

Diagonal span is not the preferred method of signalization. Redesign as a box span similar to the existing installation.

DISCONNECT FIBER IN EX. TRAFFIC SIGNAL CABINET AND ROUTE TO PROP. TRAFFIC SIGNAL CABINET. STORE DISCONNECTED FIBER IN EX. FIBER PULL BOX

DISCONNECT POWER FEED FOR ITS CAMERA POLE FROM DISCONNECT SWITCH ON EX. STRAIN POLE. REROUTE DISTRIBUTION CABLE TO NEW DISCONNECT SWITCH ON SP-2.

Add a near right side supplemental signal head for the ramp

Add no pedestrian crossing signs to the mainline.

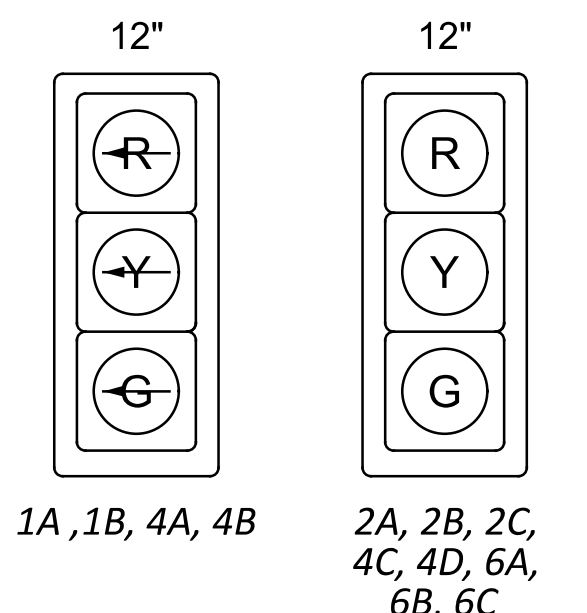
The proposed span is ~195 feet long: possible, but prone to significant wind motion. Experience with this site indicates significant wind, therefore ORE recommends a 4-pole span over a 2-pole span.

The Swiss analysis for support SP-1 does not account for the inclusion of the bracket arm. The bracket arm is typically accounted for by up sizing the pole one design. This is especially important for this location due to the calculated moment and the capacity of this support.

AERIAL SERVICE CABLE FROM EX. AES SERVICE POLE. ROUTE SERVICE CABLE OVERHEAD TO STRAIN POLE, SP-2. SEE NOTE 1.

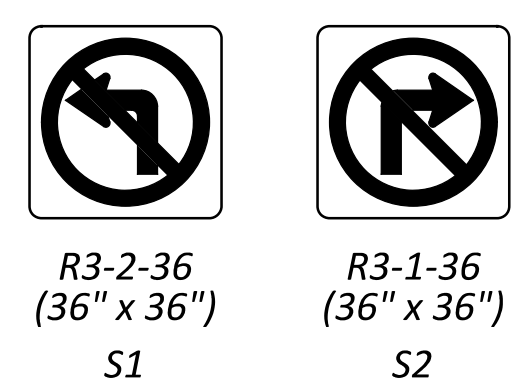
STA. 35+58.7, 90.5' LT. PROPOSED STRAIN POLE, SP-1 W/ 30' BRACKET ARM W/ (1) ADVANCE RADAR UNIT VEHICULAR SIGNAL HEAD, 2C

PROPOSED SIGNAL HEADS*



* - VEHICLE SIGNAL HEADS INCLUDE BACKPLATES

PROPOSED SIGNS

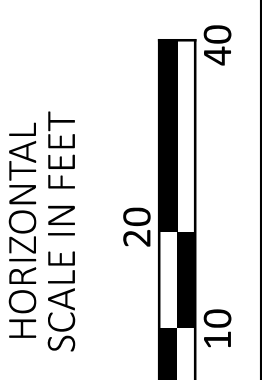
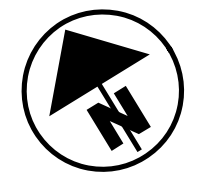


NOTES

- 120/240V ELECTRIC POWER WILL BE OBTAINED FROM EXISTING UTILITY POLE AS INDICATED ON THE PLANS. ROUTE AERIAL SERVICE TO PROPOSED STRAIN POLE, SP-1, ROUTE ACROSS INTERSECTION TO PROPOSED STRAIN POLE, SP-2 AND DOWN TO THE METER AND DISCONNECT MOUNTED ON STRAIN POLE, SP-2.
- THE EXISTING COMMUNICATIONS EQUIPMENT AT THE INTERSECTION SHALL BE REMOVED FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION AND REINSTALLED WITHIN THE NEW TRAFFIC SIGNAL. THE EXISTING EQUIPMENT TO BE REUSED SHALL INCLUDE THE EXISTING CELL MODEM, UBIQUITY ETHERNET RADIO AND ASSOCIATED CABLES/ANTENNAS, AND THE EXISTING ETHERNET SWITCH.
- POLE LOCATIONS HAVE BEEN INDICATED AS ACCURATELY AS POSSIBLE. IN NO CASE SHALL THE CLEARANCE FROM FACE OF CURB TO FACE OF POLE, SIGN OR OTHER PROPOSED ITEMS BE LESS THAN 4 FT. TOP OF POLE FOUNDATIONS SHALL BE FLUSH WITH ADJACENT WALK WAYS, IF APPLICABLE.
- LOCATION OF CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
- ALL CONDUIT SHALL BE INSTALLED IN OPEN-CUT TRENCH.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 OR 4 UNIT HEAD ARROW, 12"		
SIGNAL STRAIN POLE		
SIGN		
CONTROLLER CABINET		
TRAFFIC PULL BOX, 24" x 24"		
ADVANCE RADAR DETECTION UNIT		
STOP LINE RADAR DETECTION UNIT		
DETECTION ZONE		



TRAFFIC SIGNAL PLAN
SR-435 & I-71 SB RAMPS

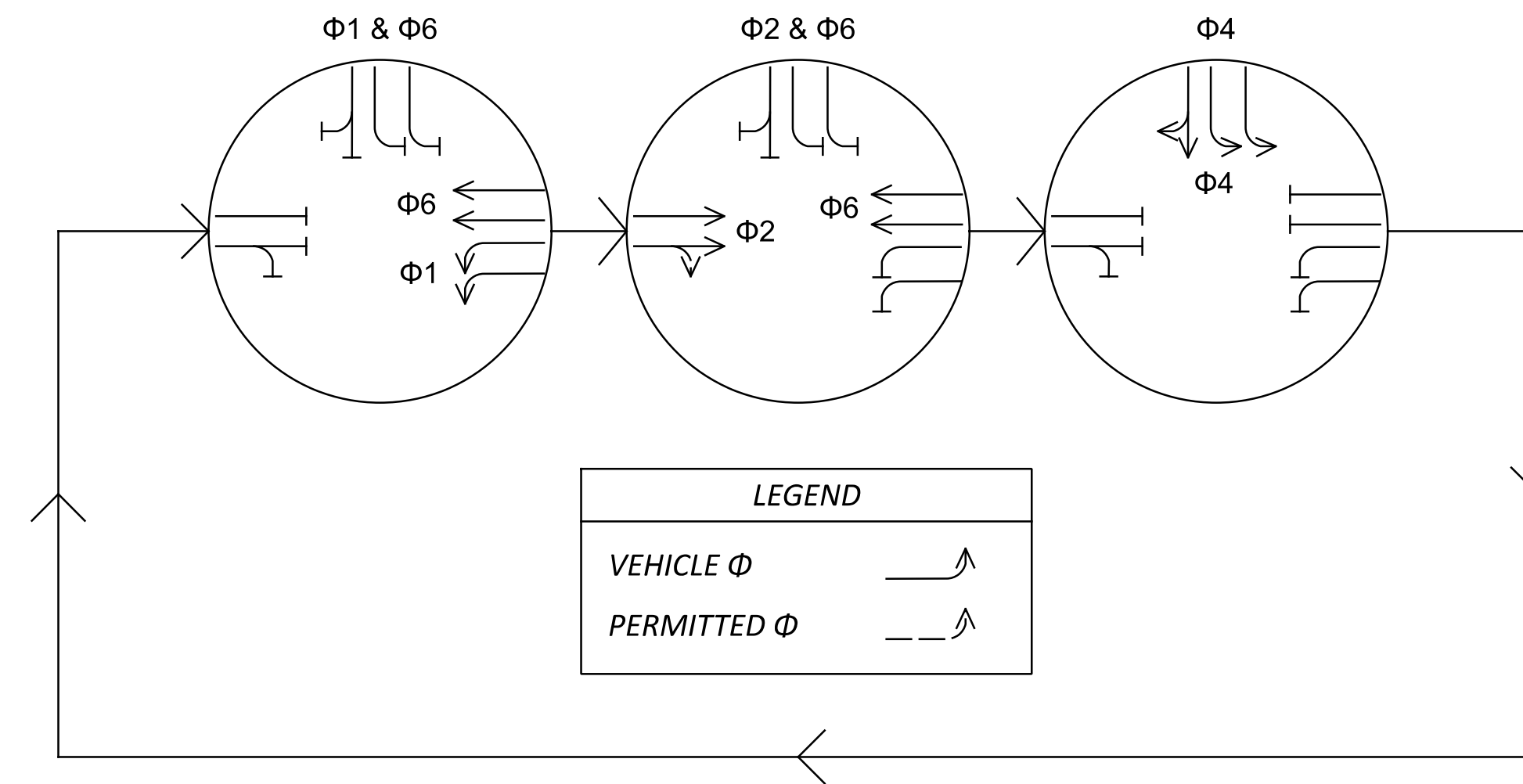
DESIGN AGENCY	
DESIGNER	JMD
REVIEWER	MJH
PROJECT ID	01/05/24
SHEET	117955
TOTAL	24

SIGNAL TIMING CHART

INTERSECTION: SR 435 & I-71 SB RAMPS		MAINTAINING AGENCY: ODOT						
START UP	DUAL ENTRY:	-	PHASES:	-				
	REST IN RED:	RING 1	-	RING 2	-			
	OVERLAP	-	-	-	-			
START IN:	ALL RED							
TIME FOR FLASH, ALL RED:	5 SEC							
FIRST PHASE(S):	-							
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	-	-	-	-	-	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	-	-	-	-	-	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	-	-	-	-	-	-	-
ALL RED CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	-	-	-	-	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-
MEMORY (ON/OFF)	-	-	-	-	-	-	-	-

COORDINATION TIMING

SIGNAL PHASING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A, 1B (WB LT)	<--R--	Φ 1R	R
	<--Y--	Φ 1Y	
	<--G--	Φ 1G	
2A, 2B, 2C (EB)	R	Φ 2R	R
	Y	Φ 2Y	
	G	Φ 2G	
4A, 4B (SB LT)	<--R--	Φ 4R	R
	<--Y--	Φ 4Y	
	<--G--	Φ 4G	
4C, 4D (SB)	R	Φ 4R	R
	Y	Φ 4Y	
	G	Φ 4G	
6A, 6B, 6C (WB)	R	Φ 6R	R
	Y	Φ 6Y	
	G	Φ 6G	

DETECTOR TABLE

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D1A	WB LT	PRESENCE	1	NON-LOCK	0	0	1	CALL/EXTEND PHASE 1	30
D1B	WB LT	PRESENCE	1	NON-LOCK	0	0	1	CALL/EXTEND PHASE 1	30
D2A	EB ADV	PRESENCE	2	NON-LOCK	0	0	2	EXTEND PHASE 2	ADVANCE
D4A	SB LT	PRESENCE	4	NON-LOCK	0	0	4	CALL/EXTEND PHASE 4	30
D4B	SB LT	PRESENCE	4	NON-LOCK	0	0	4	CALL/EXTEND PHASE 4	30
D4C	SB RT	PRESENCE	4	NON-LOCK	0	0	4	CALL/EXTEND PHASE 4	30
D4D	SB ADV	PRESENCE	4	NON-LOCK	0	0	4	EXTEND PHASE 4	ADVANCE
D6A	WB ADV	PRESENCE	6	NON-LOCK	0	0	6	EXTEND PHASE 6	ADVANCE

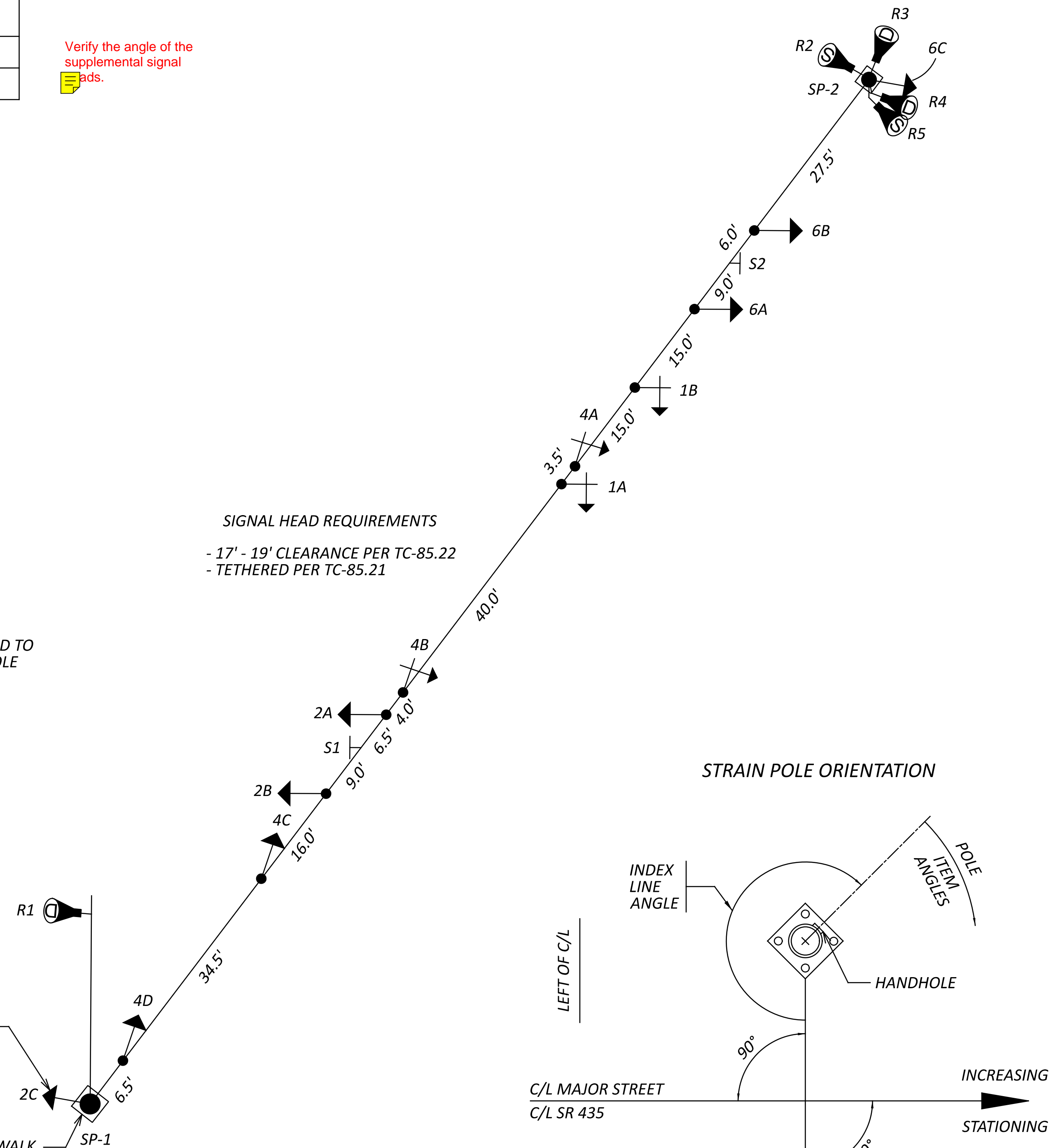
STRAIN POLE DETAILS

STATION	OFFSET	POLE NO.	DESIGN TYPE	DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION ELEVATION	SPAN WIRE ATTACHED HEIGHT (FT)	INDEX LINE ANGLE (DEG.)	INDEX LINE ANGLE (DEG.)			
									DISCONNECT SWITCH	METER BASE	BRACKET ARM	SUPPLEMENTAL SIGNAL HEAD
35+58.7	90.5' RT.	SP-1	TC-81.11	12	38.5	1049.57	33.5	218	-	-	142	62
36+75.8	65.9' LT.	SP-2	TC-81.11	12	39.0	1049.30	34.0	217	0	0	-	73

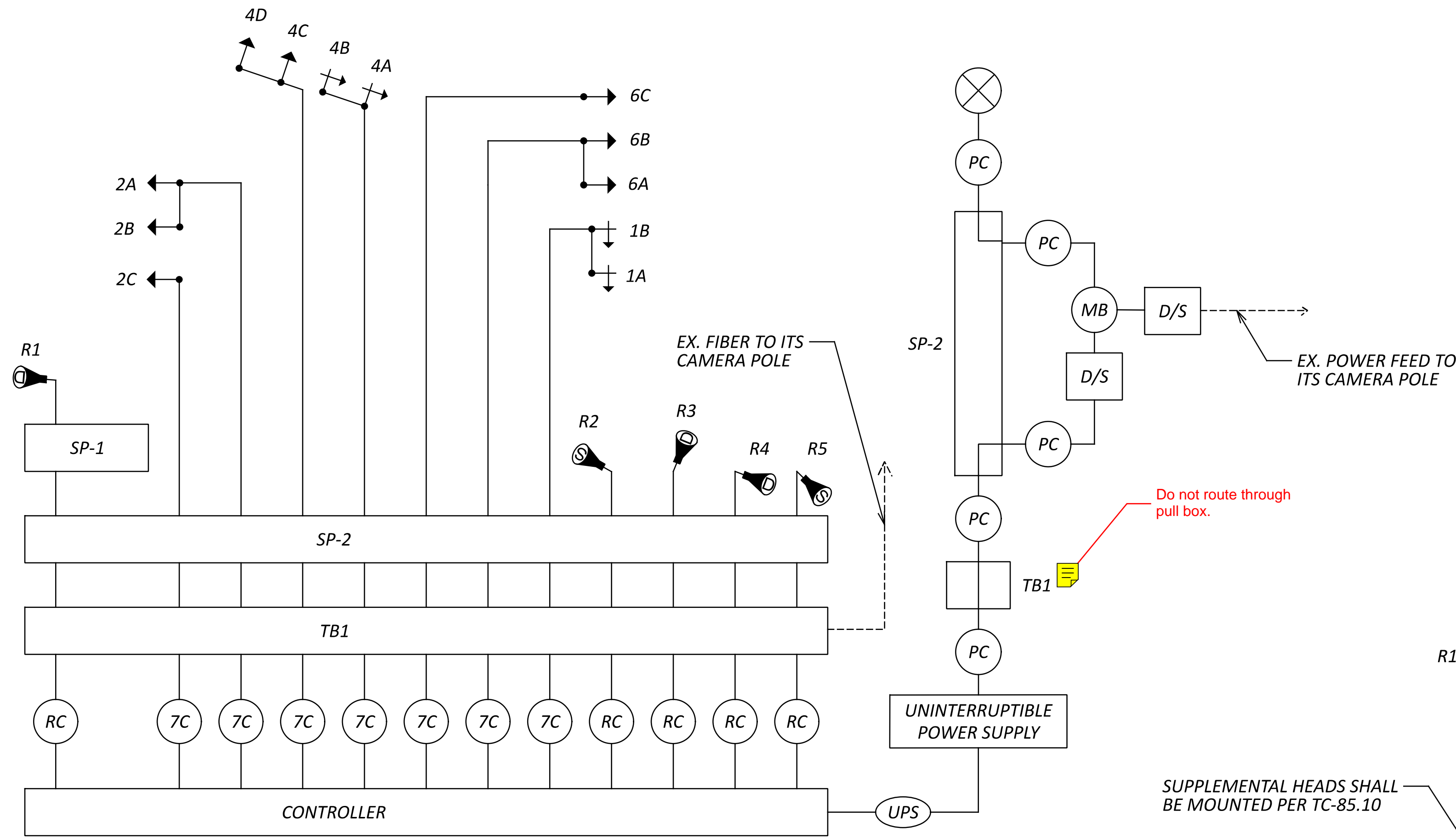
Verify the angle of the supplemental signal heads.

