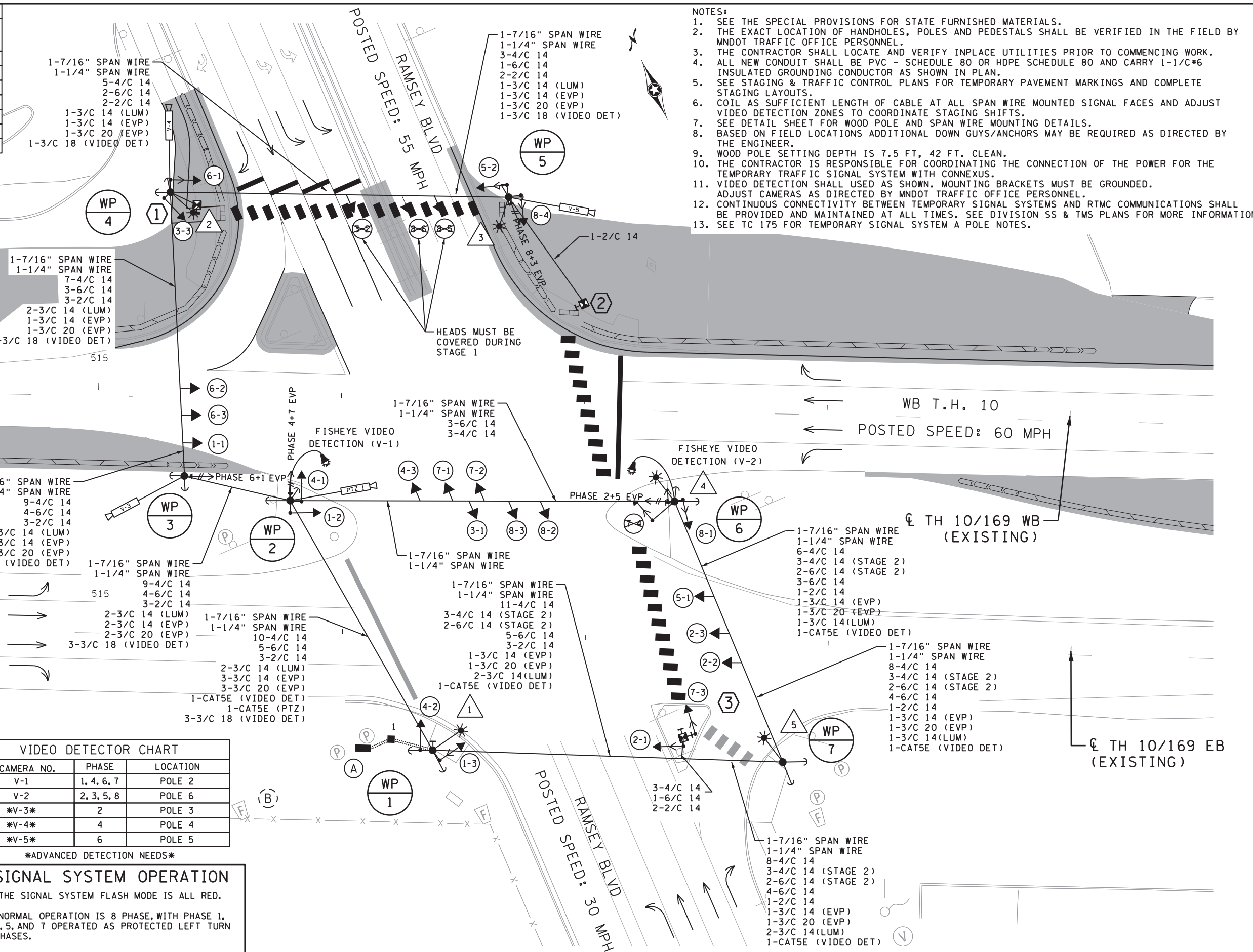


SIGNAL CONTROL POINTS		
POLE NUMBER	X	Y
WOOD POLE 1	452775.66	169793.42
WOOD POLE 2	452762.43	169910.99
WOOD POLE 3	452726.4	169937.57
WOOD POLE 4	452767.33	170047.15
WOOD POLE 5	452894.41	169990.23
WOOD POLE 6	452907.63	169848.13
WOOD POLE 7	452906.14	169731.97

SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2, 1-3	←	←	←	←
2-1, 2-2, 2-3	●	●	●	●
3-1, 3-2, 3-3	←	←	←	←
4-1, 4-2, 4-3	●	●	●	●
5-1, 5-2	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3, 7-4	←	←	←	←
8-1, 8-2, 8-3, 8-4, 8-5, 8-6	●	●	●	●

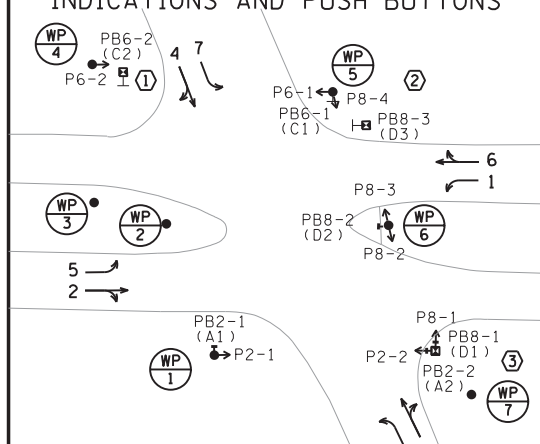
-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS

⊗ DENOTES COVERED INDICATION



- NOTES:
- SEE THE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
 - THE EXACT LOCATION OF HANDHOLES, POLES AND PEDESTALS SHALL BE VERIFIED IN THE FIELD BY MNDOT TRAFFIC OFFICE PERSONNEL.
 - THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
 - ALL NEW CONDUIT SHALL BE PVC - SCHEDULE 80 OR HOPE SCHEDULE 80 AND CARRY 1-1/C#6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
 - SEE STAGING & TRAFFIC CONTROL PLANS FOR TEMPORARY PAVEMENT MARKINGS AND COMPLETE STAGING LAYOUTS.
 - COIL AS SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES AND ADJUST VIDEO DETECTION ZONES TO COORDINATE STAGING SHIFTS.
 - SEE DETAIL SHEET FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
 - BASED ON FIELD LOCATIONS ADDITIONAL DOWN GUYS/ANCHORS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
 - WOOD POLE SETTING DEPTH IS 7.5 FT., 42 FT. CLEAN.
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TEMPORARY TRAFFIC SIGNAL SYSTEM WITH CONNEXUS.
 - VIDEO DETECTION SHALL USED AS SHOWN. MOUNTING BRACKETS MUST BE GROUNDED. ADJUST CAMERAS AS DIRECTED BY MNDOT TRAFFIC OFFICE PERSONNEL.
 - CONTINUOUS CONNECTIVITY BETWEEN TEMPORARY SIGNAL SYSTEMS AND RTMC COMMUNICATIONS SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES. SEE DIVISION SS & TMS PLANS FOR MORE INFORMATION.
 - SEE TC 175 FOR TEMPORARY SIGNAL SYSTEM A POLE NOTES.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VIDEO DETECTOR CHART		
CAMERA NO.	PHASE	LOCATION
V-1	1, 4, 6, 7	POLE 2
V-2	2, 3, 5, 8	POLE 6
V-3	2	POLE 3
V-4	4	POLE 4
V-5	6	POLE 5

ADVANCED DETECTION NEEDS

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASE 1, 3, 5, AND 7 OPERATED AS PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ON VEHICLE RECALL.

