

**JOHNSON CO.**

**LIGHTING**

**NHS-080-6(404)239--11-52**

LETTING DATE  
7/15/2020



**Highway Division**

PLANS OF PROPOSED IMPROVEMENT ON THE

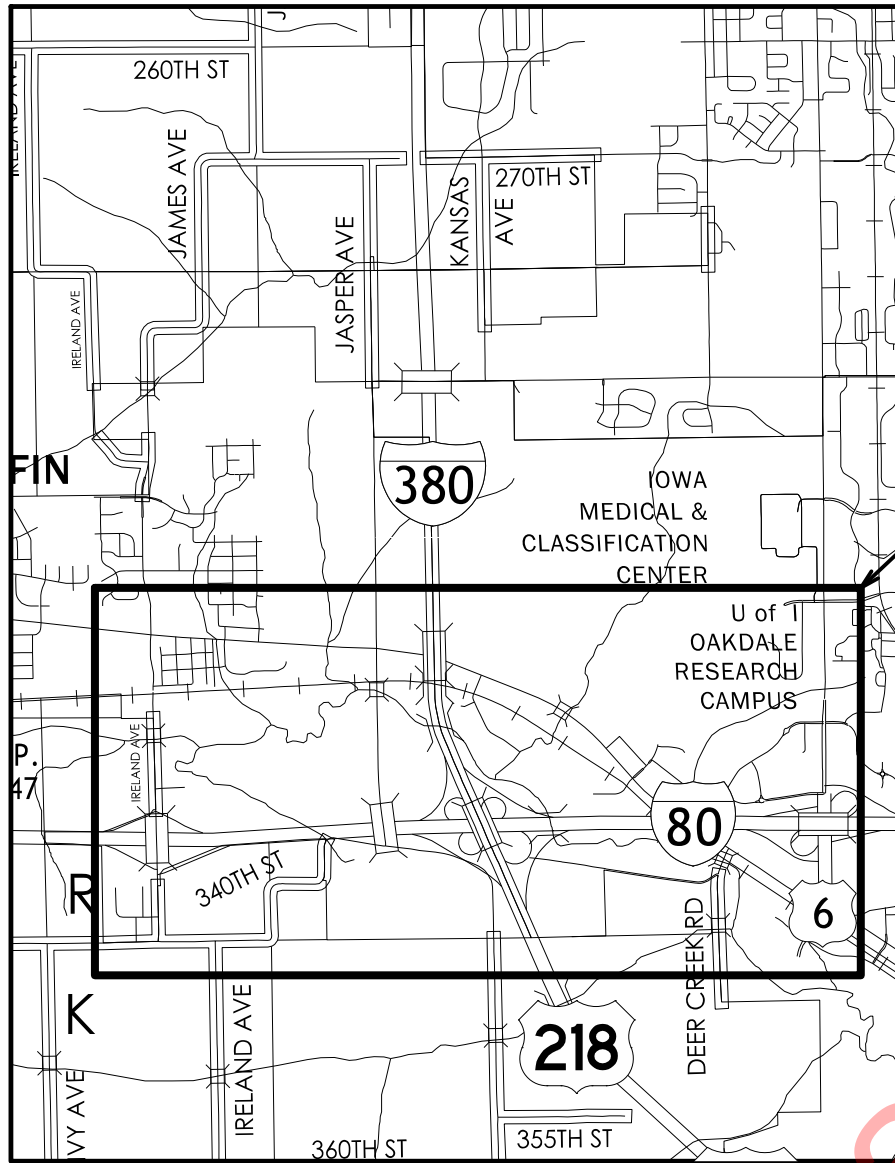
**INTERSTATE ROAD SYSTEM**  
**JOHNSON COUNTY**  
**LIGHTING**

**I-80/380/US 218 System Interchange  
near Iowa City**

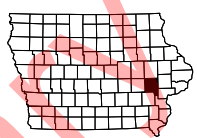
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



**PROJECT LOCATION**



REVISIONS

TOTAL  
XX

PROJECT IDENTIFICATION NUMBER

02-52-080-010

PROJECT NUMBER

NHS-080-6(404)239--11-52

INDEX OF SHEETS

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U Sheets U.1 - U.9	Detail Sheets Electrical Details

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	James J. Andersen	Primary Signature Block
A.1	Matthew T. McLaughlin	ITS Signature Block
A.1	Brian T. Havens	Geotechnical Signature Block
A.1	Aleksander T. Nelson	Structural Signature Block

FILE NO.

ENGLISH

DESIGN TEAM **HDR**

**JOHNSON** COUNTY

PROJECT NUMBER

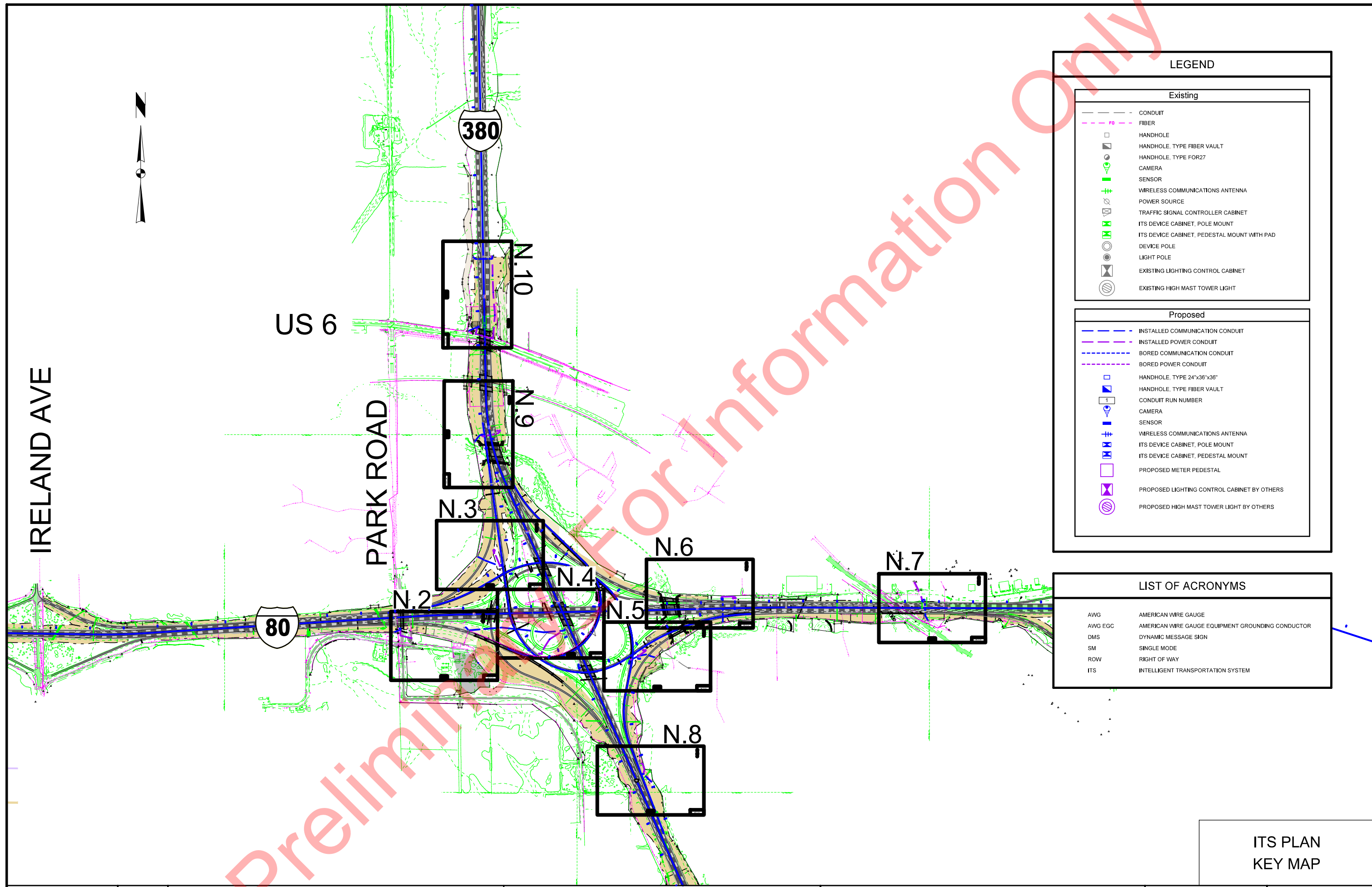
**NHS-080-6(404)239--11-52**

SHEET NUMBER **A.1**

**ESTIMATED PROJECT QUANTITIES  
(1 DIVISION PROJECT)**

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2401-6750001	REMOVALS, AS PER PLAN	LS	1	
2	2404-7775000	REINFORCING STEEL	LBS.	50652	
3	2433-0001060	CONCRETE DRILLED SHAFT, 60" DIAMETER	LF	486	
4	2522-8929100	LIGHTING TOWER, 100 FT.	EACH	2	
5	2522-8929120	LIGHTING TOWER, 120 FT.	EACH	5	
6	2522-8929150	LIGHTING TOWER, 150 FT.	EACH	11	
7	2522-8930230	LUMINAIRE, TOWER FLOODLIGHTING	EACH	136	
8	2523-0000100	LIGHTING POLES	EACH	26	
9	2523-0000200	ELECTRICAL CIRCUITS	LF	58665	
10	2523-0000310	HANDHOLES AND JUNCTION BOXES	EACH	91	
11	2523-0000400	CONTROL CABINETS	EACH	18	
12	2523-0000500	UNDERDECK LIGHTING (LI-120)	EACH	15	
13	2533-4980005	MOBILIZATION	LS	1	
14	2599-9999005	CABINET FOOTING	EACH	1	
15	2599-9999005	CABINET, GROUND MOUNTED	EACH	1	
16	2599-9999005	CABINET, POLE MOUNTED	EACH	7	
17	2599-9999005	CABINET, TRUSS MOUNTED	EACH	2	
18	2599-9999005	METER PEDESTAL	EACH	1	
19	2599-9999005	MODIFY CONTROL CABINET	EACH	1	
20	2599-9999005	MODIFY METER PEDESTAL	EACH	1	
21	2599-9999005	POWER INSTALLED FOUNDATION (FOR ITS POLES)	EACH	7	
22	2599-9999005	POWER INSTALLED FOUNDATION (FOR LIGHTING POLES)	EACH	26	
23	2599-9999005	REMOVE AND REINSTALL CONTROL CABINET	EACH	1	
24	2599-9999005	REMOVE AND REINSTALL LIGHTING TOWER	EACH	1	
25	2599-9999005	STEEL ITS POLE, 45 FOOT, INSTALL ONLY	EACH	7	
26	2599-9999009	TRACER WIRE	LF	4115	
27	2599-9999009	12 SM FIBER	LF	5485	
28	2599-9999009	2" ITS COMMUNICATION CONDUIT, BORED	LF	1115	
29	2599-9999009	2" ITS COMMUNICATION CONDUIT, INSTALL	LF	3010	

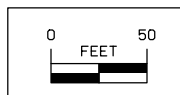
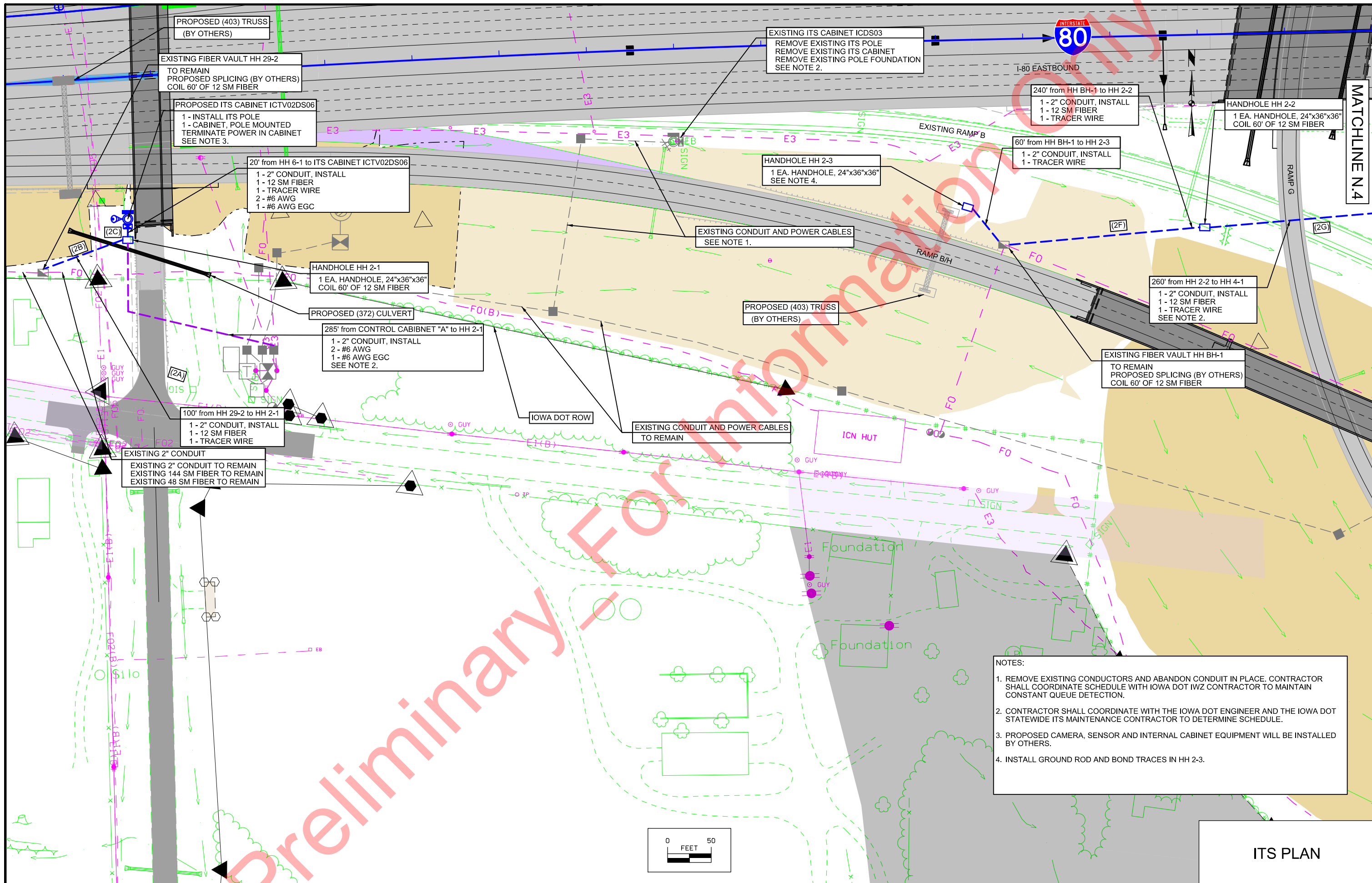
Preliminary - For Information Only



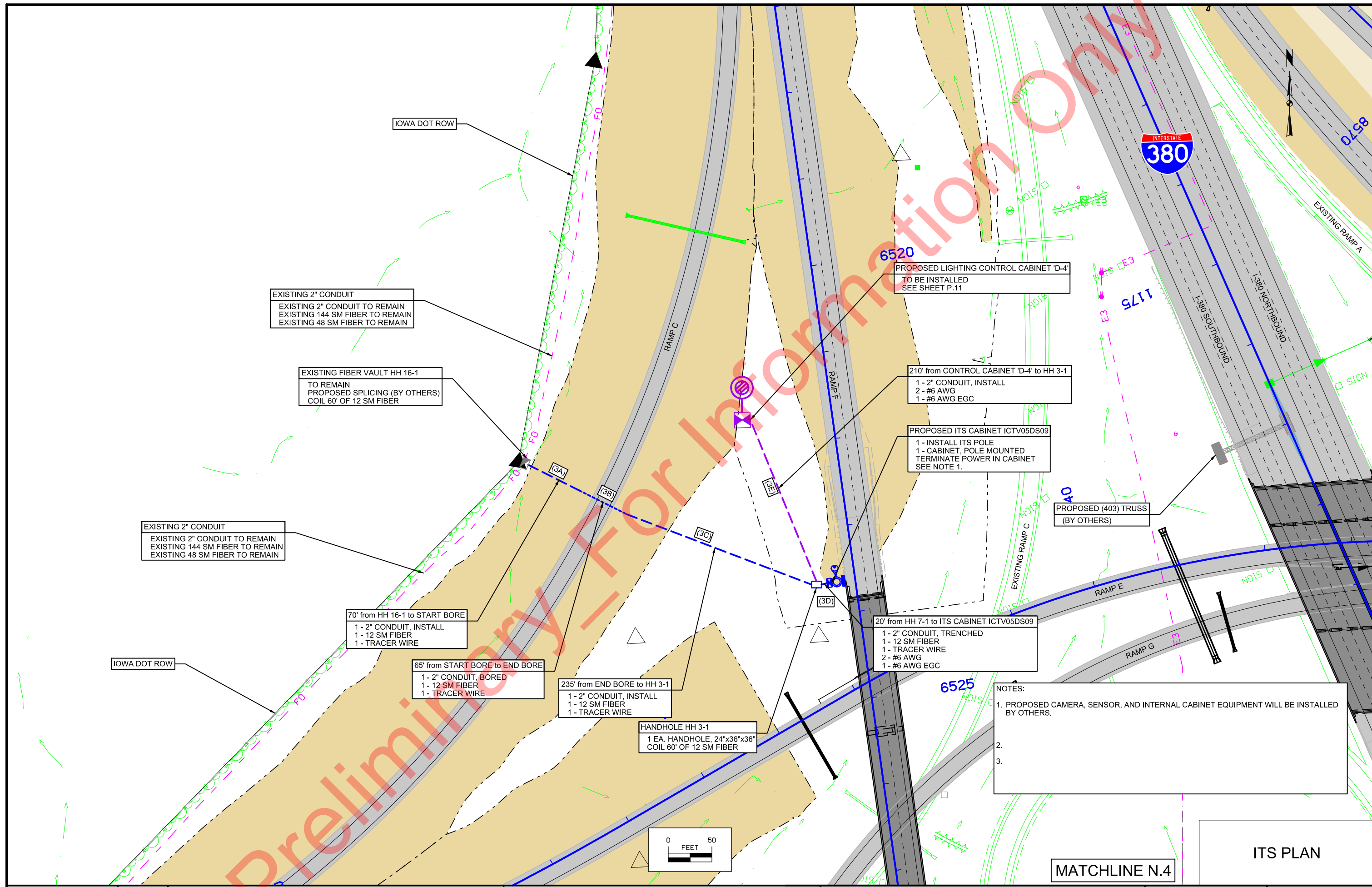
LEGEND	
Existing	
---	CONDUIT
- - -	FIBER
□	HANDHOLE
▣	HANDHOLE, TYPE FIBER VAULT
⊙	HANDHOLE, TYPE FOR27
📷	CAMERA
📡	SENSOR
📡	WIRELESS COMMUNICATIONS ANTENNA
⊕	POWER SOURCE
⊗	TRAFFIC SIGNAL CONTROLLER CABINET
⊗	ITS DEVICE CABINET, POLE MOUNT
⊗	ITS DEVICE CABINET, PEDESTAL MOUNT WITH PAD
⊕	DEVICE POLE
⊕	LIGHT POLE
⊗	EXISTING LIGHTING CONTROL CABINET
⊗	EXISTING HIGH MAST TOWER LIGHT
Proposed	
---	INSTALLED COMMUNICATION CONDUIT
- - -	INSTALLED POWER CONDUIT
---	BORED COMMUNICATION CONDUIT
- - -	BORED POWER CONDUIT
□	HANDHOLE, TYPE 24"x36"x36"
▣	HANDHOLE, TYPE FIBER VAULT
1	CONDUIT RUN NUMBER
📷	CAMERA
📡	SENSOR
📡	WIRELESS COMMUNICATIONS ANTENNA
⊗	ITS DEVICE CABINET, POLE MOUNT
⊗	ITS DEVICE CABINET, PEDESTAL MOUNT
⊗	PROPOSED METER PEDESTAL
⊗	PROPOSED LIGHTING CONTROL CABINET BY OTHERS
⊗	PROPOSED HIGH MAST TOWER LIGHT BY OTHERS

LIST OF ACRONYMS	
AWG	AMERICAN WIRE GAUGE
AWG EGC	AMERICAN WIRE GAUGE EQUIPMENT GROUNDING CONDUCTOR
DMS	DYNAMIC MESSAGE SIGN
SM	SINGLE MODE
ROW	RIGHT OF WAY
ITS	INTELLIGENT TRANSPORTATION SYSTEM

ITS PLAN  
KEY MAP



ITS PLAN



EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 144 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

EXISTING FIBER VAULT HH 16-1  
 TO REMAIN  
 PROPOSED SPLICING (BY OTHERS)  
 COIL 60' OF 12 SM FIBER

EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 144 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

70' from HH 16-1 to START BORE  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

65' from START BORE to END BORE  
 1 - 2" CONDUIT, BORED  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

235' from END BORE to HH 3-1  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

HANDHOLE HH 3-1  
 1 EA. HANDHOLE, 24"x36"x36"  
 COIL 60' OF 12 SM FIBER

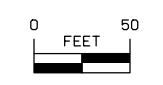
6520  
 PROPOSED LIGHTING CONTROL CABINET 'D-4'  
 TO BE INSTALLED  
 SEE SHEET P.11

210' from CONTROL CABINET 'D-4' to HH 3-1  
 1 - 2" CONDUIT, INSTALL  
 2 - #6 AWG  
 1 - #6 AWG EGC

PROPOSED ITS CABINET ICTV05DS09  
 1 - INSTALL ITS POLE  
 1 - CABINET, POLE MOUNTED  
 TERMINATE POWER IN CABINET  
 SEE NOTE 1.

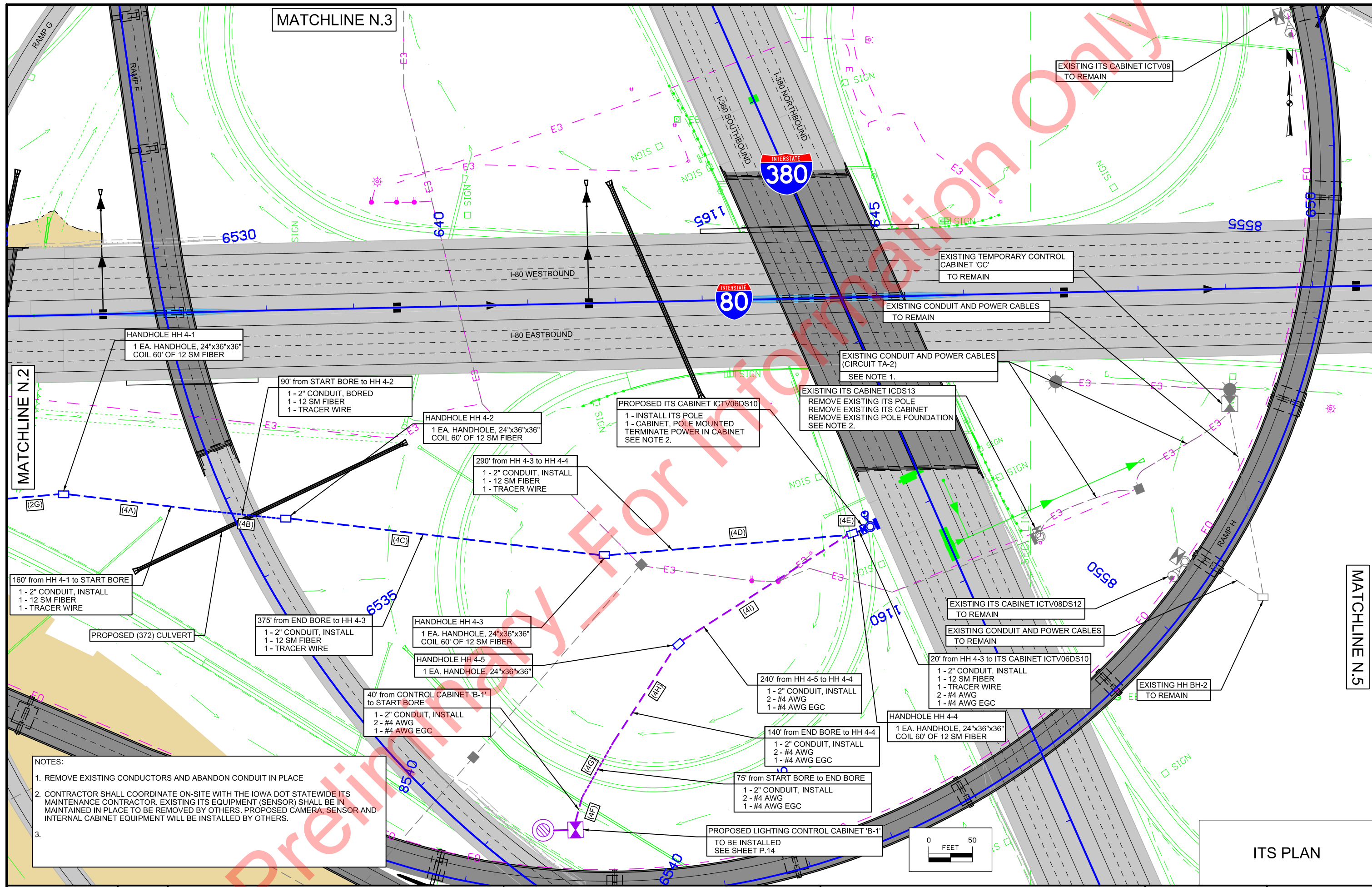
20' from HH 7-1 to ITS CABINET ICTV05DS09  
 1 - 2" CONDUIT, TRENCHED  
 1 - 12 SM FIBER  
 1 - TRACER WIRE  
 2 - #6 AWG  
 1 - #6 AWG EGC

NOTES:  
 1. PROPOSED CAMERA, SENSOR, AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.  
 2.  
 3.



MATCHLINE N.4

ITS PLAN



NOTES:

1. REMOVE EXISTING CONDUCTORS AND ABANDON CONDUIT IN PLACE
2. CONTRACTOR SHALL COORDINATE ON-SITE WITH THE IOWA DOT STATEWIDE ITS MAINTENANCE CONTRACTOR. EXISTING ITS EQUIPMENT (SENSOR) SHALL BE MAINTAINED IN PLACE TO BE REMOVED BY OTHERS. PROPOSED CAMERA, SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.
- 3.

ITS PLAN

MATCHLINE N.4

MATCHLINE N.6

PROPOSED LIGHTING CONTROL CABINET 'C-4'  
TO BE INSTALLED  
SEE SHEET P.15

285' from CONTROL CABINET 'C-4' to HH 5-1  
1 - 2" CONDUIT, INSTALL  
2 - #4 AWG  
1 - #4 AWG EGC

HANDHOLE HH 5-1  
1 EA. HANDHOLE, 24"x36"x36"  
COIL 60' OF 12 SM FIBER

50' from HH 5-1 to ITS CABINET ICTV10DS17  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE  
2 - #4 AWG  
1 - #4 AWG EGC

PROPOSED ITS CABINET ICTV10DS17  
1 - INSTALL ITS POLE  
1 - CABINET, POLE MOUNTED  
TERMINATE POWER IN CABINET  
SEE NOTE 1.

265' from END BORE to HH 5-1  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 288 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

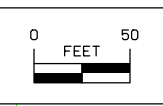
70' from START BORE to END BORE  
1 - 2" CONDUIT, BORED  
1 - 12 SM FIBER  
1 - TRACER WIRE

70' from HH 30-2 to START BORE  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 288 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

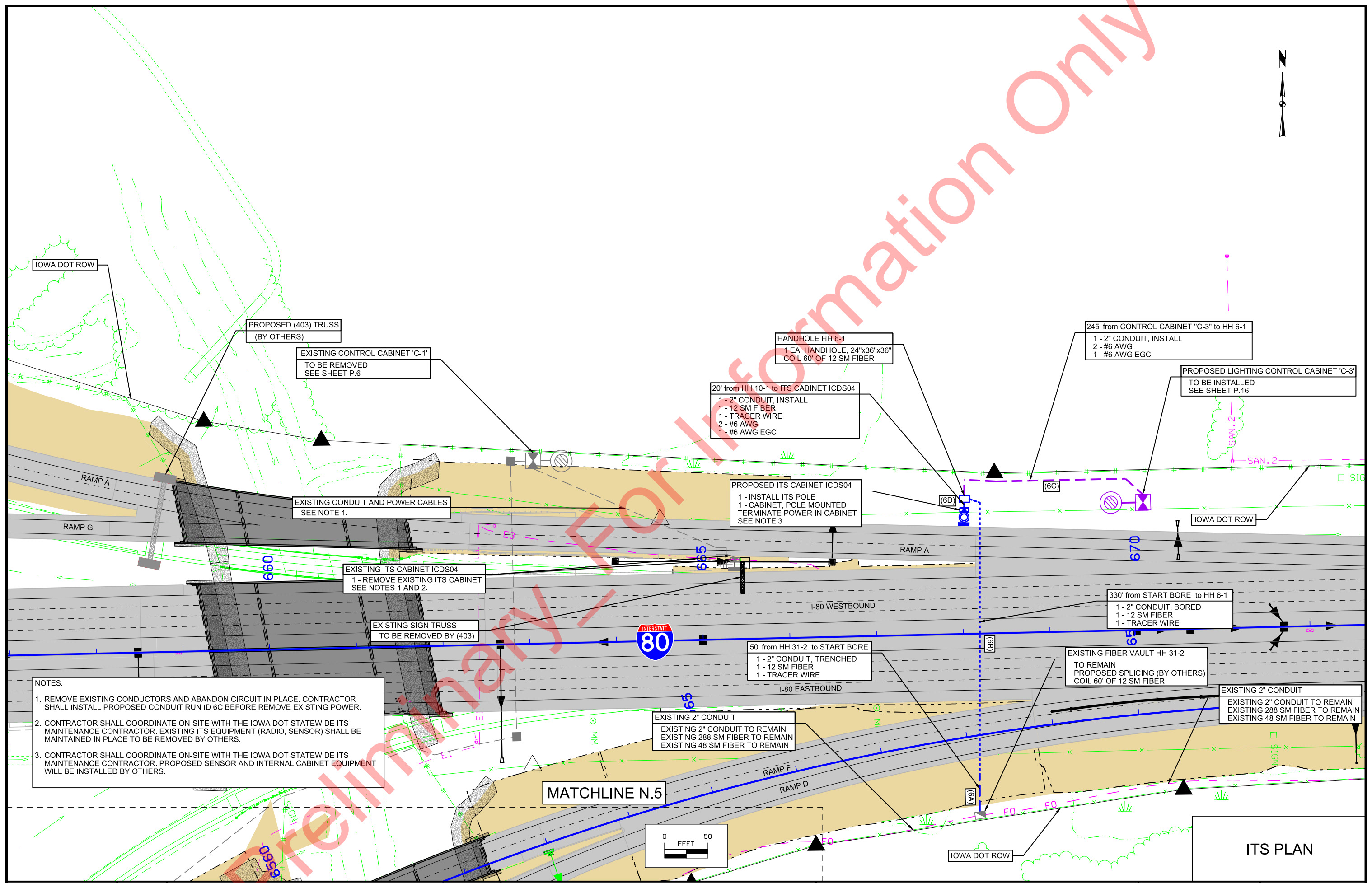
EXISTING CONTROL CABINET 'C'  
TO REMAIN

NOTES:  
1. PROPOSED CAMERA, SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.  
2.  
3.

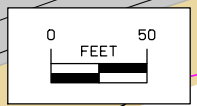


ITS PLAN

Information Only



- NOTES:
1. REMOVE EXISTING CONDUCTORS AND ABANDON CIRCUIT IN PLACE. CONTRACTOR SHALL INSTALL PROPOSED CONDUIT RUN ID 6C BEFORE REMOVE EXISTING POWER.
  2. CONTRACTOR SHALL COORDINATE ON-SITE WITH THE IOWA DOT STATEWIDE ITS MAINTENANCE CONTRACTOR. EXISTING ITS EQUIPMENT (RADIO, SENSOR) SHALL BE MAINTAINED IN PLACE TO BE REMOVED BY OTHERS.
  3. CONTRACTOR SHALL COORDINATE ON-SITE WITH THE IOWA DOT STATEWIDE ITS MAINTENANCE CONTRACTOR. PROPOSED SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.



