City and County of Honolulu
Department of Transportation Services

Rapid Transit Division (RTD)

KAMEHAMEHA STATIONS DESIGN

CONTRACT SV-340

PEARLRIDGE STATION
ALOHA STADIUM STATION

PRELIMINARY ENGINEERING DRAWINGS

December 18, 2009

Prepared for:
HHCTCP

Prepared by:
AECOM Pacific, Inc., R.M. Towill Corporation
&
Parsons Brinckerhoff
General Engineering Consultant (GEC)

City and County of Honolulu
Department of Transportation Services

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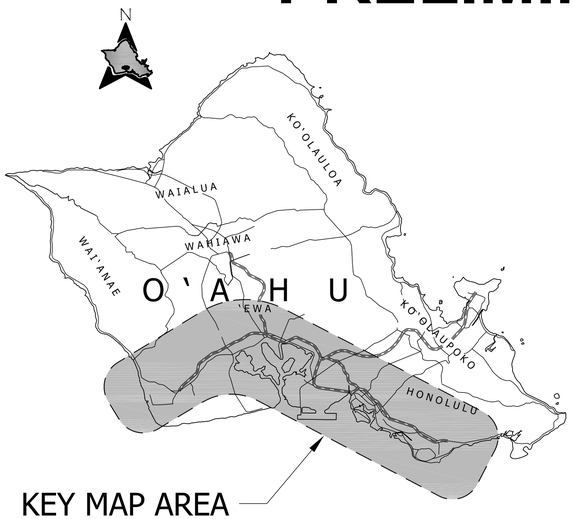
HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

PEARLRIDGE STATION

PRELIMINARY ENGINEERING DRAWINGS



City and County of Honolulu
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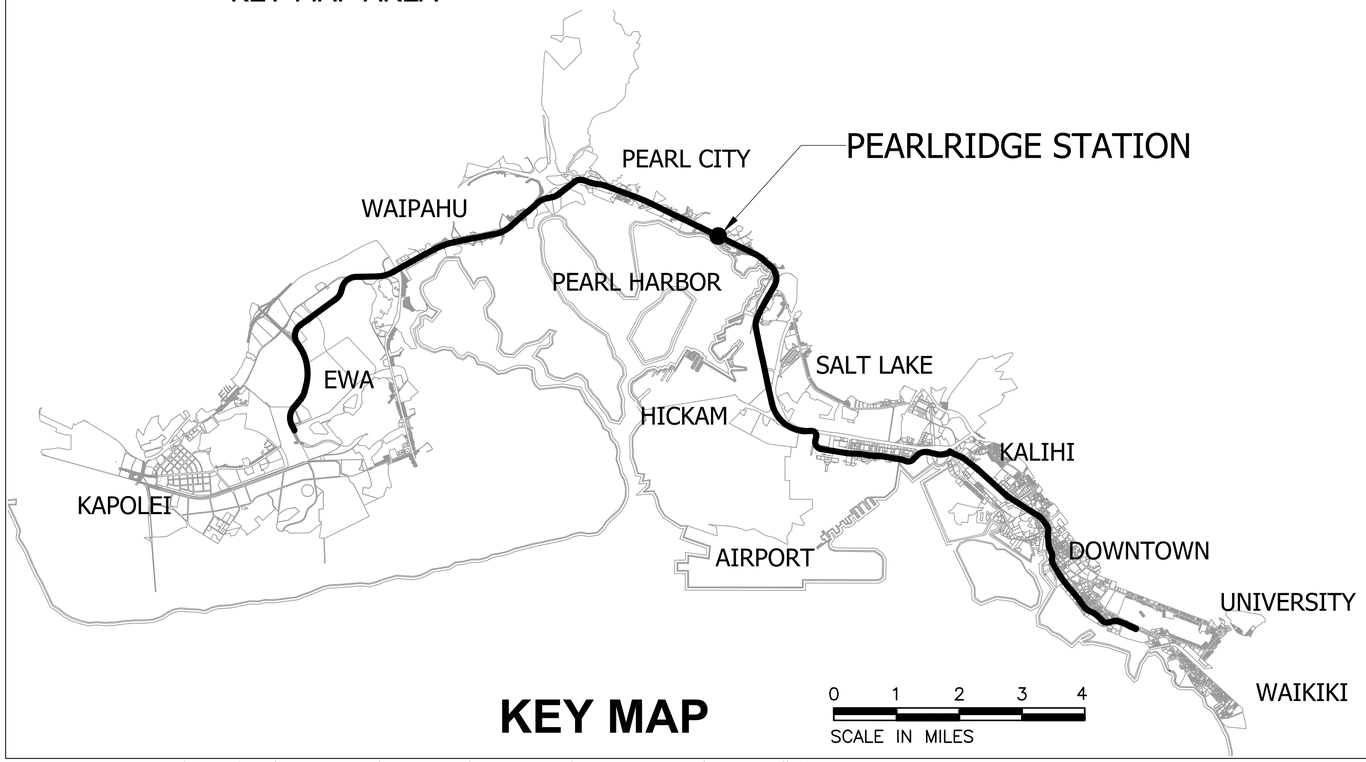

KEY MAP

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Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION
INDEX OF DRAWINGS

Contract No.: SV-340
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Page No. 2 of 60

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APPENDIX A - INDEX OF DRAWINGS
PEARLRIDGE STATION - INFORMATIVE DRAWINGS

KAMEHAMEHA GUIDEWAY & UTILITIES PLANS	
Drawing No.	**Drawing Title**
Civil	
RW012	EXISTING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS EB 880+00 TO EB 890+00
TA012	TRACK ALIGNMENT PLAN & PROFILE EB 880+00 TO EB 890+00
TA103	TRACK ALIGNMENT DATA SHEET 3 OF 4
RP012	ROAD CONSTRUCTION PLAN EB 880+00 TO EB 890+00
RP103	SYSTEMS SITE PLAN SITE # 12
RP201	ROADWAY HORIZONTAL CONTROL DATA
RX010	TYPICAL SECTIONS KAMEHAMEHA HIGHWAY SHEET 10 OF 10
GD012	GUIDEWAY DRAINAGE LAYOUT PLAN EB 880+00 TO EB 890+00
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TR012	SIGNING AND STRIPING PLAN EB 880+00 TO EB 890+00
TR112	MAINTENANCE OF TRAFFIC PLAN EB 880+00 TO EB 890+00
TR209	TRAFFIC SIGNAL PLAN KAMEHAMEHA HWY AT KAONOHI ST
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TR322	FIBER OPTIC AND TRAFFIC SIGNAL INTERCONNECT PLAN EB 885+50 TO EB 891+00
TR803	TRAFFIC MANAGEMENT PLAN INTELLIGENT TRANSPORTATION SYSTEMS SHEET 3 OF 4
Utilities	
UP012	COMPOSITE PLAN EXISTING UTILITIES EB 880+00 TO EB 890+00
UP123	UTILITY RELOCATION PLAN WATER, SEWER, DRAINAGE, PETROLEUM, & GAS EB 880+00 TO EB 885+00
UP124	UTILITY RELOCATION PLAN WATER, SEWER, DRAINAGE, PETROLEUM, & GAS EB 885+00 TO EB 890+00
UP323	UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS EB 880+00 TO EB 885+00
UP324	UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS EB 885+00 TO EB 890+00
SL023	STREET LIGHTING PLAN EB 880+00 TO EB 885+00
SL024	STREET LIGHTING PLAN EB 885+00 TO EB 890+00

KAMEHAMEHA GUIDEWAY & UTILITIES PLANS	
Drawing No.	**Drawing Title**
Structural	
GP012	STRUCTURAL PLAN & PROFILE EB 880+00 TO EB 890+00
FP001	PEARLRIDGE STATION SHEET 1 OF 10 GUIDEWAY FORCES
FP002	PEARLRIDGE STATION SHEET 2 OF 10 PLATFORM LEVEL PLAN
FP003	PEARLRIDGE STATION SHEET 3 OF 10 SECTION A
FP004	PEARLRIDGE STATION SHEET 4 OF 10 SECTION B
FP005	PEARLRIDGE STATION SHEET 5 OF 10 PARTIAL ELEVATION
FP006	PEARLRIDGE STATION SHEET 6 OF 10 BRIDGE SECTION
FP007	PEARLRIDGE STATION SHEET 7 OF 10 BEARING TABLES PLAN AND SECTION
FP008	PEARLRIDGE STATION SHEET 8 OF 10 ACCESS BRIDGE DETAILS
FP009	PEARLRIDGE STATION SHEET 9 OF 10 PLATFORM STATION DETAILS
FP010	PEARLRIDGE STATION SHEET 10 OF 10 STATION COLUMN BENT DETAILS
Landscape	
LA012	LANDSCAPE DEMOLITION PLAN EB 880+00 TO EB 890+00
LA123	LANDSCAPE PAVING AND PLANTING PLAN EB 880+00 TO EB 885+00
LA124	LANDSCAPE PAVING AND PLANTING PLAN EB 885+00 TO EB 890+00
Systems	
TN001	CONTACT RAIL INSTALLATION CONTACT RAIL SCHEMATIC LAYOUT
TN002	CONTACT RAIL INSTALLATION CONTACT RAIL LAYOUT AT CROSSOVER
TN003	MASTER SINGLE LINE DIAGRAM

CORE SYSTEMS PLANS		
Drawing No.	**Rev. No.**	**Drawing Title**
Core Systems		
TN206	B	MASTER SINGLE LINE DIAGRAM - MAINLINE SHEET 4 OF 10
TN216	B	MAINLINE EMERGENCTY TRIP STATION BLOCK DIAGRAM SHEET 2 OF 4
TN219	B	MAINLINE EMERGENCY TRIP STATION TRIPPING CHART SHEET 1 OF 3
TN220	B	MAINLINE EMERGENCY TRIP STATION TRIPPING CHART SHEET 2 OF 3
CM301	A	PEARLRIDGE STATION COMMUNICATIONS PLAN GROUND LEVEL
CM302	A	PEARLRIDGE STATION COMMUNICATIONS PLAN CONCOURSE LEVEL
CM303	A	PEARLRIDGE STATION COMMUNICATIONS PLAN PLATFORM LEVEL

Rev	By	Date	Description

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Designed: B Pang
Drawn: B Pang
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Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
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PEARLRIDGE STATION
APPENDIX A - INFORMATIVE INDEX OF DRAWINGS

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Drawing No: GN004 Rev.
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Page No. 3 of 60

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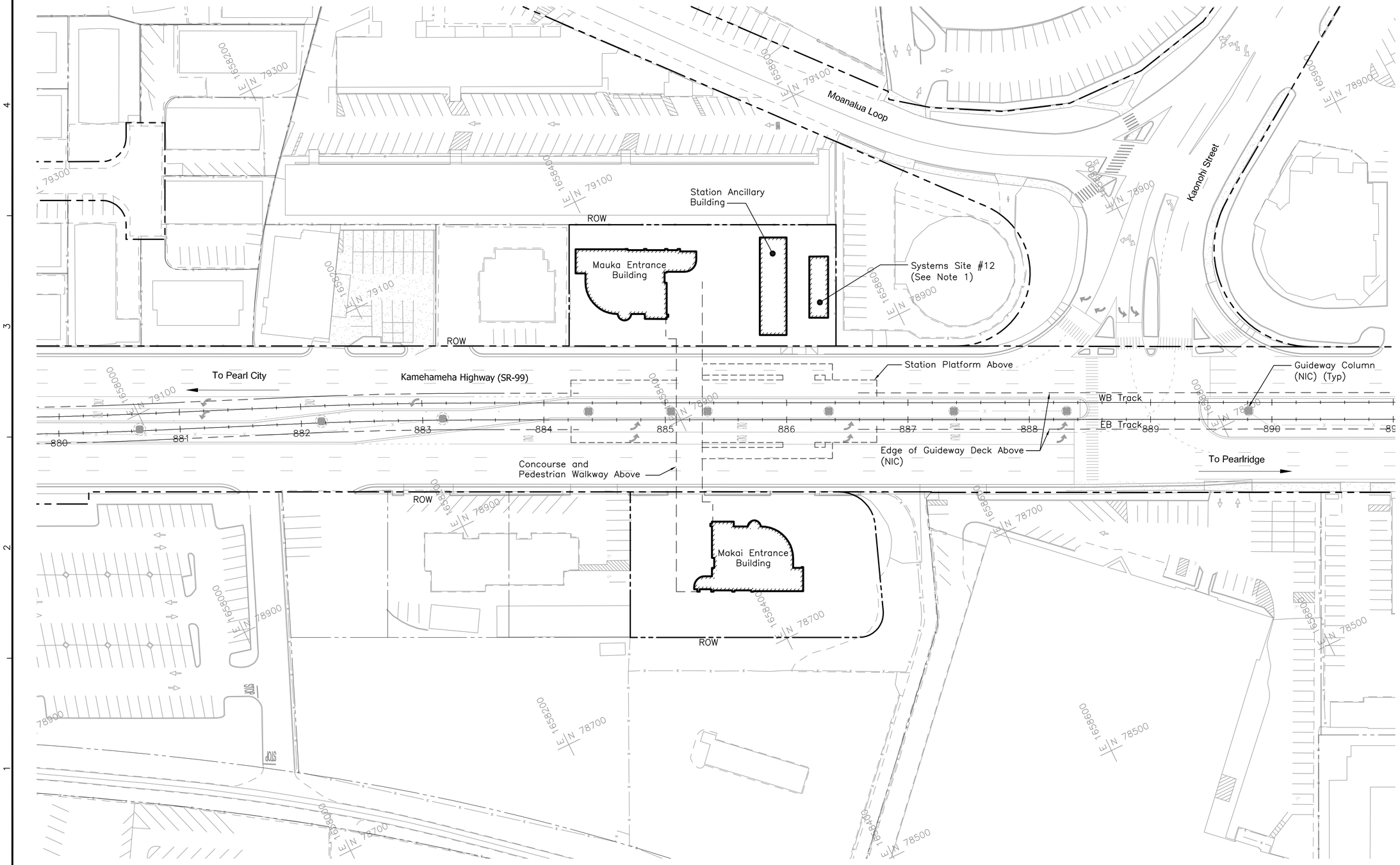

NOTES:

1. See Civil Site Plan, Utilities Plan – Electrical, and Systems Site Plan for requirements at Systems Site #12.

40' 0' 40'

Rev	By	Date	Description

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PEARLRIDGE STATION

STATION AREA PLAN

Contract No.: SV–340
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Drawing No.: GN005 Rev.
Scale: 1"=40'
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RTD STANDARD DRAWINGS

RTD STANDARD DRAWINGS			
Drawing No.	**Rev. No.**	**Applicable**	**Drawing Title**
CIVIL			
CS001	0		CIVIL STANDARD SURVEY CONTROL DATA SHEET 1 OF 2
CS002	0		CIVIL STANDARD SURVEY CONTROL DATA SHEET 2 OF 2
TRACKWORK			
WS101	0		TRACKWORK STANDARD STANDARD RAIL SECTIONS AND DATA
WS102	0		TRACKWORK STANDARD PROPOSED WHEEL PROFILE AND WHEEL/TRACK INTERFACE DISTANCES GUARD RAIL & RESTRAINING RAIL
WS302	0		TRACKWORK STANDARD NO. 6 TURNOUT BALLASTED/ CONCRETE TIES WITH 13 FT CURVED SWITCHES (UNIFORM RISERS)
WS303	0		TRACKWORK STANDARD 13 FT CURVED SPLIT SWITCH BALLASTED TRACK/CONCRETE TIES 115 RE RAIL
WS305	0		TRACKWORK STANDARD NO. 6 CONTOURED STEEL FROG FLANGE BEARING BALLASTED TRACK - 115 RE RAIL
WS306	0		TRACKWORK STANDARD 33C1 GUARD RAIL FOR NO. 6 AND NO. 8 FROGS BALLASTED TRACK (115 RE RAIL)
WS307	0		TRACKWORK STANDARD SPECIAL TRACKWORK FASTENING PLATE AND ASSEMBLY CONCRETE SWITCHTIES
WS308	0		TRACKWORK STANDARD NO. 8 TURNOUT BALLASTED/ CONCRETE TIES WITH 13 FT CURVED SWITCHES (UNIFORM RISERS)
WS310	0		TRACKWORK STANDARD NO. 8 CONTOURED STEEL FROG FLANGE BEARING BALLASTED TRACK - 115 RE RAIL
WS313	0		TRACKWORK STANDARD NO. 6 CROSSOVER - BALLASTED TRACK 14'-0" TRACK CENTERS
WS321	0		TRACKWORK STANDARD PRESTRESSED TURNOUT CONCRETE SWITCH TIES 115 RE RAIL
WS340	0		TRACKWORK STANDARD NO. 10 TURNOUT - BALLASTED CONCRETE TIES WITH 19'-6" CURVED SWITCH UNIFORM RISERS
WS810	0		TRACKWORK STANDARD NO. 10 TURNOUT - DIRECT FIXATION WITH 19'-6" CURVED SWITCH PLINTH & RAIL LAYOUT
WS811	0		TRACKWORK STANDARD NO. 10 TURNOUT - DIRECT FIXATION NOTES & BILL OF MATERIALS
WS812	0		TRACKWORK STANDARD 19'-6" CURVED SPLIT SWITCH DIRECT FIXATION TRACK 115RE RAIL
WS813	0		TRACKWORK STANDARD NO. 10 CONTOURED STEEL FROG FLANGE BEARING DIRECT FIXATION TRACK - 115RE RAIL
WS814	0		TRACKWORK STANDARD DIRECT FIXATION TURNOUT GUARD RAIL MOUNTING DETAILS
WS820	0		TRACKWORK STANDARD NO. 10 CROSSOVER - DIRECT FIXATION 14'-0" TRACK CENTERS
WS831	0		TRACKWORK STANDARD NO. 10 DOUBLE CROSSOVER DIRECT FIXATION 14'-0" TRACK CENTERS

RTD STANDARD DRAWINGS			
Drawing No.	**Rev. No.**	**Applicable**	**Drawing Title**
TRACKWORK			
WS832	0		TRACKWORK STANDARD NO. 10 DOUBLE CROSSOVER DIRECT FIXATION DIAMOND DETAILS 14'-0" TRACK CENTERS, SHEET 1 OF 2
WS833	0		TRACKWORK STANDARD NO. 10 DOUBLE CROSSOVER-DIRECT FIXATION TURNOUT FROG & DIAMOND FROG DETAILS 14'-0" TRACK CENTERS, SHEET 2 OF 2
ARCHITECTURAL			
AS301	0		ARCHITECTURAL STANDARD ELEVATOR CAR PLANS AND ELEVATIONS SHEET 1 OF 2
AS302	0		ARCHITECTURAL STANDARD ELEVATOR CAR PLANS AND ELEVATIONS SHEET 2 OF 2
AS303	0		ARCHITECTURAL STANDARD ELEVATOR CAR DETAILS
CORROSION CONTROL			
HS001	0		CORROSION CONTROL STANDARD TYPICAL SIMPLE-SPAN VIADUCT STEEL BONDING DETAILS
HS002	0		CORROSION CONTROL STANDARD TYPICAL CONTINUOUS-SPAN VIADUCT STEEL BONDING DETAILS
HS003	0		CORROSION CONTROL STANDARD TYPICAL STEEL BONDING DETAILS
HS004	0		CORROSION CONTROL STANDARD UTILITY BONDING DETAILS SHEET 1 OF 2
HS005	0		CORROSION CONTROL STANDARD UTILITY BONDING DETAILS SHEET 2 OF 2
HS006	0		CORROSION CONTROL STANDARD PIPE ISOLATION DETAILS SHEET 1 OF 2
HS007	0		CORROSION CONTROL STANDARD PIPE ISOLATION DETAILS SHEET 2 OF 2
HS008	0		CORROSION CONTROL STANDARD CATHODIC PROTECTION DETAILS SHEET 1 OF 2
HS009	0		CORROSION CONTROL STANDARD CATHODIC PROTECTION DETAILS SHEET 2 OF 2
HS010	0		CORROSION CONTROL STANDARD ELEVATOR CATHODIC PROTECTION DETAILS
HS011	0		CORROSION CONTROL STANDARD TESTING FACILITIES

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PEARLRIDGE STATION
STANDARD DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

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Drawing No.: GN006 Rev.
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Page No. 5 of 60

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RTD DIRECTIVE DRAWINGS

RTD DIRECTIVE DRAWINGS			
Drawing No.	**Rev. No.**	**Applicable**	**Drawing Title**
SYSTEMS SITES			
RP101	0		SYSTEMS SITE DIRECTIVE TYPICAL TRACTION POWER SUBSTATION SITE PLAN AND ELEVATIONS
RP102	0		SYSTEMS SITE DIRECTIVE TYPICAL GAP BREAKER STATION SITE PLAN AND ELEVATION
TRACKWORK			
WD120	0		TRACKWORK DIRECTIVE PRE-CURVED RAIL DETAILS RESTRAINING RAIL DETAILS TYPICAL LAYOUT
WD201	0		TRACKWORK DIRECTIVE BALLASTED MAINLINE SINGLE TRACK TANGENT AND CURVED TRACK
WD202	0		TRACKWORK DIRECTIVE BALLASTED MAINLINE DOUBLE TRACK TANGENT AND CURVED TRACK
WD205	0		TRACKWORK DIRECTIVE AT-GRADE CONCRETE PANEL ROAD CROSSING - TANGENT BALLASTED TRACK
WD206	0		TRACKWORK DIRECTIVE AT-GRADE TRAPEZOIDAL CONCRETE PANEL ROAD CROSSING - CURVED BALLASTED TRACK
WD211	0		TRACKWORK DIRECTIVE TRANSITION SLAB - DIRECT FIXATION TRACK TO BALLASTED TRACK 115 RE RAIL
WD251	0		TRACKWORK DIRECTIVE SERRATED PRESTRESSED CONCRETE CROSSTIE 115 RE RAIL
WD253	0		TRACKWORK DIRECTIVE SERRATED CONCRETE CROSSTIE FOR RESTRAINING RAIL & CONTACT RAIL 115 RE RAIL
WD254	0		TRACKWORK DIRECTIVE BRACKET FOR 33C1 RESTRAINING RAIL CONCRETE TIE TRACK
WD256	0		TRACKWORK DIRECTIVE CONCRETE ROAD CROSSING TIE (10 FT) - 115 RE RAIL
WD275	0		TRACKWORK DIRECTIVE DERAIL AND CAR STOP MAINTENANCE & STORAGE FACILITY
WD301	0		SUMMARY YARD SPECIAL TRACKWORK BALLASTED TURNOUTS
WD401	0		TRACKWORK DIRECTIVE EMBEDDED APRON AND SHOP TRACK DETAILS
WD405	0		TRACKWORK DIRECTIVE PEDESTAL TRACK DETAILS PIT TRACKS MAINTENANCE & STORAGE FACILITY
WD601	0		TRACKWORK DIRECTIVE TYPICAL DIRECT FIXATION TRACK INSTALLATION
WD602	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK DETAILS AERIAL/AT-GRADE SLAB STRUCTURES TANGENT TRACK
WD603	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK SECTION AERIAL/AT-GRADE STRUCTURE CURVED TRACK
WD604	0		TRACKWORK DIRECTIVE GEOMETRIC CONFIGURATION DIRECT FIXATION TRACK WITH SURVEY MARKER INTERFACE TRACTION POWER CONTACT RAIL
WD605	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK DETAILS TRAIN WASH FACILITY
WD606	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK DETAILS YARD SERVICE AND CLEANING PLATFORM

RTD DIRECTIVE DRAWINGS			
Drawing No.	**Rev. No.**	**Applicable**	**Drawing Title**
TRACKWORK			
WD608	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK CONCRETE PLINTH REINFORCING DETAILS FOR 2'-3" FASTENER LAYOUTS ON CURVED TRACKS
WD609	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK CONCRETE PLINTH REINFORCING DETAILS FOR 2'-6" FASTENER LAYOUTS
WD615	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK PLINTH REINFORCING DETAILS WITH 1 OR 2 INCHES OF SUPERELEVATION
WD616	0		TRACKWORK DIRECTIVE DIRECT FIXATION TRACK PLINTH REINFORCING DETAILS WITH 3 OR 4 INCHES OF SUPERELEVATION
WD620	0		TRACKWORK DIRECTIVE SPECIAL TRACKWORK DIRECT FIXATION CONCRETE PLINTH REINFORCING DETAILS
WD625	0		TRACKWORK DIRECTIVE SPECIAL TRACKWORK SWITCH MACHINE MOUNTING DIRECT FIXATION TRACK
WD641	0		TRACKWORK DIRECTIVE BRACKET FOR 33C1 RESTRAINING RAIL DIRECT FIXATION TRACK
WD643	0		TRACKWORK DIRECTIVE 33C1 RESTRAINING RAIL DETAILS
WD650	0		TRACKWORK DIRECTIVE BALLASTED & DIRECT FIXATION TRACK AT STATION PLATFORMS (LIGHT METRO VEHICLE)
WD675	0		TRACKWORK DIRECTIVE PEDESTRIAN CROSSWALK DIRECT FIXATION TRACK
WD898	0		TRACKWORK DIRECTIVE FRICTION TYPE (10EB) BUFFER STOP DIRECT FIXATION TRACK INSTALLATION END OF TRACK
WD899	0		TRACKWORK DIRECTIVE DF FRICTION BUFFER STOP INSTALLATION END OF TRACK DETAILS
STRUCTURAL			
WP001	0		STRUCTURAL DESIGN DIRECTVE GENERAL STRUCTURAL NOTES
WP002	0		STRUCTURAL DESIGN DIRECTVE CHAIN LINK FENCE
WP003	0		STRUCTURAL DESIGN DIRECTVE RETAINING WALL TYPE 1 H=4' THROUGH 30'
WP004	0		STRUCTURAL DESIGN DIRECTVE RETAINING WALL TYPE 2 H=4' THROUGH 12'
WP005	0		STRUCTURAL DESIGN DIRECTVE RETAINING WALL DETAILS
WP006	0		STRUCTURAL DESIGN DIRECTVE GUIDEWAY STAIRS TO STATION PLATFORM SHEET 1 OF 5
WP007	0		STRUCTURAL DESIGN DIRECTVE GUIDEWAY STAIRS TO STATION PLATFORM SHEET 2 OF 5
WP008	0		STRUCTURAL DESIGN DIRECTVE GUIDEWAY STAIRS TO STATION PLATFORM SHEET 3 OF 5
WP009	0		STRUCTURAL DESIGN DIRECTVE GUIDEWAY STAIRS TO STATION PLATFORM SHEET 4 OF 5
WP010	0		STRUCTURAL DESIGN DIRECTVE GUIDEWAY STAIRS TO STATION PLATFORM SHEET 5 OF 5
WP011	0		STRUCTURAL DESIGN DIRECTVE WATERPROOFING DETAILS SHEET 1 OF 3
WP012	0		STRUCTURAL DESIGN DIRECTVE WATERPROOFING DETAILS SHEET 2 OF 3

RTD DIRECTIVE DRAWINGS			
Drawing No.	**Rev. No.**	**Applicable**	**Drawing Title**
STRUCTURAL			
WP013	0		STRUCTURAL DESIGN DIRECTVE WATERPROOFING DETAILS SHEET 3 OF 3
ARCHITECTURAL			
AG001	0		ARCHITECTURAL DIRECTIVE GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS SHEET 1 OF 3
AG002	0		ARCHITECTURAL DIRECTIVE GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS SHEET 2 OF 2
AG003	0		ARCHITECTURAL DIRECTIVE GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS SHEET 3 OF 3
AD001	0		ARCHITECTURAL DIRECTIVE STAIR/ESCALATOR DESIGN LAYOUT AT STATION ENTRANCE
AD002	0		ARCHITECTURAL DIRECTIVE STAIR/ESCALATOR DESIGN REQUIREMENTS
AD003	0		ARCHITECTURAL DIRECTIVE TRACTION ELEVATOR DESIGN REQUIREMENT AND CONFIGURATION
AD004	0		ARCHITECTURAL DIRECTIVE HYDRAULIC ELEVATOR DESIGN REQUIREMENT AND CONFIGURATION
AD005	0		ARCHITECTURAL DIRECTIVE HOLELESS HYDRAULIC ELEVATOR DESIGN REQUIREMENT AND CONFIGURATION
AD006	0		ARCHITECTURAL DIRECTIVE ELEVATOR HOISTWAY SECTIONS
AD007	0		ARCHITECTURAL DIRECTIVE END OF PLATFORM DESIGN LAYOUT SIDE PLATFORM
AD008	0		ARCHITECTURAL DIRECTIVE END OF PLATFORM DESIGN LAYOUT CENTER PLATFORM
AD009	0		ARCHITECTURAL DIRECTIVE STAIR/ESCALATOR DETAILS
AD010	0		ARCHITECTURAL DIRECTIVE FORMLINER DETAILS PIER COLUMN 1
AD011	0		ARCHITECTURAL DIRECTIVE FORMLINER DETAILS STATION COLUMN 2
AD012	0		ARCHITECTURAL DIRECTIVE FORMLINER DETAILS COLUMN SECTIONS
AD013	0		ARCHITECTURAL DIRECTIVE SINGLE LANDING STAIR & ESCALATOR REQUIREMENTS - CONCOURSE LEVEL
AD014	0		ARCHITECTURAL DIRECTIVE MULTIPLE LANDING STAIR & ESCALATOR REQUIREMENTS - CONCOURSE LEVEL
AD015	0		ARCHITECTURAL DIRECTIVE ELEVATOR HOISTWAY PLANS, SECTION, AND DETAILS
AD016	0		ARCHITECTURAL DIRECTIVE ELEVATOR HOISTWAY SECTION AND DETAILS
AD017	0		ARCHITECTURAL DIRECTIVE ELEVATOR HOISTWAY ELEVATIONS, DATA TABULATION, AND DETAILS
AD018	0		ARCHITECTURAL DIRECTIVE ELEVATOR SCHEDULE SHEET 1 OF 2
AD019	0		ARCHITECTURAL DIRECTIVE ELEVATOR SCHEDULE SHEET 2 OF 2
AD020	0		ARCHITECTURAL DIRECTIVE TYPICAL TOILET LAYOUT AND ELEVATIONS

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: N/A
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION

DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 1 OF 2

Contract No.: SV-340
CADD File: SD1-A06-GN007
Drawing No.: GN007 Rev.
Scale: N/A
Page No. 6 of 60

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RTD DIRECTIVE DRAWINGS

RTD DIRECTIVE DRAWINGS

Drawing No.	Rev. No.	Applicable	Drawing Title
ARCHITECTURAL			
AD021	0		ARCHITECTURAL DIRECTIVE DETECTABLE WARNING & PRE-WARNING STRIP DETAILS
AD022	0		ARCHITECTURAL DIRECTIVE ROLLING GRILLE DETAILS
AD023	0		ARCHITECTURAL DIRECTIVE ESCALATOR SCHEDULE SHEET 1 OF 2
AD024	0		ARCHITECTURAL DIRECTIVE ESCALATOR SCHEDULE SHEET 2 OF 2
AD101	0		ARCHITECTURAL DIRECTIVE CONCOURSE LEVEL PLAN SIDE PLATFORM PROTOTYPE
AD102	0		ARCHITECTURAL DIRECTIVE PLATFORM LEVEL PLAN SIDE PLATFORM PROTOTYPE
AD103	0		ARCHITECTURAL DIRECTIVE ROOF PLAN SIDE PLATFORM PROTOTYPE
AD104	0		ARCHITECTURAL DIRECTIVE REFLECTED CEILING PLAN - CONCOURSE SIDE PLATFORM PROTOTYPE
AD105	0		ARCHITECTURAL DIRECTIVE REFLECTED CEILING PLAN - PLATFORM SIDE PLATFORM PROTOTYPE
AD106	0		ARCHITECTURAL DIRECTIVE FLOOR FINISH PLAN - CONCOURSE SIDE PLATFORM PROTOTYPE
AD107	0		ARCHITECTURAL DIRECTIVE FLOOR FINISH PLAN - PLATFORM SIDE PLATFORM PROTOTYPE
AD108	0		ARCHITECTURAL DIRECTIVE LONGITUDINAL & CROSS SECTIONS SIDE PLATFORM PROTOTYPE
AD109	0		ARCHITECTURAL DIRECTIVE EXTERIOR ELEVATIONS SIDE PLATFORM PROTOTYPE SHEET 1 OF 2
AD110	0		ARCHITECTURAL DIRECTIVE EXTERIOR ELEVATIONS SIDE PLATFORM PROTOTYPE SHEET 2 OF 2
AD111	0		ARCHITECTURAL DIRECTIVE PLATFORM ELEVATIONS SIDE PLATFORM PROTOTYPE
AD112	0		ARCHITECTURAL DIRECTIVE END BAY SIDE PLATFORM PROTOTYPE SHEET 1 OF 2
AD113	0		ARCHITECTURAL DIRECTIVE END BAY SIDE PLATFORM PROTOTYPE SHEET 2 OF 2
AD114	0		ARCHITECTURAL DIRECTIVE TYPICAL BAY SIDE PLATFORM PROTOTYPE SHEET 1 OF 2
AD115	0		ARCHITECTURAL DIRECTIVE TYPICAL BAY SIDE PLATFORM PROTOTYPE SHEET 2 OF 2
AD116	0		ARCHITECTURAL DIRECTIVE 'V' COLUMN ELEVATION SIDE PLATFORM PROTOTYPE
AD117	0		ARCHITECTURAL DIRECTIVE CANOPY DETAILS SIDE PLATFORM PROTOTYPE
AD118	0		ARCHITECTURAL DIRECTIVE STAIR/ELEV BRIDGE CANOPY DETAILS SIDE PLATFORM PROTOTYPE
AD119	0		ARCHITECTURAL DIRECTIVE STAIR BRIDGE CANOPY COLUMN DETAILS SIDE PLATFORM PROTOTYPE
AD120	0		ARCHITECTURAL DIRECTIVE GUARDRAIL DETAILS SIDE PLATFORM PROTOTYPE SHEET 1 OF 3

RTD DIRECTIVE DRAWINGS

Drawing No.	Rev. No.	Applicable	Drawing Title
ARCHITECTURAL			
AD121	0		ARCHITECTURAL DIRECTIVE GUARDRAIL DETAILS SIDE PLATFORM PROTOTYPE SHEET 2 OF 3
AD122	0		ARCHITECTURAL DIRECTIVE GUARDRAIL DETAILS SIDE PLATFORM PROTOTYPE SHEET 3 OF 3
AD123	0		ARCHITECTURAL DIRECTIVE 3D VIEWS SIDE PLATFORM PROTOTYPE SHEET 1 OF 5
AD124	0		ARCHITECTURAL DIRECTIVE 3D VIEWS SIDE PLATFORM PROTOTYPE SHEET 2 OF 5
AD125	0		ARCHITECTURAL DIRECTIVE 3D VIEWS SIDE PLATFORM PROTOTYPE SHEET 3 OF 5
AD126	0		ARCHITECTURAL DIRECTIVE 3D VIEWS SIDE PLATFORM PROTOTYPE SHEET 4 OF 5
AD127	0		ARCHITECTURAL DIRECTIVE 3D VIEWS SIDE PLATFORM PROTOTYPE SHEET 5 OF 5
AD201	0		ARCHITECTURAL DIRECTIVE CONCOURSE LEVEL PLAN CENTER PLATFORM PROTOTYPE
AD202	0		ARCHITECTURAL DIRECTIVE PLATFORM LEVEL PLAN CENTER PLATFORM PROTOTYPE
AD203	0		ARCHITECTURAL DIRECTIVE ROOF PLAN CENTER PLATFORM PROTOTYPE
AD204	0		ARCHITECTURAL DIRECTIVE REFLECTED CEILING PLAN - CONCOURSE CENTER PLATFORM PROTOTYPE
AD205	0		ARCHITECTURAL DIRECTIVE REFLECTED CEILING PLAN - PLATFORM CENTER PLATFORM PROTOTYPE
AD206	0		ARCHITECTURAL DIRECTIVE FLOOR FINISH PLAN - CONCOURSE CENTER PLATFORM PROTOTYPE
AD207	0		ARCHITECTURAL DIRECTIVE FLOOR FINISH PLAN - PLATFORM CENTER PLATFORM PROTOTYPE
AD208	0		ARCHITECTURAL DIRECTIVE LONGITUDINAL & CROSS SECTIONS CENTER PLATFORM PROTOTYPE
AD209	0		ARCHITECTURAL DIRECTIVE ELEVATIONS CENTER PLATFORM PROTOTYPE
AD210	0		ARCHITECTURAL DIRECTIVE TYPICAL END BAY DETAILS CENTER PLATFORM PROTOTYPE
AD211	0		ARCHITECTURAL DIRECTIVE TYPICAL BAY DETAILS CENTER PLATFORM PROTOTYPE
AD212	0		ARCHITECTURAL DIRECTIVE 'V' COLUMN DETAILS CENTER PLATFORM PROTOTYPE SHEET 1 OF 3
AD213	0		ARCHITECTURAL DIRECTIVE 'V' COLUMN DETAILS CENTER PLATFORM PROTOTYPE SHEET 2 OF 3
AD214	0		ARCHITECTURAL DIRECTIVE 'V' COLUMN DETAILS CENTER PLATFORM PROTOTYPE SHEET 3 OF 3
AD215	0		ARCHITECTURAL DIRECTIVE COLUMN MISC DETAILS CENTER PLATFORM PROTOTYPE
AD216	0		ARCHITECTURAL DIRECTIVE STAIR & BRIDGE CANOPY DETAILS CENTER PLATFORM PROTOTYPE

RTD DIRECTIVE DRAWINGS

Drawing No.	Rev. No.	Applicable	Drawing Title
ARCHITECTURAL			
AD217	0		ARCHITECTURAL DIRECTIVE RAILING DETAILS CENTER PLATFORM PROTOTYPE SHEET 1 OF 2
AD218	0		ARCHITECTURAL DIRECTIVE RAILING DETAILS CENTER PLATFORM PROTOTYPE SHEET 1 OF 2
AD219	0		ARCHITECTURAL DIRECTIVE 3D VIEWS CENTER PLATFORM PROTOTYPE
MECHANICAL			
MD101	0		MECHANICAL DIRECTIVE HVAC SYSTEMS
MD201	0		MECHANICAL DIRECTIVE PLUMBING AND DRAINAGE SYSTEMS
MD301	0		MECHANICAL DIRECTIVE FIRE PROTECTION SYSTEMS
MD401	0		MECHANICAL DIRECTIVE SEISMIC AND WIND INDICATOR SYSTEMS
MD501	0		MECHANICAL DIRECTIVE TYPICAL TPSS AND GBS AIR CONDITIONING AND CONTROL SYSTEM
ELECTRICAL			
ED001	0		GENERAL ELECTRICAL NOTES
ED002	0		ELECTRICAL DIRECTIVE PASSENGER STATION ONE-LINE DIAGRAM
ED003	0		GUIDEWAY ELECTRICAL DIRECTIVE ELECTRICAL GUIDEWAY LIGHTING PLANS
ED004	0		GUIDEWAY ELECTRICAL DIRECTIVE ELECTRICAL GUIDEWAY LIGHTING DOUBLE TRACK
ED005	0		GUIDEWAY ELECTRICAL DIRECTIVE ELECTRICAL GUIDEWAY LIGHTING SINGLE TRACK
ED006	0		ELECTRICAL DIRECTIVE PASSENGER STATION SIDE PLATFORM LIGHTING
ED007	0		ELECTRICAL DIRECTIVE PASSENGER STATION CENTER PLATFORM LIGHTING
ED008	0		ELECTRICAL DIRECTIVE PASSENGER STATION ELECTRICAL, UPS, TCC ROOMS
TRACTION POWER			
TD001	0		TRACTION POWER DIRECTIVE TYPICAL SUBSTATION RACEWAY LAYOUT
TD002	0		TRACTION POWER DIRECTIVE TYPICAL DC RACEWAYS ON AERIAL GUIDEWAY SECTIONS AND DETAILS
TD003	0		TRACTION POWER DIRECTIVE TYPICAL MANHOLE/PULLBOX DETAILS
TD004	0		TRACTION POWER DIRECTIVE TYPICAL UNDERGROUND DUCTBANK SECTIONS & DETAILS
TD005	0		TRACTION POWER DIRECTIVE SUBSTATION CABLE TRENCH DETAILS
TD006	0		TRACTION POWER DIRECTIVE SUBSTATION CABLE TRENCH DETAILS ALTERNATIVE
TD050	0		TRACTION POWER DIRECTIVE TYPICAL SUBSTATION GROUND GRID ARRANGEMENT

RTD DIRECTIVE DRAWINGS

Drawing No.	Rev. No.	Applicable	Drawing Title
TRACTION POWER			
TD051	0		TRACTION POWER DIRECTIVE TYPICAL GAP BREAKER STATION GROUND GRID ARRANGEMENT
TD052	0		TRACTION POWER DIRECTIVE TYPICAL SUBSTATION GROUND GRID DETAILS
TD100	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION SPLICE JOINT ASSEMBLY
TD101	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION END-APPROACH ASSEMBLY
TD102	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION EXPANSION JOINT ASSEMBLY
TD103	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION ANCHOR ASSEMBLY DIRECT FIXATION TRACK
TD104	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION MOUNTING & PEDESTAL DETAILS
TD105	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION INSULATOR BRACKET AND ANCHOR BALLASTED TRACKS
TD106	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION COVERBOARD ASSEMBLY
TD107	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION COVERBOARD MOUNTING DETAILS
TD108	0		TRACTION POWER DIRECTIVE CONTACT RAIL INSTALLATION COVERBOARD ASSEMBLY AT EXPANSION JOINT
TRAIN CONTROL			
ND001	0		TRAIN CONTROL DIRECTIVE MAINLINE SWITCH MACHINE LAYOUT DIRECT FIXATION
ND002	0		TRAIN CONTROL DIRECTIVE MAINLINE SWITCH MACHINE LAYOUT BALLASTED TRACK
ND003	0		TRAIN CONTROL DIRECTIVE YARD SWITCH MACHINE LAYOUT BALLASTED TRACK
SYSTEMS INTEGRATION			
ID001	0		SYSTEMS INTEGRATION DIRECTIVE CONTRACT WORK DELINEATION AERIAL GUIDEWAY

Rev	By	Date	Description

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Designed: N/A
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
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PEARLRIDGE STATION

DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 2 OF 2

Contract No.: SV-340
CADD File: SD1-A06-GN008
Drawing No: GN008 Rev.
Scale: N/A
Page No. 7 of 60

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STANDARD DETAILS SUMMARY–CITY AND COUNTY OF HONOLULU

SHEET NO.	APPLICABLE	TITLE	DATE
R–1		Pre–cast Concrete Curb	09/1984
R–2		Pre–cast Concrete Driveway Curb	09/1984
R–3		Pre–cast Concrete Drop Curb Block	09/1984
R–4		Integral Curb and Gutter, Integral Driveway Curb and Gutter	R01/1995
R–4A		Integral Curb and Gutter, Integral Driveway Curb and Gutter for R/W of 70' or More	R01/1995
R–5		Rolled Curb	09/1984
R–6		Rolled Curb Transition to Curbs and Catch Basins	09/1984
R–7		Driveway Apron with Rolled Curb	09/1984
R–8		Thru Gutter	09/1984
R–9		Concrete Pavement	09/1984
R–10		Concrete Pavement Joint Details	09/1984
R–11		Concrete Pavement Joint Details	09/1984
R–12		Street Survey Monument	09/1984
R–13		Street Survey Monument Castings	09/1984
R–14		Centerline Monument	09/1984
R–15		Temporary Wooden Barricade	09/1984
R–16		Sidewalk Reinforcement Details at Utility Boxes or Openings	09/1984
R–17		Tree Well with Concrete Cover	09/1984
R–18		3' or 4' Chain Link Fence	09/1984
R–19		6' Chain Link Fence	09/1984
R–20		Typical Single Gate	09/1984
R–21A		Typical Double Gate	R03/1991
R–22		Metal Guardrail Details	09/1984
R–23		Metal Guradrail Details	09/1984
R–24		Metal Guardrail Details	09/1984
R–25		Curb Ramp	R09/1992
R–25A		Curb Ramp	R04/2000
R–26		Private Driveway Ramp	09/1984
R–27		Full Width Sidewalk at Curb Return	09/1984
R–28		Sidewalk Details	09/1984
R–29		Driveway Apron	09/1984
R–29A		Driveway Apron	R04/2000
R–30		Driveway Layout	09/1984
R–31		Grade Adjustment Walls	09/1984
R–32		Street Cross–sections with Sidewalk	09/1984
R–33		Street Cross–sections without Sidewalk	09/1984
R–34		Road Pavement and Shoulders	09/1984
R–35		Typical Roadway Utility Location with Sidewalk	09/1984
R–36		Typical Roadway Utility Location without Sidewalk	09/1984
R–37		Residential Driveway without Curb and Gutter	09/1984
R–38		Driveway Layout	09/1984
R–39		Non–dedicable Streets	09/1984
R–40		Dry Well Cover	09/1984
R–41		Street Cross–sections with Curb and Gutter	09/1984
R–42		Street Cross–sections without Curb and Gutter	09/1984
R–43		Road Pavements and Shoulders	09/1984
R–44		Cul–de–sac	09/1984

SHEET NO.	APPLICABLE	TITLE	DATE
R–45		Tapered Road Intersection	09/1984
R–46		Typical Roadway Utility Location	09/1984
R–47		Space Allocation for Underground Utilities	09/1984
R–48		Residential Driveway without Curb and Gutter	09/1984
R–49		Driveway Layouts for Concrete Curb Streets	09/1984
R–50		Driveway Layouts for Non–Curb Streets	09/1984
R–51		Concrete Driveway with Existing Sidewalk	09/1984
R–52		Roadway Typical Sections	09/1984
R–53		Roadway Typical Sections	09/1984
R–54		Roadway Typical Sections	09/1984
R–55		Roadway Swales	09/1984
R–56		Sidewalk Details	09/1984
R–57		Cul–de–sac	09/1984
R–58		Space Allocation for Underground Utilities	09/1984
R–59		Space Allocation for Underground Utilities	09/1984
D–1		Type "A" Catch Basin	09/1984
D–2		Type "A" Catch Basin Reinforcement Details	09/1984
D–3		Type "E" Catch Basin	09/1984
D–4		Type "E" Catch Basin Reinforcement Details	09/1984
D–5		Type "B" Catch Basin	09/1984
D–6		Type "B" Catch Basin Reinforcement Details	09/1984
D–7		Type "F" Catch Basin	09/1984
D–8		Type "F" Catch Basin Reinforcement Details	09/1984
D–9		Type "C" Catch Basin	09/1984
D–10		Type "C" Catch Basin Reinforcement Details	09/1984
D–11		Type "D" Catch Basin	09/1984
D–12		Type "D" Catch Basin Reinforcement Details	09/1984
D–13		Catch Basin Details	09/1984
D–14		Details for Catch Basin with 5" Curb	09/1984
D–15		Deflector Inlet for Catch Basin	09/1984
D–16		Monolithic Construction of Catch Basin Top Slab and Sidewalk	09/1984
D–17		Shallow Drain Manhole for Sidewalk Area	09/1984
D–18		Shallow Drain Manhole for Pavement Area	09/1984
D–19		Pre–cast Top Slab for Shallow Drain Manhole	09/1984
D–20		Concrete Wall Drain Manhole	09/1984
D–21		Brick Wall Drain Manhole	09/1984
D–22		Pre–cast Concrete Drain Manhole	09/1984
D–23		Pre–cast Concrete Drain Manhole Details	09/1984
D–24		Pre–cast Concrete Drain Manhole Details	09/1984
D–25		Pre–cast Concrete Drain Manhole Details	09/1984
D–26		Channelizing Details for Drain Manhole	09/1984
D–27		Rungs for Catch Basins and Manholes	09/1984
D–28		Type "DA" Frame for Catch Basin and Manhole	09/1984
D–29		Type "DB" Frame for Catch Basin and Manhole	09/1984
D–30		Catch Basin and Manhole Cover	09/1984
D–31		Payment Trench Width and Repaving for Drain Pipes	09/1984
D–32		Sidewalk Culvert	09/1984
D–33		Driveway Drainage – Box Culvert	09/1984
D–34		Driveway Drainage – Pipe Culvert	09/1984

SHEET NO.	APPLICABLE	TITLE	DATE
D–35		Driveway Drainage – Swale	09/1984
D–36		Type G1 and Type G2 Drainage Inlets	09/1984
D–37		Type G3 Drainage Inlet	09/1984
D–38		Type G4 Drainage Inlet	09/1984
D–39		Standard Frame and Grate	09/1984
D–40		Local Depression without Curb and Gutter	09/1984
D–41		Junction Structure B	09/1984
D–42		Junction Structure C	09/1984
D–43		Junction Structure D	09/1984
D–44		Monolithic Catch Basin Connection for Pipes 12" to 72"	09/1984
D–45		Concrete Collar Details	09/1984
D–46		Single Box Culverts	09/1984
D–47		Double Box Culverts	09/1984
D–48		Triple Box Culverts	09/1984
D–49		Rectangular Transition	09/1984
D–50		Circular Transition	09/1984
D–51		Parapet Details for Box Culverts	09/1984
D–52		Support for Drain and Sewer Pipes Across Trenches	09/1984

Rev	By	Date	Description
.			

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: N/A
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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PEARLRIDGE STATION

STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU

SHEET 1 OF 2

Contract No.: SV–340
CADD File: SD1–A06–GN009
Drawing No.: GN009 Rev.
Scale: N/A
Page No. 8 of 60

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STANDARD DETAILS SUMMARY–CITY AND COUNTY OF HONOLULU

SHEET NO.	APPLICABLE	TITLE	DATE
S–1		Rock Cradle for Sewer Pipe	09/1984
S–2		Concrete Cradle for Vitrified Clay Pipe	09/1984
S–3		Method of Laying Pipe	09/1984
S–4		Pre–cast Concrete Pipe Block	09/1984
S–5		Concrete Jacket, Reinforced Concrete Cradle	09/1984
S–6		Laterals	09/1984
S–7		Advance Riser Connection	09/1984
S–8		Method of Backfill	09/1984
S–9		Chimney	09/1984
S–10		Index to Sewer Manhole Details	09/1984
S–11		Manhole Notes	09/1984
S–12		Manhole Notes	09/1984
S–13		Pre–cast Concrete Plain Manhole	09/1984
S–14		Pre–cast Concrete Plain Manhole – Section and Alternate Base	09/1984
S–15		Pre–cast Concrete Shallow Drop Manhole	09/1984
S–16		Pre–cast Concrete Shallow Drop Manhole – Butt Joint Details	09/1984
S–17		Pre–cast Concrete Drop Manhole	09/1984
S–18		Pre–cast Concrete Drop Manhole – Sections	09/1984
S–19		Pre–cast Concrete Plain Manhole for 27" to 48" R.C. Pipe	09/1984
S–20		Pre–cast Concrete Plain Manhole for 27" to 48" R.C. Pipe – Section	09/1984
S–21		Pre–cast Concrete Manhole Wall	09/1984
S–22		Pre–cast Concrete Eccentric Manhole Cone	09/1984
S–23		Pre–cast Concrete Manhole Wall to Brick Wall Adapter Ring	09/1984
S–24		Pre–cast Concrete Manhole Wall Joints	09/1984
S–25		Pre–cast Concrete Manhole – Detail at Top Rung	09/1984
S–26		Brick Manhole	09/1984
S–27		Plain Manhole	09/1984
S–28		Shallow Drop Manhole	09/1984
S–29		Drop Manhole	09/1984
S–30		Drop Manhole – Sections	09/1984
S–31		Manhole Cover – Type SA	09/1984
S–32		Manhole Frame – Type SA	09/1984
S–33		Manhole Cover – Type SB, Top View	09/1984
S–34		Manhole Cover – Type SB, Bottom View	09/1984
S–35		Manhole Frame – Type SB	09/1984
S–36		Modified Type SB Pressure Manhole Frame and Cover	09/1984
S–37		Pressure Manhole Cover – Type SC	09/1984
S–38		Pressure Manhole Cover – Type SC	09/1984
S–39		Pressure Manhole Frame and Cover – Type SC	09/1984
S–40		Manhole Frame – Type SD	09/1984
S–41		Drop Manhole Chimney Casting	09/1984
S–42		Manhole Rung Details – Type SA	09/1984
S–43		Manhole Rung Details – Type SC	09/1984
S–44		Manhole Rung Details – Type SD	09/1984
S–45		Manhole Rung Details – Type SE	09/1984
S–46		Manhole Rung Details – Type SF	09/1984
S–47		PVC Pipe – Bedding Requirements	09/1984
S–48		PVC Pipe – Resilient Manhole Connection	09/1984
P–1		Backflow Preventer	09/1984
P–2		Fence and Gate Details	09/1984
P–3		Oil Seals and Related Piping	09/1984
P–4		Oil Seals and Related Piping	09/1984
P–5		Oil Seals and Related Piping	09/1984
P–6		Removable Post and Chain Details	09/1984
P–7		Removable Railing Details	09/1984
P–8		Typical Wall Sleeve	09/1984
P–9		Sprinkler Valve Control	09/1984
P–10		Motor Shaft and Coupling	09/1984
P–11		Typical Pump Motor Drive Shaft Guard	09/1984
P–12		Typical Pump Coupling Guard	09/1984
P–13		Typical Hoizontal Shaft Guard No. 1	09/1984
P–14		Typical Hoizontal Shaft Guard No. 2	09/1984
P–15		Safety Guard General Notes	09/1984
P–16		1 1/2" Stand Pipe Detail	09/1984
T–1		Street Name and Stop Sign Details	09/1984
T–2		Height and Lateral Location of Sign	09/1984
T–3		Typical Locations for Stop Signs	09/1984
T–4		Typical Detail for Crosswalk and Stop Lines	09/1984
T–5		Typical Sign Installations in Cul–de–sacs	09/1984
T–6		Road Marker	09/1984
T–7		Raised Pavement Markers	09/1984
T–8		Typical Installation of Raised Pavement Markers	09/1984
T–9		Typical Intersection Detail for Striping	09/1984
T–10		Striping Details	09/1984
T–11		Street Name and Stop Sign Details	09/1984
T–12		Parking Design Standard, One–Way Traffic	09/1984
T–13		Parking Design Standard, Two–Way Traffic	09/1984
T–14		Standard Street Name Sign	09/1984

SHEET NO.	APPLICABLE	TITLE	DATE

Rev	By	Date	Description
.			

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: N/A
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION
STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU
SHEET 2 OF 2

Contract No.: SV–340
CADD File: SD1–A06–GN010
Drawing No: GN010 Rev.
Scale: N/A
Page No. 9 of 60

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STANDARD PLANS SUMMARY–STATE OF HAWAII DEPARTMENT OF TRANSPORTATION (HDOT)

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE
B–01		Notes and Miscellaneous Details	R05/31/07
B–03		Backfill Details at Earth Retaining Structures	R05/31/07
B–12		Prestressed Concrete Piles and Compression Splice Can Details	R05/31/07
B–12A		Prestressed Concrete Piles, Pile and Compression Splice Can Details and Pile Notes	R05/31/07
B–12B		Pile Interaction Diagram	R05/31/07
B–13		Prestressed Concrete Pile Build–Up Details	R05/31/07
D–01		Cattle Gate	R05/31/07
D–02		Chain Link Fence with Toprail	R05/31/07
D–03		Chain Link Fence without Toprail	R05/31/07
D–04		Wire Fence with Metal Posts	R05/31/07
D–05		Typical Details of Curbs and/or Gutters	R05/31/07
D–06		Typical Detail of Reinforced Concrete Drop Driveway	R05/31/07
D–07		Centerline and Reference Survey Monument	R05/31/07
D–08		Street Survey Monument	R05/31/07
D–15		Concrete Sidewalk	R05/31/07
D–16		P.C.C. Bus Pad	R05/31/07
D–17		P.C.C. Bus Pad	R05/31/07
D–18		P.C.C. Pavement Layout	R05/31/07
D–19		P.C.C. Pavement w/ Permeable Base Joint Details	R05/31/07
D–20		P.C.C. Pavement w/ Permeable Base Joint Details	R05/31/07
D–21		P.C.C. Longitudinal Joint Details	R05/31/07
D–22		P.C.C. Connection to Curbs and Gutters	R05/31/07
D–23		Joints	R05/31/07
H–01A		Type A Catch Basin	R05/31/07
H–01B		Type B Catch Basin	R05/31/07
H–01C		Type C Catch Basin	R05/31/07
H–01D		Type D Catch Basin	R05/31/07
H–01E		Catch Basin Sections	R05/31/07
H–02A		Type A1 Catch Basin	R05/31/07
H–02B		Type B1 Catch Basin	R05/31/07
H–02C		Type C1 Catch Basin	R05/31/07
H–02D		Type D1 Catch Basin	R05/31/07
H–02E		Catch Basin Sections	R05/31/07
H–03		Type A, B, and C Storm Drain Manhole	R05/31/07
H–04		Type D Storm Drain Manhole	R05/31/07
H–05		Typical Reinforcing Details for Drainage Structures	R05/31/07
H–06		Typical Reinforcing Details for Drainage Structures	R05/31/07
H–07		Catch Basin and Manhole Castings	R05/31/07
H–08		Type 1A–9 and 1A–9P Grated Drop Inlet	R05/31/07
H–09		Type 2A–9 and 2A–9P Grated Drop Inlet	R05/31/07
H–10		Type A–9 or A–9P Steel Frames	R05/31/07
H–11		Type A–9 and A–9P Steel Grates	R05/31/07
H–12		Type 61614P and 1211214P Grated Drop Inlet	R05/31/07
H–13		Type 61616P and 1211216P Grated Drop Inlet	R05/31/07
H–14		Type 61214P Grated Drop Inlet	R05/31/07
H–15		Type 1211214, 1211214P and 1211216, 1211216P Steel Frame and Grates	R05/31/07

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE
H–16		Type 61614, 61614P, 61616, 61616P Steel Frame and Grates	R05/31/07
H–17		Type 61214 Steel Frames and Grates	R05/31/07
H–18		Type 61214P Steel Grates	R05/31/07
H–19		Type 61614B Steel Frame and Grates	R05/31/07
H–20		Cement Rubble Masonry Structures	R05/31/07
H–21		Concrete and Cement Rubble Masonry Structures	R05/31/07
H–22		Inlet/Outlet Structure	R05/31/07
H–23		Inlet/Outlet Structure	R05/31/07
H–24		Flared End Section for Culverts	R05/31/07
H–25		Flared End Section for Culverts	R05/31/07
H–26		Concrete Spillway Inlet	R05/31/07
H–27		Cap Coupling Details Standard Joint	R05/31/07
H–28		Reinforced Concrete Collar & Jacket	R05/31/07
H–29		Underdrain Cleanout Steel Frame and Cover	R05/31/07
H–30		Underdrain Connection to Drainage Structure	R05/31/07
L–01		Tree Planting	R08/16/06
L–02		Tree Planting	R08/16/06
L–03		Tree Transplanting	R08/16/06
L–04		Palm Planting	R08/16/06
L–05		Shrub Planting	R08/16/06
L–06		Landscape Details	R08/16/06
L–07		Landscape Details	R08/16/06
L–08		Landscape Details	R08/16/06
L–09		Landscape Details	R08/16/06
L–10		Landscape Details	R08/16/06
L–11		Planting Notes	R08/16/06
L–12		Irrigation Details	R08/16/06
L–13		Irrigation Details	R08/16/06
L–14		Irrigation Details	R08/16/06
L–15		Irrigation Details	R08/16/06
L–16		Irrigation Details	R08/16/06
L–17		Irrigation Details	R08/16/06
L–18		Irrigation Details	R08/16/06
L–19		Irrigation Details	R08/16/06
L–20		Irrigation Details	R08/16/06
L–21		Irrigation Details	R08/16/06
L–22		Irrigation Details	R08/16/06
L–23		Irrigation Details	R08/16/06
L–24		Irrigation Notes	R08/16/06
TE–01		Sign Height and Location	07/11/08
TE–01A		Sign Installation	07/11/08
TE–02A		Galvanized Flanged Channel Sign Post Mounting	R05/31/07
TE–02B		Galvanized Flanged Channel Sign Post Mounting	R05/31/07
TE–02C		Galvanized Flanged Channel Sign Post Mounting	R05/31/07
TE–03A		Galvanized Square Tube Sign Post Mounting	R05/31/07
TE–03B		Galvanized Square Tube Sign Post Mounting	R05/31/07
TE–04		Regulatory Signs	07/11/08
TE–05		Warning Signs	07/11/08
TE–06		Miscellaneous Signs	07/11/08

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE
TE–07		Construction Signs	07/11/08
TE–08		Miscellaneous Intersection Signs	07/11/08
TE–09		Bike Route Sign & Supplementary Plates	07/11/08
TE–10		Interstate Route Marker	07/11/08
TE–11		State Route Marker and Auxiliary Markers	07/11/08
TE–12		State Route Marker and Border Detail for Guide Signs	07/11/08
TE–12A		Route Sign Assemblies	07/11/08
TE–13		Street Name Sign on Mast Arm	07/11/08
TE–14		Miscellaneous Reflector Markers	07/11/08
TE–15		Object Markers	07/11/08
TE–16		Mile Posts	07/11/08
TE–17A		Cantilever Overhead Sign Elevation & Details	R05/31/07
TE–17B		Cantilever Sign Frame Detail and Sections	R05/31/07
TE–17C		Cantilever Sign Frame Detail	R05/31/07
TE–17D		Cantilever Sign Frame Sections	R05/31/07
TE–17E		Cantilever Sign Frame Details	R05/31/07
TE–18A		Two Post Overhead Sign Frame Elevations	R05/31/07
TE–18B		Two Post Sign Framing Plan Section	R05/31/07
TE–18C		Two Post Sign Framing Sections and Details	R05/31/07
TE–18D		Two Post Sign Frame Details	R05/31/07
TE–18E		Two Post Sign Frame Details	R05/31/07
TE–19A		Overhead Sign Framing Schedule	R05/31/07
TE–19B		Sign Post Drilled Shaft Foundation	R05/31/07
TE–19C		Spread Footing	R05/31/07
TE–19D		Sign Frame Foundation Schedule	R05/31/07
TE–19D.1		Sign Frame Foundation Schedule	R05/31/07
TE–19D.2		Sign Frame Foundation Schedule	R05/31/07
TE–19D.3		Sign Frame Foundation Schedule	R05/31/07
TE–19D.4		Sign Frame Foundation Schedule	R05/31/07
TE–19D.5		Sign Frame Foundation Schedule	R05/31/07
TE–19E		Anchorage Details	R05/31/07
TE–19F		Anchorage Details	R05/31/07
TE–19G		Miscellaneous Sign Frame Details	R05/31/07
TE–19H		Luminaire Walkway Support	R05/31/07
TE–19J		Fixed Message Luminaire Support	R05/31/07
TE–19K		Miscellaneous Sign Details	R05/31/07
TE–19L		Miscellaneous Sign Details	R05/31/07
TE–19M		Miscellaneous Sign Frame Details	R05/31/07
TE–20		Supports for Ground Mounted Guide Sign	R05/31/07
TE–20A		Supports for Ground Mounted Guide Sign	R05/31/07
TE–20B		Supports for Ground Mounted Guide Sign	R05/31/07
TE–20C		Supports for Ground Mounted Guide Sign	R05/31/07
TE–21A		Sign Breakaway Mounts	R05/31/07
TE–21B		Sign Breakaway Mounts	R05/31/07
TE–22		Laminated Aluminum Sign Panels (Overhead)	07/11/08
TE–23		Laminated Aluminum Sign Panels (Ground Mounted)	R05/31/07
TE–24		Solid Aluminum Extruded Sign Panel and Accessory Details	R05/31/07
TE–25		Guide Signs Luminaire Mountings	R05/31/07
TE–26		Raised Pavement Markers and Striping	07/11/08

Rev	By	Date	Description
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PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: N/A
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION

STANDARD PLANS SUMMARY
STATE OF HAWAII (HDOT)

SHEET 1 OF 2

Contract No.: SV–340
CADD File: SD1–A06–GN011
Drawing No.: GN011 Rev.
Scale: N/A
Page No. 10 of 60

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STANDARD PLANS SUMMARY—STATE OF HAWAII DEPARTMENT OF TRANSPORTATION (HDOT)

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE
TE–27		Raised Pavement Markers and Striping	07/11/08
TE–28		Entrance and Exit Pavement Markings	07/11/08
TE–28A		Miscllaneous Pavement Markings	07/11/08
TE–29		Pavement Arrows and Symbols	07/11/08
TE–30		Pavement Alphabets, Numbers & Symbols	07/11/08
TE–31		Pavement Alphabets, Numbers & Symbols	07/11/08
TE–32		Type I & II Traffic Signal System Miscellaneous Details	R05/31/07
TE–33		Type II Traffic Signal System	08/16/06
TE–33A.1		Type II Traffic Signal Standard	R05/31/07
TE–33A.2		Type II Traffic Signal Standard	R05/31/07
TE–34		Loop Detector Details	07/11/08
TE–35		Loop Detectors & Duct Details	07/11/08
TE–36		Traffic Signal Details	07/11/08
TE–37		Pullbox & Cover Details	07/11/08
TE–37A		Type "A" Traffic Pullbox	R05/31/07
TE–37B		Type "A" Traffic Pullbox Reinforcing	R05/31/07
TE–37C		Type "B" Traffic Pullbox	R05/31/07
TE–37D		Type "B" Traffic Pullbox Reinforcing	R05/31/07
TE–37E		Type "B" Traffic Pullbox Foundation	R05/31/07
TE–37F		Type "C" Traffic Pullbox	R05/31/07
TE–37G		Type "C" Traffic Pullbox Reinforcing	R05/31/07
TE–37H		Type "C" Traffic Pullbox Foundation	R05/31/07
TE–37J		Traffic Pullbox Cover & Details	R05/31/07
TE–38		Type III Traffic Signal Standard	R05/31/07
TE–38A.1		Type III Traffic Signal Standard	R05/31/07
TE–38A.2		Type III Traffic Signal Standard	R05/31/07
TE–39		Metal Guardrail Connection to Concrete Barrier	07/11/08
TE–40		Concrete Barrier Transition	R05/31/07
TE–40A		Concrete Barrier Transition Sections	R05/31/07
TE–41		Guardrail Type 4 (Rigid Barrier)	R05/31/07
TE–42		Portable Concrete Barrier	R05/31/07
TE–43		Portable Concrete Barrier	R05/31/07
TE–44		Guardrail Type 4 Miscellaneous Details	07/11/08
TE–45		Barricades	07/11/08
TE–46		Delineation & Pavement Markings at Narrow Bridges	07/11/08
TE–47		Highway Light Standard	R05/31/07

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE

STANDARD PLAN NO.	APPLICABLE	TITLE	DATE

Rev	By	Date	Description
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PRELIMINARY ENGINEERING SUBJECT TO REVISION

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PEARLRIDGE STATION

STANDARD PLANS SUMMARY
STATE OF HAWAII (HDOT)

SHEET 2 OF 2

Contract No.: SV–340
CADD File: SD1–A06–GN012
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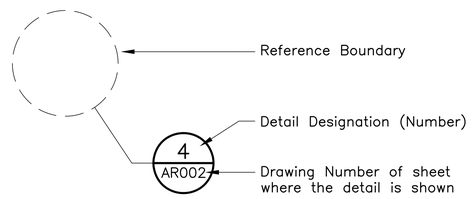
GENERAL NOTES

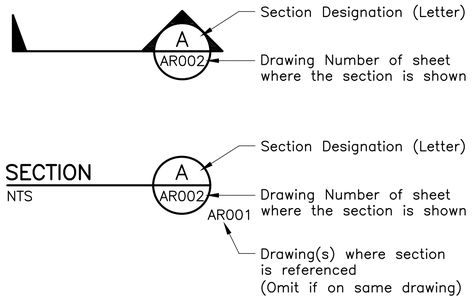
1. "EB Track" denotes the centerline of the Eastbound Track. "WB Track" denotes centerline of the Westbound Track.
2. Origin of Coordinates: Hawaii State Plane Coordinate Grid System, Zone III with the North American Datum of 83 High Accuracy Reference Network (NAD83 HARN).
3. Elevations shown on these plans are reference to Mean Sea Level (MSL).
4. Underground facilities, poles, structures, and utilities have been plotted from available surveys and records. Their locations must be considered approximate only. There may be others, the existence of which is at present unknown. Verification of all the locations, shown or not shown, will be the responsibility of the contractor.
5. The existing conditions shown hereon are based on LiDAR data collected in September and October of 2007, supplemental ground surveys were performed between September of 2007 and December of 2008, and record information from various design projects either constructed, under construction or proposed. The selected designer is responsible for verifying existing conditions prior to supplying advanced design documents to the RTD.
6. Contact the Hawaii Department of Transportation (HDOT) and/or the City and County of Honolulu for additional plan sheets not included in the Standard Details Summary and Standard Plans Summary plan sheets.
7. For Survey Control data, see RTD Standard Drawings.
8. Contractor shall replace all curbs, gutters, sidewalks and any other appurtenances damaged during construction.

