

STATE OF SOUTH DAKOTA  
 DEPARTMENT OF TRANSPORTATION  
 PLANS FOR PROPOSED

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0906(00)264	1	7

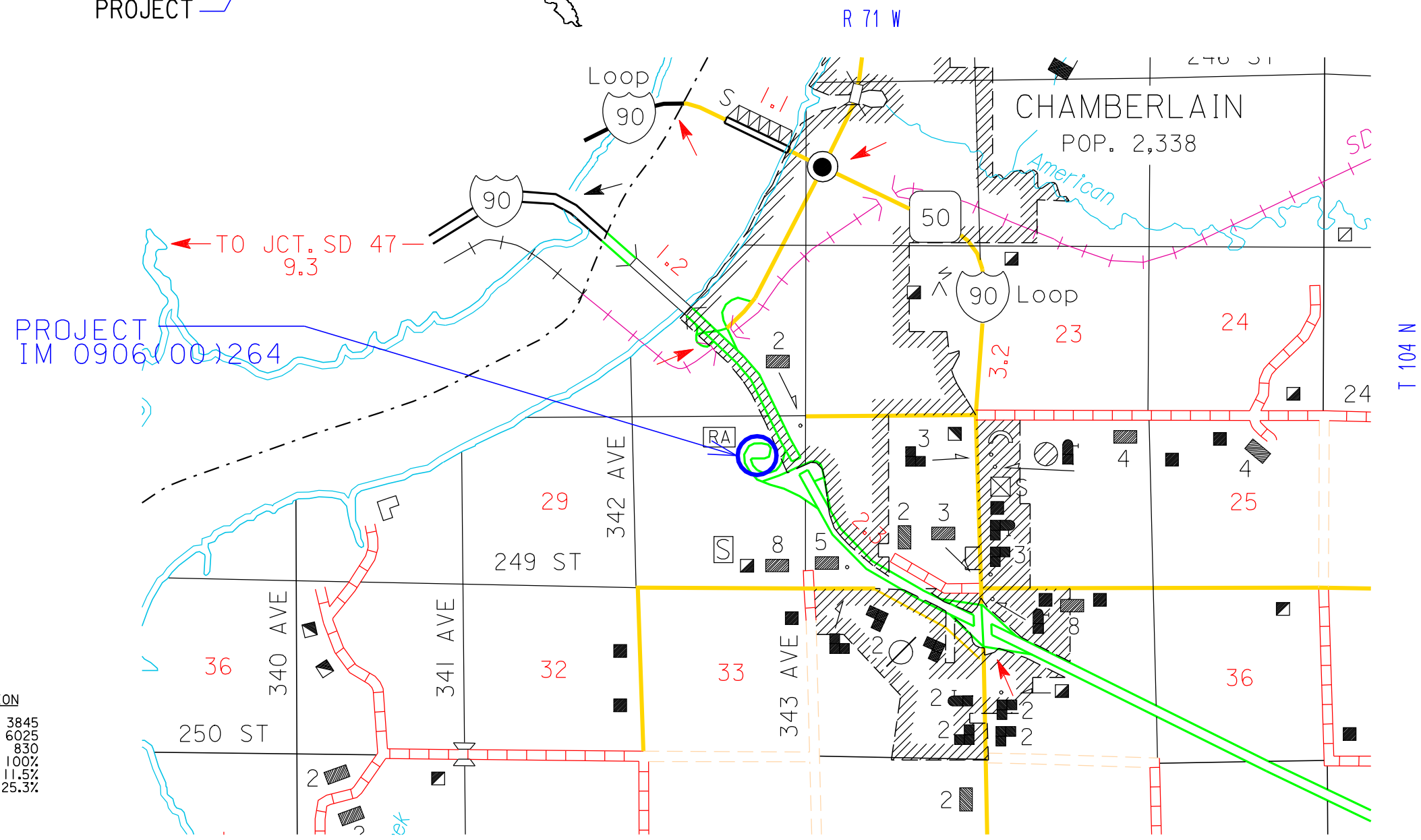
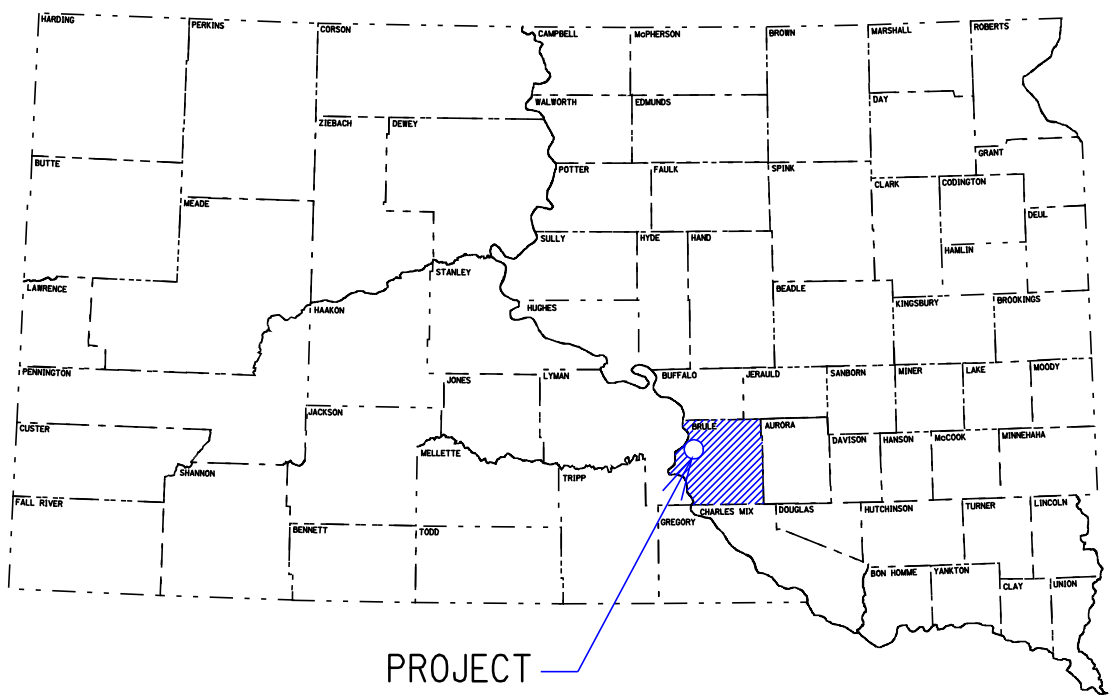
Plotting Date: 18-OCT-2007

