



Underground!

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Scope of Work

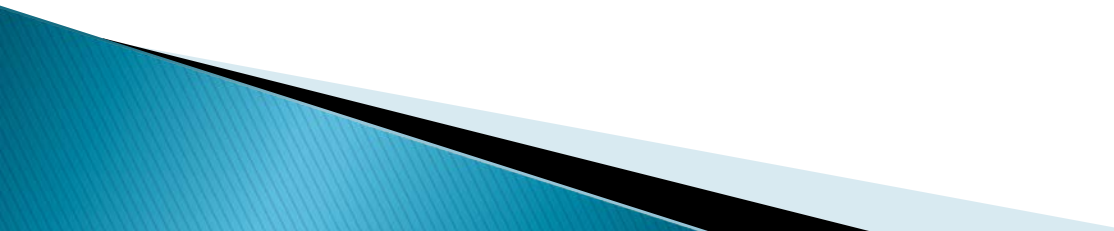
Alabama Department of Transportation (ALDOT) Road Widening Project
City of Opelika / Auburn

Checklist items:

- ✓ New Alignment Route
- ✓ Design based on Engineered Elevation
- ✓ Direct Boring Min 6' UG
- ✓ Stakeout of new Equipment
- ✓ Stakeout of Route (100')
- ✓ Bill of Material (Riser, JB, Cable, Etc.)
- ✓ Plan & Profile
- ✓ Retire Existing UG facilities

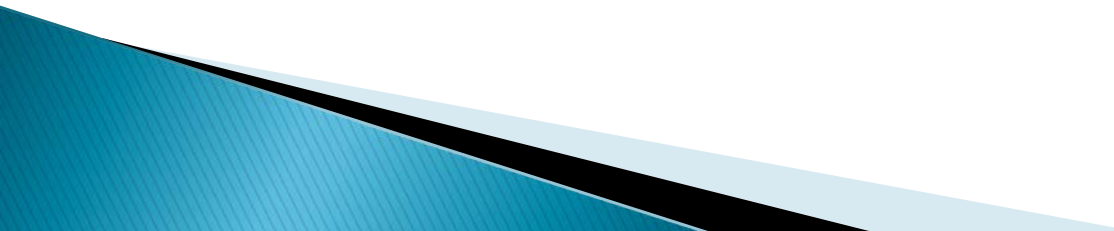
"Import Data"

STEP 1:

- Import Drawings (Existing, Engineered)
 - Import Existing Survey & Topo (DXF)
 - Built TIN Based on Existing Survey & Topo
 - Create Alignment (New Route)
 - Interpolate Points (Profile)
- 

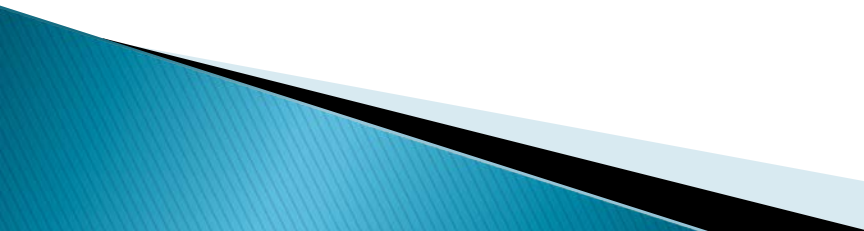
"Calculations"

STEP 2:

- Station Equations to Match ALDOT Dwgs
 - Select Equipment Location (JB, Riser)
 - Pay attention to "Construction Limits"
 - Import Engineered Topo (ALDOT)
 - Calculate "MAX" Cut/Fill "BOXES" JB to JB
- 

“Modeling”

