Task Order Request #25-008 - U-Line OCS Upgrades

Status	Open	**Assignees**	Greg Thurston
Created Date	Mar 12, 2025	**Issued Date**	Mar 12, 2025

TASK ORDER IDENTIFICATION

Contract No	24-03814		
Contractor Name ("Contractor")	ROCKY MOUNTAIN SYSTEMS SERVICES	**Contract Start Date**	06/14/24
Account Code(s)	20-7398.65000.5002 OCS Wire Survey: Traffic Signals and Crossing Projection ($10,000) 20-7398.65000.5008 OCS Wire Survey: Hardware - Equipment ($621,543.51) 20-7398.68000.8003 OCS Wire Survey: PM for Design and Construction ($1,140,534.79) 20-7398.68000.8002 OCS Wire Survey: Engineering ($21,853) 20-7398.65000.5004 OCS Wire Survey: Traction Power Distribution - Catenary ($804,728)		

1.0 SCOPE OF SERVICES

The contractor's scope letter and price estimate is hereby attached and incorporated into this Task Order	25-008_U-Line OCS Upgrades_RMSS Proposal 52720-008b.pdf

2.0 SCHEDULE

The Substantial Completion Date for this Task is	11/01/25	**The Final Acceptance Date for this Task is**	11/30/25

3.0 PRICING

The pricing agreement for this item is one of the following:	Lump Sum	**Invoices will be billed on a monthly basis for completed work to date. The price for this item is in the amount of**	$2,598,659.30
Provisional Sum Amount (if applicable). Note: Any unused amount of this provisional sum amount will be deducted from the contract upon closeout of the task order.	N/A	**Independent Cost Estimate (ICE) link, if applicable**	25-008_U-Line OCS Upgrades_ICE.xlsx

4.0 APPLICABILITY OF FEDERAL CLAUSES

Does this Task Order include federal assistance funds which requires the	Yes	**If federal assistance funds are anticipated, the UTA Civil Rights group has set a**	2%

application of the Federal Clauses appended as Exhibit D to the Contract?	**Disadvantaged Business Enterprises (DBE) participation goal for this Task Order of**

UTAH TRANSIT AUTHORITY:

Required Signatures Explanation

Project Manager $0 - 24,999
Legal Review $10k or greater
Dir. of Capital Projects $25k - 74,999
Chief Service Dev. Ofcr. $75k - 199,999
Executive Director $200,000+
Procurement/Contracts (for all)

Signature (Legal)

DocuSigned by:
By: Mike Bell
70E33A415BA44F6...
Name: Mike Bell
Date: 3/17/2025

PM Approval

The costs associated with this item have been measured against the standard schedule of rates and the agreed contract pricing, (where applicable) and have been deemed consistent and appropriate for the proposed scope of work.

Signature (Project Manager)

Signed by:
By:
C97F990ECB99456...
Name: Greg Thurston
Date: 3/14/2025

Director Approval

I have evaluated the content of this task order and the scope of work described in the task ordering agreement and have made the determination that this Task Order is within the scope of work contemplated and described by the contracting parties when they executed the original task ordering agreement.

Signature (Director)

Signed by:
By:
91ABD751A0BD4BE...
Name: Jared Scarbrough
Date: 3/17/2025

Signature (Procurement)

By: _____
Name: _____
Date: _____

Signature (Chief Service Development Officer)

By: _____
David Hancock, Chief Service Development Officer
Date: _____

Signature (Executive Director)

By: _____
Jay Fox, Executive Director
Date: _____

COMPANY:

COMPANY: ROCKY MOUNTAIN SYSTEMS SERVICES

RMSS Required Signature Explanation

- Up to $100K – Josh Lafleur (jlafleur@modrailsystems.com)
- $100K - $500K – Anthony Ortolani (aortolani@modrailsystems.com)
- $500K – $2.5M - Shon Tulik (stulik@modrailsystems.com)
- >$2.5M or Contract Time Extensions – Paul Reiger (prieger@modrailsystems.com)

Signature (Contractor)

DocuSigned by:
By: Paul Rieger
6534325C1D0847B...
Name: Paul Rieger
Date: 3/14/2025

ROCKY MOUNTAIN SYSTEMS SERVICES

March 13th, 2025 RMSS-52720-008b

Mr. Greg Thurston
Project Manager for Traction Power Systems
2264 South 900 West
Salt Lake City, UT 84119

Reference: Utah Transit Authority – Systems On-Call Services

Subject: Revised PTO022 University Line OCS and Traction Power Maintenance 2025

Greg,

Rocky Mountain Systems Services (RMSS) is pleased to provide a proposal for self-performing maintenance and upgrades to the University Line overhead catenary and traction power systems. Work under this task order is anticipated to take place in the summer of 2025. Also included in this proposal is a lump sum amount for upgrading welded track connections to bolted connections and replacing aging bonding cable.

- The lump sum price for the U-Line OCS Maintenance is **$2,276,408.82**
- The lump sum price for Track Connection Rehabilitation is: **$322,250.48**

The scope of work covered in this proposal is as follows:

General Description

In order to maximize the utilization of track access and shutdown activities UTA has coordinated the following elements with RMSS to be completed during scheduled system outages of the University Line in the summer of 2025:

- Rice Interlocking crossover OCS reconfiguration
- Overhead catenary system (OCS) maintenance from 900E to Health Sciences Station
- Auto-tensioner Tensorex C+ upgrades from 900E to Health Sciences Station
- Welded to bolted rail connection rehabilitation from Main Street to Health Sciences Station

Each element will be described in detail in the attached exhibits and sections below.

1. Rice Interlocking OCS Reconfiguration

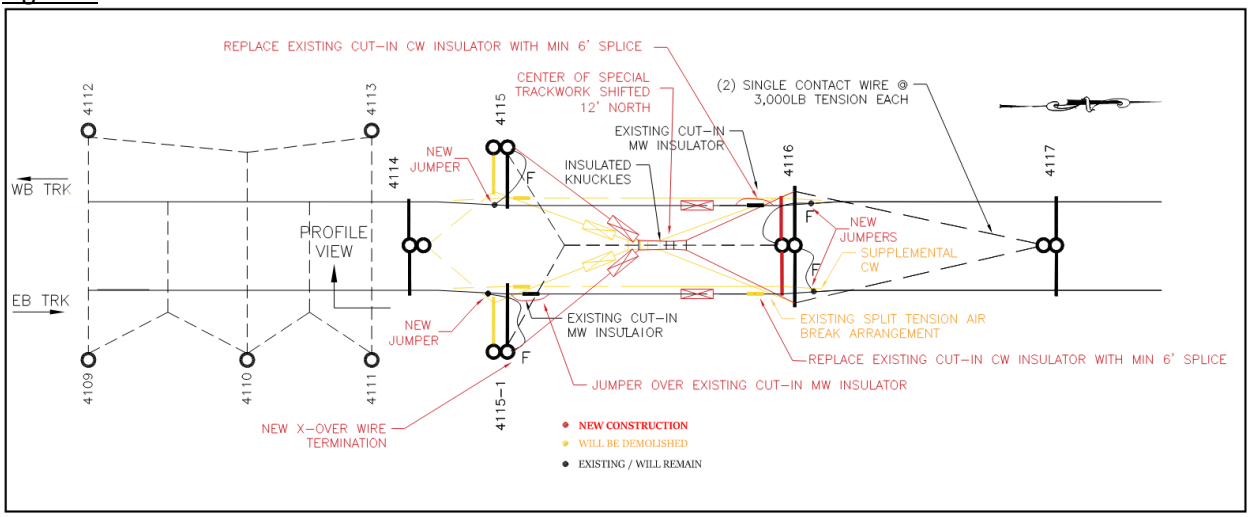
The diamond crossover at Rice Interlocking is being replaced during the scheduled system outage in the summer of 2025. The geometry of the trackwork is being modified in order to provide some extra distance between the mainline curve to the south and the south end of the crossover special trackwork. This modification to the crossover geometry requires some minor OCS reconfiguration through the crossovers.

Rice Interlocking OCS Reconfiguration Installation

The following installation activities outlined below and shown in Figure 1 are included in the scope of this proposal:

- The main-line air-break assemblies will be removed on both tracks. The existing messenger wire cut-in insulators on both tracks will be jumpered to maintain continuity. Existing cut-in insulators on the contact wires will be spliced to a section of new contact wire a minimum of 6-feet long.
- Repurpose arial head-guy hardware. Knuckles will be moved 12-feet north to align over new crossover centerline. The crossover knuckles will be reconfigured per drawing “OC147”.
- Existing crossover WR#13 termination will be moved from structure 4114 to structure 4115-1.
- Existing crossover WR#14 termination will be moved from structure 4114 to structure 4115.
    a. The pole deflection for structures 4115 and 4115-1 at the top of pole will be a maximum of 2 3/8” toward the track and 1 7/8” perpendicular to the track under the worst-case operating conditions.
- New section insulators on the EB and WB tracks are to be installed 46 feet south of structure 4116. The existing section insulators on the crossover wires will be relocated per the details given on sheet “OC212”.
- The CA-07A and CA-07B cantilevers at structures 4115 and 4115-1 to be modified as shown on sheets “OC129” and “OC130”. Staggers to be adjusted as shown on the OCS layout plan.
- Pre-assemble two (2) new CA-11A type cantilevers.
- The CA-07A and CA-07B cantilevers at structure 4116 to be replaced with CA-11A cantilevers. The surge arrester to be relocated as required to achieve the new messenger wire height.
- The CA-10 cantilevers at structures 4115 and 4115-1 that support the crossover wires to be removed.
- New hangers and in-span jumpers are to be installed to achieve the designed wire height.
    a. The existing insulated cables of the feeders and the surge arresters will remain. 500 MCM Superflex bare copper jumper cable and clamps will be installed new.
- Contact wire bridge assemblies to be installed at crossover and mainline contact wire crossing points

Figure 1



2. Overhead Catenary System (OCS) Maintenance

Included in this scope of work is the maintenance of elements of the OCS system on the University Line between 900E and the Medical Center.