SYMBOLS

DETAILS



SECTIONS



GENERAL SYMBOLS

&	And
@	At
#	Number
Ø	Diameter
%	Percent
=	Equal to
>	Greater Than
<	Less Than
≥	Greater Than or Equal To
≤	Less Than or Equal To

CIVIL SYMBOLS

△	Point of Intersection
■	Station Equation

SPECIAL TERMS

Makai	Ocean
Mauka	Mountain

231° 41' 16" South Azimuth

ABBREVIATIONS

AHD	Ahead
℄	Baseline
BK	Back
℄	Centerline
Comm	Communications
CS	Curve to Spiral
Dia	Diameter
Dwg	Drawing
E	East
Ea	Actual Superelevation
Eu	Unbalanced Elevation
EB	Eastbound
EG	Existing Ground
El	Elevation
Elev	Elevation
H	Horizontal
HWY	Highway
KH	Kamehameha Highway
L	Length
Lc	Length of Curve
LH	Left Hand
Ls	Length of Spiral
LVC	Length of Vertical Curve
Max	Maximum
Min	Minimum
MHN	Manhole, Negative
MHP	Manhole, Positive
N	North
N/A	Not Applicable
NB	Northbound
NIC	Not in Contract
N.I.C.	Not in Contract
No.	Number
PC	Point of Curve
PI	Point of Intersection
PITO	Point of Intersection of Turnout
PS	Point of Switch
PT	Point of Tangent
PVC	Point of Vertical Curvature
PVI	Point of Vertical Intersection
PVT	Point of Vertical Tangency
R	Radius
RH	Right Hand
ROW	Right-of-Way
SB	Southbound
SC	Spiral to Curve
ST	Spiral to Tangent
Sta	Station
TS	Tangent to Spiral
V	Vertical
WB	Westbound

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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PEARLRIDGE STATION

GENERAL CIVIL NOTES, SYMBOLS AND ABBREVIATIONS

Contract No.: SV-340
CADD File: SD1-B01-CG001
Drawing No: CG001 Rev.
Scale: N/A
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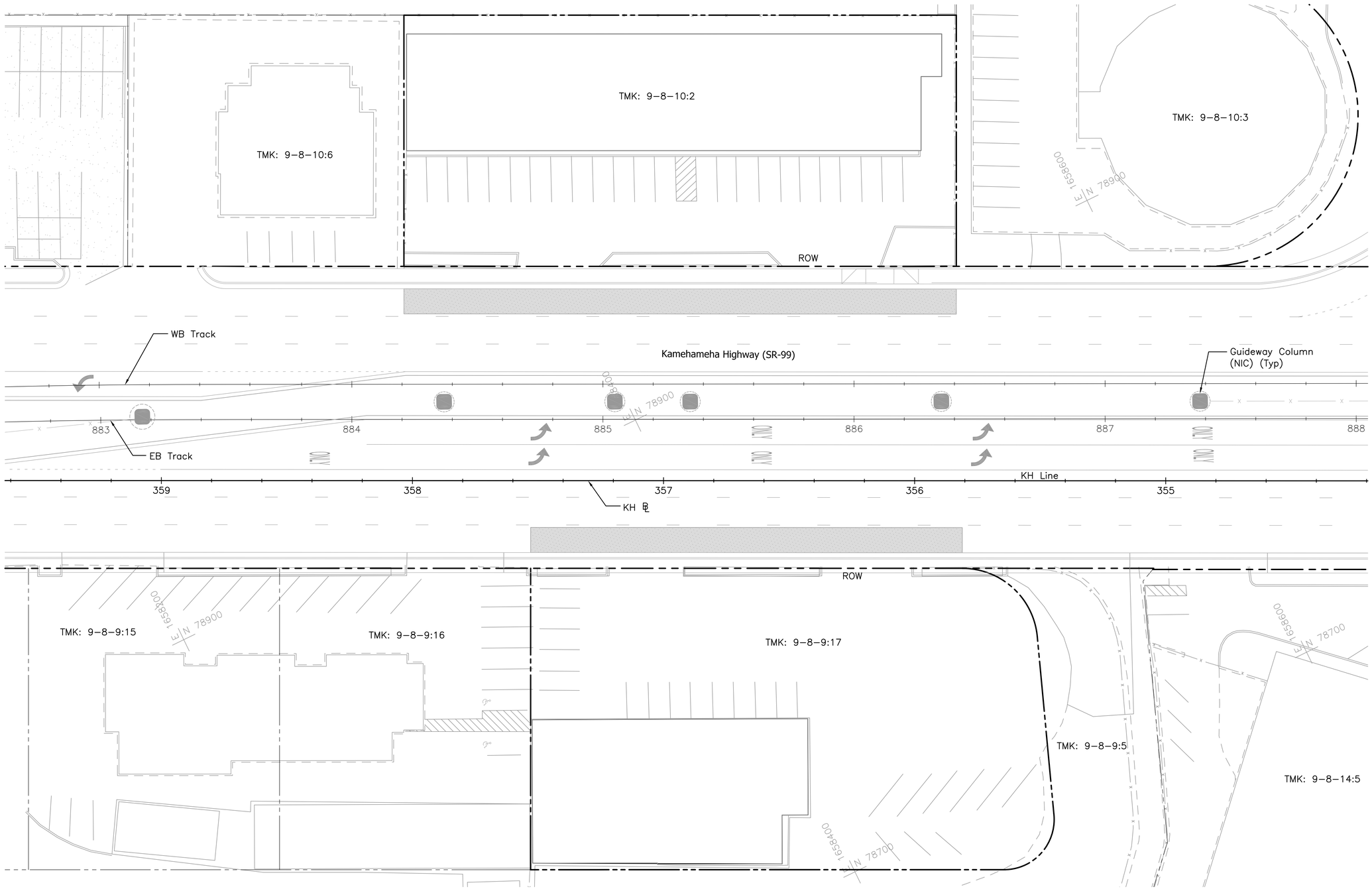

NOTES:

1. See Dwg No. CG001 for General Notes, Symbols and Abbreviations.
2. Existing conditions are shown assuming the completed construction of the Kamehameha Guideway contract.

LEGEND:

Existing concrete pavement bus pad.

20' 0' 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
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Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
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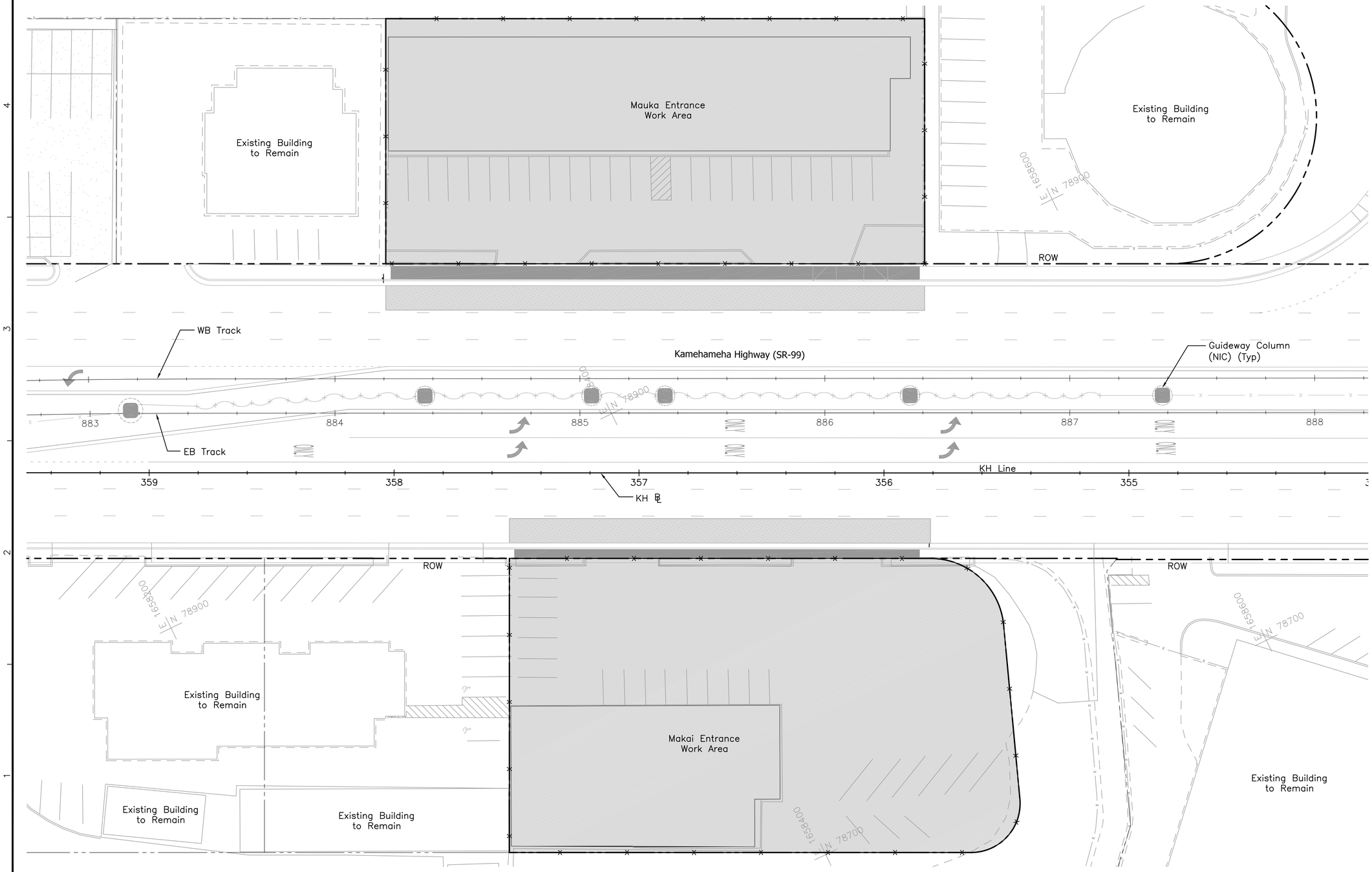
PEARLRIDGE STATION

EXISTING CONDITIONS

Contract No.: SV-340
CADD File: SD1-B03-TD001
Drawing No: TD001
Rev.
Scale: 1"=20'
Page No. 13 of 60

2009-12-28 2:48 PM P:\Projects\Oahu\60028311-HHCT\500 Submittal\Station Package\RTD BLACK Revised (12-31-2009)\SD1-B03-TD001-TD002.dwg



NOTES:

1. See Dwg No. CG001 for General Notes, Symbols and Abbreviations.
2. Cut and cap all existing utility services (per operating authority procedures/approval) to existing structures at the Right of Way line.
3. Per consultation with the City, a cesspool is assumed to be located in the Makai parcel. The cesspool shall be located and removed per applicable City and State regulations.
4. Demolish and remove all existing structures within the parcels to be acquired.
5. Existing light poles to be disposed of per the direction of the City.
6. Demolish and remove all existing curb, concrete, bituminous concrete, walls, etc. within the limits as shown.
7. Erect construction fence around the perimeter of the work areas as shown.
8. Kamehameha Highway configuration shown reflects preliminary design for HHCTCP mainline Kamehameha Guideway contract and is subject to change.

LEGEND:

- Work Areas (notes 2 through 8 above).
- Existing sidewalk areas to be removed and replaced while maintaining pedestrian and bus access at all times. Match concrete per Landscape plans.
- Existing concrete pavement.
- Construction fence

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
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Date: 12-18-09

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PEARLRIDGE STATION

DEMOLITION SITE PLAN

Contract No.: SV-340
CADD File: SD1-B03-TD002
Drawing No.: TD002 Rev.
Scale: 1"=20'
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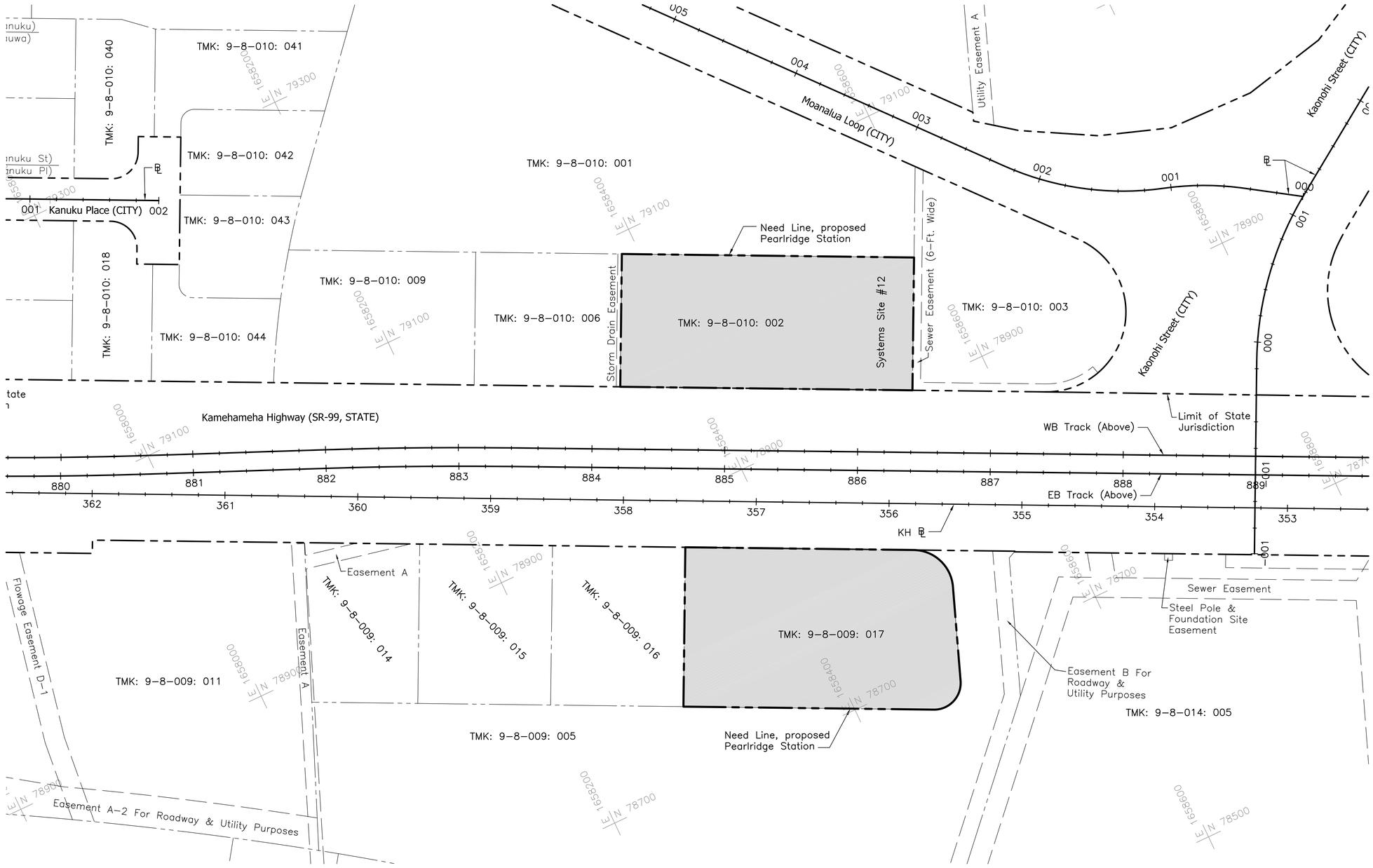

NOTES:

1. ROW acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
2. Coordination with property owners will occur prior to ROW acquisition in accordance with regulatory requirements.
3. Construction easements will be defined during the final design phase and are not reflected on plans.
4. ROW acquisitions will occur prior to or under the Kamehameha Guideway Contract. All anticipated parcel needs for the station contract are shown with the approximate limits delineated as the Station "Need Line."
5. Limits of state jurisdiction are approximate and will be verified during the final design phase.

LEGEND:

- Right-of-Way (ROW) / Parcel Need
- Access Permitted
- No Vehicle Access Permitted
- No Access Permitted
- Limited Access as noted on Plan
- ROW Line
- Property Line
- Easement Line

Tax Map Key Number	Parcel Acquisitions	House Number	Street Name	Land Use
9-8-009:017	Full	98-77	Kamehameha Hwy	Commercial
9-8-010:002	Full	98-80	Kamehameha Hwy	Commercial

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION

EXISTING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS

Contract No.: SV-340
CADD File: SD1-B04-RW001
Drawing No: RW001 Rev.
Scale: 1"=40'
Page No. 15 of 60

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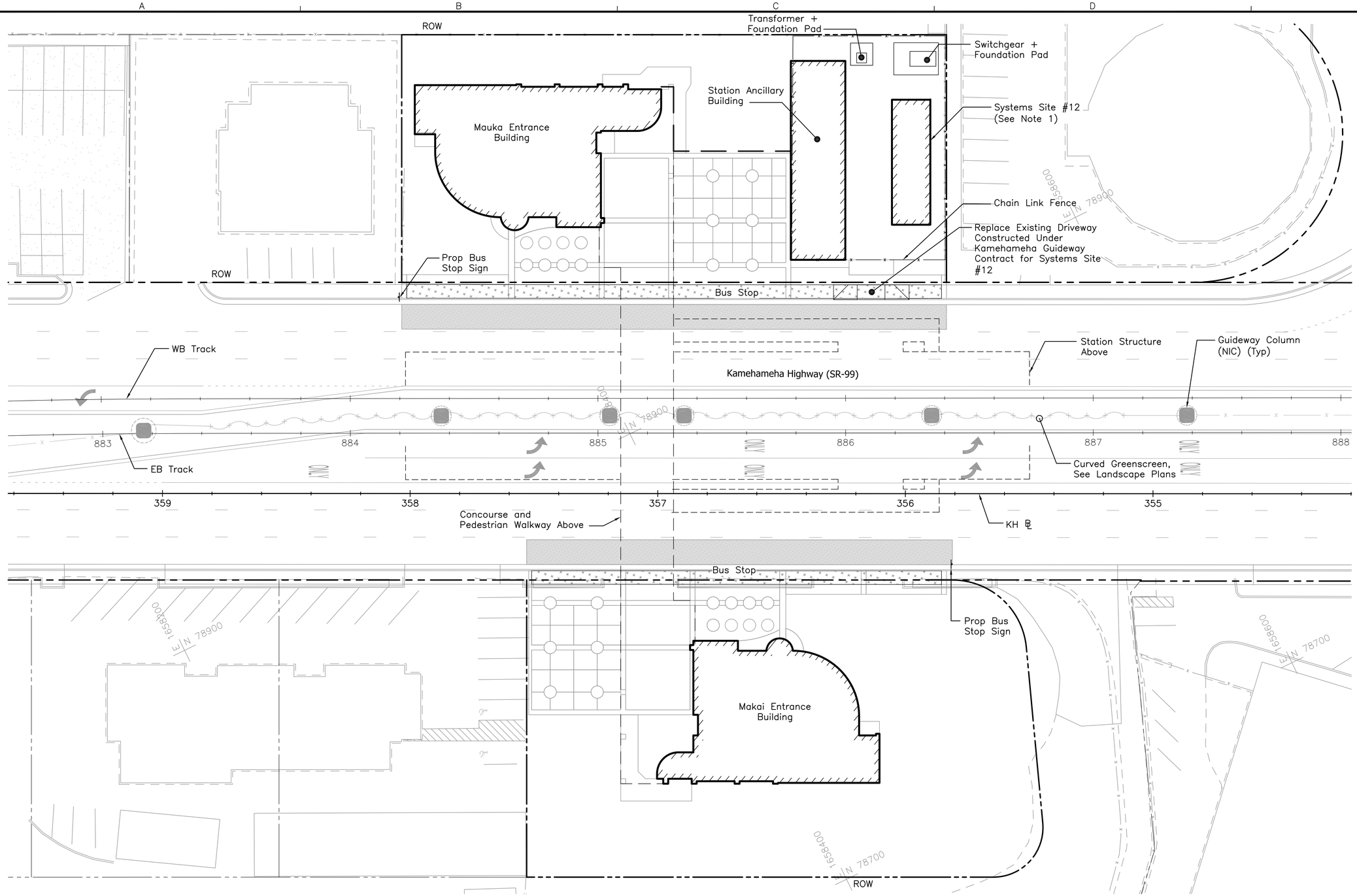

NOTES:

1. Install Concrete Pad at Systems Site #12. See Systems Site Plan (Dwg. No. RP101) for TPSS Site Work.

LEGEND:

New sidewalk to be replaced and match Landscape plans.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION

CIVIL SITE PLAN

Contract No.: SV-340
CADD File: SD1-B10-RP001
Drawing No: RP001 Rev.
Scale: 1"=20'
Page No. 16 of 60

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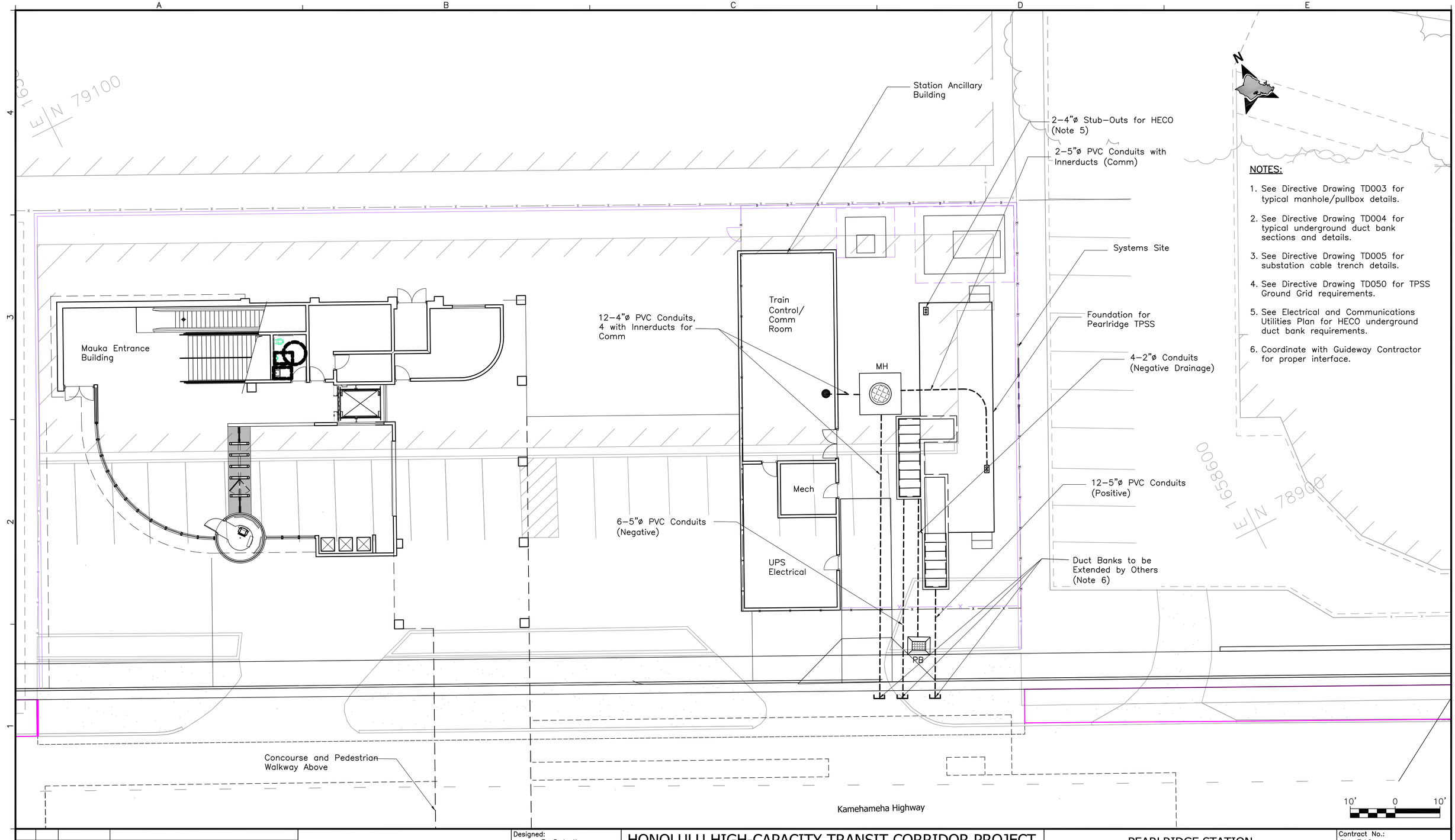

NOTES:

1. See Directive Drawing TD003 for typical manhole/pullbox details.
2. See Directive Drawing TD004 for typical underground duct bank sections and details.
3. See Directive Drawing TD005 for substation cable trench details.
4. See Directive Drawing TD050 for TPSS Ground Grid requirements.
5. See Electrical and Communications Utilities Plan for HECO underground duct bank requirements.
6. Coordinate with Guideway Contractor for proper interface.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Gobelle
Drawn: C Jamison
Checked: L Mayola
Approved: A Borst
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

For reduced prints, original page size in inches: 0 1 2 3 4

PEARLRIDGE STATION

SYSTEMS SITE PLAN SITE # 12

Contract No.: SV–340
CADD File: SD1–B10–RP101
Drawing No.: RP101 Rev.
Scale: 1"=10'
Page No. 17 of 60

2010–02–01 2:21 PM K:\CADD\16 Communications\SD1–B10–RP101.dwg

GENERAL UTILITIES NOTES

1. All construction work shall be done in accordance with the rules and regulations of the governmental agency having jurisdiction over the work. The Contractor shall notify the appropriate governmental agency having jurisdiction over the work to arrange for inspectional services.

2. The Contractor shall verify all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the City.

3. Obtain all standards and drawings related to this project from the Utility Companies. Verify that the Utility Company's Project Drawings are the same as the Contract Drawings. Notify the City of any differences between them. If differences exist, obtain a resolution prior to proceeding with the work which is affected.

4. The underground pipes, cables, manholes, handholes, service boxes, or ductlines known to exist from search of records are indicated on the plans. The Contractor shall verify the locations and depths of existing utility lines and exercise proper care when excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines. The Contractor shall verify the operational status of all existing utilities to be removed or abandoned in place. Any discrepancy shall be brought to the attention of the City.

5. The Contractor shall exercise care when performing his work and shall be held liable for any damages incurred to the existing facilities, utilities and other features, whether shown or not on plans, as a result of his operations. All damaged portions shall be replaced in accordance with the requirements of the affected owner or user at the Contractor's expense.

6. All existing utilities to remain in use, whether or not shown on the plans, shall be protected at all times by the Contractor unless specified on the plans to be abandoned. Any damage to the existing utilities shall be repaired and paid for by the Contractor.

7. Existing utilities shall remain in service and in place at all times. If relocation of the existing utilities is required for the Contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the Contractor's expense, and only with the approval of the City and the affected utility company.

8. Confined Space
For entry by HDOT or City personnel, including inspectors, into a permit required confined space as defined in 29 CFR Part 1910.146(b), the Contractor shall be responsible for providing:

   A. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:

      a. Full body harnesses for up to two personnel.
      b. Lifeline and associated clips.
      c. Ingress/egress and fall protection equipment.
      d. Two-way radios (walkie-talkies) if out of line-of-sight.
      e. Emergency (escape) respirator (10 minute duration).
      f. Cellular telephone to call for emergency assistance.
      g. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance at least 20-feet away).
      h. Personal multi-gas detector to be carried by inspector.

   B. Continuous forced air ventilation adequate to provide safe entry conditions.
   C. One attendant/rescue personnel topside (two, if conditions warrant it).

9. Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, the State Department of Land and Natural Resources-Historic Preservation Division (1-808-692-8015), and the Engineer. In addition, for non-City projects, the Contractor shall inform the Civil Engineering Branch, Department of Planning and Permitting (1-808-768-8084); and for City projects, notify the responsible City agency.

10. The existing improvements on the premises and in adjacent areas that are not to be removed shall be preserved and protected. Any and all damages resulting from the Contractor's construction operations shall be replaced and repaired to original condition, to the satisfaction of the owner.

11. The Contractor shall provide an adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic.

12. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or ductline.

13. The Contractor shall not cause falling rocks, oil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural water-courses. Should such violation occur, the Contractor shall immediately make all remedial action necessary.

14. Adequate provisions shall be made to prevent surface waters from damaging the cut face of excavated trenches. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.

15. The Contractor shall be responsible for conformance with the applicable provisions of the Water Quality and Water Pollution Control Standards contained in the Hawaii Administrative Rules, Chapter 11-54, "Water Quality Standards" and Chapter 11-55, "Water Pollution Control". As well as Chapter 14 of the Revised Ordinances of Honolulu, as amended, Best Management Practices shall be employed at all times during construction.

16. The Contractor shall be responsible for any sewage spills caused during construction. The Contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures.

17. The Contractor shall coordinate, if applicable, construction of electrical, telephone, cable television, water, sewer, and gas line relocation work with Hawaiian Electric Company, Hawaiian TelCom, Oceanic Time Warner Cable, Board of Water Supply, Department of Environmental Services, and The Gas Co., respectively. All coordination shall be considered incidental to utility relocation work.

18. Where necessary, reconstruction of sidewalk, gutter and driveway area shall conform to the standard details of the governmental agency having jurisdiction over the work.

19. The Contractor shall coordinate with the land owners and users as needed to carry out the work.

20. Origin of Coordinates: Hawaii State Plane Coordinate Grid System, Zone III with the North American Datum of 83 High Accuracy Reference Network (NAD83 HARN).

21. Elevations shown on these plans are referenced to Mean Sea Level (MSL).

UTILITIES ABBREVIATIONS

&	And
Abnd	Abandoned
AC	Asphalt Concrete
Approx	Approximate
ARV	Air Relief Valve
Ave	Avenue
BL	Baseline
BFP	Backflow Preventor
BGGV	Bevel-geared gate valve
Blvd	Boulevard
BWS	Board of Water Supply
CL	Centerline
C&C	City and County
CB	Catch Basin
CBMH	Catch Basin Manhole
COTG	Cleanout To Grade
Conc	Concrete
CTV	Cable TV
D	Drain
DI	Drainage Inlet
DMH	Drainage Manhole
DS	Down Spout
Dwg	Drawing
E	Electric, Electrical
Exist	Existing
FH	Fire Hydrant
FM	Force Main
FOC	Fiber Optic Cable
Fwy	Freeway
GW	Guy Wire
HECO	Hawaiian Electric Company
HP	High Pressure
HW	Headwall
Hwy	Highway
ICB	Irrigation Control Box
ICV	Irrigation Control Valve
Irr	Irrigation
KH	Kamehameha Highway
kV	Kilovolt
Lat	Lateral
Ln	Lane
MH	Manhole
Misc	Miscellaneous
MW	Monitoring Well
NPW	Non-Potable Water
N/A	Not Applicable
Pkwy	Parkway
Pl	Place
POC	Point Of Connection
PPB	Pedestrian Push Button
Prop	Proposed
PVC	Polyvinyl Chloride
Pwr	Power
RCP	Reinforced Concrete Pipe
Rd	Road
ROW	Right-of-Way
S	Sewer
SDMH	Storm Drain Manhole
Sig	Signal
SL	Street Light
SLB	Street Light Box
SLC	Street Light Conduit
SMH	Sewer Manhole
St	Street
St Mon	Street Monument
T	Top
TBD	To Be Determined
Temp	Temporary
TL	Traffic Light
TSB	Traffic Signal Box
TSC	Traffic Signal Conduit
TSL	Traffic Signal
UB	Utility Box
UD	Underdrain
UMH	Utility Manhole
UP	Utility Pole
USN	United States Navy
USAF	United States Air Force
Util	Utility
W	Water
WM	Water Meter
WMH	Water Manhole
Wtr	Water
WV	Water Valve
WVB	Water Valve Box
WVMH	Water Valve Manhole

UTILITIES SYMBOLS

- —AT&T— Exist AT&T Line
- —CTV— Exist Cable Television
- —OCTv— Exist Cable Television, Overhead
- —FOC— Exist Communication Fiber Optic
- —D24— Exist Drain Line (Size in Inches)
- — OE — Exist Electrical Line, Overhead
- —E— Exist Electrical Line
- —FA— Exist Fire Alarm
- —F6— Exist Fuel or Oil Line (Size in Inches)
- —FM12— Exist Force Main (Size in Inches)
- —G6— Exist Gas Line (Size in Inches)
- — NPW12 — Exist Non-Potable Water Line (Size in Inches)
- —SIC— Exist Sandwich Isle Communications Line
- —S12— Exist Sewer Line (Size in Inches)
- —SC— Exist Signal Corps Line
- —SLC— Exist Street Light Conduit
- —OT— Exist Telephone Line, Overhead
- —T— Exist Telephone Line
- —TSC— Exist Traffic Signal Conduit
- —W12— Exist Water Line (Size in Inches)

- Exist Air Relief Valve
- Exist AT&T Box
- Exist AT&T Manhole
- Exist Backflow Preventor
- Exist Utility Box
- Exist Catch Basin
- Exist Catch Basin
- Exist Cable TV Box
- Exist Clean Out
- Exist Drain Inlet
- Exist Drain Manhole
- Exist Dry Standpipe
- Exist Electrical Box
- Exist Electrical Manhole
- Exist Electrical Transformer
- Exist Fire Alarm Box
- Exist Fire Hydrant
- Exist Gas Manhole
- Exist Gas Valve
- Exist Guy Wire
- Exist Irrigation Control Valve Box
- Exist Irrigation Control Valve
- Exist Light Pole
- Exist Manhole
- Exist Street Monument
- Exist Pole (EP, U.P.)
- Exist Pedestrian Street Light
- Exist Traffic Sensor
- Exist Street Light
- Exist Street Light Box
- Exist Sewer Manhole
- Exist Telephone Box
- Exist Telephone Manhole
- Exist Traffic/Pedestrian Street Light
- Exist Traffic Signal Box
- Exist Traffic Street Light
- Exist Water Meter
- Exist Water Manhole
- Exist Water Valve

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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PEARLRIDGE STATION

GENERAL UTILITY NOTES, SYMBOLS, AND ABBREVIATIONS

Contract No.: SV-340
CADD File: SD1-D01-UG001
Drawing No: UG001 Rev.
Scale: N/A
Page No. 18 of 60

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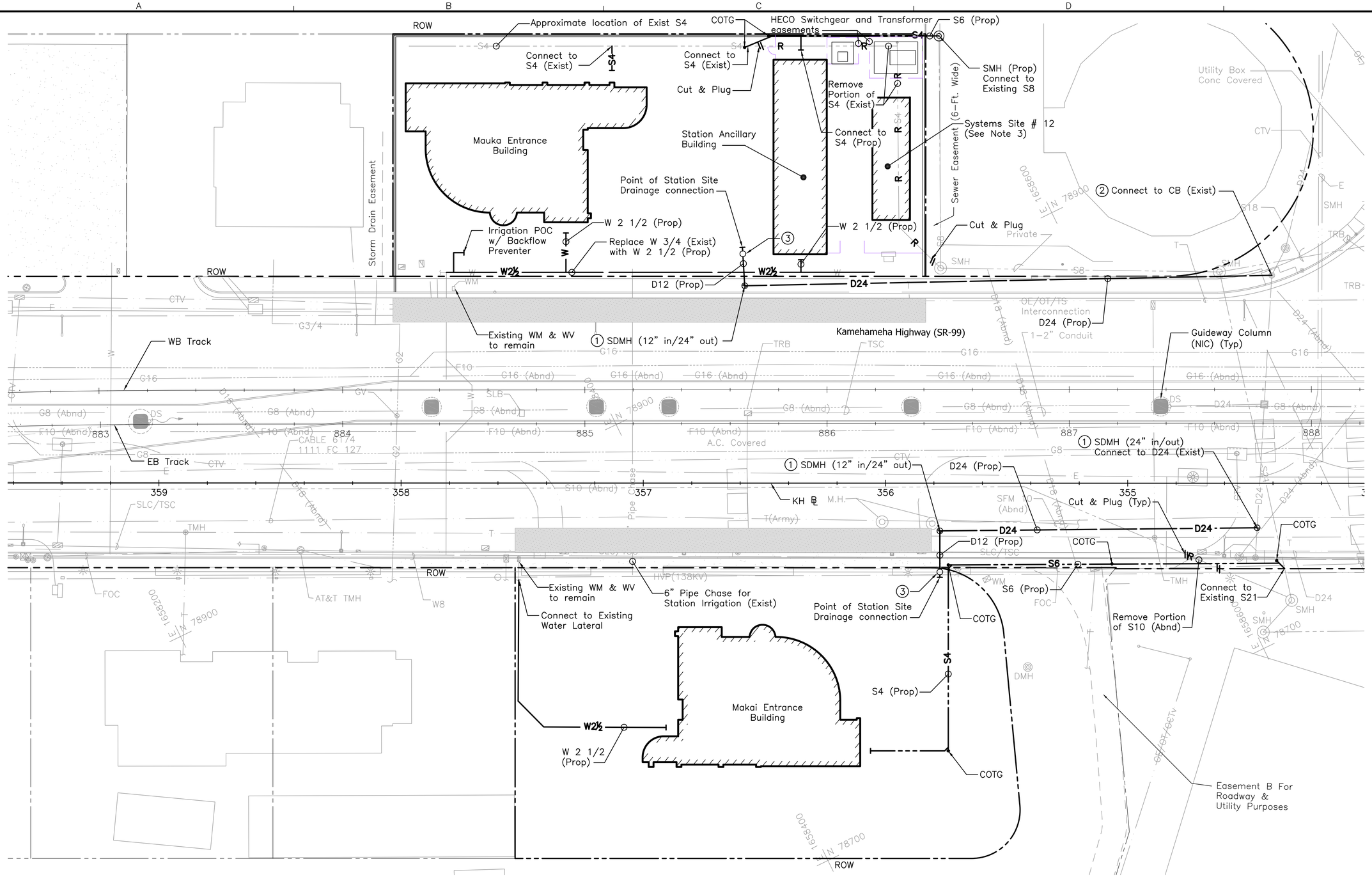

NOTES:

1. See Dwg No. UG001 for General Notes, Symbols, and Abbreviations.
2. The configuration shown relative to NIC work is under development and subject to change.
3. See Civil Site Plan, Utilities Plan – Electrical, and Systems Site Plan for requirements at Systems Site #12.
4. See Demolition Site Plan for removal of existing cesspool in Makai parcel.

DRAINAGE CONSTRUCTION NOTES:

① Construct Storm Drain Manhole, Type A per HDOT Std. Plan No. H-03.

② Catch basin constructed by Kamehameha Guideway & Utilities Contract.

③ Construct Storm Water Treatment Unit. CDS Model Manufactured by Contech or approved equivalent.

20' 0' 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: B Pang
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
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PEARLRIDGE STATION

UTILITIES PLAN WATER, SEWER, & DRAINAGE

Contract No.: SV-340
CADD File: SD1-D03-UP001
Drawing No.: UP001 Rev.
Scale: 1"=20'
Page No. 19 of 60

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HECO Transformer (By HECO)
Concrete Pad for HECO Transformer
11'x13' HECO Transformer Easement
HECO Vista Switchgear (By HECO)
Concrete Pad for HECO Vista Switchgear
16'x21' HECO Vista Switchgear Easement
ROW
Mauka Entrance Building
Station Ancillary Building
Systems Site # 12
Remove Existing HECO Transformer
Stub–Out to Station Ancillary Building Electrical Room
Continuation to HECO Service Connection Point by Guideway Contract
Stub–Out
TMK: 9–8–010: 009
TMK: 9–8–010: 006
TMK: 9–8–010: 002
TMK: 9–8–010: 003
Kamehameha Highway (SR-99)
Guideway Column (NIC) (Typ)
WB Track
EB Track
KH Line
883
884
885
886
887
888
359
358
357
356
355
TMK: 9–8–009: 015
TMK: 9–8–009: 016
TMK: 9–8–009: 017
TMK: 9–8–014: 005
Makai Entrance Building
TMK: 9–8–009: 005

LEGEND:

- Manhole
- Handhole or Pullbox
- Underground Ductline
- Ductline, Stub–Out 5'–0" from edge of sidewalk or as indicated on plan. Provide concrete stub–out marker.

6 14 E M — Handhole, Manhole Indicator

2 E 4 A — Duct Section Indicator

HANDHOLE, MANHOLE DESIGNATION

6 14 E M
- Type "H" Handhole / "M" Manhole
- Owner "E" Electrical
- Length
- Width

DUCT DESIGNATION

2 E 4 A
- Duct Section "A" See Duct Section Details
- Conduit Size
- System "P" Primary Electric (12KV) / "S" Secondary Electric
- Number of Ducts

NOTES:

1. See Dwg No. UG001 for General Notes, Symbols and Abbreviations.
2. The configuration shown relative to NIC work is under development and subject to change.
3. Coordinate with Guideway Contract for the electrical stub–out location at ROW.
4. Electrical utility relocation works outside of ROW are to be done by Guideway Contract.

20' 0' 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: C Oyama
Drawn: C Oyama
Checked: G Oyama
Approved: G Oyama
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOA NAKAMURA, OYAMA, AND ASSOCIATES
1314 SOUTH KING STREET, SUITE 401
HONOLULU, HI, 96814

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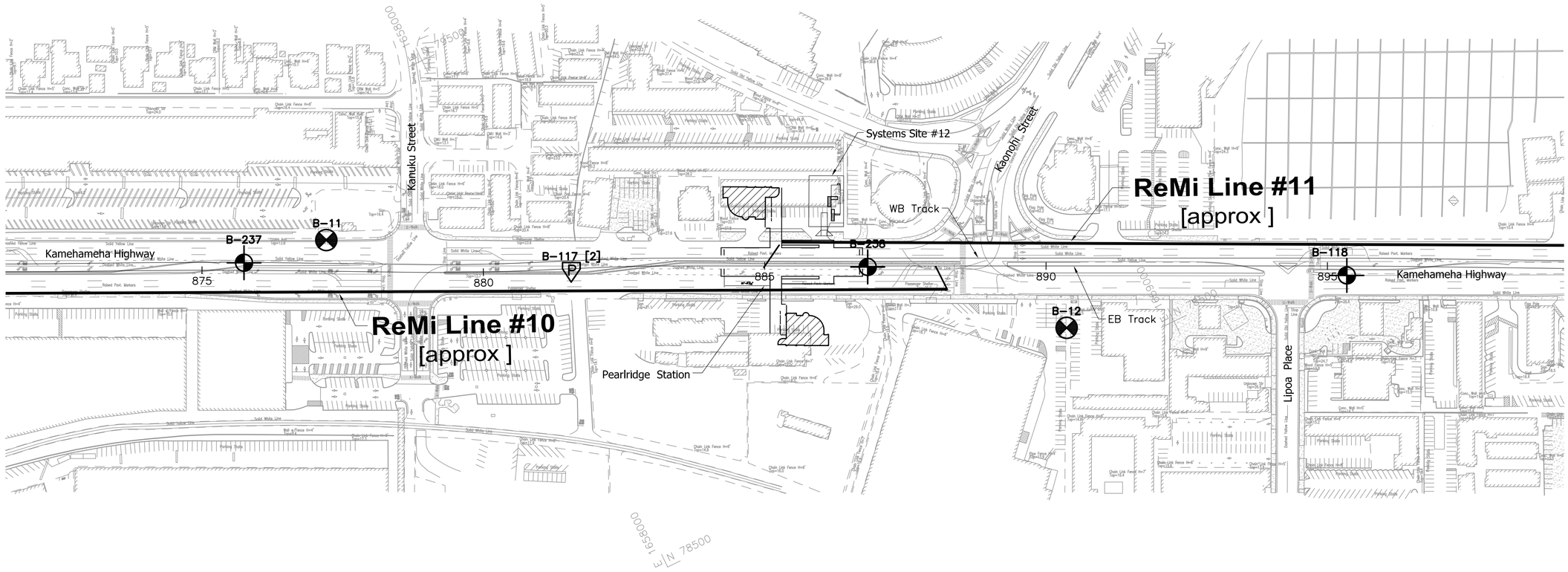
PEARLRIDGE STATION

UTILITIES PLAN
ELECTRICAL

Contract No.: SV–340
CADD File: SD1–D03–UP002
Drawing No.: UP002 Rev.
Scale: 1"=20'
Page No.: 20 of 60



GEOTECHNICAL NOTES:

1. Geotechnical Investigations Documents

   a. February 2010; Geotechnical Data Report, Honolulu High–Capacity Transit Corridor Project – Kamehameha Highway Segment, Pearl City to Aiea, Ewa, Oahu, Hawaii; W.O. 6000–20; Prepared for PB Americas; Geolabs, Inc.

   b. March 1991; Honolulu Rapid Transit Development Project, System Design, Supply, Construction, and Operation & Maintenance, Geotechnical Engineering Exploration–Waiawa to Waikiki and Manoa, Ewa and Honolulu, Oahu, Hawaii; W.O. 2366–00; Prepared for Department of Transportation Services, City and County of Honolulu; Geolabs–Hawaii.

2. Location of the City–provided geotechnical investigations, document 1.a above, documented in the GDR.

3. Locations of 1991 investigations, document 1.b above, shown on the plans are approximated from available plans. Locations are not surveyed.

4. Information from 1991 investigations, documents 1.b above, is available to the Designer for information only as an aid to understanding general site conditions.

5. See Honolulu High–Capacity Transit Corridor Project, Design Criteria Compendium, Chapter 9 – Structural [and Geotechnical] for minimum geotechnical investigation and performance requirements.

6. In accordance with Design Criteria Subsection 9.6 – Geotechnical, Designer's "project geotechnical engineer" is responsible for development of the necessary information to complete the civil and structural design required for development of the proposed Station in accordance with Contract requirements.

LEGEND:

B–105 – Completed Geotechnical Boring Ref, 1.a

B–221 [2] – Completed Geotechnical Boring Ref, 1.a (completed with [#] of piezometers)

B–00 – Geotechnical Boring Ref, 1.b

100' 0 100'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: Z Batchko
Drawn: J Derosier
Checked: J Davis
Approved: Z Batchko
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

For reduced prints, original page size in inches: 0 1 2 3 4

PEARLRIDGE STATION

GEOTECHNICAL INVESTIGATIONS PLAN

Contract No.: SV–340
CADD File: SD1–F02–GE001
Drawing No: GE001 Rev.
Scale: 1"=100'
Page No. 21 of 60

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GENERAL

1. The Structural design shall be based on the requirements of Chapter 9 – Structural of the HHCTCP Design Criteria.
2. The Contractor shall verify all dimensions and conditions prior to the start of the job and notify all discrepancies to the City. Where actual dimensions/conditions relative to existing structures conflict with the drawings, they shall be reported to the City so that proper clarification may be made.
3. All work shall conform to the best practice prevailing in the various trades comprising the work.
4. Features of construction shown are typical, and they shall apply generally throughout for similar conditions. Modify typical details as directed to meet special conditions.
5. Specific notes and details shall take precedence over general notes and typical details.
6. The Contractor shall refer to the specifications and technical provisions for information not covered by these general notes or the structural drawings.
7. The Contractor shall refer to the architectural, electrical, mechanical and utility drawings for conditions, depressions, openings, items to be embedded or attached to structural elements, etc., not shown on the structural drawings.
8. The Contractor shall provide temporary erection bracing and shoring for all structural members as required for stability of the structure during all phases of construction. The Contractor shall be responsible for all shoring.
9. The Contractor shall take all steps necessary to insure the correct location and orientation of the structure.
10. The Contractor shall protect and shield from damage all existing structures and elements adjacent to and surrounding the construction work. Existing elements damaged by the Contractor's operation shall be repaired to its original condition or replaced at no added cost.
11. All Structural work shall be prepared by a Structural Engineer licenced in the State of Hawaii or under his/her supervision, and construction review shall be made under his/her observation.

FOUNDATION

1. Reference Geotechnical Notes on Dwg No. GE001 for available geotechnical information and locations.
2. The Designer shall engage the services of a Project Geotechnical engineer in accordance with Chapter 9 of the HHCTCP Design Criteria, to perform subsurface exploration, investigation, testing, and analyses for the design and construction of the foundations of the indicated buildings and structures, and site improvements.
3. All foundation excavations shall be observed and approved by a Project Geotechnical engineer prior to placement of reinforcement and concrete. All structural fill material (both onsite and imported) shall be reviewed and approved by the Project Geotechnical engineer.
4. The Contractor shall provide for dewatering of excavations from surface water, ground water or seepage.
5. The Contractor shall be responsible for design and installation of all cribbing, sheeting, and shoring necessary to preserve excavations and earth banks.
6. Footings shall bear on undisturbed in–situ firm soil or on properly compacted fill. Bottom of footings shall be compacted to provide a firm, level and smooth bearing surface prior to placement of reinforcing steel and concrete. If soft and/or loose materials are encountered at the bottom of footing excavations, they shall be over–excavated to expose the underlying firm materials. The over excavation shall be backfilled with "lean concrete" or with structural fill compacted to a minimum of 95% relative compaction; or the footing bottom may be extended down to the underlying competent material.
7. All building slabs–on–grade shall be underlain by a 6–inch layer of aggregate subbase compacted to a minimum of 95% relative compaction.
8. All building slabs–on–grade receiving moisture sensitive flooring material shall be protected by a 15 mil vapor barrier, placed directly upon the compacted aggregate subbase.
9. The Contractor shall brace or protect all walls below grade from lateral earth pressures until attaching floor supporting members are completely in–place and have attained their full design strength.

STRUCTURAL CONCRETE

1. The design and construction of structural concrete shall conform to the "Building Code Requirements for Structural Concrete", ACI 318–05, including the following:
   A. Concrete mixing..... ASTM C94
   B. Concrete placement..... ACI 304
2. Materials shall conform to the following standard specifications, current edition:
   A. Portland cement..... ASTM C150, Type I or II
   B. Normal weight aggregates..... ASTM C33
   C. Air entraining admixture..... ASTM C260
   D. Water–reducing and retarding admixtures..... ASTM C494
3. Verify locations and dimensions of slots, anchors, ducts, etc., relating to mechanical, electrical and architectural work before pouring concrete.
4. All inserts, anchor bolts, plates, etc. embedded in concrete shall be hot–dipped galvanized unless noted otherwise.
5. All concrete shall be thoroughly consolidated during placement using a mechanical vibrator. All concrete shall be cured for a period of not less than 7 days.
6. Unless otherwise indicated on architectural drawings, provide exposed corners of beams, walls columns, etc. with 3/4" chamfers.
7. Notify the City three (3) working days prior to any concrete pour. No concrete shall be poured prior to observation by the City or its authorized representative.
8. Unless otherwise specified, concrete shall have a minimum 28–day compressive strength as follows:

A.	Sidewalks	3,000 PSI
B.	Floor Slab on Grade	3,000 PSI
C.	Footings & Grade Beams	3,000 PSI
D.	Piers	4,500 PSI
E.	Walls (incl precast or Tilt–up concrete)	4,000 PSI
F.	Columns	4,000 PSI
G.	Suspended Slabs and Beams	4,000 PSI
H.	Concrete Fill on Metal Deck	3,000 PSI
I.	All Others	3,000 PSI
J.	Site Retaining Walls	See wall schedule
K.	Prestressed Concrete	6,000 PSI

9. For walks and slabs on grade, the concrete shall be designed such that the water–cement ratio does not exceed 0.50 by weight. For concrete fill on metal deck and suspended slabs, the water–cement ratio shall not exceed 0.45 by weight.

DESIGN CRITERIA

1. Design loads:
   A. Dead loads = actual weight calculated using the material unit weights specified in Section 9.2 of the HHCTCP Design Criteria.
   B. Live loads = loads as specified in Sections 9.3 and 9.4 of the HHCTCP Design Criteria.
   C. Vehicle, crane, equipment loads = as noted on the drawings
2. Wind design data:
   A. Design effective wind speed..... 105 MPH
   B. Exposure..... C
   C. Occupancy Category III
   D. Importance factor..... 1.15
3. Seismic design data:
   A. Occupancy Category III
   B. Importance factor = 1.25
   C. Mapped spectral response accelerations:
      * Ss = 0.60
      * S1 = 0.17
   D, Site Class to be determined in accordance with Foundation Note 2.

CONCRETE TOPPING ON METAL DECK

1. Concrete topping shall not contain calcium chloride or admixtures containing calcium chloride.
2. Electrical conduits are not allowed to be embedded in concrete topping on metal deck without prior approval of the Design Engineer.
3. Connection bolts in composite floor beams shall be finger tightened only, until 72 hours after the concrete topping has been poured. At 72 hours, the bolts shall be tightened per AISC requirements.
4. The ceramic ferrule, if used to install the headed shear studs, must be removed for inspection. Under no circumstances is the ferrule to be left on any headed stud embedded in concrete topping.
5. Concrete topping shall be placed over beams first before pouring at midspan of the decking.
6. Concrete must be placed with care to avoid impacts by dropping or dumping. Buggies will not be allowed to transport and deposit concrete unless the runway is planked and the floor deck is adequately shored.
7. Pour joints across the deck shall be placed in the middle third of the bay span. Pour joints parallel to the deck shall be placed 3'–0" plus or minus from the girder line.

PRECAST CONCRETE (TILT–UP) WALL PANELS

1. The design, fabrication, transportation and erection of precast concrete (Tilt–up) wall panels shall be in accordance with Chapter 16 of the "Building Code Requirements for Structural Concrete (ACI 318–05)", and with "Tilt–Up Concrete Construction Guide", ACI 551.1R–05.
2. The Contractor shall submit shop drawings of panels showing dimensions, reinforcing, pick–up points, strong back locations, bracings, additional reinforcing for temporary lifting and bracing, and calculations showing erection stresses, stamped and signed by a structural engineer licensed in the State of Hawaii.
3. The Contractor shall verify all dimensions, openings in walls, and details prior to forming and pouring.
4. The Contractor shall be responsible for properly embedding all necessary plates, anchor bolts, inserts for dowels and anchor bolts, etc. Shown on the contract drawings. Anchor bolts shall not be substituted with expansion anchors unless approved by the City.
5. Panels shall not be lifted until concrete has cured for at least 7 days and has gained the compressive strength specified at lifting by the Engineer of Record or 3,000 PSI, whichever is greater. The Contractor shall make additional cylinders for each pour and field cure to be tested the day before lifting in order to make sure that the required compressive strength is reached. No panel shall be lifted before it has cured for 7 days.
6. Weld structural steel embed plates in accordance with ANSI/AWS D1.1. Welding of reinforcing bars shall be in conformance with ANSI/AWS D1.4. Rebars to be welded shall conform to ASTM A 706, grade 60.
7. In case the Contractor decides to cast panels stacked one above the other due to field conditions, he shall inform the City before proceeding with the work. Provide inserts in stacked panels for all rebar dowels and anchor bolts.
8. Panels more than one story high shall be braced at each floor level. In case the intermediate braces have to be removed due to field conditions, the Contractor shall submit plans for rebracing panels to the City for review and approval prior to removal of braces.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R Yamashiro
Drawn: J Perreira
Checked: G Suzuki
Approved: G Suzuki
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: CONSULTING STRUCTURAL HAWAII, INC.
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PEARLRIDGE STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 1 OF 4

Contract No.: SV–340
CADD File: SD1–G01–SG001
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REINFORCING STEEL

1. All reinforcing steel shall be deformed bars conforming to ASTM A 615 Grade 60, except ties and stirrups smaller than #4 which may be grade 40. All reinforcing steel to be welded shall conform to ASTM A 706 Grade 60.
2. Plain steel welded plain wire fabric shall conform to ASTM A 185, fabricated from as-drawn steel wire into flat sheets and galvanized.
3. Minimum concrete protection (cover) for reinforcement shall be provided in conformance with Chapter 7 of ACI 318-05.
4. Development and splices of reinforcement shall be in conformance with Chapter 12 of ACI 318-05.
5. Welding of reinforcing steel bars shall conform to "Structural Welding Code-Reinforcing Steel", AWS D1.4.
6. Bolster and support bars for slab and topping reinforcement (including slabs on grade) shall be a minimum of #4 at 36" o.c.
7. Before placing of concrete, reinforcement placement shall be inspected to insure conformance with the drawings. All discrepancies shall be corrected prior to concrete pour or grouting.

