

CITY OF PHOENIX, ARIZONA

SKY HARBOR INTERNATIONAL AIRPORT

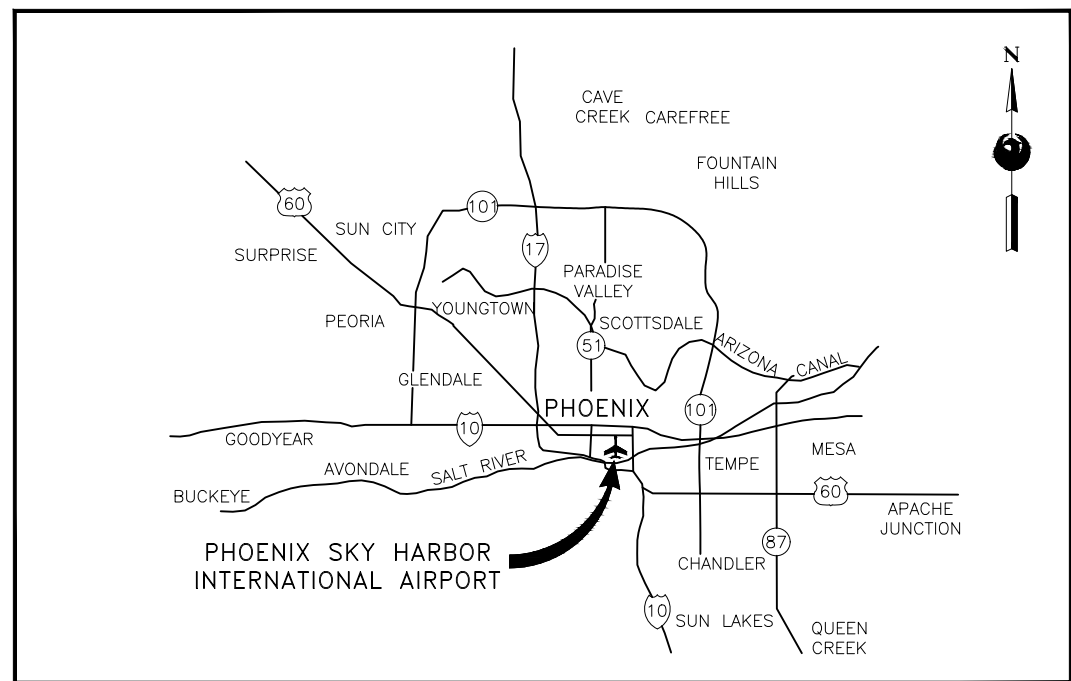
PHOENIX SKY TRAIN

STAGE 2

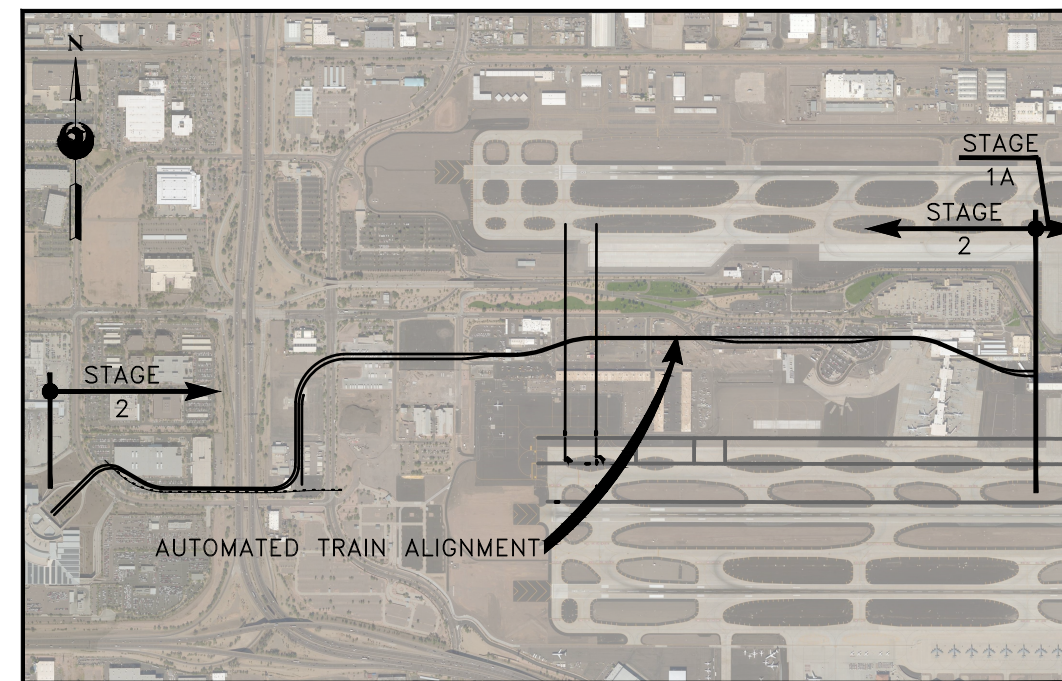
PACKAGE B02

ISSUED FOR CONSTRUCTION

VICINITY MAP



PROJECT MAP



VOLUME 1

MARCH 2, 2018

AIP NO. AV10000011



PHOENIX SKY HARBOR
INTERNATIONAL AIRPORT

PER CITY OF PHOENIX ORDINANCE G-4396,
THESE PLANS ARE FOR OFFICIAL USE ONLY AND
MAY NOT BE SHARED WITH OTHERS EXCEPT AS
REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR
CONTRACT WITH THE CITY OF PHOENIX.

PHOENIX CITY COUNCIL

DISTRICT 1	THELDA WILLIAMS
DISTRICT 2	JIM WARING
DISTRICT 3	DEBRA STARK
DISTRICT 4	LAURA PASTOR, VICE MAYOR
DISTRICT 5	DANIEL VALENZUELA
DISTRICT 6	SAL DICICCIO
DISTRICT 7	MICHAEL NOWAKOWSKI
DISTRICT 8	KATE GALLEGO

MAYOR

GREG STANTON

AVIATION ADVISORY BOARD

STEPHANIE FLEISCHMAN CHERNY – CHAIRPERSON	
ED MALDONADO – VICE CHAIRPERSON	
VERMA PASTOR	ALAN POWELL
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PETE GORRAIZ	ART HAMILTON
KARLENE KEOGH PARKS	

CITY OF PHOENIX

200 WEST WASHINGTON ST.
PHOENIX, AZ 85003

APPROVAL

JAMES BENNETT
AVIATION DIRECTOR

DATE



PACKAGE B02 - VOLUME 1

GENERAL PLANS

Table with 3 columns: ID, Description, and Details. Includes V1-001 COVER SHEET, V1-002 INDEX OF DRAWINGS -1, etc.

GUIDEWAY

OVERALL GUIDEWAY PLAN & PROFILE

Table listing guideway items from V1-007 to V1-039, including descriptions like OVERALL PLAN LAYOUT, ALIGNMENT DEFINITIONS, and various PLAN & PROFILE entries.

GUIDEWAY - ELEVATED ALIGNMENT

Table listing elevated alignment items from V1-040 to V1-061, including descriptions like ELEVATED ALIGNMENT, FOUNDATION PLAN, and DRILLED SHAFT DETAILS.

GUIDEWAY- TAXIWAYS "U" & "V" UNDERCROSSINGS

Table listing taxiway undercrossing items from V1-062 to V1-076, including descriptions like TAXIWAYS "U" & "V" UNDERCROSSING, GENERAL NOTES, and TYPICAL SECTION.

GUIDEWAY- RETAINING WALLS

Table listing retaining wall items from V1-077 to V1-083, including descriptions like RETAINING WALLS, GENERAL STRUCTURAL NOTES, and TYPICAL SECTION.

PACKAGE B02 - VOLUME 2

SEWER REHABILITATION

Table listing sewer rehabilitation items from V2-001 to V2-005, including descriptions like COVER SHEET, SEWER NOTES, and SEWER LINING PLANS.

PACKAGE B02 - VOLUME 3

GENERAL PLANS

Table listing general plan items from V3-001 to V3-006, including descriptions like COVER SHEET, INDEX OF DRAWINGS, and CONTROL PLAN.

FACILITIES

GUIDEWAY PROPULSION BUILDINGS

ARCHITECTURAL

Table listing architectural items from V3-007 to V3-030, including descriptions like RCC PROPULSION BUILDING, ARCHITECTURAL, GENERAL NOTES, and BUILDING SECTIONS.

STRUCTURAL

Table listing structural items from V3-031 to V3-052, including descriptions like PROPULSION BUILDINGS, STRUCTURAL, GENERAL STRUCTURAL NOTES, and FRAMING DETAILS.



Design Sub-Consultant



Table with 2 columns: Issued For Construction, Submitted For Review, Revisions / Submissions, Date. Includes dates 03/02/18 and 12/15/17.

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PHX Sky Train Department
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Table with 2 columns: Field Name and Value. Includes MB, Drawn by, Checked by, Date, Dwg scale, CIP No., and KIVA No.

STAGE 2 - B02 DESIGN SUBMISSION

GENERAL PLANS
INDEX OF DRAWINGS - 1

Package: Sheet Reference No:
B02-MSGN0002
V1 - 002 of 083

FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV10000011-S-2-MSGN0021.dwg

MECHANICAL

Table with 3 columns: V3 ID, drawing title, and description. Includes items like ABME0001, APME0201, APME0202, etc.

ELECTRICAL

Table with 3 columns: V3 ID, drawing title, and description. Includes items like ABEL0001, ABEL0002, ABFP0001, etc.

PLUMBING

Table with 3 columns: V3 ID, drawing title, and description. Includes items like APPL0001, APPL0022, ATPL0022, etc.

FIRE PROTECTION

Table with 3 columns: V3 ID, drawing title, and description. Includes items like ABFP0001, ABFA0002, ABFP0001, etc.

CIVIL

RCC STATION - STRUCTURAL FOUNDATION PLANS

Table with 3 columns: V3 ID, drawing title, and description. Includes items like RBSB0001, RBSB0002, RBSB0003, etc.

24TH STREET STATION - STRUCTURAL FOUNDATION PLANS

Table with 3 columns: V3 ID, drawing title, and description. Includes items like TBSB0001, TBSB0002, TBSB0003, etc.

WEST TERMINAL STATION - STRUCTURAL FOUNDATION PLANS

Table with 3 columns: V3 ID, drawing title, and description. Includes items like WBSB0001, WBSB0002, WBSB0003, etc.

CIVIL - GUIDEWAY PROPULSION BUILDING - UTILITY SERVICE CONNECTIONS (REFERENCE FROM B01 PACKAGE)

Table with 3 columns: V3 ID, drawing title, and description. Includes items like MSUT0308, MSUT0309, MSUT0310, etc.

CIVIL - WEST ECONOMY CANOPY - ARCHITECTURAL

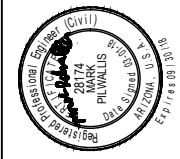
Table with 3 columns: V3 ID, drawing title, and description. Includes items like WTAR0301, WTAR0501, WTAR1001, etc.

CIVIL - WEST ECONOMY CANOPY - STRUCTURAL

Table with 3 columns: V3 ID, drawing title, and description. Includes items like WSCV0001, WSCV0002, WSCV0003, etc.

GUIDEWAY- ELECTRIC DUCTBANK

Table with 3 columns: V3 ID, drawing title, and description. Includes items like MSEL0001, MSEL0002, GWEL0200, etc.



Design Sub-Consultant



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PHX Sky Train logo, City of Phoenix Aviation Department, PHX Sky Train Stage 2 Design, 500 S. 24th Street, Phoenix, AZ 85034.

Table with 2 columns: Designed by (MB), Drawn by (.JV), Checked by (.MD), Date (03/02/2018), Dwg scale (NTS), CIP No. (AV10000011), KIVA No. (07-5204).

STAGE 2 - B02 DESIGN SUBMISSION, GENERAL PLANS INDEX OF DRAWINGS - 2.

Package: Sheet Reference No: B02-MSGN0003 V1 - 003 of 083

FILE PATH: C:\pwworking\gfpw01\mbsigs\d0667700\AV10000011-S-2-MSGNB021.dwg PLOT DATE: Mar 02, 2018 mbsigs

PRIMARY POWER - ELECTRIC-SITE

Table listing primary power drawings including MSEL0401 through MSEL1023 with descriptions such as 'PRIMARY POWER, 24TH ST APS SWITCHYARD, GROUNDING PLAN'.

PACKAGE B02 - VOLUME 4 (FOR REFERENCE ONLY)

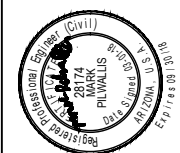
Table listing package B02 drawings including MSGN0001 through MSGN0007 with descriptions like 'COVER SHEET' and 'INDEX OF DRAWINGS'.

RCC STATION- ARCHITECTURAL PLANS

Table listing RCC station architectural drawings including RBAR0001 through RBAR104C with descriptions such as 'RCC STATION, GENERAL NOTES & BUILDING, SUMMARY'.

24TH STREET STATION - ARCHITECTURAL PLANS

Table listing 24th street station architectural drawings including TBAR0001 through TBAR102E with descriptions such as '24TH STREET STATION, GENERAL NOTES & BUILDING, SUMMARY'.



Design Sub-Consultant

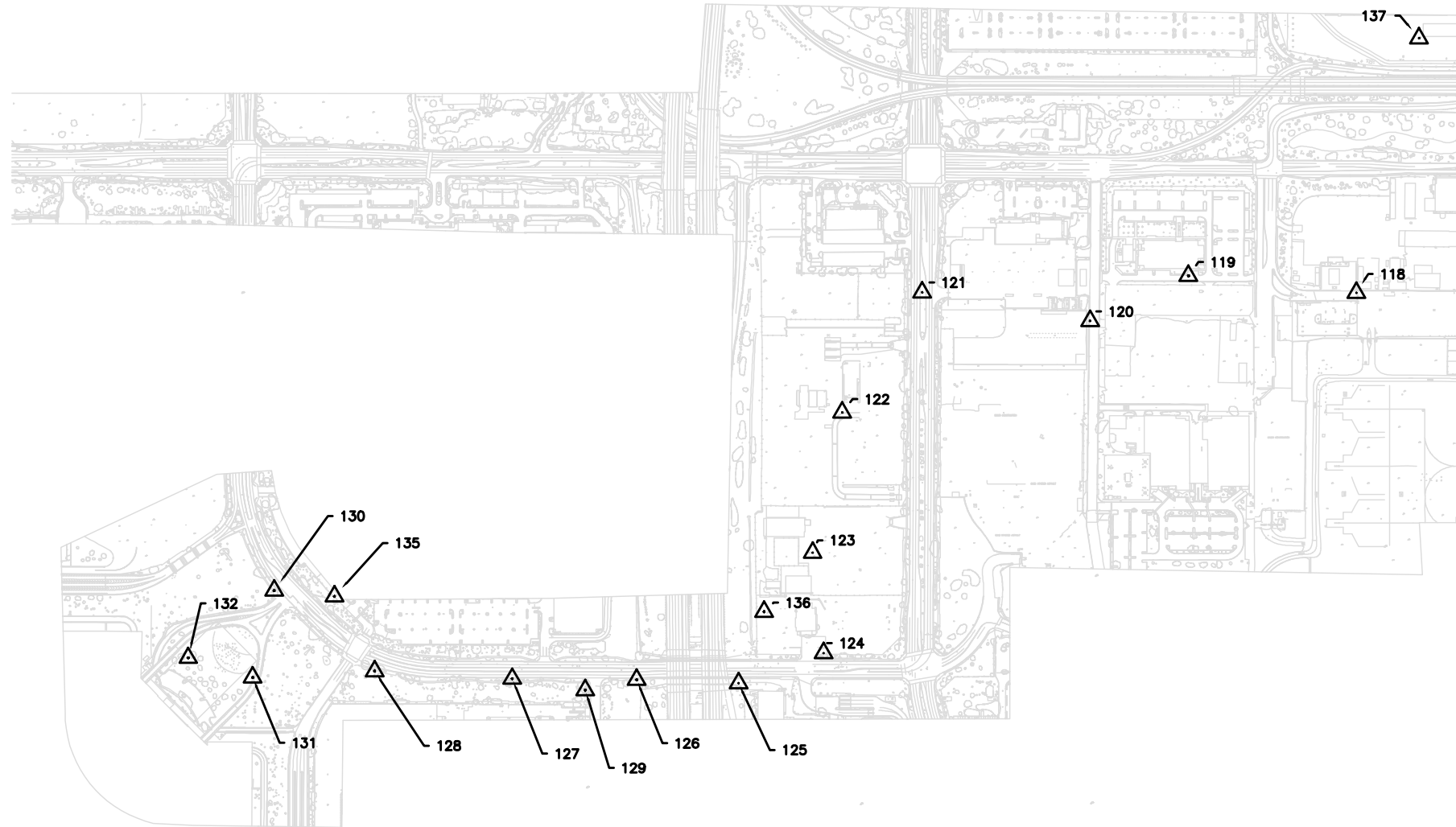


Table with columns for 'ISSUED FOR CONSTRUCTION', 'SUBMITTED FOR REVIEW', and 'REVISIONS / SUBMISSIONS' with dates and counts.

PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034. Includes City of Phoenix Aviation Department logo.

Table with fields for 'Designed by', 'Drawn by', 'Checked by', 'Date', 'Dwg scale', 'CIP No.', and 'KIVA No.'.

STAGE 2 - B02 DESIGN SUBMISSION. GENERAL PLANS INDEX OF DRAWINGS - 3.



GENERAL NOTES

1. ALL COORDINATES LISTED ARE NAD 83 (1982 EPOCH) STATE PLANE GROUND COORDINATES, ARIZONA CENTRAL ZONE, STANDARD TRANSVERSE MERCATOR PROJECTION, WITH A SCALE ORIGIN POINT X=0.000, Y=0.000, USING A COMBINED GRID ADJUSTMENT FACTOR OF 1.0001480129. THESE COORDINATES CAN BE UTILIZED AS GROUND DATUM. TO CONVERT BACK TO GRID COORDINATES DIVIDE THESE VALUES BY 1.0001480129.
2. UNITS = INTERNATIONAL FEET 1 FOOT = .3048 METER EXACTLY
3. THE COORDINATES PRESENTED ON THIS SURVEY ARE SHOWN TO FOUR DECIMAL PLACES FOR CALCULATION PURPOSES, AND ARE NOT A REPRESENTATION OF THE PRECISION OF THE SURVEY MEASUREMENTS.
4. ELEVATIONS LISTED ARE ON THE NAVD 88 VERTICAL DATUM. TO CONVERT TO NGVD 29 ELEVATIONS, SUBTRACT 1.92 FEET FROM THE ELEVATIONS LISTED.
5. THE SURVEY CONTROL POINTS SHOWN ON THIS SHEET WERE ESTABLISHED BY FIELD TRAVERSE METHODS.

BASIS OF BEARING

THE BASIS OF BEARINGS IS THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 14, TOWNSHIP 1 NORTH, RANGE 3 EAST, GLA AND SALT RIVER MERIDIAN, MONUMENTED AT THE WEST END BY A CITY OF PHOENIX BRASS CAP IN HANDHOLE, MONUMENTED AT THE EAST END BY A CITY OF PHOENIX BRASS CAP IN HANDHOLE, AND BEING CONSIDERED TO BEAR SOUTH 89°48'03" EAST, SAID BEARING BASED ON GRID NORTH, NAD 83 STATE PLANE, ARIZONA CENTRAL ZONE.

BENCHMARK

THE CONTROLLING BENCHMARK FOR THIS PROJECT IS A CITY OF PHOENIX BRASS CAP IN HANDHOLE AT THE NORTHWEST CORNER OF SECTION 14, TOWNSHIP 1 NORTH, RANGE 3 EAST, (INTERSECTION OF OLD 24TH STREET AND BUCKEYE ROAD), THE PROJECT ELEVATION (NAVD 88) IS 1105.28, THE SUPERCEDED CITY OF PHOENIX ELEVATION (NGVD 29) IS 1103.36.

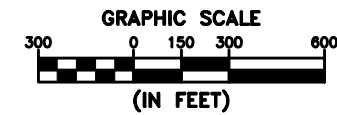
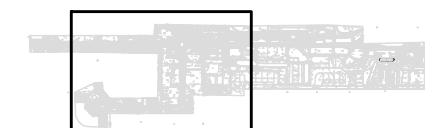


TABLE 1 STAGE 2 CONTROL

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
118	886104.5450	665796.0131	1103.66	MAG CPT
119	886171.5519	665139.9047	1105.07	MAG CPT
120	885994.9089	664755.4848	1101.38	MAG CPT
121	886106.5197	664100.3008	1099.87	RB CPT
122	885637.2302	663788.2907	1099.50	MAG CPT
123	885089.2329	663672.2327	1098.24	MAG CPT
124	884696.6560	663714.8914	1099.00	PK CPT
125	884579.4438	663383.0477	1097.84	RB CPT
126	884592.5406	662985.6222	1096.29	RB CPT
127	884597.0083	662498.8675	1095.40	RB CPT
128	884626.6218	661961.7830	1097.24	RB CPT
129	884552.4960	662784.6009	1094.97	RB CPT
130	884941.2355	661569.4792	1097.92	X CPT
131	884601.6854	661485.8032	1111.79	RB CPT
132	884678.4481	661234.1923	1115.10	RB CPT
135	884918.8317	661804.9522	1096.23	MAG CPT
136	884858.8088	663482.5252	1099.43	MAG CPT
137	887099.9558	666040.5878	1105.52	MAG CPT



STAGE 2 - B02 DESIGN SUBMISSION

HORIZONTAL AND VERTICAL CONTROL PLAN

Package: Sheet Reference No:
B02 - MSGN0005
V1 - 005 of 083



**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: **ADR**
 Drawn by: **GLG**
 Checked by: **ADR**
 Date: **03/02/2018**
 Dwg scale: **1"=300'**
 CIP No.: **AV10000011**
 RVA No.: **07-5204**

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17



Expires 3/31/2019
 Design Sub-Consultant
AZTEC
 Design Consultant

Gannett-Fleming

MATCH SHEET 1

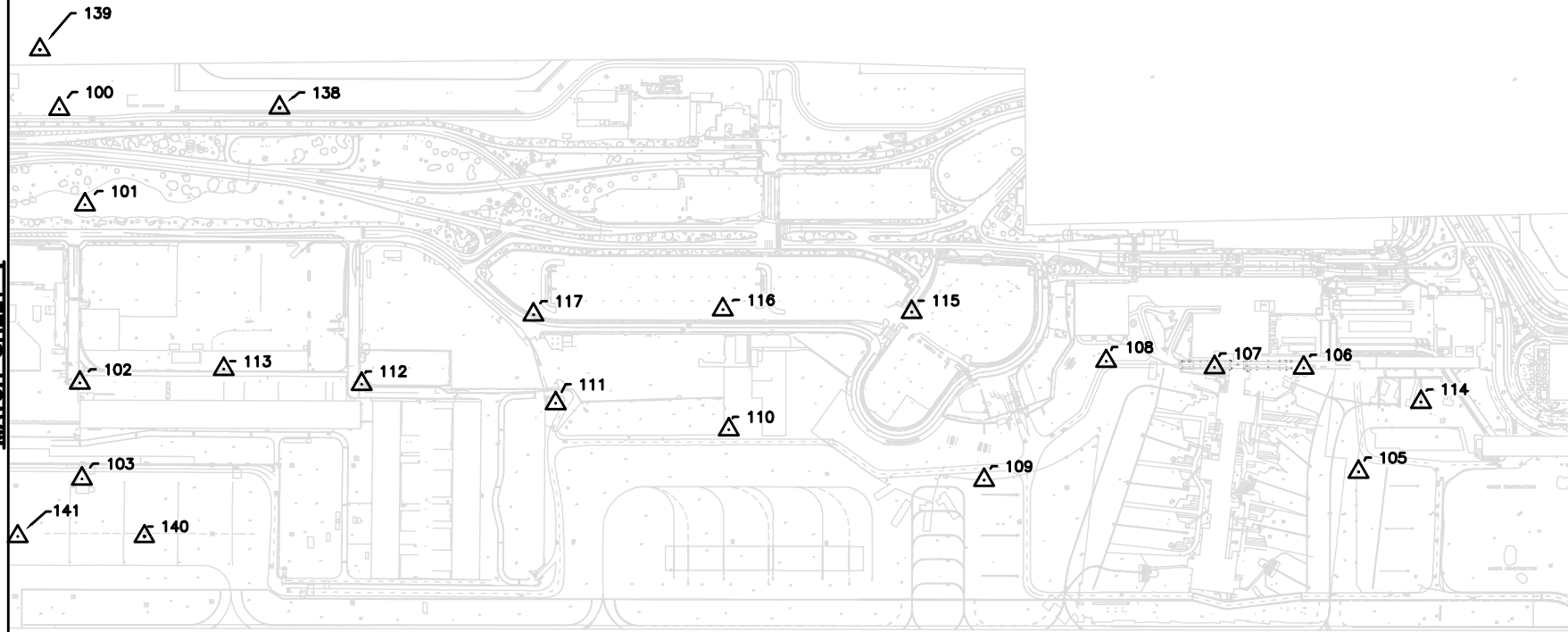


TABLE 1 STAGE 2 CONTROL

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	887033.0386	666379.618	1106.47	MAG WASHER
101	886696.5353	666469.2842	1106.57	RB
102	886069.1995	666451.9643	1105.36	BCFL
103	885730.873	666459.0825	1108.96	MAG WASHER
105	885755.7901	670955.2828	1116.46	MAG CPT
106	886122.037	670761.9232	1115.52	MAG CPT
107	886123.8173	670447.8951	1108.91	MAG CPT
108	886145.3535	670066.4005	1115.20	NAIL CPT
109	885726.5835	669636.6562	1113.91	MAG CPT
110	885904.3960	668737.4440	1111.77	MAG CPT
111	885997.2929	668127.4018	1110.68	MAG CPT
112	886064.512	667444.569	1108.20	RB CPT
113	886117.3842	666958.6387	1107.42	MAG CPT
114	886001.8475	671174.5344	1117.23	MAG CPT
115	886318.4340	669381.6357	1114.64	X CPT
116	886327.2393	668716.6990	1112.02	MAG CPT
117	886309.0812	668049.7833	1111.32	RB CPT
138	887037.4834	667155.0813	1107.32	MAG CPT
139	887242.5711	666310.5630	1105.87	MAG CPT
140	885528.2901	666678.6493	1109.59	MAG CPT
141	885528.4796	666233.1649	1108.82	MAG CPT

GENERAL NOTES

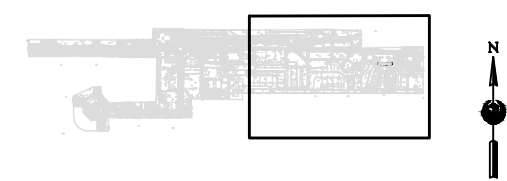
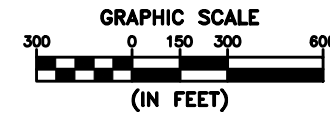
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: ADR	GLG
Drawn by:	GLG
Checked by: ADR	
Date:	03/02/2018
Dwg scale:	1"=300'
CIP No.:	AV100000011
KVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**HORIZONTAL AND VERTICAL
CONTROL PLAN**

Package: Sheet Reference No:
B02 - MSGN0006
V1 - 006 of 083

Expires 3/31/2019
Design Sub-Contractor
E. McIwail Road
Phoenix, AZ 85008-6505
Tel: (602) 454-0402
Fax: (602) 454-0403
www.aztec.com

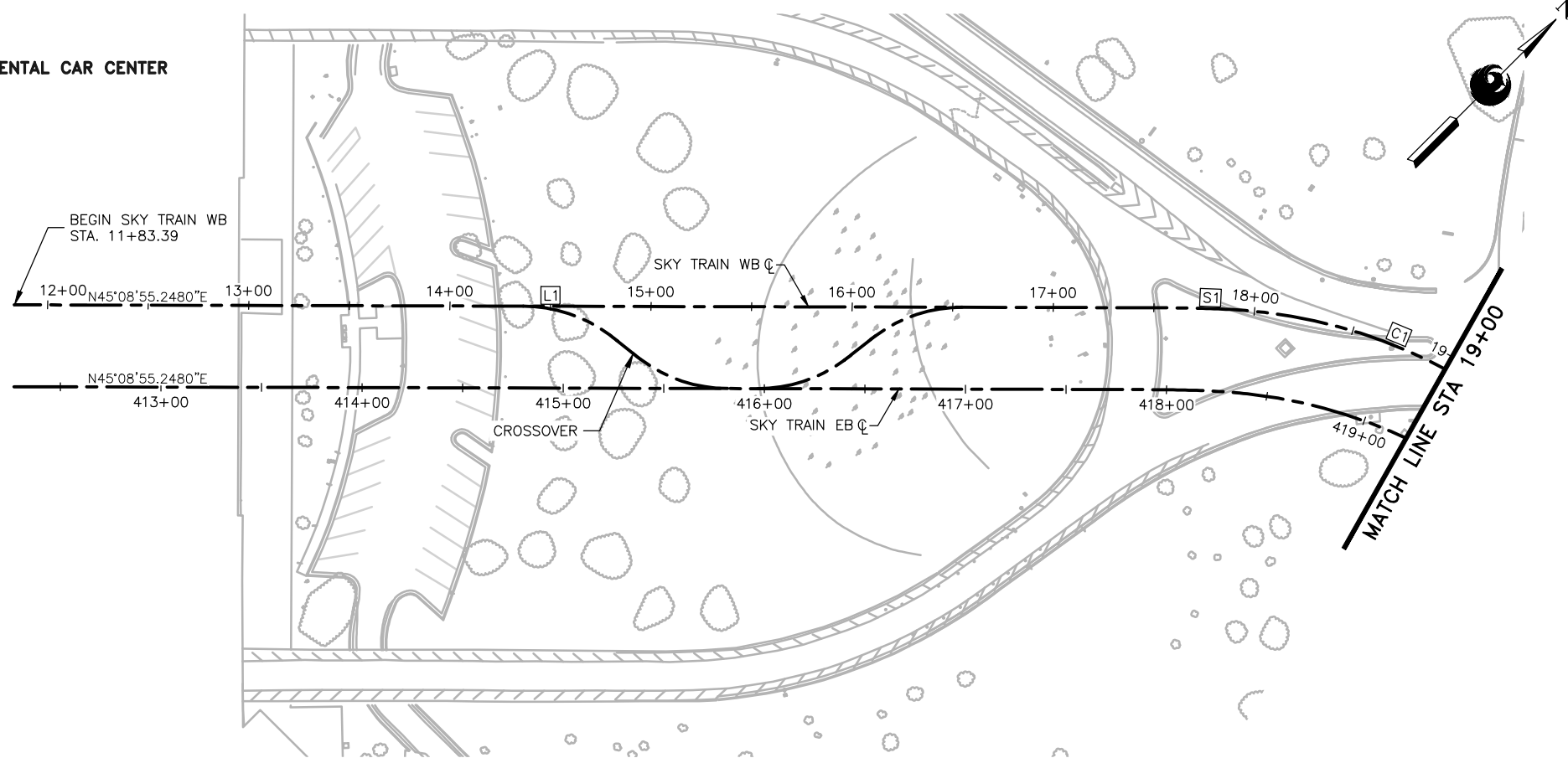
AZTEC
Design Consultant

Gannett-Fleming
Design Consultant



FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg PLOT DATE: Feb 21, 2018

RENTAL CAR CENTER



GENERAL NOTES

- EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK IN ANY AREA.
- PROFILE GRADE LINE (PGL) ELEVATIONS CORRESPOND TO THE STATION PLATFORM FINISH FLOOR ELEVATION, OR 5' ABOVE GUIDEWAY STRUCTURE OUTSIDE OF THE STATION AREAS. REFER TO SHEETS MSCV1101 OR MSCV1116 FOR DETAIL.



