CALIFORNIA HIGH-SPEED TRAIN

Engineering Plans

Burbank to Los Angeles

Volume 5

General, Stations & Trackside Access

April 2019

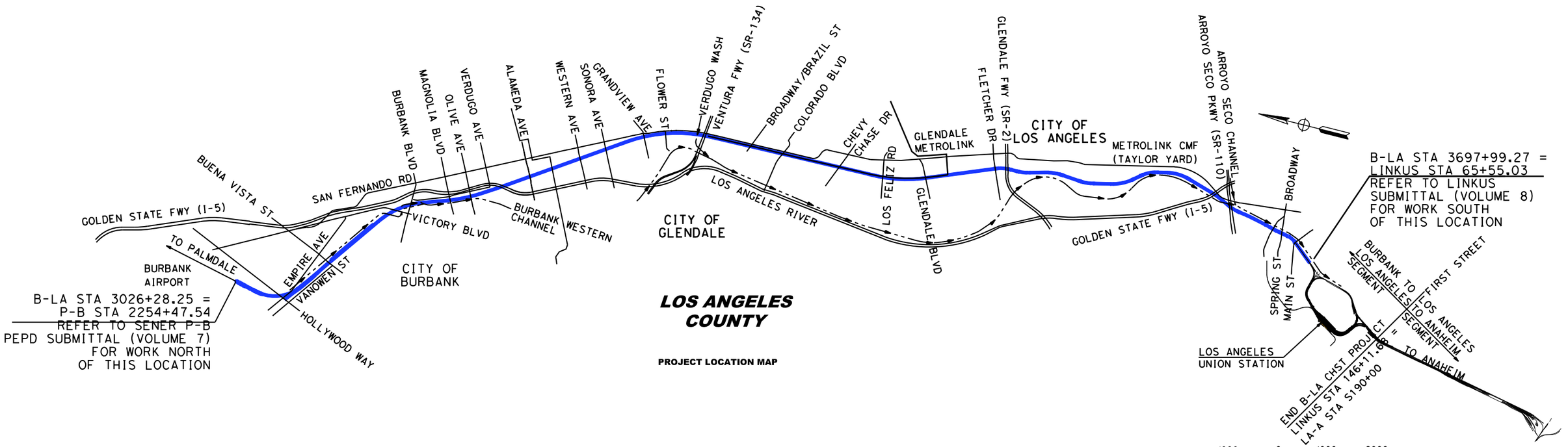
CALIFORNIA
High-Speed Rail Authority

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

PRELIMINARY ENGINEERING FOR PROJECT DEFINITION (PEPD)

CALIFORNIA HIGH-SPEED TRAIN PROJECT
VALLEY/RIVER SUBDIVISION

VOLUME 5
GENERAL, STATIONS & TRACKSIDE ACCESS



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CUSSON
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

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JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VOLUME 5
PROJECT LOCATION MAP

CONTRACT NO. HSR14-39
DRAWING NO. GE-A0501
SCALE NO SCALE
SHEET NO.

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haynesma

PEPD INDEX OF VOLUMES

VOLUME NO.	CONTENT
VOLUME 1	GENERAL
	TRACK ALIGNMENT
	RIGHT-OF-WAY IMPACT
VOLUME 2	GENERAL
	AERIAL STRUCTURES
	TUNNEL
	RETAINING WALLS
VOLUME 3	GENERAL
	GRADE SEPARATIONS
	ROADWAY IMPROVEMENTS
VOLUME 4	GENERAL
	UTILITIES
	GRADING AND DRAINAGE
	TRACTION POWER FACILITIES SITE
	COMMUNICATION SYSTEM SITE
	AUTOMATIC TRAIN CONTROL SITE

VOLUME NO.	CONTENT
VOLUME 5	GENERAL
	STATIONS
	MAINTENANCE FACILITIES
	TRACKSIDE ACCESS
VOLUME 6	GENERAL
	CONSTRUCTION PHASING PLANS
VOLUME 7	GENERAL
	BURBANK AIRPORT STATION
VOLUME 8	GENERAL
	LINK UNION STATION (LINK US) BY LA METRO

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PEPD
INDEX OF VOLUMES

CONTRACT NO. HSR14-39
DRAWING NO. GE-A0510
SCALE NO SCALE
SHEET NO.

VOLUME 5 - GENERAL, MAINTENANCE FACILITIES & TRACKSIDE ACCESS

GENERAL

DRAWING NO.	DRAWING TITLE
GE-A0500	COVER SHEET VOLUME 5
GE-A0501	PROJECT LOCATION MAP VOLUME 5
GE-A0510	INDEX OF VOLUMES
GE-A0511	INDEX OF DRAWINGS VOLUME 5
GE-D0501	VOLUME 5 - KEY MAP STATIONS AND TRACKSIDE ACCESS
GE-B0501	BASIS OF DESIGN SUMMARY
GE-C0501	ACRONYMS AND ABBREVIATIONS - SHEET 1 OF 5
GE-C0502	ACRONYMS AND ABBREVIATIONS - SHEET 2 OF 5
GE-C0503	ACRONYMS AND ABBREVIATIONS - SHEET 3 OF 5
GE-C0504	ACRONYMS AND ABBREVIATIONS - SHEET 4 OF 5
GE-C0505	ACRONYMS AND ABBREVIATIONS - SHEET 5 OF 5
GE-C0511	SYMBOLS - SHEET 1 OF 2
GE-C0512	SYMBOLS - SHEET 2 OF 2
GE-B0511	GENERAL NOTES
GE-D6501	TRACK SCHEMATIC

MAINTENANCE FACILITIES

DRAWING NO.	DRAWING TITLE
MY-D1101	CMF TRACK PLAN - SHEET 1 OF 4
MY-D1102	CMF TRACK PLAN - SHEET 2 OF 4
MY-D1103	CMF TRACK PLAN - SHEET 3 OF 4
MY-D1104	CMF TRACK PLAN - SHEET 4 OF 4
MY-D1201	CMF TRACK PROFILE - SHEET 1 OF 2
MY-D1202	CMF TRACK PROFILE - SHEET 2 OF 2
TT-E6118	CMF HORIZONTAL ALIGNMENT DATA - SHEET 1 OF 6
TT-E6119	CMF HORIZONTAL ALIGNMENT DATA - SHEET 2 OF 6
TT-E6120	CMF HORIZONTAL ALIGNMENT DATA - SHEET 3 OF 6
TT-E6121	CMF HORIZONTAL ALIGNMENT DATA - SHEET 4 OF 6
TT-E6122	CMF HORIZONTAL ALIGNMENT DATA - SHEET 5 OF 6
TT-E6123	CMF HORIZONTAL ALIGNMENT DATA - SHEET 6 OF 6
UT-C1001	CMF COMPOSITE UTILITIES PLAN - SHEET 1 OF 4
UT-C1002	CMF COMPOSITE UTILITIES PLAN - SHEET 2 OF 4
UT-C1003	CMF COMPOSITE UTILITIES PLAN - SHEET 3 OF 4
UT-C1004	CMF COMPOSITE UTILITIES PLAN - SHEET 4 OF 4

VOLUME 5 - GENERAL, MAINTENANCE FACILITIES & TRACKSIDE ACCESS

MAINTENANCE FACILITIES

DRAWING NO.	DRAWING TITLE
UT-D1640	CMF PROPOSED UTILITY RELOCATION PLAN - SHEET 1 OF 4
UT-D1641	CMF PROPOSED UTILITY RELOCATION PLAN - SHEET 2 OF 4
UT-D1642	CMF PROPOSED UTILITY RELOCATION PLAN - SHEET 3 OF 4
UT-D1643	CMF PROPOSED UTILITY RELOCATION PLAN - SHEET 4 OF 4
MY-D1001	CMF SITE CROSS SECTIONS - SHEET 1 OF 2
MY-D1002	CMF SITE CROSS SECTIONS - SHEET 2 OF 2
CV-S1101	CMF SITE IMPROVEMENTS - SHEET 1 OF 4
CV-S1102	CMF SITE IMPROVEMENTS - SHEET 2 OF 4
CV-S1103	CMF SITE IMPROVEMENTS - SHEET 3 OF 4
CV-S1104	CMF SITE IMPROVEMENTS - SHEET 4 OF 4
CV-D1101	CMF DEMOLITION - SHEET 1 OF 4
CV-D1102	CMF DEMOLITION - SHEET 2 OF 4
CV-D1103	CMF DEMOLITION - SHEET 3 OF 4
CV-D1104	CMF DEMOLITION - SHEET 4 OF 4
CV-R1101	CMF ROADWAY - SHEET 1 OF 4
CV-R1102	CMF ROADWAY - SHEET 2 OF 4
CV-R1103	CMF ROADWAY - SHEET 3 OF 4
CV-R1104	CMF ROADWAY - SHEET 4 OF 4

TRACKSIDE ACCESS & EMERGENCY ACCESS

DRAWING NO.	DRAWING TITLE
CV-S5100	VEHICLE TRACK ACCESS - LOCATION PLAN
CV-S5101	VEHICLE TRACK ACCESS - BUENA VISTA ST / LINCOLN ST HSR STA 3095+01
CV-S5102	VEHICLE TRACK ACCESS - UPRR WYE TRACKS HSR STA 3161+20
CV-S5103	VEHICLE TRACK ACCESS - ALLEN AVE HSR STA 3224+00
CV-S5104	VEHICLE TRACK ACCESS - DORAN ST HSR STA 3325+00
CV-S5105	VEHICLE TRACK ACCESS - GOODWIN AVE HSR 3387+00
CV-S5106	VEHICLE TRACK ACCESS - VERDANT ST HSR STA 3412+60
CV-S5107	VEHICLE TRACK ACCESS - MAIN ST HSR STA 3683+00

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
INDEX OF DRAWINGS
VOLUME 5 - SHEET 1 OF 1

CONTRACT NO. HSR14-39
DRAWING NO. GE-A0511
SCALE NO SCALE
SHEET NO.

BEGIN B-LA CHSR PROJECT
ALTERNATIVE E2 ALIGNMENT
STA 3053+69.55 =
P-B STA 20192+26.63
REFER TO SENER P-B PEPD SUBMITTAL (VOLUME 7)
FOR WORK NORTH OF THIS LOCATION

BURBANK AIRPORT STATION

HOLLYWOOD WAY

GOLDEN STATE FWY (I-5)

CV-S5101

BUENA VISTA ST

CITY OF BURBANK

BURBANK BLVD

CV-S5102

VICTORY BLVD

MAGNOLIA BLVD

BURBANK METROLINK STATION

OLIVE AVE

BURBANK WEST CHANNEL

ALAMEDA AVE

CITY OF BURBANK

CV-S5103

WESTERN AVE

CITY OF GLENDALE

CV-S5104

SONORA AVE

GRANDVIEW AVE

FLOWER ST

MATCH 3307+00

MATCH 3307+00

CV-S5105

FAIRMONT AVE

VENTURA FWY (SR-134)

CV-S5106

CV-S5107

CITY OF GLENDALE

GLENDALE METROLINK STATION

CITY OF LOS ANGELES

SAN FERNANDO RD

LOS ANGELES RIVER

MATCH 3554+00

FLETCHER DR

GLENDALE FWY (SR-2)

END B-LA CHSR PROJECT
HSR STA 3687+45.26 = LINKUS STA 54+32.87
REFER TO LINKUS SUBMITTAL (VOLUME 8)
FOR WORK SOUTH OF THIS LOCATION

METROLINK CMF
TAYLOR YARD

UT-D1643
MY-D1104
UT-C1004
CV-D1104
CV-R1104
CV-S1104
CV-G1104

UT-D1641
MY-D1101
UT-C1001
CV-D1101
CV-R1101
CV-S1101
CV-G1101

MY-D1103
UT-C1003
CV-D1103
CV-R1103
CV-S1103
CV-G1103
UT-D1642

MY-D1102
UT-C1002
CV-D1102
CV-R1102
CV-S1102
CV-G1102
UT-D1640

SAN FERNANDO RD

MATCH 3554+00

LOS ANGELES RIVER

GOLDEN STATE FWY (I-5)

ARROYO SECO PKWY (SR-110)

BROADWAY ST

MAIN ST

CITY OF LOS ANGELES

FIRST STREET

BURBANK TO LOS ANGELES SEGMENT

LOS ANGELES TO ANAHEIM SEGMENT

WORK END
LINKUS STA 146+11.68 =
LA-A STA S190+00

LOS ANGELES UNION STATION

1000 0 1000 2000
1"=1000' HOR.
SCALE APPLICABLE FOR FULL SIZE ONLY

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HIGH-SPEED RAIL AUTHORITY

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BURBANK TO LOS ANGELES

PEPD
VOLUME 5 - KEY MAP
MAINTENANCE FACILITIES AND TRACKSIDE ACCESS

CONTRACT NO. HSR14-39
DRAWING NO. GE-D0501
SCALE AS SHOWN
SHEET NO.

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BASIS OF DESIGN SUMMARY

THE BURBANK TO LOS ANGELES (B-LA) SEGMENT BEGINS SOUTH OF THE PROPOSED BURBANK AIRPORT STATION IN A SUBSURFACE DEDICATED CORRIDOR, RUNS ALONG THE VENTURA AND VALLEY SUBDIVISIONS IN A SHARED CORRIDOR, AND ENDS AT LOS ANGELES UNION STATION (LAUS). FOR THE B-LA-A SEGMENT (LOSSAN CORRIDOR), THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY (AUTHORITY) HAS ADOPTED A STRATEGY TO 'BLEND' HIGH SPEED WITH EXISTING RAIL SYSTEMS ON SHARED INFRASTRUCTURE TO ACCELERATE AND BROADEN BENEFITS, IMPROVE EFFICIENCY, MINIMIZE COMMUNITY IMPACTS AND REDUCE CONSTRUCTION COST. THE TECHNICAL REQUIREMENTS NECESSARY TO ALLOW JOINT OPERATION OF HIGH-SPEED RAIL, CONVENTIONAL PASSENGER RAIL, AND FREIGHT RAIL WITHIN THE BLENDED SYSTEM CORRIDOR BETWEEN BURBANK AND LOS ANGELES UNION STATION (LAUS) ARE BASED ON:

1. TECHNICAL MEMORANDUM (TM) 0.3.1 BASIS OF DESIGN FOR BLENDED OPERATION IN THE LA-A CORRIDOR, R0 DATED AUGUST 20, 2016.

2. TECHNICAL MEMORANDUM 0.3, BASIS OF DESIGN POLICY DOCUMENT, R3 DATED JUNE 21, 2013

THE BASIS OF DESIGN ELEMENTS THAT DIFFER BETWEEN BLENDED OPERATION AND THE DEDICATED HIGH-SPEED OPERATION ARE DEFINED IN THE TM 0.3.1. IT SPECIFICALLY FOCUSES ON OBJECTIVES, PROCESSES, REQUIREMENTS, AND ASSUMPTIONS THAT SUPPORT THE BLENDED OPERATION.

IN ADDITION, THE FOLLOWING DESIGN POLICY MEMOS HAVE BEEN INITIATED IN ORDER TO ADDRESS THE REQUIREMENTS OF THE VARIOUS DESIGN ELEMENTS THAT ARE NOT COVERED IN DETAIL IN THE TM 0.3.1 AND ARE BEING REVIEWED BY THE AUTHORITY.

INFRASTRUCTURE REQUIREMENTS

THE AUTHORITY HAS ESTABLISHED PERFORMANCE REQUIREMENTS TO GUIDE THE DEVELOPMENT OF THE HIGH-SPEED RAIL SYSTEM IN BLENDED CORRIDORS BASED ON THE FRA TIER STRUCTURE FOR PASSENGER SYSTEMS DESCRIBED IN THE "HIGH-SPEED PASSENGER RAIL SAFETY STRATEGY (2009)."

THE REQUIREMENTS FOR MAJOR DESIGN ELEMENTS ARE LISTED BELOW:

1. INTEROPERABILITY

REQUIRED LEVEL OF INTEROPERABILITY BETWEEN THE PASSENGER AND FREIGHT RAILROADS THAT OPERATE IN THE B-LA CORRIDOR WILL BE MAINTAINED.

THE RAILROAD OPERATORS AND RIGHT-OF-WAY OWNERS ARE:

AUTHORITY
METROLINK
AMTRAK
UNION PACIFIC RAILROAD

2. DESIGN SPEEDS

DESIGN SPEED: MAXIMUM ALLOWED PER EXISTING ALIGNMENT/ROW CONSTRAINTS WITH A SPEED NOT TO EXCEED MAXIMUM OF 125 MPH.

3. TRACK CENTER SPACING

16'-6" MINIMUM, EXCEPT FOR 15'-0" MINIMUM BETWEEN I-5 AND SR-134, NORTH OF CMF ACCESS ROAD, AND FROM DOWNEY BRIDGE TO LAUS,

4. AT-GRADE CROSSING

THERE WILL BE NO AT-GRADE CROSSINGS IN THE B-LA SEGMENT. ALL INTERSECTIONS WILL BE GRADE SEPARATED OR CLOSED.

5. ACCESS CONTROL

THE B-LA CORRIDOR WILL BE FENCED WITH NO AT-GRADE CROSSINGS. INTRUSION PROTECTION AND/OR INTRUSION MONITORING WILL BE EMPLOYED WITH MITIGATIONS AS REQUIRED TO PROMOTE SAFE AND RELIABLE OPERATION.

6. TRACK ALIGNMENT

THE B-LA CORRIDOR IS PLANNED TO OPERATE AS A CLASS 5/6/7 SERVICE (SPEEDS UP TO 125 MPH) WITH NO AT-GRADE ROADWAY CROSSINGS. TRACK ALIGNMENT DESIGN STANDARDS ARE GENERALLY BASED ON HOST RAILROAD STANDARDS UNLESS OTHERWISE NOTED ON GEOMETRY TABLES.

7. INTRUSION PROTECTION

INTRUSION DETECTION WILL BE PROVIDED AT LOCATIONS WHERE IT IS APPROPRIATE TO MITIGATE AN INTRUSION HAZARD BASED ON HAZARD ASSESSMENT AND REQUIREMENTS OF ADJACENT RAILROAD (UPRR).

8. GRADE SEPARATIONS

ALL EXISTING AT-GRADE ROADWAY/RAIL CROSSINGS WILL BE GRADE SEPARATED EXCEPT FOR POSSIBLY TWO (2) AT-GRADE CROSSINGS IN THE CITY OF GLENDALE. RISK BASED POTENTIAL MITIGATION MEASURES SUCH AS PEDESTRIAN OVERCROSSINGS/UNDERCROSSINGS WILL BE CONSIDERED.

THE AUTHORITY HAS DEVELOPED A LIST OF EARLY PROJECTS THAT WILL BE PARTIALLY FUNDED BY HSR ALONG THIS CORRIDOR. THIS LIST INCLUDES PROJECTS THAT ARE CURRENTLY IN DESIGN AND PROJECTS THAT ARE TO ENVIRONMENTALLY CLEAR BY THE HSR EIR/EIS. THOSE CROSSINGS RECEIVING FUNDS FROM THE HSR AUTHORITY ARE:

1. LINK US
2. ADDITIONAL PROJECTS UNDER NEGOTIATION
3. LACMTA SALEM SPERRY OVERPASS

ALL OTHER CROSSINGS, NEW OR REQUIRING MODIFICATIONS, WILL BE CLEARED ENVIRONMENTALLY BY HSR EXCEPT FOR:

1. LINK US

9. TERMINAL AND INTERMEDIATE STATION(S)

THE FOLLOWING STATION IN THE CORRIDOR IS DESIGNATED AS A TERMINAL STATION:

BURBANK AIRPORT STATION & LOS ANGELES UNION STATION

THERE WILL BE NO INTERMEDIATE HIGH SPEED RAIL STATION

10. TRACK AND PLATFORM CONFIGURATION

BASED ON NOTICE TO DESIGNERS NO. 13 - STATION PLATFORM AND TRACK LAYOUT (RELEASED ON SEPTEMBER 7, 2016), THE STATION PASSENGER PLATFORMS ARE PLANNED FOR A LENGTH OF APPROXIMATELY 800 TO 1410 FEET TO ACCOMODATE A RANGE OF HIGH-SPEED TRAINSETS. PLATFORM LENGTHS SHOWN IN PLANS ARE BASED ON COORDINATED STATION PLANNING WITH AUTHORITY AND STAKEHOLDERS.

11. VEHICLE STORAGE AND MAINTENANCE

UNDER CURRENT OPERATING ASSUMPTION, FLEET STORAGE, CLEANING, SERVICING, INSPECTION, MAINTENANCE, AND REPAIR REQUIREMENTS WILL BE SUPPORTED AT:

TERMINAL STORAGE AND MAINTENANCE FACILITY (LEVEL 1) THAT PROVIDES IN-SERVICE INSPECTION, CLEANING AND MAINTENANCE WITH A LOCATION IN PROXIMITY TO LOS ANGELES UNION STATION

STORAGE TRACKS FOR OVERNIGHT LAYUP AT LOS ANGELES UNION STATION.

CURRENT DESIGNS TO BE MODIFIED PER UPCOMING DISCUSSION WITH THE AUTHORITY.

12. ADJACENT RAIL OPERATIONS

IN THE BURBANK TO LOS ANGELES CORRIDOR, THE AUTHORITY WILL OPERATE IN A SHARED RIGHT-OF-WAY CORRIDOR AND WILL SHARE TRACKS WITH OTHER PASSENGER TRAINS SOUTH OF DOWNTOWN BURBANK METROLINK STATION. FREIGHT TRAINS WILL NOT OPERATE ON HSR ELECTRIFIED TRACKS.

13. SHARED RIGHT OF WAY (ROW)

GENERALLY, THE RIGHT-OF-WAY IS OWNED BY LA METRO ON THE VALLEY AND VENTURA SUBDIVSIONS, AND IS OWNED PARTIALLY BY THE FREIGHT RAILROAD (UPRR) ON THE VENTURA LINE. PASSENGER AND FREIGHT OPERATIONS OCCUR SIMULTANEOUSLY THROUGHOUT THE DAY ON PARALLEL ALIGNMENTS.

TRACK SEPARATION AND INTRUSION PROTECTION, AS DETERMINED THROUGH RISK-BASED ANALYSIS, WILL BE PROVIDED.

14. DIAMOND (AT-GRADE) CROSSINGS

THE USE OF "OWL" DIAMOND CROSSINGS WILL BE NOT ALLOWED DUE TO HIGH VOLUME OF CROSSING TRACKS. THE HSR TRACKS WILL RUN ALONGSIDE THE WESTERN SIDE OF THE CMF BUILDING TO AVOID DIAMOND CROSSINGS.

15. STRUCTURAL DESIGN

A. PEPD STRUCTURE DESIGN WILL BE BASED ON CHSTP CP 2-3 DESIGN CRITERIA MANUAL REV 2 DATED FEBRUARY, 2014.

B. DESIGN LIFE = 100 YEARS

SYSTEM REQUIREMENTS

1. SYSTEMS

DESIGN ELEMENTS RELATED TO ELECTRIFICATION/TRACTION POWER SUPPLY SYSTEM (TPSS), TRAIN CONTROL SYSTEMS AND COMMUNICATIONS ARE NOT PART OF THIS CONTRACT AND THESE DESIGN ELEMENTS WILL BE DESIGNED BY OTHERS.

ELEMENT LOCATIONS WILL BE DEFINED AS PART OF THIS CONTRACT.

AUTHORITY SYSTEMS TEAM DIRECTED THE FOLLOWING UPDATES AT A SEPTEMBER 15, 2016 WORKSHOP:

ELIMINATE ALTERNATE SITE OPTIONS

ELIMINATE BACK TO BACK PARALLELING STATION

MAINTAIN STANDARD LAYOUT TPSS-TPPS-TPWS-TPPS-TPSS. INTRODUCE A PORTAL/BRIDGE STRUCTURE EVERY MILE IN SEGMENTS UTILIZING THE DOUBLE CANTILEVER CATENARY POLE.

RIGHT-OF-WAY FOR THESE SYSTEMS AND SUB-SYSTEMS WILL BE DEFINED BY THE AUTHORITY AND MAYBE MODIFIED IN THE FUTURE.

POWER SOURCE WILL BE BASED ON DISCUSSIONS BETWEEN THE AUTHORITY AND UTILITY OWNER.

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A

@	AT
AADT	AVERAGE ANNUAL DAILY TRAFFIC
AB	AGGREGATE BASE, ANCHOR BOLT
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
ABV	ABOVE
AC	ALTERNATING CURRENT, ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACMB	AC DISTRIBUTION PANEL MAIN BREAKER
ACOUS	ACOUSTICAL
ACP	ASBESTOS CEMENT PIPE
ACR	ACCESS CONTROL ROOM
ACSR	ALUMINUM CONDUCTOR STEEL REINFORCED
AD	AREA DRAIN
ADJ	ADJACENT, ADJUST, ADJUSTABLE
ADL	ADDED DEAD LOAD
ADP	AC DISTRIBUTION PANEL
ADT	AVERAGE DAILY TRAFFIC
A&E	ARCHITECTURAL AND ENGINEERING
AEC	AERIAL EARTH (GROUND) CONDUCTOR
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
AFC	AUTOMATIC FARE COLLECTION
AFES	ALTERNATIVE FLARED END SECTION
A/G	AT-GRADE
AGW	AERIAL GROUND WIRE
AHD	AHEAD
AL	ALUMINUM
ALIGN	ALIGNMENT
ALT	ALTERNATE
AM	ANTE MERIDIEM (TIME FROM MIDNIGHT TO NOON)
ANC	ANCHOR
ANI	AUTOMATIC NUMBER IDENTIFICATION
ANN	ANNUNCIATOR
ANS	AMBIENT NOISE SENSOR
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APE	AREA OF POTENTIAL EFFECTS
APEFZ	ALQUIST-PRIOLO EARTHQUAKE FAULT ZONE
API	APPLICATION PROGRAMMING INTERFACE
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
AR	ACCESS RESTRICTION
ARCH	ARCHITECTURAL
ARS	ACCELERATION RESPONSE SPECTRUM
AS	AGGREGATE SUBBASE
ASPH	ASPHALT
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
AT	AUTOTRANSFORMER, AUTOMATIC TENSION
ATC	AUTOMATIC TRAIN CONTROL
ATEL	ADMINISTRATIVE TELEPHONE
ATM	ALONG TRACK MOVEMENT, AUTOMATED TELLER MACHINE
ATO	AUTOMATIC TRAIN OPERATION
ATP	AUTOMATIC TRAIN PROTECTION
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
ATR	ABOVE TOP OF RAIL
ATS	AUTOMATIC TRAIN SUPERVISION, AUTO TENSIONED SYSTEM
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AVL	AUTOMATIC VEHICLE LOCATION
AWG	AMERICAN WIRE GAUGE

B

BAGR	BRIDGE APPROACH GUARD RAILING
BAR	BARRIER
BAT	BATTERY
BB	BEGINNING OF BRIDGE
B-B	BACK-TO-BACK
BC	BEGINNING OF CURVE, BOLT CIRCLE
BCR	BEGIN CURB RETURN
BD	BOARD
BDA	BI-DIRECTIONAL AMPLIFIER
BDD	BRIDGE DESIGN DETAILS (CALTRANS)
BDP	BRIDGE DESIGN PRACTICE (CALTRANS)
BDS	BRIDGE DESIGN SPECIFICATIONS (CALTRANS)
BEC	BURIED EARTH (GROUND) CONDUCTOR
BEG	BEGIN
BFA	BYPASS FEEDER ANCHOR
BIL	BASIC IMPULSE INSULATION LEVEL
BITUM	BITUMINOUS
BKLN	BIKE LANE
BK	BACK
BKF	BACKFILL
BKR	BREAKER
BL	BASELINE
BLDG	BUILDING
BLKG	BLOCKING
BLM	BRIDGE-LOG MILE
BLST	BALLAST
BLVD	BOULEVARD
BM	BENCHMARK
BN	BACKBONE NETWORK
BND	BOUND
BOC	BOTTOM OF CURB
BOCC	BACK-UP OPERATIONAL CONTROL CENTER
BOS	BOTTOM OF SLOPE
BOT	BOTTOM
BOW	BOTTOM OF WALL
BR	BRIDGE, BRIDGE CURVE
BRG	BEARING
BRKT	BRACKET
BRS	BROADBAND RADIO SYSTEM
BRT	BUS RAPID TRANSIT
BS	BODY SPAN WIRE
BSC	BASE STATION CONTROLLER
B/SPAN	BODY SPAN
BT	BUS TIE
BTM	BOTTOM
BTS	BASE TRANSCEIVER STATION
BTWN	BETWEEN
BVC	BEGINNING OF VERTICAL CURVE
BW	BARBED WIRE, BALANCE WEIGHT
B/W	BLACK AND WHITE
BWA	BALANCE WEIGHT ANCHOR
BWLAN	BROADBAND WIRELESS LOCAL AREA NETWORK
BZ	BRONZE

C

C	CLOSE, CONDUIT, CONTACT, CONTROL
CA	CERTIFICATION ACCEPTANCE
CAA	CABLE ANCHOR ASSEMBLY
CAB	CABINET
CADD	COMPUTER-AIDED DESIGN AND DRAFTING
CAH	CONTROLLED ACCESS HIGHWAY
CAI	CUSTOMER ASSISTANCE INTERCOM
CALP	CORRUGATED ALUMINUM PIPE
CANT	CANTILEVER
CAP	CAPACITY, CAPACITOR, CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CAT	CATEGORY, CATEGORY SPECIFICATION FOR TWISTED PAIR CABLING
CATF	CANTENARY FOUNDATION
CATP	CANTENARY POLE
CB	CATCH BASIN, CIRCUIT BREAKER, CONCRETE BARRIER
CBTC	COMMUNICATIONS BASED TRAIN CONTROL
CBW	CONCRETE BLOCK WALL
C&C	CUT AND COVER
C-C	CENTERLINE TO CENTERLINE, CENTER TO CENTER
CCO	CONTRACT CHANGE ORDER
CCS	CALIFORNIA COORDINATE SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CCVT	COUPLING CAPACITOR VOLTAGE TRANSFORMER
CEG	CERTIFIED ENGINEERING GEOLOGIST
CEM	CEMENT
CER	COMMUNICATIONS EQUIPMENT ROOM
C&G	CURB AND GUTTER
CG	CENTER OF GRAVITY
CGS	CALIFORNIA GEOLOGICAL SURVEY
CHNL	CHANNEL
CI	CAST IRON
CIC	COMMUNICATIONS INTERFACE CABINET
CIDH	CAST-IN-DRILLED-HOLE
CIF	COMMON INTERMEDIATE FORMAT
CIP	CAST IRON PIPE
C-I-P	CAST-IN-PLACE
CIPCP	CAST-IN-PLACE CONCRETE PIPE
CIS	CUSTOMER INFORMATION SIGN
CISS	CAST-IN-STEEL-SHELL
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CKT	CIRCUIT
CL	CLASS, CEMENT LINED
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLG	CEILING
CLK	CHAIN LINK
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR, CLEARANCE
CM	CONTROL MODULE, CORRUGATED METAL
CMF	CENTRAL MAINTENANCE FACILITY
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEANOUT, COUNTY
COL	COLUMN
COMM	COMMUNICATIONS
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR, CONNECTION
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CP	CONTROL POINT
CPT	CONE PENETRATION TEST, CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CREEK, CONDUIT RISER
CRC	COMBINED RELAY AND CONTROL PANEL
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CRZ	CLEAR RECOVERY ZONE
CS	CONTROL SWITCH, CURVE TO SPIRAL
CSA	CONSTRUCTION STAGING AREA
CSG	CASING
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CT	CERAMIC TILE, COURT, CURRENT TRANSFORMER/TRANSDUCER
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTR	CENTER
CTSK	COUNTERSUNK
CTVT	COMBINED CURRENT TRANSFORMER AND VOLTAGE TRANSFORMER
CTW	COUNTER WEIGHT TAIL WIRE
CU	COPPER
CULV	CULVERT
CV	CURVE
CVR	COVER
CW	CONTACT WIRE
CWA	CONTACT WIRE ANCHOR
CWH	CONTACT WIRE HEIGHT
CWR	CONTINUOUSLY WELDED RAIL
CWT	COUNTER WEIGHT

D

D	DEPTH
DB	DESIGN-BUILD
DBE	DESIGN BASIS EARTHQUAKE
DBL	DOUBLE
DC	DIRECT CURRENT
DCMB	DC DISTRIBUTION PANEL MAIN BREAKER
DCP	DC DISTRIBUTION PANEL
DD	DOWNDRAIN, DEVICE DRIVER
DE	DEAD END
DEL	DELINEATOR
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETOUR
DF	DIRECT FIXATION, DRINKING FOUNTAIN
DGA	DOWN GUY ANCHOR
DHV	DESIGN HOURLY VOLUME
DI	DRAINAGE INLET
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIFF	DIFFERENTIAL
DIM	DIMENSION
DIN	DROP INLET
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISC	DISCONNECT
DISP	DISPENSER
DIST	DISTANCE
DISTR	DISTRIBUTION
DMBB	DOUBLE METAL BEAM BARRIER
DN	DOWN
DNS	DOMAIN NAME SYSTEM
DO	DOOR OPENING
DPDT	DOUBLE-POLE DOUBLE-THROW
DR	DRIVE
DS	DOWNSPOUT, DISCONNECT SWITCH
DSC	DIFFERING SITE CONDITIONS
DSCW	DIRECT SUSPENSION CONTACT WIRE
DSG	DISCONNECT SWITCH GROUP
DSHA	DETERMINISTIC SEISMIC HAZARD ANALYSIS
DST	DISTRICT
DTBB	DOUBLE THRIE BEAM BARRIER
DTM	DIGITAL TERRAIN MODEL
DVR	DIGITAL VIDEO RECORDERS
DWG	DRAWING
DWY	DRIVEWAY
DXO	DOUBLE CROSSOVER

E

E_e	APPLIED CANT
E_u	UNBALANCED CANT
E	EAST, EASTING
EA	EACH
EB	EASTBOUND, END OF BRIDGE
EC	END HORIZONTAL CURVE, ELECTRICAL CONDUCTOR
ECR	END CURB RETURN
EE	EACH END
EF	EACH FACE
EGS	EMERGENCY GROUND SWITCH
EHS	EXTRA HIGH STRENGTH
EI	EMERGENCY INTERCOM
EJ	EXPANSION JOINT
E-LAN	ETHERNET LAN
ELAST	ELASTOMERIC
ELEC	ELECTRICAL, ELECTRIC
ELECT	ELECTROLIER
ELEV	ELEVATION
ELOCK	ELECTRONIC LOCK
EMB	EMBANKMENT
EMC	ELECTROMAGNETIC COMPATIBILITY
EMER	EMERGENCY
EMF	ELECTROMAGNETIC FIELD
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	ELEMENT MANAGEMENT SYSTEM
EMU	ELECTRIC MULTIPLE UNIT
ENCL	ENCLOSURE

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CUSSON
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

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STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
ACRONYMS AND ABBREVIATIONS
SHEET 1 OF 5

CONTRACT NO. HSR14-39
DRAWING NO. GE-C0501
SCALE NO SCALE
SHEET NO.

