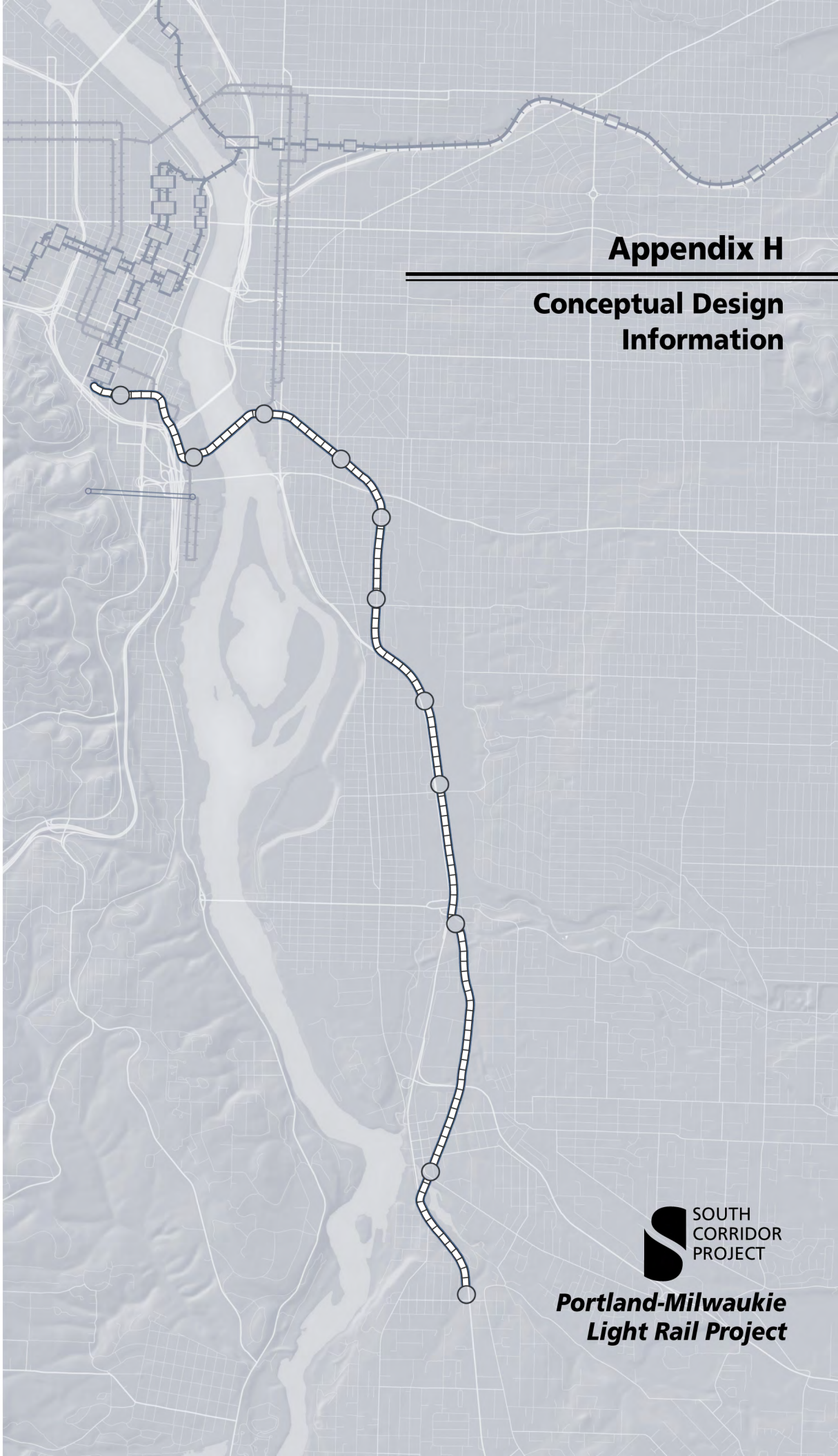

Appendix H

Conceptual Design Information

SOUTH CORRIDOR PROJECT

Portland-Milwaukie Light Rail Project

APPENDIX H. CONCEPTUAL DESIGN INFORMATION

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Portland-Milwaukie Light Rail Project — **Figure H- 1**

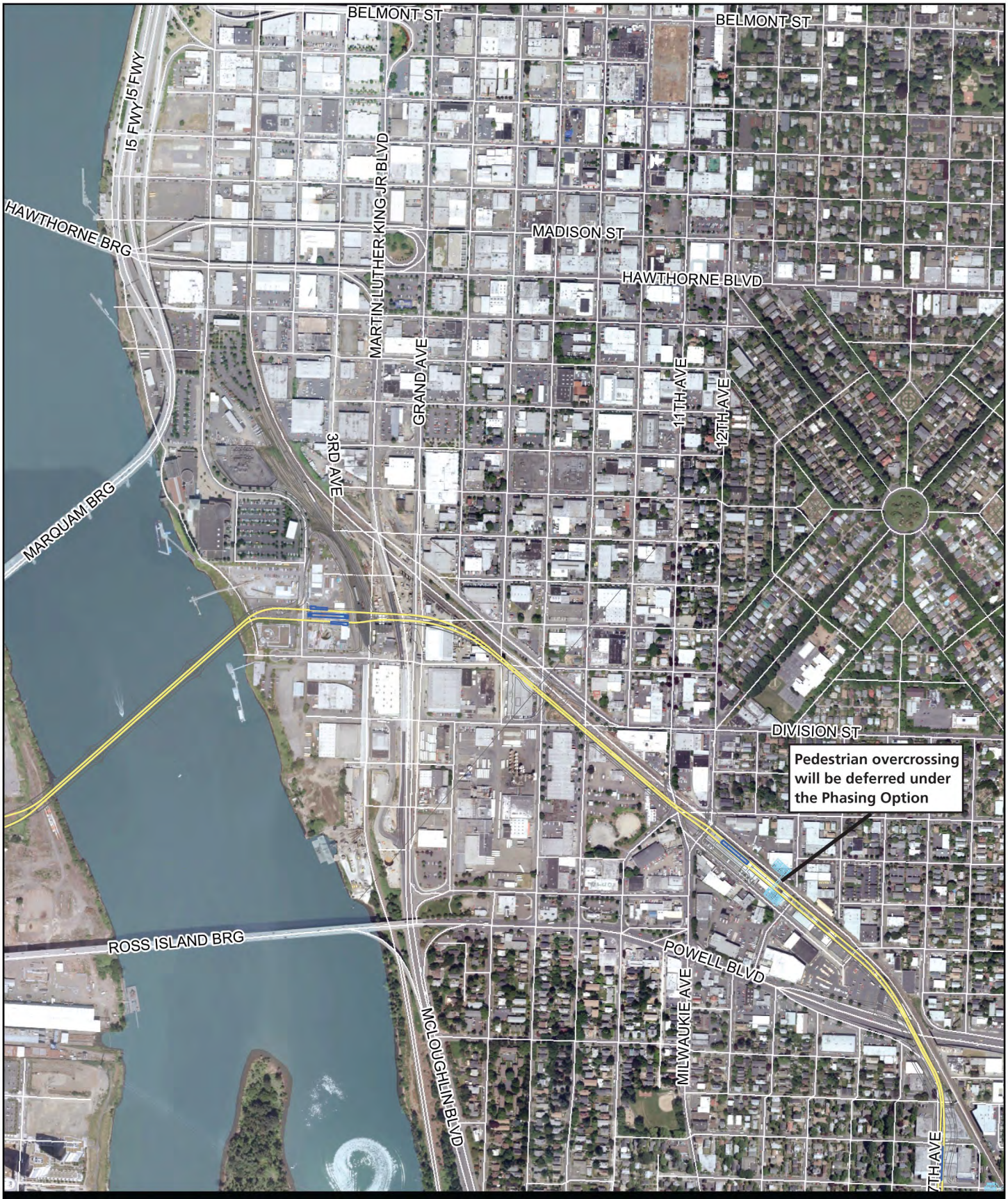
Locally Preferred Alternative to Park Ave

Light Rail track centerline — Park and Ride

Light Rail station platform — Pedestrian crossing

0 400 800 Feet

February 2010



Portland-Milwaukie Light Rail Project — **Figure H- 2**

Locally Preferred Alternative to Park Ave

Light Rail track centerline
Park and Ride
Light Rail station platform
Pedestrian crossing

0 400 800 Feet

N

February 2010

Portland-Milwaukie Light Rail Project — **Figure H- 3**

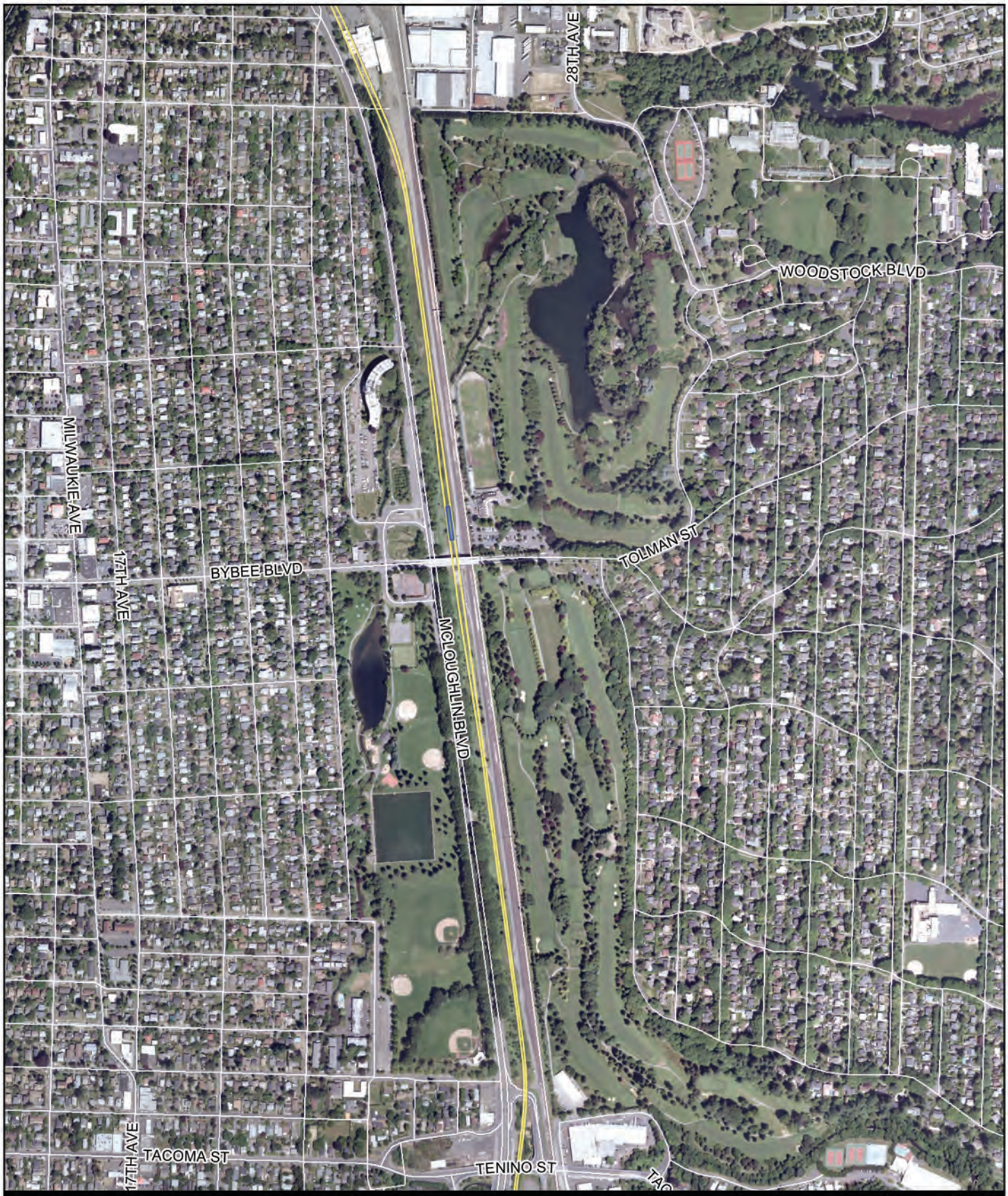
Locally Preferred Alternative to Park Ave

Light Rail track centerline
Light Rail station platform
Park and Ride
Pedestrian crossing

0 400 800 Feet

N

February 2010



Portland-Milwaukie Light Rail Project **Figure H- 4**

Locally Preferred Alternative to Park Ave

Light Rail track centerline
Park and Ride
Light Rail station platform
Pedestrian crossing

0 400 800 Feet

February 2010

Portland-Milwaukie Light Rail Project **Figure H- 5**

Locally Preferred Alternative to Park Ave

Light Rail track centerline — Park and Ride

Light Rail station platform — Pedestrian crossing

0 400 800 Feet

February 2010

Portland-Milwaukie Light Rail Project **Figure H- 6**

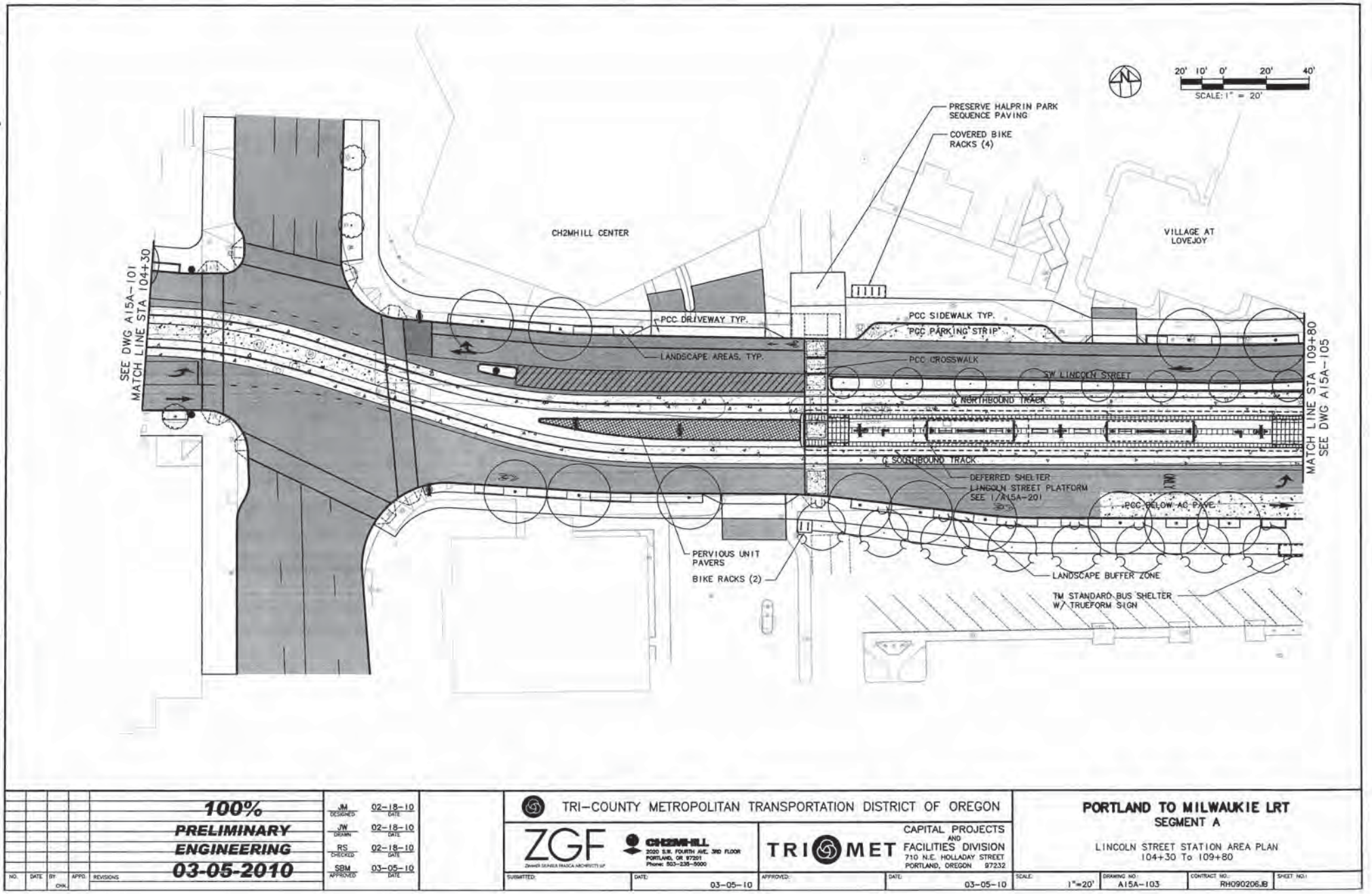
Locally Preferred Alternative to Park Ave

Light Rail track centerline
Park and Ride
Light Rail station platform
Pedestrian crossing

0 400 800 Feet

N

February 2010



NO.	DATE	BY	CHK.	APPD.	REVISIONS

100%
PRELIMINARY ENGINEERING
03-05-2010

JM DESIGNED	02-18-10	DATE
JW DRAWN	02-18-10	DATE
RS CHECKED	02-18-10	DATE
SBM APPROVED	03-05-10	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

ZGF Zimmer Gunsul Frasca Architects LLP

CH2MHILL 2020 S.W. FOURTH AVE. 3RD FLOOR PORTLAND, OR 97201 Phone: 503-235-5000

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED:	DATE: 03-05-10	APPROVED:	DATE: 03-05-10