Design Sub-Consultant

Kimley»Horn



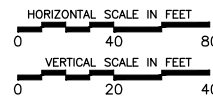
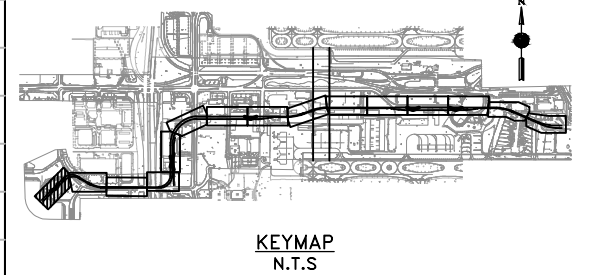
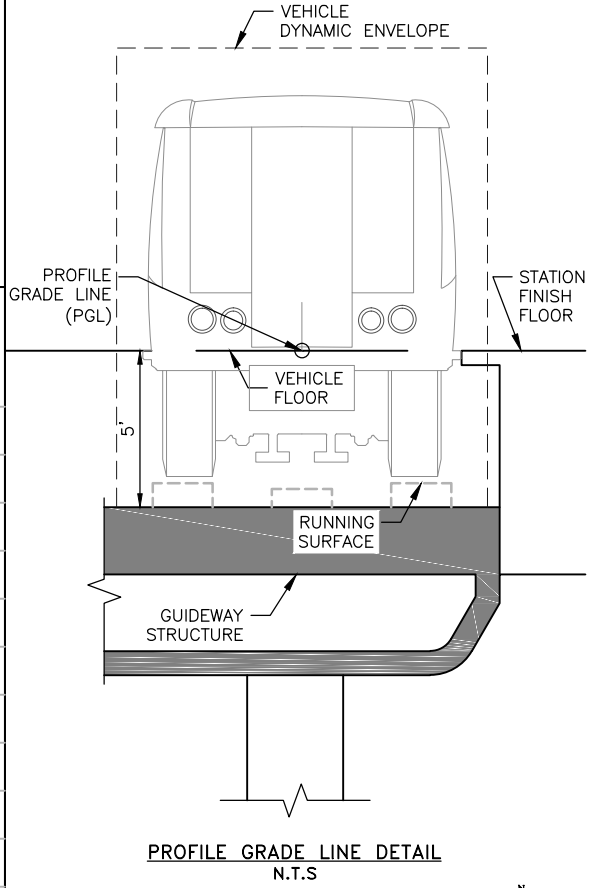
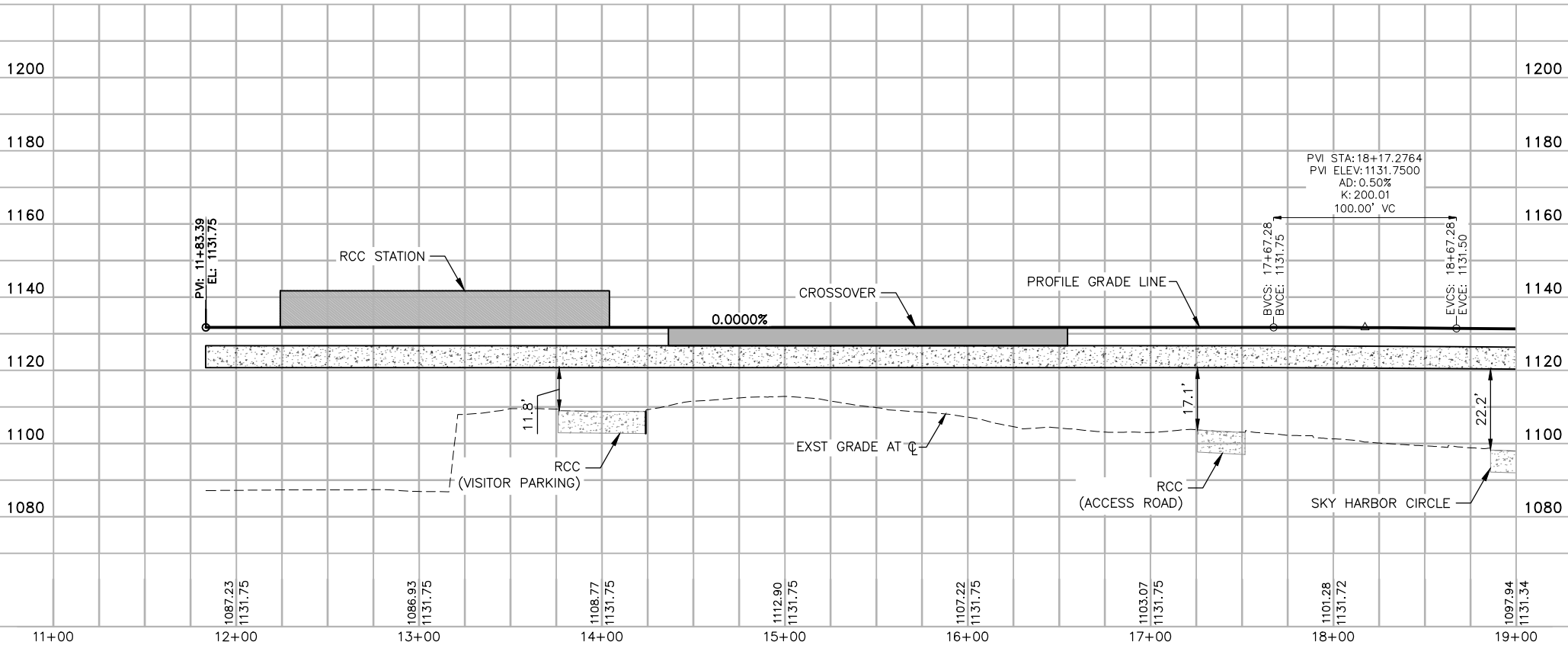
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	SUBMITTED FOR REVIEW	12/15/17



**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

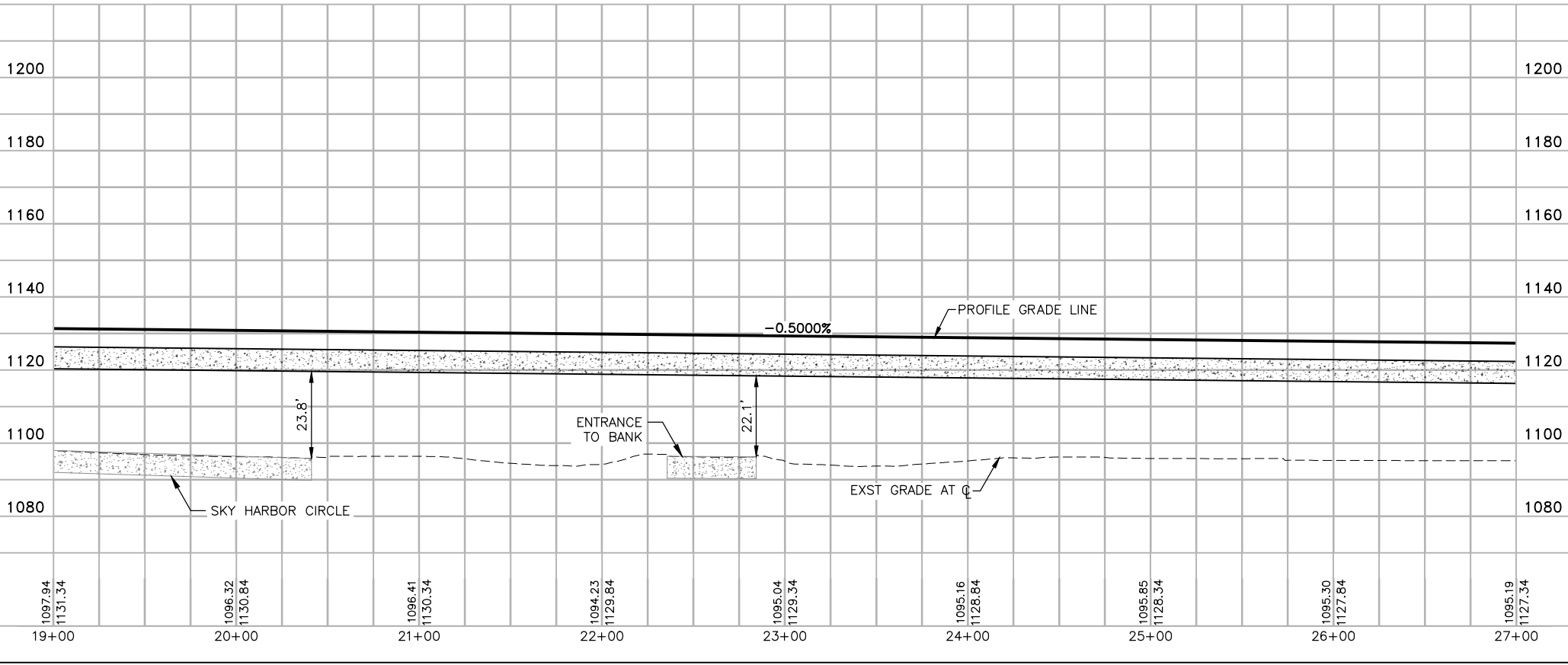
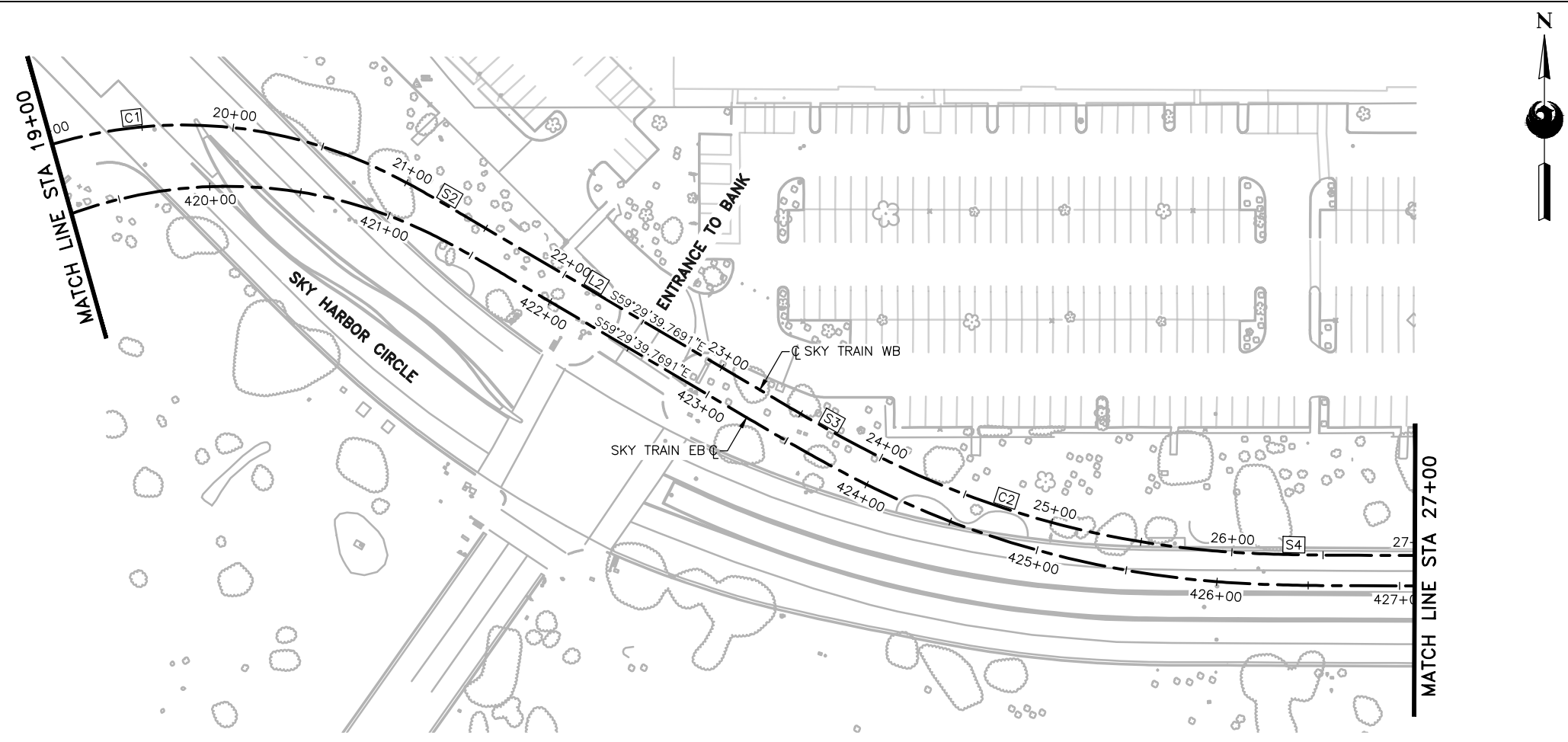


STAGE 2 - B02 DESIGN SUBMISSION

Package: Sheet Reference No:
B02-MSCV1101
V1 - 009 of 083

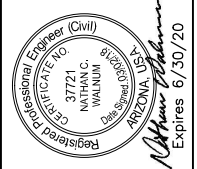
**GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 11+83.39 TO STA. 19+00**

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg PLOT DATE: Feb 21, 2018



GENERAL NOTES

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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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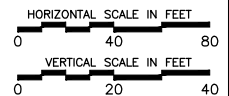
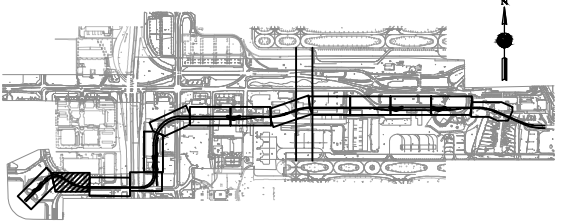
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

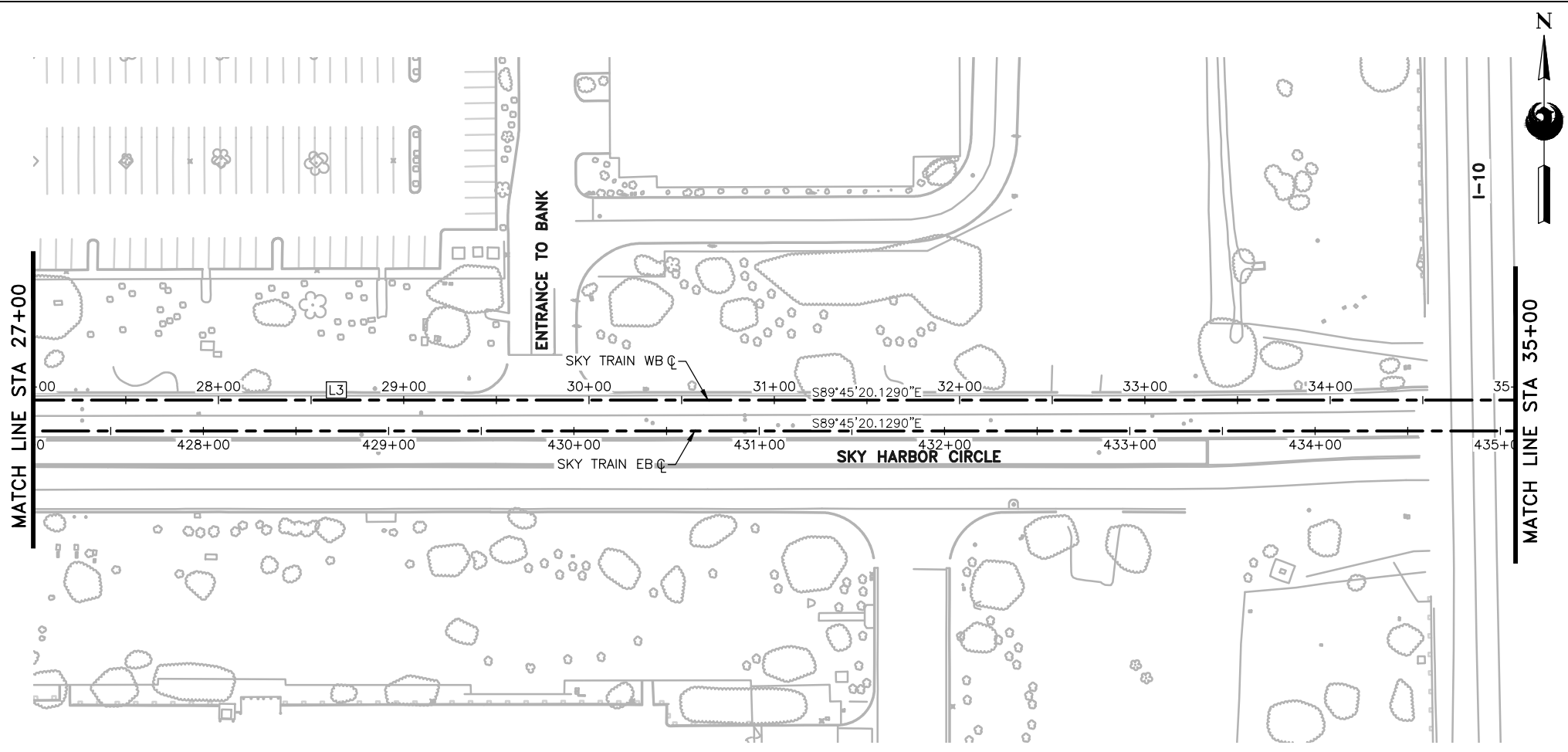
STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 19+00 TO STA. 27+00**



Package: Sheet Reference No:
B02-MSCV1102
 V1 - 010 of 083

FILE PATH: C:\pwworking\gfpw01\fred.stouffer@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stouffer



GENERAL NOTES

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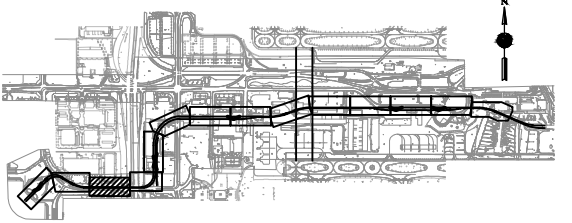
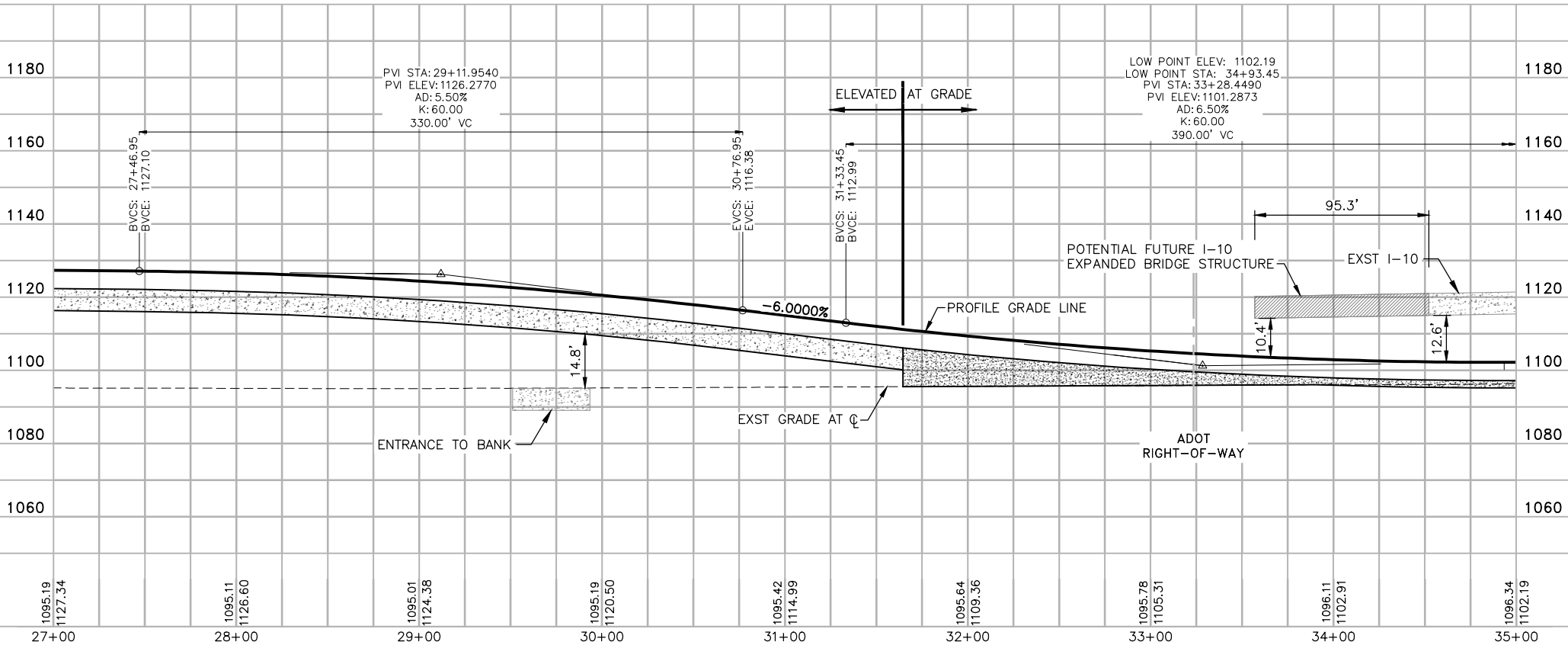
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

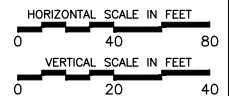
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204



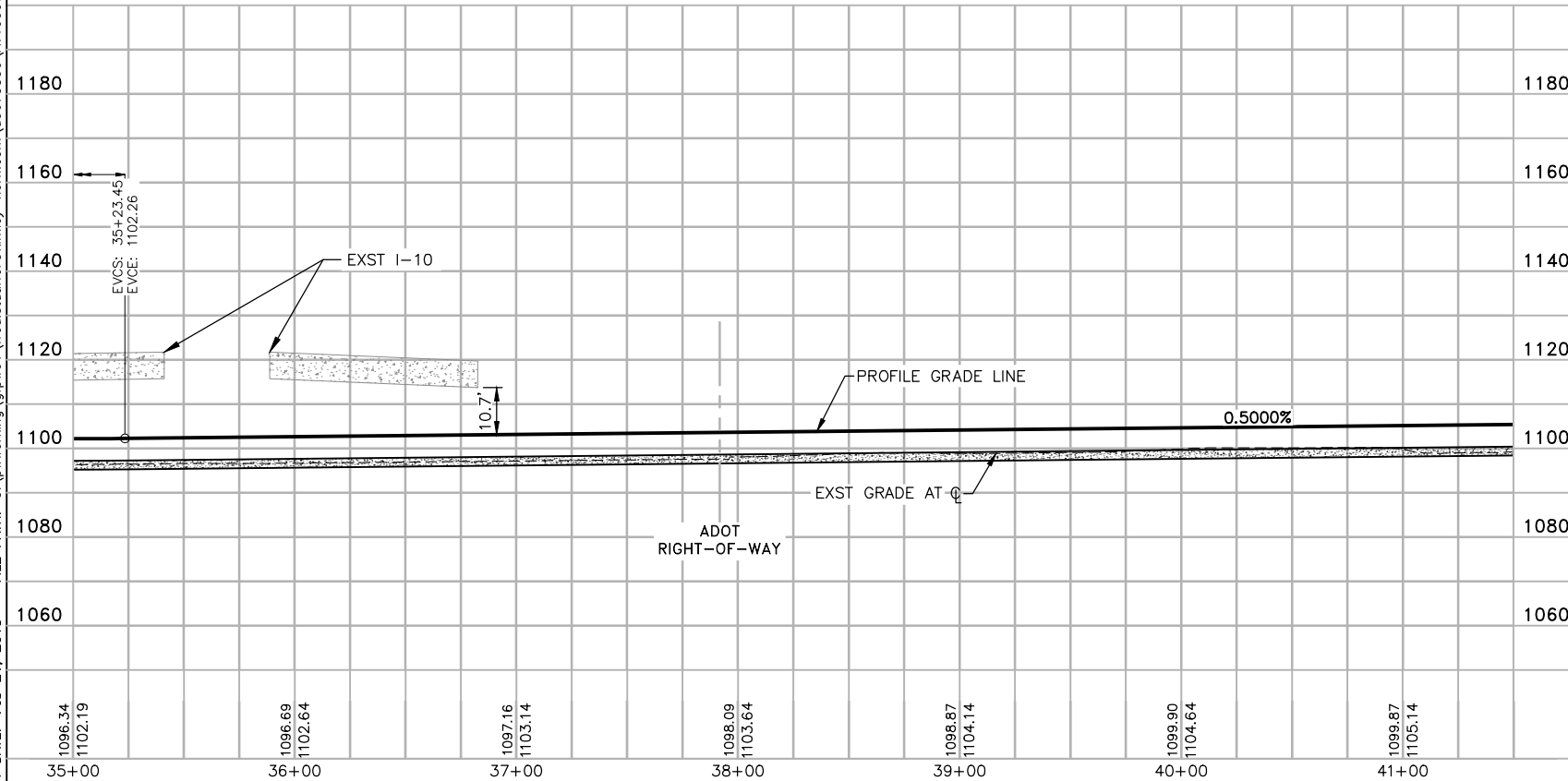
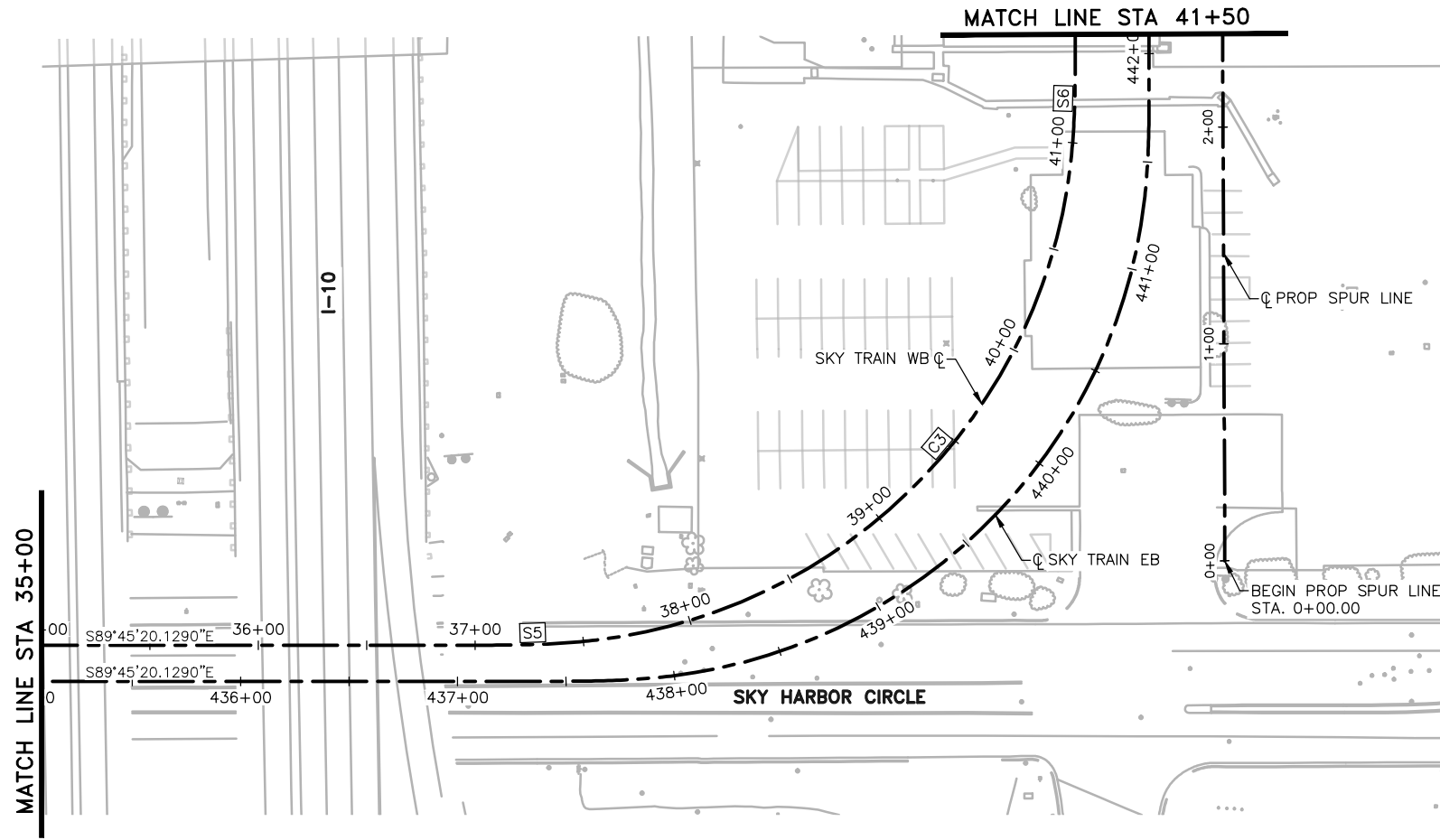
KEYMAP
N.T.S



STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 27+00 TO STA. 35+00**

Package: Sheet Reference No:
B02-MSCV1103
 V1 - 011 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffer\kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffer



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Design Sub-Consultant

Kimley»Horn



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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

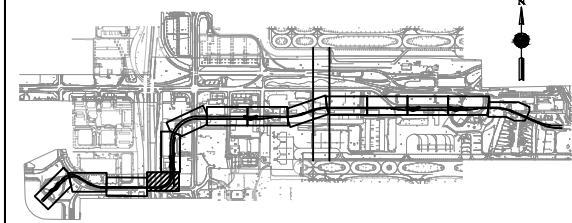
PHX AVT GYA
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

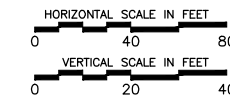
Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 35+00 TO STA. 41+50**