**PROJECT IM 0906(00)264**  
**CHAMBERLAIN REST AREA**  
**BRULE COUNTY**

TOWER LIGHTING  
 PCN 01FQ

INDEX OF SHEETS

- Sheet 1: Title Sheet
- Sheet 2: Estimate of Quantities & Plan Notes
- Sheet 3: Traffic Control
- Sheet 4: Existing Topography Symbology & Legend
- Sheet 5: Conduit Layout
- Sheet 6: Wiring Diagram
- Sheet 7: Footing Detail



1-90 WEST BOUND  
 DESIGN DESIGNATION

ADT (2006)	3845
ADT (2026)	6025
DHV	830
D	100%
T DHV	11.5%
T ADT	25.3%

PLOT SCALE -- 200,000000:1,000000

PLOTTED FROM -- TRPR13315

PLOT NAME -- 1

FILE -- U:\RD\PR\BRULE\01FQ\TITLE.DGN

**ESTIMATE OF QUANTITIES**

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E1550	Remove Light Tower	2	Each
250E0010	Incidental Work	Lump Sum	LS
634E0010	Flagging	4	Hour
634E0100	Traffic Control	68	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
635E7522	Install Light Tower	2	Each

**SPECIFICATIONS**

Standard Specifications for Roads & Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

**INCIDENTAL WORK**

Incidental work includes, but is not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer.

**REMOVE LIGHT TOWER**

The Contractor shall remove the existing light tower ET1 shown on the conduit layout.

The Contractor shall remove the lowering device and luminaires from light tower ET1 and the existing light tower lying on the ground located near the location of light tower T1.

After removing the lowering device and the luminaires the Contractor shall cut the poles into sections no larger than 20' in length. After the light towers are cut into sections the sections shall become the property of the Contractor.

All materials and labor required for the removal of the light tower, cutting the light towers into sections, and salvaging the lowering devices and luminaires shall be incidental to the contract unit price per each for "Remove Light Tower".

**INSTALL LIGHT TOWER**

The Contractor shall install two 100 ft towers supplied by South Dakota Department of Transportation. The light towers shall be installed at locations T1 and T2.

The Contractor shall install the salvaged lowering devices and luminaires onto the state furnished poles. The luminaires shall be installed according to the wiring diagram.

All cost for installing the light tower, lowering device and luminaires shall be incidental to the contract unit price per each for "Install Light Tower".

**STATE FURNISHED LIGHT TOWERS**

Two 100' light towers will be furnished by the South Dakota Department of Transportation. The cost of the furnished light towers for tax reasons is \$11,852

**DELIVERY OF POLES**

The light tower manufacturer will contact the Contractor with a date for delivery of the poles. The Contractor will be responsible for unloading the light towers when they are delivered to the rest area.

All cost for unloading the light towers shall be incidental to the contract unit price per each for "Install Light Tower".