PORTLAND TO MILWAUKIE LRT
SEGMENT A

LINCOLN STREET STATION AREA PLAN
104+30 To 109+80

SCALE:	DRAWING NO:	CONTRACT NO.:	SHEET NO.:
1"=20'	A15A-103	RH090206.IB	

Figure H-7

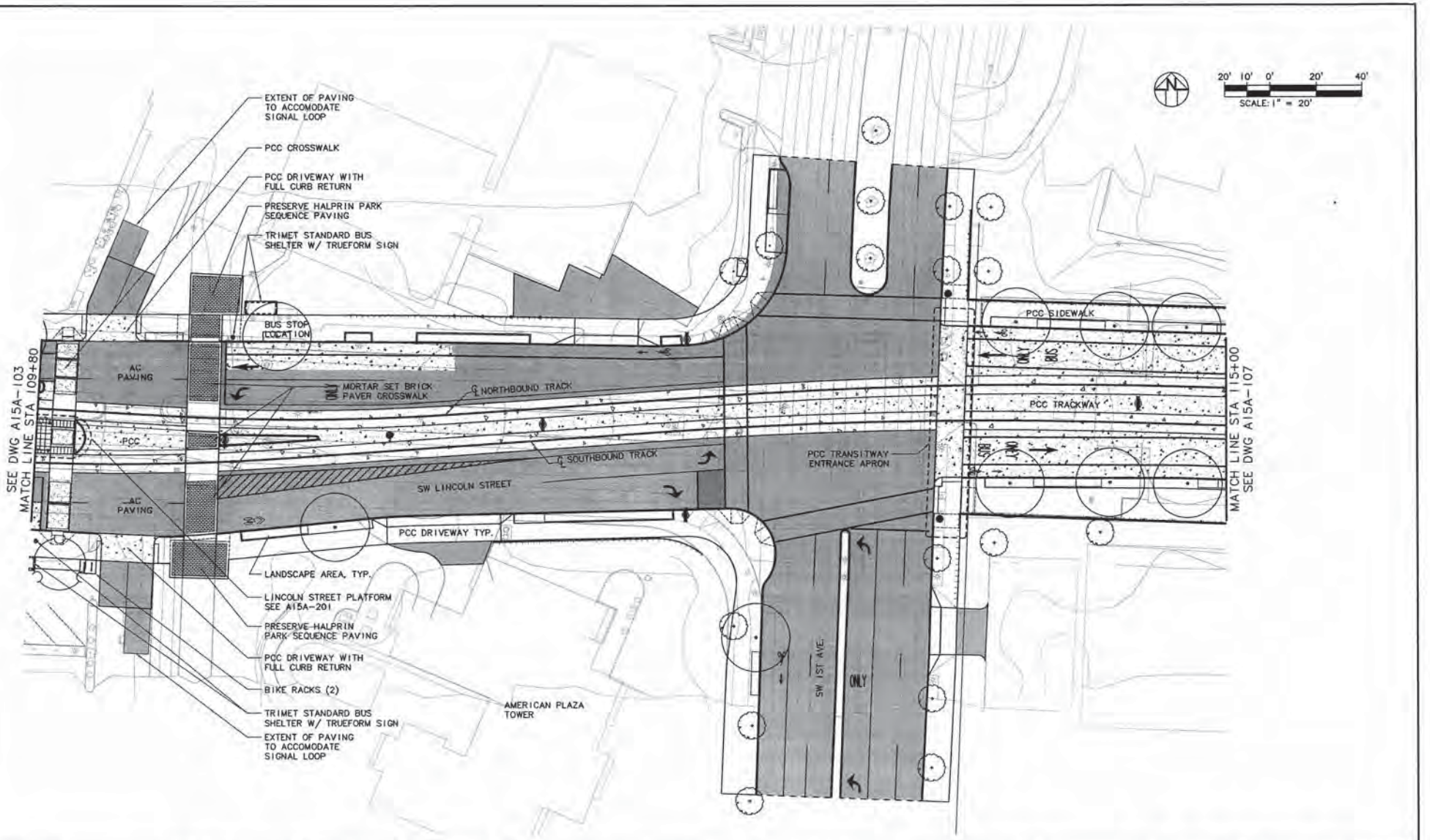


Figure H-8

100%
PRELIMINARY
ENGINEERING
03-05-2010

JM DESIGNED	02-18-10 DATE	
JW DRAWN	02-18-10 DATE	
CHECKED	02-18-10 DATE	
SBM APPROVED	03-05-10 DATE	

NO. | DATE | BY CHK | APPD | REVISIONS

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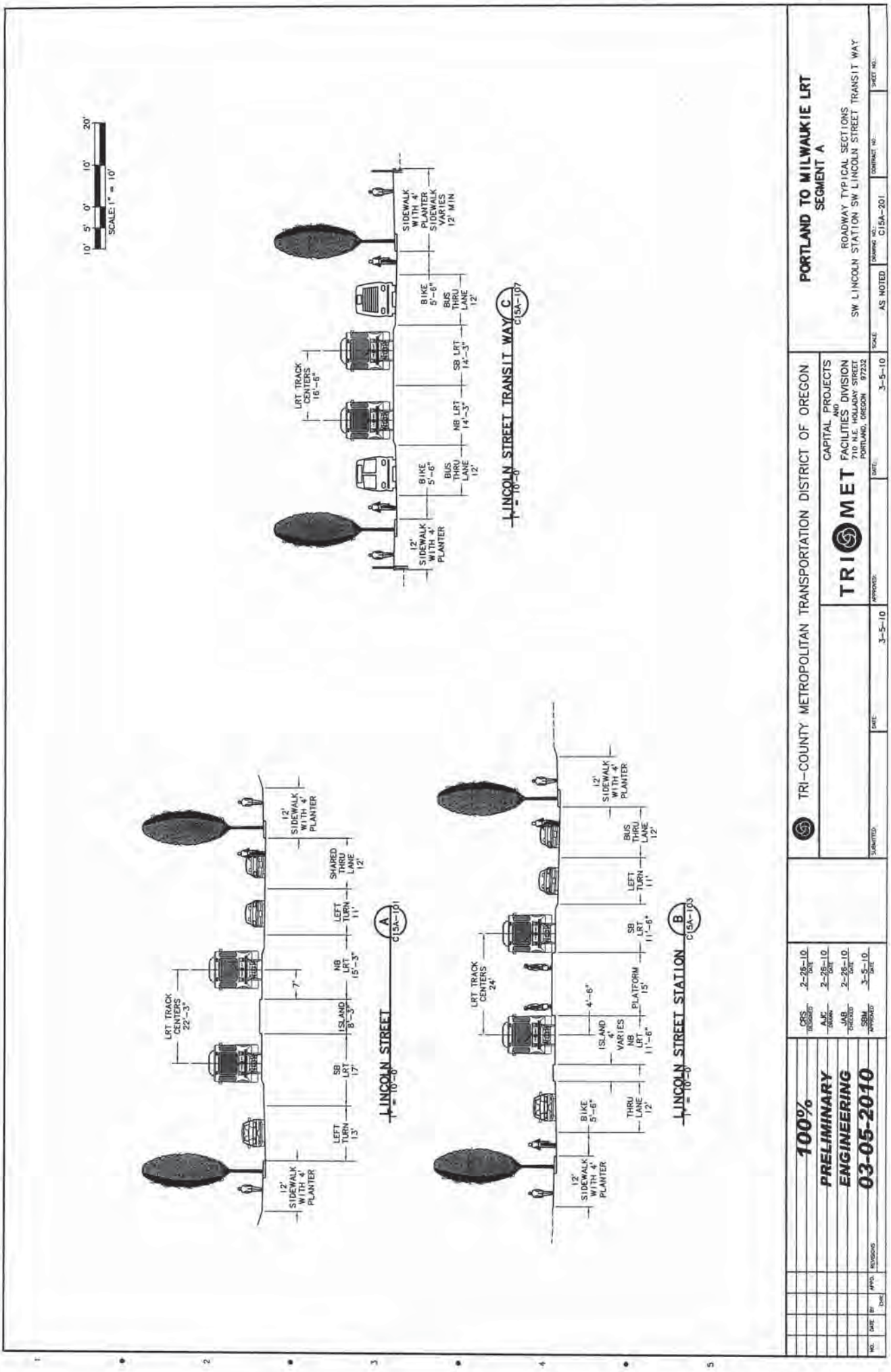
PORTLAND TO MILWAUKIE LRT
SEGMENT A

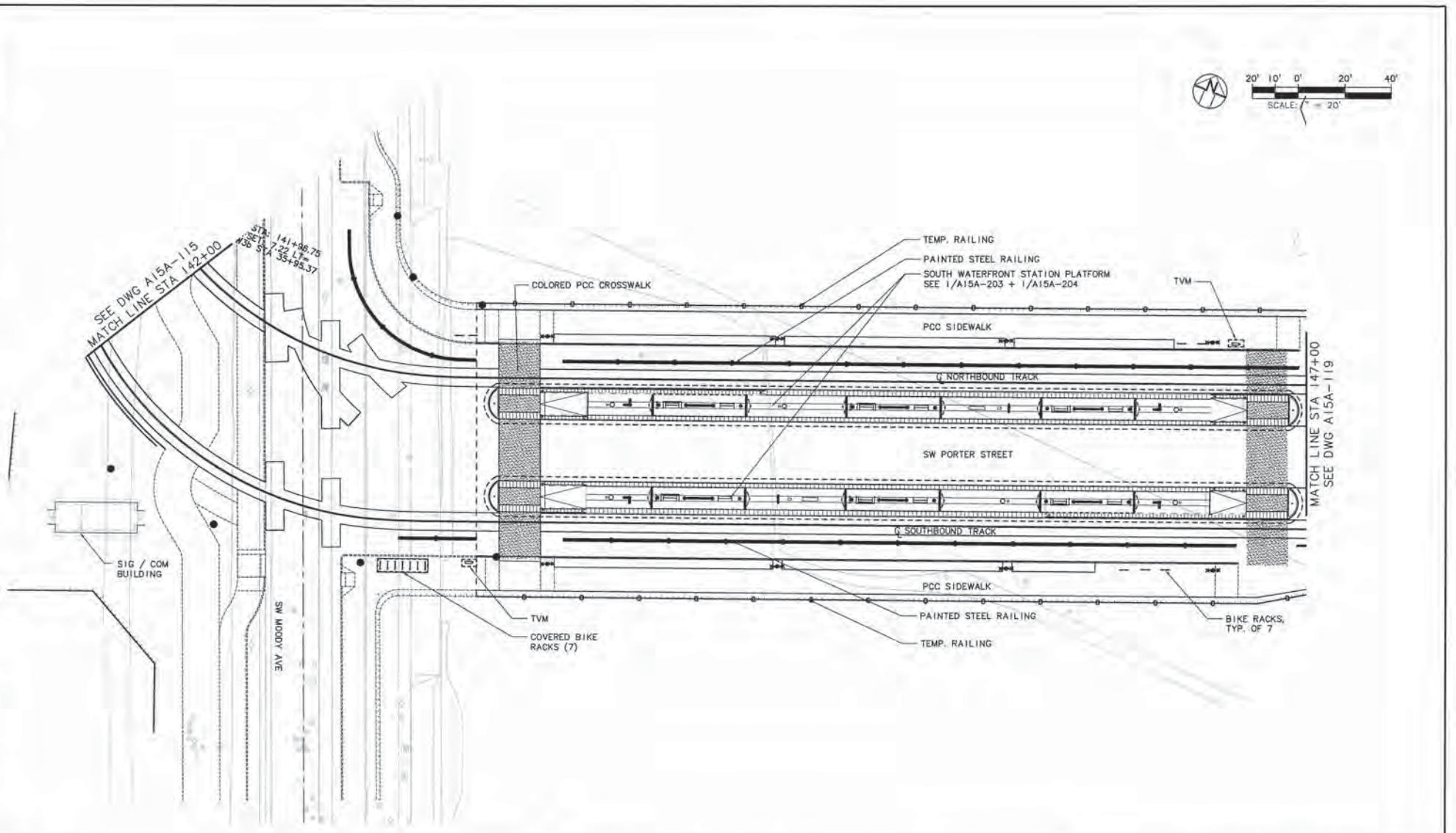
LINCOLN STREET STATION AREA PLAN
109+80 To 115+00

SCALE: 1"=20' | DRAWING NO.: A15A-105 RS | CONTRACT NO.: RH090206JB | SHEET NO.:



SCALE: 1" = 10'
10' 5' 0' 10' 20'
LINCOLN STREET
1" = 10'-0"
LRT TRACK CENTERS 22'-3"
12' SIDEWALK WITH 4' PLANTER
LEFT TURN 13'
SB LRT 17'
ISLAND 8'-3"
NB LRT 15'-3"
LEFT TURN 11'
SHARED THRU LANE 12'
LINCOLN STREET STATION
1" = 10'-0"
LRT TRACK CENTERS 24'
BIKE 5'-6"
THRU LANE 12'
ISLAND 4' VARIES
NB LRT 11'-6"
PLATFORM 15'
SB LRT 11'-6"
LEFT TURN 11'
BUS THRU LANE 12'
LINCOLN STREET TRANSIT WAY
1" = 10'-0"
LRT TRACK CENTERS 16'-6"
BIKE 5'-6"
BUS THRU LANE 12'
NB LRT 14'-3"
SB LRT 14'-3"
SIDEWALK WITH 4' PLANTER SIDEWALK VARIES 12' MIN
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232
PORTLAND TO MILWAUKIE LRT
SEGMENT A
ROADWAY TYPICAL SECTIONS
SW LINCOLN STATION SW LINCOLN STREET TRANSIT WAY
AS NOTED
C15A-201
3-5-10
100%
PRELIMINARY
ENGINEERING
03-05-2010

Figure H-9



25% PRELIMINARY ENGINEERING

DESIGNED — DATE
DRAWN — 11-10-09
CHECKED — DATE
APPROVED — DATE

NO. | DATE | BY | CHK | APPD. | REVISIONS:

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ZGF | CH2MHILL 2020 S.W. FOURTH AVE, 3RD FLOOR PORTLAND, OR 97201 Phone: 503-235-5000

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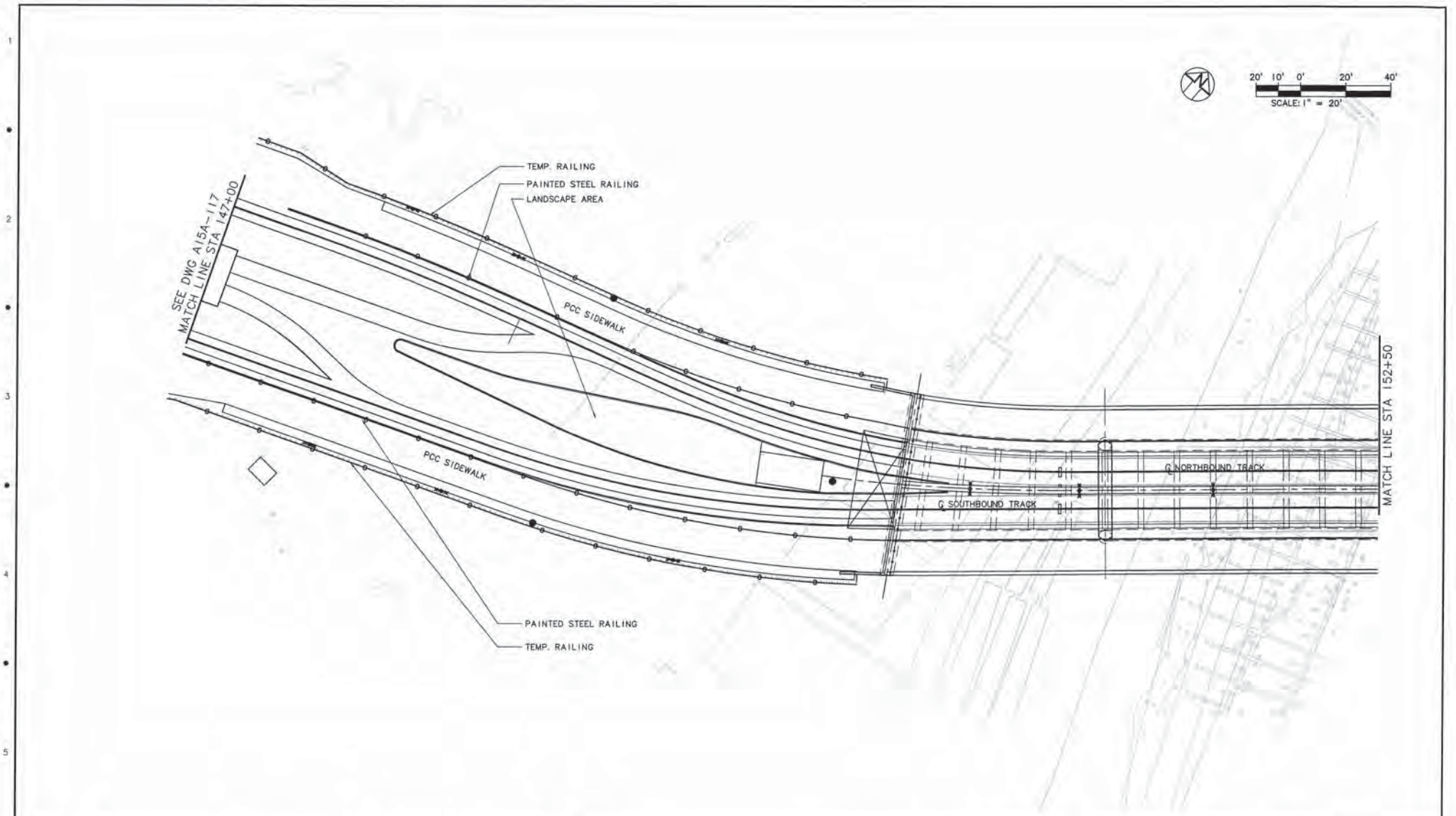
SUBMITTED: DATE: | APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT A

SOUTH WATERFRONT STATION AREA PLAN
142+00 To 147+00

SCALE: 1"=20' | DRAWING NO.: A15A-117 | CONTRACT NO.: RH090206JB | SHEET NO.: H-10

Figure H-10



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DESIGNED DATE
DRAWN 11-10-09 DATE
CHECKED DATE
APPROVED DATE

NO. | DATE | BY | CHK | APPD. | REVISIONS

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SUBMITTED: DATE: APPROVED: DATE:

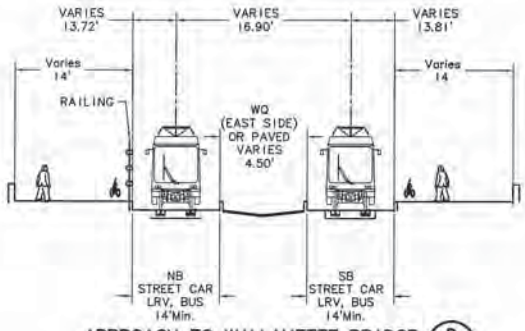
PORTLAND TO MILWAUKIE LRT
SEGMENT A

SOUTH WATERFRONT STATION AREA PLAN
147+00 To 152+50

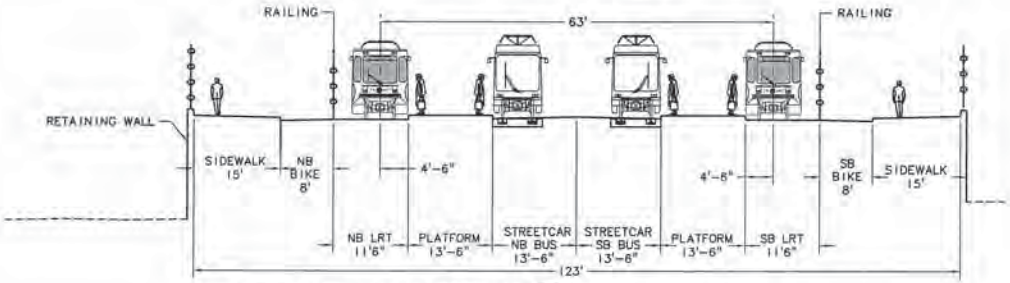
SCALE: 1"=20' | DRAWING NO.: A15A-119 | CONTRACT NO.: RH090206JB | SHEET NO.: H-11

Figure H-11

10' 5' 0' 10' 20'
SCALE: 1" = 10'



APPROACH TO WILLAMETTE BRIDGE (D) C15A-119
1" = 10'-0"



SOUTH WATERFRONT STATION (C) C15A-117
1" = 10'-0"

NO.	DATE	BY	CHK	APP'D	REVISIONS									

25% PRELIMINARY ENGINEERING

KHM	6-09		
DESIGNED	DATE		
JHM	6-09		
DRAWN	DATE		
CHECKED	DATE		
APPROVED	DATE		

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CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