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E CONTINUED

ENGR	ENGINEER, ENGINEERING
EOB	END OF BRIDGE
EOD	EDGE OF DECK
EOS	ELECTRICAL OPERATED BRIDGE
EOW	END OF WALL
EP	EDGE OF PAVEMENT
EPBM	EARTH PRESSURE BALANCING MACHINE
EPR	ETHYLENE PROPYLENE RUBBER
EQ	EQUAL, EQUILATERAL
EQN	EQUATION
EQUIP	EQUIPMENT
ES	EDGE OF SHOULDER, EXTRA STRENGTH, ELECTRICAL SECTION
ESA	ENVIRONMENTALLY SENSITIVE AREA
ESC	ESCALATOR
ESEW	EMERGENCY SHOWER / EYE WASH
ESMT	EASEMENT
ETCS	EUROPEAN TRAIN CONTROL SYSTEM
ETEL	EMERGENCY TELEPHONE
ETS	EMERGENCY TRIP SYSTEM
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	EACH WAY, ENDWALL
EXC	EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXPO	EXPOSED
EXWY	EXPRESSWAY
EXT	EXTERIOR, EXTENSION

F

FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAS	FIRE ALARM SYSTEM
FB	FLAT BAR, FLOOR BEAM, FEEDER BREAKER
FBO	FURNISHED BY OTHERS
FC	FARE COLLECTION
F&C	FRAME AND COVER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FDP	FIBER DISTRIBUTION PANEL
FDR	FEEDER
FDU	FIBER DISTRIBUTION UNIT
FE	FIRE EXTINGUISHER
FES	FLARED END SECTION
FF	FILTER FABRIC
F/F	FACE TO FACE
FFJ	FULL FEEDING JUMPER
FFL	FINISHED FLOOR LEVEL
FG	FINISHED GRADE
F&G	FRAME AND GRATE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FID	FIRE INITIATING DEVICE
FIG	FIGURE
FIN	FINISH
FIRM	FLOOD INSURANCE RATE MAPS
FJ	FEEDER JUMPER
FL	FLOW LINE
FLB	FLOOR BEAM
FLH	FLAT HEAD
FLR	FLOOR
FNA	FIRE NOTIFICATION APPLIANCE
FO	FIBER OPTIC
FOC	FIBER OPTIC CABLE, FACE OF CURB
FOCN	FIBER OPTIC CABLING NETWORK
FOF	FACE OF FINISH
FOP	FACE OF POLE
FOS	FACE OF STUDS, FACTOR OF SAFETY
FP	FULL PENETRATION
FPLM	FULL SPAN PRECAST LAUNCHING
FPRF	FIRE PROOF
FPS	FRAMES PER SECOND
FR	FRAME
FREQ	FREQUENCY

F CONTINUED

FS	FINISHED SURFACE
FTEL	FIRE TELEPHONE
FTG	FOOTING
FTP	FILE TRANSFER PROTOCOL
FTW	FIXED END TAIL WIRE
FUT	FUTURE
FW	FEEDER WIRE
FWY	FREEWAY

G

G1	ENTRANCE GRADE, GRADE BEFORE CURVE
G2	EXIT GRADE, GRADE POST CURVE
GALV	GALVANIZED
GCL	GRADING CONTROL LINE
GD	GRADE
GHS	GALVANIZED HIGH STRENGTH
GI	GENERAL INFORMATION
GIGE	GIGABIT ETHERNET
GIS	GAS INSULATED SWITCH, GEOGRAPHIC INFORMATION SYSTEM
GL	GLASS
G/L	GROUND LINE
GMA	GROUND MOTION ANALYSIS
GND	GROUND
GO-95	PUC GENERAL ORDER 95
GP	GRADING PLANE
GPS	GLOBAL POSITIONING SYSTEM
GR	GUARDRAIL, GROUND ROD
GRP	GLASS REINFORCED PLASTIC ROD
GRS	GALVANIZED RIGID STEEL
GRX	GRADE CROSSING
GSHA	GEOLOGIC AND SEISMIC HAZARDS ANALYSIS
GSP	GALVANIZED STEEL PIPE
GT	GENERAL INFORMATION
GTGM	GEOTECHNICAL TECHNICAL GUIDANCE MANUAL (FHWA)
GTR	GUTTER
GW	GUY WIRE
GYP	GYPSUM
GYPBD	GYPSUM BOARD

H

HSR1/2	HSR TRACK 1/2/ETC.
HAZ	HAZARDOUS
HB	HARDNESS BRINELL, HOSE BIBB
HC	HANDICAP
HD	HARD DRAWN, HORIZONTAL DRAIN
HDG	HOT DIP GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HDWE	HARDWARE
HDWL	HEADWALL
HEX	HEXAGONAL
HH	HANDHOLE, HEAD HARDENED
HI	HIGH
HI-RAIL	HIGHWAY TO RAILROAD VEHICLE
HM	HOLLOW METAL
HMA	HOT MIXED ASPHALT
HMI	HUMAN MACHINE INTERFACE
HO	HAND OPERATED
HOR	HORIZONTAL
HOV	HIGH-OCCUPANCY VEHICLE
HP	HIGH POINT, HINGE POINT
HP&R	HIGHWAY PLANTING AND RESTORATION
HPS	HIGH PERFORMANCE STEEL
HR	HANDRAIL
HRL	HIGH RAIL LEVEL
HS	HIGH STRENGTH
H/SPAN	HEADSPAN
HSR	HIGH-SPEED RAIL
HST	HIGH-SPEED TRAIN
HT	HIGH TEMPERATURE
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING VENTING AND AIR CONDITIONING
HW	HIGH WATER
HWT	HIGH WATER TABLE
HWM	HIGH WATER MARK

H CONTINUED

HWY	HIGHWAY

I

IB	IMPENANCE BOND
IBC	INTERNATIONAL BUILDING CODE
IDS	INTRUSION DETECTION CODE
IIMP	INTERGRATED IMFORMATION MANAGEMENT PLATFORM
IJ	INSULATED JOINT
IJP	INSULATED JOINT PLUG
INSR	INSULATOR
INST	INSTANTANEOUS
INSUL	INSULATION
INT	INTERIOR
Inter-LATA	INTER-LOCAL ACCESS AND TRANSPORT AREA
INV	INVERT
I/O	INPUT/OUTPUT
IR	IN-RUNNING (RIDING CONTACT WIRE)
IRR	IRRIGATION
I/S	IN-SPAN
I/SJ	IN-SPAN JUMPER

J

J	JUMPER
JAN	JANITOR
JB	JUNCTION BOX
JCT	JUNCTION
JP	JOINT POLE
JT(S)	JOINT(S)

K

KV	KILOVOLT

L

L	LENGTH
LA	LANDSCAPE ARCHITECT, LIGHTING ARRESTER, LOS ANGELES (CALIFORNIA, USA)
LA-A	LOS ANGELES TO ANAHEIM
LAM	LAMINATE
LAN	LOCAL AREA NETWORK
LA-SD	LOS ANGELES TO SAN DIEGO
LAT	LATITUDE
LAV	LAVATORY
LC	LENGTH OF CURVE, LANDSCAPE CONTRACTOR
LCB	LEAN CONCRETE BASE
LCX	LEAKY COAXIAL RADIO CABLE
LDBE	LOWER-LEVEL DESIGN BASIS EARTHQUAKE
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LG	LONG
LGT	LIGHT, LIGHTING
LH	LEFT-HAND
LKR	LOCKER
LL	LIGHT LOADING
LLT	LAST LONG TIE
LN	LANE
LO	LOCKOUT
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE, LONGITUDINAL
LOS	LEVEL OF SERVICE
LOTB	LOGS OF TEST BORINGS
LP	LOW POINT, LOW PROFILE
LPL	LIGHT POLE
LR	LOW RAIL
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
LRT	LIGHT RAIL TRANSIT
LRV	LIGHT RAIL VEHICLE
LS	LENGTH OF SPIRAL, LANDSCAPING, LUMP SUM
LT	LEFT
LV	LOW VOLTAGE
LVL	LEVEL
LVT	LOW VIBRATION TRACK

L CONTINUED

LWP	LOWER WORKING POINT

M

M1	CONVENTIONAL RAILWAY TRACK
M	MEDIUM LOADING
MAINT	MAINTENANCE
MAT	MATERIAL
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MCC	MAINTENANCE CONTROL CENTER
MCE	MAXIMUM CONSIDERED EARTHQUAKE
MCR	MASTER CONTROL ROOM
MDS	MOBILE DATA SYSTEM
MECH	MECHANICAL
MED	MEDIAN
MEM	MEMBRANE
MESSGR	MESSENGER WIRE
MET	METAL
MFR	MANUFACURER
MH	MANHOLE
MHHW	MEAN HIGHEST HIGH WATER
MI	MILD IRON
MIN	MINIMUM
MISC	MISCELLANEOUS
MKR	MARKER
ML	MAIN LINE
MLLW	MEAN LOWER LOW WATER
MMIS	MAINTENANCE MANAGEMENT INFORMATION SYSTEM
MO	MASONRY OPENING
MOC	MOTOR OPERATED CONTRACTOR
MOD	MODIFIED, MODIFY
MODC	MOTOR OPERATED DISCONNECT SWITCH
MOI	MAINTENANCE OF INFRASTRUCURE
MON	MONUMENT
MOP	MOTOR OPERATED
MOS	MANUALLY OPERATED SWITCH
MOV	METAL-OXIDE VARISTOR
MOW	MAINTENANCE OF WAY
MP	MILEPOST
MPA	MIDPOINT ANCHOR
MPH	MILES PER HOUR
MPLS	MULTI-PROTOCOL LABEL SWITCHING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKEMENT
MSF	MAINTENANCE AND STORAGE FACILITY
MSL	MEAN SEA LEVEL
MTD	MEMO TO DESIGNERS (CALTRANS), MOUNTED
MUL	MULLION
MVC	MINIMUM VERTICAL CLEARANCE
MW	MESSENGER WIRE

N

N	NORTH, NORTHING
N/A	NOT APPLICABLE
NAVD	NORTH AMERICAN VERTICAL DATUM
NB	NORTHBOUND
NBR	NONBRIDGING
NCL	NO COLLAPSE PERFORMANCE LEVEL
NDP	NONLINEAR DYNAMIC PROCEDURE
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NEUT	NEUTRAL
NF	NEGATIVE FEEDER, NEAR FACE
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NI	NETWORK INTERFACE
NIC	NOT IN CONTRACT
NMS	NETWORK MANAGEMENT SYSTEM
NO	NUMBER, NORMALLY OPEN
NOM	NOMINAL
NP	NETWORK PORT

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DESIGNED BY C. CUSSON
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
ACRONYMS AND ABBREVIATIONS
SHEET 2 OF 5

CONTRACT NO. HSR14-39
DRAWING NO. GE-C0502
SCALE NO SCALE
SHEET NO.

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N CONTINUED

NPRM	NOTICE OF PROPOSED RULE MAKING
NPS	NOMINAL PIPE SIZE
NR	NOT REGISTERED
NS	NOT SUPPORTED
NT	NETWORK
NTP	NOTICE TO PROCEED, NETWORK TIME PROTOCOL
NTS	NOT TO SCALE NETWORK TIME SERVER

O

OA	OVERALL
OBLR	OBLITERATE
OC	ON CENTER, OVERCROSSING
OCC	OPERATIONS CONTROL CENTER
OCS	OVERHEAD CONTACT SYSTEM
OF	OUTSIDE FACE
OFF	OFFSET
OG	ORIGINAL GROUND
OH	OVERHEAD
O-LA	ORANGE COUNTY TO LOS ANGELES
O&M	OPERATIONS AND MAINTENANCE
O-O	OUT TO OUT
OOR	OUT-OF-RUNNING (NONRIDING CONTACT WIRE)
OP	OVERPASS
OPL	OPERABILITY PERFORMANCE LEVEL
OPNG	OPENING
OPP	OPPOSITE
ORS	OPERATIONS RADIO SYSTEM
OSP	OUTSIDE PLANT
OVERTEMP	OVERTEMPERATURE

P

P-LA	PALMDALE TO LOS ANGELES
PA	PUBLIC ADDRESS
PACIS	PUBLIC ADDRESS/CUSTOMER INFORMATION SYSTEM
PAX	PASSENGER
PB	PULL BOX, PUSH BUTTON (ON ELECTRICAL DIAGRAMS)
PBX	PRIVATE BRANCH EXCHANGE
PC	PRECAST CONCRETE
PCC	PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE
PCPT	PIEZOCONE PENETROMETER TEST
PE	PORCELAIN ENAMEL
PED	PEDESTRIAN
PEPD	PRELIMINARY ENGINEERING FOR PROJECT DEFINITION
PERF	PERFORATED
PERM	PERMEABLE, PERMANENT
PET	POTENTIAL EQUALIZING JUMPER
PF	POWER FACTOR
PFDHA	PROBABILISTIC FAULT DISPLACEMENT HAZARD ANALYSIS
PGL	PROFILE GRADE LINE
PH	PHASE
PHE	POTHOLE
PID	PASSENGER INFORMATION DISPLAY
PITO	POINT OF INTERSECTION TURNOUT
PJP	PARTIAL JOINT PENETRATION
PL	PLATE, PLACE
P/L	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLYWD	PLYWOOD
PM	POST MILE, POST MERIDIEM (TIME FROM NOON TO MIDNIGHT)
PMS	PAVEMENT MANAGEMENT SYSTEM
PN	PAVING NOTCH
PNL	PANEL
PNT	POINT
PO	PULL OFF
POC	POINT OF CONNECTION
POE	POINT OF ENDING
POS	POSITIVE
POTS	PLAIN ORDINARY TELEPHONE SERVICE
PP	PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PR	PAIR
PRI	PRIMARY RATE INTERFACE (ISDN SERVICE)
PROP	PROPOSED
PS	PARALLELING STATION, POINT OF SWITCH
P/S	PRESTRESSED
PS	PARALLELING STATION
PSP	PERFORATED STEEL PIPE
PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
PSTTWS	PUBLIC SAFETY TRENCH AND TUNNEL WIRELESS SYSTEM
PSU	POWER SUPPLY UNIT
PT	POTENTIAL TRANSFORMER
PTC	POSITIVE TRAIN CONTROL
PTD/R	PAPER TOWEL DISPENSER AND RECEPTACLE
PTEL	PASSENGER ASSISTANCE TELEPHONE
PTM	PARKING TICKET MACHINE
PTT	PUSH TO TALK
PTZ	PAN-TILT-ZOOM
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
PWR	POWER

Q

QOS	QUALITY OF SERVICE
QT	QUARRY TILE
QTY	QUANTITY

R

R	RADIUS, RED
RA	REMOTE ANNUNCIATOR
R/A	ROCK ANCHOR
RAID	REDUNDANT ARRAY OF INDEPENDENT DISKS
RB	RESILIENT BASE
RBM	RAILBOUND MANGANESE FROG
RC	REGIONAL CONSULTANT, REINFORCED CONCRETE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCC	REGIONAL CONTROL CENTER
RCE	REGISTERED CIVIL ENGINEER
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD, ROOF DRAIN
R&D	REMOVE AND DISPOSE
RDWY	ROADWAY
RE	RUNNING EDGE OF RAIL
REBAR	CONCRETE REINFORCED BAR
RECT	RECTANGULAR
REF	REFERENCE
REFP	REFERENCE POINT
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE, RELOCATED
REM	REMOTE
REPL	REPLACEMENT
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING
REV	REVISED, REVISION
RF	RADIO FREQUENCY
RFI	REQUEST FOR INFORMATION
RGS	RIGID GALVANIZED STEEL
RH	RIGHT-HAND
RM	RESTRICTED MANUAL, ROOM
R-M	ROAD MIXED
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RP	RADIUS POINT
RR	RAILROAD, RUNNING RAIL
RRR	RESURFACING, RESTORATION, REHABILITATION (3R)
RRRR	RESURFACING, RESTORATION, REHABILITATION, RECONSTRUCTION (4R)
RRX	RAILROAD GRADE CROSSING
R&S	REMOVE AND SALVAGE
RSP	ROCK SLOPE PROTECTION
RT	RESILIENT TILE, RIGHT
RTE	ROUTE
RTU	REMOTE TERMINAL UNIT
RW	RETAINING WALL
R/W	RIGHT-OF-WAY
RWL	RAIN WATER LEADER
RWY	RAILWAY

S

S	SOUTH, SLOPE
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE, SWITCH CABLE
SCADA	SUPERVISORY CONTROL AND DATA AQUISITION
SCAT	SIMPLE CATENARY - AUTO TENSION
SCB	SUBSTATION CONTROL BUILDING
SCC	STATION CONTROL CENTER
SCD	SEAT COVER DISPENSER
SCFT	SIMPLE CATENARY - FIXED TENSION
SCHD	SCHEDULE
SCN	SECURITY CLASSIFICATION NUMBERS
SCPE	SEISMIC CAPACITY AND PERFORMANCE EVALUATION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SDB	SYSTEM DUCT BANK
SDC	SEISMIC DESIGN CRITERIA
SDOF	SINGLE DEGREE OF FREEDOM
SE	SUPER ELEVATION
SECT	SECTION
SECTLEG	SECTIONALIZING
SEM	SEQUENTIAL EXCAVATION METHOD
SEP	SEPARATION
SERV	SERVICE
SF	SPRING FROG
SFS	SANTA FE SPRINGS
SG	SUBGRADE
SHA	SEISMIC HAZARDS ANALYSIS
SHLD	SHOULDER
SHS	STATE HIGHWAY SYSTEM
SHT	SHEET
SI	SECTION INSULATOR, SITE INVESTIGATION
SIG	SIGNAL
SIM	SIMILAR
SLAN	PASSENGER STATION LOCAL AREA NETWORK
SM	SELECTED MATERIAL
SMF	SOLID MANGANESE FROG, SINGLE MODE FIBER
SNF	SWING NOSE FROG
SNTP	SIMPLE NETWORK TIME PROTOCOL
SP	SPARE
SPC	SPECIAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SPL	SAFETY PERFORMANCE LEVEL
SPS	SMALL PART STEELWORK
SPST	SINGLE POLE SINGLE THROW
SPT	STANDARD PENETRATION TEST
SQ	SQUARE
SR	SYSTEM REQUIREMENT, STATE ROUTE
SRRA	SAFETY ROADSIDE REST AREA
SRSS	SQUARE ROOT OF SUM OF SQUARES
SS	SLOPE STAKE, SUBSTATION
S/SPAN	STEADY SPAN
SSI	SOIL STRUCTURE INTERACTION
SSK	SERVICE SINK
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SST	STAINLESS STEEL
SSW	STEADY SPAN WIRE
SS	SANITARY SEWER
ST	SPIRAL TO TANGENT, STREET
STA	STATION, STATIONING
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STC	SINGLE TRACK CANTILEVER
STIFF	STIFFENER
STL	STEEL
STOR	STORAGE
STP	SHIELDED TWISTED PAIR CABLE
STR	STRUCTURAL, STRUCTURE
STS	SPIRAL TANGENT SPIRAL
STW	STATIC WIRE
SUPV	SUPERVISORY
SURF	SURFACING
SUSP	SUSPENDED
SW	SOUNDWALL, SOFTWARE
SWA	SINGLE WIRE ANCHOR
SWAT	SINGLE WIRE AUTO TENSIONED
SWFT	SINGLE WIRE - FIXED TERMINATION
SWGR	SWITCHGEAR
SWK	SIDEWALK
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SWR	SEWER
SWS	SWITCHING STATION
SWT	SWITCH
SYM	SYMMETRICAL

T

T	TREAD
TAN	TANGENT
TASAS	TRAFFIC ACCIDENT SUREILLANCE ANALYSIS SYSTEM
T&B	TOP AND BOTTOM
TBD	TO BE DETERMINED
TBM	TUNNEL BORING MACHINE
TCL	TRACK CENTERLINE
TC	TRAIN CONTROL
TCB	TRAFFIC CONTROL BOX
TCC	TRAIN CONTROL AND COMMUNICATIONS
TCCR	TRAIN CONTROL AND COMMUNICATIONS ROOM
TCCT	TRACK CIRCUIT
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCP/IP	TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL
TCR	TRANSMISSION COMMUNICATIONS ROOM
TD	TRENCH DRAIN, TIME DELAY
TDA	TIRE DERIVED AGGREGATE
TDD	TELECOMMUNICATIONS DEVICE FOR THE DEAF
TDM	TIME DIVISION MULTIPLEXING
TEL	TELEPHONE
TEMP	TEMPORARY
TERM	TERMINATION
TES	TRACTION ELECTRIFICATION SYSTEM
TESC	TEMPORARY EROSION AND SETTLEMENT CONTROL
TETEL	TRAIN EMERGENCY TELEPHONE/SPEAKERPHONE
TFE	TETRAFLOUROETHYLENE
TG	TOP OF GRADE
THK	THICK
TIS	TELEPHONE AND INTERCOM SYSTEM
TK	TRACK
TL	TENSION LENGTH
TM	TECHNICAL MEMORANDUM
TMP	TEMPERATURE
TO	TURNOUT, TELECOM OUTLET
TOC	TOP OF CURB
TOG	TOP OF GRATE
TOL	TOLERANCE
TOLR	TOP OF LOW RAIL
TOF	TOP OF FOUNDATION
TOFG	TOP OF FINISH GRADE
TOP	TOP OF PAVEMENT
TOR	TOP OF RAIL

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IN CHARGE K. PIRBAZARI
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
ACRONYMS AND ABBREVIATIONS
SHEET 3 OF 5

CONTRACT NO. HSR14-39
DRAWING NO. GE-C0503
SCALE NO SCALE
SHEET NO.

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T CONTINUED

TOS	TOP OF SLOPE
TOT	TOP OF TIE, TOTAL
TOW	TOP OF WALL
TP	TELEPHONE POLE, TRACTION POWER
TPB	TREATED PERMEABLE BASE
TPD	TOILET PAPER DISPENSER
TPF	TRACTION POWER FACILITY
TPM	TREATED PERMEABLE MATERIAL
TPS	TRACTION POWER SUPPLY SYSTEM
TPSS	TRACTION POWER SUBSTATION (INCLUDING PARALLEL AND SWITCHING STATIONS)
T/R	TOP OF RAIL ELEVATION
TRANS	TRANSVERSE, TRANSITION
TRK	TRACK
TS	TRAFFIC SIGNAL, TANGENT TO SPIRAL, TUBULAR STEEL
TSI	TECHNICAL SPECIFICATIONS FOR INTEROPERABILITY
TSM	TRAFFIC SYSTEMS MANAGEMENT
TSMP	TRAFFIC SYSTEMS MANAGEMENT PLAN
TTC	TWO TRACK CANTILEVER
TTEL	TRAIN EMERGENCY SPEAKERPHONE
TV	TELEVISION
TVS(S)	TICKET VENDING MACHINE(S)
TW	TIE WIRE
TWC	TIME WARNER CABLE
TWT	TIME WARNER TELEPHONE
TYP	TYPICAL

U

UB	UTILITY BOX
UBC	UNIFORM BUILDING CODE
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND, UNDERGRADE
UGB	UNDERGRADE BRIDGE
UI	USER INTERFACE
UNINS	UNINSULATED
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPS	UNINTERRUPTIBLE POWER SUPPLY
UR	URINAL
UrEDAS	URGENT EARTHQUAKE DETECTION AND ALARM SYSTEM
USCS	UNIFIED SOIL CLASSIFICATION SYSTEM
UTIL	UTILITY
UTPUN	SHIELDED TWISTED PAIR
UWP	UPPER WORKING POINT

V

V	VELOCITY, DESIGN SPEED, VALVE
VAC	VOLTS ALTERNATING CURRENT
VAR	VARIABLE, VARIES
VCAT	VIRTUAL CONCETENATION
VCE	VERTICAL CIRCULATION ELEMENT
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VCD	VOLT DC
VE	VALUE ENGINEERING
VERT	VERTICAL
VEST	VESTIBULE
VIA	VIADUCT
VLAN	VIRTUAL LOCAL AREA NETWORK
VMS	VARIABLE MESSAGE SIGN, VARIABLE MESSAGE SYSTEM
VOL	VOLTIMETER, VOLUME
VOIP	VOICE OVER INTERNET PROTOCOL
VPN	VIRTUAL PRIVATE NETWORK
VRCS	VOICE RADIO COMMUNICATIONS SYSTEM
VS	VOLTAGE SWITCH
VT	VOLTAGE TRANSFORMER/TRANSDUCER

W

W	WEST, WIDTH
W/	WITH
WA	WORK AREA
WB	WESTBOUND
WC	WATER CLOSET
WCS	WIRELESS COMMUNICATIONS SYSTEM
WD	WOOD
WLAN	WIRELESS LOCAL AREA NETWORK
WM	WIRE MESH
W/O	WITHOUT
WP	WORK POINT, WOOD POLE
WPF	WATERPROOF
WPC	WAYSIDE POWER CUBICLES
WR	WIRE RUN
WRT	WITH RESPECT TO
WS	WATER SURFACE, WORK STATION
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL, WALKWAY
WWF	WELDED WIRE FABRIC
WWJCL	WELDED STEEL PIPE
WWLOL	WINGWALL LAYOUT LINE
WWM	WELDED WIRE MESH

X

X/CAT	CROSS CANTENARY
XD	TRANSDUCER
XFMR	TRANSFORMER
XO	CROSSOVER
XOST	CROSSOVER SPRING TENSIONER
XSEC	CROSS SECTION
X/SPAN	CROSS SPAN
XING	CROSSING
XMITTER	TRANSMITTER

TRACK GEOMETRY - HORIZONTAL

BC	BEGIN HORIZONTAL CURVE
CC	COMPOUND CURVE
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
K1	TANGENT DISTANCE PF SHIFT PC REFERENCE TO THE TS
K2	TANGENT DISTANCE PF SHIFT PT REFERENCE TO THE ST
LC	LENGTH OF CIRCULAR CURVE
Ls1	LENGTH OF SPIRAL FROM TS TO SC
Ls2	LENGTH OF SPIRAL FROM CS TO ST
LSc	LENGTH OF COMPOUND SPIRAL FROM CS TO SC
p1	OFFSET FROM INITIAL TANGENT TO PC OF THE SHIFTED CIRCLE OF SPIRALIZED CURVE
p2	OFFSET FROM INITIAL TANGENT TO PT OF THE SHIFTED CIRCLE OF SPIRALIZED CURVE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PF	POINT OF FROG
PI	POINT OF INTERSECTION
PITO	POINT OF INTERSECTION TURNOUT
POC	POINT ON HORIZONTAL CURVE
POE	POINT OF ENDING
POS	POINT ON SPIRAL
POVC	POINT ON VERTICAL CURVE
POVT	POINT ON VERTICAL TANGENT
PRC	POINT OF REVERSE CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PS	POINT OF SWITCH
PT	POINT OF TANGENT
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
SPO	POINT ON ORIGIN OF COMPOUND SPIRAL
SS	POINT OF CHANGE BETWEEN SPIRALS
SSC	SPIRAL TO SPIRAL POINT OF CURVATURE
ST	POINT OF CHANGE FROM SPIRAL TO TANGENT
TC	POINT OF CHANGE FROM TANGENT TO CURVE
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
Ts1	TANGENT DISTANCE FROM TS TO PI
Ts2	TANGENT DISTANCE FROM ST TO PI
Xs1	TANGENT OFFSET AT THE SC
Xs2	TANGENT OFFSET AT THE CS
Δ	TOTAL CENTRAL ANGLE OF THE SPIRALIZED CURVE
Δc	CENTRAL ANGLE OF CIRCULAR CURVE (Lc) FROM SC TO CS
Δc1	CENTRAL ANGLE OF FIRST CIRCULAR CURVE OF COMPOUND CURVATURE
Δc2	CENTRAL ANGLE OF SECOND CIRCULAR CURVE OF COMPOUND CURVATURE
θs1	CENTRAL ANGLE OF SPIRAL LENGTH Ls1 OR SPIRAL ANGLE OF FIRST SPIRAL IN SPIRALIZED CURVE
θs2	CENTRAL ANGLE OF SPIRAL LENGTH Ls2 OR SPIRAL ANGLE OF SECOND SPIRAL IN SPIRALIZED CURVE
θsc	CENTRAL ANGLE OF COMPOUND SPIRAL OR COMPOUND SPIRAL ANGLE FROM CS TO SC

TRACK GEOMETRY - VERTICAL

BVC	BEGIN VERTICAL CURVE
Ea	ACTUAL SUPERELEVATION
EVC	END VERTICAL CURVE
PCVC	POINT OF COMPOUND VERTICAL CURVE
POVC	POINT ON VERTICAL CURVE
POVT	POINT ON VERTICAL TANGENT
PVI	POINT OF VERTICAL INTERSECTION
VC	VERTICAL CURVE
VPI	VERTICAL POINT OF INTERSECTION