ITS PLAN



EXISTING LINN COUNTY REC METER  
PEDESTAL AND TRANSFORMER

300' from METER PEDESTAL to HH 7-1  
1 - 2" CONDUIT, INSTALL  
2 - #4 AWG  
1 - #4 AWG EGC

HANDHOLE HH 7-1  
1 EA. HANDHOLE, 24"x36"x36"  
COIL 60' OF 12 SM FIBER

40' from END BORE to HH 7-1  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE

240' from START BORE to END BORE  
1 - 2" CONDUIT, BORED  
1 - 12 SM FIBER  
1 - TRACER WIRE

20' from HH 10-1 to ITS CABINET ICTV11DS15  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE  
2 - #4 AWG  
1 - #4 AWG EGC

PROPOSED ITS CABINET ICTV11DS15  
1 - CABINET, TRUSS MOUNTED  
TERMINATE POWER IN CABINET  
SEE NOTE 1.

PROPOSED (401) TRUSS  
(BY OTHERS)

90' from HH 33-2 to START BORE  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE

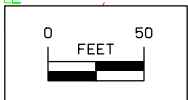
EXISTING ITS CABINET ICDS05  
TO REMAIN

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 288 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

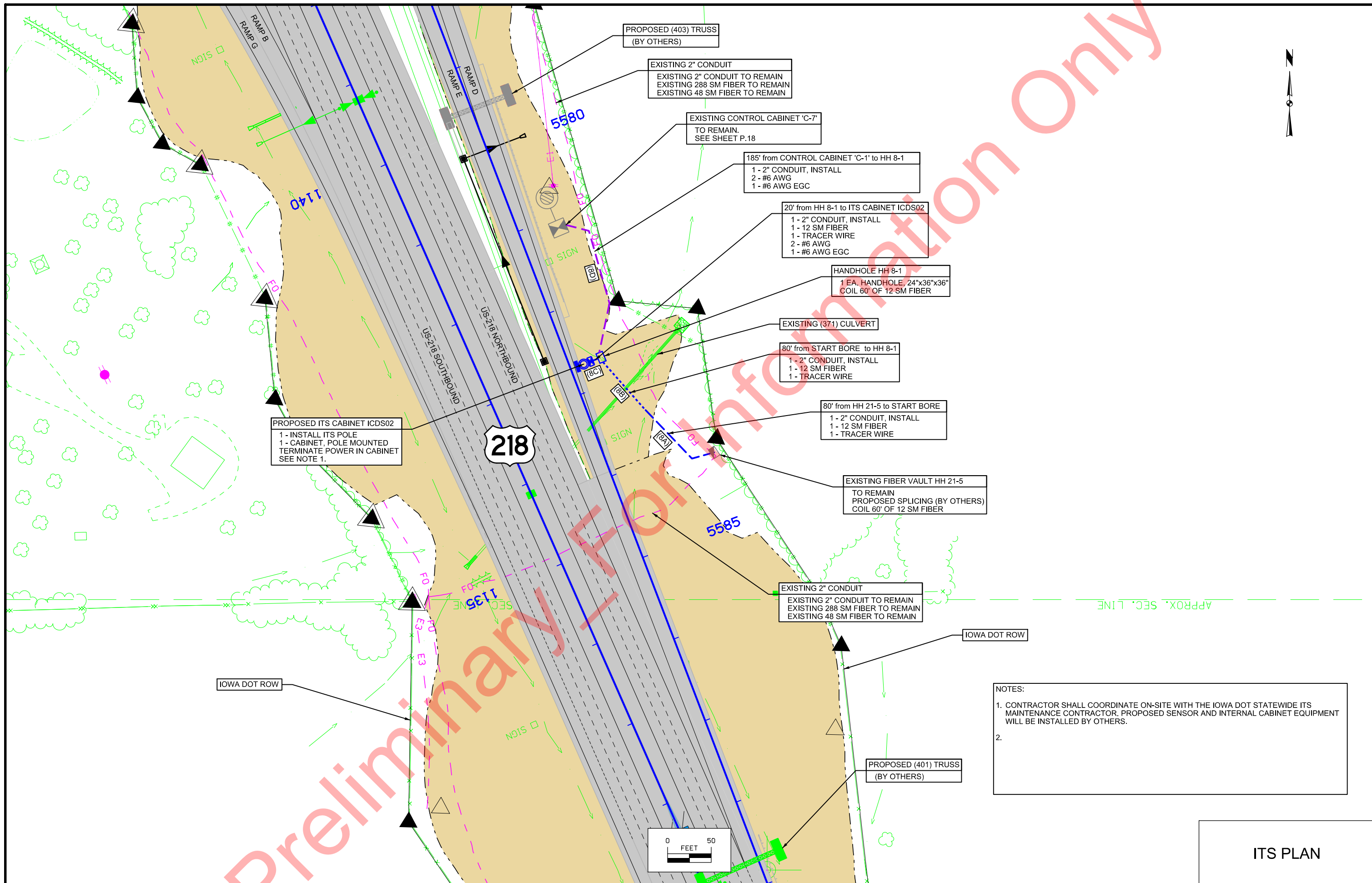
EXISTING FIBER VAULT HH 33-2  
TO REMAIN  
PROPOSED SPLICING (BY OTHERS)  
COIL 60' OF 12 SM FIBER

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 288 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

NOTES:  
1. CONTRACTOR SHALL COORDINATE ON-SITE WITH THE IOWA DOT STATEWIDE ITS MAINTENANCE CONTRACTOR. PROPOSED CAMERA, SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.  
2.  
3.



ITS PLAN



PROPOSED ITS CABINET ICDS02  
 1 - INSTALL ITS POLE  
 1 - CABINET, POLE MOUNTED  
 TERMINATE POWER IN CABINET  
 SEE NOTE 1.

PROPOSED (403) TRUSS  
 (BY OTHERS)

EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 288 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

EXISTING CONTROL CABINET 'C-7'  
 TO REMAIN.  
 SEE SHEET P.18

185' from CONTROL CABINET 'C-1' to HH 8-1  
 1 - 2" CONDUIT, INSTALL  
 2 - #6 AWG  
 1 - #6 AWG EGC

20' from HH 8-1 to ITS CABINET ICDS02  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE  
 2 - #6 AWG  
 1 - #6 AWG EGC

HANDHOLE HH 8-1  
 1 EA. HANDHOLE, 24"x36"x36"  
 COIL 60' OF 12 SM FIBER

EXISTING (371) CULVERT

80' from START BORE to HH 8-1  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

80' from HH 21-5 to START BORE  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

EXISTING FIBER VAULT HH 21-5  
 TO REMAIN  
 PROPOSED SPLICING (BY OTHERS)  
 COIL 60' OF 12 SM FIBER

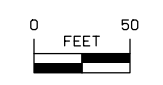
EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 288 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

IOWA DOT ROW

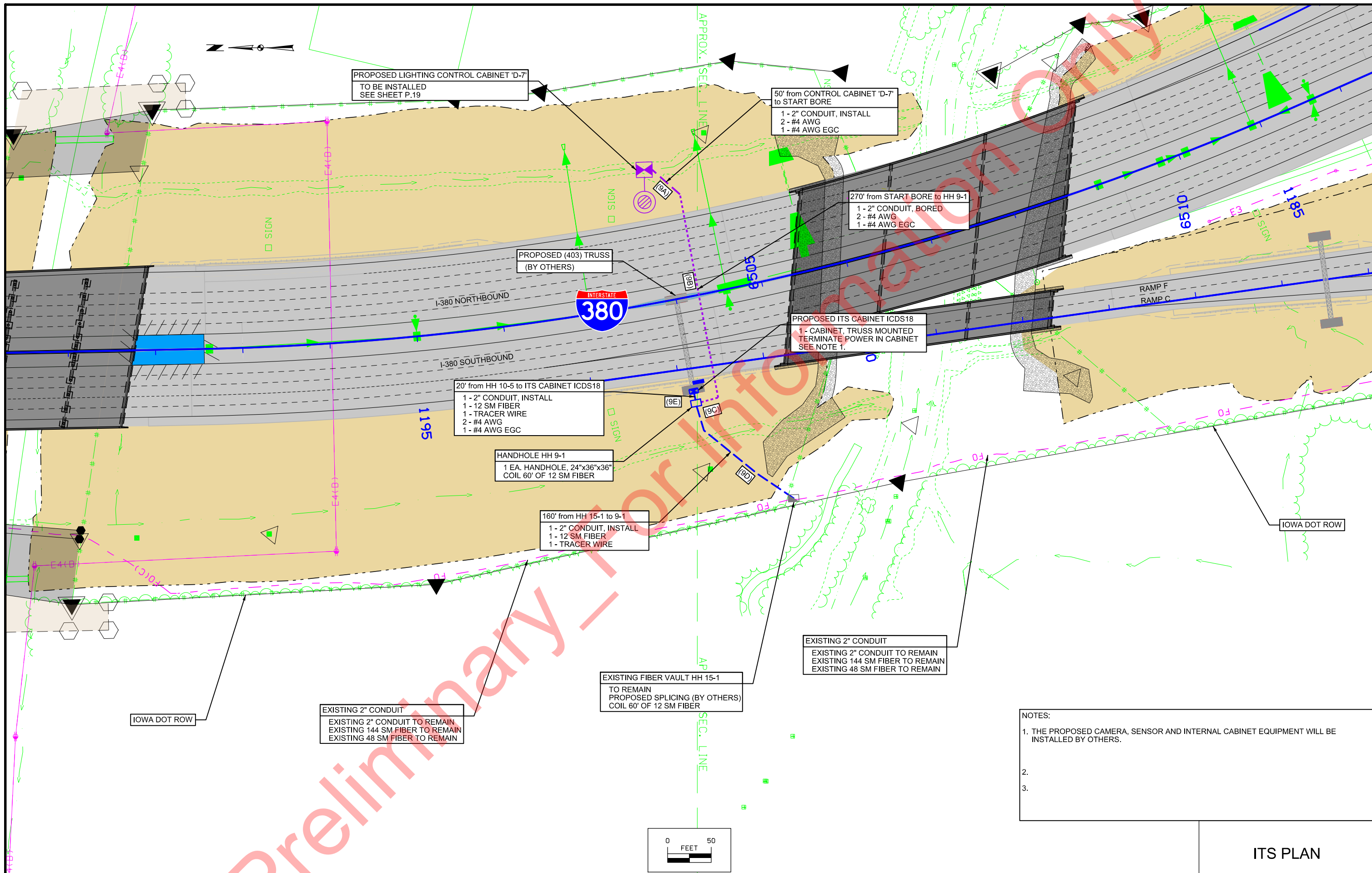
IOWA DOT ROW

PROPOSED (401) TRUSS  
 (BY OTHERS)

NOTES:  
 1. CONTRACTOR SHALL COORDINATE ON-SITE WITH THE IOWA DOT STATEWIDE ITS MAINTENANCE CONTRACTOR. PROPOSED SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.  
 2.



ITS PLAN



PROPOSED LIGHTING CONTROL CABINET 'D-7'  
TO BE INSTALLED  
SEE SHEET P.19

50' from CONTROL CABINET 'D-7'  
to START BORE  
1 - 2" CONDUIT, INSTALL  
2 - #4 AWG  
1 - #4 AWG EGC

270' from START BORE to HH 9-1  
1 - 2" CONDUIT, BORED  
2 - #4 AWG  
1 - #4 AWG EGC

PROPOSED (403) TRUSS  
(BY OTHERS)

PROPOSED ITS CABINET ICDS18  
1 - CABINET, TRUSS MOUNTED  
TERMINATE POWER IN CABINET  
SEE NOTE 1.

20' from HH 10-5 to ITS CABINET ICDS18  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE  
2 - #4 AWG  
1 - #4 AWG EGC

HANDHOLE HH 9-1  
1 EA. HANDHOLE, 24"x36"x36"  
COIL 60' OF 12 SM FIBER

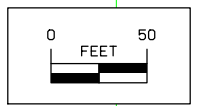
160' from HH 15-1 to 9-1  
1 - 2" CONDUIT, INSTALL  
1 - 12 SM FIBER  
1 - TRACER WIRE

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 144 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

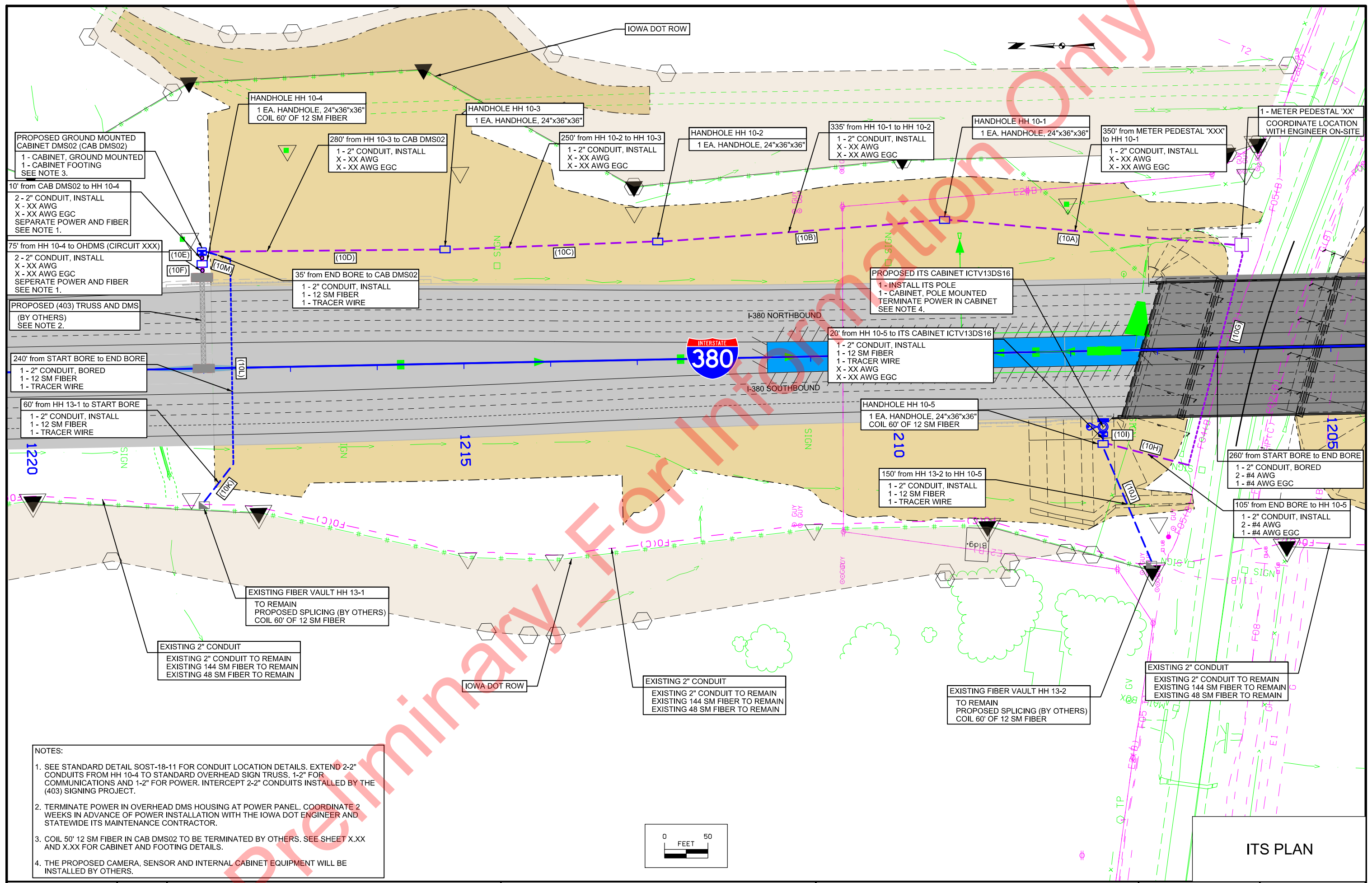
EXISTING FIBER VAULT HH 15-1  
TO REMAIN  
PROPOSED SPLICING (BY OTHERS)  
COIL 60' OF 12 SM FIBER

EXISTING 2" CONDUIT  
EXISTING 2" CONDUIT TO REMAIN  
EXISTING 144 SM FIBER TO REMAIN  
EXISTING 48 SM FIBER TO REMAIN

NOTES:  
1. THE PROPOSED CAMERA, SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.  
2.  
3.



ITS PLAN



PROPOSED GROUND MOUNTED CABINET DMS02 (CAB DMS02)  
 1 - CABINET, GROUND MOUNTED  
 1 - CABINET FOOTING  
 SEE NOTE 3.

10' from CAB DMS02 to HH 10-4  
 2 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC  
 SEPARATE POWER AND FIBER  
 SEE NOTE 1.

75' from HH 10-4 to OHDMS (CIRCUIT XXX)  
 2 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC  
 SEPARATE POWER AND FIBER  
 SEE NOTE 1.

PROPOSED (403) TRUSS AND DMS  
 (BY OTHERS)  
 SEE NOTE 2.

240' from START BORE to END BORE  
 1 - 2" CONDUIT, BORED  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

60' from HH 13-1 to START BORE  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

HANDHOLE HH 10-4  
 1 EA. HANDHOLE, 24"x36"x36"  
 COIL 60' OF 12 SM FIBER

280' from HH 10-3 to CAB DMS02  
 1 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC

HANDHOLE HH 10-3  
 1 EA. HANDHOLE, 24"x36"x36"

250' from HH 10-2 to HH 10-3  
 1 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC

HANDHOLE HH 10-2  
 1 EA. HANDHOLE, 24"x36"x36"

335' from HH 10-1 to HH 10-2  
 1 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC

HANDHOLE HH 10-1  
 1 EA. HANDHOLE, 24"x36"x36"

350' from METER PEDESTAL 'XXX' to HH 10-1  
 1 - 2" CONDUIT, INSTALL  
 X - XX AWG  
 X - XX AWG EGC

1 - METER PEDESTAL 'XX'  
 COORDINATE LOCATION WITH ENGINEER ON-SITE

PROPOSED ITS CABINET ICTV13DS16  
 1 - INSTALL ITS POLE  
 1 - CABINET, POLE MOUNTED  
 TERMINATE POWER IN CABINET  
 SEE NOTE 4.

20' from HH 10-5 to ITS CABINET ICTV13DS16  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE  
 X - XX AWG  
 X - XX AWG EGC

HANDHOLE HH 10-5  
 1 EA. HANDHOLE, 24"x36"x36"  
 COIL 60' OF 12 SM FIBER

150' from HH 13-2 to HH 10-5  
 1 - 2" CONDUIT, INSTALL  
 1 - 12 SM FIBER  
 1 - TRACER WIRE

260' from START BORE to END BORE  
 1 - 2" CONDUIT, BORED  
 2 - #4 AWG  
 1 - #4 AWG EGC

105' from END BORE to HH 10-5  
 1 - 2" CONDUIT, INSTALL  
 2 - #4 AWG  
 1 - #4 AWG EGC

EXISTING FIBER VAULT HH 13-1  
 TO REMAIN  
 PROPOSED SPLICING (BY OTHERS)  
 COIL 60' OF 12 SM FIBER

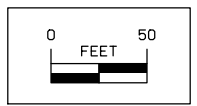
EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 144 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 144 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

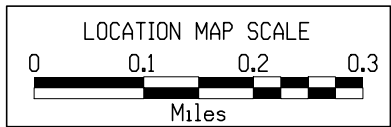
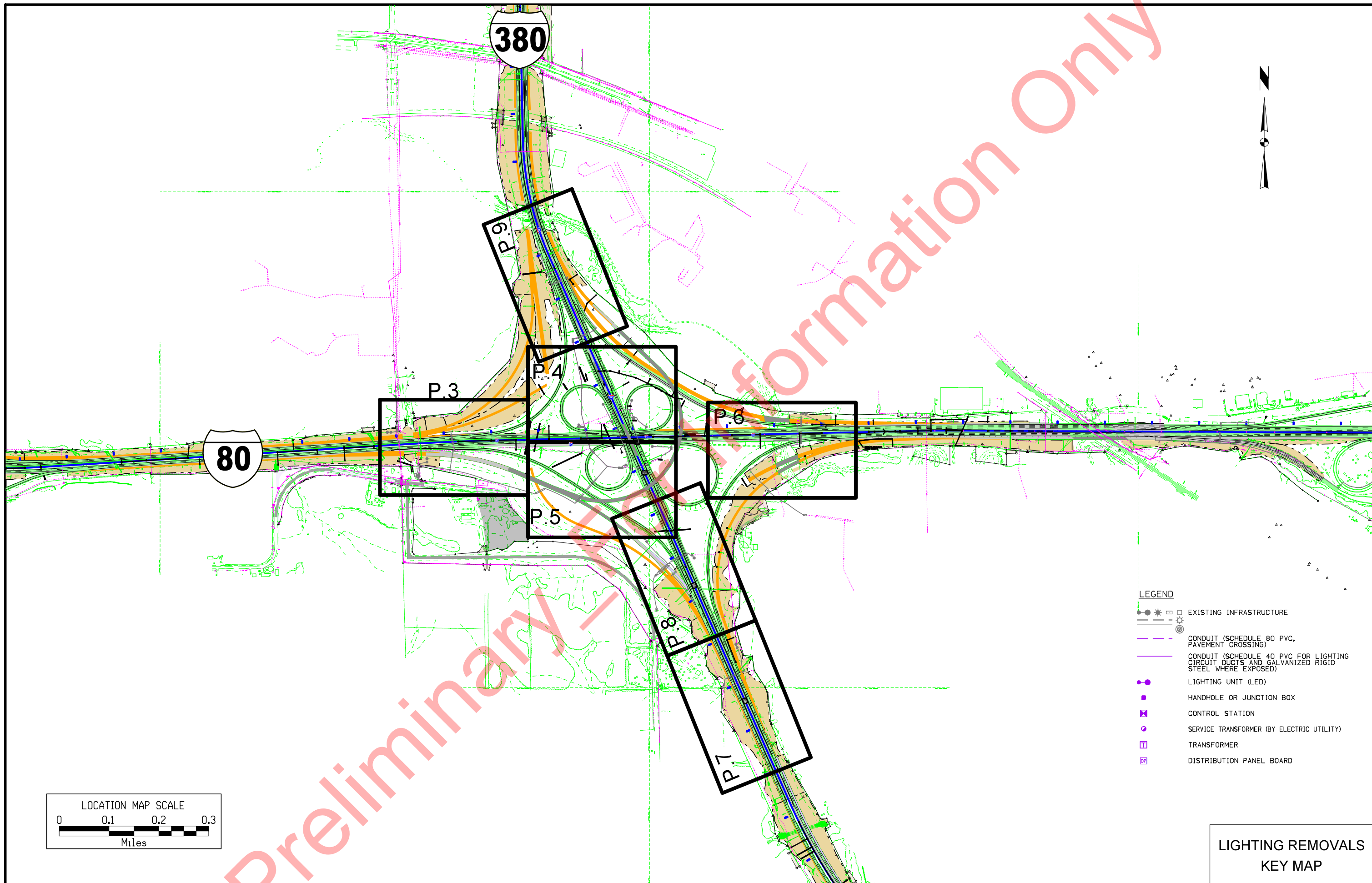
EXISTING FIBER VAULT HH 13-2  
 TO REMAIN  
 PROPOSED SPLICING (BY OTHERS)  
 COIL 60' OF 12 SM FIBER

EXISTING 2" CONDUIT  
 EXISTING 2" CONDUIT TO REMAIN  
 EXISTING 144 SM FIBER TO REMAIN  
 EXISTING 48 SM FIBER TO REMAIN

- NOTES:
- SEE STANDARD DETAIL SOST-18-11 FOR CONDUIT LOCATION DETAILS. EXTEND 2-2" CONDUITS FROM HH 10-4 TO STANDARD OVERHEAD SIGN TRUSS. 1-2" FOR COMMUNICATIONS AND 1-2" FOR POWER. INTERCEPT 2-2" CONDUITS INSTALLED BY THE (403) SIGNING PROJECT.
  - TERMINATE POWER IN OVERHEAD DMS HOUSING AT POWER PANEL. COORDINATE 2 WEEKS IN ADVANCE OF POWER INSTALLATION WITH THE IOWA DOT ENGINEER AND STATEWIDE ITS MAINTENANCE CONTRACTOR.
  - COIL 50' 12 SM FIBER IN CAB DMS02 TO BE TERMINATED BY OTHERS. SEE SHEET X.XX AND X.XX FOR CABINET AND FOOTING DETAILS.
  - THE PROPOSED CAMERA, SENSOR AND INTERNAL CABINET EQUIPMENT WILL BE INSTALLED BY OTHERS.

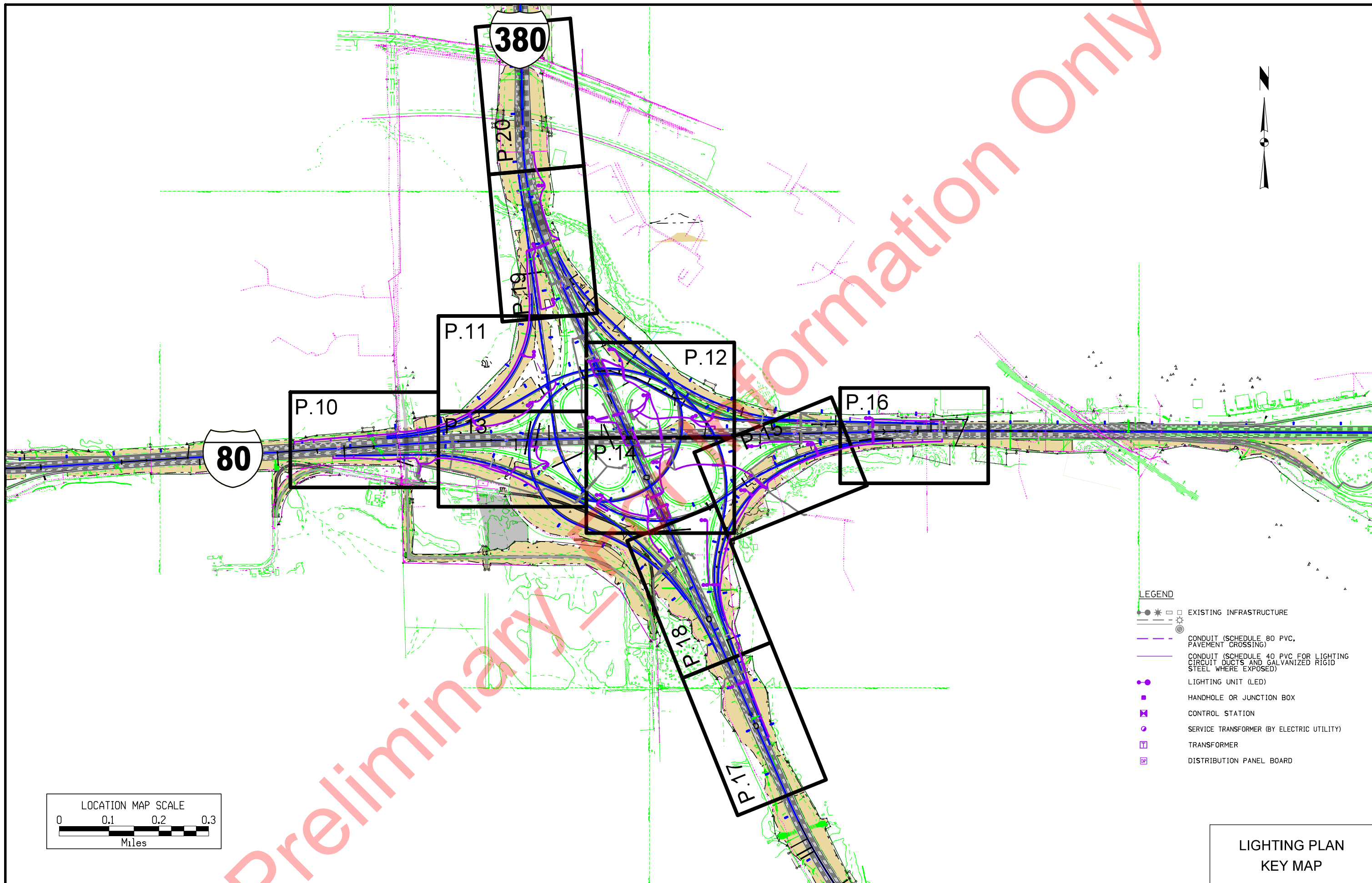


ITS PLAN

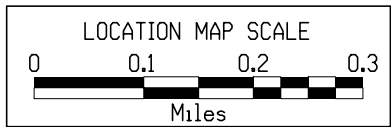


- LEGEND**
- EXISTING INFRASTRUCTURE
  - CONDUIT (SCHEDULE 80 PVC, PAVEMENT CROSSING)
  - CONDUIT (SCHEDULE 40 PVC FOR LIGHTING CIRCUIT DUCTS AND GALVANIZED RIGID STEEL WHERE EXPOSED)
  - LIGHTING UNIT (LED)
  - HANDHOLE OR JUNCTION BOX
  - CONTROL STATION
  - SERVICE TRANSFORMER (BY ELECTRIC UTILITY)
  - TRANSFORMER
  - DISTRIBUTION PANEL BOARD

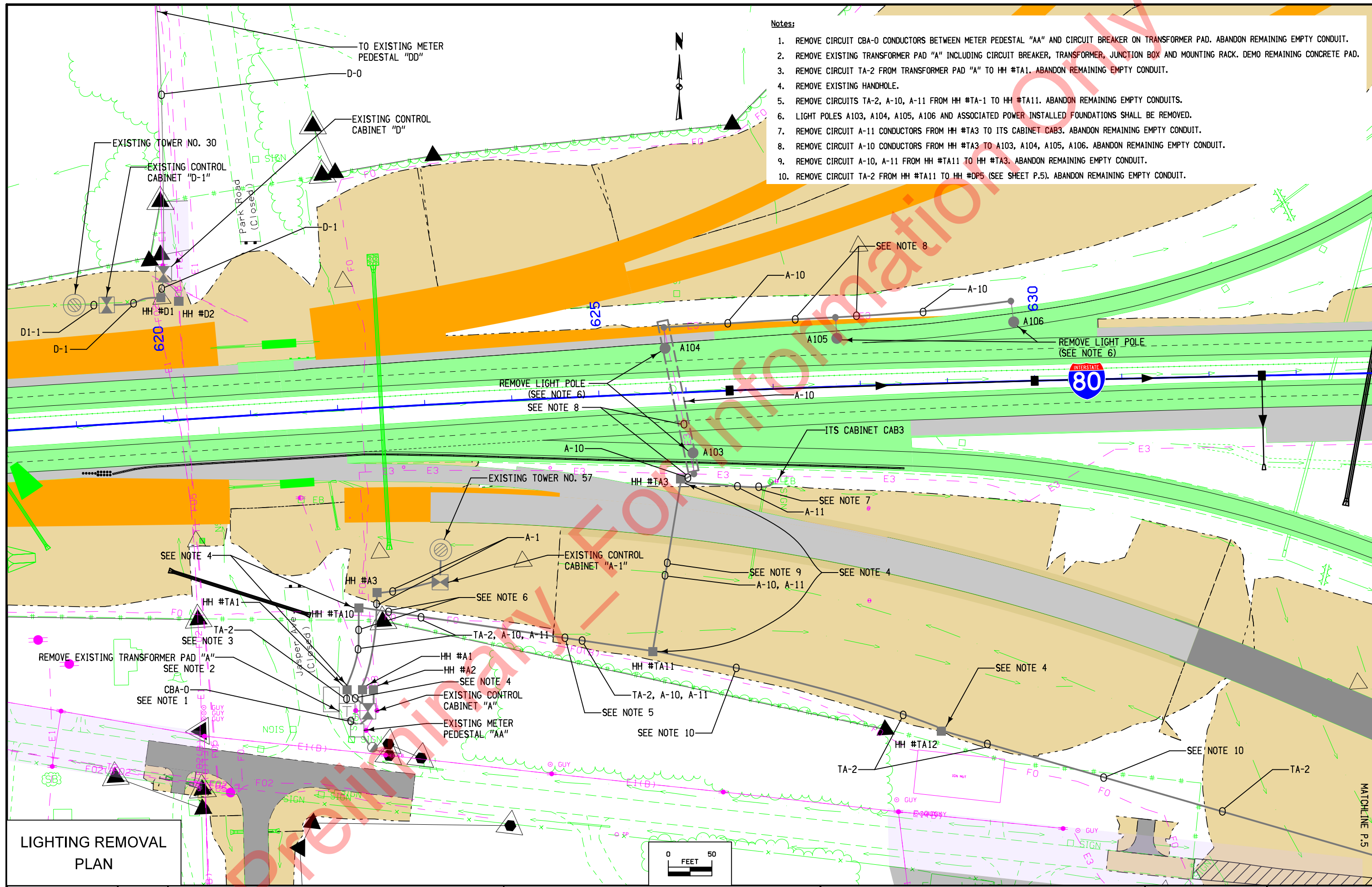
**LIGHTING REMOVALS  
KEY MAP**



- LEGEND**
- □ EXISTING INFRASTRUCTURE
  - CONDUIT (SCHEDULE 80 PVC, PAVEMENT CROSSING)
  - CONDUIT (SCHEDULE 40 PVC FOR LIGHTING CIRCUIT DUCTS AND GALVANIZED RIGID STEEL WHERE EXPOSED)
  - LIGHTING UNIT (LED)
  - HANDHOLE OR JUNCTION BOX
  - ⊠ CONTROL STATION
  - SERVICE TRANSFORMER (BY ELECTRIC UTILITY)
  - TRANSFORMER
  - DISTRIBUTION PANEL BOARD