SYSTEM ID: 4608983
 TE #: 81595
 METER ADDRESS: 7200 HIGHWAY 10 NORTHWEST

SCALE FEET

H:\AKCO\T44121316\CAD\MS\plans\Stage&TC\8_Temp_Signal\Stage_1\cd0202116_tsl001.dgn

BOLTON & MENK

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REV.	BY	DATE

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CURT T. BREZINA
 LIC. NO. 59919 DATE 03-08-2023

DESIGNED KME
 DRAWN KME
 CHECKED CTB

S.P. 0202-116 (TH10), S.P. 002-596-026, S.P. 002-656-001, S.P. 002-657-003, S.P. 199-113-003, S.P. 199-115-006

TH 10/169 IMPROVEMENTS

TEMPORARY SIGNAL PLAN

SHEET TC173 OF TC193

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 5/3/2023

(A) TEMPORARY SIGNAL CABINET BASE
 INSTALL: TEMPORARY CABINET WITH CONTROLLER
 (STATE FURNISHED: TS2)

CONTROLLER CABINET TO HH 1:
 4" CONDUIT
 10-4/C 14
 5-6/C 14
 3-2/C 14
 3-3/C 14 (EVP)
 3-3/C 20 (EVP)
 1-CAT 5E (VIDEO DET)
 1-CAT 5E (PTZ)
 3-3/C 18 (VIDEO DET)
 1-1/C 6 INS. GR.

CONTROLLER CABINET TO HH 1:
 4" CONDUIT
 14-4/C 14
 7-6/C 14
 3-2/C 14
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)
 2-3/C 14 (LUM)
 1-CAT 5E (VIDEO DET)
 1-1/C 6 INS. GR.

CONTROLLER CABINET TO HH 1:
 3" CONDUIT
 1-6/C 14
 2-4/C 14
 1-2/C 14

SERVICE CABINET TO HH1 TO WP 1:
 2" CONDUIT
 5-3/C 14 (LUM)

(B) EXISTING SOP WOOD POLE
 2" CONDUIT TO HH1:
 3-1/C #2

1 TEMPORARY ANCHORED PEDESTAL BASE
 13' PEDESTAL POLE
 1-SOLID STATE PB AND SIGN (RT ARROW)(PB2-1)
 1-R9-3 SIGN FACING WP-3
 1-2/C 14

3 TEMPORARY ANCHORED PEDESTAL BASE
 13' PEDESTAL POLE
 2-STRAIGHT MOUNT SIGNAL AT 90 AND 180 DEG
 2-STRAIGHT MOUNT C.D. PED HEAD AT 90 AND 180 DEG
 1-SOLID STATE PB AND SIGN (RT ARROW)(PB8-1)
 1-SOLID STATE PB AND SIGN (RT ARROW)(PB2-2)
 PEDESTRIAN PHASE 2:
 - COVER PEDESTRIAN INDICATIONS, PUSHBUTTON AND SIGN, STAGE 2A, 2B, 2C, 2D
 - F&I 1-R9-3 SIGN FACING WP1 STAGE 2A, 2B, 2C, 2D
 - REMOVE R9-3 SIGNS AND MAKE BUTTONS AND INDICATIONS
 OPERATIONAL FOR WINTER SUSPENSION 2024 / 2025
 CABLES FROM SPAN WIRE:
 3-4/C 14
 1-6/C 14
 2-2/C 14

WP
1

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 1-PTZ CAMERA (INSTALL, STATE FURNISHED) AND MOUNT
 2-ANGLE MOUNT SIGNAL AT 90 AND 180 DEG
 1-ANGLE MOUNT C.D. PED HEAD AT 90 DEG
 15' MAST ARM AND LUMINAIRE (LED) WITH PEC.
 1-R9-3 SIGN FACING WP-4
 PEDESTRIAN PHASE 2:
 - COVER PEDESTRIAN INDICATIONS, PUSHBUTTON AND SIGN, STAGE 2A, 2B, 2C, 2D
 - F&I 1-R9-3 SIGN FACING PEDESTAL 3, STAGE 2A, 2B, 2C, 2D
 - REMOVE R9-3 SIGNS AND MAKE BUTTONS AND INDICATIONS
 OPERATIONAL FOR WINTER SUSPENSION 2024 / 2025
 METAL JUNCTION BOX WITH TERMINAL BLOCK

4" CONDUIT RISER AND WEATHERHEAD FROM
 HH 1 TO SPAN WIRES:
 10-4/C 14
 5-6/C 14
 3-2/C 14
 3-3/C 14 (EVP)
 3-3/C 20 (EVP)
 3-3/C 14 (LUM)
 1-CAT 5E (VIDEO DET)
 1-CAT 5E (PTZ)
 3-3/C 18 (VIDEO DET)
 1-1/C 6 INS. GR.

4" CONDUIT RISER AND WEATHERHEAD FROM
 HH 1 TO SPAN WIRES:
 14-4/C 14
 7-6/C 14
 3-2/C 14
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)
 2-3/C 14 (LUM)
 1-CAT 5E (VIDEO DET)
 1-1/C 6 INS. GR.

