



Traffic Signal Design Manual

ORIGINATOR Director, Bureau of Highway Operations		5-5-1
CHAPTER 5	Signal Plan Format	
SECTION 5	Sample Plan Set	
SUBJECT 1	Sample Project	

The following plan sets illustrate the possible stages a typical signalized intersection *may* go through when creating/revising traffic signal control plans of an example intersection. FDM Procedure 15-1-5 covers sample plans for all types of improvement projects.

Example Plan Sets

- Original plan with existing geometrics
- First revision plan with modified phasing
- Removal plan
- Temporary plan
- Second revision plan (reconstructed intersection) with miscellaneous quantities
- Signalized intersection plan with railroad preemption
- Single controller plan at an interchange (dual ring with overlaps)
- TTI Phasing plan at an interchange

These sample traffic signal plans are strictly for reference. These plans attempt to demonstrate various signal operations and applications of special features (EVP, railroad, interchanges, overlaps). The Regional Traffic Engineering staff *should* be involved during the development of traffic signal plans or special applications.

SAMPLE #1
ORIGINAL PLAN WITH EXISTING GEOMETRICS

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

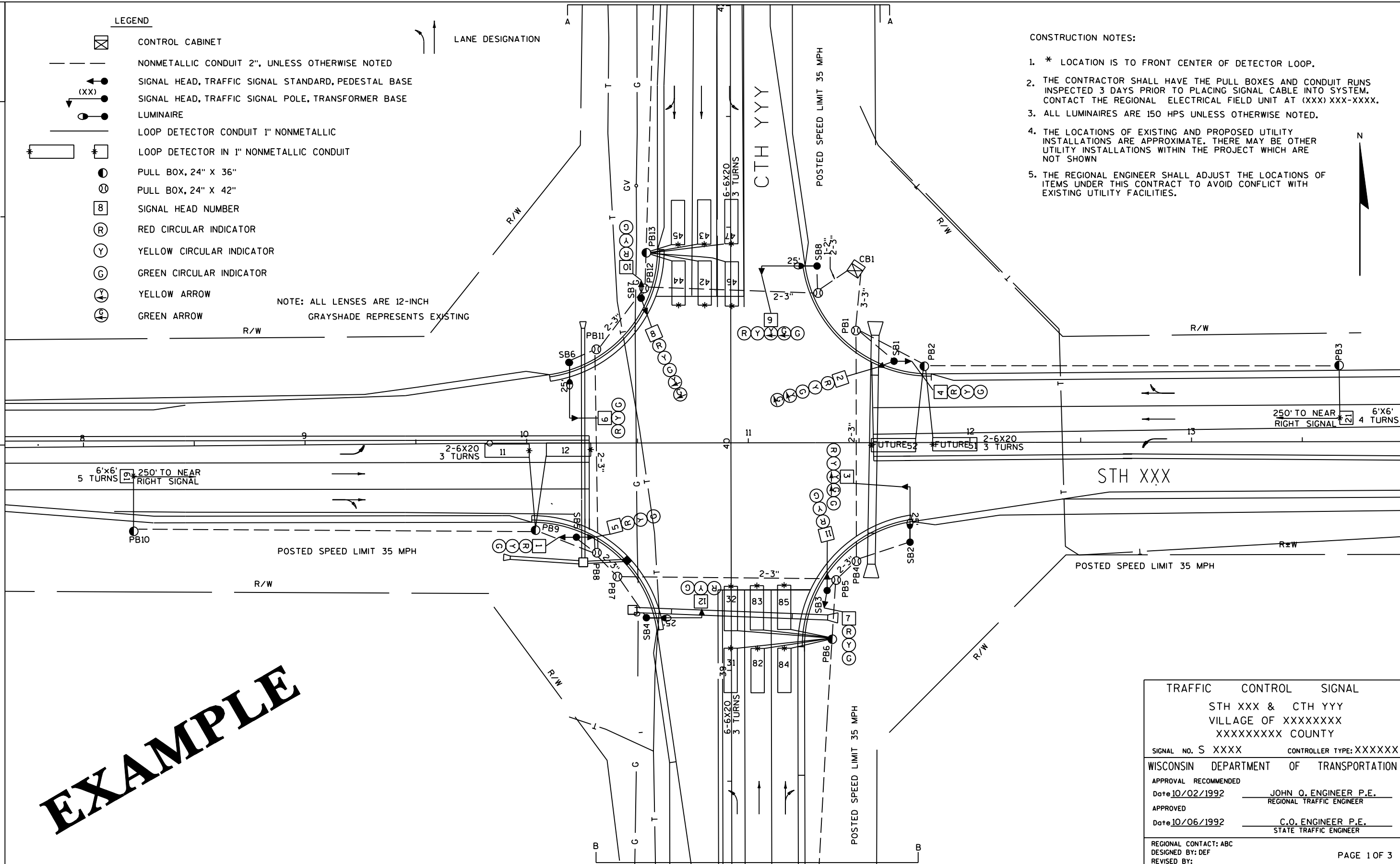
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

LANE DESIGNATION

CONSTRUCTION NOTES:

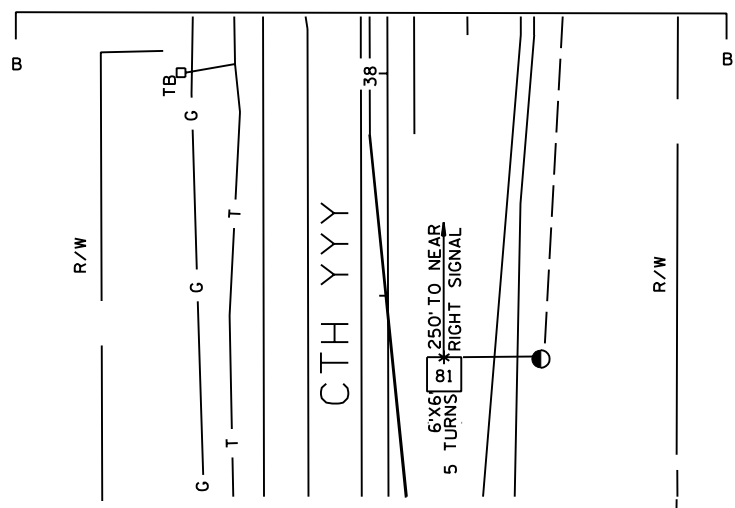
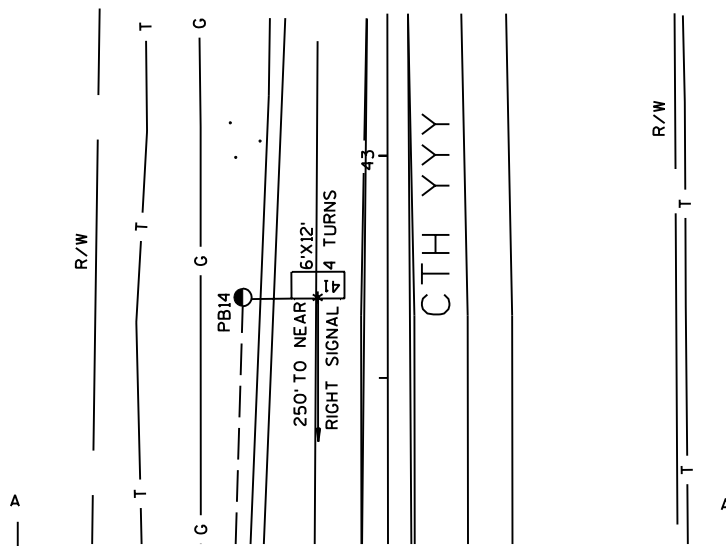
1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (XXX) XXX-XXXX.
3. ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN
5. THE REGIONAL ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

N



EXAMPLE

TRAFFIC CONTROL SIGNAL	
STH XXX & CTH YYY	
VILLAGE OF XXXXXXXXX	
XXXXXXXXXX COUNTY	
SIGNAL NO. S XXXX	CONTROLLER TYPE: XXXXXX
WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVAL RECOMMENDED	
Date 10/02/1992	JOHN O. ENGINEER P.E. REGIONAL TRAFFIC ENGINEER
APPROVED	
Date 10/06/1992	C.O. ENGINEER P.E. STATE TRAFFIC ENGINEER
REGIONAL CONTACT: ABC	PAGE 1 OF 3
DESIGNED BY: DEF	
REVISED BY:	



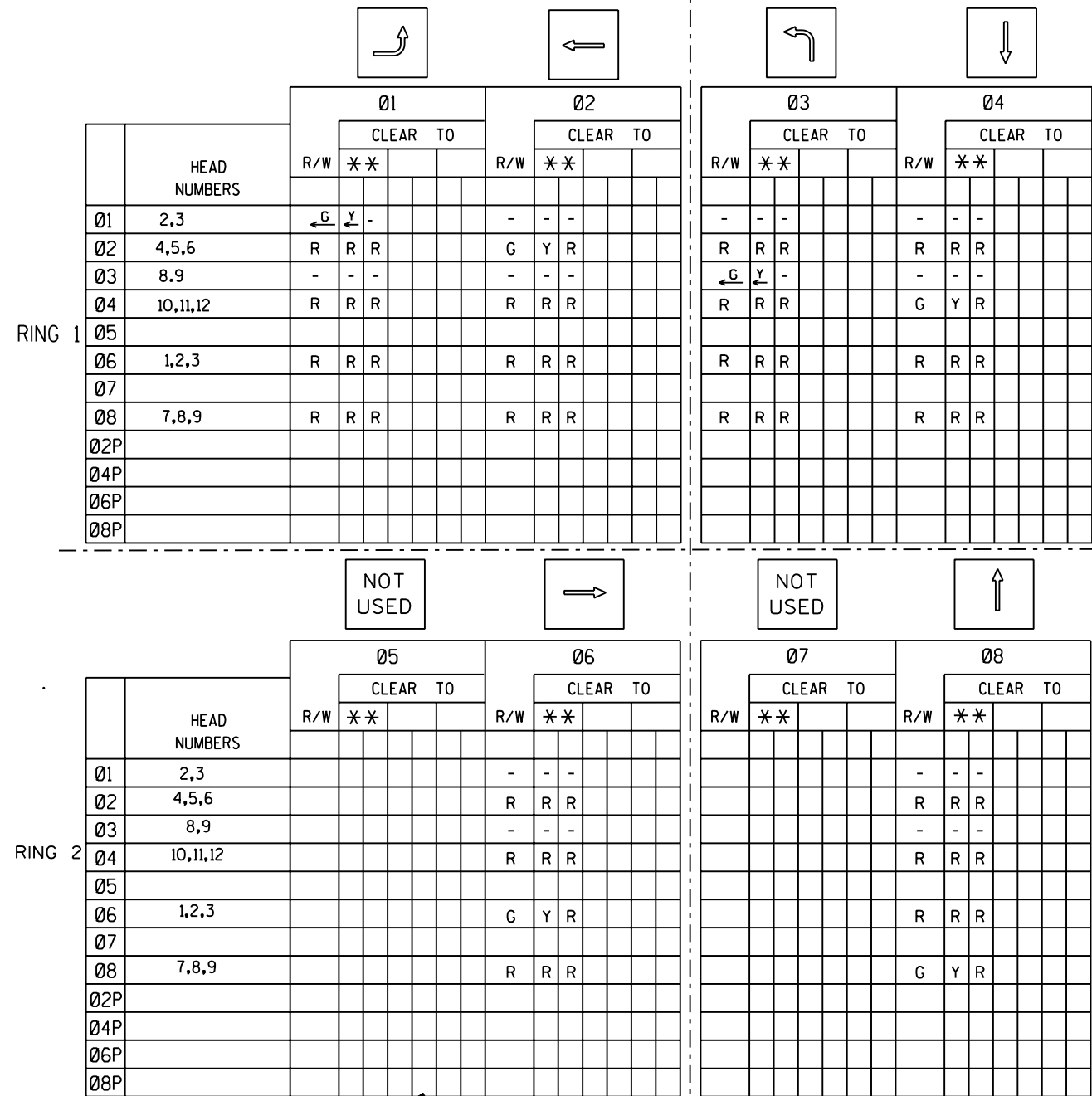
EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXXX
 XXXXXXXX COUNTY

SIGNAL NO. S XXXX
 REGIONAL CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

PAGE 2 OF 3

SEQUENCE OF OPERATION



DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE (FT)	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1	X		6X20	3	
12	1	X			1	1	X		6X20	3	
21	2	X			2	2			6X6	4	
31	3	X			3	3	X		6X20	3	
32	3	X			3	3	X		6X20	3	
41	4			X		4		X	6X12	4	
42	5	X			4	4			6X20	3	
43	5	X			4	4			6X20	3	
44	6	X			4	4	X		6X20	3	
45	6	X			4	4	X		6X20	3	
46	7	X			4	4			6X20	3	
47	7	X			4	4			6X20	3	
61	8	X			6	6			6X6	5	
FUTURE	9								6X20	3	
FUTURE	9								6X20	3	
81	10			X		8		X	6X6	5	
82	11	X			8	8			6X20	3	
83	11	X			8	8			6X20	3	
84	12	X			8	8	X		6X20	3	
85	12	X			8	8	X		6X20	3	

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
 O.L. "B" =
 O.L. "C" =
 O.L. "D" =

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

EXAMPLE

BARRIER

CHART 1

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

GENERAL NOTES:

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

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

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

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

PROJECT NO: XXXX-XX-XX

HWY: STH XXX

COUNTY: XXXXXXXXX

SEQUENCE OF OPERATIONS

SHEET NO:

E

FILE NAME : **...designfile...**

PLOT DATE : **...plottingdate...** PLOT BY : **...plotuser...** PLOT NAME :

PLOT SCALE : **...plotscale...** WISDOT/CADD SHEET 42

STH XXX & CTH YYY
 VILLAGE OF XXXXXXXX
 XXXXXXXXX COUNTY

SIGNAL NO. S XXXX
 CONTROLLER TYPE: XXXXXX
 DATE 9/15/1992 PAGE NO. 3 OF 3

2

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SAMPLE #2
FIRST REVISION PLAN WITH MODIFIED PHASING

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

PROJECT NO: XXXX-XX-XX

HWY: STH XXX

COUNTY: XXXXXXX

TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : **....designfile....**

PLOT DATE : **...plottingdate...** PLOT BY : **...plotuser...** PLOT NAME :

