Appendix A

(Part 1)

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(per PennDOT publication 'Policies and Procedures for Transportation Impact Studies' dated January 28, 2009.)

Table 1
LOS Summary

TABLE 1
LEVELS OF SERVICE [DELAY] SUMMARY

Intersection	Movement	AM PEAK HOUR STREET										
		2020 Base line	2022 Opening Year					2027 Horizon Year				
			Base		Projected			Base		Projected		
			No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.
S Market Street SR 0114 - Gettysburg Pike SIGNALIZED	ILOS	B [18.2]	C [32.9]	C [31.2]	D [41.7]	D [39.6]	C [27.8]	C [33.5]	D [37.5]	D [44.4]	D [42.6]	C [29.0]
S Market Street - Southbound Ramp US 15 SIGNALIZED	ILOS	B [17.0]	A [8.9]	B [15.7]	B [11.1]	B [18.1]	A [8.4]	A [9.0]	B [17.6]	B [11.4]	B [14.6]	B [13.8]
S Market Street - Northbound Ramp US 15 SIGNALIZED	ILOS	B [13.6]	B [15.8]	B [16.7]	B [19.7]	B [18.7]	B [19.3]	B [15.1]	B [16.4]	C [21.5]	C [24.9]	C [25.5]
Gettysburg Pike - Site Driveway 1 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [8.6]	A [8.7]	A [8.6]	NA	NA	A [8.7]	A [8.8]	A [8.7]
S Market Street SR 0114 - Site Driveway 2 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [1]	A [1]		NA	NA	A [1]	A [1]	
Gettysburg Pike - Site Driveway 3 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [2.0]	A [2.0]	A [2.0]	NA	NA	A [2.0]	A [2.0]	A [2.0]
Gettysburg Pike - Site Driveway 4 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [0.7]	A [0.7]	A [0.7]	NA	NA	A [0.7]	A [0.7]	A [0.7]

Base = No-Build (without proposed development) scenario for design year conditions
Projected = Build (with proposed development) scenario for design year conditions
ILOS = Overall Intersection Level of Service
☐ = Mitigation not required for LOS.

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY

Intersection	Movement	PM PEAK HOUR STREET										
		2020 Base line	2022 Opening Year					2027 Horizon Year				
			Base		Projected			Base		Projected		
			No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.
S Market Street SR 0114 - Gettysburg Pike SIGNALIZED	ILOS	B [19.5]	C [23.8]	C [23.0]	C [32.0]	C [30.6]	C [20.4]	C [25.6]	C [24.6]	C [33.9]	C [32.3]	C [21.2]
S Market Street - Southbound Ramp US 15 SIGNALIZED	ILOS	B [19.7]	B [18.0]	C [21.4]	C [21.3]	C [23.5]	B [17.9]	C [20.4]	C [22.8]	C [22.5]	C [23.6]	B [17.4]
S Market Street - Northbound Ramp US 15 SIGNALIZED	ILOS	B [14.8]	B [13.6]	B [16.9]	B [18.4]	C [23.1]	C [21.6]	B [15.9]	B [19.5]	C [25.2]	C [27.3]	C [25.6]
Gettysburg Pike - Site Driveway 1 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [9.0]	A [9.0]	A [8.8]	NA	NA	A [9.3]	A [9.4]	A [9.2]
S Market Street SR 0114 - Site Driveway 2 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [1]	A [1]		NA	NA	A [1]	A [1]	
Gettysburg Pike - Site Driveway 3 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [1.7]	A [1.7]	A [1.7]	NA	NA	A [1.7]	A [1.7]	A [1.7]
Gettysburg Pike - Site Driveway 4 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [0.5]	A [0.5]	A [0.5]	NA	NA	A [0.5]	A [0.5]	A [0.5]

Base = No-Build (without proposed development) scenario for design year conditions
Projected = Build (with proposed development) scenario for design year conditions
ILOS = Overall Intersection Level of Service
☐ = Mitigation not required for LOS.

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY

Intersection	Movement	SAT PEAK HOUR STREET										
		2020 Base line	2022 Opening Year					2027 Horizon Year				
			Base		Projected			Base		Projected		
			No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Improv.
S Market Street SR 0114 - Gettysburg Pike SIGNALIZED	ILOS	B [14.7]	B [16.8]	B [16.6]	C [28.1]	C [26.6]	C [20.3]	B [17.3]	B [17.1]	C [27.4]	C [26.0]	C [20.4]
S Market Street - Southbound Ramp US 15 SIGNALIZED	ILOS	A [9.5]	A [9.6]	A [9.7]	A [9.9]	B [10.3]	B [12.5]	A [9.8]	A [9.8]	B [10.3]	B [10.3]	B [12.8]
S Market Street - Northbound Ramp US 15 SIGNALIZED	ILOS	A [7.7]	A [7.8]	A [7.8]	B [10.5]	B [11.1]	B [13.8]	A [7.9]	A [7.9]	B [10.9]	B [10.9]	B [14.1]
Gettysburg Pike - Site Driveway 1 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [6.7]	A [6.7]	A [6.6]	NA	N/A	A [6.8]	A [6.8]	A [6.7]
S Market Street SR 0114 - Site Driveway 2 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [1]	A [1]		NA	N/A	A [1]	A [1]	
Gettysburg Pike - Site Driveway 3 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [3.4]	A [3.4]	A [3.4]	NA	N/A	A [3.4]	A [3.4]	A [3.4]
Gettysburg Pike - Site Driveway 4 UN-SIGNALIZED TWSC	ILOS	N/A	N/A	N/A	A [1.2]	A [1.2]	A [1.2]	NA	N/A	A [1.2]	A [1.2]	A [1.2]

Base = No-Build (without proposed development) scenario for design year conditions
Projected = Build (with proposed development) scenario for design year conditions
ILOS = Overall Intersection Level of Service
☐ = Mitigation not required for LOS.

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			AM PEAK HOUR STREET										
South Market Street SR 0114 - Gettysburg Pike SIGNALIZED	EB	Approach	B [17.2]	B [14.7]	B [17.2]	C [21.5]	C [20.1]	B [19.3]	B [15.9]	B [13.1]	C [22.0]	C [20.5]	C [20.8]
		EBL	B [11.6]	A [9.9]	C [21.8]	B [18.4]	C [20.3]	B [17.9]	B [12.0]	A [9.7]	B [19.0]	C [21.2]	B [19.6]
		EBT	B [17.8]	B [15.3]	B [18.8]	C [23.0]	C [21.9]	B [19.9]	B [16.3]	B [14.4]	C [23.3]	C [22.2]	C [21.3]
		EBR			A [2.7]		B [13.9]	C [20.0]		A [7.6]		B [14.0]	C [21.5]
	WB	Approach	A [5.3]	A [4.4]	B [16.4]	C [26.9]	C [31.4]	C [23.7]	B [11.6]	A [4.6]	C [28.6]	C [34.1]	C [27.0]
		WBL	A [9.8]	A [8.3]	B [13.7]	C [18.0]	B [17.8]	B [13.2]	A [9.6]	A [7.9]	B [19.0]	B [18.6]	B [13.9]
		WBT	A [4.5]	A [3.7]	B [18.8]	C [31.9]	D [38.5]	C [29.2]	B [12.8]	A [4.1]	C [33.9]	D [42.3]	C [33.8]
		WBR	A [0.2]	A [0.2]	A [1.0]	B [17.0]	B [13.0]	B [10.7]	A [6.3]	A [0.2]	B [17.1]	B [13.1]	B [11.0]
	NB	Approach	D [43.0]	F [111.2]	E [75.6]	F [80.1]	E [68.7]	C [29.0]	F [96.7]	F [133.1]	F [88.5]	E [75.9]	C [28.2]
		NBL	C [26.2]	C [27.6]	C [29.6]	C [25.5]	C [24.7]	C [30.1]	C [28.3]	C [30.3]	C [25.9]	C [25.4]	C [28.5]
		NBT	D [50.8]	F [147.8]	F [97.0]	F [103.1]	F [88.1]	C [31.8]	E [126.3]	F [180.2]	F [114.7]	F [98.0]	C [31.6]
		NBR						C [27.2]					C [26.7]
	SB	Approach	C [32.5]	C [35.0]	D [37.2]	D [37.8]	D [35.9]	D [42.6]	D [35.7]	D [37.9]	D [37.3]	D [37.0]	D [42.6]
		SBL	C [30.2]	C [31.6]	C [34.4]	D [39.1]	D [38.6]	C [27.4]	C [32.8]	C [33.8]	D [39.2]	D [39.0]	C [26.5]
		SBT/R	C [33.7]	D [36.7]	D [38.6]	D [36.9]	C [34.0]	D [53.3]	D [37.2]	D [40.0]	D [35.9]	D [35.6]	D [53.8]

Values shown as provided on the HCM 6 Worksheet. - indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			AM PEAK HOUR STREET										
South Market Street SR 0114 - US 15 Southbound Ramp	EB	Approach	A [9.3]	A [9.8]	C [23.0]	B [10.2]	B [10.3]	A [8.0]	B [10.0]	B [10.2]	B [10.7]	B [10.8]	A [8.4]
		EBT	A [9.3]	A [9.8]	C [23.0]	B [10.2]	B [10.3]	A [8.0]	B [10.0]	B [10.2]	B [10.7]	B [10.8]	A [8.4]
		EBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
SIGNALIZED	WB	Approach	B [18.8]	A [1.6]	A [6.5]	A [5.9]	C [21.4]	A [1.2]	A [1.2]	C [20.1]	A [6.2]	B [13.3]	B [13.2]
		WBL	A [5.4]	A [5.5]	B [16.2]	A [5.8]	A [6.1]	A [4.5]	A [5.5]	A [6.0]	A [6.2]	A [6.3]	A [5.1]
		WBT	B [19.8]	A [1.3]	A [5.8]	A [5.9]	C [22.4]	A [1.0]	A [0.8]	C [21.2]	A [6.2]	B [13.8]	B [13.8]
	SB	Approach	C [24.3]	C [22.3]	C [24.3]	C [22.9]	C [22.6]	C [23.4]	C [23.4]	C [23.1]	C [22.8]	C [22.5]	C [22.5]
		SBLTR	D [41.0]	D [37.1]	D [41.9]	D [41.9]	D [41.9]	D [43.7]	D [39.3]	D [39.3]	D [41.6]	D [41.7]	D [41.7]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			AM PEAK HOUR STREET										
South Market Street SR 0114 - US 15 Northbound Ramp	EB	Approach	A [6.8]	B [12.4]	B [13.2]	B [16.6]	B [11.0]	B [11.9]	A [8.0]	A [9.4]	B [19.2]	C [23.5]	C [24.8]
		EBL	A [9.6]	B [13.2]	B [13.9]	B [18.3]	B [15.6]	B [17.0]	B [11.3]	B [13.2]	C [22.0]	C [28.1]	C [29.9]
		EBT	A [0.2]	B [10.8]	B [11.6]	B [12.7]	A [0.2]	A [0.3]	A [0.2]	A [0.2]	B [12.9]	B [13.2]	B [13.2]
SIGNALIZED	WB	Approach	B [15.3]	B [14.9]	B [14.8]	B [17.2]	C [21.6]	C [21.4]	B [18.3]	B [19.2]	B [18.5]	C [22.8]	C [22.8]
		WBT	B [15.3]	B [14.9]	B [14.8]	B [17.2]	C [21.6]	C [21.4]	B [18.3]	B [19.2]	B [18.5]	C [22.8]	C [22.8]
		WBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
	NB	Approach	C [26.4]	C [25.1]	C [28.0]	C [30.3]	C [31.0]	C [31.8]	C [26.2]	C [27.5]	C [31.4]	C [31.3]	C [31.3]
		NBL/T/R	D [40.5]	D [38.3]	D [42.6]	D [43.9]	D [44.5]	D [45.7]	D [40.2]	D [41.8]	D [45.6]	D [44.9]	D [44.9]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	AM PEAK HOUR STREET												
	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
Gettysburg Pike - Site DW 1 UN-SIGNALIZED	WB	Approach	NA	NA	NA	C [20.7]	C [20.9]	C [20.8]	NA	NA	C [21.3]	C [21.5]	C [21.3]
		WBL	NA	NA	NA	C [21.9]	C [22.1]	C [22.0]	NA	NA	C [22.6]	C [22.8]	C [22.6]
		WBR	NA	NA	NA	B [11.0]	B [11.0]	B [11.0]	NA	NA	B [11.0]	B [11.0]	B [11.0]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [1.5]	A [1.5]	A [1.5]	NA	NA	A [1.5]	A [1.5]	A [1.5]
		SBL	NA	NA	NA	A [9.9]	A [9.9]	A [9.9]	NA	NA	A [9.9]	A [9.9]	A [9.9]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	AM PEAK HOUR STREET									
				2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
Gettysburg Pike - Site DW 3 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [13.3]	B [13.4]	B [13.3]	NA	NA	B [13.6]	B [13.7]	B [13.6]
		WBL	NA	NA	NA	C [19.3]	C [19.5]	C [19.1]	NA	NA	C [20.0]	C [20.2]	C [19.7]
		WBR	NA	NA	NA	B [11.7]	B [11.8]	B [11.8]	NA	NA	B [11.9]	B [12.0]	B [12.0]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [2.8]	A [2.8]	A [2.8]	NA	NA	A [2.7]	A [2.7]	A [2.7]
		SBL	NA	NA	NA	B [10.2]	B [10.3]	B [10.3]	NA	NA	B [10.3]	B [10.3]	B [10.3]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	AM PEAK HOUR STREET									
				2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
Gettysburg Pike - Site DW 4 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [11.5]	B [11.6]	B [11.6]	NA	NA	B [11.7]	B [11.8]	B [11.8]
		WBR	NA	NA	NA	B [11.5]	B [11.6]	B [11.6]	NA	NA	B [11.7]	B [11.8]	B [11.8]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		SBT	NA	NA	NA	-	-	-	NA	NA	-	-	-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	PM PEAK HOUR STREET												
	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - Gettysburg Pike SIGNALIZED	EB	Approach	B [19.6]	B [19.4]	B [17.7]	C [22.2]	C [20.0]	B [18.7]	C [20.2]	B [18.3]	C [22.8]	C [20.4]	B [18.9]
		EBL	B [11.6]	B [10.8]	B [10.8]	B [13.9]	B [14.3]	B [13.3]	B [10.9]	B [11.0]	B [14.0]	B [14.3]	B [13.5]
		EBT	C [20.3]	C [20.2]	B [19.4]	C [24.7]	C [23.3]	C [20.1]	C [21.1]	C [20.1]	C [25.3]	C [23.7]	C [20.3]
		EBR			B [10.6]		B [14.1]	C [20.2]		B [10.7]		B [14.1]	C [20.4]
	WB	Approach	A [6.2]	A [6.5]	A [6.2]	B [19.3]	B [18.4]	B [14.6]	A [6.8]	A [6.5]	C [20.3]	B [19.2]	B [14.5]
		WBL	B [11.5]	B [10.8]	B [10.4]	C [20.1]	B [19.2]	B [12.8]	B [11.3]	B [10.9]	C [22.3]	C [20.9]	B [12.7]
		WBT	A [3.9]	A [4.7]	A [4.9]	B [19.2]	C [20.0]	B [17.8]	A [4.9]	A [5.2]	B [19.5]	C [20.3]	B [17.7]
		WBR	A [3.2]	A [3.7]	A [2.5]	B [16.4]	B [10.4]	A [9.7]	A [3.9]	A [2.6]	B [16.5]	B [10.5]	A [9.6]
	NB	Approach	D [42.3]	E [77.1]	E [76.7]	E [63.2]	E [64.3]	C [23.2]	F [87.2]	F [86.7]	E [68.8]	E [70.1]	C [24.8]
		NBL	C [31.4]	C [27.7]	C [27.7]	C [28.2]	C [28.2]	C [23.4]	C [27.7]	C [27.7]	C [28.2]	C [28.2]	C [25.1]
		NBT	D [46.1]	F [94.2]	F [94.2]	E [73.9]	E [75.6]	C [27.4]	F [107.5]	F [107.5]	F [81.2]	F [83.1]	C [29.3]
		NBR						C [21.1]					C [22.6]
	SB	Approach	C [32.1]	C [29.0]	C [29.3]	D [36.8]	D [35.4]	C [27.9]	C [29.2]	C [29.5]	D [39.2]	D [37.4]	C [30.3]
		SBL	C [29.8]	C [26.6]	C [26.9]	D [40.5]	D [37.9]	C [24.1]	C [26.5]	C [26.9]	D [44.7]	D [41.4]	C [26.6]
		SBT/R	C [34.2]	C [31.2]	C [31.5]	C [33.2]	C [32.8]	C [31.8]	C [31.6]	C [31.8]	C [33.7]	C [33.3]	C [34.0]

Values shown as provided on the HCM 6 Worksheet. - indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	PM PEAK HOUR STREET												
	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - US 15 Southbound Ramp SIGNALIZED	EB	Approach	B [19.9]	C [22.9]	C [24.5]	C [24.6]	C [26.4]	B [16.1]	C [25.1]	C [27.4]	C [27.4]	C [29.6]	B [16.7]
		EBT	B [19.9]	C [22.9]	C [24.5]	C [24.6]	C [26.4]	B [16.1]	C [25.1]	C [27.4]	C [27.4]	C [29.6]	B [16.7]
		EBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]		A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
	WB	Approach	A [2.9]	A [2.9]	B [10.2]	A [6.2]	B [11.1]	B [14.5]	A [6.6]	B [10.7]	A [6.6]	A [6.5]	B [10.5]
		WBL	B [12.2]	B [12.5]	B [13.9]	B [14.4]	B [15.6]	A [10.4]	B [14.0]	B [15.1]	B [15.7]	B [16.6]	B [10.6]
		WBT	A [1.1]	A [1.0]	A [9.4]	A [4.7]	B [10.3]	B [15.1]	A [5.2]	A [9.9]	A [5.0]	A [4.8]	B [10.5]
	SB	Approach	D [37.1]	C [26.3]	C [27.9]	C [33.4]	C [33.2]	C [23.9]	C [27.6]	C [28.5]	C [33.7]	C [34.3]	C [25.7]
		SBLTR	D [45.3]	D [36.5]	D [39.3]	D [42.4]	D [42.4]	C [29.9]	D [38.5]	D [40.1]	D [42.9]	D [43.9]	C [32.4]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	PM PEAK HOUR STREET												
	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - US 15 Northbound Ramp SIGNALIZED	EB	Approach	B [11.4]	A [6.3]	B [12.2]	B [11.5]	B [17.3]	B [14.5]	A [9.7]	B [14.2]	B [19.3]	C [20.7]	B [17.6]
		EBL	B [19.8]	B [10.6]	B [14.4]	B [16.4]	C [22.2]	C [24.3]	B [13.7]	B [17.9]	C [25.5]	C [27.8]	C [29.8]
		EBT	A [0.4]	A [0.7]	A [9.3]	A [4.9]	B [10.8]	A [1.5]	A [4.5]	A [9.4]	B [11.0]	B [11.2]	A [1.4]
	WB	Approach	B [10.6]	C [22.1]	C [20.7]	C [23.2]	C [28.5]	C [30.2]	C [22.9]	C [24.3]	C [32.4]	D [38.6]	D [38.8]
		WBT	B [10.6]	C [22.1]	C [20.7]	C [23.2]	C [28.5]	C [30.2]	C [22.9]	C [24.3]	C [32.4]	D [38.6]	D [38.8]
		WBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
	NB	Approach	C [32.7]	C [29.4]	C [29.6]	D [36.6]	D [36.8]	D [35.8]	C [29.7]	C [33.2]	D [36.9]	D [37.1]	D [37.7]
		NBL/T/R	D [46.7]	D [41.5]	D [41.7]	D [50.2]	D [50.4]	D [49.0]	D [42.2]	D [47.3]	D [50.9]	D [51.1]	D [51.9]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			PM PEAK HOUR STREET										
Gettysburg Pike - Site DW 1 UN-SIGNALIZED	WB	Approach	NA	NA	NA	D [31.9]	D [32.1]	D [31.5]	NA	NA	D [34.0]	D [34.5]	D [33.5]
		WBL	NA	NA	NA	D [34.8]	E [35.1]	D [34.4]	NA	NA	E [37.2]	E [37.8]	D [36.7]
		WBR	NA	NA	NA	B [11.4]	B [11.4]	B [11.4]	NA	NA	B [11.5]	B [11.5]	B [11.5]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [1.2]	A [1.1]	A [1.1]	NA	NA	A [1.1]	A [1.1]	A [1.1]
		SBL	NA	NA	NA	B [10.2]	B [10.2]	B [10.2]	NA	NA	B [10.2]	B [10.2]	B [10.2]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			PM PEAK HOUR STREET										
Gettysburg Pike - Site DW 3 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [12.8]	B [12.9]	B [12.7]	NA	NA	B [13.1]	B [13.2]	B [13.0]
		WBL	NA	NA	NA	C [18.8]	C [19.0]	B [18.5]	NA	NA	C [19.4]	C [19.7]	C [19.1]
		WBR	NA	NA	NA	B [10.3]	B [10.3]	B [10.3]	NA	NA	B [10.4]	B [10.4]	B [10.4]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [1.7]	A [1.7]	A [1.7]	NA	NA	A [1.7]	A [1.6]	A [1.6]
		SBL	NA	NA	NA	A [9.5]	A [9.5]	A [9.5]	NA	NA	A [9.5]	A [9.5]	A [9.5]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	PM PEAK HOUR STREET												
	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
Gettysburg Pike - Site DW 4 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [10.2]	B [10.2]	B [10.2]	NA	NA	B [10.2]	B [10.3]	B [10.3]
		WBR	NA	NA	NA	B [10.2]	B [10.2]	B [10.2]	NA	NA	B [10.2]	B [10.3]	B [10.3]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		SBT	NA	NA	NA	-	-	-	NA	NA	-	-	-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		SAT PEAK HOUR STREET										
			2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - Gettysburg Pike SIGNALIZED	EB	Approach	B [13.7]	B [13.1]	B [12.2]	B [19.3]	B [18.9]	B [14.5]	B [13.5]	B [12.6]	C [21.4]	B [18.8]	B [14.9]
		EBL	A [9.4]	A [8.9]	A [9.0]	B [14.0]	B [15.6]	B [11.6]	A [9.1]	A [9.2]	B [15.5]	B [15.3]	B [11.9]
		EBT	B [14.1]	B [13.4]	B [13.0]	C [21.0]	C [21.4]	B [15.4]	B [13.9]	B [13.4]	C [23.3]	C [21.3]	B [15.7]
		EBR			A [8.3]		B [14.1]	B [15.5]		A [8.4]		B [13.8]	B [15.8]
	WB	Approach	A [2.6]	A [2.3]	A [2.3]	B [16.9]	B [18.0]	B [13.4]	A [2.4]	A [2.4]	B [19.1]	B [17.9]	B [13.7]
		WBL	A [8.9]	A [8.5]	A [8.4]	B [14.1]	B [15.6]	B [10.8]	A [8.6]	A [8.5]	B [15.9]	B [15.2]	B [10.9]
		WBT	A [1.5]	A [1.3]	A [1.3]	B [19.1]	C [21.4]	B [16.1]	A [1.3]	A [1.3]	C [21.5]	C [21.3]	B [16.6]
		WBR	A [0.4]	A [0.2]	A [0.2]	B [15.2]	A [9.6]	A [8.1]	A [0.2]	A [0.2]	B [17.0]	A [9.9]	A [8.3]
	NB	Approach	C [32.8]	D [46.8]	D [46.8]	D [50.6]	D [44.4]	C [25.6]	D [49.1]	D [49.1]	D [44.5]	D [41.9]	C [25.4]
		NBL	C [26.7]	C [27.6]	C [27.6]	C [26.9]	C [29.3]	C [24.4]	C [27.6]	C [27.6]	C [27.5]	C [27.4]	C [24.2]
		NBT	D [35.5]	D [55.0]	D [55.0]	E [61.0]	D [51.0]	C [29.9]	E [58.4]	E [58.4]	D [52.1]	D [48.3]	C [29.7]
		NBR						C [23.2]					C [23.0]
	SB	Approach	C [27.1]	C [28.2]	C [28.4]	C [33.7]	C [31.2]	C [30.3]	C [28.2]	C [28.4]	C [30.7]	C [31.5]	C [30.5]
		SBL	C [25.4]	C [26.5]	C [26.8]	C [35.5]	C [30.8]	C [28.9]	C [26.4]	C [26.7]	C [30.9]	C [32.1]	C [29.1]
		SBT/R	C [28.9]	C [30.2]	C [30.1]	C [31.6]	C [31.6]	C [32.1]	C [30.2]	C [30.2]	C [30.4]	C [30.8]	C [32.2]

Values shown as provided on the HCM 6 Worksheet. - indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	SAT PEAK HOUR STREET									
				2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - US 15 Southbound Ramp SIGNALIZED	EB	Approach	B [10.1]	B [10.3]	B [10.4]	B [11.3]	B [10.8]	A [9.8]	B [10.8]	B [10.8]	B [11.5]	B [11.5]	B [10.2]
		EBT	B [10.1]	B [10.3]	B [10.4]	B [11.3]	B [10.8]	A [9.8]	B [10.8]	B [10.8]	B [11.5]	B [11.5]	B [10.2]
		EBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
	WB	Approach	A [1.4]	A [1.5]	A [1.5]	A [1.6]	A [1.6]	B [10.8]	A [1.5]	A [1.5]	A [1.7]	A [1.7]	B [11.1]
		WBL	A [5.4]	A [5.5]	A [5.5]	A [6.2]	A [6.0]	A [5.8]	A [5.8]	A [5.8]	A [6.5]	A [6.5]	A [6.0]
		WBT	A [0.9]	A [0.9]	A [0.9]	A [1.1]	A [1.1]	B [11.4]	A [1.0]	A [1.0]	A [1.1]	A [1.1]	A [11.7]
	SB	Approach	C [26.6]	C [26.5]	C [26.5]	C [24.8]	C [27.6]	C [20.7]	C [26.3]	C [26.3]	C [26.2]	C [26.2]	C [20.7]
		SBLTR	C [34.8]	C [34.6]	C [34.6]	D [39.4]	D [44.2]	C [32.0]	C [34.4]	C [34.4]	D [41.6]	D [41.6]	C [31.9]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	SAT PEAK HOUR STREET									
				2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
South Market Street SR 0114 - US 15 Northbound Ramp SIGNALIZED	EB	Approach	A [1.4]	A [1.4]	A [1.4]	A [2.1]	A [2.1]	A [9.9]	A [1.5]	A [1.5]	A [2.2]	A [2.2]	B [10.3]
		EBL	A [4.2]	A [4.2]	A [4.2]	A [6.0]	A [5.9]	A [7.1]	A [4.4]	A [4.4]	A [6.2]	A [6.2]	A [7.5]
		EBT	A [0.7]	A [0.7]	A [0.7]	A [0.8]	A [0.8]	B [10.9]	A [0.8]	A [0.8]	A [0.8]	A [0.8]	B [11.2]
	WB	Approach	A [8.1]	A [8.2]	A [8.2]	B [11.3]	B [11.0]	B [12.3]	A [8.6]	A [8.6]	B [11.7]	B [11.7]	B [12.8]
		WBT	A [8.1]	A [8.2]	A [8.2]	B [11.3]	B [11.0]	B [12.3]	A [8.6]	A [8.6]	B [11.7]	B [11.7]	B [12.8]
		WBR	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]	A [0.0]
	NB	Approach	C [29.0]	C [28.9]	C [28.9]	C [33.3]	D [37.3]	C [27.5]	C [28.9]	C [28.9]	D [35.2]	D [35.2]	C [27.8]
		NBLTR	D [36.0]	D [36.0]	D [36.0]	D [38.9]	D [43.7]	C [32.0]	D [35.8]	D [35.8]	D [41.1]	D [41.1]	C [32.2]

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
			SAT PEAK HOUR STREET										
Gettysburg Pike - Site DW 1 UN-SIGNALIZED	WB	Approach	NA	NA	NA	C [20.2]	C [20.2]	C [20.0]	NA	NA	C [21.1]	C [21.1]	C [20.8]
		WBL	NA	NA	NA	C [21.7]	C [21.7]	C [21.4]	NA	NA	C [22.7]	C [22.7]	C [22.4]
		WBR	NA	NA	NA	A [9.8]	A [9.8]	A [9.8]	NA	NA	A [9.8]	A [9.8]	A [9.8]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [1.2]	A [1.2]	A [1.2]	NA	NA	A [1.2]	A [1.2]	A [1.2]
		SBL	NA	NA	NA	A [9.1]	A [9.1]	A [9.1]	NA	NA	A [9.2]	A [9.2]	A [9.2]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
	SAT PEAK HOUR STREET												
Gettysburg Pike - Site DW 3 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [12.7]	B [12.7]	B [12.6]	NA	NA	B [12.9]	B [12.9]	B [12.7]
		WBL	NA	NA	NA	C [20.3]	C [20.3]	C [19.7]	NA	NA	C [20.9]	C [20.9]	C [20.1]
		WBR	NA	NA	NA	B [10.5]	B [10.5]	B [10.5]	NA	NA	B [10.6]	B [10.6]	B [10.6]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [4.0]	A [4.0]	A [4.0]	NA	NA	A [4.0]	A [4.0]	A [4.0]
		SBL	NA	NA	NA	A [9.9]	A [9.9]	A [9.9]	NA	NA	A [10.0]	A [10.0]	A [10.0]
		SBT						-					-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

TABLE 1 (Continued)
LEVELS OF SERVICE [DELAY] SUMMARY BY MOVEMENT

Intersection	Approach / Movement		2020 Baseline	SAT PEAK HOUR STREET									
				2022 Opening Year					2027 Horizon Year				
				Base		Projected			Base		Projected		
				No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.	No-Build	W/ ADJ. DEV	Build	W/ ADJ. DEV	With Imp.
Gettysburg Pike - Site DW 4 UN-SIGNALIZED	WB	Approach	NA	NA	NA	B [10.1]	B [10.1]	B [10.1]	NA	NA	B [10.2]	B [10.2]	B [10.2]
		WBR	NA	NA	NA	B [10.1]	B [10.1]	B [10.1]	NA	NA	B [10.2]	B [10.2]	B [10.2]
	NB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		NBT/R	NA	NA	NA	-	-	-	NA	NA	-	-	-
	SB	Approach	NA	NA	NA	A [0.0]	A [0.0]	A [0.0]	NA	NA	A [0.0]	A [0.0]	A [0.0]
		SBT	NA	NA	NA	-	-	-	NA	NA	-	-	-

Values shown as provided on the HCM 6 Worksheet.
- indicates estimated operation with no delay

Concept Plans

DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-22-2020
REV :	11-19-2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

CONCEPTUAL IMPROVEMENTS SKETCH
SOUTH MARKET STREET MID INTERCHANGE

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 50'
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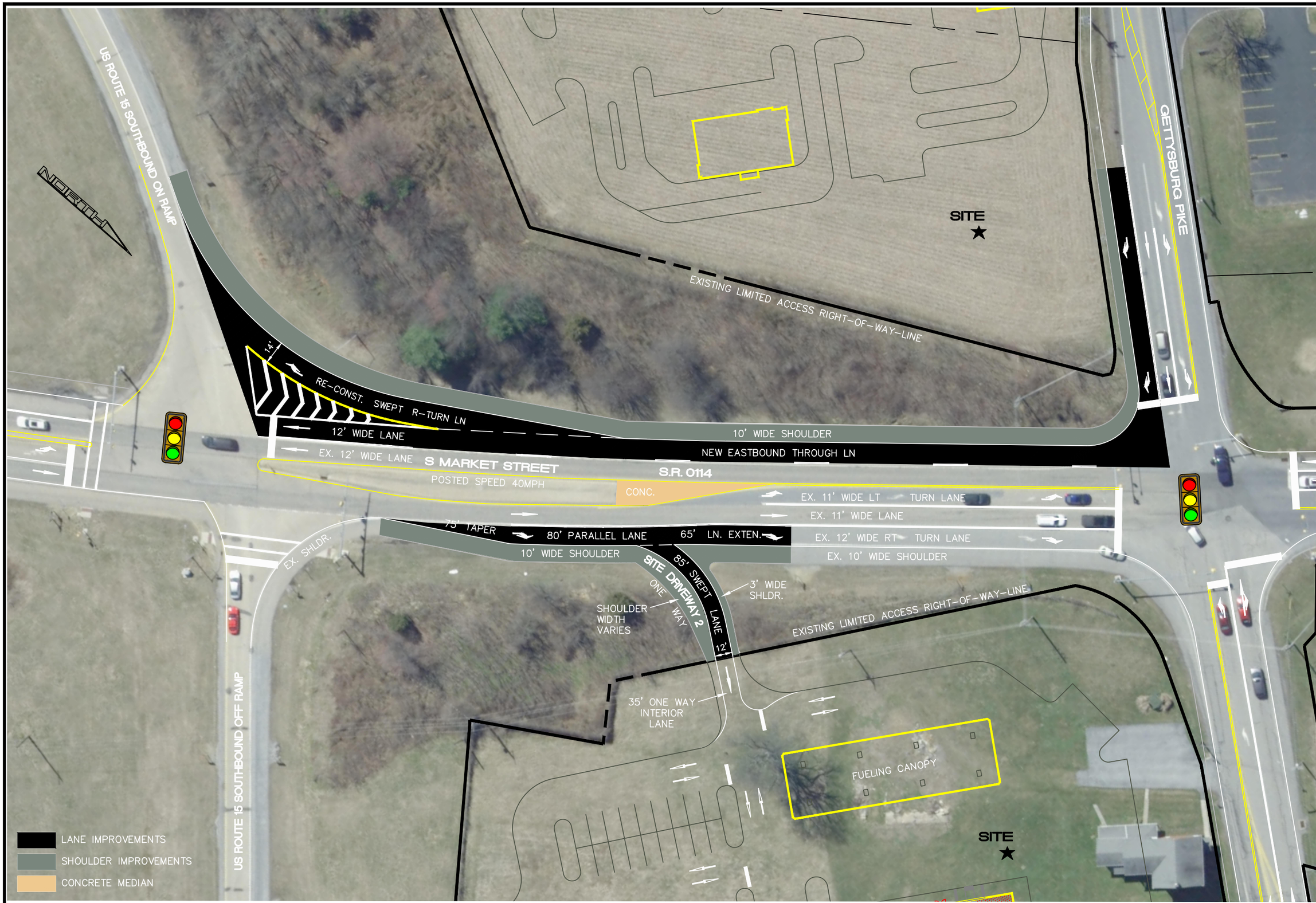
SHEET	IMP-1



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DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-22-2020
REV :	11-19-2021

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CONCEPTUAL IMPROVEMENTS SKETCH
SOUTH MARKET STREET AND SITE DRIVEWAY 2

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 50'
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SHEET	IMP-2

DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-22-2020
REV :	11-19-2021

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CONCEPTUAL IMPROVEMENTS SKETCH
GETTYSBURG PIKE AND SITE DRIVEWAYS 3 AND 4

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 50'
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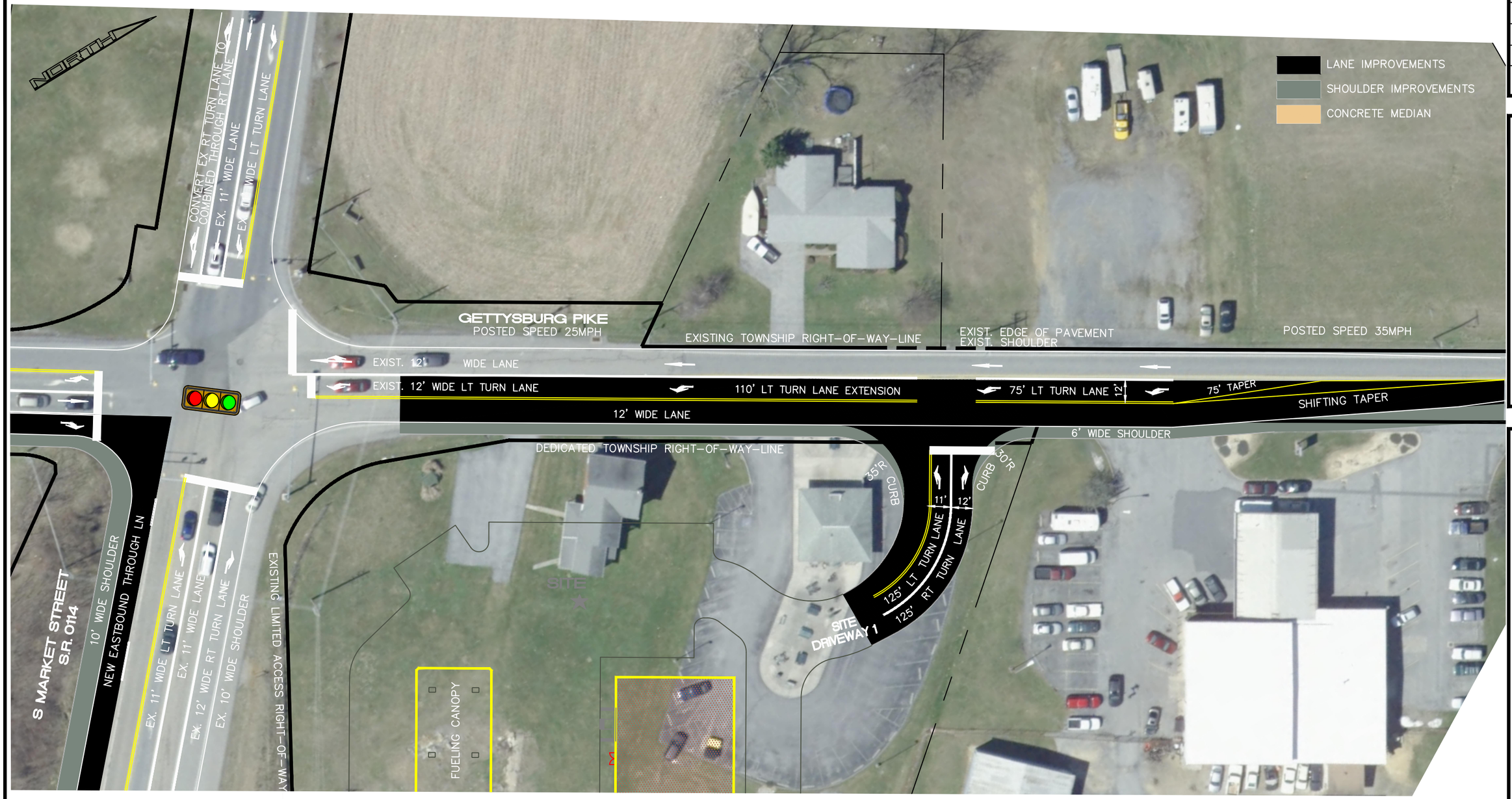
SHEET	IMP-3



DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-22-2020
REV :	12-28-2021

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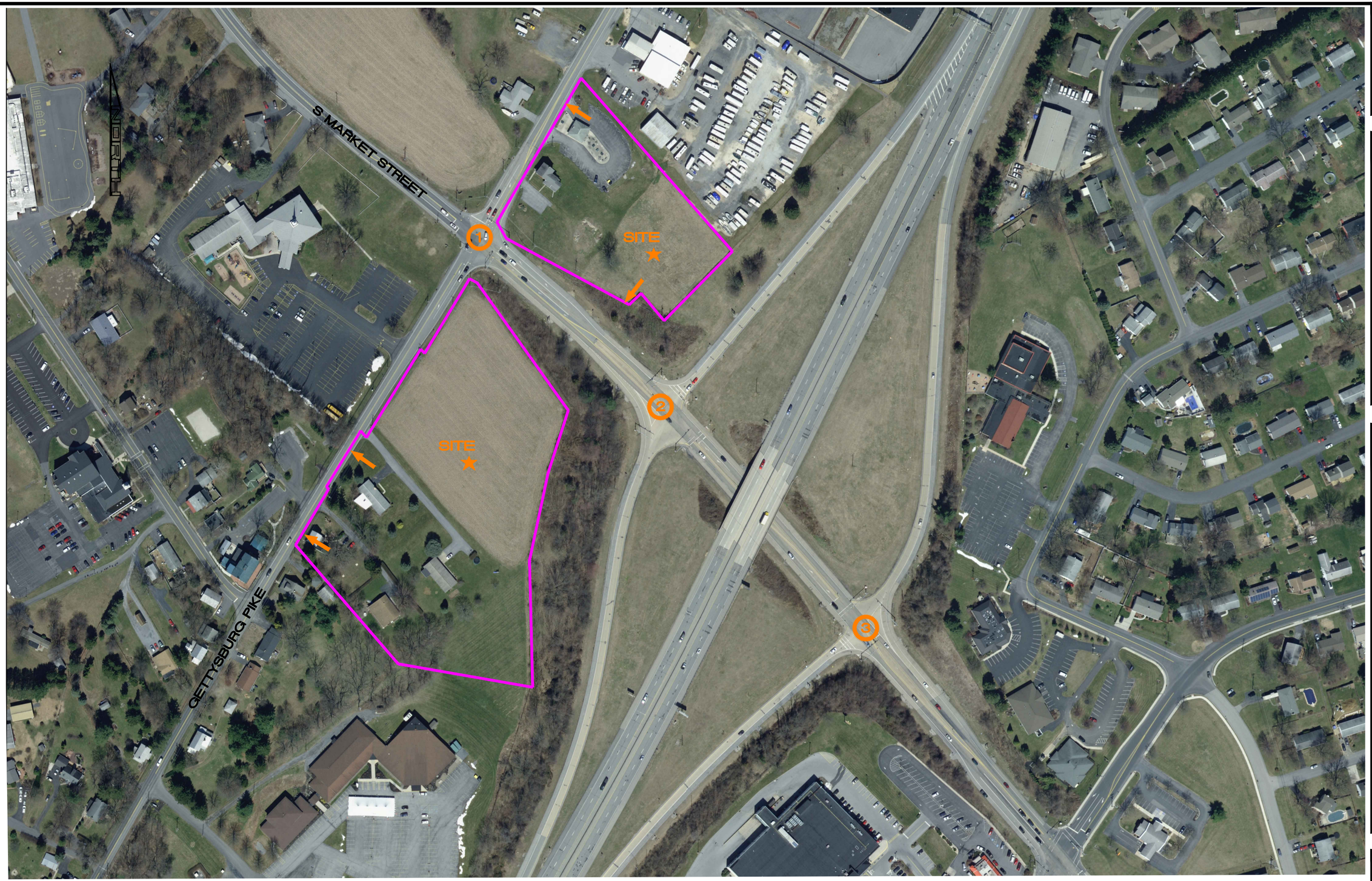
CONCEPTUAL IMPROVEMENTS SKETCH
SOUTH MARKET STREET AND SITE DRIVEWAY 2

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 50'
DWG FILE :	Y:\19\319590.dgn\319590 Dwg\Plans\HOP\TIS\ 00_TIS_ROW.dwg
SHEET	IMP-4

Figure 1
Study Area Exhibit



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DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-10-2020
REV:	08-31-2021

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FAX: (717) 770 - 2400
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TRANSPORTATION IMPACT STUDY

STUDY AREA – FIGURE 1

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

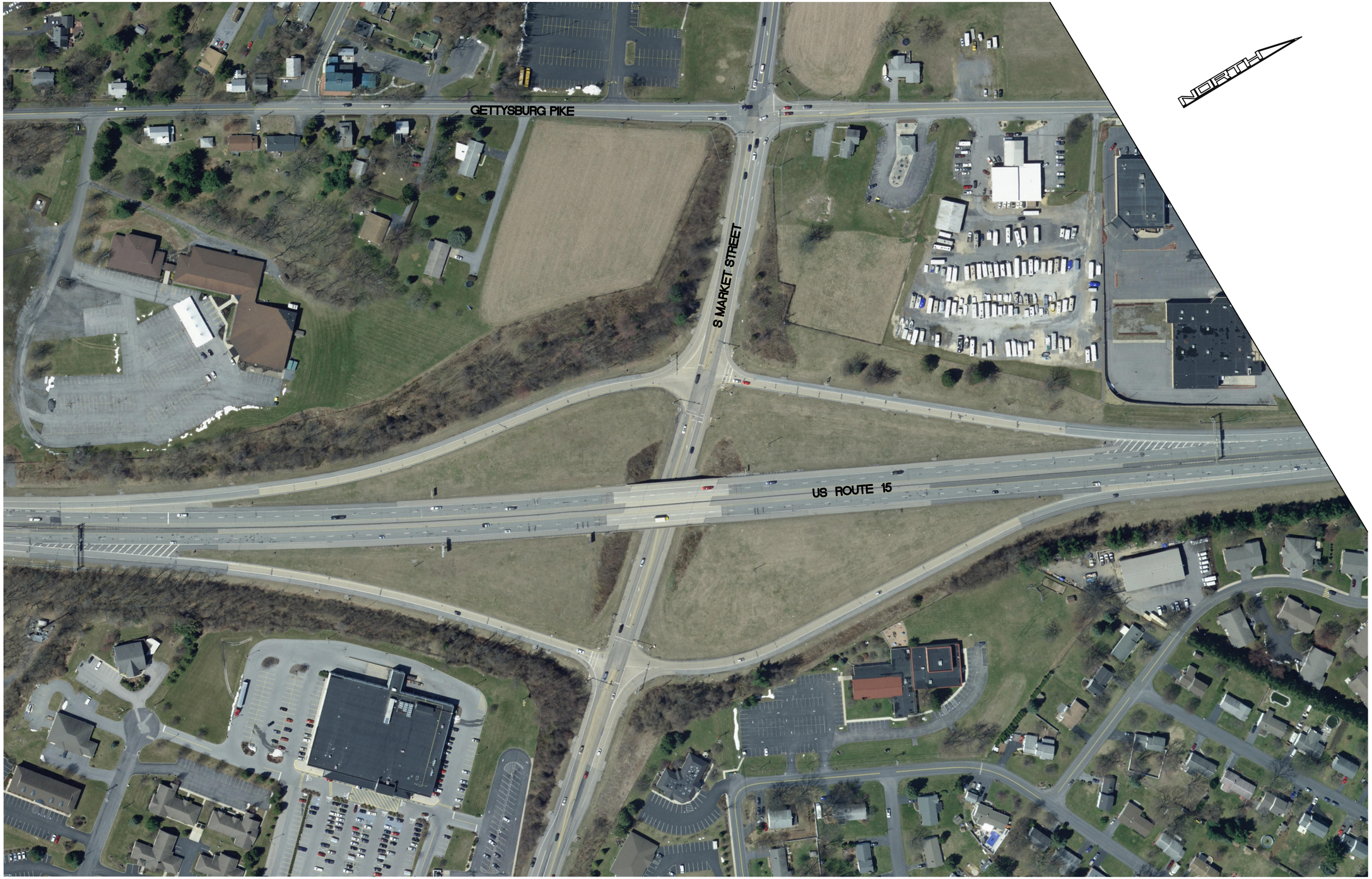
1 PROPOSED STUDY INTERSECTIONS:
1 SOUTH MARKET STREET (SR 0114) - GETTYSBURG PIKE 2 SOUTH MARKET STREET (SR 0114) - SOUTHBOUND RAMP US 15 3 SOUTH MARKET STREET (SR 0114) - NORTHBOUND RAMP US 15

SITE DRIVEWAYS

SITE

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 200'
DWG FILE :	Y:\16\319508.dph\319508\Dwg\Plans\HOP\TIS\00_TIS_LOC.dwg
SHEET	7

Figure 1a
Aerial Exhibit



SITE

DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-10-2020

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TRANSPORTATION IMPACT STUDY

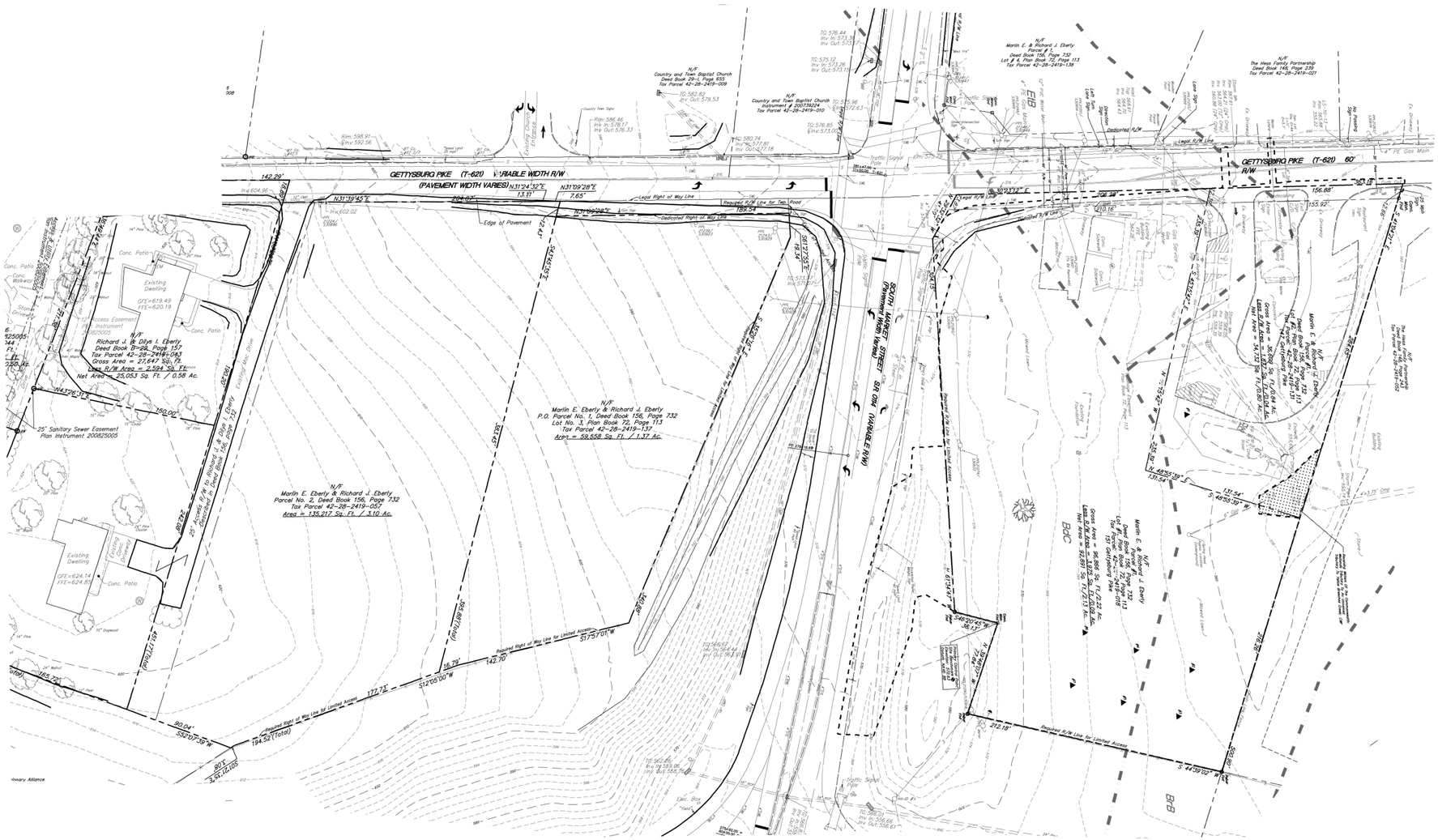
AERIAL – FIGURE 1a

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 100'
DWG FILE :	T:\18\319590.dgn\319590\Dwg\Plans\HOP\TIS\00_TIS_LOC.dwg
SHEET	8

Figure 1b
Existing Features Plan



DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-10-2020

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TRANSPORTATION IMPACT STUDY

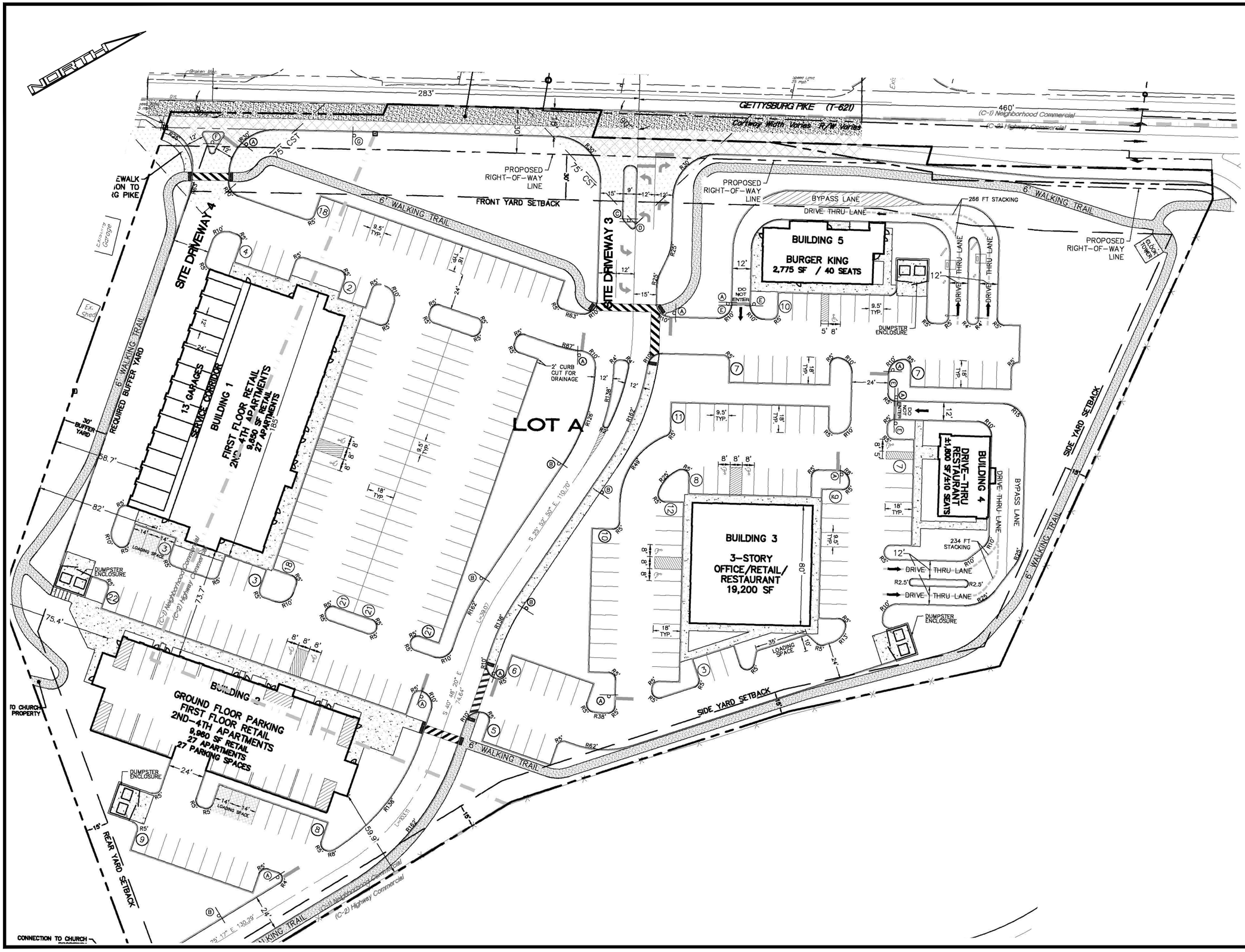
EXISTING FEATURES PLAN – FIGURE 1b

151 - 225 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE:	1" = 100'
DWG FILE :	Y:\16\317508.dgn\317508\Dwg\Plans\HOP\TIS\00_TIS_LOC.dwg
SHEET	9

Figure 2
Site Plan



DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-10-2020
REV :	08-31-2021

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TRANSPORTATION IMPACT STUDY

SITE PLAN – FIGURE 2

151 - 237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 60'
SHEET	10A

DESIGN :	MEA
DRAWN :	MEA
CHECKED :	X.X.
DATE :	07-10-2020
REV :	08-31-2021

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TRANSPORTATION IMPACT STUDY

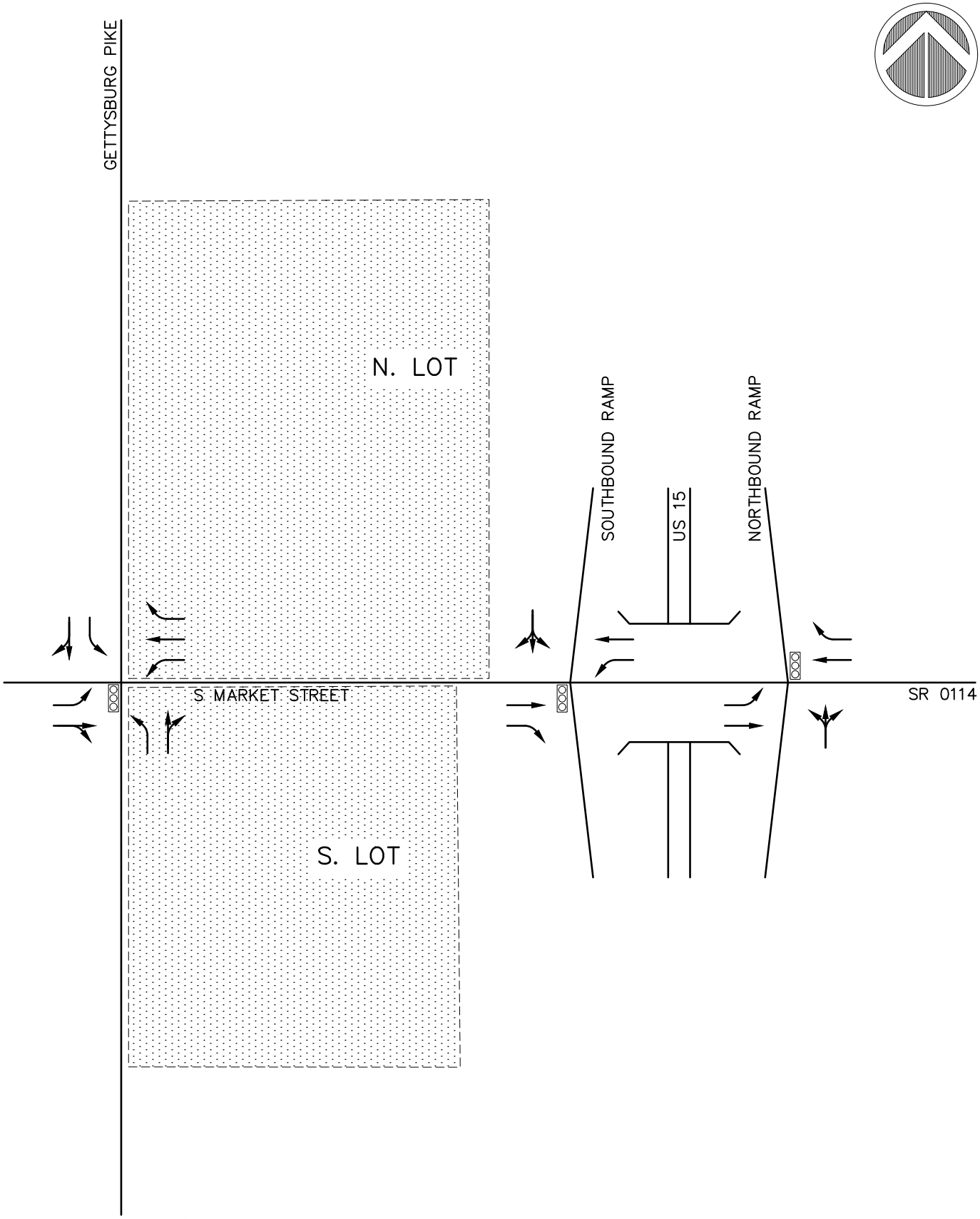
SITE PLAN – FIGURE 2

151 - 237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
SURVEY BOOK :	Z:\Surveyor\Year\Project.txt
SCALE :	1" = 60'
SHEET	10B

Figure 3



= Channelized Island

= Signal–Controlled Approach

STOP = Stop–Controlled Approach

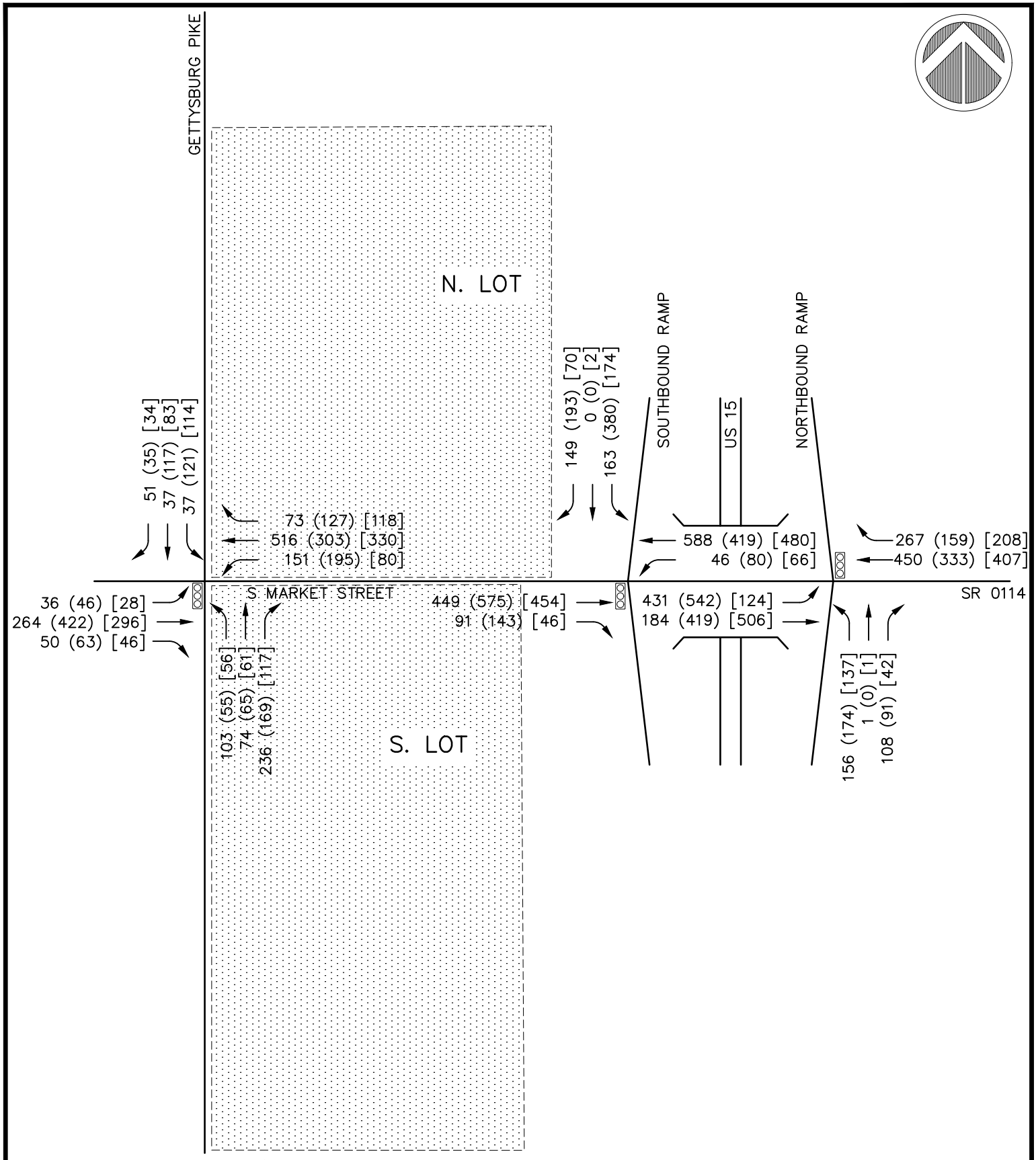
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 3 SHEET 1 OF 3

EXISTING LANE CONFIGURATION AND INTERSECTION CONTROL



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

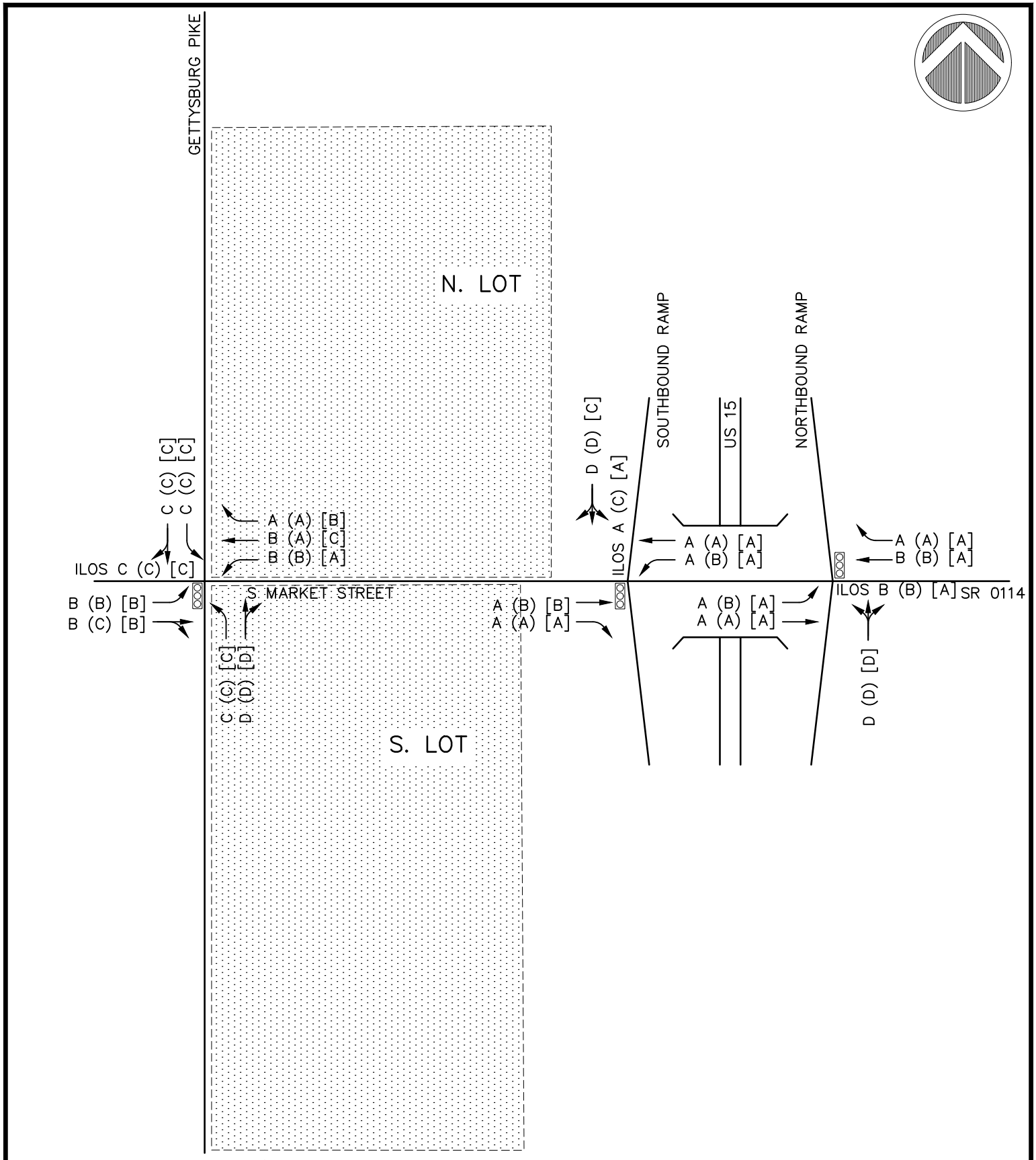
= AM Peak Hour Data
(#) = PM Peak Hour Data
[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 3 SHEET 2 OF 3

2020 BASELINE CONDITIONS
PEAK HOUR TRAFFIC VOLUMES



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

= AM Peak Hour Data
(#) = PM Peak Hour Data
[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 3 SHEET 3 OF 3

2020 BASELINE CONDITIONS
PEAK HOUR LOS

Figure 3a

TE-964 (11-14)

pennsylvania
DEPARTMENT OF TRANSPORTATION
www.dot.state.pa.us

TRAFFIC SIGNAL PERMIT

Permit No. 001911

In accordance with the Vehicle Code, the Secretary of Transportation hereby approves the installation and operation of a traffic signal at the intersection of South Market Street (SR 0114) & Old Gettysburg Pike in the Township of Upper Allen, County of Cumberland.

This permit is issued to, and accepted by the Township of Upper Allen hereinafter known as the Permittee, as follows:

This installation shall be in accordance with the Vehicle Code and the Regulations for traffic signs, signals, and markings of the Department of Transportation, and shall conform to the following requirements and those contained on the attached sheets.

Type of Controller

Volume Density

Type of Signal Mounting

Overhead

Hours of Operation as "Stop" and "Go"

Continuously

Hours of Operation as "FLASHING"

Equipped for Emergency Flashing

Controller Operation

Controller to provide the phasing, timing, and signal display indicated on the attached diagrams. Controller to be coordinated with adjacent signal controller through the use of time based coordinates to provide a progressive movement of traffic along South Market Street.

All work performed by the Permittee in the erection of the traffic signal shall be under and subject to the direction of the Secretary of Transportation or his authorized representatives. The said Permittee shall use due diligence in the execution of the work authorized under this permit and shall not obstruct or endanger travel along the said road. All operations must be conducted so as to permit safe and reasonable free travel at all times over the road within the limits of the work herein permitted.

The Permittee covenants and agrees to fully indemnify and save harmless the Department of Transportation and assume all liability for damages or injury, occurring to any person, persons or property through or in consequence of any act or omission of anyone working on the construction, or from faulty maintenance or operation of such traffic signal.

The Secretary of Transportation, by law, reserves the right to revoke and annul this permit if the Permittee shall at any time willfully or negligently fail to comply with the conditions contained in this permit, or, upon changes in traffic conditions, fail to make any changes in the construction or operation of this signal, or to remove it, when so ordered by the Secretary of Transportation; of if this installation is not in operation within twenty-four (24) months of the receipt of this permit. The Permittee shall maintain the signal in a safe condition at all times. The Permittee shall not make any change in the construction or operation of this traffic signal without prior written approval of the Secretary of Transportation.

This permit cancels and supersedes all previous permits issued for this location upon completion of the installation specified herein.

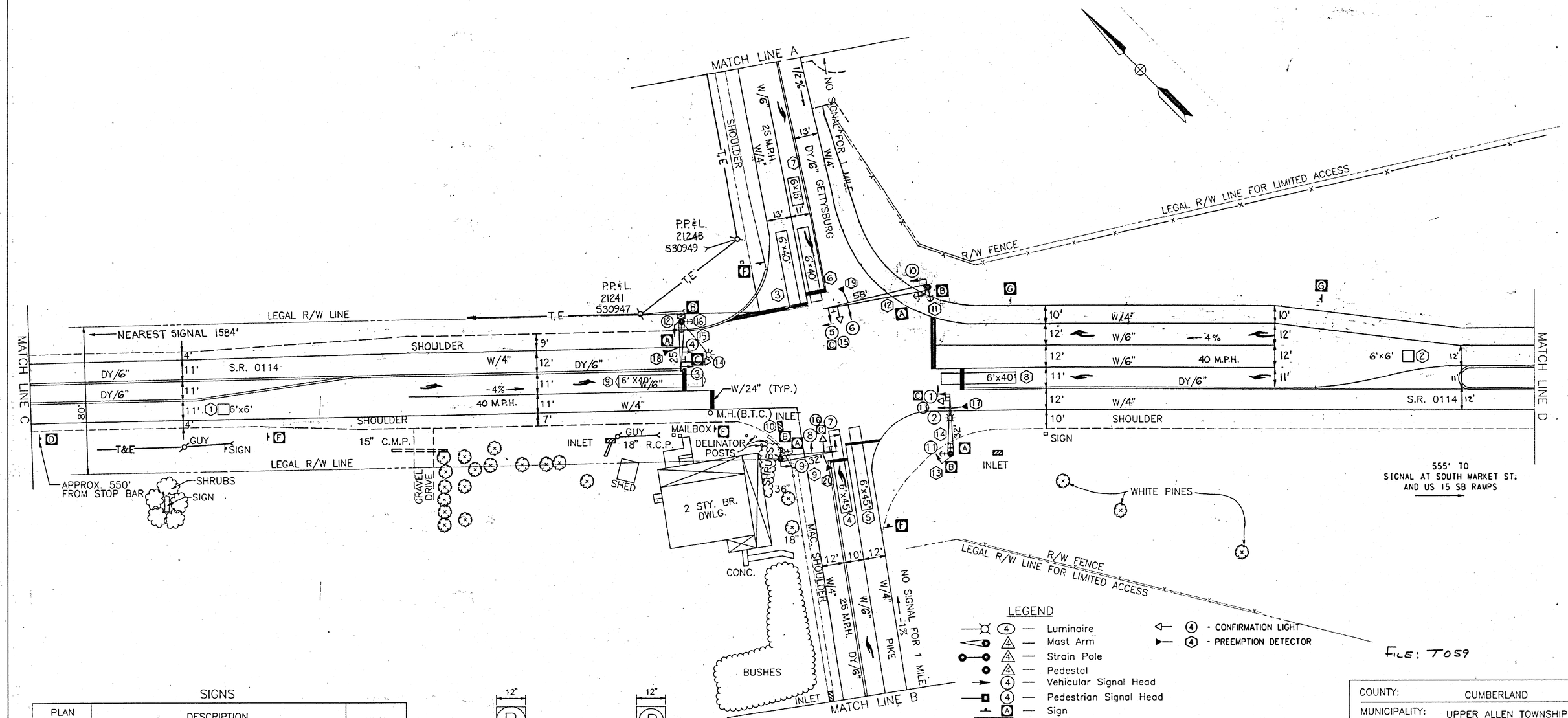
INITIAL DATE September 4, 1987 APPROVED Leslie S. Richards
(Secretary of Transportation)

REVISION DATE August 9, 2016 BY Jason S. Beverly
(District Executive or approved designee)

PERMIT NO. 001911 SHEET 2 OF 4

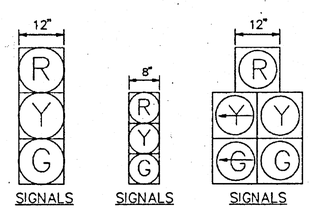
DATE ISSUED 9-4-87 DATE REVISED 08/22/2016

SEE PREEMPTION MOVEMENT SEQUENCE AND TIMING CHART ON SHEET 4 OF 4 FOR ADDITIONAL DETAILS.
SIGNALS 13,14,15, AND 16 TO BE OFF EXCEPT AS SHOWN IN PREEMPTION MOVEMENT SEQUENCE AND TIMING CHART .



SIGNS

PLAN SYMBOL	DESCRIPTION	WxH
A	R9-3R PUSH BUTTON FOR GREEN LIGHT →	9"x12"
B	R9-3L PUSH BUTTON FOR GREEN LIGHT ←	9"x12"
C	R10-12 LEFT TURN YIELD ON GREEN	30"x36"
D	W3-3 SIGNAL AHEAD	48"x48"
E	R3-8A (L-SR) LANE USE CONTROL SIGN	30"x30"
G	R3-8B (L-S-R) LANE USE CONTROL SIGN	48"x30"



SIGNALS 2,4,6,8 — SIGNALS 9,10,11,12 — SIGNALS 1,3,5,7

CONFIRMATION LIGHT 13-14-15-16

SIGNALS 1,2,3,4,5,6,7,8, 10,11 & 12 SHALL BE EQUIPPED WITH 8" & 12" TUNNEL VISORS. SIGNAL 9,10 SHALL BE EQUIPPED WITH TUNNEL VISORS AND LOUVERS

LEGEND

- Luminaire
- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button / Sign
- Junction Box
- C/2" — Conduit / Size
- CC4 — Controller Assembly
- W/4" — Solid White Line / Width
- BW/4" — Broken White Line / Width
- Y/4" — Solid Yellow Line / Width
- BY/4" — Broken Yellow Line / Width
- DY/4" — Double Yellow Solid Line / Width
- (4) - CONFIRMATION LIGHT
- (4) - PREEMPTION DETECTOR

COUNTY: CUMBERLAND

MUNICIPALITY: UPPER ALLEN TOWNSHIP

INTERSECTION: SO. MARKET ST. (SR 0114) & GETTYSBURG PIKE

APPROVED: 8/3/16
MUNICIPAL OFFICIAL DATE

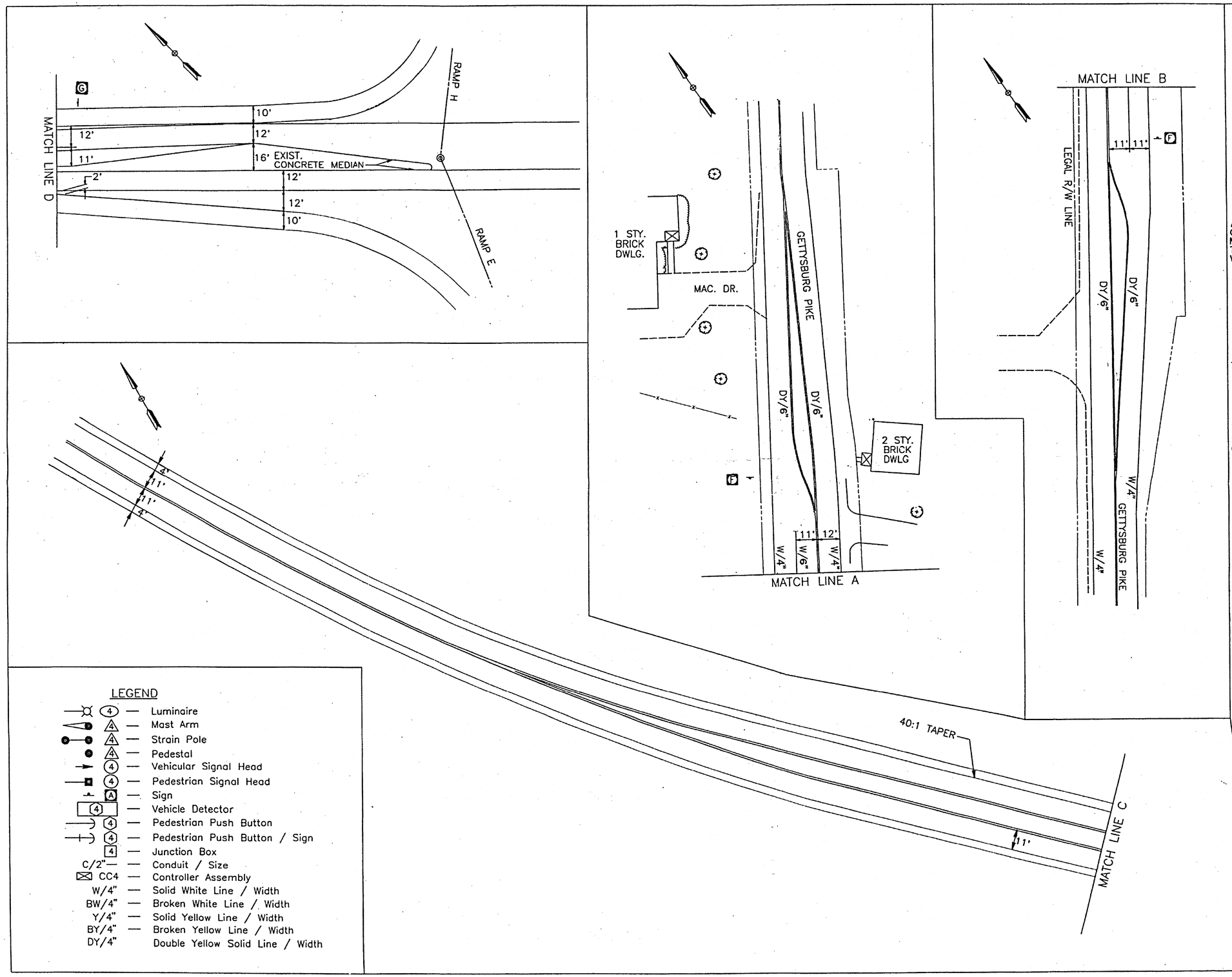
RECOMMENDED: 09/22/2016
DISTRICT TRAFFIC ENGINEER DATE

SCALE: 0 25 50 75

J:\UATO\00005 (PNPT Signal Eval)\CADD\Signals\S Market St and Gettysburg Pike.dgn
7/22/2016 4:54:12 PM mmdary
Traffic Planning and Design, Inc.