3" CONDUIT RISER FROM
 HH 1 TO JUNCTION BOX:
 1-6/C 14
 2-4/C 14
 1-2/C 14

1" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 14 (LUM)
 1- CAT5E (PTZ)

2 TEMPORARY ANCHORED PEDESTAL BASE
 13' PEDESTAL POLE
 1-STRAIGHT MOUNT SIGNAL AT 270 DEG
 1-SOLID STATE PB AND SIGN (RT ARROW)(PB2-1)
 CABLES FROM SPAN WIRE:
 1-4/C 14
 1-2/C 14

WP
2

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 1-ONE WAY EVP DETECTOR AND LIGHT (PHASE 4+7)
 2-ANGLE MOUNT SIGNAL AT 0 DEG AND 90 DEG
 1-FISHEYE VIDEO DETECTION CAMERA (V-1)
 1-R9-3 SIGN FACING WP 4
 1-R9-3 SIGN FACING WP 1
 METAL JUNCTION BOX WITH TERMINAL BLOCK
 3" CONDUIT AND WEATHERHEAD ABOVE JUNCTION
 BOX TO SPAN WIRES WITH:
 2-4/C 14

1-1/2" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-CAT5E (VIDEO DET)
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)

WP
4

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 2-ANGLE MOUNT SIGNAL AT 90 DEG AND 180 DEG
 1-ANGLE MOUNT C.D. PED HEAD AT 180 DEG
 1-VIDEO DETECTOR (V-4) LUM MOUNTED
 15' MAST ARM AND LUMINAIRE (LED) WITH PEC.
 1-R9-3 SIGN FACING WP-1
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT AND WEATHERHEAD ABOVE JUNCTION
 BOX TO SPAN WIRES WITH:
 2-4/C 14
 1-6/C 14

1" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 14 (LUM)
 1-3/C 18 (VIDEO DET)

WP
6

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 1-ONE WAY EVP DETECTOR AND LIGHT (PHASE 2+5)
 3-ANGLE MOUNT SIGNAL 0, 90 AND 180 DEG
 2-ANGLE MOUNT C.B. PED HEAD AT 0 AND 180 DEG
 1-SOLID STATE PB AND SIGN (LT/RT ARROW)(PB8-2)
 1-FISHEYE VIDEO DETECTION CAMERA (V-2)
 15' MAST ARM AND LUMINAIRE (LED) WITH PEC.
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT AND WEATHERHEAD ABOVE JUNCTION
 BOX TO SPAN WIRES WITH:

4-4/C 14
 1-2/C 14

1-1/2" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 14 (LUM)
 1-CAT 5E (VIDEO DET)
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)

WP
3

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 1-ONE WAY EVP DETECTOR AND LIGHT (PHASE 6+1)
 1-VIDEO DETECTOR (V-3)
 1-R9-3 SIGN FACING WP 1
 1-R9-3 SIGN FACING WP 4

1-1/2" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 18 (VIDEO DET)
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)

WP
5

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 1-ONE WAY EVP DETECTOR AND LIGHT (PHASE 8+3)
 2-ANGLE MOUNT SIGNAL AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEADS AT 90 AND 180 DEG
 1-SOLID STATE PB AND SIGN (LT ARROW)(PB6-1)
 1-VIDEO DETECTOR (V-5) LUM MOUNTED
 15' MAST ARM AND LUMINAIRE (LED) WITH PEC.
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 3-4/C 14
 1-6/C 14
 1-2/C 14

1-1/2" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 14 (LUM)
 1-3/C 18 (VIDEO DET)
 1-3/C 14 (EVP)
 1-3/C 20 (EVP)

WP
7

45' WOOD POLE
 2-DOWN GUY, GUARD AND ANCHOR
 15' MAST ARM AND LUMINAIRE (LED) WITH PEC.

1" CONDUIT RISER AND WEATHERHEAD ABOVE
 SPAN WIRE WITH:
 1-3/C 14 (LUM)

WP
8

45' WOOD POLE (STAGE 2)
 1-DOWN GUY, GUARD AND ANCHOR
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT AND WEATHERHEAD ABOVE JUNCTION
 BOX TO SPAN WIRES WITH:
 1-6/C 14

TEMPORARY SIGNAL SYSTEM A - POLE NOTES (ALL STAGES)



12224 NICOLLET AVENUE
 BURNSVILLE, MINNESOTA 55337
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 Email: Burnsville@bolton-menk.com
 www.bolton-menk.com

REV.	BY	DATE

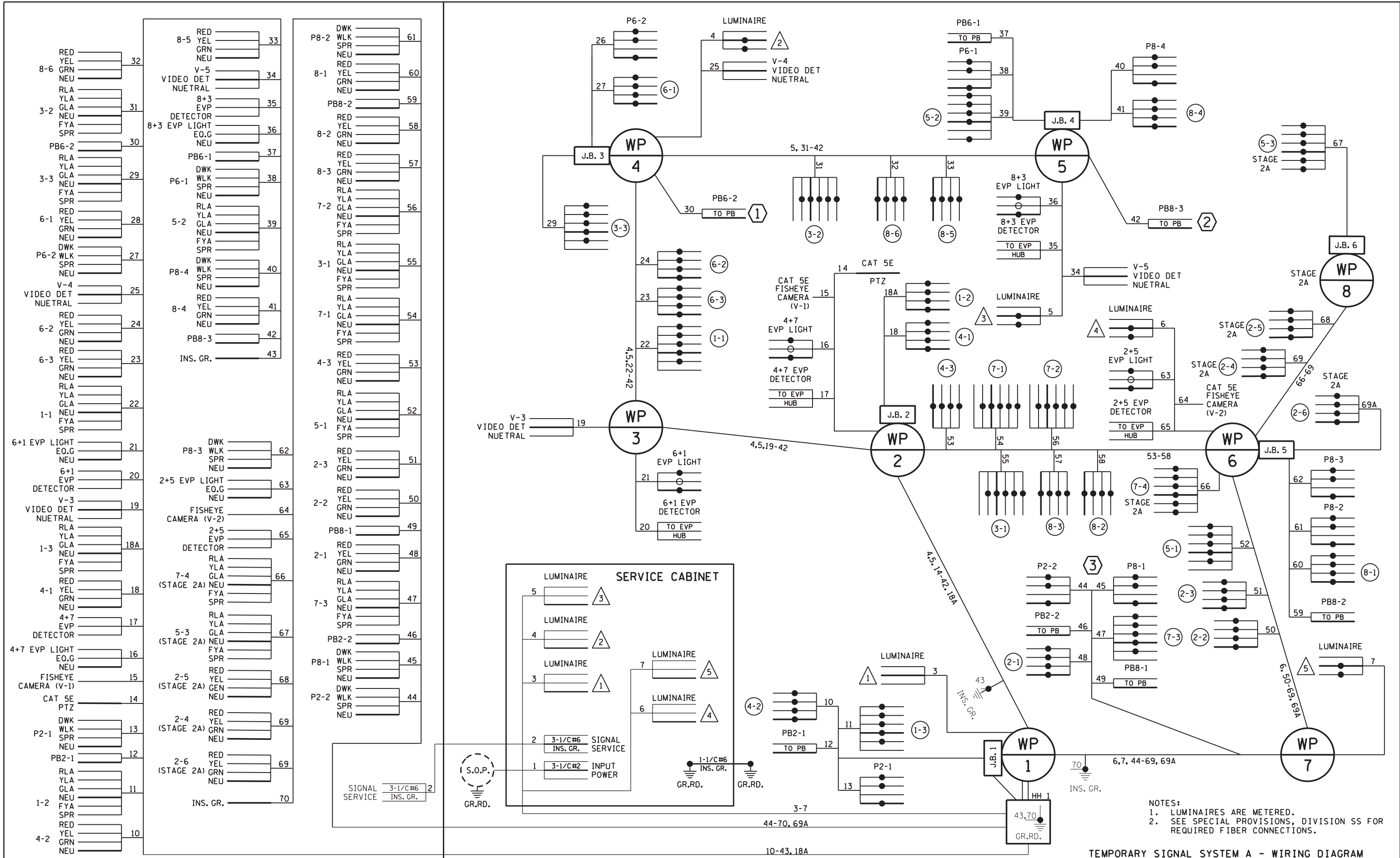
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CURT T. BREZINA
 LIC. NO. 59919 DATE 03-08-2023

