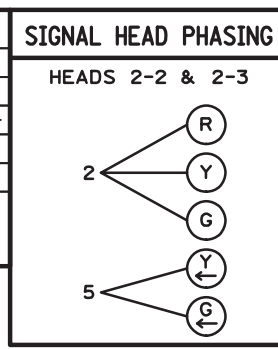


PLOTTED/REVISED: 12-JUN-2020

DISTRICT #: Metro
I-PLOT NAME: 035
PATH & FILENAME: Projects\DM_POS\035\0000\Traffic\Signal\22290\Pending\T22290LW.spl.dgn

SIGNAL HEAD CHART					
FACE	R	Y	G	Y	G
2-1	○	○	○		
2-2, 2-3	○	○	○	←	←
6-1, 6-2	○	○	○		
8-1, 8-2, 8-3	○	○	○		



NOTES:

- ALL ITEMS ARE IN PLACE UNLESS NOTED.
- FOR CONSTRUCTION OF CURB RAMP SEE DETAIL SHEET.
- USE PVC OR HDPE FOR ALL NEW CONDUIT.
- CONDUIT SIZES ARE NOMINAL DIAMETER.
- ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
- FIBER OPTIC CONDUIT TO ENTER SIGNAL CABINET THROUGH EXISTING 3" SPARE CONDUIT.
- SEE SHEETS SS15-SS20 FOR INTERCONNECT PLAN.
- ** DENOTES INTERCONNECT PAY ITEM WORK.

(4)

PA85 POLE FOUNDATION
TYPE PA85-A-25-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10A AT 90 & 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASE 6)
2-R9-3 SIGNS (FACING POLES 1 & 3)
EXTEND INTO HH 9:
3" RSC
1-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20
1-3/C #20

(A) EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
EXTEND INTO HH 1:
4" RSC
2-12/C #12
1-5/C #12
3-3/C #12
6-2/C #14
F&I 2-2/C 14
1-3/C #20
1-6PR #19
F&I 1-1/C 6 INS. GR.

EXTEND INTO HH 10:
4" RSC
3-12/C #12
2-3/C #12
3-2/C #14
2-3/C #20
1-6PR #19

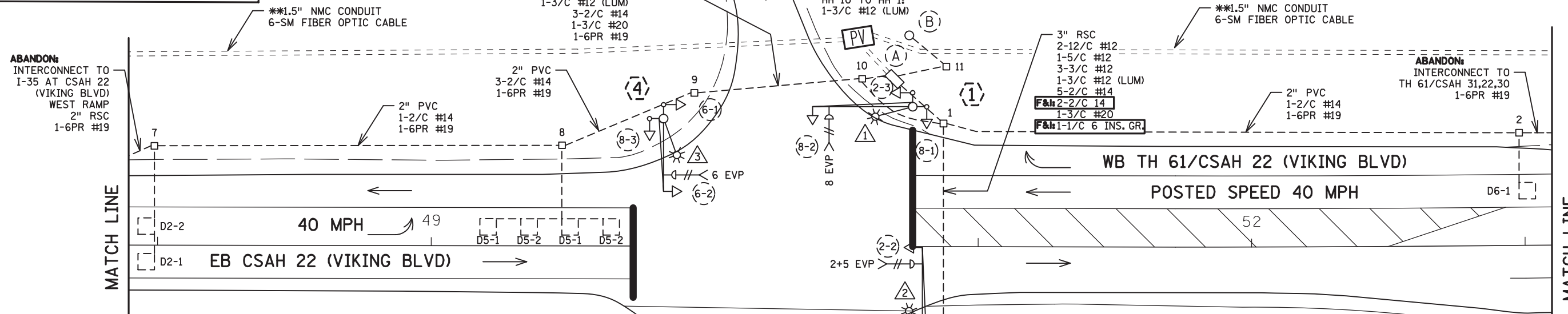
(B) S.O.P. WOOD POLE
2" RSC RISER, WEATHERHEAD
AND CONDUIT TO HH 11:
3-1/C #2

(1) PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10A AT 90 & 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASE 8)
2-R9-3 SIGNS (FACING POLES 2 & 4)
EXTEND INTO HH 10:
3" RSC
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

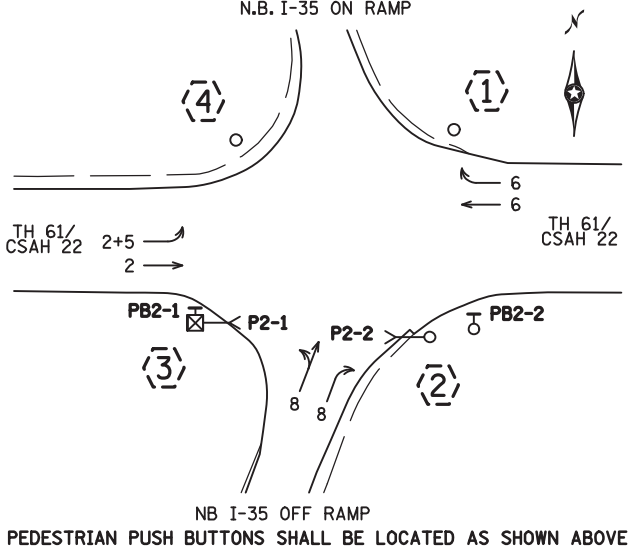
LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D2-1, D2-2	6x6	175
D5-1	2-6x6	20 & 50
D5-2	2-6x6	5 & 35
D6-1	6x6	225
D8-1, D8-2	6x6	120
D8-3	2-6x6	2 & 12
D8-4	6x6	20

-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



F&I PED PUSH BUTTON STATION
1-APS PB AND SIGN (LT ARROW) (PB2-1)
1" PVC TO HH 6:
1-2/C 14
1-1/C 6 INS. GR.

