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

## Rapid Transit Division (RTD)

# FARRINGTON HIGHWAY STATIONS
# CONTRACT SV-240

# VOLUME 2

# WAIPAHU TRANSIT CENTER STATION

## PRELIMINARY ENGINEERING DRAWINGS

**September 18, 2009**

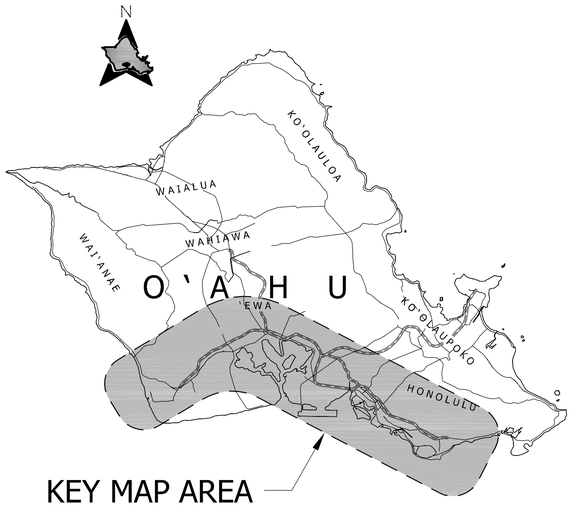
Prepared for:
**HHCTCP**

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

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

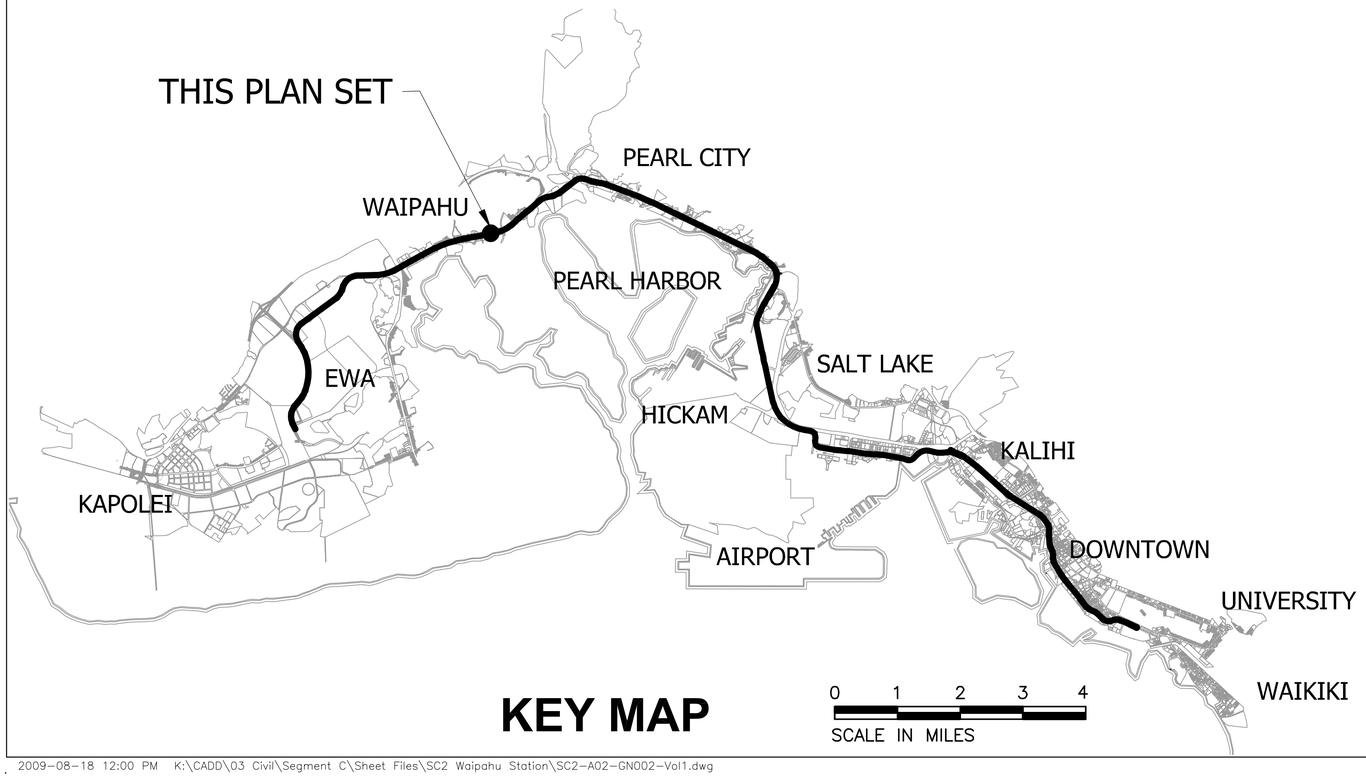
# WAIPAHU TRANSIT CENTER STATION

## PRELIMINARY ENGINEERING DRAWINGS




City and County of Honolulu
Department of Transportation Services

Rapid Transit Division




**KEY MAP**

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| 64 | LA004 | IRRIGATION PLAN |

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

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: M Hall
Date: 09-18-09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

INDEX OF DRAWINGS

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# WAIPAHU TRANSIT CENTER STATION - INFORMATIVE DRAWINGS

| Drawing No. | Rev. No. | Drawing Title |
|---|---|---|
| **Civil** | | |
| RW028 | A | EXISTING RIGHT-OF-WAY PLAN & PROPOSED ACQUISITION TABULATIONS EB 650+00 TO EB 660+00 |
| TA028 | A | TRACK ALIGNMENT PLAN & PROFILE EB 650+00 TO EB 660+00 |
| TA105 | A | TRACK ALIGNMENT DATA SHEET 5 OF 8 |
| TA205 | A | TRACK CHARTS SHEET 5 OF 7 |
| RP028 | A | ROADWAY CONSTRUCTION PLAN EB 650+00 TO EB 660+00 |
| RP201 | A | ROADWAY HORIZONTAL CONTROL DATA SHEET 1 OF 2 |
| RX006 | B | TYPICAL SECTIONS FARRINGTON HIGHWAY SHEET 6 OF 8 |
| GD028 | B | GUIDEWAY DRAINAGE LAYOUT PLAN EB 650+00 TO EB 660+00 |
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| TR128 | B | MAINTENANCE OF TRAFFIC PLAN EB 650+00 TO EB 660+00 |
| TR209 | A | DETOUR PLAN ANIANI PL/WAIKELE RD TO WAIPAHU DEPOT RD SHEET 1 OF 2 |
| TR210 | A | DETOUR PLAN ANIANI PL/WAIKELE RD TO WAIPAHU DEPOT RD SHEET 2 OF 2 |
| TR211 | B | DETOUR PLAN WAIPAHU DEPOT RD TO MOKUOLA ST/AWALUA ST |
| TR212 | A | DETOUR PLAN MOKUOLA ST/AWALUA ST TO PĀIWA ST/AWANUI ST SHEET 1 OF 2 |
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| TR648 | A | FIBER OPTIC & TRAFFIC SIGNAL INTERCONNECT PLAN EB 646+00 TO EB 651+50 |
| TR649 | A | FIBER OPTIC & TRAFFIC SIGNAL INTERCONNECT PLAN EB 651+50 TO EB 657+00 |
| TR801 | B | TRAFFIC MANAGEMENT PLAN INTELLIGENT TRANSPORTATION SYSTEMS SHEET 1 OF 2 |
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|---|---|---|
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| UP148 | B | UTILITY RELOCATION PLAN WATER, SEWER, DRAINAGE, PETROLEUM, & GAS EB 646+00 TO EB 651+50 SHEET 1 OF 2 |
| UP148A | B | UTILITY RELOCATION PLAN WATER, SEWER, DRAINAGE, PETROLEUM, & GAS EB 646+00 TO EB 651+50 SHEET 2 OF 2 |
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| UP149A | B | UTILITY RELOCATION PLAN WATER, SEWER, DRAINAGE, PETROLEUM, & GAS EB 651+50 TO EB 657+00 SHEET 2 OF 2 |
| UP248 | B | UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS EB 646+00 TO EB 651+50 |
| UP248A | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-A & 248-B |
| UP248B | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-C SHEET 1 OF 2 |
| UP248C | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-C SHEET 2 OF 2 |
| UP248D | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-D, 248-E & 248-F |
| UP248E | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-G |
| UP248F | A | UTILITY RELOCATION PLAN DUCT PROFILE 248-H & 249-A |
| UP249 | C | UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS EB 651+50 TO EB 657+00 |
| SL048 | B | STREET LIGHTING PLAN EB 646+00 TO EB 651+50 |
| SL049 | A | STREET LIGHTING PLAN EB 651+50 TO EB 657+00 |
| **Structural** | | |
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| GP039 | B | STRUCTURAL PLAN AND PROFILE SECTIONS |
| FP017 | B | WAIPAHU TRANSIT CENTER STATION GUIDEWAY FORCES SHEET 1 OF 7 |
| FP018 | B | WAIPAHU TRANSIT CENTER STATION PLATFORM LEVEL PLAN SHEET 2 OF 7 |
| FP019 | B | WAIPAHU TRANSIT CENTER STATION SECTION A SHEET 3 OF 7 |
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| Drawing No. | Rev. No. | Drawing Title |
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| **Landscaping** | | |
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| CM001 | A | COMMUNICATIONS PLAN STREET LEVEL |
| CM002 | A | COMMUNICATIONS PLAN CONCOURSE LEVEL |
| CM003 | A | COMMUNICATIONS PLAN PLATFORM LEVEL |
| SY001 | A | SYSTEM INTEGRATION CONTRACT WORK DELINEATION 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: M Hall
Date: 09-18-09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

APPENDIX A - INFORMATIVE INDEX OF DRAWINGS

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CADD File: SC2-A02-GN004
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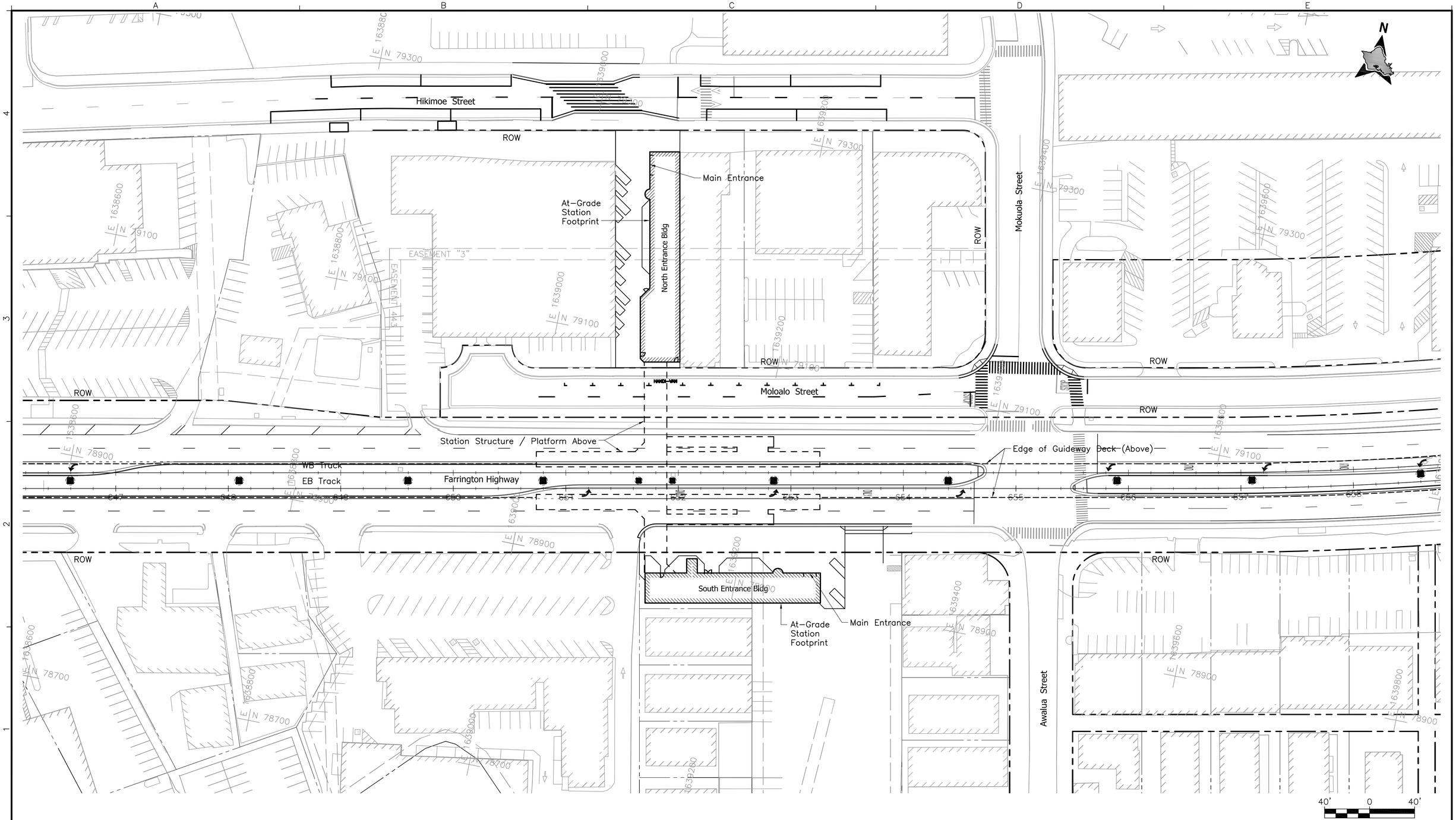


| Rev | By | Date | Description |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: M Hall
Drawn: J Derosier
Checked: J Davis
Approved: A Borst
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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## WAIPAHU TRANSIT CENTER STATION

## STATION AREA PLAN

Contract No.: SV–240
CADD File: SC2–A03–GN005
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# RTD STANDARD DRAWINGS

| RTD STANDARD DRAWINGS | | | | |
|---|---|---|---|---|
| **File** | **Drawing No.** | **Applicable** | **Drawing Title** | **Date** |
| **CIVIL** | | | | |
| RTD-B02-CS001 | CS001 | | CIVIL STANDARD<br>SURVEY CONTROL DATA<br>SHEET 1 OF 2 | 24-Aug-09 |
| RTD-B02-CS002 | CS002 | | CIVIL STANDARD<br>SURVEY CONTROL DATA<br>SHEET 2 OF 2 | 24-Aug-09 |
| **TRACKWORK** | | | | |
| RTD-E03-WS101 | WS101 | | TRACKWORK STANDARD<br>STANDARD RAIL SECTIONS AND DATA | 24-Aug-09 |
| RTD-E03-WS102 | WS102 | | TRACKWORK STANDARD<br>PROPOSED WHEEL PROFILE AND<br>WHEEL/TRACK INTERFACE DISTANCES<br>GUARD RAIL & RESTRAINING RAIL | 24-Aug-09 |
| RTD-E03-WD254 | WS254 | | TRACKWORK STANDARD<br>BRACKET FOR 33C1 RESTRAINING RAIL<br>CONCRETE TIE TRACK | 24-Aug-09 |
| RTD-E03-WS302 | WS302 | | TRACKWORK STANDARD<br>NO. 6 TURNOUT BALLASTED/ CONCRETE TIES<br>WITH 13 FT CURVED SWITCHES<br>(UNIFORM RISERS) | 24-Aug-09 |
| RTD-E03-WS303 | WS303 | | TRACKWORK STANDARD<br>13 FT CURVED SPLIT SWITCH<br>BALLASTED TRACK/CONCRETE TIES<br>115 RE RAIL | 24-Aug-09 |
| RTD-E03-WS305 | WS305 | | TRACKWORK STANDARD<br>NO. 6 CONTOURED STEEL FROG<br>FLANGE BEARING<br>BALLASTED TRACK - 115 RE RAIL | 24-Aug-09 |
| RTD-E03-WS306 | WS306 | | TRACKWORK STANDARD<br>33C1 GUARD RAIL FOR<br>NO 6 AND NO 8 FROGS<br>BALLASTED TRACK (115 RE RAIL) | 24-Aug-09 |
| RTD-E03-WS307 | WS307 | | TRACKWORK STANDARD<br>SPECIAL TRACKWORK FASTENING PLATE AND<br>ASSEMBLY CONCRETE SWITCHTIES | 24-Aug-09 |
| RTD-E03-WS308 | WS308 | | TRACKWORK STANDARD<br>NO. 8 TURNOUT BALLASTED/ CONCRETE TIES<br>WITH 13 FT CURVED SWITCHES<br>(UNIFORM RISERS) | 24-Aug-09 |
| RTD-E03-WS310 | WS310 | | TRACKWORK STANDARD<br>NO. 8 CONTOURED STEEL FROG<br>FLANGEBEARING<br>BALLASTED TRACK - 115 RE RAIL | 24-Aug-09 |
| RTD-E03-WS313 | WS313 | | TRACKWORK STANDARD<br>NO. 6 CROSSOVER - BALLASTED TRACK<br>14'-0" TRACK CENTERS | 24-Aug-09 |
| RTD-E03-WS314 | WS314 | | TRACKWORK STANDARD<br>NO 8 SINGLE CROSSOVER<br>BALLASTED/CONCRETE TIES<br>14'-0" TRACK CENTERS | 24-Aug-09 |
| RTD-E03-WS321 | WS321 | | TRACKWORK STANDARD<br>PRESTRESSED<br>TURNOUT CONCRETE SWITCH TIES<br>115 RE RAIL | 24-Aug-09 |
| RTD-E03-WS340 | WS340 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - BALLASTED<br>CONCRETE TIES WITH 19'-6" CURVED SWITCH<br>UNIFORM RISERS | 24-Aug-09 |
| RTD-E03-WS810 | WS810 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - DIRECT FIXATION<br>WITH 19'-6" CURVED SWITCH<br>PLINTH & RAIL LAYOUT | 24-Aug-09 |
| RTD-E03-WS811 | WS811 | | TRACKWORK STANDARD<br>NO. 10 TURNOUT - DIRECT FIXATION<br>NOTES & BILL OF MATERIALS | 24-Aug-09 |
| RTD-E03-WS812 | WS812 | | TRACKWORK STANDARD<br>19'-6" CURVED SPLIT SWITCH<br>DIRECT FIXATION TRACK<br>115RE RAIL | 24-Aug-09 |
| RTD-E03-WS813 | WS813 | | TRACKWORK STANDARD<br>NO. 10 CONTOURED STEEL FROG<br>FLANGEBEARING<br>DIRECT FIXATION TRACK - 115RE RAIL | 24-Aug-09 |
| RTD-E03-WS814 | WS814 | | TRACKWORK STANDARD<br>DIRECT FIXATION<br>TURNOUT GUARD RAIL<br>MOUNTING DETAILS | 24-Aug-09 |

| RTD STANDARD DRAWINGS | | | | |
|---|---|---|---|---|
| **File** | **Drawing No.** | **Applicable** | **Drawing Title** | **Date** |
| **TRACKWORK** | | | | |
| RTD-E03-WS815 | WS815 | | TRACKWORK STANDARD<br>NO. 15 TURNOUT - DIRECT FIXATION<br>WITH 26'-0" CURVED SWITCH<br>PLINTH & RAIL LAYOUT, SHEET 1 OF 2 | 24-Aug-09 |
| RTD-E03-WS816 | WS816 | | TRACKWORK STANDARD<br>NO. 15 TURNOUT - DIRECT FIXATION<br>WITH 26'-0" CURVED SWITCH<br>PLINTH & RAIL LAYOUT, SHEET 2 OF 2 | 24-Aug-09 |
| RTD-E03-WS817 | WS817 | | TRACKWORK STANDARD<br>26'-0" CURVED SPLIT SWITCH<br>DIRECT FIXATION TRACK<br>115RE RAIL | 24-Aug-09 |
| RTD-E03-WS820 | WS820 | | TRACKWORK STANDARD<br>NO. 10 CROSSOVER - DIRECT FIXATION<br>14'-0" TRACK CENTERS | 24-Aug-09 |
| RTD-E03-WS831 | WS831 | | TRACKWORK STANDARD<br>NO. 10 DOUBLE CROSSOVER<br>DIRECT FIXATION<br>14'-0" TRACK CENTERS | 24-Aug-09 |
| RTD-E03-WS832 | WS832 | | TRACKWORK STANDARD<br>NO. 10 DOUBLE CROSSOVER<br>DIRECT FIXATION DIAMOND DETAILS<br>14'-0" TRACK CENTERS, SHEET 1 OF 2 | 24-Aug-09 |
| RTD-E03-WS833 | WS833 | | TRACKWORK STANDARD<br>NO. 10 DOUBLE CROSSOVER-DIRECT FIXATION<br>TURNOUT FROG & DIAMOND FROG DETAILS<br>14'-0" TRACK CENTERS, SHEET 2 OF 2 | 24-Aug-09 |
| **ARCHITECTURAL** | | | | |
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| RTD-H09-AS302 | AS302 | | ARCHITECTURAL STANDARD<br>ELEVATOR CAR PLANS TYPE D-2A &<br>H-2A AND ELEVATIONS | 24-Aug-09 |
| RTD-H09-AS303 | AS303 | | ARCHITECTURAL STANDARD<br>ELEVATOR CAR DETAILS | 24-Aug-09 |
| **CORROSION CONTROL** | | | | |
| RTD-M01-HS001 | HS001 | | CORROSION CONTROL STANDARD<br>STRUCTURAL BONDING DETAILS<br>SHEET 1 OF 2 | 24-Jul-09 |
| RTD-M01-HS002 | HS002 | | CORROSION CONTROL STANDARD<br>STRUCTURAL BONDING DETAILS<br>SHEET 2 OF 2 | 24-Jul-09 |
| RTD-M01-HS003 | HS003 | | CORROSION CONTROL STANDARD<br>UTILITY BONDING DETAILS<br>SHEET 1 OF 2 | 24-Jul-09 |
| RTD-M01-HS004 | HS004 | | CORROSION CONTROL STANDARD<br>UTILITY BONDING DETAILS<br>SHEET 2 OF 2 | 24-Jul-09 |
| RTD-M01-HS005 | HS005 | | CORROSION CONTROL STANDARD<br>PIPE ISOLATION DETAILS<br>SHEET 1 OF 2 | 24-Jul-09 |
| RTD-M01-HS006 | HS006 | | CORROSION CONTROL STANDARD<br>PIPE ISOLATION DETAILS<br>SHEET 2 OF 2 | 24-Jul-09 |
| RTD-M01-HS007 | HS007 | | CORROSION CONTROL STANDARD<br>CATHODIC PROTECTION DETAILS<br>SHEET 1 OF 2 | 24-Jul-09 |
| RTD-M01-HS008 | HS008 | | CORROSION CONTROL STANDARD<br>CATHODIC PROTECTION DETAILS<br>SHEET 2 OF 2 | 24-Jul-09 |
| RTD-M01-HS009 | HS009 | | CORROSION CONTROL STANDARD<br>ELEVATOR CATHODIC<br>PROTECTION DETAILS | 24-Jul-09 |
| RTD-M01-HS010 | HS010 | | CORROSION CONTROL STANDARD<br>TESTING FACILITIES | 24-Jul-09 |

| Rev | By | Date | Description |
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Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: A Borst
Date: 09-18-09

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

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

Subconsultant:

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STANDARD DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

Contract No.: SV-240
CADD File: SC2-A06-GN006
Drawing No.: GN006 Rev.
Scale: N/A
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# RTD DIRECTIVE DRAWINGS

## RTD DIRECTIVE DRAWINGS

| File | Drawing No. | Applicable | Drawing Title | Date |
|---|---|---|---|---|
| **SYSTEMS SITES** | | | | |
| DD-B10-RP101 | RP101 | | SYSTEMS SITE DIRECTIVE<br>TYPICAL TRACTION POWER SUBSTATION<br>SITE PLAN AND ELEVATIONS | 24-Aug-09 |
| DD-B10-R0102 | RP102 | | SYSTEMS SITE DIRECTIVE<br>TYPICAL GAP BREAKER STATION SITE PLAN<br>AND ELEVATIONS | 24-Aug-09 |
| **TRACKWORK** | | | | |
| DD-E03-WD120 | WD120 | | TRACKWORK DIRECTIVE<br>PRE-CURVED RAIL DETAILS<br>RESTRAINING RAIL DETAILS<br>TYPICAL LAYOUT | 24-Aug-09 |
| DD-E03-WD201 | WD201 | | TRACKWORK DIRECTIVE<br>BALLASTED MAINLINE TRACK<br>CONCRETE CROSS TIES<br>TANGENT AND CURVED TRACK | 24-Aug-09 |
| DD-E03-WD202 | WD202 | | TRACKWORK DIRECTIVE<br>BALLASTED MAINLINE TRACK<br>CONCRETE CROSSTIES<br>TANGENT AND CURVED TRACK- DOUBLE TRACK | 24-Aug-09 |
| DD-E03-WD205 | WD205 | | TRACKWORK DIRECTIVE<br>AT-GRADE CONCRETE PANEL ROAD<br>CROSSING - TANGENT BALLASTED TRACK | 24-Aug-09 |
| DD-E03-WD206 | WD206 | | TRACKWORK DIRECTIVE<br>AT-GRADE TRAPEZOIDAL CONCRETE PANEL<br>ROAD CROSSING - CURVED BALLASTED TRACK | 24-Aug-09 |
| DD-E03-WD211 | WD211 | | TRACKWORK DIRECTIVE<br>TRANSITION SLAB - DIRECT FIXATION<br>TRACK TO BALLASTED TRACK<br>115 RE RAIL | 24-Aug-09 |
| DD-E03-WD251 | WD251 | | TRACKWORK DIRECTIVE<br>SERRATED<br>PRESTRESSED CONCRETE CROSSTIE<br>115 RE RAIL | 24-Aug-09 |
| DD-E03-WD253 | WD253 | | TRACKWORK DIRECTIVE<br>SERRATED CONCRETE CROSSTIE FOR<br>RESTRAINING RAIL & CONTACT RAIL<br>115 RE RAIL | 24-Aug-09 |
| DD-E03-WD256 | WD256 | | TRACKWORK DIRECTIVE<br>CONCRETE ROAD CROSSING TIE<br>(10 FT) - 115RE RAIL | 24-Aug-09 |
| DD-E03-WD275 | WD275 | | TRACKWORK DIRECTIVE<br>DERAIL AND CAR STOP<br>MSF YARD | 24-Aug-09 |
| DD-E03-WD301 | WD301 | | TRACKWORK STANDARD<br>SUMMARY YARD SPECIAL TRACKWORK<br>BALLASTED TURNOUTS | 24-Aug-09 |
| DD-E03-WD401 | WD401 | | TRACKWORK DIRECTIVE<br>EMBEDDED APRON AND<br>SHOP TRACK DETAILS | 24-Aug-09 |
| DD-E03-WD405 | WD405 | | TRACKWORK DIRECTIVE<br>PEDESTAL TRACK DETAILS<br>MSF PIT TRACKS | 24-Aug-09 |
| DD-E03-WD601 | WD601 | | TRACKWORK DIRECTIVE<br>TYPICAL DIRECT FIXATION<br>TRACK INSTALLATION | 24-Aug-09 |
| DD-E03-WD602 | WD602 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK DETAILS<br>AERIAL/AT-GRADE SLAB STRUCTURES<br>TANGENT TRACK | 24-Aug-09 |
| DD-E03-WD603 | WD603 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK SECTION<br>AERIAL/AT-GRADE STRUCTURE<br>CURVED TRACK | 24-Aug-09 |
| DD-E03-WD604 | WD604 | | TRACKWORK DIRECTIVE<br>GEOMETRIC CONFIGURATION<br>DIRECT FIXATION TRACK WITH SURVEY MARKER<br>INTERFACE TRACTION POWER CONTACT RAIL | 24-Aug-09 |
| DD-E03-WD605 | WD605 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK DETAILS<br>VEHICLE WASH FACILITY | 24-Aug-09 |
| DD-E03-WD606 | WD606 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK DETAILS<br>YARD SERVICE & CLEANING PLATFORM | 24-Aug-09 |
| DD-E03-WD608 | WD608 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK<br>CONCRETE PLINTH REINFORCING DETAILS<br>FOR 2'-3" FASTENER LAYOUTS ON CURVED TRACKS | 24-Aug-09 |

## RTD DIRECTIVE DRAWINGS

| File | Drawing No. | Applicable | Drawing Title | Date |
|---|---|---|---|---|
| **TRACKWORK** | | | | |
| DD-E03-WD609 | WD609 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK<br>CONCRETE PLINTH REINFORCING DETAILS<br>FOR 2'-6" FASTENER LAYOUTS | 24-Aug-09 |
| DD-E03-WD615 | WD615 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK<br>PLINTH REINFORCING DETAILS<br>WITH 1 OR 2 INCHES OF SUPERELEVATION | 24-Aug-09 |
| DD-E03-WD616 | WD616 | | TRACKWORK DIRECTIVE<br>DIRECT FIXATION TRACK<br>PLINTH REINFORCING DETAILS<br>WITH 3 OR 4 INCHES OF SUPERELEVATION | 24-Aug-09 |
| DD-E03-WD620 | WD620 | | TRACKWORK DIRECTIVE<br>SPECIAL TRACKWORK<br>DIRECT FIXATION<br>CONCRETE PLINTH REINFORCING DETAILS | 24-Aug-09 |
| DD-E03-WD625 | WD625 | | TRACKWORK DIRECTIVE<br>SPECIAL TRACKWORK<br>SWITCH MACHINE MOUNTING<br>DIRECT FIXATION TRACK | 24-Aug-09 |
| DD-E03-WD641 | WD641 | | TRACKWORK DIRECTIVE<br>BRACKET FOR 33C1 RESTRAINING RAIL<br>DIRECT FIXATION TRACK | 24-Aug-09 |
| DD-E03-WD643 | WD643 | | TRACKWORK DIRECTIVE<br>33C1 RESTRAINING RAIL DETAILS | 24-Aug-09 |
| DD-E03-WD650 | WD650 | | TRACKWORK DIRECTIVE<br>BALLASTED & DIRECT FIXATION TRACK<br>AT STATION PLATFORMS<br>(LIGHT METRO VEHICLE) | 24-Aug-09 |
| DD-E03-WD675 | WD675 | | TRACKWORK DIRECTIVE<br>PEDESTRIAN CROSSWALK<br>DIRECT FIXATION TRACK | 24-Aug-09 |
| DD-E03-WS898 | WD898 | | TRACKWORK DIRECTIVE<br>FRICTION TYPE (10EB) BUFFER STOP<br>DIRECT FIXATION TRACK INSTALLATION<br>END OF TRACK | 24-Aug-09 |
| DD-E03-WS899 | WD899 | | TRACKWORK DIRECTIVE<br>DF FRICTION BUFFER STOP INSTALLATION<br>END OF TRACK DETAILS | 24-Aug-09 |
| **STRUCTURAL** | | | | |
| DD-G02-WP001 | WP001 | | GENERAL STRUCTURAL NOTES | 24-Aug-09 |
| DD-G11-WP002 | WP002 | | STRUCTURAL DESIGN DIRECTVE<br>CHAIN LINK FENCE | 24-Aug-09 |
| DD-G11-WP003 | WP003 | | STRUCTURAL DESIGN DIRECTVE<br>RETAINING WALL TYPE 1<br>H=4' THROUGH 30' | 24-Aug-09 |
| DD-G11-WP004 | WP004 | | STRUCTURAL DESIGN DIRECTVE<br>RETAINING WALL TYPE 2<br>H=4' THROUGH 12' | 24-Aug-09 |
| DD-G11-WP005 | WP005 | | STRUCTURAL DESIGN DIRECTVE<br>RETAINING WALL DETAILS | 24-Aug-09 |
| DD-G11-WP006 | WP006 | | STRUCTURAL DESIGN DIRECTVE<br>GUIDEWAY STAIRS TO STATION PLATFORM<br>SHEET 1 OF 5 | 24-Aug-09 |
| DD-G11-WP007 | WP007 | | STRUCTURAL DESIGN DIRECTVE<br>GUIDEWAY STAIRS TO STATION PLATFORM<br>SHEET 2 OF 5 | 24-Aug-09 |
| DD-G11-WP008 | WP008 | | STRUCTURAL DESIGN DIRECTVE<br>GUIDEWAY STAIRS TO STATION PLATFORM<br>SHEET 3 OF 5 | 24-Aug-09 |
| DD-G11-WP009 | WP009 | | STRUCTURAL DESIGN DIRECTVE<br>GUIDEWAY STAIRS TO STATION PLATFORM<br>SHEET 4 OF 5 | 24-Aug-09 |
| DD-G11-WP010 | WP010 | | STRUCTURAL DESIGN DIRECTVE<br>GUIDEWAY STAIRS TO STATION PLATFORM<br>SHEET 5 OF 5 | 24-Aug-09 |
| DD-G11-WP011 | WP011 | | STRUCTURAL DESIGN DIRECTVE<br>WATERPROOFING DETAILS<br>SHEET 1 OF 3 | 24-Aug-09 |
| DD-G11-WP012 | WP012 | | STRUCTURAL DESIGN DIRECTVE<br>WATERPROOFING DETAILS<br>SHEET 2 OF 3 | 24-Aug-09 |
| DD-G11-WP013 | WP013 | | STRUCTURAL DESIGN DIRECTVE<br>WATERPROOFING DETAILS<br>SHEET 3 OF 3 | 24-Aug-09 |

## RTD DIRECTIVE DRAWINGS

| File | Drawing No. | Applicable | Drawing Title | Date |
|---|---|---|---|---|
| **ARCHITECTURAL** | | | | |
| DD-H01-AG001 | AG001 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 1 OF 3 | 24-Aug-09 |
| DD-H01-AG002 | AG002 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H01-AG003 | AG003 | | ARCHITECTURAL DIRECTIVE<br>GENERAL ARCHITECTURAL NOTES,<br>SYMBOLS, AND ABBREVIATIONS<br>SHEET 3 OF 3 | 24-Aug-09 |
| DD-H09-AD001 | AD001 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DESIGN LAYOUT | 24-Aug-09 |
| DD-H09-AD002 | AD002 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DESIGN<br>REQUIREMENTS | 24-Aug-09 |
| DD-H09-AD003 | AD003 | | ARCHITECTURAL DIRECTIVE<br>TRACTION ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION | 24-Aug-09 |
| DD-H09-AD004 | AD004 | | ARCHITECTURAL DIRECTIVE<br>HYDRAULIC ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION | 24-Aug-09 |
| DD-H09-AD005 | AD005 | | ARCHITECTURAL DIRECTIVE<br>HOLELESS HYDRAULIC ELEVATOR DESIGN<br>REQUIREMENT AND CONFIGURATION | 24-Aug-09 |
| DD-H09-AD006 | AD006 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY SECTIONS | 24-Aug-09 |
| DD-H09-AD007 | AD007 | | ARCHITECTURAL DIRECTIVE<br>END OF PLATFORM DESIGN LAYOUT<br>SIDE PLATFORM | 24-Aug-09 |
| DD-H09-AD008 | AD008 | | ARCHITECTURAL DIRECTIVE<br>END OF PLATFORM DESIGN LAYOUT<br>CENTER PLATFORM | 24-Aug-09 |
| DD-H09-AD009 | AD009 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR DETAILS | 24-Aug-09 |
| DD-H09-AD010 | AD010 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>PIER COLUMN 1 | 24-Aug-09 |
| DD-H09-AD011 | AD011 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>STATION COLUMN 2 | 24-Aug-09 |
| DD-H09-AD012 | AD012 | | ARCHITECTURAL DIRECTIVE<br>FORMLINER DETAILS<br>COLUMN SECTIONS | 24-Aug-09 |
| DD-H09-AD013 | AD013 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR 1 LANDING<br>REQUIREMENTS - CONCOURSE LEVEL | 24-Aug-09 |
| DD-H09-AD014 | AD014 | | ARCHITECTURAL DIRECTIVE<br>STAIR/ESCALATOR 2 LANDINGS<br>REQUIREMENTS - CONCOURSE LEVEL | 24-Aug-09 |
| DD-H09-AD015 | AD015 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY PLANS,<br>SECTION, AND DETAILS | 24-Aug-09 |
| DD-H09-AD016 | AD016 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY<br>SECTION AND DETAILS | 24-Aug-09 |
| DD-H09-AD017 | AD017 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR HOISTWAY ELEVATIONS,<br>DATA TABULATION, AND DETAILS | 24-Aug-09 |
| DD-H09-AD018 | AD018 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR SCHEDULE<br>SHEET 1 OF 2 | 24-Aug-09 |
| DD-H09-AD019 | AD019 | | ARCHITECTURAL DIRECTIVE<br>ELEVATOR SCHEDULE<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H09-AD020 | AD020 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL TOILET LAYOUT<br>AND ELEVATIONS | 24-Aug-09 |
| DD-H09-AD021 | AD021 | | ARCHITECTURAL DIRECTIVE<br>TACTILE WARNING PAVER DETAILS | 24-Aug-09 |
| DD-H09-AD101 | AD101 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE LEVEL PLAN<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |

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

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: A Borst
Date: 09-18-09

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

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

Subconsultant:

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

DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 1 OF 2

Contract No.: SV-240
CADD File: SC2-A06-GN007
Drawing No.: GN007 Rev.
Scale: N/A
Page No. 6 of 64

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# RTD DIRECTIVE DRAWINGS

| RTD DIRECTIVE DRAWINGS | | | | |
|---|---|---|---|---|
| **File** | **Drawing No.** | **Applicable** | **Drawing Title** | **Date** |
| | | | **ARCHITECTURAL** | |
| DD-H09-AD102 | AD102 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM LEVEL PLAN<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD103 | AD103 | | ARCHITECTURAL DIRECTIVE<br>ROOF PLAN<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD104 | AD104 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE REFLECTED CEILING PLAN<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD105 | AD105 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM REFLECTED CEILING PLAN<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD106 | AD106 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - CONCOURSE<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD107 | AD107 | | ARCHITECTURAL DIRECTIVE<br>FLOOR FINISH PLAN - PLATFORM<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD108 | AD108 | | ARCHITECTURAL DIRECTIVE<br>LONGITUDINAL & CROSS SECTIONS<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD111 | AD111 | | ARCHITECTURAL DIRECTIVE<br>INTERIOR ELEVATIONS<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD112 | AD112 | | ARCHITECTURAL DIRECTIVE<br>ENLARGED ELEVATIONS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 2 | 24-Aug-09 |
| DD-H09-AD114 | AD114 | | ARCHITECTURAL DIRECTIVE<br>ENLARGED ELEVATIONS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H09-AD116 | AD116 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD117 | AD117 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM CANOPY DETAILS<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD118 | AD118 | | ARCHITECTURAL DIRECTIVE<br>STAIR & BRIDGE CANOPY DETAILS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 2 | 24-Aug-09 |
| DD-H09-AD119 | AD119 | | ARCHITECTURAL DIRECTIVE<br>STAIR & BRIDGE CANOPY DETAILS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H09-AD120 | AD120 | | ARCHITECTURAL DIRECTIVE<br>GUARDRAIL DETAILS<br>SIDE PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD122 | AD122 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 1 OF 3 | 24-Aug-09 |
| DD-H09-AD123 | AD123 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 2 OF 3 | 24-Aug-09 |
| DD-H09-AD124 | AD124 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>SIDE PLATFORM PROTOTYPE<br>SHEET 3 OF 3 | 24-Aug-09 |
| DD-H09-AD201 | AD201 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE LEVEL PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD202 | AD202 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM LEVEL PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD203 | AD203 | | ARCHITECTURAL DIRECTIVE<br>ROOF PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD204 | AD204 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE REFLECTED CEILING PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD205 | AD205 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM REFLECTED CEILING PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |

| RTD DIRECTIVE DRAWINGS | | | | |
|---|---|---|---|---|
| **File** | **Drawing No.** | **Applicable** | **Drawing Title** | **Date** |
| | | | **ARCHITECTURAL** | |
| DD-H09-AD206 | AD206 | | ARCHITECTURAL DIRECTIVE<br>CONCOURSE FLOOR FINISH PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD207 | AD207 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM FLOOR FINISH PLAN<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD208 | AD208 | | ARCHITECTURAL DIRECTIVE<br>LONGITUDINAL & CROSS SECTIONS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD210 | AD210 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY END CONDITION DETAILS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD211 | AD211 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 1 OF 2 | 24-Aug-09 |
| DD-H09-AD212 | AD212 | | ARCHITECTURAL DIRECTIVE<br>TYPICAL BAY DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H09-AD214 | AD214 | | ARCHITECTURAL DIRECTIVE<br>PLATFORM CANOPY DETAILS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD215 | AD215 | | ARCHITECTURAL DIRECTIVE<br>STAIR & BRIDGE CANOPY DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 1 OF 2 | 24-Aug-09 |
| DD-H09-AD216 | AD216 | | ARCHITECTURAL DIRECTIVE<br>STAIR & BRIDGE CANOPY DETAILS<br>CENTER PLATFORM PROTOTYPE<br>SHEET 2 OF 2 | 24-Aug-09 |
| DD-H09-AD217 | AD217 | | ARCHITECTURAL DIRECTIVE<br>GUARDRAIL DETAILS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD218 | AD218 | | ARCHITECTURAL DIRECTIVE<br>MISC DETAILS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| DD-H09-AD219 | AD219 | | ARCHITECTURAL DIRECTIVE<br>3D VIEWS<br>CENTER PLATFORM PROTOTYPE | 24-Aug-09 |
| | | | **MECHANICAL** | |
| DD-K11-MD101 | MD101 | | MECHANICAL DIRECTIVE<br>HVAC SYSTEMS | 24-Aug-09 |
| DD-K11-MD201 | MD201 | | MECHANICAL DIRECTIVE<br>PLUMBING AND DRAINAGE SYSTEMS | 24-Aug-09 |
| DD-K11-MD301 | MD301 | | MECHANICAL DIRECTIVE<br>FIRE PROTECTION SYSTEMS | 24-Aug-09 |
| DD-K11-MD401 | MD401 | | MECHANICAL DIRECTIVE<br>SEISMIC AND WIND<br>INDICATOR SYSTEMS | 24-Aug-09 |
| DD-K11-MD501 | MD501 | | MECHANICAL DIRECTIVE<br>TYPICAL TPSS AND GBS AIR CONDITIONING<br>AND CONTROL SYSTEM | 24-Aug-09 |
| | | | **ELECTRICAL** | |
| DD-L01-ED001 | ED001 | | GENERAL ELECTRICAL NOTES | 3-Apr-09 |
| DD-L03-ED002 | ED002 | | ELECTRICAL DIRECTIVE<br>TYPICAL PASSENGER STATION<br>ONE-LINE DIAGRAM | 3-Jun-09 |
| DD-L05-ED003 | ED003 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY LIGHTING<br>PLANS | 3-Apr-09 |
| DD-L05-ED004 | ED004 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY LIGHTING<br>DOUBLE TRACK | 3-Apr-09 |
| DD-L05-ED005 | ED005 | | GUIDEWAY ELECTRICAL DIRECTIVE<br>ELECTRICAL GUIDEWAY LIGHTING<br>SINGLE TRACK | 3-Apr-09 |
| DD-L05-ED006 | ED006 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION - CENTER PLATFORM<br>PLATFORM LIGHTING | - |
| DD-L05-ED007 | ED007 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION - SIDE PLATFORM<br>SIDE LIGHTING | - |
| DD-L08-ED008 | ED008 | | ELECTRICAL DIRECTIVE<br>PASSENGER STATION<br>ELECTRICAL, UPS, TCC ROOMS | - |

| RTD DIRECTIVE DRAWINGS | | | | |
|---|---|---|---|---|
| **File** | **Drawing No.** | **Applicable** | **Drawing Title** | **Date** |
| | | | **TRACTION POWER** | |
| DD-N06-TD001 | TD001 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION RACEWAY LAYOUT | 24-Jul-09 |
| DD-N06-TD002 | TD002 | | TRACTION POWER DIRECTIVE<br>TYPICAL DC RACEWAYS ON<br>AERIAL GUIDEWAY<br>SECTIONS AND DETAILS | 24-Jul-09 |
| DD-N06-TD003 | TD003 | | TRACTION POWER DIRECTIVE<br>TYPICAL MANHOLE/PULLBOX<br>DETAILS | 24-Jul-09 |
| DD-N06-TD004 | TD004 | | TRACTION POWER DIRECTIVE<br>TYPICAL UNDERGROUND DUCTBANK<br>SECTIONS & DETAILS | 24-Jul-09 |
| DD-N06-TD005 | TD005 | | TRACTION POWER DIRECTIVE<br>SUBSTATION CABLE TRENCH<br>DETAILS | 24-Jul-09 |
| DD-N06-TD006 | TD006 | | TRACTION POWER DIRECTIVE<br>SUBSTATION CABLE TRENCH<br>DETAILS<br>ALTERNATIVE | 24-Jul-09 |
| DD-N06-TD050 | TD050 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION GROUND GRID<br>ARRANGEMENT | 24-Jul-09 |
| DD-N06-TD051 | TD051 | | TRACTION POWER DIRECTIVE<br>TYPICAL GAP BREAKER<br>STATION GROUND GRID ARRANGEMENT | 24-Jul-09 |
| DD-N06-TD052 | TD052 | | TRACTION POWER DIRECTIVE<br>TYPICAL SUBSTATION GROUND GRID<br>DETAILS | 24-Jul-09 |
| DD-N06-TD100 | TD100 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>SPLICE JOINT ASSEMBLY | 24-Jul-09 |
| DD-N06-TD101 | TD101 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>END-APPROACH ASSEMBLY | 24-Jul-09 |
| DD-N06-TD102 | TD102 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>EXPANSION JOINT ASSEMBLY | 24-Jul-09 |
| DD-N06-TD103 | TD103 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>ANCHOR ASSEMBLY<br>DIRECT FIXATION TRACK | 24-Jul-09 |
| DD-N06-TD104 | TD104 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>MOUNTING AND PEDESTAL DETAILS | 24-Jul-09 |
| DD-N06-TD105 | TD105 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>INSULATOR BRACKET & ANCHOR<br>BALLASTED TRACKS | 24-Jul-09 |
| DD-N06-TD106 | TD106 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD ASSEMBLY | 24-Jul-09 |
| DD-N06-TD107 | TD107 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD MOUNTING DETAILS | 24-Jul-09 |
| DD-N06-TD108 | TD108 | | TRACTION POWER DIRECTIVE<br>CONTACT RAIL INSTALLATION<br>COVERBOARD ASSEMBLY<br>AT EXPANSION JOINT | 24-Jul-09 |
| | | | **TRAIN CONTROL** | |
| DD-P04-ND001 | ND001 | | TRAIN CONTROL DIRECTIVE<br>MAINLINE SWITCH MACHINE LAYOUT<br>DIRECT FIXATION | 24-Jul-09 |
| DD-P04-ND002 | ND002 | | TRAIN CONTROL DIRECTIVE<br>MAINLINE SWITCH MACHINE LAYOUT<br>BALLASTED TRACK | 24-Jul-09 |
| DD-P04-ND003 | ND003 | | TRAIN CONTROL DIRECTIVE<br>YARD SWITCH MACHINE LAYOUT<br>BALLASTED TRACK | 24-Jul-09 |

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

Designed: N/A
Drawn: J Derosier
Checked: J Davis
Approved: A Borst
Date: 09-18-09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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DIRECTIVE DRAWING SUMMARY
CITY AND COUNTY OF HONOLULU (RTD)

SHEET 2 OF 2

Contract No.: SV-240
CADD File: SC2-A06-GN008
Drawing No.: GN008 Rev.
Scale: N/A
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# STANDARD DETAILS SUMMARY–CITY AND COUNTY OF HONOLULU

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| R–2 | | Pre–cast Concrete Driveway Curb | 09/1984 |
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| R–9 | | Concrete Pavement | 09/1984 |
| R–10 | | Concrete Pavement Joint Details | 09/1984 |
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| R–13 | | Street Survey Monument Castings | 09/1984 |
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| R–22 | | Metal Guardrail Details | 09/1984 |
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| 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 |
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| R–38 | | Driveway Layout | 09/1984 |
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| 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 |
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| R–44 | | Cul–de–sac | 09/1984 |

| SHEET NO. | APPLICABLE | TITLE | DATE |
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| R–45 | | Tapered Road Intersection | 09/1984 |
| R–46 | | Typical Roadway Utility Location | 09/1984 |
| R–47 | | Space Allocation for Underground Utilities | 09/1984 |
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| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: M Hall
Date: 09–18–09

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

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Subconsultant:

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STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU

SHEET 1 OF 2

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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: M Hall
Date: 09–18–09

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

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STANDARD DETAILS SUMMARY
CITY AND COUNTY OF HONOLULU

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

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| D–17 | | P.C.C. Bus Pad | R05/31/07 |
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| D–23 | | Joints | R05/31/07 |
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| H–03 | | Type A, B, and C Storm Drain Manhole | R05/31/07 |
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| STANDARD PLAN NO. | APPLICABLE | TITLE | DATE |
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| H–23 | | Inlet/Outlet Structure | R05/31/07 |
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| L–05 | | Shrub Planting | R08/16/06 |
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| L–07 | | Landscape Details | R08/16/06 |
| L–08 | | Landscape Details | R08/16/06 |
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| 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 |
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| STANDARD PLAN NO. | APPLICABLE | TITLE | DATE |
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| TE–10 | | Interstate Route Marker | 07/11/08 |
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| 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 |
|---|---|---|---|
| . | | | |

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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STANDARD PLANS SUMMARY
STATE OF HAWAII (HDOT)

SHEET 1 OF 2

Contract No.: SV–240
CADD File: SC2–A06–GN011
Drawing No.: GN011 Rev.
Scale: N/A
Page No. 10 of 64

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

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

| STANDARD PLAN NO. | APPLICABLE | TITLE | DATE |
|---|---|---|---|

| STANDARD PLAN NO. | APPLICABLE | TITLE | DATE |
|---|---|---|---|

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: J Derosier
Checked: L Karamatsu
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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STANDARD PLANS SUMMARY
STATE OF HAWAII (HDOT)

SHEET 2 OF 2

Contract No.: SV–240
CADD File: SC2–A06–GN012
Drawing No: GN012 Rev.
Scale: N/A
Page No. 11 of 64

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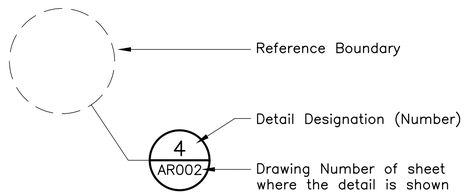
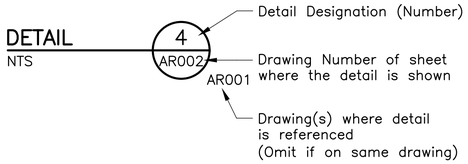
## GENERAL NOTES

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

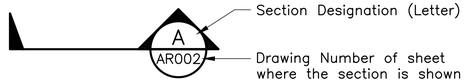
## SYMBOLS

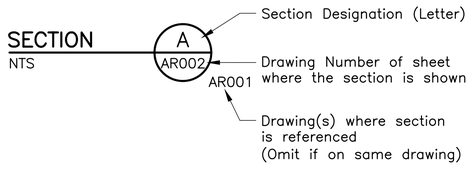
### DETAILS



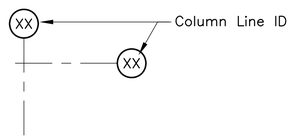




### SECTIONS




### COLUMN LINE GRID INDICATOR




### GENERAL SYMBOLS

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

### CIVIL SYMBOLS

| | |
|---|---|
| △ | Point of Intersection |
| ○ | PVC |
| | Station Equation |
| XX–X | Roadway Curve Number |
| —— CUT —— | Limit of Cut Slope (Top of Slope) |
| —— FILL —— | Limit of Fill Slope (Toe of Slope) |

### HATCH

Station Platform

### SPECIAL TERMS

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

231° 41' 16" South Azimuth

## ABBREVIATIONS

| | |
|---|---|
| Aggr | Aggregate |
| AHD, AH | Ahead |
| Align | Alignment |
| Approx | Approximate |
| ℄ | Baseline |
| BK | Back |
| BT | Back Tangent |
| Bldg | Building |
| BVC | Begin Vertical Curve |
| BVCE | Begin Vertical Curve Elevation |
| BVCS | Begin Vertical Curve Station |
| ℄ | Centerline |
| CB | Catch Basin |
| CCTV | Closed Circuit Television Camera |
| Comm | Communications |
| Conc | Concrete |
| Const | Construction |
| CS | Curve to Spiral |
| DF | Direct Fixation |
| DI | Drainage Inlet |
| Øa | Diameter |
| | Delta |
| DMH | Drainage Manhole |
| DS | Downspout |
| Dwg | Drawing |
| E | East |
| Ea | Actual Superelevation |
| Eu | Unbalanced Elevation |
| EB | Eastbound |
| EG | Existing Ground |
| El | Elevation |
| Elev | Elevation |
| EVC | End Vertical Curve |
| EVCE | End Vertical Curve Elevation |
| EVCS | End Vertical Curve Station |
| Exist | Existing |
| FA | Fire Alarm |
| FG | Finish Grade |
| Fin | Finish, Finished |
| FOC | Face of Curb |
| ft | Foot, Feet |
| GB | Grade Break |
| GBS | Gap Breaker Station |
| Gnd | Ground |
| H, Horiz | Horizontal |
| HWY | Highway |
| Jt(s) | Joint(s) |
| L | Length |
| Lc | Length of Curve |
| LH, L.H. | Left Hand |
| LiDAR | Light Detection and Ranging |
| Ls | Length of Spiral |
| LT | Left |
| LVC | Length of Vertical Curve |
| Max | Maximum |
| Min | Minimum |
| MHN | Manhole, Negative |
| MHP | Manhole, Positive |
| MPH | Miles Per Hour |
| N | North |
| N/A | Not Applicable |
| NB | Northbound |
| NIC | Not in Contract |
| N.I.C. | Not in Contract |
| No. | Number |
| OD | Outside Diameter |
| PC | Point of Curve |
| PI | Point of Intersection |
| PITO | Point of Intersection of Turnout |
| POB | Point of Beginning |
| POC | Point on Curve |
| POE | Point of Ending |
| POT | Point on Tangent |
| POVC | Point on Vertical Curve |
| POVT | Point on Vertical Tangent |
| PS | Point of Switch |
| PSI | Pounds Per Square Inch |
| PT | Point of Tangent |
| PVC | Point of Vertical Curvature |
| PVI | Point of Vertical Intersection |
| PVT | Point of Vertical Tangency |
| R | Radius |
| Reinf | Reinforce, Reinforcing |
| RH, R.H. | Right Hand |
| Rm | Room |
| ROW | Right–of–Way |
| RPM | Revolutions Per Minute |
| RT | Right |
| S | South |
| SB | Southbound |
| SC | Spiral to Curve |
| SDMH | Storm Drain Manhole |
| Shldr | Shoulder |
| Sht | Sheet |
| Sig | Signal |
| Sq | Square |
| St | Street |
| ST | Spiral to Tangent |
| Sta | Station |
| T | Tangent Distance |
| T&B | Top & Bottom |
| T.O. | Turnout |
| TOR | Top of Rail |
| TPSS | Traction Power Substation |
| TS | Tangent to Spiral |
| Typ | Typical |
| UG | Underground |
| V | Speed |
| Vert | Vertical |
| W | West |
| WB | Westbound |
| w/ | With |

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: T Cochran
Checked: E Liberman
Approved: A Borst
Date: 09–18–09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

GENERAL CIVIL NOTES, SYMBOLS, AND ABBREVIATIONS

Contract No.: SV–240
CADD File: SC2–B01–CG001
Drawing No.: CG001 Rev.:
Scale: N/A
Page No. 12 of 64

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## ROADWAY CONSTRUCTION NOTES:

1. Construct Concrete Curb, Type 2A, Per HDOT Std Plan No. D–05.
2. Construct Concrete Curb, Type 2D, Per HDOT Std Plan No. D–05.
3. Construct Concrete Curb and Gutter, Type 2DG, Per HDOT Std Plan No. D–05.
4. Construct Concrete Sidewalk, Per HDOT Std Plan No. D–15.
5. Construct Reinforced Concrete Drop Driveway, Per HDOT Std Plan No. D–06.
6. Construct Concrete Curb Ramp.
7. Install Chain Link Fence with Toprail, 6', Per HDOT Std Plan No. D–02.
8. Install Chain Link Fence without Toprail, 6', Per HDOT Std Plan No. D–03.
9. Install Double Swing Chain Link Drive Gate, 20', Per HDOT Std Plan No. D–02 and D–03.
10. Construct Concrete Barrier Rail, Type 4A, Per HDOT Std Plan No. TE–41.
11. Construct Concrete Half Barrier Rail.
12. Install Guardrail.
13. Construct Concrete Retaining Wall.
14. Construct PCC Bus Pad, Per HDOT Std Plan No. D–16.
15. Construct Plantmix Bituminous Surface Overlay.
16. Construct Plantmix Bituminous Pavement.
17. Construct Concrete Median Island Paving.
18. Construct Double Swing Drive Gate.
19. Construct Reinforced Concrete Driveway.
20. Place Aggregate Base Surface.
21. Construct Concrete Barrier Rail, Type 4B, Per HDOT Std Plan No. TE–41.
22. Construct Landscaped Median Island

## ROADWAY CONSTRUCTION LEGEND:

- Proposed full depth pavement area.
- Proposed concrete pavement.
- Proposed pavement mill & overlay area.
- Proposed sidewalk, curb & gutter, curb, and median island paving area.
- Proposed landscaped median island area.
- Full Depth Construction – Proposed Decorative Concrete, Seating Walls & Planted Areas (See Landscape Plans).
- Guideway Column (NIC)

## GENERAL ROADWAY CONSTRUCTION NOTES:

1. See RTD Standard Drawings for references to horizontal and vertical survey control datums.
2. See structural plan and profile sheets for proposed structural details.
3. See landscaping plan sheets for proposed landscaping details.
4. See ROW plan sheets for proposed ROW details.
5. See utility plan sheets for proposed modifications and/or improvements to existing above and below ground utility systems.
6. See Informative Drawings for modifications and/or improvements to existing traffic signal systems.
7. See Informative Drawings for TPSS and GBS details.
8. See Informative Drawings for track alignment details.
9. See station plan sheets for proposed station details.

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Wardell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

ROADWAY CONSTRUCTION NOTES AND LEGEND

Contract No.: SV–240
CADD File: SC2–B01–CG002
Drawing No.: CG002 Rev.:
Scale: NTS
Page No. 13 of 64

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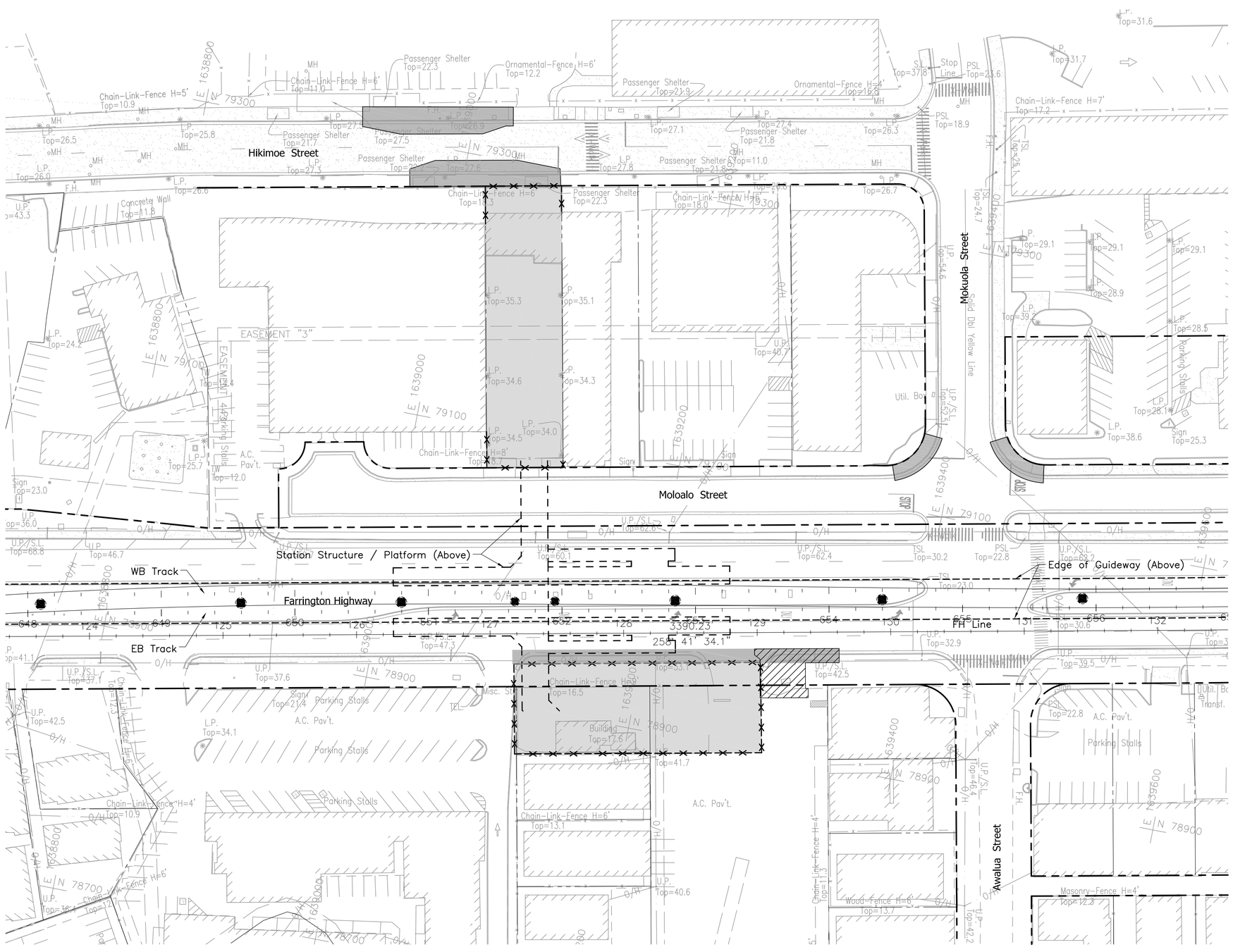


## LEGEND:

- Construct Reinforced Concrete Drop Driveway Ramp and Paving for Access to Adjacent Parking Area Prior to Occupying South Entrance Work Area.
- North and South Entrance Work Areas (notes 1 through 5 below).
- Existing curb and sidewalk areas to removed and replaced while maintaining pedestrian and bus access at all times.
- Construction Fence

## NOTES

1. Cut and cap all existing utility services (per operating authority procedures/approval) to existing structures at the Right of Way line.
2. Demolish and remove all existing structures within the parcels to be acquired.
3. Existing light poles to be disposed of per the direction of the RTD Representative.
4. Demolish and remove all existing curb, concrete, bituminous concrete, walls, etc. within the limits as shown.
5. Erect construction fence around the perimeter of the site as shown.
6. Farrington Highway configuration shown reflects preliminary design for HHCTCP mainline contract DB–1200 and is subject to change.

40' 0 40'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Derosier
Drawn: J Derosier
Checked: B Wardell
Approved: M Hall
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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## WAIPAHU TRANSIT CENTER STATION

## DEMOLITION PLAN

Contract No.: SV–240
CADD File: SC2–B03–TD001
Drawing No: TD001 Rev.
Scale: 1"=40'
Page No. 14 of 64

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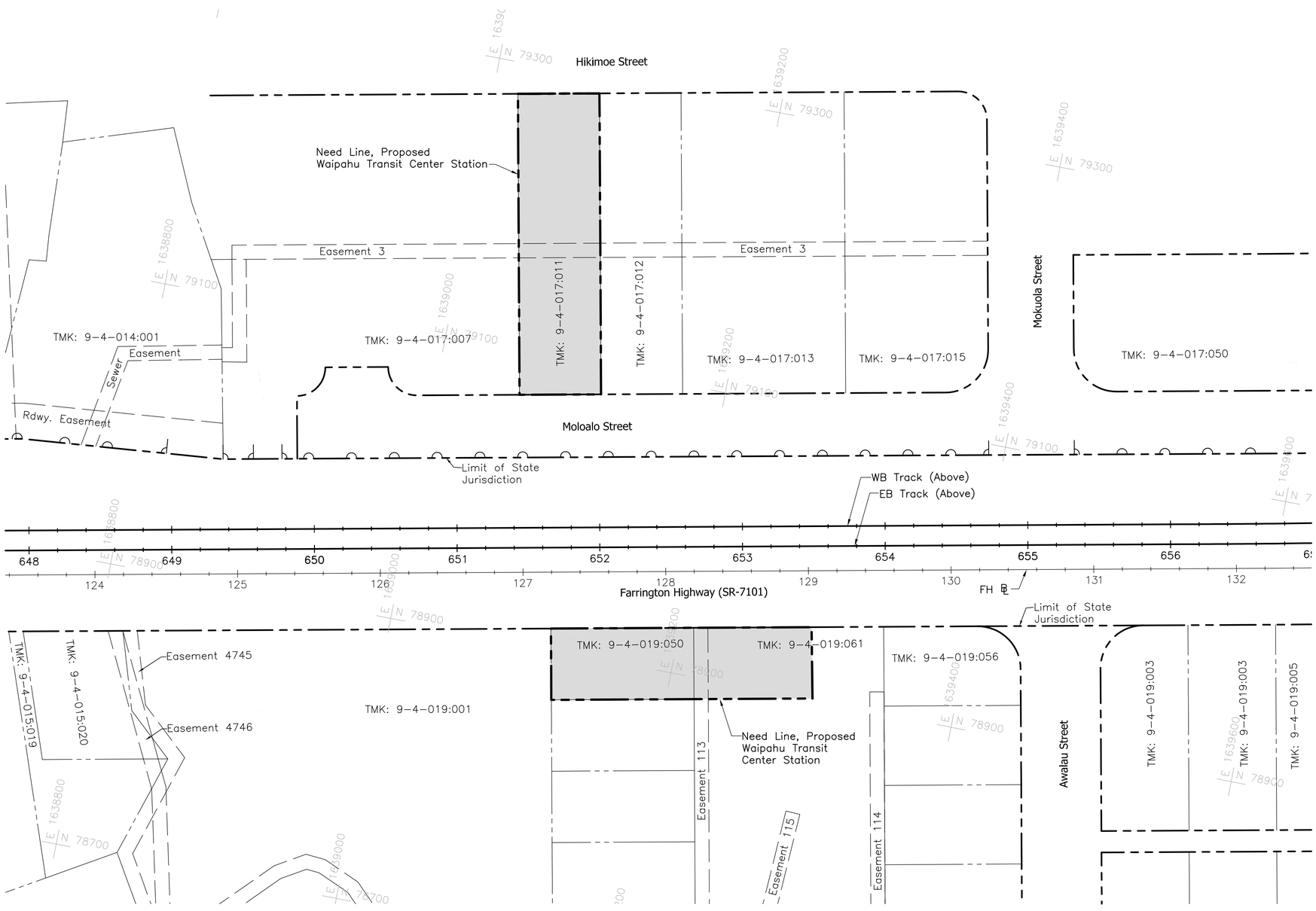


**NOTES:**

1. ROW acquisition may be in the form of an aerial easement; an easement allowing joint use; subdivision of property with transfer of title; transfer of title for the entire parcel; or some other form to be documented by Land Court registration.
2. Construction easements will be defined during the final design phase and are not reflected on plans.
3. See Dwg No. CG001 for general civil notes and abbreviations.

