Los Angeles World Airports

ADDENDUM NO. 1

TO THE

AUTOMATED PEOPLE MOVER OPERATING SYSTEM SUPPLIER ELIGIBILITY DETERMINATION

FOR THE

LANDSIDE ACCESS MODERNIZATION PROGRAM

AT

LOS ANGELES INTERNATIONAL AIRPORT

The following clarifications, corrections, revisions, additions and/or deletions included in this Addendum, shall be considered part of the Submittal Instructions issued on April 18, 2016, with immediate effect.

Roger Johnson
Deputy Executive Director
Date: May 6, 2016

ADDENDUM No. 1

Respondent must acknowledge the receipt of this Addendum in Form A of its Eligibility Determination Request. Failure of the Respondent to acknowledge this Addendum may result in delays in the review of the Eligbility Determination Request.

ADDENDUM No. 1 ITEMS:

ADDENDUM NO. 1, ITEM 1:

Attachment 3 – Select Draft Project Technical Performance Specifications:

a. Replace Page TP 9-2 with attached Page TP 9-2, Addendum 1 – May 5, 2016. Deleted text is shown with a strikethrough.
b. Replace Page TP 9-3 with attached Page TP 9-3, Addendum 1 – May 5, 2016. Newly added text is shown in italics at the top of the replacement page.

ADDENDUM NO. 1, ITEM 2:

Attachment 4 – Preliminary APM Project Layout Plan:

a. Replace sheets ED-04, ED-05, ED-09 through ED-16, and ED-19 with attached sheets ED-04, ED-05, ED-09 through ED-16, and ED-19, Addendum 1 – May 5, 2016. Revised sheets incorporate a correction to the stationing on the sheets.

REQUESTS FOR CLARIFICATION:

REQUEST FOR CLARIFICATION NO. 1:

RFC 1: TP 5.1.5.3 of Attachment 3 – Select Draft Project Technical Performance Provisions of the LAMP APM OS Supplier Determination Process has the title of "Ultimate System Line Capacity", but the information provided states that the Peak period operations minimum capacity is 5,515 pphpd.

1. Can LAWA clarify if 5,515 pphpd is the ultimate capacity or the peak period minimum (initial) capacity?
2. If 5,515 pphpd is the ultimate capacity, can LAWA provide what is expected to be the system initial capacity?
3. If 5,515 is the peak period minimum capacity, can LAWA then provide what it projects to be the ultimate system capacity?

RESPONSE 1:

1. The specified 5,515 pphpd is the minimum capacity that must be provided for the Ultimate System Line Capacity. No change to document.
2. Initial System line capacity requirements, if any, will be addressed as part of the future Request for Proposals (RFPs).
3. See response to 1 and 2 above.

REQUEST FOR CLARIFICATION NO. 2:

RFC 2: Attachment 3 - Section 9.1.2, fifth paragraph, Page TP 9-2, top states "The minimum clearance between the outside of the guideway and to the adjacent structure is indicated on the Preliminary APM Project Layout Plan". Please provide clarification to this statement with regards to where the layout drawings highlight this information.

RESPONSE 2: Refer to revised Page TP 9-2, Addendum 1 – May 5, 2016 where the referenced sentence is shown with a strikethrough.

REQUEST FOR CLARIFICATION NO. 3:

RFC 3 : Section 9.3, 3rd paragraph, Page TP-9-3, top says *"…percent and not more than 15 percent of normal capacity."*Where seating positions are located over fixed equipment lockers and cannot be removed, please confirm that it is acceptable to exceed the 15% maximum seated passenger requirement.

RESPONSE 3: See revised page TP 9-3, issued as part of Revision 1, dated May 5, 2016 with the following added language (shown in italics) "unless seating positions are located over equipment or integrated into the interior of the car such that they cannot be removed."

REQUEST FOR CLARIFICATION NO. 4:

RFC 4: Attachment 4 – About the identified geometry for the Light Maintenance Track 1 on Sheet ED-19 in Attachment 4: The Start and End coordinate points (L68 and C63) provided in the table do not allow enough space to place a 150 foot radius curve, if 150 foot radius curve is the LAWA required radius in that position. Please confirm the provided coordinate data. In addition, will additional geometry information be provided for Light Maintenance Track 2?

RESPONSE 4: Provided coordinate data is confirmed. Also see response to Request for Clarification No. 5 and provide specific details to clarify your question. Also, geometry for Light Maintenance Track 2, if required by the eventual supplier/developer team, shall be established by that team substantially within the conditions shown in the drawings. Note that a Request for Proposals expected to be issued in the future is anticipated to require integrated proposals (incorporating both the fixed facilities/infrastructure and the operating system).

REQUEST FOR CLARIFICATION NO. 5:

RFC 5 : Attachment 4 – Sheets ED-17 and ED-18. We reviewed and re-created the alignment stationing and find that there is a discrepancy between the alignment stationing (created from the curve date) and the alignment stationing shown on sheets ED-09 through ED-16. A similar discrepancy is observed on Sheets ED-03 through ED-05. Please clarify.

RESPONSE 5: Refer to the revised Sheets ED-04, ED-05, ED-09 through ED-16, and ED-19 for Attachment 4 in Addendum 1 – May 5, 2016.

END OF ADDENDUM No. 1

Specifically excluded from these clearance requirements are the platform gap and the horizontal distance between the station platform doors and vehicle doors, which shall be as specified in TP 9.10.4. Contact between the vehicle side and the platform edge may be permitted in extreme failure conditions as long as the Owner approved protective features such as, prohibiting unsafe vehicle tilting in the event of failure and making the sides of the vehicles that might contact the platform edge strip strong enough to withstand such contact without being damaged, are provided.

~~The minimum clearance between the outside of the guideway to adjacent structure is indicated on the Preliminary APM Project Layout Plan~~.

9.2 VEHICLE SPACE AND WEIGHT ALLOCATIONS

The following are vehicle passenger area and weight allocations for the purposes of these Technical Performance Provisions.

Total passenger area shall be all of the area available to and intended for seated and standing passengers. Standee floor area is defined as the area available to standing passengers and is equal to the total passenger area less 4.5 ft^2 for each fixed seat position. For calculating the number of seat positions on benches, 18 inches of bench width and no more than 24 inches of bench depth shall be allocated for each seat position. In determining the standee floor area, the area available to standing passengers shall be limited to space within the car; space in between cars such as gangways shall not be considered.