PERMIT NO. 001911 SHEET 3 OF 4

DATE ISSUED 9-4-87 DATE REVISED 08/22/2016



LEGEND

- Luminaire
- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button / Sign
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- C/2" — Conduit / Size
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- W/4" — Solid White Line / Width
- BW/4" — Broken White Line / Width
- Y/4" — Solid Yellow Line / Width
- BY/4" — Broken Yellow Line / Width
- DY/4" — Double Yellow Solid Line / Width

GENERAL NOTES

INSTALLATION, OPERATION AND MAINTENANCE OF THIS TRAFFIC SIGNAL SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATION OF THIS INSIALLATION IS PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED, EXCEPT THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS, WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY SHALL NOT BE LESS THAN 15 FEET OR MORE THAN 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISION OF ACT 1 ., PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, PRIOR TO CONSTRUCTION. CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

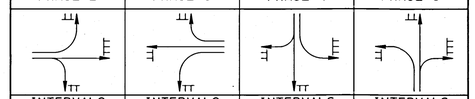
TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE OF HIGHWAY RIGHT-OF-WAY.

FILE: T059

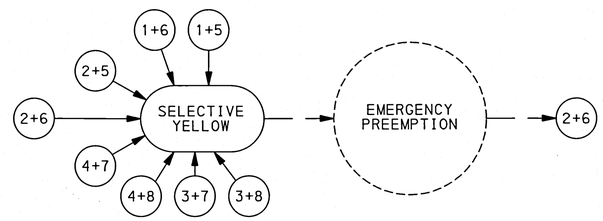
COUNTY:	CUMBERLAND
MUNICIPALITY:	UPPER ALLEN TOWNSHIP
INTERSECTION:	SO. MARKET ST. (SR 0114) & GETTYSBURG PIKE
APPROVED: Lynn Templeman	8/3/16
MUNICIPAL OFFICIAL	DATE
RECOMMENDED: Jason C. Burley	08/22/2016
DISTRICT TRAFFIC ENGINEER	DATE
SCALE:	0 25 50 75

PREEMPTION
MOVEMENT, SEQUENCE AND TIMING

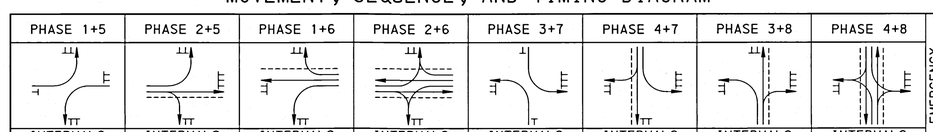


SIGNALS	PHASE 2 INTERVALS 1	2	3	4	PHASE 6 INTERVALS 1	2	3	4	PHASE 4 INTERVALS 1	2	3	4	PHASE 8 INTERVALS 1	2	3	4
1	SELECTIVE CLEARANCE	G/G	Y	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R
2,9		G	Y	R		R	R	R		R	R	R		R	R	R
3		R	R	R		G/G	Y	R		R	R	R		R	R	R
4,10		R	R	R		G	Y	R		R	R	R		R	R	R
5		R	R	R		R	R	R		R	R	R		G/G	Y	R
6,11		R	R	R		R	R	R		R	R	R		G	Y	R
7		R	R	R		R	R	R		G/G	Y	R		R	R	R
8,12		R	R	R		R	R	R		G	Y	R		R	R	R
13		ON	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF
14		OFF	OFF	OFF		ON	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF
15		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		ON	OFF	OFF
16		OFF	OFF	OFF		OFF	OFF	OFF		ON	OFF	OFF		OFF	OFF	OFF
FIXED		X	4.4	2.0		X	4.4	2.0		X	3.0	2.4		X	3.0	2.4
MINIMUM																
SEC/ACT																
MAX INT																
PASSAGE																
TBR																
TTR																
MIN GAP																
MAXIMUM I		**				**				**				**		

** DURATION OF EMERGENCY VEHICLE ACTUATION
A MAXIMUM OF 60 SECONDS



MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



SIGNALS	PHASE 1+5 INTERVALS 1	2	3	4	PHASE 2+5 INTERVALS 1	2	3	4	PHASE 1+6 INTERVALS 1	2	3	4	PHASE 2+6 INTERVALS 1	2	3	4	PHASE 3+7 INTERVALS 1	2	3	4	PHASE 4+7 INTERVALS 1	2	3	4	PHASE 3+8 INTERVALS 1	2	3	4	PHASE 4+8 INTERVALS 1	2	3	4	EMERGENCY FLASHING OPERATION
1	R/G	R/Y ①	R ①		G/G	Y ③	R ③		R	R	R		G	Y	R		R	R	R		R	R	R		R	R	R		R	R	R		Y
2,9	R	R	R		G	Y ③	R ③		R	R	R		G	Y	R		R	R	R		R	R	R		R	R	R		R	R	R		Y
3	R/G	R/Y ②	R ②		R	R	R		G/G	Y ④	R ④		G	Y	R		R	R	R		R	R	R		R	R	R		R	R	R		Y
4,10	R	R	R		R	R	R		G	Y ④	R ④		G	Y	R		R	R	R		R	R	R		R	R	R		R	R	R		Y
5	R	R	R		R	R	R		R	R	R		R	R	R		R/G	R/Y ⑤	R ⑤		R	R	R		G/G	Y ⑦	R ⑦		G	Y	R		R
6,11	R	R	R		R	R	R		R	R	R		R	R	R		R	R	R		R	R	R		G	Y ⑦	R ⑦		G	Y	R		R
7	R	R	R		R	R	R		R	R	R		R	R	R		R/G	R/Y ⑥	R ⑥		G/G	Y ⑧	R ⑧		R	R	R		G	Y	R		R
8,12	R	R	R		R	R	R		R	R	R		R	R	R		R	R	R		G	Y ⑧	R ⑧		R	R	R		G	Y	R		R
13	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF
14	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF
15	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF
16	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF
FIXED		3.0	3.3			3.0	3.3			3.0	3.3			4.4	2.0			3.0	2.2			3.0	2.2			3.0	2.2			3.0	2.4		
MINIMUM	3				3				3				10				3				3				3				3				
SEC/ACT													2.5																				
MAX INT													25																				
PASSAGE	3				3				3				6				3				3				3				3				
TBR													25																				
TTR													13																				
MIN GAP													3																				
MAXIMUM I	8				8				8				40				8				8				8				25				
PEDESTRIAN *													33																24				
MEMORY	NL				NL				NL				mR				NL				NL				NL				NL				

OPERATION NOTES

① R/G IF FOLLOWED BY 2+5
② R/G IF FOLLOWED BY 1+6
③ G/Y IF FOLLOWED BY 2+6
④ G IF FOLLOWED BY 2+6
⑤ R/G IF FOLLOWED BY 3+8
⑥ R/G IF FOLLOWED BY 4+7
⑦ G/Y IF FOLLOWED BY 4+8
⑧ G IF FOLLOWED BY 4+8

* UPON PEDESTRIAN ACTUATION ONLY

CONTROLLER TO DWELL IN PHASE 2+6
UNTIL ACTIVATED BY PHASES 3,4,7,OR 8

EMERGENCY PREEMPTION NOTES:

EMERGENCY VEHICLE PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING SHALL BE DISPLAYED: EMERGENCY PREEMPT PHASE 2, 4, 6 OR 8. THE SYSTEM SHALL PROVIDE SERVICE ON FIRST-COME, FIRST SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

2.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF THE PREEMPTION PHASE, AND UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

3.) IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY AND PROCEED TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

4.) THE PREEMPTION PHASE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACUTUATION TO A MAXIMUM OF 60 SECONDS.

5.) UPON TERMINATION OF THE PREEMPTION PHASE THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

6.) IF PREEMPTION OCCURS DURING CONFLICT/TIME CLOCK FLASH, THE TRAFFIC SIGNAL SHALL CONTINUE FLASHING.

PREEMPTION PHASE	POST PREEMPTION PHASE
2	2+6
6	2+6
4	2+6
8	2+6

COUNTY: CUMBERLAND
MUNICIPALITY: UPPER ALLEN
INTERSECTION: SO. MARKET ST. (SR 0114) & GETTYSBURG PIKE

REVIEWED: Ron Stephen — MUNICIPAL OFFICIAL — DATE 8/3/16

RECOMMENDED: Jason C. Burley — DISTRICT TRAFFIC ENGINEER — DATE 08/22/2016

Scale 0 25 50 75

PERMIT NO. 82-151 SHEET 2 OF 3
DATE ISSUED 4/22/13 DATE REVISED

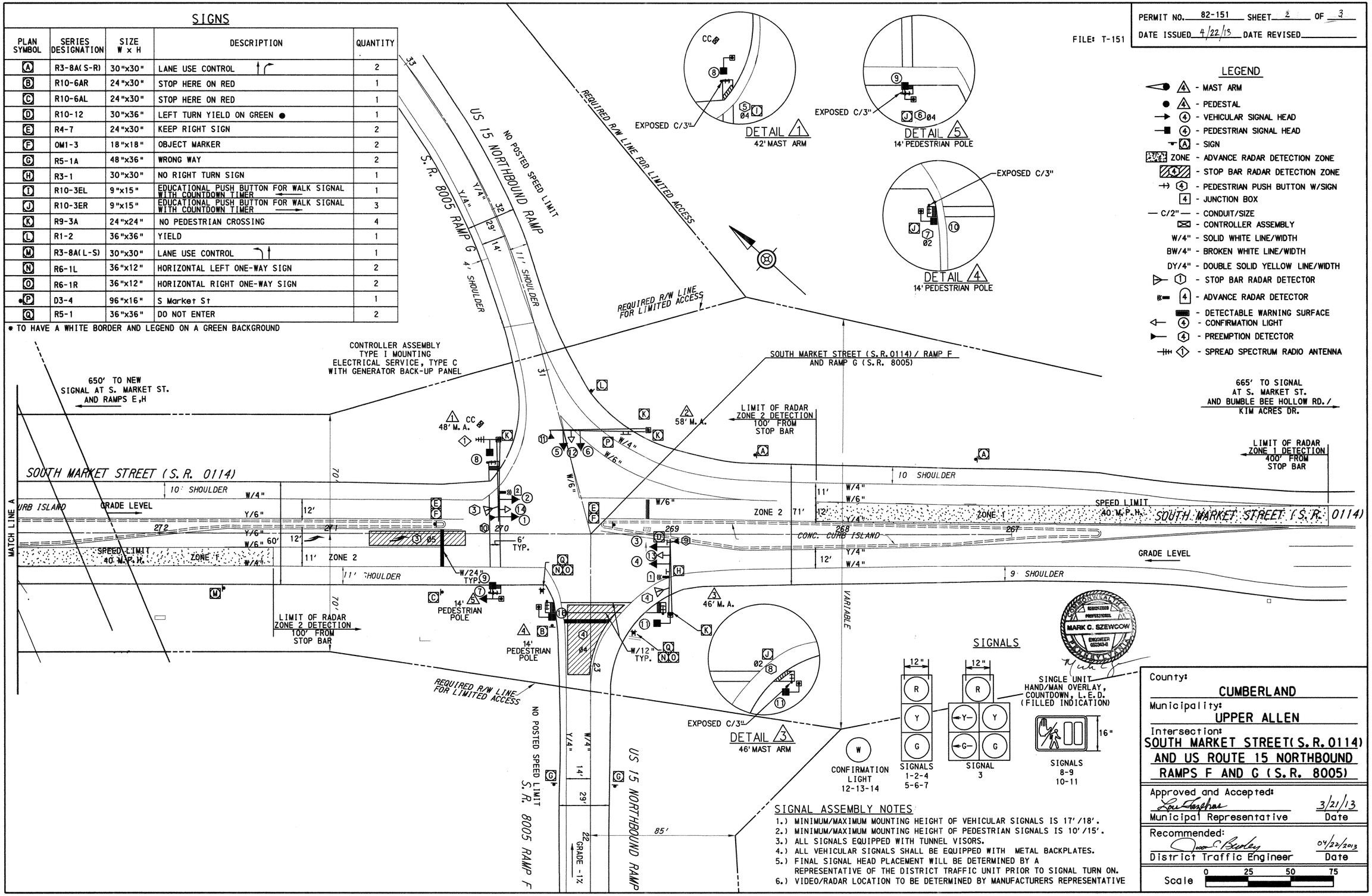
FILE: T-151

PLOTTED: 3/13/2013

SIGNS

PLAN SYMBOL	SERIES DESIGNATION	SIZE W x H	DESCRIPTION	QUANTITY
A	R3-8A(S-R)	30"x30"	LANE USE CONTROL	2
B	R10-6AR	24"x30"	STOP HERE ON RED	1
C	R10-6AL	24"x30"	STOP HERE ON RED	1
D	R10-12	30"x36"	LEFT TURN YIELD ON GREEN ●	1
E	R4-7	24"x30"	KEEP RIGHT SIGN	2
F	OM1-3	18"x18"	OBJECT MARKER	2
G	R5-1A	48"x36"	WRONG WAY	2
H	R3-1	30"x30"	NO RIGHT TURN SIGN	1
I	R10-3EL	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	1
J	R10-3ER	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	3
K	R9-3A	24"x24"	NO PEDESTRIAN CROSSING	4
L	R1-2	36"x36"	YIELD	1
M	R3-8A(L-S)	30"x30"	LANE USE CONTROL	1
N	R6-1L	36"x12"	HORIZONTAL LEFT ONE-WAY SIGN	2
O	R6-1R	36"x12"	HORIZONTAL RIGHT ONE-WAY SIGN	2
*P	D3-4	96"x16"	S Market St	1
Q	R5-1	36"x36"	DO NOT ENTER	2

* TO HAVE A WHITE BORDER AND LEGEND ON A GREEN BACKGROUND



LEGEND

- 4 - MAST ARM
- 4 - PEDESTAL
- 4 - VEHICULAR SIGNAL HEAD
- 4 - PEDESTRIAN SIGNAL HEAD
- A - SIGN
- ZONE - ADVANCE RADAR DETECTION ZONE
- 4 - STOP BAR RADAR DETECTION ZONE
- 4 - PEDESTRIAN PUSH BUTTON W/SIGN
- 4 - JUNCTION BOX
- C/2" - CONDUIT/SIZE
- CONTROLLER ASSEMBLY
- W/4" - SOLID WHITE LINE/WIDTH
- BW/4" - BROKEN WHITE LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- 1 - STOP BAR RADAR DETECTOR
- 4 - ADVANCE RADAR DETECTOR
- DETECTABLE WARNING SURFACE
- 4 - CONFIRMATION LIGHT
- 4 - PREEMPTION DETECTOR
- 1 - SPREAD SPECTRUM RADIO ANTENNA

SIGNAL ASSEMBLY NOTES

1.) MINIMUM/MAXIMUM MOUNTING HEIGHT OF VEHICULAR SIGNALS IS 17'/18'.
2.) MINIMUM/MAXIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS IS 10'/15'.
3.) ALL SIGNALS EQUIPPED WITH TUNNEL VISORS.
4.) ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH METAL BACKPLATES.
5.) FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL TURN ON.
6.) VIDEO/RADAR LOCATION TO BE DETERMINED BY MANUFACTURERS REPRESENTATIVE

County: CUMBERLAND
Municipality: UPPER ALLEN
Intersection: SOUTH MARKET STREET(S.R.0114) AND US ROUTE 15 NORTHBOUND RAMPS F AND G (S.R. 8005)

Approved and Accepted: Lou Langhner 3/21/13
Municipal Representative — Date

Recommended: Jason C. Bierley 04/22/2013
District Traffic Engineer — Date

Scale 0 25 50 75

FILE NAME: P:\ualle00\11008\working\PERMIT - south market and US rt 15 ramps F and G.dgn

PHASING DIAGRAM S.S. 2-8 PHASE, ACTUATED, WITH VOLUME DENSITY

	PHASE 2+5				PHASE 2+6 ⑤				PHASE 4				PREEMPTION PHASE 2+5				PREEMPTION PHASE 6				PREEMPTION PHASE 4				EMERGENCY FLASHING
	INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				
SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1-2	R	R	R	R	G	G	Y	R	R	R	R	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	Y
3	G/G	G/G	Y①/R②		G	G	Y③/R③		R	R	R	R		G/G	Y	R		R	R	R		R	R	R	Y
4,7	G	G	Y②/R②		G	G	Y③/R③		R	R	R	R		G	Y	R		R	R	R		R	R	R	Y
5-6	R	R	R	R	R	R	R	R	G	G	Y	R		R	R	R		R	R	R		G	Y	R	R
8-9	H	H	H	H	H	H	H	H	M	FH	H	H		H	H	H		H	H	H		H	H	H	OFF
10-11	M	FH	H	H	M	FH	H	H	H	H	H	H		H	H	H		H	H	H		H	H	H	OFF
12	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	ON	OFF	OFF
13	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	ON	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF
14	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	ON	OFF		OFF	OFF	OFF	OFF
FIXED		4	2			4	2			4	2			4	2			4	2			4	2		
MINIMUM	4				15				4				10				10				10				
SEC./ACT.																									
PASSAGE	3				1				3																
MAX. INITIAL																									
BEFORE RED.																									
TO REDUCE																									
MIN. GAP																									
MAX. I	14				38				15				**				**				**				
MAX. II																									
MAX. III																									
PEDESTRIAN *	④				8	17			7	16															
MEMORY	NL				MN				NL																

*UPON PEDESTRIAN ACTUATION, OTHERWISE "DON'T WALK" AT ALL TIMES.
**DURATION OF EMERGENCY VEHICLE ACTIVATION OR MAXIMUM OF 60 SECONDS

INTERCONNECT NOTE:

CONTROLLER TO BE INTERCONNECTED WITH ADJACENT SIGNAL CONTROLLERS ALONG SOUTH MARKET STREET TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC SUPERVISED BY A MASTER CONTROLLER AT SOUTH MARKET AND US 15 SOUTHBOUND RAMP.

CONTROLLER NOTES:

1. G/Y- IF FOLLOWED BY PHASE 2+6
2. G IF FOLLOWED BY PHASE 2+6
3. G IF FOLLOWED BY PHASE 2+5
4. TIMING TO SHOWN IN PHASE 2+6. INTERVALS 1&2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 2+6
5. TO BE FOLLOWED BY PHASE 4

MEMORY INCLUDES

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
PR - PEDESTRIAN RECALL
L - LOCKING
NL - NON LOCKING

SEE SYSTEM INTERCONNECT PLAN

DETECTOR NOTES

1. ADVANCE RADAR ZONE NOTES (ZONE 1):
ESTIMATED TIME OF ARRIVAL: MINIMUM 2.5 SECONDS - MAXIMUM 5.0 SECONDS
RANGE OF DETECTION: MINIMUM 100' FROM STOP BAR
MAXIMUM 400' FROM STOP BAR
MINIMUM SPEED BOUNDARY - 30-100 MPH
ZONE MAY ADJUSTED FOR FIELD CONDITIONS
2. ADVANCE RADAR ZONE NOTES (ZONE 2):
RANGE OF DETECTION: MINIMUM 30' FROM STOP BAR
MAXIMUM 100' FROM STOP BAR
MINIMUM SPEED BOUNDARY - 1-30 MPH
ZONE MAY ADJUSTED FOR FIELD CONDITIONS
3. DETECTORS 3a CALLS AND EXTENDS PHASE 4, PRESENCE - STOP BAR RADAR.
4. DETECTOR 3b CALLS AND EXTENDS PHASE 5, PRESENCE - STOP BAR RADAR.
5. DETECTORS 5 AND 6 CALL PHASE 4 PEDESTRIAN.
6. DETECTORS 7 AND 8 CALL PHASE 2 PEDESTRIAN.

GENERAL NOTES

INSTALLATION, OPERATION AND MAINTENANCE THIS TRAFFIC SIGNAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATION OF THIS INSTALLATION IS PERMITTED UNLESS APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDANAL PAVEMENT MARKINGS ON STATE HIGHWAYS, WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY SHALL NOT BE LESS THAN 15 FEET NOR MORE THAT 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

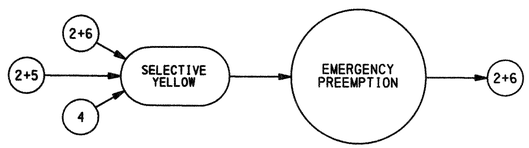
CONDUIT INSTALLED IN ASPHALT ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST B E BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

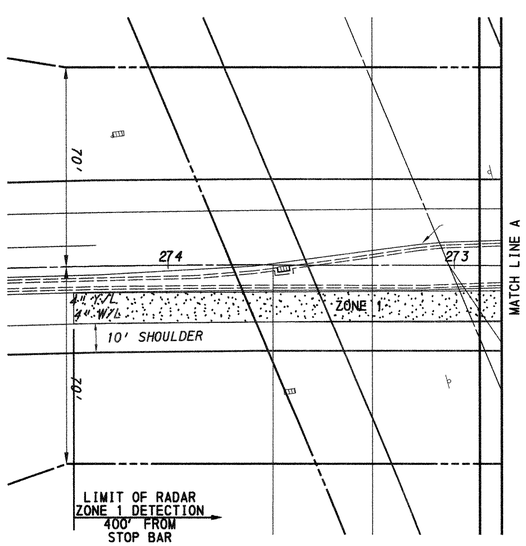
THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE OF RIGHT-OF-WAY.

TRAFFIC SIGNAL INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.





EMERGENCY PREEMPTION NOTES:

EMERGENCY VEHICLE PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING SHALL BE DISPLAYED: EMERGENCY PREEMPT PHASE 2+5, 6 OR 4. THE SYSTEM SHALL PROVIDE SERVICE ON FIRST-COME, FIRST SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

2.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF THE PREEMPTION PHASE, AND UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

3.) UPON ACTIVATION BY AN EMERGENCY VEHICLE ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY AND PROCEED NORMALY THROUGH THE FLASHING DON'T WALK AND ALL RED INTERVAL BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION.

4.) ANY FLASHING DON'T WALK INDICATION SHALL TIMEOUT NORMALLY, FOLLOWED BY THE ALL RED INTERVAL BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

5.) IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY AND PROCEED TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

6.) THE PREEMPTION PHASE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACUTUATION TO A MAXIMUM 60 SECONDS.

7.) UPON TERMINATION OF THE PREEMPTION PHASE THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

8.) IF PREEMPTION OCCURS DURING CONFLICT/TIME CLOCK FLASH, THE TRAFFIC SIGNAL SHALL CONTINUE FLASHING.

PREEMPTION PHASE	POST PREEMPTION PHASE
2+5	2+6
6	2+6
4	2+6

REGISTERED PROFESSIONAL ENGINEER
MARK C. SZEWCOW
ENGINEER
065349-E

FILE: T-151

PERMIT NO. 82-151 SHEET 3 OF 3
DATE ISSUED 4/22/13 DATE REVISED

County: CUMBERLAND
Municipality: UPPER ALLEN
Intersection: SOUTH MARKET STREET (S.R. 0114) AND US ROUTE 15 NORTHBOUND RAMPS F AND G (S.R. 8005)

Approved and Accepted: 3/21/13
Municipal Representative — Date

Recommended: 04/22/2013
District Traffic Engineer — Date

Scale 0 25 50 75

PLOTTED: 3/13/2013

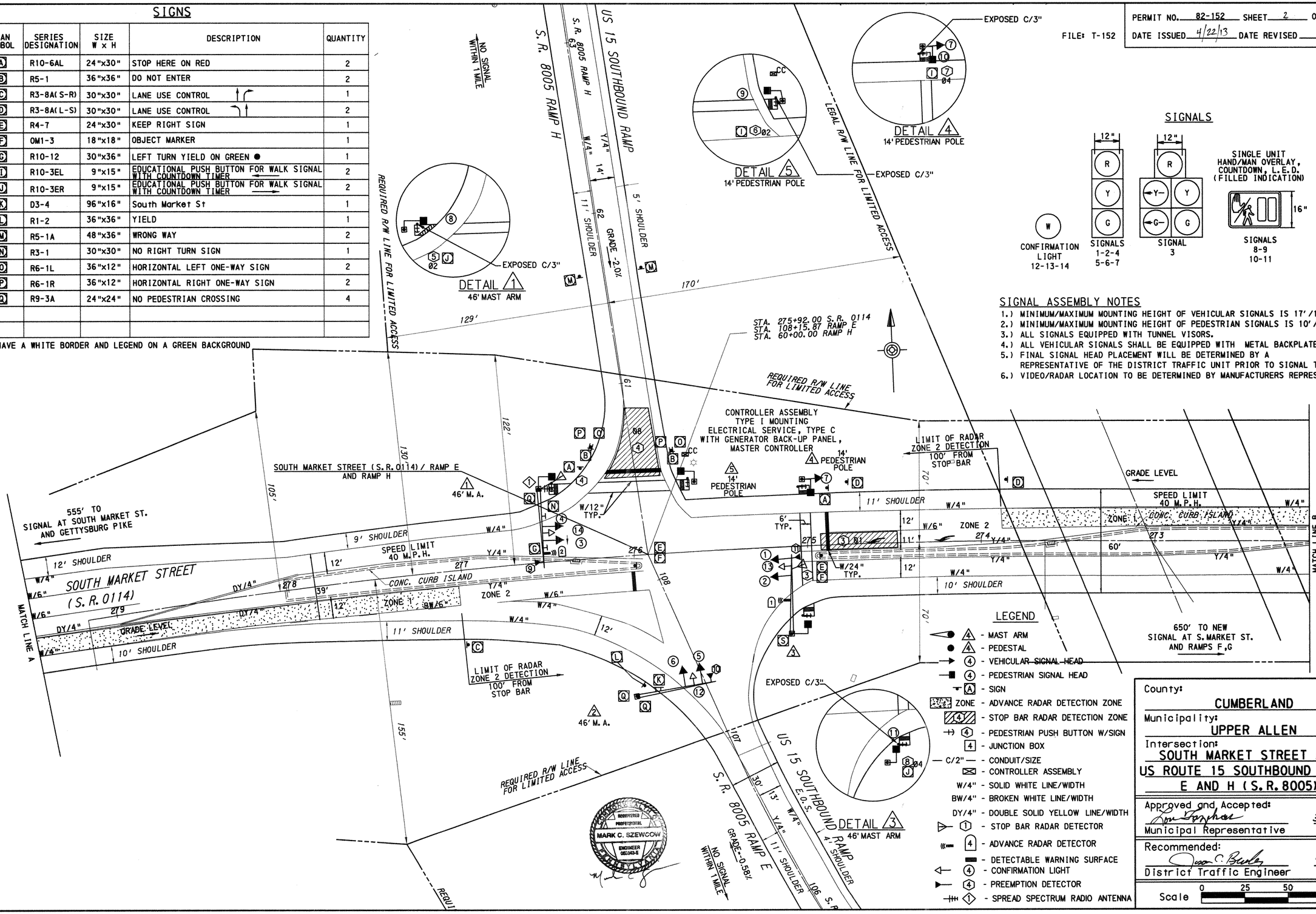
FILE NAME: P:\ualle00\11008\working\PERMIT - south market and US rt 15 ramps F and G.dgn

PERMIT NO. 82-152 SHEET 2 OF 3
DATE ISSUED 4/22/13 DATE REVISED
FILE: T-152

SIGNS

PLAN SYMBOL	SERIES DESIGNATION	SIZE W x H	DESCRIPTION	QUANTITY
A	R10-6AL	24"x30"	STOP HERE ON RED	2
B	R5-1	36"x36"	DO NOT ENTER	2
C	R3-8A(S-R)	30"x30"	LANE USE CONTROL	1
D	R3-8A(L-S)	30"x30"	LANE USE CONTROL	2
E	R4-7	24"x30"	KEEP RIGHT SIGN	1
F	OM1-3	18"x18"	OBJECT MARKER	1
G	R10-12	30"x36"	LEFT TURN YIELD ON GREEN ●	1
I	R10-3EL	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	2
J	R10-3ER	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	2
*K	D3-4	96"x16"	South Market St	1
L	R1-2	36"x36"	YIELD	1
M	R5-1A	48"x36"	WRONG WAY	2
N	R3-1	30"x30"	NO RIGHT TURN SIGN	1
O	R6-1L	36"x12"	HORIZONTAL LEFT ONE-WAY SIGN	2
P	R6-1R	36"x12"	HORIZONTAL RIGHT ONE-WAY SIGN	2
Q	R9-3A	24"x24"	NO PEDESTRIAN CROSSING	4

*TO HAVE A WHITE BORDER AND LEGEND ON A GREEN BACKGROUND



SIGNALS

SIGNAL ASSEMBLY NOTES

1.) MINIMUM/MAXIMUM MOUNTING HEIGHT OF VEHICULAR SIGNALS IS 17'/18'.
2.) MINIMUM/MAXIMUM MOUNTING HEIGHT OF PEDESTRIAN SIGNALS IS 10'/15'.
3.) ALL SIGNALS EQUIPPED WITH TUNNEL VISORS.
4.) ALL VEHICULAR SIGNALS SHALL BE EQUIPPED WITH METAL BACKPLATES.
5.) FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL TURN ON.
6.) VIDEO/RADAR LOCATION TO BE DETERMINED BY MANUFACTURERS REPRESENTATIVE

LEGEND

- (4) - MAST ARM
- (4) - PEDESTAL
- (4) - VEHICULAR SIGNAL HEAD
- (4) - PEDESTRIAN SIGNAL HEAD
- (A) - SIGN
- ZONE - ADVANCE RADAR DETECTION ZONE
- (4) - STOP BAR RADAR DETECTION ZONE
- (4) - PEDESTRIAN PUSH BUTTON W/SIGN
- (4) - JUNCTION BOX
- C/2" - CONDUIT/SIZE
- CONTROLLER ASSEMBLY
- W/4" - SOLID WHITE LINE/WIDTH
- BW/4" - BROKEN WHITE LINE/WIDTH
- DY/4" - DOUBLE SOLID YELLOW LINE/WIDTH
- (1) - STOP BAR RADAR DETECTOR
- (4) - ADVANCE RADAR DETECTOR
- DETECTABLE WARNING SURFACE
- (4) - CONFIRMATION LIGHT
- (4) - PREEMPTION DETECTOR
- (1) - SPREAD SPECTRUM RADIO ANTENNA

County: CUMBERLAND
Municipality: UPPER ALLEN
Intersection: SOUTH MARKET STREET AND US ROUTE 15 SOUTHBOUND RAMPS E AND H (S.R. 8005)

Approved and Accepted: Municipal Representative — 3/21/13 Date

Recommended: District Traffic Engineer — 04/24/2013 Date

Scale 0 25 50 75

PLOTTED: 3/13/2013

FILE NAME: P:\valle00\11008\working\PERMIT - south market and US rt 15 ramps E and H.dgn

PHASING DIAGRAM S.S. 2-8 PHASE, ACTUATED, WITH VOLUME DENSITY

	PHASE 1+6				PHASE 2+6 ⑤				PHASE 4				PREEMPTION PHASE 1+6				PREEMPTION PHASE 2				PREEMPTION PHASE 8				EMERGENCY FLASHING
	INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				INTERVALS				
SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1-2	R	R	R	R	G	G	Y	R	R	R	R	R	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	G	Y	R	SELECTIVE CLEARANCE	R	R	R	
3	G/G	G/G	Y①/R②		G	G	Y③/R③		R	R	R	R		G/G	Y	R		R	R	R		R	R	R	Y
4,7	G	G	Y②/R②		G	G	Y③/R③		R	R	R	R		G	Y	R		R	R	R		R	R	R	Y
5-6	R	R	R	R	R	R	R	R	G	G	Y	R		R	R	R		R	R	R		G	Y	R	R
8-9	M	FH	H	H	M	FH	H	H	H	H	H	H		H	H	H		H	H	H		H	H	H	OFF
10-11	H	H	H	H	H	H	H	H	M	FH	H	H		H	H	H		H	H	H		H	H	H	OFF
12	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	ON	OFF	OFF
13	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	ON	OFF		OFF	ON	OFF		OFF	OFF	OFF	OFF
14	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	ON	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF
FIXED		4	2.5			4	2.5			4	2			4	2.5			4	2.5			4	2		
MINIMUM	4				15				4					10				10				10			
SEC./ACT.																									
PASSAGE	3				1				3																
MAX. INITIAL																									
BEFORE RED.																									
TO REDUCE																									
MIN. GAP																									
MAX. I	7				44				15					**				**				**			
MAX. II																									
PEDESTRIAN *	④				8	17			7	16															
MEMORY	NL				MN				NL																

*UPON PEDESTRIAN ACTUATION, OTHERWISE "DON'T WALK" AT ALL TIMES.
**DURATION OF EMERGENCY VEHICLE ACTIVATION OR MAXIMUM OF 60 SECONDS

INTERCONNECT NOTE:

CONTROLLER TO BE INTERCONNECTED WITH ADJACENT SIGNAL CONTROLLERS ALONG SOUTH MARKET STREET TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC SUPERVISED BY A MASTER CONTROLLER AT THIS INTERSECTION.

CONTROLLER NOTES:

1. G/Y- IF FOLLOWED BY PHASE 2+6
2. G IF FOLLOWED BY PHASE 2+6
3. G IF FOLLOWED BY PHASE 2+5
4. TIMING TO SHOWN IN PHASE 2+6. INTERVALS 1&2 MAY TIME OUT IN THIS PHASE OR MAY BE COMPLETED IN PHASE 2+6
5. TO BE FOLLOWED BY PHASE 4

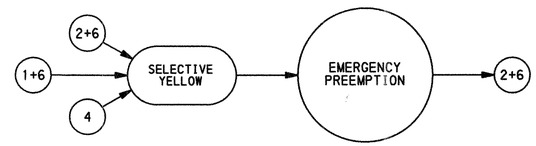
MEMORY INCLUDES

MN - MINIMUM RECALL
MX - MAXIMUM RECALL
PR - PEDESTRIAN RECALL
L - LOCKING
NL - NON LOCKING

SEE SYSTEM INTERCONNECT PLAN

DETECTOR NOTES

1. ADVANCE RADAR ZONE NOTES (ZONE 1):
ESTIMATED TIME OF ARRIVAL: MINIMUM 2.5 SECONDS - MAXIMUM 5.0 SECONDS
RANGE OF DETECTION: MINIMUM 100' FROM STOP BAR
MAXIMUM 400' FROM STOP BAR
MINIMUM SPEED BOUNDARY - 30-100 MPH
ZONE MAY ADJUSTED FOR FIELD CONDITIONS
2. ADVANCE RADAR ZONE NOTES (ZONE 2):
RANGE OF DETECTION: MINIMUM 30' FROM STOP BAR
MAXIMUM 100' FROM STOP BAR
MINIMUM SPEED BOUNDARY - 1-30 MPH
ZONE MAY ADJUSTED FOR FIELD CONDITIONS
3. DETECTORS 3a AND 3b CALLS AND EXTENDS PHASE 4, PRESENCE - VIDEO.
4. DETECTOR 4a CALLS AND EXTENDS PHASE 5, PRESENCE - VIDEO.
5. DETECTORS 5 AND 6 CALL PHASE 2 PEDESTRIAN.
6. DETECTORS 7 AND 8 CALL PHASE 4 PEDESTRIAN.



EMERGENCY PREEMPTION NOTES:

EMERGENCY VEHICLE PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING SHALL BE DISPLAYED: EMERGENCY PREEMPT PHASE 1+6, 2 OR 4. THE SYSTEM SHALL PROVIDE SERVICE ON FIRST-COME, FIRST SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

2.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF THE PREEMPTION PHASE, AND UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

3.) UPON ACTIVATION BY AN EMERGENCY VEHICLE ANY WALK INDICATION SHALL TERMINATE IMMEDIATELY AND PROCEED NORMALY THROUGH THE FLASHING DON'T WALK AND ALL RED INTERVAL BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION.

4.) ANY FLASHING DON'T WALK INDICATION SHALL TIMEOUT NORMALLY, FOLLOWED BY THE ALL RED INTERVAL BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

5.) IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY AND PROCEED TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

6.) THE PREEMPTION PHASE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACUTUATION TO A MAXIMUM OF 60 SECONDS.

7.) UPON TERMINATION OF THE PREEMPTION PHASE THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

8.) IF PREEMPTION OCCURS DURING CONFLICT/TIME CLOCK FLASH, THE TRAFFIC SIGNAL SHALL CONTINUE FLASHING.

PREEMPTION PHASE	POST PREEMPTION PHASE
1+6	2+6
2	2+6
4	2+6

GENERAL NOTES

INSTALLATION, OPERATION AND MAINTENANCE THIS TRAFFIC SIGNAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATION OF THIS INSTALLATION IS PERMITTED UNLESS APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDANAL PAVEMENT MARKINGS ON STATE HIGHWAYS, WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY SHALL NOT BE LESS THAN 15 FEET NOR MORE THAT 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH, SHALL BE 8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

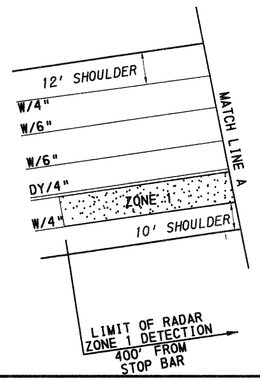
CONDUIT INSTALLED IN ASPHALT ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST B E BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

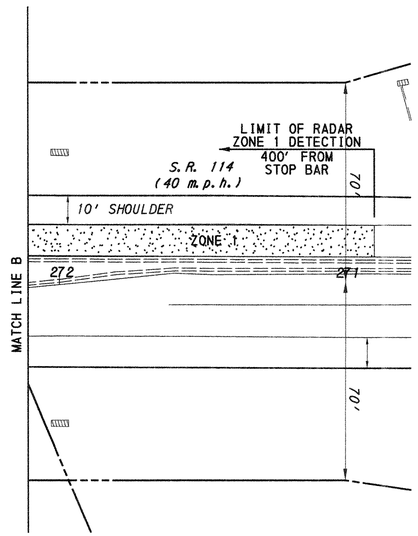
THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE OF RIGHT-OF-WAY.

TRAFFIC SIGNAL INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.





