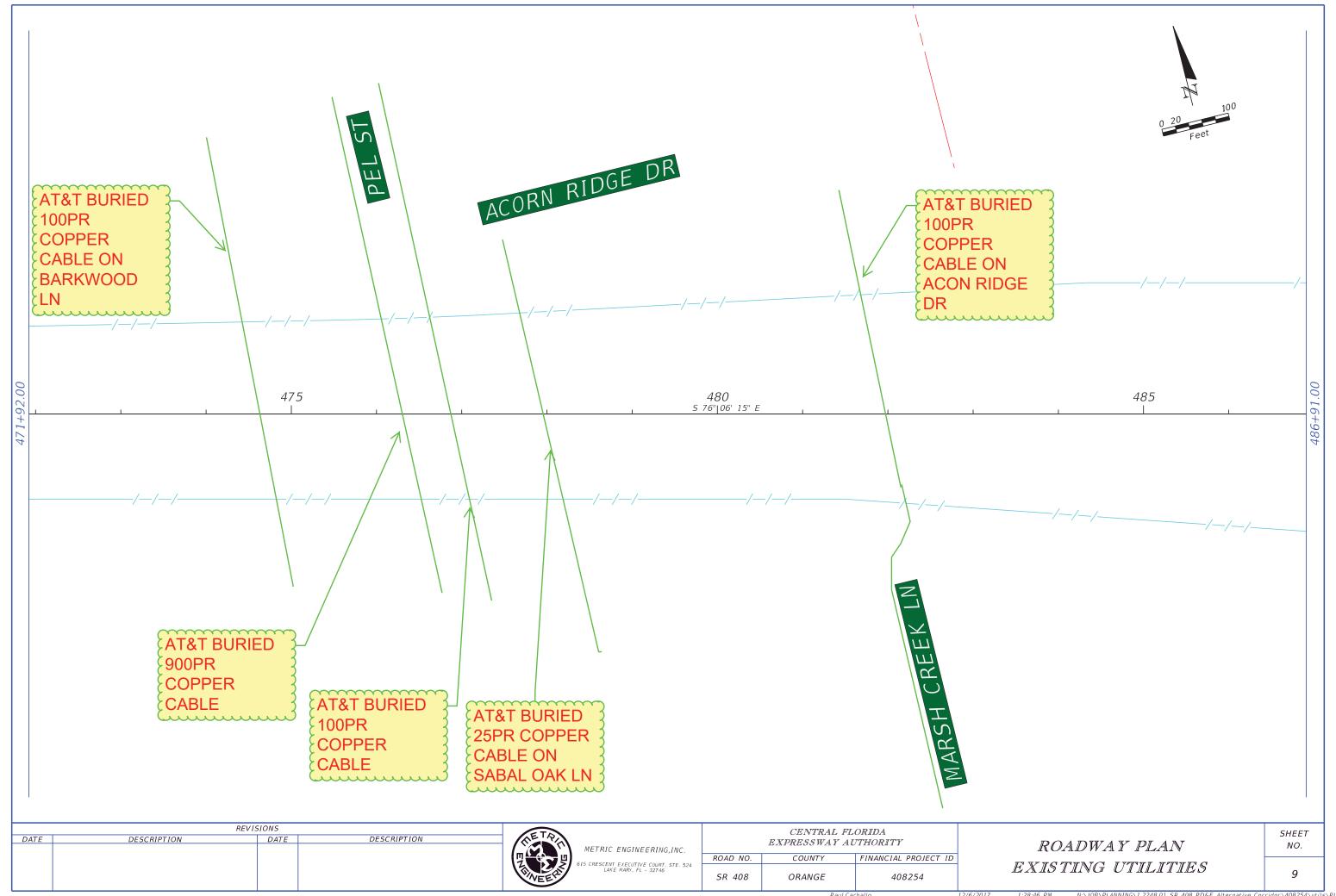


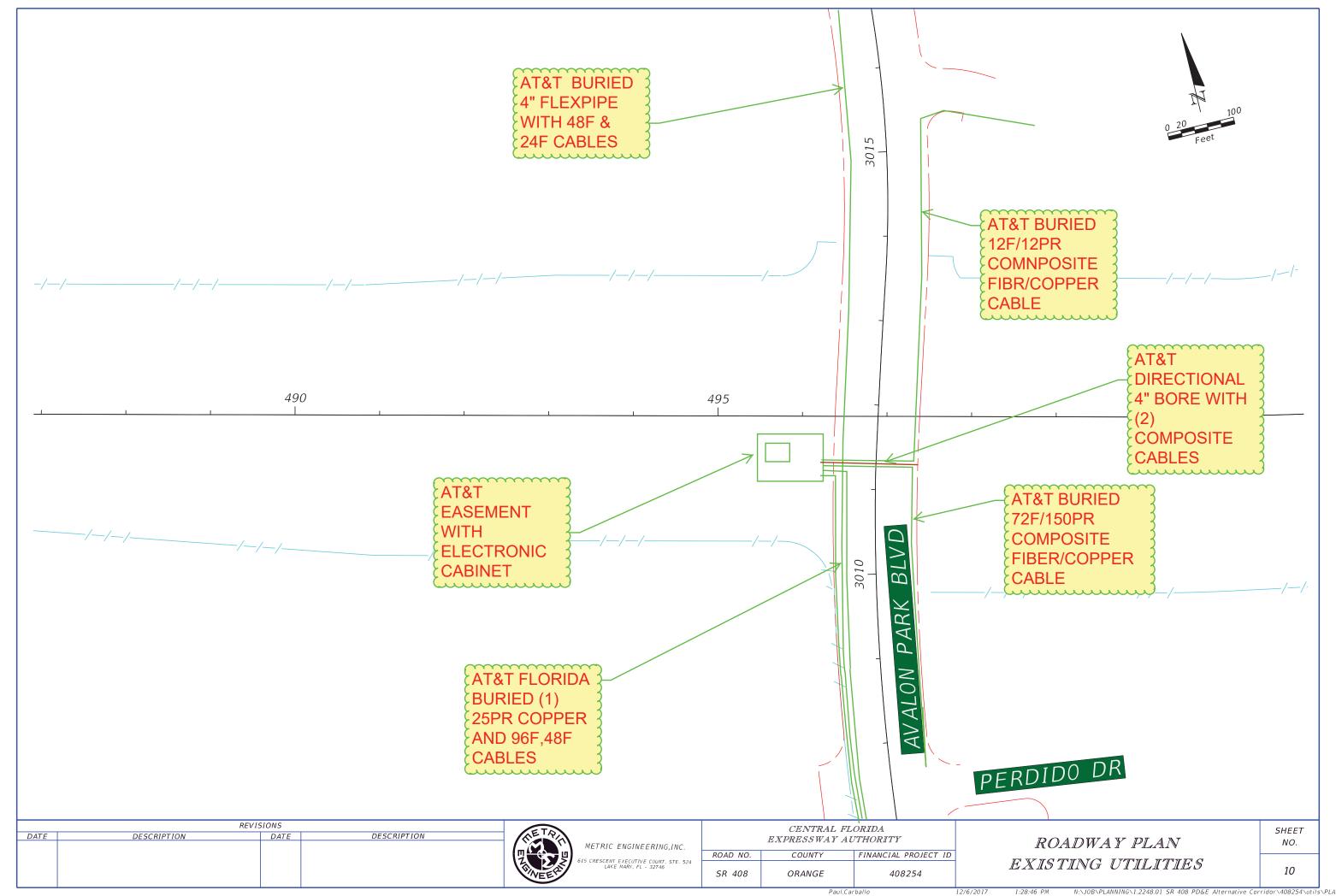


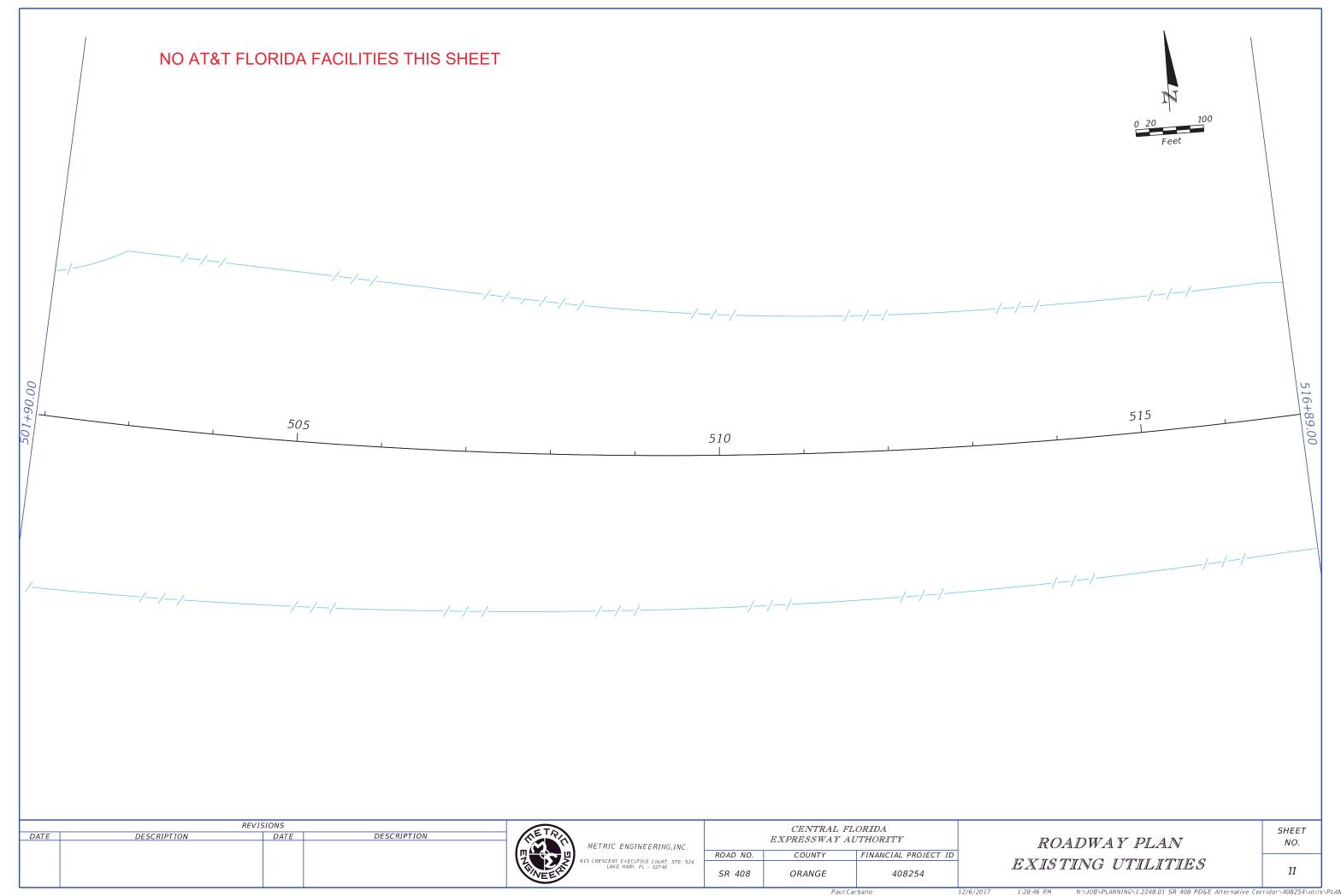


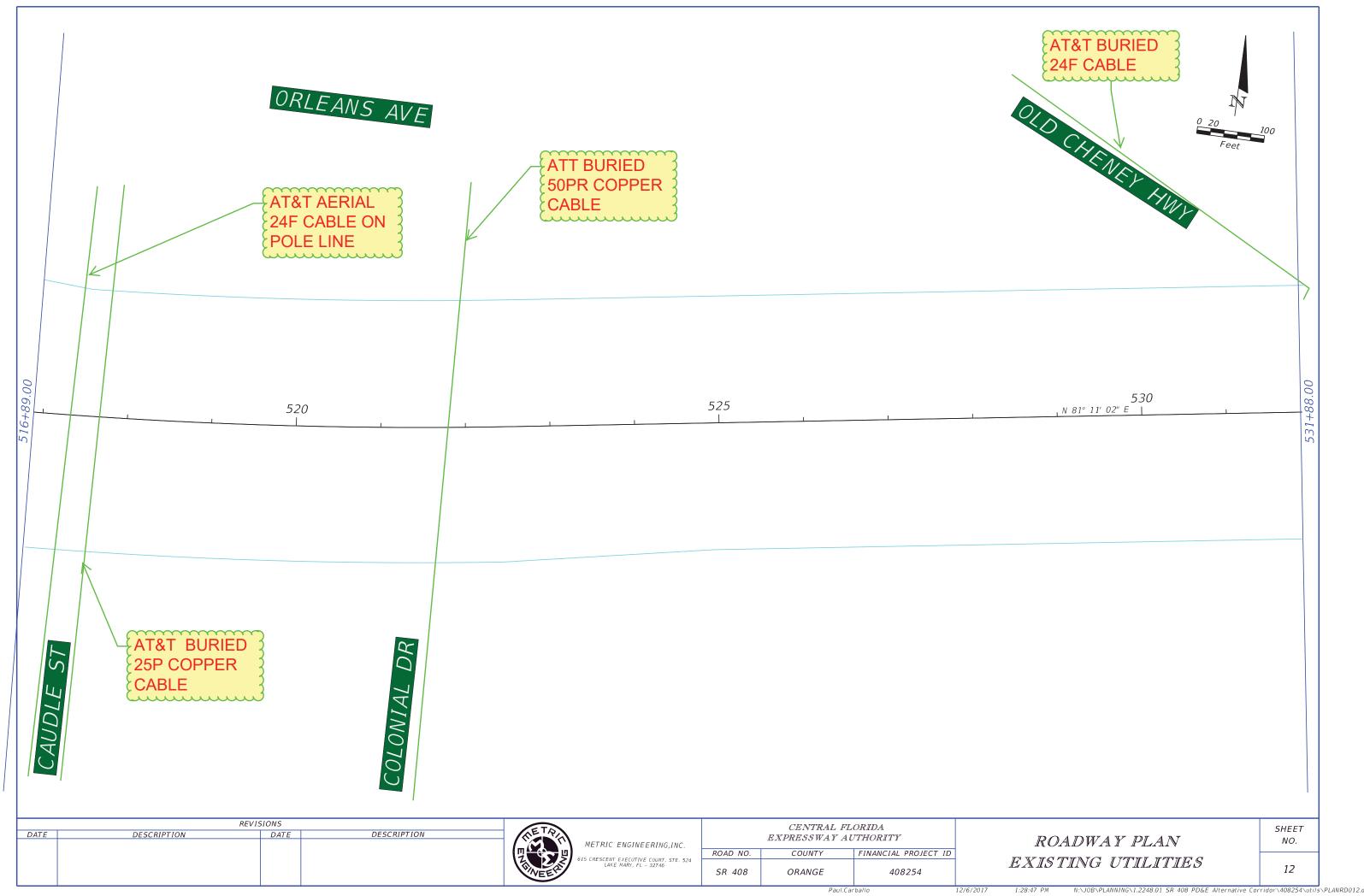


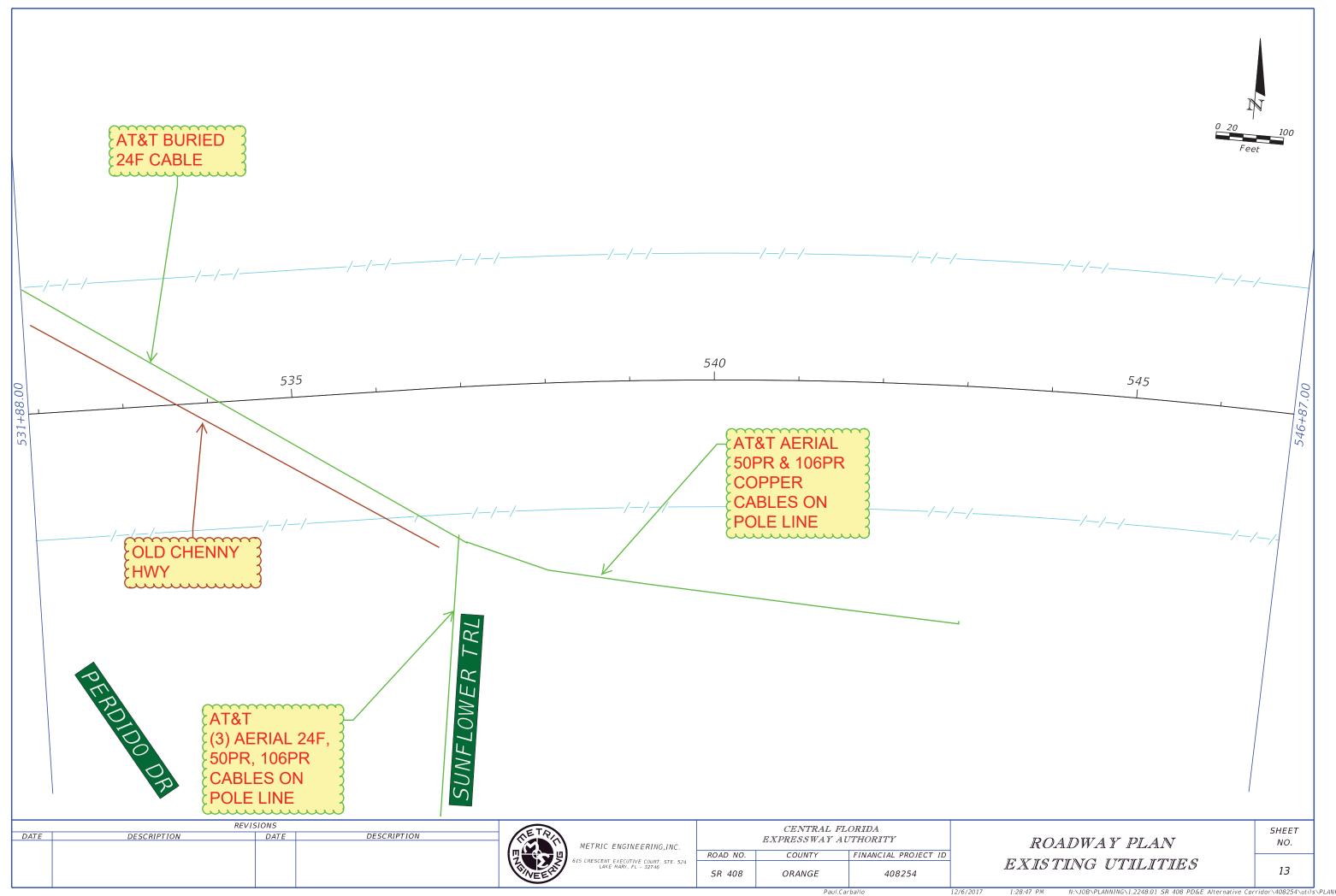


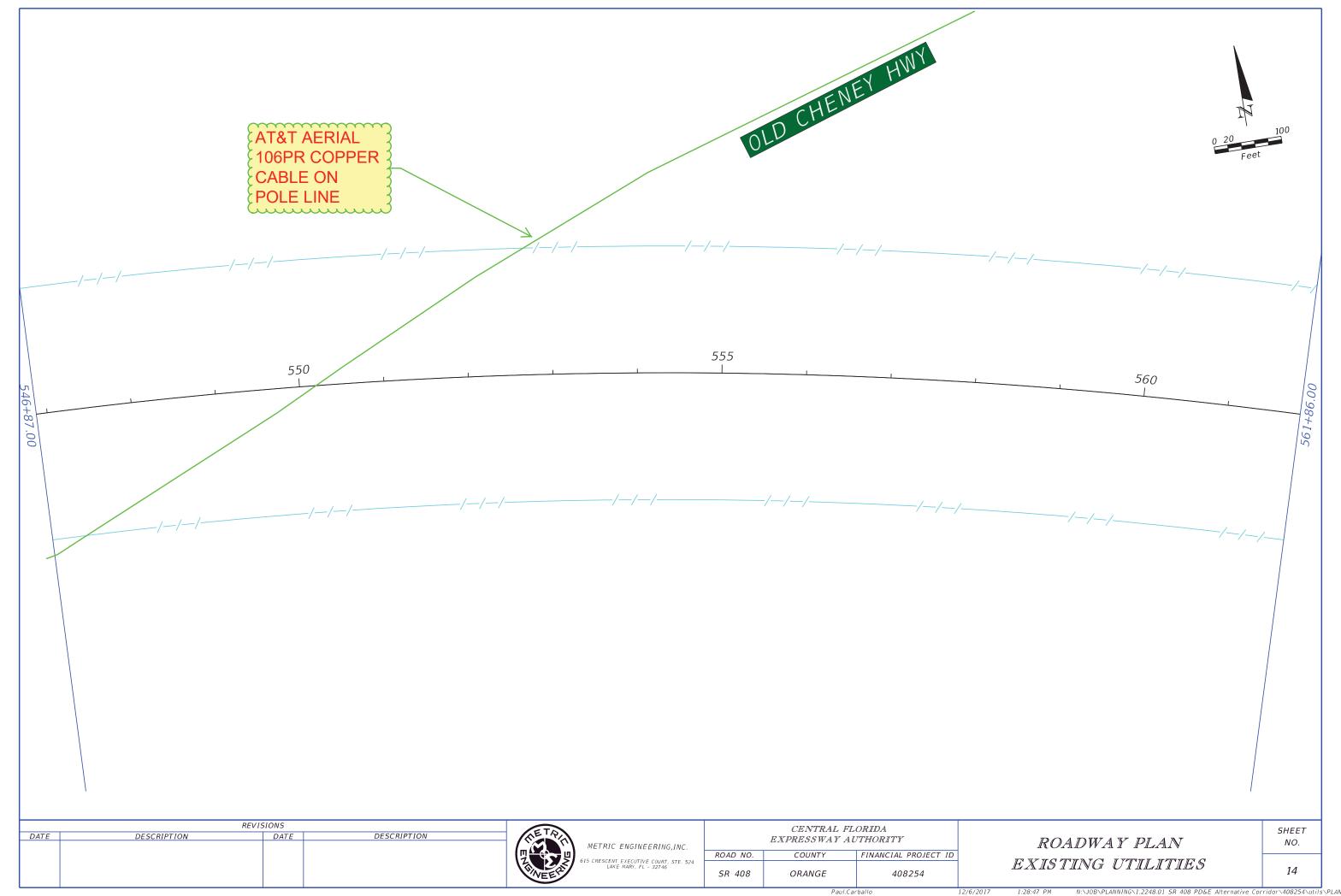


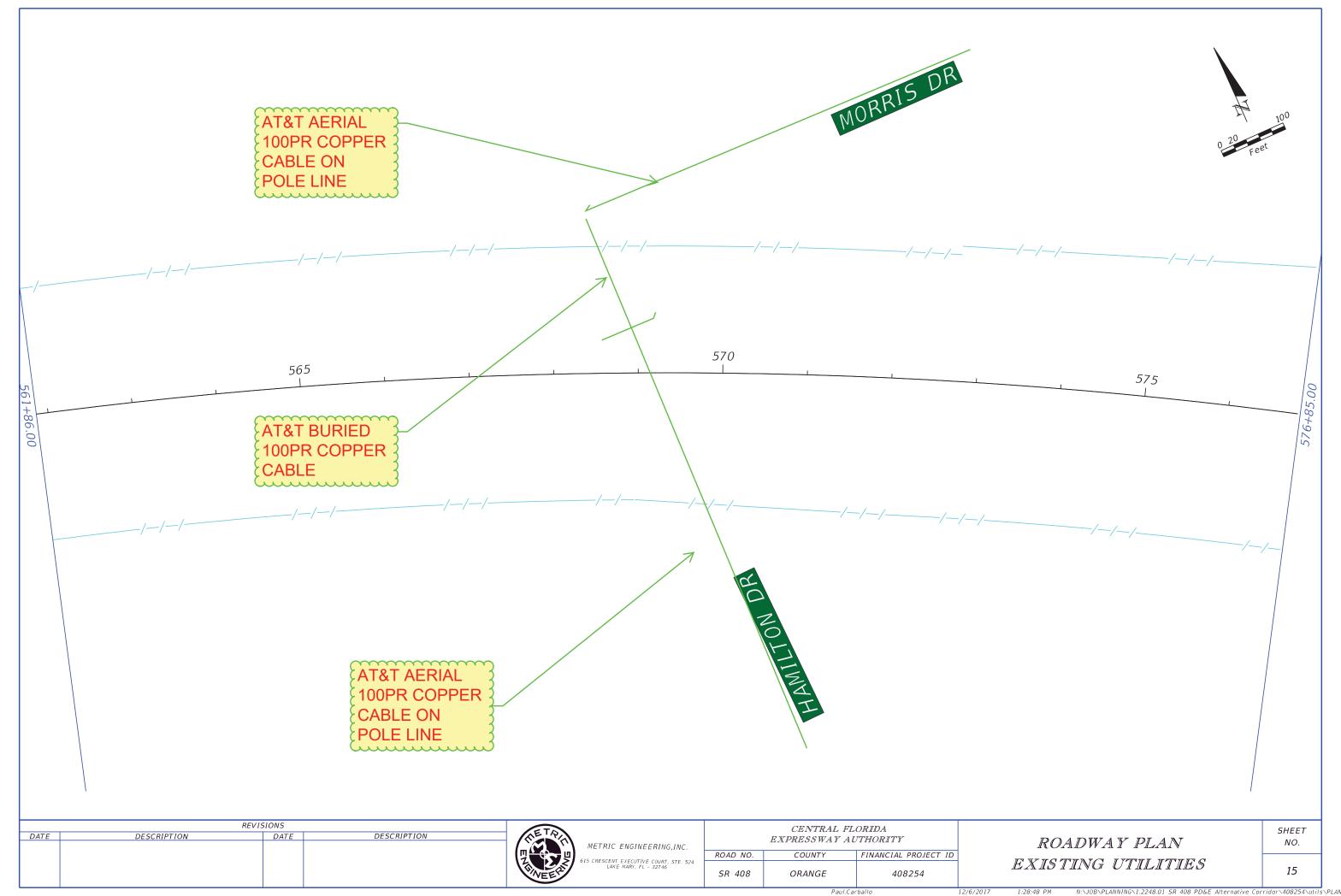


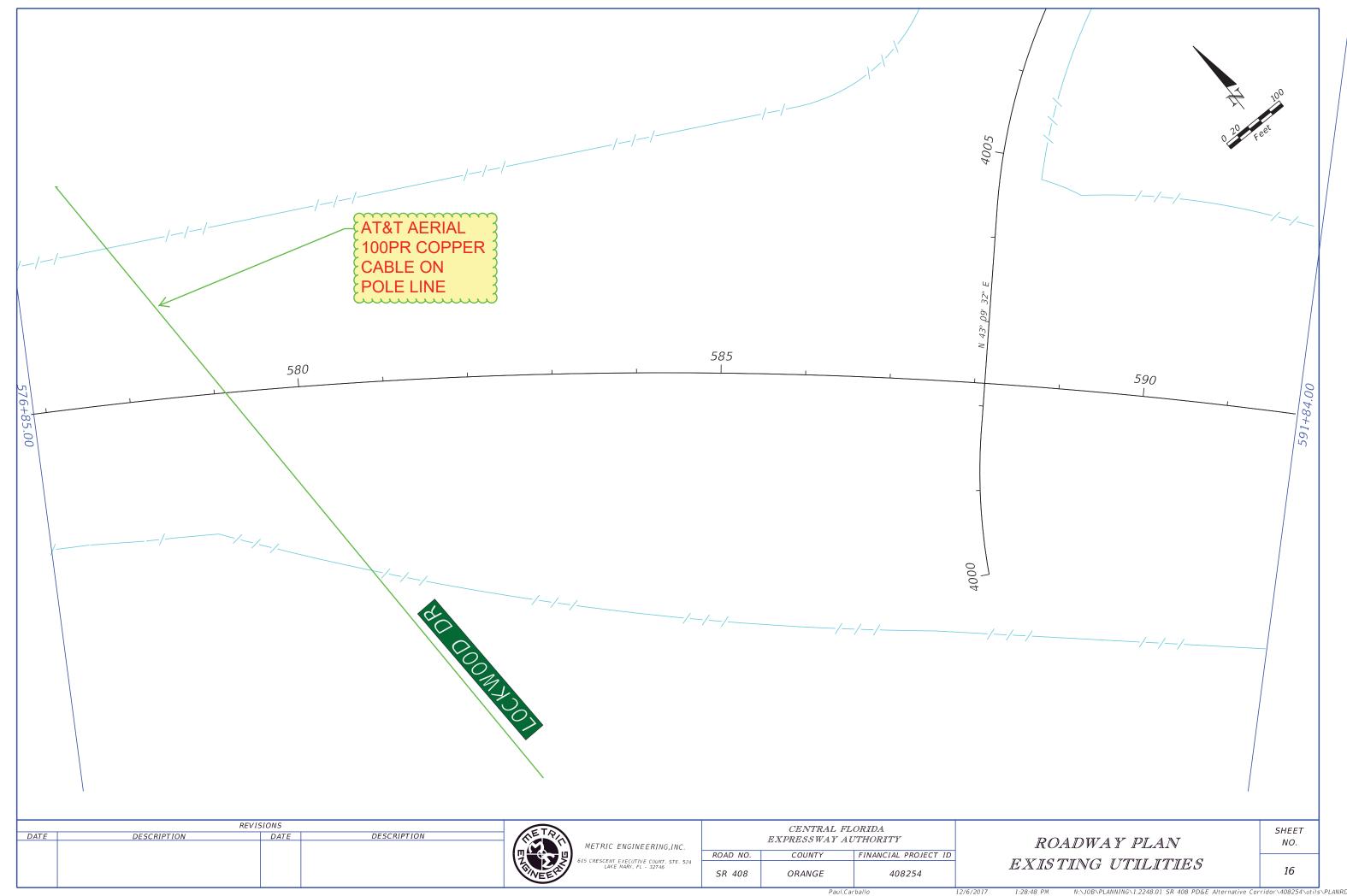


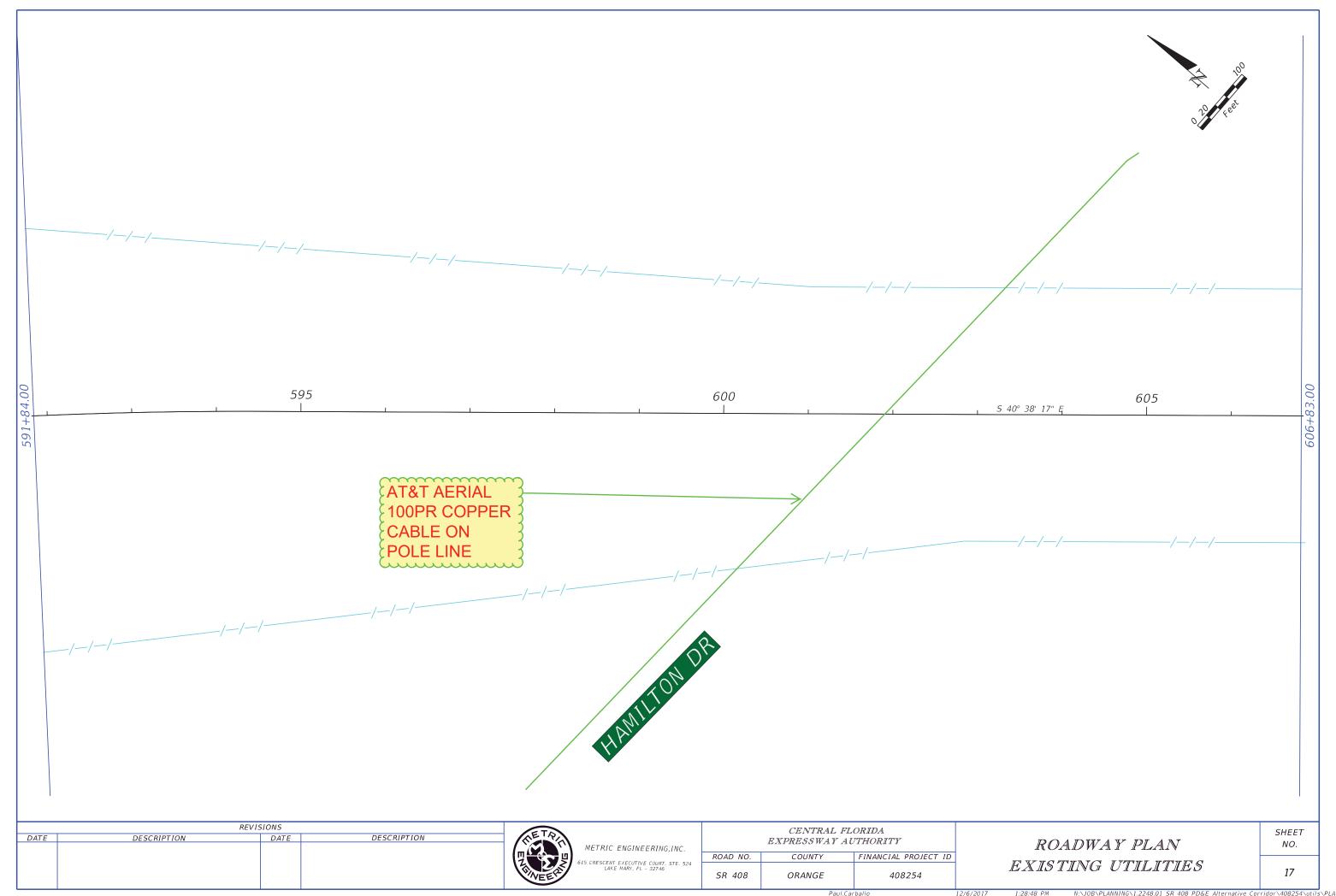


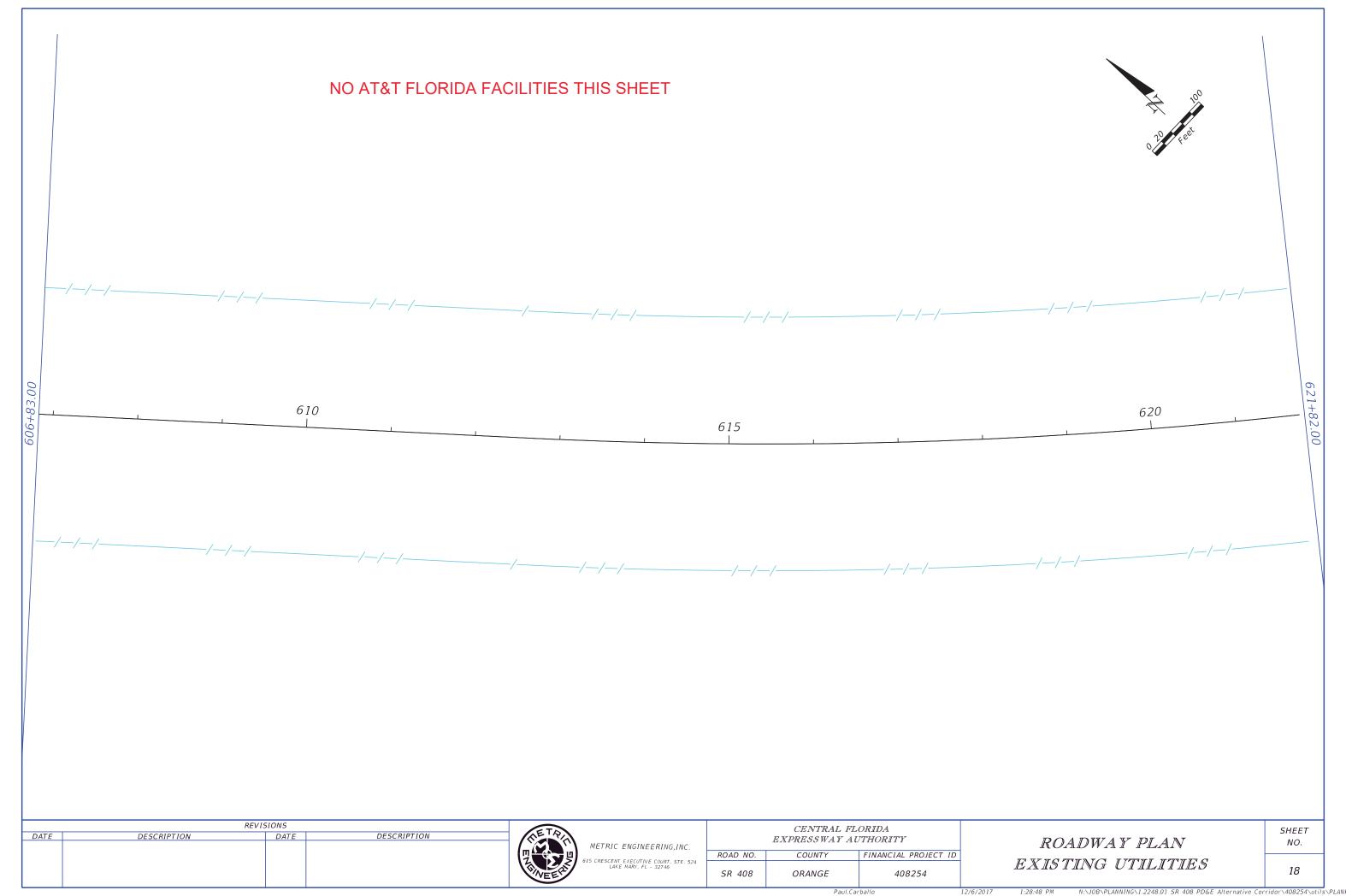


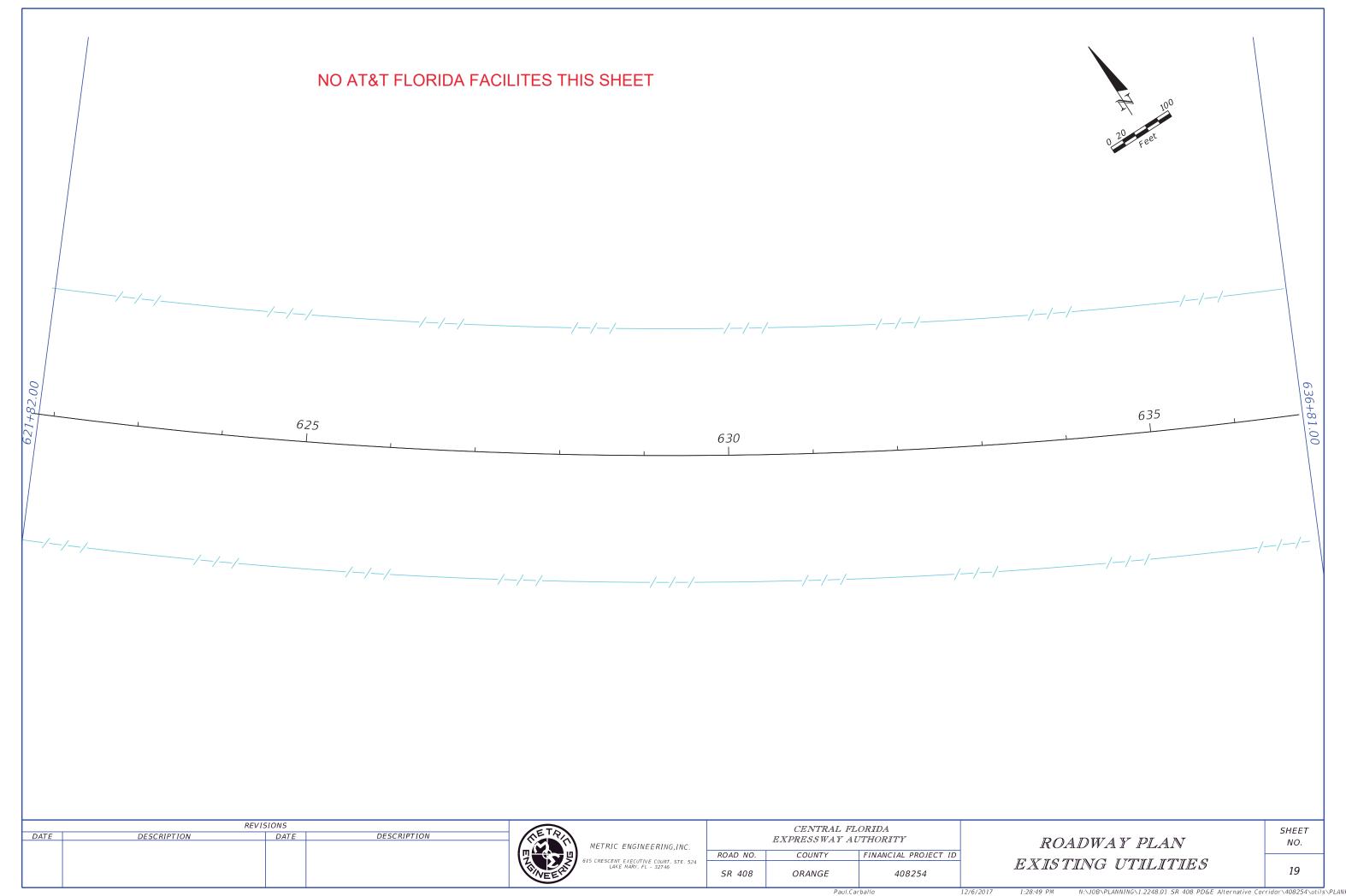


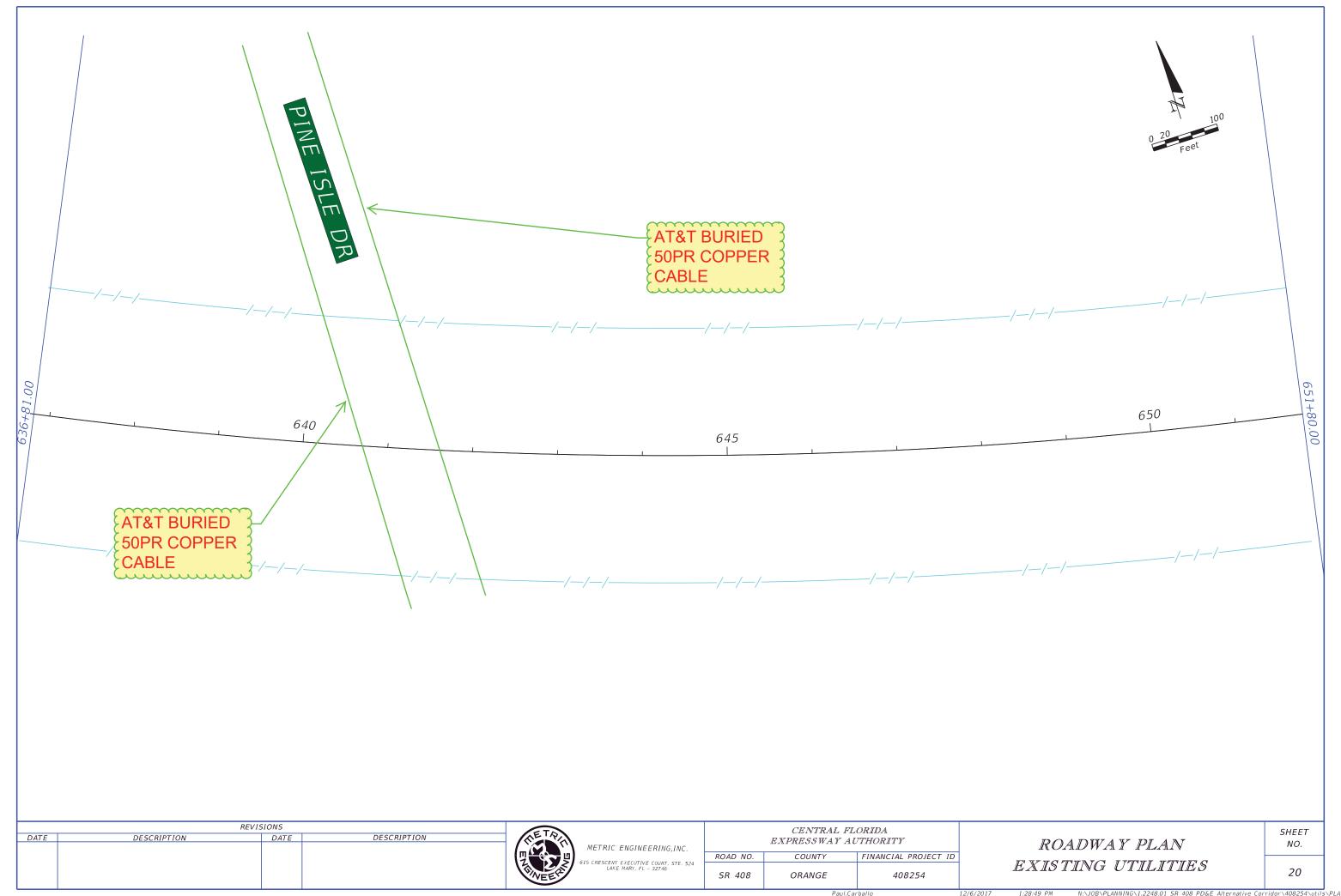


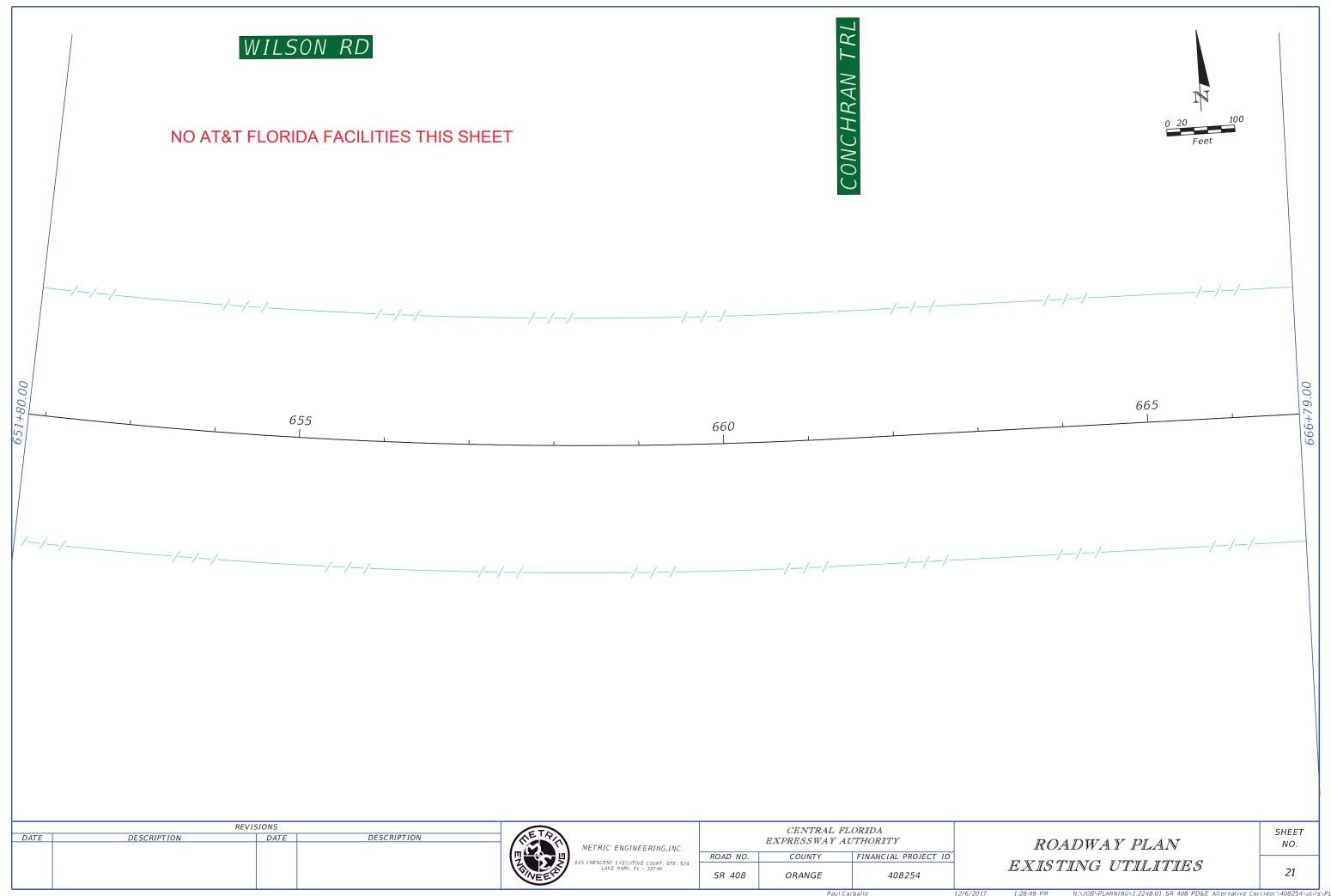


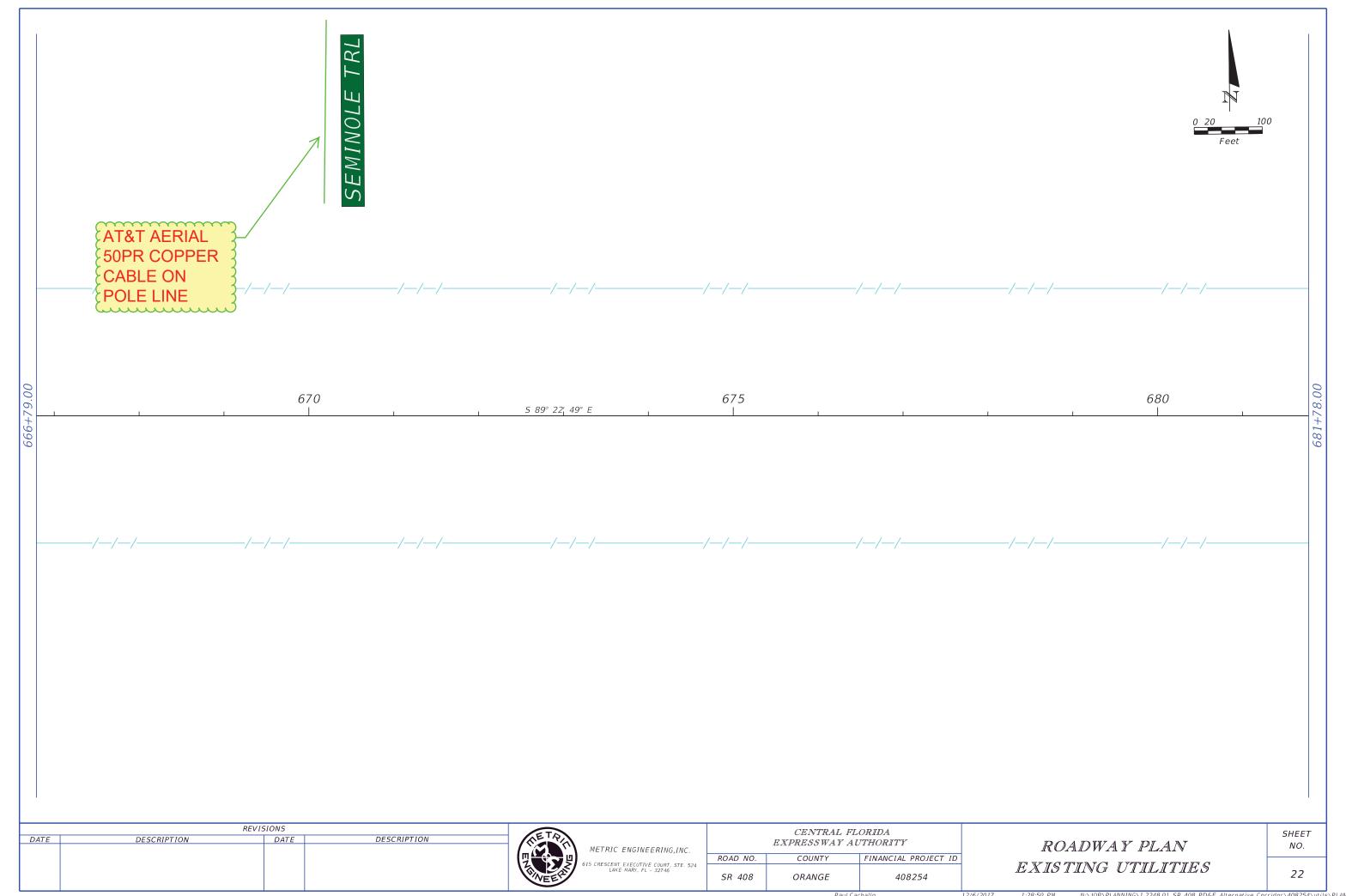


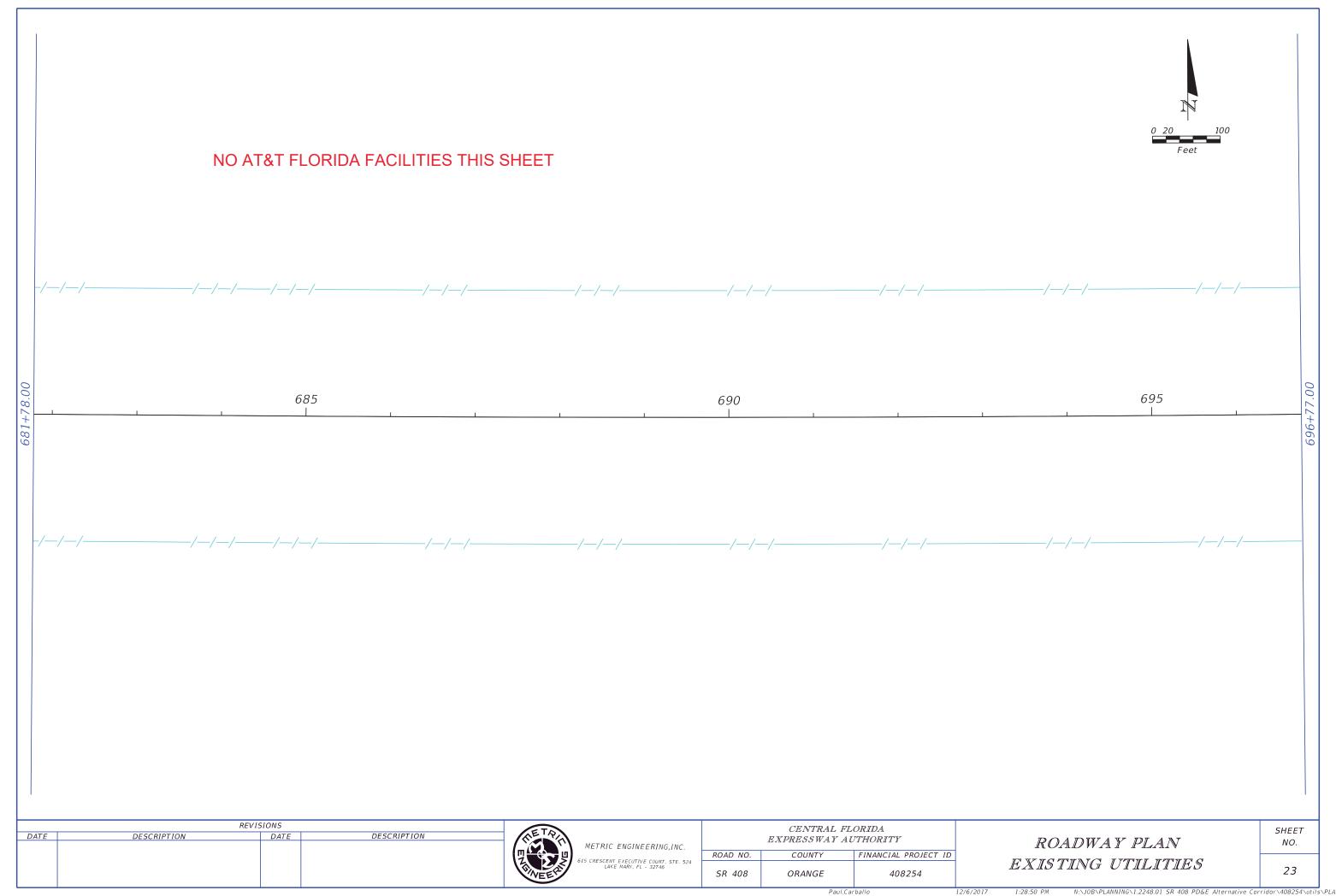


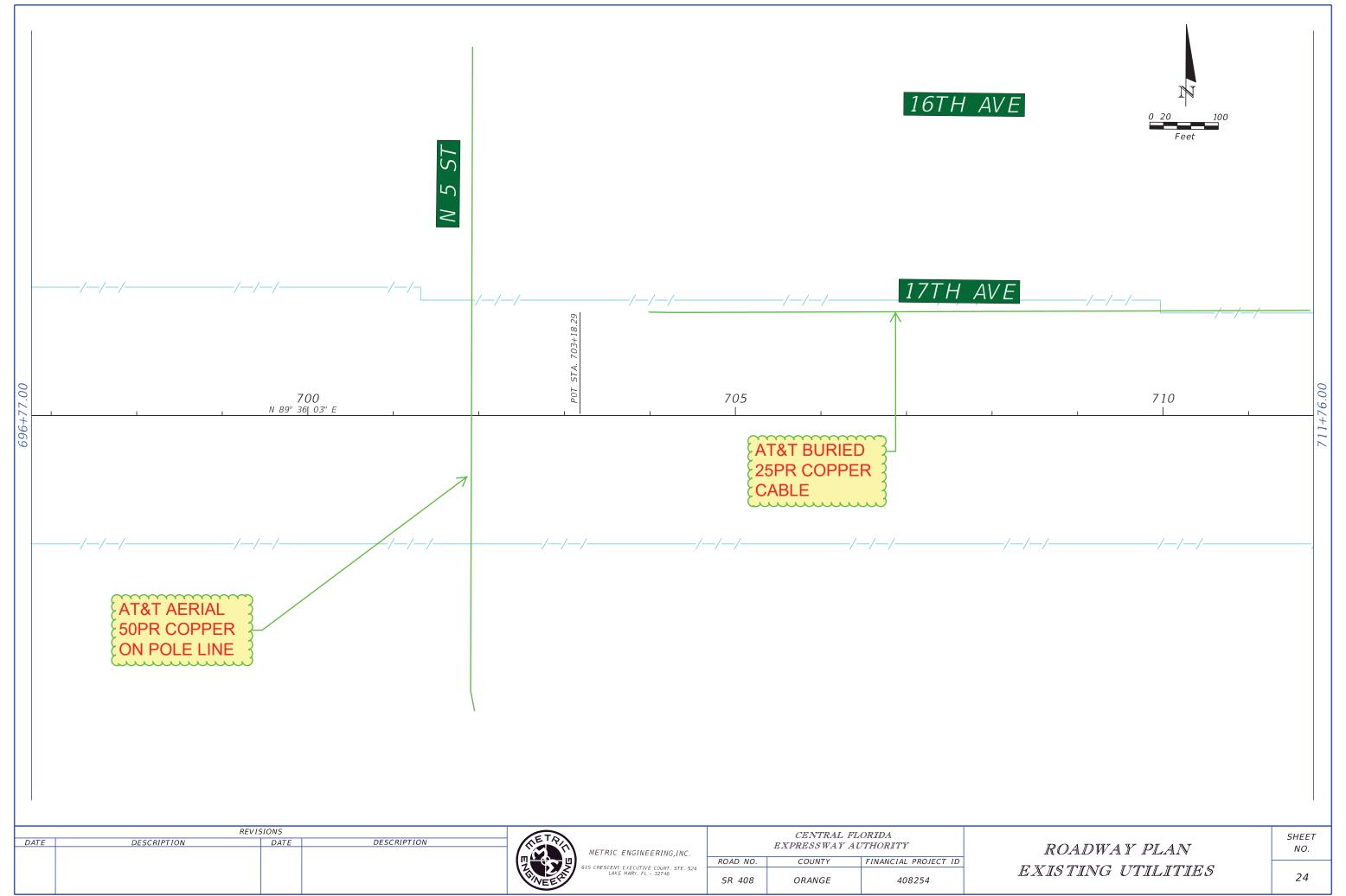


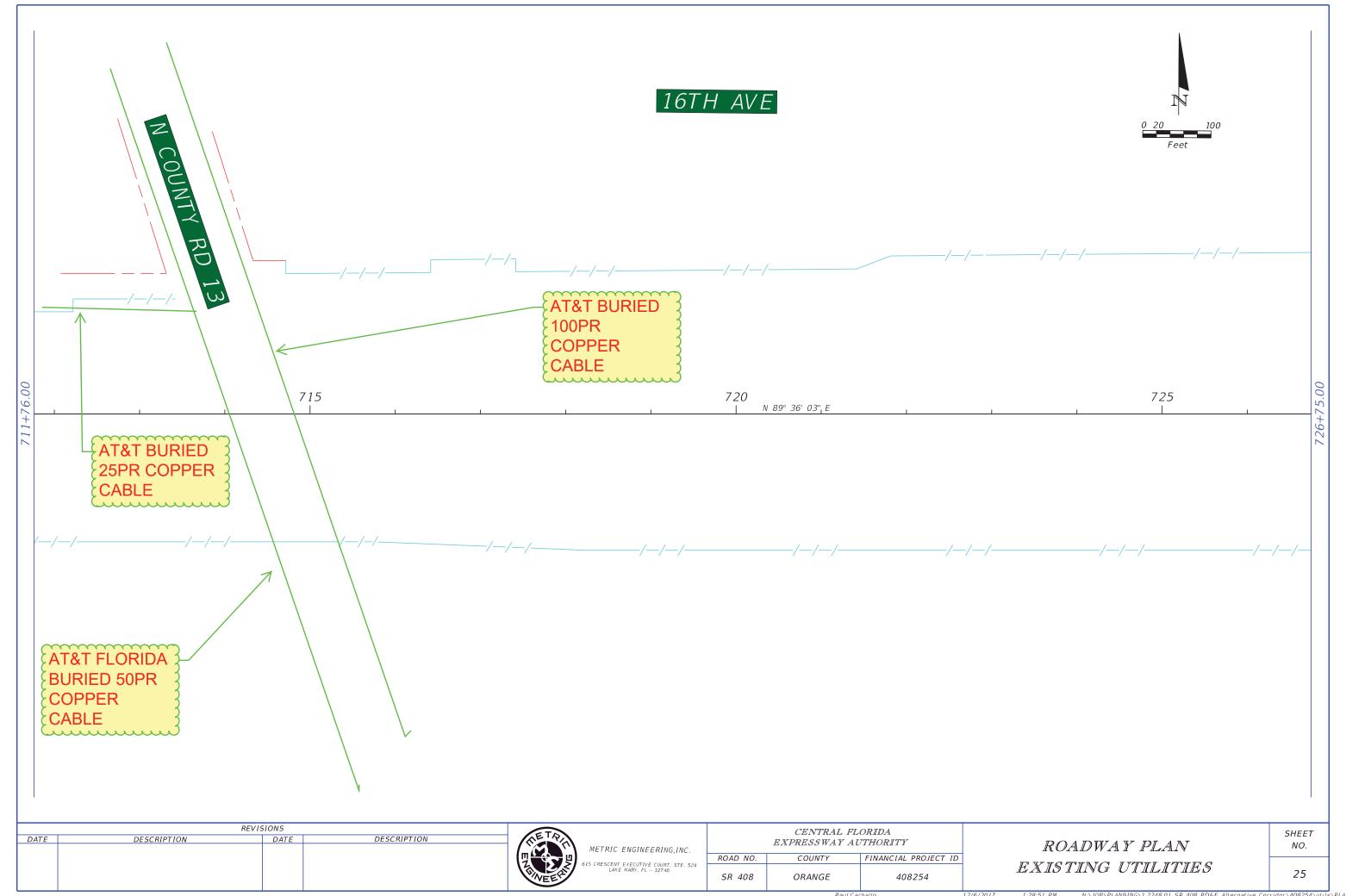


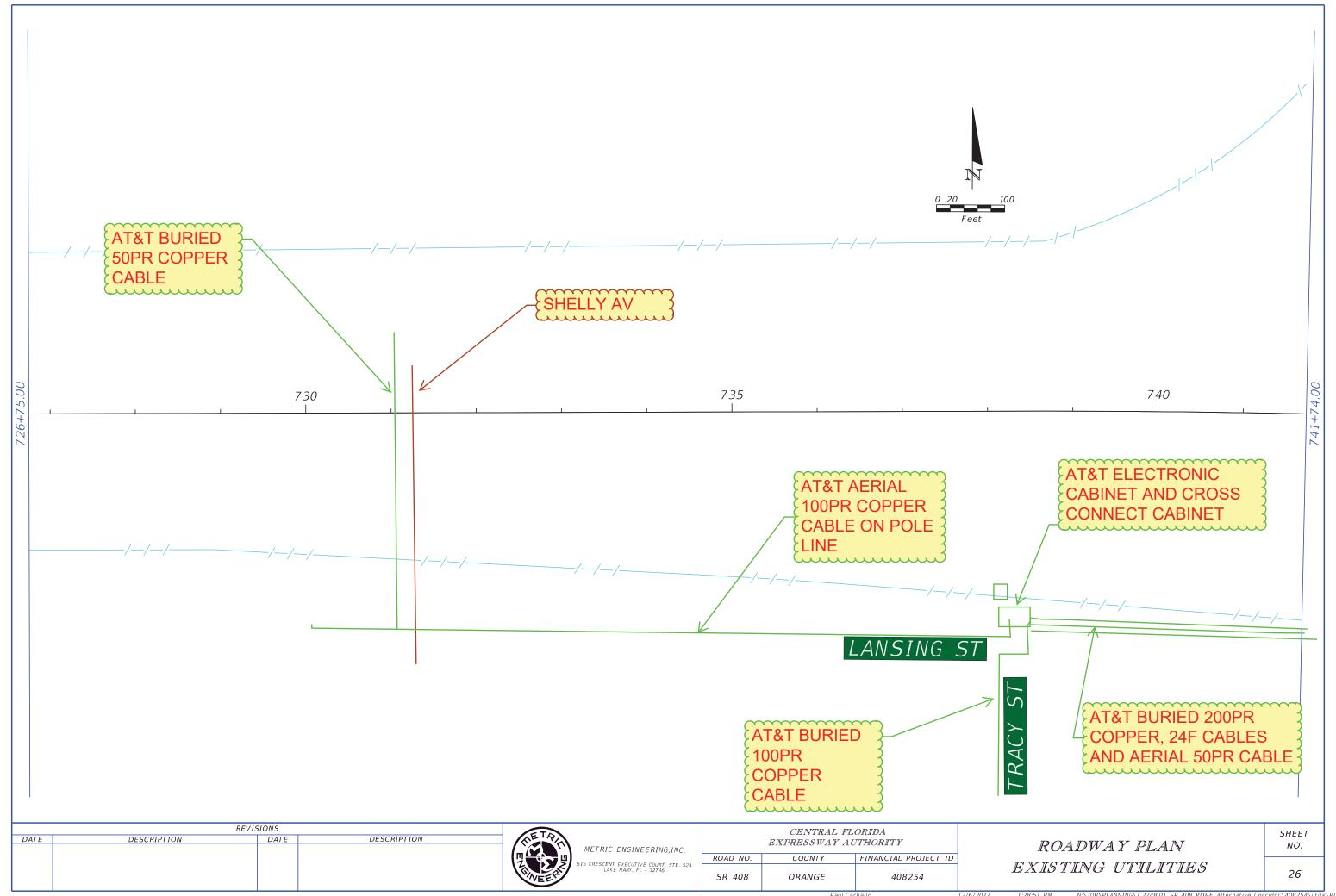


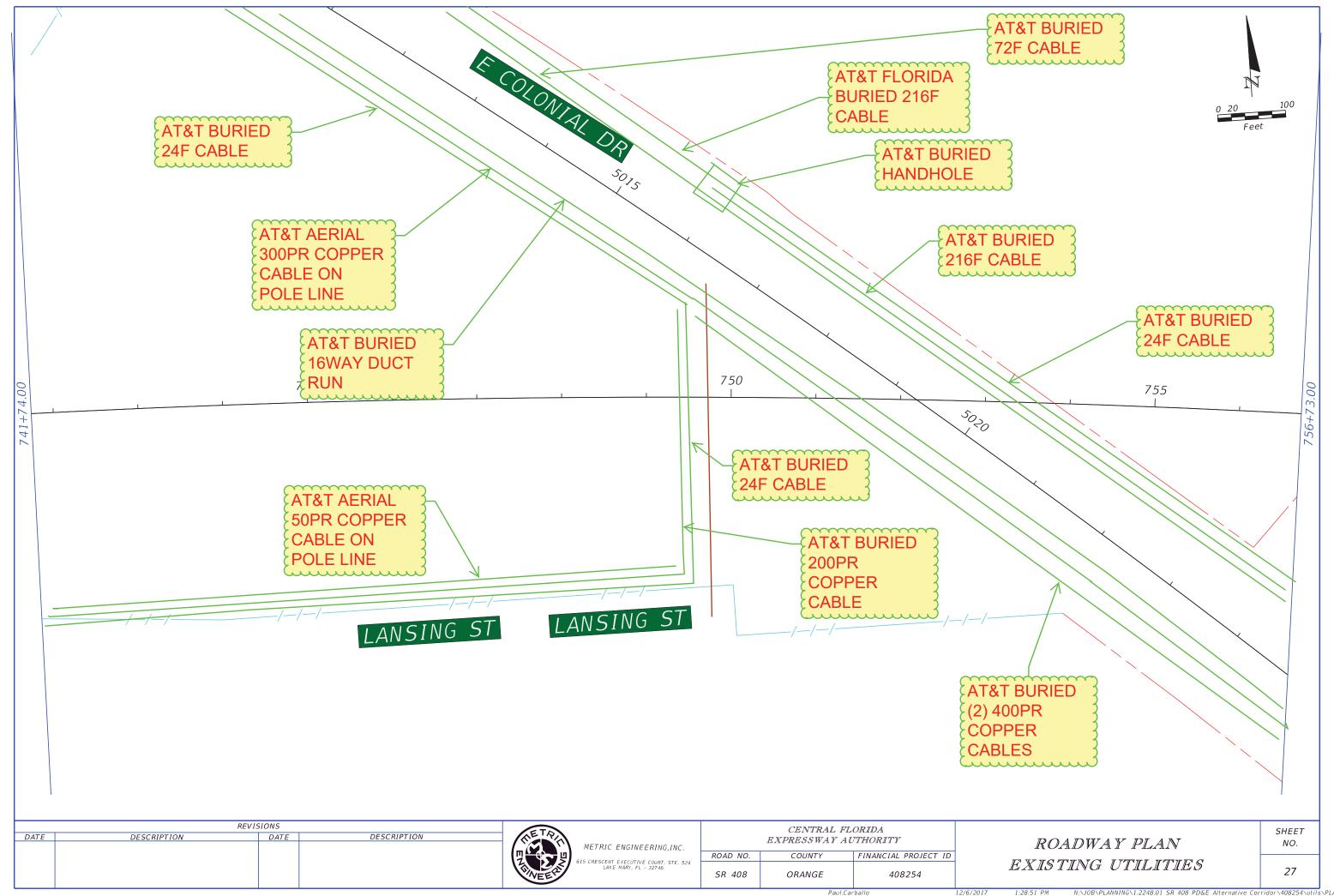


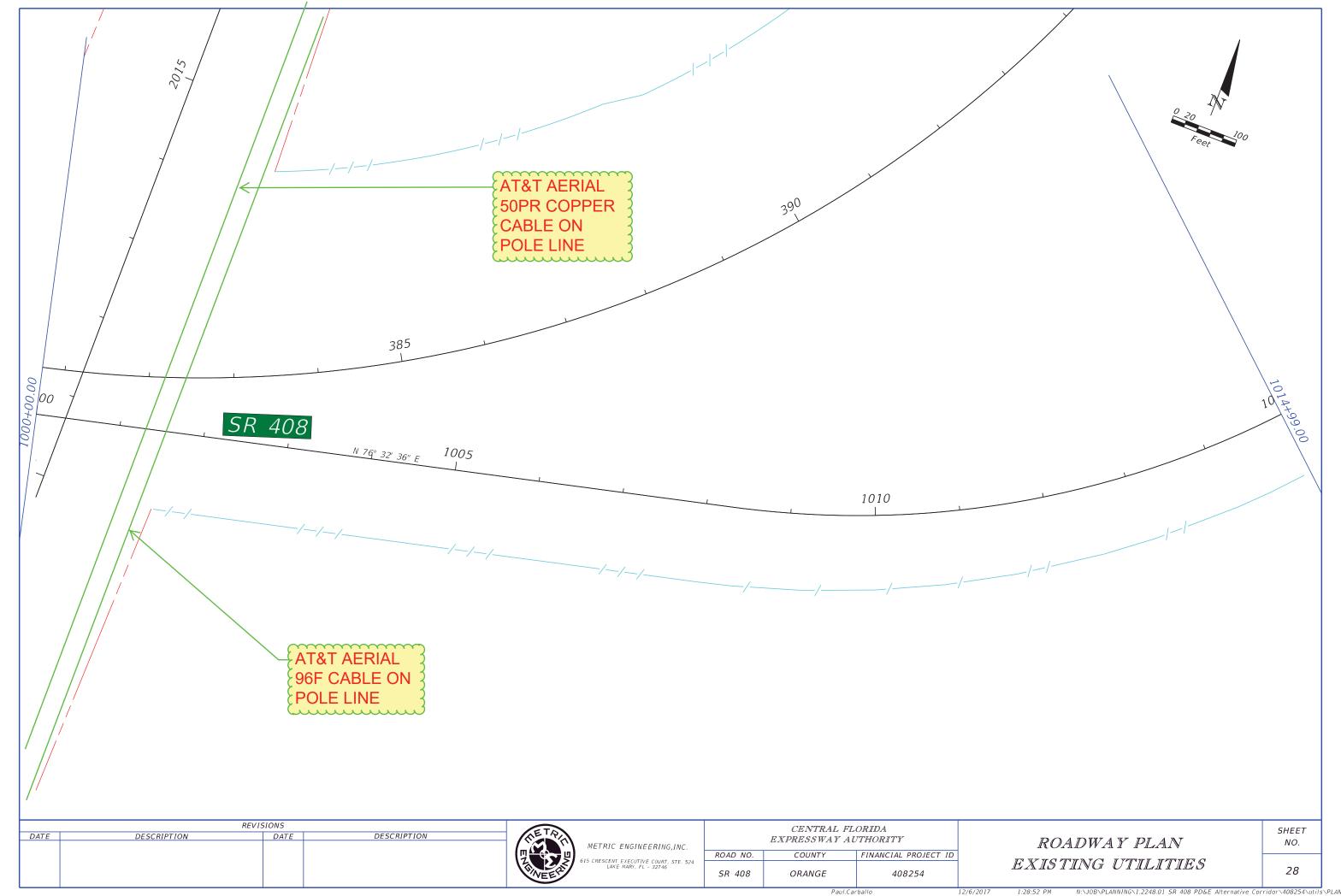


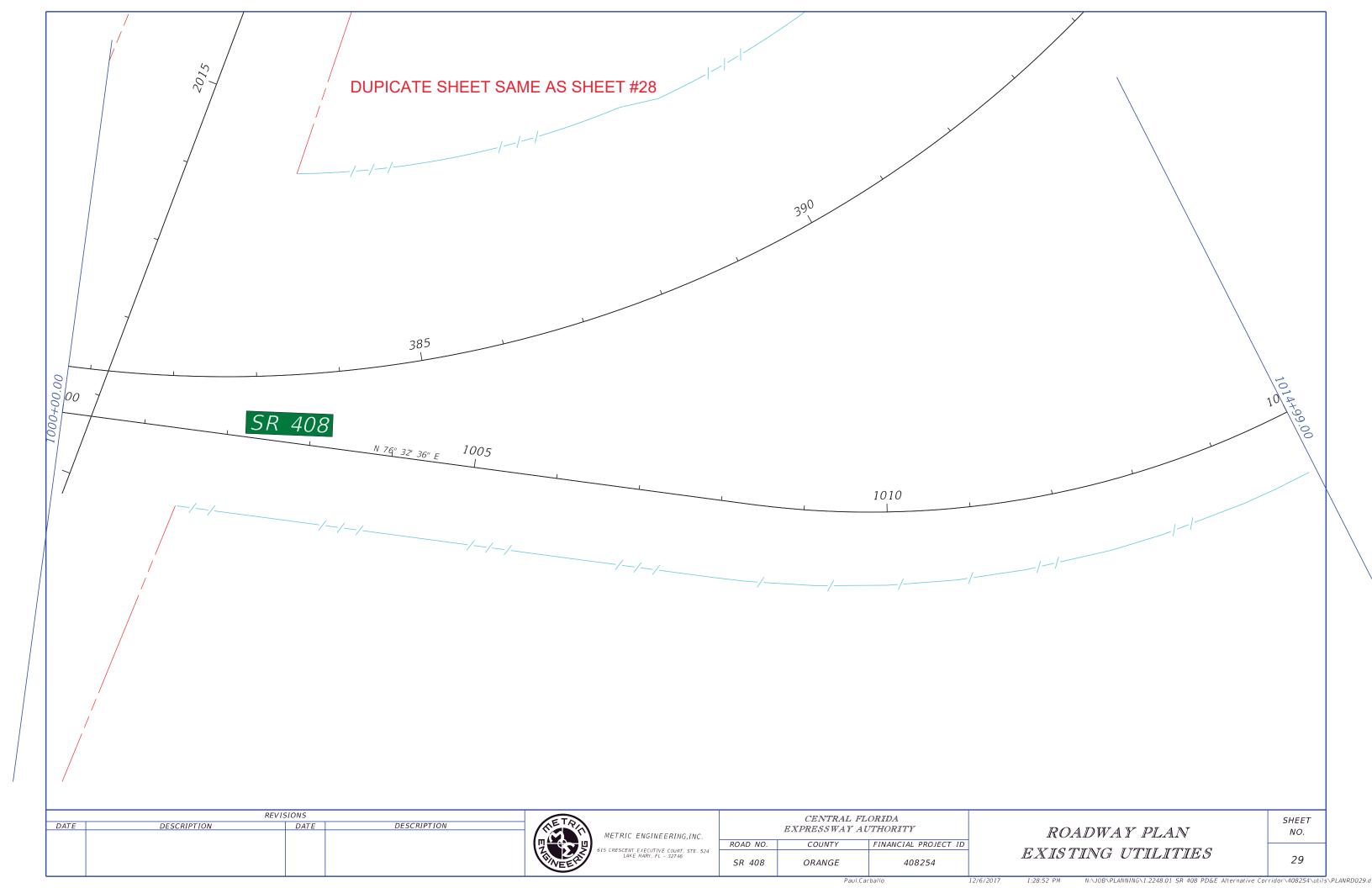


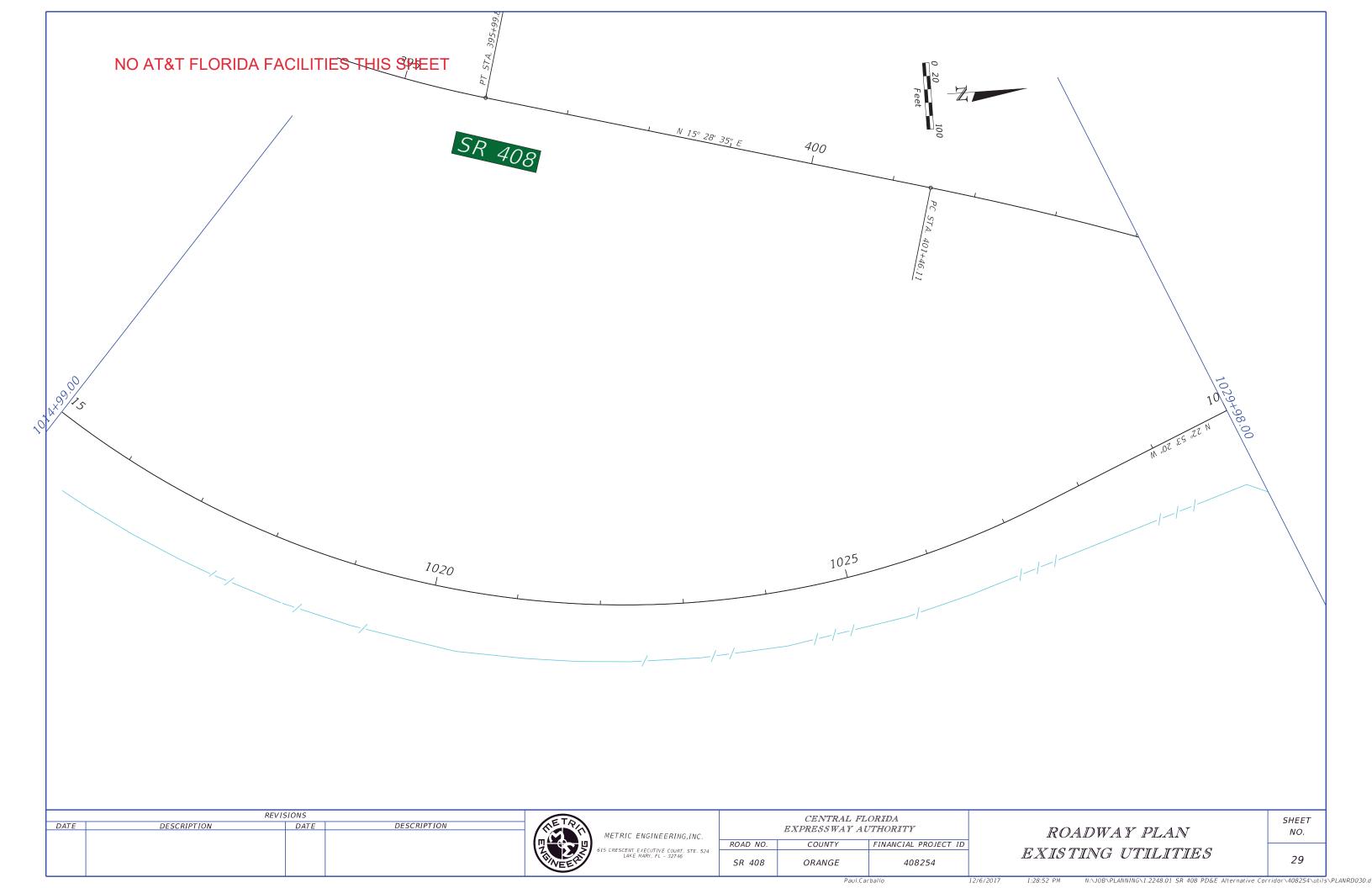


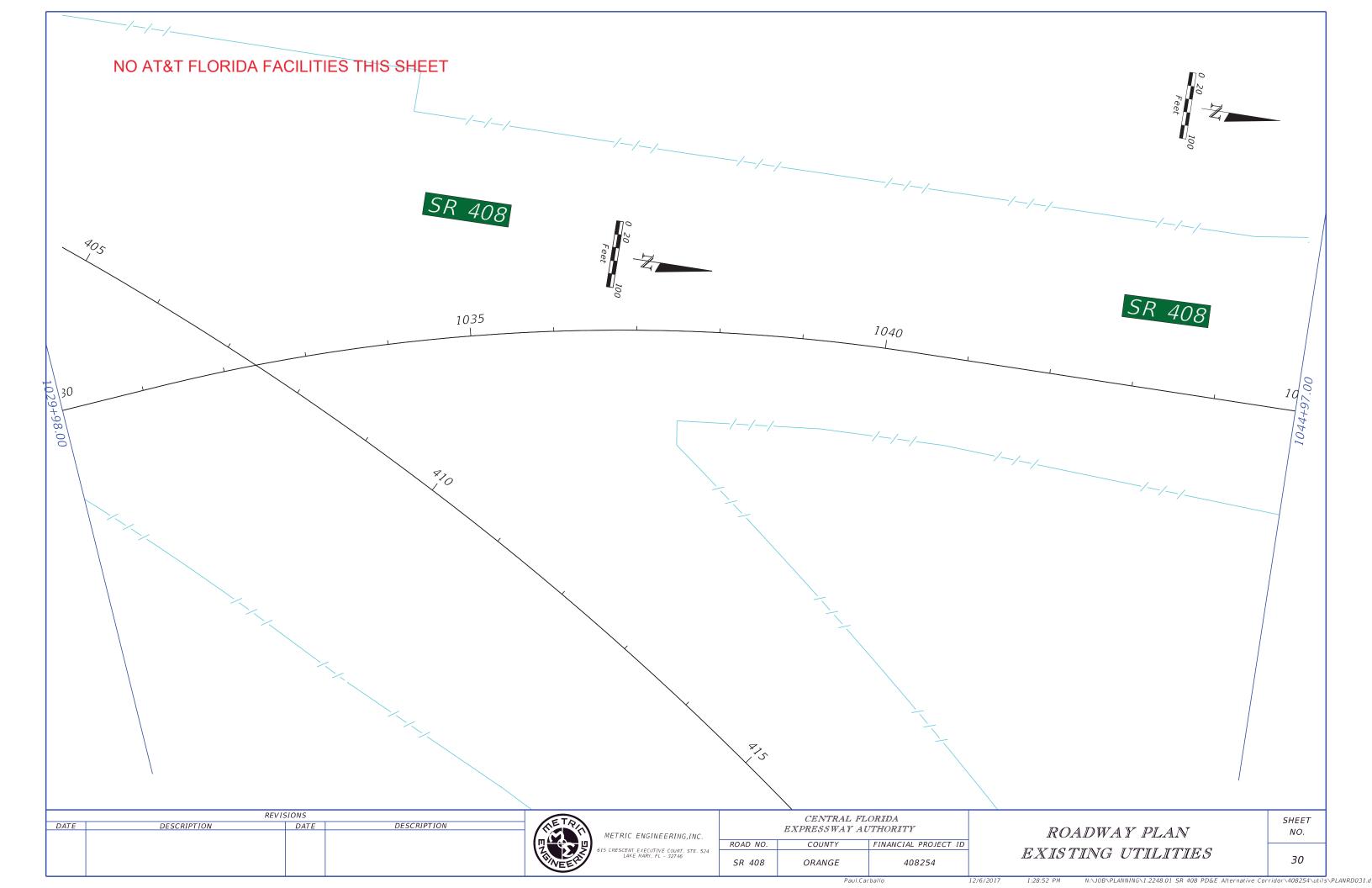


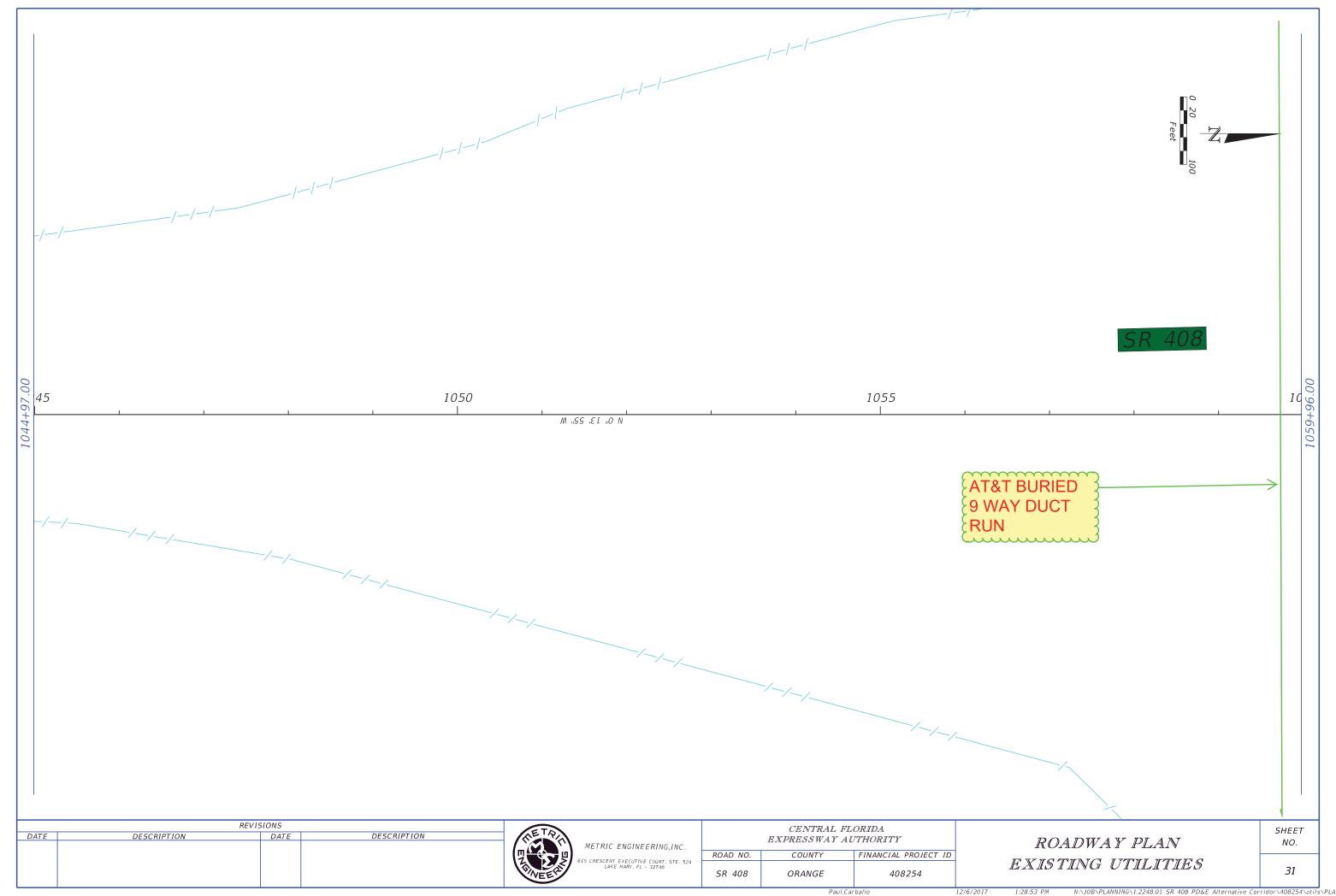


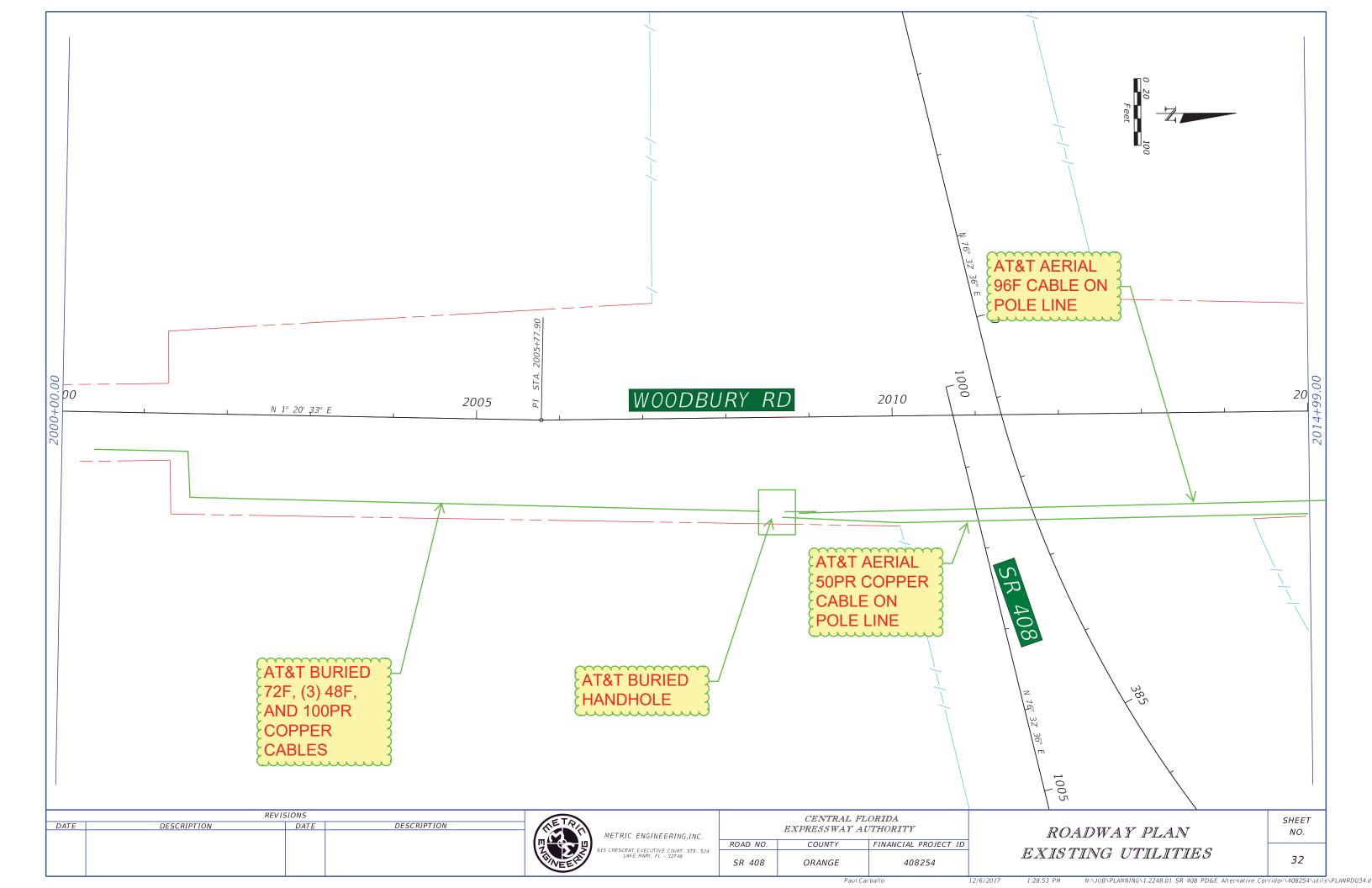


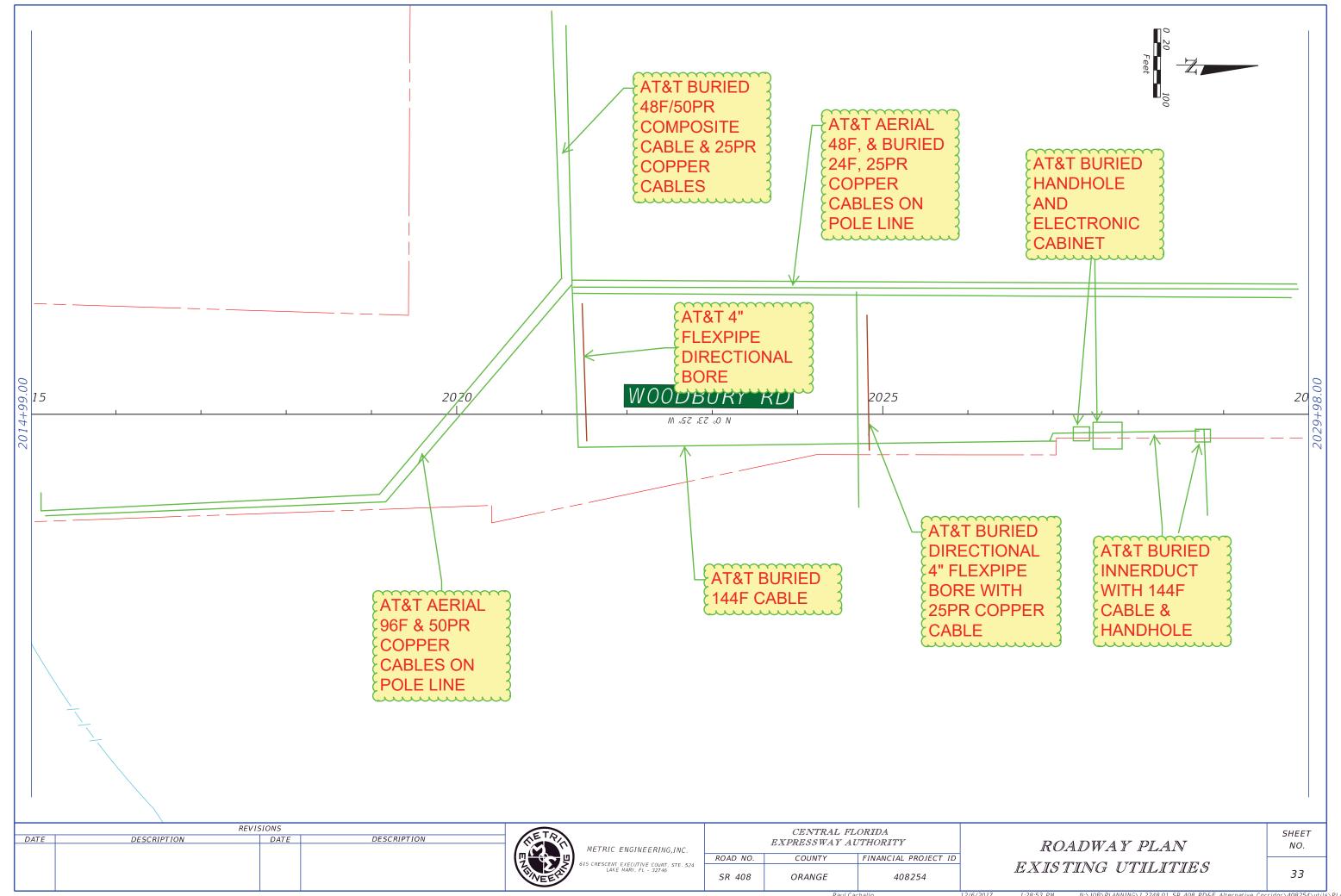


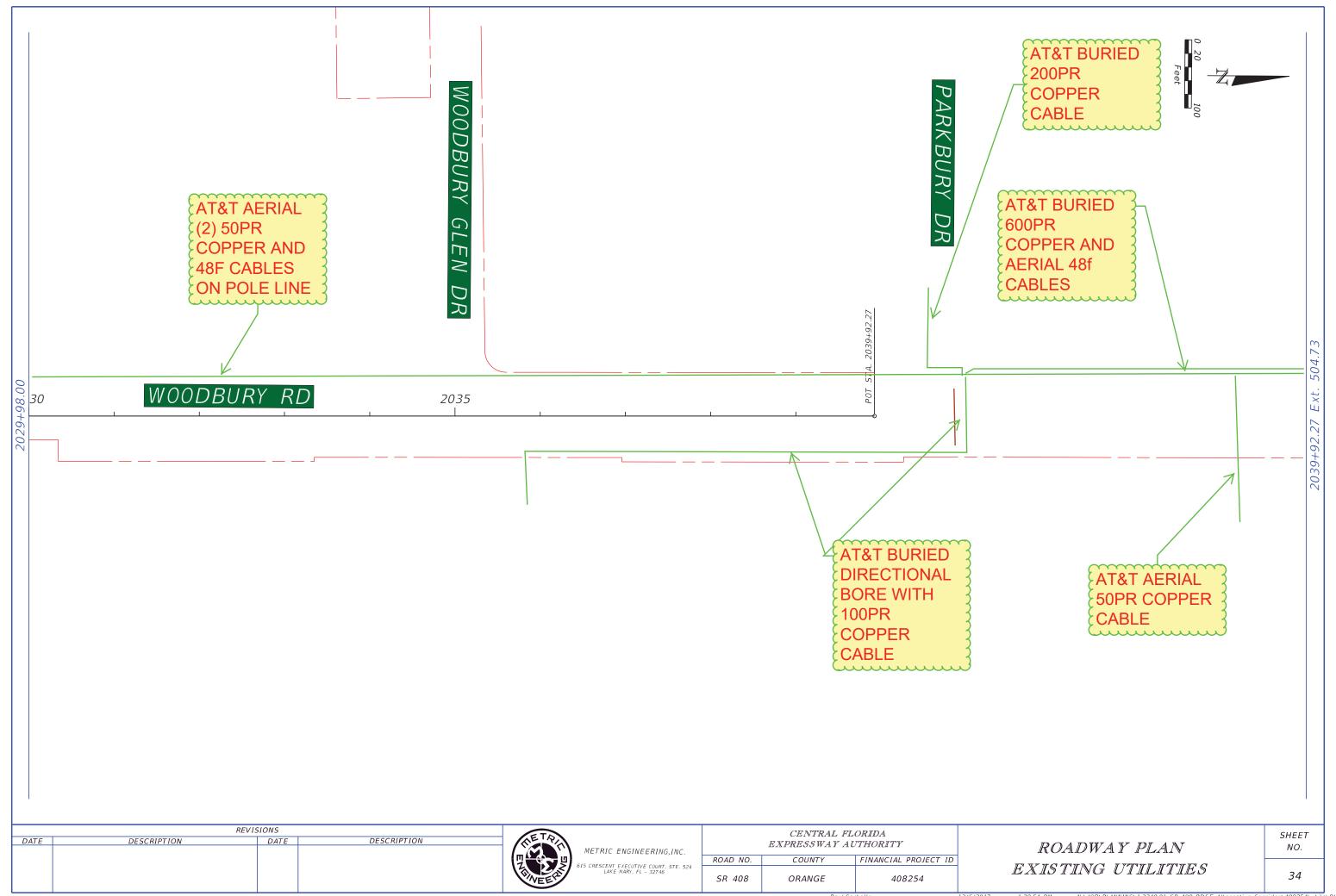


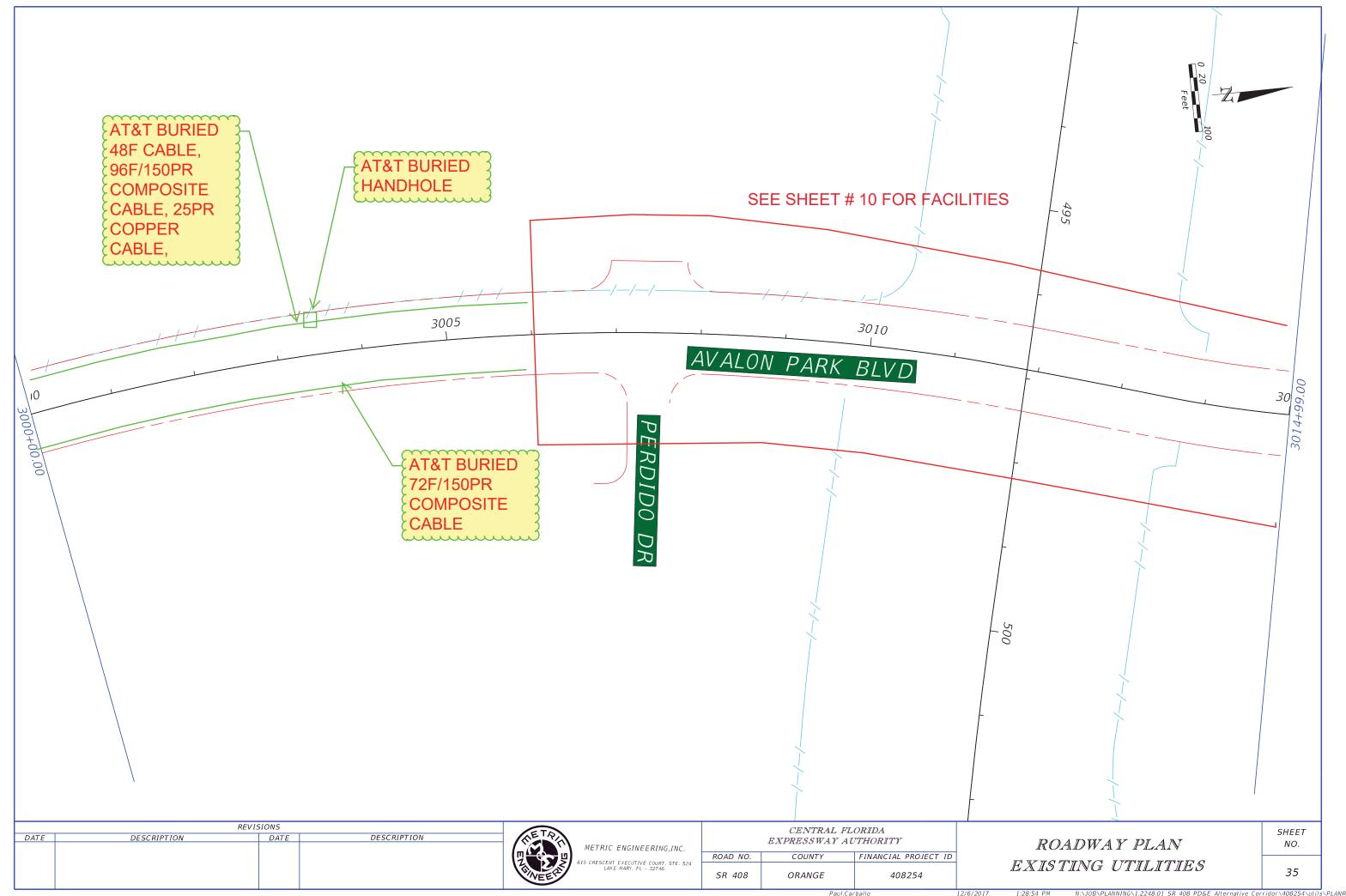


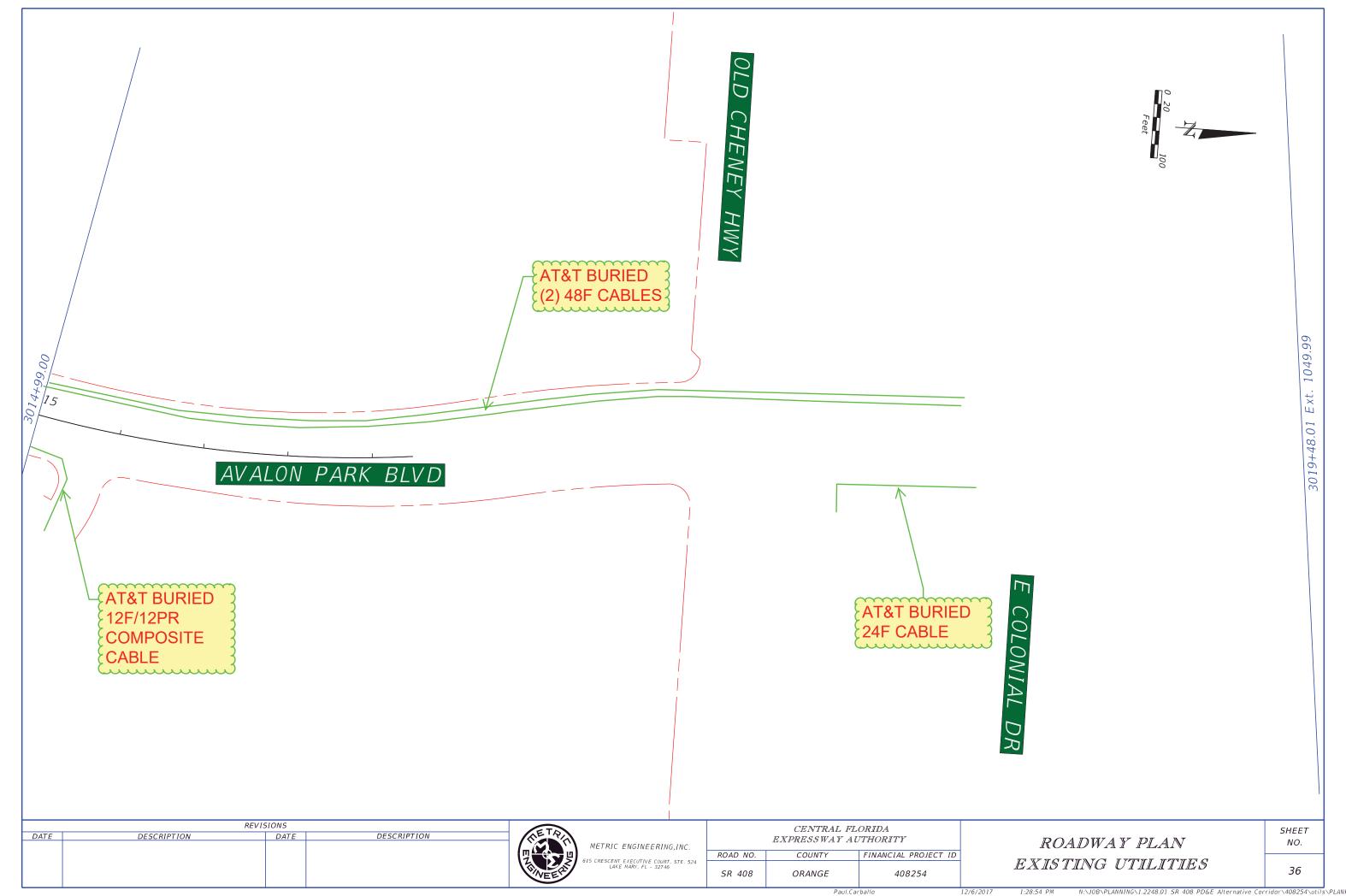


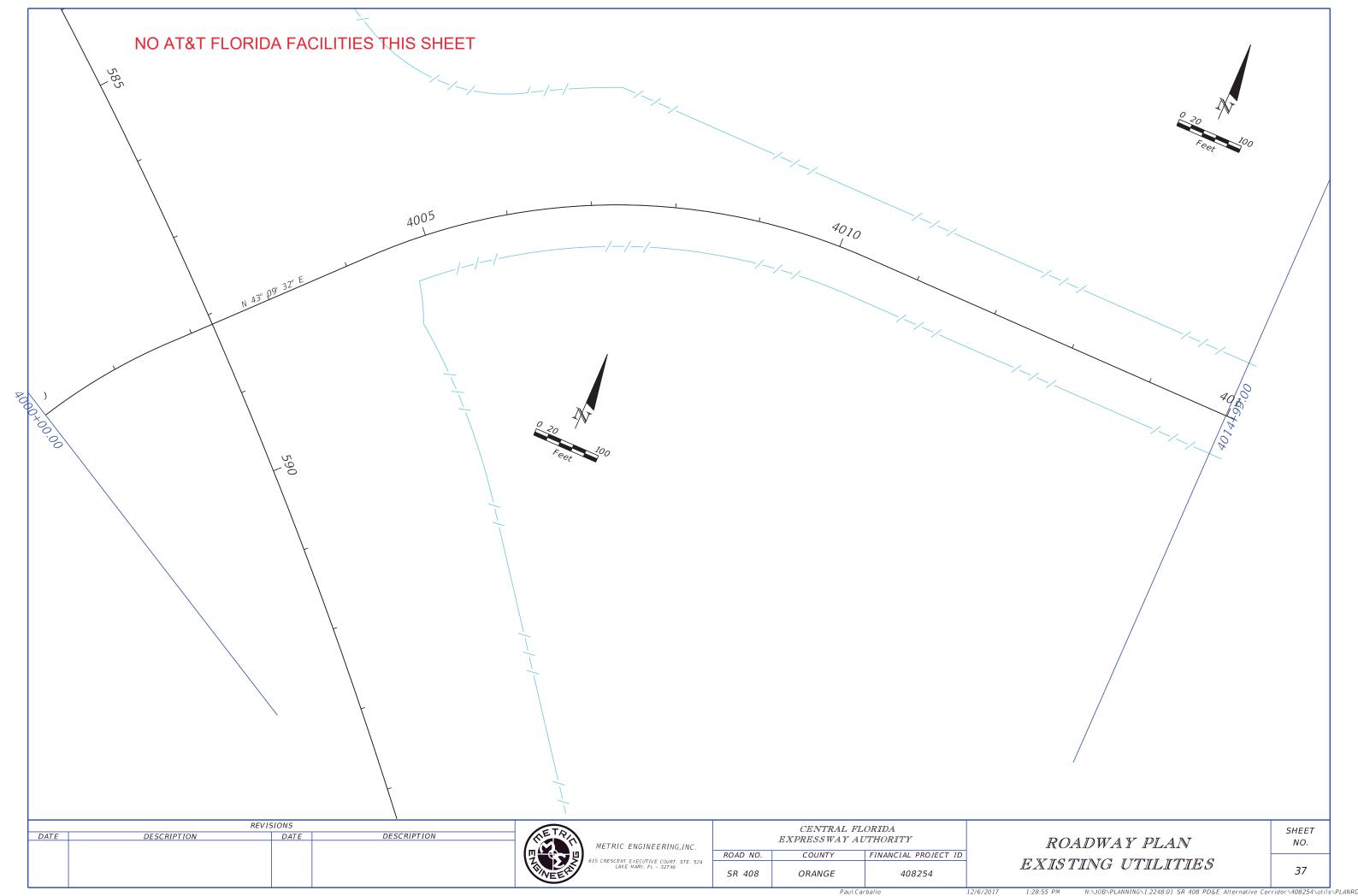


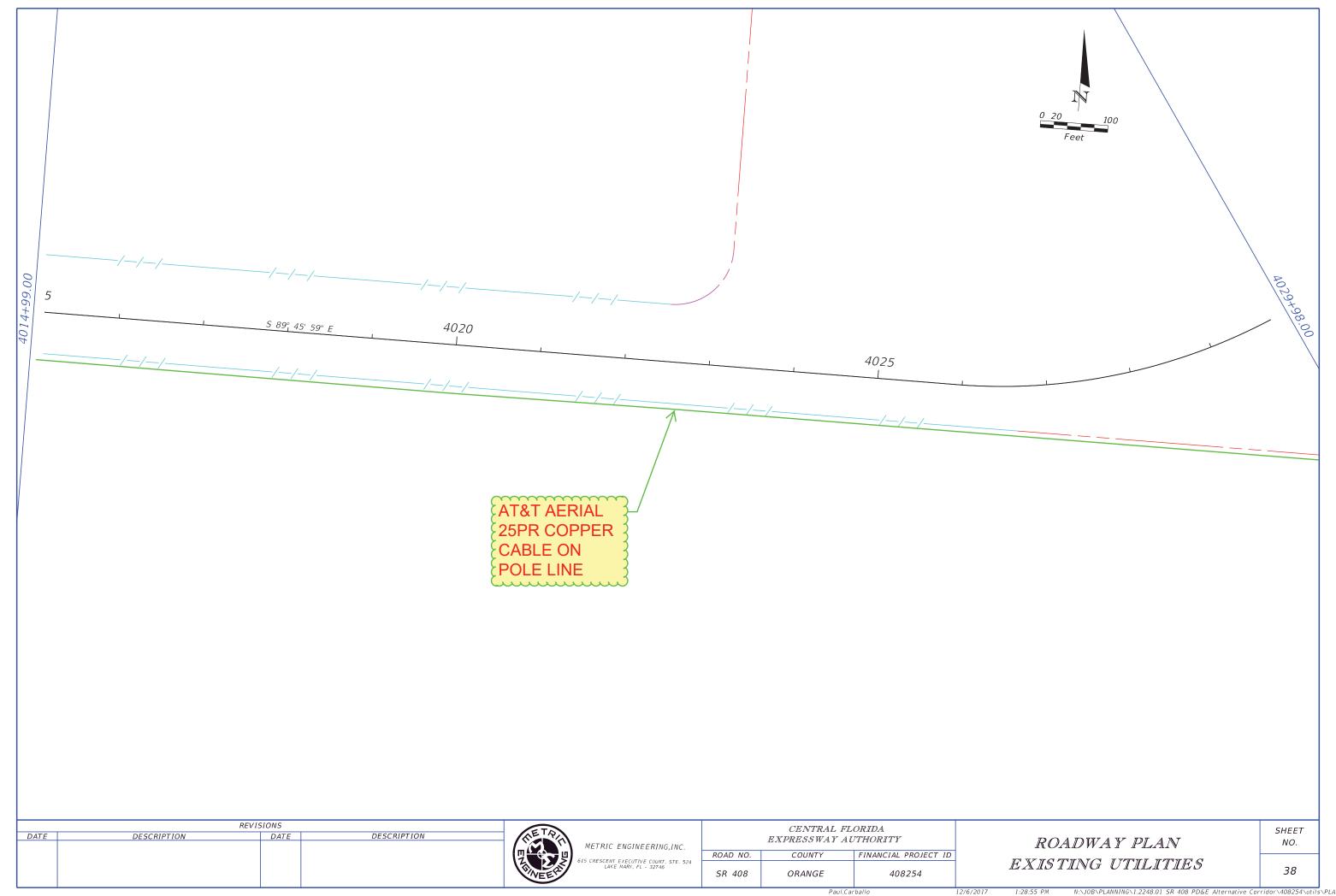


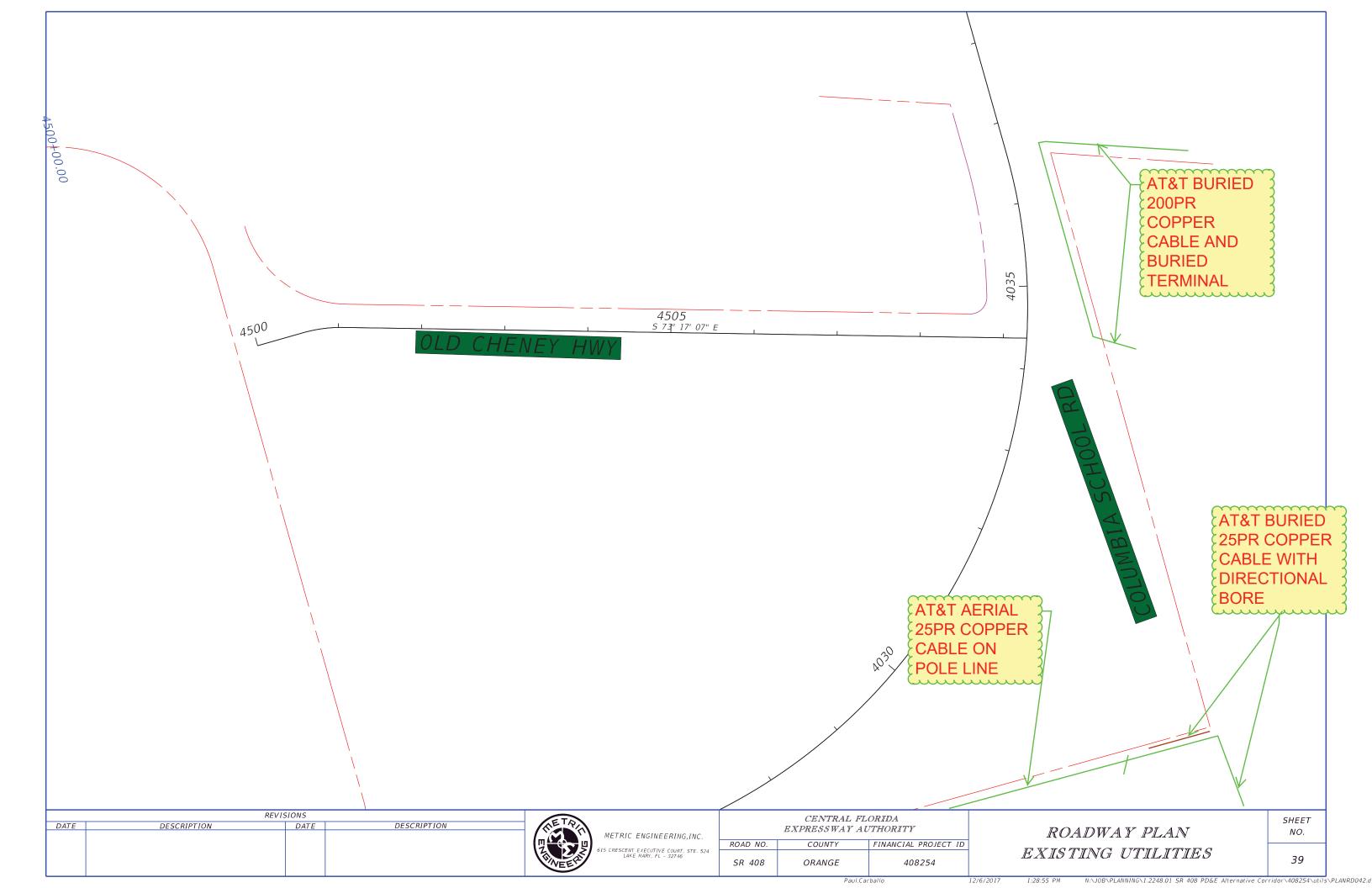


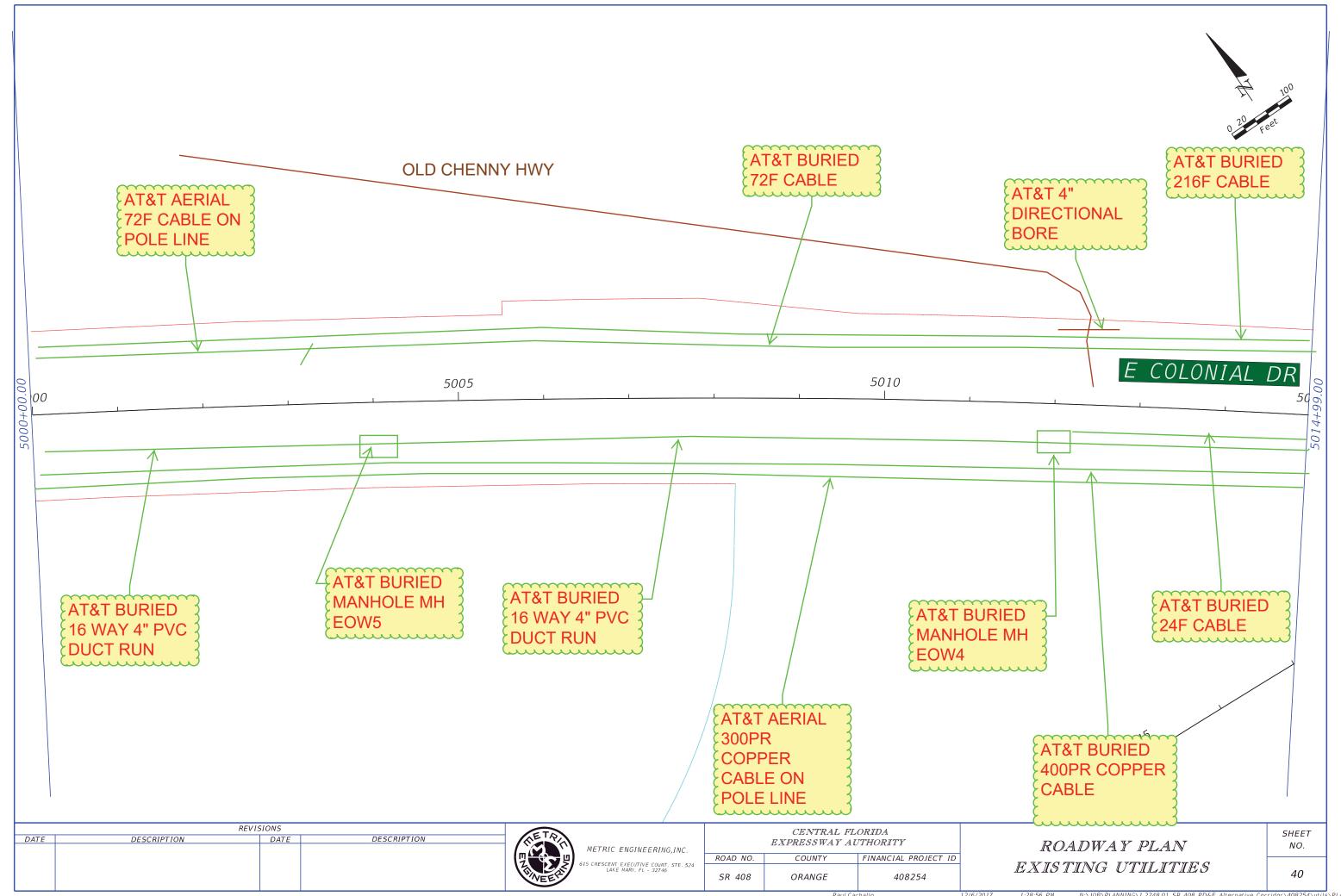


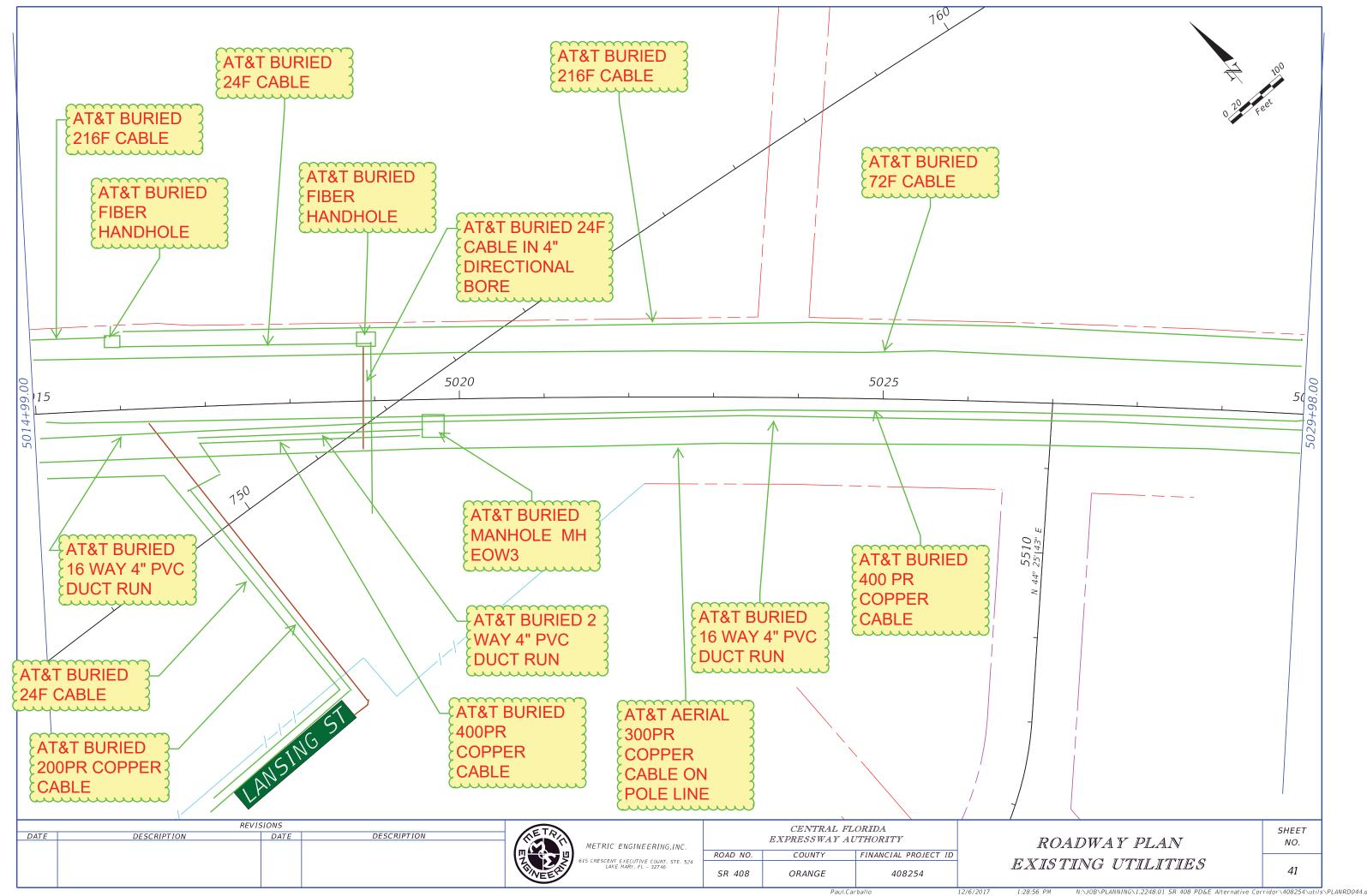


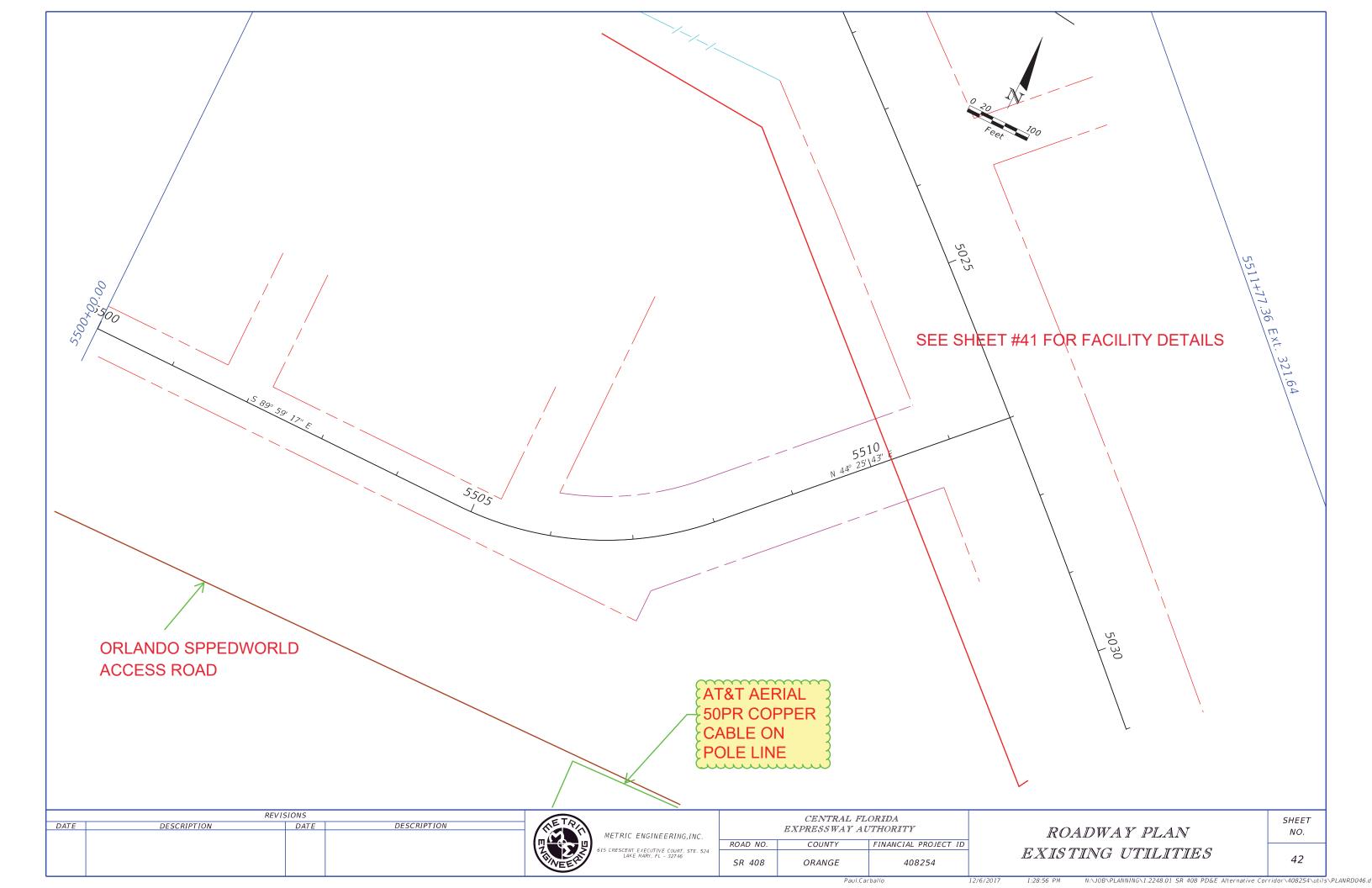














Duke Energy Transmission



January 24, 2018

TO: FDOT, Cities, Counties, Governmental Agencies in general, Developers and All Utility

Coordinators

RE: Duke Energy Transmission Communication Protocol