(3) PEDESTAL FOUNDATION
8' PEDESTAL POLE PLUS BASE
TYPE 4A
CD PED HEAD
REMOVE: 1-APS PUSH BUTTON AND SIGN (LT ARROW) (PB2-1)
R9-3 SIGN (FACING POLE 4)
EXTEND INTO HH 6:
3" RSC
1-5/C #12
1-3/C #12

SIGNAL SYSTEM OPERATION

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

REMOVE: PED PUSH BUTTON STATION
1-APS PB AND SIGN (RT ARROW) (PB2-2)
1 1/4" PVC TO HH 3:
1-2/C 14
F&I PED PUSH BUTTON STATION
1-APS PB AND SIGN (RT ARROW) (PB2-2)
1" PVC TO HH 3:
1-2/C 14
1-1/C 6 INS. GR.

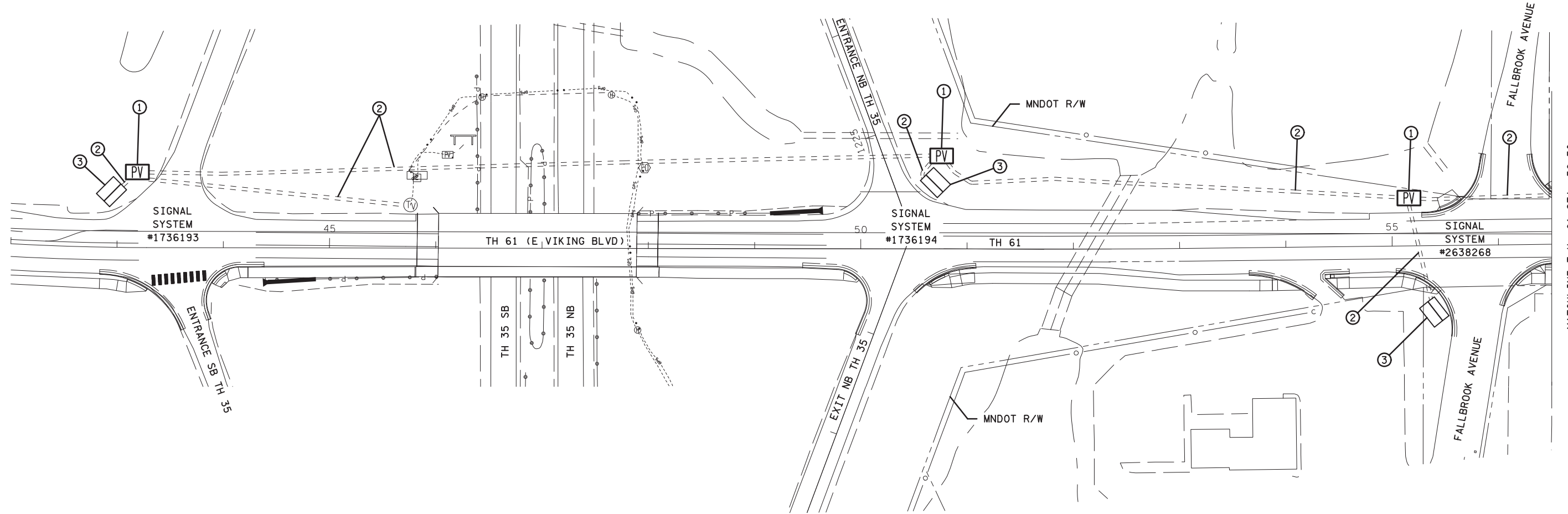
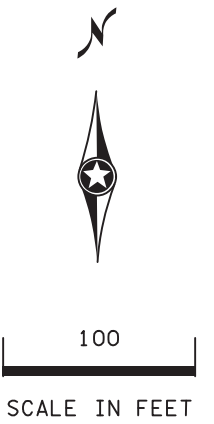
(2) PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD AT 0'
TYPE 10B AT 180 DEG
CD PED HEAD AT 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASES 2+5)
R10-12 SIGN (ADJACENT TO 2-2)
R9-3) SIGN (FACING POLE 1)
EXTEND INTO HH 3:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #12 (LUM)
1-3/C #20



BY	DATE	REVISIONS	SYSTEM ID: 22290 1736194	T.E.	INTERSECTION LAYOUT REVISE SIGNAL SYSTEM "E" TH 35 AT TH 61/ CSAH 22 (VIKING BLVD) EAST RAMPS IN WYOMING, CHISAGO COUNTY	S.A.P. NO. 248-110-003	DRAWN BY: JAR	CKD BY: GAK	DATE:
			METER ADDRESS: 5150 E. VIKING BLVD.	T.E.		CERTIFIED BY: <i>Gregory Ken</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 26829	DATE: 6-11-20	
			MASTER ID:	T.E.		STATE PROJ. NO. 1302-23 (T.H.61)	SHEET NO. SS35 OF SS39 SHEETS		

PLOTTED/REVISED: 12-JUN-2020

DISTRICT #: Metro
 IPLOT NAME: fiber_plan
 PATH & FILENAME: Projects\DM罗斯06\302\023\Traffic\Signal\fiber-plan.dgn