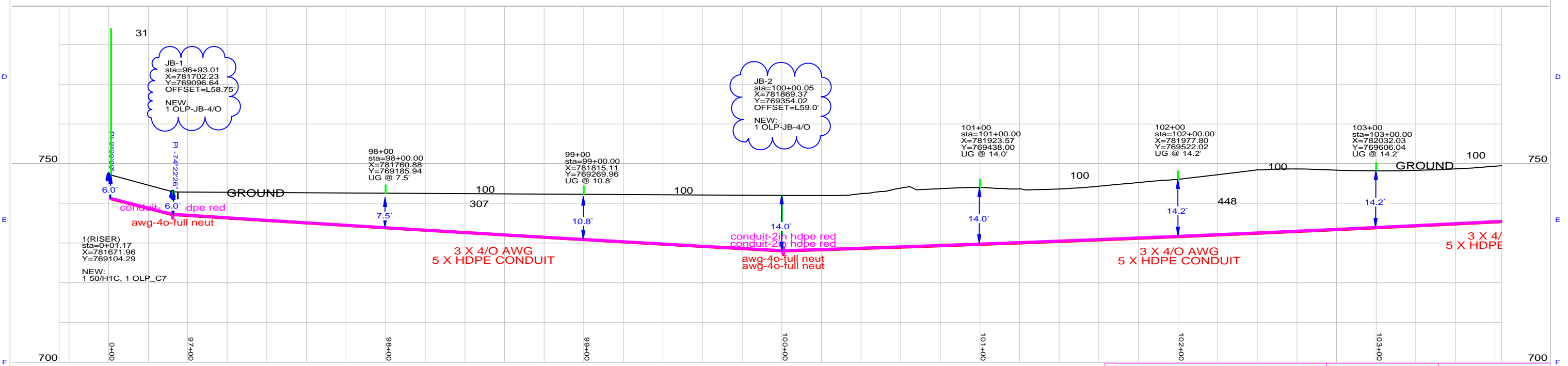
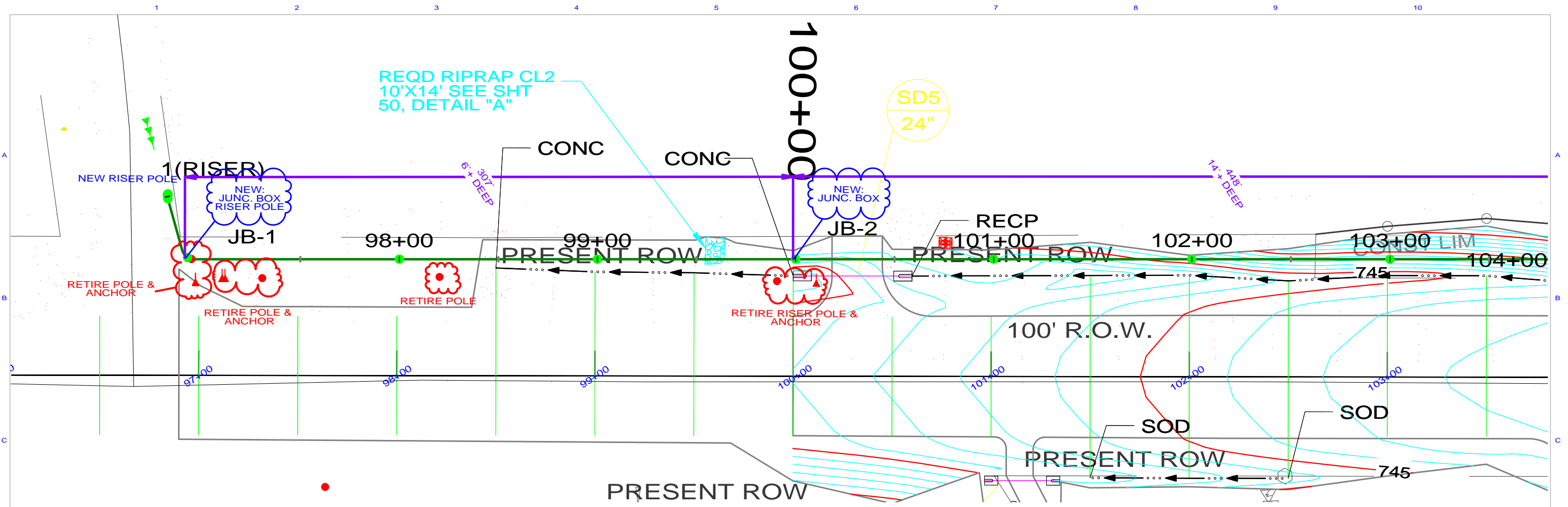
STEP 3:

- ❑ Create “Fictional” Structures for JB & Stakes
 - ❑ Place “JB” Structures at new designated location
 - ❑ Add Clamps to “JB” near Ground
 - ❑ Place “Stake” Structures at each 100’ Station
 - ❑ Create “Cable 3-Bundle” & “Conduit 5-Bundle”
 - ❑ Adjust Height at each “JB” location-Max Cut
- 