Installation

The OCS maintenance scope includes:

- Insulated Saddle and Hanger Replacement
  - Replacement of aging insulated messenger wire saddles on tangent wire sections between OCS poles 4069 to 5079 as shown on *"Appendix D – University Line OCS Upgrades and Maintenance Exhibit"*
- Replacement of worn contact wire sections including the hangers at the following locations:
  - Between OCS poles 4069 to 4094 (~2,100') on the eastbound track
  - At OCS pole 5053 adjacent to'. Douglas Station (~20') on the eastbound track
  - Between OCS Poles 5057 to 5059 (~100') on the eastbound track
  - Between OCS Poles 5077 to 5078 (~100') on the westbound track
- Replacement of pole mounted surge arrestors at the following locations:
  - Four (4) surge arrestors at feeder Pole 4070
  - Two (2) surge arrestors at feeder Pole 4115 / 4115-1
  - Two (2) surge arrestors at feeder Pole 4116
  - Four (4) surge arrestors at feeder Pole 5078
- Replacement of mid-point anchor assemblies at the following locations:
  - At OCS pole 4093
  - At OCS pole 4095
  - At OCS pole 5017
  - At OCS pole 5019
  - At OCS pole 5051
  - At OCS Pole 5054

3. Tensorex C+ OCS Spring Tensioner Upgrades

Included in this scope of work is the upgrade of existing balance weight assemblies from their current configuration to the Tensorex auto-tensioning devices.

Installation

The scope of the Tensorex C+ spring tensioner upgrade work is as follows:

- Prior to setting new spring tensioners at their final condition, the midpoint anchor assembly tension and the cantilever along track movement to be verified to original design condition at the following structures:
  - 4094 EB & WB
  - 4051 EB & WB
  - 4052 EB & WB
  - 5018 EB & WB
  - 5052 EB & WB
  - 5053 EB & WB

- Existing **reduced** tension SCAT balance weight termination assemblies will be replaced with Tensorex C+ spring tensioners at the following structures,
  - 4127
  - 4128
  - 5036
  - 5037
- Reduced Tension Installation Details:
  - Termination height will remain the same
  - Existing messenger and contact wire termination clamps to remain on the conductors and reused in new termination arrangements.
  - Termination insulators are to be located at 4’-0” minimum horizontal offset from super-elevated track centerline.
  - Hangers are to be located and adjusted or new hangers to be installed to cause the out of running contact wire to be above the in-running contact wire level over the entire span.
  - Equalizing jumpers to be replaced as necessary to enable full along track movement without binding or lifting and to be adjusted to avoid fouling the pantograph under any operating conditions.
- Existing **nominal** tension SCAT balance weight termination assemblies will be replaced with Tensorex C+ spring tensioners at the following structures,
  - 4068
  - 4069
  - 4071
  - 4072
  - 4107
  - 4108
  - 4124
  - 4125
  - 5039

  - 5040
  - 5079
  - 5080
- Nominal Tension Installation Details:
  - Messenger wire termination height to be increased by 12” from existing termination height.
  - Contact wire termination height to be decreased by 11” from existing termination height.
  - Existing messenger and contact wire termination clamps to remain on the conductors and reused in new termination arrangements.
  - Termination insulators are to be located at 4’-0” minimum horizontal offset from super-elevated track centerline.
  - Hangers are to be located and adjusted or new hangers to be installed to cause the out of running contact wire to be above the in-running contact wire level over the entire span.
  - Equalizing jumpers to be replaced as necessary to enable full along track movement without binding or lifting and to be adjusted to avoid fouling the pantograph under any operating conditions.
- A detailed workplan includes the means and methods of removing balance weight stack, rigging systems during termination replacement, and final setting of spring tensioners to be submitted for RMSS/UTA approval.

4. Welded to Bolted Rail Connection Upgrades from Main Street to Health Sciences Station

RMSS will perform the following rehabilitation to embedded track connection locations as follows:

Cactus St. & 400 S - 3+00 (Location 1)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2	~60’	By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

200 E & 400 S - 19+41 (Location 2)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	3x500 Kcmil	4	3	~120’	By others

Box #2	3x500 Kcmil	4	3	N/A	By others
Box #3	3x500 Kcmil	4	3	~100’	By others
Pull Box	N/A	N/A	N/A	~100’	N/A
Box #6	3x500 Kcmil	4	3	N/A	By others
Box #5	3x500 Kcmil	4	3	~120’	By others
Box #4	3x500 Kcmil	4	3		By others

*Cembre quantities include one spare per track box.

400 E & 400 S - 36+50 (Location 3)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2	~80’	By others
Box #2	4x500 Kcmil	5	4	~60’	By others
Box #3	4x500 Kcmil	5	4	~80’	By others
Box #4	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

Trolley Square - 53+50 (Location 4)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2	~80’	By others
Box #2	4x500 Kcmil	5	4	~60’	By others
Box #3	4x500 Kcmil	5	4	~80’	By others
Box #4	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

200 W – Sta. 730+00 (Location 5)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	~80’	By others

*Cembre quantities include one spare per track box.

700 S – Sta 745+20 (Location 6)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	~80’	By others

*Cembre quantities include one spare per track box.

700 S – Sta 748+45 (Location 7)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	~80’	By others

*Cembre quantities include one spare per track box.

500 S – Sta. 765+50 (Location 8)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	~80’	By others

*Cembre quantities include one spare per track box.

Main St. & 300 S – 782+55 (Location 9)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	3x500 Kcmil	4	3		By others
Box #3	3x500 Kcmil	4	3	~120’	By others
Box #2	3x500 Kcmil	4	3	N/A	By others
Pull Box	N/A	N/A	N/A	N/A	N/A
Box #5	3x500 Kcmil	4	3	N/A	By others
Box #6	3x500 Kcmil	4	3	N/A	By others
Box #4	3x500 Kcmil	4	3	~120’	By others

*Cembre quantities include one spare per track box.

Temple Square – Sta. 819+11 (Location 10)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others

				~80’	
Box #4	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

Delta Center – Sta. 835+22 (Location 11)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
				~80’	
Box #2	4x500 Kcmil	5	4		By others
				~60’	
Box #3	4x500 Kcmil	5	4		By others
				~80’	
Box #4	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

Delta Center – Sta.837+80 (Location 12)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	3x500 Kcmil	4	3		By others
				~120’	
Box #4	3x500 Kcmil	4	3		By others
				N/A	
Box #2	3x500 Kcmil	4	3		By others
				N/A	
Pull Box	N/A	N/A	N/A		N/A
				N/A	
Box #3	3x500 Kcmil	4	3	N/A	By others

*Cembre quantities include one spare per track box.

Main Temple - Sta.793+01 (Location 13)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
				~80’	
Box #2	4x500 Kcmil	5	4	~60’	By others

Box #3	4x500 Kcmil	5	4	~80’	By others
Box #4	2x500 Kcmil	3	2		By others

*Cembre quantities include one spare per track box.

Main Temple & 100 S Sta.796+85 (Location 14)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	80’	By others

*Cembre quantities include one spare per track box.

Location 15 – 9th South TPS (Location 15)

RMSS will provide the following items for future installation:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #1	3x500 Kcmil	4	3		By others
Box #5	3x500 Kcmil	4	3	~120’	By others
Box #2	3x500 Kcmil	4	3	N/A	By others
Pull Box	N/A	N/A	N/A	N/A	N/A
Box #4	3x500 Kcmil	4	3	N/A	By others
Box #6	3x500 Kcmil	4	3	N/A	By others
Box #3	3x500 Kcmil	4	3	~120’	By others

*Cembre quantities include one spare per track box.

500 S & 1200 E (Location 16)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box

Box #1	2x500 Kcmil	3	2		By others
Box #2	4x500 Kcmil	5	4	~80’	By others
Box #3	4x500 Kcmil	5	4	~60’	By others
Box #4	2x500 Kcmil	3	2	~80’	By others

*Cembre quantities include one spare per track box.

500 S & 1300 E – 101+80 (Location 17)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #1	2x500 Kcmil	3	2	~230’	By others
Box #2	2x500 Kcmil	3	2	~180’	By others
Box #5	2x500 Kcmil	3	2	~130’	By others
Box #6	2x500 Kcmil	3	2	~90’	By others
IB	4x500 Kcmil	N/A	4	N/A	N/A

	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #8	2x500 Kcmil	3	2	~230’	By others
Box #7	2x500 Kcmil	3	2	~180’	By others
Box #4	2x500 Kcmil	3	2	~130’	By others
Box #3	2x500 Kcmil	3	2	~90’	By others
IB	4x500 Kcmil	N/A	4	N/A	N/A

*Cembre quantities include one spare per track box.

TPS E4 – Sta. 173+00 (Location 20)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #1	2x500 Kcmil	3	2	~180’	By others

Box #2	2x500 Kcmil	3	2	~100’	By others
IB	4x500 Kcmil	N/A	4	N/A	N/A
	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #3	2x500 Kcmil	3	2	~100’	By others
Box #4	2x500 Kcmil	3	2	~180’	By others
IB	4x500 Kcmil	N/A	4	N/A	N/A

*Cembre quantities include one spare per track box.

