SIGNAL HEAD CHART			
FACE	R	Y	G
2-1, 2-2, 2-3	●	●	●
5-1, 5-2	←	←	←
6-1, 6-2, 6-3, 6-4	●	●	●
8-1, 8-2, 8-3, 8-4	●	●	●

-ALL SIGNAL INDICATIONS ARE 12" LED
-ALL SIGNAL HEADS ARE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS

LOOP DETECTOR CHART			
NUMBER	SIZE (FT)	LOCATION	NOTES
D2-1, D2-2	6x6	IN-PLACE	SAW CUT
D5-1	6x6	IN-PLACE	
D5-2	6x6	IN-PLACE	
D6-1, D6-2, D6-3	6x6	IN-PLACE	
D8-1, D8-2	6x6	IN-PLACE	
D8-3, D8-4	6x6	IN-PLACE	
D8-5, D8-6	2-6x6	IN-PLACE	
D8-7, D8-8	2-6x6	35	

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

40
SCALE IN FEET

TH 94 WB ON-RAMP

HH 5 TO HH 4:
4" RSC
4-12/C#12
3-3/C#12
1-3/C#12 (LUM)
3-2/C#14
2-3/C#20

HH 6 TO HH 5:
3" RSC
2-12/C#12
1-3/C#12
3-2/C#14
1-3/C#20

HH 7 TO HH 6:
3" RSC
3-2/C#14

HH 8 TO HH 7:
1¼" NMC
3-2/C#14

HH 4 TO HH 3:
4" RSC
4-12/C#12
3-3/C#12
1-3/C#12 (LUM)
3-2/C#14
2-3/C#20

TH 101 SB
40 MPH

6 EVP

8 EVP

15

D6-1
D6-2
D6-3

END OF BRIDGE

D5-1
D5-2

2+5 EVP

TH 101 NB
40 MPH

JB 3
D2-2
D2-1
JB 3 TO JB 2:
¾" CONDUIT
2-2/C#14
JB 2

3" RSC
1-FO CABLE (6SM)
INTERCONNECT TO
TH 94 S RAMPS

JB 2 TO HH 2:
3" RSC
2-2/C#14
1-FO CABLE (6SM)

HH 2 TO HH 1:
1¼" NMC
2-2/C#14
1-FO CABLE (6SM)

HH 13 TO HH 1:
1¼" RSC
2-3/C#12 (LUM)

HH 11 TO HH 13:
3" RSC
2-12/C#14
2-4/C#14
1-3/C#14
1-3/C#20
2-3/C#14 (LUM)
10-2/C#14
1-1/C#6 INS. GR.

HH 4 TO HH 1:
4" RSC
4-12/C#12
3-3/C#12
1-3/C#12 (LUM)
5-2/C#14
2-3/C#20

HH 15 TO HH 9:
3" CONDUIT
1-4/C#14
1-1/C#6 INS. GR.

2" CONDUIT
1-FO CABLE (6SM)
INTERCONNECT TO S DIAMOND LAKE RD
(SEE INTERCONNECT LAYOUT)

HH 9 TO HH 11:
4" CONDUIT
2-12/C#14
1-4/C #14
1-3/C#14
1-3/C#20
1-3/C#14 (LUM)
3-2/C#14
1-FO CABLE (6SM)
1-1/C#6 INS. GR.

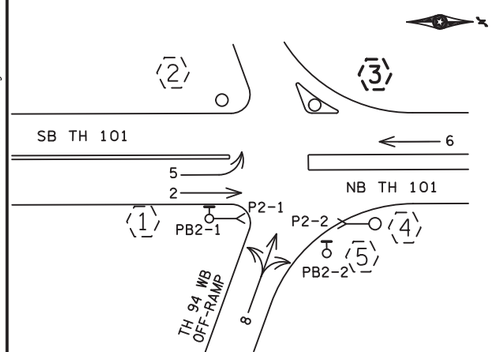
HH 12 TO HH 11:
1¼" NMC
4-2/C#14

TH 94 WB OFF-RAMP

D8-8
D8-7
D8-6
D8-5
D8-4
D8-3
D8-2
D8-1

24

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS ARE LOCATED AS SHOWN ABOVE

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE.
- PHASE 5 IS A PROTECTED LEFT TURN.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY	DATE	REVISIONS
J3T	JUL 8 19	SP 2738-30 RED-LINES

SYSTEM ID: 1736021 T.E. 6313
METER ADDRESS: 12800 T.H. 100
OLD SYSTEM ID: 22002

INTERSECTION LAYOUT
T.H. 100 AT T.H. 94 (N RAMPS)
ROGERS, HENNEPIN COUNTY

S.A.P. NO. | DRAWN BY: | CKD BY: | DATE:

CERTIFIED BY _____ LIC. NO. _____ DATE: _____
LICENSED PROFESSIONAL ENGINEER

STATE PROJ.NO. T.H. SHEET NO. 1 OF 4 SHEETS

PLOTTED/REVISED: 8-JUL-2019
PLOT NAME: Layout
PATH & FILENAME: Projects\DM_ROS\094A000\Traffic\Signals\22002 TH 100 N Ramp\T22002A2_sgl.dgn

(2)
PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' & 23'
2-POLE-MOUNTED ONE-WAY SIGNALS (TYPE 10A) AT 0 DEG AND 270 DEG
ONE-WAY EVP DETECTOR AND CONFIRMATION LIGHT (PHASE 6)
LUMINAIRE-200W HPS
1-TYPE D SIGN
2-R9-3a SIGNS (NO PED)
1-R6-1(L) SIGN (ONE-WAY)
EXTEND INTO HH 5:
3" RSC
2-12/C#12
2-3/C#12
1-3/C#12 (LUM)
1-3/C#20

(1)
PA85 POLE FOUNDATION
TYPE PA85-A-0-D40-9
1-APS PUSH BUTTON AND SIGN (LT ARROW)
1-R9-3a SIGN (NO PED)
1-CD PED HEAD MOUNTED AT 270 DEG
1-LED LUMINAIRE
EXTEND INTO HH 11:
3" CONDUIT
1-2/C#14
1-3/C#14 (LUM)
1-4/C#14
1-1/C#6 INS. GR.

(3)
PA85 POLE FOUNDATION
TYPE PA85-A-25 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
2-POLE MOUNTED SIGNALS (TYPE 10A) AT 90 DEG AND 180 DEG
ONE-WAY EVP DETECTOR AND CONFIRMATION LIGHT (PHASE 8)
1-TYPE D SIGN
2-R9-3a SIGNS (NO PED)
EXTEND INTO HH 6:
3" RSC
2-12/C#12
1-3/C#12
1-3/C#20

(6)
12' PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
"NO RIGHT TURN ON RED" BLANKOUT SIGN (R10-11C)
EXTEND INTO HH 15:
3" CONDUIT
1-3/C#14
1-1/C#6 INS. GR.