**MAINTENANCE OF TRAFFIC**

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line or within the closed work space. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP 350 crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

**ITEMIZED LIST FOR TRAFFIC CONTROL**

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
W20-1	48" x 48"	ROAD WORK AHEAD	1	34	34
W20-7a	48" x 48"	FLAGGER	1	34	34
<b>TOTAL UNITS</b>					<b>68</b>

**COMPLETION DATE**

Work on this project shall be completed by May 16, 2008. After this date, working days will be counted and liquidated damages assessed in accordance with Section 8.7 of the Standard Specifications.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0906(00)264	2	7

# TRAFFIC CONTROL

## CHAMBERLAIN REST AREA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0906(00)264	3	7

Plotting Date: 15-OCT-2007

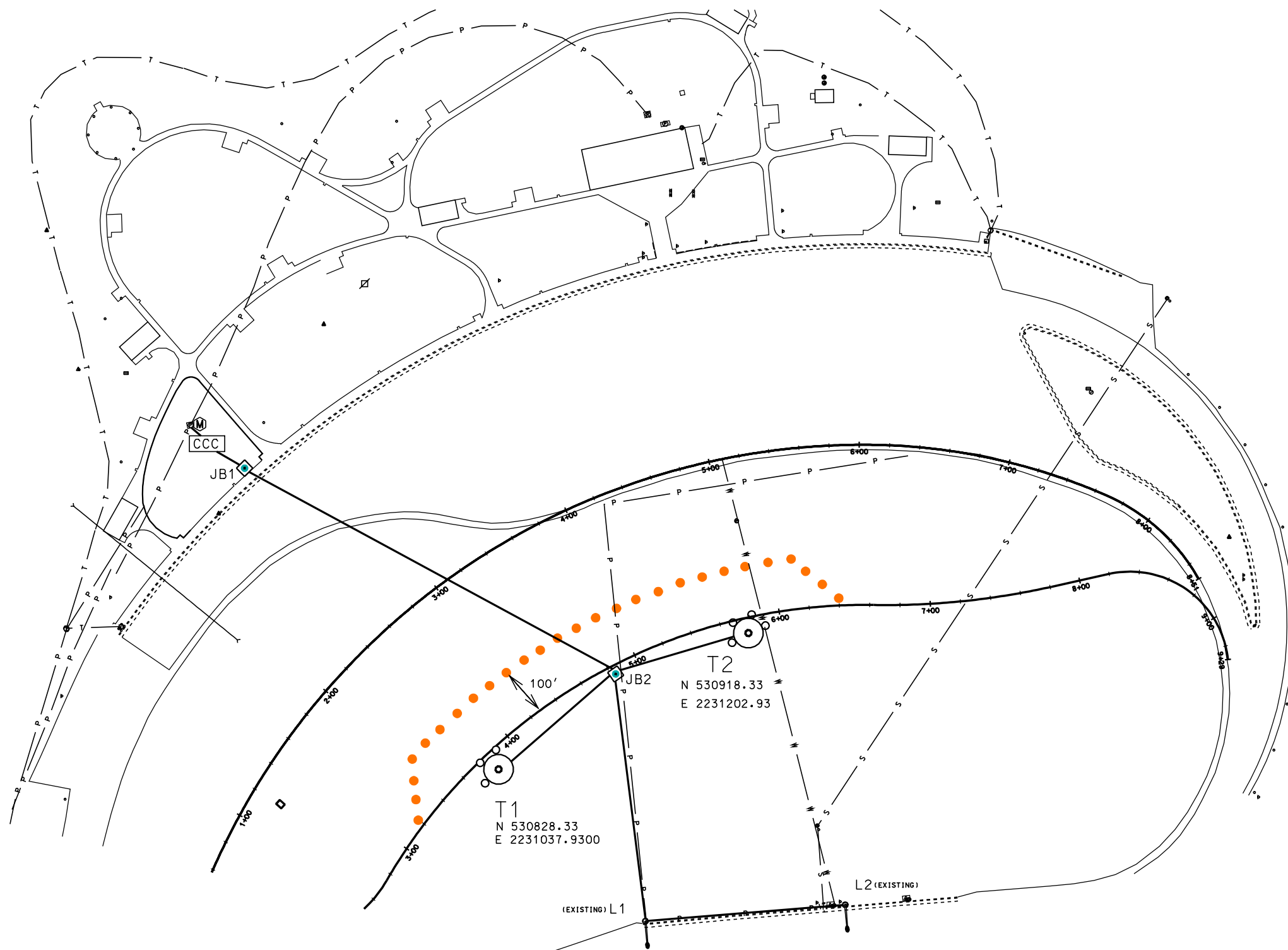
SCALE  
1" = 80'



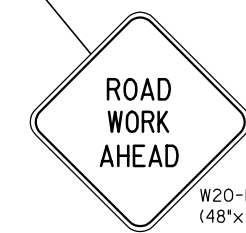
PLOT SCALE - 80.000000:1.000000

PLOT NAME - FLS

FILE - U:\REGIONAL\PRJ\BRUL\01\FG\003C.DGN



● ● ● - TRAFFIC CONTROL DEVICES  
42" CONES OR DRUMS SPACED AT 15'