GENERAL NOTES:

1. CONSTRUCTION OF THE FIBER OPTIC INTERCONNECTION IS PROPOSED (LOCATED) TO NOT IMPACT ANY EXISTING UTILITIES.
2. THE CONTRACTOR SHALL CALL GOPHER STATE ONE CALL FOR UTILITY LOCATES PRIOR TO BEGINNING CONSTRUCTION.
3. AFTER THE UTILITIES ARE FIELD LOCATED/MARKED THE CONTRACTOR SHALL VERIFY THAT THE PROPOSED LOCATION OF THE FIBER OPTIC CABLE AVOIDS THE EXISTING UTILITIES. IF NEEDED, THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER TO CHANGE THE LOCATION OF THE PROPOSED FIBER OPTIC CABLE TO AVOID EXISTING UTILITIES.

SPECIFIC NOTES:

- ① F&I: FIBER PULL VAULT. F&I OUTDOOR FIBER SPLICE ENCLOSURE, F&I FO CABLE SPLICING. COIL 70' OF ADDITIONAL LENGTH OF FIBER (6-SM) IN VAULT. LOCATE THE VAULT SO THAT IT WILL BE LEAST LIKELY TO BE IMPACTED BY FUTURE INTERSECTION CONSTRUCTION WORK.
- ② F&I: 1.5" NMC CONDUIT BORED WITH (1) 6-SM FIBER OPTIC CABLE.
- ③ SEE SIGNAL PLAN FOR SIGNAL CABINET NOTES.
F&I 1-FO FIELD TERMINATED PIGTAIL.

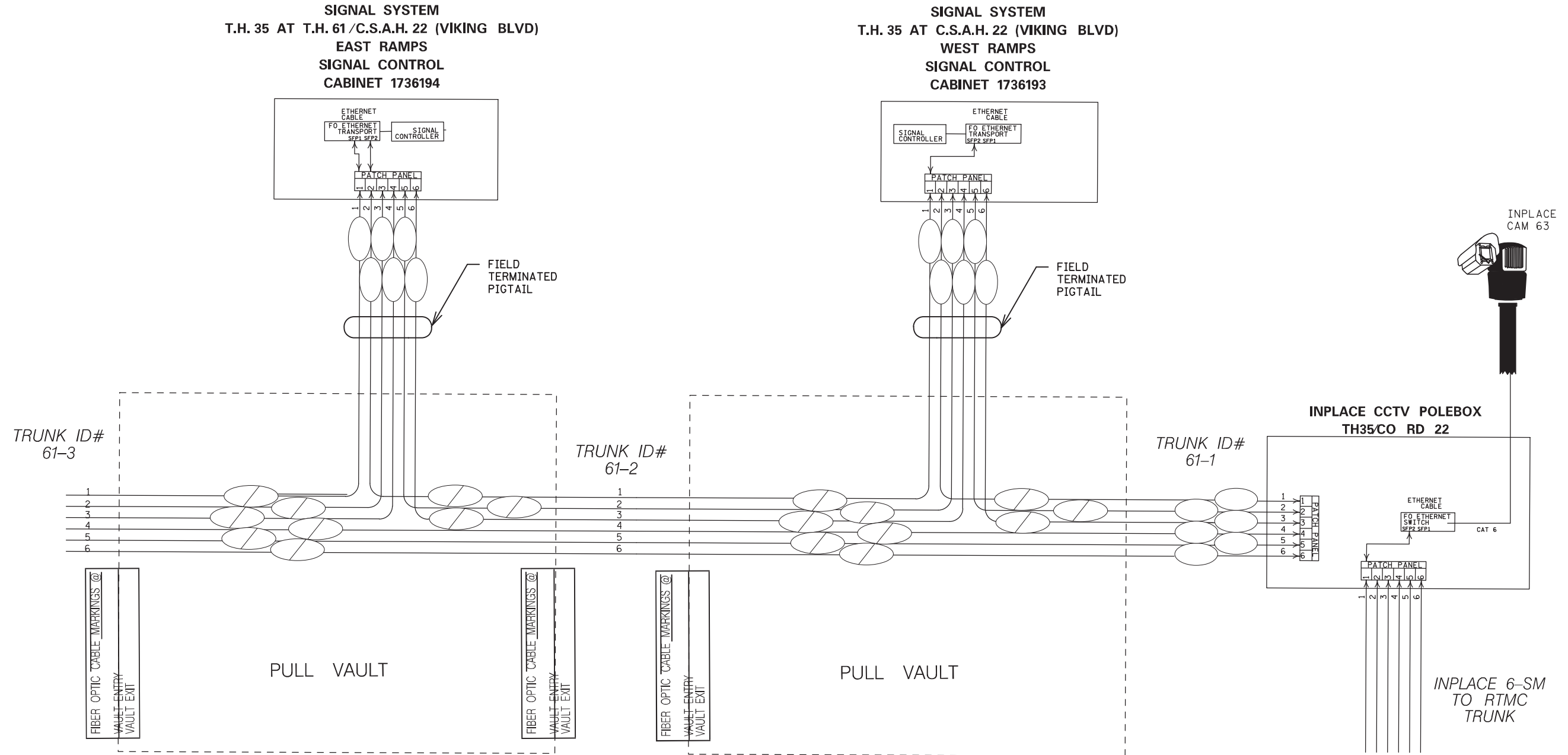
BY	DATE	REVISIONS

**TRAFFIC CONTROL INTERCONNECTION
(FIBER OPTIC)**

S.A.P. NO. 248-110-003	DRAWN BY: JDC	CKD BY: GAK	DATE:
CERTIFIED BY <i>Gregory Ken</i>	LIC. NO. 26829	DATE: 5-18-20	
STATE PROJ. NO. 1302-23 (T.H.61)		SHEET NO. SS20 OF SS39 SHEETS	