“Final”

STEP 4:

- Attach Cables & Conduits
- “Graphical Sag” based on Calculated Max Bore
- Place “Stake” Structures at each 100’ Station
- Add “Dimension” annotation – Stake Location
- “Bore Hole” every 100’ per Profile
- P&P, Staking Table & Bill Of Material



NOTES:

REV.	REVISION DESCRIPTION	MADE BY	CKD BY	APP'D BY	DATE
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OPELIKA LIGHT POWER ALABAMA

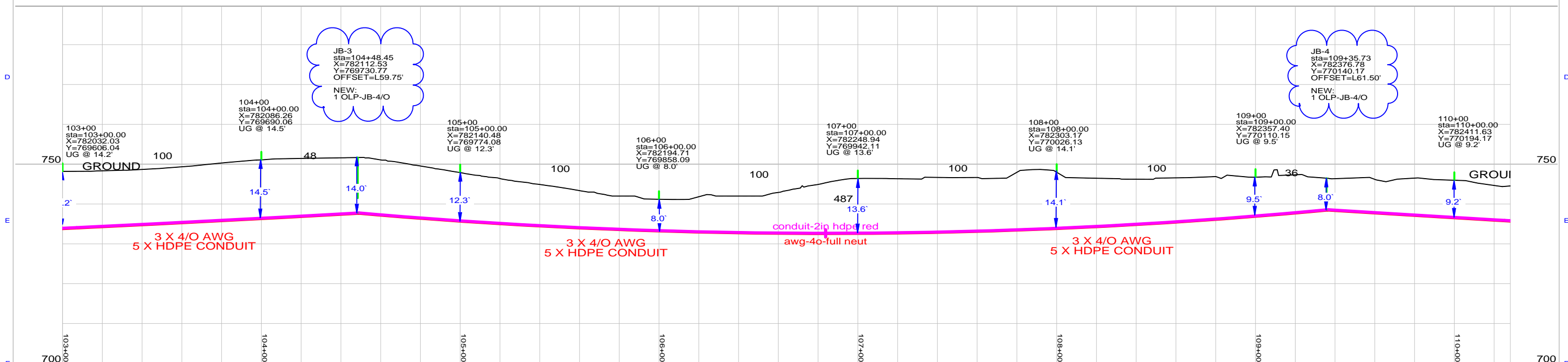
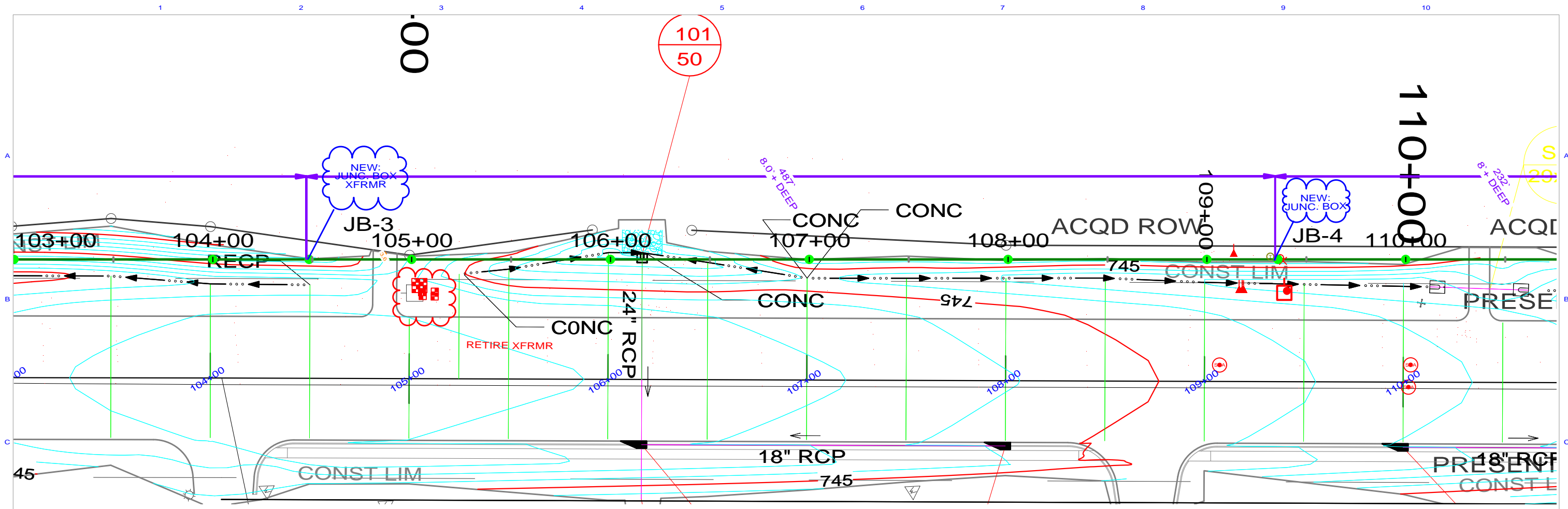
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DATE: 7/14/2013
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 PAGE 1 OF 3

