DRAWING ABBREVIATIONS

&	AND
#	NUMBER
@	AT
AAR	ASSOCIATION OF AMERICAN RAILROADS
ABV	ABOVE
ACHW	AUTOMATIC HIGHWAY CROSSING WARNING
ACR	ACCESS CARD READER
ACS	ACCESS CONTROL SYSTEM
ACU	AIR CONDITIONING UNIT
ADD'L, ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AHD	AHEAD
AI	ANALOG OUTPUT
ANS	AMBIENT NOISE SENSOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AO	ANALOG INPUT, AUDIO OVERLAY TRACK CIRCUIT
AP	ANCHOR PLATE
APPROX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURE
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AWG	AMERICAN WIRE GAUGE
BA	BATTERY / BRACKET ASSEMBLY
BB	BLOCK BOUNDARY
B/B	BACK TO BACK
BCR	BICYCLE CARD READER
BD	BYPASS DAMPER
BDA	BI-DIRECTIONAL AMPLIFIER
BDC	BACKUP DATA CENTER
BRKR	BREAKER
BLDG, BLD	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BWA	BALANCE WEIGHT ANCHOR TERMINATION
C	CONDUIT, CLOSE
CAB	CABINET
CA	CLEAN AGENT SYSTEM
CAM	CAMERA
CANT	CANTILEVER
CAT	CATENARY
CAT6	CATEGORY 6
CB	CIRCUIT BREAKER, CATCH BASIN
CC	CONTACT CLOSURE, CROSS CONTACT
CCER	CENTRAL COMMUNICATIONS EQUIPMENT ROOM
CCTV	CLOSED CIRCUIT TELEVISION
CDF	CONTROLLED DENSITY FILL
CEB	COMMUNICATIONS EQUIPMENT BUS
CGB	COMMUNICATIONS GROUND BUS
CKT, CRKT	CIRCUIT
CL	CENTERLINE
CL	CLASS
CLR	CLEARANCE, CLEAR
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUATION, CONTINUOUS
CONTR	CONTRACTOR
CP	CROSS PASSAGE
CR	CONDUIT RISER, CONDUCTOR RAIL, COMMUNICATIONS ROOM
CT	CURRENT TRANSFORMER
CTRL	CONTROL
CU	COMPRESSOR UNIT
CW OR C/W	CONTACT WIRE
CWA	COUNTERWEIGHT ANCHOR
D	DEPTH, DIAMETER
DAS	DISTRIBUTED ANTENNA SYSTEM
DBM	DECIBEL MILLIWATT
DC	DIRECT CURRENT, DISTRIBUTION CABINET
DCAM	DISTRIBUTION CONTROL, AUTOMATION AND MONITORING
DCM	DESIGN CRITERIA MANUAL
DCPS	DISTRIBUTION CABINET POWER SUPPLY, DC POWER SYSTEM
DDC	DIRECT DIGITAL CONTROLLER
DEG	DEGREE
DEPT	DEPARTMENT
DGA	DOWN GUY ANCHOR
DI	DIGITAL INPUT
DIA	DIAMETER
DID	DOOR INTRUSION DETECTOR
DIM	DIMENSION (DIM)
DIST	DISCONNECT SWITCH DISTANCE
DISTR	DISTRIBUTION
DL	DOWN LINK
DO	DIGITAL OUTPUT
DOC	DEGREE OF CURVATURE
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DS	DISCONNECT SYSTEM
DSP	DIGITAL SIGNAL PROCESSOR
DSTT	DOWNTOWN SEATTLE TRANSIT TUNNEL
DWG	DRAWING
E	EAST
EA	EACH
EB	EAST BOUND
EFAN	EMERGENCY FAN
EFN	EMERGENCY FIRE/LIFE NETWORK
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMI	ELECTROMAGNETIC INTERFERENCE
EMP	EMERGENCY MANAGEMENT PANEL
ENBW	EQUIVALENT NOISE BAND WIDTH
EOP	EDGE OF PAVEMENT
EPR	ETHYLENE PROPYLENE RUBBER
EQ	EQUAL
EQPT, EQUIP	EQUIPMENT
ERM	EMERGENCY RESPONSE MATRIX
ESC, ES	ESCALATOR
ETH	ETHERNET SWITCH
ETS	EMERGENCY TRIP STATION
ETEL	EMERGENCY TELEPHONE
EVCP	EMERG VENTILATION CONTROL PANEL
EVS	EMERG VENTILATION SYSTEM
F	FAHRENHEIT
FA	FIXED TERMINATION ANCHOR
FACP	FIRE ALARM CONTROL PANEL
FCC	FIRE CONTROL CENTER
FCR	FIRE CONTROL ROOM
FDC	FIBER DISTRIBUTION CABINET
FDN	FOUNDATION
FDP	FIBER DISTRIBUTION PANEL
FG	FINISH GRADE
FJ	FEEDER JUMPER
FMS	FACILITY MANAGEMENT SYSTEM
F/O, FO	FIBER OPTIC
FPP	FIBER PATCH PANEL
FRE	FIBERGLASS REINFORCED EPOXY
FT	FEET, FOOT
GALV	GALVANIZED
GEISYS	EXISTING PUBLIC ADDRESS SYSTEM APPLICATION SOFTWARE
GND, G	GROUND
GRL	GRILLE
GRS	GALVANIZED RIGID STEEL
GRSC	GALVANIZED RIGID STEEL CONDUIT
GRX	GRADE CROSSING
H	HEIGHT, TRACTION POWER 1500V DC BREAKER SWITCH
HD	HARD DRAWN, HEAT DEFLECTOR
HDMI	HIGH DEFINITION MULTIMEDIA INTERFACE
HEX	HEXAGONAL
HGS	HYDROGEN GAS SENSOR
HH	HANDHOLE
HMI	HUMAN MACHINE INTERFACE
HT	HEIGHT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HZ	HERTZ
I	INTERLOCK
ICC	INTEGRATED COMMUNICATIONS CONTROLLER
ID	INSIDE DIAMETER, IDENTIFICATION
IDS	INTERNATIONAL DISTRICT STATION
IED	INTELLIGENT ELECTRONIC DEVICE
IJ	INSULATED JOINT
IN	INCH, INCHES
INST	INSTANTANEOUS
INSUL	INSULATION
I/O	INPUT AND OUTPUT
IP	INTERNET PROTOCOL
IPTV	TELEVISION VIDEO OVER INTERNET PROTOCOL
I/R OR IR	IN-RUNNING (RIDING CONTACT WIRE)
ITAC	800 MHZ RADIO SYSTEM STANDARD
ITC	INTERFACE TERMINAL CABINET
JB, J BOX	JUNCTION BOX
K	KIPS (THOUSAND POUNDS), LIGHTING KEY SWITCH
KA	KILOAMPERE
KCMIL	THOUSAND CIRCULAR MILS
KSI	KIPS PER SQUARE INCH
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVM	KEY VIDEO MOUSE
KW	KILOWATT
KWH	KILOWATT HOUR
LB	POUND, POUNDS
LB/FT	POUNDS PER FOOT
LCC	LINK CONTROL CENTER
LCD	LIQUID CRYSTAL DISPLAY
LCP	LOCAL CONTROL PANEL, LIGHTING CONTROL PANEL
LCMS	LOCAL CENTRALIZED MONITORING SYSTEM
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LG	LONG, LENGTH
LRV	LIGHT RAIL VEHICLE
LSZH	LOW SMOKE ZERO HALOGEN
LV	LOW VOLTAGE
M	METER
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
M/L	MAIN LINE
MNS	MASS NOTIFICATION SYSTEM
MON(S)	MONUMENT(S), CARBON MONOXIDE DETECTOR
MP	MIDPOINT
MPA	MID-POINT ANCHOR
MPH	MILES PER HOUR
MSG	MESSAGE
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE, MILLIVOLT
MW OR M/W	MEGAWATT, MESSENGER WIRE
N	NORTH, NEUTRAL
NA, N/A	NOT APPLICABLE
NB	NORTH BOUND
NC	NORMALLY CLOSED
NE	NORTHEAST
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NESC	NATIONAL ELECTRICAL SAFETY CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER NON-OPERATING
No, #	NOMINAL
NOM	NOMINAL
NR	NOT REGISTERED
NTS	NOT TO SCALE
NVR	NETWORK VIDEO RECORDER
NW	NORTHWEST
O	OPERATING
OC	ON CENTER
OCC	OPERATIONS CONTROL CENTER
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OH	OVERHEAD, OTHER HAND
O/L	OVERLAP
OMF	OPERATIONS & MAINTENANCE FACILITY
O/R, OOR	OUT-OF-RUNNING (NON-RIDING CONTACT WIRE)
OST	OVER SWITCH TRACK CIRCUIT
P	POLE
PA	PUBLIC ADDRESS
PADC	PUBLIC ADDRESS DISTR CABINET (REMOTE AMPLIFIER RACK)
PAN	PANTOGRAPH
PASCU	PUBLIC ADDRESS STATION CONTROL UNIT
PB	PULLBOX, PUSHBUTTON
PBX	PRIVATE BRANCH EXCHANGE TELEPHONE
PC	CHANGE FROM TANGENT TO CIRCULAR CURVE
PET	PASSENGER EMERGENCY TELEPHONE
PF	POINT OF FROG/PLASTIC OPTICAL FIBER
PGRS	PVC COATED GRS
PI	POINT OF INTERSECTION OF TWO TANGENTS (CIRCULAR CURVE)
PL	PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
POB	POINT OF BEGINNING
POE	POINT OF ENDING, POWER OVER ETHERNET
POS	POSITIVE
PROJ	PROJECTION
PS	POINT OF SWITCH, POWER SUPPLY
PSE	PUGET SOUND ENERGY
PSI	POUNDS PER SQUARE INCH
PT	POINT OF CHANGE FROM CIRCULAR CURVE TO TANGENT, POTENTIAL TRANSFORMER
PTZ	PAN TILT ZOOM
PVC, PVCC	POLYVINYL CHLORIDE PIPE, DUCT
PWR	POWER
QTY	QUANTITY
R	RADIUS, RESISTANCE, RELAY, RECEIVE
RB/RN	RECEIVE BATTERY / RECEIVE NEGATIVE
REF	REFERENCE
REINF	REINFORCE, REINFORCING, REINFORCEMENT
REQ, REQD	REQUIRED
REV	REVISE, REVISION, REVERSIBLE
RF	RADIO FREQUENCY
RH	RIGHT HAND
RM	ROOM
ROW, RW	RIGHT-OF-WAY
RR	RAILROAD
RS	RS232 (SERIAL CONNECTION)
RS-485	REGIMENTED STANDARD 485
RX	RECEIVE
S	SOUTH, STATUS
SA	SURGE ARRESTER, SOUND ATTENUATER
SB	SOUTH BOUND
SC	SIGNAL/COMMUNICATION, SUPERVISORY CONTROL
SCADA	SUPERVISORY CONTROL & DATA ACQUISITION
SCAT	SIMPLE CATENARY AUTO-TENSION
SCH	SCHEDULE
SCL	SEATTLE CITY LIGHT
SCU	SYSTEM CONTROL UNIT
SE	SOUTHEAST
SEC	SECOND, SECURITY
SECT	SECTION
SFD	SEATTLE FIRE DEPARTMENT
SI	SECTION INSULATOR
SIG	SIGNAL
SP	SPRING ANCHOR TERMINATION, SUMP PUMP
SPEC	SPECIFICATION
SPU	SEATTLE PUBLIC UTILITIES
SQ	SQUARE
SQ FT, SF	SQUARE FEET
SQ IN	SQUARE INCHES
SS	STAINLESS STEEL
ST	TO TANGENT, STREET, SOUND TRANSIT
STA	STATION, STATIONING
STD	STANDARD
SW	SWITCH, SOUTHWEST, STAIRWELL
SWFT	SINGLE WIRE FIXED TERMINATION
SWGR	SWITCHGEAR
SYS	SYSTEM
T	TRANSMIT, TRIP, TERMINATION
TB	TERMINAL BLOCK
TBD	TO BE DETERMINED
TB/TN	TRANSMIT BATTERY / TRANSMIT NEGATIVE
TCN	TRAIN CONTROL NETWORK
TCS	TRAIN CONTROL SYSTEM
TE	TRACTION ELECTRIFICATION
TEMP	TEMPERATURE, TEMPORARY
TERM	TERMINAL, TERMINATION
TES	TRACTION ELECTRIFICATION SYSTEM
TGB	TELECOMMUNICATIONS GROUND BUS
THRU	THROUGH
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS
TMS	TERMINAL SERVER
TPSS	TRACTION POWER SUBSTATION
T/R, TOR	TOP OF RAIL
TR	TRACK RELAY
TRAC	TRACTION
TRK	TRACK
TS	TERMINAL STRIP
TVM	TICKET VENDING MACHINE
TWC	TRAIN TO WAYSIDE COMMUNICATION
TYP	TYPICAL
UG	UNDERGRADE, UNDERGROUND
ULINK	UNIVERSITY LINK
UL	UP LINK, UNDERWRITER LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USS, UNI	UNIVERSITY STREET STATION
UTP	UNSHIELDED TWISTED PAIR
UWS	UNIVERSITY OF WASHINGTON STATION
V	VOLT
VES	VOICE EVACUATION SYSTEM
VHLC	VITAL HARMON LOGIC CONTROLLER
VMS	VARIABLE MESSAGE SIGN
VOIP	VOICE OVER INTERNET PROTOCAL
W	WATT, WATER, WEST, WIDE, WIDTH, WIRE, AC AUXILIARY LOAD (TPSS)
WB	WEST BOUND
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE (BEAM)
WLS	WESTLAKE STATION
WS	WORK STATION
WSDOT	WASHINGTON STATE DEPT OF TRANSPORTATION
WT	WEIGHT, WARNING TIME
X2, X4	QUANTITY OF PAIRS MULTIPLIER
XFMR	TRANSFORMER
XHHW	CROSSED LINK HIGH HEAT WATER RESISTANT INSULATED WIRE
Y	YARD
YL	YARD LEAD
Z	IMPEDANCE

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

No.	DATE	DSN	CHK	APP	REVISION
2	08/2019				REVISED SYSTEMS DIRECTIVE DRAWINGS
1	01/2019				2019 GUIDANCE DRAWING REVISIONS - GENERAL UPDATE
0	08/2017				GUIDANCE DRAWINGS

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: N/A
FILENAME: JZN001
CONTRACT No.:
DATE: 1/2019

SOUND TRANSIT
DIRECTIVE DRAWING
SYSTEMS
ABBREVIATIONS

DRAWING No.: JZN001
FACILITY ID:
SHEET No.: 2 REV:

03/22/21 | 10:23 AM | PATTENB
T:_HQ_INTERNAL\EXHIBITS\DIRECTIVE-STANDARD_DRAWINGS\SYSTEMS\2021\DRAWINGS\JZN001.DWG

DIAGRAM SYMBOLS

NO
DISCONNECT SWITCH (NC) NORMALLY CLOSED, (NO) NORMALLY OPEN.
ALL SWITCHES NC UNLESS OTHERWISE SHOWN.

CIRCUIT BREAKER, ALL CIRCUIT BREAKERS NORMALLY CLOSED UNLESS OTHERWISE SHOWN.

LOAD BREAK SWITCH

POTENTIAL TRANSFORMER

CABLE POTHEAD / CABLE CONNECTOR

POWER TRANSFORMER

100/5
3
CURRENT TRANSFORMER
UPPER NUMBER DESIGNATES CURRENT RATIO
LOWER NUMBER DESIGNATES QUANTITY OF TRANSFORMER

52
WITHDRAWABLE, MV AC BREAKER

SURGE ARRESSTER

DIODE / 12 OR 6 PULSE TRACTION RECTIFIER OR TPSS

FUSE

REMOVABLE FUSE

SHUNT OR
TPSS BUS CONNECTION

72-#
WITHDRAWABLE DC CIRCUIT BREAKER
WITH SERIES TRIP

DIRECTION OF CONTROL OR
RELAY INFLUENCE LINE

RECTIFIER TRANSFORMER, 12 PULSE

BALANCE TRANSFORMER, INTERPHASE TRANSFORMER

DELTA TRANSFORMER WINDING CONNCECTION

WTY TRANSFORMER WINDING CONNECTION

OPEN DELTA CONNECTION

TEST SWITCH

OCS SECTION INSULATOR

I
INTERLOCK

LIGHT

EMERGENCY LIGHT

EXTERIOR LUMINAIRE

RECEPTACLE

DIAGRAM SYMBOLS

IMPEDANCE BOND

PAIR OF INSULATED JOINTS IN RAIL

PHASE

A
LCMS ANNUNCIATOR (PLC MONITOR SCREEN) AND SCADA

A
AMMETER

V
VOLTMETER

KWH
KILOWATT HOUR METER

KVAR
KILOVAR METER

KW
KILOWATT METER

SC
SCADA AND LCMS

DC
DCAM INTERFACE

ETS
EMERGENCY TRIP STATION

AT
CURRENT TRANSDUCER

SSS
SUBSTATION SHUTDOWN STATION

VT
VOLTAGE TRANSDUCER

E
ELECTRICAL INTERLOCK

K
MECHANICAL KEY INTERLOCK

ETS, SSS PUSH BUTTON

UTILITY GROUND CONNECTION

OCS INSULATED OVERLAP

R2G
RAIL VOLTAGE MONITORING AND GROUNDING SYSTEM

SD
SMOKE DETECTOR

HD
HEAT DETECTOR

GROUND

$ 3, M
3 WAY SWITCH

EQUIPMENT ENCLOSURE

INDICATES REMOVAL

50
RELAY OPERATING COIL. NUMBER
DESIGNATES DEVICE FUNCTION.

DEVICE FUNCTION NO.

5	EMERGENCY STOP PUSH BUTTON
23	FAN CONTROL
26R1	RECTIFIER OVERTEMP ALARM (1ST. STAGE)
26R2	RECTIFIER OVERTEMP TRIP (2ND. STAGE)
27	AC SUPPLY UNDERVOLTAGE RELAY
27A	DC FEEDER UNDERVOLTAGE RELAY
27B	LOSS OF AUXILARY DC VOLTAGE
27BH	LOSS OF AC INPUT TO AUXILARY POWER
27C	BATTERY UNDERVOLTAGE
32	REVERSE POWER RELAY
33N	NEGATIVE CUBICLE DOOR SWITCH
33R	RECTIFIER DOOR SWITCH
33T	TRANSFORMER DOOR SWITCH
47	PHASE SEQUENCE
49T1	TRANSFORMER OVERTEMP ALARM (1ST STAGE)
49T2	TRANFORMER OVERTEMP TRIP (2ND STAGE)
50/51	PHASE FAULT TIME OVERCURRENT RELAY (INT. AND TIME DELAY
50N/51N	GROUND FAULT TIME OVERCURRENT RELAY (INST. AND TIME DELAY)
52	AC CIRCUIT BREAKERS
59	OVER VOLTAGE RELAY
59X	125V DC CONTROL VOLTAGE SHORTED WITH 1500VDC
64G/H	DC STRUCTURE ENCLOSURE FAULT DETECTION TRIP AND MONITORING RELAY
64V	RAIL-TO-GROUND VOLTAGE RELAY
72	DC CIRCUIT BREAKERS
74	VISUAL ALARM
76	DC OVERCURRENT RELAY
82	LOAD MEASURING RELAY
83	RECLOSING RELAY
85RX	TRANSFER TRIP RELAY
85NX	TRANSFER TRIP RELAY (LOCKOUT)
86	AC LOCKOUT RELAY
86X	AC LOCKOUT AUXILARY RELAY
89	DISCONNECT SWITCH
186	DC LOCKOUT RELAY
186X	DC LOCKOUT AUXILARY RELAY
98-1	RECTIFIEW DIODE FAILURE ALARM
98-2	RECTIFIER DIODE FAILURE TRIP
150	DC RATE OF RISE AND OVERCURRENT RELAY

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

AHJ:

PRESCRIPTIVE

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

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PHILADELPHIA, PA 19103

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: OMFS-STD-JTN001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
TRACTION POWER SYSTEM
DIAGRAM SYMBOLS & DEVICE FUNCTION NUMBERS

DRAWING No.: STD-JTN001
FACILITY ID: STD
SHEET No.: REV: 0

02/23/24 | 8:24 AM | MSHEPPARD
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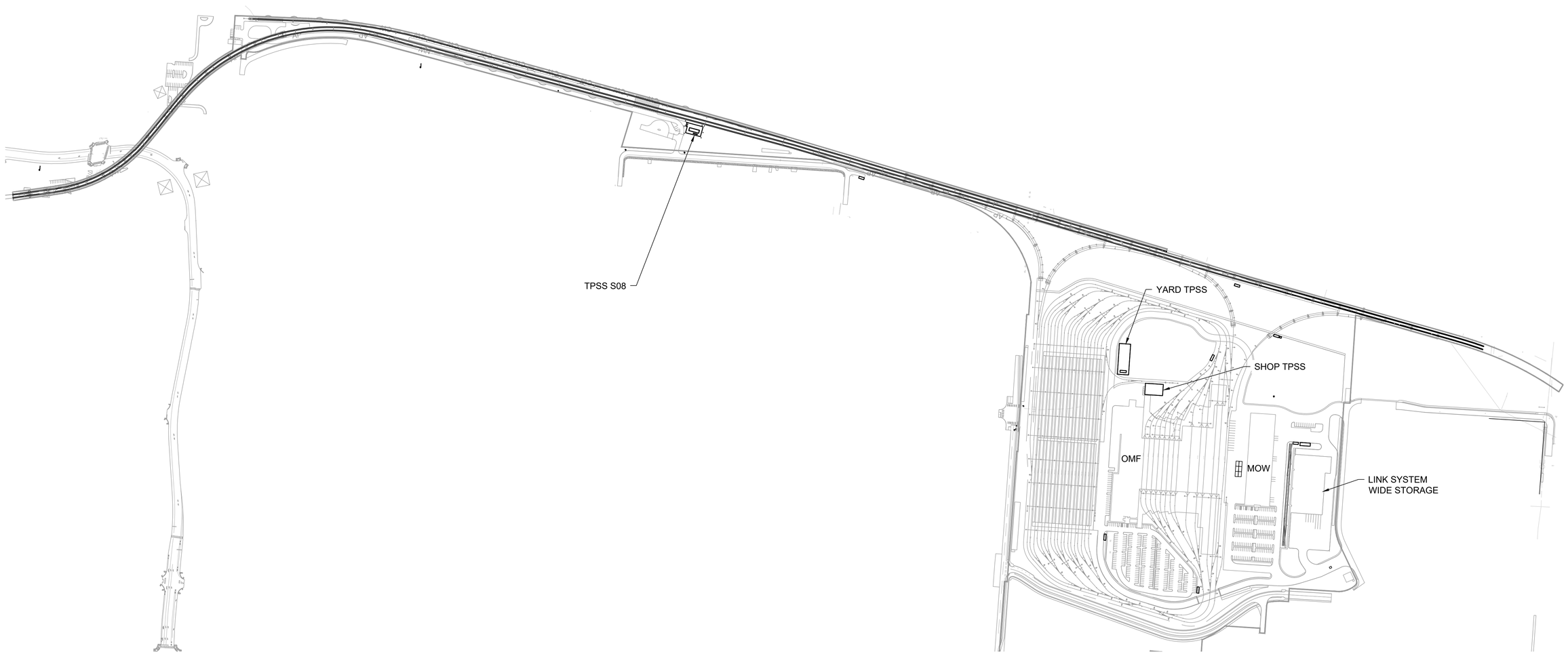

TRACTION POWER SYSTEM KEY- PLAN
NTS

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

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DRAWN BY: M. SHEPPARD
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LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

AHJ:

PACKAGE #

SCALE: NTS
FILENAME: OMFS-STD-JTK001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
KEY PLAN

DRAWING No.: STD-JTK001
FACILITY ID: STD
SHEET No.: REV: 0

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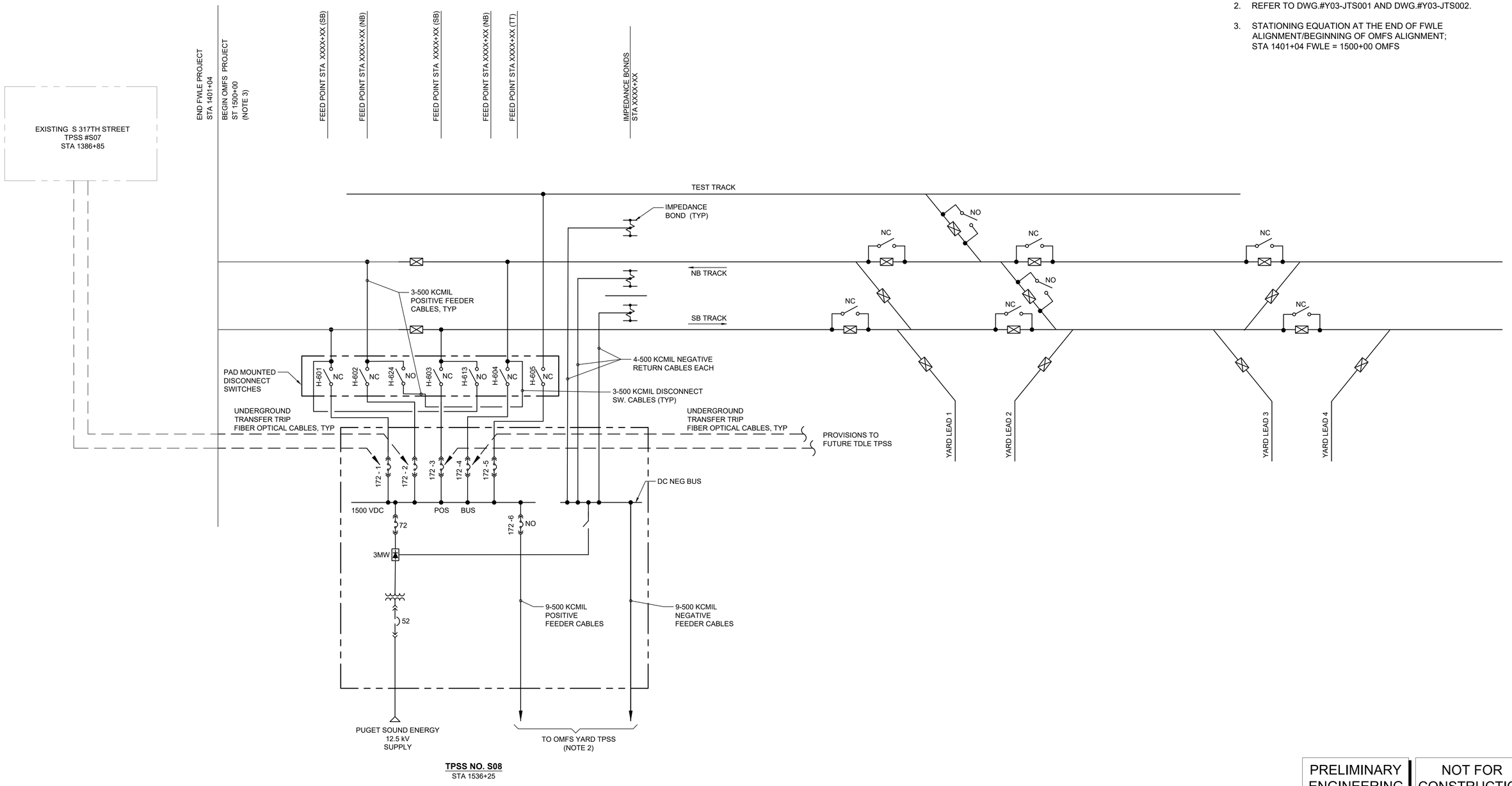
NOTES:

1. WAYSIDE DISCONNECT SWITCHES TO BE INTERLOCKED WITH CORRESPONDING FEEDER BREAKERS.
2. REFER TO DWG.#Y03-JTS001 AND DWG.#Y03-JTS002.
3. STATIONING EQUATION AT THE END OF FWLE ALIGNMENT/BEGINNING OF OMFS ALIGNMENT; STA 1401+04 FWLE = 1500+00 OMFS



TPSS NO. S08
STA 1536+25

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

AHJ:

PACKAGE #

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
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LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:
DATE:

SCALE: NTS
FILENAME: OMFS-S08-JTS001
CONTRACT No.: AE0030-17

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
TRACTION POWER SYSTEM
MAINLINE SINGLE LINE DIAGRAM

DRAWING No.: **S08-JTS001**
FACILITY ID: S08
SHEET No.:
REV: 0

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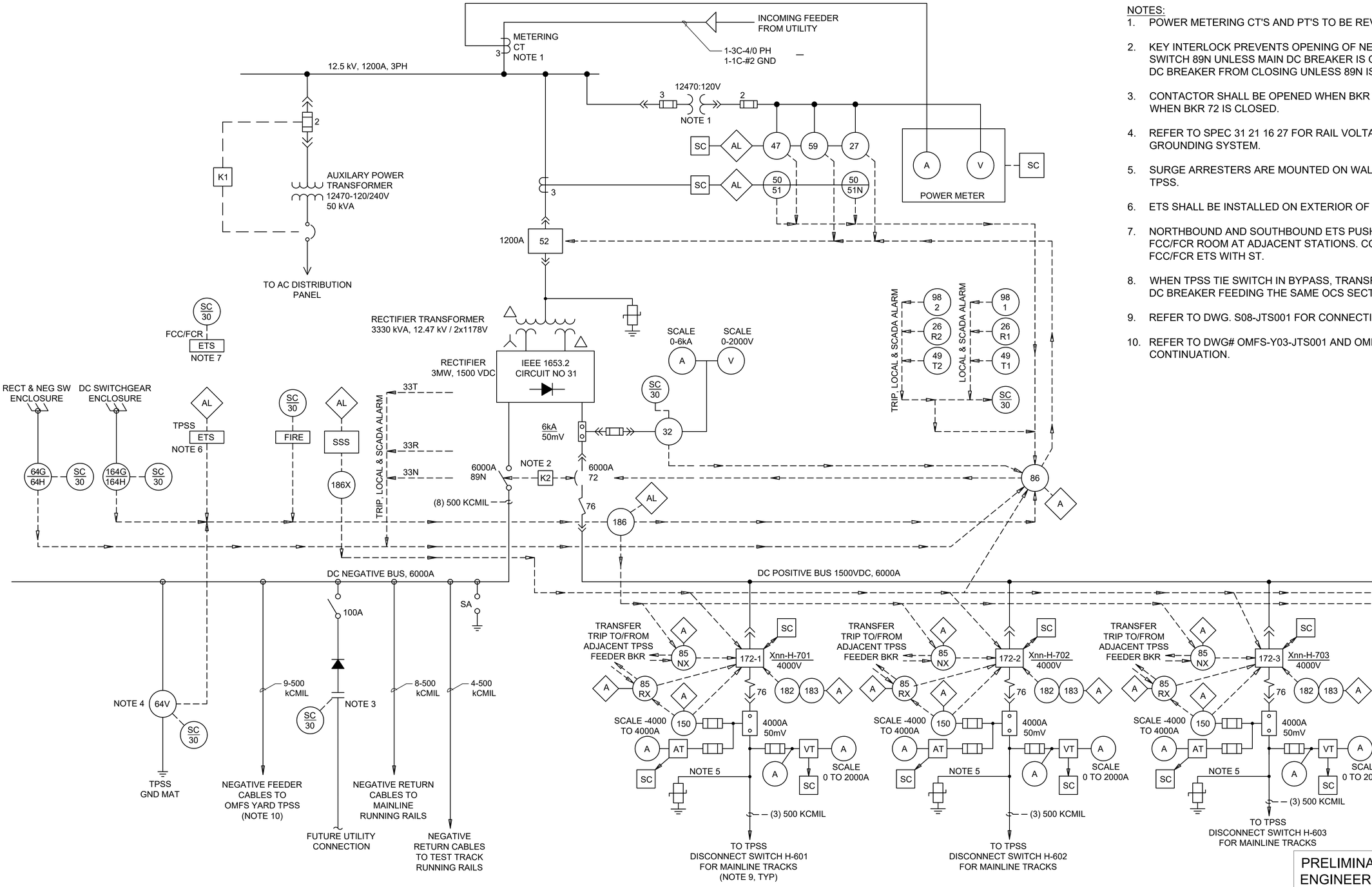

NOTES:

1. POWER METERING CT'S AND PT'S TO BE REVENUE ACCURACY.
2. KEY INTERLOCK PREVENTS OPENING OF NEGATIVE DISCONNECT SWITCH 89N UNLESS MAIN DC BREAKER IS OPEN AND PREVENTS MAIN DC BREAKER FROM CLOSING UNLESS 89N IS CLOSED.
3. CONTACTOR SHALL BE OPENED WHEN BKR 72 IS OPEN AND CLOSED WHEN BKR 72 IS CLOSED.
4. REFER TO SPEC 31 21 16 27 FOR RAIL VOLTAGE MONITORING AND GROUNDING SYSTEM.
5. SURGE ARRESTERS ARE MOUNTED ON WALL OF CABLE VAULT UNDER TPSS.
6. ETS SHALL BE INSTALLED ON EXTERIOR OF TPSS BUILDING.
7. NORTHBOUND AND SOUTHBOUND ETS PUSH BUTTONS ARE LOCATED IN FCC/FCR ROOM AT ADJACENT STATIONS. COORDINATE DESIGN OF FCC/FCR ETS WITH ST.
8. WHEN TPSS TIE SWITCH IN BYPASS, TRANSFER TRIP SIGNAL IS SENT TO DC BREAKER FEEDING THE SAME OCS SECTION FROM THE NEXT TPSS.
9. REFER TO DWG. S08-JTS001 FOR CONNECTION DETAILS.
10. REFER TO DWG# OMFS-Y03-JTS001 AND OMFS-Y03-JTS002 FOR CONTINUATION.

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
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LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER | DATE: 2/27/2024 | REVIEWED BY: | DATE:

SCALE: NTS
FILENAME: OMFS-S08-JTS002_003
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TPSS #S08 METERING & RELAYING
SINGLE LINE DIAGRAM (SHEET 1 OF 2)

DRAWING No.: S08-JTS002
FACILITY ID: S08
SHEET No.: REV: 0

02/23/24 | 8:29 AM | MSHEPPARD
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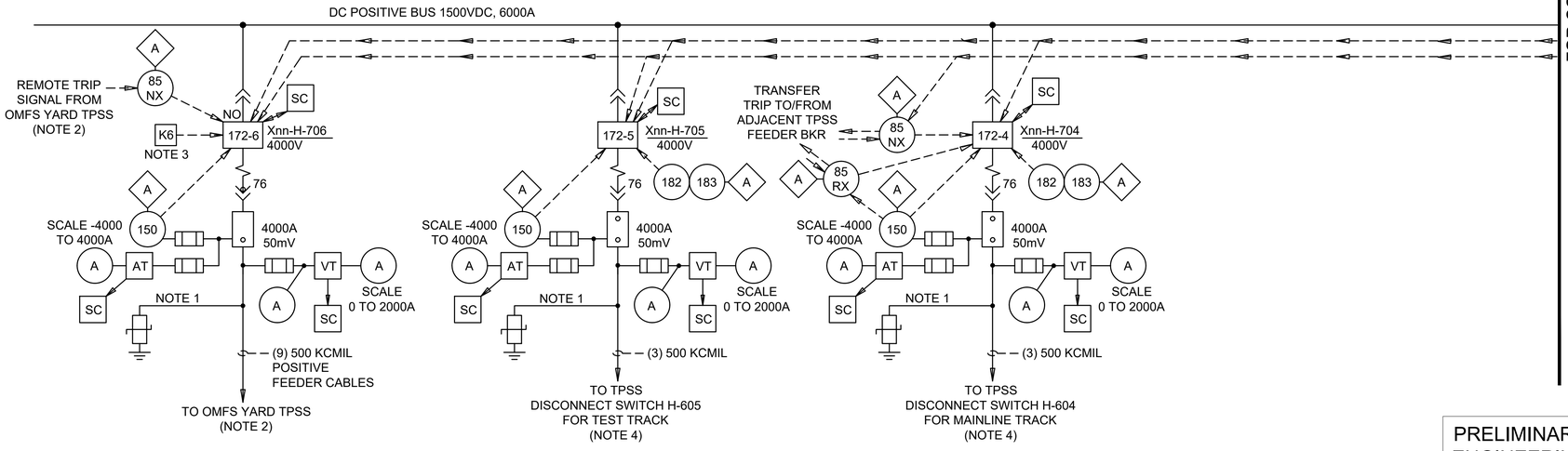
NOTES:

1. SURGE ARRESTERS ARE MOUNTED ON WALL OF CABLE VAULT UNDER TPSS.
2. REFER TO DWG. #OMFS-Y03-JTS001 AND OMFS-Y03-JTS002 FOR CONTINUATION.
3. DC BREAKER 172-6 SHALL BE KEY INTERLOCKED WITH OMFS YARD TPSS POSITIVE DISCONNECT SWITCH 89P. REFER TO DWGS. Y03-JTS001 AND Y03-JTS002.
4. REFER TO DWG. S08-JTS001 FOR CONNECTION DETAILS.



FOR CONTINUATION
SEE MATCHLINE 'B' DWG S08-JTS003

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PRESCRIPTIVE

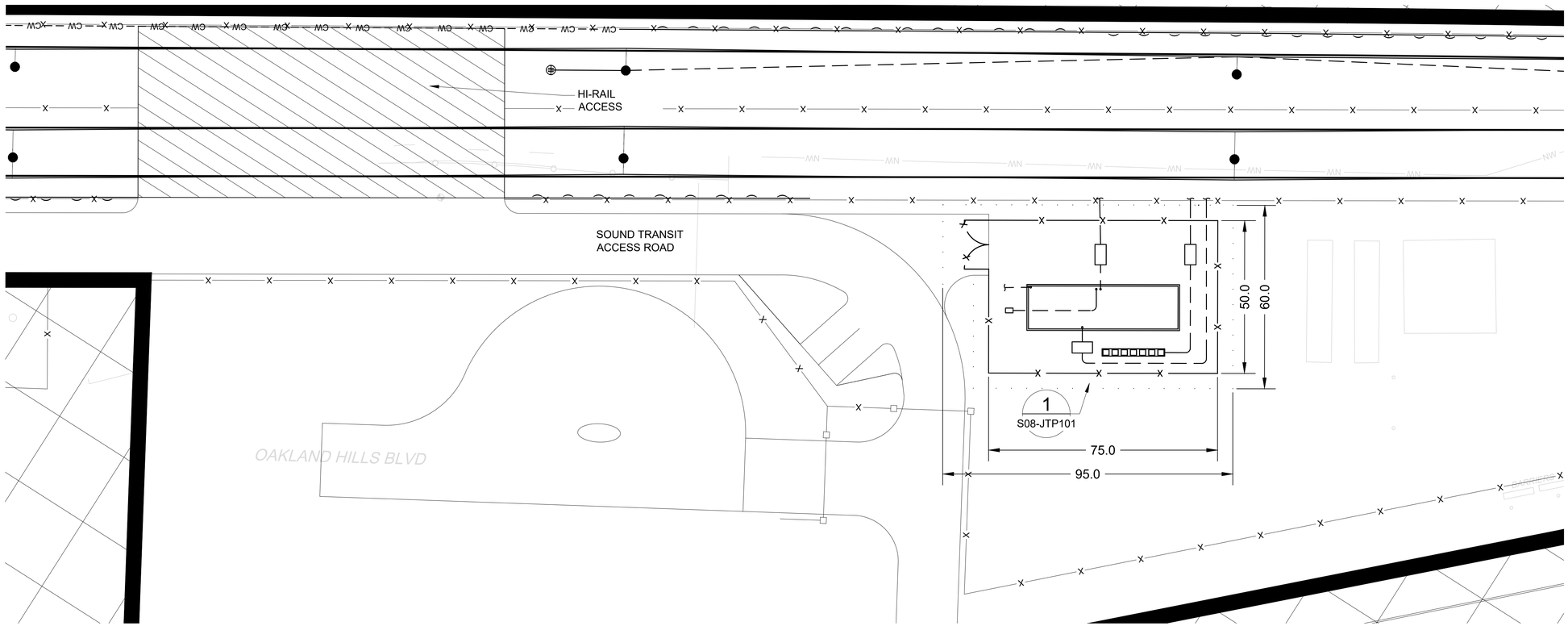
SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 11/11/23
REVIEWED BY:
DATE: 11/11/23
DATE: 11/11/23

LINE IS 1" AT FULL SCALE

SCALE: NTS
FILENAME: OMFS-S08-JTS002_003
CONTRACT No.:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
TRACTION POWER SYSTEM
TPSS #S08 METERING & RELAYING
SINGLE LINE DIAGRAM (SHEET 2 OF 2)

DRAWING No.: S08-JTS003
FACILITY ID: S08
SHEET No.:
REV: 0

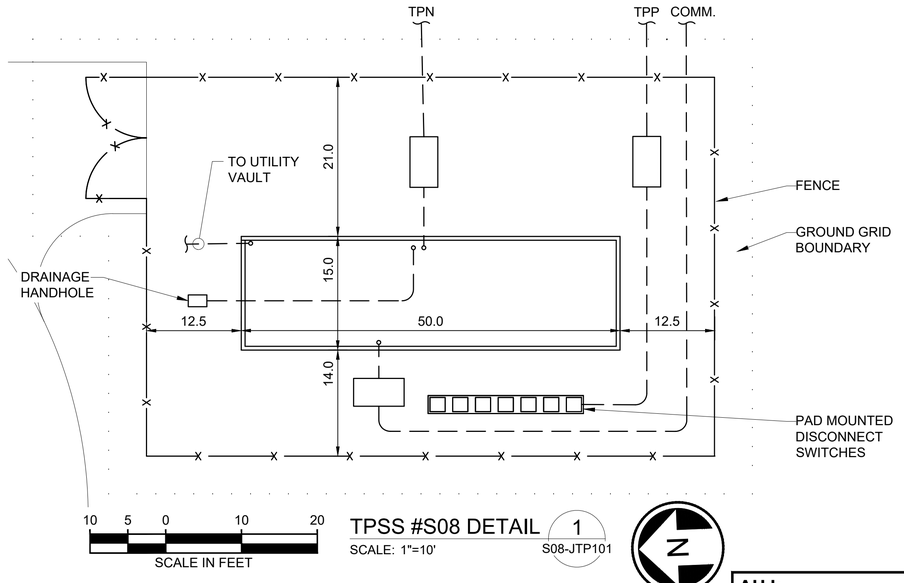


SB STA 1536+25 TPSS #S08 - PLAN

SCALE: 1" = 20'

20 10 0 20 40

SCALE IN FEET



10 5 0 10 20

SCALE IN FEET

TPSS #S08 DETAIL 1

SCALE: 1"=10' S08-JTP101

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN

DRAWN BY: M. SHEPPARD

CHECKED BY: J. HASROUNI

APPROVED BY: J. SCHIMPF

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23617598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

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BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER | DATE: 2/27/2024 | REVIEWED BY: | DATE:

AHJ:

PACKAGE #

SCALE: 1"=10', 1"=20'

FILENAME: OMFS-S08-JTP101

CONTRACT No.: AE-0030-17

DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TPSS S08
SITE PLAN AND DETAILS

DRAWING No.: S08-JTP101

FACILITY ID: S08

SHEET No.: REV: 0

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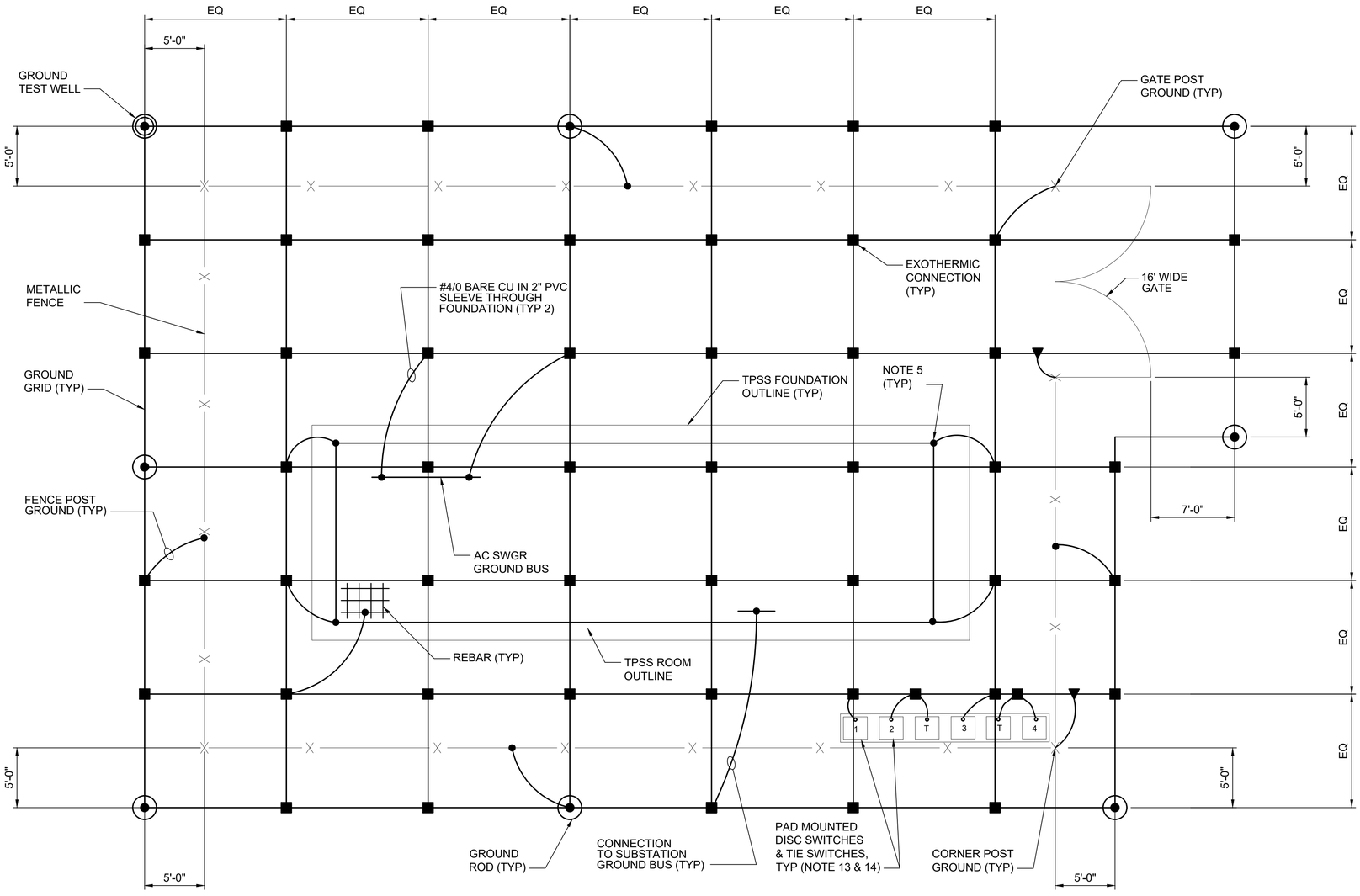

TPSS GROUND GRID LAYOUT - PLAN (TYPICAL)

SCALE: 3/16" = 1'-0"

NOTES:

1. SUBSTATION GROUND GRID IS ILLUSTRATIVE ONLY AND WILL VARY DEPENDING ON TOUCH AND STEP POTENTIAL CALCULATIONS AND GROUND GRID RESISTANCE OF LESS THAN 5 OHMS DURING FINAL DESIGN.
2. GROUND GRID CABLES SHALL BE #4/0 AWG BARE STRANDED COPPER WIRE. ALL GROUND RODS SHALL BE COPPER-CLAD STEEL, 3/4 "DIAMETER MINIMUM, 10'-0" IN LENGTH, TOPS DRIVEN TO 2'-6" BELOW FINISHED GRADE.
3. GROUND GRID SHALL BE BURIED A MINIMUM OF 2'-6" BELOW FINISHED GRADE.
4. ALL GROUNDING AND BONDING SHALL COMPLY WITH UL STANDARD #467, NEPA 70, AND IEEE 80.
5. A TWO-FOOT RISER FROM GROUND GRID SHALL BE PROVIDED ABOVE GRADE AT A MINIMUM ONE AT EACH OF TWO DIAMETRICALLY OPPOSITE CORNERS OF THE SUBSTATION HOUSING.
6. ALL MANHOLES, HANDHOLES AND PULLBOXES THAT ARE WITHIN THE GROUND GRID SHALL BE PROVIDED WITH #1/0 COPPER CABLE CONNECTION TO THE GROUND GRID.
7. ALL CONNECTIONS BELOW GRADE SHALL BE MADE USING CADWELD TYPE CONNECTORS OR EQUAL.
8. ALL CORNER POSTS, GATE POSTS AND FENCE POSTS AT INTERVALS NOT EXCEEDING 20 FEET SHALL BE CONNECTED TO THE GROUND GRID BY #2/0 AWG BARE COPPER CONDUCTORS.
9. GROUND RODS SHALL BE INSTALLED ON THE PERIMETER OF THE GROUND GRID AS SHOWN.
10. FOUNDATION STEEL REINFORCEMENT SHALL BE CONNECTED TO THE GROUND GRID #4/0 BARE COPPER CONDUCTOR AT THE FOUR CORNERS.
11. PROVIDE SINGLE ISOLATED GROUND ROD WITH 2 kV INSULATED #4/0 COPPER CABLES IN 1" PVC CONDUIT CONNECTED TO EACH SURGE ARRESTER LOCATED DIRECTLY BENEATH EACH DC FEEDER COMPARTMENT.
12. PROVIDE GROUND CONNECTION TO DISC SWITCHES PAD FOUNDATION REBAR AND 5 FEET COILED PIGTAIL OF #4/0 AWG FOR EACH PAD.
13. POSITION OF DC SWITCHES VARIES FROM EACH TPSS SITE. REFER TO EACH SITE PLAN FOR EXACT LOCATION.