PLOT SCALE : **.....plotscale.....** WISDOT/CADD SHEET 42

2

2

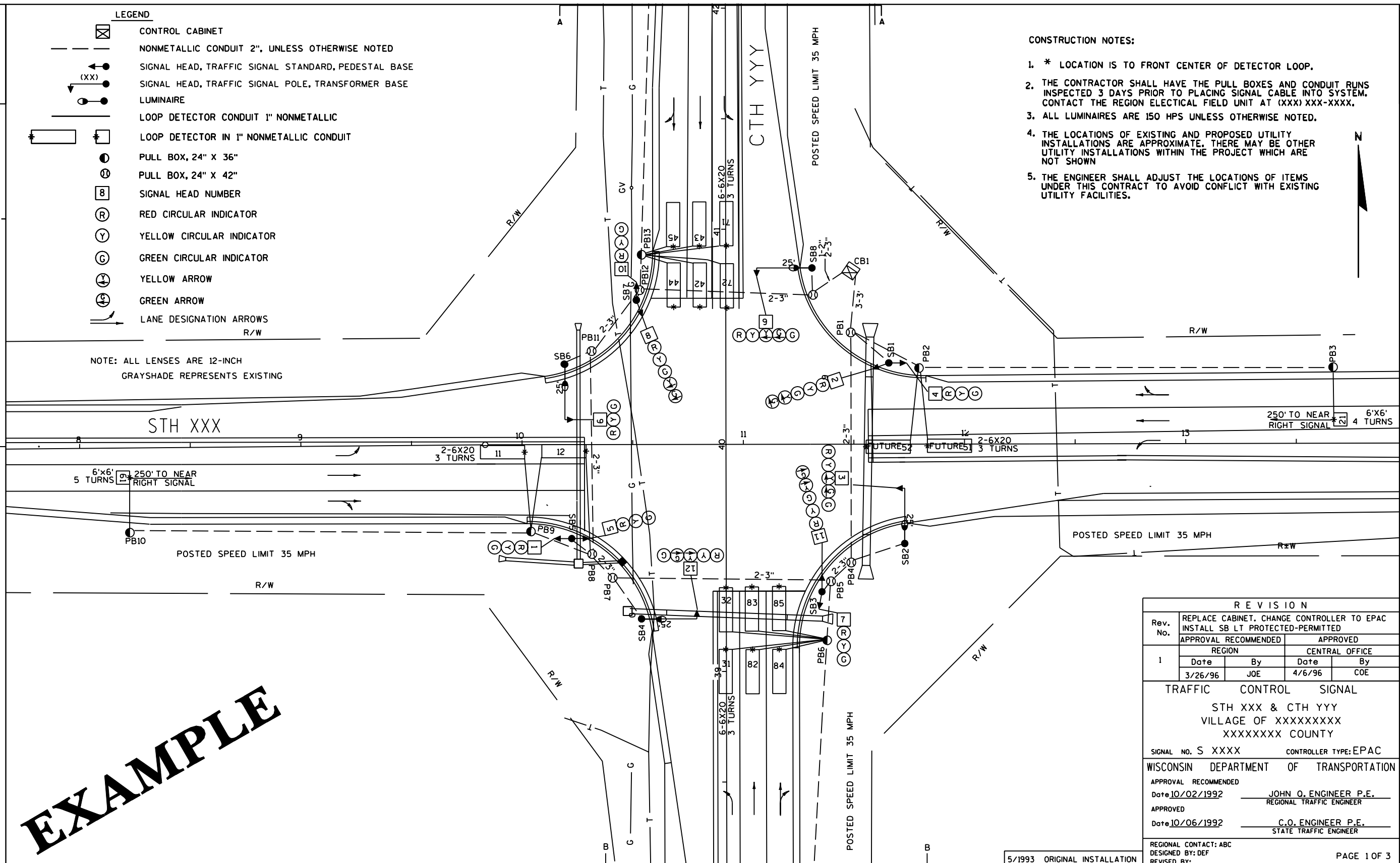
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- LANE DESIGNATION ARROWS

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGION ELECTRICAL FIELD UNIT AT (XXX) XXX-XXXX.
3. ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN
5. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

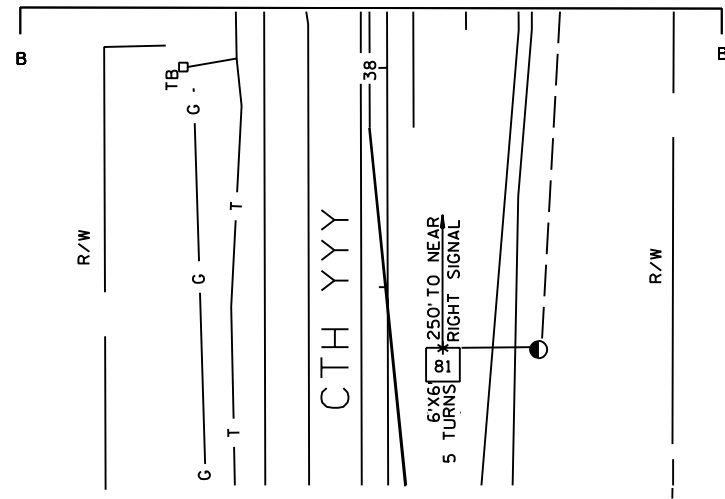
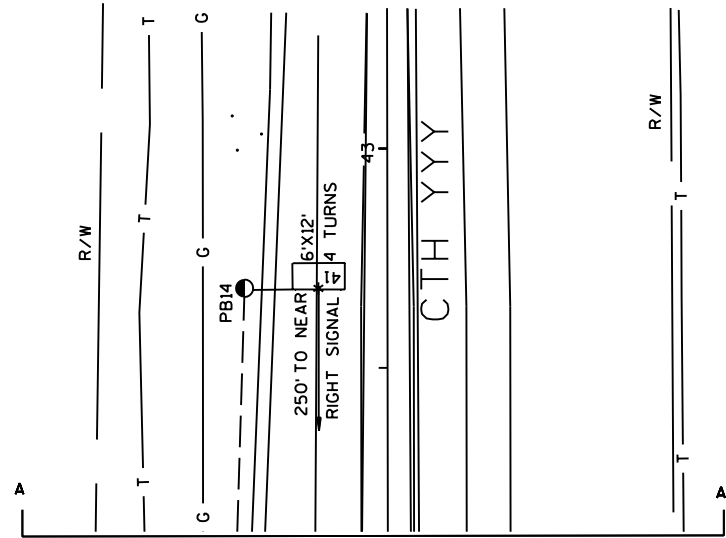


EXAMPLE

REVISION			
Rev. No.	REPLACE CABINET, CHANGE CONTROLLER TO EPAC INSTALL SB LT PROTECTED-PERMITTED		
	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
1	Date	By	Date By
	3/26/96	JOE	4/6/96 COE
TRAFFIC CONTROL SIGNAL			
STH XXX & CTH YYY			
VILLAGE OF XXXXXXXXX			
XXXXXXXXXX COUNTY			
SIGNAL NO. S XXXX		CONTROLLER TYPE: EPAC	
WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVAL RECOMMENDED			
Date	10/02/1992	JOHN O. ENGINEER P.E. REGIONAL TRAFFIC ENGINEER	
APPROVED			
Date	10/06/1992	C.O. ENGINEER P.E. STATE TRAFFIC ENGINEER	
REGIONAL CONTACT: ABC		PAGE 1 OF 3	
DESIGNED BY: DEF			
REVISED BY:			

2

2



EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXXX
 XXXXXXXX COUNTY

SIGNAL NO. S XXXX

REGIONAL CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

SEQUENCE OF OPERATION

		01				02				03				04				FLASH				
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO								
HEAD NUMBERS		R/W	**			R/W	**			R/W	**			R/W	**							
RING 1	01	2,3	G	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	02	4,5,6	R	R	R					G	Y	R						R				
	03	8,9	-	-	-					-	-	-						-				
	04	10,11,12	R	R	R					R	R	R						R				
	05																					
	06	1,2,3	R	R	R					R	R	R						R				
	07	11,12	-	-	-					-	-	-						-				
	08	7,8,9	R	R	R					R	R	R						R				
	02P																					
	04P																					
	06P																					
	08P																					
		NOT USED				05				06				07				08				N
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO								
HEAD NUMBERS		R/W	**			R/W	**			R/W	**			R/W	**							
RING 2	01	2,3								-	-	-										
	02	4,5,6								R	R	R										
	03	8,9								-	-	-										
	04	10,11,12								R	R	R										
	05																					
	06	1,2,3								G	Y	R										
	07	11,12								-	-	-										
	08	7,8,9								R	R	R										
	02P																					
	04P																					
	06P																					
	08P																					

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1		X		6X20	3
12	1	x			1	1		X		6X20	3
21	2	X			2	2				6X6	4
31	3	x			3	3		X		6X20	3
32	3	X			3	3		X		6X20	3
41	4			X		4			X	6X12	4
42	5	X			4	4				6X20	3
43	5	x			4	4				6X20	3
44	6	X			4	4		X		6X20	3
45	6	X			4	4		X		6X20	3
FUTURE	7									6X20	3
FUTURE	7									6X20	3
61	8	X			6	6				6X6	5
71	9	X			7	7		X		6X20	3
72	9	X			7	7		X		6X20	3
81	10			X		8			X	6X6	5
82	11	X			8	8				6X20	3
83	11	X			8	8				6X20	3
84	12	X			8	8		X		6X20	3
85	12	X			8	8		X		6X20	3

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / B	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN.	X
3		8		X
4		8		X
5				
6	X	2	MIN.	X
7		4		X
8		4		X

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

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

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

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

GENERAL NOTES:

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

STH XXX & CTH YYY
VILLAGE OF XXXXXXXX
XXXXXXXXXX COUNTY

SIGNAL NO. S XXXX

CONTROLLER TYPE: XXXXXX

DATE 9/15/1992 PAGE NO. 3 of 3

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

EXAMPLE

BARRIER CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01	6	2,3,4,7,8
02	6	1,3,4,7,8
03	7 OR 8	1,2,4,6
04	7 OR 8	1,2,3,6
05		
06	1 OR 2	3,4,7,8
07	3 OR 4	1,2,6,8
08	3 OR 4	1,2,6,7

SAMPLE #3
REMOVAL PLAN

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

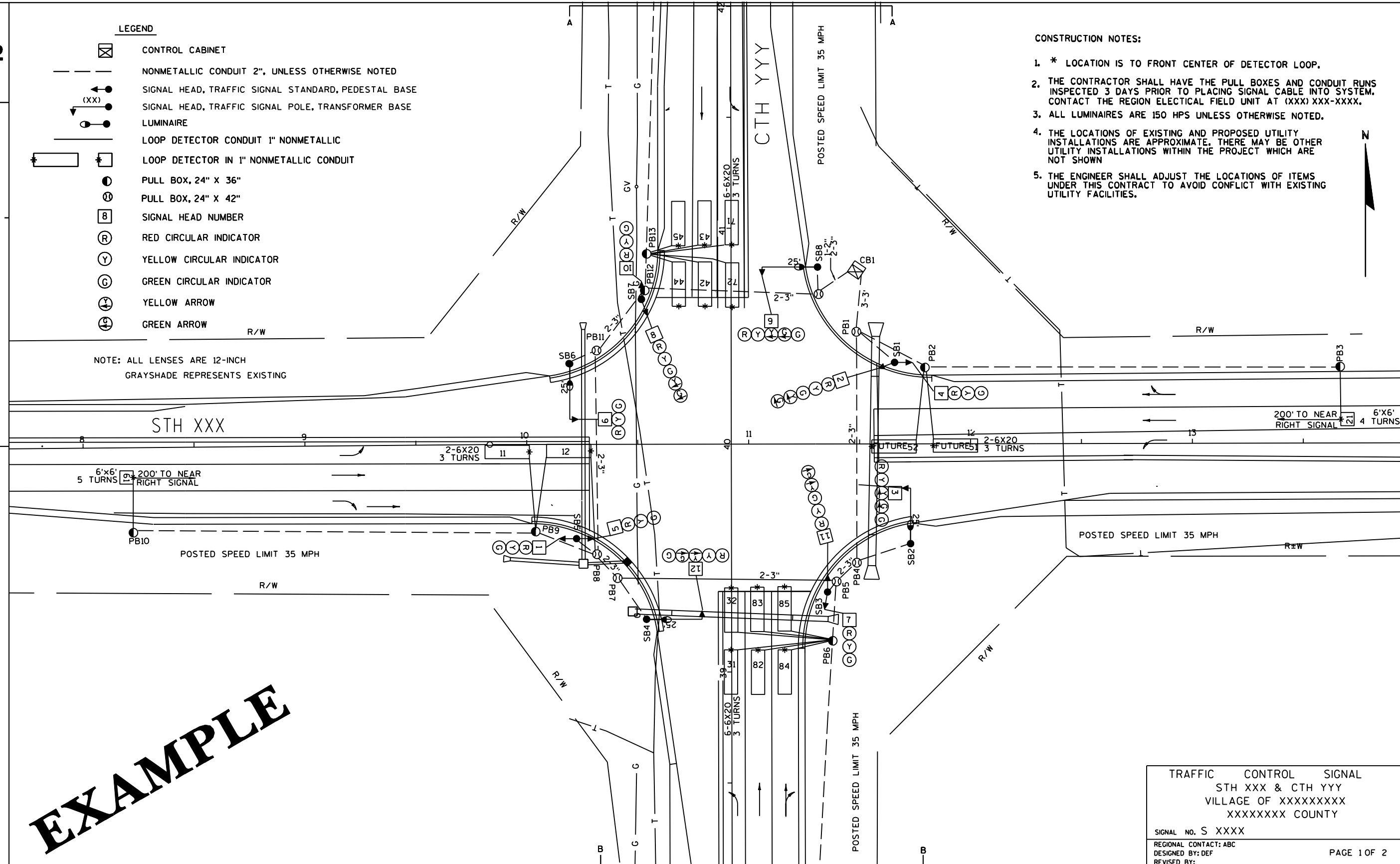
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGION ELECTRICAL FIELD UNIT AT (XXX) XXX-XXXX.
3. ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN
5. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

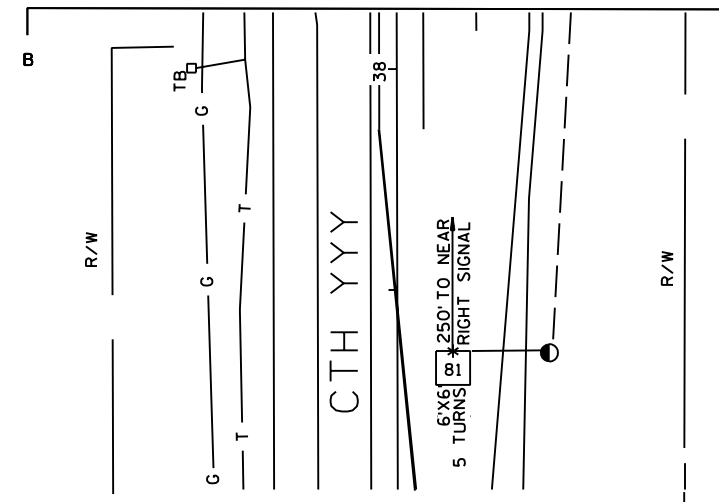
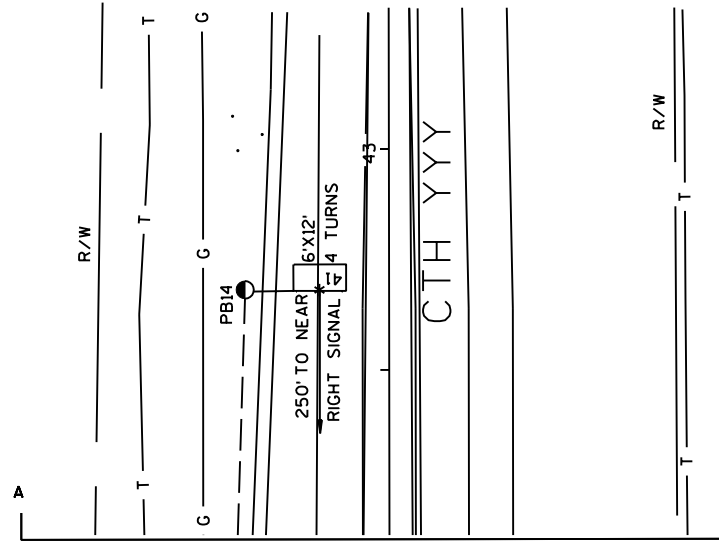


EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXXX
 XXXXXXXX COUNTY

SIGNAL NO. S XXXX
 REGIONAL CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

PAGE 1 OF 2



EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXXX
 XXXXXXXX COUNTY

SIGNAL NO. S XXXX

REGIONAL CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

PAGE 2 OF 2

SAMPLE #4
TEMPORARY PLAN

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

2

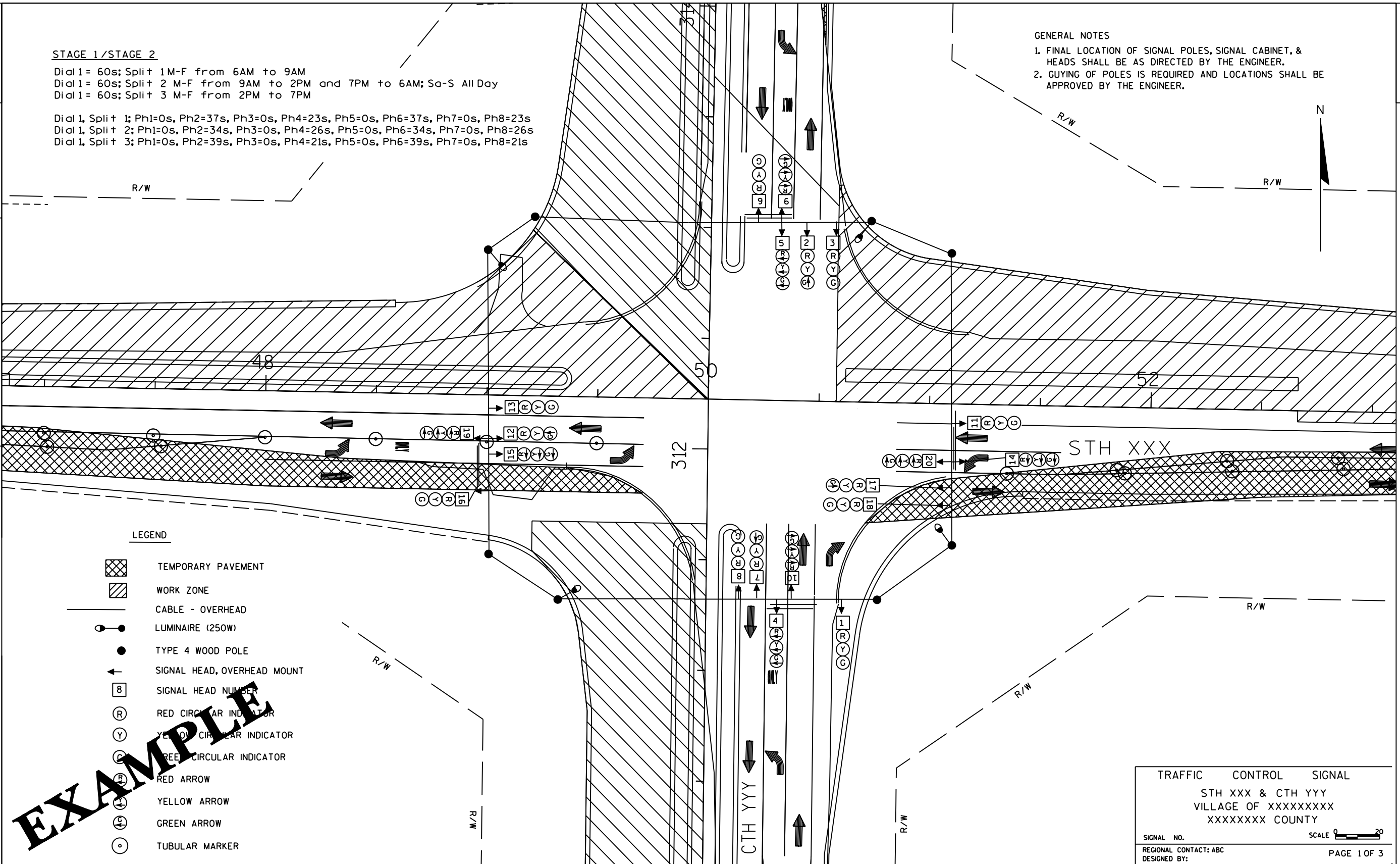
STAGE 1/STAGE 2

Dial 1= 60s; Split 1 M-F from 6AM to 9AM
Dial 1= 60s; Split 2 M-F from 9AM to 2PM and 7PM to 6AM; Sa-S All Day
Dial 1= 60s; Split 3 M-F from 2PM to 7PM

Dial 1, Split 1; Ph1=0s, Ph2=37s, Ph3=0s, Ph4=23s, Ph5=0s, Ph6=37s, Ph7=0s, Ph8=23s
Dial 1, Split 2; Ph1=0s, Ph2=34s, Ph3=0s, Ph4=26s, Ph5=0s, Ph6=34s, Ph7=0s, Ph8=26s
Dial 1, Split 3; Ph1=0s, Ph2=39s, Ph3=0s, Ph4=21s, Ph5=0s, Ph6=39s, Ph7=0s, Ph8=21s

GENERAL NOTES

- 1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
- 2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.



LEGEND

- TEMPORARY PAVEMENT
- WORK ZONE
- CABLE - OVERHEAD
- LUMINAIRE (250W)
- TYPE 4 WOOD POLE
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- TUBULAR MARKER

EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXXX
 XXXXXXXX COUNTY

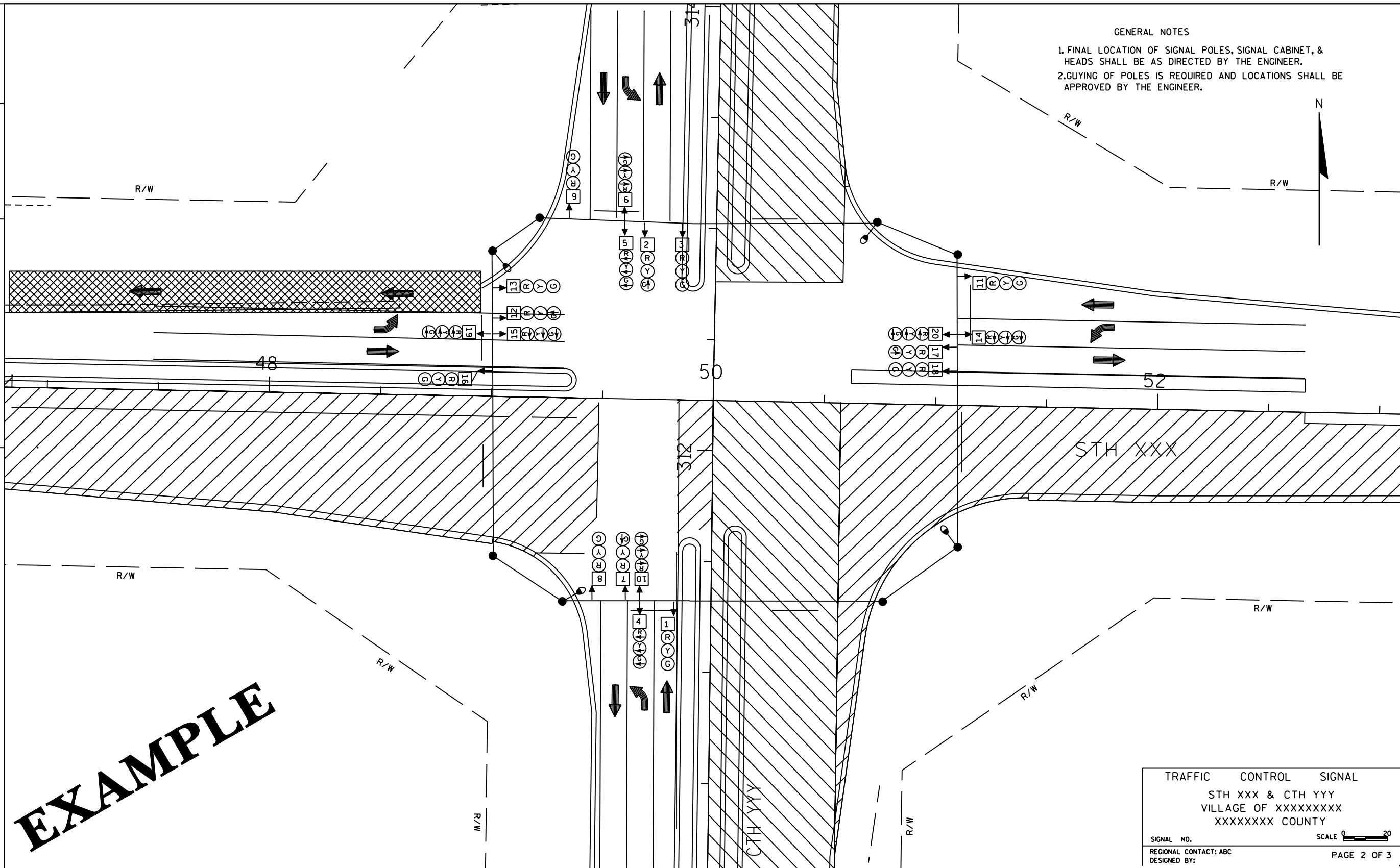
SIGNAL NO. _____ SCALE

REGIONAL CONTACT: ABC
 DESIGNED BY: _____ PAGE 1 OF 3

2

2

- GENERAL NOTES
1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
 2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.







EXAMPLE

TRAFFIC CONTROL SIGNAL	
STH XXX & CTH YYY	
VILLAGE OF XXXXXXXXX	
XXXXXXX COUNTY	
SIGNAL NO. _____	SCALE 20
REGIONAL CONTACT: ABC	PAGE 2 OF 3
DESIGNED BY: _____	

SEQUENCE OF OPERATION

CONTROLLER LOGIC

CHART 1

RING 1	HEAD NUMBERS	Ø1				Ø2				Ø3				Ø4				FLASH			
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO							
		R/W	**			R/W	**			R/W	**			R/W	**						
Ø1	19,20	G	Y	R					R	R	R										
Ø2	11,12,13	R	R	R					G,G	Y	R										
Ø3	4,5	R	R	R					R	R	R										
Ø4	6,7,8	R	R	R					R	R	R										
Ø5	14,15	R	R	R					R	R	R										
Ø6	16,17,18	R	R	R					R	R	R										
Ø7	9,10	R	R	R					R	R	R										
Ø8	1,2,3	R	R	R					R	R	R										
Ø2P																					
Ø4P																					
Ø6P																					
Ø8P																					

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

	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





OVERLAPS

O.L. "A" =
 O.L. "B" =
 O.L. "C" =
 O.L. "D" =

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

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

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

RING 2	HEAD NUMBERS	Ø5				Ø6				Ø7				Ø8							
		CLEAR TO				CLEAR TO				CLEAR TO				CLEAR TO							
		R/W	**			R/W	**			R/W	**			R/W	**						
Ø1	19,20	R	R	R					R	R	R										
Ø2	11,12,13	R	R	R					R	R	R										
Ø3	4,5	R	R	R					R	R	R										
Ø4	6,7,8	R	R	R					R	R	R										
Ø5	14,15	G	Y	R					R	R	R										
Ø6	16,17,18	R	R	R					G,G	Y	R										
Ø7	9,10	R	R	R					R	R	R										
Ø8	1,2,3	R	R	R					R	R	R										
Ø2P																					
Ø4P																					
Ø6P																					
Ø8P																					

TIMING/COORDINATION DATA									
CYCLE REFERENCE:									
	PHASE	1	2	3	4	5	6	7	8
	GREEN								
	YELLOW	4	4	4	4	4	4	4	4
	ALL RED	2	2	2	2	2	2	2	2
	TOTAL								
	MODE								
	OFFSET:								
	CYCLE LENGTH:								
	TIME OF DAY:								
	DAY OF WEEK:								

BARRIER

EXAMPLE

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

PHASE ON

GENERAL NOTES:

- WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)

STH XXX & CTH YYY
 VILLAGE OF XXXXXXXX
 XXXXXXXXX COUNTY

SIGNAL NO. _____

CONTROLLER TYPE: XXXXXX

DATE 9/15/1992 PAGE NO. 3 OF 3

SAMPLE #5
 SECOND REVISION PLAN (RECONSTRUCTED INTERSECTION)
 WITH MISCELLANEOUS QUANTITIES

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
 THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
 AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
 ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
 OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

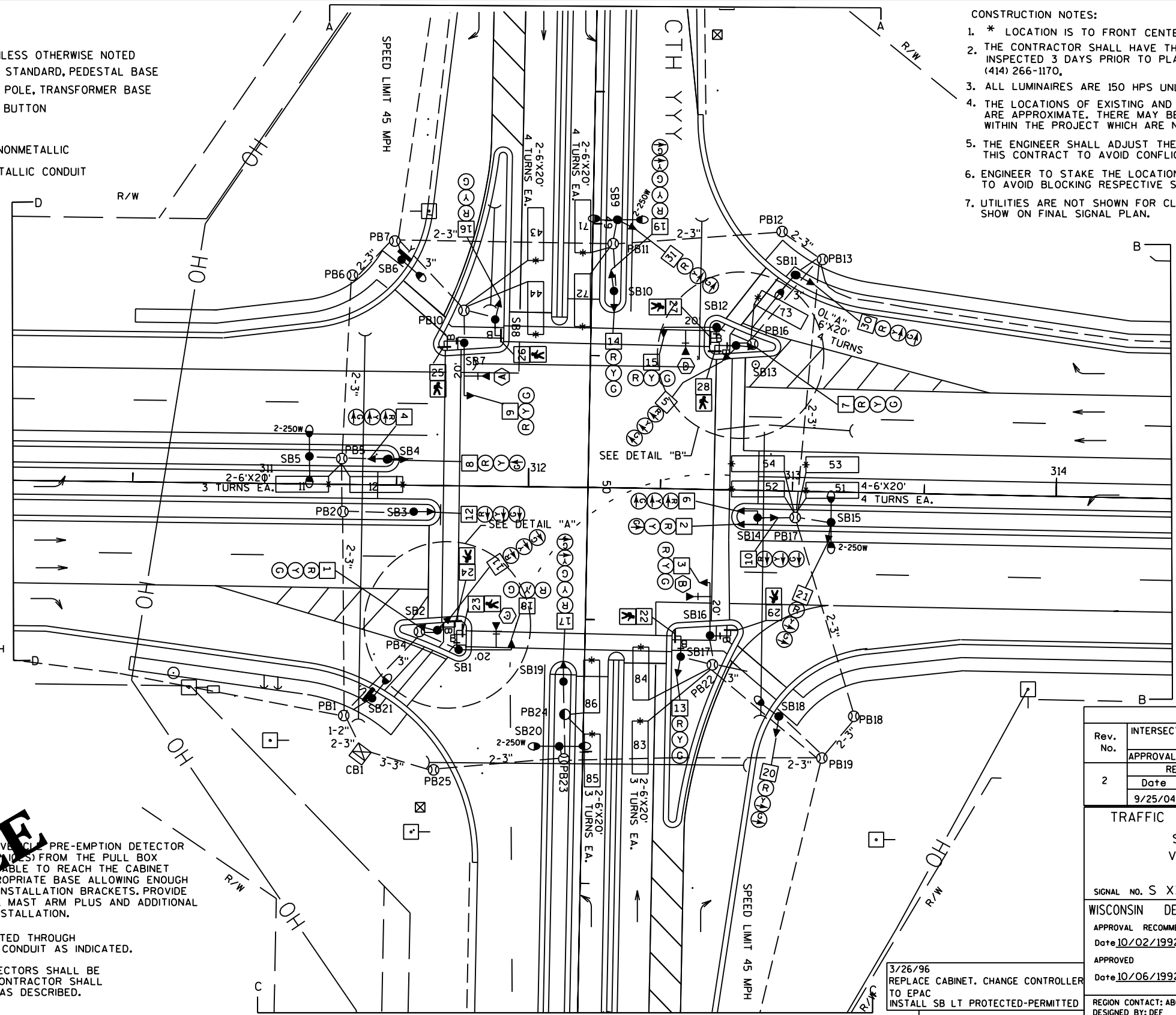
EXAMPLE

- LEGEND**
- CONTROL CABINET
 - NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 - SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
 - SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
 - PEDESTRIAN HEAD WITH PUSH BUTTON
 - LUMINAIRE
 - LOOP DETECTOR CONDUIT 1" NONMETALLIC
 - LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
 - PULL BOX, 24" X 36"
 - PULL BOX, 24" X 42"
 - SIGNAL HEAD NUMBER
 - RED CIRCULAR INDICATOR
 - YELLOW CIRCULAR INDICATOR
 - GREEN CIRCULAR INDICATOR
 - YELLOW ARROW
 - GREEN ARROW
 - WALK/DON'T WALK INDICATOR
 - EVP CHANNEL
 - EVP DETECTOR
 - YIELD SIGN
 - STOP SIGN
 - TRAFFIC FLOW DESIGNATION

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- CONSTRUCTION NOTES:**
- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
 - THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. (414) 266-1170.
 - ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.
 - THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN
 - THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
 - ENGINEER TO STAKE THE LOCATION OF SB3, SB8, SB15, AND SB20 TO AVOID BLOCKING RESPECTIVE SIGNAL HEADS.
 - UTILITIES ARE NOT SHOWN FOR CLARITY OF EXAMPLE, SHOW ON FINAL SIGNAL PLAN.