Vehicle allocated weights are defined as follows:

AW0 - The weight of an empty vehicle, ready to be operated.

AW1 - The vehicle design weight, calculated by adding AW0 with the product of 160 pounds per passenger multiplied by the design capacity (See TP 9.3).

AW2 - The maximum vehicle weight or “crush load”. This weight shall be calculated by adding AW0, 107 lbs/ft^2 of standee floor area, 160 pounds for each fixed seat position, and 36 lbs/ft^2 of interior plan area not included in the total passenger area. This definition shall apply for references to AW2 in the ASCE APM Standards.

AW3 - This weight, as defined in Section 7.1, Vehicle Capacity and Load, ASCE 21.2-08, shall be AW2 as defined above. All references to AW3 in the ASCE APM Standards shall be interpreted to be AW2 as defined above.

9.3 VEHICLE CAPACITY

The vehicle passenger capacity shall be determined based on the vehicle passenger area definitions of TP 9.2 and the provisions of this TP 9.3. Flip up and stowable seats shall be prohibited.

For the purposes of these Technical Performance Provisions, the following definitions of vehicle capacity shall be used:

Seating Capacity - Seating capacity is the number of seat positions provided for passengers (not including wheelchair passengers). Each vehicle shall have a seating capacity of at least 10

percent and not more than 15 percent of the normal capacity *unless seating positions are located over equipment or integrated into the interior of the car such that they cannot be removed.*

Design Capacity - Design capacity shall be calculated by assuming all seat positions are occupied by passengers, no wheelchair passengers, and one standing passenger for each 2.7 ft^2 of standee floor area.

Normal Capacity - Normal capacity shall be calculated by assuming all seat positions are occupied with passengers, no wheelchair passengers, and one standing passenger for each 6 ft^2 of standee floor area.

In calculating design and normal capacities, the number of standing passengers shall be rounded downward to the nearest integer.

9.6.3 Ride Comfort

Vehicle ride characteristics for maximum sustained acceleration and deceleration, maximum rate of change of acceleration, and ride quality shall be in accordance with ASCE 21.2-08, Section 7.7.3, Ride Quality, except that (1) vertical acceleration shall be limited to plus or minus 0.05 g with respect to 1.0 g datum, and (2) the normal longitudinal acceleration, excluding grade effects, shall be limited to plus or

minus 0.1 g. Furthermore, ride quality testing shall be required. Additional definitions and exceptions to the ASCE requirements for ride quality are as follows:

A. The limit on emergency deceleration may be exceeded under conditions of brake equipment failure. However, the Contractor shall carry out an analysis to determine and propose an upper limit on deceleration under such failure conditions that shall be subject to review and acceptance by the Owner.

B. Sustained refers to the nominal values used for design of curves, crests, sags, and speed profiles and excluding random vibration effects. Sustained shall include durations equal to or greater than 1.0 seconds.

C. Longitudinal is fore and aft motion, the x direction in ISO 2631; vertical is up and down motion, the z direction in ISO 2631; and lateral is side to side motion, the y direction in ISO 2631.

D. Lateral and vertical acceleration and deceleration include grade effects and are the values obtained with a standard piezoelectric accelerometer with a frequency range of at least 0.1 - 80 Hz.

E. Longitudinal acceleration and deceleration ignoring grade are the rates of change of train speed as determined from the maximum slope of tachometer generated data. Longitudinal acceleration and deceleration including grade are the values obtained with a standard piezoelectric accelerometer with a frequency range of at least 0.1 - 80 Hz, noting that this device reads acceleration along the longitudinal (fore/aft) axis of the vehicle.

SHEET NOTES:

1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC LAYOUT ON SHEETS ED-06 THRU ED-19 FOR ADDITIONAL TRACK INFORMATION.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA+ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PROJECT LAYOUT DETAIL II

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

SUBMITTED BY: DISCIPLINE DESIGNER

APPROVED BY: DISCIPLINE LEAD

DRAWN BY | CHECKED BY

DATE: 03/17/2016 DRAFT

SHEET NO. ED-04

METRO YARD

MAINTENANCE & STORAGE FACILITY

TRACTION POWER SUBSTATION III (LOCATION TO BE COORDINATED)

EAST ITF APM STATION

CONRAC APM STATION

PID # 64
E:6446543.688
N:1804568.020
ELEV: 98.328'

PID 999
E:6444410.472
N:1803706.676
ELEV: 100.617'

POS=87+20.17
POS =84+06.13
POS =83+15.17
POS =82+75.17
POS =584+19.54
POS =103+39.12
POS =612+24.34

0 150 300 Feet

SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC LAYOUT ON SHEETS ED-06 THRU ED-19 FOR ADDITIONAL TRACK INFORMATION.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PROJECT LAYOUT DETAIL III

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

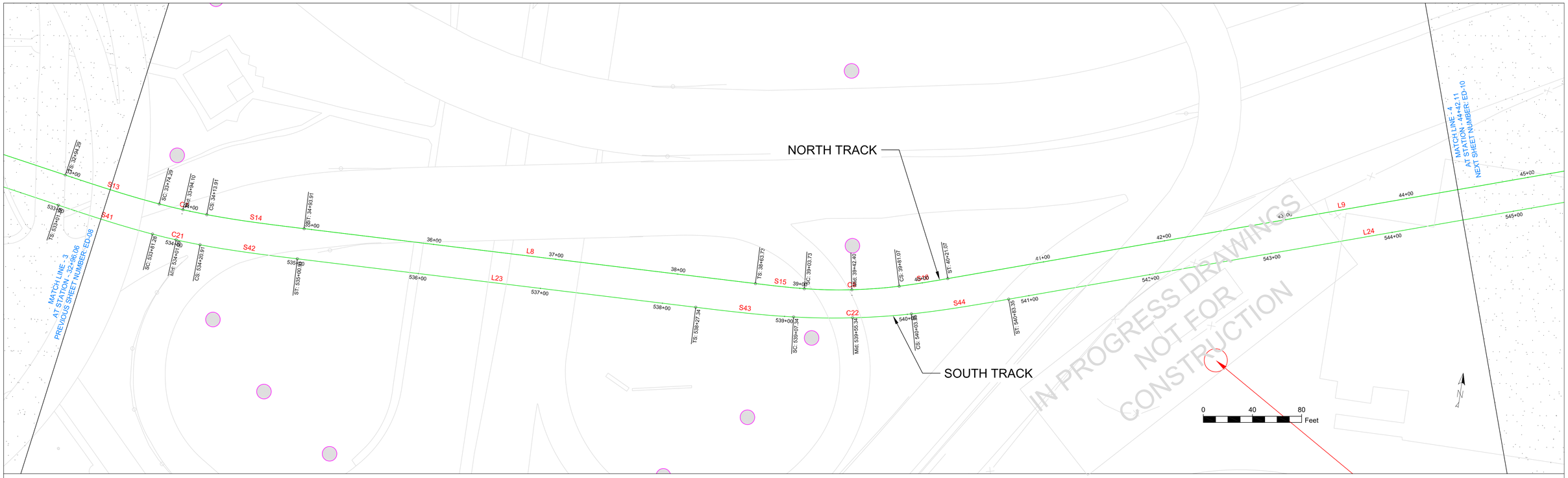
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