Do not locate the power service directly above the hand hole.

SPAN WIRE PLAN VIEW DETAIL



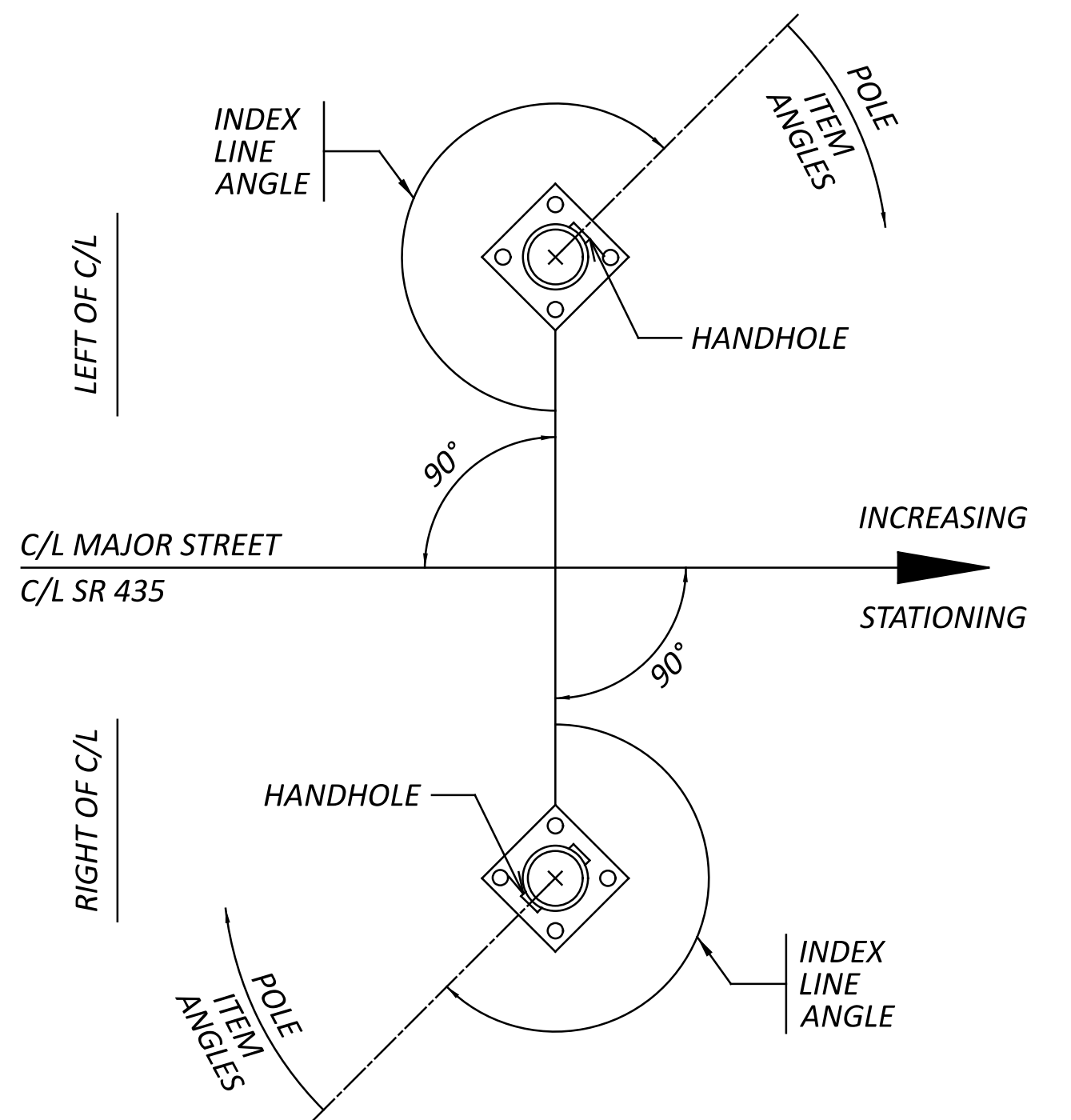
WIRING DIAGRAM



WIRING DIAGRAM LEGEND

- 3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- + 3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY, ARROWS
- ⊙ STOP LINE RADAR DETECTOR UNIT
- ⊙ ADVANCE RADAR DETECTOR UNIT
- SP-# SIGNAL SUPPORT POLE, NO. __
- D/S SIGNAL DISCONNECT SWITCH
- #C SIGNAL CABLE, # CONDUCTOR, NO. 14 AWG
- RC RADAR DETECTION CABLE
- ⊗ POWER SOURCE
- PC POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
- MB METER BASE
- UPS UPS CABLE

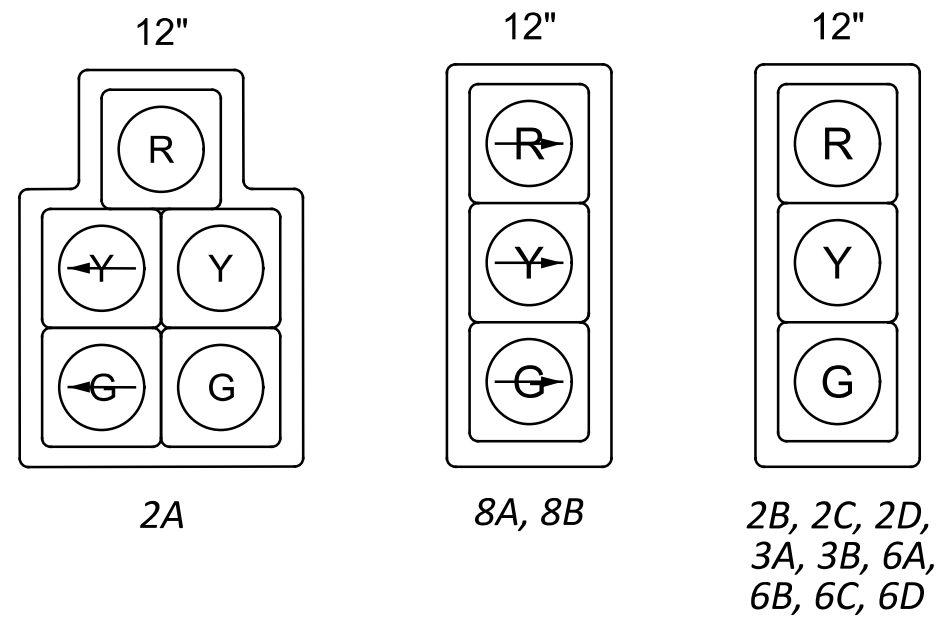
STRAIN POLE ORIENTATION



NOTES

- ALL ANGLES ARE MEASURED CLOCKWISE.
- THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

PROPOSED SIGNAL HEADS*

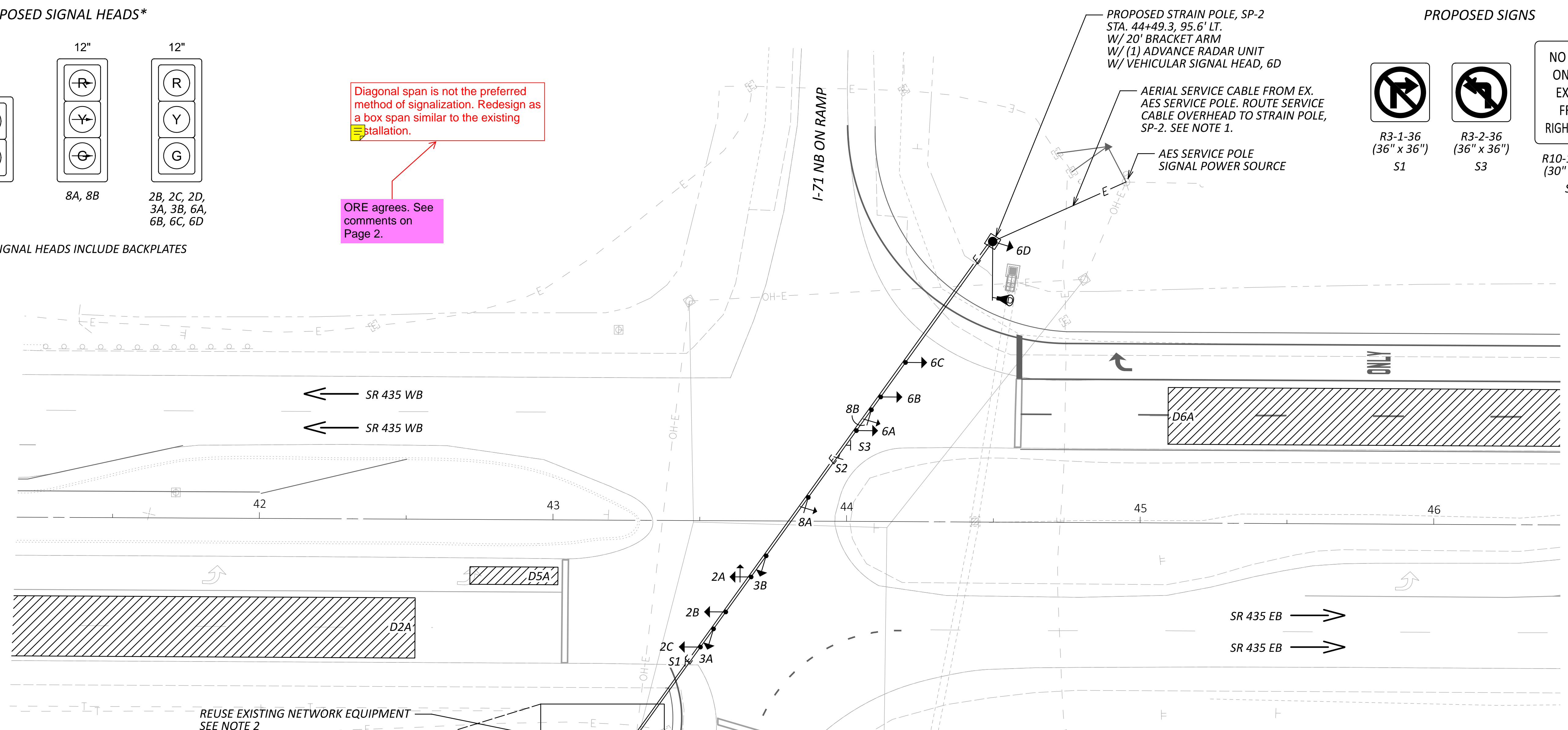
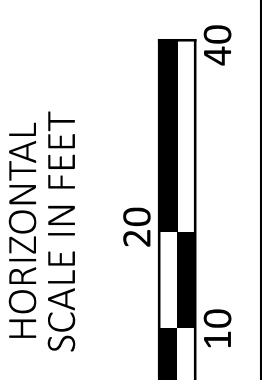
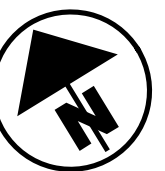
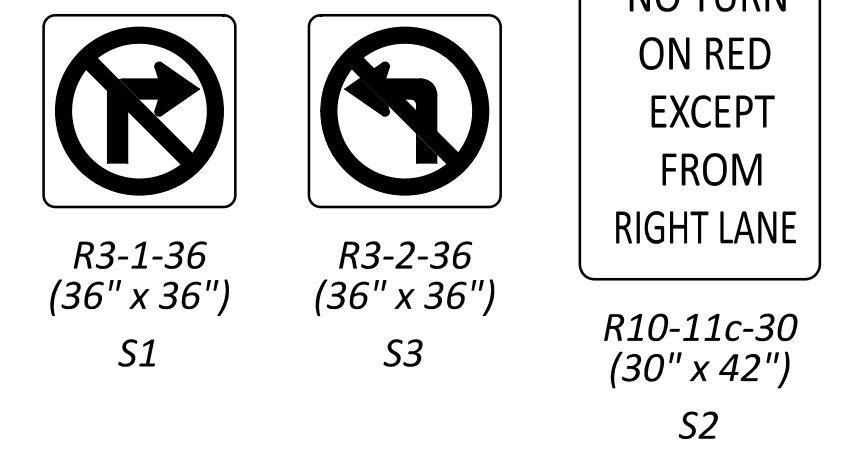


* - VEHICLE SIGNAL HEADS INCLUDE BACKPLATES

Diagonal span is not the preferred method of signalization. Redesign as a box span similar to the existing installation.

ORE agrees. See comments on Page 2.

PROPOSED SIGNS



STA. 43+16.4, 83.0' RT.
 TRAFFIC PULL BOX, 24", TB1
 (2) 4" RMC - 10'

REUSE EXISTING NETWORK EQUIPMENT
 SEE NOTE 2

See southbound ramp comments as most apply at this intersection as well.

STA. 43+22.8, 81.9' RT.
 PROPOSED STRAIN POLE, SP-1
 W/ (2) STOP BAR RADAR UNITS
 W/ (2) ADVANCE RADAR UNITS
 W/ VEHICULAR SIGNAL HEAD, 2D
 W/METER AND DISCONNECT SWITCH

4" RMC - 12'

STA. 43+16.1, 87.8' RT.
 PROPOSED TRAFFIC CABINET & UPS
 SEE NOTE 2

PROPOSED STRAIN POLE, SP-2
 STA. 44+49.3, 95.6' LT.
 W/ 20' BRACKET ARM
 W/ (1) ADVANCE RADAR UNIT
 W/ VEHICULAR SIGNAL HEAD, 6D

AERIAL SERVICE CABLE FROM EX.
 AES SERVICE POLE. ROUTE SERVICE
 CABLE OVERHEAD TO STRAIN POLE,
 SP-2. SEE NOTE 1.

AES SERVICE POLE
 SIGNAL POWER SOURCE

NOTES

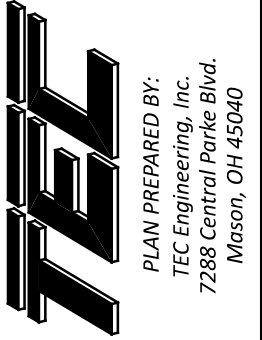
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- LOCATION OF CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
- ALL CONDUIT SHALL BE INSTALLED IN OPEN-CUT TRENCH.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 OR 4 UNIT HEAD ARROW, 12"		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL STRAIN POLE		
SIGN		
CONTROLLER CABINET		
TRAFFIC PULL BOX, 24" x 24"		
ADVANCE RADAR DETECTION UNIT		
STOP LINE RADAR DETECTION UNIT		
DETECTION ZONE		

TRAFFIC SIGNAL PLAN
 SR-435 & I-71 NB RAMPS

DESIGN AGENCY



DESIGNER

JMD

REVIEWER

MJH 01/05/24

PROJECT ID

117955

SHEET TOTAL

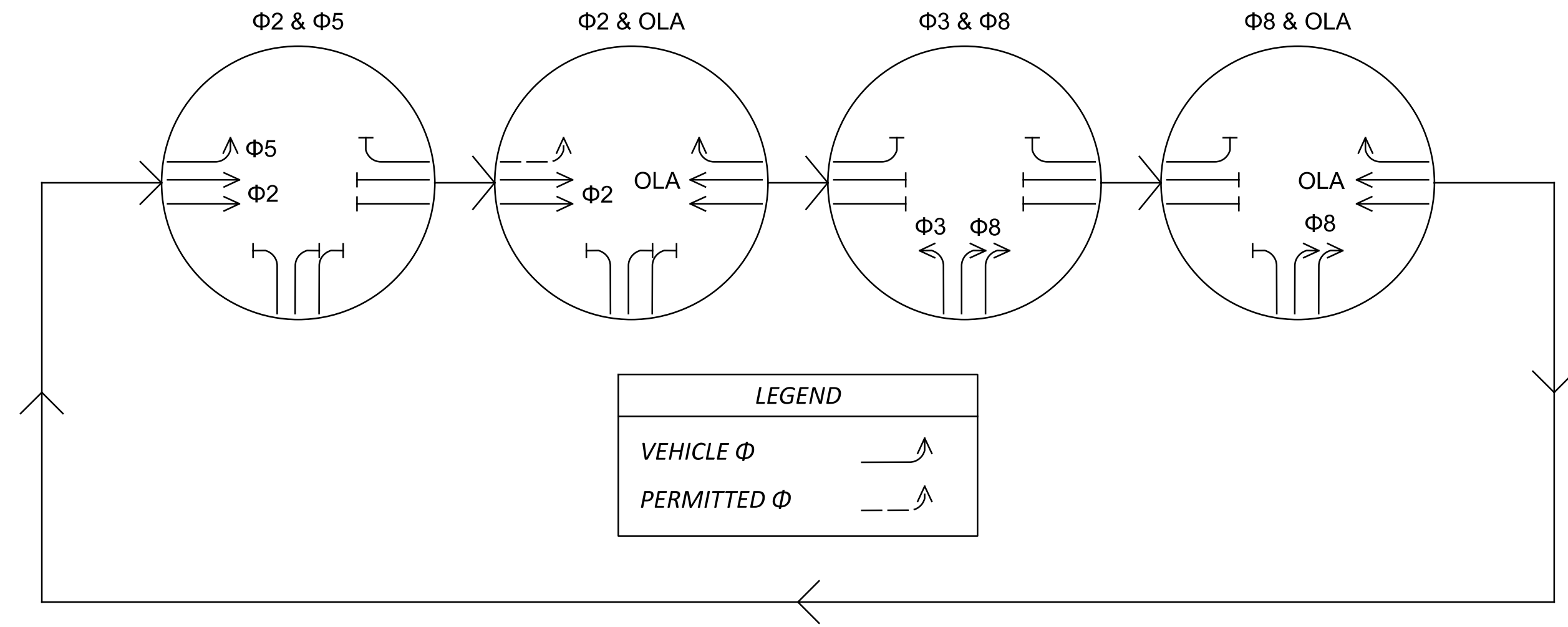
5 24

SIGNAL TIMING CHART

INTERSECTION: SR 435 & I-71 NB RAMPS								
MAINTAINING AGENCY: ODOT								
START UP	DUAL ENTRY:	-	PHASES: -					
	REST IN RED:	RING 1	-	RING 2 -				
	OVERLAP		-	-	-	-	-	-
	PHASES		-	-	-	-	-	-
START IN:	ALL RED							
TIME FOR FLASH, ALL RED:	5 SEC							
FIRST PHASE(S):	-							
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	-	-	-	-	-	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	-	-	-	-	-	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	-	-	-	-	-	-	-
ALL RED CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	-	-	-	-	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-

COORDINATION TIMING

SIGNAL PHASING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A (EB LT)	R	Φ 2R	R
	Y	Φ 2Y	
	G	Φ 2G	
	<--Y-->	Φ 5Y	
2B, 2C, 2D (EB)	<--G-->	Φ 5G	R
	R	Φ 2R	
	Y	Φ 2Y	
	G	Φ 2G	
6A, 6B, 6C, 6D (WB)	R	Φ 6R	R
	Y	Φ 6Y	
	G	Φ 6G	
3A, 3B (NB)	R	Φ 3R	R
	Y	Φ 3Y	
	G	Φ 3G	
8A, 8B (NB RT)	---R-->	Φ 8R	R
	---Y-->	Φ 8Y	
	---G-->	Φ 8G	

