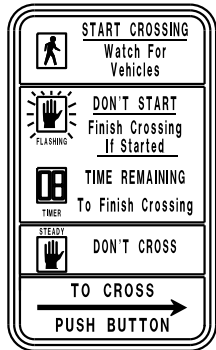


Install on SB4, SB8 & SB17



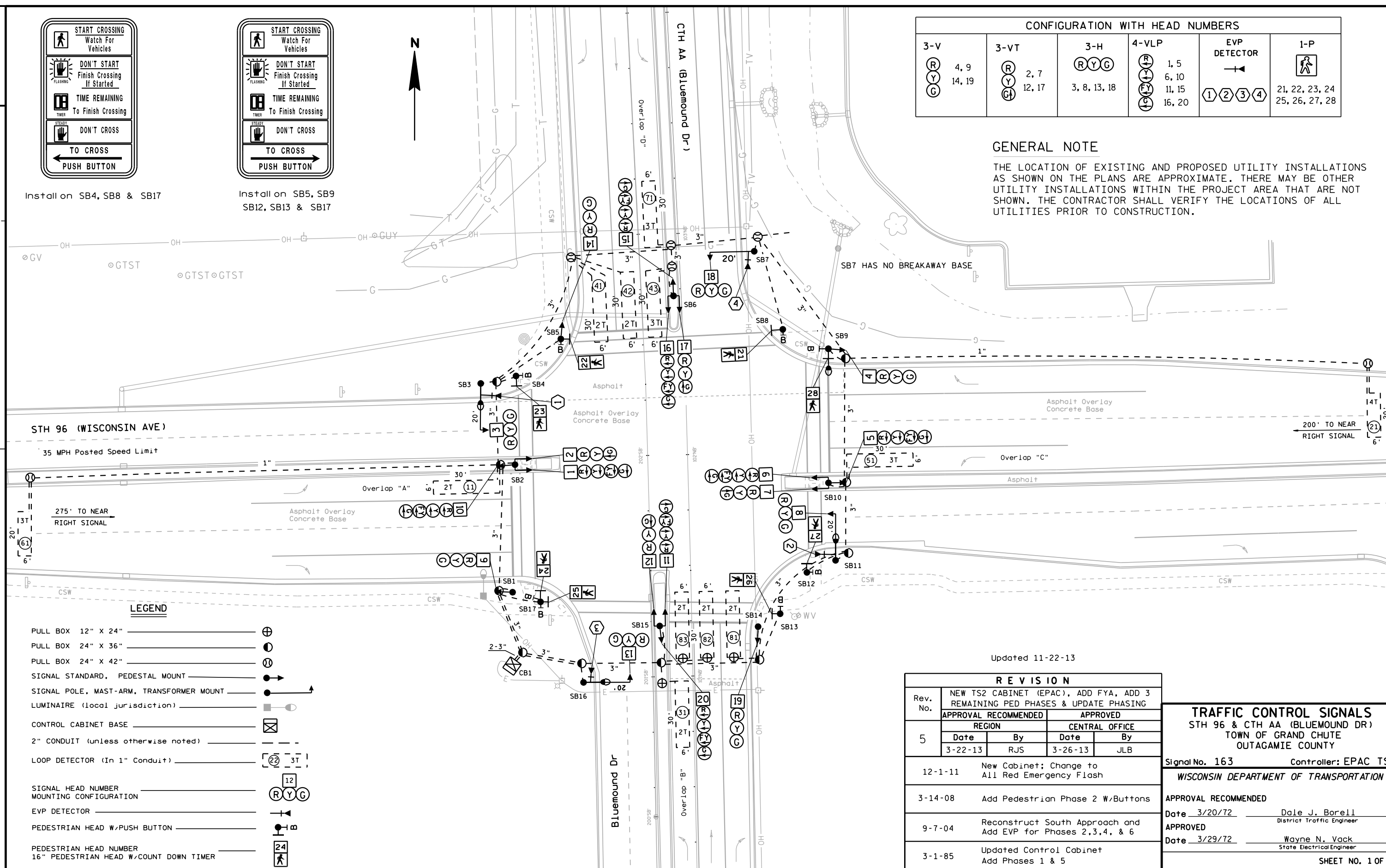
Install on SB5, SB9
SB12, SB13 & SB17



CONFIGURATION WITH HEAD NUMBERS					
3-V	3-VT	3-H	4-VLP	EVP DETECTOR	1-P
4, 9 14, 19	2, 7 12, 17	3, 8, 13, 18	1, 5 6, 10 11, 15 16, 20	①②③④	21, 22, 23, 24 25, 26, 27, 28

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.



LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL MOUNT
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT
- LUMINAIRE (local jurisdiction)
- CONTROL CABINET BASE
- 2" CONDUIT (unless otherwise noted)
- LOOP DETECTOR (In 1" Conduit)
- SIGNAL HEAD NUMBER
- MOUNTING CONFIGURATION
- EVP DETECTOR
- PEDESTRIAN HEAD W/PUSH BUTTON
- PEDESTRIAN HEAD NUMBER
- 16" PEDESTRIAN HEAD W/COUNT DOWN TIMER

Updated 11-22-13

R E V I S I O N			
Rev. No.	NEW TS2 CABINET (EPAC), ADD FYA, ADD 3 REMAINING PED PHASES & UPDATE PHASING		
5	APPROVAL RECOMMENDED		APPROVED
	REGION		CENTRAL OFFICE
	Date	By	Date By
	3-22-13	RJS	3-26-13 JLB
12-1-11	New Cabinet; Change to All Red Emergency Flash		
3-14-08	Add Pedestrian Phase 2 W/Buttons		
9-7-04	Reconstruct South Approach and Add EVP for Phases 2,3,4, & 6		
3-1-85	Updated Control Cabinet Add Phases 1 & 5		

TRAFFIC CONTROL SIGNALS
STH 96 & CTH AA (BLUEMOUND DR)
TOWN OF GRAND CHUTE
OUTAGAMIE COUNTY

Signal No. 163 Controller: EPAC TS2

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 3/20/12 Dale J. Borell
District Traffic Engineer