To initiate utility coordination, please follow the directions outlined below. Please note that Duke Energy Transmission will <u>not</u> be listed on a Sunshine-811 ticket or similar queries. To ensure the safety of all, please follow the protocol detailed in this document on all projects.

o Electronic files (PDF and CADD) email to:

*Preferred method JEWilliams@ucseng.com

cc: DEFTransmissionGOV@duke-energy.com

ARogers@ucseng.com

Hard copies mail to: Aric Rogers at UC Synergetic, LLC

4427 Pet Lane, Suite #E101

Lutz, Florida 33559

Please see attached electronic data request form which describes in detail the electronic data files requested for plans review.

Please direct any further correspondence to Aric Rogers at (813) 909-1245.

Douglas Reed

Engineer I

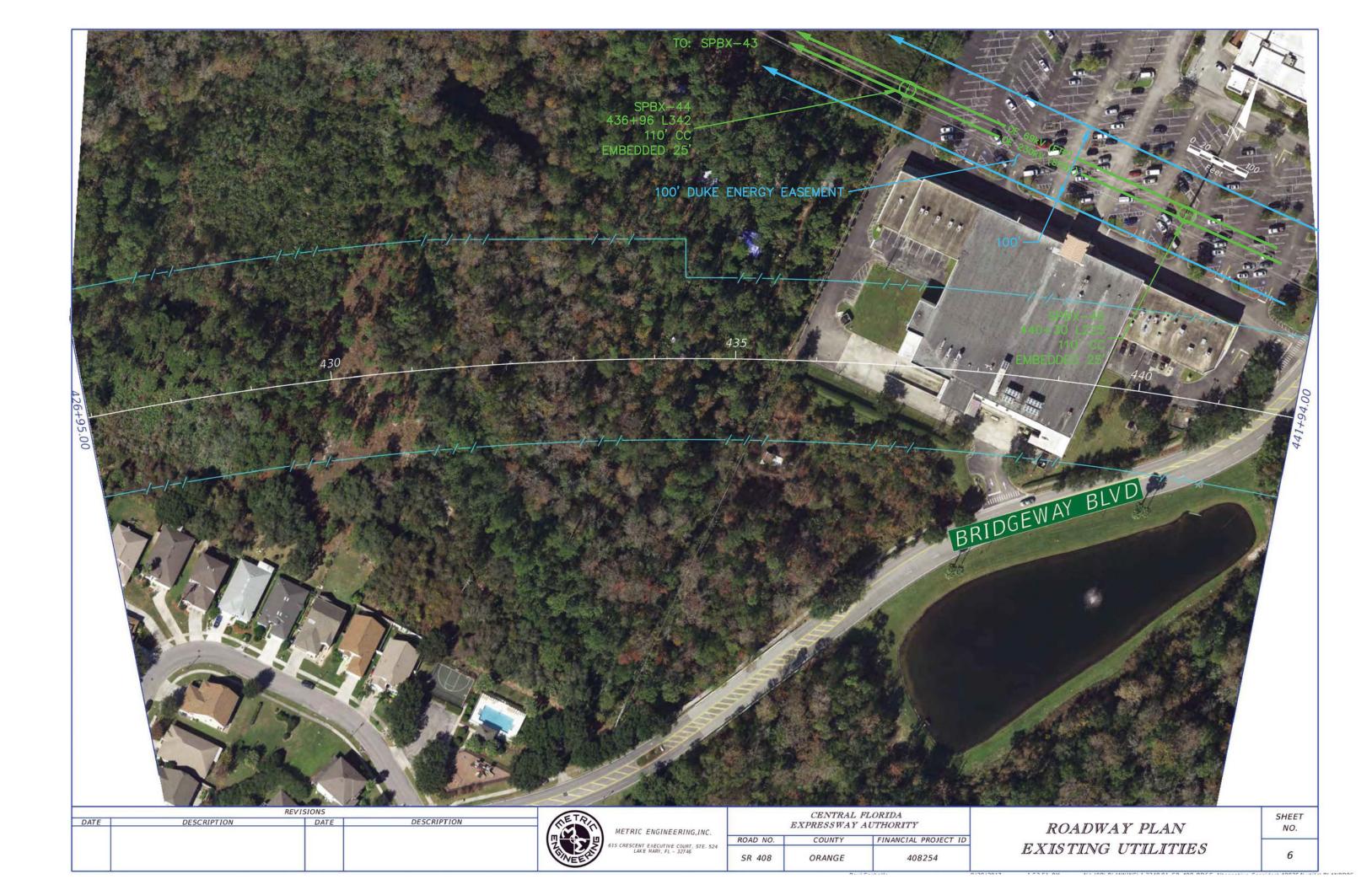
Transmission Line Engineering

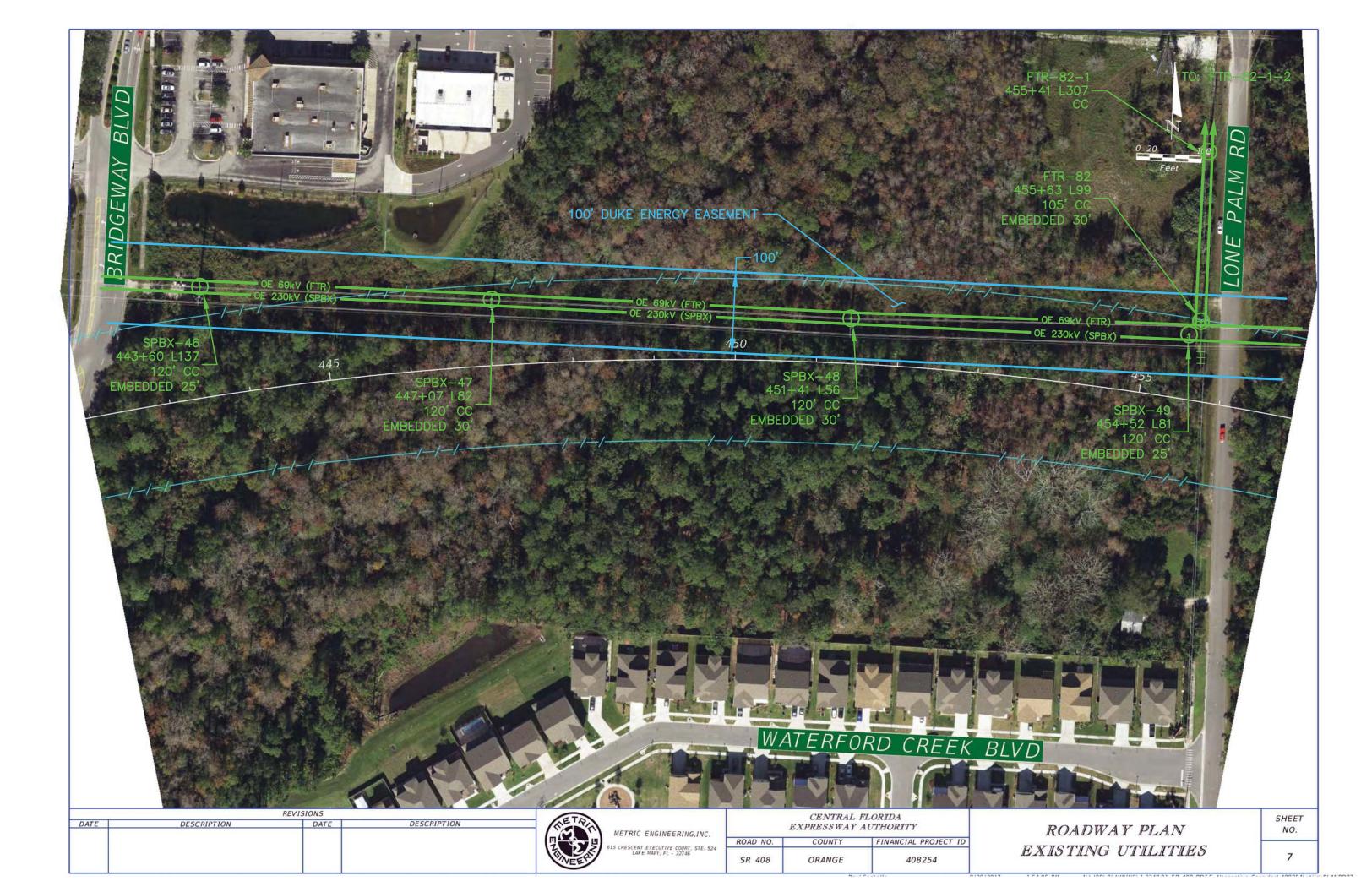
DUKE ENERGY TRANSMISSION RGB NOTES:

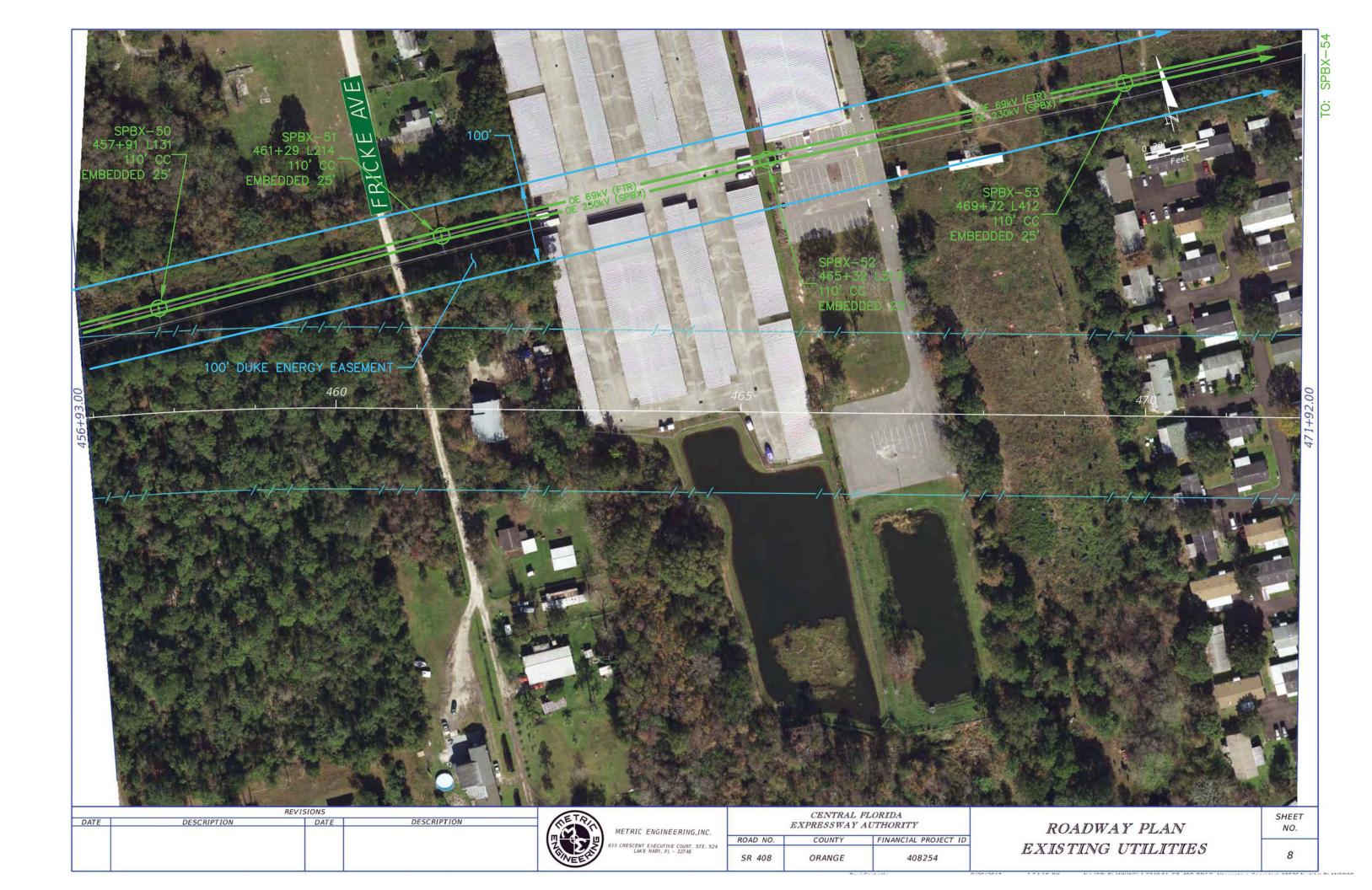
- 1) Contact: George Baxter @ (727) 483-3242
- 2) Notifications to DET:
 - a. Any temporary bracing or holding of DET poles required for construction will require 30—working—days' advance notice to DET. In addition, when roadway contractor is excavating near or around DET facilities, they shall send notification to arrange for a field meeting, and evaluation of work procedures.
 - b. When requesting outages, the contractor must follow the following guidelines:
 - i. The roadway contractor must provide an outage package indicating: the scope of work, start to finish schedule, type of equipment utilized, contractor team contact information, design drawings and other information as identified by DET as necessary. Outage initiation requires a minimum of 28—days from the approval of the outage package. In cases where multiple transmission lines are impacted by the project, DET will only allow one circuit out of service at any given time.