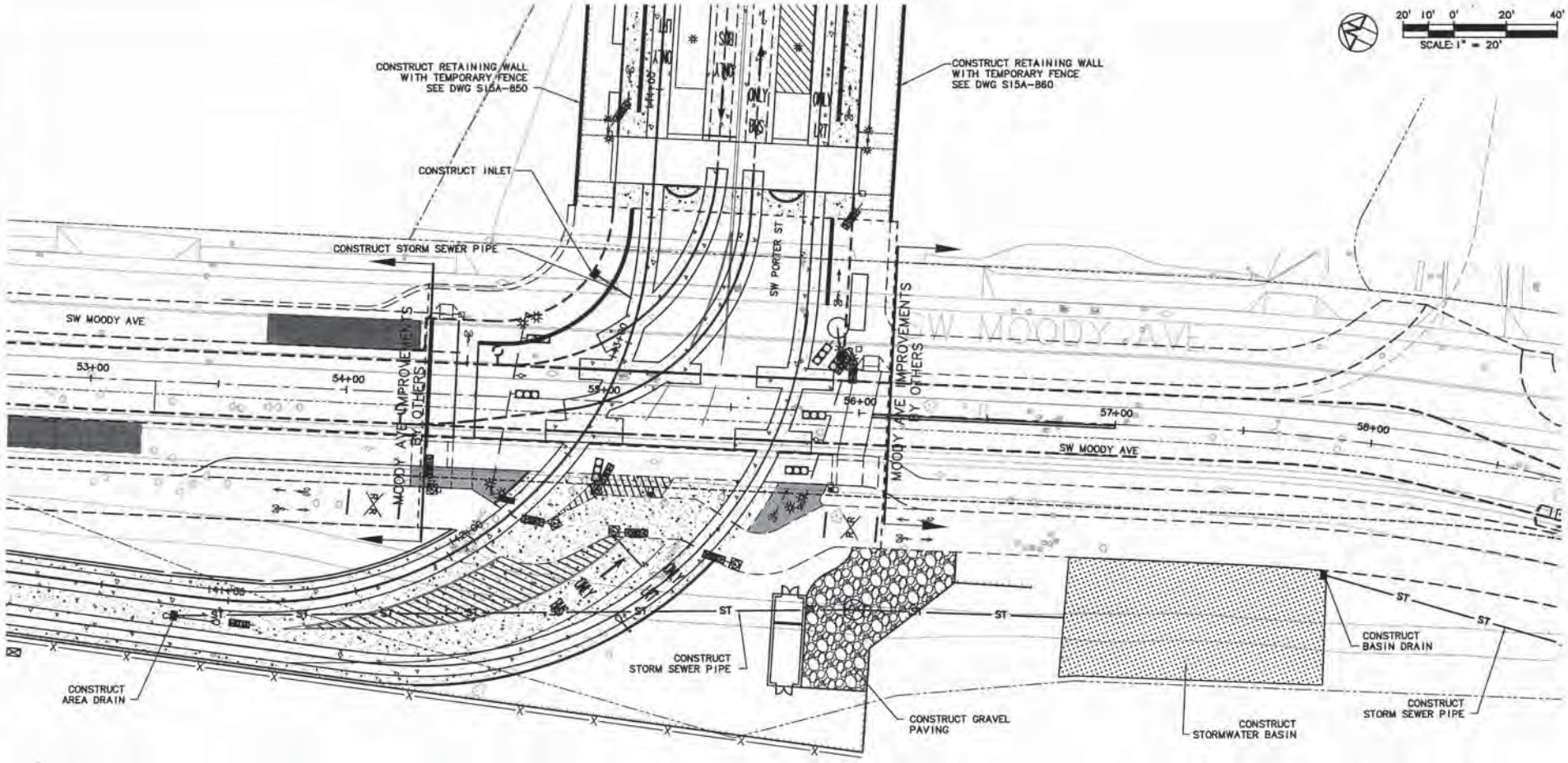
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT A

ROADWAY TYPICAL SECTIONS
SW WATERFRONT STATION WILLAMETTE BRIDGE APPROACHES

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.
AS NOTED	C15A-202		H-12

Figure H-12



NO.	DATE	BY CHK.	APPD.	REVISIONS

100%
PRELIMINARY ENGINEERING
03-05-2010

CRS DESIGNED	2-26-10 DATE	
AJC DRAWN	2-26-10 DATE	
JAB CHECKED	2-26-10 DATE	
SBM APPROVED	3-5-10 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

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2020 S.W. FOURTH AVE, 3RD FLOOR
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Phone: 503-235-5000

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CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
SEGMENT A

ROADWAY PLAN AND DRAINAGE
SW MOODY AVENUE

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	3-5-10		3-5-10	1"=20'	C15A-115A	RH090206JB	

Figure H-13

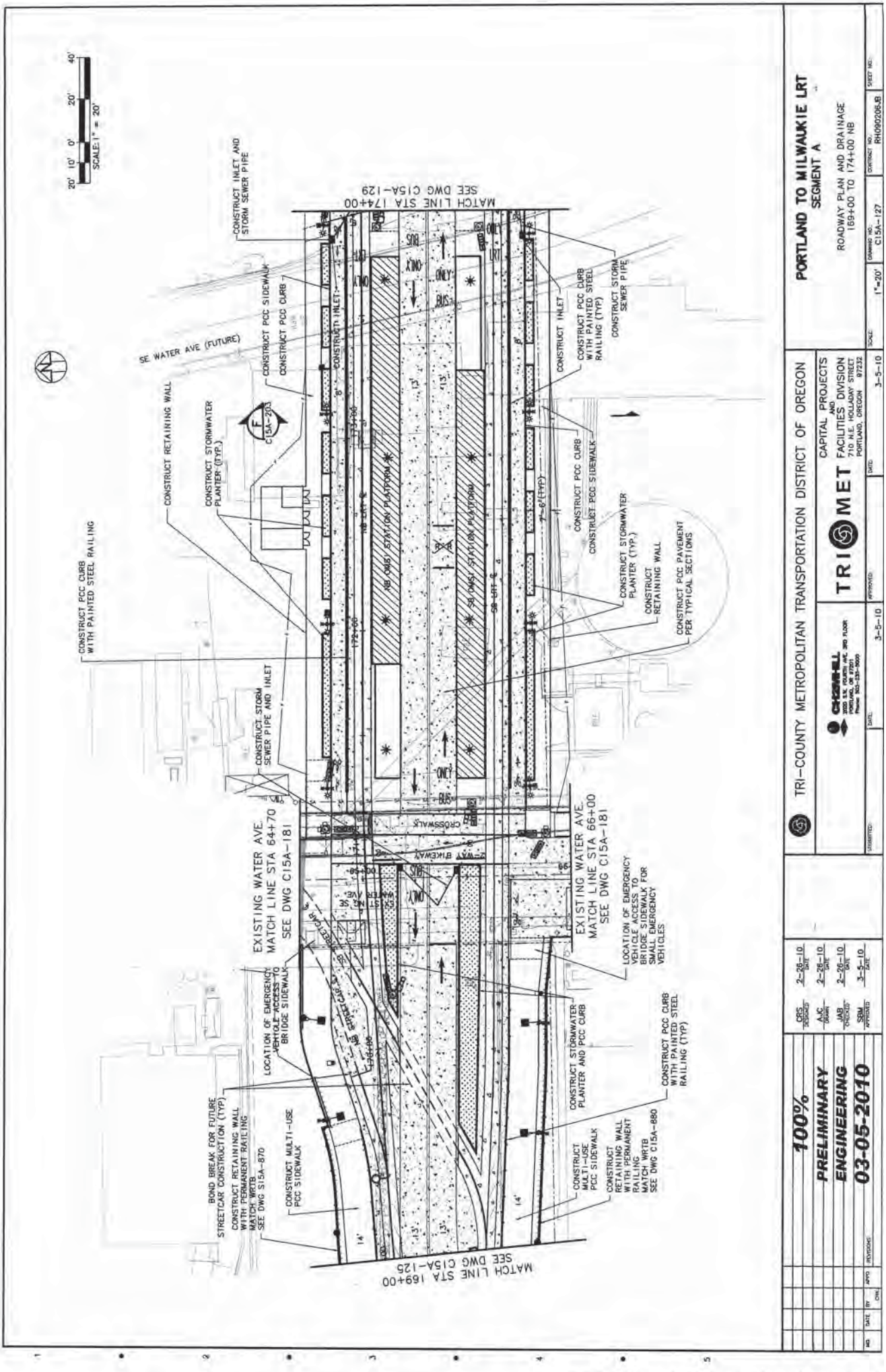
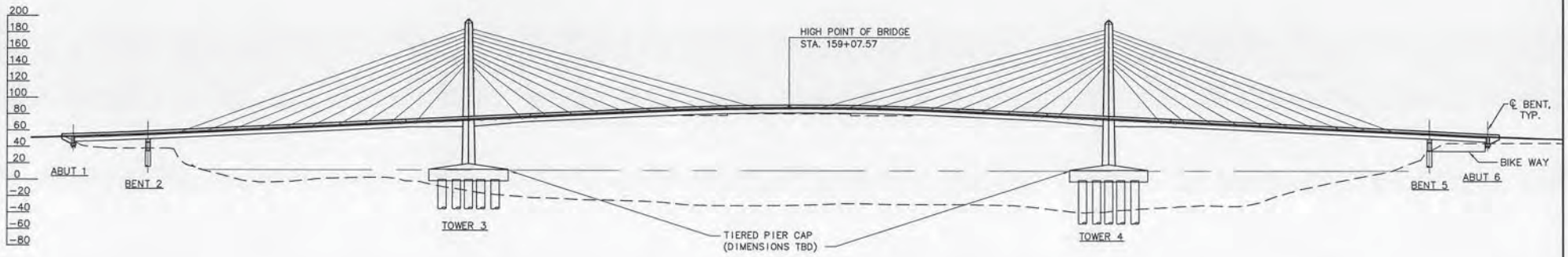

PORTLAND TO MILWAUKIE LRT
SEGMENT A
ROADWAY PLAN AND DRAINAGE
169+00 TO 174+00 NB
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232
TRIMET
100%
PRELIMINARY
ENGINEERING
03-05-2010
SCALE: 1" = 20'
MATCH LINE STA 174+00
SEE DWG C15A-129
MATCH LINE STA 169+00
SEE DWG C15A-125
EXISTING WATER AVE.
MATCH LINE STA 64+70
SEE DWG C15A-181
EXISTING WATER AVE.
MATCH LINE STA 66+00
SEE DWG C15A-181
SE WATER AVE (FUTURE)
CONSTRUCT INLET AND STORM SEWER PIPE
CONSTRUCT PCC SIDEWALK
CONSTRUCT PCC CURB
CONSTRUCT RETAINING WALL
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING
CONSTRUCT STORM SEWER PIPE AND INLET
CONSTRUCT PCC PAVEMENT PER TYPICAL SECTIONS
LOCATION OF EMERGENCY VEHICLE ACCESS TO BRIDGE SIDEWALK FOR SMALL EMERGENCY VEHICLES
CONSTRUCT STORMWATER PLANTER AND PCC CURB
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING (TYP)
CONSTRUCT MULTI-USE PCC SIDEWALK
CONSTRUCT RETAINING WALL WITH PERMANENT RAILING MATCH WRTB SEE DWG C15A-880
BOND BREAK FOR FUTURE STREETCAR CONSTRUCTION (TYP)
CONSTRUCT RETAINING WALL WITH PERMANENT RAILING MATCH WRTB SEE DWG S15A-870
CONSTRUCT MULTI-USE PCC SIDEWALK
NB OMS STATION PLATFORM
SB OMS STATION PLATFORM
CROSSWALK
2-WAY BIKEWAY
CONSTRUCT INLET
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING (TYP)
CONSTRUCT STORM SEWER PIPE
CONSTRUCT PCC CURB
CONSTRUCT PCC SIDEWALK
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT RETAINING WALL
CONSTRUCT PCC PAVEMENT PER TYPICAL SECTIONS
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING
CONSTRUCT STORM SEWER PIPE
CONSTRUCT INLET
CONSTRUCT PCC CURB
CONSTRUCT PCC SIDEWALK
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT RETAINING WALL
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING
CONSTRUCT STORM SEWER PIPE
CONSTRUCT PCC CURB
CONSTRUCT PCC SIDEWALK
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT RETAINING WALL
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING
CONSTRUCT STORM SEWER PIPE
CONSTRUCT PCC CURB
CONSTRUCT PCC SIDEWALK
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT RETAINING WALL
CONSTRUCT PCC PAVEMENT PER TYPICAL SECTIONS
CONSTRUCT STORM SEWER PIPE AND INLET
CONSTRUCT RETAINING WALL
CONSTRUCT STORMWATER PLANTER (TYP.)
CONSTRUCT PCC CURB WITH PAINTED STEEL RAILING (TYP)
CONSTRUCT MULTI-USE PCC SIDEWALK
CONSTRUCT RETAINING WALL WITH PERMANENT RAILING MATCH WRTB SEE DWG C15A-880
LOCATION OF EMERGENCY VEHICLE ACCESS TO BRIDGE SIDEWALK
SCALE: 1" = 20'

Figure H-14

Figure H-15



ELEVATION 1
SCALE: 1" = 60'

60' 30' 0 60' 120'
SCALE: 1" = 60'

25% PRELIMINARY ENGINEERING

NO.	DATE	BY	CHK	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

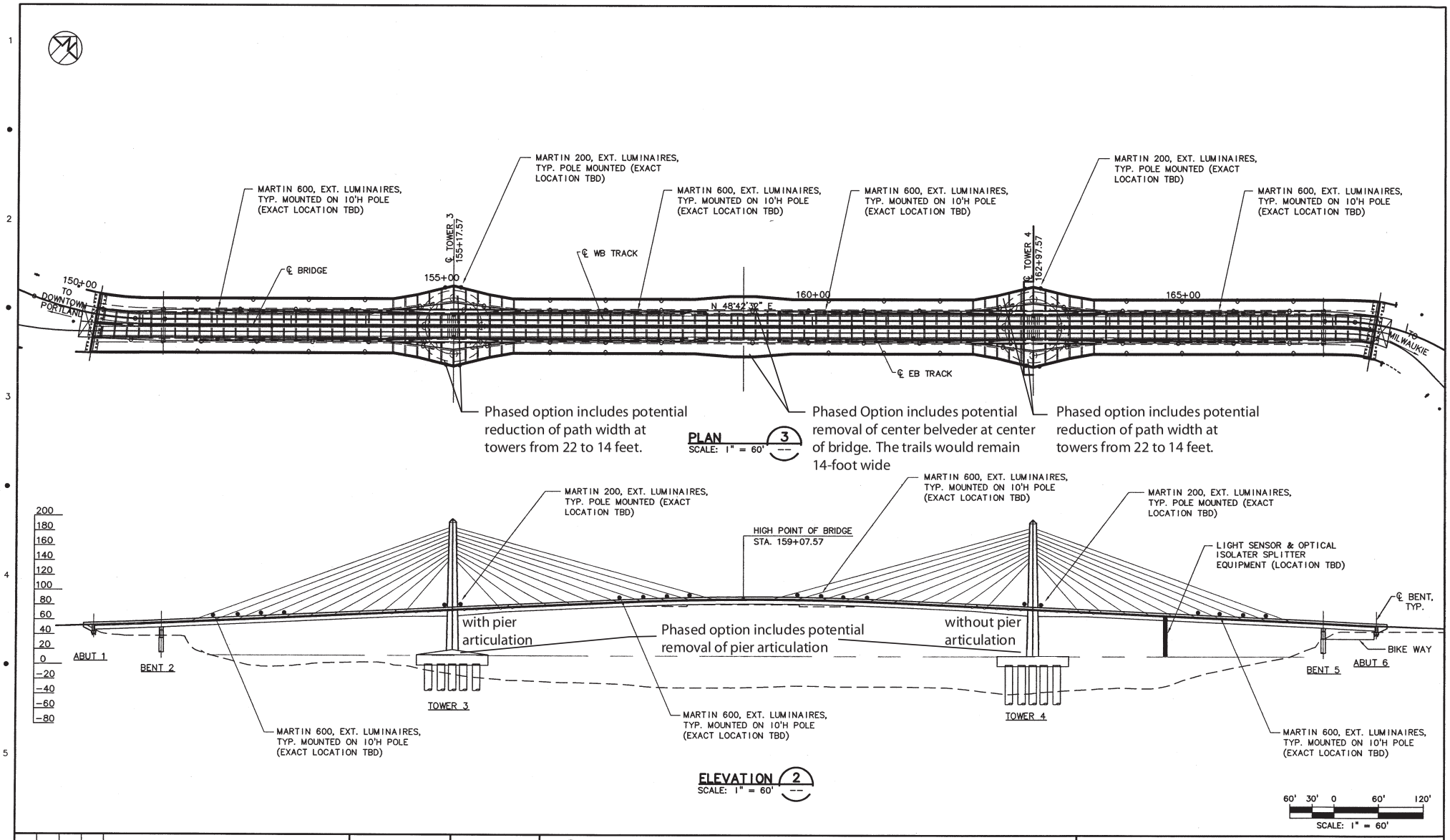
SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT B
WILLAMETTE RIVER BRIDGE
GENERAL PLAN & ELEVATION
PUBLIC ART / PIER CAP

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=60'	R15B-506		H-13

R:\15-CD DUMP\B-25%\R15B-506.dwg, 11/28/2009 3:39:58 PM, mcbridej

Figure H-16



NO.	DATE	BY	CHK.	APPD.	REVISIONS
	1/20/10				REQUEST FOR QUALIFICATIONS

100% PRELIMINARY ENGINEERING 03-05-2010

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

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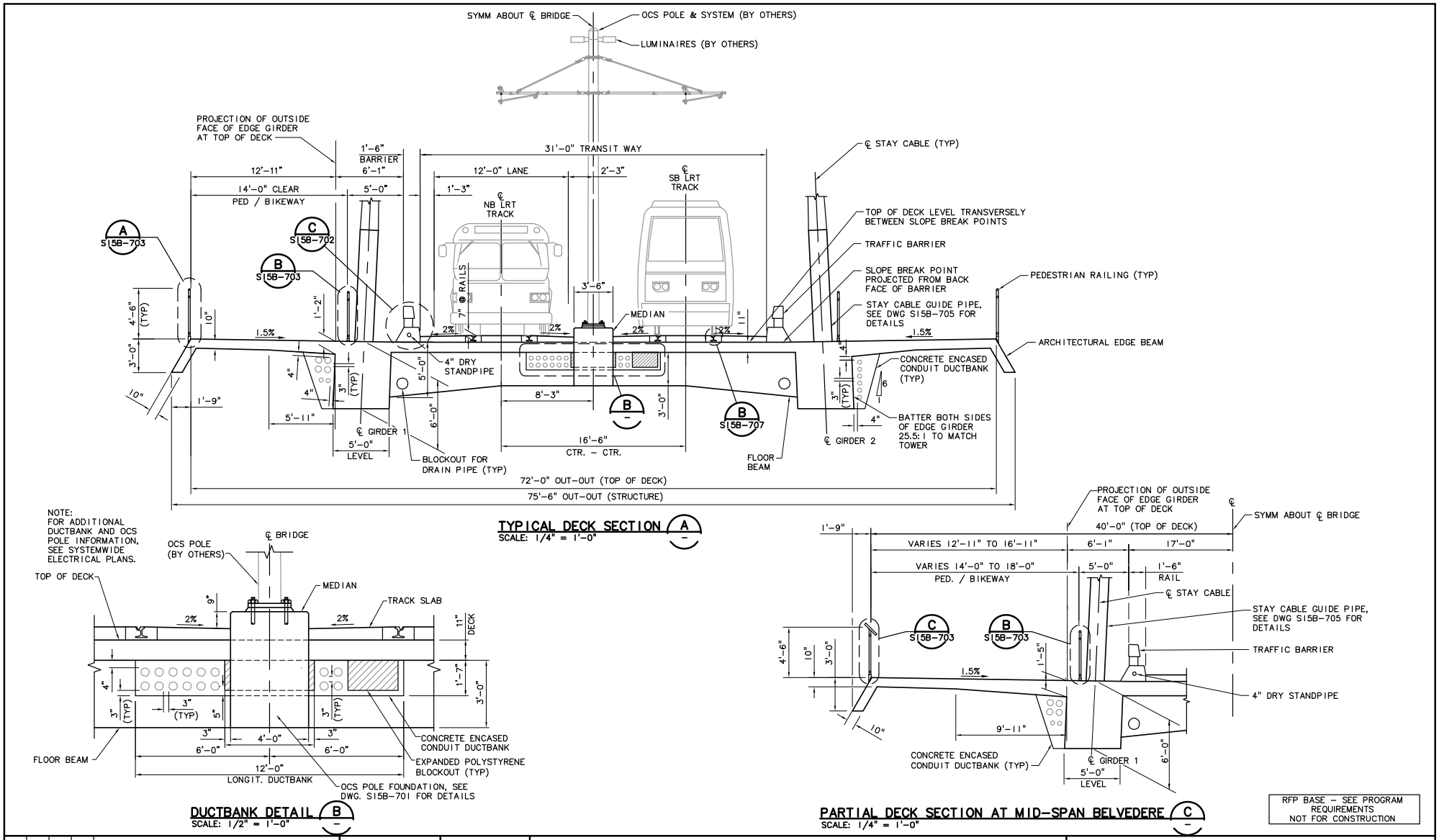
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT B
WILLAMETTE RIVER BRIDGE
GENERAL PLAN & ELEVATION
PUBLIC ART / AESTHETIC LIGHTING

