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Supplemental Information

To: City of Columbus
Date: March 7, 2018
Subject: Supplemental Information for Midland Commons (DRI #2766)

The following attachments have been generated in response to requests from the City of Columbus and include:

- An outline of the recommended improvements at each intersection split into “System Improvements” and “Site Mitigation Improvements.” **This is found in the attached Table 1.**
- The results from the recommended improvements have been summarized to produce a comparison table that displays the HCM level of service for each intersection in the existing and future networks. **This is found in the attached Table 2.**
- Concept drawings showing recommended improvements on the road network have been attached as **Supplementary Figures.**



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TABLE 1 — LIST OF RECOMMENDED IMPROVEMENTS

#	Intersection	System Improvements (Implemented in “No-Build” Scenario)	Site Mitigation Improvements (Implemented in “Build” Scenario)
5	<u>US 80 @ Flat Rock Rd (N)/Site Drwy 2</u>	<ul style="list-style-type: none"> Remove protected signal phasing on eastbound approach (JR Allen Pkwy) 	<ul style="list-style-type: none"> Dual left turn lanes on Flat Rock Road and a shared thru/right turn lane
6	<u>US 80 @ Gateway Rd</u>	<ul style="list-style-type: none"> Restripe the Manchester Expy Off-Ramp to operate as a separate left, thru, and free-flow right turn Create a third thru lane on JR Allen Pkwy going west beginning at the free-flow right turn lane from Manchester Expy Off-Ramp to drop as right turn onto Flat Rock Rd Install a second right turn lane on Gateway Road and install permissive+overlap signal phasing Create third thru lane on JR Allen Pkwy beginning at west of Gateway Rd going east toward Kitten Lake Dr 	
7	<u>Gateway Rd @ Talokas Ln</u>		<ul style="list-style-type: none"> Re-stripe Talokas Lane to operate as a single left turn and single right turn Install permissive+overlap signal phasing on Talokas Lane for right turn movement
8	<u>US 80 @ Manchester Expy NB Ramps</u>	<ul style="list-style-type: none"> Install a dedicated right turn lane on Manchester Expy Off-Ramp with a free-flow movement onto JR Allen Pkwy Create a shared thru/right turn on JR Allen Pkwy onto Manchester Expy On-Ramp 	
9	<u>US 80 @ Flat Rock Rd (S)/Kitten Lake Dr</u>	<ul style="list-style-type: none"> End third thru lane as a left turn onto Kitten Lake Drive from JR Allen Pkwy Reconfigure Flat Rock Rd to operate with dual lefts and shared thru/right turn lane Create a separate left turn lane on Kitten Lake Dr using the existing median and create a free-flow dedicated right turn lane and dedicated thru lane Create third thru lane on JR Allen Pkwy going west beginning at free-flow right turn from Kitten Lake Dr and ending at the existing right turn onto Manchester Expy SB On-Ramp 	