**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

| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 9-4-017:011 | Full | 94-818 | Moloalo St | Commercial |
| 9-4-019:050 | Full | 94-819 | Farrington Hwy | Commercial |
| 9-4-019:061 | Partial | – | – | Commercial |

40' 0 40'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: L Karamatsu
Drawn: L Karamatsu
Checked: K Wong
Approved: A Borst
Date: 09-18-09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

EXISITING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS

Contract No.: SV-240
CADD File: SC2-B04-RW001
Drawing No.: RW001 Rev.
Scale: 1"=40'
Page No. 15 of 64

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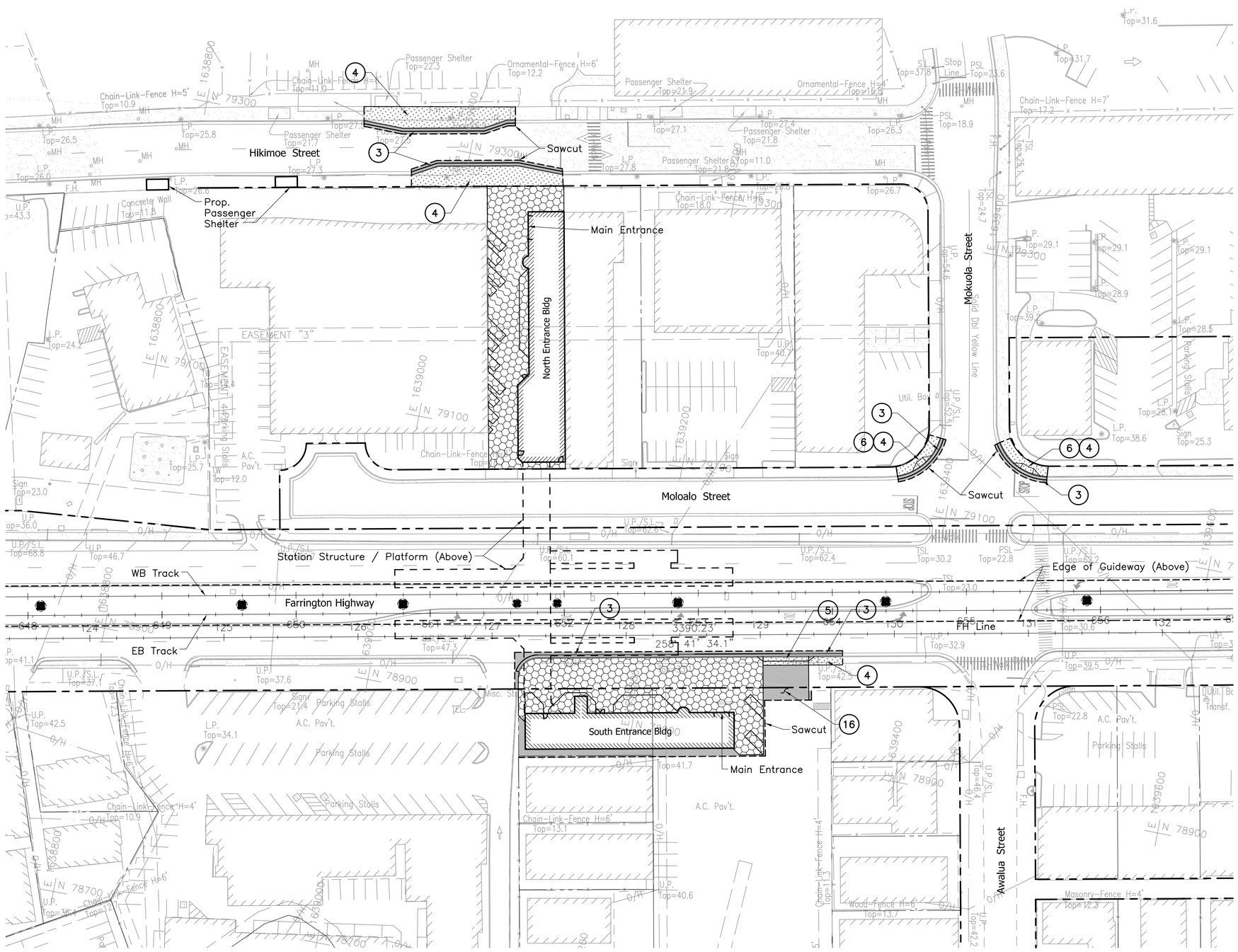


## NOTES

1. For Roadway Construction Legend, see sheet CG002.
2. Farrington Highway configuration shown reflects preliminary design for HHCTCP Mainline Contract DB–1200 and is subject to change.

40' 0 40'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Derosier
Drawn: J Derosier
Checked: B Wardell
Approved: M Hall
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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## WAIPAHU TRANSIT CENTER STATION

## CIVIL SITE PLAN

Contract No.: SV–240
CADD File: SC2–B10–RP001
Drawing No: RP001 Rev.
Scale: 1"=40'
Page No. 16 of 64

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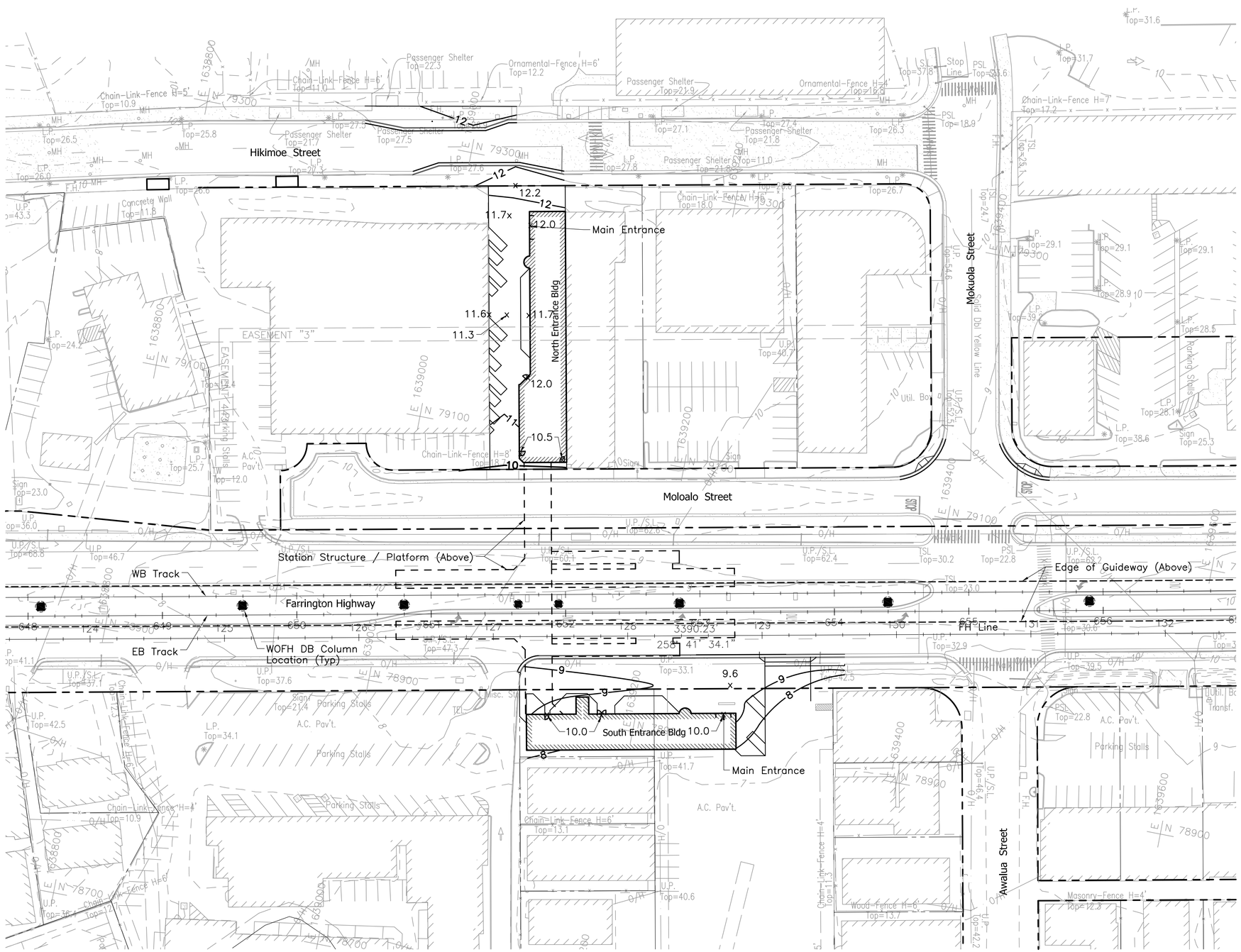


N

NOTES

1. For Roadway Construction Legend, see sheet CG002.
2. Farrington Highway configuration shown reflects preliminary design for West Oahu/ Farrington Highway Design–Build Contract and is subject to change.

40' 0 40'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Derosier
Drawn: J Derosier
Checked: B Wardell
Approved: M Hall
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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## WAIPAHU TRANSIT CENTER STATION

## GRADING PLAN

Contract No.: SV–240
CADD File: SC2–B17–GD001
Drawing No: GD001 Rev.
Scale: 1"=40'
Page No. 17 of 64

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## PAVEMENT MARKING NOTES:

| | | | |
|---|---|---|---|
| 1 | Centerline | – | Double Solid 4" Yellow Stripe with RPM |
| 2 | Centerline | – | Single Solid 4" Yellow Stripe with RPM |
| 3 | Centerline | – | RPM |
| 4 | Lane Line | – | RPM |
| 5 | Edge Line | – | Single Solid 4" White Stripe with RPM |
| 6 | Edge Line | – | Single Solid 8" White Stripe with RPM |
| 7 | Edge Line | – | Single Solid 4" Yellow Stripe with RPM |
| 8 | Edge Line | – | Single Solid 8" Yellow Stripe with RPM |
| 9 | Lane Line | – | Single Solid 4" White Stripe with RPM |
| 10 | Lane Line | – | Single Solid 8" White Stripe with RPM |
| 11 | Lane Line | – | Double Solid 4" White Stripe with RPM |
| 12 | Lane Line | – | Single Solid 4" White Stripe with RPM |
| 13 | Lane Line | – | Double Skip 4" Yellow Stripe with RPM |
| 14 | Lane Line | – | Single Dashed 4" White Stripe |
| 15 | Lane Line | – | Single Dashed 4" Yellow Stripe |
| 16 | Lane Line | – | Single Dashed 8" White Stripe with RPM |
| 17 | Transverse Markings | – | Solid White Triangles |
| 18 | Transverse Markings | – | Single Solid 12" White Stripe |
| 19 | Transverse Markings | – | Single Solid 12" Yellow Stripe |
| 20 | Transverse Markings | – | Turn Arrows |
| 21 | Transverse Markings | – | Text |
| 22 | Transverse Markings | – | Single Solid 4" White Stripe |

## GENERAL PAVEMENT MARKING NOTES:

1. See traffic signal plan sheets for proposed modifications and/or improvements to existing traffic signal systems.

## RAISED PAVEMENT MARKER (RPM) SCHEDULE:

- Type A Non–Reflective White Marker
- Type C or CL Red–Clear Reflective Marker
- Type D or DL Two–Way Yellow Reflective Marker
- Type H or HL One–Way Yellow Reflective Marker
- Type J Non–Reflective Yellow Marker
- Direction of Vehicle Travel
- No Vehicle Travel

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Wardell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

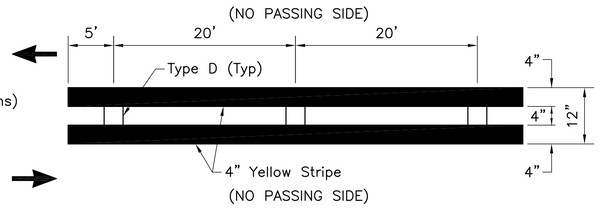
STRIPING
NOTES AND LEGEND

Contract No.: SV–240
CADD File: SC2–C01–TG001
Drawing No: TG001 Rev.
Scale: N/A
Page No. 18 of 64

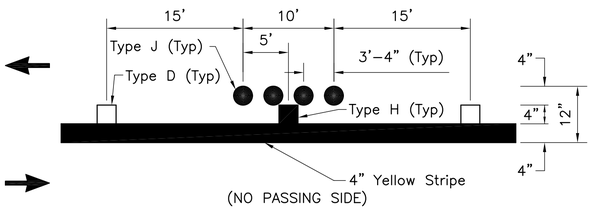
2009–08–18 12:25 PM K:\CADD\03 Civil\Segment C\Sheet Files\SC2 Waipahu Station\SC2–C01–TG001.dwg

# PAVEMENT MARKING LEGEND

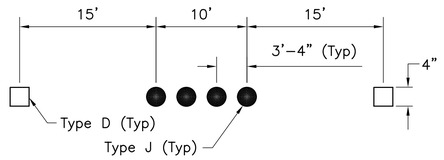
① Centerline – Passing Prohibited (Both Directions)
Double Solid 4" Yellow Stripe with
Type D Raised Pavement Markers RPM



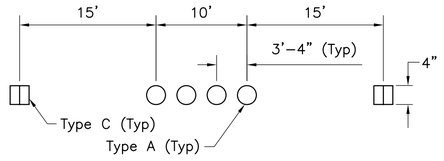

② Centerline – Passing Prohibited (One Direction)
Single Solid 4" Yellow Stripe with
Type D RPM with
Type H RPM with
Type J RPM



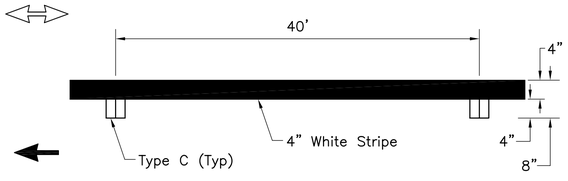

③ Centerline – Passing Permitted
Type D RPM with
Type J RPM



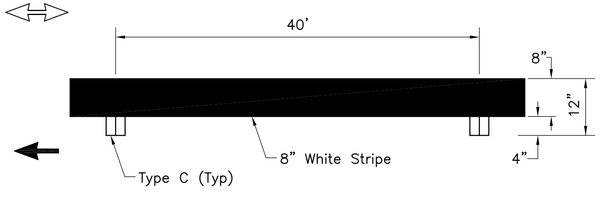

④ Lane Line – Passing Permitted
Type A RPM with
Type C RPM



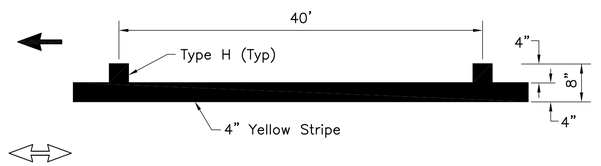

⑤ Edge Line
Single Solid 4" White Stripe with
Type C RPM



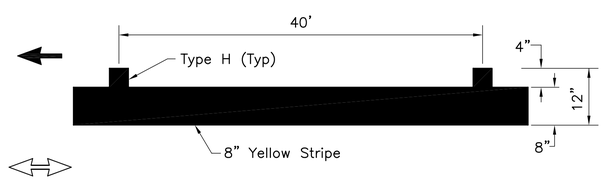

⑥ Edge Line
Single Solid 8" White Stripe with
Type C RPM



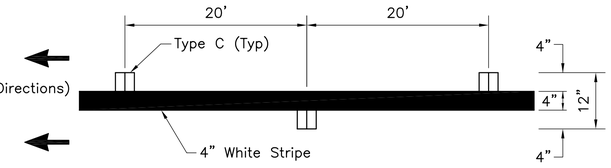

⑦ Edge Line
Single Solid 4" Yellow Stripe with
Type H RPM



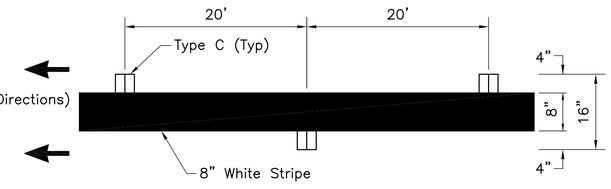

⑧ Edge Line
Single Solid 8" Yellow Stripe with
Type H RPM



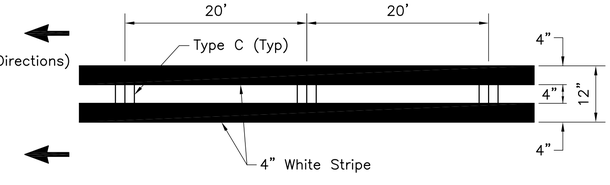

⑨ Lane Line – Lane Change Prohibited (Both Directions)
Single Solid 4" White Stripe with
Type C RPM



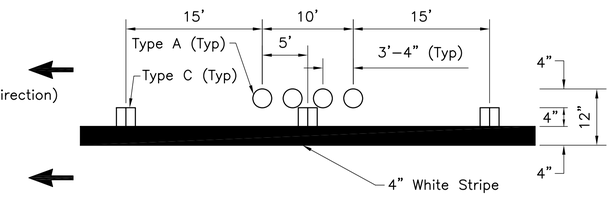

⑩ Lane Line – Lane Change Prohibited (Both Directions)
Single Solid 8" White Stripe with
Type C RPM




⑪ Lane Line – Lane Change Prohibited (Both Directions)
Double Solid 4" White Stripe with
Type C RPM




⑫ Lane Line – Lane Change Prohibited (One Direction)
Single Solid 4" White Stripe with
Type A RPM with
Type C RPM




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

Designed: B Wardell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

TYPICAL PAVEMENT MARKING LEGEND AND DETAILS

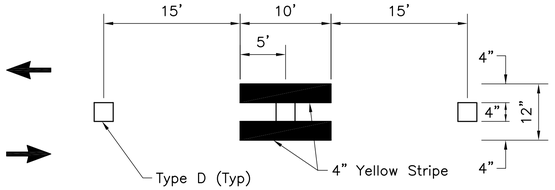
SHEET 1 OF 2

Contract No.: SV–240
CADD File: SC2–C01–TG002
Drawing No: TG002 Rev.
Scale: NTS
Page No. 19 of 64

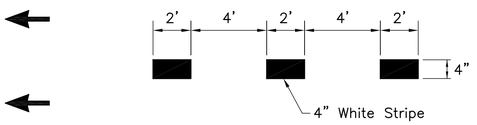
2009–08–18 12:27 PM K:\CADD\03 Civil\Segment C\Sheet Files\SC2 Waipahu Station\SC2–C01–TG002–003.dwg

# PAVEMENT MARKING LEGEND

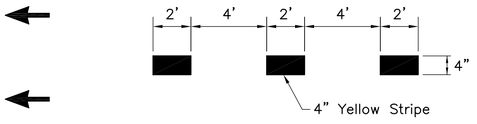
(13) Lane Line – Reversible
Double Skip 4" Yellow Stripe with
Type D RPM



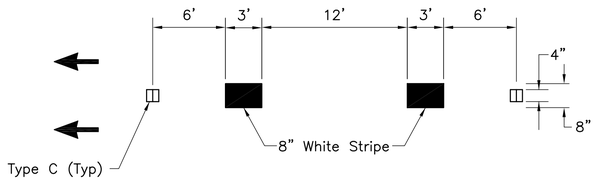

(14) Lane Line – Guidance
Single Dashed 4" White Stripe



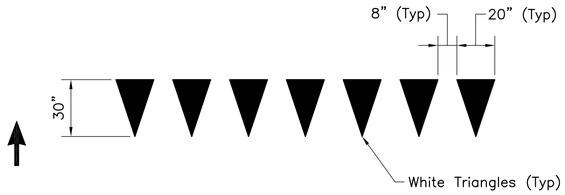

(15) Lane Line – Guidance
Single Dashed 4" Yellow Stripe



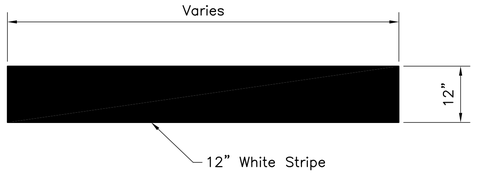

(16) Lane Line – Drop Lane
Single Dashed 8" White Stripe with
Type C RPM



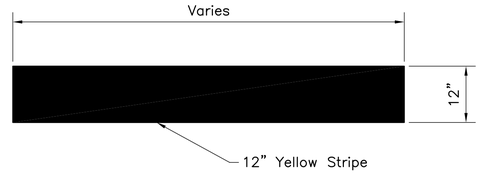

(17) Transverse Markings – Yield Line
Solid White Triangles




(18) Transverse Markings
Single Solid 12" White Stripe



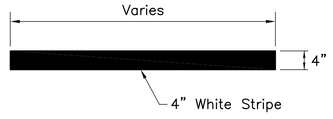

(19) Transverse Markings
Single Solid 12" Yellow Stripe




(20) Transverse Markings – Turn Arrows

(21) Transverse Markings – Text
ONLY

(22) Transverse Markings
Single Solid 4" White Stripe




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

Designed: B Wardell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 09–18–09

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

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

Subconsultant:

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WAIPAHU TRANSIT CENTER STATION

TYPICAL PAVEMENT MARKING LEGEND AND DETAILS

SHEET 2 OF 2

Contract No.: SV–240
CADD File: SC2–C01–TG003
Drawing No.: TG003 Rev.
Scale: NTS
Page No. 20 of 64

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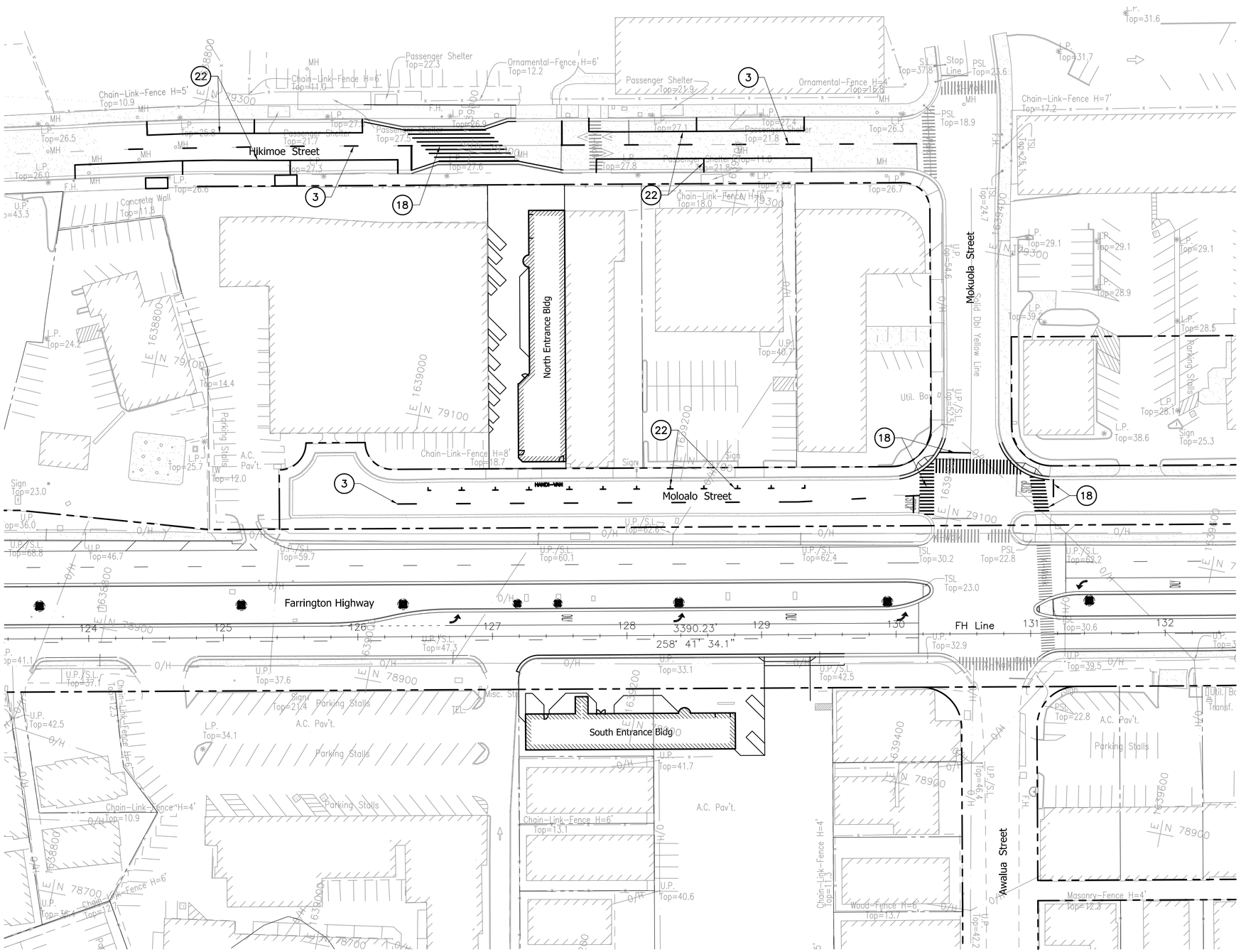


NOTES

1. For General Pavement Marking notes, see sheet TG001.
2. Farrington Highway configuration shown reflects preliminary design for HHCTCP Mainline Contract DB–1200 and is subject to change.

40' 0 40'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Derosier
Drawn: J Derosier
Checked: B Wardell
Approved: M Hall
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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## WAIPAHU TRANSIT CENTER STATION

## SIGNING AND STRIPING PLAN

Contract No.: SV–240
CADD File: SC2–C02–TR001
Drawing No.: TR001 Rev.
Scale: 1"=40'
Page No. 21 of 64

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# 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
- 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 |
| PPB | Pedestrian Push Button |
| PI | Place |
| PM | Petroleum Marker |
| PP | Power Pole |
| 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 |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: N/A
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 09–18–09

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

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

Subconsultant: 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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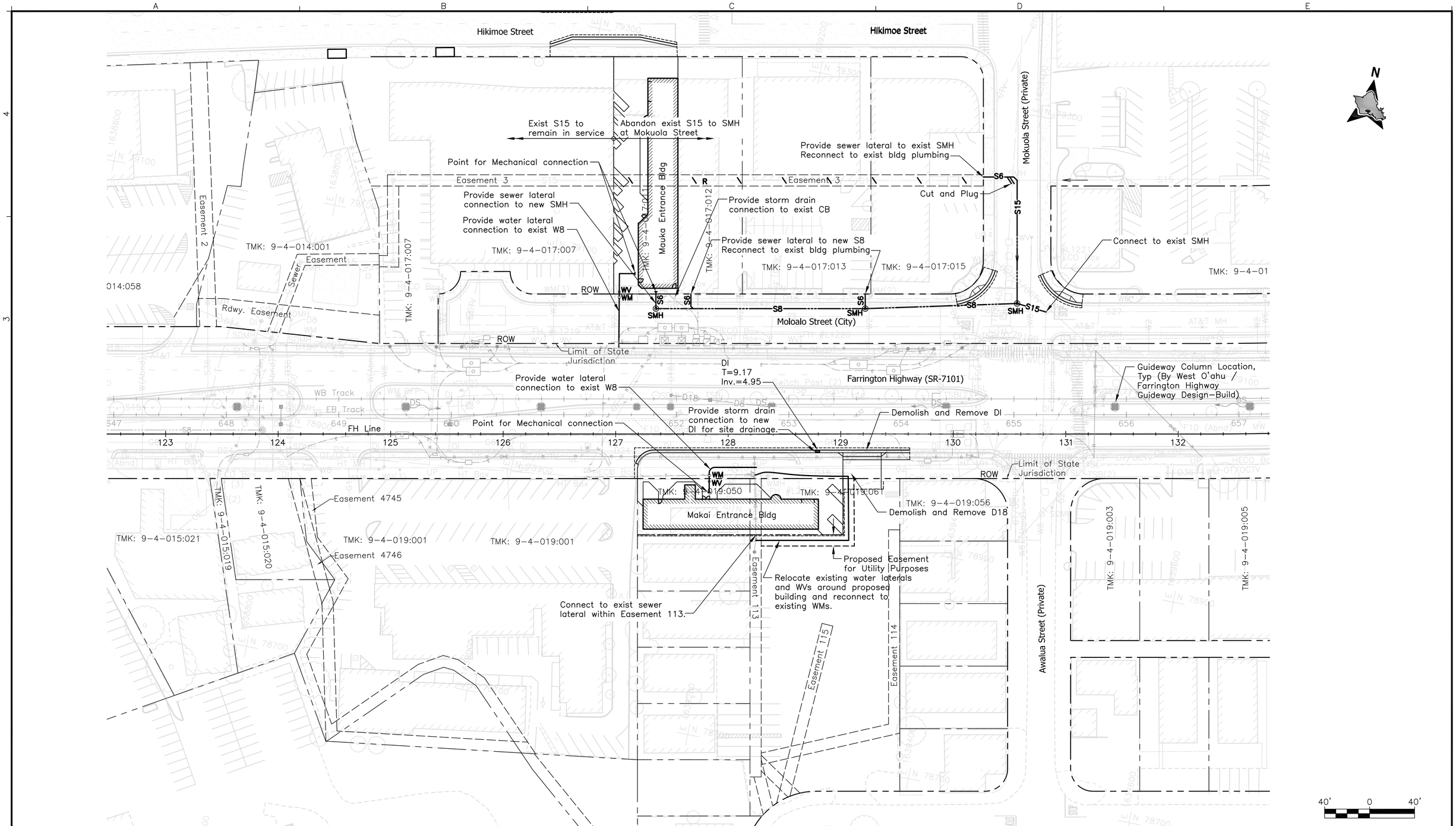
WAIPAHU TRANSIT CENTER STATION

GENERAL UTILITIES SYMBOLS AND ABBREVIATIONS

Contract No.: SV–240
CADD File: SC2–D01–UG001
Drawing No: UG001 Rev.
Scale: None
Page No. 22 of 64




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

Designed: D Toba
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant: 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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WAIPAHU TRANSIT CENTER STATION

## UTILITIES PLAN WATER, SEWER & DRAINAGE

Contract No.: SV-240
CADD File: SC2-D03-UP001
Drawing No: UP001
Rev.
Scale: 1"=40'
Page No. 23 of 64

## GENERAL

1. All work shall conform to the 2006 International Building Code (IBC) with the City and County of Honolulu Amendments unless noted otherwise.
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.

## FOUNDATION

1. The Designer shall engage the services of a Hawaii licensed geotechnical engineer to perform subsurface exploration, investigation, testing, and analyses for the design and construction of the foundations of the indicated buildings and structures.
2. All earthwork shall be performed in accordance with the above–mentioned recommendations. All foundation excavations shall be observed and approved by a Hawaii licensed geotechnical engineer prior to placement of reinforcement and concrete. All structural fill material (both onsite and imported) shall be reviewed and approved by the geotechnical engineer.
3. The Contractor shall provide for dewatering of excavations from surface water, ground water or seepage.
4. The Contractor shall be responsible for design and installation of all cribbing, sheeting, and shoring necessary to preserve excavations and earth banks.
5. 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.
6. All building slabs–on–grade shall be underlain by a 6–inch layer of aggregate subbase compacted to a minimum of 95% relative compaction.
7. 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.
8. 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..... 2,500 PSI
   B. Floor Slab on Grade..... 3,000 PSI
   C. Footings, Grade Beams & Piers..... 3,000 PSI
   D. Walls (incl precast or Tilt–up concrete)..... 3,000 PSI
   E. Columns..... 4,000 PSI
   F. Suspended Slabs and Beams..... 4,000 PSI
   G. Concrete Fill on Metal Deck..... 3,000 PSI
   H. All Others..... 3,000 PSI
   I. 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. The structural design shall be based on the provisions of the International Building Code (IBC), 2006 Edition, as amended by the City and County of Honolulu.
2. The structural design shall comply with the applicable provisions of Section 9.0 – Structural and Section 23.0 – Fire/Life Safety of the HHCTCP Design Criteria.
3. 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
4. Wind design data:
   A. Design effective wind speed..... 105 MPH
   B. Exposure..... C
   C. Importance factor..... 1.0
5. Seismic design data:
   A. Occupancy Category II
   B. Importance factor = 1.25
   C. Site class = C
   D. Mapped spectral response accelerations:
      * Ss = 0.60
      * S1 = 0.17
   E. Design spectral response acceleration:
      * Sds = 0.46
      * Sd1 = 0.18
   F. Seismic Design Category = C

## 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 structural engineer responsible for preparing shop drawings 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 |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

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

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

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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WAIPAHU TRANSIT CENTER STATION

# GENERAL STRUCTURAL NOTES

SHEET 1 OF 2

Contract No.: SV–240
CADD File: SC2–G01–SG001
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## REINFORCING STEEL

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

## STRUCTURAL STEEL AND MISCELLANEOUS IRON

1. The design, fabrication and erection of structural steel shall be in accordance with the "Specifications for Structural Steel Buildings", AISC 360–05. Seismic design of steel structures shall be in accordance with the "Seismic Provisions for Structural Steel Buildings", including Supplement No.1 dated 2006, AISC 341–05.
2. W–shapes shall conform to ASTM A 992 (Fy = 50 ksi). All steel plates, bars, and other shapes shall comply with ASTM A 36 unless noted otherwise. Structural pipe shall conform to ASTM A 53, Grade B. Round HSS shall conform to ASTM A 500, Grade B, (Fy = 42 ksi). Rectangular and square HSS shall conform to ASTM A 500, Grade B (Fy = 46 ksi). All exposed steel members and assemblies shall be hot–dip galvanized after fabrication in accordance with ASTM A 123.
3. Common bolts shall comply with ASTM A 307, hot–dip galvanized per ASTM A 153.
4. High strength bolts shall comply with ASTM A 325N or A 325SC (where noted), Galvanized. Nuts shall conform to ASTM A 563, galvanized. Washers shall conform to ASTM F 436, Galvanized.
5. Anchor rod material shall conform to ASTM F 1554, Grade 36 (Grade 55 or 105 where noted), hot–dip galvanized, per ASTM A 153.
6. Shear stud connectors shall be as specified in AWS D1.1–04, Chapter 7, Type B made from ASTM A 108 material (Fu = 60 ksi).
7. All welds shall be arc welded, matching the electrode to the base steel, according to AWS standards and performed by certified welders. All welds shall be ground smooth and painted with 2 coats of Z.R.C. 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
   Roof.....Not to exceed L/360

## COLD–FORMED LIGHT GAUGE STRUCTURAL 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.
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 light metal structural framing including trusses.
9. Each joist, rafter, truss and structural wall stud shall be aligned vertically so that the distance between the web of the horizontal framing member to the edge of the wall stud does not exceed 1/8 inch (3 mm), unless otherwise indicated in the drawings.

## 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. Decking shall be continuous for 2 or more spans, where applicable, and bear on supports a minimum of 2 inches. Ends of roof deck units shall be lapped a minimum of 2 inches over supports.
3. 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.
4. 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.
5. Rectangular or circular openings in metal deck shall be reinforced as shown.
6. Shop drawings showing the deck unit layout and fastener locations, manufacturer's brochures and ICC–ES Legacy Report shall be submitted to the Architect for approval.
7. 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.
8. 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 2,5000 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 Spectification 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 |
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

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

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WAIPAHU TRANSIT CENTER STATION

GENERAL STRUCTURAL NOTES

SHEET 2 OF 2

Contract No.: SV–240
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# STRUCTURAL ABBREVIATIONS (CONTINUED)

| | |
|---|---|
| & | 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 |
| 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 |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

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

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

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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WAIPAHU TRANSIT CENTER STATION

STRUCTURAL ABBREVIATIONS

Contract No.: SV–240
CADD File: SC2–G01–SG003
Drawing No: SG003 Rev.
Scale: N/A
Page No. 26 of 64

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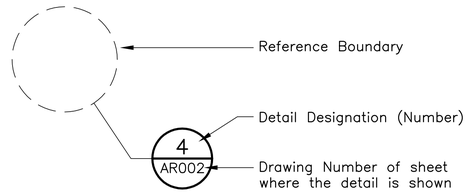
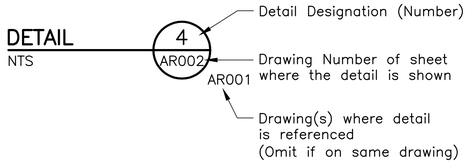
# STRUCTURAL SYMBOLS

## DETAILS

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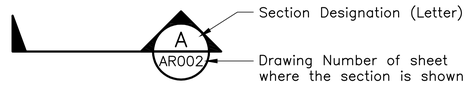
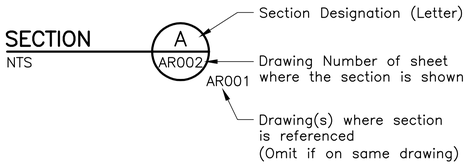
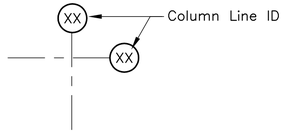


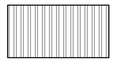

## COLUMN LINE GRID INDICATOR



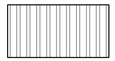

## GENERAL SYMBOLS

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

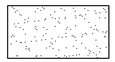
## HATCH



Metal Deck w/Conc Topping (Plan View)



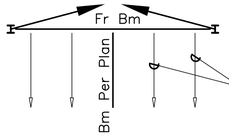
Metal Deck w/No Topping (Plan View)



Slab on Grade (Plan View)

## LEGEND

Struct. Steel "X" Braced Frame (Above)



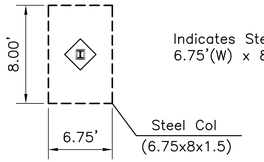
Non–Struct. Partition (See Arch. Drawings)

Non–Struct. Shaft Wall

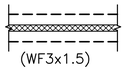
Tilt–Up Wall

CMU Wall

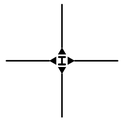
Wall Below



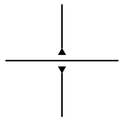

Indicates Steel Moment Frame Column & 6.75'(W) x 8.00'(L) x 1.5' Thk Footing



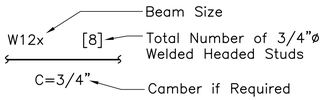

Indicates Continuous Footing 3'(W) x 1.5'(T)



Indicates Beam–to–Column Moment Connection



Indicates Beam–to–Beam Moment Connection



Indicates Direction of Metal Purlin Span

| Rev | By | Date | Description |
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CITY & COUNTY OF HONOLULU - DEPARTMENT OF TRANSPORTATION SERVICES - RAPID TRANSIT DIVISION

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WAIPAHU TRANSIT CENTER STATION

STRUCTURAL SYMBOLS

Contract No.: SV–240
CADD File: SC2–G01–SG004
Drawing No: SG004 Rev.
Scale: N/A
Page No. 27 of 64

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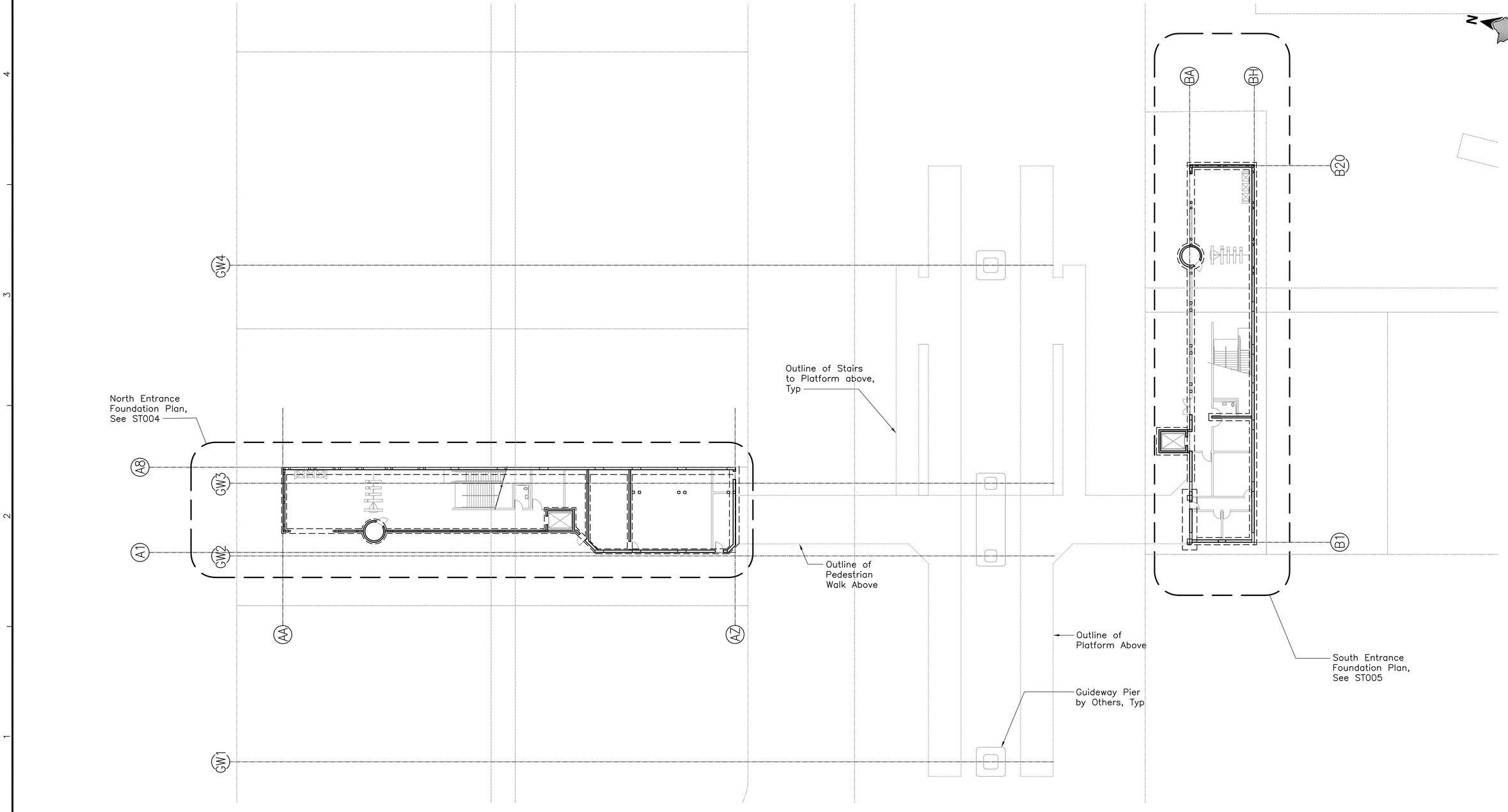


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WAIPAHU TRANSIT CENTER STATION

## OVERALL REFERENCE FOUNDATION PLAN

Contract No.: SV-240
CADD File: SC2-G12-ST001
Drawing No: ST001 Rev.
Scale: 1"=20'
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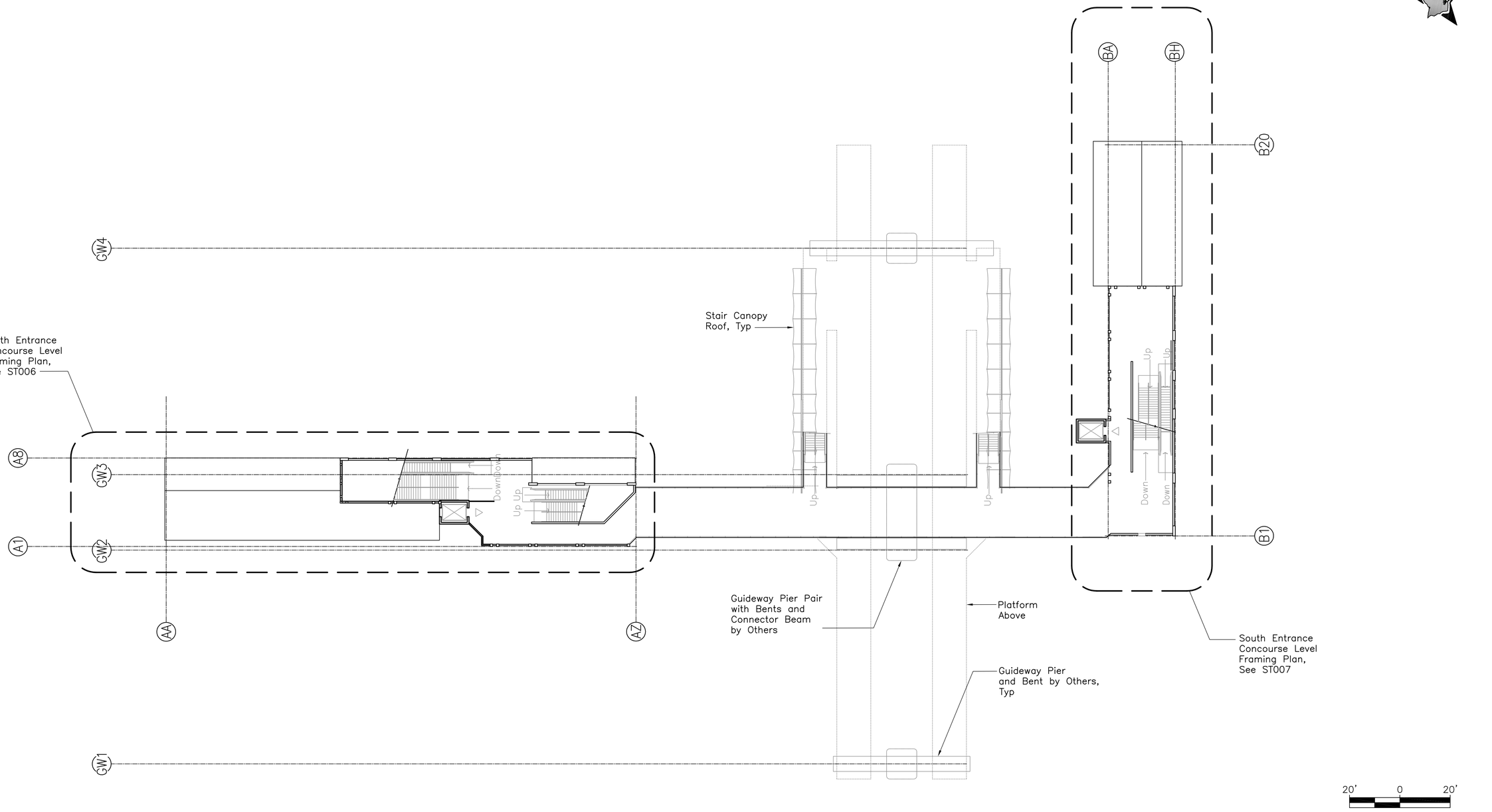


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## WAIPAHU TRANSIT CENTER STATION

## OVERALL REFERENCE CONCOURSE LEVEL FRAMING PLAN

Contract No.: SV-240
CADD File: SC2-G12-ST002
Drawing No: ST002 Rev.
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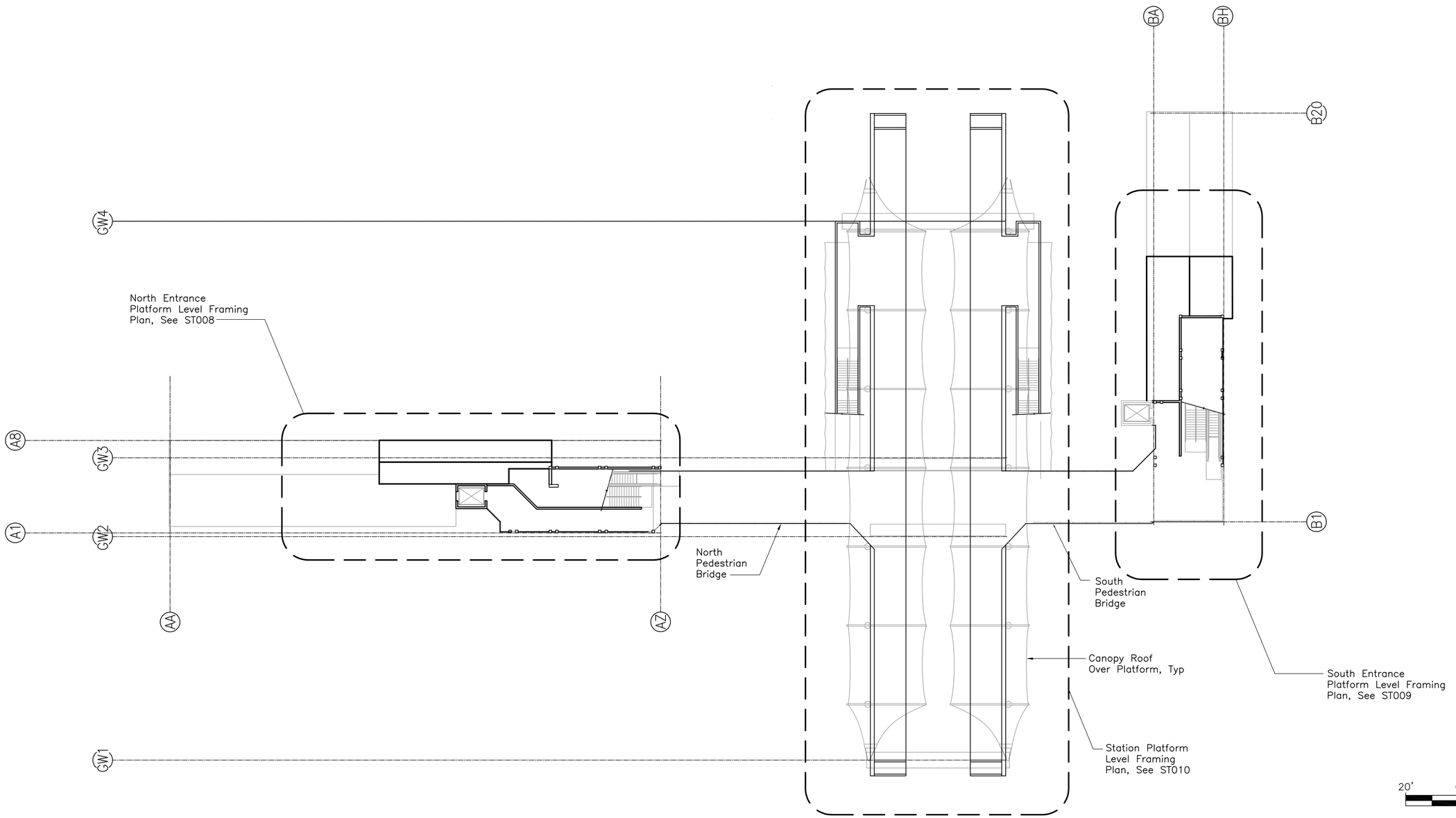


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WAIPAHU TRANSIT CENTER STATION

# OVERALL REFERENCE PLATFORM LEVEL FRAMING PLAN

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| Contract No.: | SV–240 |
| CADD File: | SC2–G12–ST003 |
| Drawing No: | ST003 |
| Rev. | |
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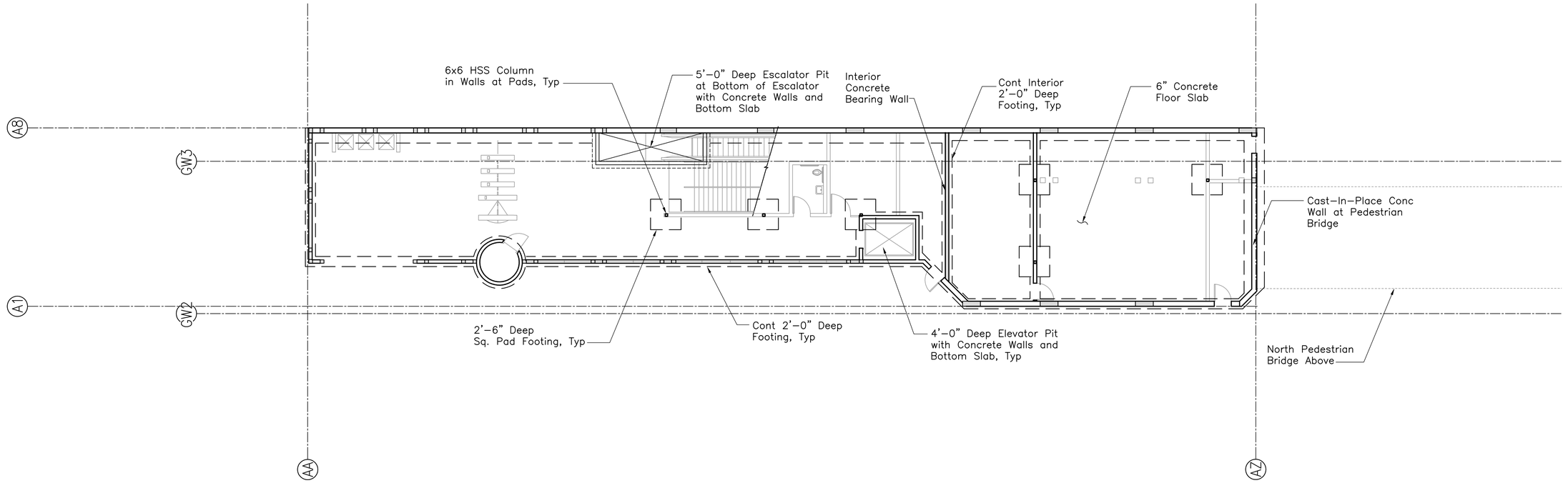


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## WAIPAHU TRANSIT CENTER STATION

## NORTH ENTRANCE FOUNDATION PLAN

Contract No.: SV–240
CADD File: SC2–G13–ST004
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Scale: 3/32" = 1'–0"
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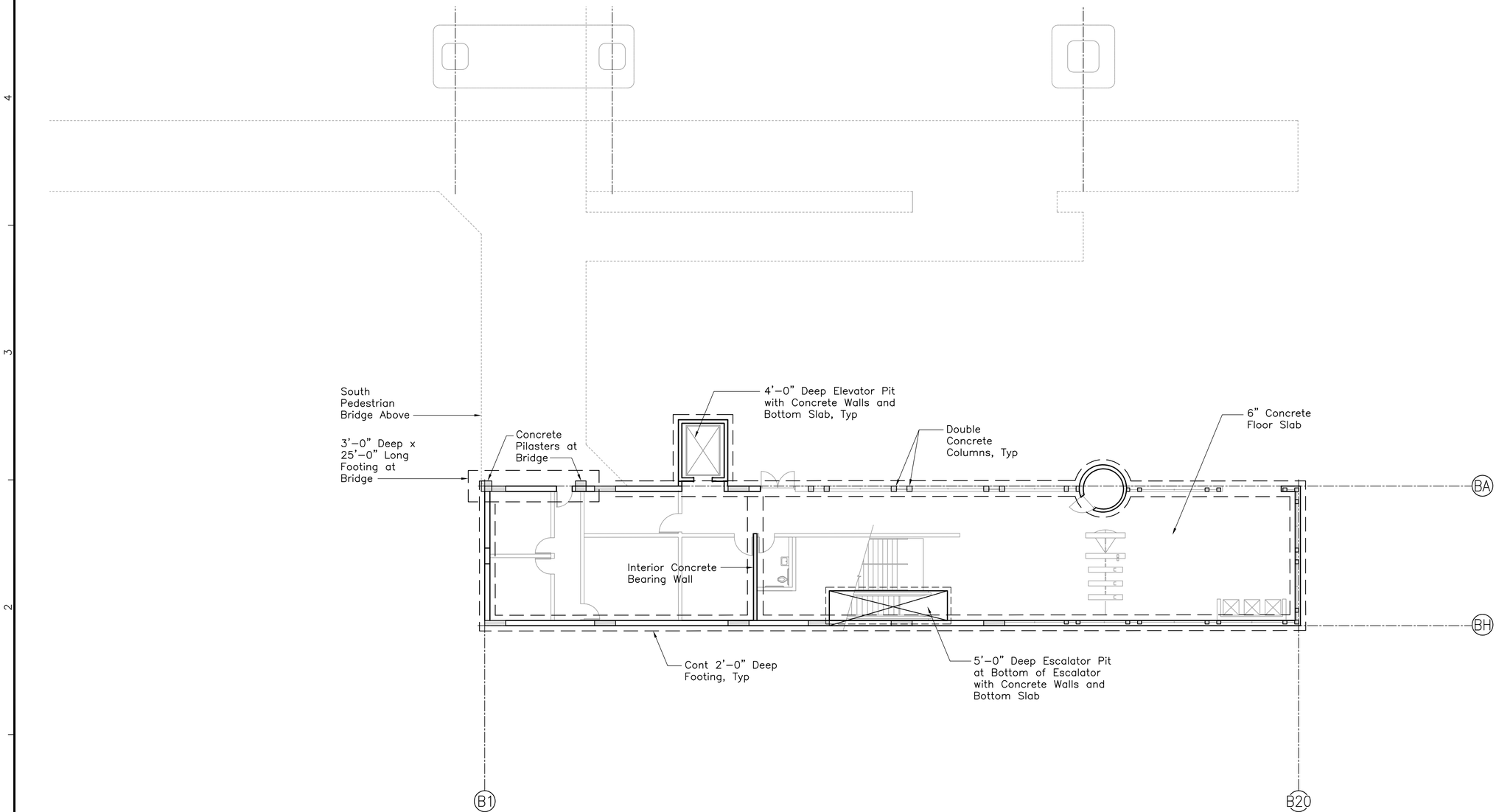


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WAIPAHU TRANSIT CENTER STATION

# SOUTH ENTRANCE FOUNDATION PLAN

Contract No.: SV–240
CADD File: SC2–G13–ST005
Drawing No: ST005 Rev.
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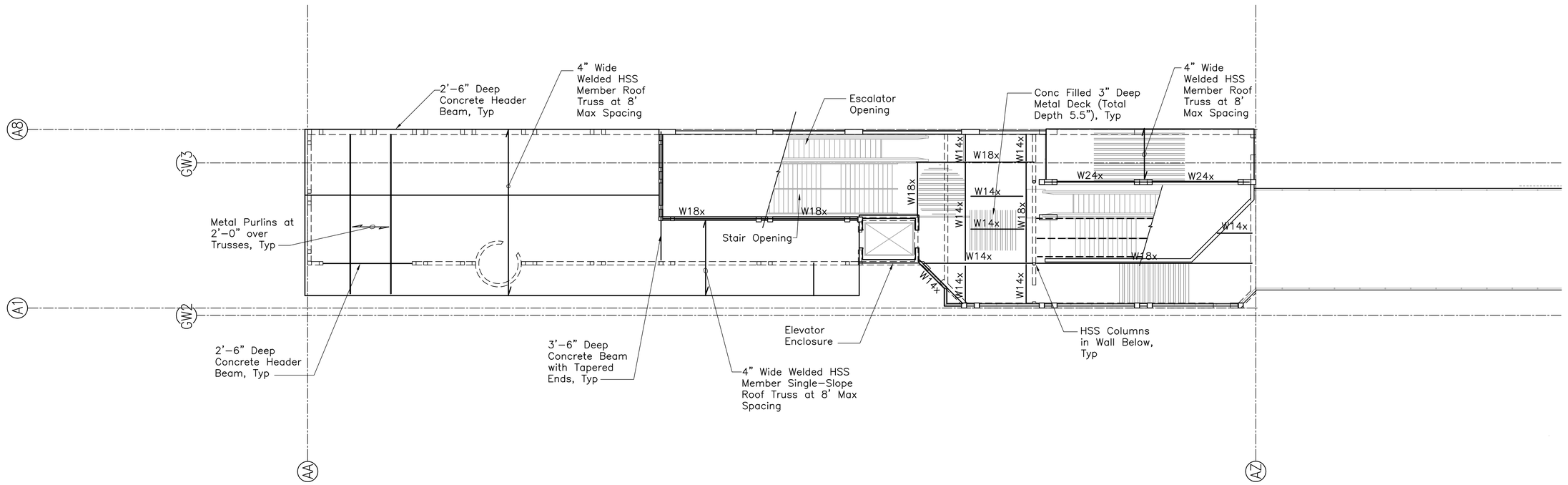


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## WAIPAHU TRANSIT CENTER STATION

## NORTH ENTRANCE CONCOURSE LEVEL FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST006
Drawing No: ST006 Rev.
Scale: 3/32" = 1'–0"
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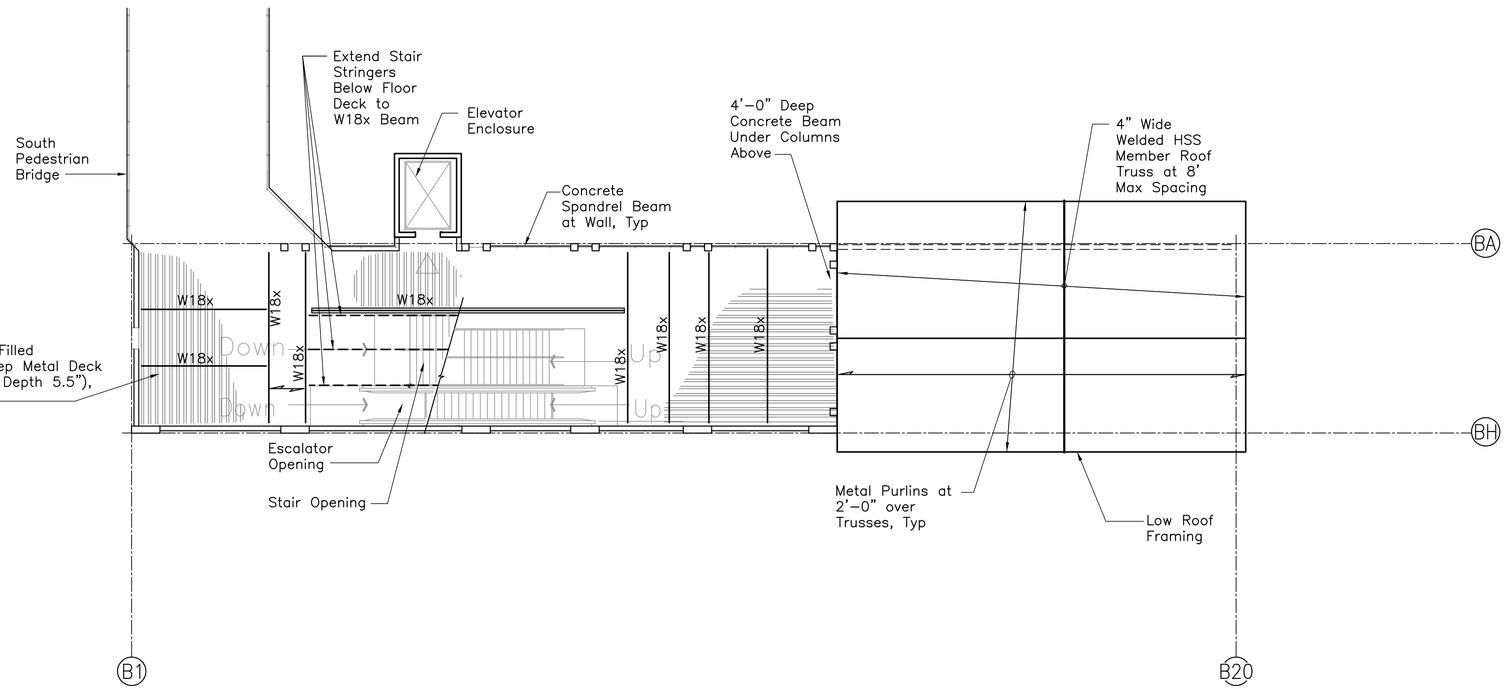


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2'0 2'4' 8' 12' 20'

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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WAIPAHU TRANSIT CENTER STATION