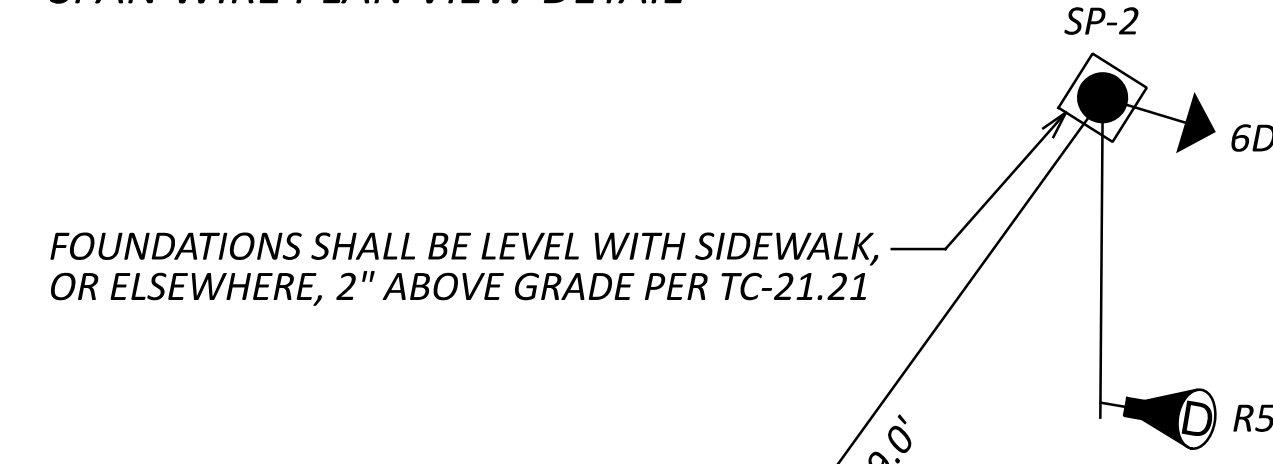
DETECTOR TABLE

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D2A	EB ADV	PRESENCE	2	NON-LOCK	0	0	2	EXTEND PHASE 2	ADVANCE
D3A	NB LT	PRESENCE	3	NON-LOCK	0	0	3	CALL/EXTEND PHASE 3	30
D5A	EB LT	PRESENCE	5	NON-LOCK	0	0	5	CALL/EXTEND PHASE 5	30
D6A	WB ADV	PRESENCE	6	NON-LOCK	0	0	6	EXTEND PHASE 6	ADVANCE
D8A	NB RT	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30
D8B	NB RT	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30
D8C	NB ADV	PRESENCE	8	NON-LOCK	0	0	8	EXTEND PHASE 8	ADVANCE

STRAIN POLE DETAILS

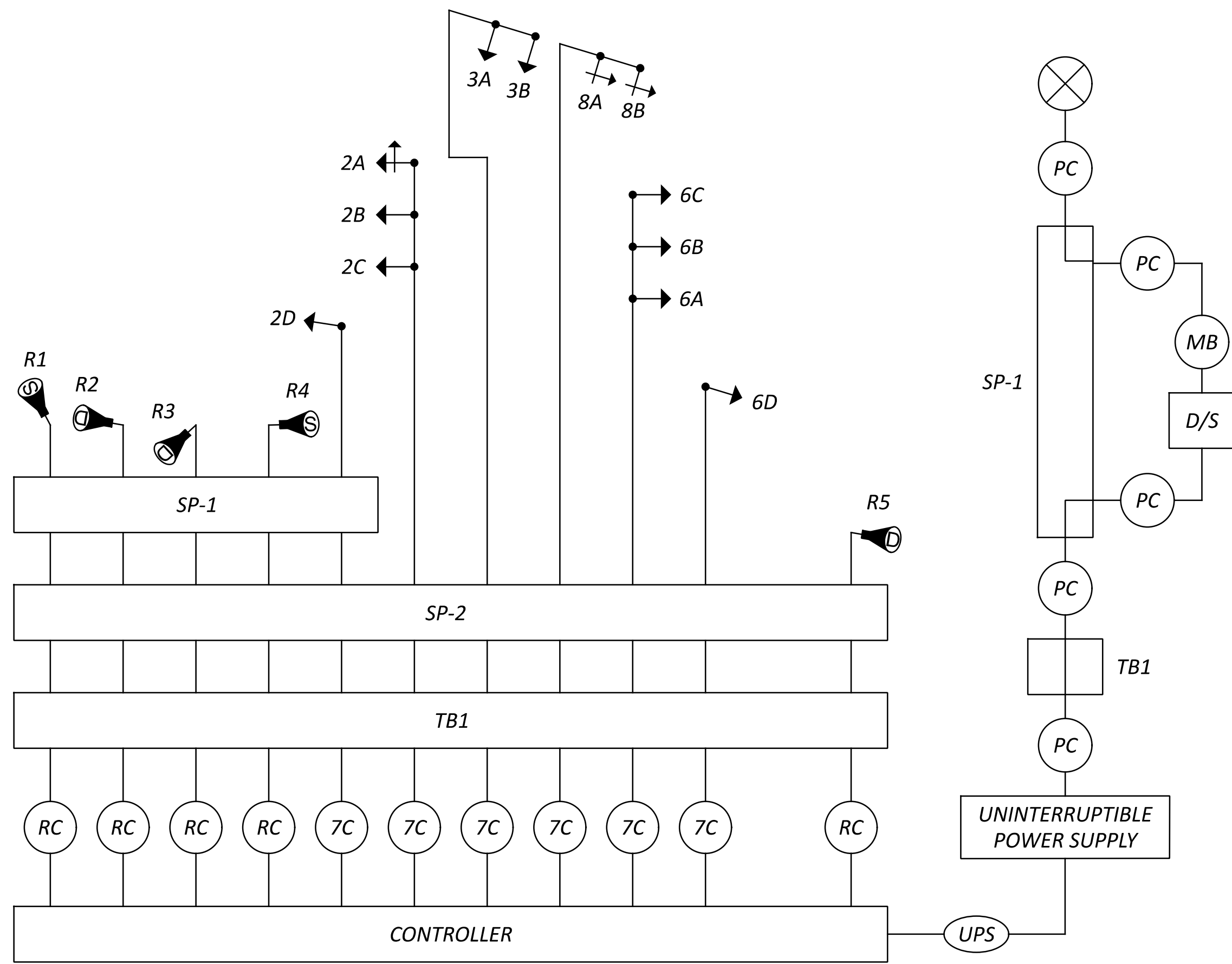
STATION	OFFSET	POLE NO.	DESIGN TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEVATION	SPAN WIRE ATTACHED HEIGHT (FT)	INDEX LINE ANGLE (DEG.)	INDEX LINE ANGLE (DEG.)			
									DISCONNECT SWITCH	METER BASE	BRACKET ARM	SUPPLEMENTAL SIGNAL HEAD
43+22.8	81.9' RT.	SP-1	TC-81.11	13	40.0	1052.08	35.0	214	0	0	-	65
44+49.3	95.6' LT.	SP-2	TC-81.11	13	40.0	1052.37	35.0	212	-	-	148	75

SPAN WIRE PLAN VIEW DETAIL



See comments made for south bound ramp as most of them apply to this intersection also.

WIRING DIAGRAM

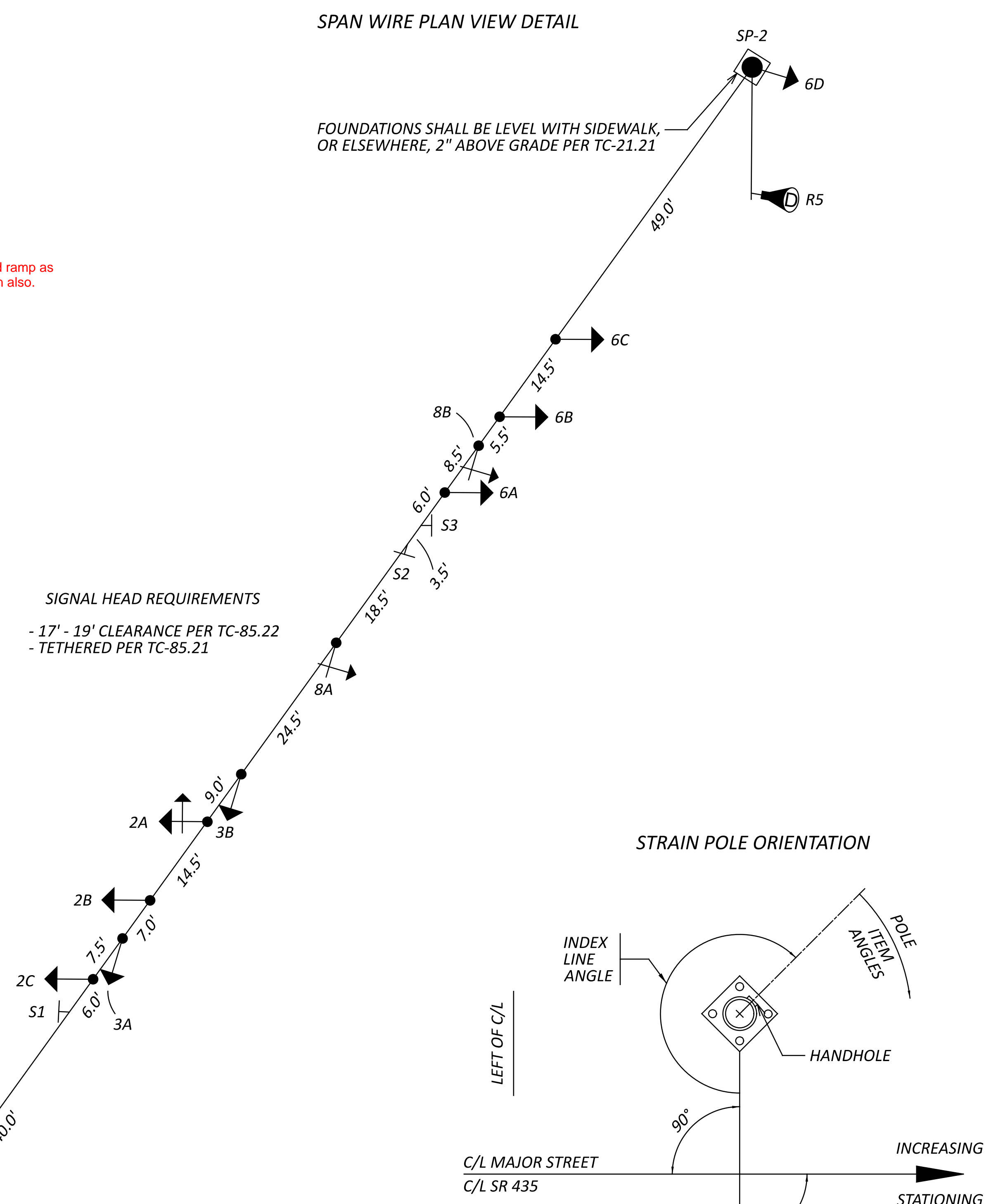


WIRING DIAGRAM LEGEND

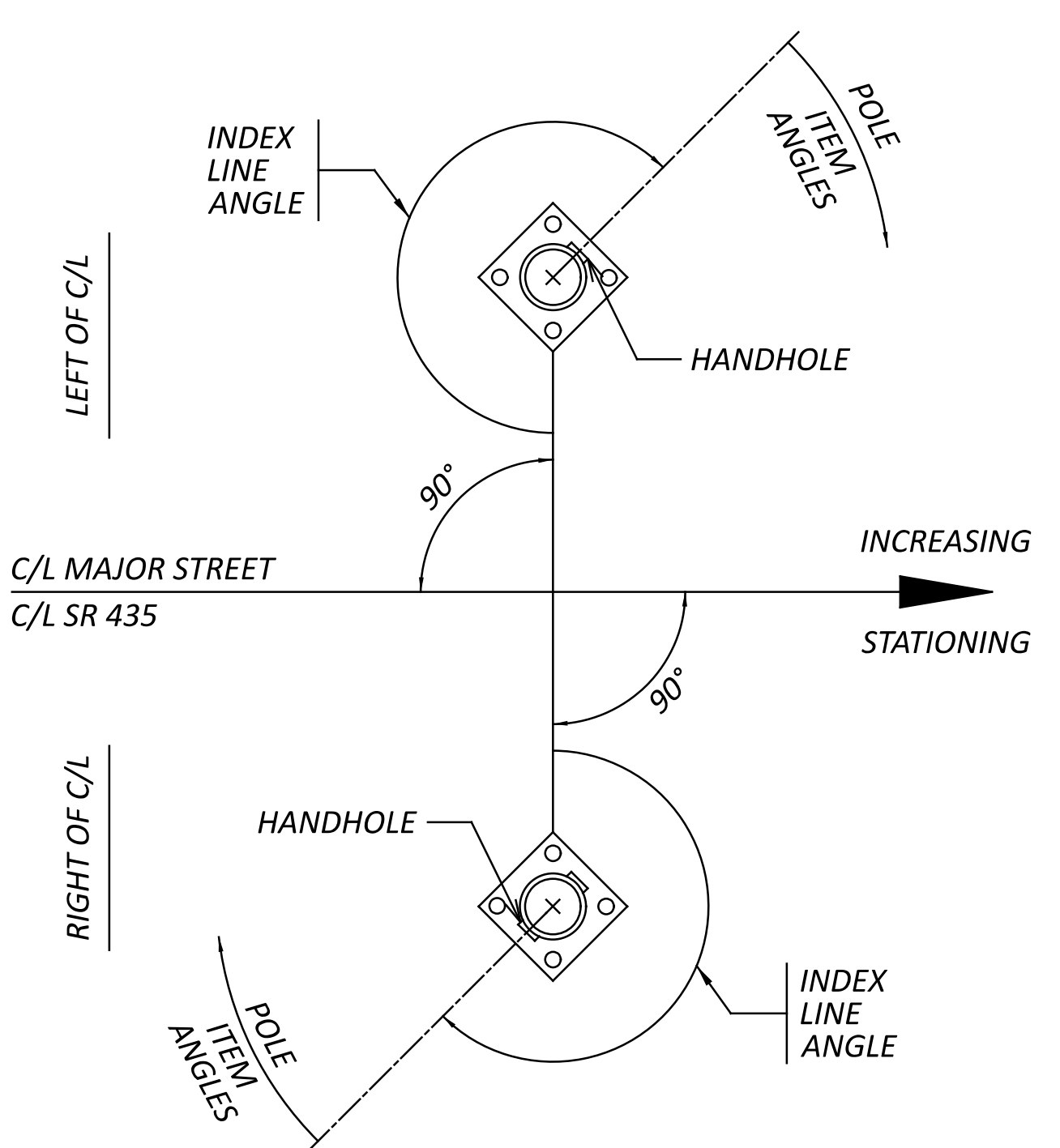
- 3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- #C SIGNAL CABLE, # CONDUCTOR, NO. 14 AWG
- 3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY, ARROWS
- RC RADAR DETECTION CABLE
- STOP LINE RADAR DETECTOR UNIT
- PC POWER SOURCE
- ADVANCE RADAR DETECTOR UNIT
- PC POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
- SP-# SIGNAL SUPPORT POLE, NO. __
- MB METER BASE
- D/S SIGNAL DISCONNECT SWITCH
- UPS UPS CABLE

SUPPLEMENTAL HEADS SHALL BE MOUNTED PER TC-85.10

SIGNAL HEAD REQUIREMENTS
 - 17' - 19' CLEARANCE PER TC-85.22
 - TETHERED PER TC-85.21



STRAIN POLE ORIENTATION



NOTES

1. ALL ANGLES ARE MEASURED CLOCKWISE.
2. THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

FAY-435-1.52

MODEL: CP06 PAPER SIZE: 34x42 (in.) DATE: 1/5/2024 TIME: 7:24:47 AM USER: mike
 \\10.1.2.4\projects\2023\Projects\23068\Palmer\Engineering\002_FAY-435-1.52\117955\400-Engineering\Signals\Sheets\117955_CP.dgn

TRAFFIC SIGNAL PLAN DETAILS
 SR-435 & I-71 NB RAMP

DESIGN AGENCY

 PLAN PREPARED BY:
 TEC Engineering, Inc.
 7288 Central Park Blvd.
 Mason, OH 45040

DESIGNER
 JMD

REVIEWER
 MJH 01/05/24

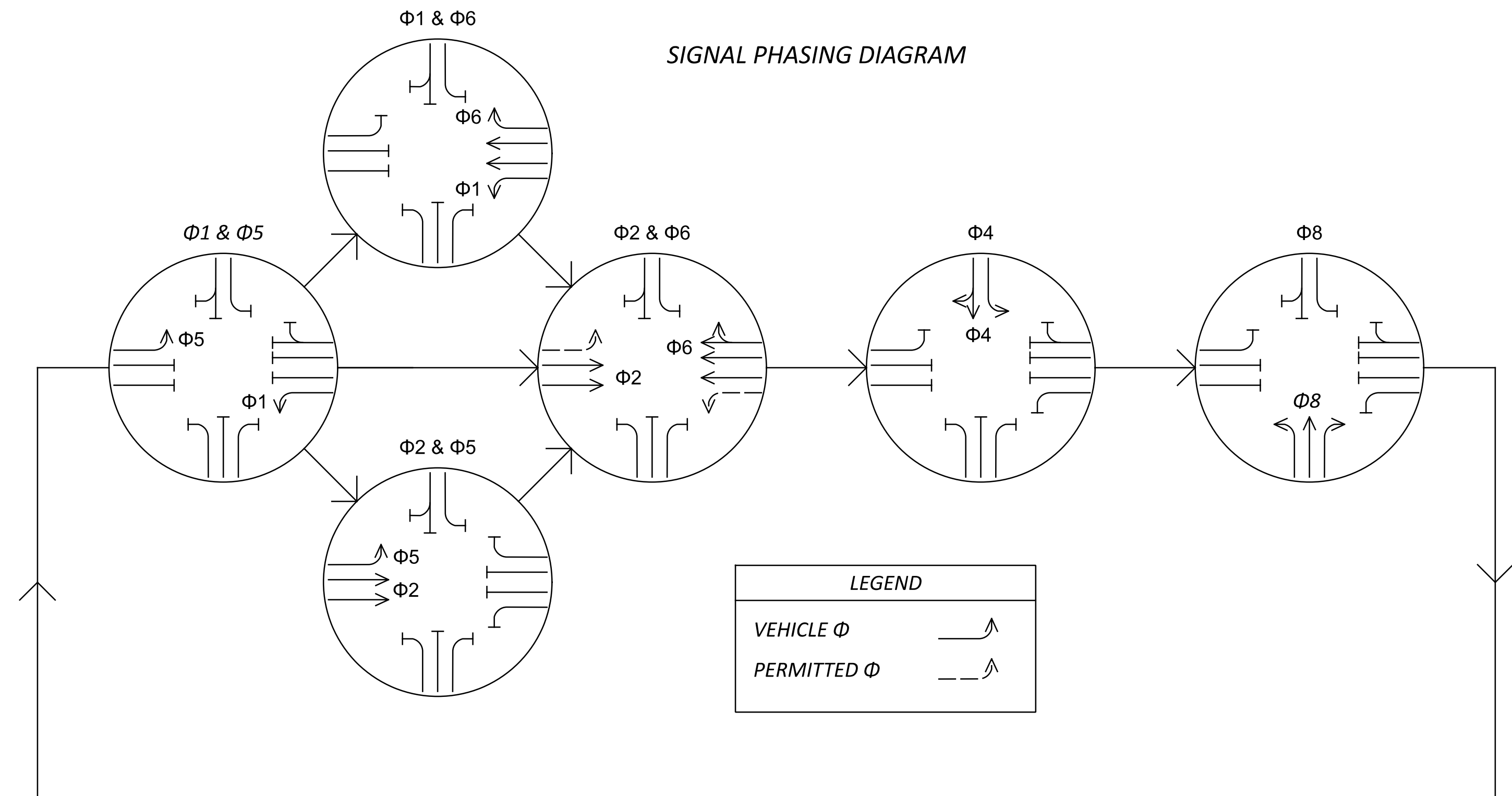
PROJECT ID
 117955

SHEET TOTAL
 7 24

SIGNAL TIMING CHART

INTERSECTION: SR 435 & ALLEN ROAD		MAINTAINING AGENCY: ODOT						
START UP	DUAL ENTRY:	-	PHASES:	-				
	REST IN RED:	RING 1	-	RING 2	-			
START IN:	ALL RED							
TIME FOR FLASH, ALL RED:	5 SEC							
FIRST PHASE(S):	-							
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	-	-	-	-	-	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	-	-	-	-	-	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	-	-	-	-	-	-	-
ALL RED CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	-	-	-	-	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-