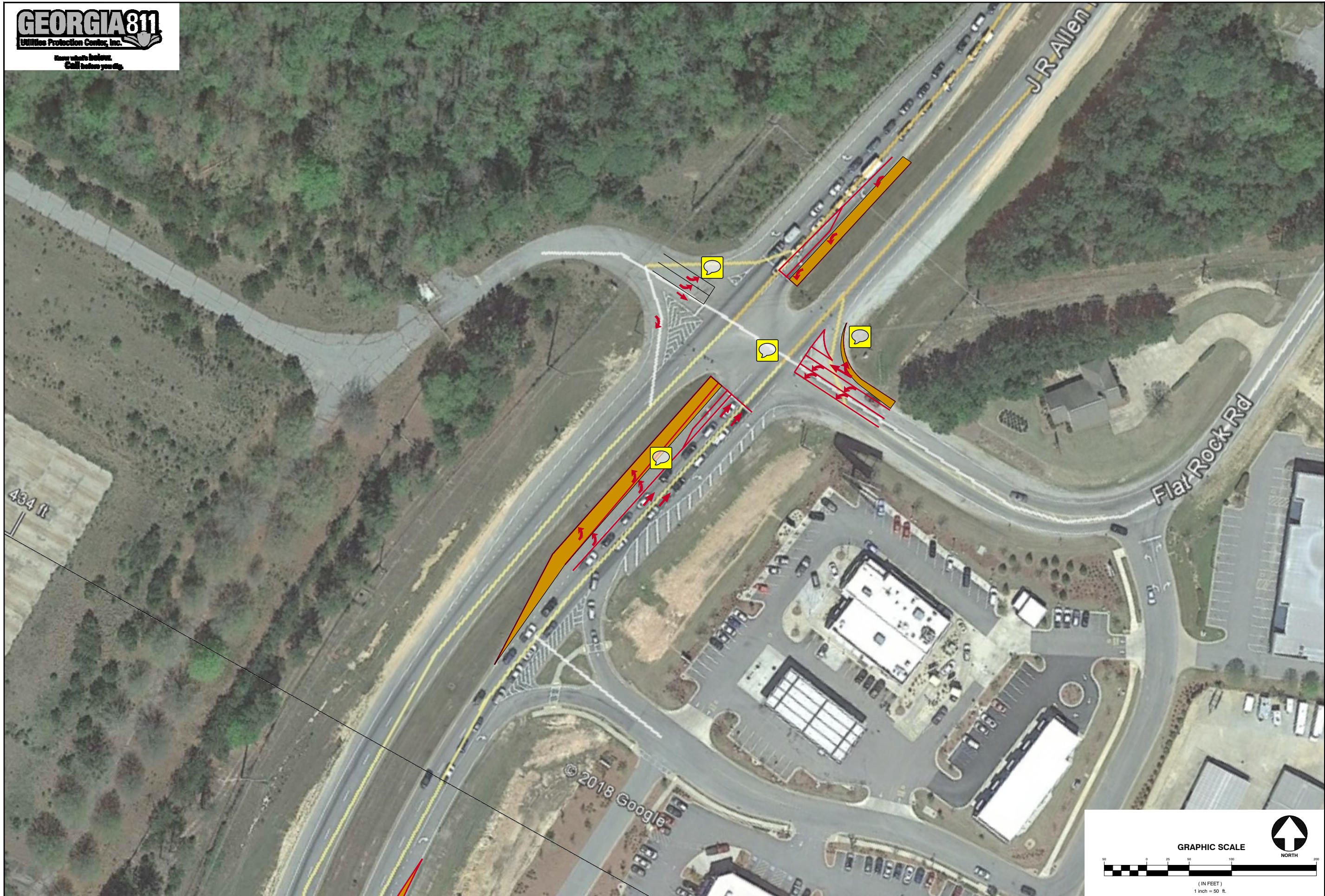
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TABLE 2 – INTERSECTION OPERATIONS