## SOUTH ENTRANCE CONCOURSE LEVEL FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST007
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Scale: 3/32"=1'–0"
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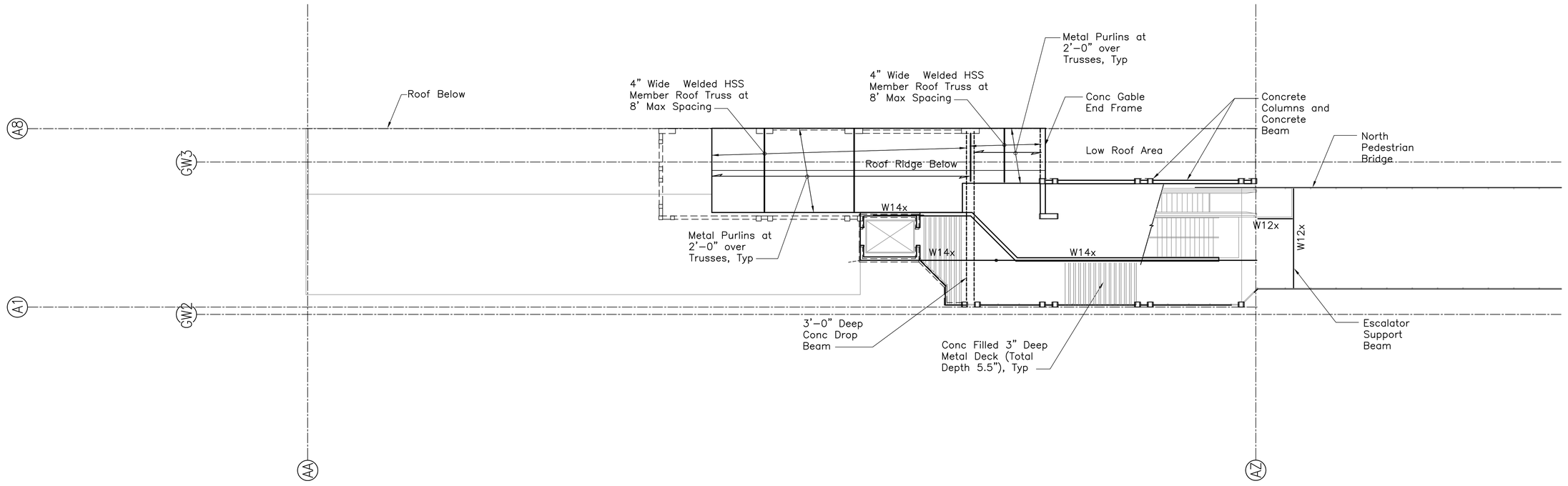


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WAIPAHU TRANSIT CENTER STATION

# NORTH ENTRANCE PLATFORM LEVEL FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST008
Drawing No: ST008 Rev.
Scale: 3/32" = 1'–0"
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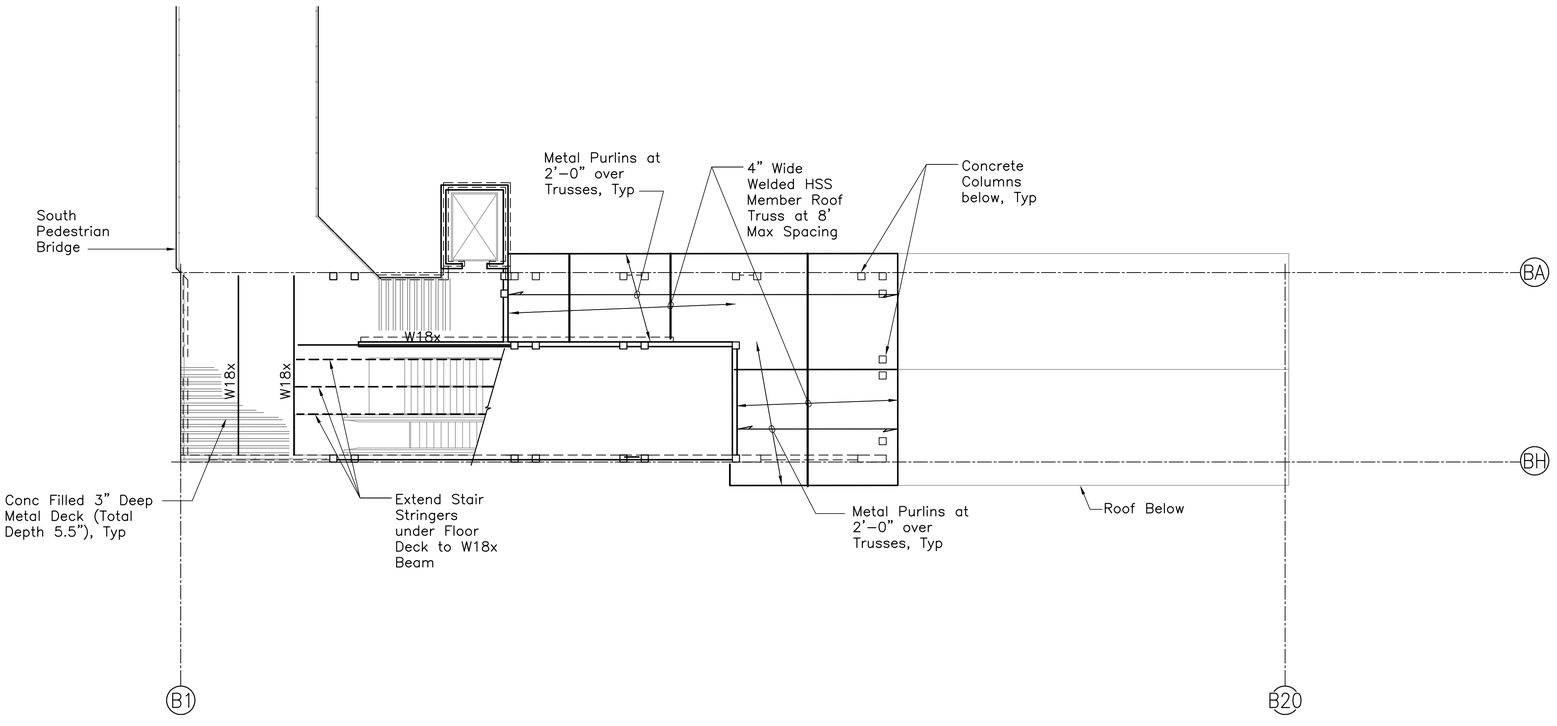


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WAIPAHU TRANSIT CENTER STATION

## SOUTH ENTRANCE PLATFORM LEVEL FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST009
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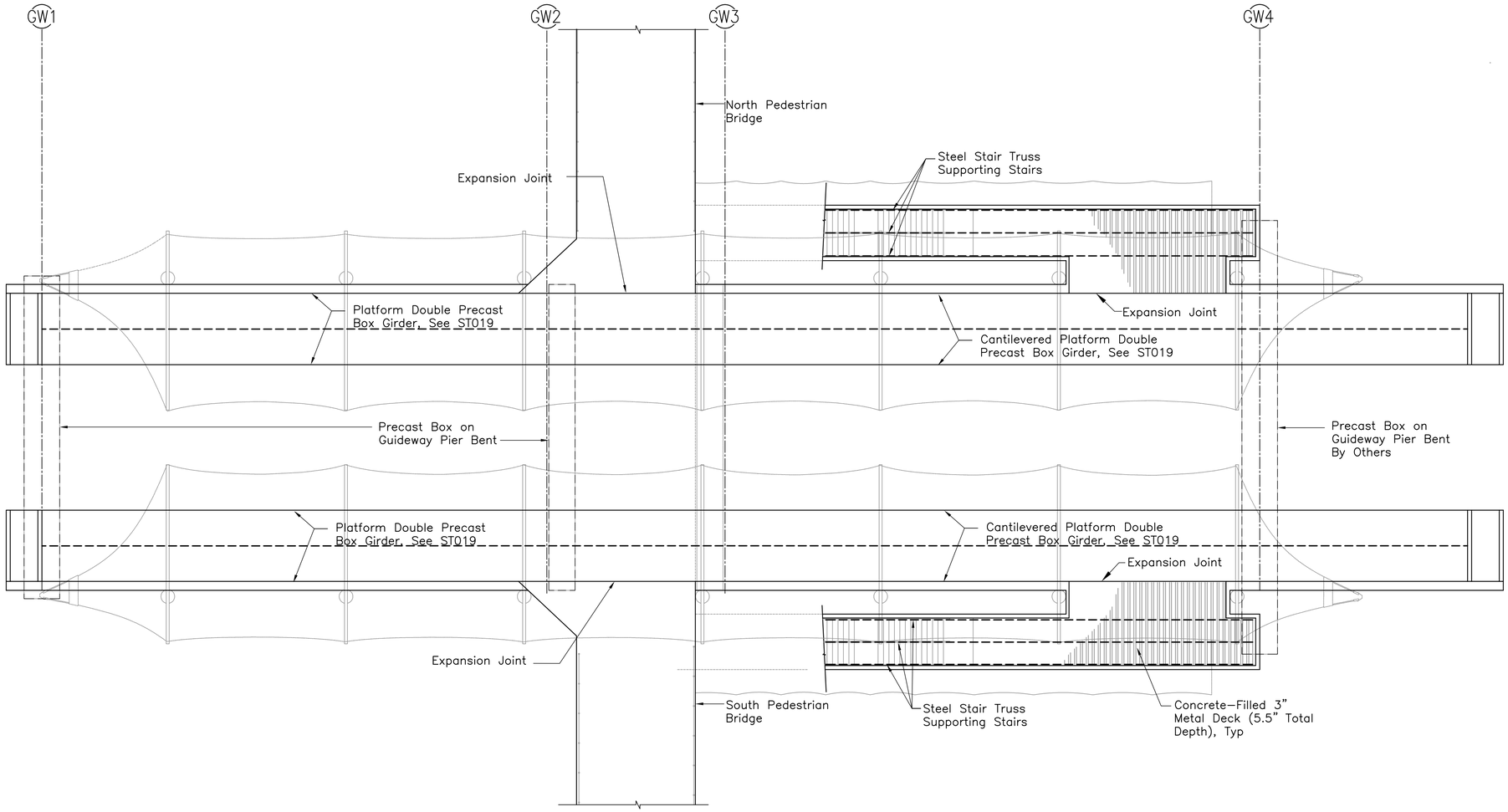


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2'0 2'4' 8' 12' 20'

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WAIPAHU TRANSIT CENTER STATION

## PLATFORM LEVEL FRAMING PLAN

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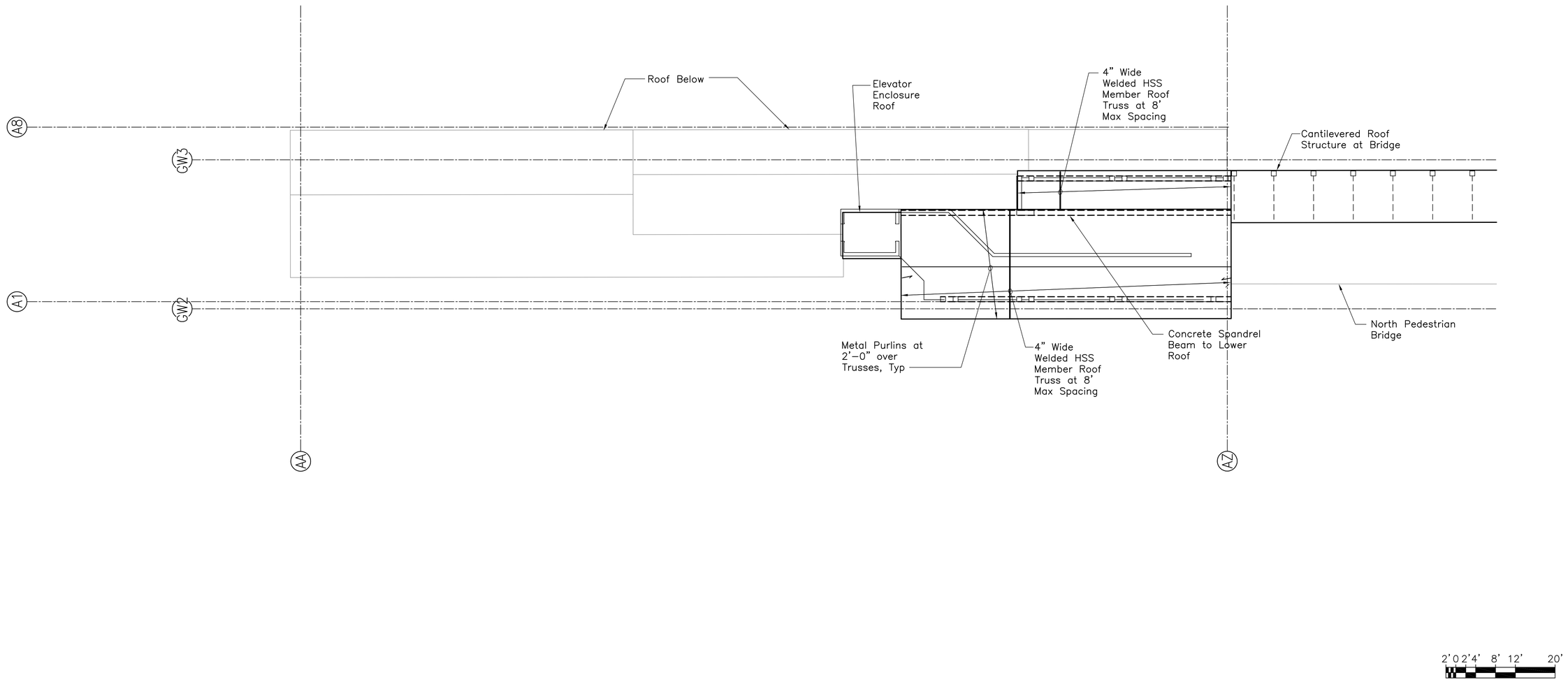


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| Rev | By | Date | Description |
|---|---|---|---|
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**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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

WAIPAHU TRANSIT CENTER STATION

## NORTH ENTRANCE ROOF FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST011
Drawing No.: ST011 Rev.
Scale: 3/32"=1'–0"
Page No. 38 of 64

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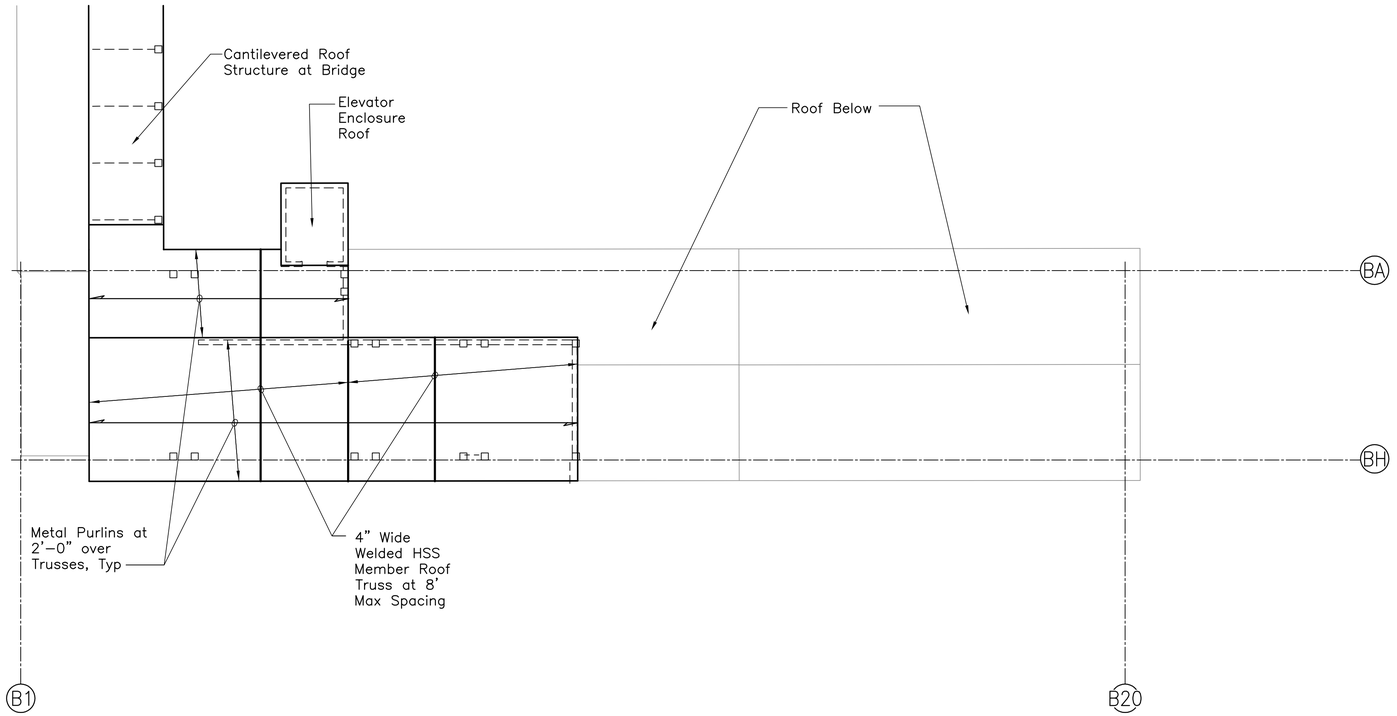


N

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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

Designed: J Fujita
Drawn: J Tamanaha
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Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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WAIPAHU TRANSIT CENTER STATION

## SOUTH ENTRANCE ROOF FRAMING PLAN

Contract No.: SV–240
CADD File: SC2–G14–ST012
Drawing No: ST012 Rev.
Scale: 3/32"=1'–0"
Page No. 39 of 64

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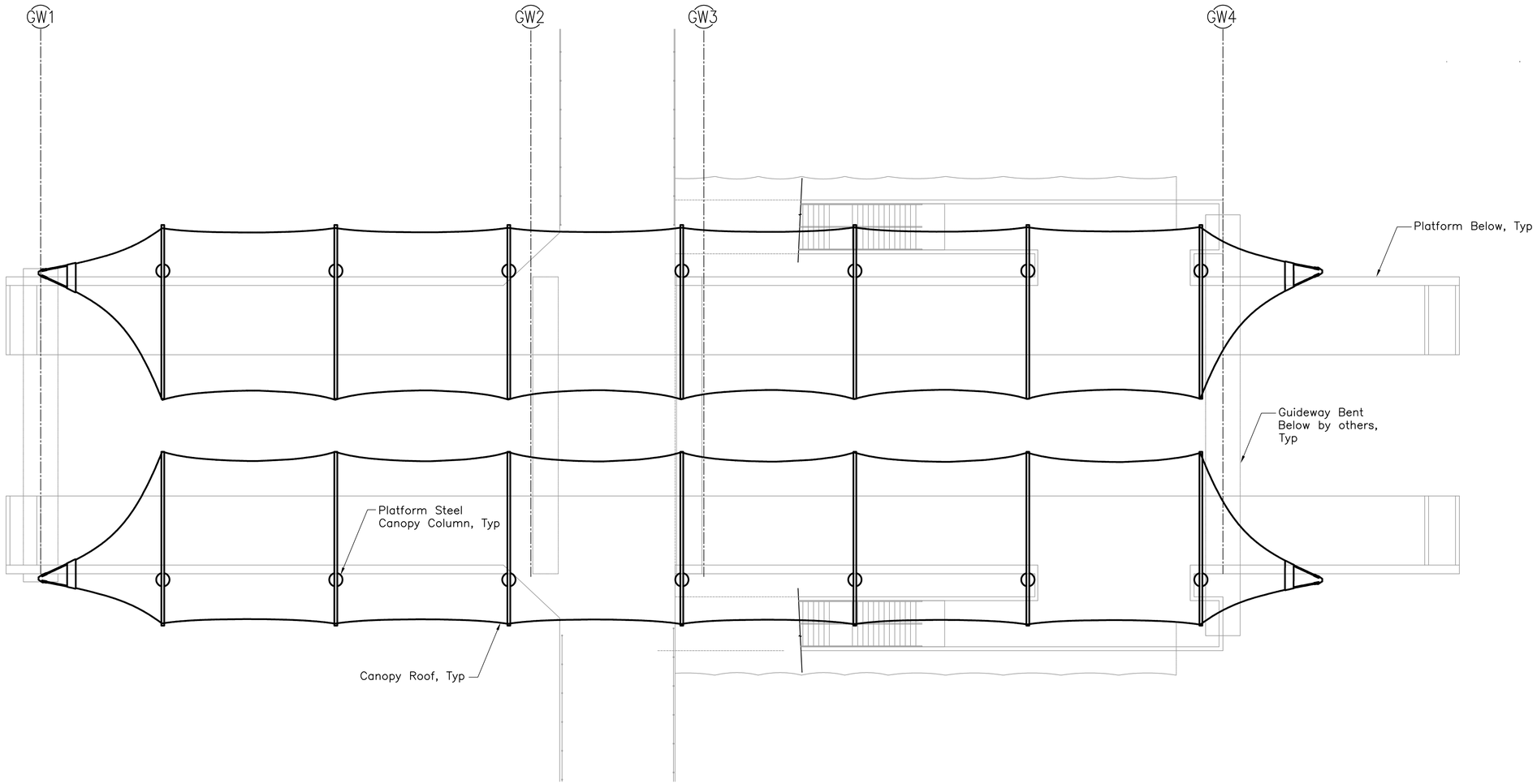


2'0 2'4' 8' 12' 20'

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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

Designed: J Fujita
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Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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WAIPAHU TRANSIT CENTER STATION

## STATION ROOF FRAMING PLAN

Contract No.: SV-240
CADD File: SC2-G14-ST013
Drawing No: ST013 Rev.
Scale: 3/32" = 1'-0"
Page No. 40 of 64

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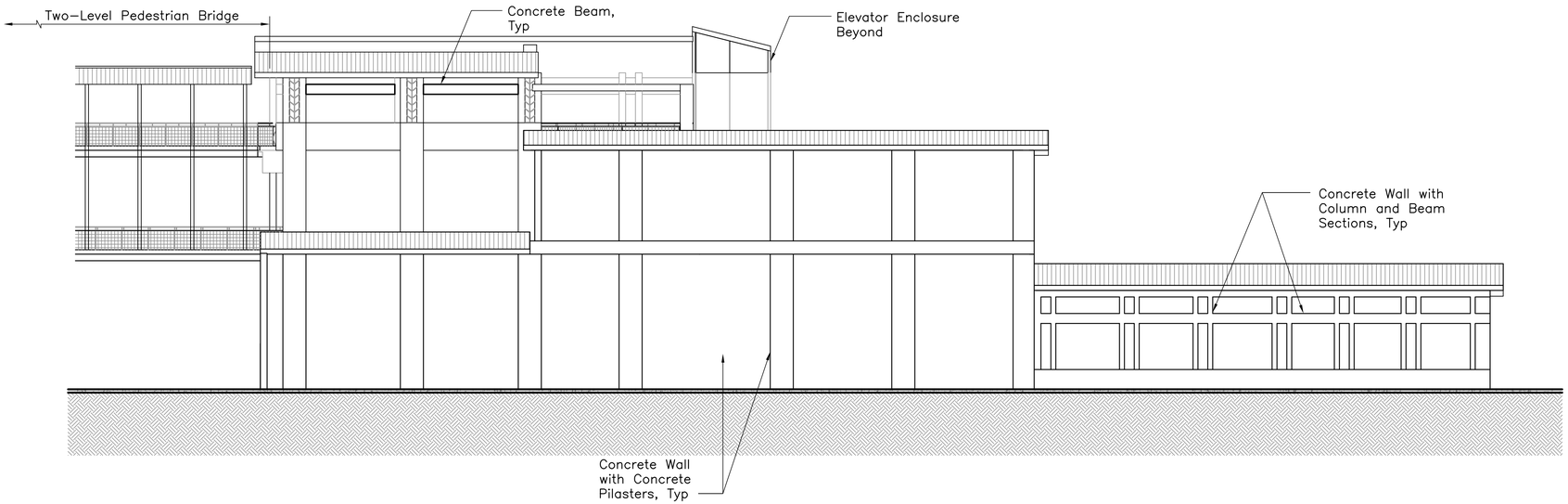


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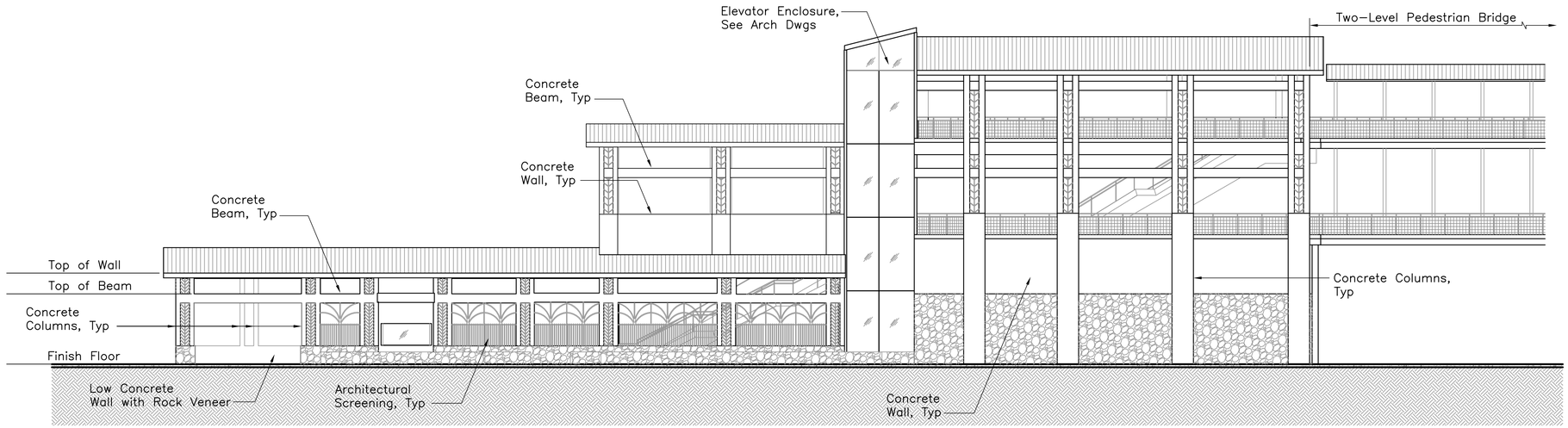


## NORTH STATION WEST ELEVATION
3/32"=1'–0"

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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Date: 09–18–09

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

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WAIPAHU TRANSIT CENTER STATION

# STRUCTURAL NORTH STATION ELEVATIONS

Contract No.: SV–240
CADD File: SC2–G15–ST014
Drawing No: ST014 Rev.
Scale: As Noted
Page No. 41 of 64

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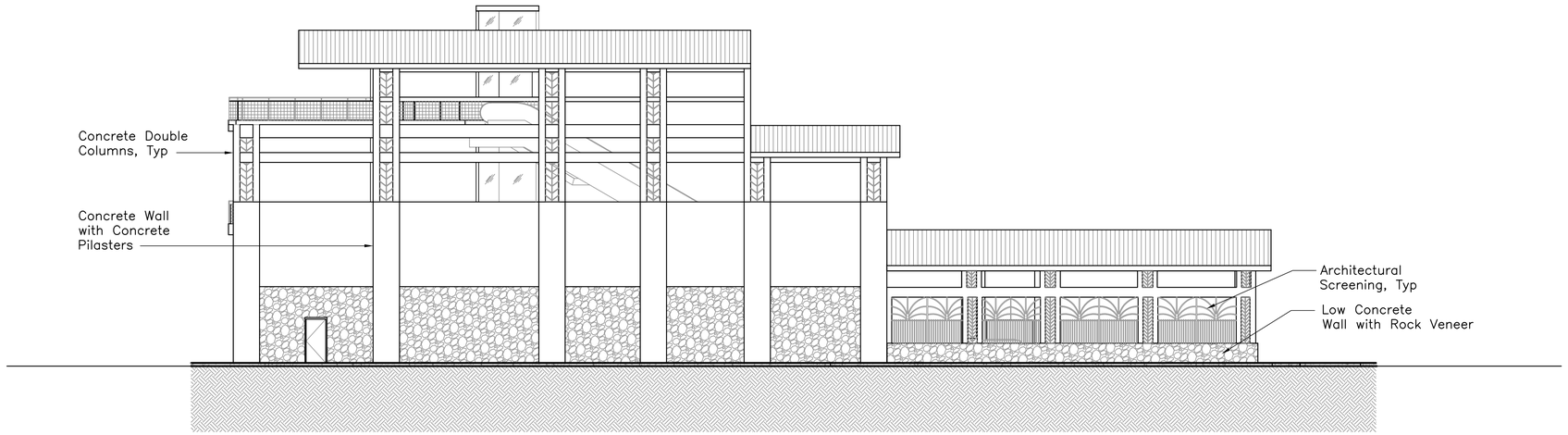
3/32"=1'-0"




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

## SOUTH STATION SOUTH ELEVATION

3/32"=1'-0"

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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Date: 09-18-09

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

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WAIPAHU TRANSIT CENTER STATION

# STRUCTURAL SOUTH STATION ELEVATIONS

Contract No.: SV-240
CADD File: SC2-G15-ST015
Drawing No: ST015 Rev.
Scale: As Noted
Page No. 42 of 64

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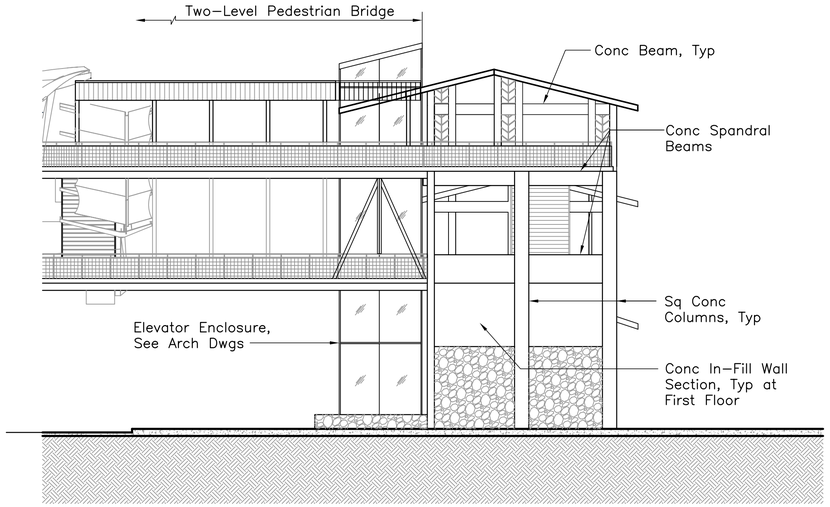
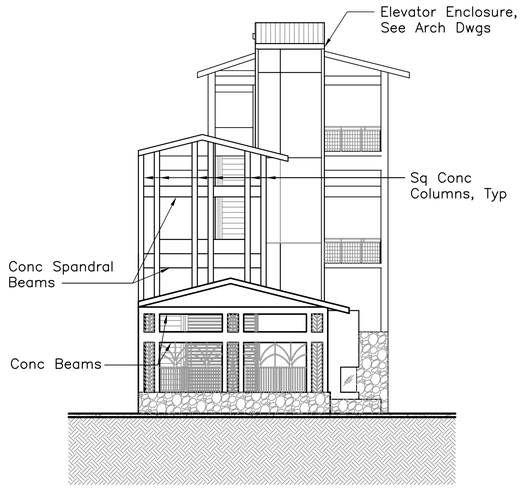



SOUTH STATION WEST ELEVATION
3/32"=1'–0"




NORTH STATION NORTH ELEVATION
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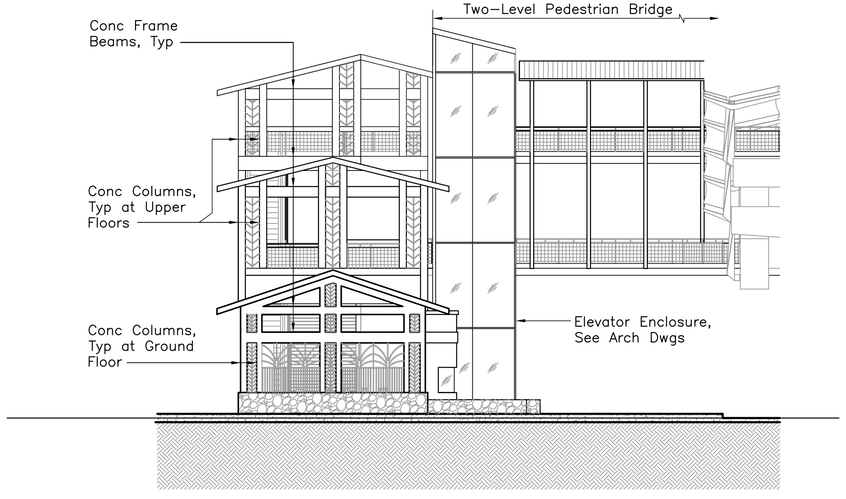
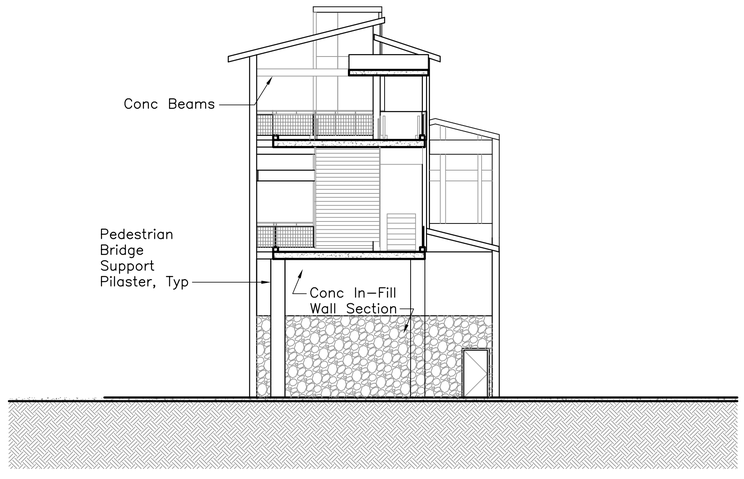



SOUTH STATION EAST ELEVATION
3/32"=1'–0"




NORTH STATION SOUTH ELEVATION
3/32"=1'–0"

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

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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WAIPAHU TRANSIT CENTER STATION

## STRUCTURAL STATION ELEVATIONS

Contract No.: SV–240
CADD File: SC2–G15–ST016
Drawing No: ST016
Rev.
Scale: As Noted
Page No. 43 of 64

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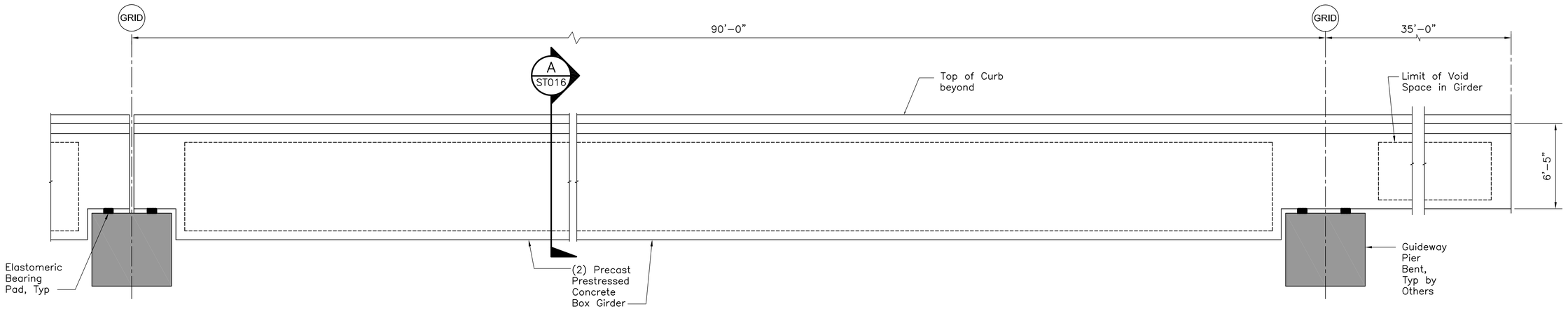
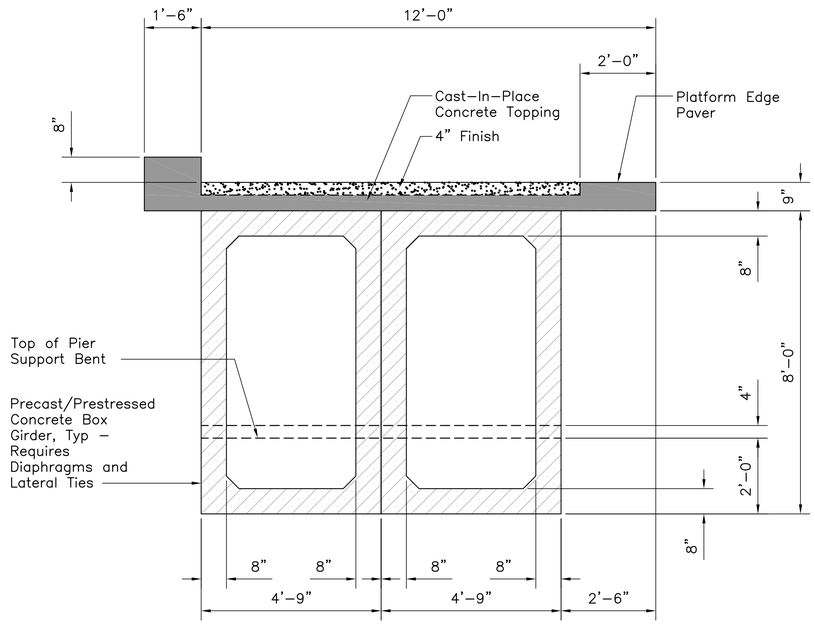



## PLATFORM GIRDER ELEVATION

1/4" = 1'–0"

1 ST017




## PRECAST DOUBLE–BOX GIRDER

1/2" = 1'–0"

A ST017

½" = 1'–0" (1' 0 2' 4')

¼" = 1'–0" (1' 0 2' 4' 8')

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

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Date: 09–18–09

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

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Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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

WAIPAHU TRANSIT CENTER STATION

PLATFORM PRECAST GIRDER

ELEVATION AND SECTION

Contract No.: SV–240
CADD File: SC2–G15–ST017
Drawing No.: ST017 Rev.
Scale: As Noted
Page No. 44 of 64

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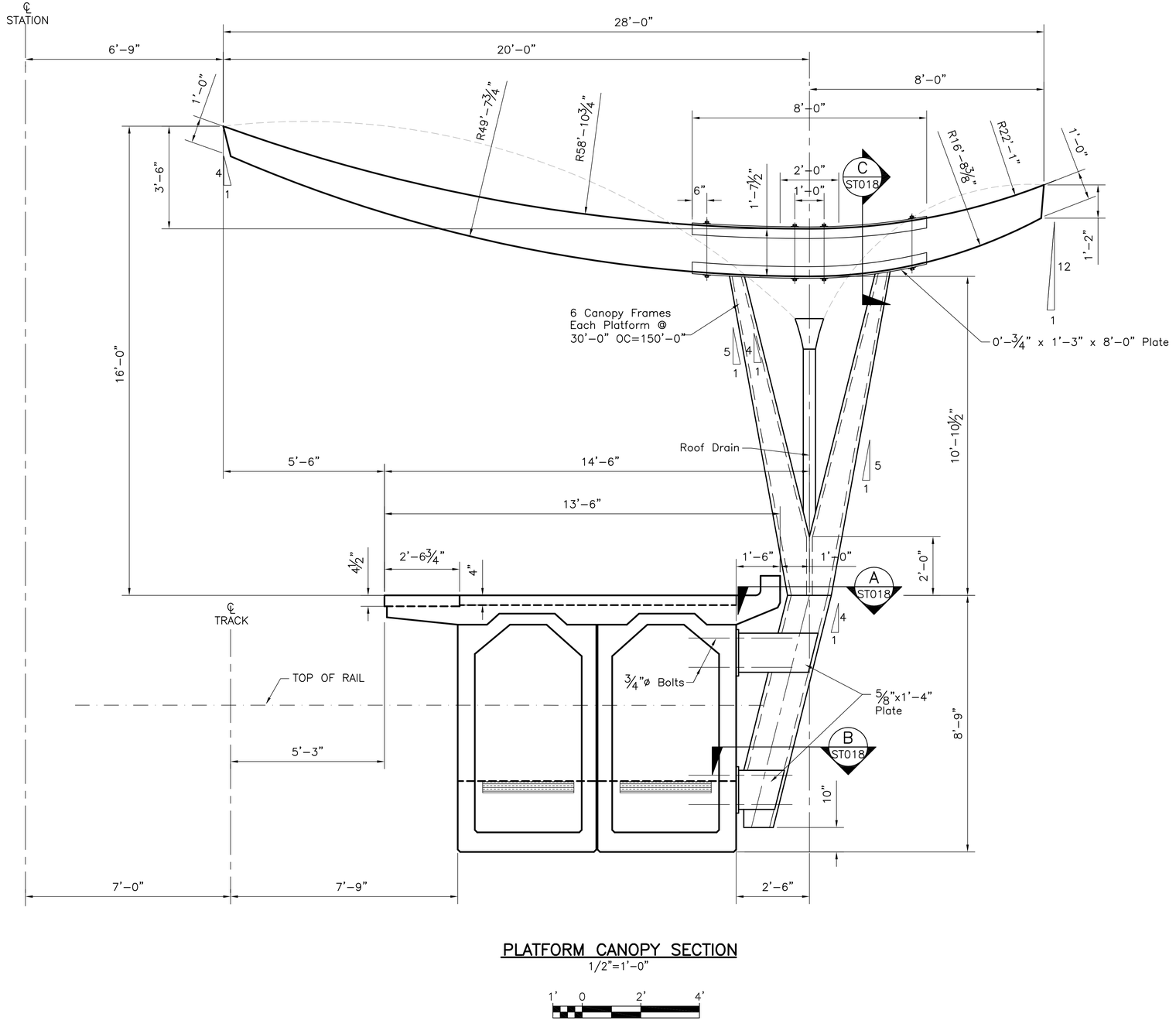
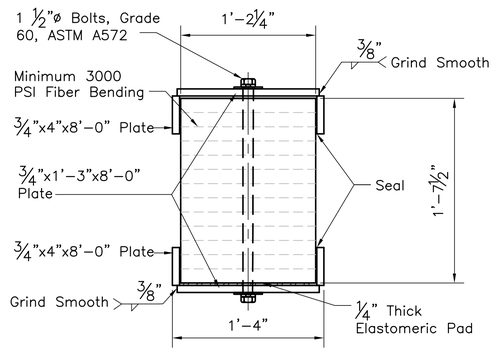



PLATFORM CANOPY SECTION

1/2"=1'–0"

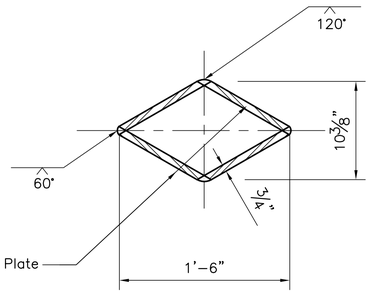
1' 0 2' 4'




SECTION C ST018

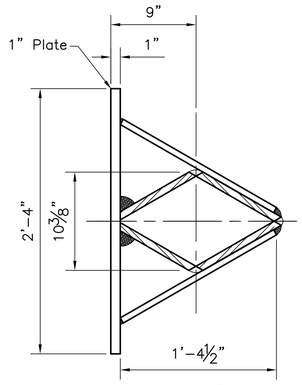
1 1/2"=1'–0"

DETAIL GLUELAM




SECTION A ST018

1 1/2"=1'–0"




SECTION B ST018

1 1/2"=1'–0"

STRUCTURAL TUBE

6" 0 6" 12" 18"

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

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Approved: E Sugiyama
Date: 09–18–09

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant: PB PARSONS BRINCKERHOFF

1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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

WAIPAHU TRANSIT CENTER STATION

# STRUCTURAL PLATFORM CANOPY

SECTION AND DETAILS

Contract No.: SV–240
CADD File: SC2–G15–ST018
Drawing No.: ST018 Rev.:
Scale: As Noted
Page No.: 45 of 64

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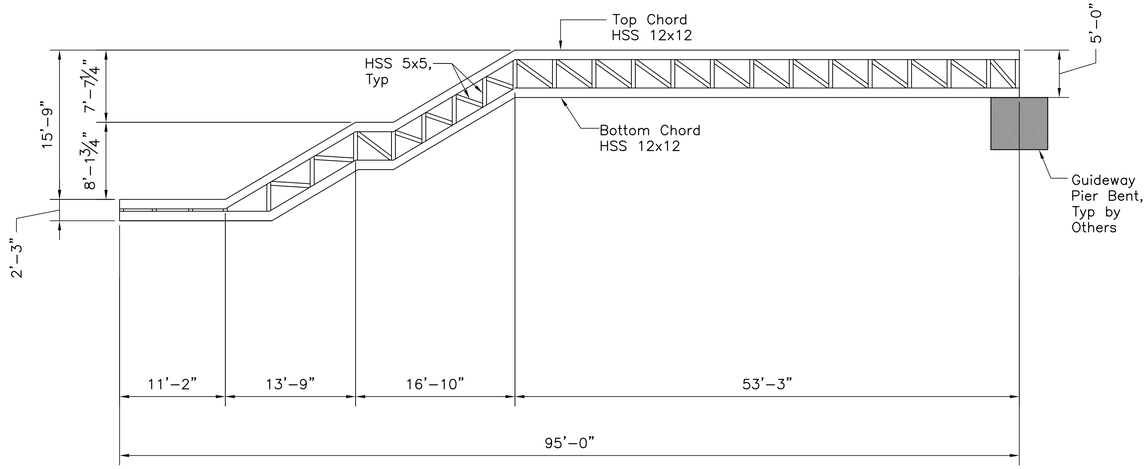


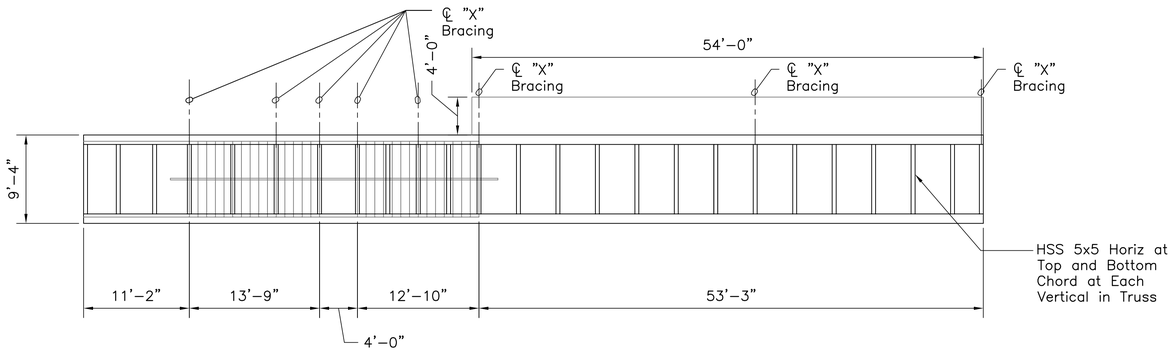


1' 0 2' 4' 8'

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

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Approved: E Sugiyama
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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

WAIPAHU TRANSIT CENTER STATION

## STATION STAIR TRUSSES ELEVATION AND PLAN

Contract No.: SV-240
CADD File: SC2-G15-ST019
Drawing No: ST019 Rev.
Scale: As Noted
Page No. 46 of 64

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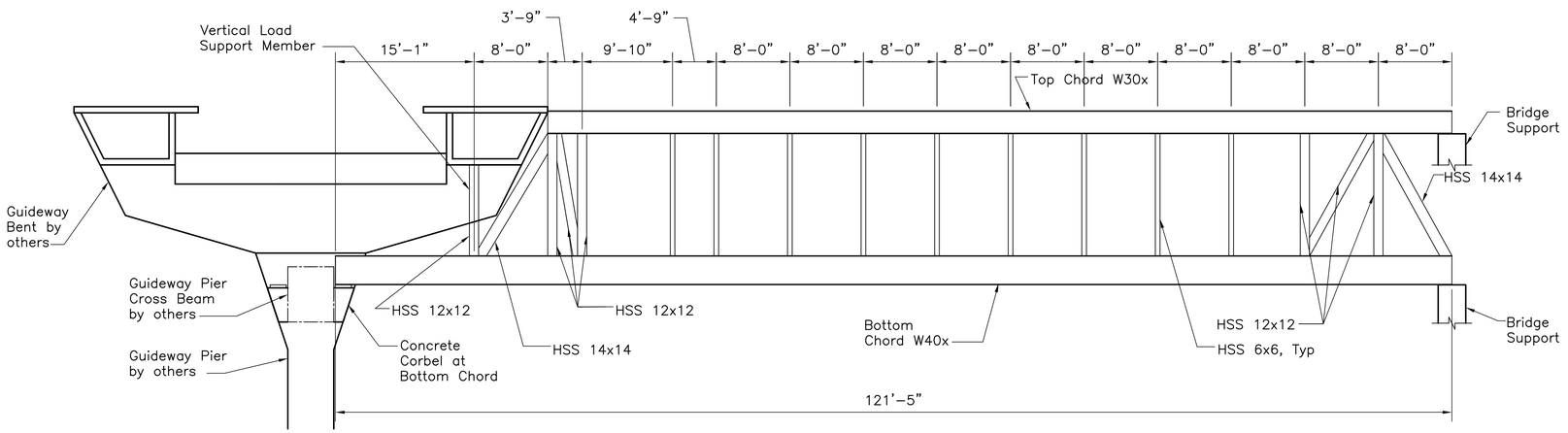
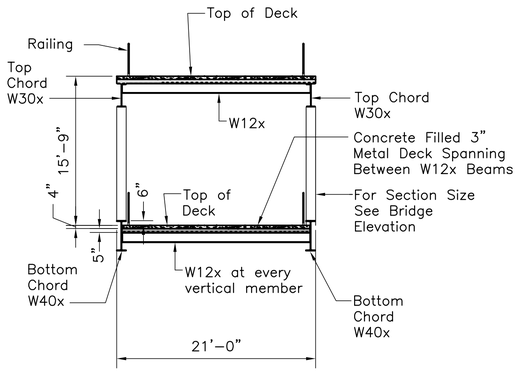
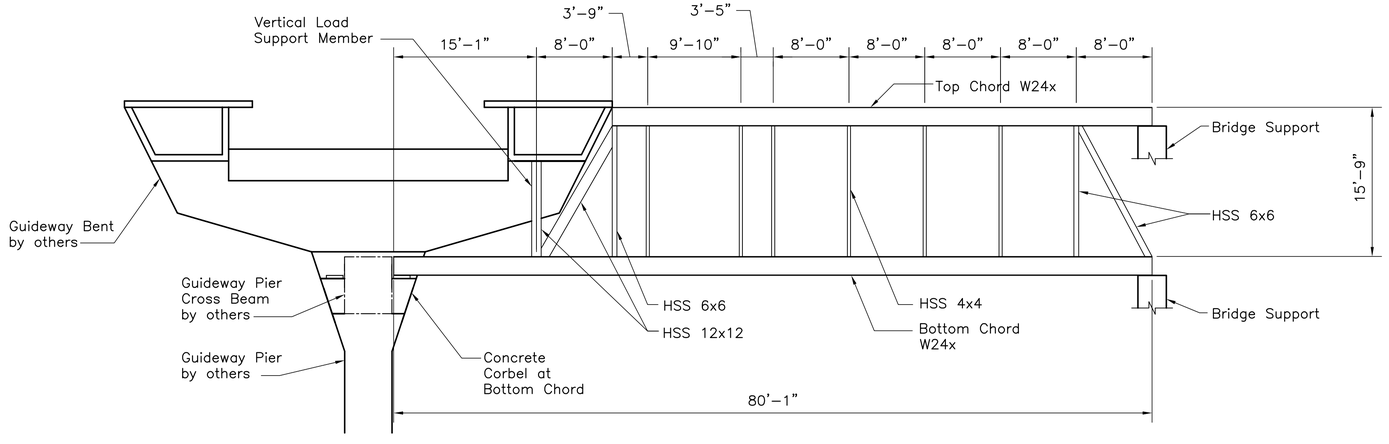


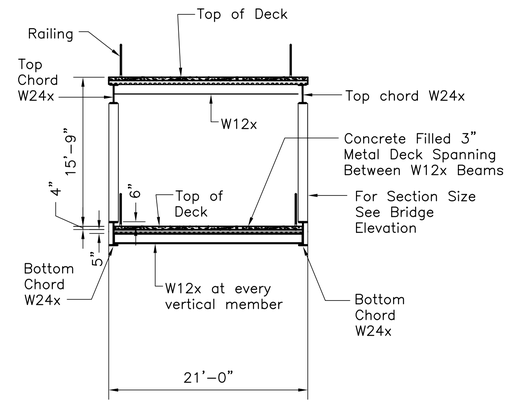

## NORTH PEDESTRIAN BRIDGE ELEVATION
1/8"=1'–0"




## NORTH PEDESTRIAN BRIDGE SECTION
1/8"=1'–0"




## SOUTH PEDESTRIAN BRIDGE ELEVATION
1/8"=1'–0"




## SOUTH PEDESTRIAN BRIDGE SECTION
1/8"=1'–0"

1' 0 2' 4' 8'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: J Fujita
Drawn: J Tamanaha
Checked: K Hayashida
Approved: E Sugiyama
Date: 09–18–09

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

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

Subconsultant: KAI HAWAII STRUCTURAL & FORENSIC ENGINEERS

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WAIPAHU TRANSIT CENTER STATION

# PEDESTRIAN BRIDGES ELEVATION AND SECTION

Contract No.: SV–240
CADD File: SC2–G15–ST020
Drawing No: ST020 Rev.
Scale: As Noted
Page No. 47 of 64

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## GENERAL ARCHITECTURAL NOTES

1. Station Designer to Coordinate limits of work and interface with the WEST OAHU / FARRINGTON Highway [WOFH] Guideway Design–Build Contractor.
2. Refer to APPENDIX "A": INFORMATIVE Drawings, for work included in the:
   - WEST OAHU / FARRINGTON Highway [WOFH] Guideway Design–Build Contract &
   - CORE SYSTEMS Design–Build–Operate–Maintenance Contract.
3. Refer to RTD Standard and Directive Architectural drawings for sizing, configuration and connections for all system wide components including: Escalators, Elevators, Fare Gates and TVM.
4. NOT IN CONTRACT Items (NIC) include: TVM, Fare gates, Escalators & Elevator Cars.
5. See RTD Directive drawings set for Canopy details and configuration.

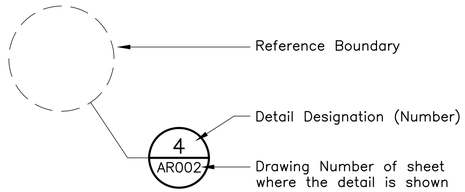
LEGEND:

- Proposed Conditions by West O'ahu /Farrington Highway (WOFH) Contractor
- Existing Conditions prior to work by the WOFH Contractor
- Work Performed under this contract

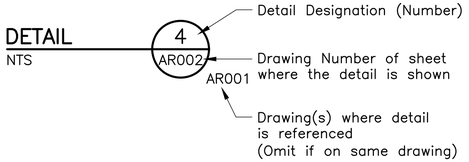
## ARCHITECTURAL SYMBOLS

NORTH ARROW
(Location – upper right corner of drawing)

DETAILS

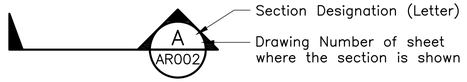



Reference Boundary
Detail Designation (Number)
Drawing Number of sheet where the detail is shown

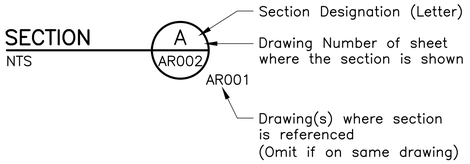



Detail Designation (Number)
Drawing Number of sheet where the detail is shown
Drawing(s) where detail is referenced (Omit if on same drawing)

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)

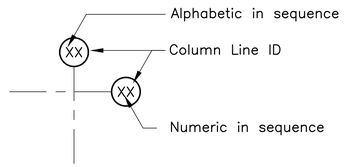
EXTERIOR ELEVATION(S)

Elevation Orientation
Drawing Number of sheet where the elevation is shown

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

XX — Door ID

EQUIPMENT IDENTIFIER

XX — Equipment ID

ROOM IDENTIFICATION

Closet — Room Name
XXXX — Room Number

WALL TYPE IDENTIFIER

XX — Wall Type ID

WINDOW IDENTIFIER

XX — Window Type ID

LOUVER IDENTIFIER

XX — Louver Type ID

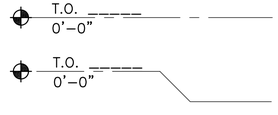
SLOPE IDENTIFIER

1 / 12 — Slope ID
Or
1:12 — 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 |
| # | Number |
| ø | Diameter |
| % | Percent |
| = | Equal to |
| > | Greater Than |
| < | Less Than |
| ≥ | Greater Than or Equal To |
| ≤ | Less Than or Equal To |

Station Equation

Elevation Point

SPECIAL TERMS

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

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Parmar
Drawn: E Birnhaum
Checked: T Man
Approved: K Parmar
Date: 9–18–09

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

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

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

WAIPAHU TRANSIT CENTER STATION

# GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 1 OF 3

Contract No.: SV–240
CADD File: SC2–H01–AG001
Drawing No.: AG001 Rev.
Scale: N/A
Page No. 48 of 64

PATH: R:\Honolulu_Transit_Corridor\Dwgs\Shts\Waipahu_Station\SC2–H01–AG001.dwg Plot Date: Sep 17, 2009 – 8:40am (Layout1)

# ARCHITECTURAL ABBREVIATIONS

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

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

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

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

| | |
|---|---|
| N | North |
| N/A | Not Applicable |
| NB | Northbound |
| NE | Northeast |
| NIC | Not in Contract |
| No. (Nos.) | Number (Numbers) |
| Nom | Nominal |
| NR | Non–rated |
| NS | Near Side |
| NTS | Not to Scale |
| NW | Northwest |
| | |
| OA | Overall |
| Obs | Obscure |
| OC | On Center |
| OCS | Overhead Contact System |
| OD | Outside Diameter |
| OF | Outside Face |
| OH | Overhead |
| Op | Opaque |
| Opng | Opening |
| Opp | Opposite |
| OSA | Outside Supply Air |
| oz | Ounce |
| O to O | Out to Out |
| | |
| PNL | Panel |
| PA | Public Address, Police Alarm |
| Par | Parallel |
| Part | Partial |
| PB | Pullbox |
| PBX | Private Branch Exchange |
| PC | Precast Concrete |
| Ped | Pedestrian, Pedestal |
| Perf | Perforated |
| Perm | Permanent |
| PG | Profile Grade |
| Pg | Page |
| PGL | Profile Grade Line |
| Ph | Phase |
| PL | Property Line |
| Pl | Plate |
| Plas | Plaster |
| Platf | Platform |
| P Lam | Plastic Laminate |
| PLD | Plastic Duct |
| PLT | Plastic Tile |
| Plum | Plumbing |
| Plywd | Plywood |
| Pol | Police |
| Pr | Pair |
| Proj | Project, Projection |
| Prop | Property |
| PS | Point of Switch |
| PSF | Pounds Per Square Feet |
| PSI | Pounds Per Square Inch |
| Pt(s) | Point(s) |
| PTD/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: K Parmar
Drawn: E Birnbaum
Checked: T Man
Approved: K Parmar
Date: 09–018–09

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, Hawaii 96813

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WAIPAHU TRANSIT CENTER STATION

GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 2 OF 3

Contract No.: SV–240
CADD File: SC2–H01–AG002
Drawing No: AG002 Rev.
Scale: N/A
Page No. 49 of 64

PATH: P:\Honolulu_Transit_Corridor\Dwgs\Shte\Waipahu_Station\SC2-H01-AG002.dwg Plot Date: Sep 10, 2009 – 9:38am (D0-H01-AG002)

# ARCHITECTURAL ABBREVIATIONS (CONTINUED)

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

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Parmar
Drawn: E Birnbaum
Checked: T Man
Approved: K Parmar
Date: 9–18–09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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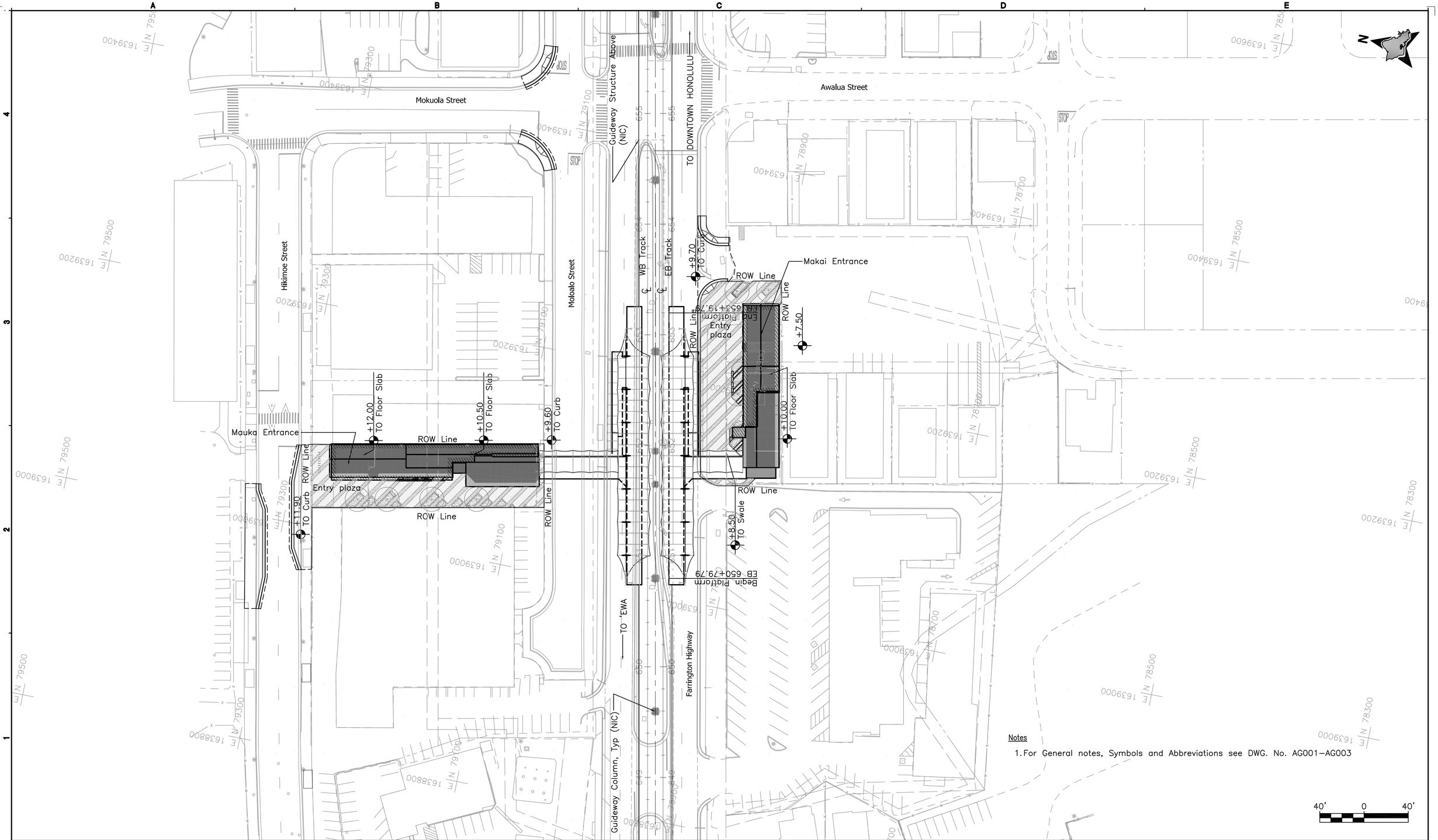
WAIPAHU TRANSIT CENTER STATION

GENERAL ARCHITECTURAL NOTES, SYMBOLS, AND ABBREVIATIONS

SHEET 3 OF 3

Contract No.: SV–240
CADD File: SC2–H01–AG003
Drawing No: AG003 Rev.
Scale: N/A
Page No. 50 of 64

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2–H01–AG003.dwg Plot Date: Sep 10, 2009 – 9:37am (DD–H01–AG003)




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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| | |
|---|---|
| Designed: | B Yoshitake |
| Drawn: | M Arakaki |
| Checked: | T Man |
| Approved: | K Parmar |
| Date: | 09–18–09 |