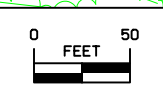
**LIGHTING PLAN  
KEY MAP**

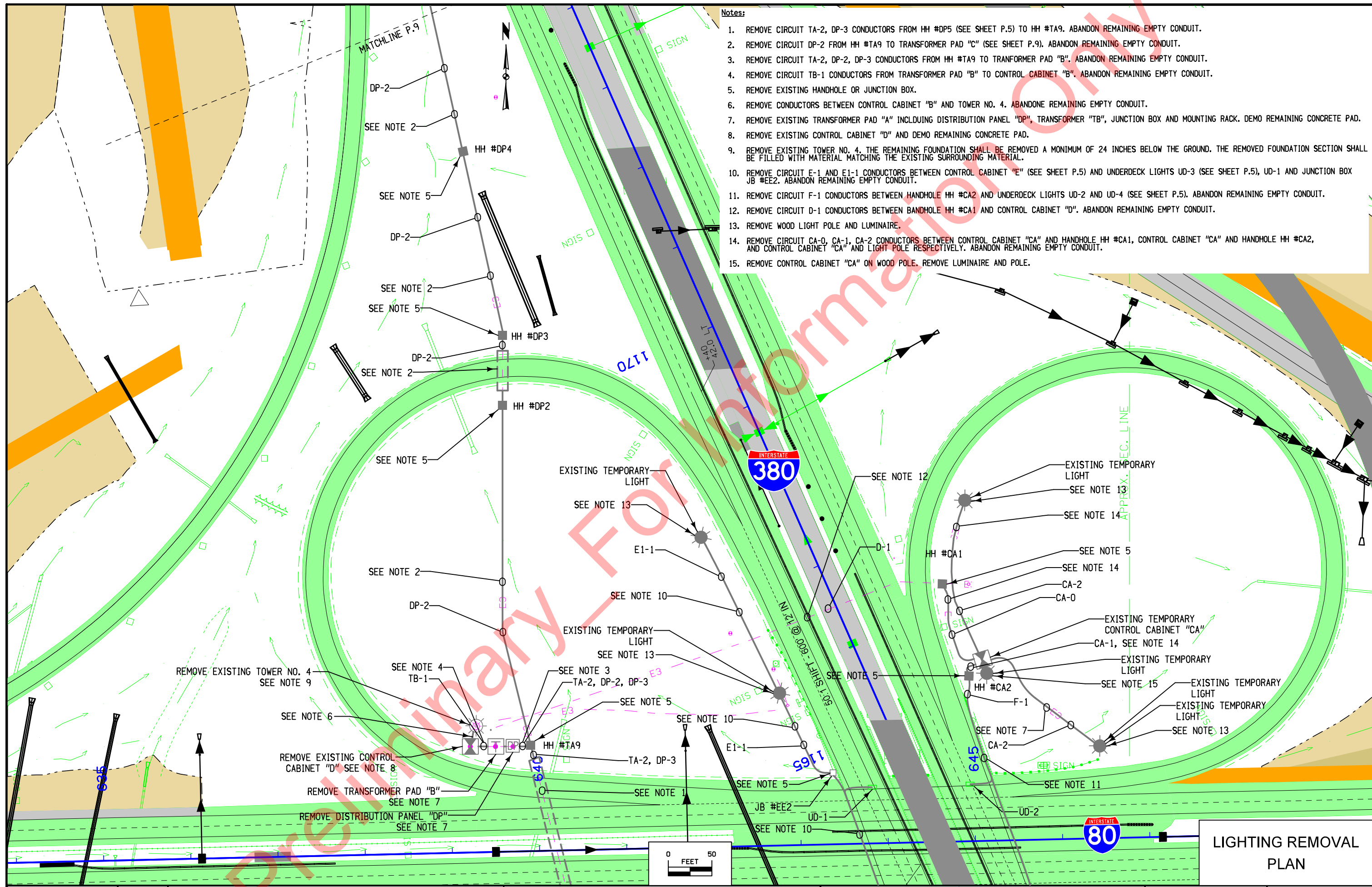


**Notes:**

1. REMOVE CIRCUIT CBA-0 CONDUCTORS BETWEEN METER PEDESTAL "AA" AND CIRCUIT BREAKER ON TRANSFORMER PAD. ABANDON REMAINING EMPTY CONDUIT.
2. REMOVE EXISTING TRANSFORMER PAD "A" INCLUDING CIRCUIT BREAKER, TRANSFORMER, JUNCTION BOX AND MOUNTING RACK. DEMO REMAINING CONCRETE PAD.
3. REMOVE CIRCUIT TA-2 FROM TRANSFORMER PAD "A" TO HH #TA1. ABANDON REMAINING EMPTY CONDUIT.
4. REMOVE EXISTING HANDHOLE.
5. REMOVE CIRCUITS TA-2, A-10, A-11 FROM HH #TA-1 TO HH #TA11. ABANDON REMAINING EMPTY CONDUITS.
6. LIGHT POLES A103, A104, A105, A106 AND ASSOCIATED POWER INSTALLED FOUNDATIONS SHALL BE REMOVED.
7. REMOVE CIRCUIT A-11 CONDUCTORS FROM HH #TA3 TO ITS CABINET CAB3. ABANDON REMAINING EMPTY CONDUIT.
8. REMOVE CIRCUIT A-10 CONDUCTORS FROM HH #TA3 TO A103, A104, A105, A106. ABANDON REMAINING EMPTY CONDUIT.
9. REMOVE CIRCUIT A-10, A-11 FROM HH #TA11 TO HH #TA3. ABANDON REMAINING EMPTY CONDUIT.
10. REMOVE CIRCUIT TA-2 FROM HH #TA11 TO HH #DP5 (SEE SHEET P.5). ABANDON REMAINING EMPTY CONDUIT.

**LIGHTING REMOVAL PLAN**

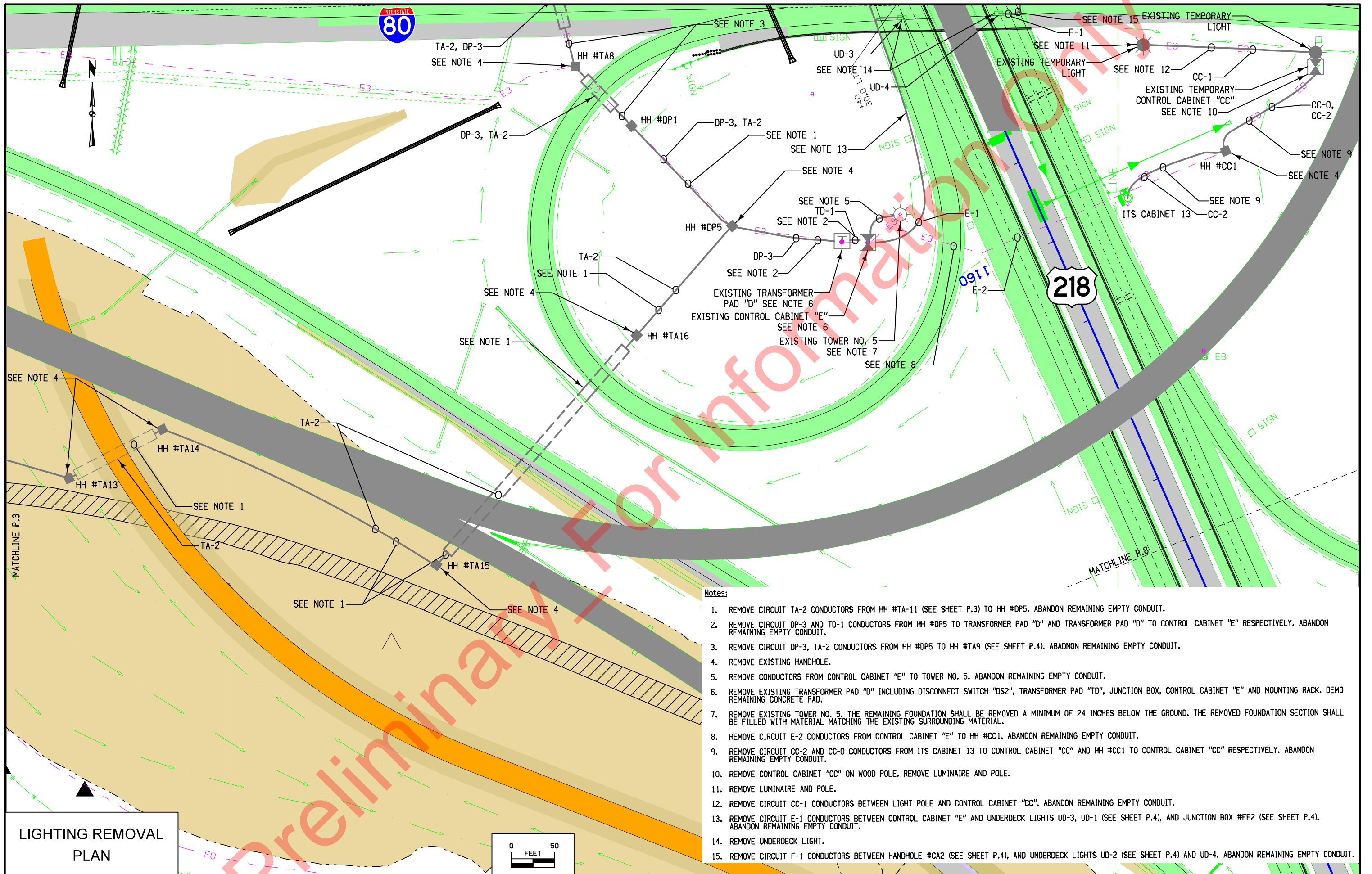




- Notes:**
1. REMOVE CIRCUIT TA-2, DP-3 CONDUCTORS FROM HH #DP5 (SEE SHEET P.5) TO HH #TA9. ABANDON REMAINING EMPTY CONDUIT.
  2. REMOVE CIRCUIT DP-2 FROM HH #TA9 TO TRANSFORMER PAD "C" (SEE SHEET P.9). ABANDON REMAINING EMPTY CONDUIT.
  3. REMOVE CIRCUIT TA-2, DP-2, DP-3 CONDUCTORS FROM HH #TA9 TO TRANSFORMER PAD "B". ABANDON REMAINING EMPTY CONDUIT.
  4. REMOVE CIRCUIT TB-1 CONDUCTORS FROM TRANSFORMER PAD "B" TO CONTROL CABINET "B". ABANDON REMAINING EMPTY CONDUIT.
  5. REMOVE EXISTING HANDHOLE OR JUNCTION BOX.
  6. REMOVE CONDUCTORS BETWEEN CONTROL CABINET "B" AND TOWER NO. 4. ABANDON REMAINING EMPTY CONDUIT.
  7. REMOVE EXISTING TRANSFORMER PAD "A" INCLUDING DISTRIBUTION PANEL "DP", TRANSFORMER "TB", JUNCTION BOX AND MOUNTING RACK. DEMO REMAINING CONCRETE PAD.
  8. REMOVE EXISTING CONTROL CABINET "D" AND DEMO REMAINING CONCRETE PAD.
  9. REMOVE EXISTING TOWER NO. 4. THE REMAINING FOUNDATION SHALL BE REMOVED A MINIMUM OF 24 INCHES BELOW THE GROUND. THE REMOVED FOUNDATION SECTION SHALL BE FILLED WITH MATERIAL MATCHING THE EXISTING SURROUNDING MATERIAL.
  10. REMOVE CIRCUIT E-1 AND E1-1 CONDUCTORS BETWEEN CONTROL CABINET "E" (SEE SHEET P.5) AND UNDERDECK LIGHTS UD-3 (SEE SHEET P.5), UD-1 AND JUNCTION BOX JB #EE2. ABANDON REMAINING EMPTY CONDUIT.
  11. REMOVE CIRCUIT F-1 CONDUCTORS BETWEEN HANDHOLE HH #CA2 AND UNDERDECK LIGHTS UD-2 AND UD-4 (SEE SHEET P.5). ABANDON REMAINING EMPTY CONDUIT.
  12. REMOVE CIRCUIT D-1 CONDUCTORS BETWEEN BANDHOLE HH #CA1 AND CONTROL CABINET "D". ABANDON REMAINING EMPTY CONDUIT.
  13. REMOVE WOOD LIGHT POLE AND LUMINAIRE.
  14. REMOVE CIRCUIT CA-0, CA-1, CA-2 CONDUCTORS BETWEEN CONTROL CABINET "CA" AND HANDHOLE HH #CA1, CONTROL CABINET "CA" AND HANDHOLE HH #CA2, AND CONTROL CABINET "CA" AND LIGHT POLE RESPECTIVELY. ABANDON REMAINING EMPTY CONDUIT.
  15. REMOVE CONTROL CABINET "CA" ON WOOD POLE. REMOVE LUMINAIRE AND POLE.

**LIGHTING REMOVAL PLAN**

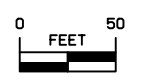


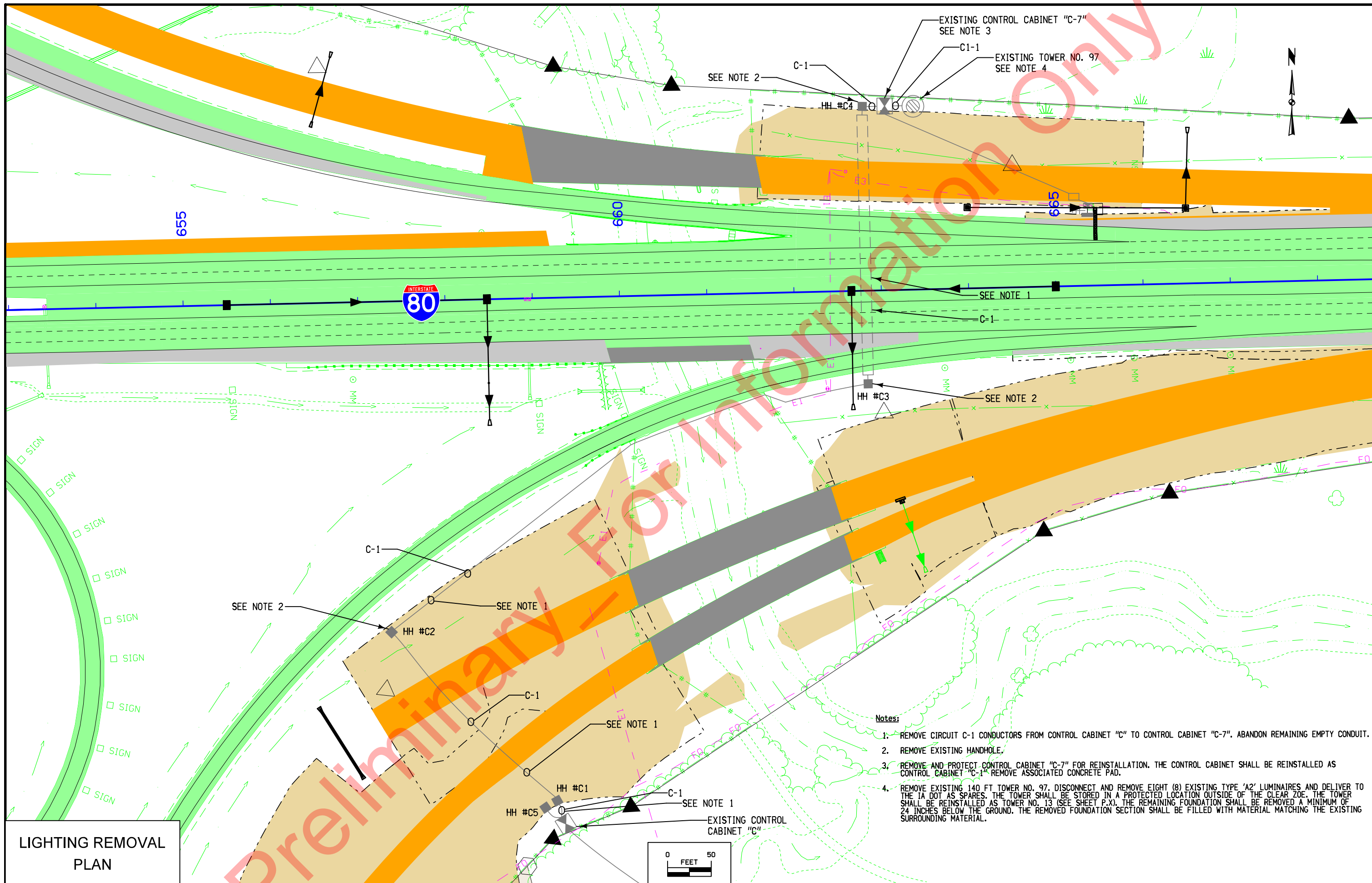


**Notes:**

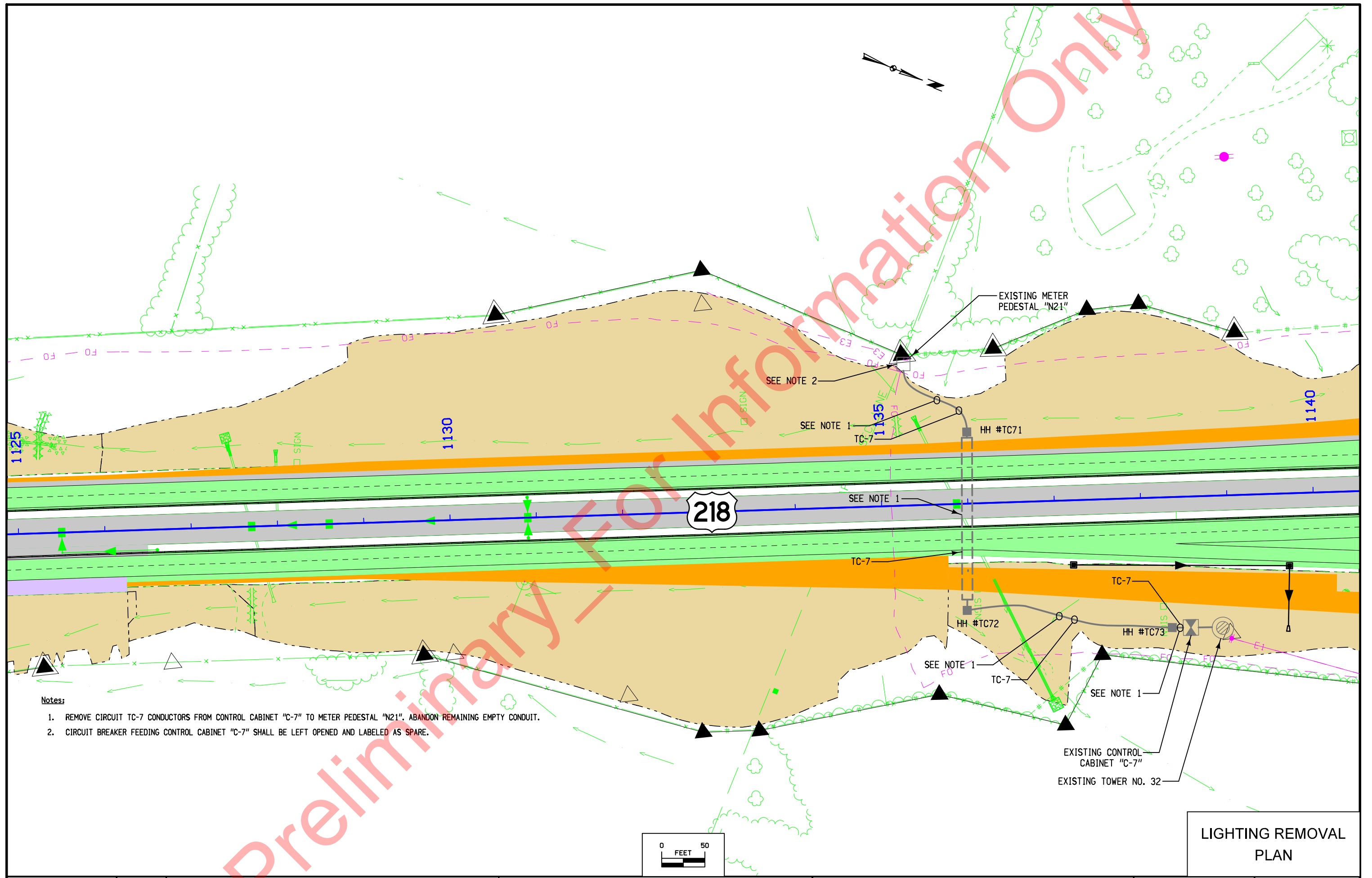
1. REMOVE CIRCUIT TA-2 CONDUCTORS FROM HH #TA-11 (SEE SHEET P.3) TO HH #DP5. ABANDON REMAINING EMPTY CONDUIT.
2. REMOVE CIRCUIT DP-3 AND TD-1 CONDUCTORS FROM HH #DP5 TO TRANSFORMER PAD "D" AND TRANSFORMER PAD "D" TO CONTROL CABINET "E" RESPECTIVELY. ABANDON REMAINING EMPTY CONDUIT.
3. REMOVE CIRCUIT DP-3, TA-2 CONDUCTORS FROM HH #DP5 TO HH #TA9 (SEE SHEET P.4). ABANDON REMAINING EMPTY CONDUIT.
4. REMOVE EXISTING HANDHOLE.
5. REMOVE CONDUCTORS FROM CONTROL CABINET "E" TO TOWER NO. 5. ABANDON REMAINING EMPTY CONDUIT.
6. REMOVE EXISTING TRANSFORMER PAD "D" INCLUDING DISCONNECT SWITCH "DS2", TRANSFORMER PAD "TD", JUNCTION BOX, CONTROL CABINET "E" AND MOUNTING RACK. DEMO REMAINING CONCRETE PAD.
7. REMOVE EXISTING TOWER NO. 5. THE REMAINING FOUNDATION SHALL BE REMOVED A MINIMUM OF 24 INCHES BELOW THE GROUND. THE REMOVED FOUNDATION SECTION SHALL BE FILLED WITH MATERIAL MATCHING THE EXISTING SURROUNDING MATERIAL.
8. REMOVE CIRCUIT E-2 CONDUCTORS FROM CONTROL CABINET "E" TO HH #CC1. ABANDON REMAINING EMPTY CONDUIT.
9. REMOVE CIRCUIT CC-2 AND CC-0 CONDUCTORS FROM ITS CABINET 13 TO CONTROL CABINET "CC" AND HH #CC1 TO CONTROL CABINET "CC" RESPECTIVELY. ABANDON REMAINING EMPTY CONDUIT.
10. REMOVE CONTROL CABINET "CC" ON WOOD POLE. REMOVE LUMINAIRE AND POLE.
11. REMOVE LUMINAIRE AND POLE.
12. REMOVE CIRCUIT CC-1 CONDUCTORS BETWEEN LIGHT POLE AND CONTROL CABINET "CC". ABANDON REMAINING EMPTY CONDUIT.
13. REMOVE CIRCUIT E-1 CONDUCTORS BETWEEN CONTROL CABINET "E" AND UNDERDECK LIGHTS UD-3, UD-1 (SEE SHEET P.4), AND JUNCTION BOX #EE2 (SEE SHEET P.4). ABANDON REMAINING EMPTY CONDUIT.
14. REMOVE UNDERDECK LIGHT.
15. REMOVE CIRCUIT F-1 CONDUCTORS BETWEEN HANDHOLE #CA2 (SEE SHEET P.4), AND UNDERDECK LIGHTS UD-2 (SEE SHEET P.4) AND UD-4. ABANDON REMAINING EMPTY CONDUIT.

**LIGHTING REMOVAL PLAN**



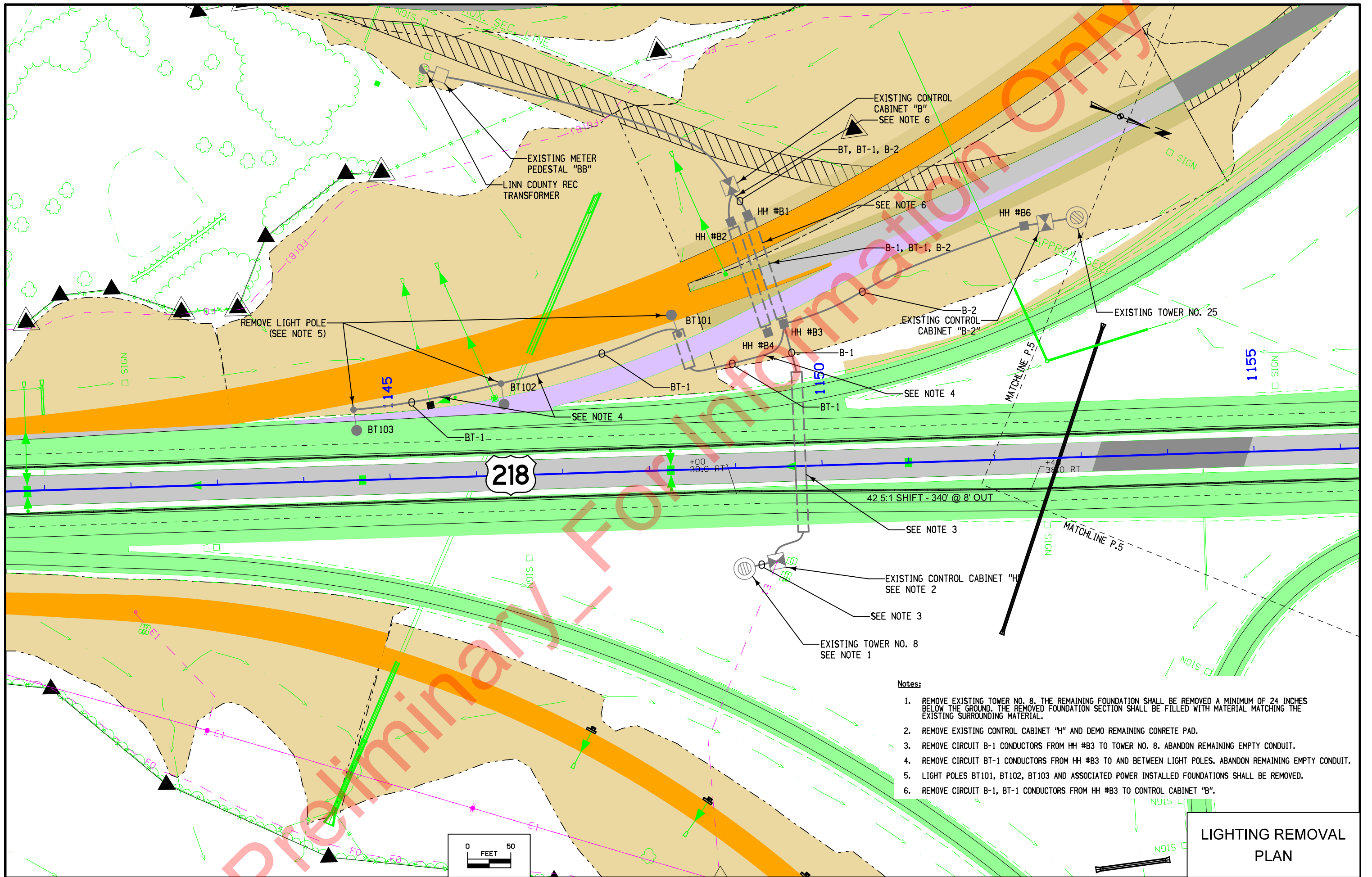


**LIGHTING REMOVAL PLAN**



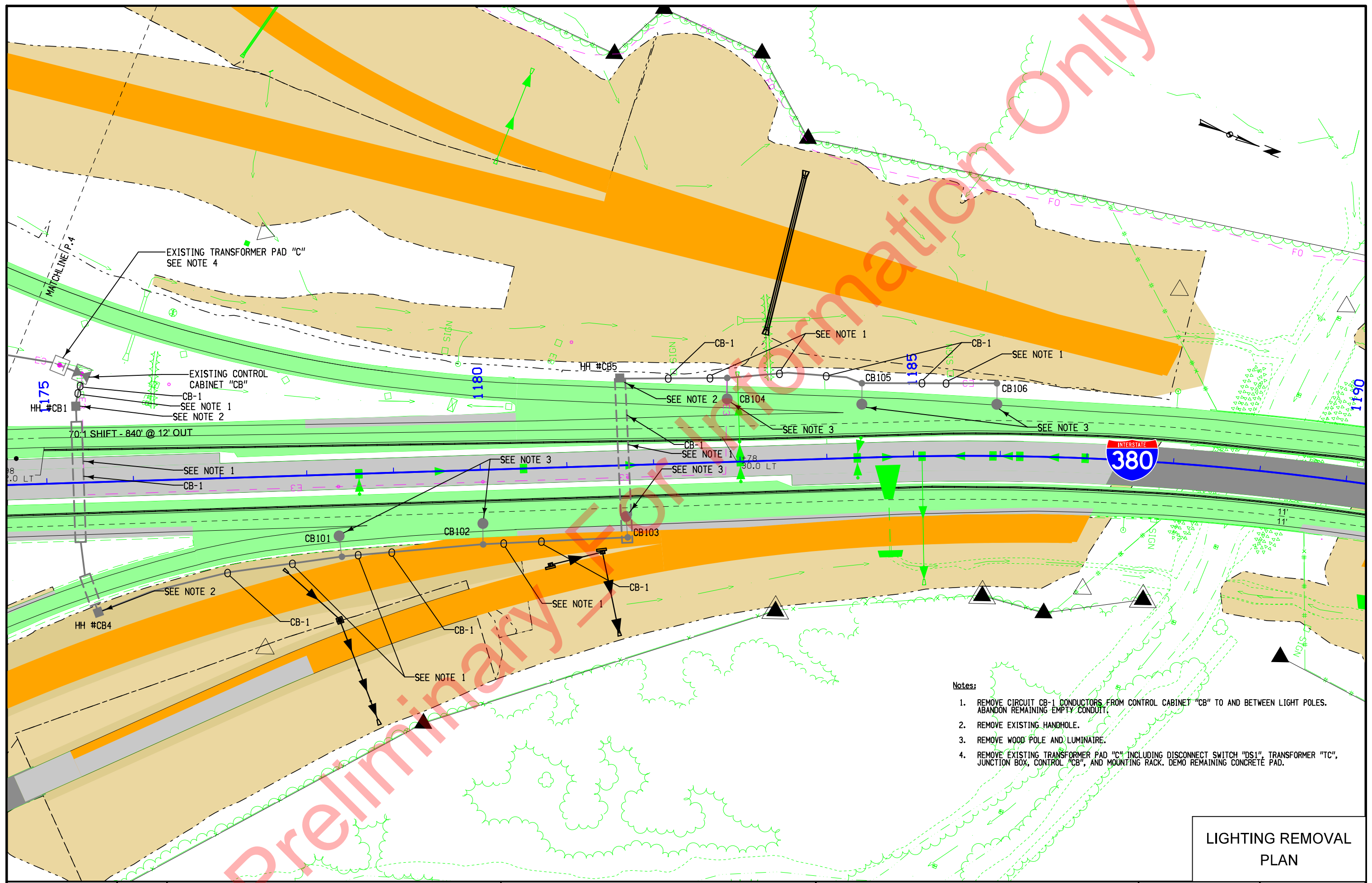
- Notes:**
1. REMOVE CIRCUIT TC-7 CONDUCTORS FROM CONTROL CABINET "C-7" TO METER PEDESTAL "N21". ABANDON REMAINING EMPTY CONDUIT.
  2. CIRCUIT BREAKER FEEDING CONTROL CABINET "C-7" SHALL BE LEFT OPENED AND LABELED AS SPARE.