REGISTERED PROFESSIONAL MARK C. SZEWCOW ENGINEER 050343-E

County: CUMBERLAND
Municipality: UPPER ALLEN
Intersection: SOUTH MARKET STREET AND US ROUTE 15 SOUTHBOUND RAMPS E AND H (S.R. 8005)

Approved and Accepted: Ron Tarpher — 3/21/13
Municipal Representative — Date

Recommended: Jason C. Beasley — 04/22/2013
District Traffic Engineer — Date

Scale 0 25 50 75

PERMIT NO. 82-152 SHEET 3 OF 3
DATE ISSUED 4/22/13 DATE REVISED
FILE: T-152

PLOTTED: 3/13/2013

FILE NAME: P:\walle00\11008\working\PERMIT - south market and US rt 15 ramps E and H.dgn

PERMIT NO. I-0010 SHEET 1 OF 1
DATE ISSUED 6/13/2012 DATE REVISED 08/22/2016

CLOSED LOOP SIGNAL NOTES

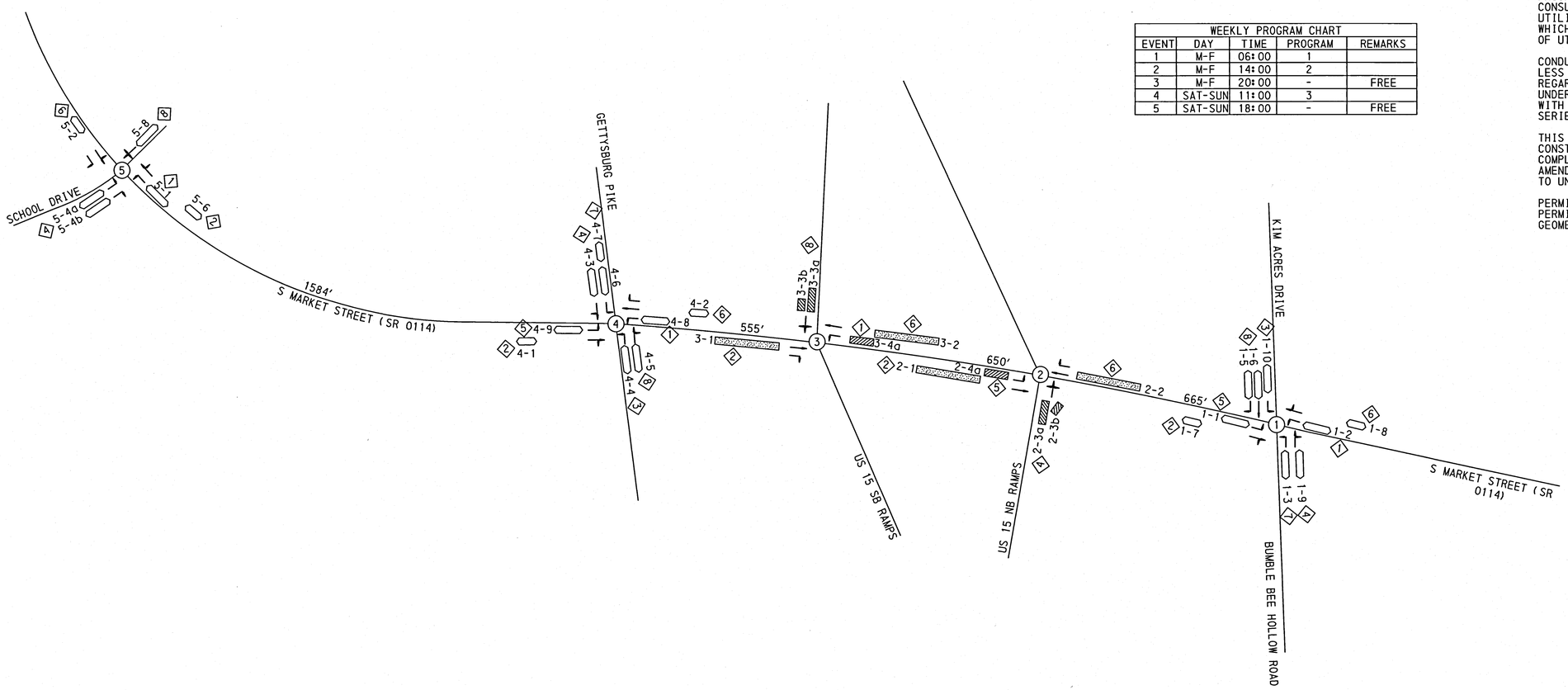
1. PROGRAMS TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TIME BASED COORDINATION BACKUP.
2. OFFSET REFERENCED TO THE BEGINNING OF PHASE 2+6 YELLOW.
3. ACTUAL GREEN TIME DETERMINED BY CYCLE LENGTH.
4. SYSTEM LIMITS: NORTH ON S MARKET STREET TO SCHOOL DRIVE
   SOUTH ON MARKET STREET TO BUMBLE BEE DRIVE
5. PRIMARY COORDINATION: SPREAD SPECTRUM RADIO INTERCONNECT
   SECONDARY COORDINATION: TIME BASED COORDINATION (DEFAULT TO BACKUP TIME BASED COORDINATION)
6. SYSTEM IS DESIGNED FOR THE SYSTEM SOFTWARE:
7. MASTER CONTROLLER LOCATED ON S MARKET STREET (SR 0114) AT US 15 SB RAMPS

LEGEND

- ① - INTERSECTION ADDRESS
- LOOP SENSOR
- ADVANCE RADAR DETECTOR
- STOP BAR RADAR DETECTOR
- 1-1 - INTERSECTION # - DETECTOR #
- ② - PHASE NUMBER

	PROGRAM 1		PHASE								CYCLE	OFFSET
	INTERSECTIONS	FILE	1	2	3	4	5	6	7	8		
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	13	38	13	21	13	38	18	16	85	45
2	S MARKET STREET AND US 15 NB RAMPS	T 151		64		21	20	44			85	56
3	S MARKET STREET AND US 15 SB RAMPS	T 152	13	51		21		64			85	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	13	38	13	21	13	38	13	21	85	77
5	S MARKET STREET AND SCHOOL DRIVE	T 109	19	41		25		60		25	85	50
	PROGRAM 2											
	INTERSECTIONS											
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	14	43	13	20	14	43	13	20	90	22
2	S MARKET STREET AND US 15 NB RAMPS	T 151		69		21	14	55			90	18
3	S MARKET STREET AND US 15 SB RAMPS	T 152	13	45		32		58			90	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	15	42	13	20	15	42	13	20	90	59
5	S MARKET STREET AND SCHOOL DRIVE	T 109	13	45		32		58		32	90	39
	PROGRAM 3											
	INTERSECTIONS											
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	13	31	13	18	13	31	13	18	75	7
2	S MARKET STREET AND US 15 NB RAMPS	T 151		54		21	14	40			75	7
3	S MARKET STREET AND US 15 SB RAMPS	T 152	13	40		22		53			75	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	13	30	13	19	13	30	13	19	75	70
5	S MARKET STREET AND SCHOOL DRIVE	T 109	14	49		12		63		12	75	45

WEEKLY PROGRAM CHART				
EVENT	DAY	TIME	PROGRAM	REMARKS
1	M-F	06:00	1	
2	M-F	14:00	2	
3	M-F	20:00	-	FREE
4	SAT-SUN	11:00	3	
5	SAT-SUN	18:00	-	FREE



GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BY ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.
TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL, MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION, WHERE APPLICABLE.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

THIS DRAWING CAN NOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, LATEST EDITION.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

COUNTY: CUMBERLAND

MUNICIPALITY: UPPER ALLEN

INTERSECTION: SOUTH MARKET STREET (S.R. 0114) INTERCONNECT SYSTEM PLAN

REVIEWED: Lou Fogelsonger — MUNICIPAL OFFICIAL — DATE 8/3/16

RECOMMENDED: Jason C. Burley — DISTRICT TRAFFIC ENGINEER — DATE 08/22/16

TE-964 (2-14)

pennsylvania
DEPARTMENT OF TRANSPORTATION
www.dot.state.pa.us

TRAFFIC SIGNAL PERMIT

Permit No. 001911

In accordance with the Vehicle Code, the Secretary of Transportation hereby approves the installation and operation of a traffic signal at the intersection of South Market Street (SR 0114) & Gettysburg Pike in the Township of Upper Allen Township, County of Cumberland County.

This permit is issued to, and accepted by the Township of Upper Allen Township hereinafter known as the Permittee, as follows:

This installation shall be in accordance with the Vehicle Code and the Regulations for traffic signs, signals, and markings of the Department of Transportation, and shall conform to the following requirements and those contained on the attached sheets.

Type of Controller

Volume Density

Type of Signal Mounting

Overhead

Hours of Operation as "Stop" and "Go"

Continuously

Hours of Operation as "FLASHING"

Equipped for Emergency Flashing

Controller Operation

Controller to provide the phasing, timing, and signal display indicated on the attached diagrams. Controller to be coordinated with adjacent signal controller through the use of time based coordinates to provide a progressive movement of traffic along South Market Street.

All work performed by the Permittee in the erection of the traffic signal shall be under and subject to the direction of the Secretary of Transportation or his authorized representatives. The said Permittee shall use due diligence in the execution of the work authorized under this permit and shall not obstruct or endanger travel along the said road. All operations must be conducted so as to permit safe and reasonable free travel at all times over the road within the limits of the work herein permitted.

The Permittee covenants and agrees to fully indemnify and save harmless the Department of Transportation and assume all liability for damages or injury, occurring to any person, persons or property through or in consequence of any act or omission of anyone working on the construction, or from faulty maintenance or operation of such traffic signal.

The Secretary of Transportation, by law, reserves the right to revoke and annul this permit if the Permittee shall at any time willfully or negligently fail to comply with the conditions contained in this permit, or, upon changes in traffic conditions, fail to make any changes in the construction or operation of this signal, or to remove it, when so ordered by the Secretary of Transportation; of if this installation is not in operation within twenty-four (24) months of the receipt of this permit. The Permittee shall maintain the signal in a safe condition at all times. The Permittee shall not make any change in the construction or operation of this traffic signal without prior written approval of the Secretary of Transportation.

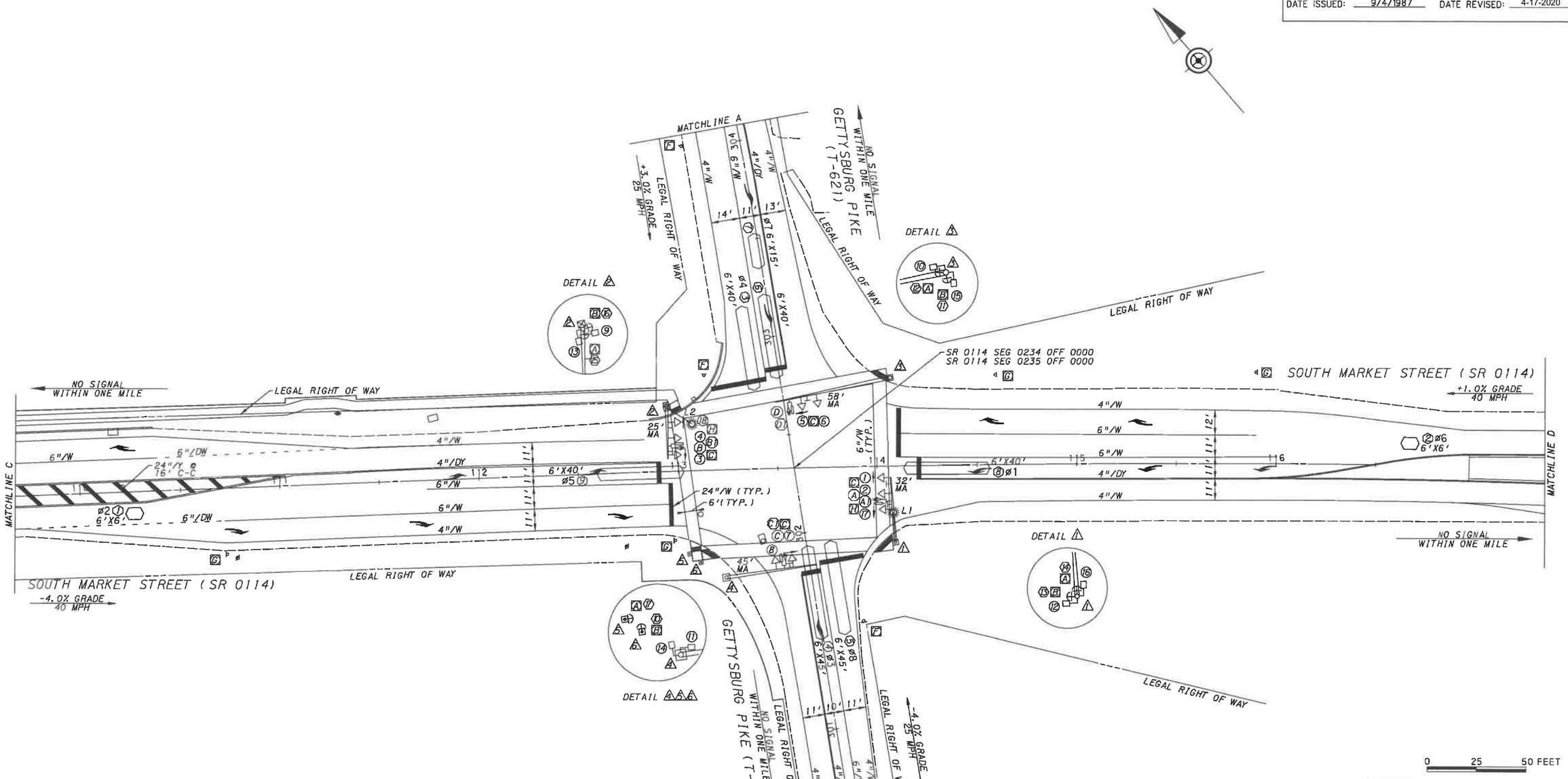
This permit cancels and supersedes all previous permits issued for this location upon completion of the installation specified herein.

INITIAL DATE September 4, 1987 APPROVED Yassmin Gramian, P.E.
(Acting Secretary of Transportation)

REVISION DATE April 17, 2020 BY
(District Executive or Designee)

PERMIT NUMBER: 001911 SHEET 2 OF 4

DATE ISSUED: 9/4/1987 DATE REVISED: 4-17-2020



SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	MESSAGE
A	R10-3E(R)	9"x15"	EDUCATIONAL PUSHBUTTON FOR WALK SIGNAL W/COUNTDOWN TIMER
B	R10-3E(L)	9"x15"	EDUCATIONAL PUSHBUTTON FOR WALK SIGNAL W/COUNTDOWN TIMER
C	R10-12	30"x36"	LEFT TURN YIELD ON GREEN
D	W3-3	36"x36"	SIGNAL AHEAD
F	R3-8A(L-SR)	30"x30"	LANE USE CONTROL
G	R3-8B(L-S-R)	48"x30"	LANE USE CONTROL
H	R10-10R	30"x36"	RIGHT TURN SIGNAL

SIGNAL INDICATIONS

16"X18" COUNTDOWN	12" LENS	12" LENS	12" LENS	
9,10,11 12,13,14 15,16	1,3,5,7	2,4,6,8	17,18	CONFIRMATION LIGHT A,B,C,D

ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE LUNAR WHITE AND PORTLAND ORANGE LEDS.

SIGNALS 1-8, 17-18 TO BE EQUIPPED WITH TUNNEL VISORS.

SIGNALS 1-8, 17-18 TO BE EQUIPPED WITH ONE PIECE BLACK ALUMINUM BACKLATES WITH RETROREFLECTIVE YELLOW BORDER.

LEGEND

55'MA	MAST ARM/ IDENTIFYING LENGTH
	PEDESTAL SIGNAL/STUB POLE
	SIGNAL HEAD/ IDENTIFYING NUMBER
	PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
	PEDESTRIAN PUSHBUTTON/ IDENTIFYING NUMBER
	DETECTABLE WARNING SURFACE
	SIGN/IDENTIFYING LETTER
6'x6'	LOOP DETECTOR/ SIZE/IDENTIFYING NUMBER
	EMERGENCY PRE-EMPTION DETECTOR/IDENTIFYING NUMBER
	EMERGENCY PRE-EMPTION FLASHING BEACON/IDENTIFYING NUMBER
4"/DY	4" WIDTH / DOUBLE YELLOW LINE
4"/Y	4" WIDTH / SOLID YELLOW LINE
4"/W	4" WIDTH / SOLID WHITE LINE
6"/W	6" WIDTH / SOLID WHITE LINE
24"/W	24" WIDTH / SOLID WHITE LINE
24"/Y	24" WIDTH / SOLID YELLOW LINE
ø3	PHASE NUMBER
	UTILITY POLE
L1	LUMINAIRE
	CONTROLLER CABINET

COUNTY: CUMBERLAND

MUNICIPALITY: UPPER ALLEN

INTERSECTION: S. MARKET ST. (SR 0114) & GETTYSBURG PIKE

ACCEPTED: Lou Fazekas 4/17/20

MUNICIPAL OFFICIAL DATE

RECOMMENDED: 4-17-2020

for DIST TRAFFIC ENGR DATE

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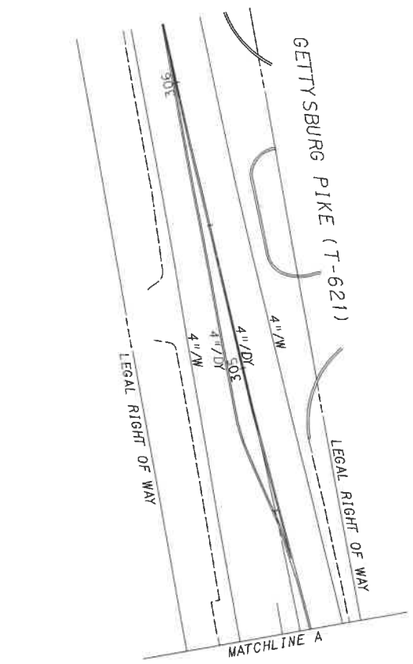
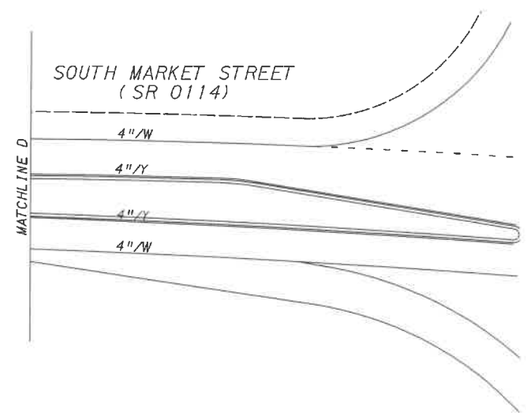
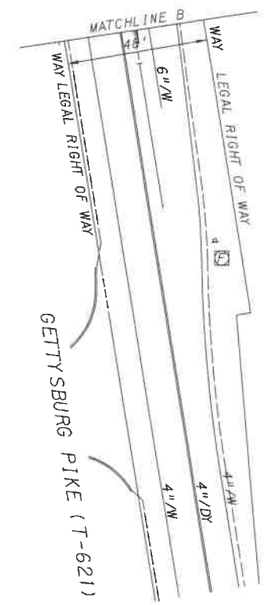
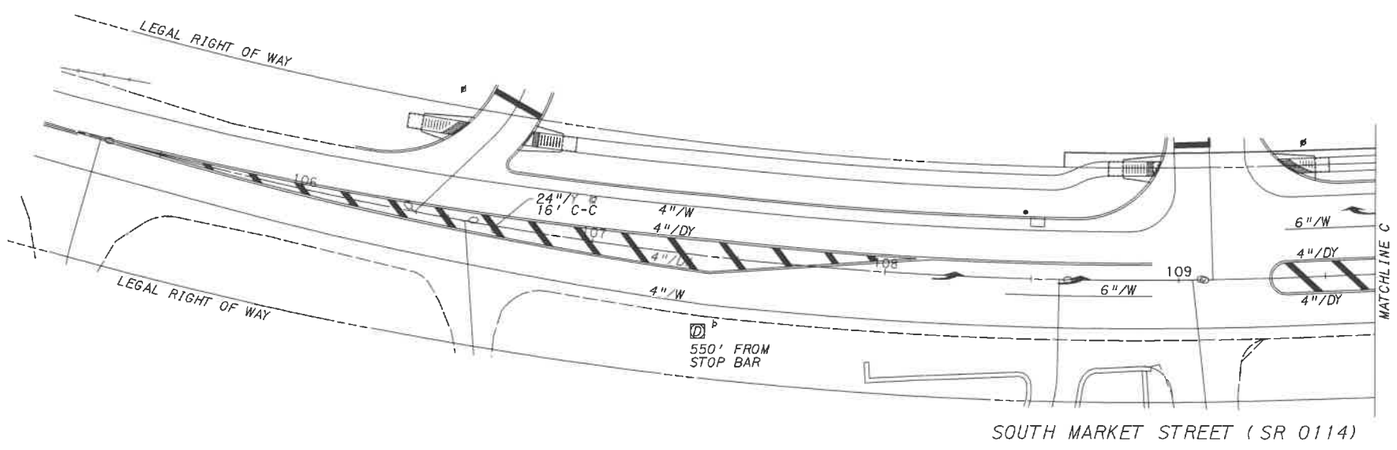
PERMIT NUMBER: 001911 SHEET 3 OF 4

DATE ISSUED: 9/4/1987 DATE REVISED: 4-17-2020









GENERAL NOTES

INSTALLATION, OPERATION, AND MAINTENANCE OF THIS TRAFFIC SIGNAL TO BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND ARE TO BE INSTALLED AND MAINTAINED BY THE PERMITTEE, UNLESS OTHERWISE INDICATED. EXCEPT THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS WHICH WILL BE MAINTAINED BY THE DEPARTMENT.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS WILL HAVE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

THE BOTTOM OF SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY ARE NOT TO BE LESS THAN 15 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. THE BOTTOM OF POST MOUNTED SIGNAL HEADS ARE NOT TO BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNAL HEADS MEASURED AT RIGHT ANGLES TO THE APPROACH IS TO BE 8 FEET.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR EMBANKMENT REMOVAL, CURBING AND/OR SIDEWALK, DRAINAGE STRUCTURES, CHANGES IN HIGHWAY GEOMETRY, PAVEMENT WIDENING, OR INSTALLATION OF ADDITIONAL LANES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 50, UNDERGROUND UTILITY LINE PROTECTION ACT, DATED APRIL 28, 2018.

PAVEMENT MARKINGS WILL BE PLACED IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING HANDBOOK.

PERMITTEE IS RESPONSIBLE FOR OBTAINING APPROVAL FOR INSTALLATION OF TRAFFIC SIGNAL DEVICES LOCATED OUTSIDE HIGHWAY RIGHT-OF-WAY.

TRAFFIC SIGNALS INSTALLED USING LIQUID FUELS TAX FUNDS MUST CONFORM TO DEPARTMENT SPECIFICATIONS AS SET FORTH IN CURRENT PUBLICATION 408, SUPPLEMENTS AND STANDARD DRAWINGS.

0 25 50 FEET

COUNTY:
CUMBERLAND

MUNICIPALITY:
UPPER ALLEN

INTERSECTION:
S. MARKET ST. (SR 0114)
& GETTYSBURG PIKE

ACCEPTED:
Joe Forgeson 4/17/20
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
for 4-17-2020
DIST TRAFFIC ENGR DATE

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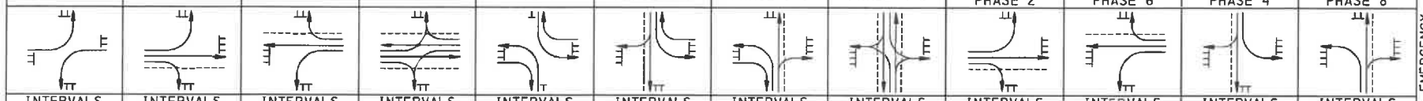
PERMIT NUMBER: 00191.1 SHEET 4 OF 4

DATE ISSUED: 9/4/1987 DATE REVISED: 4-17-2020

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



SIGNALS	PHASE 1+5				PHASE 2+5				PHASE 1+6				PHASE 2+6				PHASE 3+7				PHASE 4+7				PHASE 3+8				PHASE 4+8				PREEMPTION PHASE 2				PREEMPTION PHASE 6				PREEMPTION PHASE 4				PREEMPTION PHASE 8				EMERGENCY FLASHING OPERATION
INTERVALS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1	R/G ①	R/Y	R		G/G ②	G/G	Y	R	R	R	R	R	G	G	Y	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	SELCETIVE CLEARANCE	G/G	Y	R	SELCETIVE CLEARANCE	R	R	R	SELCETIVE CLEARANCE	R	R	R	SELCETIVE CLEARANCE	R	R	R	Y
2	R	R	R		G	G	Y	R	R	R	R	R	G	G	Y	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R		G	Y	R		R	R	R		Y	R	R		R	R	R	Y
3	R/G	R/Y	R		R	R	R	R	G/G	G/G	Y	R	G	G	Y	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R		R	R	R		G/G	Y	R		R	R	R		R	R	R	Y
4	R	R	R		R	R	R	R	G	G	Y	R	G	G	Y	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R		R	R	R		G	Y	R		R	R	R		R	R	R	Y
5	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R/G	R/Y	R		R	R	R	R	G/G	G/G	Y	R	G	G	Y	R		R	R	R		R	R	R		R	R	R		G/G	Y	R	R
6	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R	R	R	R	G	G	Y	R	G	G	Y	R		R	R	R		R	R	R		R	R	R		G	Y	R	R
7	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R/G	R/Y	R		G/G	G/G	Y	R	R	R	R	R	G	G	Y	R		R	R	R		R	R	R		G/G	Y	R		R	R	R	R
8	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		G	G	Y	R	R	R	R	R	G	G	Y	R		R	R	R		R	R	R		G	Y	R		R	R	R	R
9,10	H	H	H		H	H	H	H	M*	FH*	H	H	M*	FH*	H	H	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H		H	H	H		H	H	H		H	H	H		H	H	H	OFF
11,12	H	H	H		M*	FH*	H	H	H	H	H	H	M*	FH*	H	H	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H		H	H	H		H	H	H		H	H	H		H	H	H	OFF
13,14	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		M*	FH*	H	H	H	H	H	H	M*	FH*	H	H		H	H	H		H	H	H		H	H	H		H	H	H	OFF
15,16	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	M*	FH*	H	H	M*	FH*	H	H		H	H	H		H	H	H		H	H	H		H	H	H	OFF
17	R	R	R		G	G	Y	R	R	R	R	R	G	G	Y	R	R/G	R/Y	R		R	R	R	R	R/G	R/G	R/Y	R	R	R	R	R		G	Y	R		R	R	R		G	Y	R		R	R	R	Y
18	R	R	R		R	R	R	R	G	G	Y	R	G	G	Y	R	R/G	R/Y	R		R/G	R/G	R/Y	R	R	R	R	R	R	R	R	R		R	R	R		G	Y	R		R	R	R		R	R	R	Y
A	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		ON	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF
B	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		ON	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF	OFF
C	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		ON	OFF	OFF		OFF	OFF	OFF	OFF
D	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		OFF	OFF	OFF		ON	OFF	OFF	OFF
FIXED		3.2	2.6				4.4	2.0			4.4	2.0			4.4	2.0		3.2	2.5				3.2	2.3			3.2	2.3			3.2	2.3		X	4.4	2.0		X	4.4	2.0		X	3.2	2.3		X	3.2	2.3	
MINIMUM	3				3				3				10				3				3				3				3																				
SEC/ACT													2.5																																				
MAX INT													25																																				
PASSAGE	3				3				3				6				3				3				3				3																				
TBR													25																																				
TTR													13																																				
MIN GAP													3																																				
MAXIMUM I	8				8				8				40				8				8				8				25					**				**				**				**			
PEDESTRIAN *					⑨				⑨				7	26							⑩				⑩				7	22																			
MEMORY	NL				NL				NL				mR				NL				NL				NL				NL																				

* UPON PEDESTRIAN ACTUATION ONLY

CONTROLLER TO DWELL IN PHASE 2+6
UNTIL ACTIVATED BY PHASES 3,4,7,OR 8

SIGNAL COORDINATED WITH ADJACENT SIGNALS:
REFER TO SYSTEM INTERCONNECT PLAN I-0010

** DURATION OF EMERGENCY VEHICLE ACTUATION
A MAXIMUM OF 60 SECONDS

DETECTOR NOTES

DETECTOR 1 CALLS AND EXTENDS PHASE 2, PULSE
DETECTOR 2 CALLS AND EXTENDS PHASE 6, PULSE
DETECTOR 3 CALLS AND EXTENDS PHASE 4, PRESENCE
DETECTOR 4 CALLS AND EXTENDS PHASE 3, PRESENCE
DETECTOR 5 CALLS AND EXTENDS PHASE 8, PRESENCE
DETECTORS 6 AND 7 CALL AND EXTEND PHASE 7, PRESENCE
DETECTOR 8 CALLS AND EXTENDS PHASE 1, PRESENCE
DETECTOR 9 CALLS AND EXTENDS PHASE 5, PRESENCE
PUSHBUTTONS 10 AND 14 CALL PEDESTRIAN PHASE 2
PUSHBUTTONS 11 AND 15 CALL PEDESTRIAN PHASE 6
PUSHBUTTONS 12 AND 13 CALL PEDESTRIAN PHASE 8
PUSHBUTTONS 16 AND 17 CALL PEDESTRIAN PHASE 4
ALL PUSHBUTTONS TO INCLUDE LATCHING LED INDICATION

OPERATION NOTES

① R/G IF FOLLOWED BY 2+5
② R/G IF FOLLOWED BY 1+6
③ G/Y IF FOLLOWED BY 2+6
④ G IF FOLLOWED BY 2+6
⑤ R/G IF FOLLOWED BY 3+8
⑥ R/G IF FOLLOWED BY 4+7
⑦ G/Y IF FOLLOWED BY 4+8
⑧ G IF FOLLOWED BY 4+8
⑨ TIMING WILL BE AS SHOWN IN 2+6, IT MAY TIME OUT IN THIS PHASE OR BE COMPLATED IN 2+6.
⑩ TIMING WILL BE AS SHOWN IN 4+8, IT MAY TIME OUT IN THIS PHASE OR BE COMPLATED IN 4+8.
⑪ R/G IF FOLLOWED BY 3+8
⑫ R/G IF FOLLOWED BY 4+7

EMERGENCY PREEMPTION NOTES:

EMERGENCY VEHICLE PREEMPTION MAY OCCUR DURING ANY INTERVAL OF THE NORMAL CONTROLLER OPERATION. DEPENDING ON THE DIRECTION OF TRAVEL OF THE EMERGENCY VEHICLE, ONE OF THE FOLLOWING SHALL BE DISPLAYED: EMERGENCY PREEMPT PHASE 2, 4, 6 OR 8. THE SYSTEM SHALL PROVIDE SERVICE ON FIRST-COME, FIRST SERVE BASIS. ONCE THE FIRST PRIORITY VEHICLE CALLS THE SYSTEM, IT SHALL PREVENT OTHER PREEMPTIVE VEHICLES FROM ENTERING CALLS UNTIL THE FIRST EMERGENCY VEHICLE RELEASES CONTROL AND CLEARS THE INTERSECTION.

UPON ACTIVATION BY AN EMERGENCY VEHICLE:

1.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF A NON-PREEMPTIVE VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TERMINATE THE INTERVAL IMMEDIATELY AND PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS BEFORE PROCEEDING TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

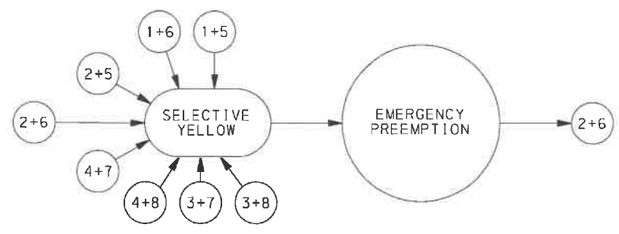
2.) IF THE CONTROLLER OPERATION IS IN INTERVAL 1 OF THE PREEMPTION PHASE, AND UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL REMAIN IN THAT INTERVAL.

3.) IF THE CONTROLLER OPERATION IS IN THE YELLOW, YELLOW ARROW OR ALL RED INTERVAL OF ANY VEHICLE PHASE, UPON ACTIVATION BY AN EMERGENCY VEHICLE, THE CONTROLLER SHALL TIME OUT THOSE INTERVALS NORMALLY AND PROCEED TO THE APPROPRIATE EMERGENCY VEHICLE PREEMPTION PHASE.

4.) THE PREEMPTION PHASE GREEN INTERVAL SHALL EXTEND FOR THE LENGTH OF THE PREEMPTION ACUTUATION TO A MAXIMUM OF 60 SECONDS.

5.) UPON TERMINATION OF THE PREEMPTION PHASE THE CONTROLLER SHALL PROCEED NORMALLY THROUGH THE YELLOW AND ALL RED INTERVALS TO THE PRE-DESIGNATED POST PREEMPTION PHASE, THEN TO NORMAL "PHASE NEXT" OPERATION.

6.) IF PREEMPTION OCCURS DURING CONFLICT/TIME CLOCK FLASH, THE TRAFFIC SIGNAL SHALL CONTINUE FLASHING.



PREEMPTION PHASE	POST PREEMPTION PHASE
2	2+6
6	2+6
4	2+6
8	2+6

0 25 50 FEET

COUNTY:
CUMBERLAND
MUNICIPALITY:
UPPER ALLEN
INTERSECTION:
SO. MARKET ST. (SR 0114)
& GETTYSBURG PIKE

ACCEPTED: 4/17/20
MUNICIPAL OFFICIAL DATE

RECOMMENDED: 4-17-2020
for DIST TRAFFIC ENGR DATE

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PERMIT NO. I-0010 SHEET 1 OF 1
DATE ISSUED 4-17-2020 DATE REVISED

CLOSED LOOP SIGNAL NOTES

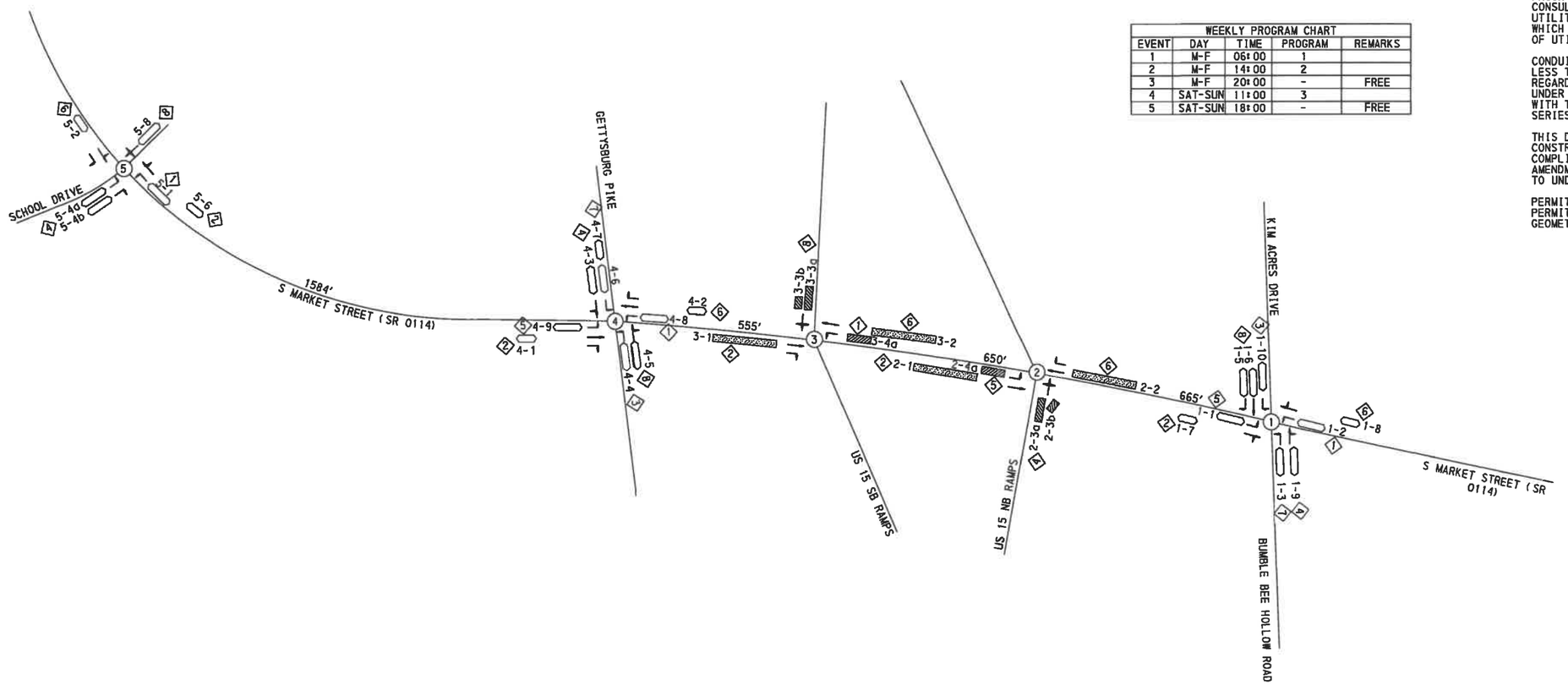
1. PROGRAMS TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TIME BASED COORDINATION BACKUP.
2. OFFSET REFERENCED TO THE BEGINNING OF PHASE 2+6 YELLOW.
3. ACTUAL GREEN TIME DETERMINED BY CYCLE LENGTH.
4. SYSTEM LIMITS: NORTH ON S MARKET STREET TO SCHOOL DRIVE
   SOUTH ON MARKET STREET TO BUMBLE BEE DRIVE
5. PRIMARY COORDINATION: SPREAD SPECTRUM RADIO INTERCONNECT
   SECONDARY COORDINATION: TIME BASED COORDINATION (DEFAULT TO BACKUP TIME BASED COORDINATION)
6. SYSTEM IS DESIGNED FOR THE SYSTEM SOFTWARE:
7. MASTER CONTROLLER LOCATED ON S MARKET STREET (SR 0114) AT US 15 SB RAMPS

LEGEND

- ① - INTERSECTION ADDRESS
- - LOOP SENSOR
- - ADVANCE RADAR DETECTOR
- - STOP BAR RADAR DETECTOR
- 1-1 - INTERSECTION # - DETECTOR #
- ② - PHASE NUMBER

	PROGRAM 1 INTERSECTIONS	FILE	PHASE 1	2	3	4	5	6	7	8	CYCLE	OFFSET
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	14	37	14	25	14	37	23	16	90	41
2	S MARKET STREET AND US 15 NB RAMPS	T 151		67		23	22	45			90	52
3	S MARKET STREET AND US 15 SB RAMPS	T 152	15	50		25		65			90	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	15	37	13	25	15	37	13	25	90	82
5	S MARKET STREET AND SCHOOL DRIVE	T 109	20	43		27		63		27	90	51
	PROGRAM 2 INTERSECTIONS											
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	14	41	14	21	14	41	19	20	90	52
2	S MARKET STREET AND US 15 NB RAMPS	T 151		67		23	20	47			90	44
3	S MARKET STREET AND US 15 SB RAMPS	T 152	14	41		35		55			90	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	14	42	14	20	14	42	14	20	90	50
5	S MARKET STREET AND SCHOOL DRIVE	T 109	14	46		30		60		30	90	24
	PROGRAM 3 INTERSECTIONS											
1	S MARKET STREET AND BUMBLE BEE HOLLOW ROAD/KIM ACRES DRIVE	T 032	13	31	13	18	13	31	13	18	75	7
2	S MARKET STREET AND US 15 NB RAMPS	T 151		54		21	14	40			75	7
3	S MARKET STREET AND US 15 SB RAMPS	T 152	13	40		22		53			75	0
4	S MARKET STREET AND GETTYSBURG PIKE	T 059	13	30	13	19	13	30	13	19	75	70
5	S MARKET STREET AND SCHOOL DRIVE	T 109	14	49		12		63		12	75	45

WEEKLY PROGRAM CHART				
EVENT	DAY	TIME	PROGRAM	REMARKS
1	M-F	06:00	1	
2	M-F	14:00	2	
3	M-F	20:00	-	FREE
4	SAT-SUN	11:00	3	
5	SAT-SUN	18:00	-	FREE



GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BY ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.
TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL, MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION, WHERE APPLICABLE.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

THIS DRAWING CAN NOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, LATEST EDITION.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