- EVP CONSTRUCTION NOTES:**
- INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPICES) FROM THE PULL BOX NEAREST THE CABINET ENSURING SUFFICIENT CABLE TO REACH THE CABINET PLUS AN ADDITIONAL 6 FEET. AT THE APPROPRIATE BASE ALLOWING ENOUGH CABLE IN BASE TO REACH THE HEAD AND INSTALLATION BRACKETS. PROVIDE ENOUGH CABLE TO REACH THE END OF THE MAST ARM PLUS AND ADDITIONAL 2.5 FEET IN THE CASE OF MAST ARM INSTALLATION.
 - ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES AND CONDUIT AS INDICATED.
 - FINAL INSTALLATION OF PRE-EMPTION DETECTORS SHALL BE PERFORMED BY WISDOT PERSONNEL. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED.



REVISION			
Rev. No.	INTERSECTION RECONSTRUCT		
2	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
	Date	By	Date By
	9/25/04	JOE	10/6/04 COE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 VILLAGE OF XXXXXXXX
 XXXXXXXX COUNTY

SIGNAL NO. S XXXX CONTROLLER TYPE: EPAC

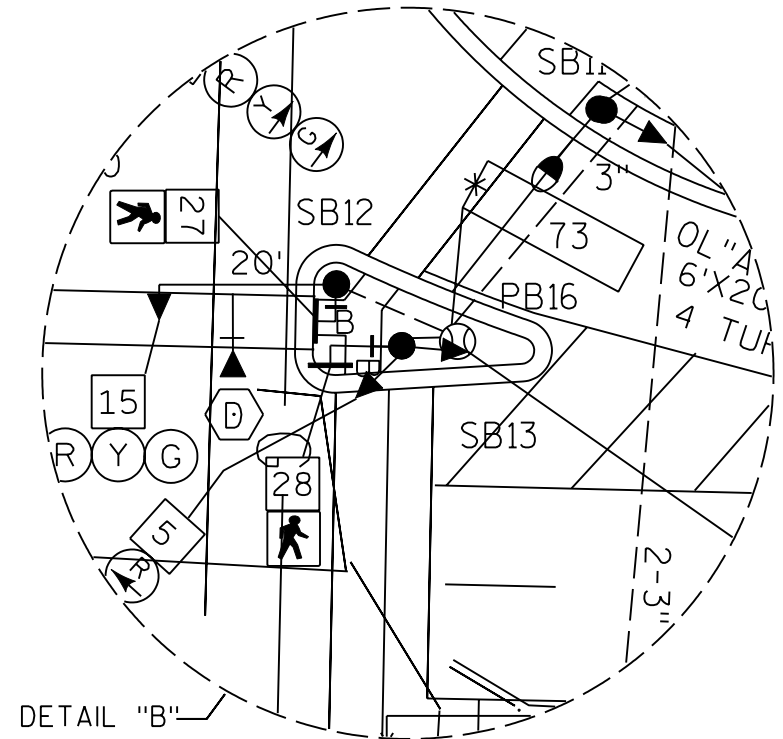
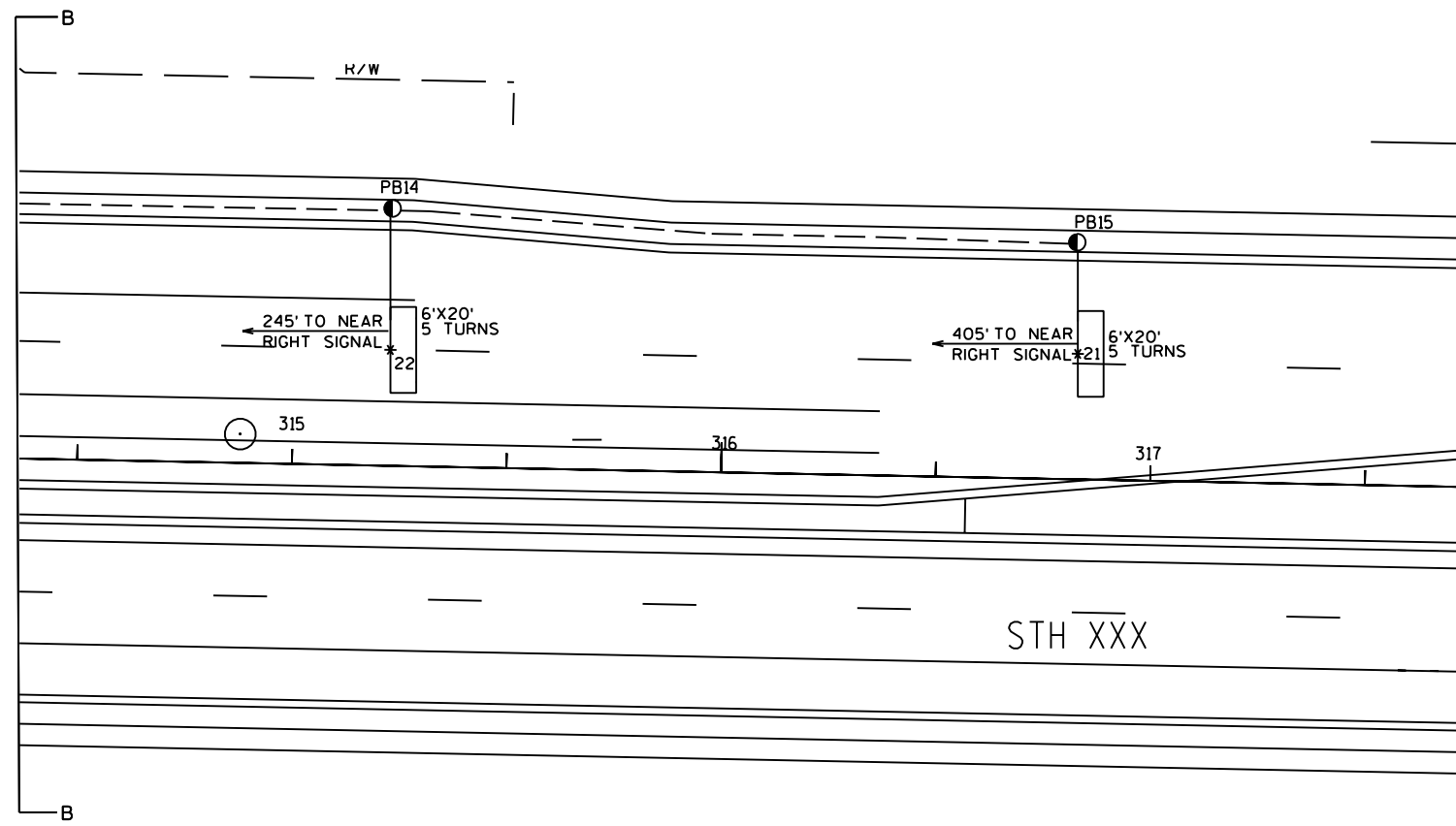
WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
 Date 10/02/1992 JOHN Q. ENGINEER P.E.
 REGIONAL TRAFFIC ENGINEER

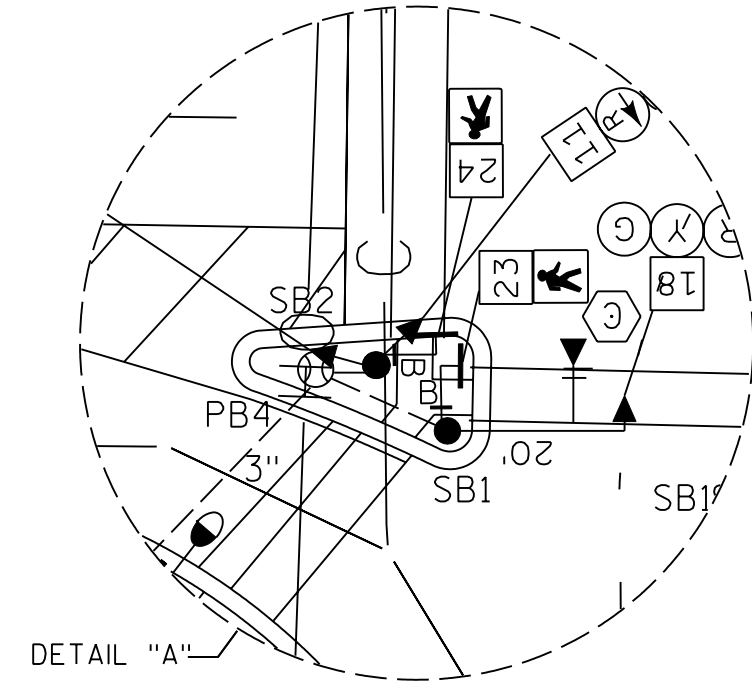
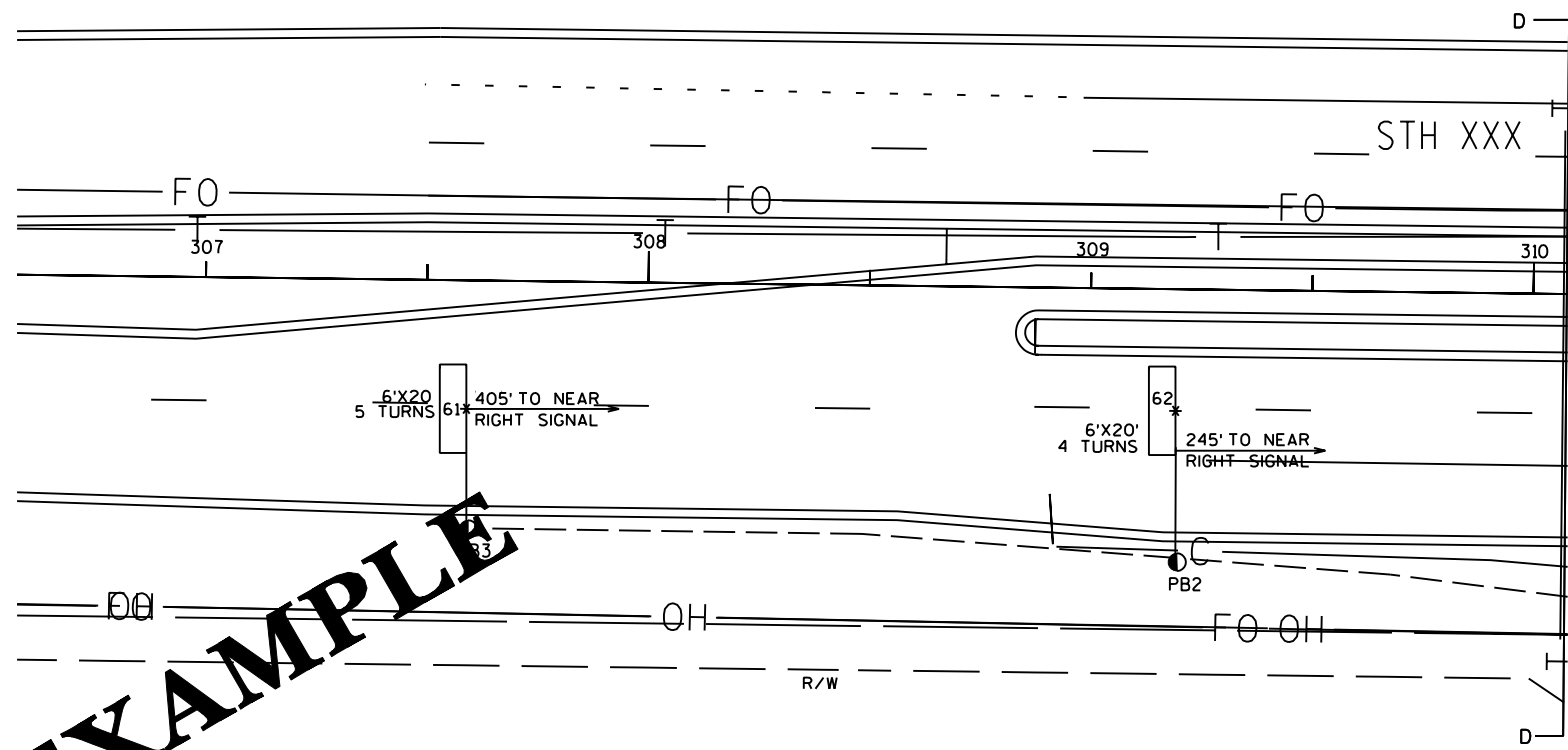
APPROVED
 Date 10/06/1992 C.O. ENGINEER P.E.
 STATE TRAFFIC ENGINEER