FIBER OPTIC SCHEMATIC

(FOR SIGNAL COMMUNICATIONS)



DISTRICT #: Metro
 PLOT NAME: 014
 PATH & FILENAME: Projects\DM_POS\06\N302\023\Traffic\Signal\T1302-23.dgn
 PLOTTED/REVISED: 12-JUN-2020

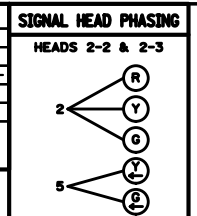
BY	DATE	REVISIONS	SYSTEM ID: 2638268 T.E. 15111	S.A.P. NO. 248-110-003	DRAWN BY: JAR CKD BY: GAK DATE:
			METER ADDRESS: 5133 E VIKING	CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829 DATE: 5-18-20
			OLD SYSTEM ID: N/A	STATE PROJ. NO. 1302-23 (T.H.61) SHEET NO. SS14 OF SS39 SHEETS	
			FIBER OPTIC SCHEMATIC TRAFFIC CONTROL SIGNAL SYSTEMS T.H. 61 (E. VIKING BLVD.) IN WYOMING, CHISAGO COUNTY		

PLOTTED/REVISED: 6/3/2016

DISTRICT #: METRO
I/LOT NAME: layout
PATH & FILENAME: IP_FWP-40780659N122290LW_sgl.dgn

SIGNAL HEAD CHART					
FACE	R	Y	G	Y	G
2-1	○	○	○		
2-2, 2-3	○	○	○	◄	◄
6-1, 6-2	○	○	○		
8-1, 8-2, 8-3	○	○	○		

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



(4)

PABS POLE FOUNDATION
TYPE PAB5-A-25-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD AT 0°
2-TYPE 10A AT 90 & 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASE 6)
2-R9-3 SIGNS (FACING POLES 1 & 3)
EXTEND INTO HH 9:
3" RSC
1-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

3" RSC
1-12/C #12
1-3/C #12
1-3/C #12 (LUM)
3-2/C #14
1-3/C #20
1-6PR #19

(A) EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
EXTEND INTO HH 1:
4" RSC
2-12/C #12
1-5/C #12
3-3/C #12
6-2/C #14
1-3/C #20
1-6PR #19

(B) S.O.P. WOOD POLE
2" RSC RISER, WEATHERHEAD
AND CONDUIT TO HH 11:
3-1/C #2

(1)

PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
ONE WAY SIGNAL OVERHEAD AT 0°
2-TYPE 10A AT 90 & 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASE 8)
2-R9-3 SIGNS (FACING POLES 2 & 4)
EXTEND INTO HH 10:
3" RSC
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

3" RSC STUBBED OUT
(THREAD AND CAP BOTH ENDS)
SERVICE CABINET TO CONTROLLER CABINET:
2" RSC
2-1/C #6
1-1/C #6 INS. GR.
SERVICE CABINET TO HH 11:
2" RSC
3-1/C #2
SERVICE CABINET TO HH 10:
2" RSC
3-3/C #12 (LUM)
HH 10 TO HH 1:
1-3/C #12 (LUM)

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

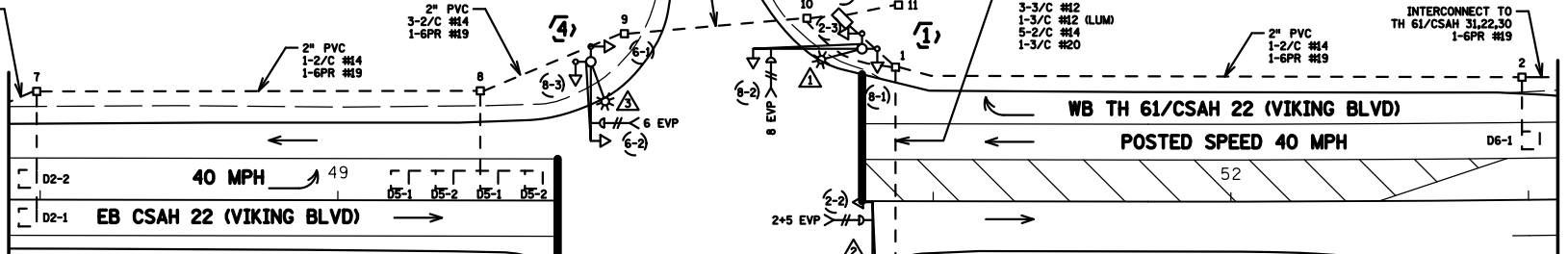
LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D2-1, D2-2	6x6	175
D5-1	2-6x6	20 & 50
D5-2	2-6x6	5 & 35
D6-1	6x6	225
DB-1, DB-2	6x6	120
DB-3	2-6x6	2 & 12
DB-4	6x6	20