DESIGNED KME	S.P. 0202-116 (TH10), S.P. 002-596-026, S.P. 002-656-001, S.P. 002-657-003, S.P. 199-113-003, S.P. 199-115-006	SHEET TC174
DRAWN KME	TH 10/169 IMPROVEMENTS	OF TC193
CHECKED CTB	TEMPORARY SIGNAL PLAN	

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5/3/2023



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Curt Brezina
CURT T. BREZINA
LIC. NO. 59919
DATE 03-08-2023

DESIGNED
KME
DRAWN
KME
CHECKED
CTB

TEMPORARY SIGNAL SYSTEM A - WIRING DIAGRAM
S.P. 0202-116 (TH10), S.P. 002-596-026, S.P. 002-656-001,
S.P. 002-657-003, S.P. 199-113-003, S.P. 199-115-006
TH 10/169 IMPROVEMENTS
TEMPORARY SIGNAL PLAN

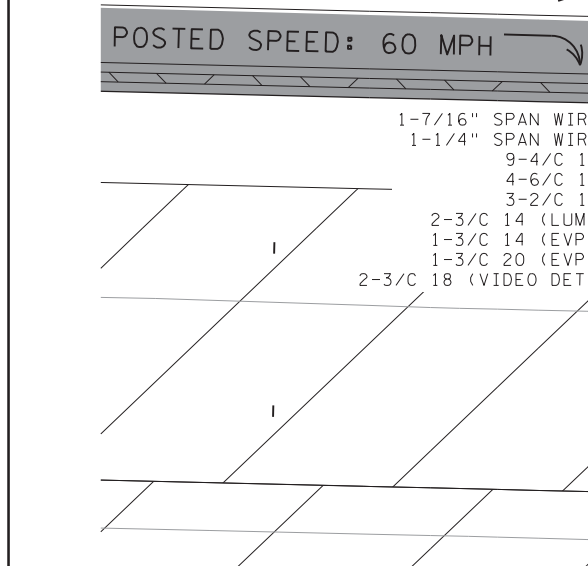
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TC175
OF
TC193

SIGNAL CONTROL POINTS		
POLE NUMBER	X	Y
WOOD POLE 1	452775.66	169793.42
WOOD POLE 2	452762.43	169910.99
WOOD POLE 3	452726.4	169937.57
WOOD POLE 4	452767.33	170047.15
WOOD POLE 5	452894.41	169990.23
WOOD POLE 6	452907.63	169848.13
WOOD POLE 7	452906.14	169731.97
WOOD POLE 8	452927.29	169896.72

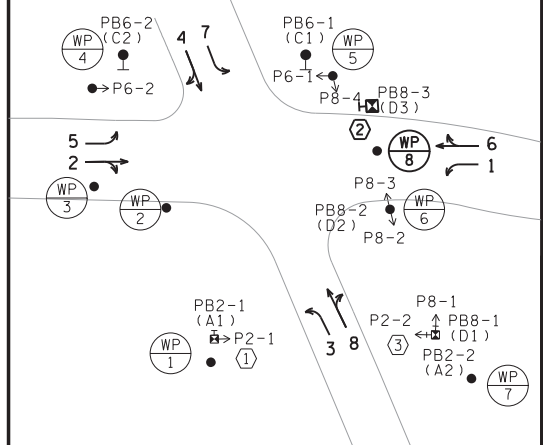
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2, 1-3	←	←	←	←
2-1, 2-2, 2-3, 2-4, 2-5, 2-6	●	●	●	●
3-1, 3-2, 3-3	←	←	←	←
4-1, 4-2, 4-3	●	●	●	●
5-1, 5-2, 5-3	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3, 7-4	←	←	←	←
8-1, 8-2, 8-4, 8-3, 8-5, 8-6	●	●	●	●