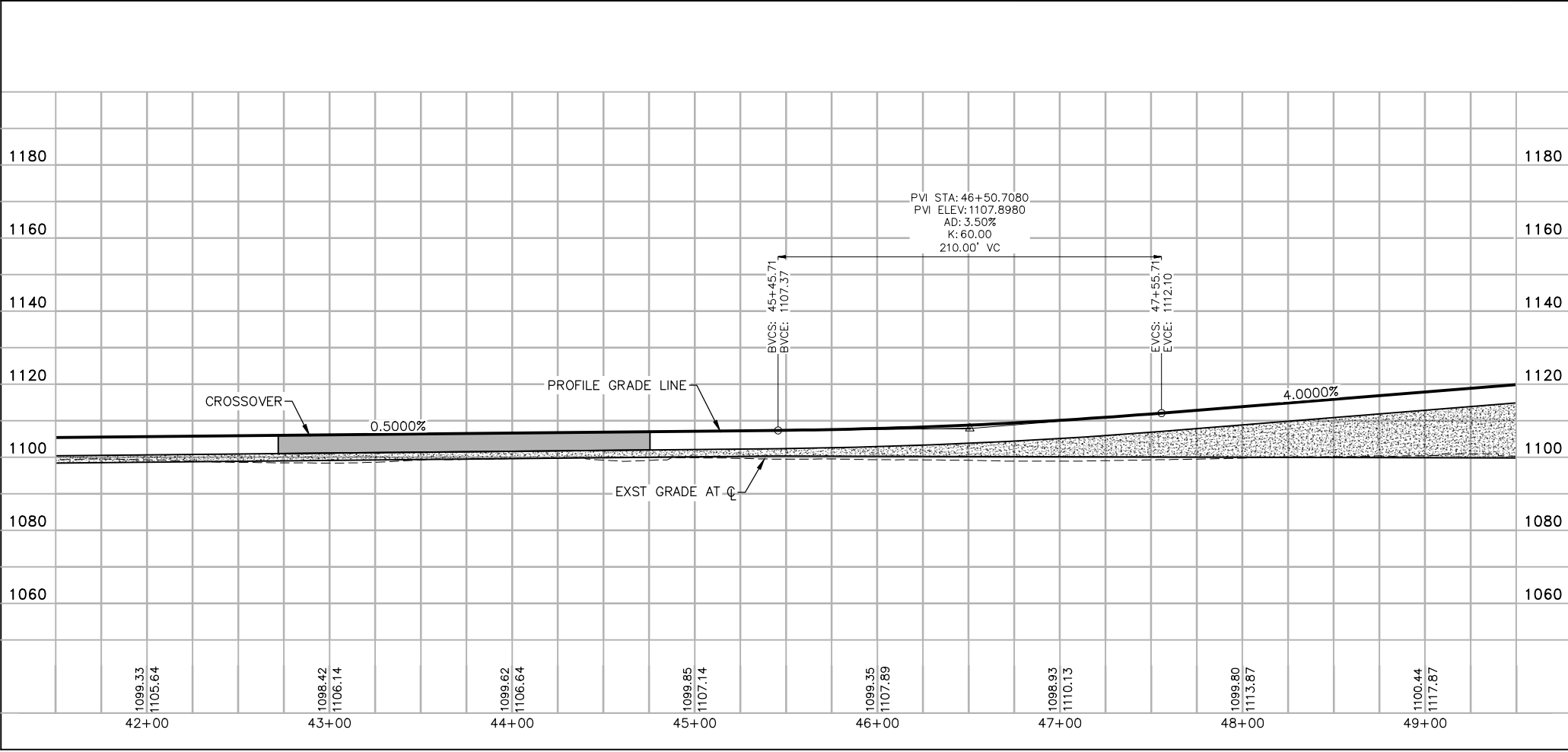
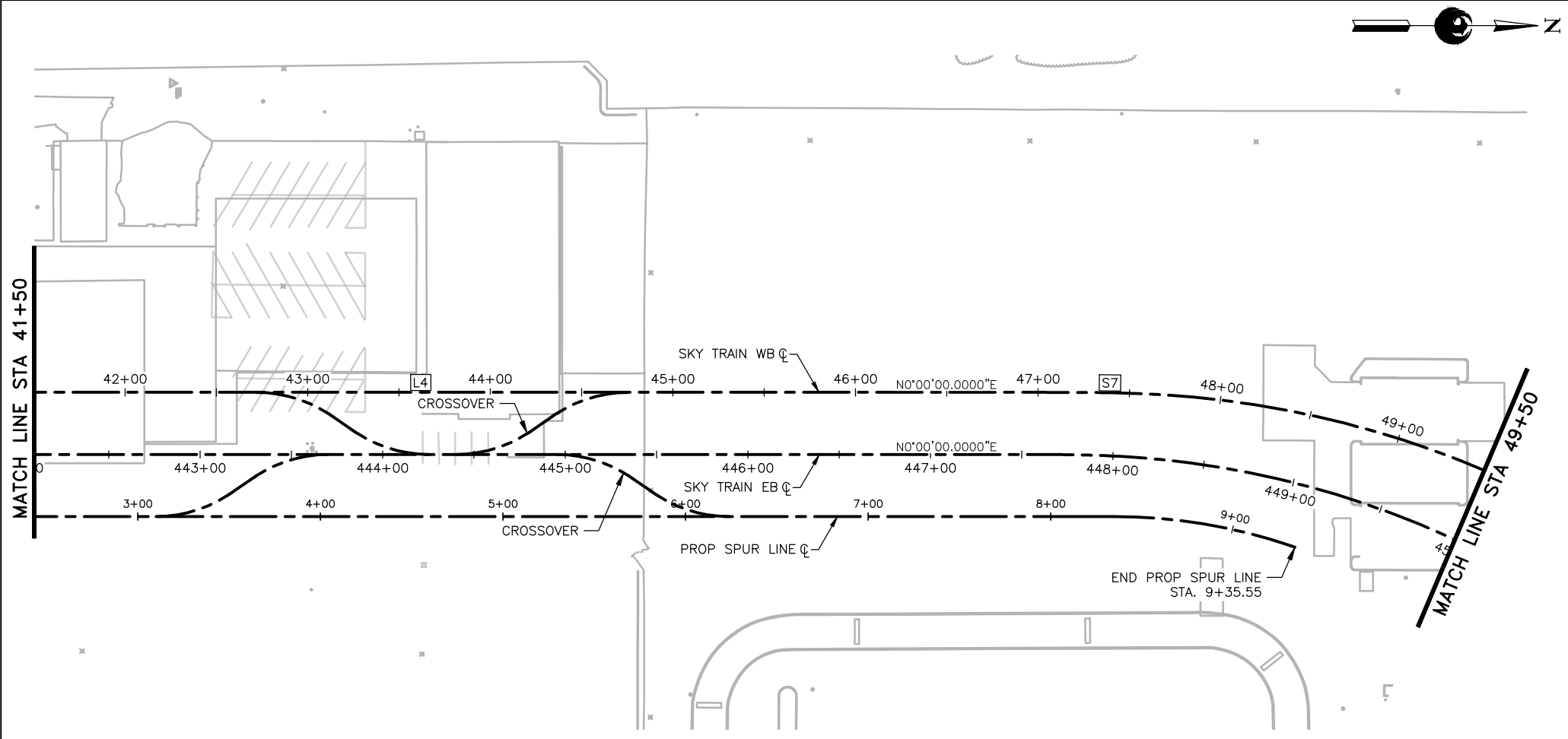


KEYMAP
N.T.S



Package: Sheet Reference No:
B02-MSCV1104
V1 - 012 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



GENERAL NOTES

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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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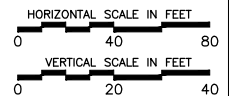
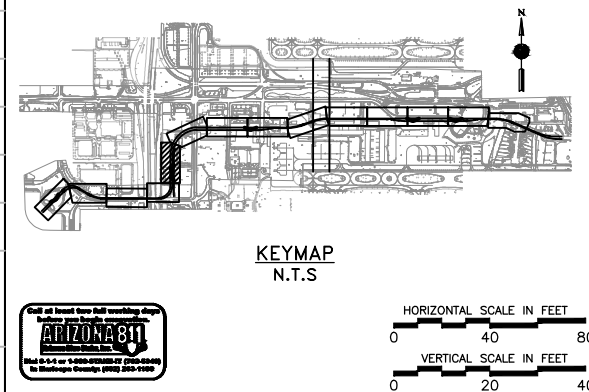
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

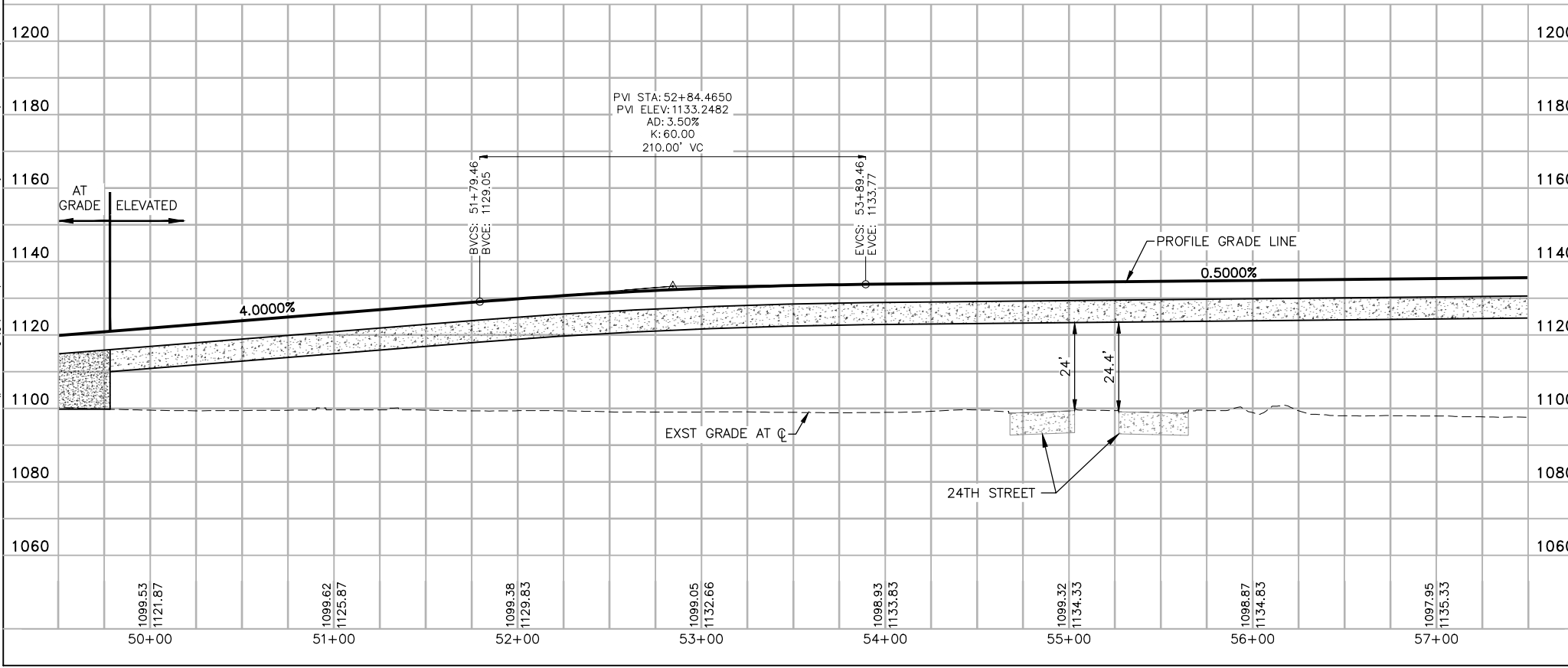
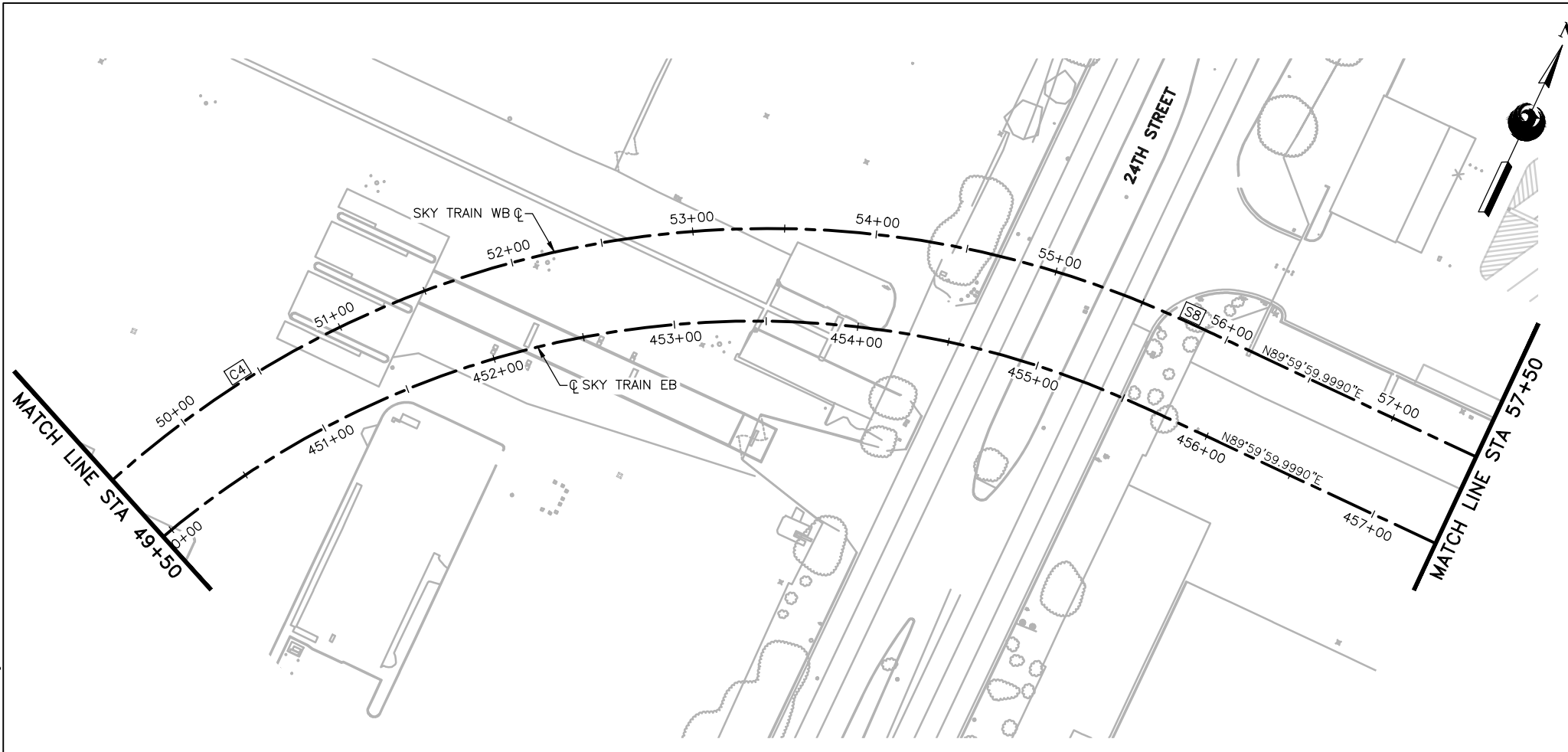
Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY PLAN & PROFILE
WB ALIGNMENT
STA. 41+50 TO STA. 49+50

Package: Sheet Reference No:
B02-MSCV1105
 V1 - 013 of 083



PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



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Design Sub-Consultant

Kimley»Horn



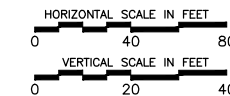
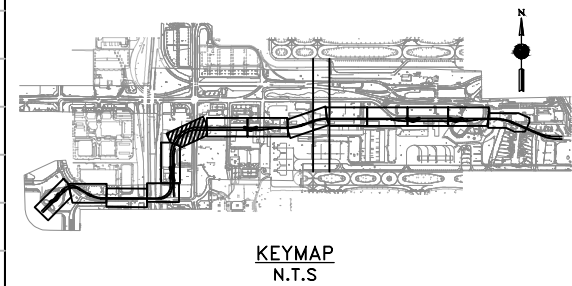
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

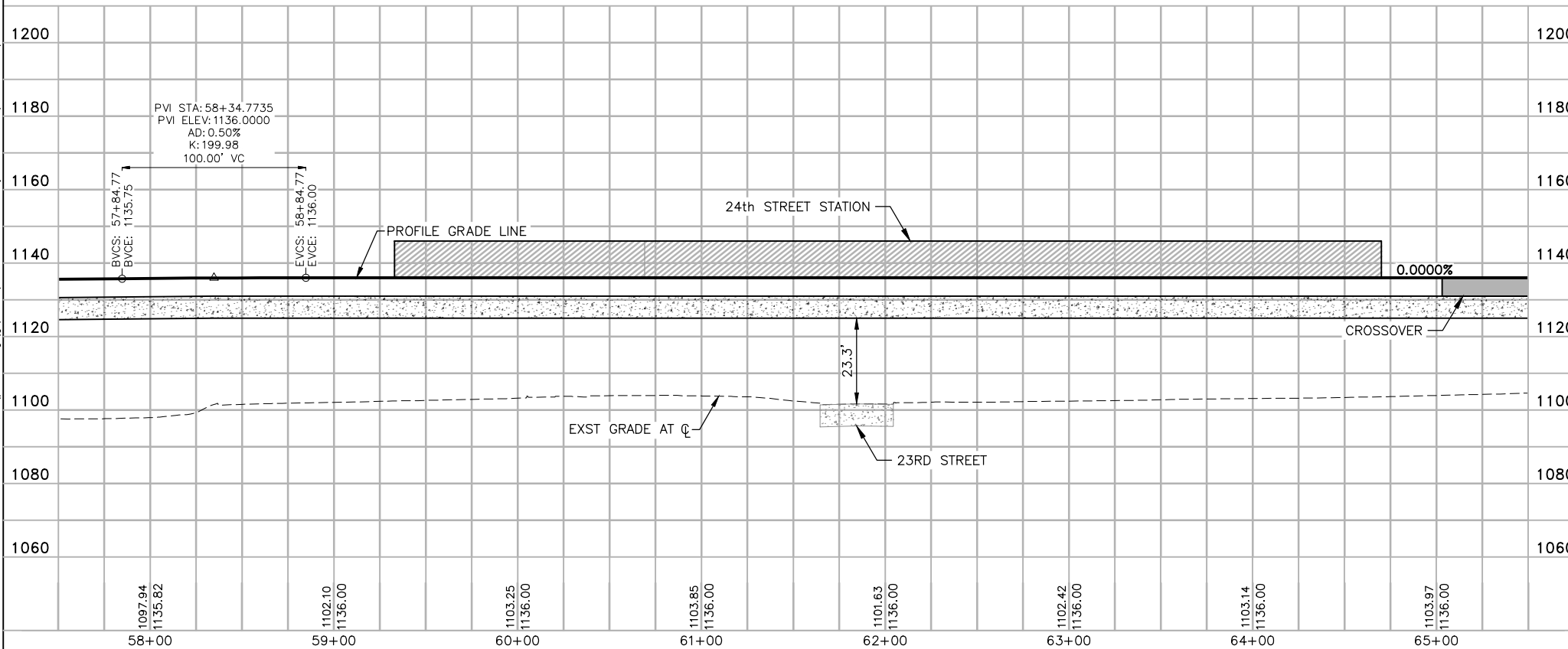
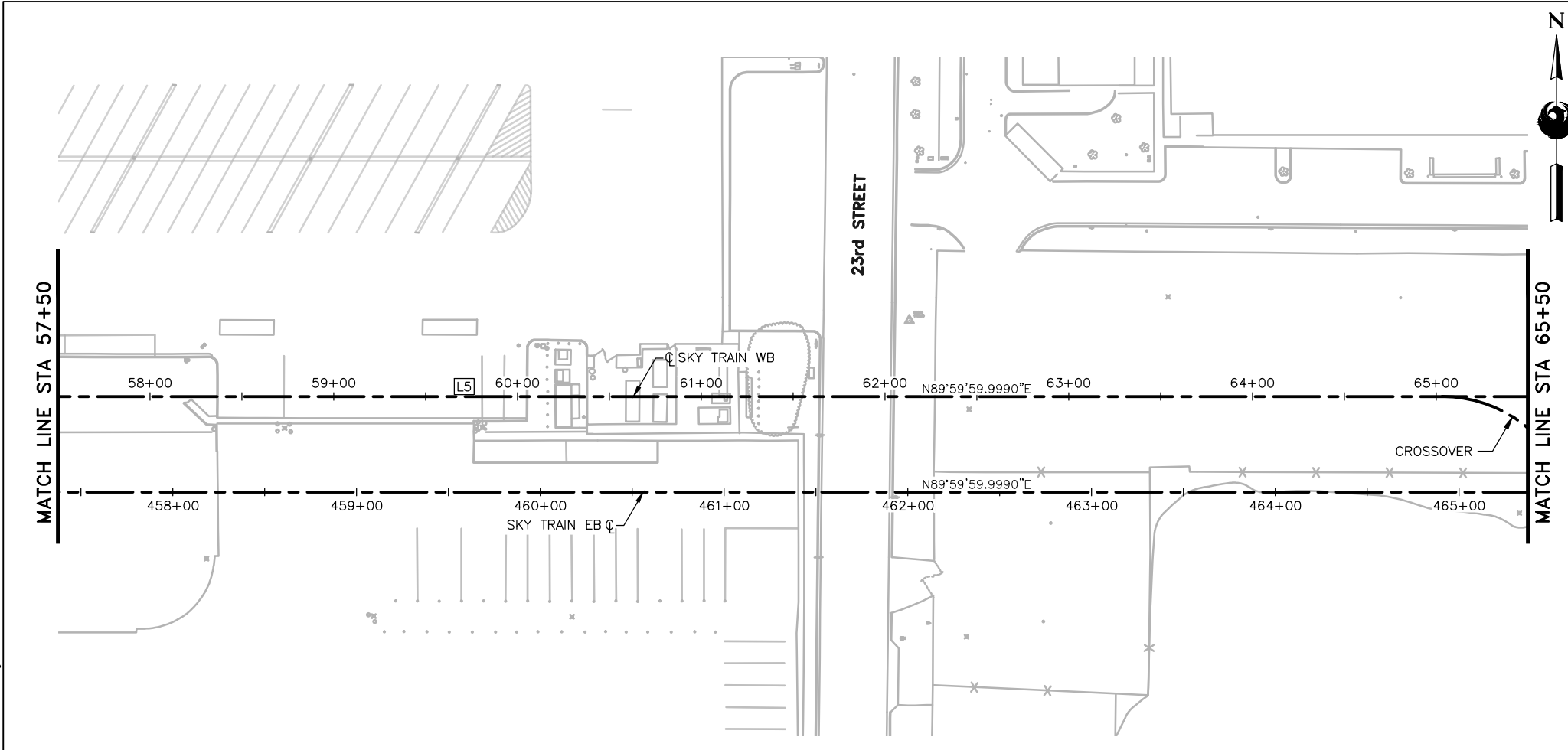
GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 49+50 TO STA. 57+50



Package: Sheet Reference No:
B02-MSCV1106
 V1 - 014 of 083

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

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Design Sub-Consultant

Kimley»Horn



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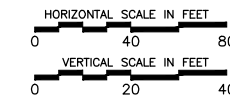
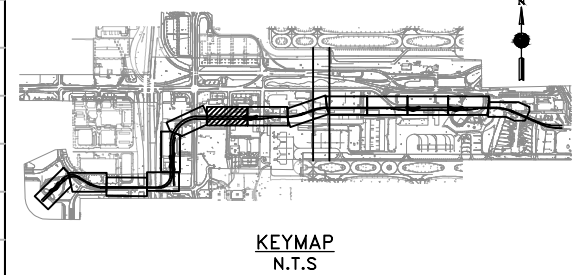
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

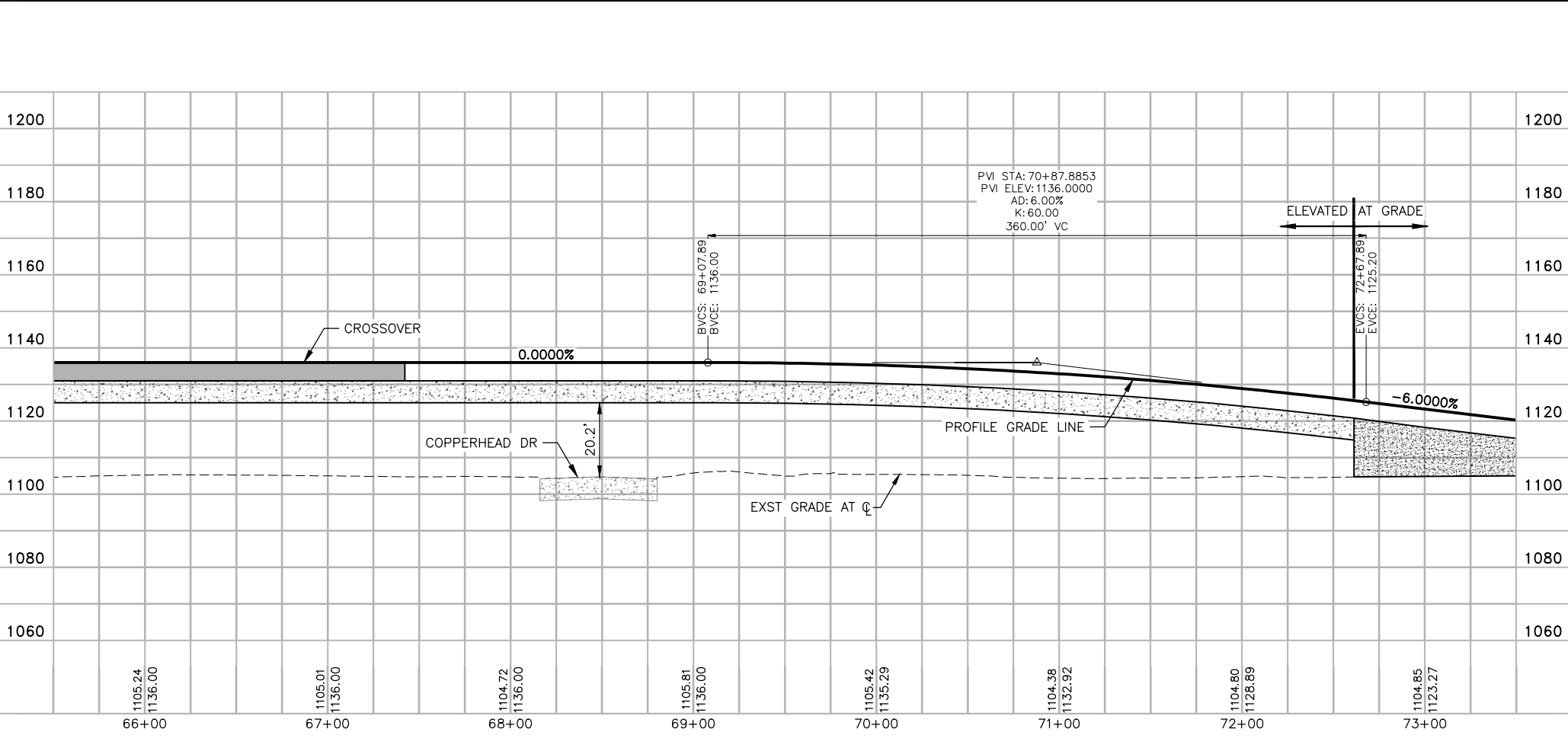
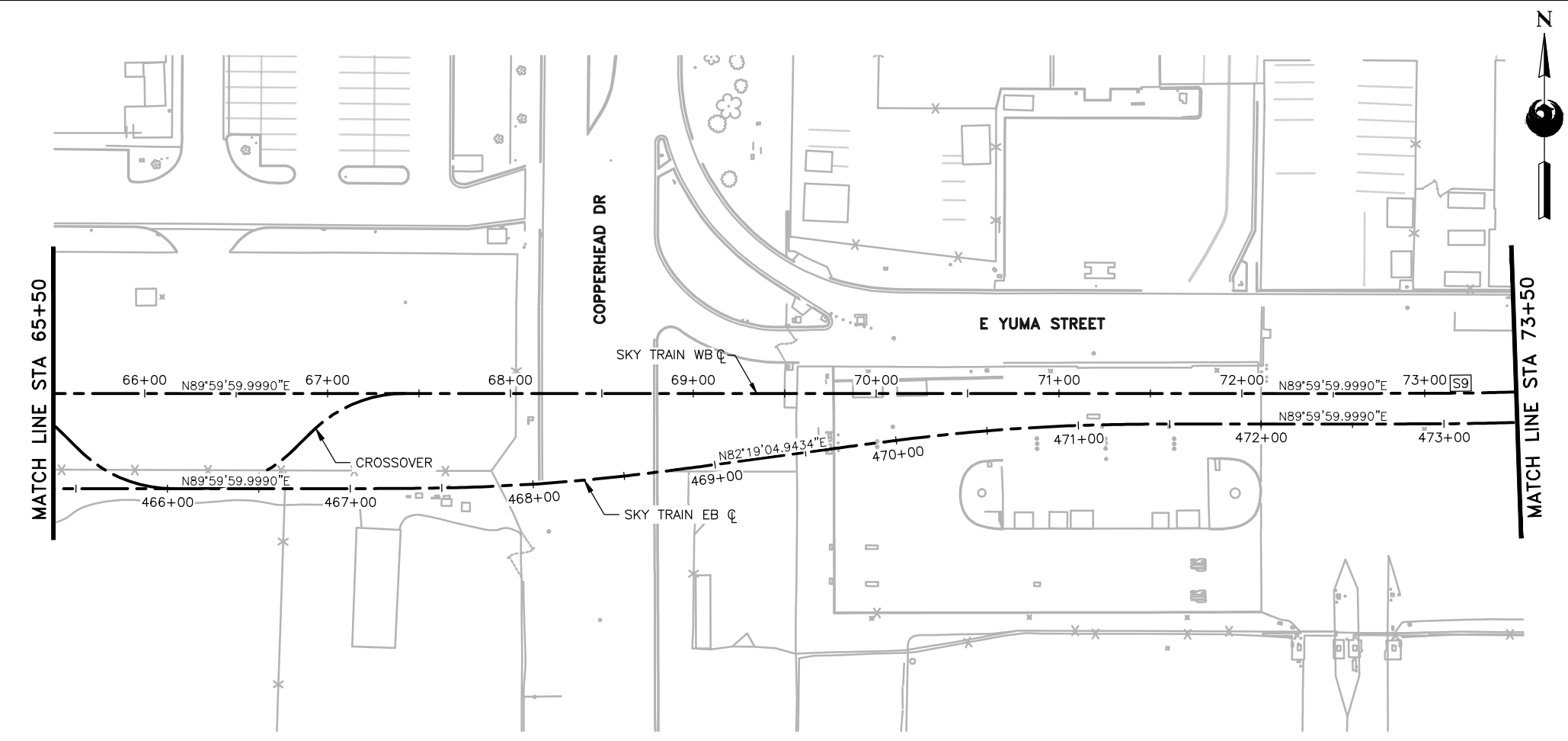
STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 57+50 TO STA. 65+50**



Package: Sheet Reference No:
B02-MSCV1107
 V1 - 015 of 083

FILE PATH: C:\pwworking\gfpw01\fred.stauff@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg PLOT DATE: Feb 21, 2018



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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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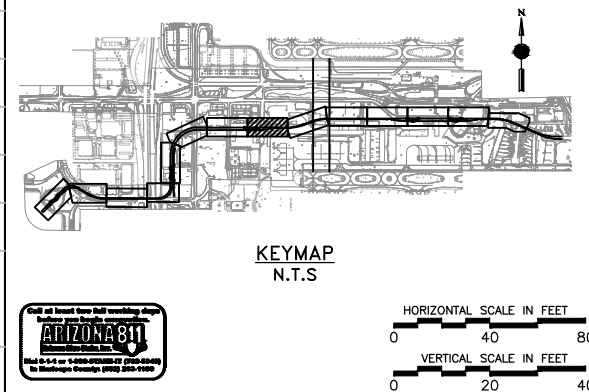
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

