**City and County of Honolulu**
**Department of Transportation Services**

## Rapid Transit Division (RTD)

**KAKAʻAKO STATIONS DESIGN**
**CONTRACT SV-545**

# KAKAʻAKO STATION

## PRELIMINARY ENGINEERING DRAWINGS

**November 20, 2009**

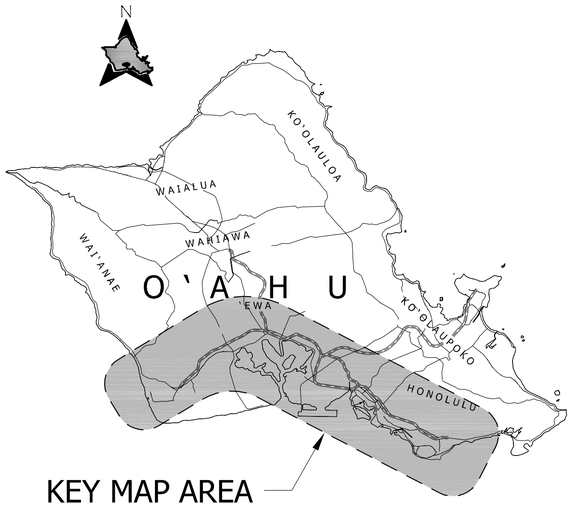
Prepared for:
**HHCTCP**

Prepared by:
***Parsons Brinckerhoff***
General Engineering Consultant (GEC)

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

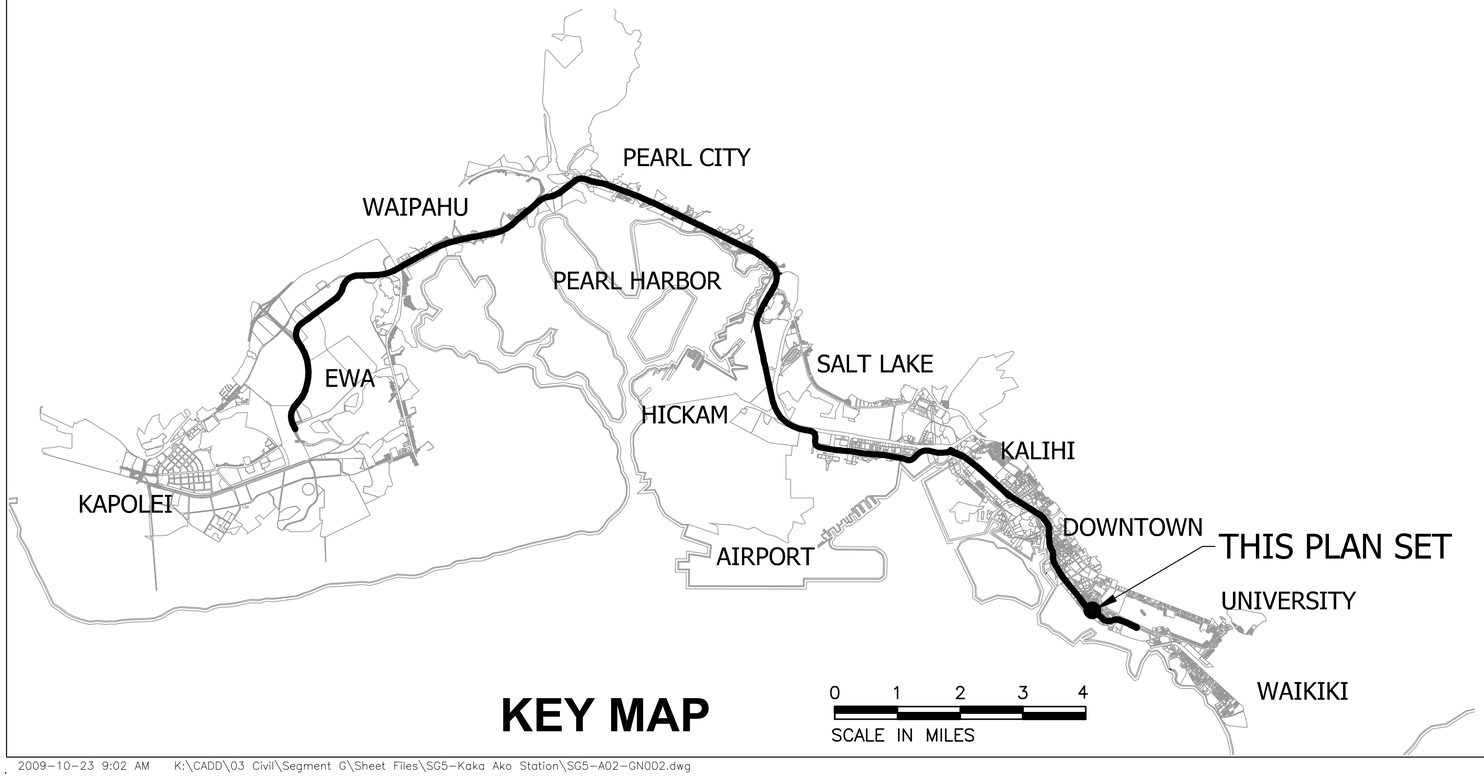
# KAKA'AKO STATION

## PRELIMINARY ENGINEERING DRAWINGS




City and County of Honolulu
Department of Transportation Services

Rapid Transit Division




## KEY MAP

2009-10-23 9:02 AM K:\CADD\03 Civil\Segment G\Sheet Files\SG5-Kaka Ako Station\SG5-A02-GN002.dwg

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| 5 | GN006 | DIRECTIVE DRAWING SUMMARY<br>CITY AND COUNTY OF HONOLULU (RTD)<br>SHEET 1 OF 2 |
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| N/A | RW020 | EXISTING RIGHT-OF-WAY PLAN &<br>PROPOSED ACQUISITION TABULATIONS<br>EB 1458+00 TO EB 1468+00 |
| N/A | TA020 | TRACK ALIGNMENT<br>PLAN & PROFILE<br>EB 1458+00 TO EB 1468+00 |
| N/A | RP020 | ROADWAY CONSTRUCTION PLAN<br>EB 1458+00 TO EB 1468+00 |
| N/A | GD020 | GUIDEWAY DRAINAGE LAYOUT PLAN<br>EB 1458+00 TO EB 1468+00 |
| **Traffic - City Center Guideway & Utilities** | | |
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| N/A | TR120 | MAINTENANCE OF TRAFFIC PLAN<br>EB 1458+00 TO EB 1468+00 |
| **Utilities - City Center Guideway & Utilities** | | |
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| N/A | UP138A | UTILITY RELOCATION PLAN<br>WATER, SEWER, DRAINAGE, PETROLEUM, & GAS<br>EB 1458+00 TO EB 1463+00 SHEET 2 OF 2 |
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| N/A | UP438 | UTILITY RELOCATION PLAN<br>ELECTRICAL & COMMUNICATIONS<br>EB 1458+00 TO EB 1463+00 |
| N/A | UP439 | UTILITY RELOCATION PLAN<br>ELECTRICAL & COMMUNICATIONS<br>EB 1463+00 TO EB 1468+00 |
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| **Structural - City Center Guideway & Utilities** | | |
| N/A | GP020 | STRUCTURAL PLAN & PROFILE<br>EB 1458+00 TO EB 1468+00 |
| N/A | FP008 | KAKA'AKO STATION<br>GUIDEWAY / STATION INTERFACE<br>PLATFORM LEVEL PLAN |
| N/A | FP008A | KAKA'AKO STATION<br>GUIDEWAY / STATION INTERFACE<br>SECTION A AND SECTION B |
| N/A | FP008B | KAKA'AKO STATION<br>GUIDEWAY / STATION INTERFACE<br>SECTION C |

| APPENDIX A - INFORMATIVE DRAWINGS | | |
|---|---|---|
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| **Landscape - City Center Guideway & Utilities** | | |
| N/A | LA020 | LANDSCAPE DEMOLITION PLAN<br>EB 1458+00 TO EB 1468+00 |
| N/A | LA138 | LANDSCAPE PLANTING AND<br>PAVING PLAN<br>EB 1458+00 TO EB 1463+00 |
| N/A | LA139 | LANDSCAPE PLANTING AND<br>PAVING PLAN<br>EB 1463+00 TO EB 1468+00 |
| **Traction Power - City Center Guideway & Utilities** | | |
| N/A | TN002 | CONTACT RAIL INSTALLATION<br>CONTACT RAIL SCHEMATIC LAYOUT<br>SHEET 2 OF 2 |
| N/A | TN009 | MASTER SINGLE LINE DIAGRAM<br>SHEET 4 OF 4 |
| **Communications - Core Systems** | | |
| N/A | CM613 | KAKA'AKO STATION<br>COMMUNICATIONS PLAN<br>GROUND LEVEL |
| N/A | CM614 | KAKA'AKO STATION<br>COMMUNICATIONS PLAN<br>PLATFORM LEVEL |

| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: C Shimizu
Date: 11-20-09

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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KAKA'AKO STATION
INDEX OF DRAWINGS

Contract No.: SV-545
CADD File: SG5-A02-GN003
Drawing No.: GN003 Rev.
Scale: N/A
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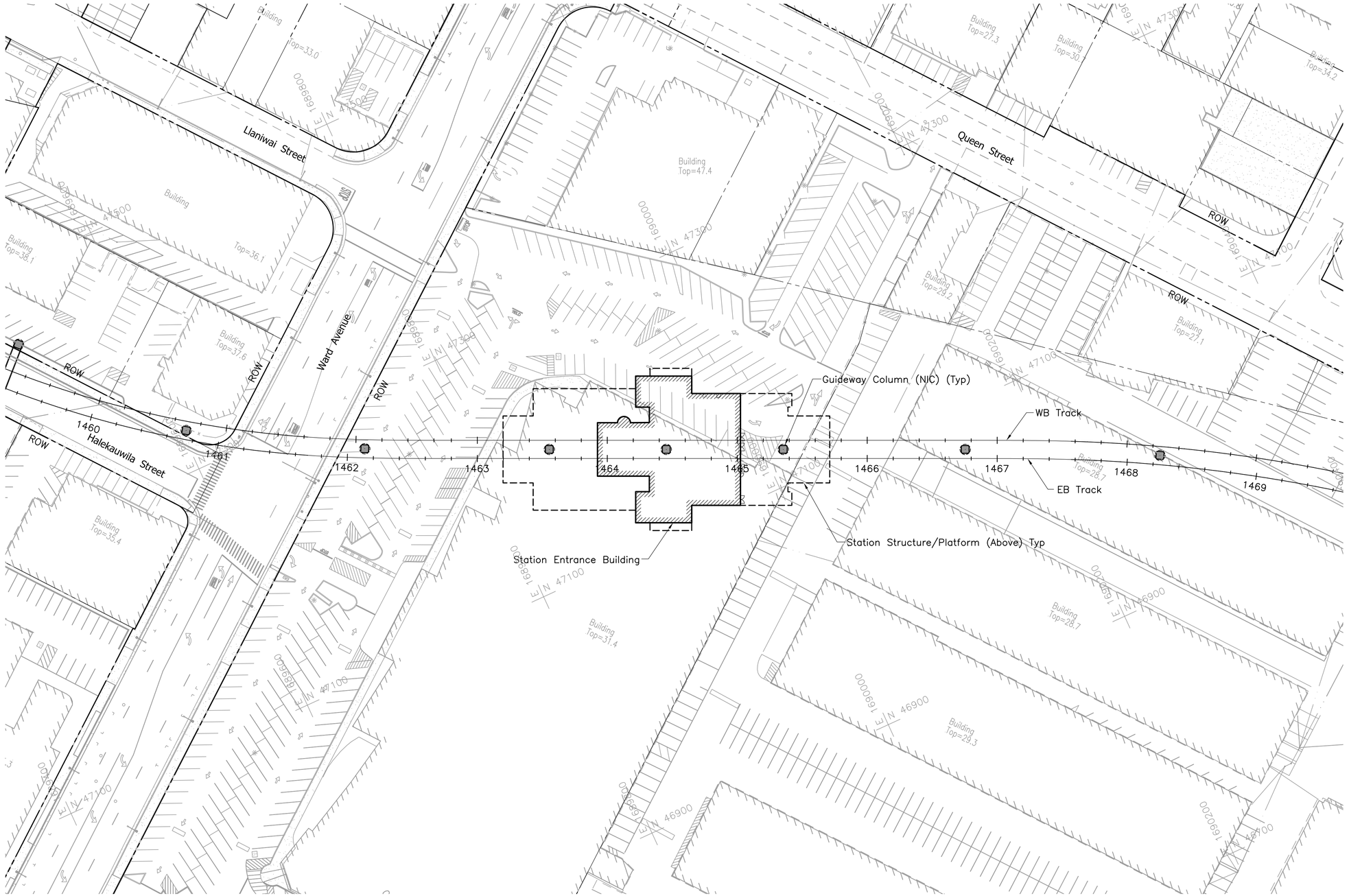


| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: M Jewell
Drawn: J Derosier
Checked: J Davis
Approved: C Shimizu
Date: 11–20–09

# 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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## KAKA'AKO STATION

## STATION AREA PLAN

Contract No.: SV–545
CADD File: SG5–A06–GN004
Drawing No: GN004 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<br>SURVEY CONTROL DATA<br>SHEET 1 OF 2 |
| CS002 | 0 | | CIVIL STANDARD<br>SURVEY CONTROL DATA<br>SHEET 2 OF 2 |
| | | **TRACKWORK** | |
| WS101 | 0 | | TRACKWORK STANDARD<br>STANDARD RAIL SECTIONS AND DATA |
| WS102 | 0 | | TRACKWORK STANDARD<br>PROPOSED WHEEL PROFILE AND<br>WHEEL/TRACK INTERFACE DISTANCES<br>GUARD RAIL & RESTRAINING RAIL |
| WS302 | 0 | | TRACKWORK STANDARD<br>NO. 6 TURNOUT BALLASTED/ CONCRETE TIES<br>WITH 13 FT CURVED SWITCHES<br>(UNIFORM RISERS) |
| WS303 | 0 | | TRACKWORK STANDARD<br>13 FT CURVED SPLIT SWITCH<br>BALLASTED TRACK/CONCRETE TIES<br>115 RE RAIL |
| WS305 | 0 | | TRACKWORK STANDARD<br>NO. 6 CONTOURED STEEL FROG<br>FLANGE BEARING<br>BALLASTED TRACK - 115 RE RAIL |
| WS306 | 0 | | TRACKWORK STANDARD<br>33C1 GUARD RAIL FOR<br>NO. 6 AND NO. 8 FROGS<br>BALLASTED TRACK (115 RE RAIL) |
| WS307 | 0 | | TRACKWORK STANDARD<br>SPECIAL TRACKWORK FASTENING PLATE<br>AND ASSEMBLY CONCRETE SWITCHTIES |
| WS308 | 0 | | TRACKWORK STANDARD<br>NO. 8 TURNOUT BALLASTED/ CONCRETE TIES<br>WITH 13 FT CURVED SWITCHES<br>(UNIFORM RISERS) |
| WS310 | 0 | | TRACKWORK STANDARD<br>NO. 8 CONTOURED STEEL FROG<br>FLANGE BEARING<br>BALLASTED TRACK - 115 RE RAIL |
| WS313 | 0 | | TRACKWORK STANDARD<br>NO. 6 CROSSOVER - BALLASTED TRACK<br>14'-0" TRACK CENTERS |
| WS321 | 0 | | TRACKWORK STANDARD<br>PRESTRESSED<br>TURNOUT CONCRETE SWITCH TIES<br>115 RE RAIL |
| WS340 | 0 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - BALLASTED<br>CONCRETE TIES WITH 19'-6" CURVED SWITCH<br>UNIFORM RISERS |
| WS810 | 0 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - DIRECT FIXATION<br>WITH 19'-6" CURVED SWITCH<br>PLINTH & RAIL LAYOUT |
| WS811 | 0 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - DIRECT FIXATION<br>NOTES & BILL OF MATERIALS |
| WS812 | 0 | | TRACKWORK STANDARD<br>19'-6" CURVED SPLIT SWITCH<br>DIRECT FIXATION TRACK<br>115RE RAIL |
| WS813 | 0 | | TRACKWORK STANDARD<br>NO. 10 CONTOURED STEEL FROG<br>FLANGE BEARING<br>DIRECT FIXATION TRACK - 115RE RAIL |
| WS814 | 0 | | TRACKWORK STANDARD<br>DIRECT FIXATION<br>TURNOUT GUARD RAIL<br>MOUNTING DETAILS |
| WS820 | 0 | | TRACKWORK STANDARD<br>NO. 10 CROSSOVER - DIRECT FIXATION<br>14'-0" TRACK CENTERS |
| WS831 | 0 | | TRACKWORK STANDARD<br>NO. 10 DOUBLE CROSSOVER<br>DIRECT FIXATION<br>14'-0" TRACK CENTERS |

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

| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: C Shimizu
Date: 11-20-09

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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KAKA'AKO STATION

STANDARD DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

Contract No.: SV-545
CADD File: SG5-A06-GN005
Drawing No.: GN005 Rev.
Scale: N/A
Page No. 4 of 50

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# RTD DIRECTIVE DRAWINGS

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

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

| RTD DIRECTIVE DRAWINGS | | | |
|---|---|---|---|
| **Drawing No.** | **Rev. No.** | **Applicable** | **Drawing Title** |
| **STRUCTURAL** | | | |
| WP012 | 0 | | STRUCTURAL DESIGN DIRECTVE<br>WATERPROOFING DETAILS<br>SHEET 2 OF 3 |
| WP013 | 0 | | STRUCTURAL DESIGN DIRECTVE<br>WATERPROOFING DETAILS<br>SHEET 3 OF 3 |
| **ARCHITECTURAL** | | | |
| AG001 | 0 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 1 OF 3 |
| AG002 | 0 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 2 OF 2 |
| AG003 | 0 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 3 OF 3 |
| AD001 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DESIGN LAYOUT<br>AT STATION ENTRANCE |
| AD002 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DESIGN<br>REQUIREMENTS |
| AD003 | 0 | | ARCHITECTURAL DIRECTIVE<br>TRACTION ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION |
| AD004 | 0 | | ARCHITECTURAL DIRECTIVE<br>HYDRAULIC ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION |
| AD005 | 0 | | ARCHITECTURAL DIRECTIVE<br>HOLELESS HYDRAULIC ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION |
| AD006 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY SECTIONS |
| AD007 | 0 | | ARCHITECTURAL DIRECTIVE<br>END OF PLATFORM DESIGN LAYOUT<br>SIDE PLATFORM |
| AD008 | 0 | | ARCHITECTURAL DIRECTIVE<br>END OF PLATFORM DESIGN LAYOUT<br>CENTER PLATFORM |
| AD009 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DETAILS |
| AD010 | 0 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>PIER COLUMN 1 |
| AD011 | 0 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>STATION COLUMN 2 |
| AD012 | 0 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>COLUMN SECTIONS |
| AD013 | 0 | | ARCHITECTURAL DIRECTIVE<br>SINGLE LANDING STAIR & ESCALATOR<br>REQUIREMENTS - CONCOURSE LEVEL |
| AD014 | 0 | | ARCHITECTURAL DIRECTIVE<br>MULTIPLE LANDING STAIR & ESCALATOR<br>REQUIREMENTS - CONCOURSE LEVEL |
| AD015 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY PLANS,<br>SECTION, AND DETAILS |
| AD016 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY<br>SECTION AND DETAILS |
| AD017 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY ELEVATIONS,<br>DATA TABULATION, AND DETAILS |
| AD018 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR SCHEDULE<br>SHEET 1 OF 2 |
| AD019 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR SCHEDULE<br>SHEET 2 OF 2 |

| Rev | By | Date | Description |
|---|---|---|---|
| . | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: C Shimizu
Date: 11-20-09

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

KAKA'AKO STATION

DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 1 OF 2

Contract No.: SV-545
CADD File: SG5-A06-GN006
Drawing No.: GN006 Rev.
Scale: N/A
Page No. 5 of 50

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# RTD DIRECTIVE DRAWINGS

## RTD DIRECTIVE DRAWINGS

| Drawing No. | Rev. No. | Applicable | Drawing Title |
|---|---|---|---|
| **ARCHITECTURAL** | | | |
| AD020 | 0 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL TOILET LAYOUT<br>AND ELEVATIONS |
| AD021 | 0 | | ARCHITECTURAL DIRECTIVE<br>DETECTABLE WARNING &<br>PRE-WARNING STRIP DETAILS |
| AD022 | 0 | | ARCHITECTURAL DIRECTIVE<br>ROLLING GRILLE DETAILS |
| AD023 | 0 | | ARCHITECTURAL DIRECTIVE<br>ESCALATOR SCHEDULE<br>SHEET 1 OF 2 |
| AD024 | 0 | | ARCHITECTURAL DIRECTIVE<br>ESCALATOR SCHEDULE<br>SHEET 2 OF 2 |
| AD101 | 0 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE LEVEL PLAN<br>SIDE PLATFORM PROTOTYPE |
| AD102 | 0 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM LEVEL PLAN<br>SIDE PLATFORM PROTOTYPE |
| AD103 | 0 | | ARCHITECTURAL DIRECTIVE<br>ROOF PLAN<br>SIDE PLATFORM PROTOTYPE |
| AD104 | 0 | | ARCHITECTURAL DIRECTIVE<br>REFLECTED CEILING PLAN - CONCOURSE<br>SIDE PLATFORM PROTOTYPE |
| AD105 | 0 | | ARCHITECTURAL DIRECTIVE<br>REFLECTED CEILING PLAN - PLATFORM<br>SIDE PLATFORM PROTOTYPE |
| AD106 | 0 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - CONCOURSE<br>SIDE PLATFORM PROTOTYPE |
| AD107 | 0 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - PLATFORM<br>SIDE PLATFORM PROTOTYPE |
| AD108 | 0 | | ARCHITECTURAL DIRECTIVE<br>LONGITUDINAL & CROSS SECTIONS<br>SIDE PLATFORM PROTOTYPE |
| AD109 | 0 | | ARCHITECTURAL DIRECTIVE<br>EXTERIOR ELEVATIONS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 2 |
| AD110 | 0 | | ARCHITECTURAL DIRECTIVE<br>EXTERIOR ELEVATIONS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 2 |
| AD111 | 0 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM ELEVATIONS<br>SIDE PLATFORM PROTOTYPE |
| AD112 | 0 | | ARCHITECTURAL DIRECTIVE<br>END BAY<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 2 |
| AD113 | 0 | | ARCHITECTURAL DIRECTIVE<br>END BAY<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 2 |
| AD114 | 0 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 2 |
| AD115 | 0 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 2 |
| AD116 | 0 | | ARCHITECTURAL DIRECTIVE<br>'V' COLUMN ELEVATION<br>SIDE PLATFORM PROTOTYPE |
| AD117 | 0 | | ARCHITECTURAL DIRECTIVE<br>CANOPY DETAILS<br>SIDE PLATFORM PROTOTYPE |
| AD118 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ELEV BRIDGE CANOPY DETAILS<br>SIDE PLATFORM PROTOTYPE |
| AD119 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR BRIDGE CANOPY COLUMN DETAILS<br>SIDE PLATFORM PROTOTYPE |

## RTD DIRECTIVE DRAWINGS

| Drawing No. | Rev. No. | Applicable | Drawing Title |
|---|---|---|---|
| **ARCHITECTURAL** | | | |
| AD120 | 0 | | ARCHITECTURAL DIRECTIVE<br>GUARDRAIL DETAILS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 3 |
| AD121 | 0 | | ARCHITECTURAL DIRECTIVE<br>GUARDRAIL DETAILS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 3 |
| AD122 | 0 | | ARCHITECTURAL DIRECTIVE<br>GUARDRAIL DETAILS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 3 OF 3 |
| AD123 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 5 |
| AD124 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 5 |
| AD125 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 3 OF 5 |
| AD126 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 4 OF 5 |
| AD127 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 5 OF 5 |
| AD201 | 0 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE LEVEL PLAN<br>CENTER PLATFORM PROTOTYPE |
| AD202 | 0 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM LEVEL PLAN<br>CENTER PLATFORM PROTOTYPE |
| AD203 | 0 | | ARCHITECTURAL DIRECTIVE<br>ROOF PLAN<br>CENTER PLATFORM PROTOTYPE |
| AD204 | 0 | | ARCHITECTURAL DIRECTIVE<br>REFLECTED CEILING PLAN - CONCOURSE<br>CENTER PLATFORM PROTOTYPE |
| AD205 | 0 | | ARCHITECTURAL DIRECTIVE<br>REFLECTED CEILING PLAN - PLATFORM<br>CENTER PLATFORM PROTOTYPE |
| AD206 | 0 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - CONCOURSE<br>CENTER PLATFORM PROTOTYPE |
| AD207 | 0 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - PLATFORM<br>CENTER PLATFORM PROTOTYPE |
| AD208 | 0 | | ARCHITECTURAL DIRECTIVE<br>LONGITUDINAL & CROSS SECTIONS<br>CENTER PLATFORM PROTOTYPE |
| AD209 | 0 | | ARCHITECTURAL DIRECTIVE<br>ELEVATIONS<br>CENTER PLATFORM PROTOTYPE |
| AD210 | 0 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL END BAY DETAILS<br>CENTER PLATFORM PROTOTYPE |
| AD211 | 0 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY DETAILS<br>CENTER PLATFORM PROTOTYPE |
| AD212 | 0 | | ARCHITECTURAL DIRECTIVE<br>'V' COLUMN DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 1 OF 3 |
| AD213 | 0 | | ARCHITECTURAL DIRECTIVE<br>'V' COLUMN DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 2 OF 3 |
| AD214 | 0 | | ARCHITECTURAL DIRECTIVE<br>'V' COLUMN DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 3 OF 3 |

## RTD DIRECTIVE DRAWINGS

| Drawing No. | Rev. No. | Applicable | Drawing Title |
|---|---|---|---|
| **ARCHITECTURAL** | | | |
| AD215 | 0 | | ARCHITECTURAL DIRECTIVE<br>COLUMN MISC DETAILS<br>CENTER PLATFORM PROTOTYPE |
| AD216 | 0 | | ARCHITECTURAL DIRECTIVE<br>STAIR & BRIDGE CANOPY DETAILS<br>CENTER PLATFORM PROTOTYPE |
| AD217 | 0 | | ARCHITECTURAL DIRECTIVE<br>RAILING DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 1 OF 2 |
| AD218 | 0 | | ARCHITECTURAL DIRECTIVE<br>RAILING DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 1 OF 2 |
| AD219 | 0 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>CENTER PLATFORM PROTOTYPE |
| **MECHANICAL** | | | |
| MD101 | 0 | | MECHANICAL DIRECTIVE<br>HVAC SYSTEMS |
| MD201 | 0 | | MECHANICAL DIRECTIVE<br>PLUMBING AND DRAINAGE SYSTEMS |
| MD301 | 0 | | MECHANICAL DIRECTIVE<br>FIRE PROTECTION SYSTEMS |
| MD401 | 0 | | MECHANICAL DIRECTIVE<br>SEISMIC AND WIND<br>INDICATOR SYSTEMS |
| MD501 | 0 | | MECHANICAL DIRECTIVE<br>TYPICAL TPSS AND GBS AIR<br>CONDITIONING AND CONTROL SYSTEM |
| **ELECTRICAL** | | | |
| ED001 | 0 | | GENERAL ELECTRICAL NOTES |
| ED002 | 0 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION<br>ONE-LINE DIAGRAM |
| ED003 | 0 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY<br>LIGHTING<br>PLANS |
| ED004 | 0 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY<br>LIGHTING<br>DOUBLE TRACK |
| ED005 | 0 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY<br>LIGHTING<br>SINGLE TRACK |
| ED006 | 0 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION<br>SIDE PLATFORM LIGHTING |
| ED007 | 0 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION<br>CENTER PLATFORM LIGHTING |
| ED008 | 0 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION<br>ELECTRICAL, UPS, TCC ROOMS |
| **TRACTION POWER** | | | |
| TD001 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION<br>RACEWAY LAYOUT |
| TD002 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL DC RACEWAYS ON<br>AERIAL GUIDEWAY<br>SECTIONS AND DETAILS |
| TD003 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL MANHOLE/PULLBOX<br>DETAILS |
| TD004 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL UNDERGROUND DUCTBANK<br>SECTIONS & DETAILS |
| TD005 | 0 | | TRACTION POWER DIRECTIVE<br>SUBSTATION CABLE TRENCH<br>DETAILS |

## RTD DIRECTIVE DRAWINGS

| Drawing No. | Rev. No. | Applicable | Drawing Title |
|---|---|---|---|
| **TRACTION POWER** | | | |
| TD006 | 0 | | TRACTION POWER DIRECTIVE<br>SUBSTATION CABLE TRENCH<br>DETAILS<br>ALTERNATIVE |
| TD050 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION GROUND GRID<br>ARRANGEMENT |
| TD051 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL GAP BREAKER<br>STATION GROUND GRID ARRANGEMENT |
| TD052 | 0 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION GROUND GRID<br>DETAILS |
| TD100 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>SPLICE JOINT ASSEMBLY |
| TD101 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>END-APPROACH ASSEMBLY |
| TD102 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>EXPANSION JOINT ASSEMBLY |
| TD103 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>ANCHOR ASSEMBLY<br>DIRECT FIXATION TRACK |
| TD104 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>MOUNTING & PEDESTAL DETAILS |
| TD105 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>INSULATOR BRACKET AND ANCHOR<br>BALLASTED TRACKS |
| TD106 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD ASSEMBLY |
| TD107 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD MOUNTING DETAILS |
| TD108 | 0 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD ASSEMBLY<br>AT EXPANSION JOINT |
| **TRAIN CONTROL** | | | |
| ND001 | 0 | | TRAIN CONTROL DIRECTIVE<br>MAINLINE SWITCH MACHINE LAYOUT<br>DIRECT FIXATION |
| ND002 | 0 | | TRAIN CONTROL DIRECTIVE<br>MAINLINE SWITCH MACHINE LAYOUT<br>BALLASTED TRACK |
| ND003 | 0 | | TRAIN CONTROL DIRECTIVE<br>YARD SWITCH MACHINE LAYOUT<br>BALLASTED TRACK |
| **SYSTEMS INTEGRATION** | | | |
| ID001 | 0 | | SYSTEMS INTEGRATION DIRECTIVE<br>CONTRACT WORK DELINEATION<br>AERIAL GUIDEWAY |

| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: C Shimizu
Date: 11-20-09

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

KAKA'AKO STATION

DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 2 OF 2

Contract No.: SV-545
CADD File: SG5-A06-GN007
Drawing No.: GN007 Rev.
Scale: N/A
Page No. 6 of 50

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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 |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: C Shimizu
Date: 11–20–09

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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KAKA'AKO STATION

STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU

SHEET 1 OF 2

Contract No.: SV–545
CADD File: SG5–A06–GN008
Drawing No.: GN008 Rev.
Scale: N/A
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# STANDARD DETAILS SUMMARY–CITY AND COUNTY OF HONOLULU

| SHEET NO. | APPLICABLE | TITLE | DATE |
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| S–7 | | Advance Riser Connection | 09/1984 |
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| 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 |
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| S–18 | | Pre–cast Concrete Drop Manhole – Sections | 09/1984 |
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| S–30 | | Drop Manhole – Sections | 09/1984 |
| S–31 | | Manhole Cover – Type SA | 09/1984 |
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| 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 |
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| S–40 | | Manhole Frame – Type SD | 09/1984 |
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| 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 |
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| S–47 | | PVC Pipe – Bedding Requirements | 09/1984 |
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| P–2 | | Fence and Gate Details | 09/1984 |
| P–3 | | Oil Seals and Related Piping | 09/1984 |
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| P–5 | | Oil Seals and Related Piping | 09/1984 |
| P–6 | | Removable Post and Chain Details | 09/1984 |
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| P–10 | | Motor Shaft and Coupling | 09/1984 |
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| 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 |
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| T–6 | | Road Marker | 09/1984 |
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| T–12 | | Parking Design Standard, One–Way Traffic | 09/1984 |
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| SHEET NO. | APPLICABLE | TITLE | DATE |
|---|---|---|---|

| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: C Shimizu
Date: 11–20–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
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KAKA'AKO STATION

STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU

SHEET 2 OF 2

Contract No.: SV–545
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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: J Derosier
Checked: L Karamatsu
Approved: C Shimizu
Date: 11–20–09

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

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KAKA'AKO STATION

STANDARD PLANS SUMMARY
STATE OF HAWAII (HDOT)

SHEET 1 OF 2

Contract No.: SV–545
CADD File: SG5–A06–GN010
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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 |
|---|---|---|---|

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Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: C Shimizu
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STATE OF HAWAII (HDOT)

SHEET 2 OF 2

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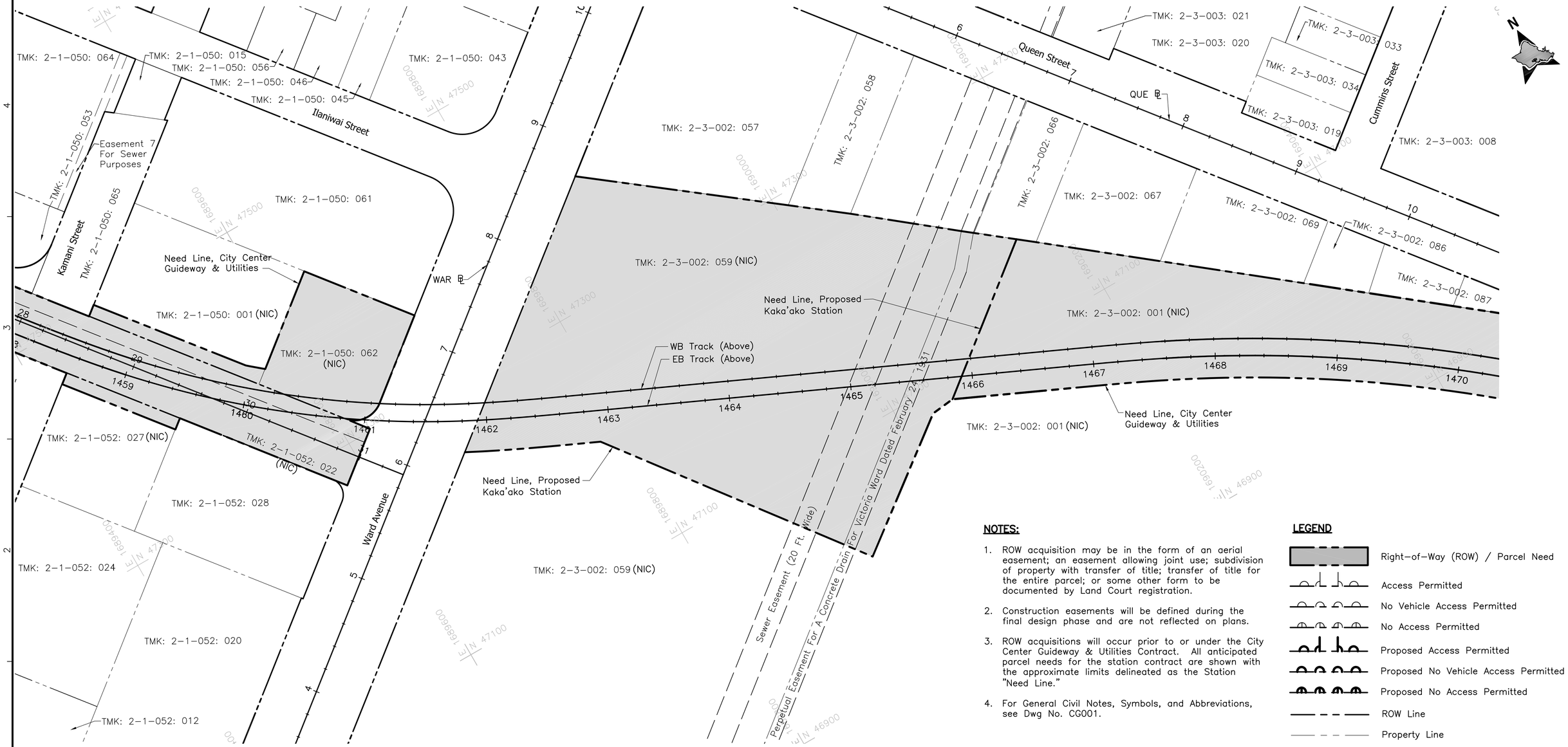


| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 2-1-050:001 | Partial | 900 | Halekauwila St | Commercial |
| 2-1-050:062 | Full | 404 | Ward Ave | Commercial |
| 2-1-052:022 | Partial | – | – | Commercial |
| 2-1-052:027 | Partial | 901, 903, 905, 907, 909, 911, 913, 915, 917 | Halekauwila St | Commercial |

| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 2-3-002:001 | Partial | 310, 330, 340 | Kamakee St | Commercial/Industrial |
| 2-3-002:001 | Partial | 1020, 1030, 1044, 1060 | Auahi St | Commercial/Industrial |
| 2-3-002:059 | Partial | 333, 953, 953A, 953B, 953C, 953D, 953E, 953F | Queen St | Commercial |

**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. Construction easements will be defined during the final design phase and are not reflected on plans.
3. ROW acquisitions will occur prior to or under the City Center Guideway & Utilities Contract. All anticipated parcel needs for the station contract are shown with the approximate limits delineated as the Station "Need Line."
4. For General Civil Notes, Symbols, and Abbreviations, see Dwg No. CG001.