#	Intersection	Existing 2017 (With Existing Signal Timing)			No-Build 2019			Build 2019			No-Build 2019 (Improved)			Build 2019 (Improved)		
		AM	MID	PM	AM	MID	PM	AM	MID	PM	AM	MID	PM	AM	MID	PM
5	US 80 @ Flat Rock Rd (N)/Site Drwy 2	D (41.3)	C (23.5)	E (79.0)	D (52.2)	C (24.3)	F (96.6)	E (58.1)	D (48.8)	F (119.6)	D (51.2)	B (19.8)	F (92.9)	C (31.7)	C (32.3)	D (54.2)
	-Eastbound Approach	C (34.0)	B (18.6)	C (29.5)	D (38.2)	B (19.5)	C (30.1)	D (47.7)	D (39.7)	F (92.9)	D (35.6)	B (12.1)	C (29.3)	C (32.1)	C (31.7)	D (44.8)
	-Westbound Approach	D (39.9)	B (18.2)	F (97.1)	E (60.0)	B (18.5)	F (126.6)	D (47.3)	D (48.0)	F (131.1)	E (60.8)	B (15.9)	F (123.0)	B (12.7)	B (16.9)	C (27.0)
	-Northbound Approach	D (48.8)	D (44.4)	A (0.0)	D (47.9)	D (44.0)	A (0.0)	F (98.4)	E (59.1)	F (133.7)	D (47.6)	D (44.0)	A (0.0)	F (88.1)	E (57.7)	F (169.1)
	-Southbound Approach	E (71.4)	E (62.8)	F (139.1)	E (73.5)	E (65.5)	F (156.3)	F (107.4)	E (72.9)	F (132.3)	E (72.2)	E (65.5)	F (148.8)	F (89.8)	E (60.6)	F (93.6)
6	US 80 @ Gateway Rd*	E (73.6)	C (28.5)	F (113.3)	F (86.3)	C (28.2)	F (137.5)	F (125.0)	D (36.7)	F (190.8)	B (15.2)	C (21.5)	D (35.1)	B (16.6)	C (26.5)	D (36.7)
	-Eastbound Approach	D (54.1)	B (16.2)	F (129.2)	E (74.4)	B (17.1)	F (164.5)	F (146.7)	D (39.5)	F (250.0)	B (12.7)	B (14.9)	C (30.4)	B (15.8)	C (30.7)	C (29.1)
	-Westbound Approach	B (18.4)	C (22.5)	C (32.5)	C (25.3)	C (21.2)	D (44.7)	D (47.6)	C (21.9)	F (89.5)	A (9.9)	B (17.9)	B (20.0)	A (9.6)	B (14.7)	C (34.3)
	-Northbound Approach	E (77.7)	E (56.4)	F (146.9)	E (77.5)	E (57.2)	F (180.6)	E (76.9)	E (57.6)	F (177.2)	E (71.3)	D (49.7)	F (93.2)	E (78.9)	D (53.9)	E (76.6)
	-Southbound Approach	F (214.2)	E (57.7)	F (268.1)	F (251.4)	E (58.4)	F (305.2)	F (267.5)	E (61.4)	F (355.2)	B (19.8)	C (23.6)	C (29.8)	C (21.0)	C (23.6)	C (23.3)
7	Gateway Rd @ Talokas Ln	B (18.1)	C (24.9)	C (24.4)	B (18.1)	C (25.0)	C (24.8)	C (22.1)	D (47.9)	D (49.0)	B (18.1)	C (25.0)	C (24.8)	B (17.5)	C (23.1)	C (23.8)
	-Eastbound Approach	E (58.8)	D (54.0)	D (54.0)	E (58.5)	D (53.4)	D (54.3)	E (57.8)	F (93.0)	F (97.7)	E (58.5)	D (53.4)	D (54.3)	D (43.3)	C (31.0)	C (31.2)