SCALE	DATE	DRAWN BY	CKD BY	APP'D BY
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-PHASE 1
 -PHASE 2
 -PHASE 3

OPELIKA FREDERICK ROAD UNDERGROUND 12KV



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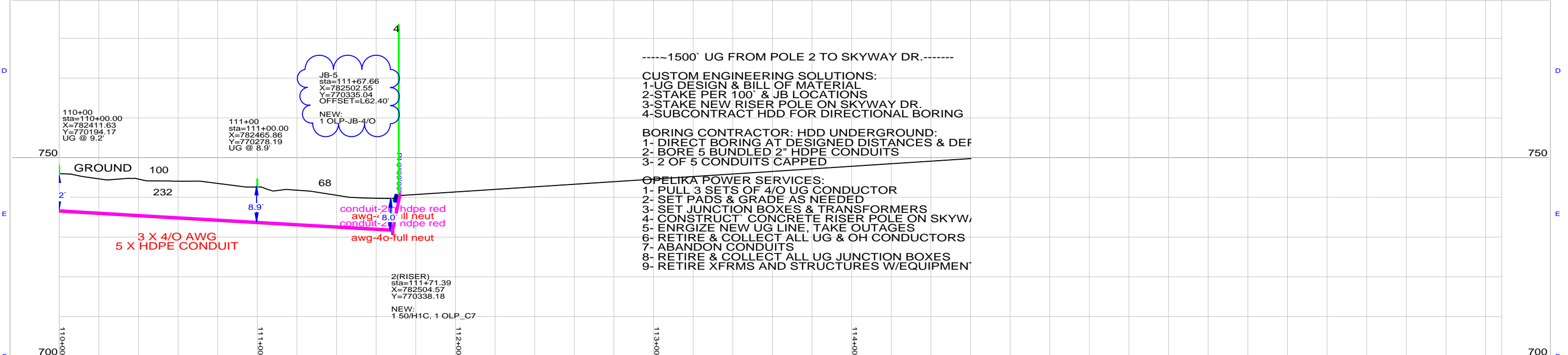
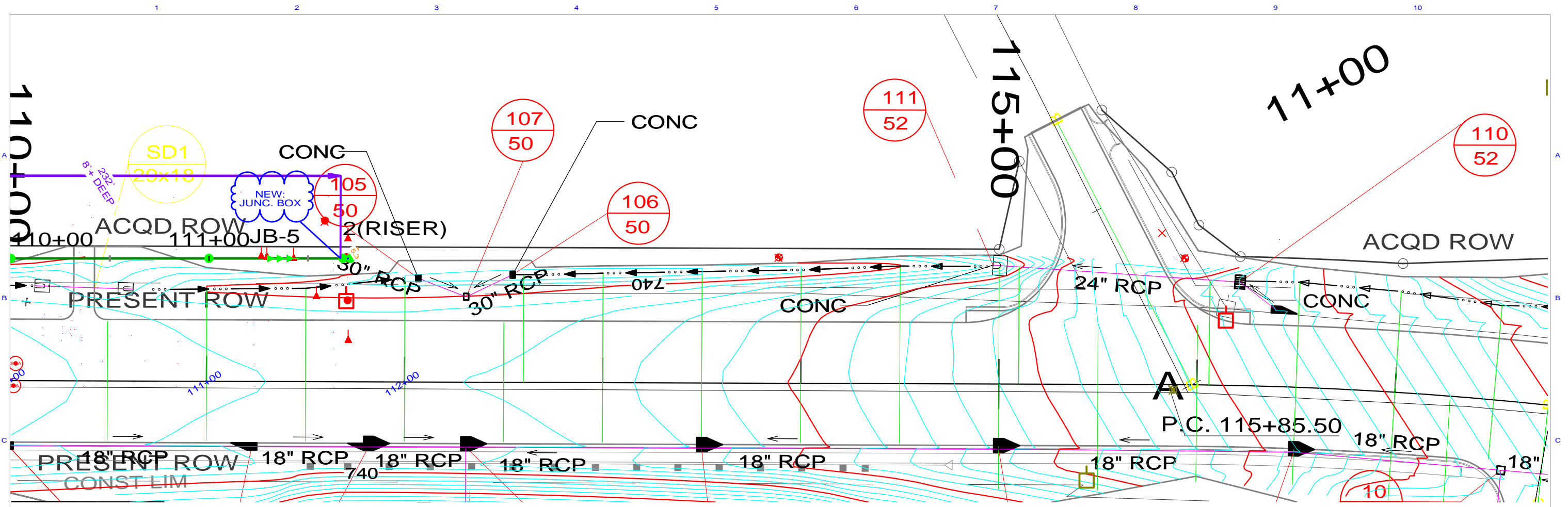
OPELIKA LIGHT POWER ALABAMA