STRUCTURAL STEEL AND MISCELLANEOUS IRON

1. The design, fabrication and erection of structural steel shall be in accordance with the "Specifications for Structural Steel Buildings", AISC 360-05. Seismic design of steel structures shall be in accordance with the "Seismic Provisions for Structural Steel Buildings", including Supplement No.1 dated 2006, AISC 341-05.
2. W-shapes shall conform to ASTM A 992 (Fy = 50 ksi). All steel plates, bars, and other shapes shall comply with ASTM A 36 unless noted otherwise. Structural pipe shall conform to ASTM A 53, Grade B. Round HSS shall conform to ASTM A 500, Grade B, (Fy = 42 ksi). Rectangular and square HSS shall conform to ASTM A 500, Grade B (Fy = 46 ksi). All exposed steel members and assemblies shall be hot-dip galvanized after fabrication in accordance with ASTM A 123.
3. Common bolts shall comply with ASTM A 307, hot-dip galvanized per ASTM A 153.
4. High strength bolts shall comply with ASTM A 325N or A 325SC (where noted), Galvanized. Nuts shall conform to ASTM A 563, galvanized. Washers shall conform to ASTM F 436, Galvanized.
5. Anchor rod material shall conform to ASTM F 1554, Grade 36 (Grade 55 or 105 where noted), hot-dip galvanized, per ASTM A 153.
6. Shear stud connectors shall be as specified in AWS D1.1-04, Chapter 7, Type B made from ASTM A 108 material (Fu = 60 ksi).
7. All welds shall be arc welded, matching the electrode to the base steel, according to AWS standards and performed by certified welders. All welds shall be ground smooth and painted with 2 coats of cold galvanizing compound.
8. Unless otherwise indicated, all steel joints not detailed shall be fully welded using minimum fillet welds per AISC.
9. Shop drawings shall be submitted to the City for all structural steel, fabricated brackets hardware and miscellaneous metals prior to fabrication.
10. All anchor plates embedded in concrete shall be hot-dip galvanized after fabrication.

STEEL JOISTS

1. The design, manufacture and installation of open web steel joists and joist girders shall be in accordance with the following Steel Joist Institute (SJI) specifications:
   a. Standard specifications for joist girders, JG-1.1-05
   b. Standard specifications for open web steel joists, K-series, K-1.1-05
   c. Standard specifications for longspan steel joists, LH series and deep longspan steel joists, DLH series, LH/DLH 1.1-05
2. Joist manufacturer shall provide all bridging and blocking, both permanent and erection. Shop drawings and design calculations stamped by a licensed Hawaii Structural Engineer shall be submitted to the City for approval two weeks prior to fabrication.
3. All roof joists, joist girders and bridging shall be designed for the net wind uplift pressures in accordance with the requirements of the 2006 International Building Code (IBC).
4. Roof joist design loads:
   Dead load.....Actual weight of roof system
   Additional (equipment) loads.....See roof framing plans (it shall be the responsibility of the Designer to verify the weight of all mechanical equipment.)
   Live load.....20 psf--unless noted otherwise
5. Floor joists design loads:
   Dead load.....Actual weight of floor system
   Live load.....As noted on the drawings
   Additional (equipment) loads.....See floor framing plans (It shall be the responsibility of the Designer to verify the weight of all mechanical equipment.)
6. Live load deflection limits:
   Floor.....Not to exceed L/360 - unless noted otherwise
   Roof.....Not to exceed L/360 - unless noted otherwise

COLD-FORMED STEEL FRAMING

1. The design, fabrication, installation and construction of cold-formed light gauge structural and non-structural steel framing shall be in accordance with the "North American Specification For Design of Cold-Formed Steel Structural Members", including 2004 Supplement, NAS-01 and the following American Iron and Steel Institute (AISI) standards:
   a. Standard for Cold-Formed Steel Framing - General Provisions, General-04
   b. Standard for Cold-Formed Steel Framing - Header Design, Header-04
   c. Standard for Cold-Formed Steel Framing - Truss Design, Truss-04
   d. Standard for Cold-Formed Steel Framing - Wall Stud Design, WSD-04
2. All light gauge structural steel members, plates and angles shall be hot dip galvanized. (Minimum G90 coating) per ASTM A 924.
3. All light gauge structural steel framing members shall be cold formed to shapes from structural quality sheet steel complying with the requirements of ASTM A 1003, Grade 50 for 14 and 16 gauge members; Grade 33 for 18 thru 26 gauge members.
4. Shop drawings shall be submitted to the City for all fabricated connections and hardware prior to fabrication.
5. Structural calculations and shop drawings stamped by a Structural Engineer licensed in the State of Hawaii shall be submitted for review to the City for all pre-engineered framing, including trusses prior to fabrication.
6. Fasteners shall be self-piercing and self-drilling, power-driven screws intended for cold formed steel application and shall be zinc plated or galvanized. Screws shall not protrude through the metal decking where exposed to view. If decking is exposed on the bottom surface, welding of metal decking shall be utilized.
7. All welding shall be done in accordance with "Structural Welding Code", AWS D1.1 and "Structural Welding Code Sheet Steel", AWS D1.3 for sheet steel and performed by certified welders.
8. The Contractor shall be responsible for temporary bracing of all cold-formed metal framing including trusses.

PEDESTRIAN BRIDGES

1. Pedestrian bridges shall be designed in accordance with Section 9.4 of the HHCTCP Design Criteria.

METAL DECKING

1. Steel sheets for roof and composite floor metal deck and accessories shall conform to ASTM A 653, with minimum yield strength of 38 ksi. Decks shall be galvanized in accordance with ASTM A 653, G90.
2. Metal floor deck units shall be fastened to supporting structural steel members with ¡ -inch effective diameter puddle welds. If studs are welded through the deck to the structural steel, stud welds may replace the puddle welds. Use of powder actuated mechanical fasteners (PAMF) may be considered provided the manufacturer's information of the mechanical fastener includes an ICC-ES Legacy Report.
3. Roof deck units shall be fastened to supporting structural steel members with ¡ -inch effective diameter puddle welds or with ICC-ES approved powder actuated mechanical fasteners.
4. Rectangular or circular openings in metal deck shall be reinforced.
5. Shop drawings showing the deck unit layout and fastener locations, manufacturer's brochures and ICC-ES Legacy Report shall be submitted to the City for approval.
6. Welding of metal deck to structural steel members shall conform to AWS D1.1 and AWS D1.3. Welders shall be certified prior to commencing work.
7. Construction loads (including those due to storage of construction materials) shall not exceed the design live load of the roof or floor system.

CONCRETE MASONRY UNIT

1. The design, construction and quality of masonry structures shall be in accordance with the "Building Code Requirements for Masonry Structures", ACI 530 - 05.
2. Hollow concrete masonry units: ASTM C 90, Grade N, 1,900 psi compressive strength, medium weight. Units shall be 2-core type, 8" nominal height, 16" nominal length and width indicated on the plans.
3. Mortar and grout materials:
   a. Portland Cement: ASTM C 150, Type I or II
   b. Masonry Cement: ASTM C 91
   c. Mortar Cement: ASTM C 1329
   d. Aggregate for Mortar: ASTM C 144
   e. Aggregate for Grout: ASTM C 404, with grading per ASTM D 448, No. 10
   f. Hydrated Lime: ASTM C 207, Type S
   g. Plasticizer Additive: Powder or liquid type with current ICC acceptance as a substitute for lime in mortar.
   h. Water: Potable and complying with ASTM C 94.
4. Mortar shall be ASTM C 270 Type 'M' or 'S' with a minimum 28-day compressive strength of 1,800 psi for Type S and 2,500 psi for Type M. Use mortar within 2 hours after initial mixing.
5. Grout (fine) shall be proportioned to attain a 28-day compressive strength of 2,500 psi and a slump between 8 and 11 inches. Grout shall be placed within 90 minutes after mixing.
6. Reinforcing bar positioners: Commercial, non-metallic positioners that prevent displacement of reinforcing bars during construction. Install at intervals not exceeding 8 feet.
7. Fill all cells solid with grout. No grouting shall commence prior to inspection by the Engineer or Special Inspector.
8. Unless noted otherwise, all walls shall be constructed in running bond.
9. Post-installed anchors in grouted masonry: corrosion-resistant anchors with capacity to support design shear and tension loads with a factor of safety of at least 4.0 as documented in a current ICC legacy report.

TIMBER

1. The design of timber framing shall be in accordance with the International Building Code (IBC).
2. The design of glued-laminated (glulam) beams for the canopy system shall be in accordance with NDS National Design Specification for Wood Construction from the American Forest and Paper Assocation.
   a. The allowable bending stress, F_b, shall be taken as 3000 psi modified with the appropriate adjustment factors.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R Yamashiro
Drawn: J Perreira
Checked: G Suzuki
Approved: G Suzuki
Date: 12-18-09

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CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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PEARLRIDGE STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 2 OF 4

Contract No.: SV-340
CADD File: SD1-G01-SG002
Drawing No.: SG002 Rev.
Scale: N/A
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STRUCTURAL ABBREVIATIONS

&	And
@	At
AASHTO	American Association of State Highway & Transportation Officials
AB	Anchor Bolt
Abut	Abutment
AC	Asphalt Concrete
ACI	American Concrete Institute
ACU	Air Conditioning Unit
Aggr	Aggregate
AHU	Air Handling Unit
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
Anch	Anchor
ANSI	American National Standards Institute
Approx	Approximate
Arch.	Architect, Architectural
AREMA	American Railway Engineering & Maintenance–of–Way Association
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing & Materials
AWS	American Welding Society
℄	Baseline
Bal	Balance
BF	Both Faces
Bldg	Building
Blkg	Blocking
Bm	Beam
Bot	Bottom
℄	Centerline
c	Camber
C–C	Center to Center
CCH	City and County of Honolulu
CFS	Cold–Formed Steel
CIP	Cast–in–Place
CJ	Construction Joint, Control Joint
Clr	Clear, Clearance
CMU	Concrete Masonry Unit
Col	Column
Conc	Concrete
Conn	Connect, Connection, Connector
Cont	Continuous, Continue
Cu	Cubic
CY	Cubic Yard
Dbl	Double
Dept	Department
Det	Detail
Dia	Diameter
Diag	Diagonal, Diagram
Diaph	Diaphragm
Dim	Dimension
Dir	Direction
Dist	Distance
DL	Dead Load
Dn	Down
DOT	Department of Transportation
DS	Downspout
Dwg	Drawing
Dwl	Dowel
E	East
ea	Each
EB	Eastbound
EE	Each End
EF	Each Face, Exhaust Fan
EJ	Expansion Joint
El, Elev	Elevation
Elec	Electric, Electrical
Elev	Elevator
Engr	Engineer, Engineering
EQ	Earthquake
Eq	Equal
Eqn	Equation
Est	Estimate
EW	Each Way
Exc	Excavation
Exist	Existing
Exp	Expansion
Ext	Exterior, External
Extn	Extension

FD	Floor Drain
Fdn	Foundation
FF	Finish Floor
FFE	Finish Floor Elevation
FHWA	Federal Highway Administration
Fig.	Figure
Fin	Finish
Fl	Floor
Fr	Frame
ft	Foot, Feet
Ftg	Footing
Fu	Ultimate Stress
Fy	Yield Stress
Ga	Gauge
Galv	Galvanized
GB	Grade Beam
Gen	General
Gnd	Ground
Govt	Government
Grd	Grade
H	High, Height, Horizontal
HDOT	Hawaii Department of Transportation
HHCTCP	Honolulu High–Capacity Transit Coridor Project
Horiz	Horizontal
Hr	Hour
HS	High Strength
HSS	Hawaii Standard Specifications for Road and Bridge Construction (Issued 2005)
HSS	Hollow Structural Shape
Ht	Height
Hwy	Highway
IBC	International Building Code
ICC–ES	International Code Council–Evaluation Service
ID	Inside Diameter
IF	Inside Face
in.	Inch
Incl	Included, Including, Inclusive
Int	Interior
Inv	Invert
JG	Joint Girders
Jt	Joint
Jt(s)	Joints
K	Kip(s)
KF	Kip Foot
KLF	Kips Per Linear Foot
KSF	Kips Per Square Foot
KSI	Kips Per Square Inch
L	Left, Length, Angle (Steel Shape)
LB	Pound (unit of measure)
LF	Linear Foot
Lin	LinearLinear
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
Long.	Longitudinal
Max	Maximum
Mech	Mechanical
Met	Metal
Mezz	Mezzanine
Mfr	Manufacturer
MH	Manhole
Mil	One Thousandth of an inch
Min	Minimum
Misc	Miscellaneous
mm	Millimeter
Mom	Moment
MOW	Maintenance–of–Way
Mtg	Meeting
Mtl	Material

N	North
N/A	Not Applicable
NAS	North American Specification
NB	Northbound
NE	Northeast
Neg	Negative
NF	Near Face
NIC	Not in Contract
No.(Nos.)	Number (Numbers)
Nom	Nominal
NTS	Not to Scale
NW	Northwest
OC	On Center
OD	Outside Diameter
OF	Outside Face
Opng	Opening
Opp	Opposite
Opp Hd	Opposite Hand
oz	Ounce
PAMFP	Power Actuated Mechanical Fasteners
PCF	Pounds Per Cubic Feet
P/T	Post Tensioned
P.E.	Professional Engineer
Ped	Pedestrian
Perp	Perpendicular
Ph	Phase
Plywd	Plywood
Pos	Positive
Proj	Project
Prop	Property
PSF	Pounds Per Square Feet
PSI	Pounds Per Square Inch
PVC	Polyvinyl Chloride
Pvmt	Pavement
QA/QC	Quality Assurance/Quality Control
Qty	Quantity
R	Radius
RC	Reinforced Concrete
RD	Roof Drain
Rdwy	Roadway
Rect	Rectangle
Ref	Reference
Reinf	Reinforce, Reinforcing
Repl	Replace, Replaced
Reqd	Required
Ret	Return, Retain, Retaining
Rev	Revision, Revised
RFP	Request for Proposal
Rm	Room
RO	Rough Opening
ROW	RIgh–of–Way
Rt	Right
RTD	Rapid Transit Division
RW	Retaining Wall

S	South
S1	Mapped MCE Spectral Response Acceleration at a Period of 1–sec.
Sch	Schedule
SDS	Design Spectral Response Acceleration at Short Periods
SD1	Design Spectral Response Acceleration at a Period of 1–sec.
SE	Southeast
Sect	Section
SF	Square Foot, Square Feet
Sgl	Single
Sht	Sheet
Sim	Similar
SJI	Steel Joist Institute
SMS	Sheet Metal Screw
Spec	Specification
Sq	Square
SRP	Skylight Roof Post
SS	Stainless Steel
Sta	Station, Stationing
Std	Standard
Stiff	Stiffener
Stl	Steel
Struct	Structure
SW	Southwest
Sym	Symmetrical
T	Top
TB	Tie Beam
T&B	Top and Bottom
T&G	Tongue and Groove
Temp	Temporary, Temperature
Thk	Thick, Thickness
Thru	Through
TOC	Top of Concrete
Topo	Topography
TOR	Top of Rail
TOS	Top of Slab
TO Stl	Top of Steel
Tot.	Total
TOW	Top of Wall
Typ	Typical
UNO	Unless Noted Otherwise
V	Vertical
Var	Variable, Varies
Veh	Vehicle
Vert	Vertical
Vol	Volume
W	Wide Flange
w/	With
w/o	Without
WB	Westbound
WF	Wall Footing
WL	Wind Load
WP	Work Point
WSD	Wall Stud Design
Wt	Weight
WWF	Welded Wire Fabric

SPECIAL TERMS

Makai	Ocean
Mauka	Mountain

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R Yamashiro
Drawn: J Perreira
Checked: G Suzuki
Approved: G Suzuki
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PEARLRIDGE STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 3 OF 4

Contract No.: SV–340
CADD File: SD1–G01–SG003
Drawing No.: SG003 Rev.: Rev
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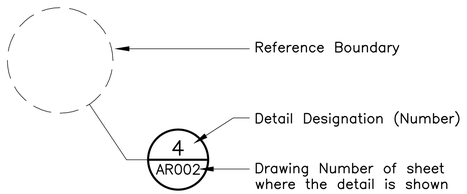
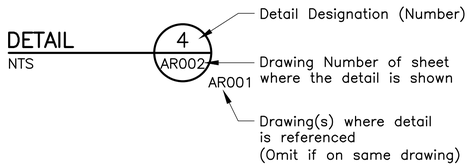
STRUCTURAL SYMBOLS

DETAILS





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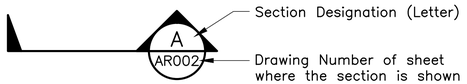
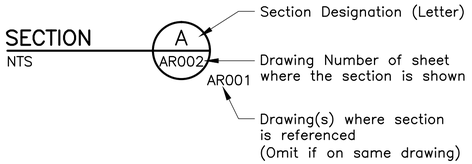
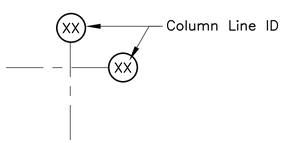




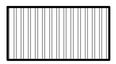
COLUMN LINE GRID INDICATOR



GENERAL SYMBOLS

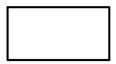
&	And
@	At
#	Number
ø	Diameter
%	Percent
=	Equal to
>	Greater Than
<	Less Than
≥	Greater Than or Equal To
≤	Less Than or Equal To
±	Plus or Minus

HATCH



Metal Deck w/Conc Topping (Plan View)

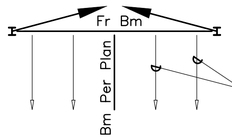
Metal Deck w/No Topping (Plan View)



Slab on Grade (Plan View)

LEGEND

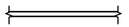
Struct. Steel "X" Braced Frame (Above)



Struct. Steel Braced Frame (Above)

Structural Concrete Wall

Non–Struct. Partition (See Arch. Drawings)

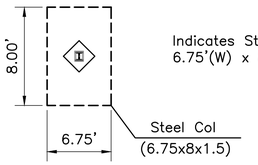


Non–Struct. Shaft Wall

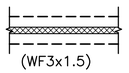
Tilt–Up Wall

CMU Wall

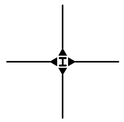
Wall Below



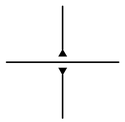
Indicates Steel Moment Frame Column & 6.75'(W) x 8.00'(L) x 1.5' Thk Footing



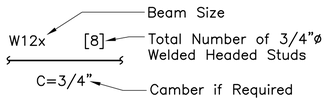
Indicates Continuous Footing 3'(W) x 1.5'(T)



Indicates Beam–to–Column Moment Connection



Indicates Beam–to–Beam Moment Connection



Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed:	R Yamashiro
Drawn:	J Perreira
Checked:	G Suzuki
Approved:	G Suzuki
Date:	12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: CONSULTING STRUCTURAL HAWAII, INC.
931 HAUSTEN STREET, SUITE 200
HONOLULU, HAWAII 96826

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PEARLRIDGE STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 4 OF 4

Contract No.:	SV–340
CADD File:	SD1–G01–SG004
Drawing No:	SG004
Rev.	Rev
Scale:	N/A
Page No.	25 of 60

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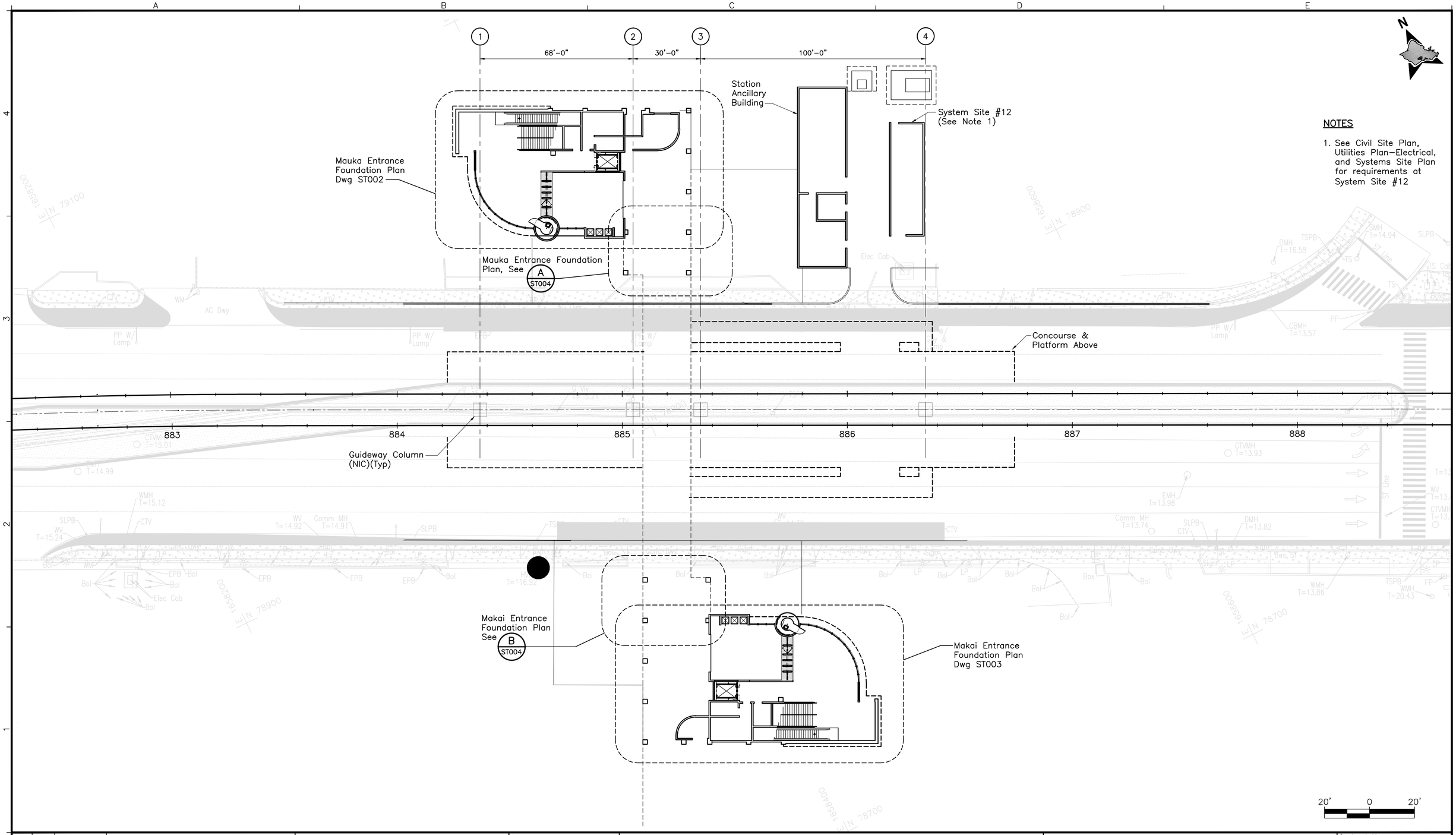

NOTES

1. See Civil Site Plan, Utilities Plan–Electrical, and Systems Site Plan for requirements at System Site #12

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PEARLRIDGE STATION

STRUCTURAL
OVERALL FOUNDATION PLAN

Contract No.: SV–340
CADD File: SD1–G13–ST001
Drawing No: ST001 Rev.
Scale: 1" = 20'–0"
Page No. 26 of 60

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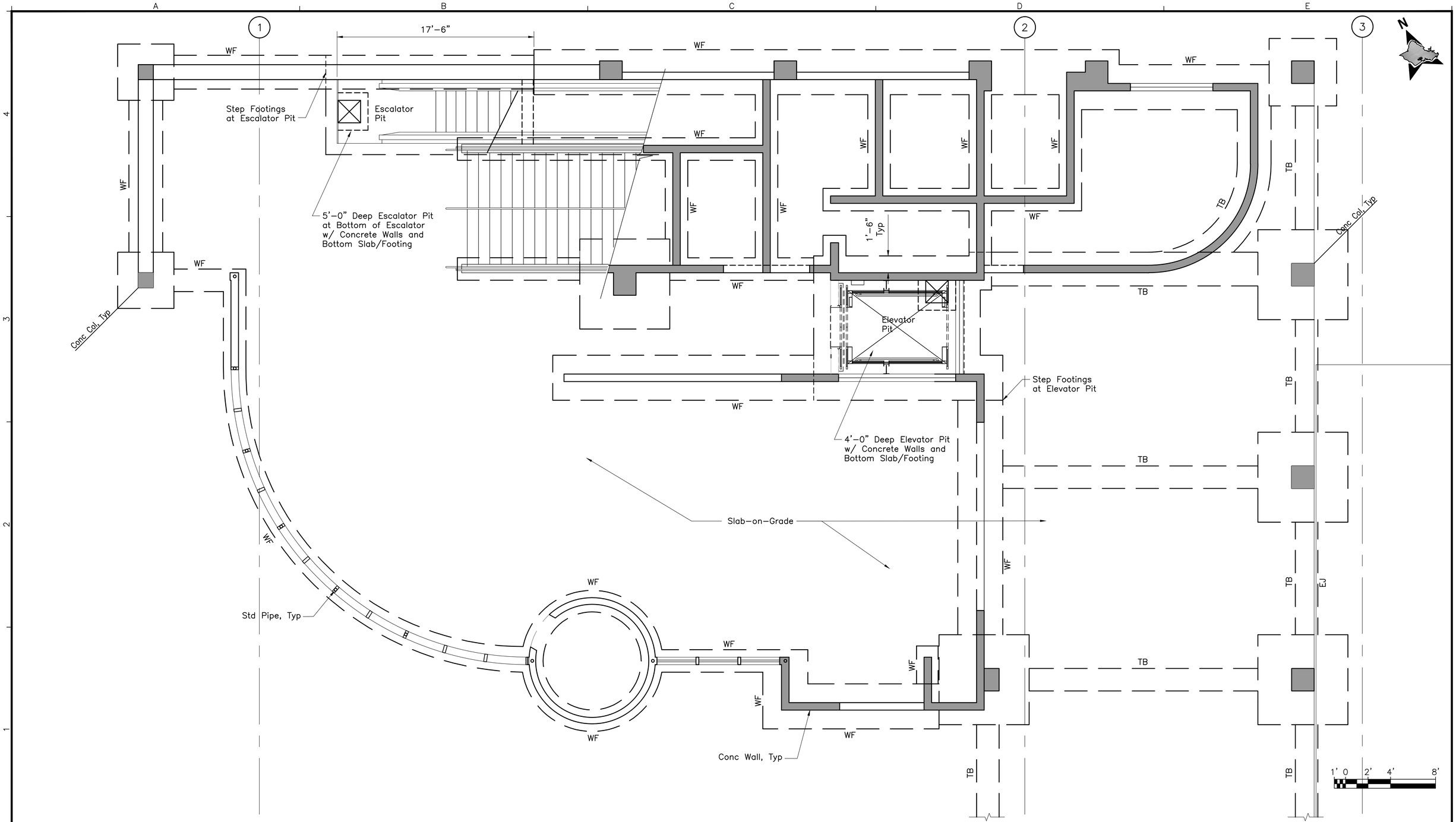

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PEARLRIDGE STATION

STRUCTURAL MAUKA ENTRANCE FOUNDATION PLAN

Contract No.: SV-340
CADD File: SD1-G13-ST002
Drawing No: ST002 Rev.
Scale: 1/4" - 1'-0"
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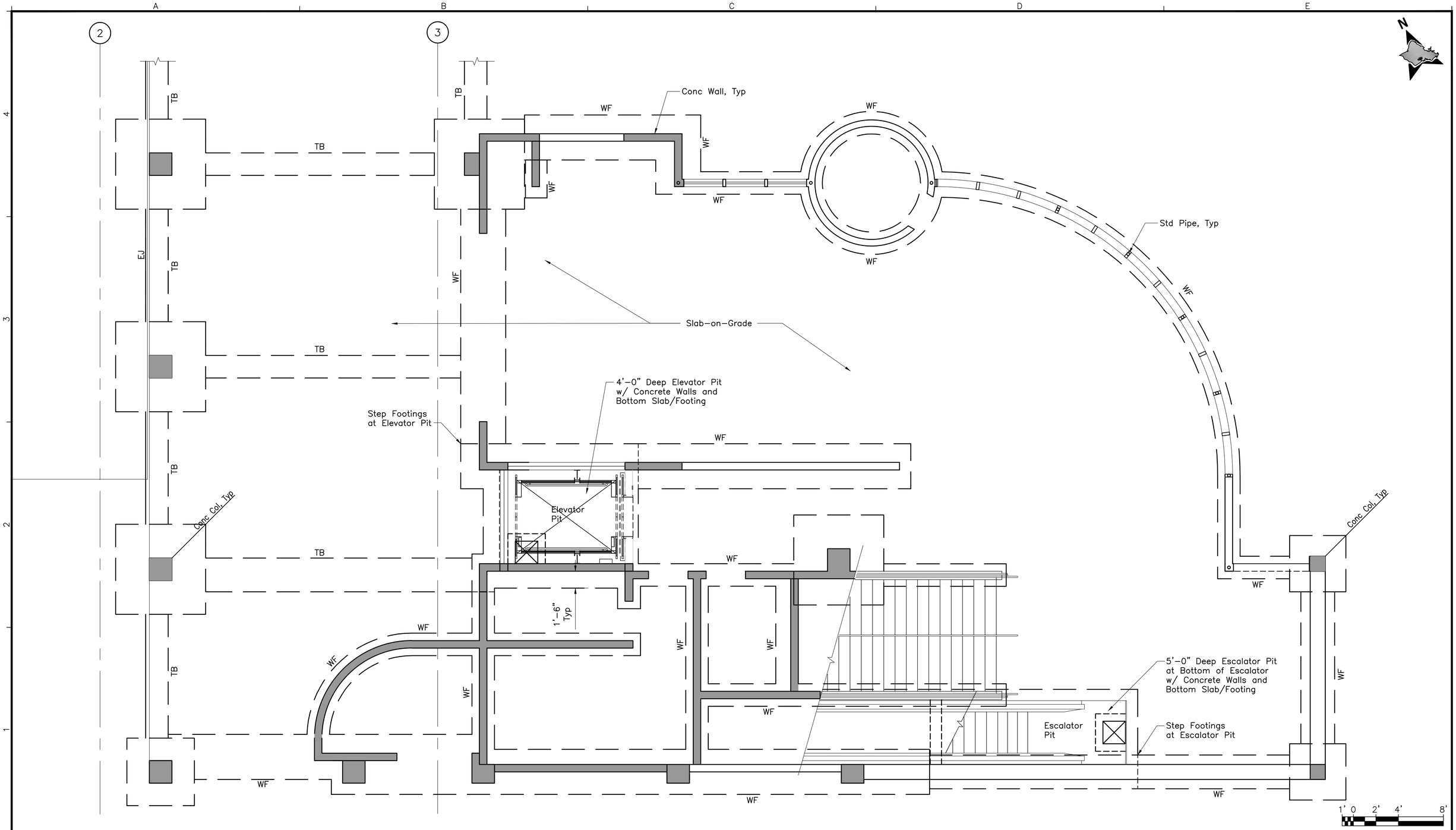

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PEARLRIDGE STATION

STRUCTURAL
MAKAI ENTRANCE FOUNDATION PLAN

Contract No.: SV–340
CADD File: SD1–G13–ST003
Drawing No: ST003 Rev.
Scale: 1/4" – 1'–0"
Page No. 28 of 60

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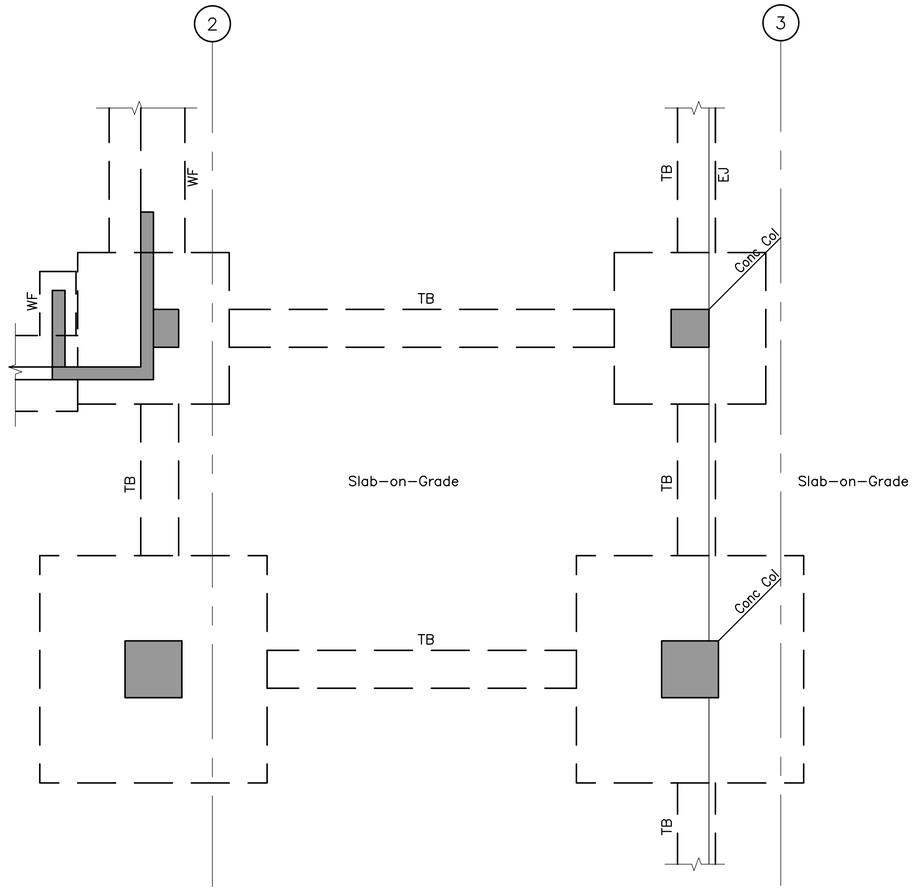
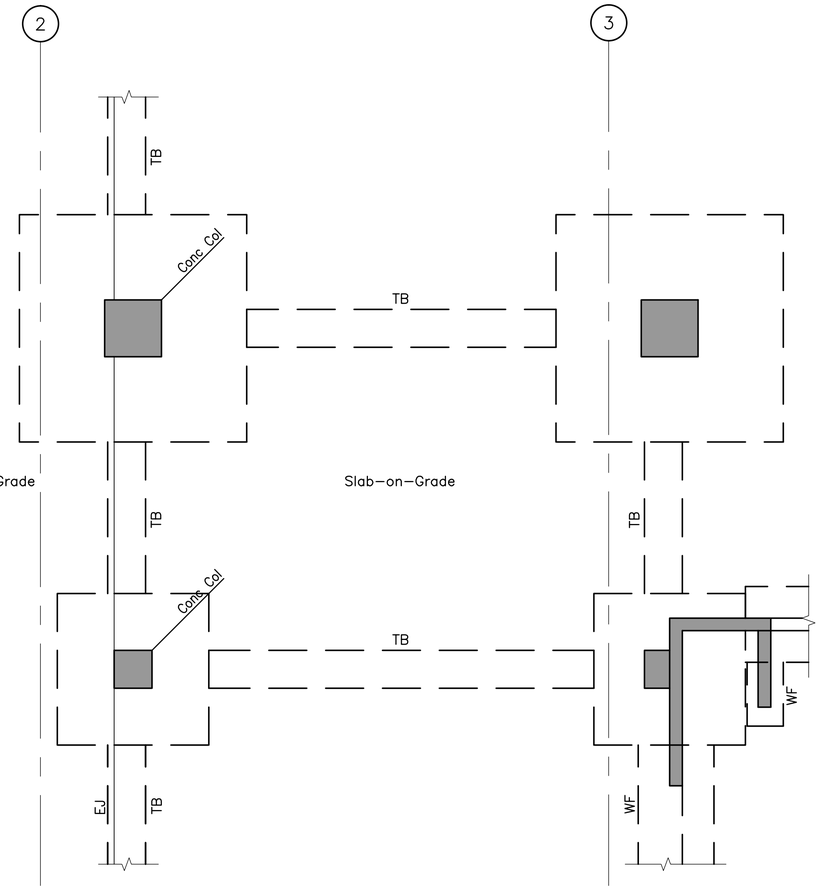


MAUKA ENTRANCE FOUNDATION PLAN
1/4"=1'–0"
A ST004 ST001



MAKAI ENTRANCE FOUNDATION PLAN
1/4"=1'–0"
B ST004 ST001

1' 0 2' 4' 8'

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PEARLRIDGE STATION

STRUCTURAL MAUKA AND MAKAI ENTRANCE FOUNDATION PLAN

Contract No.: SV–340
CADD File: SD1–G13–ST004
Drawing No: ST004 Rev.
Scale: 1/4" – 1'–0"
Page No. 29 of 60

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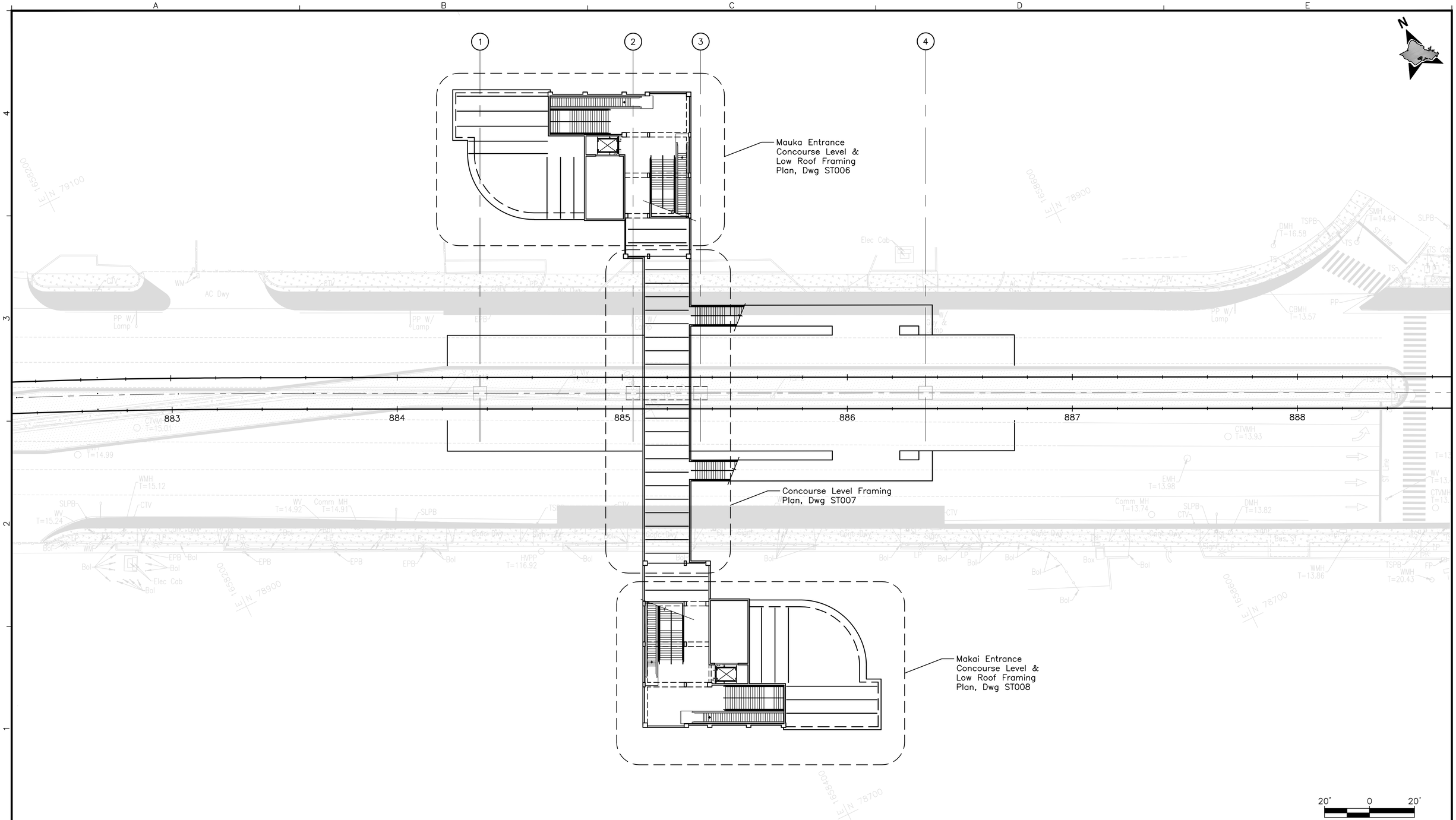

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Approved: G Suzuki
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PEARLRIDGE STATION

STRUCTURAL
OVERALL CONCOURSE FRAMING PLAN

Contract No.: SV-340
CADD File: SD1-G14-ST005
Drawing No: ST005 Rev.
Scale: 1" = 20'-0"
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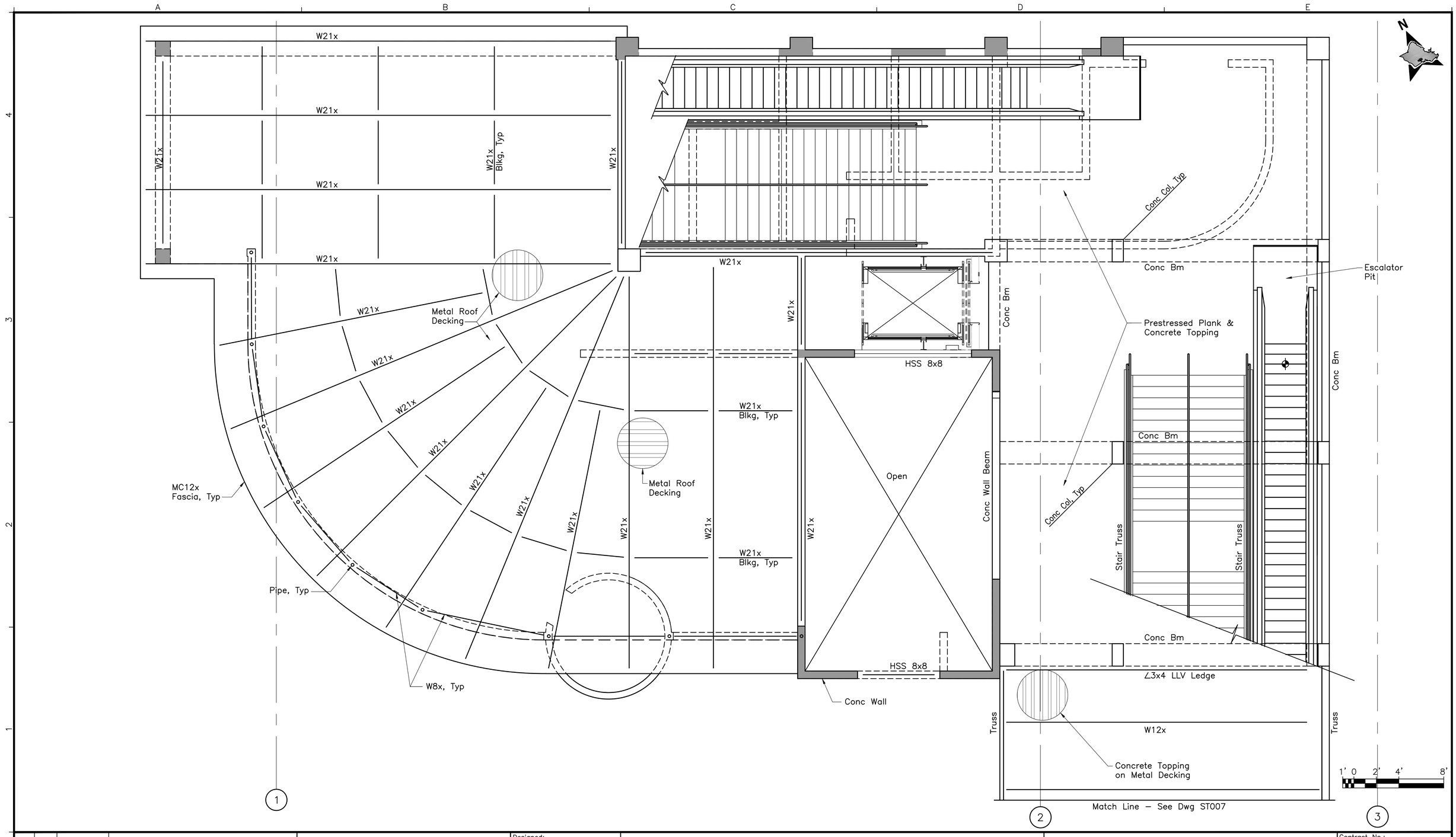

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CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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931 HAUSTEN STREET, SUITE 200 HONOLULU, HAWAII 96826

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PEARLRIDGE STATION

STRUCTURAL CONCOURSE LEVEL FRAMING PLAN

MAUKA STATION AND LOW ROOF

Contract No.: SV–340
CADD File: SD1–G14–ST006
Drawing No: ST006 Rev.
Scale: 1/4" – 1'–0"
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A B C D E

4 3 2 1

Match Line – See Dwg ST006

N

1 2 3 4

W12x @ 6'–0", Typ

Stair Truss

Stair Truss

Truss T–3

W40x

Truss T–4

Guideway Column (NIC)

Guideway Column (NIC)

Conc Bm

Guideway Column (NIC)

Guideway Column (NIC)

By Others

885

886

Guideway Hammerhead By Others, Typ

W40x

Hanger from Guideway Hammerhead (by Others, Typ)

Stair Truss

Stair Truss

Concrete Topping on Metal Decking

Truss T–1

Truss T–2

Match Line – See Dwg ST008

2' 0 2' 4' 6' 10' 14'

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Approved: G Suzuki
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

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PEARLRIDGE STATION

STRUCTURAL CONCOURSE LEVEL FRAMING PLAN

PEDESTRIAN WALKWAY

Contract No.: SV–340
CADD File: SD1–G14–ST007
Drawing No.: ST007 Rev.
Scale: 1/8" = 1'–0"
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HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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HONOLULU, HAWAII 96826

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PEARLRIDGE STATION

STRUCTURAL
CONCOURSE LEVEL FRAMING PLAN

MAKAI STATION AND LOW ROOF

Contract No.: SV–340
CADD File: SD1–G14–ST008
Drawing No: ST008
Rev.:
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Page No. 33 of 60

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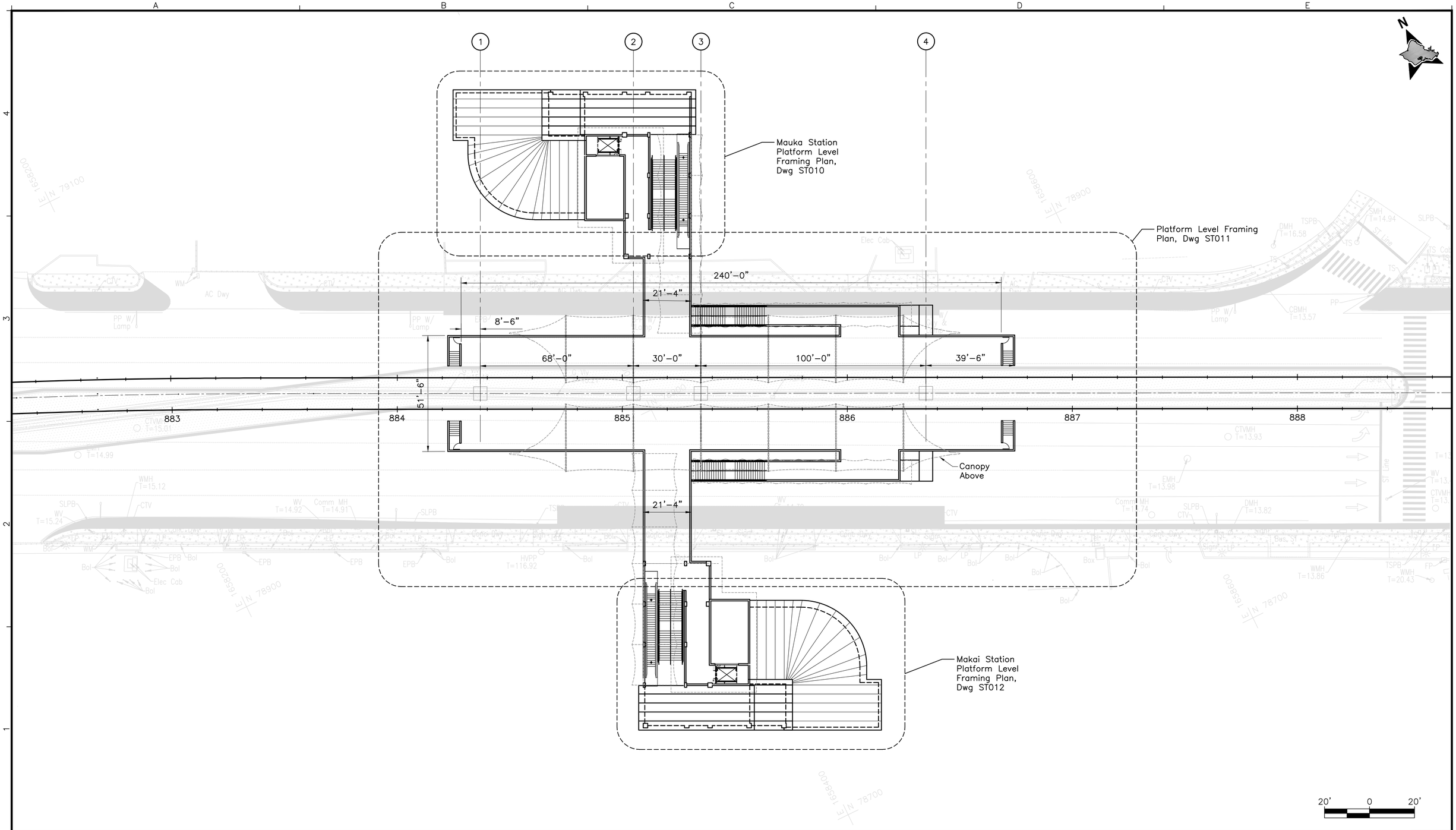

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CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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PEARLRIDGE STATION

STRUCTURAL OVERALL PLATFORM FRAMING PLAN

Contract No.: SV–340
CADD File: SD1–G14–ST009
Drawing No.: ST009 Rev.
Scale: 1" = 20'–0"
Page No. 34 of 60

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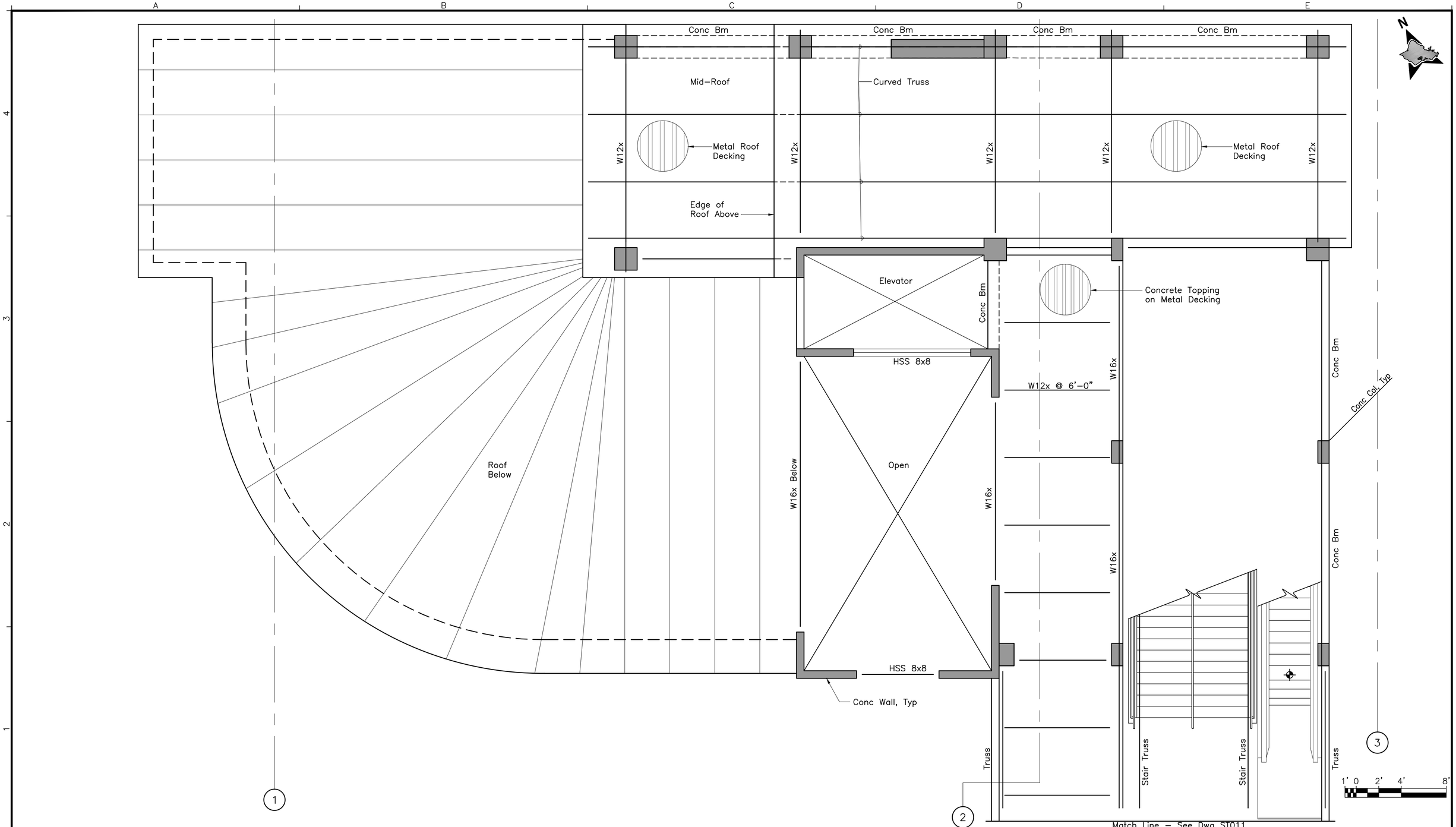

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PEARLRIDGE STATION

STRUCTURAL
PLATFORM LEVEL FRAMING PLAN

MAUKA STATION

Contract No.: SV–340
CADD File: SD1–G14–ST010
Drawing No.: ST010 Rev.
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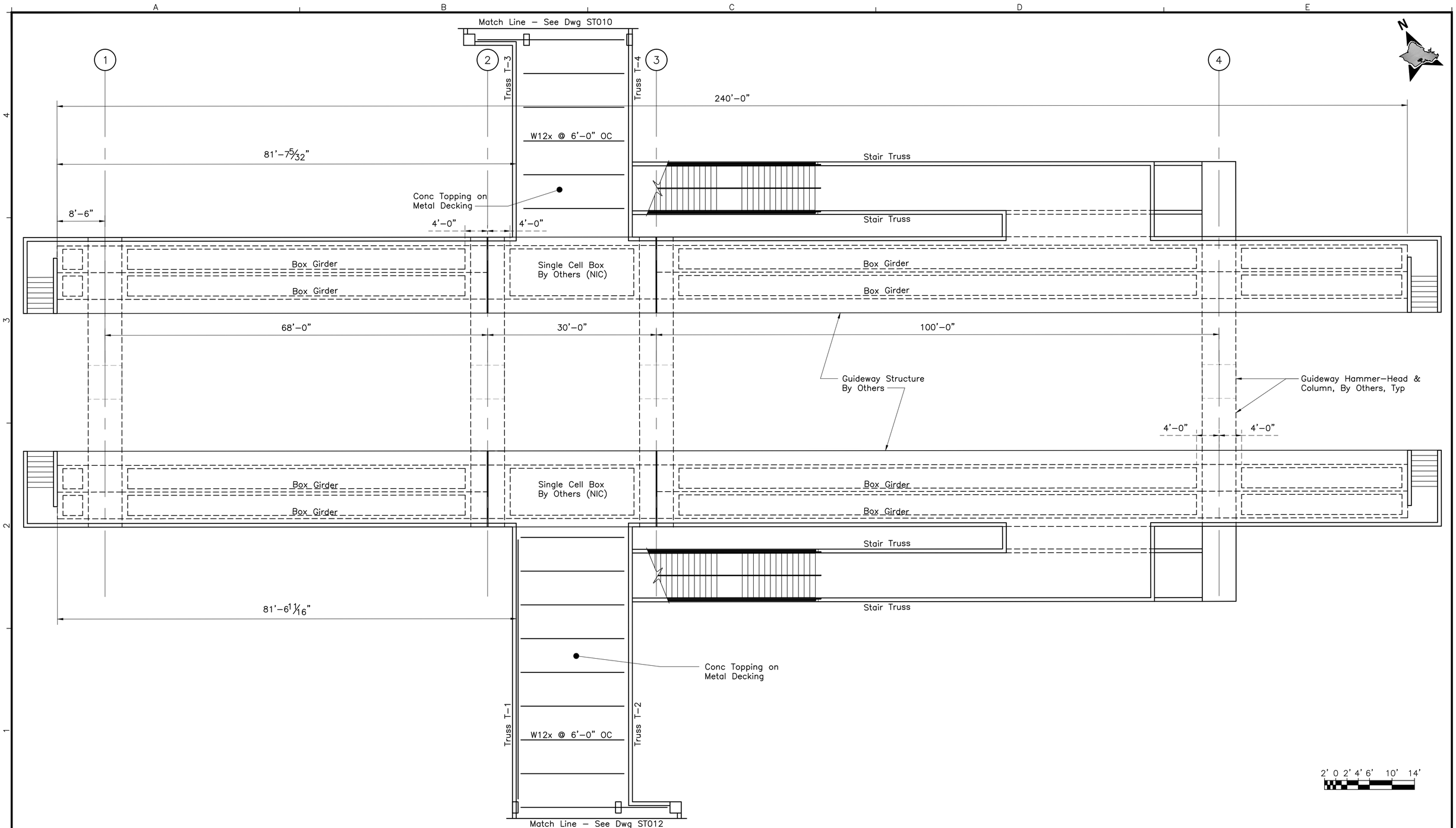

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PEARLRIDGE STATION

STRUCTURAL PLATFORM FRAMING PLAN

PEDESTRIAN WALKWAY

Contract No.:	SV-340
CADD File:	SD1-G14-ST011
Drawing No:	ST011
Rev.	
Scale:	1/8" – 1'-0"
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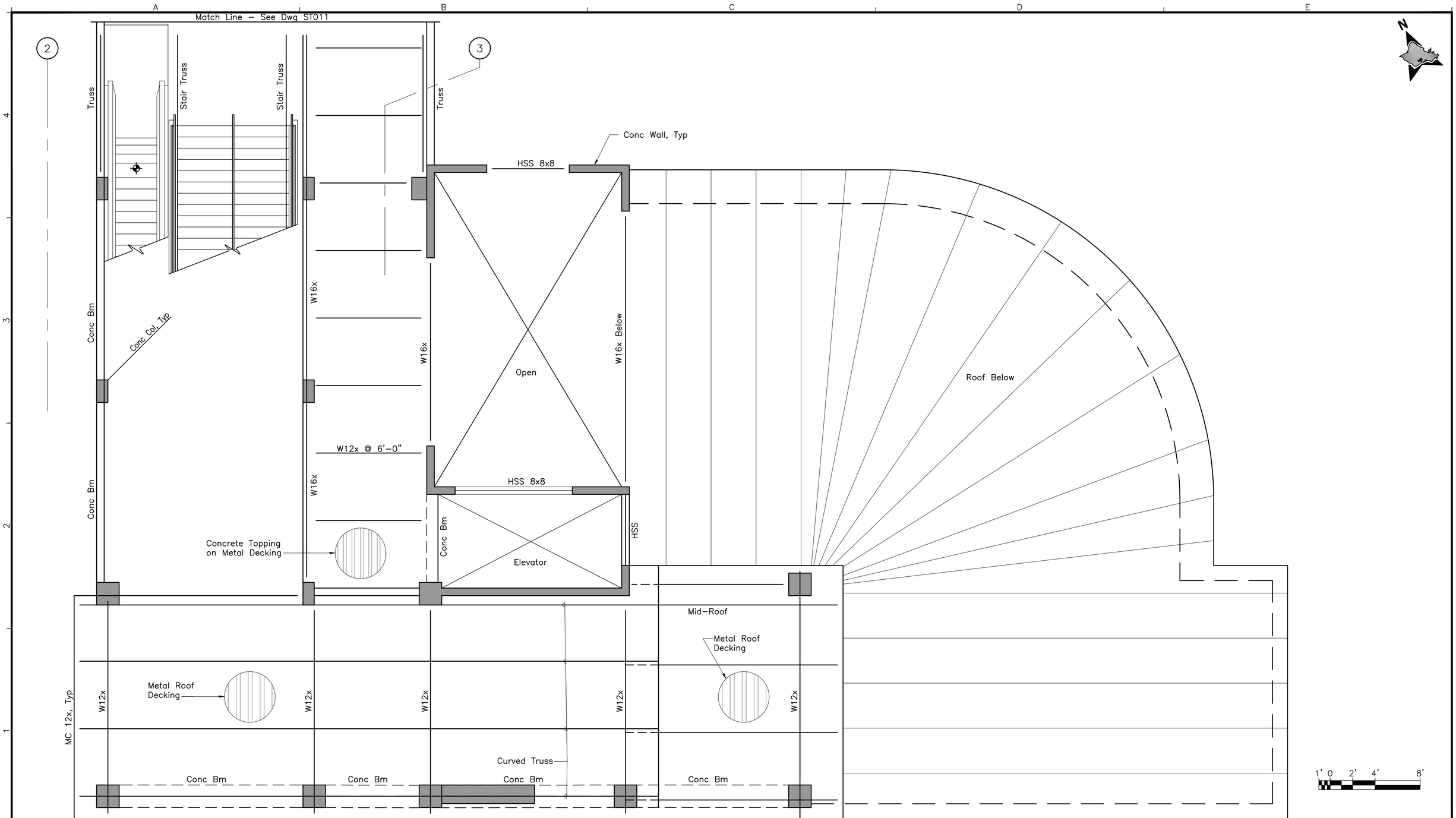

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PEARLRIDGE STATION

STRUCTURAL PLATFORM LEVEL FRAMING PLAN

MAKAI STATION

Contract No.: SV–340
CADD File: SD1–G14–ST012
Drawing No: ST012 Rev.
Scale: 1/4" – 1'–0"
Page No. 37 of 60