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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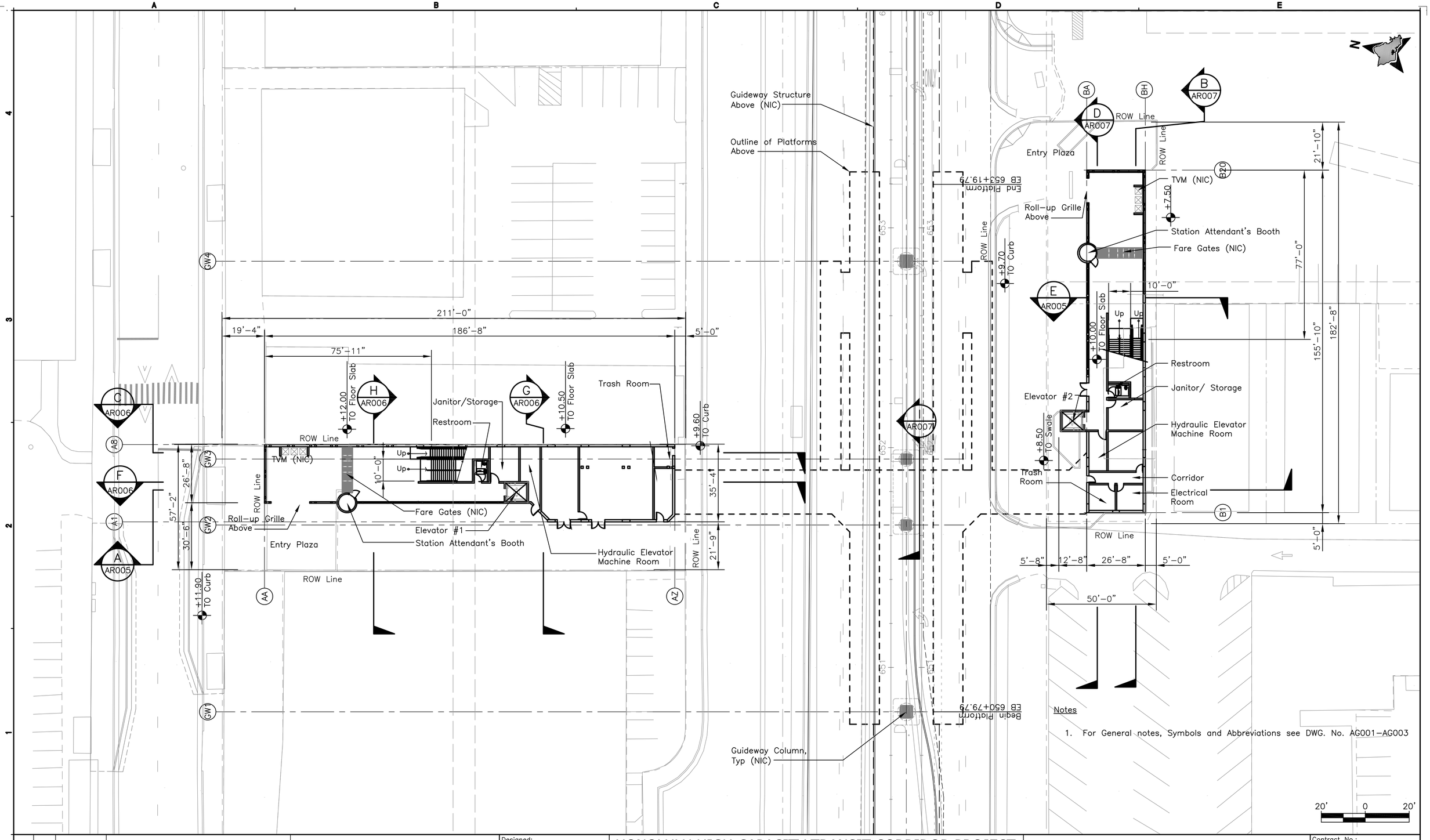
## WAIPAHU TRANSIT CENTER STATION

## ARCHITECTURAL SITE PLAN

| | |
|---|---|
| Contract No.: | SV–240 |
| CADD File: | SC2–H02–AR001 |
| Drawing No: | AR001 |
| Rev. | |
| Scale: | 1"=40' |
| Page No. | 51 of 64 |

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2–H02–AR001.dwg Plot Date: Sep 17, 2009 – 8:49am (Layout1)




Notes

1. For General notes, Symbols and Abbreviations see DWG. No. AG001–AG003

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

| | |
|---|---|
| Designed: | B Yoshitake |
| Drawn: | M Arakaki |
| Checked: | T Man |
| Approved: | K Parmar |
| Date: | 09–18–09 |

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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## WAIPAHU TRANSIT CENTER STATION

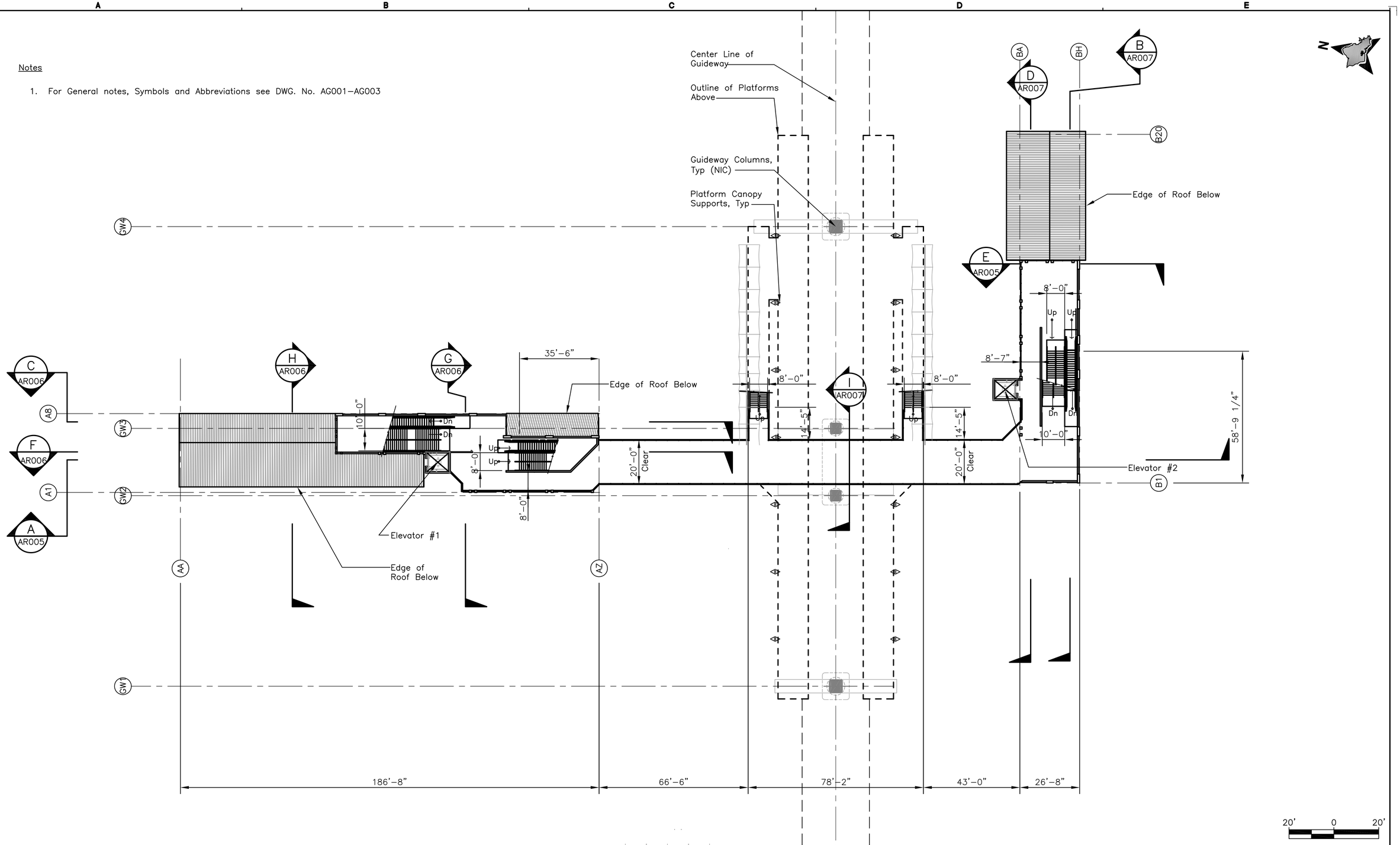
## GROUND LEVEL FLOOR PLAN

| | |
|---|---|
| Contract No.: | SV–240 |
| CADD File: | SC2–H03–AR002 |
| Drawing No: | AR002 |
| Rev. | |
| Scale: | 1"=20' |
| Page No. | 52 of 64 |

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2–H03–AR002.dwg Plot Date: Sep 17, 2009 – 9:12am (Layout1)

Notes

1. For General notes, Symbols and Abbreviations see DWG. No. AG001–AG003




**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09–18–09

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

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

Subconsultant: NEXT DESIGN
1132 Bishop Street, Suite 145
Honolulu, Hawaii 96813

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

WAIPAHU TRANSIT CENTER STATION

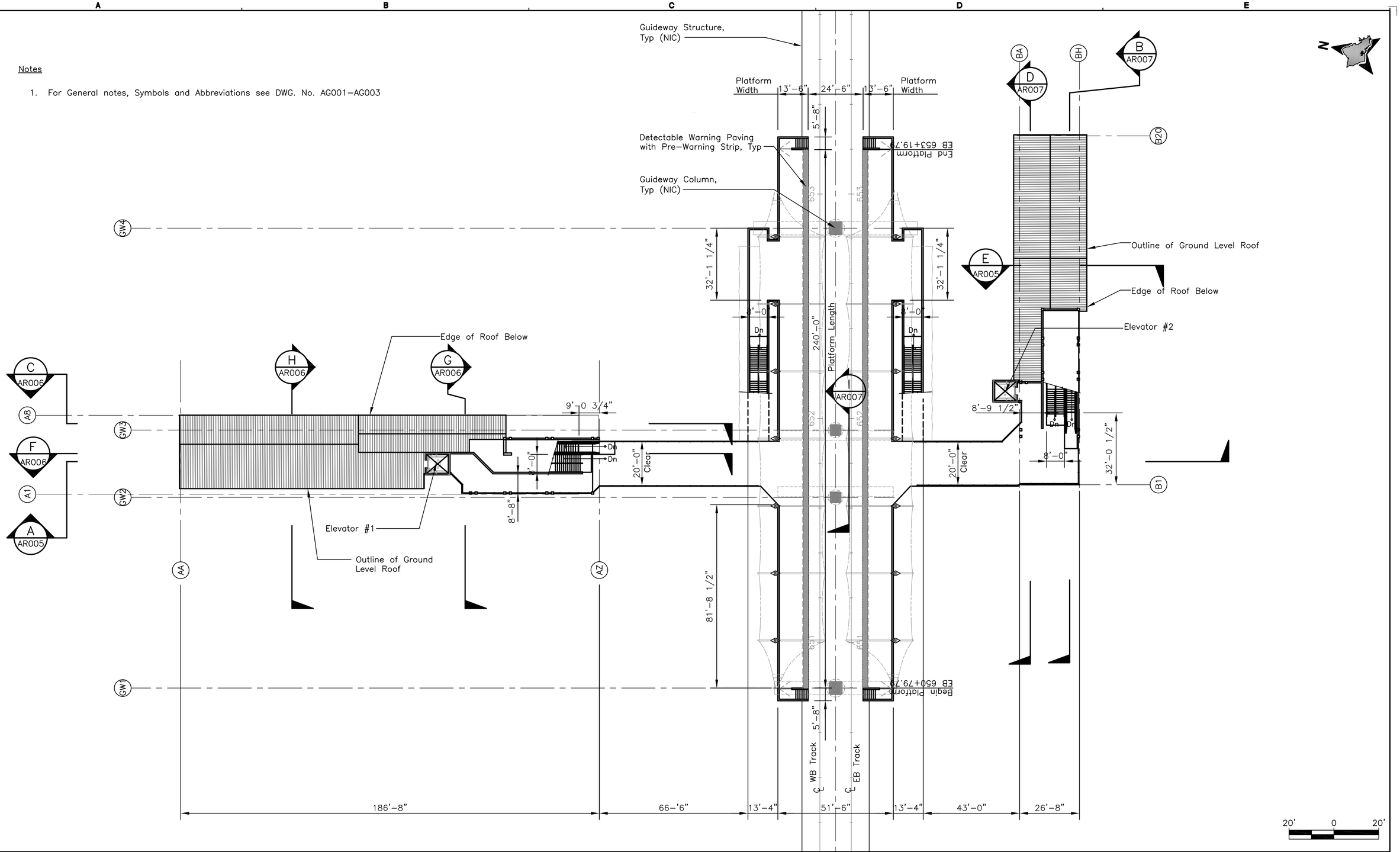
# CONCOURSE LEVEL FLOOR PLAN

Contract No.: SV–240
CADD File: SC2–H03–AR003
Drawing No: AR003 Rev.
Scale: 1"=20'
Page No. 53 of 64

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2–H03–AR003.dwg Plot Date: Sep 17, 2009 – 9:28am (Layout1)

Notes

1. For General notes, Symbols and Abbreviations see DWG. No. AG001–AG003




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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09–18–09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Honolulu, Hawaii 96813

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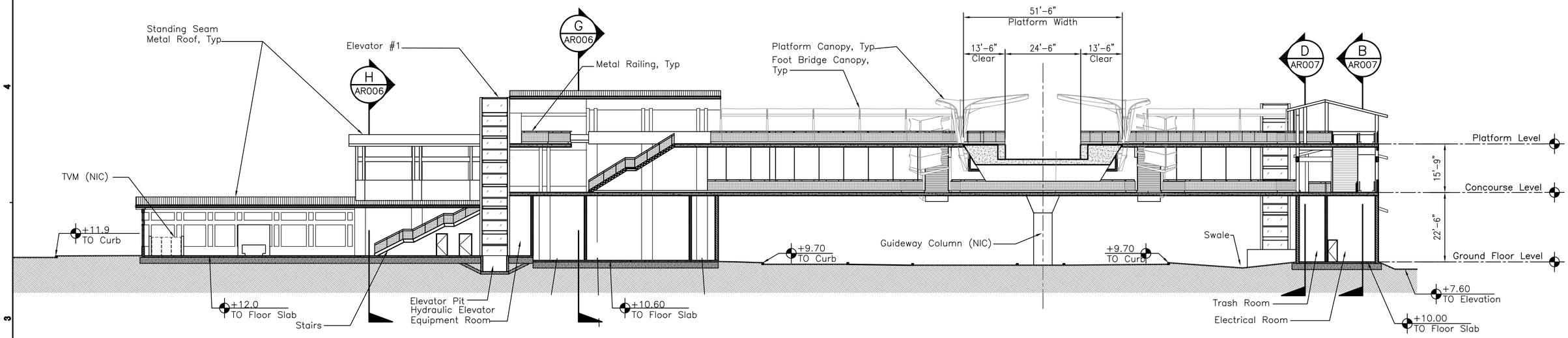
WAIPAHU TRANSIT CENTER STATION

# PLATFORM LEVEL FLOOR PLAN

Contract No.: SV–240
CADD File: SC2–H03–AR004
Drawing No: AR004 Rev.
Scale: 1"=20'
Page No. 54 of 64

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2–H03–AR004.dwg Plot Date: Sep 17, 2009 – 9:40am (Layout1)




SECTION A / AR005
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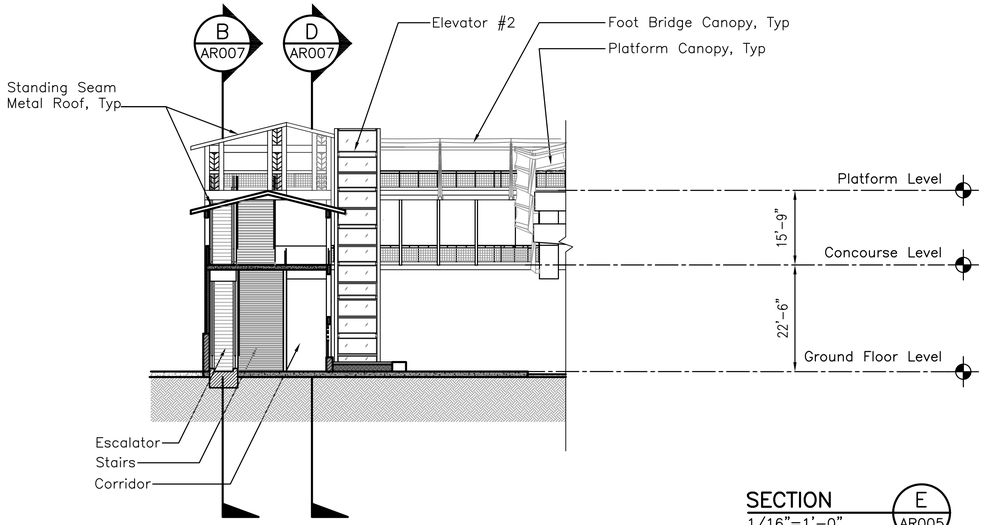


SECTION E / AR005
1/16"=1'-0"

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

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09-18-09

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

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1132 Bishop Street, Suite 145
Honolulu, Hawaii 96813

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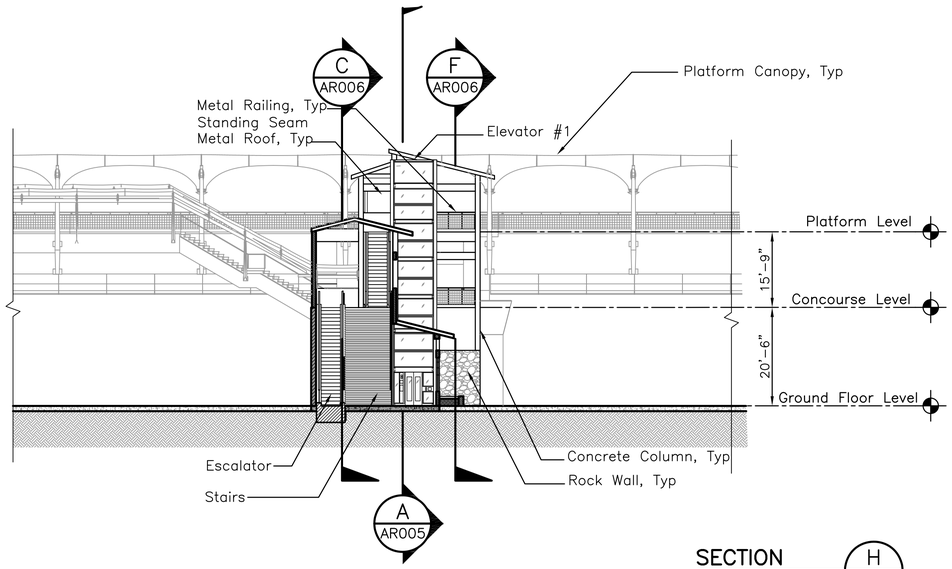
WAIPAHU TRANSIT CENTER STATION

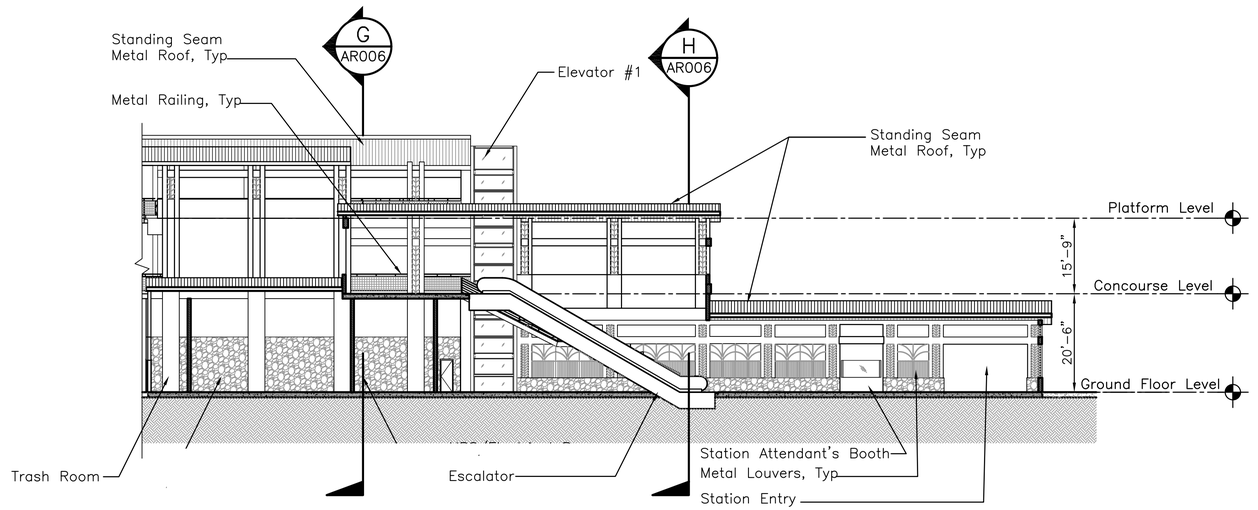
LONGITUDINAL SECTIONS

Contract No.: SV-240
CADD File: SC2-H05-AR005
Drawing No: AR005 Rev.
Scale: 1/16"=1'-0"
Page No. 55 of 64

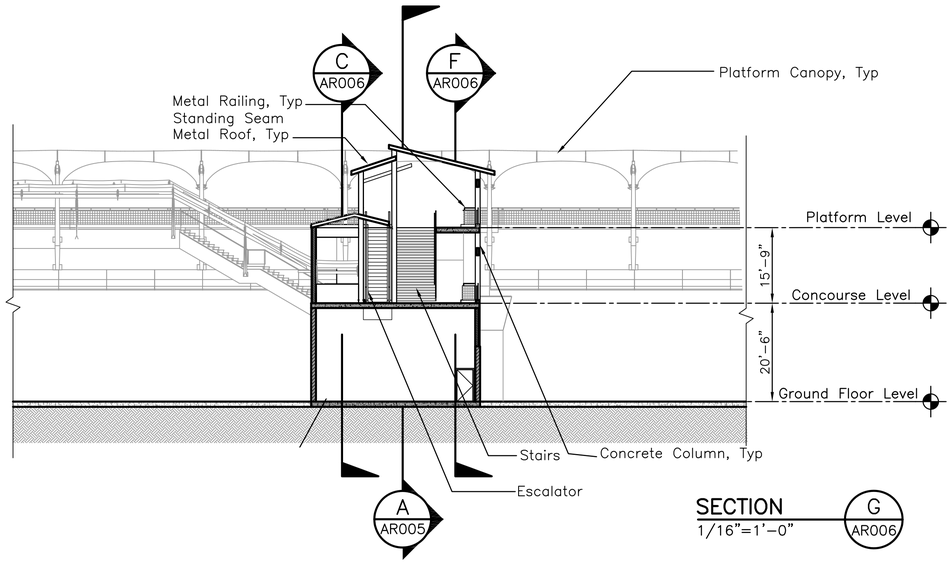
PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2-H05-AR005.dwg Plot Date: Sep 12, 2009 - 8:39pm (NORTH AND EAST EXT ELEV)



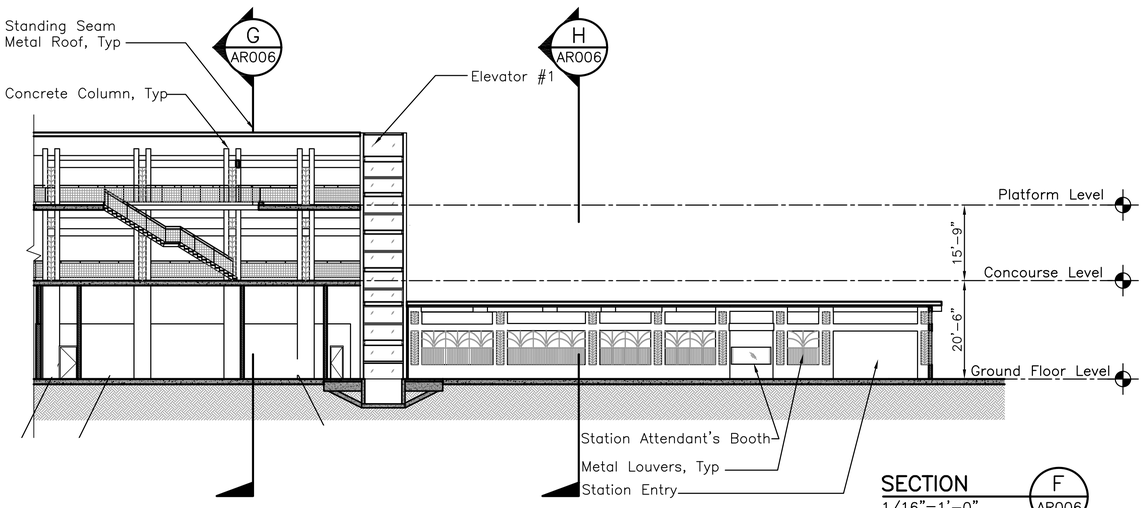

SECTION H AR006
1/16"=1'-0"




SECTION C AR006
1/16"=1'-0"




SECTION G AR006
1/16"=1'-0"




SECTION F AR006
1/16"=1'-0"

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

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

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant: NEXT DESIGN
1132 Bishop Street, Suite 145
Honolulu, Hawaii 96813


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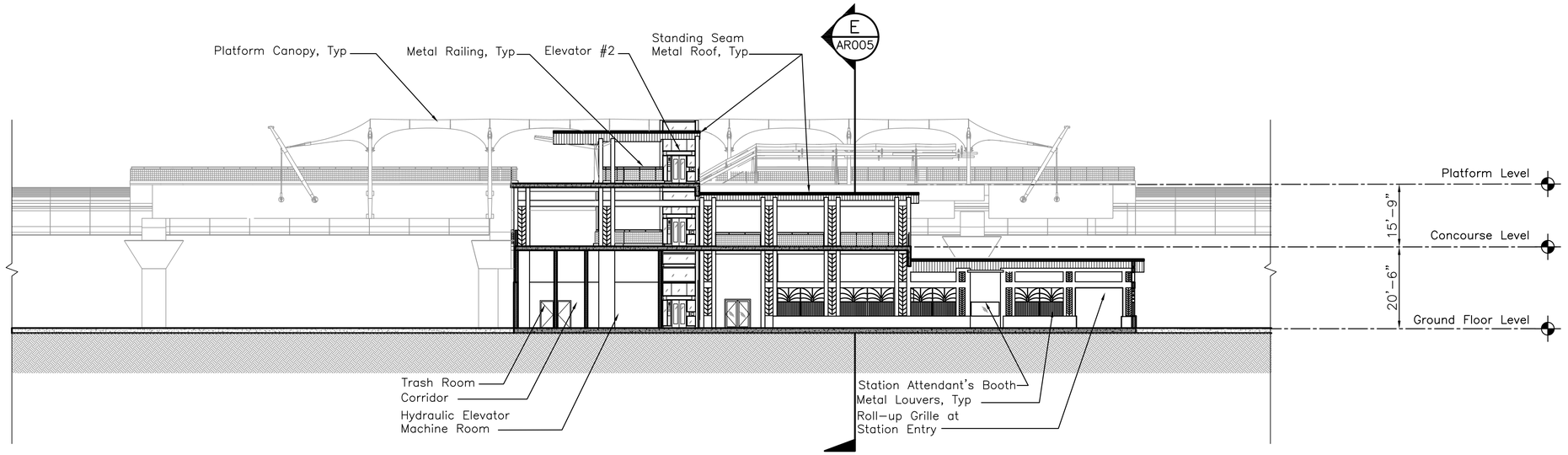
## WAIPAHU TRANSIT CENTER STATION

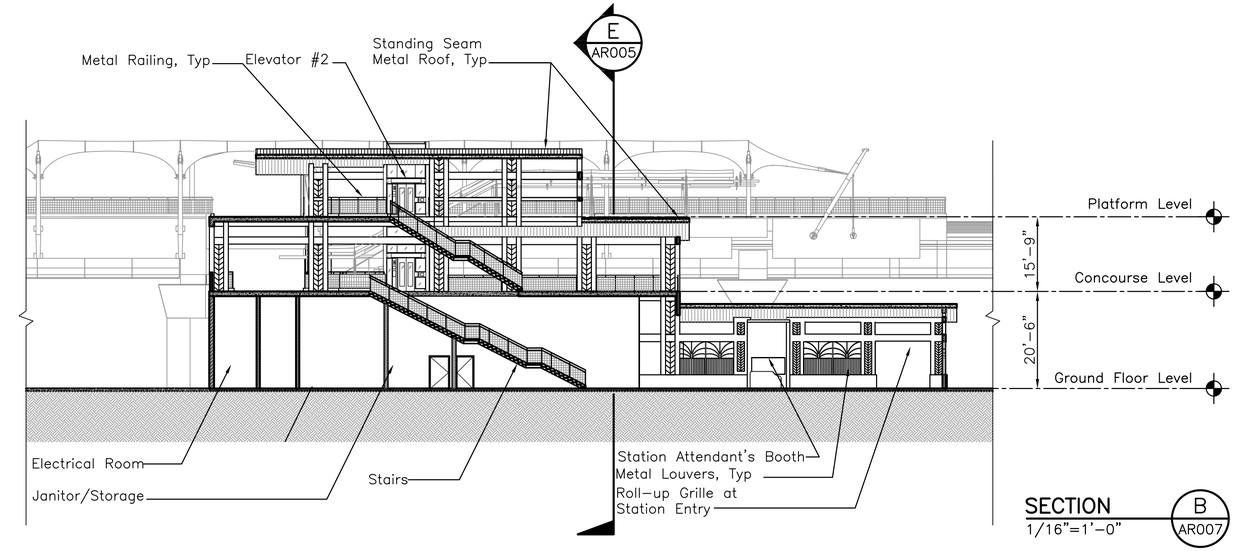
## CROSS SECTIONS

SHEET 1 OF 2

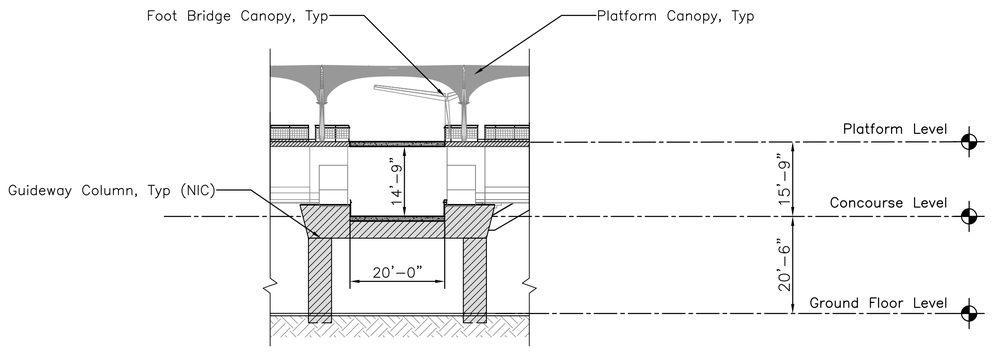
Contract No.: SV-240
CADD File: SC2-H05-AR006
Drawing No: AR006 Rev.
Scale: 1/16"=1'-0"
Page No. 56 of 64




SECTION D AR007
1/16"=1'-0"




SECTION B AR007
1/16"=1'-0"




SECTION I AR007
1/16"=1'-0"

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

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Honolulu, Hawaii 96813

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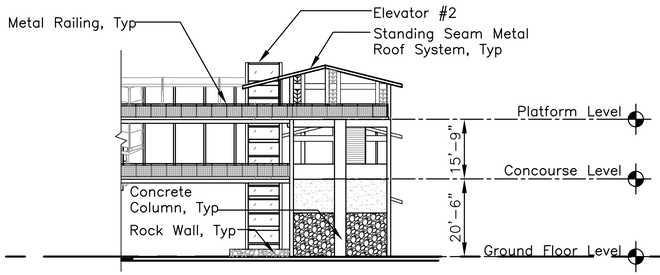
WAIPAHU TRANSIT CENTER STATION

## CROSS SECTIONS

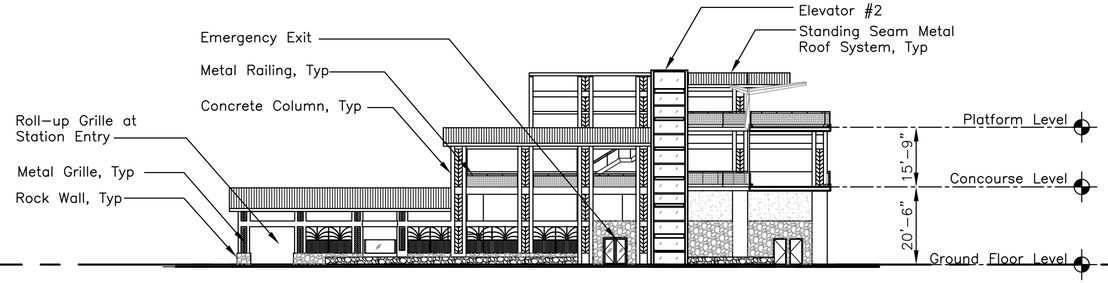
SHEET 2 OF 2

Contract No.: SV-240
CADD File: SC2-H05-AR007
Drawing No: AR007 Rev.
Scale: 1/16"=1'-0"
Page No. 57 of 64

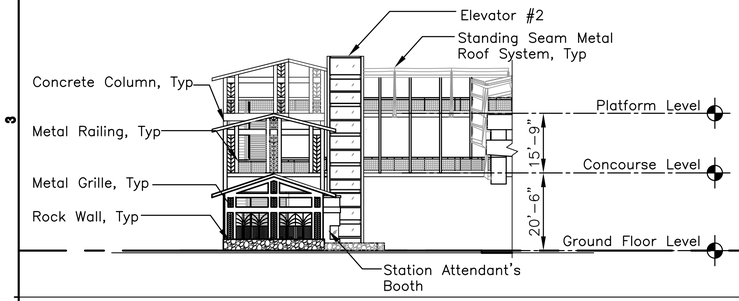
PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2-H05-AR007.dwg Plot Date: Sep 12, 2009 - 9:22pm (NORTH AND EAST EXT ELEV)



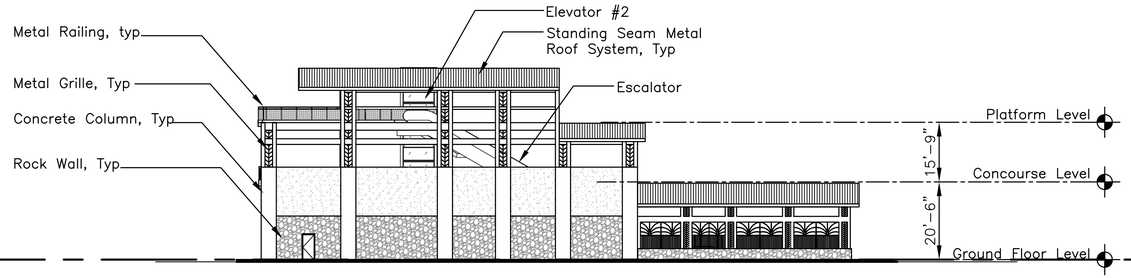

MAKAI ENTRANCE
WEST ELEV (A)
1"=20' AR008



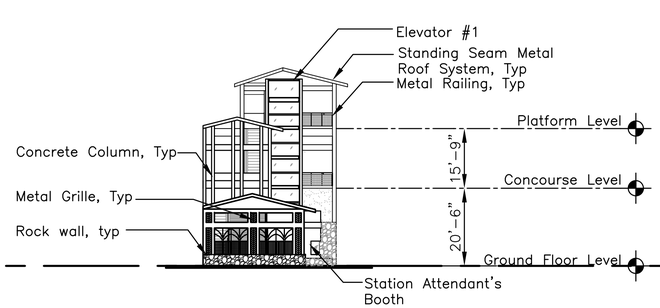

MAKAI ENTRANCE
NORTH ELEV (B)
1"=20' AR008



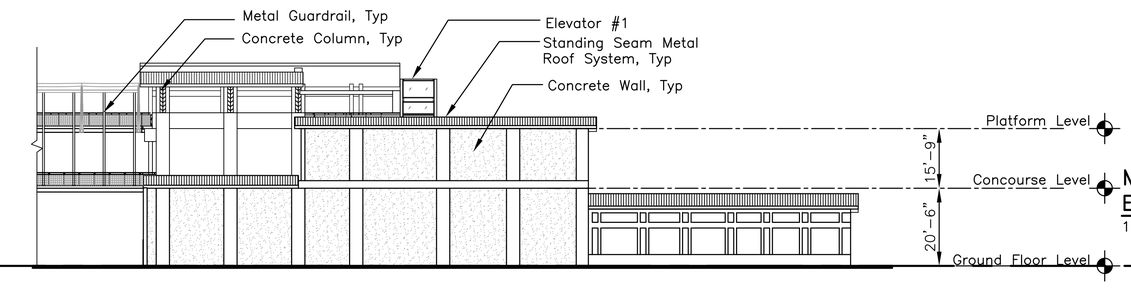

MAKAI ENTRANCE
EAST ELEV (C)
1"=20' AR008



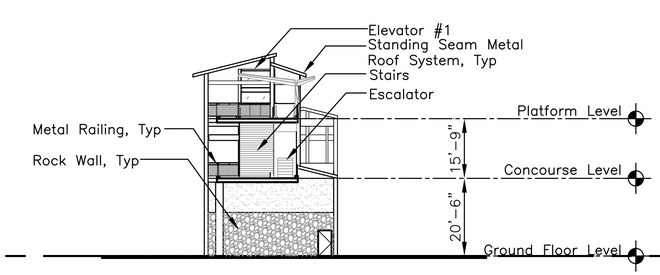

MAKAI ENTRANCE
SOUTH ELEV (D)
1"=20' AR008



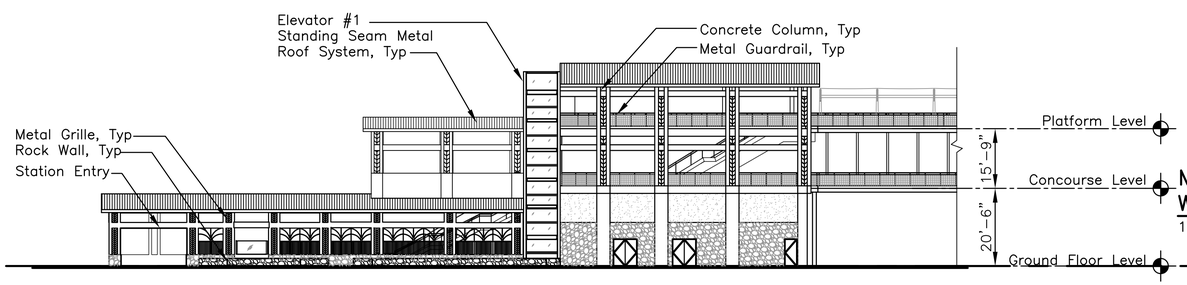

MAUKA ENTRANCE
NORTH ELEV (E)
1"=20' AR008




MAUKA ENTRANCE
EAST ELEV (F)
1"=20' AR008




MAUKA ENTRANCE
SOUTH ELEV (G)
1"=20' AR008




MAUKA ENTRANCE
WEST ELEV (H)
1"=20' AR008

20' 0 20'

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Yoshitake
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant: NEXT DESIGN
1132 Bishop Street, Suite 145
Honolulu, Hawaii 96813

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WAIPAHU TRANSIT CENTER STATION

ELEVATIONS

Contract No.: SV-240
CADD File: SC2-H06-AR008
Drawing No: AR008 Rev.
Scale: 1" = 20'
Page No. 58 of 64

PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2-H06-AR008.dwg Plot Date: Sep 14, 2009 - 11:46am (NORTH AND EAST EXT ELEV)

MAKAI ENTRANCE
AERIAL VIEW (D)
NTS AR009

MAUKA ENTRANCE
PLAZA VIEW (A)
NTS AR009

MAKAI ENTRANCE
PLAZA VIEW (C)
NTS AR009

MAKAI ENTRANCE
AERIAL VIEW (B)
NTS AR009

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: K Parmar
Drawn: M Arakaki
Checked: T Man
Approved: K Parmar
Date: 09-18-09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant: NEXT DESIGN
1132 Bishop Street, Suite 145
Honolulu, Hawaii 96813


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WAIPAHU TRANSIT CENTER STATION

## 3D VIEWS

Contract No.: SV-240
CADD File: SC2-H07-AR009
Drawing No: AR009 Rev.
Scale: NTS
Page No. 59 of 64

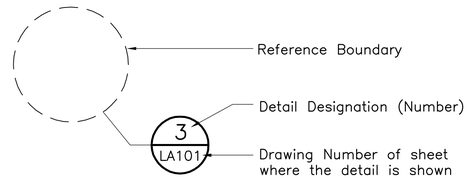
PATH: P:\Honolulu Transit Corridor\Dwgs\Shts\Waipahu Station\SC2-H07-AR009.dwg Plot Date: Sep 14, 2009 - 11:48am (Layout1)

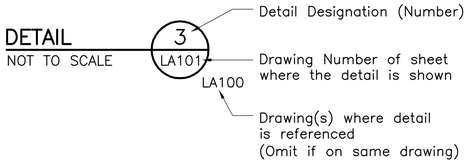
# GENERAL NOTES

1. "EB Track" denotes the centerline of the Eastbound Track. "WB Track" denotes the centerline of the Westbound Track.
2. Origin of Coordinates: Hawaii State Plane Coordinate Grid System, Zone III with the North American Datum of 83 High Accuracy Reference Network (NAD83 HARN).
3. The proposed WB Track alignment stationing equals to the proposed EB Track alignment stationing in all parallel tangent sections. Station equations are given at the endpoint of each westbound curve.
4. Underground facilities, poles, structures, and utilities have been plotted from available surveys and records. Their locations must be considered approximate only. There may be others, the existence of which is at present unknown. Verification of all the locations, shown or not shown, will be the responsibility of the contractor.
5. The existing conditions shown hereon are based on LiDAR data collected in September and October of 2007, supplemental ground surveys were performed between September of 2007 and December of 2008, and record information from various design projects either constructed, under construction, or proposed. The selected design–build contractor 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.
7. All remaining trees within project limits are to remain and be protected unless otherwise noted.
8. All utilities servicing existing facilities shall remain in service at all times. Exercise caution during tree root removal. Notify owner's representative immediately if service is interrupted and pay for repair at no cost to owner.
9. All existing utilities, site furnishings, paving, landscape and other elements to remain shall be protected from any damage unless otherwise noted.
10. Contractor shall notify all necessary utility companies 48 hours minimum prior to digging for verification of all underground utilities, and other obstructions and coordinate with owner's representative prior to initiating operations.
11. Landscape contractor shall coordinate all work with related contractors and with the general construction of the project in order not to impede the progress of the work of others or the contractor's own work.
12. Landscape contractor shall field adjust locations of plant material as necessary to avoid damage to existing underground utilities and/or existing above ground elements. All changes required shall be completed at the contractor's expense and shall be coordinated with the owner's representative and the landscape architect.
13. The contractor shall perform its own quantity estimates for the purposes of bidding and construction. The contractor shall provide plants and other materials in the quantities necessary to complete the installation as shown on the drawings.
14. Stake tree and palm locations and obtain approval of the landscape architect prior to planting trees and palms.

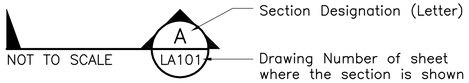
# SYMBOLS

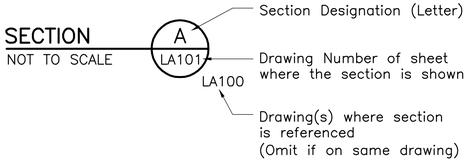
## DETAILS




## SECTIONS




## SPECIAL TERMS

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

## GENERAL SYMBOLS

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

## LANDSCAPE SYMBOLS

Existing Palm

Existing Tree

Existing Vegetation

Medium Tree

| | |
|---|---|
| Rainbow Shower | Cassia javanica x C. fistula |
| Kou | Cordia subcordata |

Palm

| | |
|---|---|
| Manila | Veitchia merrillii |
| Loulu | Pritchardia spp. |

Groundcover

| | |
|---|---|
| Lantana | Lantana montevidensis 'New Gold' |
| Ilima Papa | Sida fallax |
| Lauae Fern | Phymatosorus scolopendria |
| Pohinahina | Vitex rotundifolia |

# ABBREVIATIONS

| | |
|---|---|
| ℄ | Baseline |
| BWS | Board of Water Supply |
| ℄ | Centerline |
| Conc | Concrete |
| Cont | Container |
| Dia | Diameter |
| Dwg | Drawing |
| EB | Eastbound |
| FS | Field specimen |
| Gal | Gallon |
| GB# | Gap Breaker |
| HDPE | High density polyethylene |
| Max | Maximum |
| Min | Minimum |
| MH | Manhole |
| N/A | Not Applicable |
| NB | Northbound |
| NIC | Not in Contract |
| N.I.C. | Not in Contract |
| NTS | Not to scale |
| OC | On Center |
| ROW | Right of Way |
| RPBP | Reduce Pressure Backflow Preventer |
| SB | Southbound |
| SR | State Route |
| Typ | Typical |
| Typ Sym | Typical Symbol |
| WB | Westbound |
| WM | Water meter |

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Tanimura
Drawn: L Keliiaa
Checked: D Easterday
Approved: A Kutsunai
Date: 09–18–09

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

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

Subconsultant: BELT COLLINS
PLANNING • CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL CONSULTING
Belt Collins Hawaii Ltd.
2153 North King Street, Suite 200
Honolulu, Hawaii 96819
T: 808.521.5361 • F: 808.538.7819
www.beltcollins.com

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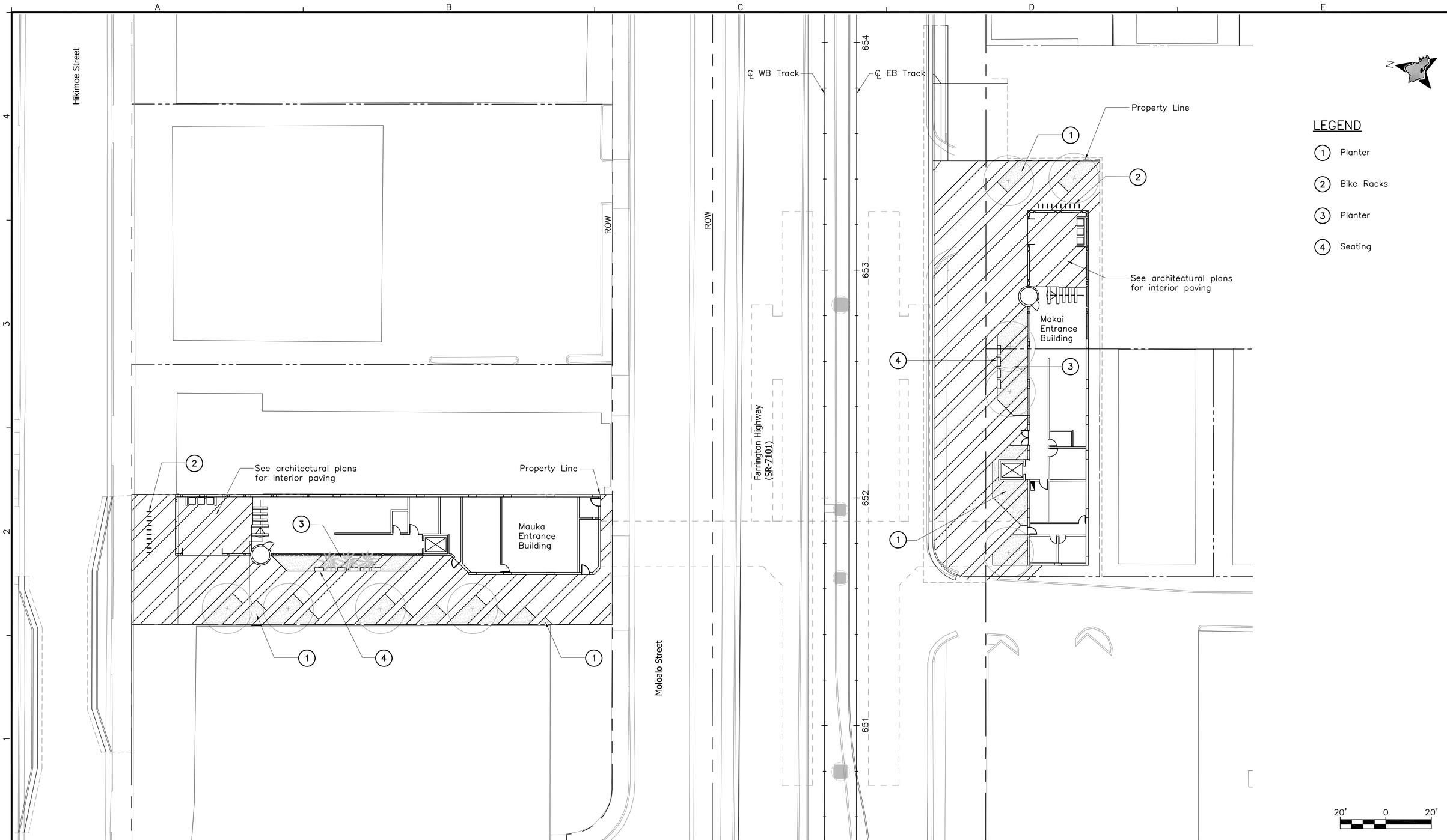
WAIPAHU TRANSIT CENTER STATION

GENERAL LANDSCAPE NOTES, SYMBOLS, AND ABBREVIATIONS

Contract No.: SV–240
CADD File: SC2–J01–LG001
Drawing No: LG001 Rev.
Scale: NONE
Page No. 60 of 64




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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Tanimura
Drawn: L Keliiaa
Checked: D Easterday
Approved: A Kutsunai
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

Prime Consultant:
PB 100 YEARS PARSONS BRINCKERHOFF
1003 Bishop Street, Suite 2250 – Honolulu, HI 96813

Subconsultant:
BELT COLLINS
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LANDSCAPE ARCHITECTURE
ENVIRONMENTAL CONSULTING
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Honolulu, Hawaii 96819
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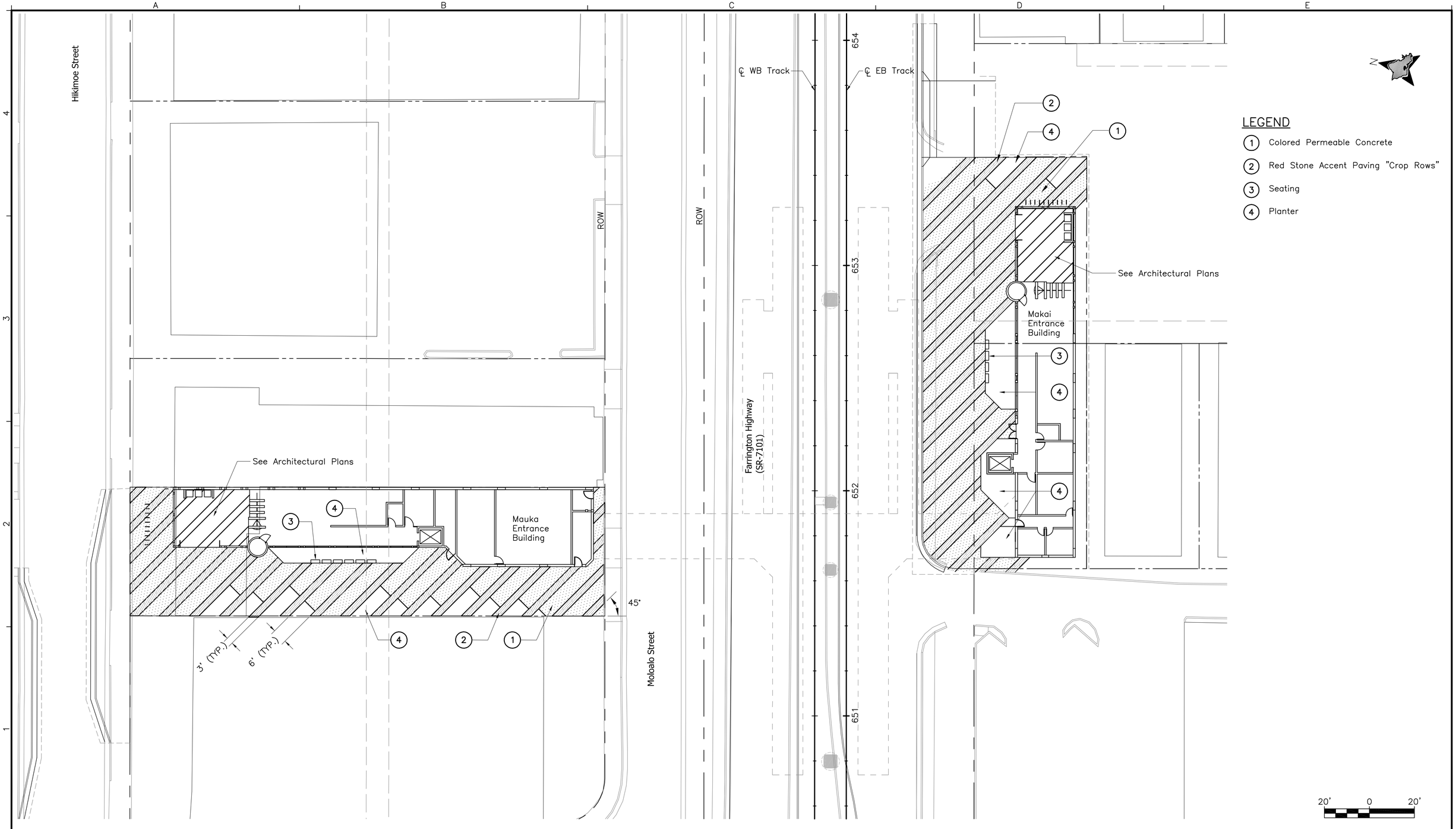
WAIPAHU TRANSIT CENTER STATION

## LANDSCAPE SITE PLAN

Contract No.: SV–240
CADD File: SC2–J02–LA001
Drawing No: LA001 Rev.
Scale: 1"=20'
Page No. 61 of 64




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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Tanimura
Drawn: L Keliiaa
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Date: 09-18-09

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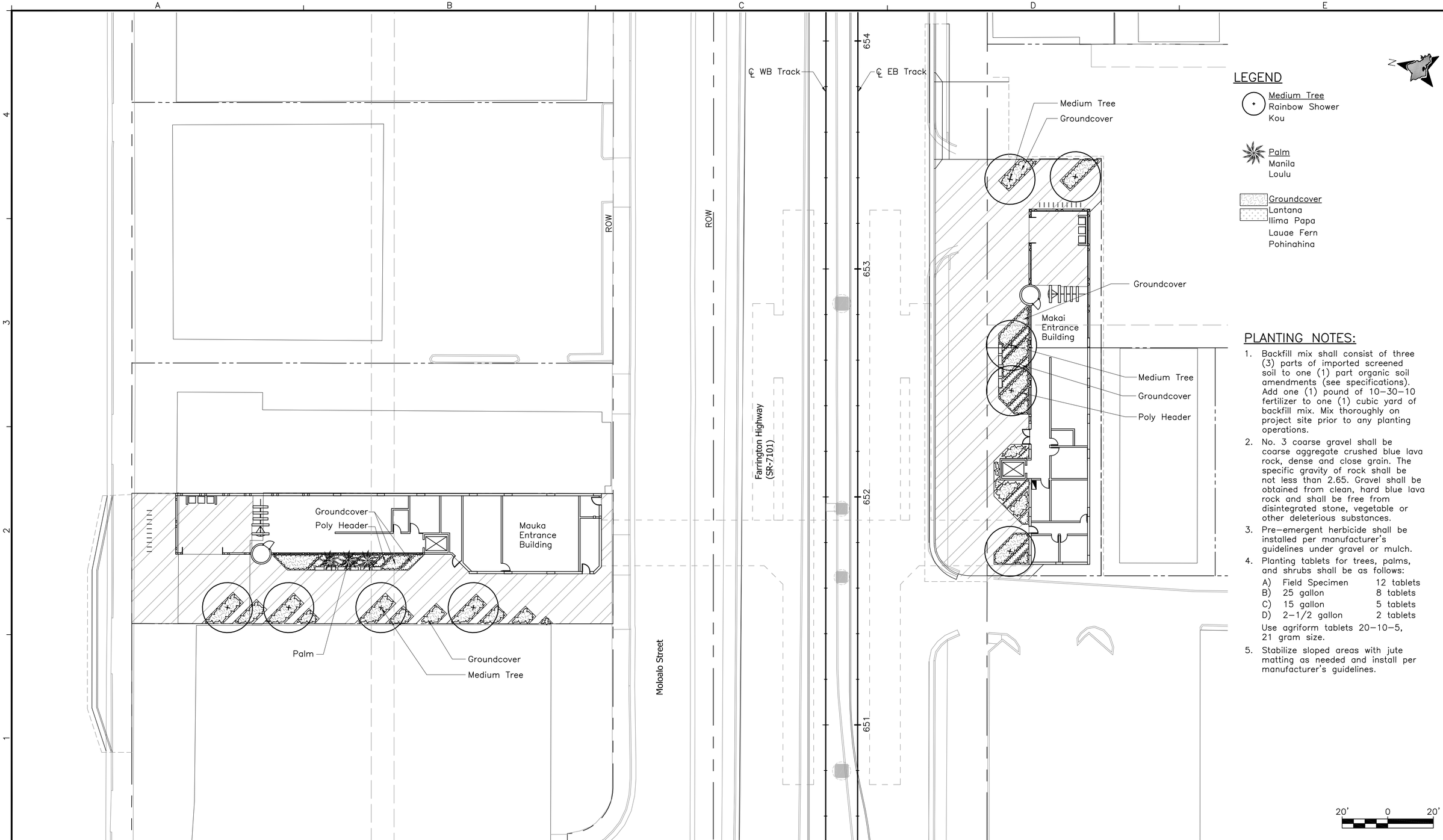
## WAIPAHU TRANSIT CENTER STATION

## PAVING PLAN

Contract No.: SV-240
CADD File: SC2-J03-LA002
Drawing No: LA002 Rev.
Scale: 1"=20'
Page No. 62 of 64




## PLANTING NOTES:

1. 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.
2. No. 3 coarse gravel shall be coarse aggregate crushed blue lava rock, dense and close grain. The specific gravity of rock shall be not less than 2.65. Gravel shall be obtained from clean, hard blue lava rock and shall be free from disintegrated stone, vegetable or other deleterious substances.
3. Pre–emergent herbicide shall be installed per manufacturer's guidelines under gravel or mulch.
4. 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) | 2–1/2 gallon | 2 tablets |

   Use agriform tablets 20–10–5, 21 gram size.
5. Stabilize sloped areas with jute matting as needed and install per manufacturer's guidelines.

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: B Tanimura
Drawn: L Keliiaa
Checked: D Easterday
Approved: A Kutsunai
Date: 09–18–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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


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

Subconsultant: BELT COLLINS
PLANNING • CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL CONSULTING
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2153 North King Street, Suite 200
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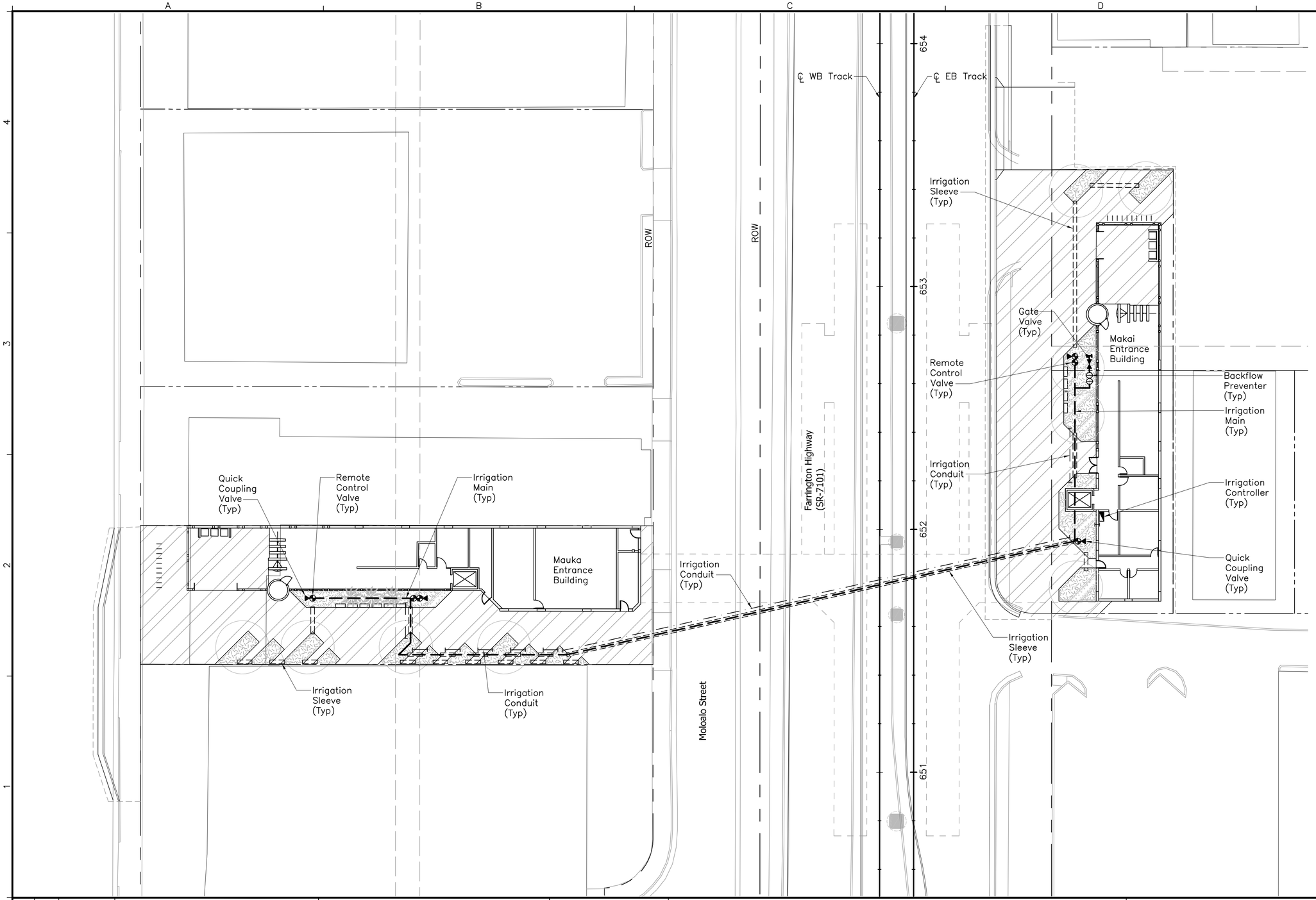
WAIPAHU TRANSIT CENTER STATION

PLANTING PLAN

Contract No.: SV–240
CADD File: SC2–J04–LA003
Drawing No.: LA003 Rev.
Scale: 1"=20'
Page No. 63 of 64




## IRRIGATION LEGEND

- Point of Connection
- Remote Control Valve
- Quick Coupling Valve
- Controller
- Main
- Sleeve
- Conduit
- Copper Pipe

## IRRIGATION NOTES:

1. Preserve and protect all existing irrigation meters, backflow preventers and points of connection for reuse. Finish grades to be maintained around reused equipment.
2. Demolish and remove all existing irrigation mainline, laterals, valves, heads.
3. Install 2–wire system and controllers.
4. Connect HDPE mainline to service pipe and other non–HDPE pipe by mechanical connection. All other HDPE joints shall be heat fusion per manufacturer's recommendations.
5. All mainline and laterals shall be HDPE.
6. Sleeves and conduit pipe can be PVC.
7. Adjust heads as required to account for any vertical obstructions.
8. Provide sufficient laterals and heads for full coverage of planting area.
9. Permanently mark sleeve and conduit locations by installing detectable warning tape.
10. Provide electric handholes for irrigation control wires at a minimum 250 ft. spacing.