 - ii. If at any time a de—energized line will need to be placed back into service, such as a system emergency (é.g. hurricane, loss of another transmission line, and/or extreme load, etc.) DET will ask the roadway contractor, within a two—hour period, to shut down any construction that would restrict DET construction crews from placing the de—energized line back into service.
 - iii. Typically, any de—energizing of any DET lines can occur during the following time periods: October 1st to November 15th, and March 1st to April 15th. Any additional required de—energized time periods needed throughout the project will need to be coordinated with the UAO representative previously listed.
 - iv. Typically an outage cannot exceed a two—week duration; a new request may be required if additional outage time is needed.
 - v. DET can NOT guarantee that the roadway contractor will get the approval for the outage; it is the contractor's responsibility to follow up with the above—listed contact.
 - vi. If for any reason the outage was approved but can't be accomplished, the DET will reserve the right to cancel the outage with 2—hours advance notification.
 - vii. In cases where multiple transmission lines are impacted by the project, DET will only allow one circuit out of service at any given time.
 - viii. A responsible representative from the roadway contractor's staff will attend all daily and necessary pre—job briefing meetings conducted by DET.
 - ix. An outage that is reimbursable to DET may require payment prior to the initiation of the outage.
- 3) This project is to be constructed in the vicinity of energized 230 & 69kV OH transmission.
- 4) When doing any work or task under or near any DET facilities, all NESC & OSHA guidelines must be adhered to.
- 5) Any relocation of existing or proposed DET facilities beyond what is described in this document that is required to accommodate construction will require notice sufficient to cover analysis, design, material logistics & mobilization/demobilization.
- 6) When the roadway contractor is excavating around DET facilities, they shall provide at least a 15—foot horizontal clearance to the facility; if this cannot be met, a notification must be sent to the UAO Field representative previously listed to arrange for a field meeting.
- 7) The roadway contractor is prohibited from stacking material (soils, fill dirt, gravel, etc.) under or near energized overhead power lines.
- 8) No grading is allowed within any DET easement without prior approval from Duke Energy Asset Protection.
- 9) The road plans and/or survey provided did not reflect existing DET facility locations. Transmission facilities as shown on marked RGB plans are approximate and require additional field surveying for accuracy.

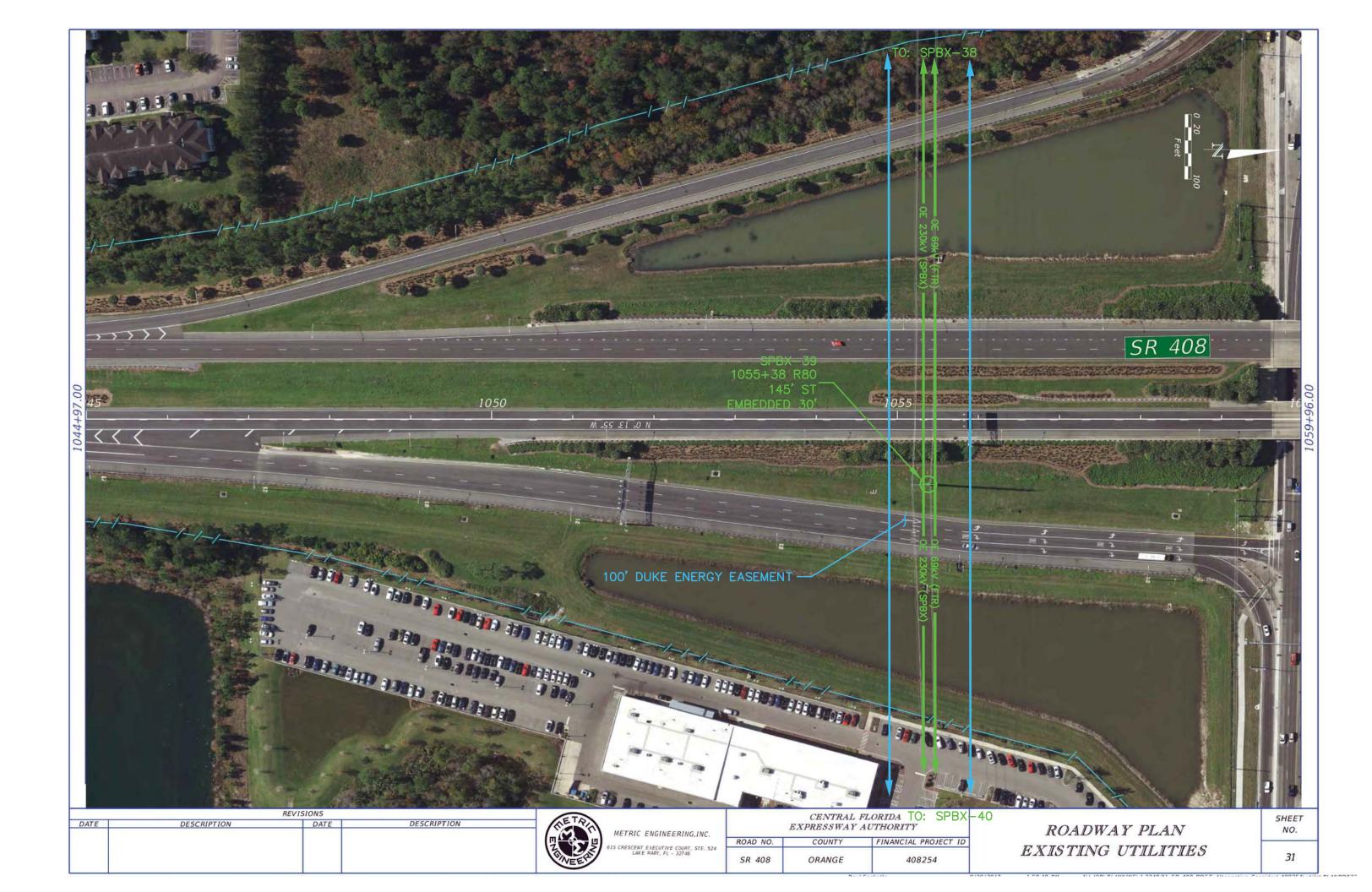
THESE NOTES SHALL APPLY TO ALL RGB SHEETS CONTAINED WITHIN THIS DUKE ENERGY TRANSMISSION RGB SUBMITTAL

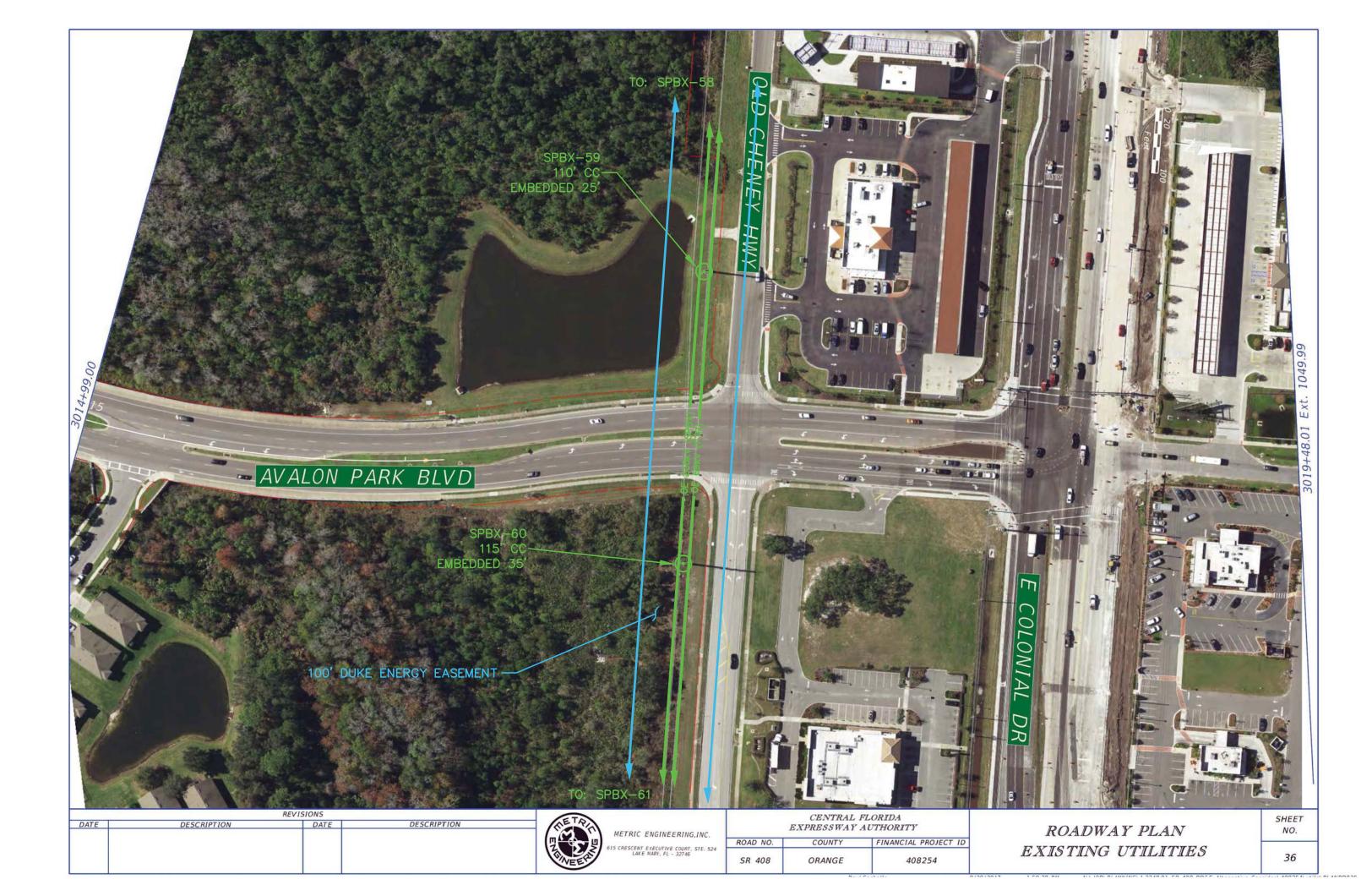
ROAD NO.	COUNTY	FPID	PLAN STAGE	PLAN STAGE DATE	UCS: 22-011
SR 408	ORANGE	408254	PD & E	8/28/2017	THOR: n/a
					DATE: March 19, 2018





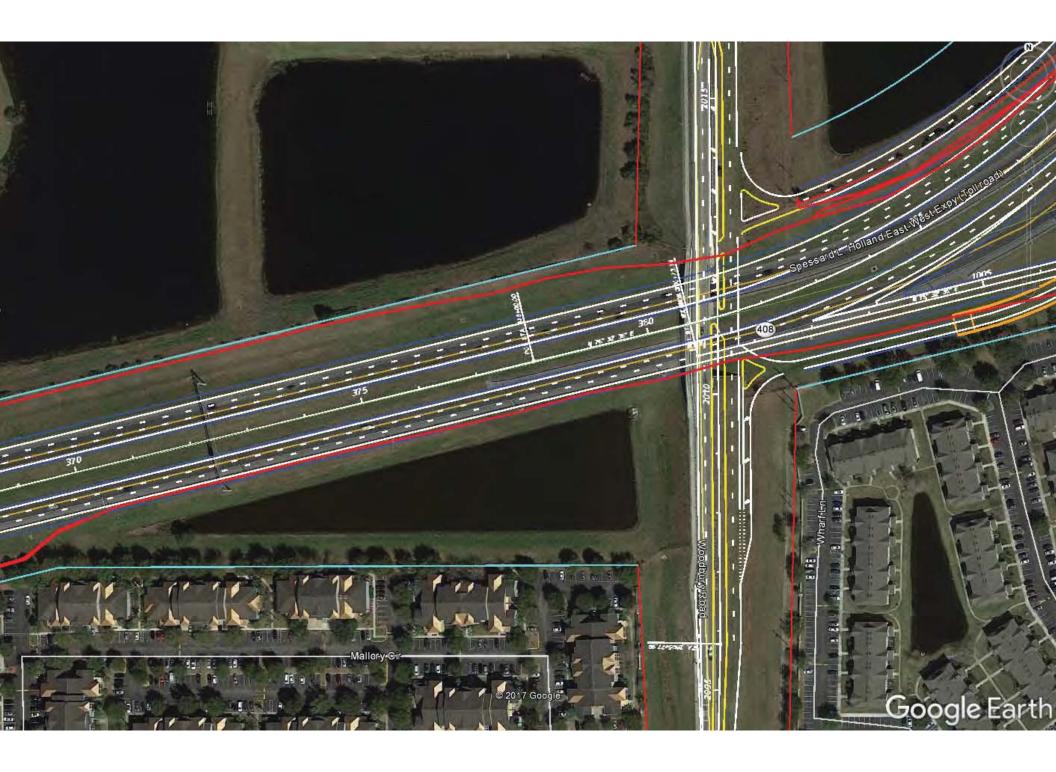


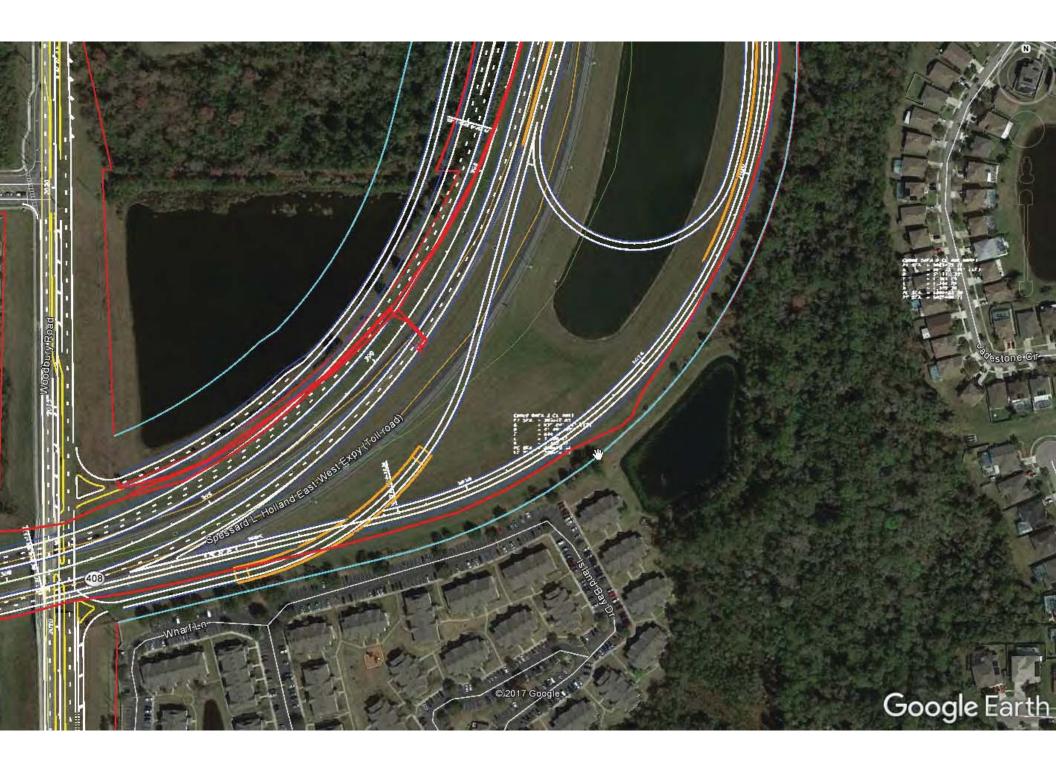




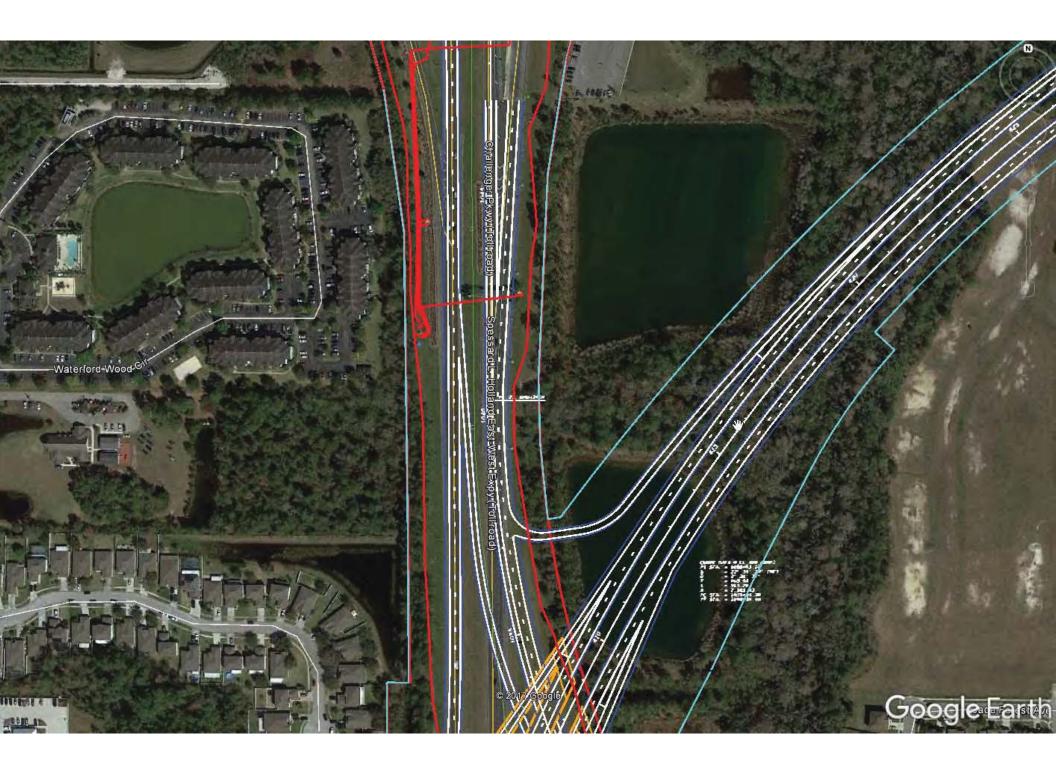
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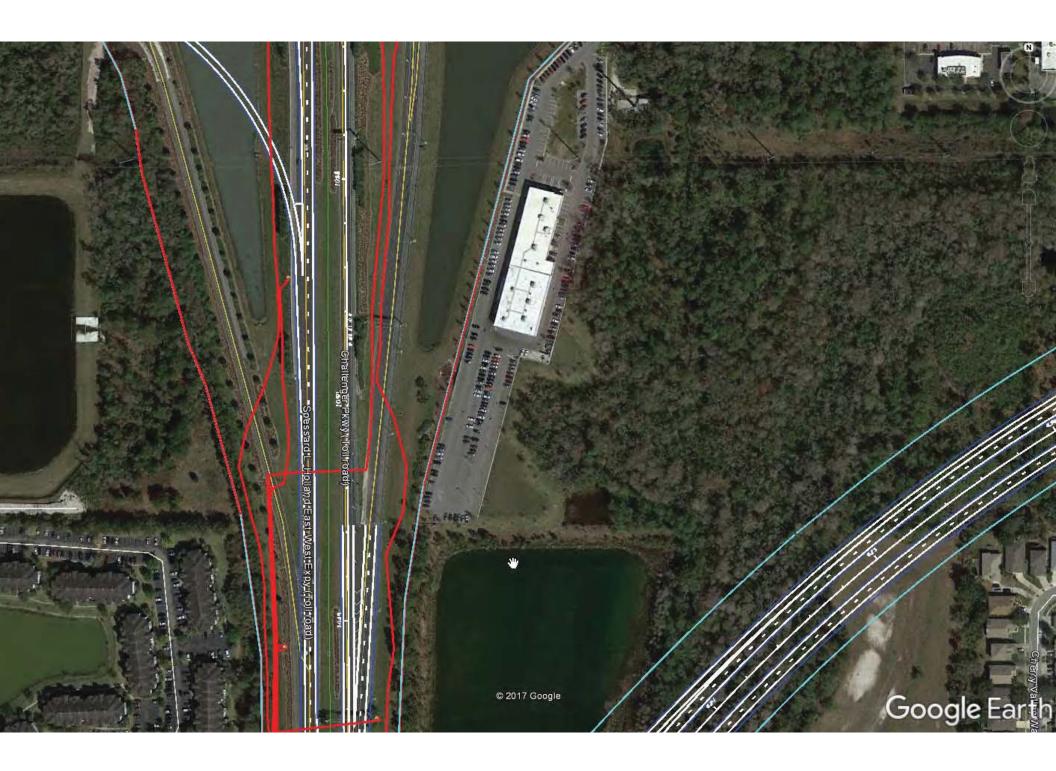