REGION CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

2



2

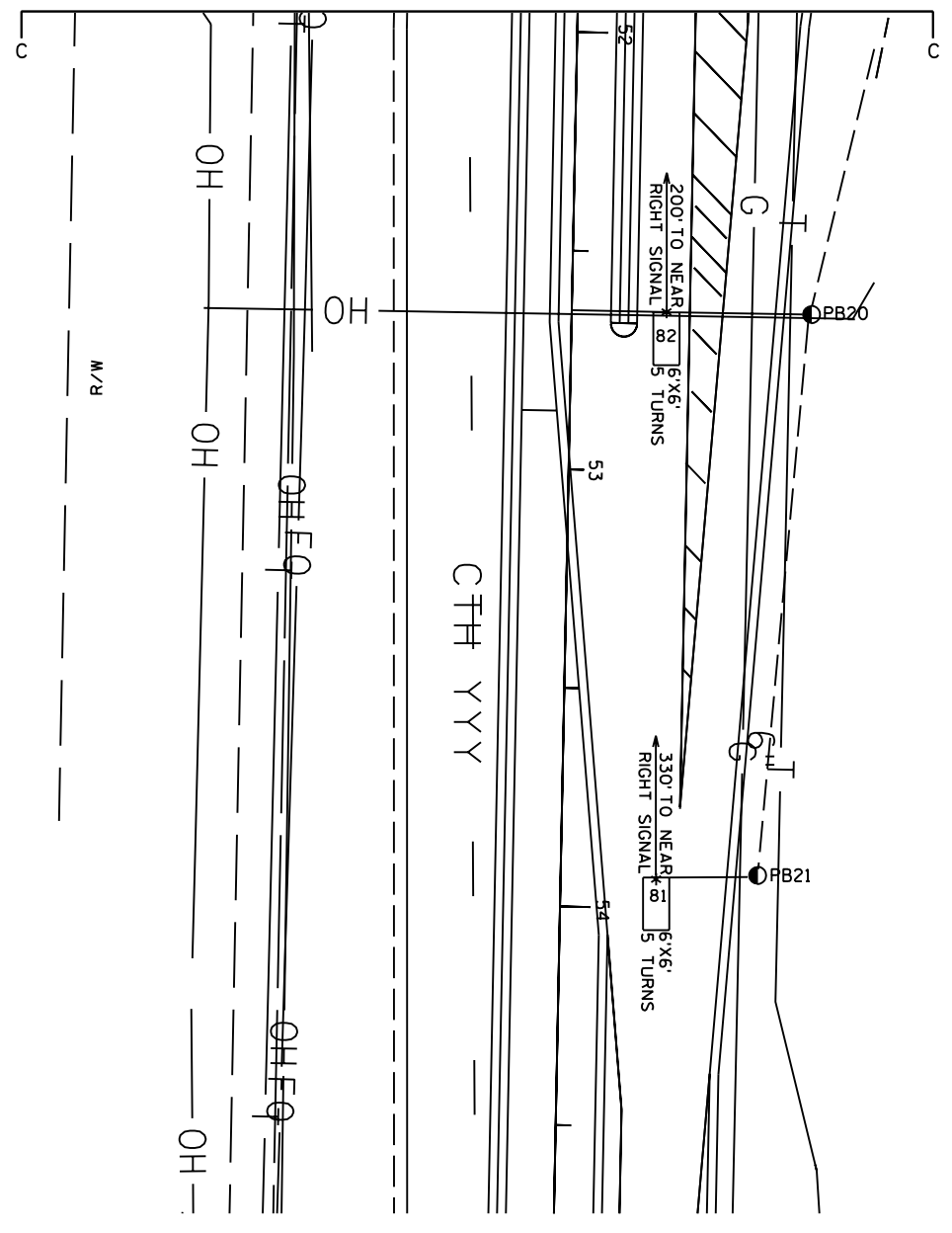
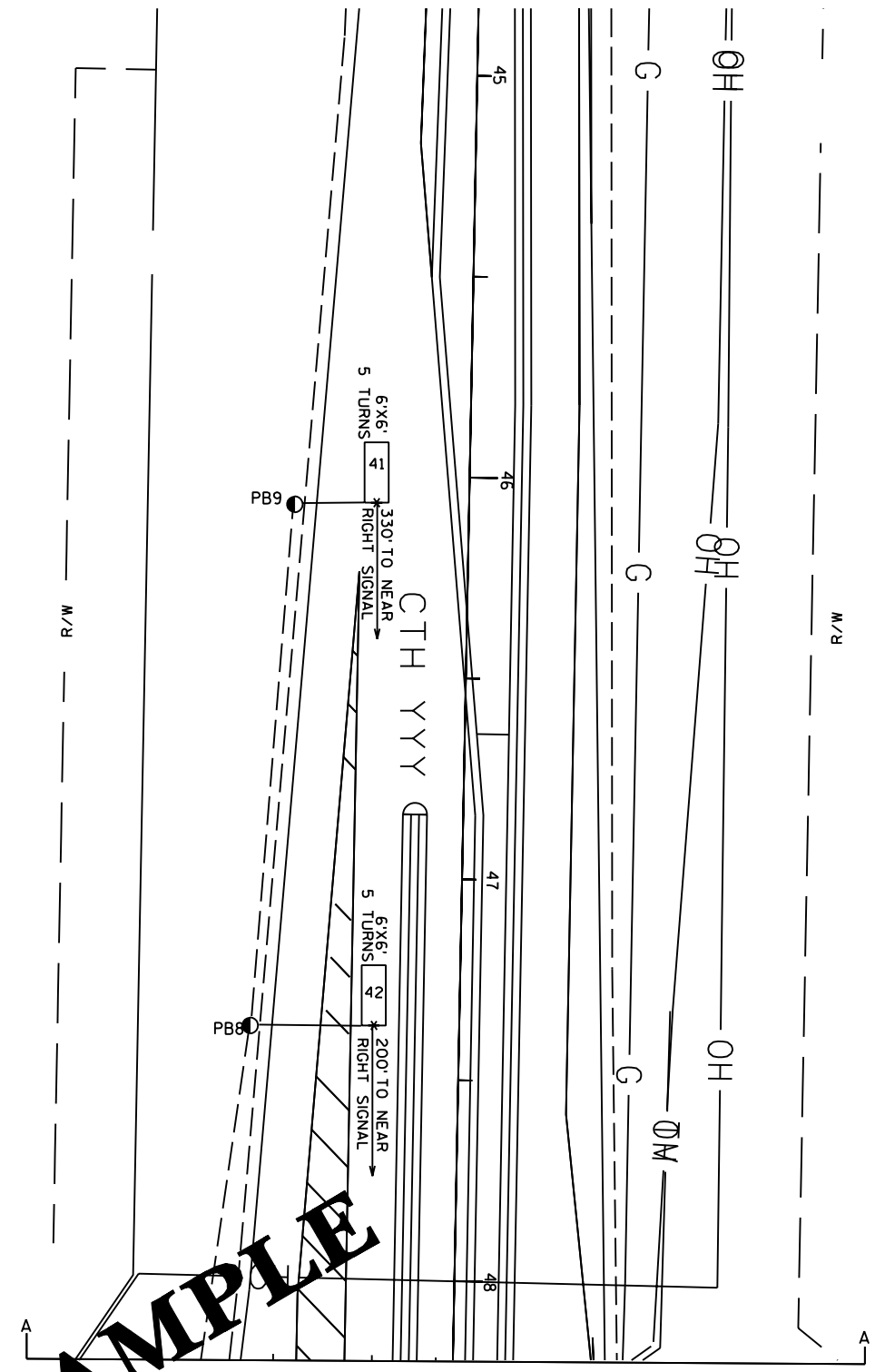


EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 XXXXXXXXX COUNTY
 VILLAGE OF XXXXXXXX
 SIGNAL NO. S XXXX
 REGION CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:
 PAGE 2 OF 5

2

2



EXAMPLE

TRAFFIC CONTROL SIGNAL
 STH XXX & CTH YYY
 XXXXXXXXX COUNTY
 VILLAGE OF XXXXXXXXX

SIGNAL NO. S XXXX
 REGION CONTACT: ABC
 DESIGNED BY: DEF
 REVISED BY:

PAGE 3 OF 5

PROJECT ID: XXXX-XX-XX
INTERSECTION: STH XXX & CTH YYY

SIGNAL WIRE COLOR CODING
BLK-BLACK WHT-WHITE RED-RED BLU-BLUE GRN-GREEN ORG-ORANGE

Table with columns: CB_TO, JUMPER, # OF COND., HEAD NO., PHASE, RED, YELLOW, GREEN, <RED, <YELLOW>, <GREEN>, D/WALK, WALK, PED BUTTON, OTHER. Rows include SB1 through SB19 with various signal configurations.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP. Table with FROM and TO columns listing connections between CB1-SB21, SB21-SB1, SB1-SB3, SB3-SB4, SB4-SB5, SB5-SB6, SB6-SB7, SB7-SB8, SB8-SB9, SB9-SB10, SB10-SB11, SB11-SB12, SB12-SB13, SB13-SB14, SB14-SB1, SB15-SB16, SB16-SB17, SB17-SB18, SB18-SB19, SB19-CB1.

PULL BOX BONDING JUMPER 10 AWG GRN XLP. Table with FROM and TO columns listing connections between PB1-CB1, PB2-SB3, PB4-SB2, PB5-SB4, PB6-SB5, PB7-SB5, PB10-SB6, PB11-SB8, PB12-SB10, PB13-SB10, PB16-SB12, PB17-SB13, PB18-SB17, PB19-SB17, PB22-SB15, PB23-SB18, PB24-SB19, PB25-CB1.

LIGHTING UF 12 AWG W/GROUND. Table with FROM and TO columns listing connections between CB1-SB21, SB21-SB3, SB3-SB5, SB5-SB8, CB1-SB20, SB20-SB17, SB17-SB13, SB13-SB10.

EMERGENCY VEHICLE PREEMPTION. Table with FROM and TO columns listing connections between CB1-SB1, SB1-HEAD 'C', CB1-SB6, SB6-HEAD 'A', CB1-SB11, SB11-HEAD 'D', CB1-SB15, SB15-HEAD 'B'.

- NOTES: 1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS. 2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS. 3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR. 4. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

EXAMPLE

TRAFFIC CONTROL SIGNAL
STH XXX & CTH YYY
VILLAGE OF XXXXXXXX
XXXXXXXX COUNTY
SIGNAL NO. S XXXX SCALE 1"=20'
REGIONAL CONTACT: ABC DESIGNED BY: PAGE 5 OF 5

SPV.0105.x.SUMMARY OF STATE FURNISHED MATERIALS
 TRAFFIC SIGNALS & INTERSECTION LIGHTING STH XXX & CTH XXX
 1 - LUMP SUM

QUANT. EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
6	PEDESTAL BASES
14	TRANSFORMER BASES, STANDARD, 11 1/2" BOLT CIRCLE
6	POLES, TYPE 2
8	POLES, TYPE 5
4	TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13'
2	TRAFFIC SIGNAL STANDARDS, ALUMINUM, 15'
4	TROMBONE ARMS, 20'
16	TRAFFIC SIGNAL FACES, 3-12" VERTICAL, LED MODULES*
1	TRAFFIC SIGNAL FACES, 5-12" VERTICAL, LED MODULES*
4	TRAFFIC SIGNAL FACES, 3-12" HORIZONTAL, LED MODULES*
20	BACKPLATES, 3 SECTION, 12" SIGNAL FACES
26	ARROWS
1	BACKPLATES, 5 SECTION, 12" SIGNAL FACES
8	PEDESTRIAN SIGNAL FACES, 12", LED MODULES*
8	PEDESTRIAN PUSH BUTTONS
1	TRAFFIC SIGNAL MOUNTING HARDWARE, STH XXX & CTH XXX
4	LUMINAIRES, UTILITY, 150 W
8	LUMINAIRES, UTILITY, 250 W
12	LUMINAIRE ARMS, SINGLE MEMBER, 4.53' CLAMP, 6'

NOTE: THIS TABLE IS FOR INFORMATION ONLY

PEDESTAL BASES*
 TRANSFORMER BASES, BREAKAWAY, 11 1/2 INCH BOLT CIRCLE*
 POLES, TYPE 2 - ALUMINUM*
 POLES, TYPE 5
 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13-FOOT*
 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 15-FOOT*
 TROMBONE ARMS, 20-FOOT*
 LUMINAIRES, UTILITY, 150 W*
 LUMINAIRE ARMS, SINGLE MEMBER, 4 1/2-INCH CLAMP, 6-FOOT*
 PEDESTRIAN PUSH BUTTONS*

SIG. BASE NO.	PED. BASE EACH	TRANS. BASE EACH	POLE TYPE2 EACH	POLE TYPE5 EACH	13-FOOT STAND. EACH	15-FOOT STAND. EACH	20-FOOT TROMB. EACH	LUMIN. 150 W EACH	LUMIN. 250 W EACH	ARM 6-FOOT EACH	PUSH BUTTON EACH
1		1.0	1.0				1.0				1.0
2	1.0				1.0						1.0
3		1.0		1.0				2.0	2.0		
4		1.0	1.0						1.0		
5		1.0		1.0			1.0			1.0	
6		1.0	1.0				1.0				1.0
7	1.0				1.0						1.0
8		1.0		1.0				2.0	2.0		
9	1.0					1.0					
10		1.0		1.0				1.0		1.0	
11		1.0	1.0				1.0				1.0
12	1.0				1.0						1.0
13		1.0		1.0				2.0	2.0		
14		1.0	1.0								
15		1.0	1.0				1.0				1.0
16	1.0				1.0						1.0
17		1.0		1.0				1.0		1.0	
18	1.0					1.0					
19		1.0		1.0				2.0	2.0		
20		1.0		1.0				1.0		1.0	
TOTAL	6.0	14.0	6.0	8.0	4.0	2.0	4.0	4.0	8.0	12.0	8.0

* INCIDENTAL TO ITEM *TRAFFIC SIGNALS & INTERSECTION LIGHTING* STH XXX & CTH XXX*

NOTE: THIS TABLE IS FOR INFORMATION ONLY

TRAFFIC SIGNAL FACES, 3-12 INCH VERTICAL, LED MODULES*
 TRAFFIC SIGNAL FACES, 5-12 INCH VERTICAL, LED MODULES*
 TRAFFIC SIGNAL FACES, 3-12 INCH HORIZONTAL, LED MODULES*
 TRAFFIC SIGNAL LENS, ARROW SHIELD*
 BACKPLATES, 3 SECTION, 12-INCH SIGNAL FACES*
 BACKPLATES, 5 SECTION, 12-INCH SIGNAL FACES*
 PEDESTRIAN SIGNAL FACES, 12-INCH, LED MODULES*

SIG. HEAD NO.	SIG. BASE NO.	3-12" VERT. EACH	5-12" VERT. EACH	3-12" HORZ. EACH	BCKPLT ARROW EACH	BCKPLT 3-SEC. EACH	BCKPLT 5-SEC. EACH	PED. FACE EACH
1	SB2	1.0				1.0		
2	SB14	1.0			1.0			
3	SB15			1.0		1.0		
4	SB4	1.0			3.0		1.0	
5	SB12	1.0			3.0		1.0	
6	SB14	1.0			3.0		1.0	
7	SB12	1.0					1.0	
8	SB4	1.0			1.0		1.0	
9	SB6			1.0			1.0	
10	SB14	1.0			3.0		1.0	
11	SB2	1.0			3.0		1.0	
12	SB4	1.0			3.0		1.0	
13	SB16	1.0					1.0	
14	SB9	1.0					1.0	
15	SB11			1.0			1.0	
16	SB7	1.0					1.0	
17	SB18		1.0		2.0		1.0	
18	SB1			1.0	2.0		1.0	
19	SB9	1.0					1.0	
20	SB17	1.0			2.0		1.0	
21	SB13	1.0			2.0		1.0	
22	SB16						1.0	
23	SB1						1.0	
24	SB2						1.0	
25	SB6						1.0	
26	SB7						1.0	
27	SB11						1.0	
28	SB12						1.0	
29	SB15						1.0	
TOTAL		16.0	1.0	4.0	26.0	20.0	1.0	8.0