TPS E5 – Sta. 196+00 Double XO (Location 21)

RMSS will remove and install the following items:

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #11	6x500 Kcmil	7	6	~120’	By others
Box #12	3x500 Kcmil	4	3		By others

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #10	6x500 Kcmil	7	6	~120’	By others
Box #9	3x500 Kcmil	4	3		By others

	Existing Connections	Cembre	Lugs	Cable	Track Box
Box #7	2x500 Kcmil	3	2	N/A	By others
Box #8	2x500 Kcmil	3	2		By others

	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #1	2x500 Kcmil	3	2	~80’	By others
Box #2	2x500 Kcmil	3	2	~100’	By others
Box #3	2x500 Kcmil	3	2	~120’	By others
IB	6x500 Kcmil	N/A	6	N/A	N/A

	Existing Connections	Cembre	Lugs	Cable to IB	Track Box
Box #6	2x500 Kcmil	3	2	~ 80’	By others
Box #4	2x500 Kcmil	3	2	~100’	By others
Box #5	2x500 Kcmil	3	2	~120’	By others
IB	6x500 Kcmil	N/A	6	N/A	N/A

*Cembre quantities include one spare per track box.

Deliverables:

The following deliverables are included in the scope of work:

Deliverable	Due
Step-by-step work plans and Job Hazard Analysis (JHA)	5/9/2025
Safety & Testing Equipment Calibration Certification	5/9/2025
Hour-by-hour Installation Schedule	5/9/2025
Pre-Construction Kick-off Meeting	5/12/2025
Acceptance Measurements	8/31/2025
Test Reports	8/31/2025
Rice Interlocking Reconfiguration – Structural Erection Drawings	8/31/2025
As-in-service OCS plan set	8/31/2025

Execution Timeline

An anticipated timeline for the execution of this scope of work is attached to this RFQ as *“Appendix C – Execution Timeline”*.

- Prefabrication efforts may occur prior to scheduled system shutdown if material is available.
- Rice Interlocking OCS Reconfiguration efforts must occur after completion of track work.

Assumptions

- The scope and pricing of this proposal is based on UTA OCS Specifications for the Mid-Jordan Line dated 12/05/2008

Attachments

- Appendix A – Materials
- Appendix B – Execution Timeline
- Appendix C – University Line OCS Upgrades and Maintenance Exhibit

This proposal is valid for 60 days, unless extended in writing by RMSS.
If you need any additional information, please don't hesitate to contact us.

Sincerely,

Ozgun Yilmaz
Project Engineer
Rocky Mountain Systems Services

cc:

Marshall Wilson – RMSS
Anthony Ortolani – RMSS
Josh LaFleur - RMSS

Our pricing is in U.S. Dollars, F.O.B. Salt Lake City UT, and excludes all allowances, taxes, tariffs, licenses, and permits.

ROCKY MOUNTAIN SYSTEMS SERVICES

Appendix A:

Rice Interlocking Reconfiguration Permanent Materials

Item No	Manuf. Part No	Description	Unit	Qty	Estimated Delivery Date
63	SHS34T	SPLICE, HIGH SPEED, 350 MCM CW	EA	5	3/13/2025
72	055375-3001	CLAMP, CLEVIS 2" PIPE	EA	5	4/24/2025
80	700340-2	CAP, 2" PIPE	EA	3	2/27/2025
93	056463-3002	EYE, 2" SCH 40 PIPE	EA	3	2/27/2025
201	057183-3003	SADDLE, INS. 2" PIPE (MESSENGER)	EA	3	4/24/2025
459	X	PIPE, 2" SCH 40 AST A53 GRADED B	FT	48	5/22/2025
91	0675026-8060	STEADY ARM, UNINSULATED, LT. DUTY	EA	3	5/8/2025
106	056909-3002	TRANS*LITE TRUT 2" SCH 40	EA	5	5/8/2025
205	674999	CLAMP, INSULATED SWIVEL	EA	3	4/24/2025
194	018988-3001	CLAMP, UNIVERSAL FEEDER (2 BOLT)	EA	62	4/24/2025
231	013853-3007	CLAMP, DUPLEX .81"-1.19"	EA	60	4/24/2025
22	X	500 KCMIL SUPERFLEX CU BARE CABLE	FT	207	2/27/2025
48	070776-2000	EYE, BALL ANSI 52-5 30K	EA	3	2/27/2025
73	055629-6150	TRANS*LITE, E/E, 5/8", 15.00 LG	EA	5	4/24/2024
117	057174-3001	CLAMP, STRAIGHTLINE MESS	EA	5	4/24/2025
220	014001-3007	CLAMP, DEADEND 350 KCMIL	EA	3	4/24/2025
294	087603-2000	CLEVIS, SOCKET ANSI 52-3	EA	3	4/24/2025
111	056997-3002	GRIP, SPIRAL GUY, 1/2" EHS GALVANIZED	EA	10	3/13/2025
168	070709-2000	SHACKLE, ANCHOR 3/4"	EA	3	4/24/2025
186	095683-3013	TURNBUCKLE, .75" X 12" J/E	EA	3	3/27/2025
503a	428-4-VM	SLEEVE, 1/8" COMPRESSION	EA	48	2/27/2025
656	6925960010	CAP, CRIMP	EA	48	4/24/2024
521	KMA-238-4	CATENARY HANGER CLAMP - MAC	EA	48	2/27/2025
502	301721	INSULATED THIMBLE	EA	48	3/13/2025
277	X	WIRE ROPE, 0.13" 7X19 SS	FT	120	2/27/2025
249	057603-3001	CONNECTOR, SPLIT-BOLT	EA	39	2/27/2025
250	055412-4001	ARMOR, 5/8" ROD	EA	5	2/27/2025

ROCKY MOUNTAIN SYSTEMS SERVICES

Item No	Manuf. Part No	Description	Unit	Qty	Estimated Delivery Date
394	057431-4001	ROPE, SYNTHETIC 0.305 DIA.	FT	58	5/22/2025
428	056626-4002	THIMBLE, 0.31" OPEN	EA	10	5/22/2025
637	TBC-LP-A02	TURNBUCKLE, LOOP TYPE, BRZ BODY. SS HDW	EA	10	5/22/2025
792	700300-27X	SECTION INSULATOR - TYPE KF	EA	3	4/24/2025
795	700360-1X	SUPPORT, TYPE KF SEC. INS	EA	5	4/24/2025
797	060470-6200	JUMPER, TYPE KF, SECTION INS.	EA	5	4/24/2025
799	700391-X	RUNNER, TYPE KF SEC INS	EA	5	4/24/2025
802	055629-6540	TRANS*LITE E/E, 0.63" 54.00 LG	EA	3	4/24/2025
488	056048-3003	CLAMP, CONTACT BRIDGE	EA	5	2/27/2025
489	X	PIPE 0.5: IPS SCH 40 (BRASS)	FT	15	4/24/2024
104	056626-4004	THIMBLE, 1/2" OPEN	EA	10	2/27/2025
N/A	X	BA-10 Termination Brackets	EA	4	5/22/2025
N/A	X	1/2" Galvanized EHS Steel Guy Strand	Ft	72	5/22/2025
N/A	X	3/8" Galvanized EHS Steel Guy Strand	Ft	250	5/22/2025
N/A	X	350 KCMIL CONTACT WIRE	Ft	100	2/27/2025

ROCKY MOUNTAIN SYSTEMS SERVICES

OCS Maintenance Permanent Materials

Item No	Manuf. Part No	Description	Unit	Qty	Estimated Delivery Date
225/III	SHS34T	SPLICE, HIGH SPEED, 350 MCM CW	Ea	12	2/15/2025
#201	057183-3003	SADDLE, INS. 2" PIPE (MESSENGER)	Ea	302	2/15/2025
#85	056088-4004	SLEEVE, 3/8" COMPRESSION	Ea	77	In Stock
#103	056626-4003	THIMBLE, 3/8" OPEN	Ea	82	In Stock
N/A	X	WIRE ROPE, .38" STAINLESS STEEL	Ft	500	In Stock
#191	059006-3002	SADDLE, DOUBLE INS. 2" PIPE	Ea	60	2/15/2025
#205	674999	CLAMP, INSULATED SWIVEL	Ea	182	2/15/2025
N/A	X	WIRE ROPE, .25" STAINLESS STEEL	Ft	505	In Stock
#84	056088-4002	SLEEVE, 1/4" COMPRESSION	Ea	257	2/15/2025
#73	055629-6150	TRANS*LITE, E/E, 5/8", 15.00 LG	Ea	29	2/15/2025
#220	014001-3007	CLAMP, DEADEND 350 KCMIL	Ea	3	2/15/2025
#111	056997-3002	GRIP, SPIRAL GUY, 1/2" GALV	Ea	44	2/15/2025
#168	070709-2000	SHACKLE, ANCHOR 3/4"	Ea	15	2/15/2025
#186	095683-3013	TURNBUCKLE, .75" X 12" J/E	Ea	15	2/15/2025
#706	OTC34T	HANGER CONTACT WIRE CLAMP	Ea	129	2/15/2025
#707	301721	INSULATED THIMBLE	Ea	129	2/15/2025
#104	056626-4004	THIMBLE, 1/2" OPEN	Ea	82	2/15/2025
N/A	X	1/2" Galvanized EHS Steel Guy Strand	Ft	2400	In Stock
#614	6925960030	CAP, CRIMP 0.25" Dia	Ea	257	2/15/2025
#616	0135/06/K55	0.25"OPEN THIMBLE	Ea	129	2/15/2025
#705	MHC81-19	MESSENGER HANGER CLAMP	Ea	129	2/15/2025
#145	058867-3001	STRANDVISE, 0.5" Galvanized	Ea	29	2/15/2025
#296	056574-3007	CLIP, 0.88 GUY OUTLINE U-Bolt	Ea	56	2/15/2025
#224	015332-2000	CLAMP, STRAIN 500 KCMIL OFFSET, HDG	Ea	15	2/15/2025
#199/I	135/15/T79/II	STRAIN CLAMP, CW	Ea	20	1/15/2025
171/I	135/14/LA1	LIGHTNING ARRESTOR 750 VDC, 970 MCOV	Ea	15	2/15/2025
N/A	X	350 KCMIL CONTACT WIRE	Ft	2500	In Stock
#345	057183-3004	MESSENGER SADDLE, SINGLE, STITCH BRIDLE, HDG	Ea	12	2/15/2025