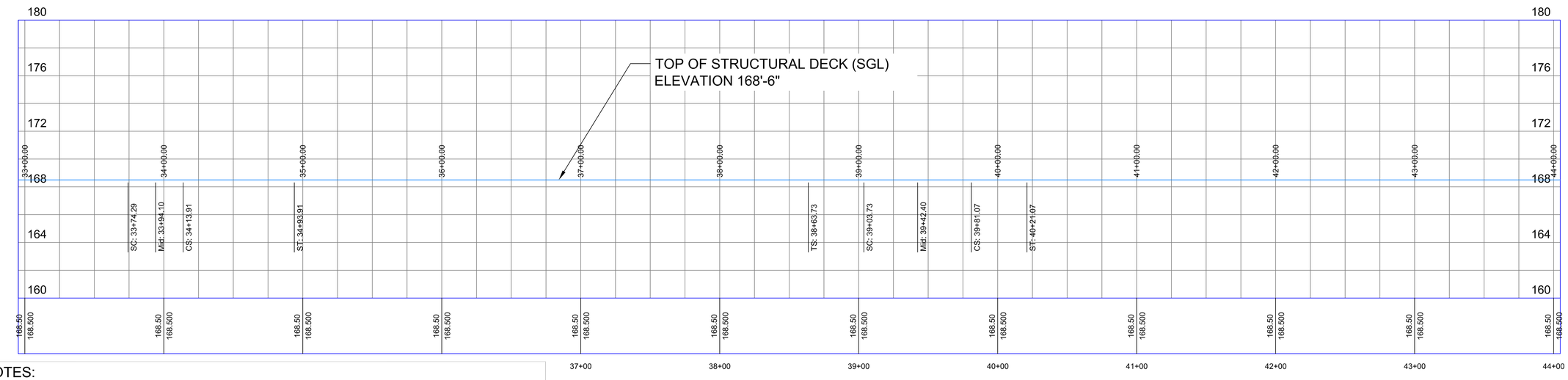
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-05