* INCIDENTAL TO ITEM *TRAFFIC SIGNALS & INTERSECTION LIGHTING* STH XXX & CTH XXX

3

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

LOC.	TO LOC.	NONMET. 2-INCH	NONMET. 3-INCH
CB1	TO PB1	15.00	30.00
PB1	TO PB2	214.00	
PB2	TO PB3	161.00	
PB1	TO PB4		86.00
PB4	TO SB1	17.00	
PB4	TO SB2	8.00	
PB1	TO PB5		200.00
PB5	TO SB3	9.00	
PB5	TO SB4	16.00	
PB5	TO PB6		136.00
PB6	TO PB7		40.00
PB7	TO PB10	38.00	
PB10	TO SB6	13.00	
PB10	TO SB7	13.00	
PB7	TO PB8	173.00	
PB8	TO PB9	130.00	
PB7	TO PB11		166.00
PB11	TO SB8	6.00	
PB11	TO SB9	21.00	
PB11	TO PB12		128.00
PB12	TO PB13		36.00
PB13	TO SB10	13.00	
PB13	TO PB14	223.00	
PB14	TO PB15	160.00	
PB13	TO PB16	42.00	
PB16	TO SB11	15.00	
PB16	TO SB12	8.00	
PB13	TO PB17		200.00
PB17	TO SB13	14.00	
PB17	TO SB14	15.00	
PB17	TO PB18		158.00
PB18	TO PB19		42.00
PB19	TO SB17	23.00	
PB19	TO PB22	55.00	
PB22	TO SB15	12.00	
PB22	TO SB16	13.00	
PB19	TO PB20	167.00	
PB20	TO PB21	130.00	
PB19	TO PB23		200.00
PB23	TO SB19	6.00	
PB23	TO PB24	17.00	
PB24	TO SB18	15.00	
PB23	TO PB25		100.00
PB25	TO CB1		87.00
TOTAL		1762.0	1609.0

653.0135 PULL BOXES STEEL 24X36-INCH
653.0140 PULL BOXES STEEL 24X42-INCH

PULL BOX NO.	LOCATION*	24"x36" EACH	24"x42" EACH
1	STH XXX, 311+41.0', 87.5' RT		1.0
2	STH XXX, 309+20.0', 62.0' RT	1.0	
3	STH XXX, 207+60.0', 56.2' RT	1.0	
4	STH XXX, 311+60.0', 55.3' RT		1.0
5	STH XXX, 311+40.0', 10.3' LT		1.0
6	STH XXX, 311+33.6', 78.0' LT		1.0
7	STH XXX, 311+48.0', 92.4' LT		1.0
8	CTH XXX, 47+37.0', 52.0' RT	1.0	
9	CTH XXX, 47+7.5', 43.3' RT	1.0	
10	CTH XXX, 49+33.8', 48.0' RT		1.0
11	CTH XXX, 49+7.5', 7.8' LT		1.0
12	CTH XXX, 49+1.6', 71.7' LT		1.0
13	CTH XXX, 49+12.0', 87.0' LT		1.0
14	STH XXX, 315+22.2', 60.0' LT	1.0	
15	STH XXX, 316+82.0', 55.3' LT	1.0	
16	STH XXX, 312+84.0', 55.4' LT		1.0
17	STH XXX, 313+1.3', 10.0' RT		1.0
18	CTH XXX, 50+84.7', 103.0' LT		1.0
19	CTH XXX, 51+1.0', 90.6' LT		1.0
20	CTH XXX, 52+63.5', 54.8' LT	1.0	
21	CTH XXX, 53+92.0', 45.0' LT	1.0	
22	CTH XXX, 50+66.2', 48.5' LT		1.0
23	CTH XXX, 51+3.0', 7.0' RT		1.0
24	CTH XXX, 50+86.0', 7.0' RT	1.0	
25	CTH XXX, 51+8.0', 56.4' RT		1.0
TOTAL		9.0	16.0

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

654.0101 CONCRETE BASES, TYPE 1
654.0102 CONCRETE BASES, TYPE 2
654.0105 CONCRETE BASES, TYPE 5

SIGNAL BASE NO.	LOCATION*	TYPE 1 EACH	TYPE 2 EACH	TYPE 5 EACH
1	CTH XXX, 50+62.5', 47.8' RT		1.0	
2	STH XXX, 311+66.3', 54.8' RT	1.0		
3	STH XXX, 311+32.0', 11.2' LT			1.0
4	STH XXX, 311+56.0', 10.0' LT		1.0	
5	CTH XXX, 49+15.5', 72.0' RT			1.0
6	CTH XXX, 49+46.0', 48.0' RT		1.0	
7	CTH XXX, 49+37.0', 36.4' RT	1.0		
8	CTH XXX, 49+3.0', 9.7' LT			1.0
9	CTH XXX, 49+28.0', 8.0' LT	1.0		
10	CTH XXX, 49+18.0', 77.0' LT			1.0
11	STH XXX, 312+70.0', 61.6' LT		1.0	
12	STH XXX, 312+77.6', 54.8' LT	1.0		
13	STH XXX, 313+15.0', 11.6' RT			1.0
14	STH XXX, 312+87.0', 10.3' RT		1.0	
15	STH XXX, 312+69.5', 55.5' RT		1.0	
16	CTH XXX, 50+63.4', 36.4' LT	1.0		
17	CTH XXX, 50+85.0', 74.0' LT			1.0
18	CTH XXX, 50+72.0', 8.0' RT	1.0		
19	CTH XXX, 50+98.0', 9.0' RT			1.0
20	STH XXX, 311+41.6', 81.3' RT			1.0
TOTAL		6.0	6.0	8.0

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

204.0195 REMOVING CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	EACH
SB1	STH XXX, 11+66.0', 36.7' LT	1.0
SB2	STH XXX, 11+73.0', 45.0' RT	1.0
SB3	CTH XXX, 39+36.0', 43.3' RT	1.0
SB4	CTH XXX, 39+24.0', 38.3' LT	1.0
SB5	STH XXX, 10+22.4', 42.5' RT	1.0
SB6	STH XXX, 10+19.0', 36.4' LT	1.0
SB7	STH XXX, 40+68.0', 40.4' LT	1.0
SB8	CTH XXX, 40+82.5', 39.0' RT	1.0
TOTAL		8.0

654.0217 CONCRETE CONTROL CABINET BASES, TYPE 9, SPECIAL
656.0200 ELECTRICAL SERVICE, METER BREAKER PEDESTAL,
STH XXX & CTH XXX

LOCATION*	BASE EACH	METER L.S.
STH XXX, 311+38.0', 101.2' RT	1.0	1.0
TOTAL		1.0 1.0

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

652.0800 CONDUIT LOOP DETECTOR 1064.0 LF
 655.0700 LOOP DETECTOR LEAD IN CABLE 5170.0 LF
 655.0800 LOOP DETECTOR WIRE 4046.0 LF

NOTE: THIS TABLE IS FOR INFORMATION ONLY

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION*	SIZE (FT)x(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	LOOP DETECT	LEAD IN	LOOP	
							SLOT L.F.	CONDUIT L.F.	CABLE L.F.	WIRE L.F.
11	PB5	STH XXX, 311+39.0', 1.3' RT	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	60.0	113.0	172.0
12	PB5	STH XXX, 311+67.3', 1.0' RT	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	60.0	113.0	172.0
21	PB15	STH XXX, 316+82.5', 31.8' LT	6x20	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	67.0	750.0	328.0
22	PB14	STH XXX, 315+22.4', 31.4' LT	6x20	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	74.0	590.0	335.0
41	PB9	CTH XXX, 48+6.7', 23.0' RT	6x15	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	61.0	506.0	286.0
42	PB8	CTH XXX, 47+38.8', 21.3' RT	6x15	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	67.0	376.0	308.0
43	PB11	CTH XXX, 49+14.4', 21.5' RT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	82.0	241.0	268.0
44	PB11	CTH XXX, 49+42.4', 21.0' RT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	77.0	241.0	258.0
51	PB17	STH XXX, 313+5.0', C/L	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	58.0	276.0	222.0
52	PB17	STH XXX, 312+76.8', C/L	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	58.0	276.0	222.0
53	PB17	STH XXX, 313+5.0', 10.0' LT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	69.0	276.0	242.0
54	PB17	STH XXX, 312+77.0', 10.0' LT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	69.0	276.0	242.0
61	PB3	STH XXX, 307+59.0', 29.0' LT	6x20	5	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	67.0	338.0	275.0
62	PB2	STH XXX, 309+20.0', 36.5' RT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	74.0	228.0	256.0
71	PB11	CTH XXX, 49+11.0', 3.6' RT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	59.0	285.0	224.0
72	PB11	CTH XXX, 49+39.0', 3.2' RT	6x20	4	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	62.0	285.0	236.0
81	PB21	CTH XXX, 53+93.4', 22.0' LT	6x12	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	68.0	472.0	328.0
82	PB20	CTH XXX, 52+64.0', 22.0' LT	6x12	6	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	78.0	345.0	348.0
83	PB22	CTH XXX, 50+88.0', 21.5' LT	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	77.0	230.0	220.0
84	PB22	CTH XXX, 50+60.0', 21.5' LT	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	82.0	230.0	210.0
85	PB24	CTH XXX, 50+88.7', 4.0' LT	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	61.0	95.0	172.0
86	PB24	CTH XXX, 50+60.8', C/L	6x20	3	ASPHALT	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)	0.0	58.0	95.0	170.0
TOTAL:							0.0	1064.0	5170.0	4046.0

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

SUMMARY OF MAJOR ITEMS FOR TRAFFIC SIGNAL CABLING

ITEM	DESCRIPTION	L.F.
55.027	CABLE TRAFFIC SIGNAL 15-14 AWG	4314.5
55.030	CABLE TYPE UF 2-12 AWG GROUNDED	1151.5
655.051	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG 2889.0	

SPV.0105.XX TEMPORARY TRAFFIC SIGNALS

LOCATION	L.S.
STH XXX & CTH XXX	1
TOTAL	1.0

SPV.0060.XX REMOVE PULL BOX

PB NO.	LOCATION	REM. PB EACH
PB1	STH XXX, 11+48.6', 50.6' LT	1.0
PB2	STH XXX, 12+74.6', 34.0' LT	1.0
PB3	STH XXX, 11+48.7', 53.5' RT	1.0
PB4	CTH XXX, 39+40.7', 47.3' RT	1.0
PB5	CTH XXX, 37+21.3', 34.3' RT	1.0
PB6	CTH XXX, 39+42.5', 52.0' LT	1.0
PB7	STH XXX, 10+31.6', 50.0' RT	1.0
PB8	STH XXX, 8+25.7', 38.4' RT	1.0
PB9	STH XXX, 10+31.0', 48.2' LT	1.0
PB10	CTH XXX, 40+72.0', 39.0' LT	1.0
PB11	CTH XXX, 43+20.7', 31.0' LT	1.0
PB12	CTH XXX, 40+72.0', 39.0' LT	1.0
TOTAL		12.0

SPV.0105.XX REMOVE TRAFFIC SIGNALS


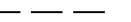













LOCATION	L.S.
STH XXX & CTH XXX	1
TOTAL	1.0

SAMPLE #6
 SIGNALIZED INTERSECTION PLAN
 WITH RAILROAD PREEMPTION

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
 THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
 AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
 ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
 OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

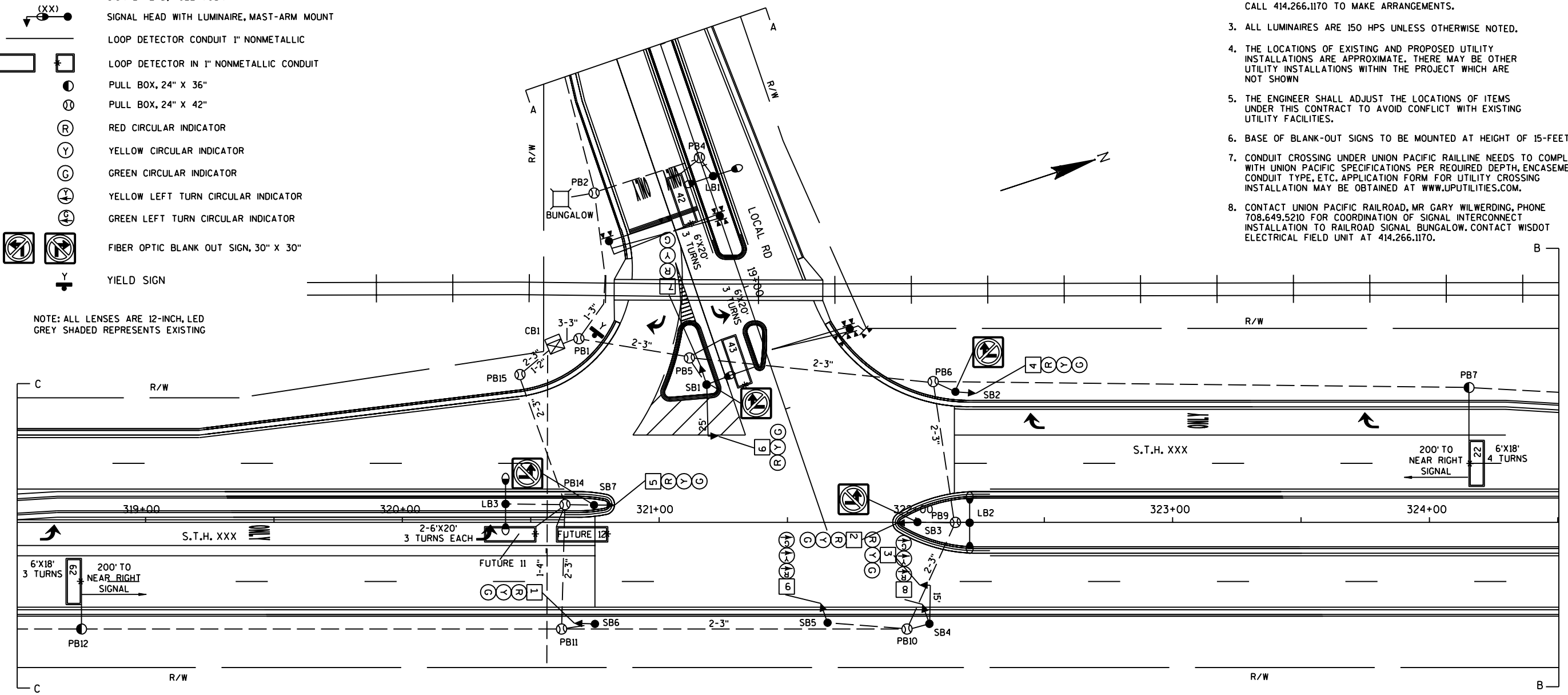
LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SIGNAL HEAD, POLE MOUNT
-  SIGNAL HEAD WITH LUMINAIRE, MAST-ARM MOUNT
-  LOOP DETECTOR CONDUIT 1" NONMETALLIC
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  PULL BOX, 24" X 36"
-  PULL BOX, 24" X 42"
-  RED CIRCULAR INDICATOR
-  YELLOW CIRCULAR INDICATOR
-  GREEN CIRCULAR INDICATOR
-  YELLOW LEFT TURN CIRCULAR INDICATOR
-  GREEN LEFT TURN CIRCULAR INDICATOR
-  FIBER OPTIC BLANK OUT SIGN, 30" X 30"
-  YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH, LED
GREY SHADED REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR WILL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED BEFORE PLACING SIGNAL CABLE INTO SYSTEM. CALL 414.266.1170 TO MAKE ARRANGEMENTS.
3. ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN
5. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
6. BASE OF BLANK-OUT SIGNS TO BE MOUNTED AT HEIGHT OF 15-FEET.
7. CONDUIT CROSSING UNDER UNION PACIFIC RAILLINE NEEDS TO COMPLY WITH UNION PACIFIC SPECIFICATIONS PER REQUIRED DEPTH, ENCASEMENT, CONDUIT TYPE, ETC. APPLICATION FORM FOR UTILITY CROSSING INSTALLATION MAY BE OBTAINED AT WWW.UPUTILITIES.COM.
8. CONTACT UNION PACIFIC RAILROAD, MR GARY WILWERDING, PHONE 708.649.5210 FOR COORDINATION OF SIGNAL INTERCONNECT INSTALLATION TO RAILROAD SIGNAL BUNGALOW. CONTACT WISDOT ELECTRICAL FIELD UNIT AT 414.266.1170.