SCALE: 1"=60' DRAWING NO.: R15B-505 CONTRACT NO.: RH100391JB SHEET NO.:

R:\15-CD DUMP\R-100%\R15B-505.dwg, 2/27/2010 3:16:35 PM, kerbs



NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5/5/10				REQUEST FOR PROPOSAL

MHJ	DESIGNED	11/17/09 DATE
RAM	DRAWN	11/17/09 DATE
DDM	CHECKED	11/17/09 DATE
SCL	APPROVED	05/05/10 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

HNTB
111 SW COLUMBIA STREET, SUITE 940
PORTLAND OREGON 97201
(503) 205-4140 (503) 205-4141 FAX

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

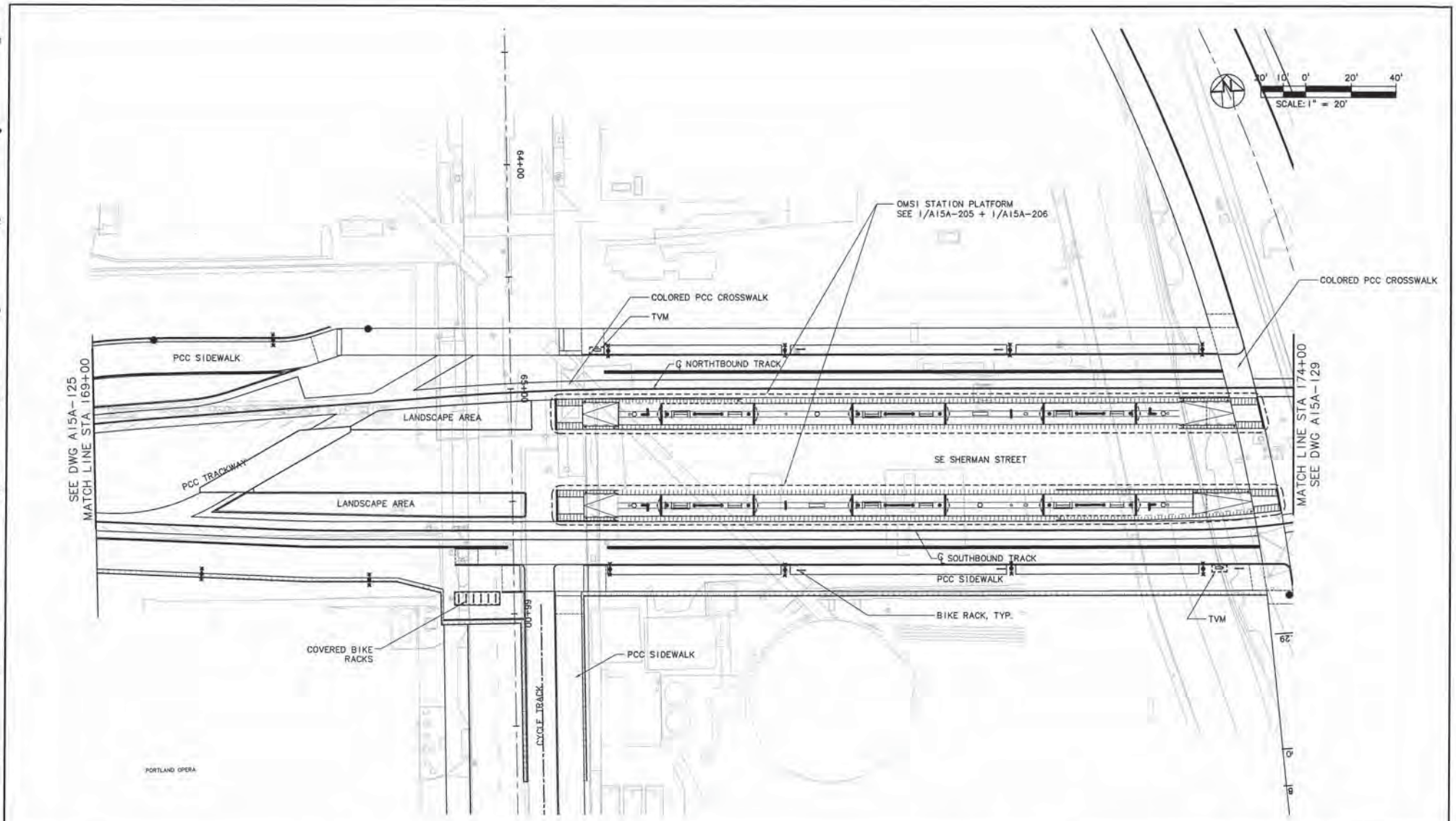
SUBMITTED: DATE: 05/05/10 APPROVED: DATE: 05/05/10

PORTLAND TO MILWAUKIE LRT
SEGMENT B
WILLAMETTE RIVER TRANSIT BRIDGE
TYPICAL DECK SECTION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	S15B-600	RH090256JB	

Figure H-17

R:\15-CD DUMP\B-RePathed 07-27-10\S15B-600.dwg, 9/2/2010 3:24:31 PM, lartsb



25% PRELIMINARY ENGINEERING

NO.	DATE	BY	CHK.	APPD.	REVISIONS

DESIGNED — DATE
DRAWN — DATE 11-10-09
CHECKED — DATE
APPROVED — DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

ZGF — ZIMMER GUNSUL FRASCA ARCHITECTS LLP

CH2MHILL
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PORTLAND, OR 97201
Phone: 503-235-5000

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710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

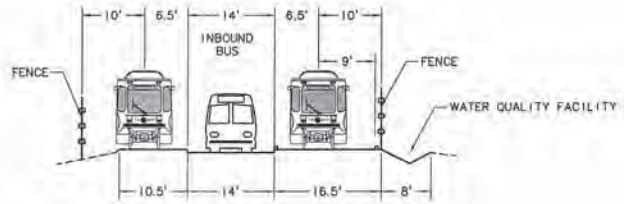
SUBMITTED: — DATE:
APPROVED: — DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT A

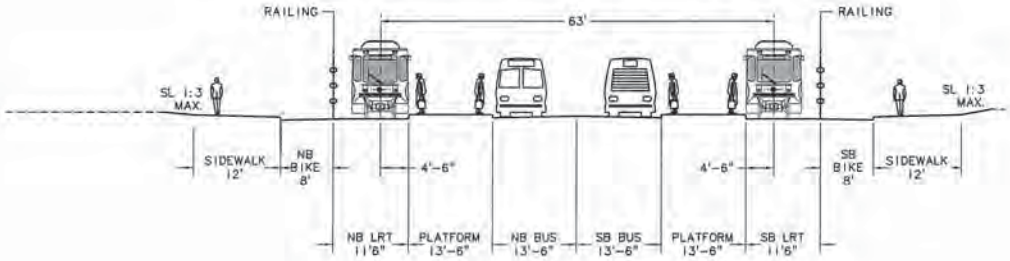
OMSI STATION AREA PLAN
169+00 To 174+00

SCALE: 1"=20' | DRAWING NO.: A15A-127 | CONTRACT NO.: RH090206JG | SHEET NO.: H-16

Figure H-18



TRANSIT WAY EAST OF OMSI STATION (F, C15A-131)
1" = 10'-0"



OMSI STATION (F, C15A-127)
1" = 10'-0"

10' 5' 0' 10' 20'
SCALE: 1" = 10'

25% PRELIMINARY ENGINEERING

KHM (DESIGNED)	6-09 (DATE)	
JHM (DRAWN)	6-09 (DATE)	
CHECKED	DATE	
APPROVED	DATE	

NO | DATE | BY | APPD | REVISIONS

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710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

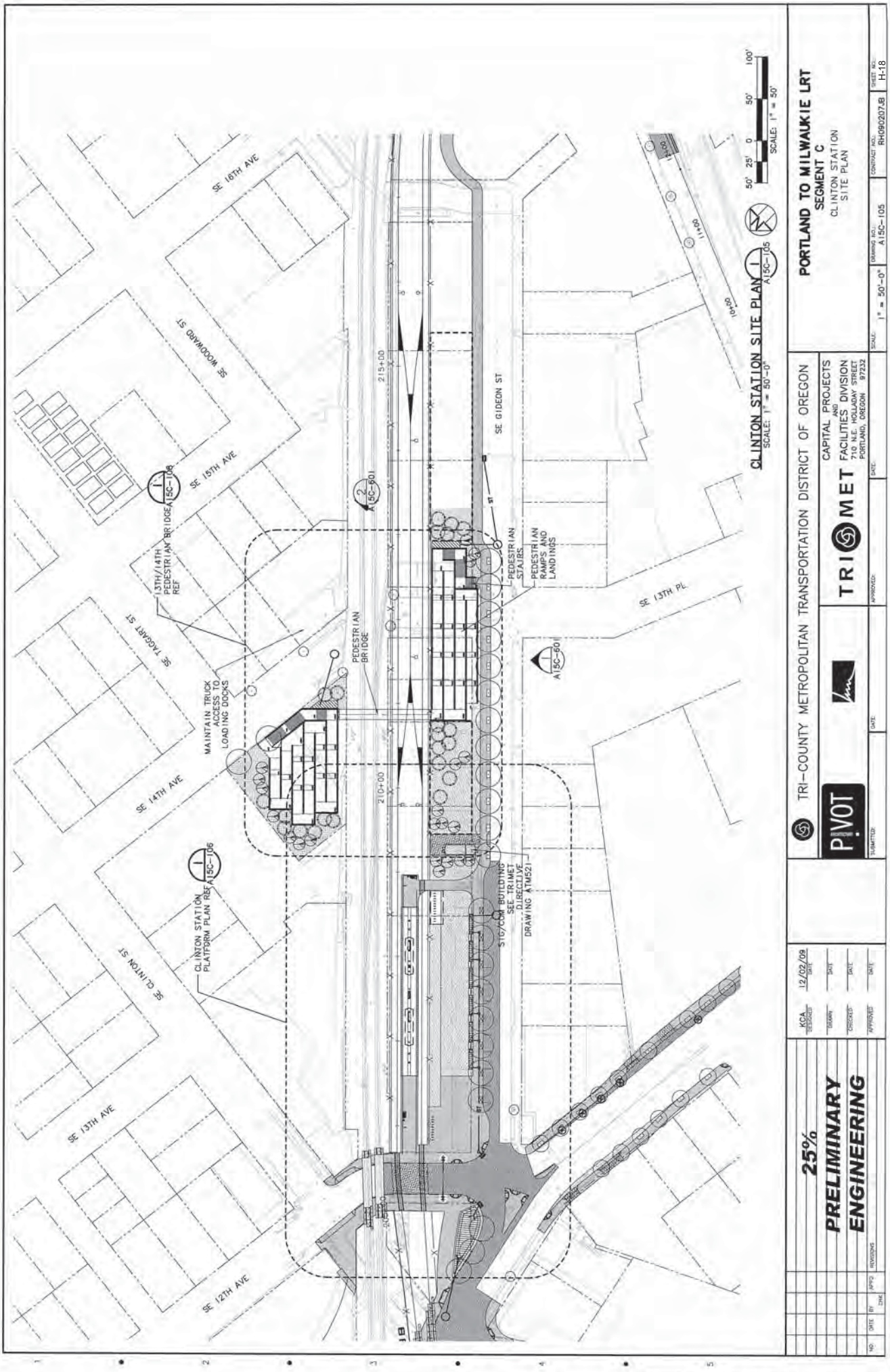
SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT A

ROADWAY TYPICAL SECTIONS
OMSI STATION SE TRANSIT WAY

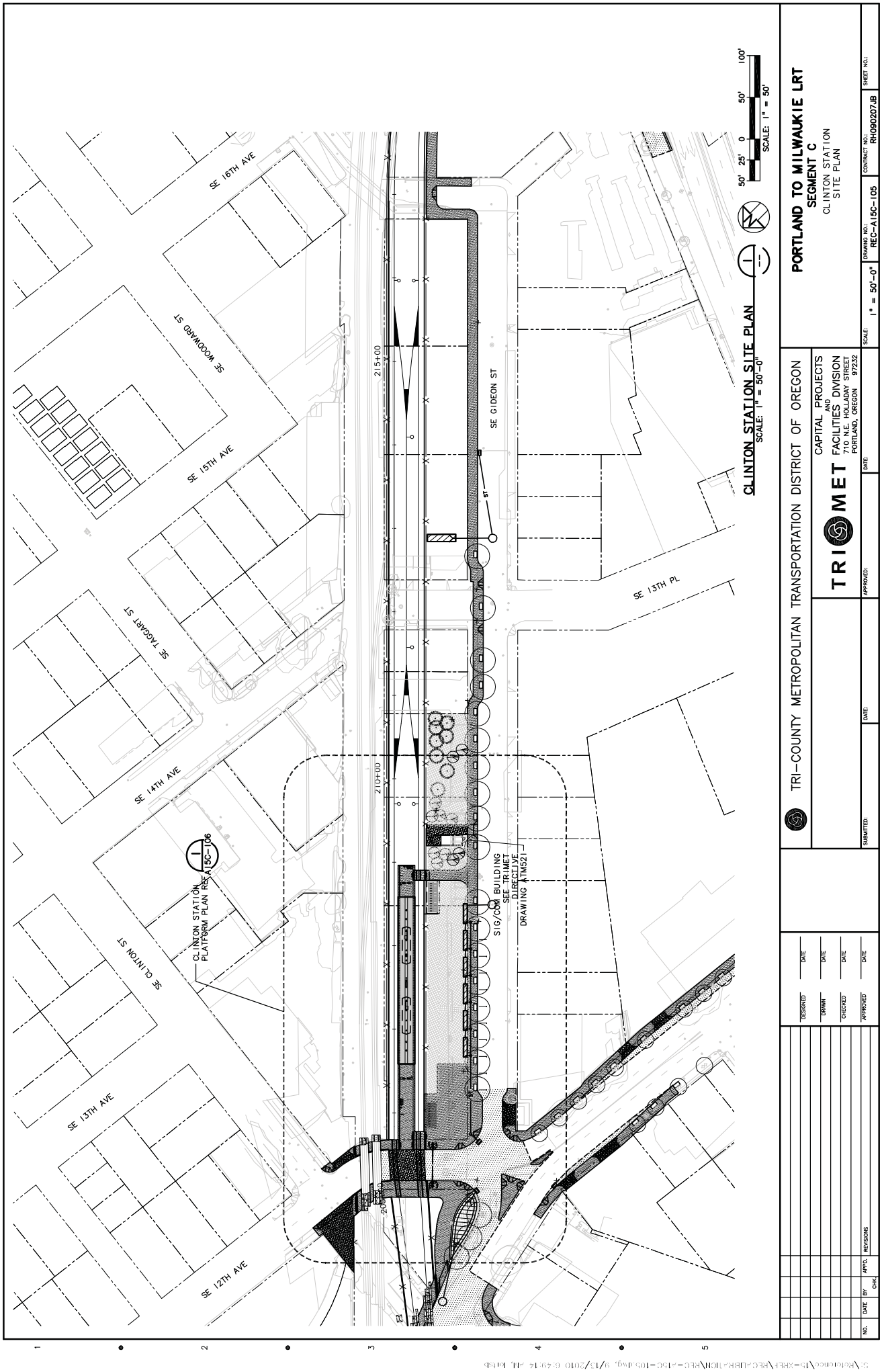
SCALE: AS NOTED | DRAWING NO.: C15A-203 | CONTRACT NO.: | SHEET NO.: H-17

Figure H-19



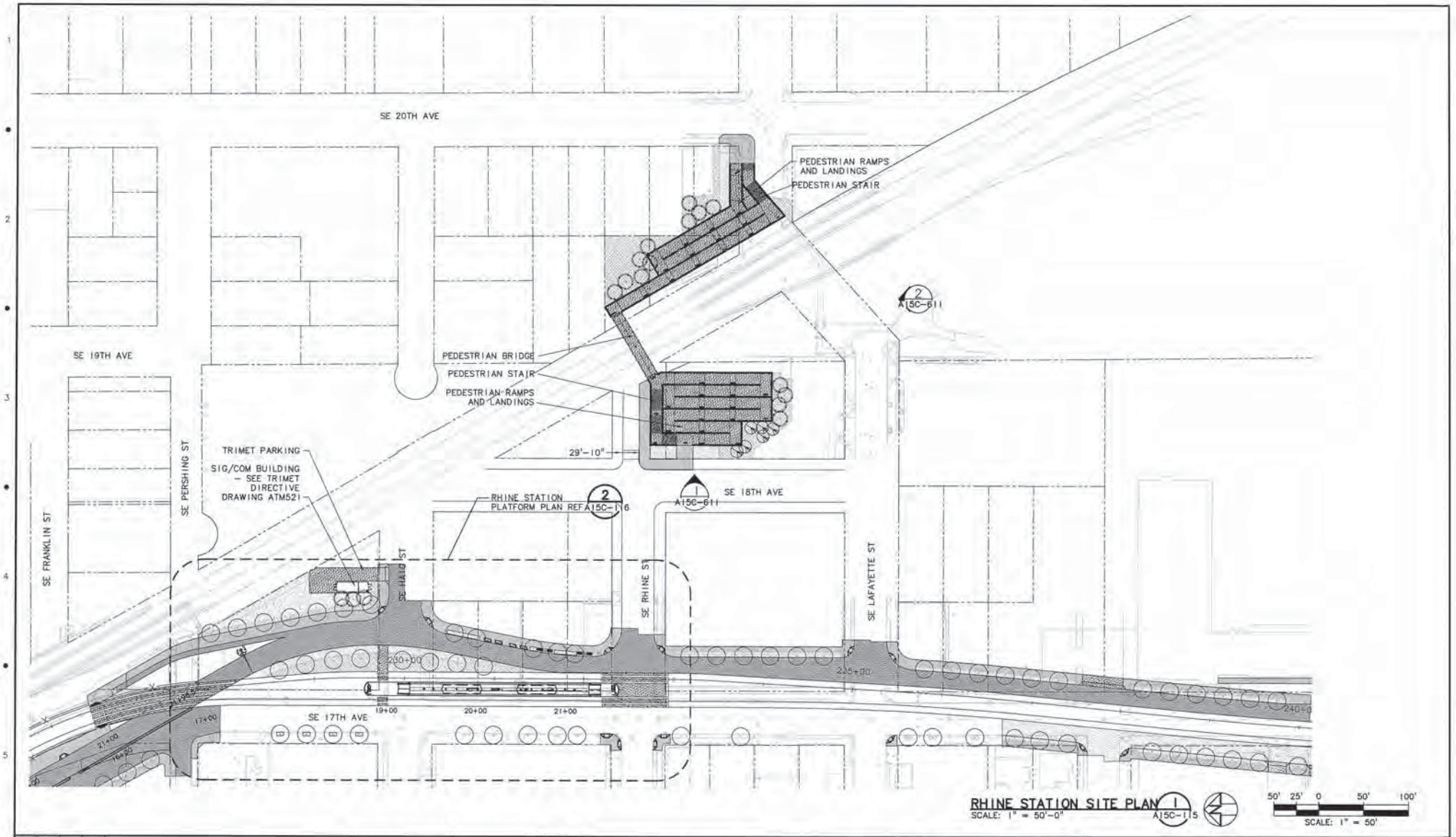
PORTLAND TO MILWAUKIE LRT
SEGMENT C
CLINTON STATION
SITE PLAN
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232
TRIMET
PIVOT
25%
PRELIMINARY
ENGINEERING
CLINTON STATION SITE PLAN
SCALE: 1" = 50'-0"
SCALE: 1" = 50'
SE 16TH AVE
SE WOODWARD ST
SE 15TH AVE
SE TAGGART ST
SE 14TH AVE
SE CLINTON ST
SE 13TH AVE
SE 12TH AVE
SE GIDEON ST
SE 13TH PL
13TH/14TH PEDESTRIAN BRIDGE REF
MAINTAIN TRUCK ACCESS TO LOADING DOCKS
PEDESTRIAN BRIDGE
PEDESTRIAN STAIRS
PEDESTRIAN RAMPS AND LANDINGS
CLINTON STATION PLATFORM PLAN REF
SIG/COM BUILDING SEE TRIMET DIRECTIVE DRAWING ATM521
215+00
210+00
A15C-106
A15C-601
A15C-105
KCA
12/02/09
1" = 50'-0"
A15C-105
RH090207JB
H-18