COORDINATION TIMING



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A (EB LT)	R	Φ 2R	R	6A (WB LT)	R	Φ 6R	R
	Y	Φ 2Y			Y	Φ 6Y	
	G	Φ 2G			G	Φ 6G	
	<--Y---	Φ 5Y			<--Y---	Φ 1Y	
	<--G---	Φ 5G		<--G---	Φ 1G		
2B, 2C, 2D (EB)	R	Φ 2R	R	6B, 6C, 6D, 6E (WB)	R	Φ 6R	R
	Y	Φ 2Y			Y	Φ 6Y	
	G	Φ 2G			G	Φ 6G	
4A (SB LT)	R	Φ 4R	R	8A (NB LT)	R	Φ 8R	R
	Y	Φ 4Y			Y	Φ 8Y	
	G	Φ 4G			G	Φ 8G	
	<--G---	Φ 4G			<--G---	Φ 8G	
4B (SB)	R	Φ 4R	R	8B (NB)	R	Φ 8R	R
	Y	Φ 4Y			Y	Φ 8Y	
	G	Φ 4G			G	Φ 8G	

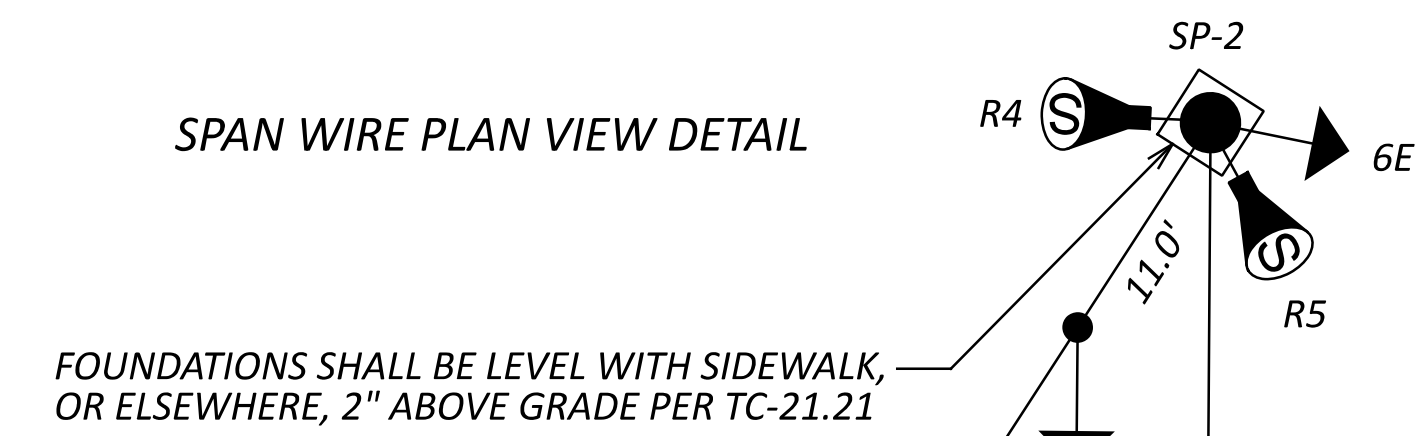
DETECTOR TABLE

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D1A	WB LT	PRESENCE	1	NON-LOCK	0	0	1	CALL/EXTEND PHASE 1	30
D2A	EB ADV	PRESENCE	2	NON-LOCK	0	0	2	EXTEND PHASE 2	ADVANCE
D4A	SB LT	PRESENCE	4	NON-LOCK	0	0	4	CALL/EXTEND PHASE 4	30
D4B	SB	PRESENCE	4	NON-LOCK	0	0	4	CALL/EXTEND PHASE 4	30
D5A	EB LT	PRESENCE	5	NON-LOCK	0	0	5	CALL/EXTEND PHASE 5	30
D6A	WB ADV	PRESENCE	6	NON-LOCK	0	0	6	EXTEND PHASE 6	ADVANCE
D8A	NB LT	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30
D8B	NB	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30
D8C	NB RT	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30

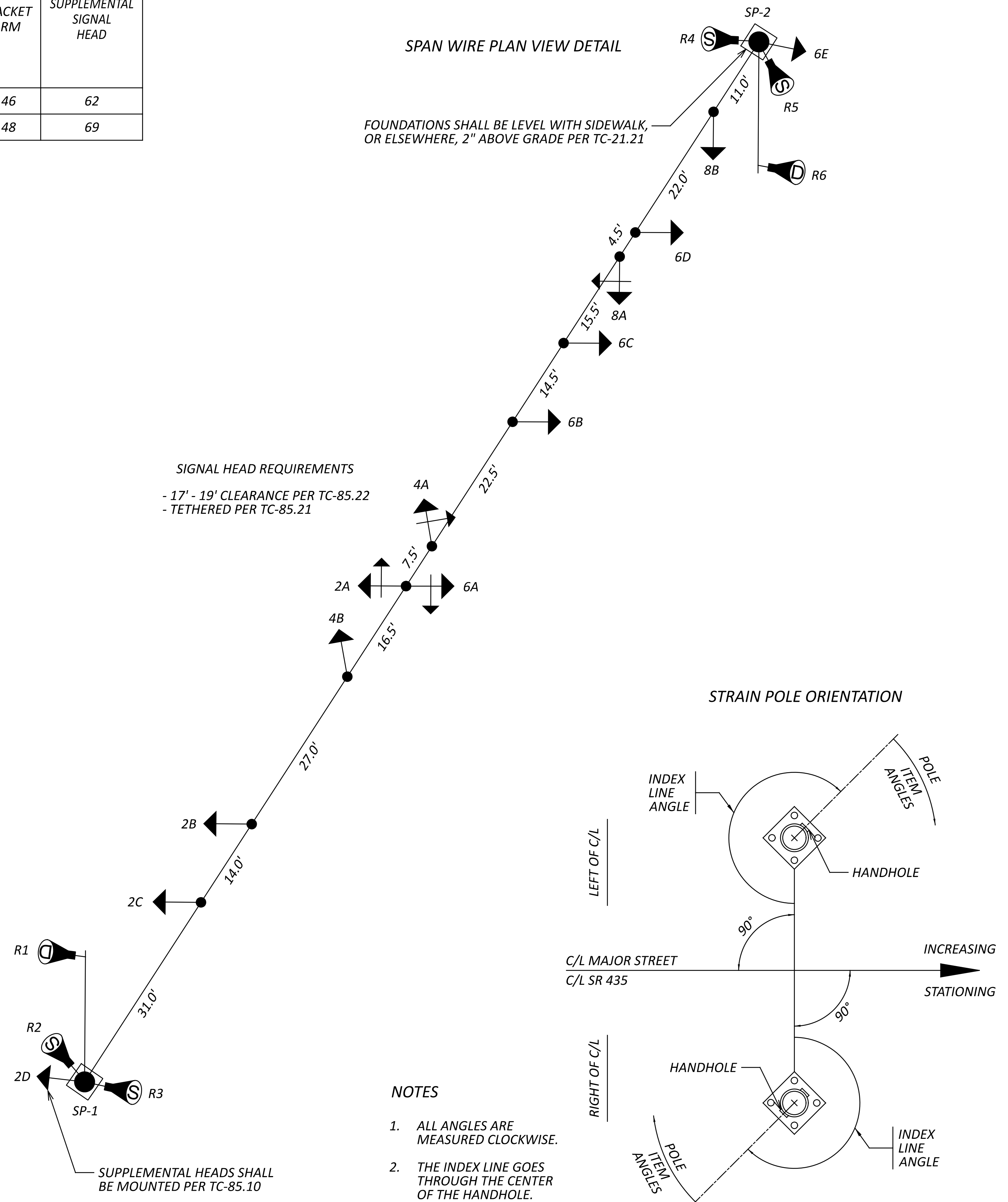
STRAIN POLE DETAILS

STATION	OFFSET	POLE NO.	DESIGN TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEVATION	SPAN WIRE ATTACHED HEIGHT (FT)	INDEX LINE ANGLE (DEG.)	INDEX LINE ANGLE (DEG.)			
									DISCONNECT SWITCH	METER BASE	BRACKET ARM	SUPPLEMENTAL SIGNAL HEAD
49+00.5	70.4' RT.	SP-1	TC-81.11	13	35.0	1054.76	33.5	214	-	-	146	62
50+02.3	89.0' LT.	SP-2	TC-81.11	13	35.0	1055.10	33.5	212	0	0	148	69

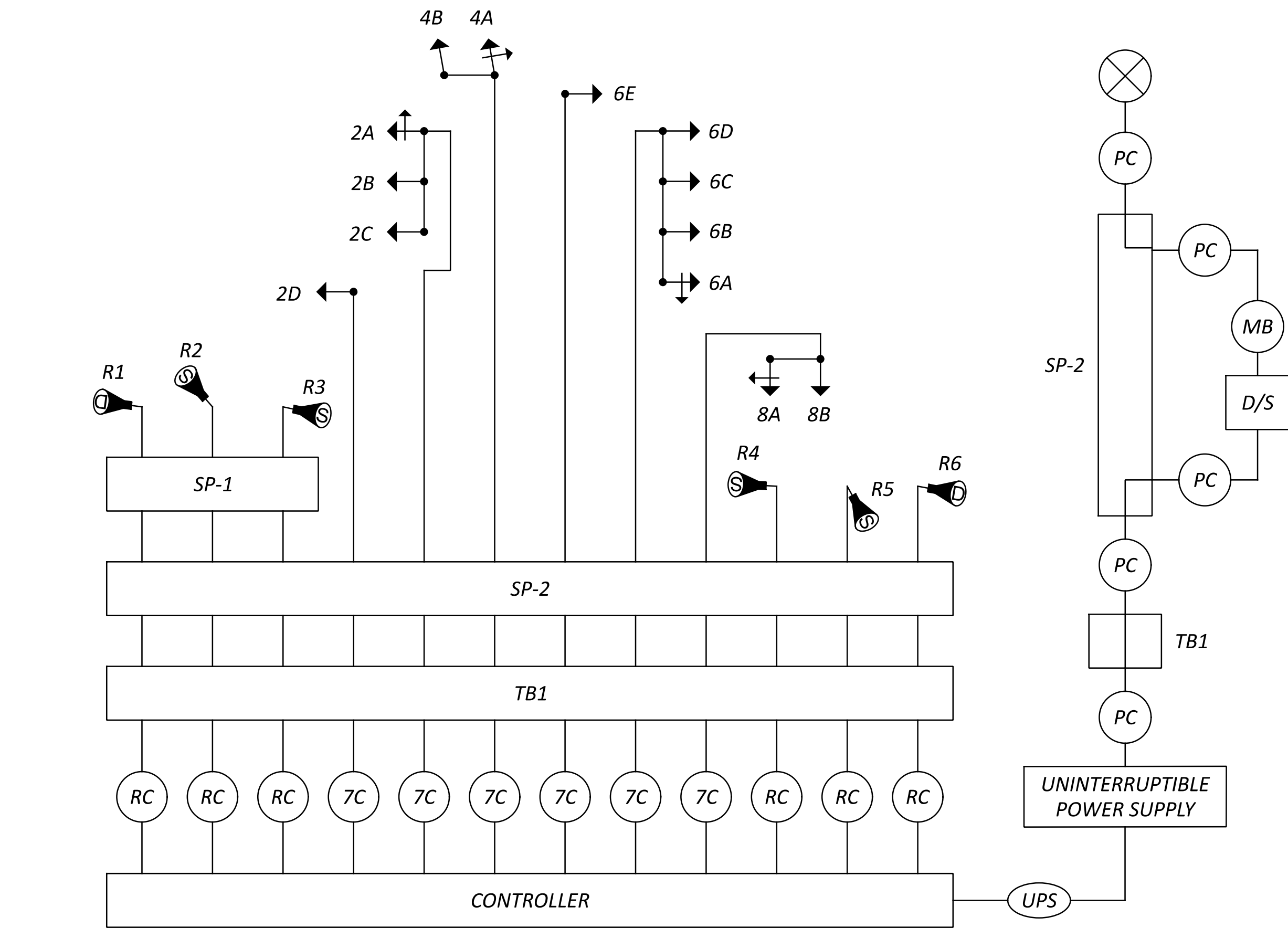
SPAN WIRE PLAN VIEW DETAIL



SIGNAL HEAD REQUIREMENTS
 - 17' - 19' CLEARANCE PER TC-85.22
 - TETHERED PER TC-85.21



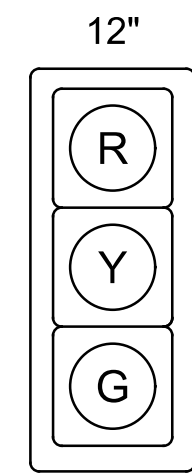
- NOTES
- ALL ANGLES ARE MEASURED CLOCKWISE.
 - THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.



WIRING DIAGRAM LEGEND

	3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY		SIGNAL CABLE, # CONDUCTOR, NO. 14 AWG
	3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY, ARROWS		RADAR DETECTION CABLE
	STOP LINE RADAR DETECTOR UNIT		POWER SOURCE
	ADVANCE RADAR DETECTOR UNIT		POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
	SIGNAL SUPPORT POLE, NO. __		METER BASE
	SIGNAL DISCONNECT SWITCH		UPS CABLE

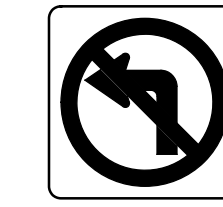
PROPOSED SIGNAL HEADS*



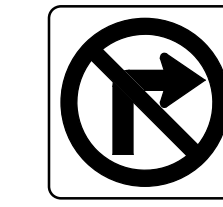
2A, 2B, 2C,
6A, 6B, 6C,
8A, 8B, 8C

* - VEHICLE SIGNAL HEADS INCLUDE BACKPLATES

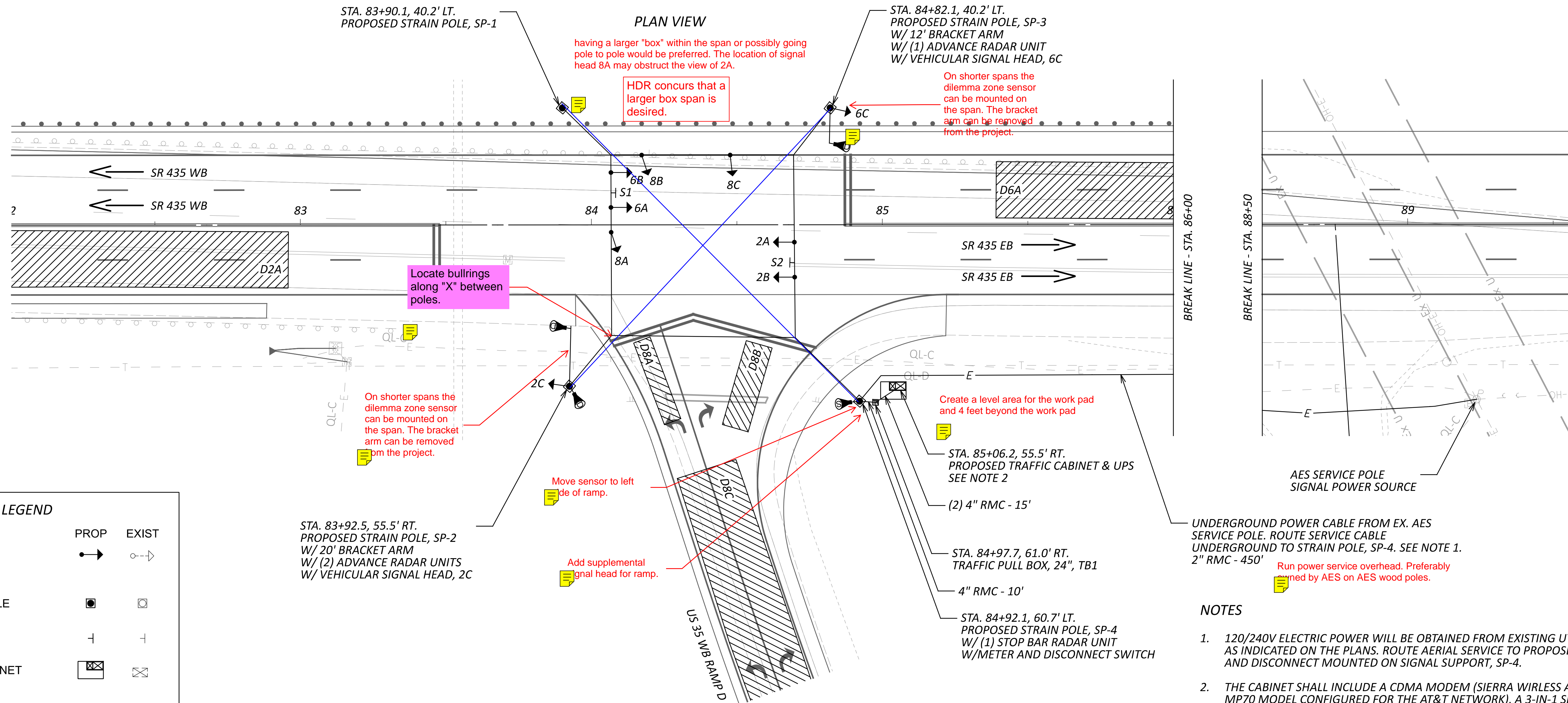
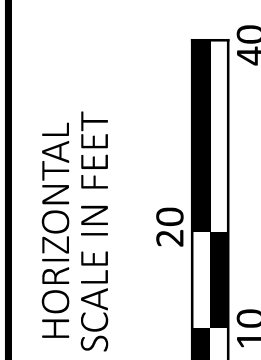
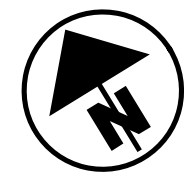
PROPOSED SIGNS



R3-2-36
(36" x 36")
S1



R3-1-36
(36" x 36")
S2



LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
SIGNAL STRAIN POLE		
SIGN		
CONTROLLER CABINET		
TRAFFIC PULL BOX, 24" x 24"		
ADVANCE RADAR DETECTION UNIT		
STOP LINE RADAR DETECTION UNIT		
DETECTION ZONE		

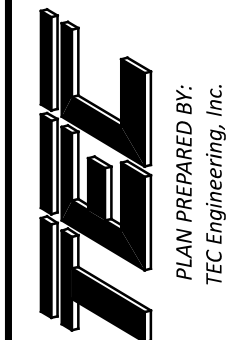
UNDERGROUND POWER CABLE FROM EX. AES SERVICE POLE. ROUTE SERVICE CABLE UNDERGROUND TO STRAIN POLE, SP-4. SEE NOTE 1.
 2" RMC - 450'
 Run power service overhead. Preferably mounted by AES on AES wood poles.

NOTES

- 120/240V ELECTRIC POWER WILL BE OBTAINED FROM EXISTING UTILITY POLE AS INDICATED ON THE PLANS. ROUTE AERIAL SERVICE TO PROPOSED METER AND DISCONNECT MOUNTED ON SIGNAL SUPPORT, SP-4.
- THE CABINET SHALL INCLUDE A CDMA MODEM (SIERRA WIRELESS AIRLINK MP70 MODEL CONFIGURED FOR THE AT&T NETWORK), A 3-IN-1 SHARKFIN CELLULAR ANTENNA, AND AN ETHERNET SWITCH (COMTROL ROCKETLINK ES8108).
- POLE LOCATIONS HAVE BEEN INDICATED AS ACCURATELY AS POSSIBLE. IN NO CASE SHALL THE CLEARANCE FROM FACE OF CURB TO FACE OF POLE, SIGN OR OTHER PROPOSED ITEMS BE LESS THAN 4 FT. TOP OF POLE FOUNDATIONS SHALL BE FLUSH WITH ADJACENT WALK WAYS, IF APPLICABLE.
- LOCATION OF CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
- ALL CONDUIT SHALL BE INSTALLED IN OPEN-CUT TRENCH.