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

SUBMITTED BY
DISCIPLINE DESIGNER

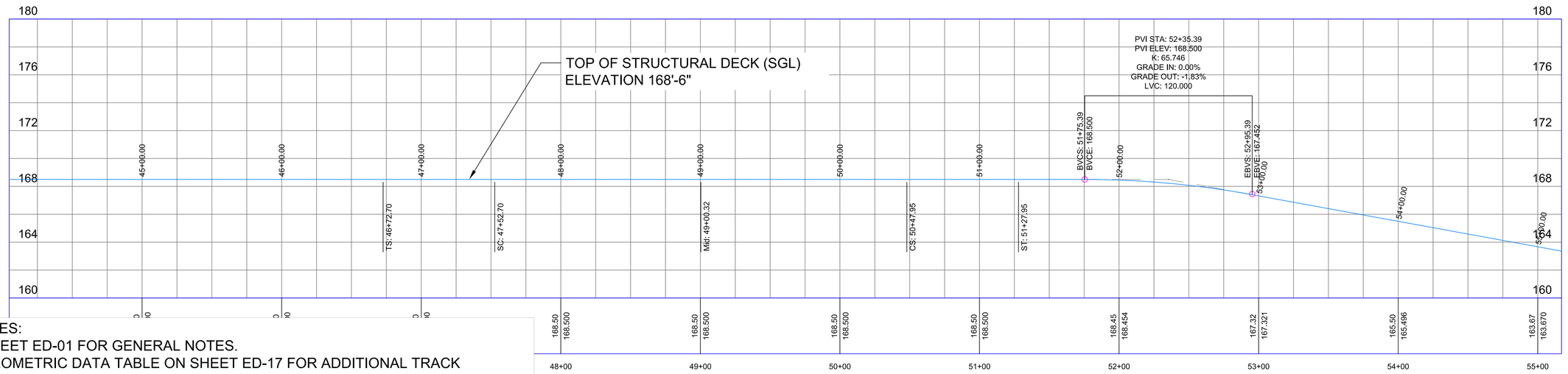
APPROVED BY
DISCIPLINE LEAD

DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-09

PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

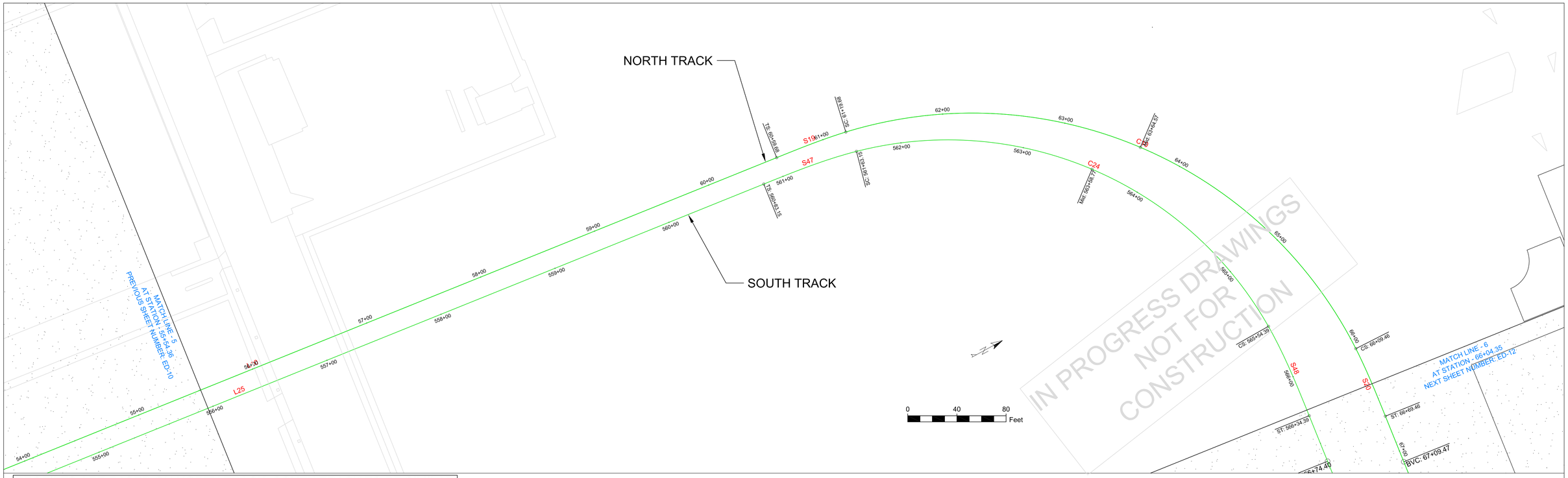
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-10



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR

SHEET NOTES:

1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles
World Airports

mapLAX
a Joint Venture

LANDSIDE ACCESS
MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

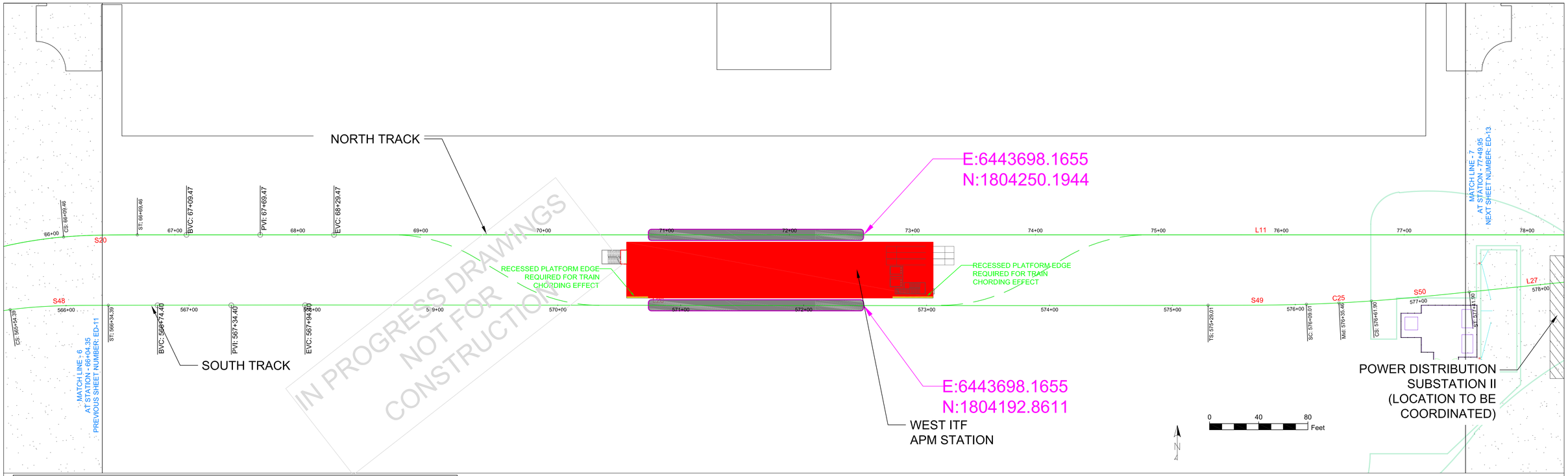
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

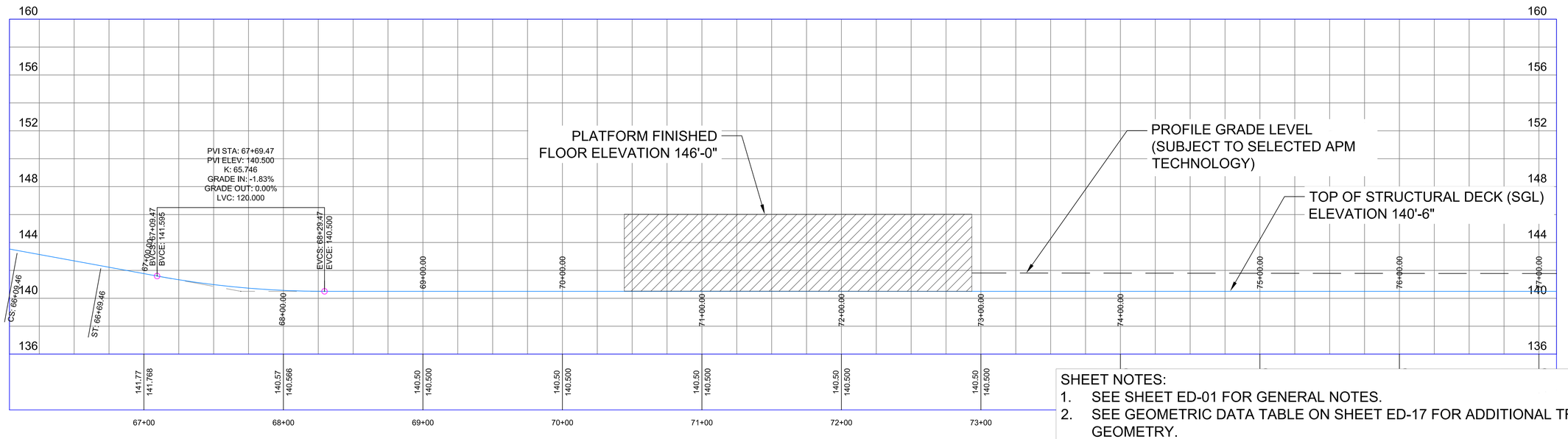
DRAWN BY
CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-11