UNITS OF MEASUREMENT

Ac	ACRES
AMP	AMPERES
BTU	BRITISH THERMAL UNIT
CAL	CALIPER
CF	CUBIC FEET
CP	CANDLE POWER
CY	CUBIC YARD
dB	DECIBEL
DEG	DEGREE
DIA	DIAMETER
Eu	UNBALANCED SUPERELEVATION
F	FARENHEIT
FT	FOOT, FEET
g	ACCELERATION DUE TO GRAVITY
GA	GAUGE
GAL	GALLON
GB	GIGABYTE
GBPS	GIGABITS PER SECOND
GHz	GIGAHERTZ
HR	HOUR
HT	HEIGHT
Hz	HERTZ
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
IR	INSIDE RADIUS
K	KIPS (1000 POUNDS)
KCMIL	THOUSAND CIRCULAR MILS
KHz	KILOHERTZ
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KV	KILOVOLTS
KVA	KILOVOLTS-AMPERE
KVAR	KILOVOLTS-AMPERE REACTIVE
KW	KILOWATT
KWH/D	KILOWATT HOUR / DEMAND
L	LENGTH
LB	POUNDS
LB/FT	POUNDS PER FOOT
LF	LINEAR FOOT
m	METER
MBPS	MEGABITS PER SECOND
MCM	THOUSAND CIRCULAR MILS
MHz	MEGAHERTZ
mm	MILLIMETER
MPH	MILES PER HOUR
MVA	MEGAVOLT-AMPERE
MW	MEGAWATT
OD	OUTSIDE DIAMETER
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
SEC	SECOND
SF	SQUARE FEET
SY	SQUARE YARD
TF	TRACK FEET
VA	VOLTS
VAC	VOLT-AMPERE
Y	YARDS
YR(S)	YEAR(S)

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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AGENCIES/ORGANIZATIONS/REFERENCE

AAR	ASSOCIATION OF AMERICAN RAILROADS
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
ACI	AMERICAN CONCRETE INSTITUTE
ADA	AMERICAN WITH DISABILITIES ACT (FEDERAL)
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AMTRAK	NATIONAL RAILROAD PASSANGER CORPORATION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANSS	ADVANCED NATIONAL SEISMIC SYSTEM
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AREA	AMERICAN RAILWAY ENGINEERING ASSOCIATION
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION
ARTIC	ANAHEIM REGIONAL TRANSPORTATION INTERMODAL CENTER
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	ASTM INTERNATIONAL, AMERICAN SOCIETY OF TESTING AND MATERIALS
ATC	APPLIED TECHNOLOGY COUNCIL
AUTHORITY	CALIFORNIA HIGH-SPEED RAIL ATHORITY
AWS	AMERICAN WELDING SOCIETY
BART	BAY AREA RAPID TRANSIT DISTRICT
BDA	BRIDGE DESIGN AIDS (CALTRANS)
BDD	BRIDGE DESIGN DETAILS (CALTRANS)
BDP	BRIDGE DESIGN PRACTICE (CALTRANS)
BDS	BRIDGE DESIGN SPECIFICATIONS (CALTRANS)
BKLN	BIKE LANE
BNSF	BURLIGNTON NORTHERN SANTA FE RAILWAY, BNSF RAILWAY
CALNET	CALIFORNIA INTEGRATED TELECOMMUNICATIONS NETWORK
CALTRANS	CALIFORNIA DEPARTMENT OF TRANSPORTATION
CBC	CALIFORNIA BUILDING CODE
CBDM	CALIFORNIA DEPARTMENT OF TRANSPORTATION-BRIDGE DESIGN MANUAL
CCR	CALIFORNIA CODE OF REGULATIONS
CDC	CALIFORNIA HIGH-SPEED TRAIN DESIGN CRITERIA
CEC	CALIFORNIA ELECTRIC CODE
CEQA	CALIFORNIA ENVIRONMENTAL QUALITY ACT
CFR	CODE OF FEDERAL REGULATIONS
CHD	COUNTY HEALTH DEPARTMENT
CHP	CALIFORNIA DEPARTMENT OF HIGHWAY PATROL (STATE)
CHST	CALIFORNIA HIGH-SPEED TRAIN
CHSTP	CALIFORNIA HIGH-SPEED TRAIN PROJECT
CIWMB	CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD
CPH	CALIFORNIA PERMIT HANDBOOK
CPUC	CALIFORNIA PUBLIC UTILITIES COMMISSION
CRR	COMMUTER RAIL PROGRAM (STATE)
DOD	DEPARTMENT OF DEFENSE (FEDERAL)
DOT	DEPARTMENT OF TRANSPORTATION (FEDERAL)
DTX	DOWNTOWN EXTENSION (CALTRAIN)
EIRENE	EUROPEAN INTEGRATED RADIO ENHANCED NETWORK
ERTMS	EUROPEAN RAIL TRAFFIC MANAGEMENT SYSTEM
FAA	FEDERAL AVIATION ADMINISTRATION
FCC	FEDERAL COMMUNICATIONS COMMISSION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FMFCD	FRESNO METROPOLITAN FLOOD CONTROL DISTRICT
FRA	FEDERAL RAILROAD ADMINISTRATION
FSTIP	FEDERAL STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM
FTA	FEDERAL TRANSIT ADMINISTRATION
GBR	GEOTECHNICAL BASELINE REPORT
GBR-B	GEOTECHNICAL BASELINE REPORT FOR BIDDING
GBR-C	GEOTECHNICAL BASELINE REPORT FOR CONSTRUCTION
GDR	GEOTECHNICAL DATA REPORT
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
LACFCD	LOS ANGELES COUNTY FLOOD CONTROL DEPARTMENT
LADWP	LOS ANGELES DEPARTMENT OF WATER AND POWER
LAUS	LOS ANGELES UNION STATION
LTC	LOCAL TRANSPORTATION COMMISSION
METRO	LOS ANGELES COUNTY METROPOLITAN TRANSIT AUTHORITY
MTA	METROPOLITAN TRANSIT AUTHORITY
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
MWD	METROPOLITAN WATER DISTRICT
NAAQS	NATIONAL AMBIENT AIR QUALITY STANDARDS
NAC	NOISE ABATEMENT CRITERIA
NBSSR	NOISE BARRIER SCOPE SUMMARY REPORT

AGENCIES/ORGANIZATIONS/REFERENCE CONTINUED

NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NENA	NATIONAL EMERGENGY NUMBER ASSOCIATION
NESC	NATIONAL ELECTRICAL SAFETY CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIST	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OCFCD	ORANGE COUNTY FLOOD CONTROL DISTRICT
OCTA	ORANGE COUNTY TRANSPORTATION AUTHORITY
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEER	PACIFIC EARTHQUAKE ENGINEER RESEARCH
PG&E	PACIFIC GAS AND ELECTRIC COMPANY
PUC	PUBLIC UTILITIES COMMISSION
RSIA	RAIL SAFETY IMPROVEMENT ACT (2008)
RWQCB	REGIONAL WATER QUALITY CONTROL BOARD (STATE)
SAVE	SOCIETY OF AMERICAN VALUE ENGINEERS
SCE	SOUTHERN CALIFORNIA EDISON
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY (METROLINK)
SDG&E	SAN DIEGO GAS AND ELECTRIC COMPANY
SDNR	SAN DIEGO NORTHERN RAILWAY
SHOPP	STATE HIGHWAY OPERATION AND PROTECTION PROGRAM (FORMERLY HSOPP)
SHPO	STATE HISTORIC PRESERVATION OFFICER (STATE)
SJRRA	SAN JOAQUIN REGIONAL RAIL AUTHORITY
SMUD	SACRAMENTO MUNICIPAL UTILITY DISTRICT
SPTC	SOUTHERN PACIFIC TRANSPORTATION COMPANY
SSCOM	SEISMIC SAFETY COMMISSION
SSORC	SAFETY AND SECURITY OVERSIGHT AND REVIEW COMMITTEE
SVBX	SILICON VALLEY BERRYESSA EXTENSION
SVRT	SILICON VALLEY RAPID TRANSIT
UPRR	UNION PACIFIC RAILROAD
US	UNITED STATES
USCE	UNITED STATES (ARMY) CORP OF ENGINEERS
USCG	UNITED STATES COAST GUARD
USCS	UNIFIED SOIL CLASSIFICATION SYSTEM
VTA	VALLEY TRANSPORTATION AUTHORITY (OF SANTA CLARA COUNTY)

SEGMENT/COUNTY CODES AND SUBDIVISIONS

AJ	ALTAMONT PASS
BP	BAKERSFIELD TO PALMDALE
FB	FRESNO TO BAKERSFIELD
FJ	SAN FRANCISCO TO SAN JOSE
JM	SAN JOSE TO MERCED
LD	LOS ANGELES TO SAN DIEGO
LO	LOS ANGELES TO ANAHEIM
MF	MERCED TO FRESNO
PL	PALMDALE TO LOS ANGELES
SM	SACRAMENTO TO MERCED
B	BAY SUBDIVISION
C	CAPITAL SUBDIVISION
D	DESERT SUBDIVISION
J	SAN JACINTO SUBDIVISION
P	PACHECO SUBDIVISION
S	SIERRA SUBDIVISION
T	TONGVA SUBDIVISION
ALA	ALAMEDA
ALP	ALPINE
AMA	AMADOR
BUT	BUTTE
CAL	CALAVERAS
CC	CONTRA COSTA
COL	COLUSA
DN	DEL NORTE
ED	EL DORADO
FRE	FRESNO
GLE	GLENN
HUM	HUMBOLT
IMP	IMPERIAL
INY	INYO
KER	KERN
KIN	KINGS
LA	LOS ANGELES
LAK	LAKE
LAS	LASSEN
MAD	MADERA
MEN	MENDOCINO
MER	MERCED
MNO	MONO
MOD	MODOC
MON	MONTEREY
MPA	MARIPOSA
MRN	MARIN
NAP	NAPA
NEV	NEVADA
ORA	ORANGE
PLA	PLACER
PLU	PLUMAS
RIV	RIVERSIDE
SAC	SACRAMENTO
SB	SANTA BARBARA
SBD	SAN BERNARDINO
SBT	SAN BENITO
SCL	SANTA CLARA
SCR	SANTA CRUZ
SD	SAN DIEGO
SF	SAN FRANCISCO
SHA	SHASTA
SIE	SIERRA
SIS	SISKIYOU
SJ	SAN JOAQUIN
SLO	SAN LUIS OBISPO
SM	SAN MATEO
SOL	SOLANO
SON	SONOMA
STA	STANISLAUS
SUT	SUTTER
TEH	TEHAMA
TRI	TRINITY
TUL	TULARE
TUO	TUOLUMNE
VEN	VENTURA
YOL	YOLO
YUB	YUBA

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TRACK

- EXISTING FREIGHT/PASSENGER TRACK
- NEW MAINLINE AND/OR INDUSTRY TRACK (SEE TRACK PLANS FOR DESIGNATION) — 3600+00
- BALLAST
- BUMPER/BUMPING POST
- CONCRETE
- DERAIL-DENOTES DERAIL DIRECTION AND LOCATION OF SWITCH MACHINE (LEFT-HAND SHOWN)
- DOUBLE CROSSOVER
- EARTH
- FRICTION BUFFER
- INSULATED JOINT
- INSULATED JOINT LOCATIONS-BOTH RAIL
- INSULATED JOINT LOCATIONS-LEFT RAIL
- INSULATED JOINT LOCATIONS-RIGHT RAIL
- POINT OF CURVATURE
- POINT OF SWITCH-DENOTES SWITCH MACHINE LOCATION
- PREPARED SUBGRADE
- RAIL LUBRICATOR-DIRECTION OF TRAVEL, (DT), TWO RAIL LUBRICATORS SHOWN — DT
- SINGLE CROSSOVER (LEFT-HAND SHOWN)
- SPECIAL RAIL
- STANDARD BOLTED JOINT
- STANDARD RAIL
- SUBBALLAST
- TURNOUT (RIGHT HAND SHOWN)
- WELDED JOINT
- CONTROL POINT (CP)
- WALKWAY/DRAINAGE ENVELOPE

CIVIL

- AGGREGATE BASE
- ASPHALT CONCRETE
- BEGIN OR END PLATFORM — BP OR EP
- BIKE STAND — BS
- BREAK LINE
- BORINGS (EXISTING)
- CENTERLINE
- CENTERLINE TEXT SYMBOL
- CLEAN OUT — CO
- COLUMN, BENT
- CONCRETE
- CONCRETE BARRIER
- CONTOUR LINE — 290
- CONTROL PANEL — CTR
- CONTROL POINT OR STREET INTERSECTION POINT — 4-7-1
- COORDINATE GRID CROSSAIR — E174000 N87000
- CURB WITH GUTTER (CURB-LIP, FLOW LINE, BACK-TOP OF CURB)
- CURVE NUMBER — ##
- CURVE NUMBER (TRACK GEOMETRY) — ### RADIUS'
- TANGENT NUMBER — ##
- DITCH/DRAINAGE FLOW LINE
- DOUBLE THRIE BEAM BARRIER
- DROP INLET
- ROUND DROP INLET
- DETENTION BASIN
- EARTHWORK LIMITS
- ELEVATIONS — OG (2447.9) FG 2089.3

CIVIL CONTINUED

- (175.2) ELEVATION (EXISTING)
- ELECTROLIER, ELECTROLIER ON POLE
- EXISTING GUARD RAILING
- EXISTING WALL
- FENCE
- FIRE HYDRANT
- GRADED/LANDSCAPED AREA
- GAS METER — G
- GAS VALVE — G
- GUARD POST
- GUARD RAIL
- GRAVEL OR DIRT ROAD
- GUY WIRE
- HIGH MAST LIGHTING
- HORIZONTAL & VERTICAL CONTROL MONUMENT
- HORIZONTAL CONTROL MONUMENT
- ICV
- MAIL BOX
- MANHOLE
- MATCH LINE — MATCH LINE (DWG NO.)
- NEW ASPHALTIC CONCRETE
- NEW GUARD RAILING
- NEWS STAND — NS
- NORTH ARROW
- ORIGINAL GROUND
- PARKING METER
- POINT OF INTERSECTION

CIVIL CONTINUED

- POINT OF INTERSECTION SYMBOL
- POINT OF VERTICAL INTERSECTION
- POWER POLE
- PROPERTY LINE
- RETAINING WALL
- RIVER, STREAMS, AND CREEKS
- SECTION DESIGNATION (LETTER) DRAWING NO. ON WHICH SECTION AND DETAIL APPEARS — A / DWG NO.
- SECTION OR DETAIL TITLE — SECTION A, SCALE 1"=1'-0"
- SPOT ELEVATION — 290.4
- TILDE (TERMINATOR)
- SIGNALIZED INTERSECTION — S
- STATION EQUATION
- STREET LIGHT
- STREET LIGHT POWER POLE
- STREET LIGHT TRAFFIC SIGNAL
- STREET SIGN
- STRUCTURE CLEARANCE ENVELOPE — VIA
- SUPER AXIS OF ROTATION
- TELEPHONE BOOTH — T
- TELEPHONE POLE — TP
- TEMPORARY RAILING (TYPE K)
- TIRE DERIVED AGGREGATE
- TRACK ALIGNMENT CENTER LINE — 3600+00
- TRAFFIC PANEL — TRF
- TRAFFIC SIGNAL
- TRANSMISSION TOWER

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SHEET 1 OF 2

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CIVIL CONTINUED

- TREE
- UTILITY POLE
- POLE AND WIRES
- POLE WITH WIRES AND ANCHOR
- VALVE
- VENT
- VERTICAL CONTROL MONUMENT
- RETAINING WALL
- WALL ON BARRIER
- WATER EDGE, LAKE, POND, SWAMP
- WATER METER
- WELL
- YARD BOX ELECTRICAL

RIGHT-OF-WAY

- PROP ROW — PROPOSED RIGHT-OF-WAY
- EXISTING ROW
- EXISTING EASEMENT
- PROP TCE — PROPOSED TEMPORARY CONSTRUCTION EASEMENT

AERIAL UTILITIES

- EXIST OH ELECTRICAL
- EXIST OH FIBER OPTIC
- EXIST OH TELEMETER CABLE
- EXIST OH TELEPHONE
- EXIST OH TELEVISION
- NEW OH ELECTRICAL
- NEW OH FIBER OPTIC
- NEW OH TELEMETER CABLE

AERIAL UTILITIES CONTINUED

- NEW OH TELEPHONE
- NEW OH TELEVISION

UNDERGROUND UTILITIES

- EXIST ELECTRICAL
- EXIST FIBER OPTIC
- EXIST GASOLINE
- EXIST NATURAL GAS
- EXIST OIL
- EXIST SEWER
- EXIST STEAM
- EXIST STORM DRAIN
- EXIST TELEMETER CABLE
- EXIST TELEPHONE
- EXIST TELEVISION
- EXIST WATER
- NEW ELECTRICAL
- NEW FIBER OPTIC
- NEW GASOLINE
- NEW NATURAL GAS
- NEW OIL
- NEW SEWER
- NEW STEAM
- NEW STORM DRAIN
- NEW TELEMETER CABLE
- NEW TELEPHONE
- NEW TELEVISION
- NEW WATER

TRACTION POWER

- SINGLE-POLE MOTOR OPERATED SECTIONALIZING SWITCH (NORMALLY CLOSED)
- SINGLE-POLE MOTOR OPERATED SECTIONALIZING SWITCH (NORMALLY OPEN)
- SINGLE-POLE MANUAL SECTIONALIZING SWITCH (NORMALLY OPEN)
- SINGLE-POLE MANUAL SECTIONALIZING SWITCH (NORMALLY CLOSED)
- SINGLE-POLE MOTOR OPERATED SECTIONALIZING SWITCH WITH GROUND
- SINGLE-POLE MANUAL SECTIONALIZING SWITCH WITH GROUND
- GANGED GROUNDING DISCONNECT SWITCHES
- ELECTRICAL CONNECTION
- SECTION INSULATOR
- JUMPERED SECTION INSULATOR
- SECTION INSULATOR WITH BY-PASS SWITCH
- PHASE BREAK — PHASE BREAK
- LOW VOLTAGE CIRCUIT BREAKER
- FUSE
- FUSED DISCONNECT SWITCH
- TRANSFORMER
- AUTOTRANSFORMER
- VOLTAGE TRANSFORMER (VT)
- COUPLING CAPACITOR VOLTAGE TRANSFORMER
- MH — MANHOLE
- HH — HANDHOLE
- CAPACITOR
- CURRENT TRANSFORMER (CT)
- GROUND CONNECTION
- SURGE ARRESTER

- CABLE TERMINATION OR STRESS CONE
- DOUBLE-POLE MOTORIZED DISCONNECT SWITCH
- OCS SECTION GAP
- K — KEY-INTERLOCK
- DIRECTION OF CONTROL OR RELAY INFLUENCE LINE
- MANUALLY OPERATED GROUNDING SWITCH
- NO LOAD BREAK MANUALLY OPERATED DISCONNECT SWITCH
- A B C — HV 3 PHASE DISCONNECT SWITCH
- SINGLE-POLE HIGH VOLTAGE POWER CIRCUIT BREAKER
- DOUBLE-POLE HIGH VOLTAGE POWER CIRCUIT BREAKER
- DRAW-OUT FUSED (VT)
- DRAW-OUT TYPE MEDIUM VOLTAGE SINGLE-POLE CIRCUIT BREAKER
- DRAW-OUT TYPE MEDIUM VOLTAGE DOUBLE-POLE CIRCUIT BREAKER
- INSULATOR
- BREAK LINE

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CUSSON
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
SYMBOLS
SHEET 2 OF 2

CONTRACT NO. HSR14-39
DRAWING NO. GE-C0512
SCALE NO SCALE
SHEET NO.

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haynesma

GENERAL NOTES

VOLUME 1

1. FOR UPRR ALIGNMENTS, SEE "TT-D1500" SHEETS.
2. FOR GRADE SEPARATION DETAILS, SEE VOLUME 3.
3. FOR AERIAL STRUCTURE DETAILS, SEE VOLUME 2.
4. RAIL ALIGNMENT BETWEEN MAIN STREET, UNION STATION, AND 1ST STREET IS BEING DESIGNED BY METRO'S LINKUS TEAM. THE ALIGNMENT THAT IS SHOWN IS BASED ON LATEST COORDINATION WITH THEIR TEAM, SHOWN FOR REFERENCE ONLY AND SUBJECT TO CHANGE.
5. SCRRA TURNOUT GEOMETRY IS BASED ON THE 2009 EDITION OF THE SCRRA ENGINEERING STANDARDS.
6. PROPOSED FENCE, WHERE INDICATED ON PLANS, REPRESENT AN ACCESS CONTROL WALL WITH FENCE. REFER TO TM 2.8.2 FOR ACCESS CONTROL FOR HIGH-SPEED RAIL RIGHT-OF-WAY AND FACILITIES.

VOLUME 2

1. FOR TRACK INFORMATION, SEE TRACK PLANS IN VOLUME 1.
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS IN VOLUME 1.
3. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS IN VOLUME 3.
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS IN VOLUME 4.
5. FOR GRADING INFORMATION, SEE GRADING PLANS IN VOLUME 4.
6. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS IN VOLUME 4.
7. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS IN VOLUME 4.
8. FOR TRENCH INFORMATION, SEE STRUCTURAL PLANS IN VOLUME 4.
9. ACCESS DETERRING SOLID BARRIER RAILING TO BE INSTALLED ON ALL EXISTING AND PROPOSED OVERHEAD BRIDGE STRUCTURES CROSSING HSR TRACKS PER RDP DIRECTIVE NO. 0006.

VOLUME 3

1. FOR TRACK INFORMATION, SEE TRACK PLANS IN VOLUME 1.
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS IN VOLUME 1.
3. FOR AERIAL STRUCTURE INFORMATION, SEE STRUCTURAL PLANS IN VOLUME 2.
4. FOR RETAINING WALL INFORMATION, SEE RETAINING WALL PLANS IN VOLUME 2.
5. FOR UTILITY INFORMATION, SEE UTILITY PLANS IN VOLUME 4.
6. FOR GRADING INFORMATION, SEE GRADING PLANS IN VOLUME 4.
7. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS IN VOLUME 4.
8. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS IN VOLUME 4.
9. FOR TRENCH INFORMATION, SEE STRUCTURAL PLANS IN VOLUME 4.
10. ACCESS DETERRING SOLID BARRIER RAILING TO BE INSTALLED ON ALL EXISTING AND PROPOSED OVERHEAD BRIDGE STRUCTURES CROSSING HSR TRACKS PER RDP DIRECTIVE NO. 0006.

VOLUME 4

EXISTING COMPOSITE UTILITY NOTES:

1. FOR TRACK INFORMATION, SEE TRACK PLANS IN VOLUME 1.
2. UTILITY CONFLICTS ON CROSSING STREETS AT EXISTING GRADE SEPARATIONS ARE ANTICIPATED.
3. ONLY THE FOLLOWING UTILITIES SHALL BE CONSIDERED MAJOR AND ARE IDENTIFIED IN THE UTILITY CONFLICTS MATRIX ON THE DRAWINGS.
   - A. WET UTILITIES:
     - I. SEWER, WATER, STORM DRAIN GREATER THAN OR EQUALTO 12".
     - II. ALL OIL LINES.
     - III. ALL FUEL (GASOLINE) LINES.
   - B. DRY UTILITIES:
     - I. ALL GAS LINES.
     - II. ALL FIBER OPTIC LINES.
     - III. ALL ELECTRIC LINES GREATER THAN 240V.
     - IV. ALL DUCT BANKS WITH 6 OR MORE DUCTS.
     - V. EXCLUDE INDIVIDUAL TELEPHONE, CABLE LINES.
   - C. ALL OTHER CONFLICTS ARE CONSIDERED MINOR AND ARE NOT SHOWN IN THE UTILITY CONFLICT MATRIX.
   - D. UTILITIES AT GRADE SEPARATIONS ARE NOT SHOWN IN THE UTILITY CONFLICTS MATRIX EVEN IF THEY FALL UNDER THE ABOVE CRITERIA SINCE VOLUMES 3 & 4 OFFER MORE SPECIFIC AND ACCURATE INFORMATION REGARDING THE DESIGN.
4. REFER TO TRACK PLANS, VOLUME 1 AND PROPOSED UTILITY PLANS, VOLUME 4, FOR VERTICAL UTILITY CONFLICTS.

VOLUME 4 (CONT.)

5. USE LACTMA STANDARD DRAWINGS (2010) FOR TEMPORARY SUPPORT OF UTILITIES IMPACTED BY CUT AND FILL OPERATIONS.

GRADING AND DRAINAGE NOTES:

1. CONTOUR GRADING ALONG THE HSR TRACKS IS BASED ON THE TOP OF SUBGRADE ELEVATIONS. BALLAST IS NOT INCLUDED
2. FOR RETAINING WALL INFORMATION, SEE RETAINING WALL PLANS IN VOLUME 2.

VOLUME 5

1. FOR MAIN LINE TRACK INFORMATION, SEE TRACK PLANS IN VOLUME 1.
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS IN VOLUME 1.
3. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS IN VOLUME 3.
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS IN VOLUME 4.
5. FOR GRADING INFORMATION WITHIN MAIN LINE ROW, SEE GRADING PLANS IN VOLUME 4.
6. FOR DRAINAGE INFORMATION WITHIN MAIN LINE ROW, SEE DRAINAGE PLANS IN VOLUME 4.
7. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS IN VOLUME 4.

VOLUME 6

1. CONSTRUCTION PHASING PROVIDED FOR PROPOSED WORK SOUTH OF HSR BURBANK STATION TO MAIN STREET. PHASING OF HSR BURBANK STATION AND LINKUS PROJECT NOT INCLUDED AS PART OF THIS SUBMITTAL

VOLUME 7

1. HSR BURBANK STATION CONCEPT DESIGN PROVIDED AS REFERENCE TO WORK PROPOSED AS PART OF THE PALMDALE TO BURBANK SEGMENT. FINAL DESIGN COORDINATION REQUIRED AT INTERFACE SOUTH OF STATION.

VOLUME 8

1. LINKUS DESIGN PROVIDED AS REFERENCE TO WORK SOUTH OF MAIN STREET EXTENDING INTO LA UNION STATION.
2. FINAL DESIGN COORDINATION REQUIRED AT INTERFACE WEST OF MISSION TOWER BRIDGE. PROPOSED TRACK DESIGN BASED ON BEST AVAILABLE INFORMATION AT TIME OF DESIGN.

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
GENERAL NOTES

CONTRACT NO. HSR14-39
DRAWING NO. GE-B0511
SCALE NO SCALE
SHEET NO.

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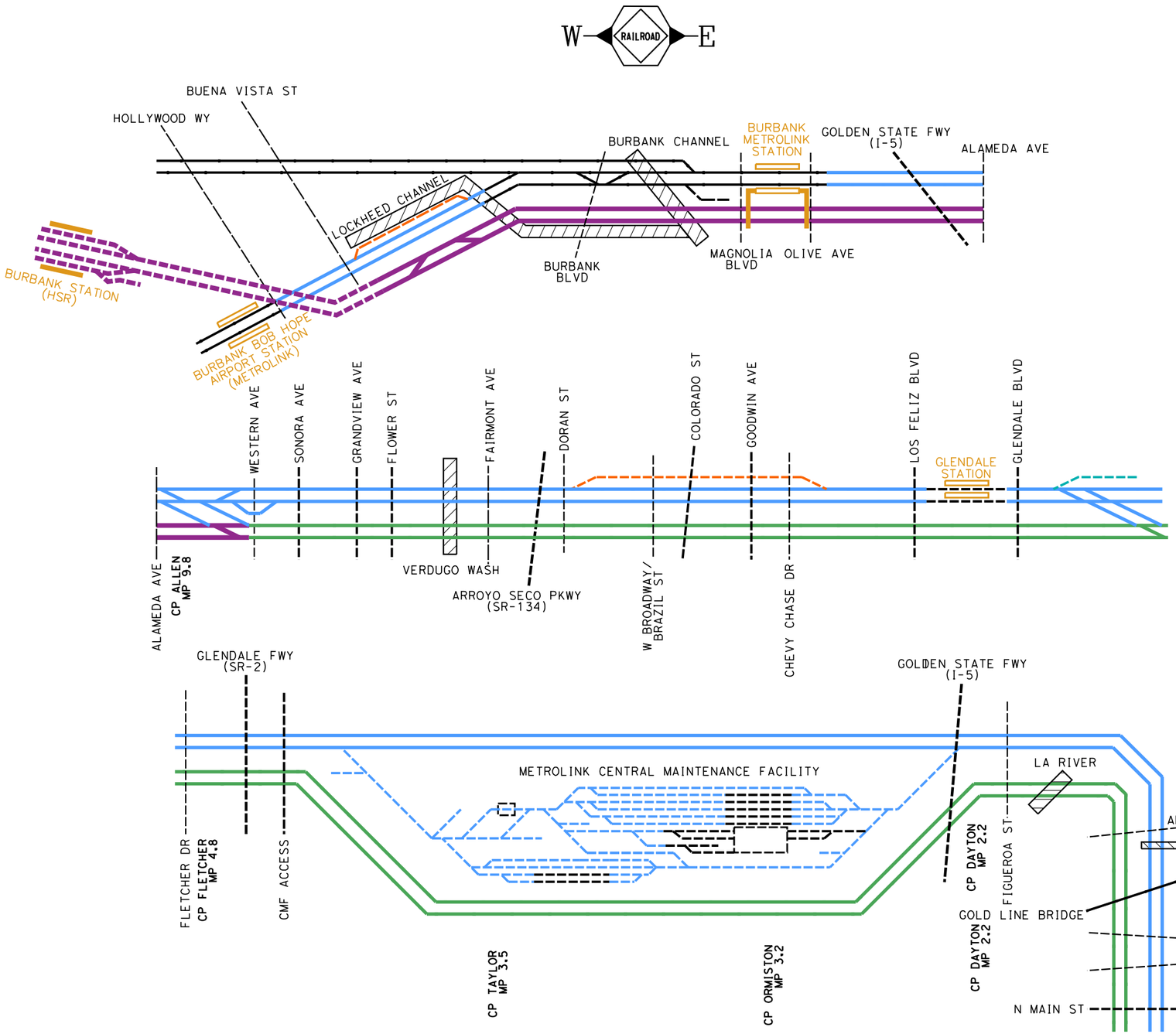
haynesma



LEGEND (TRACKWORK)

- EXISTING FREIGHT/PASSENGER MAINLINE TRACK
- EXISTING FREIGHT/PASSENGER SECONDARY TRACK
- NEW AMTRAK/METROLINK/UPRR MAINLINE TRACK
- NEW AMTRAK/METROLINK TRENCH/TUNNEL
- NEW AMTRAK/METROLINK SECONDARY TRACK
- NEW UPRR MAINLINE TRACK
- NEW UPRR SECONDARY TRACK
- NEW TERRY LUMBER SPUR TRACK
- NEW HSR TRACK ELEVATED
- NEW HSR TRACK AT GRADE
- NEW HSR TRACK TRENCH/TUNNEL
- NEW SHARED MAINLINE TRACK
- NEW SHARED SECONDARY TRACK
- NEW TRACK BRIDGE
- EXISTING STATION PLATFORM
- EXISTING STATION PLATFORM WITH PEDESTRIAN BRIDGE/TUNNEL
- NEW STATION PLATFORM
- NEW STATION PLATFORM WITH PEDESTRIAN BRIDGE/TUNNEL

LEGEND (ROADWAY)

- EXISTING AT-GRADE CROSSING
- EXISTING GRADE SEPARATION (LOCAL STREET)
- EXISTING GRADE SEPARATION (MAJOR HWY/FREEWAY)
- NEW OR MODIFY GRADE SEPARATION

LEGEND (GENERAL)

- DRAINAGE SYSTEM

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FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CUSSON
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
TRACK SCHEMATIC

CONTRACT NO. HSR14-39
DRAWING NO. GE-D6501
SCALE NO SCALE
SHEET NO.