TRAFFIC SIGNAL PLAN
 SR-435 & US 35 WB RAMP D

DESIGN AGENCY



DESIGNER

JMD

REVIEWER

MJH 01/05/24

PROJECT ID

117955

SHEET

TOTAL

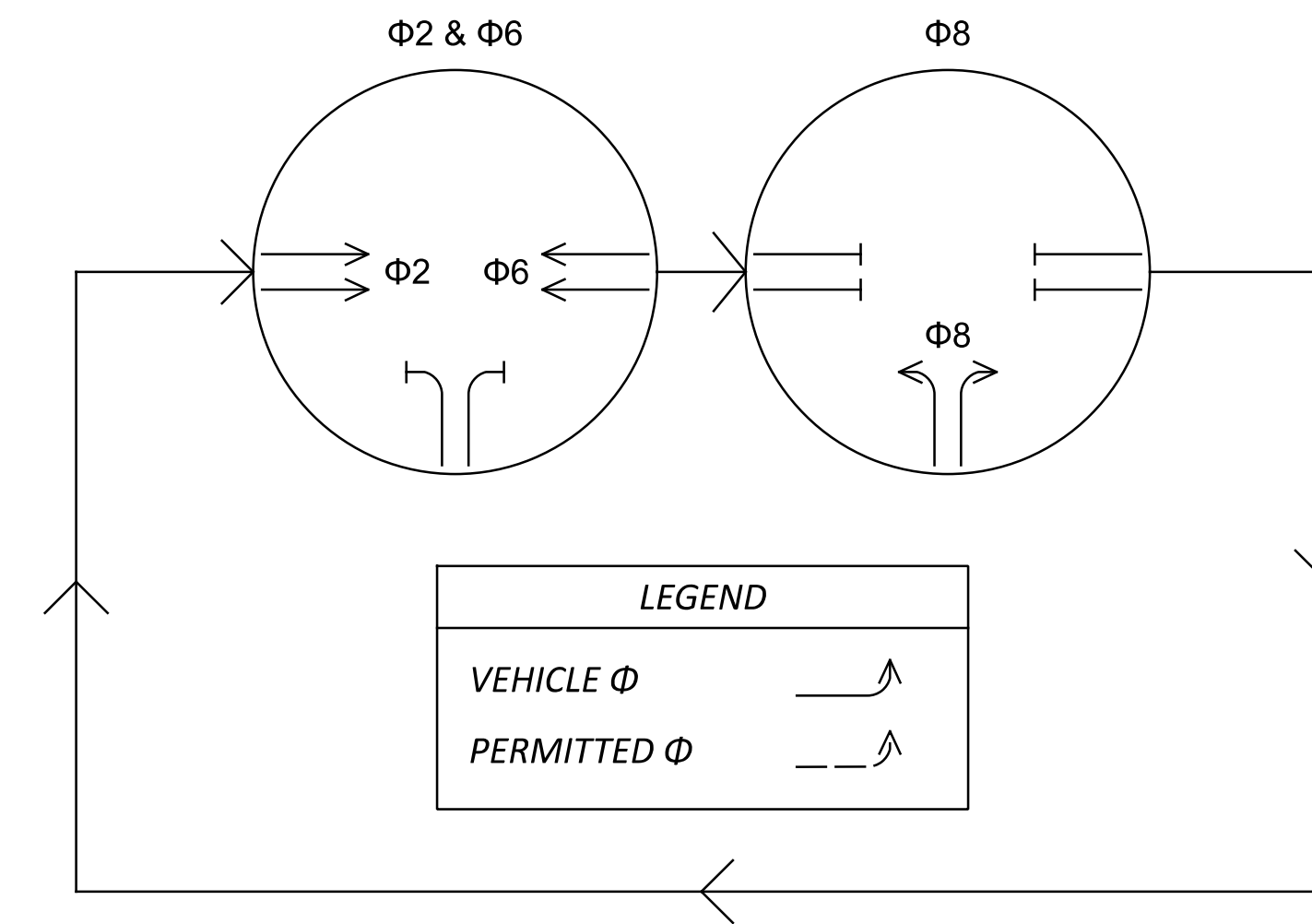
11 24

SIGNAL TIMING CHART

INTERSECTION: SR 435 & US 35 WB RAMP D								
MAINTAINING AGENCY: ODOT								
START UP	DUAL ENTRY:	-	PHASES: -					
	REST IN RED:	RING 1	-	RING 2 -				
	OVERLAP		-	-	-	-	-	-
	PHASES		-	-	-	-	-	-
START IN:	ALL RED							
TIME FOR FLASH, ALL RED:	5 SEC							
FIRST PHASE(S):	-							
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	-	-	-	-	-	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	-	-	-	-	-	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	-	-	-	-	-	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	-	-	-	-	-	-	-	-
ALL RED CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	-	-	-	-	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-
MEMORY (ON/OFF)	-	-	-	-	-	-	-	-

COORDINATION TIMING

SIGNAL PHASING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B, 2C (EB)	R	Φ 2R	R
	Y	Φ 2Y	
	G	Φ 2G	
6A, 6B, 6C (WB)	R	Φ 6R	R
	Y	Φ 6Y	
	G	Φ 6G	
8A, 8B, 8C (NB)	R	Φ 8R	R
	Y	Φ 8Y	
	G	Φ 8G	

DETECTOR TABLE

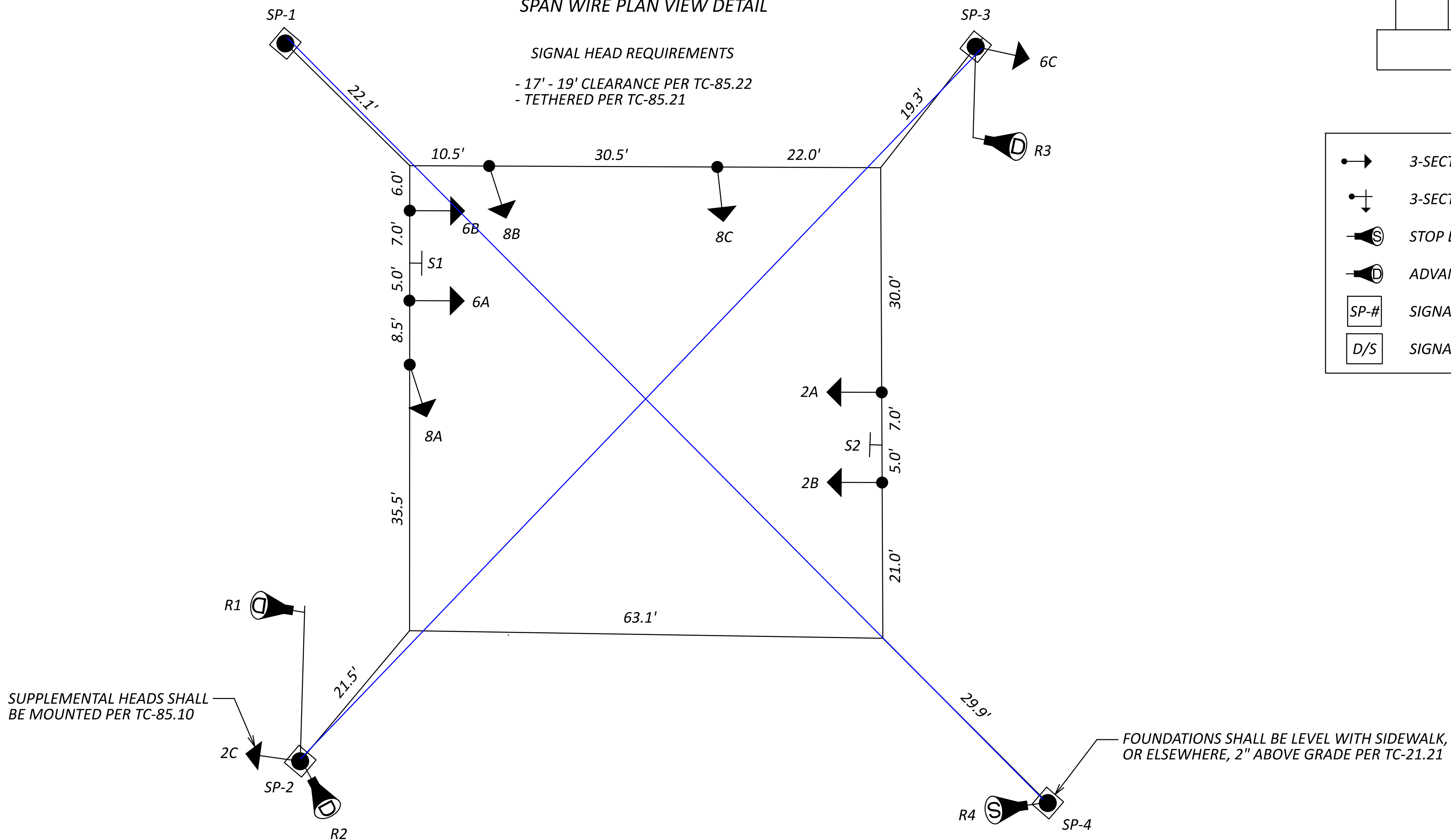
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D2A	EB ADV	PRESENCE	2	NON-LOCK	0	0	2	EXTEND PHASE 2	ADVANCE
D6A	WB ADV	PRESENCE	6	NON-LOCK	0	0	6	EXTEND PHASE 6	ADVANCE
D8A	NB LT	PRESENCE	8	NON-LOCK	0	0	8	CALL/EXTEND PHASE 8	30
D8B	NB RT	PRESENCE	8	NON-LOCK	0	10	8	CALL/EXTEND PHASE 8	30
D8C	NB ADV	PRESENCE	8	NON-LOCK	0	0	8	EXTEND PHASE 8	ADVANCE

STRAIN POLE DETAILS

STATION	OFFSET	POLE NO.	DESIGN TYPE	DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION ELEVATION	SPAN WIRE ATTACHED HEIGHT (FT)	INDEX LINE ANGLE (DEG.)	INDEX LINE ANGLE (DEG.)			
									DISCONNECT SWITCH	METER BASE	BRACKET ARM	SUPPLEMENTAL SIGNAL HEAD
83+90.1	40.2' LT.	SP-1	TC-81.11	10	34.0	1070.31	32.5	130	-	-	-	-
83+92.5	55.5' RT.	SP-2	TC-81.11	10	28.0	1073.37	26.5	220	-	-	-	58
84+82.1	40.2' LT.	SP-3	TC-81.11	12	35.0	1066.81	33.5	218	-	-	143	64
84+92.1	60.7' RT.	SP-4	TC-81.11	12	32.0	1070.37	30.5	131	0	0	-	-

All strain poles are to be same design.

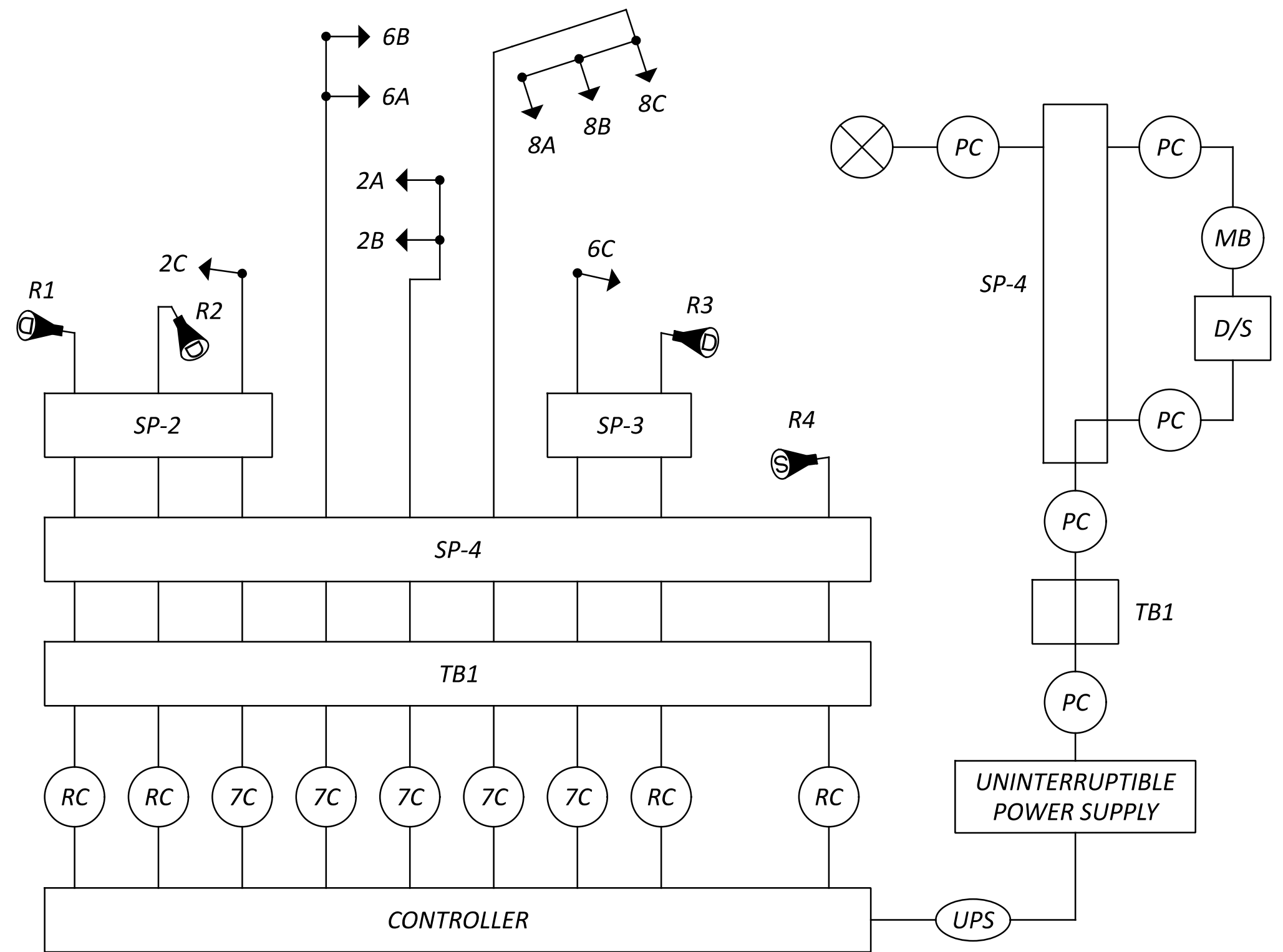
SPAN WIRE PLAN VIEW DETAIL



SUPPLEMENTAL HEADS SHALL BE MOUNTED PER TC-85.10

NOTES

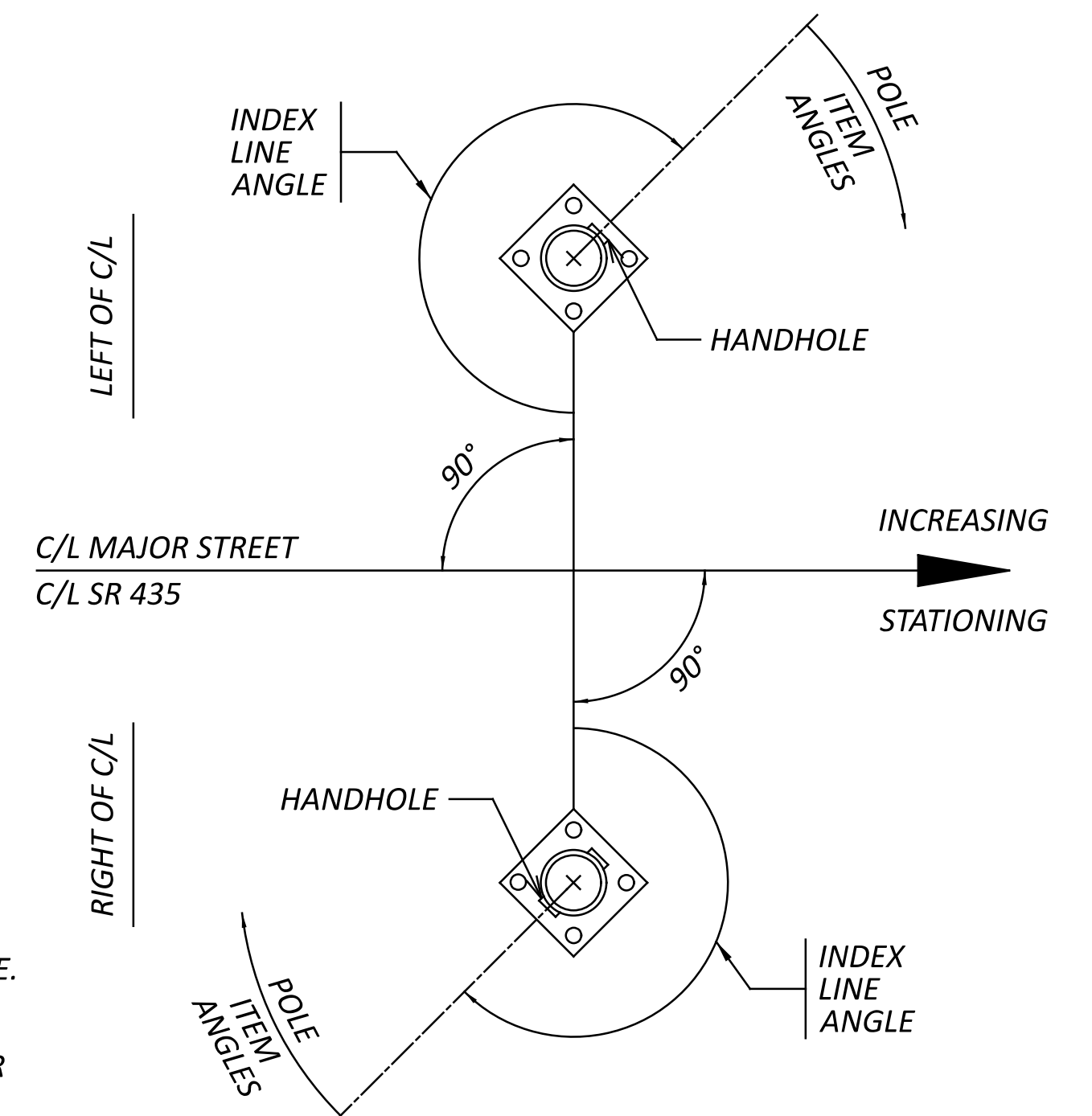
- ALL ANGLES ARE MEASURED CLOCKWISE.
- THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.