ROCKY MOUNTAIN SYSTEMS SERVICES

Tensorex C+ OCS Spring Tensioner Permanent Materials

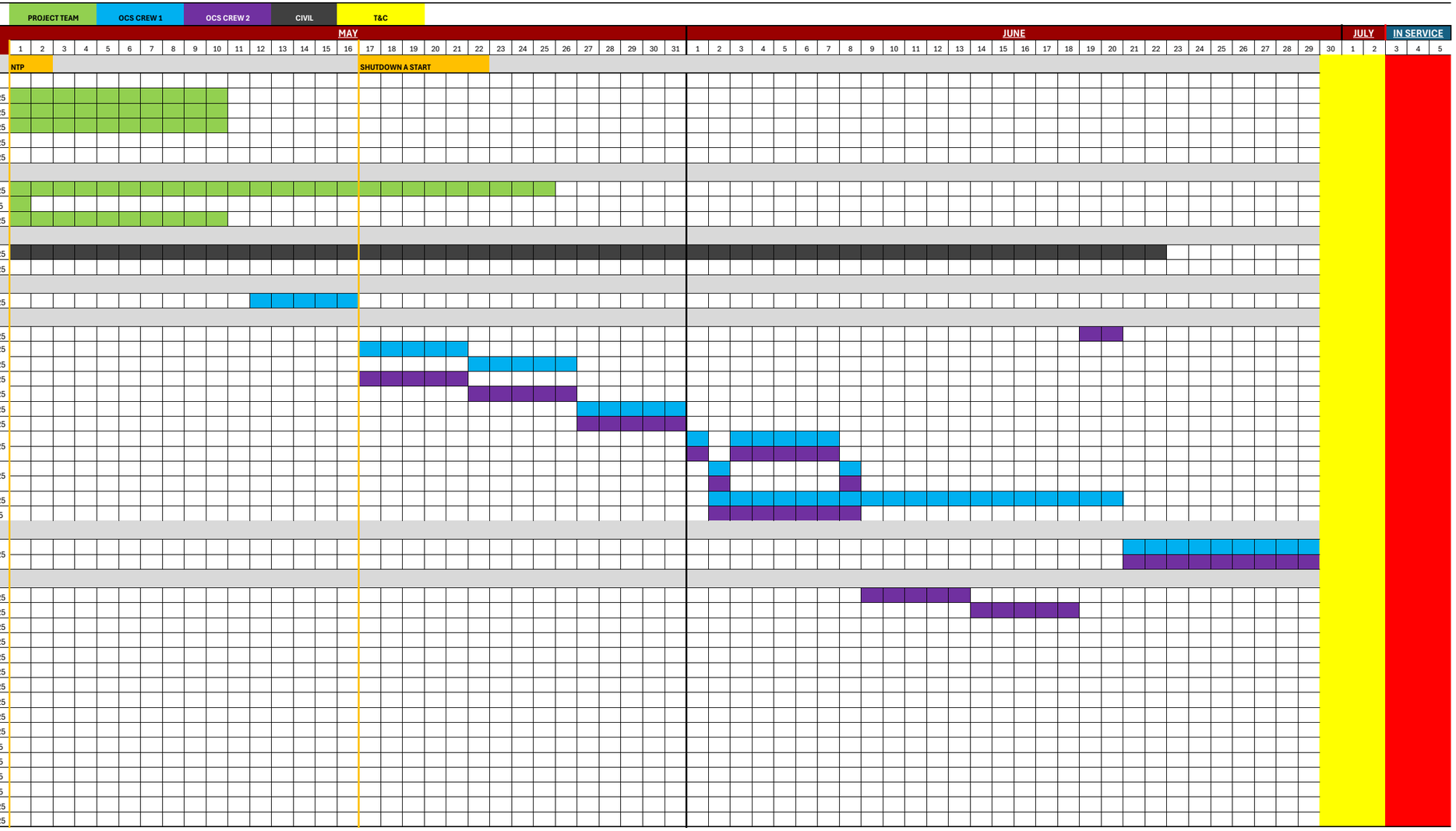
Item No	Manuf. Part No	Description	Unit	Qty	Estimated Delivery Date
194	018988-3001	CLAMP, UNIVERSAL FEEDER (2 BOLT)	Ea	77	4/24/2024
231	013853-3007	CLAMP, DUPLEX .81"-1.19"	Ea	58	4/24/2025
22	N/A	500 KCMIL SUPERFLEX CU BARE CABLE	Ft	231	2/27/2025
48	070776-2000	EYE, BALL ANSI 52-5 30K	Ea	44	2/27/2025
73	055629-6150	TRANS*LITE, E/E, 5/8", 15.00 LG	Ea	68	4/24/2025
294	087603-2000	CLEVIS, SOCKET ANSI 52-3	Ea	44	2/27/2025
75	055709-6150	TRANS*LITE, C/E, 5/8", 15.00 LG	Ea	10	4/24/2025
105	056626-4005	THIMBLE, 5/8" OPEN	Ea	77	2/27/2025
302	057464-4002	WIRE ROPE, 7 STRAND 1/2" EHS GALVANIZED	Ft	768	5/22/2025
111a	056997-3002	GRIP, SPIRAL GUY, 1/2" EHS GALVANIZED	Ea	77	3/13/2025
186	095683-3013	TURNBUCKLE, .75" X 12" J/E	Ea	39	3/27/2025
463	057196-4001	PLATE, YOKE (3K X 6K)	Ea	5	3/13/2025
503a	428-4-VM	SLEEVE, 1/8" COMPRESSION	Ea	144	2/27/2025
656	6925960010	CAP, CRIMP	Ea	144	4/24/2024
521	KMA-238-4	CATENARY HANGER CLAMP - MAC	Ea	144	2/27/2025
502	301721	INSULATED THIMBLE	Ea	144	3/13/2025
277	N/A	WIRE ROPE, 0.13" 7X19 SS	Ft	360	2/27/2025
88	043054-03	Bracket for 2xTRC+ Round Internal BWA Pole	Ea	14	5/8/2025
89	043054-04	Bracket for TRC+ Round Internal B	Ea	6	5/8/2025
90	N/A	Backing Plate	Ea	20	3/13/2025
78	N/A	3/4" All Thread Rod W/ Washers and Double Nuts	Set	20	3/13/2025
84	701142-TB12420	TENSOREX C+ 33.4 IN, 3000LBS	Ea	5	5/8/2025
85	701141-TB12420	TENSOREX C+ 33.4 IN, 6000LBS	Ea	9	5/8/2025
86	701360-TB12420	TENSOREX C+ 40.9 IN, 3000LBS	Ea	9	5/8/2025
87	701423-TB12420	TENSOREX C+ 40.9 IN, 6000LBS	Ea	9	5/8/2025
N/A	X	1/8” 7x19 Stainless Steel Wire Rope	Ft	480	2/27/2025
463	057196-4001	PLATE, YOKE (3K x 6K)	EA	5	3/13/2025