**LEGEND**

- Right-of-Way (ROW) / Parcel Need
- Access Permitted
- No Vehicle Access Permitted
- No Access Permitted
- Proposed Access Permitted
- Proposed No Vehicle Access Permitted
- Proposed No Access Permitted
- ROW Line
- Property Line
- Easement Line
- C/L Easement Line

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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Drawn: L Karamatsu
Checked: K Wong
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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

KAKA' AKO STATION

# EXISTING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS

Contract No.: SV-545
CADD File: SG5-B04-RW001
Drawing No: RW001 Rev.
Scale: 1"=40'
Page No. 11 of 50

2009-11-13 4:22 PM K:\CADD\03 Civil\Segment G\Sheet Files\SG5-Kaka Ako Station\SG5-B04-RW001.dwg

# UTILITIES SYMBOLS

- Exist AT&T Line
- Exist Cable Television
- Exist Cable Television, Overhead
- Exist Communication Fiber Optic
- Exist Drain Line (Size in Inches)
- Exist Electrical Line, Overhead
- Exist Electrical Line
- Exist Fire Alarm
- Exist Fuel or Oil Line (Size in Inches)
- Exist Force Main (Size in Inches)
- Exist Gas Line (Size in Inches)
- Exist Non–Potable Water Line (Size in Inches)
- Exist Sandwich Isle Communications Line
- Exist Sewer Line (Size in Inches)
- Exist Signal Corps Line
- Exist Street Light Conduit
- Exist Telephone Line, Overhead
- Exist Telephone Line
- Exist Traffic Signal Conduit
- 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

- Prop Drain Line (Size in Inches)
- Prop Fuel or Oil Line (Size in Inches)
- Prop Gas Line (Size in Inches)
- Prop Non–Potable Water Line (Size in Inches)
- Prop Sewer Line (Size in Inches)
- Prop Water Line (Size in Inches)

- Prop Air Relief Valve
- Prop Backflow Preventor
- Prop Catch Basin
- Prop Catch Basin
- Prop Clean Out
- Prop Drain Inlet
- Prop Drain Manhole
- Prop Swale or Slope
- Prop Fire Hydrant
- Prop Gas Manhole
- Prop Gas Valve
- Prop Sewer Manhole
- Prop Water Meter
- Prop Water Manhole
- Prop Water Valve
- Cut and Plug
- Abandon in Place
- Demolish/Remove

# UTILITIES ABBREVIATIONS

| | |
|---|---|
| & | And |
| Abnd | Abandoned |
| AC | Asphalt Concrete |
| AF | Air Force |
| Approx | Approximate |
| ARV | Air Relief Valve |
| Ave | Avenue |
| ℄ | Baseline |
| BFP | Backflow Preventor |
| BGGV | Bevel–geared gate valve |
| Blvd | Boulevard |
| BWS | Board of Water Supply |
| ℄ | Centerline |
| C&C | City and County |
| CB | Catch Basin |
| CBMH | Catch Basin Manhole |
| CO | Cleanout |
| Comm | Communication |
| Conc | Concrete |
| CTV | Cable TV |
| D | Drain |
| DI | Drainage Inlet |
| DMH | Drainage Manhole |
| DS | Down Spout |
| Dwg | Drawing |
| E | Electric, Electrical |
| EB | Electrical Box |
| EH | Electrical Handhole |
| Elec | Electric, Electrical |
| EP | Electric Pole |
| EMH | Electrical Manhole |
| EV | Electrical Vault |
| Exist | Existing |
| F | Fuel |
| FA | Fire Alarm |
| FAB | Fire Alarm Box |
| FH | Fire Hydrant, Farrington Highway |
| FM | Force Main |
| FMH | Fuel Manhole |
| FOC | Fiber Optic Cable |
| FSA | Fire Safety Alarm |
| Fwy | Freeway |
| G | Gas |
| GM | Gas Meter |
| GMH | Gas Manhole |
| GV | Gas Valve, Gate Valve |
| GW | Guy Wire |
| HECO | Hawaiian Electric Company |
| HH | Handhole |
| HITS | Hawaii Information Transfer System |
| HP | High Pressure |
| HT | Hawaiian Telcom |
| HVP | High Voltage Power |
| HW | Headwall |
| Hwy | Highway |
| ICB | Irrigation Control Box |
| ICV | Irrigation Control Valve |
| Irr | Irrigation |
| kV | Kilovolt |
| Lat | Lateral |
| Ln | Lane |
| LP | Light Pole |
| Lt | Light |
| MH | Manhole |
| MHP | Manhole (Positive) |
| MHN | Manhole (Negative) |
| Misc | Miscellaneous |
| MTCO | Mutual Telephone Company |
| MW | Monitoring Well |
| NPW | Non–Potable Water |
| N/A | Not Applicable |
| NS | North–South Road |
| OCTv | Overhead Cable Television |
| OH | Overhead |
| OHE | Overhead Electrical |
| OT | Overhead Telephone |
| PB | Pullbox |
| Pkwy | Parkway |
| Pl | Place |
| PM | Petroleum Marker |
| PP | Power Pole |
| PPB | Pedestrian Push Button |
| Prop | Proposed |
| PVC | Polyvinyl Chloride |
| Pwr | Power |
| RCP | Reinforced Concrete Pipe |
| Rd | Road |
| ROW | Right–of–Way |
| S | Sewer |
| SC | Signal Corps Line |
| SDMH | Storm Drain Manhole |
| SIC | Sandwich Isle Communications |
| Sig | Signal |
| SL | Street Light |
| SL | Sewer Line |
| SLB | Street Light Box |
| SLC | Street Light Conduit |
| SMH | Sewer Manhole |
| St | Street |
| St Mon | Street Monument |
| T | Top |
| TBD | To Be Determined |
| TCB | Traffic Control Box |
| Tel | Telephone |
| Temp | Temporary |
| TGC | The Gas Company |
| TL | Traffic Light |
| TMH | Telephone Manhole |
| TP | Telephone Pole |
| TPOL | Traffic Signal Pole |
| TRB | Traffic Box |
| TS | Top Stem |
| TSB | Traffic Signal Box |
| TSC | Traffic Signal Conduit |
| TSL | Traffic Signal |
| TV | Television |
| Typ. | Typical |
| UB | Utility Box |
| UD | Underdrain |
| UMH | Utility Manhole |
| UP | Utility Pole |
| USN | United States Navy |
| USAF | United States Air Force |
| Util | Utility |
| W | Water |
| WL | Water Line |
| WM | Water Meter |
| WMH | Water Manhole |
| Wtr | Water |
| WV | Water Valve |
| WVB | Water Valve Box |
| WVMH | Water Valve Manhole |

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 11–20–09

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: R. M. TOWILL CORPORATION
Planning – Engineering – Environmental Services – Photogrammetry – Surveying – Construction Management
808 842 1133 2024 North King Street Suite 200 Honolulu Hawaii 96819–3470

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KAKA`AKO STATION

GENERAL UTILITIES SYMBOLS AND ABBREVIATIONS

Contract No.: SV–545
CADD File: SG5–D01–UG001
Drawing No: UG001 Rev.
Scale: N/A
Page No. 12 of 50

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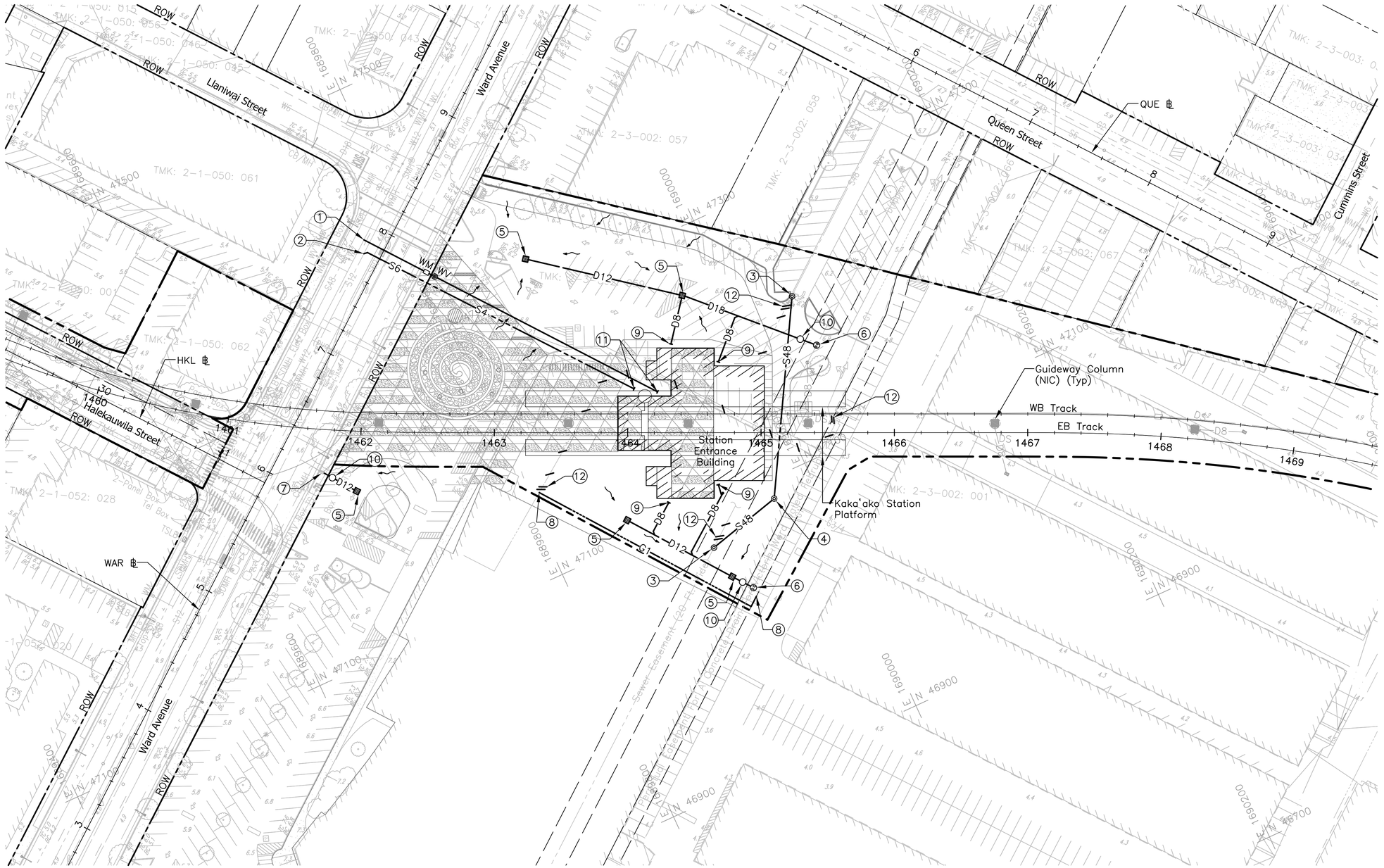


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NOTES:

1. For General Utilities Symbols and Abbreviations, see Dwg No. UG001.
2. The configuration shown relative to NIC work is under development and subject to change.

UTILITIES NOTES:

(1) New water lateral
Connect to exist W12

(2) New sewer lateral
Connect to exist S12

(3) New SMH
Connect to exist S48

(4) New SMH

(5) New DI

(6) New SDMH
Connect to exist drainline

(7) Connect to exist CB

(8) Connect to exist G1

(9) D8
Point for Mechanical connection

(10) New Storm Water Treatment Unit, CDS Model manufactured by Contech, or approved equivalent.

(11) Point for Mechanical connection

(12) Cut and Plug

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Toba
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 11-20-09

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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KAKA`AKO STATION

UTILITIES PLAN
WATER, SEWER, & DRAINAGE

Contract No.: SV-545
CADD File: SG5-D03-UP001
Drawing No.: UP001 Rev.
Scale: 1"=40'
Page No. 13 of 50

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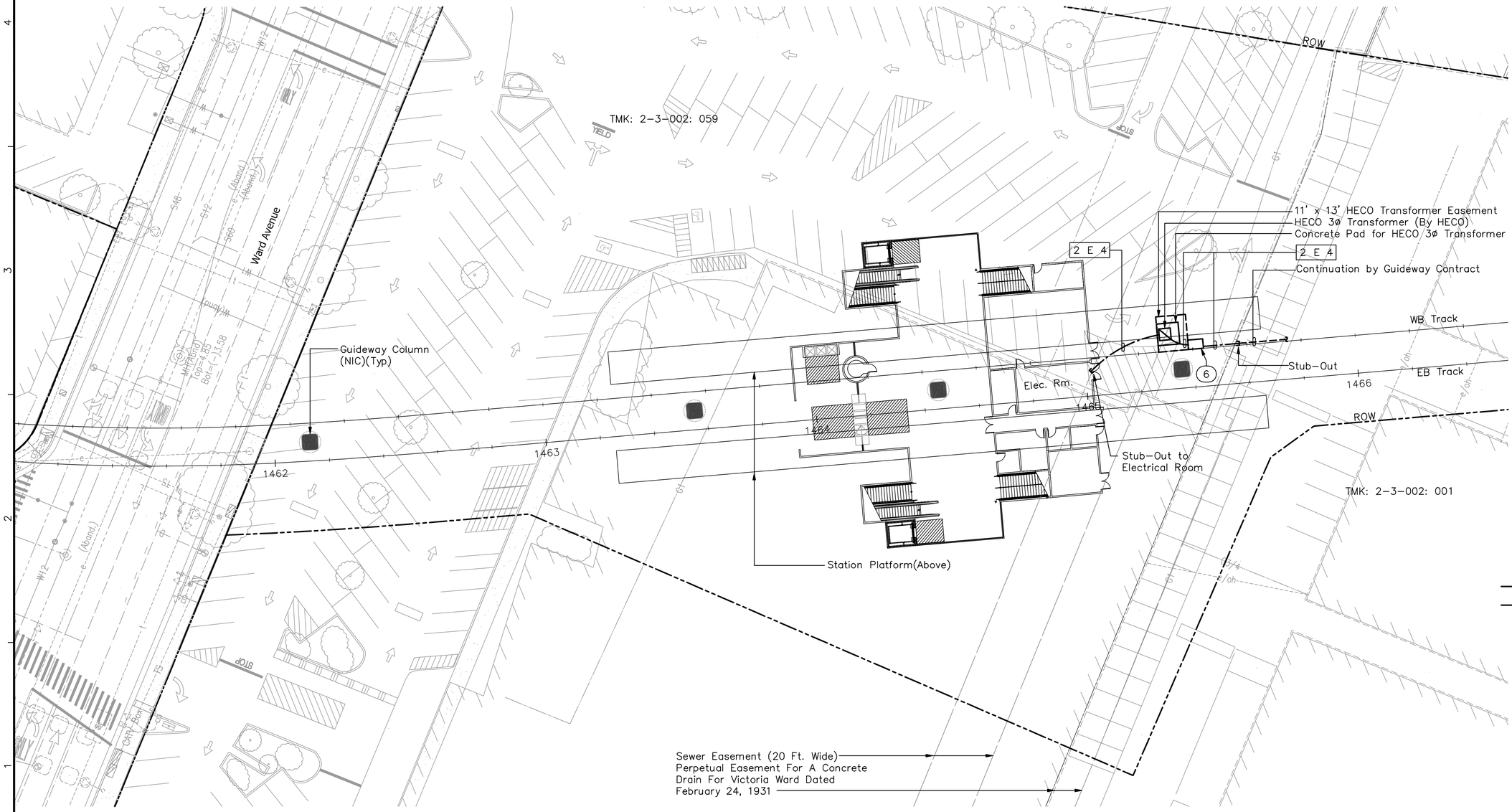


**NOTES:**

1. For General Utilities Symbols and Abbreviations, see Dwg. No. UG001
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.

**LEGEND:**

- (6) 3' x 5' HECO Handhole
- Handhole or Pullbox
- Underground Ductline
- Ductline, Stub–Out 5'–0" from edge of sidewalk or as indicated on plan. Provide concrete stub–out marker.
- 2 E 4 Duct Section Indicator

Duct Designation

2 E 4
- Conduit Size
- System "E" Electric
- Number of Ducts

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: G Takase
Drawn: R Nagata
Checked: S Sakai
Approved: S Sakai
Date: 11–20–09

# 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: RONALD N. S. HO & ASSOCIATES, INC.
Electrical Engineers
2138 Algaroba Street, Suite A Honolulu, Hawaii 96826
Phone: (808)941–0577 Fax: (808)945–2646


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KAKA'AKO STATION

## UTILITIES PLAN ELECTRICAL

Contract No.: SV–545
CADD File: SG5–D03–UP002
Drawing No: UP002 Rev.
Scale: 1"=20'
Page No. 14 of 50

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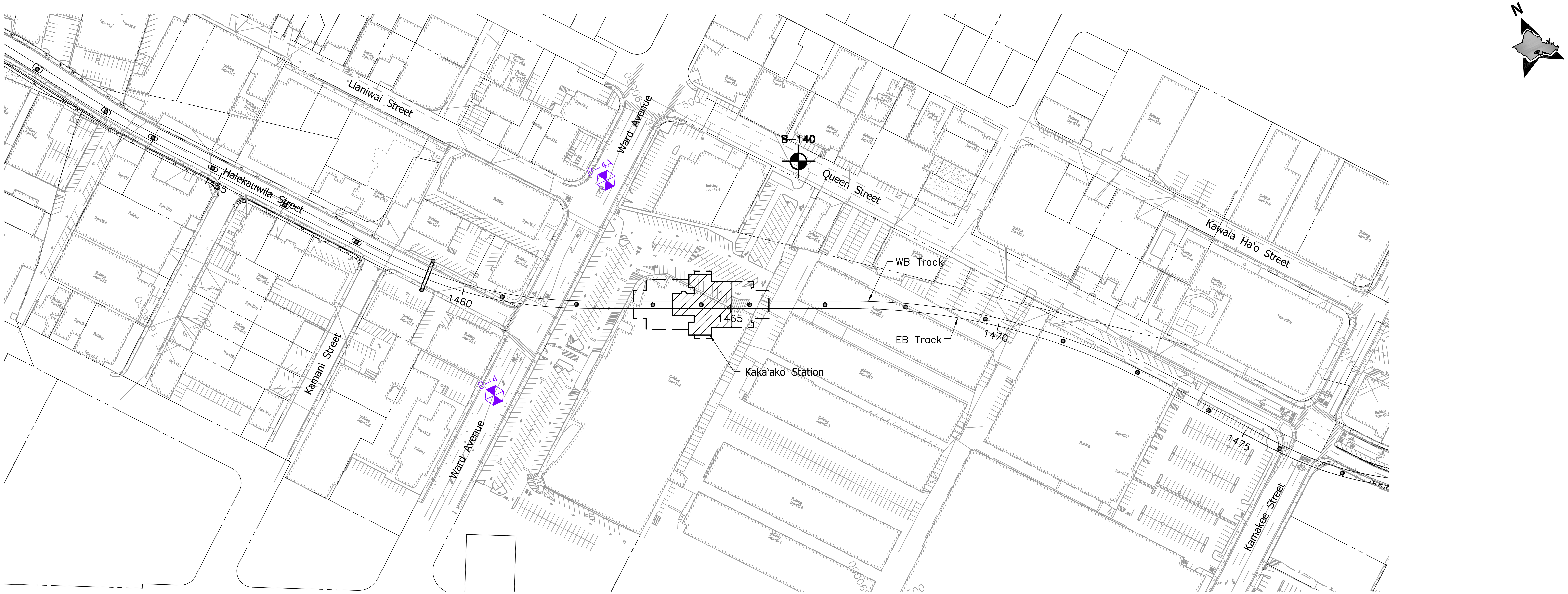


## GEOTECHNICAL NOTES:

1. Geotechnical Investigations Documents
   a. December 2009; Geotechnical Data Report, Honolulu High-Capacity Transit Corridor Project – City Center Segment, Middle Street to Ala Moana Center, Honolulu, Oahu, Hawaii; W.O. 6000-00; 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.
   c. March 1973; Sewer Tunnel Relief (Ward Avenue Relief Sewer); Honolulu, Oahu, Hawaii; Department of Public Works, City and County of Honolulu, Division of Sewers; Job No. 46-72. [Stick Logs Only]
2. Location of the City-provided geotechnical investigation, document 1.a above, documented in the GDR.
3. Locations of March 1973 investigations, Document 1.c above, are approximated from available plans.
4. Document 1.b is a reference document made available to the Designer for information only as an aid to understanding regional 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-140 – Completed Geotechnical Boring, Ref 1.a

B-4 – Geotechnical Boring, Ref 1.c

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: 11-20-09

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

Prime Consultant: PARSONS BRINCKERHOFF
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Subconsultant:

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KAKA'AKO STATION

GEOTECHNICAL INVESTIGATIONS PLAN

Contract No.: SV-545
CADD File: SG5-F02-GE001
Drawing No: GE001
Rev.:
Scale: 1"=100'



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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
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
      * Sl = 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: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# 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: NOEI NAGAMINE OKAWA ENGINEERS INC.
CONSULTING STRUCTURAL ENGINEERS
1003 BISHOP STREET, SUITE 2025
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KAKA'AKO STATION

# GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 1 OF 4

Contract No.: SV–545
CADD File: SG5–G01–SG001
Drawing No: SG001 Rev.
Scale: N/A
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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 ½–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 ½–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: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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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KAKA'AKO STATION

# GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 2 OF 4

Contract No.: SV–545
CADD File: SG5–G01–SG002
Drawing No.: SG002 Rev.:
Scale: N/A
Page No.: 17 of 50

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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 | Rlgh–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 |
| 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: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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KAKA'AKO STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 3 OF 4

Contract No.: SV–545
CADD File: SG5–G01–SG003
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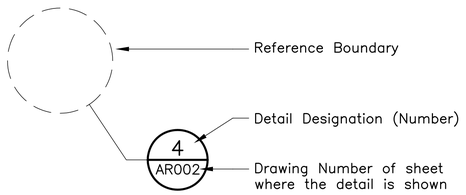
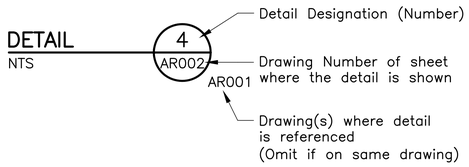
# STRUCTURAL SYMBOLS

## DETAILS

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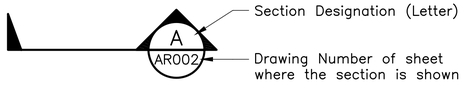
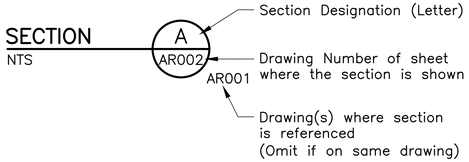
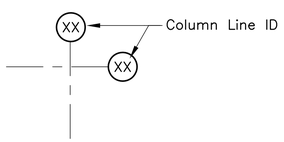



## COLUMN LINE GRID INDICATOR

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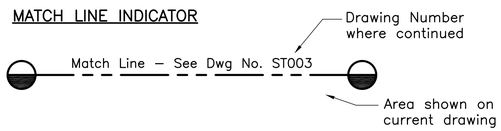
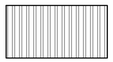


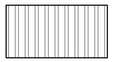

## GENERAL SYMBOLS

| | |
|---|---|
| & | 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)

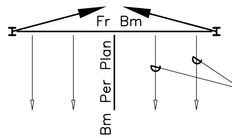


Metal Deck w/No Topping (Plan View)

Slab on Grade (Plan View)

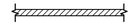
## LEGEND

Struct. Steel "X" Braced Frame (Above)

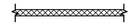


Non–Struct. Partition (See Arch. Drawings)

Non–Struct. Shaft Wall

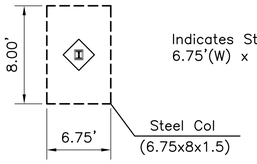


Tilt–Up Wall

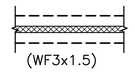


CMU Wall

Wall Below



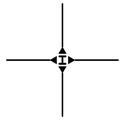

Indicates Steel Moment Frame Column & 6.75'(W) x 8.00'(L) x 1.5' Thk Footing



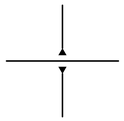

Indicates Continuous Footing 3'(W) x 1.5'(T)

Concrete Slab

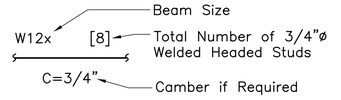
Prestressed Element with Concrete Topping



Indicates Beam–to–Column Moment Connection



Indicates Beam–to–Beam Moment Connection




| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: NOEI NAGAMINE OKAWA ENGINEERS INC.
CONSULTING STRUCTURAL ENGINEERS
1003 BISHOP STREET, SUITE 2025
HONOLULU, HAWAII 96813
PH: (808) 536–2626 FAX: (808) 536–3926

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KAKA'AKO STATION

GENERAL STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 4 OF 4

Contract No.: SV–545
CADD File: SG5–G01–SG004
Drawing No.: SG004 Rev.
Scale: N/A
Page No. 19 of 50

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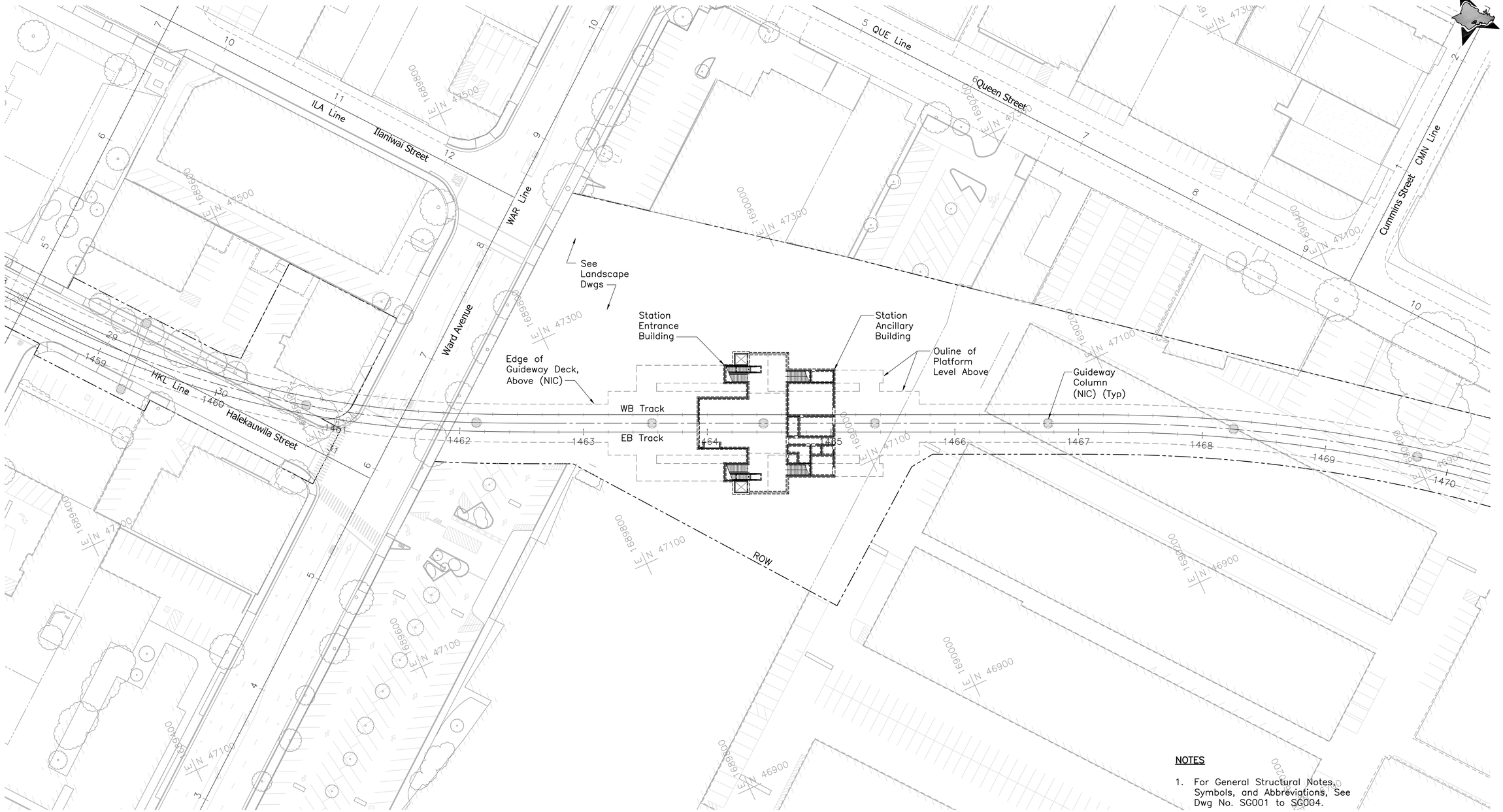


NOTES

1. For General Structural Notes, Symbols, and Abbreviations, See Dwg No. SG001 to SG004.
2. The configuration shown relative to NIC work is under development and subject to change.

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# 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: NOEI NAGAMINE OKAWA ENGINEERS INC.
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## KAKA'AKO STATION

## STRUCTURAL SITE PLAN

GROUND LEVEL

Contract No.: SV–545
CADD File: SG5–G12–ST001
Drawing No: ST001 Rev.
Scale: 1"=40'
Page No. 20 of 50

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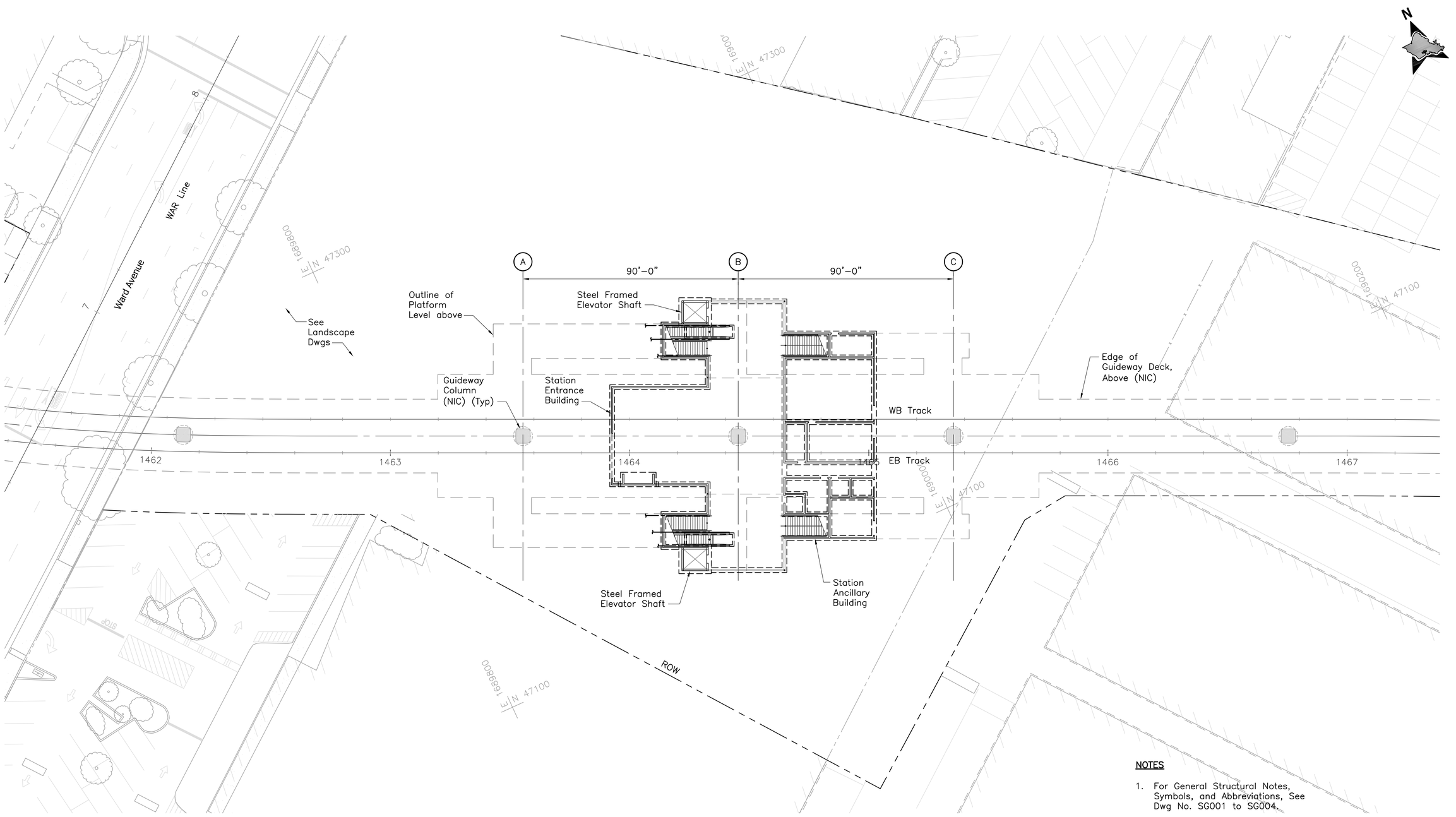


NOTES

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| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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PH: (808) 536-2626 FAX: (808) 536-3926

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KAKA'AKO STATION

## STRUCTURAL OVERALL REFERENCE PLAN

GROUND LEVEL

Contract No.: SV–545
CADD File: SG5–G13–ST002
Drawing No.: ST002 Rev.
Scale: 1"=20'
Page No. 21 of 50

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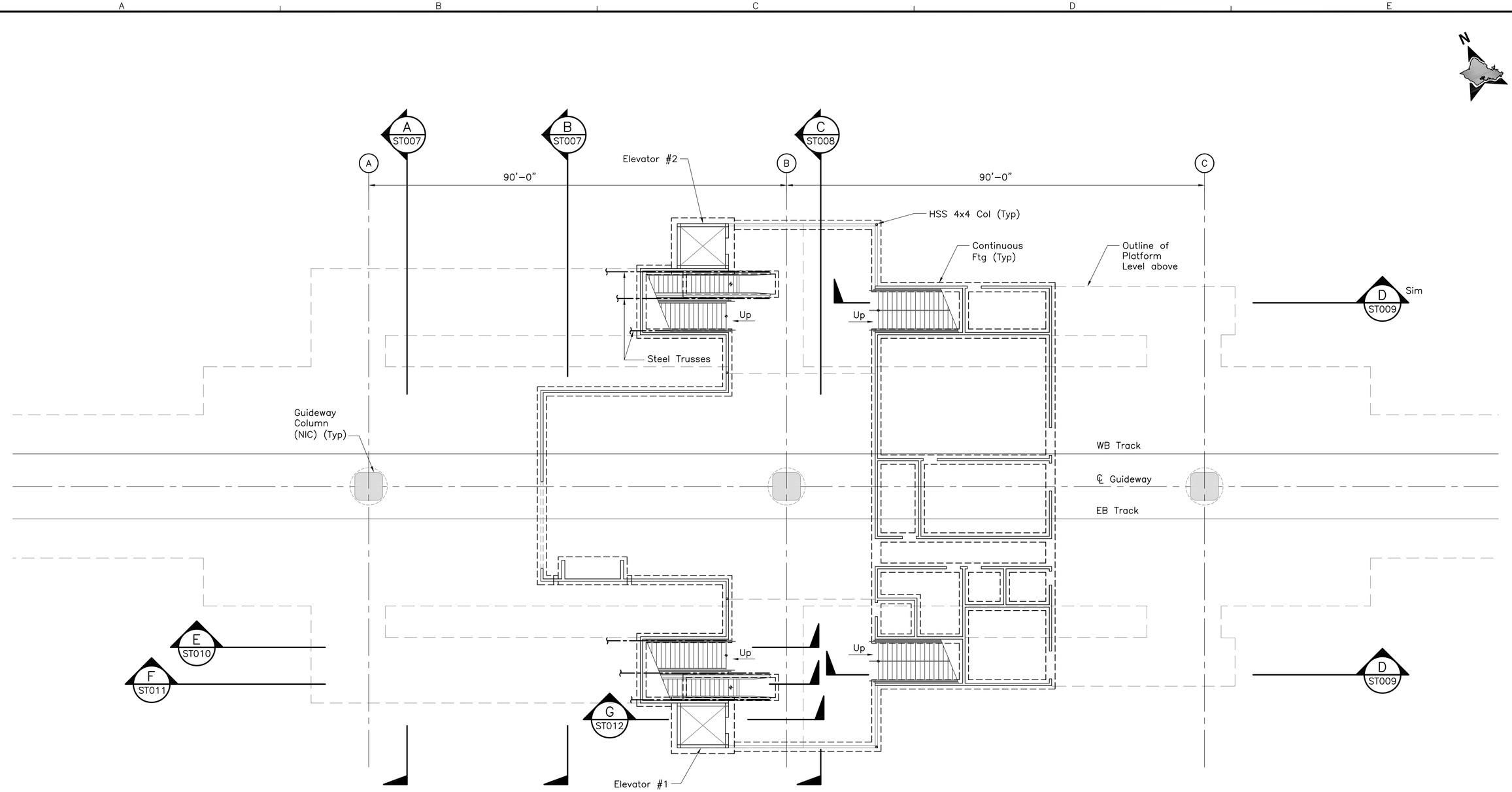


NOTES

1. For General Structural Notes, Symbols, and Abbreviations, See Dwg No. SG001 to SG004.
2. The configuration shown relative to NIC work is under development and subject to change.