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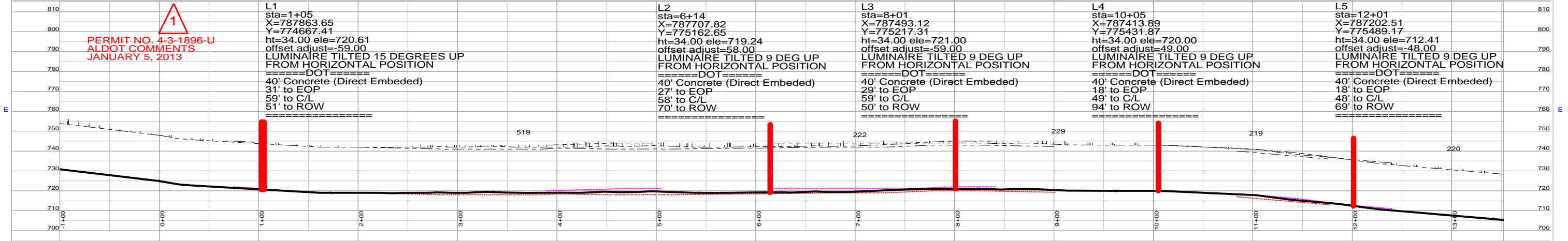
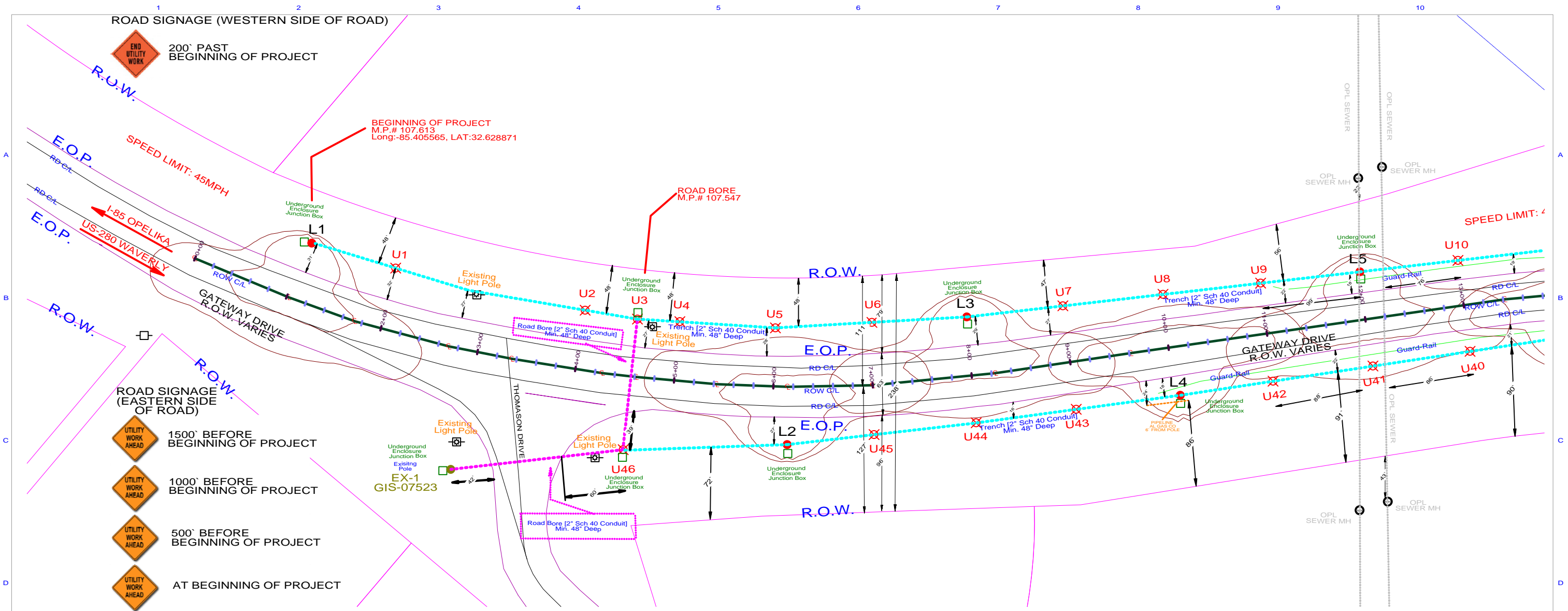
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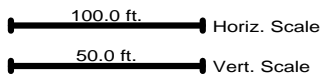
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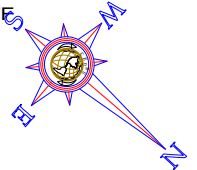
PERMIT NO. 4-3-1896-U
ALDOT COMMENTS
JANUARY 5, 2013