University Line OCS Maintenance and Upgrades
Execution Timeline

UNIVERSITY LINE OCS UPGRADES AND MAINTENANCE EXECUTION TIMELINE

PROJECT TEAM | OCS CREW 1 | OCS CREW 2 | CIVIL | T&C

No.	Activity Description	Work Crew	Start	Finish
PROJECT MANAGEMENT				
1	NTP	UTA		
2	DEVELOP WORK PLAN SUBMITTALS	Project Team	NTP	5/10/2025
3	SAFETY & TESTING EQUIPMENT CALIBRATION CERTIFICATION SUBMITTALS	Project Team	NTP	5/10/2025
4	HOUR-BY-HOUR SCHEDULE	Project Team	NTP	5/10/2025
5	COMPILE ACCEPTANCE MEASUREMENTS & SUBMIT	Project Team	NTP	5/10/2025
6	COMPILE TEST REPORTS & SUBMIT	Project Team	NTP	5/10/2025
PROCUREMENT				
7	PROCURE RICE OCS COMPONENTS	Project Team	1/2/2024	5/25/2025
8	PROCURE U-LINE MAINTENANCE MATERIALS (DELIVERED PRIOR TO MAY)	Project Team	10/3/2024	5/2/2025
9	PROCURE AUTO-TENSIONER UPGRADE MATERIALS	Project Team	1/2/2024	5/10/2025
CIVIL WORK				
10	RICE INTERLOCKING SPECIAL TRACKWORK REPLACEMENT	StacyWitbeck	5/1/2025	6/22/2025
11	S-CURVE RESTRAINING RAIL INSTALLATION	StacyWitbeck	7/6/2025	7/31/2025
PREFABRICATION				
12	PREFAB NEW CANTILIVERS, TERMINATION ASSEMBLIES, AND HANGERS	Crew 1	5/1/2025	6/22/2025
U LINE MAINTENANCE				
13	SURGE ARRESTER REPLACEMENT	Crew 2	6/19/2025	6/20/2025
14	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 4093	Crew 1	5/17/2025	5/21/2025
15	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 4095	Crew 1	5/22/2025	5/26/2025
16	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5051	Crew 2	5/17/2025	5/21/2025
17	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5054	Crew 2	5/22/2025	5/26/2025
18	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5017	Crew 1	5/27/2025	5/31/2025
19	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5019	Crew 2	5/27/2025	5/31/2025
20	CONTACT WIRE REPLACEMENT ON S-CURVE (~2,100')	Crew 1	5/17/2025	5/23/2025
21		Crew 2		
22	CONTACT WIRE REPLACEMENT ALL OTHER LOCATIONS	Crew 1	5/18/2025	5/24/2025
23		Crew 2		
24	INSULATED HANGER, MESSENGER WIRE SADDLE. AND CONTACT WIRE	Crew 1	6/2/2025	7/16/2025
25	CLAMP REPLACEMENT	Crew 2	6/2/2025	6/8/2025
RICE INTERLOCKING OCS RECONFIGURATION				
26	RICE INTERLOCKING OCS RECONFIGURATION	Crew 1	5/23/2025	5/29/2025
27		Crew 2		
TENSOREX C+ INSTALL				
28	TENSOREX C+ INSTALL AT 4068 (SPT-01B)	Crew 2	6/10/2025	6/13/2025
29	TENSOREX C+ INSTALL AT 4069 (SPT-01B)	Crew 2	6/14/2025	6/18/2025
30	TENSOREX C+ INSTALL AT 4107 (SPT-01A)	Crew 2	7/6/2025	7/10/2025
31	TENSOREX C+ INSTALL AT 4108 (SPT-01A)	Crew 2	7/11/2025	7/16/2025
32	TENSOREX C+ INSTALL AT 4071 (SPT-01B)	Crew 2	7/17/2025	7/21/2025
33	TENSOREX C+ INSTALL AT 4072 (SPT-01B)	Crew 1	7/17/2025	7/21/2025
34	TENSOREX C+ INSTALL AT 4127 (SPT-02) (REDUCED)	Crew 2	7/22/2025	7/25/2025
35	TENSOREX C+ INSTALL AT 4128 (SPT-02) (REDUCED)	Crew 1	7/22/2025	7/25/2025
36	TENSOREX C+ INSTALL AT 4124 (SPT-01A)	Crew 2	7/26/2025	7/30/2025
37	TENSOREX C+ INSTALL AT 4125 (SPT-01A)	Crew 1	7/26/2025	7/30/2025
38	TENSOREX C+ INSTALL AT 5039 (SPT-01B)	Crew 2	7/31/2025	8/4/2025
39	TENSOREX C+ INSTALL AT 5040 (SPT-01B)	Crew 1	7/31/2025	8/4/2025
40	TENSOREX C+ INSTALL AT 5036 (SPT-02) (REDUCED)	Crew 2	8/5/2025	8/9/2025
41	TENSOREX C+ INSTALL AT 5037 (SPT-02) (REDUCED)	Crew 1	8/5/2025	8/9/2025
42	TENSOREX C+ INSTALL AT 5080 (SPT-01B)	Crew 2	8/10/2025	8/13/2025
43	TENSOREX C+ INSTALL AT 5079 (SPT-01B)	Crew 1	8/10/2025	8/13/2025



**** Execution timeline is subject to change based on collaborative scheduling efforts with owner and other contractors leading up to shutdown activities.**

University Line OCS Maintenance and Upgrades
Execution Timeline

UNIVERSITY LINE OCS UPGRADES AND MAINTENANCE EXECUTION TIMELINE

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4	HOUR-BY-HOUR SCHEDULE	Project Team	NTP	5/10/2025
5	COMPILE ACCEPTANCE MEASUREMENTS & SUBMIT	Project Team	NTP	5/10/2025
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PROCUREMENT				
7	PROCURE RICE OCS COMPONENTS	Project Team	1/2/2024	5/25/2025
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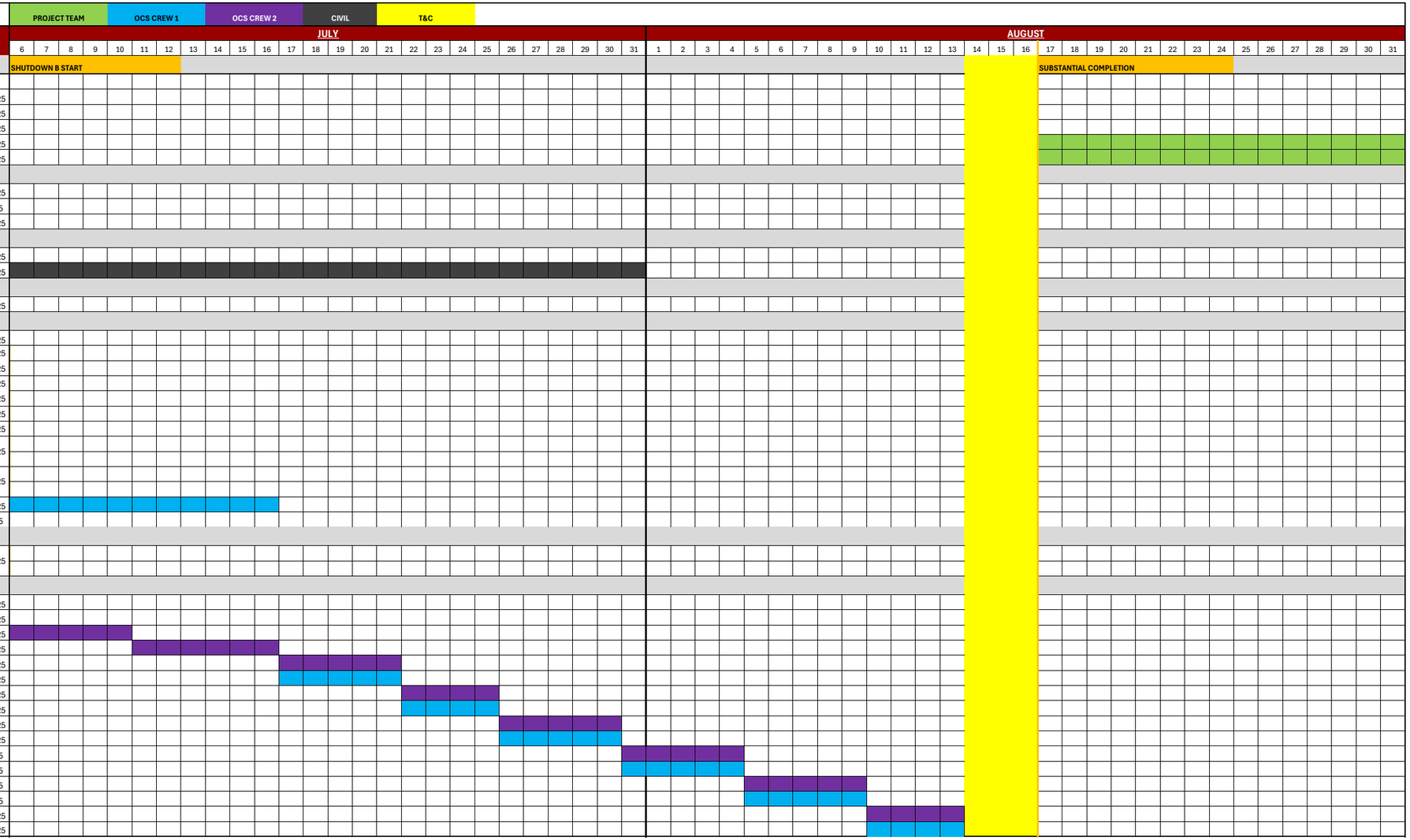
PREFABRICATION				
12	PREFAB NEW CANTILIVERS, TERMINATION ASSEMBLIES, AND HANGERS	Crew 1	5/1/2025	6/22/2025
U LINE MAINTENANCE				
13	SURGE ARRESTER REPLACEMENT	Crew 2	6/19/2025	6/20/2025
14	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 4093	Crew 1	5/17/2025	5/21/2025
15	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 4095	Crew 1	5/22/2025	5/26/2025
16	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5051	Crew 2	5/17/2025	5/21/2025
17	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5054	Crew 2	5/22/2025	5/26/2025
18	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5017	Crew 1	5/27/2025	5/31/2025
19	MID-POINT ANCHOR ASSEMBLY REPLACEMENT - OCS POLE 5019	Crew 2	5/27/2025	5/31/2025
20	CONTACT WIRE REPLACEMENT ON S-CURVE (~2,100')	Crew 1	5/17/2025	5/23/2025
21		Crew 2		
22	CONTACT WIRE REPLACEMENT ALL OTHER LOCATIONS	Crew 1	5/18/2025	5/24/2025
23		Crew 2		
24	INSULATED HANGER, MESSENGER WIRE SADDLE. AND CONTACT WIRE	Crew 1	6/2/2025	7/16/2025
25	CLAMP REPLACEMENT	Crew 2	6/2/2025	6/8/2025
RICE INTERLOCKING OCS RECONFIGURATION				
26	RICE INTERLOCKING OCS RECONFIGURATION	Crew 1	5/23/2025	5/29/2025
27		Crew 2		
TENSOREX C+ INSTALL				
28	TENSOREX C+ INSTALL AT 4068 (SPT-01B)	Crew 2	6/10/2025	6/13/2025
29	TENSOREX C+ INSTALL AT 4069 (SPT-01B)	Crew 2	6/14/2025	6/18/2025
30	TENSOREX C+ INSTALL AT 4107 (SPT-01A)	Crew 2	7/6/2025	7/10/2025
31	TENSOREX C+ INSTALL AT 4108 (SPT-01A)	Crew 2	7/11/2025	7/16/2025
32	TENSOREX C+ INSTALL AT 4071 (SPT-01B)	Crew 2	7/17/2025	7/21/2025
33	TENSOREX C+ INSTALL AT 4072 (SPT-01B)	Crew 1	7/17/2025	7/21/2025
34	TENSOREX C+ INSTALL AT 4127 (SPT-02) (REDUCED)	Crew 2	7/22/2025	7/25/2025
35	TENSOREX C+ INSTALL AT 4128 (SPT-02) (REDUCED)	Crew 1	7/22/2025	7/25/2025
36	TENSOREX C+ INSTALL AT 4124 (SPT-01A)	Crew 2	7/26/2025	7/30/2025
37	TENSOREX C+ INSTALL AT 4125 (SPT-01A)	Crew 1	7/26/2025	7/30/2025
38	TENSOREX C+ INSTALL AT 5039 (SPT-01B)	Crew 2	7/31/2025	8/4/2025
39	TENSOREX C+ INSTALL AT 5040 (SPT-01B)	Crew 1	7/31/2025	8/4/2025
40	TENSOREX C+ INSTALL AT 5036 (SPT-02) (REDUCED)	Crew 2	8/5/2025	8/9/2025
41	TENSOREX C+ INSTALL AT 5037 (SPT-02) (REDUCED)	Crew 1	8/5/2025	8/9/2025
42	TENSOREX C+ INSTALL AT 5080 (SPT-01B)	Crew 2	8/10/2025	8/13/2025
43	TENSOREX C+ INSTALL AT 5079 (SPT-01B)	Crew 1	8/10/2025	8/13/2025