(4)
PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
1-ANGLE MOUNT SIGNAL AT 180 DEG
1-ANGLE MOUNT CD PED HEAD AT 180 DEG
LUMINAIRE 200W HPS
ONE-WAY EVP DETECTOR AND CONFIRMATION LIGHT (PHASE 2 & 5)
1-TYPE D SIGN
1-R9-3a SIGN (NO PED)
EXTEND INTO HH 9:
3" CONDUIT
2-12/C#14
1-3/C#14 (LUM.)
1-3/C#14
1-3/C#20
1-1/C#6 INS.GR.

(5)
PED PUSH BUTTON STATION (PB2-2)
1- APS PUSH BUTTON AND SIGN (RT ARROW)
EXTEND INTO HH 9:
1" CONDUIT
1-2/C#14

(A)
EQUIPMENT PAD
CONTROLLER, CABINET & SERVICE CABINET

EXTEND 4" RSC INTO HH 1:
4-12/C#12
3-3/C#12
7-2/C#14
2-3/C#20
1-FO CABLE(6SM)

EXTEND 4" RSC INTO HH 13:
2-12/C#14
2-4/C#14
1-3/C#14
10-2/C#14
1-3/C#20
1-1/C#6 INS. GR.

3" RSC EXTEND INTO HH 11:
(CONNECT TO INPLACE STUB OUT)
1-FO CABLE(6SM)

SERVICE CABINET TO CABINET:
1 1/4" RSC
2-1/C#6
1-1/C#6 INS GR.

SERVICE CABINET TO HH 14:
2" RSC
3-1/C#2

SERVICE CABINET TO HH 1:
2" RSC
2-3/C#12 (LUM)
1-3/C#14 (LUM)

(B)
SOURCE OF POWER
WOOD POLE MOUNTED TRANSFORMER
2" RISER AND WEATHERHEAD

2" RSC TO HH 14:
3-1/C#2

BY	DATE	REVISIONS
J3T	JUL 8 19	SP 2738-30 RED-LINES

SYSTEM ID: 1736021 T.E. 6313
METER ADDRESS: 12800 T.H. 100
OLD SYSTEM ID: 22002

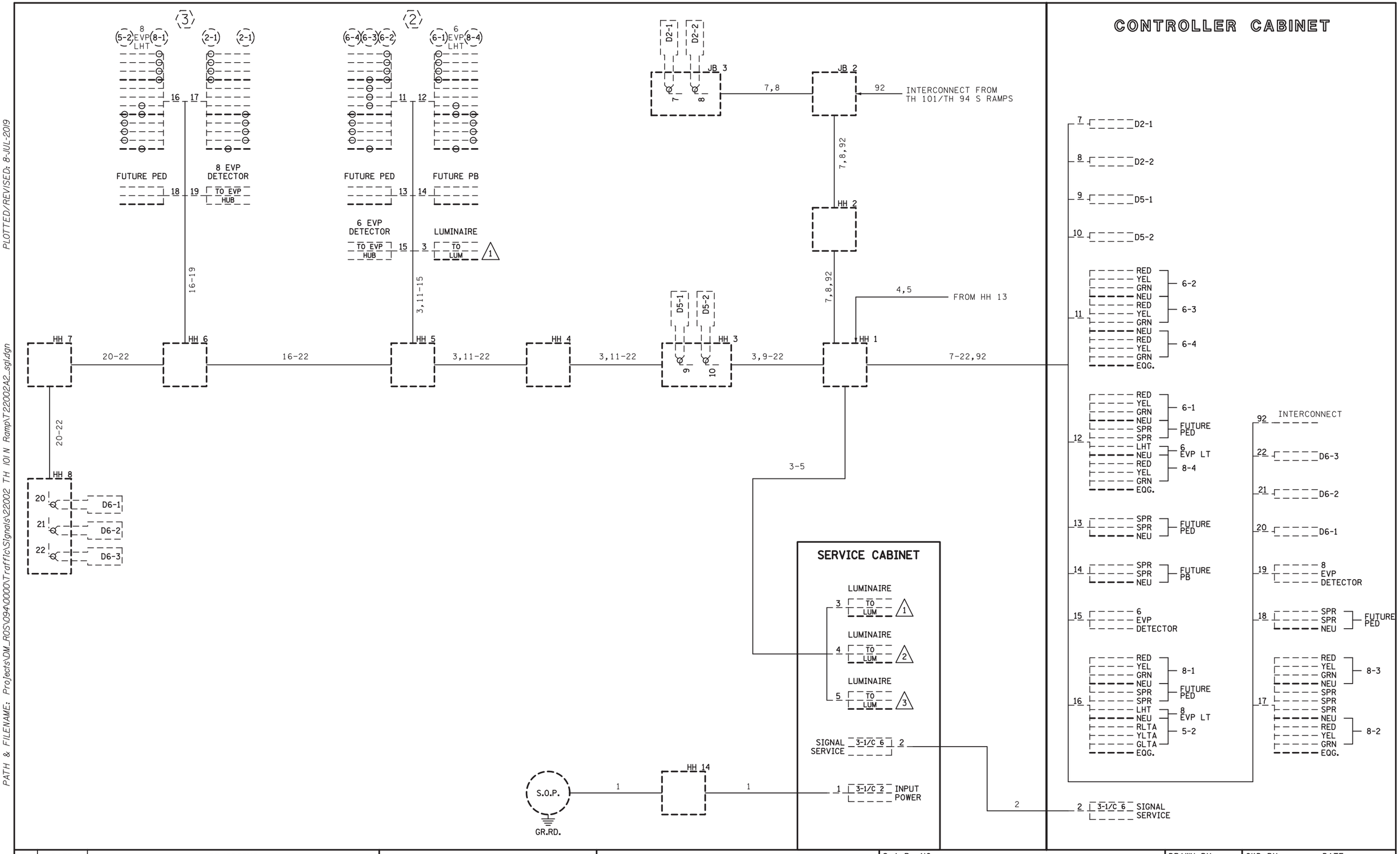
INTERSECTION NOTES
T.H. 100 AT T.H. 94 (N RAMPS)
ROGERS, HENNEPIN COUNTY

S.A.P. NO. | DRAWN BY: | CKD BY: DATE:

CERTIFIED BY _____ LIC. NO. _____ DATE: _____
LICENSED PROFESSIONAL ENGINEER

STATE PROJ.NO. T.H. SHEET NO. 2 OF 4 SHEETS

PLOTTED/REVISED: 8-JUL-2019
IPLOT NAME: Notes
PATH & FILENAME: Projects\DM_ROS\094A000\Traffic\Signals\22002 TH 101N Ramp\T22002A2_sgl.dgn



IPLOT NAME: Wiring I
PATH & FILENAME: Projects\DM_ROS\094A0000\Traffic\Signals\22002 TH 101N Ramp\T22002A2_sgl.dgn