**LIGHTING REMOVAL PLAN**



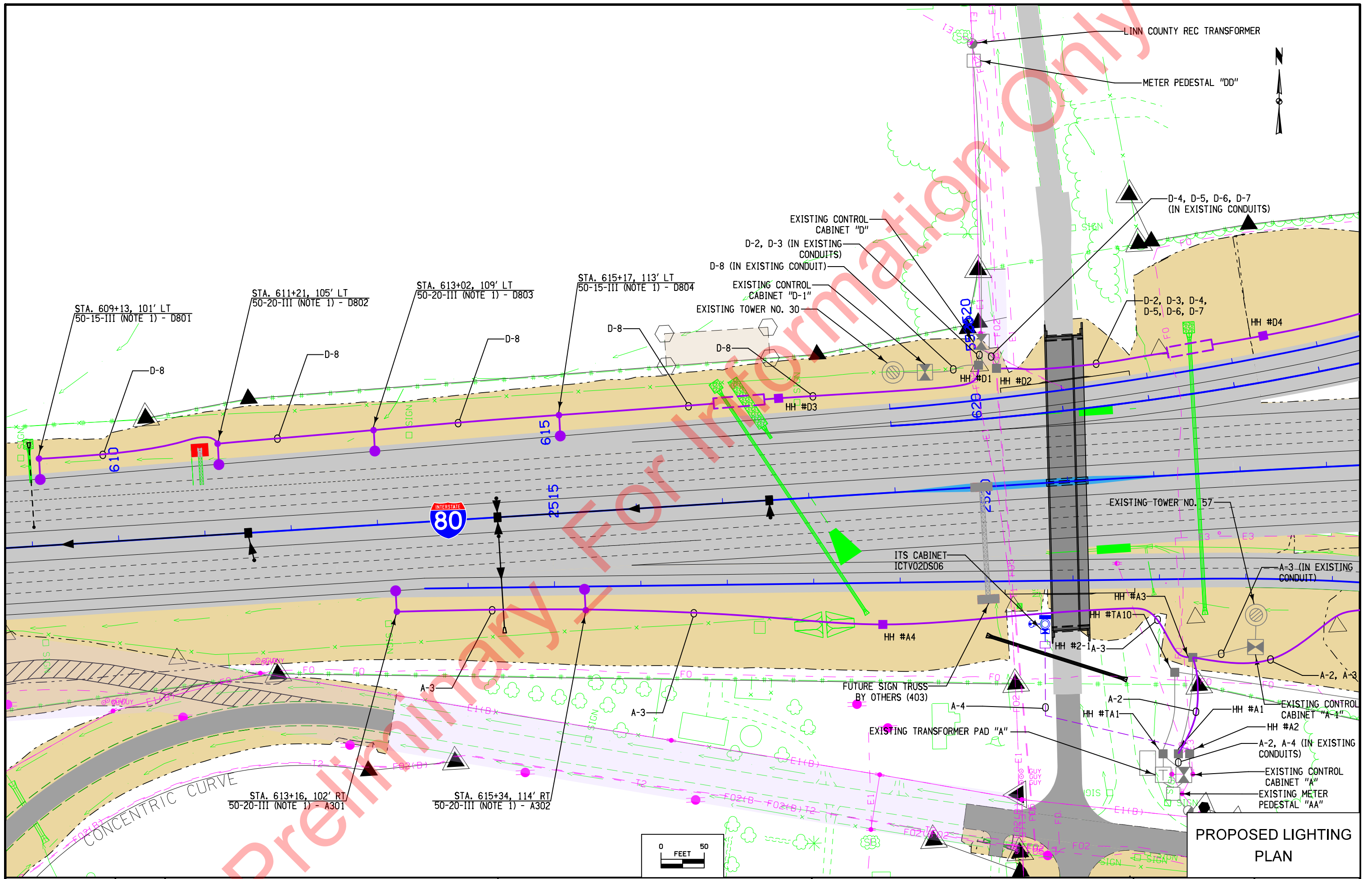
- Notes:**
1. REMOVE EXISTING TOWER NO. 8. THE REMAINING FOUNDATION SHALL BE REMOVED A MINIMUM OF 24 INCHES BELOW THE GROUND. THE REMOVED FOUNDATION SECTION SHALL BE FILLED WITH MATERIAL MATCHING THE EXISTING SURROUNDING MATERIAL.
  2. REMOVE EXISTING CONTROL CABINET "H" AND DEMO REMAINING CONCRETE PAD.
  3. REMOVE CIRCUIT B-1 CONDUCTORS FROM HH #B3 TO TOWER NO. 8. ABANDON REMAINING EMPTY CONDUIT.
  4. REMOVE CIRCUIT BT-1 CONDUCTORS FROM HH #B3 TO AND BETWEEN LIGHT POLES. ABANDON REMAINING EMPTY CONDUIT.
  5. LIGHT POLES BT101, BT102, BT103 AND ASSOCIATED POWER INSTALLED FOUNDATIONS SHALL BE REMOVED.
  6. REMOVE CIRCUIT B-1, BT-1 CONDUCTORS FROM HH #B3 TO CONTROL CABINET "B".

**LIGHTING REMOVAL PLAN**

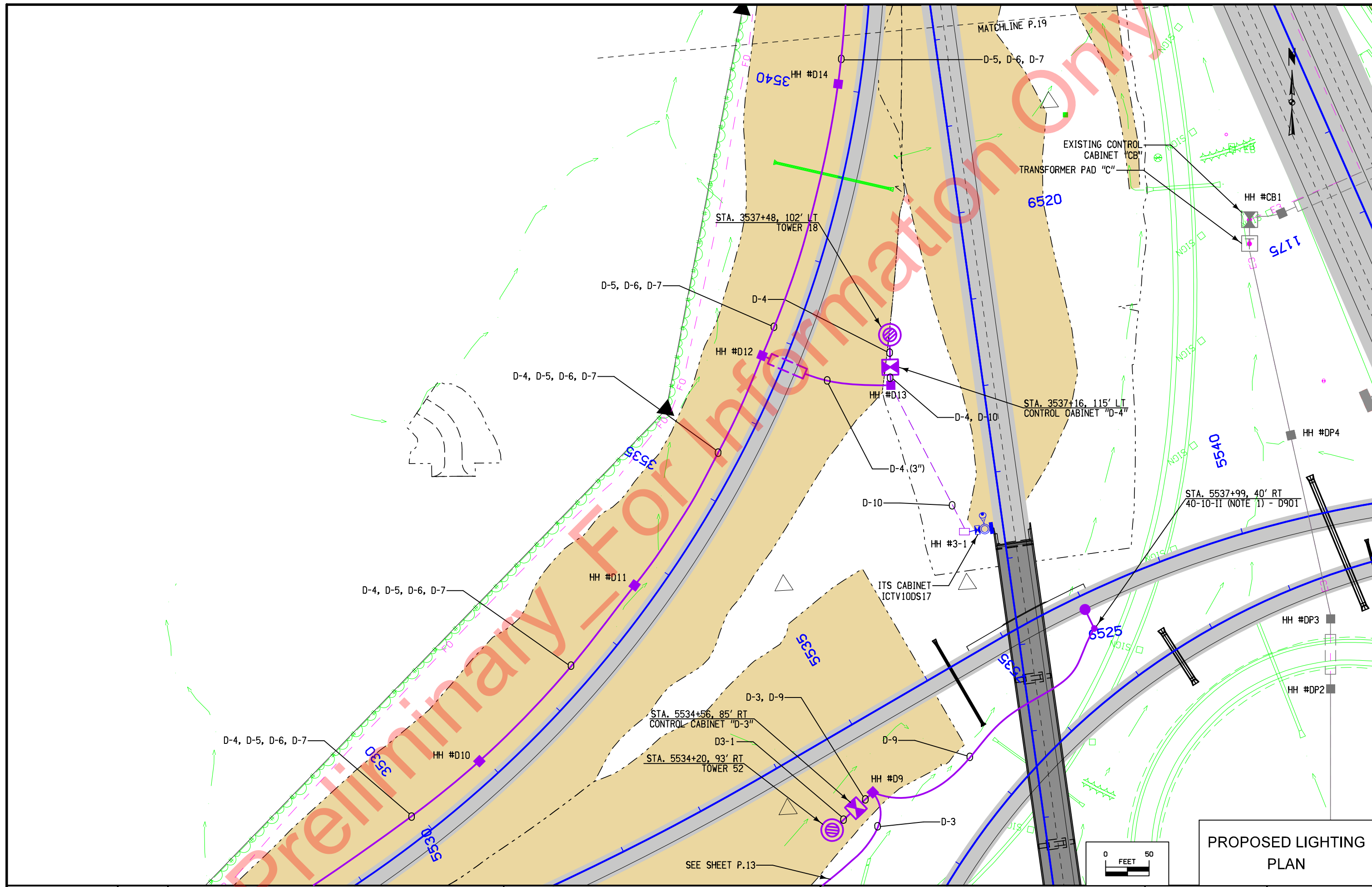


- Notes:
1. REMOVE CIRCUIT CB-1 CONDUCTORS FROM CONTROL CABINET "CB" TO AND BETWEEN LIGHT POLES. ABANDON REMAINING EMPTY CONDUIT.
  2. REMOVE EXISTING HANDHOLE.
  3. REMOVE WOOD POLE AND LUMINAIRE.
  4. REMOVE EXISTING TRANSFORMER PAD "C" INCLUDING DISCONNECT SWITCH "DS1", TRANSFORMER "TC", JUNCTION BOX, CONTROL "CB", AND MOUNTING RACK. DEMO REMAINING CONCRETE PAD.

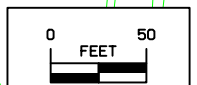
LIGHTING REMOVAL PLAN

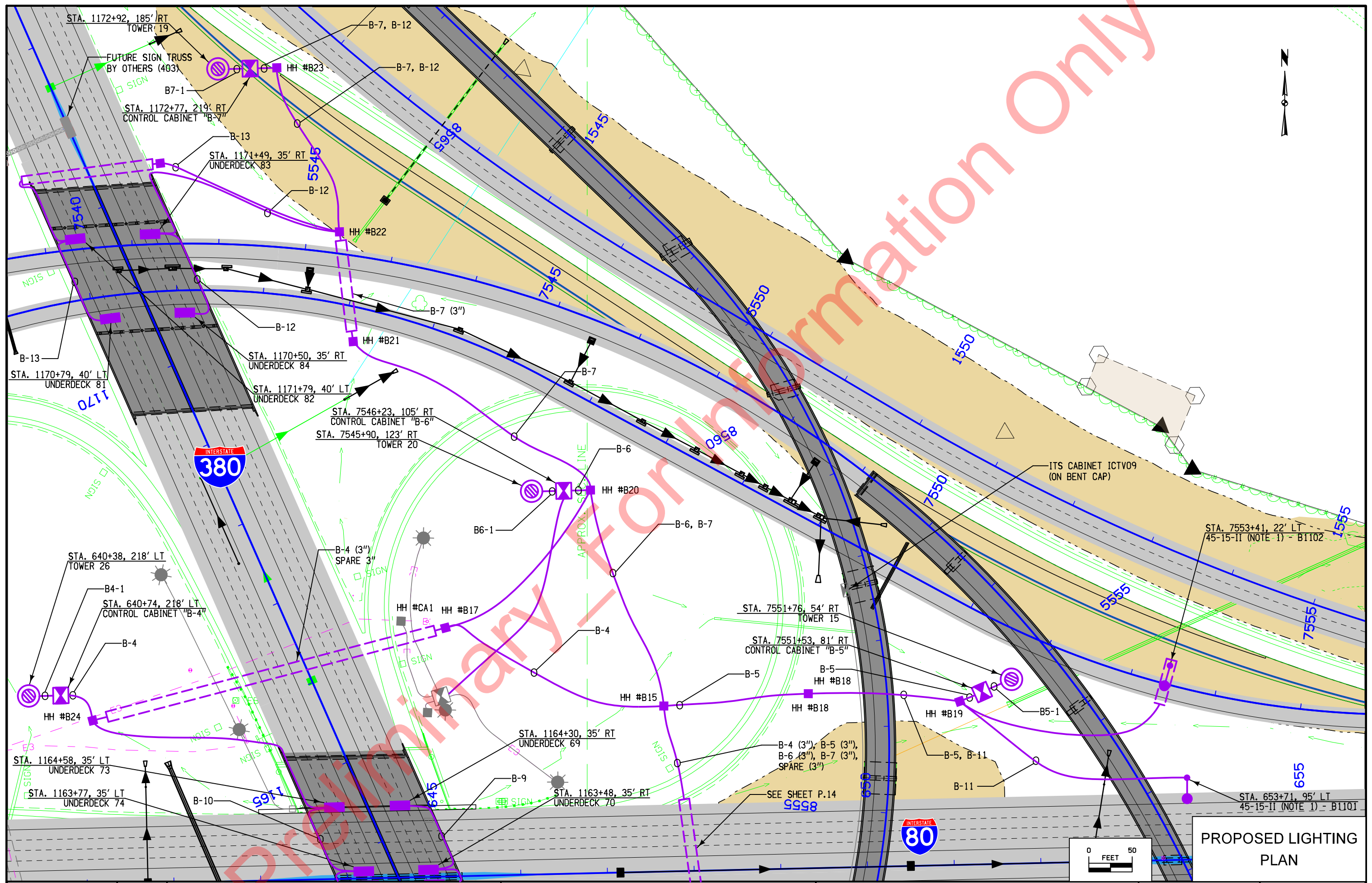


**PROPOSED LIGHTING PLAN**



**PROPOSED LIGHTING PLAN**

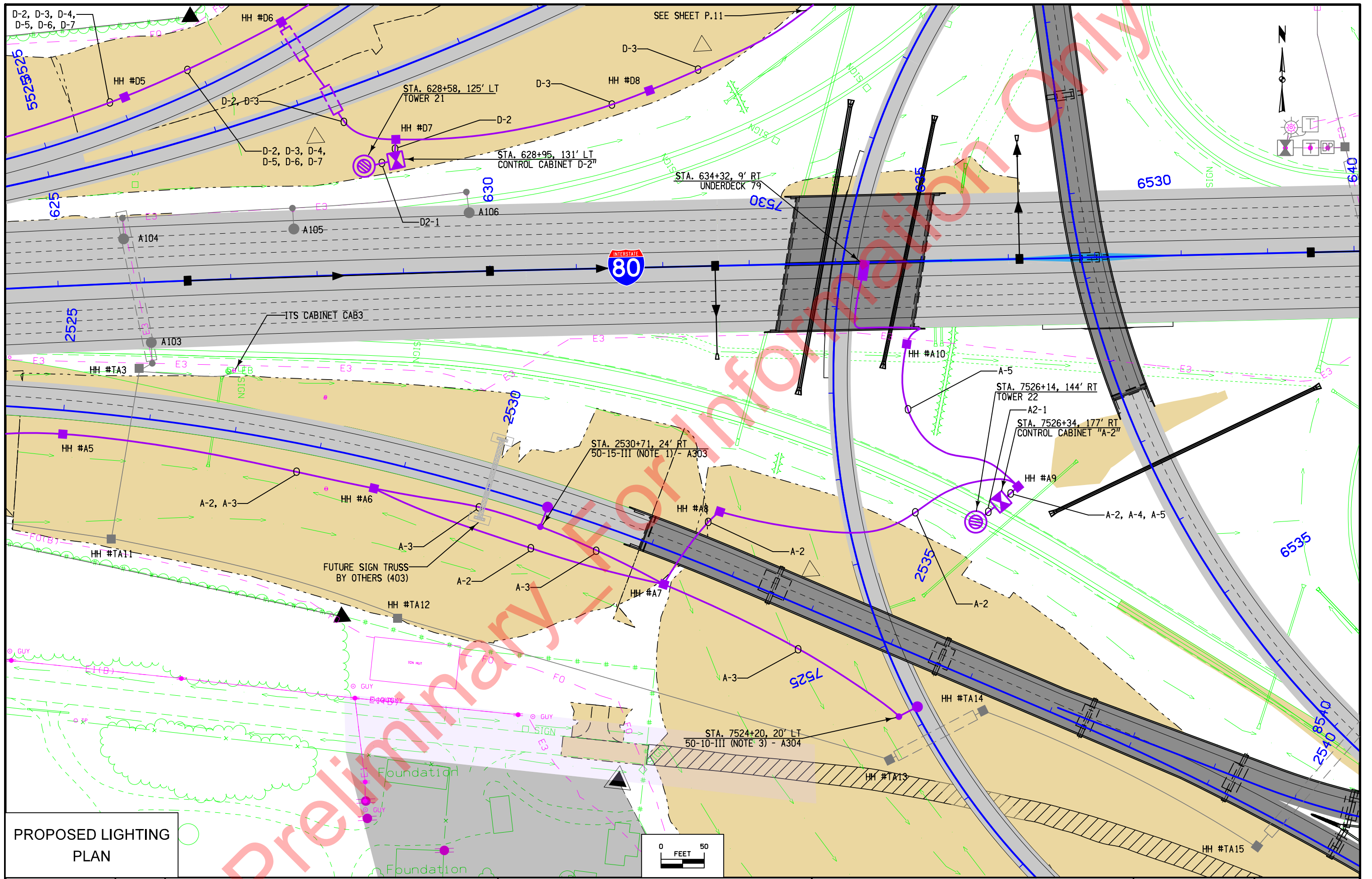


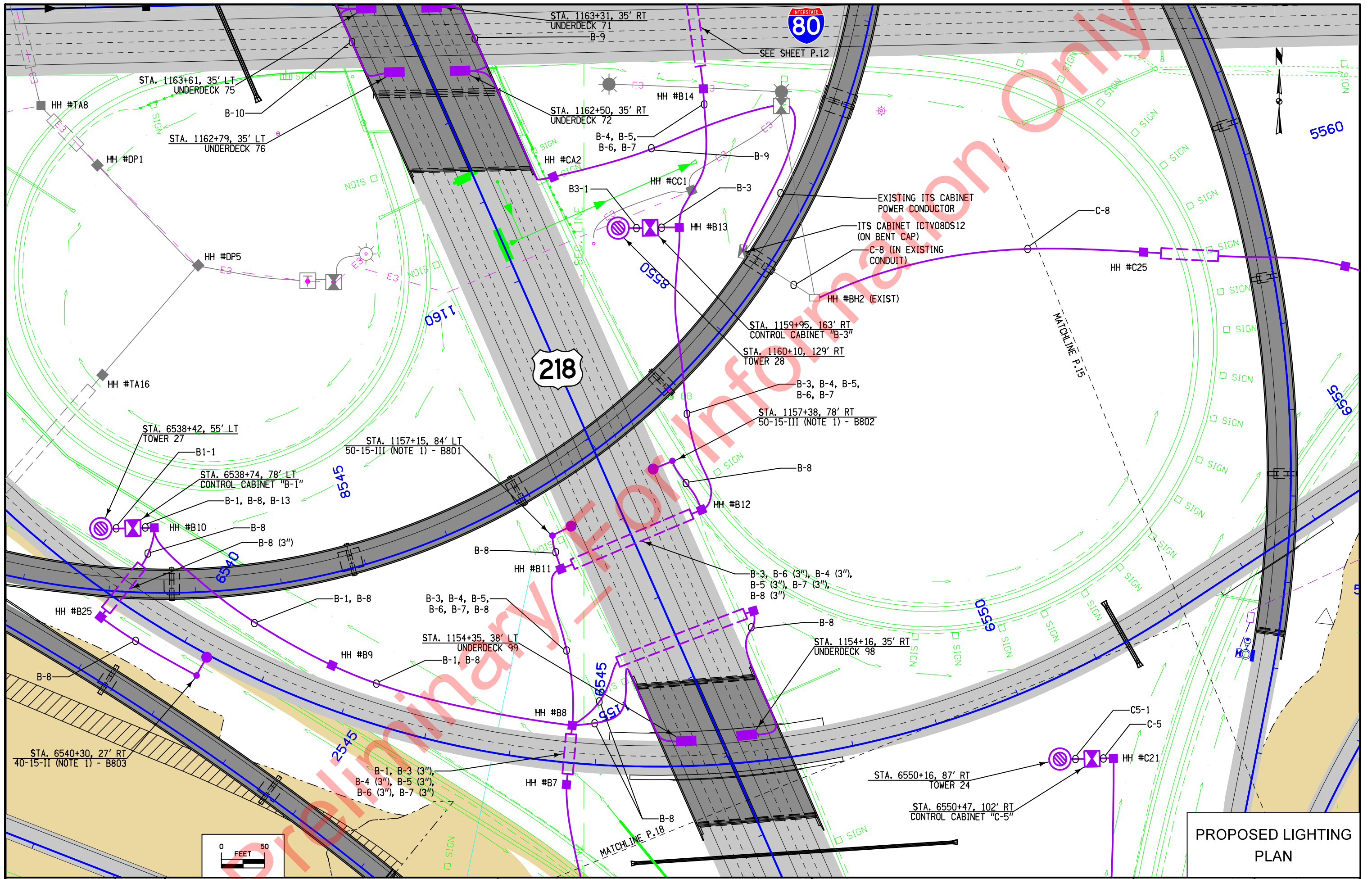


Primary Information Only

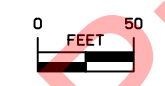
**PROPOSED LIGHTING PLAN**

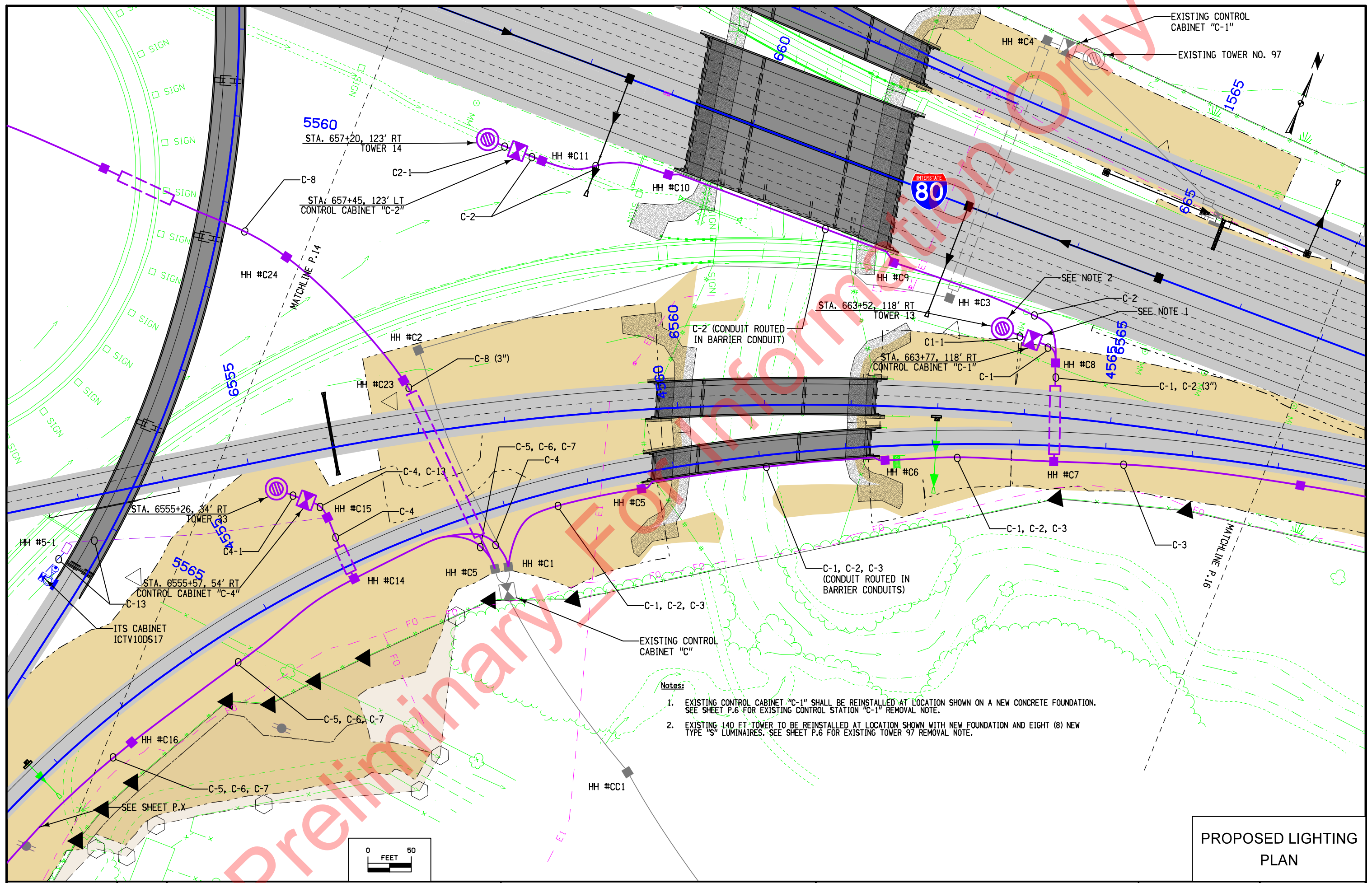






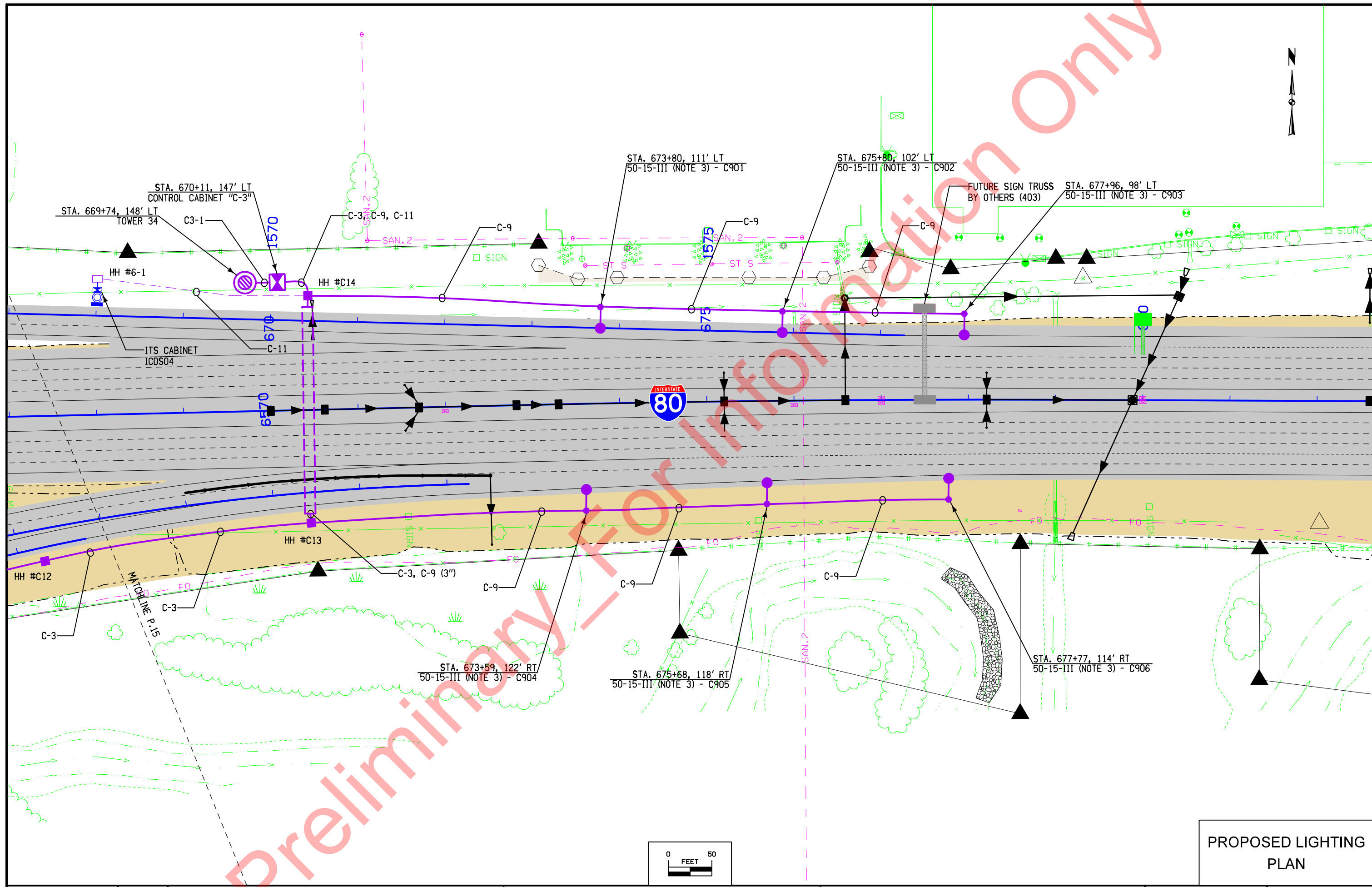
**PROPOSED LIGHTING PLAN**



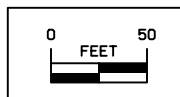
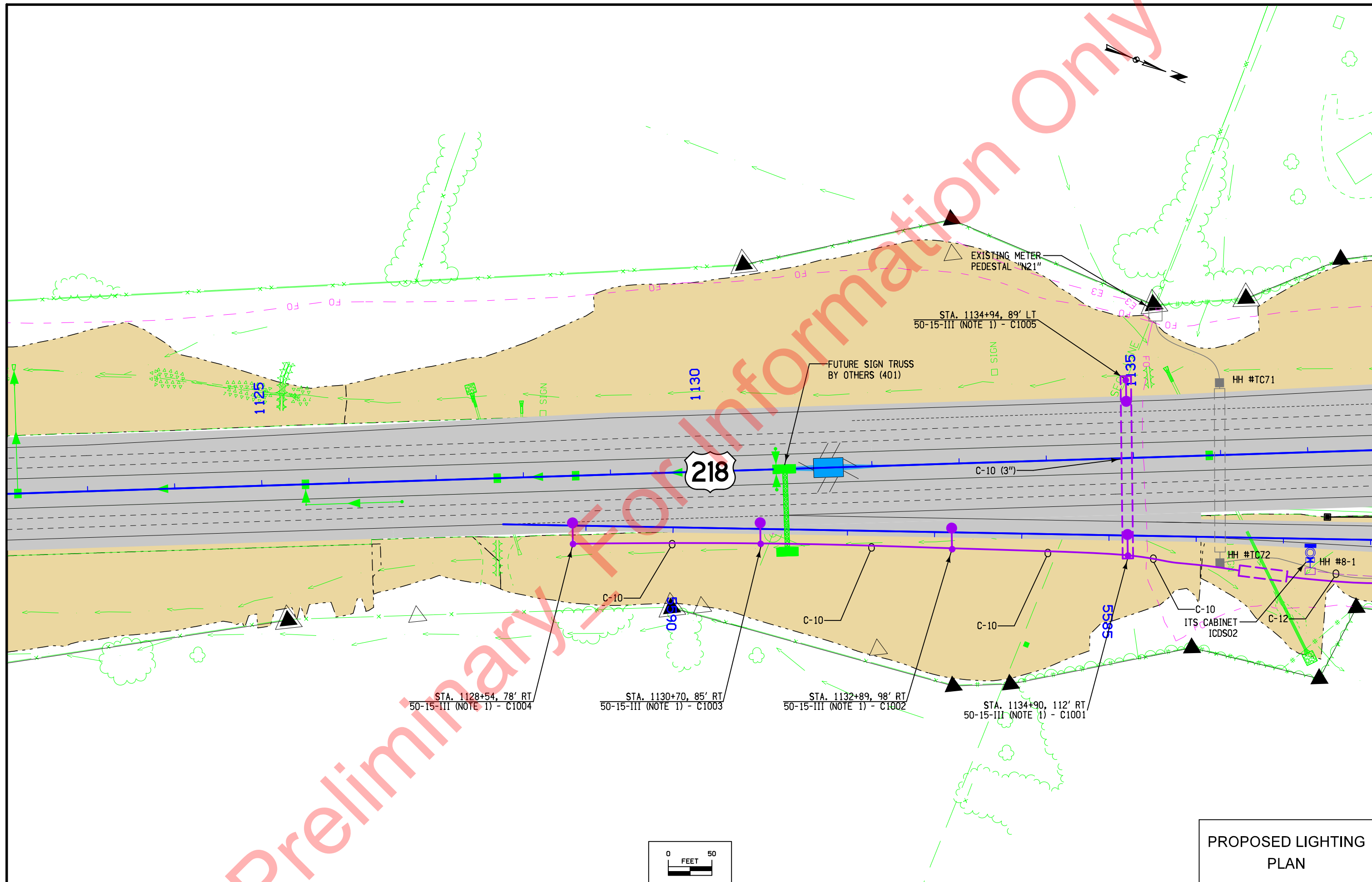


- Notes:
- EXISTING CONTROL CABINET "C-1" SHALL BE REINSTALLED AT LOCATION SHOWN ON A NEW CONCRETE FOUNDATION. SEE SHEET P.6 FOR EXISTING CONTROL STATION "C-1" REMOVAL NOTE.
  - EXISTING 140 FT TOWER TO BE REINSTALLED AT LOCATION SHOWN WITH NEW FOUNDATION AND EIGHT (8) NEW TYPE "S" LUMINAIRES. SEE SHEET P.6 FOR EXISTING TOWER 97 REMOVAL NOTE.