COUNTY: CUMBERLAND

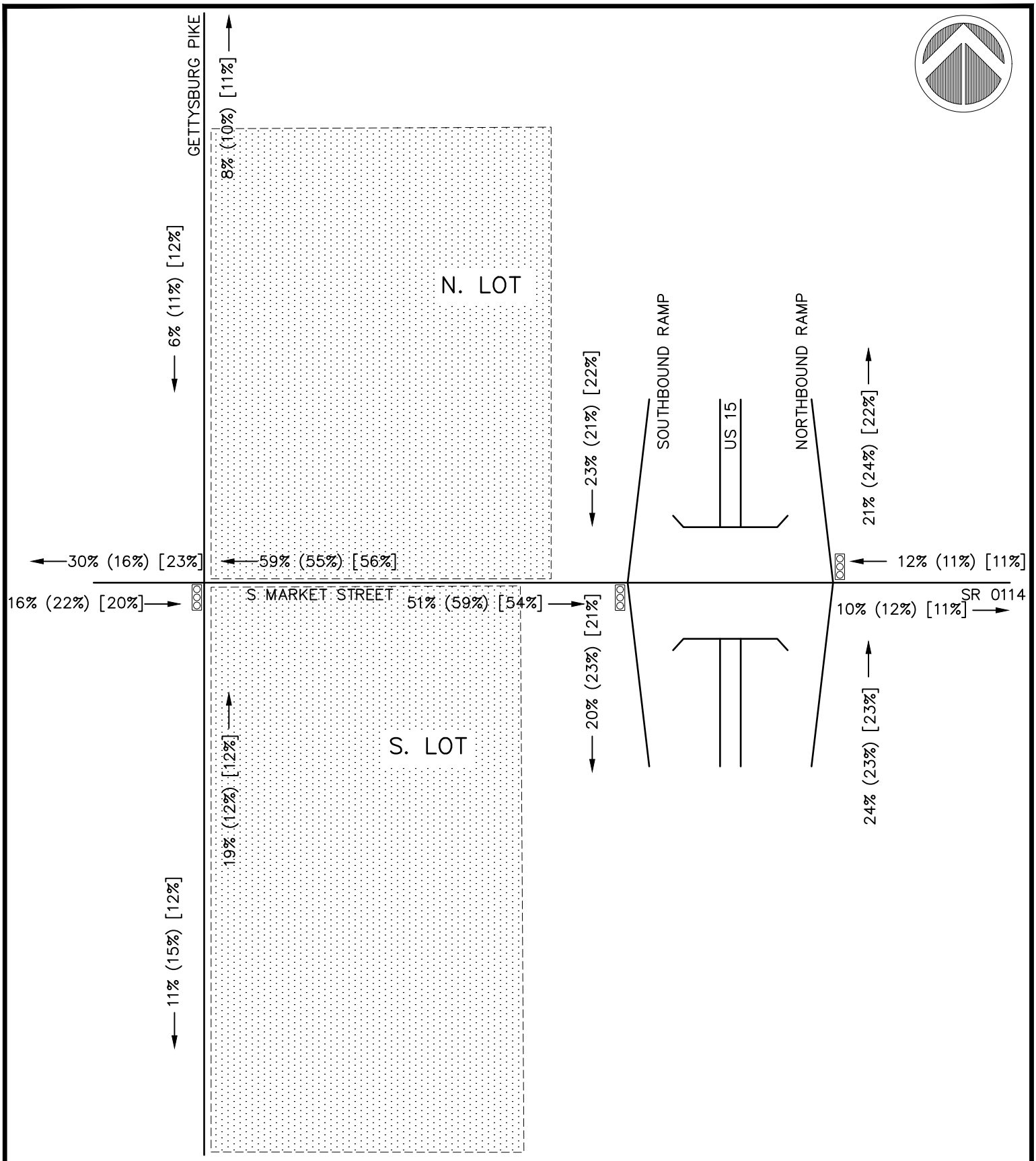
MUNICIPALITY: UPPER ALLEN

INTERSECTION: SOUTH MARKET STREET (S.R. 0114) INTERCONNECT SYSTEM PLAN

APPROVED: Lou Toghar — MUNICIPAL OFFICIAL — DATE 4/17/20

RECOMMENDED: — DISTRICT TRAFFIC ENGINEER — DATE 4-17-2020

Figure 4



= Channelized Island

= Signal–Controlled Approach

STOP = Stop–Controlled Approach

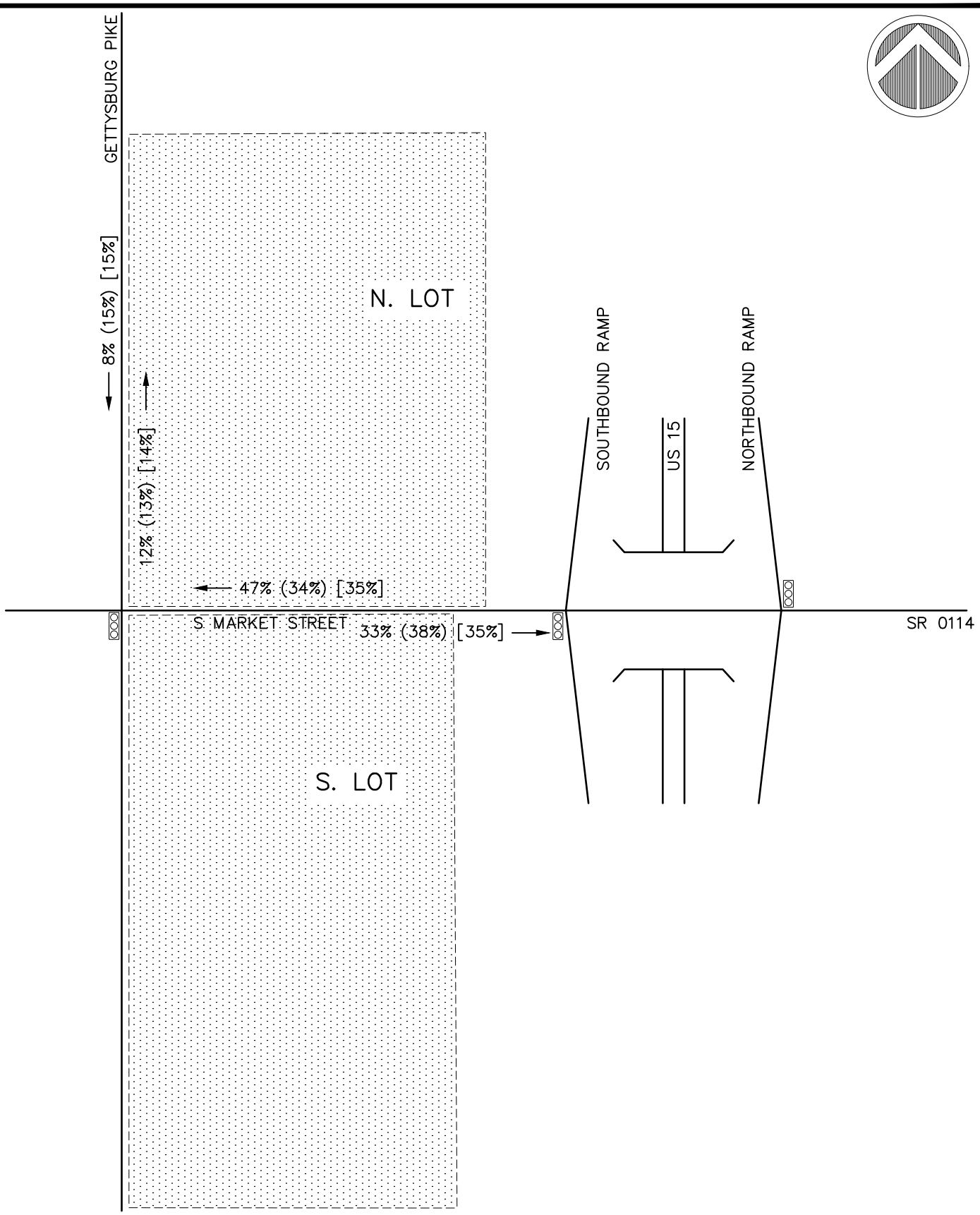
= AM Peak Hour Data
(#) = PM Peak Hour Data
[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 1 OF 18

2020 EXISTING DISTRIBUTION PERCENTAGE



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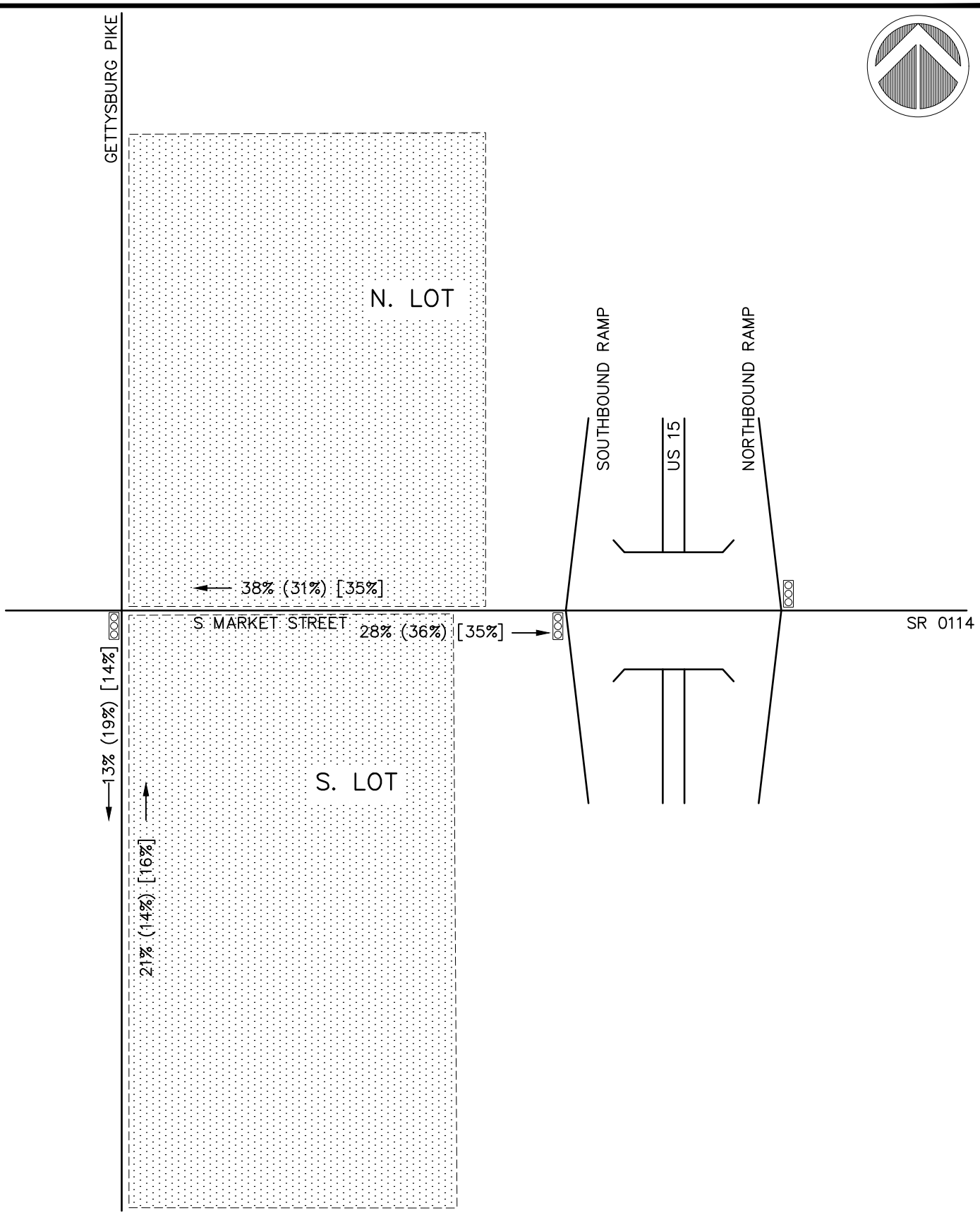
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 2 OF 18

2020 EXISTING DISTRIBUTION PERCENTAGE
CORRIDOR NORTH LOT



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(#) = PM Peak Hour Data
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ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

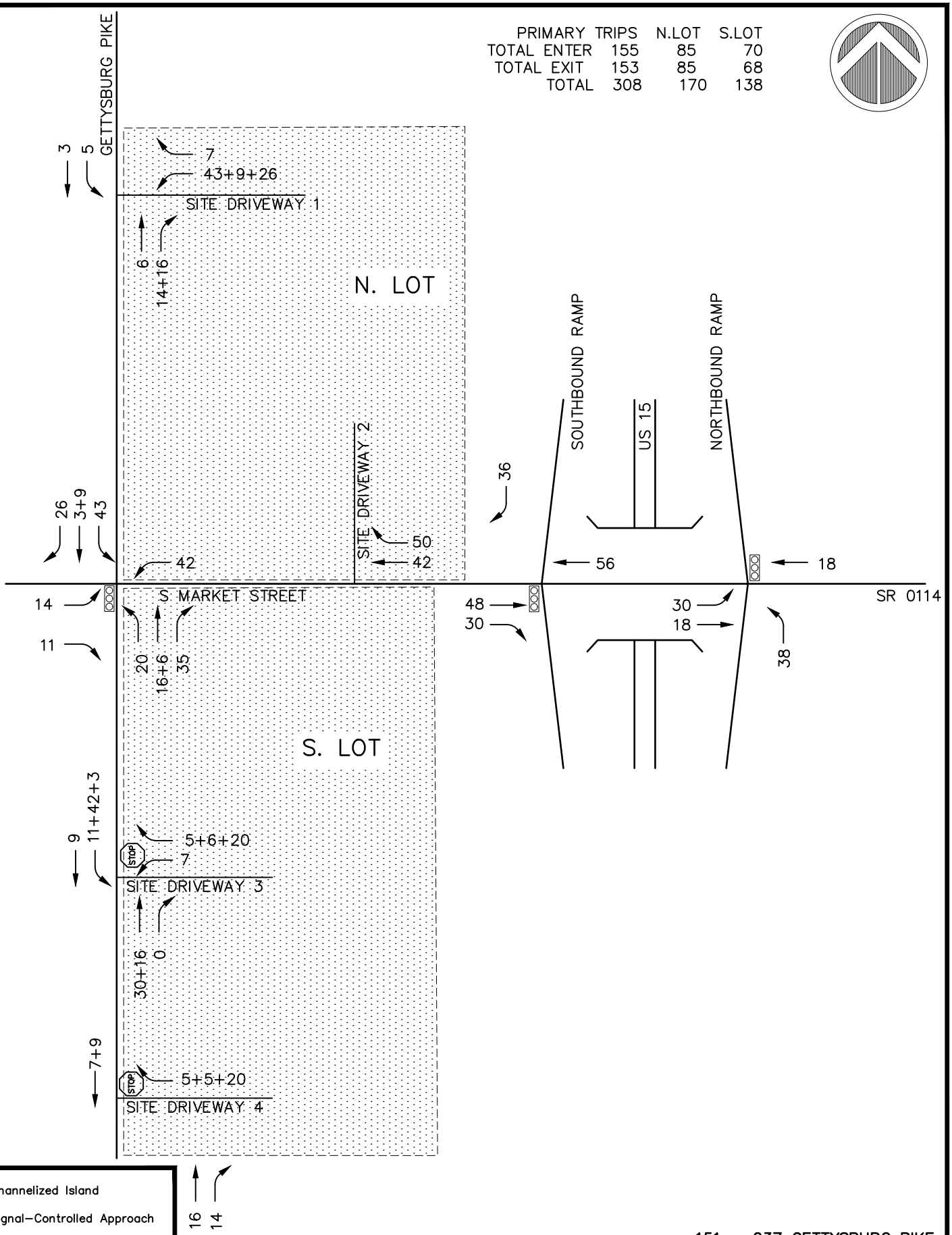
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 3 OF 18

2020 EXISTING DISTRIBUTION PERCENTAGE
CORRIDOR SOUTH LOT

PRIMARY TRIPS	N.LOT	S.LOT
TOTAL ENTER 155	85	70
TOTAL EXIT 153	85	68
TOTAL 308	170	138



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

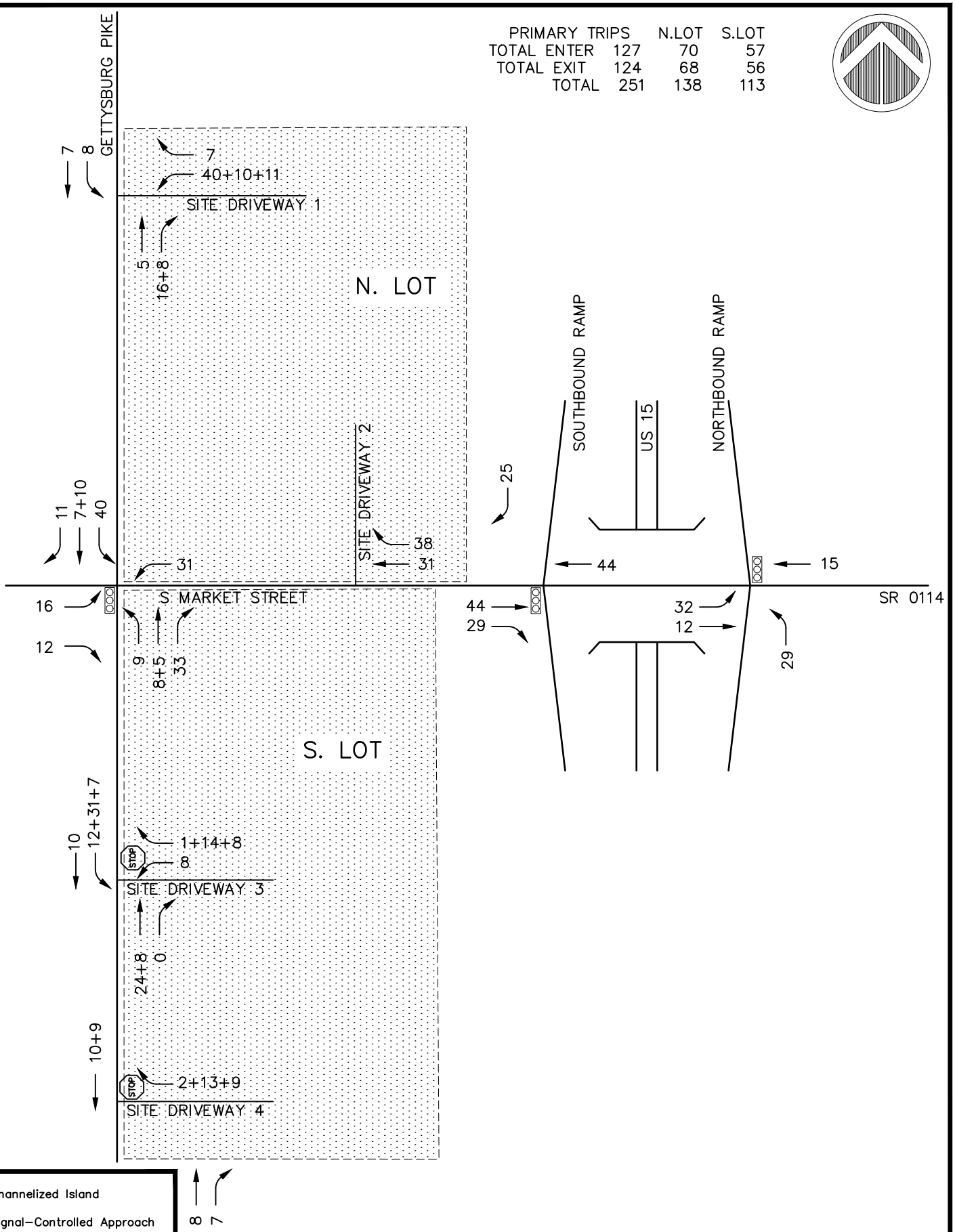
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 4 OF 18

2022 AND 2027 BUILD
DISTRIBUTION/ASSIGN. AM PRIMARY TRIPS

PRIMARY TRIPS		N.LOT	S.LOT
TOTAL ENTER	127	70	57
TOTAL EXIT	124	68	56
TOTAL	251	138	113



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

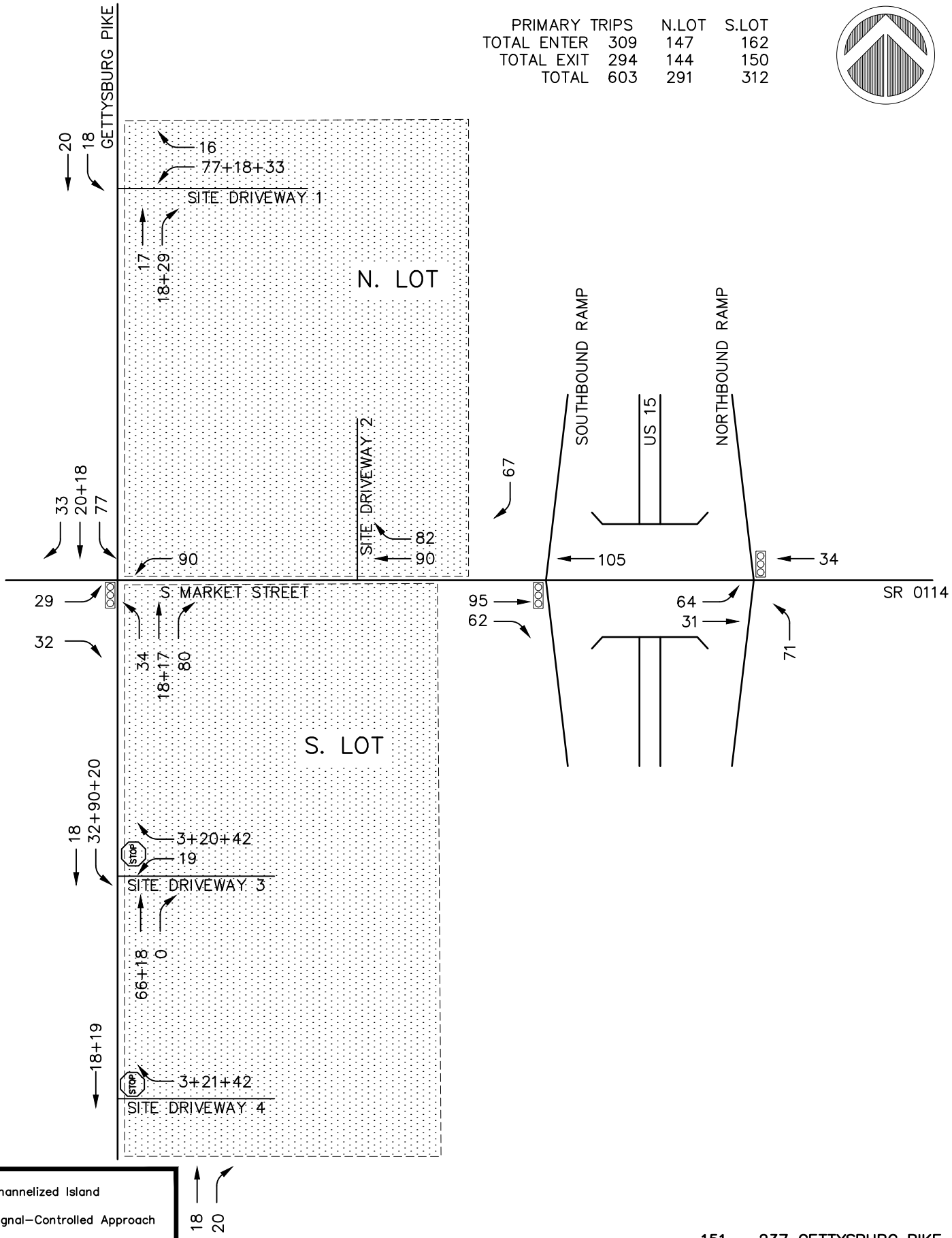
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 5 OF 18

2022 AND 2027 BUILD
DISTRIBUTION/ASSIGN. PM PRIMARY TRIPS

PRIMARY TRIPS		N.LOT	S.LOT
TOTAL ENTER	309	147	162
TOTAL EXIT	294	144	150
TOTAL	603	291	312



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

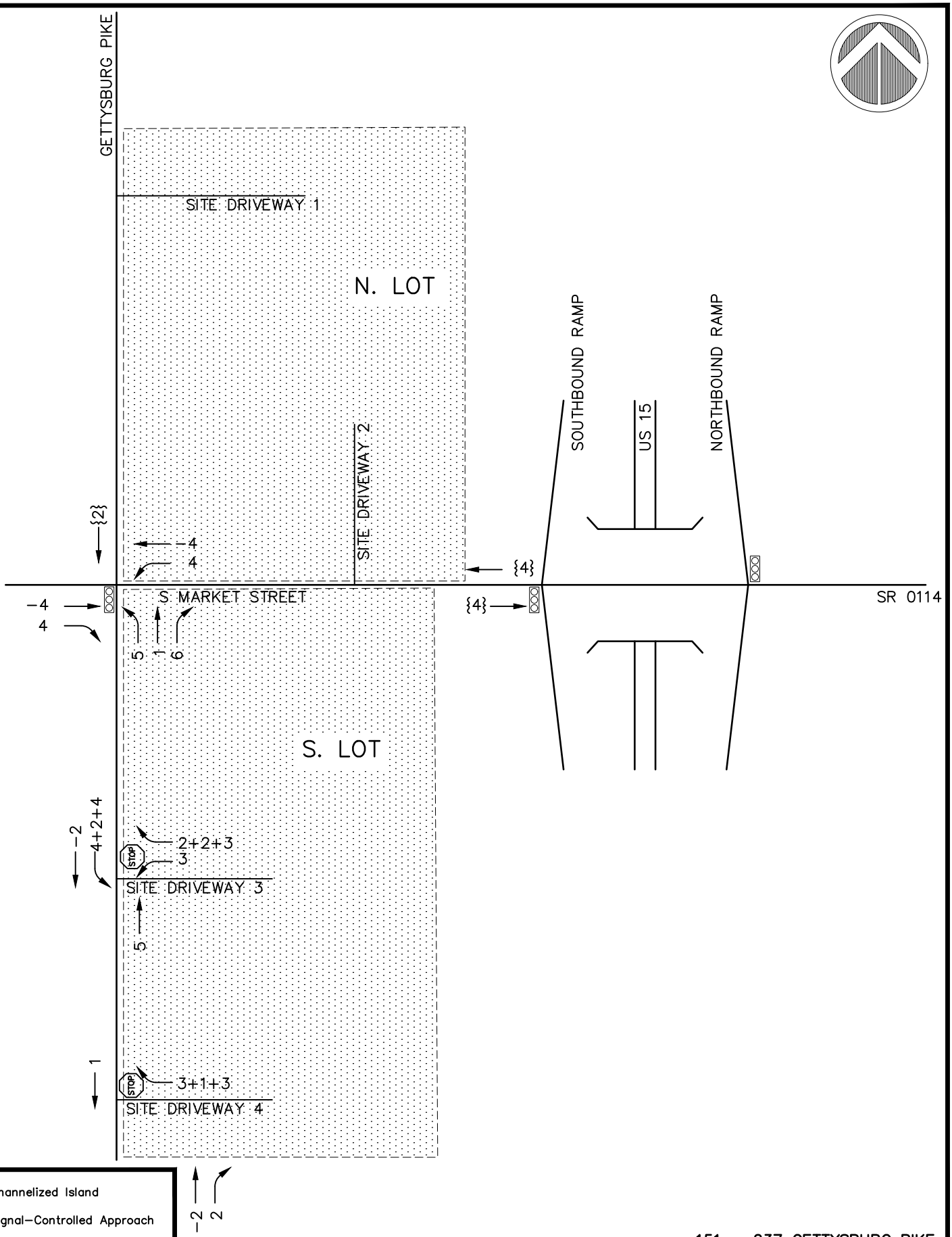
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 6 OF 18

2022 AND 2027 BUILD
DISTRIBUTION/ASSIGN. SAT PRIMARY TRIPS



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

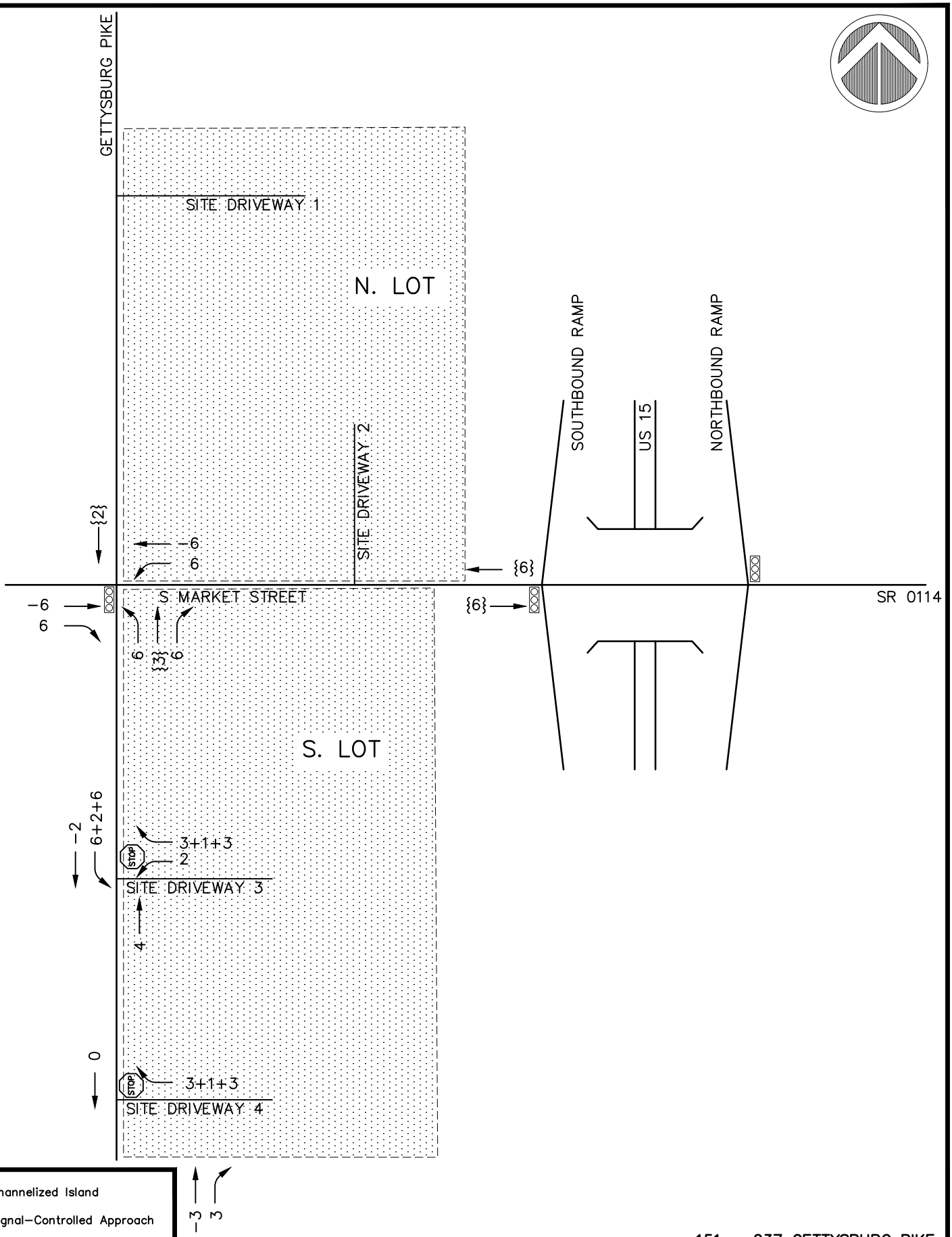
Estimated Entering Trips 12 PM
Estimated Exiting Trips 17 PM
Bypass trips per. ITE Trip Generation Handbook, 3rd Edition
PM 34% (Table E. 9), Saturday 26% (Table E. 10)

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 7 OF 18

PM PASS BY TRIPS
LUC 820 SHOPPING CENTER



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

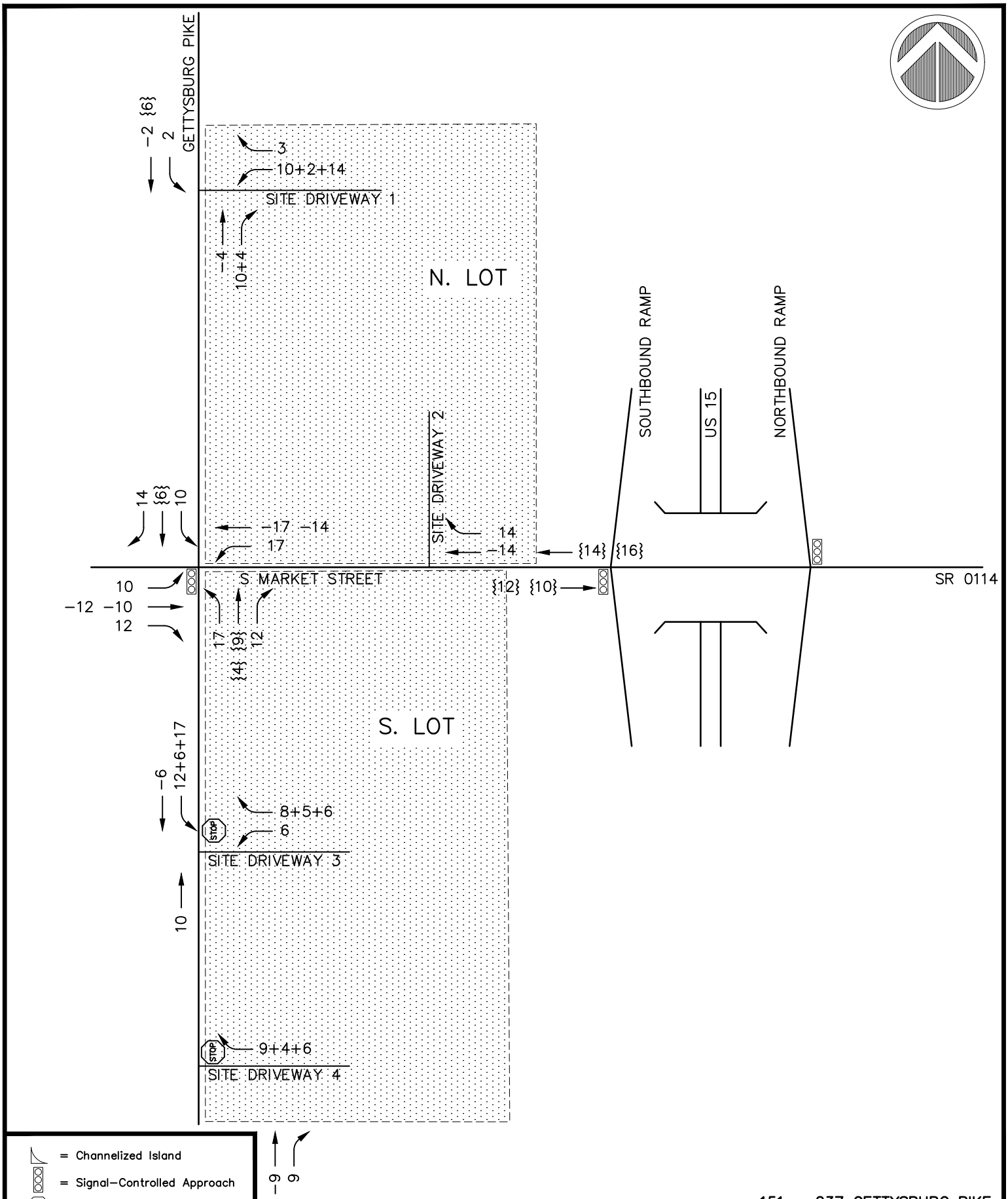
Estimated Entering Trips 17 Saturday
Estimated Exiting Trips 16 Saturday
Bypass trips per. ITE Trip Generation Handbook, 3rd Edition
PM 34% (Table E. 9), Saturday 26% (Table E. 10)

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 8 OF 18

SAT PASS BY TRIPS
LUC 820 SHOPPING CENTER



Estimated Entering Trips 74 AM
Estimated Exiting Trips 73 AM
Bypass trips per. ITE Trip Generation Handbook, 3rd Edition
AM 49% (Table E. 31), PM 50% (Table E. 32)

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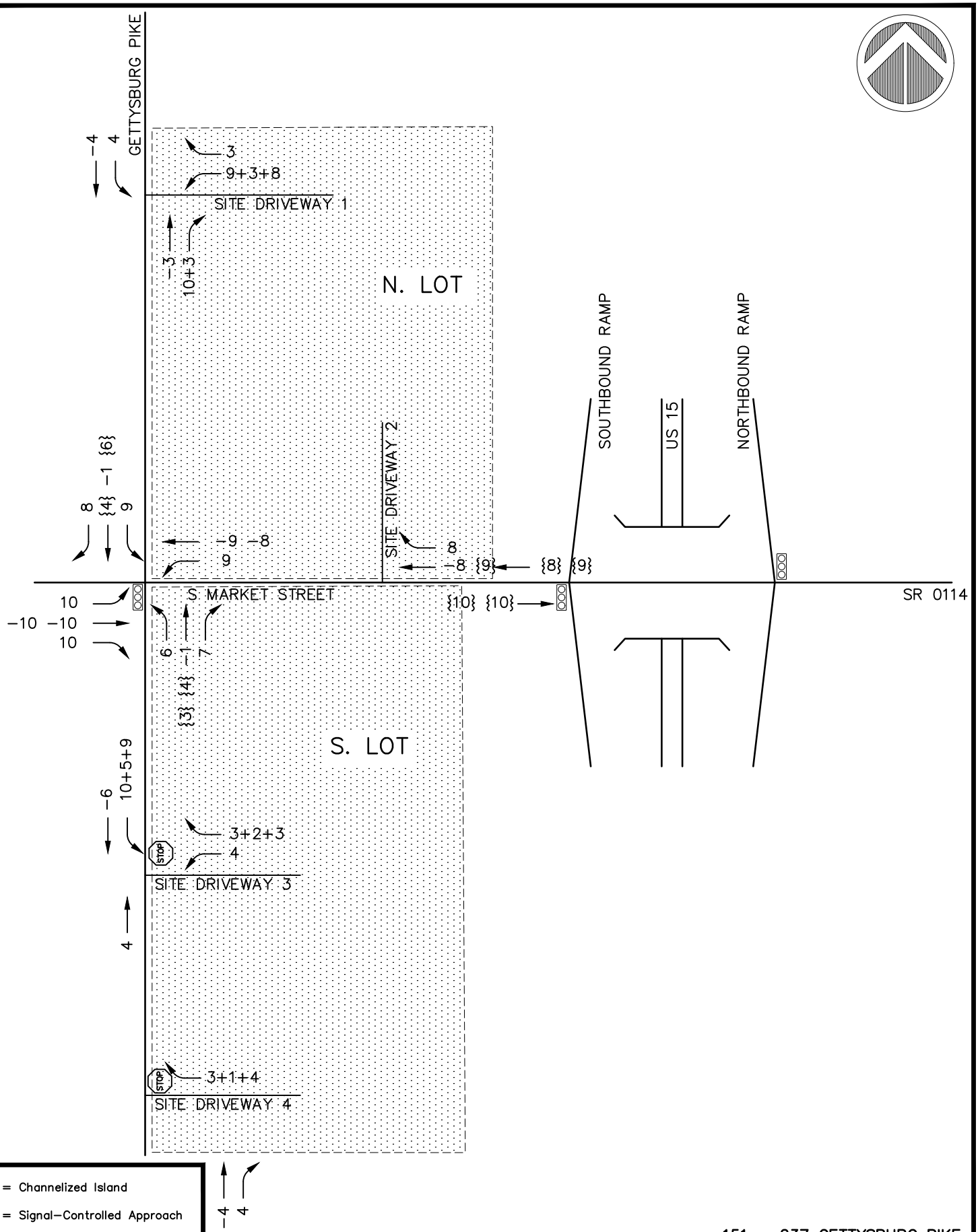
ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 9 OF 18