PLOTTED/REVISED: 8-JUL-2019

BY	DATE	REVISIONS
J3T	JUL 8 19	SP 3738-30 RED-LINES

SYSTEM ID: 1736021 T.E. 6313
METER ADDRESS: 12800 T.H. 100
OLD SYSTEM ID: 22002

FIELD WIRING DIAGRAM (1 OF 2)
T.H. 100 AT T.H. 94 (N RAMPS)
ROGERS, HENNEPIN COUNTY

S.A.P. NO. | DRAWN BY: | CKD BY: DATE:

CERTIFIED BY _____ LIC. NO. _____ DATE: _____
LICENSED PROFESSIONAL ENGINEER

STATE PROJ.NO. T.H. SHEET NO. 3 OF 4 SHEETS

IPLOT NAME: Wiring 2
PATH & FILENAME: Projects\DM_ROS\094A0000\Traffic\Signals\22002 TH 101 N Ramp\T22002A2_sgl.dgn
PLOTTED/REVISED: 8-JUL-2019

CONTROLLER CABINET

P2-1: DWK, WLK, SPR, NEU → 23
PB2-1 → 24
2-2: RED, YEL, GRN, NEU
2-3: RED, YEL, GRN, NEU → 25
5-1: RLTA, YLTA, GLTA, NEU
2-1: RED, YEL, GRN, NEU
P2-2: DWK, WLK, SPR, NEU → 26
SPR, SPR, SPR, NEU
2+5 EVP LIGHT, EQ.G, NEU → 27
2+5 EVP DETECTOR → 28
INS. GR. → 29
PB2-2 → 30
D8-5 → 31
D8-6 → 32
D8-7 → 33
D8-8 → 34
D8-1 → 35

INTERCONNECT → 91
SIGN, SPR, SPR, NEU → 39
D8-1 → 35
D8-4 → 38
D8-3 → 37
D8-2 → 36
D8-1 → 35

91

(1)
P2-1 → 23 → 5 → LUMINAIRE TO LUM (3)
PB2-1 → 24 → TO PB
29 → INS. GR.
5,23,24,29
HH 11
29 GR.RD.
33 D8-7
34 D8-8
35-38
HH 12
35 D8-1
36 D8-2
37 D8-3
38 D8-4

TO HH 1
4,5
HH 13
23-39
4,5,23-39

(4)
(5-1)(2-3)(2-2) (2-1)P2-2
25 26
LUMINAIRE TO LUM (2) → 4 → 27 2+5 EVP LIGHT
28 2+5 EVP DETECTOR TO EVP HUB
29 INS. GR.

(5)
PED PB STA PB2-2 TO PB → 30
30
4,25-29
HH 9
31 D8-5
32 D8-6
29 GR.RD.
4,25-32,39.91
91
HH 10
91 INTERCONNECT FROM TH 101/DIAMOND LAKE RD

(6)
SIGN → 39
29 INS. GR. — BASE LUG
GR.RD.
29,39
HH 15
29,39

BY	DATE	REVISIONS
J3T	JUL 8 19	SP 2738-30 RED-LINES

SYSTEM ID: 1736021 T.E. 6313
METER ADDRESS: 12800 T.H. 100
OLD SYSTEM ID: 22002

FIELD WIRING DIAGRAM (2 OF 2)
T.H. 100 AT T.H. 94 (N RAMPS)
ROGERS, HENNEPIN COUNTY

S.A.P. NO. | DRAWN BY: | CKD BY: | DATE:

CERTIFIED BY _____ LIC. NO. _____ DATE: _____
LICENSED PROFESSIONAL ENGINEER

STATE PROJ.NO. T.H. SHEET NO. 4 OF 4 SHEETS

PLOTTED/REVISED: 3/11/2011

(A) EQUIPMENT PAD
CONTROLLER, CABINET & SERVICE CABINET
EXTEND 4" RSC INTO HH-1 WITH:
4 - 12/C#12
3 - 3/C#12
7 - 2/C#14
2 - 3/C#20
REMOVE- 1 - 6PR #19
F & I- 1 - FO CABLE(6SM)✳
EXTEND 4" RSC INTO HH-13 WITH:
2 - 12/C#12
1 - 3/C#12
1 - 3/C#20
3 - 2/C#14
REMOVE- 1 - 6PR#19
2 - 12/C#14
1 - 3/C#14
1 - 3/C#14
10 - 2/C#14
F & I- 1 - 3/C#20
1 - 1/C#6 INS. GR.
3" RSC EXTEND INTO HH-11
(CONNECT TO INPLACE STUB OUT)
1 - FO CABLE(6SM)✳
SERVICE CABINET TO CABINET
1 1/4" RSC
2 - 1/C#6
1 - 1/C#6 BR. GR.
SERVICE CABINET TO HH-14 WITH:
2" RSC
3 - 1/C#2
SERVICE CABINET TO HH-1 WITH:
2" RSC
1 - 3/C #12 (LUM.)
REMOVE- 1 - 3/C #12 (LUM.)
F & I- 1 - 3/C #12 (LUM.)

(4) PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9
(DAVIT AT 350°)
F & I- 3 - ONE-WAY SIGNALS OVERHEAD
(0',12' & 24' FROM END OF MAST ARM)
1 - ANGLE MOUNT SIGNAL AT 180°
1 - ANGLE MOUNT C.D. PED IND AT 180°
INSTALL SALVAGED-LUMINAIRE 200W HPS
INSTALL SALVAGED- ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2 & 5)
INSTALL SALVAGED-TYPE D SIGN
INSTALL SALVAGED-1-R9-3a SIGN (NO PED)
EXTEND INTO INP. HH:
REMOVE- 3" RSC
2 - 12/C#12
1 - 3/C#12
1 - 3/C#20
EXTEND INTO HH-9:
F & I- 3" CONDUIT
2 - 12/C#14
1 - 3/C#14 (LUM.)
1 - 3/C#14
1 - 3/C#20
1 - 1/C#6 INS.GR.