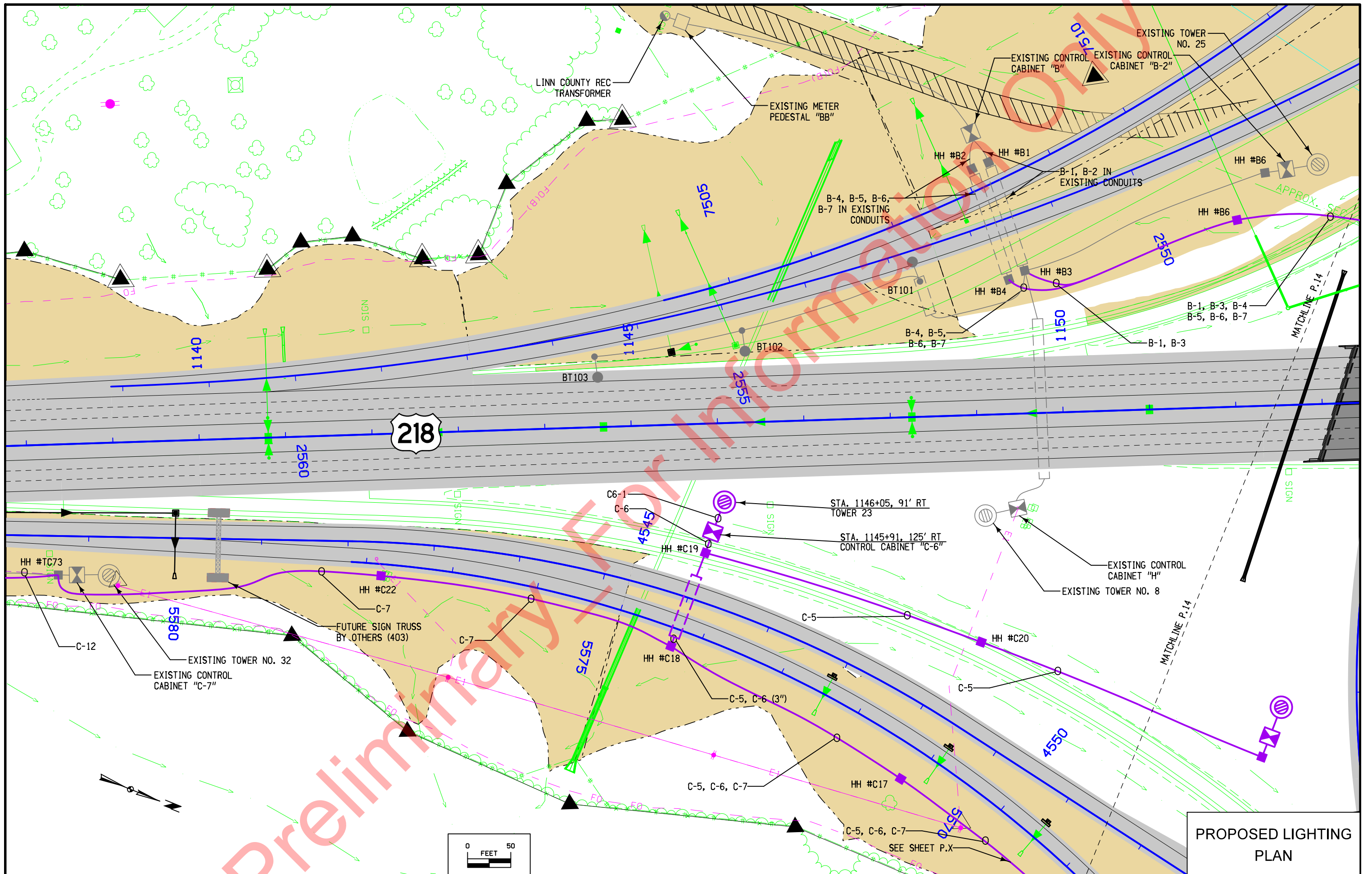
**PROPOSED LIGHTING PLAN**



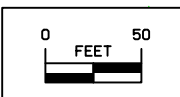
**PROPOSED LIGHTING PLAN**

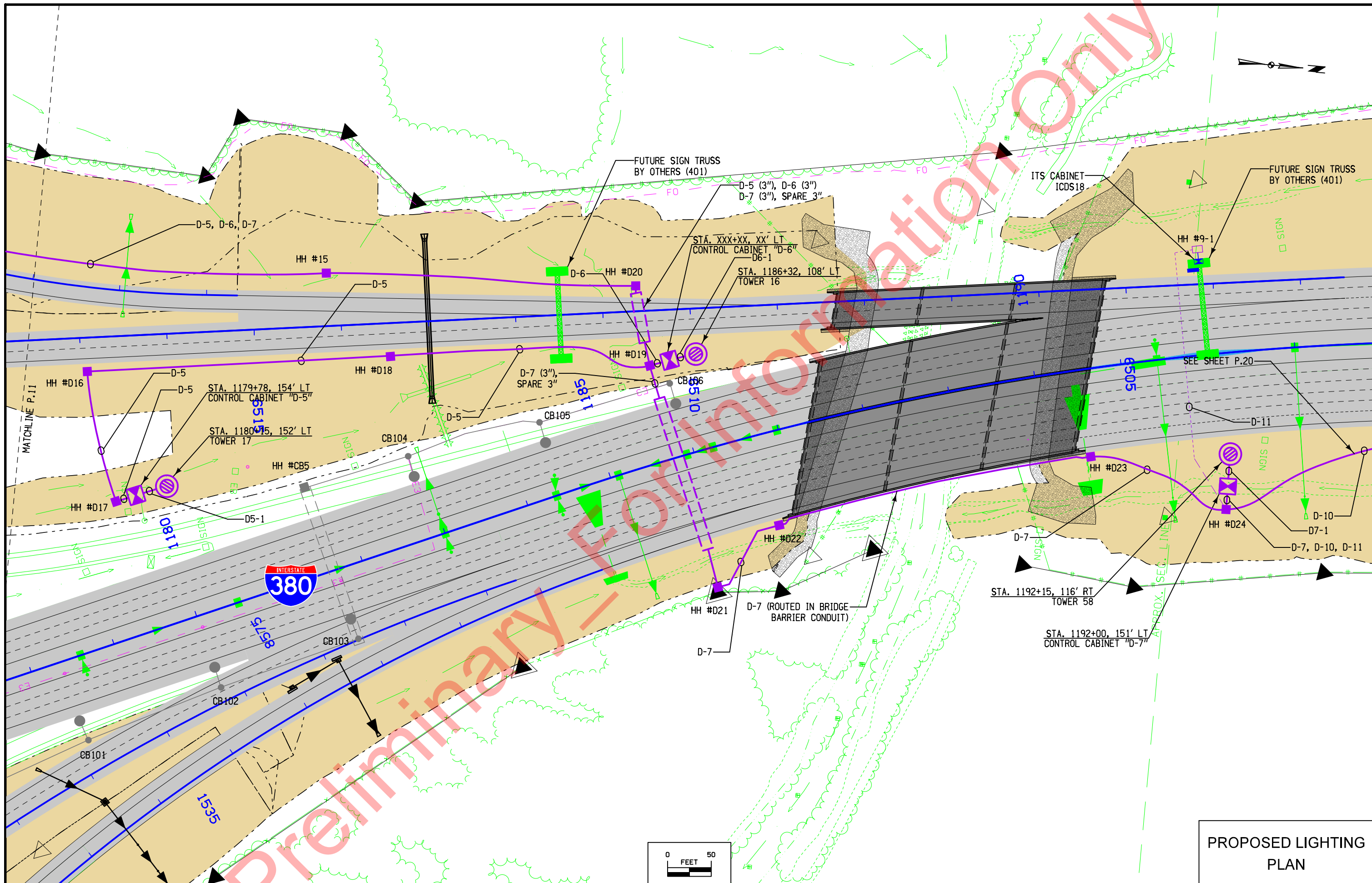


**PROPOSED LIGHTING PLAN**

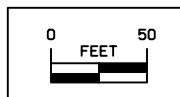


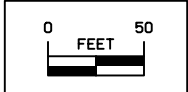
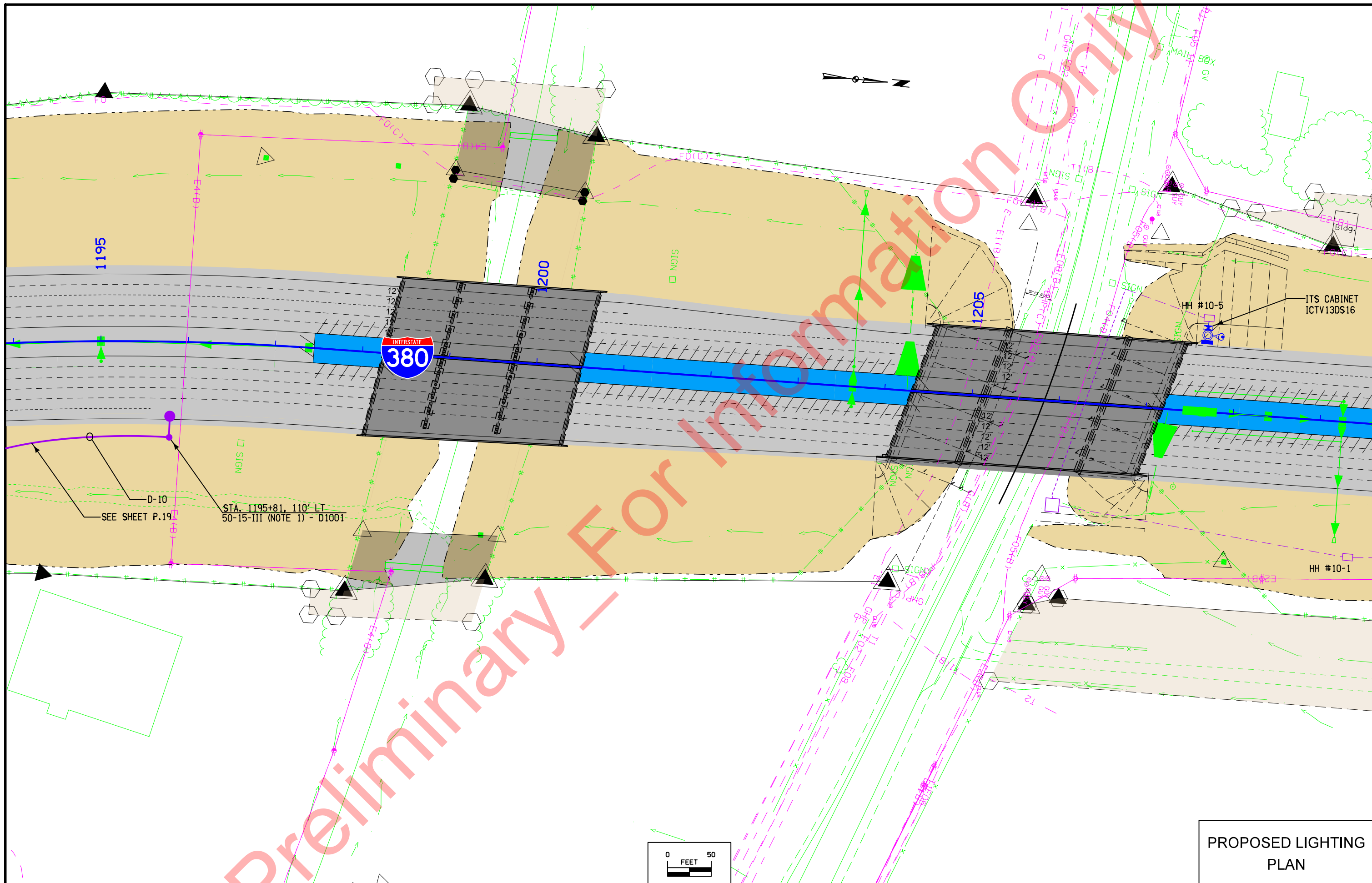
**PROPOSED LIGHTING PLAN**





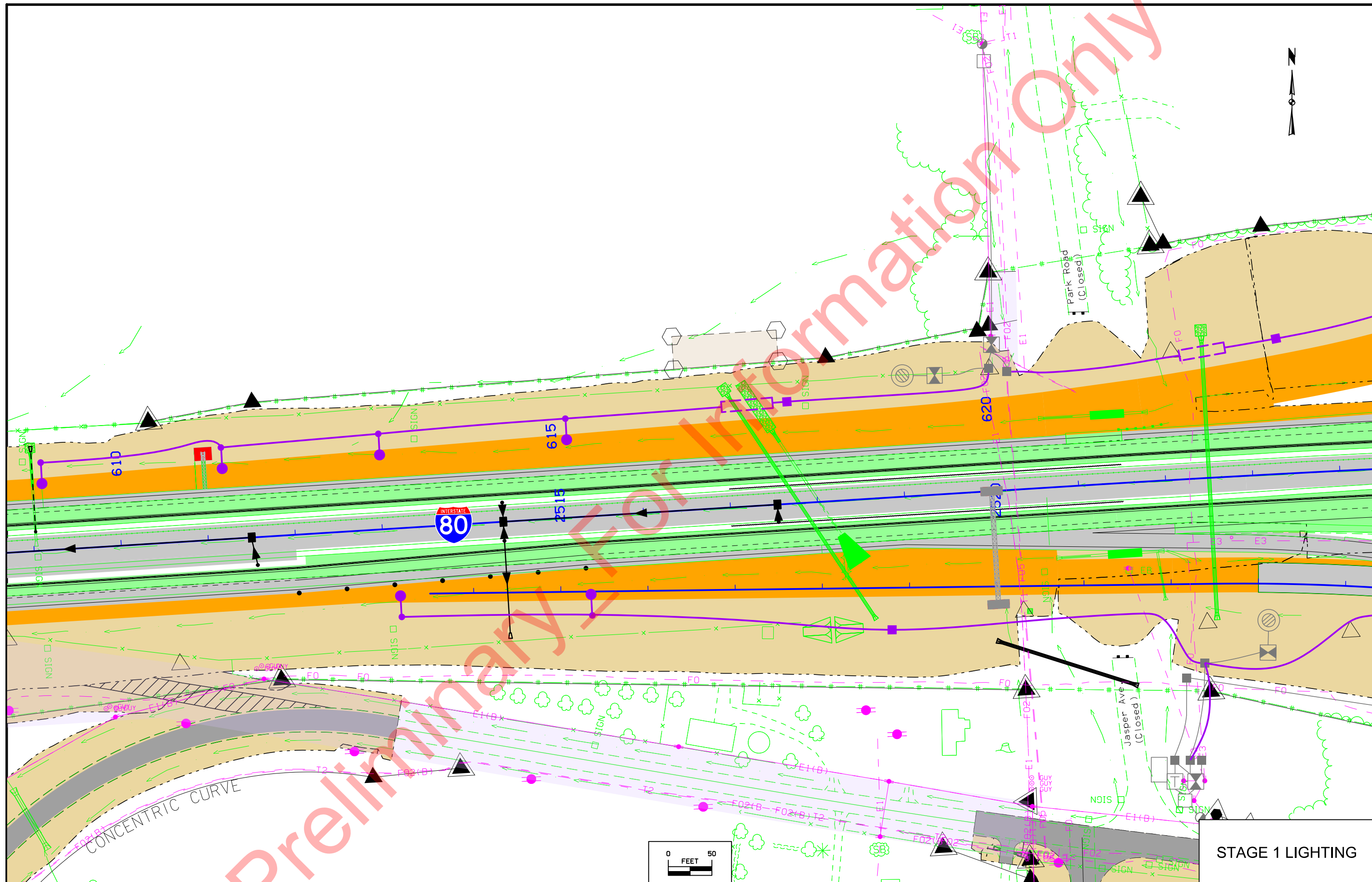
**PROPOSED LIGHTING PLAN**





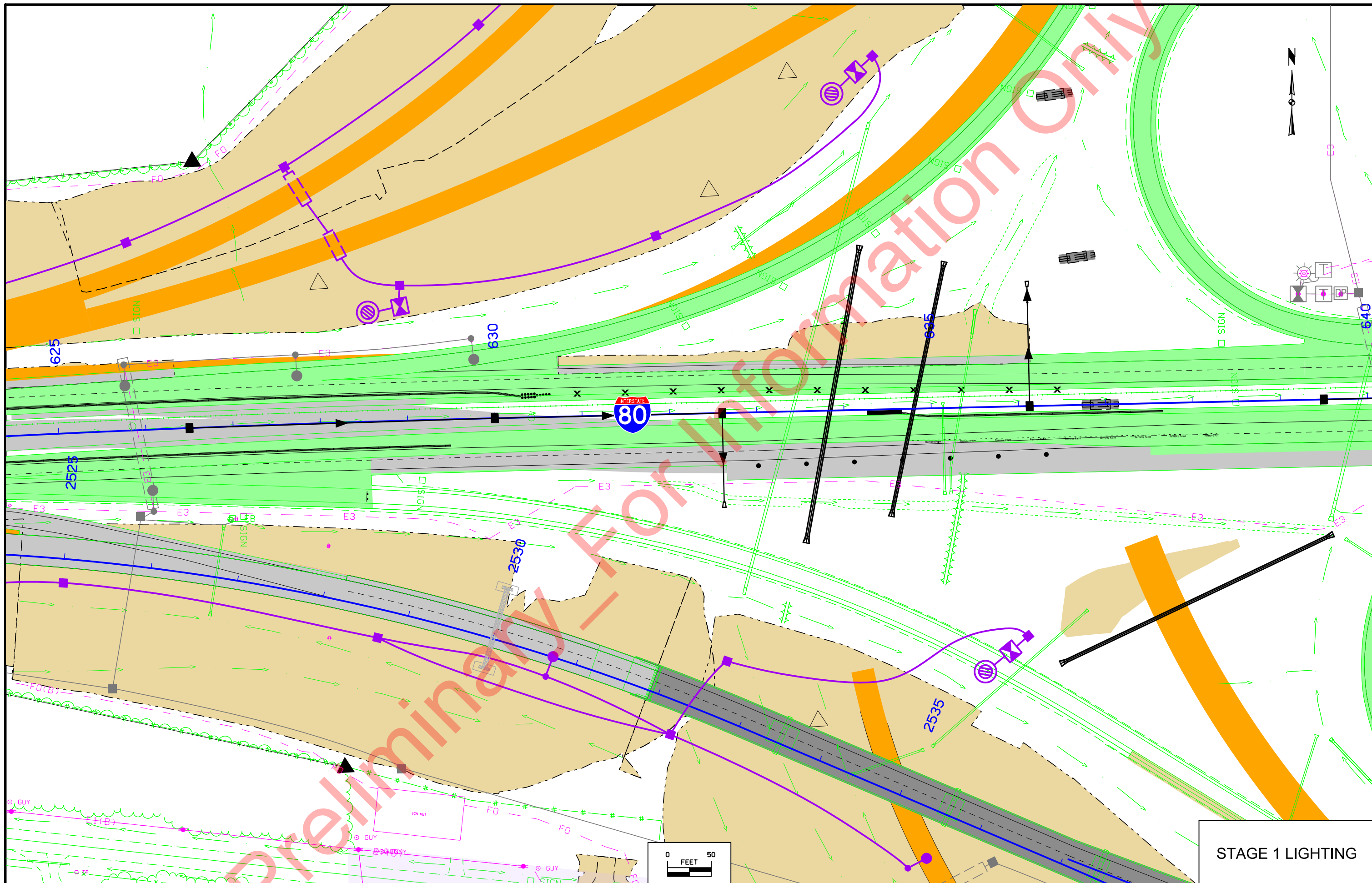
PROPOSED LIGHTING PLAN



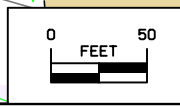


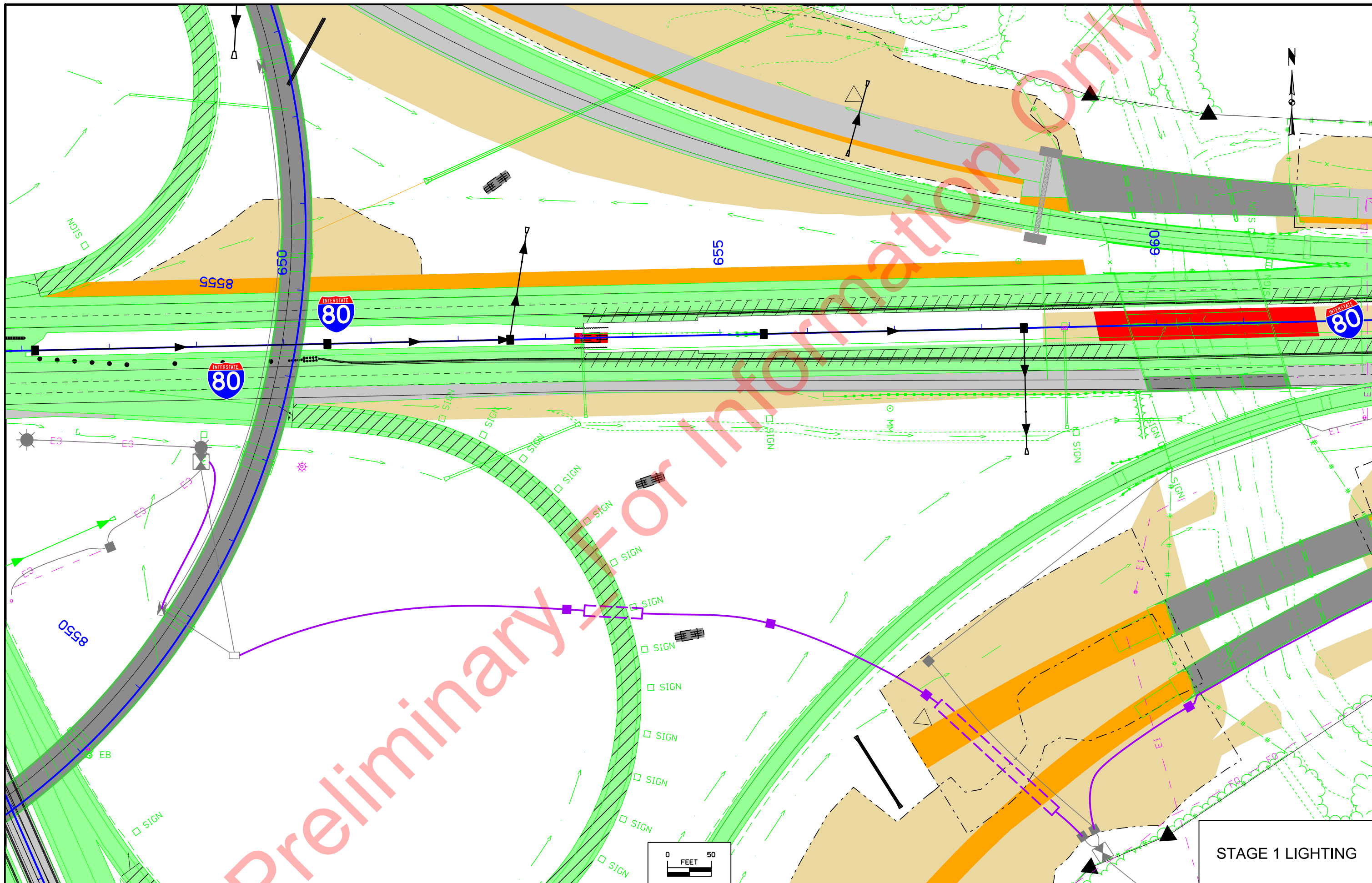
Preliminary Information Only

**STAGE 1 LIGHTING**

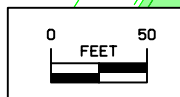


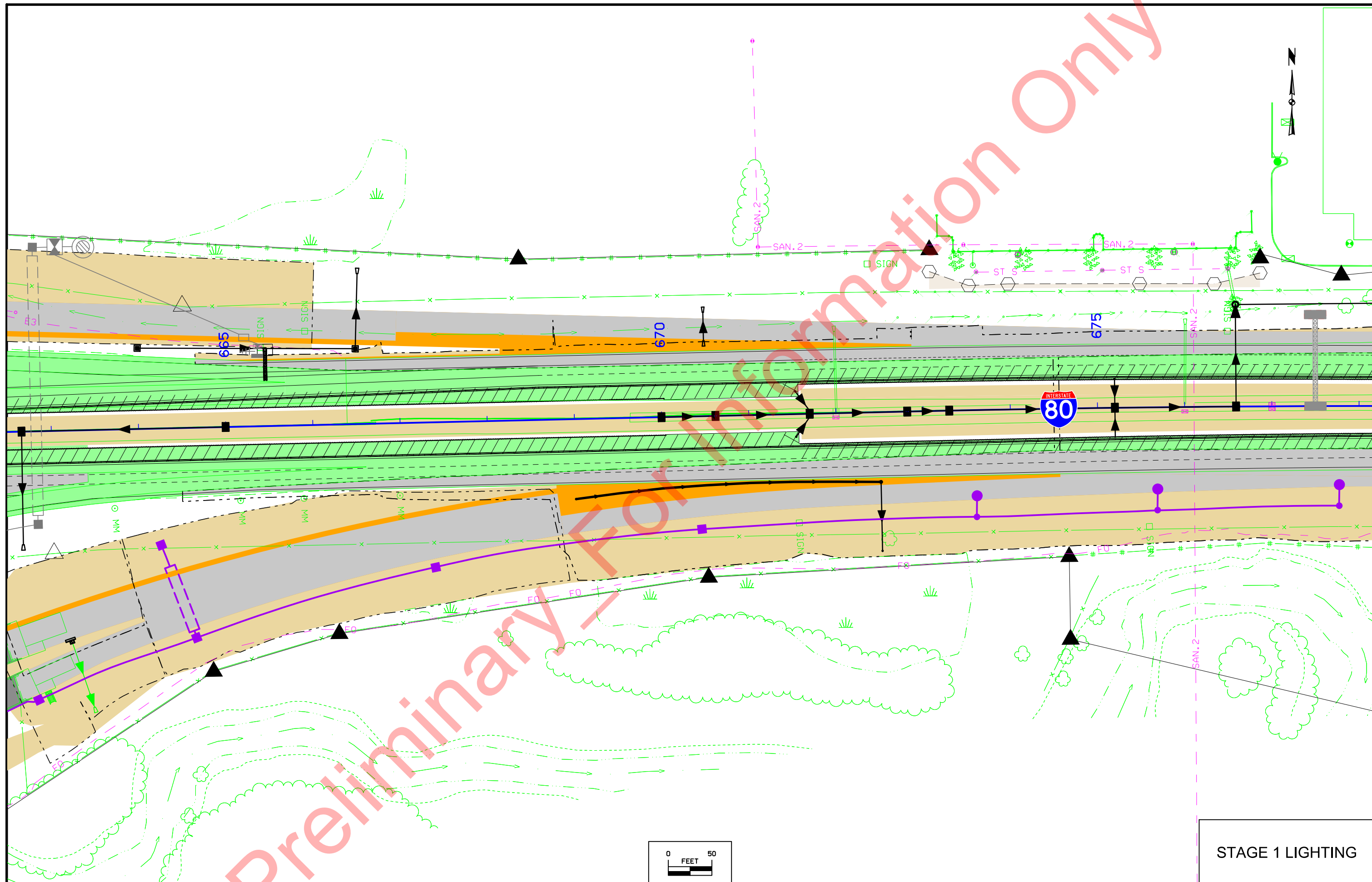
**STAGE 1 LIGHTING**





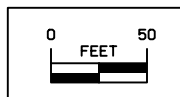
STAGE 1 LIGHTING

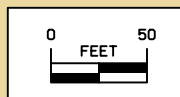
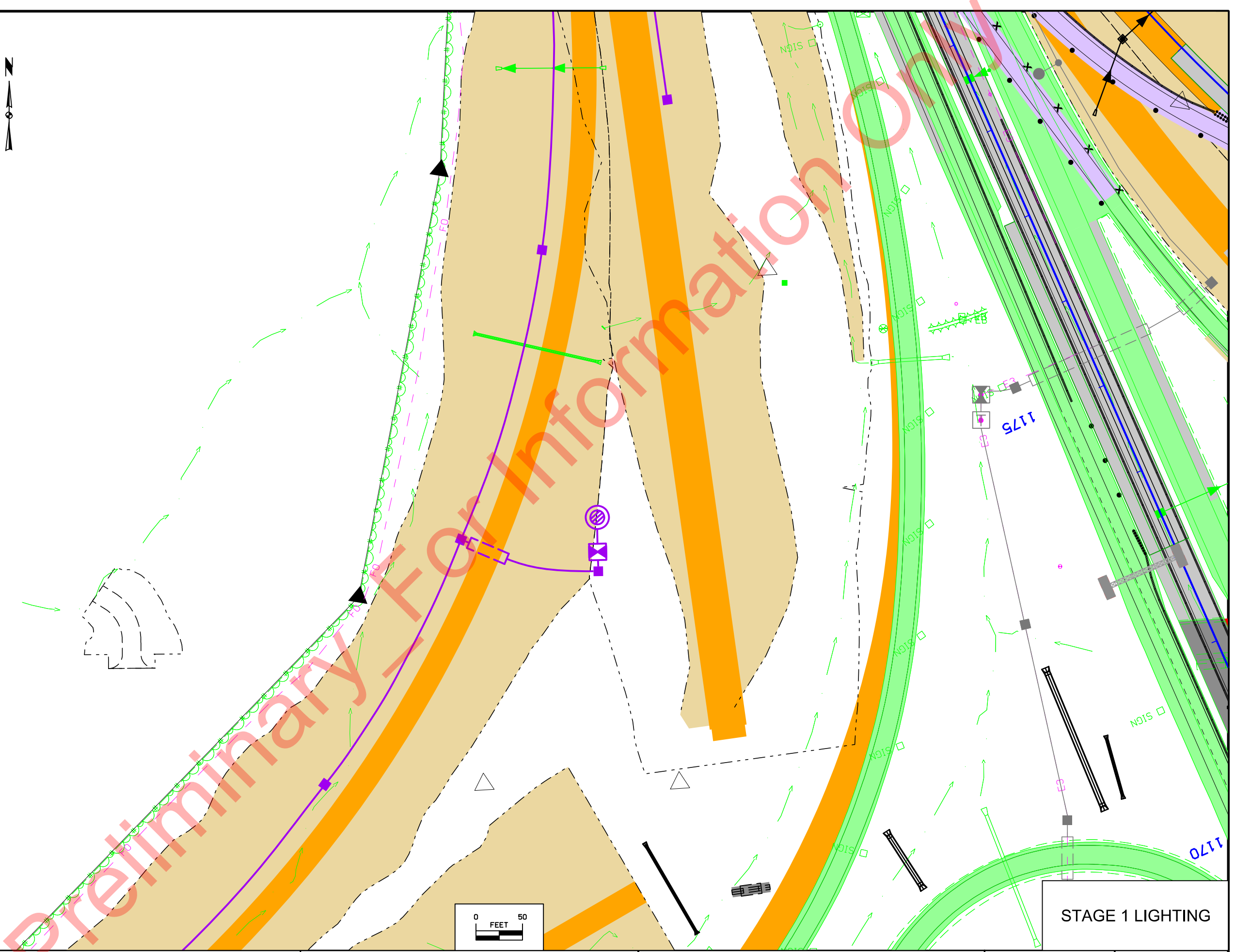