	-Northbound Approach	A (1.9)	A (3.8)	A (5.4)	A (2.0)	A (4.1)	A (5.9)	A (5.2)	B (16.5)	B (17.8)	A (2.0)	A (4.1)	A (5.9)	A (4.8)	B (15.6)	B (17.6)
	-Southbound Approach	A (4.5)	A (7.2)	A (10.0)	A (4.6)	A (7.8)	B (10.9)	B (10.0)	C (25.3)	C (25.9)	A (4.6)	A (7.8)	B (10.9)	A (9.4)	C (24.6)	C (25.8)
8	US 80 @ Manchester Expy NB Ramps*	B (18.3)	B (13.8)	F (91.9)	C (20.0)	B (13.9)	F (105.4)	C (25.1)	B (18.3)	F (131.0)	A (9.9)	B (10.9)	C (26.1)	A (9.3)	B (14.2)	C (31.7)
	-Eastbound Approach	A (9.9)	B (11.2)	B (19.8)	B (12.0)	B (11.3)	C (20.5)	B (19.2)	B (14.9)	C (21.9)	A (7.2)	B (10.6)	C (25.8)	A (5.5)	A (6.5)	C (23.9)
	-Westbound Approach	B (13.2)	A (3.3)	E (56.9)	B (15.0)	A (3.7)	E (61.2)	B (16.3)	A (7.3)	F (85.2)	A (8.4)	A (7.3)	C (22.7)	A (4.5)	B (14.9)	D (36.7)
	-Northbound Approach	F (83.8)	E (55.9)	F (298.2)	F (83.0)	E (55.4)	F (354.3)	E (76.4)	E (56.0)	F (424.3)	C (30.4)	C (23.1)	C (33.3)	D (40.0)	C (34.0)	D (37.2)
9	US 80 @ Flat Rock Rd (S)/Kitten Lake Dr*	E (58.1)	E (70.5)	F (82.2)	E (59.8)	E (78.6)	F (93.3)	E (63.7)	F (81.6)	F (100.5)	D (47.5)	D (42.8)	E (62.6)	D (43.4)	D (45.1)	E (63.1)
	-Eastbound Approach	D (48.7)	D (36.9)	D (46.1)	D (47.4)	D (37.6)	D (47.1)	D (43.7)	D (39.2)	D (47.2)	C (30.7)	D (36.5)	E (60.5)	C (29.9)	D (37.0)	D (47.4)
	-Westbound Approach	D (47.9)	D (52.1)	E (57.4)	D (51.9)	E (55.5)	E (59.3)	E (67.4)	E (69.0)	E (64.1)	D (45.4)	D (43.6)	E (63.0)	D (47.4)	D (48.1)	E (64.3)
	-Northbound Approach	F (83.9)	E (60.1)	F (144.6)	F (85.6)	E (63.4)	F (169.3)	F (84.5)	E (73.9)	F (201.8)	E (73.7)	D (53.9)	E (77.0)	E (73.1)	E (55.2)	F (103.5)
	-Southbound Approach	F (92.0)	F (172.5)	F (145.4)	F (98.8)	F (207.1)	F (185.6)	F (108.1)	F (207.1)	F (187.5)	F (88.7)	D (41.5)	D (41.7)	D (49.0)	D (45.8)	D (39.4)
16	US 80 @ Site Drwy 1 (RIRO)*															
	-Northbound Approach	NA	NA	NA	NA	NA	NA	D (26.1)	C (16.7)	D (29.4)	NA	NA	NA	D (26.1)	C (16.7)	D (29.4)
17	US 80 @ Site Drwy 3 (RIRO)*															
	-Northbound Approach	NA	NA	NA	NA	NA	NA	B (12.8)	B (10.8)	B (13.7)	NA	NA	NA	B (12.5)	B (14.6)	B (13.1)
18	US 80 @ Site Drwy 4 (RIRO)*															
	-Northbound Approach	NA	NA	NA	NA	NA	NA	B (12.8)	B (10.6)	B (13.2)	NA	NA	NA	B (11.5)	B (14.6)	B (12.0)