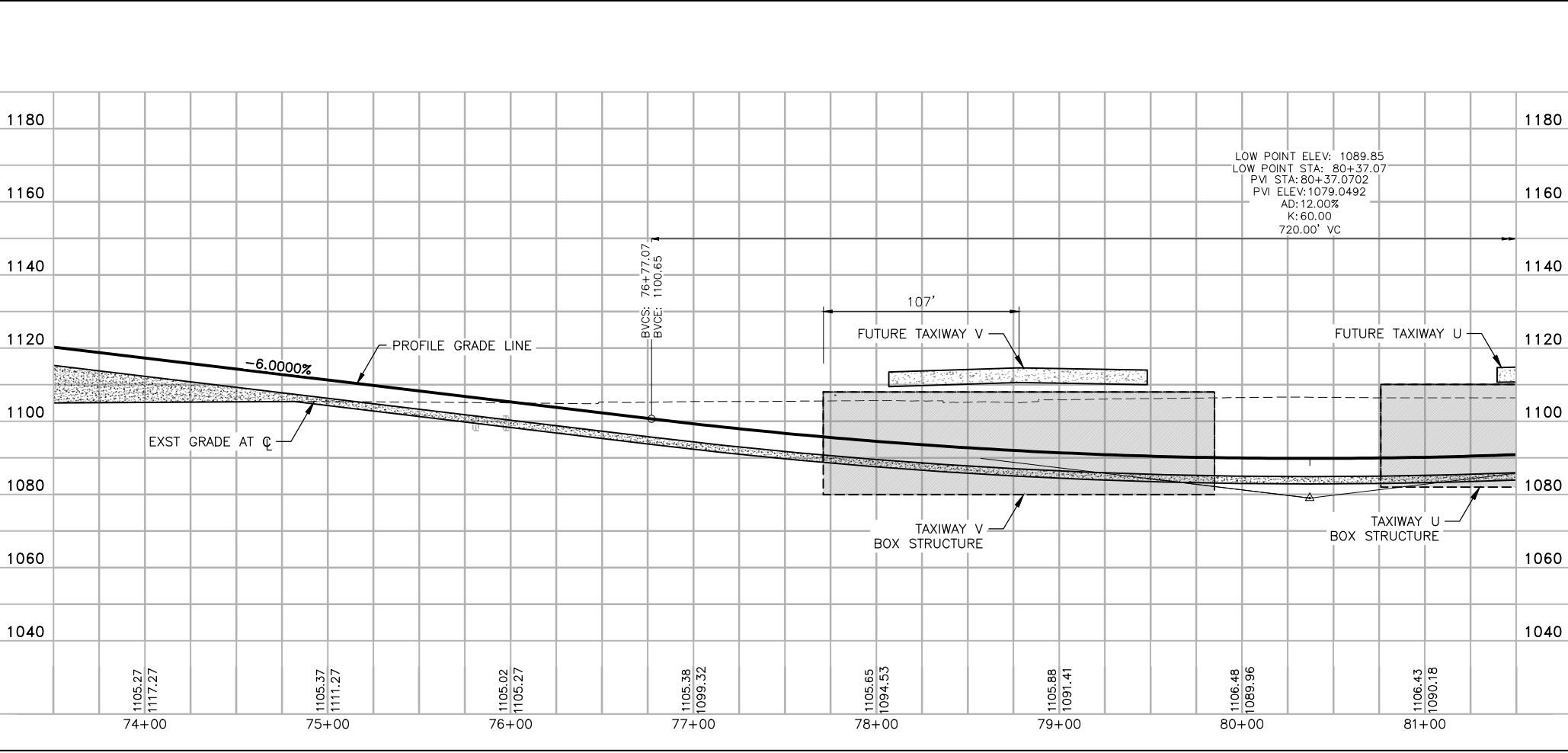
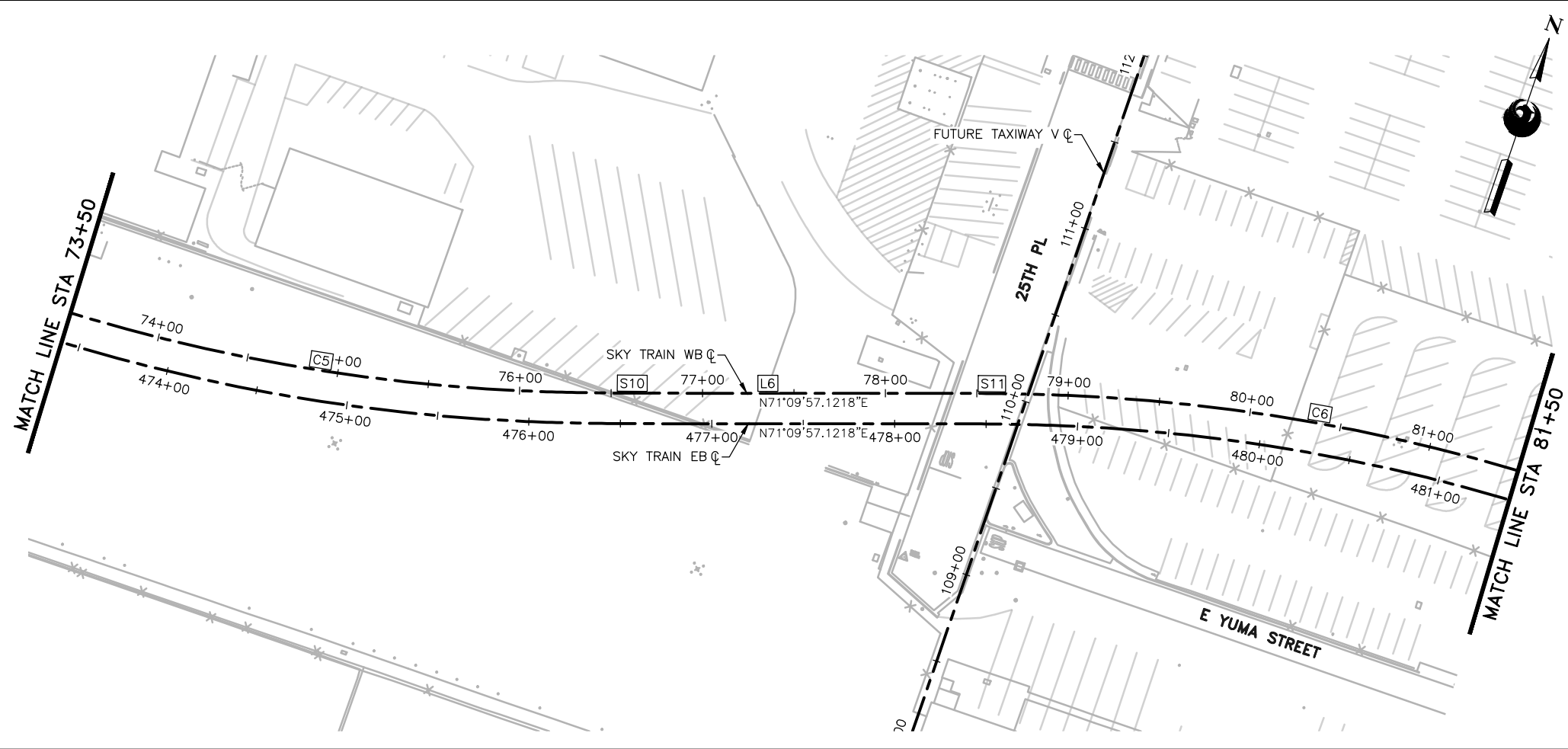
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Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 65+50 TO STA. 73+50

Package: Sheet Reference No:
B02-MSCV1108
 V1 - 016 of 083



PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

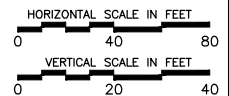
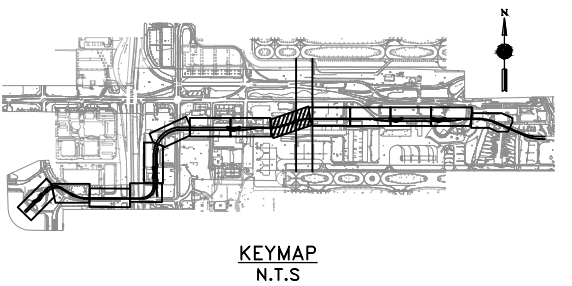
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

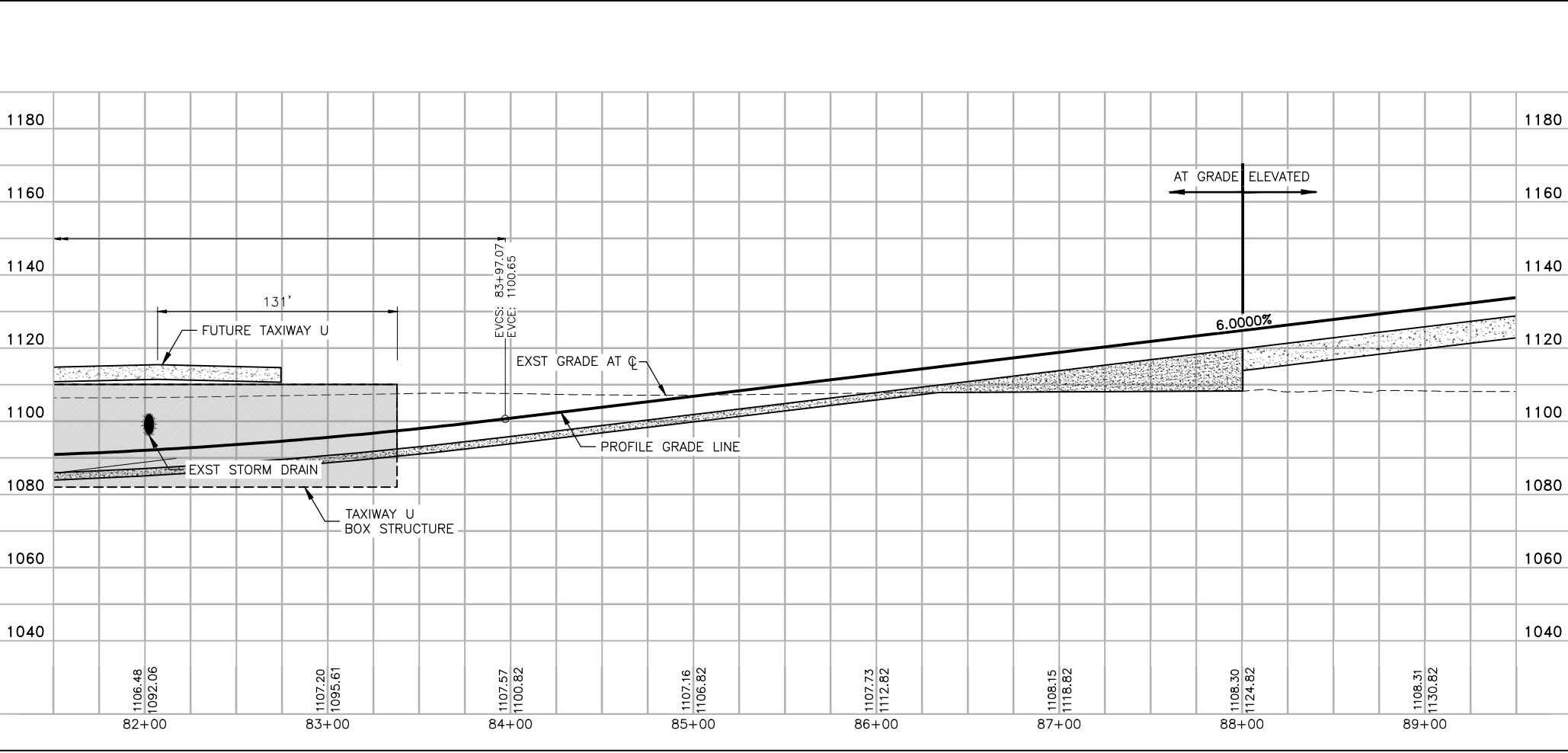
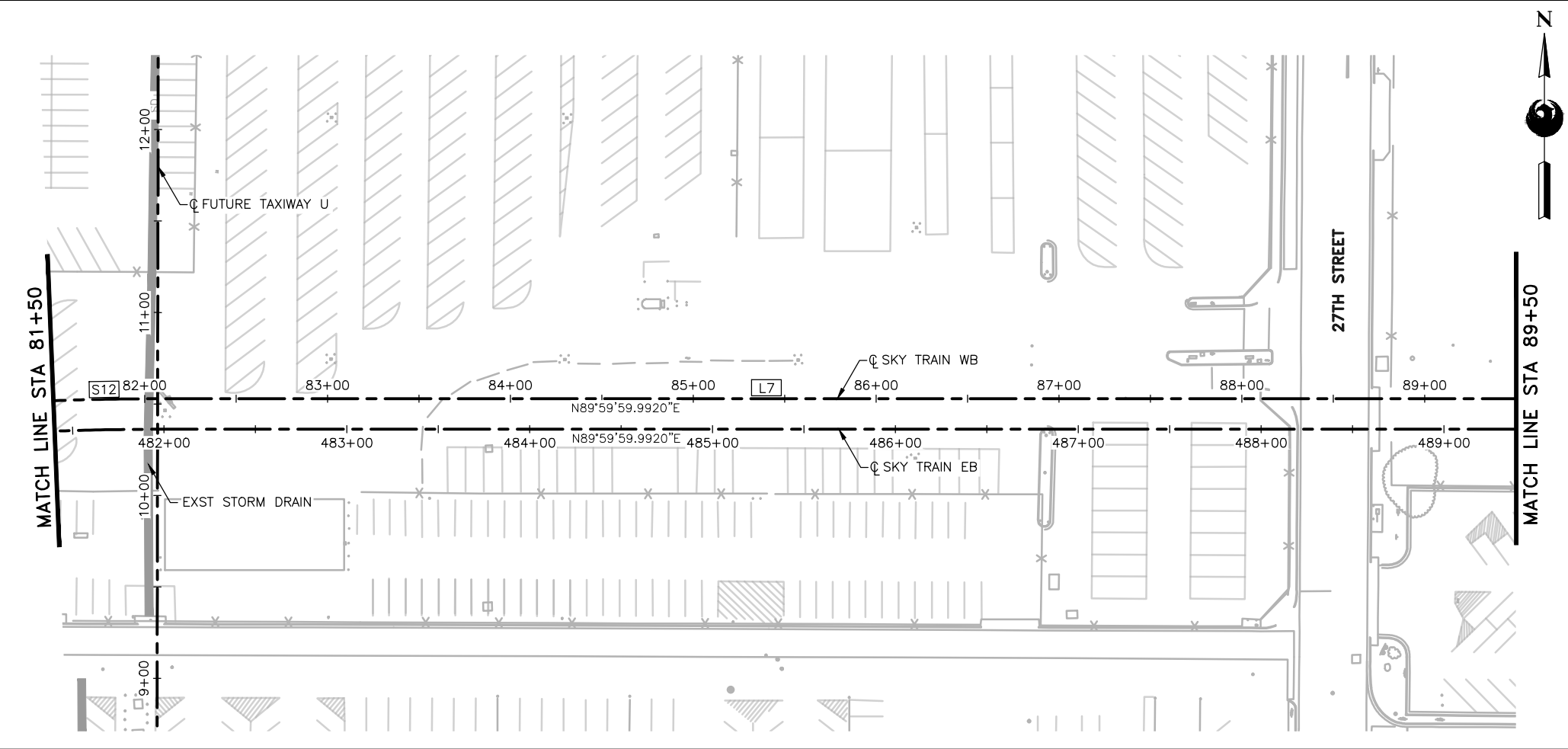
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Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY PLAN & PROFILE
WB ALIGNMENT
STA. 73+50 TO STA. 81+50



Package: Sheet Reference No:
B02-MSCV1109
 V1 - 017 of 083

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg PLOT DATE: Feb 21, 2018



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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

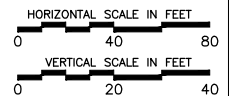
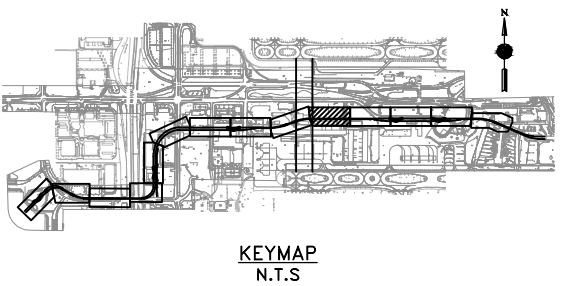
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NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	12/15/17

PHX AVT BYA
 CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

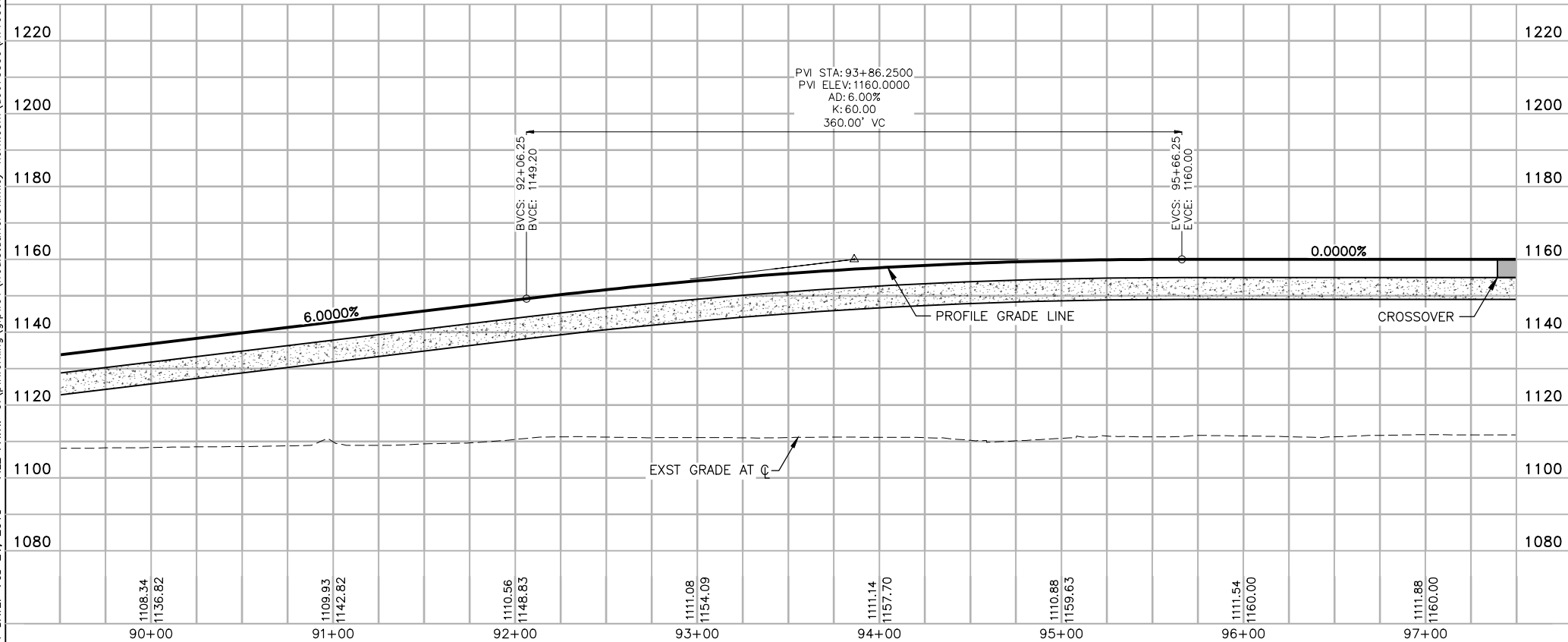
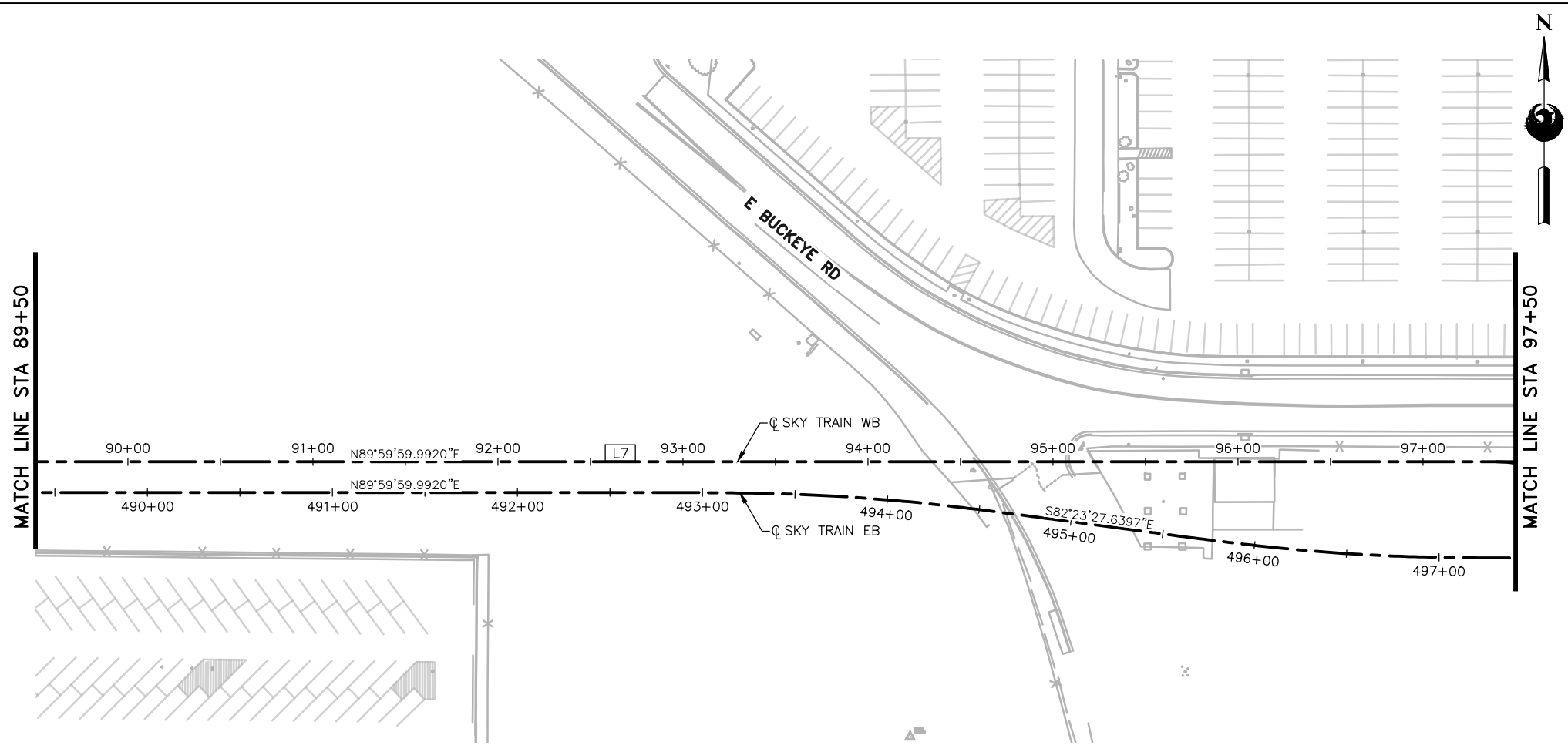
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Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 81+50 TO STA. 89+50



Package: Sheet Reference No:
B02-MSCV1110
 V1 - 018 of 083

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg PLOT DATE: Feb 21, 2018



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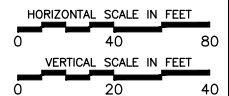
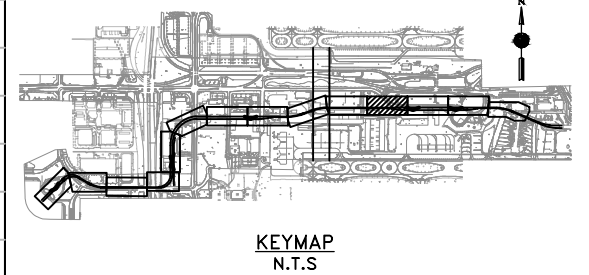
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

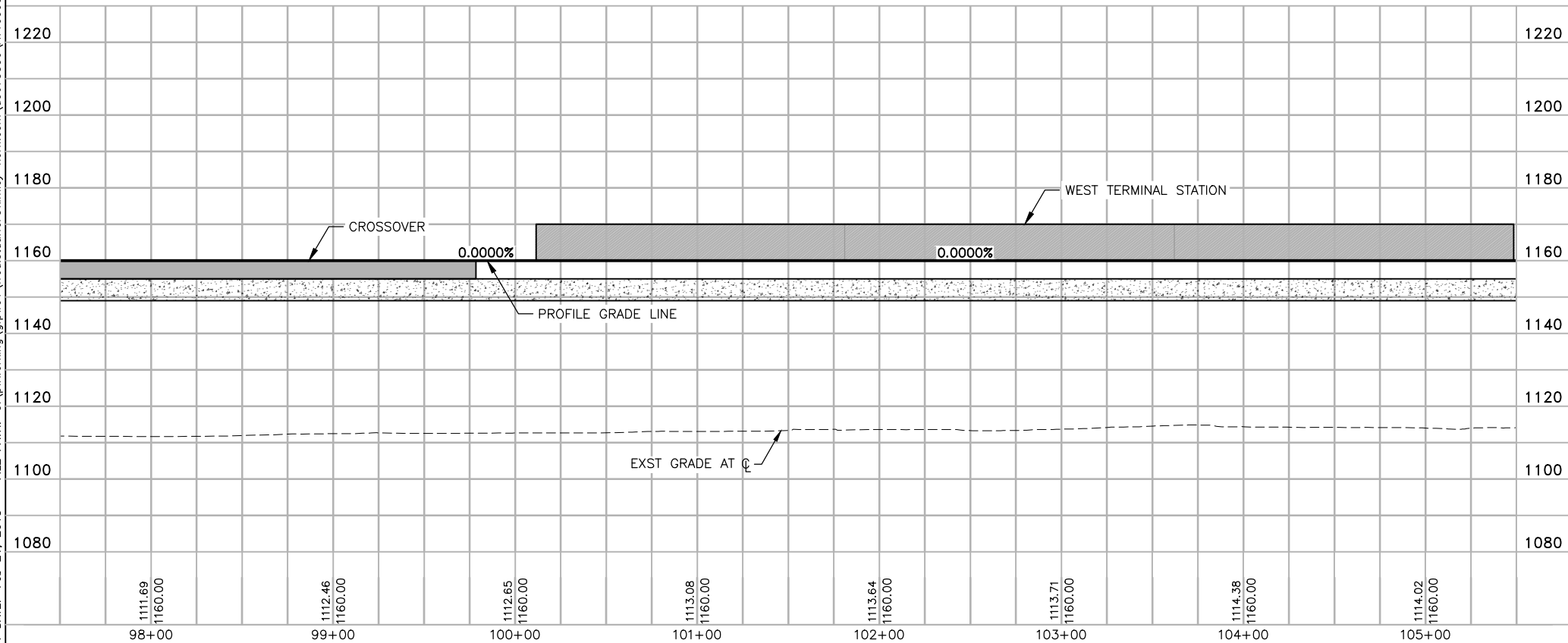
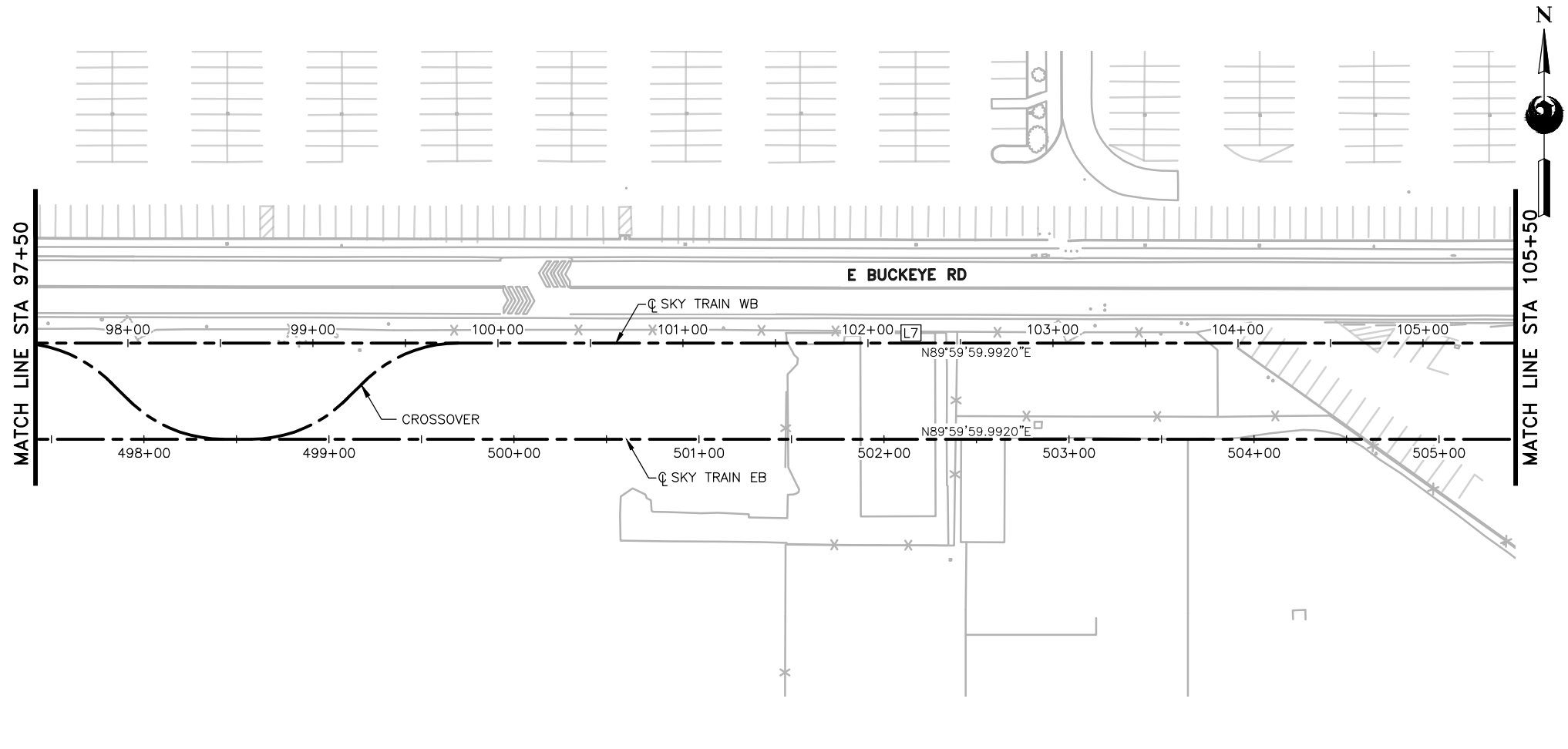


STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 89+50 TO STA. 97+50**

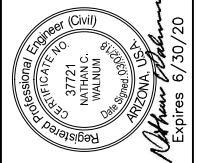
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B02-MSCV1111
 V1 - 019 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



GENERAL NOTES

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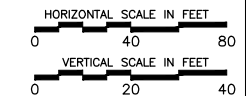
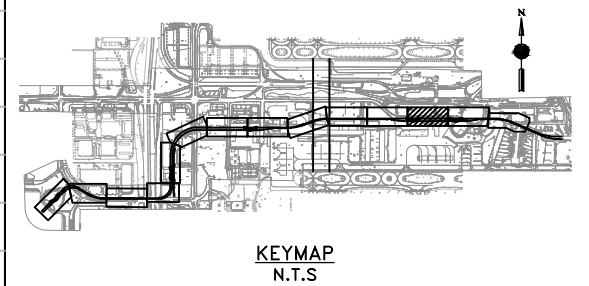
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

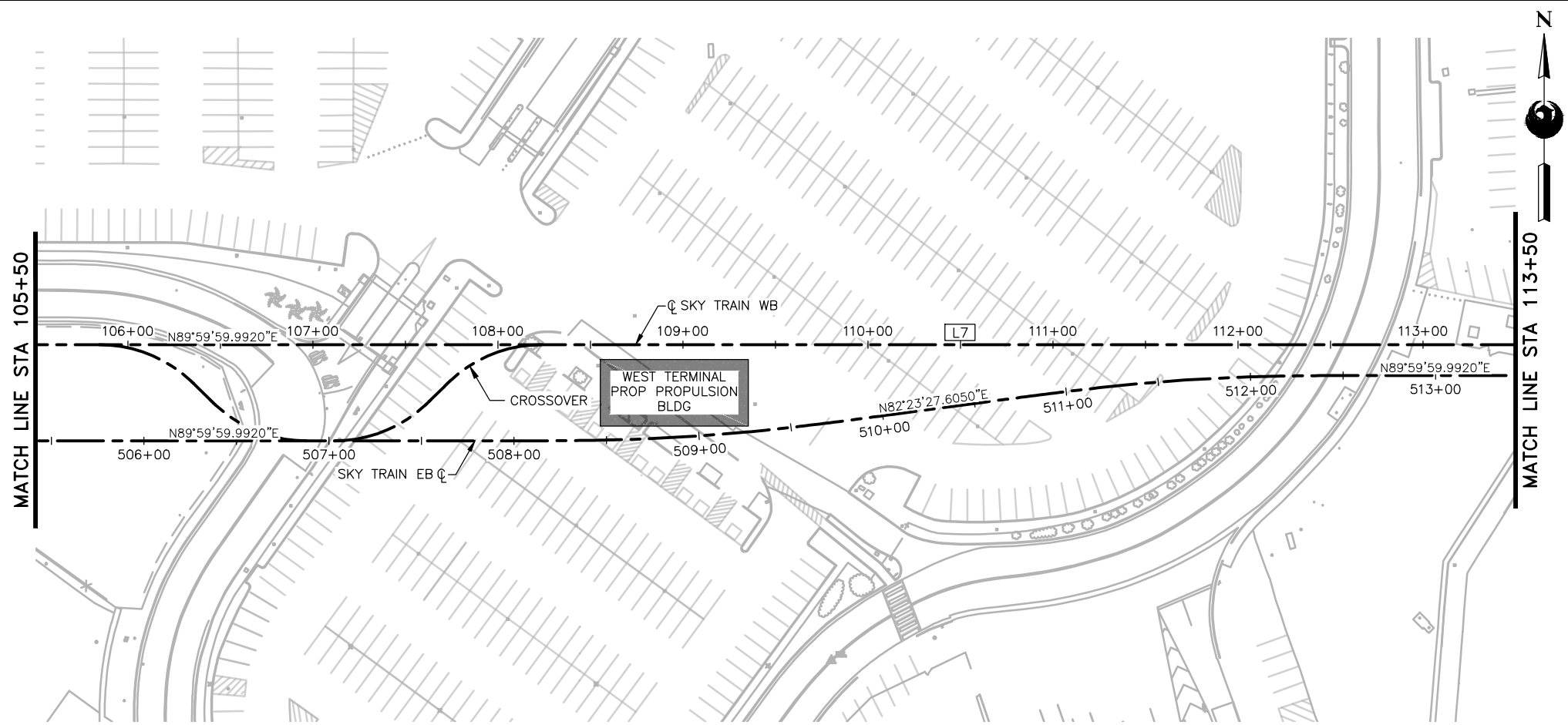


STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 97+50 TO STA. 105+50**

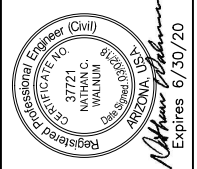
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B02-MSCV1112
 V1 - 020 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



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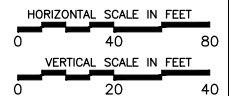
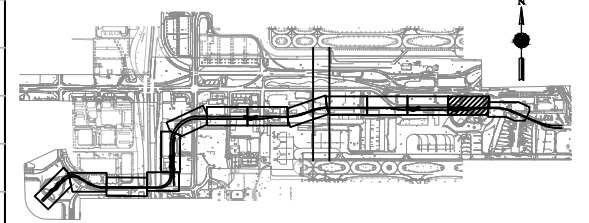
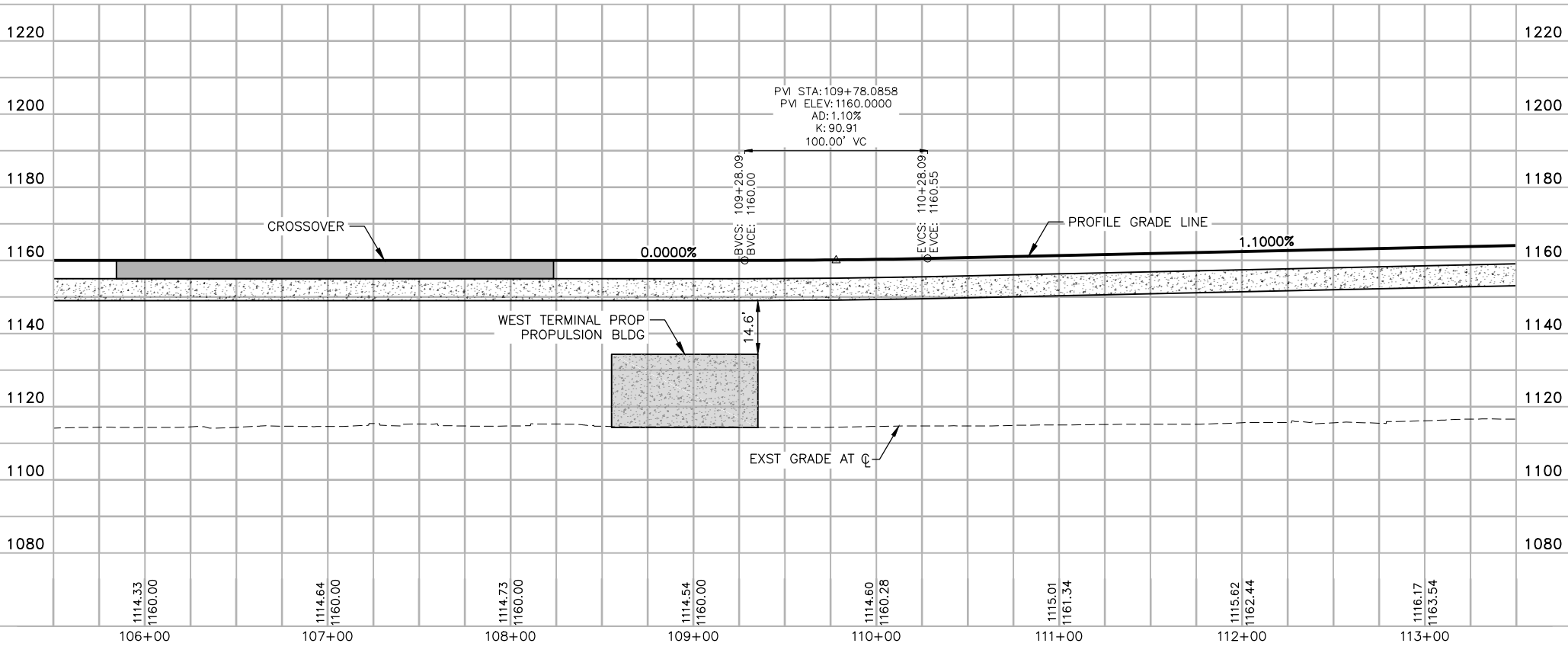
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

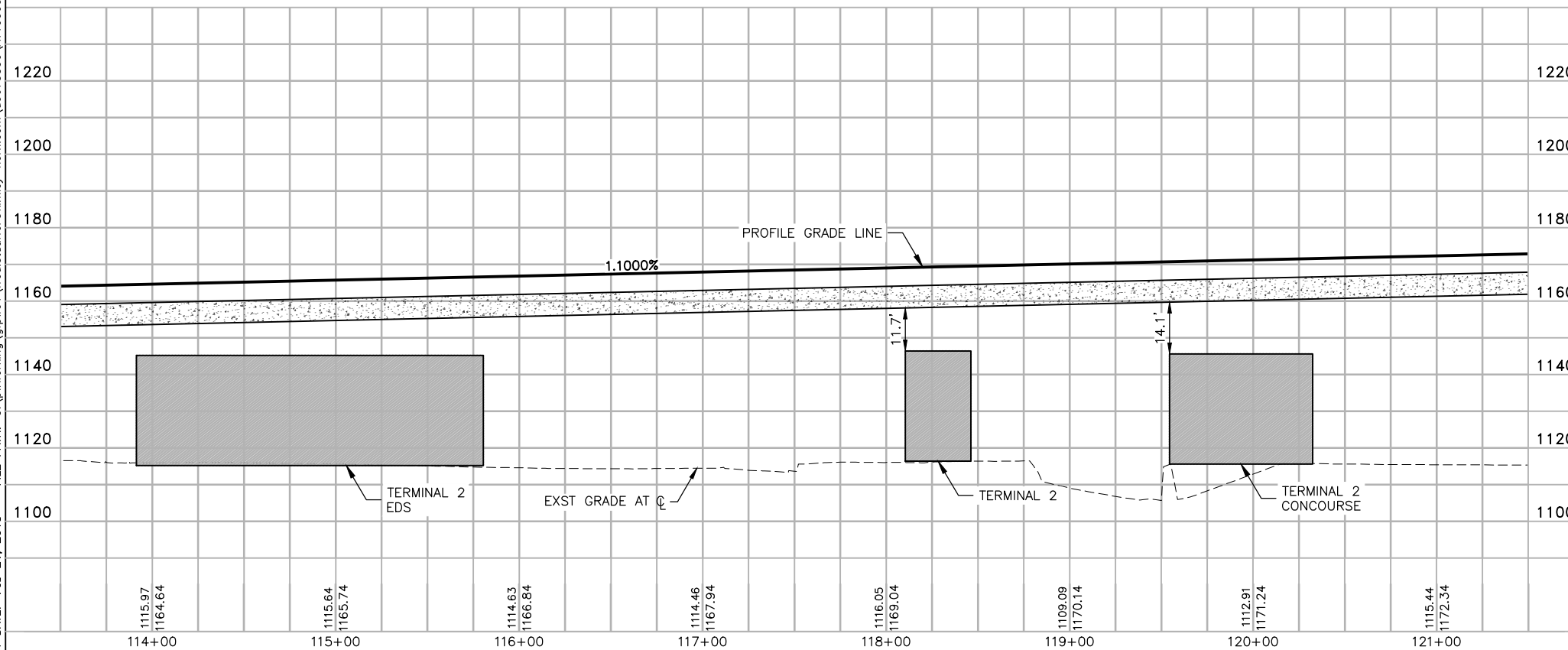
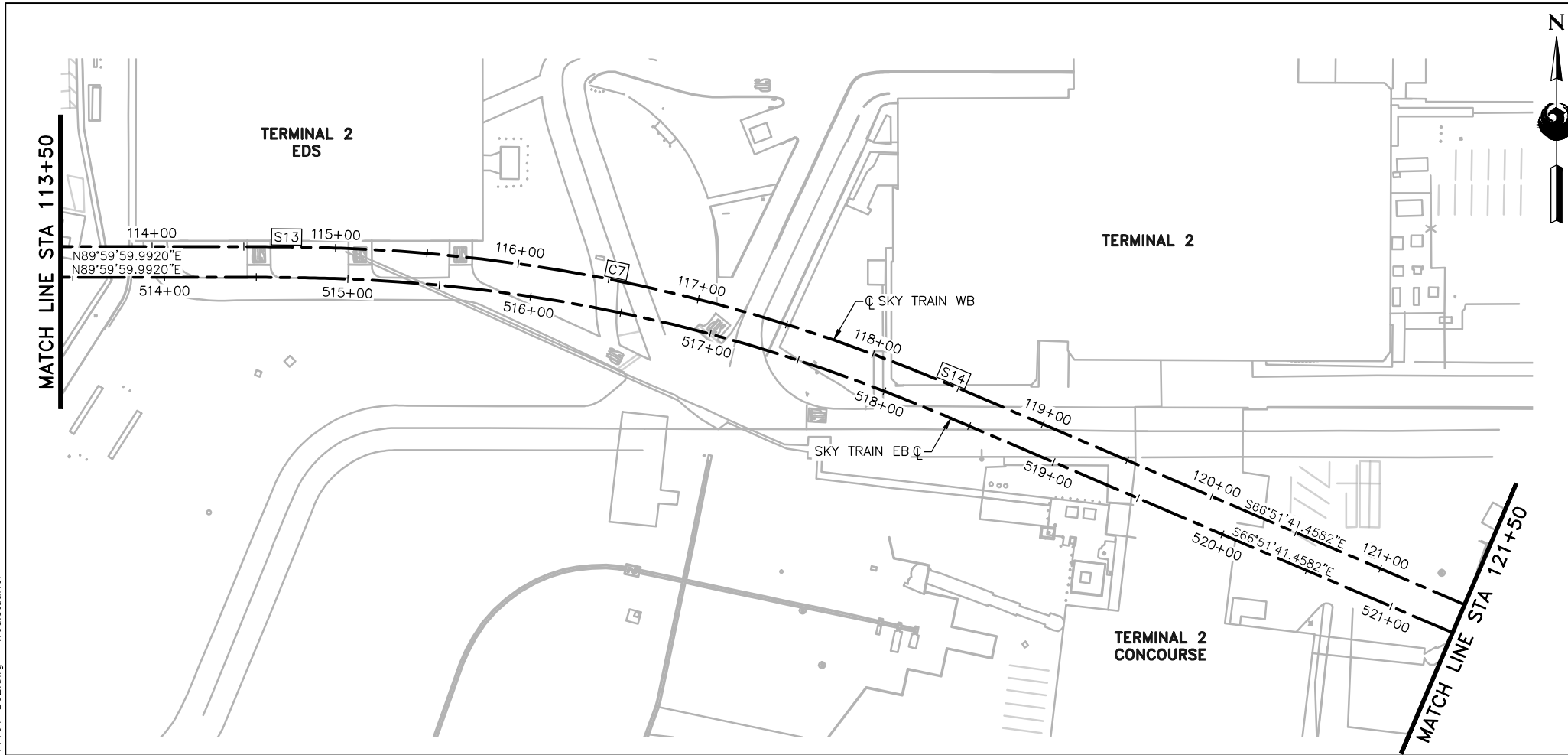


STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 WB ALIGNMENT
 STA. 105+50 TO STA. 113+50**

Package: Sheet Reference No:
B02-MSCV1113
 V1 - 021 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



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Design Sub-Consultant

Kimley»Horn



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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
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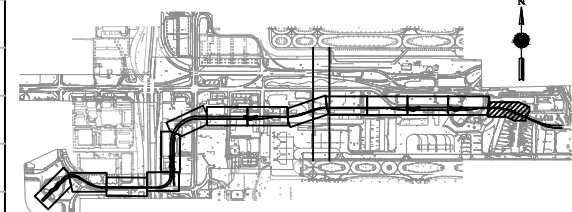


**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

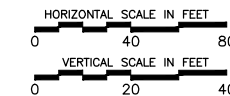
Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 113+50 TO STA. 121+50**

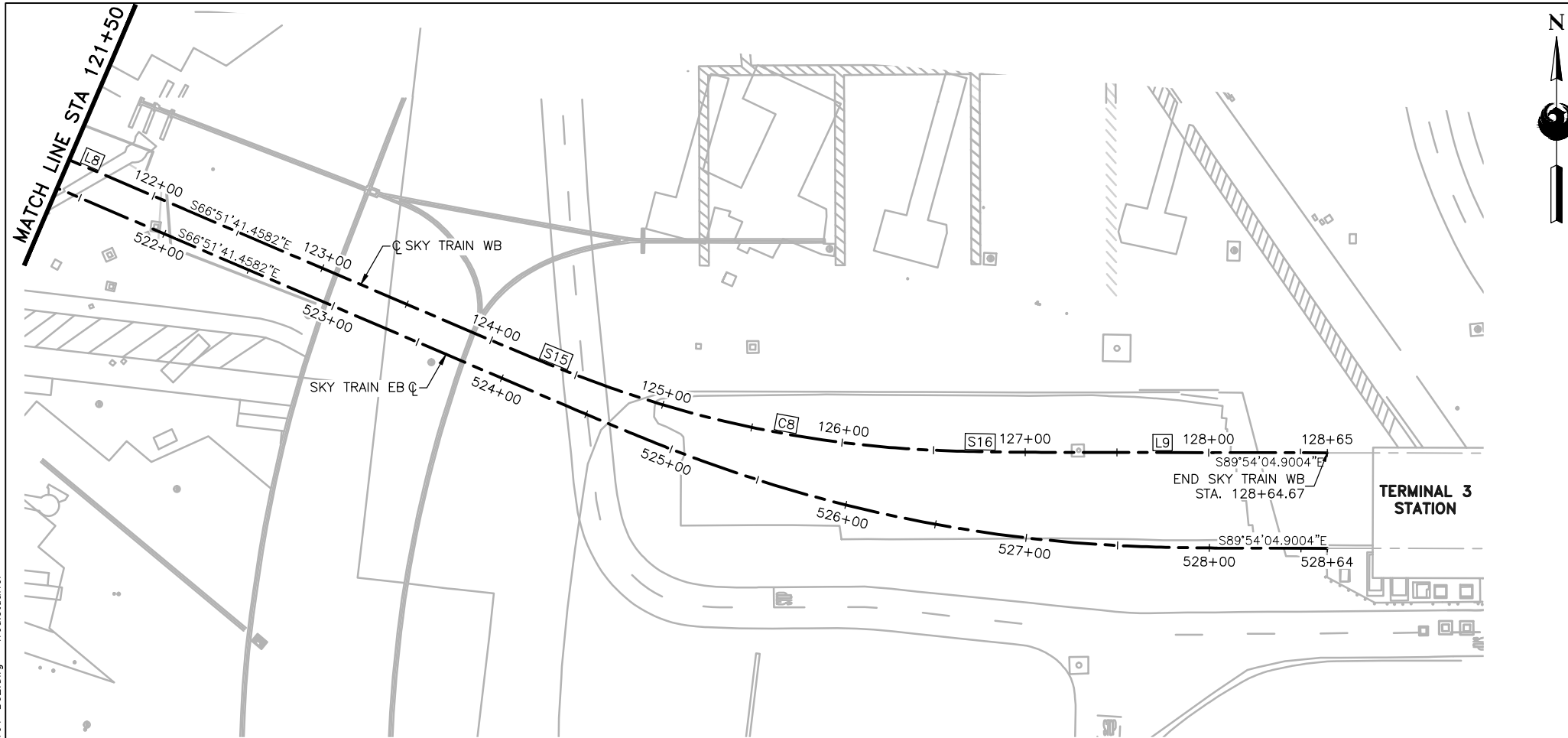


KEYMAP
N.T.S



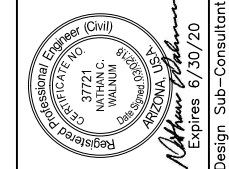
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V1 - 022 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1101-B02.dwg fred.stauffe



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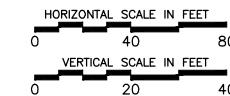
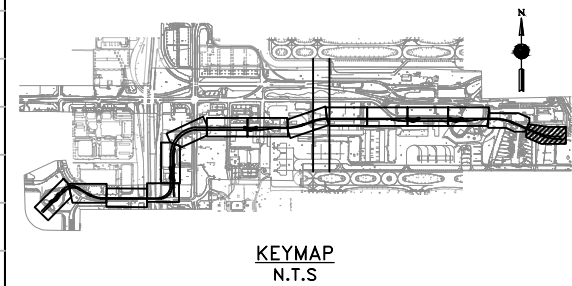
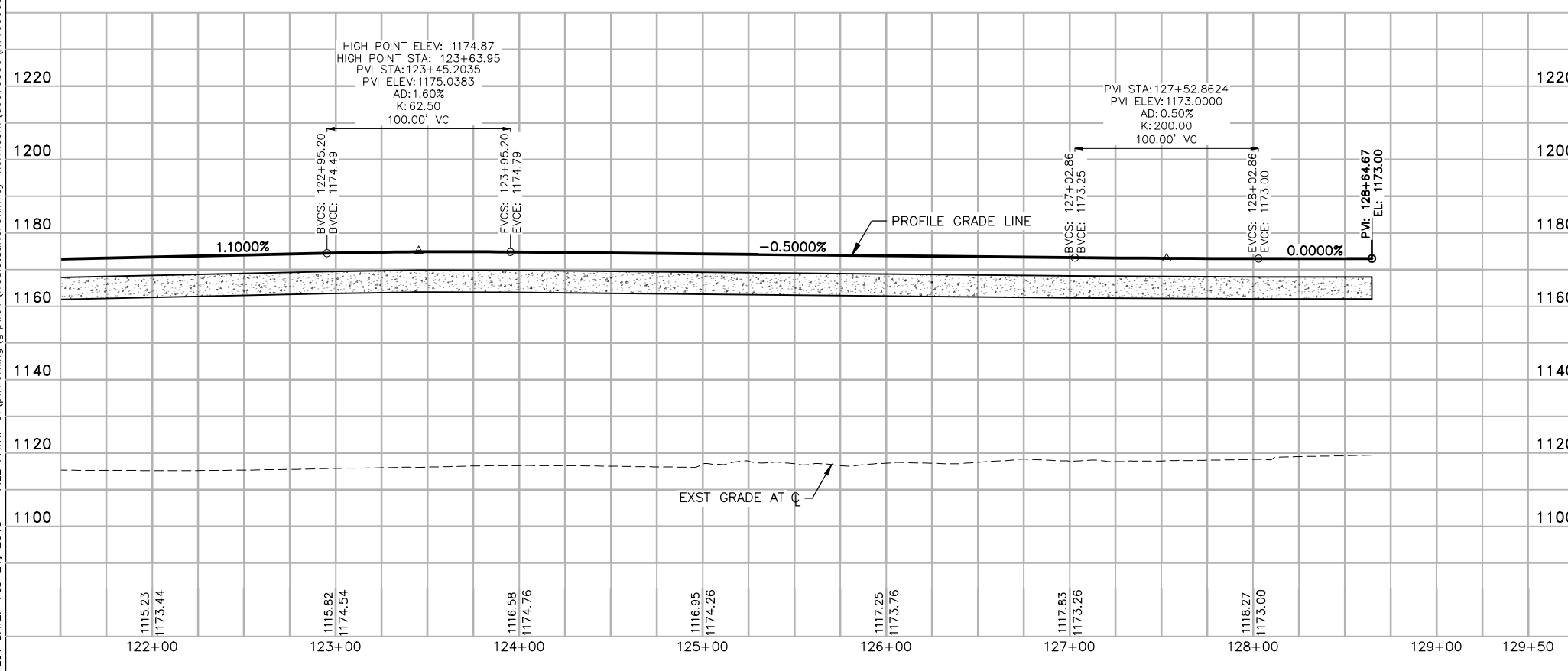
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
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PHX AVT GYA
 CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

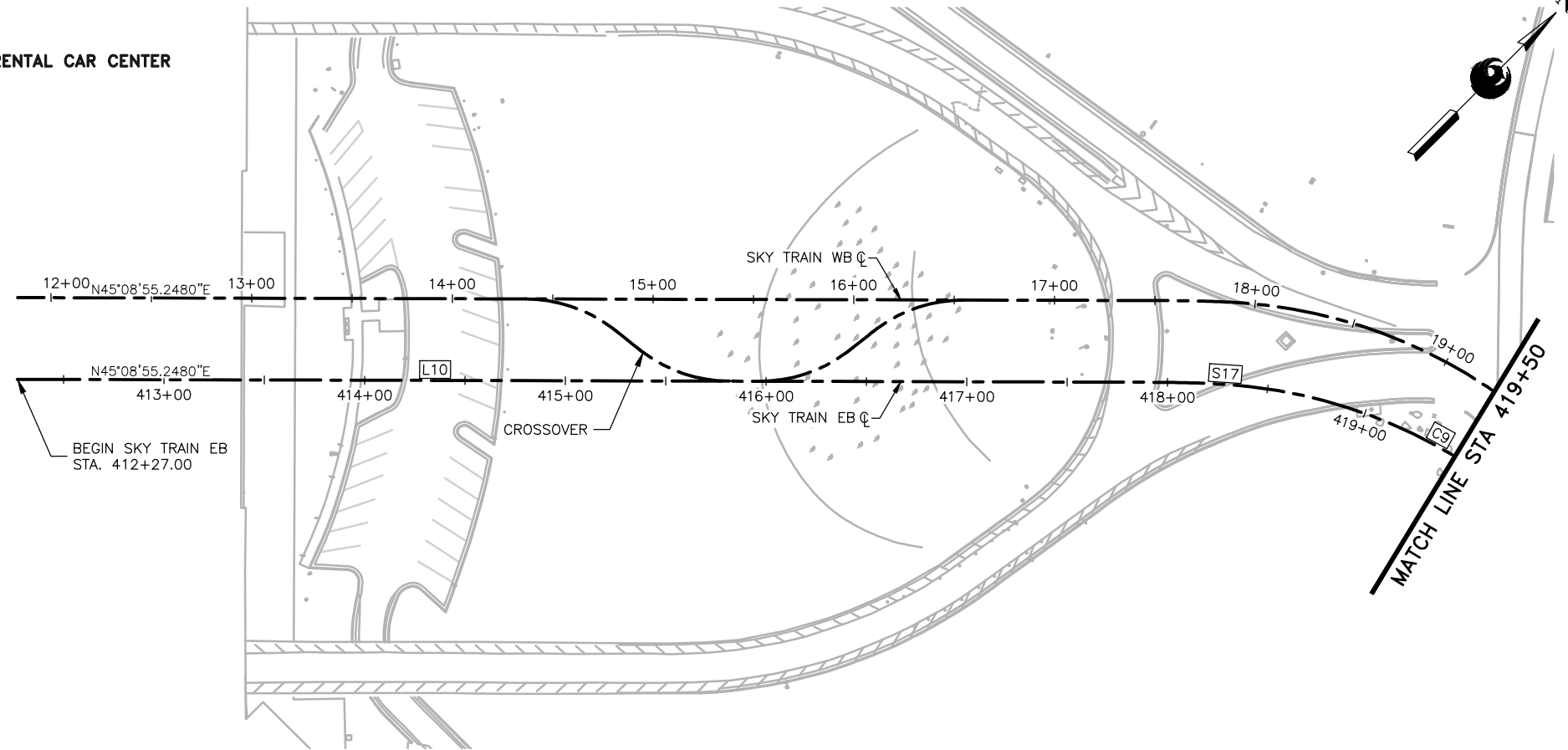


STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
PLAN & PROFILE
WB ALIGNMENT
STA. 121+50 TO STA. 128+64.67

Package: Sheet Reference No:
B02-MSCV1115
 V1 - 023 of 083

PLOT DATE: Feb 27, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe

RENTAL CAR CENTER



GENERAL NOTES

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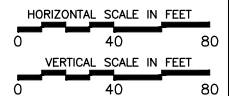
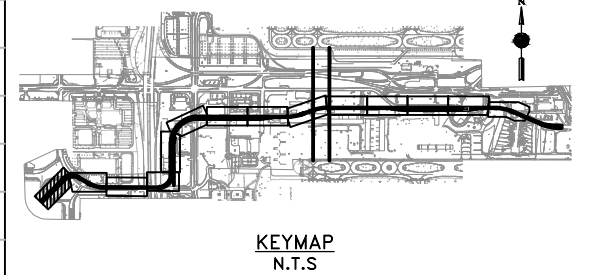
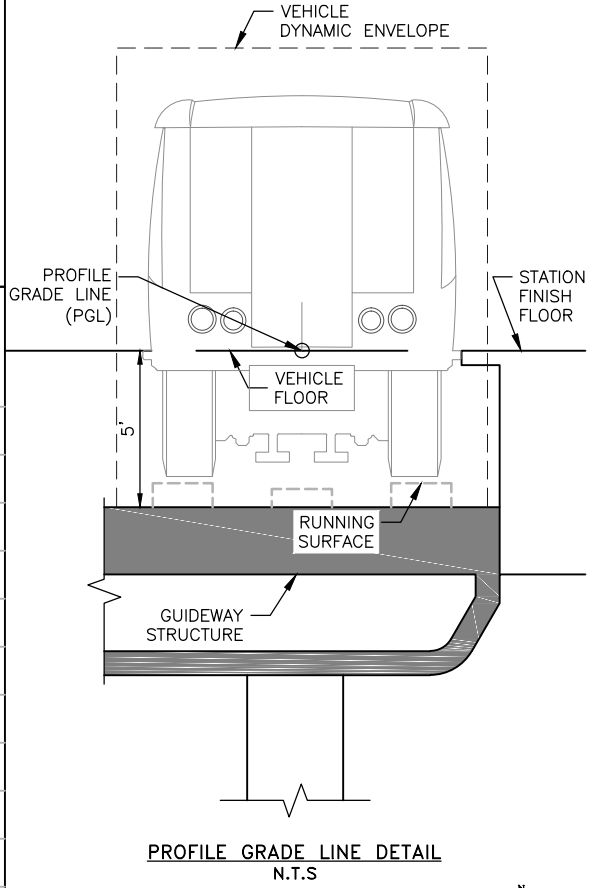
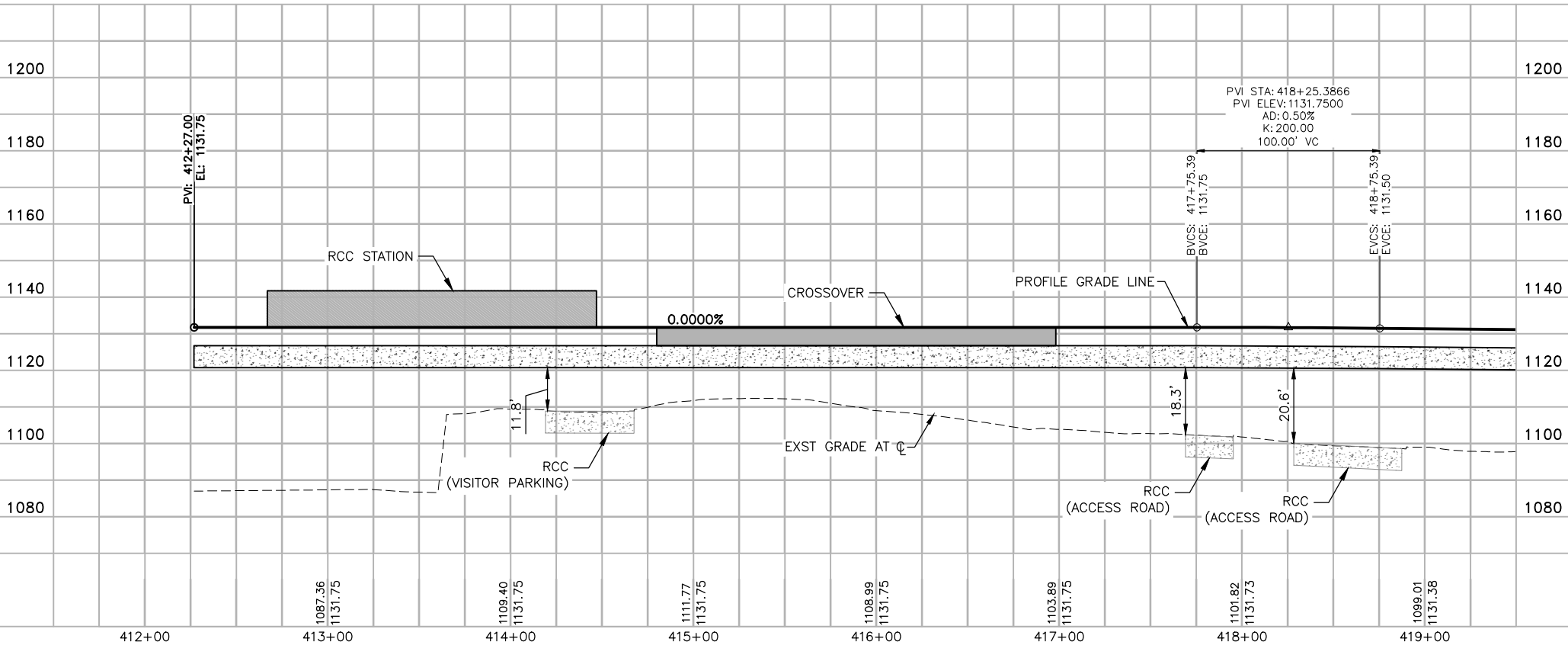
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
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	REVISIONS / SUBMISSIONS	