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

**PRELIMINARY ENGINEERING SUBJECT TO REVISION**

Designed: C Hironaka
Drawn: L Keliiaa
Checked: D Easterday
Approved: A Kutsunai
Date: 09–18–09

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

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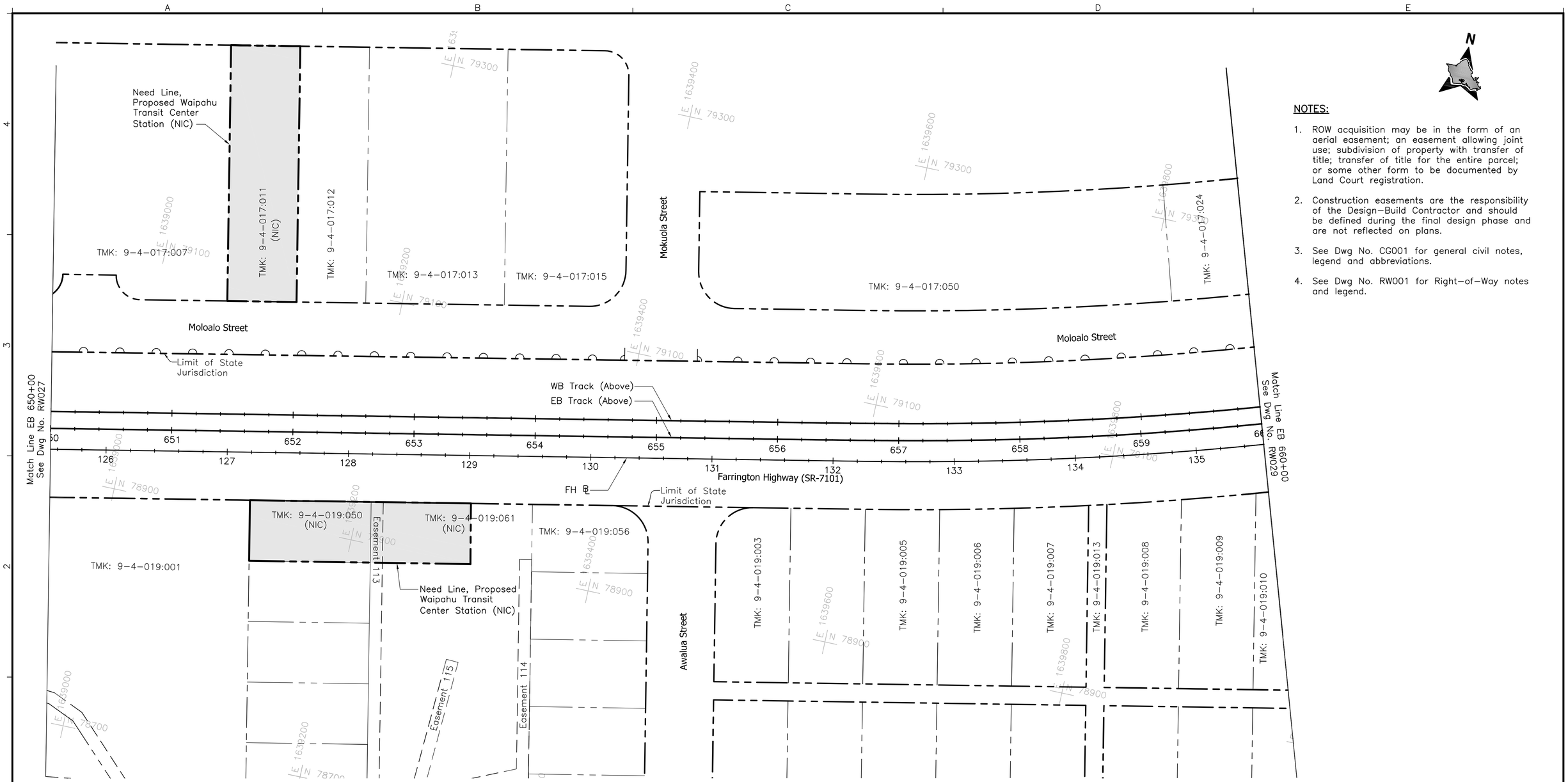
WAIPAHU TRANSIT CENTER STATION

# IRRIGATION PLAN

Contract No.: SV–240
CADD File: SC2–J05–LA004
Drawing No.: LA004 Rev.:
Scale: 1"=20'
Page No.: 64 of 64

# WAIPAHU TRANSIT CENTER STATION

APPENDIX A - INFORMATIVE DRAWINGS




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 are the responsibility of the Design–Build Contractor and should be defined during the final design phase and are not reflected on plans.
3. See Dwg No. CG001 for general civil notes, legend and abbreviations.
4. See Dwg No. RW001 for Right–of–Way notes and legend.

| Tax Map Key Number | Parcel Acquisitions | House Number | Street Name | Land Use |
|---|---|---|---|---|
| 9–4–017:011 | Full | 94–818 | Moloalo St | Commercial |
| 9–4–019:050 | Full | 94–819 | Farrington Hwy | Commercial |
| 9–4–019:061 | Partial | – | – | Commercial |

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: L Karamatsu
Drawn: A Viterbo
Checked: K Wong
Approved: A Borst
Date: 04–03–09

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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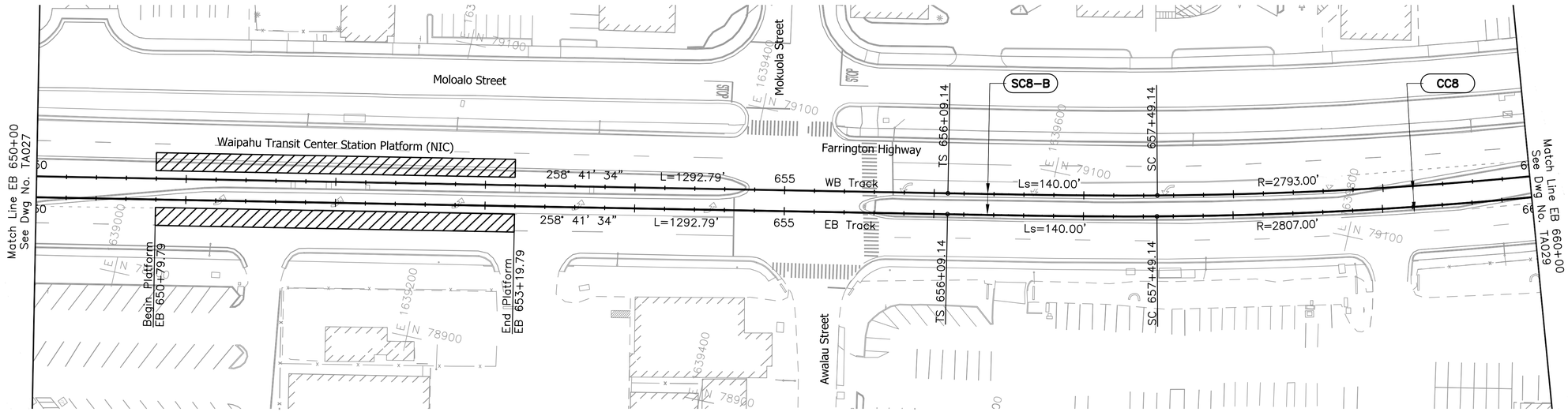
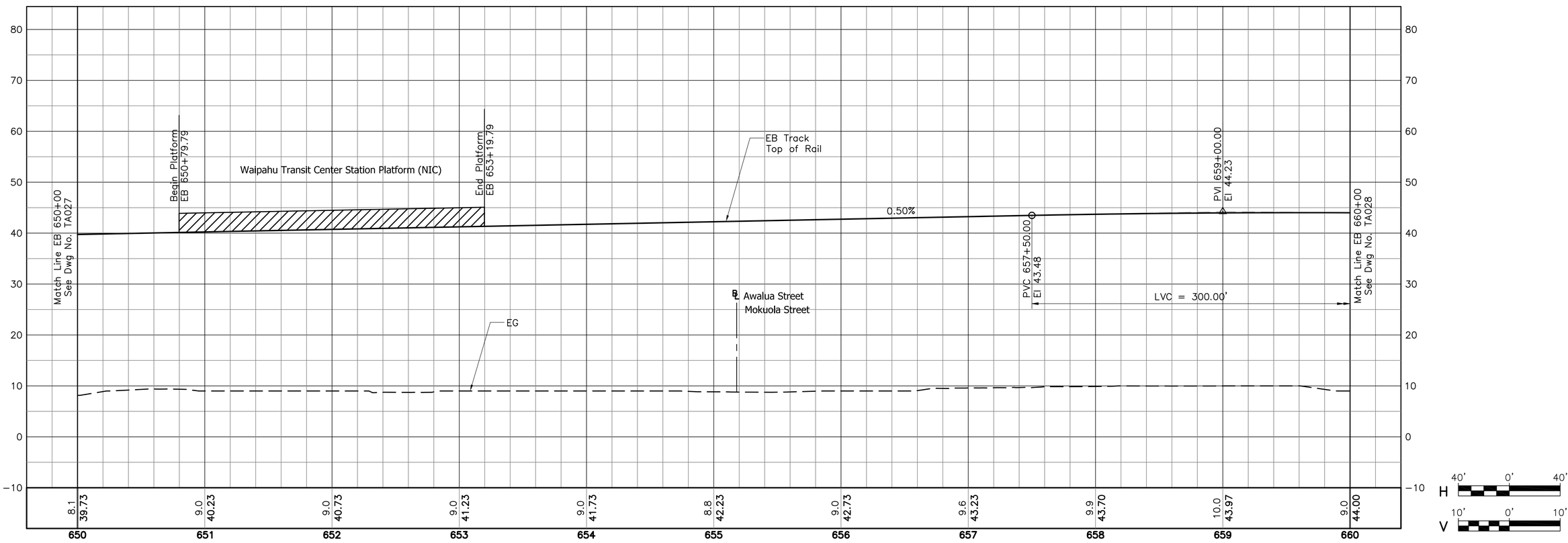
WEST O`AHU / FARRINGTON DESIGN-BUILD

# EXISTING RIGHT-OF-WAY & PROPOSED ACQUISITION TABULATIONS

EB 650+00 TO EB 660+00

Contract No.: DB–1200
CADD File: WF–B04–RW028
Drawing No: RW028 Rev. A
Scale: 1"=40'
Page No. 52 of 312




NOTES:

1. For general notes, symbols, and abbreviations, see Dwg No. CG001.
2. For track alignment abbreviations, see Dwg No. CG002.
3. For Station information, refer to Structural Plans.

H 40' 0' 40'

V 10' 0' 10'

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: M Hall
Drawn: R Nacion
Checked: E Liberman
Approved: A Borst
Date: 04-03-09

# 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

WEST O'AHU/FARRINGTON DESIGN-BUILD

## TRACK ALIGNMENT PLAN & PROFILE

EB 650+00 TO EB 660+00

Contract No.: DB-1200
CADD File: WF-B05-TA028
Drawing No.: TA028 Rev. A
Scale: 1"=40' H, 1"=10' V
Page No. 91 of 312

2009-03-26 8:44 AM K:\CADD\03 Civil\Segment C\Sheet Files\SC-B05_sheets.dwg

## ALIGNMENT: SEG C – EB Track

| Curve No | Curve Element | Type | Station | Northing | Easting | Data | |
|---|---|---|---|---|---|---|---|
| | | | | | | L = | 142.61' |
| | | | | | | Di = | 260° 43' 24.15" |
| | | PC: | 633+92.25 | 78637.043 | 1637358.882 | I = | 01° 02' 55.73" |
| | V=55 mph | | | | | R = | 12014.00' |
| CC6 | Ea=0.00" | PI: | – | 78654.769 | 1637467.407 | Lc = | 219.92' |
| | Eu=1.00" | | | | | Δ= | 01° 02' 55.73" |
| | | PT: | 636+12.17 | 78674.479 | 1637575.589 | Dc = | 00° 28' 36.87" |
| | | | | | | L = | 361.36' |
| | | | | | | Di = | 259° 40' 28.42" |
| | | PC: | 639+73.54 | 78739.249 | 1637931.101 | I = | 00° 58' 54.32" |
| | V=55 mph | | | | | R = | 20007.00' |
| CC7 | Ea=0.00" | PI: | – | 78769.973 | 1638099.738 | Lc = | 342.82' |
| | Eu=0.60" | | | | | Δ = | 00° 58' 54.32" |
| | | PT: | 643+16.35 | 78803.582 | 1638267.823 | Dc = | 00° 17' 10.96" |
| | | | | | | L = | 1292.79' |
| | | | | | | Di = | 258° 41' 34.10" |
| Waipahu Station | | | 650+79.79 | – | – | | |
| | | | 653+19.79 | – | – | | |
| | SC8–B | TS: | 656+09.14 | 79057.058 | 1639535.520 | Ls = | 140.00' |
| | | | | | | Ts = | 836.77' |
| | | | | | | Θs = | 01° 25' 43.76" |
| | | SC: | 657+49.14 | 79085.647 | 1639672.566 | I = | 30° 33' 13.84" |
| | V=55 mph | | | | | R = | 2807.00' |
| CC8 | Ea=2.25" | PI: | – | 79221.123 | 1640356.049 | Lc = | 1356.88' |
| | Eu=2.02" | | | | | Δ = | 27° 41' 46.32" |
| | | CS: | 671+06.02 | 79686.969 | 1640874.210 | Dc = | 02° 02' 28.23" |
| | SC8–A | | | | | | |
| | | ST: | 672+46.02 | 79779.523 | 1640979.248 | | |
| | | | | | | L = | 399.43' |
| | | | | | | Di = | 228° 08' 20.26" |
| | | PC: | 676+45.45 | 80046.072 | 1641276.729 | I = | 01° 15' 18.30" |
| | V=55 mph | | | | | R = | 12014.00' |
| CC9 | Ea=0.00" | PI: | | 80133.886 | 1641374.733 | Lc = | 263.17' |
| | Eu=1.00" | | | | | Δ = | 01° 15' 18.30" |
| | | PT: | 679+08.62 | 80223.826 | 1641470.790 | Dc = | 00° 28' 36.87" |
| | | | | | | L = | 132.17' |
| | | | | | | Di = | 226° 53' 01.96" |
| | | PC: | 680+40.79 | 80314.160 | 1641567.269 | I = | 00° 52' 33.56" |
| | V=55 mph | | | | | R = | 12000.00' |
| CC10 | Ea=0.00" | PI: | – | 80376.859 | 1641634.233 | Lc = | 183.47' |
| | Eu=1.00" | | | | | Δ = | 00° 52' 33.56" |
| | | PT: | 682+24.25 | 80438.527 | 1641702.147 | Dc = | 00° 28' 38.87" |
| | | | | | | L = | 166.45' |
| | | | | | | Di = | 227° 45' 35.52" |

## ALIGNMENT: SEG C – WB Track

| Curve No | Curve Element | Type | Station | Northing | Easting | Data | |
|---|---|---|---|---|---|---|---|
| | | | | | | L = | 142.61' |
| | | | | | | Di = | 260° 43' 24.15" |
| | | PC: | 633+92.25 | 78650.860 | 1637356.625 | I = | 01° 02' 55.73" |
| | V=55 mph | | | | | R = | 12000.00' |
| CC6 | Ea=0.00" | PI: | – | 78668.565 | 1637465.024 | Lc = | 219.66' |
| | Eu=1.00" | | | | | Δ = | 01° 02' 55.73" |
| | | PT: | 636+11.92 | 78688.252 | 1637573.079 | Dc = | 00° 28' 38.87" |
| | | | | | | L = | 361.36' |
| | | | | | | Di = | 259° 40' 28.42" |
| | | PC: | 639+73.54 | 78753.022 | 1637928.591 | I = | 00° 58' 54.32" |
| | V=55 mph | | | | | R = | 19993.00' |
| CC7 | Ea=0.00" | PI: | | 78783.725 | 1638097.110 | Lc = | 342.58' |
| | Eu=0.60" | | | | | Δ = | 00° 58' 54.32" |
| | | PT: | 643+16.11 | 78817.310 | 1638265.078 | Dc = | 00° 17' 11.69" |
| | | | | | | L = | 1292.79' |
| | | | | | | Di = | 258° 41' 34.10" |
| Waipahu Station | | | 650+79.79 | – | – | | |
| | | | 653+19.79 | – | – | | |
| | | TS: | 656+09.14 | 79070.786 | 1639532.774 | Ls = | 140.00' |
| | SC8–B | | | | | Ts = | 832.95' |
| | | | | | | Θs = | 01° 26' 09.54" |
| | | SC: | 657+49.14 | 79099.381 | 1639669.819 | I = | 30° 33' 13.84" |
| | V=55 mph | | | | | R = | 2793.00' |
| CC8 | Ea=2.25" | PI: | – | 79234.102 | 1640349.555 | Lc = | 1349.41' |
| | Eu=2.04" | | | | | Δ = | 27° 40' 54.75" |
| | | CS: | 670+98.55 | 79697.401 | 1640864.864 | Dc = | 02° 03' 05.06" |
| | SC8–A | | | | | | |
| | | ST: | 672+38.55 | 79789.950 | 1640969.905 | | |
| | | | | | | L = | 399.43' |
| | | | | | | Di = | 228° 08' 20.26" |
| | | PC: | 676+45.45 | 80056.499 | 1641267.386 | I = | 01° 15' 18.30" |
| | V=55 mph | | | | | R = | 12000.00' |
| CC9 | Ea=0.00" | PI: | – | 80144.210 | 1641365.276 | Lc = | 262.86' |
| | Eu=1.00" | | | | | Δ = | 01° 15' 18.30" |
| | | PT: | 679+08.31 | 80234.045 | 1641461.221 | Dc = | 00° 28' 38.87" |
| | | | | | | L = | 132.17' |
| | | | | | | Di = | 226° 53' 01.96" |
| | | PC: | 680+40.79 | 80324.379 | 1641557.700 | I = | 00° 52' 33.56" |
| | V=55 mph | | | | | R = | 12014.00' |
| CC10 | Ea=0.00" | PI: | – | 80387.151 | 1641624.742 | Lc = | 183.68' |
| | Eu=1.00" | | | | | Δ = | 00° 52' 33.56" |
| | | PT: | 682+24.47 | 80448.891 | 1641692.736 | Dc = | 00° 28' 36.87" |
| | | | | | | L = | 166.45' |
| | | | | | | Di = | 227° 45' 35.52" |

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: M Hall
Drawn: R Nacion
Checked: E Liberman
Approved: A Borst
Date: 04–03–09

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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WEST O'AHU/FARRINGTON DESIGN-BUILD

TRACK ALIGNMENT DATA

SHEET 5 OF 8

Contract No.: DB–1200
CADD File: WF–B06–TA105
Drawing No.: TA105 Rev. A
Scale: N/A
Page No. 107 of 312

2009–03–27 11:18 AM K:\CADD\03 Civil\Control Points\WF–B06_TRCK–data.dwg

## ALIGNMENT DATA

To East Kapolei
Westbound

To Ala Moana Center
Eastbound

WB Track

EB Track

Waipahu Transit Center Station

| | CS | ST | PC | PT | TS | SC | CS | ST | PC | PT | PC | PT | TS | SC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WB | 621+48.84 | 622+11.00 | 624+11.30 | 627+04.74 | 628+74.91 | 629+87.91 | 631+37.70 | 632+50.70 | 633+92.25 | 636+12.17 | 639+73.54 | 643+16.11 | 656+09.14 | 657+49.14 |
| EB | 621+45.00 | 622+11.00 | 624+11.30 | 627+04.74 | 628+74.91 | 629+87.91 | 631+36.65 | 632+49.65 | 633+92.25 | 636+12.17 | 639+73.54 | 643+16.35 | 656+09.14 | 657+49.14 |

Begin Platform 650+79.79
End Platform 653+19.79

| Curve C3 (EB) | Curve C3 (WB) |
|---|---|
| Ea = 0.75" | Ea = 0.75" |
| Eu = 0.99" | Eu = 0.98" |
| V = 55 mph | V = 55 mph |
| Ls = 66.00' | Ls = 66.00' |
| R = 6893.00' | R = 6907.00' |

| Curve C4 (EB) | Curve C4 (WB) |
|---|---|
| Ea = 0.00" | Ea = 0.00" |
| Eu = 1.00" | Eu = 1.00" |
| V = 55 mph | V = 55 mph |
| Ls = 0.00 | Ls = 0.00 |
| R = 12014.00' | R = 12000.00' |

| Curve C5 (EB) | Curve C5 (WB) |
|---|---|
| Ea = 1.75" | Ea = 1.75" |
| Eu = 1.68" | Eu = 1.67" |
| V = 55 mph | V = 55 mph |
| Ls = 113.00' | Ls = 113.00' |
| R = 3493.00' | R = 3507.00' |

| Curve C6 (EB) | Curve C6 (WB) |
|---|---|
| Ea = 0.00" | Ea = 0.00" |
| Eu = 1.00" | Eu = 1.00" |
| V = 55 mph | V = 55 mph |
| Ls = 0 | Ls = 0 |
| R = 12014.00' | R = 12000.00' |

| Curve C7 (EB) | Curve C7 (WB) |
|---|---|
| Ea = 0.00" | Ea = 0.00" |
| Eu = 0.60" | Eu = 0.60" |
| V = 55 mph | V = 55 mph |
| Ls = 0.00 | Ls = 0.00 |
| R = 20007.00' | R = 19993.00' |

| Curve C8 (EB) | Curve C8 (WB) |
|---|---|
| Ea = 2.25" | Ea = 2.25" |
| Eu = 2.02" | Eu = 2.04" |
| V = 55 mph | V = 55 mph |
| Ls = 140.00' | Ls = 140.00' |
| R = 2807.00' | R = 2793.00' |

## TYPICAL SECTION

Double Track Aerial Guideway Structure

Direct Fixation Track – 30" Fastener Spacing

For Continuation See Dwg TA204

For Continuation See Dwg TA206

## PROFILE

PVC: 614+60.00 EL: 94.25
LVC: 600'
PVT: 620+60.00 EL: 90.29
1.38%
−2.70%
PVC: 637+00.00 EL: 46.03
LVC: 800'
PVT: 645+00.00 EL: 37.23
0.50%
PVC: 657+50.00 EL: 43.48
LVC: 300'
PVT: 660+50.00 EL: 43.93
−0.20%

200' 0 200'

STA. 610 620 630 640 650 660

| Rev | By | Date | Description |
|---|---|---|---|
| A | MH | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: E Liberman
Drawn: J Derosier
Checked: B Wardell
Approved: M Hall
Date: 04–03–09

# 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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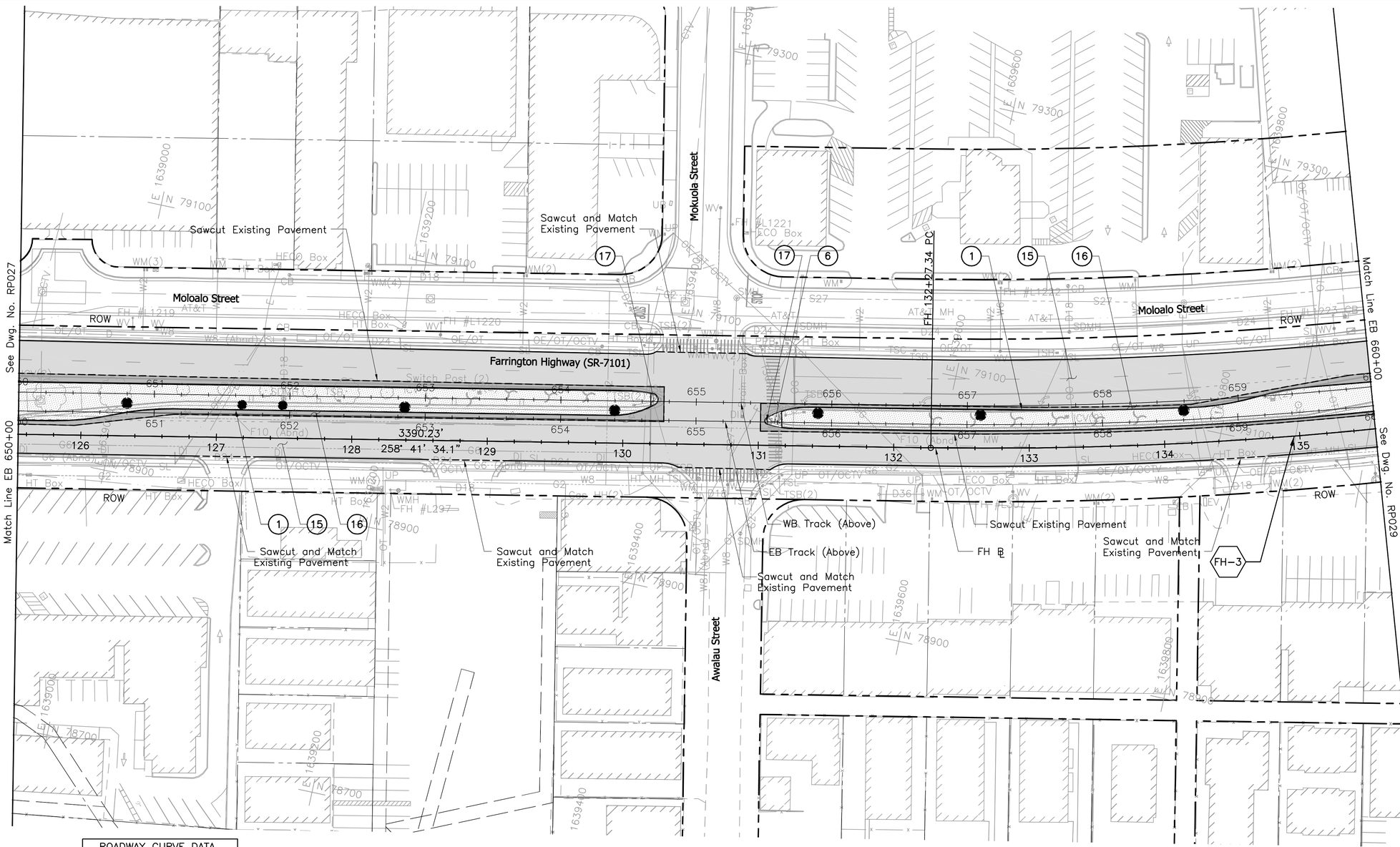
WEST O'AHU/FARRINGTON DESIGN-BUILD

## TRACK CHARTS

SHEET 5 OF 7

Contract No.: DB–1200
CADD File: WF–B07–TA205
Drawing No: TA205 Rev. A
Scale: 1"=200'
Page No. 115 of 312

2009–03–26 5:40 PM K:\CADD\03 Civil\Segment C\Sheet Files\WF–B07_track charts.dwg




## NOTES:

1. For general notes, symbols, and abbreviations, see Dwg. No. CG001.
2. For roadway construction plan notes and legend, see Dwg. No. CG003.

## LEGEND:

- Proposed full depth pavement area.
- Proposed concrete pavement.
- Proposed pavement mill & overlay area.
- Proposed sidewalk, curb & gutter, curb, and median island paving area.
- Proposed landscaped median island area.
- Proposed gravel pavement.
- Proposed guideway column.
- Proposed guideway cantilever bent column.
- Proposed guideway straddle bent column.

## CONSTRUCTION NOTES:

1. Construct Concrete Curb, Type 2A, Per HDOT Std. Plan No. D-05.
6. Construct Concrete Curb Ramp.
15. Construct Plantmix Bituminous Surface Overlay.
16. Construct Plantmix Bituminous Pavement.
17. Construct Concrete Median Island Paving.

| ROADWAY CURVE DATA | |
|---|---|
| | FH-3 |
| Δ | 30° 56' 00.0" |
| R | 2864.79' |
| T | 792.68' |
| C | 1527.95' |
| $L_C$ | 1546.67' |

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
| A | MH | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: M Jewell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 04-03-09

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

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Subconsultant:

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WEST O'AHU/FARRINGTON DESIGN-BUILD

ROADWAY CONSTRUCTION PLAN

EB 650+00 TO EB 660+00

Contract No.: DB-1200
CADD File: WF-B09-RP028
Drawing No.: RP028 Rev. A
Scale: 1"=40'
Page No. 134 of 312

2009-03-26 2:54 PM K:\CADD\03 Civil\Segment C\Sheet Files\WF-B09-RP_2.dwg

## ROADWAY HORIZONTAL CONTROL DATA – FARRINGTON HIGHWAY BASELINE – FH, FHI, FHO

| NUMBER | TYPE | STATION | NORTHING | EASTING | BEARING | DISTANCE | Δ | R | T | Lc | CURVE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| FH | POB | 48+00.00 | 75424.84 | 1627455.43 | 268° 45' 38" | 2183.41 | - | - | - | - | - |
| | PC | 69+83.41 | 75472.07 | 1629638.32 | - | - | 27°34'00" | 2864.83 | 702.79 | 1378.35 | FH-1 |
| | PT | 83+61.76 | 75825.91 | 1630956.76 | 241° 11' 38" | 758.47 | - | - | - | - | - |
| | POE | 91+20.23 | 76191.38 | 1631621.38 | - | - | - | - | - | - | - |
| "FH" 91+20.23, 0.55' RT BK= "FH" 46+66.18 AHD | | | | | | | | | | | |

| NUMBER | TYPE | STATION | NORTHING | EASTING | BEARING | DISTANCE | Δ | R | T | Lc | CURVE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| FH | POB | 46+66.18 | 76190.90 | 1631621.64 | 241° 11' 34" | 3070.93 | - | - | - | - | - |
| | PC | 77+37.11 | 77670.67 | 1634312.53 | - | - | 17°30'00" | 6875.50 | 1058.24 | 2100.00 | FH-2 |
| | PT | 98+37.11 | 78388.09 | 1636277.51 | 258° 41' 34" | 3390.23 | - | - | - | - | - |
| | PC | 132+27.34 | 79052.81 | 1639601.94 | - | - | 30°56'00" | 2864.79 | 792.68 | 1546.67 | FH-3 |
| | PT | 147+74.01 | 79741.10 | 1640966.08 | 227° 45' 34" | 1841.04 | - | - | - | - | - |
| | POE | 166+15.05 | 80978.73 | 1642329.06 | - | - | - | - | - | - | - |
| "FH" 166+15.05 BK= "FHI" 0+00.00, 0.00' RT AHD | | | | | | | | | | | |

| NUMBER | TYPE | STATION | NORTHING | EASTING | BEARING | DISTANCE | Δ | R | T | Lc | CURVE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| FHI | POB | 0+00.00 | 80978.73 | 1642329.06 | 227° 45' 34" | 2417.95 | - | - | - | - | - |
| | POE | 24+17.95 | 82604.19 | 1644119.14 | - | - | - | - | - | - | - |
| "FH" 166+15.05 BK= "FHO" 0+00.00, 49.99' LT AHD | | | | | | | | | | | |

| NUMBER | TYPE | STATION | NORTHING | EASTING | BEARING | DISTANCE | Δ | R | T | Lc | CURVE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| FHO | POB | 0+00.00 | 81009.82 | 1642300.83 | 227° 45' 33" | 2456.15 | - | - | - | - | - |
| | POE | 24+56.15 | 82660.96 | 1644119.18 | - | - | - | - | - | - | - |

## ROADWAY HORIZONTAL CONTROL DATA – NORTH–SOUTH ROADWAY BASELINE – NS

| NUMBER | TYPE | STATION | NORTHING | EASTING | BEARING | DISTANCE | Δ | R | T | Lc | CURVE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| NS | POB | 0+00.00 | 61447.57 | 1622950.08 | 169° 35' 38" | 95.47 | - | - | - | - | - |
| | PC | 0+95.47 | 61541.47 | 1622932.84 | - | - | 15°48'20" | 1320.00 | 183.23 | 364.13 | - |
| | PT | 4+59.60 | 61886.07 | 1622818.81 | 153° 47' 18" | 1157.84 | - | - | - | - | - |
| | PC | 16+17.44 | 62924.85 | 1622307.40 | - | - | 65°20'20" | 1449.00 | 929.15 | 1652.41 | - |
| | PT | 32+69.85 | 64479.24 | 1622483.34 | 219° 07' 38" | 981.54 | - | - | - | - | - |
| | PC | 42+51.39 | 65240.67 | 1623102.74 | - | - | 25°06'00" | 1551.00 | 345.27 | 679.46 | - |
| | PT | 49+30.85 | 65843.48 | 1623404.30 | 194° 01' 38" | 483.94 | - | - | - | - | - |
| | PC | 54+14.79 | 66312.99 | 1623521.60 | - | - | 60°40'00" | 4051.00 | 2370.38 | 4289.33 | - |
| | PT | 97+04.12 | 70240.15 | 1622372.76 | 133° 21' 38" | 3667.39 | - | - | - | - | - |
| | PC | 133+71.52 | 72758.13 | 1619706.38 | - | - | 27°38'34" | 1640.00 | 403.47 | 791.23 | - |
| | PT/POE | 141+62.75 | 73144.45 | 1619024.66 | - | - | - | - | - | - | - |

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: L Karamatsu
Drawn: R Angkaw
Checked: M Jewell
Approved: A Borst
Date: 04–03–09

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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WEST O'AHU/FARRINGTON DESIGN BUILD

ROADWAY HORIZONTAL CONTROL DATA

SHEET 1 OF 2

Contract No.: DB–1200
CADD File: WF–B12–RP201
Drawing No.: RP201 Rev.: A
Scale: NTS
Page No.: 160 of 312

2009–03–25 2:32 PM K:\CADD\03 Civil\Segment C\Sheet Files\WF–B12_Data.dwg

NOTE: Station ranges not listed have 0' width dimension

Ⓐ
| | | |
|---|---|---|
| 118+30 | to 122+40 | 8.85' |
| 122+40 | to 130+20 | 8.85'–0' |
| 130+20 | to 137+00 | 0'–5' |
| 137+00 | to 147+00 | 5'± |
| 147+00 | to 149+40 | 5'–0' |
| 149+40 | to 154+40 | 2' |
| 154+40 | to 159+00 | 0' |

Ⓑ
| | | |
|---|---|---|
| 118+30 | to 154+20 | 12' |
| 154+00 | to 159+00 | 12'–11.75' |

Ⓒ
| | | |
|---|---|---|
| 118+30 | to 152+00 | 12' |
| 152+00 | to 159+00 | 11' (B) |

Ⓓ
| | | |
|---|---|---|
| 119+00 | to 122+20 | 10' |
| 122+20 | to 123+00 | 10'–0' |
| 131+00 | to 134+20 | 10' |
| 134+20 | to 135+00 | 10'–0' |
| 150+20 | to 153+10 | 10' |
| 153+10 | to 154+00 | 10'–0' |

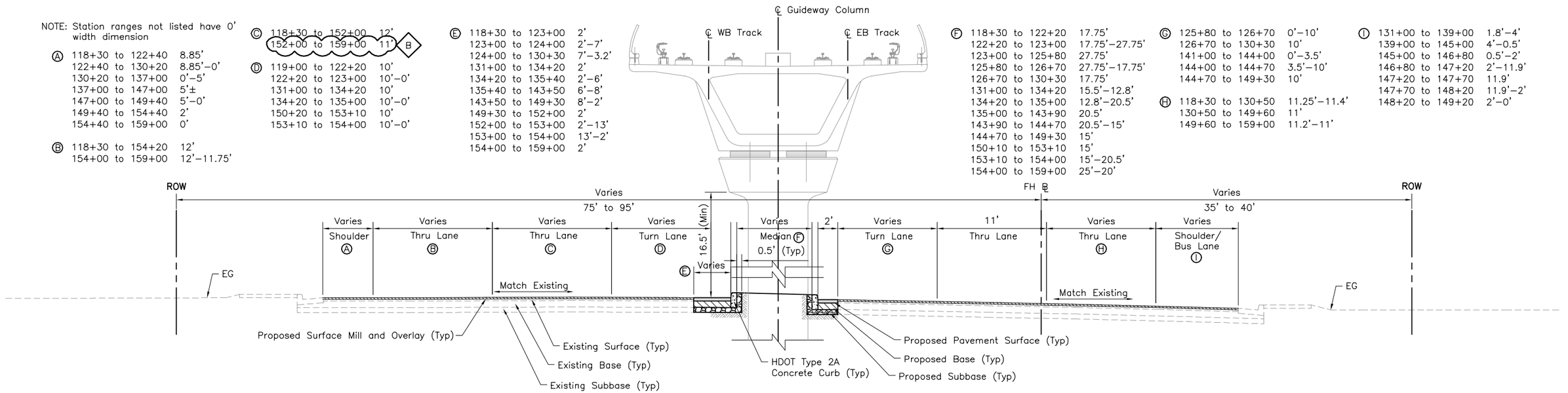
Ⓔ
| | | |
|---|---|---|
| 118+30 | to 123+00 | 2' |
| 123+00 | to 124+00 | 2'–7' |
| 124+00 | to 130+30 | 7'–3.2' |
| 131+00 | to 134+20 | 2' |
| 134+20 | to 135+40 | 2'–6' |
| 135+40 | to 143+50 | 6'–8' |
| 143+50 | to 149+30 | 8'–2' |
| 149+30 | to 152+00 | 2' |
| 152+00 | to 153+00 | 2'–13' |
| 153+00 | to 154+00 | 13'–2' |
| 154+00 | to 159+00 | 2' |

Ⓕ
| | | |
|---|---|---|
| 118+30 | to 122+20 | 17.75' |
| 122+20 | to 123+00 | 17.75'–27.75' |
| 123+00 | to 125+80 | 27.75' |
| 125+80 | to 126+70 | 27.75'–17.75' |
| 126+70 | to 130+30 | 17.75' |
| 131+00 | to 134+20 | 15.5'–12.8' |
| 134+20 | to 135+00 | 12.8'–20.5' |
| 135+00 | to 143+90 | 20.5' |
| 143+90 | to 144+70 | 20.5'–15' |
| 144+70 | to 149+30 | 15' |
| 150+10 | to 153+10 | 15' |
| 153+10 | to 154+00 | 15'–20.5' |
| 154+00 | to 159+00 | 25'–20' |

Ⓖ
| | | |
|---|---|---|
| 125+80 | to 126+70 | 0'–10' |
| 126+70 | to 130+30 | 10' |
| 141+00 | to 144+00 | 0'–3.5' |
| 144+00 | to 144+70 | 3.5'–10' |
| 144+70 | to 149+30 | 10' |

Ⓗ
| | | |
|---|---|---|
| 118+30 | to 130+50 | 11.25'–11.4' |
| 130+50 | to 149+60 | 11' |
| 149+60 | to 159+00 | 11.2'–11' |

Ⓘ
| | | |
|---|---|---|
| 131+00 | to 139+00 | 1.8'–4' |
| 139+00 | to 145+00 | 4'–0.5' |
| 145+00 | to 146+80 | 0.5'–2' |
| 146+80 | to 147+20 | 2'–11.9' |
| 147+20 | to 147+70 | 11.9' |
| 147+70 | to 148+20 | 11.9'–2' |
| 148+20 | to 149+20 | 2'–0' |




"FH" 118+30 to "FH" 159+00

NOTE: Station ranges not listed have 0' width dimension

Ⓐ
| | | |
|---|---|---|
| 159+00 | to 159+85 | 20'–11' |
| 159+85 | to 161+20 | 11' |
| 161+20 | to 167+80 | 11'–1' |

Ⓑ
| | | |
|---|---|---|
| 159+00 | to 159+85 | 2'–1' |
| 159+85 | to 161+20 | 1' |
| 161+20 | to 161+40 | 1'–0.5' |
| 161+40 | to 163+00 | 0.5' |

Ⓒ
| | | |
|---|---|---|
| 159+00 | to 161+20 | 2' |
| 161+20 | to 162+25 | 2'–9' |
| 162+25 | to 163+00 | 10' |

Ⓓ
| | | |
|---|---|---|
| 159+00 | to 159+85 | 0–10' |
| 159+85 | to 163+00 | 10' |

Ⓔ
| | | |
|---|---|---|
| 161+10 | to 162+30 | 0–8' |
| 162+30 | to 163+00 | 2' |

Ⓕ 162+30 to 163+00 8'–11.5'

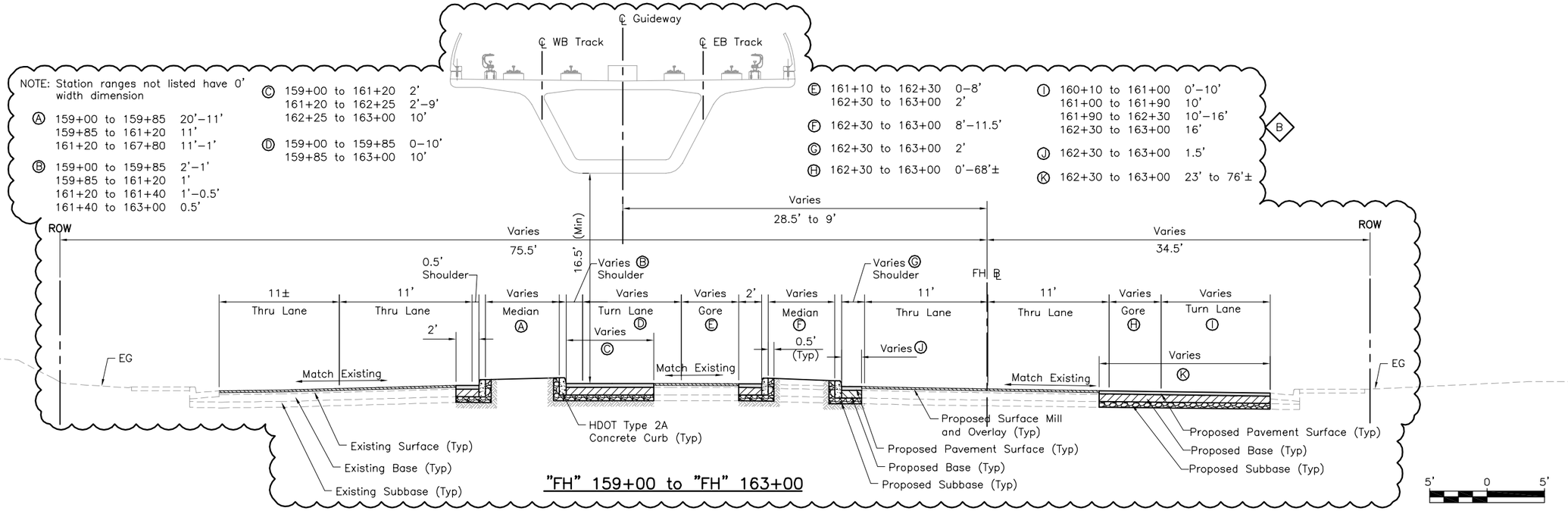
Ⓖ 162+30 to 163+00 2'

Ⓗ 162+30 to 163+00 0'–68'±

Ⓘ
| | | |
|---|---|---|
| 160+10 | to 161+00 | 0'–10' |
| 161+00 | to 161+90 | 10' |
| 161+90 | to 162+30 | 10'–16' |
| 162+30 | to 163+00 | 16' |

Ⓙ 162+30 to 163+00 1.5'

Ⓚ 162+30 to 163+00 23' to 76'± (B)




"FH" 159+00 to "FH" 163+00

5' 0 5'

| Rev | By | Date | Description |
|---|---|---|---|
| B | MH | 05–22–09 | Revised Typical Sections |
| A | MH | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B. Wardell
Drawn: T Cochran
Checked: E Liberman
Approved: M Hall
Date: 04–03–09

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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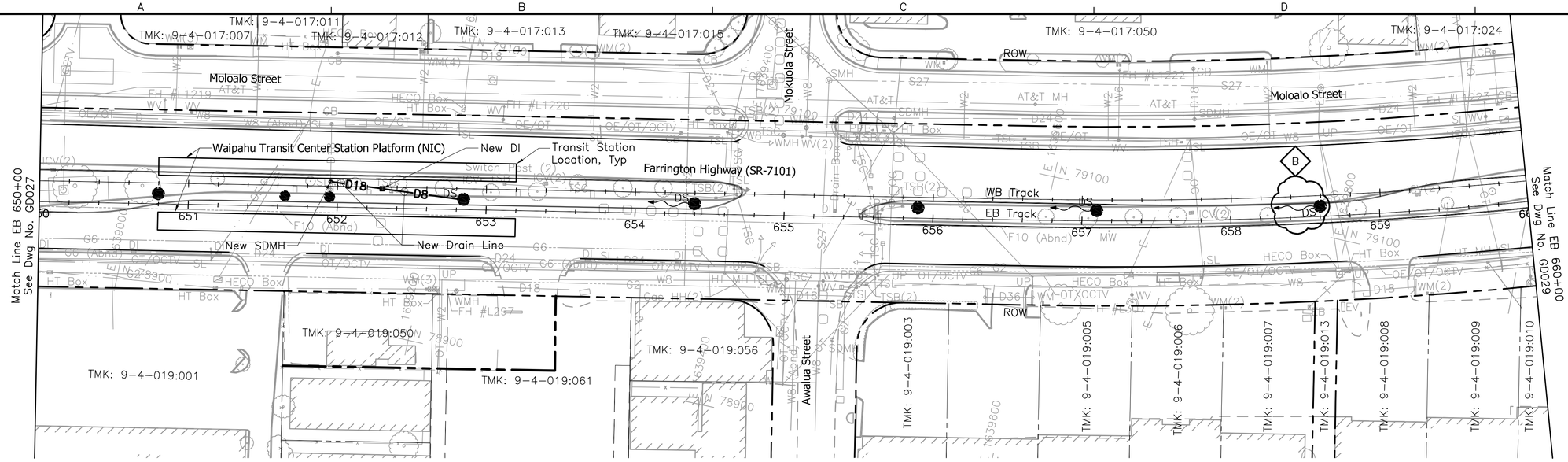
WEST O'AHU/FARRINGTON DESIGN-BUILD

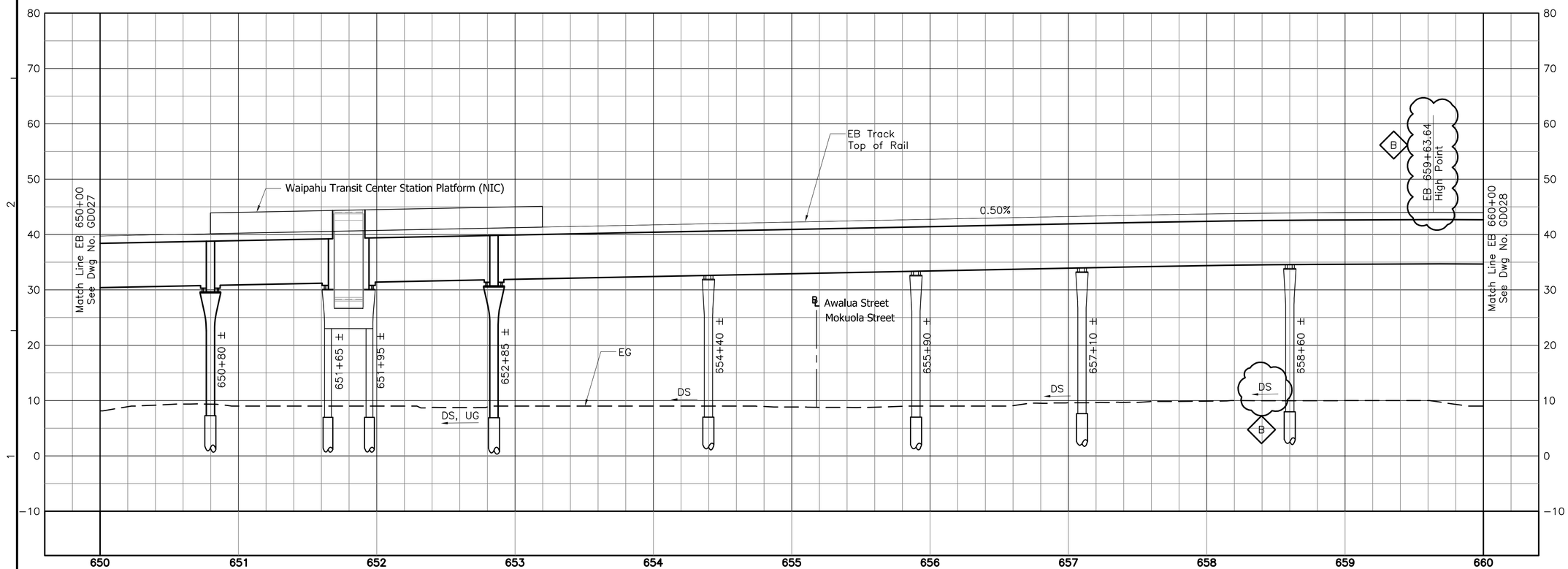
# TYPICAL SECTIONS FARRINGTON HIGHWAY

SHEET 6 OF 8

Contract No.: DB–1200
CADD File: WF–B13–RX006
Drawing No.: RX006 Rev. B
Scale: 1"=5'
Page No. 167 of 312

2009–05–08 11:47 AM K:\CADD\03 Civil\Segment C\Sheet Files\WF–B13–RX_2.dwg




**NOTES:**

1. Refer to utility relocation drawings UP149A for new drainage structures shown in this sheet.
2. Refer to GD001 for legend and symbols.
3. For DS locations and discharge conditions, see schedule on Drawing No. GD039 & GD040.

40' 0 40'

10' 0 10'

| Rev | By | Date | Description |
|---|---|---|---|
| B | MY | 05-22-09 | Added Downspout & High Point |
| A | MY | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: E Leung
Drawn: D Chua
Checked: N Orense
Approved: M Yonamine
Date: 04-03-09

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

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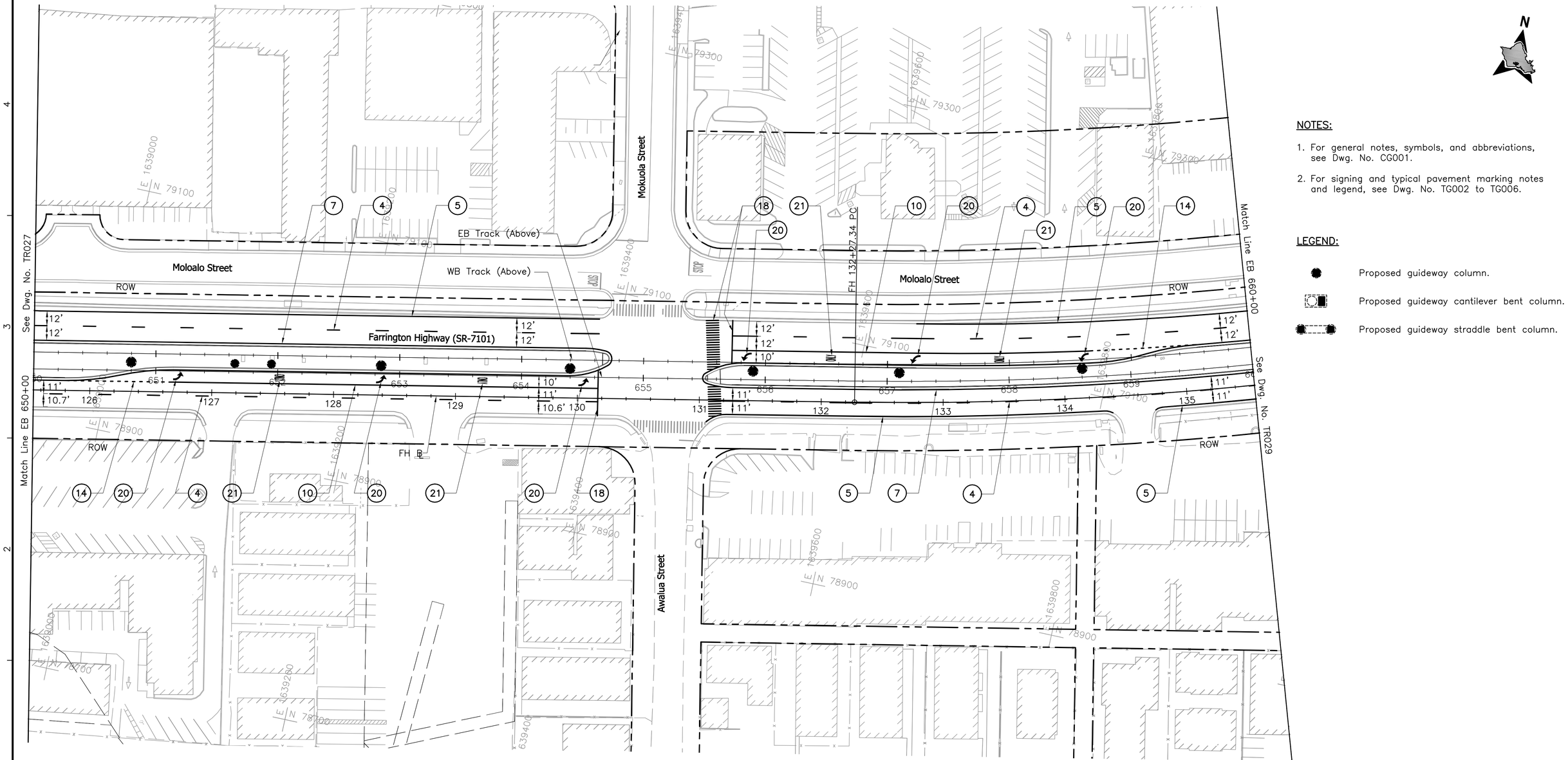
WEST O'AHU/FARRINGTON DESIGN-BUILD

# GUIDEWAY DRAINAGE LAYOUT PLAN

EB 650+00 TO EB 660+00

Contract No.: DB-1200
CADD File: WF-B16-GD028
Drawing No.: GD028 Rev. B
Scale: 1"=40' H, 1"=10' V
Page No. 197 of 312




| Rev | By | Date | Description |
|---|---|---|---|
| A | MH | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: M Jewell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 04–03–09

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

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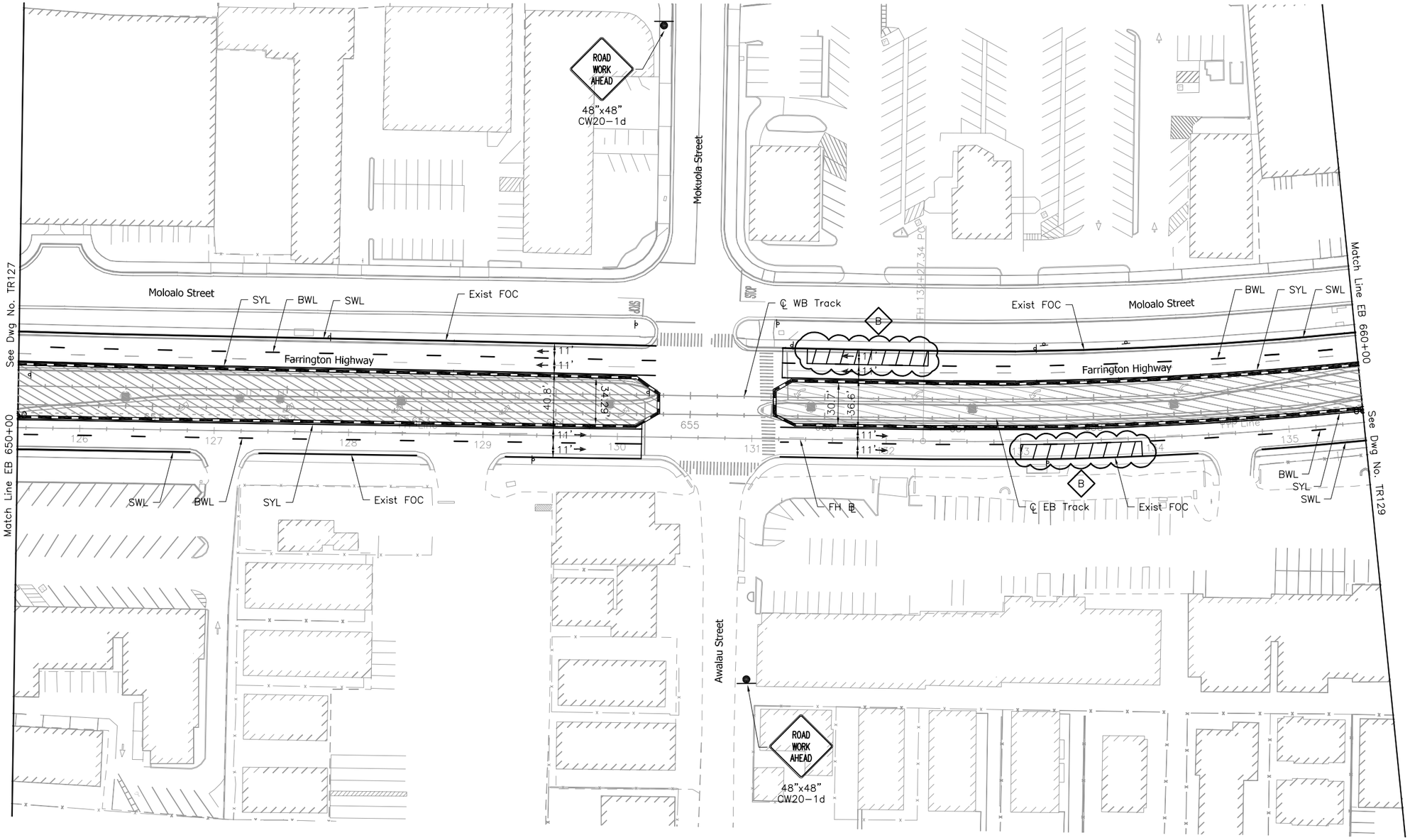
WEST O'AHU/FARRINGTON DESIGN-BUILD

# SIGNING AND STRIPING PLAN

EB 650+00 TO EB 660+00

Contract No.: DB–1200
CADD File: WF–C02–TR028
Drawing No.: TR028 Rev. A
Scale: 1"=40'
Page No. 242 of 312

2009–03–26 4:12 PM K:\CADD\03 Civil\Segment C\Sheet Files\WF–C02–SS_2.dwg




N

NOTES

1. For general 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 |
| | Guideway Column Location |
| | Attenuator |
| | Existing Sign |
| FOC | Face of Curb |
| EP | Edge of Pavement |

40' 0 40'

| Rev | By | Date | Description |
|---|---|---|---|
| B | MH | 05–22–09 | Bus Access |
| A | MH | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: J Derosier
Checked: E Liberman
Approved: M Hall
Date: 04–03–09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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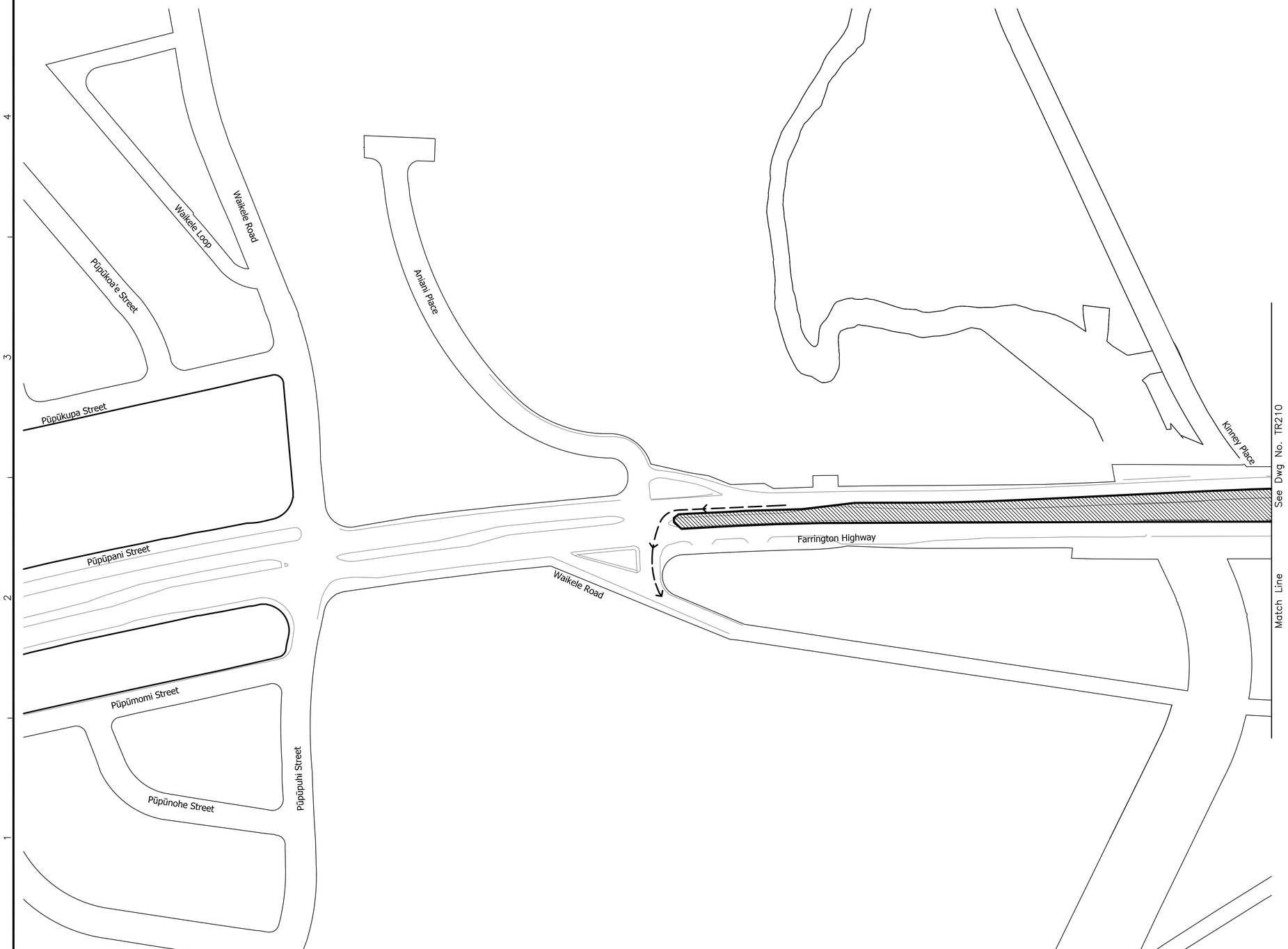
WEST O'AHU/FARRINGTON DESIGN-BUILD

# MAINTENANCE OF TRAFFIC PLAN

EB 650+00 TO EB 660+00

Contract No.: DB–1200
CADD File: WF–C03–TR128
Drawing No.: TR128 Rev.: B
Scale: 1"=40'
Page No.: 264 of 312

2009–04–23 2:53 PM K:\CADD\03 Civil\Segment C\Sheet Files\WF–C03–MOT_2.dwg




NOTE:

1. For general notes, See Dwg No. TG001.

LEGEND

- EB detour route
- WB detour route
- Construction zone
- Sign
- No Left Turn

100' 0 100'

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: F Jugueta
Checked: M Jewell
Approved: A Borst
Date: 04–03–09

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

Prime Consultant: PB PARSONS BRINCKERHOFF
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Subconsultant:

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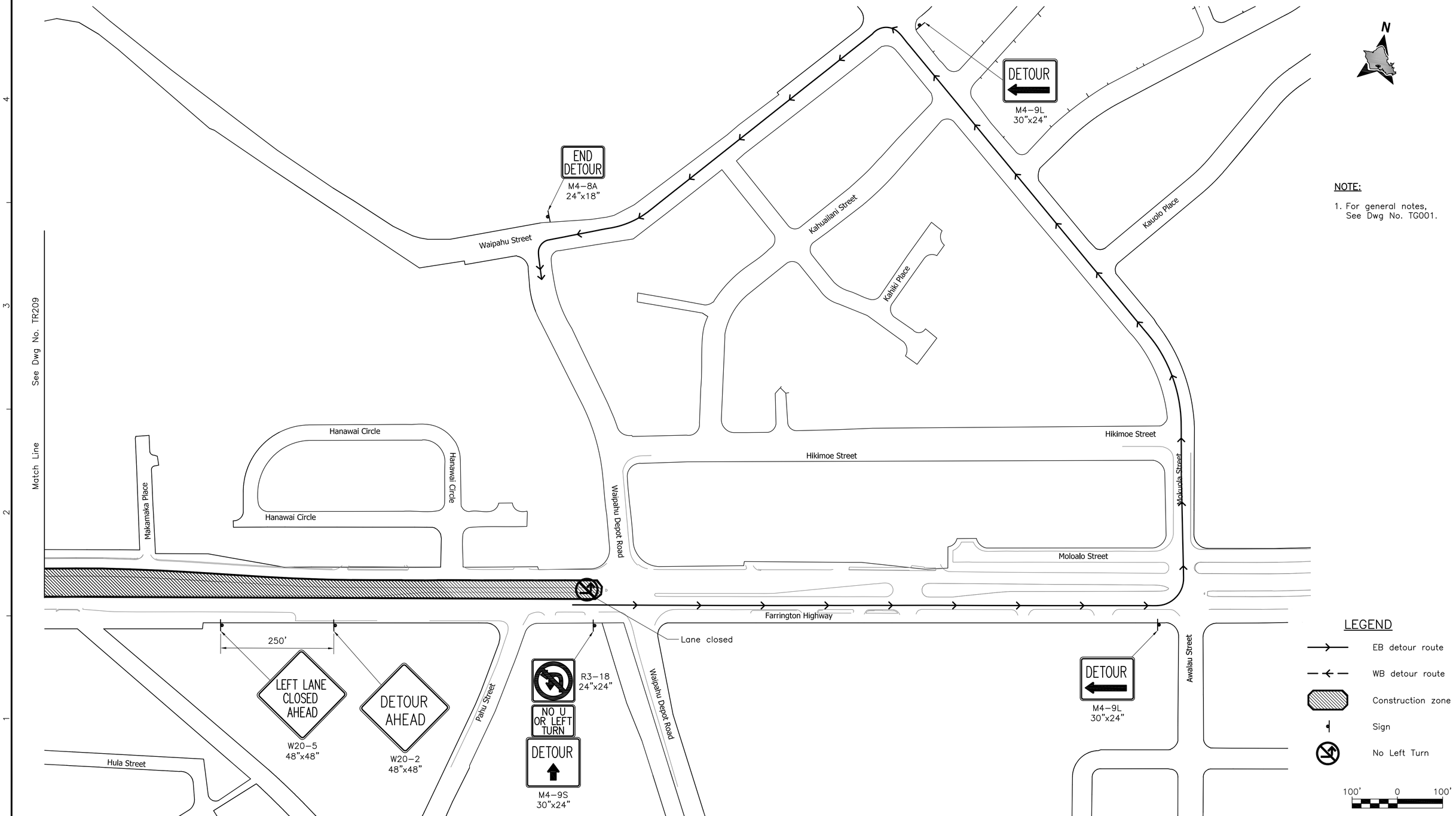
WEST O'AHU/FARRINGTON DESIGN-BUILD

DETOUR PLAN
ANIANI PL/WAIKELE RD TO WAIPAHU DEPOT RD

SHEET 1 OF 2

Contract No.: DB–1200
CADD File: WF–C03–TR209
Drawing No: TR209 Rev. A
Scale: 1"=100'
Page No. 278 of 312

2009–03–25 11:13 AM K:\CADD\03 Civil\Segment B\Sheet Files\WF–C03–Detour.dwg




NOTE:

1. For general notes, See Dwg No. TG001.

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: F Jugueta
Checked: M Jewell
Approved: A Borst
Date: 04–03–09