AM PASS BY TRIPS
LUC 934 RESTAURANT



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

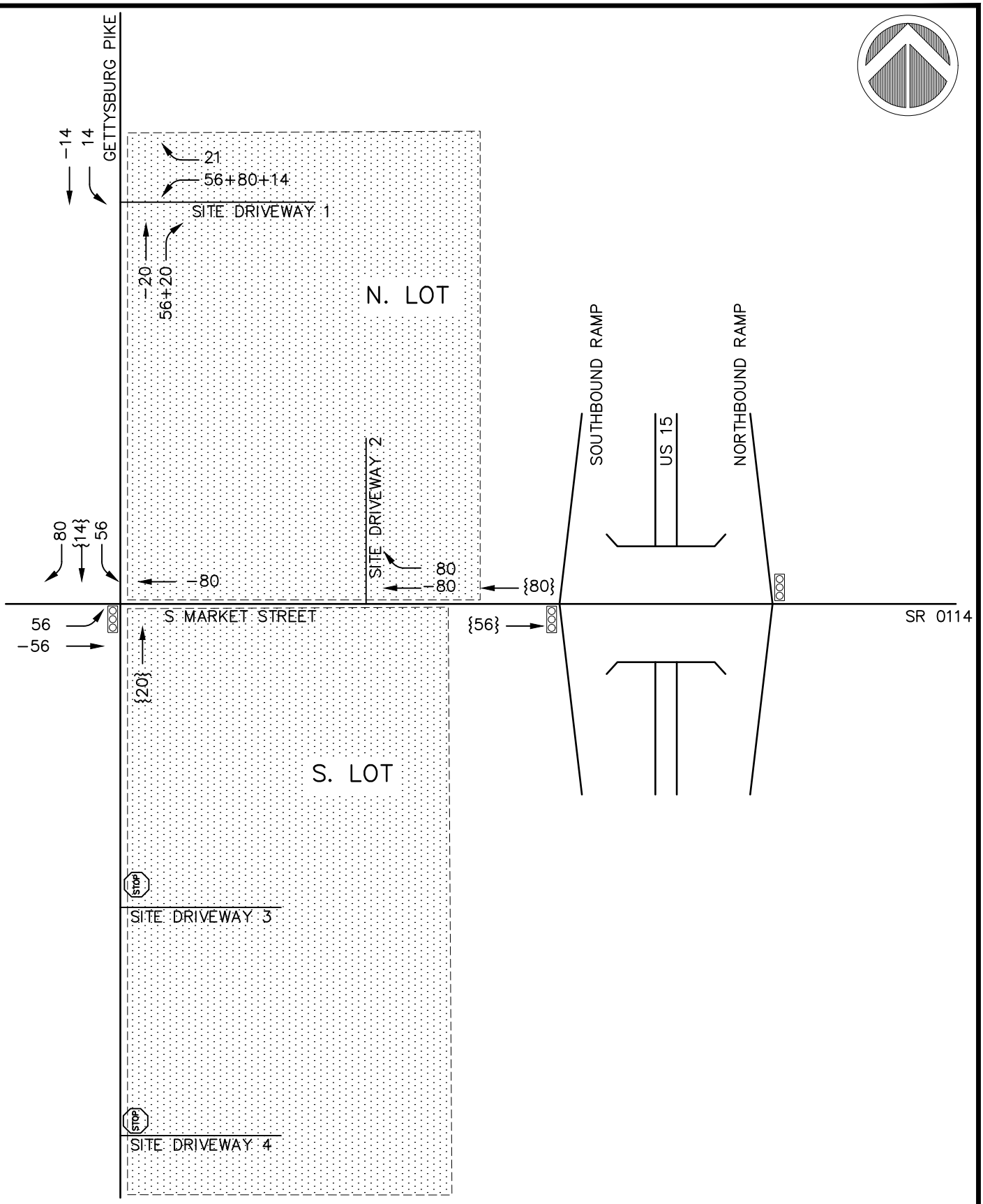
Estimated Entering Trips 53 PM
Estimated Exiting Trips 43 PM
Bypass trips per. ITE Trip Generation Handbook, 3rd Edition
AM 49% (Table E. 31), PM 50% (Table E. 32)

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 10 OF 18

PM PASS BY TRIPS
LUC 934 RESTAURANT



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

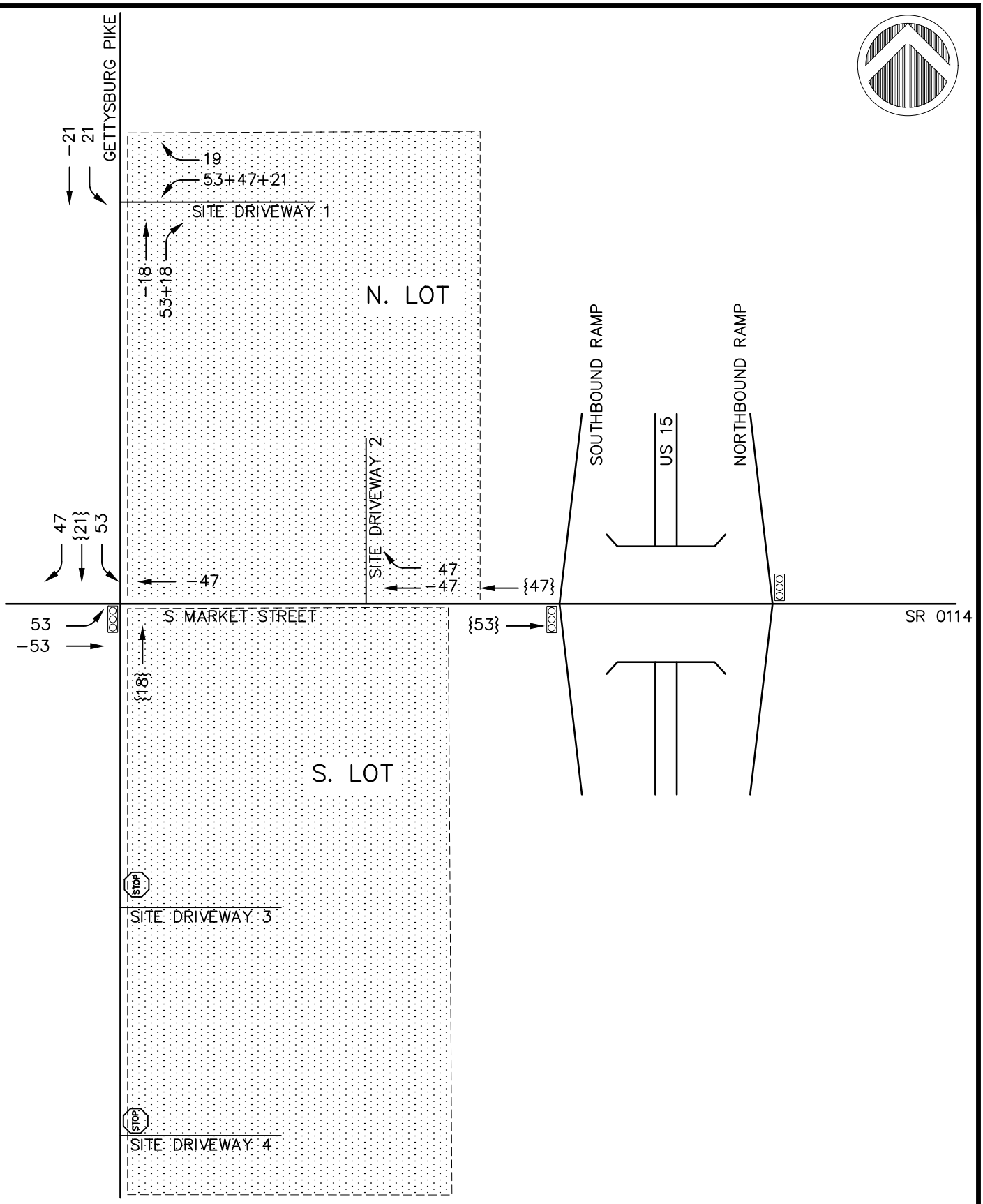
Estimated Entering Trips 170 AM
Estimated Exiting Trips 171 AM
Bypass trips per. ITE 2017 Trip Generation Vol. 3 Handbook
Application E RP–028D Errata
AM 76% (Table E. 39), PM 76% (Table E. 40)

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 11 OF 18

AM PASS BY TRIPS
LUC 960 SUPER CONVENIENCE MARKET



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

Estimated Entering Trips 139 PM
Estimated Exiting Trips 140 PM
Bypass trips per. ITE 2017 Trip Generation Vol. 3 Handbook
Application E RP–028D Errata
AM 76% (Table E. 39), PM 76% (Table E. 40)

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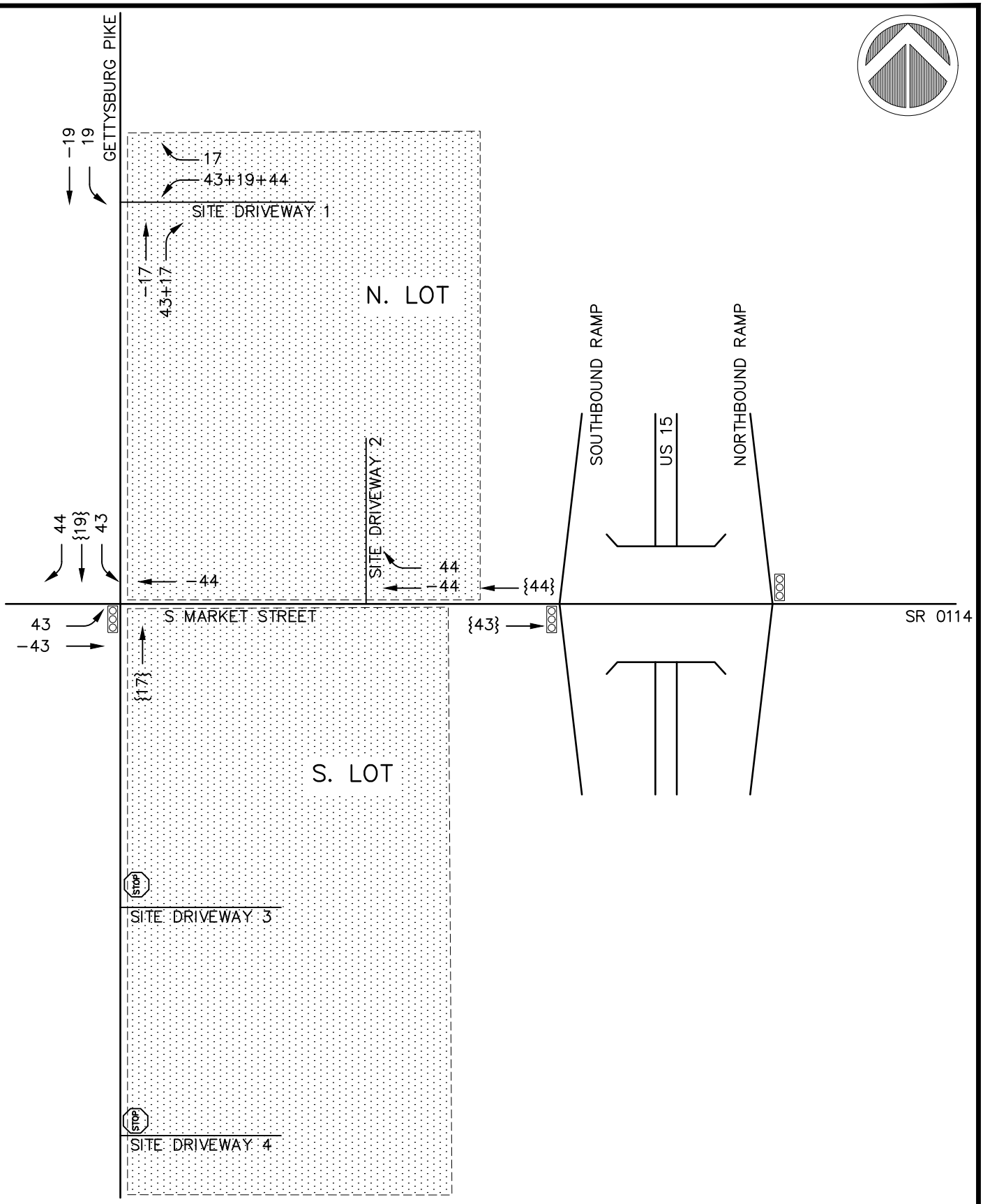
ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 12 OF 18

PM PASS BY TRIPS
LUC 960 SUPER CONVENIENCE MARKET



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

Estimated Entering Trips 123 SAT
Estimated Exiting Trips 123 SAT
Bypass trips per. PennDOT, 10% less than PM Peak Hour or 66%, PM 76% (Table E. 40)

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 13 OF 18

SAT PASS BY TRIPS
LUC 960 SUPER CONVENIENCE MARKET

AM PEAK HOUR

N/S CORRIDOR

6 Vph Pass By / 308 Vph = 2.0% [934]
34 Vph Pass By / 308 Vph = 11.0% [960]

[934 960]

24 Vph Pass By / 1,277 Vph =1.9% [934]
136 Vph Pass By / 1,277 Vph =10.6% [960]

S MARKET STREET

E/W CORRIDOR

29 Vph Pass By / 1,277 Vph =2.3% [934]

[820 934]

16 Vph Pass By / 651 Vph = 2.5% [934]

Pass By Volumes = 243 Vph
N % = 13.0% / S % = 2.5% / E % =14.8%

PM PEAK HOUR

N/S CORRIDOR

7 Vph Pass By / 511 Vph = 1.4% [934]
39 Vph Pass By / 511 Vph = 7.6% [960]

[934 960]

18 Vph Pass By / 1,337 Vph =1.4% [934]
100 Vph Pass By / 1,337 Vph =7.5% [960]

S MARKET STREET

E/W CORRIDOR

8 Vph Pass By / 1,337 Vph =0.6% [820]
19 Vph Pass By / 1,337 Vph =1.4% [934]

[820 934]

4 Vph Pass By / 664 Vph = 0.6% [820]
9 Vph Pass By / 664 Vph = 1.4% [934]

Pass By Volumes = 204 Vph
N % = 9.0% / S % = 2.1% / E% =10.9%

SAT PEAK HOUR

N/S CORRIDOR

36 Vph Pass By / 438 Vph = 8.2% [960]

[934 960]

87 Vph Pass By / 1,055 Vph =8.3% [960]

S MARKET STREET

E/W CORRIDOR

12 Vph Pass By / 1,055 Vph =1.1% [820]

[820 934]

5 Vph Pass By / 443 Vph = 1.1% [820]

Pass By Volumes = 139 Vph
N % = 8.2% / S % = 1.1% / E % =9.4%

= Channelized Island
= Signal–Controlled Approach
= Stop–Controlled Approach

{#} = Within Existing Traffic Stream
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

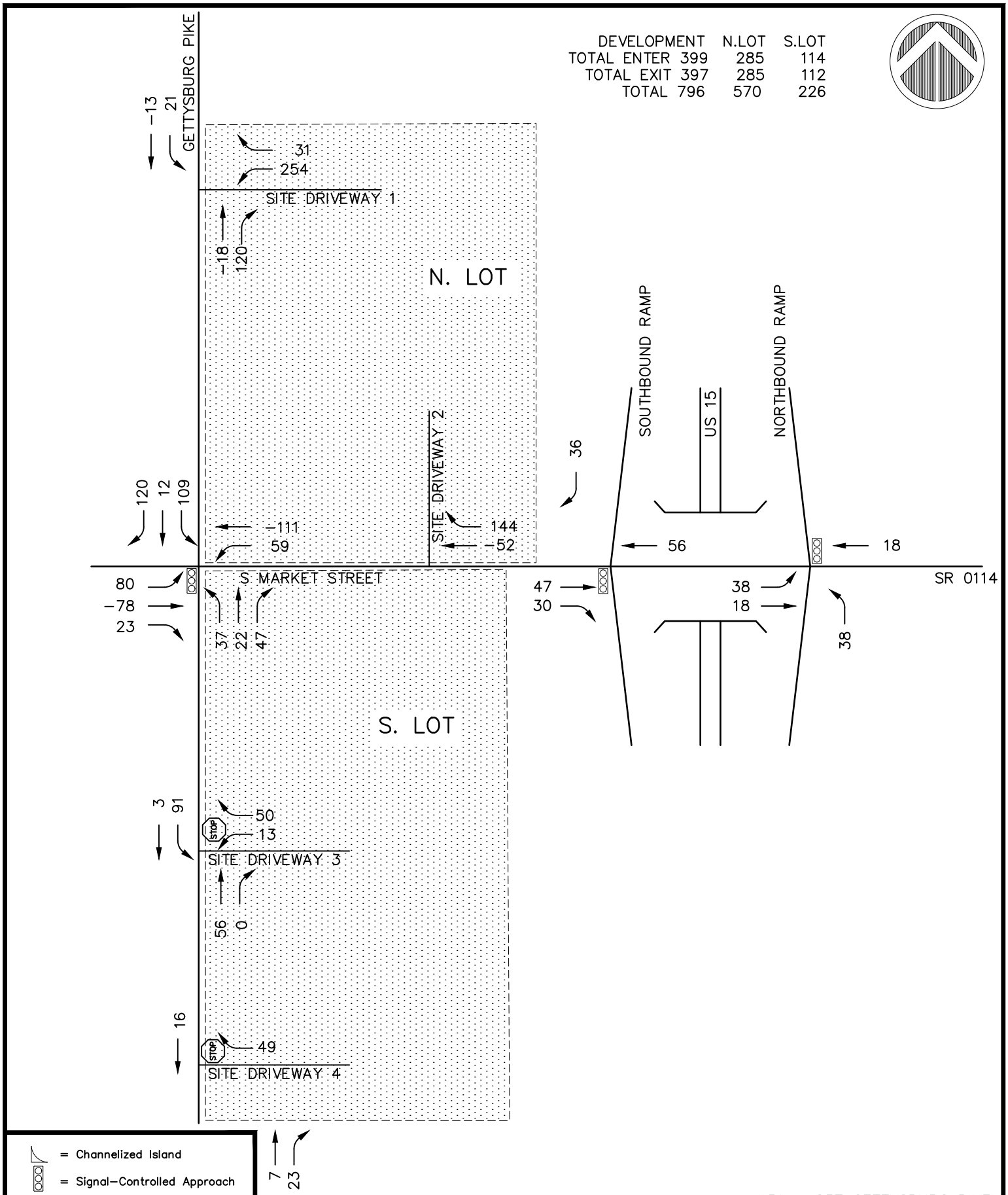
[###] Land Use Code

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 14 OF 18

PASS BY VOLUMES AS A PERCENTAGE OF EXISTING CORRIDOR VOLUMES



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

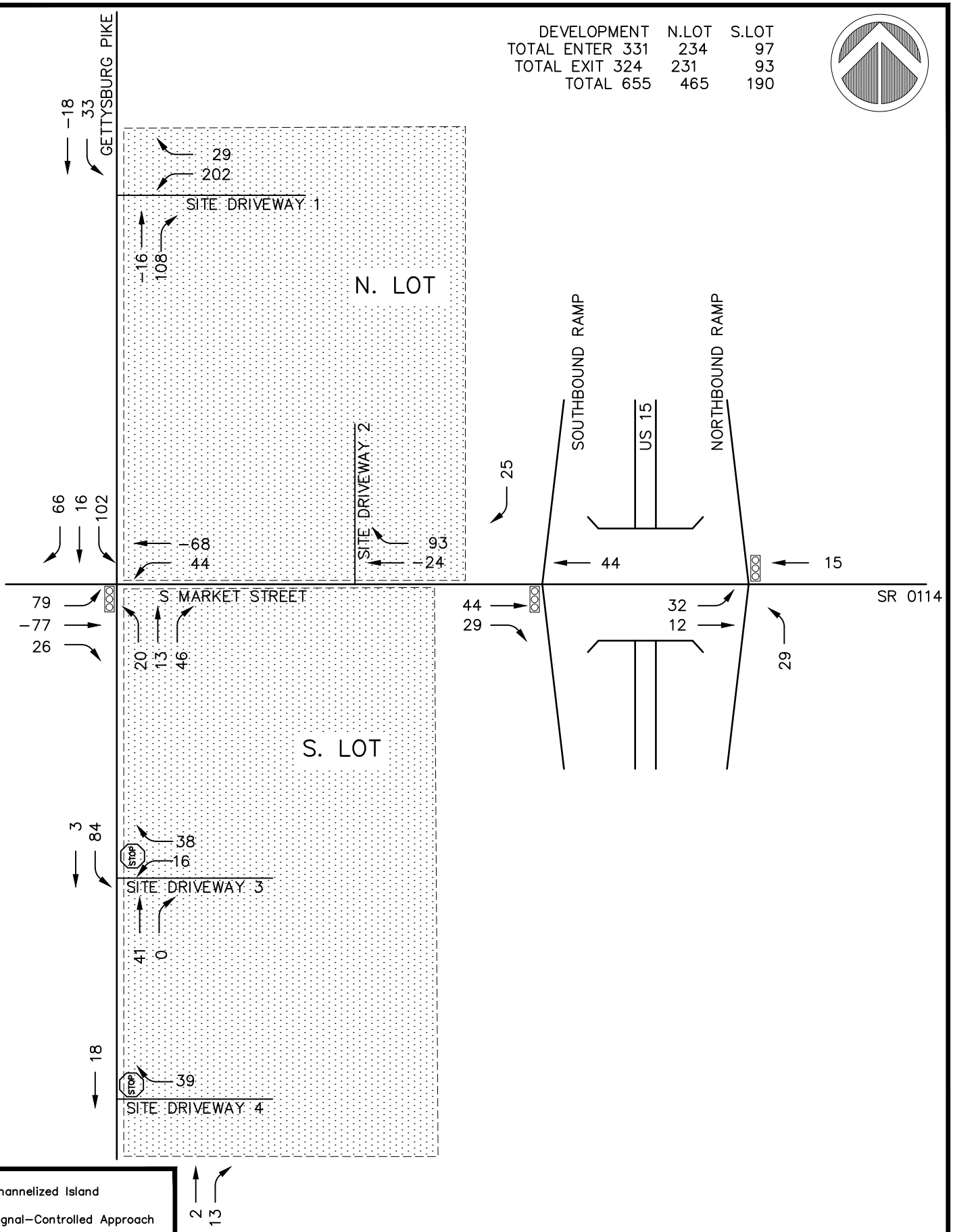
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 15 OF 18

2022 AND 2027 BUILD AM PEAK HOUR DISTRIBUTION/ASSIGN. TOTAL DEV. TRIPS

DEVELOPMENT	N.LOT	S.LOT
TOTAL ENTER 331	234	97
TOTAL EXIT 324	231	93
TOTAL 655	465	190



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= Stop–Controlled Approach

SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

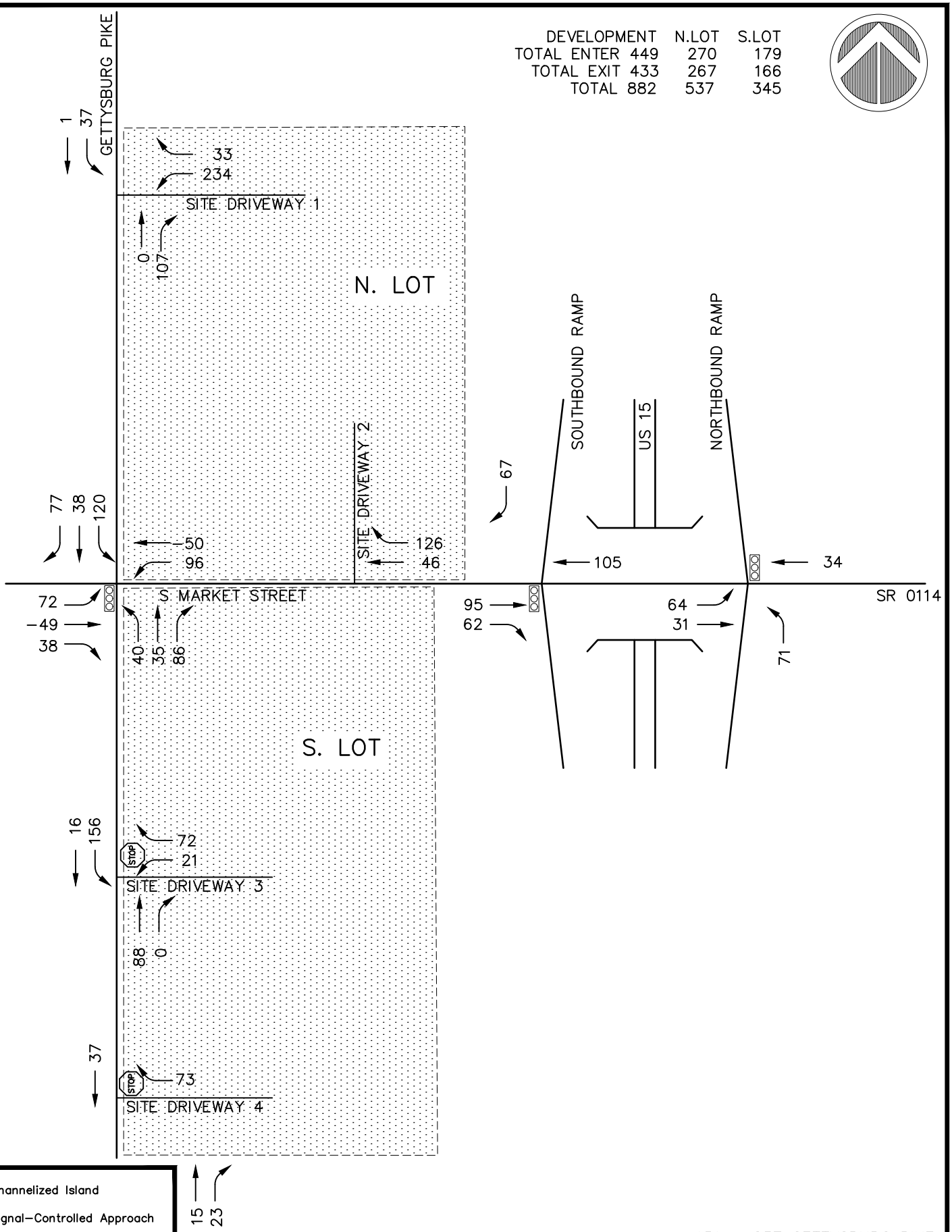
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 16 OF 18

2022 AND 2027 BUILD PM PEAK HOUR DISTRIBUTION/ASSIGN. TOTAL DEV. TRIPS

DEVELOPMENT	N.LOT	S.LOT
TOTAL ENTER 449	270	179
TOTAL EXIT 433	267	166
TOTAL 882	537	345



= Channelized Island

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= Stop–Controlled Approach

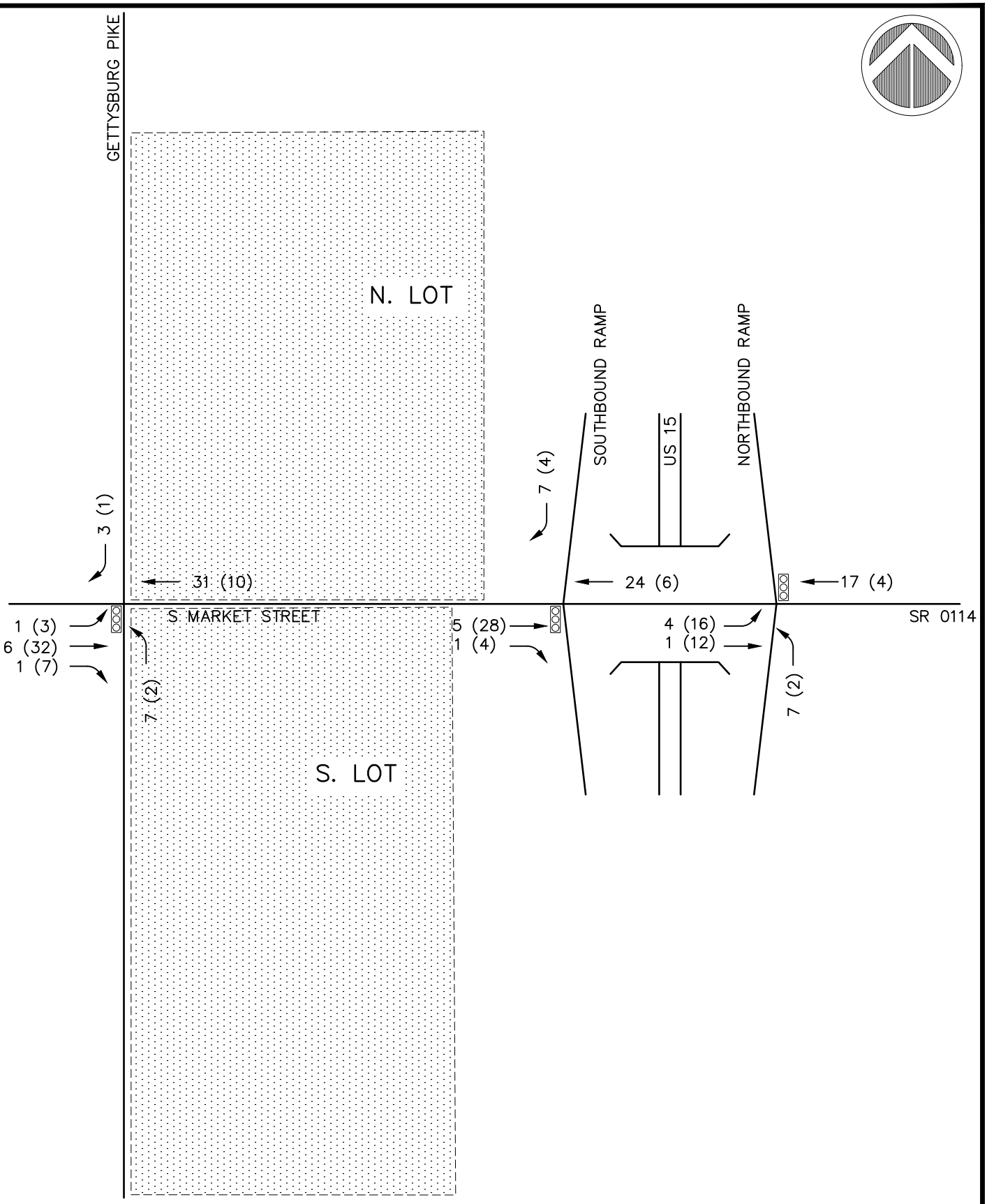
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 17 OF 18

2022 AND 2027 BUILD SAT PEAK HOUR DISTRIBUTION/ASSIGN. TOTAL DEV. TRIPS



= Channelized Island

= Signal–Controlled Approach

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= AM Peak Hour Data
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[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

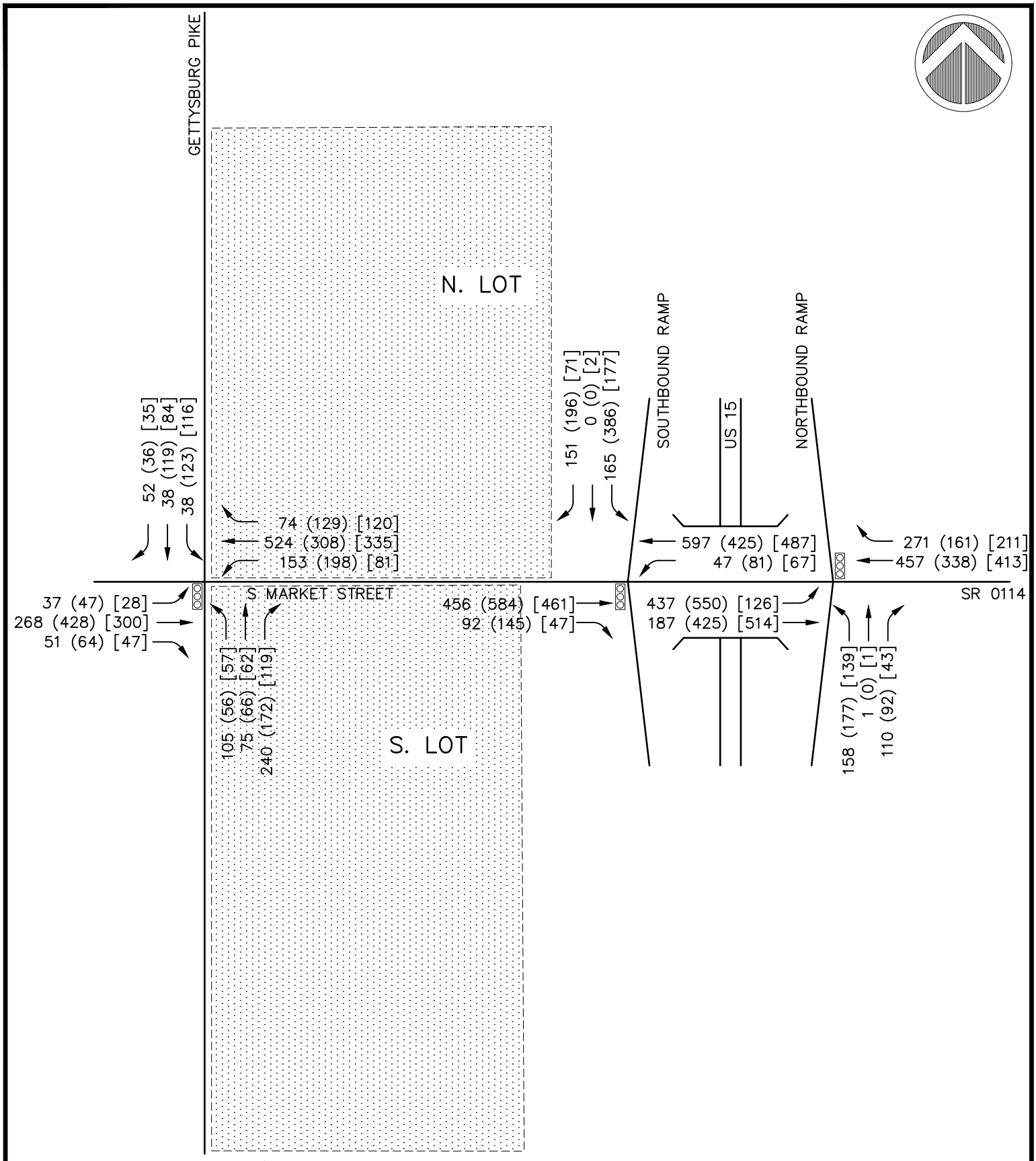
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 4 SHEET 18 OF 18

OTHER DEVELOPMENT ASSIGNMENT OF TRIPS

Figure 5a-5h



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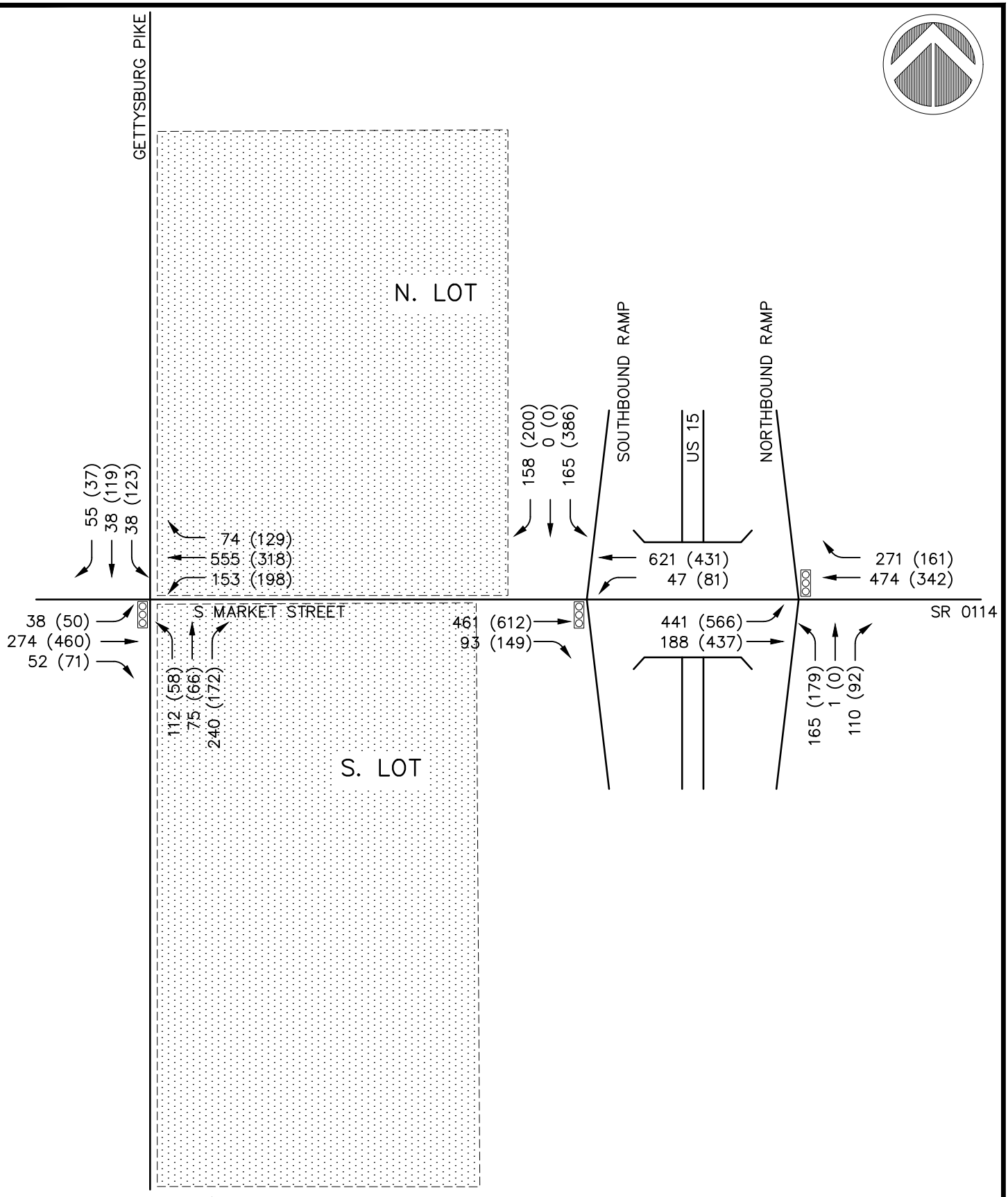
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5A SHEET 1 OF 1