PHX AVT BVA
 CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	
Dwg scale:	1"=40'
CIP No.:	AV10000011
KVA No.:	07-5204

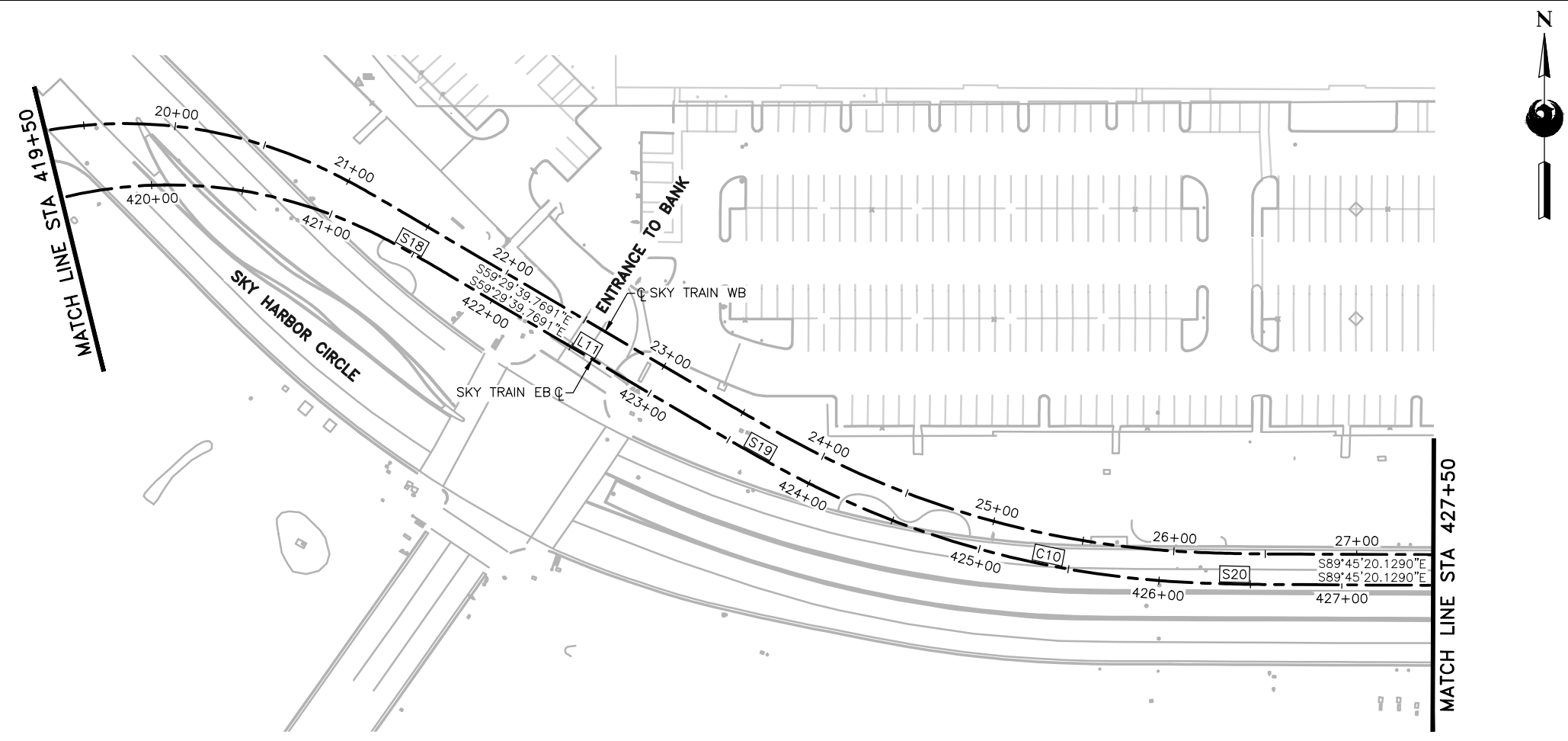


STAGE 2 - B02 DESIGN SUBMISSION

Package: Sheet Reference No:
B02-MSCV1116
 V1 - 024 of 083

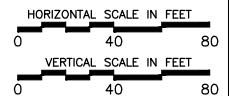
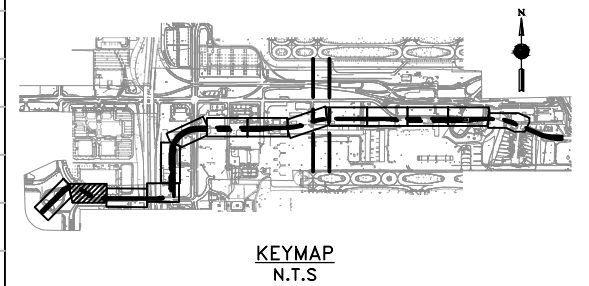
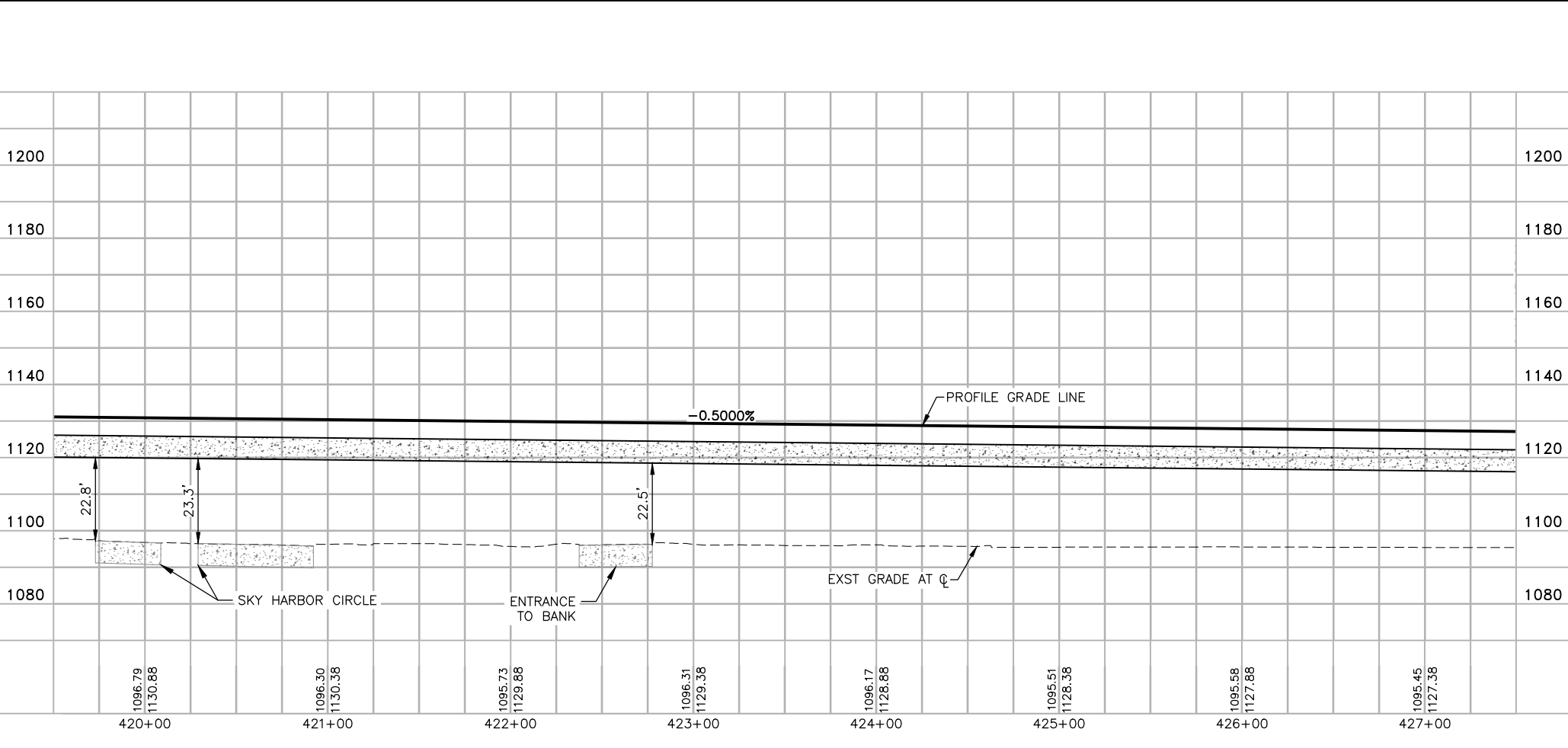
GUIDEWAY
 PLAN & PROFILE
 EB ALIGNMENT
 STA. 412+27.00 TO STA. 419+50

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg PLOT DATE: Feb 21, 2018



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Professional Engineer (Civil)
 LICENSE NO. 37721
 NATHAN J. JOHNSON
 PHOENIX, ARIZONA
 Expires 6/30/20

Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
 CITY OF PHOENIX

**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

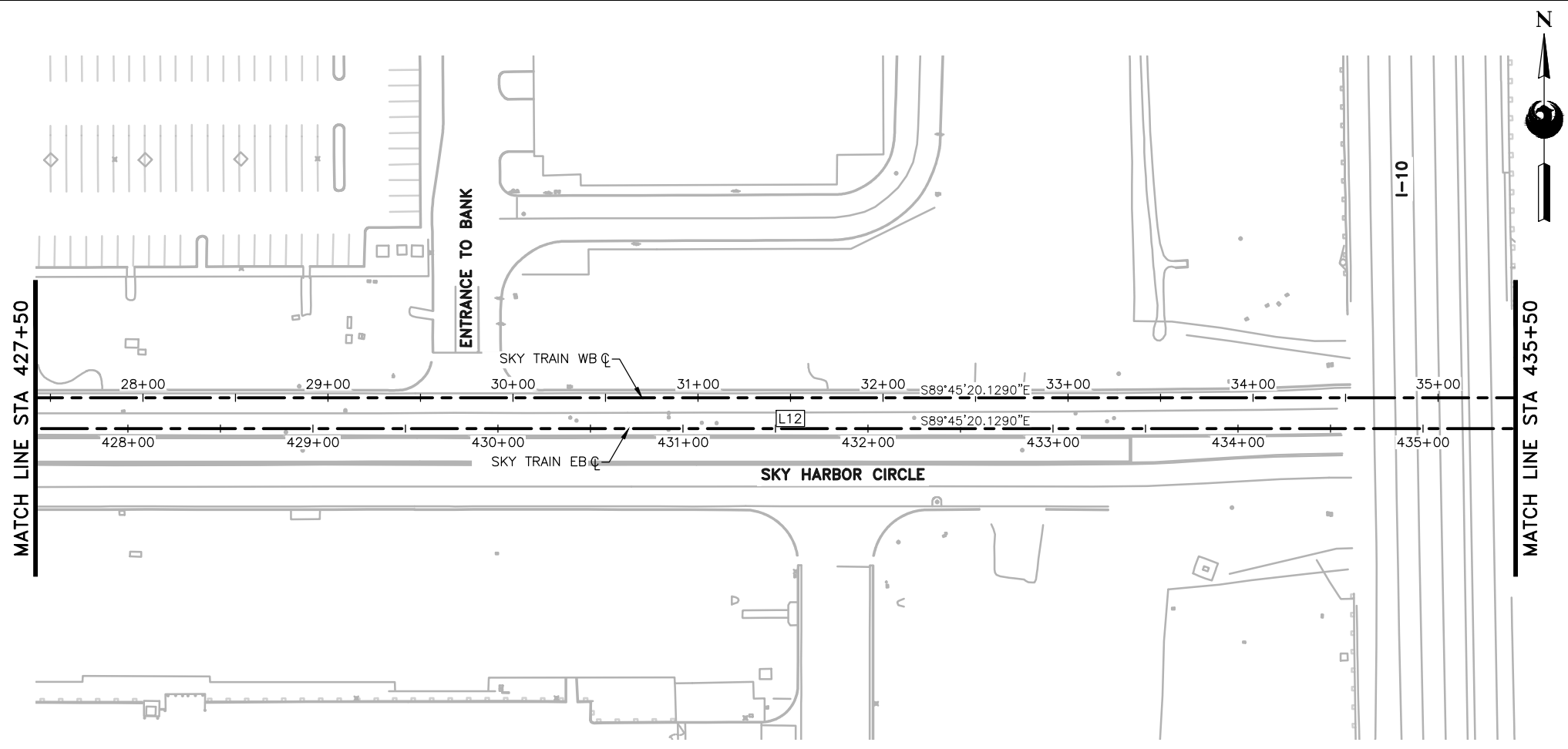
Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 EB ALIGNMENT
 STA. 419+50 TO STA. 427+50**

Package: Sheet Reference No:
B02-MSCV1117
 V1 - 025 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



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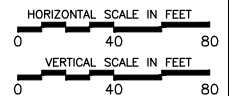
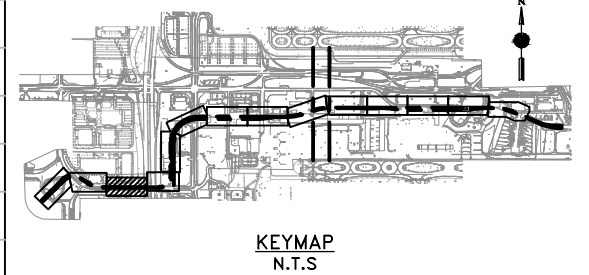
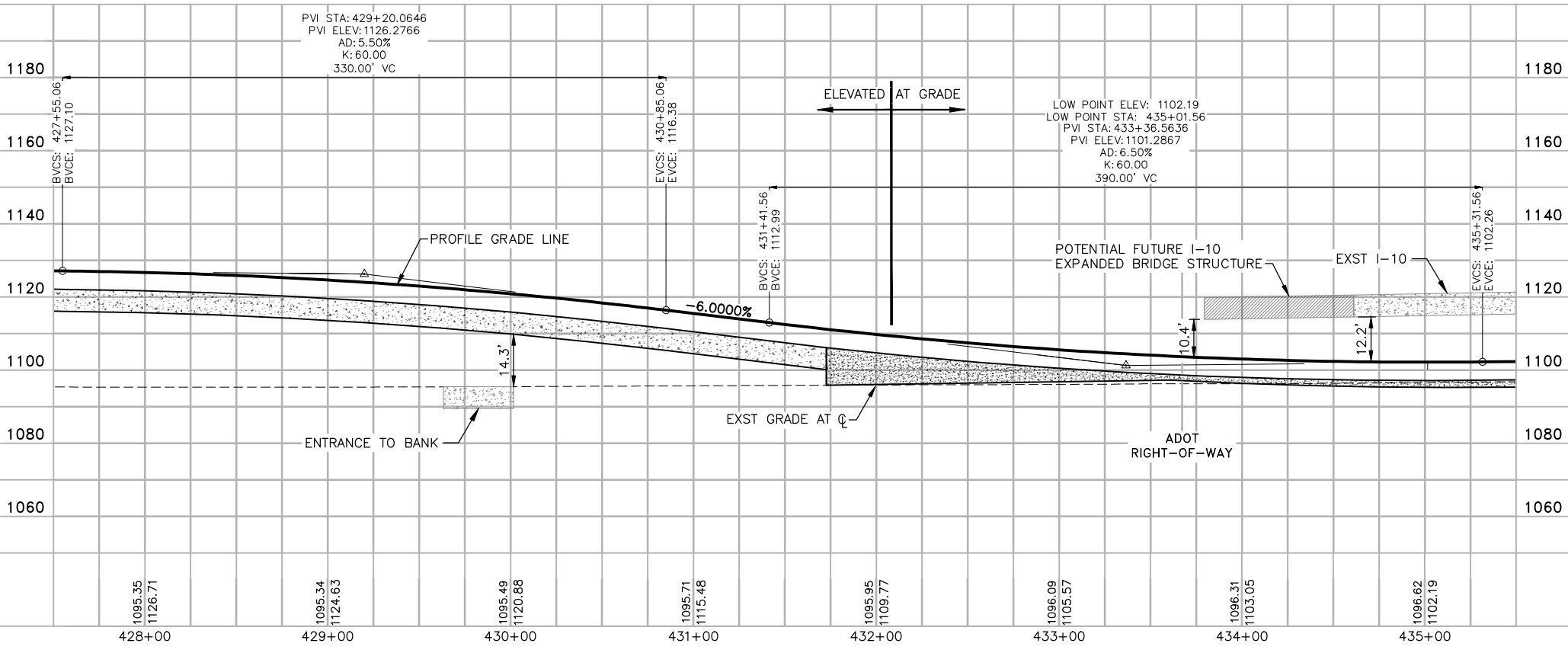
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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PHX AVIATION DEPARTMENT
 CITY OF PHOENIX
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
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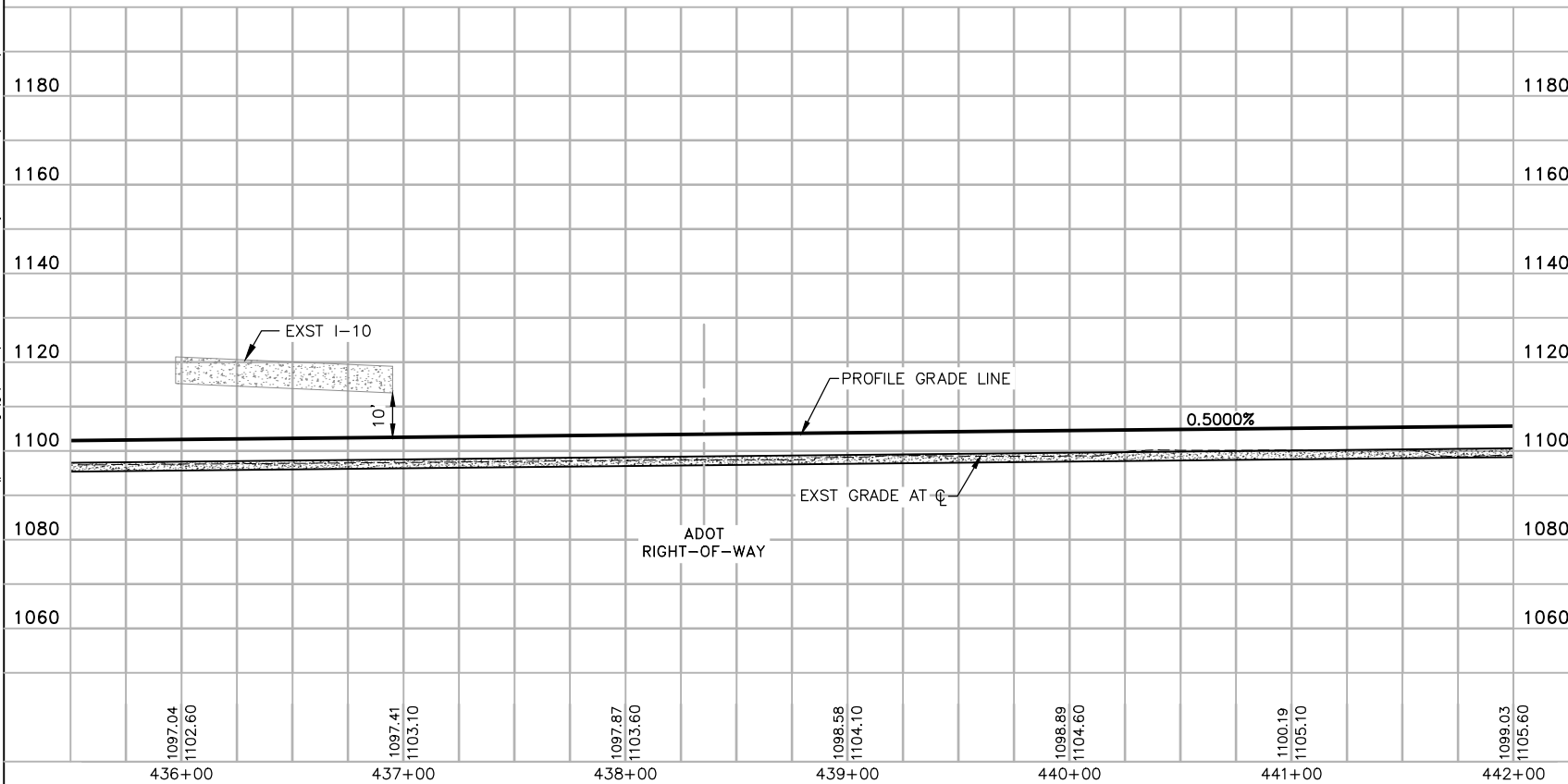
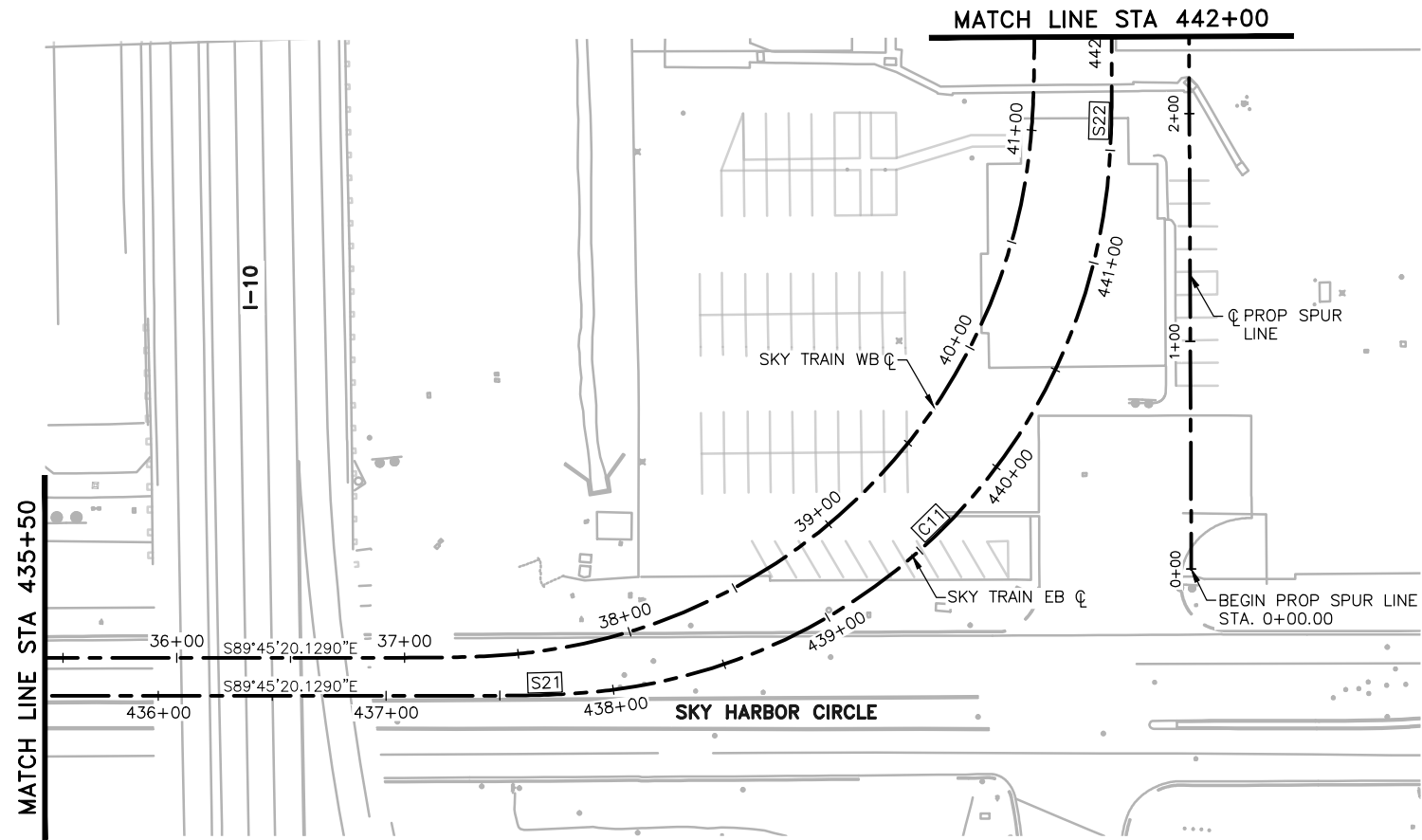


STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY PLAN & PROFILE
EB ALIGNMENT
STA. 427+50 TO STA. 435+50

Package: Sheet Reference No:
B02-MSCV1118
 V1 - 026 of 083

PLOT DATE: Feb 27, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



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Design Sub-Consultant

Kimley»Horn



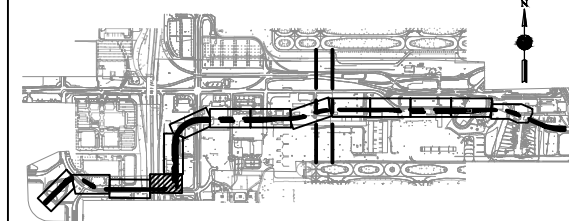
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

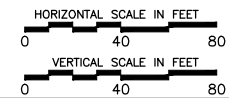
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Checked by:	NCW
Date:	
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY PLAN & PROFILE
EB ALIGNMENT
STA. 435+50 TO STA. 442+00



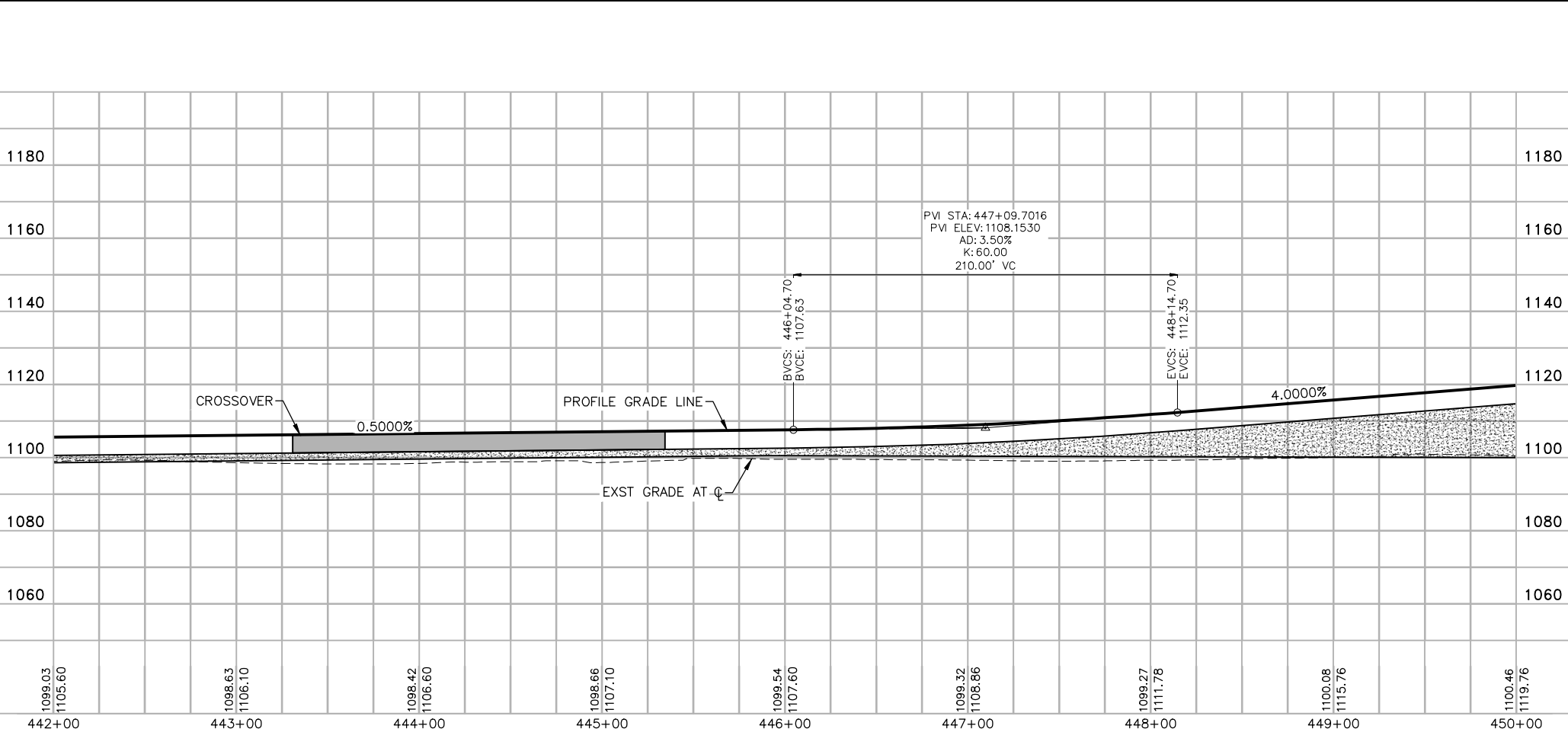
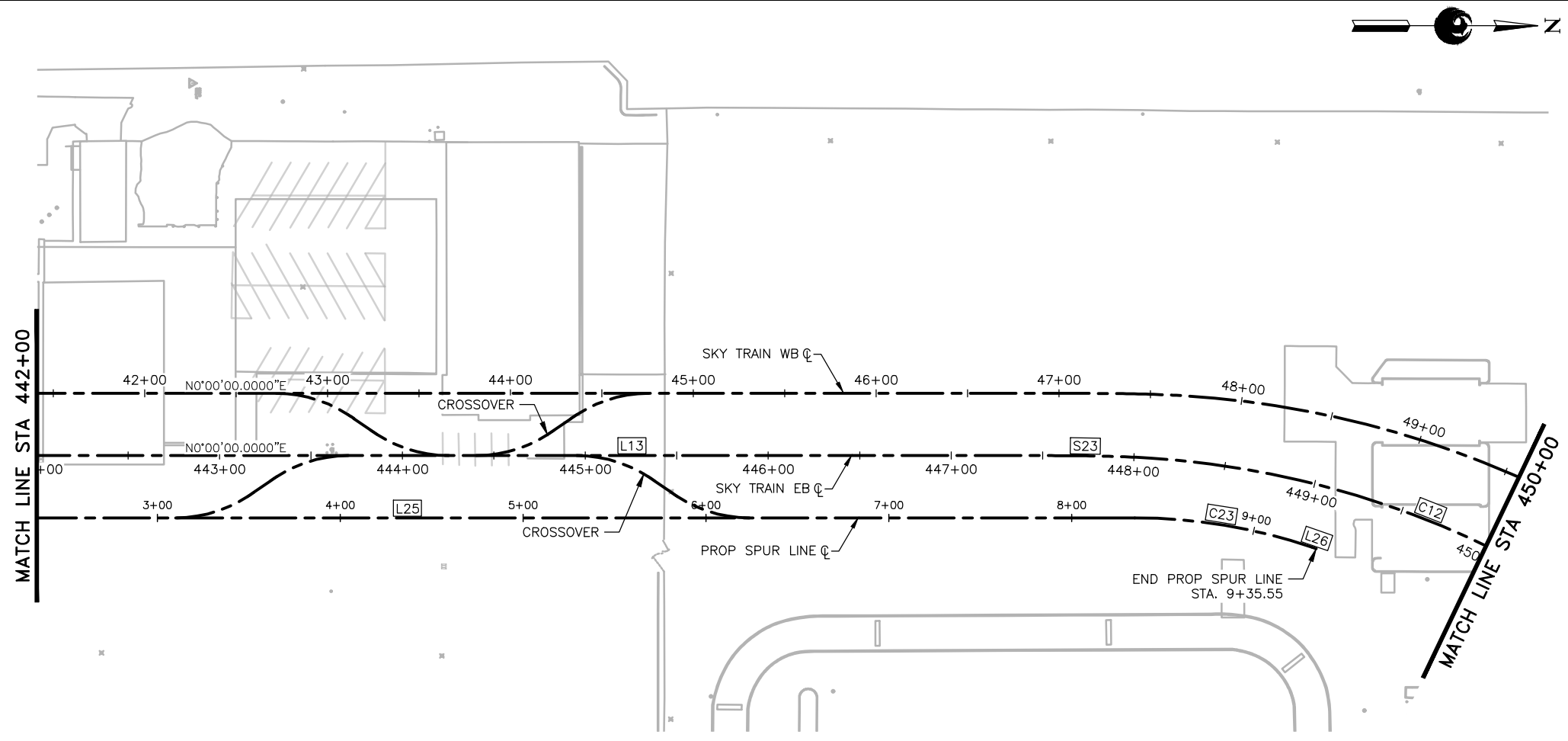
KEYMAP
N.T.S.