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PRELIMINARY — JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 21817598 — REGISTERED PROFESSIONAL ENGINEER

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TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

PRESCRIPTIVE

SCALE: NTS
FILENAME: OMFS-S08-JTP102
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TPSS GROUND GRID LAYOUT
(TYPICAL)

DRAWING No.: **S08-JTP102**
FACILITY ID: S08
SHEET No.:
REV: 0

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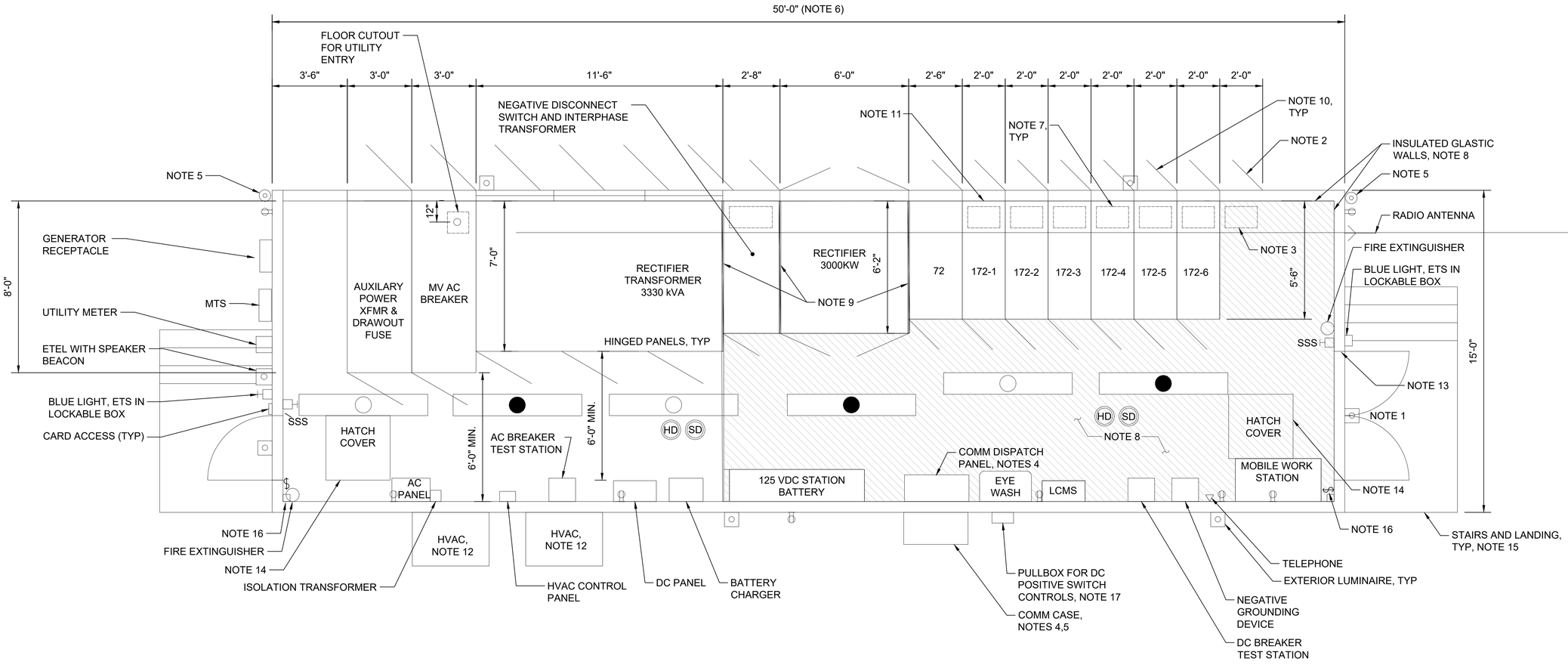
NOTES:

1. PROVIDE REMOVABLE TRANSOM AND WALL PANEL ABOVE DOOR.
2. PROVIDE ONE ADDITIONAL REAR ENTRY DOOR FOR ACCESS TO FUTURE DC FEEDER BREAKER.
3. PROVIDE OPENING IN FLOOR FOR FUTURE FEEDER BREAKER. COVER WITH 1/4" GLASTIC AND FASTEN TO FLOOR.
4. COMM TO DETERMINE FINAL LOCATION AND SIZE.
5. MOUNT CAMERAS AND CASES TO TPSS FOR WATER TEST AND REMOVE FOR SHIPMENT. REINSTALL AT SITE.
6. COORDINATE BUILDING DIMENSIONS AND EQUIPMENT LOADINGS WITH STRUCTURAL ENGINEER.
7. SIZE AND LOCATION OF DC CABLE ENTRANCES TO BE DETERMINED BY CONTRACTOR.
8. PROVIDE ELECTRICAL INSULATION ON ALL WALLS AND FLOOR IN AREAS SHOWN. IF 6' MINIMUM CANNOT BE ACHEIVED, LINE DOORS, FRAMS AND HARDWARE WITH INSULATION. FLOOR INSULATION TO EXTEND TO ALL 3 WALLS.
9. PROVIDE GLASTIC BARRIER BETWEEN RECTIFIER TRANSFORMER AND NEGATIVE DISCONNECT SWITCH. EXTEND GLASTIC 2'-6" BEYOND RECTIFIER TRANSFORMER, AS SHOWN. PROVIDE AN INSULATED FINISHED EDGE ON EXPOSED GLASTIC EDGE.
10. PROVIDE GLASTIC BARIER INSIDE REAR DOOR TO COMPLETE WALL INSULATION WHEN DOOR IS CLOSED.
11. SPACE DC SWITCHGEAR AND RECTIFIER 2 INCHES OFF REAR WALL.
12. HVAC UNIT LAYOUT IS FOR REFERENCE ONLY.
13. DOOR FRAMES AND DOORS TO BE INSULATED HERE REQUIRED TO MEET 6 FOOT MINIMUM FROM DC SWITCHGEAR TO GROUNDED OBJECT.
14. HATCH COVER SHALL BE RATED TO HANDLE MAXIMUM EQUIPMENT WEIGHT.
15. PROVIDE STAIRS AND LANDINGS.
16. PROVIDE CONTINUOUS GROUND BUS AROUND ENTIRE TPSS.
17. LOCATE AND SIZE PULLBOX TO SUIT SITE CONDITIONS.



TPSS EQUIPMENT LAYOUT - PLAN

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

HDR
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BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/24
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
DATE:

SCALE: 3/8" = 1'-0"
FILENAME: OMFS-S08-JTP103
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TPSS-S08 EQUIPMENT
LAYOUT PLAN

DRAWING No.: S08-JTP103
FACILITY ID: S08
SHEET No.: REV: 0

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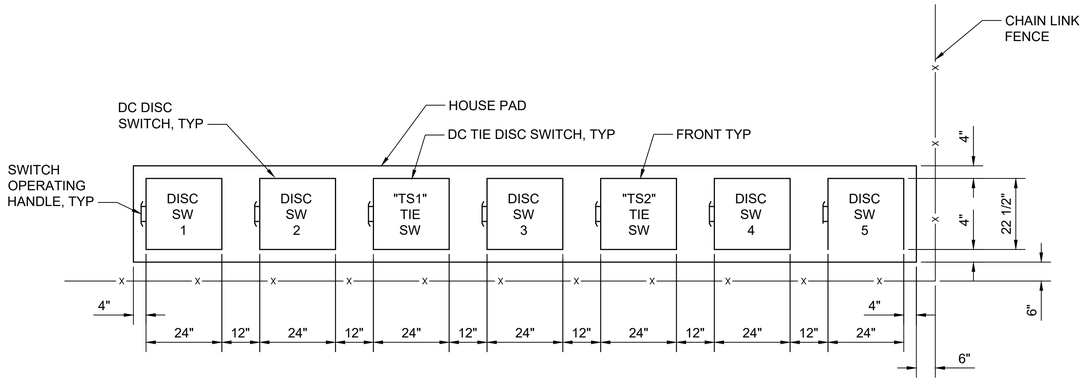
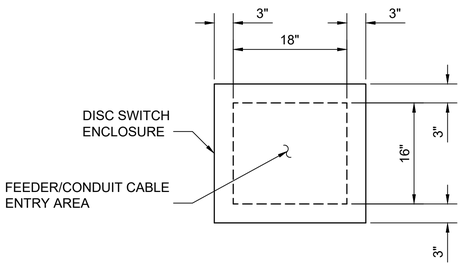


PAD MOUNTED DISC SWITCH LAYOUT PLAN (1)

SCALE: 1/2" = 1'-0"

S08-JTD001



TYPICAL DISC SWITCH PLAN VIEW

SCALE: 1" = 1'-0"

NOTE:

1. REFER TO DWG. S08-JTS001 FOR CONNECTION DETAILS

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23617598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

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TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY:	DATE:	REVIEWED BY:	DATE:
PABLO LOPEZ-HILFIKER	2/27/2024		

SCALE: 1/2"=1'-0", 1"=1'-0"
FILENAME: OMFS-S08-JTD001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TPSS S08 PAD MOUNT DISCONNECT SWITCHES
LAYOUT PLAN

DRAWING No.: **S08-JTD001**
FACILITY ID: STD
SHEET No.: REV: 0

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CONDUIT		FROM	VIA	TO	DESTINATION/STATIONING LOCATION	CABLE DESCRIPTION				REMARKS
No	SIZE					CONDUCTOR	SIZE	TYPE	VOLT	
TPSS8-01	4" PVC	TPSS-S08, BKR 172-1	DUCT BANK	DISCONNECT SWITCH H-601	OCS FEEDER POLE (SB)	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	POSITIVE FEEDER SB1 TRACK
TPSS8-02	4" PVC	TPSS-S08, BKR 172-1	DUCT BANK	DISCONNECT SWITCH H-601	OCS FEEDER POLE (SB)	---	---	---	---	SPARE CONDUIT
TPSS8-03	4" PVC	TPSS-S08, BKR 172-2	DUCT BANK	DISCONNECT SWITCH H-602	OCS FEEDER POLE (NB)	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	POSITIVE FEEDER NB1 TRACK
TPSS8-04	4" PVC	TPSS-S08, BKR 172-2	DUCT BANK	DISCONNECT SWITCH H-602	OCS FEEDER POLE (NB)	---	---	---	---	SPARE CONDUIT
TPSS8-05	4" PVC	TPSS-S08, BKR 172-3	DUCT BANK	DISCONNECT SWITCH H-603	OCS FEEDER POLE (SB)	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	POSITIVE FEEDER SB2 TRACK
TPSS8-06	4" PVC	TPSS-S08, BKR 172-3	DUCT BANK	DISCONNECT SWITCH H-603	OCS FEEDER POLE (SB)	---	---	---	---	SPARE CONDUIT
TPSS8-07	4" PVC	TPSS-S08, BKR 172-4	DUCT BANK	DISCONNECT SWITCH H-604	OCS FEEDER POLE (NB)	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	POSITIVE FEEDER NB2 TRACK
TPSS8-08	4" PVC	TPSS-S08,BKR 172-4	DUCT BANK	DISCONNECT SWITCH H-604	OCS FEEDER POLE (NB)	---	---	---	---	SPARE CONDUIT
TPSS8-09	4" PVC	TPSS-S08, BKR 172-5	DUCT BANK	DISCONNECT SWITCH H-605	OCS FEEDER POLE (TT)	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	POSITIVE FEEDER TEST TRACK
TPSS8-10	4" PVC	TPSS-S08, BKR 172-5	DUCT BANK	DISCONNECT SWITCH H-605	OCS FEEDER POLE (TT)	---	---	---	---	SPARE CONDUIT
TPSS8-11	4" PVC	TPSS-S08, BKR 172-6	DUCT BANK	YARD TPSS POSITIVE BUS	POSITIVE DISCONNECT SWITCH 89P	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS POSITIVE DUCTBANK INTERCONNECTION
TPSS8-12	4" PVC	TPSS-S08, BKR 172-6	DUCT BANK	YARD TPSS POSITIVE BUS	POSITIVE DISCONNECT SWITCH 89P	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS POSITIVE DUCTBANK INTERCONNECTION
TPSS8-13	4" PVC	TPSS-S08, BKR 172-6	DUCT BANK	YARD TPSS, POSITIVE BUS	POSITIVE DISCONNECT SWITCH 89P	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS POSITIVE DUCTBANK INTERCONNECTION
TPSS8-14	4" PVC	TPSS-S08, BKR 172-6	DUCT BANK	YARD TPSS, POSITIVE BUS	POSITIVE DISCONNECT SWITCH 89P	---	---	---	---	SPARE CONDUIT
TNSS8-01	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (SB)	IMPEDANCE BOND (SB)	4-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	NEGATIVE RETURN SB TRACK
TNSS8-02	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (SB)	IMPEDANCE BOND (SB)	---	---	---	---	SPARE CONDUIT
TNSS8-03	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (NB)	IMPEDANCE BOND (NB)	4-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	NEGATIVE RETURN NB TRACK
TNSS8-04	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (NB)	IMPEDANCE BOND (NB)	---	---	---	---	SPARE CONDUIT
TNSS8-05	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (TT)	IMPEDANCE BOND (TT)	4-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	NEGATIVE RETURN TEST TRACK
TNSS8-06	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	IMPEDANCE BOND (TT)	IMPEDANCE BOND (TT)	---	---	---	---	SPARE CONDUIT
TNSS8-07	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	YARD TPSS NEGATIVE BUS	NEGATIVE DISCONNECT SWITCH 89N-3	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS NEGATIVE DUCTBANK INTERCONNECTION
TNSS8-08	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	YARD TPSS NEGATIVE BUS	NEGATIVE DISCONNECT SWITCH 89N-3	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS NEGATIVE DUCTBANK INTERCONNECTION
TNSS8-09	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	YARD TPSS NEGATIVE BUS	NEGATIVE DISCONNECT SWITCH 89N-3	3-1/C	500 KCMIL	CLASS D	2-4 KV-EPR	YARD TPSS NEGATIVE DUCTBANK INTERCONNECTION
TNSS8-10	4" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	YARD TPSS NEGATIVE BUS	NEGATIVE DISCONNECT SWITCH 89N-3	---	---	---	---	SPARE CONDUIT
TNSS8-11	2" PVC	TPSS-S08, NEGATIVE BUS	DUCT BANK	TE-HH-SS8-01	DRAINAGE MANHOLE					FUTURE DRAINAGE CABLE
SCSS8-01	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	TPSS-S07, COMM CABINET	FO CABLE	1-24 SM FIBER	---	---	DC FEEDER BREAKERS TRANSFER TRIP CONTROL.
SCSS8-02	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	TPSS-S07, COMM CABINET	---	---	---	---	SPARE CONDUIT
SCSS8-03	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	TPSS-S09, COMM CABINET	FO CABLE	1-24 SM FIBER			DC FEEDER BREAKERS TRANSFER TRIP CONTROL.
SCSS8-04	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	TPSS-S09, COMM CABINET	---	---	---	---	SPARE CONDUIT
SCSS8-05	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	COMM ROOM	FO CABLE	1-24 SM FIBER	---	---	INTERFACE WITH COMM
SCSS8-06	2"PVC	TPSS-S08, COMM CABINET	DUCT BANK	COMM MANHOLE	COMM ROOM	---	---	---	---	SPARE CONDUIT
MVSS8-01	4" PVC	TPSS-S08, AC SWGR	DUCT BANK	PSE 12.5KV INCOMING SERVICE		1-3/C & 1-1/C	4/0 PH & #2 GND		15 KV	INTERFACE WITH PUGET SOUND ENERGY
MVSS8-02	4" PVC	TPSS-S08, AC SWGR	DUCT BANK	PSE 12.5KV INCOMING SERVICE		---	---	---	---	SPARE CONDUIT

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PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23617598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

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PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER | DATE: 2/27/2024 | REVIEWED BY: | DATE:

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JTS101
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENACE FACILITY SOUTH
TRACTION POWER SYSTEM
TPSS #S08 CONDUIT AND CABLE SCHEDULE

DRAWING No.: S08-JTS101
FACILITY ID: S08
SHEET No.: REV: 0

EQUIPMENT ID	EQUIPMENT	SCADA I/O POINT DESCRIPTION	VARIABLE TYPE	TAG TEMPLATE	NOTES
LXX-W-401	AC POWER METER	AC AMPS	AI	AMPA	
LXX-W-401	AC POWER METER	AC VOLTS	AI	VLTA	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER OPEN CONTROL	DO	ABOC	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER CLOSE CONTROL	DO	ABCO	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER OPENED INDICATION	DI	ABOI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER CLOSED INDICATION	DI	ABCI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER LOCKOUT RELAY 86	DI	ALOI	
LXX-W-401	AC CIRCUIT BREAKER	AC LOCKOUT 86 UNHEALTHY TRIPPING COIL	DI	ATCI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER OVERCURRENT 50/51	DI	AOCI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER PHASE SEQUENCE 47	DI	APSI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER UNDERVOLTAGE 27	DI	AUVI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER OVERVOLTAGE 59	DI	AOVI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER LOSS OF CONTROL POWER 27A	DI	ALVI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER TRIPPED	DI	ATRI	
LXX-W-401	AC CIRCUIT BREAKER	AC CIRCUIT BREAKER REMOTE 43	DI	ARMI	
LXX-H-711	DC MAIN BREAKER	DC AMPS	AI	DAMA	
LXX-H-711	DC MAIN BREAKER	DC VOLTS	AI		
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER OPEN CONTROL	DO	DMOO	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER CLOSE CONTROL	DO	DMCO	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER OPENED INDICATION	DI	DMOI	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER CLOSED INDICATION	DI	DMCI	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER REMOTE 43	DI	DMRI	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER REVERSE CURRENT 32	DI	DMVI	
LXX-H-711	DC MAIN BREAKER	DC MAIN CIRCUIT BREAKER TRIPPED	DI	DMTI	
LXX-H-70X	DC FEEDER BREAKER	DC AMPS	AI	DVLA	
LXX-H-70X	DC FEEDER BREAKER	DC VOLTS	AI		
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER OPEN CONTROL	DO	DBOO	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER CLOSE CONTROL	DO	DBCO	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER OPENED INDICATION	DI	DBOI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER CLOSED INDICATION	DI	DBCI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER OVERCURRENT TRIPPED 150	DI	DOTI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER RATE OF RISE TRIPPED 150	DI	DRTI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER TRANSFER TRIP COM ALARM	DI	DTAI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER PROTECTION RELAY WATCHDOG ALARM	DI	PWAI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER REMOTE 43	DI	DBRI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER TRIPPED	DI	DBTI	
LXX-H-70X	DC FEEDER BREAKER	DC FEEDER BREAKER TRANSFER TRIP SUMMARY 85	DI	DTTI	
LXX-H-90X	DC DISCONNECT SWITCH	RECTIFIER NEGATIVE DISCONNECT SWITCH OPENED	DI		
LXX-H-90X	DC DISCONNECT SWITCH	RECTIFIER NEGATIVE DISCONNECT SWITCH CLOSED	DI		
LXX-H-60X	DC DISCONNECT SWITCH	DC POSITIVE DISCONNECT SWITCH OPENED	DI		
LXX-H-60X	DC DISCONNECT SWITCH	DC POSITIVE DISCONNECT SWITCH CLOSED	DI		
LXX-H-613	DC DISCONNECT SWITCH	DC TIE SWITCH OPENED	DI		
LXX-H-624	DC DISCONNECT SWITCH	DC TIE SWITCH CLOSED	DI		
LXX-RT	RECIFIER TRANSFORMER	RECITIFIER DIODE FAILURE ALARM 98-1	DI	RDFI	
LXX-RT	RECIFIER TRANSFORMER	RECITIFIER DIODE FAILURE TRIP 98-2	DI	RDPI	
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER OVER TEMP ALARM 26R1	DI	RDTI	
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER OVER TEMP TRIP 26R2	DI	RDWI	
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER TRANSFORMER OVER TEMP ALARM 49T1	DI	RDWI	
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER TRANSFORMER OVER TEMP TRIP 49T2	DI	ROTI	
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER ENCLOSURE 64H/G HOT/GROUNDED ALARM	DI		
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER ENCLOSURE 64H/G HOT/GROUNDED TRIP	DI		
LXX-RT	RECIFIER TRANSFORMER	RECTIFIER LOSS OF CONTROL POWER 27	DI	RLVI	

EQUIPMENT ID	EQUIPMENT	TPSS TYPICAL SCADA POINTS(TAG) DESCRIPTION	Variable Type	TAG Template	NOTES
LXX-DC-700	DC GENERAL	DC SWGR ENCLOSURE 64H/G HOT/GROUNDED ALARM	DI		
LXX-DC-700	DC GENERAL	DC SWGR ENCLOSURE 64H/G HOT/GROUNDED TRIP	DI		
LXX-DC-700	DC GENERAL	DC FEEDER BREAKER LOCKOUT SUMMARY	DI	DLSI	
LXX-DC-700	DC GENERAL	DC SWITCHGEAR LOCKOUT RELAY 186	DI	DLKI	
LXX-DC-700	DC GENERAL	DC SURGE ARRESTER FUSE BLOWN SUMMARY	DI	DSBI	
LXX-DC-700	DC GENERAL	DC SWITCHGEAR LOSS OF CONTROL POWER 27	DI	DSGI	
LXX-DC-700	DC GENERAL	DC NEGATIVE GROUNDING DEVICE 64V STAGE 1	DI	DHNI	
LXX-DC-700	DC GENERAL	DC NEGATIVE GROUNDING DEVICE 64V STAGE 2	DI		
LXX-DC-700	DC GENERAL	DC NEGATIVE GROUNDING DEVICE 64V STAGE 3	DI		
LXX-DC-700	DC GENERAL	DC PROTECTION RELAY COMM FAIL	DI	DCFI	
LXX-BA	BATTERY/CHARGER	BATTERY/CHARGER 125V DC SHORTED 59X	DI	BASI	
LXX-BA	BATTERY/CHARGER	BATTERY/CHARGER SUMMARY ALARM	DI	BAAI	
LXX-BA	BATTERY/CHARGER	BATTERY/CHARGER LOSS OF DC VOLTAGE	DI	BLVI	
LXX-G	GENERAL	HMI NON CRITICAL SUMMARY	DI	TASI	
LXX-G	GENERAL	EQUIPMENT DOORS OPEN 33	DI	TCOI	
LXX-G	GENERAL	LOCAL ETS ACTIVATED	DI	TEAI	
LXX-G	GENERAL	SSS ACTIVATED	DI	TSAI	
LXX-G	GENERAL	TPS-IC/PLC ERROR	DI	TPEI	
LXX-G	GENERAL	TPS-SCADA COMM ERROR	DI	TCMI	
LXX-G	GENERAL	AUXILARY POWER TRANSFORMER OVER TEMP ALARM 49T1	DI	TTAI	
LXX-G	GENERAL	AUXILARY POWER TRANSFORMER OVER TEMP TRIP 49T2	DI	TTTI	
LXX-G	GENERAL	TPS-HIGH BUILDING INTERIOR TEMPERATURE	DI		
LXX-G	GENERAL	HVAC#1 UNIT FILTER CLOGGED	DI		
LXX-G	GENERAL	HVAC#2 UNIT FILTER CLOGGED	DI		
LXX-G	GENERAL	HVAC#1 UNIT TROUBLE	DI		
LXX-G	GENERAL	HVAC#2 UNIT TROUBLE	DI		
LXX-G	GENERAL	TPS-BASEMENT HIGH WATER LEVEL	DI		
LXX-G	GENERAL	FIRE ALARM	DI		
LXX-G	GENERAL	SMOKE ALARM	DI		
LXX-G	GENERAL	INTRUSION ALARM 1	DI	LXX_TPSS_XX_Intrusion_01_DI	
LXX-G	GENERAL	INTRUSION ALARM 2	DI	LXX_TPSS_XX_Intrusion_02_DI	
LXX-G	GENERAL	CAMERA FAULT 1	DI	LXX_CAM_XX_FLT_01_DI	
LXX-G	GENERAL	CAMERA FAULT 2	DI	LXX_CAM_XX_FLT_02_DI	
LXX-G	GENERAL	ETEL OFF HOOK	DI	LXX_ETEL_XX_OFFHK_DI	
LXX-G	GENERAL	SPARE INPUT 1	DI		
LXX-G	GENERAL	SPARE INPUT 2	DI		
LXX-G	GENERAL	SPARE INPUT 3	DI		
LXX-G	GENERAL	SPARE INPUT 4	DI		

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23017598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 3001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:
DATE:

SCALE: NTS
FILENAME: OMFS-S08-JTS102
CONTRACT No.: AE0030-17

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENACE FACILITY SOUTH

TRACTION POWER SYSTEM
TYPICAL TPSS SCADA POINT LIST

DRAWING No.: S08-JTS102
FACILITY ID: S08
SHEET No.: REV: 0

02/23/24 | 8:28 AM | MSHEPPARD
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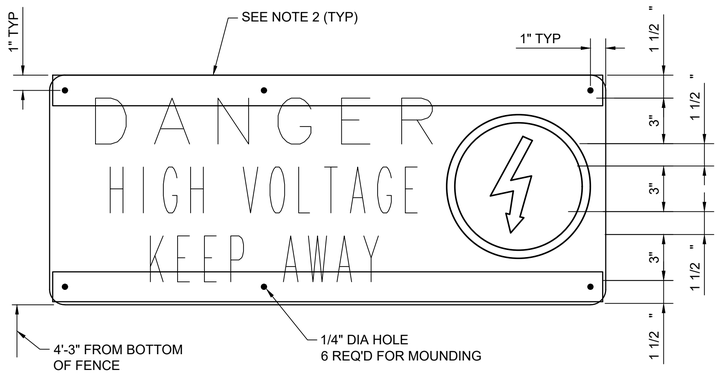
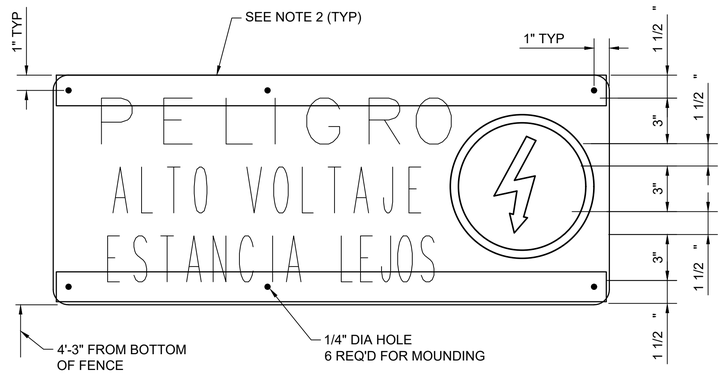


WARNING SIGN AT GATE TO
ELECTRICAL EQUIPMENT AREA (ENGLISH)

DETAIL 1 — NTS — STD-JTD001

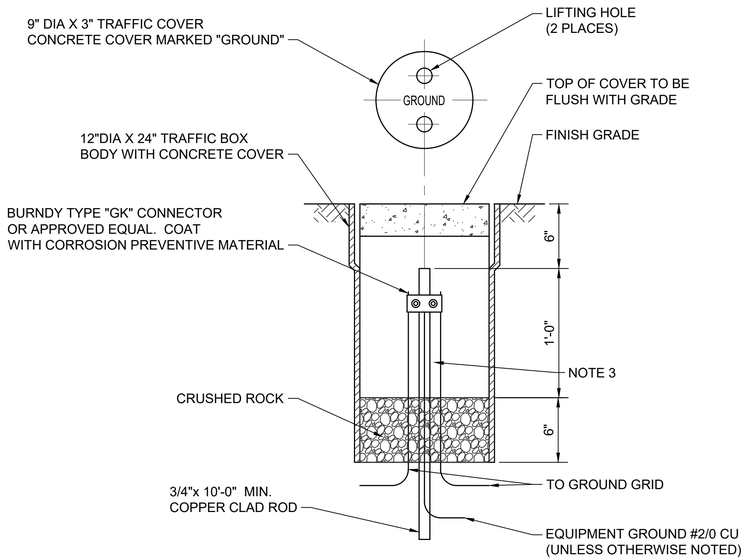


WARNING SIGN AT GATE TO
ELECTRICAL EQUIPMENT AREA (SPANISH)

DETAIL 2 — NTS — STD-JTD001

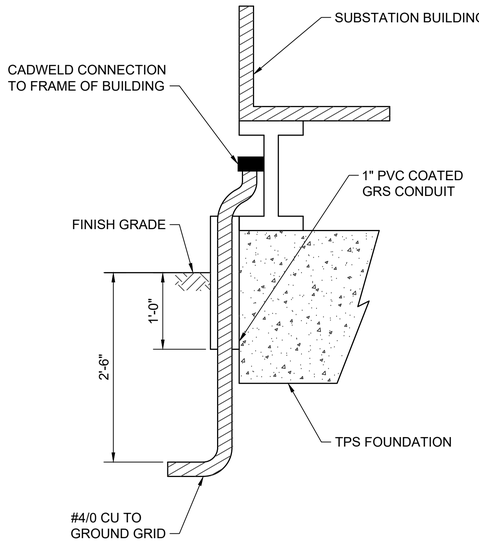
NOTES:

1. ALL LETTERING SHALL BE RED ON WHITE BACKGROUND.
2. SECURE SIGN TO FENCE WITH A GALVANIZED 2" WIDE BAR STOCK BEHIND SIGN. FASTEN WITH GALVANIZED THEFT-PROOF BOLTS. SPOIL THREAD AFTER SIGN IS ALIGNED AND FASTENED TO THE FENCE.
3. PACK THE CONDUIT OPENING WITH DUCT-SEAL MATERIAL TO PREVENT WATER STAGNATING IN THE CONDUIT.