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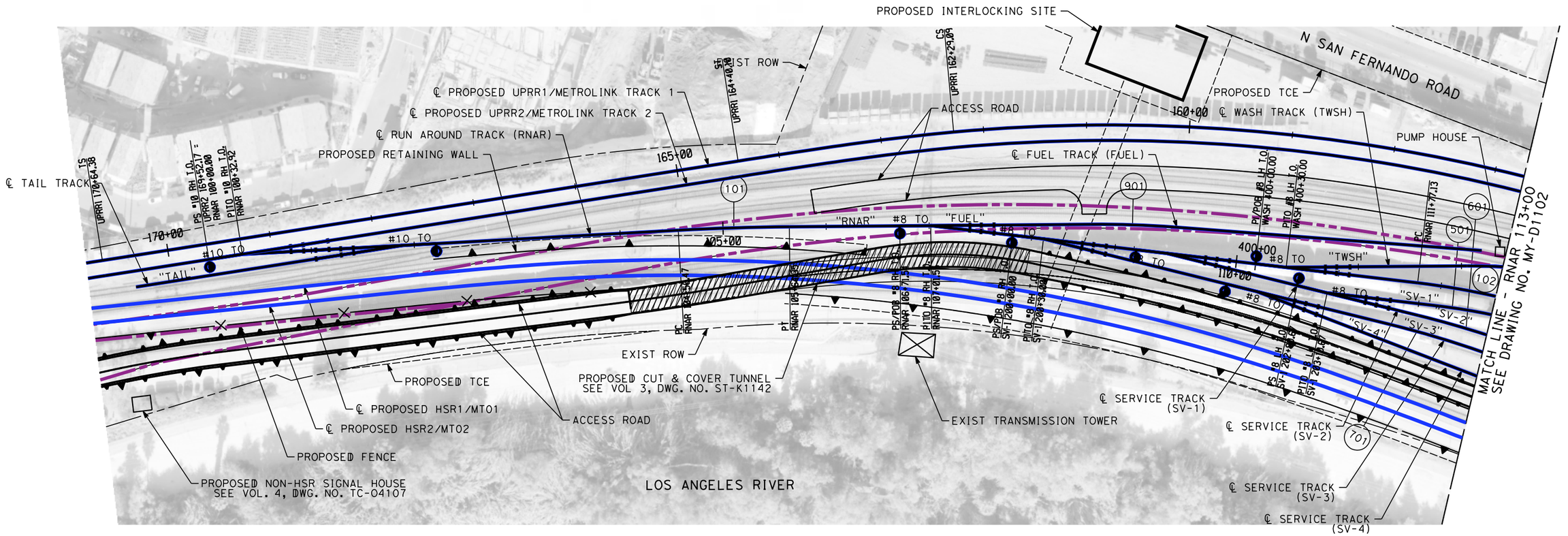
Haynesma



NOTE:
STATIONING FOR ONLY SELECT TRACKS SHOWN.

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY W. XU
DRAWN BY W. XU
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PLAN - SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1101
SCALE AS SHOWN
SHEET NO.

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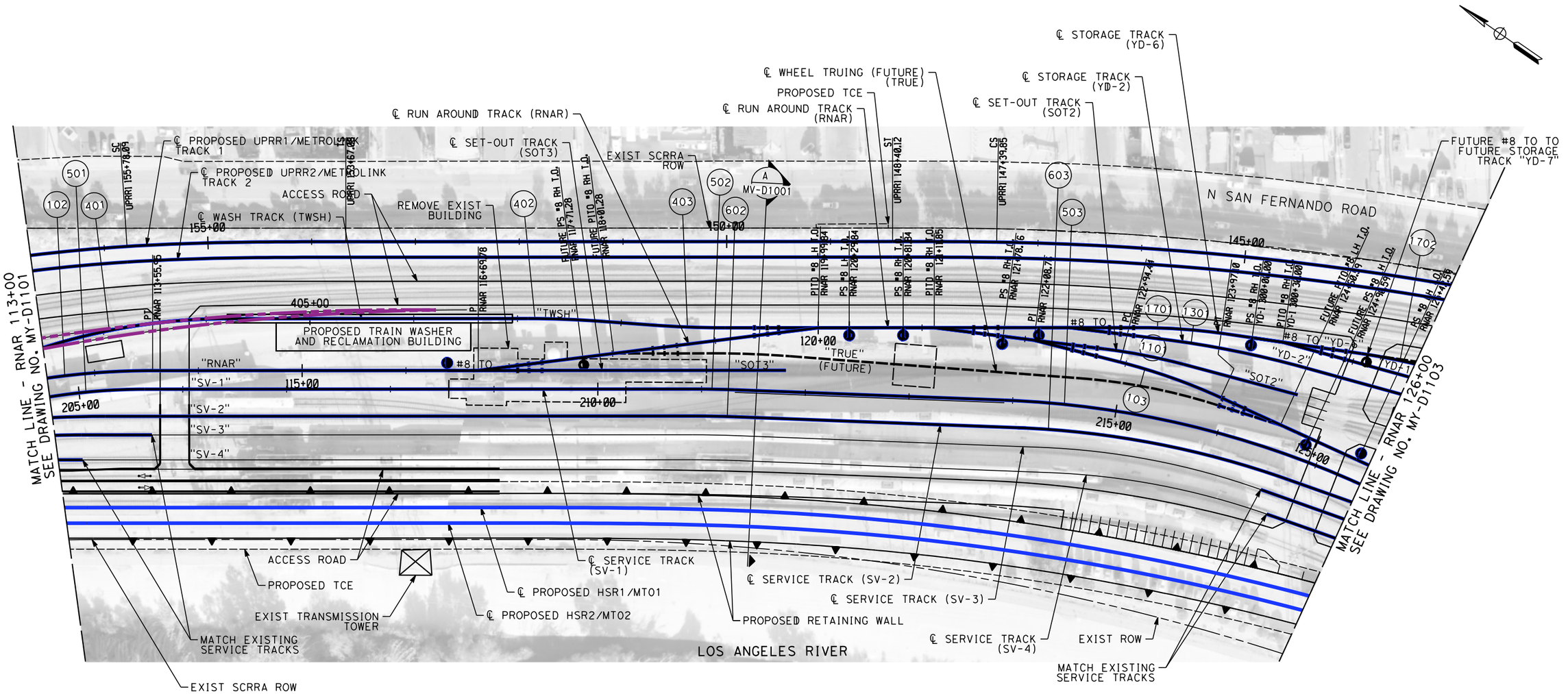

NOTE:
STATIONING FOR ONLY SELECT TRACKS SHOWN.

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY W. XU
DRAWN BY W. XU
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PLAN - SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1102
SCALE AS SHOWN
SHEET NO.

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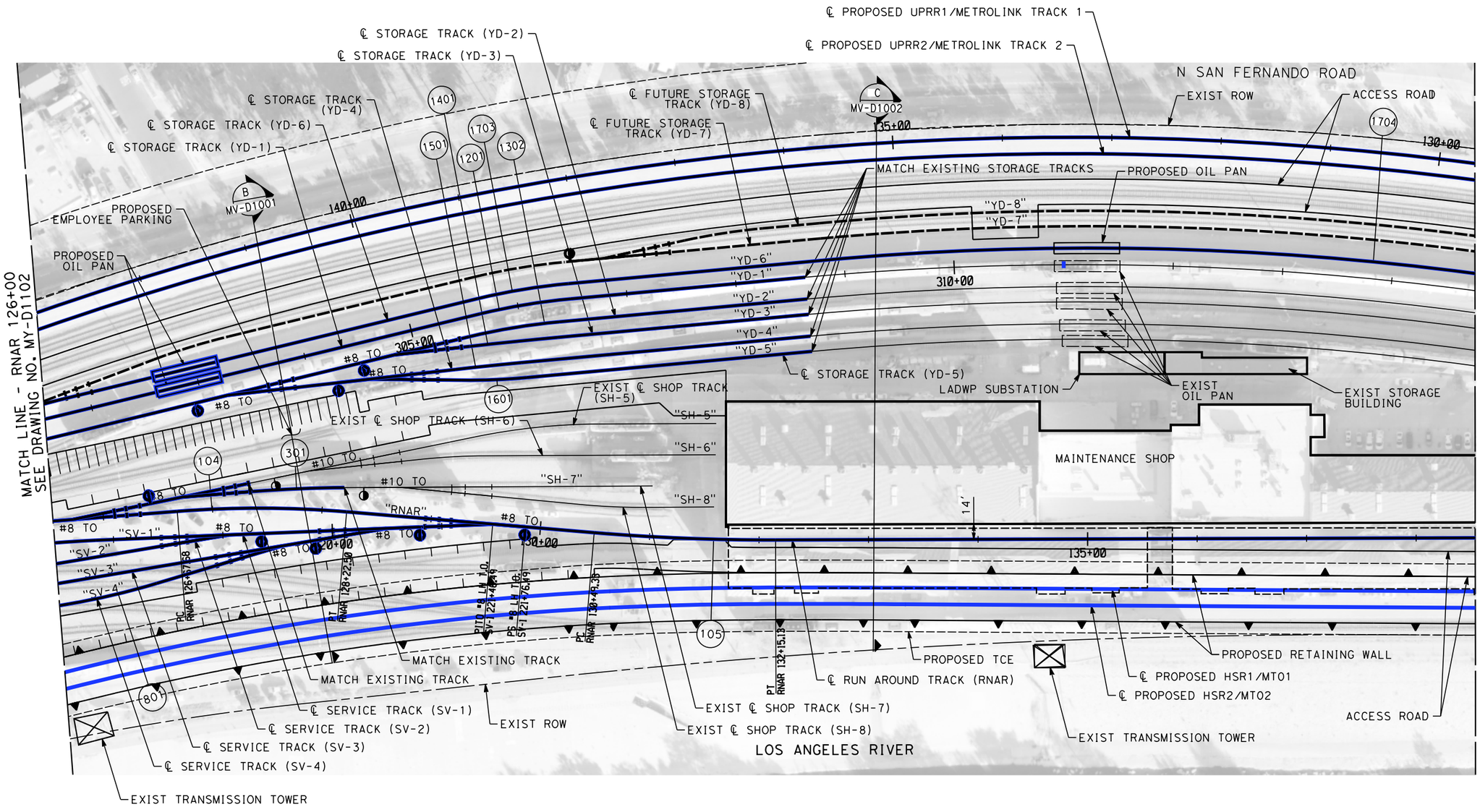

NOTE:

STATIONING FOR ONLY SELECT TRACKS SHOWN.

50 0 50 100

1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY W. XU
DRAWN BY W. XU
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PLAN - SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1103
SCALE AS SHOWN
SHEET NO.

5/2/2019 8:09:58 AM c:\jlp\pwworkdir\haynesma\d0138945\K2L-MY-D1103.dgn
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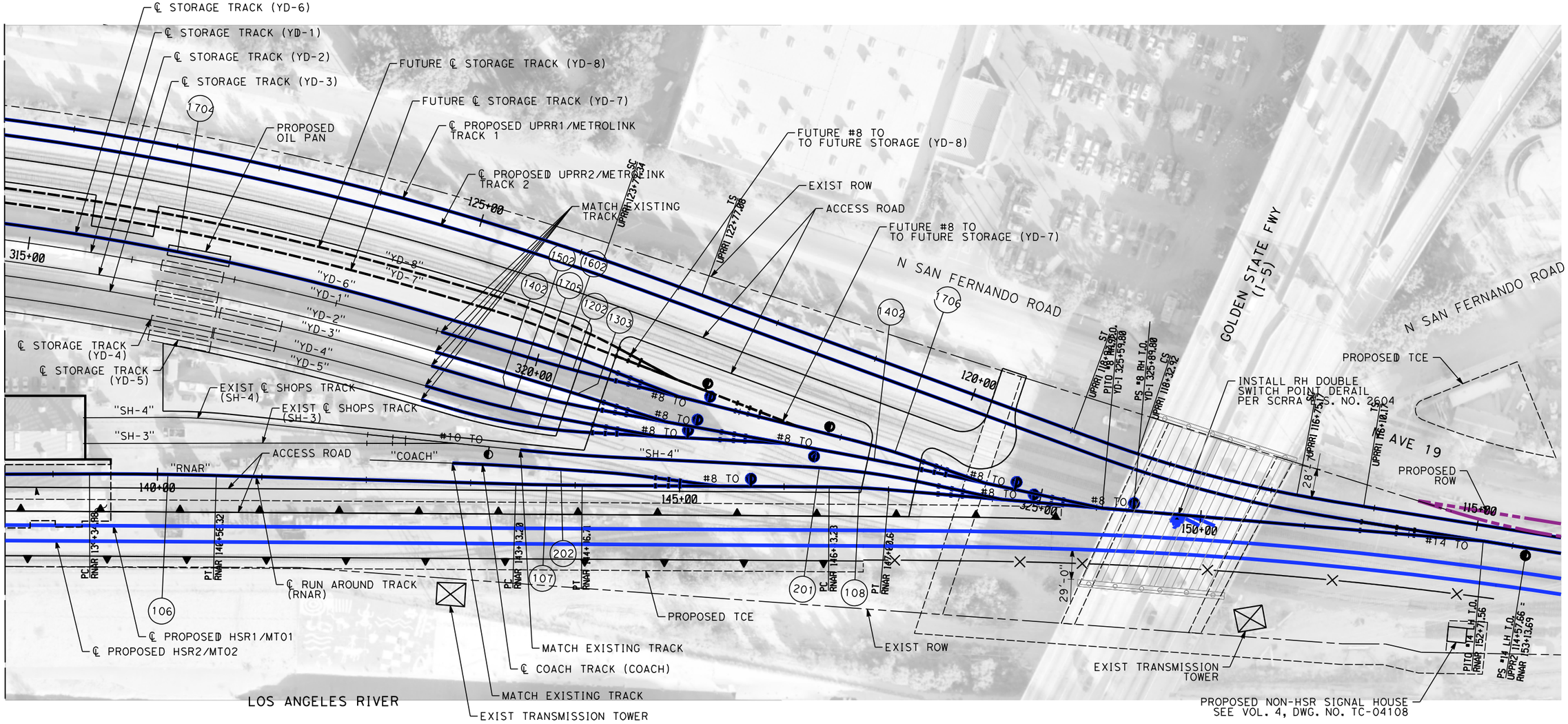

NOTE:
STATIONING FOR ONLY SELECT TRACKS SHOWN.

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY W. XU
DRAWN BY W. XU
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PLAN - SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1104
SCALE AS SHOWN
SHEET NO.

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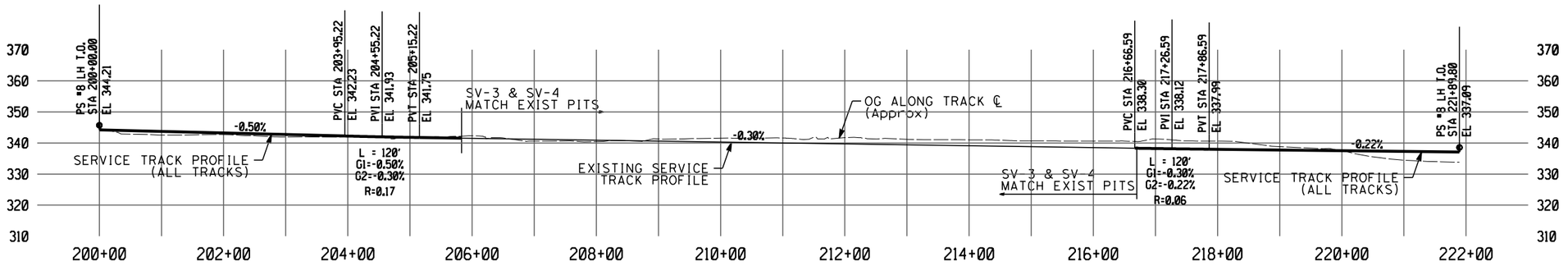
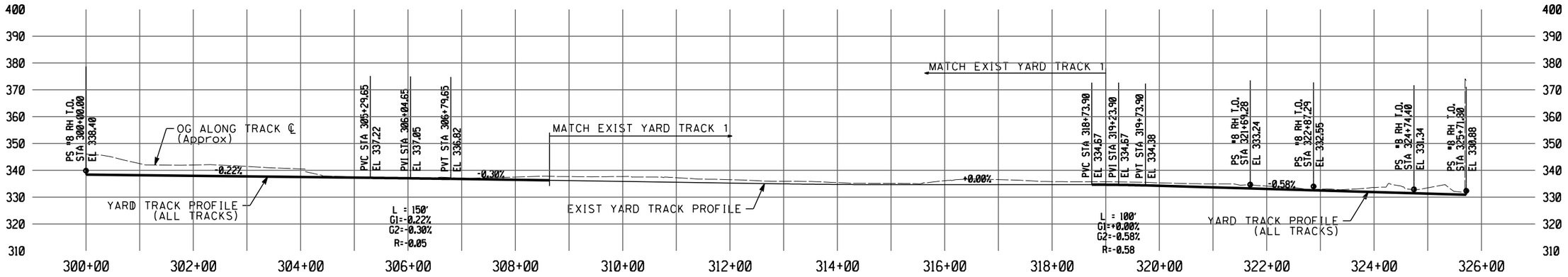
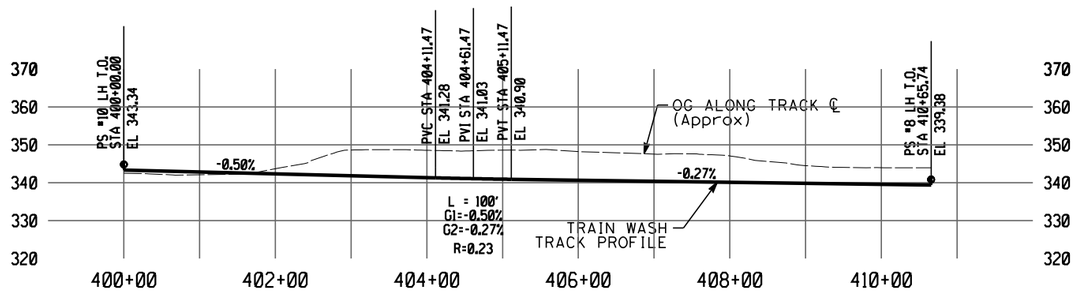


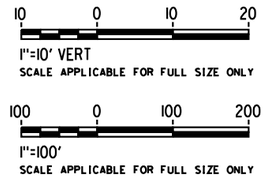
PROFILE
"SV-1"



PROFILE
"YD-1"



PROFILE
"WASH"



NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: W. XU
DRAWN BY: W. XU
CHECKED BY: P. MAHONEY
IN CHARGE: K. PIRBAZARI
DATE: 04/30/2019

PEPD
RECORD SET

NOT FOR
CONSTRUCTION

STV 100 Years

JACOBS

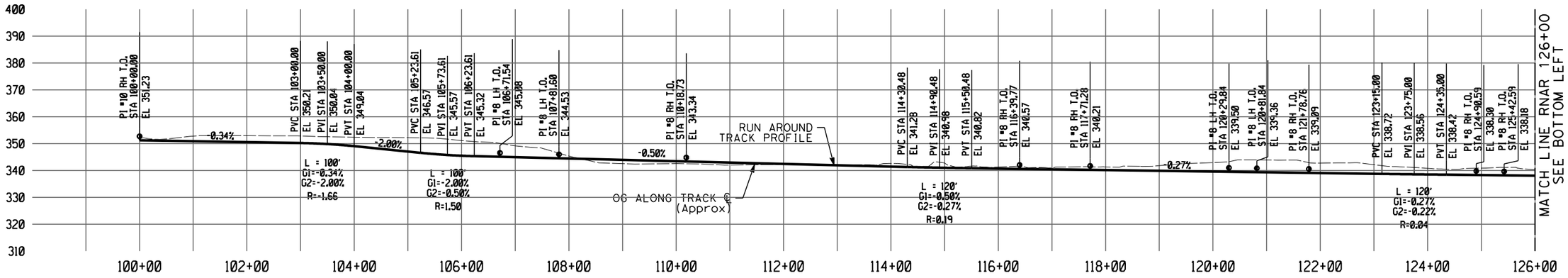
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

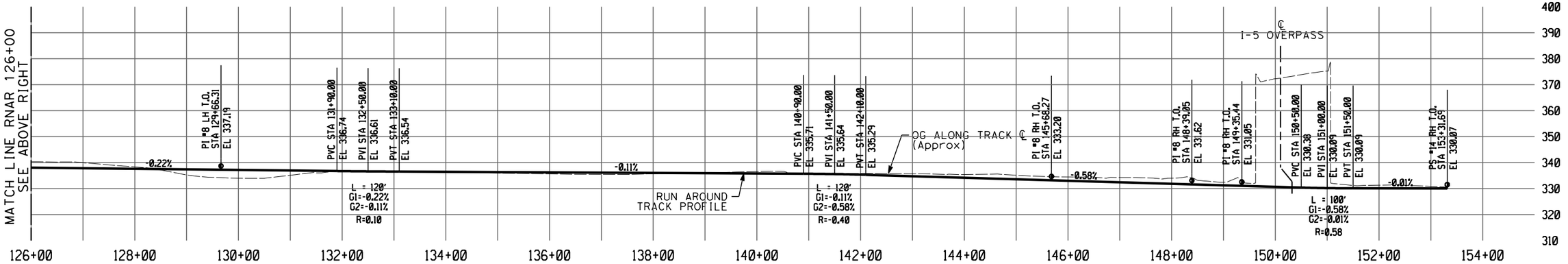
CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PROFILE - SHEET 1 OF 2

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1201
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:22:55 AM c:\jlp\pwworkdir\haynesma\d0138945\K2L-MY-D1201.dgn
haynesma





PROFILE
"RNAR"

10 0 10 20
I"=10' VERT
SCALE APPLICABLE FOR FULL SIZE ONLY

100 0 100 200
I"=100'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY W. XU
DRAWN BY W. XU
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
TRACK PROFILE - SHEET 2 OF 2

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1202
SCALE AS SHOWN
SHEET NO.

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haynesma

RUN AROUND TRACK GEOMETRY TABLE (RNAR)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#10 TO	PS			100+00.00	1856821.627	6491145.611																			
	PITO	S64°41'19"E	32.92	100+32.92	1856807.553	6491175.369																			
	PC	S58°57'50"E	423.55	104+56.47	1856589.181	6491538.282																			
101	PI	S56°16'01"E	107.88		1856561.364	6491584.512	2°30'00"	0.00	0.18	-	10			2292.01	2°41'49"	107.88	53.95								
	PT			105+64.35	1856531.401	6491629.383																			
		S56°16'01"E	107.20																						
#8 TO	PS	S56°16'01"E	30.00	106+71.55	1856471.870	6491718.535																			
	PITO	S49°06'51"E	80.06	107+01.55	1856455.209	6491743.485																			
#8 TO	PS	S49°06'51"E	30.00	107+81.61	1856402.799	6491804.008																			
	PITO	S49°06'51"E	90.47	108+11.61	1856383.161	6491826.689																			
#8 TO	PS	S49°06'51"E	30.00	109+02.08	1856323.952	6491895.088																			
	PITO	S49°06'51"E	86.66	109+32.08	1856304.315	6491917.769																			
#8 TO	PS	S49°06'51"E	30.00	110+18.74	1856247.590	6491983.287																			
	PITO			110+48.74	1856227.952	6492005.968																			
	PC			111+77.13	1856143.915	6492103.032																			
102	PI				1856085.038	6492171.036	8°00'00"	0.00	0.56	-	10			716.78	14°18'20"	178.82	89.95								
	PT			113+55.95	1856011.183	6492222.383																			
#8 TO	PS	S34°48'31"E	30.00	116+39.76	1855778.157	6492384.391																			
	PITO	S41°57'41"E	330.07	116+69.76	1855753.524	6492401.517																			
#8 TO	PITO	S41°57'41"E	30.00	119+99.83	1855508.088	6492622.210																			
	PS	S34°48'31"E	52.00	120+29.83	1855483.455	6492639.335																			
#8 TO	PS	S34°48'31"E	30.00	120+81.83	1855440.759	6492669.019																			
	PITO	S27°39'21"E	66.92	121+11.83	1855416.127	6492686.144																			
#8 TO	PS	S27°39'21"E	30.00	121+78.75	1855356.855	6492717.205																			
	PITO	S20°30'11"E	85.68	122+08.75	1855330.281	6492731.130																			
	PC			122+94.43	1855250.028	6492761.140																			
103	PI				1855201.763	6492779.188	10°00'00"	0.00	0.70	-	10			573.69	10°15'54"	102.65	51.53								
	PT			124+43.13	1855151.055	6492788.347																			
#8 TO	PS	S10°14'17"E	99.45	125+42.58	1855007.874	6492814.207																			
	PITO	S10°14'17"E	30.00	125+72.58	1854978.350	6492819.539																			
	PC	S10°14'17"E	141.14	127+13.72	1854884.777	6492836.440																			
104	PI				1854808.397	6492850.235	6°00'00"	0.00	0.42	-	10			955.37	9°17'21"	154.82	77.62								
	PT			128+22.49	1854730.793	6492851.520																			
#8 TO	PITO	S08°06'05"W	85.50	129+56.30	1854597.002	6492853.736																			
	PS	S08°06'05"W	30.00	129+86.30	1854567.005	6492854.232																			
	PC	S08°06'05"W	149.06	130+49.31	1854503.997	6492855.276																			
105	PI				1854421.046	6492856.649	3°00'00"	0.00	1.31	-	25			1910.08	4°58'27"	165.80	82.96								
	PT			132+15.12	1854338.526	6492865.210																			
		S05°55'22"E	719.85																						
	PC			139+34.97	1853622.516	6492939.490																			
106	PI				1853562.167	6492945.751	1°30'00"	0.00	0.66	-	25			3819.83	1°49'12"	121.33	60.67								
	PT			140+56.30	1853501.650	6492950.092																			
		S04°06'10"E	286.88																						
	PC			143+43.18	1853215.505	6492970.617																			
107	PI				1853183.825	6492972.890	2°00'00"	0.00	0.88	-	25			2864.93	1°16'13"	63.51	31.76								
	PT			144+52.75	1853152.204	6492975.864																			
#8 TO	PITO	S05°22'23"E	85.50	145+38.25	1853021.228	6492988.183																			
	PS	S05°22'23"E	30.00	145+68.25	1852991.359	6492990.992																			
	PC	S05°22'23"E	149.06	147+17.31	1852916.724	6492998.011																			
108	PI				1852888.109	6493000.703	8°00'00"	0.00	3.50	-	25			716.78	4°35'33"	57.41	28.74								
	PT			147+74.72	1852859.369	6493001.094																			
		S00°46'50"E	34.31																						
#8 TO	PITO	S00°46'50"E	30.00	148+09.03	1852750.972	6493002.571																			
	PS	S00°46'50"E	66.39	148+39.03	1852720.974	6493002.980																			
#8 TO	PITO	S00°46'50"E	30.00	149+05.42	1852654.587	6493003.884																			
	PS	S00°46'50"E	339.18	149+35.42	1852624.589	6493004.293																			
#14 TO	PITO		42.13	152+74.60	1852288.503	6493008.872																			
	PS			153+13.46	1852246.444	6493006.439																			

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HORIZONTAL ALIGNMENT DATA - SHEET 1 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6118
SCALE NO SCALE
SHEET NO.

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haynesma

SHOP TRACK (SH-4) GEOMETRY TABLE (SH-4)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1852738.897	6493004.981																			
	PITO	N00°46'50"W	30.00	0+30.00	1852768.896	6493004.573																			
		N06°22'20"E	60.54																						
201	PC			0+90.54	1852829.060	6493011.292																			
	PI				1852886.620	6493017.720	8°00'00"	0.00	0.56	-	10			716.78	9°14'21"	115.58	57.92								
	PT			2+06.03	1852944.464	6493014.823																			
		N02°52'01"W	172.59																						
202	PC			3+78.62	1853116.842	6493006.191																			
	PI				1853165.615	6493003.748	3°00'00"	0.00	0.21	-	10			1910.08	2°55'45"	97.65	48.83								
	POE			4+76.26	1853214.449	6493003.801																			

SHOP TRACK (SH-5) TRACK GEOMETRY TABLE (SH-5)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1855007.874	6492814.207																			
	PITO	S10°14'17"E	30.00	0+30.00	1854978.350	6492819.539																			
		S17°22'48"E	163.23																						
	POE			1+93.23	1854822.572	6492868.298																			

SHOP TRACK (SH-7) TRACK GEOMETRY TABLE (SH-7)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1854909.779	6492841.013																			
	PITO	S17°22'24"E	30.00	0+30.00	1854881.146	6492849.971																			
		S10°13'14"E	64.76																						
301	PC			0+94.76	1854817.416	6492861.462																			
	PI				1854776.467	6492868.845	5°00'00"	0.00	0.35	-	10			1146.28	4°09'28"	83.18	41.61								
	PT			1+77.92	1854735.090	6492873.240																			

TAIL TRACK GEOMETRY TABLE (TAIL)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#10 TO	PS			0+00.00	1856730.294	6491294.793																			
	PITO	N58°57'50"W	32.92	0+32.92	1856747.266	6491266.587																			
		N64°41'19"W	215.00																						
	POE			2+47.92	1856839.186	6491072.228																			

WASH TRACK GEOMETRY TABLE (TWSH)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			400+00.00	1856247.590	6491983.287																			
	PITO	S49°08'53"E	30.00	400+30.00	1856227.952	6492005.968																			
		S54°52'22"E	175.45	402+05.45	1856130.520	6492151.879																			
401	PC																								
	PI				1856070.155	6492242.279	10°00'00"	0.00	0.70	-	10			573.69	21°27'30"	214.58	108.70								
	PT			404+20.04	1855980.904	6492304.330																			
		S34°48'31"E	290.25	407+10.29	1855742.590	6492470.015																			
402	PC																								
	PI				1855712.905	6492490.654	6°00'00"	0.00	0.42	-	10			955.37	4°20'04"	72.24	36.16								
	PT			407+82.53	1855681.744	6492508.990																			
		S30°28'26"E	45.47	408+27.99	1855642.559	6492532.048																			
403	PC																								
	PI				1855611.398	6492550.384	6°00'00"	0.00	0.42	-	10			955.37	4°20'04"	72.24	36.16								
	PT			409+00.24	1855581.713	6492571.022																			
		S34°48'31"E	89.67	409+89.91	1855508.088	6492622.210																			
#8 TO	PITO	S34°48'31"E	30.00	410+19.91	1855483.455	6492639.335																			
	PS																								

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HORIZONTAL ALIGNMENT DATA - SHEET 2 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6119
SCALE NO SCALE
SHEET NO.