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

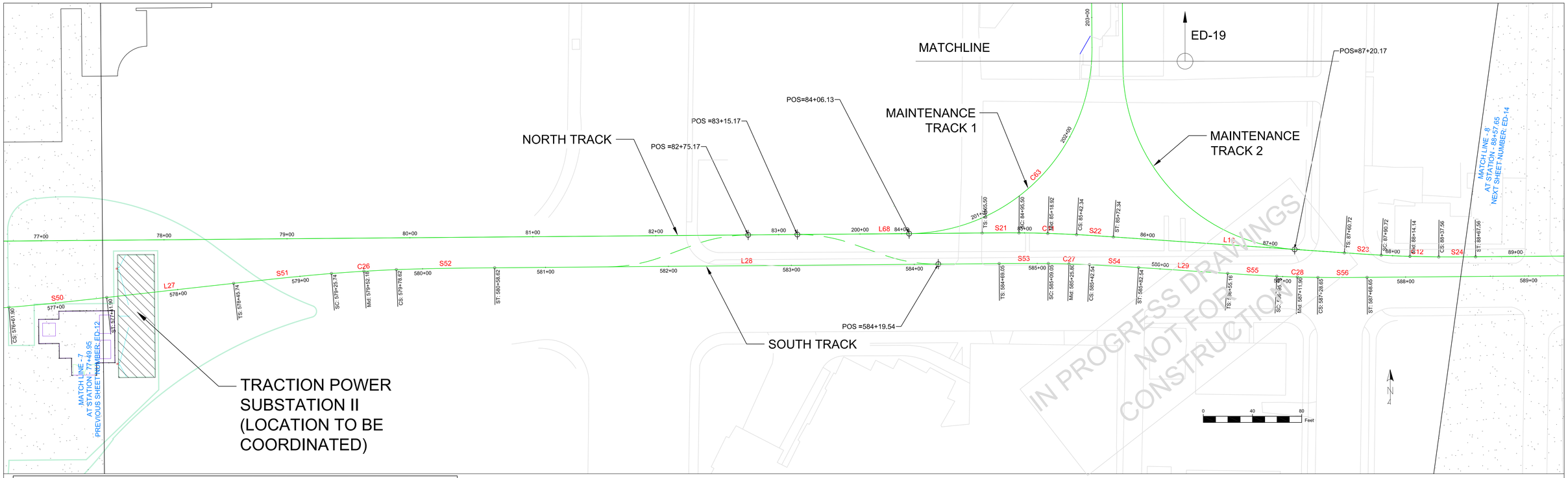
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

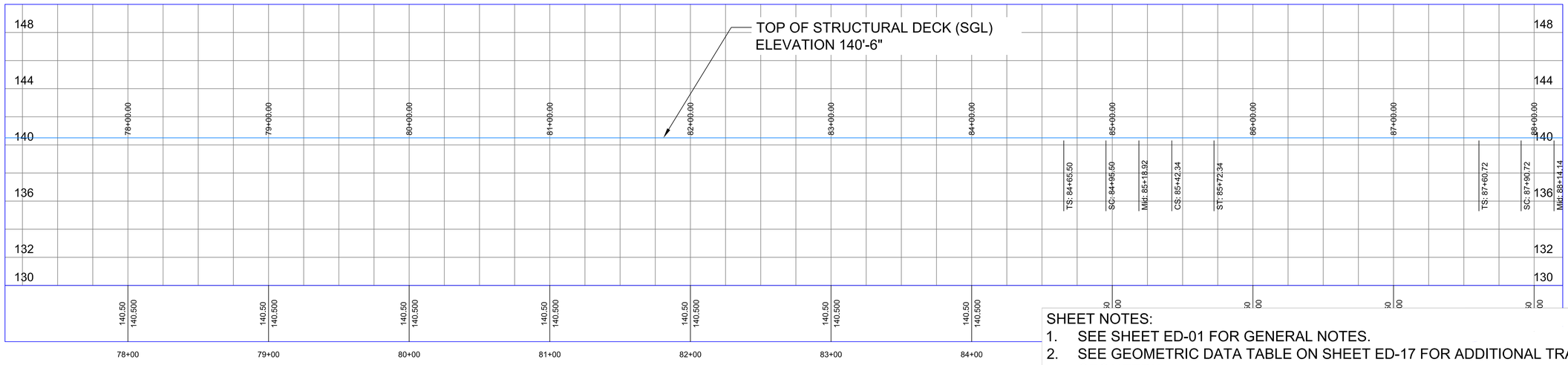
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-12



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

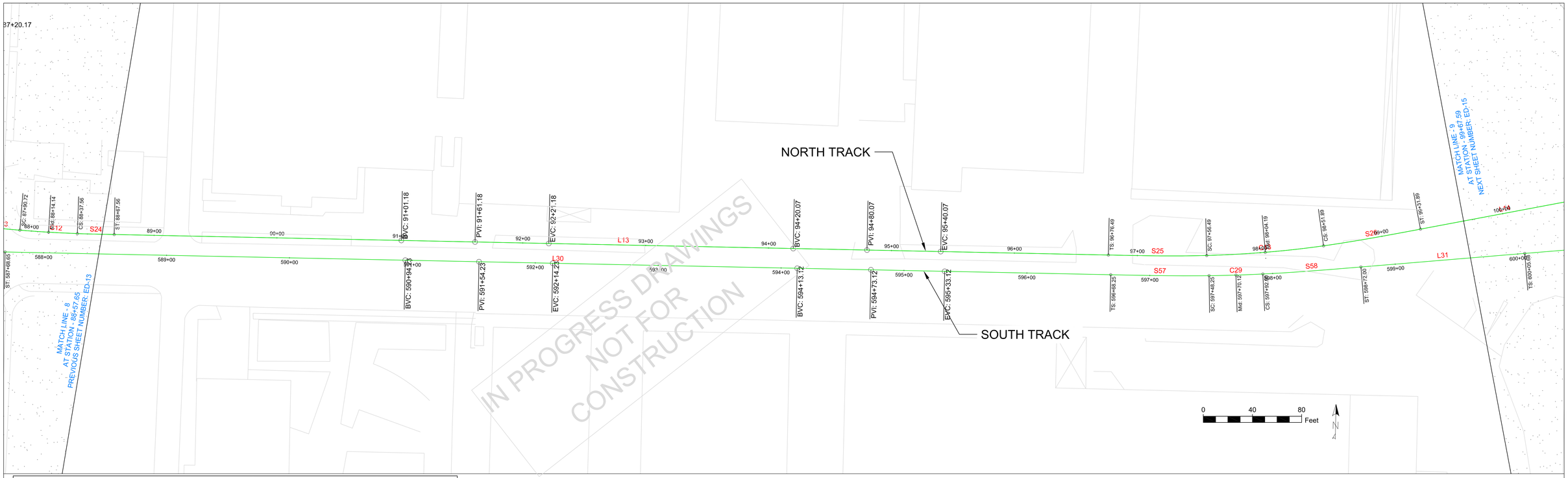
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