APPROVED
Date 3/29/12 Wayne N. Vack
State Electrical Engineer

SHEET NO. 1 OF 2

RING 1

		01								02							
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO			
		R/W	*	*						R/W	*	*					
	HEAD NUMBERS																
01	6, 10	G	-	-						-	-	-					
02	2, 3, 4	R	R	R						G	Y	R					
03	16, 20	-	-	-						-	-	-					
04	12, 13, 14	R	R	R						R	R	R					
05	1, 5	-	-	-						-	-	-					
06	7, 8, 9	R	R	R						R	R	R					
07	11, 15	-	-	-						-	-	-					
08	17, 18, 19	R	R	R						R	R	R					
OL "A"	6, 10	-	Y	R						FY	Y	R					
OL "B"	16, 20	R	R	R						R	R	R					
OL "C"	1, 5	R	R	R						R	R	R					
OL "D"	11, 15	R	R	R						R	R	R					
02P	21, 22	D	D	D						*	D	D					
04P	23, 24	D	D	D						D	D	D					
06P	25, 26	D	D	D						D	D	D					
08P	27, 28	D	D	D						D	D	D					

RING 2

		05								06							
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO			
		R/W	*	*						R/W	*	*					
	HEAD NUMBERS																
01	6, 10	-	-	-						-	-	-					
02	2, 3, 4	R	R	R						R	R	R					
03	16, 20	-	-	-						-	-	-					
04	12, 13, 14	R	R	R						R	R	R					
05	1, 5	G	-	-						-	-	-					
06	7, 8, 9	R	R	R						G	Y	R					
07	11, 15	-	-	-						-	-	-					
08	17, 18, 19	R	R	R						R	R	R					
OL "A"	6, 10	R	R	R						R	R	R					
OL "B"	16, 20	R	R	R						R	R	R					
OL "C"	1, 5	-	Y	R						FY	Y	R					
OL "D"	11, 15	R	R	R						R	R	R					
02P	21, 22	D	D	D						D	D	D					
04P	23, 24	D	D	D						D	D	D					
06P	25, 26	D	D	D						*	D	D					
08P	27, 28	D	D	D						D	D	D					