EXAMPLE

TRAFFIC CONTROL SIGNAL
S.T.H. XXX & LOCAL RD
XXXXXXXXXX COUNTY

SIGNAL NO. S XXXX SCALE 0 20

WISCONSIN DEPARTMENT OF TRANSPORTATION

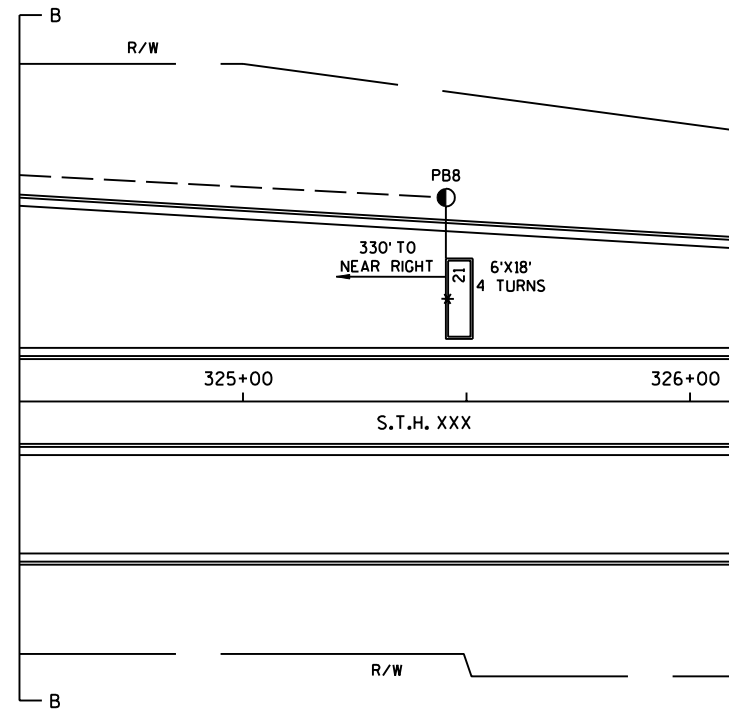
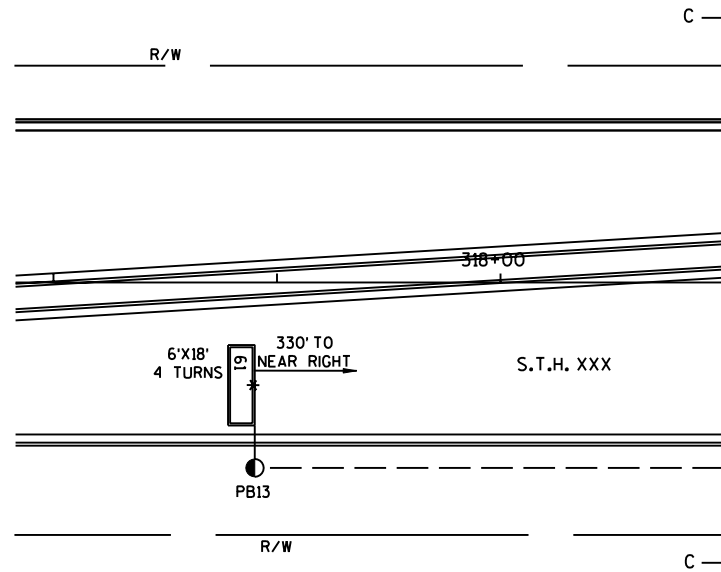
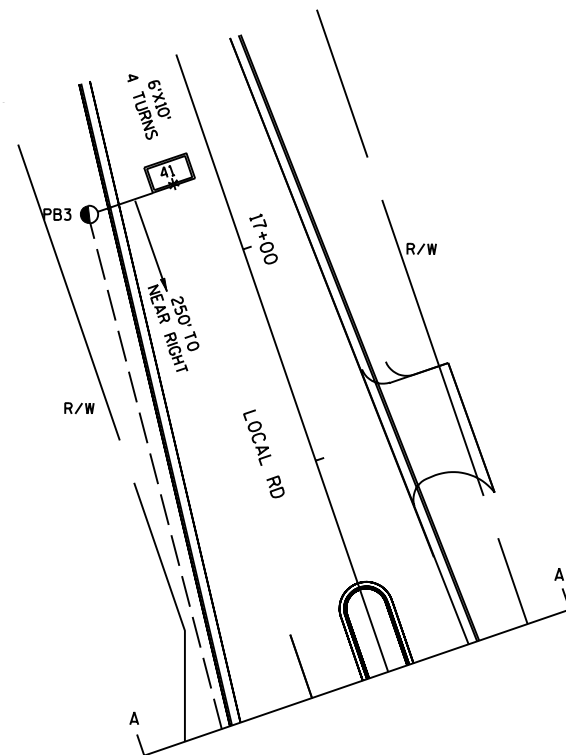
APPROVAL RECOMMENDED

Date _____ REGIONAL TRAFFIC ENGINEER

APPROVED _____

Date _____ STATE TRAFFIC ENGINEER

DISTRICT CONTACT: ABC DESIGNED BY: DEF PAGE 1 OF 3



EXAMPLE

TRAFFIC CONTROL SIGNAL	
S.T.H. XXX & LOCAL RD	
XXXXXXX COUNTY	
SIGNAL NO. S XXXX	SCALE
DISTRICT CONTACT: ABC	PAGE 2 OF 3
DESIGNED BY: DEF	

SAMPLE #7
 SINGLE CONTROLLER PLAN AT AN INTERCHANGE
 (DUAL RING WITH OVERLAPS)

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
 THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
 AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
 ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
 OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

2

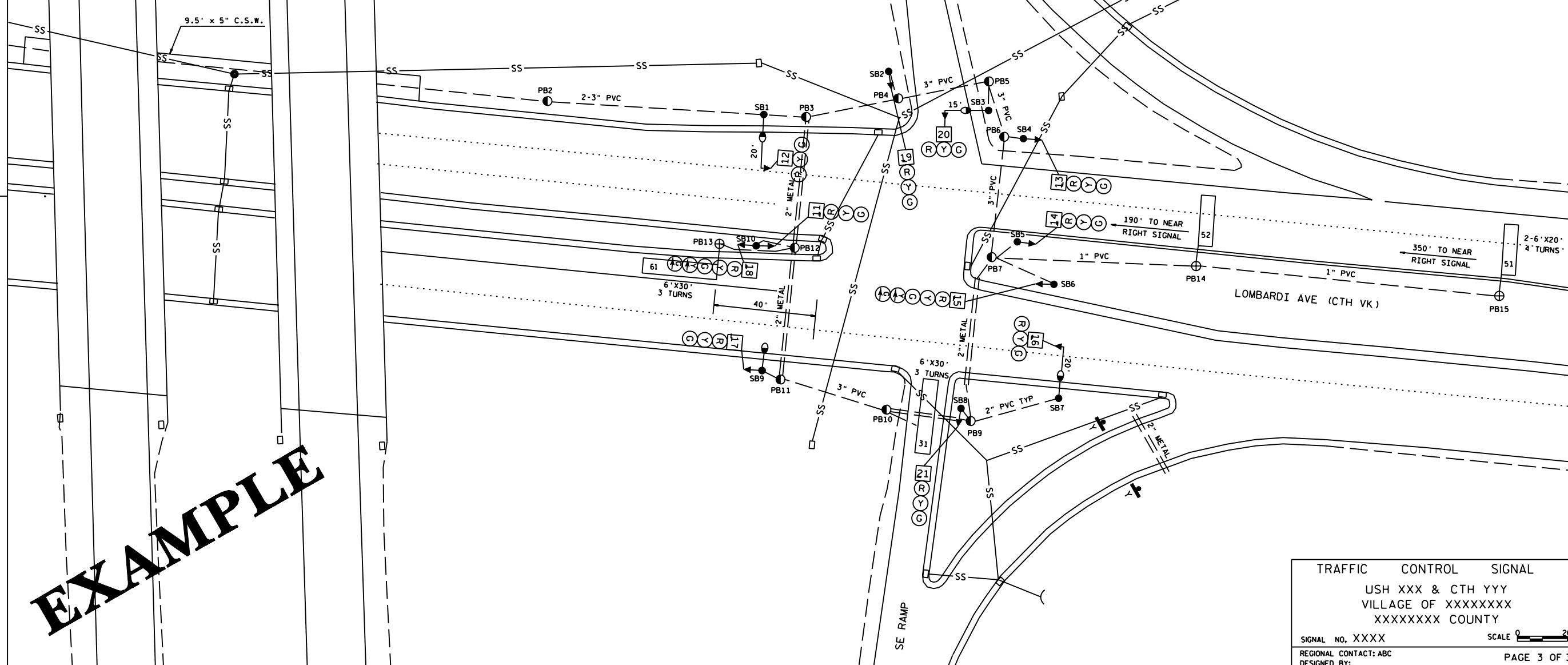
2

USH 41 SOUTHBOUND

USH 41 NORTHBOUND

LEGEND

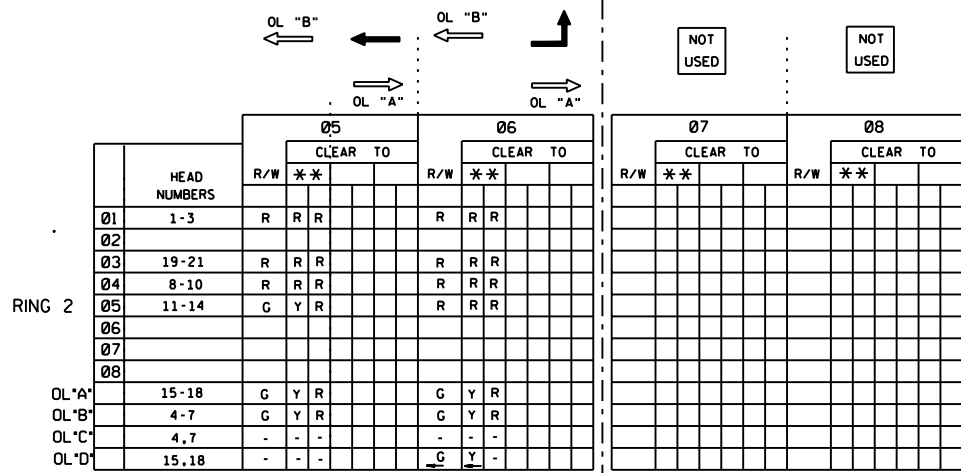
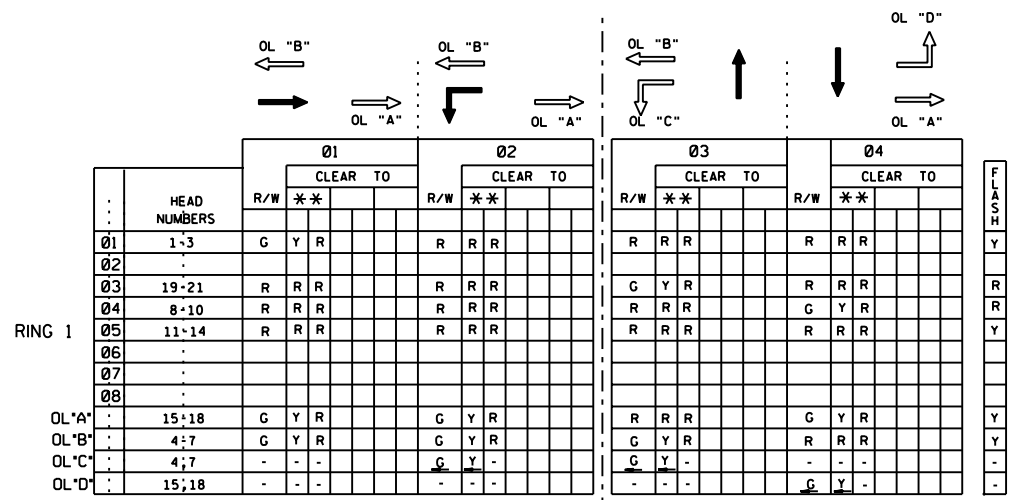
- CONTROL CABINET
- EXISTING 2" METALLIC CONDUIT
- NONMETALLIC CONDUIT
- OVERHEAD LINES
- UNDERGROUND ELECTRIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR
- PULL BOX, 24" x 36"
- PULL BOX, 12" x 24"
- MOUNTING CONFIGURATION
- SIGNAL HEAD NUMBER



EXAMPLE

TRAFFIC CONTROL SIGNAL	
USH XXX & CTH YYY	
VILLAGE OF XXXXXXXX	
XXXXXXX COUNTY	
SIGNAL NO. XXXX	SCALE
REGIONAL CONTACT: ABC	PAGE 3 OF 3
DESIGNED BY:	

SEQUENCE OF OPERATION



BARRIER

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

DETECTOR LOGIC

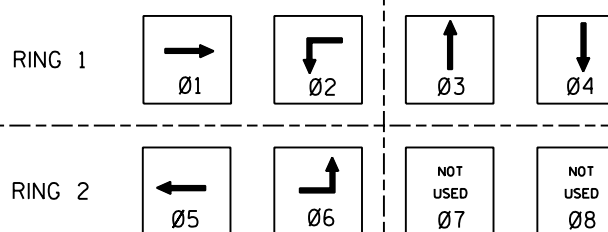
DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1			X	6X20	
12	2	X			1	1				6X20	3
21	3	X			2	2				6X30	
31	4	X			3	3				6X30	3
41	5	X			4	4				6X30	
51	6	X			5	5		X		6X20	4
52	7	X			5	5				6X20	4
61	8	X			6	6				6X30	3

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" = 01,02,04,05,06
O.L. "B" = 01,02,03,05,06
O.L. "C" = 02,03
O.L. "D" = 04,06



BARRIER

TYPE OF COORDINATION	TYPE OF PRE-EMPT	TYPE OF LIGHTING
NONE	NONE	BY OTHER AGENCY
TBC	RAILROAD	IN TRAFFIC SIGNAL CABINET
TRAFFIC RESPONSIVE	EMERGENCY VEHICLE	IN SEPARATE DOT LIGHTING CABINET
ADAPTIVE	3M	
	TOMAR	
	HARDWIRE	
	OTHER	
	LIFT BRIDGE	
	QUEUE DETECTOR	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
3. PROVIDE FOR HAND CONTROL OPERATION.