GROUND WELL DETAIL AND
GROUND ROD CONNECTION

DETAIL 3 — NTS — STD-JTD001



GROUND TO BUILDING FRAME

DETAIL 4 — NTS — STD-JTD001

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PRELIMINARY — JONATHAN A. SCHMIDT — STATE OF WASHINGTON — 23617598 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns — BURNS ENGINEERING, INC. | 215 979-7700 — TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 — PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER | DATE: 2/27/2024 | REVIEWED BY: | DATE:

PRESCRIPTIVE

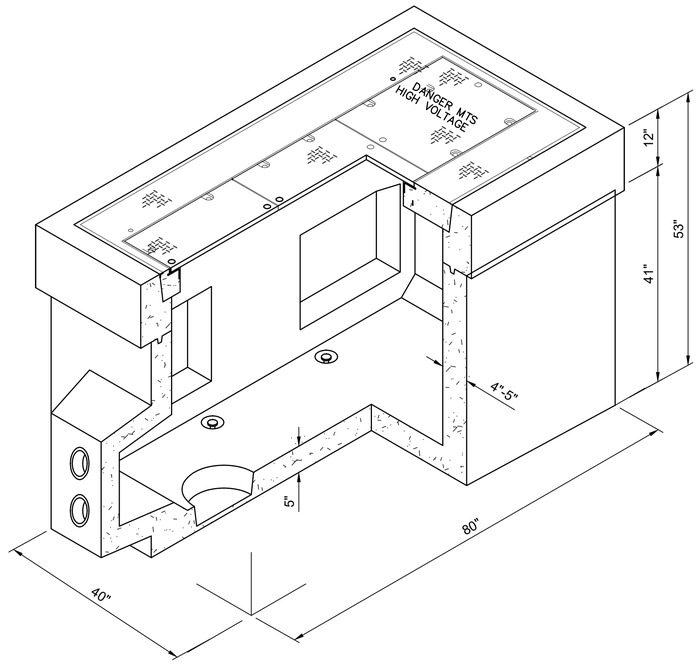
SCALE: NTS
FILENAME: OMFS-STD-JTD001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

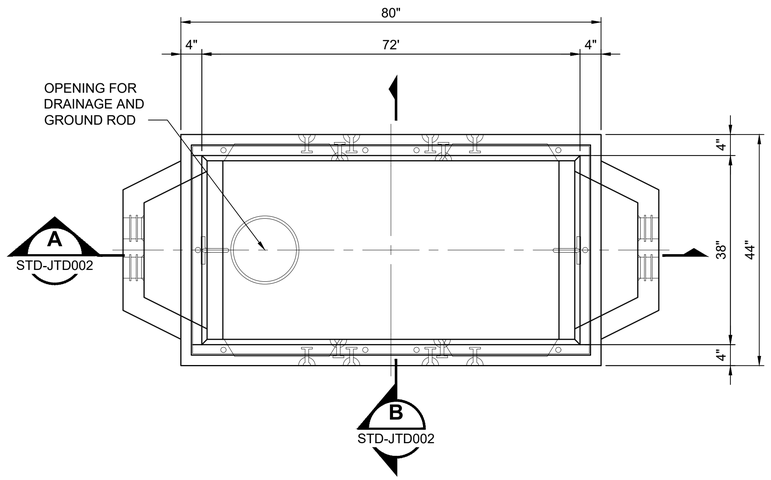
TRACTION POWER SYSTEM
SUBSTATION GROUNDING
DETAILS AND SIGNAGE

DRAWING No.: **STD-JTD001**
FACILITY ID: STD
SHEET No.: REV: 0

02/23/24 | 8:28 AM | MSHEPPARD
J:\2019\D\2019-175-SOUNDTRANSIT_HDR_TDLE\10-DESIGN\DRAWINGS\OMFS\WORKING DOCUMENTS\TRACTIONPOWER\OMFS-STD-JTD001.DWG



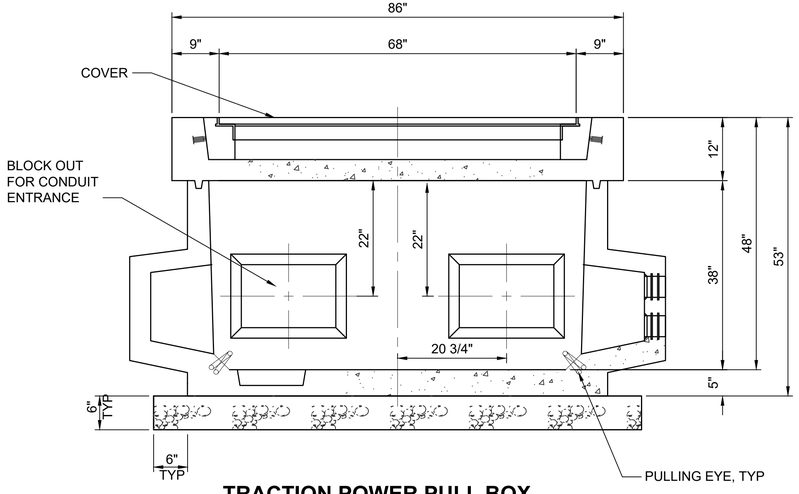
ISOMETRIC VIEW



PLAN VIEW

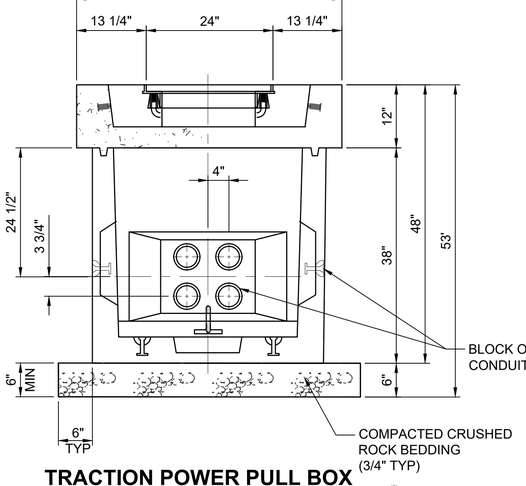
NOTES:

1. TRACTION POWER PULLBOX BASED ON LOCAL UTILITY STANDARD WITH TRAFFIC RATED COVER.
2. COVER SHALL BE HOT DIPPED GALVANIZED STEEL PLATE MARKED "DANGER MTS HIGH VOLTAGE" LABEL SHALL BE WELDED TO COVER BEFORE GALVANIZING.
3. SWEEP DUCTS INTO MANHOLE. DO NOT USE MANUFACTURED BENDS.
4. CONCRETE SHALL BE A MINIMUM OF 4000 PSI WITH 3/8" AGGREGATE.
5. HANDHOLE BASED ON JENSEN PRECAST B1324.
6. REINFORCING SHALL BE DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI.
7. PULL BOX/HANDHOLES SHALL MEET AASHTO H20/HS20 LOADING REQUIREMENTS.
8. SEE PLAN VIEWS FOR SIZE AND NUMBER OF CONDUITS.
9. UNUSED CONDUIT OPENINGS SHALL BE SEALED.
10. PROVIDE 6" OF ROCK BEDDING UNDER PULL BOXES AND HAND HOLES FOR WATER DRAINAGE.



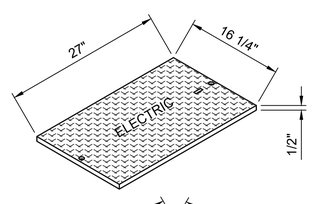
TRACTION POWER PULL BOX
SECTION A
SCALE: NTS

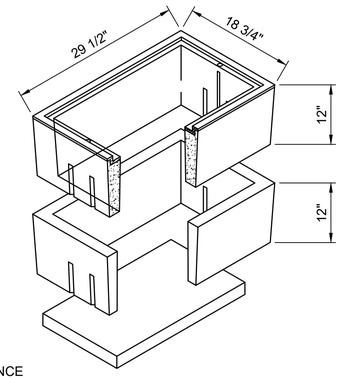
A STD-JTD002



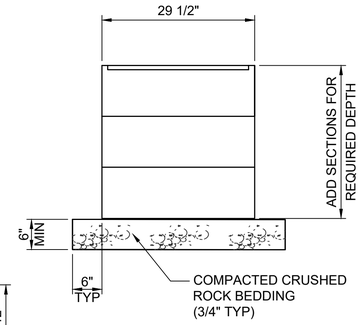
TRACTION POWER PULL BOX
SECTION B
SCALE: NTS

B STD-JTD002

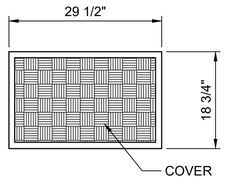




ISOMETRIC VIEW



ELEVATION VIEW



PLAN VIEW

TRACTION POWER PULL BOX 2
SCALE: NTS
STD-JTD002

TRACTION POWER PULL BOX 1
SCALE: NTS
STD-JTD002

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23817598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

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PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

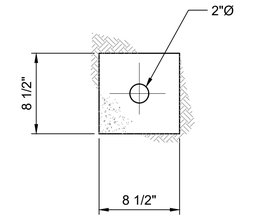
SUBMITTED BY:	DATE:	REVIEWED BY:	DATE:
PABLO LOPEZ-HILFIKER	2/27/2024		

SCALE: NTS
FILENAME: OMFS-STD-JTD002
CONTRACT No.: AE0030-17
DATE:

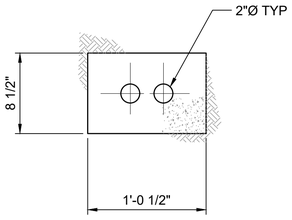
SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

TRACTION POWER SYSTEM
TRACTION POWER PULLBOX
AND HANDHOLE DETAILS

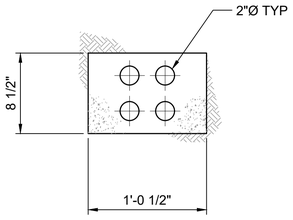
DRAWING No.: **STD-JTD002**
FACILITY ID: STD
SHEET No.: REV: 0



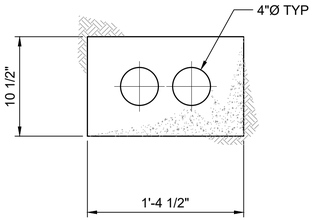
SECTION A
SCALE: NTS STD-JTD003



SECTION B
SCALE: NTS STD-JTD003



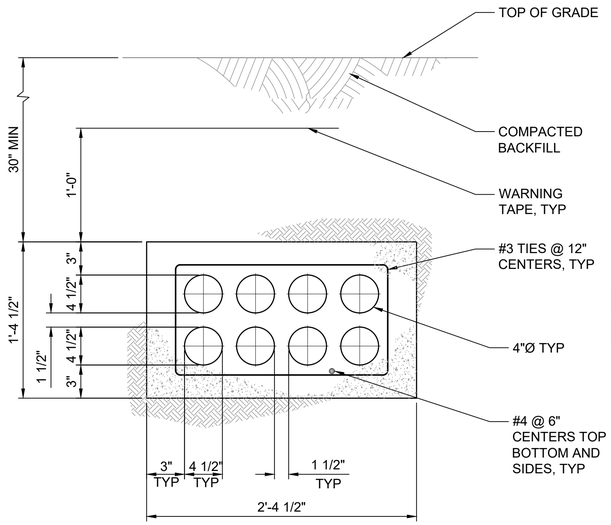
SECTION C
SCALE: NTS STD-JTD003



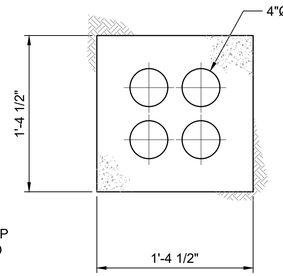
SECTION D
SCALE: NTS STD-JTD003

NOTES:

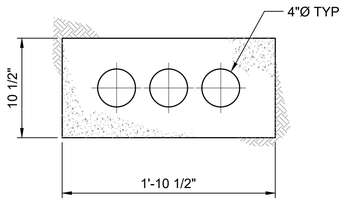
1. WHERE CROSSING UNDER TRACK, TOP OF DUCTBANKS TO BE 4'-0" MIN BELOW TOP OF HIGH RAIL UNLESS OTHERWISE INDICATED.
2. TRANSITION FROM PULL BOX ENTRANCE TO NORMAL DEPTH AS SHOWN ON DUCTBANK SECTIONS TO BE MADE WITH LONG CONDUIT SWEEPS.
3. MINIMUM DIMENSIONS DO NOT APPLY AT CROSSINGS UNDER UTILITY PIPES.
4. ALL CONDUITS SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
5. INSTALL YELLOW WARNING TAPE 12" BELOW TOP OF FINISHED GRADE CONTINUOUS FOR ENTIRE DUCT LINE.
6. ALL UNDERGROUND TRACTION POWER CONDUITS TO BE ENCASED IN RED CONCRETE.
7. DUCT BANKS TO BE CONCRETE ENCASED, STEEL REINFORCED. FOR CLARITY REINFORCING NOT SHOWN FOR ALL SECTIONS. REFERENCE SECTION F FOR TYPICAL INSTALLATION - PROVIDE #4 AT 6" CENTERS TOP, BOTTOM AND SIDES WITH #3 TIES AT 12" CENTERS FOR ALL SECTIONS.
8. CONDUIT BEND RADIUS SHALL BE MINIMUM 3' FOR 4" DIAMETER CONDUITS, 2' FOR 2" DIAMETER CONDUITS.



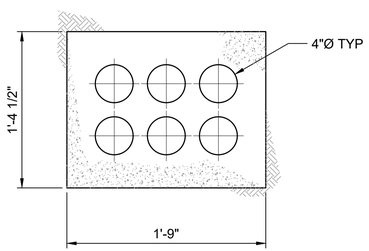
SECTION F
SCALE: NTS STD-JTD003



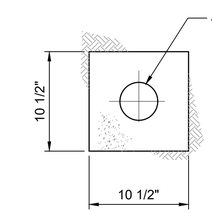
SECTION E
SCALE: NTS STD-JTD003



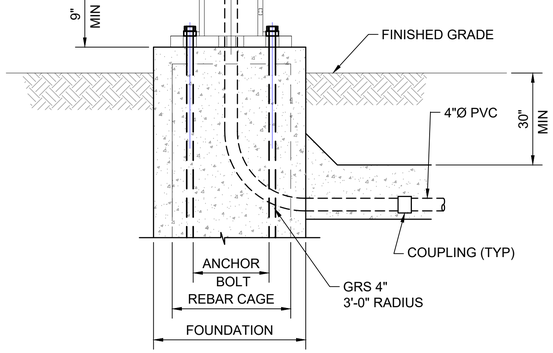
SECTION G
SCALE: NTS STD-JTD003



SECTION H
SCALE: NTS STD-JTD003



SECTION I
SCALE: NTS STD-JTD003



TYPICAL OCS POLE CONDUIT ROUTING DETAIL 1
SCALE: NTS STD-JTD003

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

AHJ:

PACKAGE #

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: P. VIJAYASUNDARARAJAN
DRAWN BY: M. SHEPPARD
CHECKED BY: J. HASROUNI
APPROVED BY: J. SCHIMPF

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 21617598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:
DATE:

SCALE: NTS
FILENAME: OMFS-STD-JTD003
CONTRACT No.: AE0030-17

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

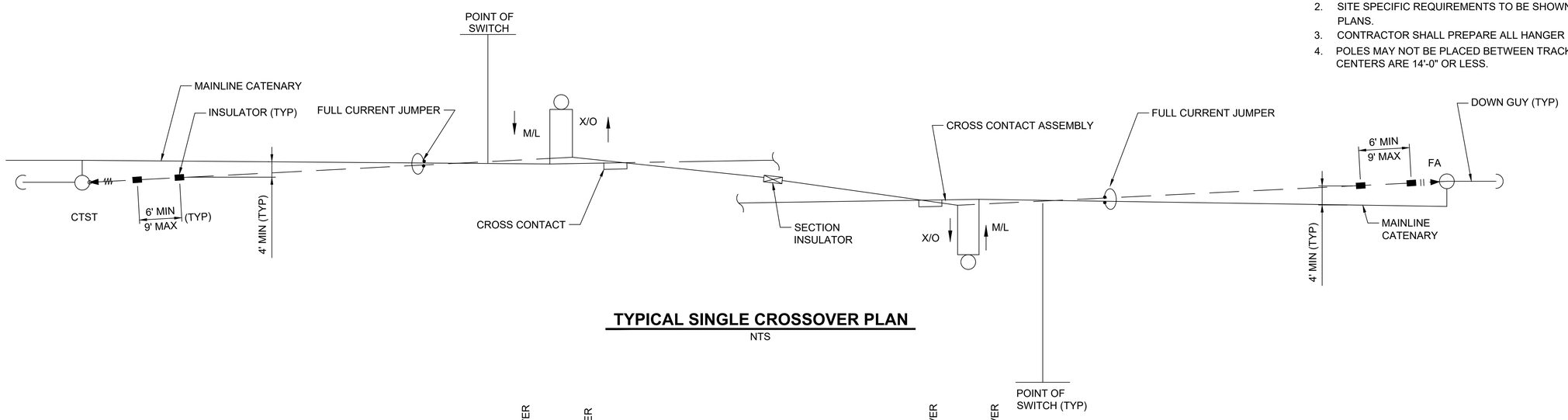
TRACTION POWER SYSTEM
TRACTION POWER DUCTBANK
SECTIONS AND DETAILS

DRAWING No.: **STD-JTD003**
FACILITY ID: STD
SHEET No.: REV: 0

02/23/24 | 8:27 AM | MSHEPPARD
J:\2019\D2019-175-SOUNDTRANSIT_HDR_TDLE\10-DESIGN\DRAWINGS\OMFS\WORKING DOCUMENTS\TRACTIONPOWER\OMFS-STD-JTD003.DWG

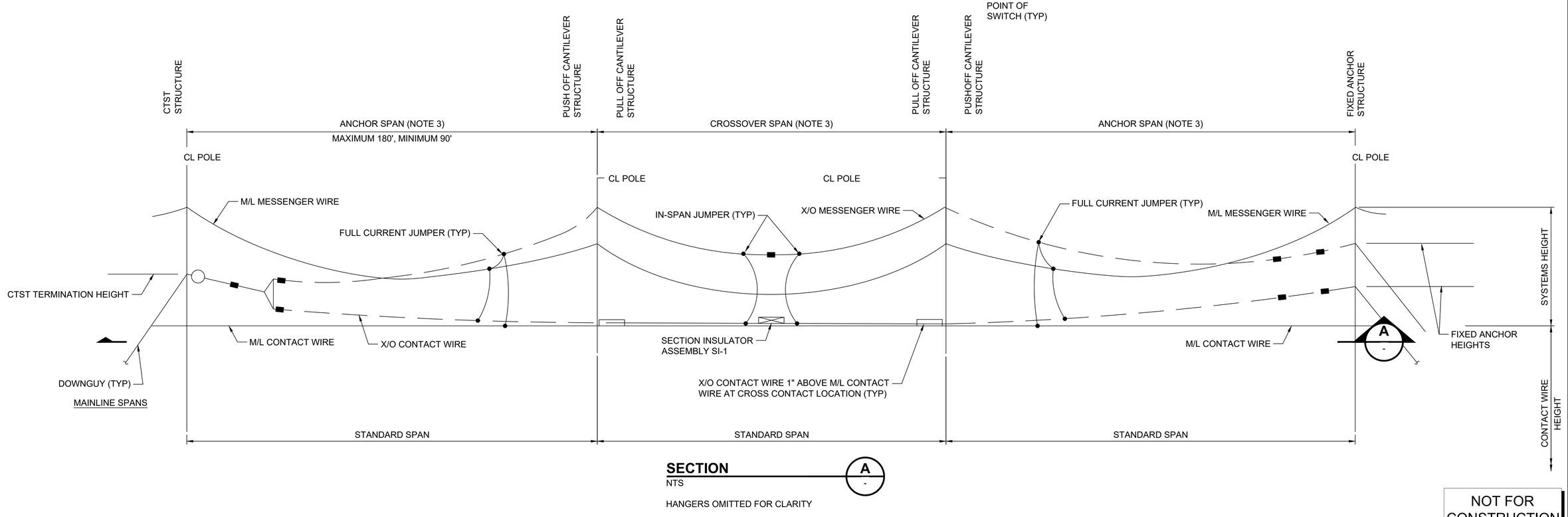
NOTES:

1. FOR SYMBOLS, ABBREVIATIONS AND LEGEND SEE DWG STD-GZN031, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107.
2. SITE SPECIFIC REQUIREMENTS TO BE SHOWN ON OCS LAYOUT PLANS.
3. CONTRACTOR SHALL PREPARE ALL HANGER DIMENSIONS.
4. POLES MAY NOT BE PLACED BETWEEN TRACKS WHEN TRACK CENTERS ARE 14'-0" OR LESS.



TYPICAL SINGLE CROSSOVER PLAN

NTS



SECTION A-A

NTS

HANGERS OMITTED FOR CLARITY

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION
1	08/2019				REVISED SYSTEMS DIRECTIVE DRAWINGS

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

MOISES RAMOS — STATE OF WASHINGTON — PRELIMINARY — REGISTERED PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

AHJ:

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JOY020
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
DIRECTIVE DRAWING
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CATENARY SYSTEM
GENERAL ARRANGEMENT SINGLE CROSSOVER

DRAWING No.: S08-JOY020
FACILITY ID: M08
SHEET No.:
REV: 0

02/26/24 | 12:46 PM | MACLEMENT
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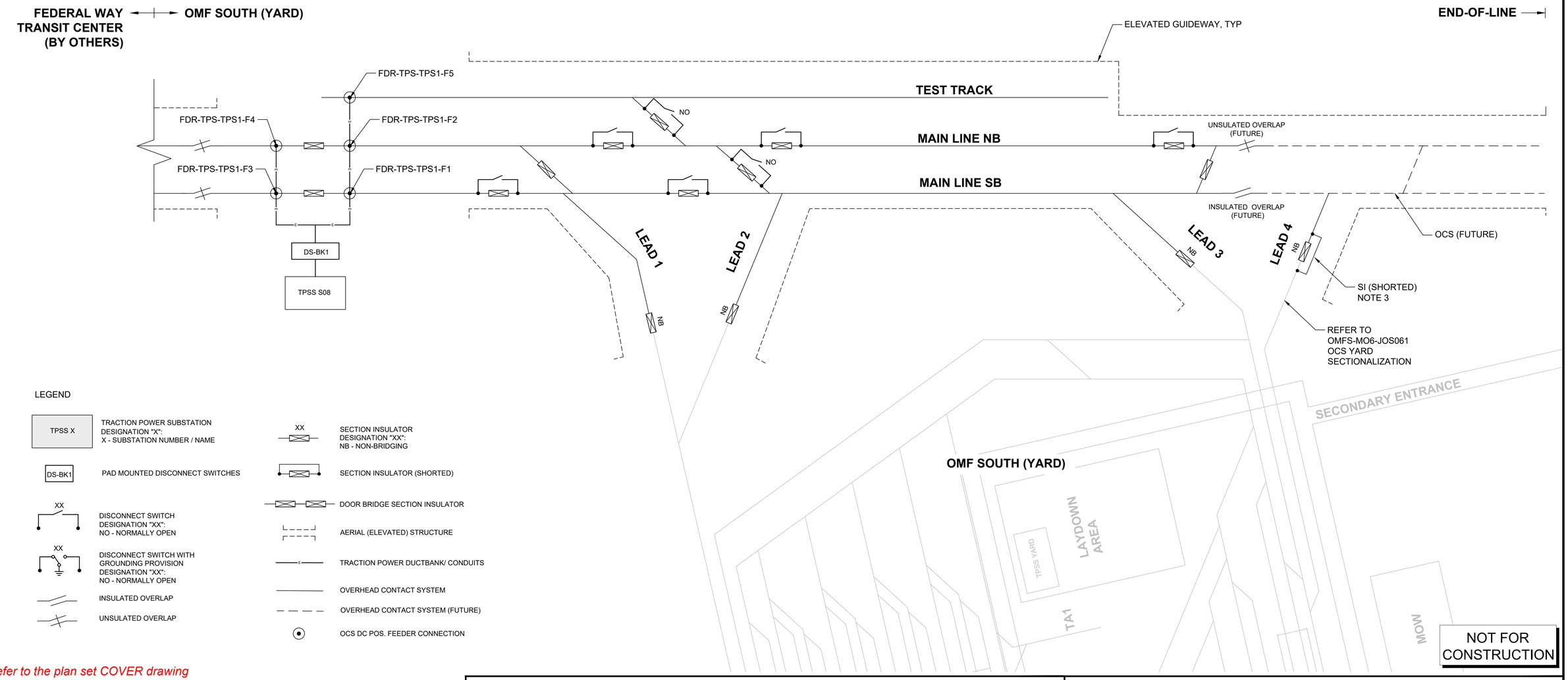
NOTES:

1. OCS SECTIONALIZATION PLANS ARE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE.
2. ALL OCS DISCONNECT SWITCHES ARE NORMALLY CLOSED, UNLESS OTHERWISE NOTED.
3. SECTION INSULATOR SHALL BE SHORTED TO PROVIDE CONTINUOUS POWER THROUGH YARD LEAD 4. SI JUMPER TO BE REMOVED DURING FUTURE ELECTRIFICATION.