4/30/2019 10:23:13 AM c:\jlp\pwworkdir\haynesma\d0138946\K2L-TT-E6119.dgn haynesma

SERVICE TRACK (SV-1) TRACK GEOMETRY TABLE (SV-1)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			200+00.00	1856402.805	6491804.013																			
	PITO	S49°06'51"E	30.00	200+30.00	1856383.167	6491826.694																			
	PS	S49°06'51"E	90.47	201+20.47	1856323.952	6491895.088	6°30'00"	0.00	0.46	-	10			881.95	5°22'06"	82.64	41.35								
#8 TO	PITO	S49°06'51"E	30.00	201+50.47	1856304.315	6491917.769																			
	PS	S49°06'51"E	130.20	202+80.67	1856207.497	6492004.826																			
#8 TO	PITO	S41°57'41"E	30.00	203+10.67	1856185.188	6492024.886																			
	PC	S41°57'41"E	109.43	204+20.10	1856113.559	6492107.618																			
501	PI	S49°06'51"E	156.00		1856066.435	6492162.046	10°00'00"	0.00	0.70	-	10			573.69	14°18'20"	143.06	41.35								
	PT			205+76.10	1856007.324	6492203.142																			
	PC	S34°48'31"E	531.94	210+95.10	1855570.568	6492506.793																			
502	PI				1855555.404	6492517.335	6°00'00"	0.00	0.42	-	10			955.37	2°12'54"	36.92	81.26								
	PT			211+32.02	1855539.844	6492527.284																			
	PC	S32°35'37"E	260.01	213+92.02	1855320.782	6492667.345																			
503	PI				1855153.059	6492774.582	6°15'00"	0.00	0.44	-	10			917.19	24°29'32"	391.87	199.07								
	PT			217+83.90	1854955.972	6492802.637																			
#8 TO	PITO	S08°06'05"E	362.59	221+46.49	1854597.002	6492853.736																			
	PS	S00°56'55"E	30.00	221+76.49	1854567.005	6492854.232																			

SERVICE TRACK (SV-2) TRACK GEOMETRY TABLE (SV-2)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			210+00.00	1856194.136	6492014.739																			
	PITO	S43°46'47"E	30.00	210+30.00	1856172.476	6492035.496																			
	PC	S43°46'47"E	96.42	210+96.42	1856124.523	6492081.447																			
601	PI				1856092.030	6492112.585	10°00'00"	0.00	0.70	-	10			573.69	8°58'16"	89.82	45.00								
	PT			211+86.13	1856055.079	6492138.275																			
	PC	S34°48'31"E	607.67	217+93.80	1855556.139	6492485.158																			
602	PI				1855540.975	6492495.701	6°00'00"	0.00	0.42	-	10			955.37	2°12'54"	36.93	18.47								
	PT			218+30.72	1855525.415	6492505.649																			
	PC	S32°35'37"E	273.35	221+04.06	1855295.118	6492652.894																			
603	PI				1855181.938	6492725.258	6°30'00"	0.00	0.46	-	10			881.95	17°19'16"	266.62	134.34								
	PT			223+70.54	1855052.346	6492760.643																			
#8 TO	PITO	S15°16'21"E	224.25	225+94.79	1854836.016	6492819.712																			
	PS	S08°06'05"E	30.00	226+24.79	1854806.315	6492823.940																			

SERVICE TRACK (SV-3) TRACK GEOMETRY TABLE (SV-3)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			1+05.62	1854692.899	6492840.085																			
	PITO	S41°59'43"E	30.00	1+35.62	1856302.157	6491969.228																			
	PC	S34°48'31"E	249.27	2+79.27	1856116.898	6492064.232																			
701	PI				1856072.309	6492104.373	6°00'00"	0.00	0.42	-	10			955.37	7°11'12"	119.83	60.00								
	PT			3+99.05	1856023.049	6492138.621																			
		S34°48'31"E	56.79	4+55.84	1855976.418	6492171.041																			
EXIST POT	PT			15+29.22	1855068.790	6492737.575																			
	PITO	S15°15'15"E	389.62	19+18.83	1854692.899	6492840.085																			
#8 TO	PS	S08°06'05"E	30.00	19+48.84	1854663.197	6492844.313																			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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HORIZONTAL ALIGNMENT DATA - SHEET 3 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6120
SCALE NO SCALE
SHEET NO.

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SERVICE TRACK (SV-4) TRACK GEOMETRY TABLE (SV-4)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1856237.182	6491955.945																			
	PITO	S41°59'43"E	30.00	0+30.00	1856214.886	6491976.018																			
	POT	S34°48'31"E	240.38	2+70.38	1856017.521	6492113.234																			
CONNECT TO EXISTING																									
	POT			14+16.21	1855050.510	6492721.482																			
	PC	S15°24'52"E	78.75	14+94.97	1854974.588	6492742.415																			
801	PI				1854934.849	6492753.372	8°30'00"	0.00	0.60	-	10			674.69	6°59'33"	82.34	41.22								
	PT			15+77.23	1854896.739	6492769.085																			
#8 TO	PITO	S22°24'25"E	119.40	16+96.63	1854786.353	6492814.599																			
	PS	S15°15'15"E	30.00	17+26.64	1854757.409	6492822.492																			

FUEL TRACK GEOMETRY TABLE (FUEL)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1856471.870	6491718.535																			
	PITO	S56°18'03"E	30.00	0+30.00	1856455.055	6491743.551																			
	PC	S56°18'03"E	155.29	1+85.29	1856368.893	6491872.749																			
901	PI				1856346.516	6491906.303	6°00'00"	0.00	0.42	-	10			955.37	4°50'05"	80.61	40.33								
	PT			2+65.87	1856321.390	6491937.852																			
	POE	S51°27'58"E	299.36	5+65.23	1856134.896	6492172.023																			

COACH TRACK GEOMETRY TABLE (COACH)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1852991.359	6492990.992																			
	PITO	N05°22'23"W	30.00	0+30.00	1853021.228	6492988.183																			
	PC	N01°46'47"E	62.49	0+92.49	1853083.690	6492990.123																			
1001	PI				1853113.396	6492991.046	6°00'00"	0.00	0.42	-	10			955.37	3°33'49"	59.42	29.72								
	PT			1+51.89	1853143.103	6492990.121																			
	PC	N01°47'03"W	68.39	2+20.28	1853211.464	6492987.992																			
1002	PI				1853232.753	6492987.329	4°00'00"	0.00	0.28	-	10			1432.69	1°42'12"	42.59	21.30								
	PT			2+62.87	1853254.012	6492986.033																			
	POE	N03°29'15"W	23.96	2+86.83	1853277.927	6492984.576																			

SET-OUT TRACK (SOT2) GEOMETRY TABLE (SOT2)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1855356.855	6492717.205																			
	PITO	S27°52'18"E	30.00	0+30.00	1855330.344	6492731.246																			
	PC	S27°52'18"E	63.63	0+93.63	1855274.096	6492760.992																			
1101	PI				1855238.663	6492779.730	10°00'00"	0.00	0.70	-	10			573.69	7°59'35"	80.03	40.08								
	PT			1+73.56	1855200.970	6492793.359																			
	POE	S19°52'42"E	116.33	2+89.89	1855091.574	6492832.913																			

SET-OUT TRACK (SOT3) GEOMETRY TABLE (SOT3)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1855778.157	6492384.391																			
	PITO	S34°48'31"E	30.00	0+30.00	1855753.525	6492401.516																			
	POE	S34°48'31"E	296.55	3+26.55	1855510.040	6492570.797																			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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HORIZONTAL ALIGNMENT DATA - SHEET 4 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6121
SCALE NO SCALE
SHEET NO.

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STORAGE TRACK (YD-1) GEOMETRY TABLE (YD-1)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			300+00.00	1855159.082	6492852.975																			
	PITO	S26°30'28"E	30.00	300+30.00	1855132.235	6492866.365																			
1201	PC	S19°21'18"E	535.09	305+65.09	1854627.391	6493043.703																			
	PI				1854587.834	6493057.598	10°00'00"	0.00	0.70	-	10			573.69	8°21'36"	83.71	41.93								
	PT			306+48.69	1854546.676	6493065.594																			
	POT	S10°59'42"E	214.95	308+63.63	1854335.676	6493106.590																			
CONNECT TO EXISTING																									
	POT	S10°41'16"W	75.12	319+04.27	1853301.180	6493109.364																			
1202	PC			319+79.39	1853227.365	6493095.433																			
	PI				1853182.476	6493086.961	2°30'00"	0.00	0.18	-	10			2292.01	2°17'01"	91.35	45.68								
	PT	S08°24'15"W	237.69	320+70.73	1853137.285	6493080.285																			
1203	PC			323+08.43	1852902.146	6493045.545																			
	PI				1852870.437	6493040.860	8°00'00"	0.00	0.56	-	10			716.78	5°07'15"	64.06	32.05								
	PT																								
#8 TO	PITO	S06°22'20"W	30.00	324+44.43	1852839.273	6493033.364																			
	PS	S06°22'20"W	67.37	324+74.43	1852739.464	6493013.363																			
#8 TO	PS	S00°46'50"E	30.00	325+41.80	1852672.508	6493005.721																			
	PITO			325+71.80	1852642.510	6493006.129																			

STORAGE TRACK (YD-2) GEOMETRY TABLE (YD-2)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1855333.393	6492743.664																			
	PITO	S34°48'31"E	30.00	0+30.00	1855308.760	6492760.790																			
1301	PC	S27°39'21"E	90.71	1+20.71	1855228.414	6492802.894																			
	PI				1855167.008	6492835.072	6°00'00"	0.00	0.42	-	10			955.37	8°18'03"	138.41	69.33								
	PT			2+59.06	1855101.599	6492858.048																			
1302	PC	S19°21'18"E	493.87	7+52.92	1854635.645	6493021.725																			
	PI				1854596.088	6493035.620	10°00'00"	0.00	0.70	-	10			573.69	8°21'36"	83.71	41.93								
	PT			8+36.52	1854554.930	6493043.617																			
	POT	S10°59'42"E	227.24	10+63.76	1854331.861	6493086.957																			
CONNECT TO EXISTING																									
	POT	S10°41'16"W	56.31	20+96.83	1853304.890	6493089.711																			
1303	PC			21+53.15	1853249.552	6493079.267																			
	PI				1853198.776	6493069.684	1°00'00"	0.00	0.07	-	10			5729.65	1°02'00"	103.34	51.67								
	PT	S11°43'16"W	70.55	22+56.49	1853148.182	6493059.187																			
#8 TO	PITO	S04°34'06"W	30.00	23+27.04	1853079.106	6493044.856																			
	PS			23+57.04	1853049.200	6493042.466																			

STORAGE TRACK (YD-3) GEOMETRY TABLE (YD-3)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1854730.266	6492988.487																			
	PITO	S19°21'18"E	30.00	0+30.00	1854701.960	6492998.430																			
1401	PC	S12°12'08"E	69.64	0+99.65	1854633.889	6493013.151																			
	PI				1854594.558	6493021.656	1°30'00"	0.00	0.11	-	10			3819.83	1°12'26"	80.48	40.24								
	PT			1+80.12	1854555.056	6493029.331																			
	POT	S10°59'42"E	230.09	4+10.21	1854329.191	6493073.214																			
CONNECT TO EXISTING																									
	POT	S10°41'16"W	81.85	14+37.98	1853307.486	6493075.954																			
1402	PC			15+19.83	1853227.057	6493060.775																			
	PI				1853189.408	6493053.669	8°00'00"	0.00	0.56	-	10			716.78	6°07'10"	76.55	38.31								
	PT	S04°34'06"W	230.48	15+96.32	1853151.216	6493050.618																			
1403	PC			18+26.80	1852921.473	6493032.261																			
	PI				1852876.512	6493028.668	2°00'00"	0.00	0.14	-	10			2864.93	1°48'14"	90.20	45.10								
	PT	S06°22'20"W	160.17	19+17.00	1852831.687	6493023.662																			
#8 TO	PITO	S00°46'50"E	30.00	20+77.16	1852672.511	6493005.886																			
	PS			21+07.16	1852642.513	6493006.295																			

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HORIZONTAL ALIGNMENT DATA - SHEET 5 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6122
SCALE NO SCALE
SHEET NO.

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STORAGE TRACK (YD-4) GEOMETRY TABLE (YD-4)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1854877.752	6492936.679																			
	PITO	S19°21'18"E	30.00	0+30.00	1854849.447	6492946.622																			
	PC	S12°12'08"E	209.18	2+39.18	1854644.991	6492990.835																			
1501	PI				1854615.492	6492997.214	2°00'00"	0.00	0.14	-	10			2864.93	1°12'26"	60.36	30.18								
	PT			2+99.54	1854585.865	6493002.971																			
	POT	S10°59'42"E	265.36	5+64.90	1854325.377	6493053.581																			
CONNECT TO EXISTING																									
	POT	S10°41'16"W	25.80	15+85.10	1853311.195	6493056.301																			
	PC			16+10.91	1853285.839	6493051.516																			
1502	PI				1853235.732	6493042.059	6°00'00"	0.00	0.42	-	10			955.37	6°06'37"	101.89	50.99								
	PT	S04°34'39"W	99.03	17+12.75	1853184.904	6493037.990																			
#8 TO	PITO	S02°34'31"E	30.00	18+11.78	1853086.187	6493030.086																			
	PS			18+41.78	1853056.217	6493031.434																			

STORAGE TRACK (YD-5) GEOMETRY TABLE (YD-5)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1854750.730	6492967.970																			
	PITO	S12°12'08"E	30.00	0+30.00	1854721.407	6492974.311																			
	PC	S05°02'58"E	83.32	1+13.32	1854638.407	6492981.644																			
1601	PI				1854608.730	6492984.267	10°00'00"	0.00	0.70	-	10			573.69	5°56'44"	59.53	29.79								
	PT			1+72.78	1854579.484	6492989.949																			
	POT	S10°59'42"E	261.58	4+34.36	1854322.707	6493039.838																			
CONNECT TO EXISTING																									
	POT	S10°41'16"W	32.12	14+49.27	1853313.791	6493042.544																			
	PC			14+81.39	1853282.224	6493036.586																			
1602	PI				1853216.683	6493024.217	10°00'00"	0.00	0.70	-	10			573.69	13°15'47"	132.80	66.70								
	PT	S02°34'31"E	186.85	16+14.02	1853150.052	6493027.214																			
#8 TO	PITO	S04°34'39"W	30.00	18+00.88	1852963.387	6493035.610																			
	PS			18+30.88	1852933.482	6493033.216																			

STORAGE TRACK (YD-6) GEOMETRY TABLE (YD-6)

STATIONING DATA							INPUT DATA							CURVE DATA				SPIRAL DATA							
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(FRT)	LS	I	RADIUS	△	L	T	θs	X	Y	P	K	LT	ST	Ts
							degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#8 TO	PS			0+00.00	1855440.759	6492669.019																			
	PITO	S34°48'31"E	30.00	0+30.00	1855416.127	6492686.144																			
	PC	S34°48'31"E	197.82	2+27.82	1855253.709	6492799.064																			
1701	PI				1855219.528	6492822.828	10°00'00"	0.00	0.70	-	10			573.69	8°18'03"	83.11	41.63								
	PT			3+10.82	1855182.275	6492841.408																			
	PC	S26°30'28"E	132.50	4+43.32	1855063.706	6492900.544																			
1702	PI				1855031.619	6492916.547	10°00'00"	0.00	0.70	-	10			573.69	7°09'10"	71.62	35.86								
	PT			5+14.85	1854997.790	6492928.431																			
	PC	S19°21'18"E	388.69	9+03.54	1854631.066	6493057.250																			
1703	PI				1854591.508	6493071.146	10°00'00"	0.00	0.70	-	10			573.69	8°21'36"	83.71	41.93								
	PT			9+87.14	1854550.351	6493079.142																			
	PC	S10°59'42"E	233.21	12+20.34	1854321.427	6493123.620																			
1704	PI				1853818.732	6493221.289	2°08'34"	0.00	0.15	-	10			2674.00	21°40'58"	1011.94	512.09								
	PT			22+32.22	1853315.521	6493126.318																			
	PC	S10°41'16"W	100.64	23+32.86	1853216.628	6493107.654																			
1705	PI				1853176.713	6493100.121	6°00'00"	0.00	0.42	-	10			955.37	4°52'09"	81.19	40.62								
	PT			24+14.01	1853137.581	6493089.227																			
#8 TO	PITO	S15°33'25"W	70.70	24+84.71	1853069.476	6493070.266																			
	PS	S08°24'15"W	30.00	25+14.71	1853039.797	6493065.882																			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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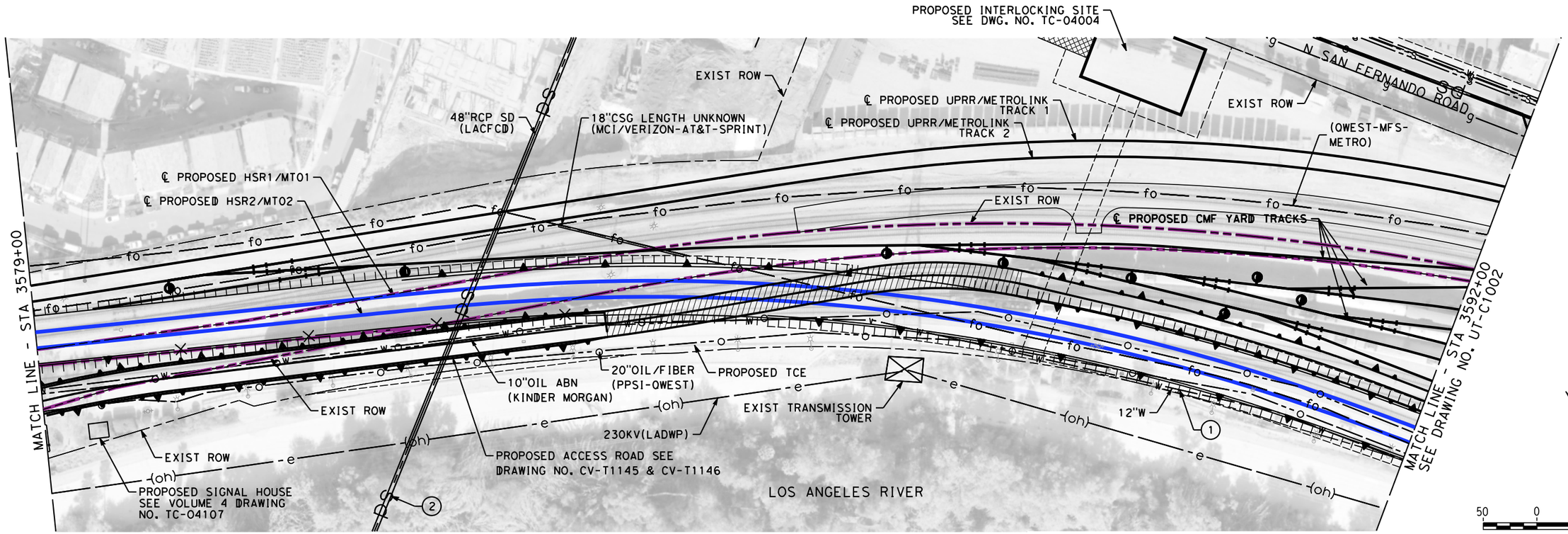
HORIZONTAL ALIGNMENT DATA - SHEET 6 OF 6

CONTRACT NO. HSR14-39
DRAWING NO. TT-E6123
SCALE
SHEET NO.



MAJOR UTILITY CONFLICTS

	TYPE OF UTILITY	SIZE/MATERIAL	LOCATION	OWNER	DISPOSITION
(1)	WATER	12"	STA 3576+75 TO 3626+50	TBD	RELOCATE
(2)	STORM DRAIN	48" RCP	STA 3583+00	LACFCD	RELOCATE UNDER TRENCH RETAINING WALLS

NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.
2. FOR HSR UTILITY INFORMATION SEE VOLUME 4, DRAWING NO. UT-C1542.

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DATE 04/30/2019

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STV 100 Years
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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COMPOSITE UTILITIES PLAN - SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-C1001
SCALE AS SHOWN
SHEET NO.

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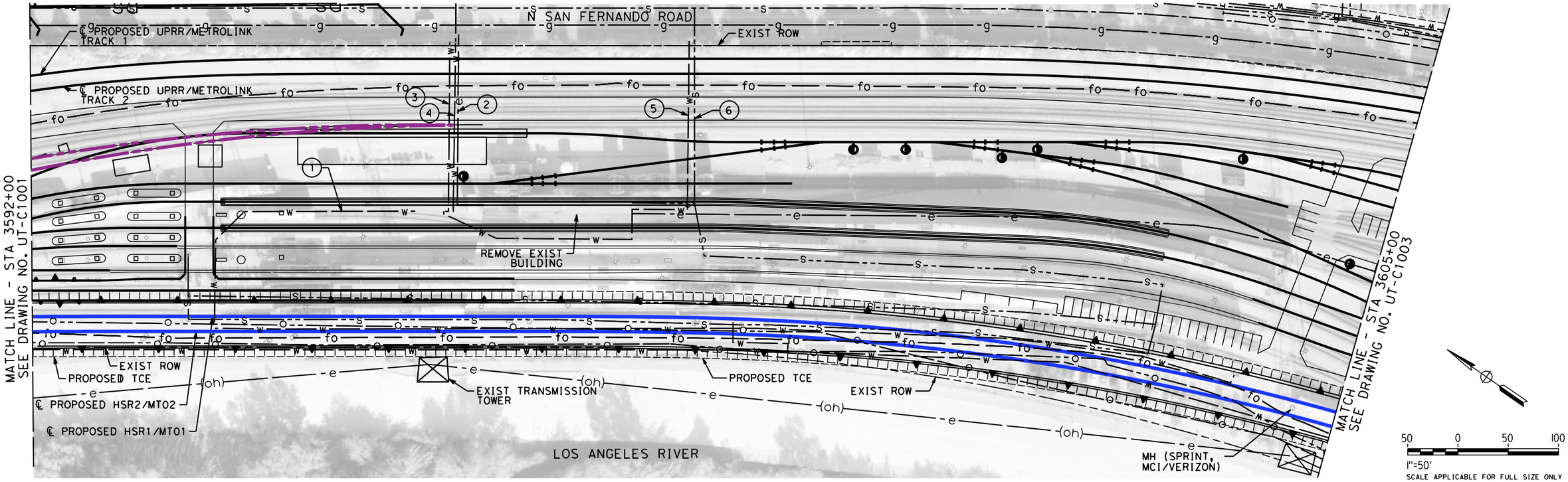

MAJOR UTILITY CONFLICTS

	TYPE OF UTILITY	SIZE/MATERIAL	LOCATION	OWNER	DISPOSITION
(1)	WATER	4"	STA 3593+77 TO 3600+42	LADWP	RELOCATE TO CAR WASH
(2)	POWER	UNDERGROUND POWER	STA 3593+77 TO 3600+42	LADWP	RELOCATE TO NEW FACILITIES
(3)	FIRE WATER	6" IN 10" CSG	STA 3595+10	LADWP	RELOCATE TO NEW FACILITIES
(4)	FIRE WATER	8" IN CSG	STA 3595+15	LADWP	RELOCATE TO NEW FACILITIES
(5)	WATER	8" IN 12" CSG	STA 3598+50	LADWP	RELOCATE TO NEW FACILITIES
(6)	SEWER	TBD	STA 3598+60 TO 3603+00	SCRRA	RELOCATE TO NEW FACILITIES

NOTES:
1. FOR HSR UTILITY INFORMATION SEE VOLUME 4, DRAWING NO. UT-C1543.

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DATE 04/30/2019

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STV 100 Years

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
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COMPOSITE UTILITIES PLAN - SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-C1002
SCALE AS SHOWN
SHEET NO.

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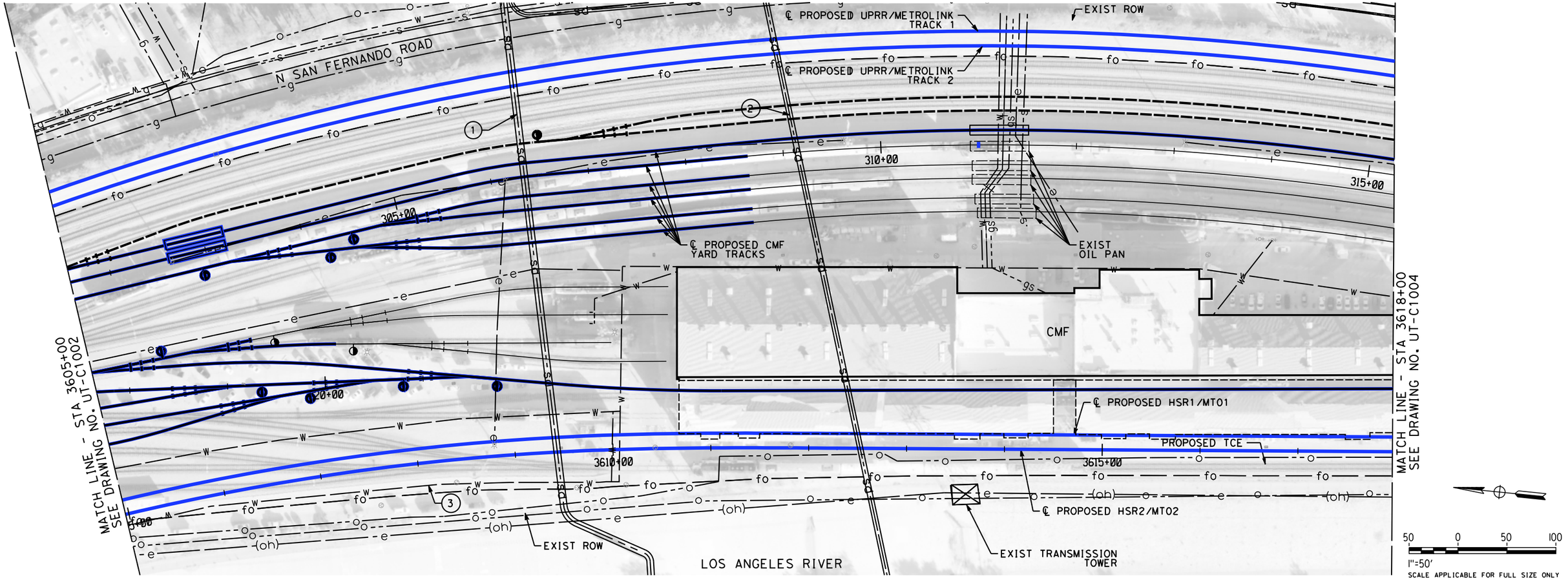

MAJOR UTILITY CONFLICTS

	TYPE OF UTILITY	SIZE/MATERIAL	LOCATION	OWNER	DISPOSITION
(1)	STORM DRAIN	81" RCP	STA 3609+43/ POPLAR ST.	LACFCD	PROTECT-IN-PLACE
(2)	STORM DRAIN	63" RCP	STA 3612+53/ MC CLURE ST.	CITY OF LOS ANGELES	PROTECT-IN-PLACE
(3)	WATER	10"	STA 3610+10	CITY OF LOS ANGELES	PROTECT-IN-PLACE

NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.

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DATE 04/30/2019

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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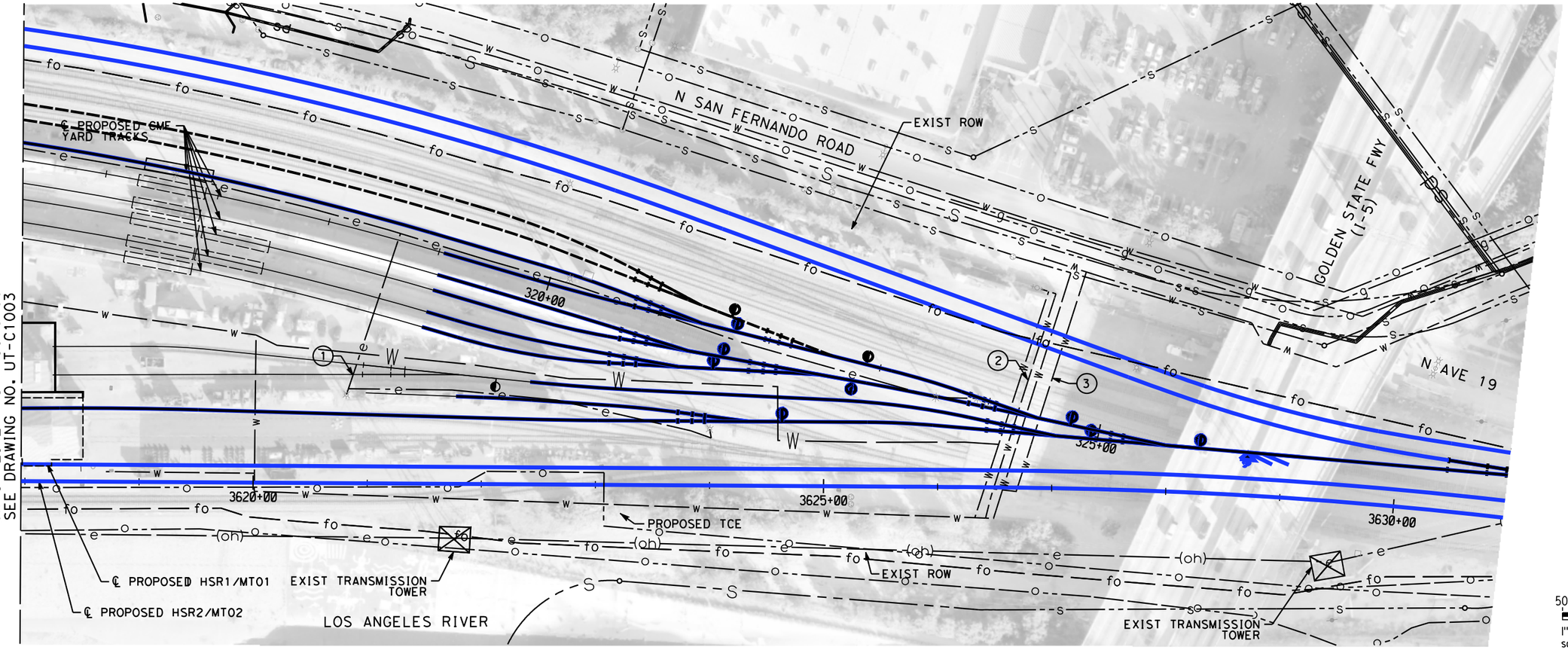
COMPOSITE UTILITIES PLAN - SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-C1003
SCALE AS SHOWN
SHEET NO.



MAJOR UTILITY CONFLICTS

	TYPE OF UTILITY	SIZE/MATERIAL	LOCATION	OWNER	DISPOSITION
(1)	FIRE WATER	10" IN CSG	STA 3626+50	CITY OF LOS ANGELES	PROTECT-IN-PLACE
(2)	WATER	12"	STA 3626+75	CITY OF LOS ANGELES	PROTECT-IN-PLACE
(3)	POWER	UNDERGROUND POWER	STA 3620+60	CITY OF LOS ANGELES	PROTECT-IN-PLACE

NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.

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STV 100 Years
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

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COMPOSITE UTILITIES PLAN - SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-C1004
SCALE AS SHOWN
SHEET NO.

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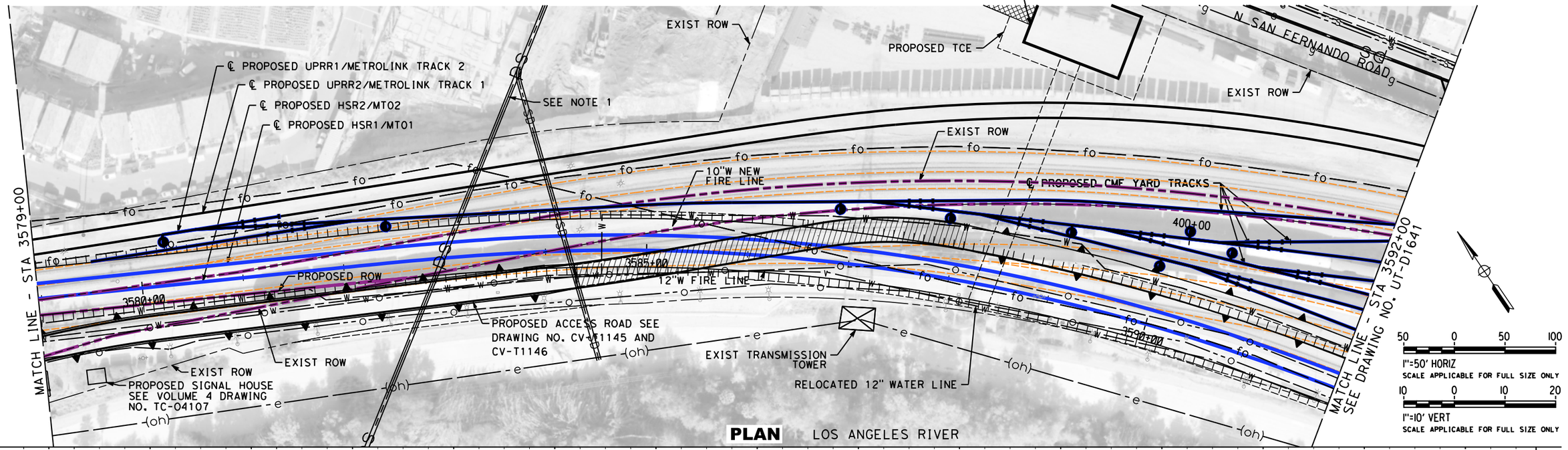
haynesma



PLAN LOS ANGELES RIVER

PROFILE

NOTES:

1. LOWER STORM DRAIN UNDER RETAINING WALL FOOTING

REFERENCE DWG SEE VOL4 UT-D1629

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. HIGGINS
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
PROPOSED UTILITY RELOCATION PLAN - CMF
SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-D1640
SCALE AS SHOWN
SHEET NO.