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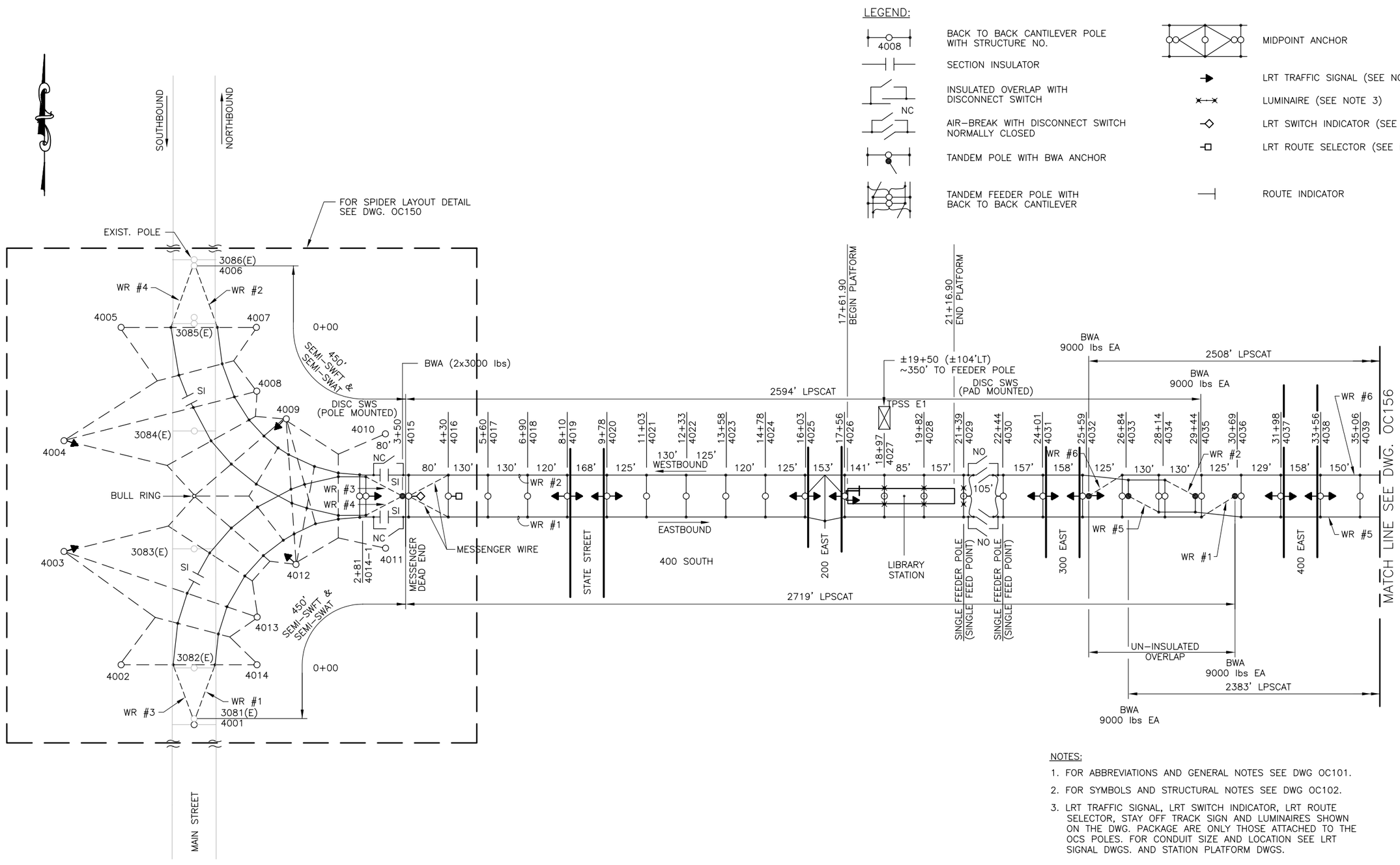

NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG OC101.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG OC102.
3. LRT TRAFFIC SIGNAL, LRT SWITCH INDICATOR, LRT ROUTE SELECTOR, STAY OFF TRACK SIGN AND LUMINAIRES SHOWN ON THE DWG. PACKAGE ARE ONLY THOSE ATTACHED TO THE OCS POLES. FOR CONDUIT SIZE AND LOCATION SEE LRT SIGNAL DWGS. AND STATION PLATFORM DWGS.

THIS PRINT IS HALF SIZE REPRODUCED

REV	DATE	Description
6	2/15/02	AS-BUILT
		REVISION BLOCK
5	8/24/01	DELETED STAY OFF-TRACK SIGN
4	5/4/01	DELETED STRUCTURES 4025-1, 4026-1
3	3/30/01	INCORPORATED LATEST COMMENTS
2	3/2/01	ADDED LUMINAIRE ON OCS POLES
0	12/7/00	ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
GERARDO N. TERRADO
4770088-2202
STATE OF UTAH
EXPIRES: 12/31/2002
NOT VALID UNLESS SIGNED

A Joint Venture of
CH2MHILL
Hatch Mott MacDonald
STV Incorporated
CHS DESIGNERS

UTA TRAX
UNIVERSITY LRT LINE

Designed By: G. TERRADO
Drawn By: N. PURIFICACION
Checked By: G. EYZAGUIRRE
Approved By: J. ADELA

OVERHEAD CONTACT SYSTEM

MASTER SCHEMATIC LAYOUT
SHEET 1 OF 3

Scale: NTS
CADD Filename: OC155AB.DWG
Submittal Date: 12/07/00
UTA Contract No.: UT99-05VT-DB WE
Drawing No.: OC155
Sheet No.: 56

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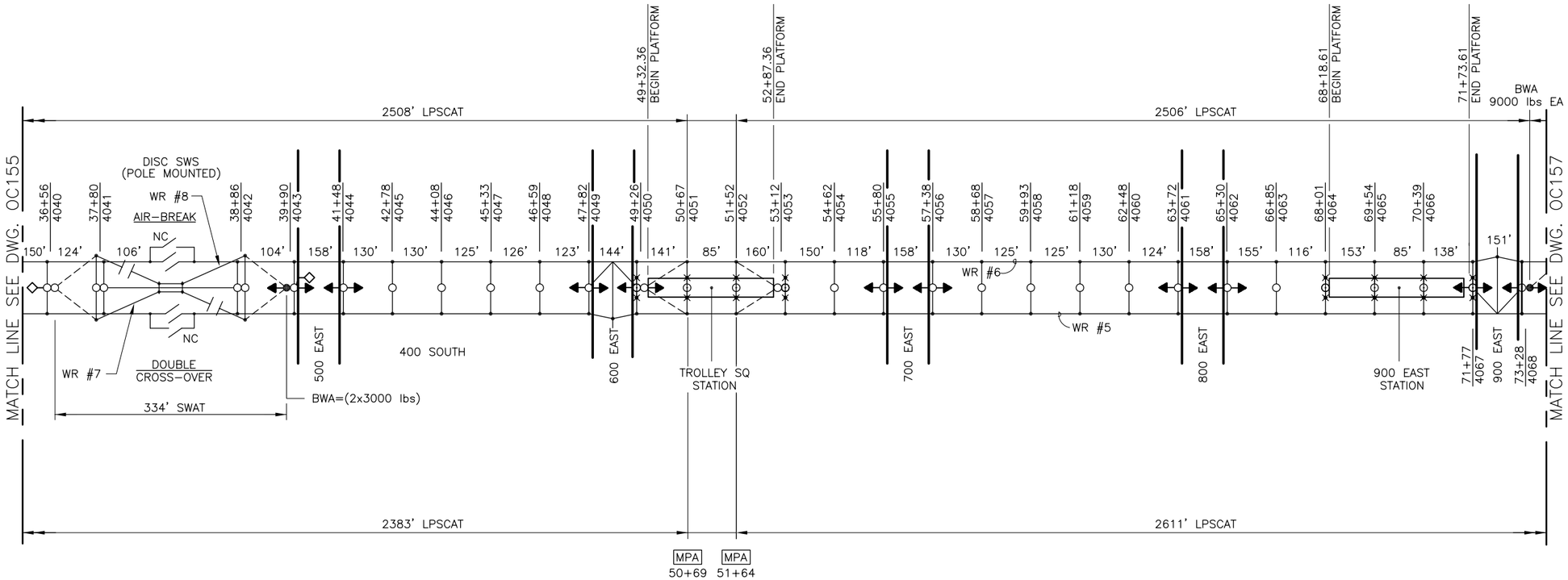

NOTES:

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THIS PRINT IS HALF SIZE REPRODUCED