CHART 1

PHASE	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01	5 OR 6	2,3,4
02	5 OR 6	1,3,4
03	NONE	1,2,4,5,6
04	NONE	1,2,3,5,6
05	1 OR 2	3,4,6
06	1 OR 2	3,4,5
07		
08		

EXAMPLE

TRAFFIC CONTROL SIGNAL
 USH XXX & CTH YYY
 VILLAGE OF XXXXXXXX
 XXXXXXXX COUNTY
 SIGNAL NO. XXXX SCALE 0 20
 REGIONAL CONTACT: ABC DESIGNED BY: PAGE 3 OF 3

SAMPLE #8
TTIPHASING PLAN AT AN INTERCHANGE

NOTE: THIS SAMPLE TRAFFIC SIGNAL PLAN IS STRICTLY FOR REFERENCE.
THIS PLAN ATTEMPTS TO DEMONSTRATE VARIOUS SIGNAL OPERATIONS
AND APPLICATIONS OF SPECIAL FEATURES. THE REGIONAL TRAFFIC
ENGINEERING STAFF SHOULD BE INVOLVED DURING THE DEVELOPMENT
OF TRAFFIC SIGNAL PLANS OR SPECIAL APPLICATIONS.

EXAMPLE

20

D3125

1-30-87
3-26-87 6-29-87
3-30-87 4-9-88
4-1-87 11-21-95

LEUQUIN DIST. 3

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

U.S.H. 41 NB LANES

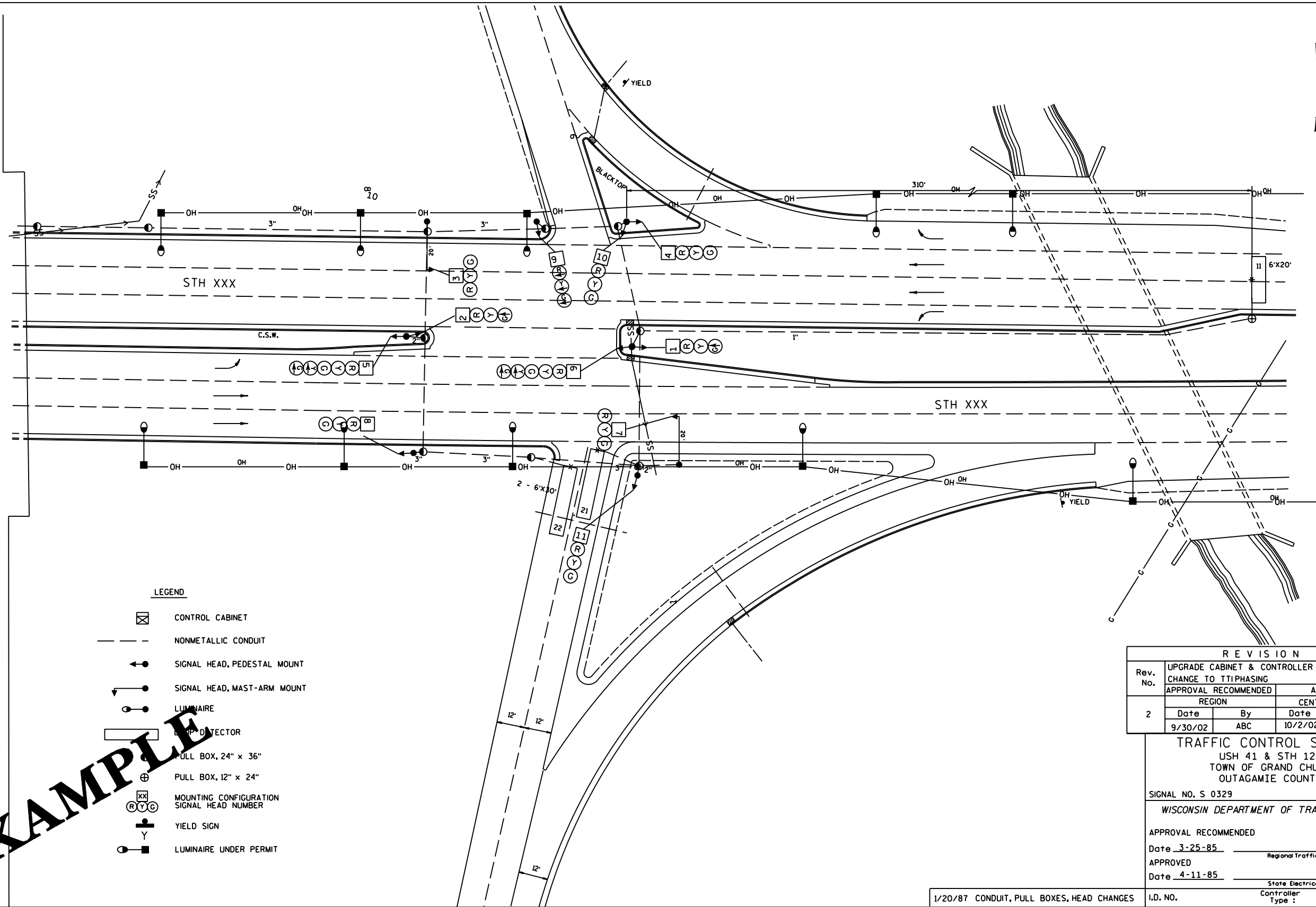
STH XXX

C.S.W.

STH XXX

- LEGEND**
- CONTROL CABINET
 - NONMETALLIC CONDUIT
 - SIGNAL HEAD, PEDESTAL MOUNT
 - SIGNAL HEAD, MAST-ARM MOUNT
 - LUMINAIRE
 - LOOP DETECTOR
 - PULL BOX, 24" x 36"
 - PULL BOX, 12" x 24"
 - MOUNTING CONFIGURATION SIGNAL HEAD NUMBER
 - YIELD SIGN
 - LUMINAIRE UNDER PERMIT

EXAMPLE



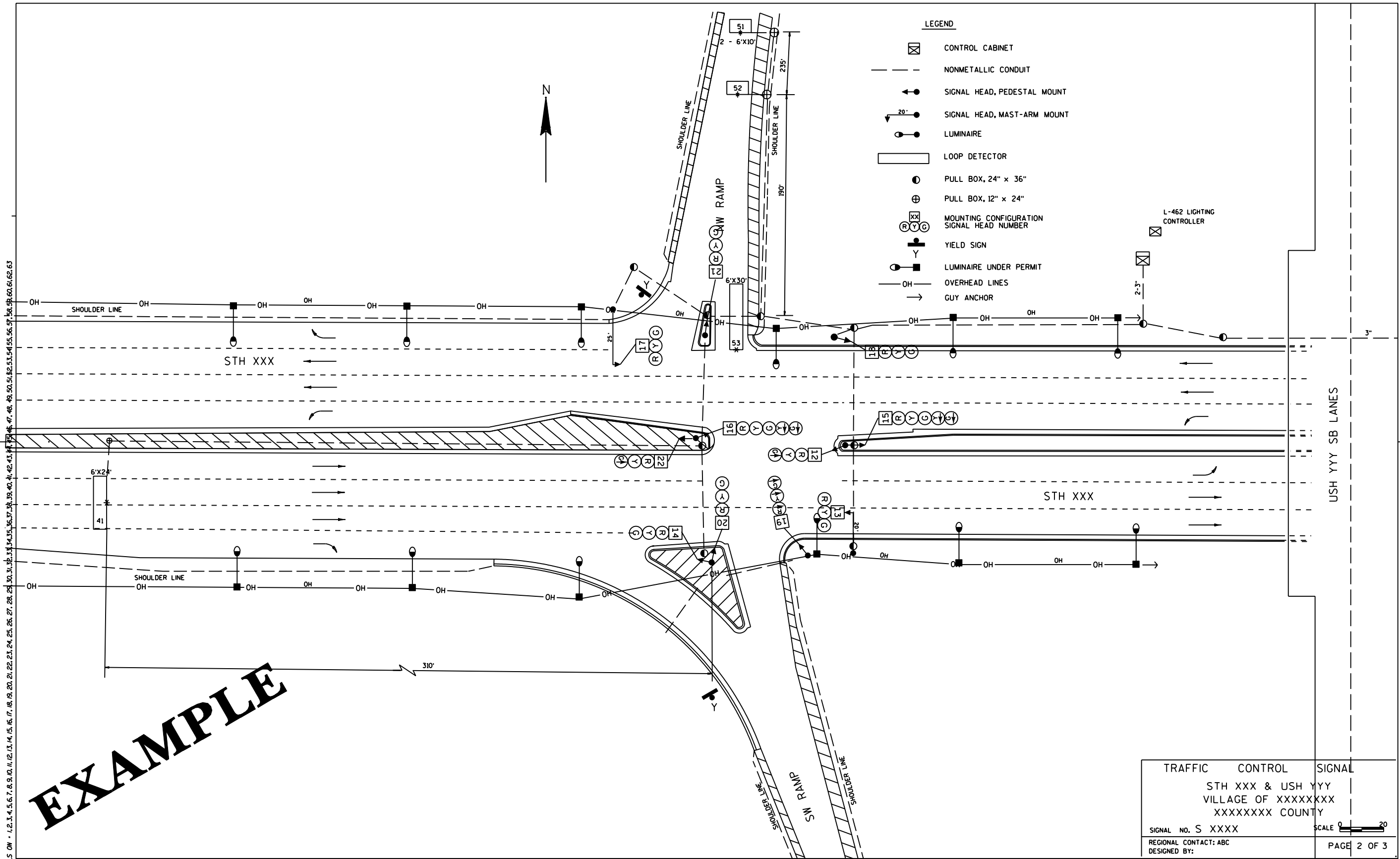
REVISION			
Rev. No.	UPGRADE CABINET & CONTROLLER CHANGE TO TTI PHASING		
	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
2	Date	By	Date By
	9/30/02	ABC	10/2/02 DEF

TRAFFIC CONTROL SIGNALS
 USH 41 & STH 125
 TOWN OF GRAND CHUTE
 OUTAGAMIE COUNTY
 SIGNAL NO. S 0329 SCALE 0 5' 10' 20'
 WISCONSIN DEPARTMENT OF TRANSPORTATION
 APPROVAL RECOMMENDED
 Date 3-25-85 _____ Regional Traffic Engineer
 APPROVED
 Date 4-11-85 _____ State Electrical Engineer
 I.D. NO. _____ Controller Type : _____

1/20/87 CONDUIT, PULL BOXES, HEAD CHANGES

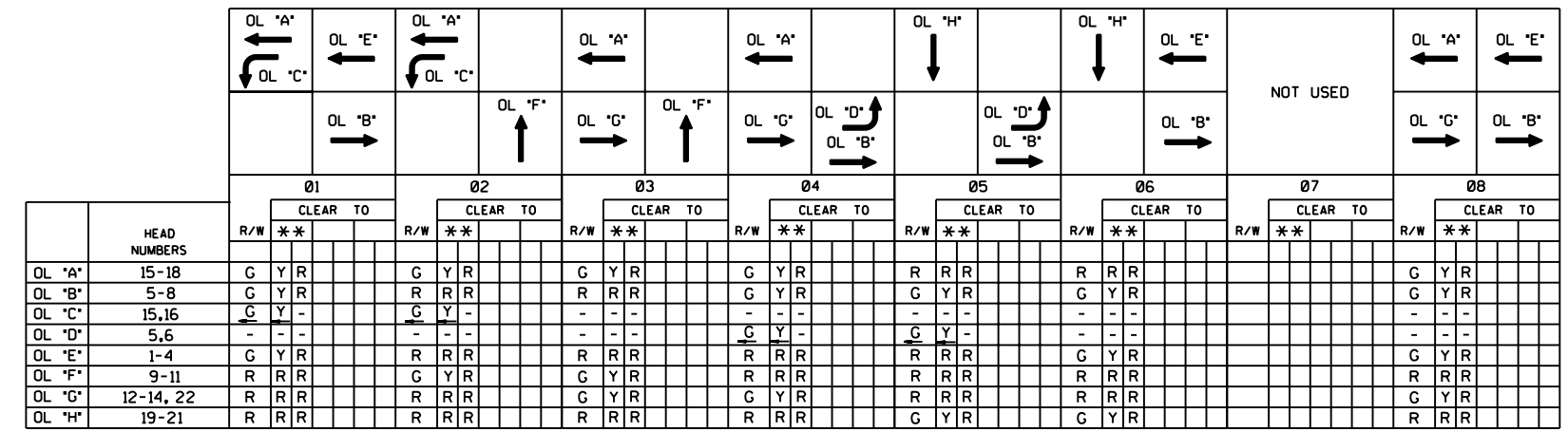
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

EXAMPLE



TRAFFIC CONTROL		SIGNAL	
STH XXX & USH YYY			
VILLAGE OF XXXXXXXX			
XXXXXXX COUNTY			
SIGNAL NO. S XXXX		SCALE 0 20 40	
REGIONAL CONTACT: ABC		PAGE 2 OF 3	
DESIGNED BY:			

SEQUENCE OF OPERATION

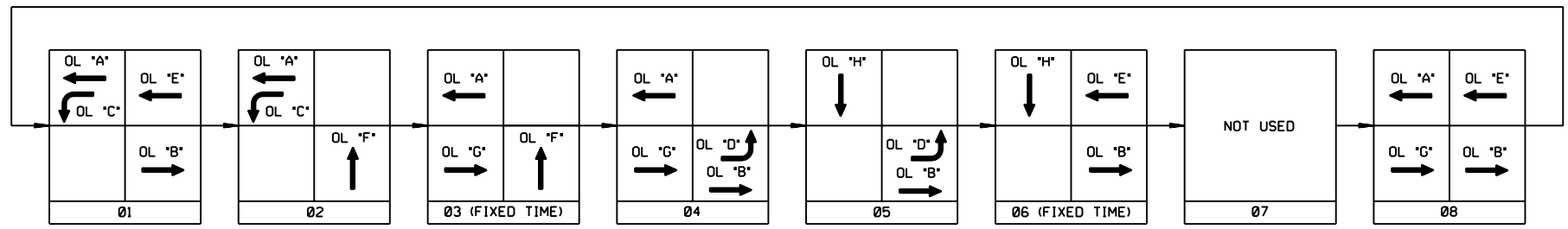


CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL DAY	PHASE RECALL NIGHT
1			COORD.	
2			MAX.	
3			MAX.	
4			COORD.	
5			MAX.	
6			MAX.	
8				MIN.

OVERLAPS

O.L. "A"	= 01,02,03,04,08
O.L. "B"	= 01,04,05,06,08
O.L. "C"	= 01,02
O.L. "D"	= 04,05
O.L. "E"	= 01,06,08
O.L. "F"	= 02,03
O.L. "G"	= 03,04,08
O.L. "H"	= 05,06



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

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01	NONE	2,3,4,5,6,8
02	NONE	1,3,4,5,6,8
03	NONE	1,2,4,5,6,8
04	NONE	1,2,3,5,6,8
05	NONE	1,2,3,4,6,8
06	NONE	1,2,3,4,5,8
07		
08	NONE	1,2,3,4,5,6

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	

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

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

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1				1	1			X	6X20	
21	2	X			2	2				6X30	
22	2				2	2				6X30	
41	3	X			4	4			X	6X24	
51	4	X			5	5	X			6X10	
52	5	X			5	5			X	6X10	
53	6	X			5	5				6X30	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PROVIDE FOR HAND CONTROL OPERATION
3. DAY - OMIT 08
NIGHT - OMIT 01, 03, 04, 06

TRAFFIC CONTROL SIGNAL

STH XXX & USH YYY
VILLAGE OF XXXXXXXX
XXXXXXXXXX COUNTY

SIGNAL NO. S XXXX SCALE 0 20

REGIONAL CONTACT: ABC DESIGNED BY: PAGE 3 OF 3

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63