(3) PA85 POLE FOUNDATION
TYPE PA85-A-25
(DAVIT AT 350°)
1 - ONE-WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
F & I- 1 - ONE-WAY SIGNAL OVERHEAD
(11' FROM END OF MAST ARM)
TYPE 10A POLE MOUNTED AT 90°
TYPE 10A POLE MOUNTED AT 180°
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(PHASE 8)
TYPE D SIGN
2-R9-3a SIGNS (NO PED)
EXTEND INTO HH-6:
3" RSC
2 - 12/C#12
1 - 3/C#12
1 - 3/C#20

(2) PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9
(DAVIT AT 350°)
3-ONE-WAY SIGNALS OVERHEAD
(0',11' & 23' FROM END OF MAST ARM)
TYPE 10A POLE MOUNTED AT 0°
TYPE 10A POLE MOUNTED AT 270°
ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(PHASE 6)
LUMINAIRE-200W HPS
TYPE D SIGN
2-R9-3a SIGNS (NO PED)
1-R6-1(L) SIGN (ONE-WAY)
EXTEND INTO HH-5:
3" RSC
2 - 12/C#12
3 - 3/C#12
1 - 3/C#20

LED SIGNAL INDICATIONS

SIGNAL FACE	R	Y	G
2-1,2-2,2-3	●	●	●
5-1,5-2	⇦	←	←
6-1,6-2,6-3,6-4	○	●	●
8-1,8-3,8-4	○	●	●
8-2	●	●	●

-ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12"
-EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD

NMC LOOP DETECTORS

DESIGNATION	NO. & SIZE/FT.	LOCATION
D2-1,D2-2 (SAW-CUT)	1-6'X6'	250'
D5-1	1-6'X6'	40'
D5-2	1-6'X6'	10'
D6-1,D6-2,D6-3	1-6'X6'	250'
D8-1,D8-2,D8-3,D8-4	1-6'X6'	120'
D8-5,D8-6,D8-7,D8-8	2-6'X6'	5',20'

-ALL LOOP DETECTORS SHALL BE NMC UNLESS NOTED OTHERWISE
-LOCATION: DISTANCE FROM CROSSWALK/STOP

T.H. 101
(40 M.P.H.)
15
4" RSC
4 - 12/C #12
4 - 3/C #12
3 - 2/C #14
2 - 3/C #20
3" RSC
2 - 12/C #12
1 - 3/C #12
3 - 2/C #14
1 - 3/C #20
1 1/4" NMC
3 - 2/C #14
3" RSC
3 - 2/C #14
Ø8 EVP
Ø6 EVP
Ø2+Ø5 EVP
D5-1
D5-2
D6-1
D6-2
D6-3
D2-1
D2-2
JB 1
JB 2
JB 3
1 1/4" RSC
REMOVE- 1 - 3/C #12
F & I- 1 - 3/C #12 (LUM.)
3" RSC
2 - 2/C #14
REMOVE- 1 - 6PR #19
F & I- 1 - FO CABLE(6SM)✳
(SEE INTERCONNECT LAYOUT)
INTERCONNECT TO
T.H. 94 S. RAMPS
4" RSC
4 - 12/C #12
4 - 3/C #12
5 - 2/C #14
2 - 3/C #20
1 1/4" NMC
2 - 2/C #14
REMOVE- 1 - 6PR #19
F & I- 1 - FO CABLE(6SM)✳
3" RSC
REMOVE- 2 - 12/C #12
2 - 3/C #12
4 - 2/C #14
1 - 3/C #20
1 - 6PR #19
F & I- 2 - 12/C #14
1 - 3/C #14
1 - 3/C #14 (LUM.)
9 - 2/C #14
1 - 3/C #20
1 - 1/C #6 INS.GR.
1 1/4" NMC
REMOVE- 2 - 2/C #14
F & I- 4 - 2/C #14
2" CONDUIT
1 - FO CABLE(6SM)✳
(SEE INTERCONNECT LAYOUT)
INTERCONNECT TO
S. DIAMOND LAKE RD.
T.H. 94 W.B. OFF-RAMP
D8-1
D8-2
D8-3
D8-4
D8-5
D8-6
D8-7
D8-8
0 40
scale feet

(1) REMOVE- PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
F & I- PEDESTAL FOUNDATION
10' PEDESTAL POLE AND BASE
INSTALL SALVAGED- 1 - TYPE 4A
1 - R9-3a SIGN (NO PED)
REMOVE- 3" RSC
3 - 3/C #12
F & I- 1 - C.D. PED IND
1 - APS PUSH BUTTON AND SIGN (RT. ARROW)
EXTEND INTO HH-13:
3" CONDUIT
1 - 2/C#14
1 - 3/C#14
1 - 1/C#6 INS. GR.

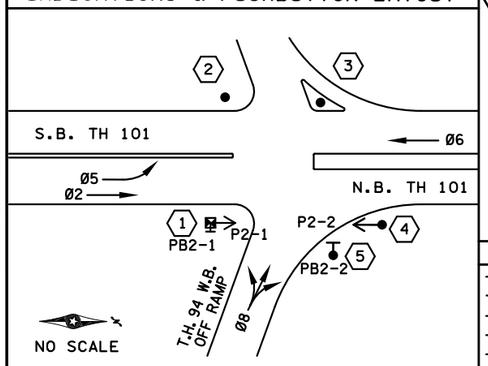
(B) SOURCE OF POWER
WOOD POLE MOUNTED TRANSFORMER
2" RISER AND WEATHERHEAD
2" RSC TO HH-14 WITH:
3 - 1/C #2

(5) PUSH BUTTON STATION FOUNDATION
F & I- 1-APS PEDESTRIAN PUSH BUTTON STATION
1-APS PUSH BUTTON AND SIGN (RT ARROW)
EXTEND INTO HH-9:
2" CONDUIT
1 - 2/C#14

F & I- 4" CONDUIT
2 - 12/C #14
1 - 3/C #14
1 - 3/C #14 (LUM.)
3 - 2/C #14
1 - 3/C #20
1 - 1/C #6 INS.GR.
1 - FO CABLE(6SM)✳

SIGNAL SYSTEM ID#: 22002
T.E.#: 4969
METER ADDRESS:
12800 T.H. 101

CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT



SIGNAL OPERATION NOTES

- NORMAL OPERATION IS 4 PHASE
- FLASH MODE SHALL BE ALL RED
- Ø5 SHALL BE PROTECTED LEFT TURNS
- Ø2 SHALL BE ON PEDESTRIAN RECALL
- Ø6 SHALL BE VEHICLE RECALL

NOTES:

1) ALL ITEMS SHOWN ARE INPLACE AND SHALL REMAIN INPLACE UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL PROTECT AND MAINTAIN INPLACE ITEMS (SEE SPECIAL PROVISIONS).
2) SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, LED PEDESTRIAN INDICATIONS, LED VEHICLE INDICATIONS, ONE-WAY SIGNAL MOUNT AND PAINTING OF SIGNAL SYSTEM.
3) THE EXACT LOCATION OF HANDHOLES, POLES AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE MN/DOT TRAFFIC OFFICE PERSONNEL.
4) ITEMS DENOTED WITH AN ✳ ARE INCLUDED IN THE INTERCONNECT PAY ITEM.
5) THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK. SEE UTILITY PLANS.
6) THE CONTRACTOR SHALL REMOVE INPLACE PEDESTRIAN INDICATIONS AND FURNISH AND INSTALL LED PEDESTRIAN INDICATIONS WITH COUNTDOWN TIMER.
7) ALL INPLACE YELLOW AND GREEN INCANDESCENT VEHICLE SIGNAL HEAD SECTIONS SHALL BE REPLACED WITH LED SECTIONS AND LEDS.
8) THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL.