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

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# 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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KAKA'AKO STATION

## STRUCTURAL FOUNDATION & SLAB ON GRADE PLAN

GROUND LEVEL

Contract No.: SV–545
CADD File: SG5–G13–ST003
Drawing No: ST003 Rev.
Scale: 3/32"=1'–0"
Page No. 22 of 50

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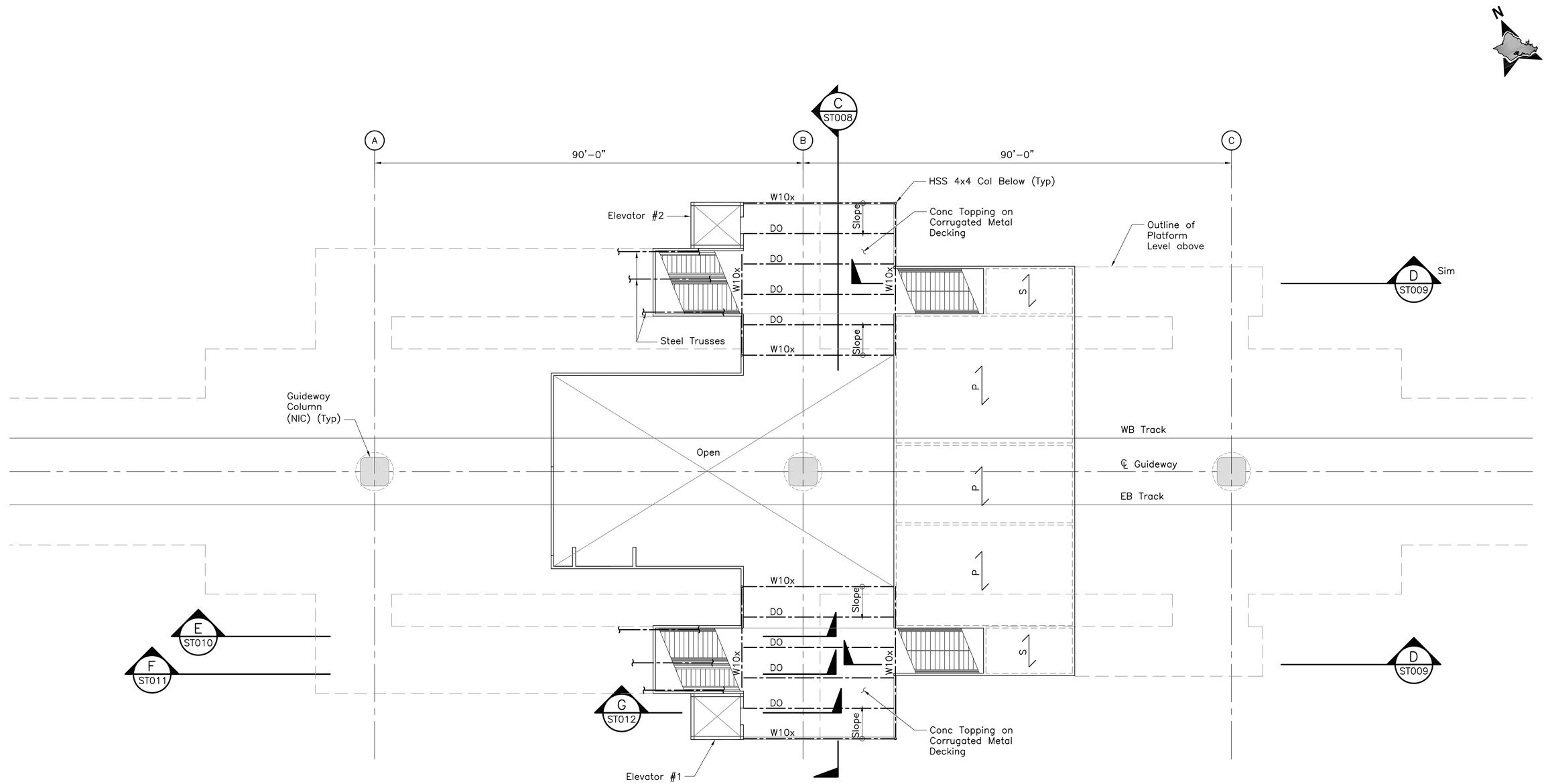


NOTES

1. For General Structural Notes, Symbols, and Abbreviations, See Dwg No. SG001 to SG004.
2. The configuration shown relative to NIC work is under development and subject to change.

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

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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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KAKA'AKO STATION

# STRUCTURAL ROOF FRAMING PLAN

GROUND LEVEL

Contract No.: SV–545
CADD File: SG5–G13–ST004
Drawing No.: ST004 Rev.
Scale: 3/32"=1'–0"
Page No. 23 of 50

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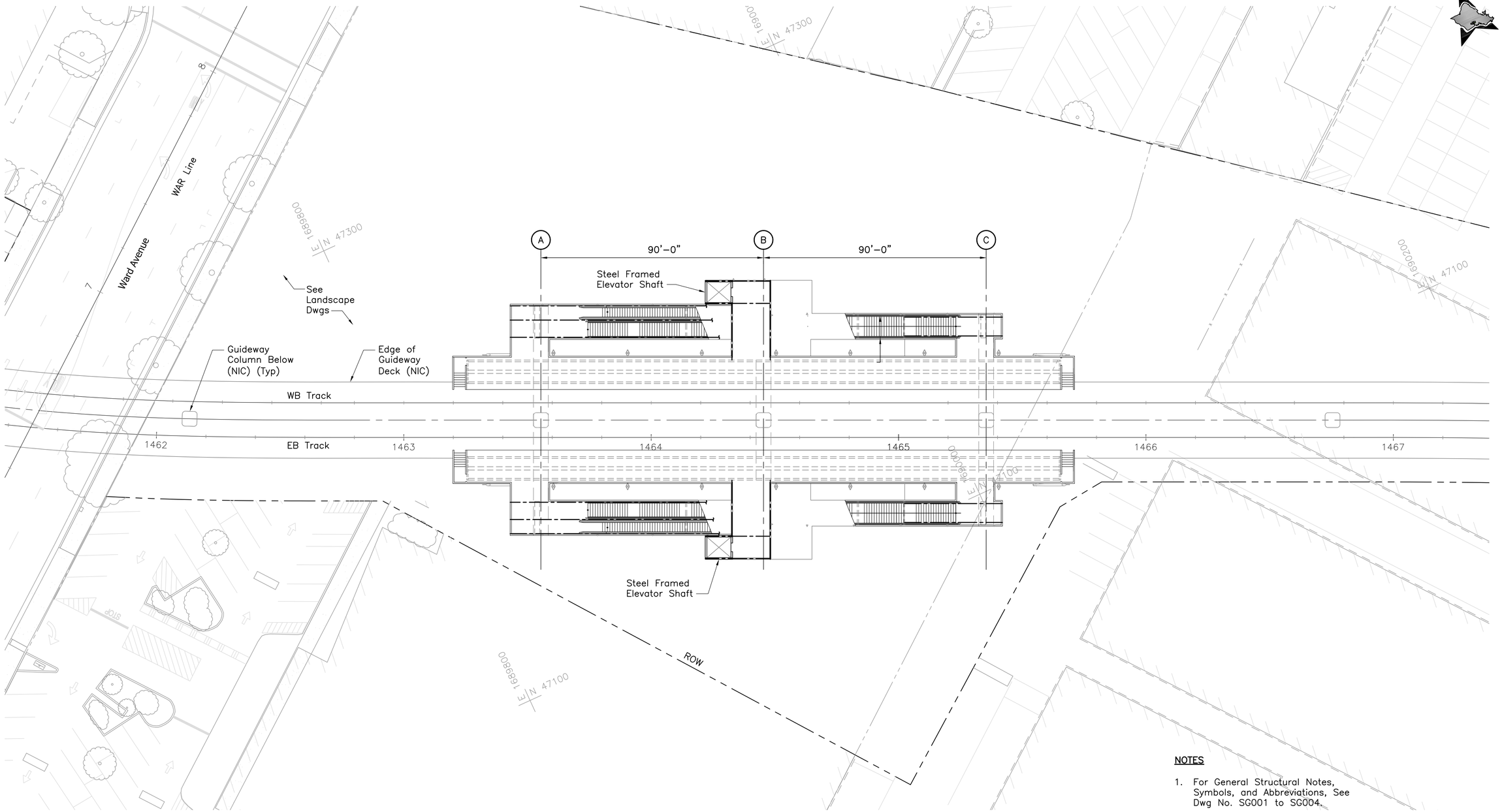


NOTES

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| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
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Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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

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KAKA'AKO STATION

# STRUCTURAL OVERALL REFERENCE PLAN

PLATFORM LEVEL

Contract No.: SV–545
CADD File: SG5–G14–ST005
Drawing No.: ST005 Rev.
Scale: 1"=20'
Page No. 24 of 50

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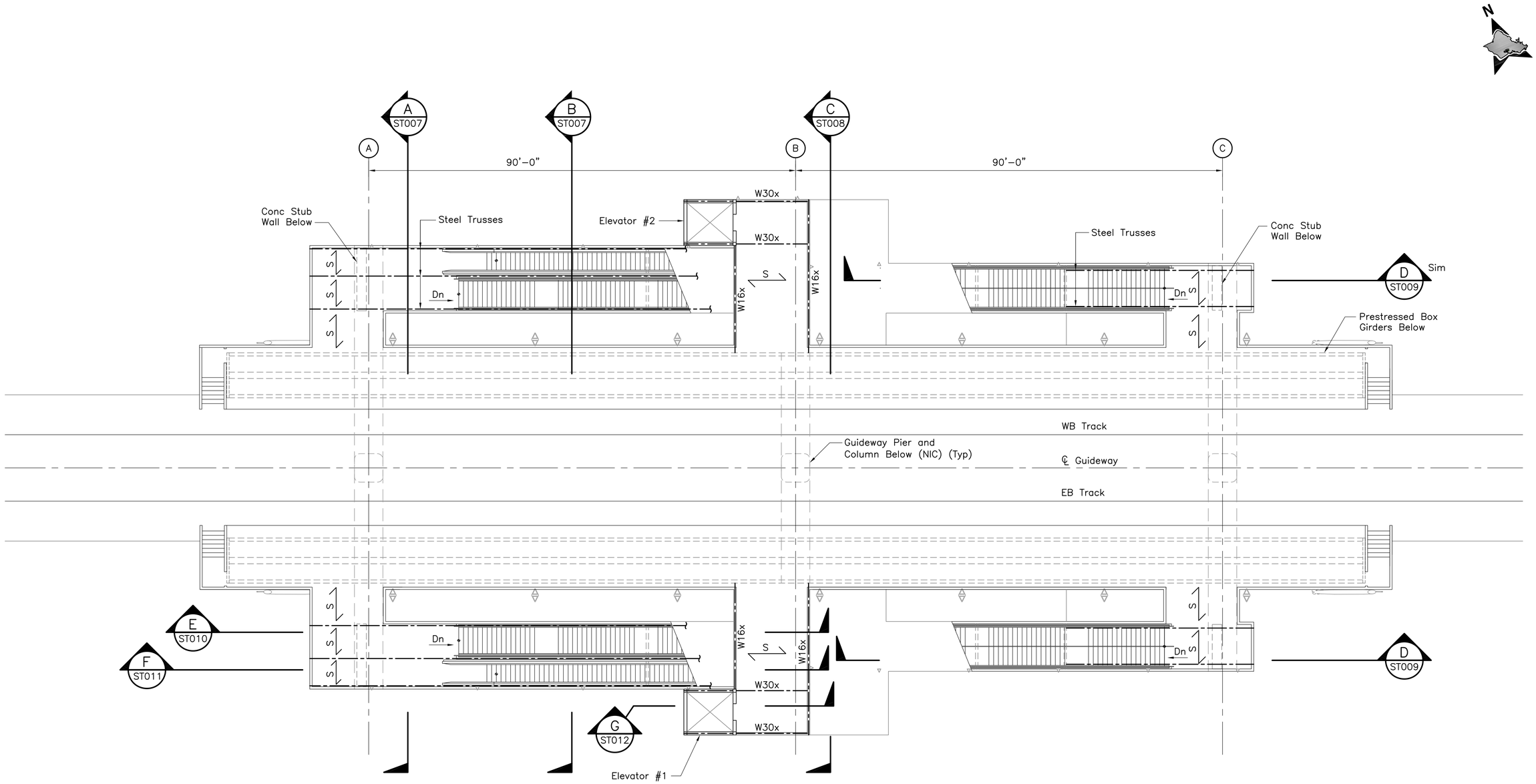


NOTES

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2. The configuration shown relative to NIC work is under development and subject to change.

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

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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

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KAKA'AKO STATION

# STRUCTURAL FRAMING PLAN

PLATFORM LEVEL

Contract No.: SV–545
CADD File: SG5–G14–ST006
Drawing No.: ST006 Rev.
Scale: 3/32"=1'–0"
Page No. 25 of 50

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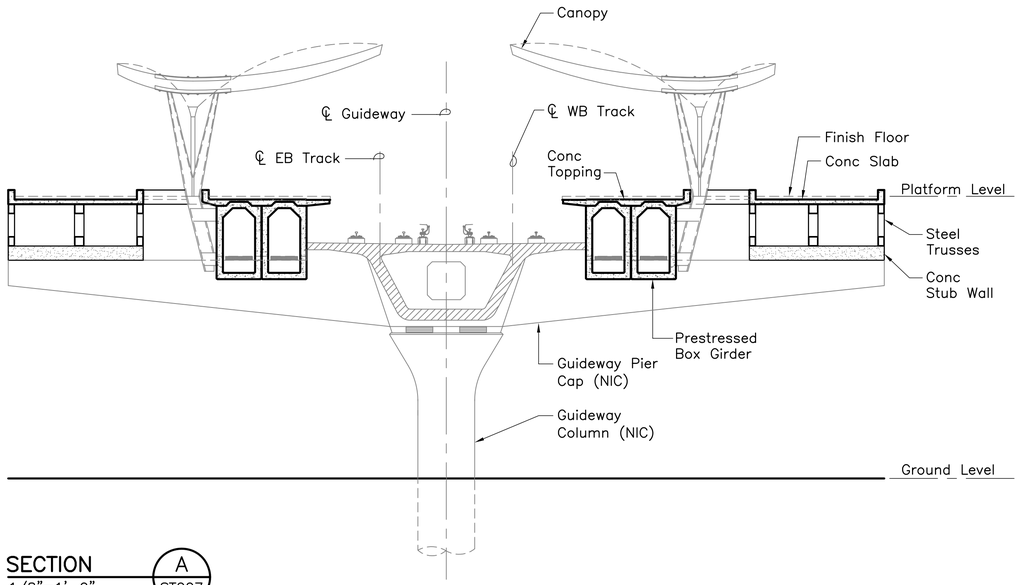
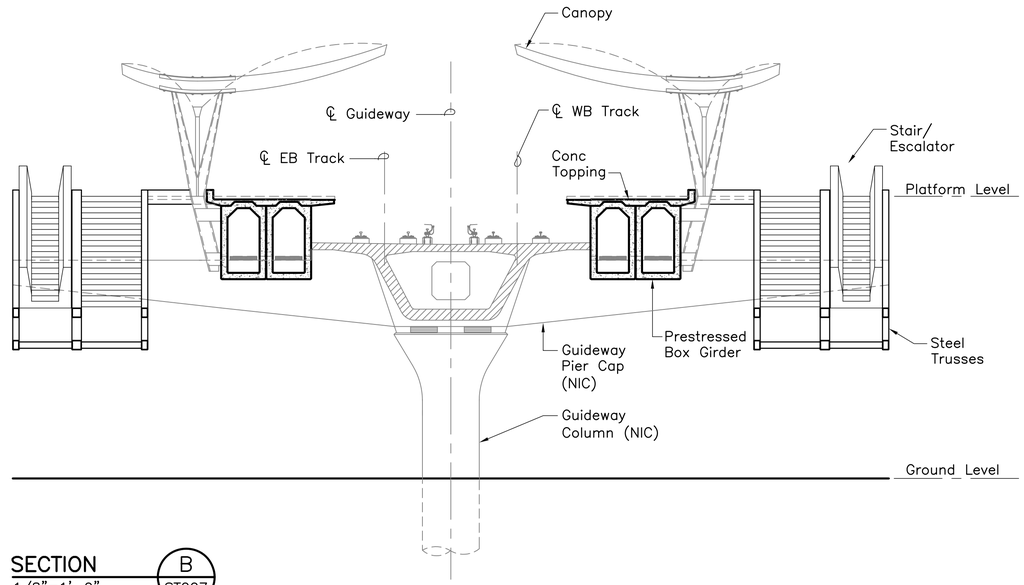



SECTION A (ST007)
1/8"=1'-0"

ST003
ST006




SECTION B (ST007)
1/8"=1'-0"

ST003
ST006

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

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11-20-09

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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KAKA'AKO STATION

STRUCTURAL
SECTION A & SECTION B

Contract No.: SV-545
CADD File: SG5-G14-ST007
Drawing No.: ST007 Rev.
Scale: 1/8"=1'-0"
Page No. 26 of 50

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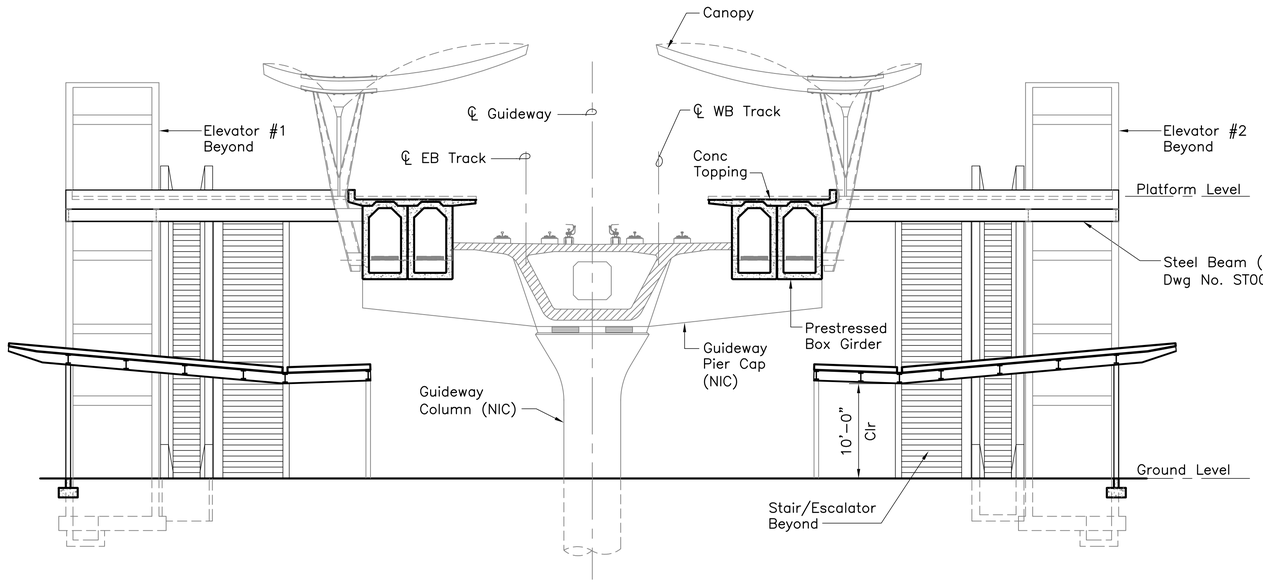


SECTION C
1/8"=1'-0"
ST008

ST003
ST004
ST006

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| Rev | By | Date | Description |
|---|---|---|---|

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11-20-09

# 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: NOEI NAGAMINE OKAWA ENGINEERS INC.
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1003 BISHOP STREET, SUITE 2025
HONOLULU, HAWAII 96813
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KAKA'AKO STATION

STRUCTURAL SECTION C

Contract No.: SV-545
CADD File: SG5-G14-ST008
Drawing No: ST008 Rev.
Scale: 1/8"=1'-0"
Page No. 27 of 50

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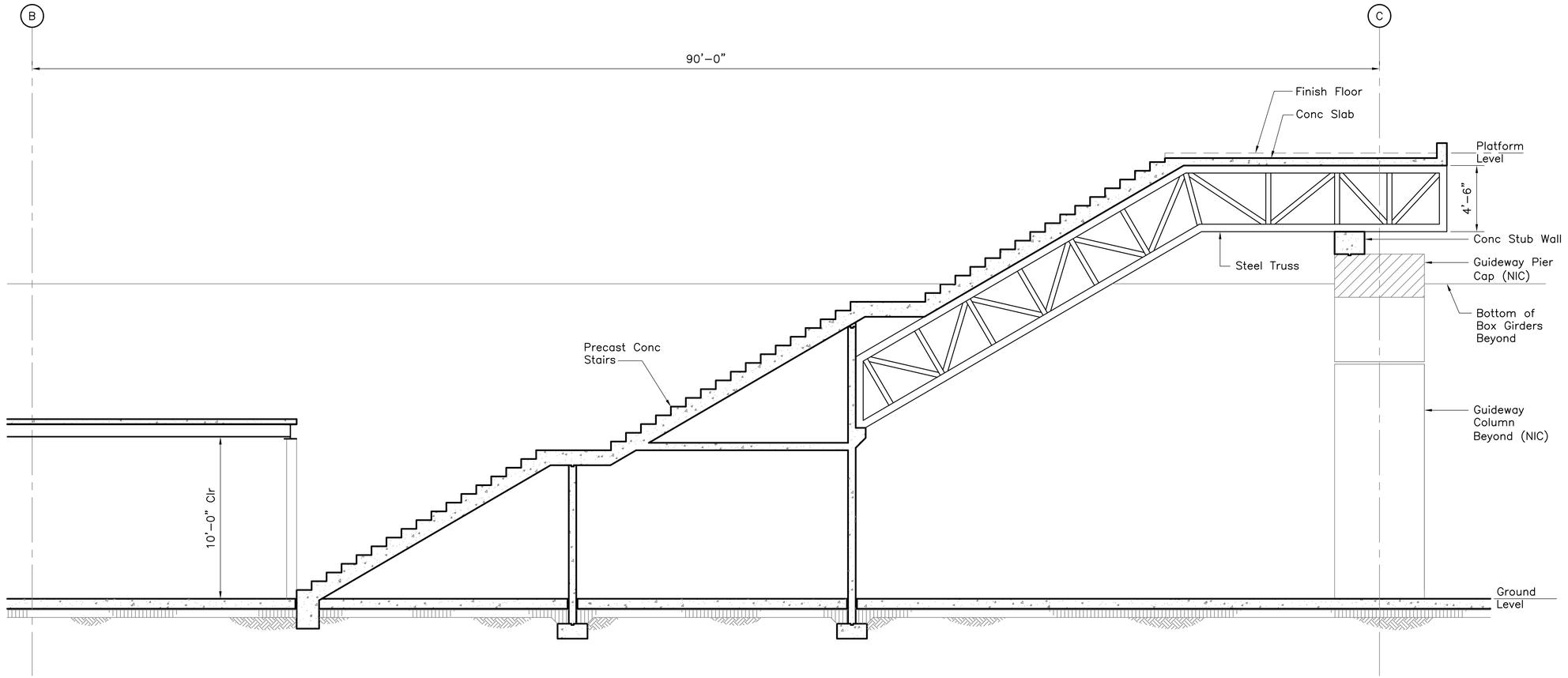


SECTION D
1/4"=1'–0"

ST009

ST003
ST004
ST006

1' 0 2' 4' 8'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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Date: 11–20–09

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

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KAKA'AKO STATION

STRUCTURAL SECTION D

Contract No.: SV–545
CADD File: SG5–G14–ST009
Drawing No.: ST009 Rev.
Scale: 1/4"=1'–0"
Page No. 28 of 50

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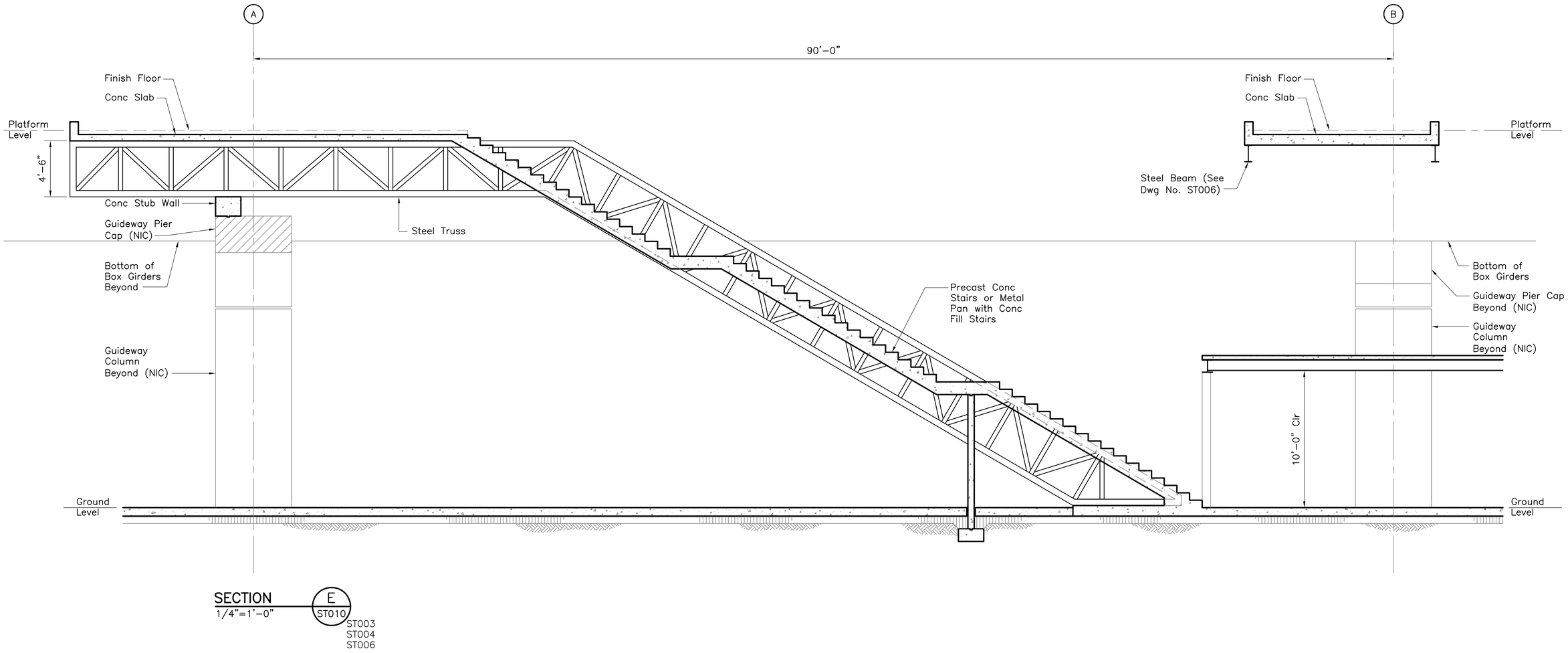


SECTION E
1/4"=1'–0"
ST010

ST003
ST004
ST006

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| Rev | By | Date | Description |
|---|---|---|---|

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant:
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HONOLULU, HAWAII 96813
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KAKA'AKO STATION

## STRUCTURAL SECTION E

Contract No.: SV–545
CADD File: SG5–G14–ST010
Drawing No.: ST010
Rev.:
Scale: 1/4"=1'–0"
Page No.: 29 of 50

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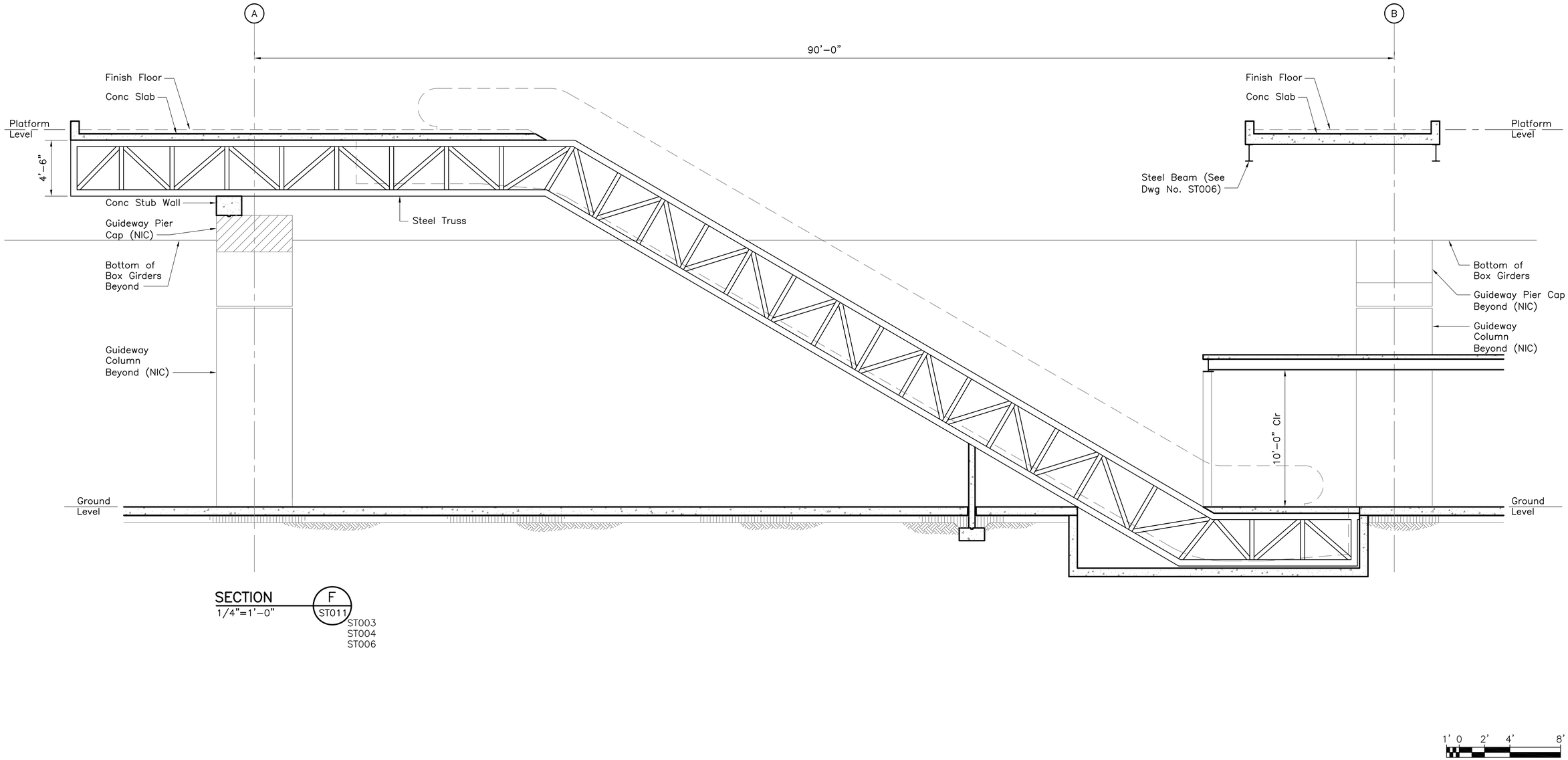


SECTION F
1/4"=1'–0"
ST011

ST003
ST004
ST006

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| Rev | By | Date | Description |
|---|---|---|---|

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


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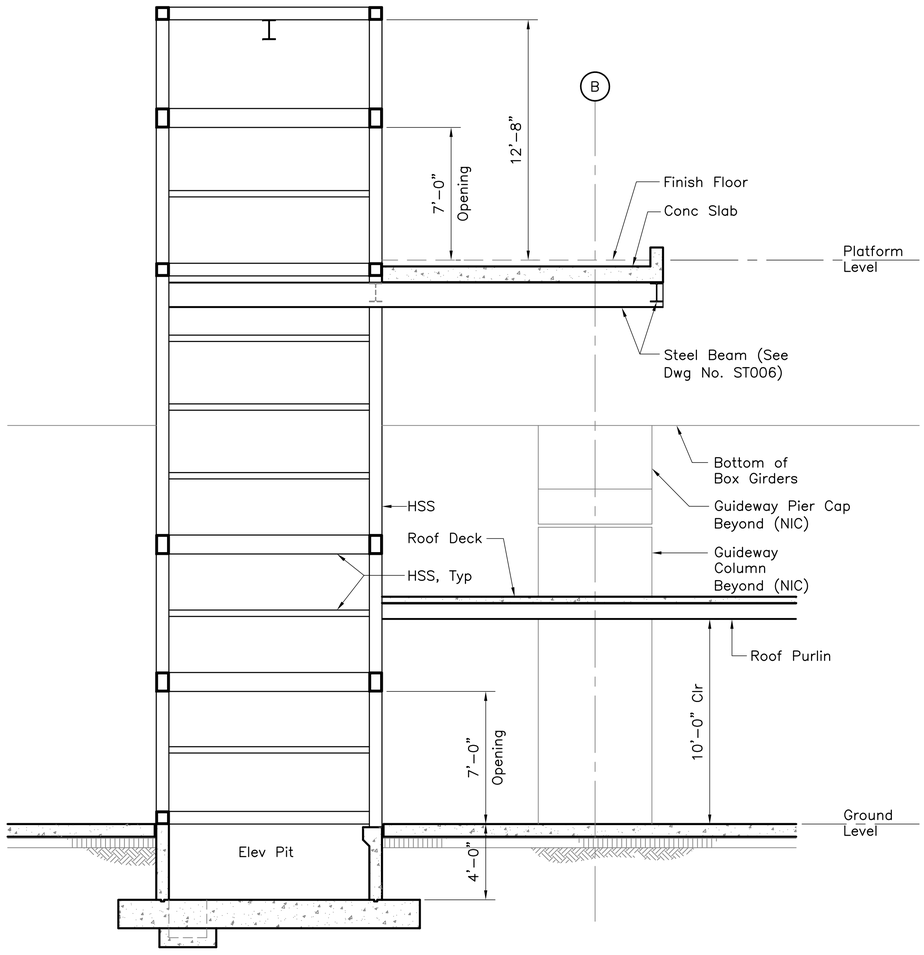
KAKA'AKO STATION

## STRUCTURAL SECTION F

Contract No.: SV–545
CADD File: SG5–G14–ST011
Drawing No.: ST011 Rev.
Scale: 1/4"=1'–0"
Page No. 30 of 50