PLOTTED FROM - TRM111119

# EXISTING TOPOGRAPHY SYMBOLOLOGY AND LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0906(00)264	4	7

Plotting Date: 20-SEP-2007

Anchor		Information Sign One Post		Satellite Dish	
Antenna		Information Sign Two Post		Septic Tank	
Approach		Interstate Close Gate		Shrub Tree	
Assumed Corner		Iron Pin		Sidewalk	
Azimuth Marker		Irrigation Ditch		Sign Face	
Bbq Grill/ Fireplace		Lake Edge		Sign Post	
Bearing Tree		Lawn Sprinkler		Slough Or Marsh	
Bench Mark		Mailbox		Spring	
Box Culvert		Manhole Electric		Stream Gauge	
Bridge		Manhole Gas		Street Marker	
Brush		Manhole Misc		Telephone Fiber Optics	
Buildings		Manhole Sanitary Sewer		Telephone Junction Box	
Bulk Tank		Manhole Storm Sewer		Telephone Pole	
Cattle Guard		Manhole Telephone		Television Cable Jct Box	
Cemetery		Manhole Water		Television Tower	
Centerline		Merry-Go-Round		Test Wells/Bore Holes	
Cistern		Microwave Radio Tower		Traffic Signal	
Clothes Line		Misc. Property Corner		Trash Barrel	
Commercial Sign Double Face		Misc. Post		Tree Belt	
Commercial Sign One Post		Overhang Or Encroachment		Tree Coniferous	
Commercial Sign Overhead		Overhead Utility Line		Tree Deciduous	
Commercial Sign Two Post		Parking Meter		Tree Stumps	
Concrete Symbol		Pipe With End Section		Triangulation Station	
Creek Edge		Pipe With Headwall		Underground Electric Line	
Curb/Gutter		Pipe Without End Section		Underground Gas Line	
Curb		Playground Slide		Underground Sanitary Sewer	
Dam Grade/Dike/Levee		Playground Swing		Underground Storm Sewer	
Ditch Block		Power And Light Pole		Underground Tank	
Drainage Profile		Power And Telephone Pole		Underground Telephone Line	
Drop Inlet		Power Meter		Underground Television Cable	
Edge Of Asphalt		Power Pole		Underground Water Line	
Edge Of Concrete		Power Pole And Transformer		Warning Sign One Post	
Edge Of Gravel		Power Tower Structure		Warning Sign Two Post	
Edge Of Other		Propane Tank		Water Fountain	
Edge Of Shoulder		Property Pipe		Water Hydrant	
Elec. Trans./Power Jct. Box		Property Pipe With Cap		Water Meter	
Fence Barbwire		Property Stone		Water Tower	
Fence Chainlink		Public Telephone		Water Valve	
Fence Electric		Railroad Crossing Signal		Water Well	
Fence Misc.		Railroad Milepost Marker		Weir Rock	
Fence Rock		Railroad Profile		Windmill	
Fence Snow		Railroad R.O.W. Marker		Wingwall	
Fence Wood		Railroad Signs		Witness Corner	
Fence Woven		Railroad Switch			
Fire Hydrant		Railroad Track		State and National Line	
Flag Pole		Railroad Trestle		County Line	
Flower Bed		Rebar		Section Line	
Gas Valve Or Meter		Rebar With Cap		Quarter Line	
Gas Pump Island		Reference Mark		Sixteenth Line	
Grain Bin		Retaining Wall		Property Line	
Guardrail		Riprap		Construction Line	
Gutter		River Edge		R. O. W. Line	
Guy Pole		Rock And Wire Baskets		Work Limits	
Haystack		Rockpiles		Existing Control of Access	
Hedge		Route Sign One Post		Control of Access	
Highway R.O.W. Marker		Route Sign Two Post			