NO	DATE	BY	CKD	APPR	REVISION

$TIME$
$DATE$
DGN
$FILEA$

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: JONATHAN J. KRIEG
Date _____ License # 40780

STATE PROJECT NO. 2780-75
FEDERAL PROJECT NO. 238-010-02

DRAWN BY D. RASMUSSEN
DESIGNED BY D. RASMUSSEN
CHECKED BY J. KRIEG
COMM. NO. 0096911

SRF CONSULTING GROUP, INC.

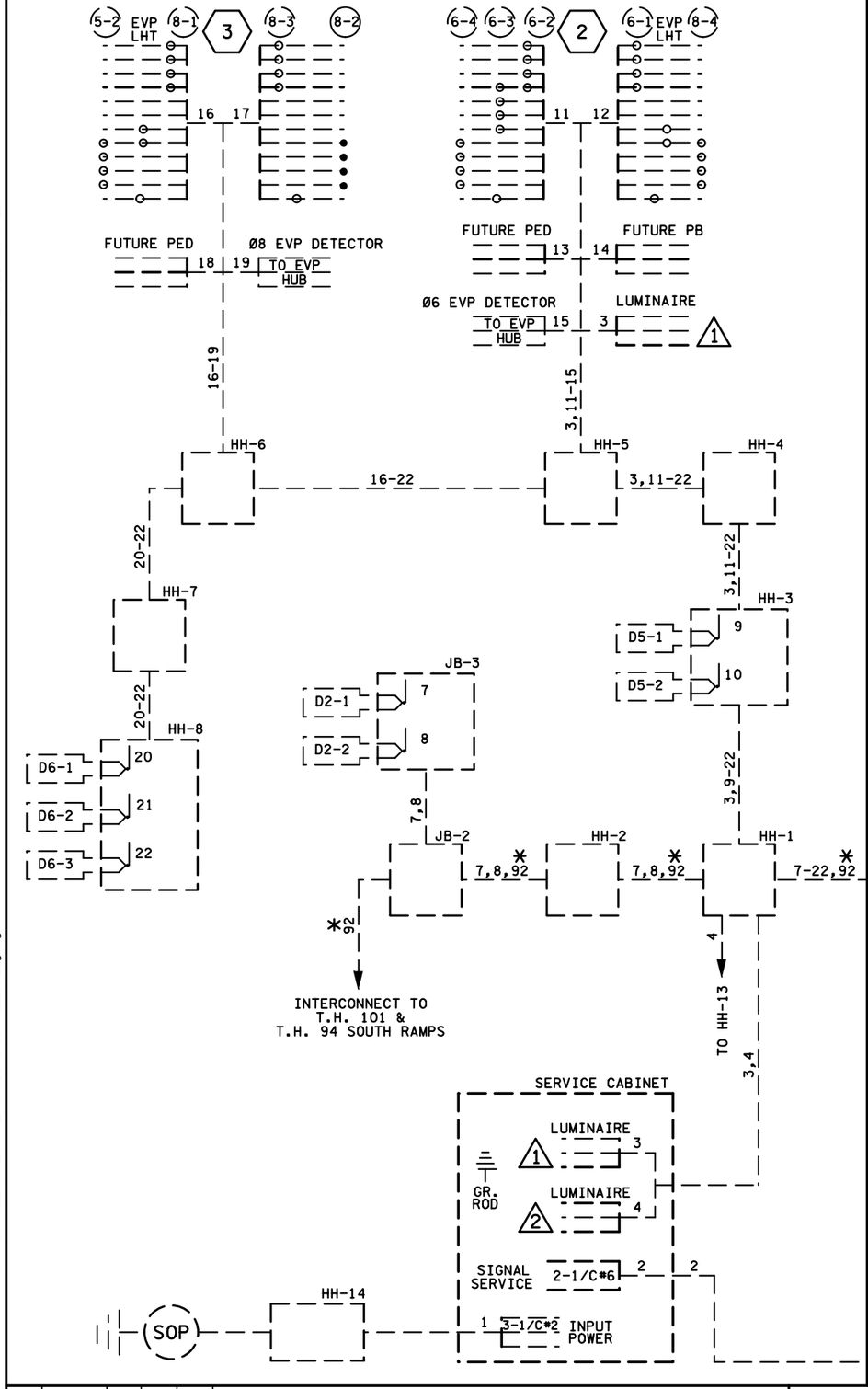
MINNESOTA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL PLANS
N.B. TH 101 FLYOVER DIAMOND LAKE ROAD
REVISED INTERSECTION LAYOUT
T.H. 101 AT T.H. 94 NORTH RAMPS (SYSTEM "A")

SHEET #R01 OF #XXX

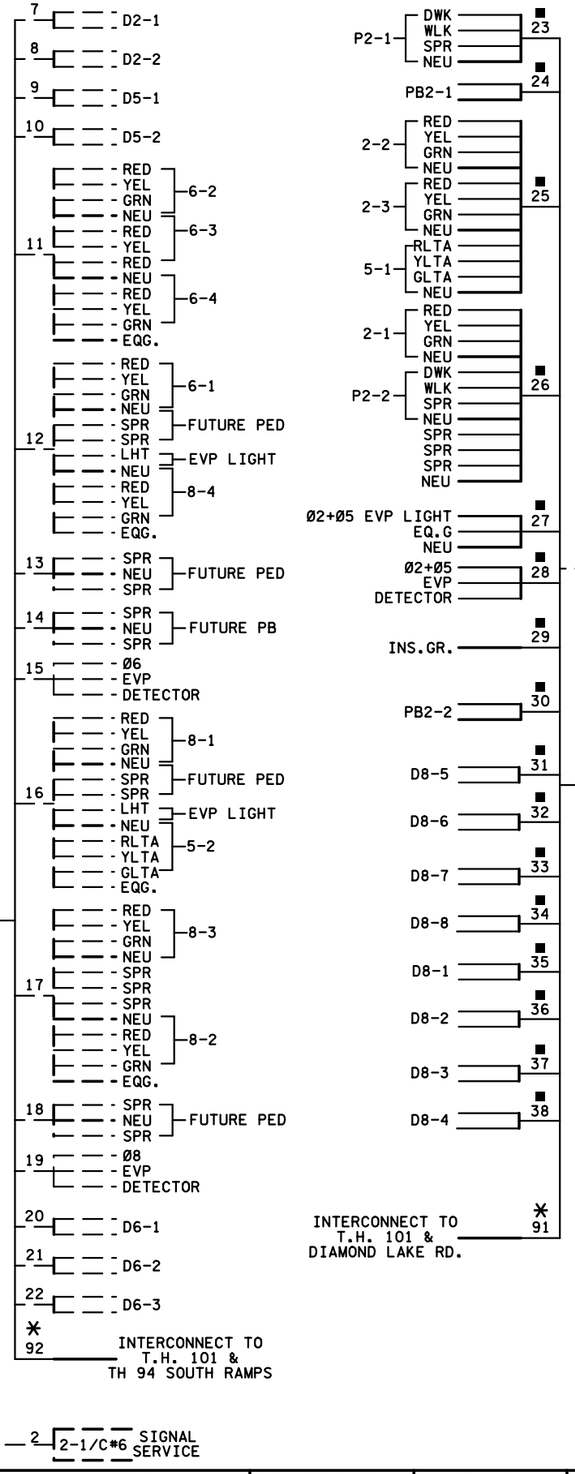
DISTRICT #: METRO
IPLOT NAME: 122002lo
PATH & FILENAME: IP_PWP:d078l69\v122002sgl.dgn