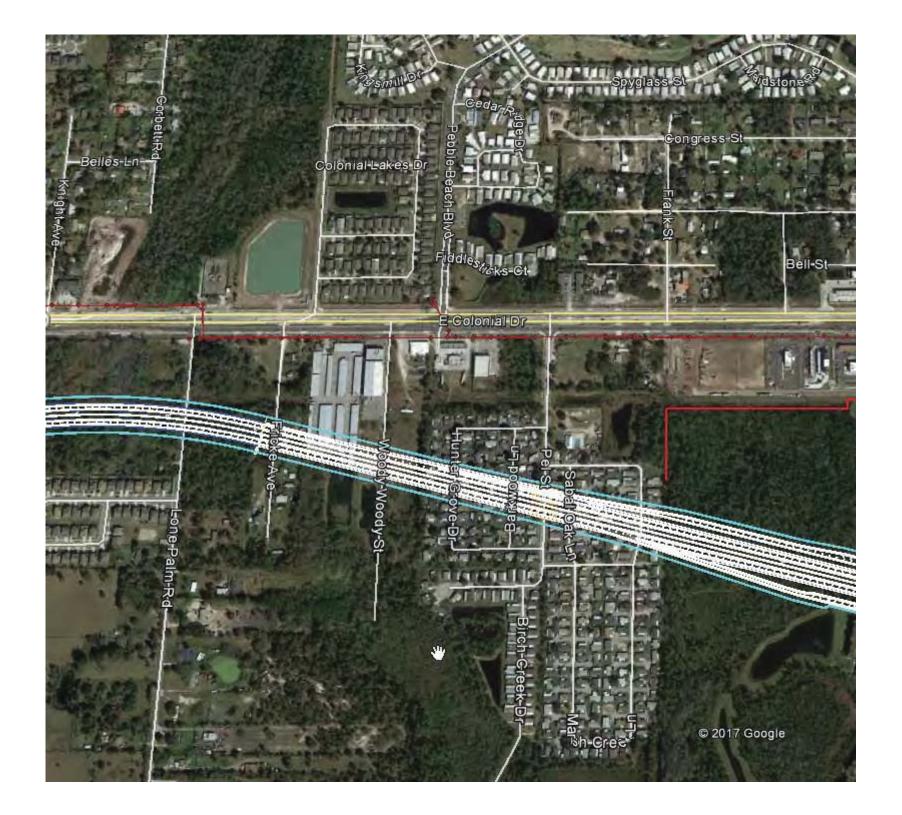


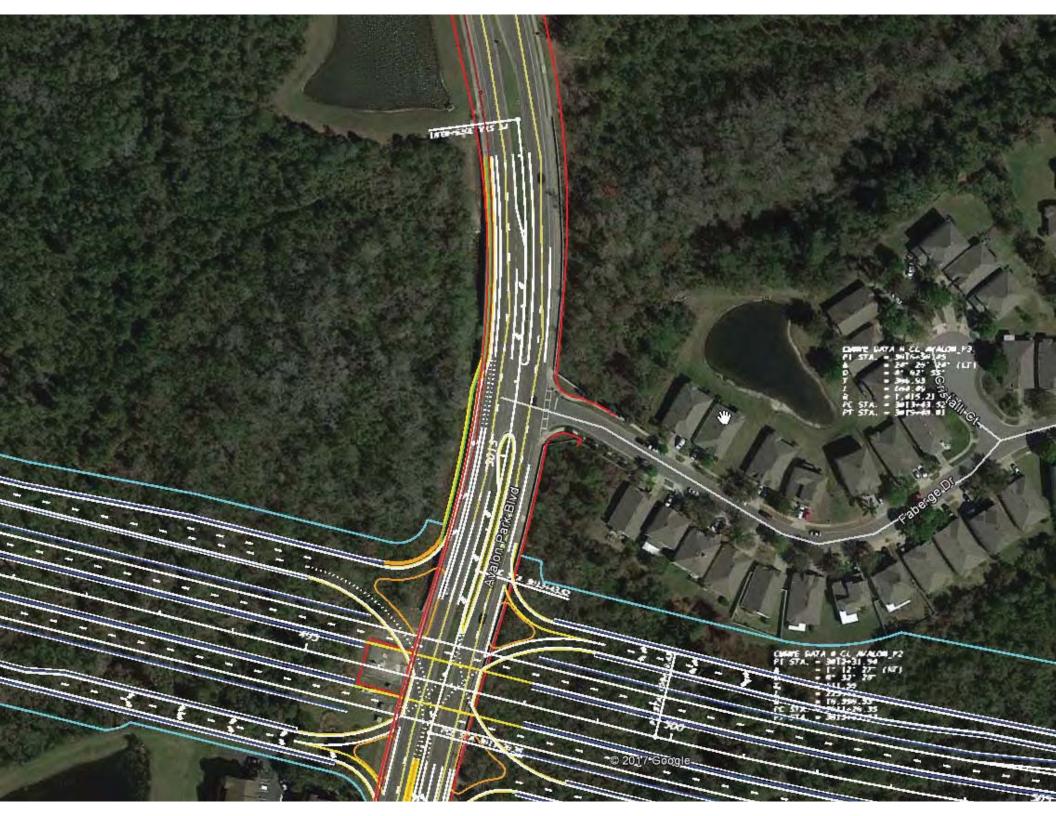


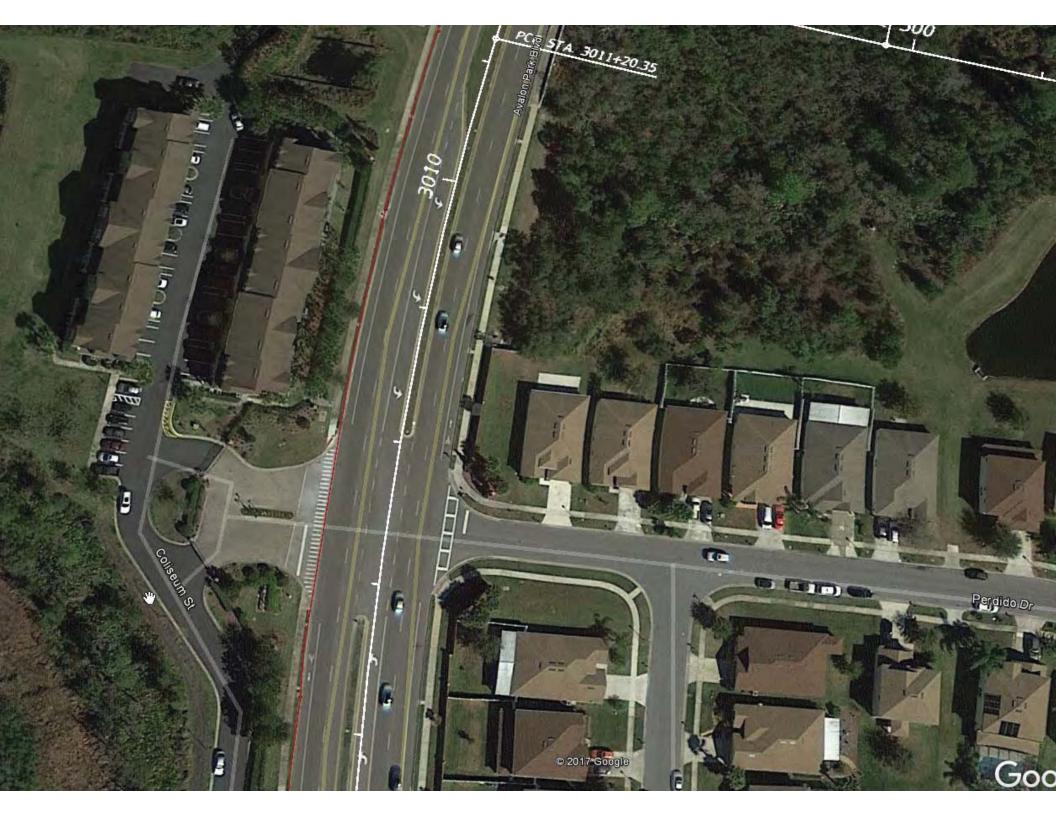


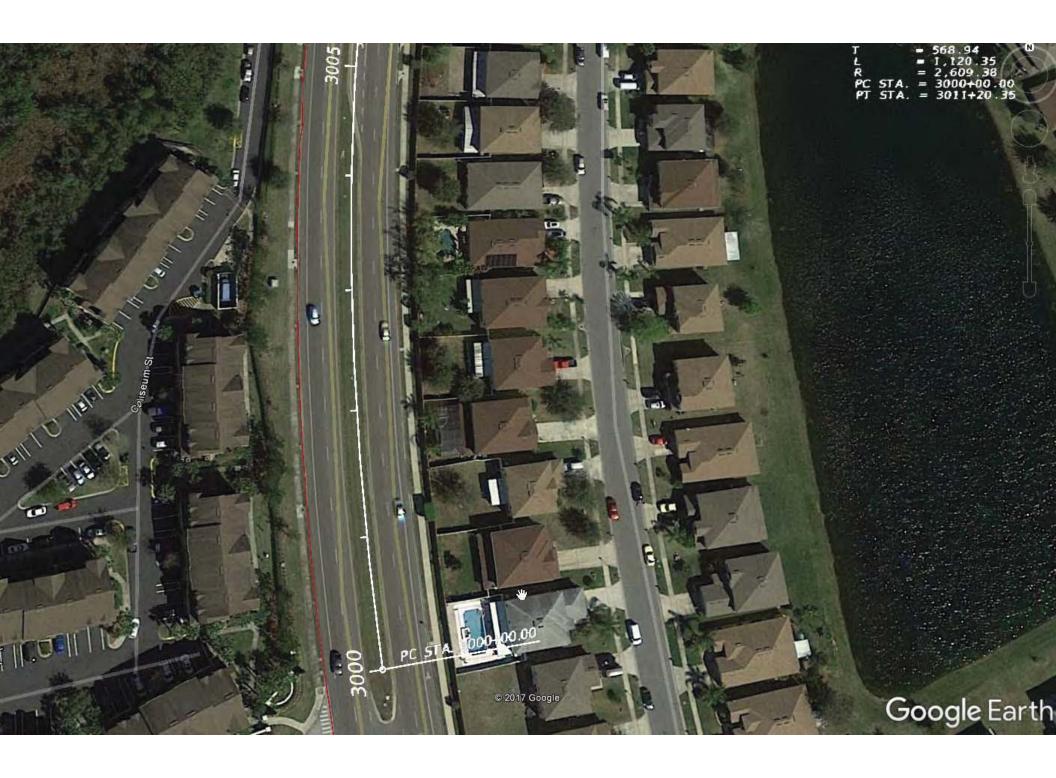


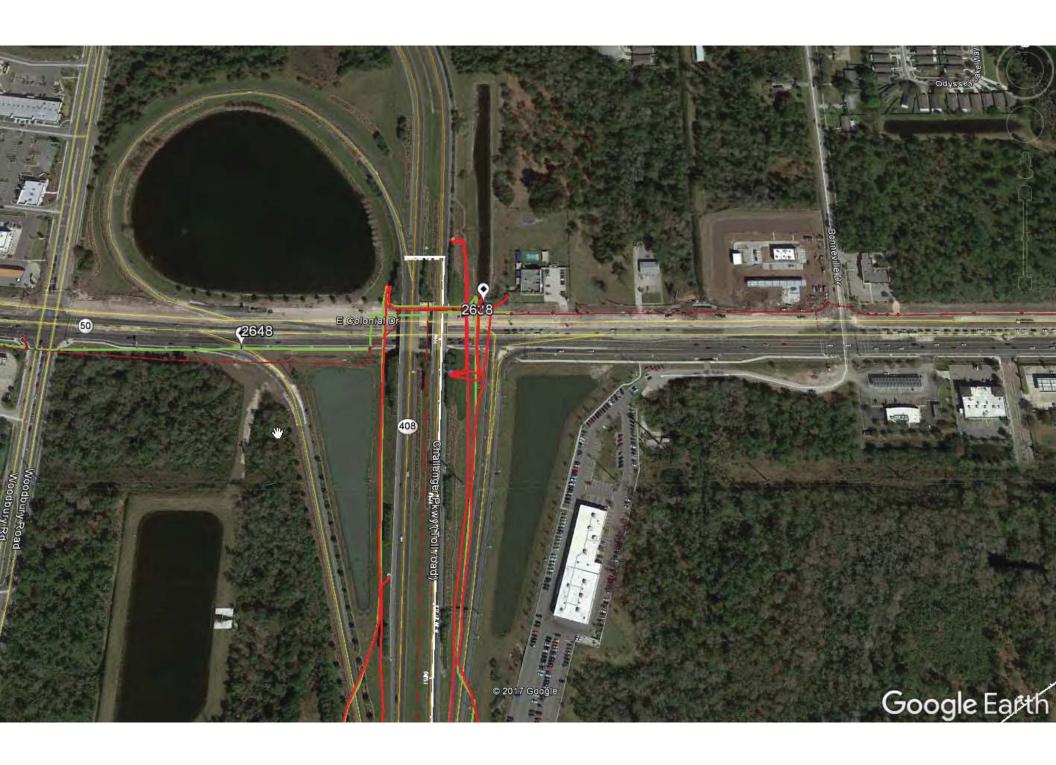












Lovelace Gas Service



10606 E. Colonial Drive Orlando, FL 32817-4497 Phone (407) 277-2966 www.lovelacegas.com

September 22, 2017

William Sloup, PE Metric Engineering, Inc. 13940 SW 136th Street Suite 200 Miami, FL 33186

REF: PD&E Study for the Proposed SR 408 East Extension

Dear Mr. Sloup,

I am in receipt of the preliminary construction plans for the project referenced. Please be advised that our company does not have any permanent facilities in current public right-of-ways. We may have propane tanks that are within the proposed project vicinity, but they can be easily removed when construction begins. A typical cost to move these cylinders is \$75 each.

Sincerely,

Garry Lovelace

President

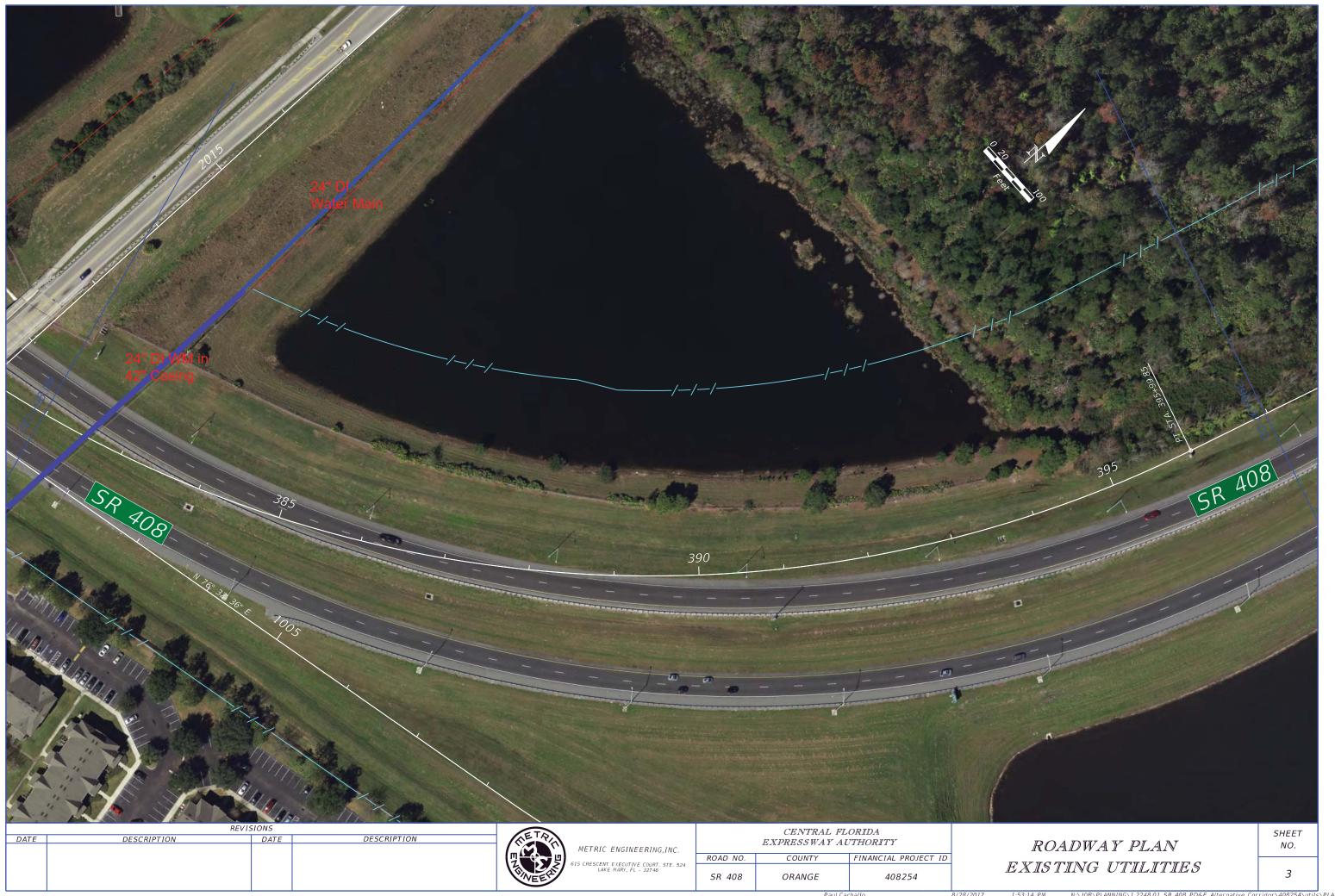
Orange County Utiliites

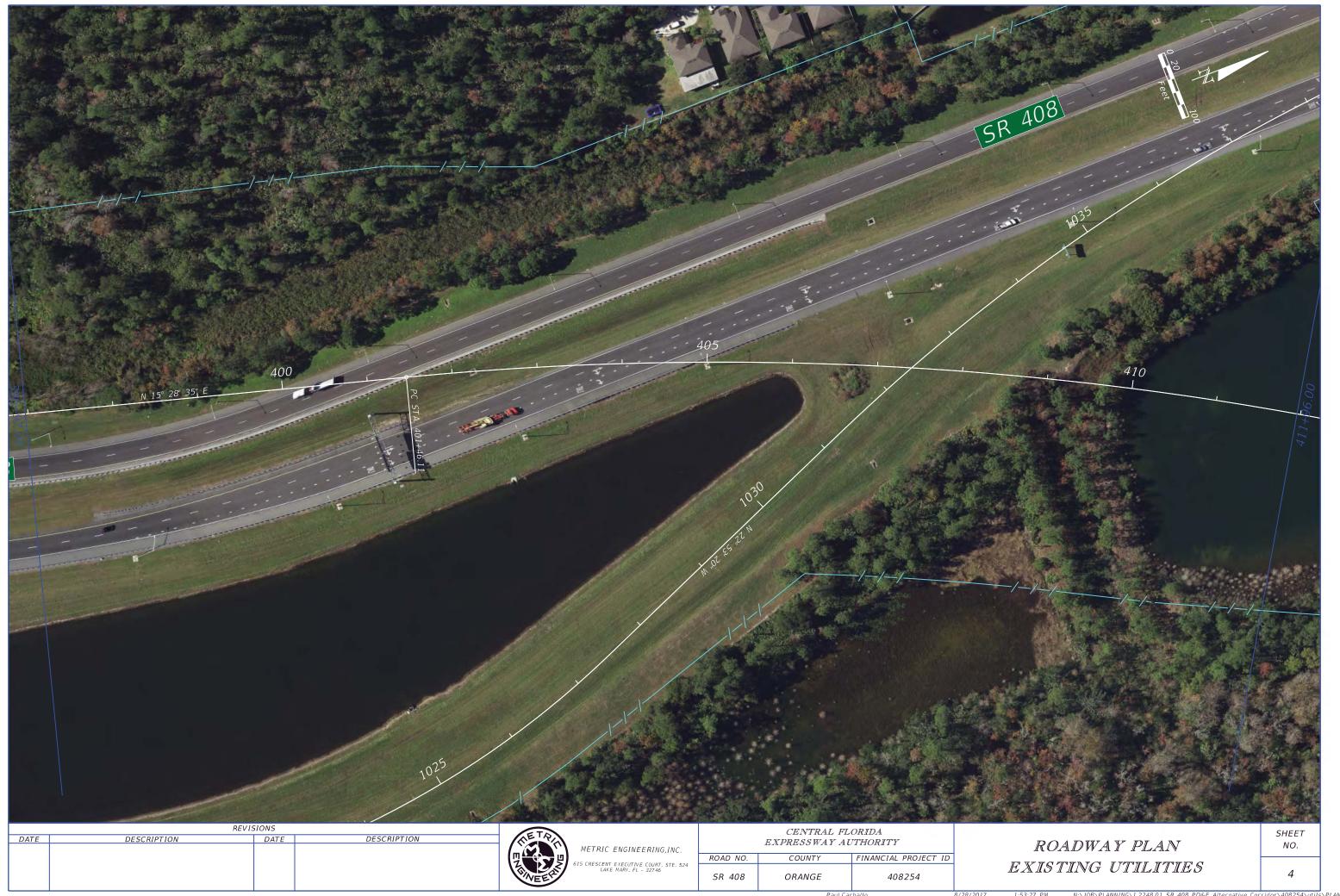


Paul.Carballo

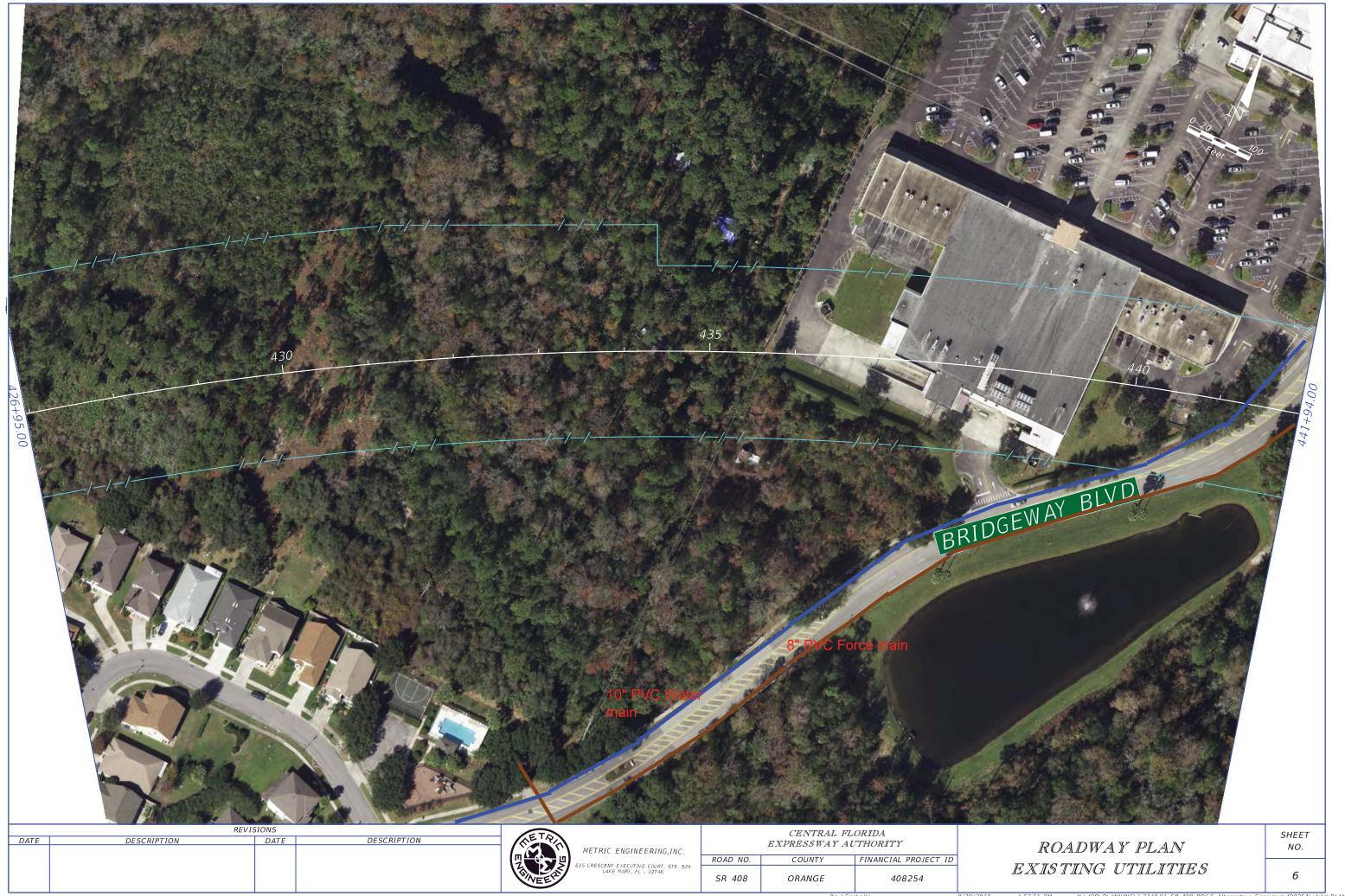
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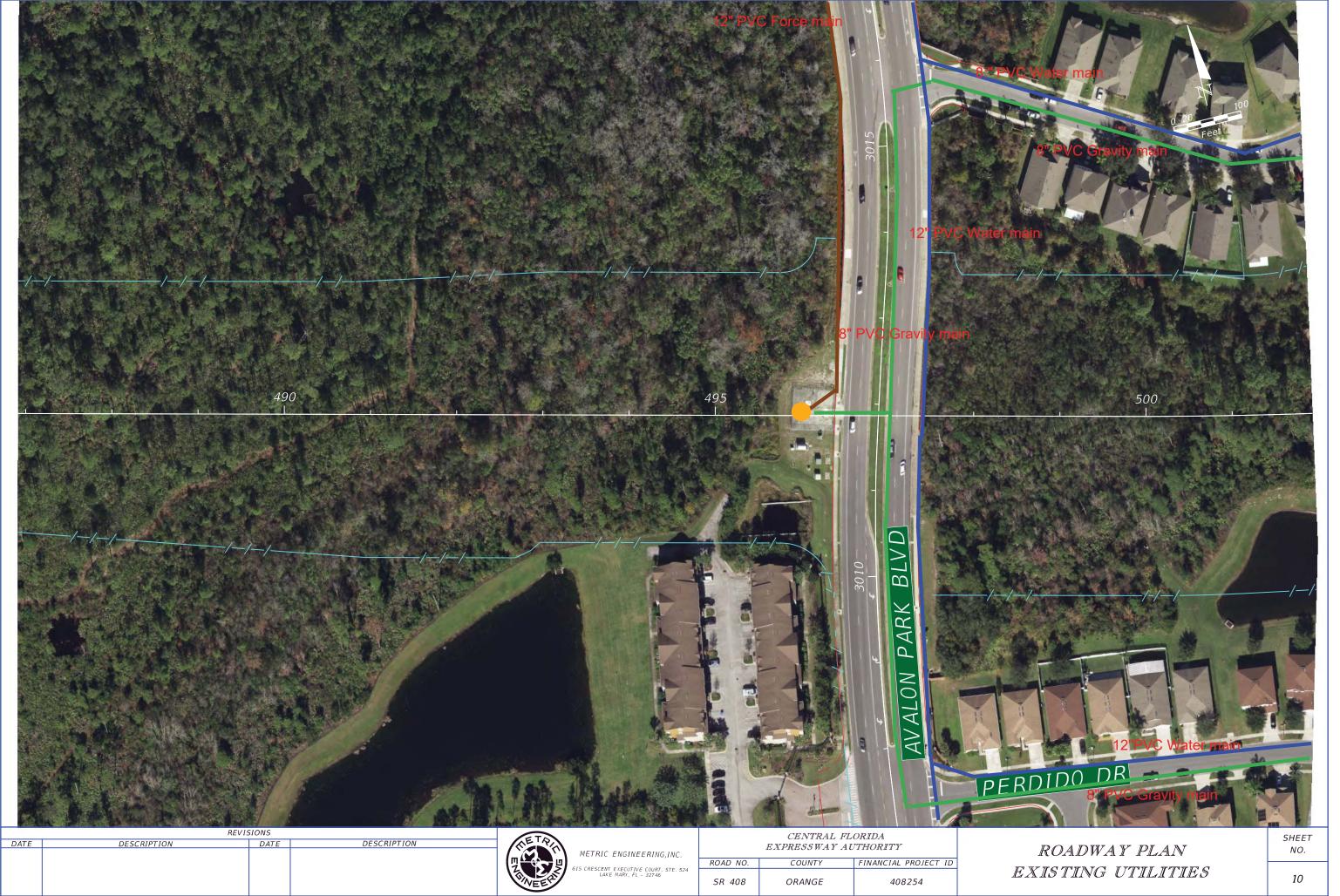