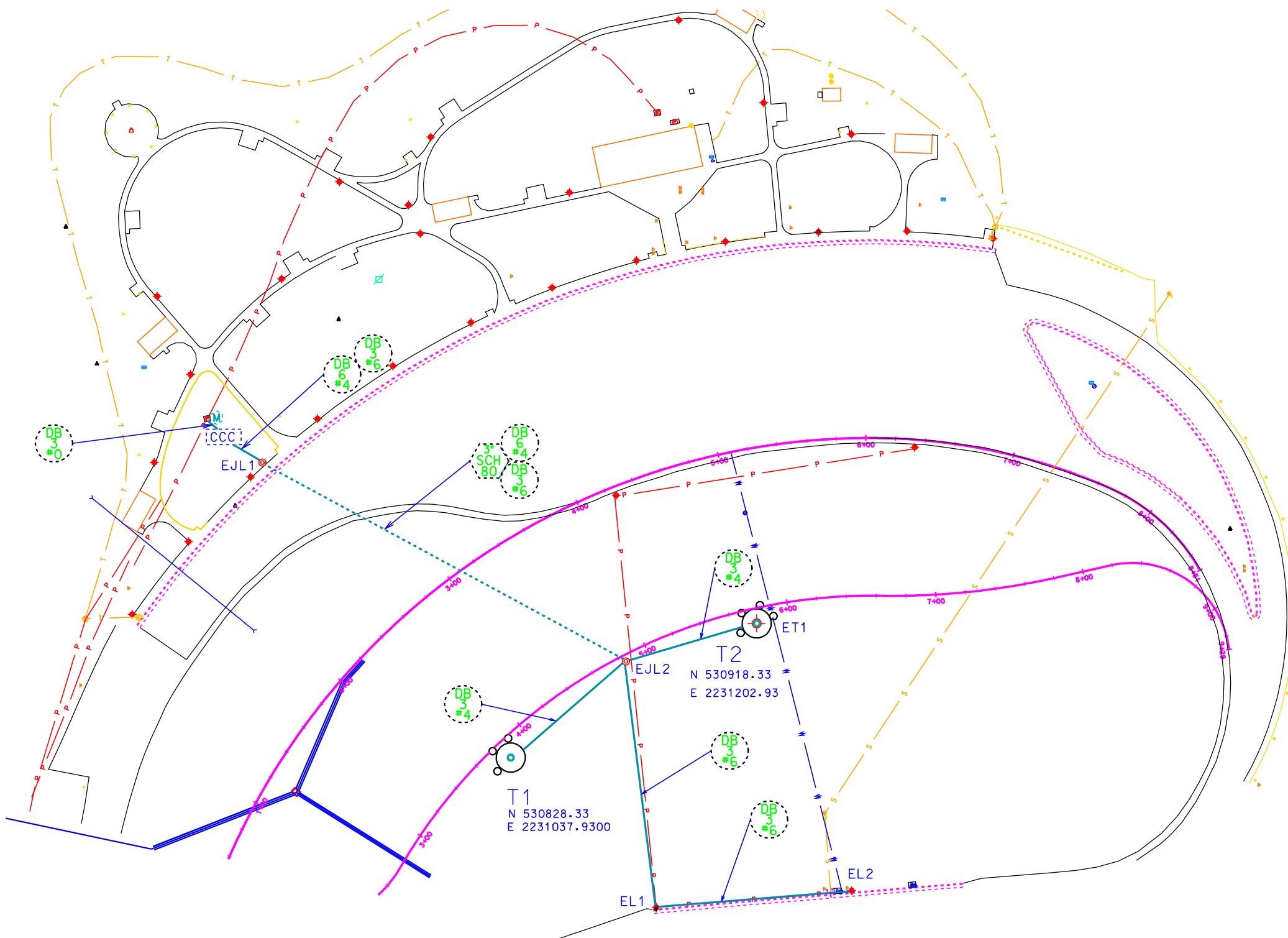
# CONDUIT LAYOUT

## CHAMBERLAIN REST AREA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0906(00)264	5	7

Plotting Date: 20-SEP-2007

SCALE  
1" = 80'



EXISTING ITEMS	
KEY	ITEM
◆	LUMINAIRE POLE (EL1, EL2)
○	ROADWAY LUMINAIRE, 1000 WATT
⊙	3' DIAMETER FOOTING (T1, T2)
⊙	JUNCTION BOX (EJL1, EJL2)
CCC	CIRCUIT CONTROL CENTER
SCH 80	3" RIGID CONDUIT, SCHEDULE 80
DB #0	1/C #0 AWG DIRECT BURIAL COPPER WIRE
DB #4	1/C #4 AWG DIRECT BURIAL COPPER WIRE
DB #6	1/C #6 AWG DIRECT BURIAL COPPER WIRE
M	METER SOCKET (NOT A BID ITEM)

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
⊙	REMOVE LIGHT TOWER (ET1)	2	EACH
⊙	INSTALL LIGHT TOWER (T1, T2)	2	EACH