LEGEND

TPSS X — TRACTION POWER SUBSTATION DESIGNATION "X": X - SUBSTATION NUMBER / NAME	XX — SECTION INSULATOR DESIGNATION "XX": NB - NON-BRIDGING
DS-BK1 — PAD MOUNTED DISCONNECT SWITCHES	SECTION INSULATOR (SHORTED)
XX — DISCONNECT SWITCH DESIGNATION "XX": NO - NORMALLY OPEN	DOOR BRIDGE SECTION INSULATOR
XX — DISCONNECT SWITCH WITH GROUNDING PROVISION DESIGNATION "XX": NO - NORMALLY OPEN	AERIAL (ELEVATED) STRUCTURE
INSULATED OVERLAP	TRACTION POWER DUCTBANK/ CONDUITS
UNSULATED OVERLAP	OVERHEAD CONTACT SYSTEM
	OVERHEAD CONTACT SYSTEM (FUTURE)
	OCS DC POS. FEEDER CONNECTION

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

02/26/24 | 12:47 PM | MACLEMENT
C:\PWWORKING\WEST01\D2780549\OMFS-S08-JOS060.DWG

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

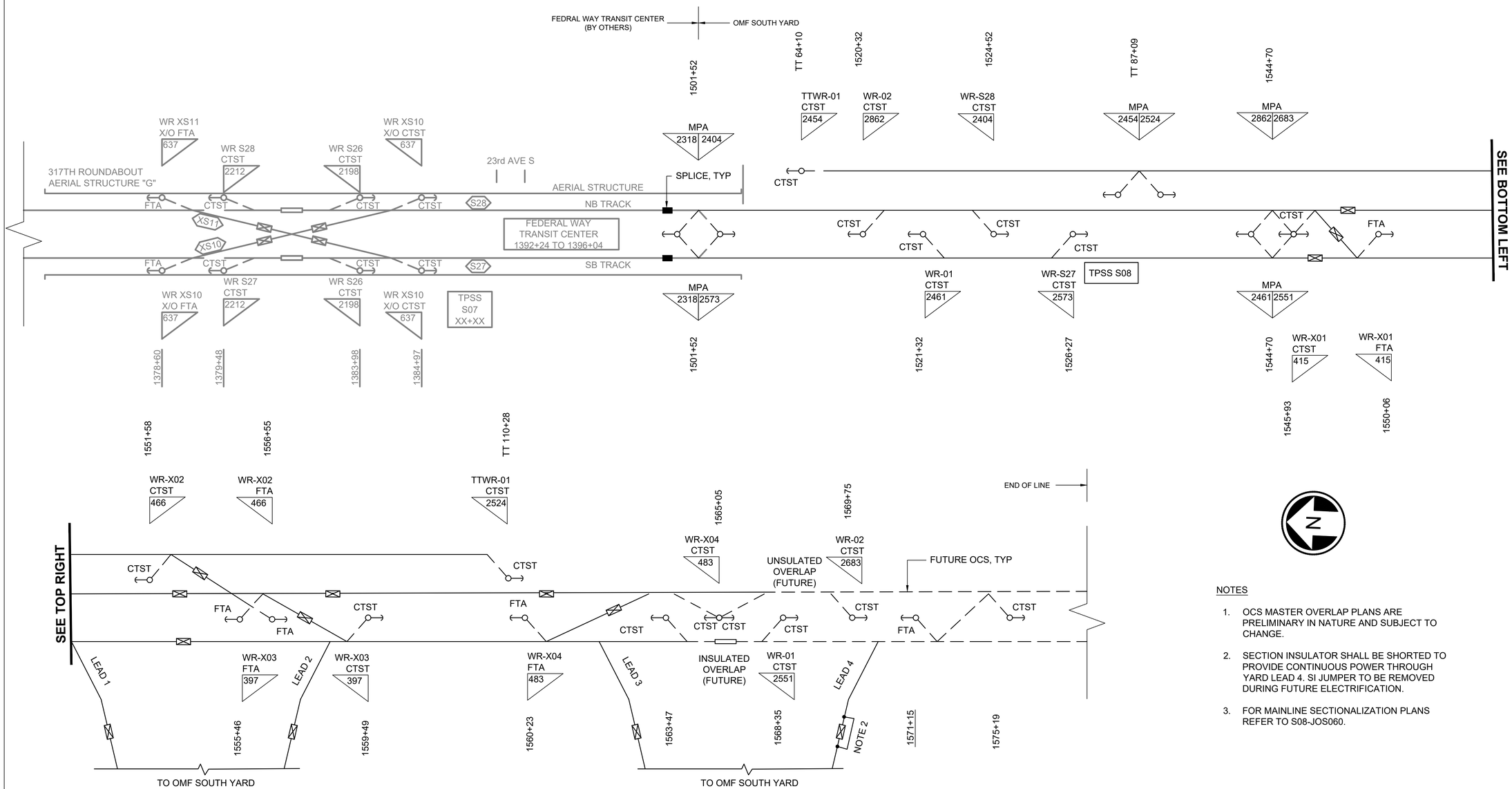
SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 02/14/2023
REVIEWED BY:
DATE: 02/14/2023

LINE IS 1" AT FULL SCALE

SCALE: NTS
FILENAME: OMFS-S08-JOS060
CONTRACT No.: AE-0030-17
DATE: 2023/02/14

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CONTACT SYSTEMS
MAINLINE SECTIONALIZATION

DRAWING No.: **S08-JOS060**
FACILITY ID: S08
SHEET No.: REV: 0



NOTES

1. OCS MASTER OVERLAP PLANS ARE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE.
2. SECTION INSULATOR SHALL BE SHORTED TO PROVIDE CONTINUOUS POWER THROUGH YARD LEAD 4. SI JUMPER TO BE REMOVED DURING FUTURE ELECTRIFICATION.
3. FOR MAINLINE SECTIONALIZATION PLANS REFER TO S08-JOS060.

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE: 2/27/2024
DATE: 2/27/2024

LINE IS 1" AT FULL SCALE

SCALE:
FILENAME: OMFS-S08-JOS070
CONTRACT No.: AE-0030-17

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CONTACT SYSTEMS
MASTER OVERLAP CHART
MAINLINE

DRAWING No.: S08-JOS070
FACILITY ID: S08
SHEET No.: REV: 0

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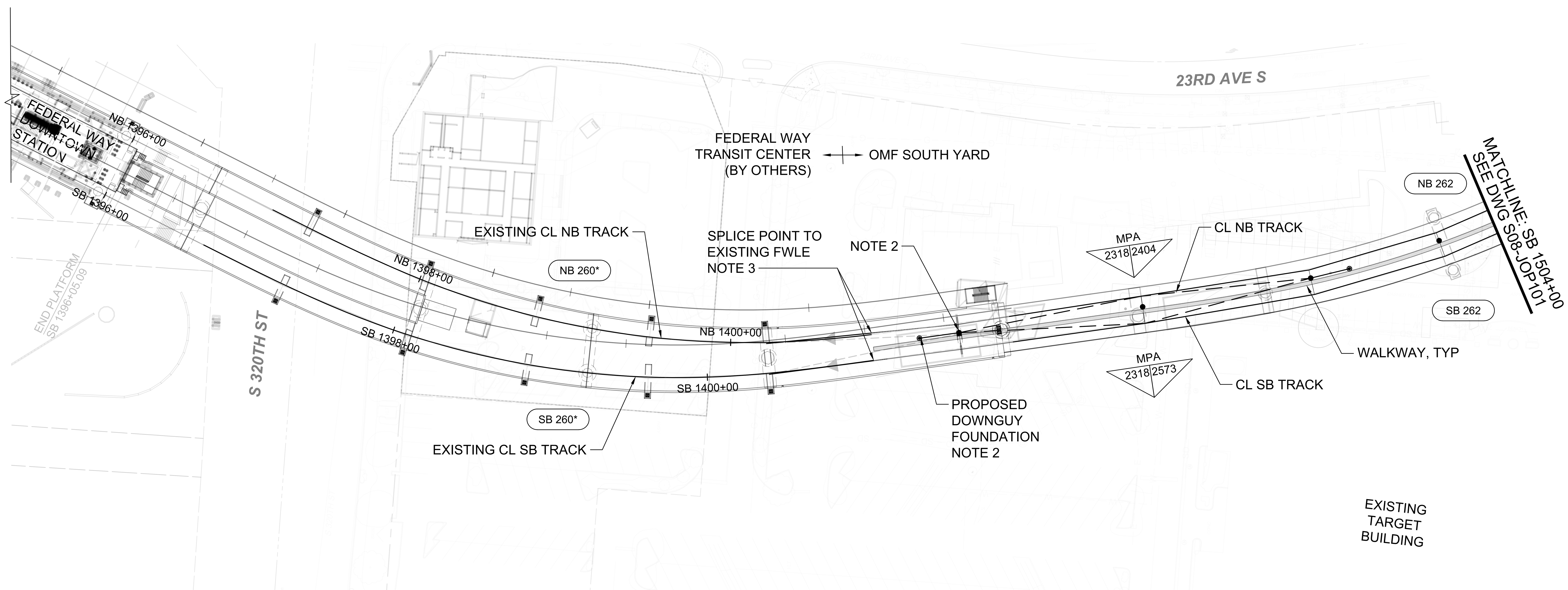


NOTES:

1. FWLE LAYOUT DETAILS ARE PROVIDED FOR REFERENCE AND REFLECT THE LATEST DESIGN PROVIDED DURING THE DEVELOPMENT OF THESE PLANS. DESIGN BUILDER SHALL VERIFY ALL FINAL AS BUILTS PRIOR TO COMMENCING FINAL DESIGN DOCUMENTS
2. MAINLINE DESIGN INTENDS TO REUSE EXISTING POLE AND INSTALL A NEW DOWNGUY ON THE FWLE EXISTING STRUCTURE.
3. NEW WIRE TO BE SPLICED TO EXISTING FWLE TERMINATION SPAN IN APPROXIMATE LOCATION SHOWN ON THE PLANS.

N

40 20 0 40 80
SCALE IN FEET

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

02/26/24 | 12:49 PM | MACLEMENT
C:\PWWORKING\WEST01\D2780549\OMFS-S08-JOP100-108.DWG

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/03/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

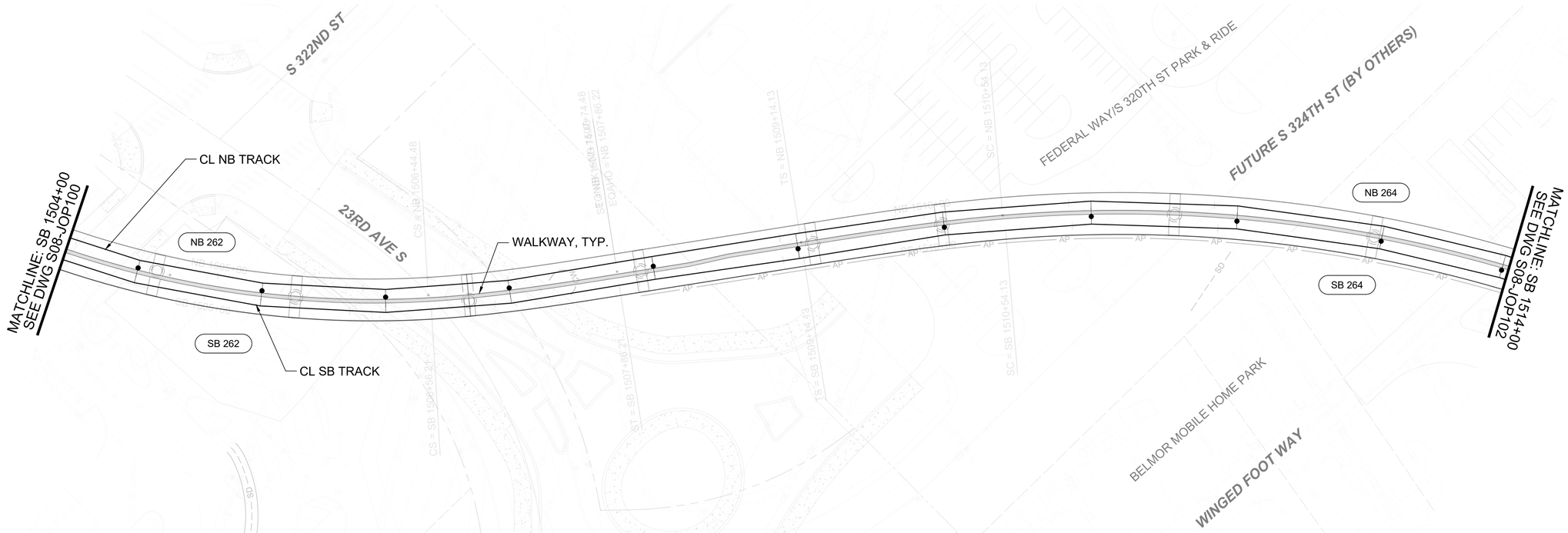
SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1500+00 TO SB STA 1504+00

DRAWING No.: S08-JOP100
FACILITY ID: S08
SHEET No.:
REV: 0

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107



40 20 0 40 80

SCALE IN FEET

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

MOISES RAMOS STATE OF WASHINGTON PRELIMINARY LICENSED PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1504+00 TO SB STA 1514+00

DRAWING No.: S08-JOP101
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12:49 PM | MACLEMENT
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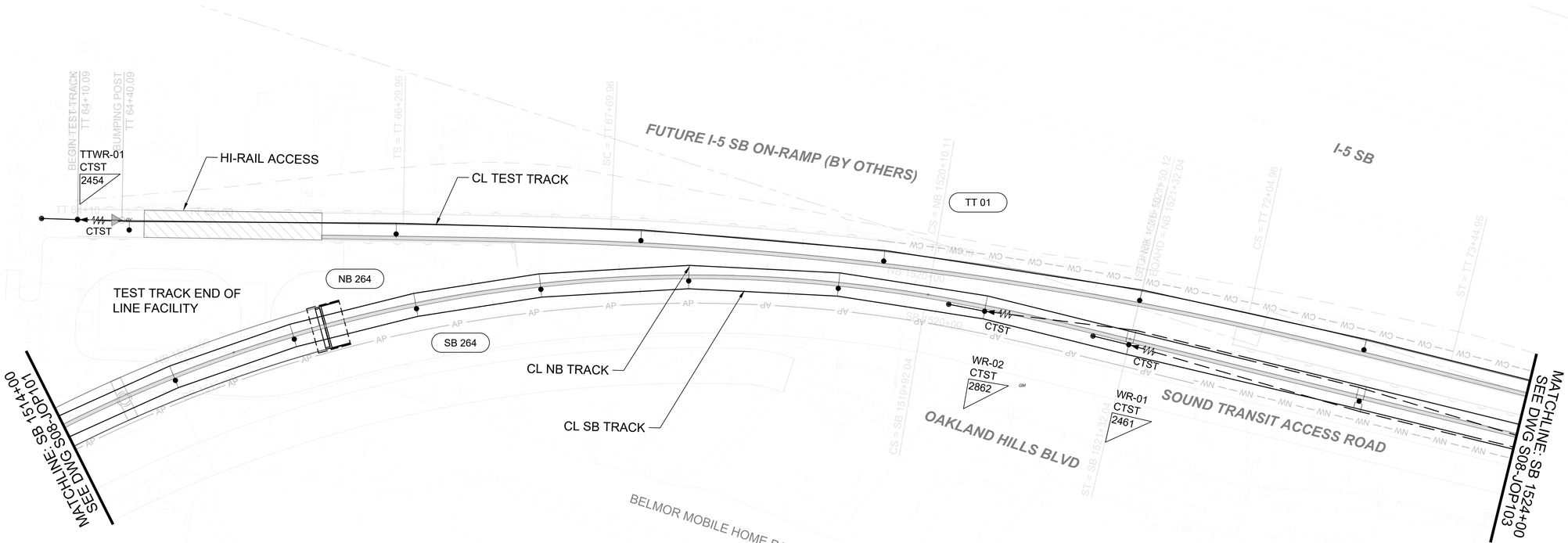
NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107



NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

MOISES RAMOS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1514+00 TO SB STA 1524+00

DRAWING No.: S08-JOP102
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12:49 PM | MACLEMENT
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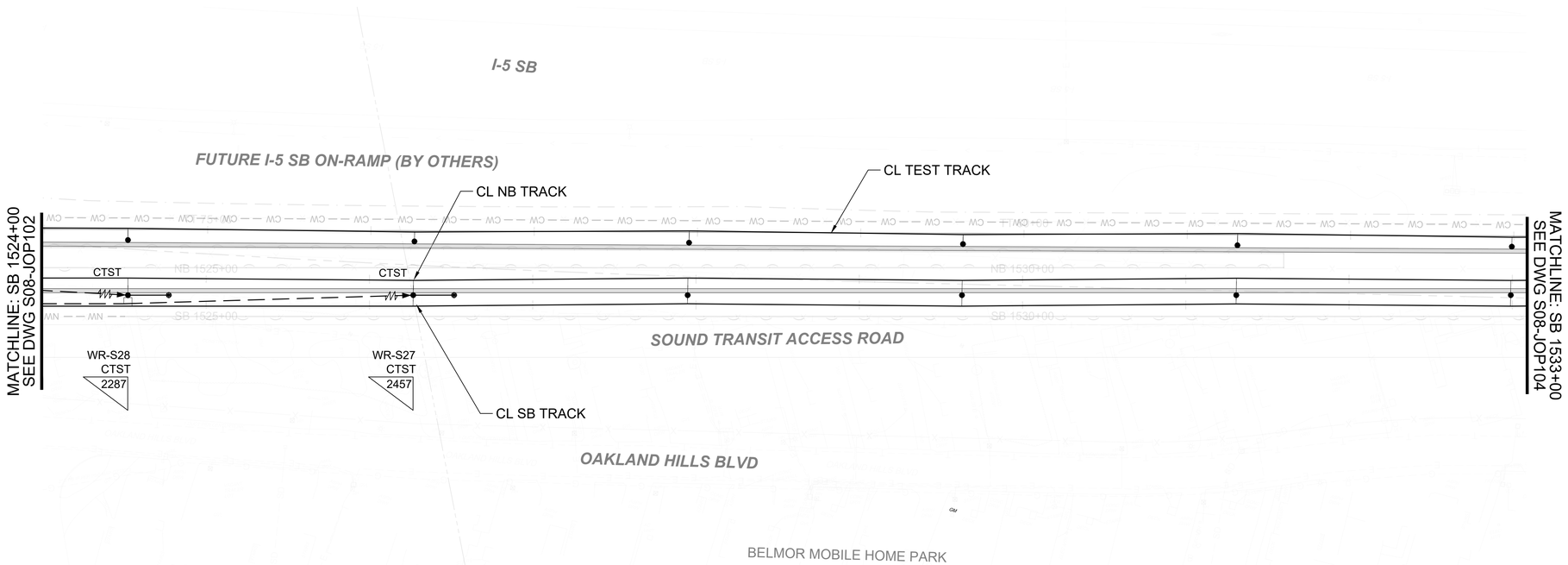
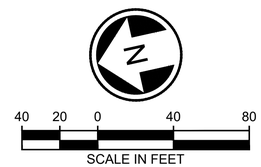
NOTES:
1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107





NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1524+00 TO SB STA 1533+00

DRAWING No.: S08-JOP103
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12-49 PM | MACLEMENT
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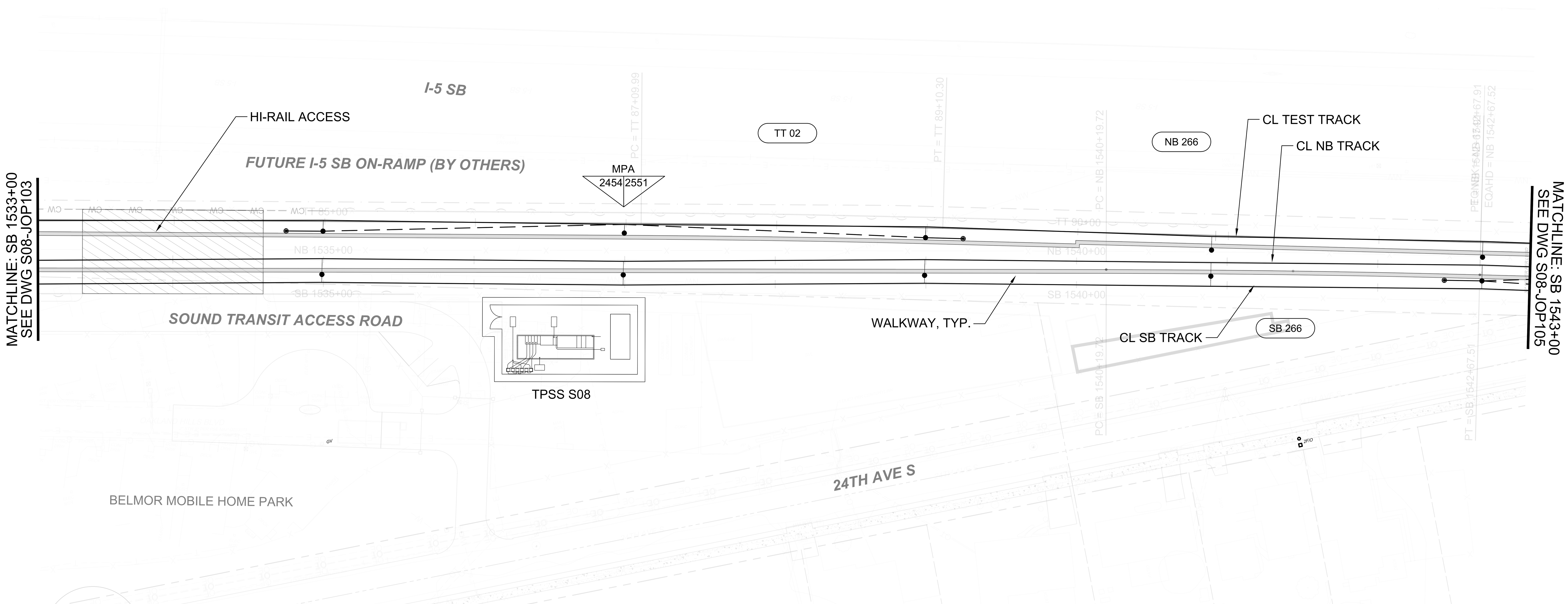
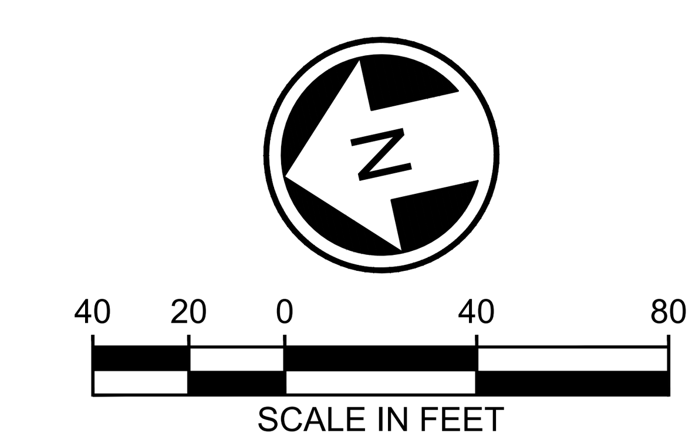
NOTES:
1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107





NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

02/26/24 | 12:49 PM | MACLEMENT
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REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/03/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

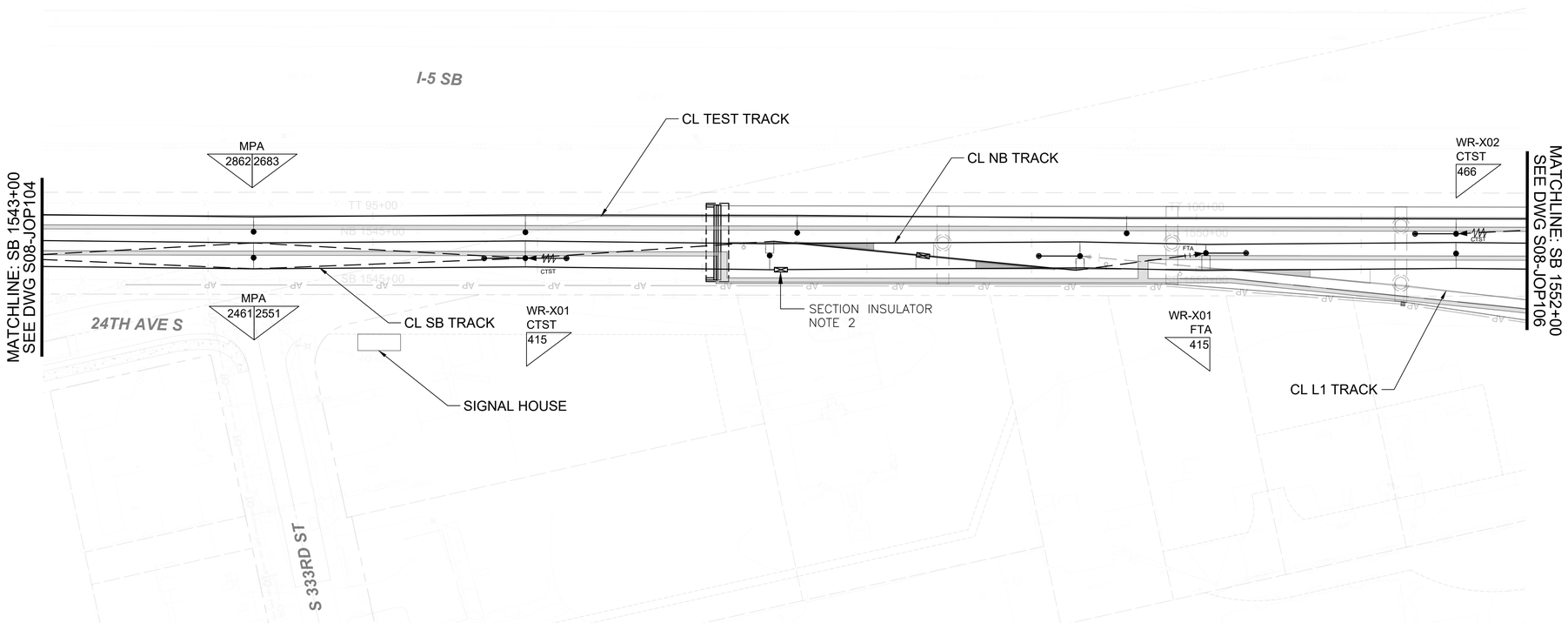
SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

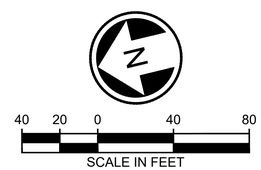
OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1533+00 TO SB STA 1543+00

DRAWING No.: S08-JOP104
FACILITY ID: S08
SHEET No.:
REV: 0

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107
2. FINAL DESIGN BUILDER SHALL COORDINATE PLACEMENT OF SECTION INSULATOR WITH SIGNAL DESIGNER FOR YARD LEAD TRAIN MOVEMENT.





NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

MOISES RAMOS STATE OF WASHINGTON PRELIMINARY LICENSED PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/03/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1543+00 TO SB STA 1552+00

DRAWING No.: S08-JOP105
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12:49 PM | MACLEMENT
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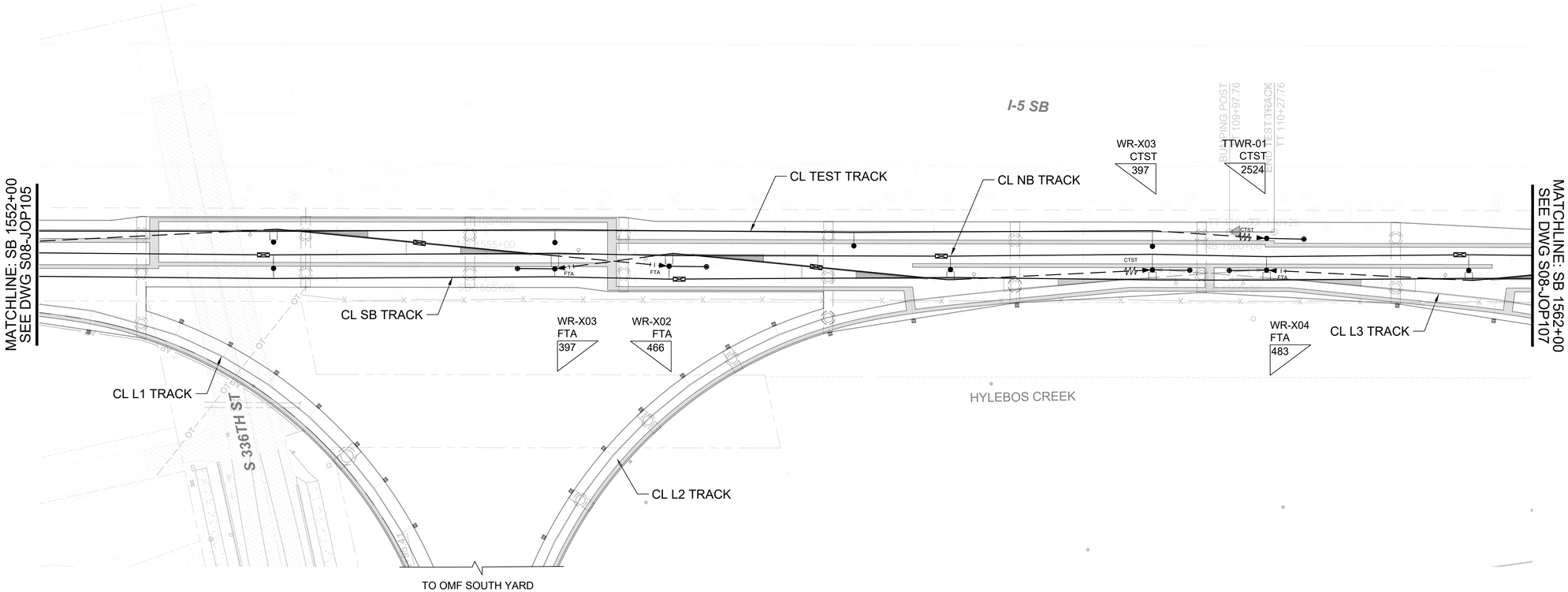
NOTES:
1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107



40 20 0 40 80
SCALE IN FEET

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

MOISES RAMOS — STATE OF WASHINGTON — PRELIMINARY — PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1552+00 TO SB STA 1562+00

DRAWING No.: S08-JOP106
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12:49 PM | MACLEMENT
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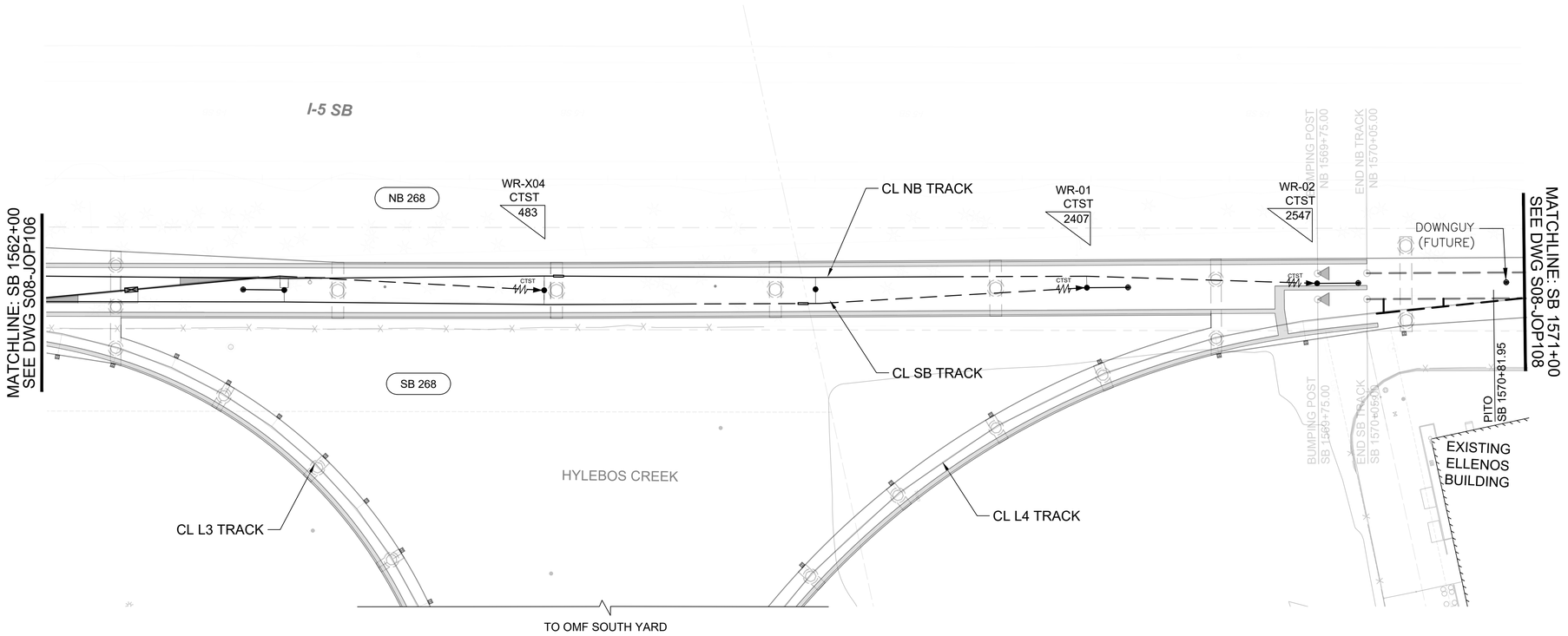
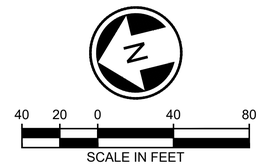
NOTES:
1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107





NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

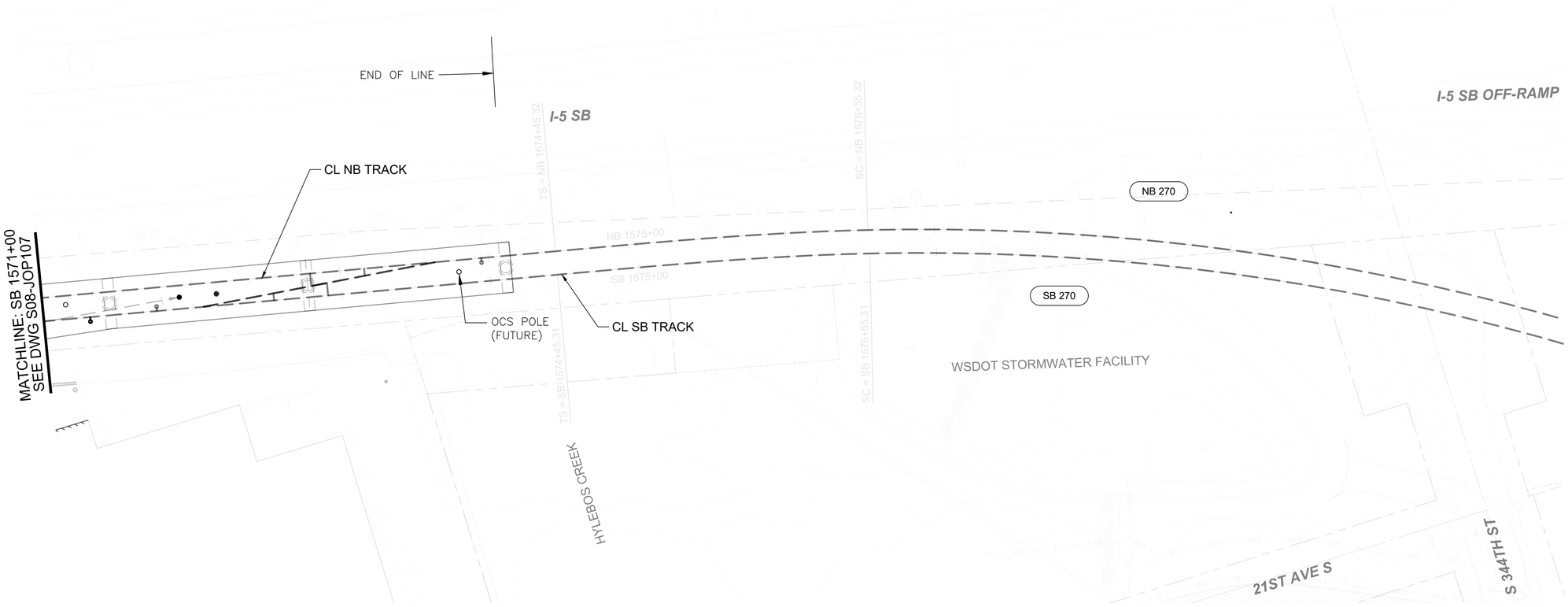
SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1562+00 TO SB STA 1571+00

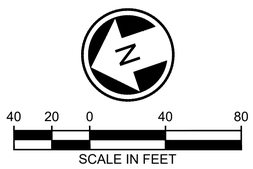
DRAWING No.: S08-JOP107
FACILITY ID: S08
SHEET No.: REV: 0

02/26/24 | 12:49 PM | MACLEMENT
C:\PW\WORKING\WEST01\D2780549\OMFS-S08-JOP100-108.DWG

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS, SEE DWGS STD-GZN03, STD-GZN032, STD-GZN033, STD-GZN106, AND STD-GZN107





NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

MOISES RAMOS LEMUS — STATE OF WASHINGTON — PROFESSIONAL ENGINEER

HDR

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/03/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

AHJ:

PACKAGE #

SCALE: 1"=40'
FILENAME: OMFS-S08-JOP100-108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
MAINLINE LAYOUT
SB STA 1571+00 TO SB STA 1579+70

DRAWING No.: S08-JOP108
FACILITY ID: S08
SHEET No.: REV: 0

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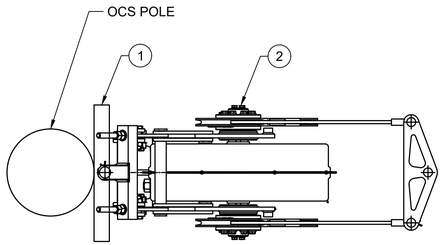
NOTES:

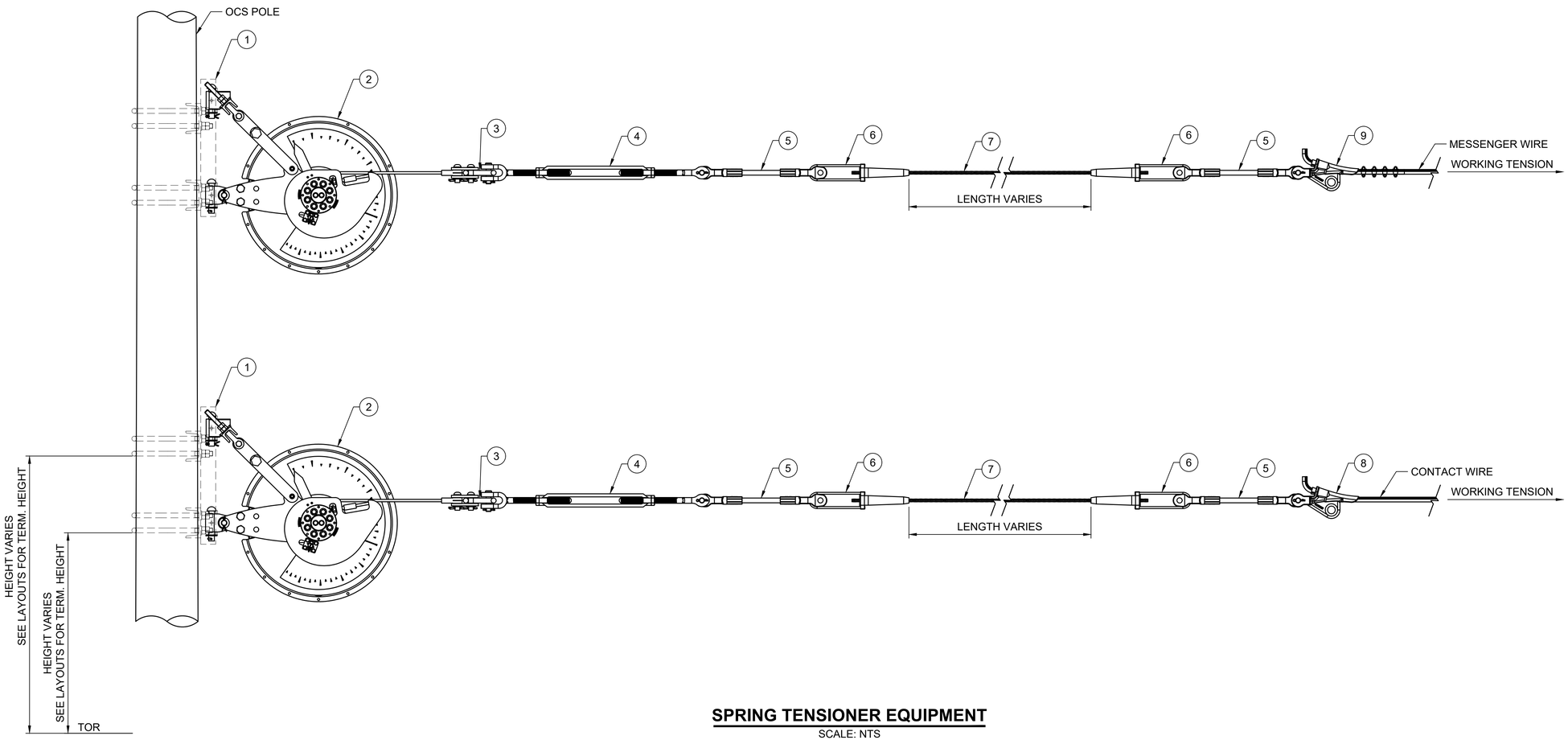
1. CONTRACTOR TO DETERMINE POLE SIZE AT ATTACHMENT HEIGHT, AND COORDINATE DESIGN OF POLE BRACKET PRIOR TO FABRICATION.
2. ALL DIMENSIONS AND BOLT SIZES SHALL BE DETERMINED BY CONTRACTOR BASED ON FURNISHED CATENARY COMPONENTS PRIOR TO FABRICATION.
3. BOLT THREAD PROJECTION THROUGH NUTS SHALL NOT EXCEED 2" IN LENGTH.
4. POLE BRACKET ASSEMBLIES MAY NOT BE MOUNTED WITHIN THE TOP 6" OF THE OCS POLE.



PLAN VIEW

SPRING TENSIONER (A)

SCALE: NTS



SPRING TENSIONER EQUIPMENT

SCALE: NTS

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. RAMOS
DRAWN BY: M. CLEMENT
CHECKED BY: R. DEMERS
APPROVED BY: M. RAMOS

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 07/07/2023
REVIEWED BY:
DATE: 07/03/2023

LINE IS 1" AT FULL SCALE

SCALE: NTS
FILENAME: OMFS-S08-JOD108
CONTRACT No.: AE-0030-17
DATE: 2/27/2024

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

OVERHEAD CONTACT SYSTEMS
ASSEMBLY
SPRING TENSIONER - MAINLINE

DRAWING No.: **S08-JOD108**
FACILITY ID: M08
SHEET No.: REV: 0

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SIGNAL SYSTEM SYMBOLS AND ABBREVIATIONS

SINGLE LINE DIAGRAM	SYMBOLS
EXISTING TWC LOOP	
TWC LOOP	
TRACK CIRCUIT BOUNDARY	
NEGATIVE RETURN CONNECTION TO TPSS	
WAYSIDE SIGNAL	
BUMPING POST SIGNAL	
CROSS BOND	XB
END OF TRACK	EOT
EDGE OF PLATFORM	EOP
POWER CONTROLLED SWITCH	
END OF TEST TRACK	TT
DESTINATION SIGN	
MANHOLE	MH

SIGNAL LIGHTS	SYMBOLS
STOP ASPECT (AMBER)	
PROCEED DIVERGE LEFT ASPECT (WHITE)	
PROCEED DIVERGE RIGHT ASPECT (WHITE)	
PROCEED STRAIGHT ROUTE ASPECT (WHITE)	

DOUBLELINE TRACK SCHEMATIC	
DUAL CONTROL ELECTRIC SWITCH MACHINE	
TWC LOOP	
CAB LOOP	X X
SIGNAL, POLE MOUNTED	
DESTINATION SIGN	
IMPEDANCE BOND	
INSULATED JOINT	
CROSS BOND	XB
TRACTION POWER SUBSTATION	TPSS
SIGNAL BUNGALOW	CIH
SIGNAL RAIL	
NEGATIVE RETURN RAIL	

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

AHJ:

JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 23627163 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

SOUNDTRANSIT
DATE:

PRESCRIPTIVE

SCALE: NTS
FILENAME: OMFS-STD-JSN001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
SIGNALS SYSTEM
SYMBOLS AND LEGEND

DRAWING No.: **STD-JSN001**
FACILITY ID: STD
SHEET No.: REV: 0

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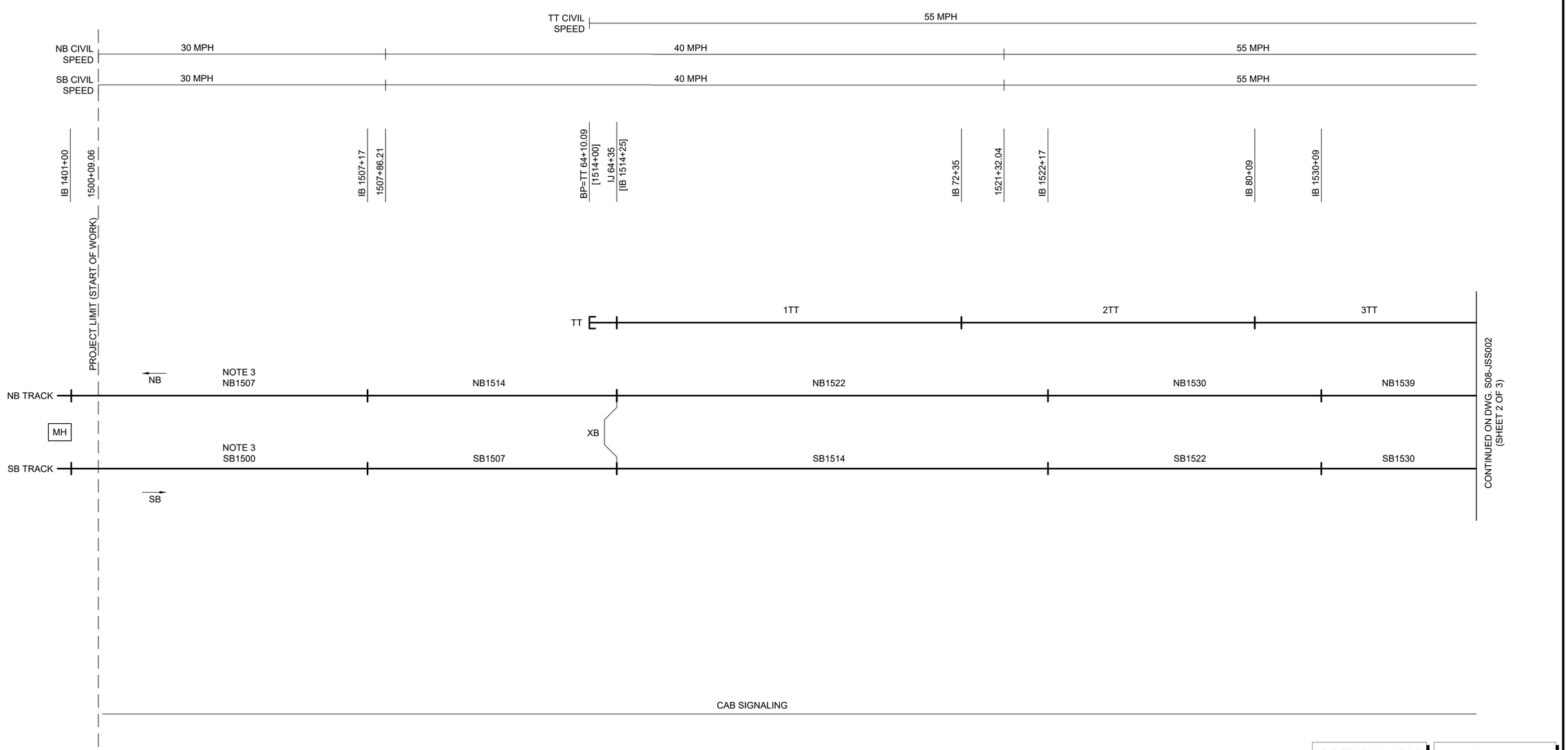
NOTES:

1. FINAL BLOCK SIZING AND LOCATIONS SHALL BE FINALIZED BY THE CONTRACTOR. QUANTITIES SHOWN FOR COST ESTIMATE ONLY.
2. EXISTING TRACKING CHAINING 1401+00 IS EQUIVALENT TO 1500+00 OF THIS PROJECT'S NEW TRACK EXTENSION.
3. NEW TRACK CIRCUIT SHALL EXTEND TO EXISTING IJ AT END OF EXISTING TRACK.



PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

AHJ:

PACKAGE #

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

PRELIMINARY — JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 23627163 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

SOUNDTRANSIT

SCALE: NTS
FILENAME: OMFS-S08-JSS001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

SIGNALS SYSTEM
MAINLINE SINGLE LINE TRACK PLAN
SHEET 1 OF 3

DRAWING No.: **S08-JSS001**
FACILITY ID: S08
SHEET No.: REV: 0

02/23/24 | 11:48 AM | MSHEPPARD
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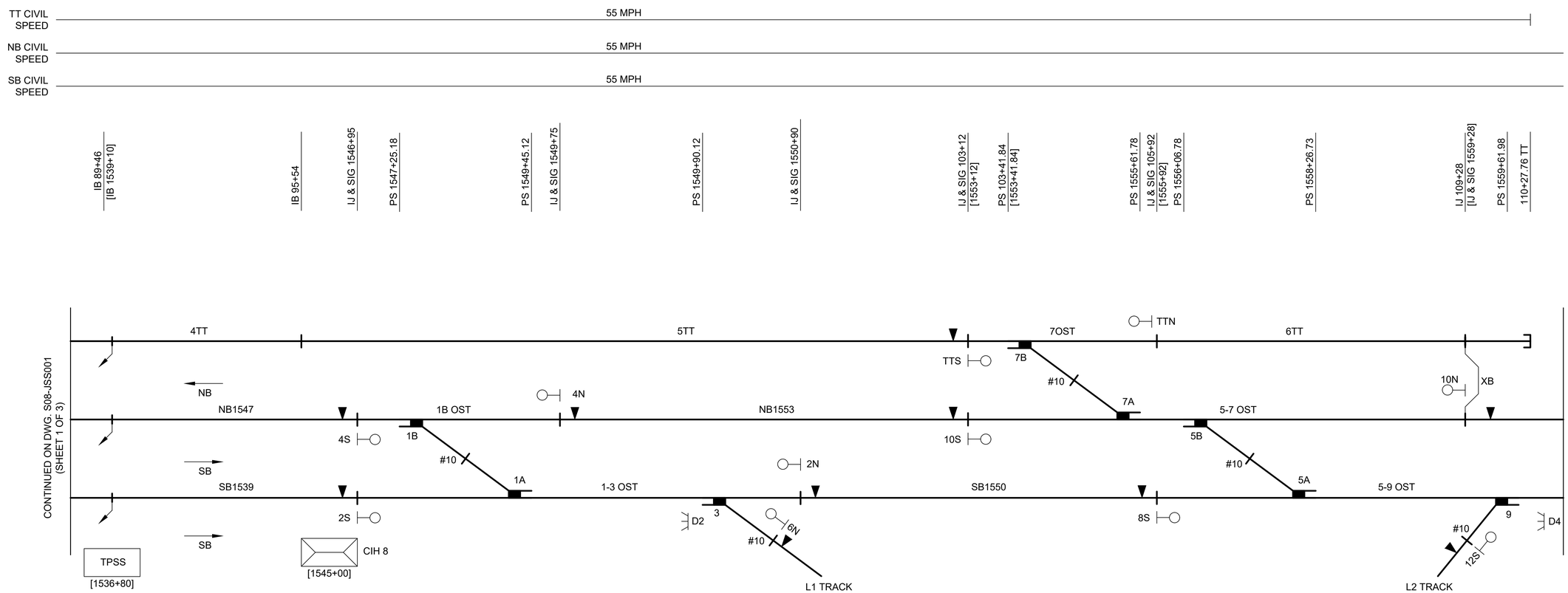
NOTES:

1. FINAL BLOCK SIZING AND LOCATIONS SHALL BE FINALIZED BY THE CONTRACTOR. QUANTITIES SHOWN FOR COST ESTIMATE ONLY.



CAB SIGNALING

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

AHJ:

PRELIMINARY — JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 23627163 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JSS002
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

SIGNALS SYSTEM
MAINLINE SINGLE LINE TRACK PLAN
SHEET 2 OF 3

DRAWING No.: **S08-JSS002**
FACILITY ID: S08
SHEET No.: REV: 0

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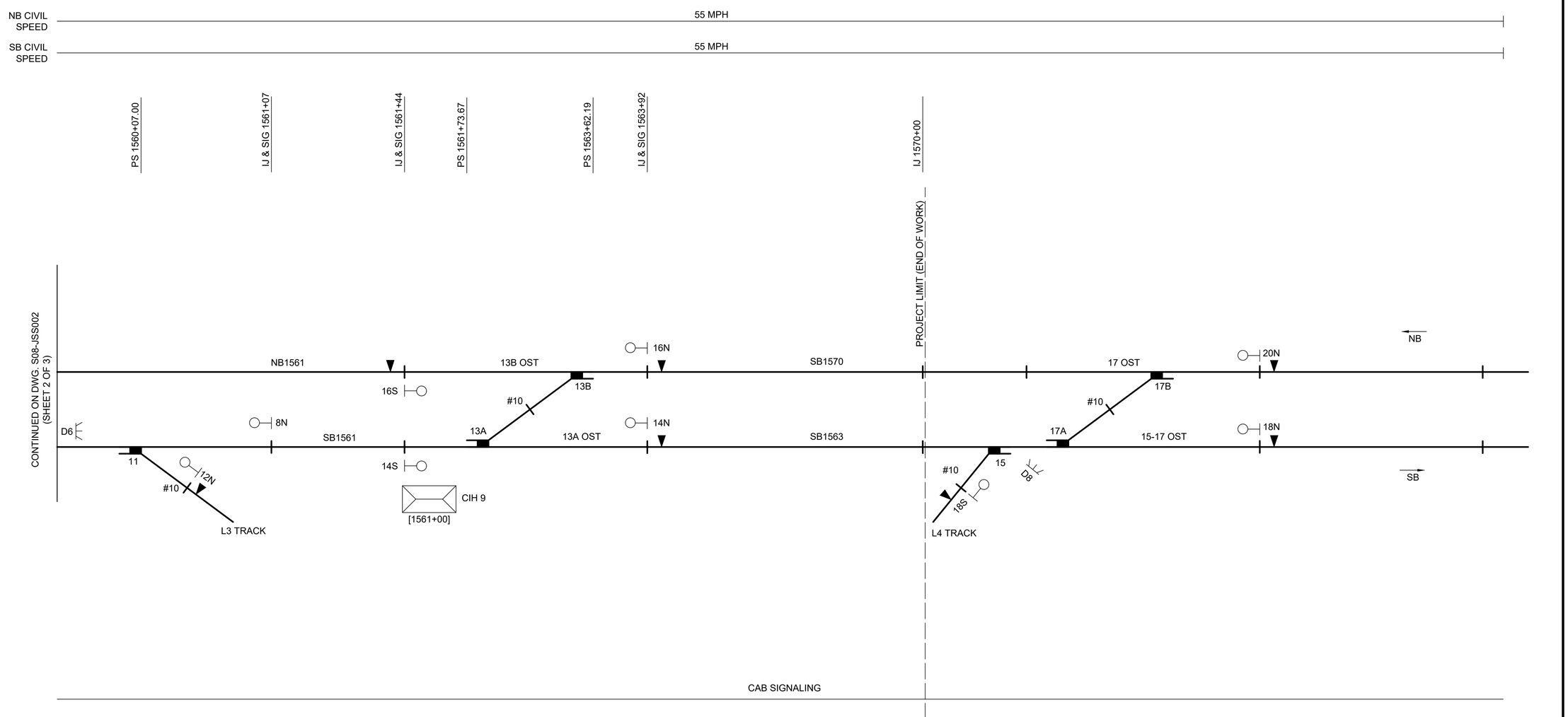
NOTES:

1. FINAL BLOCK SIZING AND LOCATIONS SHALL BE FINALIZED BY THE CONTRACTOR. QUANTITIES SHOWN FOR COST ESTIMATE ONLY.



PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDELMAN
APPROVED BY: J. CANTWELL

AHJ:

JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 23627163 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JSS003
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

SIGNALS SYSTEM
MAINLINE SINGLE LINE TRACK PLAN
SHEET 3 OF 3

DRAWING No.: **S08-JSS003**
FACILITY ID: S08
SHEET No.: REV: 0

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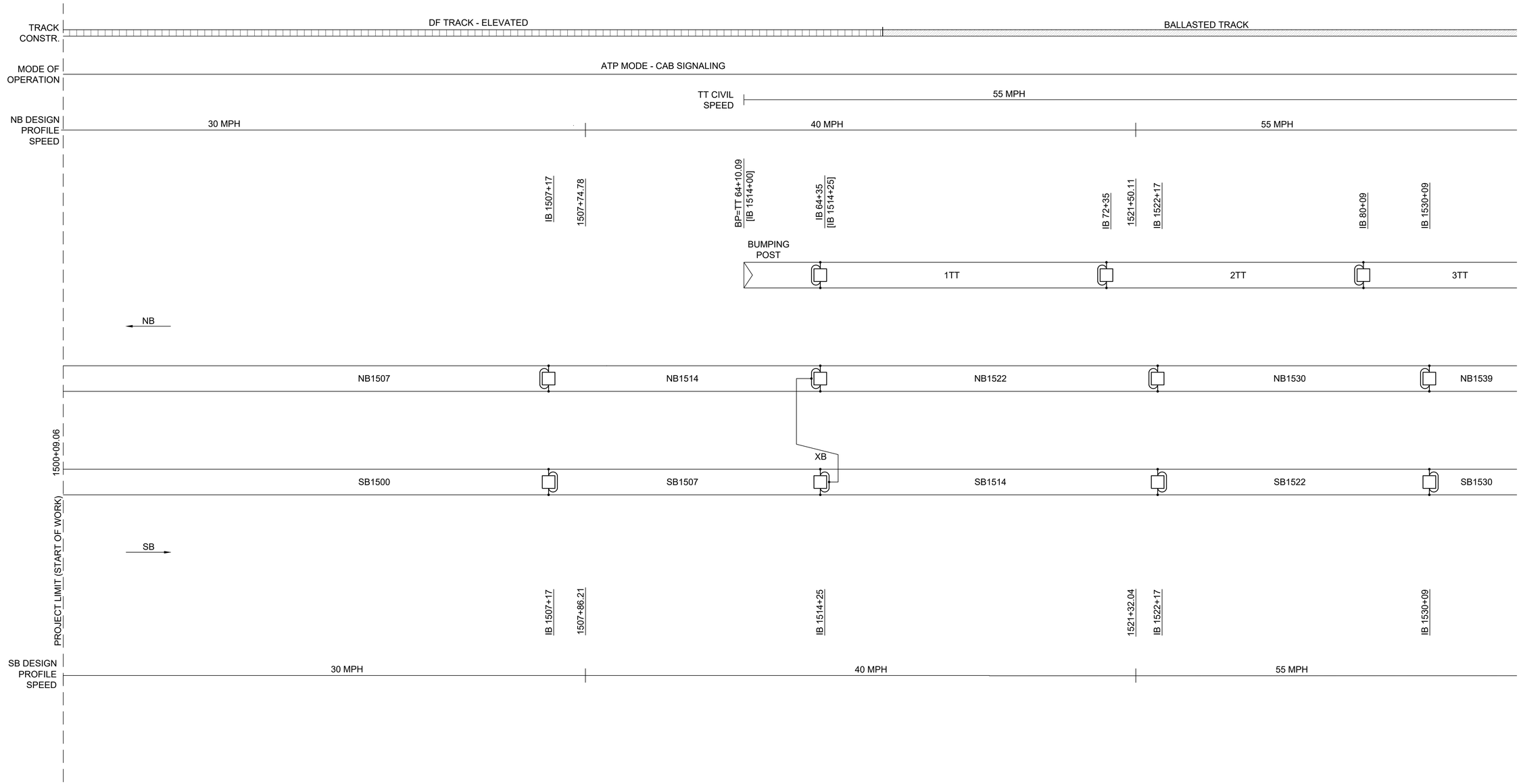
NOTES:

1. DESIGN SHOWN IS PRELIMINARY ONLY. THE BLOCK DESIGN AND SPACING TO BE FINALIZED BY THE CONTRACTOR.
2. QUANTITIES ARE PRELIMINARY FOR USE OF COST ESTIMATING ONLY.



CONTINUED ON DWG. S08-JSS102 (SHEET 2 OF 3)

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

AHJ:

PRELIMINARY — JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 22027163 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

SOUNDTRANSIT

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JSS101
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
SIGNALS SYSTEM
MAINLINE DOUBLE LINE TRACK PLAN
SHEET 1 OF 3

DRAWING No.: **S08-JSS101**
FACILITY ID: S08
SHEET No.: REV: 0

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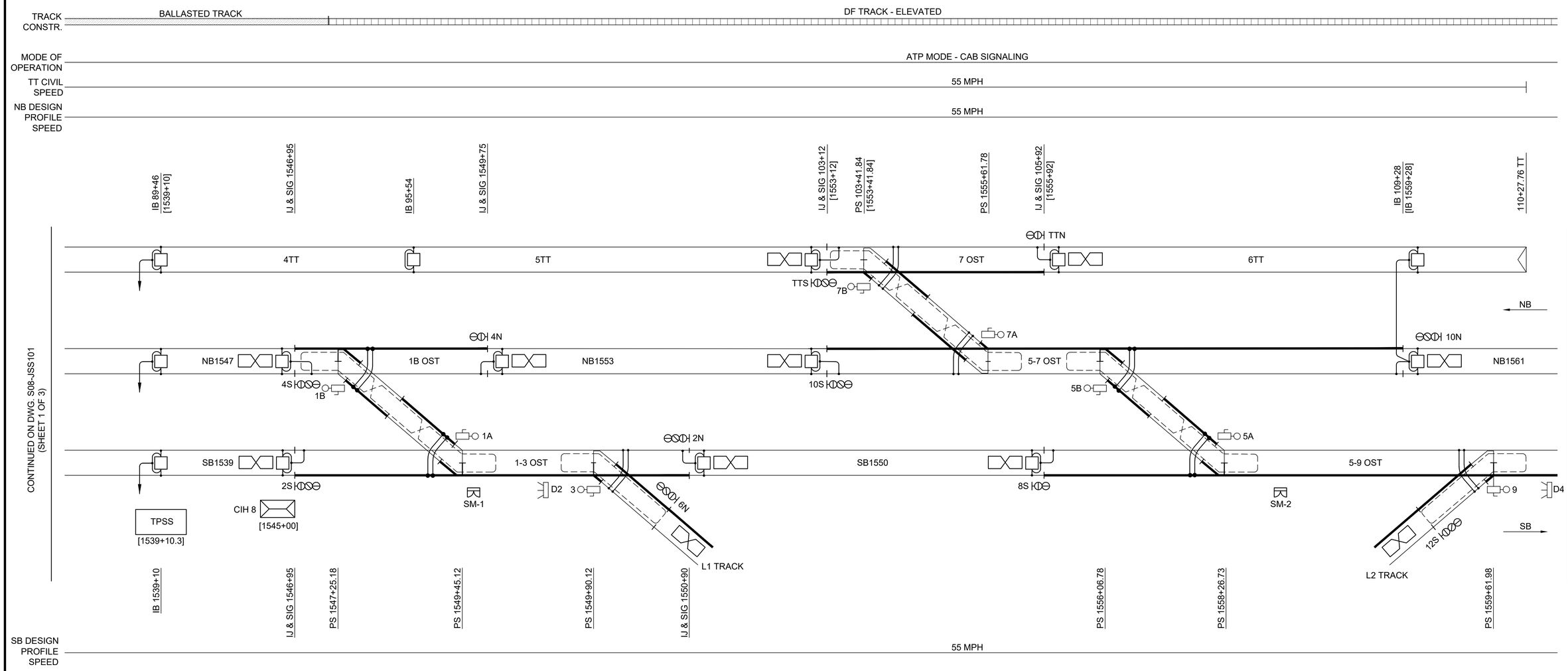
NOTES:

1. DESIGN SHOWN IS PRELIMINARY ONLY. THE BLOCK DESIGN AND SPACING TO BE FINALIZED BY THE CONTRACTOR.
2. QUANTITIES ARE PRELIMINARY FOR USE OF COST ESTIMATING ONLY.



CONTINUED ON DWG. S08-JSS101 (SHEET 1 OF 3)

CONTINUED ON DWG. S08-JSS103 (SHEET 3 OF 3)

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:
DATE:

HDR
Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: OMFS-S08-JSS102
CONTRACT No.: AE0030-17

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

SIGNALS SYSTEM
MAINLINE DOUBLE LINE TRACK PLAN
SHEET 2 OF 3

DRAWING No.: **S08-JSS102**
FACILITY ID: S08
SHEET No.: REV: 0

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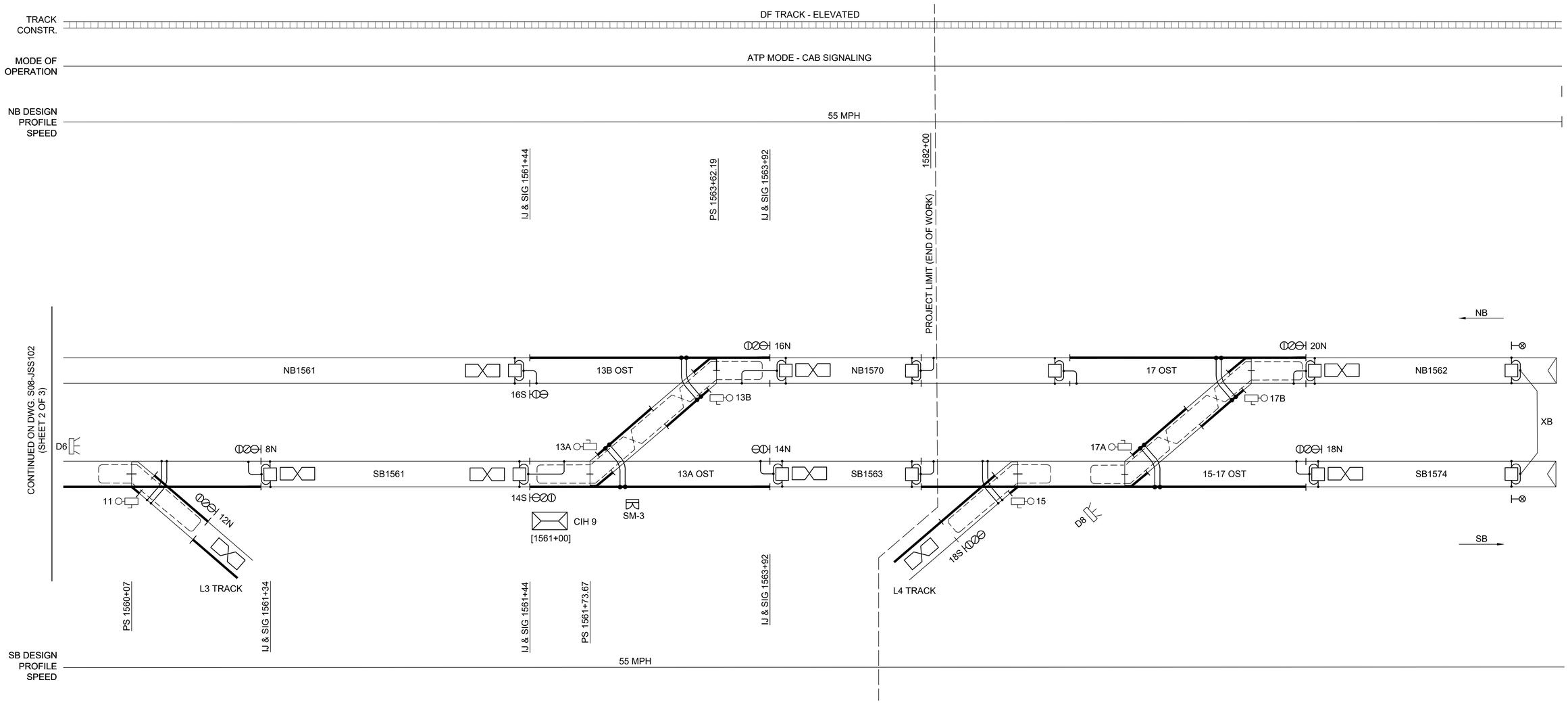
NOTES:

1. DESIGN SHOWN IS PRELIMINARY ONLY. THE BLOCK DESIGN AND SPACING TO BE FINALIZED BY THE CONTRACTOR.
2. QUANTITIES ARE PRELIMINARY FOR USE OF COST ESTIMATING ONLY.



PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: S. EDELMAN
DRAWN BY: M. SHEPPARD
CHECKED BY: A. EDLEMAN
APPROVED BY: J. CANTWELL

AHJ:

PRELIMINARY — JAMES WILLIAM CANTWELL — STATE OF WASHINGTON — 23627163 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

PACKAGE #

SCALE: NTS
FILENAME: OMFS-S08-JSS103
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

SIGNALS SYSTEMS
MAINLINE DOUBLE LINE TRACK PLAN
SHEET 3 OF 3

DRAWING No.: **S08-JSS103**
FACILITY ID: S08
SHEET No.: REV: 0

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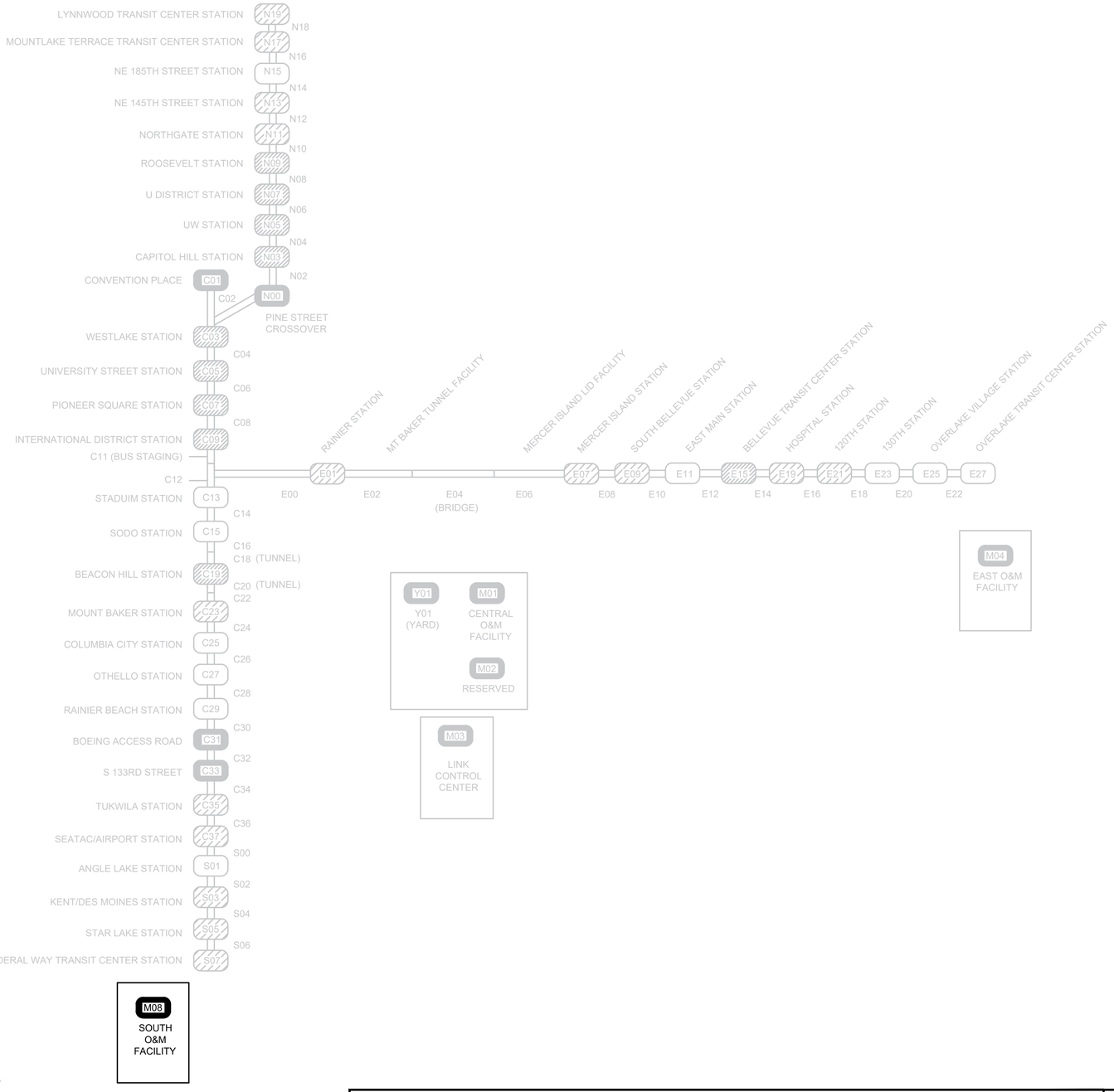

NOTES:

1. LOCATION ID FOR INFORMATION ONLY.
2. TRACTION POWER SUBSTATIONS AND SIGNAL BUNGALOWS HAVE A LOCATION CODE THE SAME AS THE CLOSEST STATION EVEN IF THE BUILDING IS IN AN INTERMEDIATE SECTION.
3. EXTEND THE EXISTING BACKBONE NETWORK FROM FEDERAL WAY TRANSIT CENTER STATION TO OMFS IN REDUNDANT AND DIVERSE PATHS TO SUPPORT ALL EXTENDED COMMUNICATIONS SUBSYTEMS.
4. PROVIDE FIBER CONNECTION TO THE TEST TRACK FACILITY.