SECTION G
1/4"=1'-0"
ST012

ST003
ST004
ST006

1' 0 2' 4' 8'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11-20-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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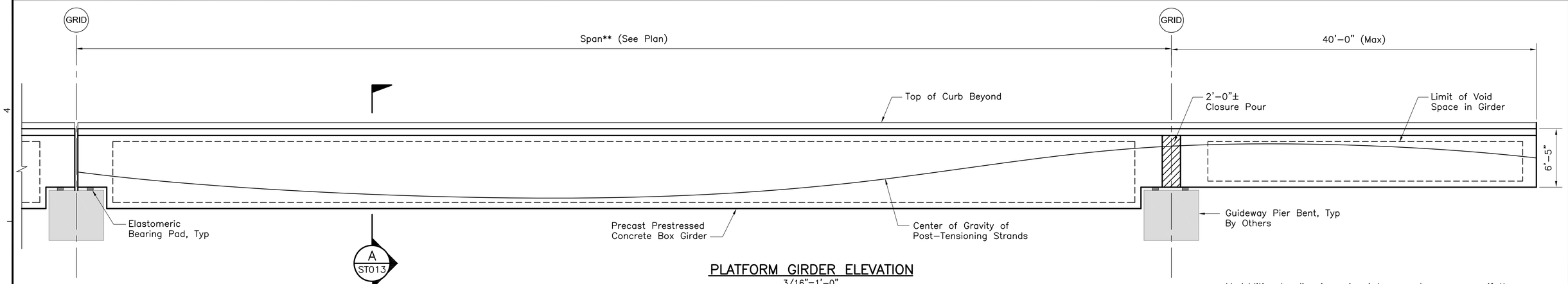
KAKA'AKO STATION

## STRUCTURAL SECTION G

Contract No.: SV-545
CADD File: SG5-G14-ST012
Drawing No: ST012 Rev.
Scale: 1/4"=1'-0"
Page No. 31 of 50

2009-11-13 5:15 PM F:\09job.dwg\09034 City Rail Transit Seg G\Drawings\Structural 09034_SG5-KAKA'AKO\Sheets\SG5-G14-ST012.dwg

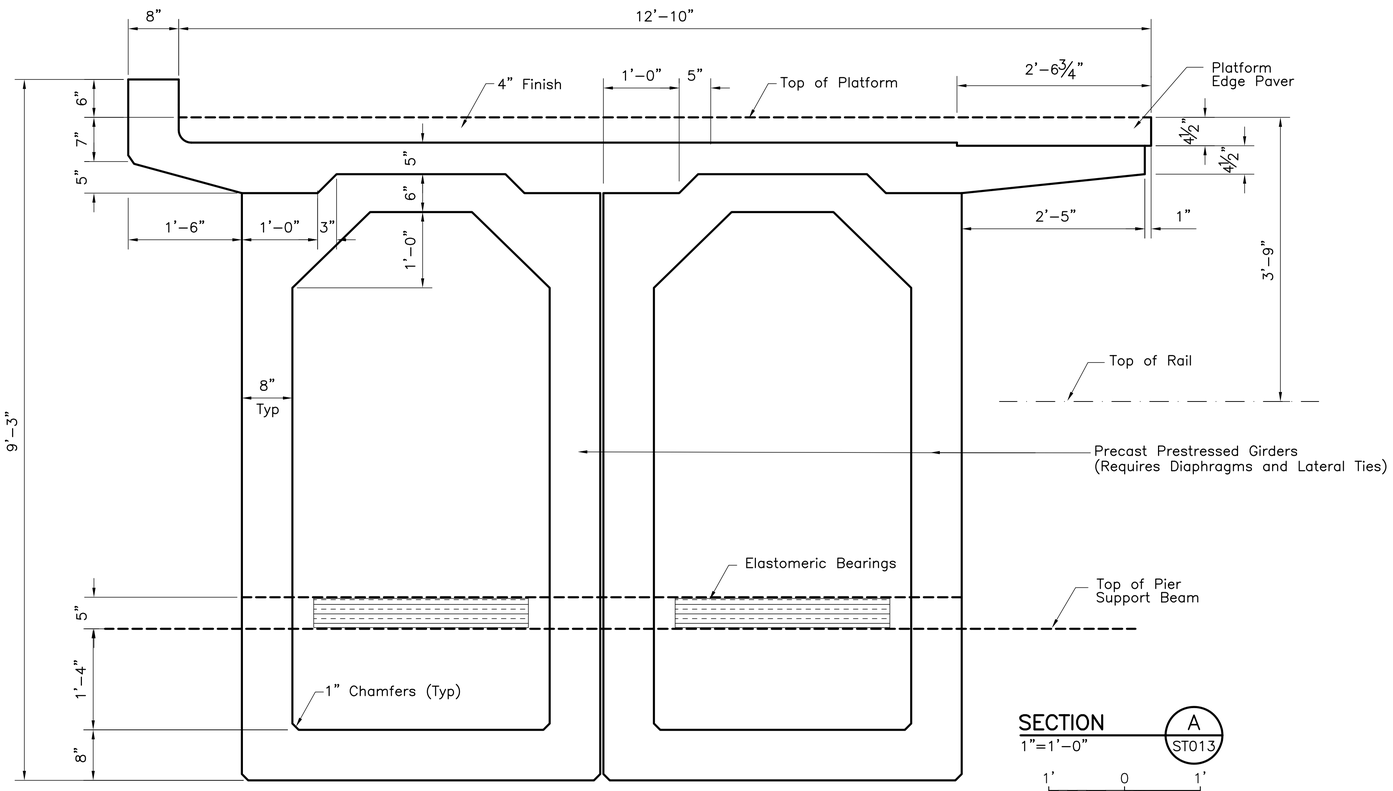



## PLATFORM GIRDER ELEVATION

3/16"=1'–0"

1' 0 2' 4' 6' 10'

** 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 ST013

1"=1'–0"

1' 0 1'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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

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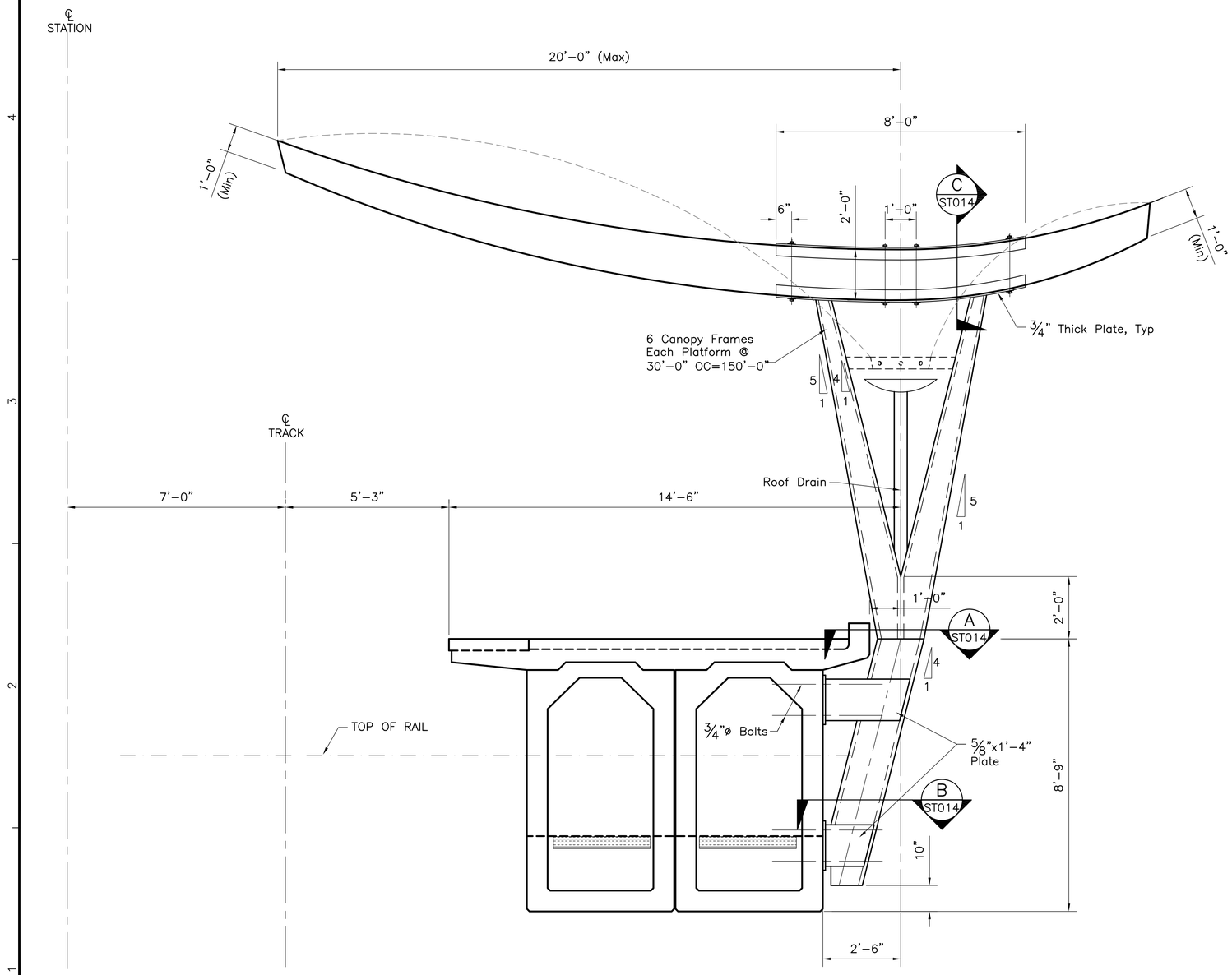
KAKA'AKO STATION

# STRUCTURAL PLATFORM PRECAST GIRDER

DETAILS

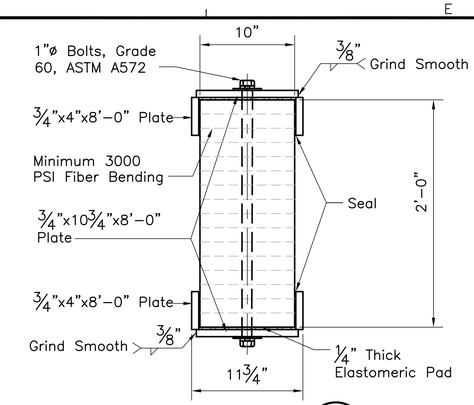
Contract No.: SV–545
CADD File: SG5–G15–ST013
Drawing No: ST013
Rev.:
Scale: As Noted
Page No. 32 of 50

2010–01–07 12:09 PM F:\09job.dwg\09034 City Rail Transit Seg G\Drawings\Structural 09034_SG5–KAKA'AKO\Sheets\SG5–G15–ST013.dwg



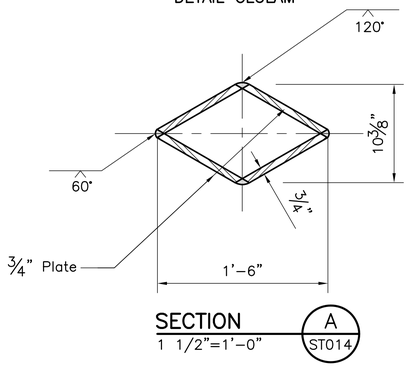

PLATFORM CANOPY SECTION
1/2"=1'–0"

1' 0 2' 4'

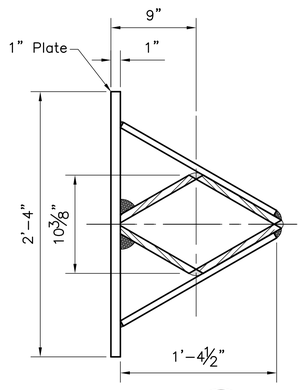



SECTION C
1 1/2"=1'–0" ST014

DETAIL GLULAM




SECTION A
1 1/2"=1'–0" ST014




SECTION B
1 1/2"=1'–0" ST014

STRUCTURAL TUBE

6" 0 6" 12" 18"

NOTE:

1. See Architectural Directive Drawings for additional canopy details.

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| Rev | By | Date | Description |
|---|---|---|---|

Designed: D Okawa
Drawn: L Loo
Checked: A Agapay
Approved: D Okawa
Date: 11–20–09

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: NOEI NAGAMINE OKAWA ENGINEERS INC.
CONSULTING STRUCTURAL ENGINEERS
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PH: (808) 536-2626 FAX: (808) 536-3926

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

KAKA'AKO STATION

# STRUCTURAL PLATFORM CANOPY

DETAILS

Contract No.: SV–545
CADD File: SG5–G15–ST014
Drawing No.: ST014 Rev.
Scale: As Noted
Page No. 33 of 50

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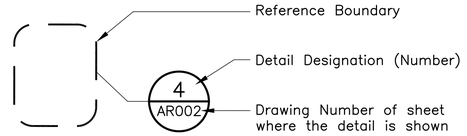
# GENERAL ARCHITECTURAL NOTES

1. Station Designer to Coordinate Limits of Work and Interface with the City Center Guideway Contract.
2. Refer to Appendix "A": INFORMATIVE Drawings, for work included in the:
   –City Center Guideway Contract
   –CORE SYSTEMS Design –Build–Operate–Maintenance Contract.
3. Refer to RTD Architectural 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 in set for Canopy Details and Configuration.

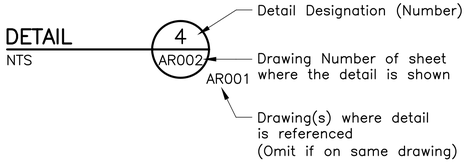
# ARCHITECTURAL SYMBOLS

NORTH ARROW
(Location – upper right corner of drawing)

## DETAILS

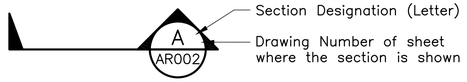



Reference Boundary
Detail Designation (Number)
Drawing Number of sheet where the detail is shown

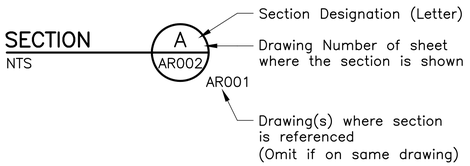



Detail Designation (Number)
Drawing Number of sheet where the detail is shown
Drawing(s) where detail is referenced
(Omit if on same drawing)

## SECTIONS

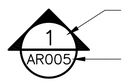



Section Designation (Letter)
Drawing Number of sheet where the section is shown

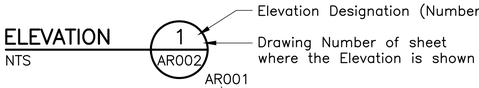



Section Designation (Letter)
Drawing Number of sheet where the section is shown
Drawing(s) where section is referenced
(Omit if on same drawing)

## EXTERIOR ELEVATION(S)

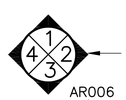



Elevation Orientation
Drawing Number of sheet where the elevation is shown



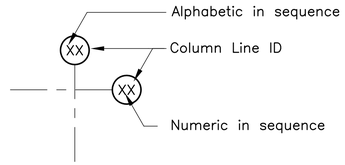

Elevation Designation (Number)
Drawing Number of sheet where the Elevation is shown
Drawing(s) where Elevation is referenced
(Omit if on same drawing)

## INTERIOR ELEVATION(S)




Elevation Identification
Drawing where elevation is shown

## COLUMN LINE GRID INDICATOR




Alphabetic in sequence
Column Line ID
Numeric in sequence

## DOOR OPENING IDENTIFIER

Door ID

## EQUIPMENT IDENTIFIER

Equipment ID

## ROOM IDENTIFICATION

Closet — Room Name
XXXX — Room Number

## WALL TYPE IDENTIFIER

Wall Type ID

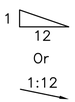
## WINDOW IDENTIFIER

Window Type ID

## LOUVER IDENTIFIER

Louver Type ID

## SLOPE IDENTIFIER

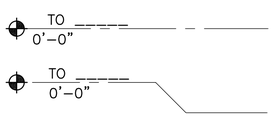



Slope ID
DN or UP

## SIGN IDENTIFICATION

Sign Number
Drawing Number where sign is shown

## ELEVATION IDENTIFICATION




## 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 |
| ℄ | Center Line |
| # | Number |
| ⌀ | Diameter |
| % | Percent |
| = | Equal to |
| > | Greater Than |
| < | Less Than |
| ≥ | Greater Than or Equal To |
| ≤ | Less Than or Equal To |

Station Equation
Elevation Point
Breakline

## SPECIAL TERMS

| | |
|---|---|
| Makai | Ocean |
| Mauka | Mountain |

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: L Matsunaga
Drawn: J Valdez
Checked: B Kanisthakhon
Approved: L Matsunaga
Date: 11–20–09

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

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Subconsultant: Urban Works
831 POHUKAINA STREET E1
HONOLULU, HAWAII 96813
(808)597–1155/FAX(808)591–1221

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KAKA'AKO STATION

GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 1 OF 3

Contract No.: SV–545
CADD File: SG5–H01–AG001
Drawing No.: AG001 Rev.
Scale: N/A
Page No.: 34 of 50

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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 |
| BO | 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 |
| FMP | Fire Management Panel |
| 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: L Matsunaga
Drawn: J Valdez
Checked: B Kanisthakhon
Approved: L Matsunaga
Date: 11–20–09

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: Urban Works
831 POHUKAINA STREET E1
HONOLULU, HAWAII 96813
(808)597–1155/FAX(808)591–1221


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KAKA'AKO STATION

# GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 2 OF 3

Contract No.: SV–545
CADD File: SG5–H01–AG002
Drawing No: AG002 Rev.
Scale: N/A
Page No. 35 of 50

# 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 |
| TO | 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**

Designed: L Matsunaga
Drawn: J Valdez
Checked: B Kanisthakhon
Approved: L Matsunaga
Date: 11-20-09

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: Urban Works
831 POHUKAINA STREET E1
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KAKA'AKO STATION

GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 3 OF 3

Contract No.: SV-545
CADD File: SG5-H01-AG003
Drawing No.: AG003 Rev.:
Scale: N/A
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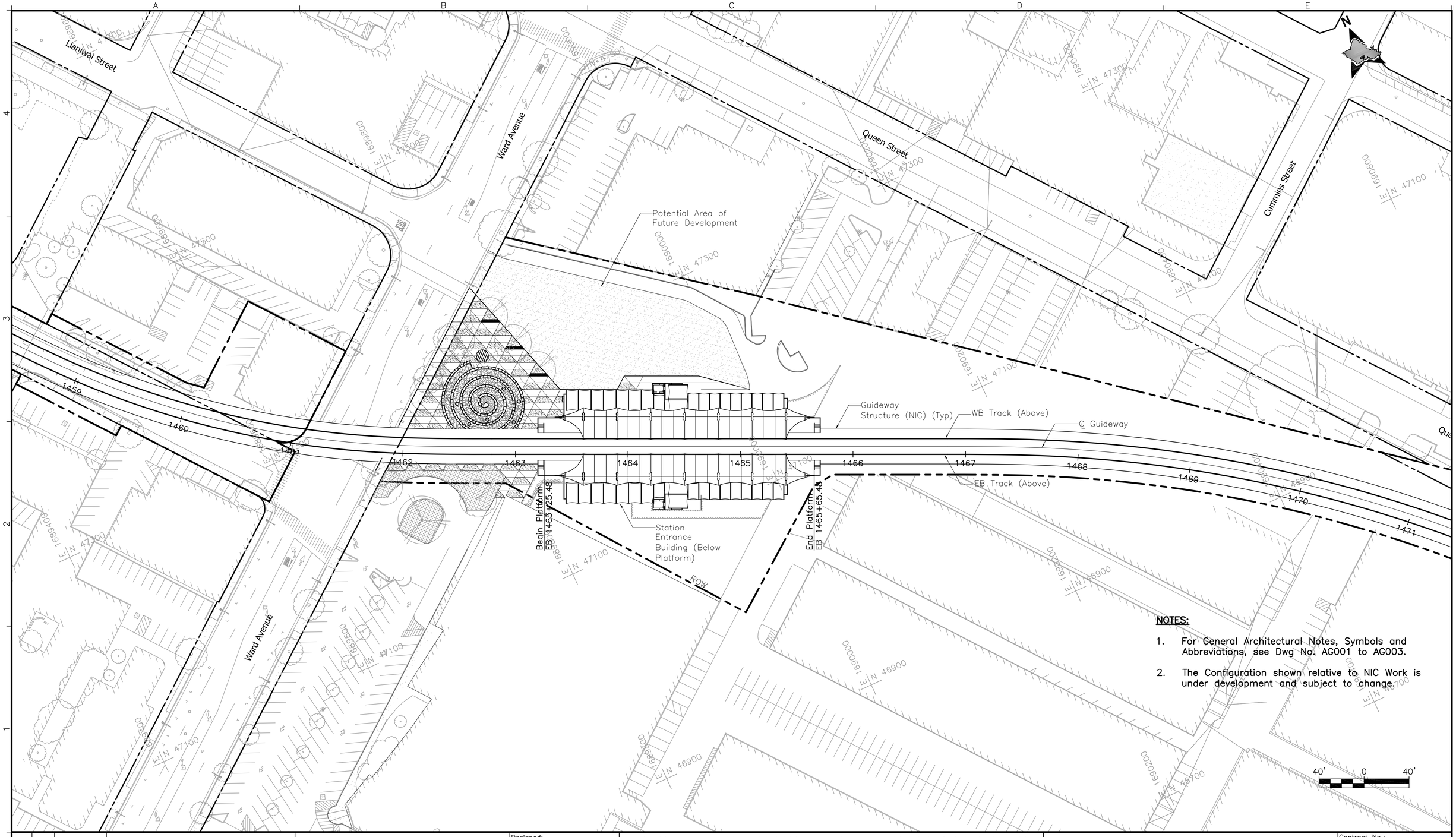


| Rev | By | Date | Description |
|---|---|---|---|
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## KAKA'AKO STATION

## ARCHITECTURAL SITE PLAN

Contract No.: SV–545
CADD File: SG5–H02–AR001
Drawing No.: AR001 Rev.:
Scale: 1"=40'
Page No.: 37 of 50

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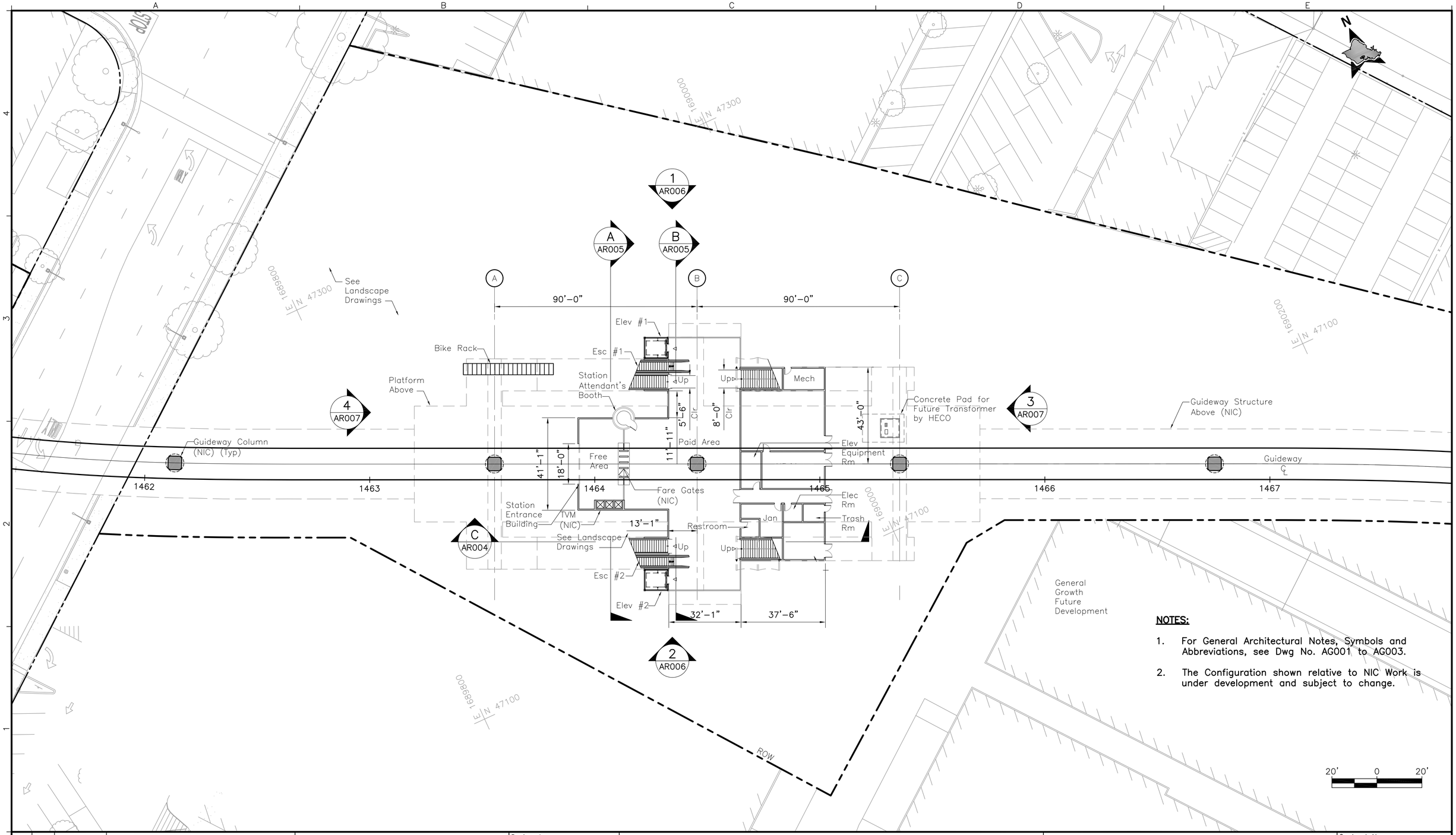


**NOTES:**

1. For General Architectural Notes, Symbols and Abbreviations, see Dwg No. AG001 to AG003.
2. The Configuration shown relative to NIC Work is under development and subject to change.

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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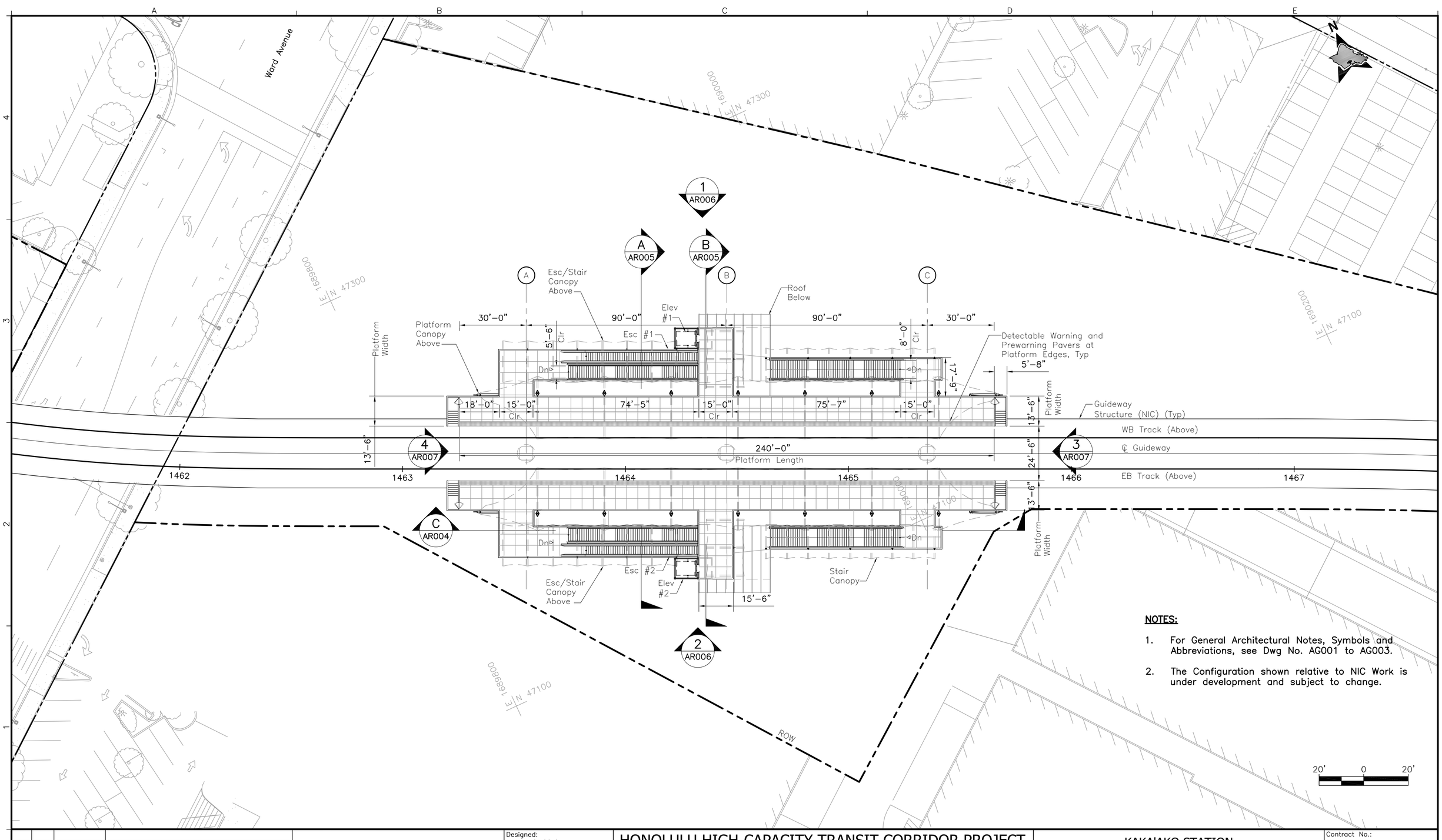
## KAKA'AKO STATION

## GROUND LEVEL FLOOR PLAN

Contract No.: SV–545
CADD File: SG5–H03–AR002
Drawing No.: AR002 Rev.:
Scale: 1"=20'
Page No.: 38 of 50




**NOTES:**

1. For General Architectural Notes, Symbols and Abbreviations, see Dwg No. AG001 to AG003.
2. The Configuration shown relative to NIC Work is under development and subject to change.

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

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Date: 11-20-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


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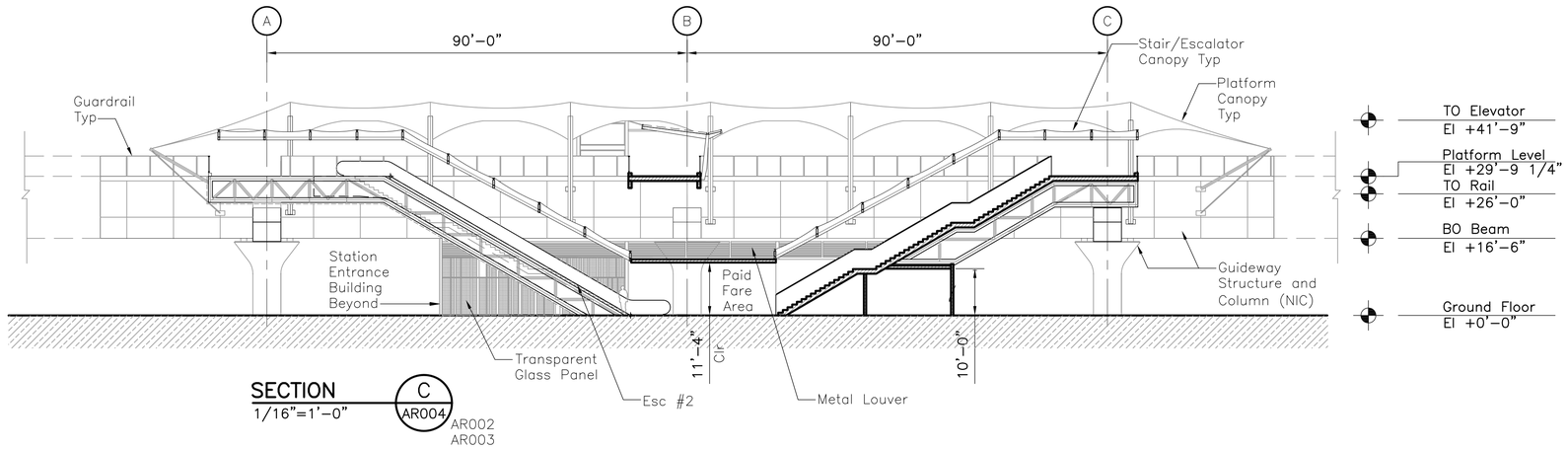
## KAKA'AKO STATION

## PLATFORM LEVEL FLOOR PLAN

Contract No.: SV-545
CADD File: SG5-H03-AR003
Drawing No: AR003 Rev.
Scale: 1"=20'
Page No. 39 of 50

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KAKA'AKO STATION

LONGITUDINAL SECTIONS

Contract No.: SV–545
CADD File: SG5–H05–AR004
Drawing No.: AR004 Rev.
Scale: 1/16"=1'–0"
Page No.: 40 of 50

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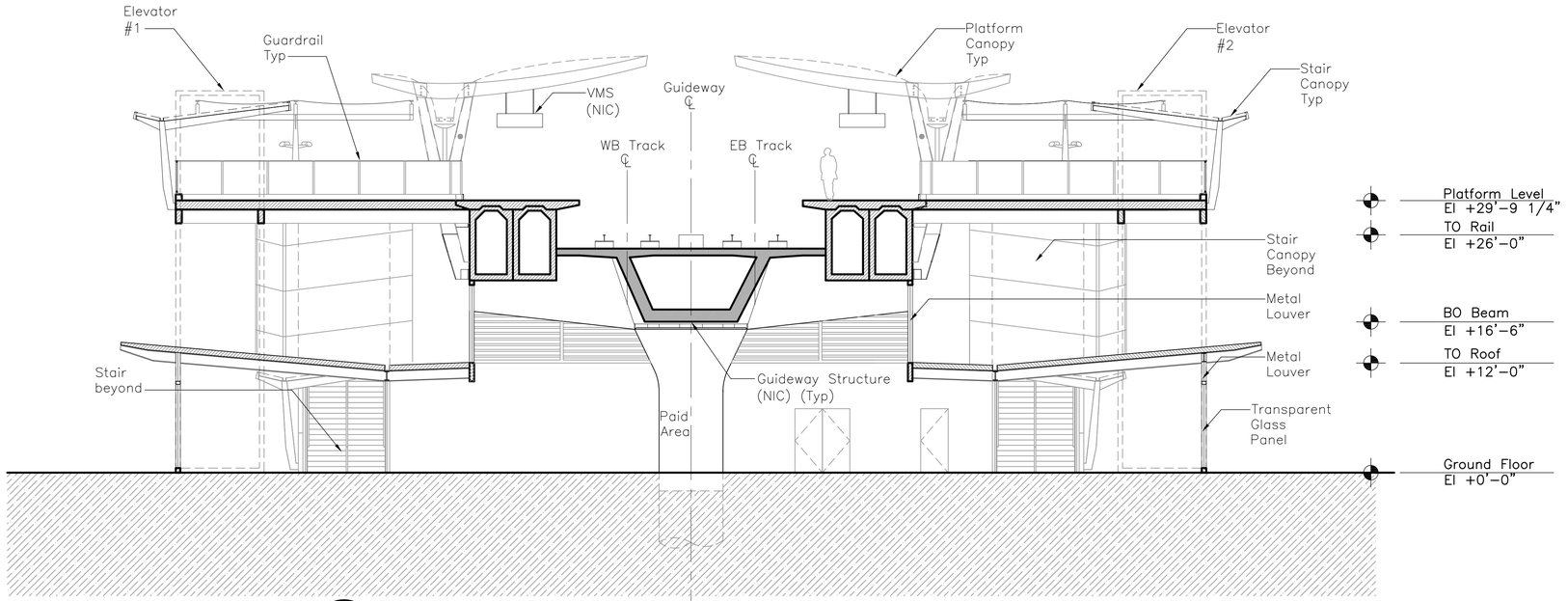
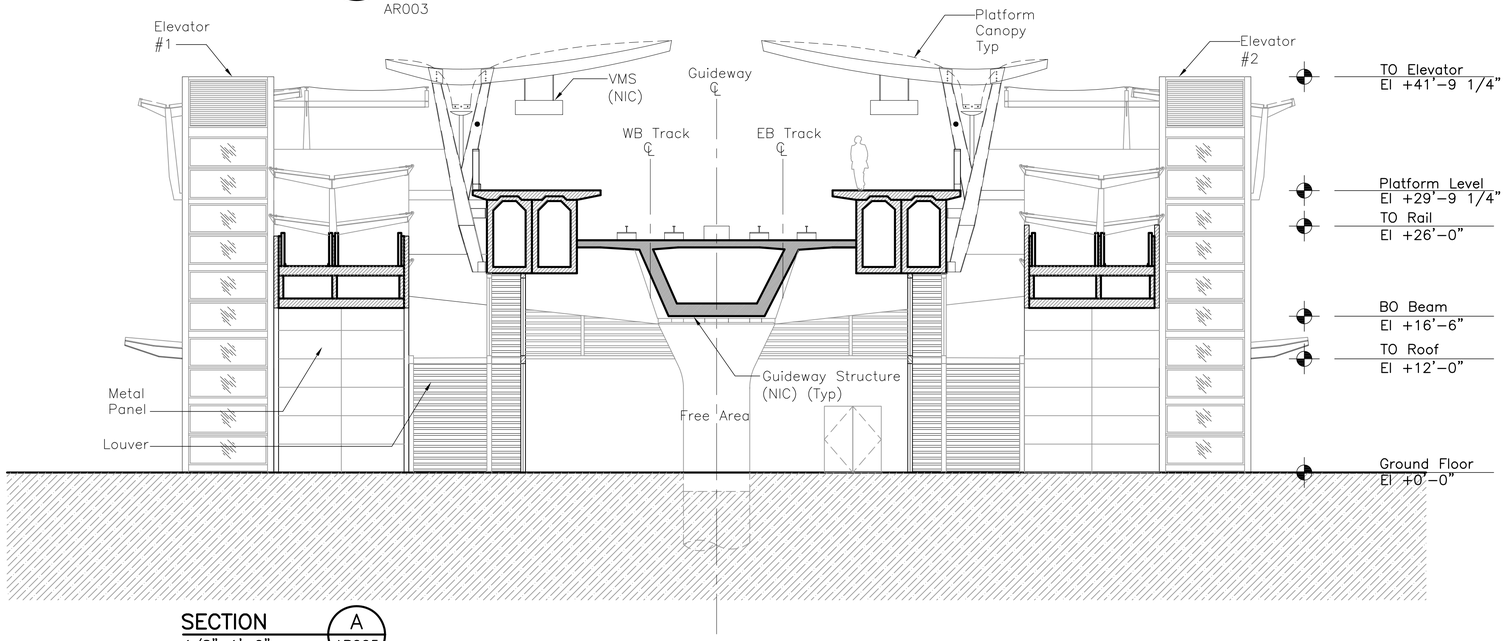