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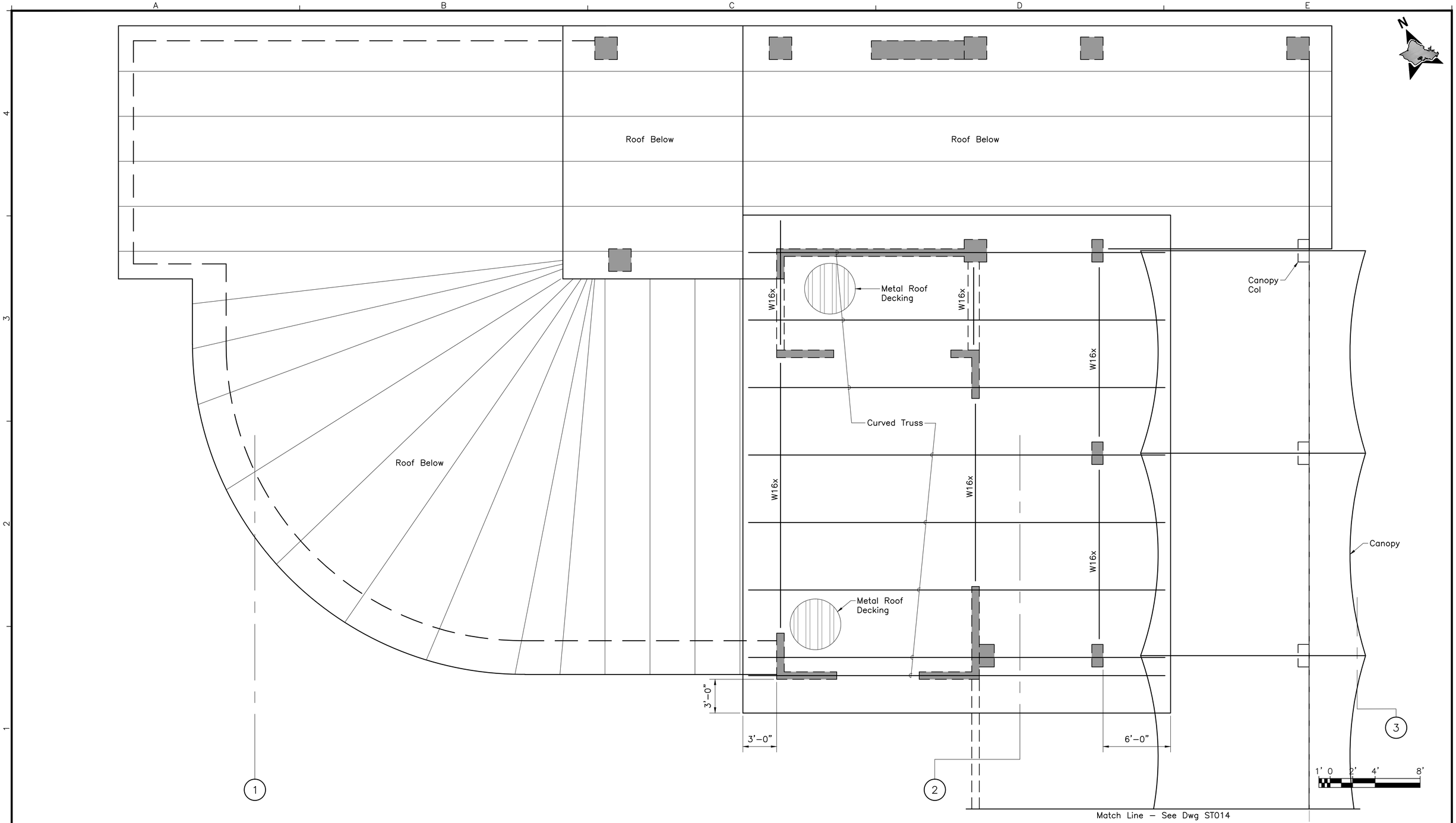

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PEARLRIDGE STATION

STRUCTURAL PLATFORM LEVEL ROOF FRAMING PLAN

MAUKA STATION

Contract No.: SV-340
CADD File: SD1-G14-ST013
Drawing No: ST013 Rev.
Scale: 1/4" – 1'-0"
Page No. 38 of 60

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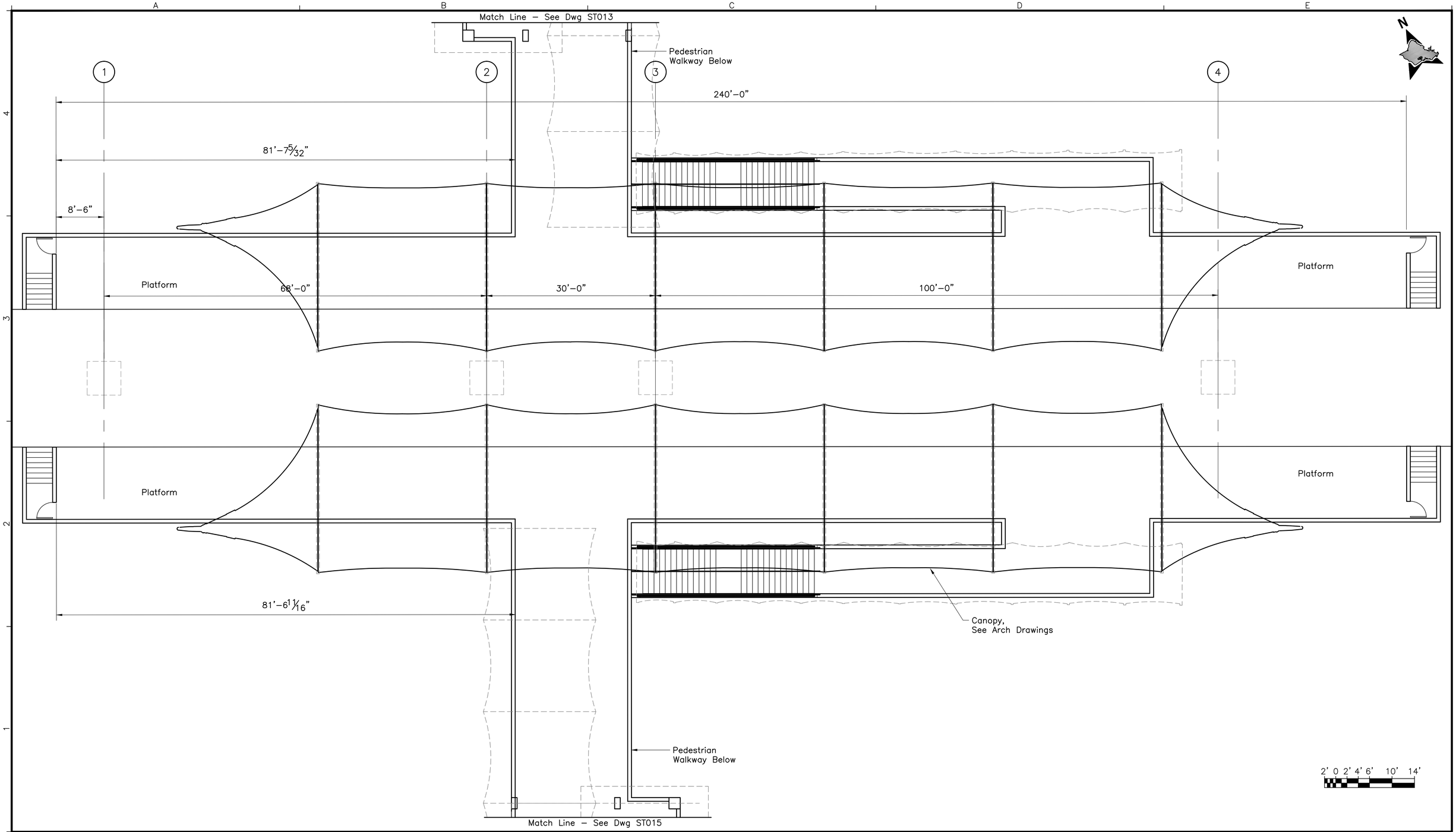

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Rev	By	Date	Description

Designed: R Yamashiro
Drawn: J Perreira
Checked: G Suzuki
Approved: G Suzuki
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: CONSULTING STRUCTURAL HAWAII, INC.
931 HAUSTEN STREET, SUITE 200
HONOLULU, HAWAII 96826

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PEARLRIDGE STATION

STRUCTURAL
PLATFORM LEVEL ROOF FRAMING PLAN

Contract No.: SV–340
CADD File: SD1–G14–ST014
Drawing No: ST014
Rev.
Scale: 1/8" – 1'–0"
Page No. 39 of 60

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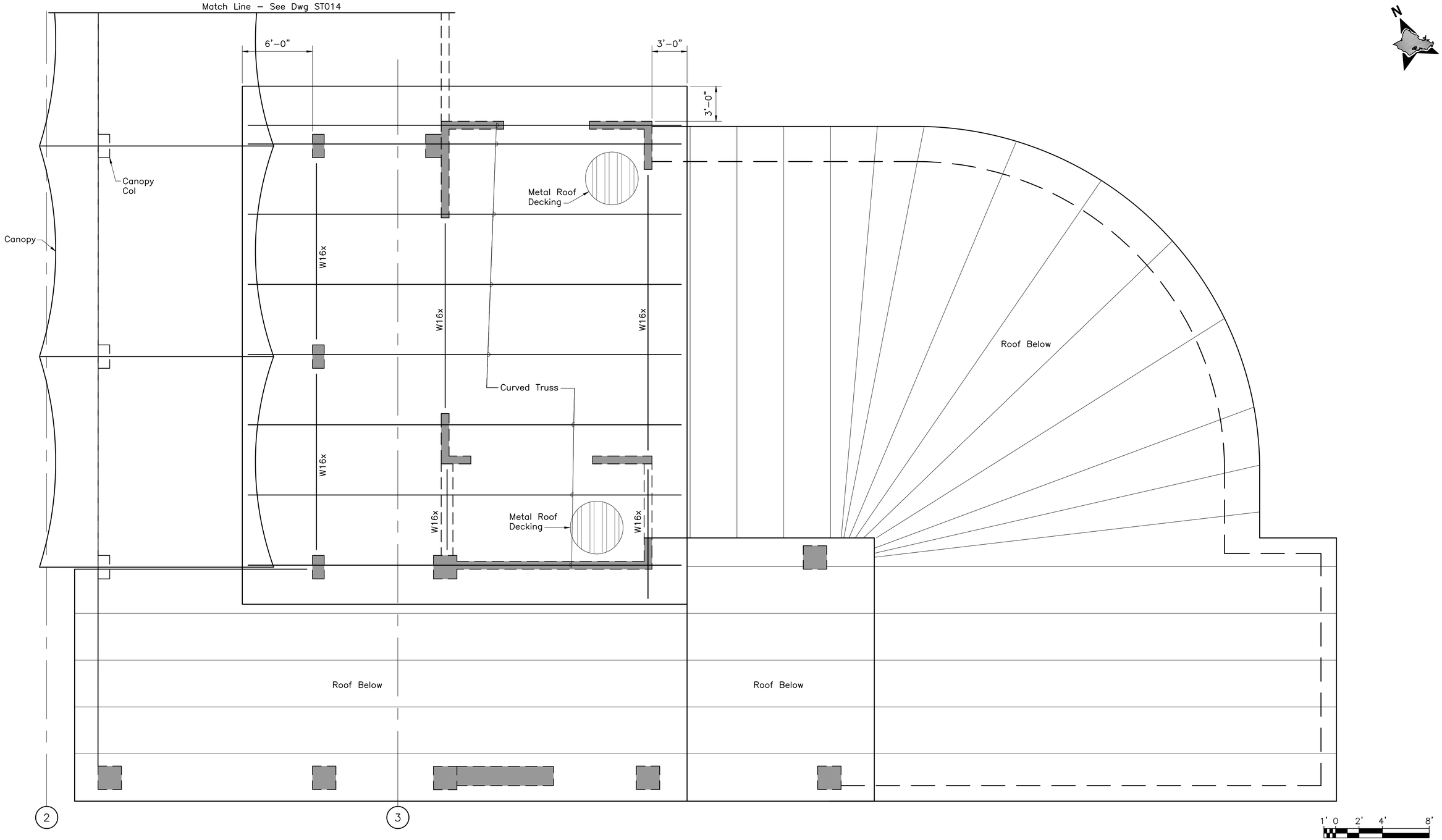

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Rev	By	Date	Description

Designed: R Yamashiro
Drawn: J Perreira
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Date: 12–18–09

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PEARLRIDGE STATION

STRUCTURAL PLATFORM LEVEL ROOF FRAMING PLAN

MAKAI STATION

Contract No.: SV–340
CADD File: SD1–G14–ST015
Drawing No.: ST015 Rev.
Scale: 1/4" – 1'–0"
Page No. 40 of 60

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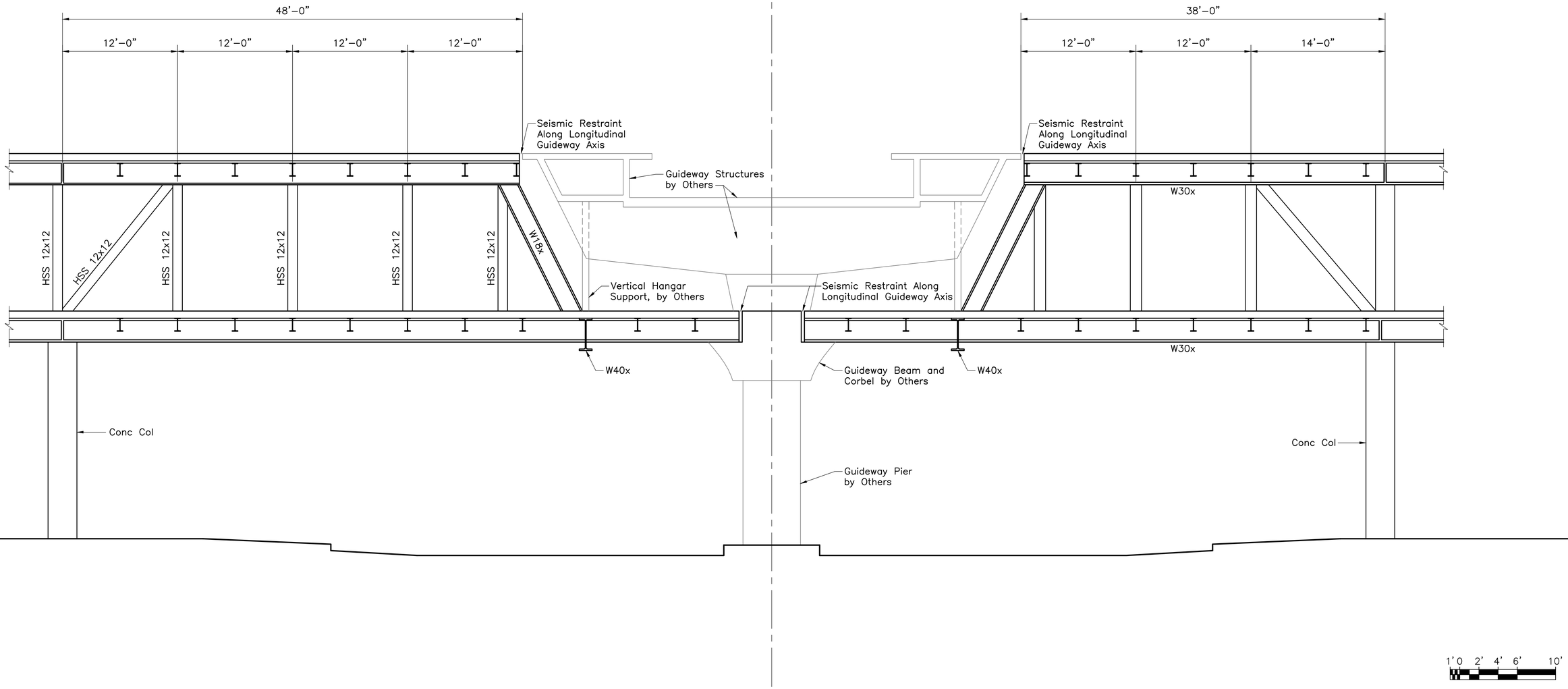

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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PEARLRIDGE STATION

STRUCTURAL LONGITUDINAL SECTION

PEDESTRIAN WALKWAY

Contract No.: SV–340
CADD File: SD1–G15–ST016
Drawing No.: ST016 Rev.
Scale: 3/16" = 1'–0"
Page No. 41 of 60

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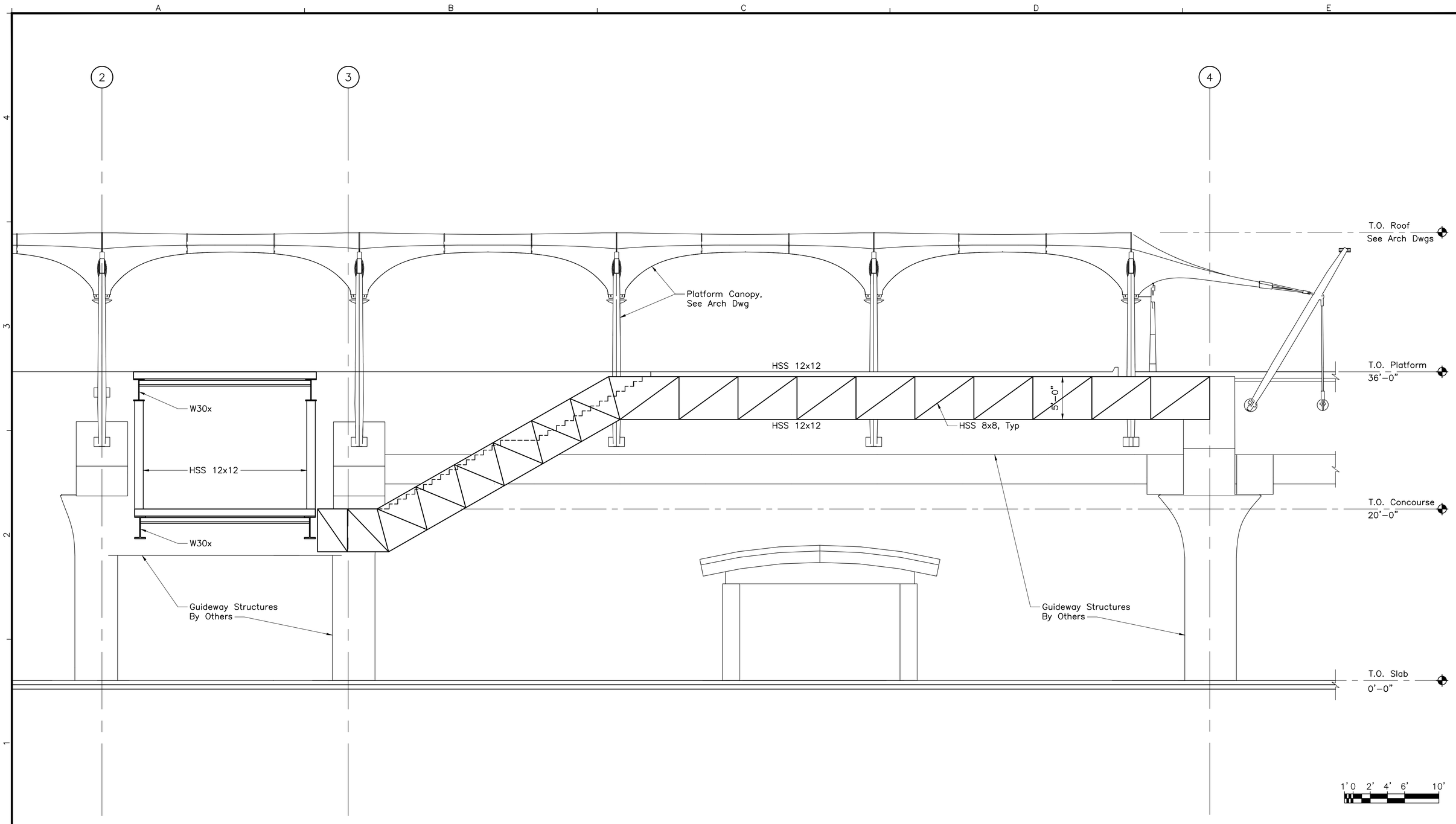

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PEARLRIDGE STATION

STRUCTURAL STAIR AND ESCALATOR TRUSS ELEVATION

Contract No.: SV–340
CADD File: SD1–G15–ST017
Drawing No: ST017 Rev.
Scale: 3/16" = 1'–0"
Page No. 42 of 60

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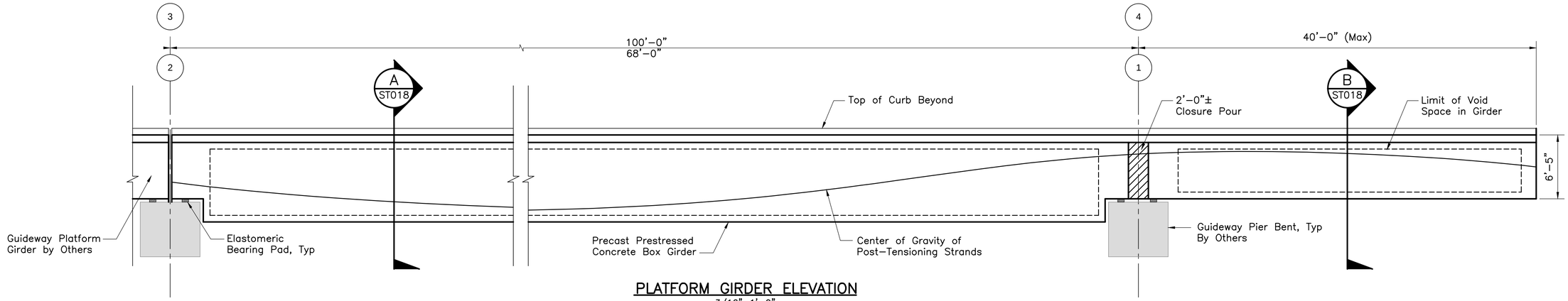
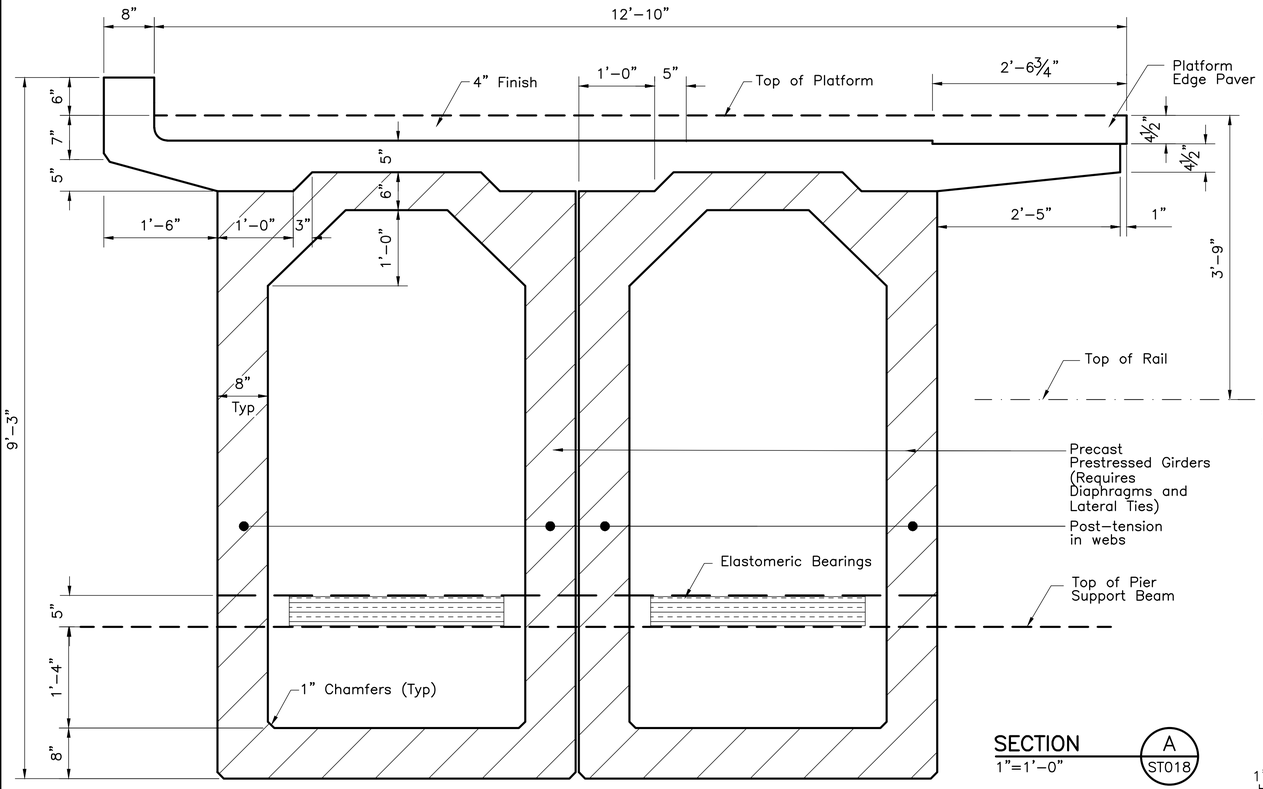


PLATFORM GIRDER ELEVATION

3/16"=1'–0"

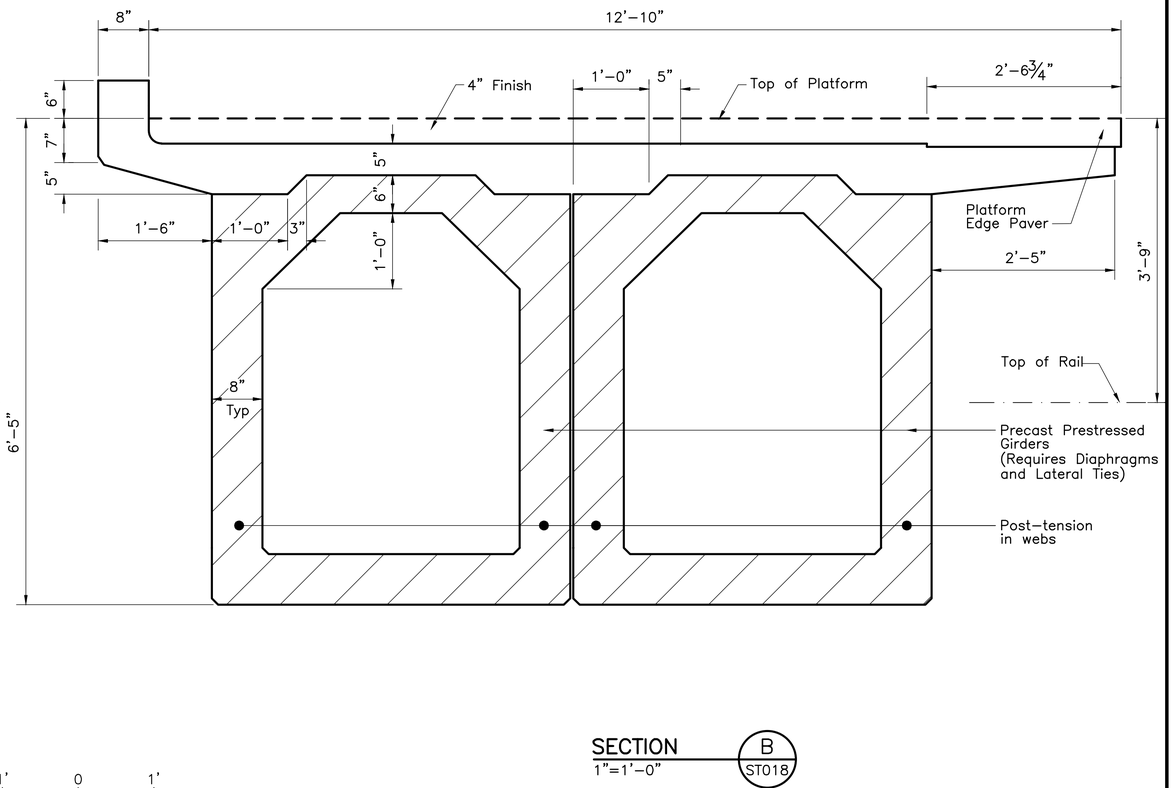
1' 0 2' 4' 8'

** Additional splice in main girder may be necessary if the shipping weight of the main girder exceeds 100 tons and the shipping route does not allow shipment of long girders.



SECTION A ST018
1"=1'–0"

1' 0 1'



SECTION B ST018
1"=1'–0"

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PEARLRIDGE STATION

STRUCTURAL
PLATFORM PRECAST GIRDER

ELEVATION AND SECTION

Contract No.: SV–340
CADD File: SD1–G15–ST018
Drawing No.: ST018 Rev.
Scale: As Noted
Page No.: 43 of 60

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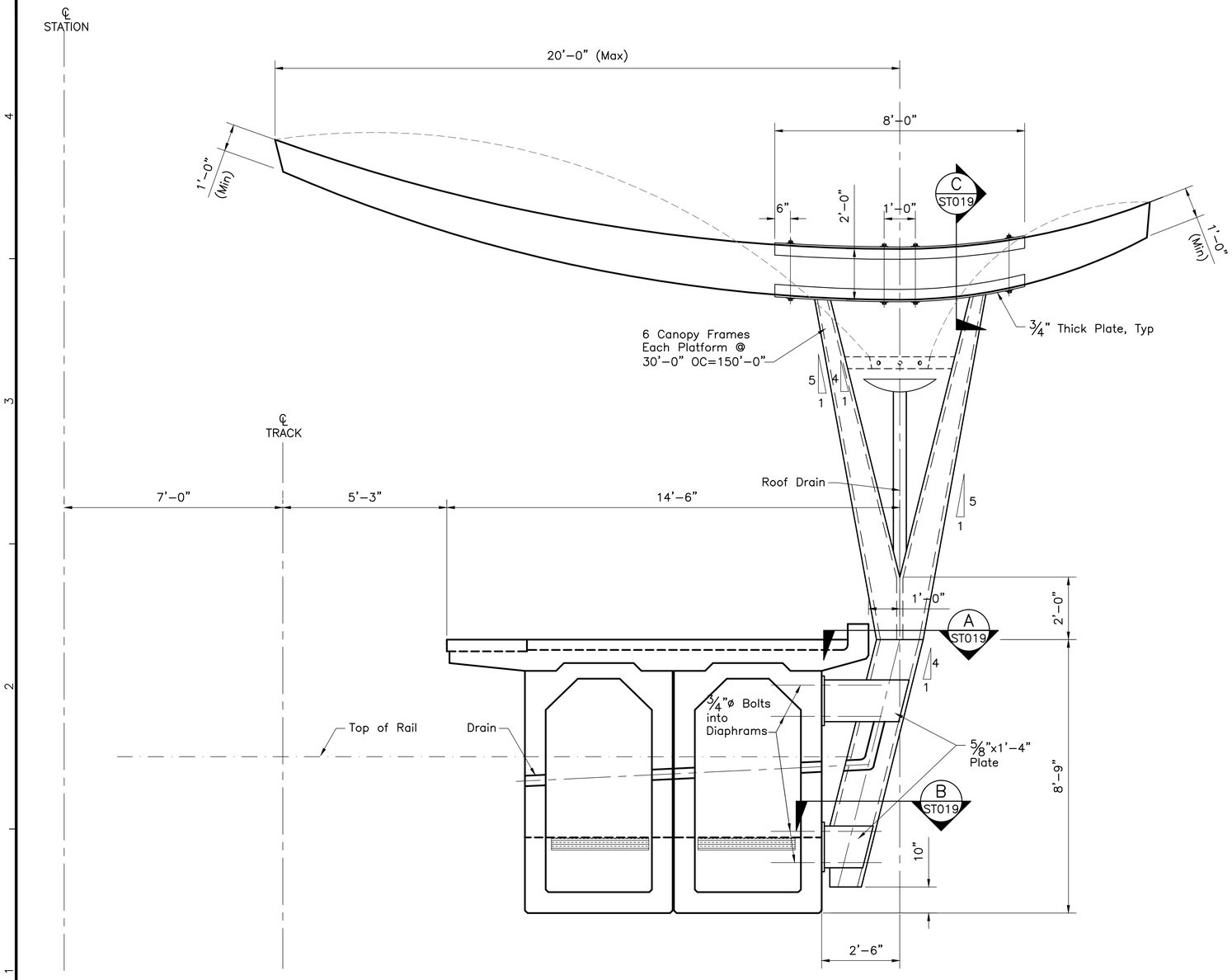
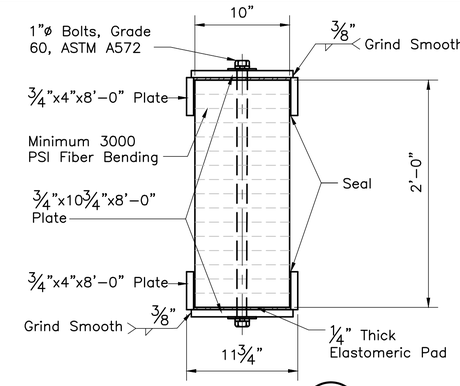
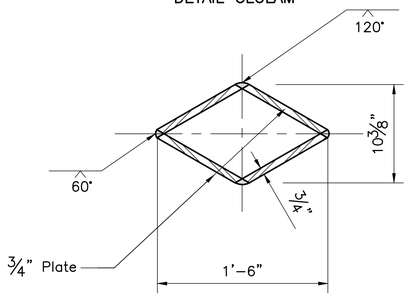


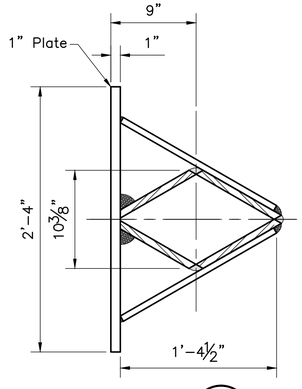


SECTION C
1 1/2"=1'–0" ST019

DETAIL GLULAM



SECTION A
1 1/2"=1'–0" ST019



SECTION B
1 1/2"=1'–0" ST019

STRUCTURAL TUBE

NOTE:

1. See Architectural Directive Drawings for additional canopy details.

PLATFORM CANOPY SECTION
1/2"=1'–0"

1' 0 2' 4'

6" 0 6" 12" 18"

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R Yamashiro
Drawn: J Perreira
Checked: G Suzuki
Approved: G Suzuki
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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PEARLRIDGE STATION

STRUCTURAL PLATFORM CANOPY

DETAILS

Contract No.: SV–340
CADD File: SD1–G15–ST019
Drawing No: ST019 Rev.
Scale: As Noted
Page No. 44 of 60

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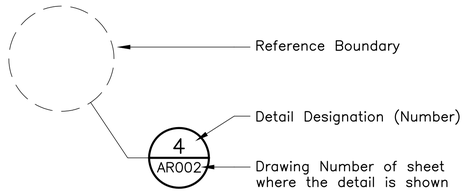
GENERAL ARCHITECTURAL NOTES

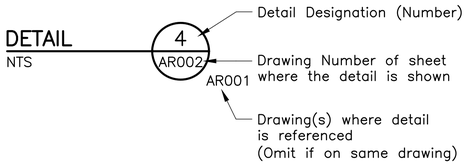
1. Station Designer to Coordinate Limits of Work and Interface with the Kamehameha Guideway Contractor.
2. Refer to Appendix "A": Informative Drawings, for Work Included in the:
   – Kamehameha Guideway Contract &
   – Core Systems Design–Build–Operate–Maintenance Contract.
3. Refer to RTD Architecture Standard and Directive Drawings for Sizing, Configuration and Connections for All System Wide Components Including: Escalators, Elevators, Fare Gates and TVM
4. Not in Contract Items (NIC) Include: TVM, Fare Gates, Escalators, & Elevator Cars.
5. See RTD Directive Drawings Set for Canopy Details and Configuration.

ARCHITECTURAL SYMBOLS

NORTH ARROW
(Location – upper right corner of drawing)

DETAILS





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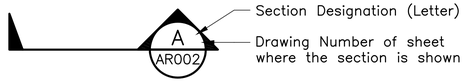
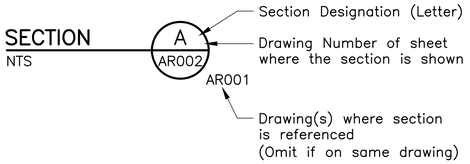
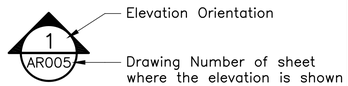
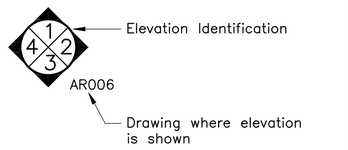




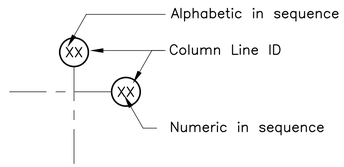
EXTERIOR ELEVATION(S)



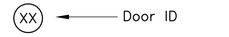
INTERIOR ELEVATION(S)



COLUMN LINE GRID INDICATOR



DOOR OPENING IDENTIFIER



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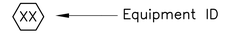

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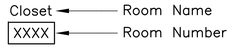
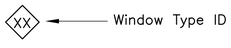


WALL TYPE IDENTIFIER

WINDOW IDENTIFIER



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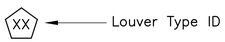

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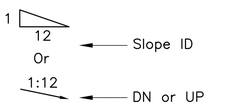

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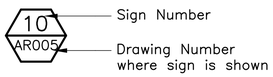

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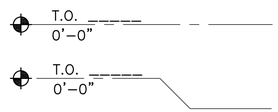

HATCH

- Brick
- Concrete Masonry Unit
- Concrete
- Composite Panel
- Earth
- Finished Stone
- Gravel
- Insulation (Batt)
- Insulation (Rigid)
- Metal
- Plywood
- Precast Concrete
- Sand, Grout, Mortar, Plaster
- Tile
- Glass (Elevation)

GENERAL SYMBOLS

&	And
@	At
#	Number
ø	Diameter
%	Percent
=	Equal to
>	Greater Than
<	Less Than
≥	Greater Than or Equal To
≤	Less Than or Equal To

Station Equation

Elevation Point

SPECIAL TERMS

Makai	Ocean
Mauka	Mountain

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: W Deguchi
Drawn: D Wong
Checked: M. Leineweber
Approved: K Parmar
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: DURRANT Media Five
345 QUEEN STREET, SUITE 901
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PEARLRIDGE STATION

GENERAL ARCHITECTURAL NOTES SYMBOLS, AND ABBREVIATIONS

SHEET 1 OF 3

Contract No.: SV–340
CADD File: SD1–H01–AG001
Drawing No.: AG001 Rev.
Scale: N/A
Page No. 45 of 60

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ARCHITECTURAL ABBREVIATIONS

AB	Anchor Bolt
Abnd	Abandoned
Abt	About
Abv	Above
Ac	Acre(s)
Acc	Access
Acous	Acoustical
AD	Area Drain
ADA	Americans with Disabilities Act
Addl	Additional
Adh	Adhesive
Adj	Adjacent, Adjust, Adjustable
A/E	Architect/Engineer
AFC	Automatic Fare Collection
AFF	Above Finished Floor
Aggr	Aggregate
Ahd	Ahead
Alum	Aluminum
Alt	Alternate, Alternative
Anch	Anchor
Anod	Anodized
AP	Access Panel
App	Approved
Approx	Approximate
Arch.	Architect, Architectural
ARV	Air Relief Valve
ASC	Above Suspended Ceiling
Asph	Asphalt
Assm	Assembly
ASTM	American Society for Testing & Materials
Auto	Automatic
Aux	Auxiliary
Ave	Avenue
Avg	Average
℄	Baseline
Bal	Balance
BC	Bottom of curb
Bd	Board
Beg	Begin, Beginning
Bet	Between
Bitum	Bituminous
Bldg	Building
Blk	Block, Black
Blkg	Blocking
Blvd	Boulevard
Blw	Below
Bk	Back
BM	Benchmark
Bm	Beam
Bol	Bollard
Bot	Bottom
BP	Back Plaster/Plastered
Br	Bridge
Brz	Bronze
BS	Bottom of Slope, Both Sides
Bsmt	Basement
Btw	Between
Bvl	Beveled
℄	Centerline
C	Cable, Celsius
Cab	Cabinet
Cal	Caliper
Cap	Capacity
CB	Catch Basin
CCTV	Closed–circuit television
Cem	Cement
Cer	Ceramic
CF	Cubic Feet
CG	Corner Guard
Cham	Chamfer
Chk	Check
CI	Cast Iron
CIP	Cast–in–Place
Circ	Circle, Circular
Circum	Circumference
CJ	Construction Joint, Control Joint
CL	Chain Link
Clg	Ceiling

Clkg	Caulking
Clo	Closet
Clr	Clear, Clearance
cm	Centimeter
CMU	Concrete Masonry Unit
Cnd	Conduit
Cntr	Counter
CO	Cleanout
Col	Column
Comm	Communication
Comp	Composite,Component,Comparable,Composition
Conc	Concrete
Cond	Condition, Conduit
Conf	Confirm, Confirmation, Conference
Conn	Connect, Connection, Connector
Const	Construction
Cont	Continuous, Continue
Contd	Continued
Corr	Correction, Corrugated, Corridor
Coord	Coordinate
Cpr	Copper
CR	Card Reader
CT	Ceramic Tile
Ctr	Center
Ctsk	Countersunk
Cu	Cubic
CY	Cubic Yard
Cyl	Cylinder
D	Depth
D.B.G.	Distance Between Guides
Dbl	Double
DD	Down Drain
Deg	Degree
Dept	Department
Desc	Description
Det	Detail
DF	Drinking Fountain
DI	Drain Inlet
Dia	Diameter
Diag	Diagonal, Diagram
Diaph	Diaphragm
Dim	Dimension
Dir	Direction
Disp	Dispenser
Div	Division
Dn	Down
DO	Door Opening
Dr	Door
DS	Downspout
DTA	Dovetail Anchor
DTS	Dovetail Anchor Slot
Dwg	Drawing
Dwy	Driveway
E	East, Electrical
ea	Each
EB	Expansion Joint, Eastbound
EE	Each End
EF	Each Face
EJ	Expansion Joint
El	Elevation
Elec	Electrical
Elev	Elevator
Emer	Emergency
EMP	Emergency Management Panel
Encl	Enclosure
Eq	Equal
Eqmt	Equipment
Esc	Escalator
etc	Et cetera
EW	Each Way
Exh	Exhaust
Exist	Existing
Exp	Expansion
Expo	Exposed
Ext	Exterior, External

F	Fahrenheit, Front
FA	Fire Alarm
FAB	Fire Alarm Box
FAC	Fire Alarm Conduit
FAI	Fresh Air Intake
FB	Flat Bar
FBO	Furnished by Others
FC	Flexible Connection
FCO	Floor Cleanout
FD	Floor Drain
Fdn	Foundation
FE	Fire Extinguisher
FEC	Fire Extinguisher Cabinet
FFE	Finish Floor Elevation
FFL	Finish Floor Line
FG	Finish Grade
FH	Fire Hydrant, Flat Head
FHC	Fire Hose Cabinet
FHV	Fire Hose Valve
Fig.	Figure
Fin	Finish
Fl	Floor
Flex	Flexible
Flg	Flashing
Fluor	Fluorescent
FOC	Face of Concrete
FOF	Face of Finish
FOM	Face of Masonry
FOS	Face of Studs
FP	Fire Protection
Fprf	Fireproof
FR	Fire–rated
FS	Full Size, Fire Service
ft	Foot, Feet
Ftg	Footing
Furr	Furring
Fut	Future
Fwy	Freeway
G	Gas
Ga	Gauge
gal	Gallon
Galv	Galvanized
Gar	Garage
GB	Gypsum Board
Gen	General
GFRC	Glass Fiber Reinforce Concrete
Gl	Glass
GM	Gas Meter
Gnd	Ground
Grl	Grille
Grn	Granite
GSM	Galvanized Sheet metal
Gyp	Gypsum
H	High, Horizontal
HB	Hose Bibb
HD	Heavy–duty
Hdcp	Handicap–ADA Compliant
HDOT	Hawaii Department of Transportation
HDPE	High–Density Polyethylene (membrane)
Hdr	Header
Hdw	Hardware
Hex	Hexagonal
HFD	Honolulu Fire Department
HH	Handhole
HM	Hollow Metal
Horiz	Horizontal
HP	High Point, High Pressure
HPD	Honolulu Police Department
HR	Handrail
Hr	Hour
Ht	Height
HVAC	Heating, Ventilation & Air Conditioning
HWP	High Working Point
Hwy	Highway
Hydr	Hydraulic

I	Iron
ID	Inside Diameter, Identification
IE	Invert Elevation
IF	Inside Face
in.	Inch
Incl	Included, Including, Inclusive
Inf	Information
Inst	Install, Instrument
Insul	Insulation
Int	Interior, Internal
Inv	Invert
Jan	Janitor
JB	Junction Box
JC	Janitor's Closet
Jct	Junction
JF	Joint Filler
Jt(s)	Joint(s)
kg	Kilogram
KP	Knockout Panel
KO	Knock Out
L	Length
LA	Landscape Architect
Lam	Laminate
Lat	Latitude, Lateral
Lav	Lavatory
LB	Pound (unit of measurement)
LC	Landscape Contractor
LF	Linear Foot
Lg	Long
LH	Left Hand
Lin	Linear
Lkr	Locker
Ln	Lane
Loc	Location
Long	Longitude, Longitudinal
LP	Low Point, Light Pole
Lt	Light, Left
Ltg	Lighting
Lvl	Level
LW	Lightweight
LWP	Low Working Point
L/T	Left Track
m	Meter (unit of measure)
Max	Maximum
MB	Mailbox
Mech	Mechanical
Med	Medium
Mem	Membrane
Met	Metal
Mezz	Mezzanine
Mfr	Manufacturer
MH	Manhole
Min	Minimum
Mir	Mirror
Misc	Miscellaneous
mm	Millimeter
MO	Masonry Opening
Mod	Modified
Mtd	Mounted
Mtg	Meeting, Mounting
Matl	Material
Mul	Mullion

N	North
N/A	Not Applicable
NB	Northbound
NE	Northeast
NIC	Not in Contract
No. (Nos.)	Number (Numbers)
Nom	Nominal
NR	Non–rated
NS	Near Side
NTS	Not to Scale
NW	Northwest
OA	Overall
Obs	Obscure
OC	On Center
OCS	Overhead Contact System
OD	Outside Diameter
OF	Outside Face
OH	Overhead
Op	Opaque
Opng	Opening
Opp	Opposite
OSA	Outside Supply Air
oz	Ounce
O to O	Out to Out
PNL	Panel
PA	Public Address, Police Alarm
Par	Parallel
Part	Partial
PB	Pullbox
PBX	Private Branch Exchange
PC	Precast Concrete
Ped	Pedestrian, Pedestal
Perf	Perforated
Perm	Permanent
PG	Profile Grade
Pg	Page
PGL	Profile Grade Line
Ph	Phase
PL	Property Line
Pl	Plate
Plas	Plaster
Platf	Platform
P Lam	Plastic Laminate
PLD	Plastic Duct
PLT	Plastic Tile
Plum	Plumbing
Plywd	Plywood
Pol	Police
Pr	Pair
Proj	Project, Projection
Prop	Property
PS	Point of Switch
PSF	Pounds Per Square Feet
PSI	Pounds Per Square Inch
Pt(s)	Point(s)
Ptd	Painted
PTD/R	Paper Towel Dispenser & Receptacle
PVC	Polyvinyl Chloride
Pvmt	Pavement
Pwr	Power
QT	Quarry Tile
qt	Quart
Qty	Quantity
Quad	Quadrant

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: W Deguchi
Drawn: D Wong
Checked: M. Leineweber
Approved: K Parmar
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
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PEARLRIDGE STATION

GENERAL ARCHITECTURAL NOTES SYMBOLS, AND ABBREVIATIONS

SHEET 2 OF 3

Contract No.: SV–340
CADD File: SD1–H01–AG002
Drawing No: AG002 Rev.
Scale: N/A
Page No. 46 of 60

2009–12–21 8:38 AM P:\8042 HHTCP Transit Stations\8042 Production\8042 CAD Files\8042 Current Dwgs\8042 HCCT Station\Sheets\8042 SD1 Pearl Ridge\SD1–H01–AG002.dwg

ARCHITECTURAL ABBREVIATIONS (CONTINUED)

R	Radius
RB	Resilient Base
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
RD	Roof Drain
Rdwy	Roadway
Rect	Rectangle
Ref	Reference
Refl	Reflect, Reflected, Reflective, Reflector
Reinf	Reinforce, Reinforcing, Reinforcement
Repl	Replace
Reqd	Required
Resil	Resilient
Ret	Return, Retain, Retaining
Rev	Revised, Revision
Rfg	Roofing
RH	Right Hand
Rm	Room
RO	Rough Opening
ROW	Right–of–Way
Rt	Right
RT	Resilient Tile
R/T	Right Track
RW	Retaining Wall
S	South
San	Sanitary
SB	Southbound
SC	Solid Core
SCD	Seat Cover Dispenser
Sch	Schedule
SD	Soap Dispenser
SE	Southeast
Sect	Section
SF	Square Foot, Square Feet
SFP	Site Finish Plan
Sgl	Single
Sht	Sheet
Sim	Similar
SIP	Support in Place
SL	Street Light
SLC	Street Light Conduit
SLPB	Street Light Pull Box
SND	Sanitary Napkin Dispenser
SNR	Sanitary Napkin Receptacle
Spa.	Spaces, Spacing
Spec	Specification
Spkr	Speaker
Spr	Sprinkler
Sq	Square
SS	Service Sink, Stainless Steel
St	Street
Sta	Station, Stationing
Std	Standard
Stl	Steel
Stor	Storage
Str	Structure
Strl	Structural
Supv	Supervisor, Supervise
Susp	Suspended
SW	Southwest
SY	Square Yard
Sym	Symmetrical
Sys	System
T	Top
T.O.	Top of
T&B	Top and Bottom
Tan.	Tangent
TBD	To Be Determined
TC	Top of Curb
TCCR	Train Control & Communications Room
TD	Trench Drain
TDD	Telecommunications Device for the Deaf
Tel	Telephone
Tele	Telescoping
Temp	Temporary, Temperature
TG	Top of Grate
T&G	Tongue and Groove
Thk	Thick, Thickness
TL	Traffic Light
TOC	Top of Concrete
TOR	Top of Rail
TOS	Top of Steel
Tot.	Total
TOW	Top of Wall
TP	Top of Pavement
TPD	Toilet Paper Dispenser
TPSS	Traction Power Substation
Tr	Tread
TV	Television, Ticket Validator
TVM	Ticket Vending Machine
Typ	Typical
T/C	Top of Curb
T/R	Top of Rail
T/P	Top of Platform
UB	Utility Box
UC	Undercut
UD	Underdrain
Unf	Unfinished
Unk	Unknown
UNO	Unless Noted Otherwise
UPE	Under Platform Exhaust
UR	Urinal
UST	Underground Storage Tank
Util	Utility
UWP	Upper Working Point
V	Vertical
Vac	Vacuum
Var	Variable, Varies
VCT	Vinyl Composition Tile
Vent.	Ventilate, Ventilation
Vert	Vertical
Vest	Vestibule
Vlv	Valve
VMS	Variable Message Sign
VoIP	Voice over Internet Protocol
Vt	Vent
W	West, Wide, Width
w/	With
w/o	Without
WB	Westbound
WC	Water Closet
WCR	Wheel Chair Ramp
Wd	Wood
Whse	Warehouse
WI	Wrought Iron
Wk	Work
WL	Water Line
WM	Water Meter, Water Main
WP	Work Point
Wpf	Waterproof, Waterproofing
WSP	Wet Stand Pipe
Wt	Weight
Wtr	Water
WTW	Wall to Wall
WV	Water Valve
WWF	Welded Wire Fabric
WWM	Welded Wire Mesh

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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Drawn: D Wong
Checked: M. Leineweber
Approved: K Parmar
Date: 12–18–09

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PEARLRIDGE STATION

GENERAL ARCHITECTURAL NOTES SYMBOLS, AND ABBREVIATIONS

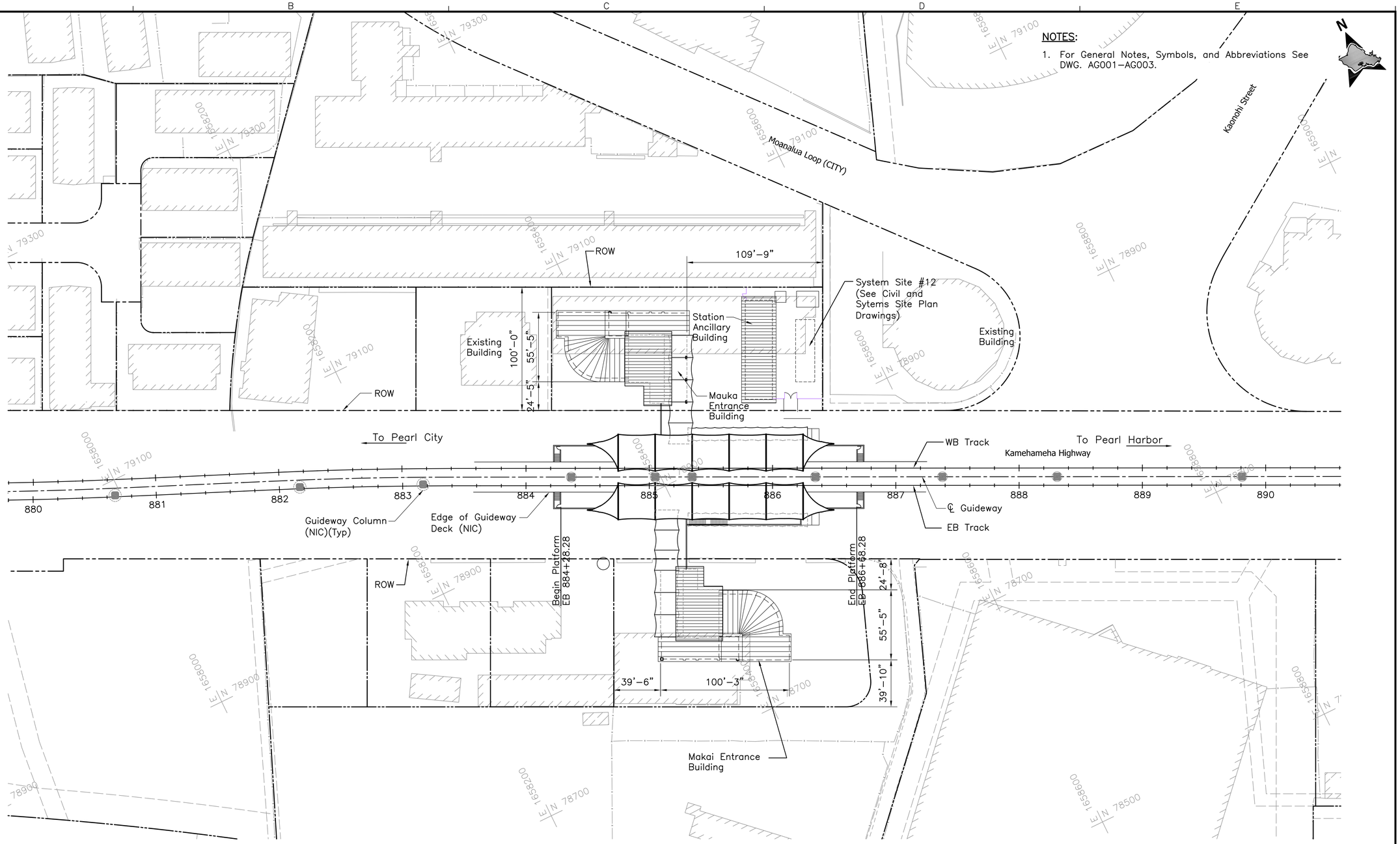
SHEET 3 OF 3

Contract No.: SV–340
CADD File: SD1–H01–AG003
Drawing No: AG003 Rev.
Scale: N/A
Page No. 47 of 60

2009–12–29 7:26 AM P:\8042 HHTCP Transit Stations\8042 Production\8042 CAD Files\8042 Current Dwgs\8042 HCCT Station\Sheets\8042 SD1 Pearl Ridge\SD1–H01–AG003.dwg

NOTES:

1. For General Notes, Symbols, and Abbreviations See DWG. AG001–AG003.



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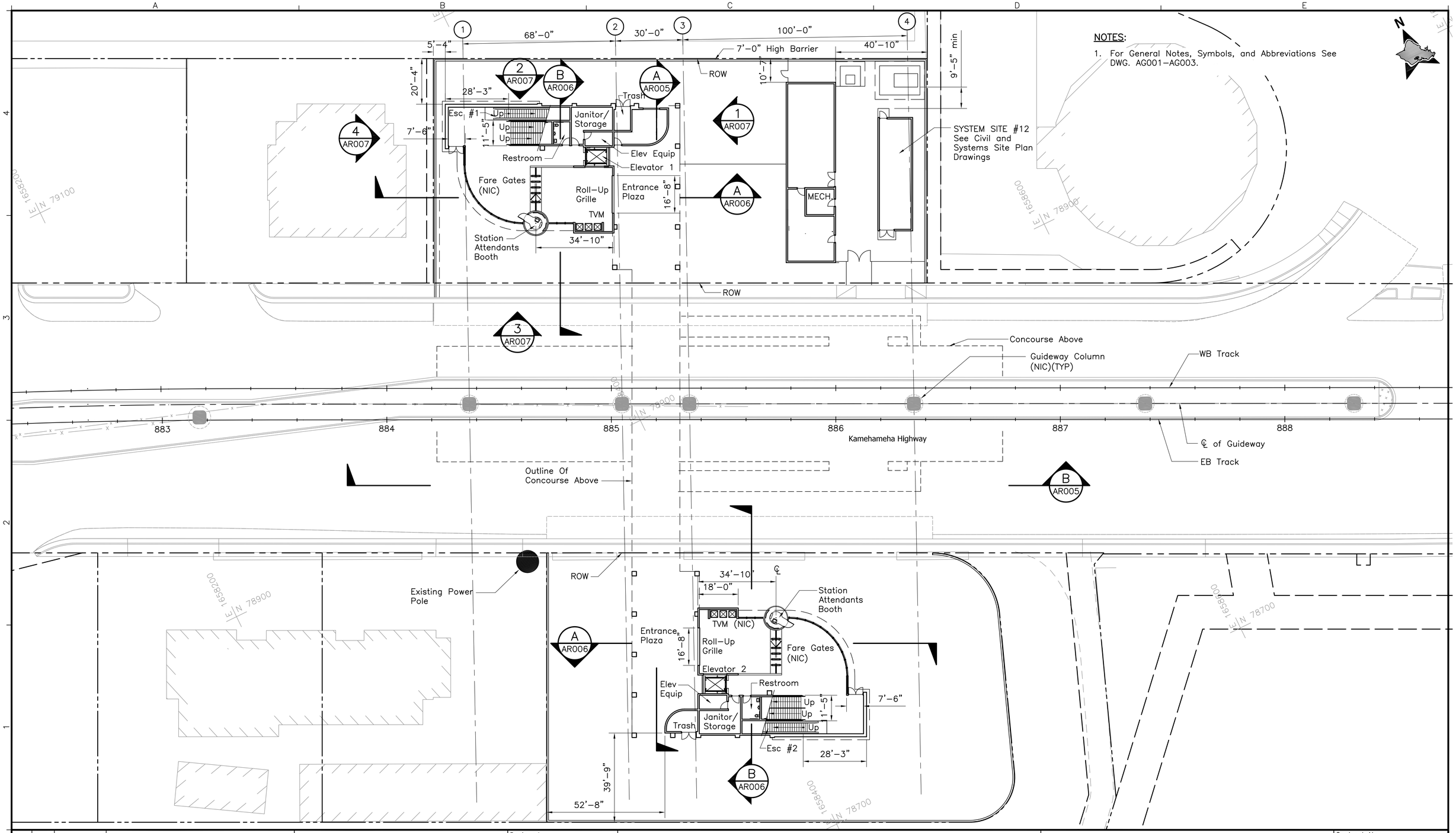
PEARLRIDGE STATION

ARCHITECTURAL SITE PLAN

Contract No.: SV–340
CADD File: SD1–H02–AR001
Drawing No.: AR001
Rev.:
Scale: 1" = 40'

NOTES:

1. For General Notes, Symbols, and Abbreviations See DWG. AG001–AG003.



Rev	By	Date	Description

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PEARLRIDGE STATION

GROUND FLOOR PLAN

Contract No.: SV–340
CADD File: SD1–H03–AR002
Drawing No: AR002
Rev.
Scale: 1" = 20'

NOTES:

1. For General Notes, Symbols, and Abbreviations See DWG. AG001–AG003.

68'–0" | 30'–0" | 100'–0"

33'–1" | 28'–11"

28'–5"

9'–4"

20'–0" Clr

28'–11" | 33'–1"

883 | 884 | 885 | 886 | 887 | 888

Esc #1 | Esc #2 | Esc #3 | Esc #4

Elevator 1 | Elevator 2

Open to Below

Guideway Column (NIC)(TYP)

WB Track

EB Track

℄ of Guideway

℄ of Guideway

Outline Of Platform Above

Outline of Ground Level Below

Existing Power Pole

N 79100 E 1658200

N 78900 E 1658200

N 78900 E 1658600

N 78700 E 1658200

N 78700 E 1658400

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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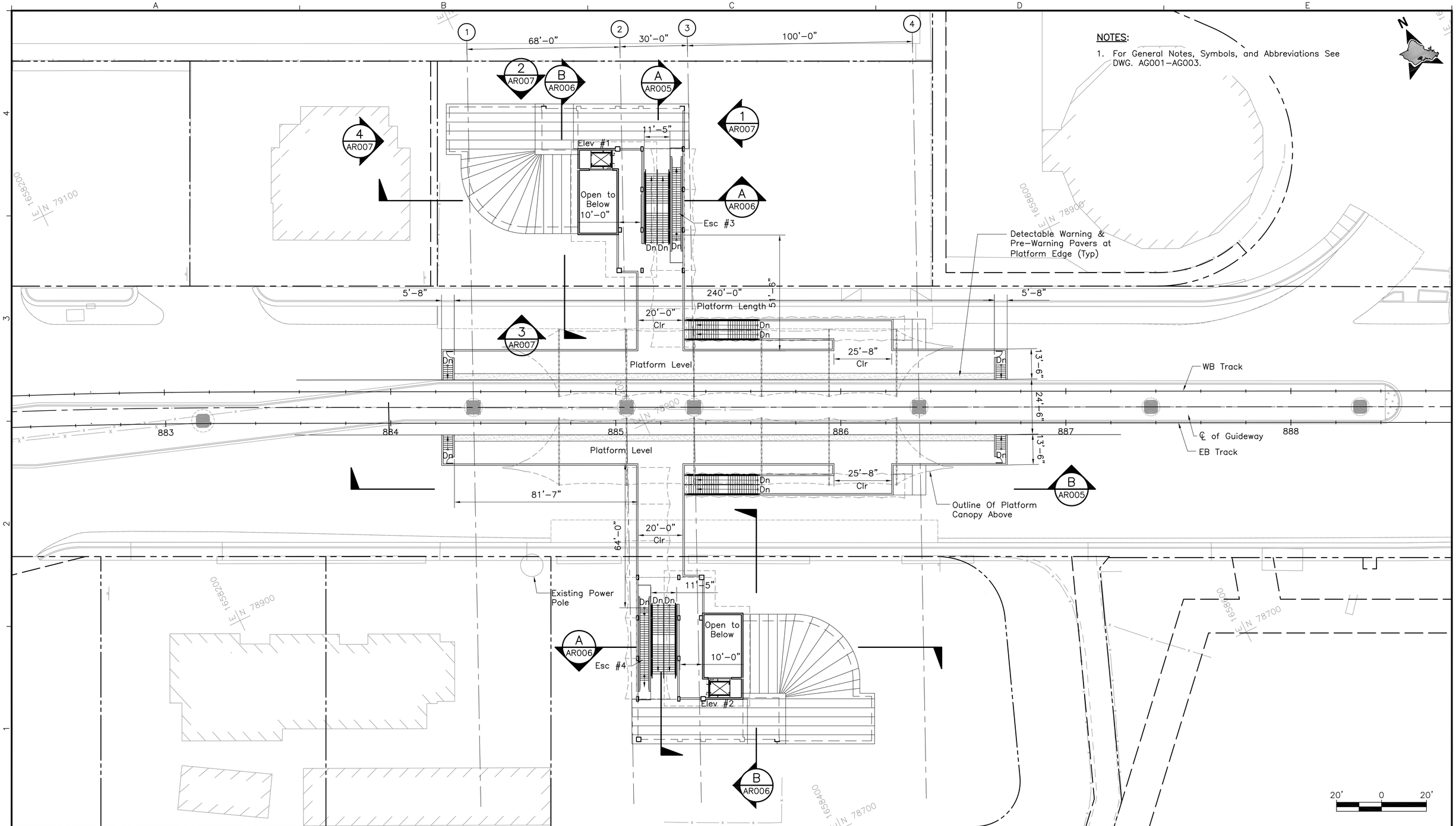
PEARLRIDGE STATION