-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

INTERCONNECT TO I-35 AT CSAH 22 (VIKING BLVD) WEST RAMP
2" RSC
1-6PR #19

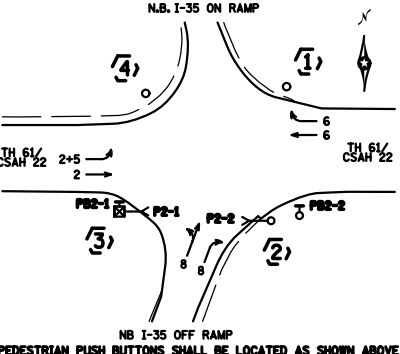
MATCH LINE



INTERCONNECT TO TH 61/CSAH 22, 22.30
1-6PR #19

MATCH LINE

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

(3)

PEDESTAL FOUNDATION
8" PEDESTAL POLE PLUS BASE
TYPE 4A
CD PED HEAD
1-APS PUSH BUTTON AND SIGN (LT ARROW)(PB2-1)
R9-3 SIGN (FACING POLE 4)
EXTEND INTO HH 6:
3" RSC
1-5/C #12
1-3/C #12

SIGNAL SYSTEM OPERATION

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

(2)

PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-200W HPS
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD AT 0°
TYPE 10B AT 180 DEG
CD PED HEAD AT 180 DEG
ONE WAY EVP DETECTOR AND LIGHT (PHASES 2+5)
R10-12 SIGN (ADJACENT TO 2-2)
R9-3 SIGN (FACING POLE 1)
EXTEND INTO HH 3:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #12 (LUM)
1-3/C #20

PED PB STATION
1-APS PB AND SIGN (RT ARROW) (PB2-2)
EXTEND INTO HH 3:
1 1/4" CONDUIT
1-2/C #14

3" RSC
1-5/C #12
1-3/C #12
1-2/C #14

2" PVC
2-2/C #14



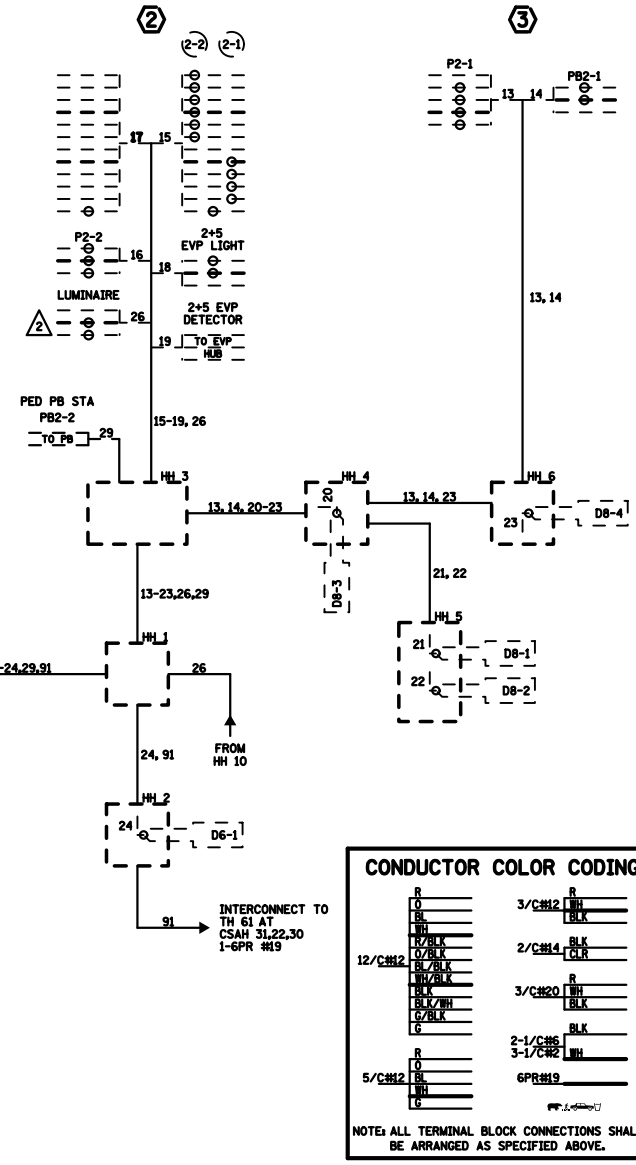
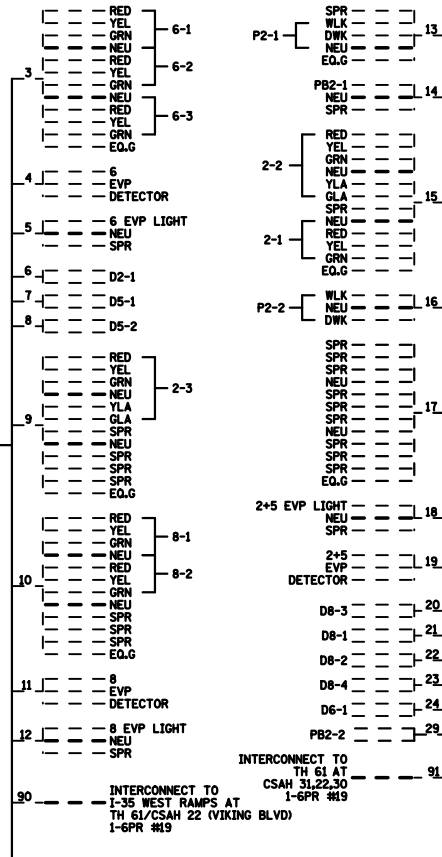
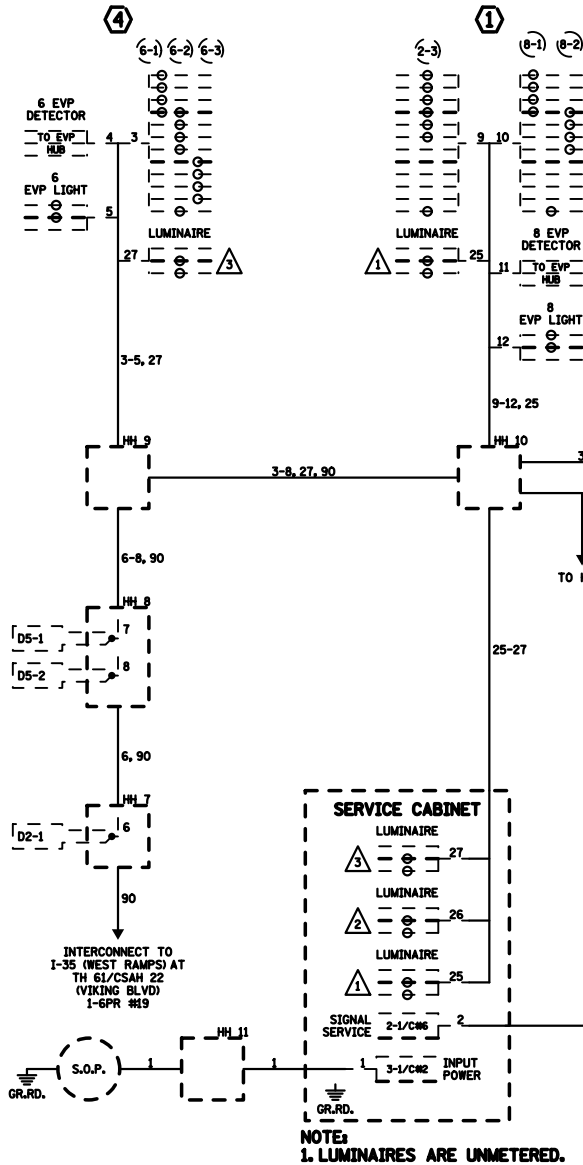
BY	DATE	REVISIONS
SJK	07-25-12	AS-BUILT OF SP 1380-63
EJA	06-03-16	PLAN UPDATES