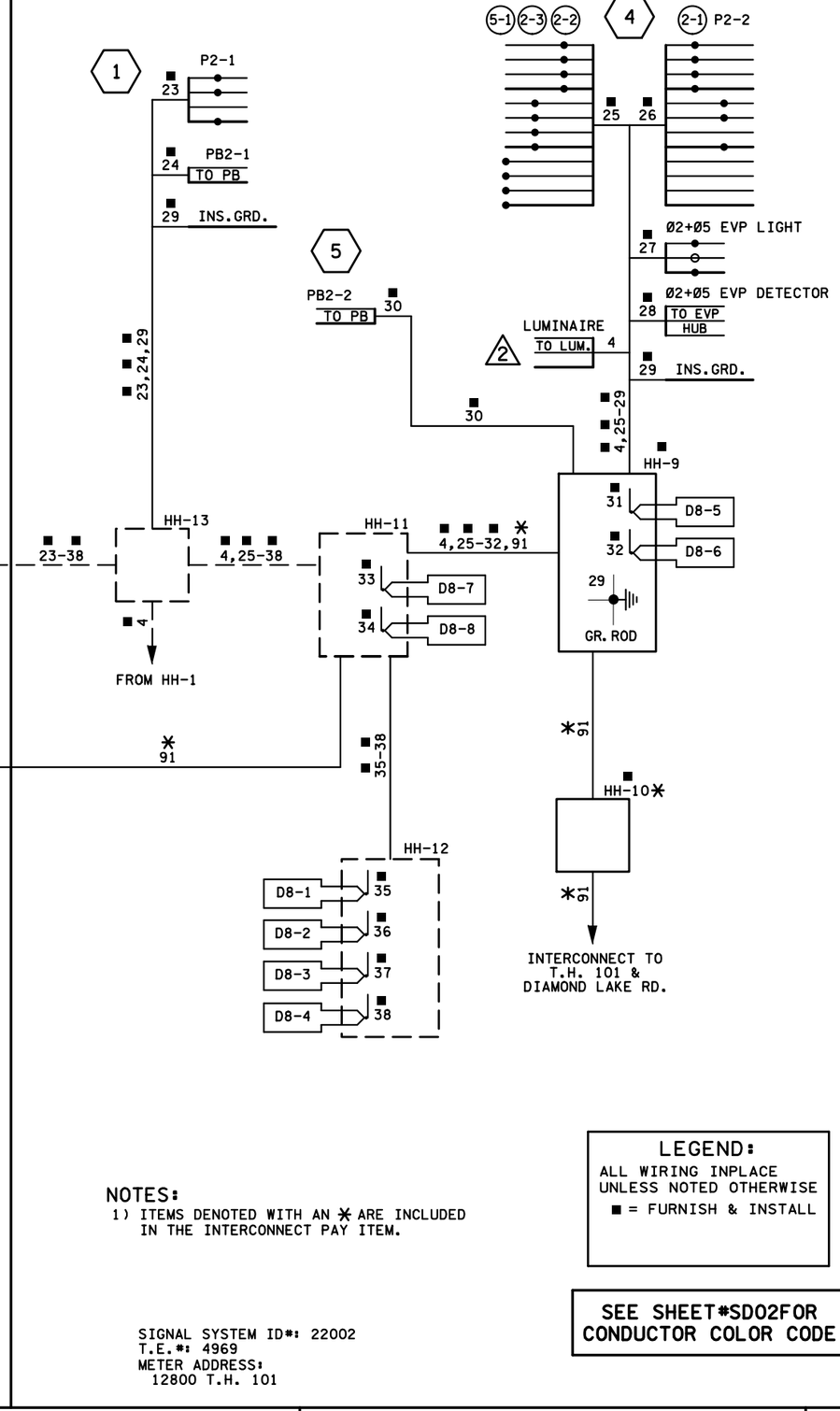
PLOTTED/REVISED: 3/11/2011

DISTRICT *: METRO
IPLOT NAME: t22002w
PATH & FILENAME: IP_PWP:sd078697\t22002sgldgn



CONTROLLER CABINET





NOTES:
1) ITEMS DENOTED WITH AN * ARE INCLUDED IN THE INTERCONNECT PAY ITEM.

LEGEND:
ALL WIRING INPLACE UNLESS NOTED OTHERWISE
■ = FURNISH & INSTALL

SEE SHEET #SD02 FOR CONDUCTOR COLOR CODE

SIGNAL SYSTEM ID#: 22002
T.E.#: 4969
METER ADDRESS:
12800 T.H. 101

NO	DATE	BY	CKD	APPR	REVISION

#TIME#
#DATE#
#DGN#
#FILEA#

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: JONATHAN J. KRIEG
Date _____ License # 40780