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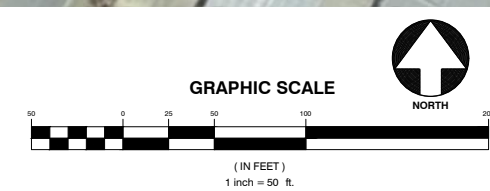
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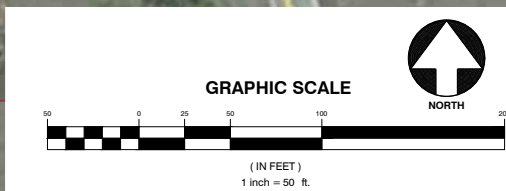


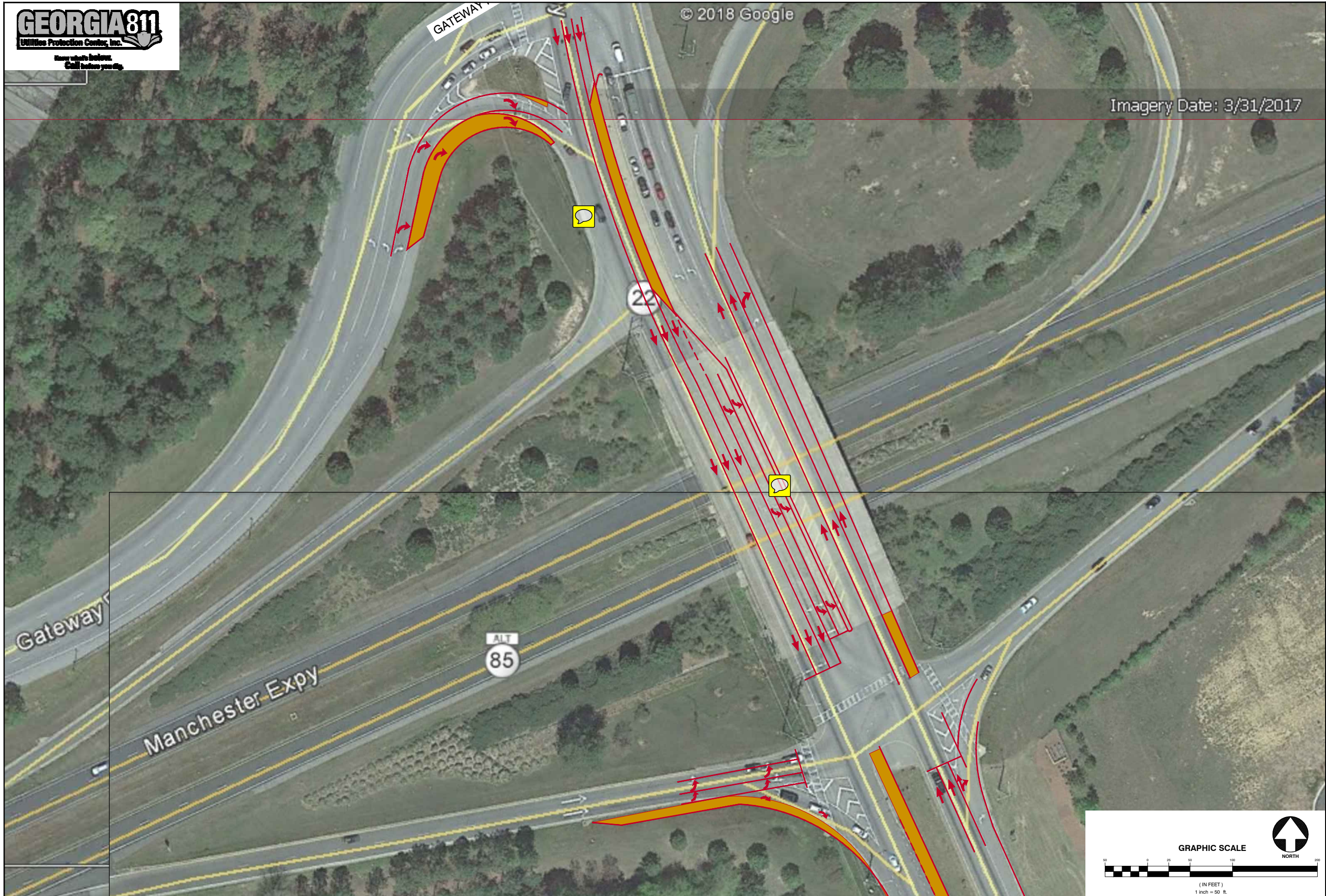
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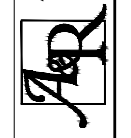