SYSTEM ID: 22290	T.E.
METER ADDRESS: 5150 E. VIKING BLVD.	
MASTER ID:	T.E.

INTERSECTION LAYOUT
TH 35 AT TH 61/
CSAH 22 (VIKING BLVD) EAST RAMPS
IN WYOMING, CHISAGO COUNTY

S.A.P. NO.	DRAWN BY: GDS	CKD BY: MJF	DATE: 08-02-10
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.35)	SHEET NO. 1 OF 2 SHEETS	

CONTROLLER CABINET



BY	DATE	REVISIONS	SYSTEM ID: 22290	T. E.
SJK	07-25-12	AS-BUILT OF SP 1380-63	METER ADDRESS: 5150 E. VIKING BLVD.	
EJA	06-03-16	PLAN UPDATES	MASTER ID:	T. E.

FIELD WIRING DIAGRAM
 TH 35 AT TH 61/
 CSAH 22 (VIKING BLVD) EAST RAMPS
 IN WYOMING, CHISAGO COUNTY

S.A.P. NO.	DRAWN BY: GDS	CKD BY: MJF	DATE: 08-02-10
CERTIFIED BY	LIC. NO.	DATE:	
STATE PROJ. NO.	(T.H.35)	SHEET NO. 2 OF 2 SHEETS	

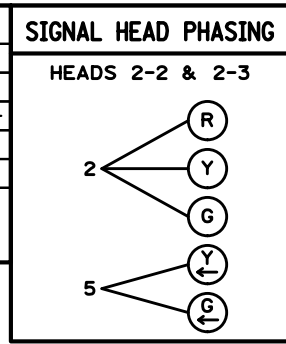
PLOTTED/REVISED: 8/1/2012

DISTRICT #: METRO
IPLOT NAME: layout
PATH & FILENAME: IP_PWP-d0780659T22290LW_sgl.dgn

SIGNAL FACE CHART

FACE	R	Y	G	Y	G
2-1	○	○	○		
2-2, 2-3	○	○	○	◀	◀
6-1, 6-2	○	○	○		
8-1, 8-2, 8-3	○	○	○		

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



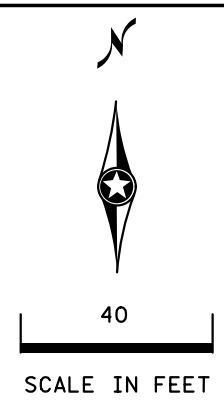
(4) PA85 POLE FOUNDATION
TYPE PA85-A-25-D40-9
(DAVIT AT 350°)
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD
TYPE 10A AT 90 DEG
TYPE 10A AT 180 DEG
ONE WAY EVP DETECTOR
AND LIGHT (PHASE 6)
2-R9-3a (NO PED) SIGNS
FACING POLES 1+3
LUMINAIRE-200W HPS
EXTEND INTO HH 9:
3" RSC
1-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

(A) EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
EXTEND INTO HH 1:
4" R.S.C.
2-12/C #12
1-5/C #12
3-3/C #12
6-2/C #14
1-3/C #20
1-6PR #19