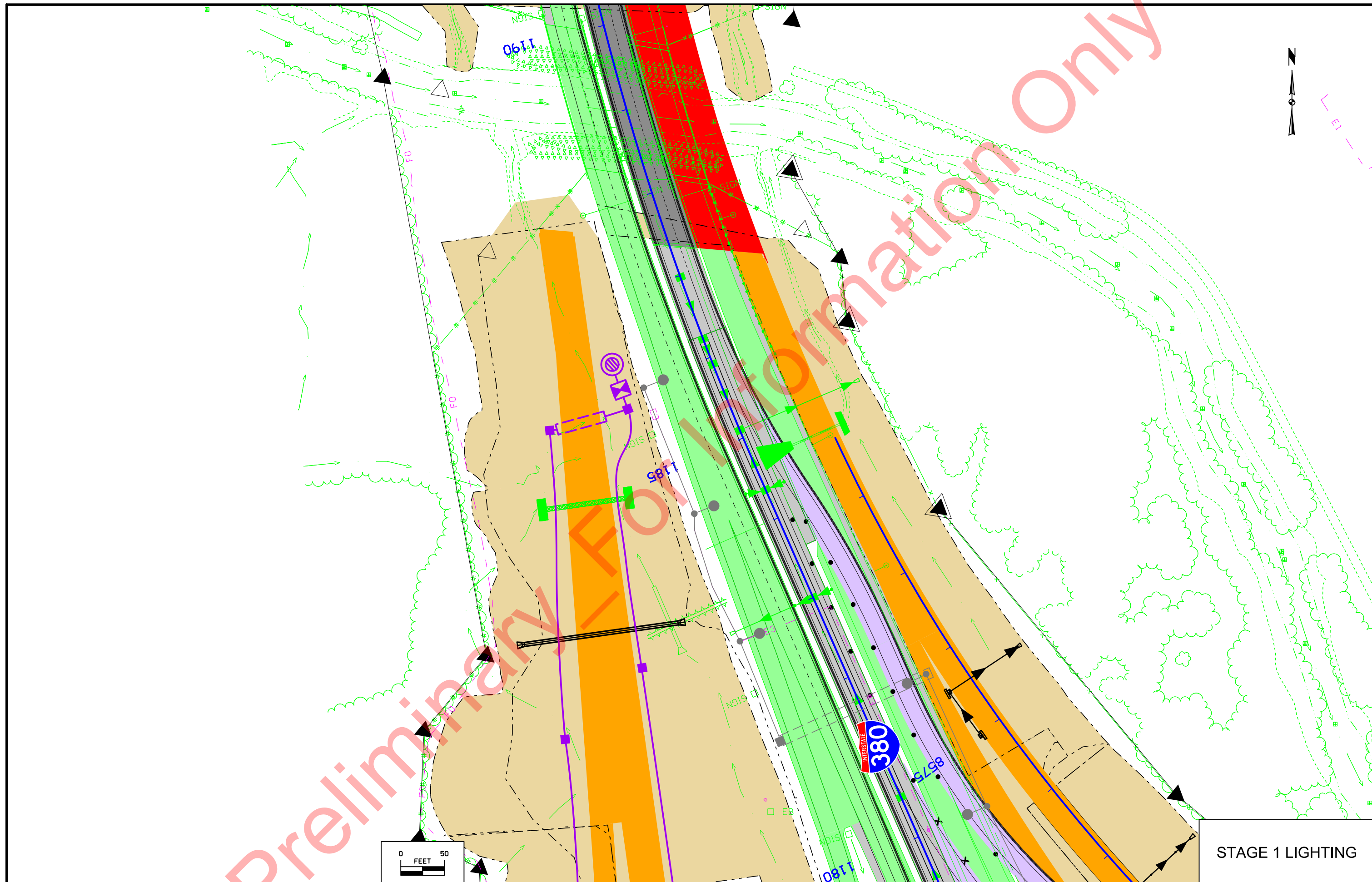
Preliminary For Information Only

**STAGE 1 LIGHTING**



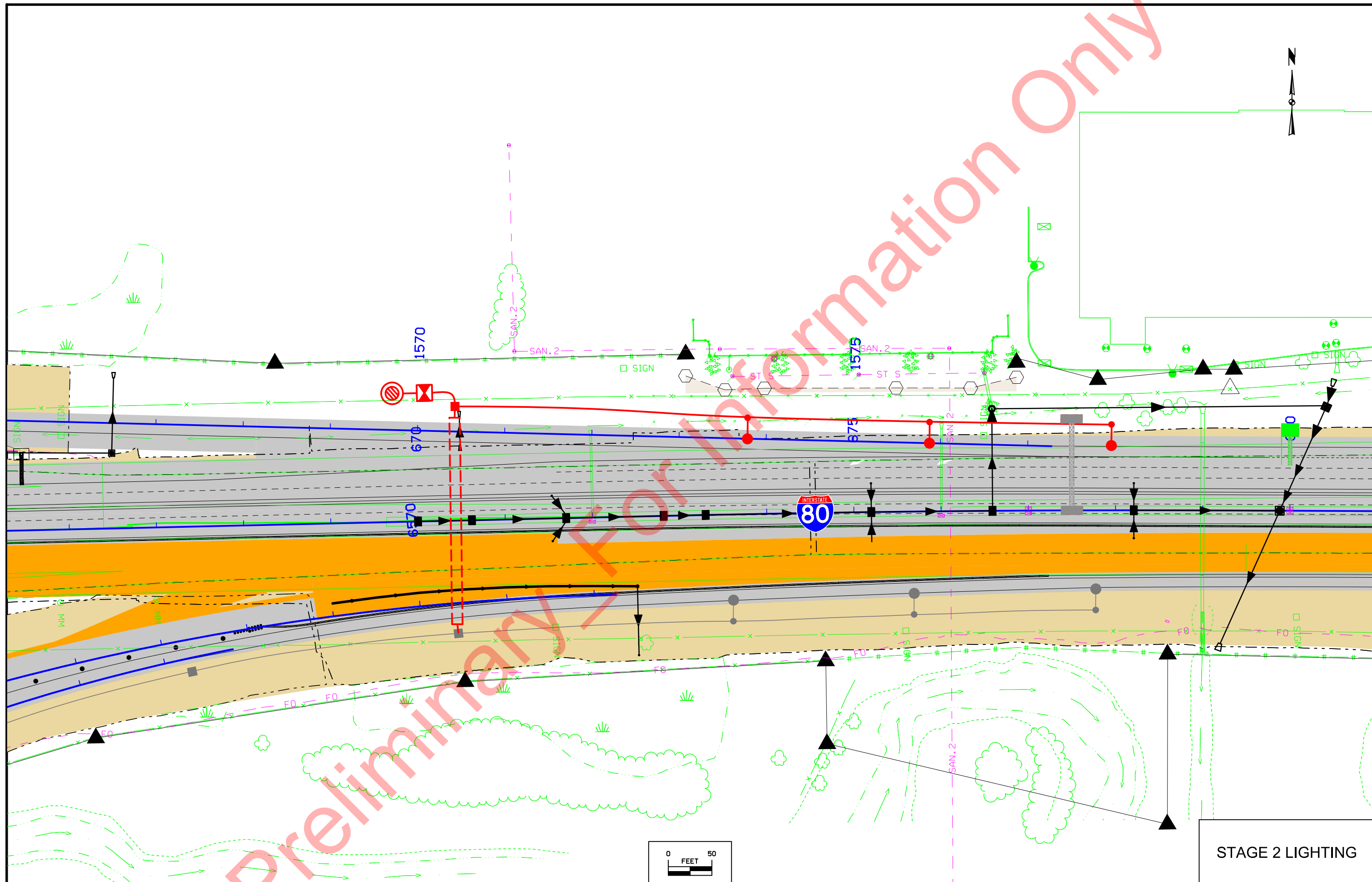


STAGE 1 LIGHTING

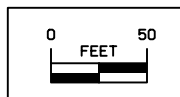


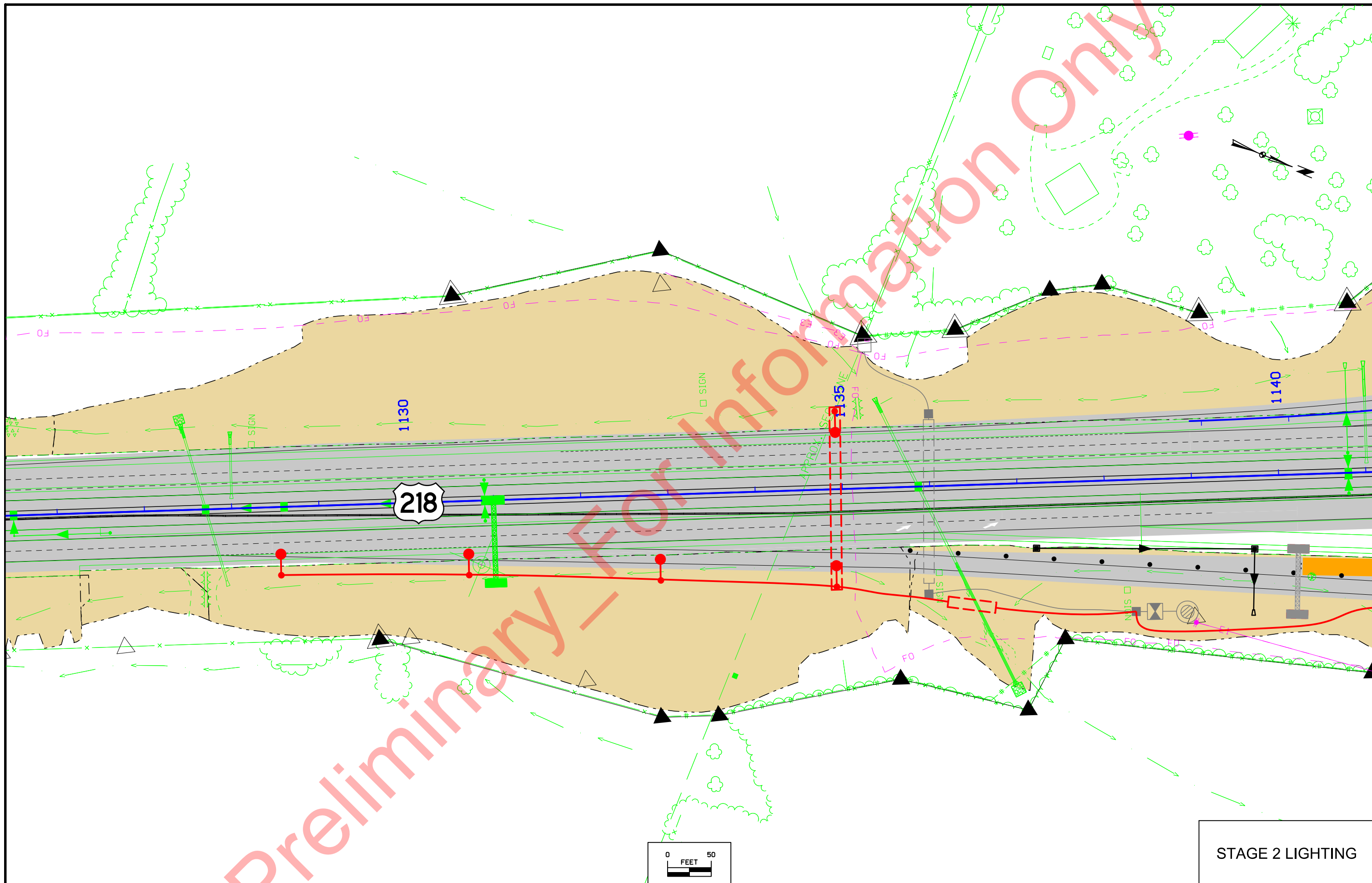
STAGE 1 LIGHTING

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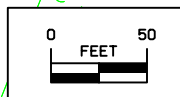


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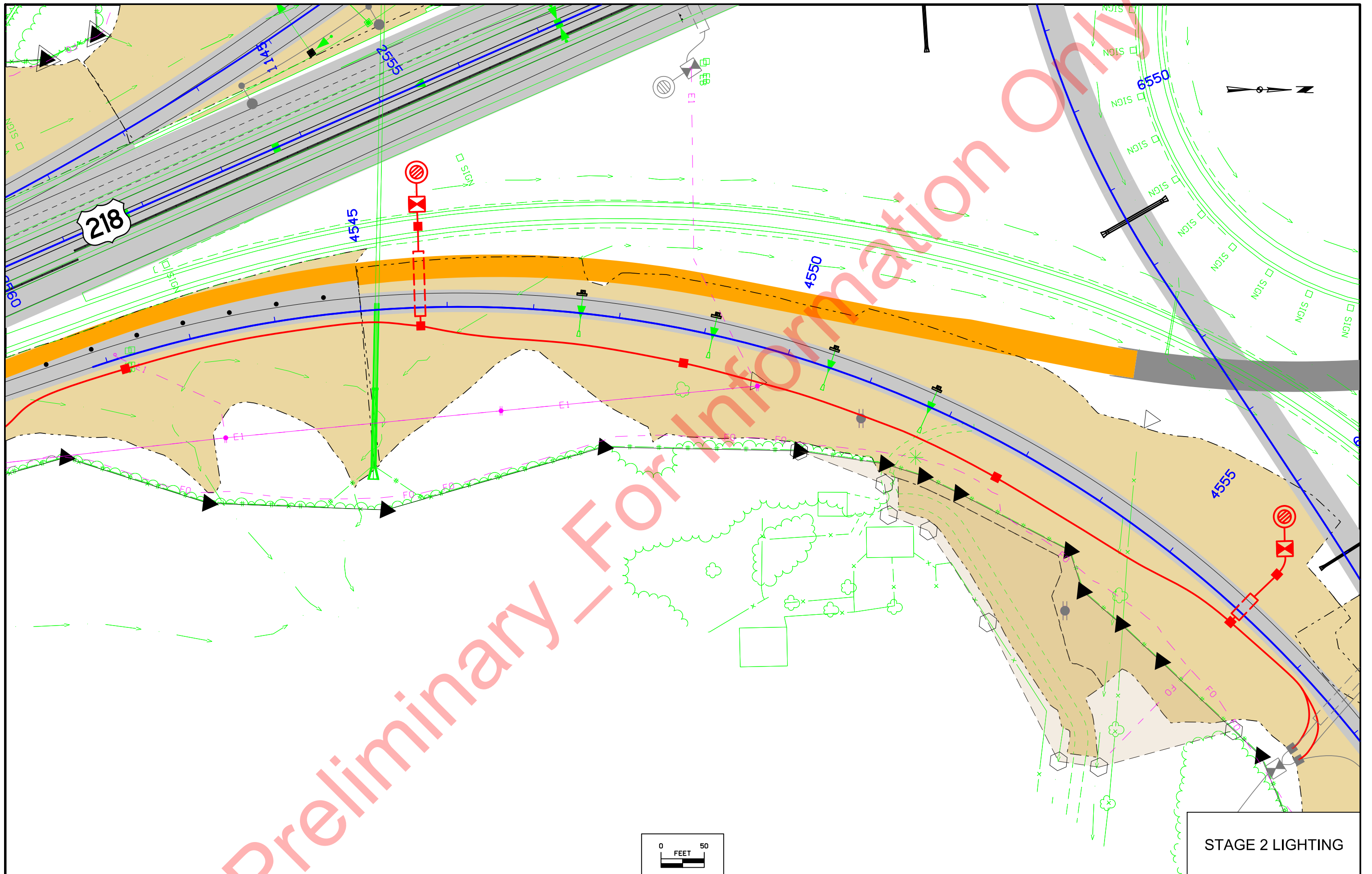