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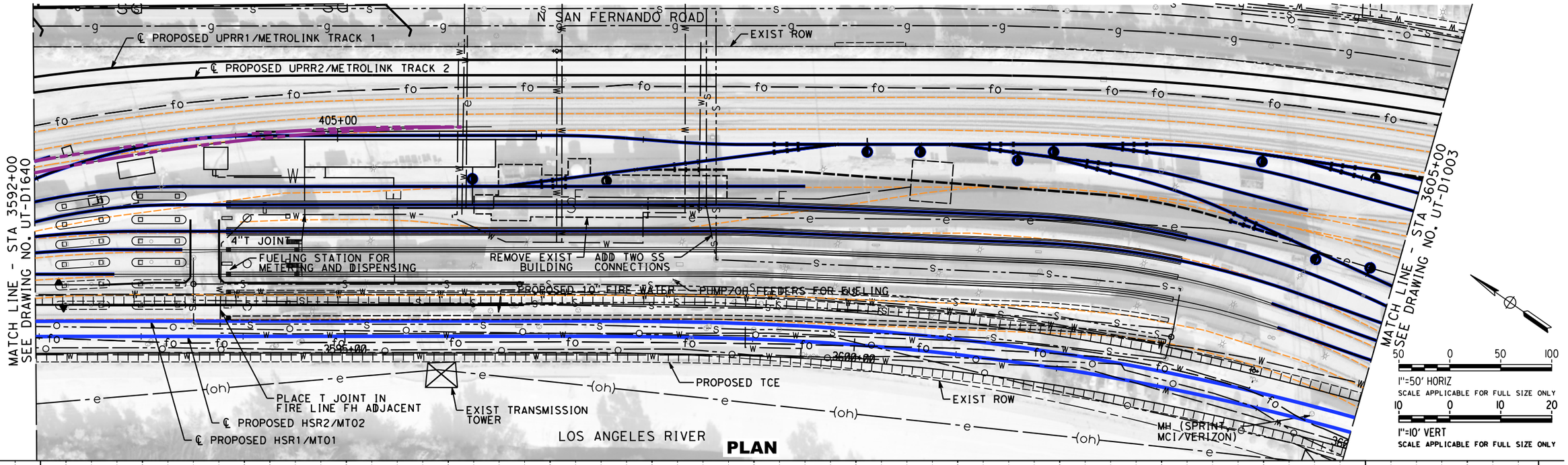
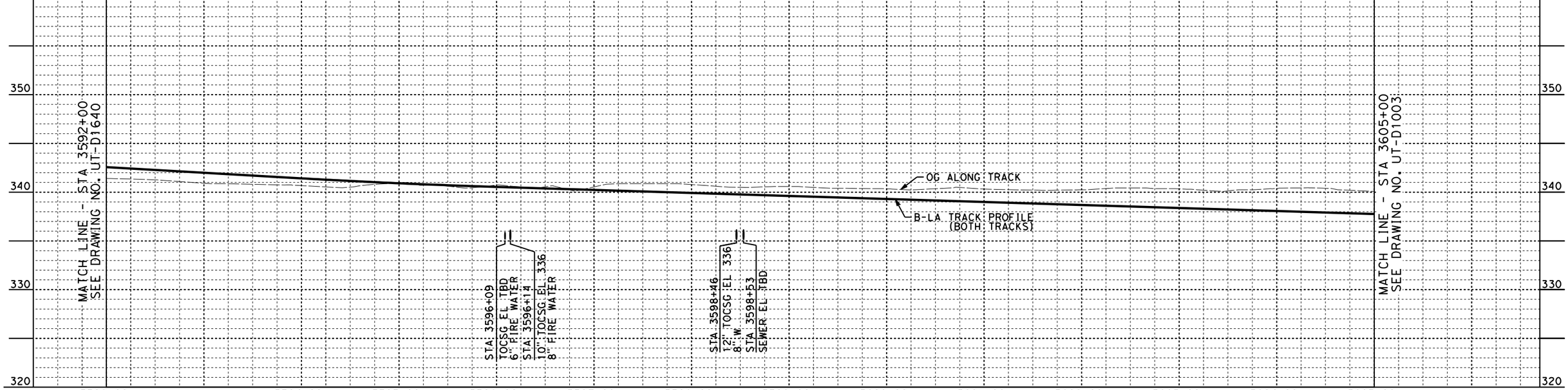


PLAN



PROFILE

NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.
2. RELOCATED UTILITIES TO PROVIDE SERVICE TO PROPOSED FACILITIES.
3. FOR HSR UTILITY INFORMATION SEE VOLUME 4, DRAWING NO. UT-D1543.

REFERENCE DWG SEE VOL4 UT-D1630

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. HIGGINS
DRAWN BY C. CUSSON
CHECKED BY C. ADAMS
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
PROPOSED UTILITY RELOCATION PLAN - CMF
SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-D1641
SCALE AS SHOWN
SHEET NO.

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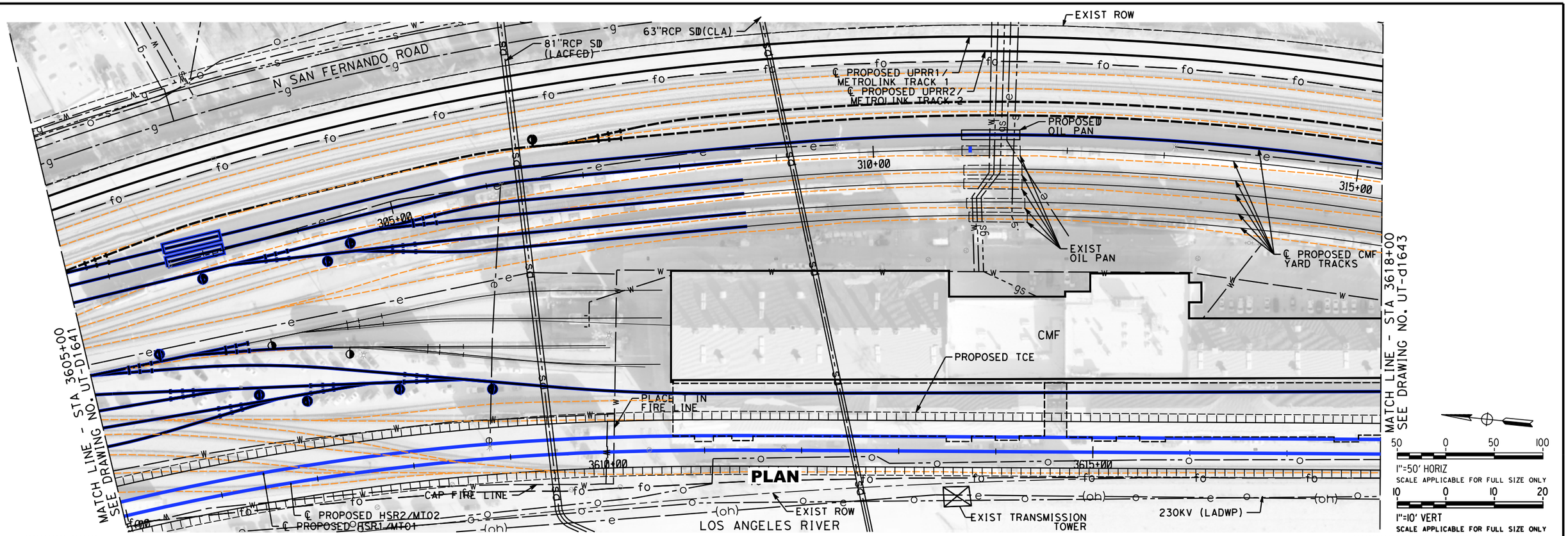
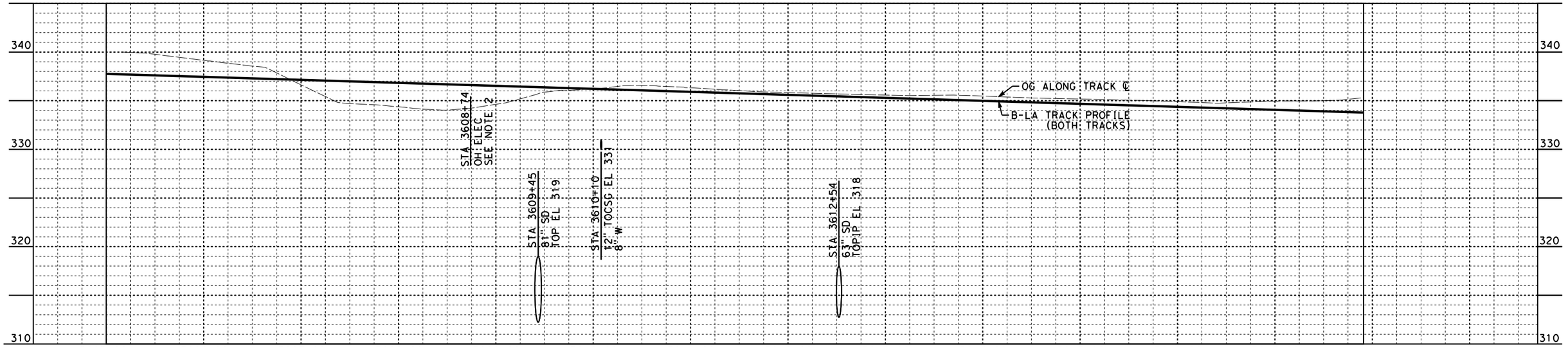
haynesma





NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.
2. RELOCATED UTILITIES TO PROVIDE SERVICE TO PROPOSED FACILITIES.
3. FOR HSR UTILITY INFORMATION SEE VOLUME 4, DRAWING NO. UT-D1543.

PROFILE

REFERENCE DWG SEE VOL4 UT-D1631

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. HIGGINS
DRAWN BY C. CUSSON
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
PROPOSED UTILITIES RELOCATION PLAN - CMF
SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-D1642
SCALE AS SHOWN
SHEET NO.

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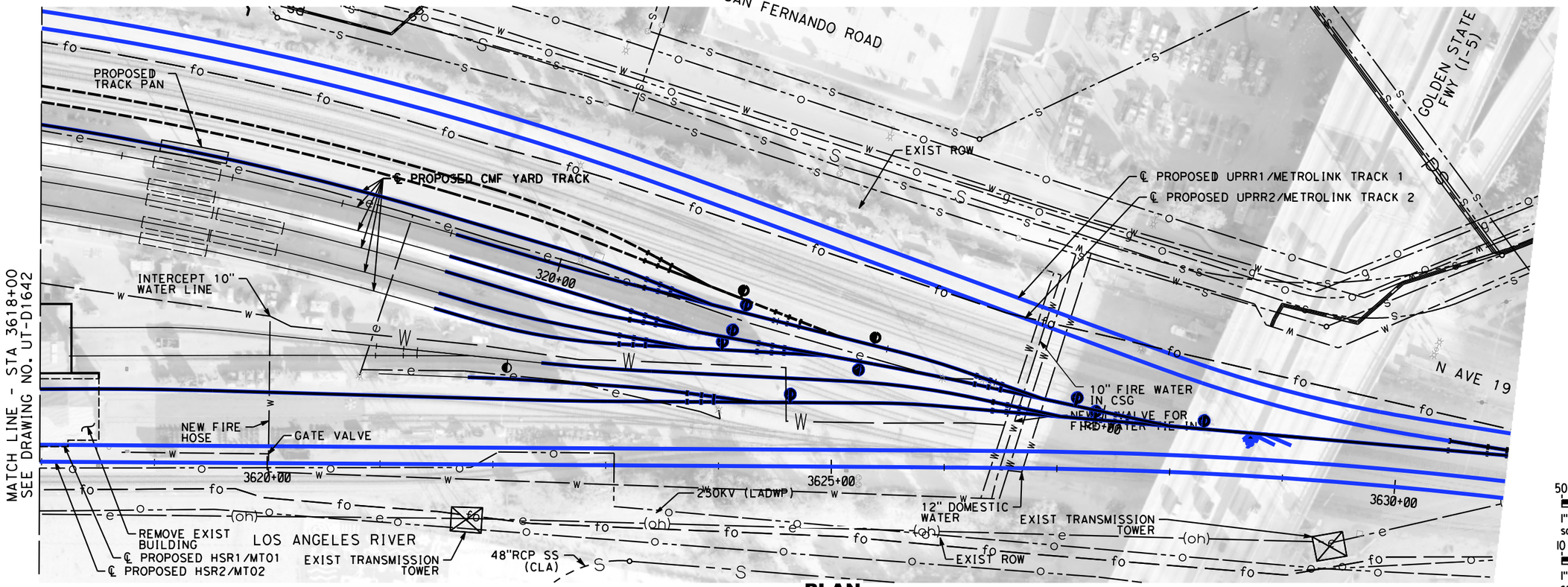

PLAN

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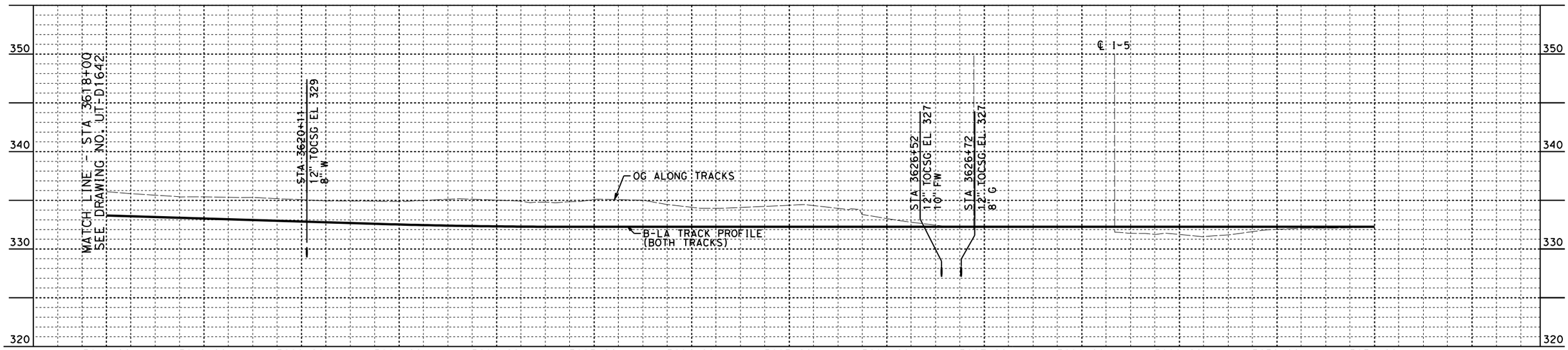
1"=50' HORIZ
SCALE APPLICABLE FOR FULL SIZE ONLY
10 0 10 20
1"=10' VERT
SCALE APPLICABLE FOR FULL SIZE ONLY



PROFILE

NOTES:
1. ADD NEW CASINGS TO ALL FIRE, WATER & GAS LINES IN TAYLOR YARD. ALL CASINGS ARE FROM ROW TO ROW.
2. RELOCATED UTILITIES TO PROVIDE SERVICE TO PROPOSED FACILITIES.
3. FOR HSR UTILITY INFORMATION SEE VOLUME 4, DRAWING NO. UT-D1545.

REFERENCE DWG SEE VOL4 UT-D1632

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. HIGGINS
DRAWN BY C. CUSSON
CHECKED BY C. ADAMS
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
PROPOSED UTILITIES RELOCATION PLAN - CMF
SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. UT-D1643
SCALE AS SHOWN
SHEET NO.

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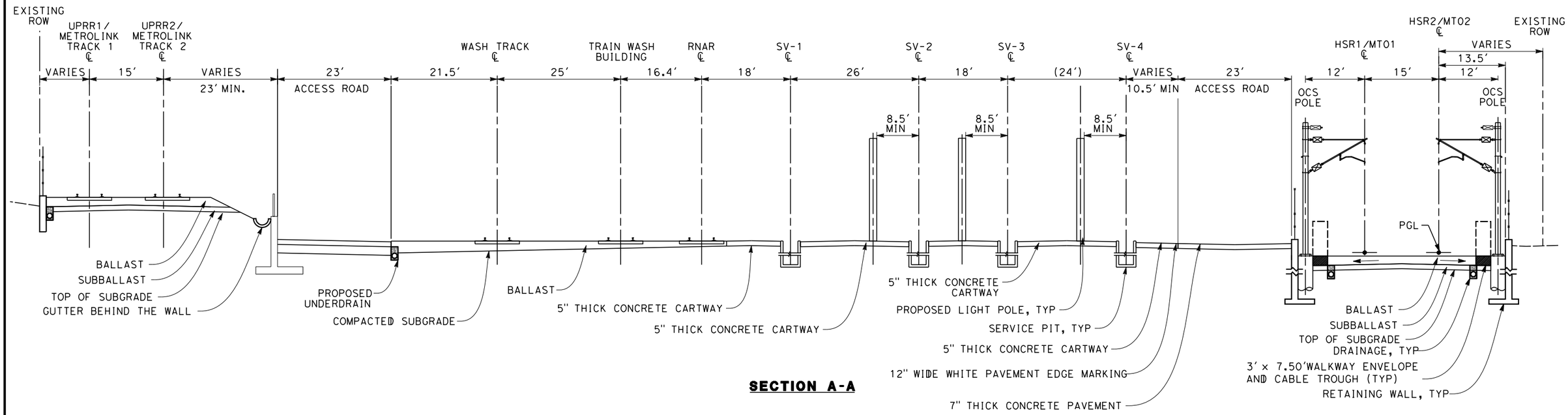
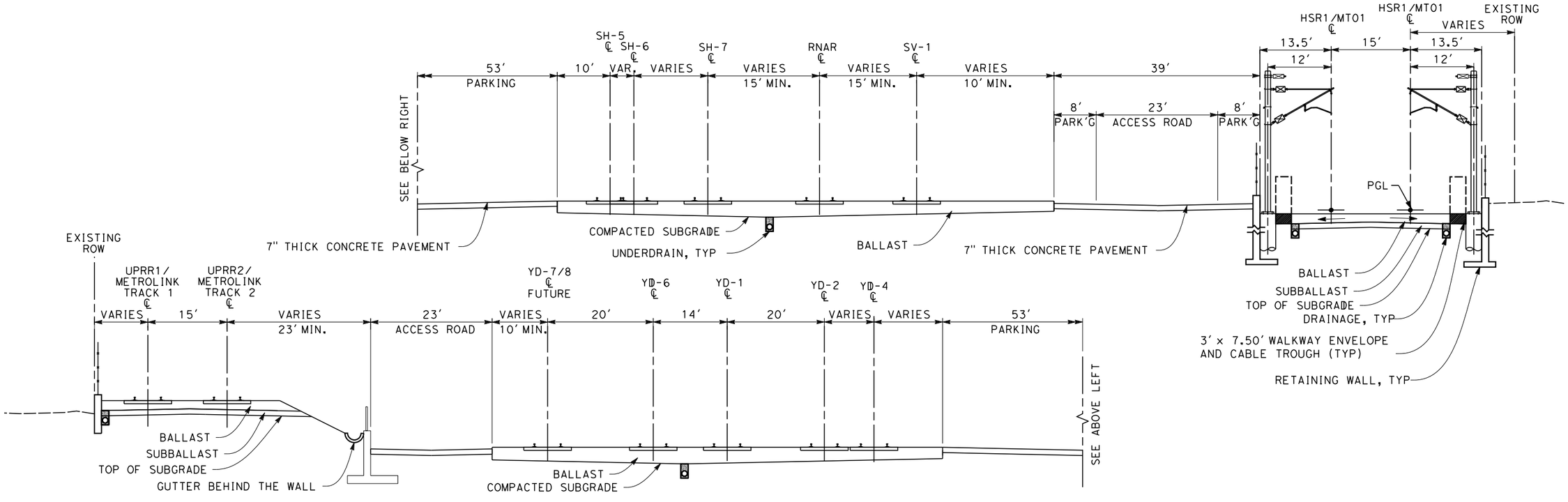
haynesma



SECTION A-A



SECTION B-B

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ZAHER
DRAWN BY A. ZAHER
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
CMF
SITE CROSS SECTIONS - SHEET 1 OF 2

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1001
SCALE NONE
SHEET NO.

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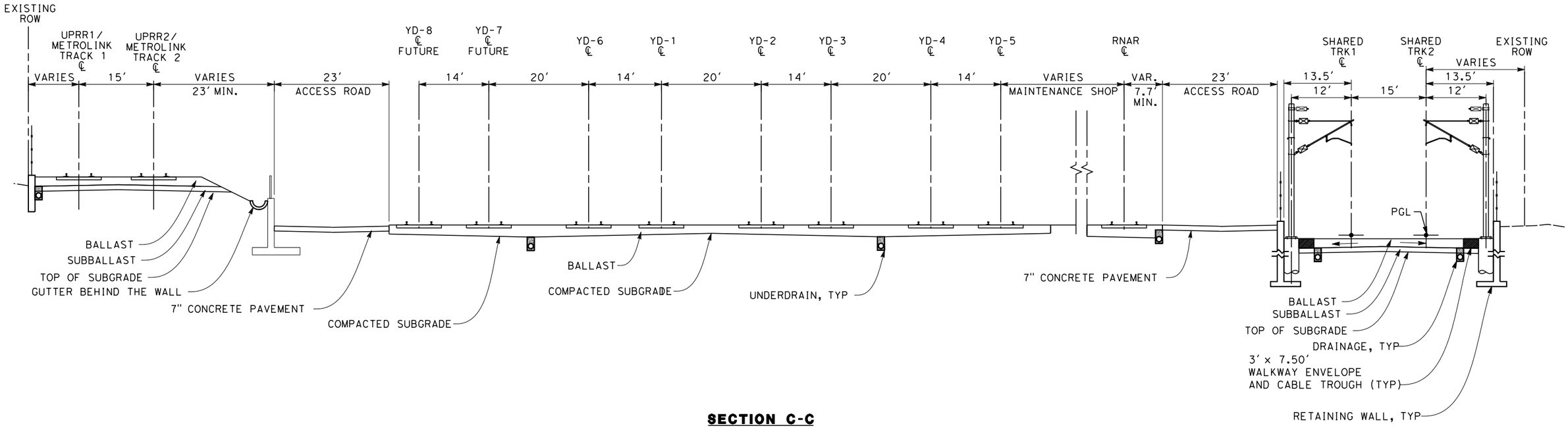
haynesma



SECTION C-C

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ZAHER
DRAWN BY A. ZAHER
CHECKED BY P. MAHONEY
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

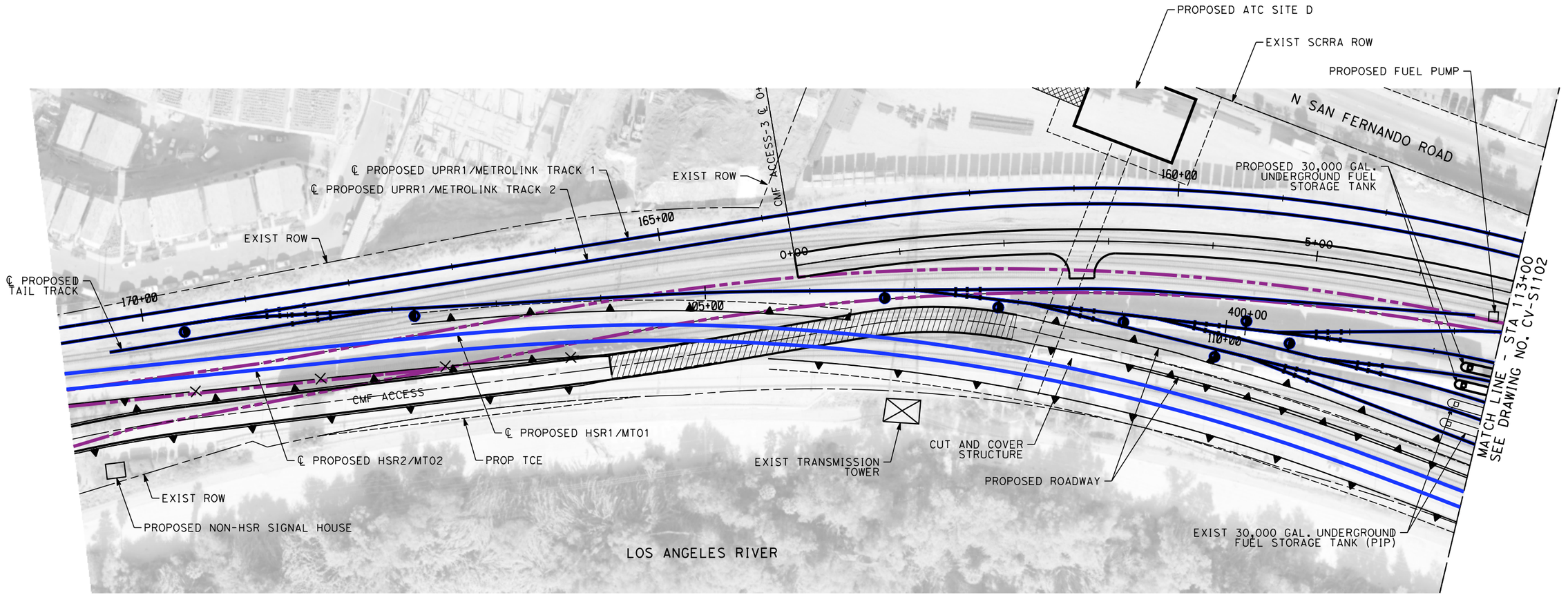
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
SITE CROSS SECTIONS - SHEET 2 OF 2

CONTRACT NO. HSR14-39
DRAWING NO. MY-D1002
SCALE NONE
SHEET NO.



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1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
SITE IMPROVEMENTS - SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-S1101
SCALE AS SHOWN
SHEET NO.

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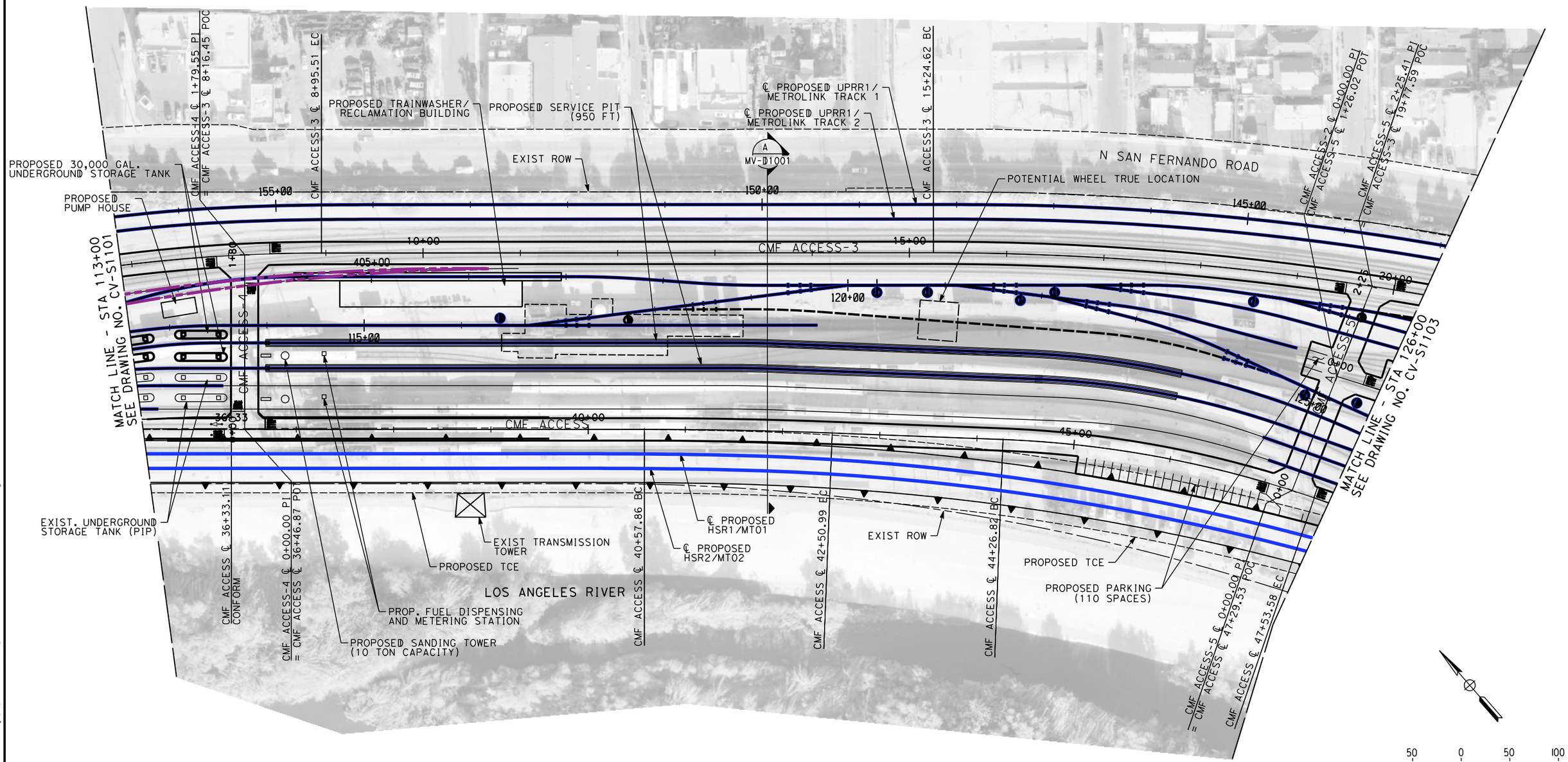

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1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
CMF
SITE IMPROVEMENTS - SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-S1102
SCALE AS SHOWN
SHEET NO.