SECTION B
1/8"=1'-0"
AR005
AR002
AR003




SECTION A
1/8"=1'-0"
AR005
AR002
AR003

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

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

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KAKA'AKO STATION

CROSS SECTION

Contract No.: SV-545
CADD File: SG5-H05-AR005
Drawing No: AR005 Rev.
Scale: 1/8"=1'-0"
Page No. 41 of 50

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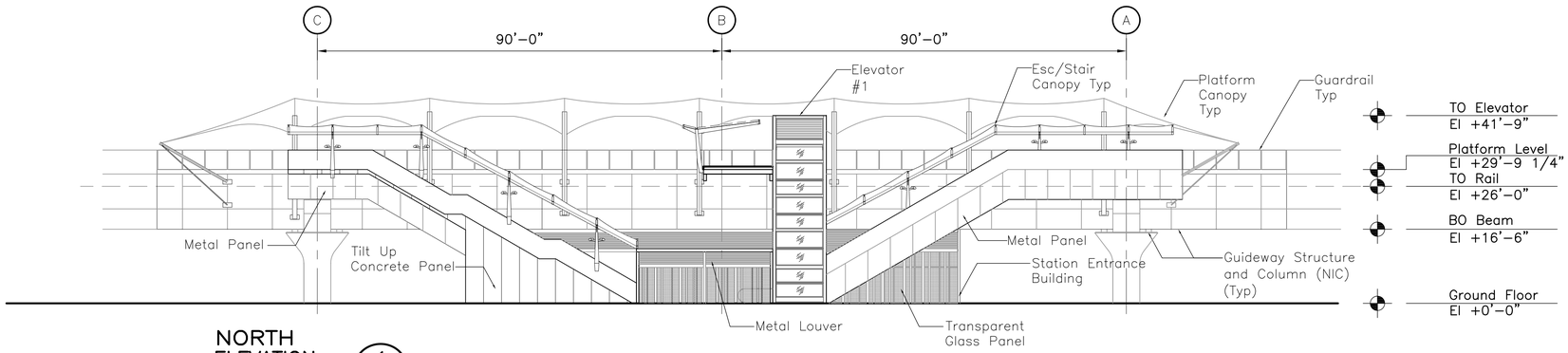
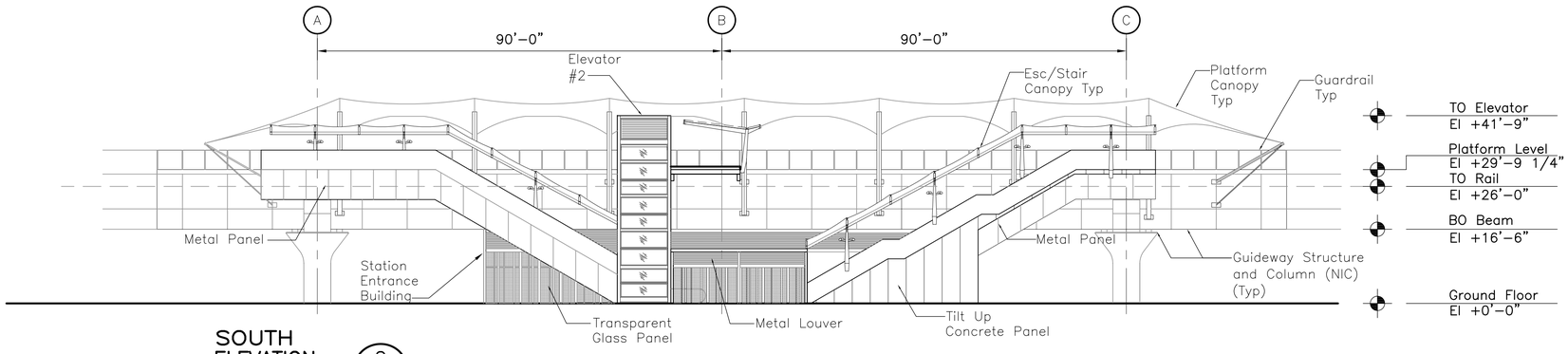



NORTH ELEVATION 1
1/16"=1'–0"
AR006
AR002
AR003




SOUTH ELEVATION 2
1/16"=1'–0"
AR006
AR002
AR003

4' 0 4' 8'12' 20' 28'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

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# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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KAKA'AKO STATION

ELEVATIONS

SHEET 1 OF 2

Contract No.: SV–545
CADD File: SG5–H06–AR006
Drawing No: AR006 Rev.
Scale: 1/16"=1'–0"
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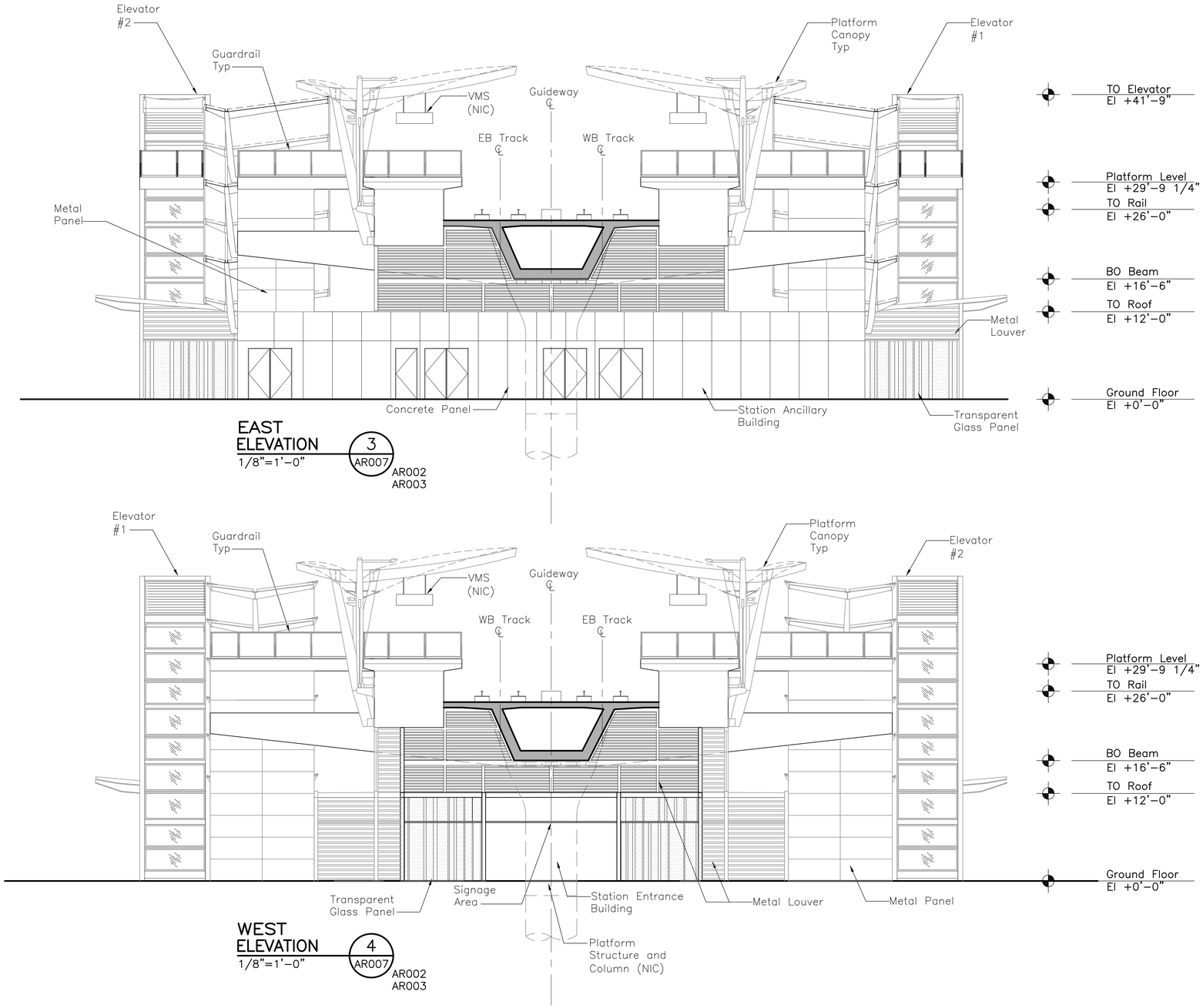


EAST ELEVATION
1/8"=1'-0"
3 AR007
AR002
AR003




WEST ELEVATION
1/8"=1'-0"
4 AR007
AR002
AR003

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

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

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Date: 11-20-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


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## KAKA'AKO STATION

## ELEVATIONS

SHEET 2 OF 2

Contract No.: SV-545
CADD File: SG5-H06-AR007
Drawing No: AR007 Rev.
Scale: 1/8"=1'-0"
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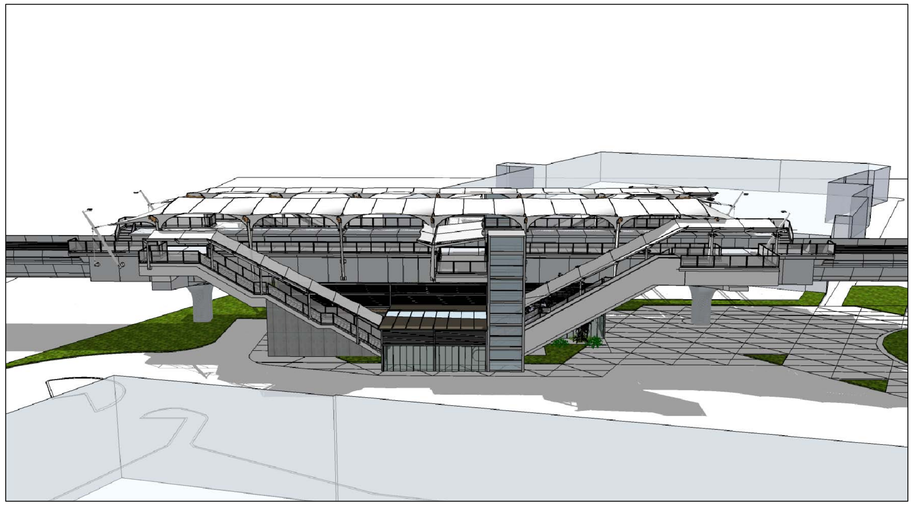
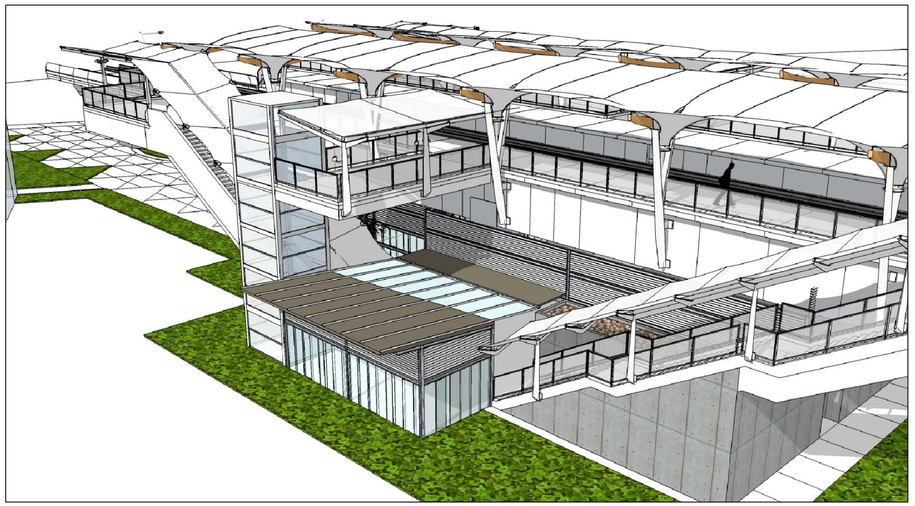
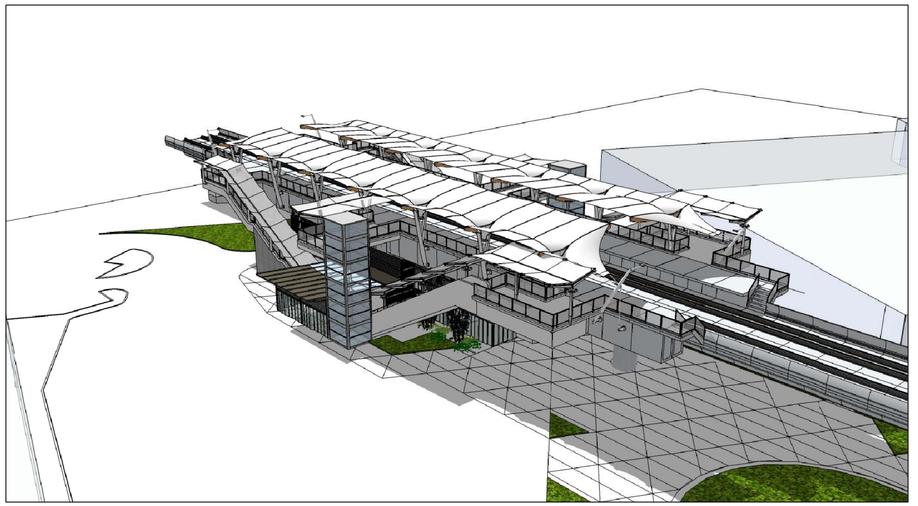


STATION ENTRANCE
NTS
A AR008

VIEW LOOKING MAUKA
NTS
B AR008



PERSPECTIVE
NTS
C AR008



VIEW LOOKING MAKAI
NTS
D AR008

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

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KAKA'AKO STATION

3D VIEWS

Contract No.: SV-545
CADD File: SG5-H07-AR008
Drawing No.: AR008 Rev.
Scale: NTS
Page No.: 44 of 50

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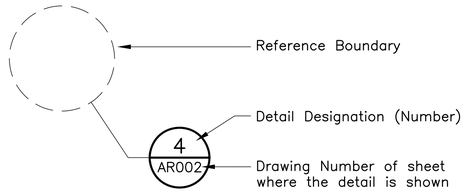
## GENERAL NOTES

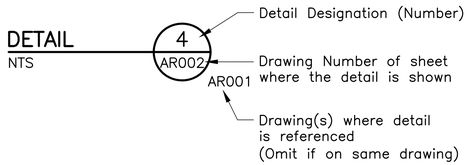
1. "EB Track" denotes the centerline of the Eastbound Track. "WB Track" denotes the centerline of the Westbound Track.
2. Origin of Coordinates: Hawaii State Plan Coordinate Grid System, Zone III with the North American Datum of 83 High Accuracy Reference Network (NAD83 HARN).
3. The proposed WB Track 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 Sepember 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 Standard Plans Summary plan sheets.

## SYMBOLS

NORTH ARROW
(Location – upper right corner of drawing)

### DETAILS

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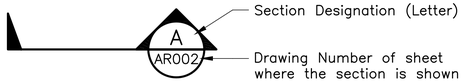


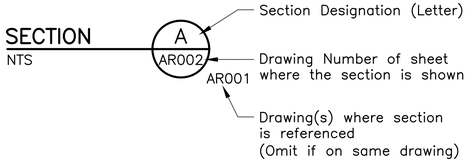


### SPECIAL TERMS

| | |
|---|---|
| Makai | Ocean |
| Mauka | Mountain |

### GENERAL SYMBOLS

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

### LANDSCAPE SYMBOLS

Large tree

Medium tree

Palm


Large shrub


Small shrub

Groundcover–1

Groundcover–2

Groundcover–3

Lawn–1

Lawn–2

## ABBREVIATIONS

| | |
|---|---|
| & | And |
| Abbr | Abbreviation, Abbreviated |
| Ac | Acre(s) |
| Approx | Approximate |
| Cal | Caliper |
| ℄ | Centerline |
| CLF | Chain Link Fence |
| Conc | Concrete |
| CY | Cubic Yard |
| Dia | Diameter |
| Dwg | Drawing |
| ea | Each |
| EB | Eastbound |
| Eq | Equal |
| Exist | Existing |
| Fig. | Figure |
| ft | Foot, Feet |
| gal | Gallon(s) |
| Hdr | Header |
| Ht | Height |
| in. | Inch |
| Irr | Irrigation |
| LF | Linear Foot |
| m | Meter |
| Min | Minimum |
| N/A | Not Applicable |
| NIC | Not in Contract |
| No. (Nos.) | Number(s) |
| NTS | Not to Scale |
| OC | On Center |
| Perp | Perpendicular |
| PVC | Polyvinyl Chloride |
| ROW | Right–of–Way |
| SF | Square Foot, Square Feet |
| Sht | Sheet |
| Spr | Sprinkler |
| Std | Standard |
| SY | Square Yard |
| Typ | Typical |
| Vert | Vertical |
| WB | Westbound |
| WL | Water Line |
| Wtr | Water |
| WM | Water Main |
| Xsect | Cross Section |
| Yd | Yard |

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

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: CONCEPTS LLC
Site Planning
Landscape Architects
1580 Makaloa Street, Suite 1005
Honolulu, HI 96814

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KAKA'AKO STATION

GENERAL LANDSCAPING NOTES, SYMBOLS, & ABBREVIATIONS

Contract No.: SV–545
CADD File: SG5–J01–LG001
Drawing No: LG001 Rev.
Scale: N/A
Page No. 45 of 50

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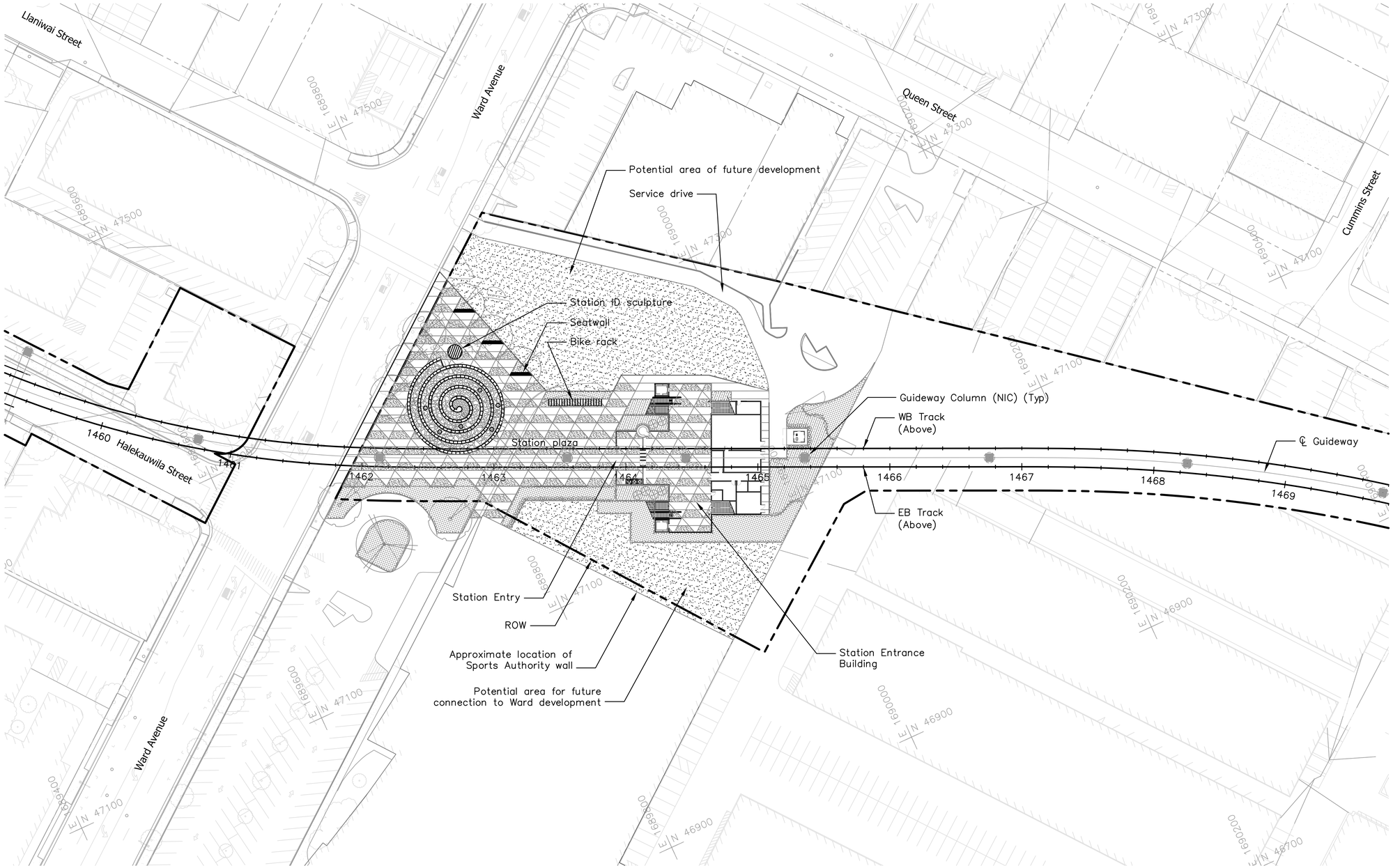


**NOTES:**

1. For Abbreviations see Dwg No. LG001.
2. For Planting Notes and Symbols see Dwg No. LA401.
3. The configuraton shown relative to NIC work is under development and subject to change.

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Date: 12-21-09

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: CONCEPTS LLC Site Planning Landscape Architects
1580 Makaloa Street, Suite 1005 Honolulu, HI 96814

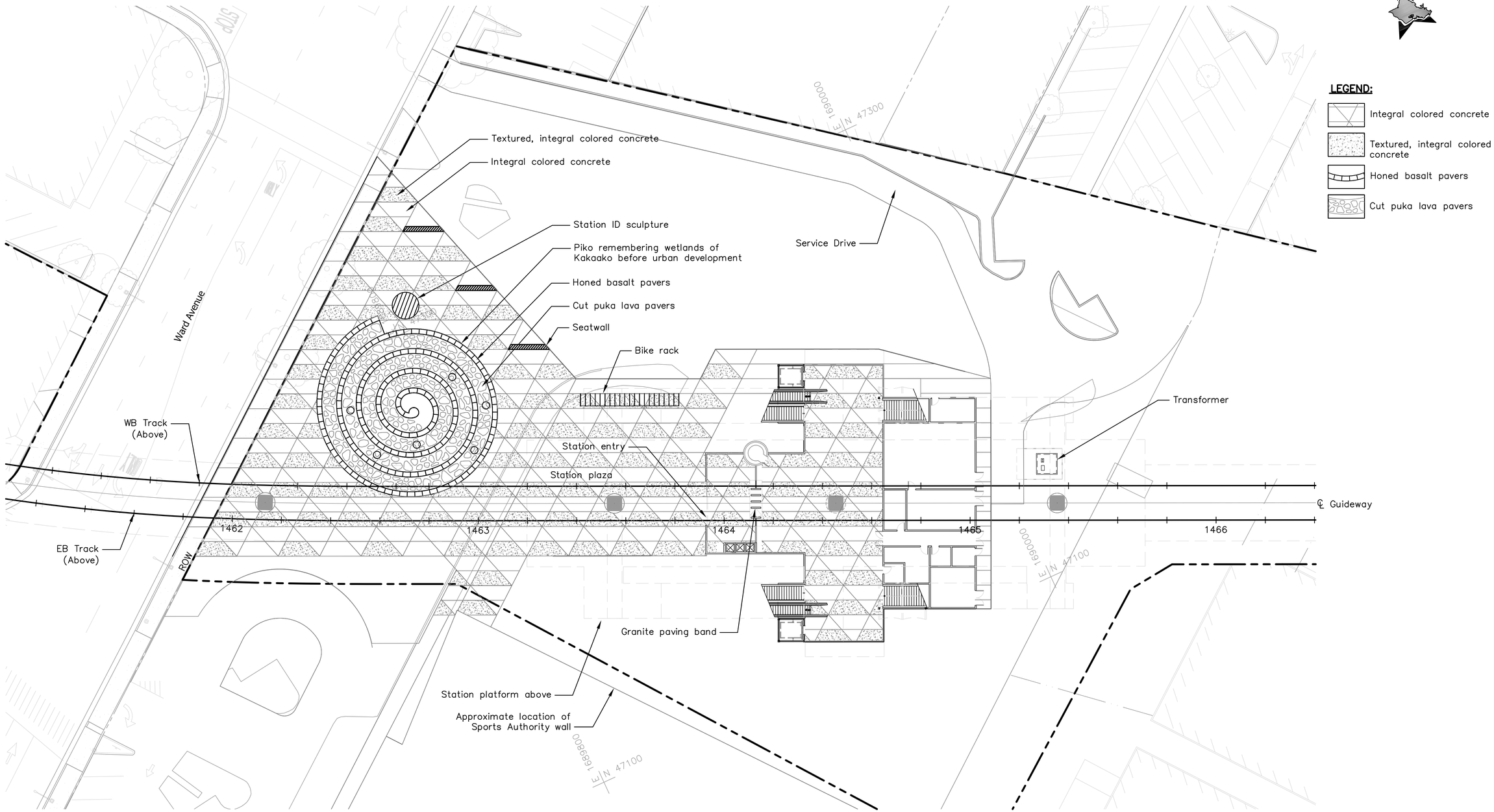
For reduced prints, original page size in inches: 0 1 2 3 4

KAKA'AKO STATION

# LANDSCAPE SITE PLAN

Contract No.: SV-545
CADD File: SG5-J02-LA001
Drawing No.: LA001 Rev.
Scale: 1"=40'
Page No. 46 of 50

2010-01-07 3:43 PM P:\Z-Projects (working)\w-kyle\z-projects\'08\108017-Honolulu HCTC\dwgs\xrefs\SG5-LA_revised2.dwg




| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12-21-09

# 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: CONCEPTS LLC
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Honolulu, HI 96814

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## KAKA'AKO STATION

## PAVING PLAN

Contract No.: SV-545
CADD File: SG5-J03-LA101
Drawing No: LA101 Rev.
Scale: 1"=20'
Page No. 47 of 50

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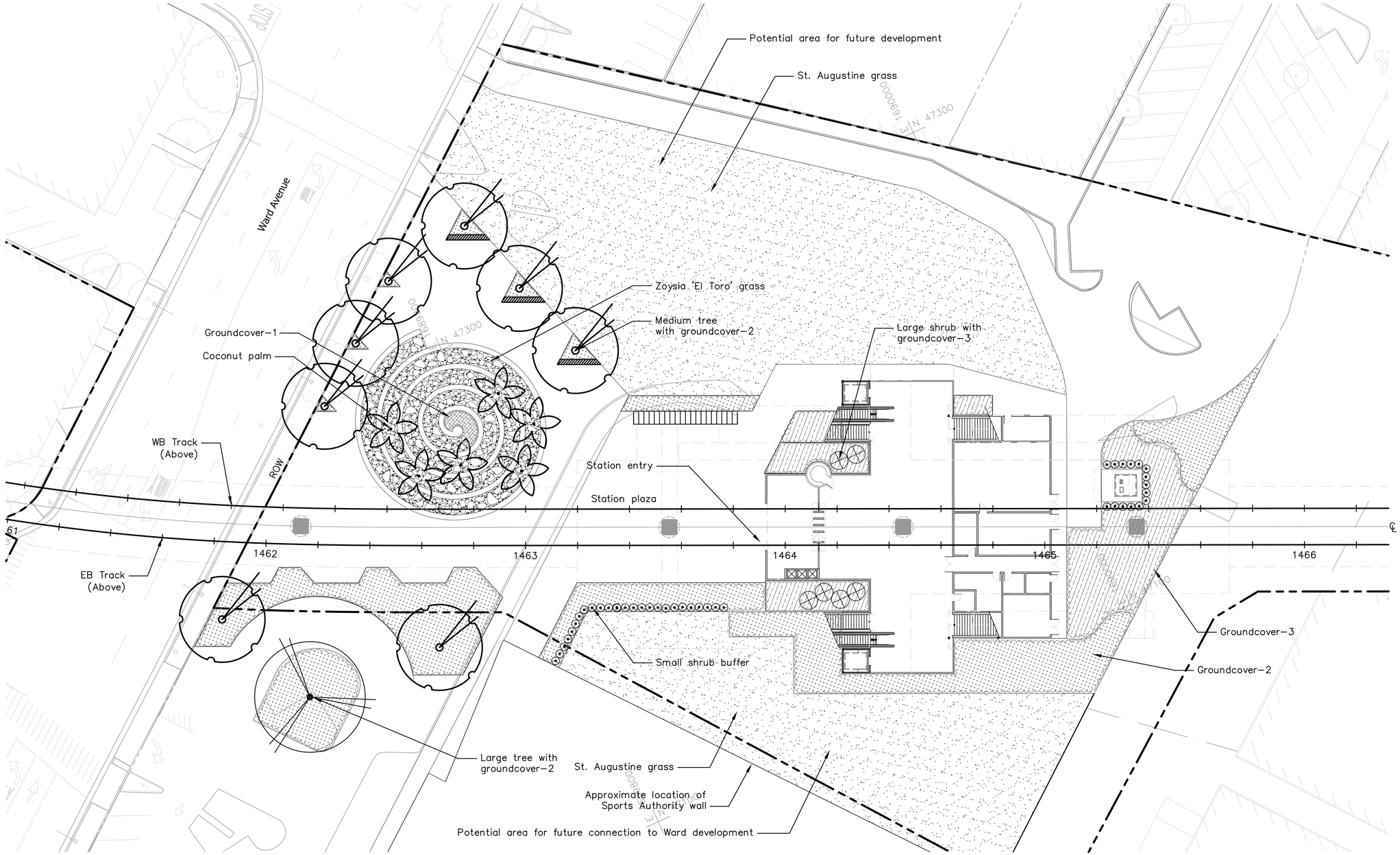


**NOTES:**

1. For Planting Notes and Symbols see Dwg No. LA401.

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

# 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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Honolulu, HI 96814

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## KAKA'AKO STATION

## PLANTING PLAN

Contract No.: SV–545
CADD File: SG5–J04–LA201
Drawing No: LA201 Rev.
Scale: 1"=20'
Page No. 48 of 50

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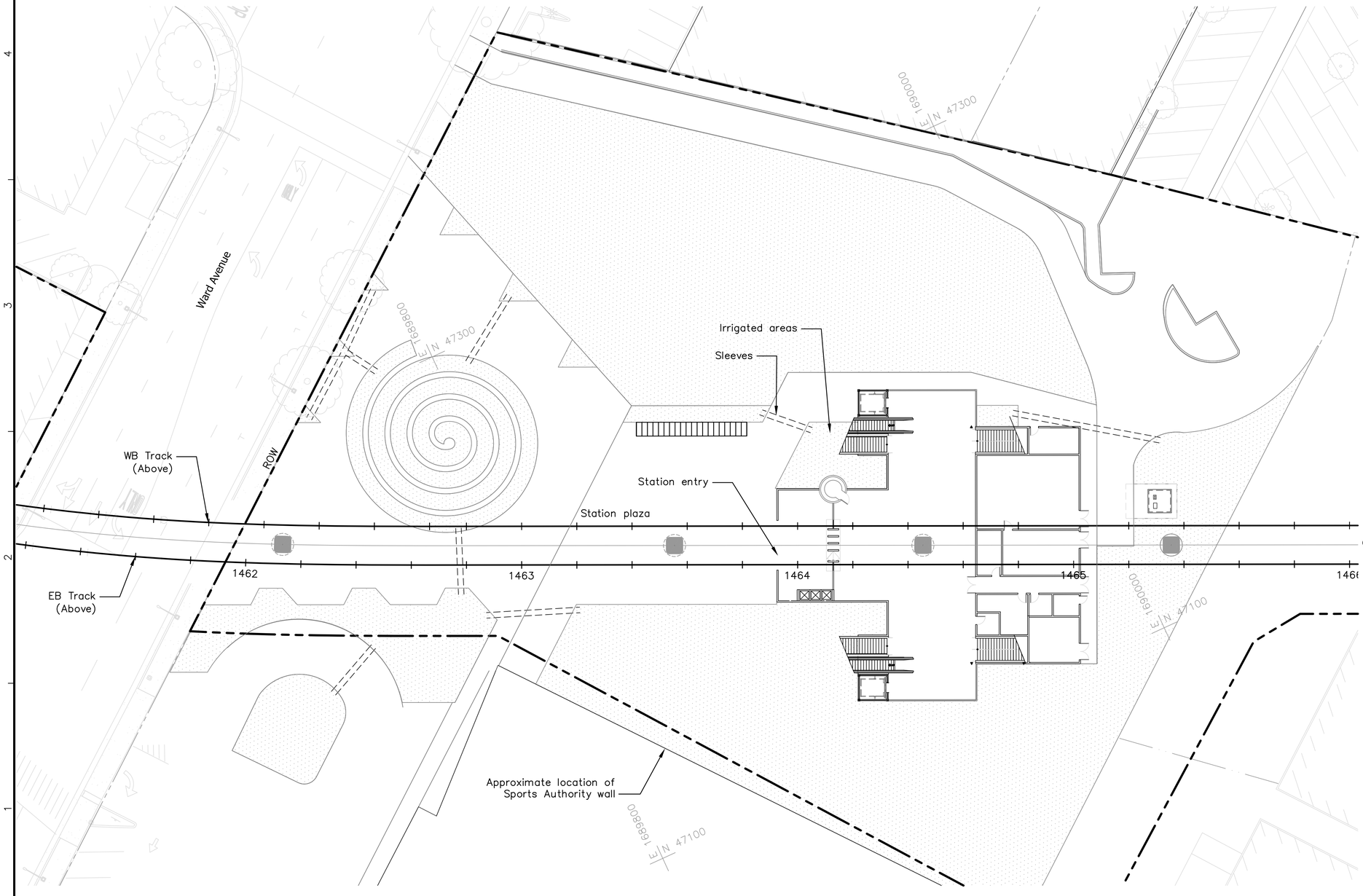


## IRRIGATION NOTES:

1. Water or maintain irrigation to existing planting areas that are impacted by construction.
2. Maintain existing irrigation meters and salvage backflow preventers for reuse.
3. Demolish and remove all existing irrigation mainlines, laterals, valves and heads.
4. Provide a two–wire type irrigation controller capable of being expanded to a central computer. Central control computer to be located at Project Maintence Facility (NIC).
5. Provide power to controller.
6. Irrigation system shown is diagrammatic and subject to adjustment in the field. Layout of irrigation system to be determined.
7. Provide sufficient irrigation heads and or driplines for full coverage of planting areas.
8. All mainline and laterals shall be HDPE.
9. Sleeves and conduit pipe can be PVC.
10. Provide electric handholes for irrigation control wires at a minimum 250 feet spacing.