Figure H-20



CLINTON STATION SITE PLAN
SCALE: 1" = 50'-0"
50' 25' 0 50' 100'
SCALE: 1" = 50'
PORTLAND TO MILWAUKIE LRT
SEGMENT C
CLINTON STATION
SITE PLAN
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON
TRI MET
CAPITAL PROJECTS
AND
FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232
SCALE: 1" = 50'-0"
DRAWING NO.: REC-A15C-105
CONTRACT NO.: RH090207JB
SHEET NO.:
SUBMITTED:
DATE:
APPROVED:
DATE:
DESIGNED
DRAWN
CHECKED
APPROVED
DATE
NO.
DATE
BY
CHK.
APPD.
REVISIONS
SE 16TH AVE
SE WOODWARD ST
SE 15TH AVE
SE TAGGART ST
SE 14TH AVE
SE CLINTON ST
SE 13TH AVE
SE 12TH AVE
SE GIDEON ST
SE 13TH PL
215+00
210+00
CLINTON STATION PLATFORM PLAN REF A15C-106
SIG/COM BUILDING SEE TRIMET DIRECTIVE DRAWING ATM521

Figure H-20a



25% PRELIMINARY ENGINEERING

NO.	DATE	BY	CHK	APPD	REVISIONS

DESIGNED	KCA	12/02/09 DATE
DRAWN		DATE
CHECKED		DATE
APPROVED		DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

PIVOT

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

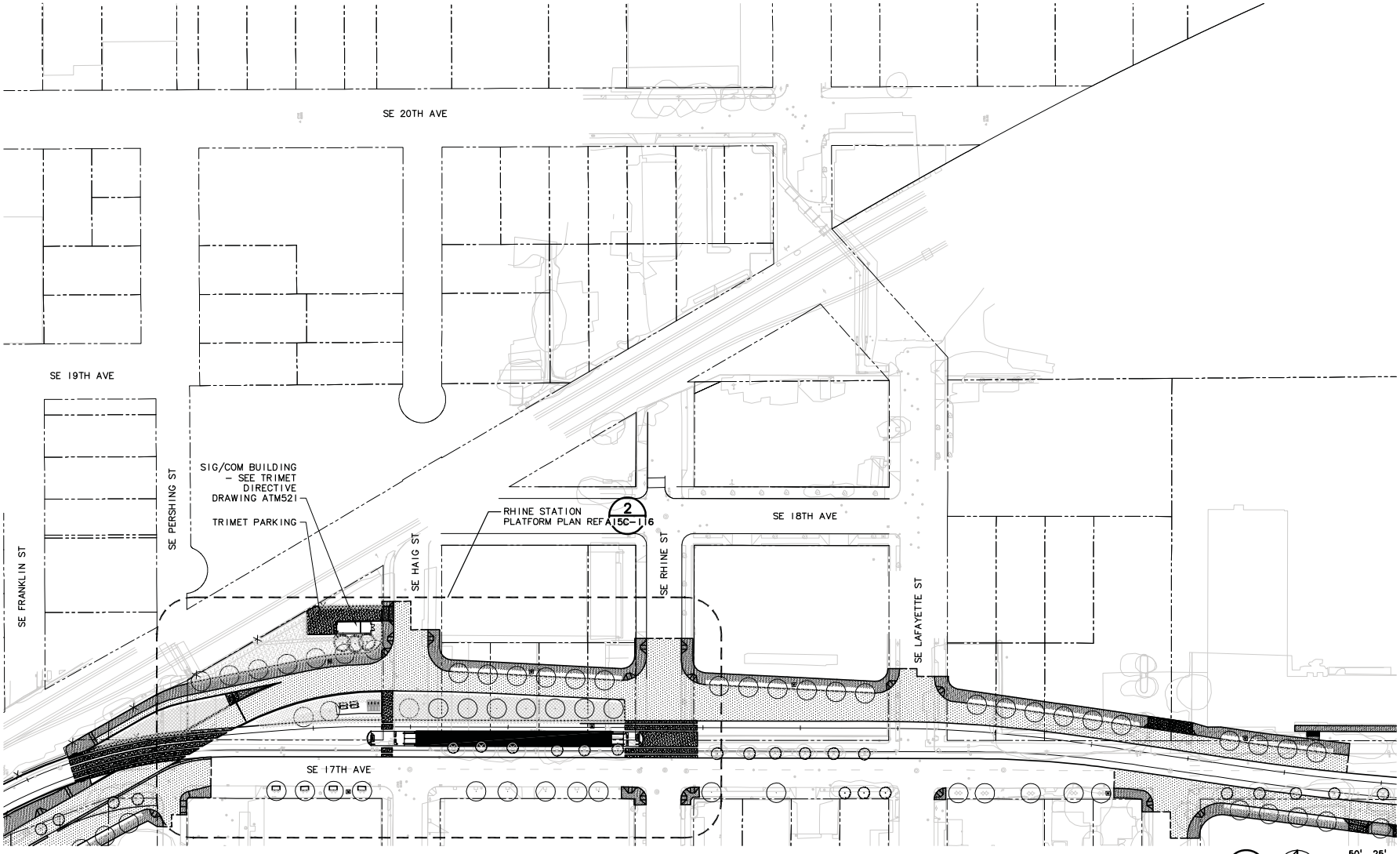
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT C
RHINE STATION
SITE PLAN

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 50'-0"	A15C-115	RH090207JB	H-19

R:\15-CD DUMP\C-25\WA15C-115.dwg, 11/28/2009 2:11:09 PM, mcbride

Figure H-21



NO.	DATE	BY / CHK.	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT C
RHINE STATION
SITE PLAN

SCALE: 1" = 50'-0" | DRAWING NO.: REC-A15C-115 | CONTRACT NO.: RH090207JB | SHEET NO.:

Figure H-21a

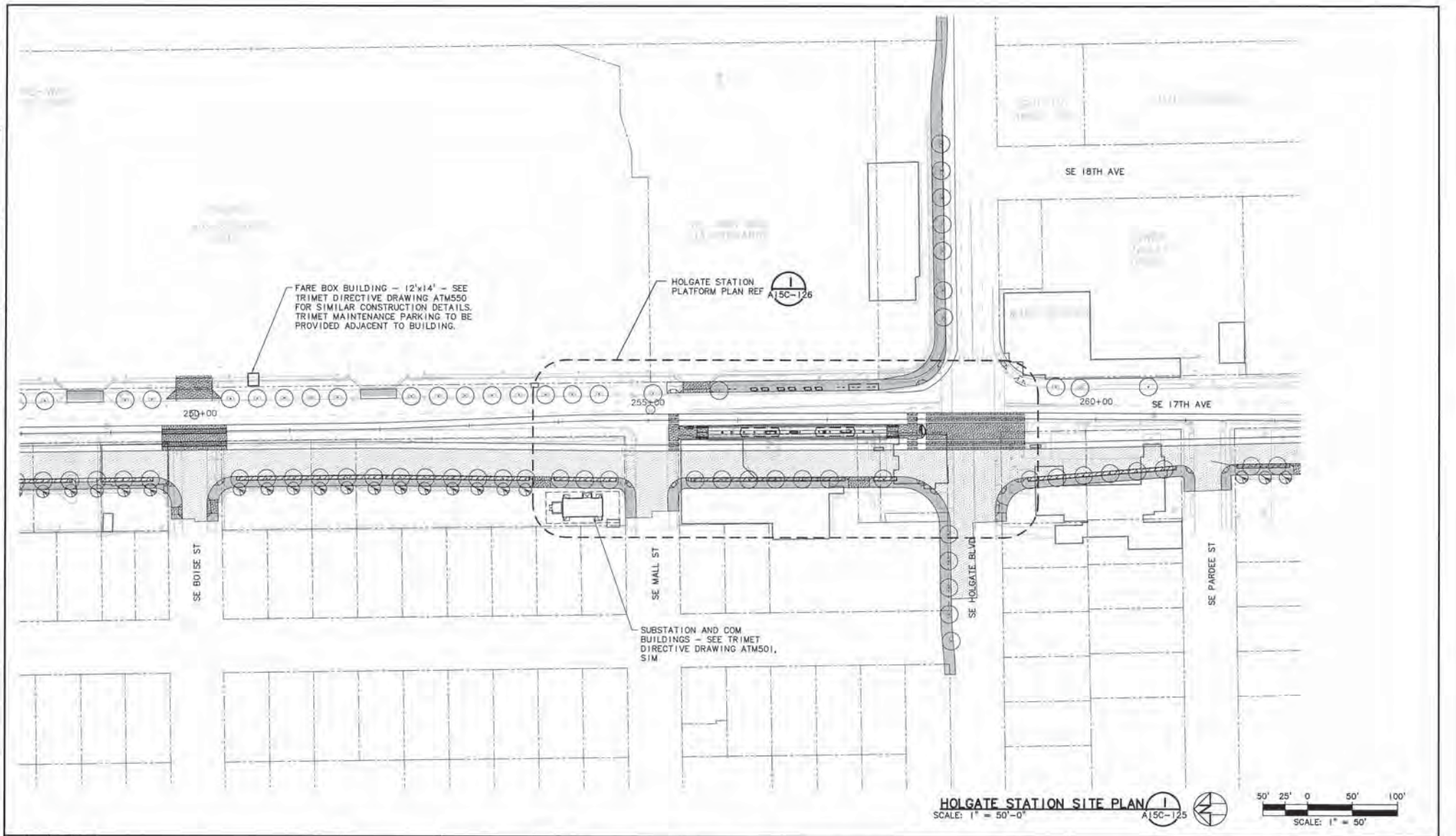


Figure H-22

25% PRELIMINARY ENGINEERING

NO.	DATE	BY	CHK	APPD	REVISIONS

DESIGNED	KCA	12/02/09 DATE
DRAWN		DATE
CHECKED		DATE
APPROVED		DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

PIVOT

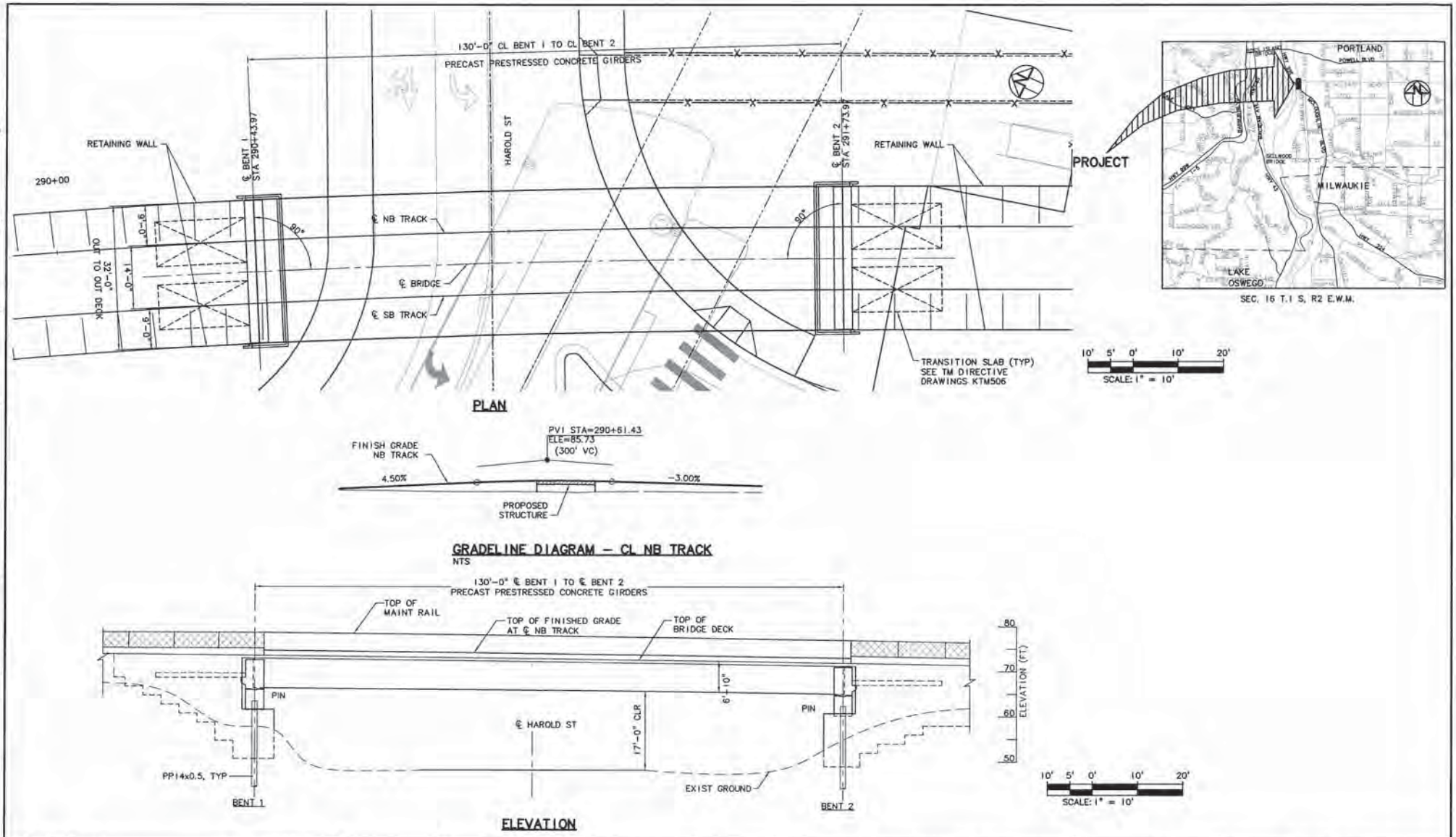
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT C
HOLGATE STATION
SITE PLAN

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 50'-0"	A15C-125	RH090207JB	H-20

R:\15-CD DUMP\C-25%\A15C-125.dwg, 11/28/2009 2:14:30 PM, mcbiting



NO.	DATE	BY	CHK	APPD.	REVISIONS

100%
PRELIMINARY
ENGINEERING
03-05-2010

IW DESIGNED	03/05/10 DATE	
PF DRAWN	03/05/10 DATE	
CI CHECKED	03/05/10 DATE	
RS APPROVED	03/05/10 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Hatch Mott MacDonald
400 S.W. 6th Avenue, Suite 914
Portland, OR 97204
(503) 243-5001

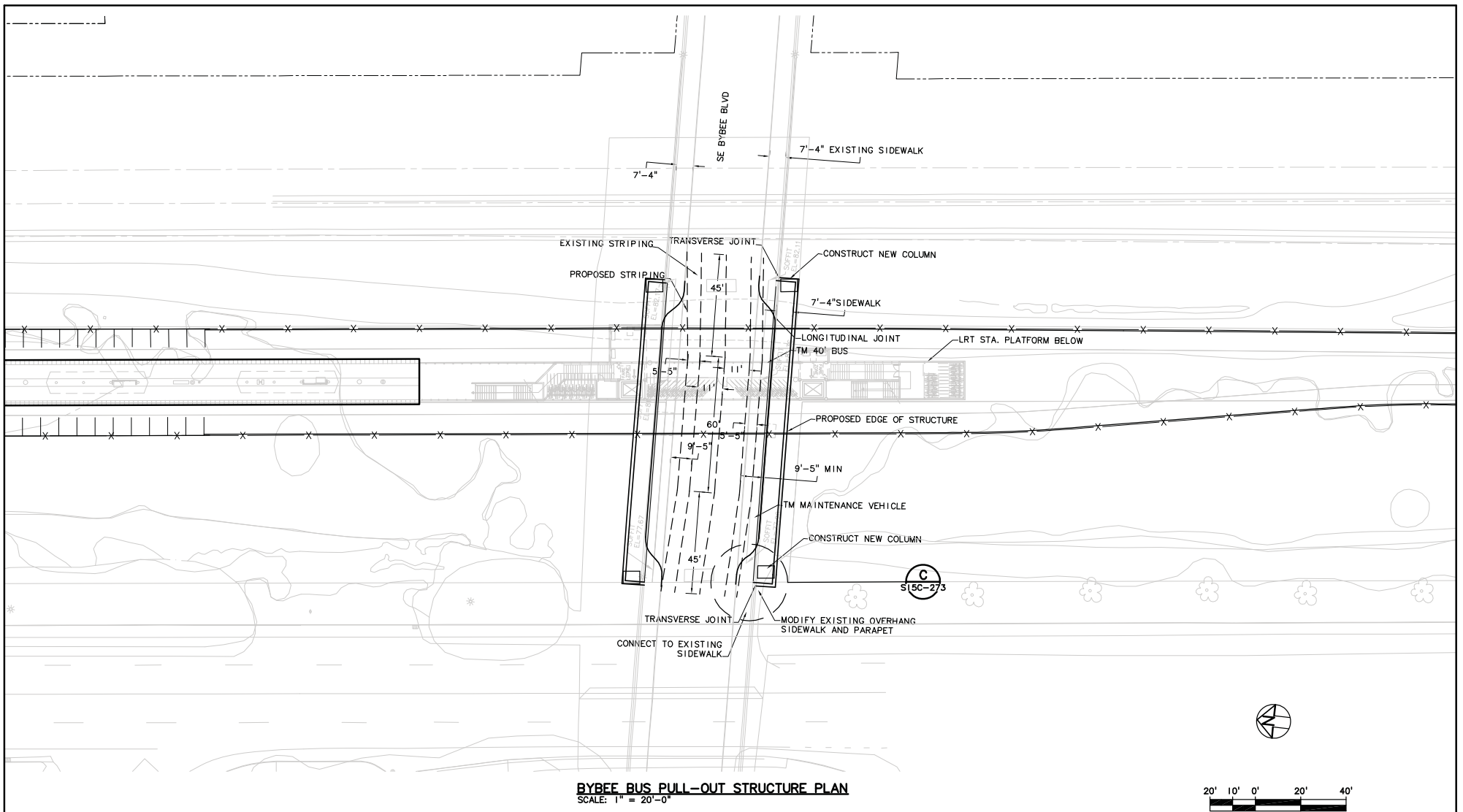
TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 03/05/10
APPROVED: DATE: 03/05/10

PORTLAND TO MILWAUKIE LRT
SEGMENT C
STRUCTURAL
HAROLD STREET OVERPASS
PE – STA 290+43.97 TO 291+73.97

SCALE: AS NOTED
DRAWING NO.: S15C-350
CONTRACT NO.: RH090207.B
SHEET NO.:

Figure H-23



BYBEE BUS PULL-OUT STRUCTURE PLAN
SCALE: 1" = 20'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS

NAF DESIGNED	3/5/10 DATE
NAF DRAWN	3/5/10 DATE
CHL CHECKED	3/5/10 DATE
APPROVED	3/5/10 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

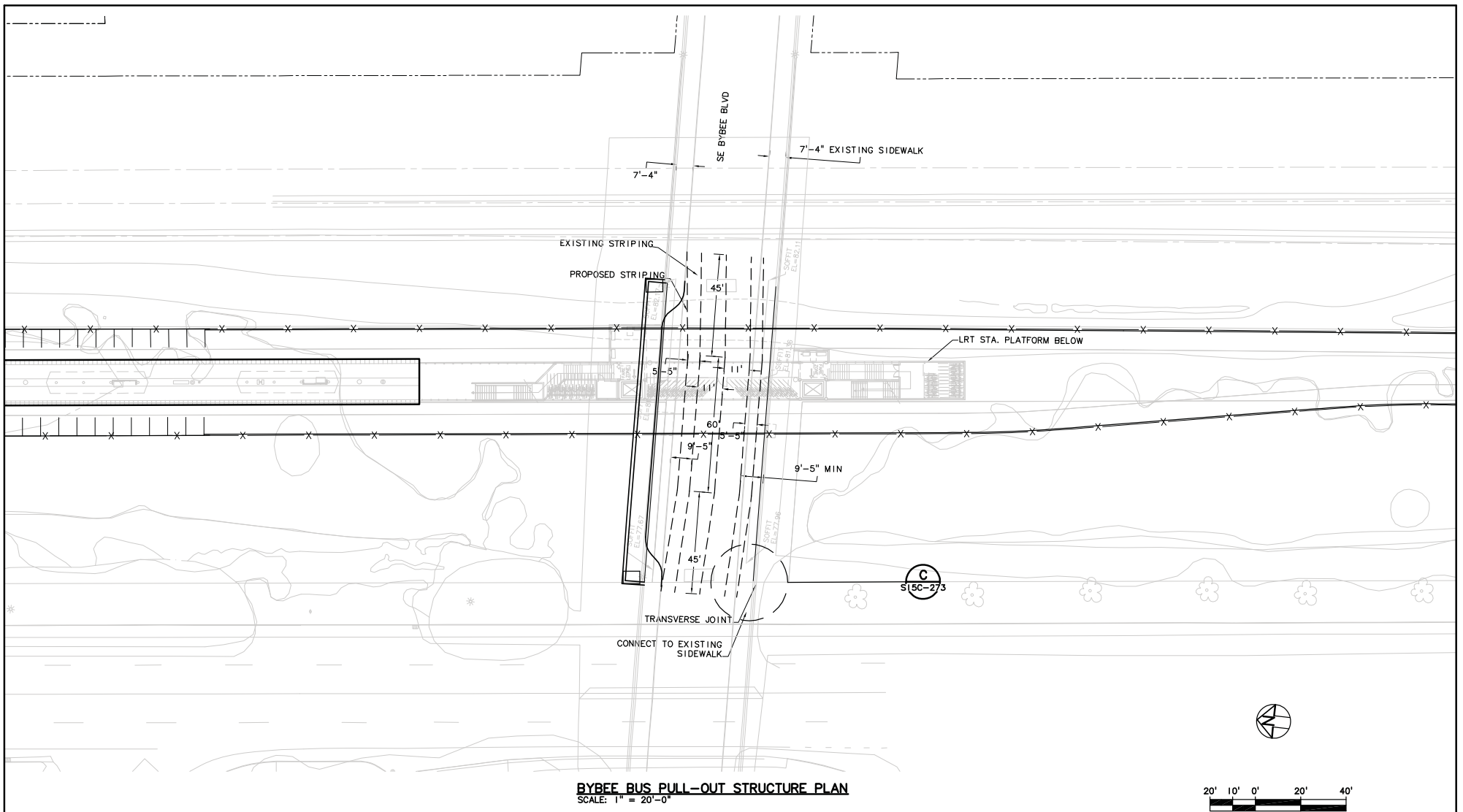
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 3/5/10 APPROVED: DATE: 3/5/10

PORTLAND TO MILWAUKIE LRT
SEGMENT C
BYBEE BUS PULL-OUT STRUCTURE PLAN

SCALE: 1" = 20'-0" DRAWING NO.: REC-S15C-270 CONTRACT NO.: RH090207JB SHEET NO.:

Figure H-24



BYBEE BUS PULL-OUT STRUCTURE PLAN
SCALE: 1" = 20'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

NAF DESIGNED	3/5/10 DATE	
NAF DRAWN	3/5/10 DATE	
CHL CHECKED	3/5/10 DATE	
APPROVED	3/5/10 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

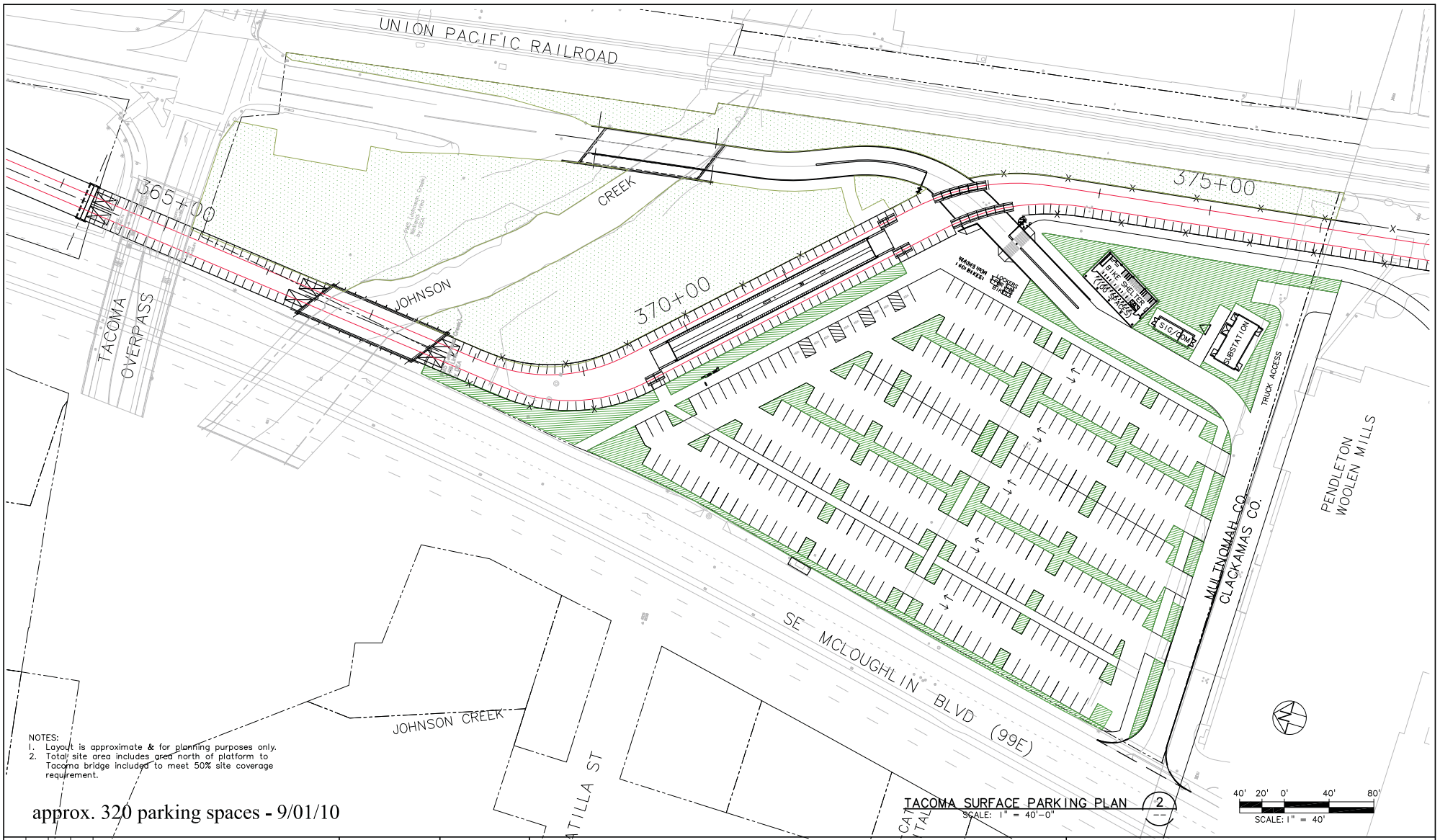
SUBMITTED:	DATE:	APPROVED:	DATE:
	3/5/10		3/5/10

PORTLAND TO MILWAUKIE LRT
SEGMENT C
BYBEE BUS PULL-OUT STRUCTURE - NORTH SIDE ONLY PLAN

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 20'-0"	REC-S15C-270A	RH090207JB	

Figure H-24a

Figure H-25



NO.	DATE	BY CHK.	APPD.	REVISIONS

PS	DESIGNED	09/01/10 DATE
PS	DRAWN	09/01/10 DATE
AF	CHECKED	09/01/10 DATE
LR	APPROVED	DATE

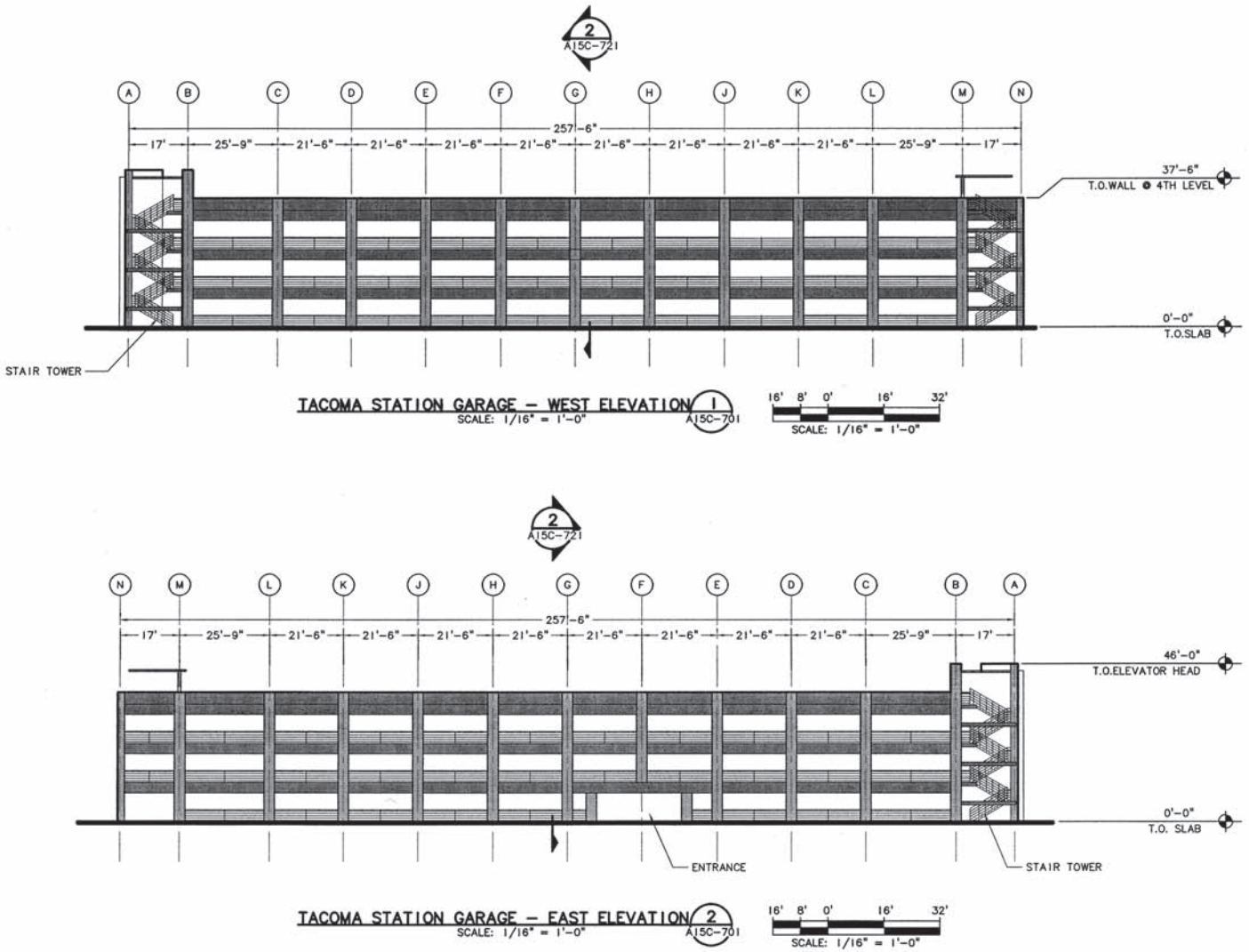
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT C
TACOMA STATION
SURFACE PARKING SCHEME

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED		RH090207JB	



Note: Surface Parking lot only (no elevated structured parking) with LPA Phasing Option

Figure H-26

NO.	DATE	BY CHK	APPD.	REVISIONS

100%
PRELIMINARY ENGINEERING
03-05-2010

KCA	DESIGNED	12/02/09 DATE
KCA	DRAWN	12/02/09 DATE
HC	CHECKED	3/5/10 DATE
HC	APPROVED	3/5/10 DATE

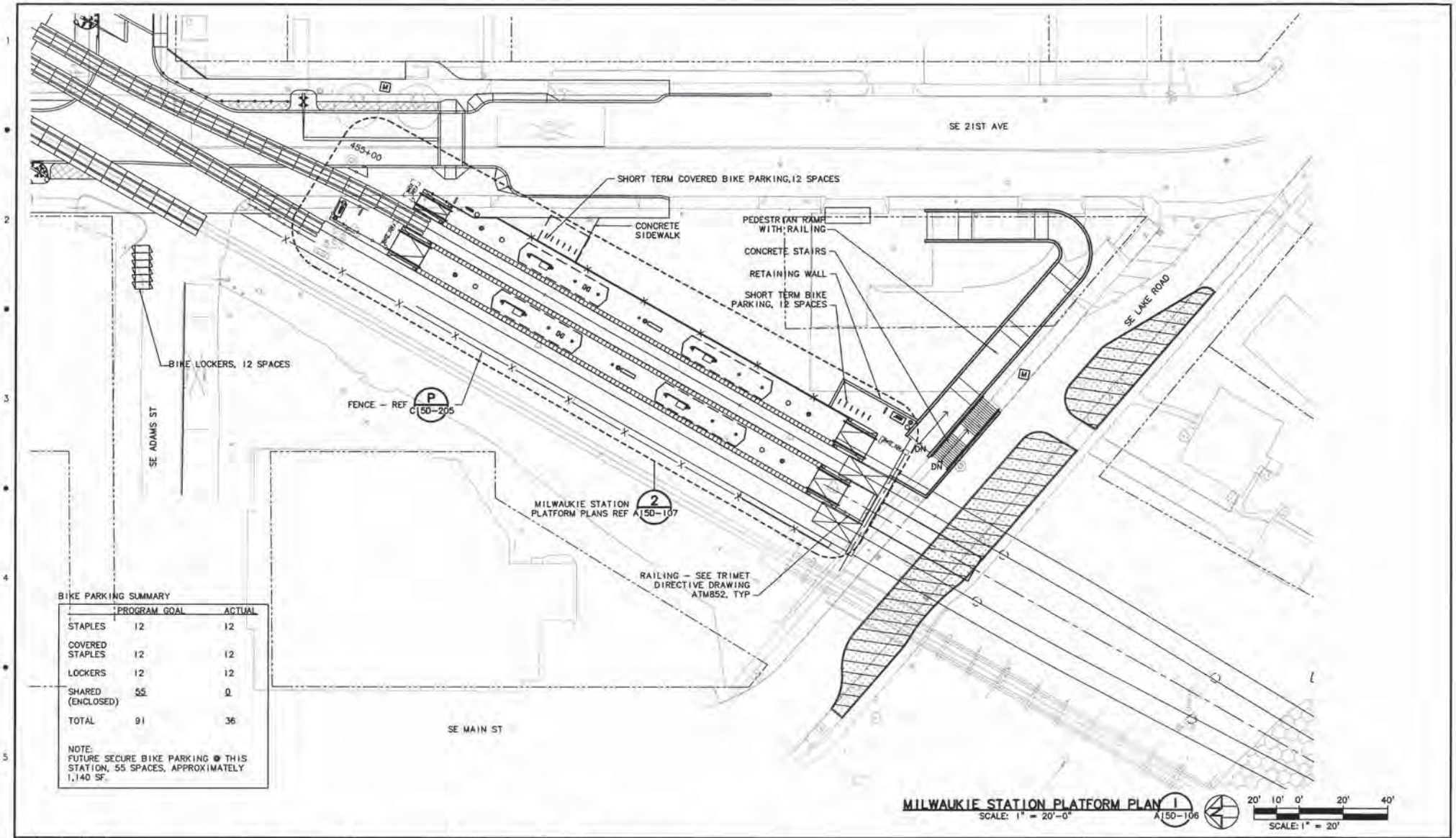
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

PIVOT

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
SEGMENT C
TACOMA STATION
GARAGE ELEVATIONS

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	3/5/10		3/5/10	AS NOTED	A15C-711	RH090207JB	



100%
PRELIMINARY
ENGINEERING
03-05-2010

NO.	DATE	BY CHK.	APPD.	REVISIONS

JS DESIGNED	12/02/09	DATE
JS DRAWN	12/02/09	DATE
HC CHECKED	3/5/10	DATE
HC APPROVED	3/5/10	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

PIVOT

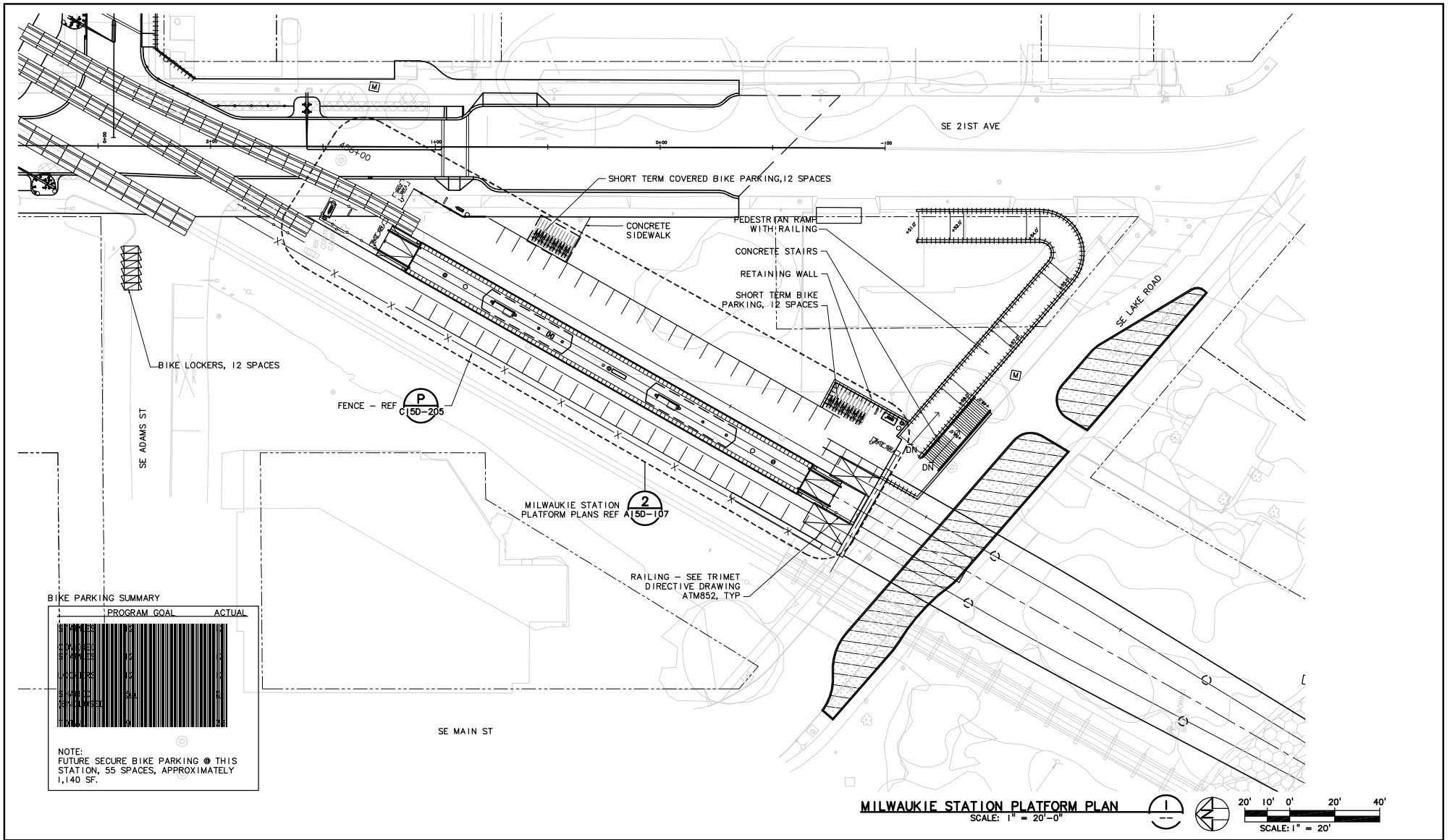
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	3/5/10		3/5/10