PLOT SCALE -- 80.0000001.000000

PLOTTED FROM -- TRPR13315

FILE -- U:\RD\PR\BRUL01\FG\03C.DGN

PLOT NAME -- 5

# WIRING DIAGRAM

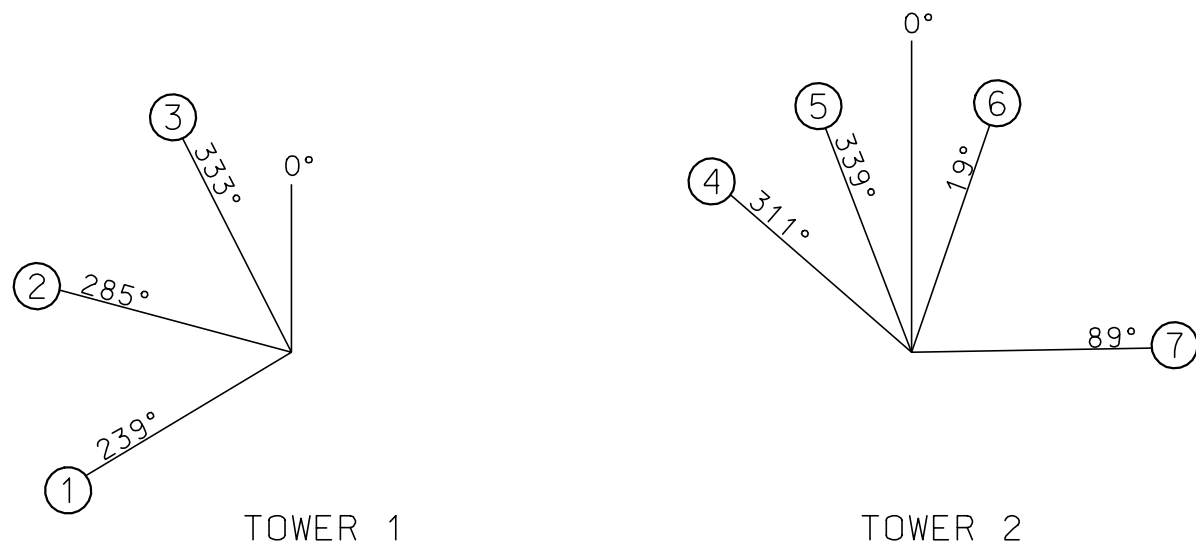
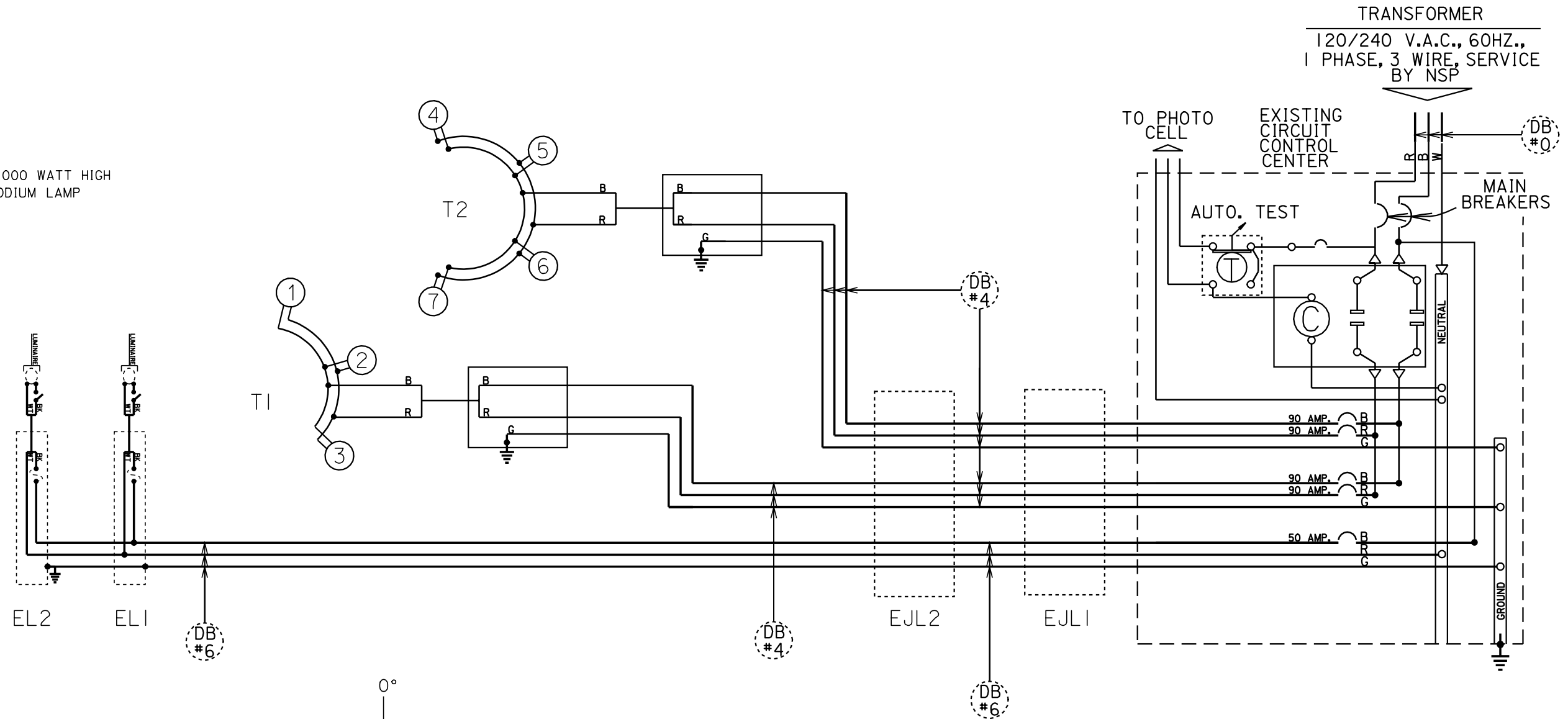
## CHAMBERLAIN REST AREA

Plotting Date: 16-OCT-2007

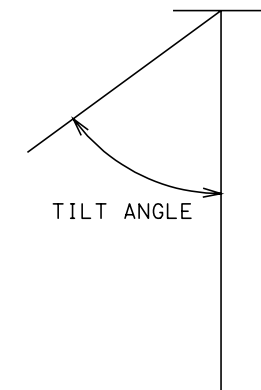
NOTE:  
All circuits shall be bonded in accordance with the NATIONAL ELECTRICAL CODE.  
Quantities for bonding conductors are not included in these plans.