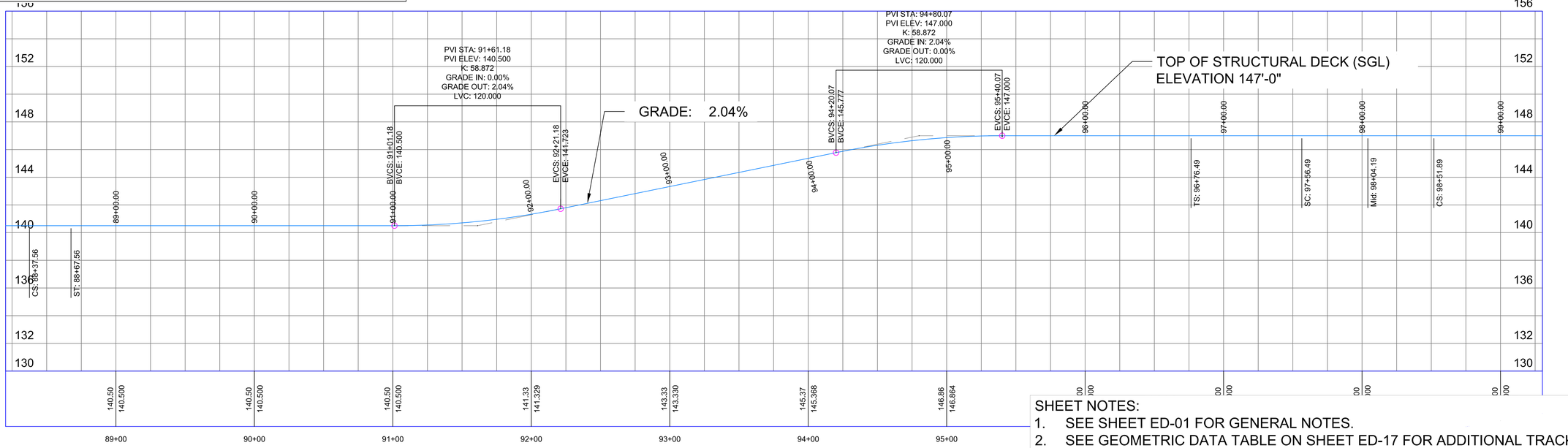
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-13



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:

1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

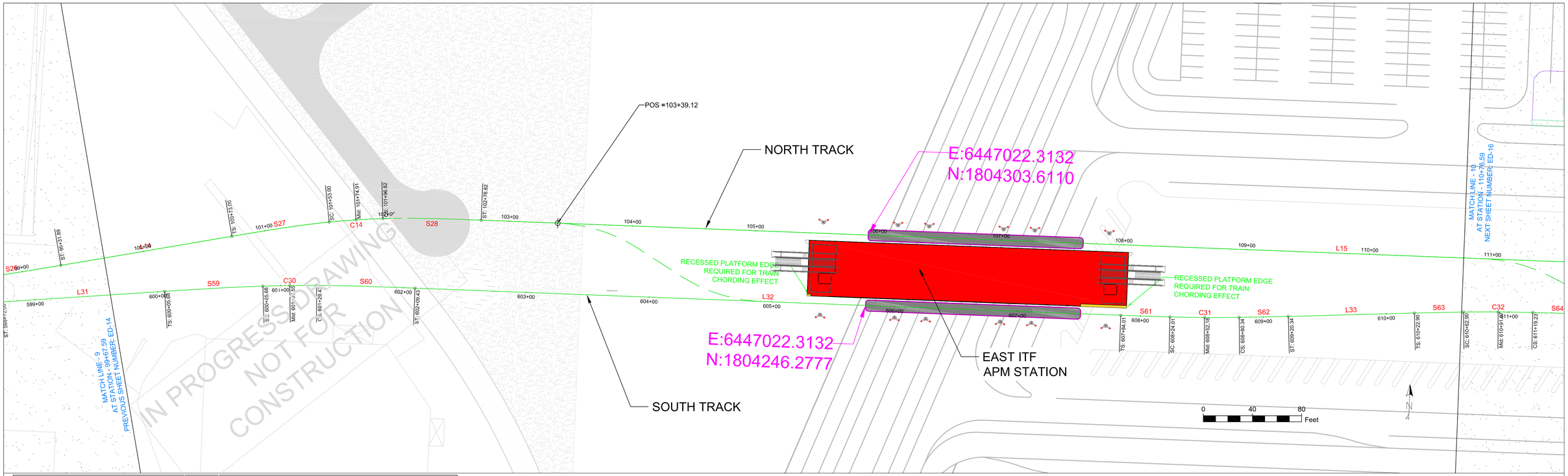
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