2022 OPENING YEAR – BASE CONDITIONS
PEAK HOUR TRAFFIC VOLUMES



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= Stop–Controlled Approach

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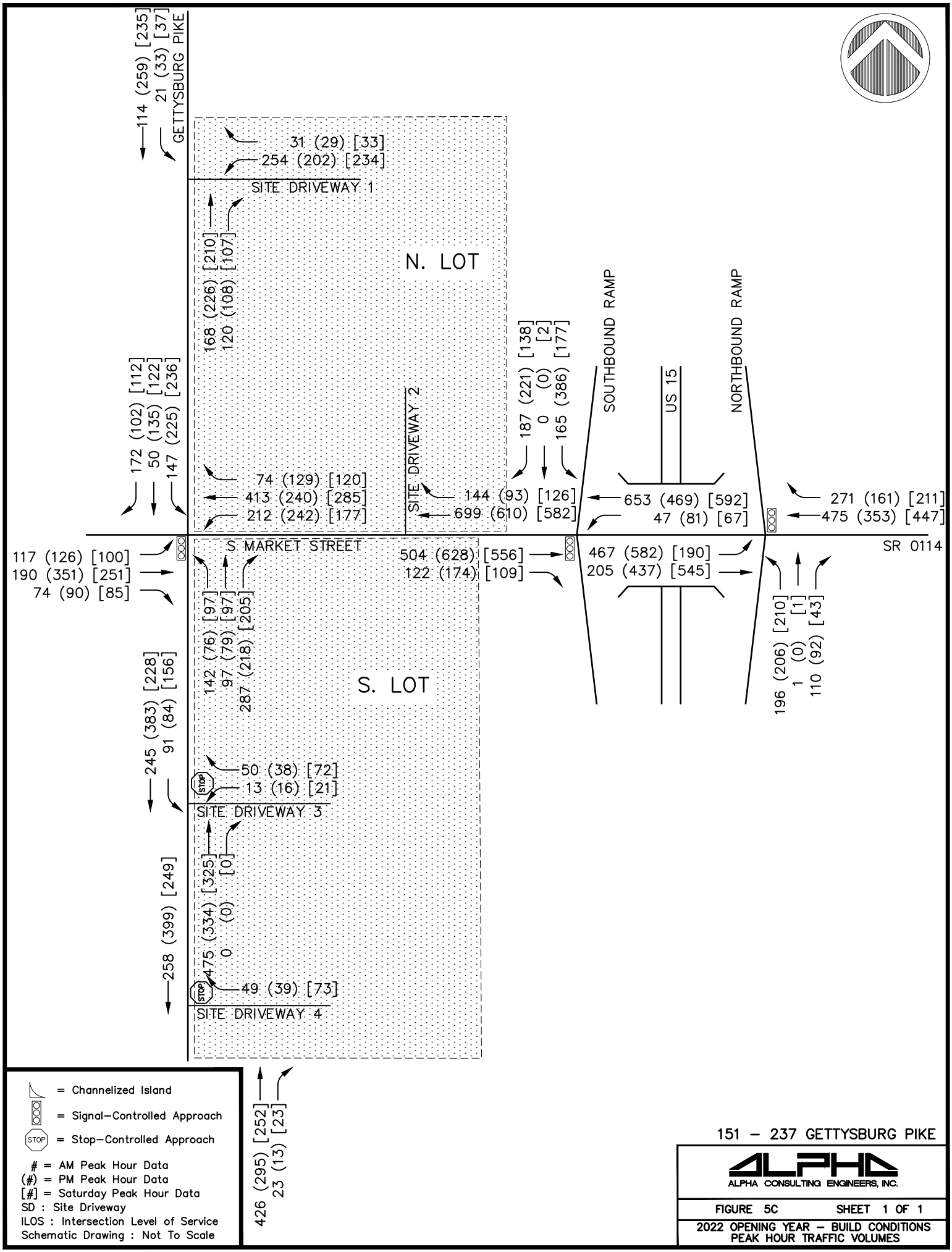
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5B SHEET 1 OF 1

2022 OPENING YEAR – BASE w/ ADJ. DEV
PEAK HOUR TRAFFIC VOLUMES



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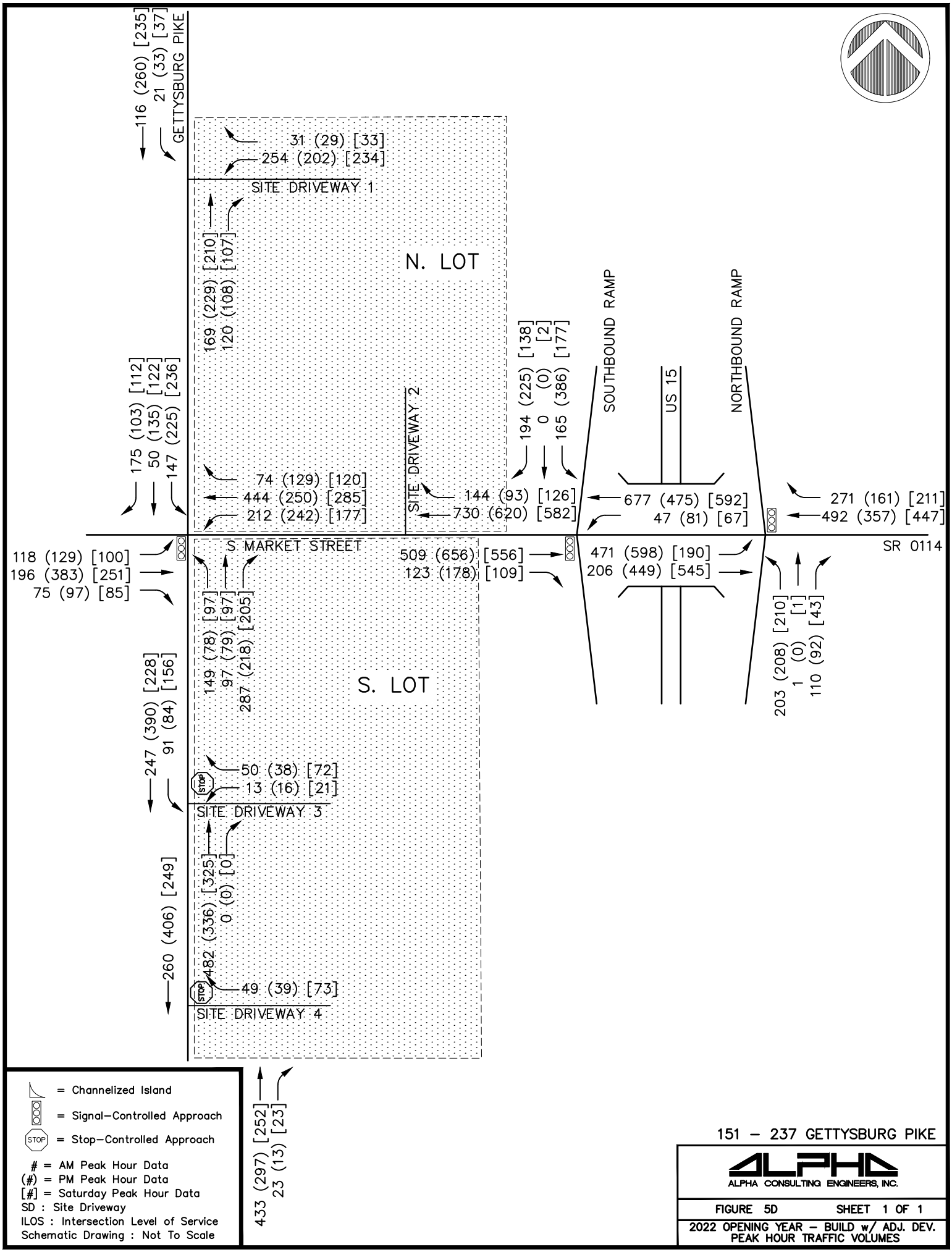
ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5C SHEET 1 OF 1

2022 OPENING YEAR – BUILD CONDITIONS
PEAK HOUR TRAFFIC VOLUMES

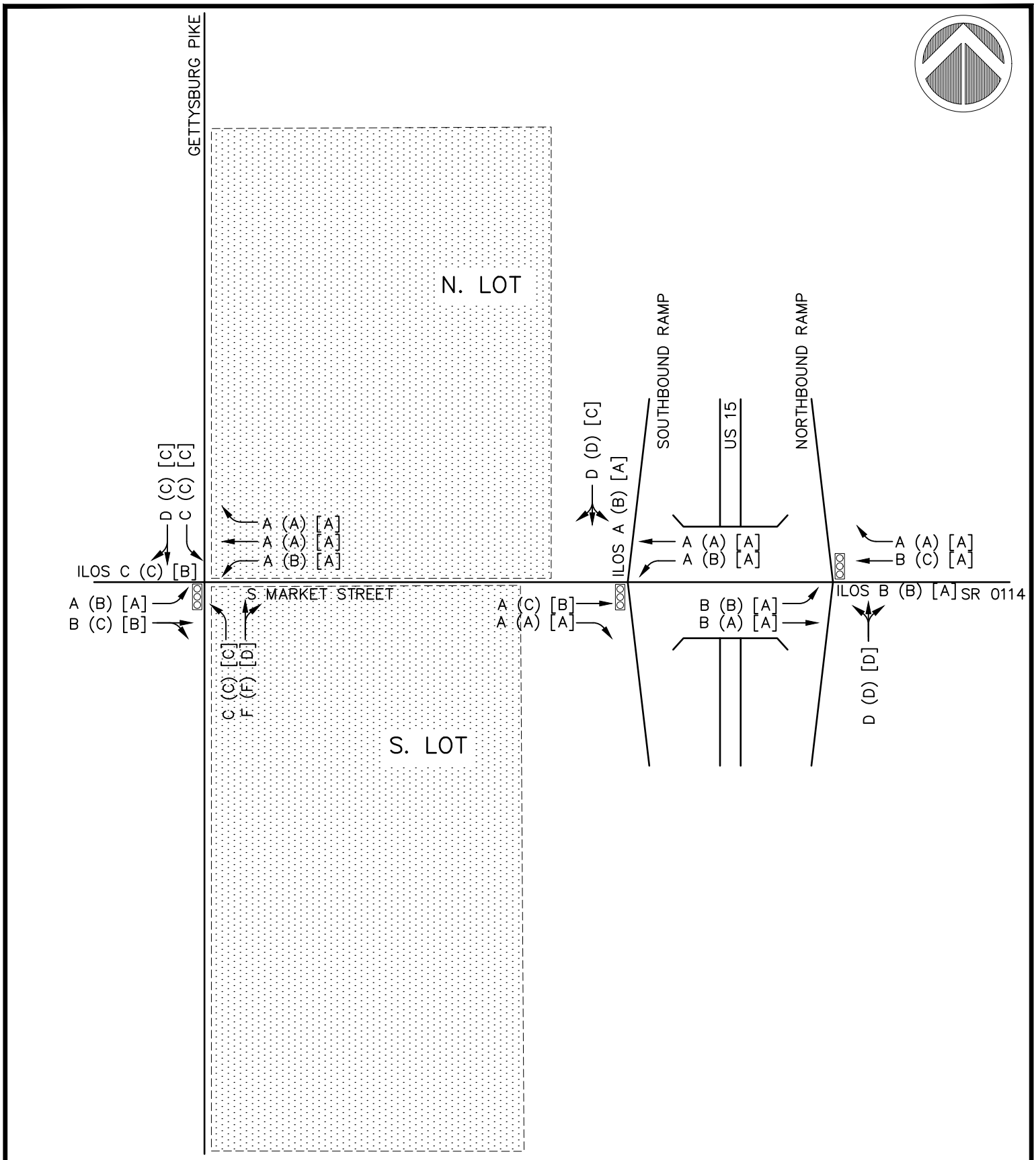


151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5D SHEET 1 OF 1

2022 OPENING YEAR – BUILD w/ ADJ. DEV.
PEAK HOUR TRAFFIC VOLUMES



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= Stop–Controlled Approach

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[#] = Saturday Peak Hour Data
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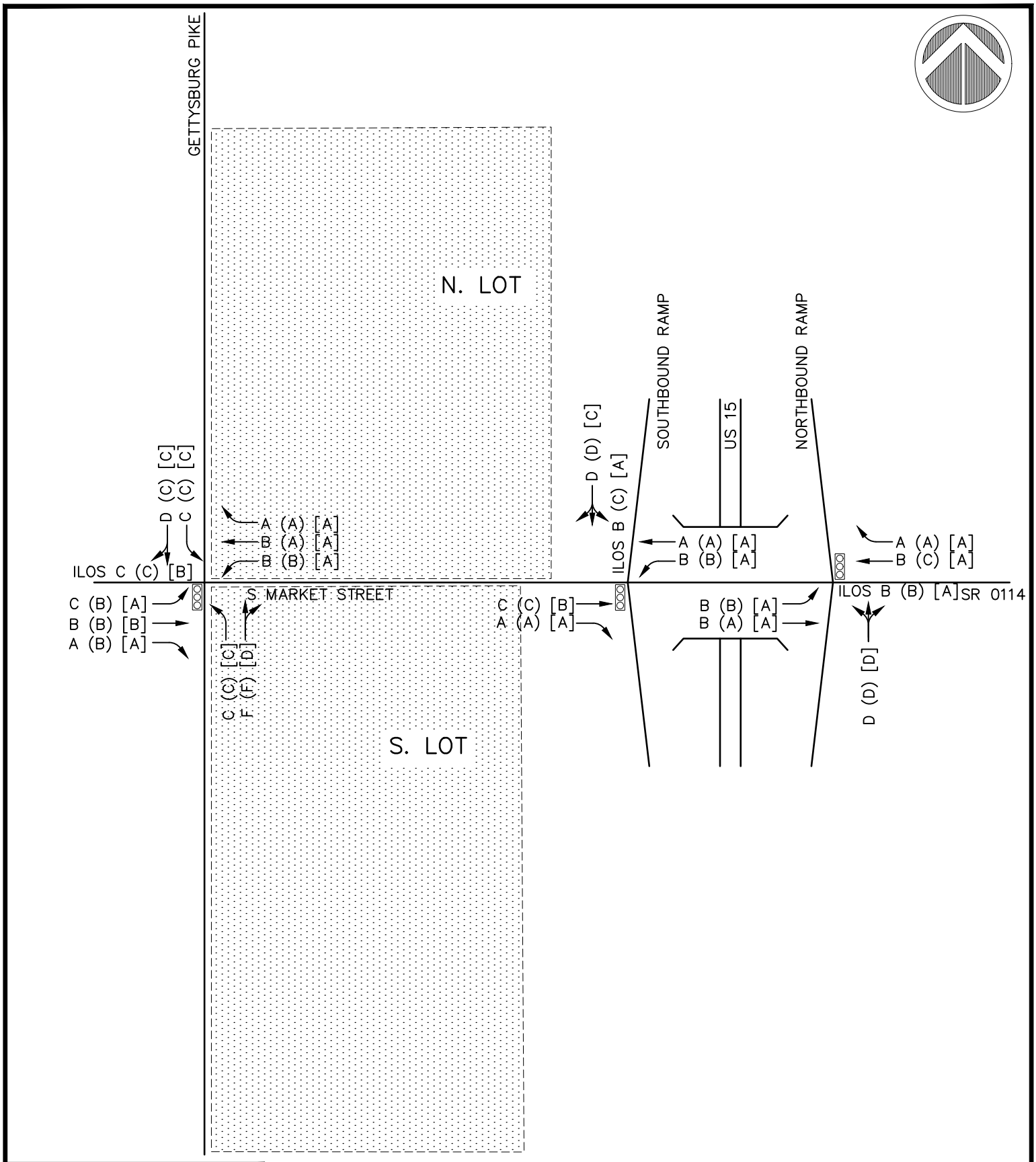
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5E SHEET 1 OF 1

2022 OPENING YEAR – BASE CONDITIONS
PEAK HOUR LOS



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

= AM Peak Hour Data
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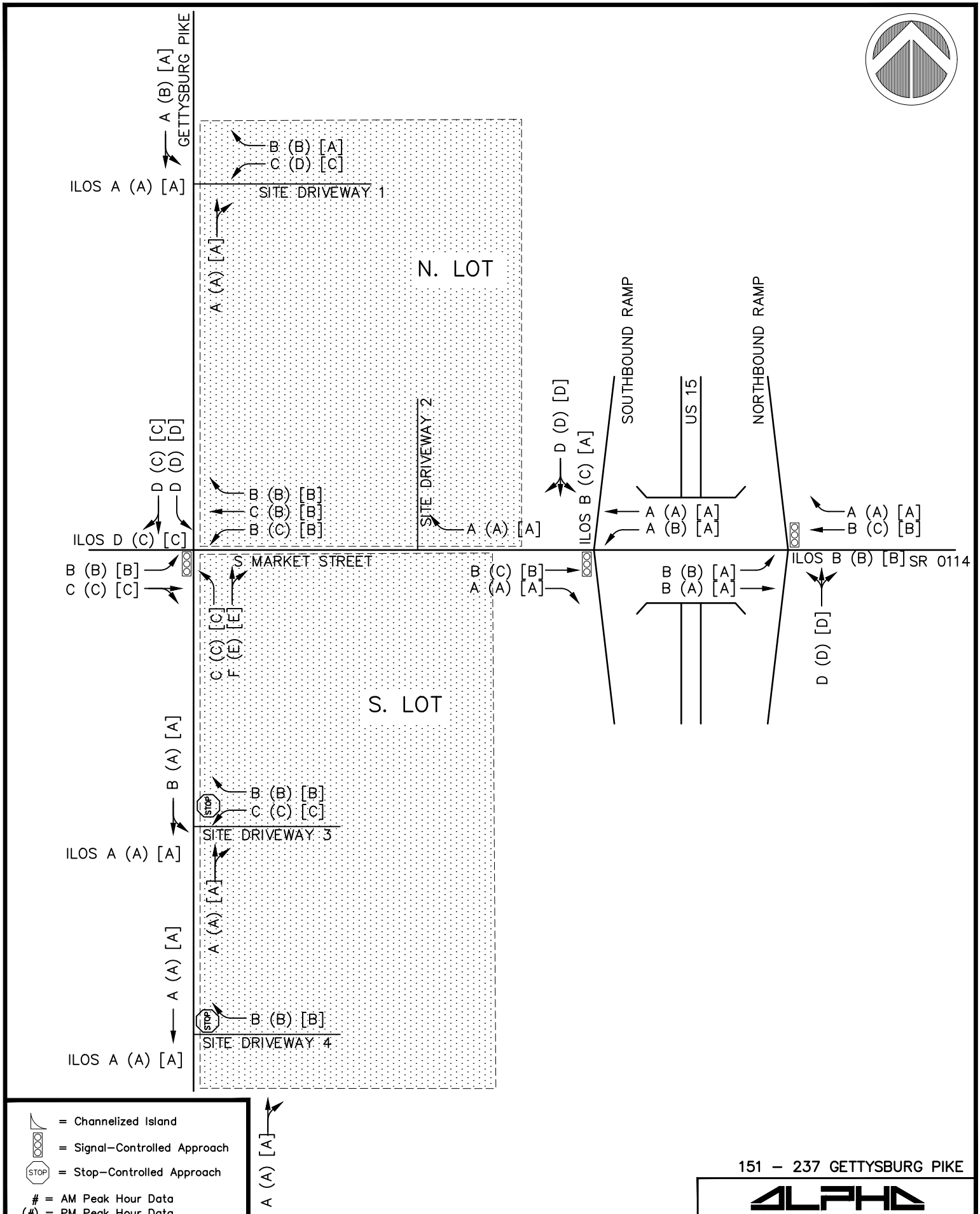
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5F SHEET 1 OF 1

2022 OPENING YEAR – BASE w/ ADJ. DEV.
PEAK HOUR LOS



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= AM Peak Hour Data
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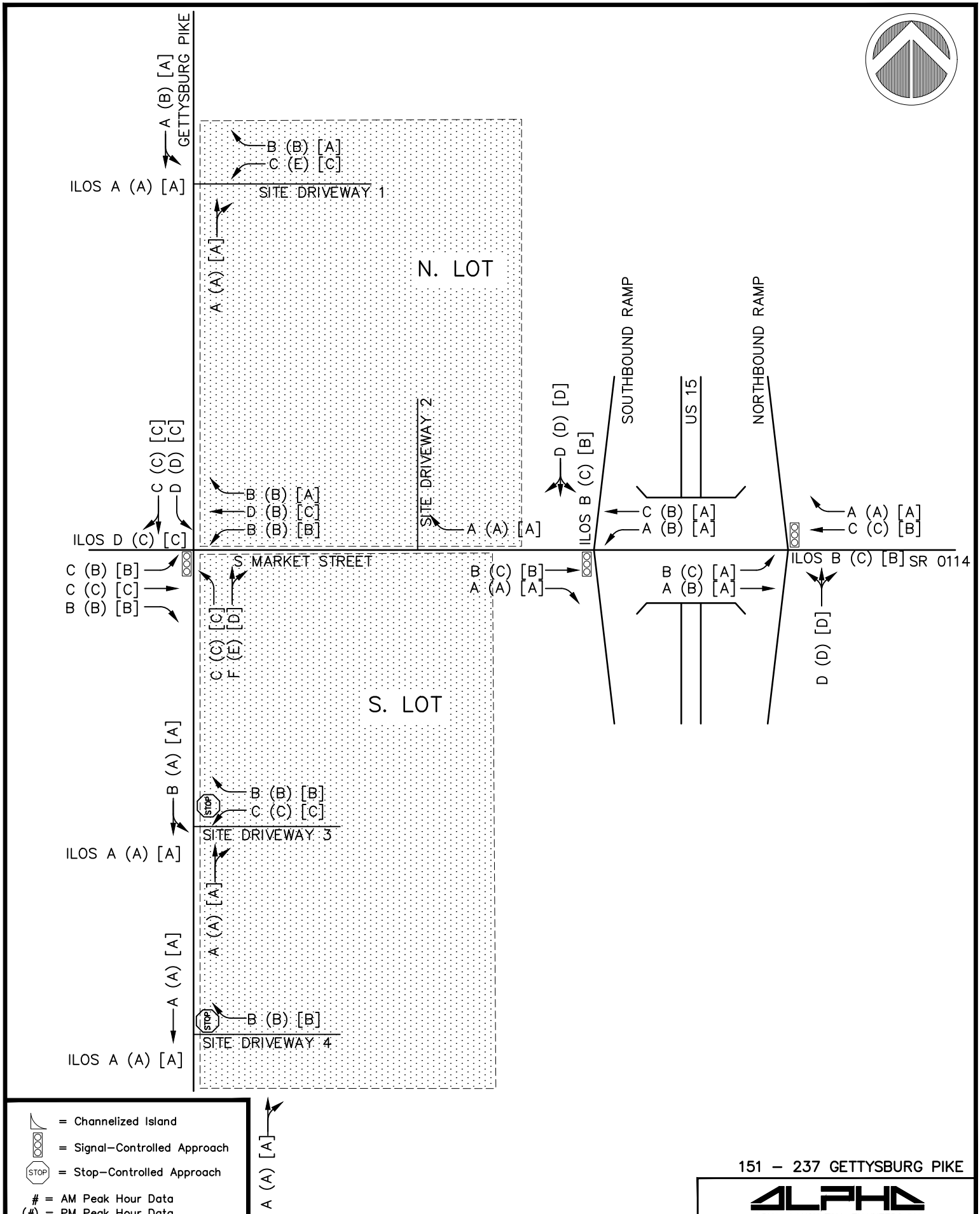
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5G SHEET 1 OF 1

2022 OPENING YEAR – BUILD CONDITIONS
PEAK HOUR LOS



= Channelized Island

= Signal–Controlled Approach

= Stop–Controlled Approach

= AM Peak Hour Data
(#) = PM Peak Hour Data
[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

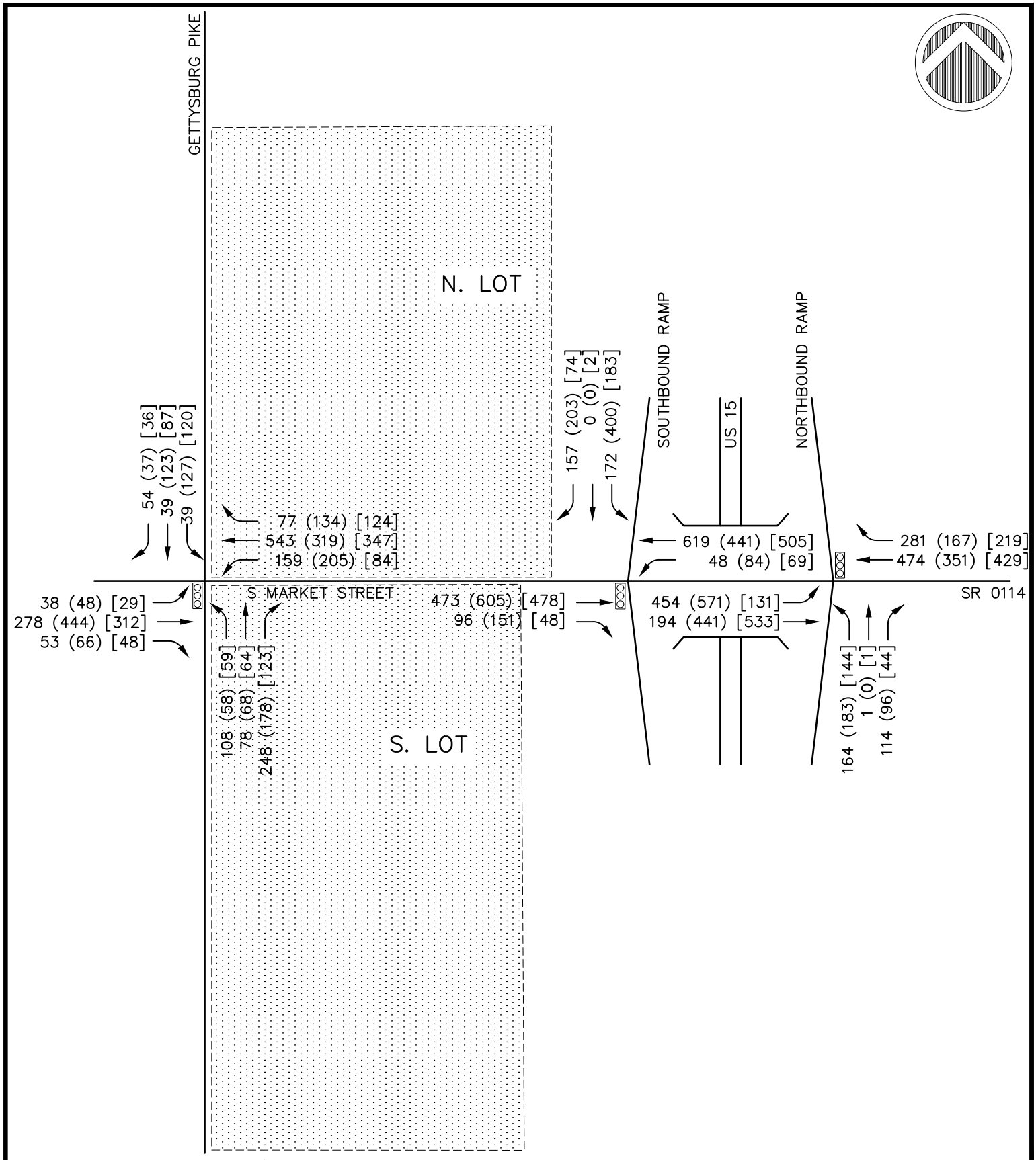
151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 5H SHEET 1 OF 1

2022 OPENING YEAR – BUILD w/ ADJ. DEV.
PEAK HOUR LOS

Figure 6a-6g



= Channelized Island

= Signal–Controlled Approach

STOP = Stop–Controlled Approach

= AM Peak Hour Data
(#) = PM Peak Hour Data
[#] = Saturday Peak Hour Data
SD : Site Driveway
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

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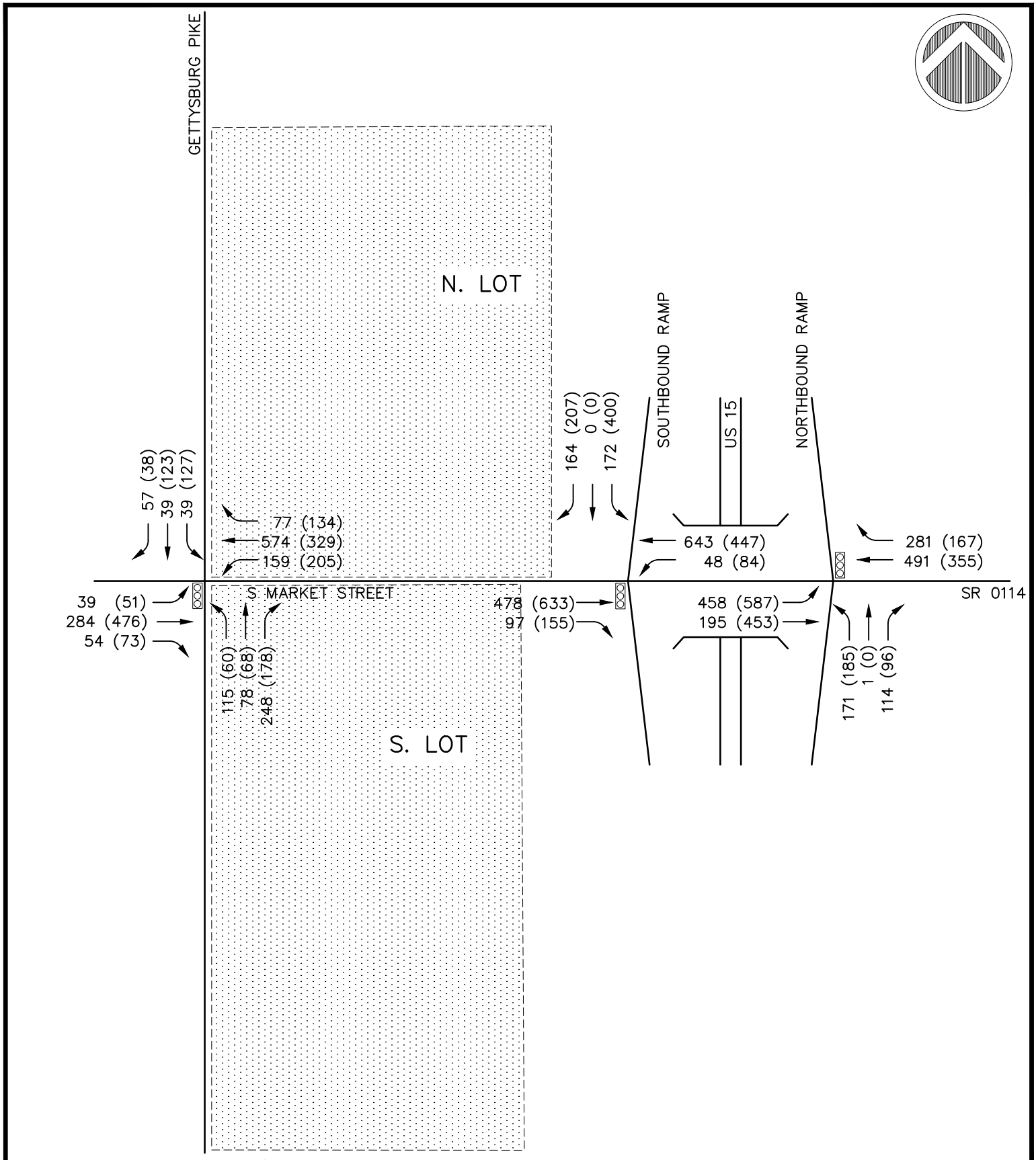
FIGURE 6A SHEET 1 OF 1

2027 HORIZON YEAR – BASE CONDITIONS
PEAK HOUR TRAFFIC VOLUMES



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ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

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FIGURE 6B SHEET 1 OF 1

2027 HORIZON YEAR – BASE w/ ADJ. DEV
PEAK HOUR TRAFFIC VOLUMES

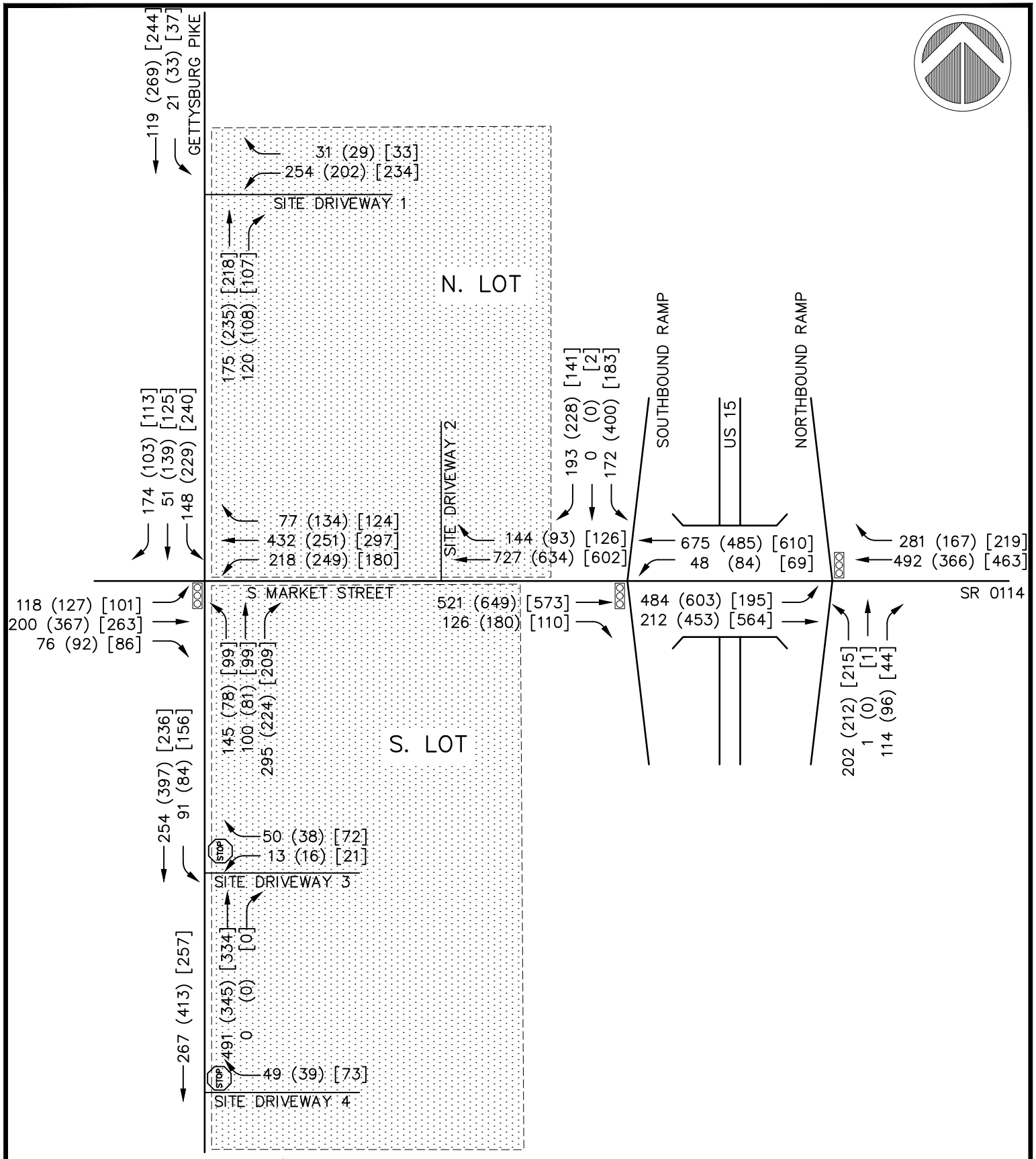

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FIGURE 6C SHEET 1 OF 1

2027 HORIZON YEAR – BUILD CONDITIONS PEAK HOUR TRAFFIC VOLUMES

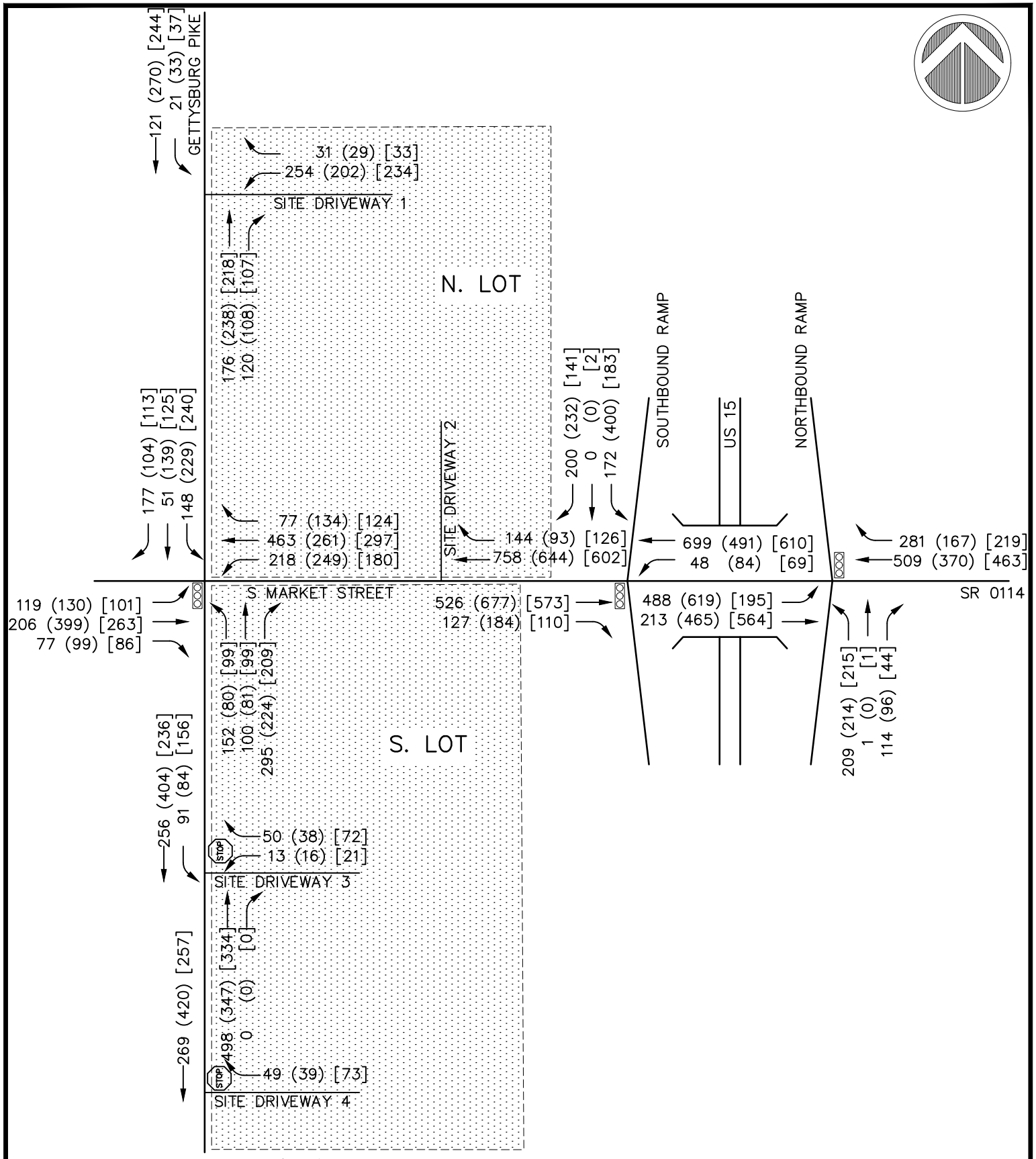

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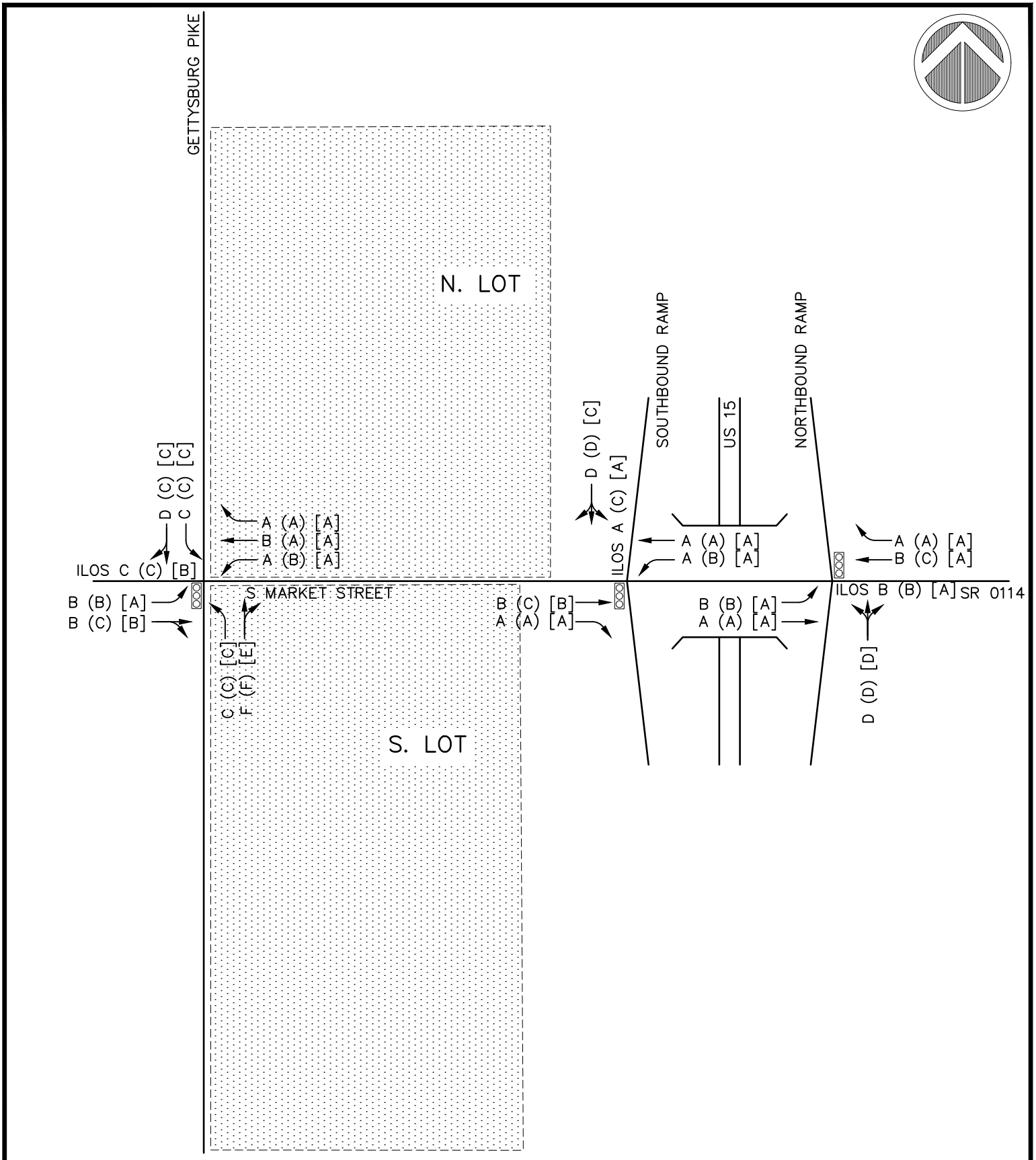
FIGURE 6D SHEET 1 OF 1