# 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

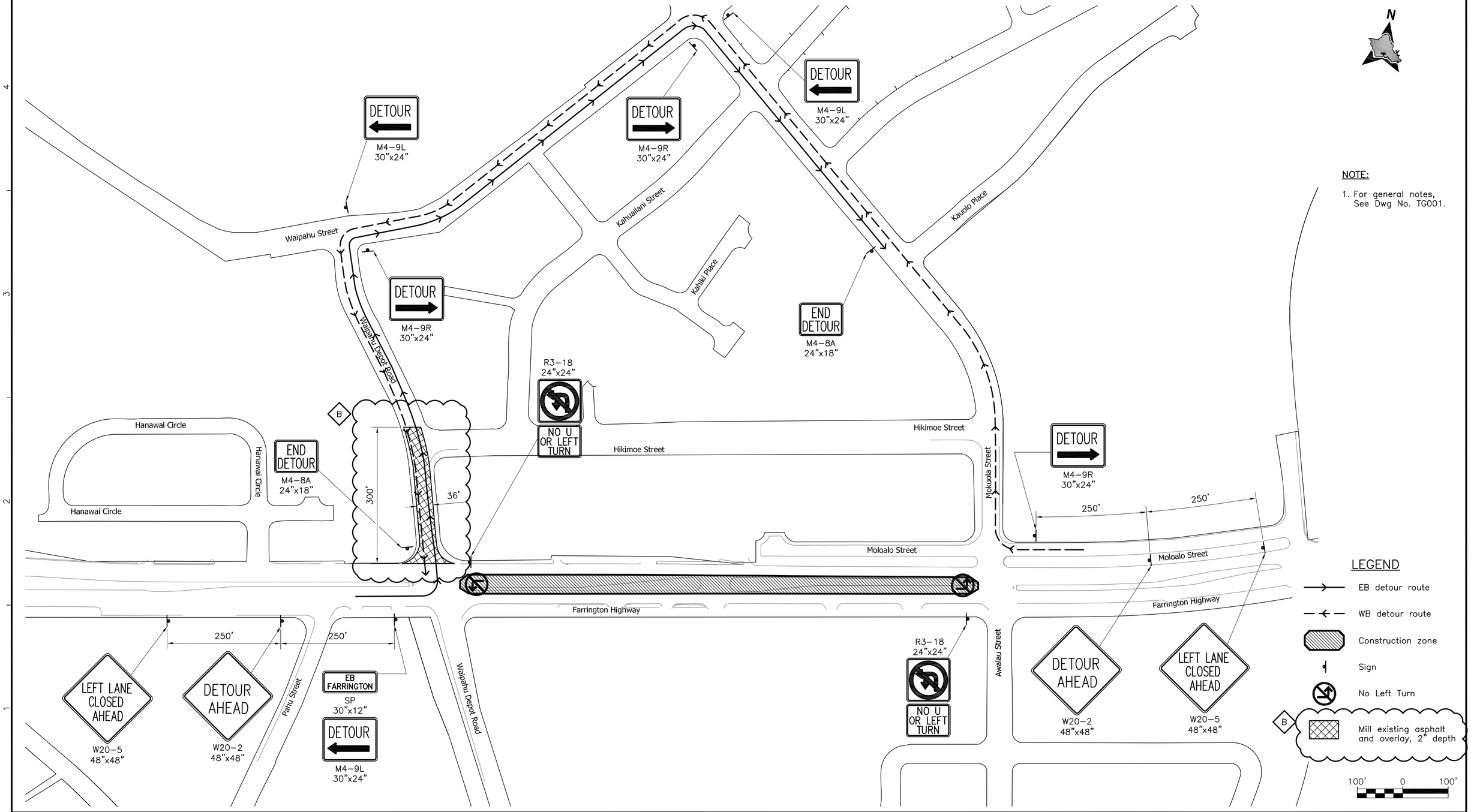
WEST O'AHU/FARRINGTON DESIGN-BUILD

## DETOUR PLAN
## ANIANI PL/WAIKELE RD TO WAIPAHU DEPOT RD

SHEET 2 OF 2

Contract No.: DB–1200
CADD File: WF–C03–TR210
Drawing No.: TR210 Rev. A
Scale: 1"=100'
Page No. 279 of 312

2009–03–25 11:13 AM K:\CADD\03 Civil\Segment B\Sheet Files\WF–C03–Detour.dwg




| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Pavement mill and overlay |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: F Jugueta
Checked: M Jewell
Approved: A Borst
Date: 04–03–09

# 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:

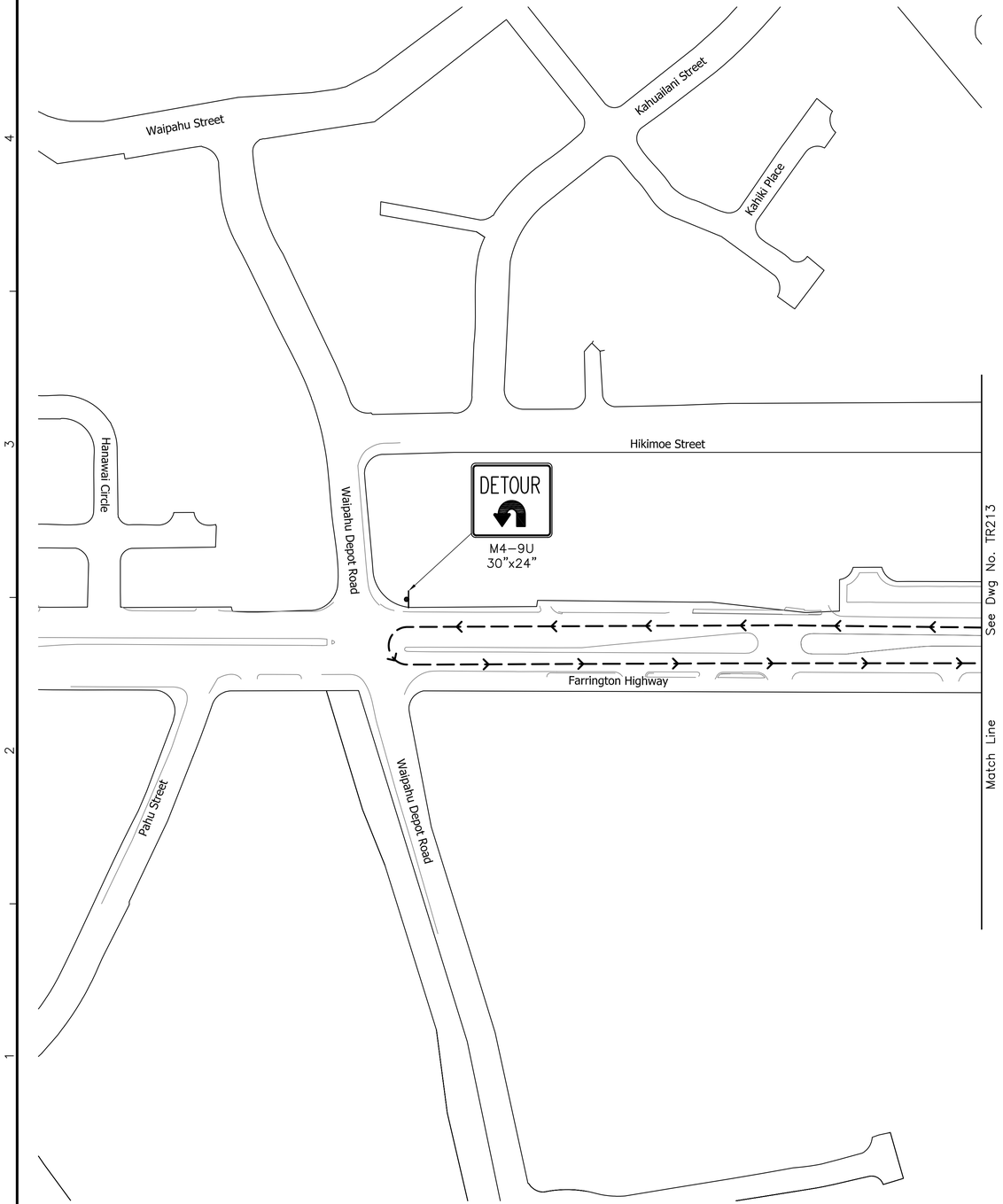
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

## DETOUR PLAN
## WAIPAHU DEPOT RD TO MOKUOLA ST/AWALAU ST

Contract No.: DB–1200
CADD File: WF–C03–TR211
Drawing No.: TR211
Rev.: B
Scale: 1"=100'
Page No.: 280 of 312

2009–05–05 4:32 PM K:\CADD\03 Civil\Segment B\Sheet Files\WF–C03–Detour.dwg




N

NOTE:

1. For general notes, See Dwg No. TG001.

LEGEND

- EB detour route
- WB detour route
- Construction zone
- Sign
- No Left Turn

100' 0 100'

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: F Jugueta
Checked: M Jewell
Approved: A Borst
Date: 04-03-09

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

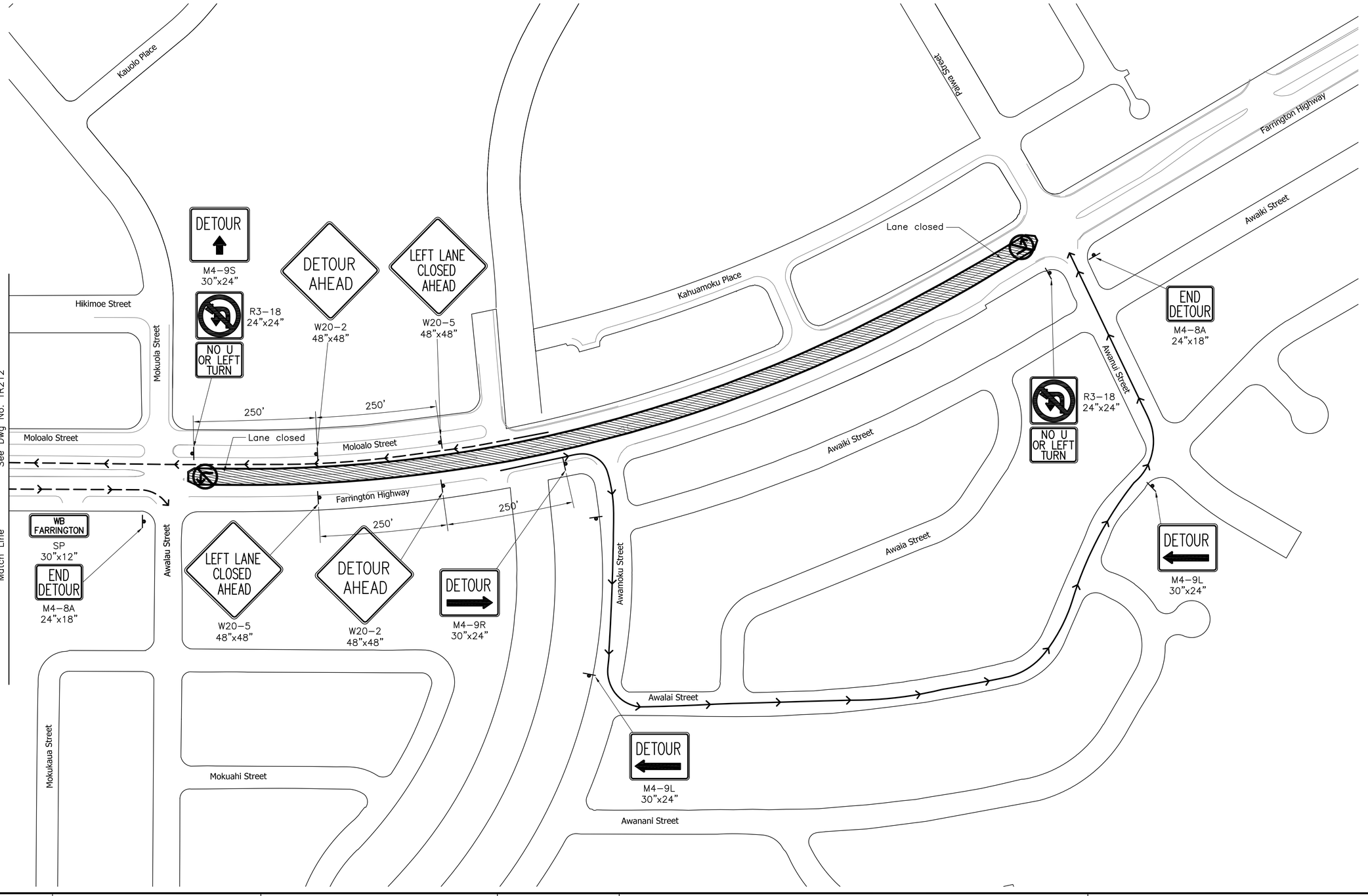
WEST O'AHU/FARRINGTON DESIGN-BUILD

DETOUR PLAN
MOKUOLA ST/AWALAU ST TO PĀIWA ST/AWANUI ST

SHEET 1 OF 2

Contract No.: DB-1200
CADD File: WF-C03-TR212
Drawing No: TR212 Rev. A
Scale: 1"=100'
Page No. 281 of 312

2009-03-25 11:13 AM K:\CADD\03 Civil\Segment B\Sheet Files\WF-C03-Detour.dwg




NOTE:

1. For general notes, See Dwg No. TG001.

LEGEND

- EB detour route
- WB detour route
- Construction zone
- Sign
- No Left Turn

100' 0 100'

| Rev | By | Date | Description |
|---|---|---|---|
| A | AB | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: B Wardell
Drawn: F Jugueta
Checked: M Jewell
Approved: A Borst
Date: 04-03-09

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

WEST O'AHU/FARRINGTON DESIGN-BUILD

DETOUR PLAN
MOKUOLA ST/AWALAU ST TO PĀIWA ST/AWANUI ST

SHEET 2 OF 2

Contract No.: DB-1200
CADD File: WF-C03-TR213
Drawing No.: TR213 Rev.: A
Scale: 1"=100'
Page No.: 282 of 312

2009-03-25 11:13 AM K:\CADD\03 Civil\Segment B\Sheet Files\WF-C03-Detour.dwg

New Type II Traffic Signal Standard, Foundation, and Assemblies, Pedestrian Head Assembly, and Pedestrian Push Button

Mokuola Street

Replace Existing Pullbox with New Type "B" Pullbox

New 8–2" Traffic Signal Conduits and Cables

2 ea, 1–6'x6' Loop Detectors

New EVP Detector

New CCTV Cabinet

New 3–2" Traffic Signal Conduits and Cables

Replace Existing Pullbox with New Type "C" Pullbox

1 ea, 6–6'x6' Loop Detectors

ROW

New CCTV Camera

New EVP Detector

Farrington Highway
(SR-7101)
Waipahu Transit Center Station Platform (NIC)

WB Track Above

New 1–2" Traffic Signal Conduits and Cables

New Type "A" Pullbox

New 8–2" Traffic Signal Conduits and Cables

New Type I Traffic Signal Standard, Foundation, Pedestrian Head Assemblies, and Pedestrian Push Button

2 ea, 2–6'x6' Loop Detectors

Guideway Column (Typ)

New 8–2" Traffic Signal Conduits and Cables

EB Track Above

New Type "A" Pullbox

New 1–2" Traffic Signal Conduits and Cables

1 ea, 6–6'x6' Loop Detectors

2 ea, 1–6'x6' Loop Detectors

2 ea, 2–6'x6' Loop Detectors

Replace Type "B" Pullbox

New EVP Detector

New CCTV Camera

New Type II Traffic Signal Standard, Foundation, and Assemblies, Pedestrian Head Assembly, and Pedestrian Push Button

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| B | KKN | 05–22–09 | Added CCTV Camera |
| A | KKN | 04–03–09 | Issued for Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: Z Tong
Drawn: R Quemado
Checked: K Niiya
Approved: K Niiya
Date: 04–03–09

# 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: AUSTIN, TSUTSUMI & ASSOC., INC.
ENGINEERS, SUVEYORS • HONOLULU, HAWAII

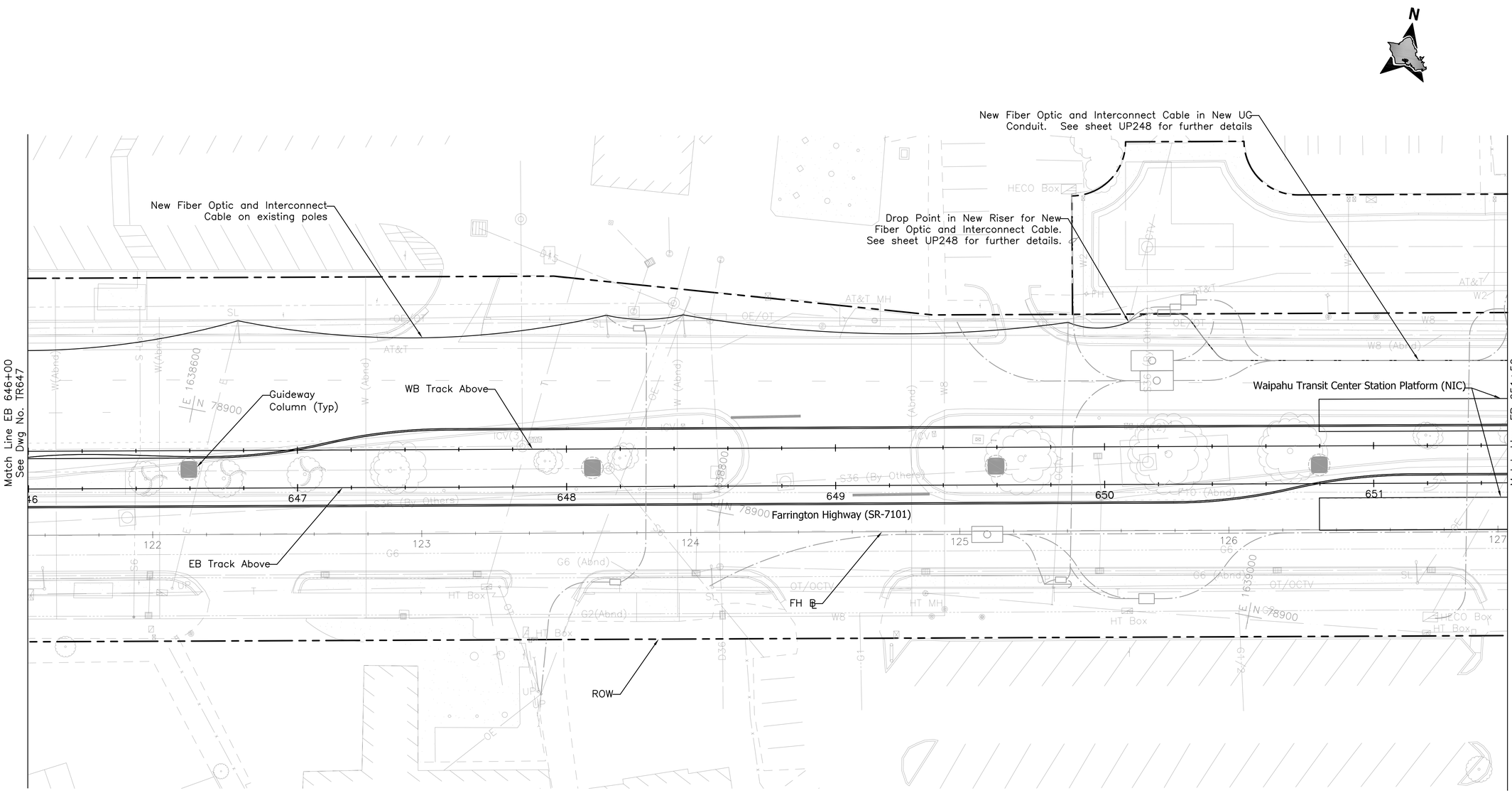
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

## TRAFFIC SIGNAL PLAN

FARRINGTON HWY AT MOKUOLA ST

Contract No.: DB–1200
CADD File: WF–C04–TR510
Drawing No.: TR510 Rev.: B
Scale: 1"=20'
Page No.: 295 of 312




NOTES:

For electrical/communications utility relocation see Drawing No. UP248.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | KKN | 04–03–09 | Issued for Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: Z Tong
Drawn: R Quemado
Checked: K Niiya
Approved: K Niiya
Date: 04–03–09

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

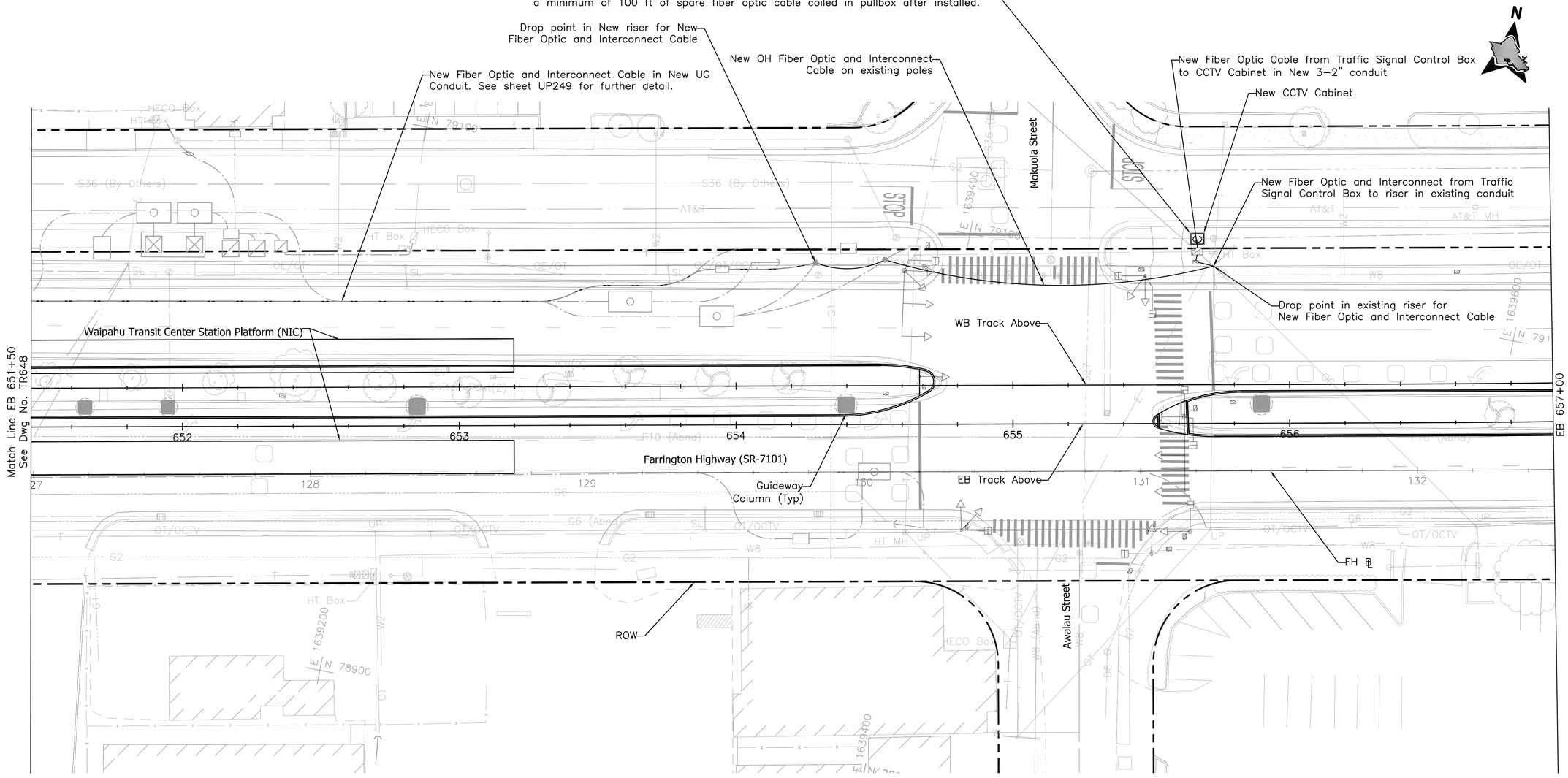
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

# FIBER OPTIC & TRAFFIC SIGNAL INTERCONNECT PLAN

EB 646+00 TO EB 651+50

Contract No.: DB–1200
CADD File: WF–C04–TR648
Drawing No.: TR648 Rev. A
Scale: 1"=20'
Page No. 307 of 312




NOTES:

For electrical/communications utility relocation see Drawing No. UP249 and for traffic signal relocation see Drawing No. TR510.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | KKN | 04–03–09 | Issued for Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: Z Tong
Drawn: R Quemado
Checked: K Niiya
Approved: K Niiya
Date: 04–03–09

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

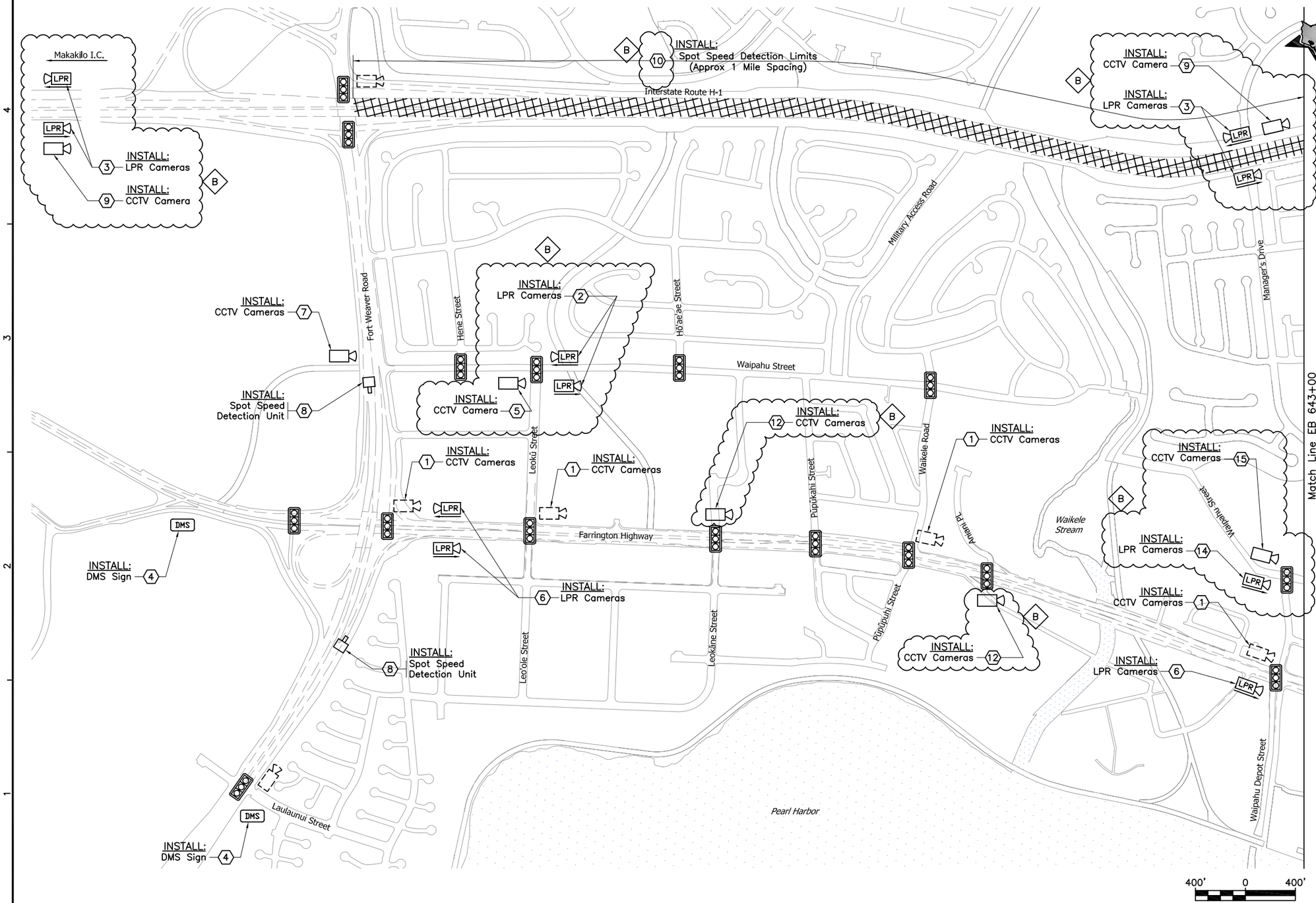
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

# FIBER OPTIC & TRAFFIC SIGNAL INTERCONNECT PLAN

EB 651+50 TO EB 657+00

Contract No.: DB–1200
CADD File: WF–C04–TR649
Drawing No.: TR649 Rev. A
Scale: 1"=20'
Page No.: 308 of 312




NOTES:

1. Contracter Shall Provide and Install Permanent CCTV Camera For Direction Of Traffic Opposite Of Existing Camera. Mount to Existing Traffic Signal Mast arm.
2. Contractor Shall Provide and Install One (1) Temporary LPR Camera Per Thru–Lane, Per Direction Of Travel. Mount to Existing Traffic Signal Mast arm. (Drawing TR908).
3. Contractor Shall Provide and Install Two (2) Permanent LPR Cameras Per Direction Of Travel. Refer To Applicable Site Plans (Drawing TR910 and TR911).
4. Contractor Shall Provide Portable DMS.
5. Contractor Shall Provide and Install One (1) Temporary CCTV Camera. (Drawing TR903)
6. Contractor Shall Provide and Install Two (2) Temporary LPR Cameras Per Direction Of Travel During Construction. Contractor Shall Replace Temporary LPR Cameras With Two (2) Permanent LPR Cameras Per Direction of Travel As Soon As Permanent Power Can Be Accommodated.
7. Contractor Shall Provide and Install One (1) Temproray CCTV Camera During Construction. Contractor Shall Replace Temporary CCTV Camera With One (1) Permanent CCTV Camera As Soon As Permanent Power Can Be Accommodated.
8. Contractor Shall Provide and Install One (1) Spot Speed Detection Unit. (See Drawing TR901)
9. Contractor Shall Provide and Install Two (2) Temporary CCTV Cameras. Mount to Existing Street Light Pole Nearest to Center of Overpass Span. Contractor Shall Replace Temporary CCTV Camera With One (1) Permanent CCTV Camera As Soon as Permanent Power Can Be Accommodated.
10. Contractor Shall Provide and Install Permanent Spot Speed Detection, For Each Direction Of Travel, At Spacing Of Approximately One Mile. (See Drawing TR901).
11. Not Used
12. Contractor Shall Provide and Install Two (2) Temporary CCTV Cameras. Mount to Existing traffic signal Mast Arms. Contractor Shall Replace Temporary CCTV Cameras With Two (2) Permanent CCTV Cameras – One (1) Camera Per Direction of Traffic. Mount to Existing Traffic Signal Mast Arms.
13. Not Used
14. Contractor Shall Provide and Install One (1) Temporary LPR Camera Per Thru Lane, Per Direction of Travel. Contractor Shall Determine Installation Method, Develop Details, and Obtain the Appropriate Approvals.
15. Contractor Shall Provide and Install One (1) Temporary CCTV Camera. Contractor Shall Determine Installation Method, Develop Details, and Obtain the Appropriate Approvals.

B

| Rev | By | Date | Description |
|---|---|---|---|
| B | GF | 05–22–09 | Location Description Revisions |
| A | GF | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: G Kurashima
Drawn: ICX
Checked: G Fromm
Approved: G Fromm
Date: 04–03–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

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

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

WEST O'AHU/FARRINGTON DESIGN-BUILD

## TRAFFIC MANAGEMENT PLAN INTELLIGENT TRANSPORTATION SYSTEMS

SHEET 1 OF 2

Contract No.: DB–1200
CADD File: WF–C04–TR801
Drawing No.: TR801 Rev.: B
Scale: 1" = 400'
Page No.: 309 of 312

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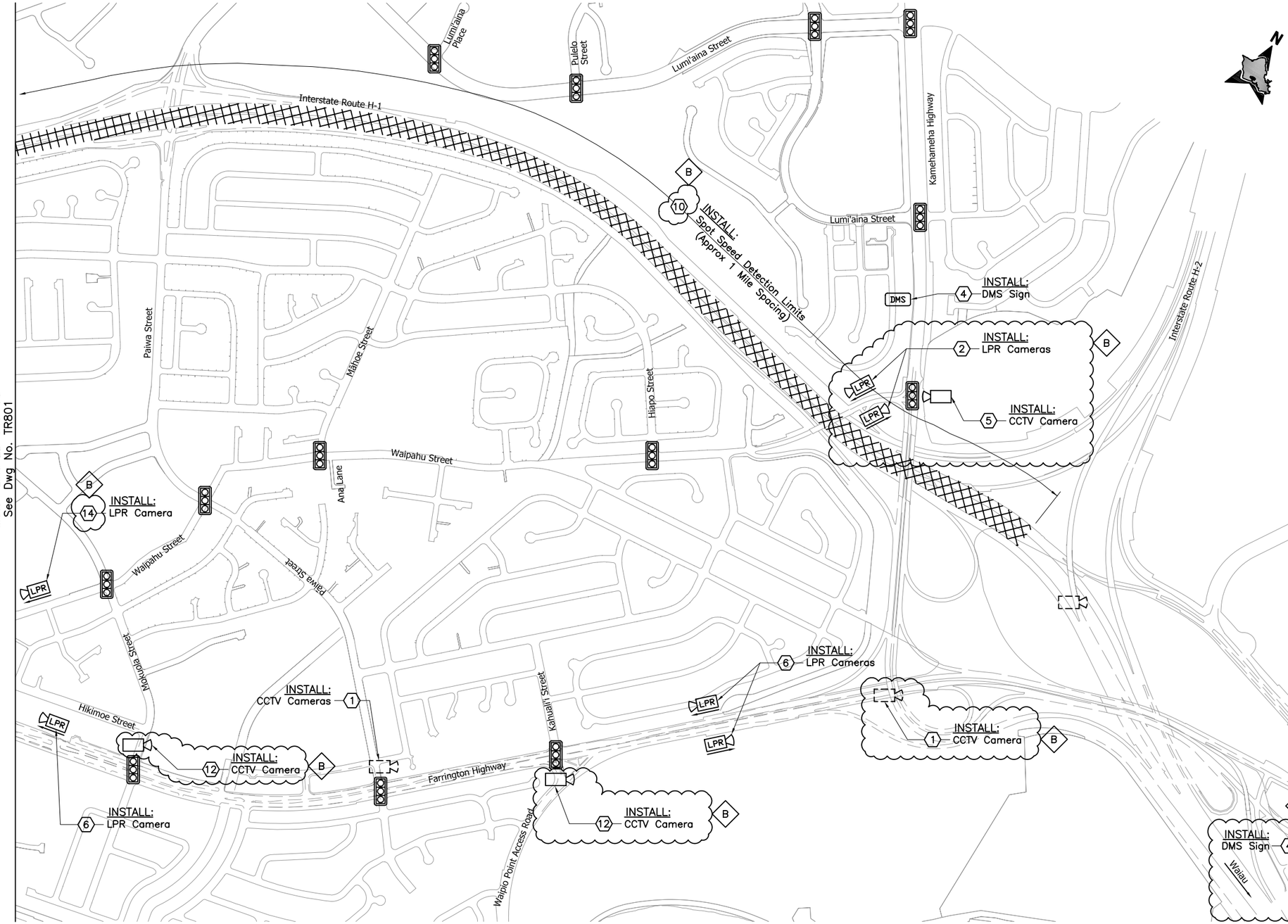


NOTES:

1. Contracter Shall Provide and Install Permanent CCTV Camera For Direction Of Traffic Opposite Of Existing Camera. Mount to Existing Traffic Signal Mast arm.
2. Contractor Shall Provide and Install One (1) Temporary LPR Camera Per Thru–Lane, Per Direction Of Travel. Mount to Existing Traffic Signal Mast arm. (Drawing TR908).
3. Contractor Shall Provide and Install Two (2) Permanent LPR Cameras Per Direction Of Travel. Refer To Applicable Site Plans (Drawing TR910 and TR911).
4. Contractor Shall Provide Portable DMS.
5. Contractor Shall Provide and Install One (1) Temporary CCTV Camera. (Drawing TR903)
6. Contractor Shall Provide and Install Two (2) Temporary LPR Cameras Per Direction Of Travel During Construction. Contractor Shall Replace Temporary LPR Cameras With Two (2) Permanent LPR Cameras Per Direction of Travel As Soon As Permanent Power Can Be Accommodated.
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8. Contractor Shall Provide and Install One (1) Spot Speed Detection Unit. (See Drawing TR901)
9. Contractor Shall Provide and Install Two (2) Temporary CCTV Cameras. Mount to Existing Street Light Pole Nearest to Center of Overpass Span. Contractor Shall Replace Temporary CCTV Camera With One (1) Permanent CCTV Camera As Soon as Permanent Power Can Be Accommodated.
10. Contractor Shall Provide and Install Permanent Spot Speed Detection, For Each Direction Of Travel, At Spacing Of Approximately One Mile. (See Drawing TR901).
11. Not Used
12. Contractor Shall Provide and Install Two (2) Temporary CCTV Cameras. Mount to Existing traffic signal Mast Arms. Contractor Shall Replace Temporary CCTV Cameras With Two (2) Permanent CCTV Cameras – One (1) Camera Per Direction of Traffic. Mount to Existing Traffic Signal Mast Arms.
13. Not Used
14. Contractor Shall Provide and Install One (1) Temporary LPR Camera Per Thru Lane, Per Direction of Travel. Contractor Shall Determine Installation Method, Develop Details, and Obtain the Appropriate Approvals.
15. Contractor Shall Provide and Install One (1) Temporary CCTV Camera. Contractor Shall Determine Installation Method, Develop Details, and Obtain the Appropriate Approvals.

| Rev | By | Date | Description |
|---|---|---|---|
| B | GF | 05–22–09 | Location Description Revisions |
| A | GF | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: G Kurashima
Drawn: ICX
Checked: G Fromm
Approved: G Fromm
Date: 04–03–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

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

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

WEST O'AHU/FARRINGTON DESIGN-BUILD

## TRAFFIC MANAGEMENT PLAN INTELLIGENT TRANSPORTATION SYSTEMS

SHEET 2 OF 2

Contract No.: DB–1200
CADD File: WF–C04–TR802
Drawing No.: TR802 Rev.: B
Scale: 1" = 400'
Page No.: 310 of 312

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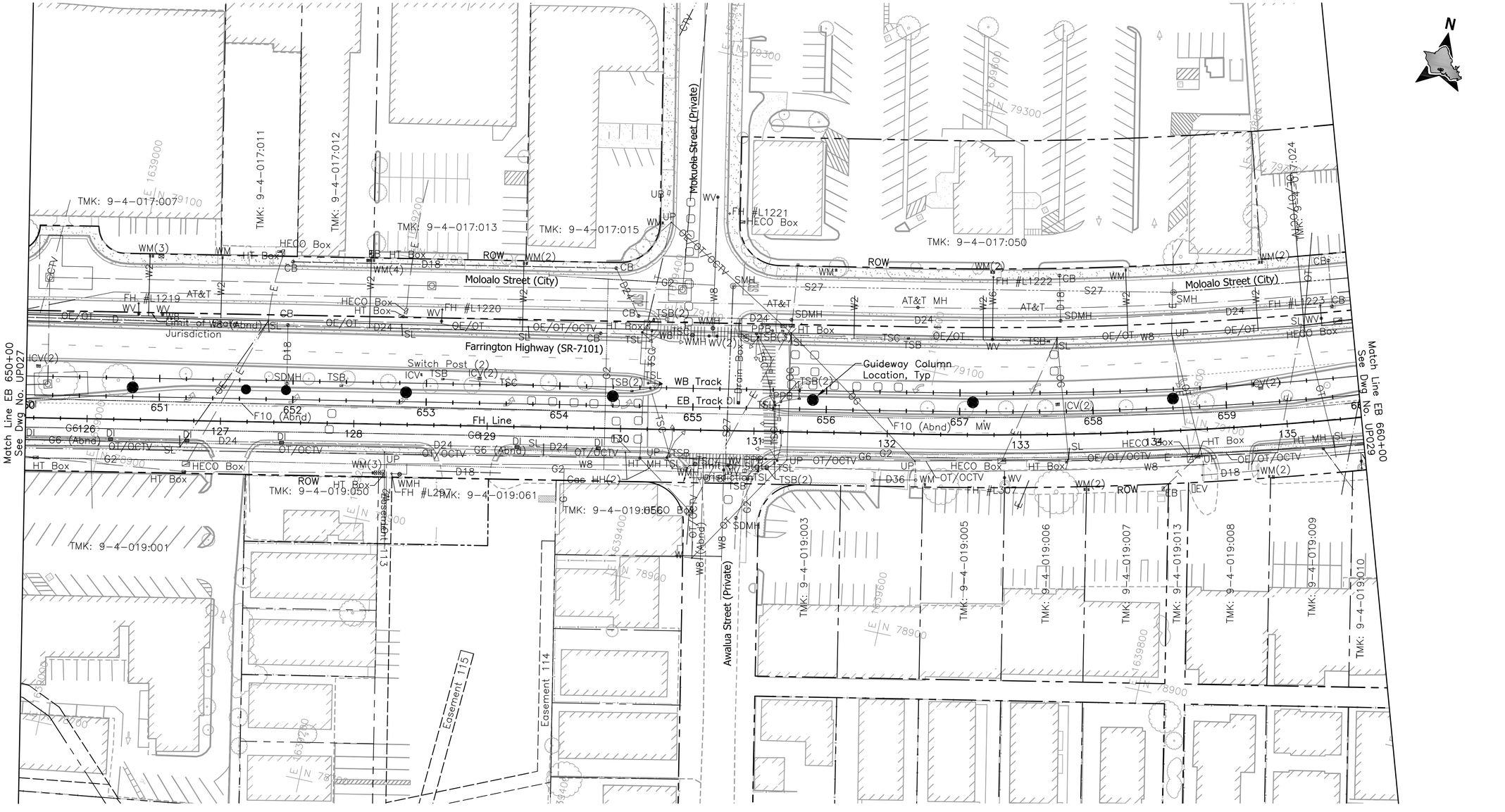



| Rev | By | Date | Description |
|---|---|---|---|
| A | JY | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: N/A
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 04–03–09

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

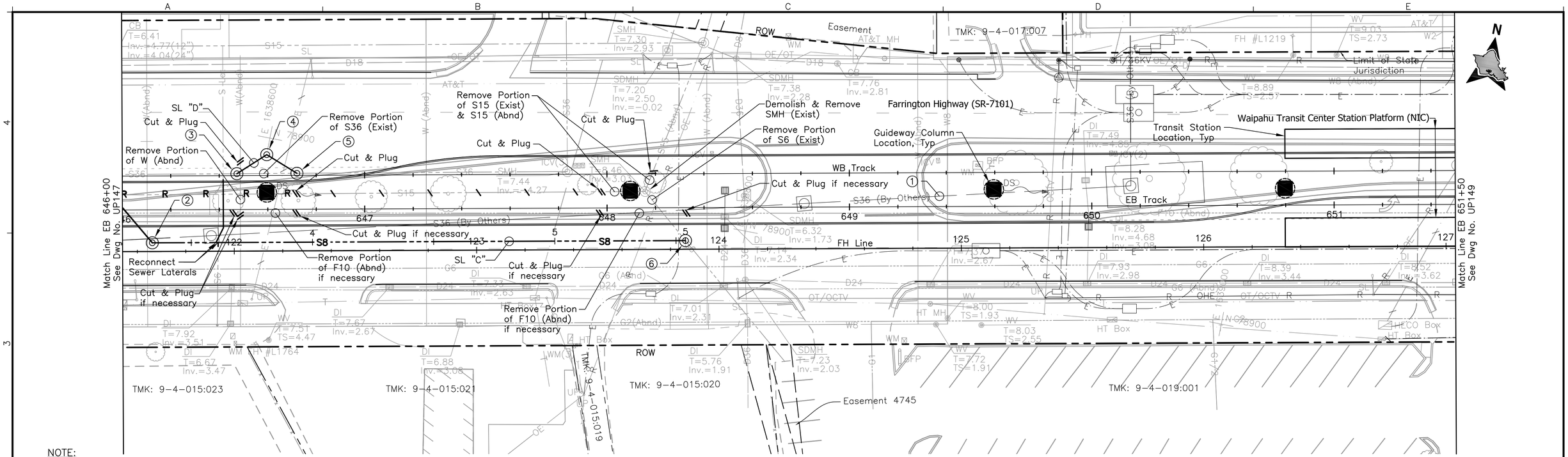
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

# COMPOSITE PLAN EXISTING UTILITIES

EB 650+00 TO EB 660+00

Contract No.: DB–1200
CADD File: WF–D02–UP028
Drawing No.: UP028 Rev. A
Scale: 1"=40'
Page No. 58 of 314




NOTE:

① Koa Ridge Offsite 36" Sewer, a proposed future microtunneling project by others, is shown for informational purposes only. The Design Build Contractor shall coordinate the location of the future line with the Project to avoid potential conflicts. The Design Build Contractor shall inform the City of all coordination efforts.

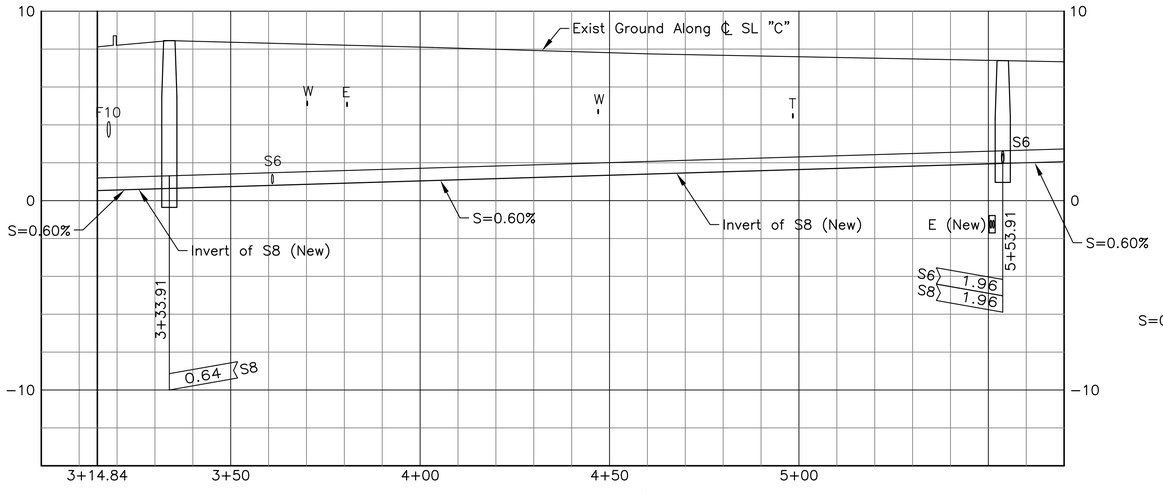
② STA 121+66.19 FH Line, O/S 3.59' Lt.
=3+33.91 SL "C"
New SMH

③ STA 122+01.19 FH Line, O/S 31.98' Lt.
=0+00 SL "D"
New SMH
Connect S36 (Exist)

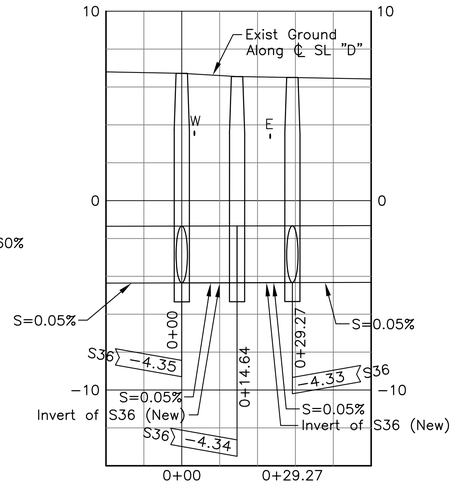
④ STA 122+13.57 FH Line, O/S 39.80' Lt.
=0+14.64 SL "D"
New SMH

⑤ STA 122+25.98 FH Line, O/S 32.04' Lt.
=0+29.28 SL "D"
New SMH
Connect S36 (Exist)

⑥ STA 123+86.19 FH Line, O/S 3.59' Lt.
=5+53.91 SL "C"
New SMH
Connect to S6 (Exist)




PROFILE: SL "C"




PROFILE: SL "D"

NOTE:

**For drainage relocations, see Drawing No. UP148A.**

20' 0 20'

4' 0 4'

| Rev | By | Date | Description |
|---|---|---|---|
| B | JY | 05-22-09 | Added Profile and Misc. Revisions |
| A | JY | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Toba
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 04-03-09

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

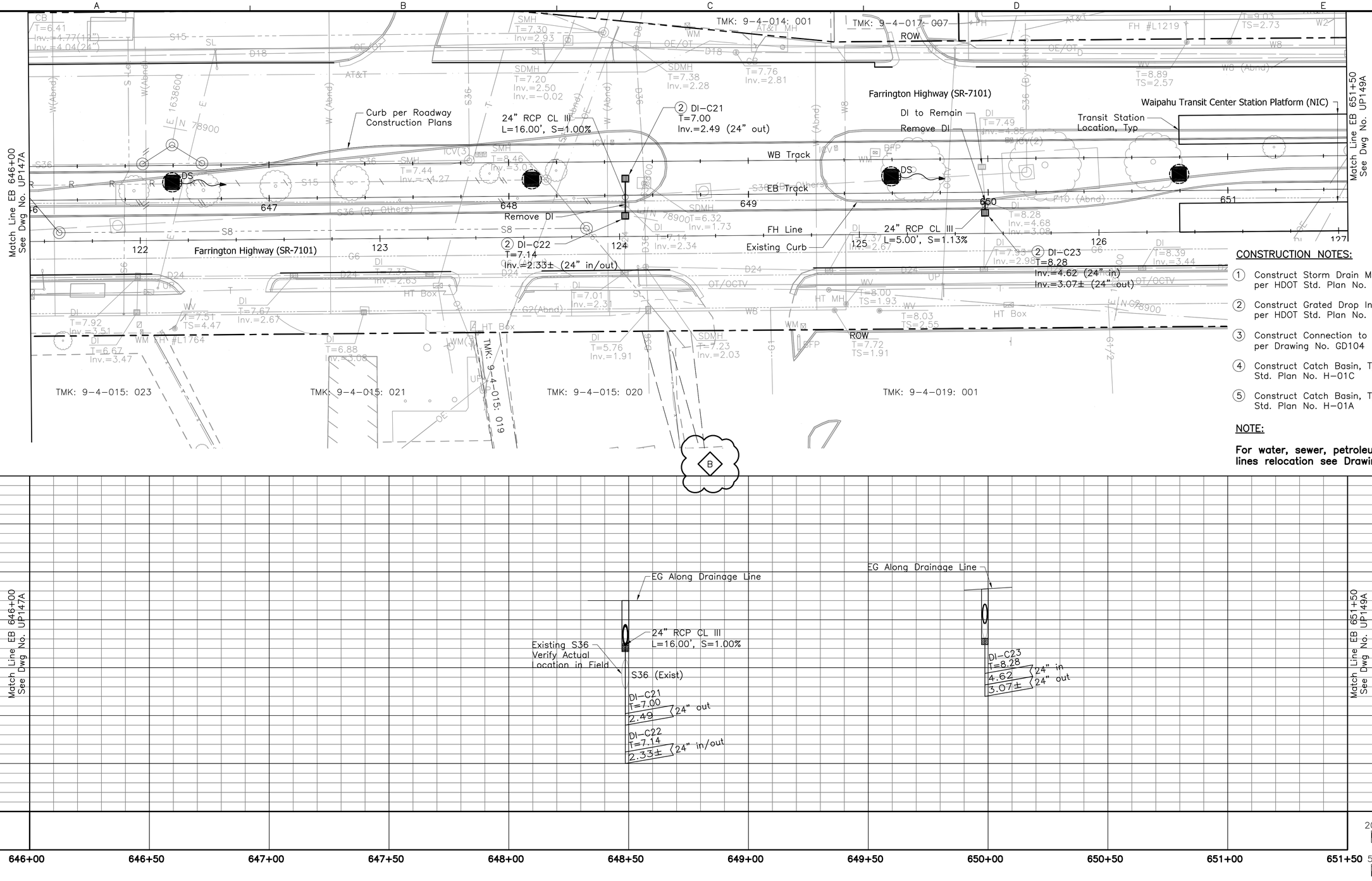
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

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

EB 646+00 TO EB 651+50 SHEET 1 OF 2

Contract No.: DB-1200
CADD File: WF-D03-UP148
Drawing No.: UP148 Rev.: B
Scale: 1"=20'
Page No.: 113 of 314




## CONSTRUCTION NOTES:

1. Construct Storm Drain Manhole, Type A per HDOT Std. Plan No. H-03
2. Construct Grated Drop Inlet, Type 1A-9P per HDOT Std. Plan No. H-08
3. Construct Connection to Existing DI/SDMH per Drawing No. GD104
4. Construct Catch Basin, Type C per HDOT Std. Plan No. H-01C
5. Construct Catch Basin, Type D per HDOT Std. Plan No. H-01A

NOTE:

**For water, sewer, petroleum and gas lines relocation see Drawing No. UP148.**

| Rev | By | Date | Description |
|---|---|---|---|
| B | MY | 05-22-09 | Added Profile & Misc. Update |
| A | MY | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: E Leung
Drawn: D Chua
Checked: N Orense
Approved: M Yonamine
Date: 04-03-09

# 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
841 Bishop Street, Suite 2006
Honolulu, HI 96813 USA
Voice: (808) 536-6621
Fax: (808) 523-1738
E-mail: adminhi@lyonassociates.com
www.lyonassociates.com

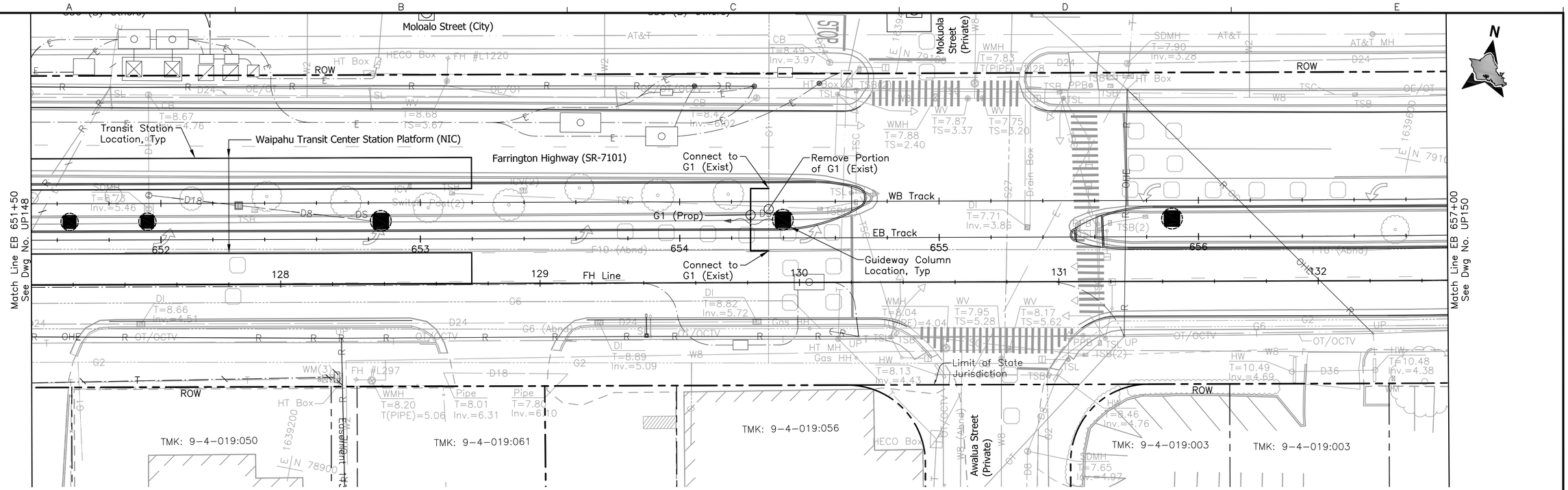

For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

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

EB 646+00 TO EB 651+50 SHEET 2 OF 2

Contract No.: DB-1200
CADD File: WF-D03-UP148A
Drawing No.: UP148A
Rev.: B
Scale: 1"=20' H, 1"=5' V
Page No.: 114 of 314




**NOTE:**

**For drainage relocations, see Drawing No. UP149A.**

20' 0 20'

4' 0 4'

| Rev | By | Date | Description |
|---|---|---|---|
| A | JY | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Toba
Drawn: D Toba
Checked: H Andrews
Approved: J Yamamoto
Date: 04–03–09

# 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

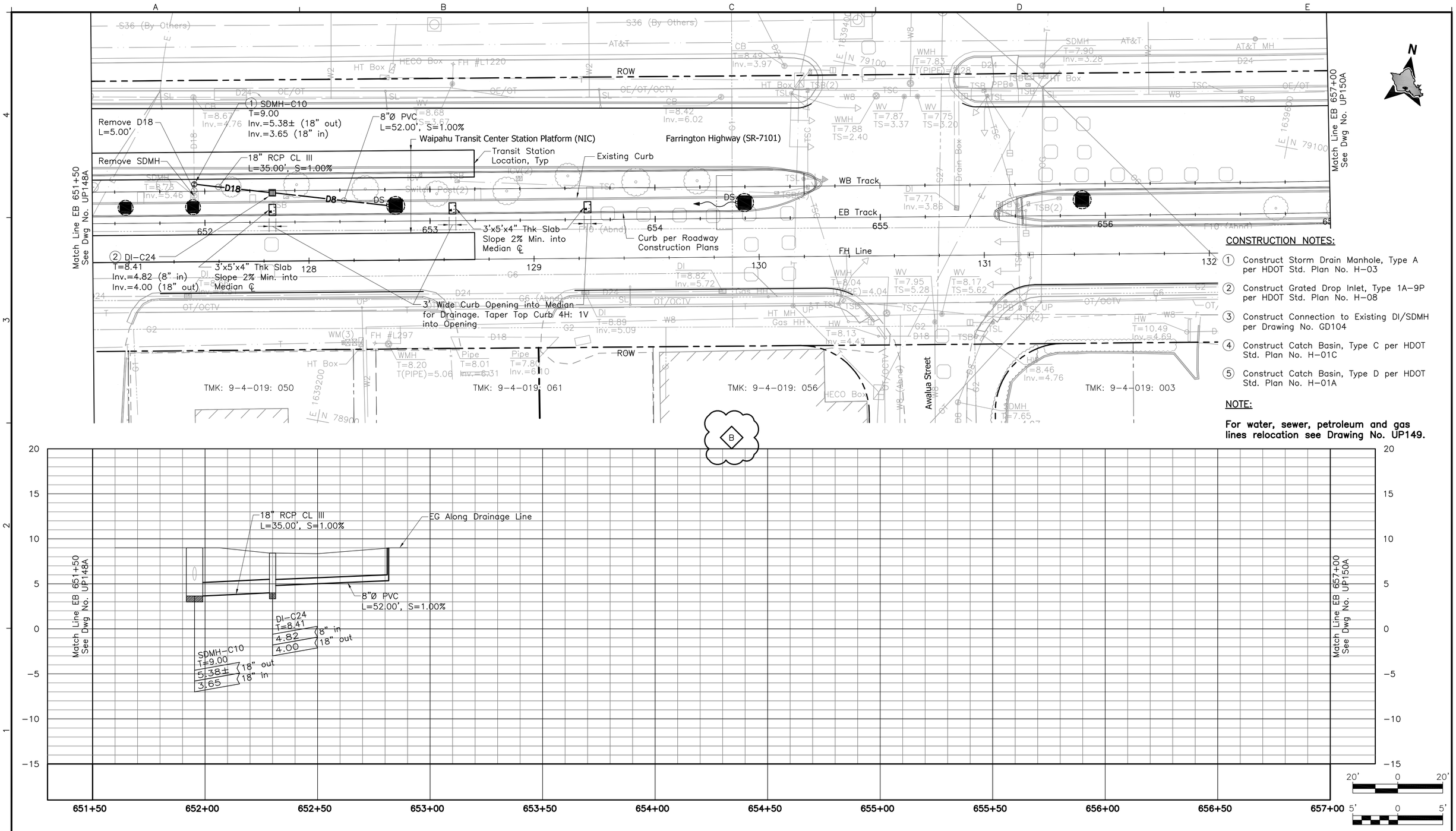
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O'AHU/FARRINGTON DESIGN-BUILD

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

EB 651+50 TO EB 657+00 SHEET 1 OF 2

Contract No.: DB–1200
CADD File: WF–D03–UP149
Drawing No.: UP149 Rev. A
Scale: 1"=20'
Page No. 115 of 314




**CONSTRUCTION NOTES:**

1. Construct Storm Drain Manhole, Type A per HDOT Std. Plan No. H-03
2. Construct Grated Drop Inlet, Type 1A-9P per HDOT Std. Plan No. H-08
3. Construct Connection to Existing DI/SDMH per Drawing No. GD104
4. Construct Catch Basin, Type C per HDOT Std. Plan No. H-01C
5. Construct Catch Basin, Type D per HDOT Std. Plan No. H-01A

**NOTE:**

**For water, sewer, petroleum and gas lines relocation see Drawing No. UP149.**

| Rev | By | Date | Description |
|---|---|---|---|
| B | MY | 05-22-09 | Added Profile & Misc. Update |
| A | MY | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: E Leung
Drawn: D Chua
Checked: N Orense
Approved: M Yonamine
Date: 04-03-09

# 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
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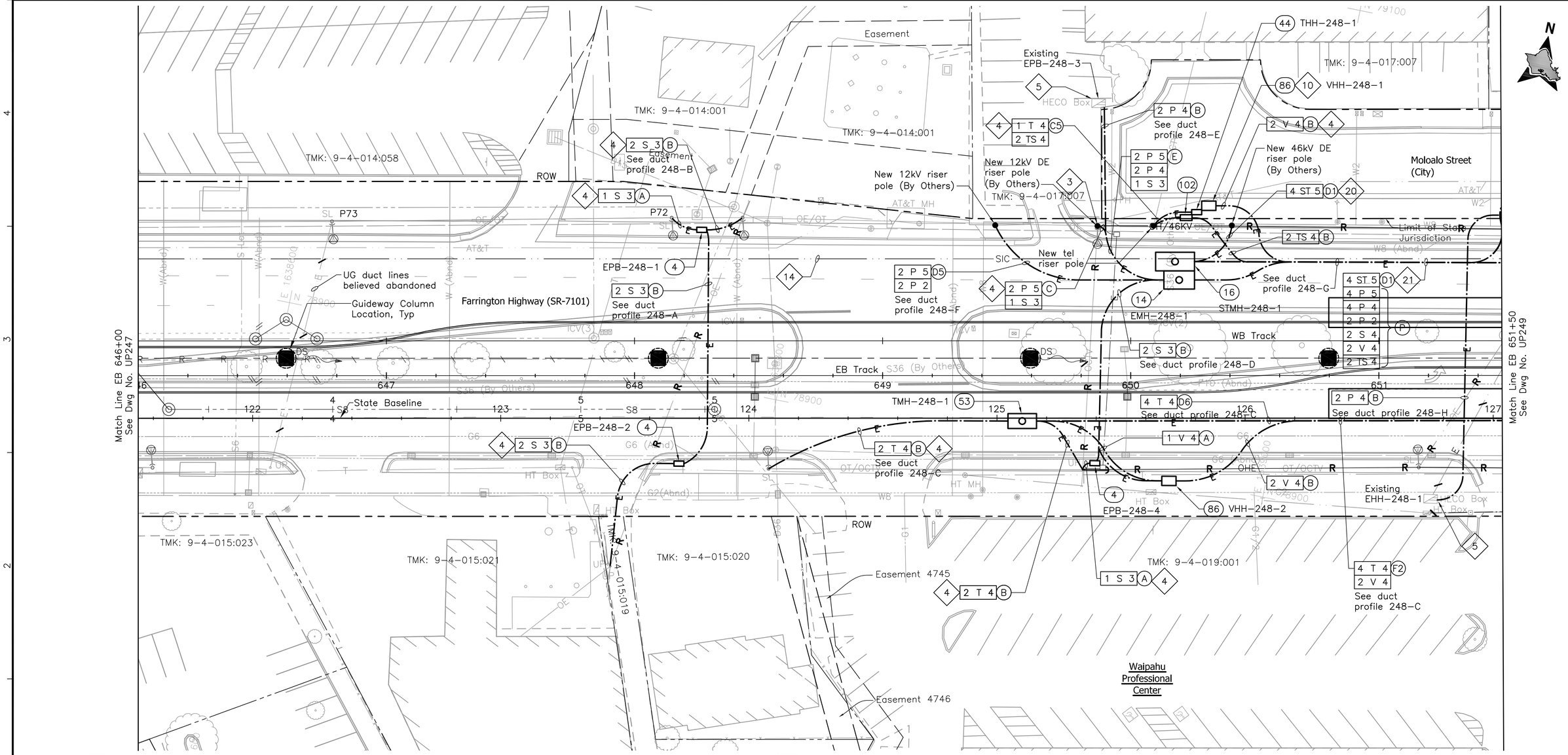
WEST O'AHU/FARRINGTON DESIGN-BUILD

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

EB 651+50 TO EB 657+00 SHEET 2 OF 2

Contract No.: DB-1200
CADD File: WF-D03-UP149A
Drawing No.: UP149A Rev.: B
Scale: 1"=20' H, 1"=5' V
Page No.: 116 of 314




NOTE:

Sandwich Isles Communications (SIC) line is a proposed future communication utility project by others and shown for informational purposes only. The symbols for SIC line are carried from the project design and have not been modified to match standard HHCTCP symbols.