CONCOURSE FLOOR PLAN

Contract No.: SV–340
CADD File: SD1–H03–AR003
Drawing No: AR003 | Rev.
Scale: 1" = 20'
Page No. 50 of 60



NOTES:

1. For General Notes, Symbols, and Abbreviations See DWG. AG001-AG003.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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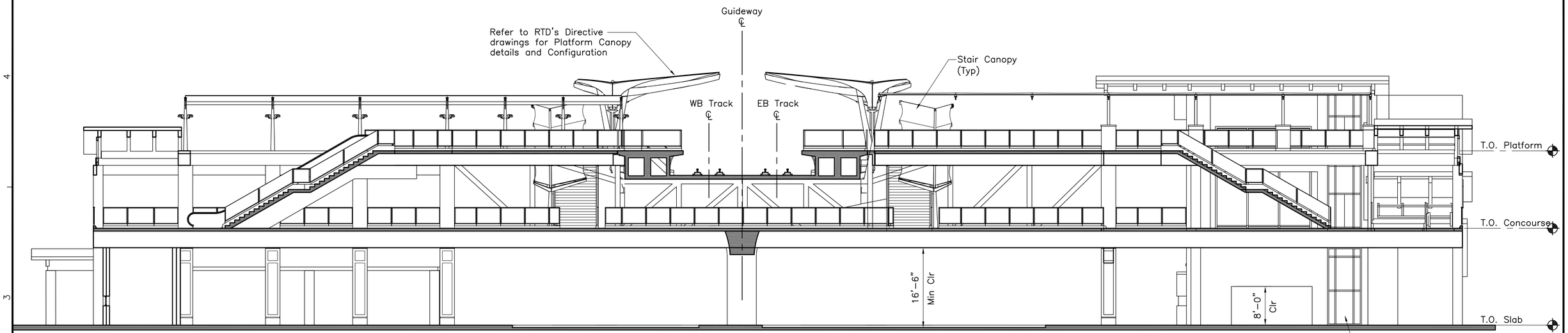
PEARLRIDGE STATION

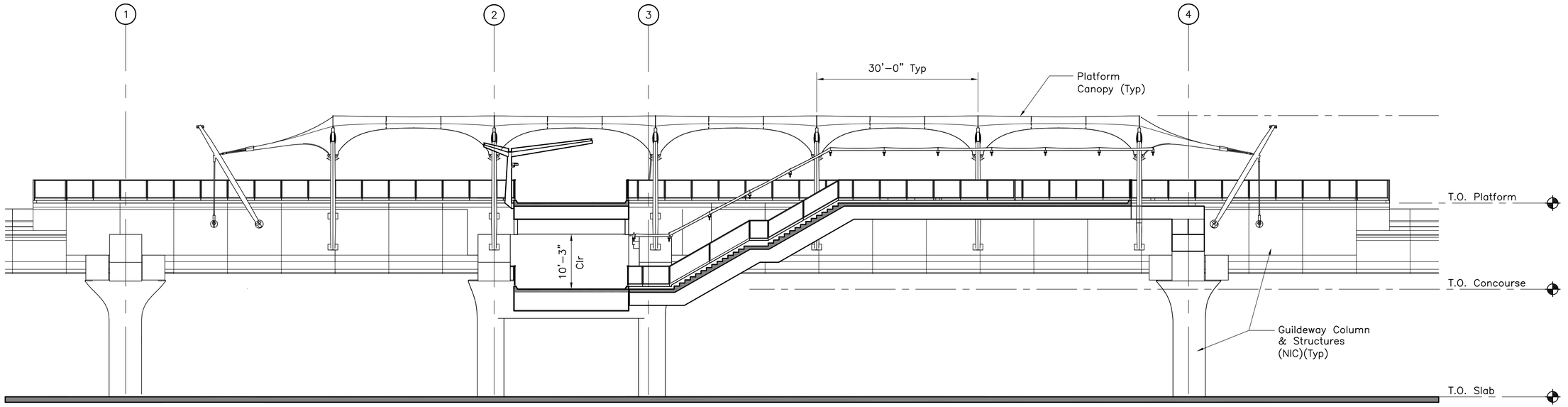
PLATFORM FLOOR PLAN

Contract No.: SV-340
CADD File: SD1-H03-AR004
Drawing No: AR004
Rev.
Scale: 1" = 20'
Page No. 51 of 60



LONGITUDINAL
1"=10'

A / AR005 — AG002, AG003, AG004



LONGITUDINAL
1"=10'

B / AR005 — AG002, AG003, AG004

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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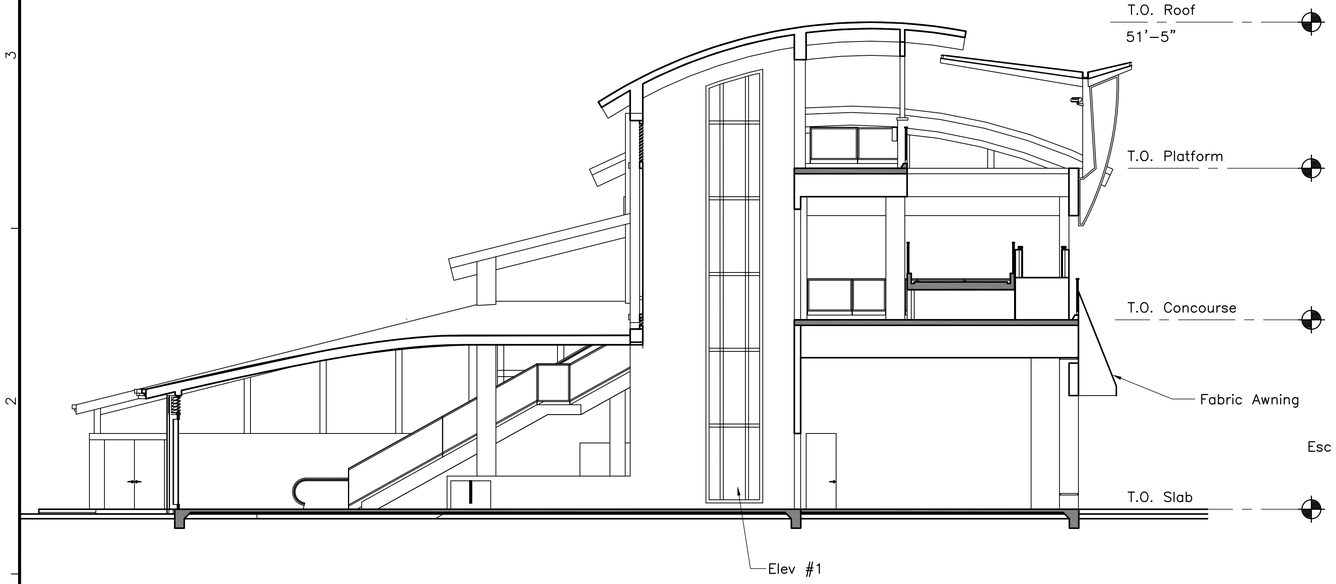
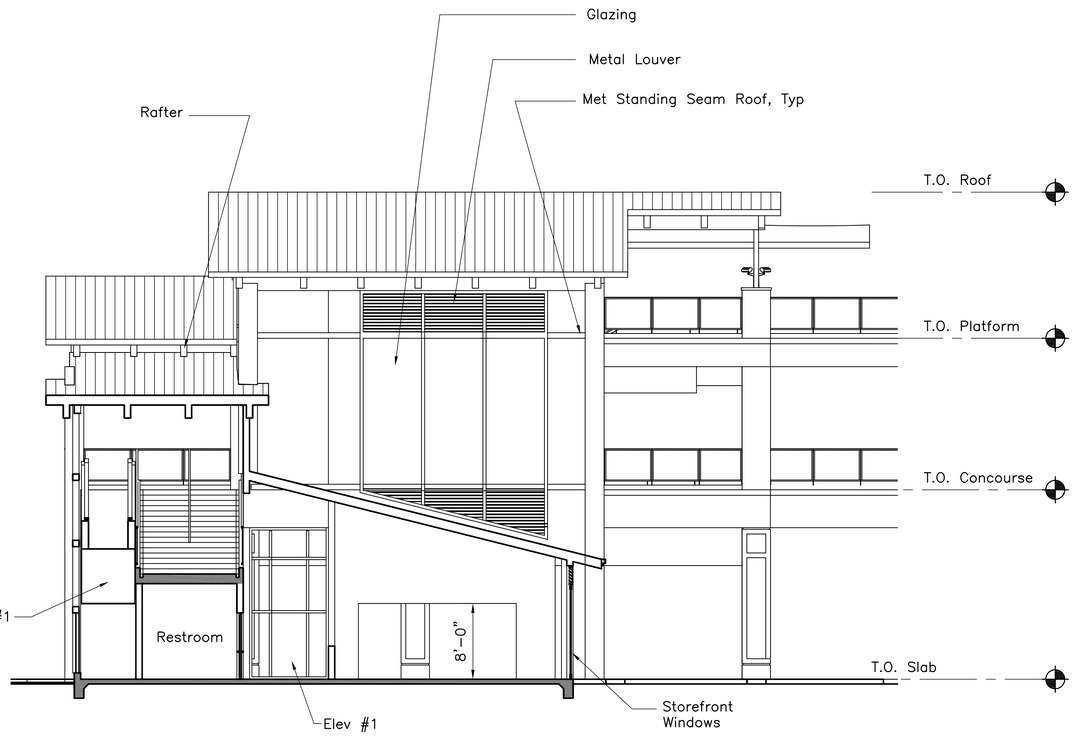
PEARLRIDGE STATION

LONGITUDINAL SECTIONS

Contract No.: SV-340
CADD File: SD1-H05-AR005
Drawing No.: AR005 Rev.
Scale: 1"=10'
Page No. 52 of 60





CROSS SECTION
1/8"=1'–0"
A AR006 AG002 AG003 AG004

CROSS SECTION
1/8"=1'–0"
B AR006 AG002 AG003 AG004

8' 0 8'

Rev	By	Date	Description

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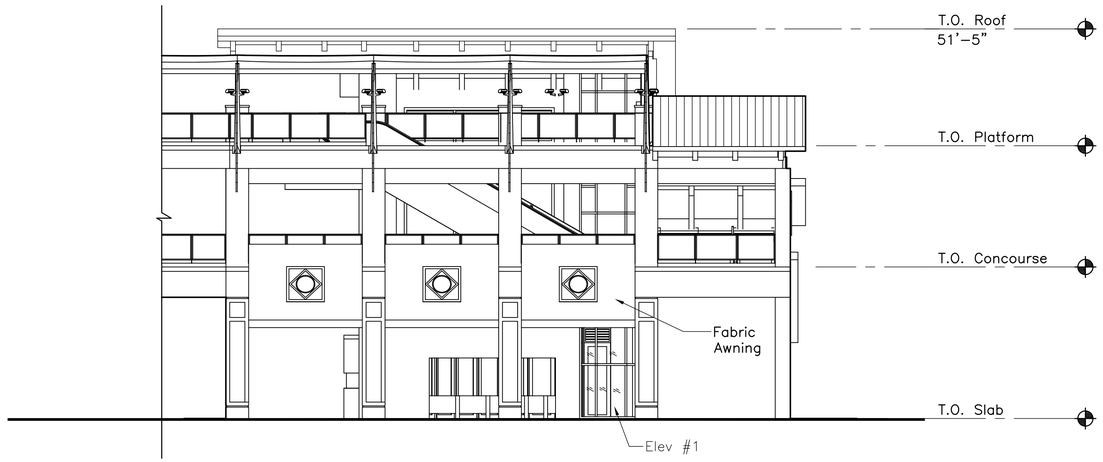
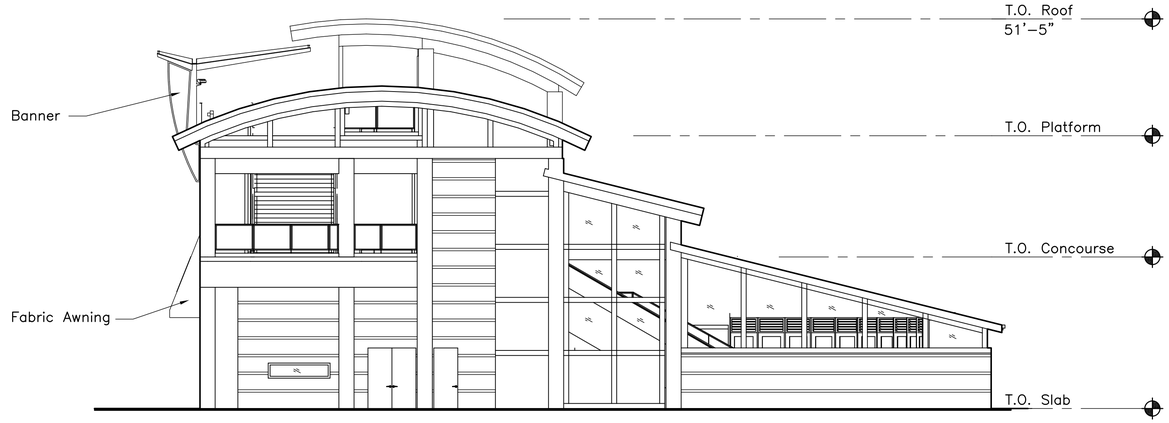
PEARLRIDGE STATION

CROSS SECTIONS

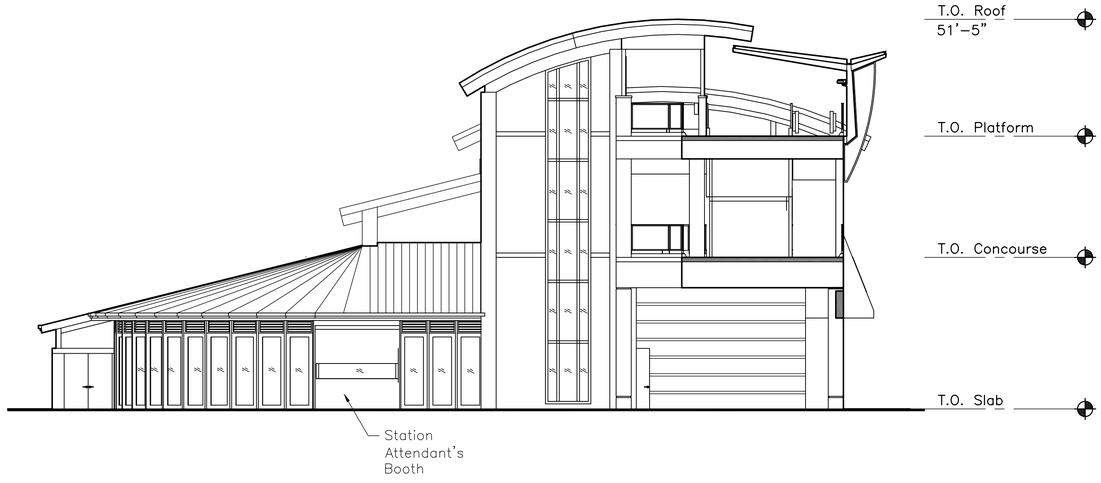
Contract No.: SV–340
CADD File: SD1–H05–AR006
Drawing No.: AR006 Rev.
Scale: 1/8"=1'–0"
Page No. 53 of 60



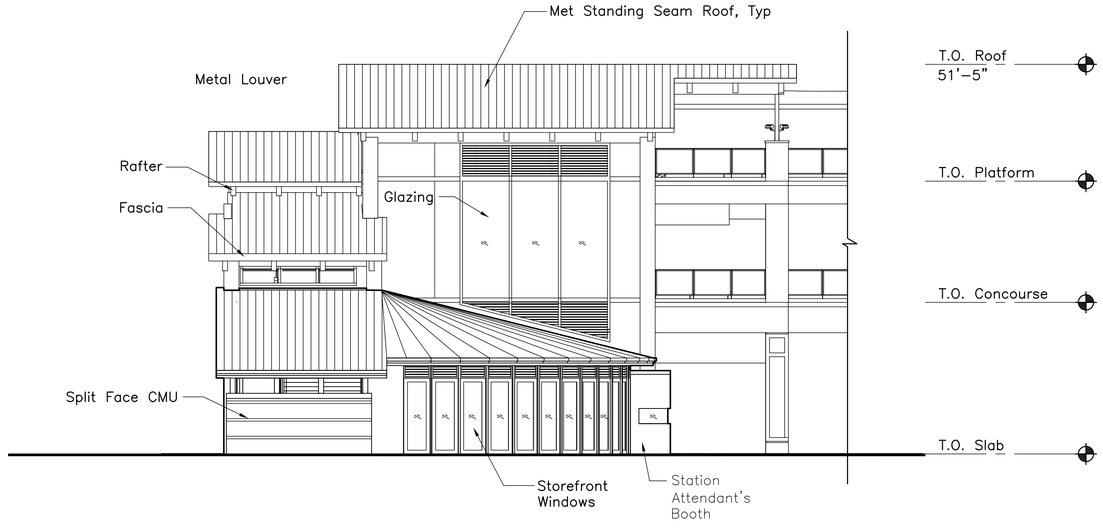
EAST ELEVATION
1"=10'
1 AR007
AR002
AR003
AR004



NORTH ELEVATION
1"=10'
2 AR007
AR002
AR003
AR004



SOUTH ELEVATION
1"=10'
3 AR007
AR002
AR003
AR004



WEST ELEVATION
1"=10'
4 AR007
AR002
AR003
AR004

10' 0 10'

Rev	By	Date	Description

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PEARLRIDGE STATION

ELEVATIONS

Contract No.: SV–340
CADD File: SD1–H06–AR007
Drawing No: AR007
Rev.:
Scale: 1"=10'
Page No. 54 of 60

GROUND VIEW
N/A
2
AR008

ENTRY VIEW
N/A
1
AR008

UNDER PLATFORM VIEW
N/A
3
AR008

AERIAL VIEW
N/A
4
AR008

Rev	By	Date	Description

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PEARLRIDGE STATION

3D VIEWS

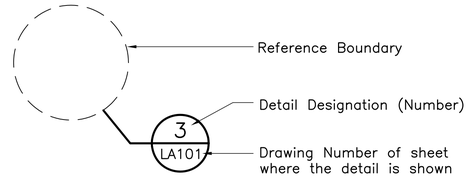
Contract No.: SV–340
CADD File: SD1–H07–AR008
Drawing No.: AR008
Rev.:
Scale: N/A
Page No.: 55 of 60

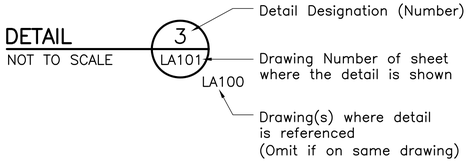
GENERAL NOTES

1. "EB Track" denotes the centerline of the Eastbound Track. "WB Track" denotes the centerline of the Westbound Track.
2. Origin of Coordinates: Hawaii State Plane Coordinate Grid System, Zone III with the North American Datum of 83 High Accuracy Reference Network (NAD83 HARN).
3. The proposed WB Track alignment stationing equals to the proposed EB Track alignment stationing in all parallel tangent sections. Station equations are given at the endpoint of each westbound curve.
4. Underground facilities, poles, structures, and utilities have been plotted from available surveys and records. Their locations must be considered approximate only. There may be others, the existence of which is at present unknown. Verification of all the locations, shown or not shown, will be the responsibility of the contractor.
5. The existing conditions shown hereon are based on LiDAR data collected in September and October of 2007, supplemental ground surveys were performed between September of 2007 and December of 2008, and record information from various design projects either constructed, under construction, or proposed. The selected designer is responsible for verifying existing conditions prior to supplying advanced design documents to the RTD.
6. Contact the Hawaii Department of Transportation (HDOT) and/or the City and County of Honolulu for additional plan sheet details not included in the Standard Details Summary and Standars Plans Summary plan sheets.
7. All planting areas to receive 3 inches minimum depth crushed aggregate mulch on landscape week barrier fabric except at groundcover areas or unless noted otherwise.

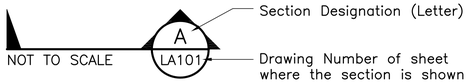
SYMBOLS

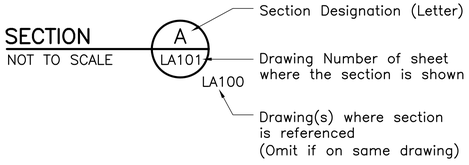
DETAILS





SECTIONS

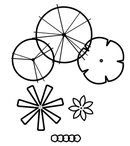




GENERAL SYMBOLS

&	And
@	At
#	Number
ø	Diameter
%	Percent
=	Equal
>	Greater Than
<	Less Than
≥	Greater Than or Equal To
≤	Less Than or Equal To
	Guideway Column (NIC)

LANDSCAPE SYMBOLS



Proposed Trees

Proposed Palms

Proposed Hedge or Shrub Row

Vines

Shrub Areas

Groundcovers

Groundcovers

Lawn

Decorative Iron Tree Grate

Seatwalls and/or Benches

Tree Bubbler

Location of Irrigation Equipment: Controller, POC, Weather Station

Low–Flow Drip Irrigated Area

Overhead Spray Irrigated Area

Concrete Landscape Header

ABBREVIATIONS

℄	Baseline
℄	Centerline
Conc	Concrete
Dia	Diameter
Dwg	Drawing
EB	Eastbound
GB#	Gap Breaker
Max	Maximum
Min	Minimum
MH	Manhole
N/A	Not Applicable
NB	Northbound
NIC	Not in Contract
NTS	Not to scale
POC	Point of Connection
ROW	Right of Way
SB	Southbound
SR	State Route
TBD	To Be Determined
Typ	Typical
WB	Westbound

SPECIAL TERMS

Makai	Ocean
Mauka	Mountain

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: K Fishman
Drawn: K Fishman
Checked: M McMillen
Approved: R S Duncan
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: Land Planning, Landscape Architecture, Environmental Studies, Graphic Design
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Honolulu, HI 96813
PBR HAWAII & ASSOCIATES, INC.

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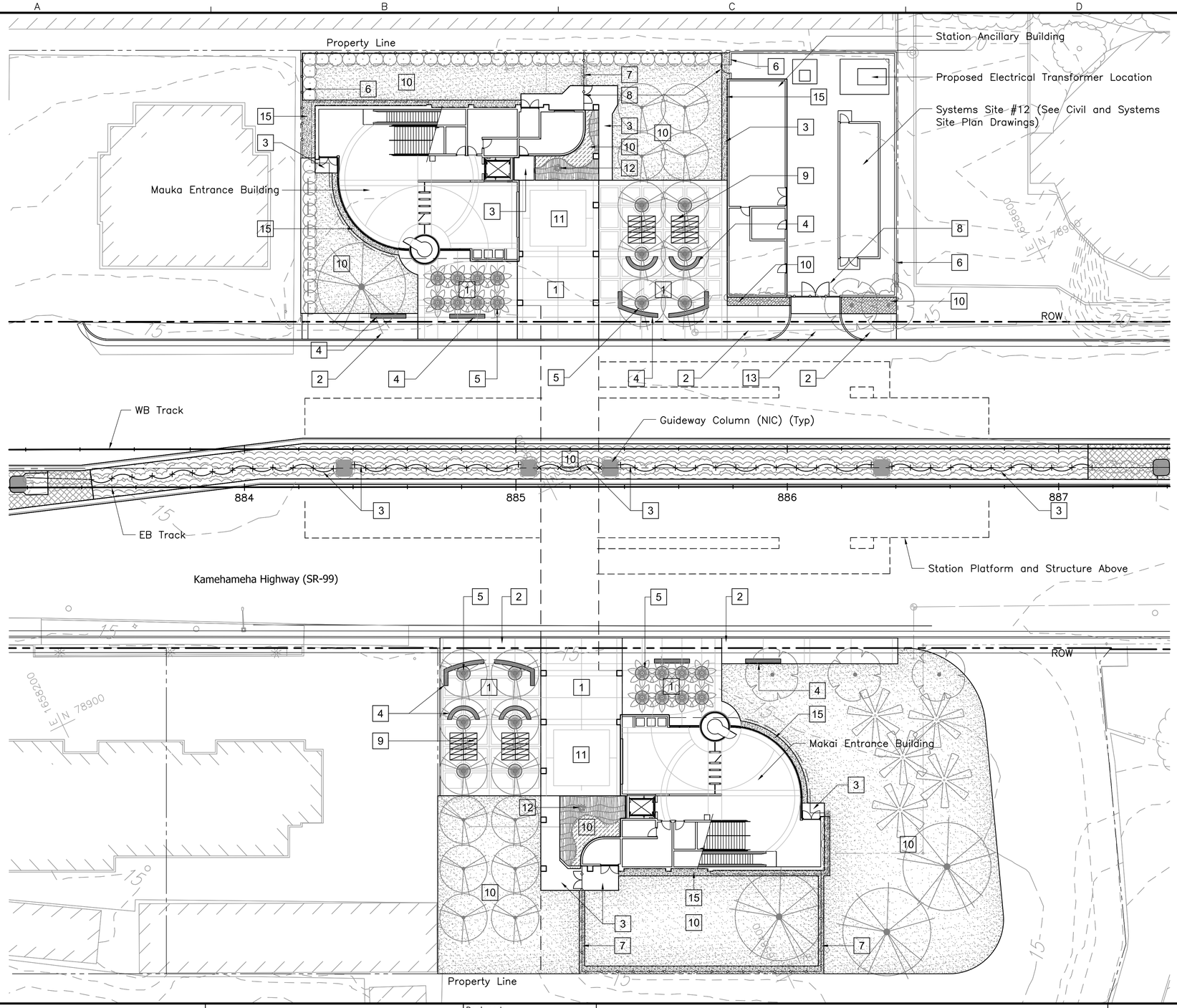
PEARLRIDGE STATION

GENERAL LANDSCAPE NOTES, SYMBOLS, AND ABBREVIATIONS

Contract No.: SV–340
CADD File: SD1–J01–LG001
Drawing No: LG001 Rev.
Scale: N/A
Page No. 56 of 60



LEGEND

SYMBOL	DESCRIPTION
1	Plaza
2	Sidewalk
3	Walkway
4	Seat Wall or Bench
5	Tree Well Planter with Decorative Cover
6	Site Wall
7	Security Fencing
8	Gate
9	Bike Rack
10	Planting Area
11	Art Opportunity: Paving Mosaic
12	Art Opportunity: Sculpture Garden
13	Driveway Ramp
15	Maintenance Strip
16	Curved Green Screen Fencing

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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PEARLRIDGE STATION

LANDSCAPE SITE PLAN

Contract No.: SV-340
CADD File: SD1-J02-LA001
Drawing No.: LA001 Rev.
Scale: 1"=20'-0"
Page No.: 57 of 60

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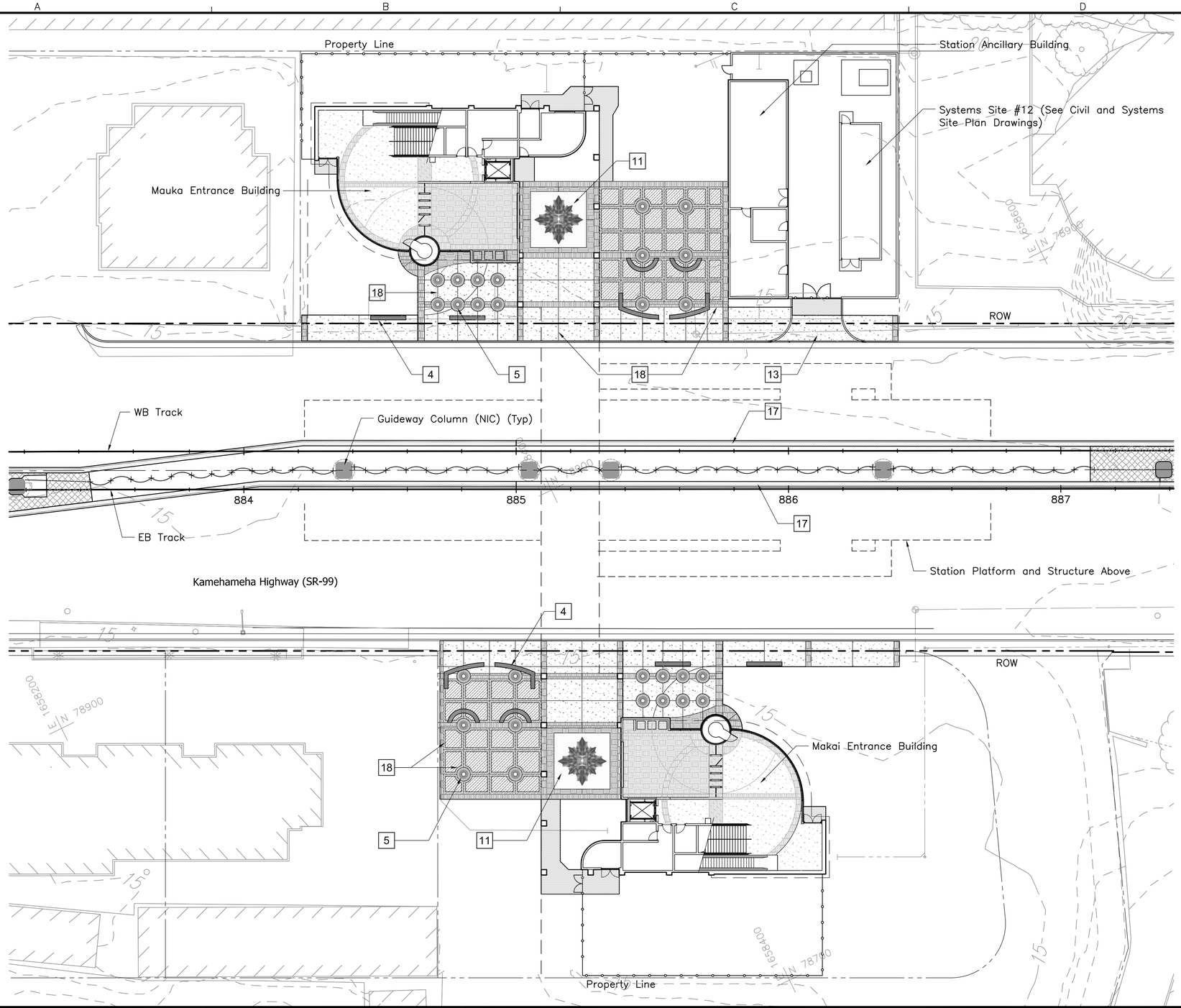

NOTES:

1. Refer to Architectural Drawings for paving pattern on interior of station.

LEGEND

SYMBOL	DESCRIPTION
4	Seatwall
5	Tree Well Planter with Decorative Cover
11	Art Opportunity: Paving Mosaic
13	Driveway Ramp
17	Median Accent Paving (NIC)
18	Paving Expansion/Control Joint

PAVING LEGEND

SYMBOL	DESCRIPTION
	Natural Concrete Paving
	Plaza Concrete Paving
	Accent Paving Band
	Watercress Paving (Green Colors)
	Watercress Paving Accent Band (Blue Colors)
	Lauhala Mat Paving

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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Drawn: K Fishman
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Approved: R S Duncan
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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PEARLRIDGE STATION

PAVING PLAN

Contract No.: SV-340
CADD File: SD1-J03-LA002
Drawing No.: LA002 Rev.
Scale: 1"=20'-0"
Page No. 58 of 60

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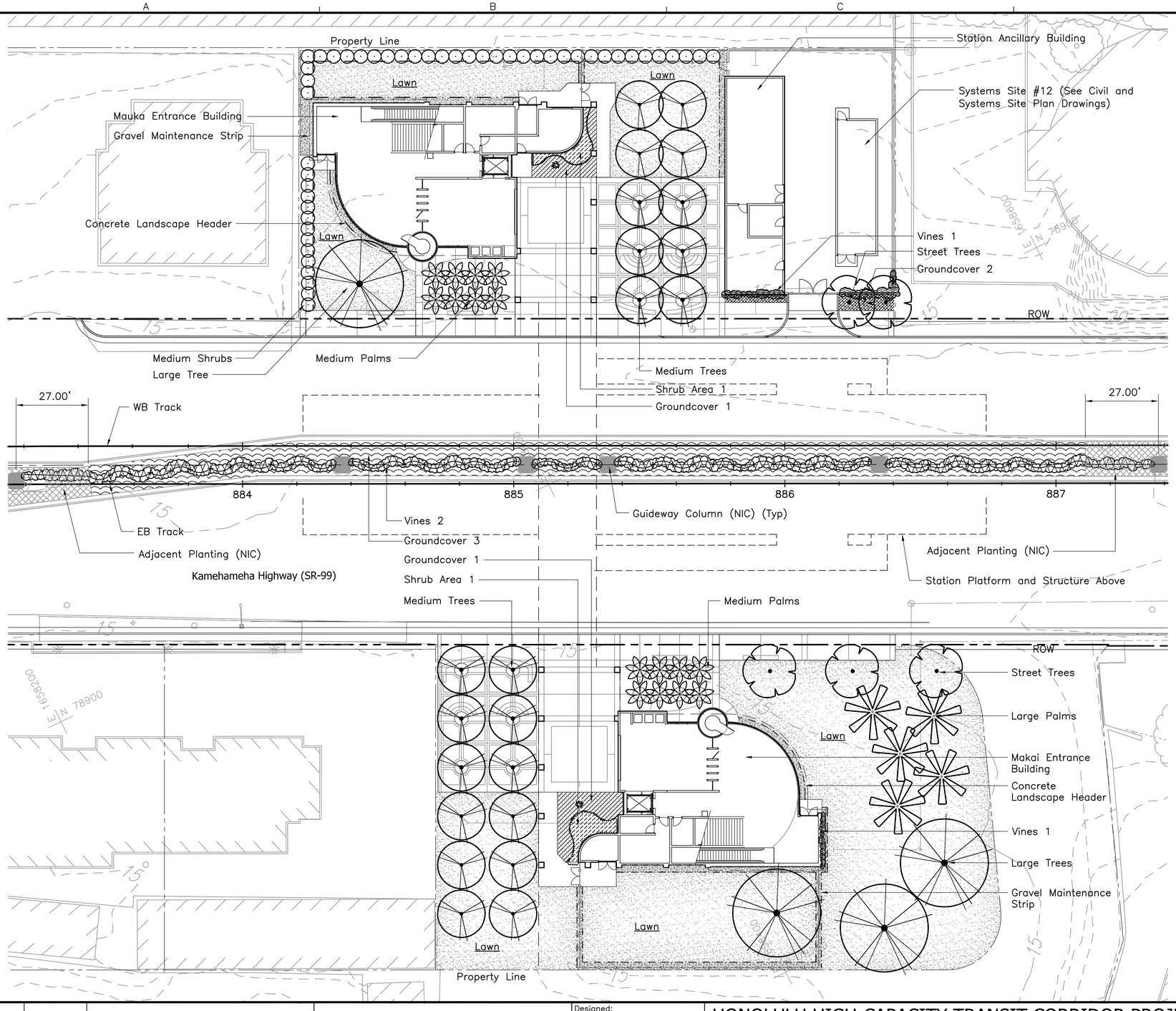

CONCEPT PLANT SCHEDULE

LARGE TREES
Samanea saman / Monkeypod Tree

MEDIUM TREES
Bauhinia x blakeana / Hong Kong Orchid Tree

STREET TREES
Cordia subcordata / True Kou

LARGE PALMS
Cocos nucifera / Coconut Palm

MEDIUM PALMS
Pritchardia martii / Loulu Palm

MEDIUM SHRUBS
Codiaeum variegatum 'Franklin Roosevelt' / Franklin Roosevelt Croton
Codiaeum variegatum 'Mammey' / Mammey Croton
Plumbago auriculata / Blue Plumbago
Pseuderanthemum carruthersii atropurpureum / Purple False Eranthemum

SHRUB AREA 1
Sansevieria trifasciata / Sansevieria
Spathiphyllum wallisii 'Clevelandii' / Peace Lily
Spathiphyllum x 'McCoy' / McCoy Peace Lily

VINES 1
Bougainvillea x 'California Gold' / Bougainvillea
Marsdenia floribunda / Stephanotis

GROUND COVER 1
Hemigraphis alternata / Metal Leaf
Liriope muscari 'Variegata' / Variegated Lily Turf
Tradescantia zebrina / Honohono

GROUND COVER 2
Microsorium scolopendrum / Laua'e Iki
Vitex rotundifolia / Pohinahina

VINES 2
Stephanotis floribunda / Madagascar Jasmine

GROUND COVER 3
Epipremnum pinnatum / Golden Pothos
Syngonium auritum / Five Fingers Syngonium

LAWN
Stenotaphrum secundatum / St. Augustine Grass

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: K Fishman
Drawn: K Fishman
Checked: M McMillen
Approved: R S Duncan
Date: 12-18-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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PEARLRIDGE STATION

PLANTING PLAN

Contract No.: SV-340
CADD File: SD1-J04-LA003
Drawing No.: LA003
Rev.:
Scale: 1"=20'-0"
Page No.: 59 of 60

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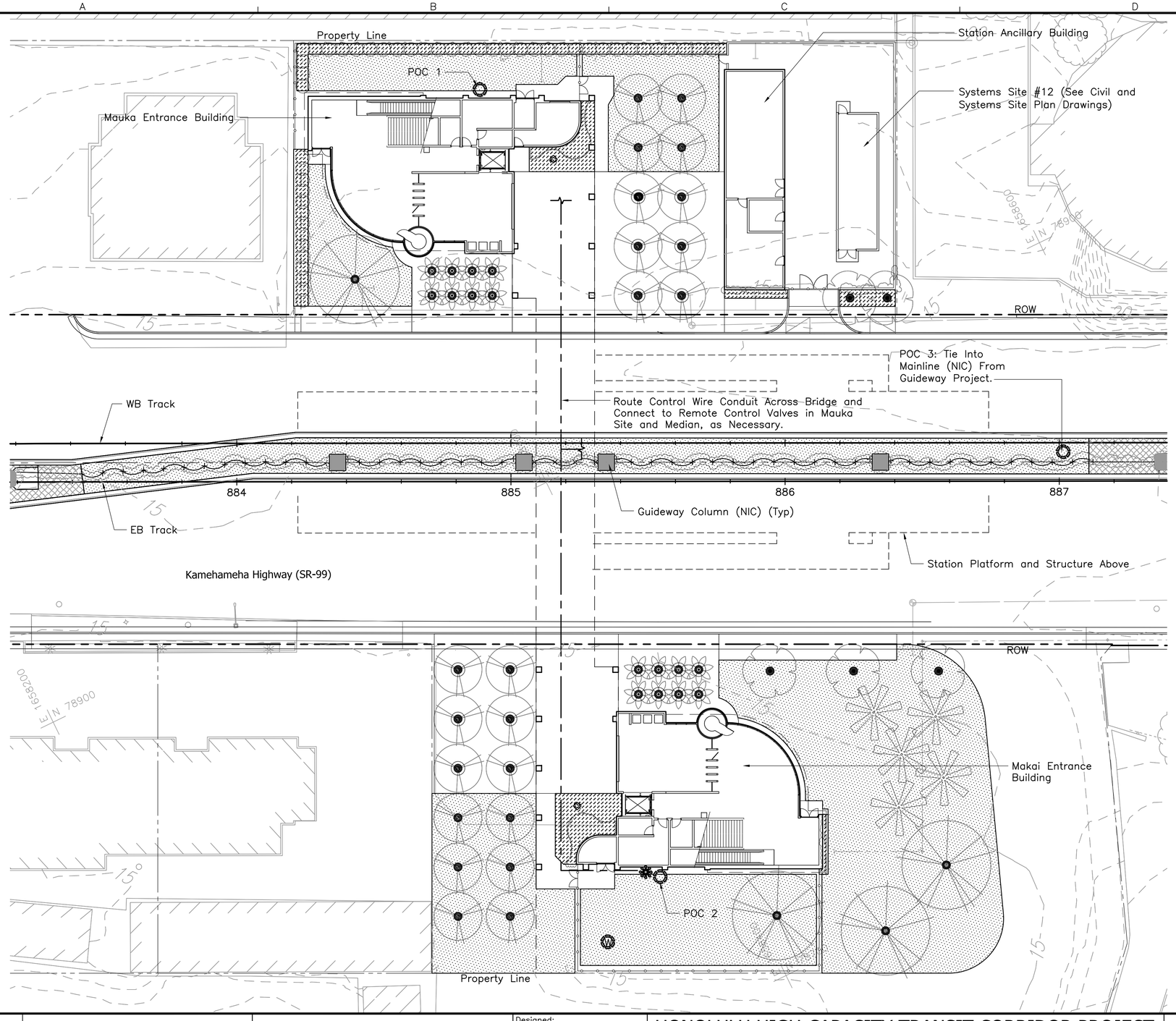

N

NOTES:

1. Provide separate point–of–connections for Mauka and Makai station sides and medians at locations shown.
2. Provide a two–wire type irrigation controller capable of being expanded to a central computer. Central Control Computer to be located at Project Maintenance Facility (NIC).
3. Irrigation valves, heads, and piping locations TBD during final design phase of Project.
4. Provide sufficient irrigation heads and driplines for full coverage of planting areas.
5. Provide power and communication connections for controller and weather station.
6. Provide electrical handholes for irrigation control wires at 250–feet minimum spacing.

LEGEND:

- Proposed Location of Irrigation Point–of–Connection and Backflow Preventer
- Proposed Location of Irrigation Controller
- Proposed Location of Weather Station and Rain Sensor
- Tree Bubbler
- Low–Flow Drip Irrigated Area
- Overhead Spray Irrigated Area

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: K Fishman
Drawn: K Fishman
Checked: M McMillen
Approved: R S Duncan
Date: 12–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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PBR HAWAII & ASSOCIATES, INC.

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PEARLRIDGE STATION

IRRIGATION PLAN

Contract No.: SV–340
CADD File: SD1–J05–LA004
Drawing No.: LA004 Rev.
Scale: 1"=20'–0"
Page No. 60 of 60

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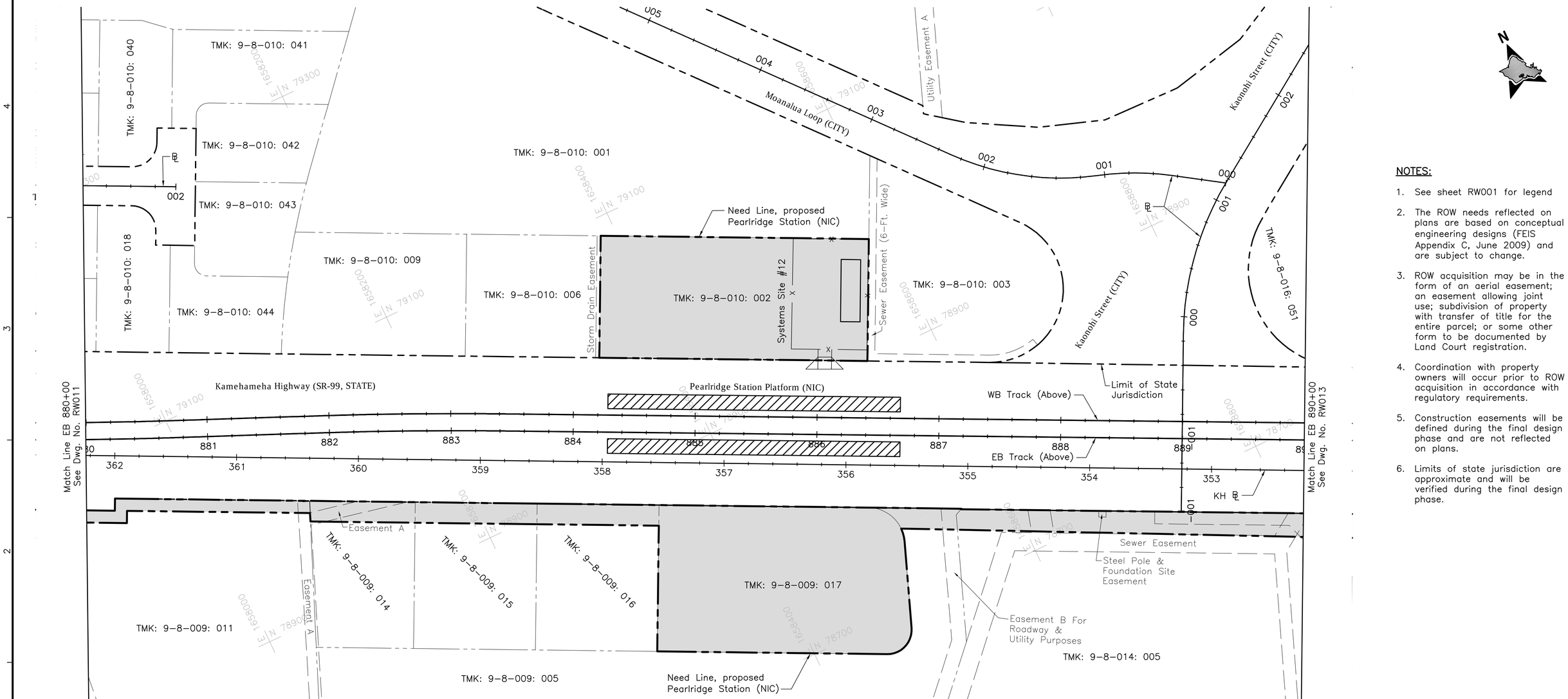
PEARLRIDGE STATION

APPENDIX A - INFORMATIVE DRAWINGS

FROM KAMEHAMEHA GUIDEWAY & UTILITIES PRELIMINARY ENGINEERING PLANS AND CORE SYSTEMS RFP PLANS



Tax Map Key Number	Parcel Acquisitions	House Number	Street Name	Land Use
9-8-009:011	Partial	98-51, 98-57	Kamehameha Hwy	Commercial
9-8-009:014	Partial	98-69	Kamehameha Hwy	Commercial
9-8-009:015	Partial	98-73	Kamehameha Hwy	Commercial
9-8-009:016	Partial	98-75	Kamehameha Hwy	Commercial
9-8-009:017	Full	98-77	Kamehameha Hwy	Commercial
9-8-010:002	Full	98-80	Kamehameha Hwy	Commercial
9-8-014:005	Partial	98-107	Kamehameha Hwy	Commercial

NOTES:

1. See sheet RW001 for legend
2. The ROW needs reflected on plans are based on conceptual engineering designs (FEIS Appendix C, June 2009) and are subject to change.
3. ROW acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
4. Coordination with property owners will occur prior to ROW acquisition in accordance with regulatory requirements.
5. Construction easements will be defined during the final design phase and are not reflected on plans.
6. Limits of state jurisdiction are approximate and will be verified during the final design phase.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

EXISTING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-B04-RW012
Drawing No: RW012 Rev.
Scale: 1"=40'
Page No. 30 of 211

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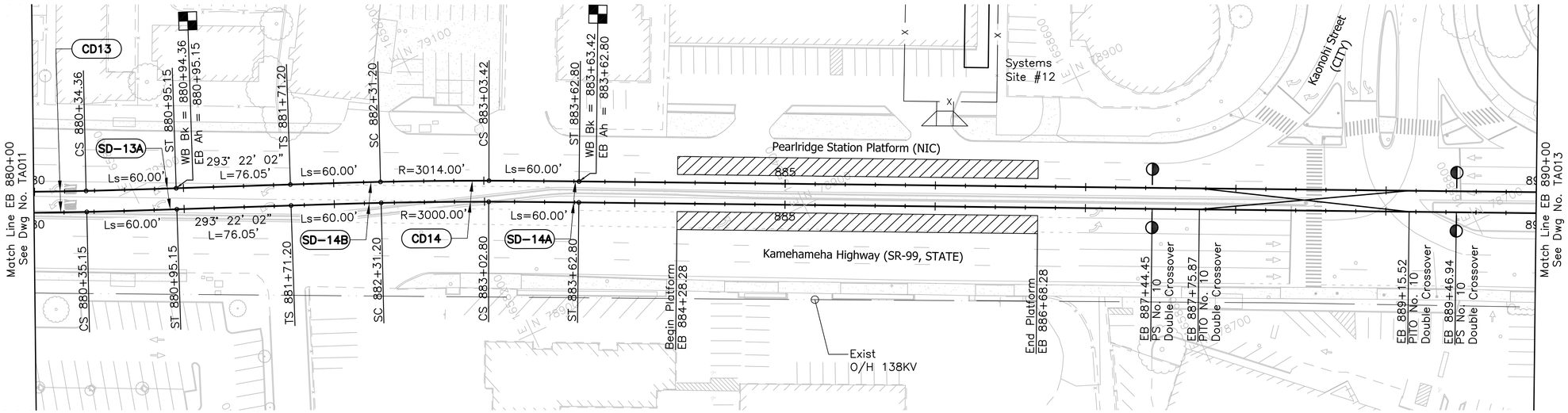
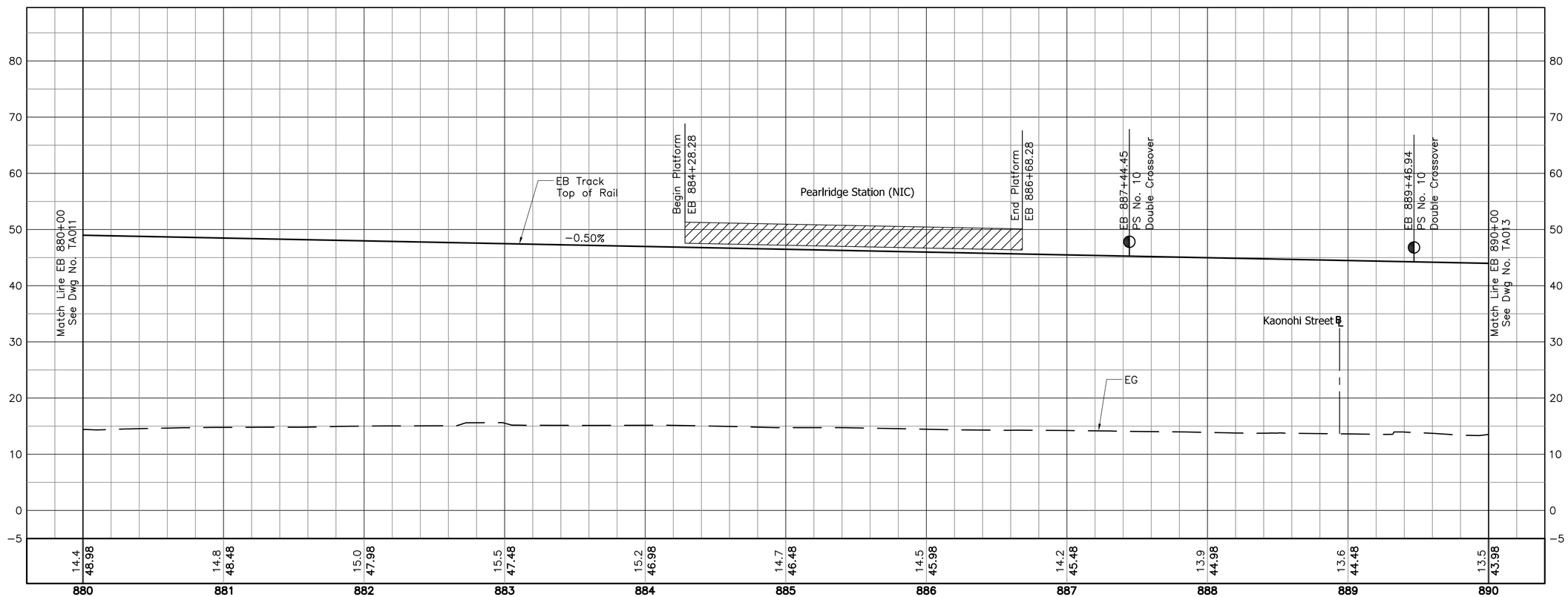


NOTES:

1. See Dwg No. CG001 for General Notes, Symbols and Abbreviations.
2. For track alignment abbreviations, see Dwg No. CG002.
3. Utilities not shown for clarity.
4. Electrical 138KV lines shown for reference.



Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

TRACK ALIGNMENT PLAN & PROFILE

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-B05-TA012
Drawing No: TA012 Rev.
Scale: 1"=40' H, 1"=10' V
Page No. 48 of 211

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ALIGNMENT: SEG D – EB Track

Curve No	Curve Element	Type	Station	Northing	Easting	Data
						L = 128.78'
						Di = 295° 14' 18.09"
		PC:	873+79.49	79387.411	1657376.963	I = 01° 22' 42.97"
	V=55 mph					R = 12000.00'
CD12	Ea=0.00"	PI:	–	79325.852	1657507.555	Lc = 288.73'
	Eu=1.00"					Δ = 01° 22' 42.97"
		PT:	876+68.22	79261.169	1657636.628	Dc = 00° 28' 38.87"
						L = 195.97'
						Di = 296° 37' 01.06"
		TS:	878+64.20	79173.369	1657811.833	Ls = 60.00'
	SD13–B					Ts = 115.50'
						Θs = 00° 34' 13.07"
		SC:	879+24.20	79146.665	1657865.563	I = 03° 14' 59.20"
	V=35 mph					R = 3014.00'
CD13	Ea=0.50"	PI:	–	79121.622	1657915.093	Lc = 110.95'
	Eu=1.11"					Δ = 02° 06' 33.07"
		CS:	880+35.15	79099.792	1657966.120	Dc = 01° 54' 03.56"
	SD13–A					
		ST:	880+95.15	79075.812	1658021.120	
						L = 76.05'
						Di = 293° 22' 01.86"
		TS:	881+71.20	79045.648	1658090.935	Ls = 60.00'
	SD14–B					Ts = 95.81'
						Θs = 00° 34' 22.65"
		SC:	882+31.20	79021.667	1658145.934	I = 02° 30' 48.04"
	V=35 mph					R = 3000.00'
CD14	Ea=0.50"	PI:	–	79007.647	1658178.887	Lc = 71.60'
	Eu=1.12"					Δ = 01° 22' 02.74"
		CS:	883+02.80	78991.835	1658211.020	Dc = 01° 54' 35.49"
	SD14–A					
		ST:	883+62.80	78965.826	1658265.089	
						L = 1138.30'
						Di = 295° 52' 49.89"
Pearlridge Station			884+28.28	–	–	
			886+68.28	–	–	
No. 10 Xover		PS:	887+44.45	78799.236	1658608.463	
		PITO:	887+75.87	78785.523	1658636.729	
No. 10 Xover		PITO:	889+15.52	78724.566	1658762.375	
		PS:	889+46.94	78710.852	1658790.641	
		PC:	895+01.10	78468.963	1659289.224	I = 00° 47' 07.57"
	V=55 mph					R = 12000.00'
CD15	Ea=0.00"	PI:	–	78433.060	1659363.227	Lc = 164.50'
	Eu=1.00"					Δ = 00° 47' 07.57"
		PT:	896+65.60	78396.146	1659436.730	Dc = 00° 28' 38.87"
						L = 185.45'
						Di = 296° 39' 57.46"
		PC:	898+51.05	78312.921	1659602.451	I = 01° 07' 59.83"
	V=55 mph					R = 12014.00'
CD16	Ea=0.00"	PI:	–	78259.596	1659708.633	Lc = 237.63'
	Eu=1.00"					Δ = 01° 07' 59.83"
		PT:	900+88.68	78208.381	1659815.849	Dc = 00° 28' 36.87"

ALIGNMENT: SEG D – WB Track

Curve No	Curve Element	Type	Station	Northing	Easting	Data
						L = 128.78'
						Di = 295° 14' 18.09"
		PC:	873+79.49	79400.075	1657382.932	I = 01° 22' 42.97"
	V=55 mph					R = 12014.00'
CD12	Ea=0.00"	PI:	–	79338.444	1657513.677	Lc = 289.07'
	Eu=1.00"					Δ = 01° 22' 42.97"
		PT:	876+68.22	79273.686	1657642.901	Dc = 00° 28' 36.87"
						L = 195.97'
						Di = 296° 37' 01.06"
		TS:	878+64.20	79185.885	1657818.105	Ls = 60.00'
	SD13–B					Ts = 115.10'
						Θs = 00° 34' 22.65"
		SC:	879+24.20	79159.183	1657871.836	I = 03° 14' 59.20"
	V=35 mph					R = 3000.00'
CD13	Ea=0.50"	PI:	–	79134.316	1657921.010	Lc = 110.16'
	Eu=1.12"					Δ = 02° 06' 13.91"
		CS:	880+34.36	79112.644	1657971.673	Dc = 01° 54' 35.49"
	SD13–A					
		ST:	880+95.15	79088.664	1658026.672	
						L = 76.05'
						Di = 293° 22' 01.86"
		TS:	881+71.20	79058.499	1658096.488	Ls = 60.00'
	SD14–B					Ts = 96.12'
						Θs = 00° 34' 13.07"
		SC:	882+31.20	79034.520	1658151.487	I = 02° 30' 48.04"
	V=35 mph					R = 3014.00'
CD14	Ea=0.50"	PI:	–	79020.377	1658184.722	Lc = 72.21'
	Eu=1.11"					Δ = 01° 22' 21.90"
		CS:	883+03.42	79004.432	1658217.131	Dc = 01° 54' 03.56"
	SD14–A					
		ST:	883+62.80	78978.422	1658271.200	
						L = 1138.30'
						Di = 295° 52' 49.89"
Pearlridge Station			884+28.28	–	–	
			886+68.28	–	–	
No. 10 Xover		PS:	887+44.45	78811.832	1658614.574	
		PITO:	887+75.87	78798.119	1658642.840	
No. 10 Xover		PITO:	889+15.52	78737.161	1658768.486	
		PS:	889+46.94	78723.448	1658796.752	
		PC:	895+01.10	78481.559	1659295.335	I = 00° 47' 07.57"
	V=55 mph					R = 12014.00'
CD15	Ea=0.00"	PI:	–	78445.614	1659369.424	Lc = 164.69'
	Eu=1.00"					Δ = 00° 47' 07.57"
		PT:	896+65.79	78408.657	1659443.013	Dc = 00° 28' 36.87"
						L = 185.45'
						Di = 296° 39' 57.46"
		PC:	898+51.05	78325.431	1659608.734	I = 01° 07' 59.83"
	V=55 mph					R = 12000.00'
CD16	Ea=0.00"	PI:	–	78272.169	1659714.793	Lc = 237.36'
	Eu=1.00"					Δ = 01° 07' 59.83"
		PT:	900+88.68	78221.014	1659821.884	Dc = 00° 28' 38.87"

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R Nacion
Drawn: R Nacion
Checked: E Liberman
Approved: A Borst
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

TRACK ALIGNMENT DATA

SHEET 3 OF 4

Contract No.: SV-330
CADD File: KH-B06-TA103
Drawing No.: TA103 Rev.
Scale: N/A
Page No. 57 of 211

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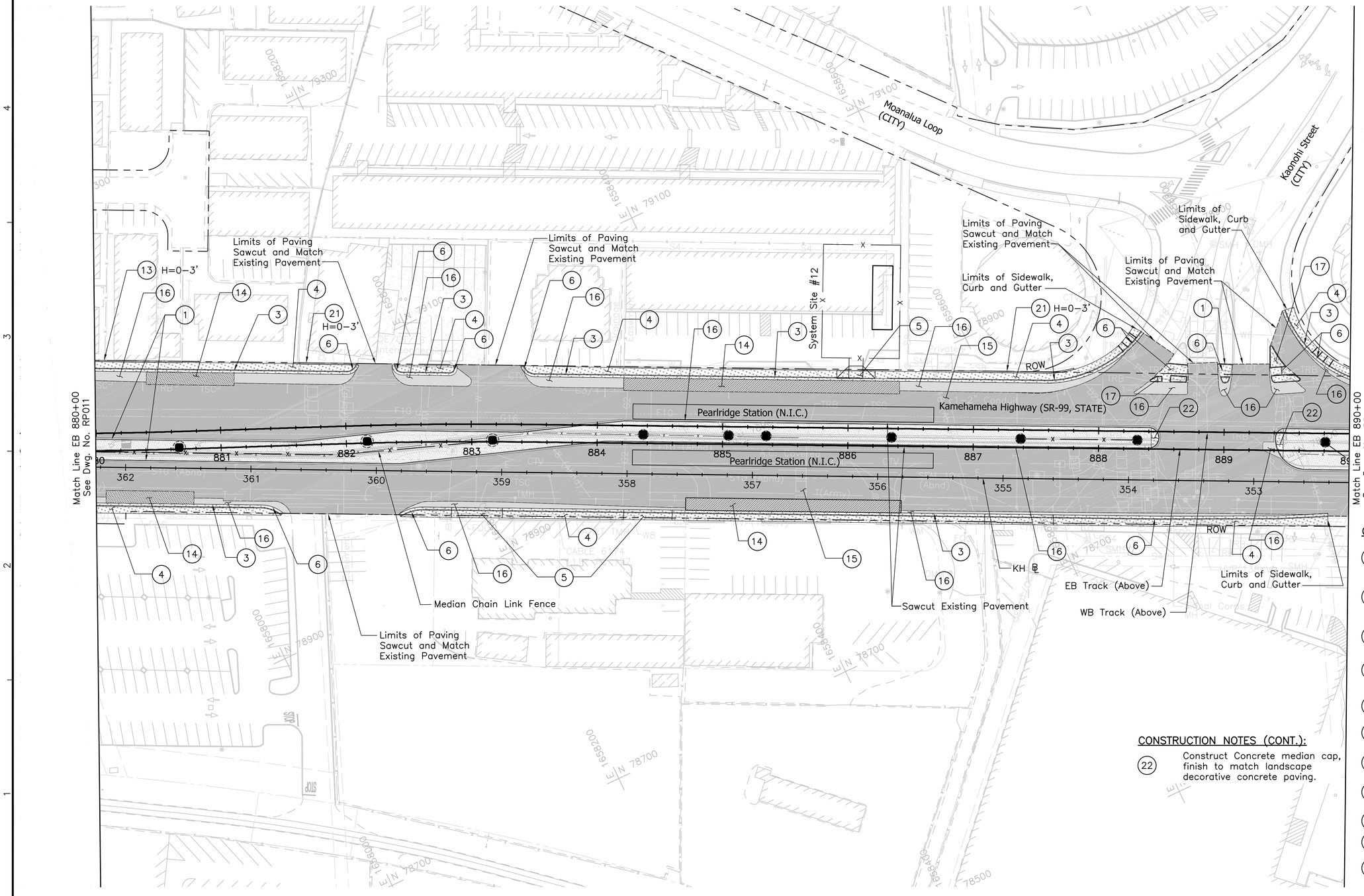

NOTES:

1. See Dwg No. CG001 for General Notes, Symbols and Abbreviations.
2. For Roadway Construction Plan Notes and Legend, see Dwg No. CG003.
3. Median Chain Link Fence to Match DOT Project 99D/G–02–08.