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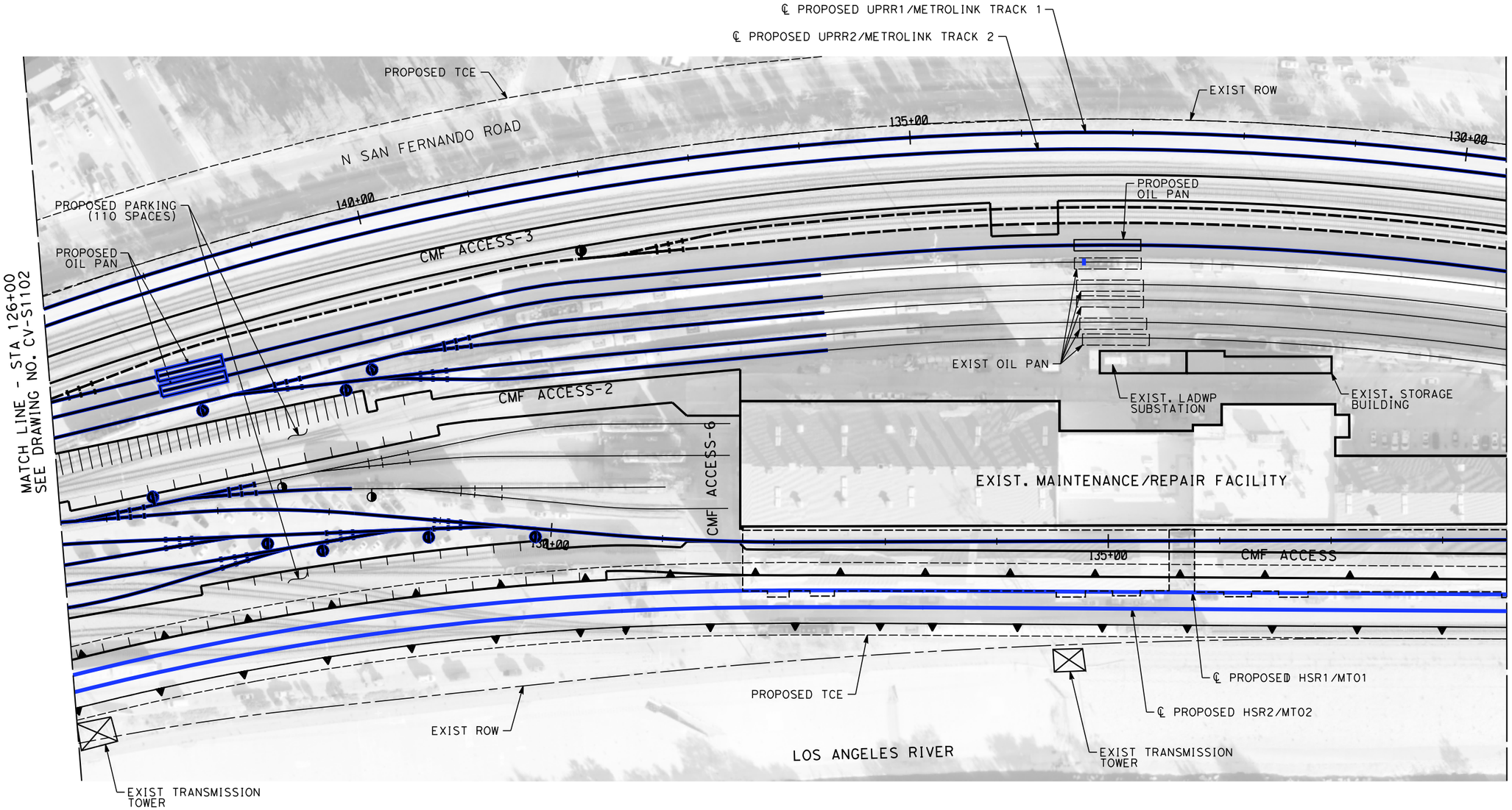
haynesma



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1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
SITE IMPROVEMENTS - SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-S1103
SCALE AS SHOWN
SHEET NO.

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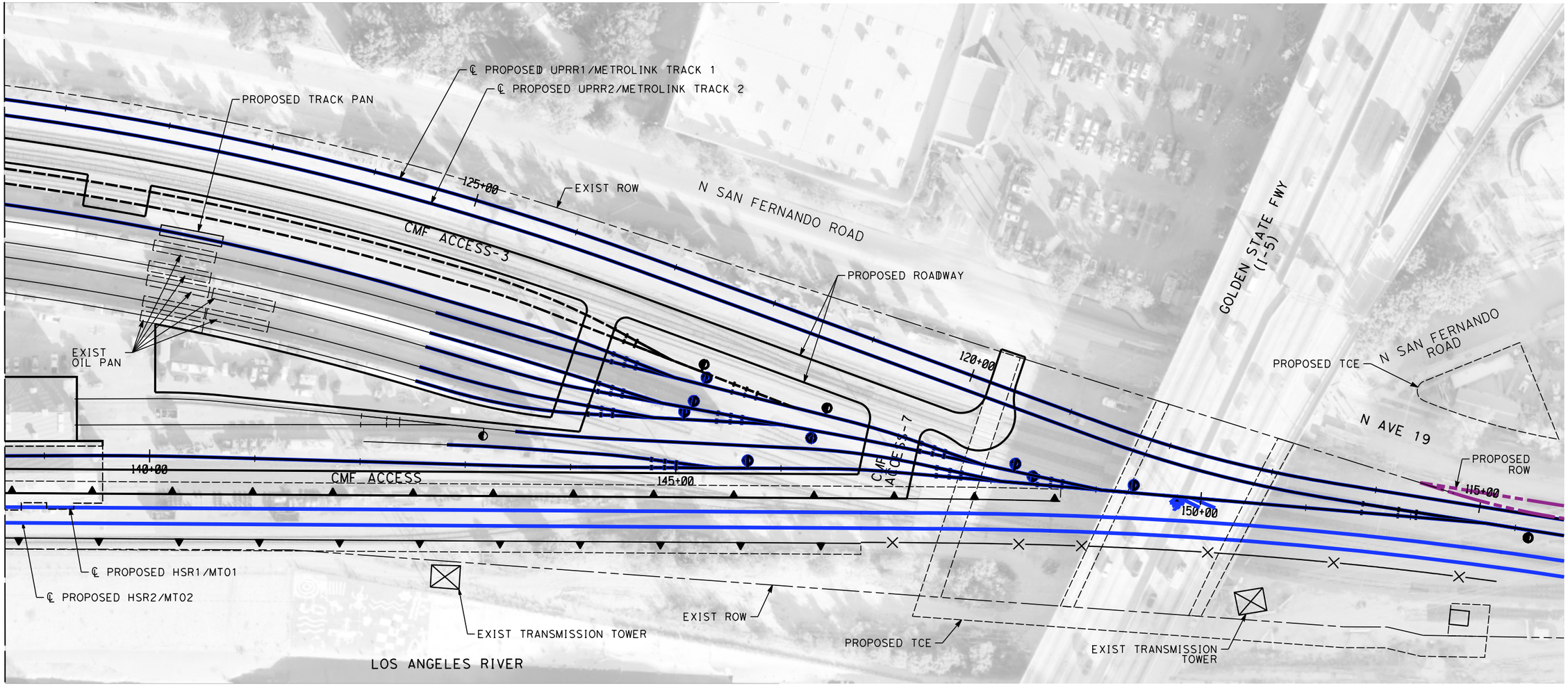

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1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
SITE IMPROVEMENTS - SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-S1104
SCALE AS SHOWN
SHEET NO.

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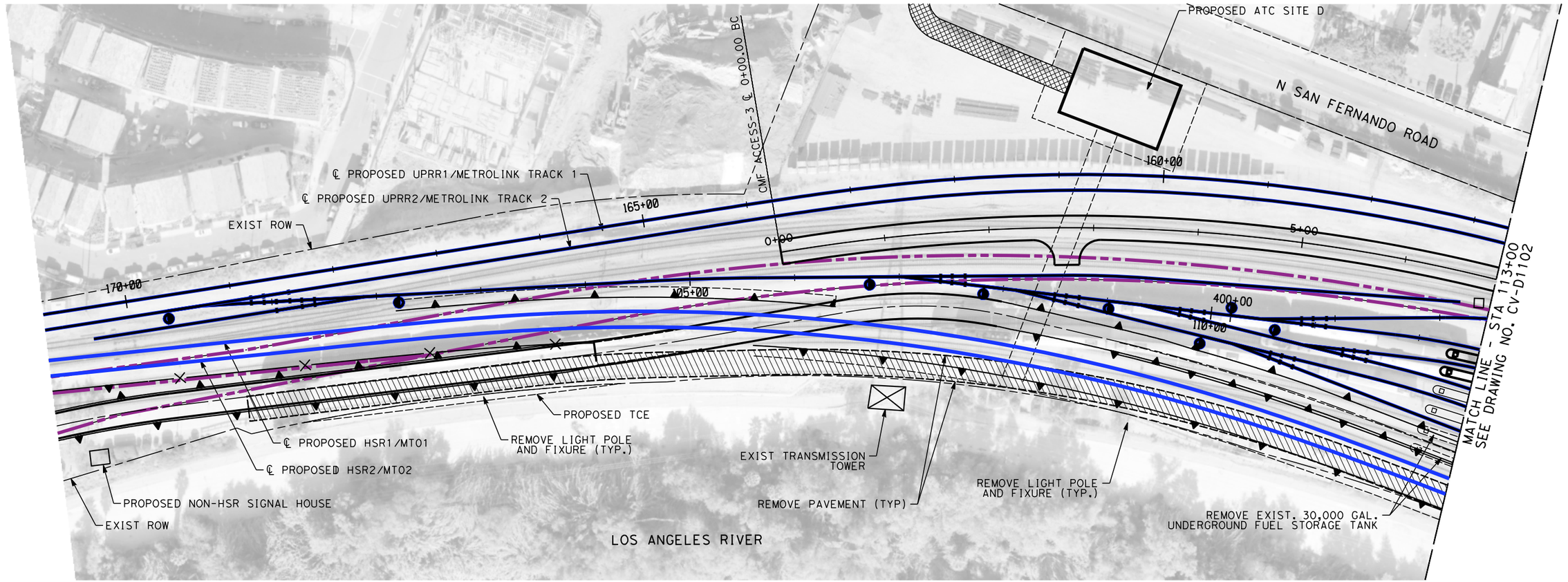
haynesma



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1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
DEMOLITION - SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-D1101
SCALE AS SHOWN
SHEET NO.

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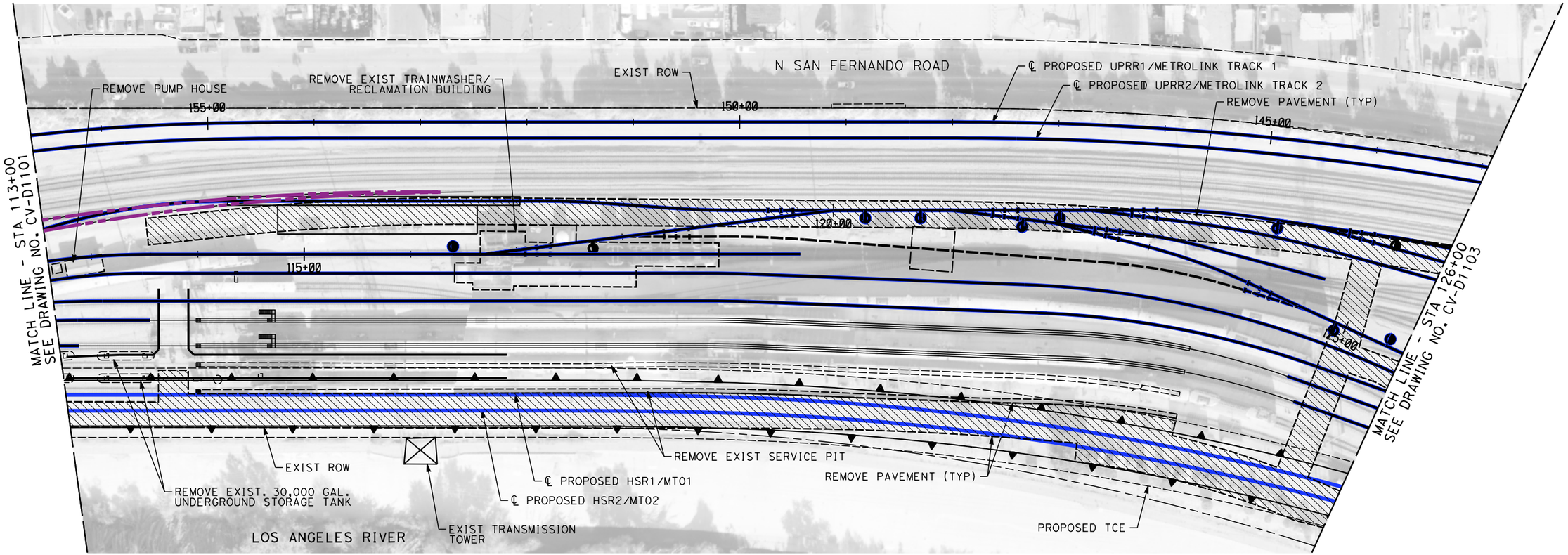
haynesma



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1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
DEMOLITION - SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-D1102
SCALE AS SHOWN
SHEET NO.

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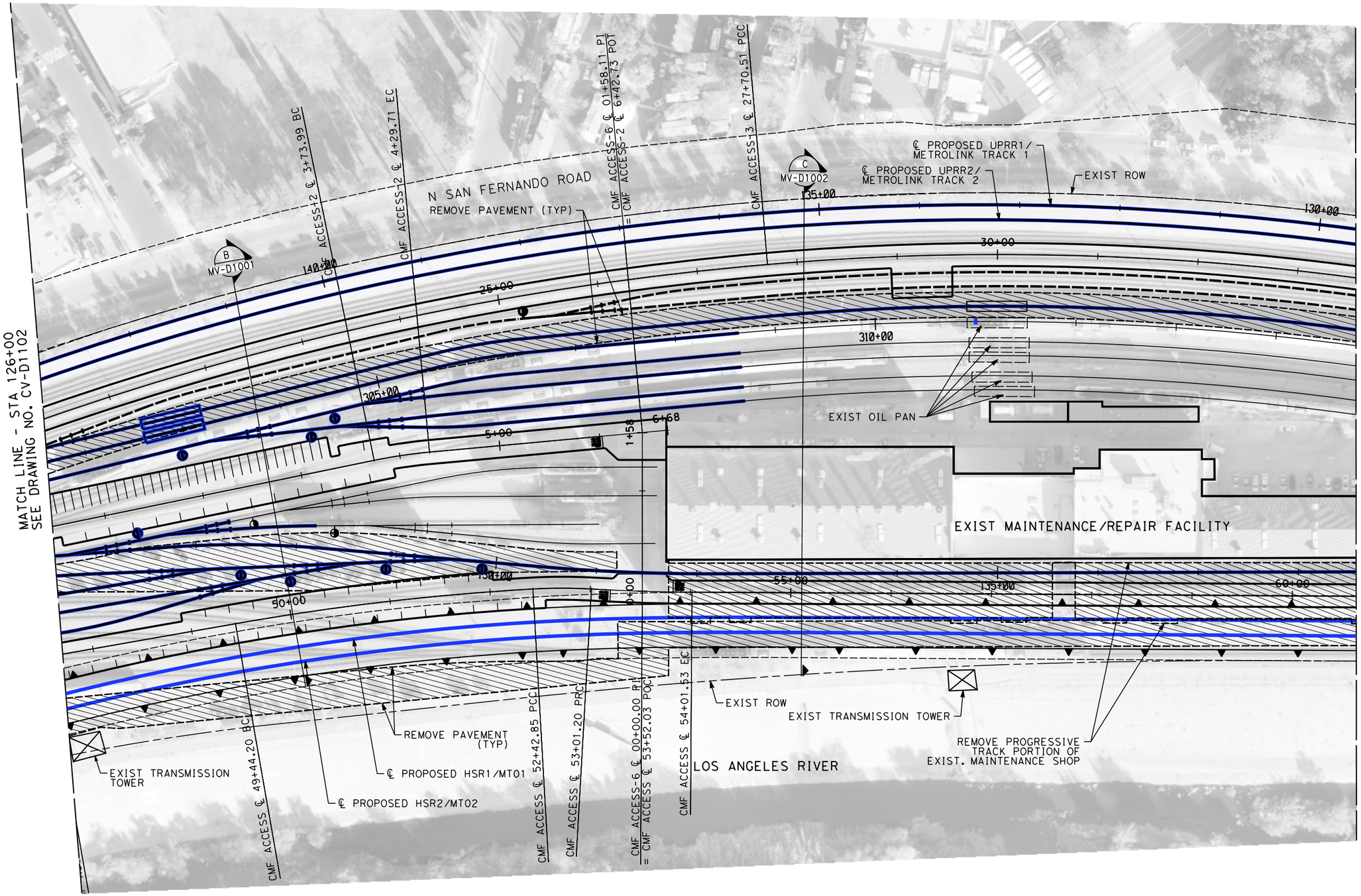

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR
CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
DEMOLITION - SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-D1103
SCALE AS SHOWN
SHEET NO.

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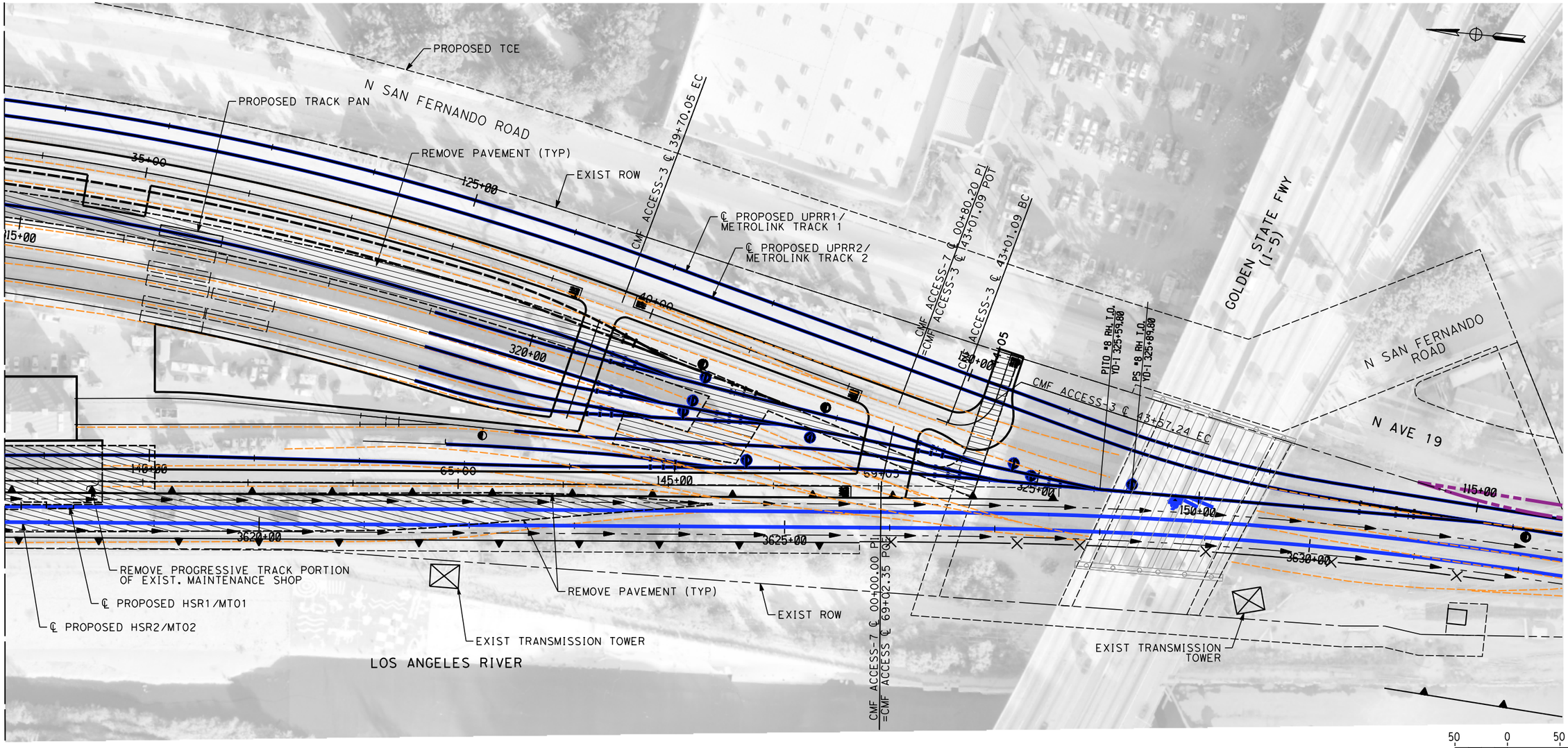
haynesma



50 0 50 100

1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

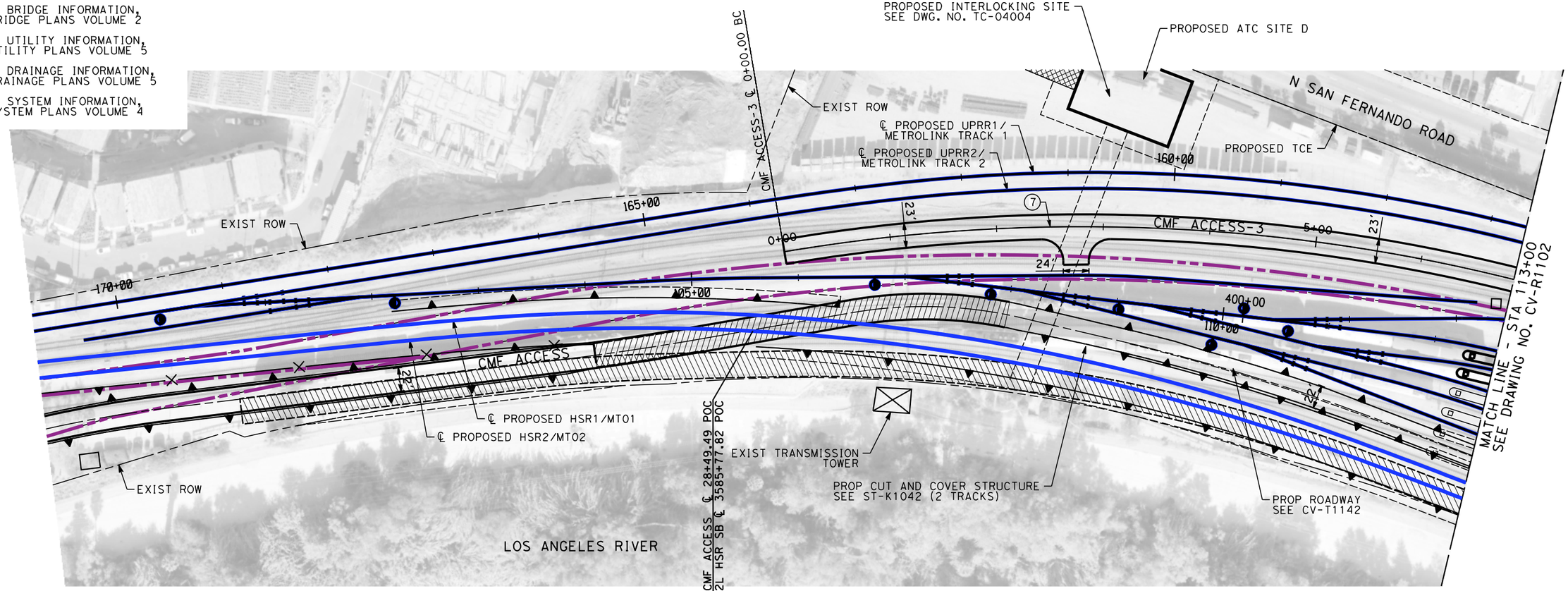
PEPD
CMF
DEMOLITION - SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-D1104
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:33:54 AM c:\jlp\pwworkdir\haynesma\d0138949\k2L-CV-D1104.dgn haynesma

NOTES:

1. FOR TRACK INFORMATION, SEE TRACK PLANS VOLUME 5
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS VOLUME 1
3. FOR BRIDGE INFORMATION, SEE BRIDGE PLANS VOLUME 2
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS VOLUME 5
5. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS VOLUME 5
6. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS VOLUME 4



LINE DATA

NO	BEARING	DISTANCE
1	S34°48'06"E	424.75'
2	S32°35'37"E	175.83'
3	S 15°44'59" E	190.62'
4	S 5°23'21" E	1501.30
5	S 83°37'40" E	80.21
6	S 17°22'48" E	373.99
7	S 10°59'42" E	238.22
8	N 76°38'14" E	225.41
9	N 55°11'54" E	179.55'
10	S 34°48'31" E	629.12
11	S 14°35'19" W	331.04
12	S 77°19'18" E	47.69

CURVE DATA

NO	R	Δ	T	L
1	5011.50'	2°12'29"	96.58'	193.13'
2	1111.50'	16°50'38"	164.57'	326.76'
3	2548.00'	6°42'56"	149.50	298.65
4	511.50	6°32'09"	29.21	58.35
5	1988.50	2°53'27"	50.17	100.32
6	500.00	6°23'06"	27.89	55.72
7	1676.61	30°36'10"	458.71	895.51
8	2952.17	24°10'49"	632.36	1245.89
9	2725.50	25°13'01"	609.64	1199.54
10	35.00	91°54'37"	36.19	56.14

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

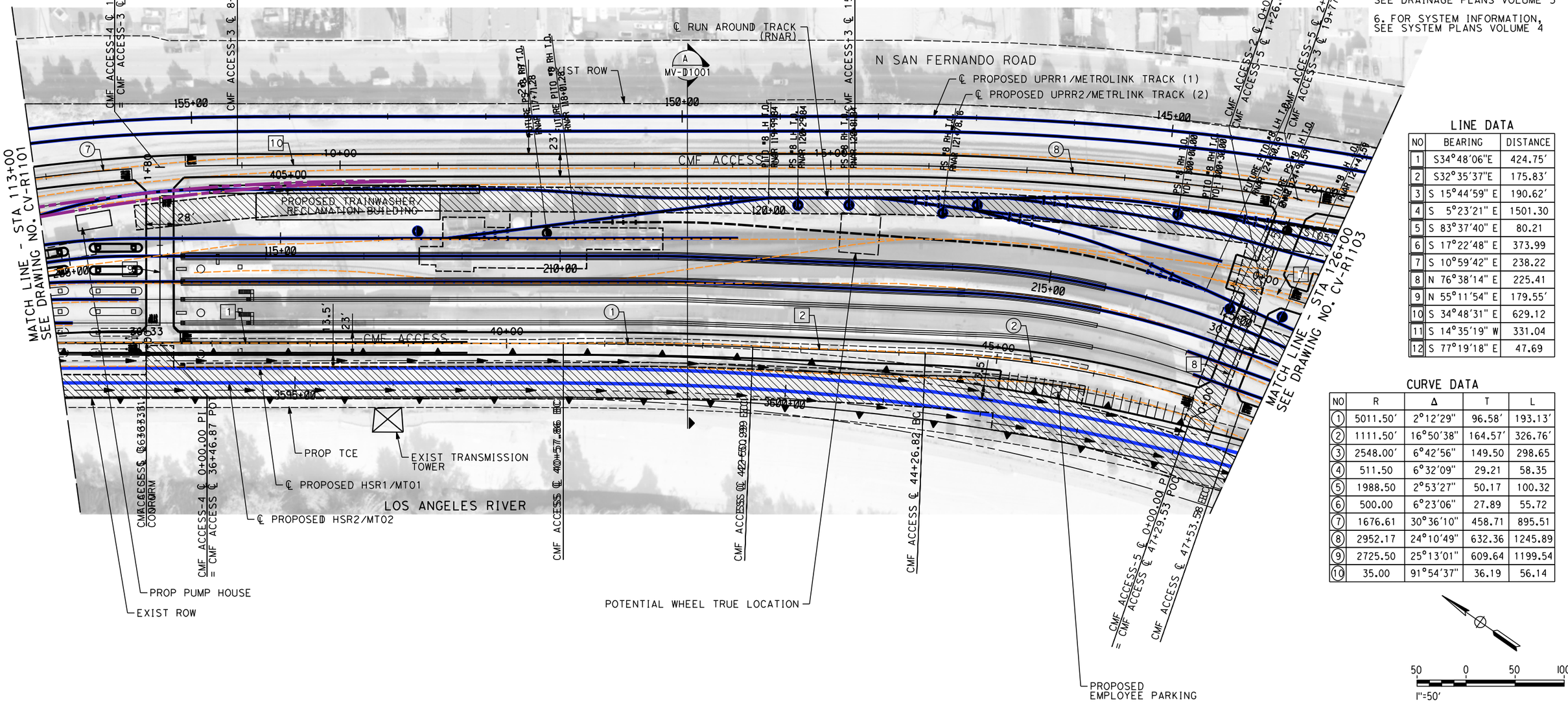
CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
ROADWAY - SHEET 1 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-R1101
SCALE AS SHOWN
SHEET NO.

NOTES:

1. FOR TRACK INFORMATION, SEE TRACK PLANS VOLUME 5
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS VOLUME 1
3. FOR BRIDGE INFORMATION, SEE BRIDGE PLANS VOLUME 2
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS VOLUME 5
5. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS VOLUME 5
6. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS VOLUME 4



LINE DATA

NO	BEARING	DISTANCE
1	S34°48'06"E	424.75'
2	S32°35'37"E	175.83'
3	S 15°44'59" E	190.62'
4	S 5°23'21" E	1501.30
5	S 83°37'40" E	80.21
6	S 17°22'48" E	373.99
7	S 10°59'42" E	238.22
8	N 76°38'14" E	225.41
9	N 55°11'54" E	179.55'
10	S 34°48'31" E	629.12
11	S 14°35'19" W	331.04
12	S 77°19'18" E	47.69

CURVE DATA

NO	R	Δ	T	L
(1)	5011.50'	2°12'29"	96.58'	193.13'
(2)	1111.50'	16°50'38"	164.57'	326.76'
(3)	2548.00'	6°42'56"	149.50	298.65
(4)	511.50	6°32'09"	29.21	58.35
(5)	1988.50	2°53'27"	50.17	100.32
(6)	500.00	6°23'06"	27.89	55.72
(7)	1676.61	30°36'10"	458.71	895.51
(8)	2952.17	24°10'49"	632.36	1245.89
(9)	2725.50	25°13'01"	609.64	1199.54
(10)	35.00	91°54'37"	36.19	56.14

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

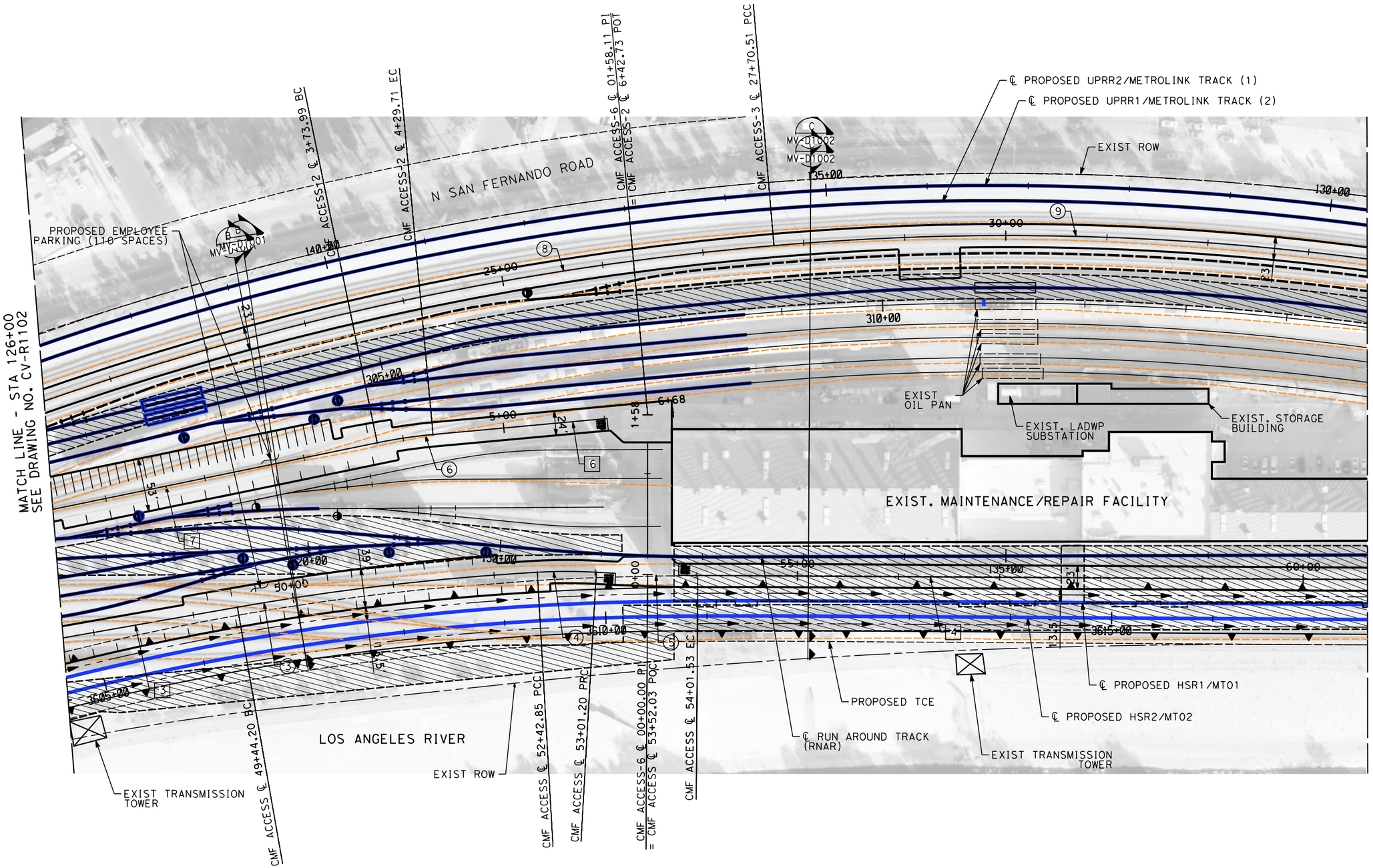
STV 100 Years
JACOBS
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
CMF
ROADWAY - SHEET 2 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-R1102
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:34:45 AM c:\jlp\pwworkdir\haynesma\d0138949\K2L-CV-R1102.dgn haynesma



NOTES:

1. FOR TRACK INFORMATION, SEE TRACK PLANS VOLUME 5
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS VOLUME 1
3. FOR BRIDGE INFORMATION, SEE BRIDGE PLANS VOLUME 2
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS VOLUME 5
5. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS VOLUME 5
6. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS VOLUME 4

LINE DATA

NO	BE-RING	DIST-NCE
1	S34°48'06"E	424.75'
2	S32°35'37"E	175.83'
3	S 15°44'59" E	190.62'
4	S 5°23'21" E	1501.30
5	S 83°37'40" E	80.21
6	S 17°22'48" E	373.99
7	S 10°59'42" E	238.22
8	N 76°38'14" E	225.41
9	N 55°11'54" E	179.55'
10	S 34°48'31" E	629.12
11	S 14°35'19" W	331.04
12	S 77°19'18" E	47.69

CURVE DATA

NO	R	Δ	T	L
1	5011.50'	2°12'29"	96.58'	193.13'
2	1111.50'	16°50'38"	164.57'	326.76'
3	2548.00'	6°42'56"	149.50	298.65
4	511.50	6°32'09"	29.21	58.35
5	1988.50	2°53'27"	50.17	100.32
6	500.00	6°23'06"	27.89	55.72
7	1676.61	30°36'10"	458.71	895.51
8	2952.17	24°10'49"	632.36	1245.89
9	2725.50	25°13'01"	609.64	1199.54
10	35.00	91°54'37"	36.19	56.14

50 0 50 100
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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT BURBANK TO LOS ANGELES

PEPD
CMF
ROADWAY - SHEET 3 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-R1103
SCALE AS SHOWN
SHEET NO.