BARRIER

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 or 6	2, 3, 4, 7, 8
2	5 or 6	1, 3, 4, 7, 8
3	7 or 8	1, 2, 4, 5, 6
4	7 or 8	1, 2, 3, 5, 6
5	1 or 2	3, 4, 6, 7, 8
6	1 or 2	3, 4, 5, 7, 8
7	3 or 4	1, 2, 5, 6, 8
8	3 or 4	1, 2, 5, 6, 7

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

D = DON'T WALK

PROJECT NO: 0083-03-01

HWY: STH 96

COUNTY: OUTAGAMIE

SEQUENCE OF OPERATIONS S-163

SHEET

E

FILE NAME : F:\d3_traffic\1\S-163.dgn

PLOT DATE : 09-DEC-2013 07:29

PLOT BY : dotc5s

PLOT NAME : S-163,seq,up

PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR RACK NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE (in feet)	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	3	X			1	1				6x30	2
21	1	X			2	2				6x20	4
31	7	X			3	3				6x30	2
41	5	X			4	4		X		6x30	2
42	6	X			4	4				6x30	2
43	11	X			4	4				6x30	3
51	19	X			5	5				6x30	3
61	17	X			6	6				6x20	3
71	23	X			7	7				6x30	3
81	21	X			8	8		X		6x30	2
82	22	X			8	8				6x30	2
83	27	X			8	8				6x30	2

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				YES
2			MIN	YES
3				YES
4		8		YES
5				YES
6			MIN	YES
7				YES
8		4		YES

OVERLAP SPECIAL

	Protected	Permissive
OL "A"	1	2
OL "B"	3	4
OL "C"	5	6
OL "D"	7	8

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-0309
SIGNAL SYSTEM #:	SS-0078

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	X
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

NOTES:

- ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
- IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.
- PROVIDE FOR HAND CONTROL
- EMERGENCY VEHICLE PREEMPTION

-UPON PREEMPTION, THE SIGNAL SHALL CLEAR TO PHASES 2+5 or 1+6 or 4+7 or 3+8.

-ANY GREEN INTERVAL IN EFFECT SHALL TIME A MINIMUM 5 SECOND DURATION

BEFORE ENTERING THE PREEMPT SEQUENCE. ELAPSED GREEN TIME PRIOR TO THE PREEMPT CALL SHALL BE CONSIDERED THE MINIMUM TIME.

-ANY CLEARANCE INTERVAL IN EFFECT SHALL TIME ITS FULL NORMAL DURATION BEFORE ENTERING THE PREEMPT SEQUENCE.

-THE SIGNAL SHALL DWELL IN PHASES 2+5 or 1+6 or 4+7 or 3+8 DURING PREEMPTION.

-UPON TERMINATION OF PREEMPTION, VEHICLE CALLS SHALL BE PLACED IN ALL PHASES ACTIVE DURING NORMAL PHASE CYCLING.

-FLASHING YELLOW ARROW SHALL BE DISABLED.

EMERGENCY VEHICLE PREEMPTION

EMERGENCY VEHICLE DETECTOR	①	②	③	④
MOVEMENT	←	↗	↓	↖
PHASE	2+5	1+6	4+7	3+8
TOMAR CHANNEL	1	2	3	4

Updated 11-22-13

STH 96 & CTH AA (Bluemound Dr.)
TOWN OF GRAND CHUTE
OUTAGAMIE COUNTY

SIGNAL NO. 163

CONTROLLER TYPE: EPAC TS2

DATE: 3-26-2013

PAGE NO. 2 OF 2