EXTEND INTO HH 10:
4" R.S.C.
3-12/C #12
2-3/C #12
3-2/C #14
2-3/C #20
1-6PR #19

(B) S.O.P. WOOD POLE
2" R.S.C. RISER, WEATHERHEAD
AND CONDUIT TO HH 11:
3-1/C #2

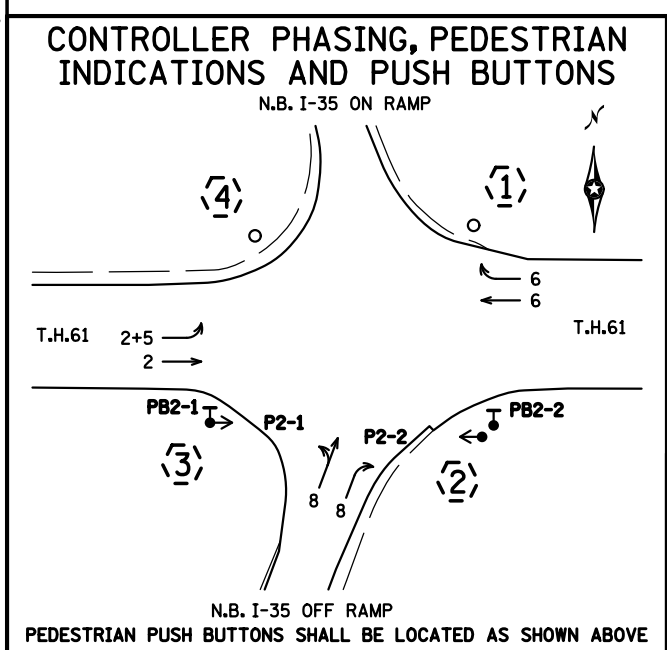
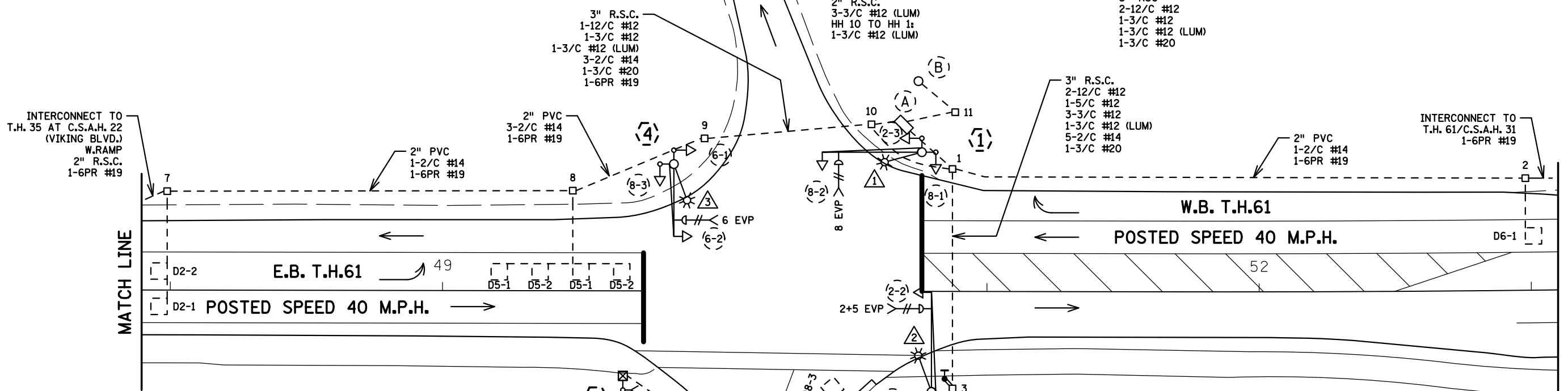
(1) PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9
(DAVIT AT 350°)
ONE WAY SIGNAL OVERHEAD
TYPE 10A AT 90 DEG
TYPE 10A AT 180 DEG
ONE WAY EVP DETECTOR
AND LIGHT (PHASE 8)
2-R9-3a (NO PED) SIGNS
FACING POLES 2+4
LUMINAIRE-200W HPS
EXTEND INTO HH 10:
3" RSC
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20



LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D2-1, D2-2	6x6	175
D5-1	2-6x6	20 & 50
D5-2	2-6x6	5 & 35
D6-1	6x6	225
D8-1, D8-2	6x6	120
D8-3	2-6x6	2 & 12
D8-4	6x6	20

-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



(3) PEDESTAL FOUNDATION
PEDESTAL BASE AND 8' POLE
TYPE 4A
1-C.D. PED IND
1-APS PUSH BUTTON AND SIG (LT ARROW)(PB2-1)
1-R9-3a (NO PED) SIGN
FACING POLE 4
EXTEND INTO HH 6:
3" RSC
1-5/C #12
1-3/C #12

SIGNAL SYSTEM OPERATION

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

BY	DATE	REVISIONS
SJK	07-25-12	AS-BUILT PLAN

SYSTEM ID: 22290 T.E.
METER ADDRESS: 5150 E. VIKING BLVD.
MASTER ID: T.E.