REV	DATE	Description
6	2/15/02	AS-BUILT
5	8/24/01	DELETED STAY-OFF TRACK SIGN/ADDITION OF PUSH-OFF ASSEMBLY AT 600 E &900 E
2	3/2/01	ADDED LUMINAIRE ON OCS POLES
0	12/7/00	ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — GERARDO N. TERRADO — 4770088-2202 — STATE OF UTAH
EXPIRES: 12/31/2002
NOT VALID UNLESS SIGNED

A Joint Venture of CH2MHILL, Hatch Mott MacDonald, STV Incorporated
CHS DESIGNERS

UTA TRAX
UNIVERSITY LRT LINE

Designed By: G. TERRADO
Drawn By: N. PURIFICACION
Checked By: G. EYZAGUIRRE
Approved By: J. ADELA

OVERHEAD CONTACT SYSTEM

MASTER SCHEMATIC LAYOUT
SHEET 2 OF 3

Scale: NTS
CADD Filename: OC156AB.DWG
Submittal Date: 12/07/00
UTA Contract No.: UT99-05VT-DB WE
Drawing No.: OC156
Sheet No.: 57

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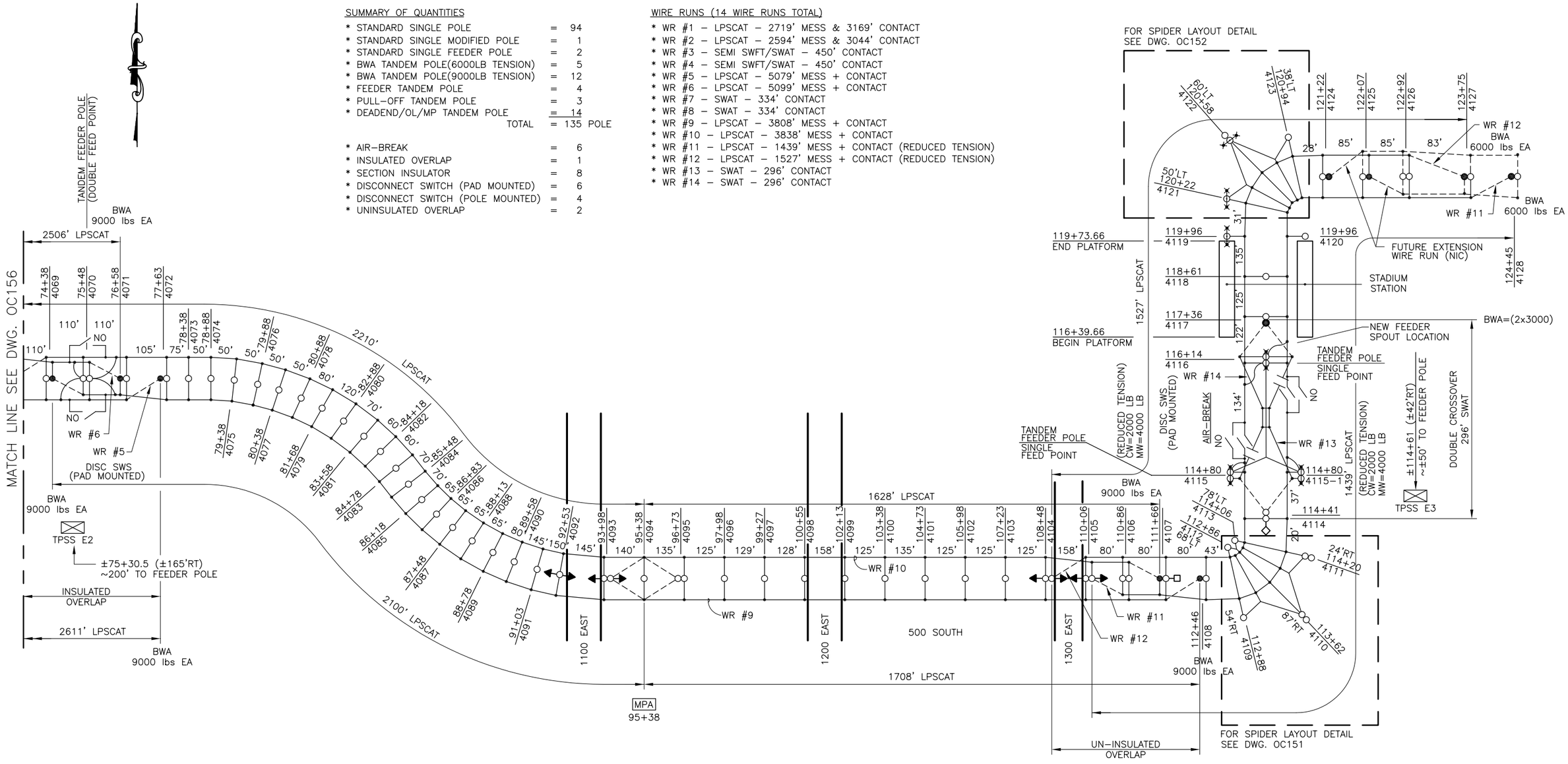
SUMMARY OF QUANTITIES

* STANDARD SINGLE POLE	=	94
* STANDARD SINGLE MODIFIED POLE	=	1
* STANDARD SINGLE FEEDER POLE	=	2
* BWA TANDEM POLE(6000LB TENSION)	=	5
* BWA TANDEM POLE(9000LB TENSION)	=	12
* FEEDER TANDEM POLE	=	4
* PULL-OFF TANDEM POLE	=	3
* DEADEND/OL/MP TANDEM POLE	=	14
TOTAL	=	135 POLE
* AIR-BREAK	=	6
* INSULATED OVERLAP	=	1
* SECTION INSULATOR	=	8
* DISCONNECT SWITCH (PAD MOUNTED)	=	6
* DISCONNECT SWITCH (POLE MOUNTED)	=	4
* UNINSULATED OVERLAP	=	2

WIRE RUNS (14 WIRE RUNS TOTAL)

* WR #1 - LPSCAT - 2719' MESS & 3169' CONTACT
* WR #2 - LPSCAT - 2594' MESS & 3044' CONTACT
* WR #3 - SEMI SWFT/SWAT - 450' CONTACT
* WR #4 - SEMI SWFT/SWAT - 450' CONTACT
* WR #5 - LPSCAT - 5079' MESS + CONTACT
* WR #6 - LPSCAT - 5099' MESS + CONTACT
* WR #7 - SWAT - 334' CONTACT
* WR #8 - SWAT - 334' CONTACT
* WR #9 - LPSCAT - 3808' MESS + CONTACT
* WR #10 - LPSCAT - 3838' MESS + CONTACT
* WR #11 - LPSCAT - 1439' MESS + CONTACT (REDUCED TENSION)
* WR #12 - LPSCAT - 1527' MESS + CONTACT (REDUCED TENSION)
* WR #13 - SWAT - 296' CONTACT
* WR #14 - SWAT - 296' CONTACT



NOTES:

1. FOR ABBREVIATIONS AND GENERAL NOTES SEE DWG OC101.
2. FOR SYMBOLS AND STRUCTURAL NOTES SEE DWG OC102.

THIS PRINT IS HALF SIZE REPRODUCED

REV	DATE	Description
6	2/15/02	AS-BUILT
5	8/24/01	DELETED STAY-OFF TRACK SIGN/ADDED NEW FEEDER
4	3/2/01	INCORPORATED LATEST CHANGES
1	12/28/00	INCORPORATED LATEST CHANGES/CHANGE ORDER
0	12/7/00	ISSUED FOR CONSTRUCTION

REVISION BLOCK

REGISTERED PROFESSIONAL ENGINEER GERARDO N. TERRADO 4770086-2202 STATE OF UTAH
EXPIRES: 12/31/2002
NOT VALID UNLESS SIGNED

A Joint Venture of CH2MHILL, Hatch Mott MacDonald, STV Incorporated
CHS DESIGNERS

UTA TRAX
UNIVERSITY LRT LINE

Designed By: G. TERRADO
Drawn By: N. PURIFICACION
Checked By: G. EYZAGUIRRE
Approved By: J. ADELA

OVERHEAD CONTACT SYSTEM

MASTER SCHEMATIC LAYOUT
SHEET 3 OF 3

Scale: NTS
CADD Filename: OC157AB.DWG
Submittal Date: 12/07/00
UTA Contract No.: UT99-05VT-DB WE
Drawing No.: OC157
Sheet No.: 58

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LEGEND:

- BACK TO BACK CANTILEVER POLE WITH STRUCTURE NO. (4008)
- SECTION INSULATOR
- INSULATED OVERLAP WITH DISCONNECT SWITCH (NC)
- AIR–BREAK WITH DISCONNECT SWITCH NORMALLY CLOSED
- TANDEM POLE WITH BWA ANCHOR
- TANDEM FEEDER POLE WITH BACK TO BACK CANTILEVER
- MIDPOINT ANCHOR
- LRT TRAFFIC SIGNAL = (TS) (SINGLE TRAFFIC HEAD)
- LRT TRAFFIC SIGNAL = (TS) (BACK TO BACK TRAFFIC HEAD)
- LUMINAIRE = (L)
- LRT SWITCH INDICATOR = (SWI)
- LRT ROUTE SELECTOR = (RS)
- ROUTE INDICATOR = (RI)
- SIGNAL COUPLER = (SC)
- MOTORMAN INDICATOR = (MI)
- STREET LUMINAIRE = (SL)