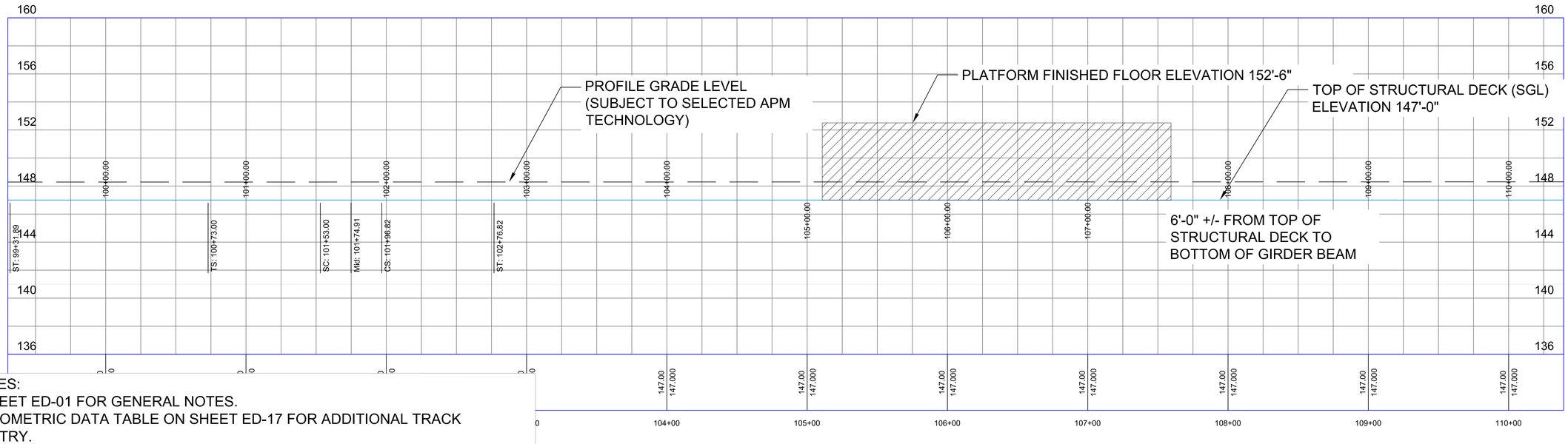
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-14



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

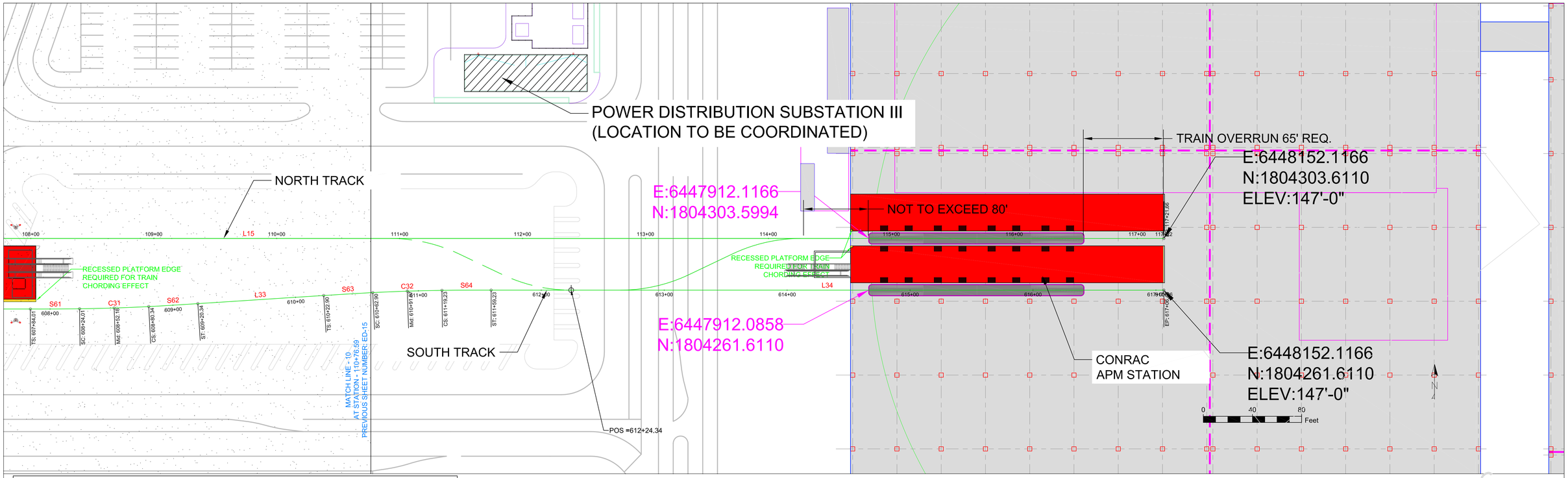
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

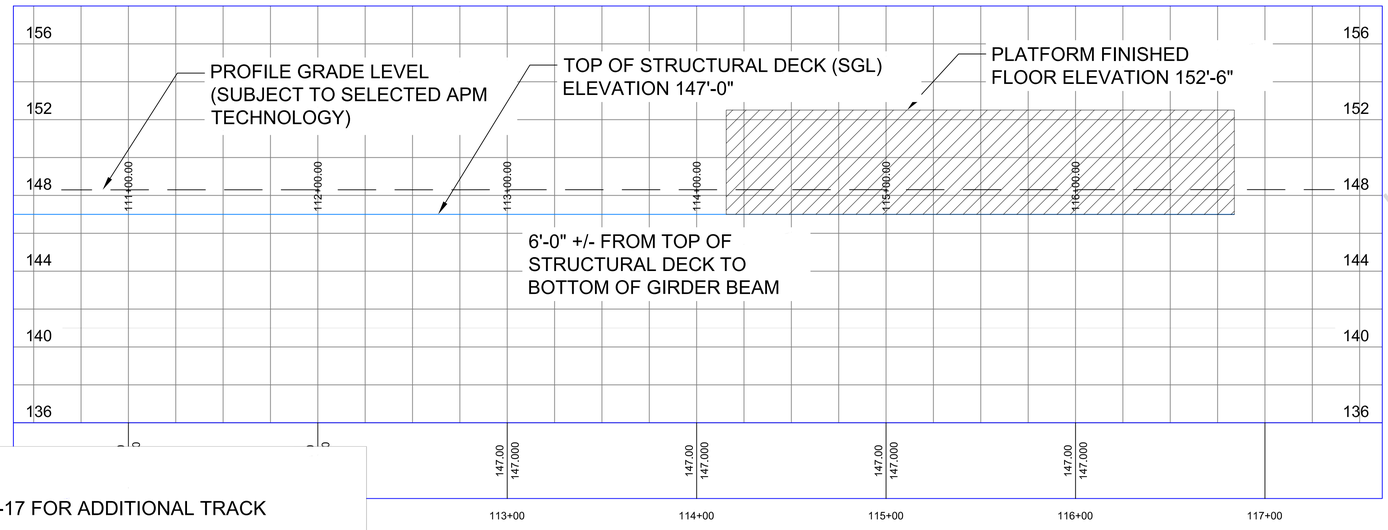
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-15



PROFILES ARE BASED ON NORTH TRACK; SOUTH TRACK TO BE SIMILAR



SHEET NOTES:
1. SEE SHEET ED-01 FOR GENERAL NOTES.
2. SEE GEOMETRIC DATA TABLE ON SHEET ED-17 FOR ADDITIONAL TRACK GEOMETRY.
3. SGL ELEVATIONS SHOWN IN THESE DRAWINGS ARE HIGH POINTS OF THE DECK. ELEVATIONS WILL VARY FOR STRUCTURAL DECK DRAINAGE.