## LEGEND:

Irrigation sleeve

Irrigation

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

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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Honolulu, HI 96814

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KAKA'AKO STATION

IRRIGATION PLAN

Contract No.: SV–545
CADD File: SG5–J05–LA301
Drawing No: LA301 Rev.
Scale: 1"=20'
Page No. 49 of 50

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# PLANT & MATERIALS LIST

| SYMBOL | QUANTITY | COMMON NAME | BOTANICAL NAME | SIZE | REMARKS |
|---|---|---|---|---|---|
| | ea | Large Tree<br>Monkeypod | Samanea saman | | |
| | ea | Medium Tree<br>Rainbow shower | Cassia x nealiae 'Queen's Hospital White' | | |
| | ea | Palm<br>Coconut palm | Cocos nucifera | | |
| ⊕ | ea | Large shrubs<br>Bamboo | Bambusa vulgaris<br>Schizostachyum glaucifolium | | |
| ⊙ | ea | Small shrubs<br>'Akia<br>Ti | Wikstroemia uva-ursi<br>Cordyline fruticosa | | |
| | SF | Groundcover-1<br>'Ahu'awa | Cyperus javanicus | | |
| | SF | Groundcover-2<br>Naio papa<br>'Uki'uki | Myoporum sandwicense<br>Dianella sandwicensis | | |
| | SF | Groundcover-3<br>Palapalai | Microlepia strigosa | | |
| | SF | Grass<br>Zoysia 'El Toro' | Zoysia japonica 'El Toro' | | |
| | | Grass<br>St. Augustine | Stenotaphrum secundatum | | |
| | SF<br>CY<br>Lin ft | Organic soil amendments<br>Imported screened soil<br>Root barrier | | | |

Quantities shown on plant list are for reference
Only. Verify actual quantities as shown on plan.

## PLANTING NOTES

1. Provide a 6" layer of imported screened soil over all planting areas.
2. Backfill mix shall consist of three (3) parts of imported screened soil to one (1) part organic soil amendments (see specifications). Add one (1) pound of 10–30–10 fertilizer to one (1) cubic yard of backfill mix. Mix thoroughly on project site prior to any planting operations.
3. Planting tablets for trees, palms, and shrubs shall be as follows:

| | | |
|---|---|---|
| A) | Field specimen | 12 tablets |
| B) | 25 gallon | 8 tablets |
| C) | 15 gallon | 5 tablets |
| D) | 5 gallon | 3 tablets |
| E) | 3 gallon | 2 tablets |
| F) | 1 gallon | 1 tablet |

Use Agriform Tablets 20–10–5, 21 gram size.

4. Groundcover shall be planted under all trees and shrubs (unless otherwise noted on plans).
5. Quantities shown are for reference only. Contractor to verify actual quantities as shown on drawings. Contractor shall provide plants and materials in the quantity necessary to complete the installation as shown on the drawings.

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

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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Honolulu, HI 96814

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KAKA'AKO STATION

MATERIALS SCHEDULE, MISCELLANEOUS DETAILS, & SECTIONS

Contract No.: SV–545
CADD File: SG5–J06–LA401
Drawing No.: LA401 Rev.
Scale: N/A
Page No. 50 of 50

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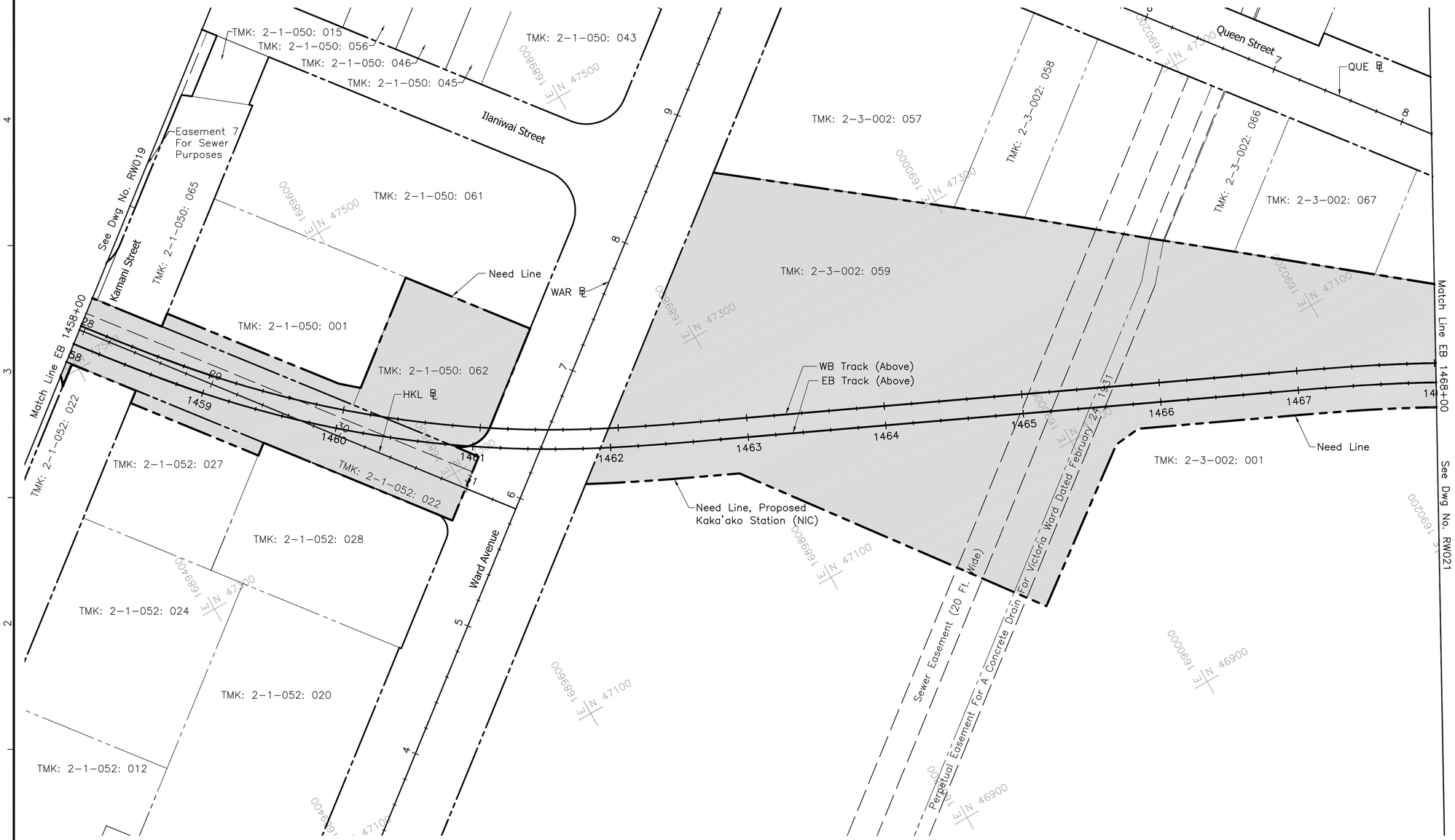
# KAKAʻAKO STATION

## APPENDIX A - INFORMATIVE DRAWINGS

**FROM CITY CENTER GUIDEWAY & UTILITIES PRELIMINARY ENGINEERING PLANS AND CORE SYSTEMS RFP PLANS**




**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. Construction easements will be defined during the final design phase and are not reflected on plans.
3. For General Civil Notes, Symbols, and Abbreviations, see Dwg No. CG001.
4. For Right-of-Way legend, see Dwg No. RW001.

| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 2-1-050:001 | Partial | 900 | Halekauwila St | Commercial |
| 2-1-050:062 | Full | 404 | Ward Ave | Commercial |
| 2-1-052:022 | Partial | – | – | Commercial |

| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 2-1-052:027 | Partial | 901, 903, 905, 907, 909, 911, 913, 915, 917 | Halekauwila St | Commercial |
| 2-3-002:001 | Partial | 310, 330, 340 | Kamakee St | Commercial/Industrial |
| 2-3-002:001 | Partial | 1020, 1030, 1044, 1060 | Auahi St | Commercial/Industrial |
| 2-3-002:059 | Partial | 333, 953, 953A, 953B, 953C, 953D, 953E, 953F | Queen St | Commercial |

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: L Karamatsu
Drawn: L Francisco
Checked: K Wong
Approved: C Shimizu
Date: 12-21-09

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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CITY CENTER GUIDEWAY & UTILITIES

# EXISTING RIGHT-OF-WAY PLAN & PROPOSED ACQUISITION TABULATIONS

EB 1458+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-B04-RW020
Drawing No: RW020 Rev.
Scale: 1"=40'
Page No. 44 of 323

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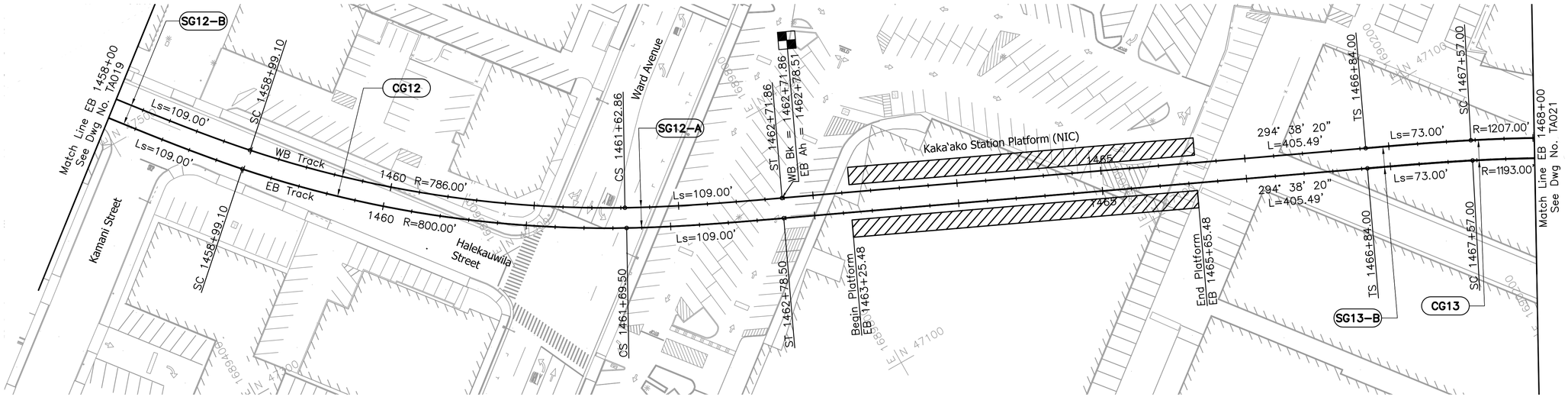


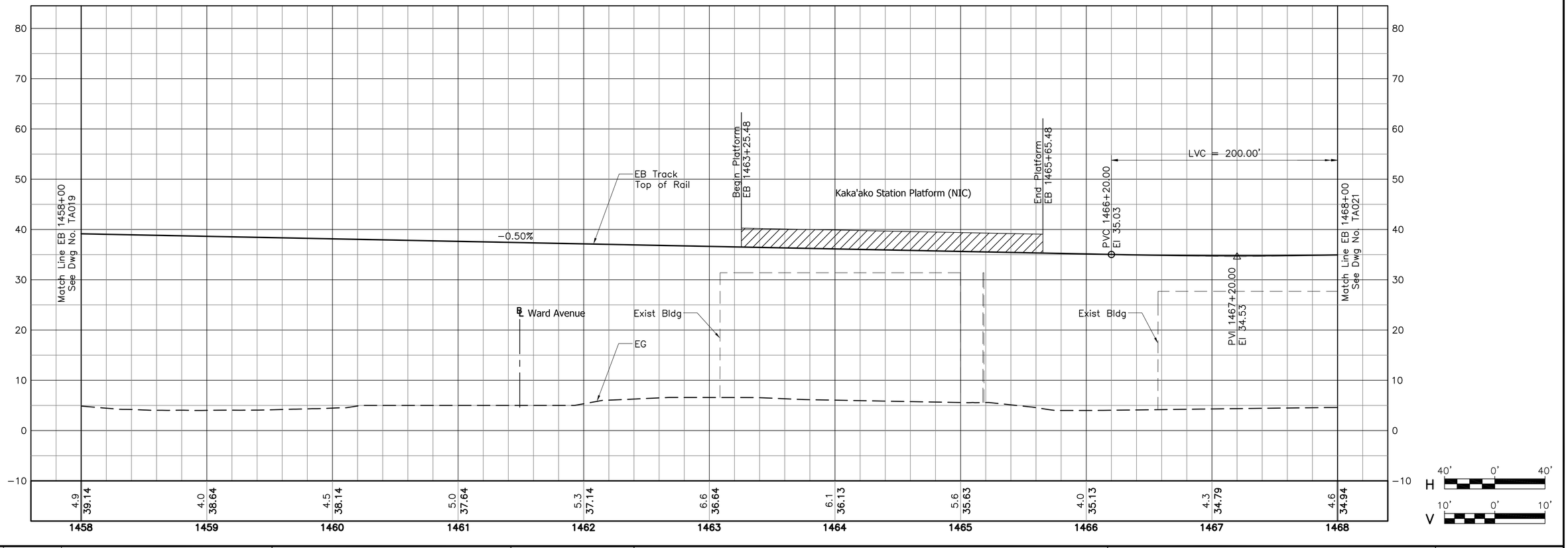


NOTES:

1. For General Civil Notes, Symbols, and Abbreviations, see Dwg No. CG001.
2. For Track Alignment Abbreviations, see Dwg No. CG002.
3. For Station information, refer Structural Plans.

H 40' 0' 40'
V 10' 0' 10'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: M Jewell
Drawn: L Francisco
Checked: E Liberman
Approved: C Shimizu
Date: 12–21–09

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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CITY CENTER GUIDEWAY & UTILITIES

TRACK ALIGNMENT
PLAN & PROFILE

EB 1458+00 TO EB 1468+00

Contract No.: SV–530
CADD File: CC–B05–TA020
Drawing No.: TA020 Rev.
Scale: 1"=40' H, 1"=10' V
Page No. 68 of 323

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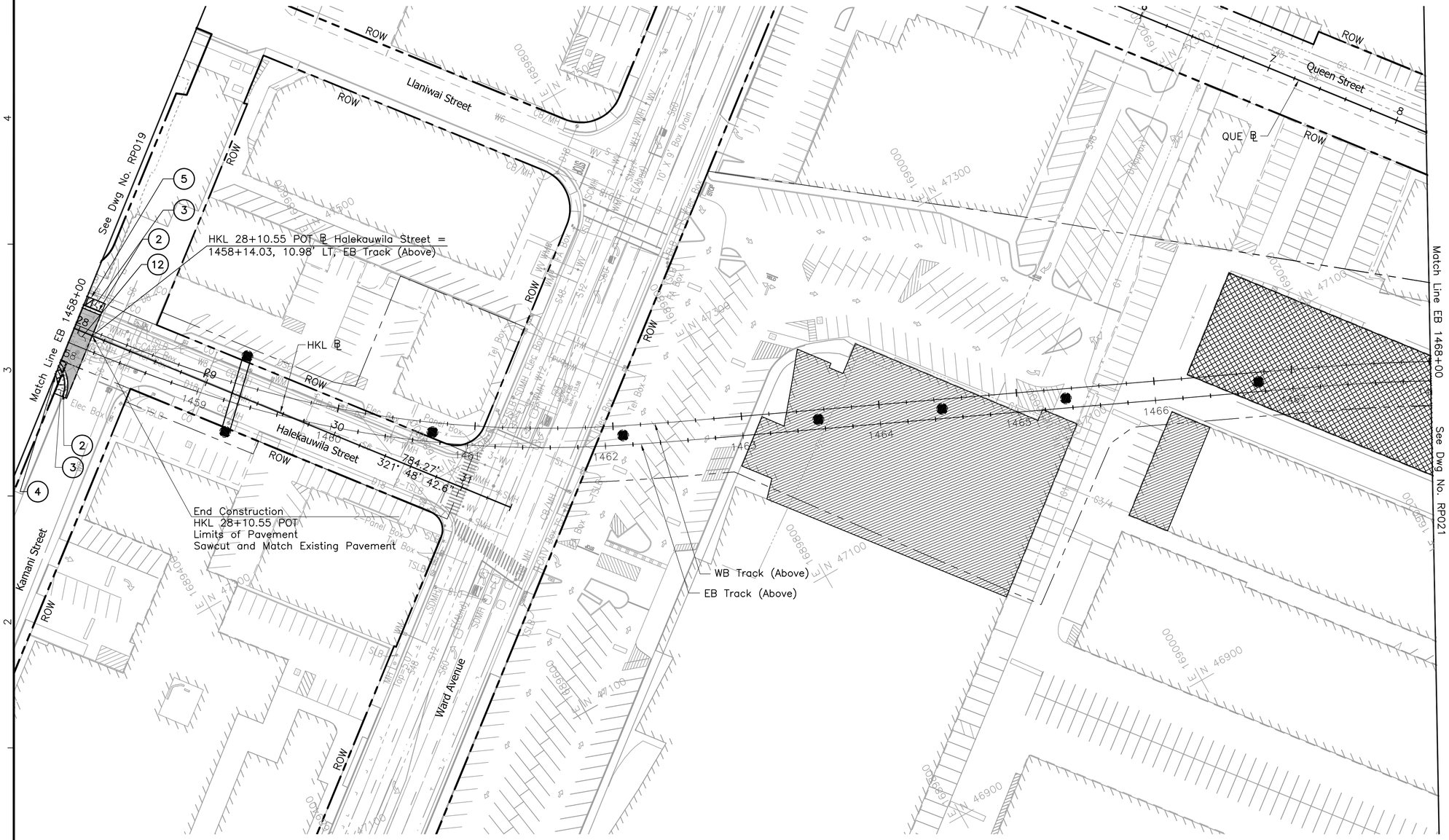


CONSTRUCTION NOTES:

| | | | |
|---|---|---|---|
| (2) | Construct Concrete Curb and Gutter. | (5) | Construct Reinforced Concrete Driveway. |
| (3) | Construct Concrete Sidewalk. | (12) | Construct Plantmix Bituminous Pavement. |
| (4) | Construct Concrete Curb Ramp. | | |

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: M Jewelll
Drawn: L Francisco
Checked: E Liberman
Approved: C Shimizu
Date: 12-21-09

# 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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CITY CENTER GUIDEWAY & UTILITIES

## ROADWAY CONSTRUCTION PLAN

EB 1458+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-B09-RP020
Drawing No.: RP020 Rev.
Scale: 1"=40'
Page No. 104 of 323

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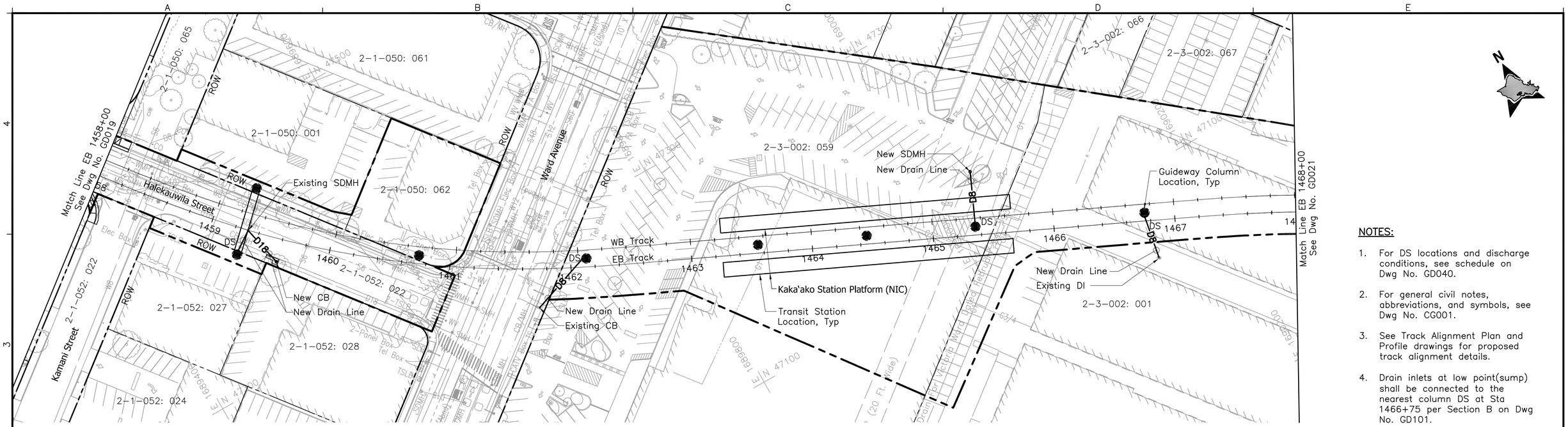
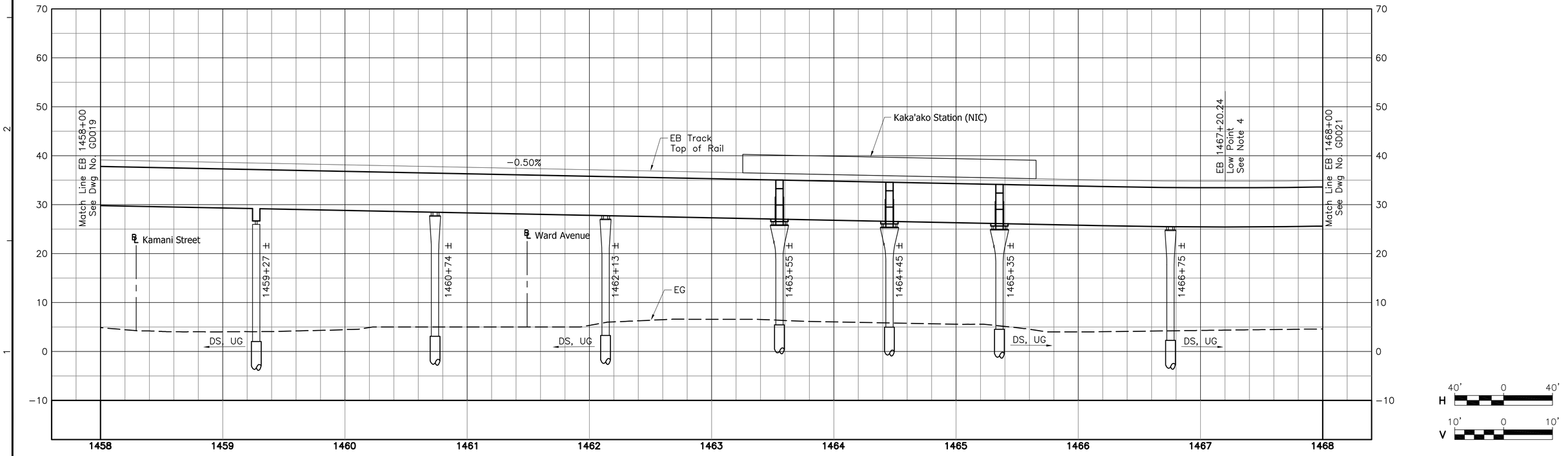



NOTES:

1. For DS locations and discharge conditions, see schedule on Dwg No. GD040.
2. For general civil notes, abbreviations, and symbols, see Dwg No. CG001.
3. See Track Alignment Plan and Profile drawings for proposed track alignment details.
4. Drain inlets at low point(sump) shall be connected to the nearest column DS at Sta 1466+75 per Section B on Dwg No. GD101.




H 40' 0 40'

V 10' 0 10'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: E Leung
Drawn: M Lauriaga
Checked: N Orense
Approved: M Yonamine
Date: 12-21-09

# 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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45 North King Street, Suite 501
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E-mail: adminhi@lyonassociates.com
www.lyonassociates.com
CIVIL ENGINEERING / CONSTRUCTION MANAGEMENT

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## CITY CENTER GUIDEWAY & UTILITIES

## GUIDEWAY DRAINAGE LAYOUT PLAN

EB 1458+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-B16-GD020
Drawing No: GD020 Rev.
Scale: 1"=40' H, 1"=10' V
Page No. 169 of 323

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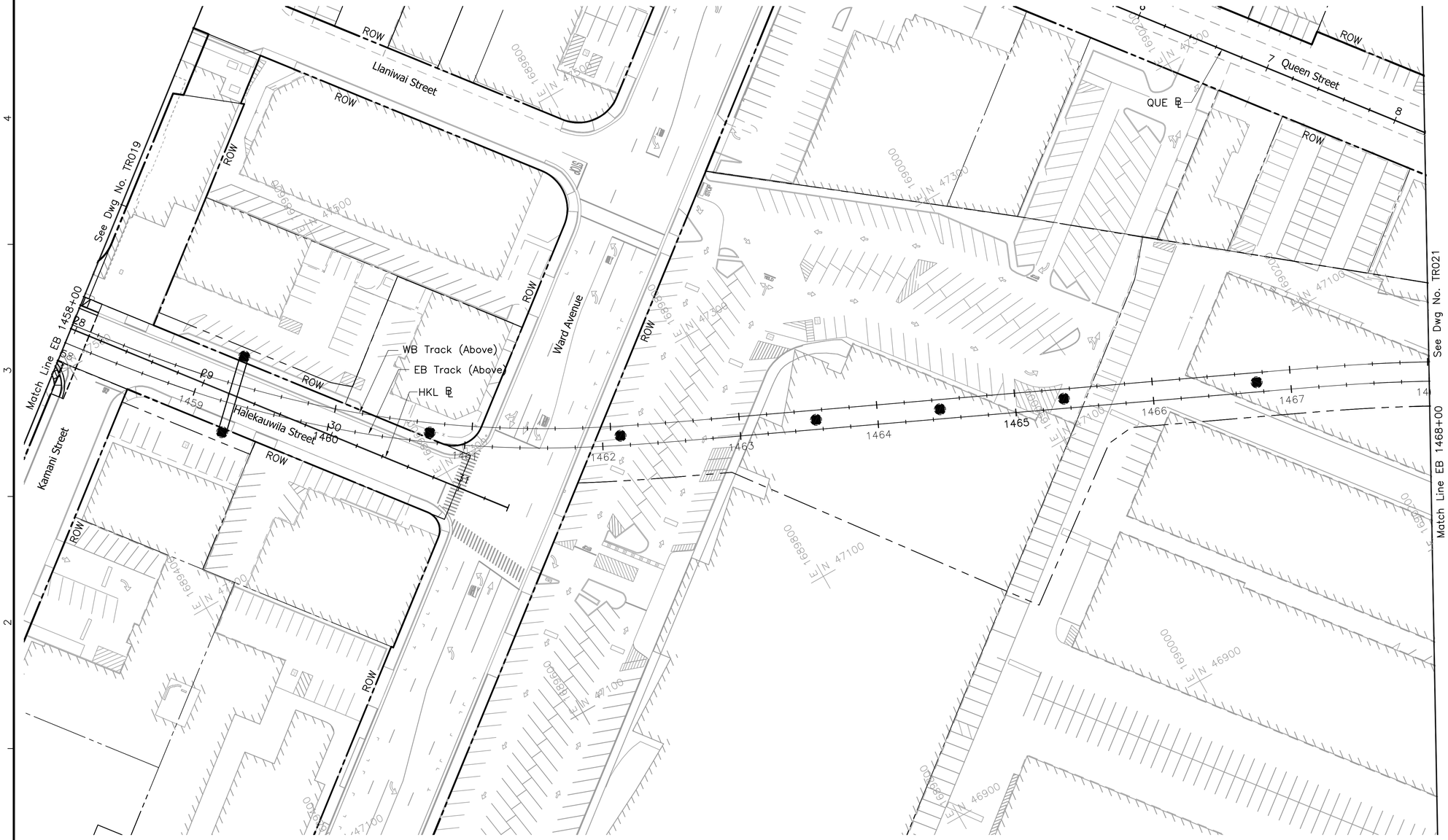


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NOTES:

1. For General Civil Notes, Symbols, and Abbreviations, see Dwg No. CG001.
2. For Signing and Typical Pavement Marking Notes and Legend, see Dwg No. TG002 to TG005.

LEGEND:

- Future guideway column. (NIC)
- Proposed guideway column.
- Proposed guideway cantilever bent column.
- Proposed guideway straddle bent column.
- Proposed guideway balanced cantilever bent column.

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: M Jewell
Drawn: L Francisco
Checked: E Liberman
Approved: C Shimizu
Date: 12-21-09

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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CITY CENTER GUIDEWAY & UTILITIES

SIGNING AND STRIPING PLAN

EB 1458+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-C02-TR020
Drawing No: TR020 Rev.
Scale: 1"=40'
Page No. 210 of 323

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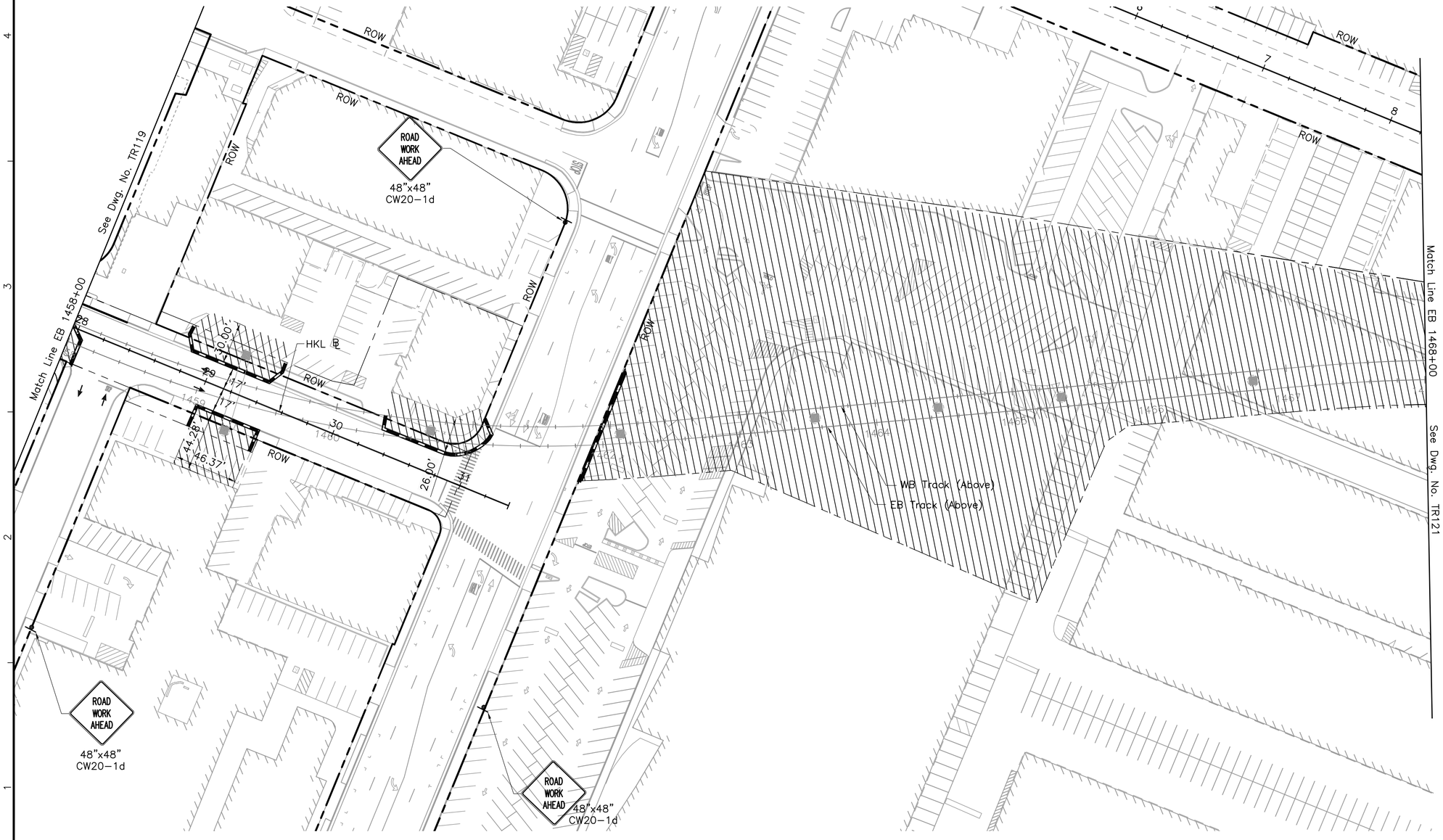


NOTES:

1. For General Civil Notes, Symbols, and Abbreviations, see Dwg No. CG001.
2. For Roadway Construction Notes and Legend, see Dwg No. CG003.
3. For Traffic Control Plan and Notes, see Dwg No. TG001.

LEGEND

- Work Zone
- Bus Pullout Area
- Concrete Barrier
- Proposed Traffic Control
- SYL Temporary Solid Yellow Line
- SWL Temporary Solid White Line
- BWL Temporary Broken White Line
- DWL Temporary Dashed White Line
- Flow of Traffic
- Attenuator
- Existing Sign
- FOC Face of Curb
- EP Edge of Pavement
- Guideway Column Location
- Guideway cantilever bent column.
- Guideway straddle bent column.