WIRING DIAGRAM LEGEND

	3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY		SIGNAL CABLE, # CONDUCTOR, NO. 14 AWG
	3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY, ARROWS		RADAR DETECTION CABLE
	STOP LINE RADAR DETECTOR UNIT		POWER SOURCE
	ADVANCE RADAR DETECTOR UNIT		POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
	SIGNAL SUPPORT POLE, NO. __		METER BASE
	SIGNAL DISCONNECT SWITCH		UPS CABLE

STRAIN POLE ORIENTATION



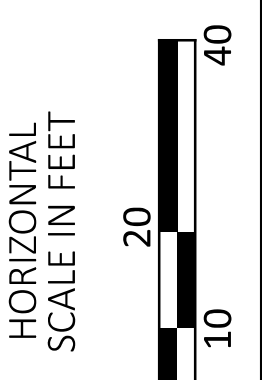
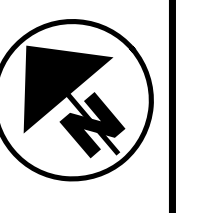
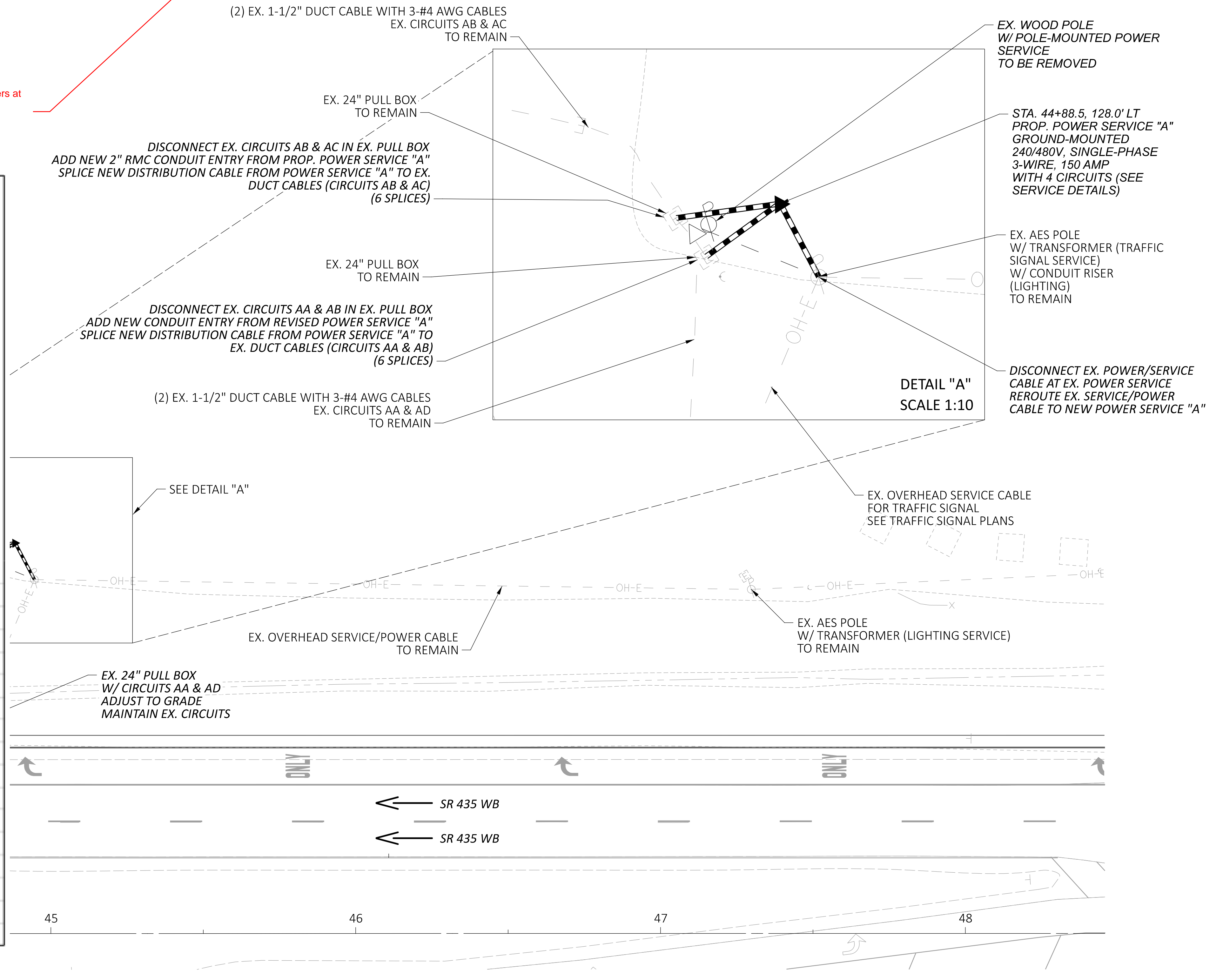
CONTROL CENTER DATA											
CONTROL CENTER	LINE VOLTAGE	CONNECTED LOAD (KVA)	ENCLOSURE RATING AMPS.	SERVICE ENTRANCE CONDUCTOR SIZE	CIRCUIT NUMBER	DESCRIPTION	CIRCUIT VOLTAGE	CIRCUIT LOAD AMPS.	CIRCUIT FUSE SIZE AMPS.	CIRCUIT CABLE SIZE	MAINTAINING AGENCY
LCCA	240/480V SINGLE PHASE 3-WIRE	40.13	150 AMPS	#1/0 AWG	AA	RAMP A LIGHTING	480V	19.8 AMPS	35 AMPS	#4	ODOT
					AB	RAMP B LIGHTING	480V	22.0 AMPS	35 AMPS	#4	
					AC	RAMP C LIGHTING	480V	19.8 AMPS	35 AMPS	#4	
					AD	RAMP D LIGHTING	480V	22.0 AMPS	35 AMPS	#4	

EX.	PROP.	ITEM
		PROPOSED POWER SERVICE
		PULL BOX, IDENTIFICATION NO.
		2" CONDUIT, 725.04

- NOTES:
- LOCATION OF TRENCH AND CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL CLEARANCE AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
 - ALL CONDUIT SHALL BE RMC.
 - SEE CONTROL CENTER DATA FOR SERVICE INFORMATION.

This comment is general and applies to all existing Power Services in this plan: Verify that these branch circuit loads are correct. Interchange lighting has been upgraded to LED, and these numbers seem more like those associated with HPS luminaires. Upgrade plan excerpt below shows 16 towers at the interchange, with qty. 38 new 70-80Klumen LED luminaires installed. The typical 70-80Klumen luminaire is a Holophane HMLLED4 with PK4 package of ~580W, or 1.2 amps at 480VAC. This equates to each branch circuit being approximately 11 amps. Generally, an upgrade to LED from HPS reduces the power by about half.

POLE ID	EXISTING HPS LUMINAIRES (FOR REFERENCE)	LUMINAIRE REMOVED (400W HPS)	LUMINAIRE REMOVED, AS PER PLAN (400W HPS)	PROPOSED LUMINAIRE	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN	SYMMETRICAL, 70-80k LUMENS, 480V	PROPOSED LUMINAIRE	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN	ASYMMETRICAL, 70-80k LUMENS, 480V	PROPOSED LUMINAIRE	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	SYMMETRICAL, 42-47k LUMENS, 480V	PROPOSED LUMINAIRE	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN	ASYMMETRICAL, 37-42k LUMENS, 480V	LUMINAIRE MISC: LUMINAIRE GLASS, REFLECTOR AND SOCKET REMOVED
AA4	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AA3	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AD4	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AA2	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AD3	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AD2	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AA1	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AD1	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AB1	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AC1	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AB2	6	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
AC2	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AB3	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AC3	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AB4	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2
AC4	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	2



POWER SERVICE MODIFICATION PLAN
I-71 & SR-435 INTERCHANGE LIGHTING

DESIGN AGENCY	TEC
REVIEWER	MJH 01/05/24
PROJECT ID	117955
SHEET	14
TOTAL	24

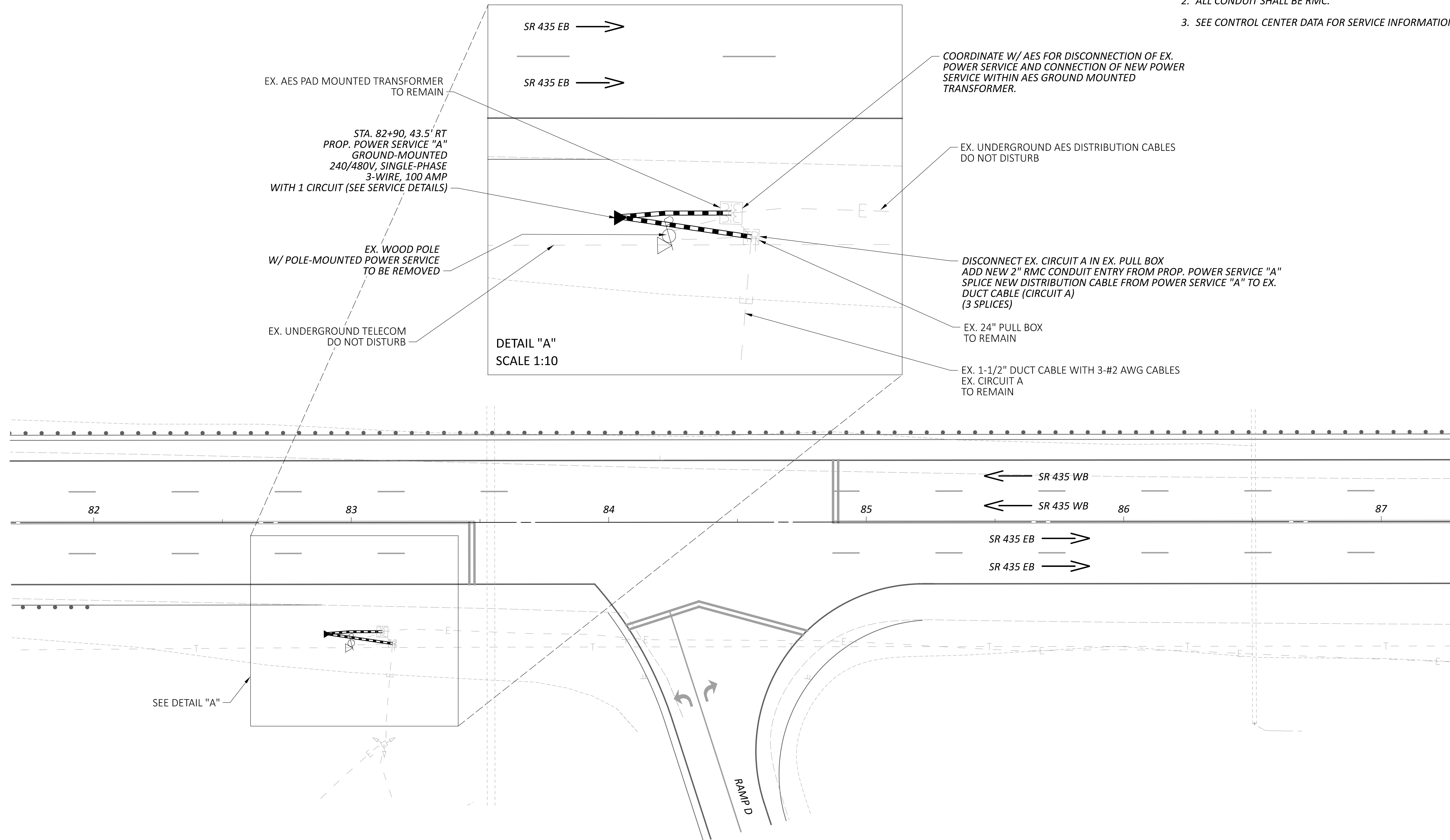
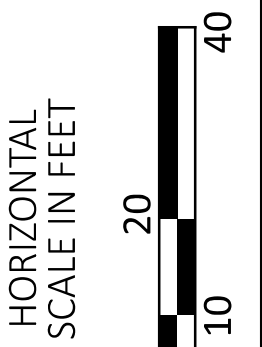
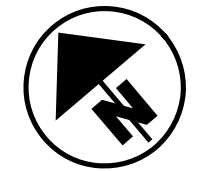
CONTROL CENTER DATA											
CONTROL CENTER	LINE VOLTAGE	CONNECTED LOAD (KVA)	ENCLOSURE RATING AMPS.	SERVICE ENTRANCE CONDUCTOR SIZE	CIRCUIT NUMBER	DESCRIPTION	CIRCUIT VOLTAGE	CIRCUIT LOAD AMPS.	CIRCUIT FUSE SIZE AMPS.	CIRCUIT CABLE SIZE	MAINTAINING AGENCY
LCCA	240/480V SINGLE PHASE 3-WIRE	25.4 KVA	100 AMPS	#2 AWG	A	ALL INTERCHANGE LIGHTING	480V	53 AMPS	100 AMPS	#2	ODOT
					-	-	-	-	-	-	

PLAN LEGEND

EX.	PROP.	ITEM
		PROPOSED POWER SERVICE
		PULL BOX, IDENTIFICATION NO.
		2" CONDUIT, 725.04

NOTES:

1. LOCATION OF TRENCH AND CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL CLEARANCE AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
2. ALL CONDUIT SHALL BE RMC.
3. SEE CONTROL CENTER DATA FOR SERVICE INFORMATION.



EX. AES PAD MOUNTED TRANSFORMER TO REMAIN

STA. 82+90, 43.5' RT
 PROP. POWER SERVICE "A"
 GROUND-MOUNTED
 240/480V, SINGLE-PHASE
 3-WIRE, 100 AMP
 WITH 1 CIRCUIT (SEE SERVICE DETAILS)

EX. WOOD POLE
 W/ POLE-MOUNTED POWER SERVICE
 TO BE REMOVED

EX. UNDERGROUND TELECOM
 DO NOT DISTURB

DETAIL "A"
 SCALE 1:10

COORDINATE W/ AES FOR DISCONNECTION OF EX. POWER SERVICE AND CONNECTION OF NEW POWER SERVICE WITHIN AES GROUND MOUNTED TRANSFORMER.

EX. UNDERGROUND AES DISTRIBUTION CABLES DO NOT DISTURB

DISCONNECT EX. CIRCUIT A IN EX. PULL BOX ADD NEW 2" RMC CONDUIT ENTRY FROM PROP. POWER SERVICE "A" SPLICE NEW DISTRIBUTION CABLE FROM POWER SERVICE "A" TO EX. DUCT CABLE (CIRCUIT A) (3 SPLICES)

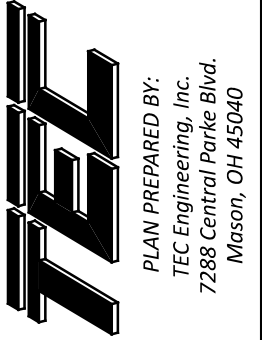
EX. 24" PULL BOX TO REMAIN

EX. 1-1/2" DUCT CABLE WITH 3-#2 AWG CABLES EX. CIRCUIT A TO REMAIN

SEE DETAIL "A"

POWER SERVICE MODIFICATION PLAN
 US 35 & SR-435 INTERCHANGE LIGHTING

DESIGN AGENCY



DESIGNER
 TEC

REVIEWER
 MJH 01/05/24

PROJECT ID
 117955

SHEET TOTAL
 15 24

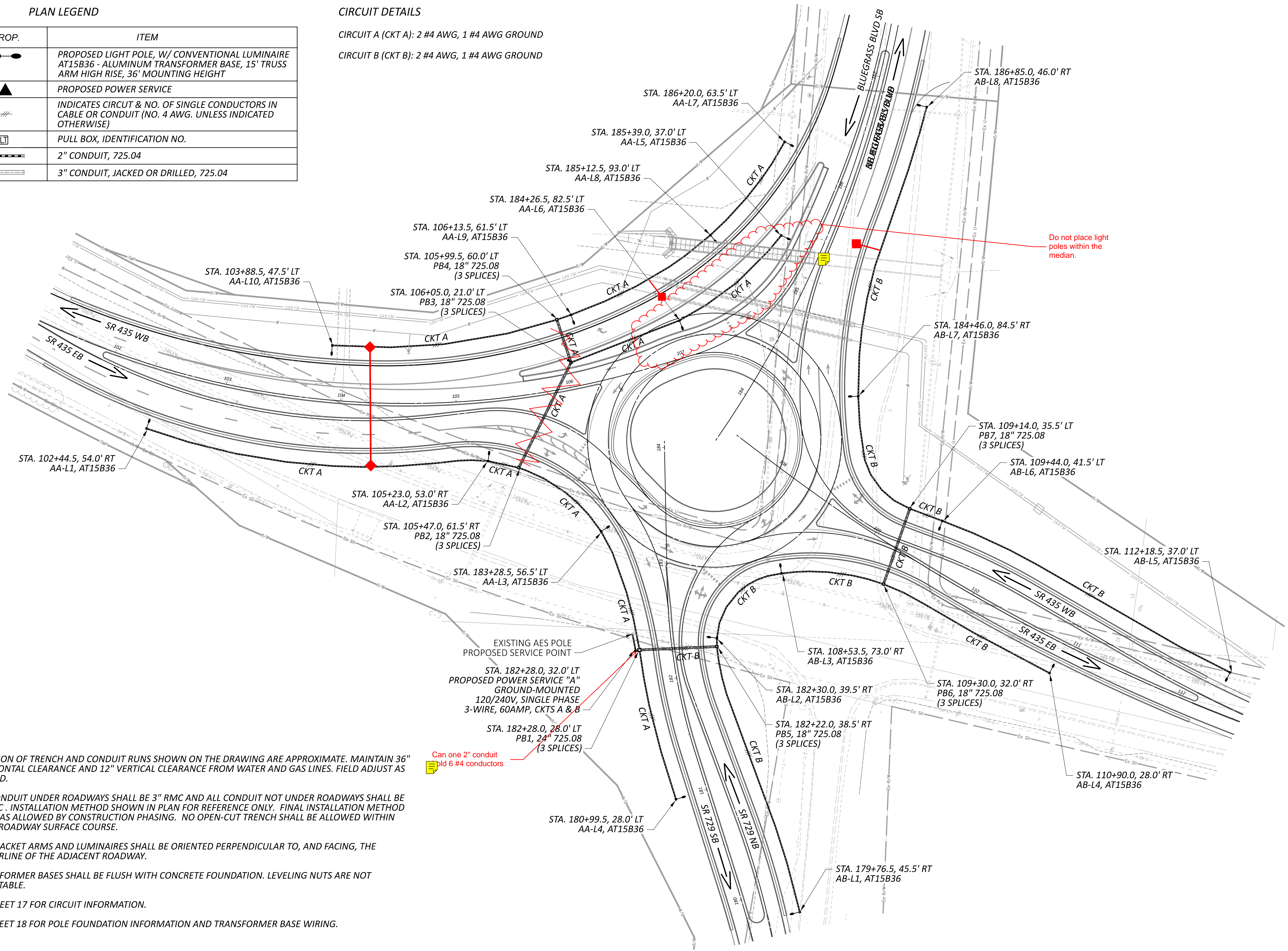
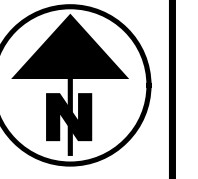
PLAN LEGEND

PROP.	ITEM
	PROPOSED LIGHT POLE, W/ CONVENTIONAL LUMINAIRE AT15B36 - ALUMINUM TRANSFORMER BASE, 15' TRUSS ARM HIGH RISE, 36' MOUNTING HEIGHT
	PROPOSED POWER SERVICE
	INDICATES CIRCUIT & NO. OF SINGLE CONDUCTORS IN CABLE OR CONDUIT (NO. 4 AWG. UNLESS INDICATED OTHERWISE)
	PULL BOX, IDENTIFICATION NO.
	2" CONDUIT, 725.04
	3" CONDUIT, JACKED OR DRILLED, 725.04

CIRCUIT DETAILS

CIRCUIT A (CKT A): 2 #4 AWG, 1 #4 AWG GROUND

CIRCUIT B (CKT B): 2 #4 AWG, 1 #4 AWG GROUND



- NOTES:
- LOCATION OF TRENCH AND CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL CLEARANCE AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
 - ALL CONDUIT UNDER ROADWAYS SHALL BE 3" RMC AND ALL CONDUIT NOT UNDER ROADWAYS SHALL BE 2" RMC. INSTALLATION METHOD SHOWN IN PLAN FOR REFERENCE ONLY. FINAL INSTALLATION METHOD SHALL AS ALLOWED BY CONSTRUCTION PHASING. NO OPEN-CUT TRENCH SHALL BE ALLOWED WITHIN FINAL ROADWAY SURFACE COURSE.
 - ALL BRACKET ARMS AND LUMINAIRES SHALL BE ORIENTED PERPENDICULAR TO, AND FACING, THE CENTERLINE OF THE ADJACENT ROADWAY.
 - TRANSFORMER BASES SHALL BE FLUSH WITH CONCRETE FOUNDATION. LEVELING NUTS ARE NOT ACCEPTABLE.
 - SEE SHEET 17 FOR CIRCUIT INFORMATION.
 - SEE SHEET 18 FOR POLE FOUNDATION INFORMATION AND TRANSFORMER BASE WIRING.