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

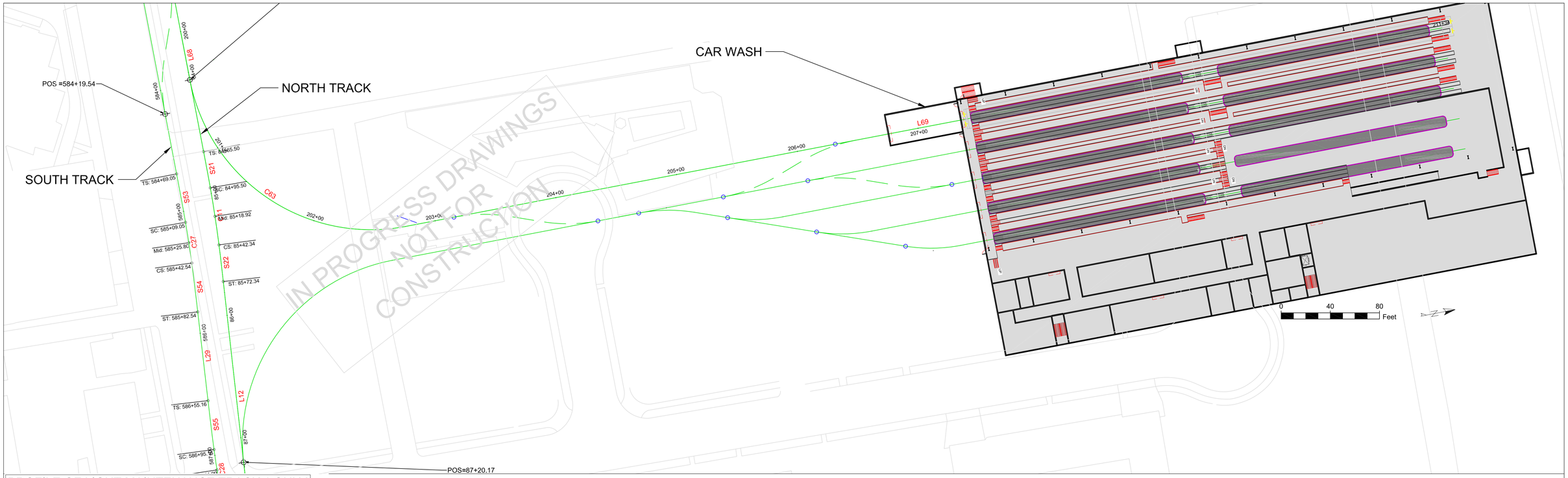
SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

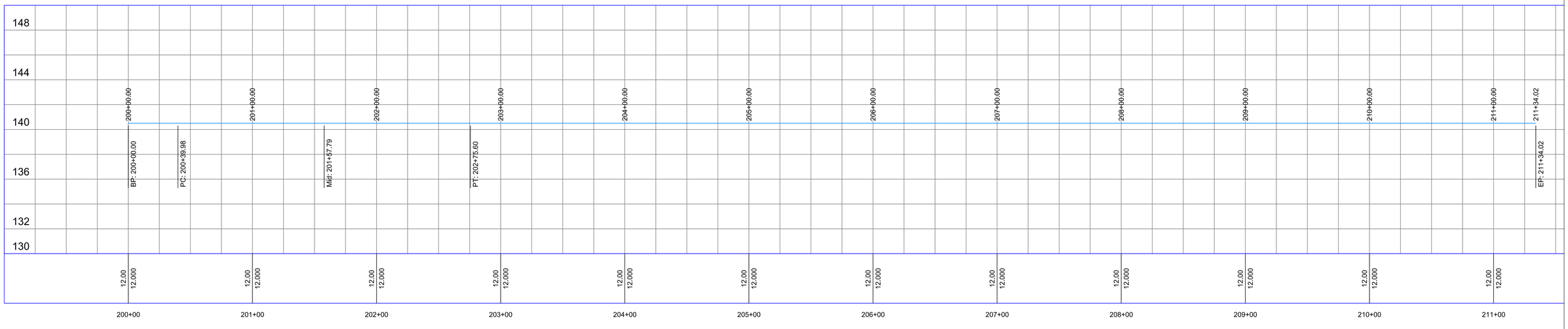
DRAWN BY | CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-16



PROFILE OF LIGHT MAINTENANCE TRACK 1 ONLY



Light Maintenance 1

Number	Radius	Length	Line/Chord Direction	A Value	Direction	Start Station	End Station	Delta Angle	Degree of Curvature by Arc	Start Point	End Point	Long Tan	Mid-Ordinate	PI Station	External Tangent	Total X	P	K	Chord Direction	Total Y	Short Tan	Chord Length
L68		39,98	N90° 00' 00,00"E		N90° 00' 00"E	200+00,00	200+39,98			6444804,0641;1804250,1944	6444844,0479;1804250,1944											
C63	150,00	235,62	N45° 00' 00,00"E			200+39,98	202+75,60	90,0000	38,1972	6444844,0479;1804250,1944	6444994,0479;1804400,1944		43,934	201+89,98	150,00				N45° 00' 00"E			212,13
L69		858,42	N0° 00' 00,00"E		N0° 00' 00"E	202+75,60	211+34,02			6444994,0479;1804400,1944	6444994,0479;1805258,6134											

Los Angeles World Airports

mapLAX a Joint Venture

LANDSIDE ACCESS MODERNIZATION PROGRAM
AT LOS ANGELES INTERNATIONAL AIRPORT

LEA ELLIOTT

ARCHITECT/ENGINEER SEAL

SHEET TITLE
PLAN & PROFILE- M&SF

NO.	ISSUED FOR	CHK'D	APP'D	DATE
1	ADDENDUM 1			5/5/2016

SUBMITTED BY
DISCIPLINE DESIGNER

APPROVED BY
DISCIPLINE LEAD

DRAWN BY

CHECKED BY

DATE
03/17/2016 DRAFT

SHEET NO.
ED-19