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Wardell
Drawn: B Wardell
Checked: E Liberman
Approved: C Shimizu
Date: 12–21–09

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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CITY CENTER GUIDEWAY & UTILITIES

# MAINTENANCE OF TRAFFIC PLAN PHASE 1

EB 1458+00 TO EB 1468+00

Contract No.: SV–530
CADD File: CC–C03–TR120
Drawing No: TR120 Rev.
Scale: 1"=40'
Page No. 235 of 323

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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Cadiz
Checked: L Stevens
Approved: K Nishio
Date: 12-21-09

# 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: CONTROLPOINT SURVEYING, INC.
1150 SOUTH KING STREET, SUITE 1200
HONOLULU, HAWAII 96814

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CITY CENTER GUIDEWAY & UTILITIES

## COMPOSITE PLAN EXISTING UTILITIES

EB 1458+00 TO 1463+00

Contract No.: SV-530
CADD File: CC-D02-UP038
Drawing No: UP038 Rev.
Scale: 1"=20'
Page No. 69 of 319

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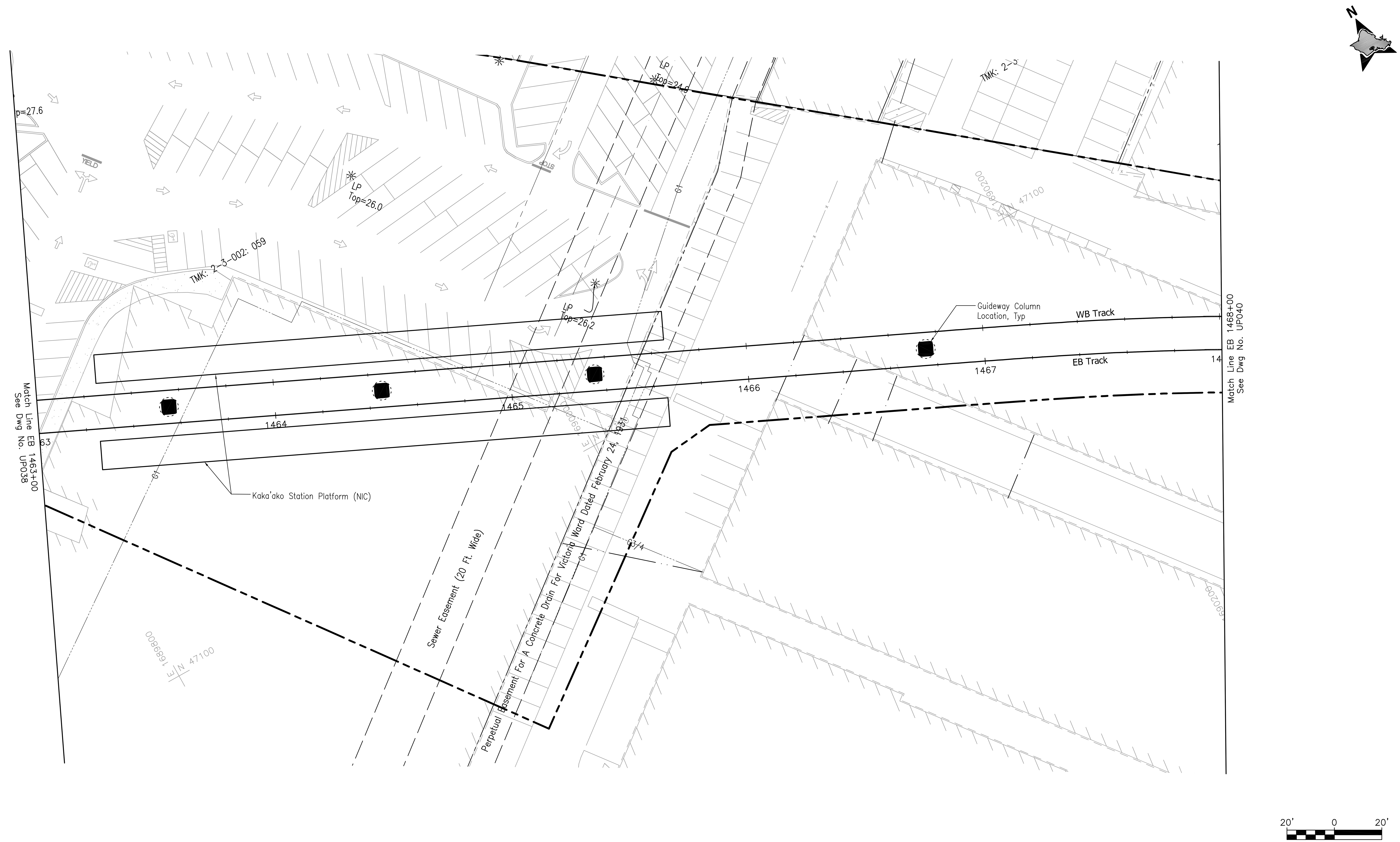


| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Cadiz
Checked: L Stevens
Approved: K Nishio
Date: 12-21-09

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

Prime Consultant: PARSONS BRINCKERHOFF
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1150 SOUTH KING STREET, SUITE 1200
HONOLULU, HAWAII 96814

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CITY CENTER GUIDEWAY & UTILITIES

COMPOSITE PLAN
EXISTING UTILITIES

EB 1463+00 TO 1468+00

Contract No.: SV-530
CADD File: CC-D02-UP039
Drawing No: UP039
Rev.:
Scale: 1"=20'



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**NOTE:**

**For drainage relocations, see Drawing No. UP138A.**

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Toba
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 12-21-09

# 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: R. M. TOWILL CORPORATION
Planning – Engineering – Environmental Services – Photogrammetry – Surveying – Construction Management
808 842 1133 2024 North King Street Suite 200 Honolulu Hawaii 96819-3470


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

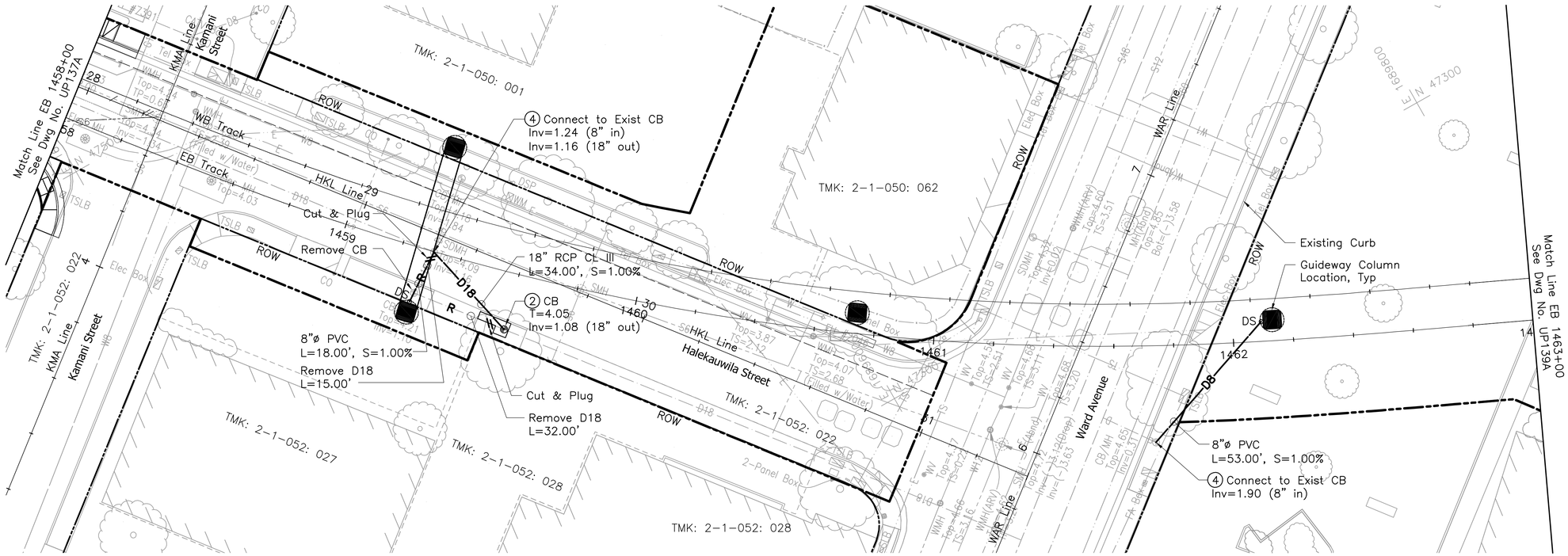
## CITY CENTER GUIDEWAY & UTILITIES

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

EB 1458+00 TO EB 1463+00 SHEET 1 OF 2

Contract No.: SV-530
CADD File: CC-D03-UP138
Drawing No.: UP138 Rev.:
Scale: 1"=20'
Page No.: 134 of 319

2009-12-15 4:49 PM K:\civil\21132 Honolulu Transit Corridor\Segment G\dwg\SG UTIL RELOC\CC-D03-.dwg




## CONSTRUCTION NOTES:

1. Construct Storm Drain Manhole for Sidewalk Area per C&C of Honolulu Std Detail D-17
2. Construct Catch Basin, Type A per C&C of Honolulu Standard Detail D-1
3. Construct Storm Drain Manhole for Pavement Area per C&C of Honolulu Standard Detail D-18
4. Construct Connection to Existing DI/SDMH/CB per Detail on Dwg No. GD102
5. Construct Catch Basin Type B per C&C of Honolulu Standard Detail D-5

## NOTE:

**For water, sewer, petroleum and gas lines relocation see Drawing No. UP138.**

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: E Leung
Drawn: D Chua
Checked: N Orense
Approved: M Yonamine
Date: 12-21-09

# 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: LYON ASSOCIATES
CIVIL ENGINEERING / CONSTRUCTION MANAGEMENT
45 North King Street, Suite 501
Honolulu, HI 96817-5649 USA
Voice: (808) 536-6621
Fax: (808) 523-1738
E-mail: adminhi@lyonassociates.com
www.lyonassociates.com

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

## CITY CENTER GUIDEWAY & UTILITIES

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

EB 1458+00 TO EB 1463+00 SHEET 2 OF 2

Contract No.: SV-530
CADD File: CC-D03-UP138A
Drawing No.: UP138A
Rev.:
Scale: 1"=20'
Page No.: 135 of 319

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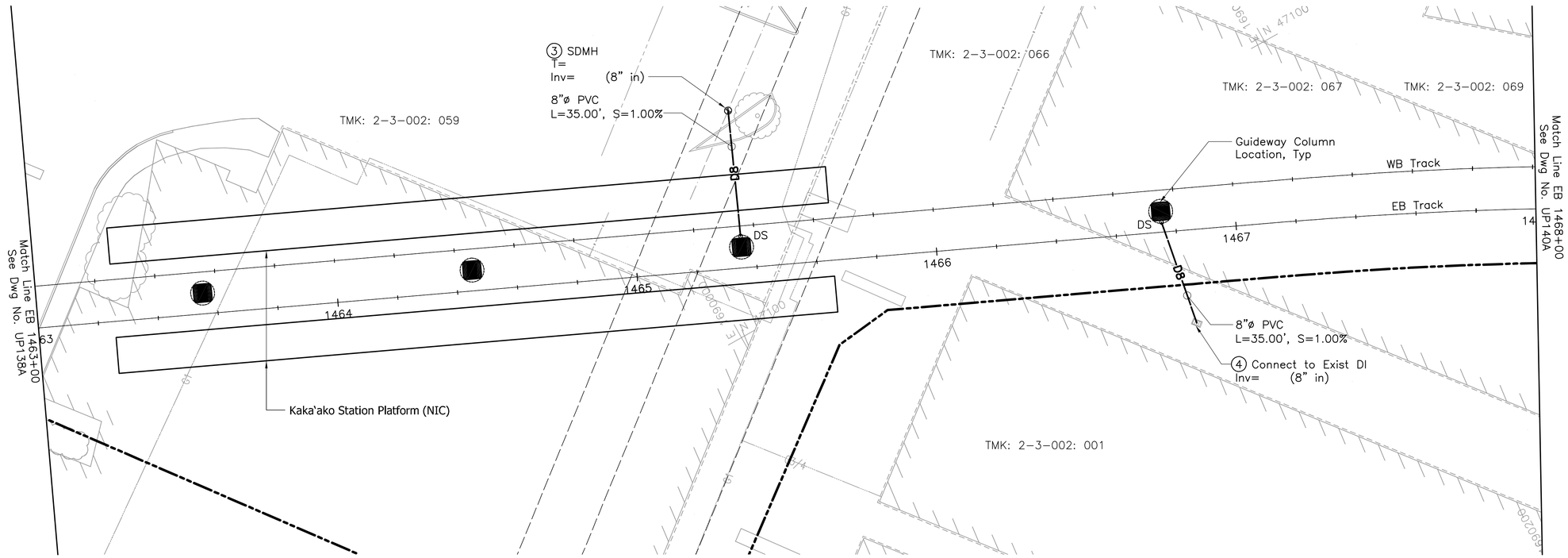


## CONSTRUCTION NOTES:

1. Construct Storm Drain Manhole for Sidewalk Area per C&C of Honolulu Std Detail D-17
2. Construct Catch Basin, Type A per C&C of Honolulu Standard Detail D-1
3. Construct Storm Drain Manhole for Pavement Area per C&C of Honolulu Standard Detail D-18
4. Construct Connection to Existing DI/SDMH/CB per Detail on Dwg No. GD102
5. Construct Catch Basin Type B per C&C of Honolulu Standard Detail D-5

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: E Leung
Drawn: D Chua
Checked: N Orense
Approved: M Yonamine
Date: 12-21-09

# 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: LYON ASSOCIATES
CIVIL ENGINEERING / CONSTRUCTION MANAGEMENT
45 North King Street, Suite 501
Honolulu, HI 96817-5649 USA
Voice: (808) 536-6821
Fax: (808) 523-1738
E-mail: adminhi@lyonassociates.com
www.lyonassociates.com

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

CITY CENTER GUIDEWAY & UTILITIES

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

EB 1463+00 TO EB 1468+00 SHEET 1 OF 1

Contract No.: SV-530
CADD File: CC-D03-UP139A
Drawing No: UP139A
Rev.:
Scale: 1"=20'
Page No. 136 of 319

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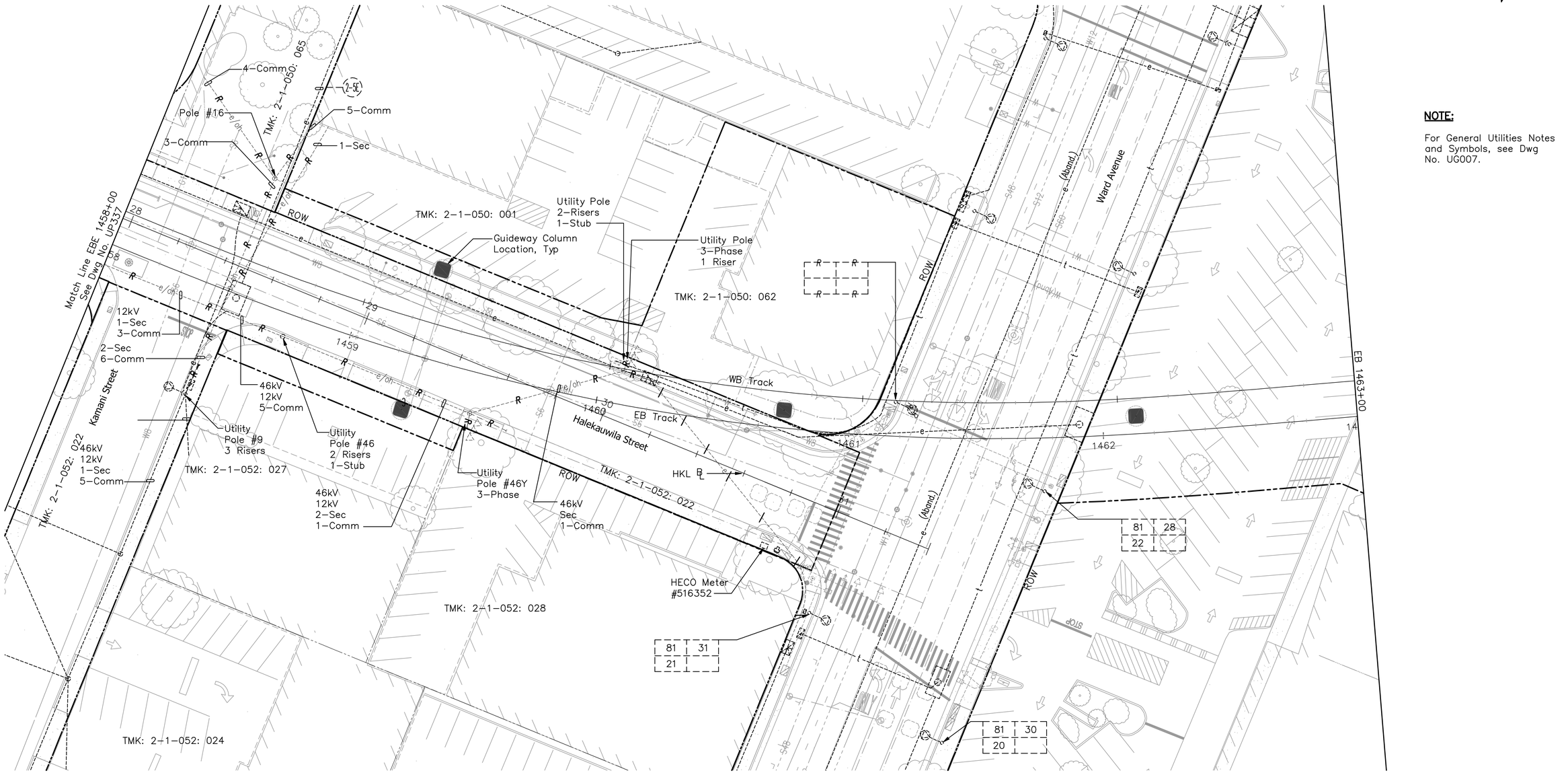


**NOTE:**

For General Utilities Notes and Symbols, see Dwg No. UG007.

| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: G Takase
Drawn: R Nagata
Checked: S Sakai
Approved: S Sakai
Date: 12–21–09

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:
RONALD N. S. HO & ASSOCIATES, INC.
Electrical Engineers
2138 Algaroba Street, Suite A Honolulu, Hawaii 96826
Phone: (808)941–0577 Fax: (808)945–2646

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

CITY CENTER GUIDEWAY & UTILITIES

# UTILITY DEMOLITION PLAN ELECTRICAL & COMMUNICATIONS

EB 1458+00 TO EB 1463+00

Contract No.: SV–530
CADD File: CC–D03–UP338
Drawing No.: UP338
Rev.:
Scale: 1"=20'
Page No.: 197 of 319

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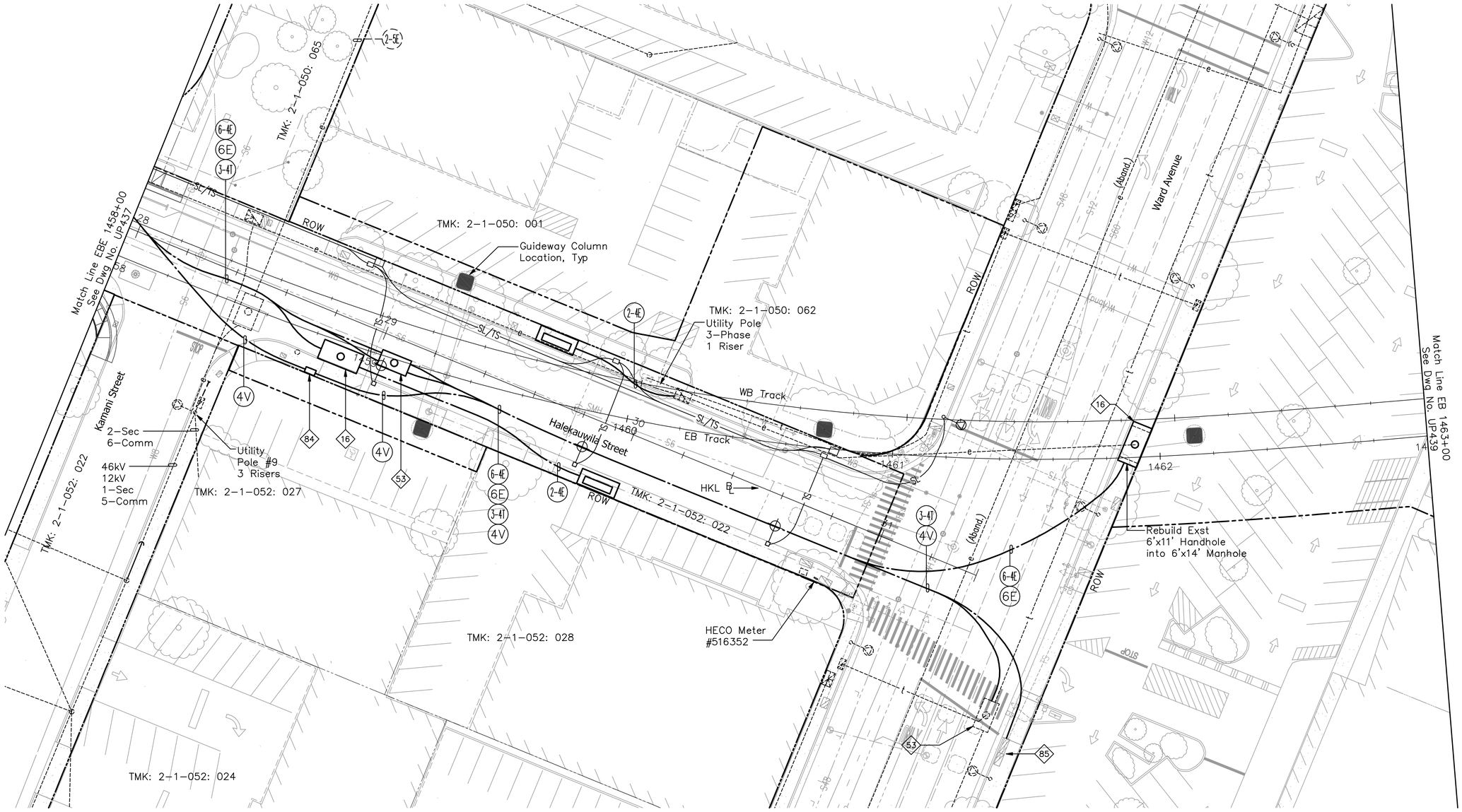


**NOTE:**

For General Utilities Notes and Symbols, see Dwg No. UG007.

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: G Takase
Drawn: R Nagata
Checked: S Sakai
Approved: S Sakai
Date: 12-21-09

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: RONALD N. S. HO & ASSOCIATES, INC.
Electrical Engineers
2138 Algaroba Street, Suite A Honolulu, Hawaii 96826
Phone: (808)941-0577 Fax: (808)945-2646

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

CITY CENTER GUIDEWAY & UTILITIES

# UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS

EB 1458+00 TO EB 1463+00

Contract No.: SV-530
CADD File: CC-D03-UP438
Drawing No.: UP438
Rev.:
Scale: 1"=20'
Page No.: 258 of 319

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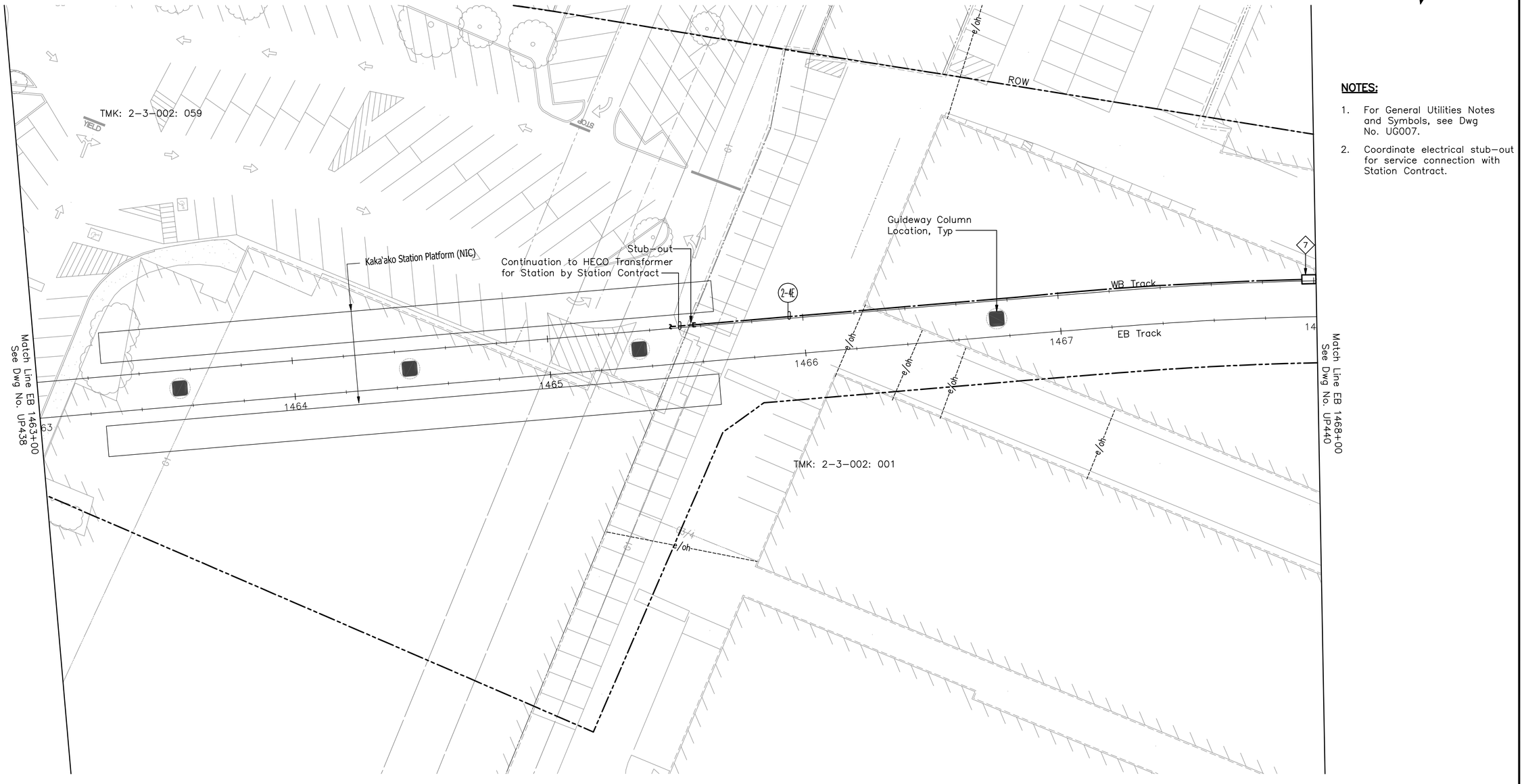


**NOTES:**

1. For General Utilities Notes and Symbols, see Dwg No. UG007.
2. Coordinate electrical stub-out for service connection with Station Contract.

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: G Takase
Drawn: R Nagata
Checked: S Sakai
Approved: S Sakai
Date: 12-21-09

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: RONALD N. S. HO & ASSOCIATES, INC.
Electrical Engineers
2138 Algaroba Street, Suite A Honolulu, Hawaii 96826
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For reduced prints, original page size in inches: 0 1 2 3 4

CITY CENTER GUIDEWAY & UTILITIES

# UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS

EB 1463+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-D03-UP439
Drawing No: UP439
Rev.
Scale: 1"=20'
Page No. 259 of 319

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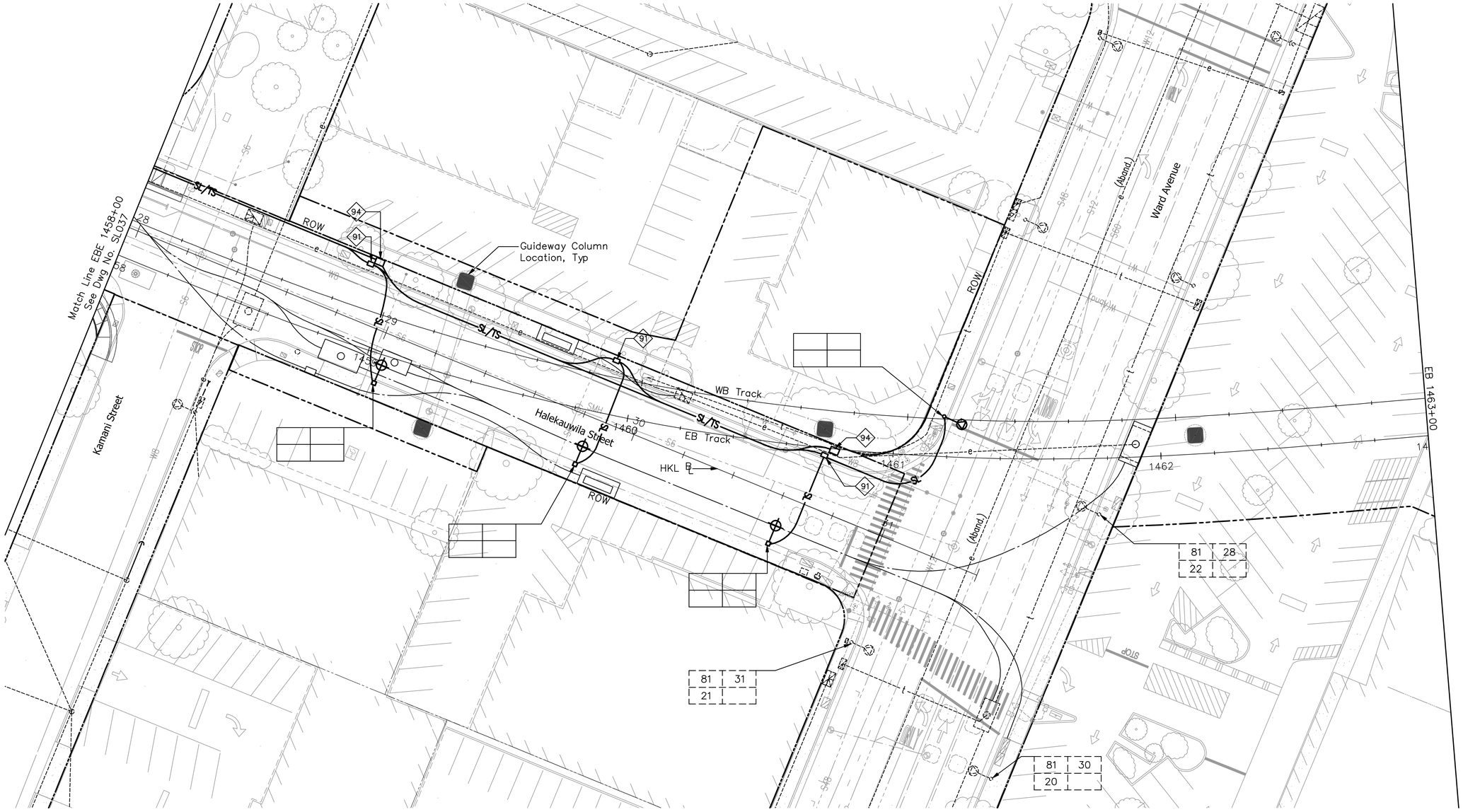


**NOTE:**

For General Utilities Notes and Symbols, see Dwg No. UG007.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: G Takase
Drawn: R Nagata
Checked: S Sakai
Approved: S Sakai
Date: 12-21-09

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: RONALD N. S. HO & ASSOCIATES, INC.
Electrical Engineers
2138 Algaroba Street, Suite A Honolulu, Hawaii 96826
Phone: (808)941-0577 Fax: (808)945-2646

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

CITY CENTER GUIDEWAY & UTILITIES

# UTILITY RELOCATION PLAN STREET LIGHT & TRAFFIC SIGNAL

EB 1458+00 TO EB 1463+00

Contract No.: SV-530
CADD File: CC-D05-SL038
Drawing No.: SL038 Rev.
Scale: 1"=20'
Page No.: 310 of 319

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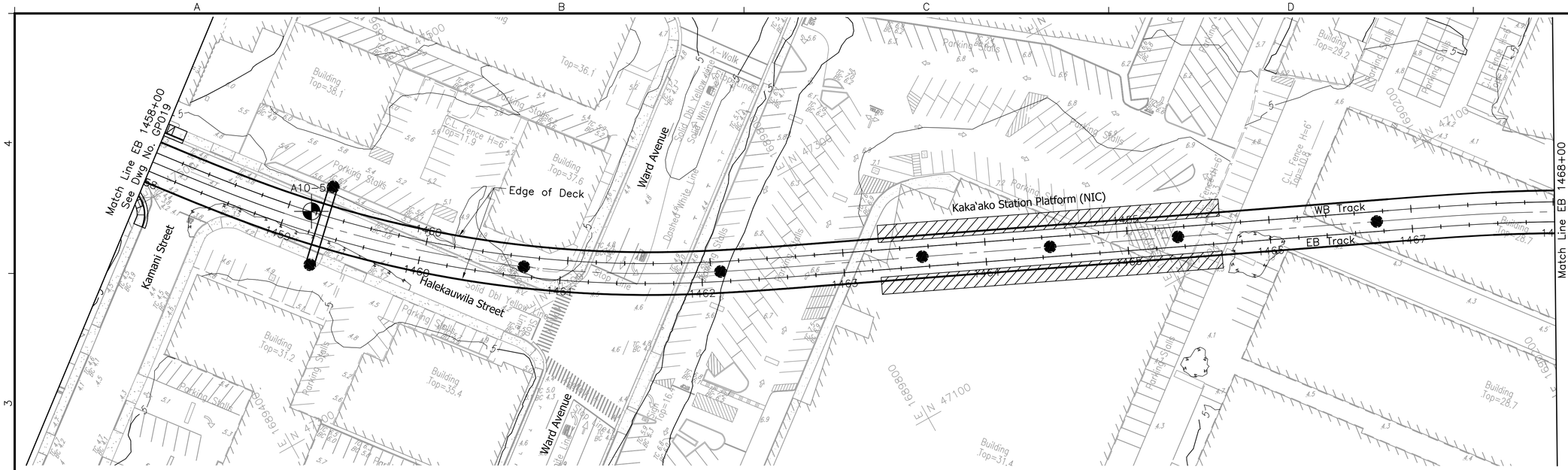
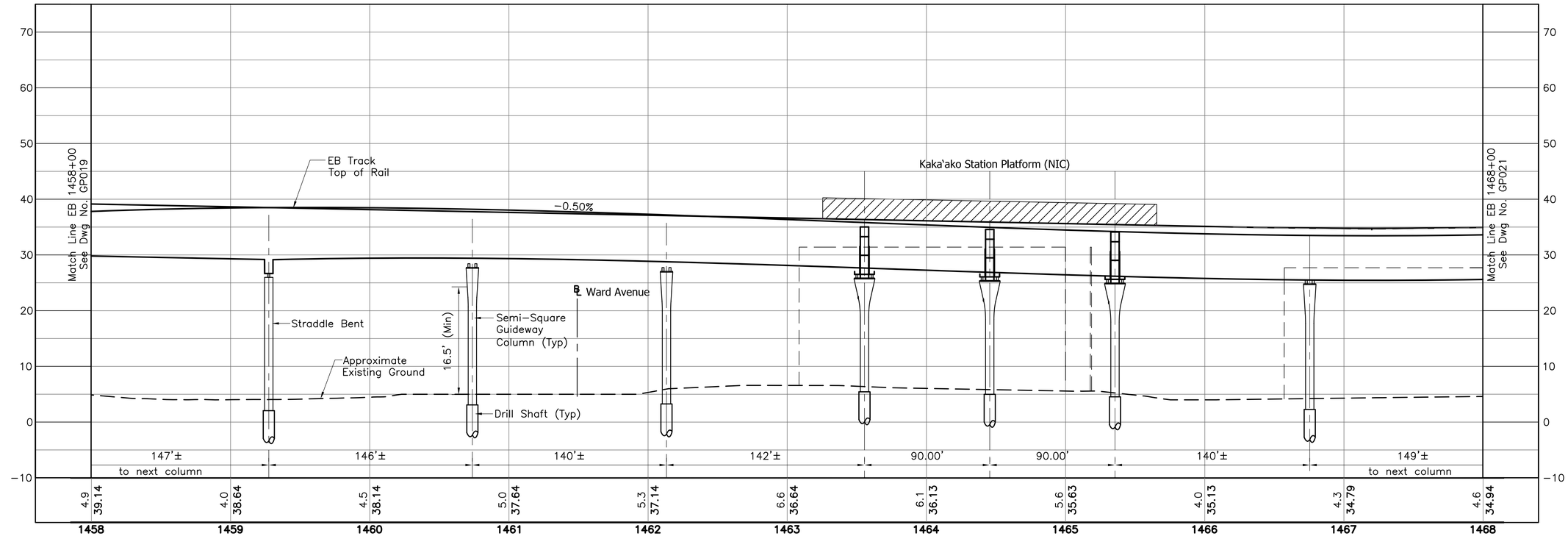



NOTES:

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.
4. For Kaka'ako Station details, See Dwg Nos. FP008 thru FP008B.