INTERSECTION LAYOUT
T.H. 35 AT T.H. 61/
C.S.A.H. 22 (VIKING BLVD.) E.RAMP
IN WYOMING, CHISAGO COUNTY

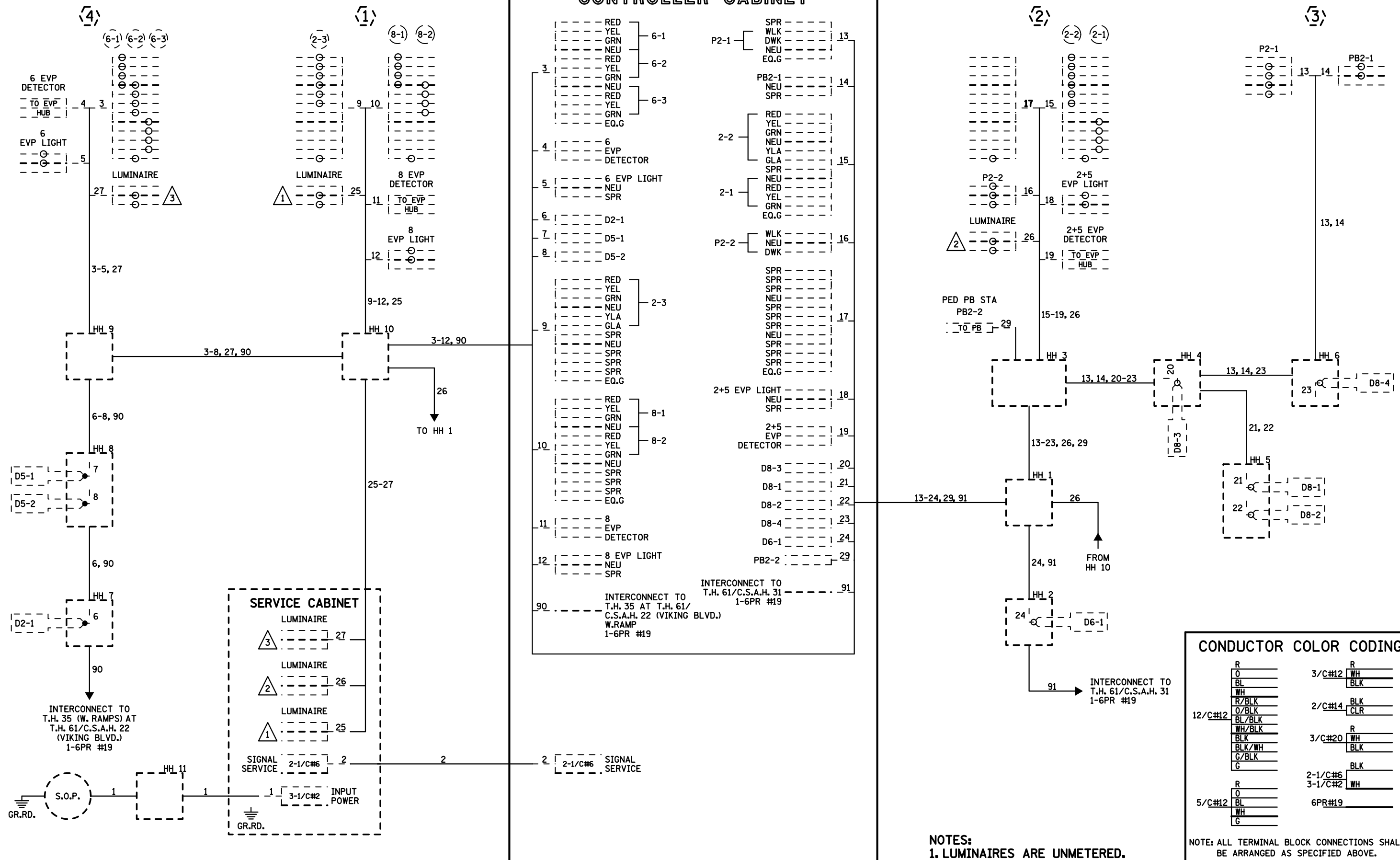
S.A.P. NO.
CERTIFIED BY:
STATE PROJ. NO. 1380-63 (T.H.35)

DRAWN BY: GDS CKD BY: MJF DATE: 08-02-10
LIC. NO. 43062 DATE: 08-02-10
SHEET NO. 247 OF 248 SHEETS

PLOTTED/REVISED: 8/11/2012

DISTRICT #: METRO
PLOT NAME: wiring diagram
PATH & FILENAME: IP_PWP-d0780659T22290LW_sgl.dgn

CONTROLLER CABINET



CONDUCTOR COLOR CODING	
R	R
O	3/C#12 WH
BL	BLK
WH	
R/BLK	2/C#14 BLK
O/BLK	CLR
BLK/BLK	
WH/BLK	3/C#20 R
BLK/WH	WH
G/BLK	BLK
G	
R	2-1/C#6 BLK
O	3-1/C#2 WH
BL	
WH	6PR#19
G	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTES:
1. LUMINAIRES ARE UNMETERED.

BY	DATE	REVISIONS
SJK	07-25-12	AS-BUILT PLAN

SYSTEM ID: 22290 T.E.
 METER ADDRESS: 5150 E. VIKING BLVD.
 MASTER ID: T.E.

FIELD WIRING DIAGRAM
 T.H. 35 AT T.H. 61/
 C.S.A.H. 22 (VIKING BLVD.) E-RAMP
 IN WYOMING, CHISAGO COUNTY

S.A.P. NO. _____
 DRAWN BY: GDS CKD BY: MJF DATE: 08-02-10
 CERTIFIED BY: *[Signature]* L.C. NO. 43062 DATE: 08-02-10
 STATE PROJ. NO. 1380-63 (T.H. 35) SHEET NO. 248 OF 248 SHEETS