Light Pole	Station	X	Y	Height	Element	Offsets	Notes
L1	1+05	787863.65	774667.41	34.00	40' Concrete (Direct Embedded)	31' to EOP, 59' to C/L, 51' to ROW	LUMINAIRE TILTED 15 DEGREES UP FROM HORIZONTAL POSITION
L2	6+14	787707.82	775162.65	34.00	40' Concrete (Direct Embedded)	27' to EOP, 58' to C/L, 70' to ROW	LUMINAIRE TILTED 9 DEG UP FROM HORIZONTAL POSITION
L3	8+01	787493.12	775217.31	34.00	40' Concrete (Direct Embedded)	29' to EOP, 59' to C/L, 50' to ROW	LUMINAIRE TILTED 9 DEG UP FROM HORIZONTAL POSITION
L4	10+05	787413.89	775431.87	34.00	40' Concrete (Direct Embedded)	18' to EOP, 49' to C/L, 94' to ROW	LUMINAIRE TILTED 9 DEG UP FROM HORIZONTAL POSITION
L5	12+01	787202.51	775489.17	34.00	40' Concrete (Direct Embedded)	18' to EOP, 48' to C/L, 69' to ROW	LUMINAIRE TILTED 9 DEG UP FROM HORIZONTAL POSITION



- LEGEND:**
- EXISTING POLE
 - NEW LIGHT POLE
 - ⊗ STAKE (SHOWS UG ROUTE IN THE FIELD)
 - D.O.T. ROW
 - Edge of Pavement
 - Center Line
 - Trenched for UG Route
 - Bored for UG route

- NOTES:**
1. ALL WORK WILL BE PERFORMED OFF THE HIGHWAYS. STOPPING OR REDIRECTING TRAFFIC WILL NOT BE REQUIRED.
 2. ALL UNDERGROUND CONDUIT WILL HAVE MARKING TAPE BURIED 1' ABOVE THE CONDUIT.
 3. LIGHTING POLES WILL HAVE 1' ARMS SUPPORTING THE LIGHTS.



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1	ADDED LIGHT L9M & ADJUSTED ANGLES PER DOT REQUEST	AM	FN	FN	01/17/12