NOTES:

3. Convert pole to self-sustaining metal pole (by HECO).
4. Provide pole riser conduits in complement indicated up to applicable location on pole.
5. Install conduits into manhole, handhole, or pullbox under applicable utility company supervision. See Detail 3/UP301.
10. Provide 1-4" sleeve between CATV handhole and HT handhole/manhole.
14. Sandwich Isles Communications (SIC) line is a proposed communication utility project by others and shown for informational purposes only. The Design Build Contractor shall coordinate the location of the future line with SIC to avoid potential conflicts. The Design Build Contractor shall inform the City of all coordination efforts.
20. See detail 2/UP303.
21. See detail 3/UP303.

| Rev | By | Date | Description |
|---|---|---|---|
| B | FKH | 05-22-09 | Update Drawing |
| A | RCK | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: R Katahara
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 04-03-09

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

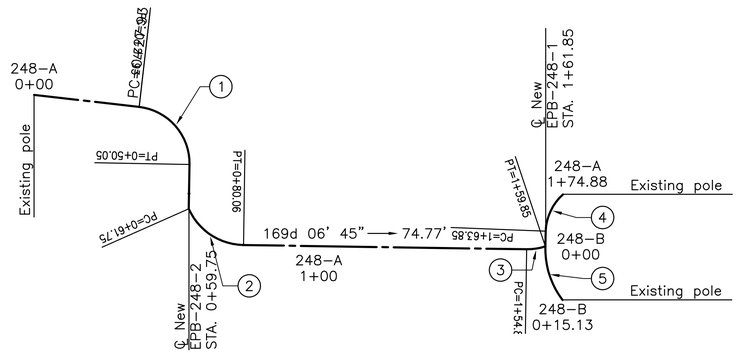
WEST O`AHU/FARRINGTON DESIGN-BUILD

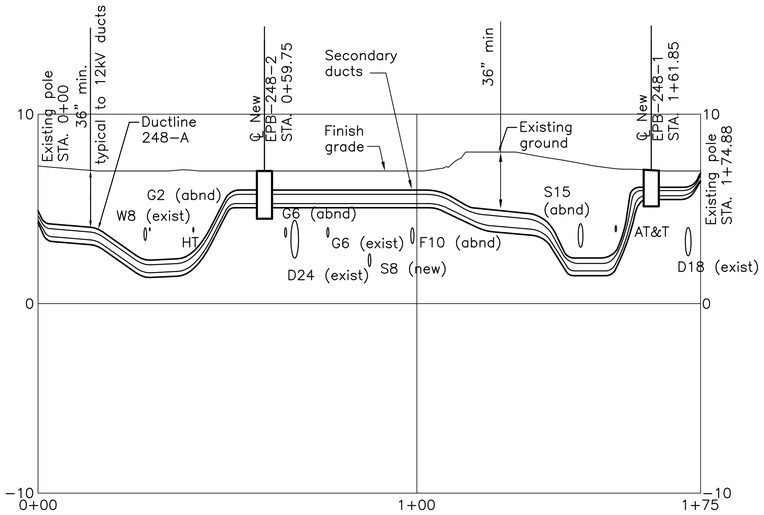
# UTILITY RELOCATION PLAN ELECTRICAL & COMMUNICATIONS

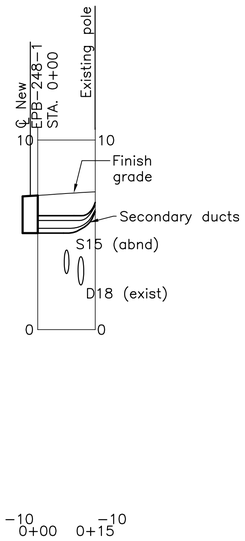
EB 646+00 TO EB 651+50

Contract No.: DB-1200
CADD File: WF-D03-UP248
Drawing No.: UP248 Rev. B
Scale: 1"=20'
Page No. 205 of 314

P:\01_PROJECTS\2007\07081-HHCTCSEIS-B_Dwg\WF-D03-UP235-UP287.dwg, WF-D03-UP248, 5/19/2009 4:23:33 PM, dwyn, 1:1




## DUCT PROFILE 248-A

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

## DUCT PROFILE 248-B

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

## HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-A"

| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
|---|---|---|---|---|---|---|---|
| 1 | 0+27.93 | 0+50.05 | 84d 29' 35" | 15.00' | 13.62' | 20.17' | 22.12' |
| 2 | 0+61.75 | 0+80.06 | 65d 12' 56" | 16.09' | 10.29' | 17.34' | 18.31' |
| 3 | 1+54.83 | 1+59.85 | 19d 23' 59" | 14.83' | 2.53' | 5.00' | 5.02' |
| 4 | 1+63.85 | 1+74.88 | 45d 47' 12" | 13.81' | 5.83' | 10.74' | 11.03' |

## HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-B"

| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
|---|---|---|---|---|---|---|---|
| 5 | 0+00 | 0+15.13 | 39d 13' 26" | 22.10' | 7.87' | 14.83' | 15.13' |

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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

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

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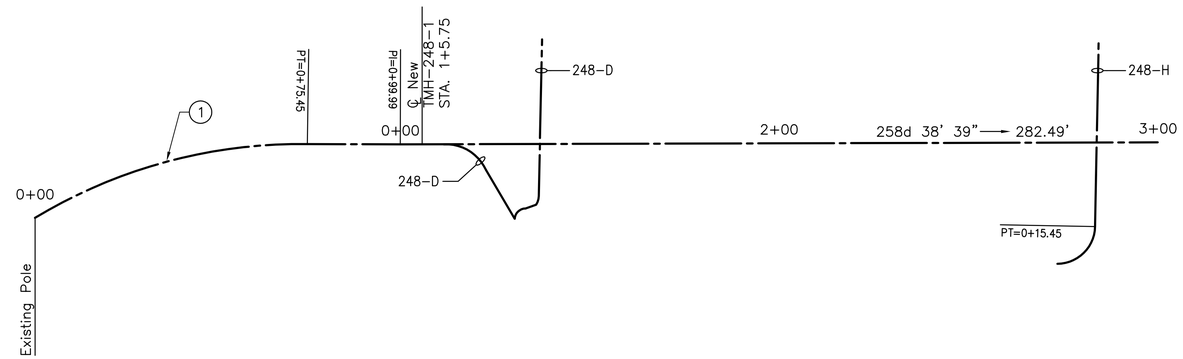
For reduced prints, original page size in inches: 0 1 2 3 4

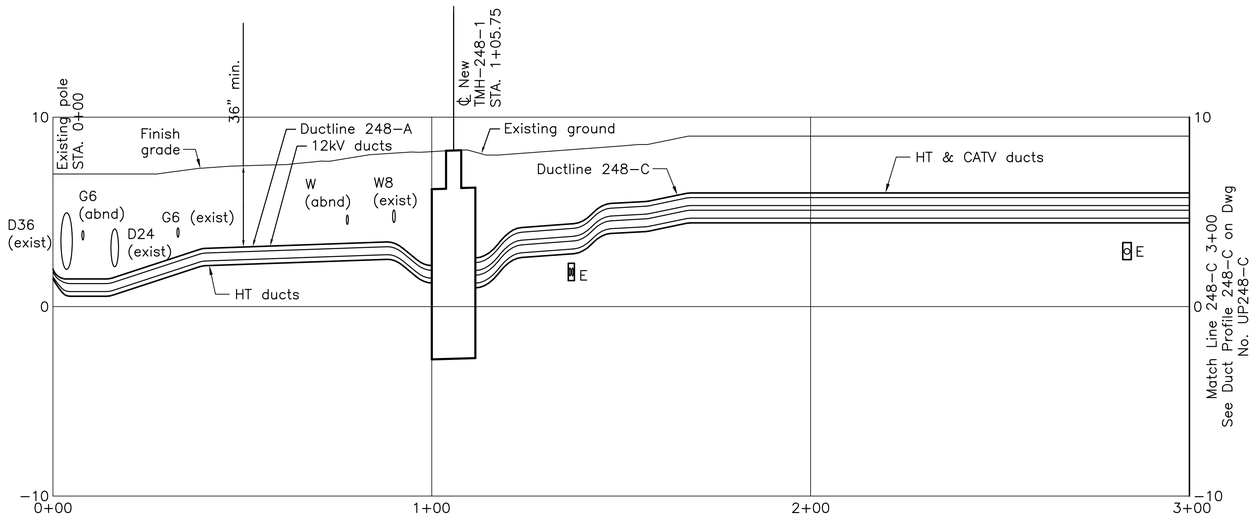
WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-A & 248-B

Contract No.: DB-1200
CADD File: WF-D03-UP248A
Drawing No: UP248A
Rev. A
Scale: 1"=20'
Page No. 206 of 314

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-C" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 1 | 0+00 | 0+75.45 | 31d 57' 53" | 135.25' | 38.74' | 74.48' | 75.45' |




## DUCT PROFILE 248-C

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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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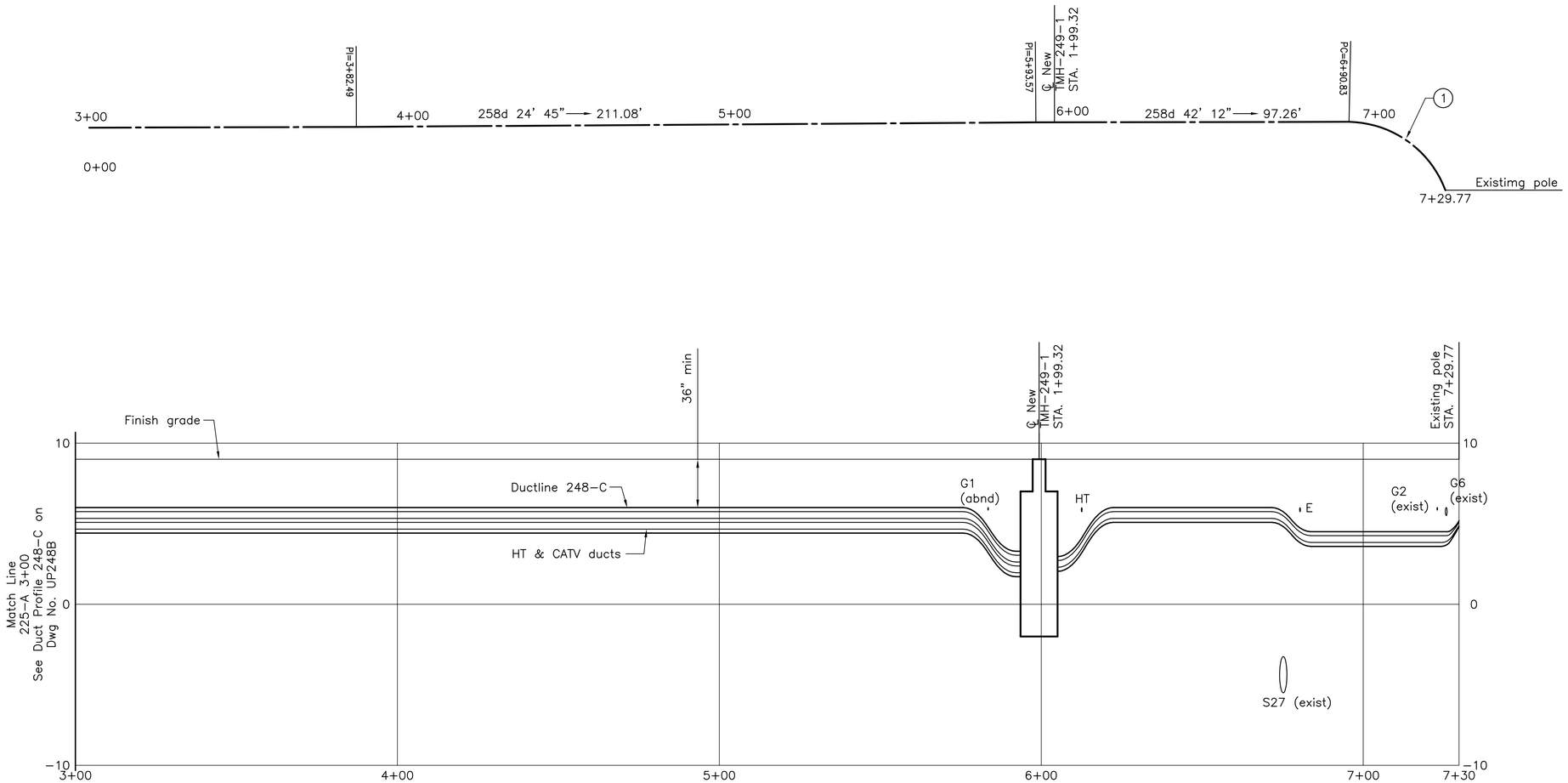
WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-C

SHEET 1 OF 2

Contract No.: DB-1200
CADD File: WF-D03-UP248B
Drawing No: UP248B
Rev. A
Scale: 1"=20'
Page No. 207 of 314

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-C" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 1 | 6+90.83 | 7+29.77 | 68d 23' 07" | 32.63' | 22.17' | 36.67' | 38.95' |




## DUCT PROFILE 248-C

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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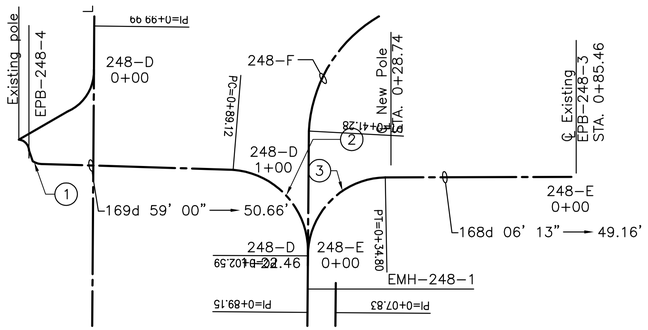
For reduced prints, original page size in inches: 0 1 2 3 4

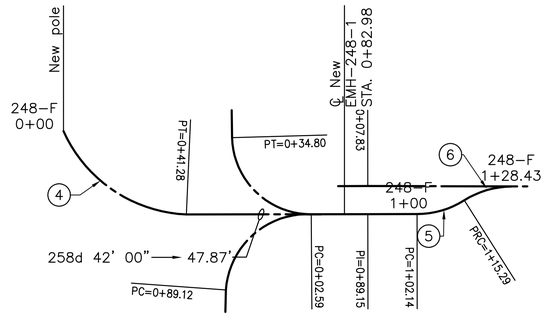
WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-C

SHEET 2 OF 2

Contract No.: DB-1200
CADD File: WF-D03-UP248C
Drawing No: UP248C
Rev. A
Scale: 1"=20'
Page No. 208 of 314

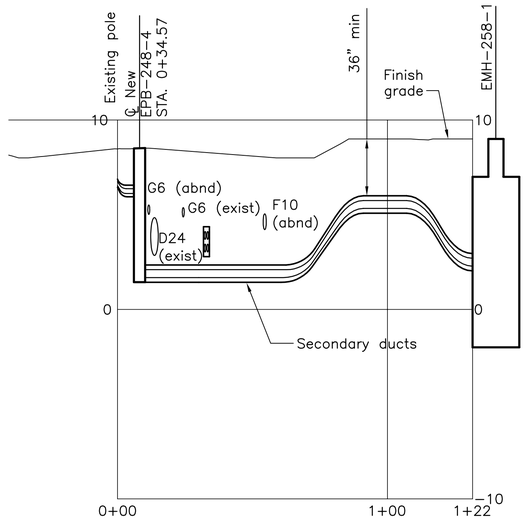



| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-D" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 1 | 0+36.05 | 0+38.46 | 31d 20' 19" | 4.40' | 1.23' | 2.38' | 2.41' |
| 2 | 0+89.12 | 1+22.46 | 88d 41' 00" | 21.54' | 21.05' | 31.10' | 33.33' |

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-E" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 3 | 0+00 | 0+81.37 | 88d 44' 31" | 20.80' | 20.34' | 29.08' | 32.21' |

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-F" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 4 | 0+00 | 0+41.28 | 63d 21' 25" | 37.33' | 23.04' | 39.21' | 41.28' |
| 5 | 1+02.14 | 1+15.29 | 32d 17' 59" | 23.32' | 6.75' | 12.97' | 13.14' |
| 6 | 1+15.29 | 1+28.43 | 32d 17' 59" | 23.32' | 6.75' | 12.97' | 13.14' |

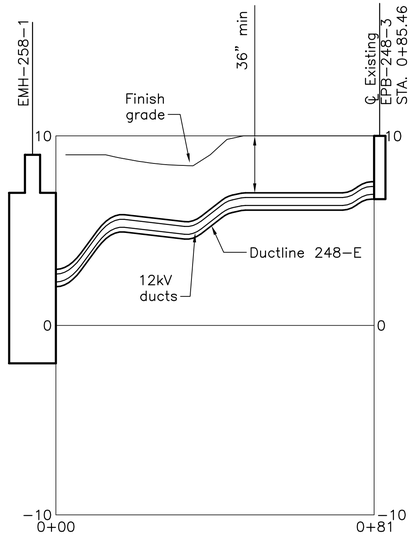



## DUCT PROFILE 248-D

HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

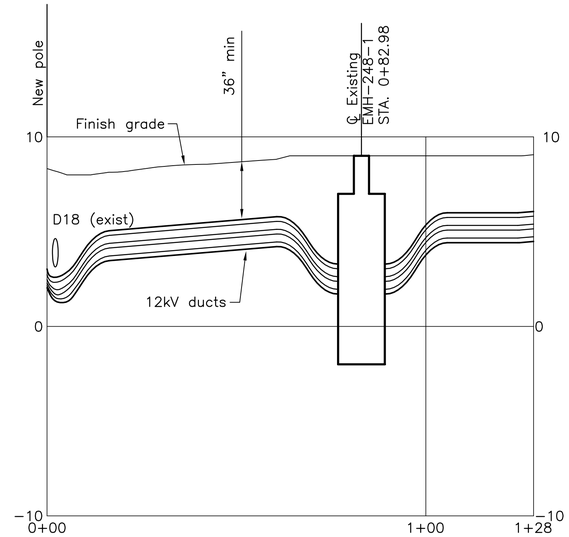



## DUCT PROFILE 248-E

HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.




## DUCT PROFILE 248-F

HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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

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

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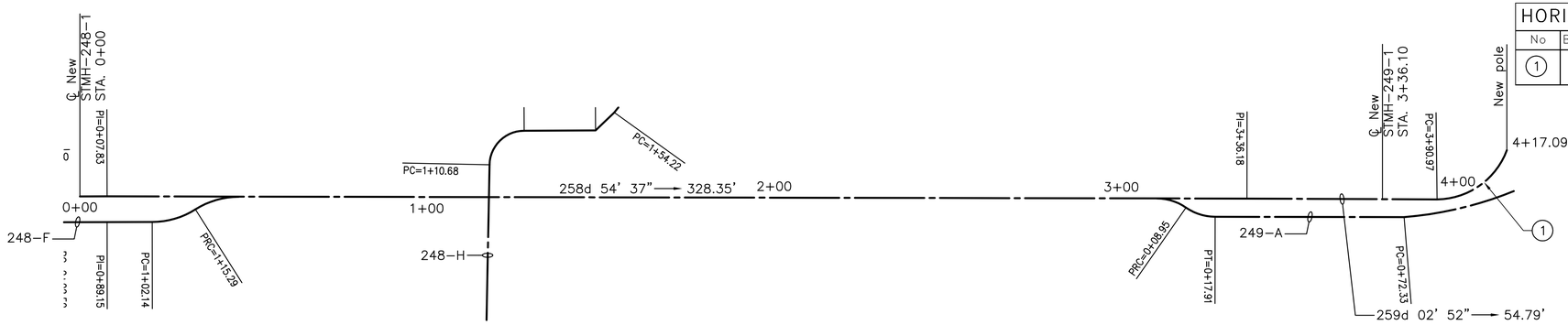
For reduced prints, original page size in inches: 0 1 2 3 4

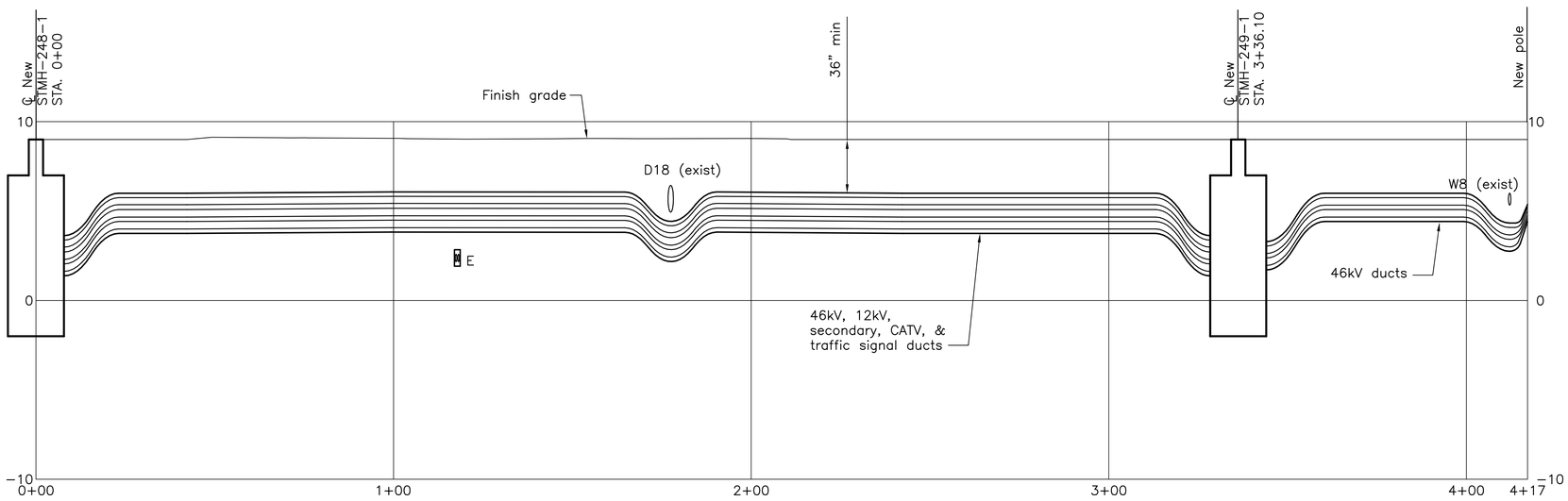
WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-D, 248-E & 248-F

Contract No.: DB-1200
CADD File: WF-D03-UP248D
Drawing No: UP248D
Rev. A
Scale: 1"=20'
Page No. 209 of 314

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-G" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 1 | 3+90.97 | 4+17.09 | 69d 01' 42" | 21.68' | 14.91' | 24.57' | 26.12' |




## DUCT PROFILE 248-G

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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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Phone: (808) 848-8622
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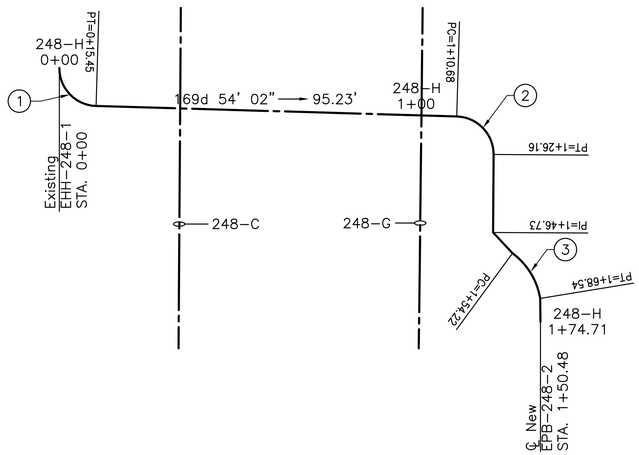
E-Mail: info@mkhawaii.com

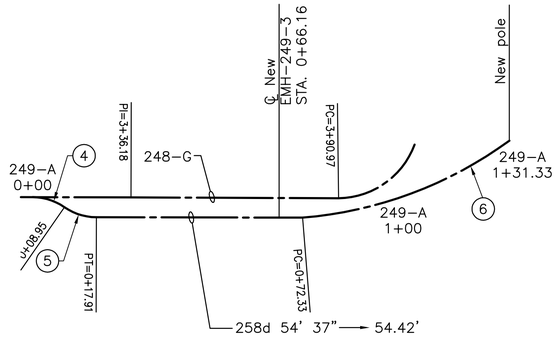
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-G

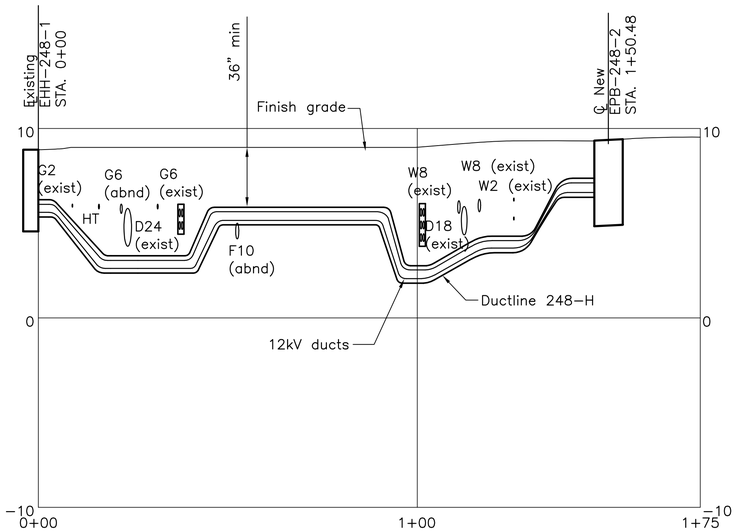
Contract No.: DB-1200
CADD File: WF-D03-UP248E
Drawing No: UP248E
Rev. A
Scale: 1"=20'
Page No. 210 of 314

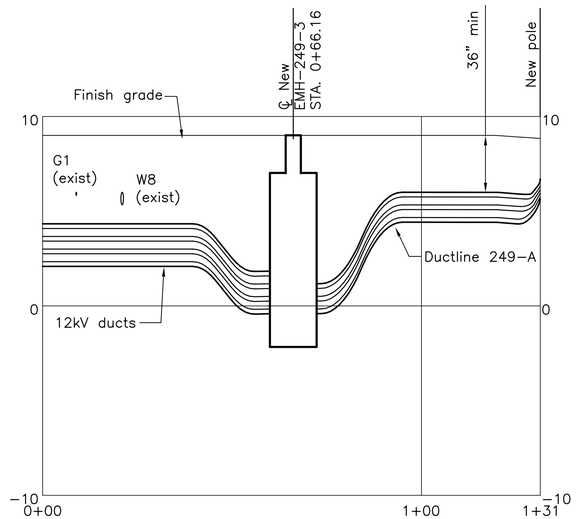



| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "248-H" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 1 | 0+00 | 0+15.45 | 88d 31' 52" | 10.00' | 9.75' | 13.96' | 15.45' |
| 2 | 1+10.68 | 1+26.16 | 88d 40' 07" | 10.00' | 9.77' | 13.98' | 15.48' |
| 3 | 1+54.22 | 1+68.54 | 44d 29' 56" | 18.44' | 7.55' | 13.97' | 14.32' |

| HORIZONTAL GEOMETRY FOR ELECTRICAL DUCTLINE "249-A" | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | Begin Station | End Station | Delta | Radius | Tangent | Chord | Arc Length |
| 4 | 0+00 | 0+08.95 | 34d 43' 16" | 14.77' | 4.62' | 8.82' | 8.95' |
| 5 | 0+08.95 | 0+17.91 | 34d 43' 16" | 14.77' | 4.62' | 8.82' | 8.95' |
| 6 | 0+72.33 | 1+31.33 | 31d 33' 18" | 107.14' | 30.27' | 58.26' | 59.00' |




## DUCT PROFILE 248-H

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

## DUCT PROFILE 249-A

HORIZONAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 4'-0"

NOTES:

1. Provide minimum clearance to existing utilities per Hawaiian Electric Company note #14 on UG010.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | FKH | 05-22-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: F Hirakami
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 05-22-09

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: MKengineers
286 Kalihi Street
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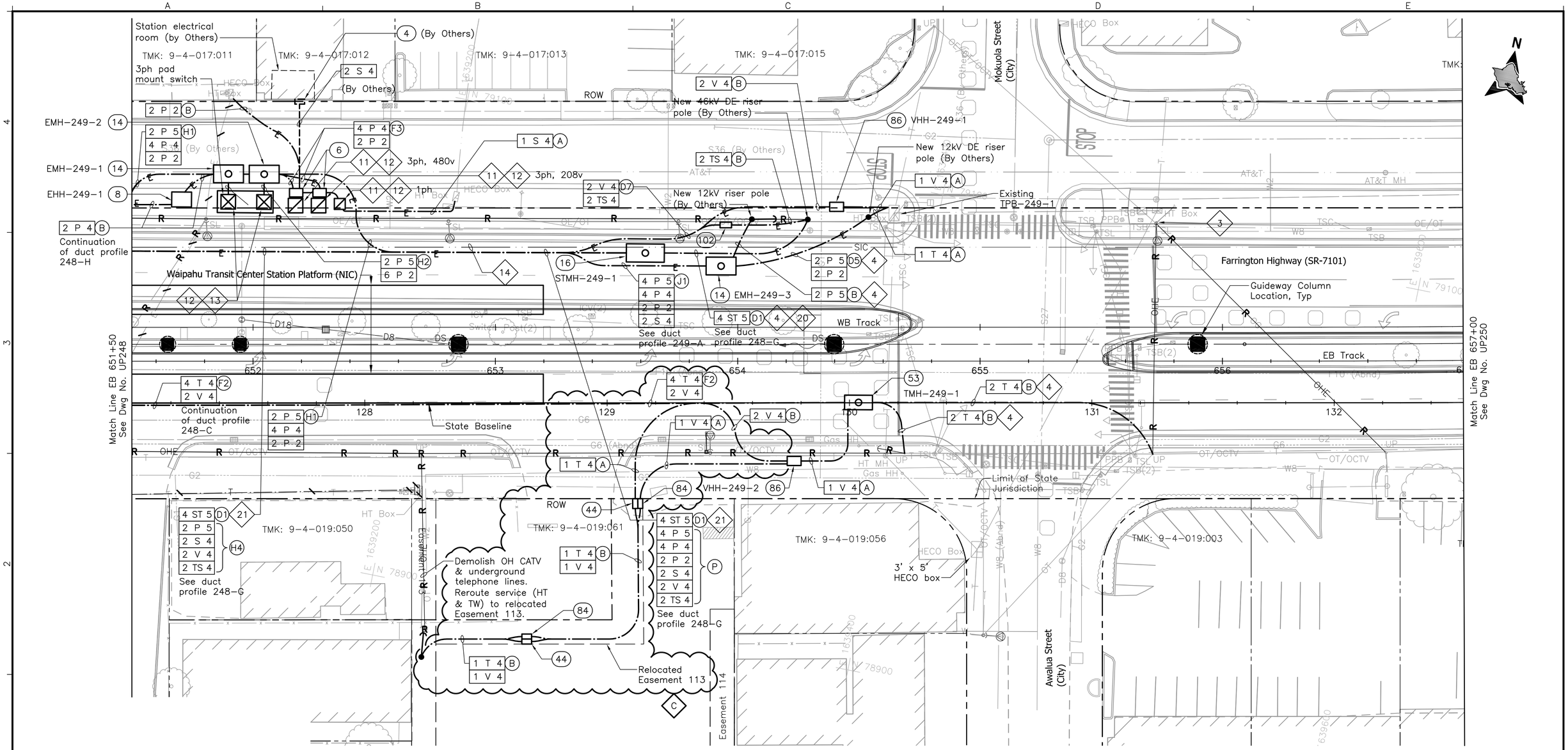
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
DUCT PROFILE 248-H & 249-A

Contract No.: DB-1200
CADD File: WF-D03-UP248F
Drawing No: UP248F
Rev. A
Scale: 1"=20'
Page No. 211 of 314




NOTE:

Sandwich Isles Communications (SIC) line is a proposed future communication utility project by others and shown for informational purposes only. The symbols for SIC line are carried from the project design and have not been modified to match standard HHCTCP symbols.

NOTES:

3 Convert pole to self-sustaining metal pole (by HECO).

4 Provide pole riser conduits in complement indicated up to applicable location on pole.

11 Provide transformer concrete pad (transformer by HECO). See detail 1/UP306.

12 Preliminary new HECO service design only; to be finalized by Design Build Contractor.

13 Provide switchgear concrete pad (switchgear by HECO). See details 1/UP307 & 2/UP307.

14 Sandwich Isles Communications (SIC) line is a proposed communication utility project by others and shown for informational purposes only. The Design Build Contractor shall coordinate the location of the future line with SIC to avoid potential conflicts. The Design Build Contractor shall inform the City of all coordination efforts.

B

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| C | FKH | 08-05-09 | Relocate HT & TW to new easement |
| B | FKH | 05-22-09 | Update Drawing |
| A | RCK | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: R Katahara
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 04-03-09

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

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

Subconsultant: MKengineers
286 Kalihi Street
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E-Mail: info@mkhawaii.com

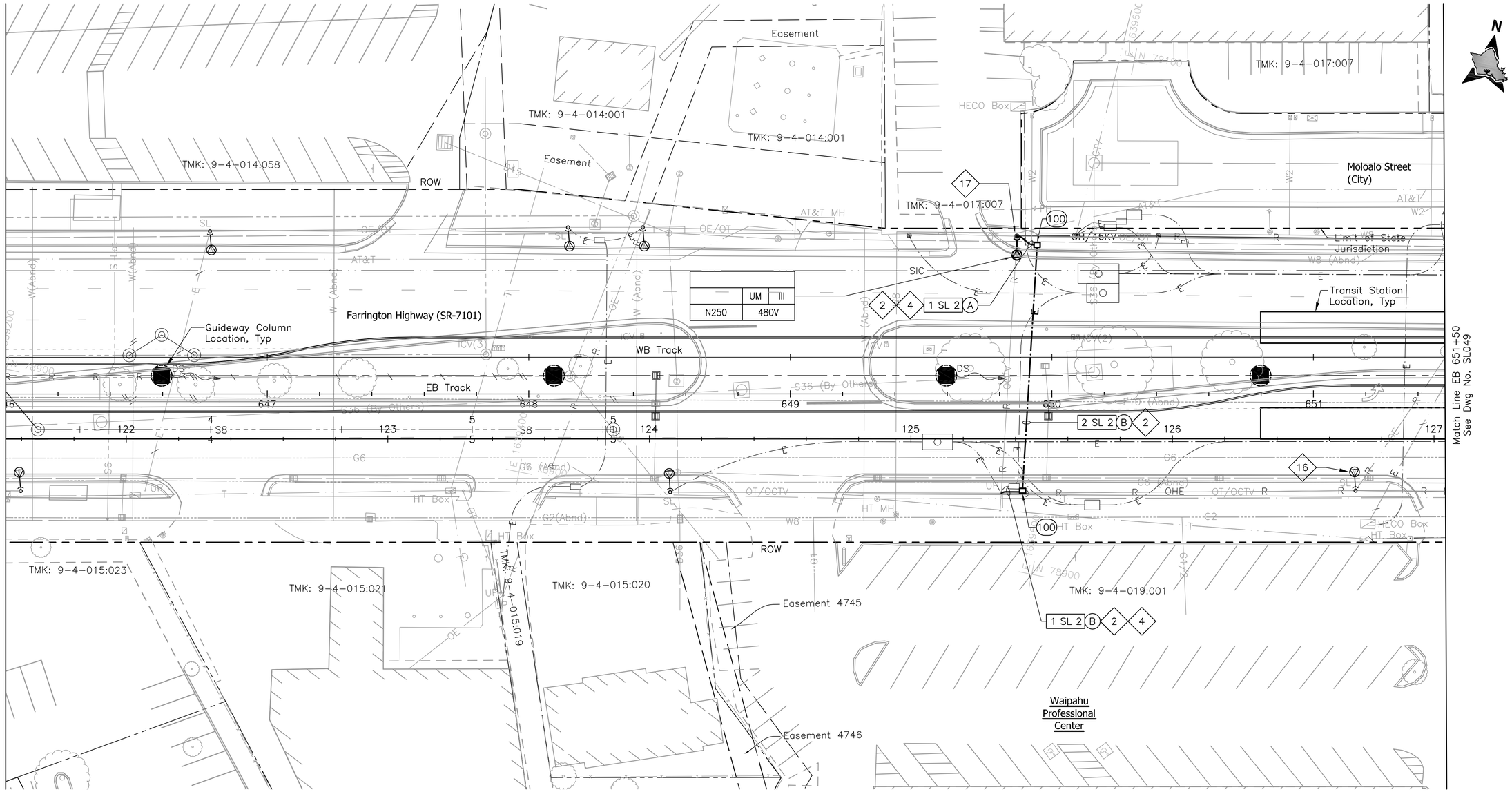
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
ELECTRICAL & COMMUNICATIONS

EB 651+50 TO EB 657+00

Contract No.: DB-1200
CADD File: WF-D03-UP249
Drawing No: UP249
Rev. C
Scale: 1"=20'
Page No. 212 of 314




NOTE:

Sandwich Isles Communications (SIC) line is a proposed future communication utility project by others and shown for informational purposes only. The symbols for SIC line are carried from the project design and have not been modified to match standard HHCTCP symbols.

NOTES:

2 Provide 3#2, #8 ground in conduit, pullboxes, risers and make connections to replace overhead conductors.

4 Provide pole riser conduits in complement indicated up to applicable location on pole.

16 HECO to top pole above street light conductor contact point after 46kV & 12kV conductors are removed. Retain street light conductors on pole.

17 Attach existing street light conductors to new pole. Relocate existing light fixture from old pole to new pole unless a new fixture is indicated. Provide new bracket arm with length to match existing. Reconnect fixture; see detail A/SL415.

B

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| B | FKH | 05-22-09 | Update Drawing |
| A | RCK | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: R Katahara
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 04-03-09

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

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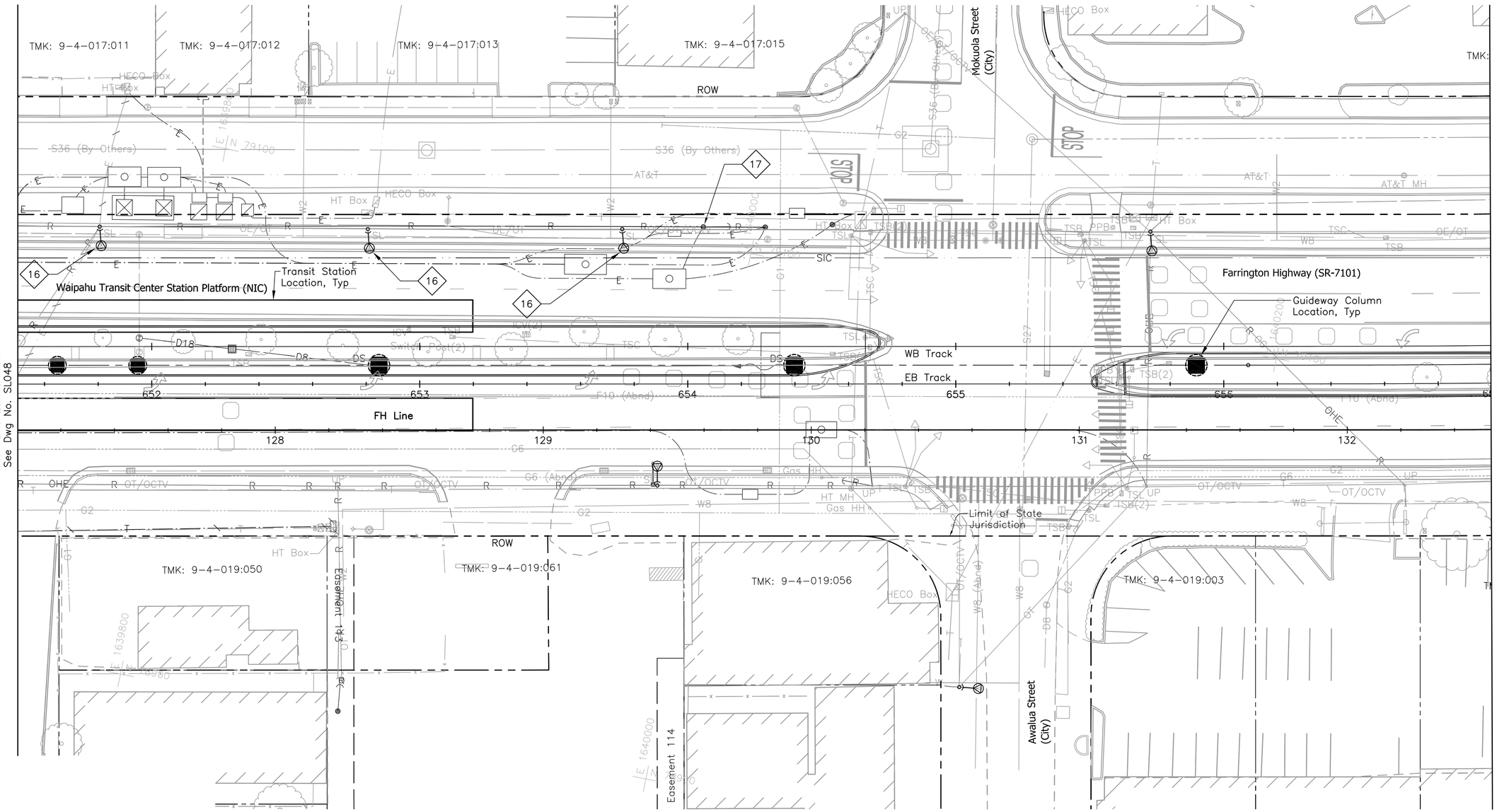
For reduced prints, original page size in inches: 0 1 2 3 4

WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
STREET LIGHTING

EB 646+00 TO EB 651+50

Contract No.: DB-1200
CADD File: WF-D04-SL048
Drawing No: SL048
Rev. B
Scale: 1"=20'
Page No. 278 of 314




NOTE:

Sandwich Isles Communications (SIC) line is a proposed future communication utility project by others and shown for informational purposes only. The symbols for SIC line are carried from the project design and have not been modified to match standard HHCTCP symbols.

NOTES:

16 HECO to top pole above street light conductor contact point after 46kV & 12kV conductors are removed. Retain street light conductors on pole.

17 Attach existing street light conductors to new pole. Relocate existing light fixture from old pole to new pole unless a new fixture is indicated. Provide new bracket arm with length to match existing. Reconnect fixture; see detail A/SL415.

20' 0 20'

| Rev | By | Date | Description |
|---|---|---|---|
| A | RCK | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: R Katahara
Drawn: D Saito
Checked: P Uyeda
Approved: P Uyeda
Date: 04-03-09

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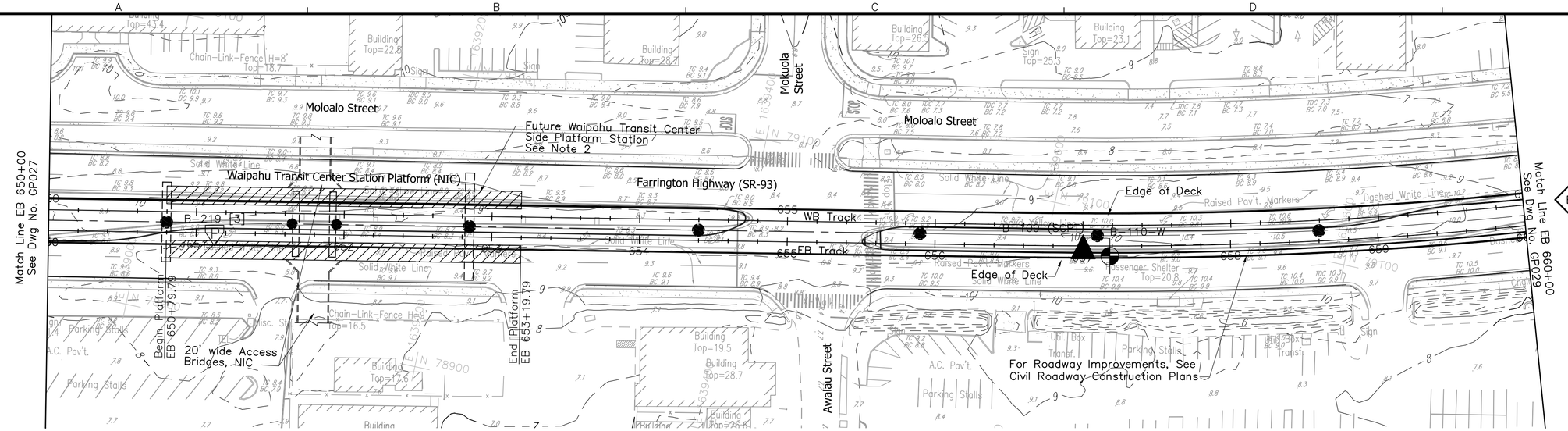
For reduced prints, original page size in inches: 0 1 2 3 4

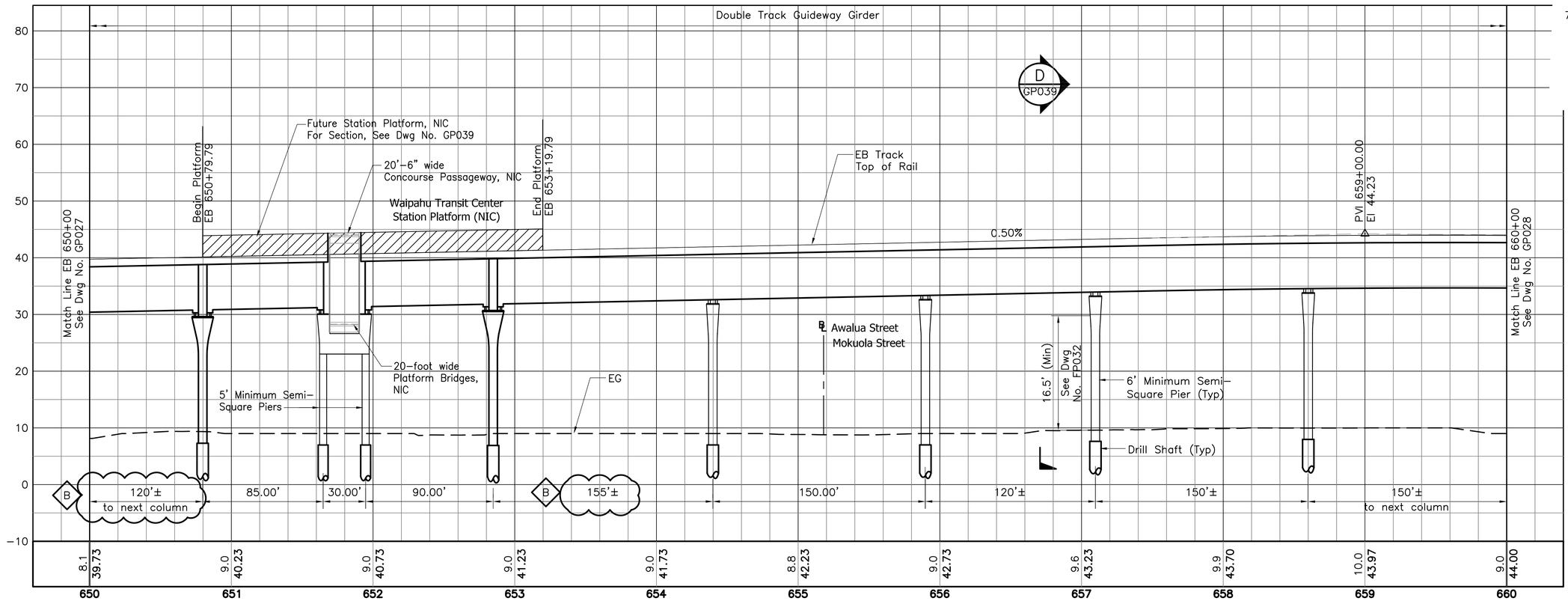
WEST O`AHU/FARRINGTON DESIGN-BUILD

UTILITY RELOCATION PLAN
STREET LIGHTING

EB 651+50 TO EB 657+00

Contract No.: DB-1200
CADD File: WF-D04-SL049
Drawing No: SL049 Rev. A
Scale: 1"=20'
Page No. 279 of 314




N

**NOTE:**

1. See Dwg Nos. SG001 and SG002 for Structural General Notes, Symbols and Abbreviations.
2. For Station Details, See Dwg Nos. FP017 through FP020.
3. The configuration shown relative to NIC work and site condition is under development and subject to change.
4. The depiction of retaining walls is for approximate location only. The type of wall and its foundation required to protect structural facilities against ground movement and settlement is to be determined by the Design–Builder. The Design–Builder shall also provide retaining walls that may not be shown, but are dependant on his approved grading plans.
5. Complete Structural and Geotechnical calculations and drawings must be provided for all newly constructed structures and for all facilities within the zone of construction influence.
6. Drilled shaft foundations are shown for reference only. The actual type and size of the pier foundations shall be determined by the Design–Builder.
7. Unless shown otherwise on the drawings, the semi–square columns, if used, shall not be less than 6–foot by 6–foot, and the associated drilled shafts shall not be less than 8–foot in diameter.

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Revised Notes; Revised Dimensions |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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

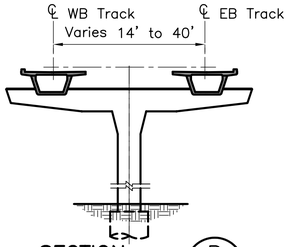
WEST O'AHU/FARRINGTON DESIGN-BUILD

STRUCTURAL
PLAN & PROFILE

EB 650+00 TO EB 660+00

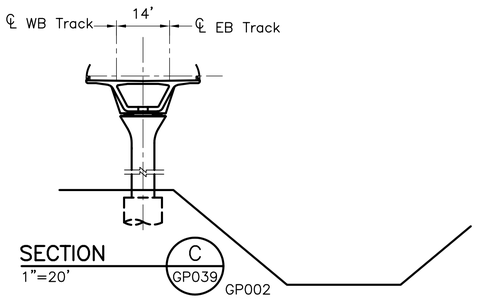
Contract No.: DB–1200
CADD File: WF–G04–GP028
Drawing No.: GP028 Rev. B
Scale: 1"=40' H, 1"=10' V
Page No. 49 of 209

2009–05–19 4:13 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G04–GP020.dwg



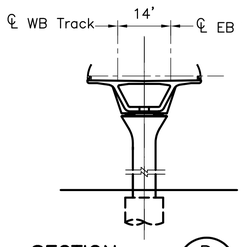

SECTION B
1"=20'
GP039

GP001
GP002



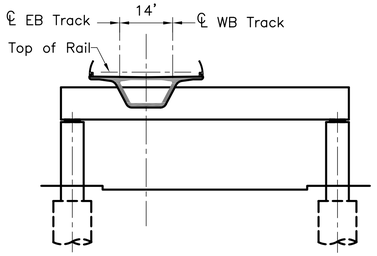

SECTION C
1"=20'
GP039

GP002
GP003
GP004
GP005
GP006



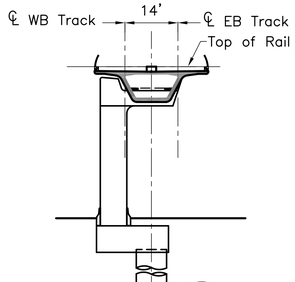

SECTION D
1"=20'
GP039

GP007 GP016 GP025
GP008 GP017 GP026
GP009 GP018 GP027
GP010 GP019 GP028
GP011 GP020 GP029
GP012 GP021 GP030
GP013 GP022 GP031
GP014 GP023 GP032
GP015 GP024 GP037
GP038



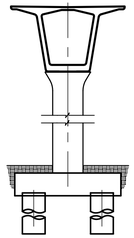

SECTION E
1"=20'
GP039

GP014
GP031



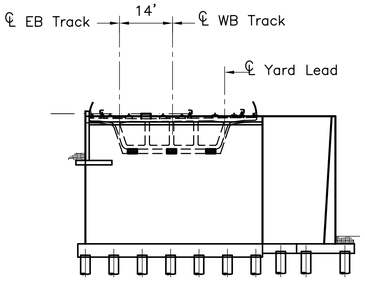

SECTION F
1"=20'
GP039

GP016
GP017
GP031
GP032



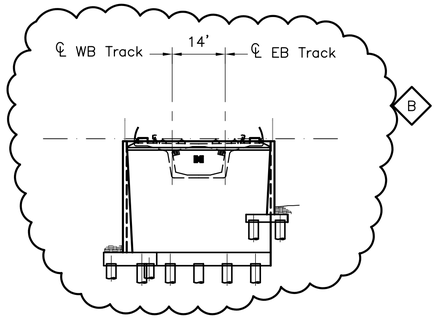
SECTION G
1"=20'
GP039

GP036
GP037



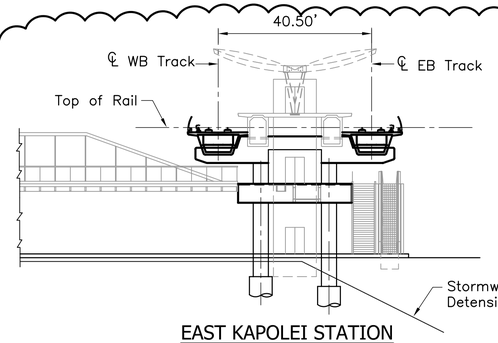

SECTION H
1"=20'
GP039

GP032

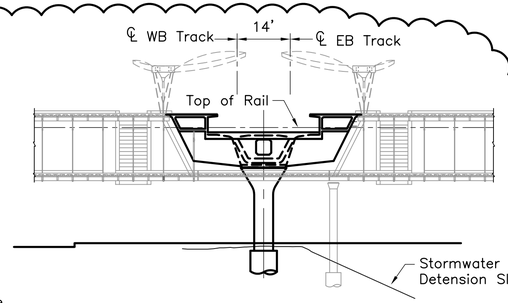



SECTION J
1"=20'
GP039

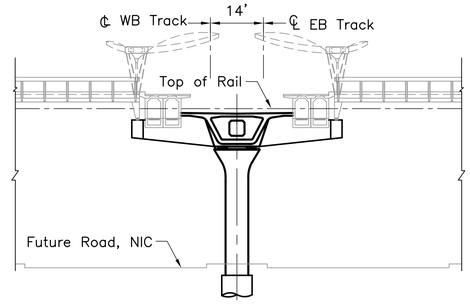
GP036



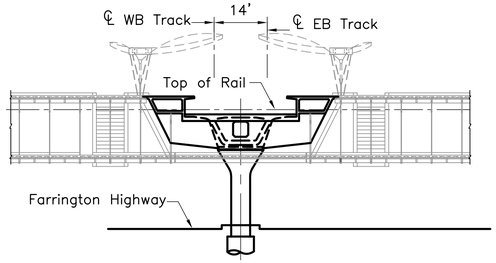

EAST KAPOLEI STATION
SECTION STA 397+00
1"=20'



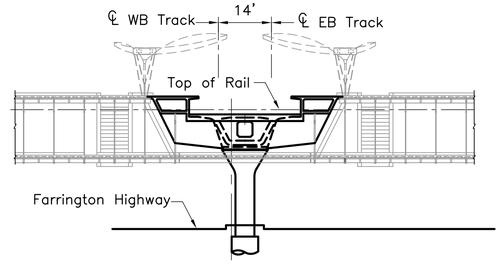

UH WEST O'AHU STATION
SECTION STA 448+40
1"=20'



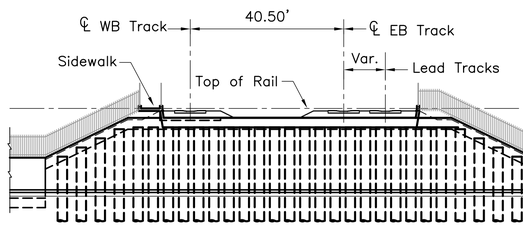

HO'OPILI STATION
SECTION STA 500+80
1"=20'



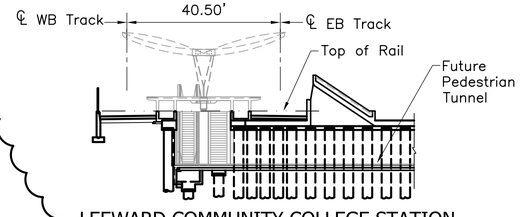

WEST LOCH STATION
SECTION STA 583+60
1"=20'



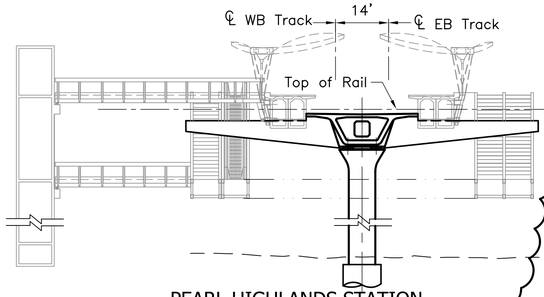

WAIPAHU TRANSIT CENTER STATION
SECTION STA 651+80
1"=20'




ALA IKE STREET TUNNEL
SECTION STA 722+40
1"=20'




LEEWARD COMMUNITY COLLEGE STATION
SECTION STA 725+60
1"=20'




PEARL HIGHLANDS STATION
SECTION STA 748+50
1"=20'

20' 0' 20'

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Revised Sections |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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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WEST O'AHU/FARRINGTON DESIGN-BUILD

STRUCTURAL
PLAN & PROFILE SECTIONS

Contract No.: DB–1200
CADD File: WF–G04–GP039
Drawing No: GP039 Rev. B
Scale: 1"=20'
Page No. 60 of 209

2009–05–20 7:45 AM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G04–GP039.dwg

FUTURE STATION LOADS ON GUIDEWAY COLUMN 1
LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS

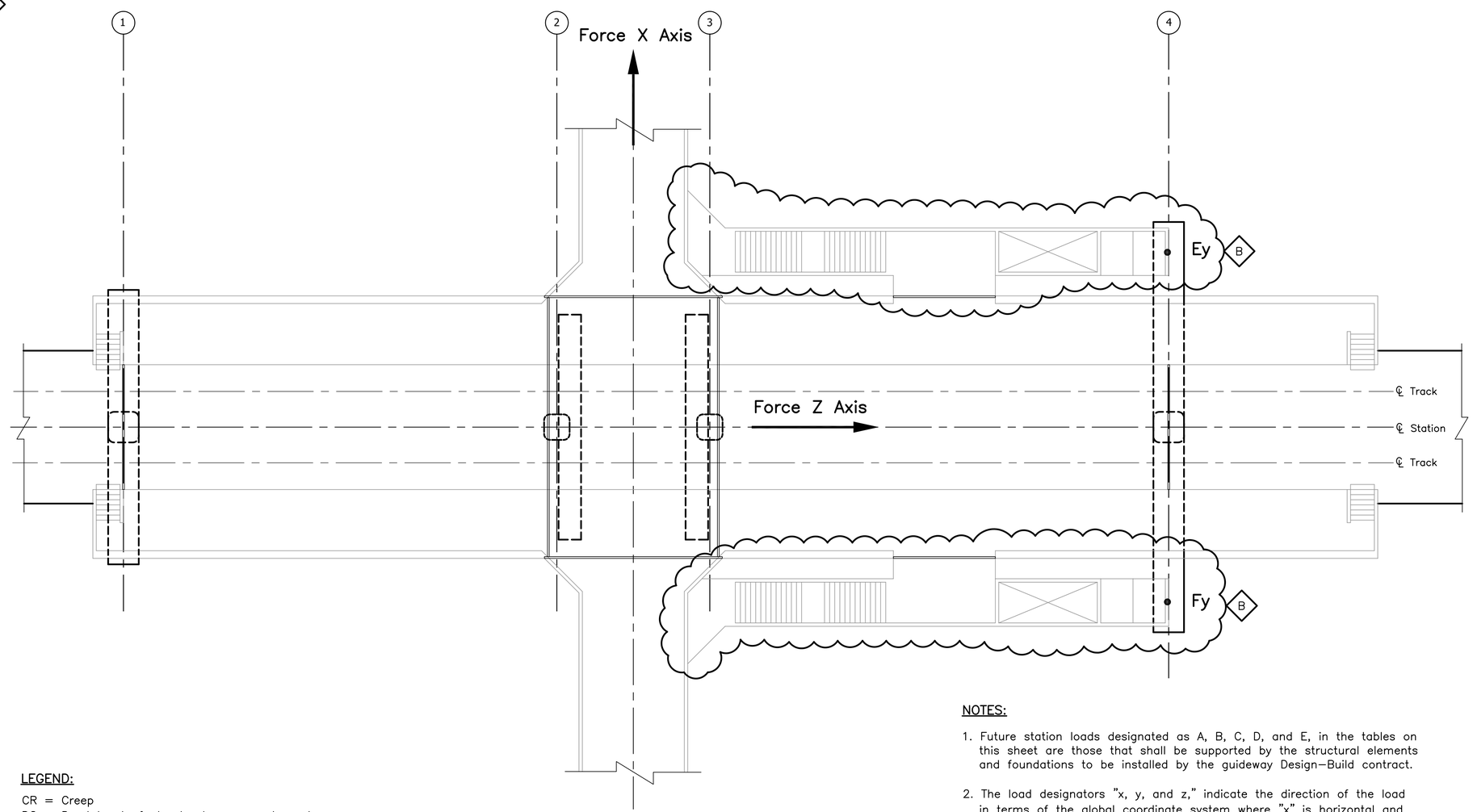
| | DC DW | LL PL | IM | EQ | WS | TG | TU | SH CR | SE | XX |
|---|---|---|---|---|---|---|---|---|---|---|
| Ay | 529 | 94 | 0 | 15 | 0 | 0 | 0 | 0 | – | – |
| Ax | – | – | – | 124 | 26 | 0 | 0 | 0 | – | – |
| Az | – | – | – | 124 | 8 | 0 | * | * | – | – |
| By | 529 | 94 | 0 | 15 | 0 | 0 | 0 | 0 | – | – |
| Bx | – | – | – | 124 | 26 | 0 | 0 | 0 | – | – |
| Bz | – | – | – | 124 | 8 | 0 | * | * | – | – |
| Cy | – | – | – | – | – | – | – | – | – | – |
| Cx | – | – | – | – | – | – | – | – | – | – |
| Cz | – | – | – | – | – | – | – | – | – | – |
| Dy | – | – | – | – | – | – | – | – | – | – |
| Dx | – | – | – | – | – | – | – | – | – | – |
| Dz | – | – | – | – | – | – | – | – | – | – |

FUTURE STATION LOADS ON GUIDEWAY COLUMNS 2 AND 3
LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS

| | DC DW | LL PL | IM | EQ | WS | TG | TU | SH CR | SE | XX |
|---|---|---|---|---|---|---|---|---|---|---|
| Ay | 496 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | – | – |
| Ax | – | – | – | 117 | 24 | 0 | 0 | 0 | – | – |
| Az | – | – | – | 117 | 8 | 0 | * | * | – | – |
| By | 496 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | – | – |
| Bx | – | – | – | 117 | 24 | 0 | 0 | 0 | – | – |
| Bz | – | – | – | 117 | 8 | 0 | * | * | – | – |
| Cy | 415 | 235 | 0 | – | 0 | 0 | 0 | 0 | – | – |
| Cx | – | – | – | 85 | 10 | 0 | 0 | 0 | – | – |
| Cz | – | – | – | 85 | 33 | 0 | * | * | – | – |
| Dy | 246 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | – | – |
| Dx | – | – | – | 58 | 6 | 0 | 0 | 0 | – | – |
| Dz | – | – | – | 58 | 18 | 0 | * | * | – | – |

FUTURE STATION LOADS ON GUIDEWAY COLUMN 4
LOADS IN KIPS=1000 POUNDS ON GUIDEWAY PIERS AND PIER BEAMS

| | DC DW | LL PL | IM | EQ | WS | TG | TU | SH CR | SE | XX |
|---|---|---|---|---|---|---|---|---|---|---|
| Ay | 888 | 167 | 0 | 41 | 0 | 0 | 0 | 0 | – | – |
| Ax | – | – | – | 208 | 45 | 0 | 0 | 0 | – | – |
| Az | – | – | – | 208 | 14 | 0 | * | * | – | – |
| By | 888 | 167 | 0 | 41 | 0 | 0 | 0 | 0 | – | – |
| Bx | – | – | – | 208 | 45 | 0 | 0 | 0 | – | – |
| Bz | – | – | – | 208 | 14 | 0 | * | * | – | – |
| Ey | 117 | 41 | 0 | 5 | 0 | 0 | 0 | 0 | – | – |
| Ex | – | – | – | 28 | 5 | 0 | 0 | 0 | – | – |
| Ez | – | – | – | 28 | 14 | 0 | * | * | – | – |
| Fy | 117 | 41 | 0 | 5 | 0 | 0 | 0 | 0 | – | – |
| Fx | – | – | – | 28 | 5 | 0 | 0 | 0 | – | – |
| Fz | – | – | – | 28 | 14 | 0 | * | * | – | – |




PLATFORM PLAN
NTS

LEGEND:

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

NOTES:

1. Future station loads designated as A, B, C, D, and E, in the tables on this sheet are those that shall be supported by the structural elements and foundations to be installed by the guideway Design–Build contract.
2. The load designators "x, y, and z," indicate the direction of the load in terms of the global coordinate system where "x" is horizontal and perpendicular to the trackways, "y" is vertical, and "z" is horizontal and parallel to the trackways.
3. All other forces and loads designated by the HHCTCP Design Criteria, Section 9, Structural, shall also be applied in conjunction with those in 1 above.
4. All forces shall be applied in accordance with the above HHCTCP Design Criteria.
5. B All forces in the structural elements and foundations being installed by the guideway Design–Build contract shall be applied in a manner that produces the maximum design stresses for the service limit state design and the most unfavorable force load combinations for strength limit state design.