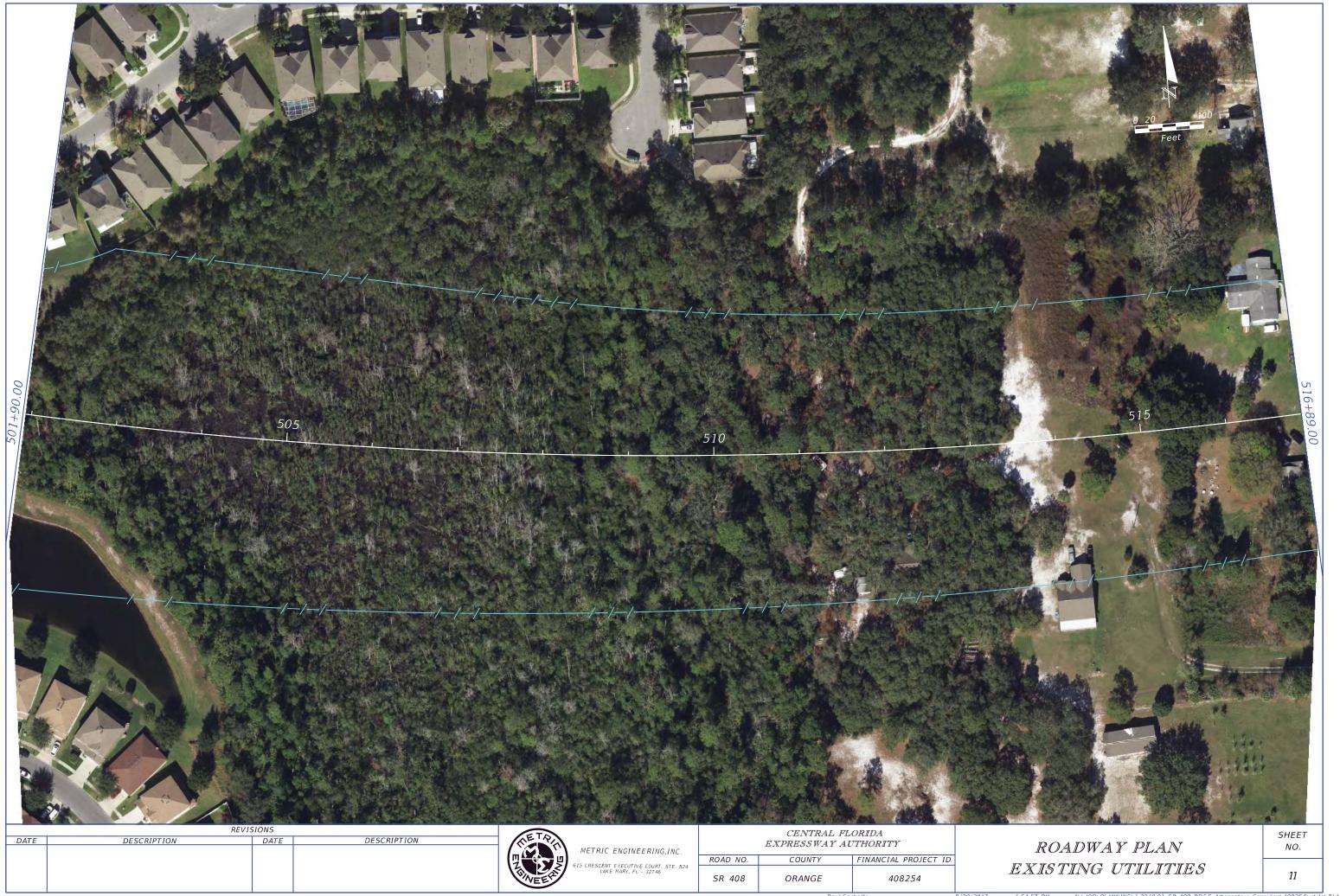


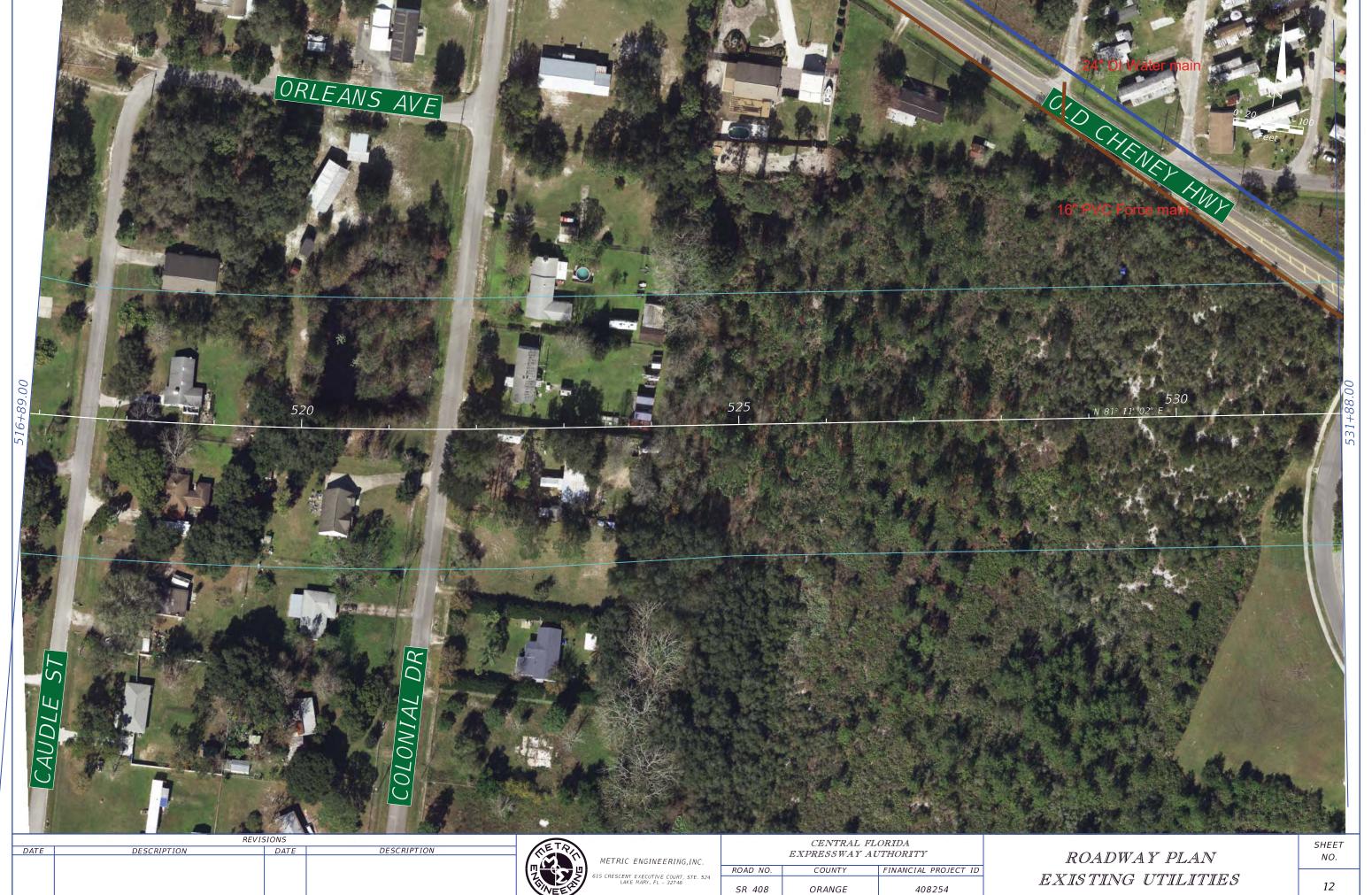








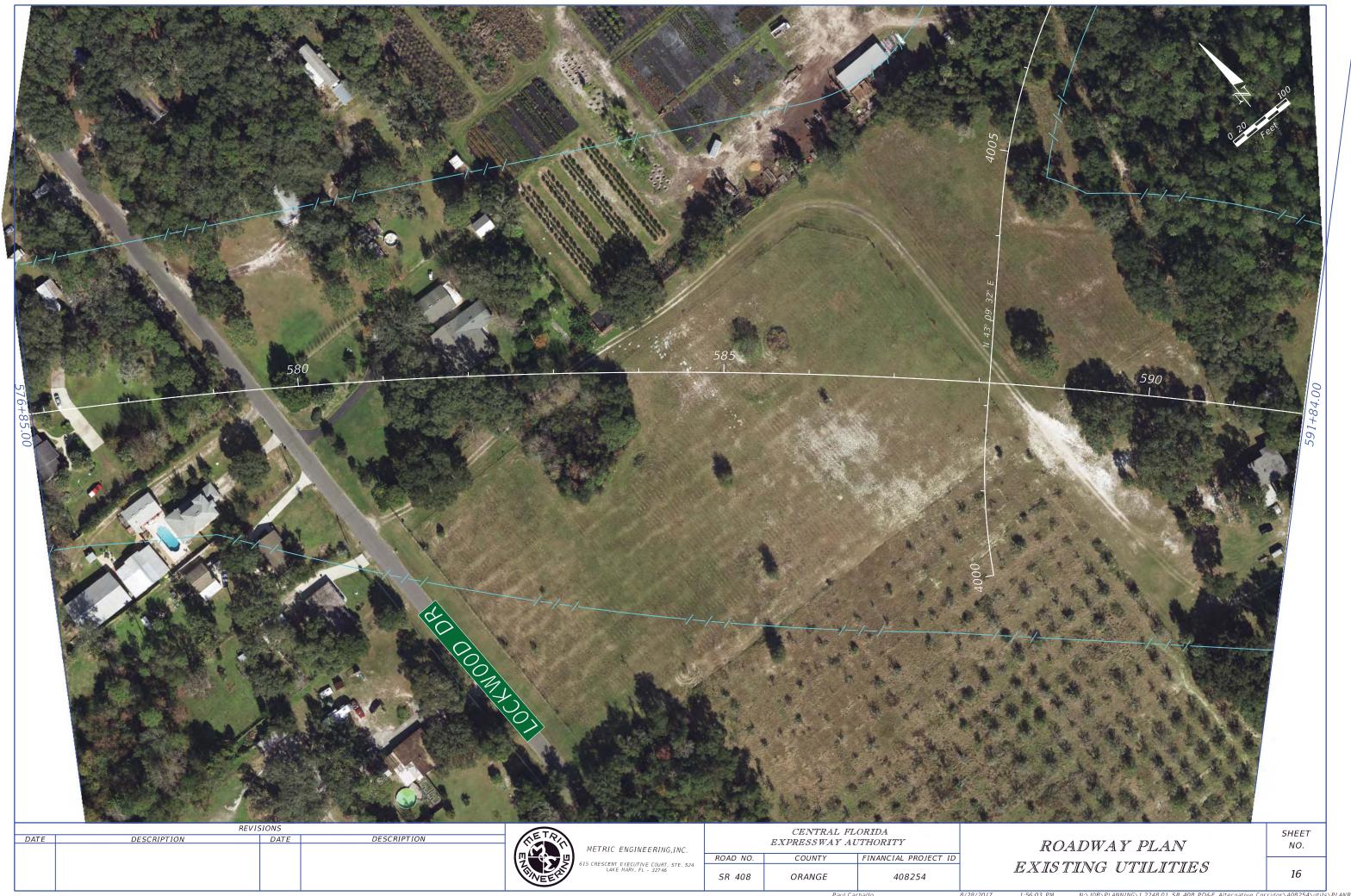










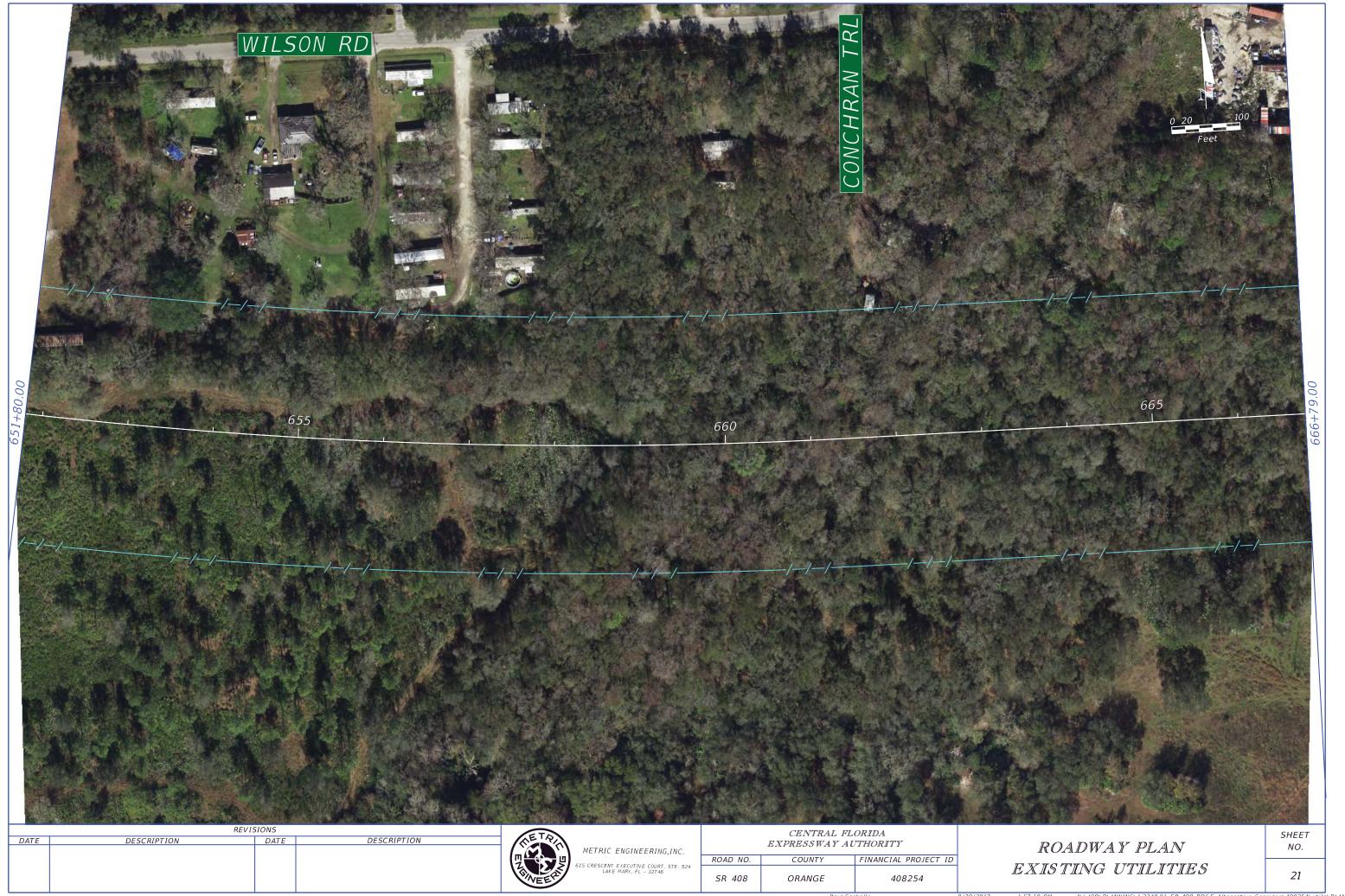








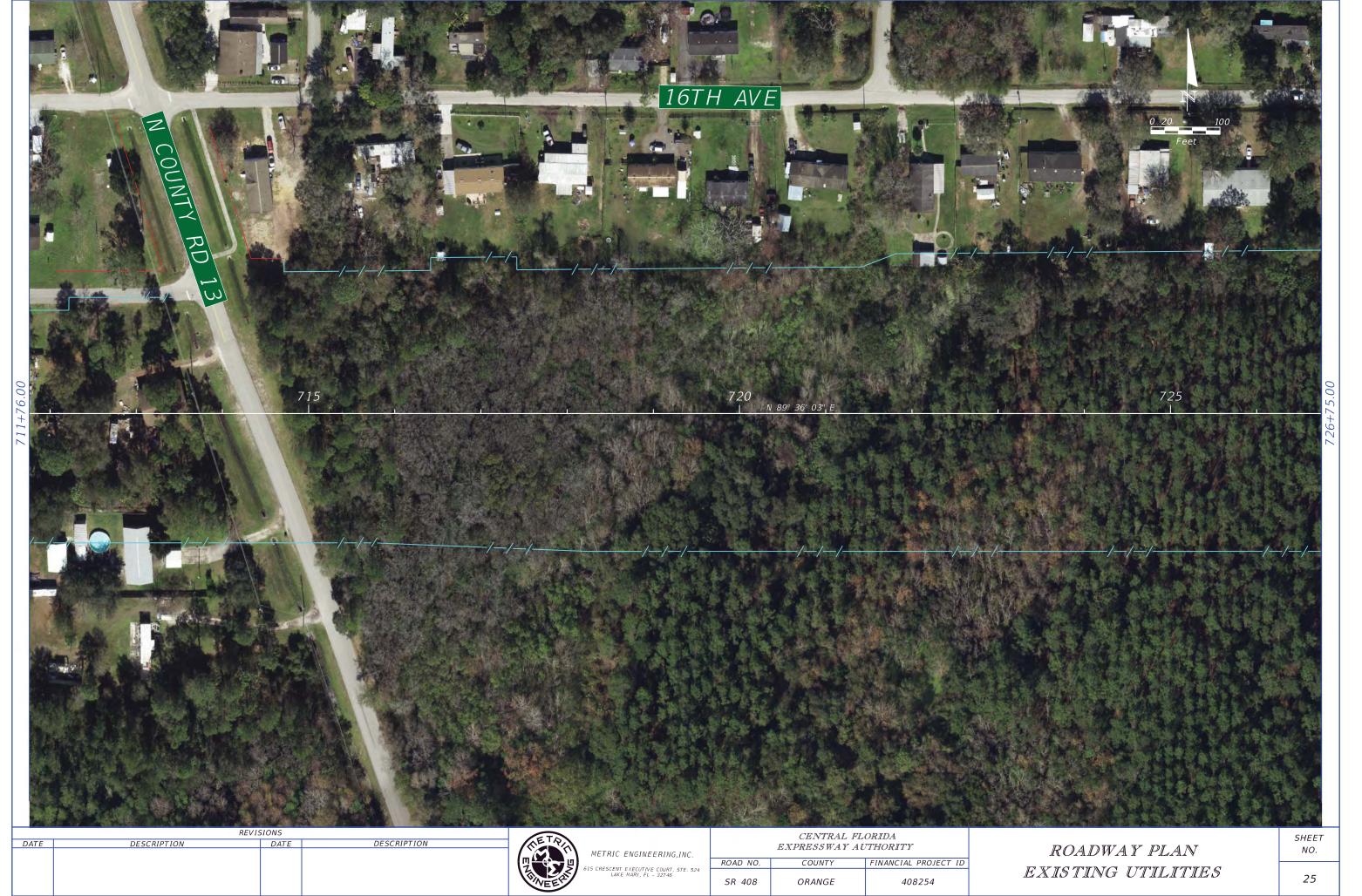












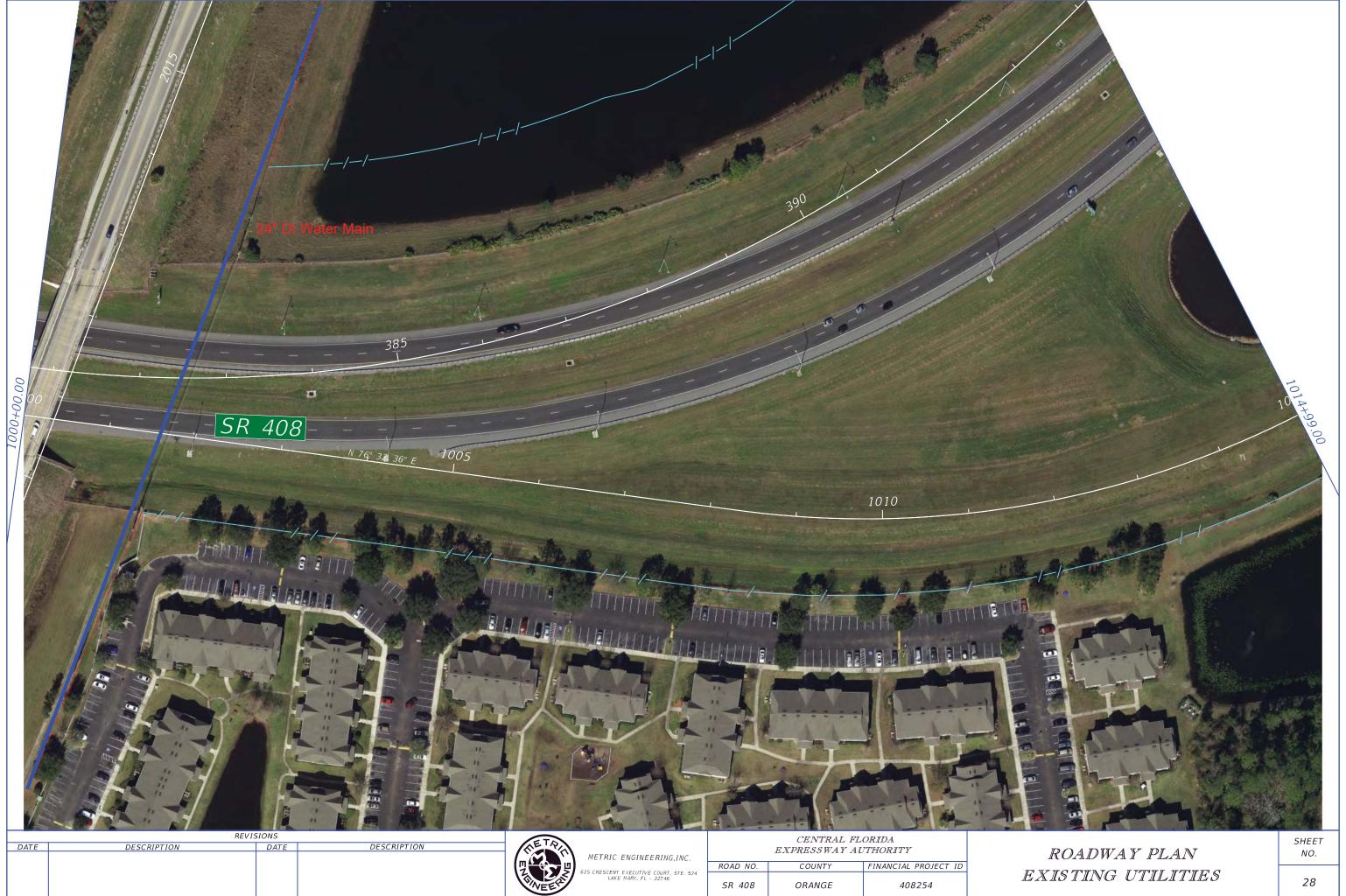


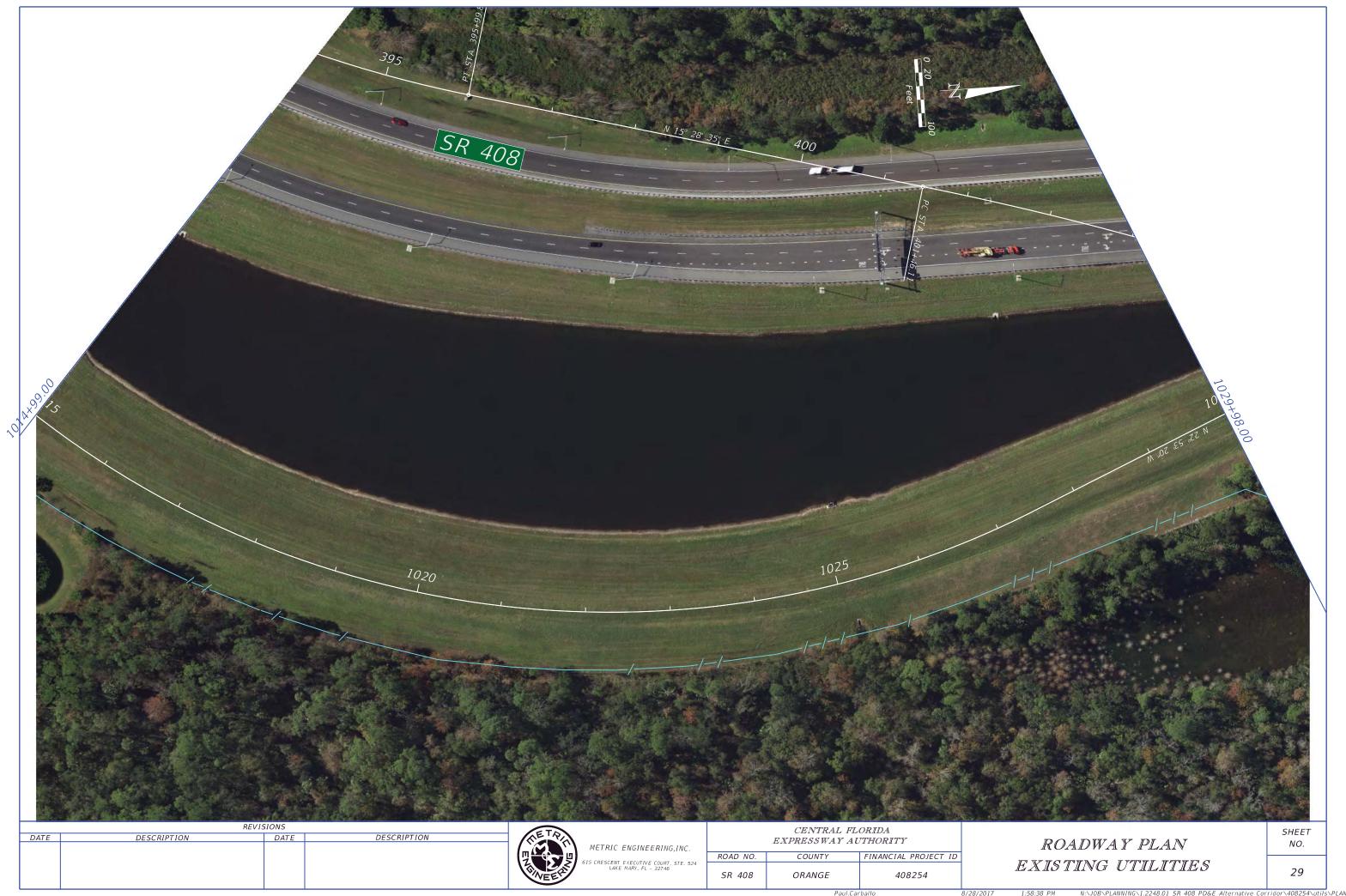


Paul.Carball

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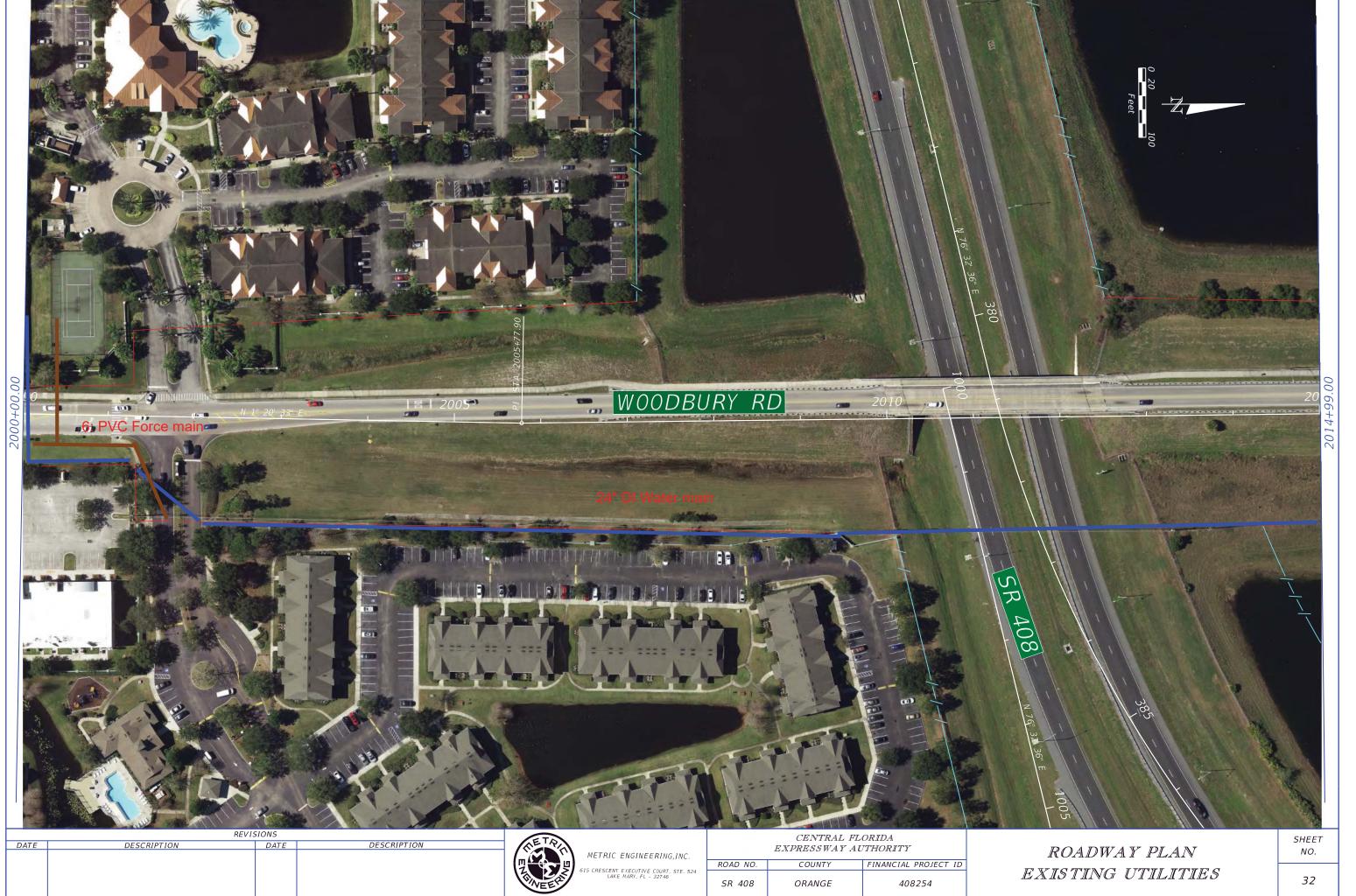
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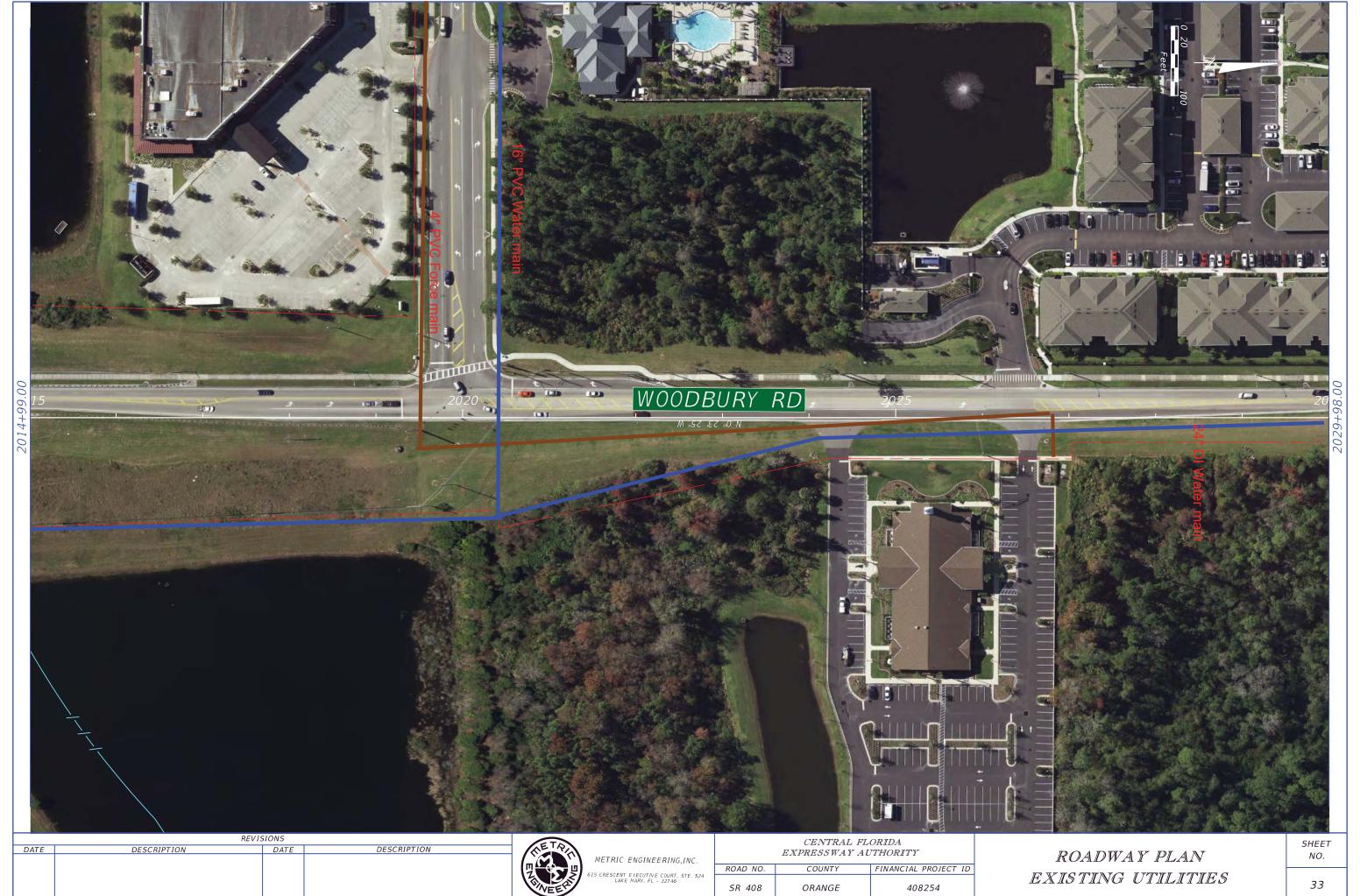


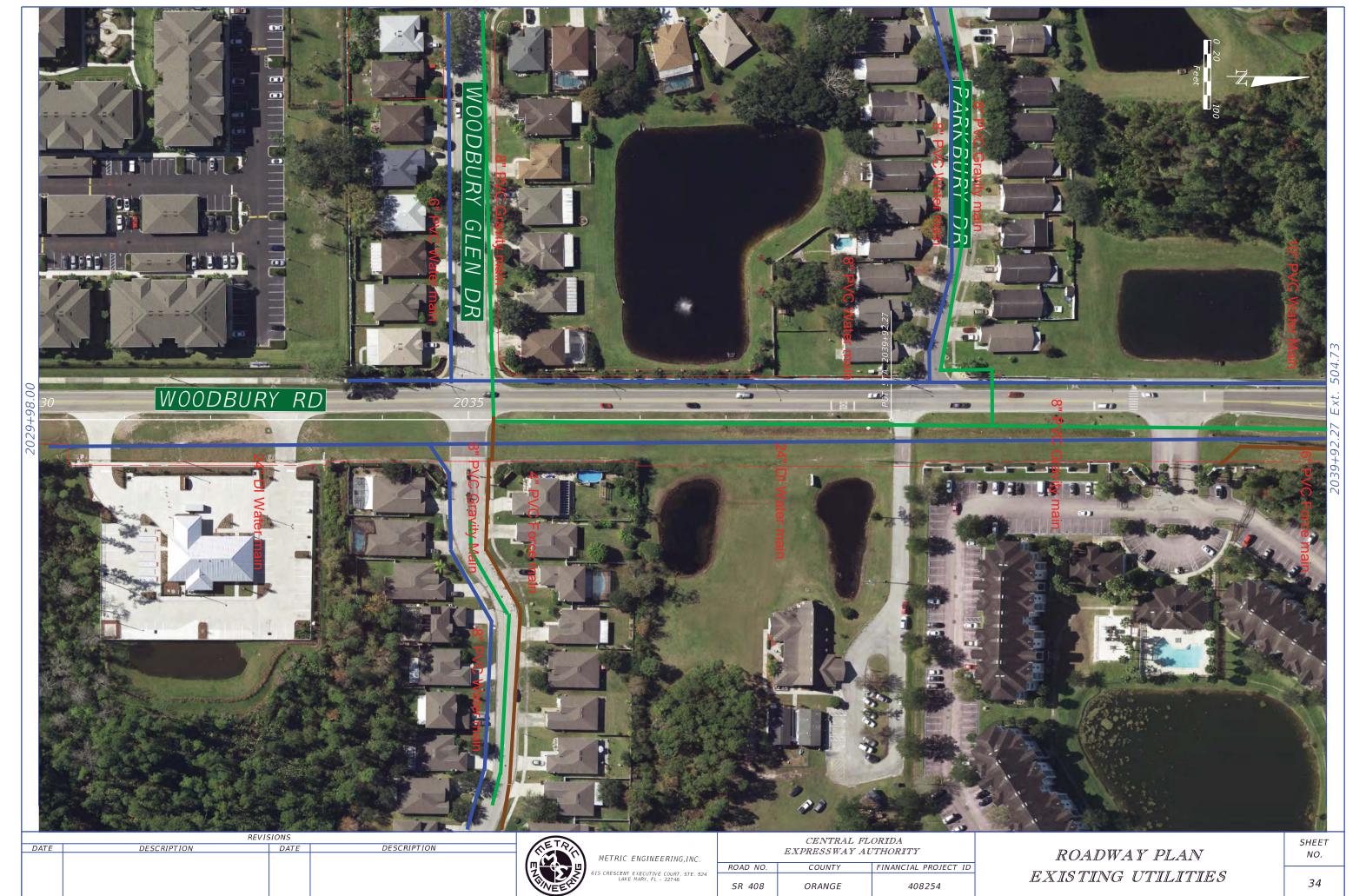












Paul.Carballo

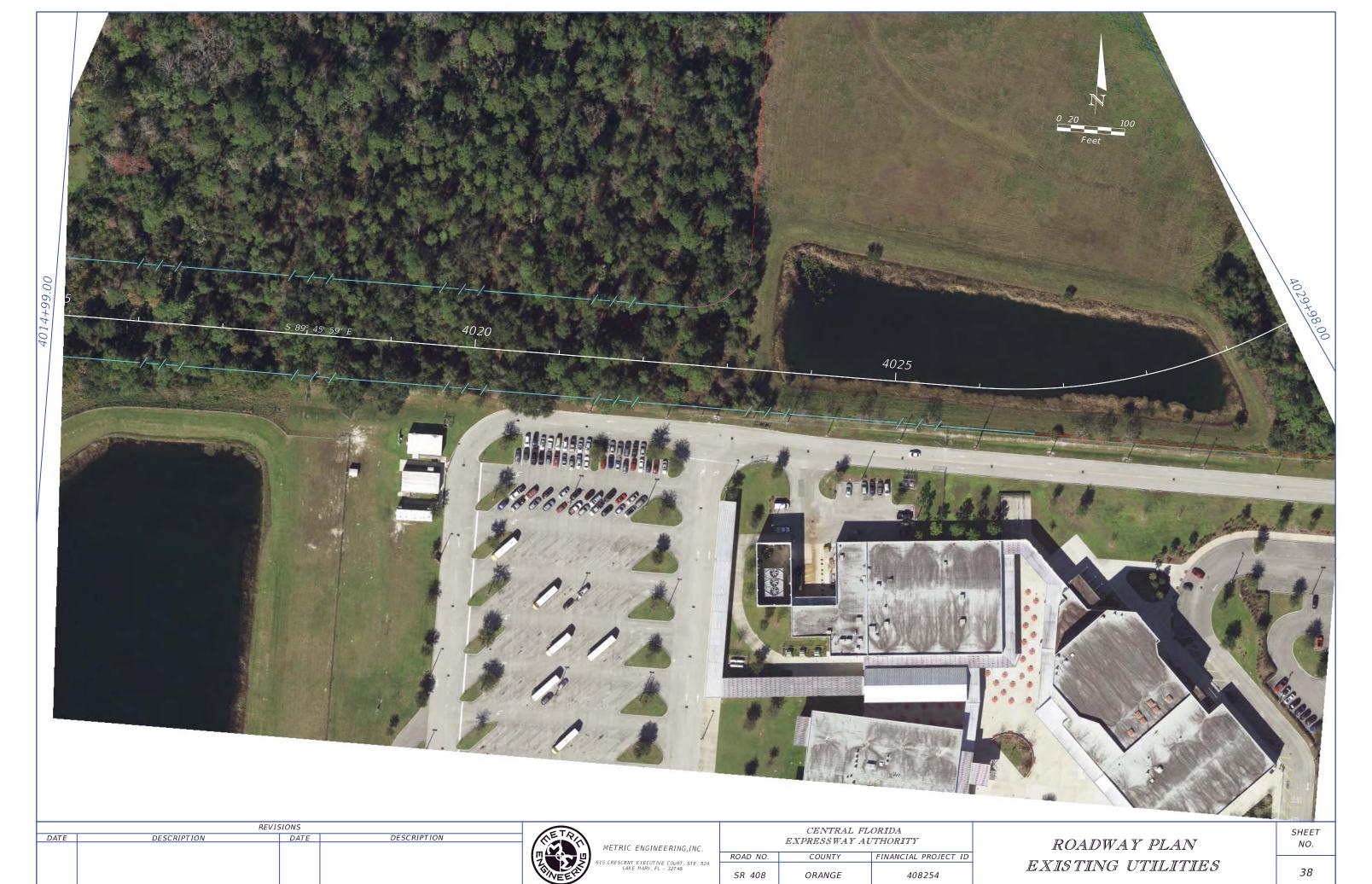
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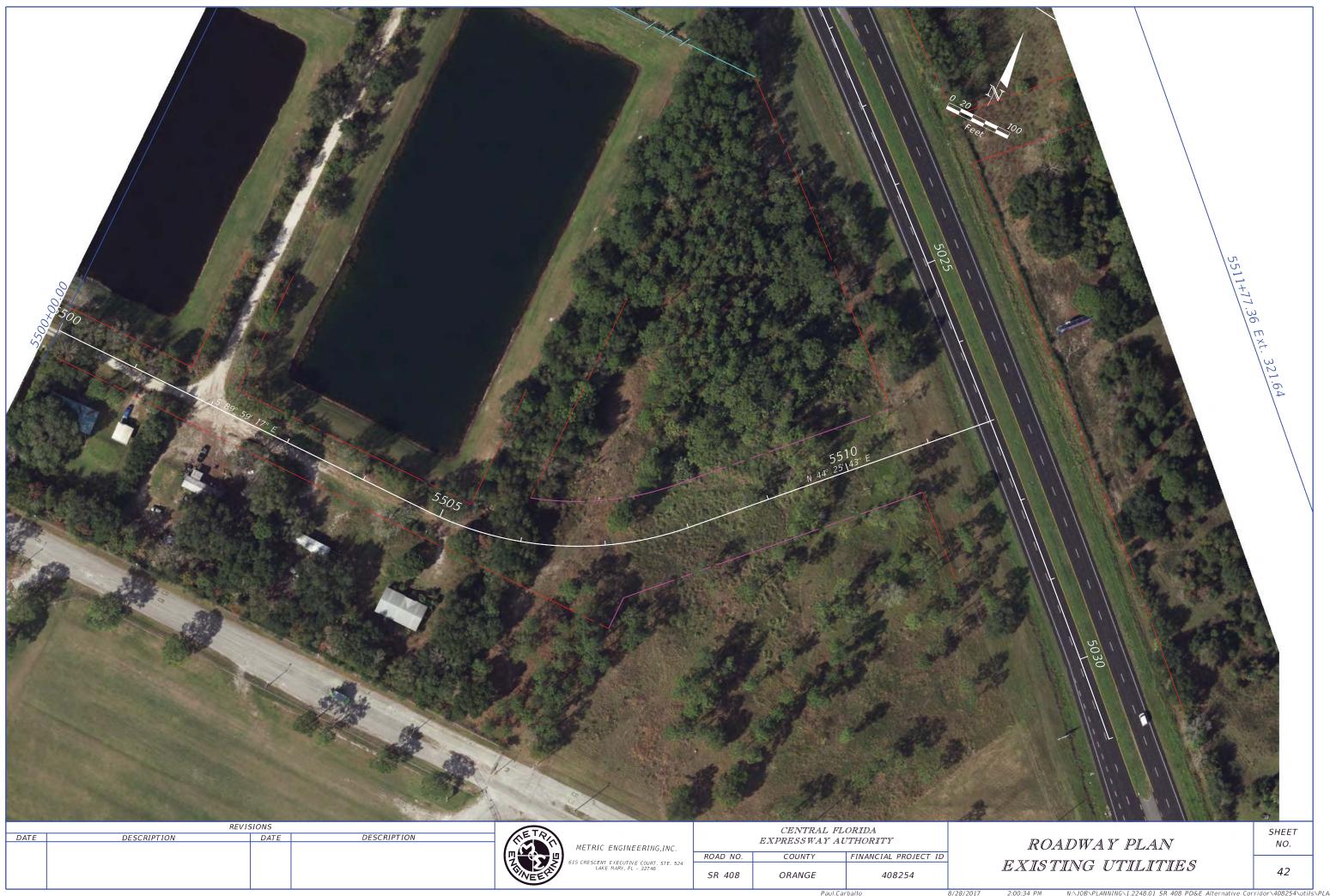