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

⊗ DENOTES COVERED INDICATION
 EB T.H. 10
 POSTED SPEED: 60 MPH



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

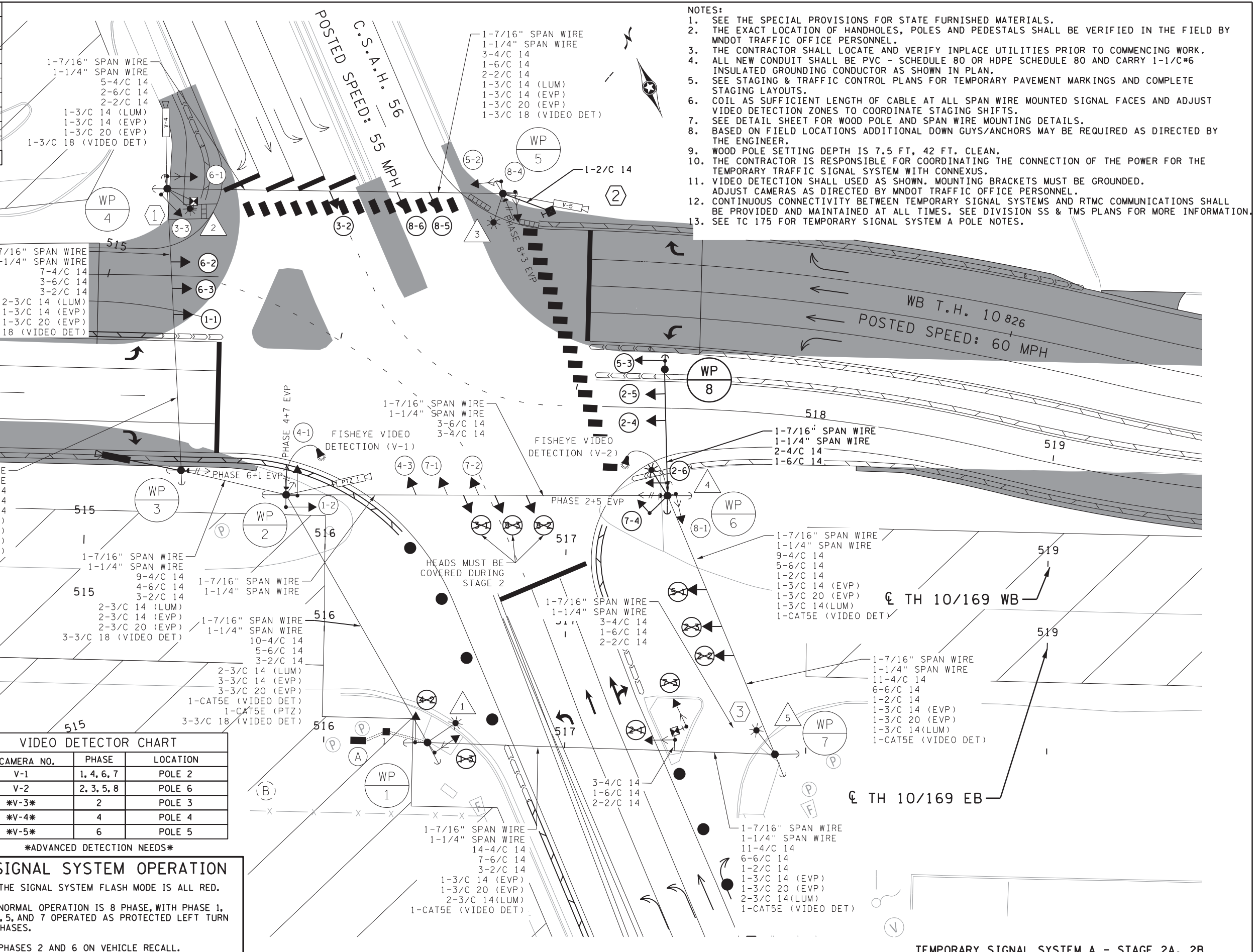


VIDEO DETECTOR CHART		
CAMERA NO.	PHASE	LOCATION
V-1	1, 4, 6, 7	POLE 2
V-2	2, 3, 5, 8	POLE 6
V-3	2	POLE 3
V-4	4	POLE 4
V-5	6	POLE 5

ADVANCED DETECTION NEEDS

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASE 1, 3, 5, AND 7 OPERATED AS PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ON VEHICLE RECALL.



- NOTES:**
- SEE THE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
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 - WOOD POLE SETTING DEPTH IS 7.5 FT., 42 FT. CLEAN.
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 - SEE TC 175 FOR TEMPORARY SIGNAL SYSTEM A POLE NOTES.

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 LIC. NO. 59919
 DATE 03-08-2023

DESIGNED KME
 DRAWN KME
 CHECKED CTB

TEMPORARY SIGNAL SYSTEM A - STAGE 2A, 2B
 S.P. 0202-116 (TH10), S.P. 002-596-026, S.P. 002-656-001, S.P. 002-657-003, S.P. 199-113-003, S.P. 199-115-006
 TH 10/169 IMPROVEMENTS
 TEMPORARY SIGNAL PLAN

SHEET TC176 OF TC193

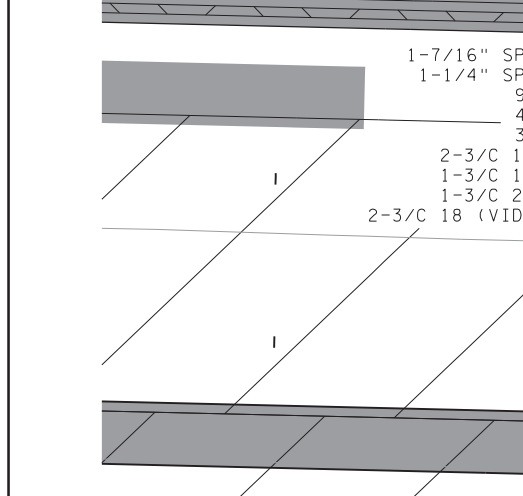
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WOOD POLE 8	452927.29	169896.72

SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2, 1-3	←	←	←	←
2-1, 2-2, 2-3, 2-4, 2-5, 2-6	●	●	●	●
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5-1, 5-2, 5-3	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3, 7-4	←	←	←	←
8-1, 8-2, 8-3, 8-4, 8-5, 8-6	●	●	●	●

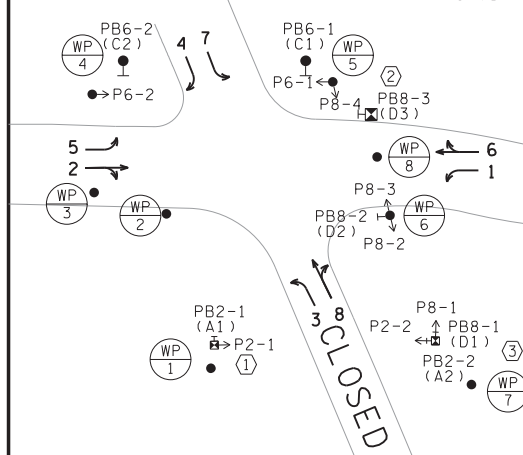
-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS

⊗ DENOTES COVERED INDICATION.
 EB T.H. 10

POSTED SPEED: 60 MPH



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

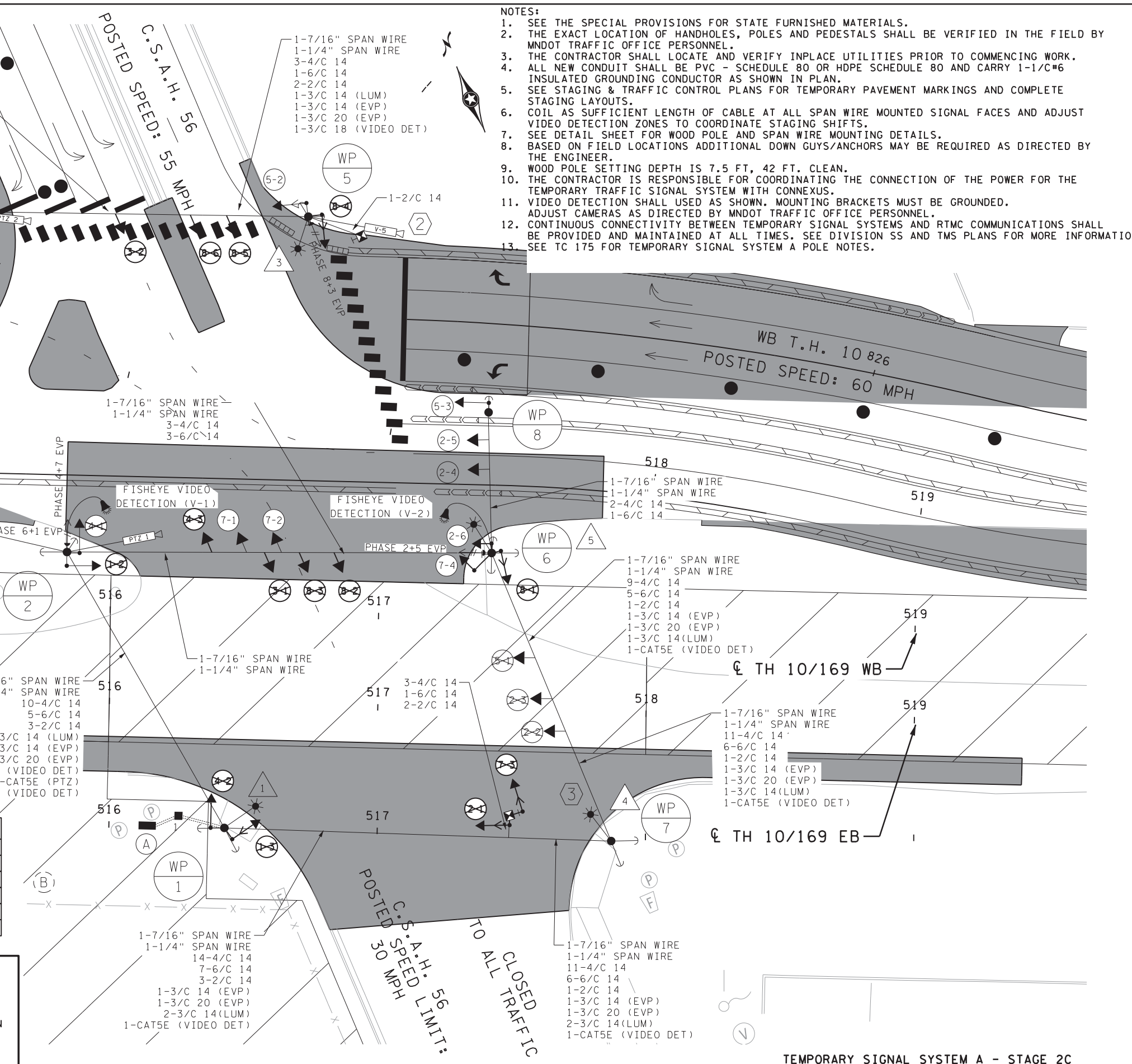
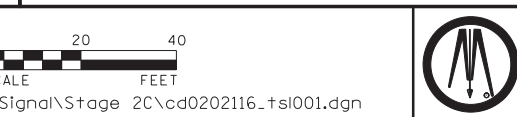


VIDEO DETECTOR CHART		
CAMERA NO.	PHASE	LOCATION
V-1	1, 4, 6, 7	POLE 2
V-2	2, 3, 5, 8	POLE 6
V-3	2	POLE 3
V-4	4	POLE 4
V-5	6	POLE 5

ADVANCED DETECTION NEEDS

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASE 1, 3, 5, AND 7 OPERATED AS PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ON VEHICLE RECALL.



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 - SEE STAGING & TRAFFIC CONTROL PLANS FOR TEMPORARY PAVEMENT MARKINGS AND COMPLETE STAGING LAYOUTS.
 - COIL AS SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES AND ADJUST VIDEO DETECTION ZONES TO COORDINATE STAGING SHIFTS.
 - SEE DETAIL SHEET FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
 - BASED ON FIELD LOCATIONS ADDITIONAL DOWN GUYS/ANCHORS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
 - WOOD POLE SETTING DEPTH IS 7.5 FT., 42 FT. CLEAN.
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TEMPORARY TRAFFIC SIGNAL SYSTEM WITH CONNEXUS.
 - VIDEO DETECTION SHALL USED AS SHOWN. MOUNTING BRACKETS MUST BE GROUNDED. ADJUST CAMERAS AS DIRECTED BY MNDOT TRAFFIC OFFICE PERSONNEL.
 - CONTINUOUS CONNECTIVITY BETWEEN TEMPORARY SIGNAL SYSTEMS AND RTMC COMMUNICATIONS SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES. SEE DIVISION SS AND TMS PLANS FOR MORE INFORMATION.
 - SEE TC 175 FOR TEMPORARY SIGNAL SYSTEM A POLE NOTES.

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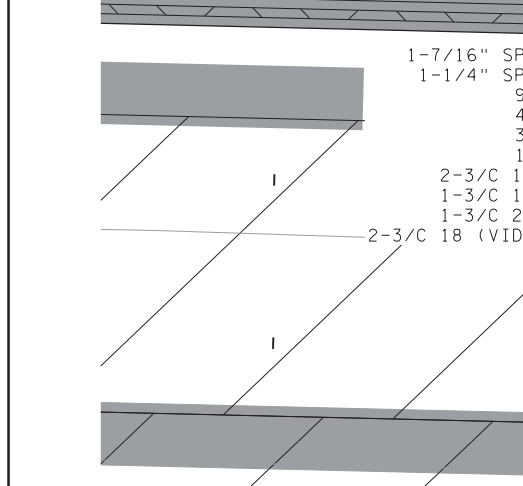
SIGNAL CONTROL POINTS		
POLE NUMBER	X	Y
WOOD POLE 1	452775.66	169793.42
WOOD POLE 2	452762.43	169910.99
WOOD POLE 3	452726.4	169937.57
WOOD POLE 4	452767.33	170047.15
WOOD POLE 5	452894.41	169990.23
WOOD POLE 6	452907.63	169848.13
WOOD POLE 7	452906.14	169731.97
WOOD POLE 8	452927.29	169896.72

SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2, 1-3	←	←	←	←
2-1, 2-2, 2-3, 2-4, 2-5, 2-6	●	●	●	●
3-1, 3-2, 3-3	←	←	←	←
4-1, 4-2, 4-3	●	●	●	●
5-1, 5-2, 5-3	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3, 7-4	←	←	←	←
8-1, 8-2, 8-3, 8-4, 8-5, 8-6	●	●	●	●