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Revised Stair Loc; Rev Loads; Rev Notes |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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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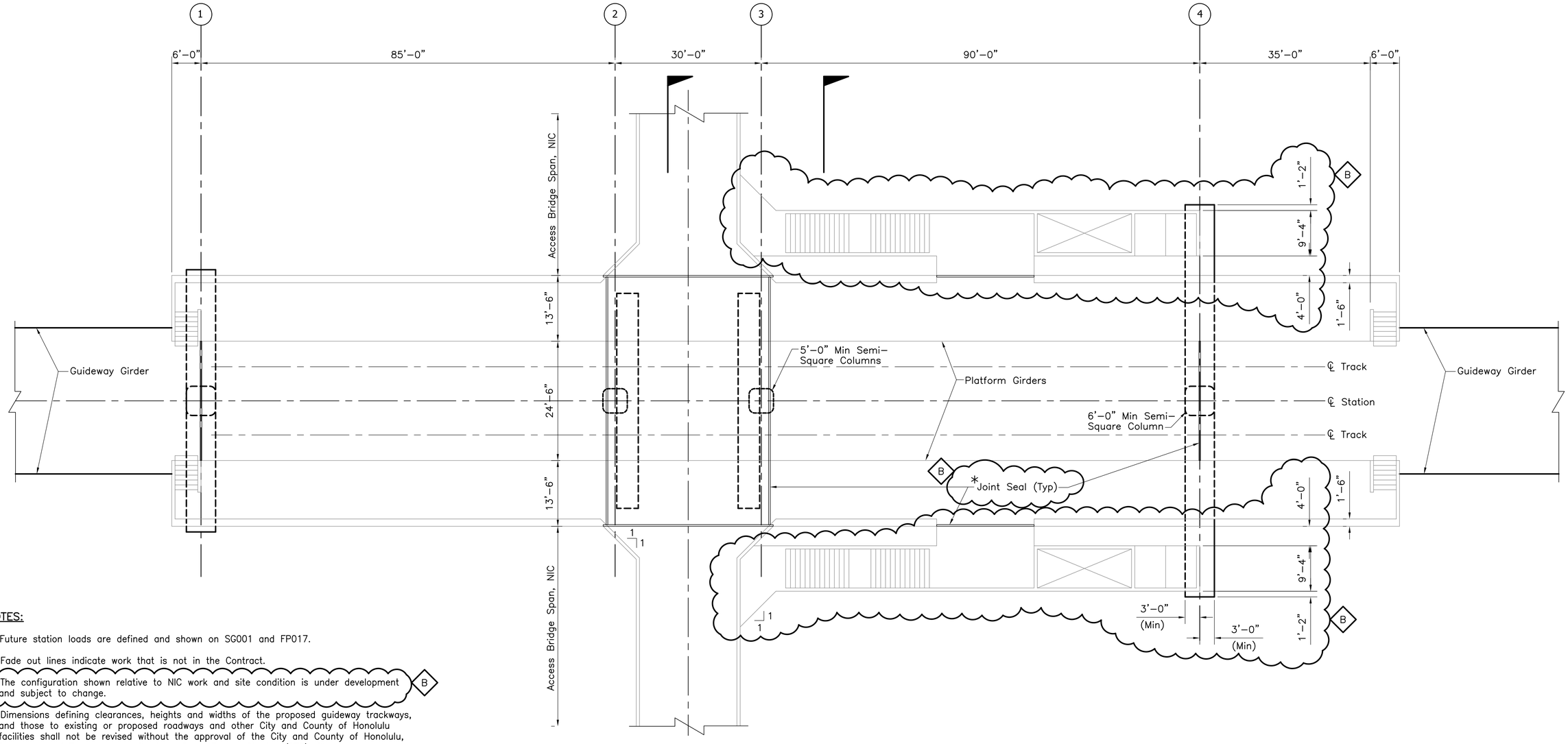
WEST O'AHU/FARRINGTON DESIGN-BUILD

# WAIPAHU TRANSIT CENTER STATION
SHEET 1 OF 7

GUIDEWAY FORCES

Contract No.: DB–1200
CADD File: WF–G05–FP017
Drawing No.: FP017 Rev.: B
Scale: NTS
Page No.: 87 of 209

2009–05–19 2:12 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G05–FP017.dwg




NOTES:

1. Future station loads are defined and shown on SG001 and FP017.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change. B
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.
5. Deep foundations are predominantly shown as single cast–in–drilled–hole (CIDH) concrete shafts. The most efficient and cost effective constructed foundation solution is the responsibility of the Design–Builder. Where deep foundations are shown, a deep foundation shall be provided unless the Design–Builder receives approval from RTD upon receipt of calculations sealed by both a structural engineer and geotechnical engineer licensed in the State of Hawaii that demonstrate that his foundation design can meet the performance and differential settlement criteria of Chapter 9 of the HHCTC Design Criteria.
6. * Joint seals that interface with station elements require coordination with the station designers. B

A FP019

B FP019A

## PLATFORM LEVEL PLAN

3/32"=1'–0"

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

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Rev Stair Loc; Rem/Rev Dims; Revised Notes |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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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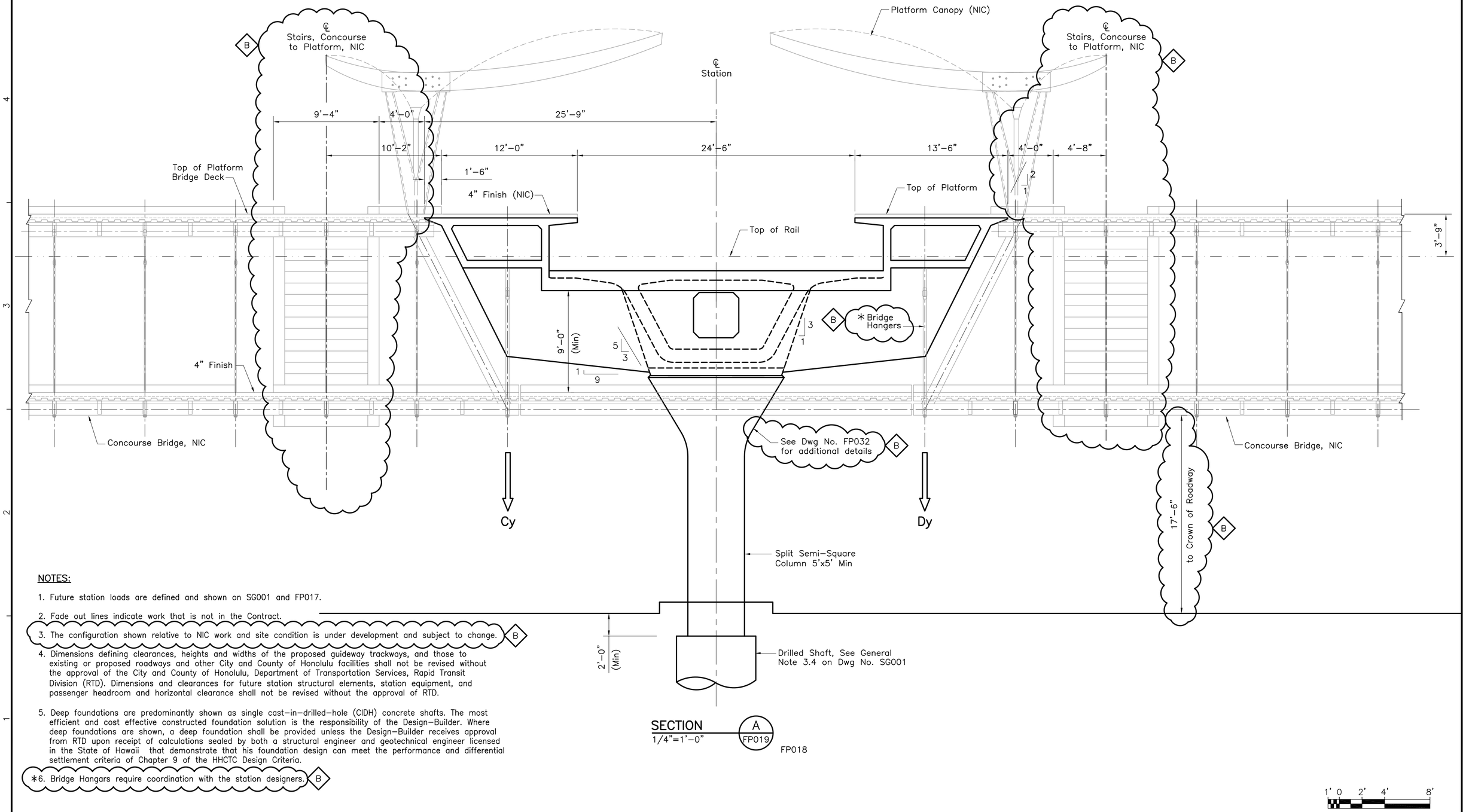
WEST O'AHU/FARRINGTON DESIGN-BUILD

WAIPAHU TRANSIT CENTER STATION
SHEET 2 OF 7

PLATFORM LEVEL PLAN

Contract No.: DB–1200
CADD File: WF–G05–FP018
Drawing No.: FP018 Rev. B
Scale: 3/32"=1'–0"
Page No. 88 of 209

2009–05–19 2:14 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G05–FP018.dwg




NOTES:

1. Future station loads are defined and shown on SG001 and FP017.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change. B
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.
5. Deep foundations are predominantly shown as single cast–in–drilled–hole (CIDH) concrete shafts. The most efficient and cost effective constructed foundation solution is the responsibility of the Design–Builder. Where deep foundations are shown, a deep foundation shall be provided unless the Design–Builder receives approval from RTD upon receipt of calculations sealed by both a structural engineer and geotechnical engineer licensed in the State of Hawaii that demonstrate that his foundation design can meet the performance and differential settlement criteria of Chapter 9 of the HHCTC Design Criteria.
6. *Bridge Hangars require coordination with the station designers. B

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Revised Stair Location, Dimensions & Notes |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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

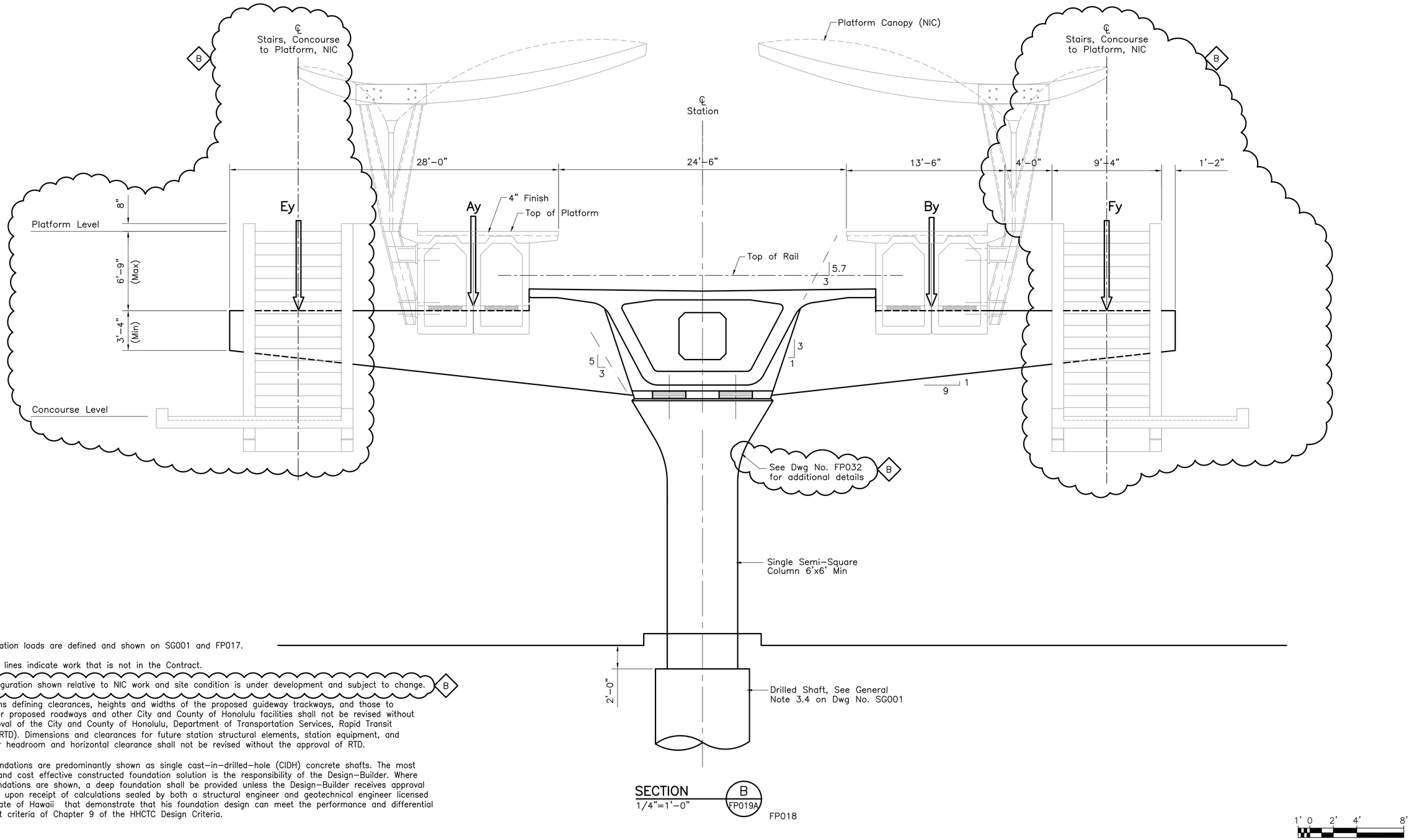
WEST O'AHU/FARRINGTON DESIGN-BUILD

# WAIPAHU TRANSIT CENTER STATION
SHEET 3 OF 7

SECTION A

Contract No.: DB–1200
CADD File: WF–G05–FP019
Drawing No.: FP019 Rev.: B
Scale: 1/4"=1'–0"
Page No.: 89 of 209

2009–05–19 2:17 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G05–FP019.dwg




SECTION B
1/4"=1'–0"
FP019A

FP018

1' 0 2' 4' 8'

NOTES:

1. Future station loads are defined and shown on SG001 and FP017.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change. B
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.
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| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Rev Stair Loc; Rem/Rev Dims; Revised Notes |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

# 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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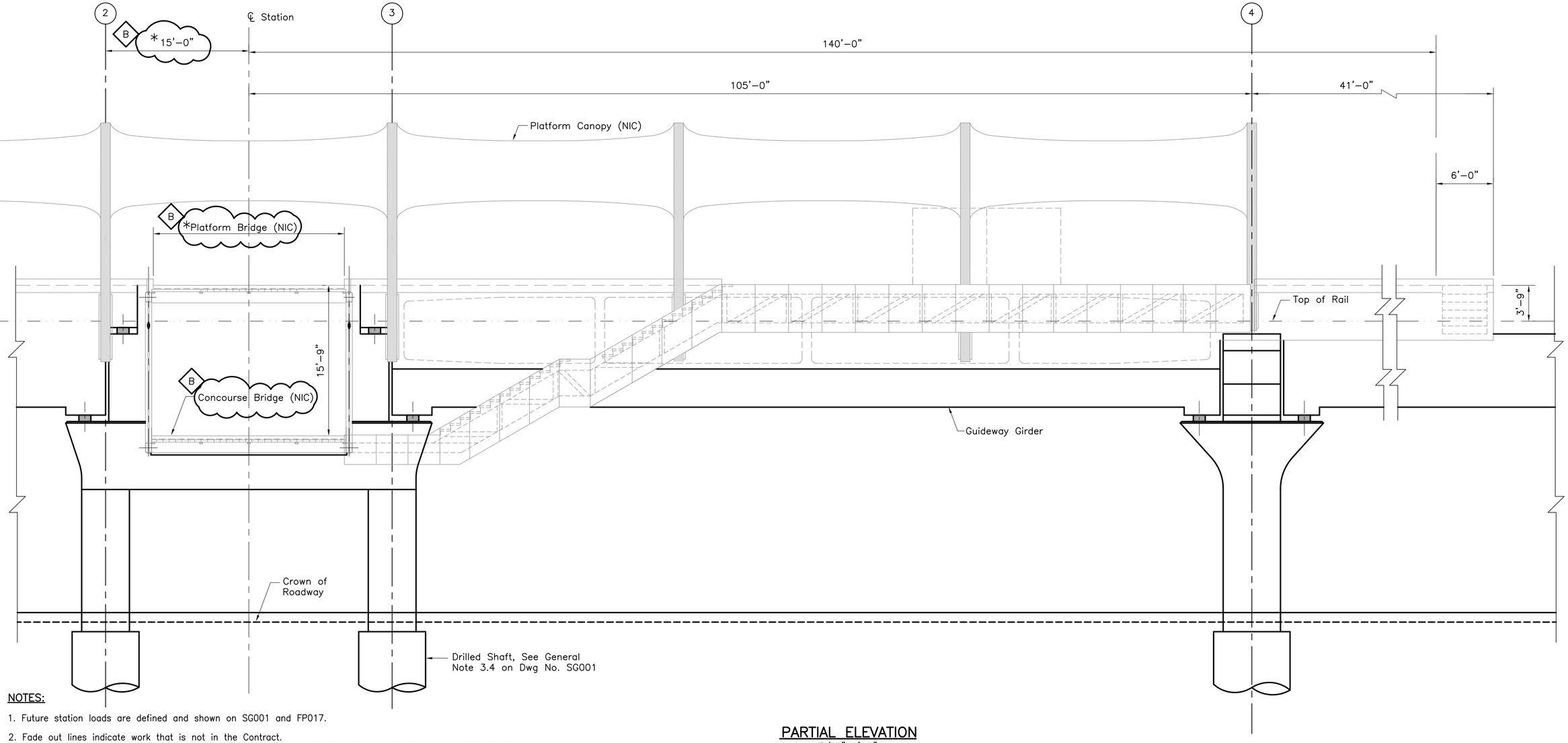
WEST O'AHU/FARRINGTON DESIGN-BUILD

## WAIPAHU TRANSIT CENTER STATION
SHEET 4 OF 7

SECTION B

Contract No.: DB–1200
CADD File: WF–G05–FP019A
Drawing No: FP019A Rev. B
Scale: 1/4"=1'–0"
Page No. 90 of 209

2009–05–19 2:20 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G05–FP019A.dwg




NOTES:

1. Future station loads are defined and shown on SG001 and FP017.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change. B
4. Dimensions defining clearances, heights and widths of the proposed guideway trackways, and those to existing or proposed roadways and other City and County of Honolulu facilities shall not be revised without the approval of the City and County of Honolulu, Department of Transportation Services, Rapid Transit Division (RTD). Dimensions and clearances for future station structural elements, station equipment, and passenger headroom and horizontal clearance shall not be revised without the approval of RTD.
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6. *Canopy column location and bridge connection details require coordination with the station designers. B

## PARTIAL ELEVATION

3/16"=1'–0"

1'0 2' 4' 6' 10'

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Removed/Revised Dimensions; Added Note |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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

WEST O'AHU/FARRINGTON DESIGN-BUILD

WAIPAHU TRANSIT CENTER STATION
SHEET 5 OF 7

PARTIAL ELEVATION

Contract No.: DB–1200
CADD File: WF–G05–FP019B
Drawing No: FP019B
Rev. B
Scale: 3/16"=1'–0"
Page No. 91 of 209

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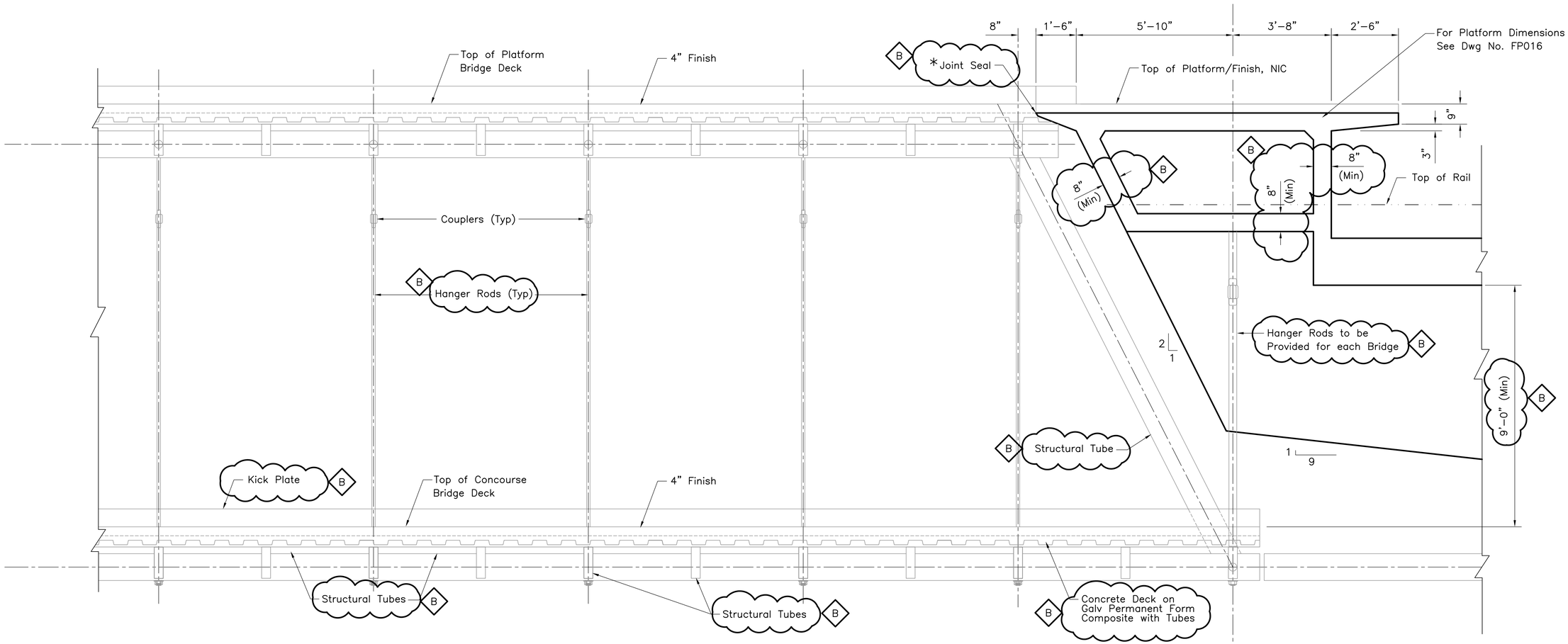


NOTES:

1. Future station loads are defined and shown on SG001 and FP017.
2. Fade out lines indicate work that is not in the Contract.
3. The configuration shown relative to NIC work and site condition is under development and subject to change. B
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6. * Joint seals and hanger rods require coordination with the station designers. B

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

1' 0 2' 4'

| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05-22-09 | Removed/Revised Dimensions; Revised Notes |
| A | AB | 04-03-09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04-03-09

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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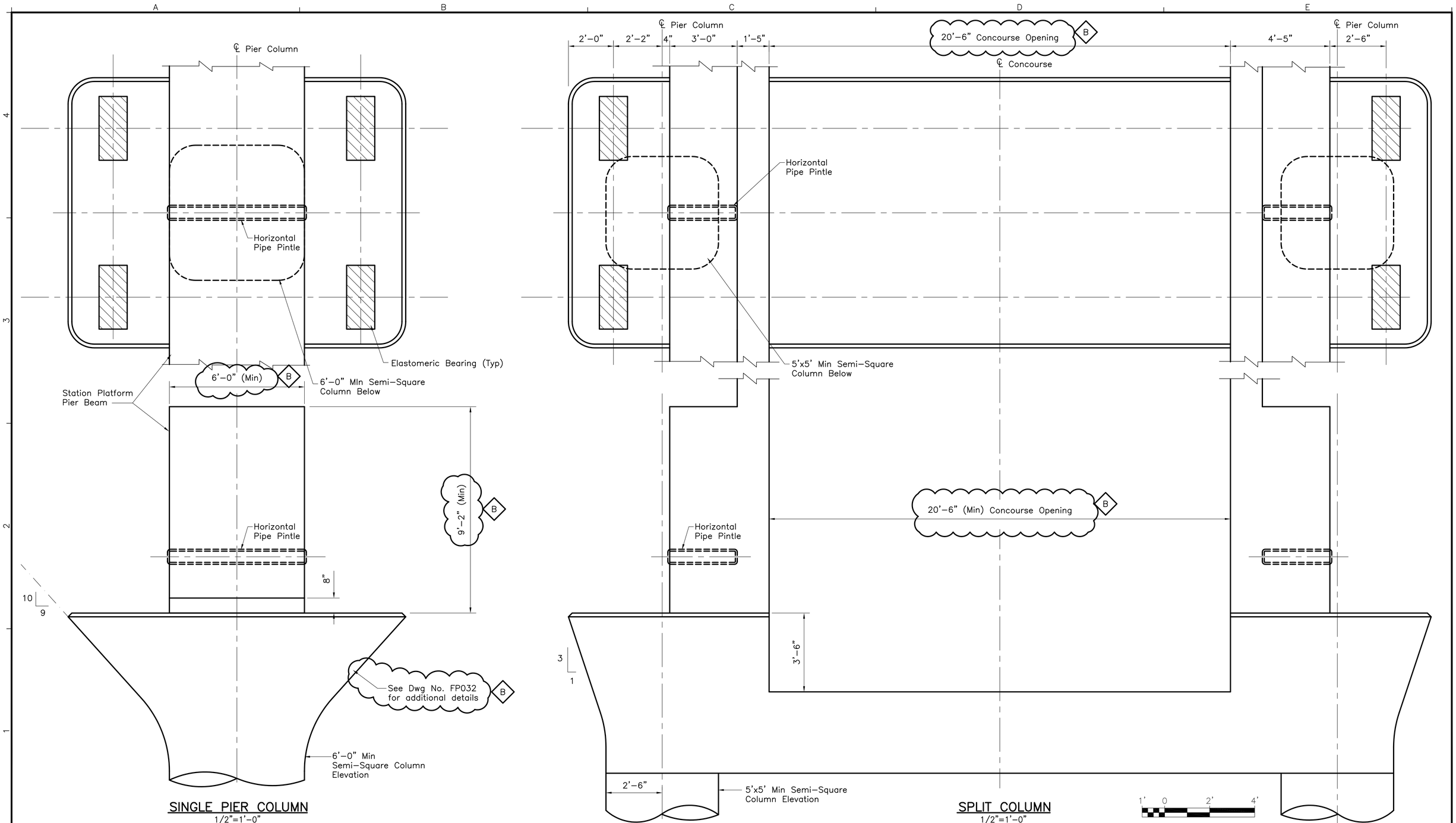
WEST O'AHU/FARRINGTON DESIGN-BUILD

WAIPAHU TRANSIT CENTER STATION
SHEET 6 OF 7

BRIDGE SECTION

Contract No.: DB-1200
CADD File: WF-G05-FP019C
Drawing No.: FP019C Rev. B
Scale: 1/2"=1'-0"
Page No. 92 of 209

2009-05-19 2:30 PM \\hon-t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF-G05-FP019C.dwg




| Rev | By | Date | Description |
|---|---|---|---|
| B | AB | 05–22–09 | Removed/Revised Dimensions |
| A | AB | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Yavorsky
Drawn: T Cochran
Checked: T Kimura
Approved: A Borst
Date: 04–03–09

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

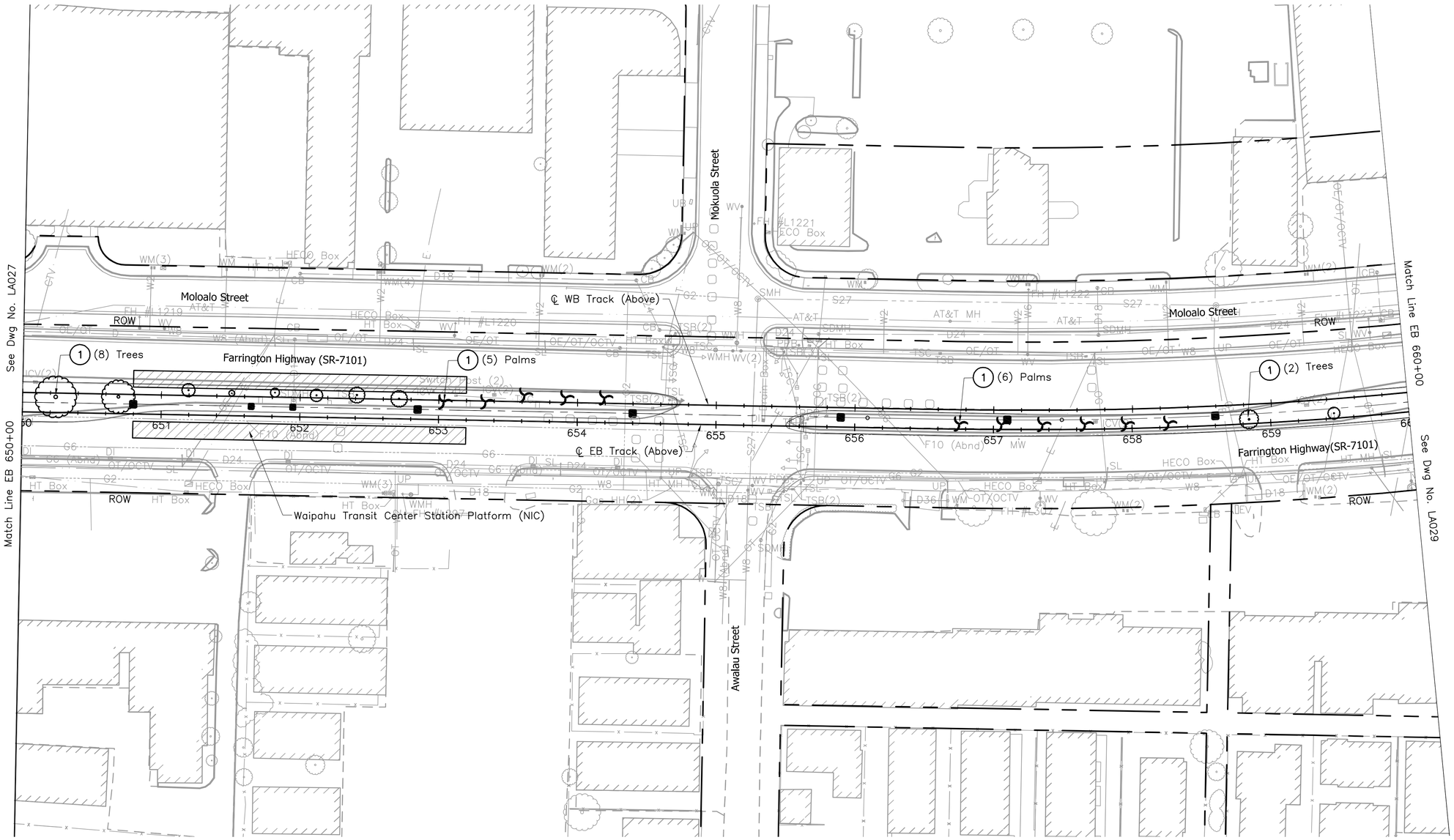
WEST O'AHU/FARRINGTON DESIGN-BUILD

# WAIPAHU TRANSIT CENTER STATION
SHEET 7 OF 7

BEARING TABLES PLAN AND ELEVATION

Contract No.: DB–1200
CADD File: WF–G05–FP020
Drawing No.: FP020 Rev. B
Scale: 1/2"=1'–0"
Page No. 93 of 209

2009–05–19 2:34 PM \\hon–t1\transit\CADD\08 Structural\W Oahu_Farrington DB\WF–G05–FP020.dwg




| Rev | By | Date | Description |
|---|---|---|---|
| A | AK | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Easterday
Drawn: M Weiss
Checked: D Easterday
Approved: A Kutsunai
Date: 04–03–09

# 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: BELTCOLLINS
PLANNING • CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL CONSULTING
Belt Collins Hawaii Ltd.
2153 North King Street, Suite 200
Honolulu, Hawaii 96819
T: 808.521.5361 • F: 808.538.7819
www.beltcollins.com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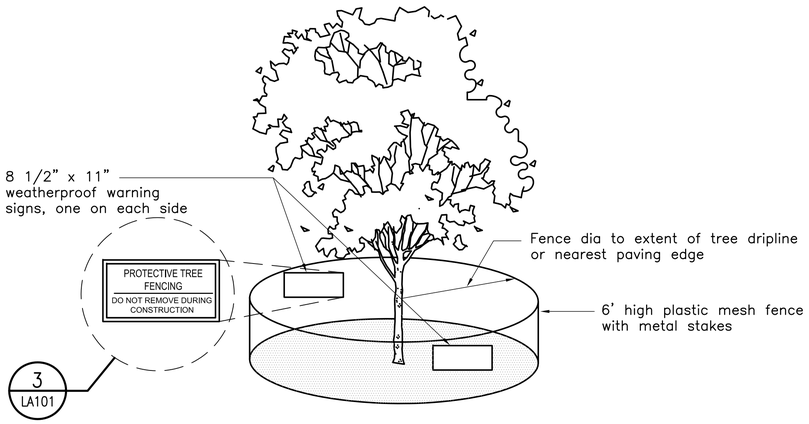
WEST O‘AHU/FARRINGTON DESIGN-BUILD

## LANDSCAPE DEMOLITION PLAN

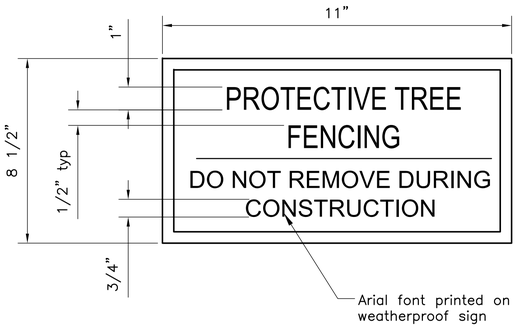
EB 650+00 TO EB 660+00

Contract No.: DB–1200
CADD File: WF–J02–LA028
Drawing No: LA028 Rev. A
Scale: 1”=40’
Page No. 166 of 209

2009–03–25 9:54 AM L:\2008710100_HHCTCP\CAD\Blocks\Segments\WF–J02–SCLA.dwg




TREE/PALM PROTECTION 1 LA101
NOT TO SCALE




SIGN 3 LA101
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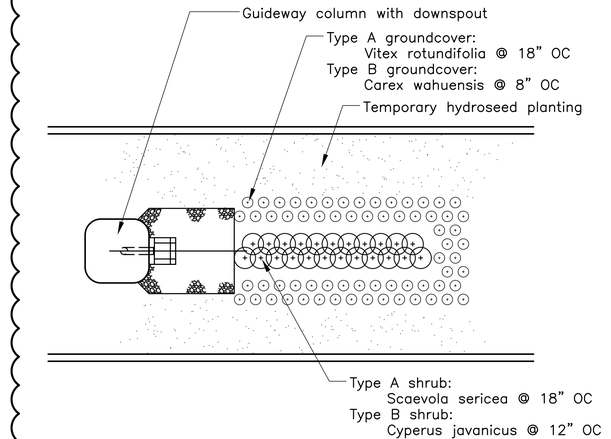
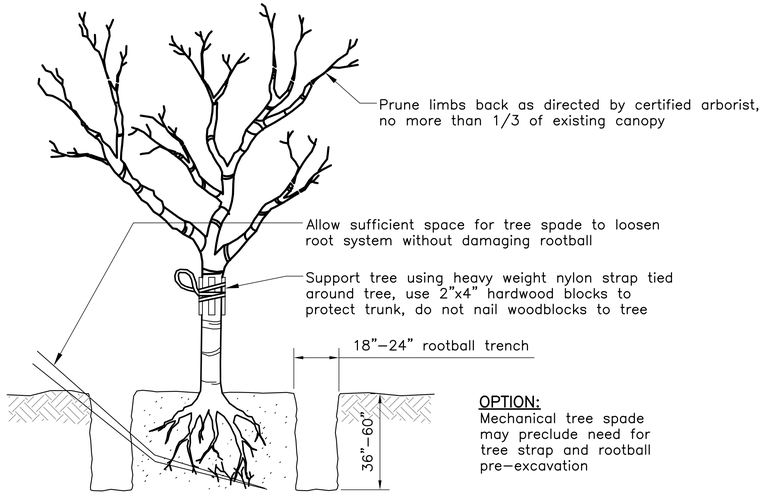



B

BIO–INFILTRATION PLAN 5 LA101
NOT TO SCALE

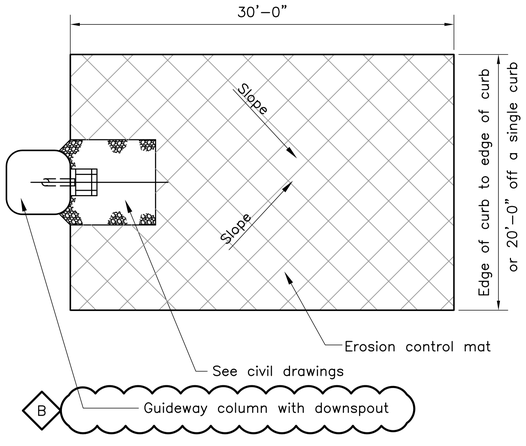
NOTES:

1. Mulch the root zone within dripline of all trees designated to remain in place with a minimum of 4" cover to protect against soil compaction.
2. Install tree protection fencing.
3. Minimize root pruning of structural roots. Any root pruning shall be clean cuts by proper equipment with no ripping or tearing.
4. If roots are pruned, prune canopy by similar amount to reduce shock to the tree.
5. Provide irrigation to all trees designated to be protected in place.
6. No stockpiling, storage or transport of materials, vehicles, or equipment within the dripline of trees designated to be protected in place.
7. Tree and palm demolition shall include demolition, removal and disposal, including rootball. Rootball excavation shall be backfilled and compacted with approved backfill material.
8. Planting areas shall be rough graded for temporary landscape condition. A 2% slope to median center shall be maintained to collect stormwater from guideway drains.

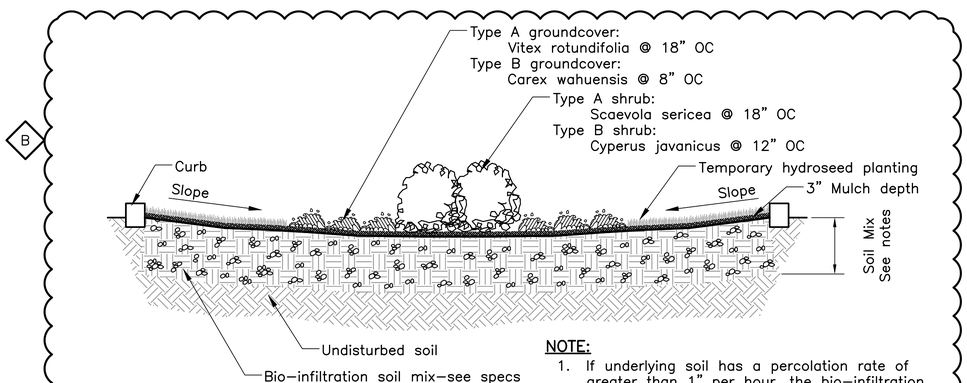



**OPTION:**
Mechanical tree spade may preclude need for tree strap and rootball pre–excavation

TREE SALVAGE 2 LA101
NOT TO SCALE




EROSION CONTROL MAT 4 LA101
NOT TO SCALE




BIO–INFILTRATION SECTION 6 LA101
NOT TO SCALE

NOTE:

1. If underlying soil has a percolation rate of greater than 1" per hour, the bio–infiltration soil mix will be 24" depth. If the underlying soil percolation rate is less than 1" per hour the depth will be 36".
2. Bio–infiltration soil mix: 30% sandy loam, 30% sand, and 40% organic compost (heated to destroy weed seed).
3. Bio–infiltration planting is permanent, while hydroseed is temporary.
4. Bio–infiltration areas are located adjacent only to streams (see civil plans for locations). Planting at each site should alternate between Type A and Type B.

| Rev | By | Date | Description |
|---|---|---|---|
| B | AK | 05–22–09 | Bio–Infiltration Details |
| A | AK | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Easterday
Drawn: M Weiss
Checked: D Easterday
Approved: A Kutsunai
Date: 04–03–09

# 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: BELTCOLLINS
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www.beltcollins.com


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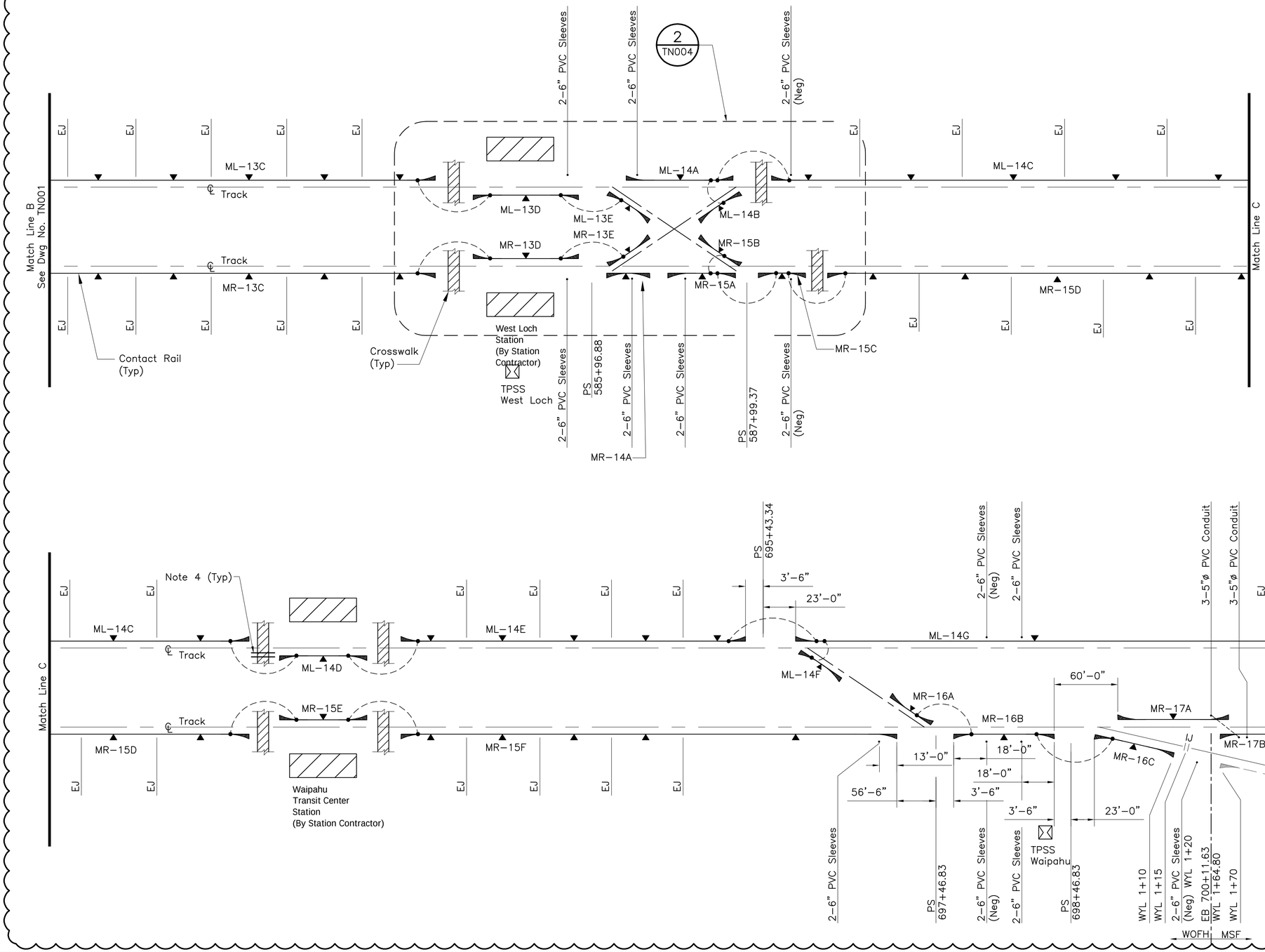
WEST O'AHU/FARRINGTON DESIGN BUILD

## LANDSCAPE PLANTING DETAILS

Contract No.: DB–1200
CADD File: WF–J06–LA101
Drawing No: LA101 Rev. B
Scale: AS NOTED
Page No. 177 of 209

2009–05–15 1:43 PM L:\2008710100_HHCTCP\CAD\Blocks\Directives\WF–J06–LAS.dwg




NOTES

1. For notes see dwg TN001.

| Rev | By | Date | Description |
|---|---|---|---|
| B | SDS | 08–05–09 | Updated PS, EJ's & anchors |
| A | SDS | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: L Mayola
Drawn: O Kurnovskaya
Checked: A Patel
Approved: S Stoilov
Date: 04–03–09

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

WEST O'AHU/FARRINGTON DESIGN-BUILD

# CONTACT RAIL INSTALLATION
# CONTACT RAIL SCHEMATIC LAYOUT

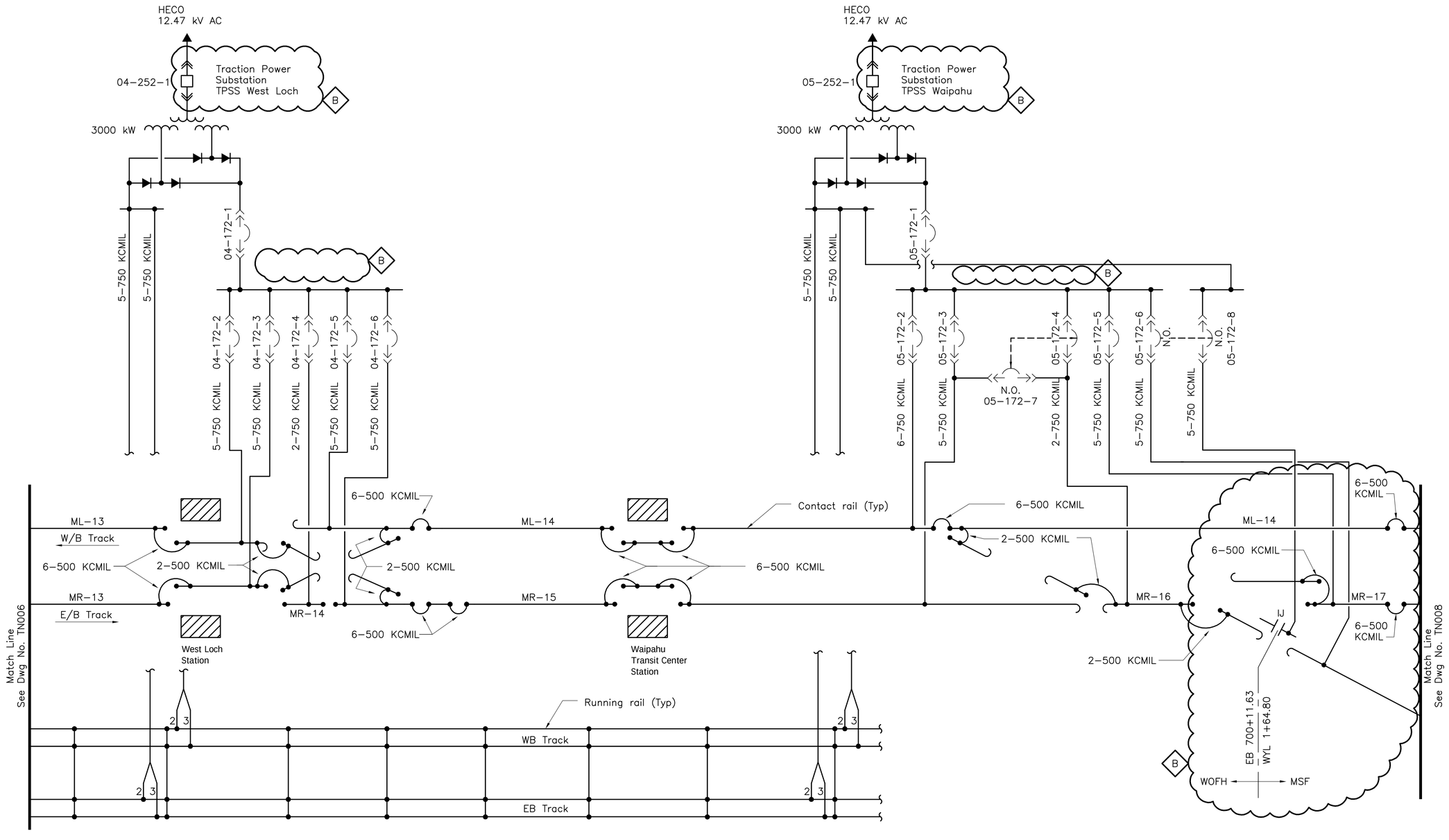
SHEET 2 OF 3

Contract No.: DB–1200
CADD File: WF–N06–TN002
Drawing No: TN002 Rev. B
Scale: As Noted
Page No. 185 of 209

2009–08–03 3:39 PM T:\16434A–HI Maint Fac\CADD\sheets\Traction\WF\Updates 8–05–09\WF–N06–TN002.dwg

NOTES

1. Refer to drawing TN006.




| Rev | By | Date | Description |
|---|---|---|---|
| B | SDS | 08–05–09 | Updated Master Single Line Diagram |
| A | SDS | 04–03–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: L Mayola
Drawn: O Kurnovskaya
Checked: A Patel
Approved: S Stoilov
Date: 04–03–09

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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WEST O'AHU/FARRINGTON DESIGN-BUILD

# MASTER SINGLE LINE DIAGRAM

SHEET 2 OF 3

Contract No.: DB–1200
CADD File: WF–N06–TN007
Drawing No: TN007 Rev. B
Scale: As Noted
Page No. 190 of 209

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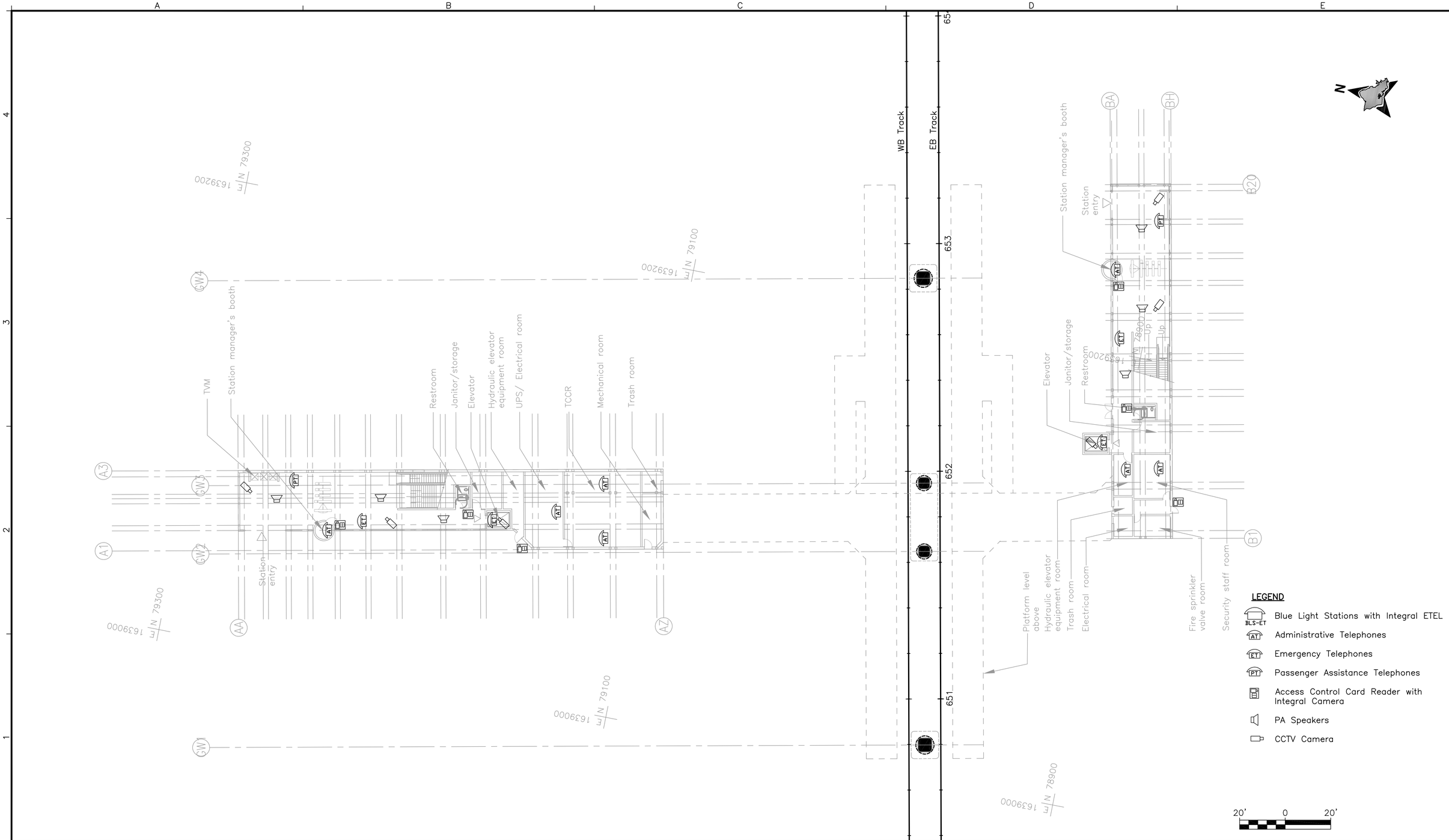



| Rev | By | Date | Description |
|---|---|---|---|
| A | HB | 08–17–09 | Issued For Proposal |

**RFP DRAWING**
**NOT FOR CONSTRUCTION**

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 07–31–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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

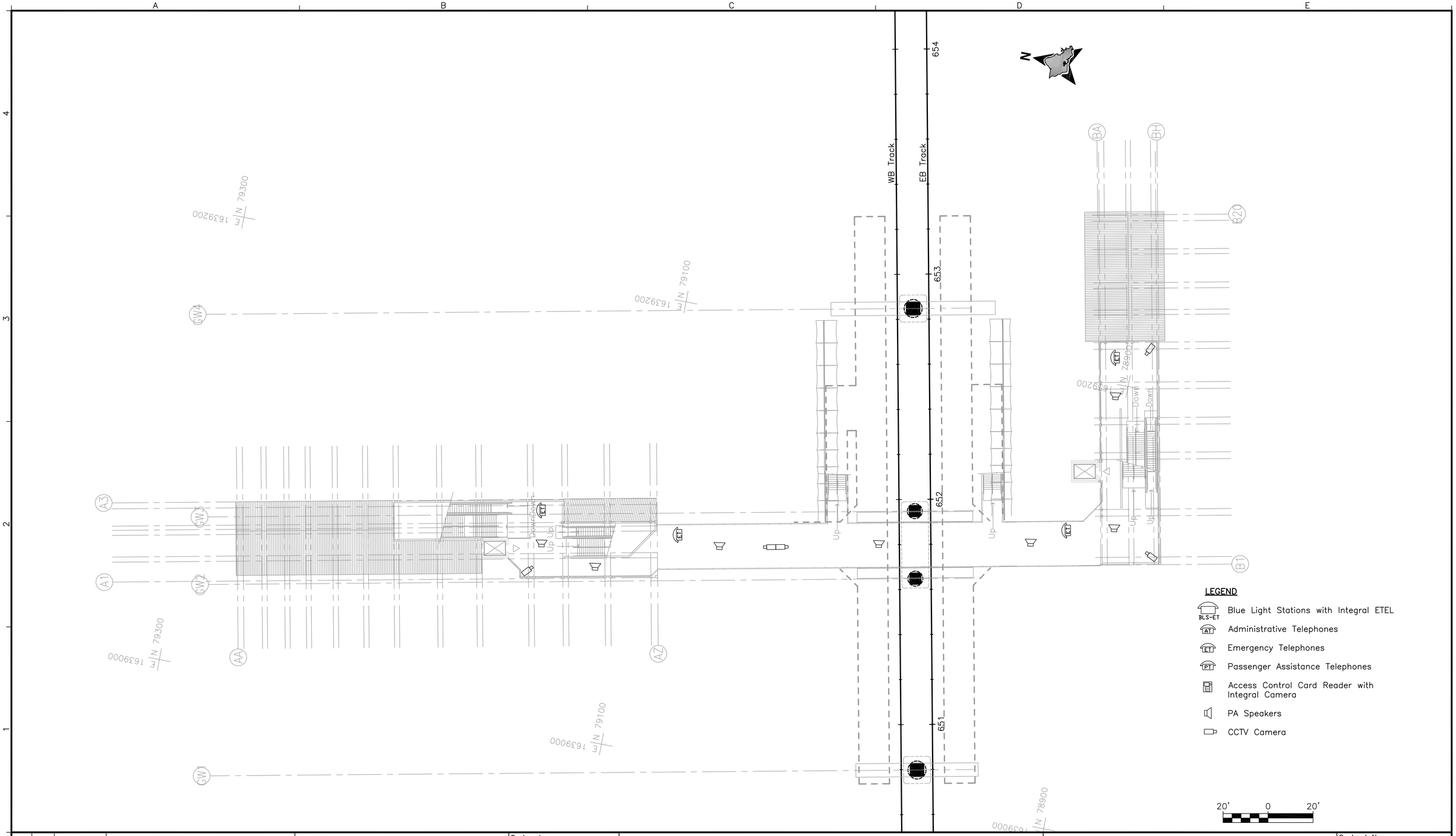
CORE SYSTEMS

## WAIPAHU TRANSIT CENTER STATION COMMUNICATIONS PLAN

GROUND LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM204
Drawing No: CM204 Rev. A
Scale: 1" = 20'
Page No. 136 of 195

2009–08–06 4:04 PM K:\CADD\Architectural\CS–R06–CM204.dwg




| Rev | By | Date | Description |
|---|---|---|---|
| A | HB | 08–17–09 | Issued For Proposal |

**RFP DRAWING**
**NOT FOR CONSTRUCTION**

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: C Jamison
Date: 07–31–09

# HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

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

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

Subconsultant:

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

CORE SYSTEMS

## WAIPAHU TRANSIT CENTER STATION COMMUNICATIONS PLAN

CONCOURSE LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM205
Drawing No.: CM205 Rev. A
Scale: 1" = 20'
Page No. 137 of 195

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| Rev | By | Date | Description |
|---|---|---|---|
| A | HB | 08–17–09 | Issued For Proposal |

**RFP DRAWING**
**NOT FOR CONSTRUCTION**

Designed: H Bowie
Drawn: C Jamison
Checked: B Russo
Approved: H Bowie
Date: 07–31–09

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

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

Subconsultant:

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

CORE SYSTEMS

# WAIPAHU TRANSIT CENTER STATION COMMUNICATIONS PLAN

PLATFORM LEVEL

Contract No.: MI–920
CADD File: CS–R06–CM206
Drawing No.: CM206
Rev.: A
Scale: 1" = 20'
Page No.: 138 of 195

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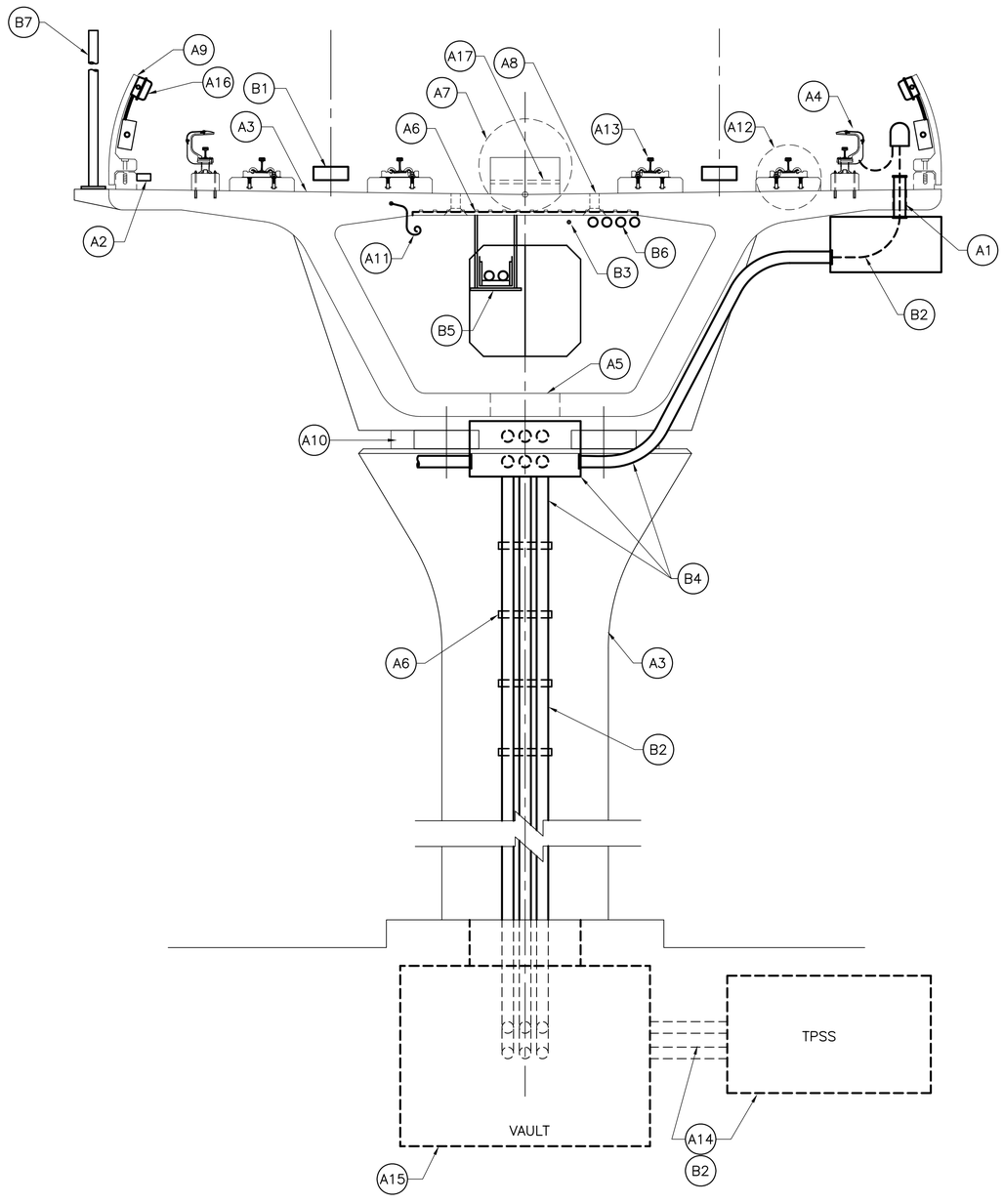
## GUIDEWAY CONTRACTOR

- (A1) Sleeves in Box Girder for Traction Power Cabling
- (A2) Stray Current Test Station
- (A3) Precast Segmental Box Girder Guideway Foundations, Substructure, Columns, Bents, Superstructure and all Associated Permanent and Temporary Works
- (A4) Contact Rail Layout and Installation
- (A5) Access Hatch
- (A6) Unistrut for Support of Cable Trays and Conduits
- (A7) Emergency Walkway
- (A8) Knock Outs
- (A9) Acoustic Barrier
- (A10) Bearings, Tie–downs/Restrainers/Shock Transissions Units, Expansion Joints, and all other associated Guideway appurtenances.
- (A11) Stray Current and Grounding Cables
- (A12) Cast–in–Place Rail Plinths, DF Fasteners, Inserts and all related appurtenances.
- (A13) Continuously welded rail, and all related appurtenances.
- (A14) TPSS Foundation and Conduits to Guideway and to HECO Feeder
- (A15) Traction Electrification Vault
- (A16) Guideway Lighting (See Directive Drawings ES001, ES002 and ES003)
- (A17) Sleeves for Crossbonds

## CORE SYSTEMS CONTRACTOR

- (B1) Impedance Bonds
- (B2) Feeder Cabling
- (B3) Longitudinal Grounding
- (B4) Conduits and Pull Box for Traction Power Feeders
- (B5) Cable Tray, Cable Tray Supports and Conduits
- (B6) Conduits
- (B7) 15' pole for Wireless Mesh Access Point




| Rev | By | Date | Description |
|---|---|---|---|
| A | DG | 05–22–09 | Issued For Bid |

**BID DOCUMENT**
**NOT FOR CONSTRUCTION**

Designed: D Gobelle
Drawn: C Jamison
Checked: M Becher
Approved: M Hall
Date: 05–22–09

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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WEST O'AHU/FARRINGTON DESIGN-BUILD

SYSTEM INTEGRATION
CONTRACT WORK DELINEATION

AERIAL GUIDEWAY

Contract No.: DB–1200
CADD File: WF–V11–SY001
Drawing No: SY001 Rev. A
Scale: NTS
Page No. 209A of 209

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