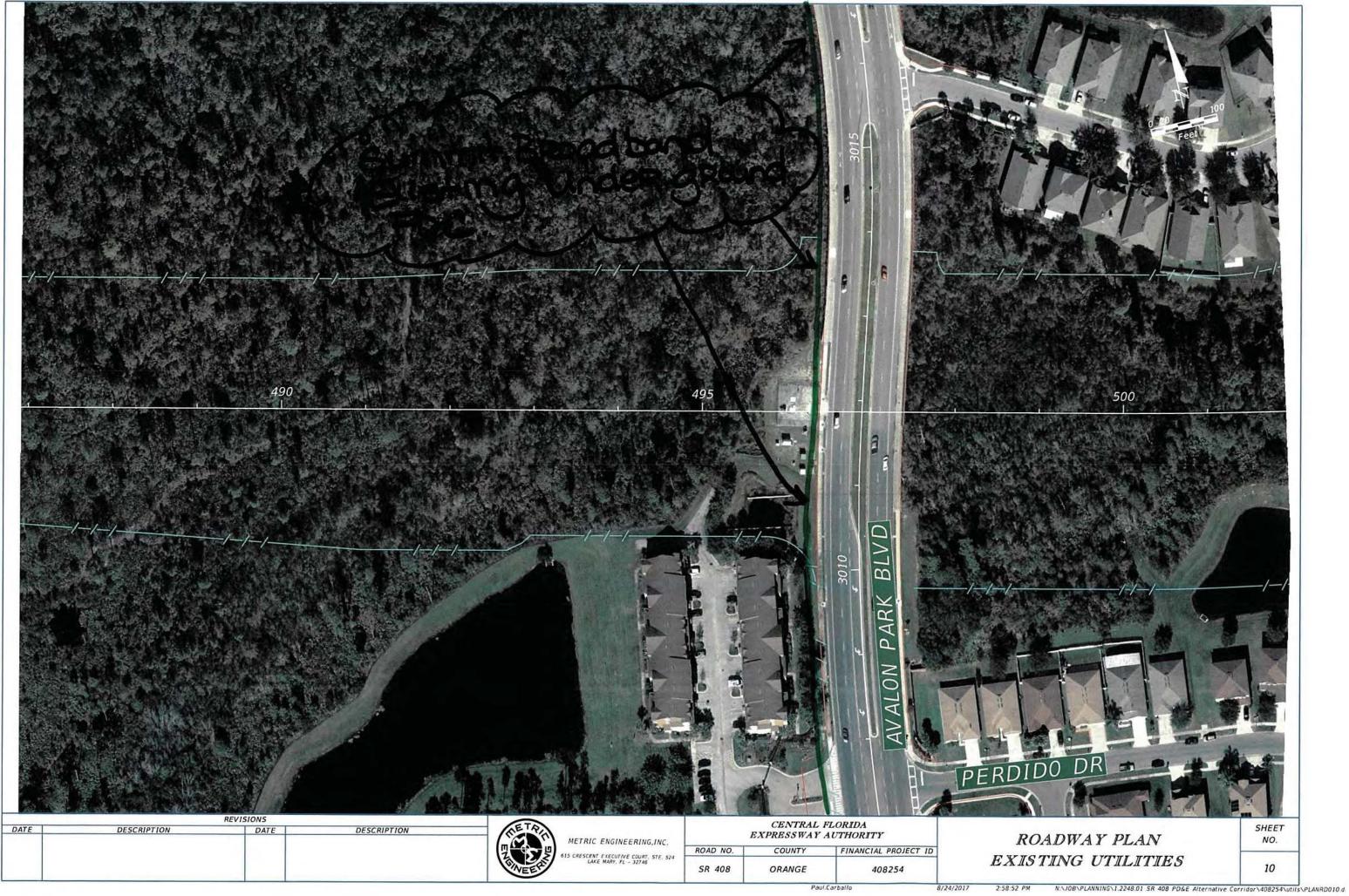








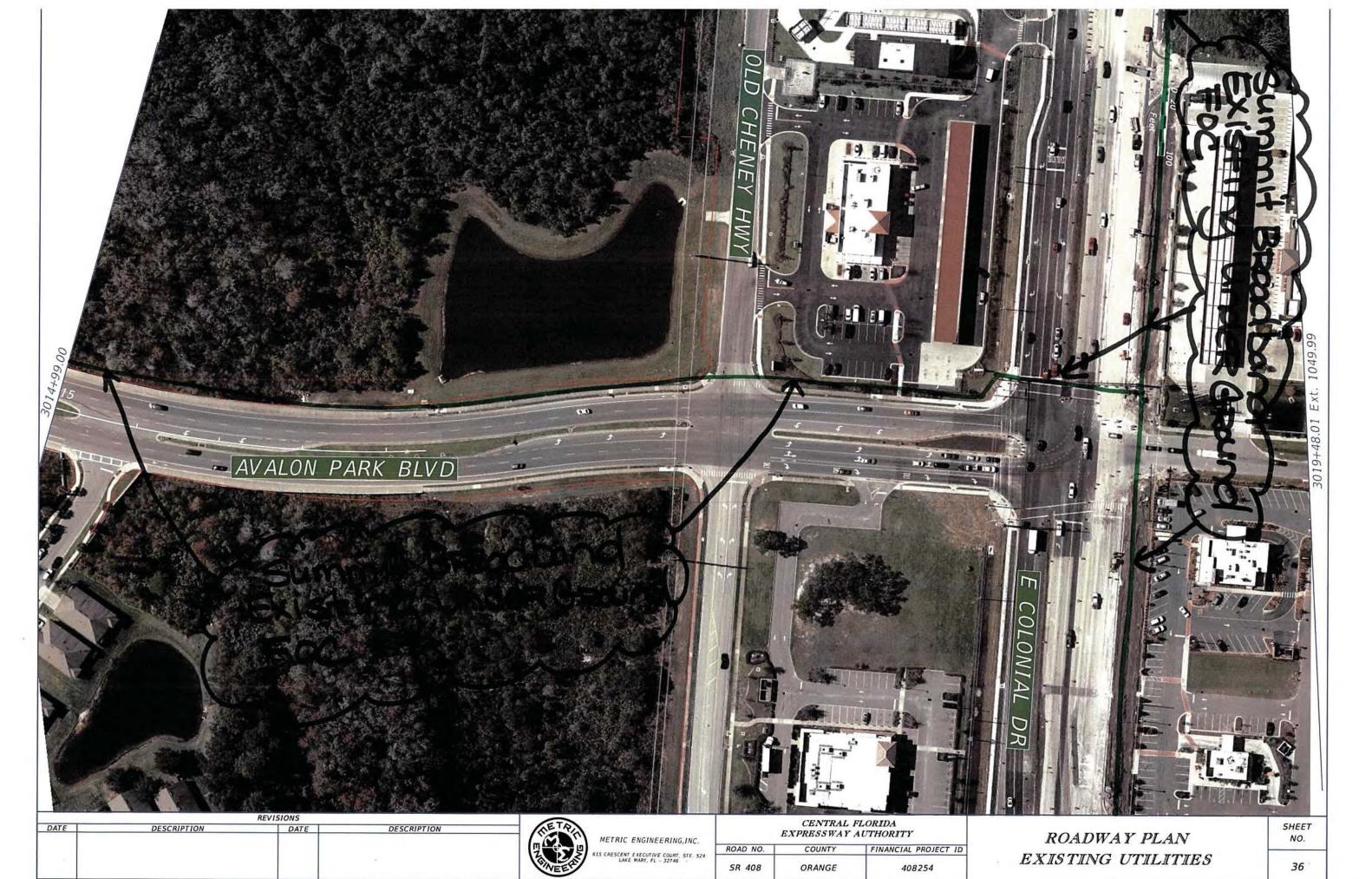
Orlando Telephone Company Inc

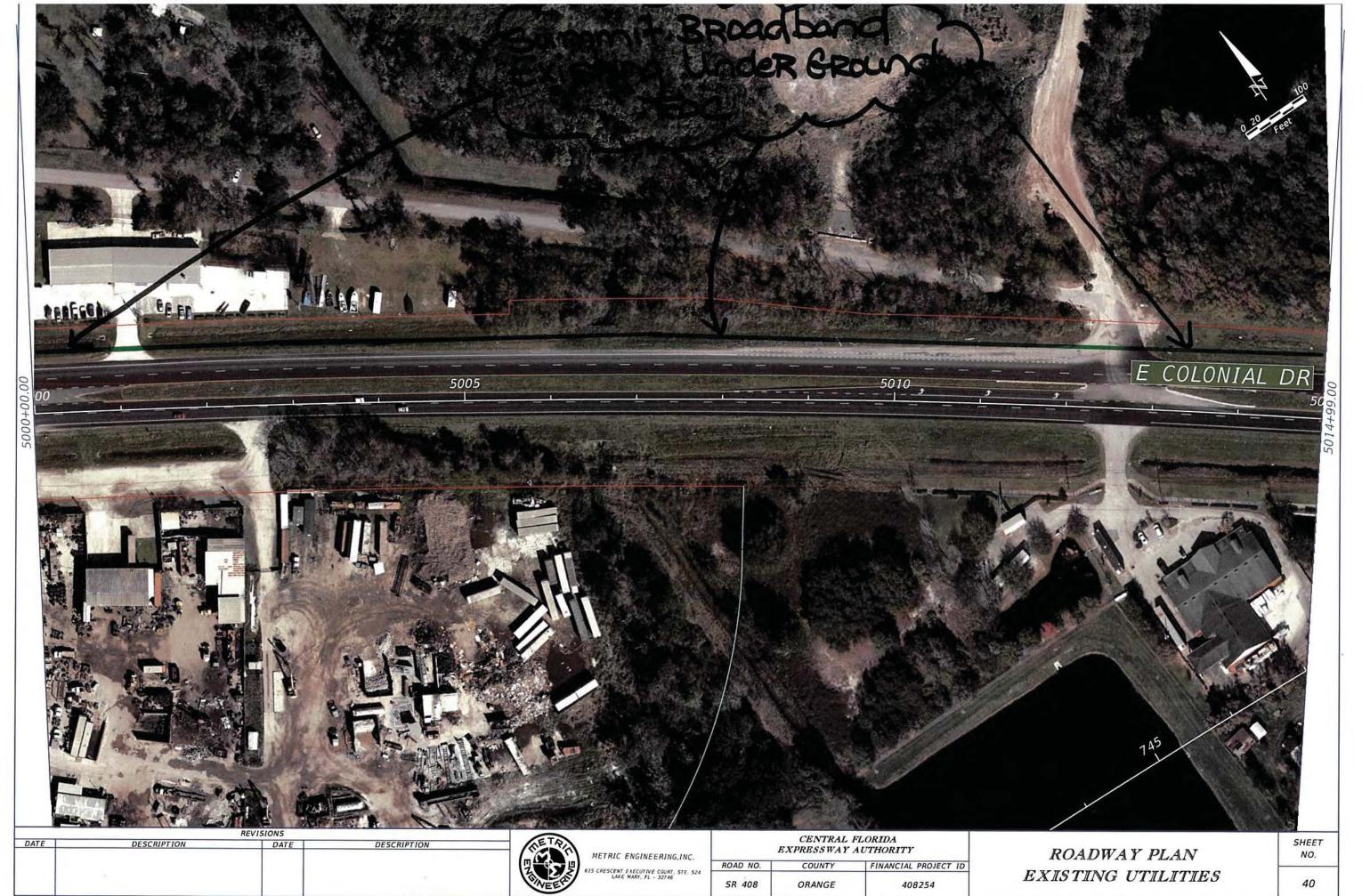




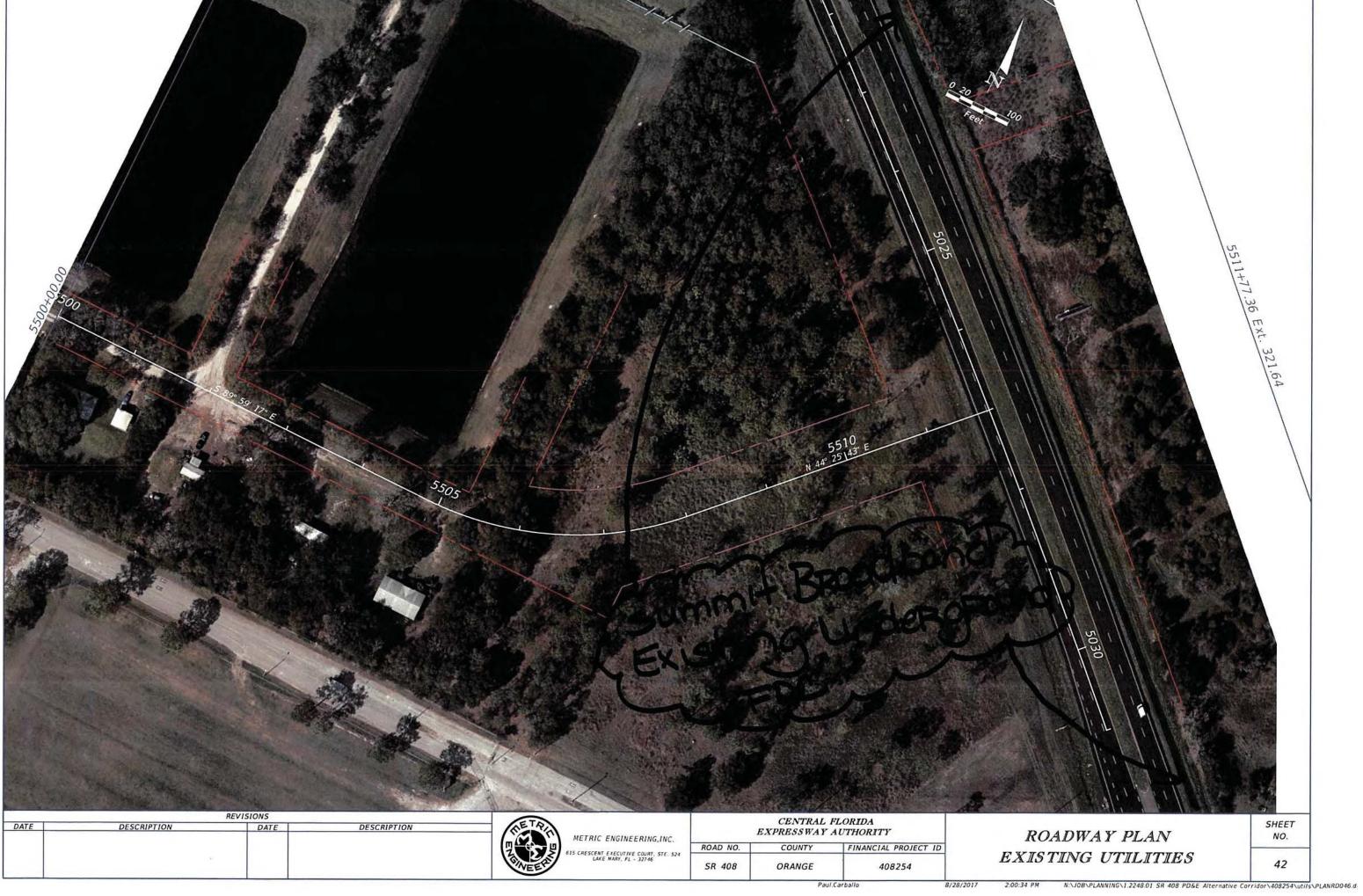












Teco People's Gas



SHAWN WINSOR GAS DESIGN PROJECT MANAGER



600 WEST ROBINSON STREET
ORLANDO, FL 32801
OFFICE: 407-420-6663
CELL: 407-232-5257
EMERGENCY PHONE: 1-877-832-6747
E-MAIL:SWINSOR@TECGENERGY.COM
PEOPLESGAS.COM

Figure 1-1 Dunit - AID:	Te 1 15 :	LID AI/A
Financial Project ID:	Federal Projec	
County: Orange	State Road No	: 408
District Document No: 1		
Utility Agency/Owner (UAO): TECO Peoples Gas	}	- 1000 -
A .	Summary of Utility Work And	Execution
	stimated Time alendar days)	
(FDOT), the FDOT's Contractor, and other right-ofacilities, on this FDOT project. The following data in FDOT or its contractor from the plans, as provide change, this utility may require additional days for events beyond the control of the UAO that could no	f-way users, the location, relocat is based on FDOT preliminary cor ed, may render this work schedu assessment and negotiation of a t reasonably be anticipated by the	to transmit to the Florida Department of Transportation ion, adjustment, installation, and/or protection of their struction plans dated 8/25/2017. Any deviation by the le null and void. Upon notification by FDOT of such new work schedule. This UAO is not responsible for UAO and which could not be avoided by the UAO with fy the Department in writing prior to starting, stopping.
UAO Project Representative: Shawn Winsor	Telephone N	umber: 407-420-6663
UAO Field Representative: Bobby Robinson	Telephone N	
additions, deletions or substitutions are reflected o text of the document itself. Hand notations on a Appendix but are for reference purposes only and	nly in an Appendix entitled "Chan ffected portions of this documen do not change the terms of the o	and all revisions thereto by the UAO in the form of ges to Form Document" and no change is made in the may refer to changes reflected in the above-named locument. By signing this document, the UAO hereby h the terms of the appendix entitled "Changes to Form
You MUST signify by selecting or checking which o	f the following applies:	
No changes to forms document. ☐ Appendix "Changes to Forms Document ☐ Appendix "Changes to Forms	nt" is attached Number of At	achment Pages.
Authorized Utility Agent:	**Engineer of Record (EOI	R): Acceptance by District Utilities:
(Signature)	(Signature)	(Signature)
Shawn Winsor		
(Printed Name)	(Printed Name)	(Printed Name)
Gas Design / Project Monager	•	•
Gas Design / Project Manager (Title)	(Title)	(Title)
, ,		···,
8/31/2017 (Date)	(Date)	(Date)
	, ,	ans, specifications and Utility Work Schedule)

710-010-05 UTILITIES 12/09 Page 2 of 3

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION UTILITY WORK SCHEDULE

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t D		nt No:	wner (41+94	2002+2						
Financial Project ID:	range	District Document No: 1	Utility Agency/Owner (UAO): TECO Peoples Gas		Sta. 440+00 to 441+94 (sheet 6) TECo has a existing 2" CS (GM) & service line that will have to be retired outside of CFX R/W prior to construction.	Sta. 2000+00 to 2002+20 (Sheet 32) Existng 2" Coated Steel Gas Main in R/W						
ncial	County: Orange	trict Do	ity Age	; :i	440+0	2000+						
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710-010-05 UTILITIES 12/09 Page 3 of 3

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION UTILITY WORK SCHEDULE

I						
					CONSECUTIVE CALENDAR DAYS	
					M.O.T. PHASE NUMBER	
				n Project:	DEPENDENT ACTIVITIES	
Federal Project ID: N/A	State Road No.: 408			Disposition of Facilities (List All Existing & Proposed) on Project:		
				sition of Facilities (List	DESCRIPTION OF UTILITY WORK	
			oles Gas	Dispo		
Financial Project ID:	Orange	District Document No: 1	Utility Agency/Owner (UAO): TECO Peoples Gas		UTILITY FACILITIES BY STATUS/ TYPE/SIZE/MATERIAL/OFFSET TO BASELINE FROM STA TO STA	
Financial	County: Orange	District D	Utility Age	رن ن	UTILIT TYPE/S BASE	



August 25, 2017

Ms. Deborah Frazier Teco Peoples Gas – Orlando 600 West Robinson Street Orlando, FL 32801

ADJUSTMENT OF UTILITIES – FLORIDA STATUTES CHAPTER 337.403

RE: Project Description: PD&E Study for the Proposed SR 408 East Extension

CFX Project Number: 408-254 **County:** Orange

Dear Ms. Frazier:

The Central Florida Expressway Authority (CFX) is in the development phase for evaluation of several design alternatives and final location design approval relating to the above project. Facilities owned or maintained by your utility agency/owner (UAO) within the project vicinity may require relocation or adjustment as necessitated by final design selection.

To assist us in selection of the most feasible design alternative while minimizing conflicts with your facilities, 1 set of base maps are enclosed. One set should be marked with your principal existing and proposed facilities and returned to this office and the other retained for your files. Along with the plans, your UAO should also present any general concerns and/or comments that would be useful in the CFX's evaluation process.

If your facilities are located on right of way owned by you, in an easement acquired for your use or if you have other interests within the limits of this project, you may be eligible to have your relocation costs reimbursed by CFX. If you have any of the above interests, please mark the approximate boundaries of them on the enclosed set of plans and return the same, together with documentation of your interests and a preliminary cost estimate to this office.

Please note that failure to respond to this request will result in plans development without identification of your facilities. In order to maintain project schedules, please return the marked up plans with your transmittal to this office by **September 14, 2017.**

If you do not have any existing or proposed facilities within the limits of this project, please advise us of that fact in writing. Should additional information be required, please contact me at (407)-644-1898 or via email at william.sloup@metriceng.com. Your cooperation in these matters is appreciated.

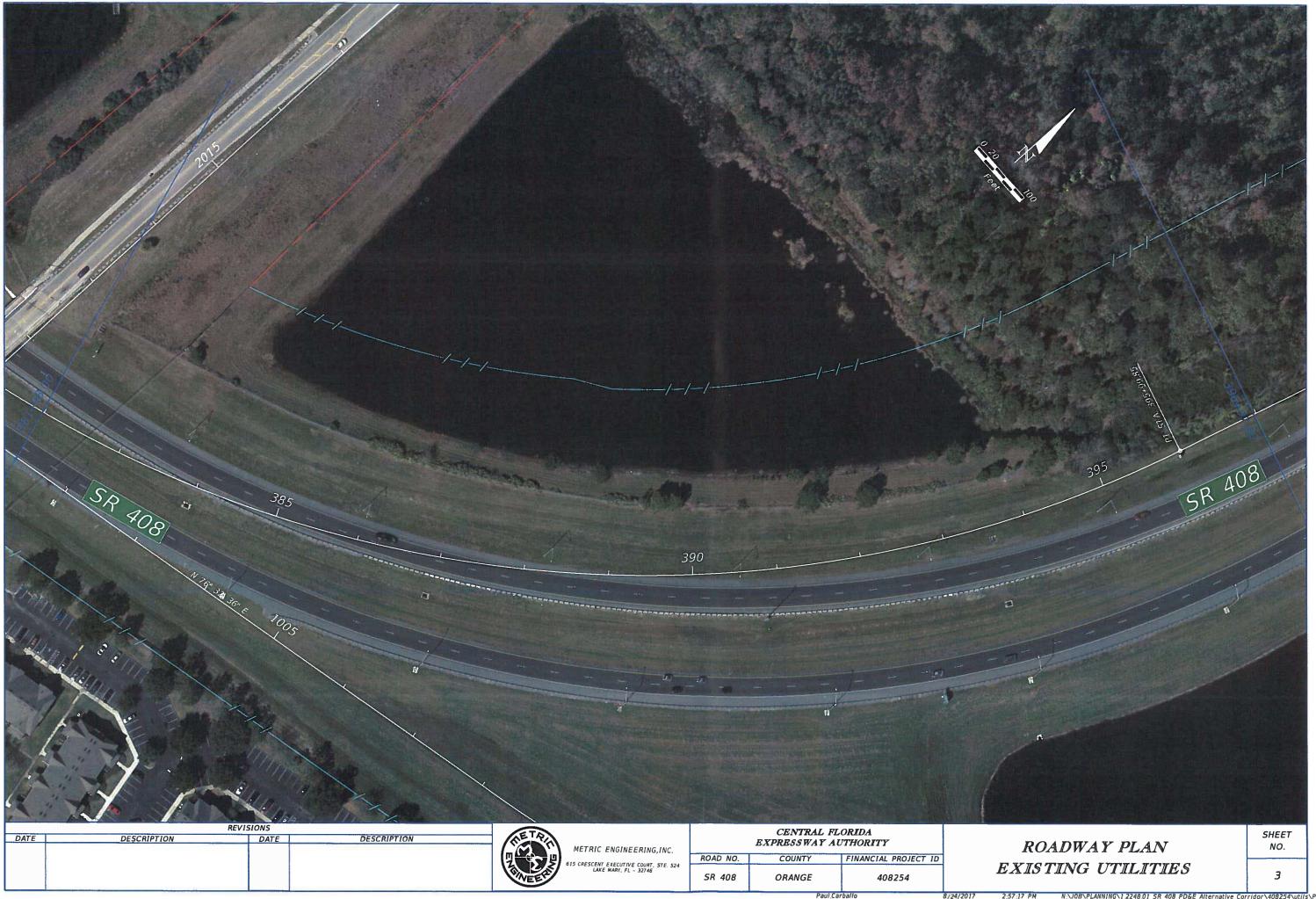
Sincerely,

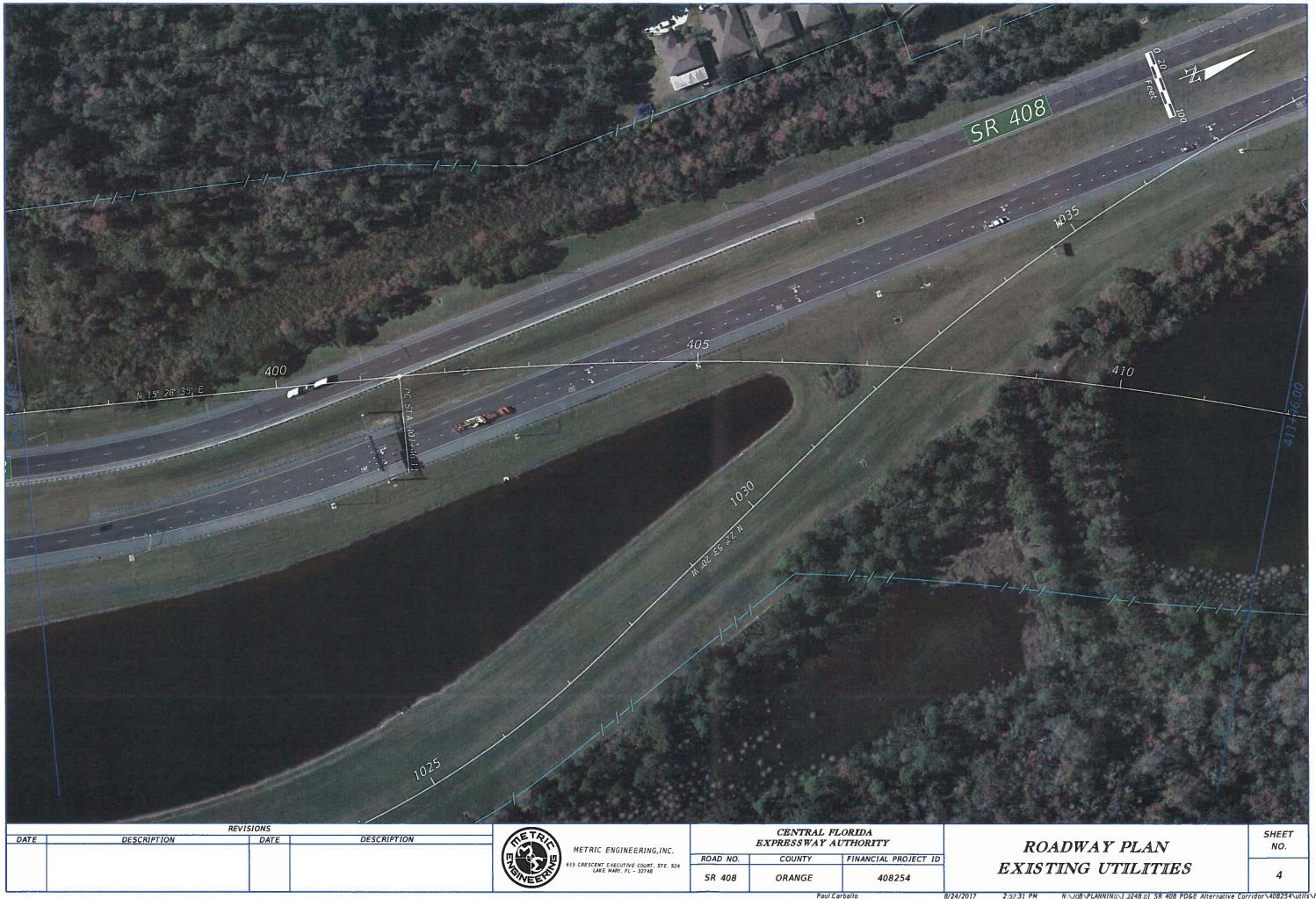
William Sloup, PE Metric Engineering, Inc.