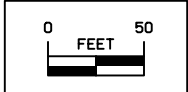
STAGE 2 LIGHTING

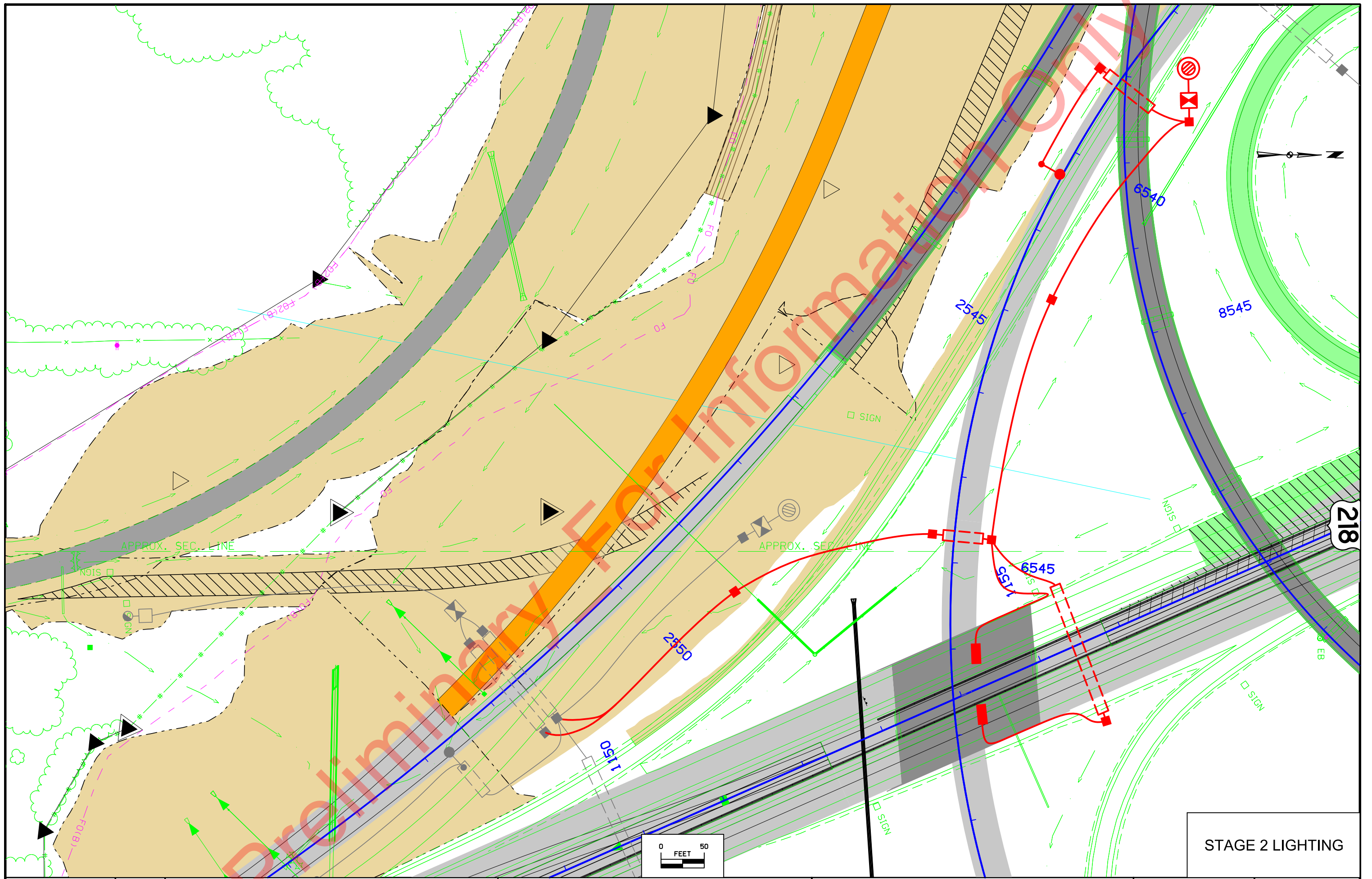


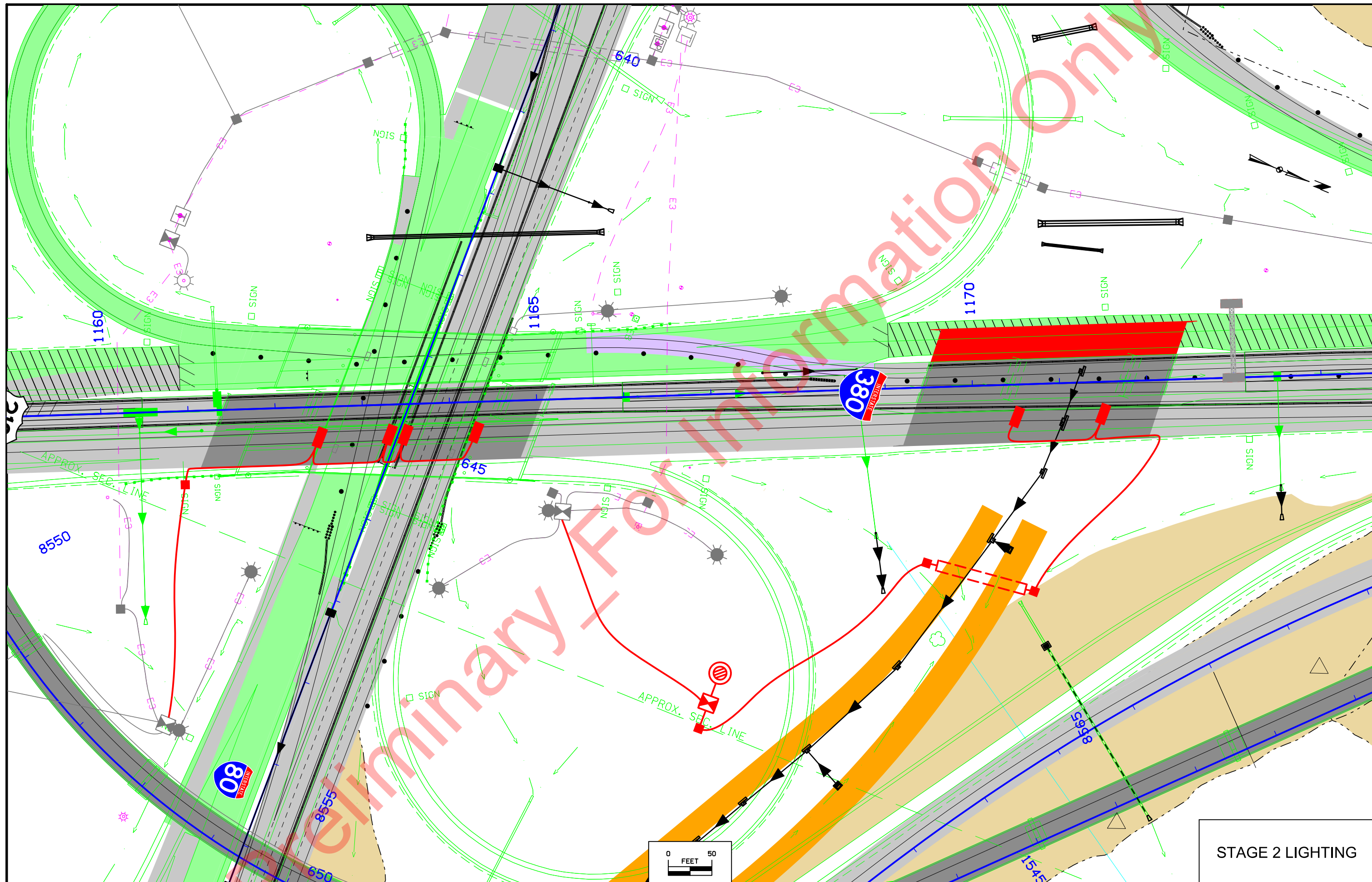


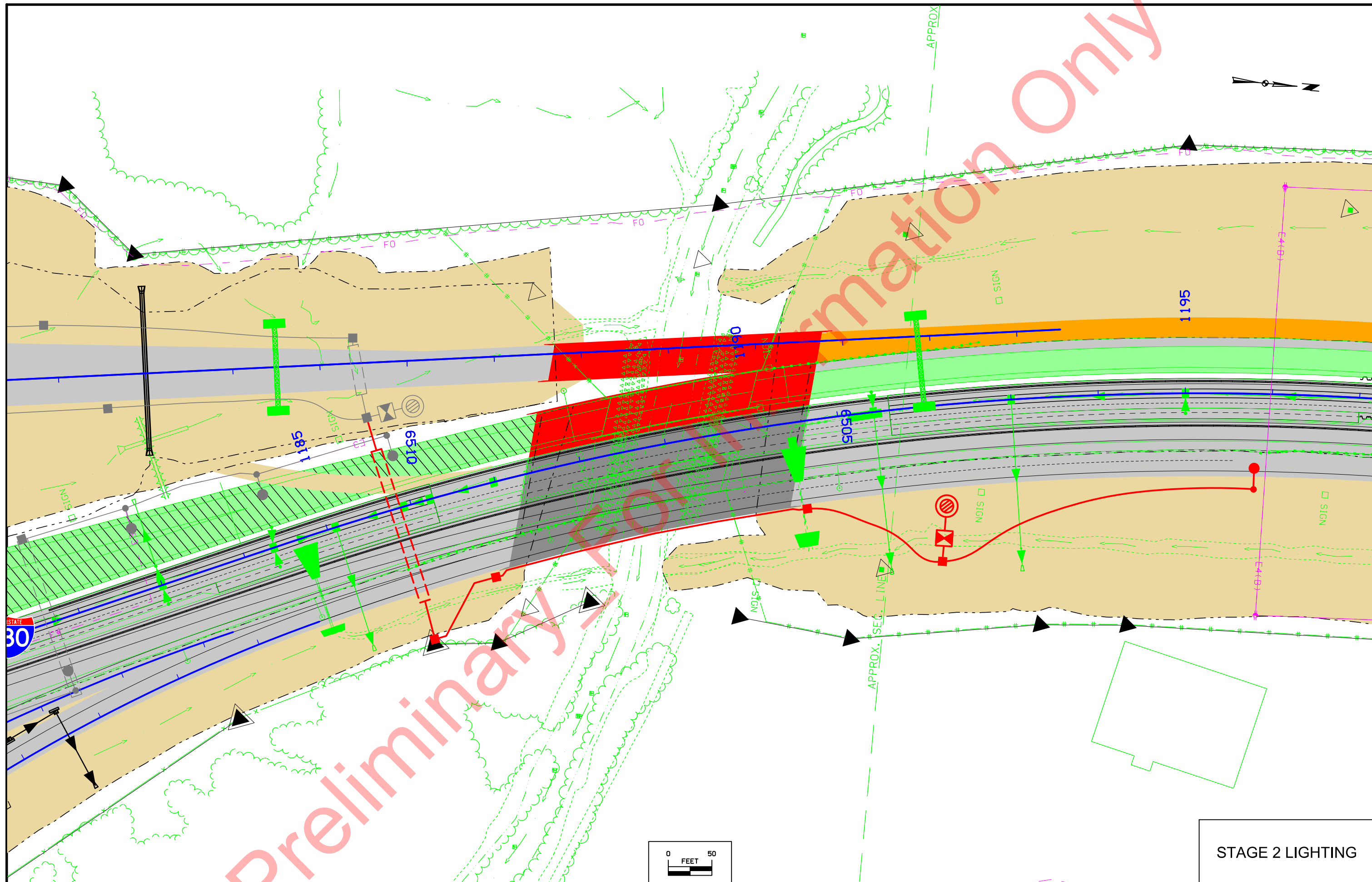


STAGE 2 LIGHTING

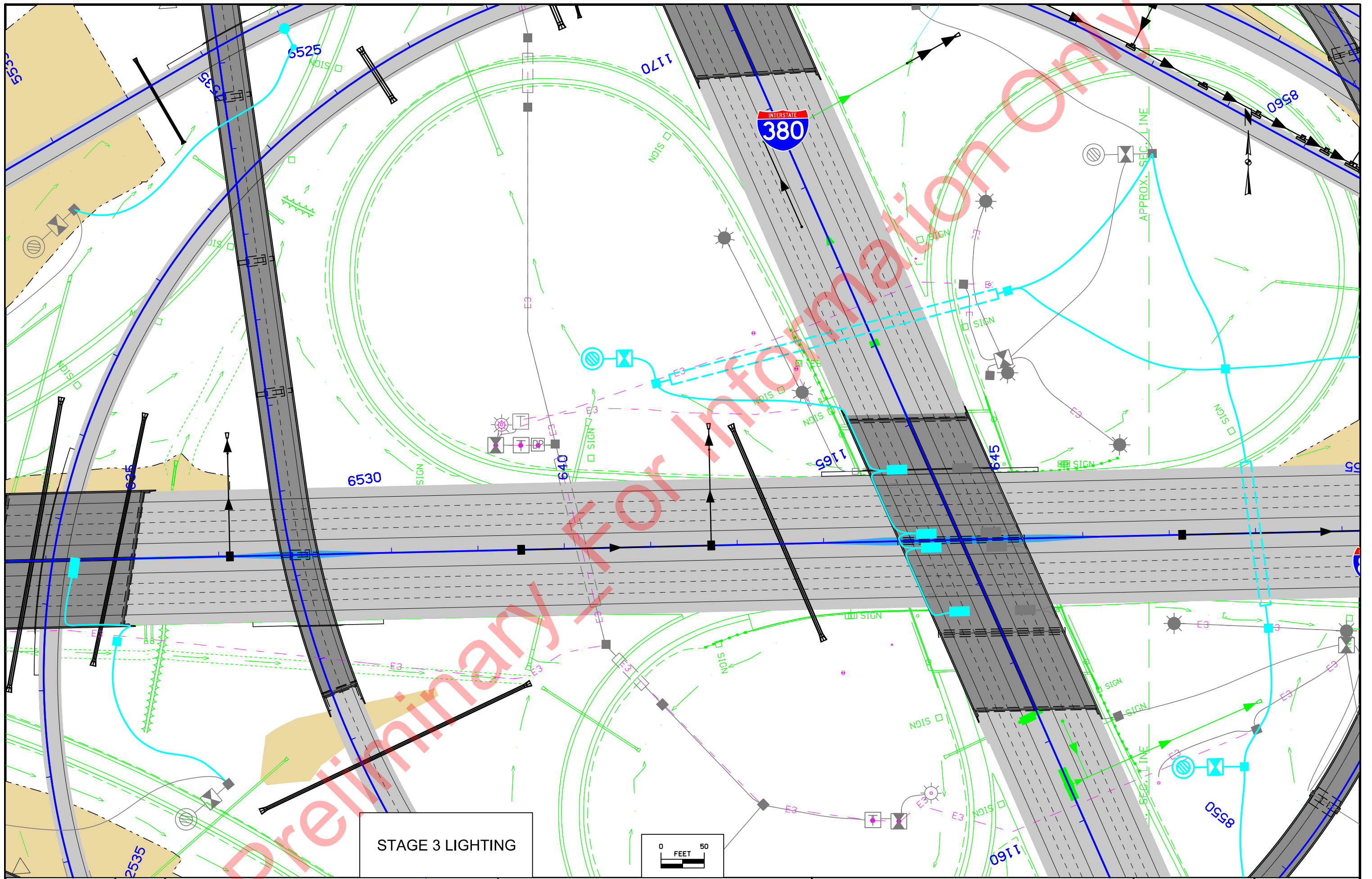




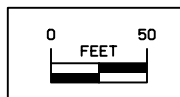


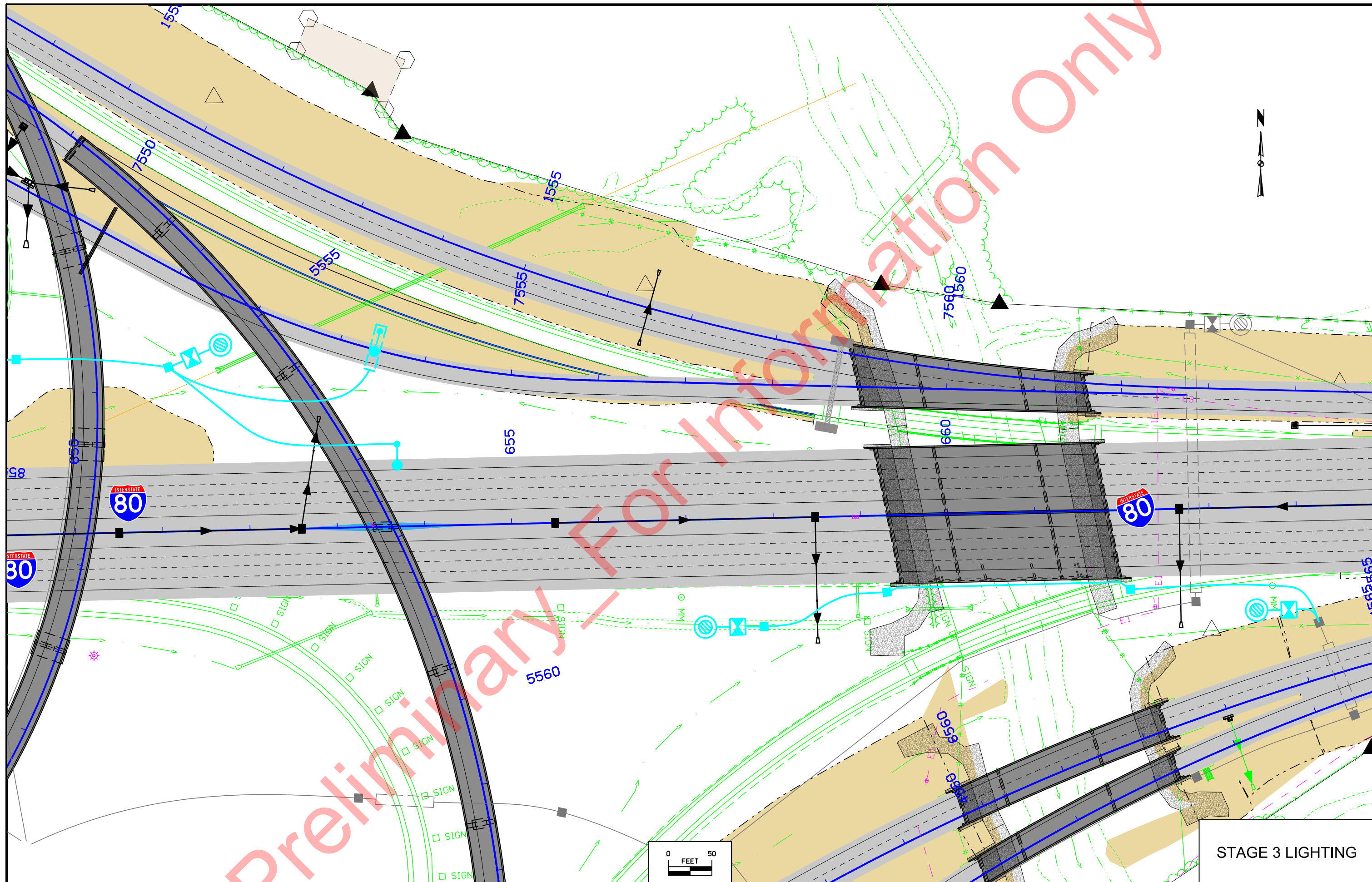


STAGE 2 LIGHTING



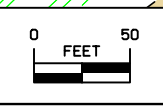
STAGE 3 LIGHTING

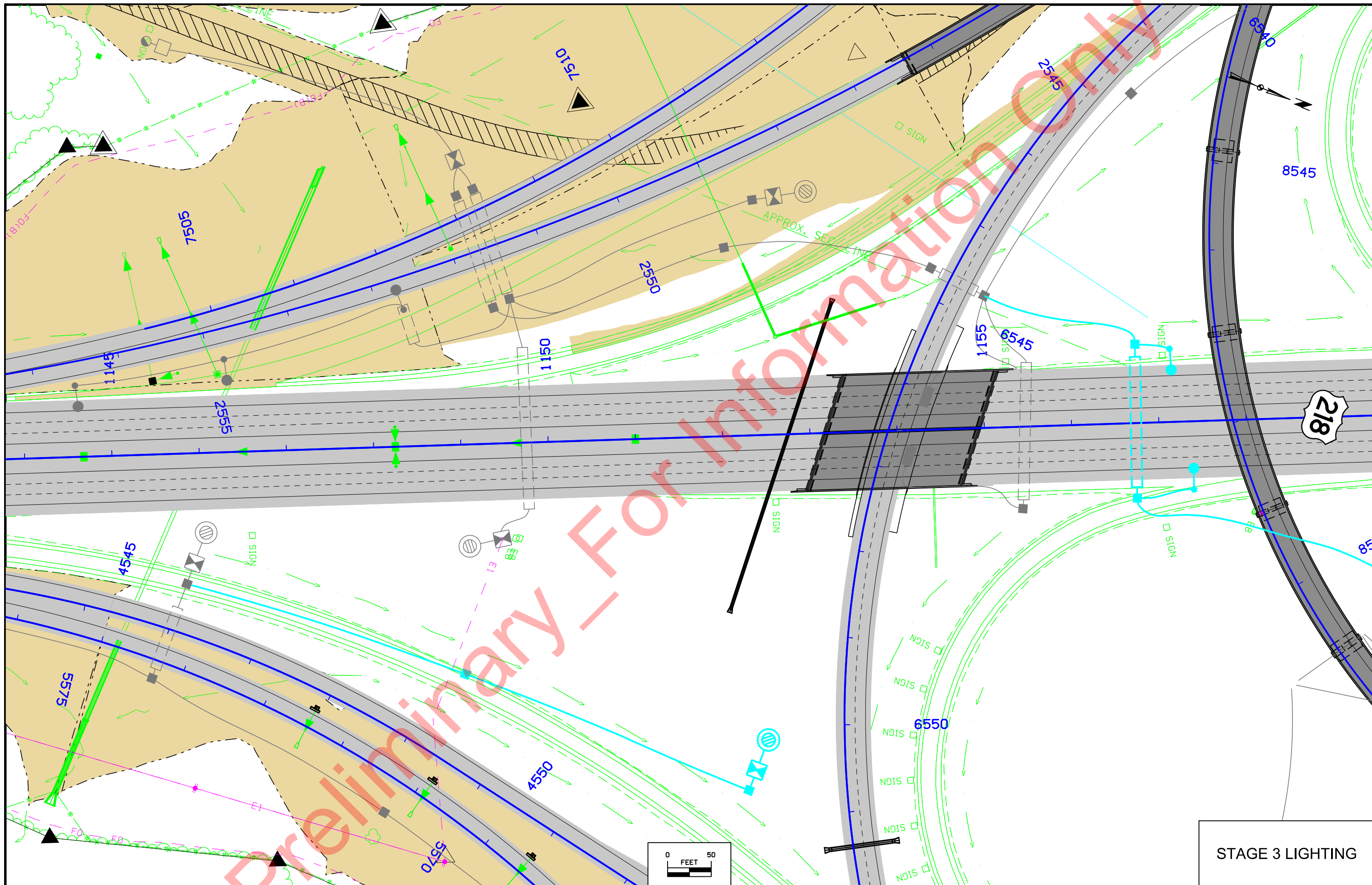




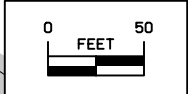
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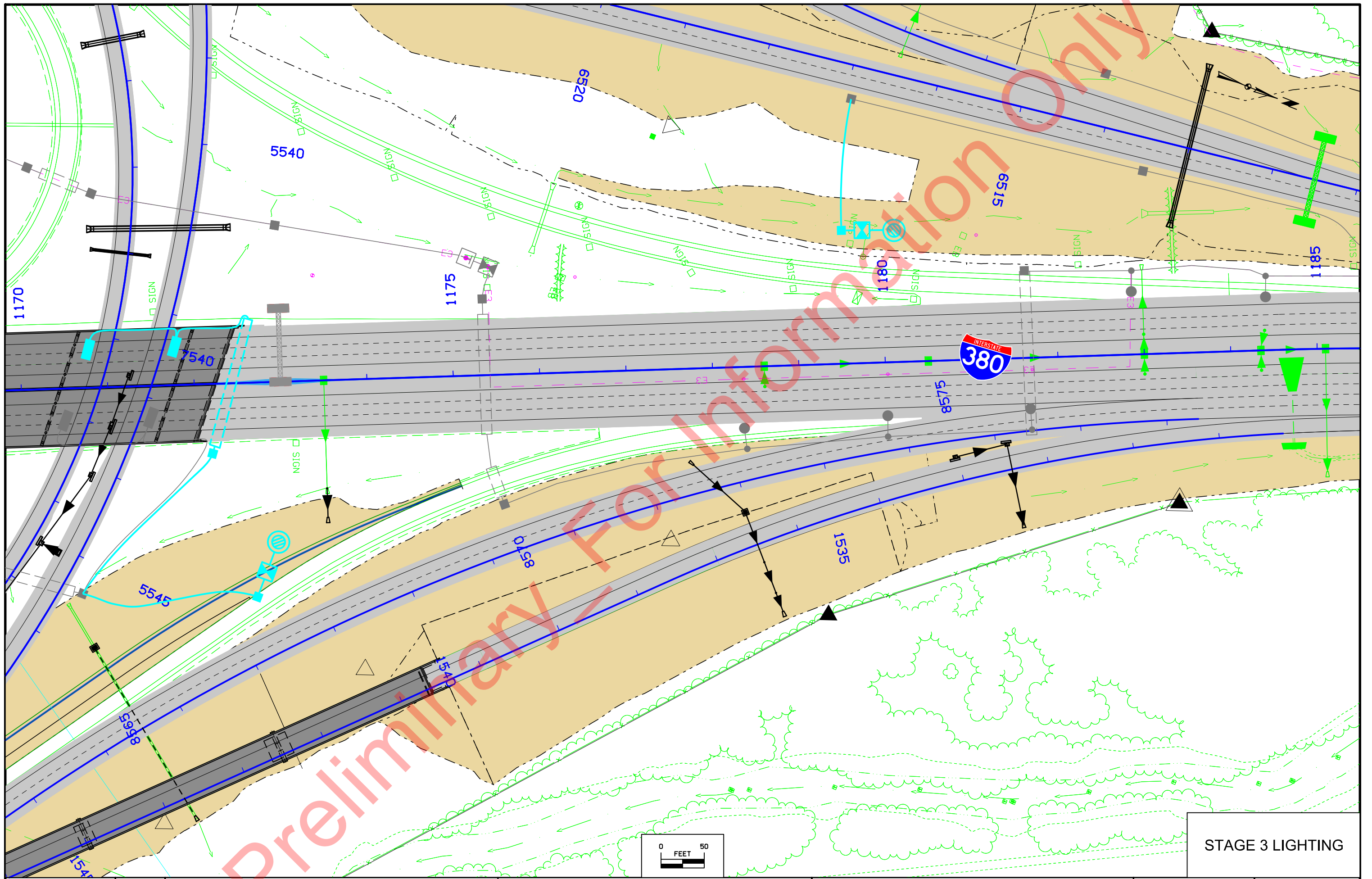
**STAGE 3 LIGHTING**





STAGE 3 LIGHTING





**STAGE 3 LIGHTING**



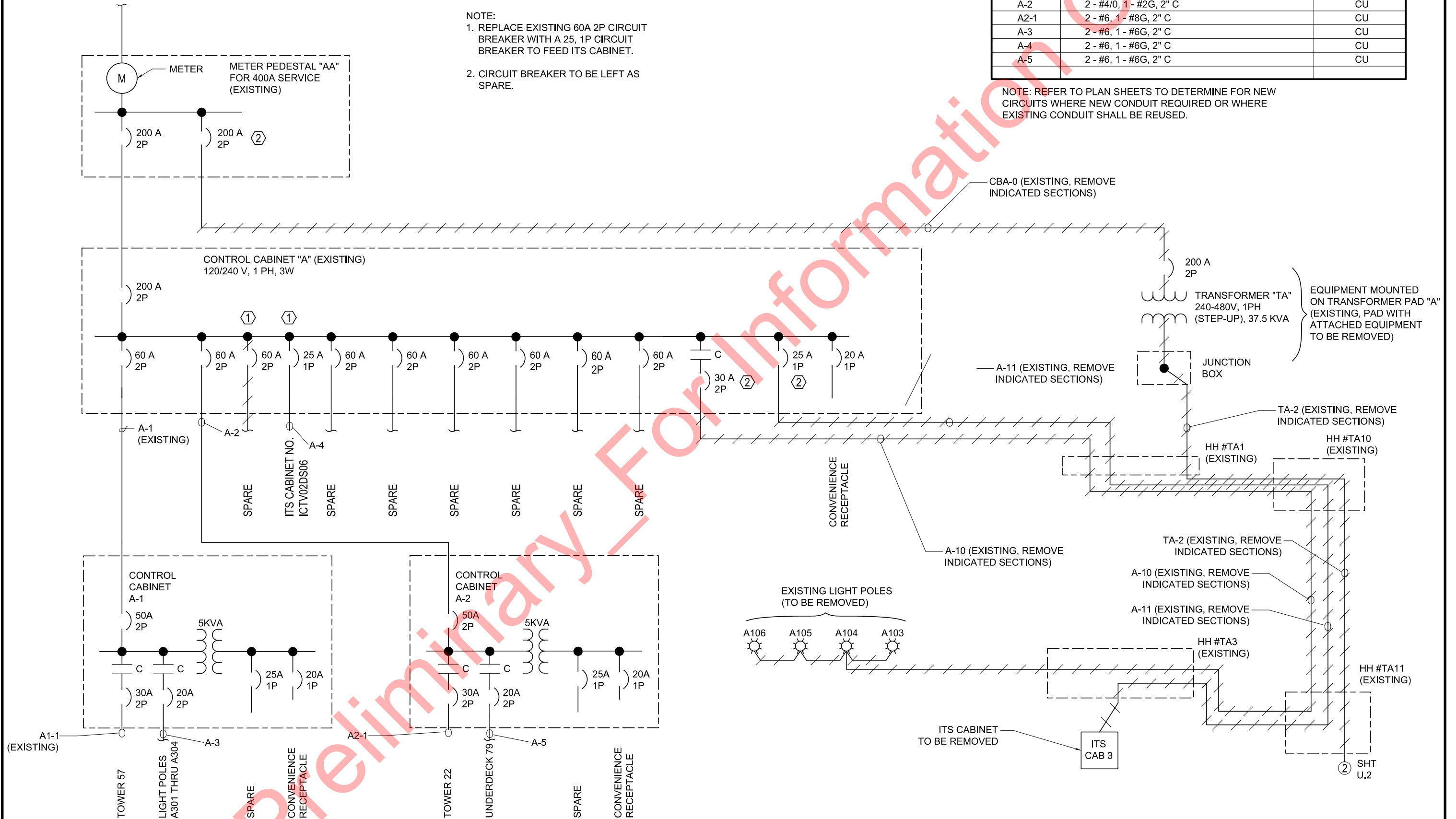
120/240V ELECTRICAL SERVICE

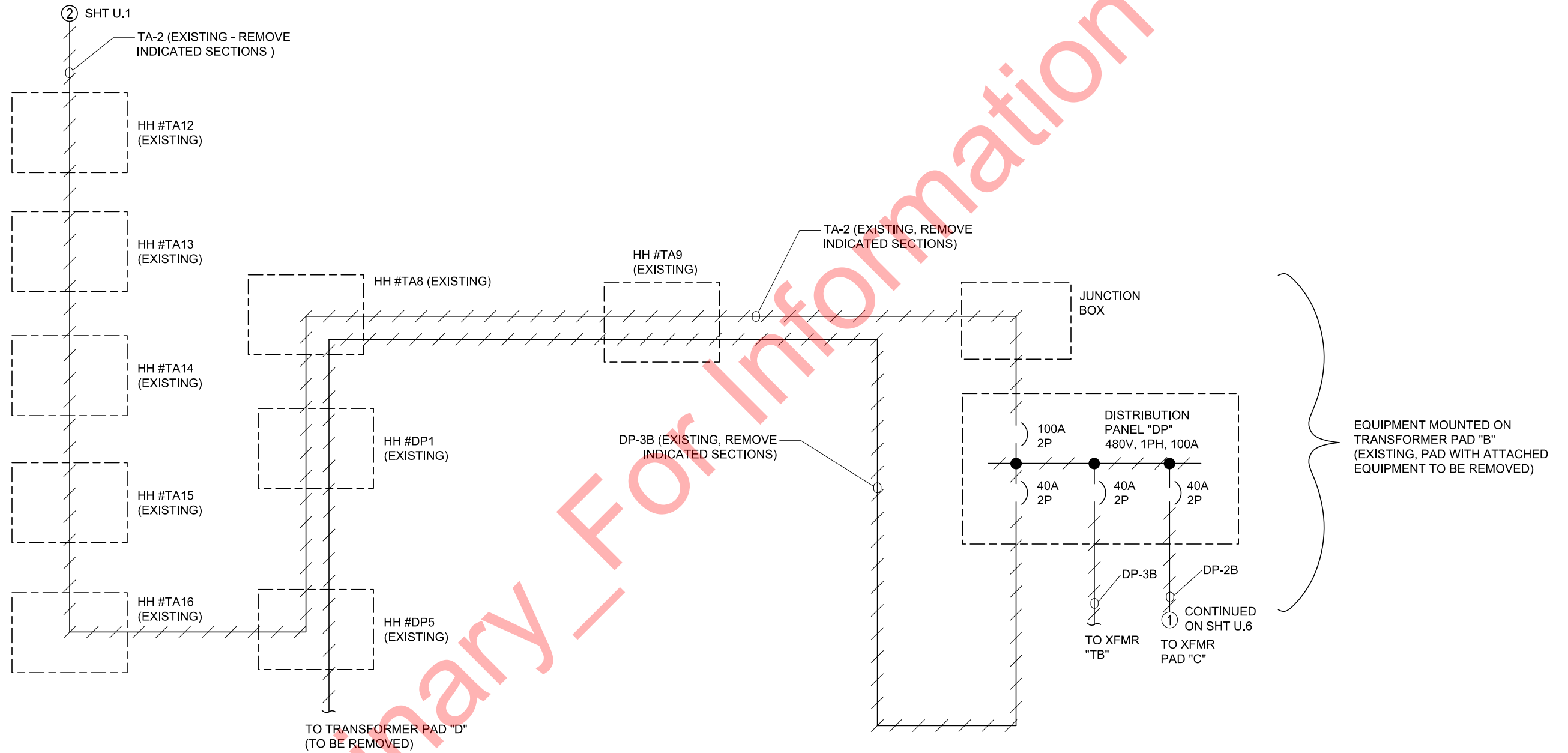
# CONTROL CABINET "A" ONE-LINE DIAGRAM

- NOTE:
1. REPLACE EXISTING 60A 2P CIRCUIT BREAKER WITH A 25, 1P CIRCUIT BREAKER TO FEED ITS CABINET.
  2. CIRCUIT BREAKER TO BE LEFT AS SPARE.

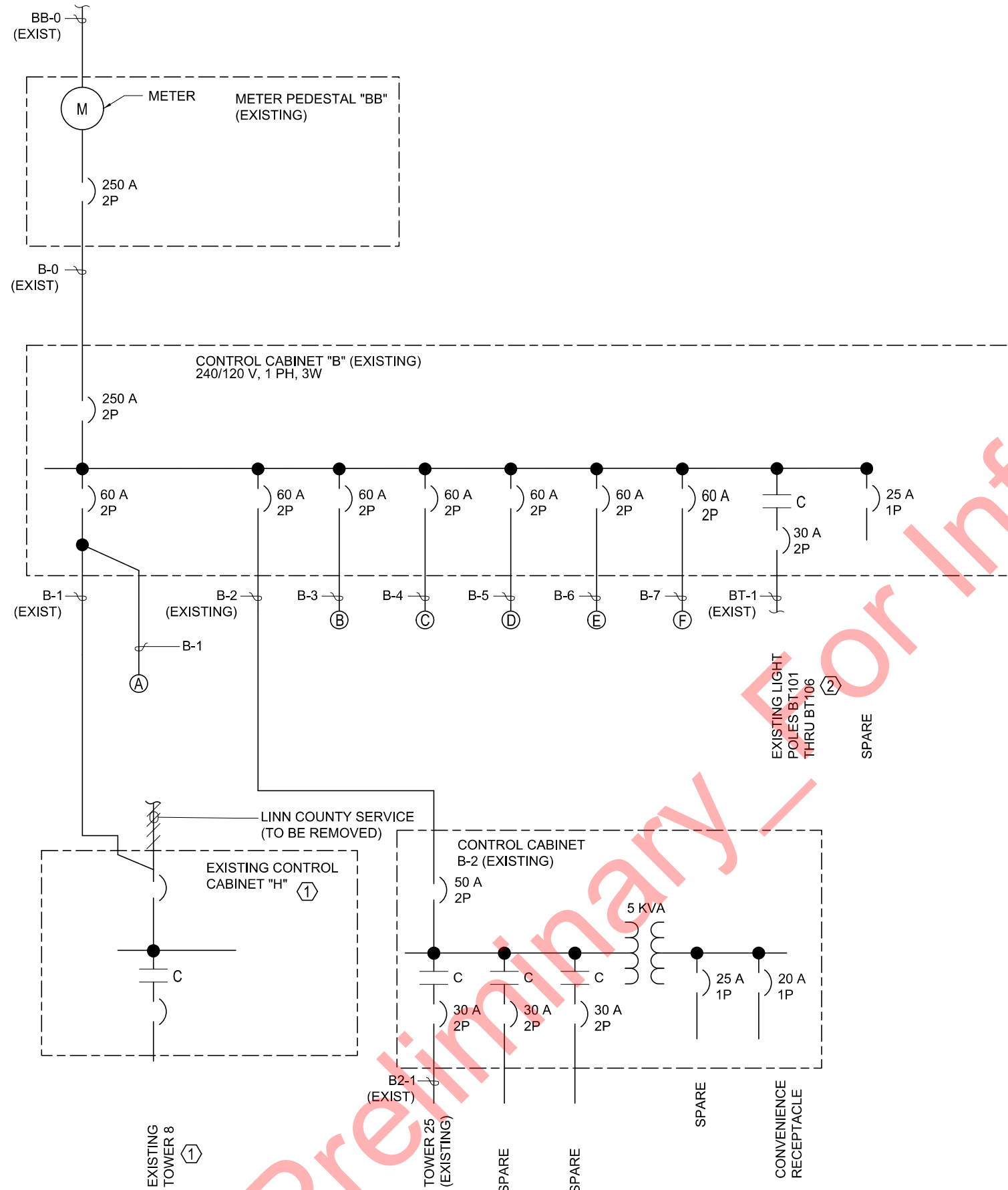
CKT	CABLE / CONDUIT DESCRIPTION (SEE NOTE)	CONDUCTORS: COPPER (CU) OR ALUMINUM (AL)
A-1	EXISTING	-
A1-1	EXISTING	-
A-2	2 - #4/0, 1 - #2G, 2" C	CU
A2-1	2 - #6, 1 - #8G, 2" C	CU
A-3	2 - #6, 1 - #6G, 2" C	CU
A-4	2 - #6, 1 - #6G, 2" C	CU
A-5	2 - #6, 1 - #6G, 2" C	CU

NOTE: REFER TO PLAN SHEETS TO DETERMINE FOR NEW CIRCUITS WHERE NEW CONDUIT REQUIRED OR WHERE EXISTING CONDUIT SHALL BE REUSED.





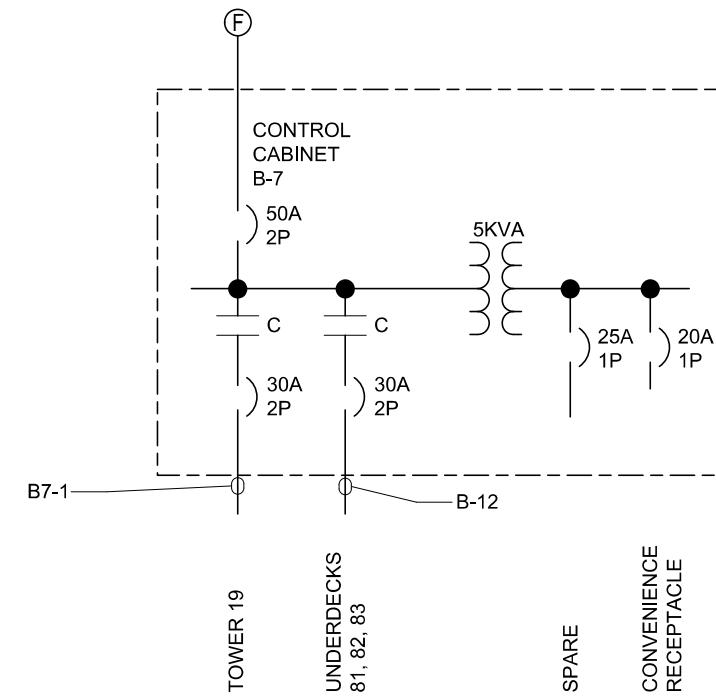
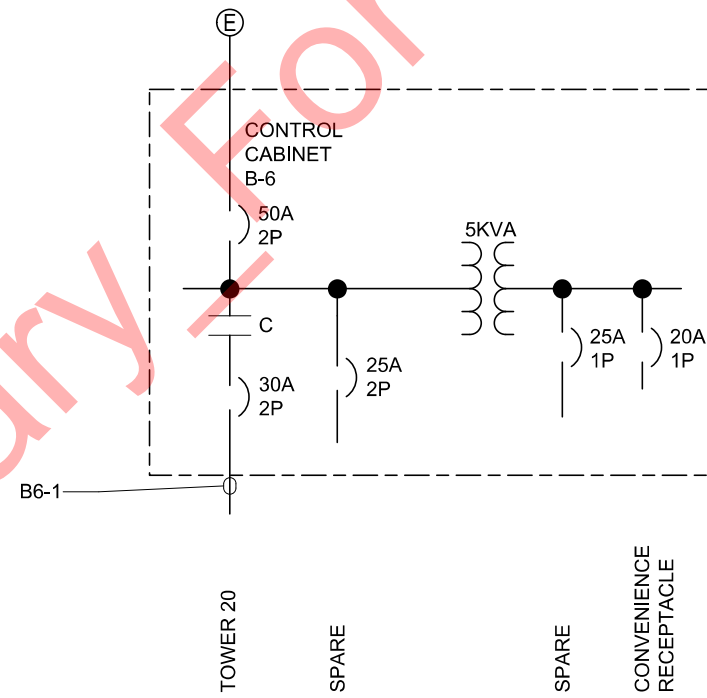
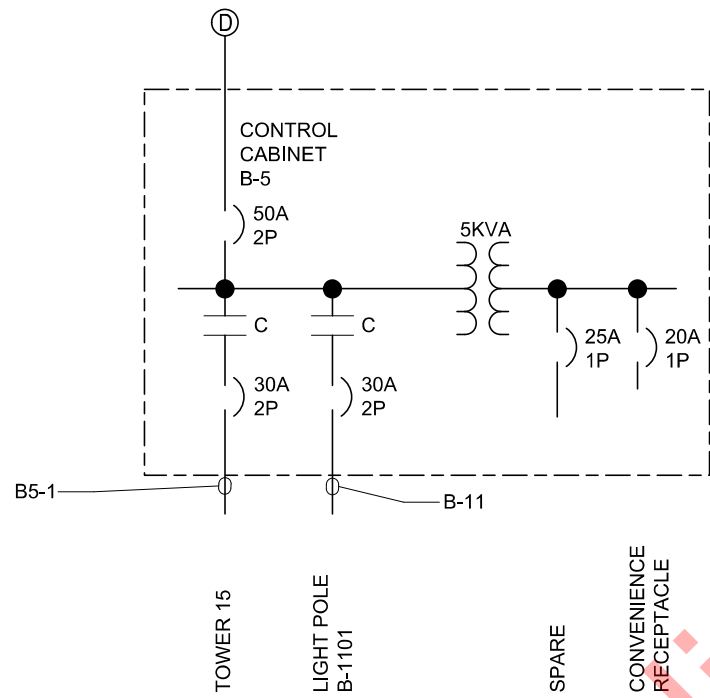
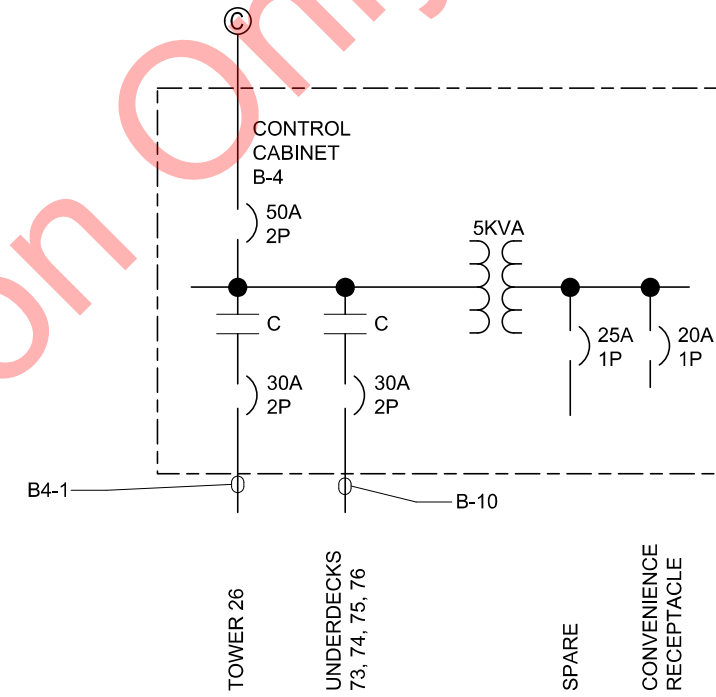
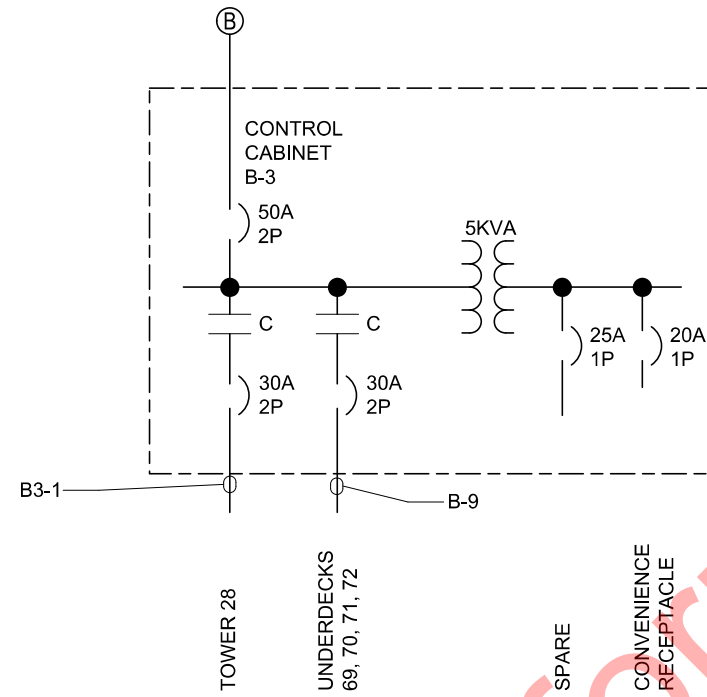
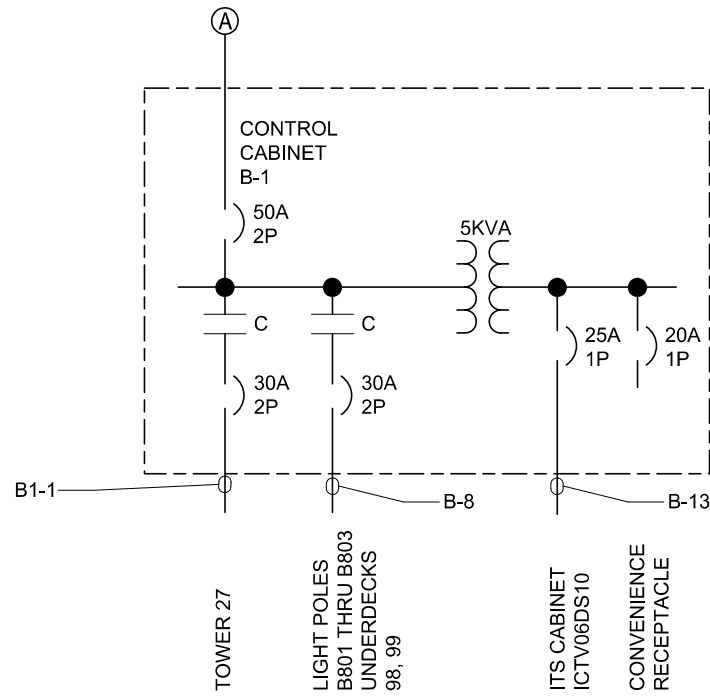
240/120V ELECTRICAL SERVICE