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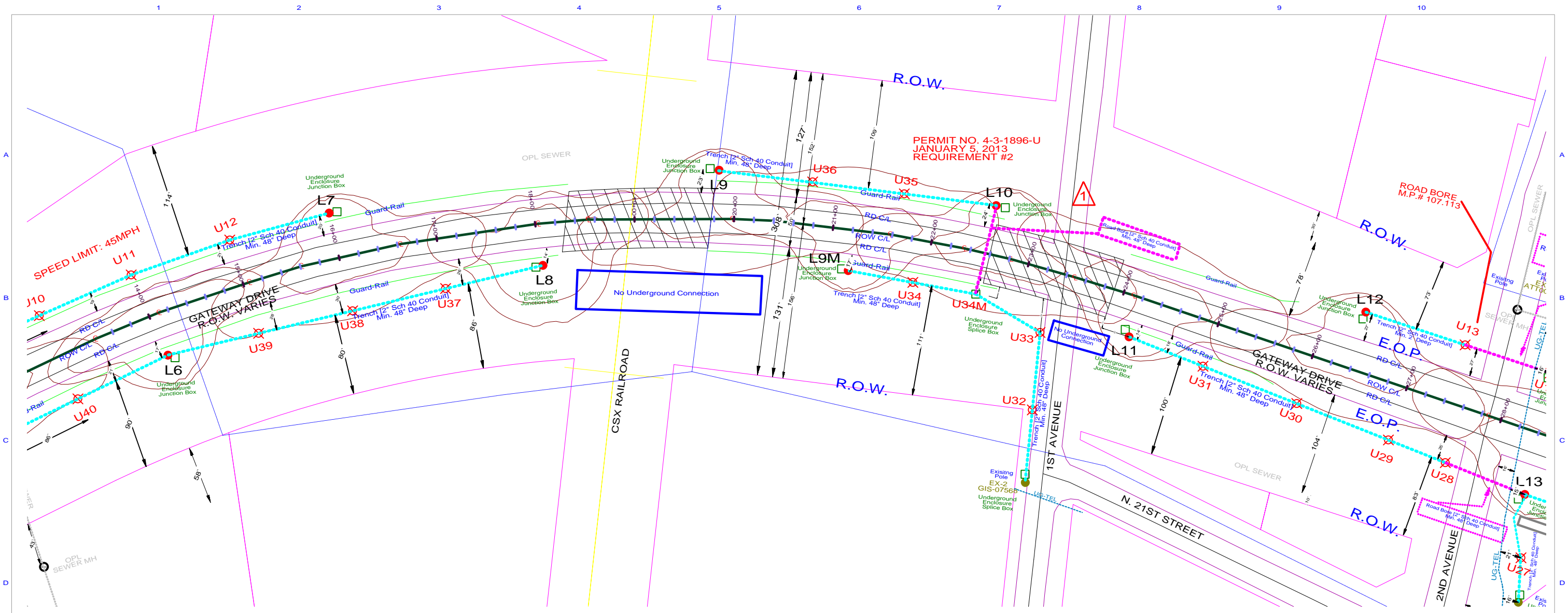
ALDOT PERMIT
 CONSTRUCTION
 AS-BUILT

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DESIGN OF LIGHTING STRUCTURES ON GATEWAY DR

SCALE: AS SHOWN
 DATE: AS SHOWN
 DRAWN BY: AM
 CHECKED BY: FN
 APPROVED BY: FN

GATEWAYLIGHTING_071513
 7/14/2013
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Light Pole	Station	X	Y	Height	Offset	Angle	Notes
L6	14+03	787115.70	775691.41	34.00	43.00	9 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 17' to EOP 43' to C/L 94' to ROW
L7	16+00	786921.01	775784.55	34.00	46.00	9 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 17' to EOP 46' to C/L 114' to ROW
L8	18+02	786885.08	776002.78	34.00	42.00	9 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 14' to EOP 42' to C/L 96' to ROW
L9	19+85	786727.83	776128.18	34.00	49.00	15 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 23' to EOP 49' to C/L 108' to ROW
L9M	21+20	786769.74	776287.06	34.00	41.00	15 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 17' to EOP 41' to C/L 115' to ROW
L10	22+55	786651.44	776398.31	34.00	49.00	15 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 23' to EOP 49' to C/L 111' to ROW
L11	24+19	786720.30	776572.77	34.00	41.00	9 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 17' to EOP 41' to C/L 106' to ROW
L12	26+37	786604.13	776781.86	34.00	59.00	9 DEG UP	40' Concrete (Direct Embedded) 1' Arm Attachment Holophane Light 27' to EOP 59' to C/L 76' to ROW