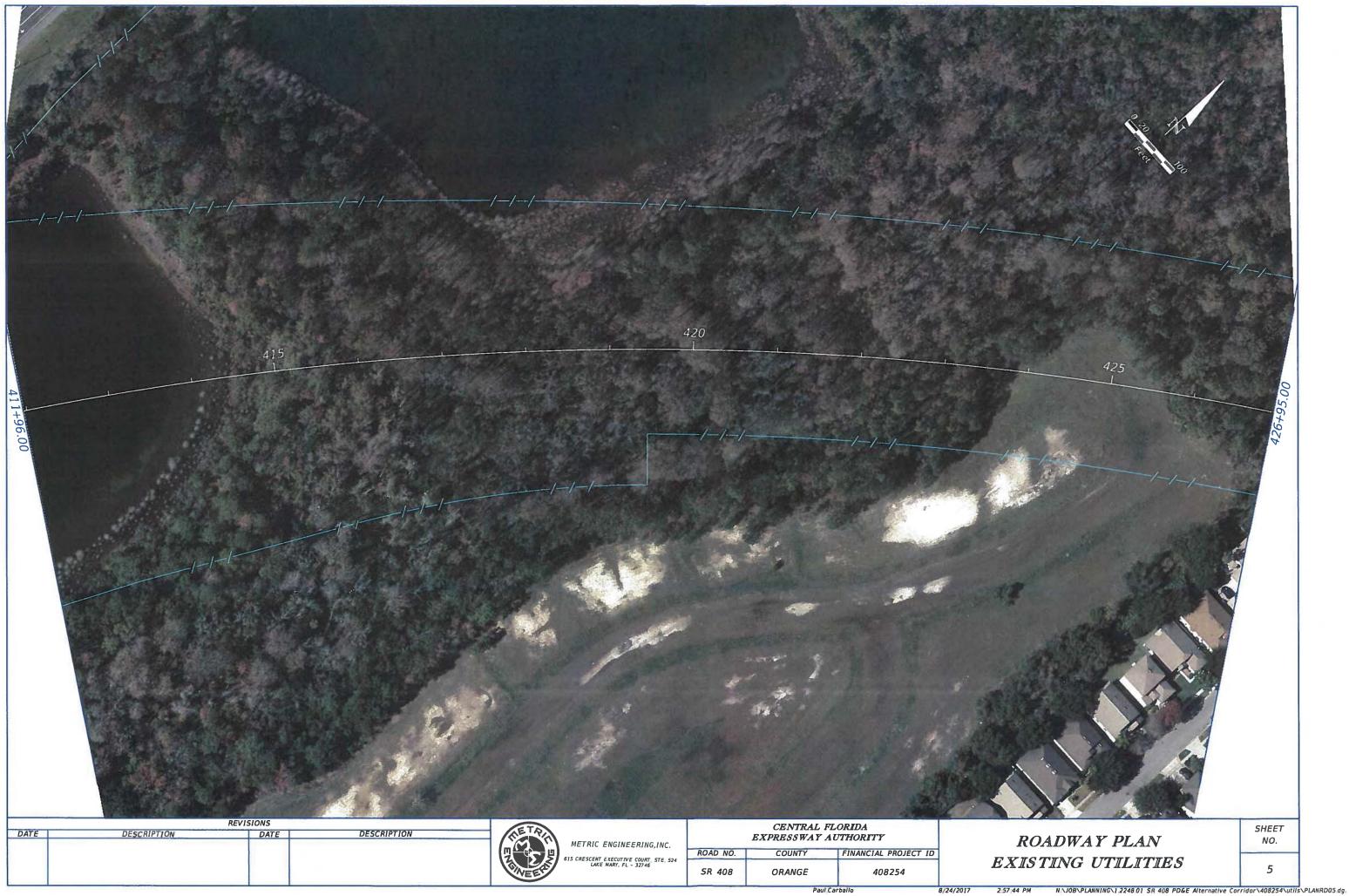
Enclosures

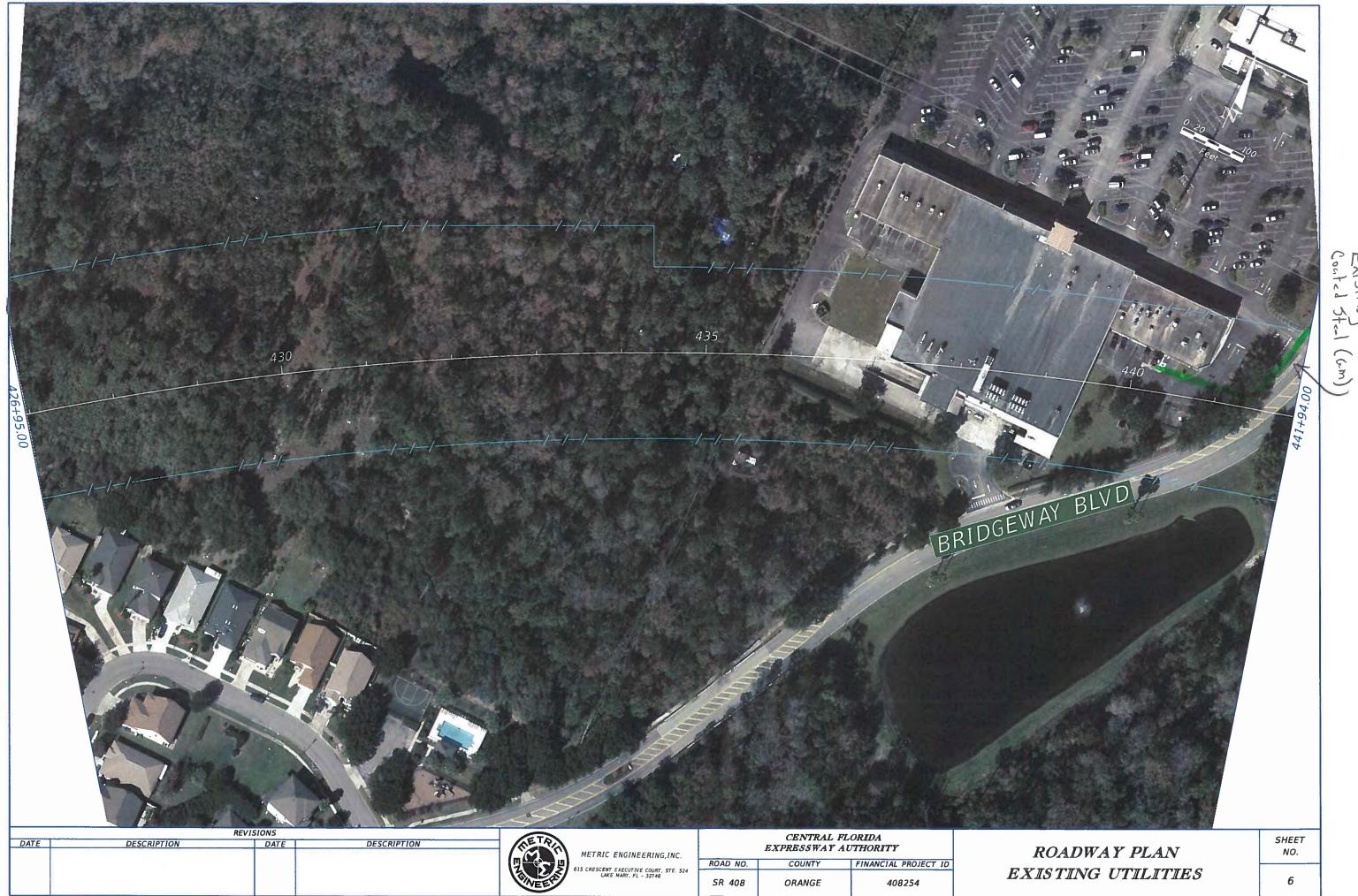






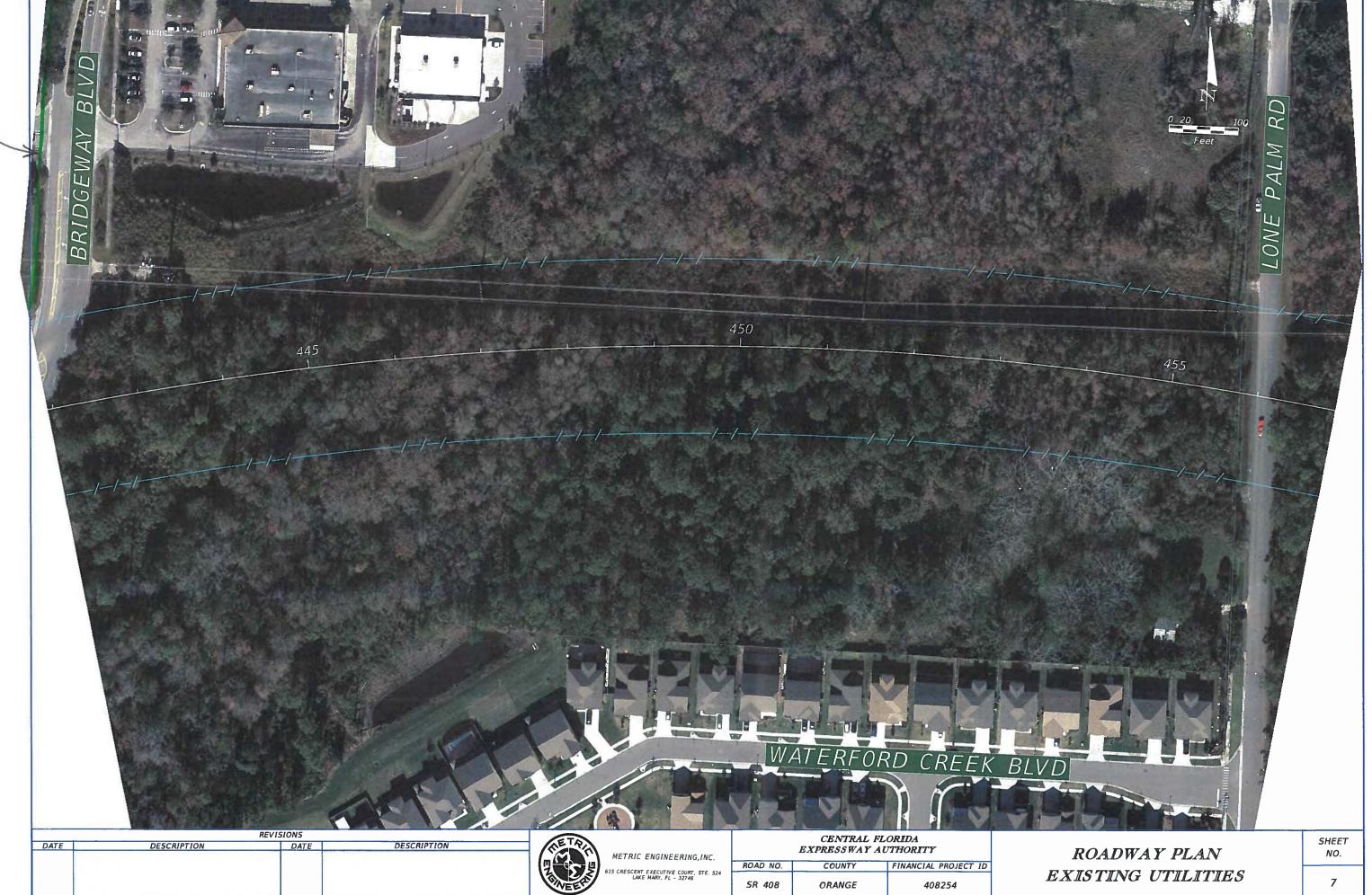


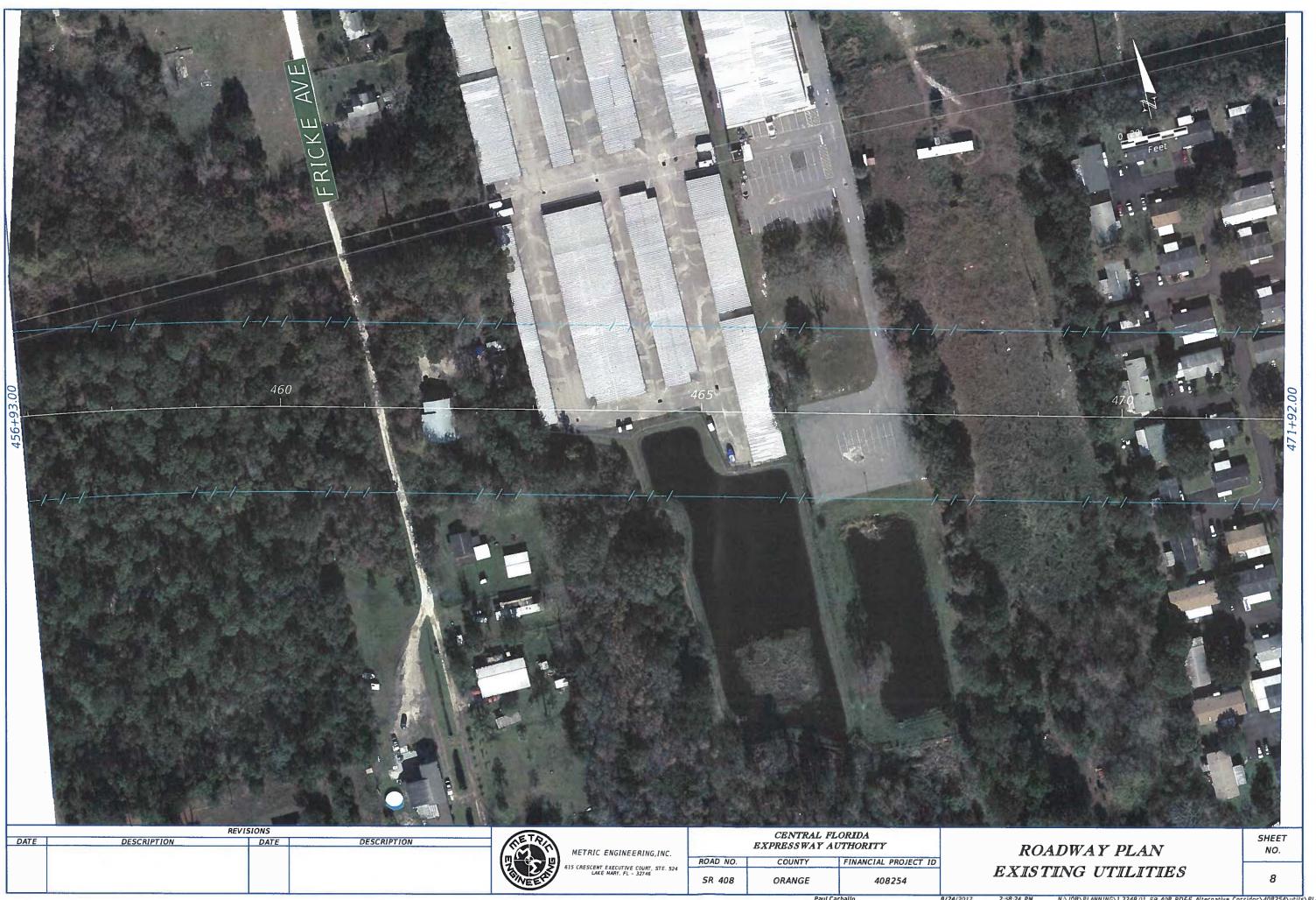




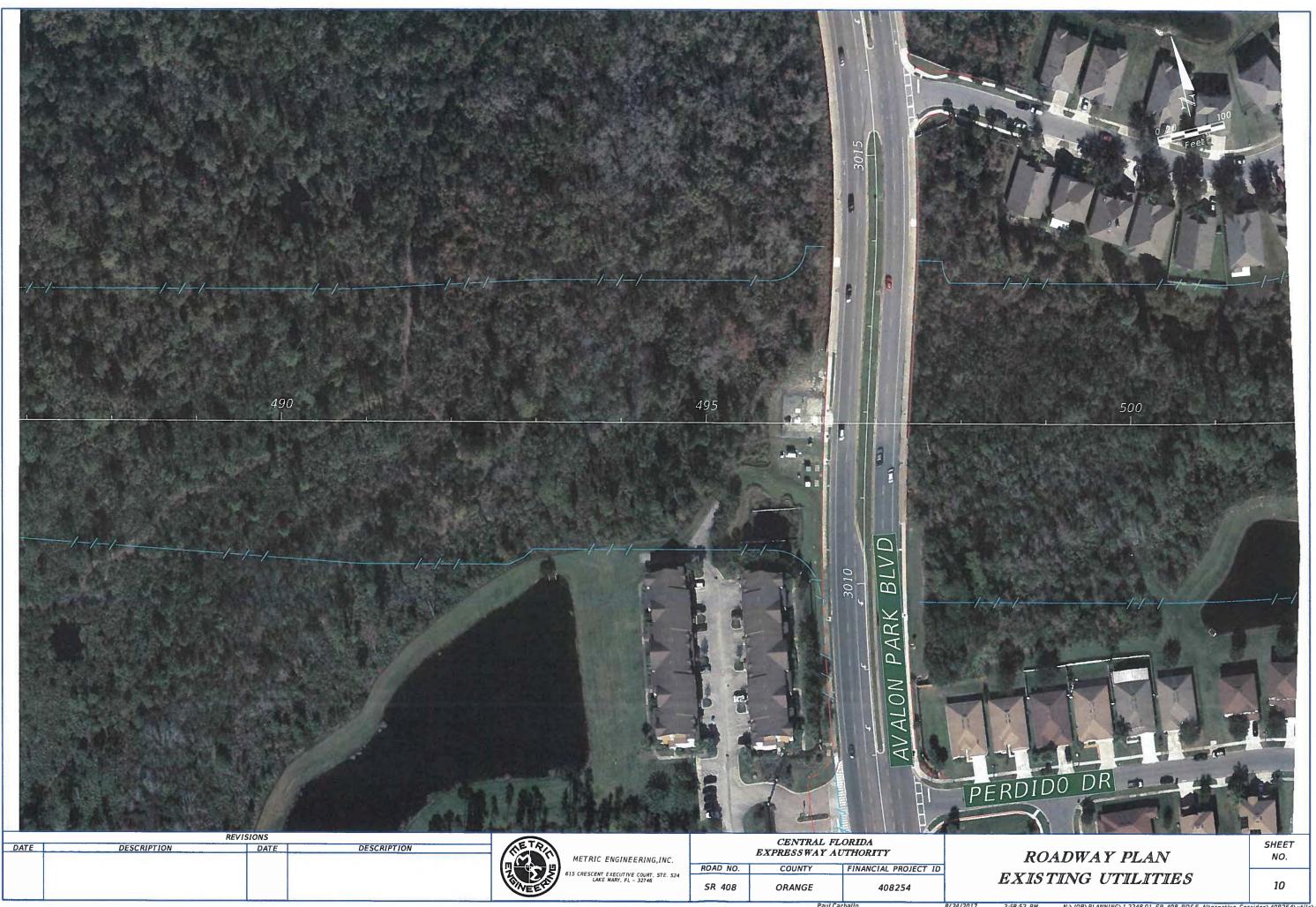
Paul Carballo

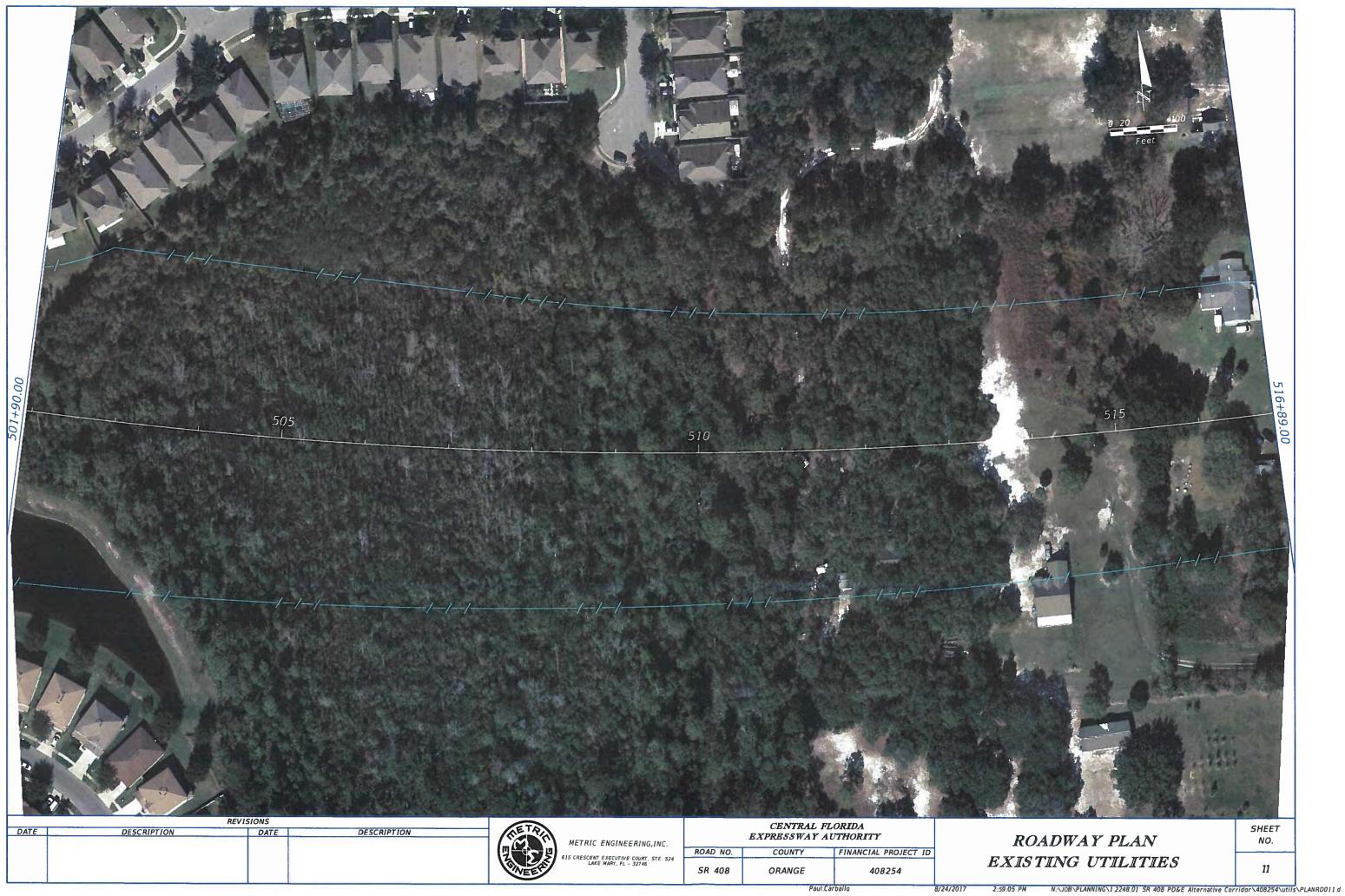
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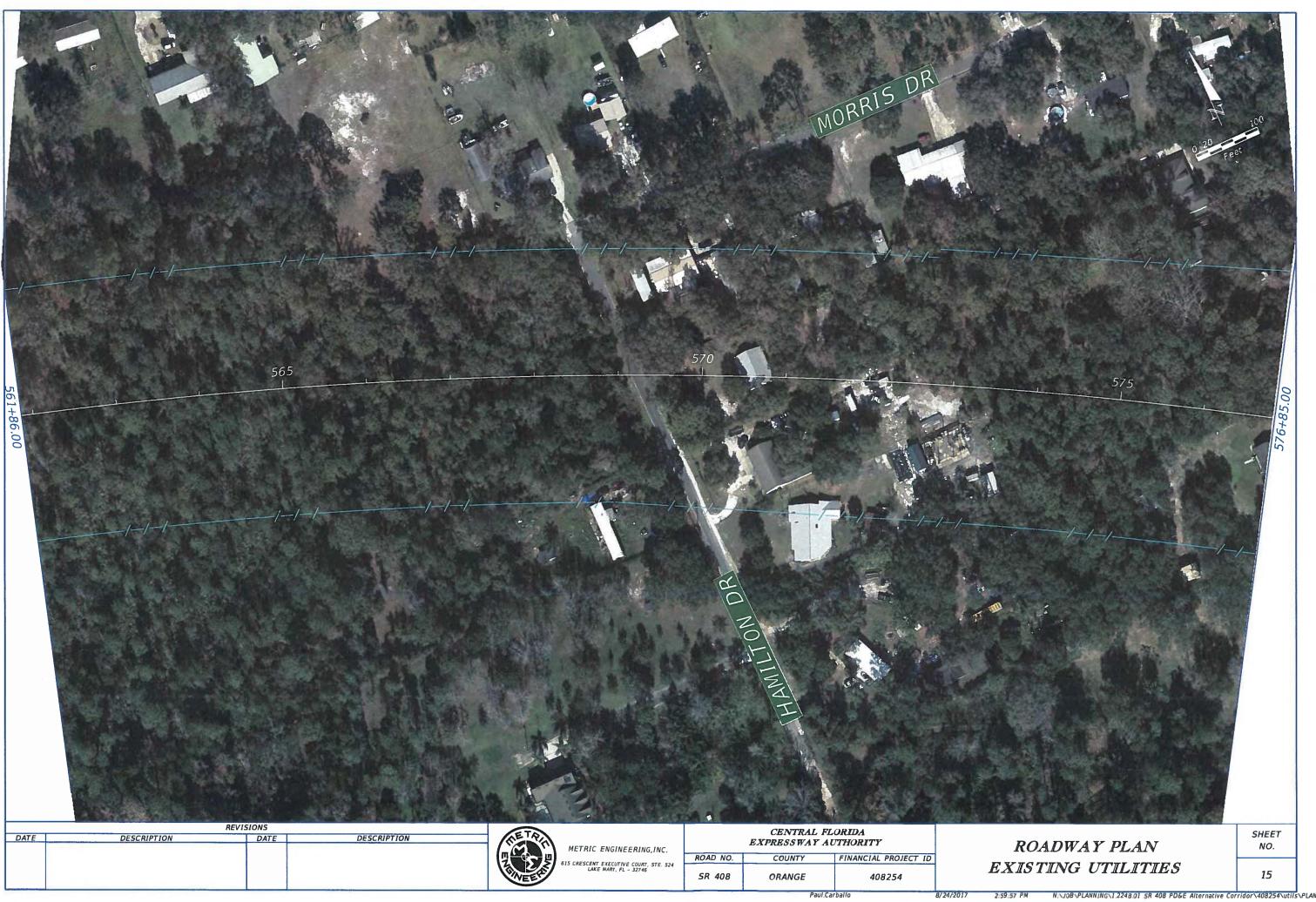


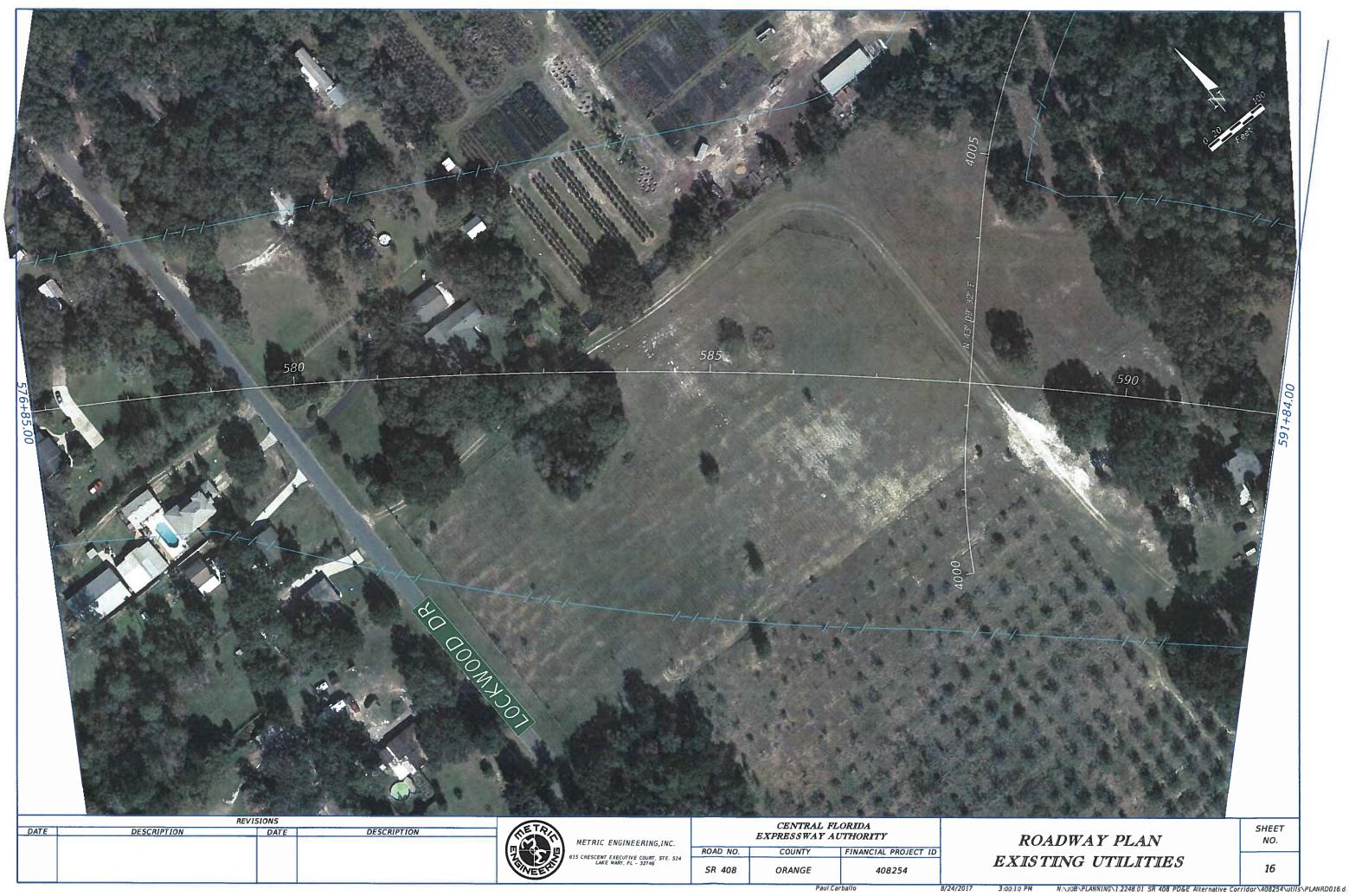




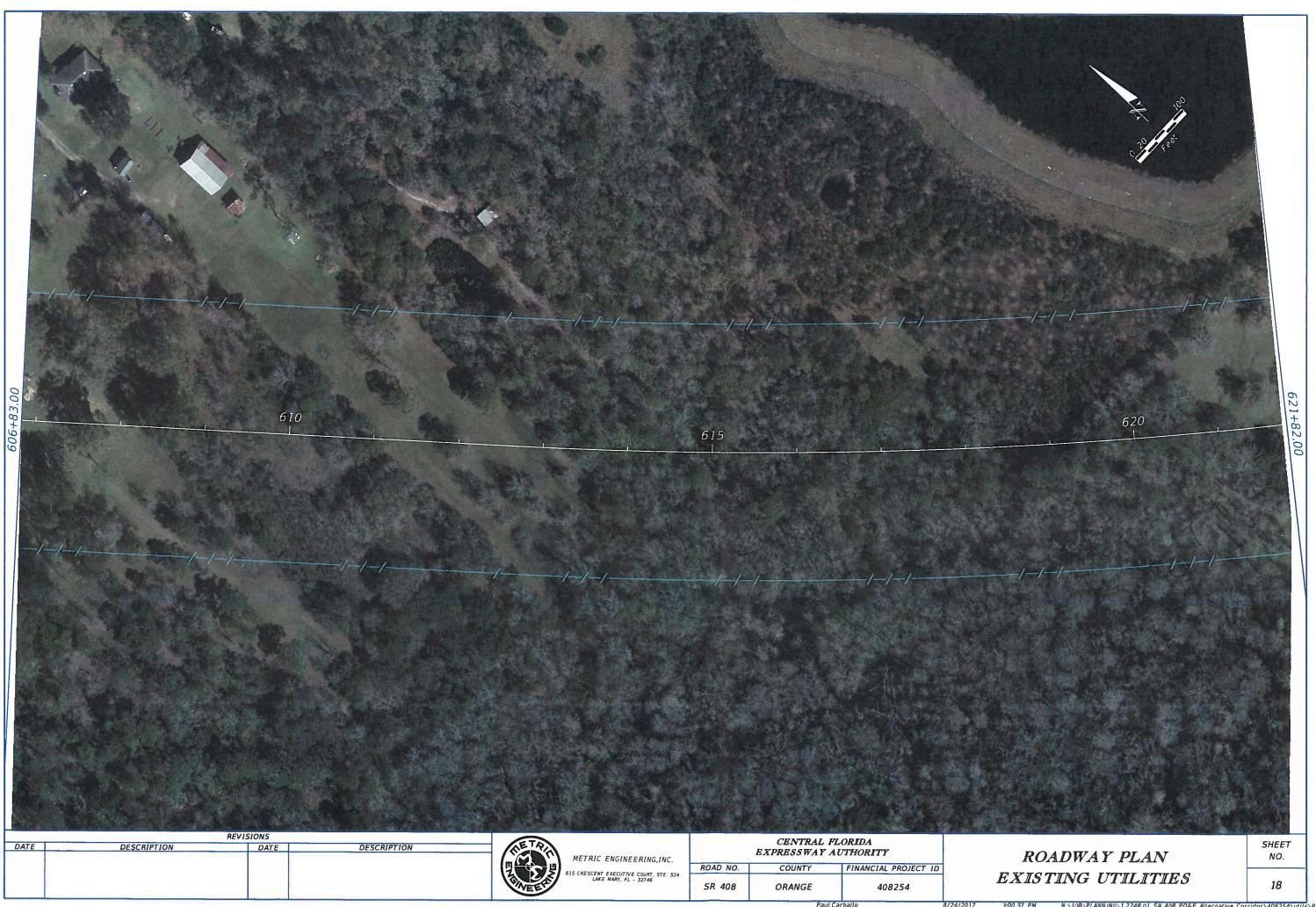








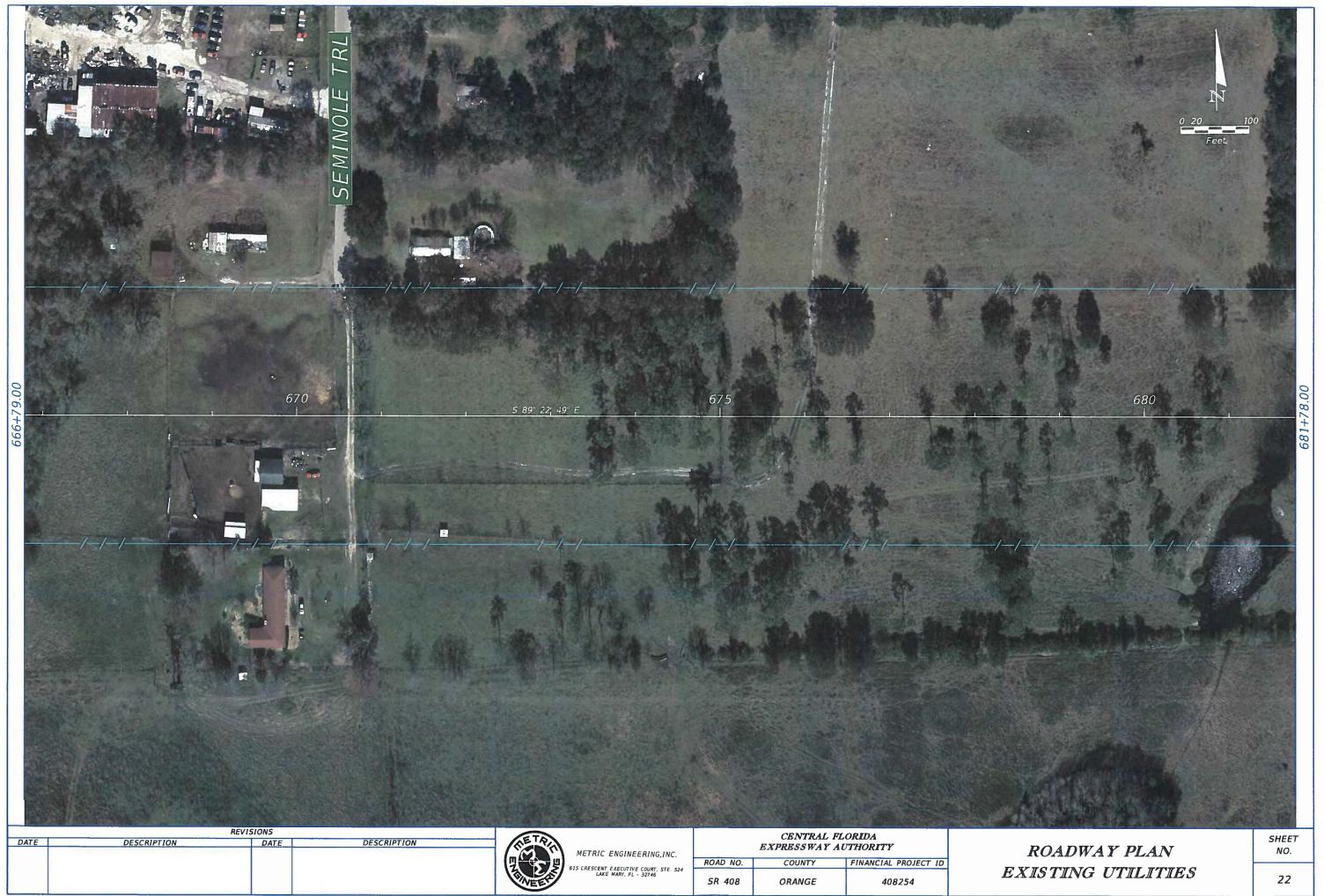












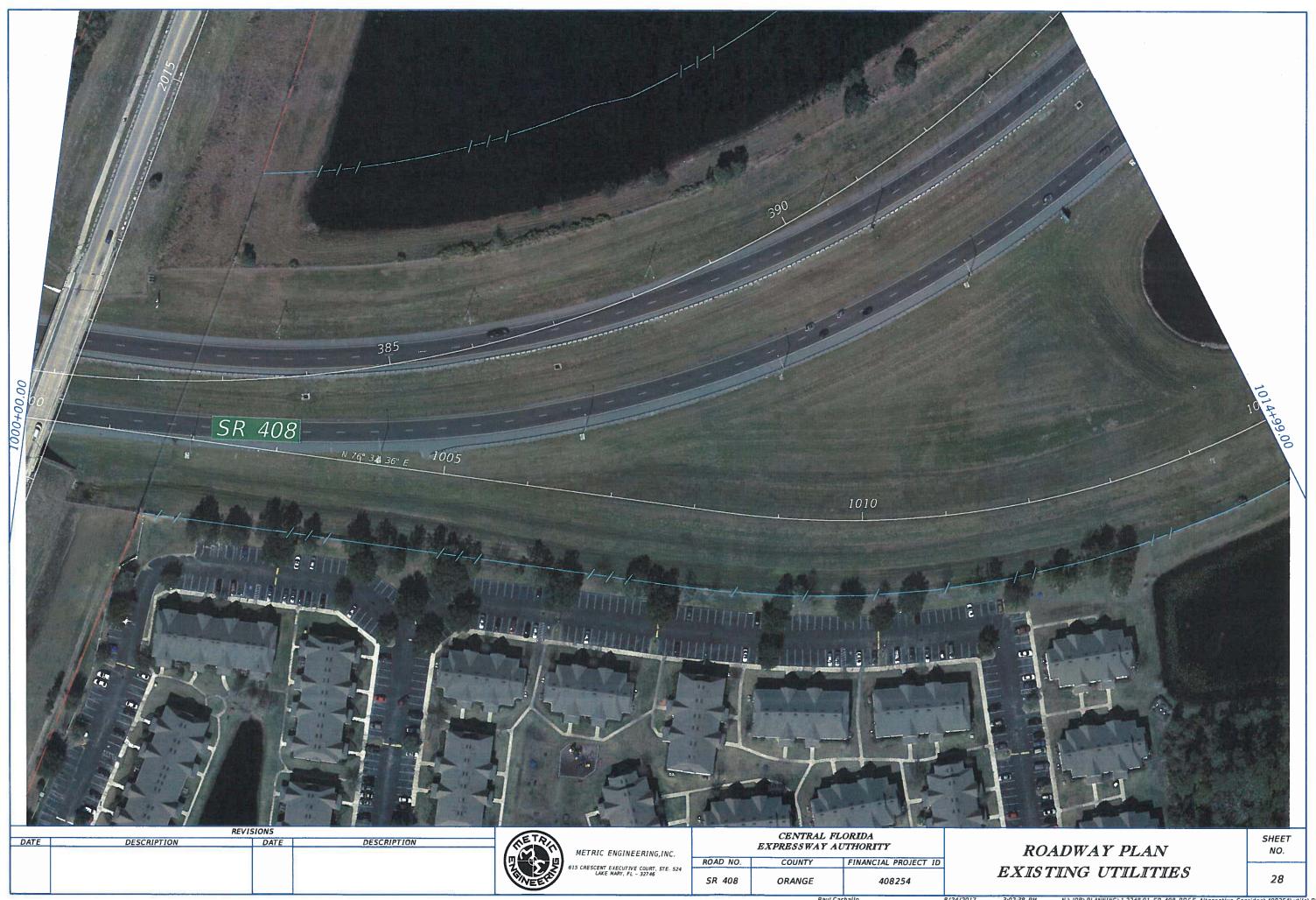


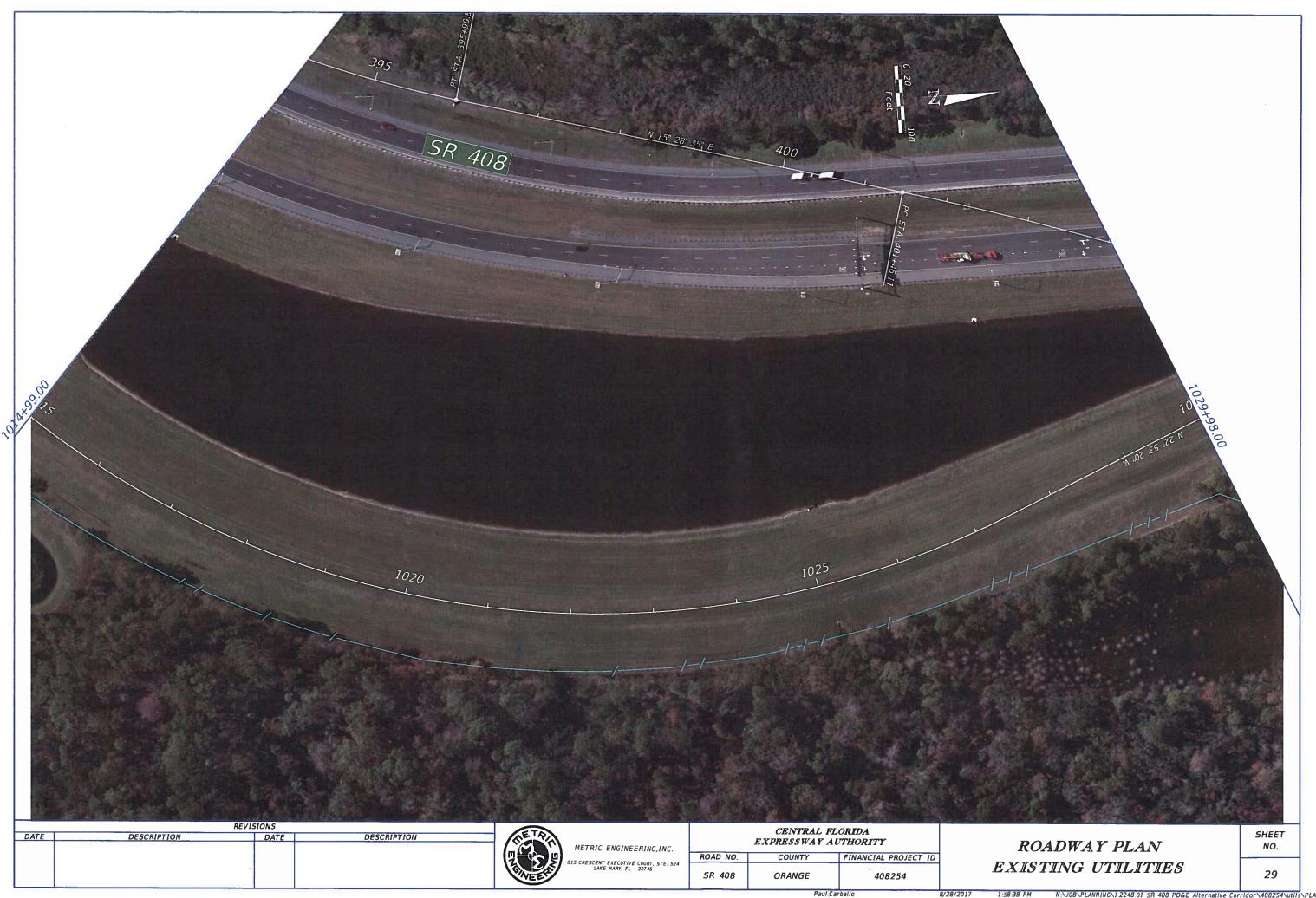


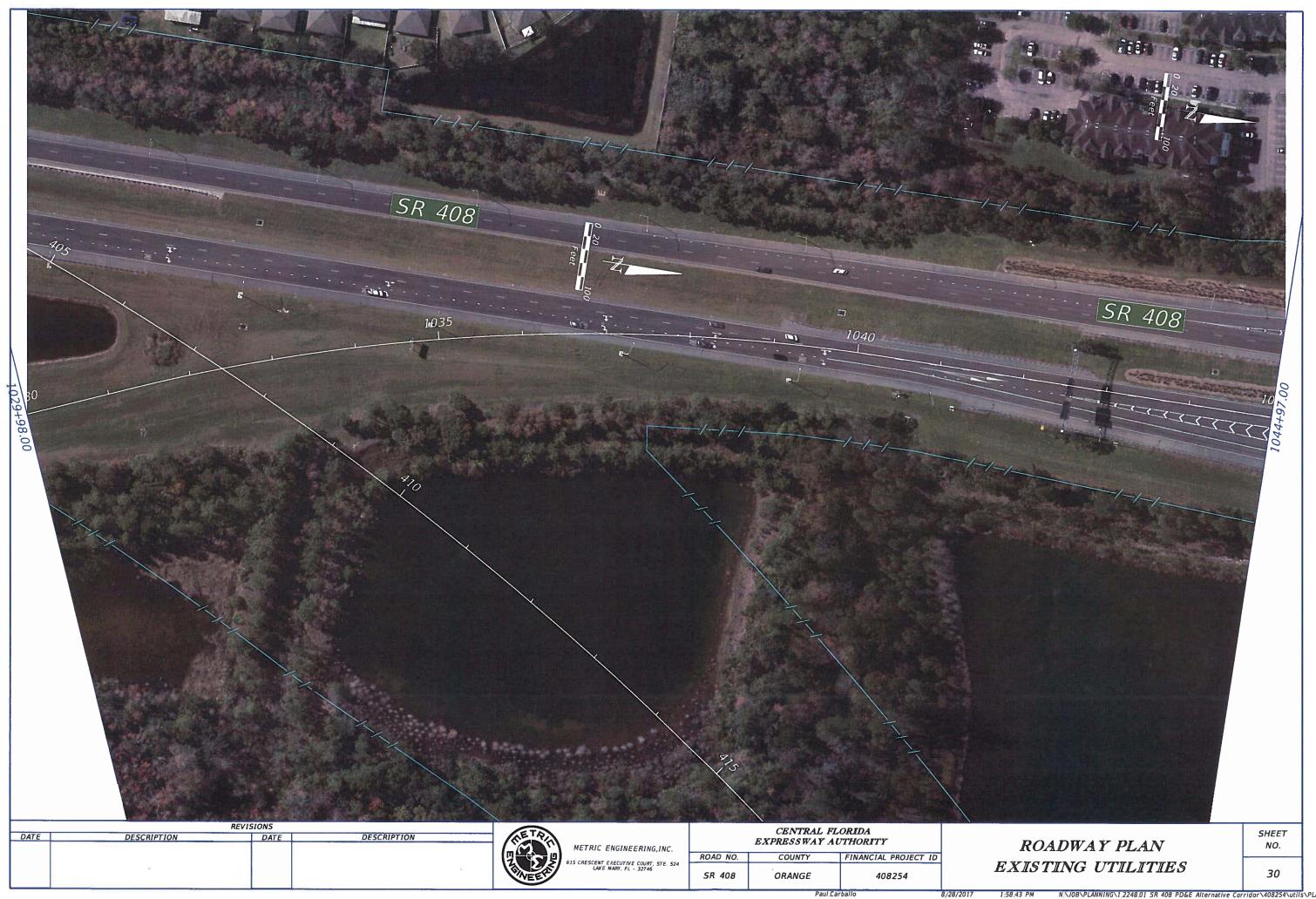


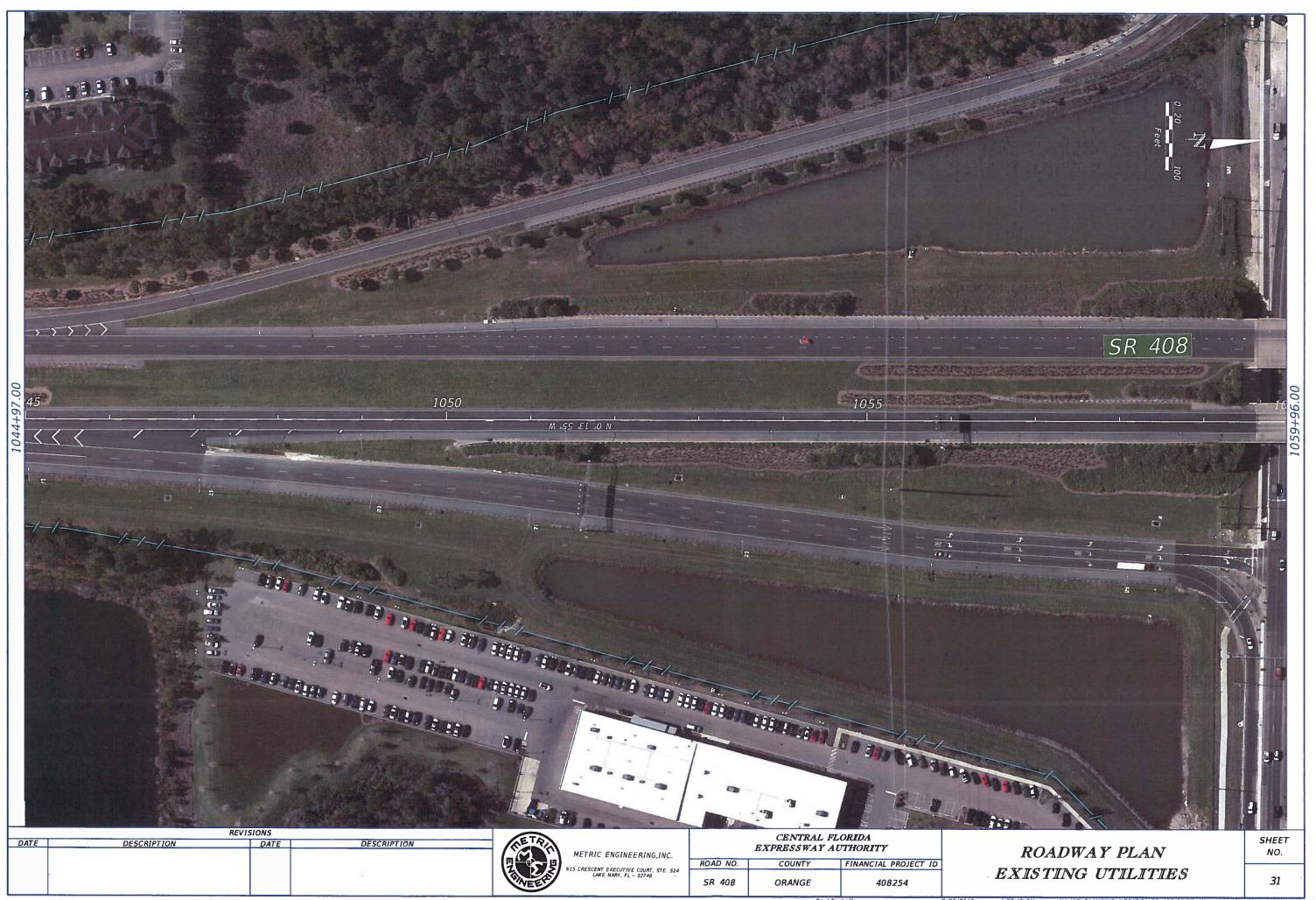












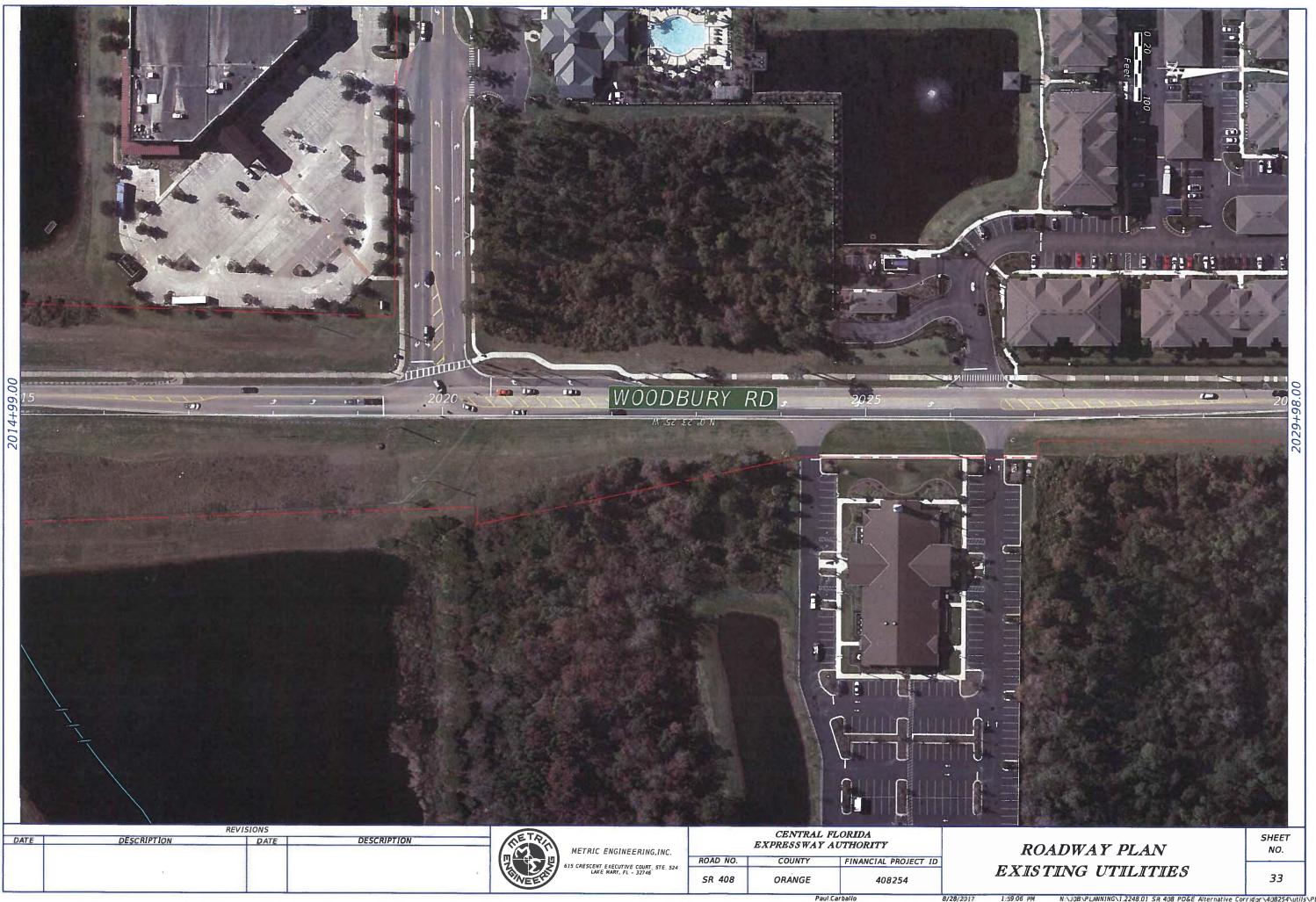


Paul.Carballo

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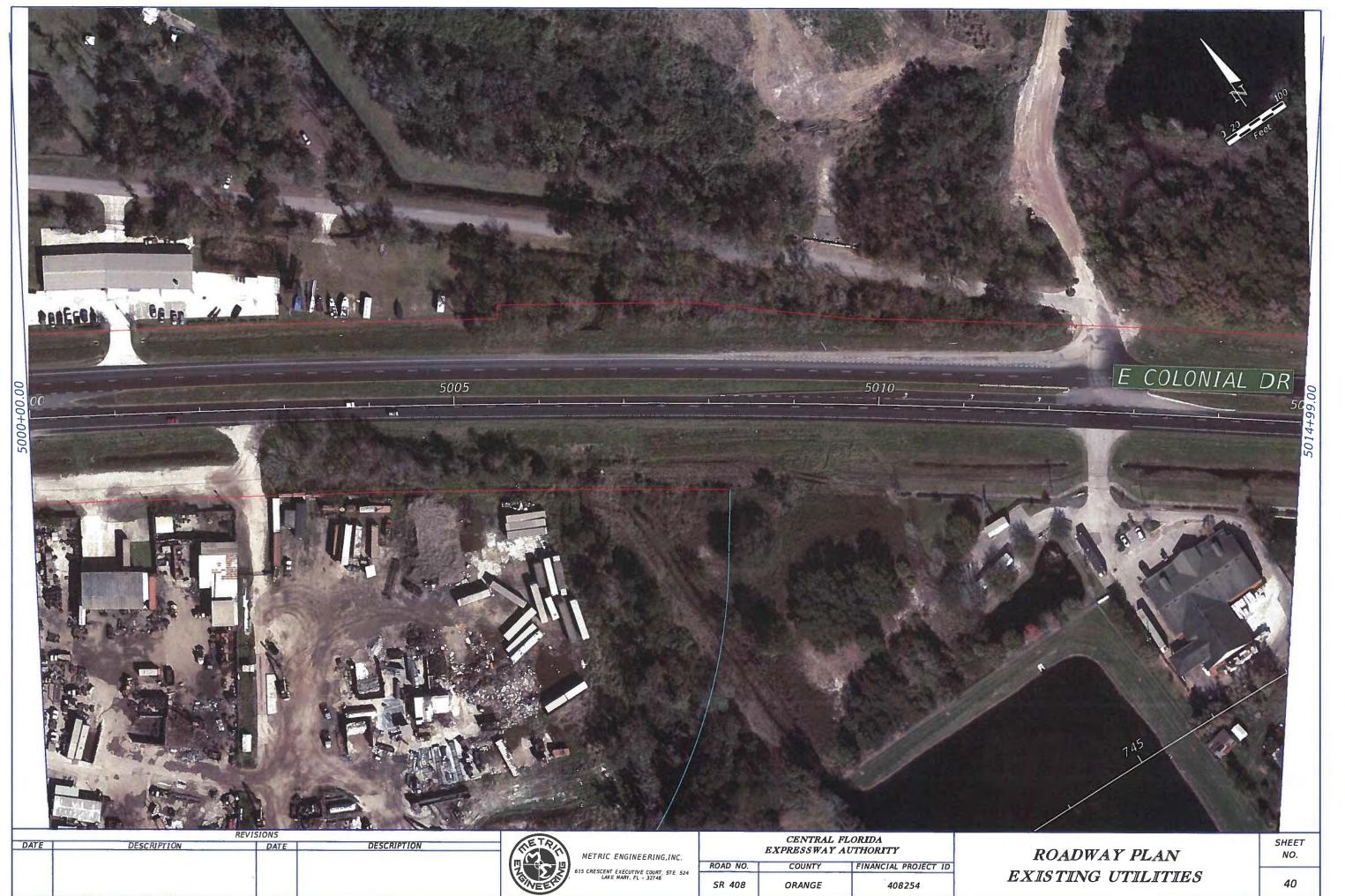
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