LEGEND:

- Proposed full depth pavement area.
- Proposed concrete pavement.
- Proposed pavement mill & overlay area.
- Proposed sidewalk, curb & gutter, curb, and median island paving area.
- Proposed landscaped median island area.
- Proposed guideway column.
- Proposed guideway column with 10' diameter shaft.
- Proposed guideway straddle bent column.
- Proposed cantilever column.
- Proposed median chain link fence.
- Proposed temporary silt fence during construction.
- Wetland boundary.

CONSTRUCTION NOTES:

1. Construct Concrete Curb, Type 2A, Per HDOT Std. Plan No. D–05.
3. Construct Concrete Curb and Gutter, Type 2DG, Per HDOT Std. Plan No. D–05.
4. Construct Concrete Sidewalk, Per HDOT Std. Plan No. D–15.
5. Construct Reinforced Concrete Drop Driveway, Per HDOT Std. Plan No. D–15.
6. Construct Concrete Curb Ramp.
13. Construct Concrete Retaining Wall with Pedestrian Railing.
14. Construct P.C.C. Bus Pad, Per HDOT Std. Plan No. D–16.
15. Construct Plantmix Bituminous Surface Overlay.
16. Construct Plantmix Bituminous Pavement.
17. Construct Concrete Median Island Paving.
21. Construct Concrete Retaining Wall without Pedestrian Railing.

CONSTRUCTION NOTES (CONT.):

22. Construct Concrete median cap, finish to match landscape decorative concrete paving.

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

ROADWAY CONSTRUCTION PLAN

EB 880+00 TO EB 890+00

Contract No.: SV–330
CADD File: KH–B09–RP012
Drawing No: RP012 Rev.
Scale: 1"=40'
Page No. 70 of 211

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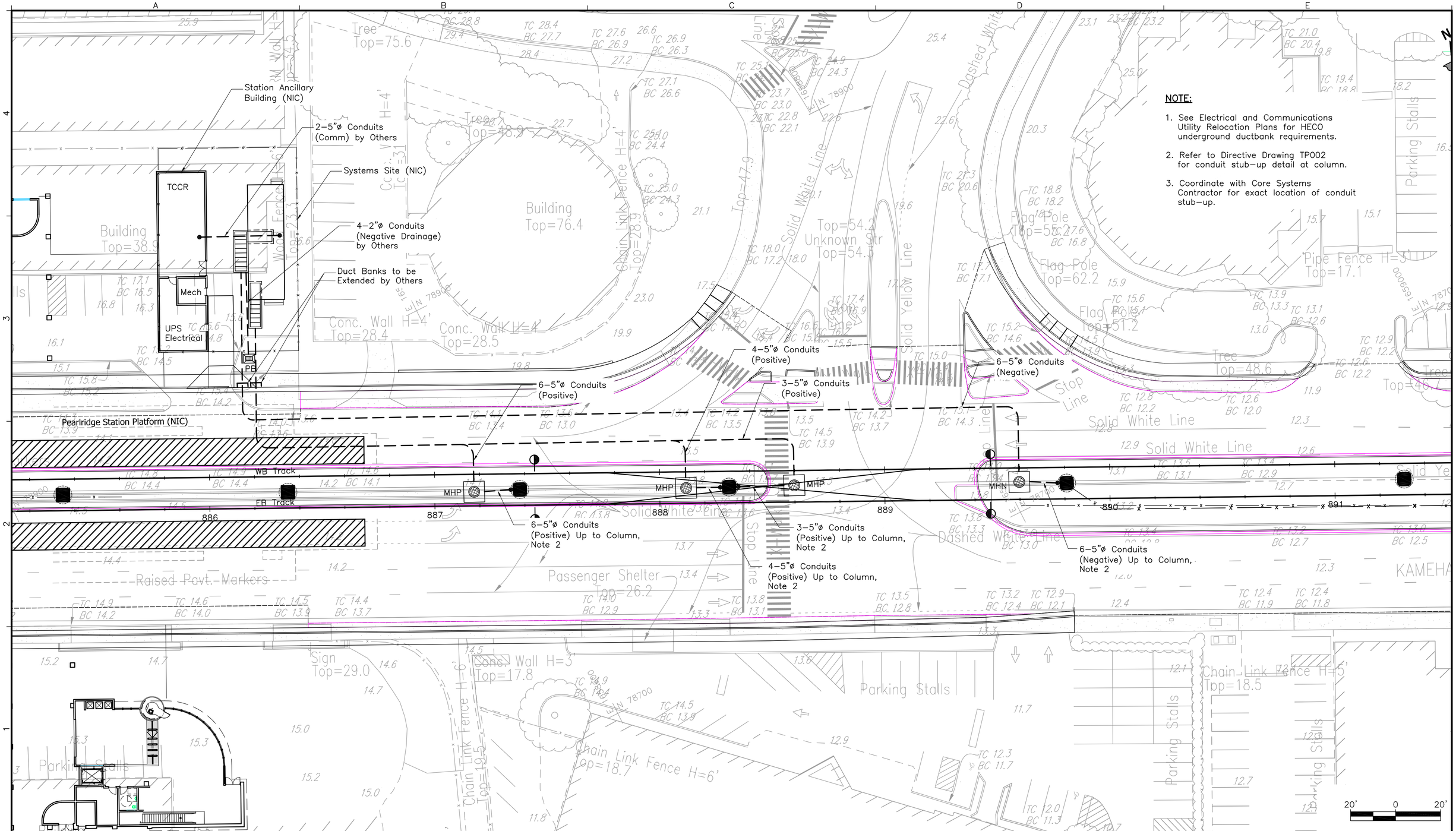

NOTE:

1. See Electrical and Communications Utility Relocation Plans for HECO underground ductbank requirements.
2. Refer to Directive Drawing TP002 for conduit stub–up detail at column.
3. Coordinate with Core Systems Contractor for exact location of conduit stub–up.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed:	D Gobelle
Drawn:	C Jamison
Checked:	A Patel
Approved:	A Borst
Date:	10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF

1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

SYSTEMS SITE PLAN
SITE # 12

Contract No.:	SV–330
CADD File:	KH–B10–RP103
Drawing No:	RP103
Rev.	
Scale:	1"=20'
Page No.	78 of 211

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SURVEYED KAMEHAMEHA HIGHWAY BASELINE "KH"

NUMBER	TYPE	STATION	NORTHING	EASTING	BEARING	DISTANCE	Δ	R	T	Lc	CURVE NO.
KH	POB	286+03.79	74527.30	1662950.44	209° 05' 29.5"	472.680	-	-	-	-	-
	PC	290+76.47	74940.35	1663180.26	-	-	80°53'30.0"	1080.480	921.052	1525.450	KH-4
	PT	306+01.92	76314.79	1662904.26	218° 11' 59.5"	1.400	-	-	-	-	-
	POE	306+03.32	76315.89	1662905.13	-	-	-	-	-	-	-
	POB	306+03.32	76315.89	1662905.13	128° 11' 59.5"	1191.130	-	-	-	-	-
	PC	317+94.45	77052.50	1661969.07	-	-	12°15'30.9"	3330.500	357.650	712.569	KH-3
	PT / POE	325+07.02	77430.12	1661366.39	122° 04' 14.1"	-	-	-	-	-	-

* Sta 325+07.02 KH Bk = Sta 324+00.71 KH Ahd

NUMBER	TYPE	STATION	NORTHING	EASTING	BEARING	DISTANCE	Δ	R	T	Lc	CURVE NO.
KH	POB	324+00.71	77430.12	1661366.39	115° 56' 28.6"	8064.125	-	-	-	-	-
	POE	404+64.83	80957.77	1654114.79	-	-	-	-	-	-	-
	POB	404+64.83	80957.77	1654114.79	115° 56' 28.6"	1895.853	-	-	-	-	-
	PC	423+60.68	81787.11	1652409.96	-	-	5°37'24.7"	5729.650	281.406	562.360	KH-2
	PT / POE	429+23.04	82007.92	1651893.01	110° 19' 03.9"	1455.329	-	-	-	-	-
	POB	443+78.37	82513.25	1650528.23	110° 19' 04.1"	1508.923	-	-	-	-	-
	PC	458+87.30	83037.19	1649113.19	-	-	2°54'30.0"	5635.720	143.065	286.069	KH-1
	PT	461+73.37	83129.67	1648842.51	107° 24' 34.1"	164.084	-	-	-	-	-
	POE	463+37.45	83178.77	1648685.94	-	-	-	-	-	-	-

SURVEYED FARRINGTON HIGHWAY BASELINE "FHI"

NUMBER	TYPE	STATION	NORTHING	EASTING	BEARING	DISTANCE	Δ	R	T	Lc	CURVE NO.
FHI	POB	19+61.31	83130.87	1647228.16	265° 09' 34.1"	1073.770	-	-	-	-	-
	PC	30+35.08	83221.48	1648298.10	-	-	22°15'00.0"	1011.10	198.83	392.65	FHI-1
	PT/POE	34+27.73	83178.77	1648685.94	287° 24' 34.1"	-	-	-	-	-	-

SURVEYED FARRINGTON HIGHWAY BASELINE "FHO"

NUMBER	TYPE	STATION	NORTHING	EASTING	BEARING	DISTANCE	Δ	R	T	Lc	CURVE NO.
FHO	POB/PC	21+85.50	83466.32	1647452.89	-	-	20°52'00.0"	1432.50	263.77	521.71	FHO-1
	PT	27+07.21	83403.91	1647967.95	287° 24' 34.1"	752.468	-	-	-	-	-
	POE	34+59.67	83178.77	1648685.94	-	-	-	-	-	-	-

SURVEYED KAMEHAMEHA HIGHWAY BASELINE "KHB"

NUMBER	TYPE	STATION	NORTHING	EASTING	BEARING	DISTANCE	Δ	R	T	Lc	CURVE NO.
KHB	POB	54+62.37	83577.27	1647538.76	287° 24' 34.1"	561.07	-	-	-	-	-
	POE	60+23.44	83409.40	1648074.13	-	-	-	-	-	-	-

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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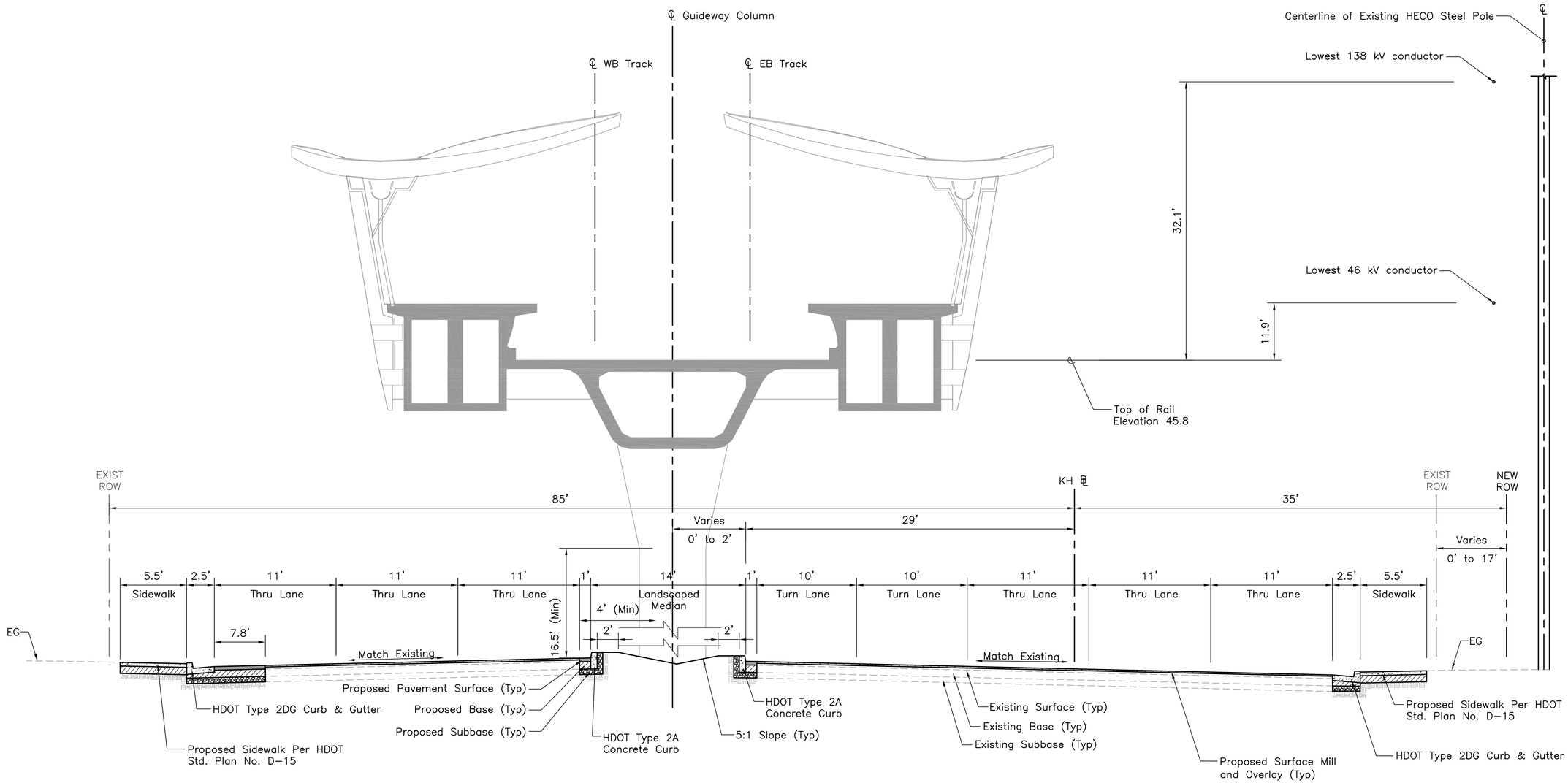
KAMEHAMEHA GUIDEWAY & UTILITIES

ROADWAY HORIZONTAL CONTROL DATA

Contract No.: SV-330
CADD File: KH-B12-RP201
Drawing No: RP201 Rev.
Scale: NTS
Page No. 79 of 211

2009-09-03 11:32 AM P:\Projects\Oahu\60028311-HHCT\500 Submittal\RTD Final\Plan\KH-B12-RP201(sht 78).dwg

NOTE: Pearlridge station concepts to be developed by others as a separate contract.



TYPICAL SECTION PEARLRIDGE STATION

5' 0 5'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
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KAMEHAMEHA GUIDEWAY & UTILITIES

TYPICAL SECTIONS
KAMEHAMEHA HIGHWAY

SHEET 10 OF 10

Contract No.: SV–330
CADD File: KH–B13–RX010
Drawing No.: RX010 Rev.
Scale: 1"=5'
Page No. 89 of 211

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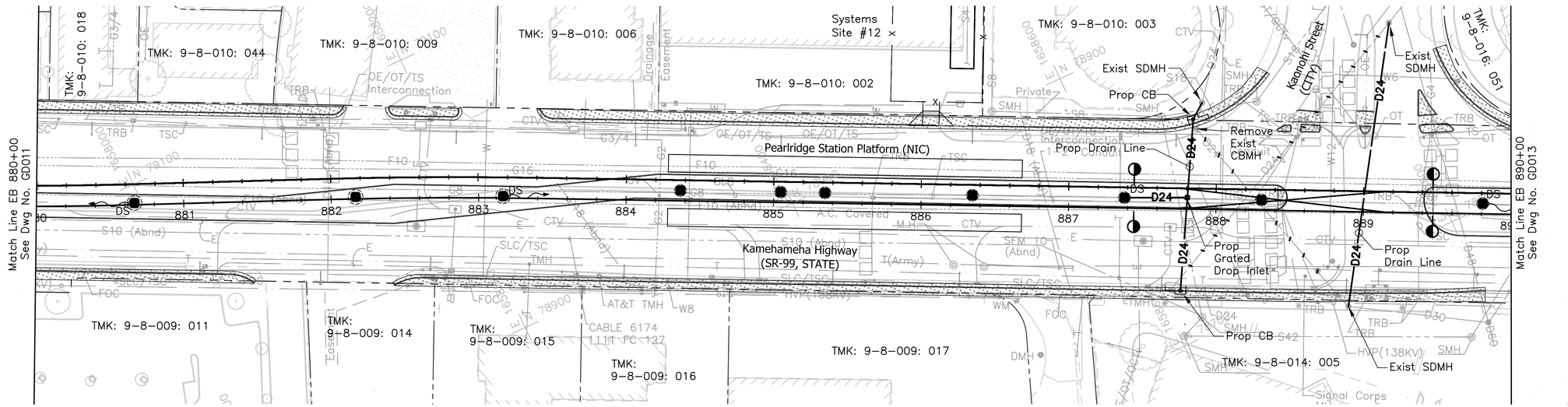

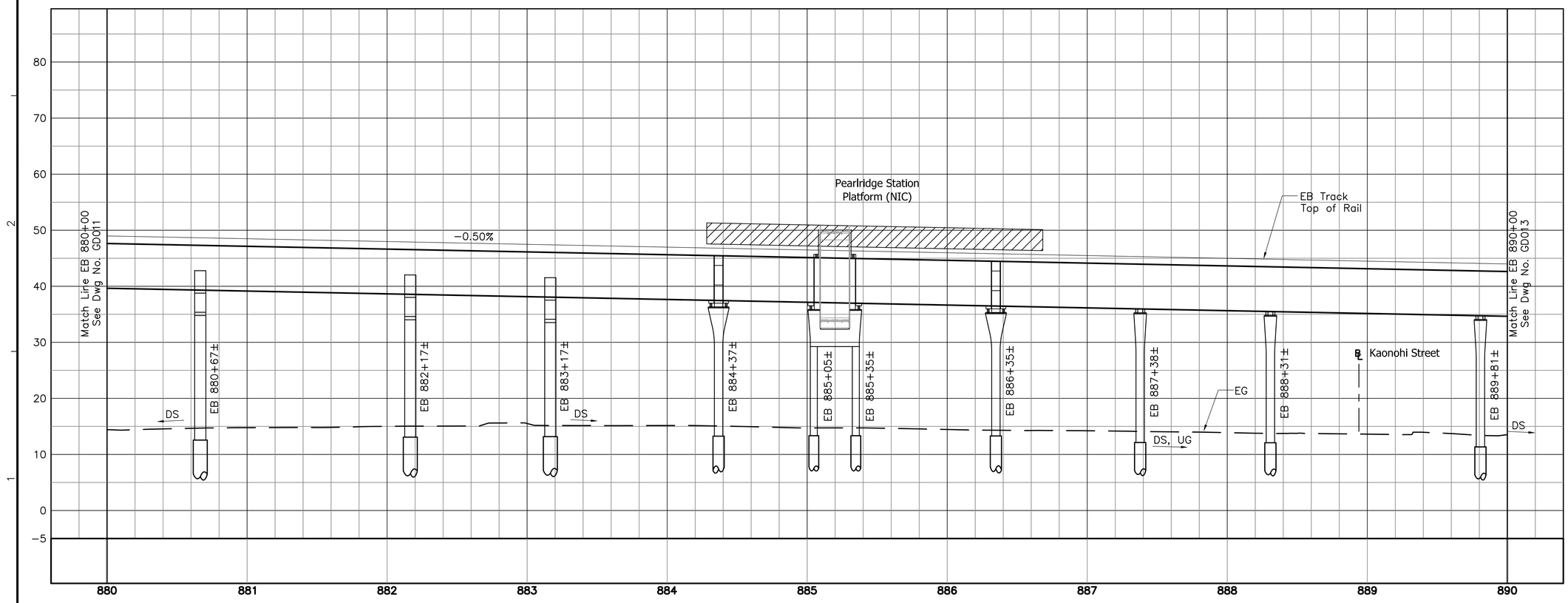

NOTES:

1. Refer to utility relocations drawing UP124 for proposed drainage structures shown in this sheet.
2. Refer to GD018 for legend and symbols.
3. For DS locations and discharge conditions, see schedule on Drawing No. GD019.

40' 0' 40'

10' 0' 10'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
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KAMEHAMEHA GUIDEWAY & UTILITIES

GUIDEWAY DRAINAGE LAYOUT PLAN

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-B16-GD012
Drawing No.: GD012 Rev.:
Scale: 1"=40' H, 1"=10' V
Page No.: 101 of 211

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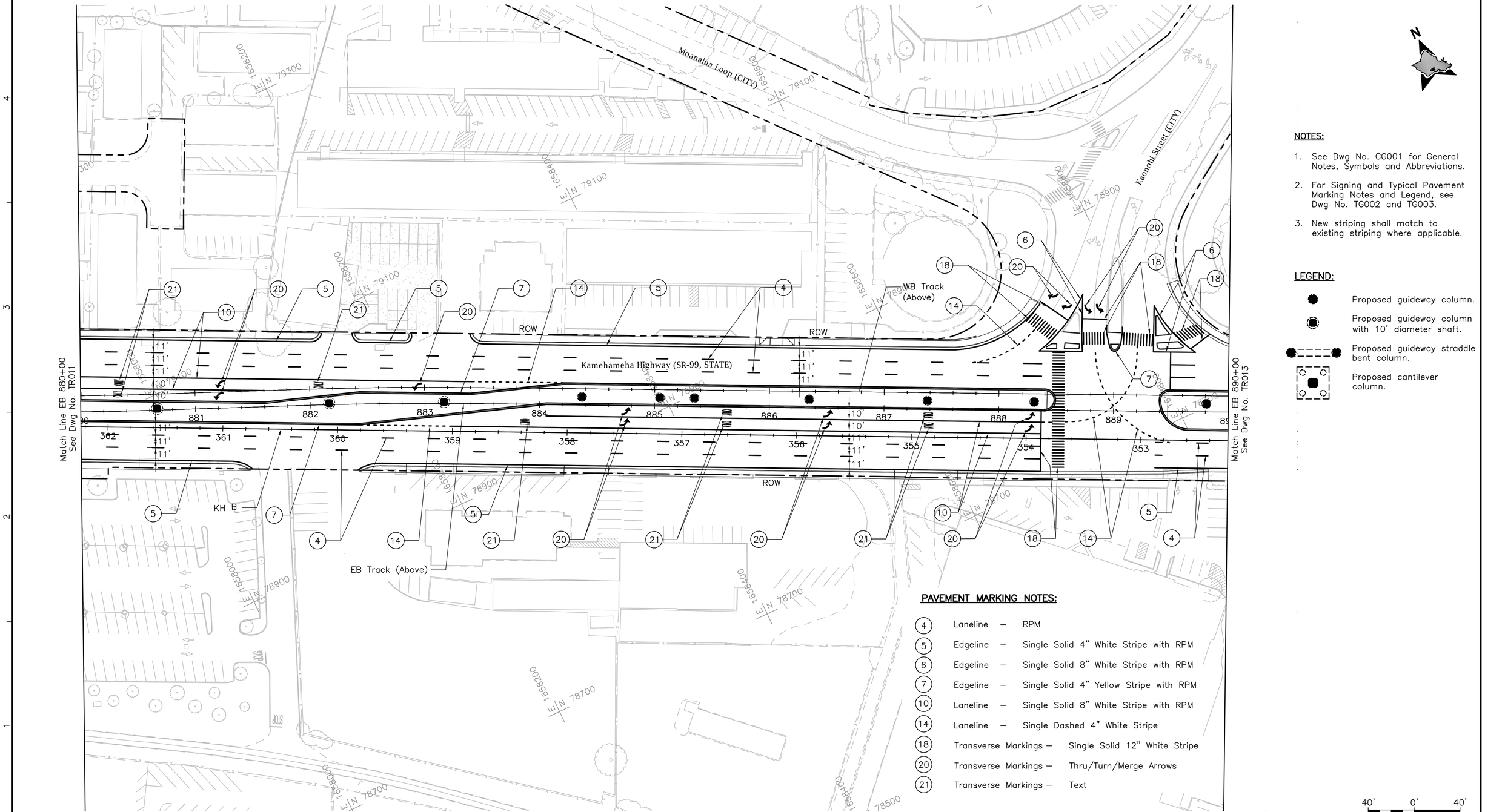

N

NOTES:

1. See Dwg No. CG001 for General Notes, Symbols and Abbreviations.
2. For Signing and Typical Pavement Marking Notes and Legend, see Dwg No. TG002 and TG003.
3. New striping shall match to existing striping where applicable.

LEGEND:

- Proposed guideway column.
- Proposed guideway column with 10' diameter shaft.
- Proposed guideway straddle bent column.
- Proposed cantilever column.

PAVEMENT MARKING NOTES:

4	Laneline	– RPM
5	Edgeline	– Single Solid 4" White Stripe with RPM
6	Edgeline	– Single Solid 8" White Stripe with RPM
7	Edgeline	– Single Solid 4" Yellow Stripe with RPM
10	Laneline	– Single Solid 8" White Stripe with RPM
14	Laneline	– Single Dashed 4" White Stripe
18	Transverse Markings	– Single Solid 12" White Stripe
20	Transverse Markings	– Thru/Turn/Merge Arrows
21	Transverse Markings	– Text

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

SIGNING AND STRIPING PLAN

EB 880+00 TO EB 890+00

Contract No.: SV–330
CADD File: KH–C02–TR012
Drawing No.: TR012 Rev.
Scale: 1"=40'
Page No. 132 of 211

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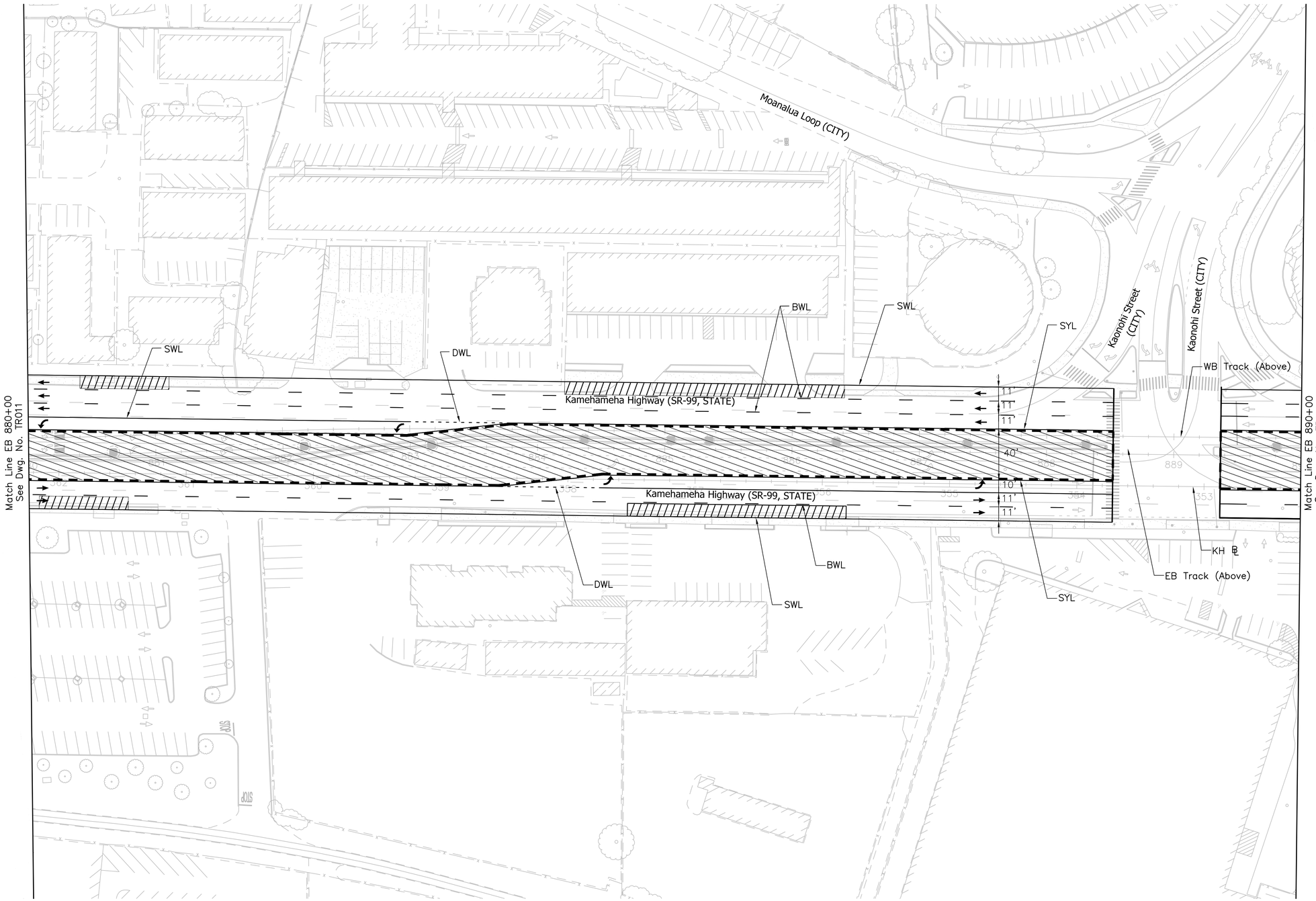

NOTE:

See Dwg No. CG001 for General Notes, Symbols and Abbreviations.

LEGEND

	Work Zone
	Bus Pullout Area
	Concrete Barrier
SYL	Temporary Solid Yellow Line
SWL	Temporary Solid White Line
BWL	Temporary Broken White Line
DWL	Temporary Dashed White Line
→	Flow of Traffic
	Proposed Guideway Column
	Proposed guideway column with 10' diameter shaft
FOC	Face of Curb
EP	Edge of Pavement

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

MAINTENANCE OF TRAFFIC PLAN

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-C03-TR112
Drawing No: TR112 Rev.
Scale: 1"=40'
Page No. 150 of 211

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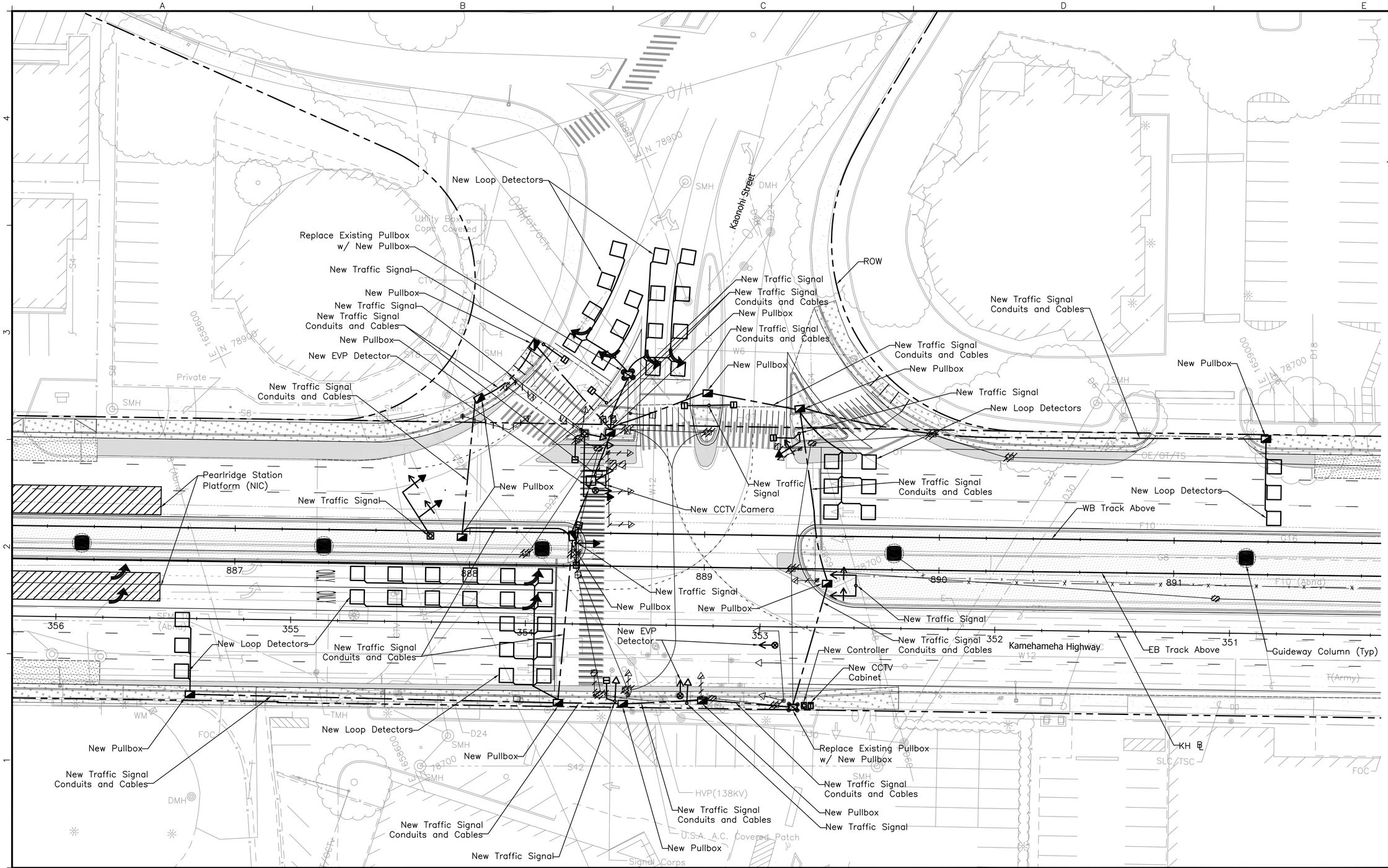

NOTE:

See Dwg No. TG006 for General Notes, Symbols and Abbreviations.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed:	Z Tong
Drawn:	Z Tong
Checked:	L Yokomizo
Approved:	K Niiya
Date:	10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF

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Subconsultant: AUSTIN, TSUTSUMI & ASSOC., INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII

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KAMEHAMEHA GUIDEWAY & UTILITIES

TRAFFIC SIGNAL PLAN KAMEHAMEHA HWY AT KAONOHI ST

Contract No.:	SV-330
CADD File:	KH-C04-TR209
Drawing No:	TR209
Rev.	
Scale:	1"=20'
Page No.	165 of 211

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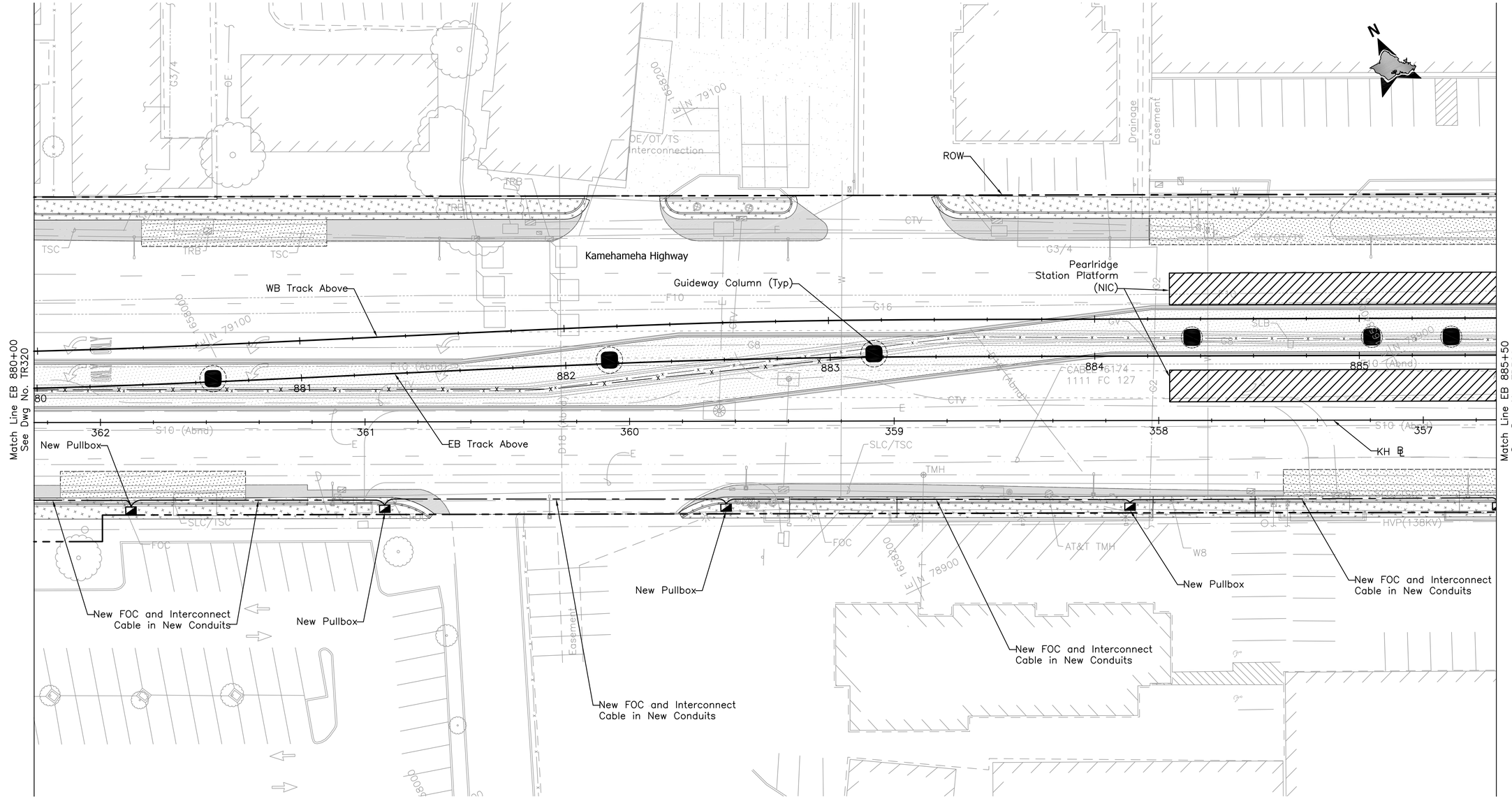

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: Z Tong
Drawn: Z Tong
Checked: L Yokomizo
Approved: K Niiya
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: ATA AUSTIN, TSUTSUMI & ASSOC., INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII

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KAMEHAMEHA GUIDEWAY & UTILITIES

FIBER OPTIC AND TRAFFIC SIGNAL INTERCONNECT PLAN

EB 880+00 TO EB 885+50

Contract No.: SV-330
CADD File: KH-C04-TR321
Drawing No.: TR321 Rev.:
Scale: 1"=20'
Page No.: 189 of 211

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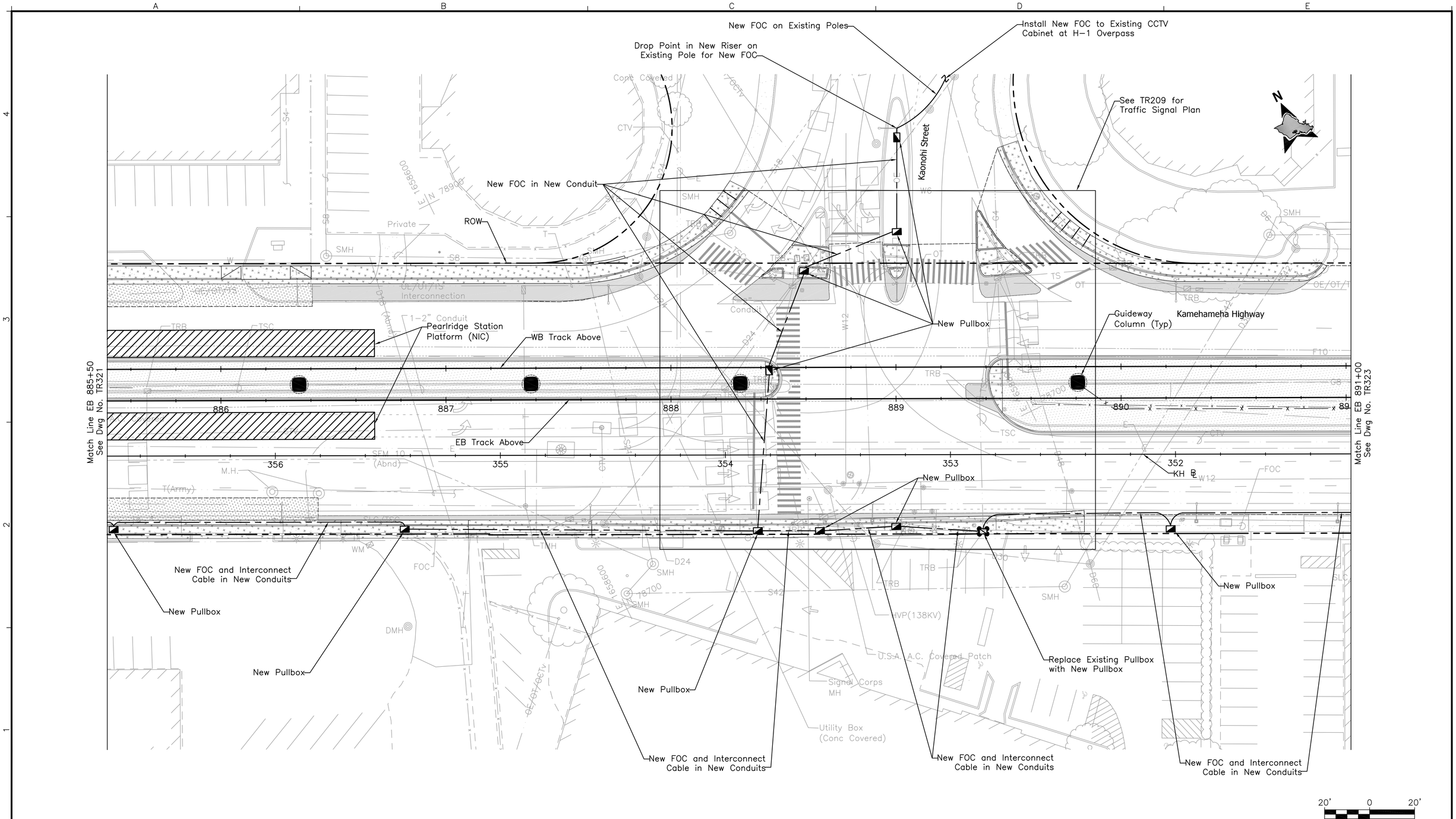

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Rev	By	Date	Description

Designed: Z Tong
Drawn: Z Tong
Checked: L Yokomizo
Approved: K Niiya
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: ATA AUSTIN, TSUTSUMI & ASSOC., INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

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KAMEHAMEHA GUIDEWAY & UTILITIES

FIBER OPTIC AND TRAFFIC SIGNAL INTERCONNECT PLAN

EB 885+50 TO EB 891+00

Contract No.: SV-330
CADD File: KH-C04-TR322
Drawing No.: TR322 Rev.
Scale: 1"=20'
Page No. 190 of 211

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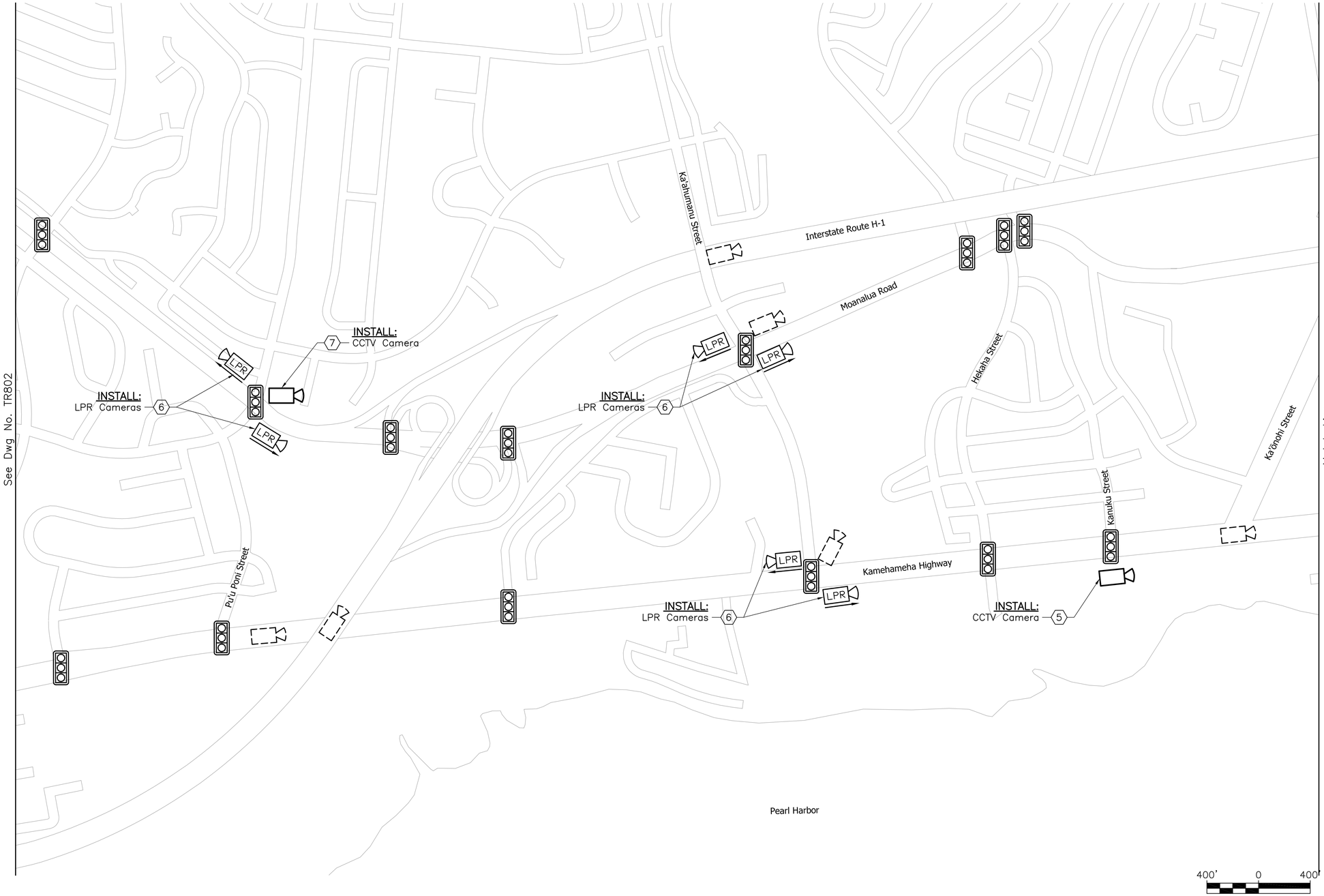

N

NOTES:

1. Not Used.
2. Not Used.
3. Not Used.
4. Contractor Shall Provide Portable DMS.
5. Contractor Shall Provide and Install One (1) Temporary CCTV Camera. (Drawing TR903)
6. Contractor Shall Provide and Install Two (2) Temporary LPR Cameras Per Direction Of Travel During Construction. Mount To Existing Traffic Signal Mast Arm. Cameras Shall Be Replace With Permanent Installations Once Construction Has Been Completed.
7. Contractor Shall Provide And Install Two (2) Temporary CCTV Cameras – One (1) Per Direction Of Traffic. Mount To Existing Traffic Signal Mast Arm. Cameras Shall Be Replaced With One (1) Permanent CCTV Camera As Soon As Permanent Power Can Be Accommodated.
8. Not Used.
9. Contractor Shall Provide and Install Two (2) Temporary CCTV Cameras. Mount to Existing Street Light Pole Nearest to Center of Overpass Span. Cameras Shall Be Replaced With One (1) Permanent CCTV Camera as Soon as Permanent Power Can Be Accommodated.
10. Not Used.
11. Not Used.
12. Not Used.
13. Not Used
14. Not Used.
15. Not Used.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: G Kurashima
Drawn: ICX
Checked: G Fromm
Approved: G Fromm
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: icx transportation
1003 Bishop Street, Suite 720 – Honolulu, HI 96813

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KAMEHAMEHA GUIDEWAY AND UTILITIES

TRAFFIC MANAGEMENT PLAN INTELLIGENT TRANSPORTATION SYSTEMS

SHEET 3 OF 4

Contract No.: SV-330
CADD File: KH-C05-TR803
Drawing No.: TR803 Rev.
Scale: 1" = 400'
Page No. 199 of 211

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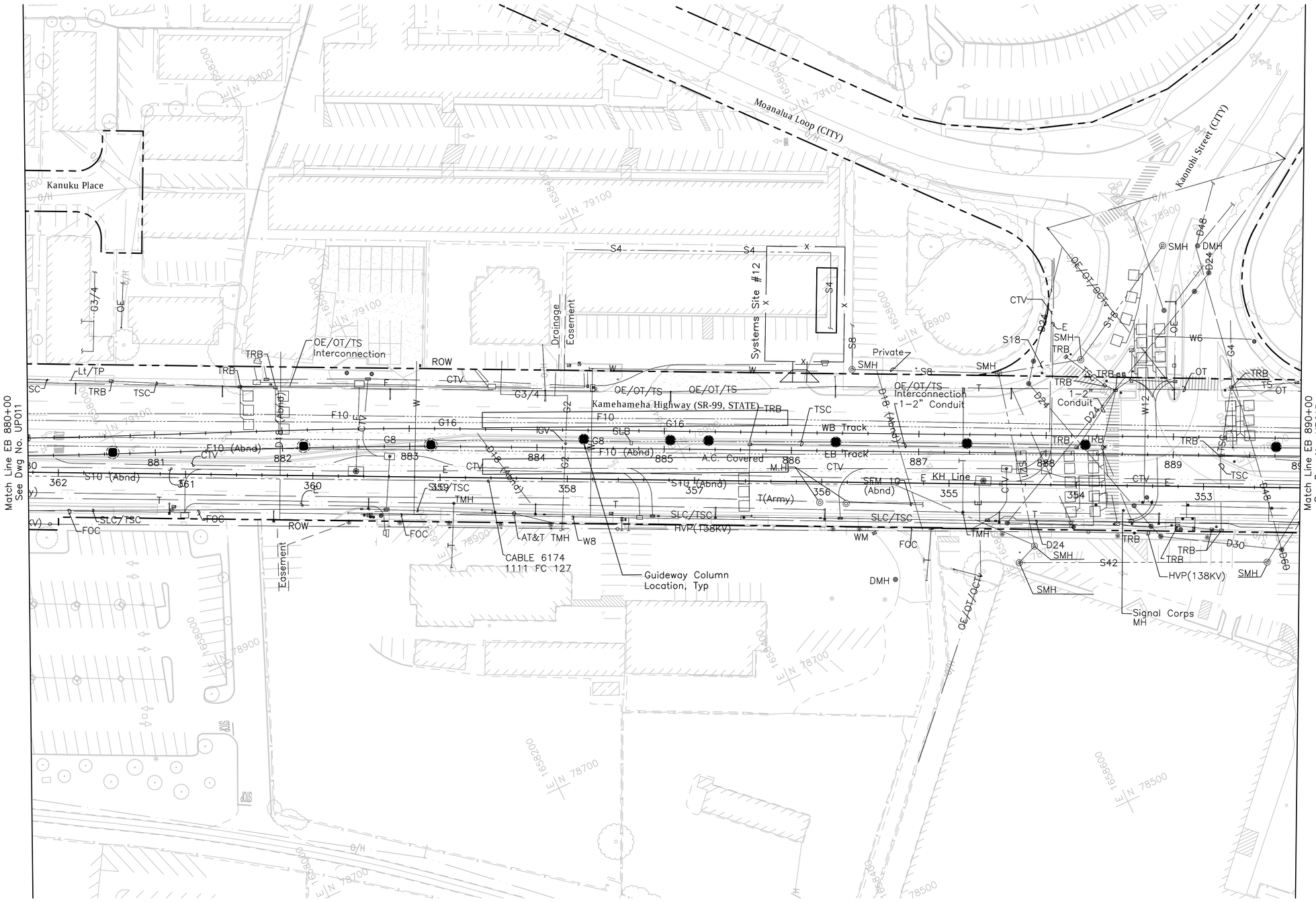

NOTE:

1. See Dwg No. UG001 for General Utilities Symbols and Abbreviations.
2. See Dwg No. UG007 for Electrical & Communication Notes and Symbols.

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

COMPOSITE PLAN EXISTING UTILITIES

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-D02-UP012
Drawing No.: UP012 Rev.:
Scale: 1"=40'
Page No.: 38 of 151

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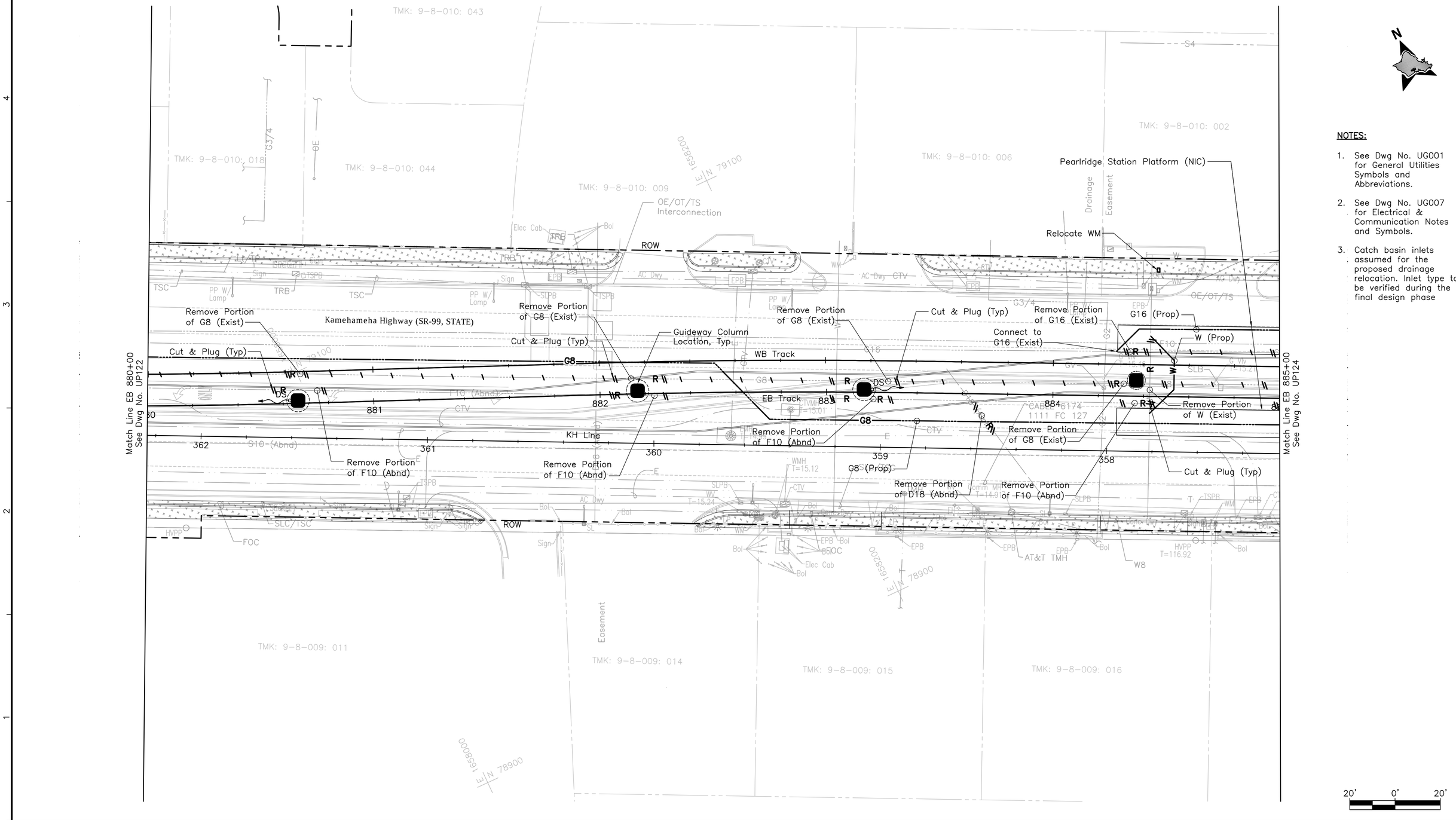

NOTES:

1. See Dwg No. UG001 for General Utilities Symbols and Abbreviations.
2. See Dwg No. UG007 for Electrical & Communication Notes and Symbols.
3. Catch basin inlets assumed for the proposed drainage relocation. Inlet type to be verified during the final design phase

20' 0' 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

UTILITY RELOCATION PLAN
WATER, SEWER, DRAINAGE, PETROLEUM, & GAS

EB 880+00 TO EB 885+00

Contract No.: SV-330
CADD File: KH-D03-UP123
Drawing No.: UP123 Rev.:
Scale: 1"=20'
Page No.: 67 of 151

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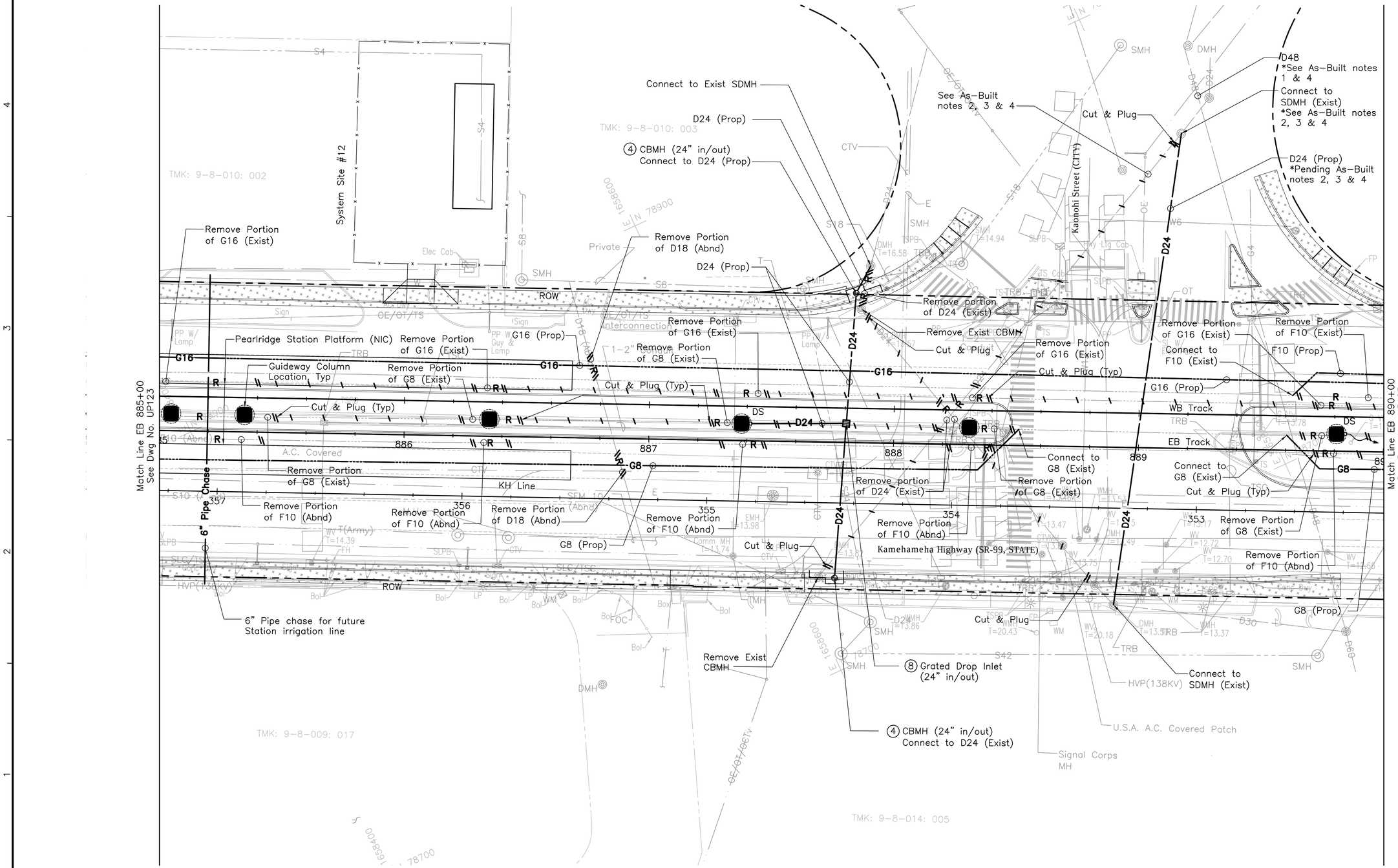

NOTES:

1. See Dwg No. UG001 for General Utilities Symbols and Abbreviations.
2. See Dwg No. UG007 for Electrical & Communication Notes and Symbols.
3. Catch basin inlets assumed for the proposed drainage relocation. Inlet type to be verified during the final design phase

DRAINAGE CONSTRUCTION NOTES:

4 Construct Catch Basin, Type C per HDOT Std. Plan No. H-01C

8 Construct Grated Drop Inlet, Type 1A-9P per HDOT Std. Plan No. H-08

*AS-BUILT NOTES:

1. 48" Drainline not shown on BWS as-built: 1983-019: Kamehameha Highway 8-Inch Water Main Ewa of Kaonohi Street
2. 24" Drainline shown on BWS as-built: 326-WRP: 80 Foot Roadway, Pearl Harbor Heights.
3. 24" Drainline not shown in CCH GIS systems.
4. Final Designer to verify size and location of all utilities.