LEGEND

- AT-GRADE STATION
- GRADE SEPARATED STATION
- TUNNEL STATION
- FACILITY (NON-STATION)
- TRACK SECTION

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: P. PERREAULT
APPROVED BY: J. SCHIMPF

AHJ:

JONATHAN A. SCHIMPF, STATE OF WASHINGTON, 21817598, REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 3001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

SOUNDTRANSIT

PACKAGE #

SCALE: NTS
FILENAME: OMFS-STD-JCS001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
COMMUNICATION SYSTEM
PROJECT LOCATION IDENTIFICATION
M08

DRAWING No.: STD-JCS001
FACILITY ID: M08
SHEET No.: REV: 0

02/22/24 | 9:36 PM | ZZHANG
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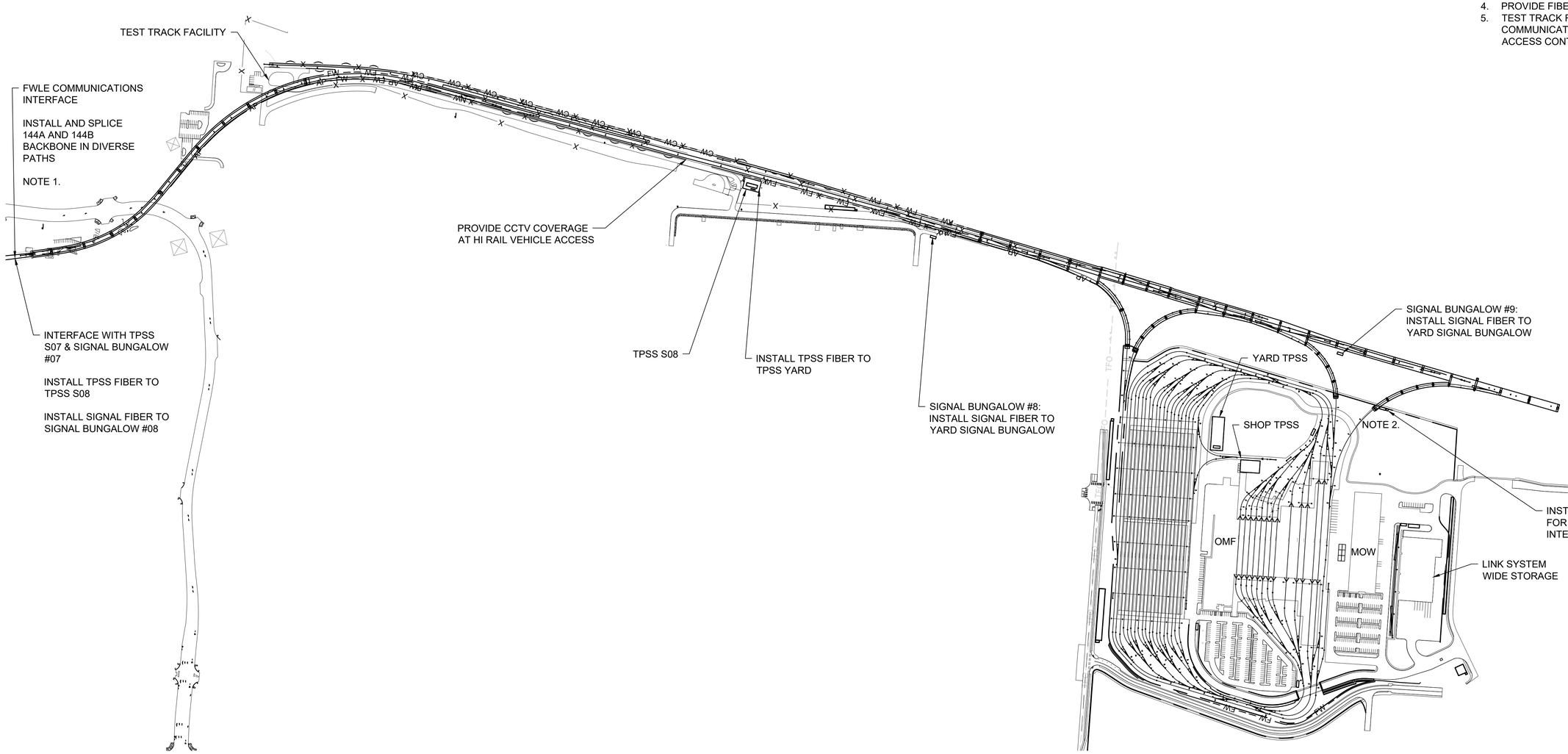
NOTES:
1. SPLICE COMMUNICATIONS CABLE TO FWLE CABLE AT FEDERAL WAY TRANSIT CENTER MANHOLE FOR CONNECTION TO FIBER BACKBONE.
2. COORDINATE WITH SOUND TRANSIT ON LOCATION OF MANHOLE. PROVIDE FIBER SLACK TO BE COILED IN MANHOLE FOR FUTURE TDLE SPLICE EXTENSION.
3. COORDINATE WITH SOUND TRANSIT ON PLACEMENT OF TRACK INTRUSION DETECTION SYSTEM ALONG THE GUIDEWAY.
4. PROVIDE FIBER TO THE TEST TRACK FACILITY.
5. TEST TRACK FACILITY SHALL INCLUDE ALL COMMUNICATIONS SUBSYSTEMS SUCH AS CCTV, ACCESS CONTROL, RADIO, AND TELEPHONE.



COMMUNICATIONS SYSTEMS KEY- PLAN
SCALE: 1" = 250'

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: P. PERREAULT
APPROVED BY: J. SCHIMPF

AHJ:

PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

PACKAGE #

SCALE: 1" = 250'
FILENAME: OMFS-S08-JCK001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
COMMUNICATIONS SYSTEMS KEY PLAN

DRAWING No.: STD-JCK001
FACILITY ID: S08
SHEET No.: REV: 0

02/22/24 | 9:39 PM | ZZHANG
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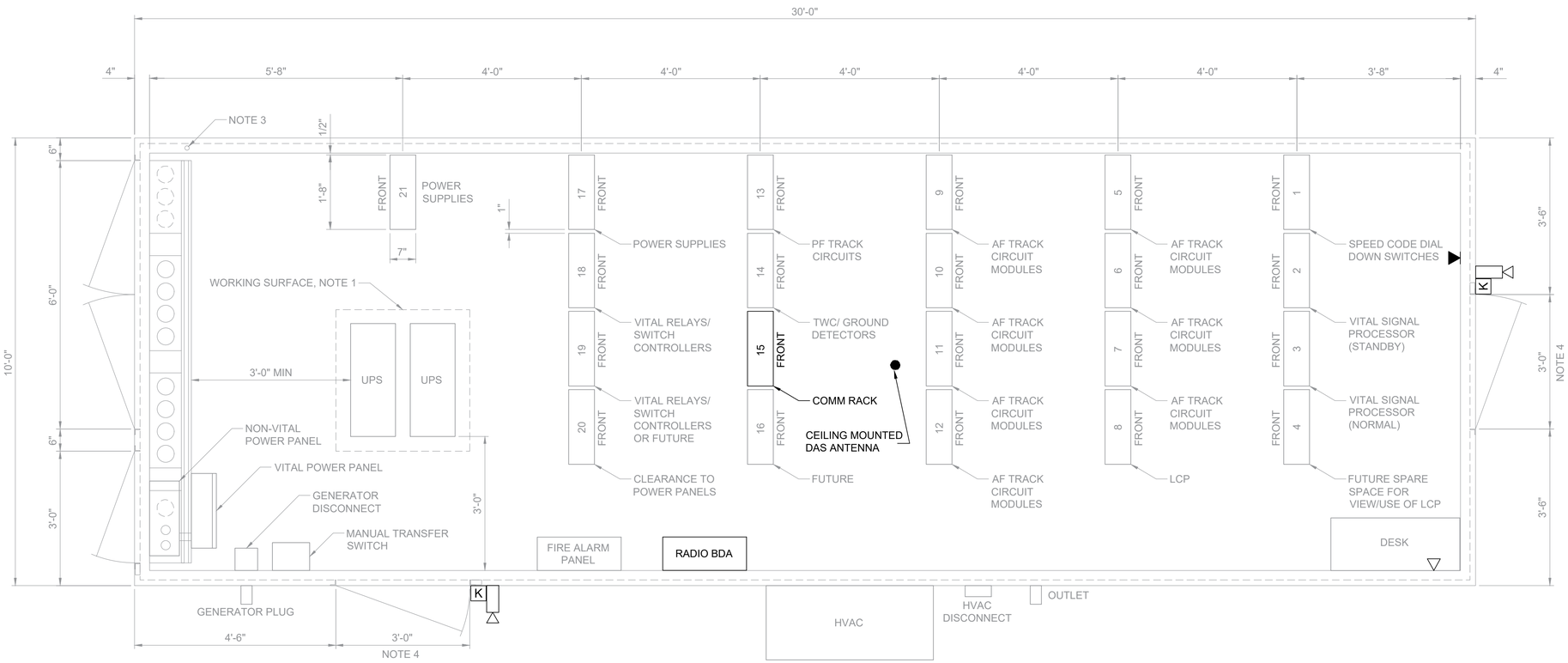
GENERAL NOTES:

1. PROVIDE NON-CONDUCTIVE REMOVABLE WORKING SURFACE COVER OVER THE TOP OF THE UPS UNITS. COVER SHALL NOT RESTRICT THE VENTILATION OF THE UPS UNITS.
2. SEE TYPICAL SIGNAL HOUSE, SIGNAL POWER DISTRIBUTION PLAN, JSD208 FOR SIGNAL LINE DIAGRAM OF HOUSE POWER AND OTHER DETAILS.
3. RADIO ANTENNA, PROVIDE PROVISIONS FOR A MAST, 10'-0" ABOVE ROOF LINE OF SIGNAL HOUSE, AND ANTENNA COAX CABLE ENTRANCE. BOND ANTENNA MAST TO HOUSE GROUNDING STUD AND BIDIRECTIONAL AMPLIFIER.
4. CLOSED CIRCUIT CAMERA COVERAGE AT ENTRANCE DOORS.
5. CONTRACTOR SHALL COORDINATED WITH SOUND TRANSIT ON EXACT LOCATION OF COMMUNICATIONS END DEVICES.
6. REFER TO JZN004 FOR SYMBOLS.



10'-0" x 30'-0" SIGNAL HOUSE
SCALE: 3/4" = 1'-0"

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: M. STAHLEY
APPROVED BY: J. SCHIMPF

AHJ:

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23617598 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

PACKAGE #

SCALE: 3/4" = 1'0"
FILENAME: OMFS-S08-JCD001
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

COMMUNICATION SYSTEM
TYPICAL SIGNAL HOUSE
EQUIPMENT LAYOUT

DRAWING No.: **S08-JCD001**
FACILITY ID: S08
SHEET No.: REV: 0

02/22/24 | 9:43 PM | ZZHANG
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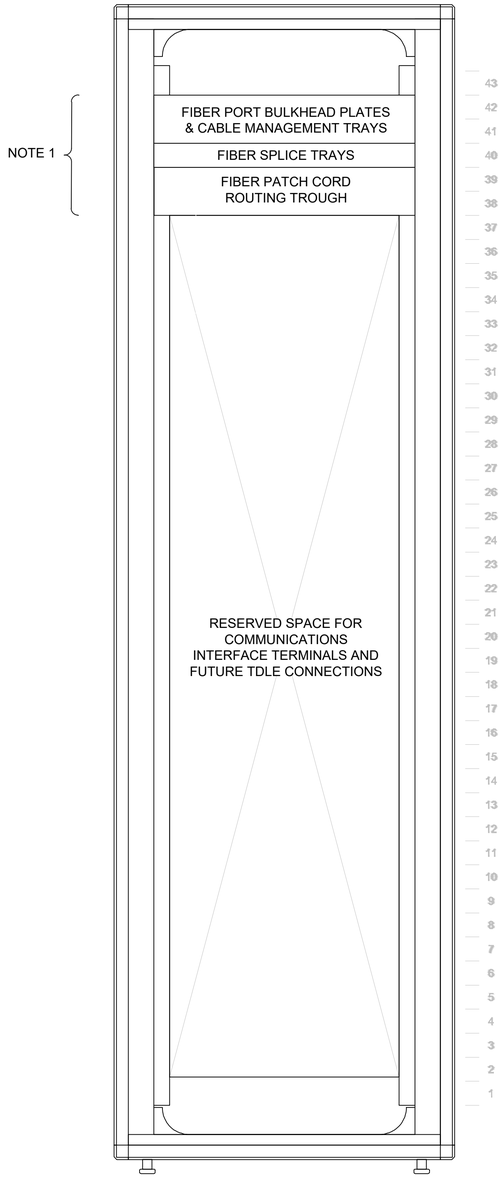
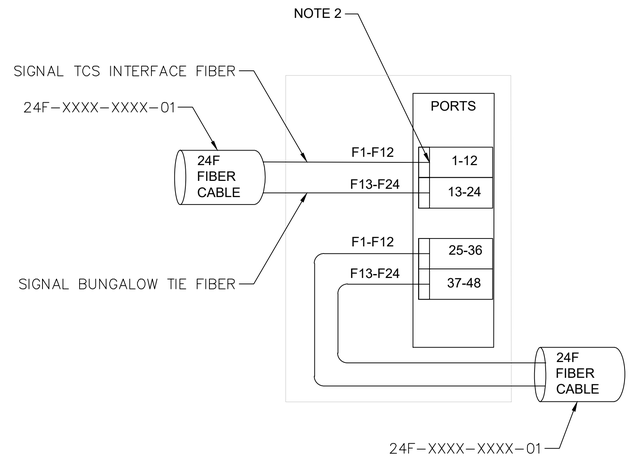


FRONT VIEW

SIGNAL COMM RACK

SCALE: NTS



SXX-FDP-S

SCALE: NTS

NOTES:

1. RACK PROVIDED FOR ALL COMMUNICATIONS TERMINATIONS AND SUBSYSTEM CONNECTIONS.
2. PROPERLY SECURE FIBER CABLE TO FDP CHASSIS PER FDP MANUFACTURER REQUIREMENTS. ROUTE FIBER BUFFER TUBES INTO FDP WHILE MAINTAINING PROPER FIBER TUBE BEND RADIUS.
3. SPLICE DESIGNATED FIBERS TO SC PIGTAILS IN SPLICE TRAY, TERMINATE TO SC BULKHEAD PORTS AS INDICATED ON DRAWING.

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: M. STAHLEY
APPROVED BY: J. SCHIMPF

PRELIMINARY — JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 217598 — REGISTERED PROFESSIONAL ENGINEER

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

AHJ:				PACKAGE #	
SUBMITTED BY: PABLO LOPEZ-HILFIKER	DATE: 2/27/2024	REVIEWED BY:	DATE:	SCALE: NTS	FILENAME: OMFS-S08-JCD002
				CONTRACT No.: AE0030-17	DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

COMMUNICATION SYSTEM
SIGNAL BUNGALOW COMMUNICATIONS
RACK ELEVATION AND FDP DETAIL

DRAWING No.: **S08-JCD002**
FACILITY ID: S08
SHEET No.: REV: 0

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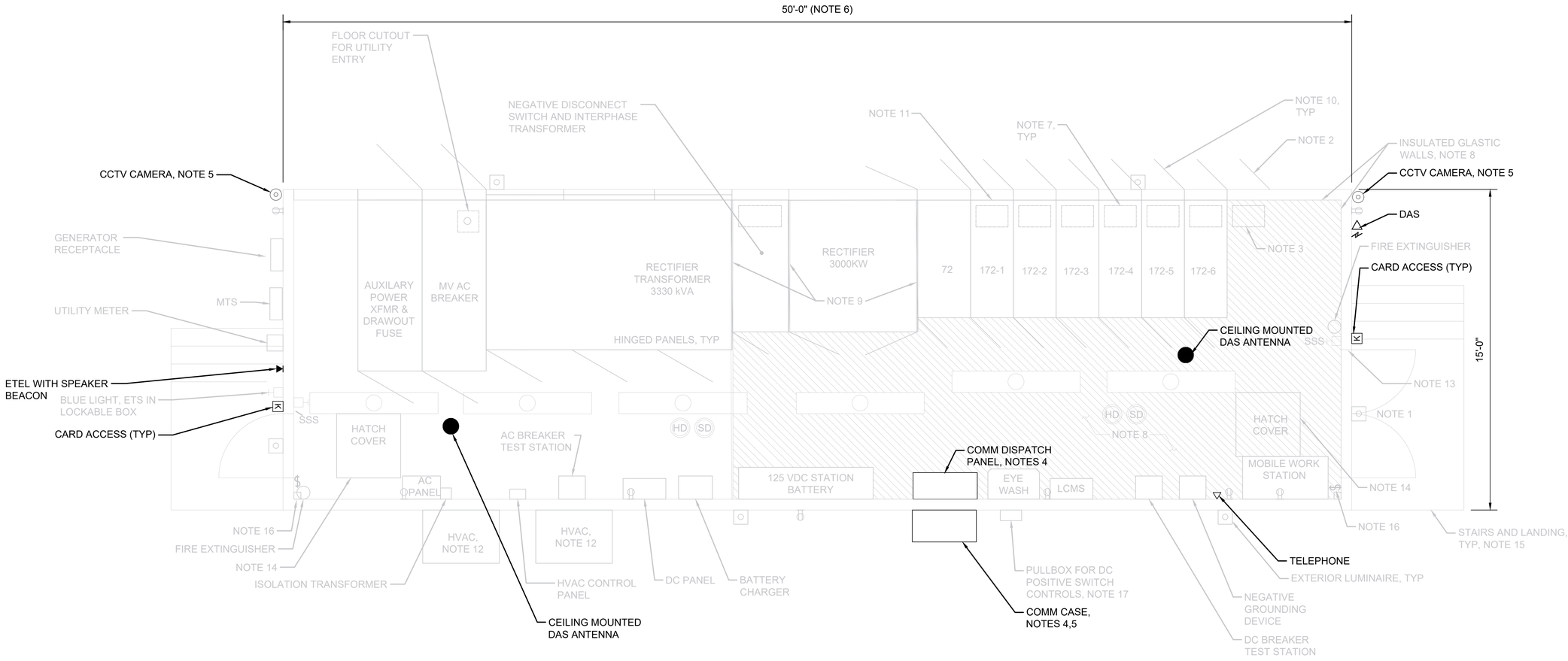
NOTES:

1. PROVIDE REMOVABLE TRANSOM AND WALL PANEL ABOVE DOOR.
2. PROVIDE ONE ADDITIONAL REAR ENTRY DOOR FOR ACCESS TO FUTURE DC FEEDER BREAKER.
3. PROVIDE OPENING IN FLOOR FOR FUTURE FEEDER BREAKER. COVER WITH 1/4" GLASTIC AND FASTEN TO FLOOR.
4. COMM TO DETERMINE FINAL LOCATION AND SIZE.
5. MOUNT CAMERAS AND CASES TO TPSS FOR WATER TEST AND REMOVE FOR SHIPMENT. REINSTALL AT SITE.
6. COORDINATE BUILDING DIMENSIONS AND EQUIPMENT LOADINGS WITH STRUCTURAL ENGINEER.
7. SIZE AND LOCATION OF DC CABLE ENTRANCES TO BE DETERMINED BY CONTRACTOR.
8. PROVIDE ELECTRICAL INSULATION ON ALL WALLS AND FLOOR IN AREAS SHOWN. IF 6' MINIMUM CANNOT BE ACHEIVED, LINE DOORS, FRAMS AND HARDWARE WITH INSULATION. FLOOR INSULATION TO EXTEND TO ALL 3 WALLS.
9. PROVIDE GLASTIC BARRIER BETWEEN RECTIFIER TRANSFORMER AND NEGATIVE DISCONNECT SWITCH. EXTEND GLASTIC 2'-6" BEYOND RECTIFIER TRANSFORMER, AS SHOWN. PROVIDE AN INSULATED FINISHED EDGE ON EXPOSED GLASTIC EDGE.
10. PROVIDE GLASTIC BARIER INSIDE REAR DOOR TO COMPLETE WALL INSULATION WHEN DOOR IS CLOSED.
11. SPACE DC SWITCHGEAR AND RECTIFIER 2 INCHES OFF REAR WALL.
12. HVAC UNIT LAYOUT IS FOR REFERENCE ONLY.
13. DOOR FRAMES AND DOORS TO BE INSULATED HERE REQUIRED TO MEET 6 FOOT MINIMUM FROM DC SWITCHGEAR TO GROUNDED OBJECT.
14. HATCH COVER SHALL BE RATED TO HANDLE MAXIMUM EQUIPMENT WEIGHT.
15. PROVIDE STAIRS AND LANDINGS.
16. PROVIDE CONTINUOUS GROUND BUS AROUND ENTIRE TPSS.
17. LOCATE AND SIZE PULLBOX TO SUIT SITE CONDITIONS.



TPSS EQUIPMENT LAYOUT - PLAN

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

Refer to the plan set COVER drawing for disclaimers regarding this drawing.

REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: M. STAHLEY
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

JONATHAN A. SCHIMPF — STATE OF WASHINGTON — 23017398 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

HDR

Burns
BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/24
REVIEWED BY:
DATE:

SOUNDTRANSIT

SCALE: 3/8" = 1'-0"
FILENAME: OMFS-S08-JCD003
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH

COMMUNICATION SYSTEM
TYPICAL TPSS
EQUIPMENT LAYOUT

DRAWING No.: S08-JCD003
FACILITY ID: S08
SHEET No.:
REV: 0

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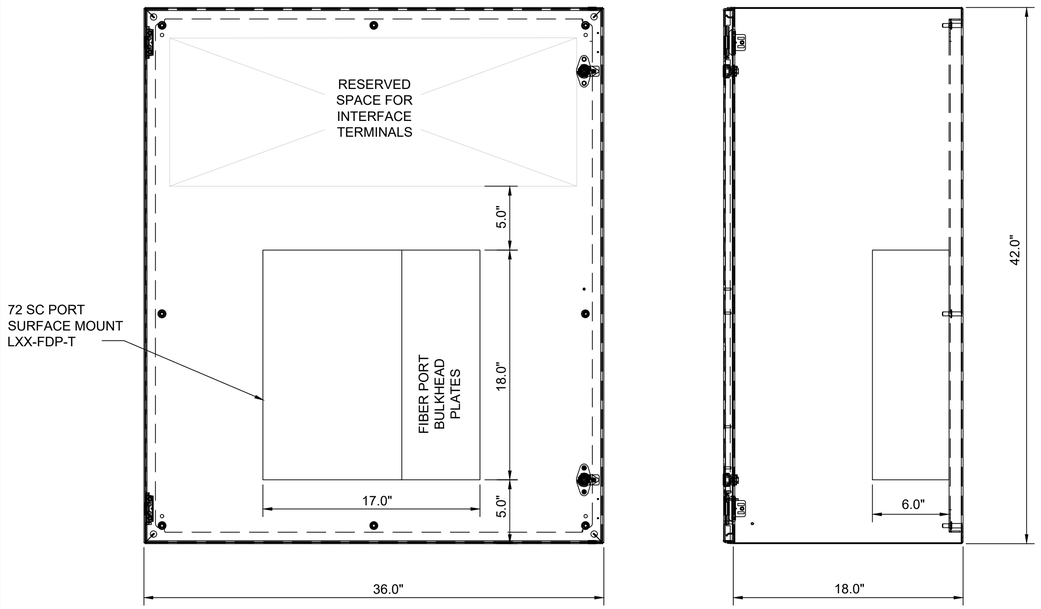


FRONT VIEW

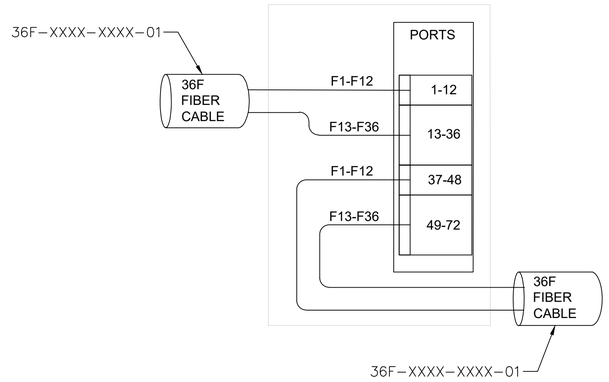
SIDE VIEW

INTERFACE TERMINAL CABINET - ENCLOSURE DETAIL

SCALE: 1" = 6"

NOTES:

1. 14 GUAGE STEEL WELDED CONSTRUCTION. SEAMS WELDED AND GROUND SMOOTH. COLOR: ANSI 61 GRAY, SMOOTH; INTERIOR & EXTERIOR.
2. CORNER FORMED DOOR. DOORS ARE INTERCHANGEABLE AND EASILY REMOVED BY PULLING CLIP-STYLE HINGE PINS.
3. QUARTER-TURN SLOTTED LATCH(ES).
4. MOUNTING HOLES IN BACK OF BODY FOR EXTERNAL WALL-MOUNT BRACKETS.
5. HARDWARE KIT WITH PANEL MOUNTING NUTS, PANEL GROUNDING HARDWARE AND SEALING WASHERS.
6. FIBER CABLE AND PATCH CORD ENTRY SHALL BE VIA CONDUIT FROM TOP OR BOTTOM OF ENCLOSURE.
7. SPLICE DESIGNATED FIBERS TO SC PIGTAILS IN SPLICE TRAY, TERMINATE TO SC BUILKHEAD PORTS AS INDICATED ON DRAWING.



FIBER DISTRIBUTION PANEL XXX-FDP-T

SCALE: NTS

PRELIMINARY ENGINEERING

NOT FOR CONSTRUCTION

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REFERENCE CONCEPT DRAWINGS

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: Z. ZHANG
DRAWN BY: Z. ZHANG
CHECKED BY: M. STAHLEY
APPROVED BY: J. SCHIMPF

AHJ:

PACKAGE #

SUBMITTED BY: PABLO LOPEZ-HILFIKER
DATE: 2/27/2024
REVIEWED BY:
DATE:

BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 3001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

LINE IS 1" AT FULL SCALE

SCALE: NTS
FILENAME: OMFS-S08-JCD004
CONTRACT No.: AE0030-17
DATE:

SOUND TRANSIT
PRELIMINARY ENGINEERING PLANS
OPERATIONS & MAINTENANCE FACILITY SOUTH
COMMUNICATIONS SYSTEM
TPSS FIBER DISTRIBUTION CABINET ELEVATION AND FDP DETAIL

DRAWING No.: S08-JCD004
FACILITY ID: S08
SHEET No.: REV: 0

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