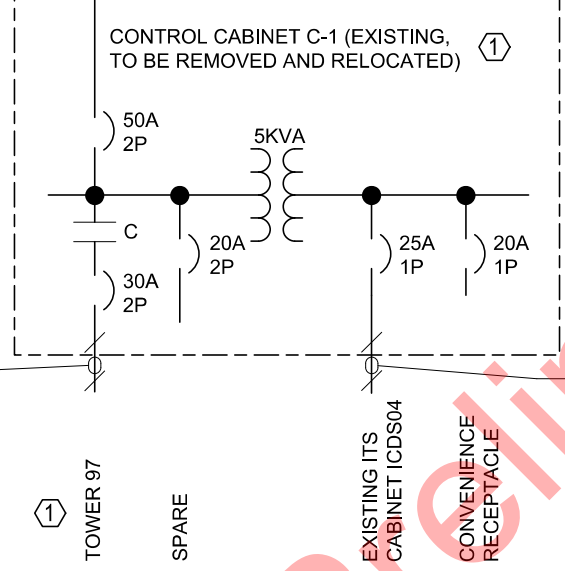
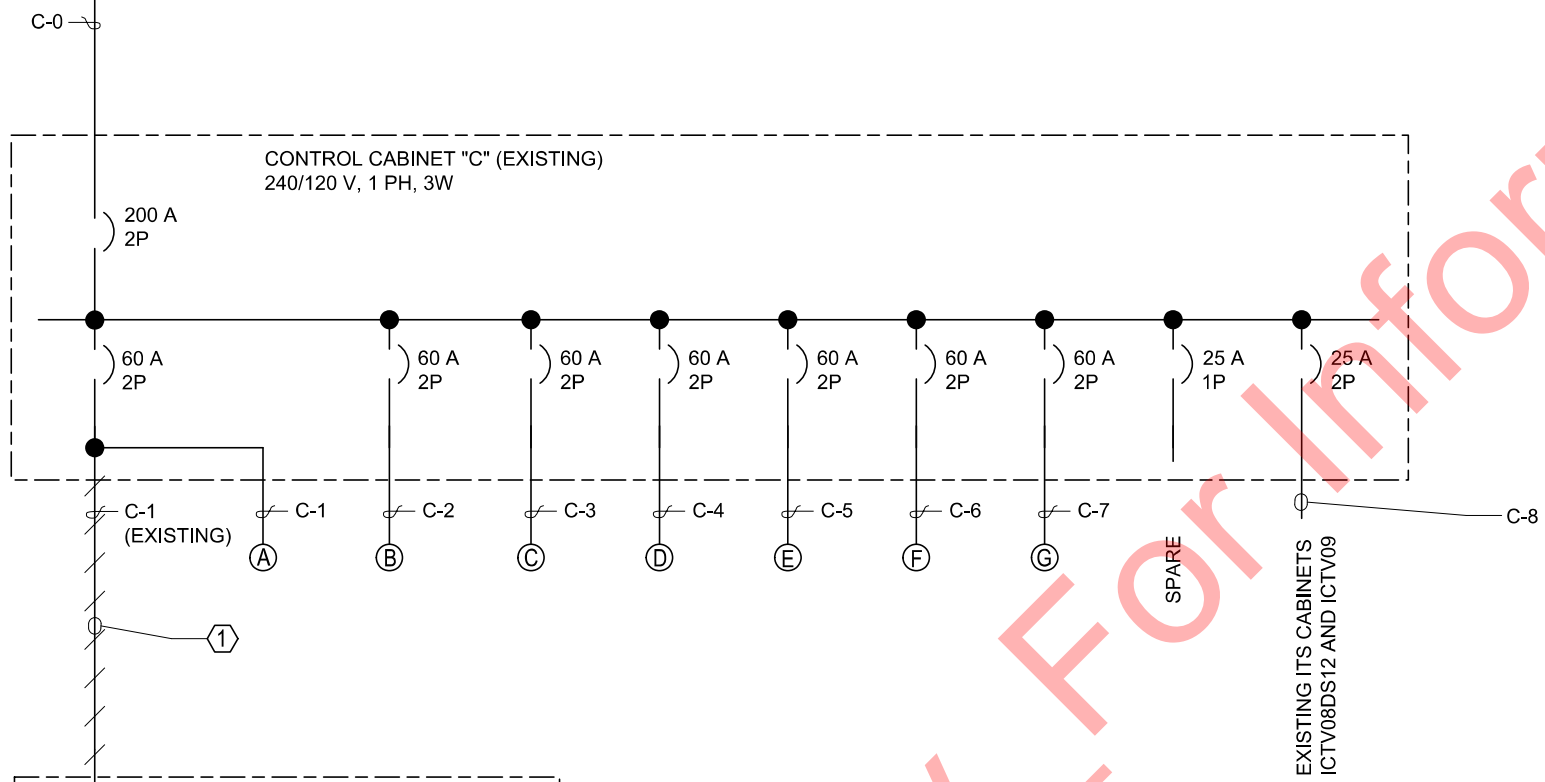
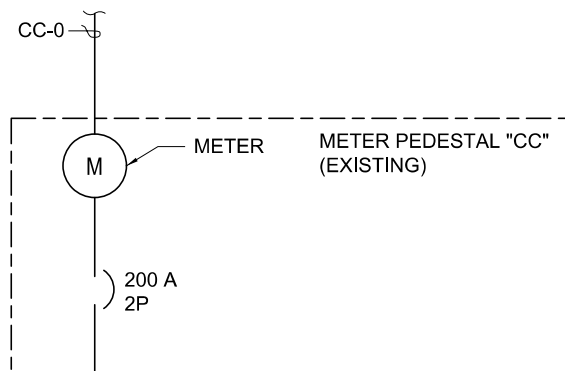
CKT	CABLE / CONDUIT DESCRIPTION	CONDUCTORS: COPPER (CU) OR ALUMINUM (AL)
BB-0 (EXIST)	EXISTING	-
B-0 (EXIST)	EXISTING	-
B-1 (EXIST)	EXISTING	-
B-1	2 - #1/0, 1 - #4G	CU
B-2 (EXIST)	EXISTING	-
B-3	2 - #2/0, 1 - #4G	CU
B-4	2 SETS (2 - #1/0, 1 - #3G, 2" C)	CU
B-5	2 SETS (2 - #1/0, 1 - #3G, 2" C)	CU
B-6	2 - #1/0, 1 - #4G	CU
B-7	2 SETS (2 - #4, 1 - #4G, 2" C)	CU
B-8	2 - #4, 1 - #4G, 2" C	CU
B-9	2 - #6, 1 - #6G, 2" C	CU
B-10	2 - #6, 1 - #6G, 2" C	CU
B-11	2 - #6, 1 - #6G, 2" C	CU
B-12	2 - #6, 1 - #6G, 2" C	CU
B-13	2 - #4, 1 - #4G, 2" C	CU
B1-1	2 - #6, 1 - #6G, 2" C	CU
B3-1	2 - #6, 1 - #6G, 2" C	CU
B4-1	2 - #6, 1 - #6G, 2" C	CU
B5-1	2 - #6, 1 - #6G, 2" C	CU
B6-1	2 - #6, 1 - #6G, 2" C	CU
B7-1	2 - #6, 1 - #6G, 2" C	CU
BT-1	EXISTING	-
B2-1	EXISTING	-

CONTROL CABINET "B" ONE-LINE DIAGRAM

- NOTE:
- EXISTING CONTROL CABINET "H", TOWER 8, EXISTING CIRCUIT 'B-1', AND WIRING FROM CABINET TO TOWER 8 TO BE REMOVED.
  - EXISTING LIGHT POLES BT101 THRU BT106 AND EXISTING CIRCUIT BT-1 TO BE REMOVED.



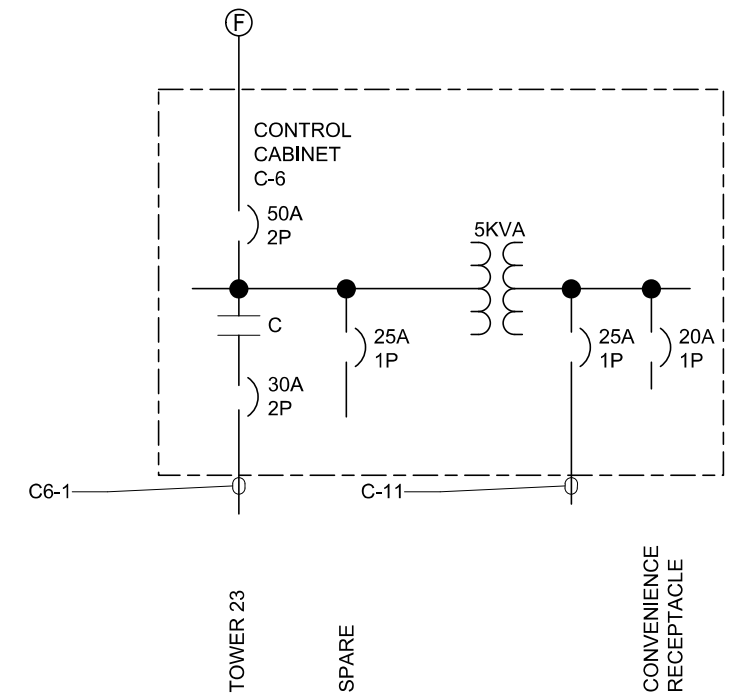
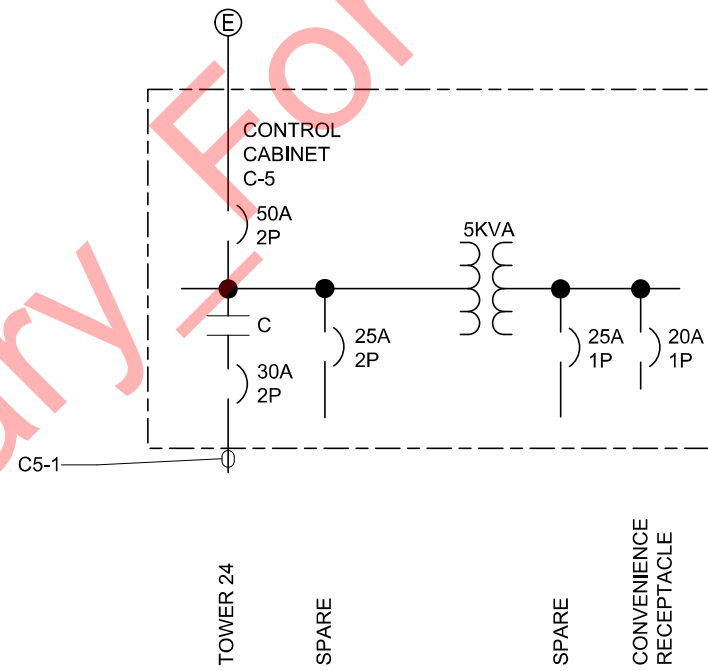
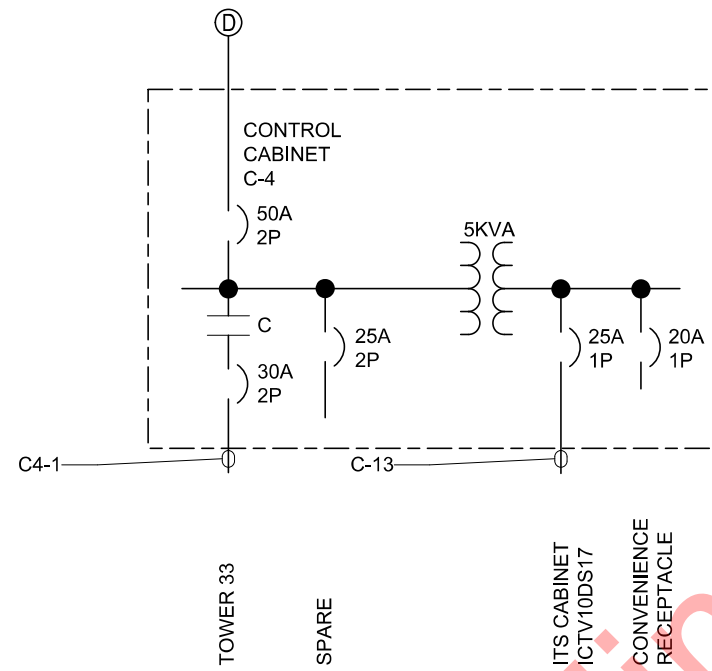
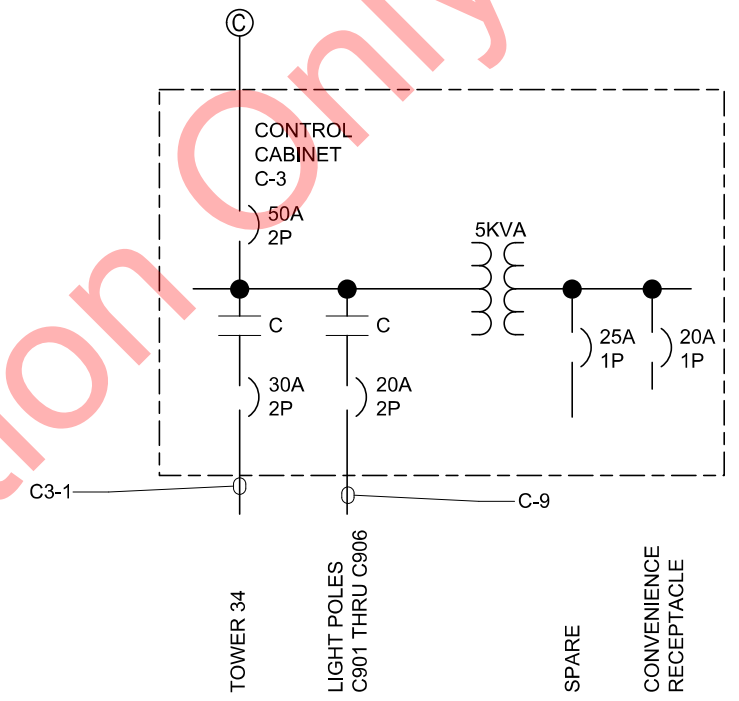
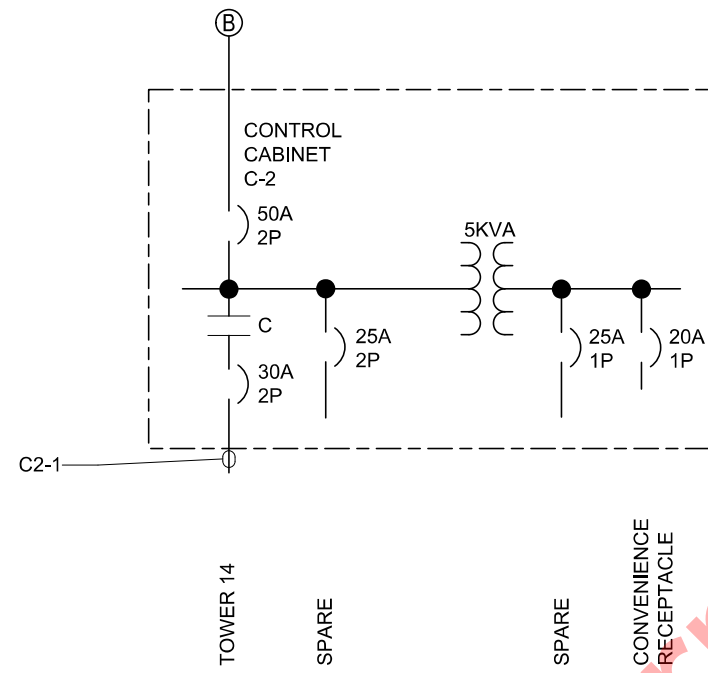
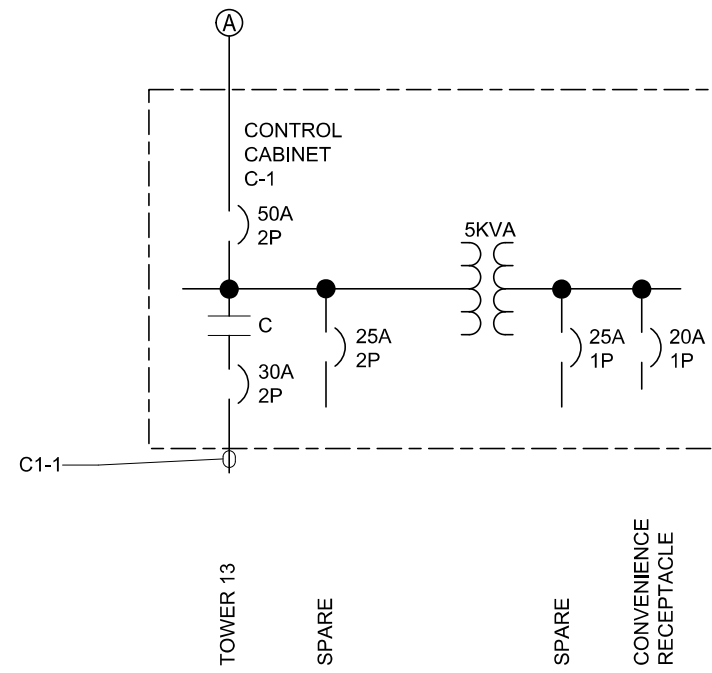
240/120V ELECTRICAL SERVICE

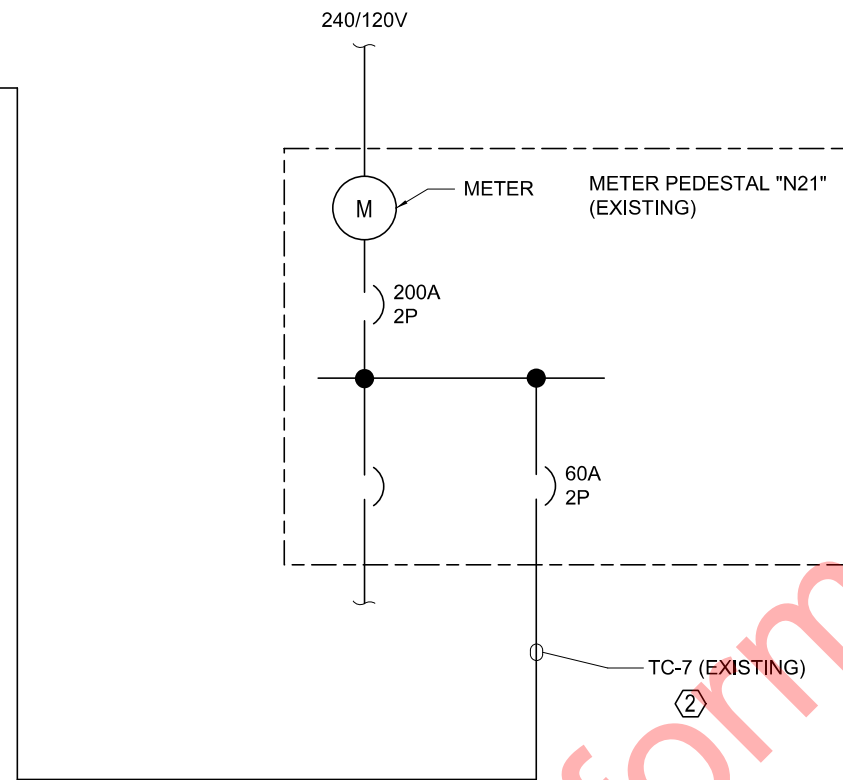
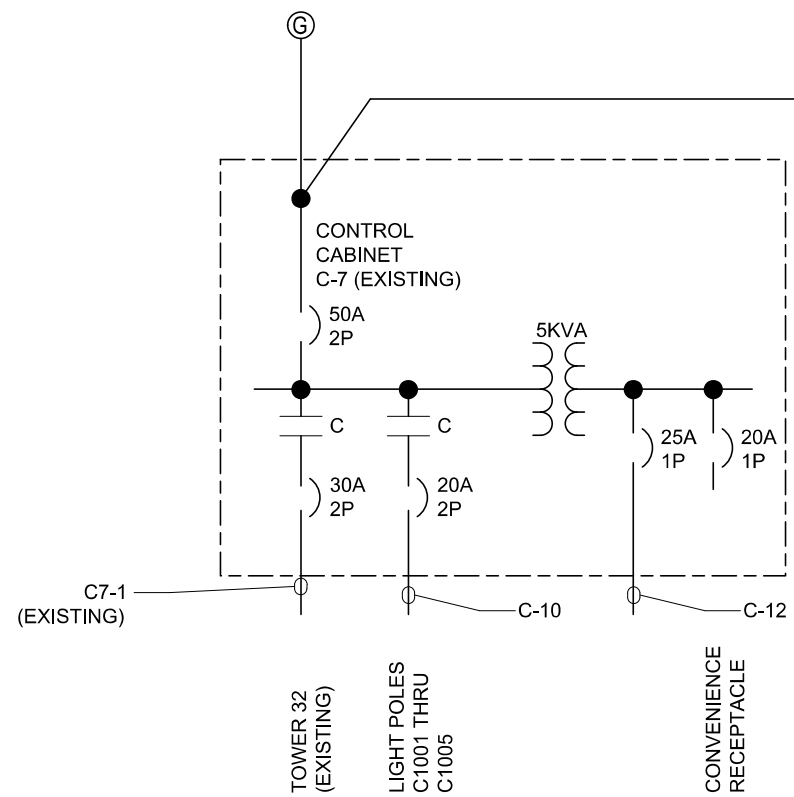


### CONTROL CABINET "C" ONE-LINE DIAGRAM

NOTE:  
 1. EXISTING CONTROL CABINET C-1, TOWER 97, AND EXISTING CIRCUITS C-1, C1-1 AND C-9 TO BE REMOVED. TOWER 97 SHALL BE RELOCATED AND REINSTALLED AS TOWER NO. 13. CONTROL CABINET C-1 TO BE RELOCATED AND CONNECTED AT TOWER NO.13.

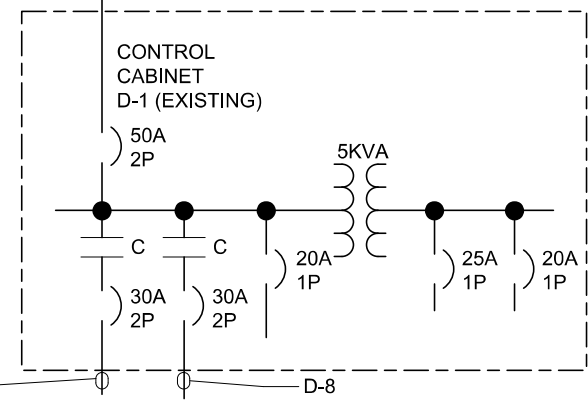
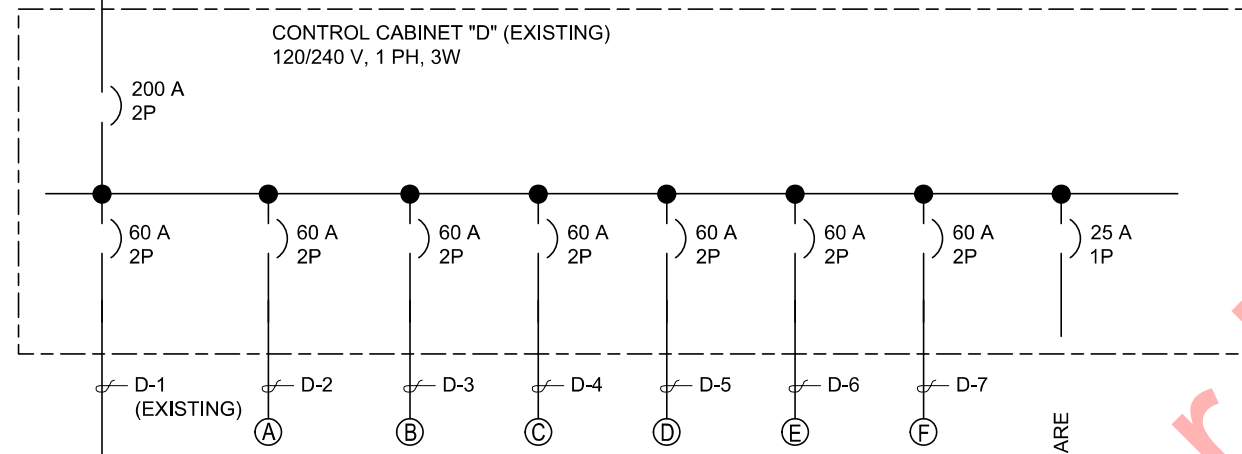
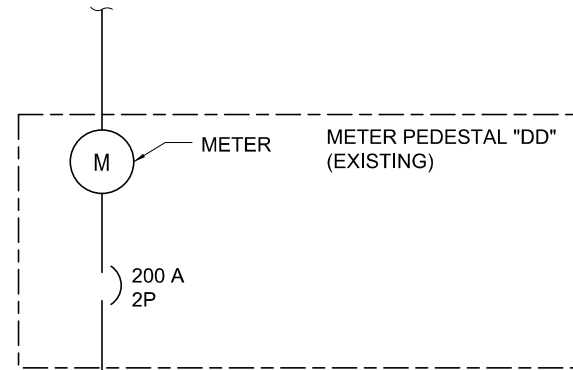
CKT	CABLE / CONDUIT DESCRIPTION	CONDUCTORS: COPPER (CU) OR ALUMINUM (AL)
C-1 (EXIST)	EXISTING	-
C-1	2 - #3, 1 - #8G, 2" C	CU
C-2	2 - #1/0, 1 - #4G, 2" C	CU
C-3	2 - #2/0, 1 - #4G, 2" C	CU
C-4	2 - #4, 1 - #4N, 1 - #6G, 2" C	CU
C-5	2 - #1/0, 1 - #4G, 2" C	CU
C-6	2 - #1/0, 1 - #4G, 2" C	CU
C-7	2 - #2/0, 1 - #4G, 2" C	CU
C-8	2 - #4, 1 - #4N, 1 - #10G, 2" C	CU
C-9 (EXIST)	EXISTING	-
C-9	2 - #6, 1 - #6G, 2" C	CU
C-11	2 - #6, 1 - #6G, 2" C	CU
C-12	2 - #6, 1 - #6G, 2" C	CU
C-13	2 - #4, 1 - #4G, 2" C	CU
C1-1 (EXIST)	EXISTING	CU
C1-1	2 - #6, 1 - #6G, 2" C	CU
C2-1	2 - #6, 1 - #6G, 2" C	CU
C3-1	2 - #6, 1 - #6G, 2" C	CU
C4-1	2 - #6, 1 - #6G, 2" C	CU
C5-1	2 - #6, 1 - #6G, 2" C	CU
C6-1	2 - #6, 1 - #6G, 2" C	CU
C7-1	2 - #6, 1 - #6G, 2" C	CU
C-10	2 - #6, 1 - #6G, 2" C	CU
TC-7	EXISTING	-





② EXISTING CIRCUIT TC-7 SHALL BE DISCONNECTED FROM CONTROL CABINET C-7 AND REMOVED BACK TO METER PEDESTAL "N21"

120/240V ELECTRICAL SERVICE



**CONTROL CABINET "D" ONE-LINE DIAGRAM**

TOWER 30  
 LIGHT POLES D801 THRU D804  
 SPARE  
 SPARE  
 CONVENIENCE RECEPTACLE

CKT	CABLE / CONDUIT DESCRIPTION	CONDUCTORS: COPPER (CU) OR ALUMINUM (AL)
D-1	EXISTING	-
D-2	2 - #3, 1 - #8G, 3" C	CU
D-3	2 - #2/0, 1 - #4G, 3" C	CU
D-4	2 - #1/0, 1 - #4G, 3" C	CU
D-5	2 - #3/0, 1 - #3G, 3" C	CU
D-6	2 - #3/0, 1 - #3G, 3" C	CU
D-7	2 SETS (2 - #1/0, 1 - #3G), 3" C	CU
D-8	2 - #6, 1 - #6G, 2" C	CU
D1-1	EXISTING	-
D-9	2 - #6, 1 - #6G, 2" C	CU
D-10	2 - #6, 1 - #6G, 2" C	CU
D-11	2 - #4, 1 - #4G, 2" C	CU
D2-1	2 - #6, 1 - #6G, 2" C	CU
D3-1	2 - #6, 1 - #6G, 2" C	CU
D4-1	2 - #6, 1 - #6G, 2" C	CU
D5-1	2 - #6, 1 - #6G, 2" C	CU
D6-1	2 - #6, 1 - #6G, 2" C	CU
D7-1	2 - #6, 1 - #6G, 2" C	CU