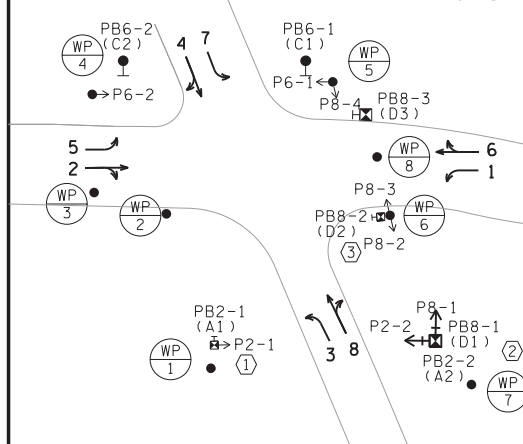
-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS

⊗ DENOTES COVERED INDICATION
 EB T.H. 10

POSTED SPEED: 60 MPH



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

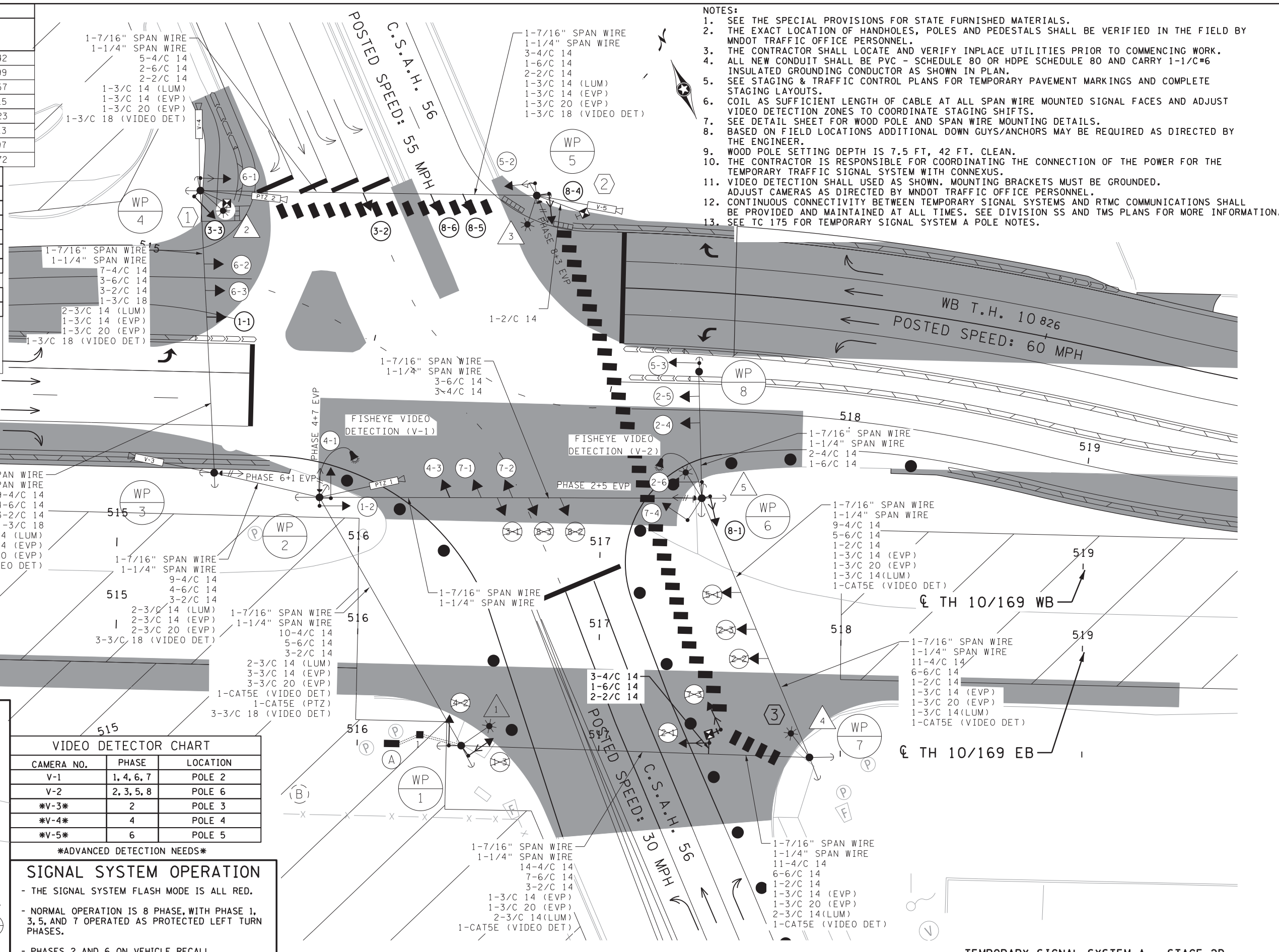
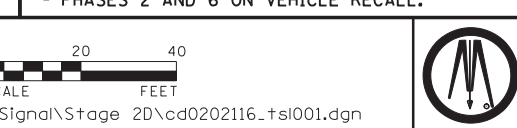


VIDEO DETECTOR CHART		
CAMERA NO.	PHASE	LOCATION
V-1	1, 4, 6, 7	POLE 2
V-2	2, 3, 5, 8	POLE 6
V-3	2	POLE 3
V-4	4	POLE 4
V-5	6	POLE 5

ADVANCED DETECTION NEEDS

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASE 1, 3, 5, AND 7 OPERATED AS PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ON VEHICLE RECALL.



- NOTES:**
1. SEE THE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
 2. THE EXACT LOCATION OF HANDHOLES, POLES AND PEDESTALS SHALL BE VERIFIED IN THE FIELD BY MNDOT TRAFFIC OFFICE PERSONNEL.
 3. THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
 4. ALL NEW CONDUIT SHALL BE PVC - SCHEDULE 80 OR HDPE SCHEDULE 80 AND CARRY 1-1/C*6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
 5. SEE STAGING & TRAFFIC CONTROL PLANS FOR TEMPORARY PAVEMENT MARKINGS AND COMPLETE STAGING LAYOUTS.
 6. COIL AS SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES AND ADJUST VIDEO DETECTION ZONES TO COORDINATE STAGING SHIFTS.
 7. SEE DETAIL SHEET FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
 8. BASED ON FIELD LOCATIONS ADDITIONAL DOWN GUYS/ANCHORS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
 9. WOOD POLE SETTING DEPTH IS 7.5 FT, 42 FT. CLEAN.
 10. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TEMPORARY TRAFFIC SIGNAL SYSTEM WITH CONNEXUS.
 11. VIDEO DETECTION SHALL USED AS SHOWN. MOUNTING BRACKETS MUST BE GROUNDED. ADJUST CAMERAS AS DIRECTED BY MNDOT TRAFFIC OFFICE PERSONNEL.
 12. CONTINUOUS CONNECTIVITY BETWEEN TEMPORARY SIGNAL SYSTEMS AND RTMC COMMUNICATIONS SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES. SEE DIVISION SS AND TMS PLANS FOR MORE INFORMATION.
 13. SEE TC 175 FOR TEMPORARY SIGNAL SYSTEM A POLE NOTES.