20' 0' 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Hikiji
Drawn: B Pang
Checked: B Muranaka
Approved: M Ding
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: AECOM Pacific, Inc.
DAVIES PACIFIC CTR, STE 1900 · 841 BISHOP ST, HONOLULU, HAWAII 96813

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KAMEHAMEHA GUIDEWAY & UTILITIES

UTILITY RELOCATION PLAN
WATER, SEWER, DRAINAGE, PETROLEUM, & GAS

EB 885+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-D03-UP124
Drawing No.: UP124 Rev.
Scale: 1"=20'
Page No. 68 of 151

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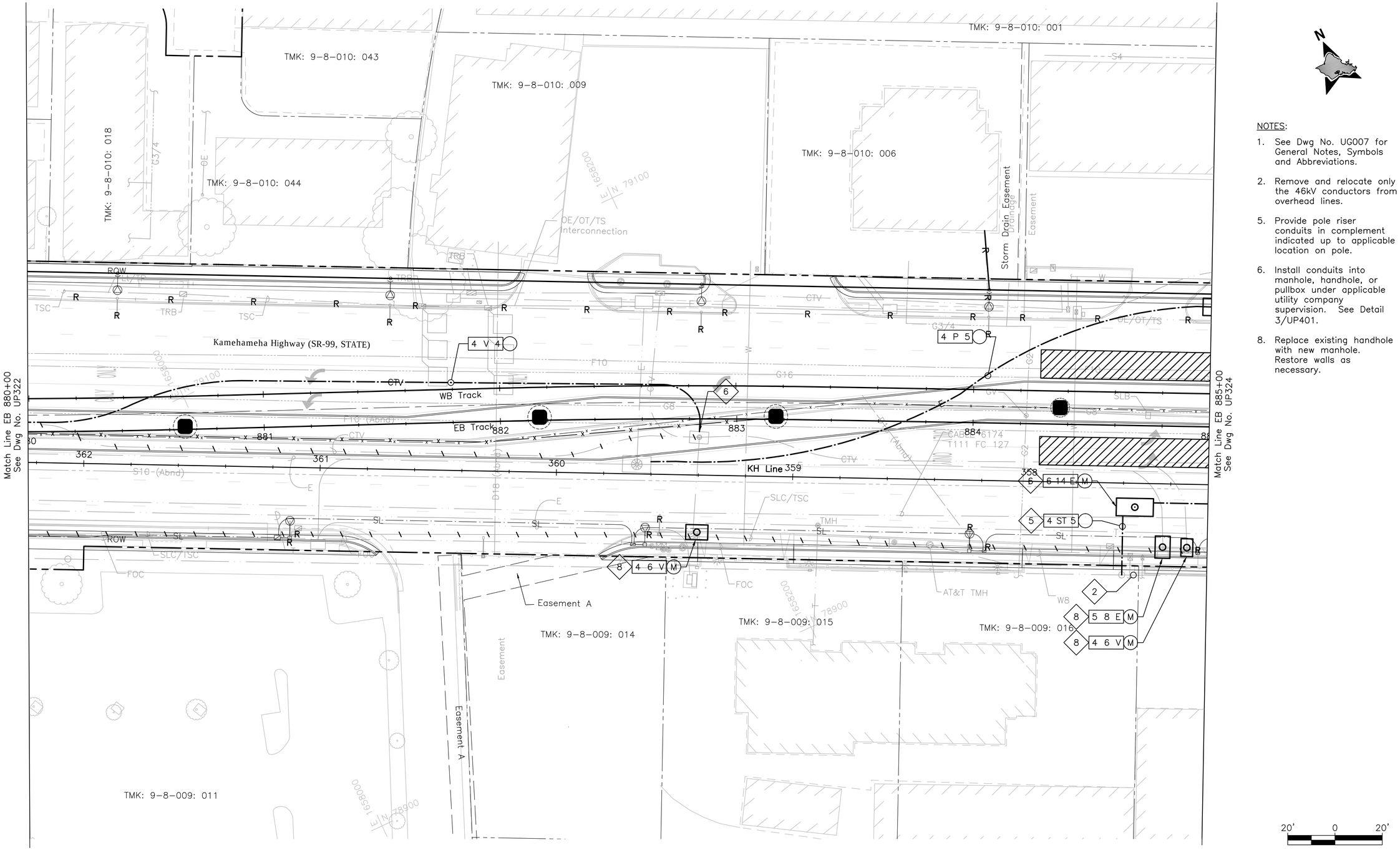

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: C Oyama
Drawn: D Suzuki
Checked: C Kam
Approved: G Oyama
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOA NAKAMURA, OYAMA, AND ASSOCIATES
1314 SOUTH KING STREET, SUITE 401
HONOLULU, HI, 96814

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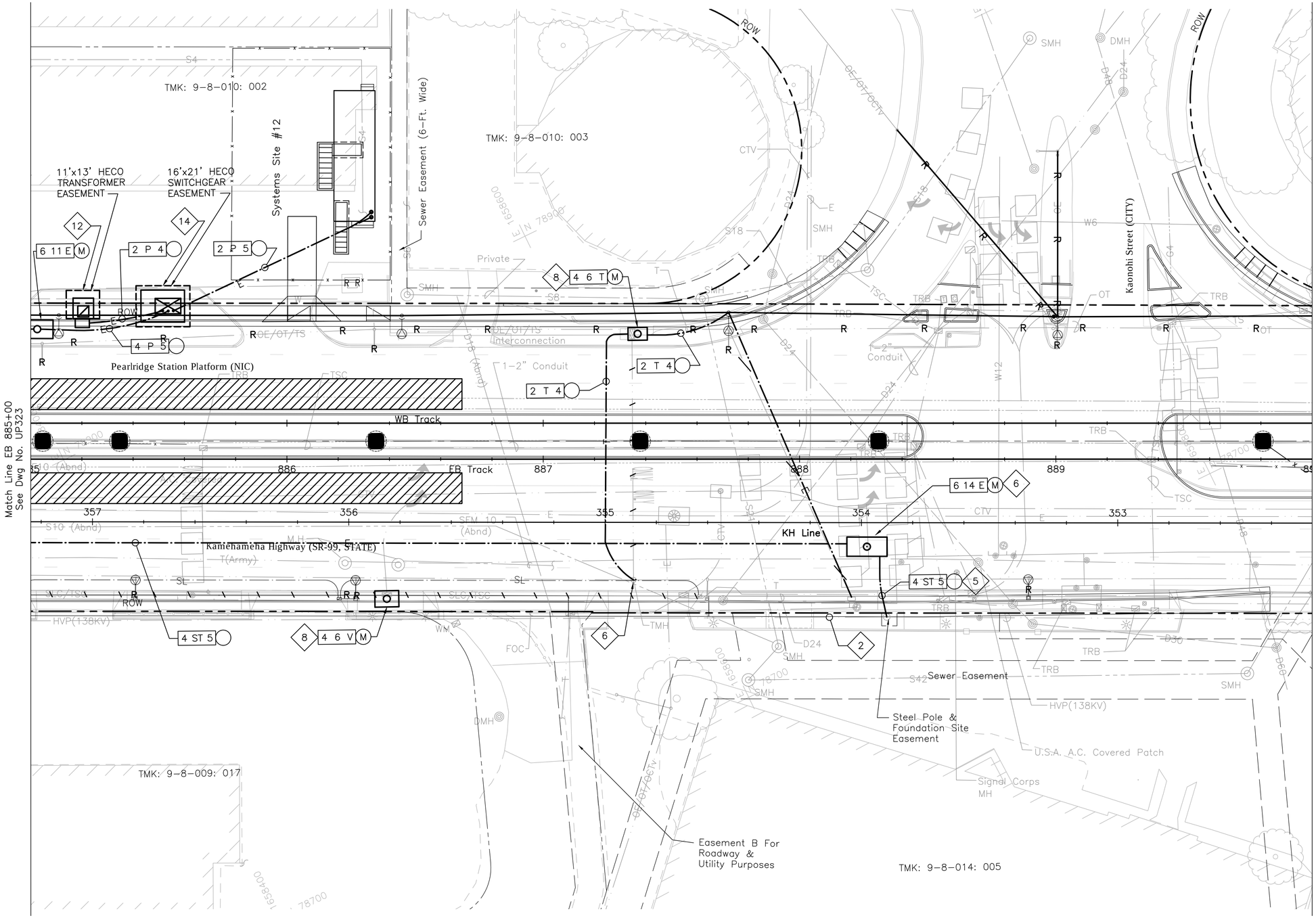
KAMEHAMEHA GUIDEWAY & UTILITIES

UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS

EB 880+00 TO EB 885+00

Contract No.: SV-330
CADD File: KH-D03-UP323
Drawing No.: UP323 Rev.
Scale: 1"=20'
Page No.: 106 of 151



NOTES:

1. See Dwg No. UG007 for General Notes, Symbols and Abbreviations.
2. Remove and relocate only the 46kV conductors from overhead lines.
5. Provide pole riser conduits in complement indicated up to applicable location on pole.
6. Install conduits into manhole, handhole, or pullbox under applicable utility company supervision. See Detail 3/UP401.
8. Replace existing handhole with new manhole. Restore walls as necessary.
12. Provide transformer concrete pad (transformer by HECO).
14. Provide switchgear concrete pad (switchgear by HECO).

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: C Oyama
Drawn: D Suzuki
Checked: C Kam
Approved: G Oyama
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOA NAKAMURA, OYAMA, AND ASSOCIATES
1314 SOUTH KING STREET, SUITE 401
HONOLULU, HI, 96814

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KAMEHAMEHA GUIDEWAY & UTILITIES

UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS

EB 885+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-D03-UP324
Drawing No.: UP324 Rev.:
Scale: 1"=20'
Page No.: 107 of 151

NOTES:

1. See Dwg No. UG007 for General Notes, Symbols and Abbreviations.
2. Remove and relocate existing street light and utility pole.
3. Connect new street light to existing street lighting circuit.

Match Line EB 880+00 See Dwg No. SL022

Match Line EB 885+00 See Dwg No. SL024

TMK: 9-8-010: 043

TMK: 9-8-010: 018

TMK: 9-8-010: 044

TMK: 9-8-010: 009

TMK: 9-8-010: 001

TMK: 9-8-010: 006

Kamehameha Highway (SR-99, STATE)

WB Track

EB Track

KH Line

Storm Drain Easement

Drainage Easement

Easement A

TMK: 9-8-009: 014

TMK: 9-8-009: 015

TMK: 9-8-009: 016

TMK: 9-8-009: 011

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: C Oyama
Drawn: D Suzuki
Checked: C Kam
Approved: G Oyama
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOA NAKAMURA, OYAMA, AND ASSOCIATES
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HONOLULU, HI, 96814

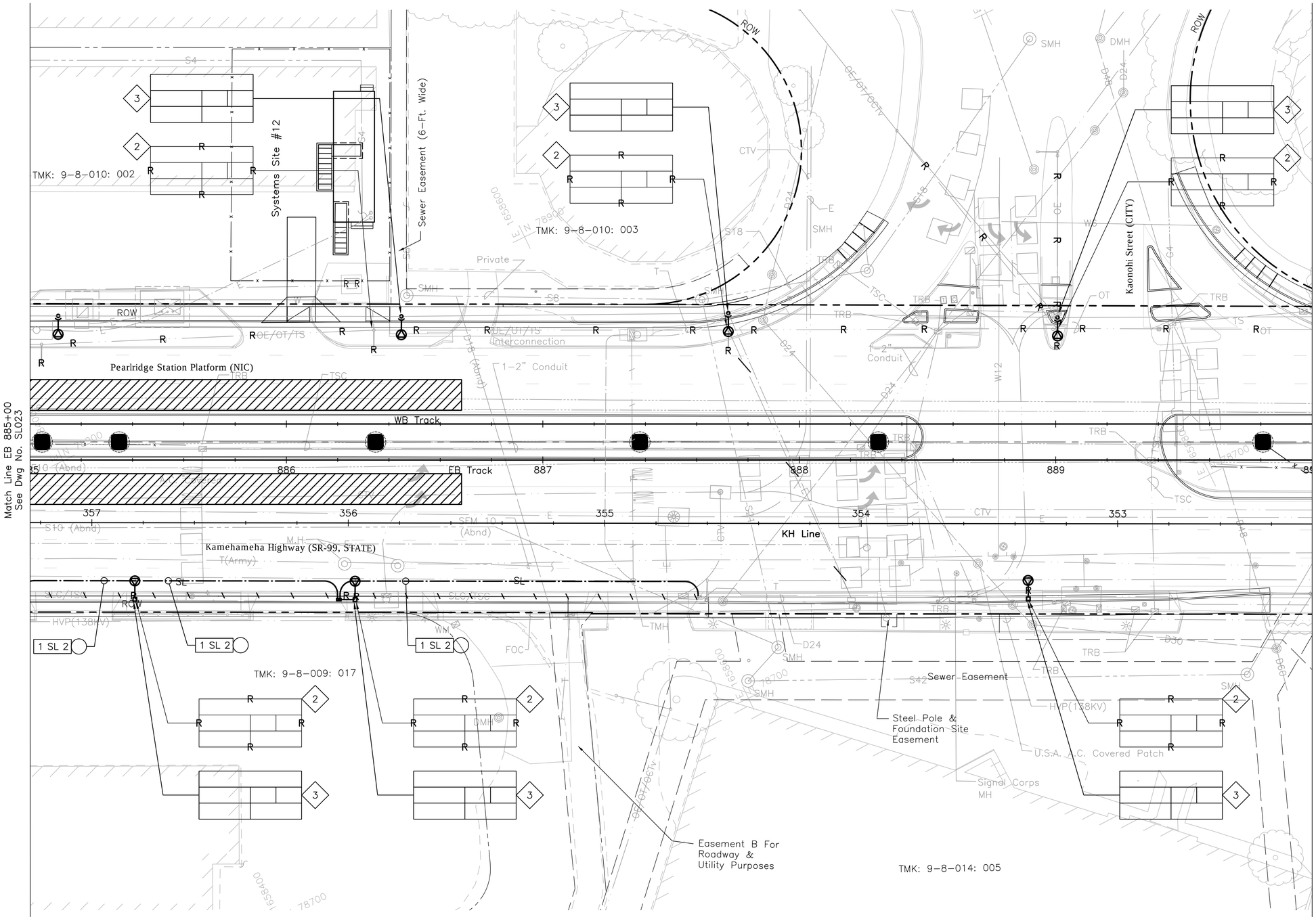
For reduced prints, original page size in inches: 0 1 2 3 4

KAMEHAMEHA GUIDEWAY & UTILITIES

STREET LIGHTING PLAN

EB 880+00 TO EB 885+00

Contract No.: SV-330
CADD File: KH-D04-SL023
Drawing No.: SL023 Rev.
Scale: 1"=20'
Page No. 139 of 151



NOTES:

1. See Dwg No. UG007 for General Notes, Symbols and Abbreviations.
2. Remove and relocate existing street light and utility pole.
3. Connect new street light to existing street lighting circuit.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: C Oyama
Drawn: D Suzuki
Checked: C Kam
Approved: G Oyama
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOA NAKAMURA, OYAMA, AND ASSOCIATES
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HONOLULU, HI, 96814

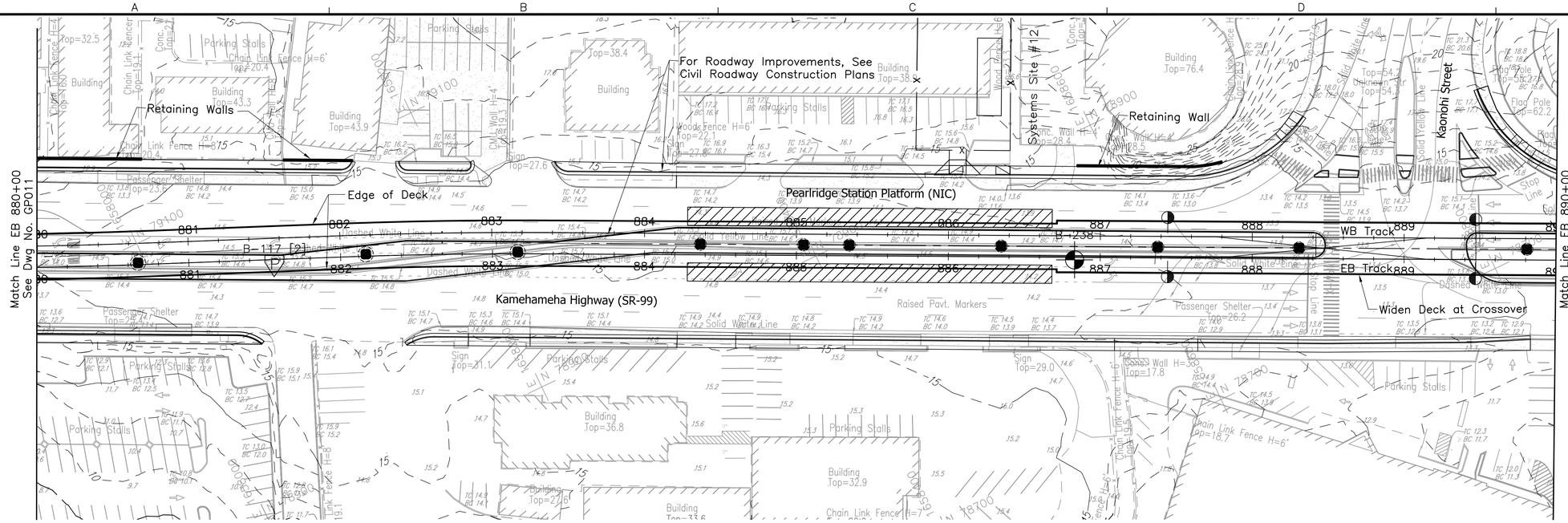
For reduced prints, original page size in inches: 0 1 2 3 4

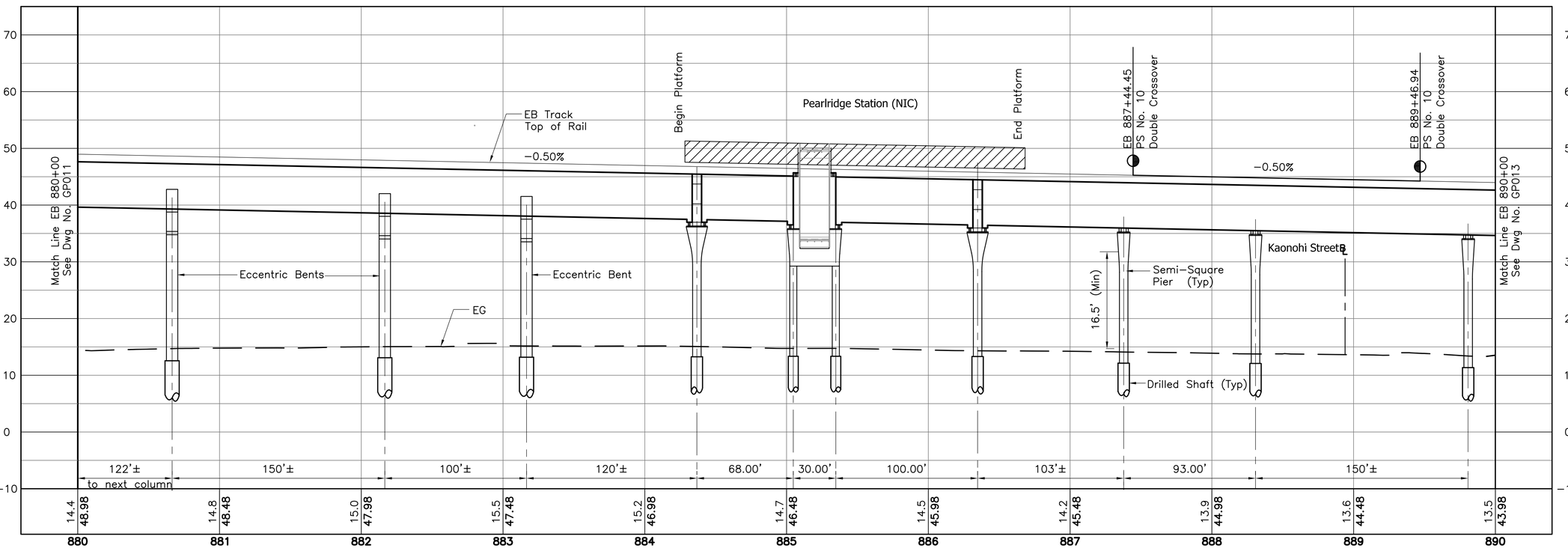
KAMEHAMEHA GUIDEWAY & UTILITIES

STREET LIGHTING PLAN

EB 885+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-D04-SL024
Drawing No: SL024 Rev.
Scale: 1"=20'
Page No. 140 of 151





NOTE:

1. See Dwg Nos. SG001 and SG002 for Structural General Notes, Symbols and Abbreviations.
2. The configuration shown relative to NIC work and site condition is under development and subject to change.
3. Unless shown otherwise on the drawings, the semi−square columns, if used, shall not be less than 6−foot by 6−foot, and the associated drilled shafts shall not be less than 8−foot in diameter.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10−02−09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 − Honolulu, HI 96813
Subconsultant:
For reduced prints, original page size in inches: 0 1 2 3 4

KAMEHAMEHA GUIDEWAY & UTILITIES

STRUCTURAL PLAN AND PROFILE

EB 880+00 TO EB 890+00

Contract No.: SV−330
CADD File: KH−G04−GP012
Drawing No.: GP012 Rev.
Scale: 1"=40' H, 1"=10' V
Page No. 32 of 139

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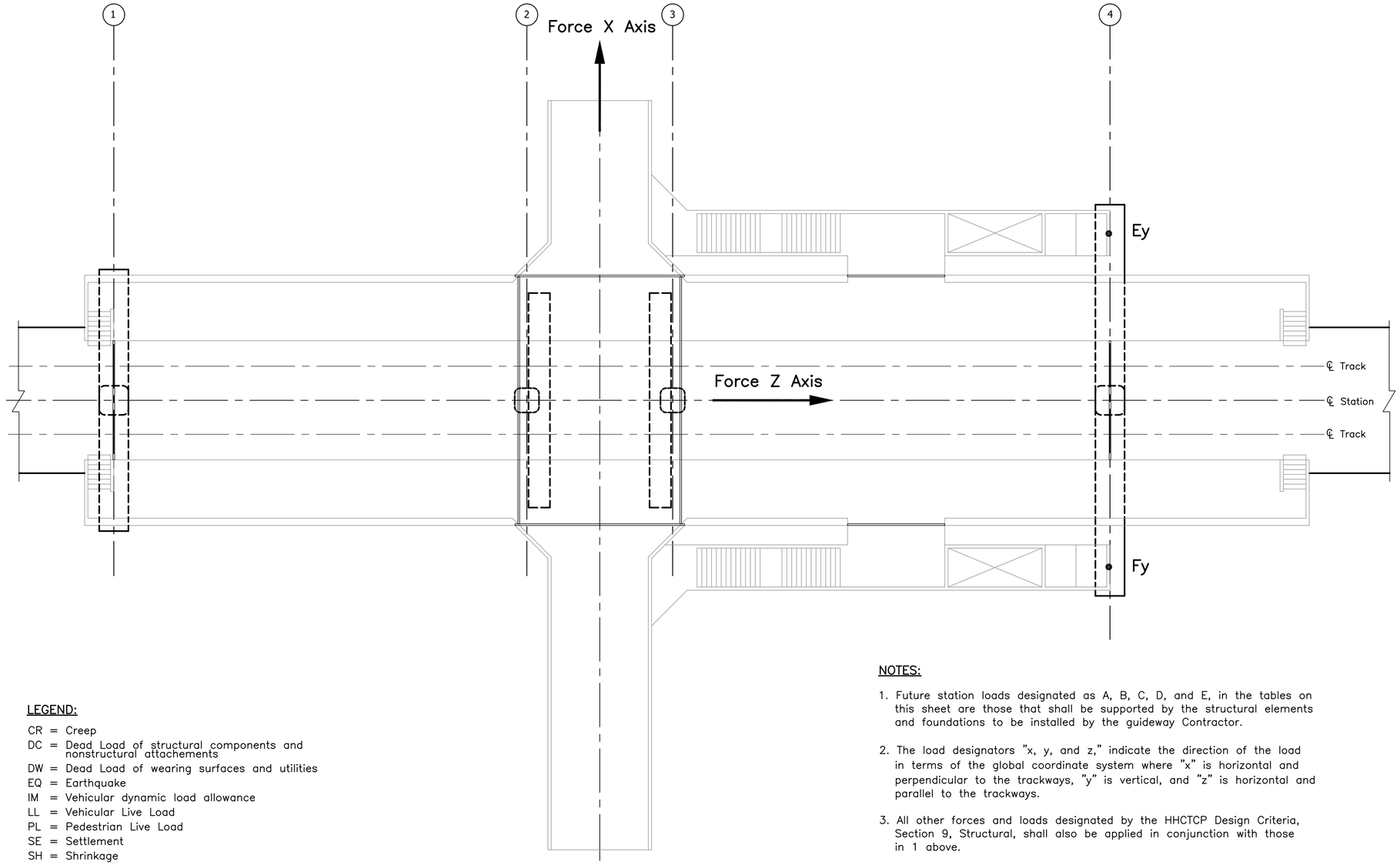
FUTURE STATION LOADS ON GUIDEWAY COLUMN 1 LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS										
	DC DW	LL PL	IM	EQ	WS	TG	TU	SH CR	SE	XX
Ay	529	94	0	15	0	0	0	0	–	–
Ax	–	–	–	124	26	0	0	0	–	–
Az	–	–	–	124	8	0	*	*	–	–
By	529	94	0	15	0	0	0	0	–	–
Bx	–	–	–	124	26	0	0	0	–	–
Bz	–	–	–	124	8	0	*	*	–	–
Cy	–	–	–	–	–	–	–	–	–	–
Cx	–	–	–	–	–	–	–	–	–	–
Cz	–	–	–	–	–	–	–	–	–	–
Dy	–	–	–	–	–	–	–	–	–	–
Dx	–	–	–	–	–	–	–	–	–	–
Dz	–	–	–	–	–	–	–	–	–	–

FUTURE STATION LOADS ON GUIDEWAY COLUMNS 2 AND 3 LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS										
	DC DW	LL PL	IM	EQ	WS	TG	TU	SH CR	SE	XX
Ay	496	144	0	0	0	0	0	0	–	–
Ax	–	–	–	117	24	0	0	0	–	–
Az	–	–	–	117	8	0	*	*	–	–
By	496	144	0	0	0	0	0	0	–	–
Bx	–	–	–	117	24	0	0	0	–	–
Bz	–	–	–	117	8	0	*	*	–	–
Cy	360	195	0	0	0	0	0	0	–	–
Cx	–	–	–	85	10	0	0	0	–	–
Cz	–	–	–	85	33	0	*	*	–	–
Dy	246	125	0	0	0	0	0	0	–	–
Dx	–	–	–	58	6	0	0	0	–	–
Dz	–	–	–	58	18	0	*	*	–	–

FUTURE STATION LOADS ON GUIDEWAY COLUMN 4 LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS										
	DC DW	LL PL	IM	EQ	WS	TG	TU	SH CR	SE	XX
Ay	888	167	0	41	0	0	0	0	–	–
Ax	–	–	–	208	45	0	0	0	–	–
Az	–	–	–	208	14	0	*	*	–	–
By	888	167	0	41	0	0	0	0	–	–
Bx	–	–	–	208	45	0	0	0	–	–
Bz	–	–	–	208	14	0	*	*	–	–
Ey	117	41	0	5	0	0	0	0	–	–
Ex	–	–	–	28	5	0	0	0	–	–
Ez	–	–	–	28	14	0	*	*	–	–
Fy	117	41	0	5	0	0	0	0	–	–
Fx	–	–	–	28	5	0	0	0	–	–
Fz	–	–	–	28	14	0	*	*	–	–



PLATFORM PLAN
NTS

LEGEND:

CR = Creep
DC = Dead Load of structural components and nonstructural attachements
DW = Dead Load of wearing surfaces and utilities
EQ = Earthquake
IM = Vehicular dynamic load allowance
LL = Vehicular Live Load
PL = Pedestrian Live Load
SE = Settlement
SH = Shrinkage
TG = Temperature gradient
TU = Uniform Temperature
WS = Wind Load on structure
XX = Other Loads
* = Load dependent on bearing stiffness. Requires coordination with station designers.

NOTES:

1. Future station loads designated as A, B, C, D, and E, in the tables on this sheet are those that shall be supported by the structural elements and foundations to be installed by the guideway Contractor.
2. The load designators "x, y, and z," indicate the direction of the load in terms of the global coordinate system where "x" is horizontal and perpendicular to the trackways, "y" is vertical, and "z" is horizontal and parallel to the trackways.
3. All other forces and loads designated by the HHCTCP Design Criteria, Section 9, Structural, shall also be applied in conjunction with those in 1 above.
4. All forces shall be applied in accordance with the above HHCTCP Design Criteria.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 1 OF 10

GUIDEWAY FORCES

Contract No.: SV-330
CADD File: KH-G05-FP001
Drawing No.: FP001
Rev.:
Scale: NTS
Page No.: 39 of 139

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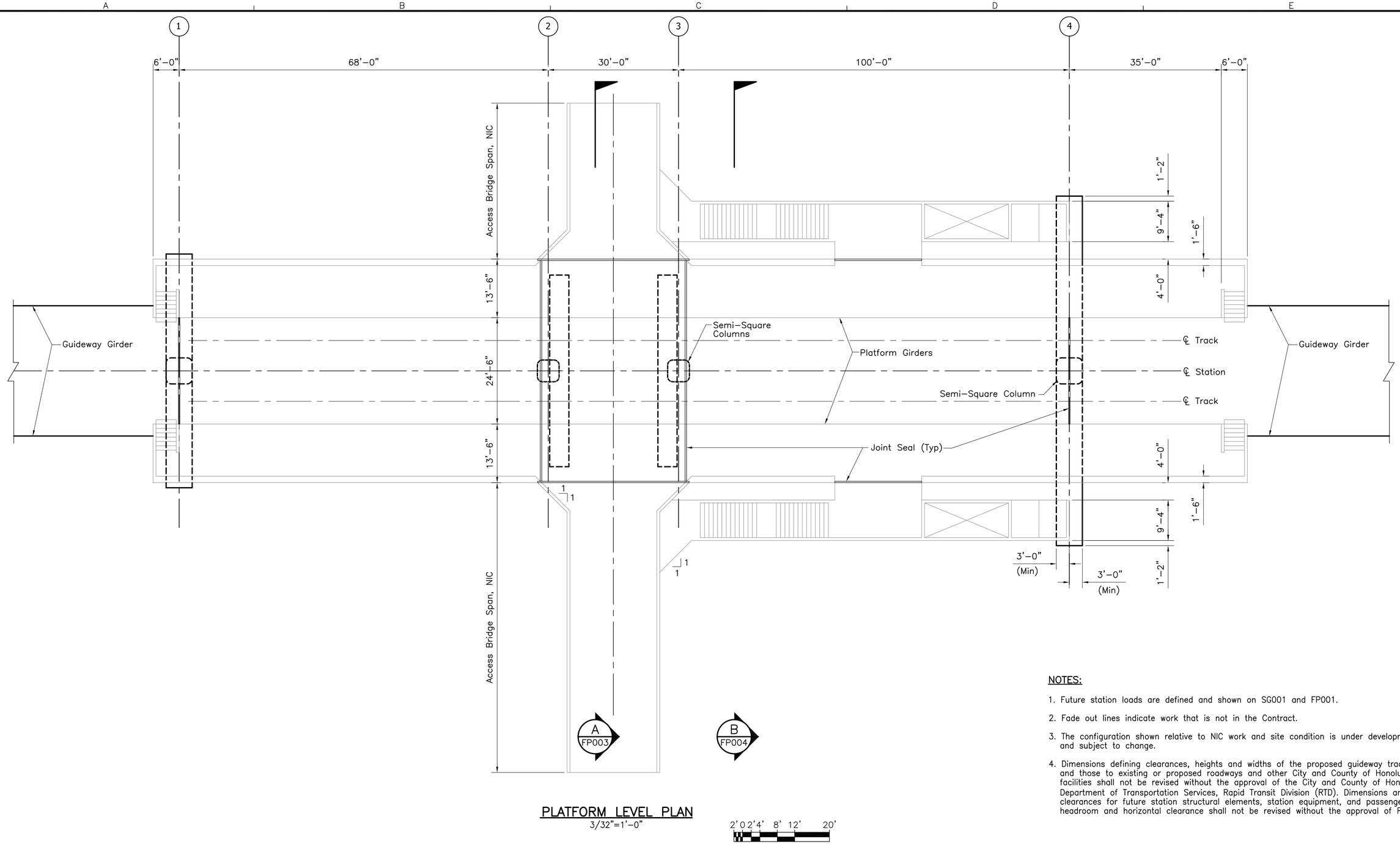

PLATFORM LEVEL PLAN

3/32"=1'–0"

2' 0 2'4' 8' 12' 20'

NOTES:

1. Future station loads are defined and shown on SG001 and FP001.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change.
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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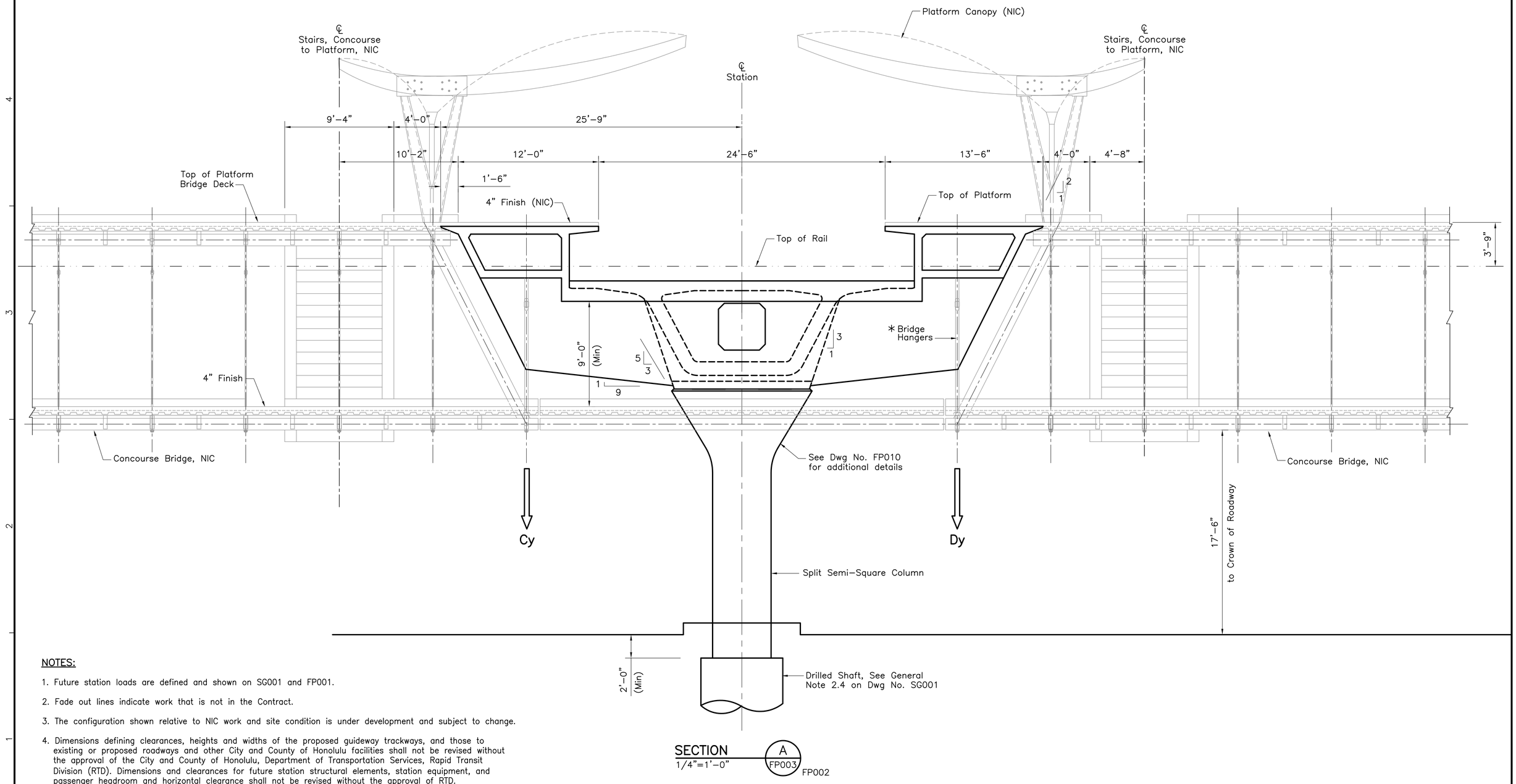
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 2 OF 10

PLATFORM LEVEL PLAN

Contract No.: SV–330
CADD File: KH–G05–FP002
Drawing No.: FP002 Rev.
Scale: 3/32"=1'–0"
Page No. 40 of 139

2009–09–24 11:02 AM K:\CADD\08 Structural\Segment D\KH–G05–FP002.dwg



SECTION A
1/4"=1'–0"
FP003
FP002

NOTES:

1. Future station loads are defined and shown on SG001 and FP001.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change.
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.

* 5. Bridge Hangers require coordination with the station designers.

1' 0 2' 4' 8'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 3 OF 10

SECTION A

Contract No.: SV–330
CADD File: KH–G05–FP003
Drawing No.: FP003 Rev.
Scale: 1/4"=1'–0"
Page No. 41 of 139

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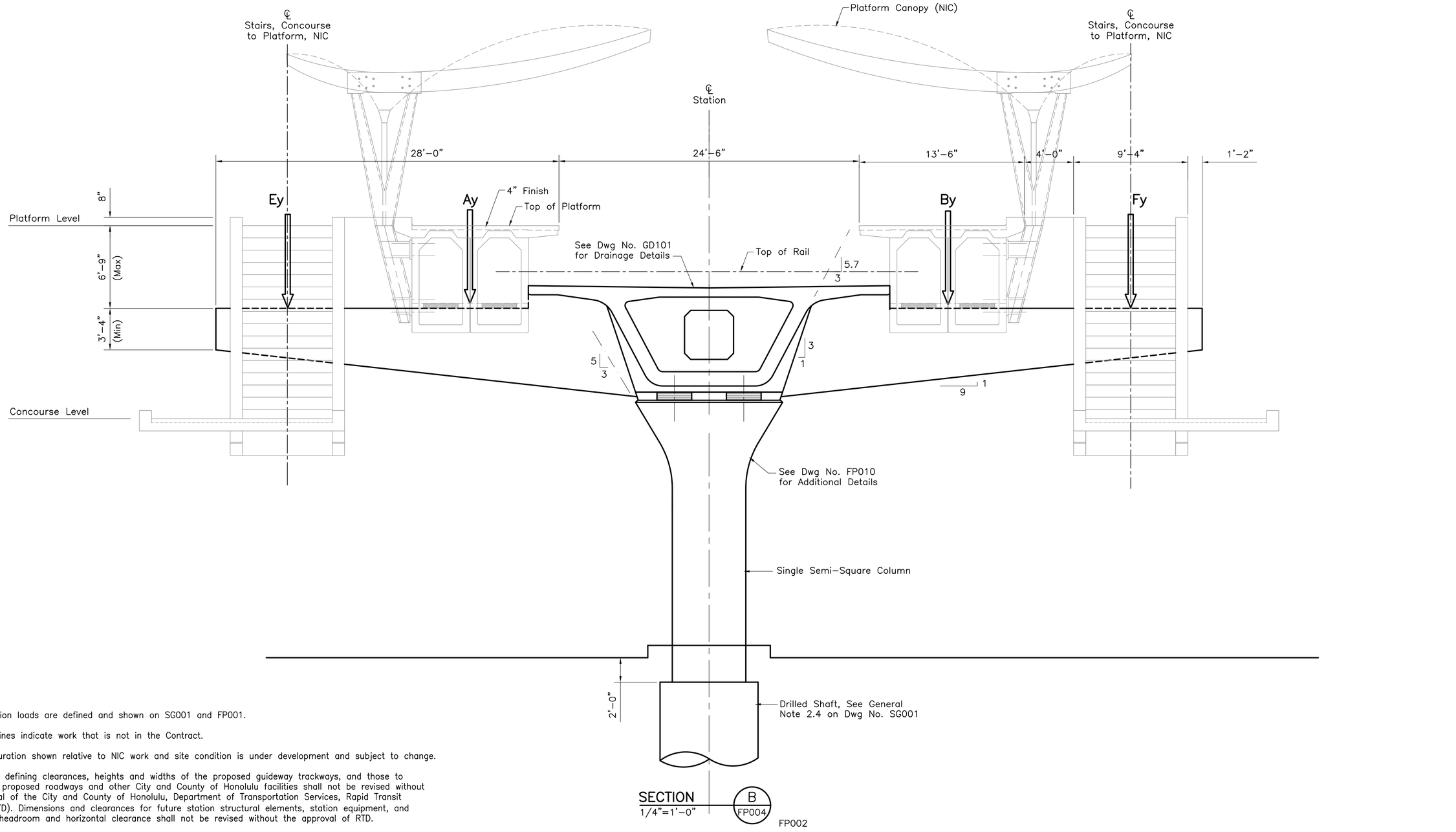

NOTES:

1. Future station loads are defined and shown on SG001 and FP001.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change.
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.

1' 0 2' 4' 8'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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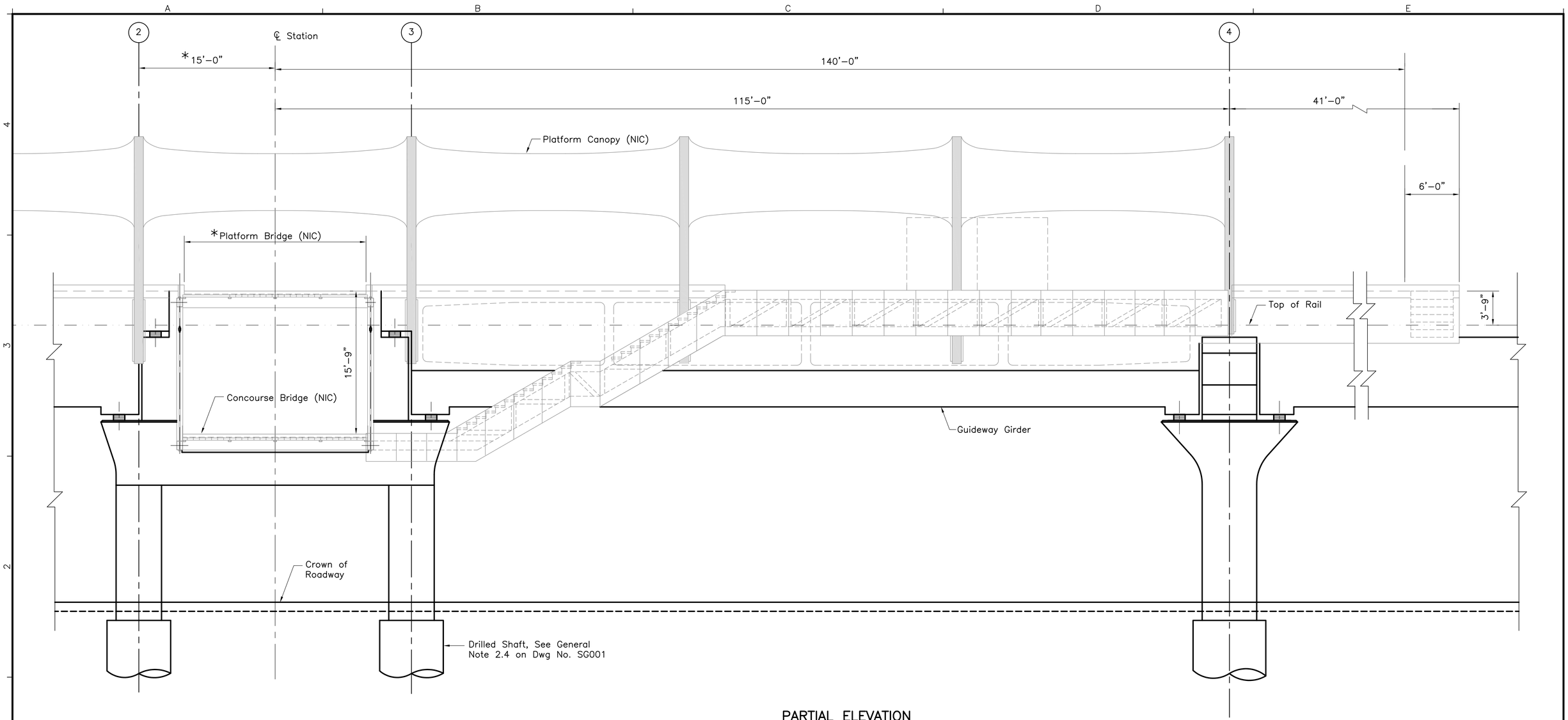
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 4 OF 10

SECTION B

Contract No.: SV–330
CADD File: KH–G05–FP004
Drawing No.: FP004 Rev.
Scale: 1/4"=1'–0"
Page No. 42 of 139

2009–09–14 9:40 AM K:\CADD\08 Structural\Segment D\KH–G05–FP004.dwg



PARTIAL ELEVATION

3/16"=1'–0"

NOTES:

1. Future station loads are defined and shown on SG001 and FP001.
2. Fade out lines indicate work that is not in the Contract.
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4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.

*5. Canopy column location and bridge connection details require coordination with the station designers.

1' 0 2' 4' 6' 10'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

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Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 5 OF 10

PARTIAL ELEVATION

Contract No.: SV–330
CADD File: KH–G05–FP005
Drawing No.: FP005 Rev.
Scale: 3/16"=1'–0"
Page No. 43 of 139

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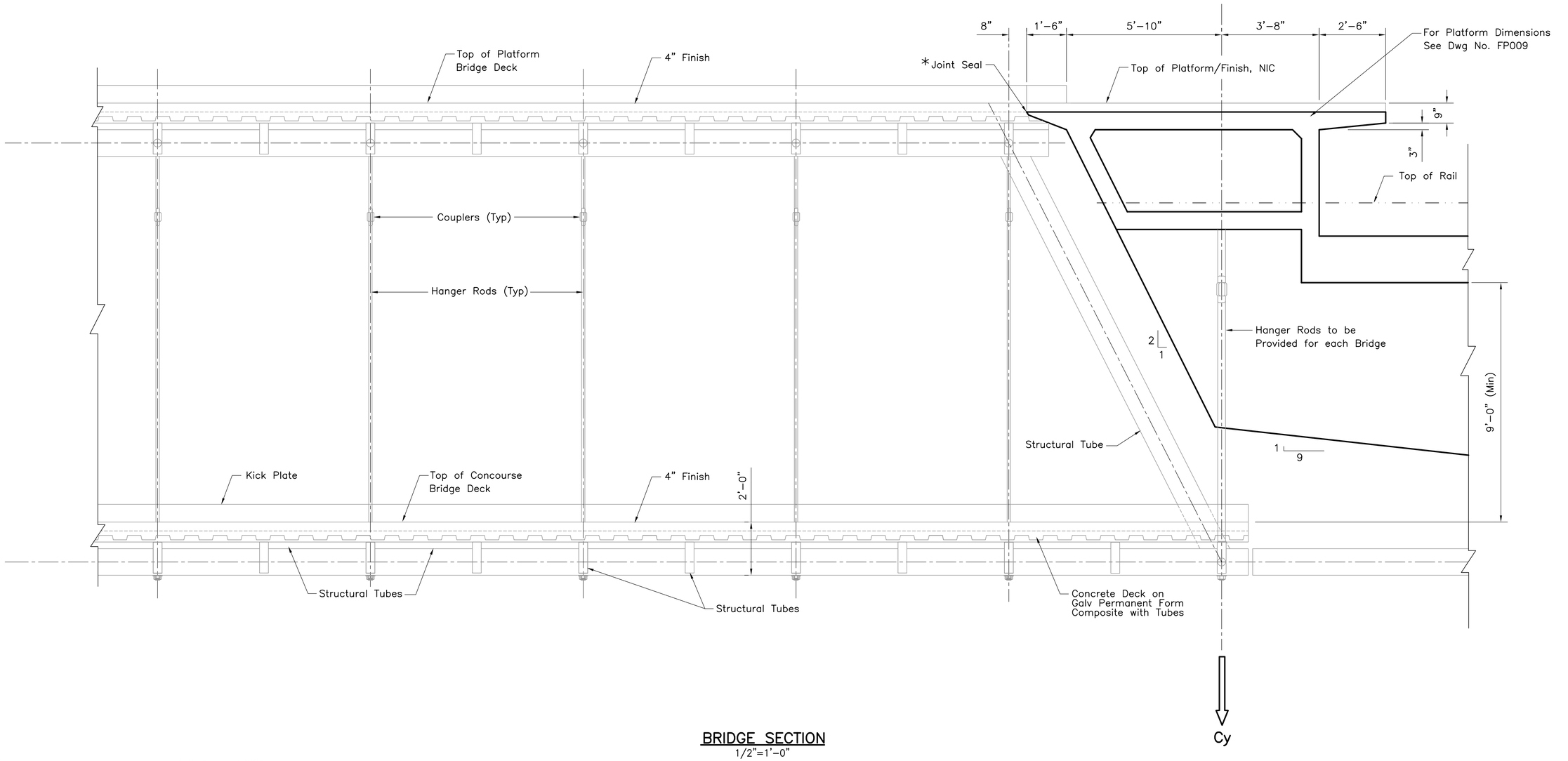

BRIDGE SECTION
1/2"=1'-0"

NOTES:

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*5. Joint seals and hanger rods require coordination with the station designers.

1' 0 2' 4'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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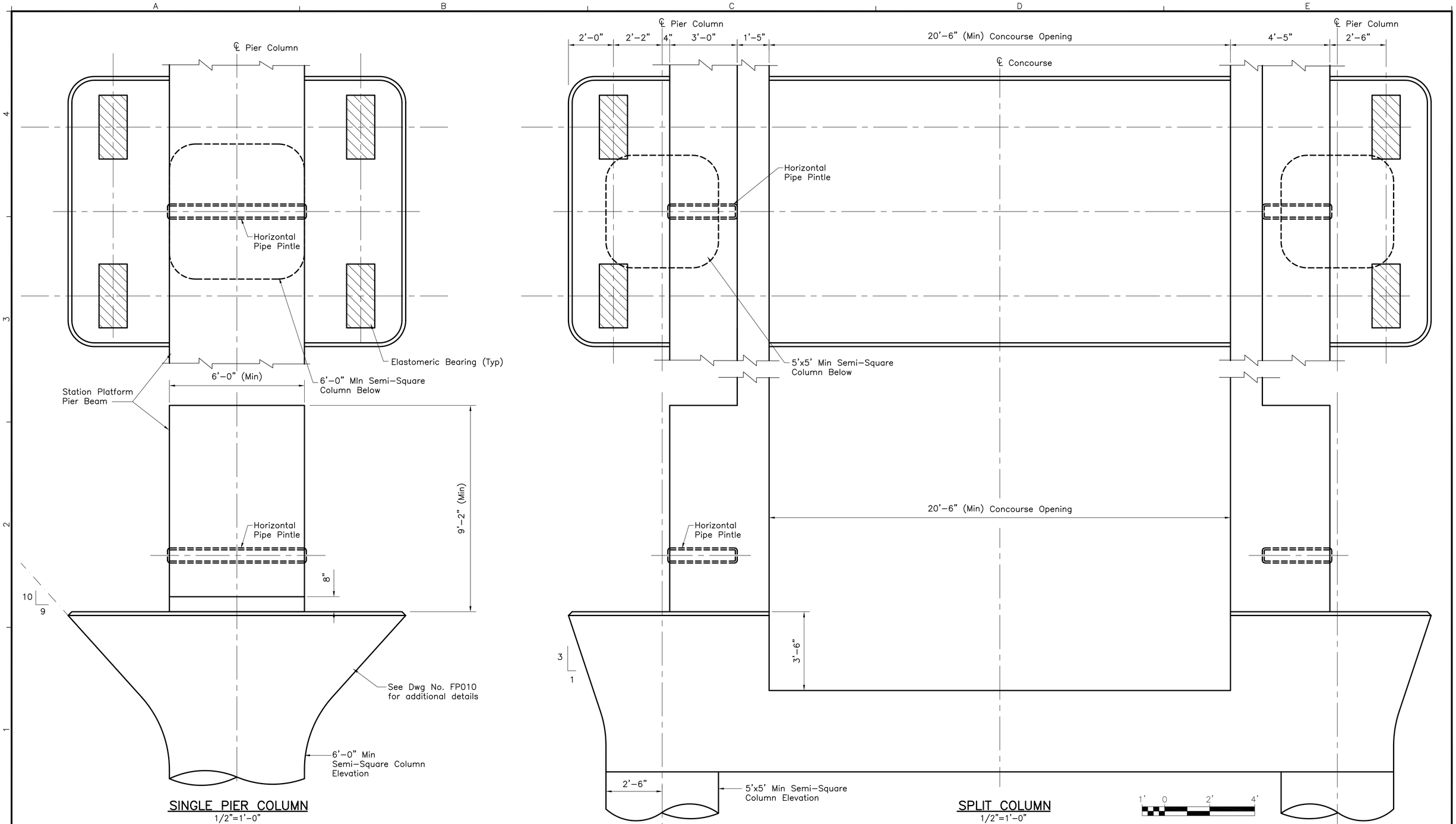
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 6 OF 10

BRIDGE SECTION

Contract No.: SV-330
CADD File: KH-G05-FP006
Drawing No.: FP006 Rev.
Scale: 1/2"=1'-0"
Page No. 44 of 139

2009-08-11 11:27 AM K:\CADD\08 Structural\Segment D\KH-G05-FP006.dwg



Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 7 OF 10

BEARING TABLES PLAN AND SECTION

Contract No.: SV–330
CADD File: KH–G05–FP007
Drawing No.: FP007 Rev.
Scale: 1/2"=1'–0"
Page No. 45 of 139

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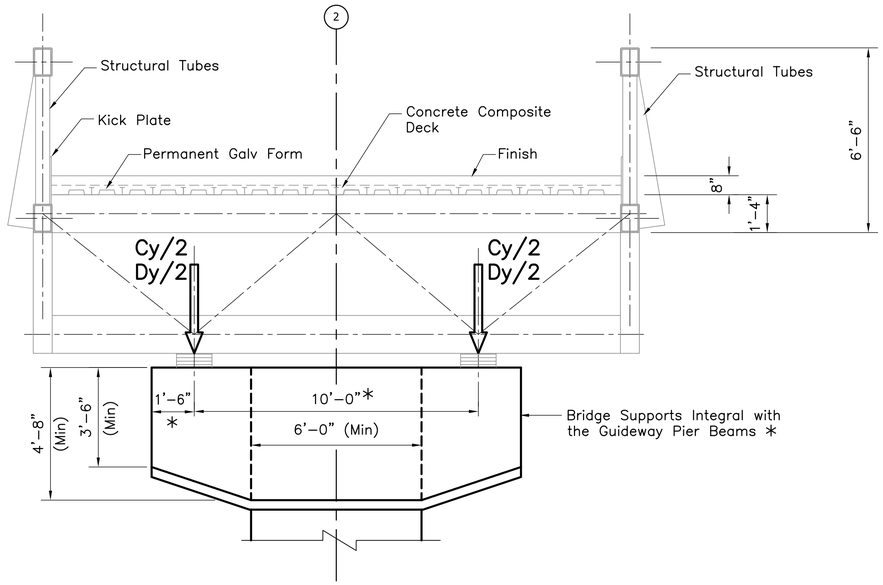
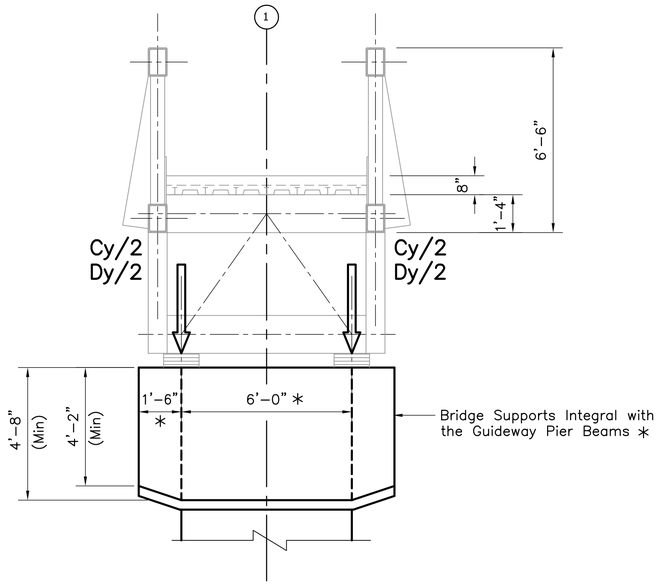
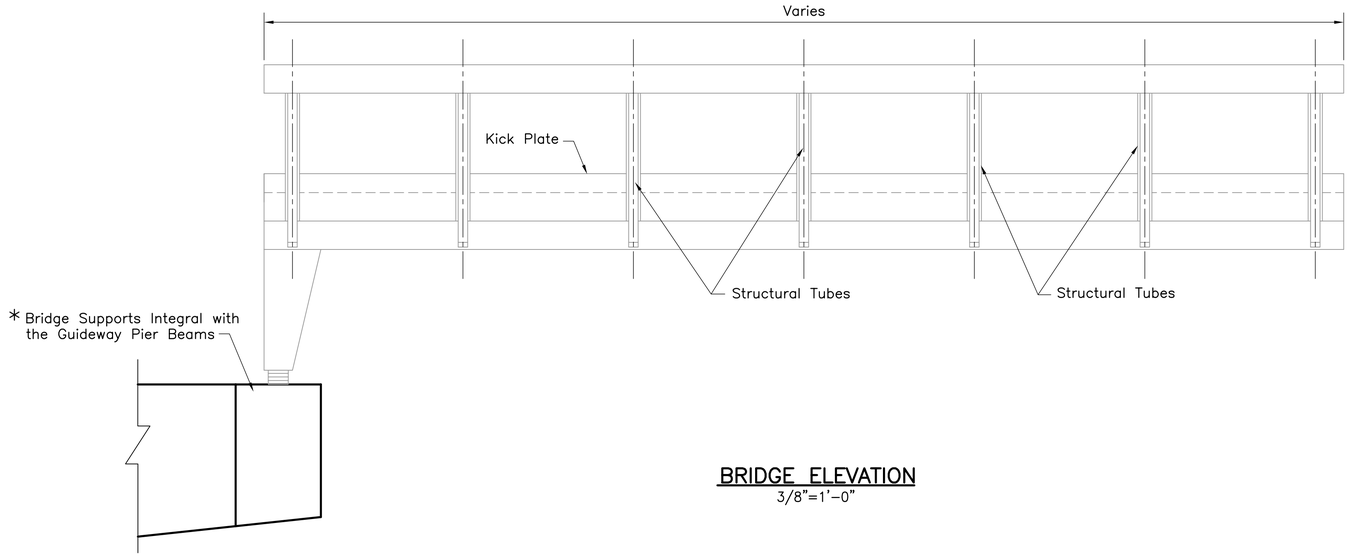


SECTION C
3/8"=1'-0"
FP008



SECTION D
3/8"=1'-0"
FP008



BRIDGE ELEVATION
3/8"=1'-0"

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* 5. Dimensions and bearing details on this drawing requires coordination with the station designer.