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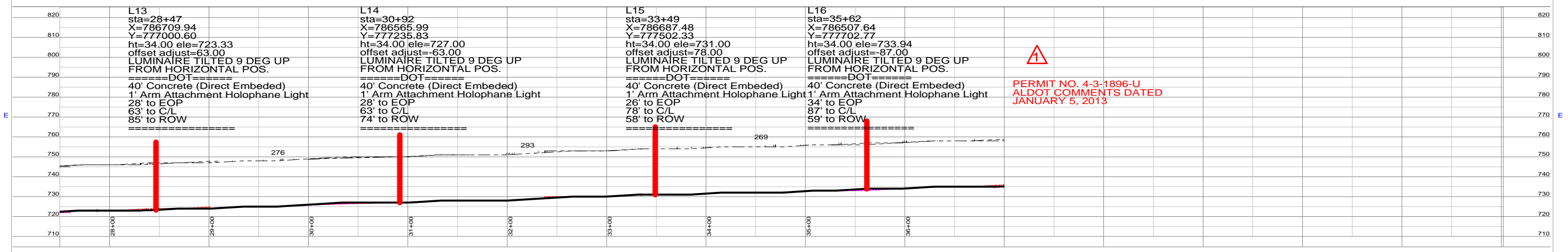
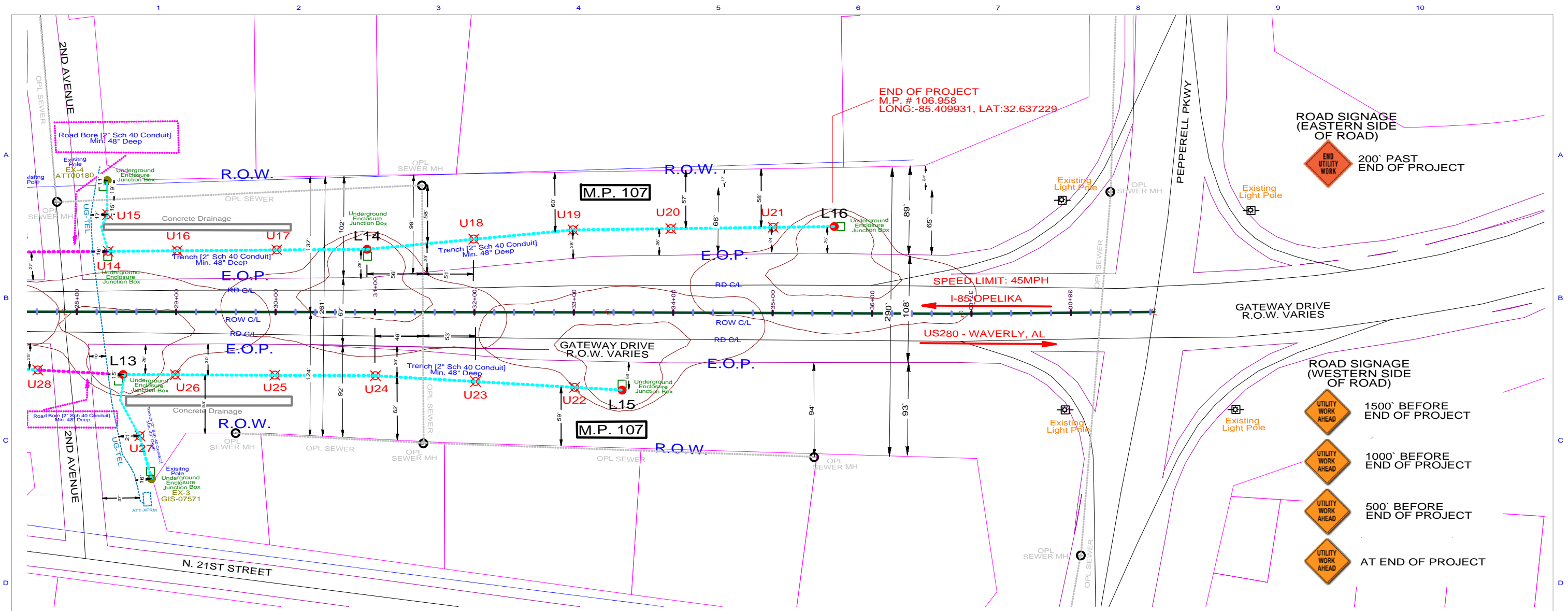
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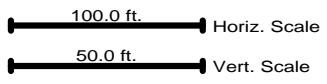
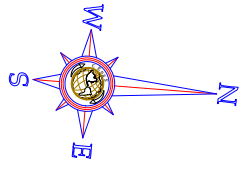
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