40' 0 40'

10' 0 10'

| Rev | By | Date | Description |
|---|---|---|---|

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 12-21-09

# 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

## CITY CENTER GUIDEWAY & UTILITIES

## STRUCTURAL PLAN AND PROFILE

EB 1458+00 TO EB 1468+00

Contract No.: SV-530
CADD File: CC-G04-GP020
Drawing No.: GP020 Rev.
Scale: 1"=40' H, 1"=10' V
Page No.: 41 of 202

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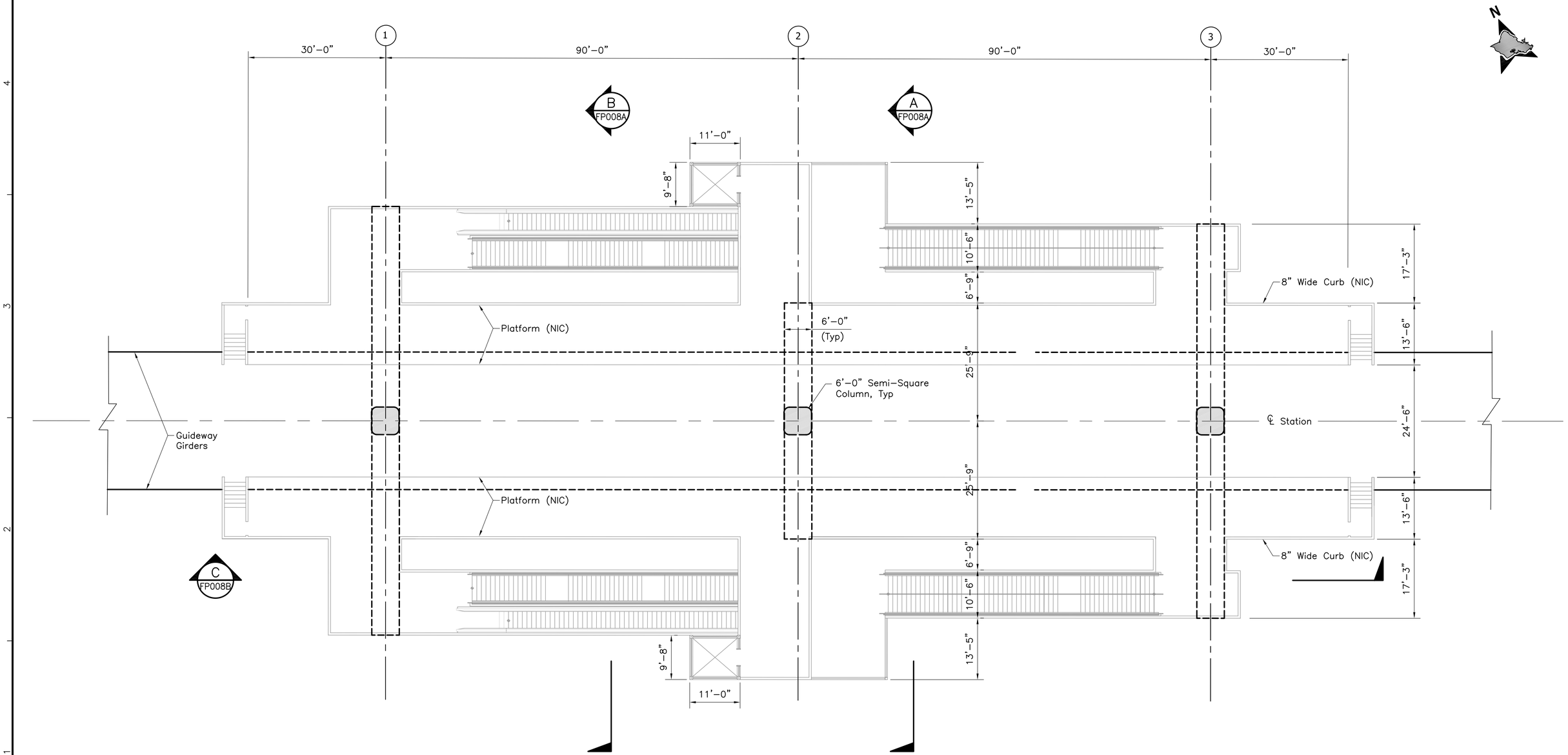


| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 12–21–09

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

CITY CENTER GUIDEWAY & UTILITIES

# KAKA'AKO STATION GUIDEWAY/STATION INTERFACE

PLATFORM LEVEL PLAN

Contract No.: SV–530
CADD File: CC–G05–FP008
Drawing No: FP008 Rev.
Scale: 3/32"=1'–0"
Page No. 82 of 202

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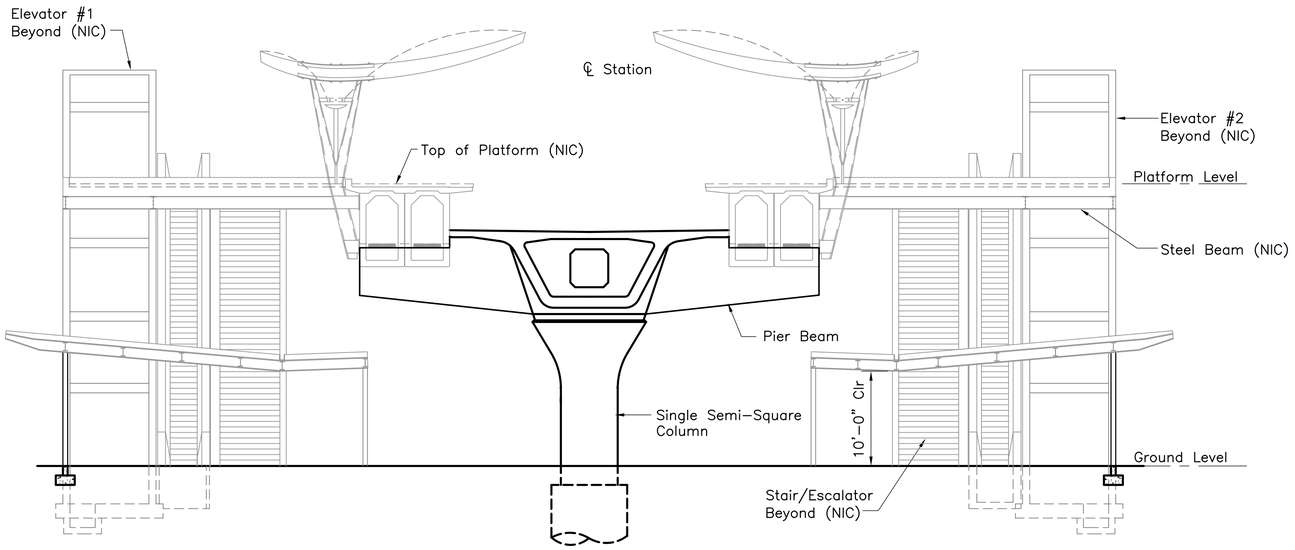
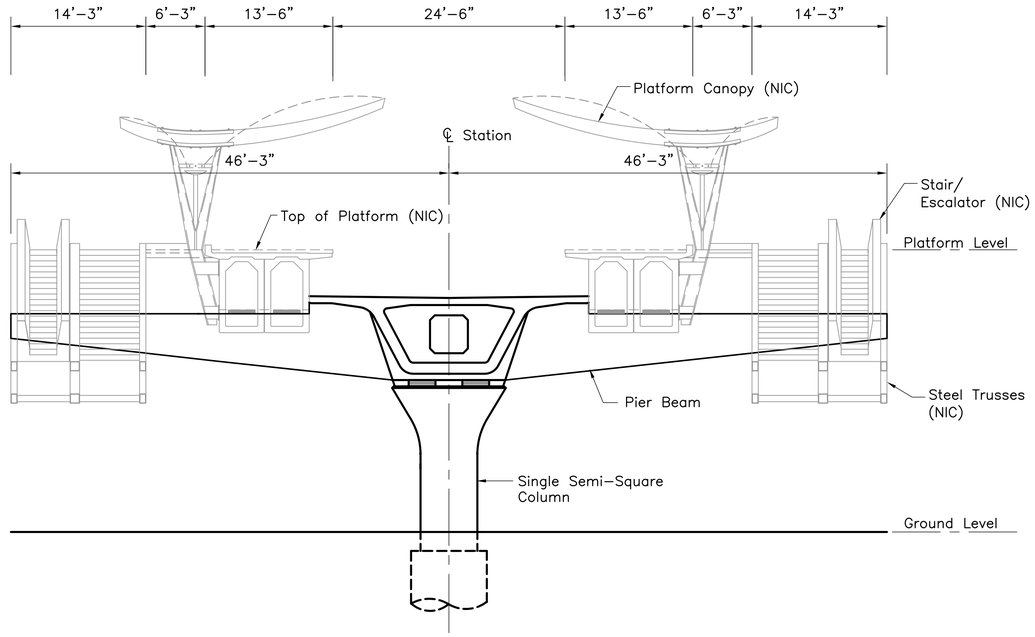



SECTION A
1/8"=1'–0"
FP008A
FP008




SECTION B
1/8"=1'–0"
FP008A
FP008

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| Rev | By | Date | Description |
|---|---|---|---|

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 12–21–09

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

CITY CENTER GUIDEWAY & UTILITIES

KAKA'AKO STATION
GUIDEWAY/STATION INTERFACE

SECTION A AND SECTION B

Contract No.: SV–530
CADD File: CC–G05–FP008A
Drawing No: FP008A
Rev.
Scale: 1/8"=1'–0"
Page No. 83 of 202

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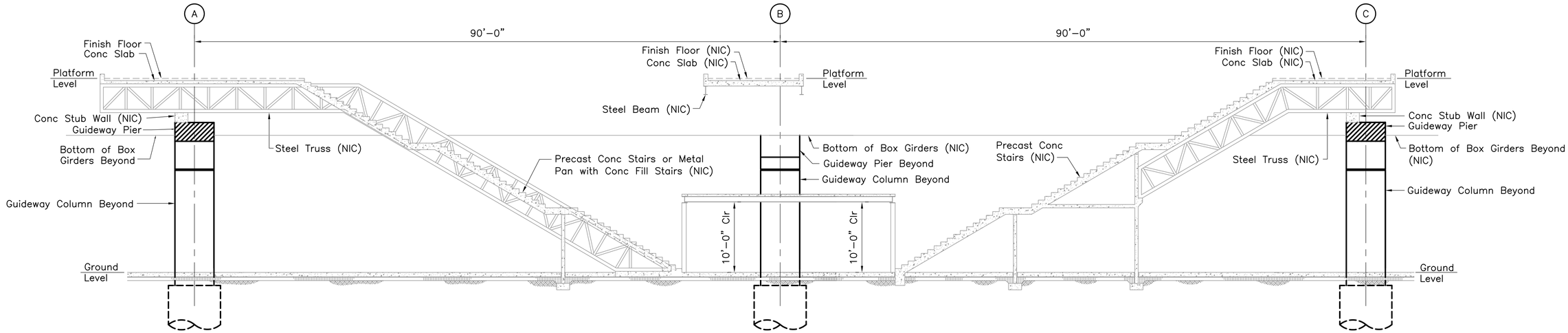


SECTION C
1/8"=1'–0"
FP008B
FP008

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

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 12–21–09

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

CITY CENTER GUIDEWAY & UTILITIES

KAKA'AKO STATION
GUIDEWAY/STATION INTERFACE

SECTION C

Contract No.: SV–530
CADD File: CC–G05–FP008B
Drawing No.: FP008B
Rev.:
Scale: 1/8"=1'–0"
Page No.: 84 of 202

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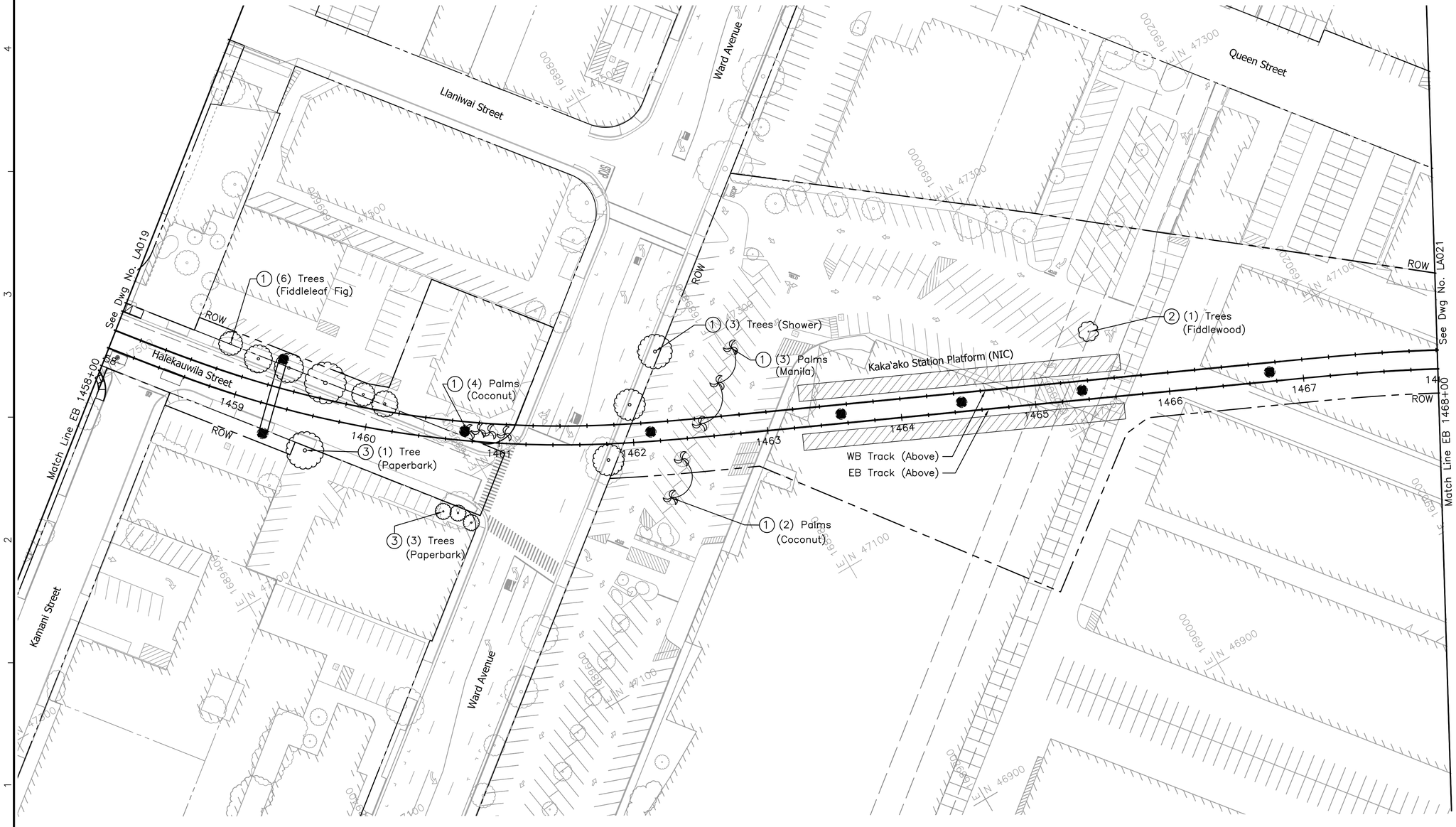



**NOTES:**

1. For General Landscape Notes, Symbols, and Abbreviations, see Dwg No. LG001.
2. See Roadway Construction plan sheets for proposed roadway construction.

**LEGEND:**

- Proposed Guideway Column
- Existing Palm
- Existing Tree
- Existing Vegetation

**CONSTRUCTION NOTES:**

1. Salvage tree or palm for transplanting. Deliver to project nursery.
2. Remove tree or palm including grinding stump 18" below finish grade.
3. Protect tree or palm in place. (See Detail 1–LA201). Prune per Arborist's Instructions.

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

# 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: CONCEPTS LLC Site Planning Landscape Architects
1580 Makaloa Street, Suite 1005 Honolulu, HI 96814

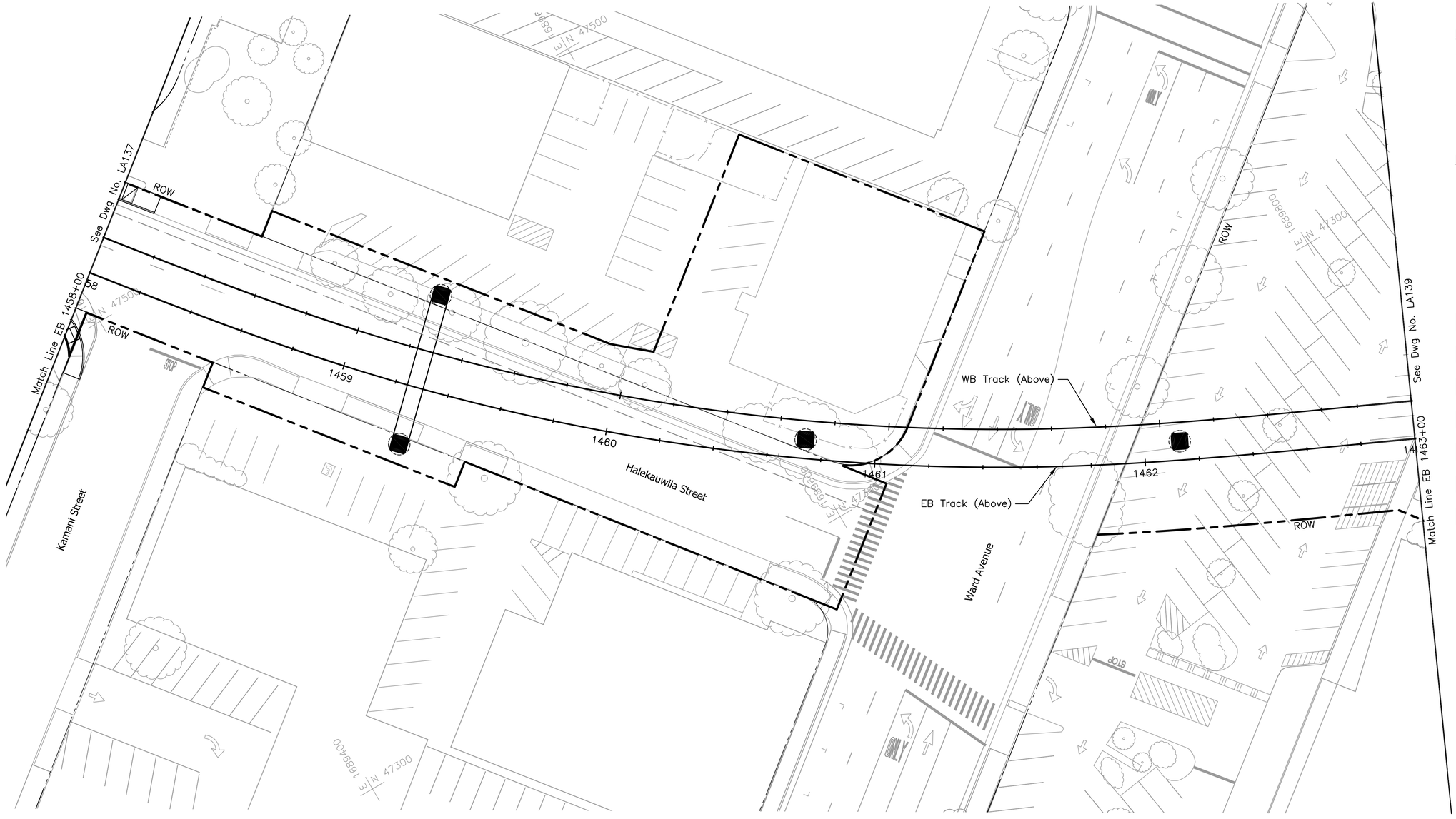
For reduced prints, original page size in inches: 0 1 2 3 4

CITY CENTER GUIDEWAY & UTILITES

## LANDSCAPE DEMOLITION PLAN

EB 1458+00 TO EB 1468+00

Contract No.: SV–530
CADD File: CC–J02–LA020
Drawing No: LA020 Rev.
Scale: 1"=40'
Page No. 135 of 202




NOTES:

1. For General Landscape Notes, Symbols, and Abbreviations, see Dwg No. LG001.
2. See Roadway Construction plan sheets for proposed roadway construction.

LEGEND:

- Proposed Guideway Column
- Relocated False Olive / Elaeodendron orientale
- Relocated Coconut Palm / Cocos nucifera
- Psydrax odorata / Alahe'e
- Existing Vegetation
- Sansevieria trifasciata / Mother–in–Law's Tongue
- Scaevola sericea / Beach Naupaka
- Dianella sandwicensis / 'Uki'uki
- Epipremnum pinnatum 'Aureum' / Pothos
- Carex wahuensis / Carex
- Stenotaphrum secundatum / St. Augustine Grass
- Vitex rotundifolia / Pohinahina

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

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: CONCEPTS LLC
Site Planning
Landscape Architects
1580 Makaloa Street, Suite 1005
Honolulu, HI 96814

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

CITY CENTER GUIDEWAY & UTILITIES

# LANDSCAPE PLANTING AND PAVING PLAN

EB 1458+00 TO EB 1463+00

Contract No.: SV–530
CADD File: CC–J04–LA138
Drawing No.: LA138 Rev.
Scale: 1"=20'
Page No. 177 of 202

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N

NOTES:

1. For General Landscape Notes, Symbols, and Abbreviations, see Dwg No. LG001.
2. See Roadway Construction plan sheets for proposed roadway construction.

LEGEND:

- Proposed Guideway Column
- Relocated False Olive / Elaeodendron orientale
- Relocated Coconut Palm / Cocos nucifera
- Psydrax odorata / Alahe'e
- Existing Vegetation
- Sansevieria trifasciata / Mother–in–Law's Tongue
- Scaevola sericea / Beach Naupaka
- Dianella sandwicensis / 'Uki'uki
- Epipremnum pinnatum 'Aureum' / Pothos
- Carex wahuensis / Carex
- Stenotaphrum secundatum / St. Augustine Grass
- Vitex rotundifolia / Pohinahina

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Sasaki
Drawn: C Kimura
Checked: J Kurokawa
Approved: J Kurokawa
Date: 12–21–09

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: CONCEPTS LLC Site Planning Landscape Architects
1580 Makaloa Street, Suite 1005 Honolulu, HI 96814

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CITY CENTER GUIDEWAY & UTILITIES

# LANDSCAPE PLANTING AND PAVING PLAN

EB 1463+00 TO EB 1468+00

Contract No.: SV–530
CADD File: CC–J04–LA139
Drawing No.: LA139 Rev.
Scale: 1"=20'
Page No. 178 of 202

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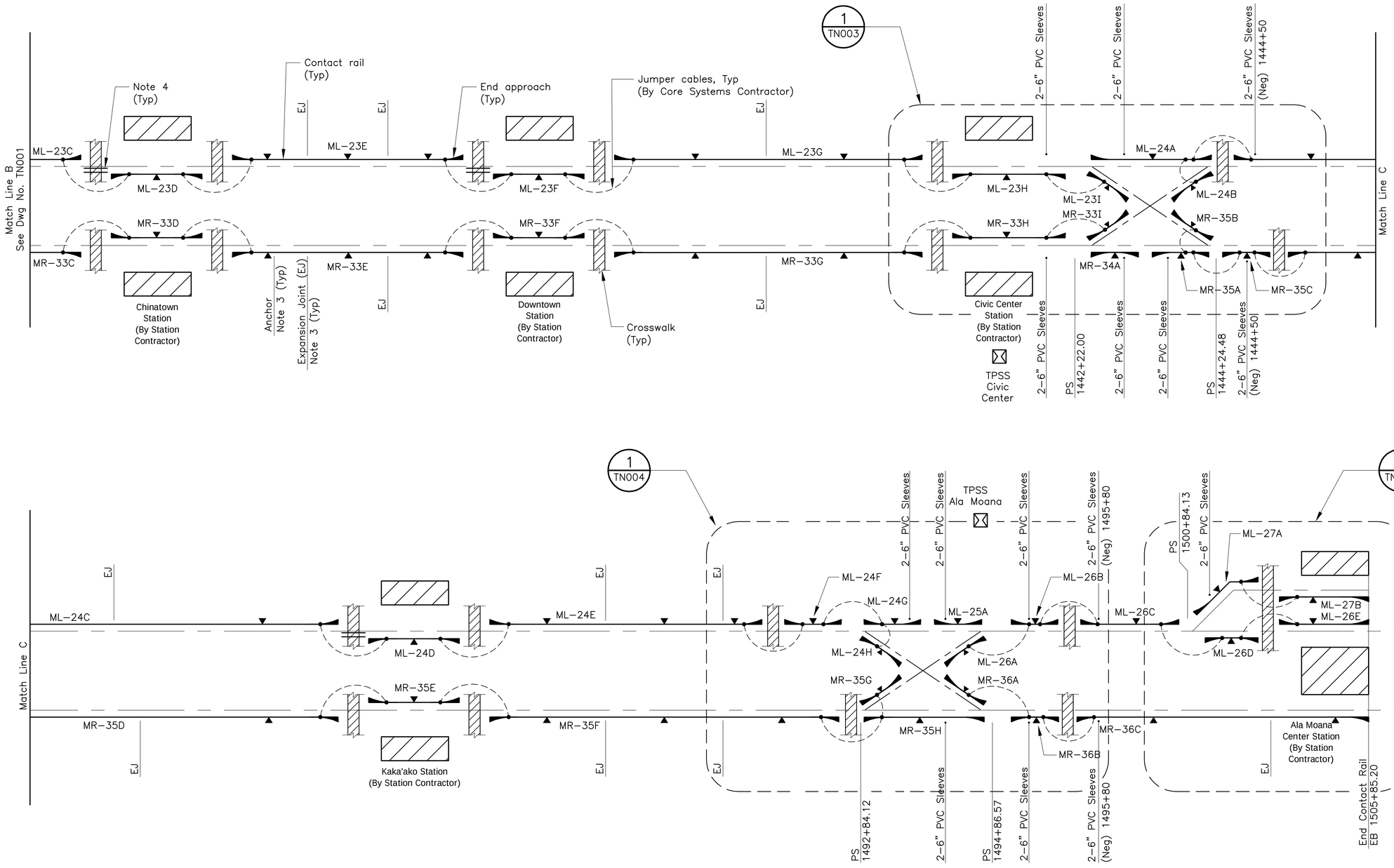
## NOTES

1. For general notes and legend, refer to drawing TN001.




| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Sun
Drawn: O Kurnovskaya
Checked: A Patel
Approved: S Stoilov
Date: 12-21-09

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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CITY CENTER GUIDEWAY & UTILITIES

# CONTACT RAIL INSTALLATION
# CONTACT RAIL SCHEMATIC LAYOUT

SHEET 2 OF 2

Contract No.: SV-530
CADD File: CC-N06-TN002
Drawing No.: TN002 Rev.
Scale: NTS
Page No.: 195 of 202

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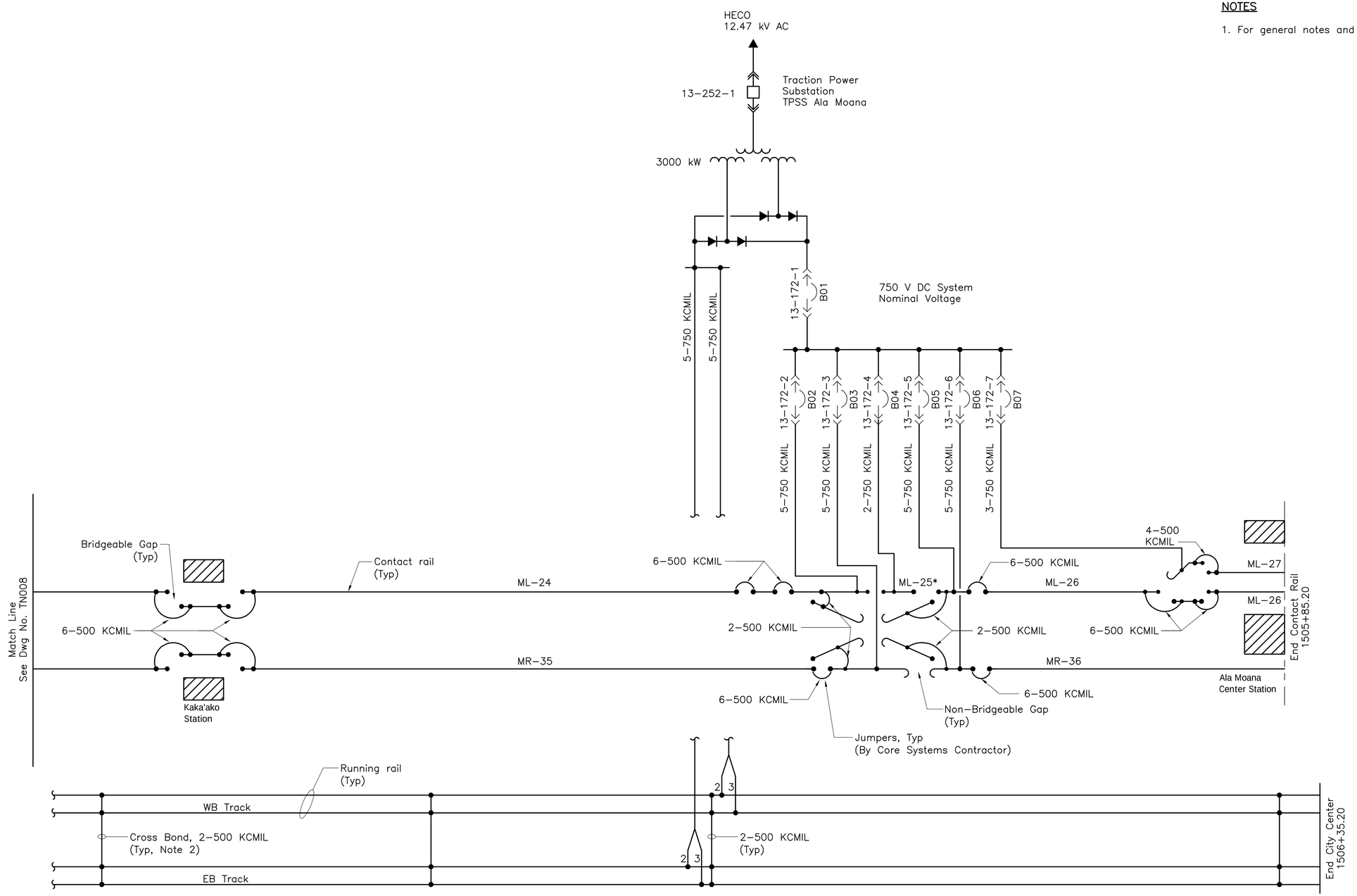
NOTES

1. For general notes and legend, refer to drawing TN006.




| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Sun
Drawn: O Kurnovskaya
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Date: 12–21–09

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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CITY CENTER GUIDEWAY & UTILITIES

# MASTER SINGLE LINE DIAGRAM

SHEET 4 OF 4

Contract No.: SV–530
CADD File: CC–N06–TN009
Drawing No.: TN009 Rev.
Scale: NTS
Page No.: 202 of 202

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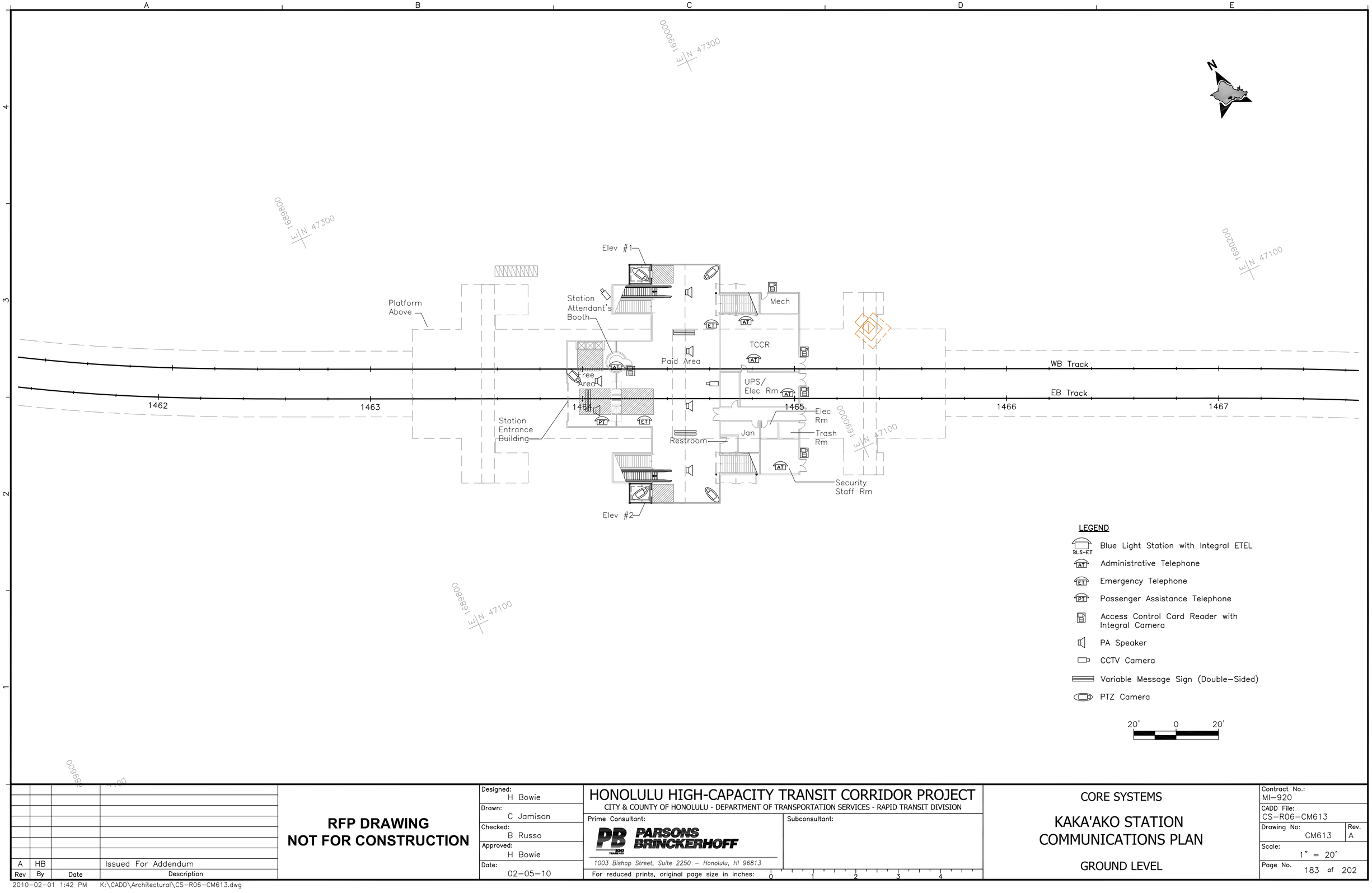


| Rev | By | Date | Description |
|---|---|---|---|
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**RFP DRAWING**
**NOT FOR CONSTRUCTION**

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 02-05-10

# 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

## KAKA'AKO STATION COMMUNICATIONS PLAN

GROUND LEVEL

Contract No.: MI-920
CADD File: CS-R06-CM613
Drawing No: CM613 Rev. A
Scale: 1" = 20'
Page No. 183 of 202

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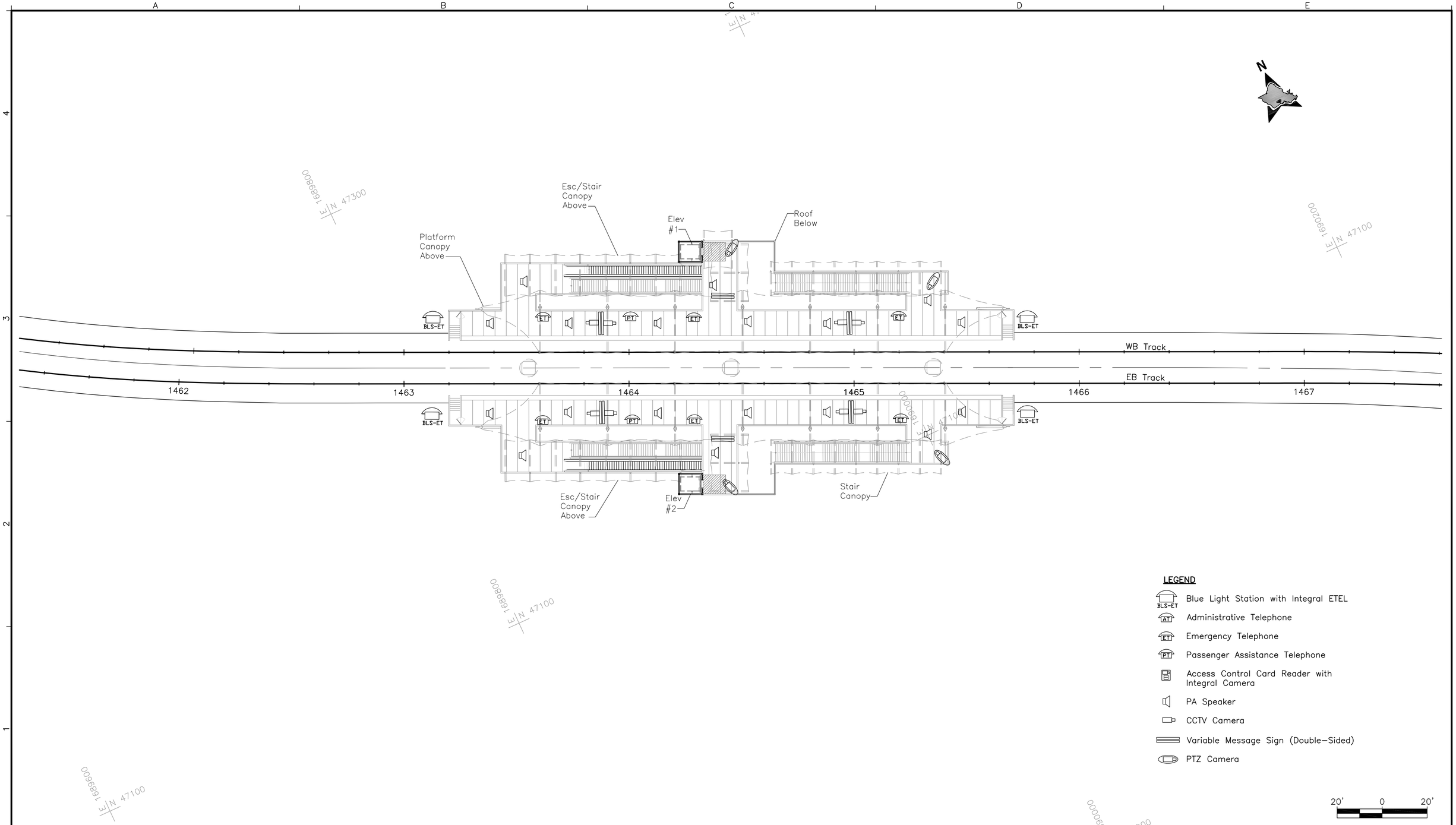


| Rev | By | Date | Description |
|---|---|---|---|
| A | HB | | Issued For Addendum |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 02-05-10

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

# KAKA'AKO STATION COMMUNICATIONS PLAN

PLATFORM LEVEL

Contract No.: MI-920
CADD File: CS-R06-CM614
Drawing No.: CM614 Rev. A
Scale: 1" = 20'
Page No. 184 of 202

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