STATE PROJECT NO. 2780-75
FEDERAL PROJECT NO. 238-010-02

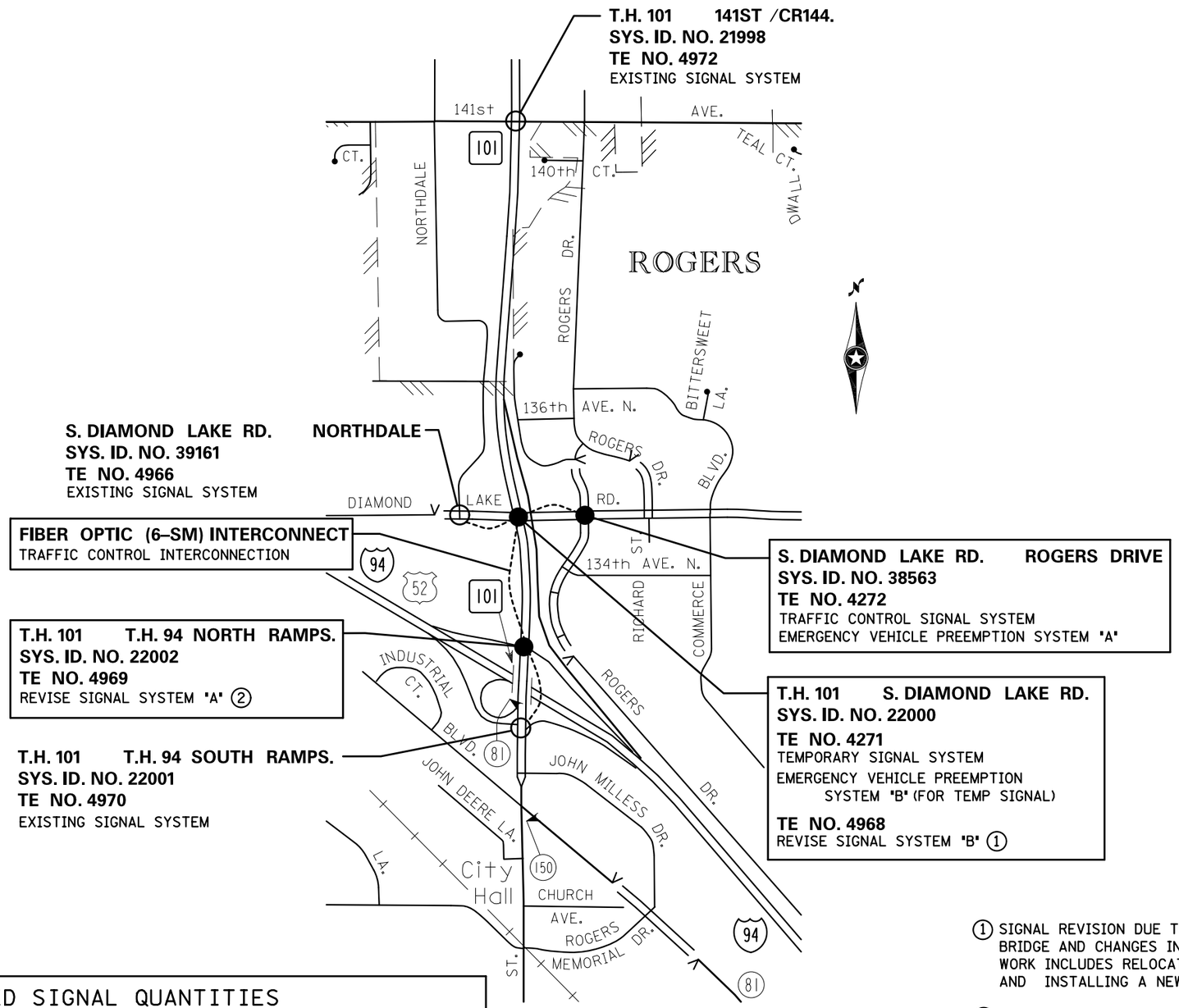
DRAWN BY D. RASMUSSEN
DESIGNED BY D. RASMUSSEN
CHECKED BY J. KRIEG
COMM. NO. 0096911

SRF CONSULTING GROUP, INC.

MINNESOTA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL PLANS
N.B. TH 101 FLYOVER DIAMOND LAKE ROAD
REVISED FIELD WIRING DIAGRAM
T.H. 101 AT T.H. 94 NORTH RAMPS (SYSTEM "A")

SHEET #WD01 OF #XXX

PLOTTED/REVISED: 3/11/2011



(1) SIGNAL REVISION DUE TO CONSTRUCTION OF THE FLYOVER BRIDGE AND CHANGES IN INTERSECTION GEOMETRY. MAJOR WORK INCLUDES RELOCATING EXISTING POLES, AND FURNISHING AND INSTALLING A NEW SIGNAL MAST ARM POLE.

(2) SIGNAL REVISION DUE TO ELIMINATION OF FREE RIGHT TURN AND CHANGES IN LANE ASSIGNMENTS. MAJOR WORK INCLUDES FURNISHING AND INSTALLING A NEW SIGNAL MAST ARM POLE.

AF	TABULATED SIGNAL QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	LOCATION	UNIT	ESTIMATED QUANTITIES
2565	TRAFFIC CONTROL SIGNAL SYSTEM	S. DIAMOND LAKE ROAD @ ROGERS DRIVE (ID# 38563)	SIG SYS	1
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM A	S. DIAMOND LAKE ROAD @ ROGERS DRIVE (ID# 38563)	LUMP SUM	1
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM B	T.H. 101 @ S. DIAMOND LAKE ROAD (ID# 22000)	LUMP SUM	1
2565	TRAFFIC CONTROL INTERCONNECTION	5 SIGNALS INTERCONNECTED	LUMP SUM	1
2565	REVISE SIGNAL SYSTEM A	T.H. 101 @ T.H. 94 N. RAMPS (ID# 22002)	SYSTEM	1
2565	REVISE SIGNAL SYSTEM B	T.H. 101 @ S. DIAMOND LAKE ROAD (ID# 22000)	SYSTEM	1
2565	TEMPORARY SIGNAL SYSTEM	T.H. 101 @ S. DIAMOND LAKE ROAD (ID# 22000)	SYSTEM	1

DISTRICT #: METRO
IPLOT NAME: t22002tit
PATH & FILENAME: IP_PWP-d0781697\t22002sgl.dgn

NO	DATE	BY	CKD	APPR	REVISION

#TIME#
#DATE#
#DGN#
#FILEA#

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Print Name: JONATHAN J. KRIEG

Date _____ License # 40780

STATE PROJECT NO. 2780-75

FEDERAL PROJECT NO. 238-010-02

DRAWN BY M. BRESSLER
DESIGNED BY M. BRESSLER
CHECKED BY J. KRIEG
COMM. NO. 0096911

SRF CONSULTING GROUP, INC.

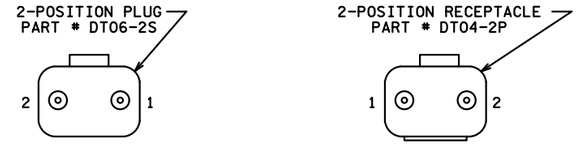
MINNESOTA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL PLANS
N.B. TH 101 FLYOVER DIAMOND LAKE ROAD
GENERAL LAYOUT & TABULATED SIGNAL QUANTITIES

SHEET #SD10 OF #XXX

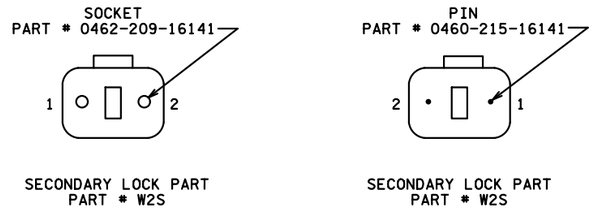
PLOTTED/REVISED: 3/11/2011

2-POSITION CONNECTOR

(BACK VIEW)

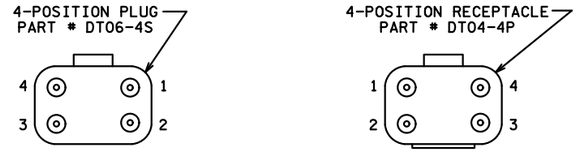


(FRONT VIEW)