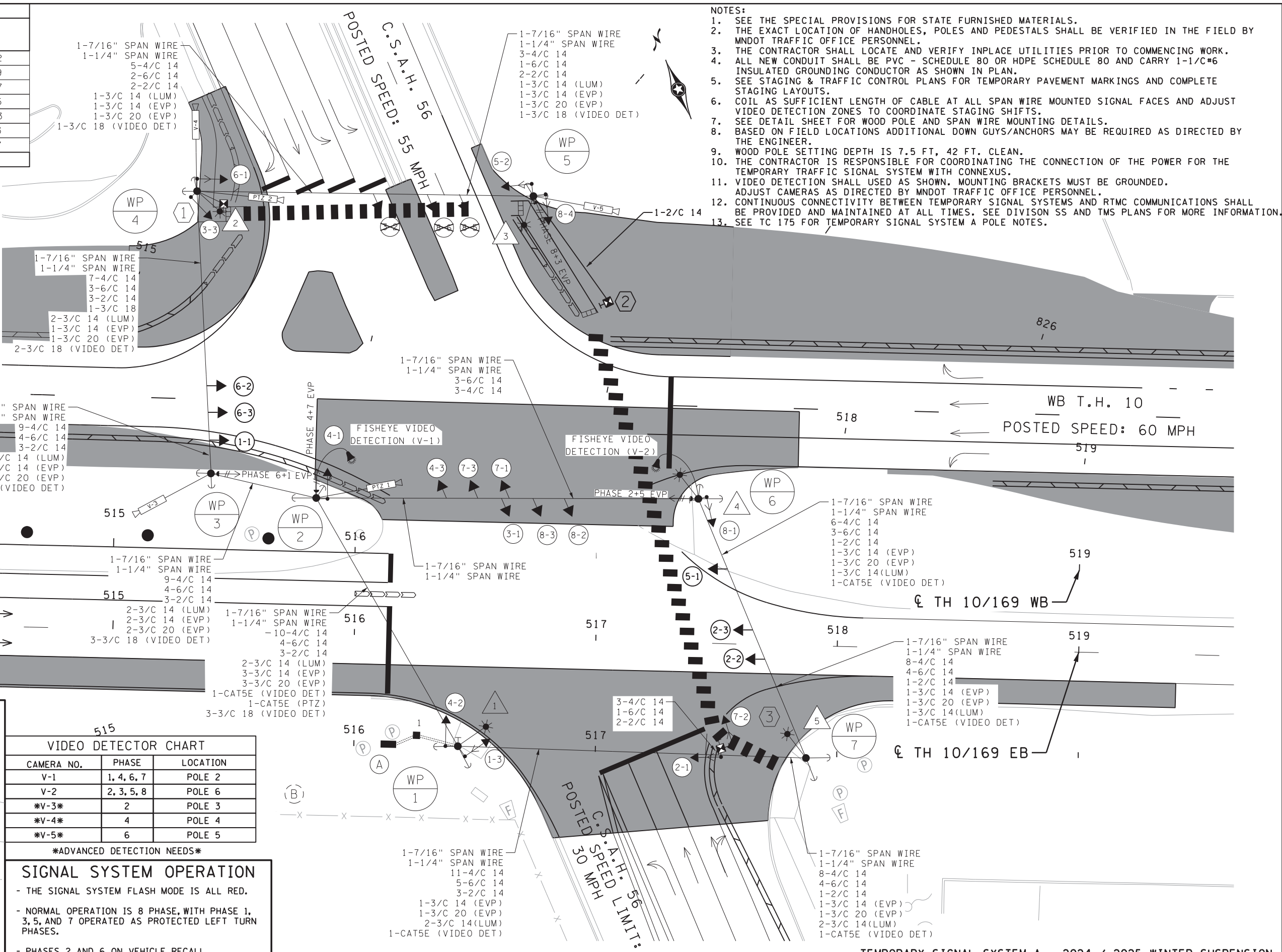
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WOOD POLE 3	452726.4	169937.57
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FACE	R	Y	FYA	G
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2-1, 2-2, 2-3	●	●	●	●
3-1, 3-2, 3-3	←	←	←	←
4-1, 4-2, 4-3	●	●	●	●
5-1, 5-2	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3	←	←	←	←
8-1, 8-2, 8-3, 8-4, 8-5, 8-6	●	●	●	●

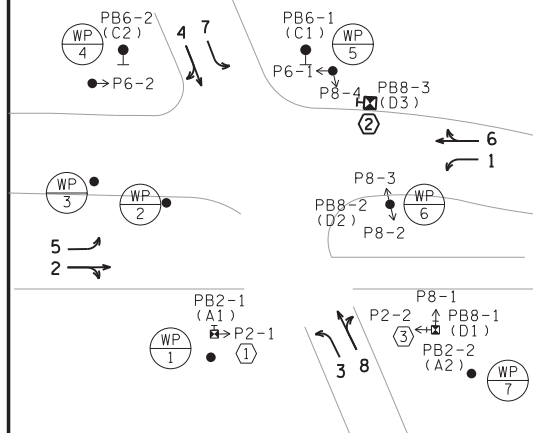
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⊗ DENOTES COVERED INDICATION



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CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



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CAMERA NO.	PHASE	LOCATION
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V-3	2	POLE 3
V-4	4	POLE 4
V-5	6	POLE 5

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- PHASES 2 AND 6 ON VEHICLE RECALL.

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 BURNSVILLE, MINNESOTA 55337
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 Email: Burnsville@bolton-menk.com
 www.bolton-menk.com

REV.	BY	DATE

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.

CURT T. BREZINA
 LIC. NO. 59919
 DATE 03-08-2023

TEMPORARY SIGNAL SYSTEM A - 2024 / 2025 WINTER SUSPENSION

DESIGNED KME	S.P. 0202-116 (TH10), S.P. 002-596-026, S.P. 002-656-001, S.P. 002-657-003, S.P. 199-113-003, S.P. 199-115-006	SHEET TC179
DRAWN KME	TH 10/169 IMPROVEMENTS	OF TC193
CHECKED CTB	TEMPORARY SIGNAL PLAN	