PORTLAND TO MILWAUKIE LRT
SEGMENT D
MILWAUKIE STATION
PLATFORM PLAN

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 20'-0"	A150-106	RH090207JB	

Figure H-27



NO.	DATE	BY CHK.	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

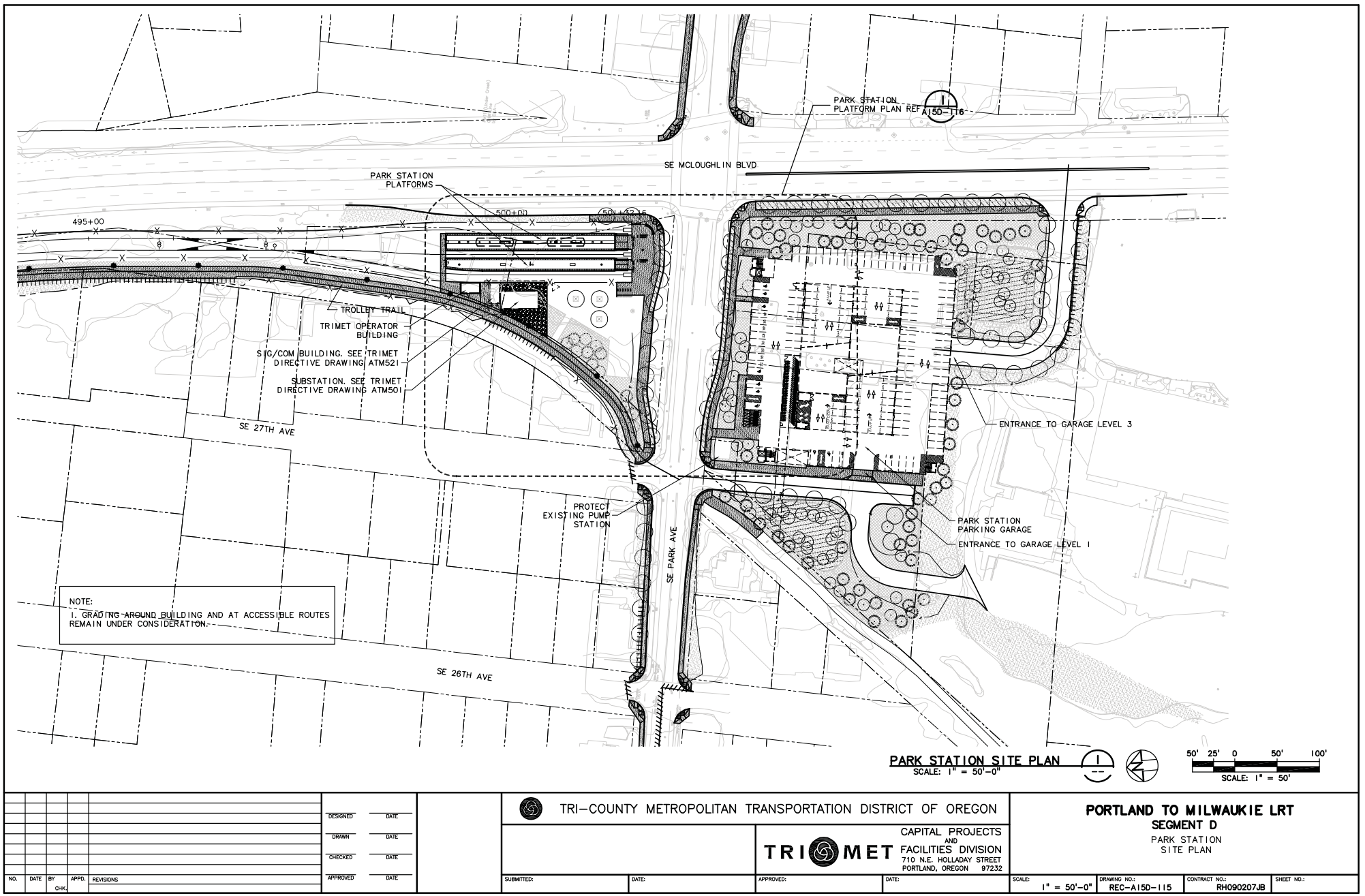
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT D
MILWAUKIE STATION
PLATFORM PLAN

SCALE: 1" = 20'-0" | DRAWING NO.: REC-A15D-106 | CONTRACT NO.: RH090207JB | SHEET NO.:

Figure H-27a



NO.	DATE	BY / CHK.	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE:
APPROVED: DATE:

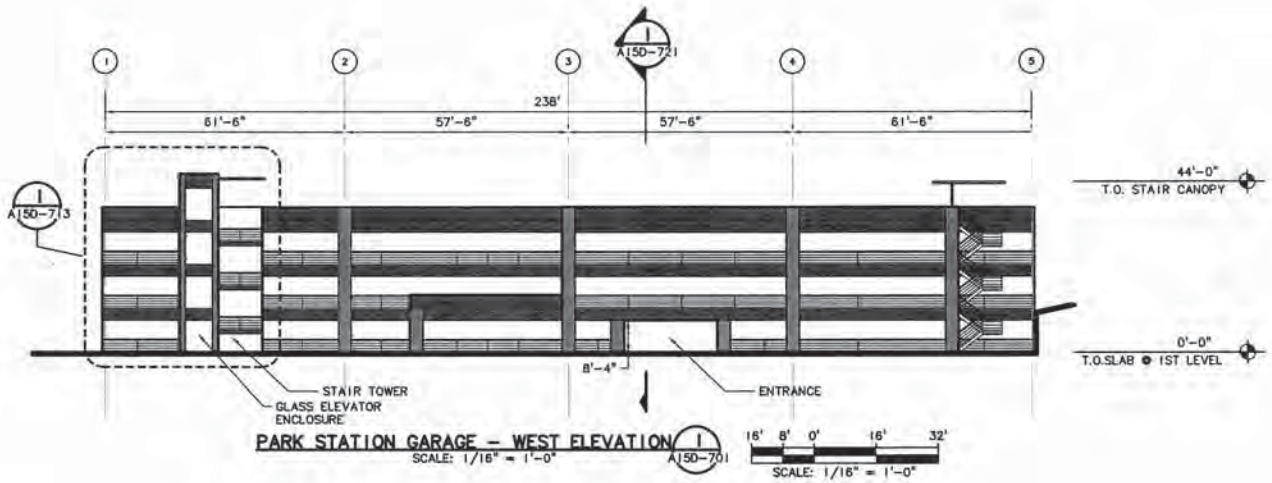
PORTLAND TO MILWAUKIE LRT
SEGMENT D
PARK STATION
SITE PLAN

SCALE: 1" = 50'-0" | DRAWING NO.: REC-A15D-115 | CONTRACT NO.: RH090207JB | SHEET NO.:

Figure H-28

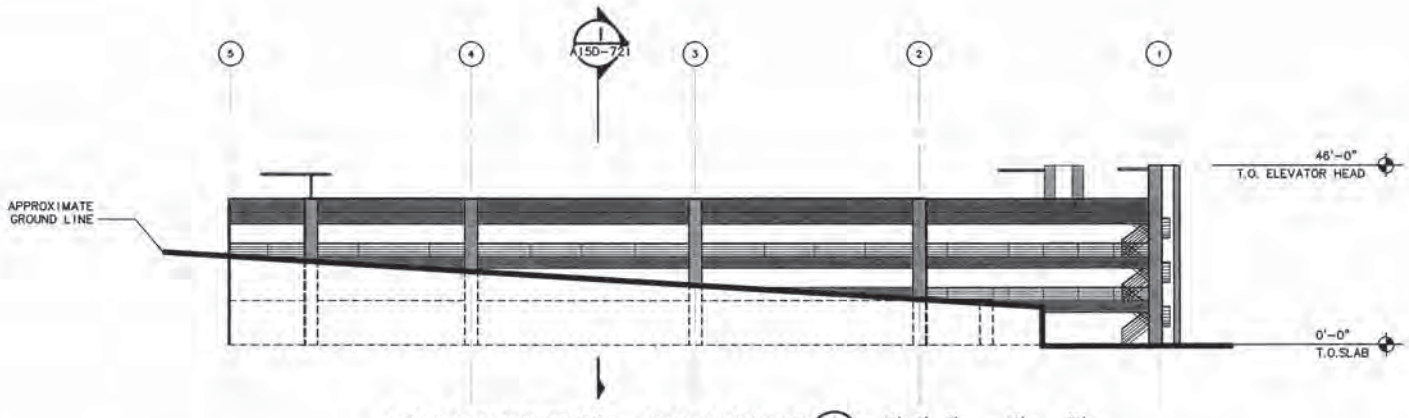
NOTES:
1: AS PART OF THE NATURE IN NEIGHBORHOODS PROGRAM, A SERIES OF TRELLIS STRUCTURES WILL BE INCORPORATED IN TO THE BUILDING ARCHITECTURE ON THE NORTH AND EAST FACADES.

2: AS PART OF THE NATURE IN NEIGHBORHOODS PROGRAM, AN ART INSTALLATION CONSISTING OF VERTICAL STORM WATER ELEMENTS WILL BE INCORPORATED IN TO THE ARCHITECTURE ON THE NORTH AND EAST FACADES.



PARK STATION GARAGE – WEST ELEVATION (1 / A150-701)
SCALE: 1/16" = 1'-0"

16' 8' 0' 16' 32'
SCALE: 1/16" = 1'-0"



PARK STATION GARAGE – EAST ELEVATION (2 / A150-701)
SCALE: 1/16" = 1'-0"

16' 8' 0' 16' 32'
SCALE: 1/16" = 1'-0"

NO.	DATE	BY / CHK	APPD	REVISIONS

100%
PRELIMINARY ENGINEERING
03-05-2010

KCA (DESIGNED)	12/02/09	DATE
KCA (DRAWN)	12/02/09	DATE
HC (CHECKED)	3/5/10	DATE
HC (APPROVED)	3/5/10	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

PIVOT

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	3/5/10		3/5/10

PORTLAND TO MILWAUKIE LRT
SEGMENT D
PARK STATION
GARAGE ELEVATIONS

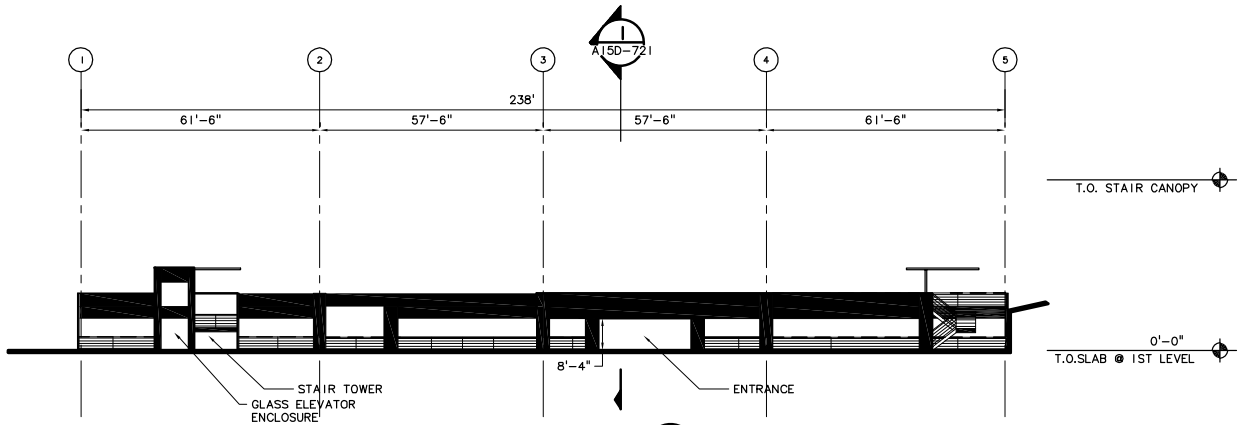
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A150-711	RH090207JB	

Figure H-29

Figure H-29 A

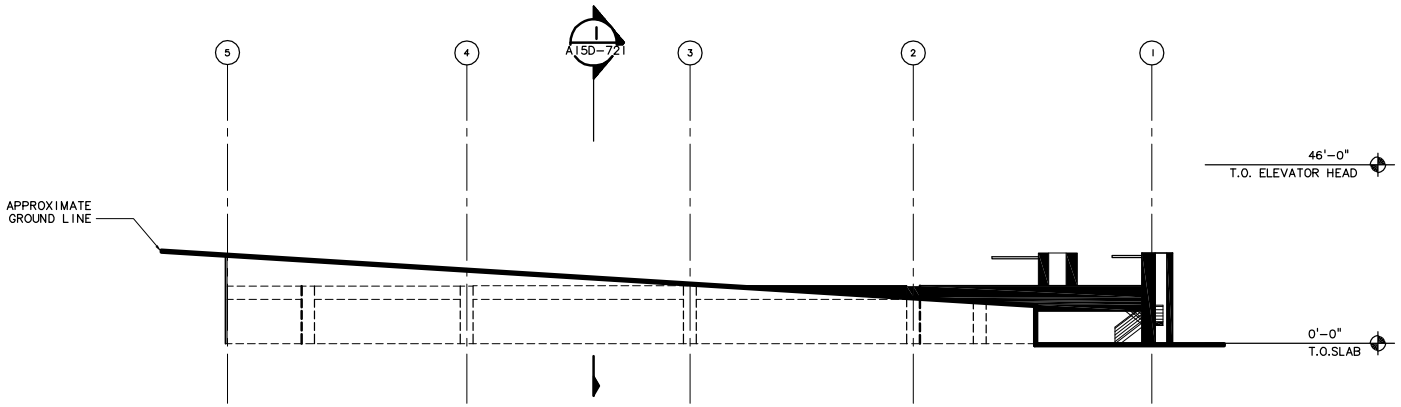
NOTES:
1: AS PART OF THE NATURE IN NEIGHBORHOODS PROGRAM, A SERIES OF TRELLIS STRUCTURES WILL BE INCORPORATED IN TO THE BUILDING ARCHITECTURE ON THE NORTH AND EAST FACADES.

2: AS PART OF THE NATURE IN NEIGHBORHOODS PROGRAM, AN ART INSTALLATION CONSISTING OF VERTICAL STORM WATER ELEMENTS WILL BE INCORPORATED IN TO THE ARCHITECTURE ON THE NORTH AND EAST FACADES.



PARK STATION GARAGE – WEST ELEVATION 1 A15D-701
SCALE: 1/16" = 1'-0"

16' 8' 0' 16' 32'
SCALE: 1/16" = 1'-0"



PARK STATION GARAGE – EAST ELEVATION 2 A15D-701
SCALE: 1/16" = 1'-0"

16' 8' 0' 16' 32'
SCALE: 1/16" = 1'-0"

LPA Phasing Option

NO.	DATE	BY CHK.	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

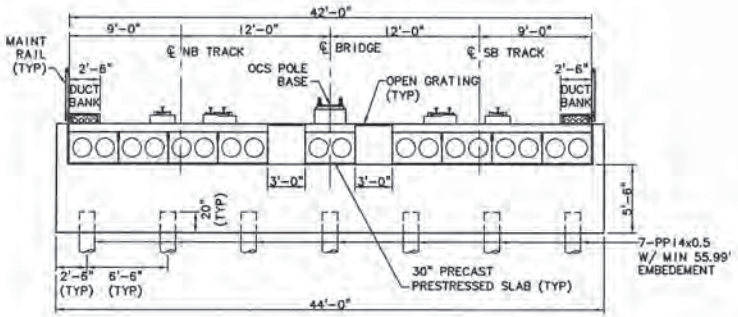
TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

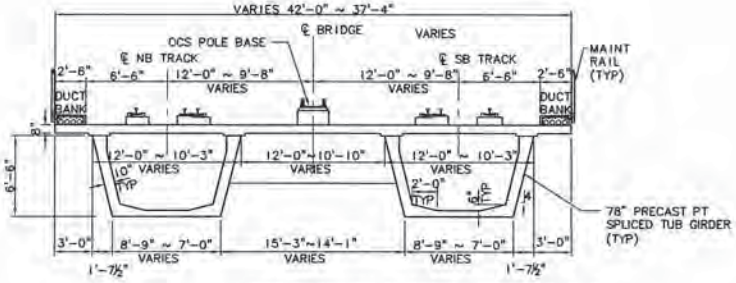
SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
SEGMENT D
PARK STATION
GARAGE ELEVATIONS

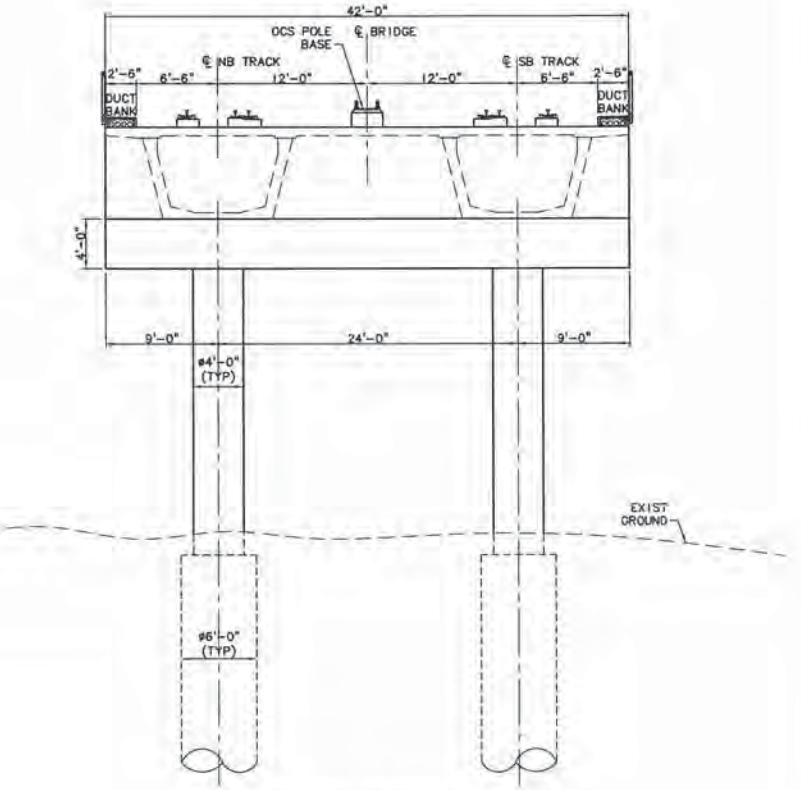
SCALE: AS NOTED | DRAWING NO.: REC-A15D-711 | CONTRACT NO.: RH090207JB | SHEET NO.:



SECTION – BENT 1
SCALE: 1" = 5'-0"



TYP SECTION BETWEEN BENTS 2 & 3
SCALE: 1" = 5'-0"



SECTION AT BENT 2
SCALE: 1" = 5'-0"
(ONLY TUB GIRDERS SHOWN FOR CLARITY)

NO.	DATE	BY CHK.	APP'D.	REVISIONS

100%
PRELIMINARY ENGINEERING
03-05-2010

DESIGNED	IW	03/05/10
DRAWN	PF	03/05/10
CHECKED	CI	03/05/10
APPROVED	RS	03/05/10

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

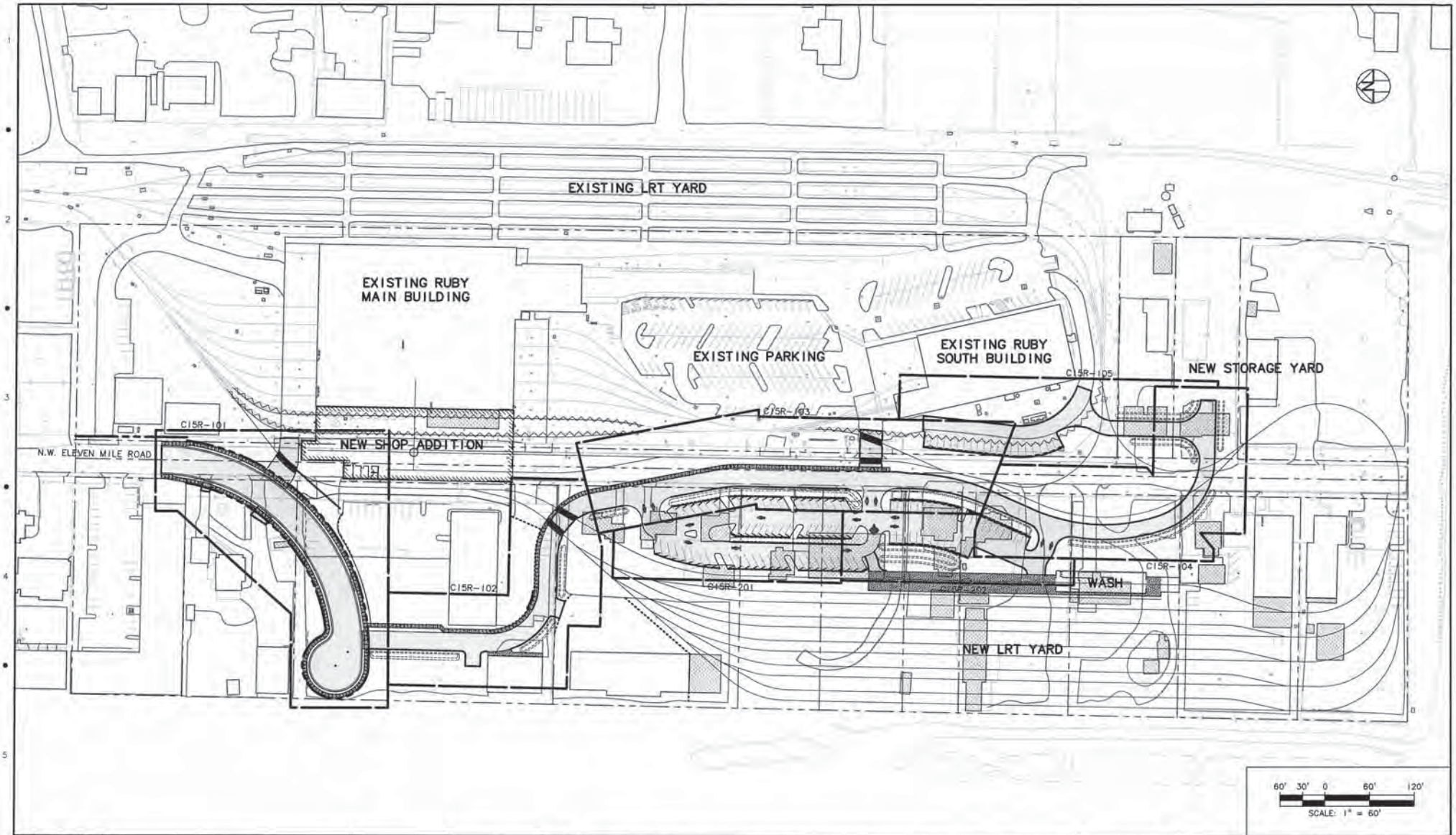
Hatch Mott MacDonald
400 S.W. 6th Avenue, Suite 914
Portland, OR 97204
(503) 243-5001

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
SEGMENT D
STRUCTURAL
KELLOGG BRANCH STRUCTURE
TYPICAL SECTIONS

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	03/05/10		03/05/10	AS NOTED	S15D-352	RH090207JB	

Figure H-30



25% PRELIMINARY ENGINEERING

RFH DESIGNED 11-10-09 DATE
RFH DRAWN 11-10-09 DATE
CHECKED DATE
APPROVED DATE

NO. | DATE | BY | CHK | APPD. | REVISIONS

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

LTK Engineering Services

DAVID EVANS AND ASSOCIATES INC.
2100 Southwest River Parkway
Portland, Oregon 97201
Phone: 503.223.6663

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

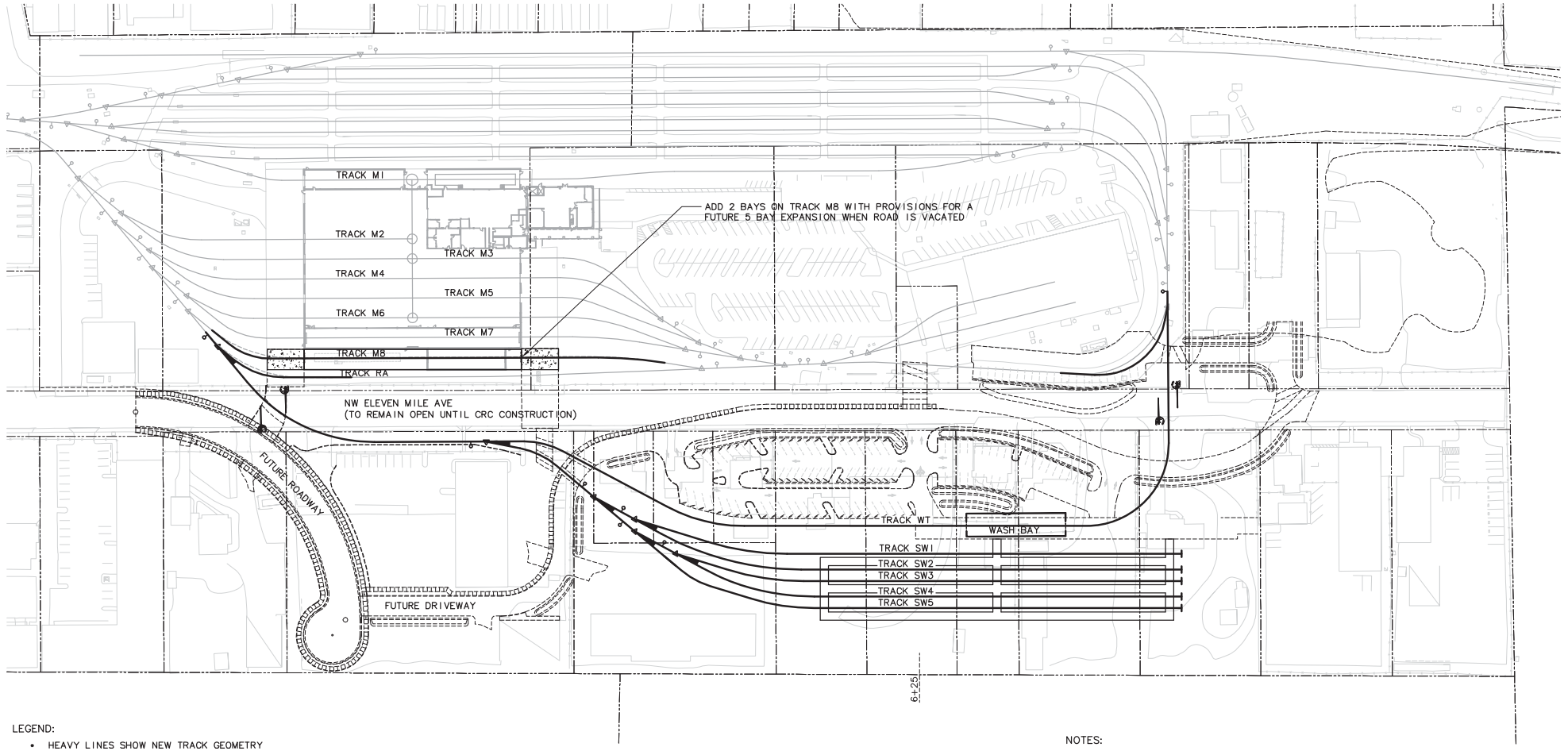
SUBMITTED: DATE:
APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
RUBY JUNCTION EXPANSION
CIVIL
CIVIL SITE PLAN

SCALE: 1" = 60' | DRAWING NO.: C15R-002 | CONTRACT NO.: | SHEET NO.: H-28

Figure H-31

Figure H-31a



LEGEND:

- HEAVY LINES SHOW NEW TRACK GEOMETRY
- LIGHT LINES SHOW EXISTING FEATURES
- DASHED LINES SHOW THE 100% PE ROADWAY, DRIVEWAY AND PARKING LOT LOCATIONS

NOTES:

THIS CONCEPT DESIGN IS FOR THE MODIFIED LPA TO PARK OPTION THAT REQUIRES 14 LRV'S, 2 MAINTENANCE BAYS, A RELOCATED WASH BAY AND TWO TRACK CROSSINGS OF ELEVEN MILE AVE. FOR PROJECT OPENING LAND ACQUISITION LIMITED TO PARCELS NEEDED FOR NEW TRACK CONSTRUCTION. STORAGE YARD SIZED TO STORE UP TO 20 LRV'S TO ACCOMODATE OPENING AND FUTURE GROWTH.

60' 30' 0 60' 120'
SCALE: 1" = 60'

NO.	DATE	BY / CHK.	APPD.	REVISIONS

JG DESIGNED 8/2/10 DATE
JHM DRAWN 8/2/10 DATE
CHECKED DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

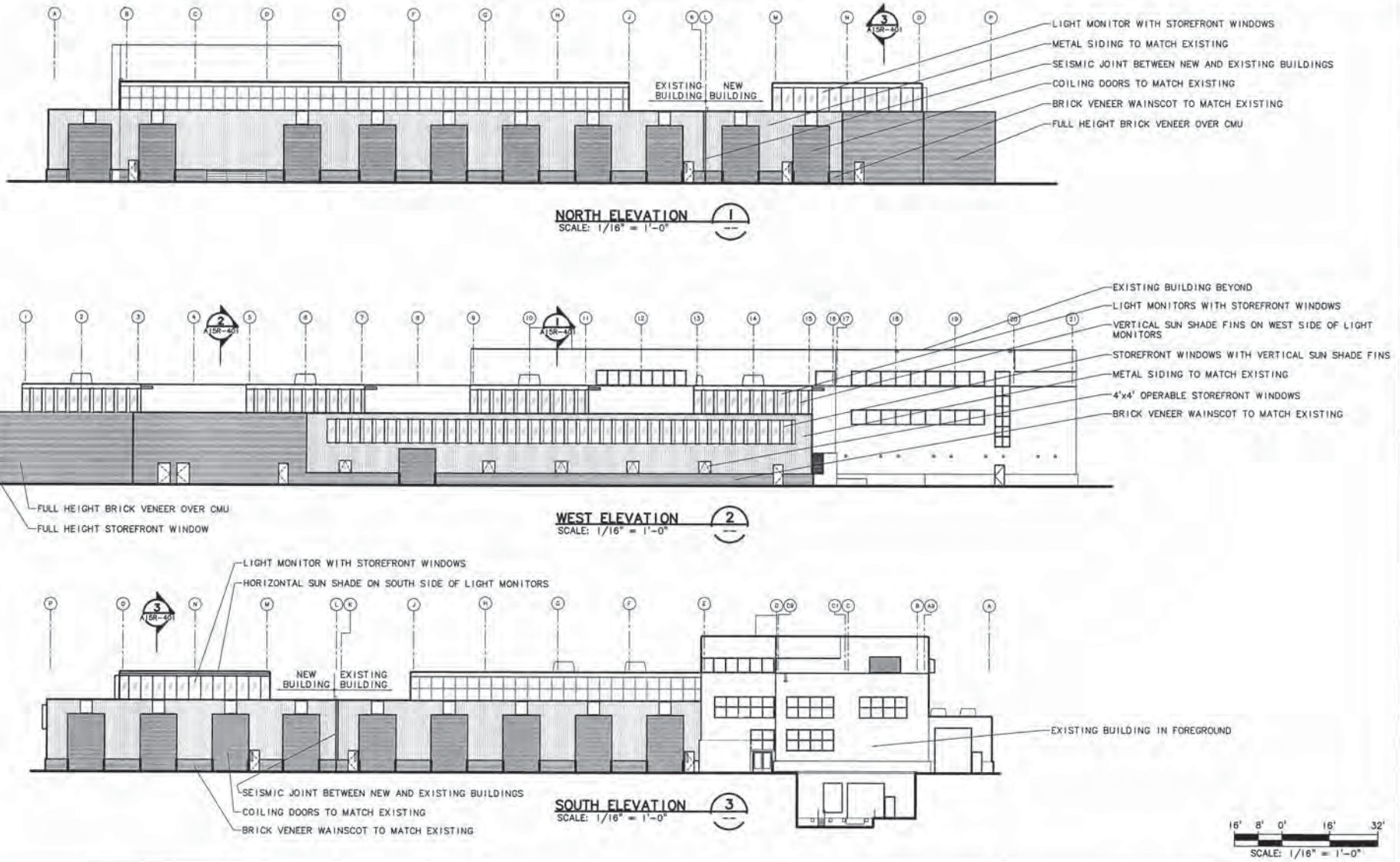
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
RUBY JUNCTION EXPANSION
TRACKWORK DRAWINGS
OVERVIEW PLAN
AUGUST 2010 – OPTION 3

SCALE: 1" = 60' | DRAWING NO.: RUBY-OPT3 Aug10 | CONTRACT NO.: | SHEET NO.:

S:\Reference\15-XREF\TRIMET DRAWINGS\RUBY-NO CRC OPTION\RUBY-OPT3 Aug10.dwg, 8/30/2010 1:36:43 PM, mcbridej



25% PRELIMINARY ENGINEERING

BNS DESIGNED 10-20-09 DATE
BNS DRAWN 10-20-09 DATE
CHECKED DATE
APPROVED DATE

NO. | DATE | BY | CHK | APPD | REVISIONS

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

LTK Engineering Services — waterleaf

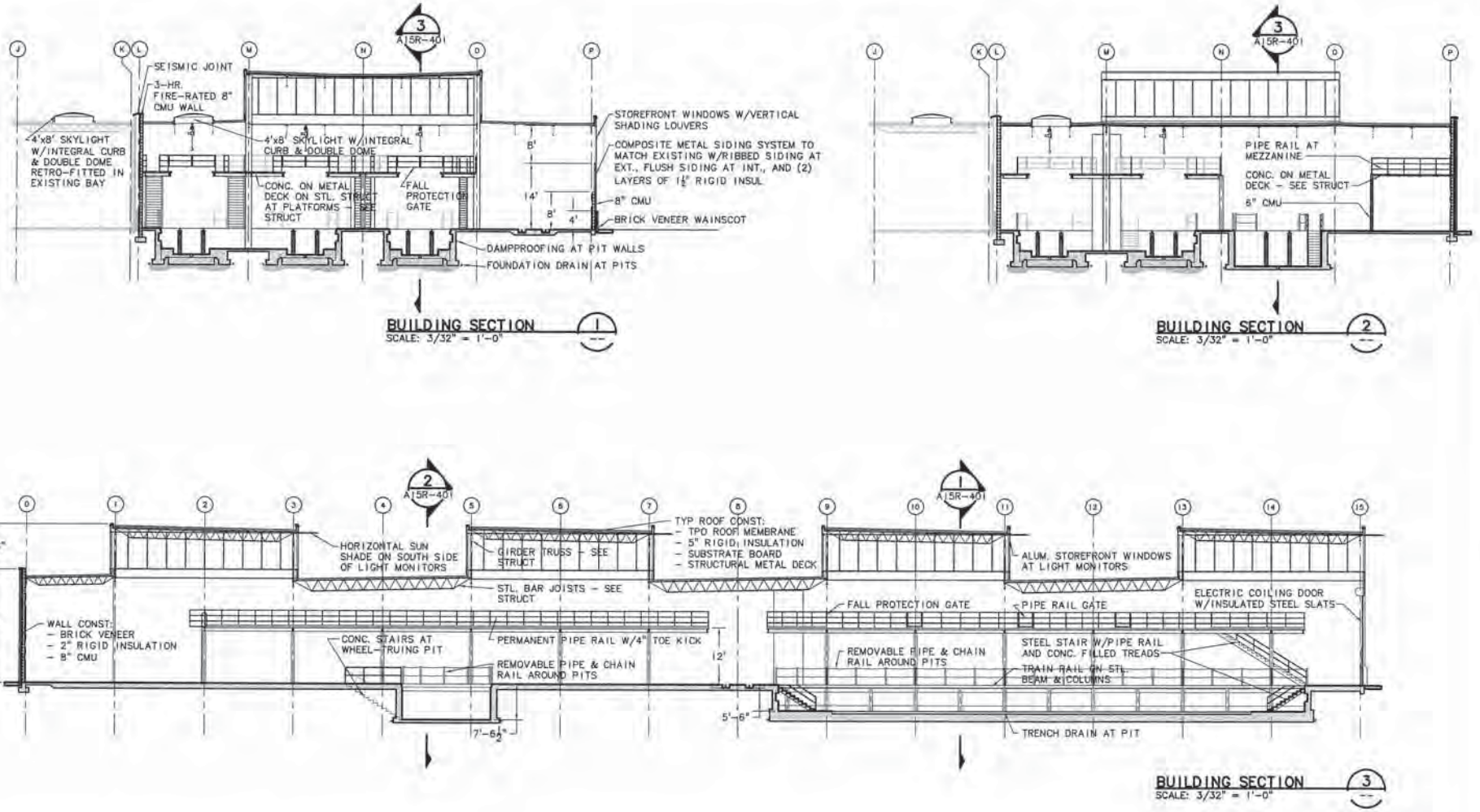
TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
RUBY JUNCTION EXPANSION
ARCHITECTURAL
EXTERIOR ELEVATIONS

SCALE: 1/16" = 1'-0" | DRAWING NO.: A15R-301 | CONTRACT NO.: | SHEET

Figure H-32



25% PRELIMINARY ENGINEERING

BNS DESIGNED	10-20-09 DATE	
RB DRAWN	10-20-09 DATE	
CHECKED	DATE	
APPROVED	DATE	

NO. | DATE | BY | CHK | APPD | REVISIONS

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

LTK Engineering Services — waterleaf

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
RUBY JUNCTION EXPANSION
ARCHITECTURAL
BUILDING SECTIONS

SCALE: 3/32" = 1'-0" | DRAWING NO.: A15R-401 | CONTRACT NO.: | SHEET:

Figure H-33