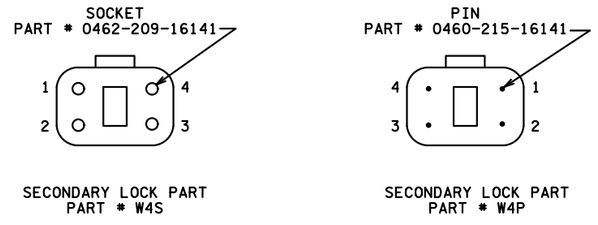


4-POSITION CONNECTOR

(BACK VIEW)

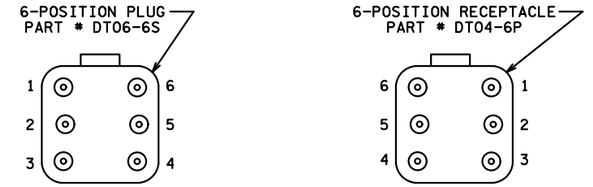


(FRONT VIEW)



6-POSITION CONNECTOR

(BACK VIEW)



(FRONT VIEW)

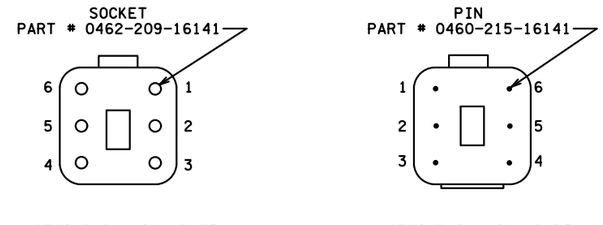


TABLE 1 2 Position DT Connector

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	PB (If Required)
WH or CL	2	WH or CL	NEU

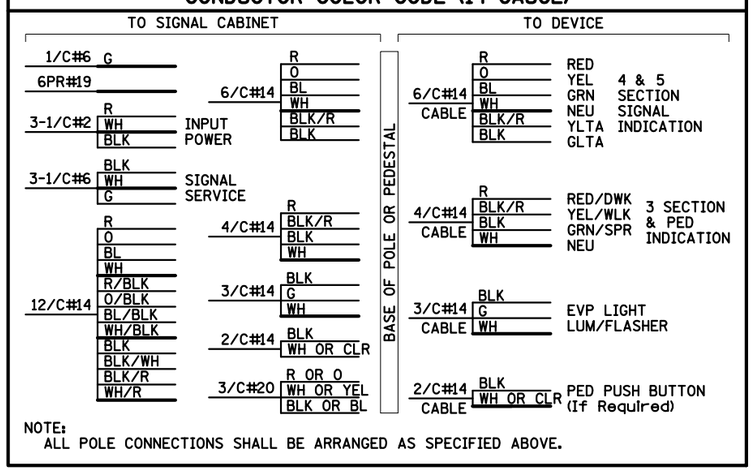
TABLE 2a 4 Position DT Connector (3 Section Head/DWK/WLK)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R or R/BLK or BLK	1	R	RED or DWK
O or O/BLK or BLK/WH or BLK	2	BLK/R	YEL or WLK
BL or BL/BLK or BLK/R or BLK	3	BLK	GRN or SPR
WH or WH/BLK or WH/R	4	WH	NEU

TABLE 3 6 Position DT Connector (4 and 5 Section Heads)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R	1	R	RED
O	2	O	YEL
BL	3	BL	GRN
WH	4	WH	NEU
O/BLK	5	BLK/R	YLTA
BL/BLK	6	BLK	GLTA

CONDUCTOR COLOR CODE (14 GAUGE)



NOTE:
ALL POLE CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

TABLE 2b 4 Position DT Connector (EVP LHT/LUM/Flasher)
(Used with 3 Conductor Cable Only)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
BLK	1	BLK	EVP LHT or LUM or RED or YEL
(Not Used)	2	(Not Used)	(Not Used) (See Note #8)
G	3	G	EQ.G
WH	4	WH	NEU

NOTES:

1. DT04-P RECEPTACLE SHALL BE TERMINATED TO THE WIRING HARNESS RUNNING FROM THE BASE/JUNCTION BOX OF THE POLE TO SIGNAL INDICATIONS.
2. DT06-_S PLUG SHALL BE TERMINATED TO THE CABLES RUNNING FROM THE TRAFFIC SIGNAL CABINET TO THE BASE/JUNCTION BOX OF THE POLE.
3. THERE SHALL BE A MINIMUM OF 24 INCHES OF SLACK ON EACH CABLE IN EVERY POLE BASE /JUNCTION BOX.
4. STRIP A MAXIMUM OF 6 INCHES OF THE OUTER JACKET OF EACH SIGNAL CABLE.
5. STRIP .250 INCHES OF INSULATION FROM EACH INDIVIDUAL CONDUCTOR.
6. CRIMP PINS OR SOCKETS USING RATCHETING TYPE CRIMPING TOOL HDT-48-00. NO OTHER CRIMPING TOOL WILL BE ALLOWED.
7. WIRES MUST BE TERMINATED AS DETAILED IN TABLES 1 THRU 3 DEPENDING ON WIRE COUNT.
8. ANY UNUSED PIN MUST HAVE A SEALING PLUG INSTALLED IN BOTH THE PLUG & RECEPTACLE (PART # 114017).
9. LABEL EACH HALF OF THE CONNECTOR (PLUG AND RECEPTACLE) WITH THE DEVICE DESIGNATION (AS INDICATED IN THE WIRING DIAGRAM) USING A PERMANENT BLACK MARKER.

Wire Color Code Key

R	Red
O	Orange
BL	Blue
WH	White
BLK	Black
BRN	Brown
CL	Clear
G	Green
R/BLK	Red with Black Stripe
O/BLK	Orange with Black Stripe
BL/BLK	Blue with Black Stripe
WH/BLK	White with Black Stripe
WH/R	White with Red Stripe
BLK/WH	Black with White Stripe
BLK/R	Black with Red Stripe

DISTRICT *: METRO
IPLOT NAME: t22002con
PATH & FILENAME: IP_PWP:d078l697\t22002sgl.dgn

NO	DATE	BY	CKD	APPR	REVISION

TIME
DATE
DGN
FILEA

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Print Name: JONATHAN J. KRIEG
Date _____ License # 40780

STATE PROJECT NO. 2780-75
FEDERAL PROJECT NO. 238-010-02

DRAWN BY M. BRESSLER
DESIGNED BY M. BRESSLER
CHECKED BY J. KRIEG
COMM. NO. 0096911

SRF CONSULTING GROUP, INC.

MINNESOTA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL PLANS
N.B. TH 101 FLYOVER DIAMOND LAKE ROAD
TRAFFIC SIGNAL POLE BASE CONNECTOR DETAILS

SHEET #SD02 OF #XXX