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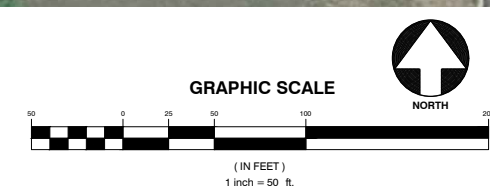
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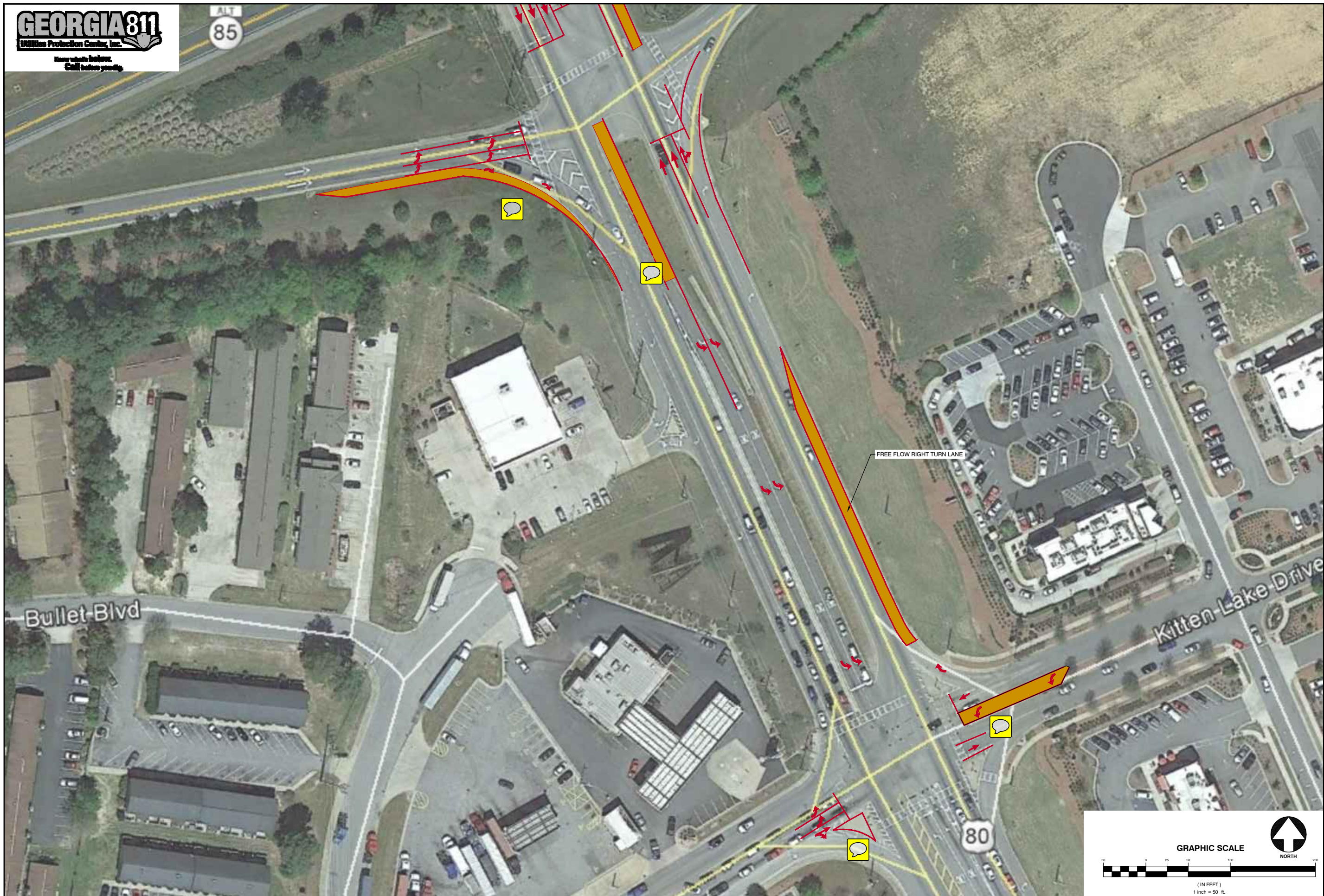
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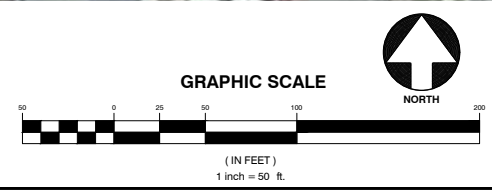




FREE FLOW RIGHT TURN LANE

Bullet Blvd

Kitten-Lake Drive



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