**LEGEND:**

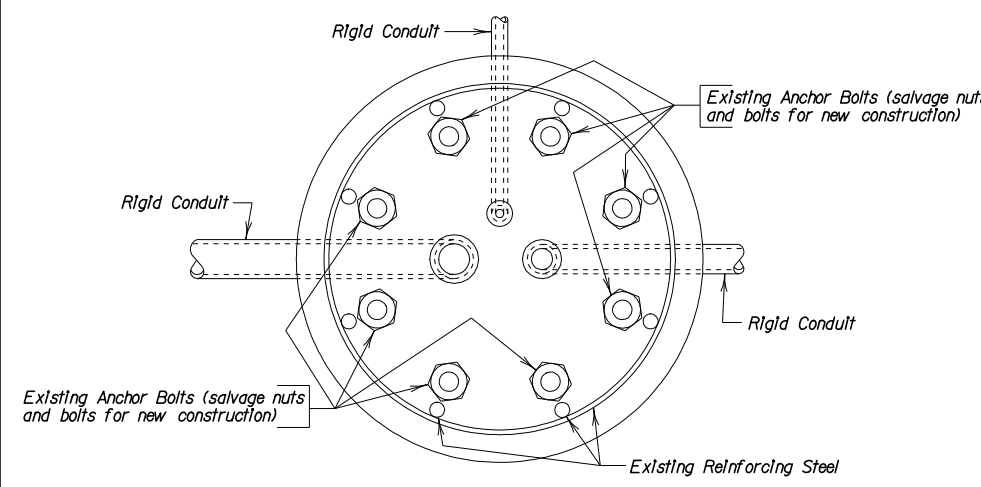
- FUSE: EXISTING
- LUMINAIRE: EXISTING
- LUMINAIRE: RELOCATED 1000 WATT HIGH PRESSURE SODIUM LAMP



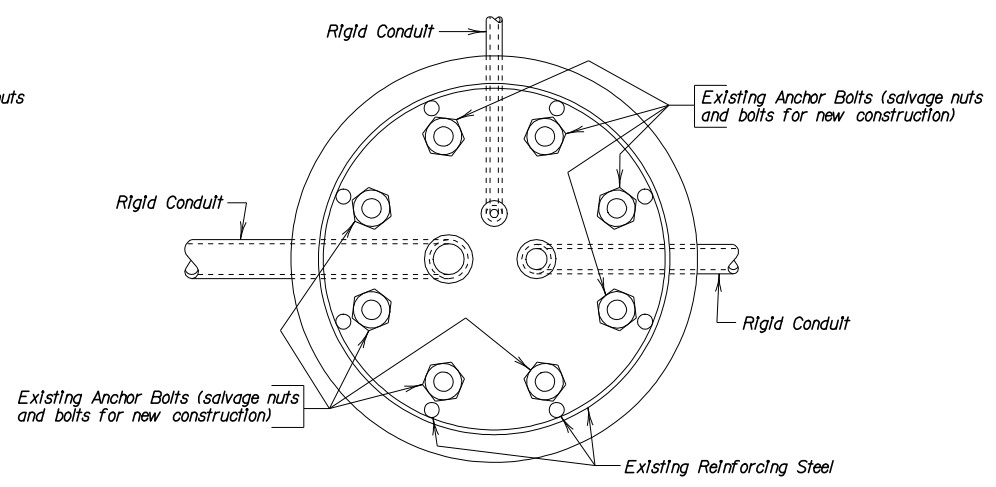
LUMINAIRE TILT ANGLE	
LUMINAIRE	ANGLE
1	72°
2	66°
3	72°
4	73°
5	70°
6	65°
7	72°