Can one 2" conduit hold 6 #4 conductors

LIGHTING PLAN
SR-435 & BLUEGRASS BLVD ROUNDABOUT

FAY-435-1.52

MODEL: L:\003 PAPER\SIZE: 34x22 (in.) DATE: 1/5/2024 TIME: 7:24:55 AM USER: mike
 \\10.1.2.4\projects\2023\Projects\23068 Palmer\Engineering\Lighting\Sheets\117955_LP_RAB.dgn

DESIGN AGENCY

 PLAN PREPARED BY:
 TEC Engineering, Inc.
 7288 Central Parke Blvd.
 Mason, OH 45040

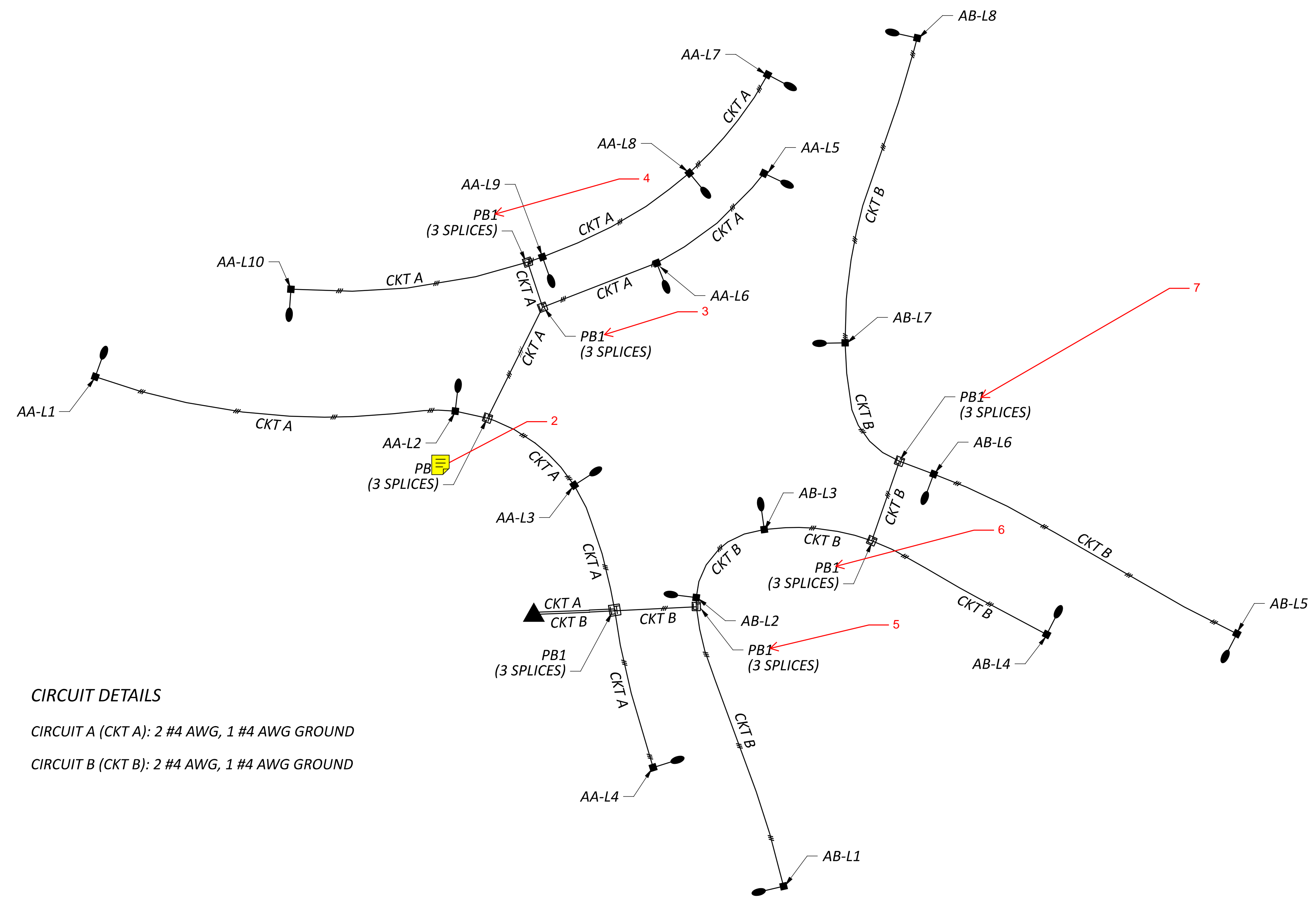
DESIGNER
 TEC

REVIEWER
 MJH 01/05/24

PROJECT ID
 117955

SHEET TOTAL
 16 24

CONTROL CENTER DATA											
CONTROL CENTER	LINE VOLTAGE	CONNECTED LOAD (KVA)	ENCLOSURE RATING AMPS.	SERVICE ENTRANCE CONDUCTOR SIZE	CIRCUIT NUMBER	DESCRIPTION	CIRCUIT VOLTAGE	CIRCUIT LOAD AMPS.	CIRCUIT FUSE SIZE AMPS.	CIRCUIT CABLE SIZE	MAINTAINING AGENCY
LCCA	120/240V SINGLE PHASE	3.01 KVA	60 AMPS	#2 AWG	A	ROUNDABOUT LIGHTING - WESTSIDE	120V	13.9 AMPS	20 AMPS	#4	ODOT
					B	ROUNDABOUT LIGHTING - EASTSIDE	120V	11.1 AMPS	20 AMPS	#4	
					-	-	-	-	-	-	
					-	-	-	-	-	-	
					-	-	-	-	-	-	

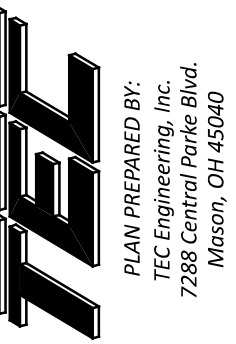


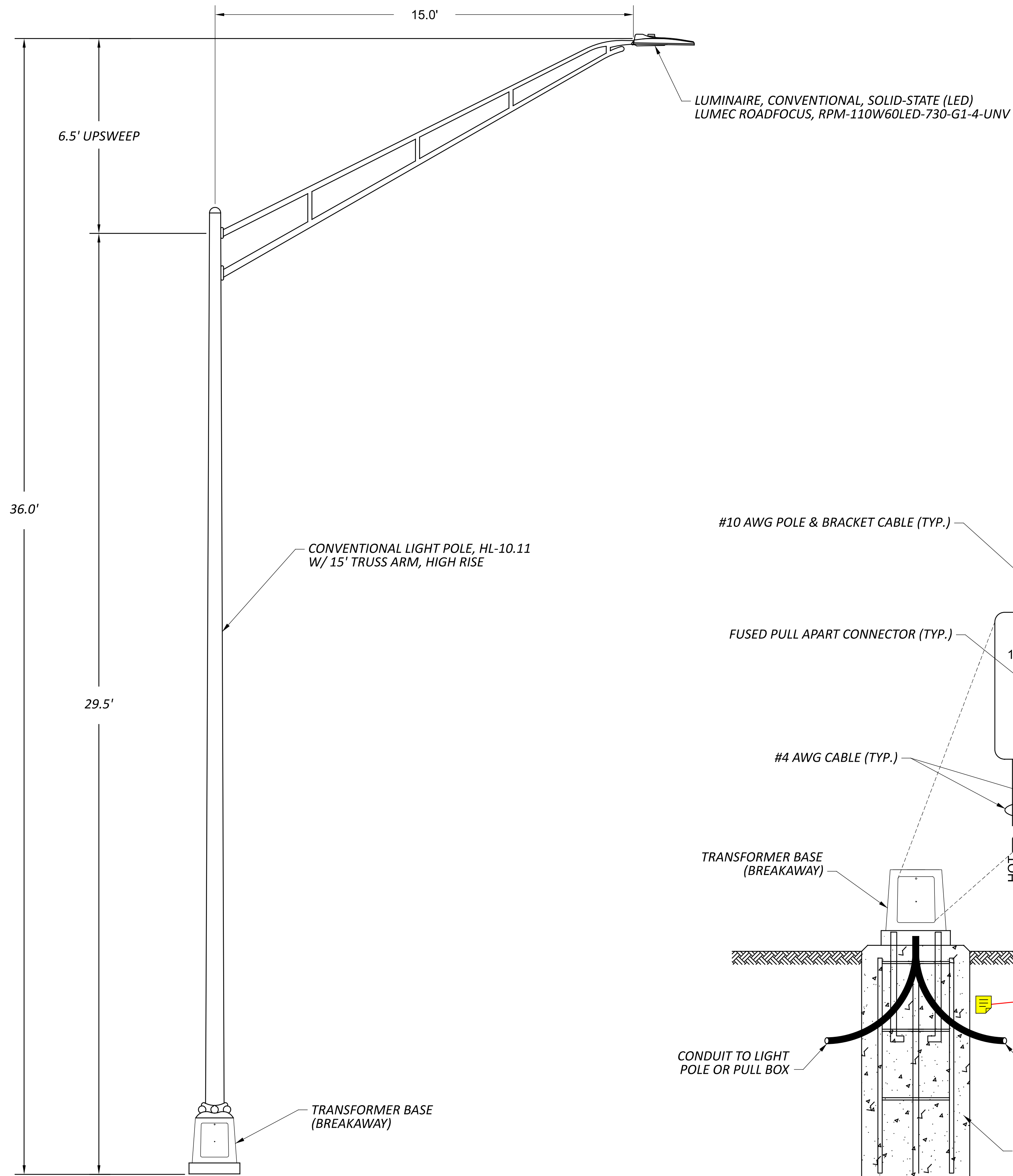
PLAN LEGEND

PROP.	ITEM
	PROPOSED LIGHT POLE, W/ CONVENTIONAL LUMINAIRE AT 15B36 - ALUMINUM TRANSFORMER BASE, 15' TRUSS ARM HIGH RISE, 36' MOUNTING HEIGHT
	PROPOSED POWER SERVICE
	INDICATES CIRCUIT & NO. OF SINGLE CONDUCTORS IN CABLE OR CONDUIT (NO. 4 AWG. UNLESS INDICATED OTHERWISE)
	PULL BOX, IDENTIFICATION NO.

CIRCUIT DETAILS

CIRCUIT A (CKT A): 2 #4 AWG, 1 #4 AWG GROUND
 CIRCUIT B (CKT B): 2 #4 AWG, 1 #4 AWG GROUND



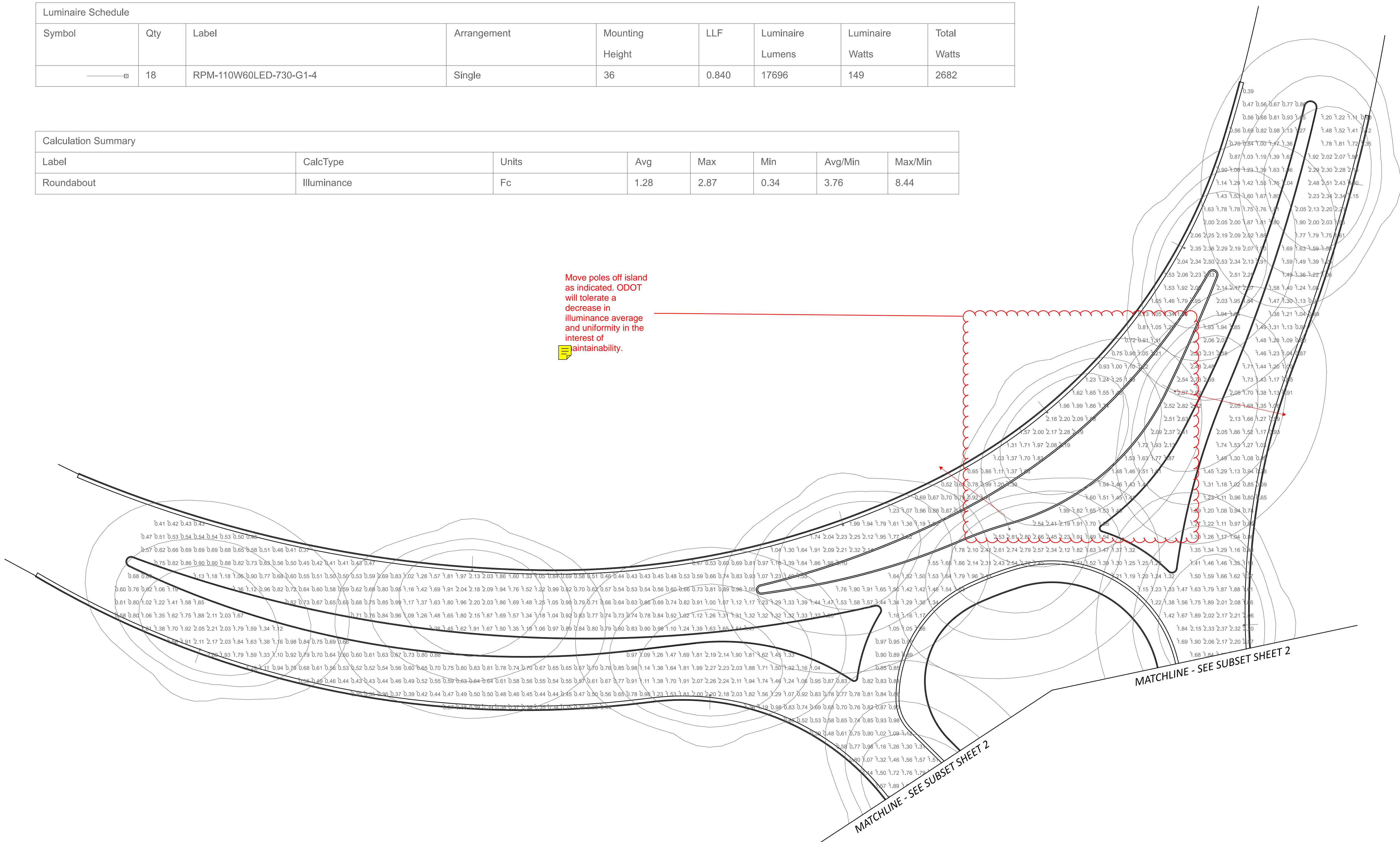


A
18 LIGHT POLE WITH BRACKET ARM
AT15B36

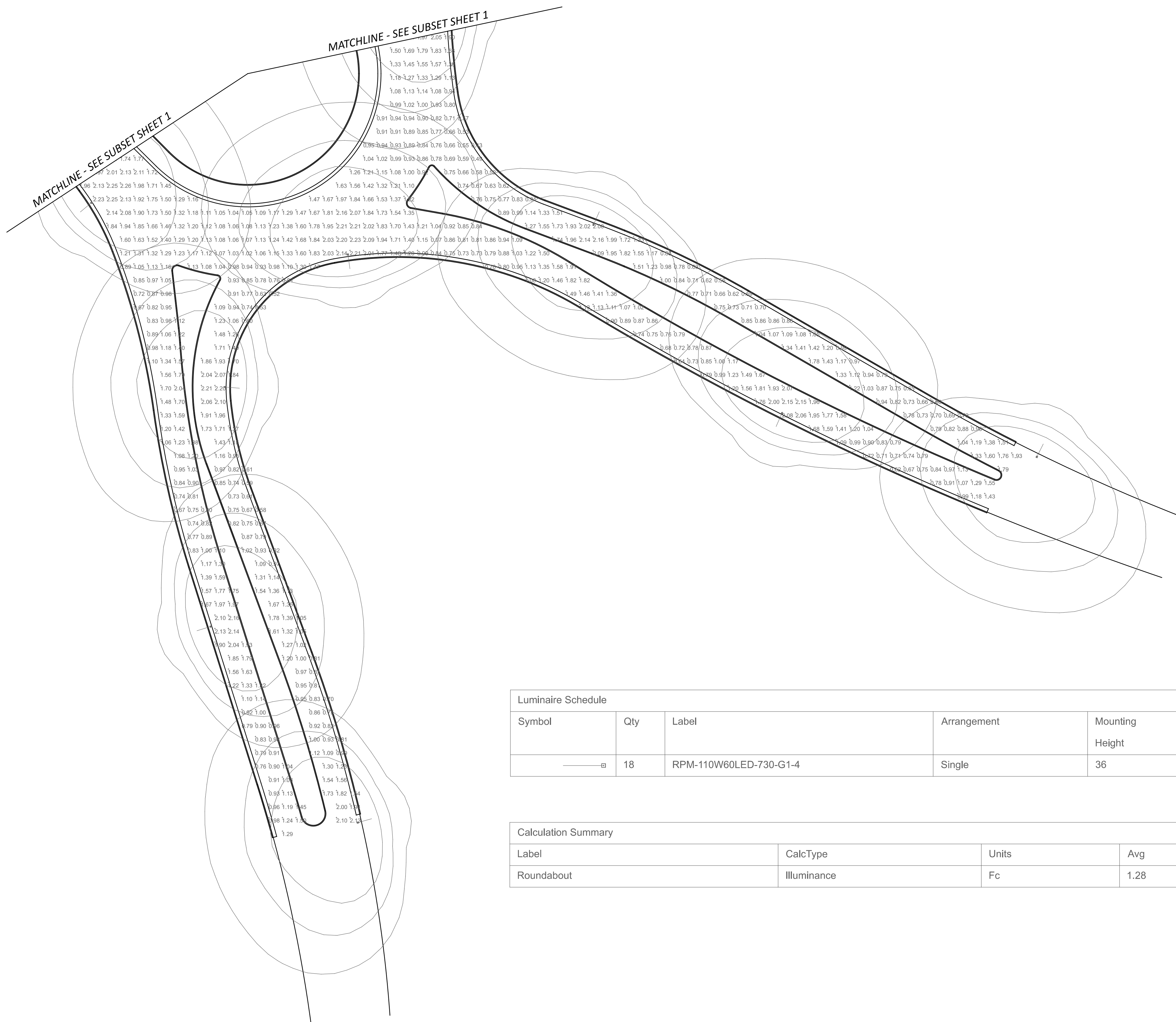
B
18 LIGHT POLE FOUNDATION AND WIRING
(TYPICAL)

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Mounting Height	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
□	18	RPM-110W60LED-730-G1-4	Single	36	0.840	17696	149	2682

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roundabout	Illuminance	Fc	1.28	2.87	0.34	3.76	8.44



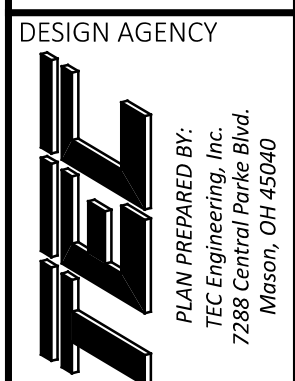
Move poles off island as indicated. ODOT will tolerate a decrease in illuminance average and uniformity in the interest of maintainability.