1' 0 2' 4' 6'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10-02-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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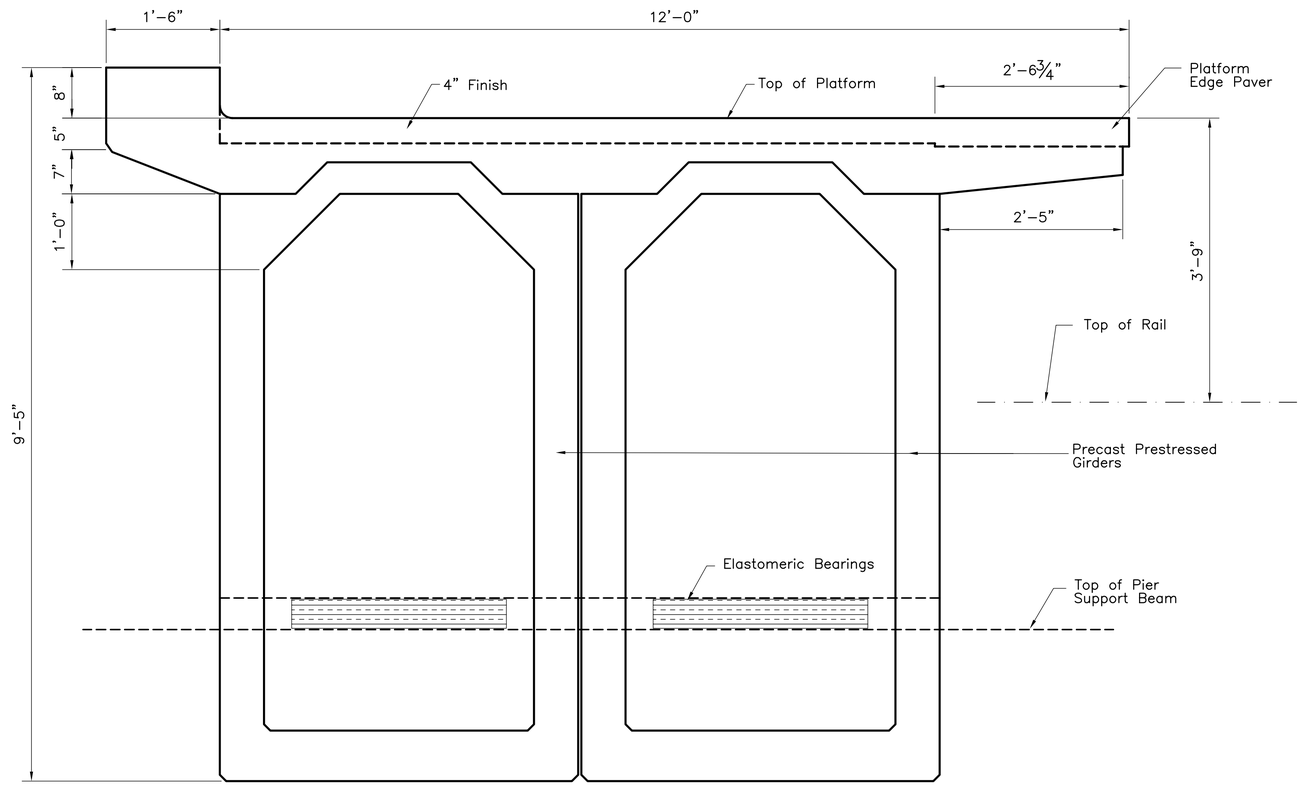
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 8 OF 10

ACCESS BRIDGE DETAILS

Contract No.: SV-330
CADD File: KH-G05-FP008
Drawing No: FP008 Rev.
Scale: 3/8"=1'-0"
Page No. 46 of 139

2009-08-11 11:28 AM K:\CADD\08 Structural\Segment D\KH-G05-FP008.dwg



PLATFORM SECTION
1"=1'–0"

1' 0 1'

FOR DIMENSIONS ONLY, NOT IN CONTRACT

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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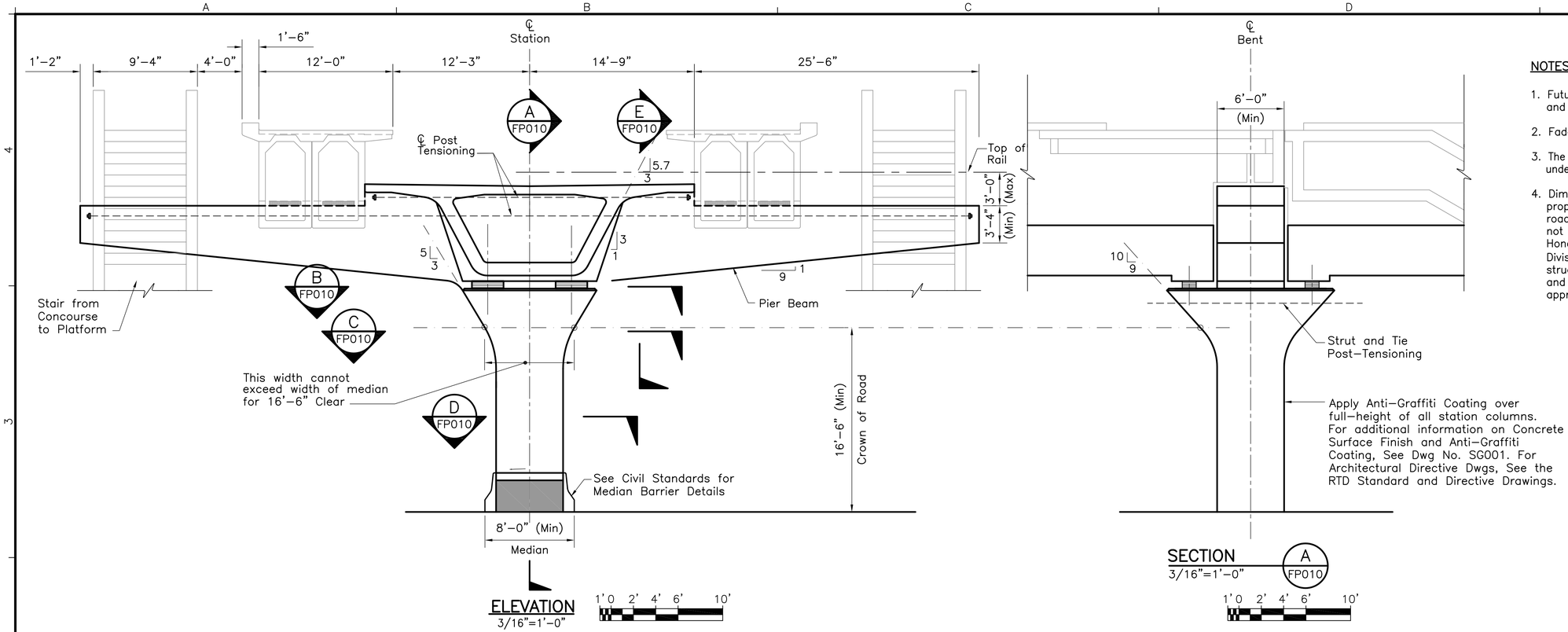
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 9 OF 10

PLATFORM STATION DETAILS

Contract No.: SV–330
CADD File: KH–G05–FP009
Drawing No: FP009 Rev.
Scale: 1"=1'–0"
Page No. 47 of 139

2009–08–11 11:31 AM K:\CADD\08 Structural\Segment D\KH–G05–FP009.dwg



NOTES:

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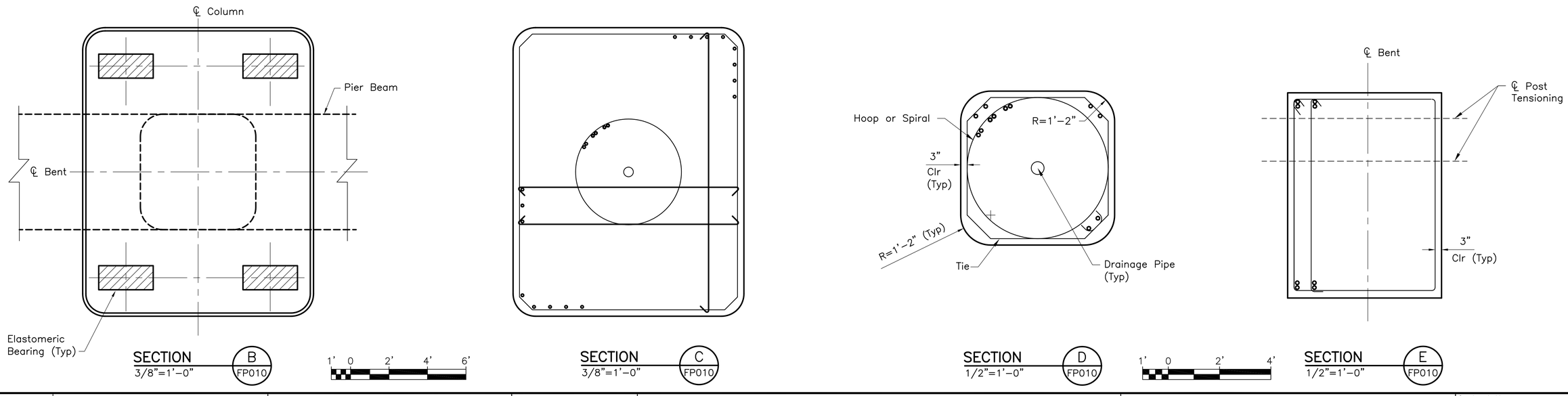

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed:	D Yavorsky
Drawn:	T Cochran
Checked:	T Kimura
Approved:	A Borst
Date:	10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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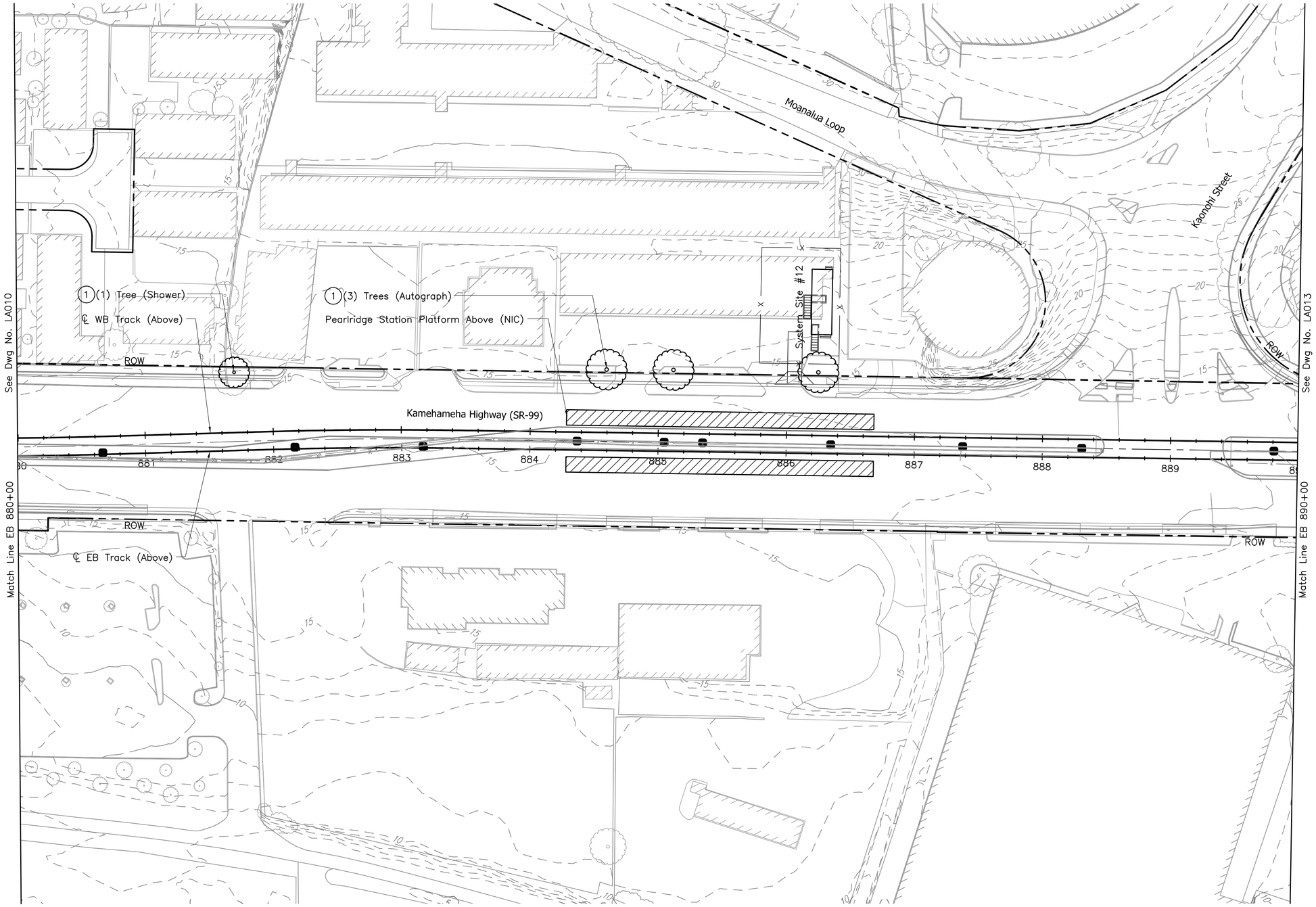
KAMEHAMEHA GUIDEWAY & UTILITIES

PEARLRIDGE STATION
SHEET 10 OF 10

STATION COLUMN BENT DETAILS

Contract No.:	SV–330
CADD File:	KH–G05–FP010
Drawing No:	FP010
Rev.	
Scale:	As Noted
Page No.	48 of 139

2009–08–11 11:31 AM K:\CADD\08 Structural\Segment D\KH–G05–FP010.dwg



N

NOTE:

1. See Dwg No. LG001 for General Notes, Symbols and Abbreviations.

2. See Roadway construction plan sheets for proposed roadway construction.

3. Tree species information are shown for reference only and shall be field verified by certified arborist prior to proceeding.

LEGEND:

Proposed Guideway Column.

Existing tree

CONSTRUCTION NOTES:

(1) Salvage tree or palm for transplanting. Deliver to project nursery.

40' 0' 40'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: K Fishman
Drawn: M McMillen
Checked: M Shimatsu
Approved: R S Duncan
Date: 10-02-2009

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: Land Planning, Landscape Architecture, Environmental Studies, Graphic Design
1001 Bishop Street, Suite 650
Honolulu, HI 96813
PBR HAWAII & ASSOCIATES, INC.

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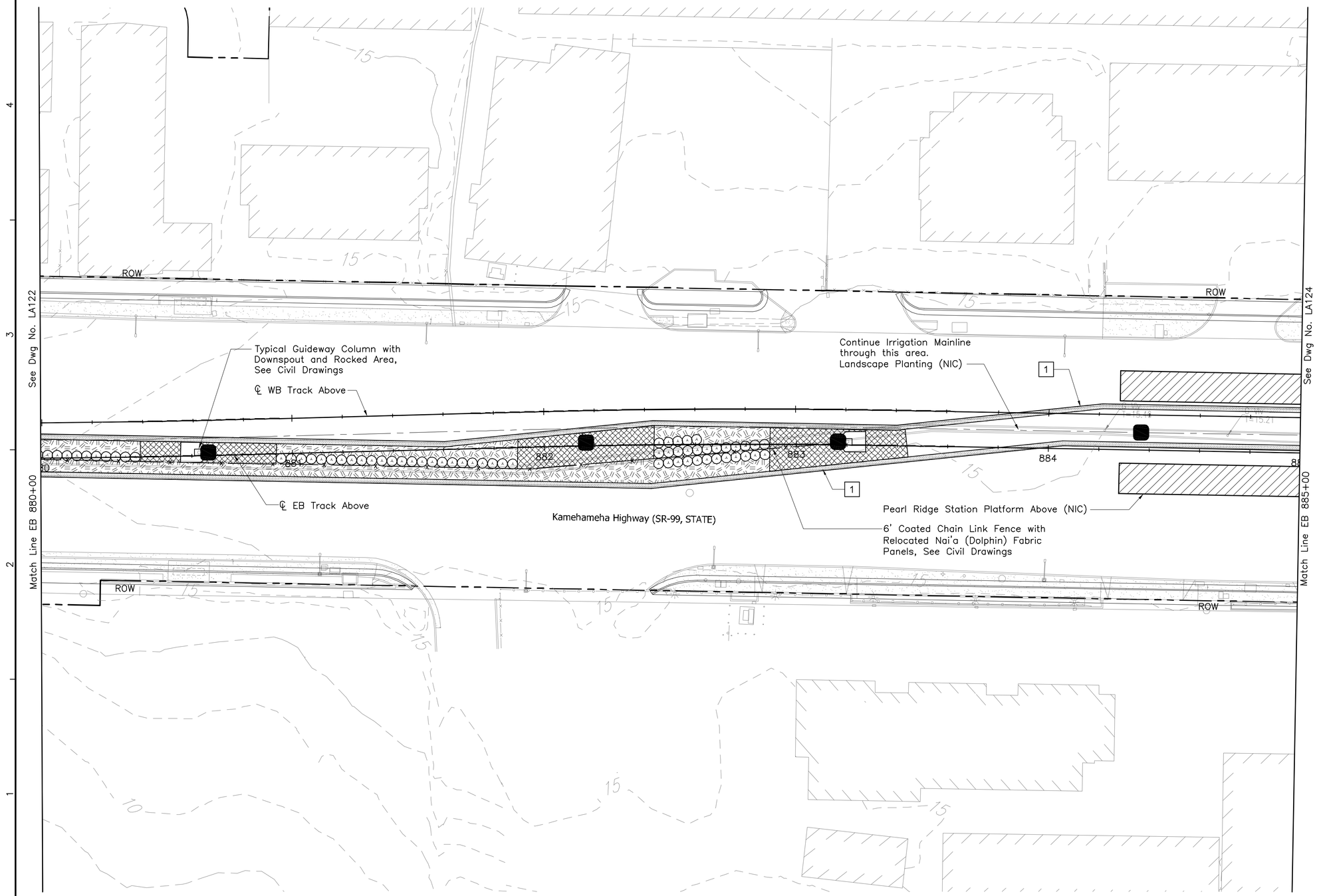
KAMEHAMEHA GUIDEWAY AND UTILITIES

LANDSCAPE DEMOLITION PLAN

EB 880+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-J02-LA012
Drawing No: LA012 Rev.
Scale: 1"=40'
Page No. 88 of 139

2009-09-28 12:19 PM P:\PROJECTS\OAHU\HHCTCP\PBR Working File\Segment D\Final Submittal\KH-J02-LA012.dwg



N

NOTES

1. See Dwg No. LG001 for General Notes, Symbols and Abbreviations.
2. See Roadway construction plan sheets for proposed roadway construction
3. Mulch all shrub and groundcover planting areas with 3" layer of crushed gravel on landscape weed barrier fabric unless otherwise noted. Submit gravel samples to Engineer for color selection.
4. All planting areas to receive a minimum 4" deep planting soil layer. Amend and install per Specifications.
5. All planting areas to receive pre-emergent and post-emergent herbicide applications per Specifications.

PLANT SCHEDULE LA123

SHRUBS	BOTANICAL/COMMON
⊕	Duranta repens aurea / Dwarf Golden Duranta
SHRUB AREAS	**BOTANICAL/COMMON**
▨	Scaevola sericea / Naupaka Kahakai
GROUNDCOVER	**BOTANICAL/COMMON**
▨	Vitex rotundifolia / Pohinahina

REFERENCE NOTES SCHEDULE LA123

SYMBOL	DESCRIPTION
1	Decorative Concrete Paving Equivalent to L.M. Scofield Company's: Chromix Admixture Porcelain Gray 3987; Lithotex Pavecrafters Sculptured Granite Pattern; Lithocrome Antiquing Release Mohagany Red 2775; Cementone Clear Sealer

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: R S Duncan
Drawn: C Billete
Checked: M Shimatsu
Approved: R S Duncan
Date: 10-02-2009

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: Land Planning, Landscape Architecture, Environmental Studies, Graphic Design
1001 Bishop Street, Suite 650 Honolulu, HI 96813
PBR HAWAII & ASSOCIATES, INC.

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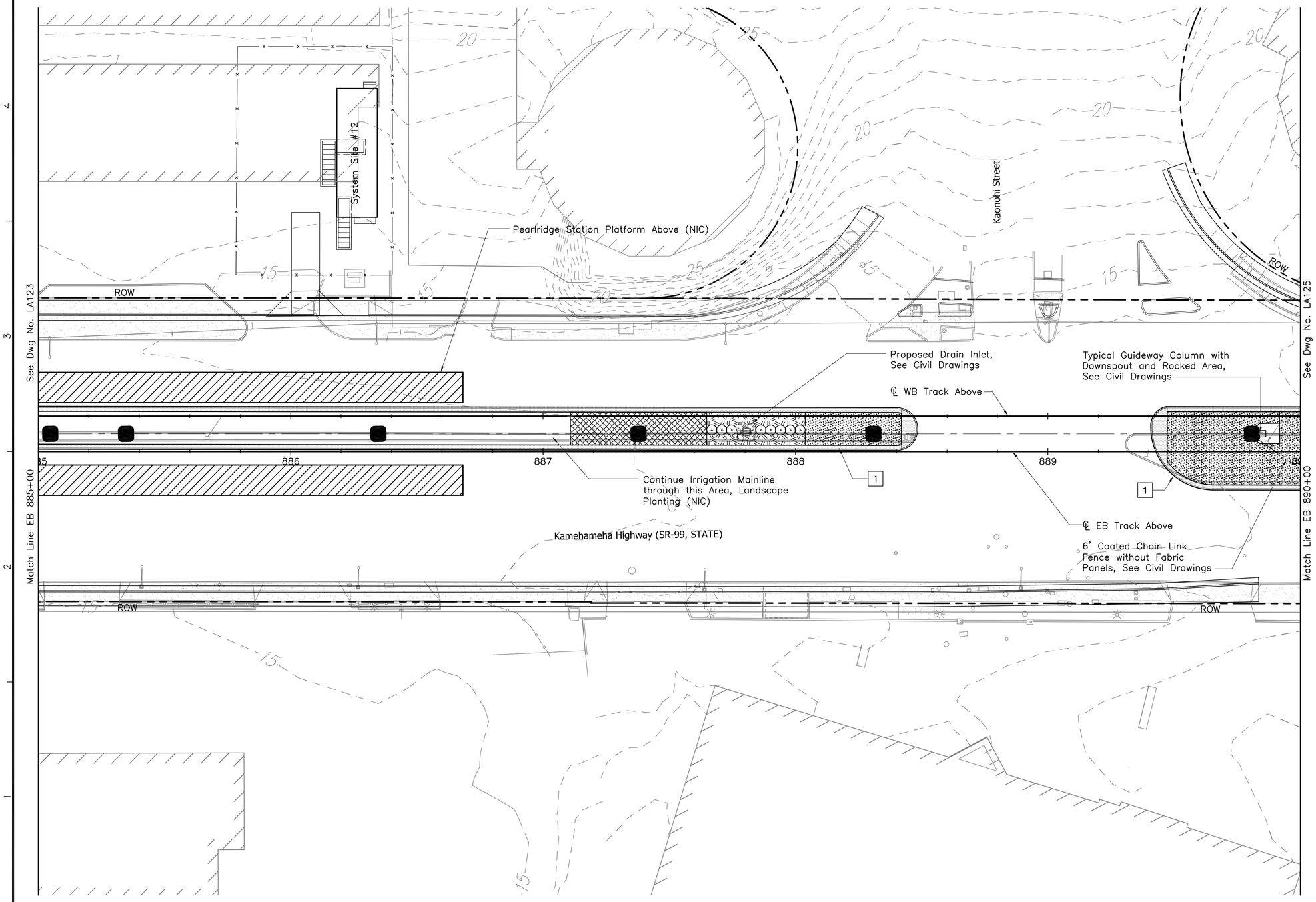
KAMEHAMEHA GUIDEWAY AND UTILITIES

LANDSCAPE PAVING AND PLANTING PLAN

EB 880+00 TO EB 885+00

Contract No.: SV-330
CADD File: KH-J04-LA123
Drawing No.: LA123 Rev.
Scale: 1"=20'
Page No. 117 of 139



NOTES

1. See Dwg No. LG001 for General Notes, Symbols and Abbreviations.
2. See Roadway construction plan sheets for proposed roadway construction
3. Mulch all shrub and groundcover planting areas with 3" layer of crushed gravel on landscape weed barrier fabric unless otherwise noted. Submit gravel samples to Engineer for color selection.
4. All planting areas to receive a minimum 4" deep planting soil layer. Amend and install per Specifications.
5. All planting areas to receive pre-emergent and post-emergent herbicide applications per Specifications.

PLANT SCHEDULE LA124

SHRUBS	BOTANICAL/COMMON
⊕	Duranta repens aurea / Dwarf Golden Duranta
SHRUB AREAS	**BOTANICAL/COMMON**
	Pittosporum tobira 'Wheeler's Dwarf' / Wheeler's Dwarf Pittosporum
	Scaevola sericea / Naupaka Kahakai
GROUNDCOVER	**BOTANICAL/COMMON**
	Vitex rotundifolia / Pohinahina

REFERENCE NOTES SCHEDULE LA124

SYMBOL	DESCRIPTION
1	Decorative Concrete Paving Equivalent to L.M. Scofield Company's: Chromix Admixture Porcelain Gray 3987; Lithotex Pavecrafters Sculptured Granite Pattern; Lithocrome Antiquing Release Mohagany Red 2775; Cementone Clear Sealer

20' 0 20'

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: K Fishman
Drawn: C Billete
Checked: M Shimatsu
Approved: R S Duncan
Date: 10-02-2009

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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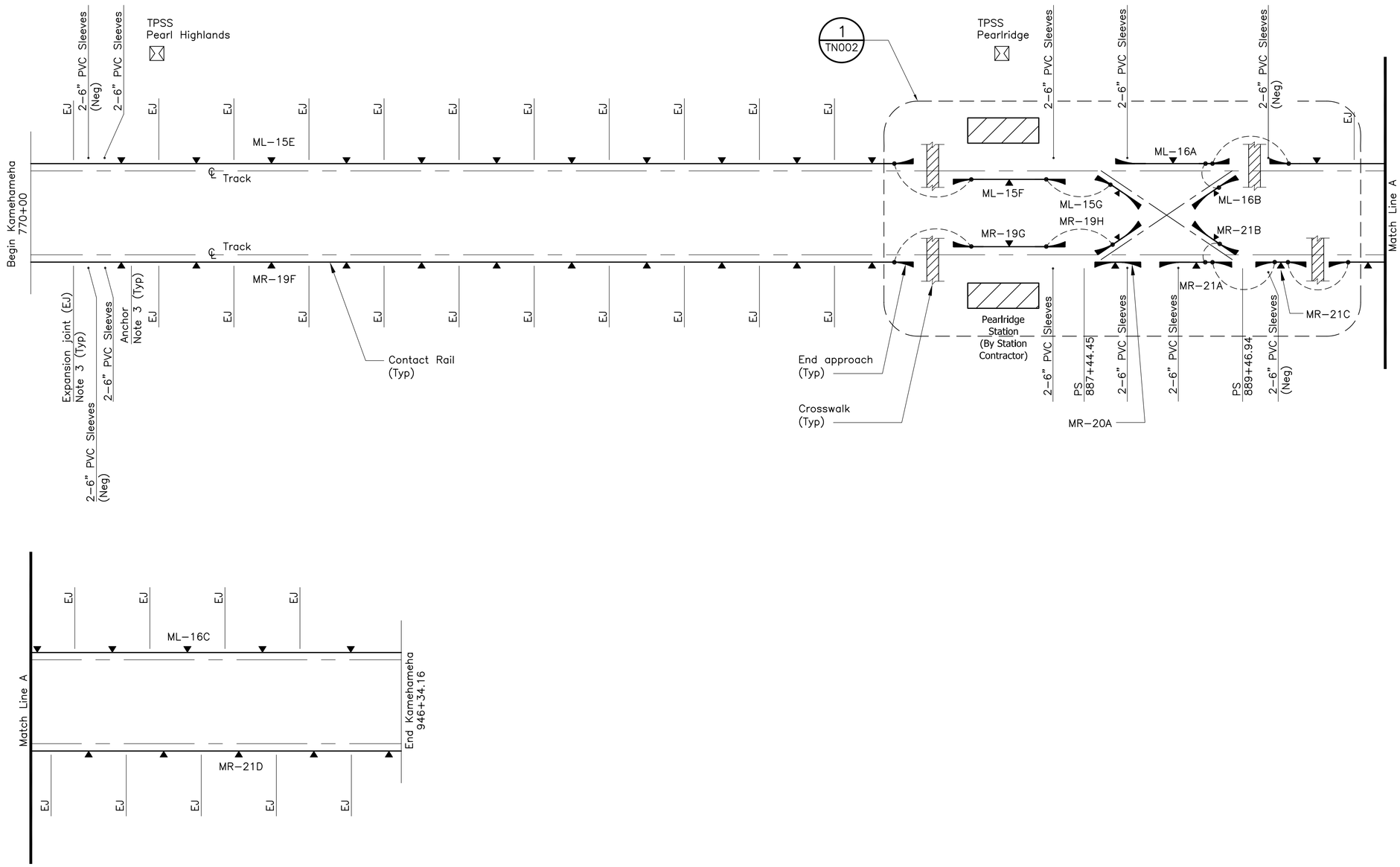
KAMEHAMEHA GUIDEWAY AND UTILITIES

LANDSCAPE PAVING AND PLANTING PLAN

EB 885+00 TO EB 890+00

Contract No.: SV-330
CADD File: KH-J04-LA124
Drawing No.: LA124 Rev.
Scale: 1"=20'
Page No. 118 of 139



NOTES

1. Contractor shall develop and submit final design of the contact rail layout, including conduit sleeves locations, and breaks in the rail plinths for continuity jumpers and negative return cable connections.
2. Refer to drawings DD–N06–TD001 and DD–N06–TD002 for raceway installation details.
3. Contractor shall determine the precise location of contact rail anchors and expansion joints (EJ).

LEGEND:

MR–19F, ML–15E

M – Mainline contact rail section

R or L – Right or Left
(facing direction of increasing stationing)

19, 15 – Electrical section number

F, E – Physical contact rail segment

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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Subconsultant:

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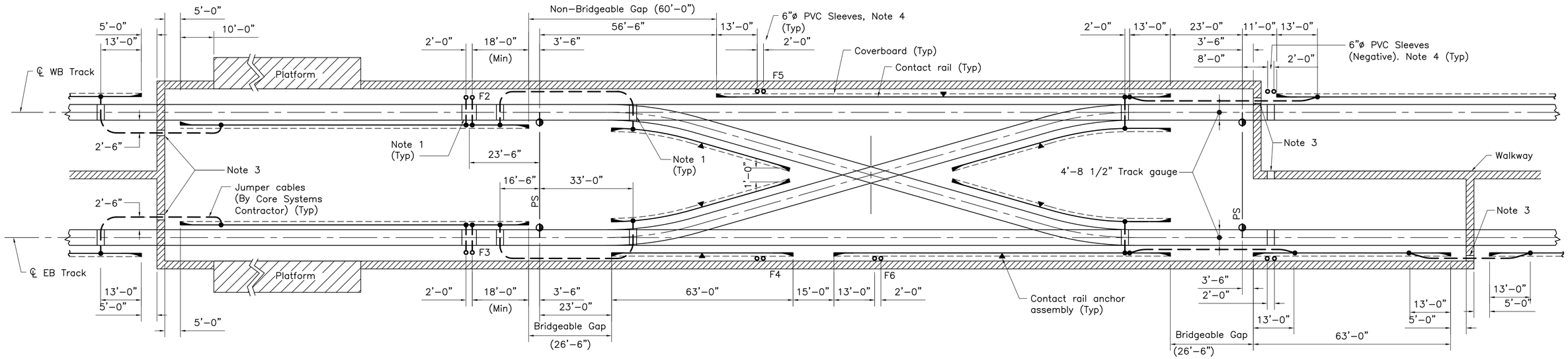
KAMEHAMEHA GUIDEWAY & UTILITIES

CONTACT RAIL INSTALLATION
CONTACT RAIL SCHEMATIC LAYOUT

Contract No.: SV–330
CADD File: KH–N06–TN001
Drawing No: TN001 Rev.
Scale: NTS
Page No. 137 of 139

2009–08–11 6:16 AM K:\CADD\Seg D – Kamehameha Contract Deliverables\N – Traction Power\KH–N06–TN001.dwg



SIDE PLATFORM – PLAN

DETAIL 1 / NTS / TN002 TN001

TABLE 1		
Sleeves through safety Walkway for Cross Bonding		
Location (Note 2)	Conduit	Remarks
771+55	1–5"	PVC Schedule 40
791+22	1–5"	PVC Schedule 40
810+88	1–5"	PVC Schedule 40
830+55	1–5"	PVC Schedule 40
850+22	1–5"	PVC Schedule 40
869+89	1–5"	PVC Schedule 40
889+55	1–5"	PVC Schedule 40
902+27	1–5"	PVC Schedule 40
919+54	1–5"	PVC Schedule 40
936+80	1–5"	PVC Schedule 40

NOTES

1. Provide break in rail plinths, (10" wide) for cable way, coordinated with required cable connections to contact rail.
2. Locations for cross bonding as shown are approximate. Contractor to locate sleeves in line with the running rail concrete plinth breaks nearby to allow for cross bonding of the four running rails.
3. Install 2–5"ø PVC conduit sleeves for cable way.
4. Locations of sleeves for conduit stub–ups as shown are approximate. Contractor to determine the exact locations, coordinated with the final contact rail layout and guideway column locations.

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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Subconsultant:

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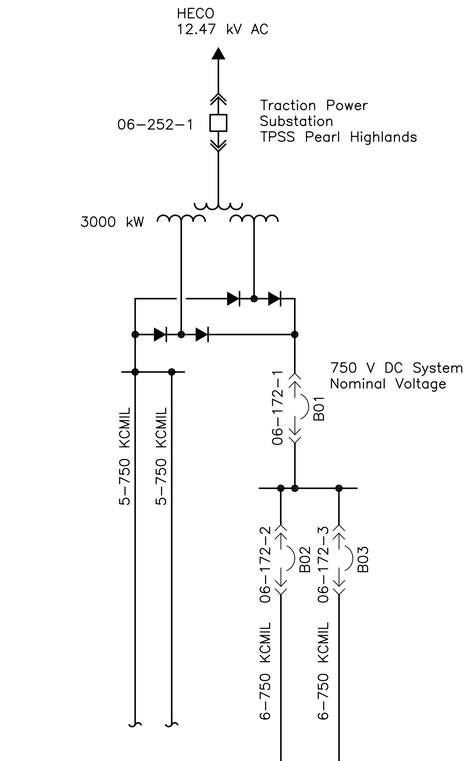
KAMEHAMEHA GUIDEWAY & UTILITIES

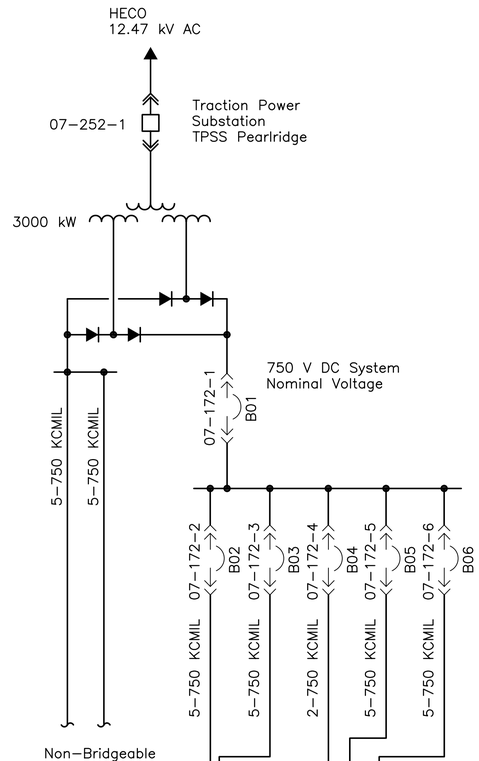
CONTACT RAIL INSTALLATION
CONTACT RAIL LAYOUT

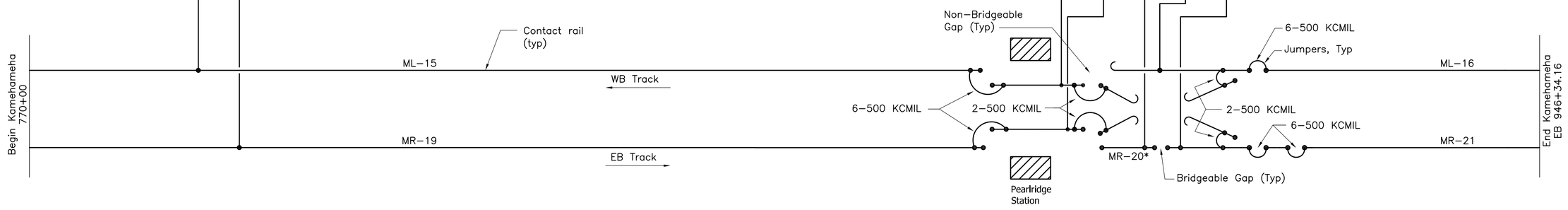
AT CROSSOVER

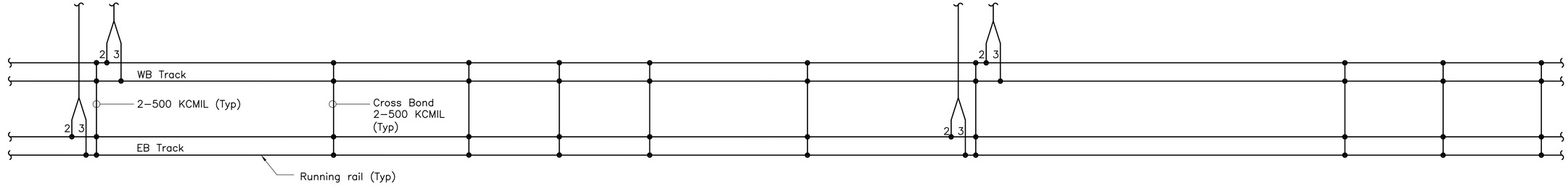
Contract No.: SV–330
CADD File: KH–N06–TN002
Drawing No.: TN002
Rev.:
Scale: NTS
Page No.: 138 of 139

2009–10–02 7:08 AM K:\CADD\Seg D – Kamehameha Contract Deliverables\N – Traction Power\KH–N06–TN002.dwg









NOTES

1. Substation equipment and cables will be provided by Core System Contractor. Contractor shall use the DC feeder sizes and routing data shown on this drawing to design the raceway support provisions on the aerial guideway, and finalize the design of the underground raceways.
2. For approximate cross bonding locations see drawing TN002.

LEGEND:

MR–19, ML–15

M – Mainline contact rail section

R or L – Right or Left side
(facing direction of increasing stationings)

19, 15 – Electrical section number

* Kicker Rail

Rev	By	Date	Description

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 10–02–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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KAMEHAMEHA GUIDEWAY & UTILITIES

MASTER SINGLE LINE DIAGRAM

Contract No.: SV–330
CADD File: KH–N06–TN003
Drawing No: TN003 Rev.
Scale: NTS
Page No. 139 of 139

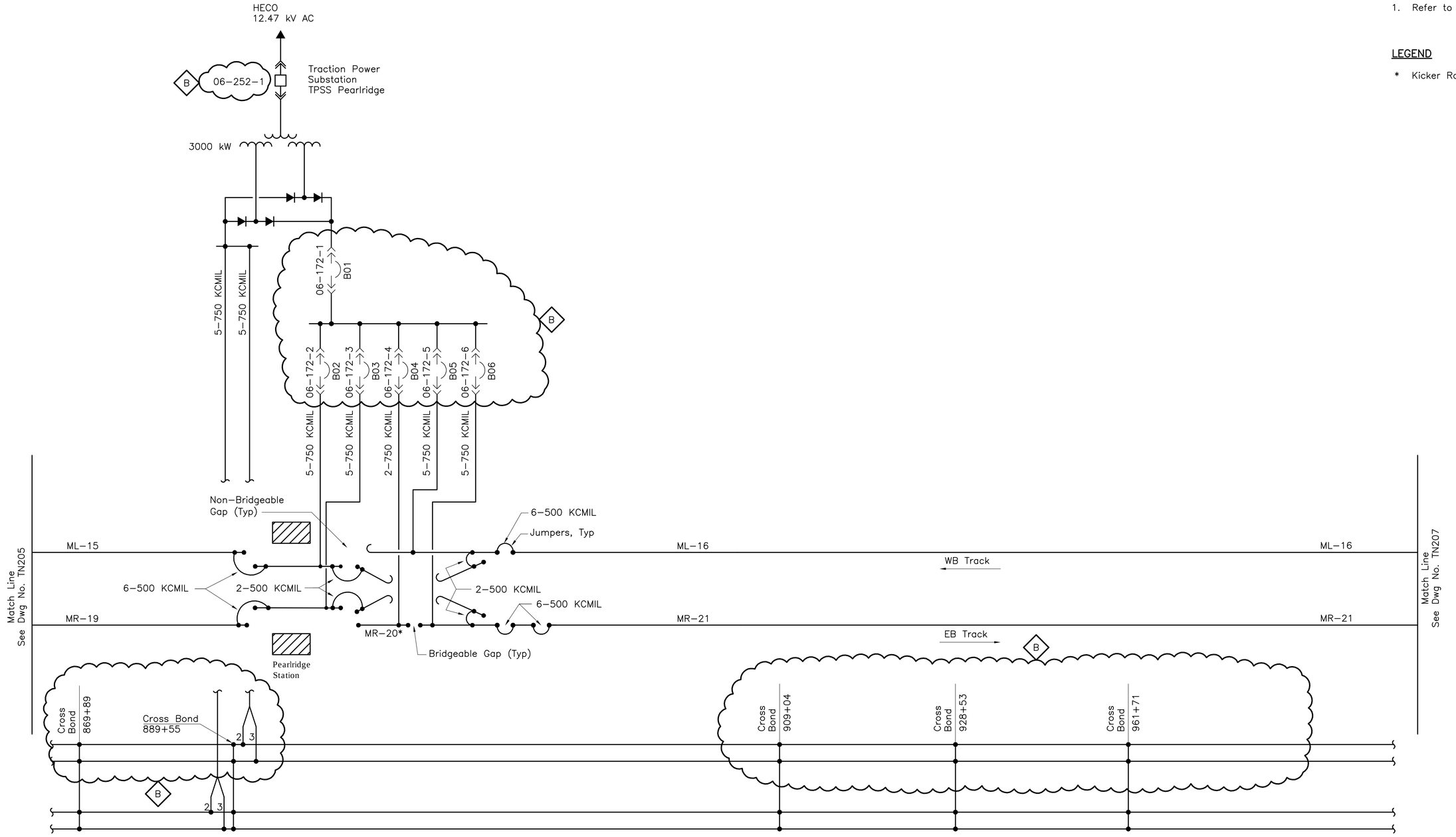
2009–08–11 10:56 AM K:\CADD\Seg D – Kamehameha Contract Deliverables\N – Traction Power\KH–N06–TN003.dwg

NOTES

1. Refer to drawing TN203.

LEGEND

* Kicker Rail



Rev	By	Date	Description
B	SDS	11–13–09	Revised x–bond locations &
			CB numbering
A	SDS	08–17–09	Issued For Proposal

RFP DRAWING
NOT FOR CONSTRUCTION

Designed: L Mayola
Drawn: O Kurnovskaya
Checked: A Patel
Approved: S Stoilov
Date: 07–31–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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CORE SYSTEMS
TRACTION ELECTRIFICATION SYSTEM

MASTER SINGLE LINE DIAGRAM MAINLINE

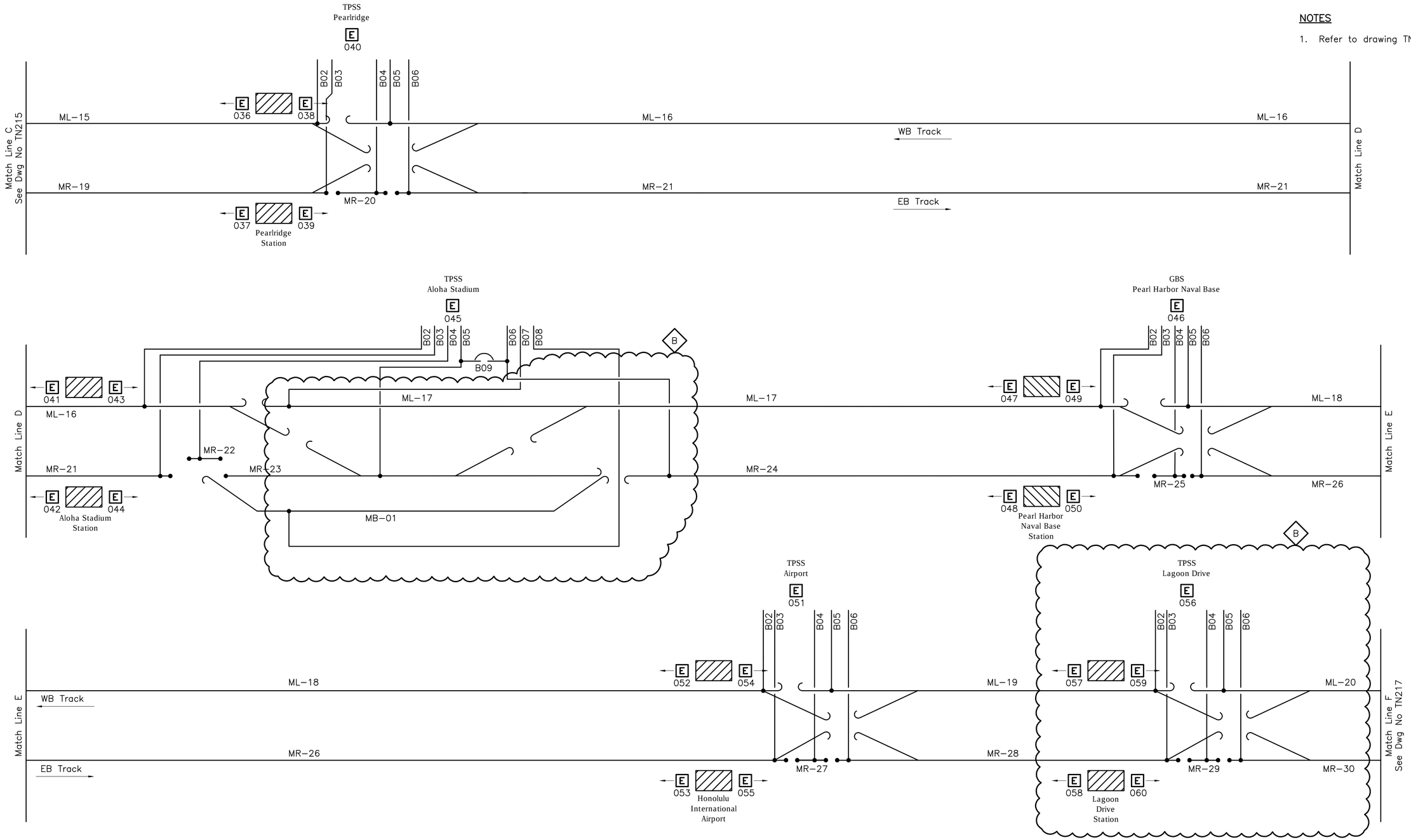
SHEET 4 OF 10

Contract No.: MI–920
CADD File: CS–N04–TN206
Drawing No.: TN206 Rev. B
Scale: NTS
Page No. 12 of 195

2009–11–09 1:07 PM T:\16434A–HI Maint Fac\CADD\sheets\Traction\HHCT\Rev B\CS–N04–TN206.dwg

NOTES

1. Refer to drawing TN215.



Rev	By	Date	Description
B	SDS	11-13-09	Revised x-over location & pos fdr connection points
A	SDS	08-17-09	Issued For Proposal

RFP DRAWING
NOT FOR CONSTRUCTION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 07-31-09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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CORE SYSTEMS
TRACTION ELECTRIFICATION SYSTEM

MAINLINE EMERGENCY TRIP STATION BLOCK DIAGRAM

SHEET 2 OF 4

Contract No.: MI-920
CADD File: CS-N04-TN216
Drawing No: TN216
Rev. B
Scale: NTS
Page No. 22 of 195

2009-11-09 1:11 PM T:\16434A-HI Maint Fac\CADD\sheets\Traction\HHCT\Rev B\CS-N04-TN216.dwg

ETS Location	TPSS East Kapolei						TPSS UH West O'ahu			GBS Ho'opili					TPSS West Loch						TPSS Waipahu							GBS Leeward					TPSS Pearl Highlands			TPSS Pearlridge					
	A01	B02	B03	B04	B05	B06	A01	B02	B03	B02	B03	B04	B05	B06	A01	B02	B03	B04	B05	B06	A01	B02	B03	B04	B05	B06	B07	B02	B03	B04	B05	B06	A01	B02	B03	A01	B02	B03	B04	B05	B06
East Kapolei Station																																									
001		X							B																																
002			X	X								X																												
003		X			X			X		X			X																											
004			X	X		X			X		X																													
TPSS East Kapolei																																									
005	X	X	X	X	X	X																																		
UH West O'ahu Station																																									
006		X			X			X		X		X																												
007			X	X		X			X		X																													
008					X			X		X		X	X			X																								
009				X		X			X		X			X			X	X																						
TPSS UH West O'ahu																																									
010							X	X	X																															
TPSS Ho'opili																																									
011										X	X	X	X	X																										
Ho'opili Station																																									
012					X			X		X		X	X			X																								
013				X		X			X		X			X			X	X																						
014												X	X			X																								
015														X			X	X																						
West Loch Station																																									
016												X	X			X																								
017														X			X	X																						
018												X	X			X			X									X												
019														X			X	X		X			X	X																
TPSS West Loch																																									
020															X	X	X	X	X	X																				
Waipahu Transit Center Station																																									
021												X	X			X			X			X						X												
022														X			X	X		X			X	X																
023																			X			X						X												
024																		X		X			X	X	X				X	X										
TPSS Waipahu																																									
025																					X	X	X	X	X	X														
Leeward Community College Station																																									
026																			X			X						X												
027																		X		X			X	X	X					X	X									
028																			X			X						X				X			X			x			
029																									X				X	X		X			X			x	x		
GBS Leeward																																									
030																												X	X	X	X	X									

NOTES

1. X indicates DC Feeder Breaker Trip on BLS Activation based on Emergency Access route shown by arrow symbol: ⟶ .

Rev	By	Date	Description
B	SDS	11–13–09	Changed Ho'opili TPSS to GBS
A	SDS	08–17–09	Issued For Proposal

RFP DRAWING
NOT FOR CONSTRUCTION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 07–31–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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CORE SYSTEMS
TRACTION ELECTRIFICATION SYSTEM

MAINLINE EMERGENCY TRIP STATION TRIPPING CHART

SHEET 1 OF 3

Contract No.: MI–920
CADD File: CS–N04–TN219
Drawing No.: TN219 Rev. B
Scale: N/A
Page No. 25 of 195

2009–11–06 9:57 AM T:\16434A–HI Maint Fac\CADD\sheets\Traction\HHCT\Rev B\CS–N04–TN219.dwg

ETS Location	TPSS West Loch						TPSS Waipahu							GBS Leeward					TPSS Pearl Highlands			TPSS Pearlridge					
	A01	B02	B03	B04	B05	B06	A01	B02	B03	B04	B05	B06	B07	B02	B03	B04	B05	B06	A01	B02	B03	A01	B02	B03	B04	B05	B06
Pearl Highlands Station																											
031					X			X						X			X			X			X				
032											X				X	X		X			X			X	X		
033																	X			X			X				
034																X		X			X			X	X		
TPSS Pearl Highlands																											
035																			X	X	X						

ETS Location	GBS Leeward					TPSS Pearl Highlands			TPSS Pearlridge						TPSS Aloha Stadium									GBS Pearl Harbor Naval Base					TPSS Airport					
	B02	B03	B04	B05	B06	A01	B02	B03	A01	B02	B03	B04	B05	B06	A01	B02	B03	B04	B05	B06	B07	B08	B09	B02	B03	B04	B05	B06	A01	B02	B03	B04	B05	B06
Pearlridge Station																																		
036				X			X			X																								
037			X		X			X			X	X																						
038				X			X			X			X			X																		
039			X		X			X			X	X		X			X	X																
TPSS Pearlridge																																		
040									X	X	X	X	X	X																				
Aloha Stadium Station																																		
041				X			X			X			X			X																		
042			X		X			X			X	X		X			X	X																
043													X			X								X										
044												X		X			X	X	X	X		X			X	X								
TPSS Aloha Stadium																																		
045															X	X	X	X	X	X	X	X												
GBS Pearl Harbor Naval Base																																		
046																								X	X	X	X	X						
Pearl Harbor Naval Base Station																																		
047													X			X					X			X										
048												X		X			X	X	X	X		X			X	X								
049																					X			X			X							
050																				X			X		X	X		X			X	X		
TPSS Airport																																		
051																													X	X	X	X	X	X
Honolulu International Airport Station																																		
052																					X			X			X							
053																				X			X		X	X		X			X	X		

NOTES

1. Refer to drawing TN219.

Rev	By	Date	Description
A	SDS	08–17–09	Issued For Proposal

RFP DRAWING
NOT FOR CONSTRUCTION

Designed: J Sun
Drawn: O Kurnovskaya
Checked: L Mayola
Approved: S Stoilov
Date: 07–31–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
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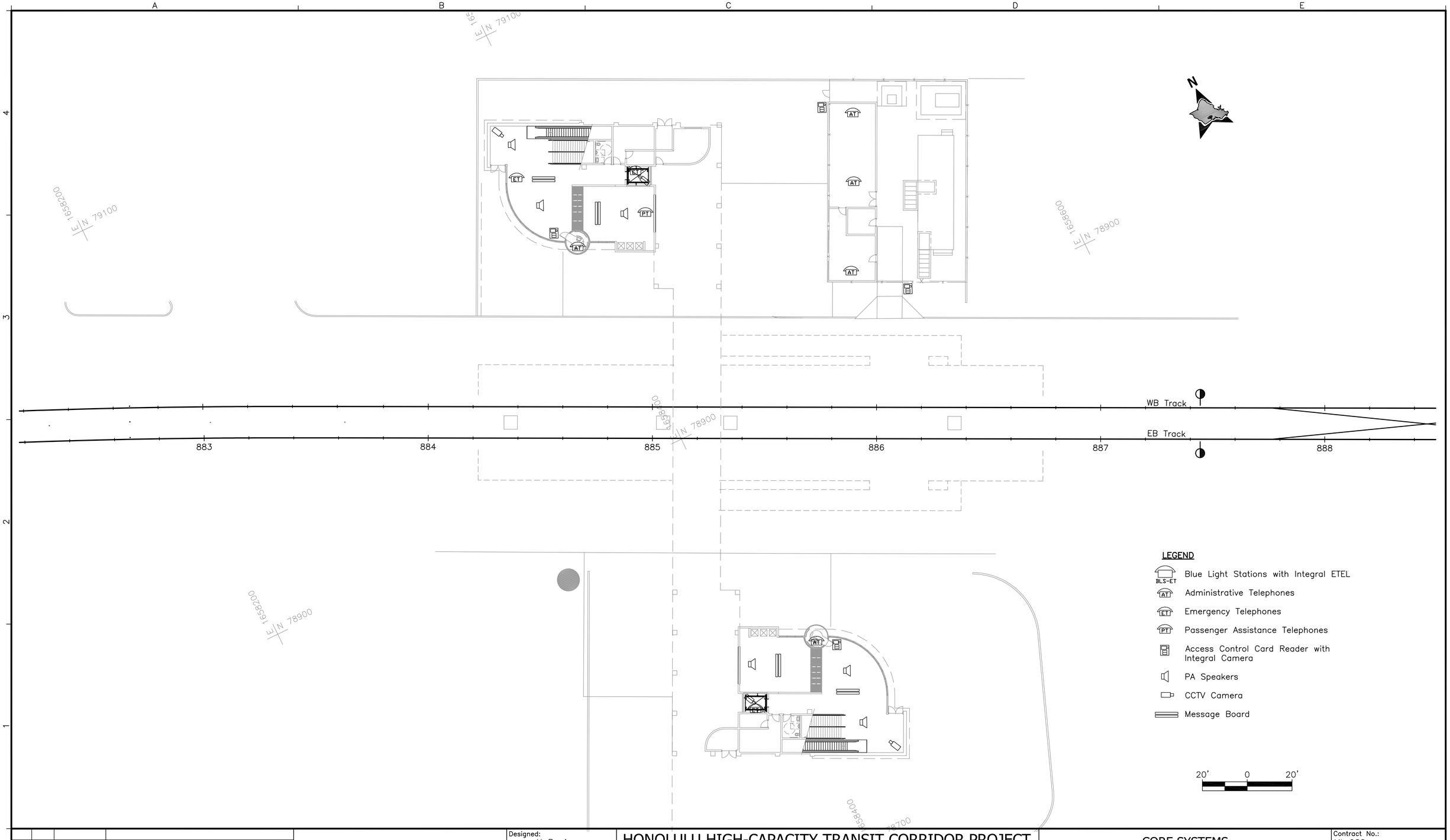
CORE SYSTEMS
TRACTION ELECTRIFICATION SYSTEM

MAINLINE EMERGENCY TRIP STATION TRIPPING CHART

SHEET 2 OF 3

Contract No.: MI–920
CADD File: CS–N04–TN220
Drawing No: TN220 Rev. A
Scale: N/A
Page No. 26 of 195

2009–07–27 2:48 PM T:\16434A–HI Maint Fac\CADD\sheets\Traction\HHCT\CS–N04–TN220.dwg



Rev	By	Date	Description
A	HB	11–13–09	Issued For Addendum

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 11–06–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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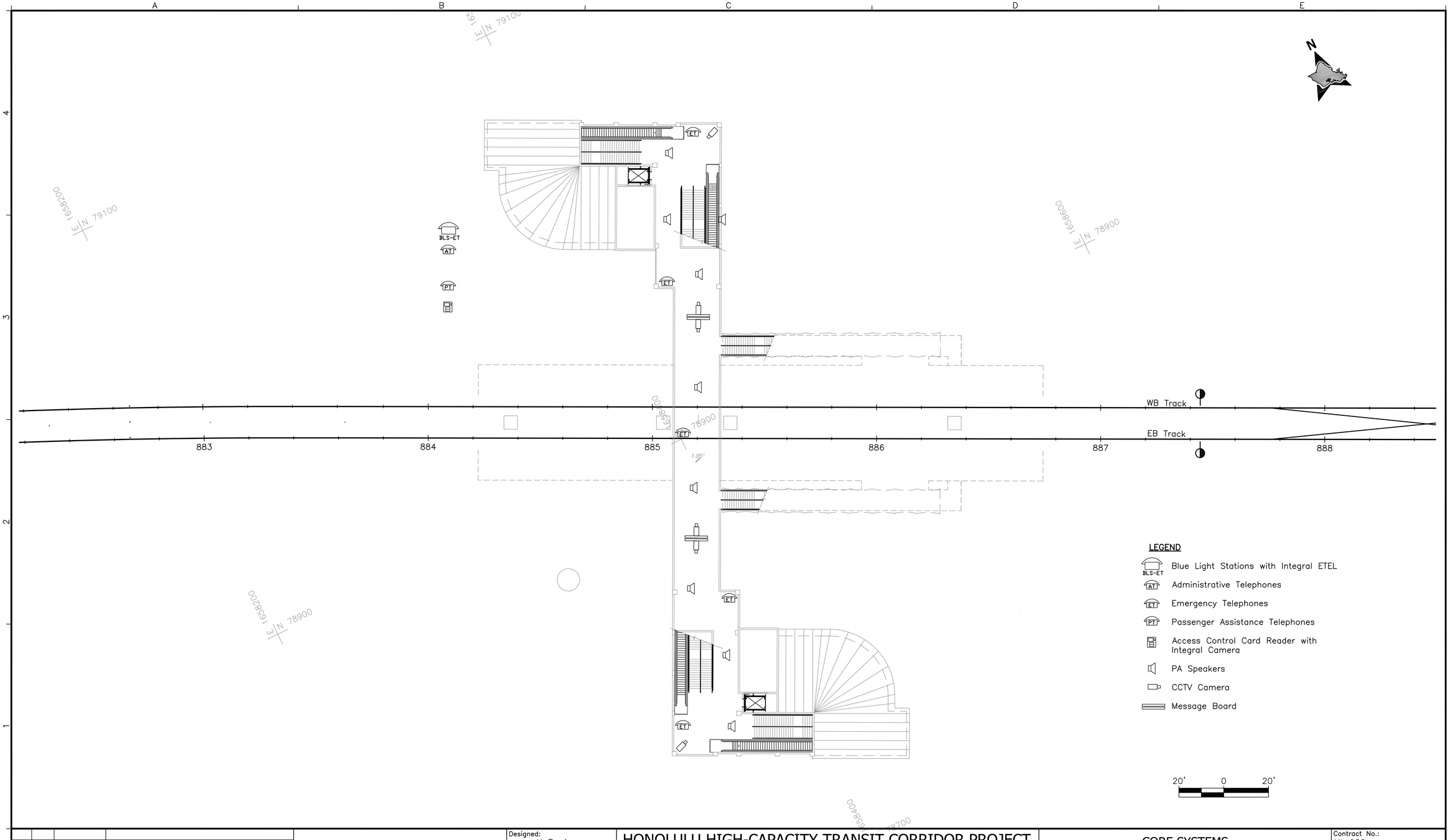
CORE SYSTEMS

PEARLRIDGE STATION COMMUNICATIONS PLAN

GROUND LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM301
Drawing No: CM301 Rev. A
Scale: 1" = 20'
Page No. 151 of 202

2009–11–12 3:08 PM K:\CADD\Architectural\CS–R06–CM301.dwg



Rev	By	Date	Description
A	HB	11–13–09	Issued For Addendum

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 11–13–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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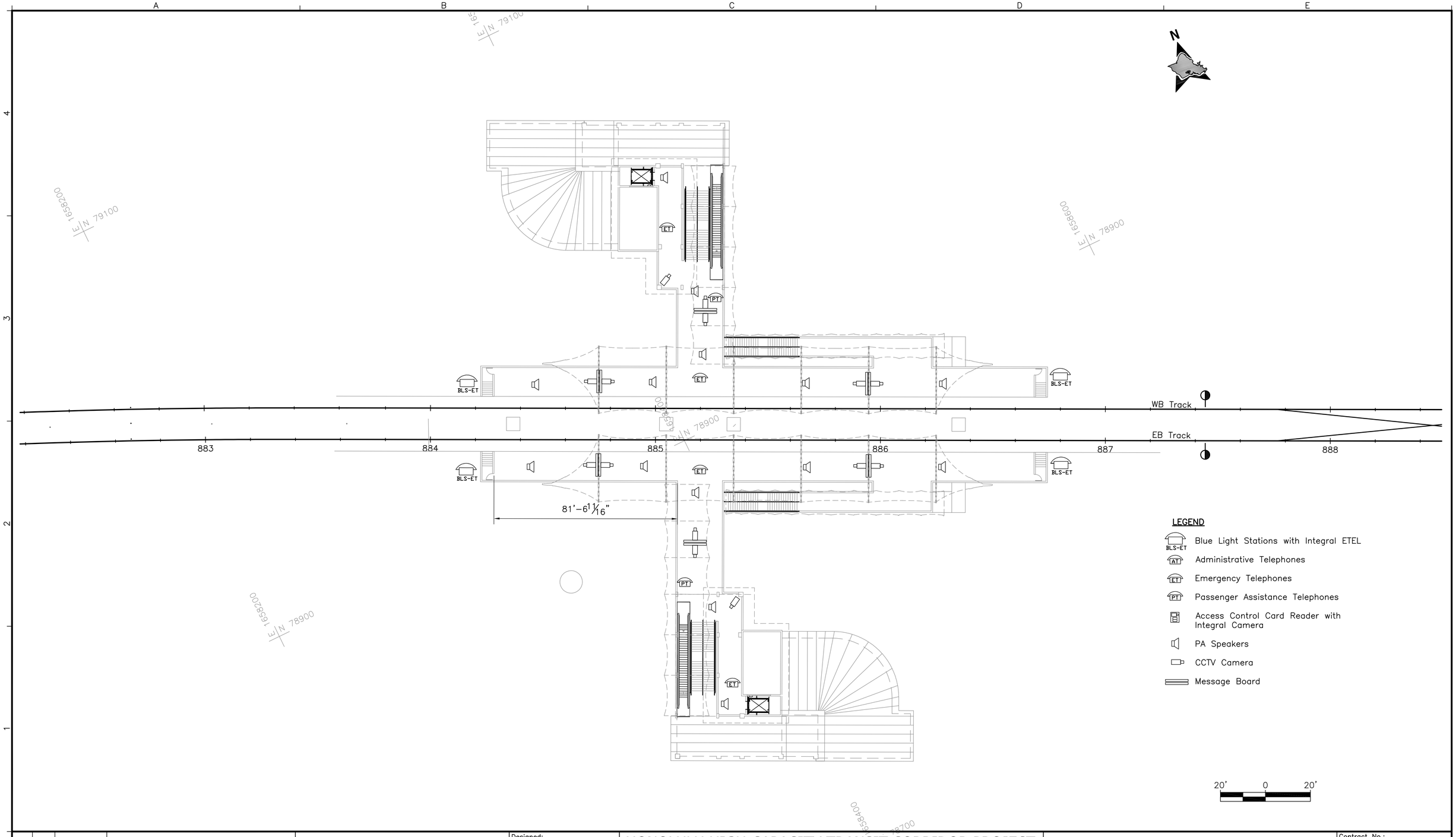
CORE SYSTEMS

PEARLRIDGE STATION COMMUNICATIONS PLAN

CONCOURSE LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM302
Drawing No: CM302 Rev. A
Scale: 1" = 20'
Page No. 152 of 202

2009–11–12 3:30 PM K:\CADD\Architectural\CS–R06–CM302.dwg



Rev	By	Date	Description
A	HB	11–13–09	Issued For Addendum

PRELIMINARY ENGINEERING SUBJECT TO REVISION

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 11–13–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

Prime Consultant: PB 200 YEARS 2009 PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:

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CORE SYSTEMS

PEARLRIDGE STATION COMMUNICATIONS PLAN

PLATFORM LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM303
Drawing No.: CM303 Rev. A
Scale: 1" = 20'
Page No. 153 of 202

2009–11–12 3:33 PM K:\CADD\Architectural\CS–R06–CM303.dwg