2027 HORIZON YEAR – BUILD w/ ADJ. DEV.
PEAK HOUR TRAFFIC VOLUMES



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STOP = Stop–Controlled Approach

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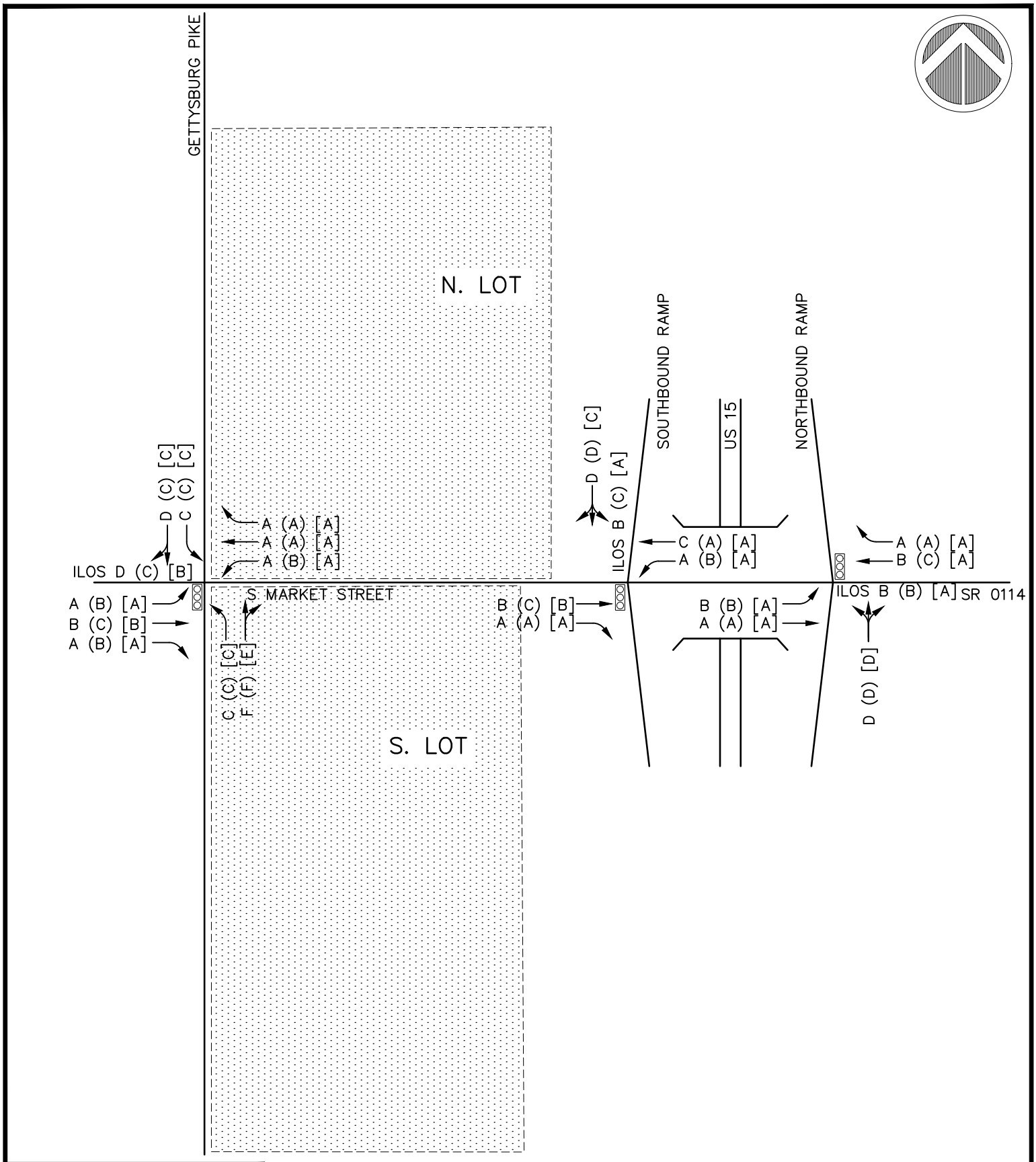
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 6E SHEET 1 OF 1

2027 HORIZON YEAR – BASE CONDITIONS
PEAK HOUR LOS



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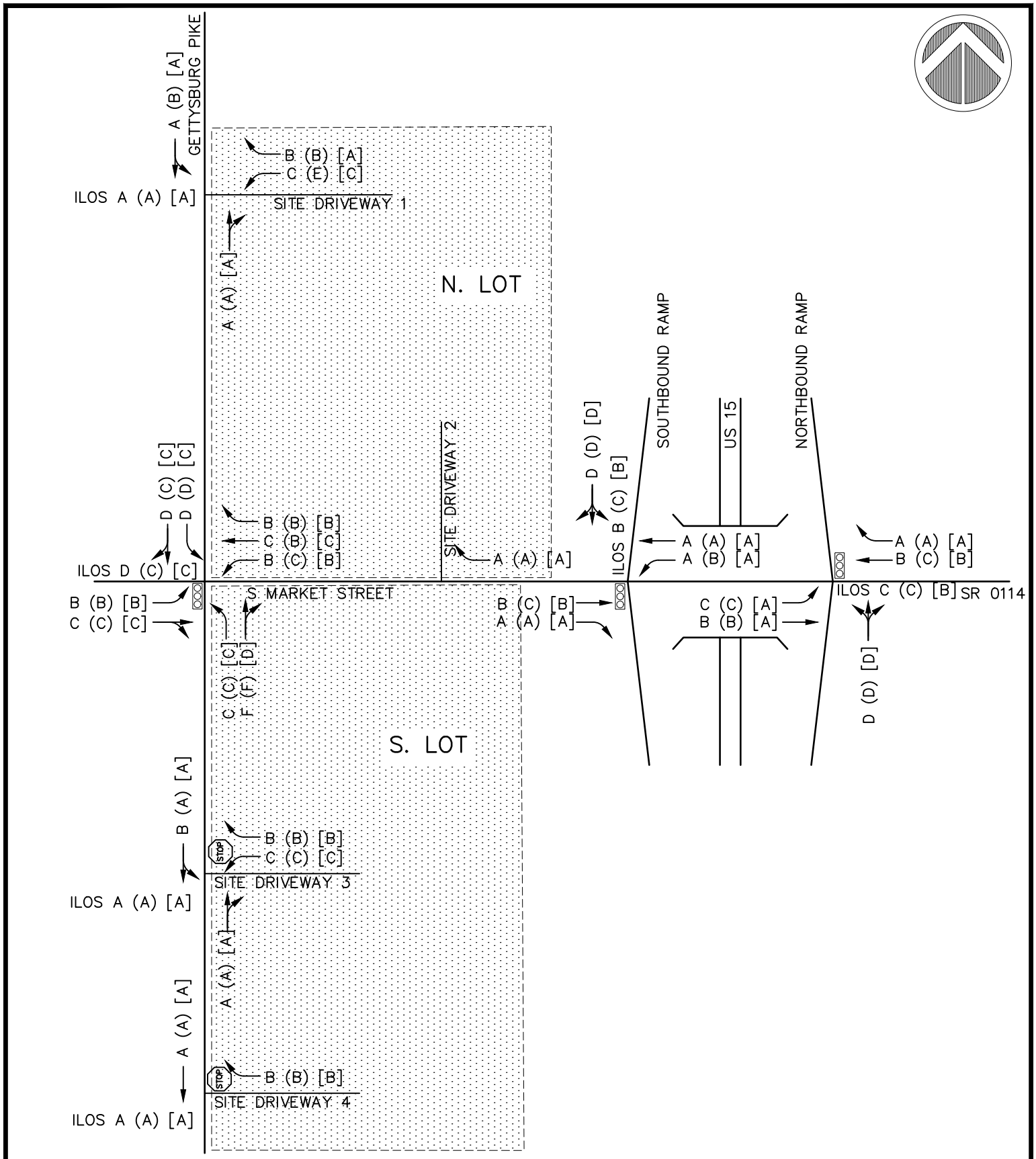
ILOS : Intersection Level of Service
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 6F SHEET 1 OF 1

2027 OPENING YEAR – BASE w/ ADJ. DEV.
PEAK HOUR LOS



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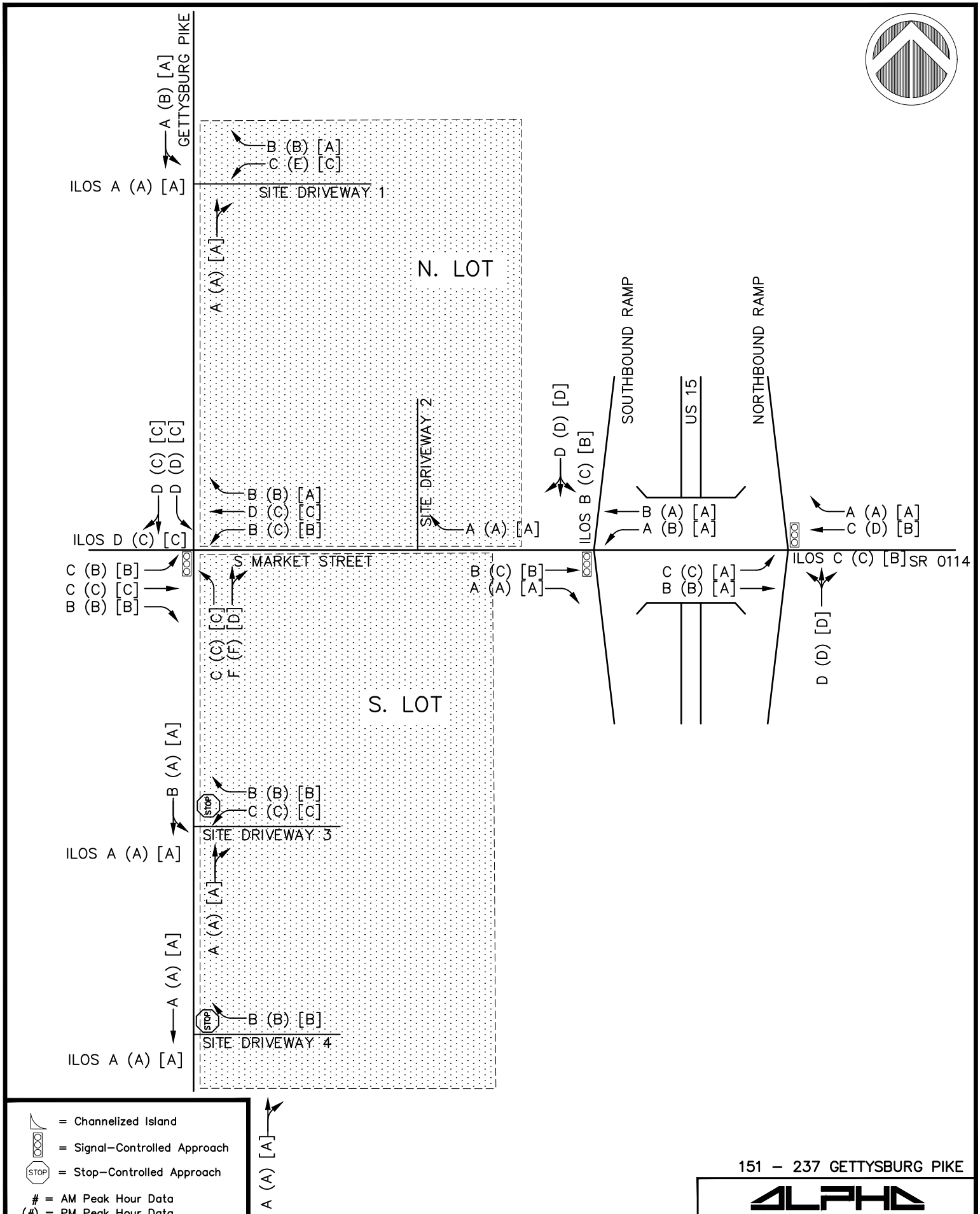
Schematic Drawing : Not To Scale

151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 6G SHEET 1 OF 1

2027 HORIZON YEAR – BUILD CONDITIONS PEAK HOUR LOS



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151 – 237 GETTYSBURG PIKE

ALPHA CONSULTING ENGINEERS, INC.

FIGURE 6H SHEET 1 OF 1

2027 OPENING YEAR – BUILD w/ ADJ. DEV.
PEAK HOUR LOS

Site Photographs

GETTYSBURG PIKE –

SOUTH MARKET STREET

Northbound on Gettysburg Pike – Approaching Intersection

Northbound on Gettysburg Pike – Approaching Intersection

Southbound on Gettysburg Pike – Departing Intersection

Southbound on Gettysburg Pike – Departing Intersection

Southbound on Gettysburg Pike – At Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Approaching Intersection

Westbound on S. Market Street – Approaching Intersection

SOUTH MARKET STREET – NORTH/SOUTHBOUND US 15 RAMPS

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Southbound On-Ramp – Departing Intersection

Southbound On-Ramp – Departing Intersection

Southbound Off-Ramp – Approaching Intersection

Northbound Off-Ramp Looking South – Approaching Intersection

Northbound Off-Ramp Looking South – Approaching Intersection

SOUTH MARKET STREET –

NORTH/SOUTHBOUND US 15 RAMPS

Northbound Off-Ramp – Departing Intersection

Northbound Off-Ramp – Departing Intersection

Northbound Off-Ramp – Departing Intersection

Northbound Off-Ramp – Departing Intersection

Northbound Off-Ramp – Approaching Intersection

Northbound Off-Ramp – Approaching Intersection

Northbound Off-Ramp – Approaching Intersection

Northbound on Off-Ramp – Approaching Intersection

Southbound On-Ramp – At Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Approaching Intersection

Eastbound on S. Market Street – Departing Intersection

Eastbound on S. Market Street – Departing Intersection

Eastbound on S. Market Street – Departing Intersection

Westbound on S. Market Street – Approaching Intersection

Westbound on St. Market Street – Approaching Intersection

Westbound on S. Market Street – Approaching Intersection

Westbound on S. Market Street – At Intersection

Westbound Off-Ramp Looking East – At Intersection

Eastbound from Off-Ramp – Approaching Intersection

Westbound Off-Ramp Looking East – Approaching Intersection

Westbound Off-Ramp Looking East – Approaching Intersection

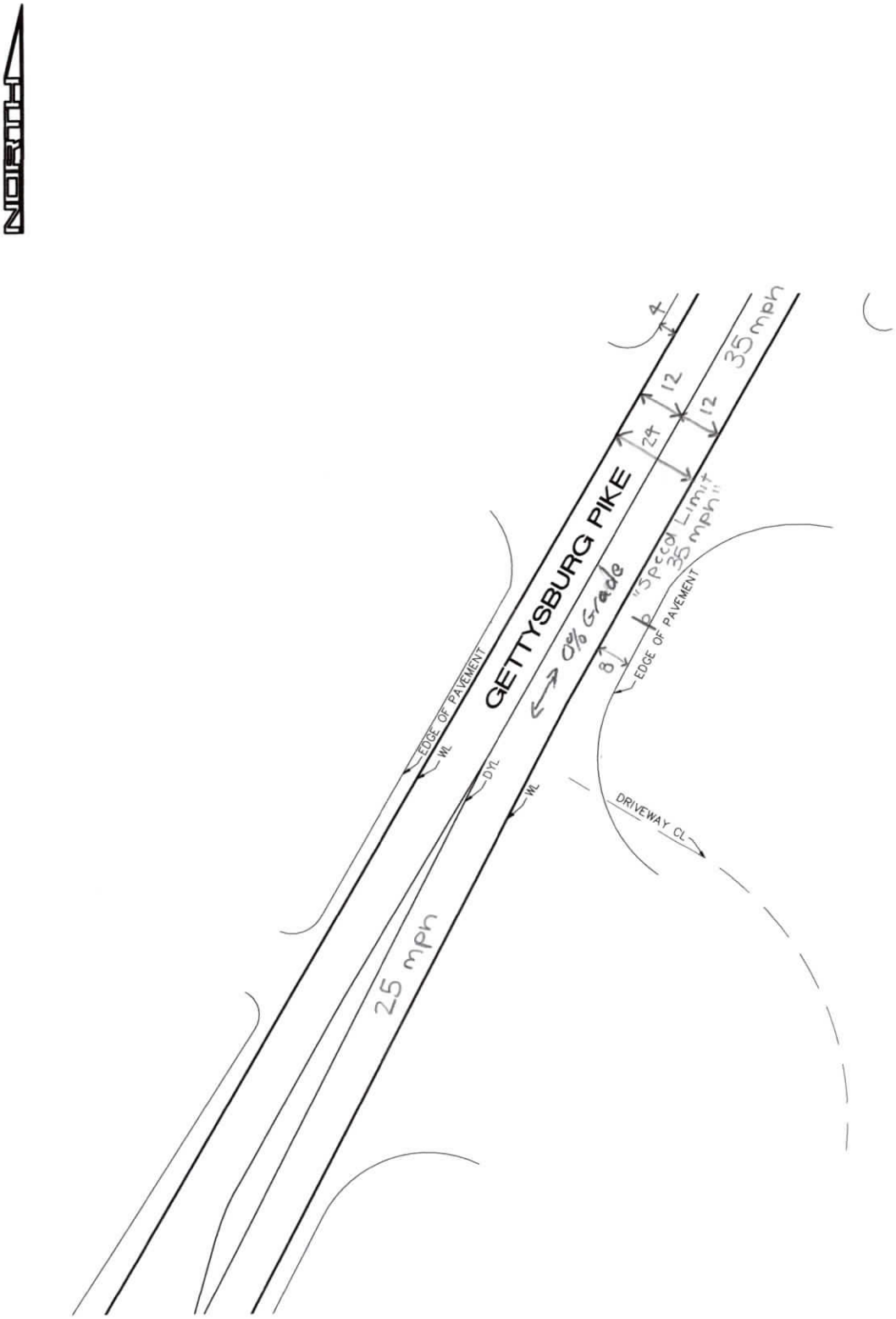
Westbound Off-Ramp Looking East – Approaching Intersection

S YORK STREET – GETTYSBURG PIKE

Northbound on Gettysburg Pike

Southbound on Gettysburg Pike

Existing Conditions



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NEW CUMBERLAND, PA 17070
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FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

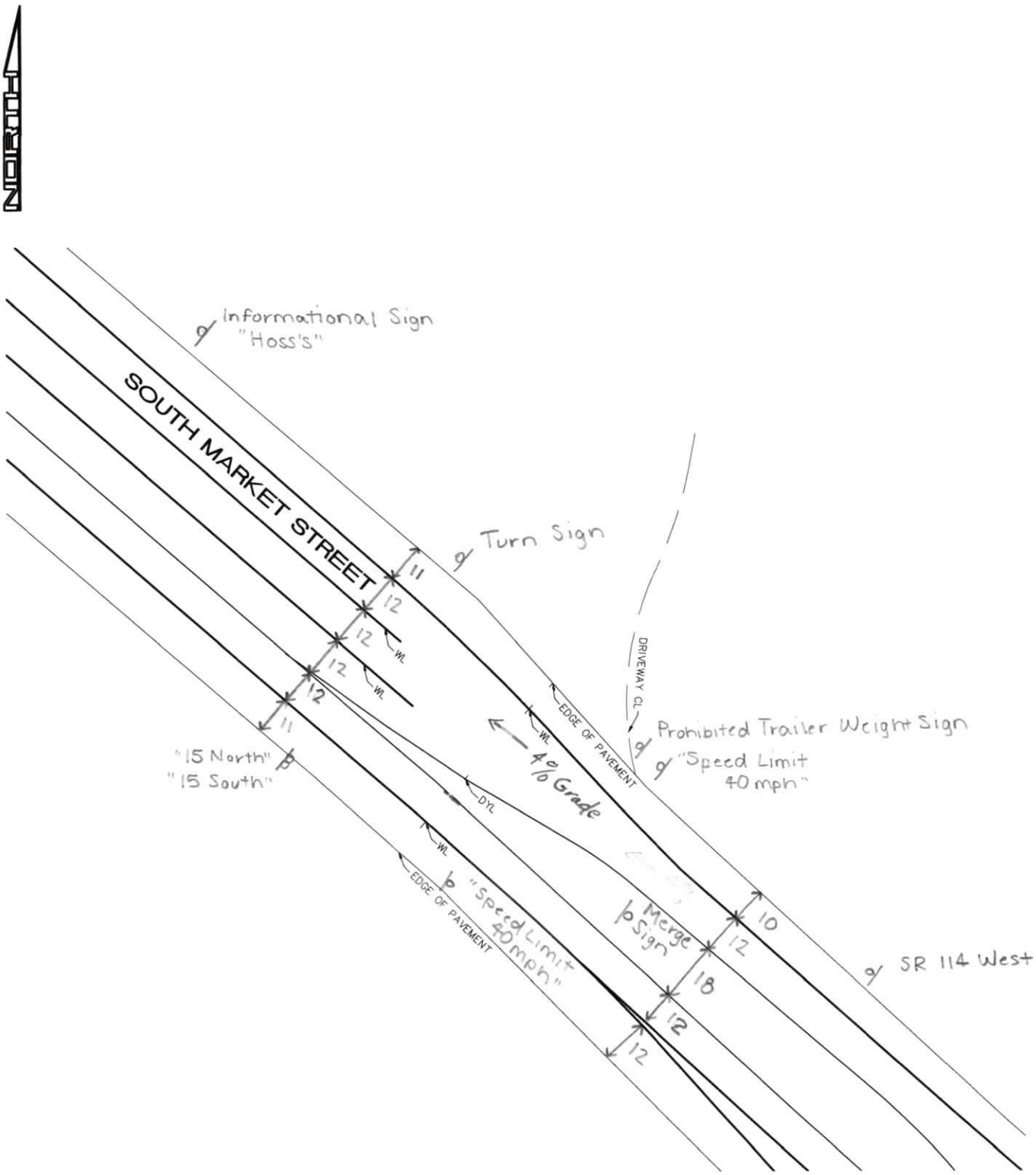
INTERSECTION SKETCH

GETTYSBURG PIKE – SITE DRIVEWAY 1

151-237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
DATE :	08-30-2021
DRAWN :	MEA
SCALE :	1" = 40'
SHEET	1 of 4



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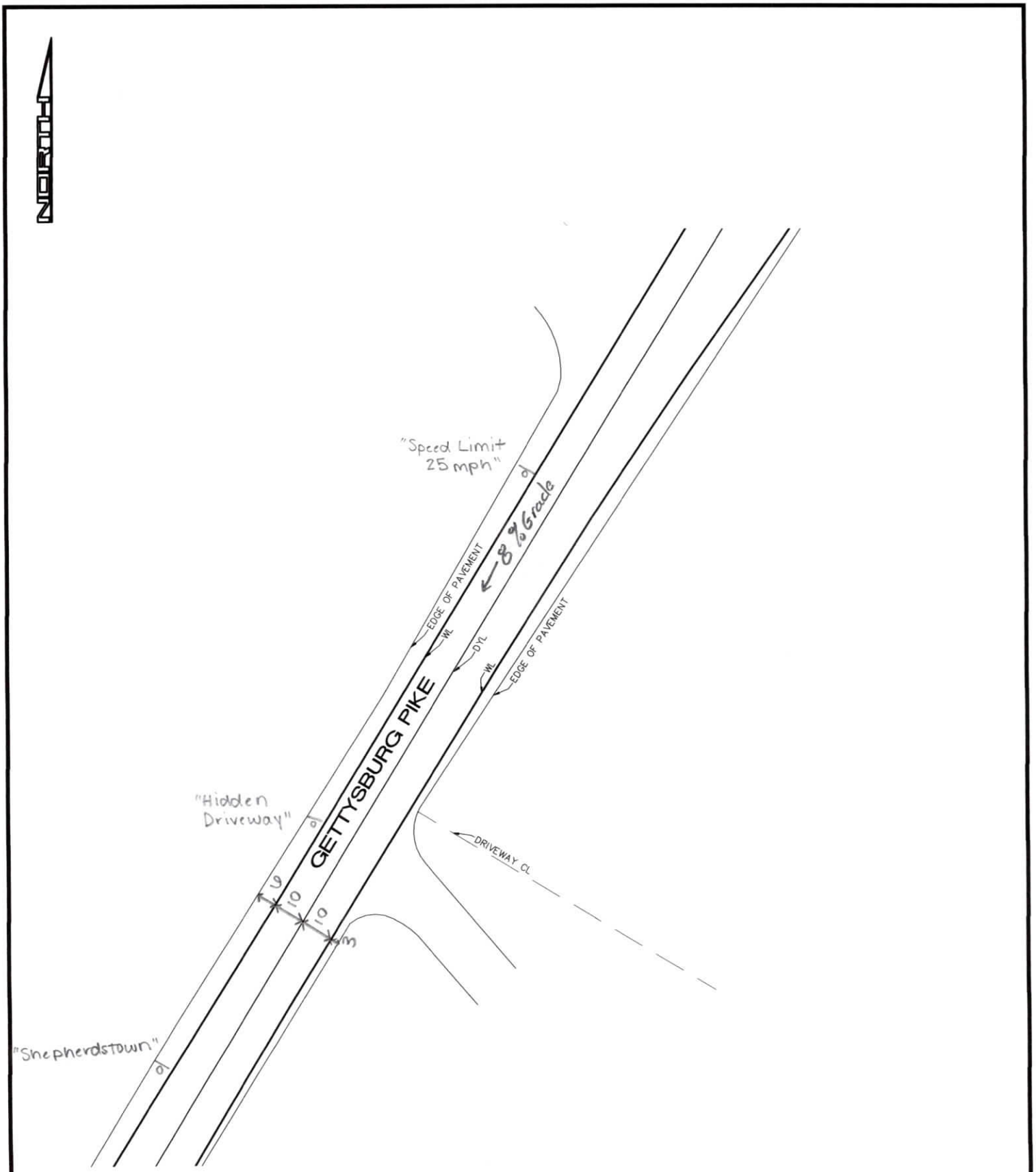
INTERSECTION SKETCH

SOUTH MARKET STREET – SITE DRIVEWAY 2

151-237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
DATE :	08-30-2021
DRAWN :	MEA
SCALE :	1" = 40'
SHEET	2 of 4



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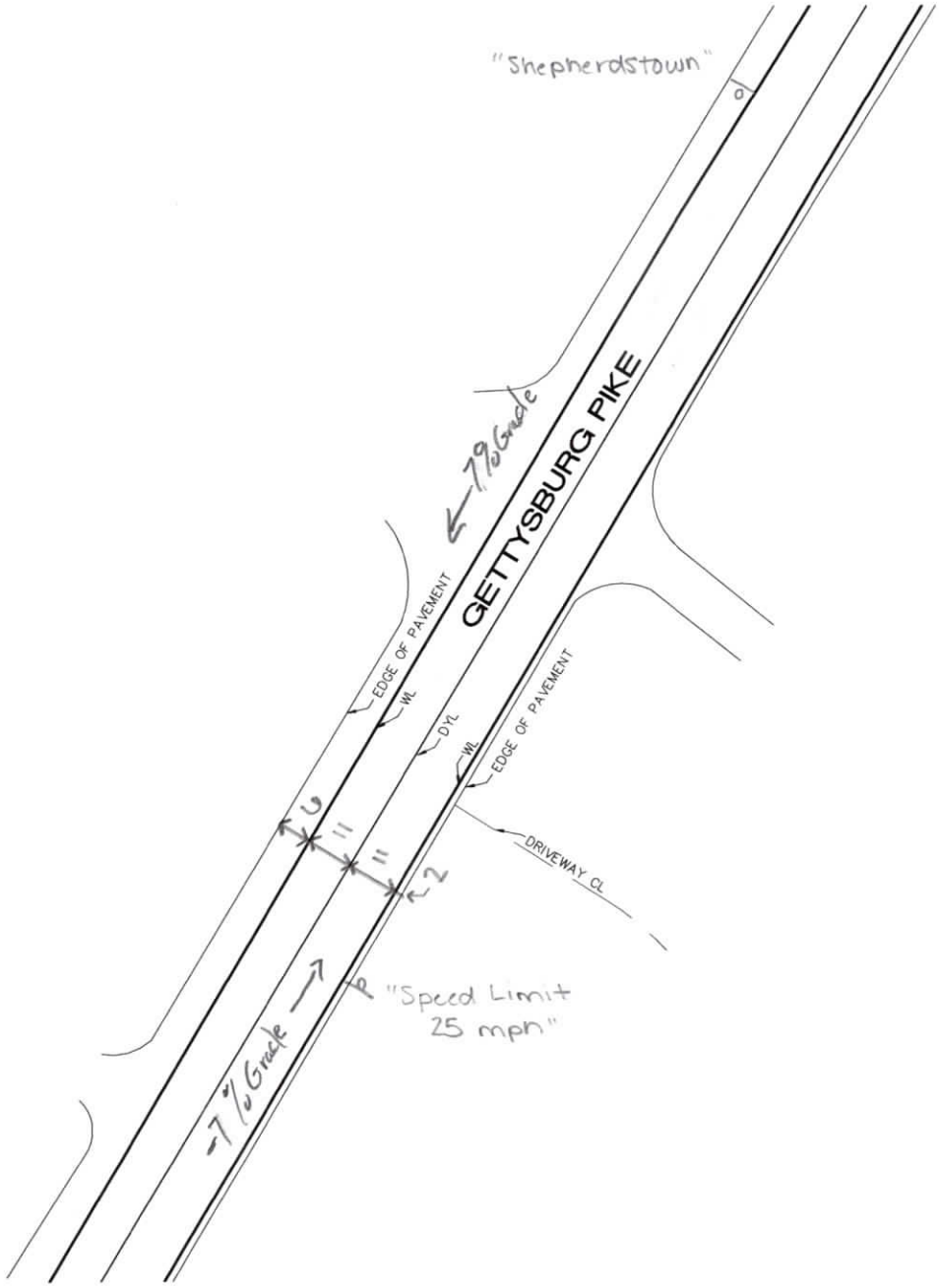
INTERSECTION SKETCH

GETTYSBURG PIKE – SITE DRIVEWAY 3

151-237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
DATE :	08-30-2021
DRAWN :	MEA
SCALE :	1" = 40'
SHEET	3 of 4



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INTERSECTION SKETCH

GETTYSBURG PIKE – SITE DRIVEWAY 4

151-237 GETTYSBURG PIKE

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA

PROJECT NO.	319590
DATE :	08-30-2021
DRAWN :	MEA
SCALE :	1" = 40'
SHEET	4 of 4

Planning and Programming Checklist

Project 151-237 Gettysburg Pike
SR 0114 Segment 0235 Offset 0300 to 0400
Team Members
Date

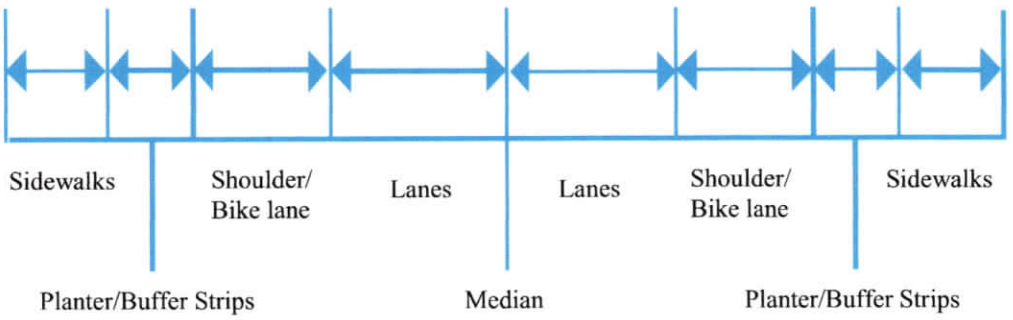
Item	Considerations	Check	Comments
1. Consistency with Bicycle/Pedestrian Planning Documents	Is the transportation facility included in or related to bicycle and pedestrian facilities identified in a master plan? • MPO/RPO bike/ped plan. • Local planning documents. • BicyclePA Routes. • Statewide Bicycle and Pedestrian Master Plan.	No	Check list does not appropriately apply to small private development and related transportation facilities
	Will the transportation facility provide continuity and linkages with existing or proposed bicycle/pedestrian facilities?	No	Not directly. The facility will provide widened shoulders to facilitate usage.
	Is the transportation facility included in or related to a regional/local recreational plan? • Rails-to-Trails. • Greenways. • Local, State, National Parks.	No	There are no resources like those listed near the proposed facility
2. Existing and Future Usage	Do bicycle/pedestrian groups regularly use the transportation facility? • Bike clubs. • Bicycle commuters. • Hiking, walking, or running clubs. • Skateboarding or rollerblading groups. • Bicycle touring groups. • General tourism/sightseeing.	No	
	Does the existing transportation facility provide the only convenient transportation connection/linkage between land uses in the local area or region?	N/A	
	Could the transportation facility have favorable or unfavorable impacts upon the bike tourism/economy of an area/ region? Consider: • Local businesses • Chamber of Commerce • Tourism Promotion Agencies.	No	The proposed facility will not generate enough traffic to have positive or negative impacts on the local economy.
	Are there physical or perceived impediments to bicycle or pedestrian use of the transportation facility?	No	Traffic signals could provide limits
	Is there a higher than normal incidence of bicycle/pedestrian crashes in the area?	No	
3. Safety	Is the transportation facility in a high-density land use area that has pedestrian/ bike/motor vehicle traffic?	NO	

Item	Considerations	Check	Comments
3. Safety (continued)	Is there a high amount of crossing activity at intersections? • Midblock • Night crossing activity • Adequate lighting.	No	The signal intersections provide lighting
	Would the transportation facility (and all users) benefit from widened or improved shoulders or improved markings (shoulders, crosswalks)?	Yes	The facility will provide widened shoulders.
4. Community and Land Use	Is the transportation facility in a city, town, or village?	Yes	Upper Allen Township
	Is the transportation facility within/near a community or neighborhood?	Yes	
	Is the transportation facility the "main street" in a community or town?	No	
	Could bicycle or pedestrian usage impact economic development?	No	
	Are sidewalks needed in the area? • Presence of worn paths along the facility. • Adjacent land uses generate pedestrian traffic. • Possible linkages/continuity with other pedestrian facilities.	No	
	Is the transportation facility a link between complimentary land uses? • Residential and commercial. • Residential and business.	No	
	Is the transportation facility in close proximity to hospitals, elderly care facilities, or the residences or businesses of persons with disabilities?	No	
	Is the transportation facility within or near educational buildings?	No	
	Is the transportation facility in close proximity to transit stops or multi-modal centers (including airports, rail stations, intercity bus terminals, and water ports)?	No	
5. Transit	Is the transportation facility on a transit route?	No	Nearest Transit route is Winding Hill Express
	Is the transportation facility near park-and-ride lots?	No	Nearest Park-n-Ride is approx. 1 mile from site
	Are there existing or proposed bicycle racks, shelters or parking available? Are there bike racks on buses?	No	CAT busses provide bike racks as well as some Park-n-Rides
6. Traffic Calming	Is the community considering traffic calming as a possible solution to speeding and cut-through traffic?	No	

Scoping Checklist

Project 151-237 Gettysburg Pike
SR 0114 Segment 0235 Offset 0030 to 0400
Team Members
Date

Right-of-Way Needs Diagram



Element	Number Required	Width Required	Total Width
Sidewalks	N/A	N/A	N/A
Buffer Strips	N/A	N/A	N/A
Shoulders	N/A	N/A	N/A
Lanes	N/A	N/A	N/A
Median	N/A	N/A	N/A
Total Right-of-Way Required			

Pedestrian Facilities

Item	Considerations	Check	Comments
1. Sidewalks	Appropriate width: • 1.5 m - 2.1 m (5' - 7') for residential, commercial, and industrial. • 2.5 m (8') minimum for high use areas/CBD. • 2.1 m (7') width for bridges. • 0.6 m (2') shy distance for vertical barriers. • 1.2 m - 2.1 m (5' - 7') barrier separating traffic from pedestrians on bridges.	Yes	Internal to development

Item	Considerations	Check	Comments
Sidewalks (cont'd)	Applicability of planter or buffer strips.	NO	
	Connectivity with other pedestrian facilities.	NO	
	Proximity to transit bike/ped generators: • Transit stops. • Schools. • Park & rides. • Nursing homes. • Offices. • Business environments. • Athletic fields. • Recreation facilities.	Info →	1 mile to nearest park + ride
	Observe pedestrian patterns for special needs such as: • Midblock crossings. • Islands and refuges. • Night crossing activity.	No	
	ADA needs and concerns.	Info →	To be addressed in Design Phase
2. Signalized Intersections	Crosswalks provided and marked.	Yes	
	Intersection bike/ped crash history reviewed.	Yes	
	Is there a dedicated pedestrian phase, if so how long?	No	
	Crossing distance is minimized.	Yes	
	Ped heads and ped pushbuttons provided.	Yes	
	ADA needs and concerns.	Retirement homes: NO Schools: NO Medical facilities: NO	
3. Traffic Calming	Is the community considering traffic calming as a means to curb speeding and cut-through traffic?	NO	

Bicycle Facilities

Item	Considerations	Check	Comments
1. Bikelanes/Paved Shoulders	Appropriate width of bike lane: • 1.5 m (5') adjacent to curb • 1.8 m (6') standard.	Info →	10' on South Market St. Shoulder being widened on Gettysburg Pike
	Connectivity with other facilities. • Bike lanes • Shared use trails • Trail heads/parking areas.	NO	
	Maximize width of shoulders and provide appropriate markings as per *AASHTO Green Book*.	Yes	Shoulders are being widened
	3 m (10') vertical clearance from fixed obstructions (excluding road signs).	NO	
	Angle and smoothness of railroad crossings. Avoid angles of incidence of < 70° or re-design.	NO	
	Bridge accesses provided/pinch points avoided.		
	Parking parallel or angled.		
2. Signalized intersections	Inventory existing bicycle facilities.	NO	
	Intersection bike/ped crash history reviewed.	Yes	
	Crossing distance is minimized.	NO	
	Considerations for bikes making turns.	NO	
	Bike detection.	NO	
	Elevated push buttons.		
3. Traffic Calming	Is the community considering traffic calming as a means to curb speeding and cut-through traffic?	NO	