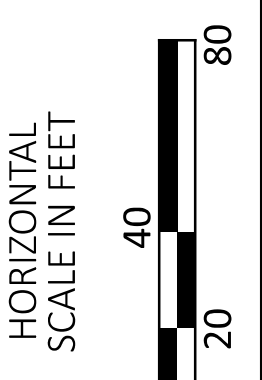
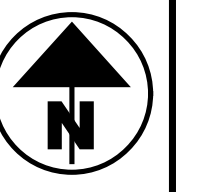
Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Mounting Height	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
□	18	RPM-110W60LED-730-G1-4	Single	36	0.840	17696	149	2682

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roundabout	Illuminance	Fc	1.28	2.87	0.34	3.76	8.44

PHOTOMETRIC ANALYSIS - PERMANENT LIGHTING
 SR-435 & BLUEGRASS BLVD ROUNDABOUT

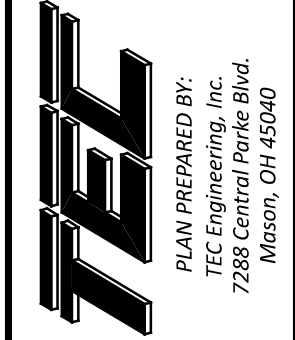


DESIGNER	TEC
REVIEWER	MJH 01/05/24
PROJECT ID	117955
SUBSET	TOTAL
2	2
SHEET	TOTAL
20	24



TEMPORARY LIGHTING PLAN
SR-435 & BLUEGRASS BLVD ROUNDABOUT

DESIGN AGENCY



DESIGNER

TEC

REVIEWER

MJH 01/05/24

PROJECT ID

117955

SHEET TOTAL

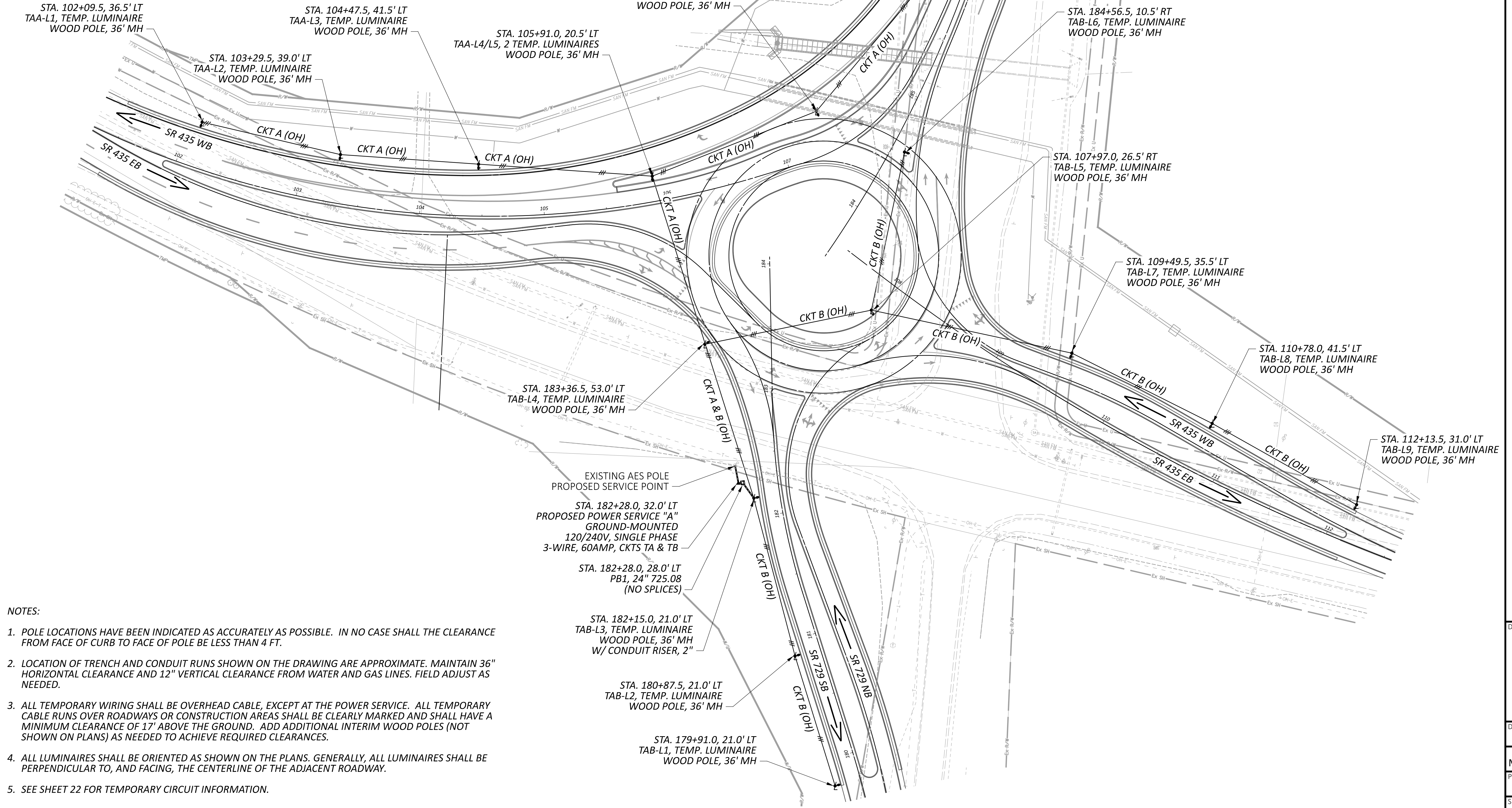
21 24

PLAN LEGEND

PROP.	ITEM
●	TEMPORARY WOOD POLE, SIZED TO ALLOW 36' LUMINAIRE MOUNTING HEIGHT
●	TEMPORARY LUMINAIRE, LED, 18000 LUMENS, TYPE IV DISTRIBUTION, 36' MOUNTING HEIGHT (LUMEC ROADFOCUS, OR APPROVED EQUAL)
▲	PROPOSED POWER SERVICE
///	INDICATES CIRCUIT & NO. OF SINGLE CONDUCTORS IN CABLE OR CONDUIT (NO. 4 AWG, UNLESS INDICATED OTHERWISE) (OH = OVERHEAD CABLE INSTALLATION)
□	PULL BOX, IDENTIFICATION NO.
—	2" CONDUIT, 725.04

TEMPORARY CIRCUIT DETAILS

TEMP. CIRCUIT A (CKT A): 2 #4 AWG, 1 #4 AWG GROUND
TEMP. CIRCUIT B (CKT B): 2 #4 AWG, 1 #4 AWG GROUND

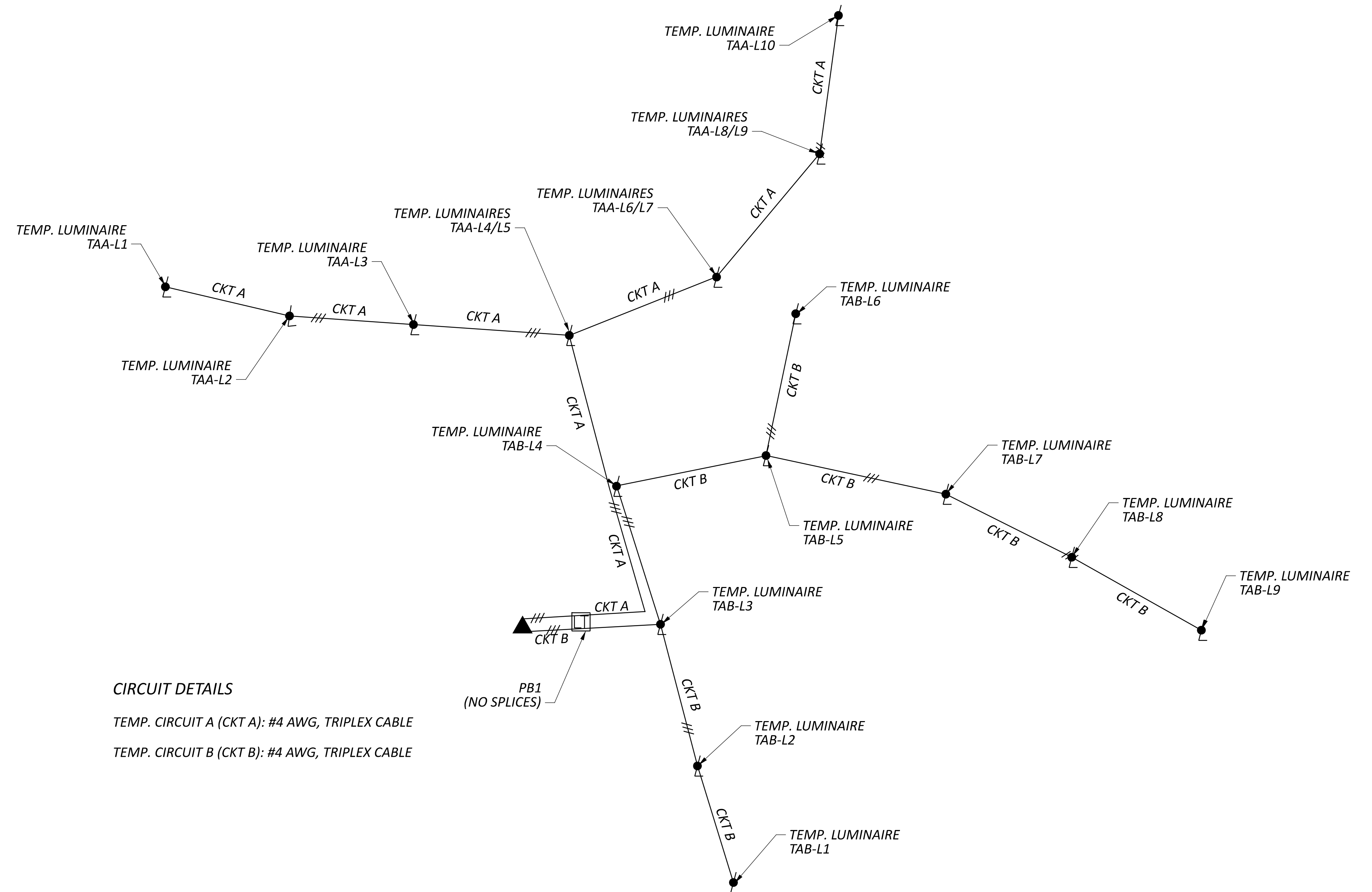


- NOTES:
- POLE LOCATIONS HAVE BEEN INDICATED AS ACCURATELY AS POSSIBLE. IN NO CASE SHALL THE CLEARANCE FROM FACE OF CURB TO FACE OF POLE BE LESS THAN 4 FT.
 - LOCATION OF TRENCH AND CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL CLEARANCE AND 12" VERTICAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.
 - ALL TEMPORARY WIRING SHALL BE OVERHEAD CABLE, EXCEPT AT THE POWER SERVICE. ALL TEMPORARY CABLE RUNS OVER ROADWAYS OR CONSTRUCTION AREAS SHALL BE CLEARLY MARKED AND SHALL HAVE A MINIMUM CLEARANCE OF 17' ABOVE THE GROUND. ADD ADDITIONAL INTERIM WOOD POLES (NOT SHOWN ON PLANS) AS NEEDED TO ACHIEVE REQUIRED CLEARANCES.
 - ALL LUMINAIRES SHALL BE ORIENTED AS SHOWN ON THE PLANS. GENERALLY, ALL LUMINAIRES SHALL BE PERPENDICULAR TO, AND FACING, THE CENTERLINE OF THE ADJACENT ROADWAY.
 - SEE SHEET 22 FOR TEMPORARY CIRCUIT INFORMATION.

FAY-435-1.52

MODEL: LP004 PAPER SIZE: 34x22 (in.) DATE: 1/5/2024 TIME: 7:25:09 AM USER: mike
\\10.1.2.4\projects\2023\Projects\23068\Palmer\Engineering\Lighting\Sheets\117955_LP_RAB.dgn

TEMPORARY CONTROL CENTER DATA											
CONTROL CENTER	LINE VOLTAGE	CONNECTED LOAD (KVA)	ENCLOSURE RATING AMPS.	SERVICE ENTRANCE CONDUCTOR SIZE	CIRCUIT NUMBER	DESCRIPTION	CIRCUIT VOLTAGE	CIRCUIT LOAD AMPS.	CIRCUIT FUSE SIZE AMPS.	CIRCUIT CABLE SIZE	MAINTAINING AGENCY
TEMPORARY POWER SERVICE	120/240V SINGLE PHASE	3.17 KVA	60 AMPS	#2 AWG	A	TEMP CIRCUIT A	120V	13.9 AMPS	20 AMPS	#4	N/A
					B	TEMP CIRCUIT B	120V	12.5 AMPS	20 AMPS	#4	
					-	-	-	-	-	-	
					-	-	-	-	-	-	
					-	-	-	-	-	-	

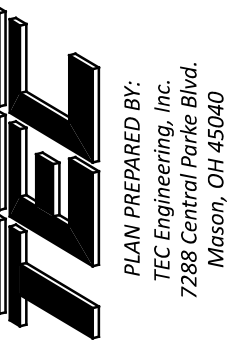


PLAN LEGEND

PROP.	ITEM
●	WOOD POLE WITH TEMPORARY LUMINAIRE(S) 36' MOUNTING HEIGHT
▲	PROPOSED POWER SERVICE
///	INDICATES CIRCUIT & NO. OF CONDUCTORS IN CABLE (NO. 4 AWG. UNLESS INDICATED OTHERWISE)
□	PULL BOX, IDENTIFICATION NO.

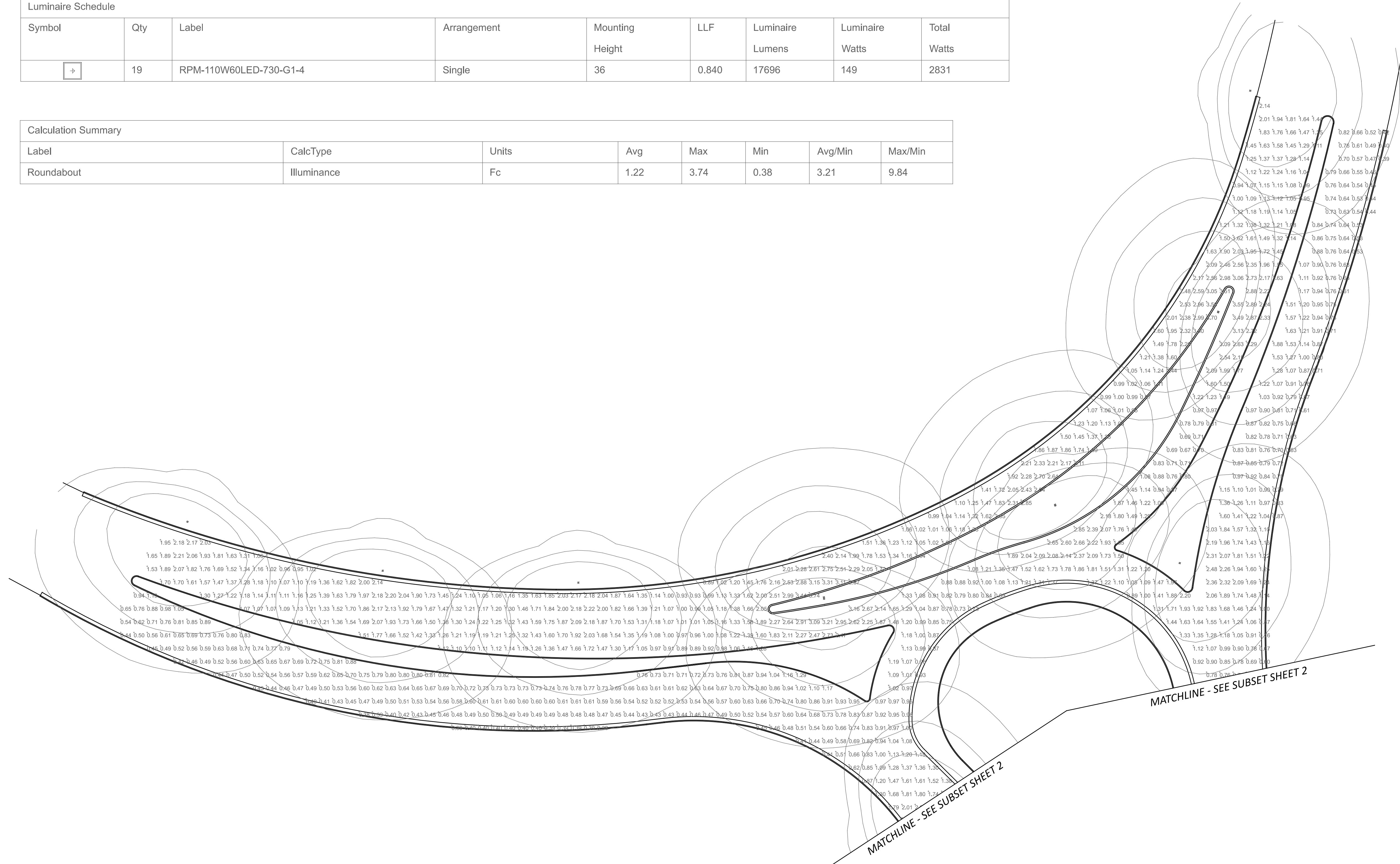
CIRCUIT DETAILS

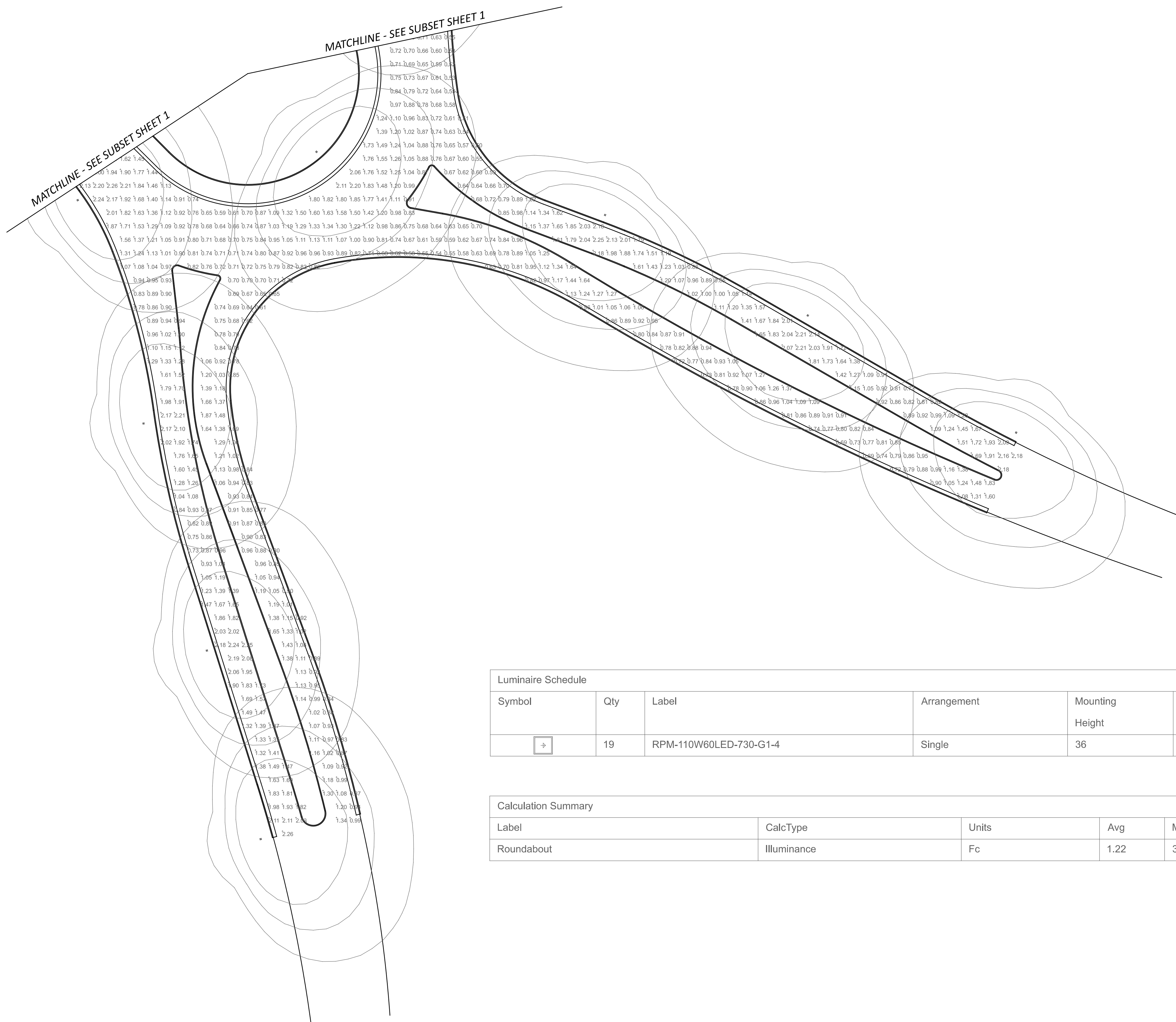
TEMP. CIRCUIT A (CKT A): #4 AWG, TRIPLEX CABLE
 TEMP. CIRCUIT B (CKT B): #4 AWG, TRIPLEX CABLE



Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Mounting Height	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
➔	19	RPM-110W60LED-730-G1-4	Single	36	0.840	17696	149	2831

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Roundabout	Illuminance	Fc	1.22	3.74	0.38	3.21

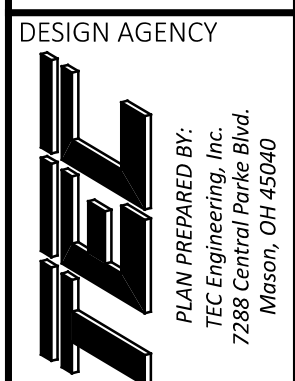




Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Mounting Height	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
+	19	RPM-110W60LED-730-G1-4	Single	36	0.840	17696	149	2831

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roundabout	Illuminance	Fc	1.22	3.74	0.38	3.21	9.84

PHOTOMETRIC ANALYSIS - TEMPORARY LIGHTING
 SR-435 & BLUEGRASS BLVD ROUNDABOUT



DESIGNER	TEC
REVIEWER	MJH 01/05/24
PROJECT ID	117955
SUBSET	2
TOTAL	2
SHEET	24
TOTAL	24