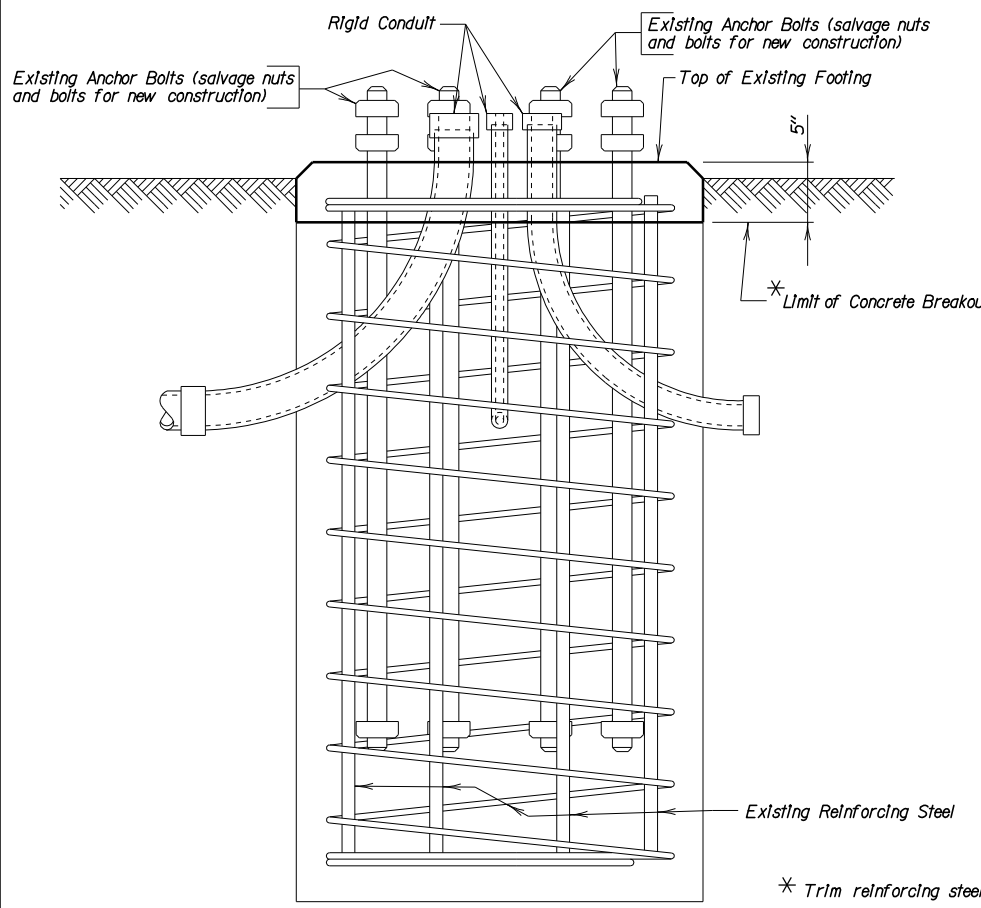
LUMINAIRE AIMING ANGLE  
0° IS DUE NORTH



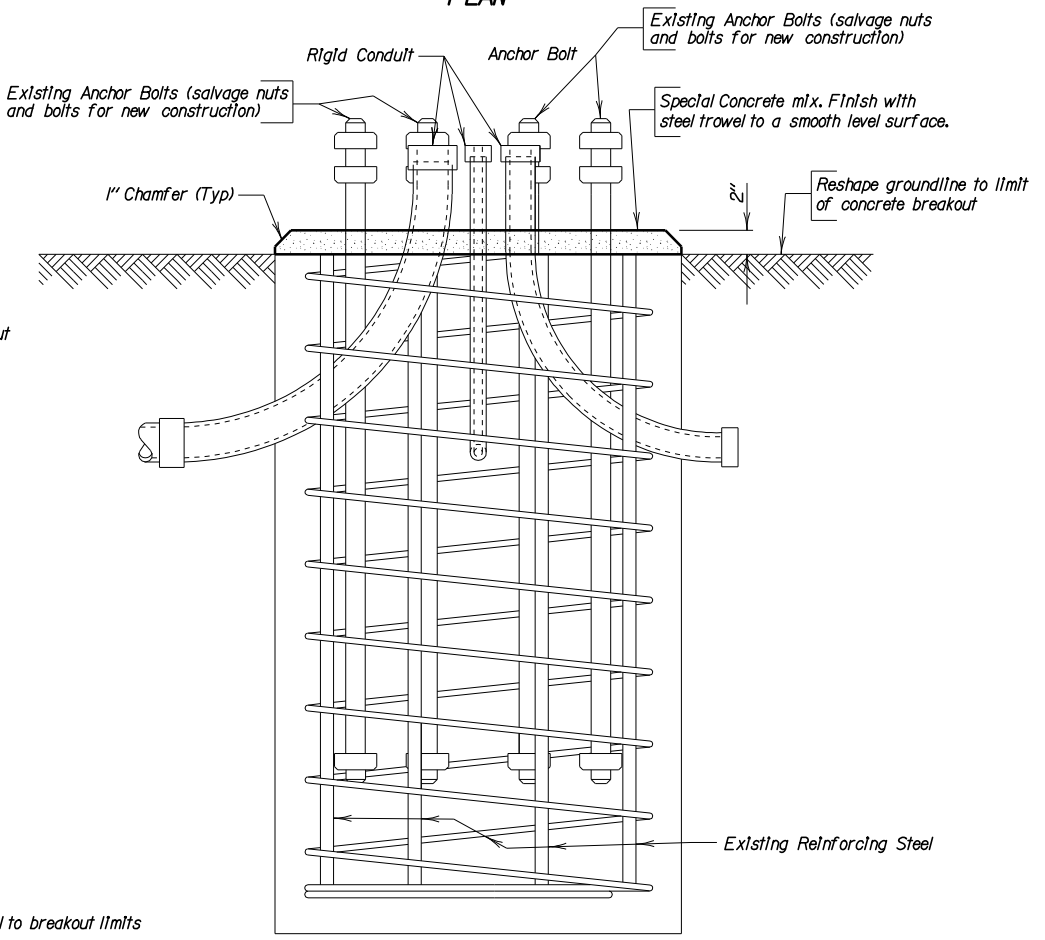
PLAN



PLAN



ELEVATION  
(Showing Limits of Concrete Breakout)



ELEVATION  
(Footing after reconstruction)

LIGHT POLE FOOTING MODIFICATION