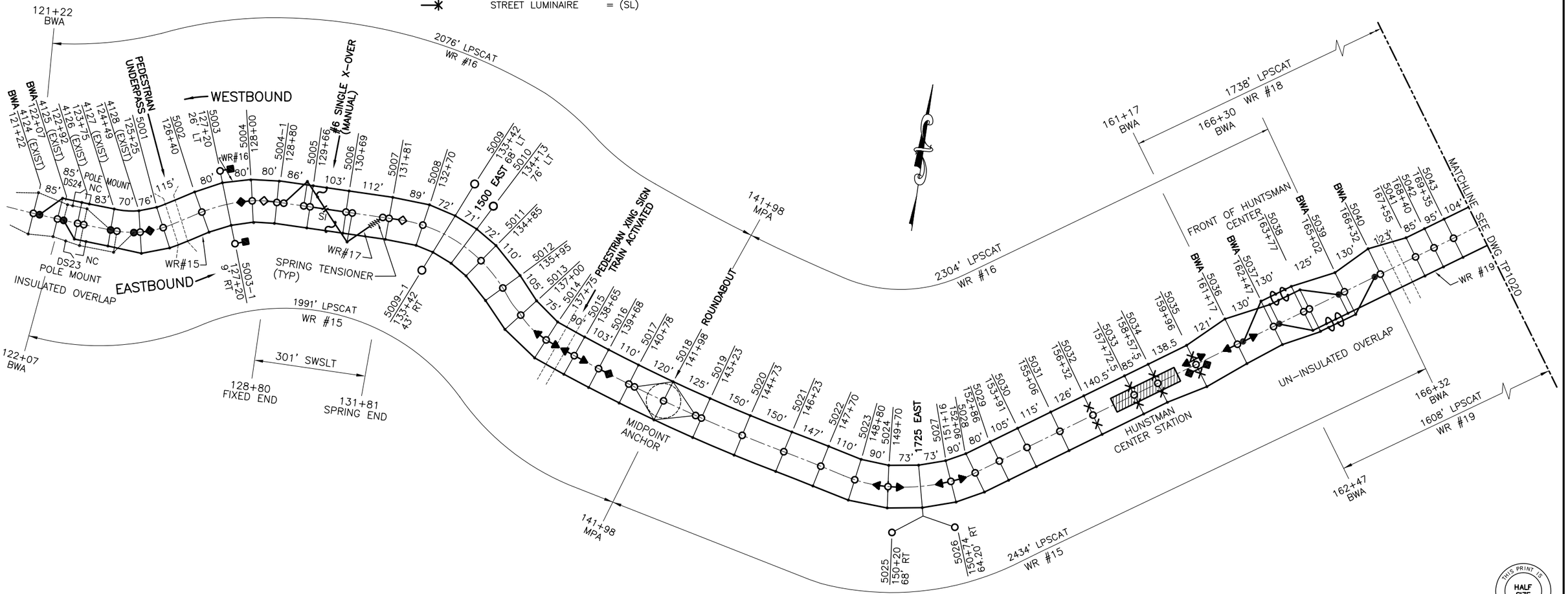
(ABBREVIATION)

SUMMARY OF QUANTITIES

* STANDARD SINGLE POLE	=	61	TOT=84 POLES
* BWA TANDEM POLE	=	6	
* STANDARD TANDEM POLE	=	17	
* SECTION INSULATOR	=	3	
* POLE MOUNTED DISCONNECT	=	4	
* PAD MOUNTED DISCONNECT	=	8	
* NO OF WIRE RUNS	=	7	
* NO OF SPRING LOADED TROLLEY RUNS	=	3	

WIRE RUNS (7 WIRE RUNS TOTAL)

- * WR #15 – LPSCAT – 4425' MESS & CONTACT
- * WR #16 – LPSCAT – 4380' MESS & CONTACT
- * WR #17 – SWSLT – 301' CONTACT
- * WR #18 – LPSCAT – 3798' MESS & CONTACT
- * WR #19– LPSCAT – 4508' MESS & CONTACT
- * WR #20 – SWSLT – 425' CONTACT
- * WR #21 – SWSLT – 425' CONTACT



REV	DATE	Description
4	10/15/03	AS–BUILT
3	2/18/02	INCORPORATE CHANGE ORDER – IFC
2	11/12/02	INCORPORATE UTA COMMENTS
1	8/09/02	INCORPORATE IFC COMMENTS
0	6/14/02	ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — GERARDO N. TERRADO — 4770068-2202 — STATE OF UTAH

EXPIRES: 12/31/2004
NOT VALID UNLESS SIGNED

A Joint Venture of CH2MHILL, Hatch Mott MacDonald, STV Incorporated
CHS DESIGNERS

UTA TRAX
MEDICAL CENTER LRT LINE
UTAH TRANSIT AUTHORITY

Designed By:	G. TERRADO
Drawn By:	N. PURIFICACION
Checked By:	G. EYZAGUIRRE
Approved By:	J. ADELA

OVERHEAD CONTACT SYSTEM

MASTER SCHEMATIC LAYOUT & FEEDING ARRANGEMENT SHEET 1 OF 2

Scale:	NTS
CADD Filename	TP1019.DWG
Submittal Date	06/14/02
UTA Contract No.:	UT99–05VT–DB WE
Drawing No.:	TP1019
Sheet No.:	

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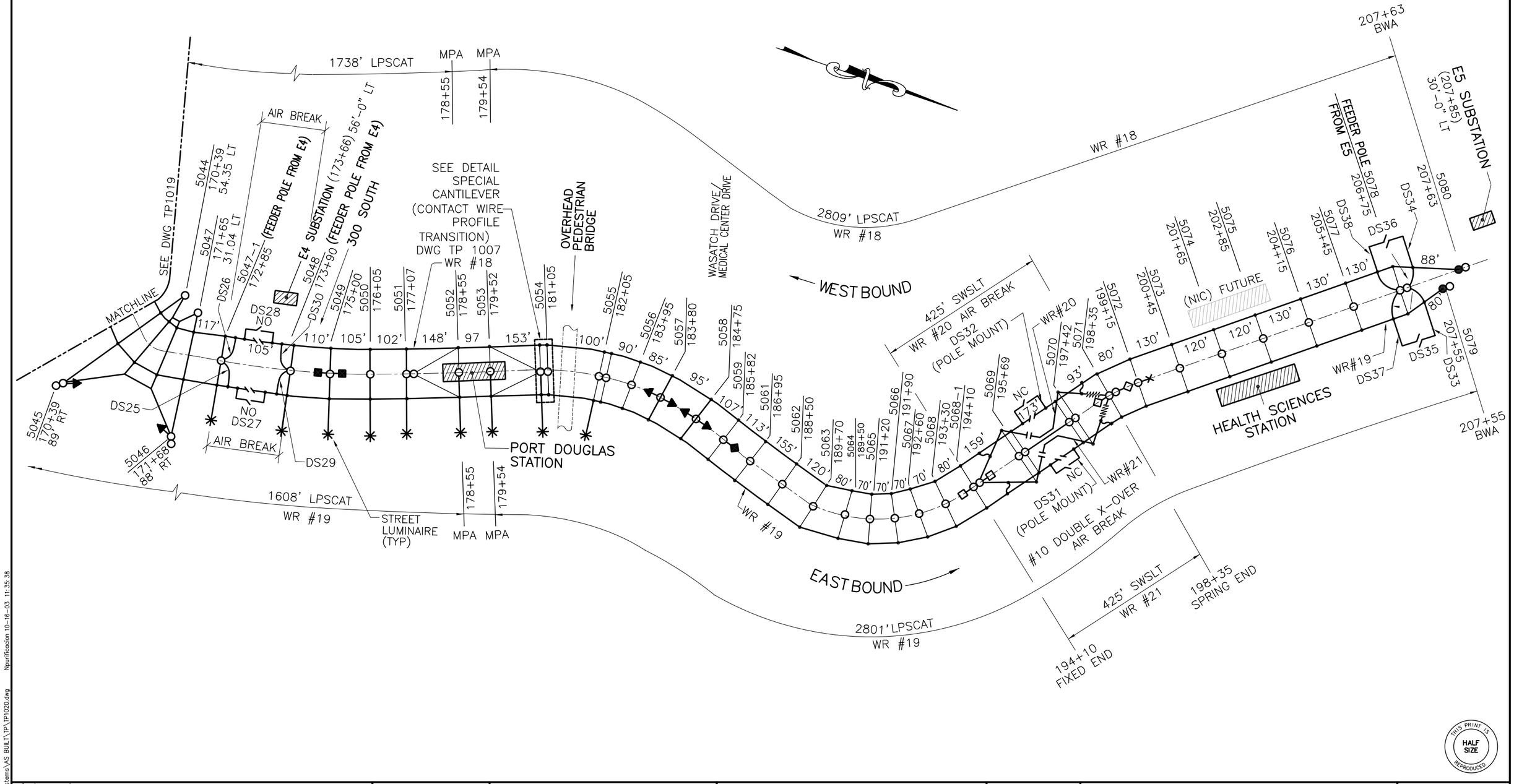

REV	DATE	Description
4	10/15/03	AS-BUILT
3	02/28/03	INCORPORATE CHANGE ORDER - IFC
2	11/12/02	INCORPORATE UTA COMMENTS
1	8/09/02	INCORPORATE IFC COMMENTS
0	6/14/02	ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
GERARDO N. TERRADO
4770068-2202
STATE OF UTAH
EXPIRES: 12/31/2004
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A Joint Venture of
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UTA TRAX
MEDICAL CENTER LRT LINE
UTAH TRANSIT AUTHORITY

Designed By: G. TERRADO
Drawn By: N. PURIFICACION
Checked By: G. EYZAGUIRRE
Approved By: J. ADELA

OVERHEAD CONTACT SYSTEM

MASTER SCHEMATIC LAYOUT & FEEDING ARRANGEMENT SHEET 2 OF 2

Scale: NTS
CADD Filename: TP1020.DWG
Submittal Date: 06/14/02
UTA Contract No.: UT99-05VT-DB WE
Drawing No.: TP1020
Sheet No.:

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