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haynesma

NOTES:

1. FOR TRACK INFORMATION, SEE TRACK PLANS VOLUME 5
2. FOR RIGHT-OF-WAY INFORMATION, SEE RIGHT-OF-WAY PLANS VOLUME 1
3. FOR BRIDGE INFORMATION, SEE BRIDGE PLANS VOLUME 2
4. FOR UTILITY INFORMATION, SEE UTILITY PLANS VOLUME 5
5. FOR DRAINAGE INFORMATION, SEE DRAINAGE PLANS VOLUME 5
6. FOR SYSTEM INFORMATION, SEE SYSTEM PLANS VOLUME 4

LINE DATA

NO	BEARING	DISTANCE
1	S34°48'06"E	424.75'
2	S32°35'37"E	175.83'
3	S 15°44'59" E	190.62'
4	S 5°23'21" E	1501.30
5	S 83°37'40" E	80.21
6	S 17°22'48" E	373.99
7	S 10°59'42" E	238.22
8	N 76°38'14" E	225.41
9	N 55°11'54" E	179.55'
10	S 34°48'31" E	629.12
11	S 14°35'19" W	331.04
12	S 77°19'18" E	47.69

CURVE DATA

NO	R	Δ	T	L
1	5011.50'	2°12'29"	96.58'	193.13'
2	1111.50'	16°50'38"	164.57'	326.76'
3	2548.00'	6°42'56"	149.50	298.65
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6	500.00	6°23'06"	27.89	55.72
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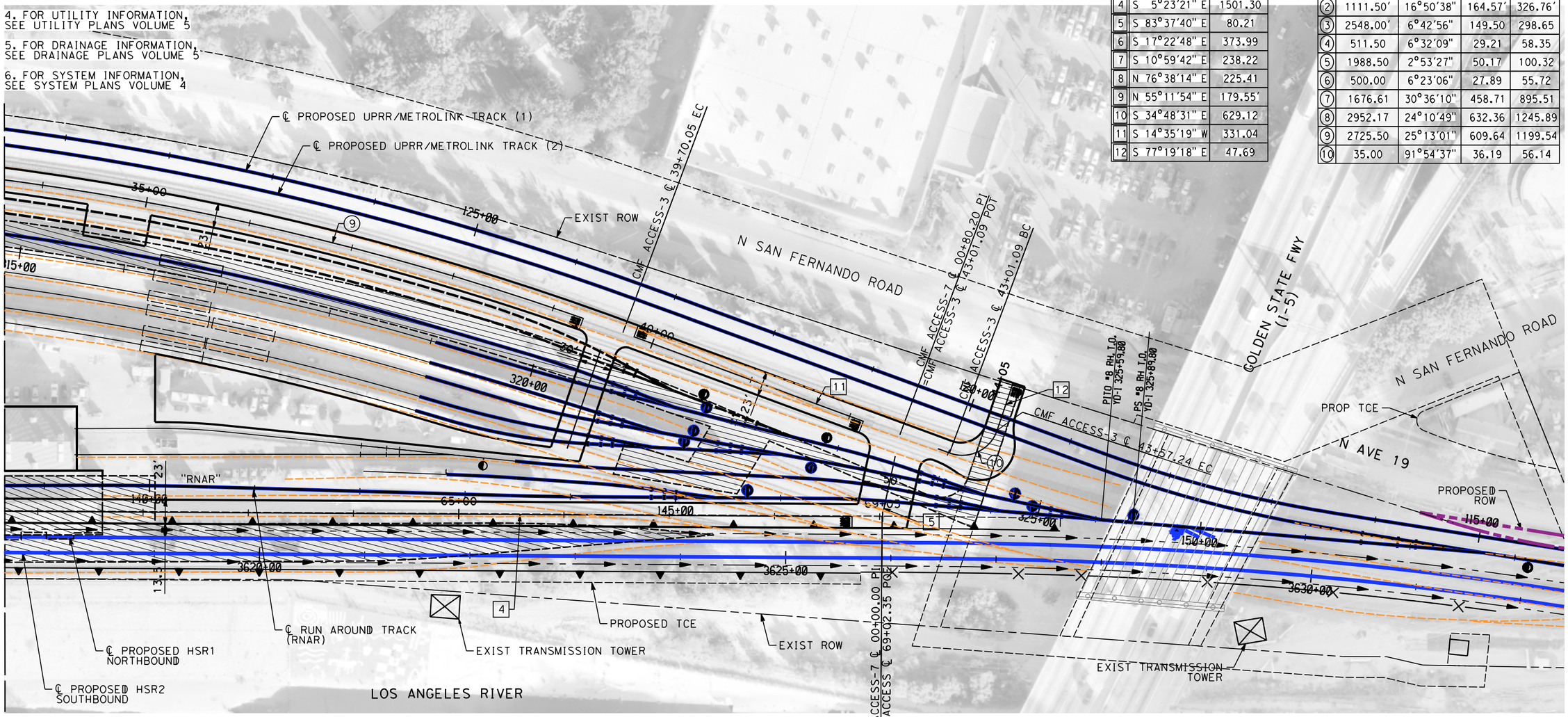

50 0 50 100
1"=50'
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. LEE
DRAWN BY C. LEE
CHECKED BY K. PIRBAZARI
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET
NOT FOR CONSTRUCTION

STV 100 Years
JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
CMF
ROADWAY - SHEET 4 OF 4

CONTRACT NO. HSR14-39
DRAWING NO. CV-R1104
SCALE AS SHOWN
SHEET NO.

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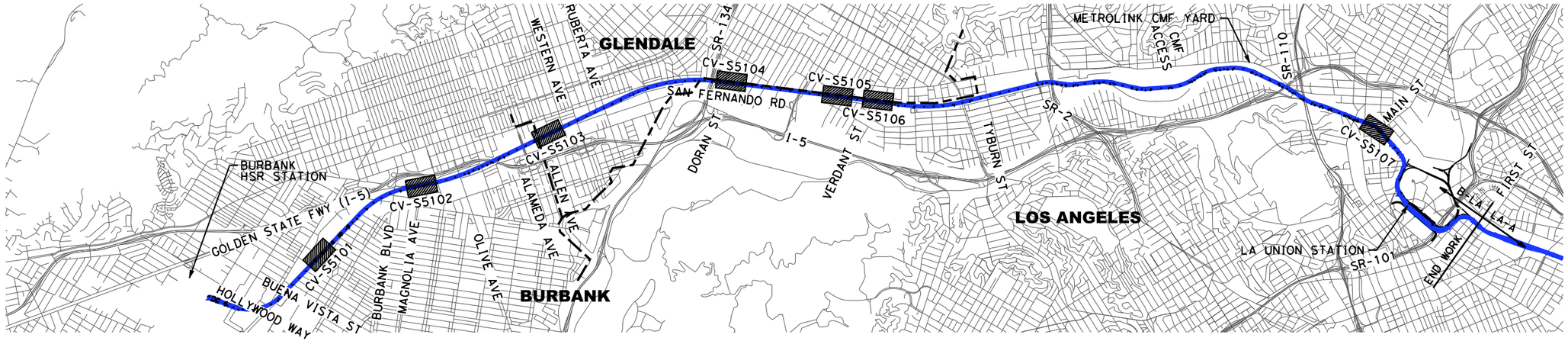
haynesma



VEHICLE TRACK ACCESS LOCATIONS		
STREET POINT OF ENTRY	HSR STATION	DRAWING NO.
BUENA VISTA ST / LINCOLN ST	3095+01	CV-S5101
UPRR WYE TRACKS	3161+20	CV-S5102
ALLEN AVE	3224+00	CV-S5103
DORAN ST	3325+00	CV-S5104
GOODWIN AVE	3387+00	CV-S5105
VERDANT ST	3412+60	CV-S5106
MAIN ST	3683+00	CV-S5107

3,000 0 3,000 6,000

1"=3,000'

SCALE APPLICABLE FOR FULL SIZE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION
REV					

DESIGNED BY J. FELIX
DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
LOCATION PLAN

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5100
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:35:48 AM c:\jlp\pwworkdir\haynesma\d0138949\K2L-CV-S5100.dgn haynesma

CONSTRUCT MAINTENANCE DRIVEWAY
PER APWA STANDARD PLAN 110-2, TYPE A
CONSTRUCT 16' GATE PER METROLINK ES-5106

INSTALL NO
TRESSPASSING SIGN

PROPOSED ROW

℄ PROPOSED METROLINK (VE02)

℄ PROPOSED METROLINK (VE01)

℄ PROPOSED HSR1

℄ PROPOSED HSR2

CONSTRUCT MAINTENANCE DRIVEWAY
PER APWA STANDARD PLAN 110-2, TYPE A
CONSTRUCT 16' GATE PER METROLINK ES-5106

INSTALL NO
TRESSPASSING SIGN

PROPOSED PARKING LOT

EXIST ROW

PROPOSED TCE

3090+00

3095+00

3100+00

N BUENA VISTA ST

N BRIGHTON ST

PROPOSED ROW

PROPOSED TCE

PROPOSED TCE

CITY OF BURBANK
WATER AND POWER
SUBSTATION

N LINCOLN ST

W PACIFIC AVE

N MYERS ST

NO
DUMPING
TRESPASSING

NO
TRESPASSING
SIGN

50 0 50 100
1"=50' HOR
SCALE APPLICABLE FOR FULL SIZE ONLY

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. FELIX
DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR
CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
BUENA VISTA ST / LINCOLN ST HSR STA 3095+01

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5101
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:36:31 AM c:\jlp\pwworkdir\haynesma\d0138949\k2L-CV-S5101.dgn
haynesma

GOLDEN STATE FREEWAY (I-5)

MAGNOLIA BLVD

INSTALL NO TRESSPASSING SIGN

CONSTRUCT MAINTENANCE DRIVEWAY
PER APWA STANDARD PLAN 110-2, TYPE A
CONSTRUCT 16' GATE PER METROLINK ES-5106

FRONT ST

EXIST ROW

℄ PROPOSED HSR1

℄ PROPOSED HSR2

EXIST ROW

PROPOSED ROW

3155+00
24+84

3160+00
20+00

3165+00
15+00

10+00

20' ACCESS ROAD

PROPOSED ROW

PROPOSED ROW

PROPOSED ROW

PROPOSED COMMUNICATION TOWER
SEE VOL.4 SEE DWG CO-F4001

PROPOSED ROW

PROPOSED ROW

PROPOSED ROW

PROPOSED ROW

PROPOSED TCE

PROPOSED TCE

VARNEY ST

NO
DUMPING
TRESPASSING

NO
TRESPASSING
SIGN

50 0 50 100
1"=50' HOR
SCALE APPLICABLE FOR FULL SIZE ONLY

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REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR
CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
UPRR WYE TRACKS HSR STA 3161+20

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5102
SCALE AS SHOWN
SHEET NO.

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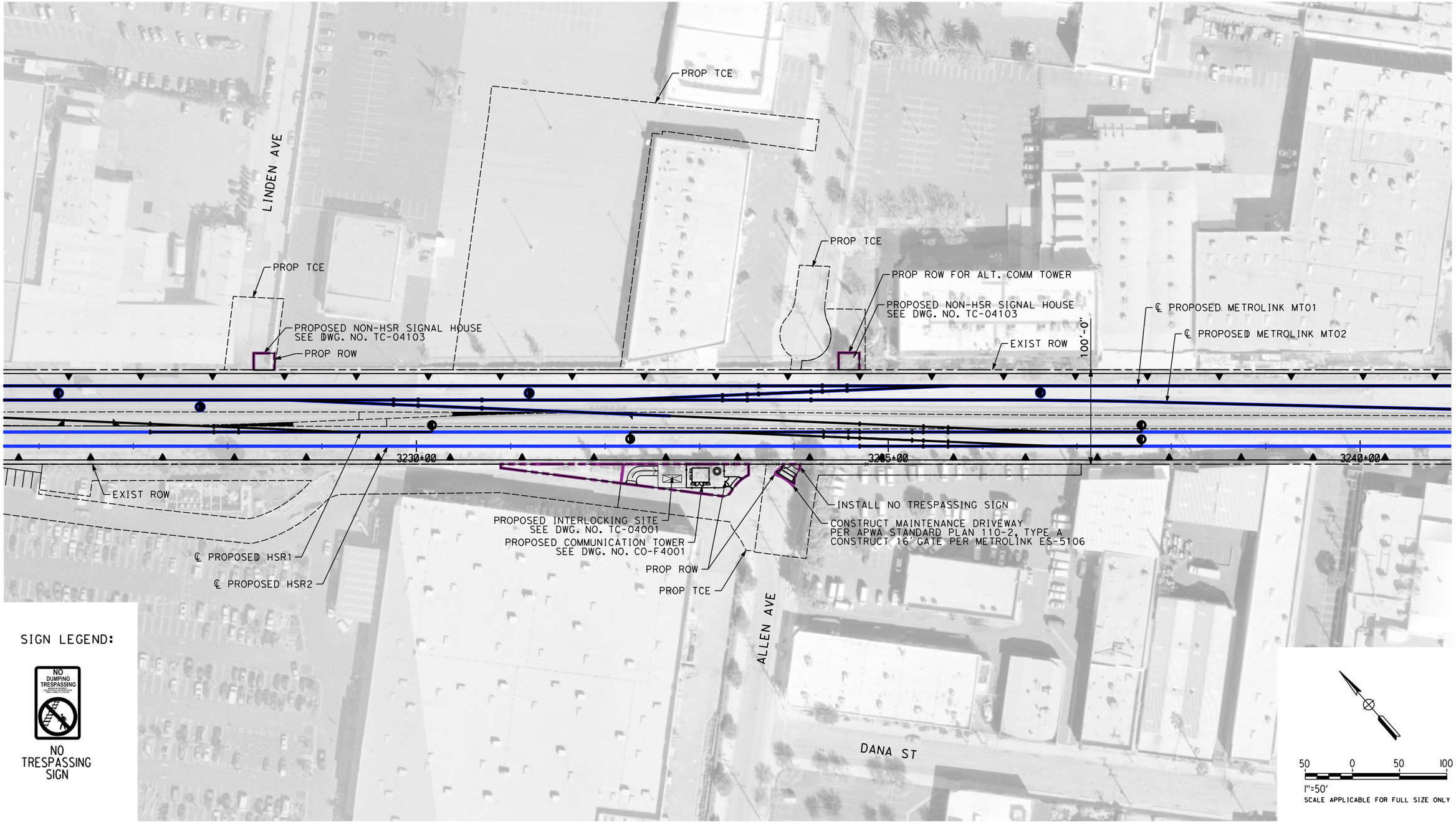
haynesma



SIGN LEGEND:

NO TRESPASSING SIGN

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. FELIX
DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
ALLEN AVE HSR STA 3224+00

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5103
SCALE AS SHOWN
SHEET NO.

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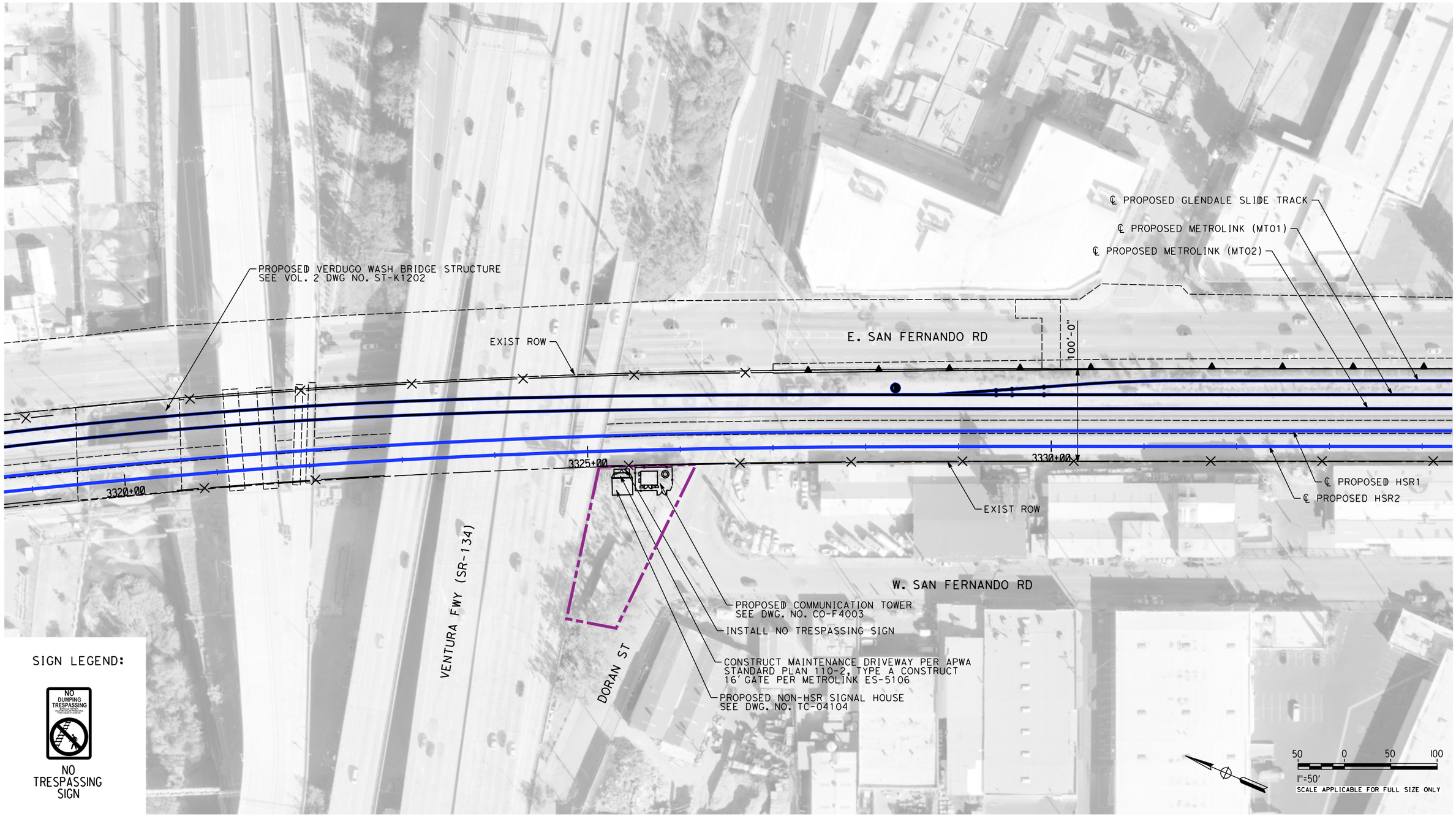

SIGN LEGEND:

NO TRESPASSING SIGN

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
DORAN ST HSR STA 3325+00

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5104
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:38:35 AM c:\jlp\pwworkdir\haynesma\d0138949\k2L_CV-S5104.dgn
haynesma

PROP ROW

REMOVE EXIST ACCESS INFRASTRUCTURE

INSTALL NO TRESPASSING SIGN

CONSTRUCT 16' GATE PER METROLINK ES-5106

PROP TCE

SAN FERNANDO RD

EXIST ROW

℄ PROPOSED GLENDALE SLIDE TRACK

℄ PROPOSED METROLINK (MT01)

℄ PROPOSED METROLINK (MT02)

100'-0"

LOS ANGELES ST

3385+00

3390+00

3395+00

W. SAN FERNANDO RD

PROP ROW

℄ PROPOSED HSR1

℄ PROPOSED HSR2

PROPOSED GOODWIN AVE BRIDGE STRUCTURE
SEE VOL. 3 DWG NO. ST-K1111

REMOVE EXIST MAINTENANCE DRIVEWAY AND GATE

INSTALL NO TRESPASSING SIGN

CONSTRUCT MAINTENANCE DRIVEWAY PER APWA STANDARD PLAN 110-2, TYPE A CONSTRUCT 16' GATE PER METROLINK ES-5106

EXIST ROW

PROPOSED SAN FERNANDO RD GRADE SEPARATION
SEE VOL. 3 DWG NO. CV-T1112

PROPOSED INTERLOCKING SITE
SEE DWG. NO. TC-F4002

ALGER ST

PROPOSED ALGER STREET BRIDGE STRUCTURE
SEE VOL. 3 DWG NO. ST-K1112

GOODWIN AVE

50 0 50 100

1"=50'

SCALE APPLICABLE FOR FULL SIZE ONLY

SIGN LEGEND:

NO TRESPASSING SIGN

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. FELIX
DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
GOODWIN AVE HSR STA 3387+00

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5105
SCALE AS SHOWN
SHEET NO.

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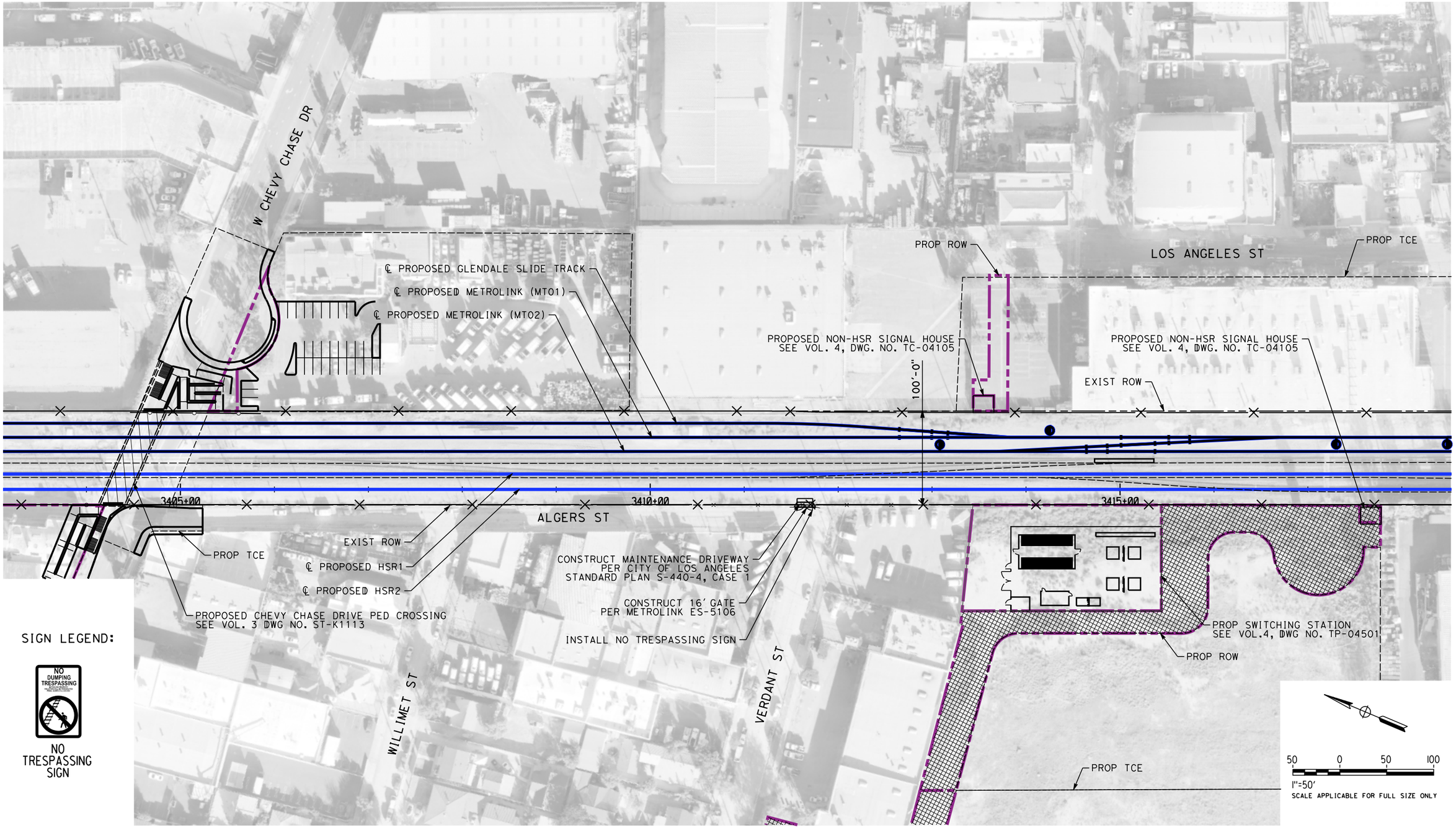

SIGN LEGEND:

NO TRESPASSING SIGN

NOT FOR CONSTRUCTION
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REV	RDATE	BY	CHK	APP	REV_DESC
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. FELIX
DRAWN BY J. FELIX
CHECKED BY C. LEE
IN CHARGE K. PIRBAZARI
DATE 04/30/2019

PEPD RECORD SET

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STV 100 Years

JACOBS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
VERDANT ST HSR STA 3412+60

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5106
SCALE AS SHOWN
SHEET NO.

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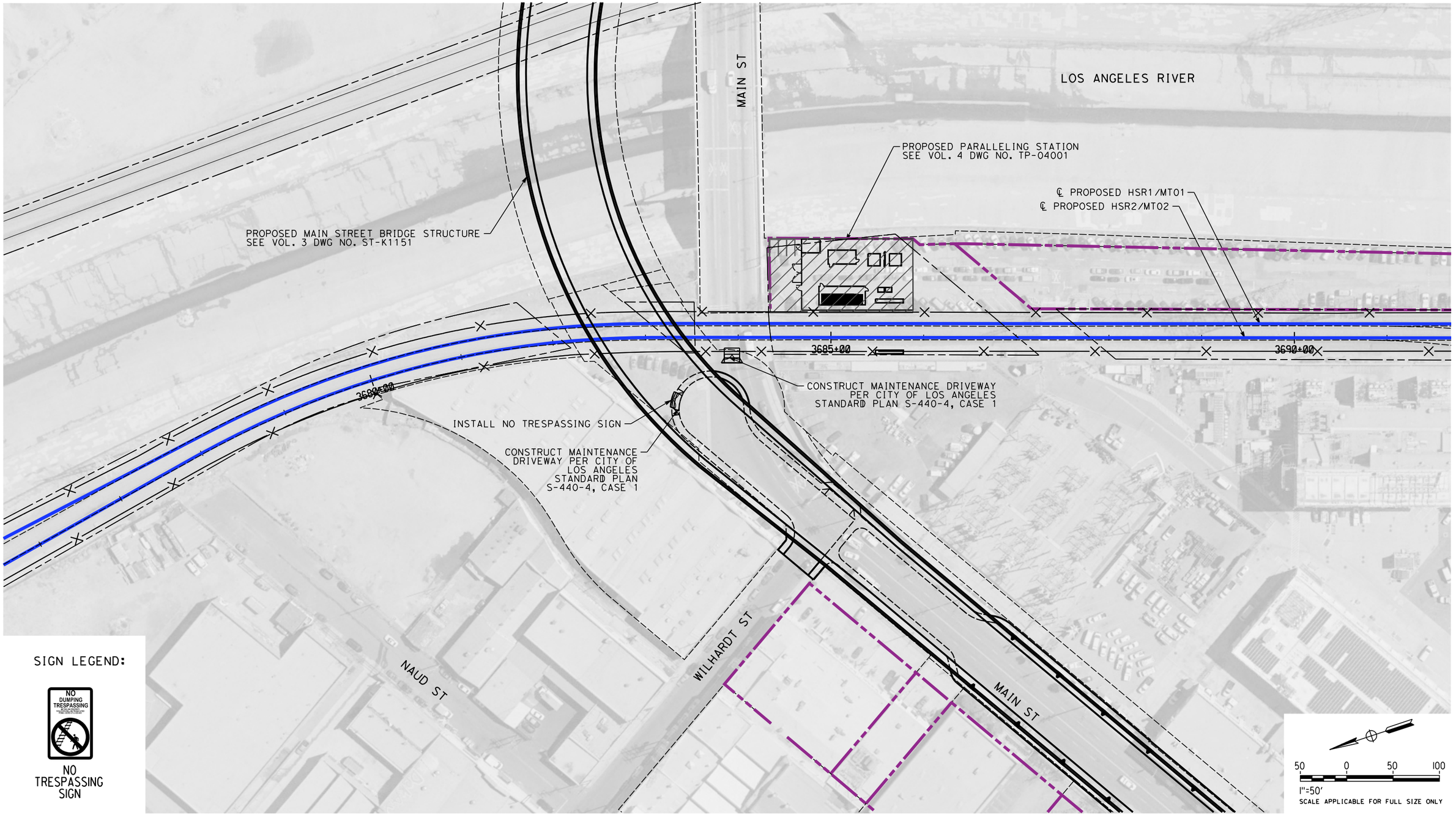
haynesma



SIGN LEGEND:

NO TRESPASSING SIGN

50 0 50 100

1"=50'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: J. FELIX
DRAWN BY: J. FELIX
CHECKED BY: C. LEE
IN CHARGE: K. PIRBAZARI
DATE: 04/30/2019

PEPD
RECORD SET

NOT FOR CONSTRUCTION

STV 100 Years

JACOBS

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
BURBANK TO LOS ANGELES

PEPD
VEHICLE TRACK ACCESS
MAIN ST HSR STA 3683+00

CONTRACT NO. HSR14-39
DRAWING NO. CV-S5107
SCALE AS SHOWN
SHEET NO.

4/30/2019 10:40:39 AM c:\jlp\pwworkdir\haynesma\d0138949\K2L-CV-S5107.dgn
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