Package: Sheet Reference No:
B02-MSCV1119
V1 - 027 of 083

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg PLOT DATE: Feb 21, 2018



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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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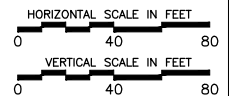
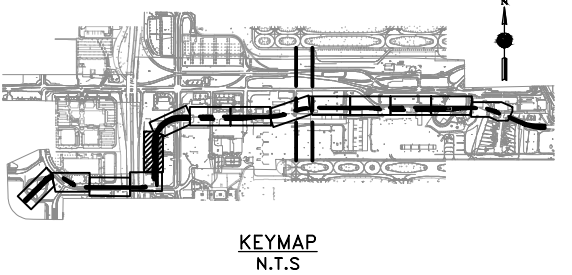
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
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Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

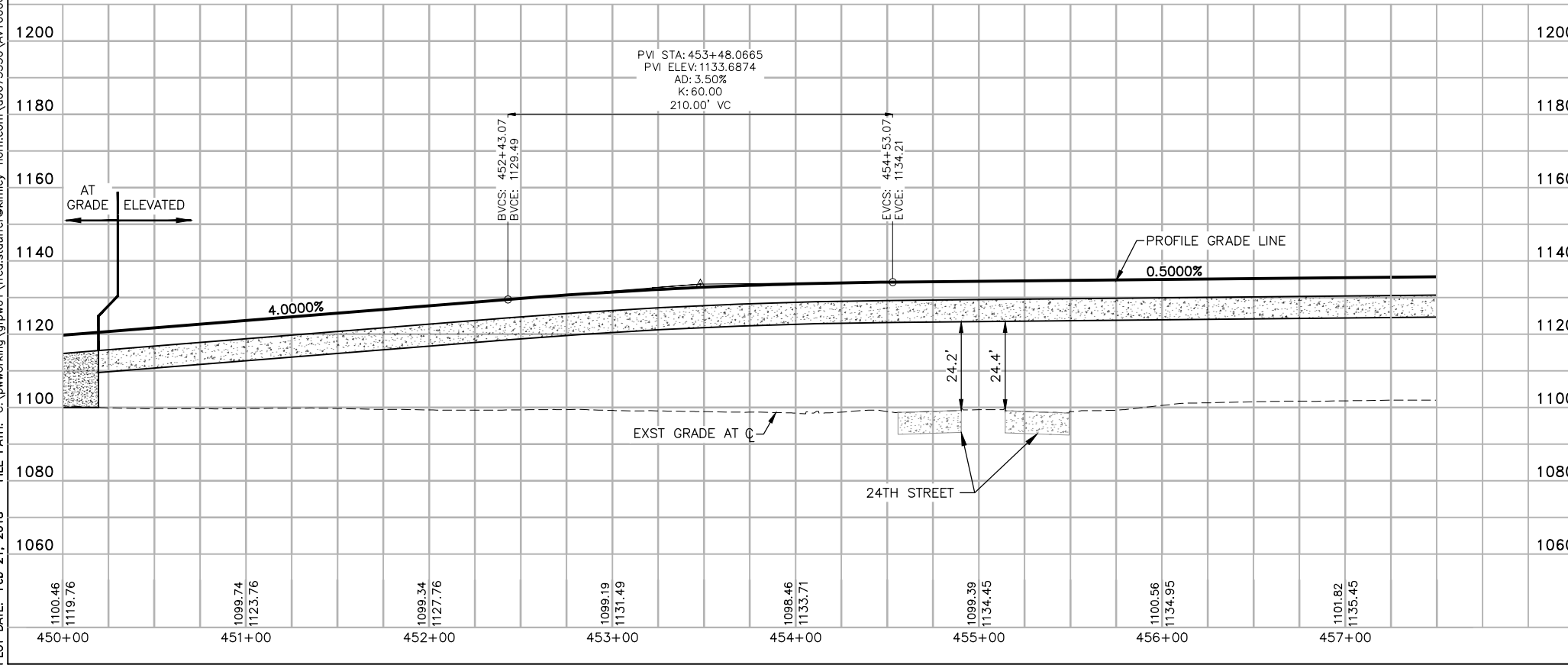
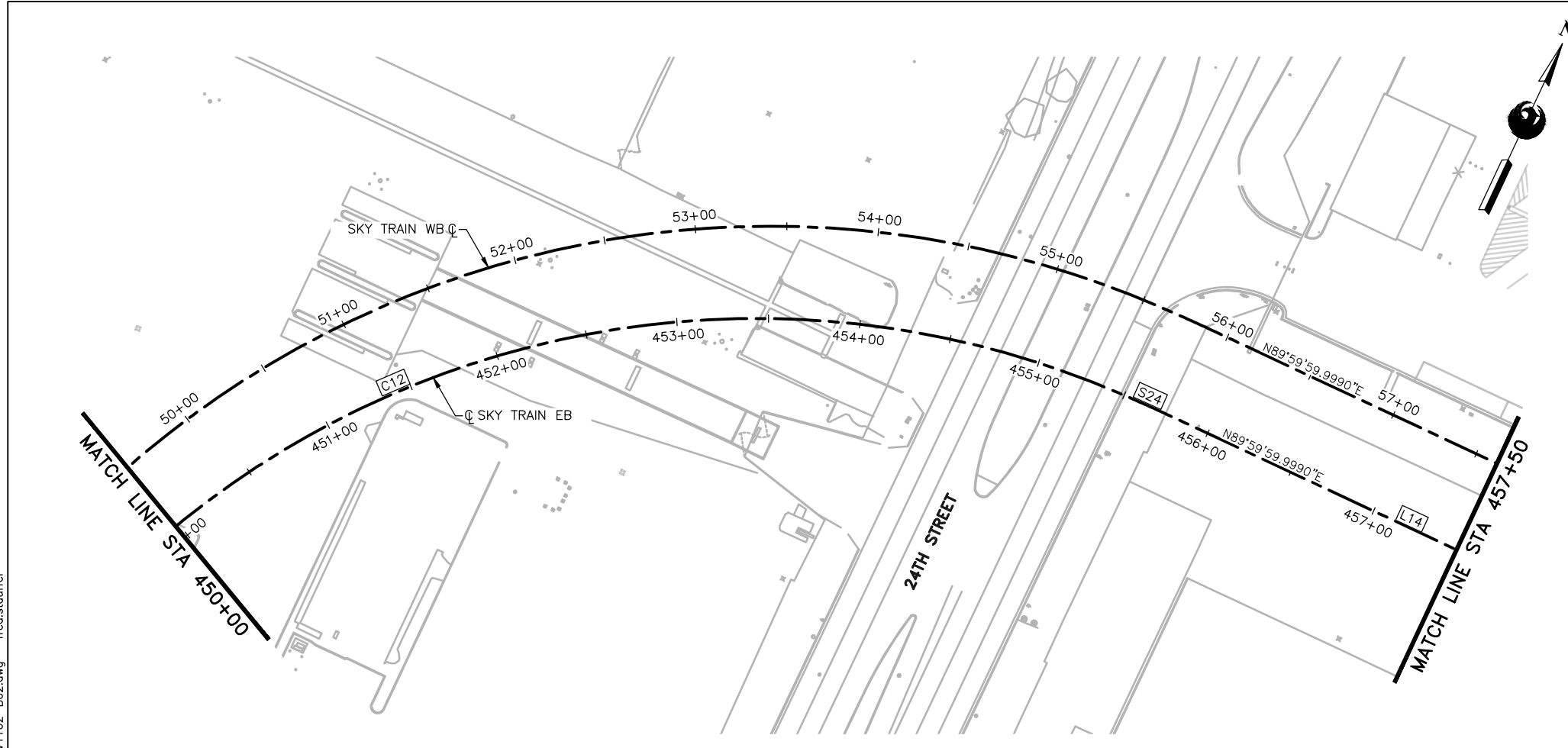
STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 EB ALIGNMENT
 STA. 442+00 TO STA. 450+00**



Package: Sheet Reference No:
B02-MSCV1120
 V1 - 028 of 083

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GENERAL NOTES

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Design Sub-Consultant

Kimley»Horn



PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

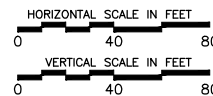
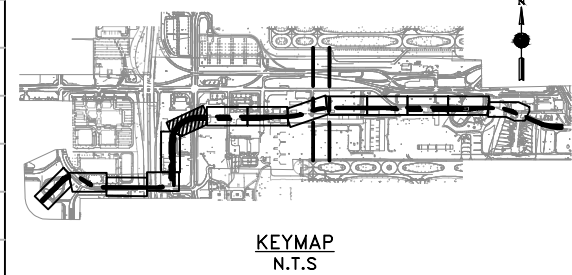
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

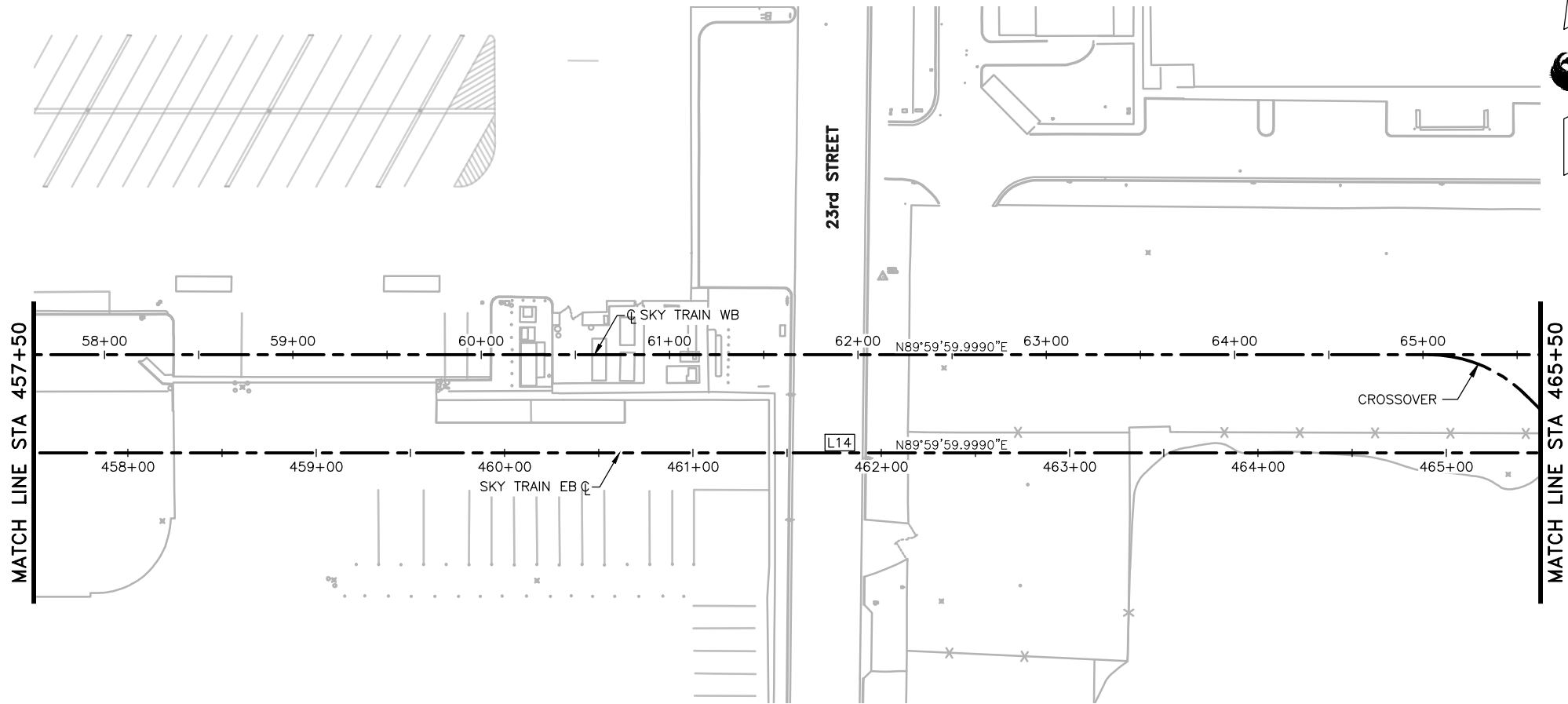
STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY PLAN & PROFILE
EB ALIGNMENT
STA. 450+00 TO STA. 457+50



Package: Sheet Reference No:
B02-MSCV1121
 V1 - 029 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



GENERAL NOTES

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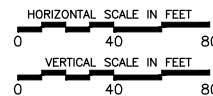
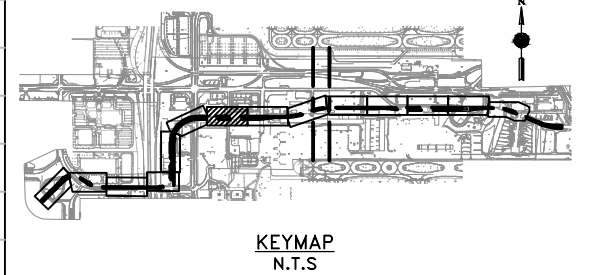
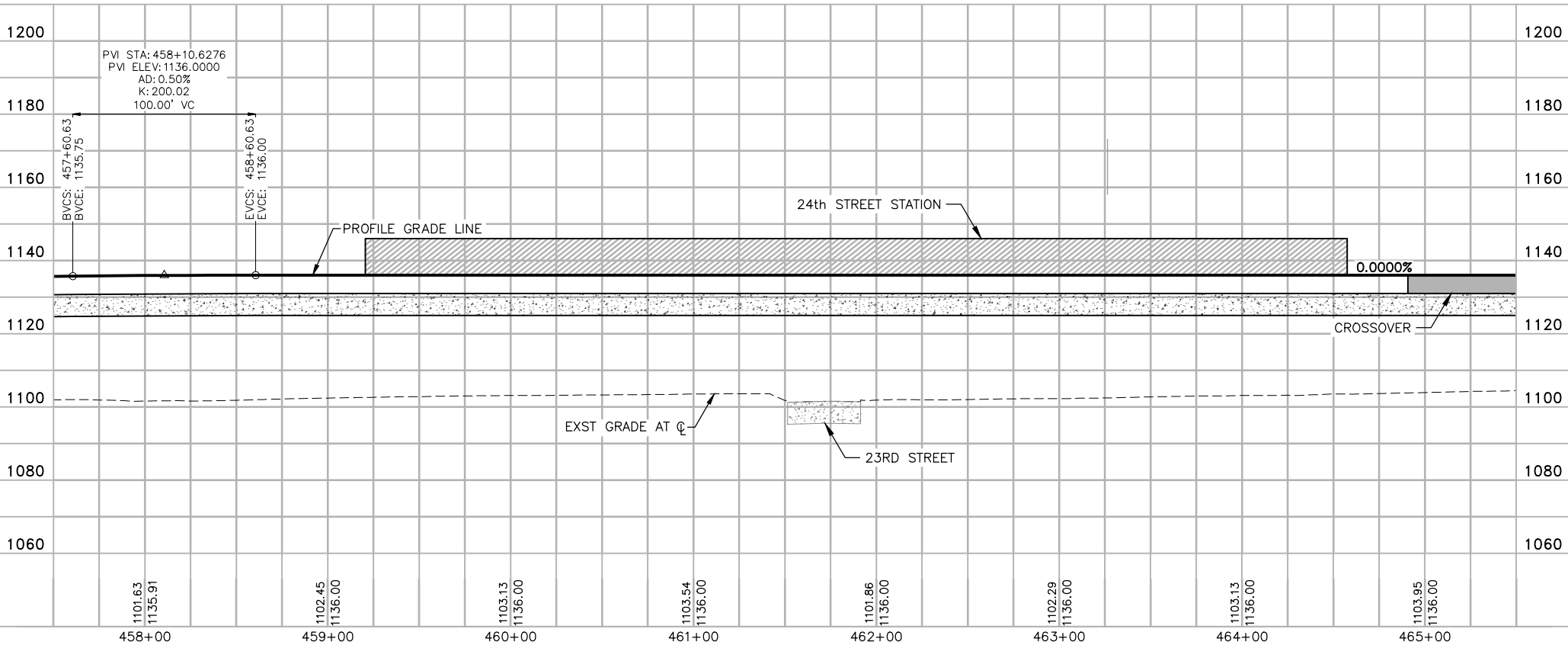
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
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PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: FAS	Drawn by: FAS	Checked by: NCW	Date: 03/02/2018	Dwg scale: 1"=40'	CIP No.: AV10000011	KIVA No.: 07-5204
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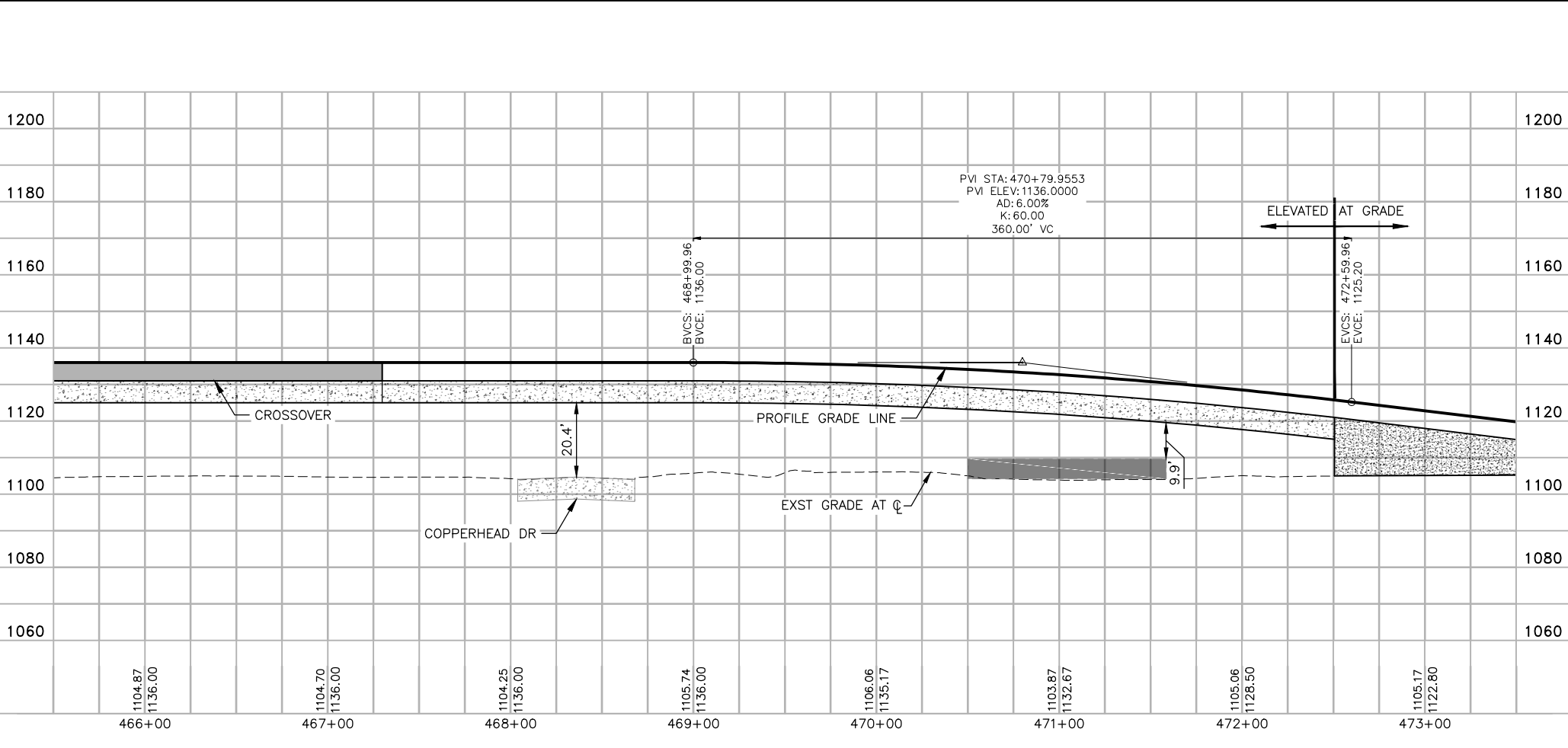
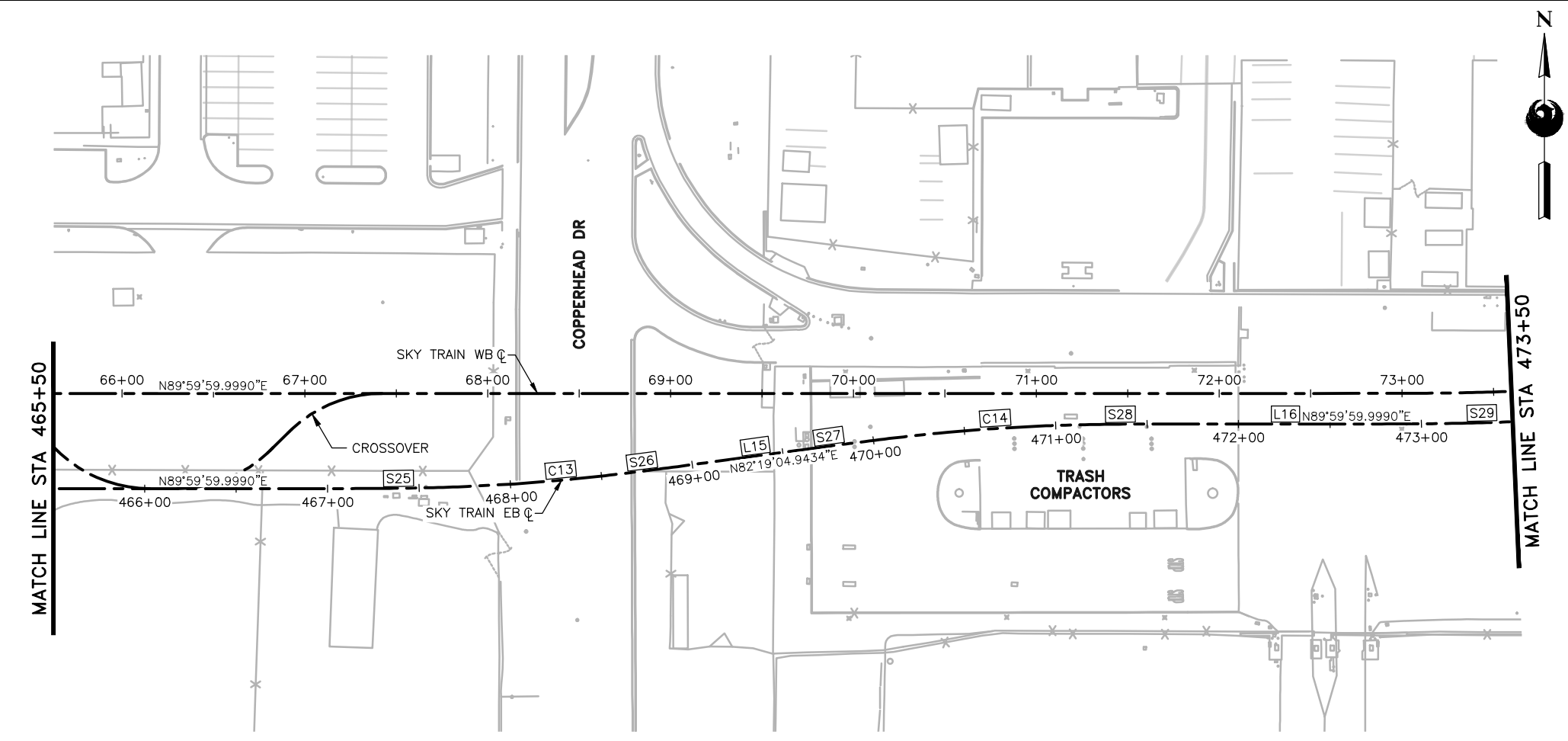


STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 EB ALIGNMENT
 STA. 457+50 TO STA. 465+50**

Package: Sheet Reference No:
B02-MSCV1122
 V1 - 030 of 083

FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg PLOT DATE: Feb 21, 2018



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Design Sub-Consultant

Kimley»Horn



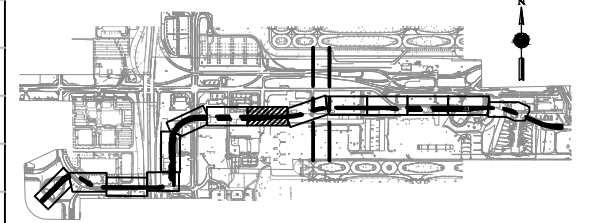
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
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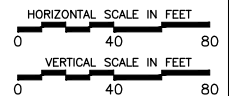


CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204



KEYMAP
N.T.S

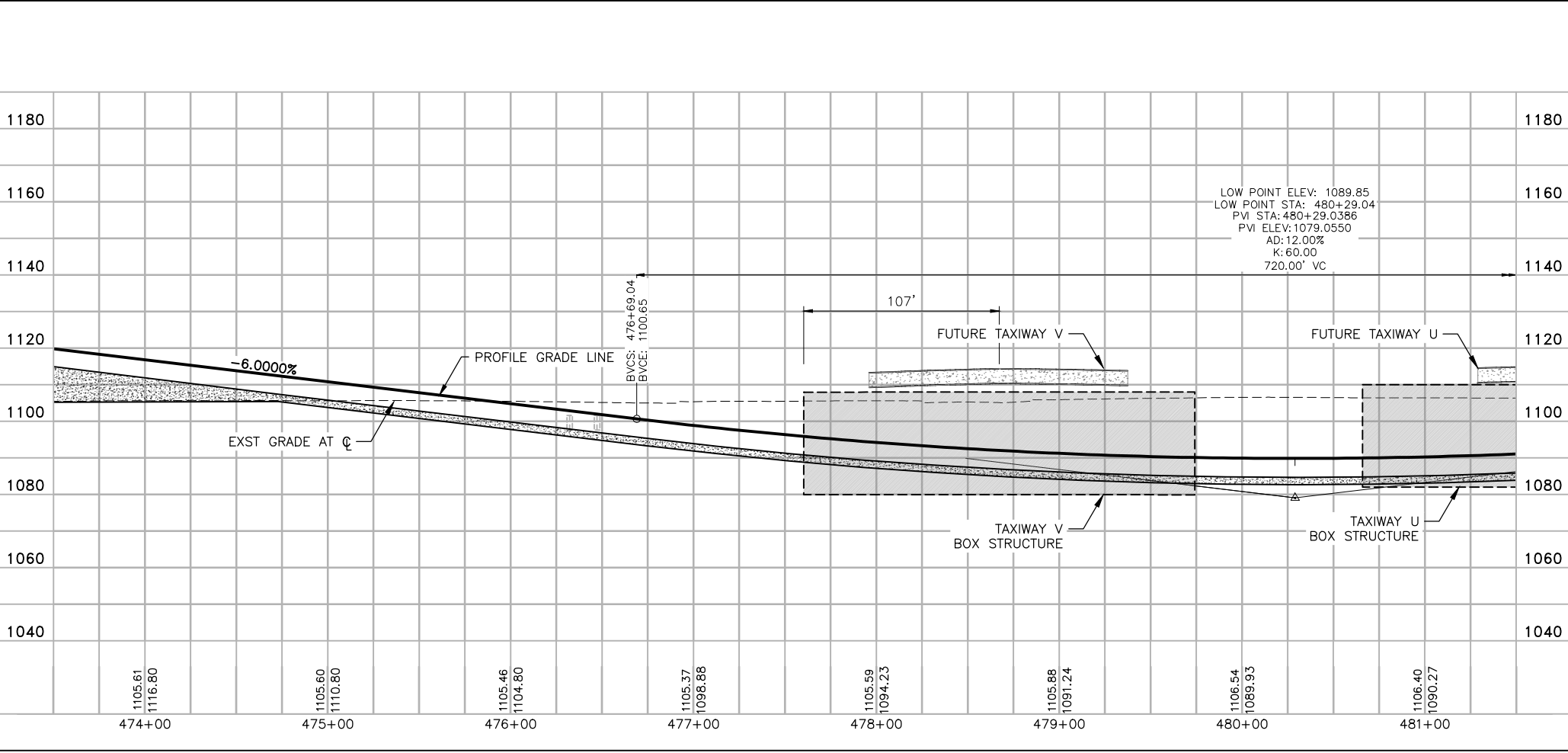
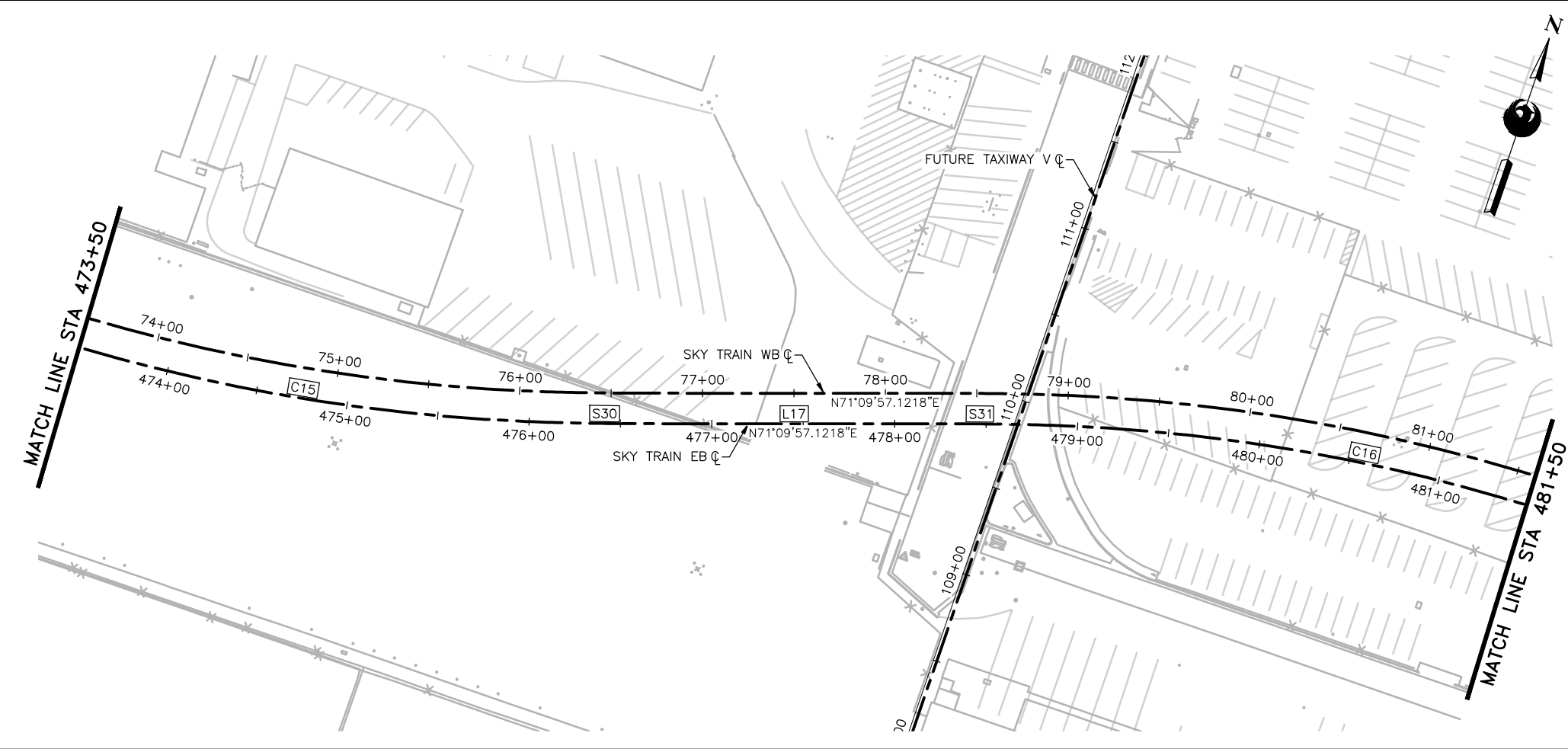


STAGE 2 - B02 DESIGN SUBMISSION

Package: Sheet Reference No:
B02-MSCV1123
 V1 - 031 of 083

GUIDEWAY
 PLAN & PROFILE
 EB GUIDEWAY
 STA. 465+50 TO STA. 473+50

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauff@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauff



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Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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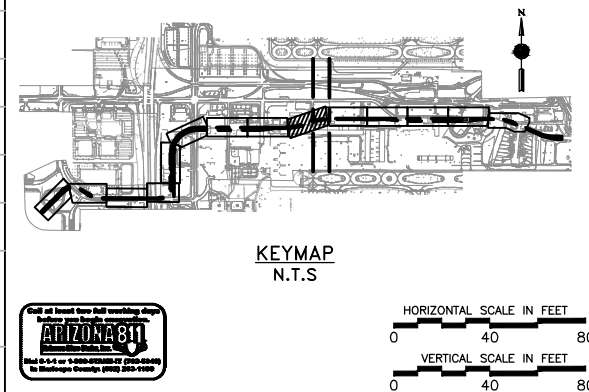
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

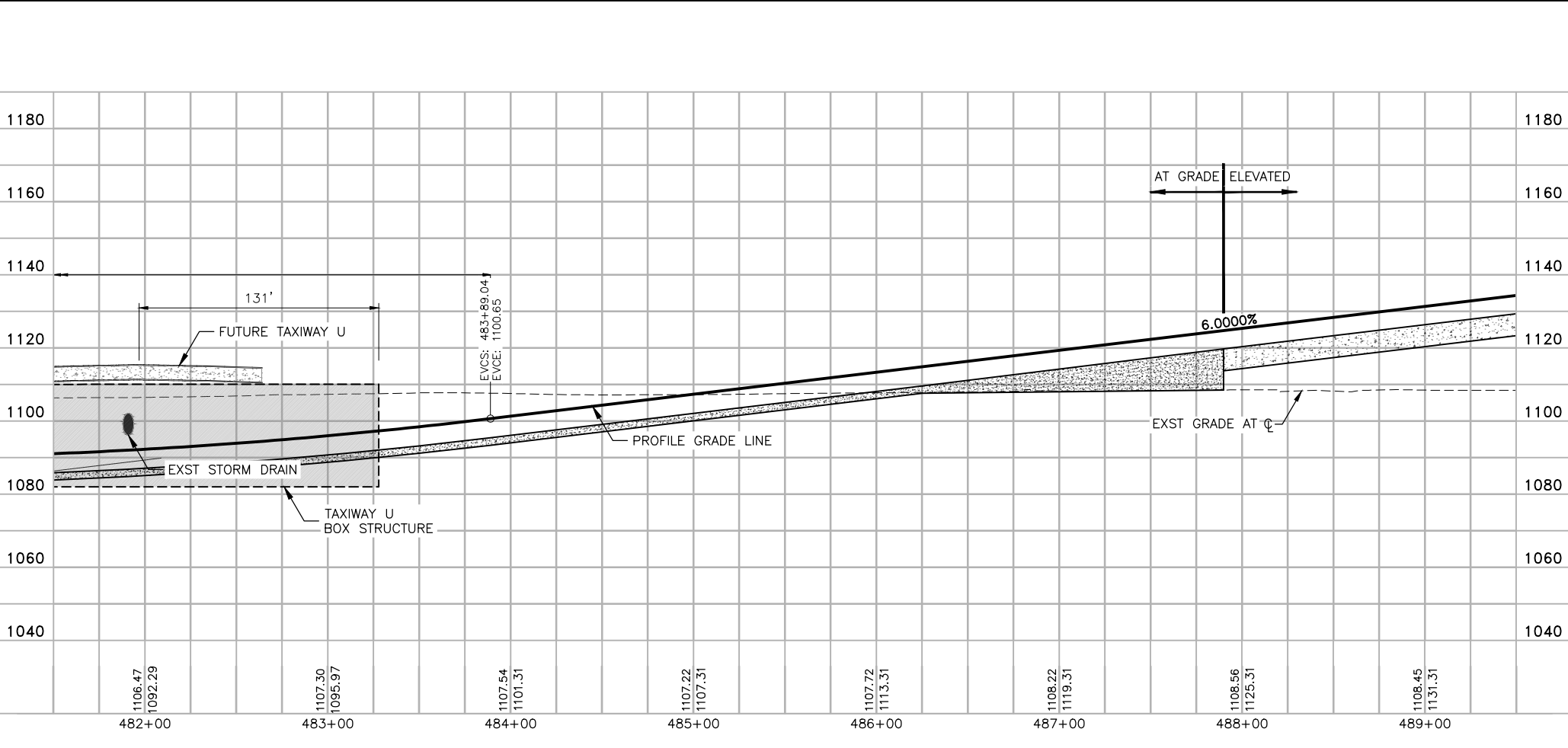
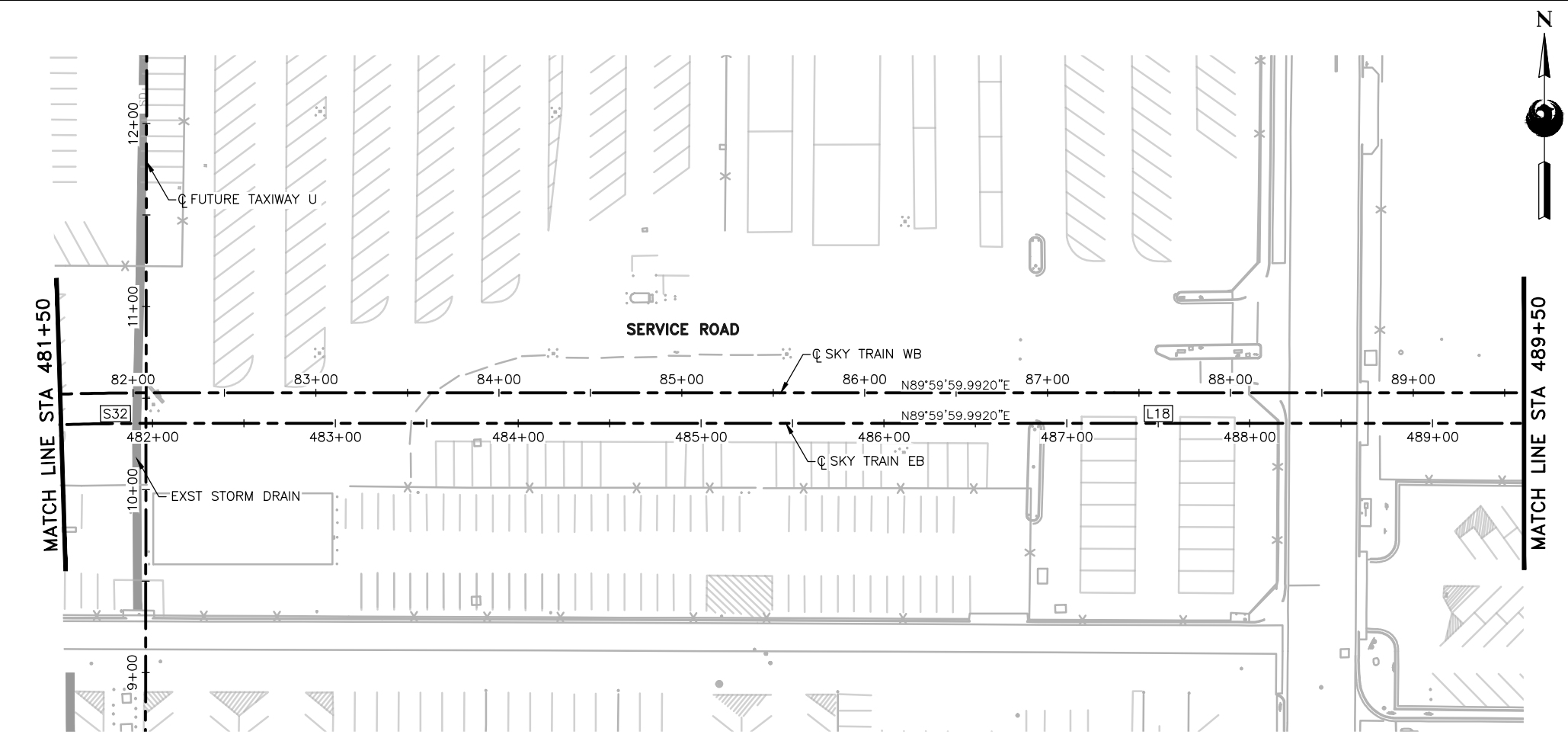
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY PLAN & PROFILE
EB ALIGNMENT
STA. 473+50 TO STA. 481+50

Package: Sheet Reference No:
B02-MSCV1124
 V1 - 032 of 083



FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg PLOT DATE: Feb 21, 2018



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Design Sub-Consultant

Kimley»Horn



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	ISSUED FOR CONSTRUCTION	03/02/18
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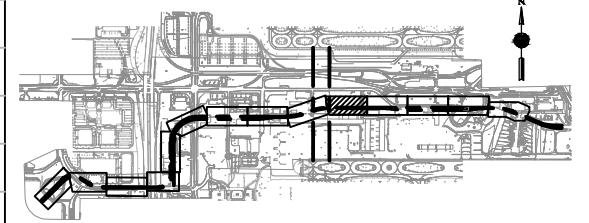


**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

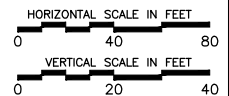
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Date:	03/02/2018
Dwg scale:	1"=40'
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STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
PLAN & PROFILE
EB ALIGNMENT
STA. 481+50 TO STA. 489+50**

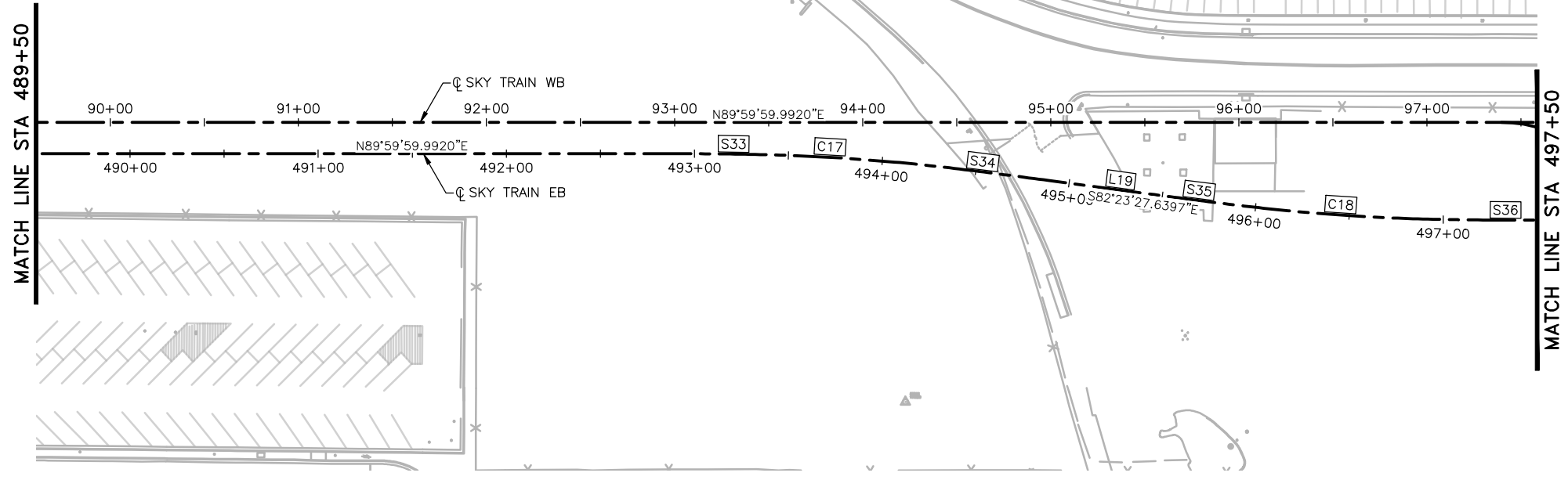


KEYMAP
N.T.S



Package: Sheet Reference No:
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Design Sub-Consultant

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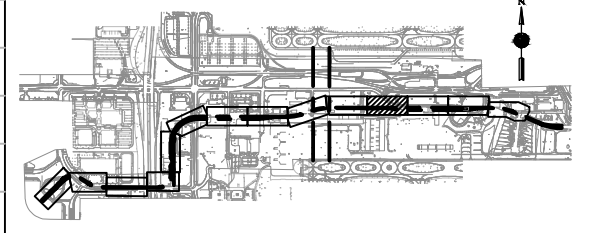
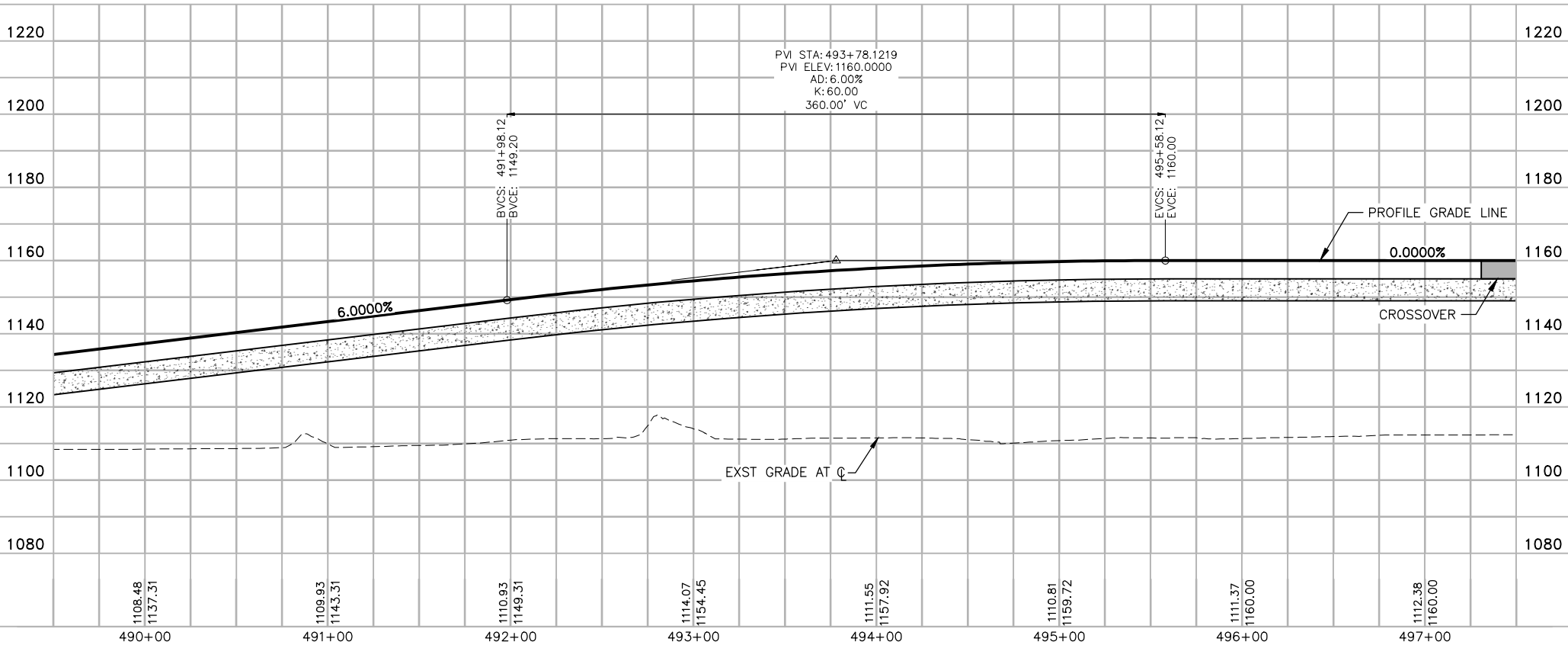
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PHX SKY TRAIN

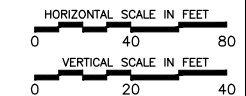
STAGE 2 DESIGN

500 S. 24TH STREET

PHOENIX, AZ 85034



KEYMAP
N.T.S



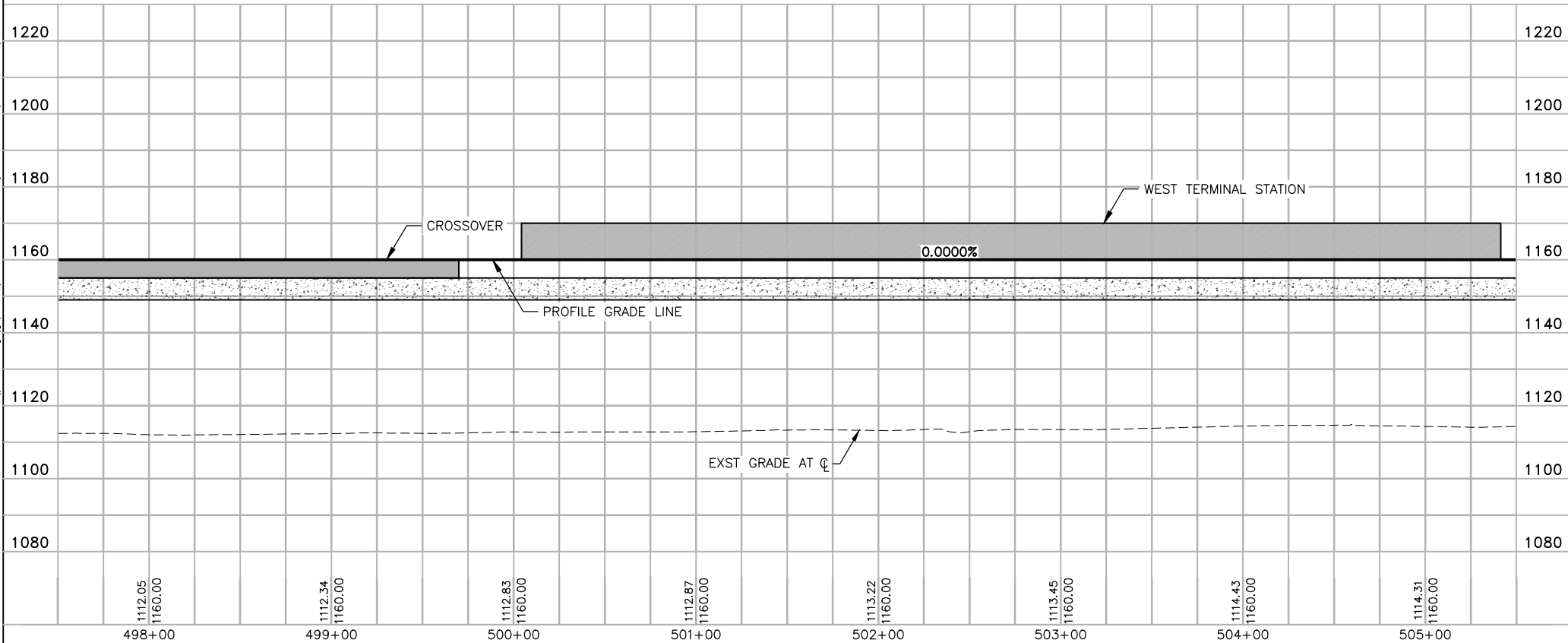
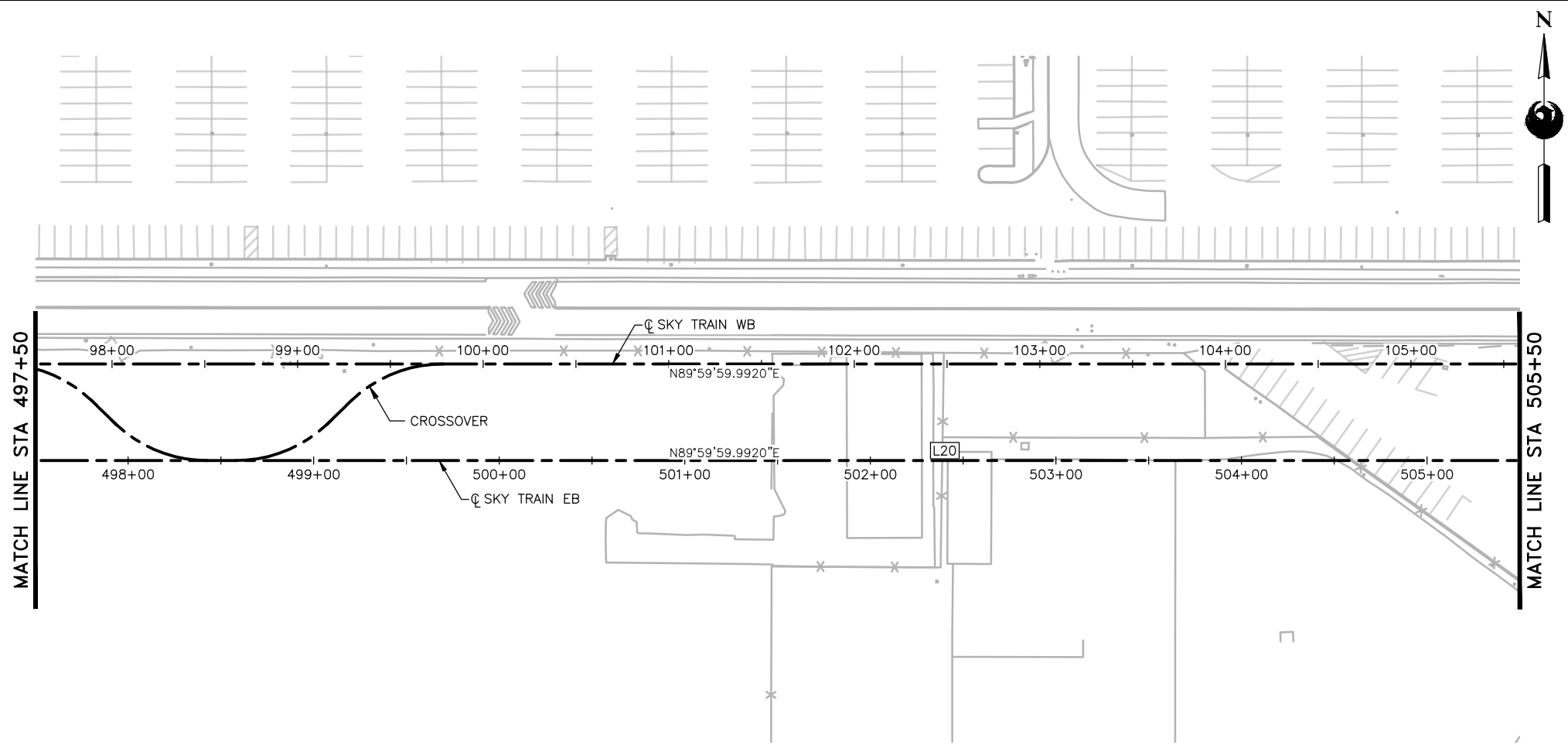
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Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
PLAN & PROFILE
EB ALIGNMENT
STA. 489+50 TO STA. 497+50**

Package: Sheet Reference No:
B02-MSCV1126
V1 - 034 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



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Design Sub-Consultant

Kimley»Horn



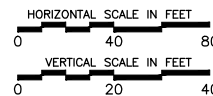
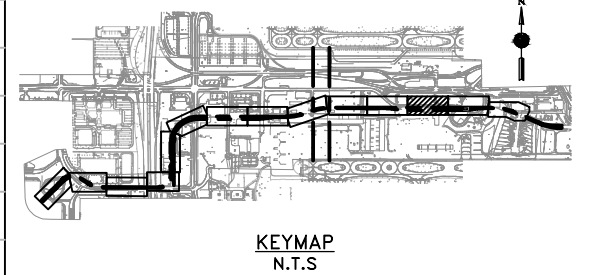
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
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PHX AVT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

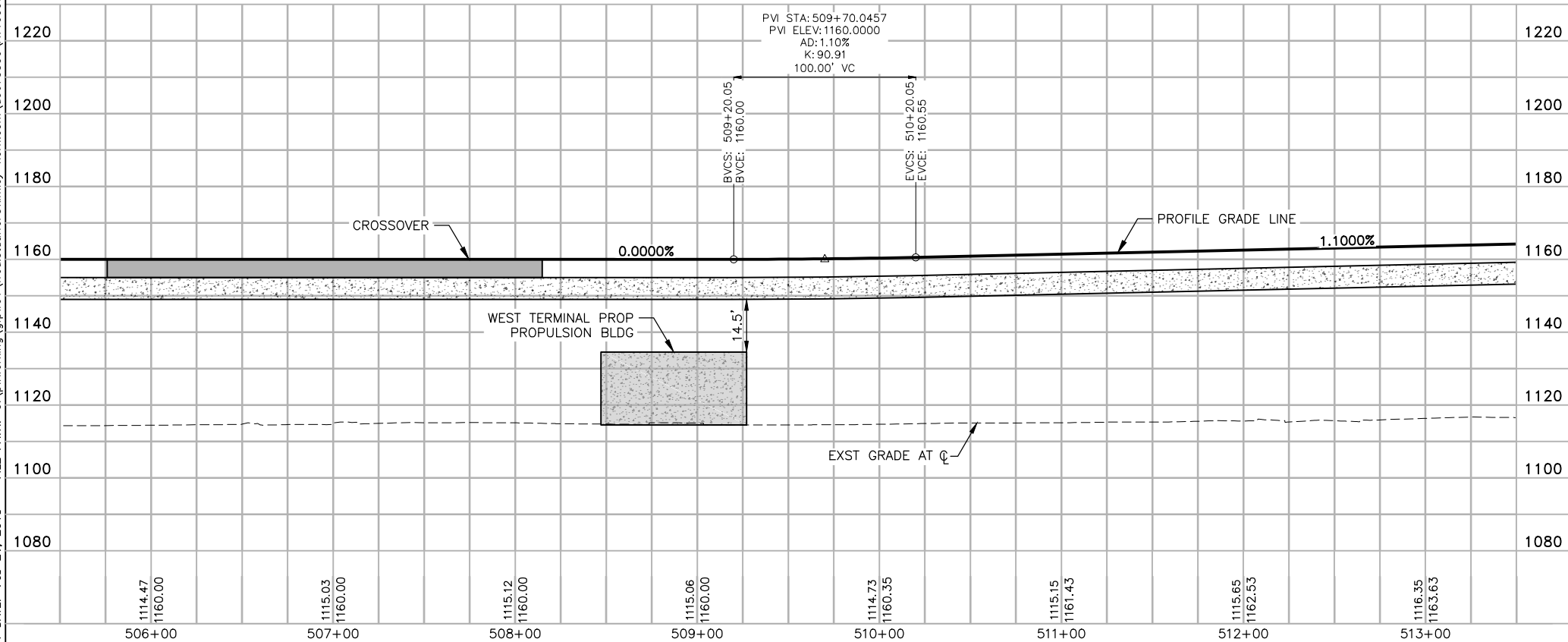
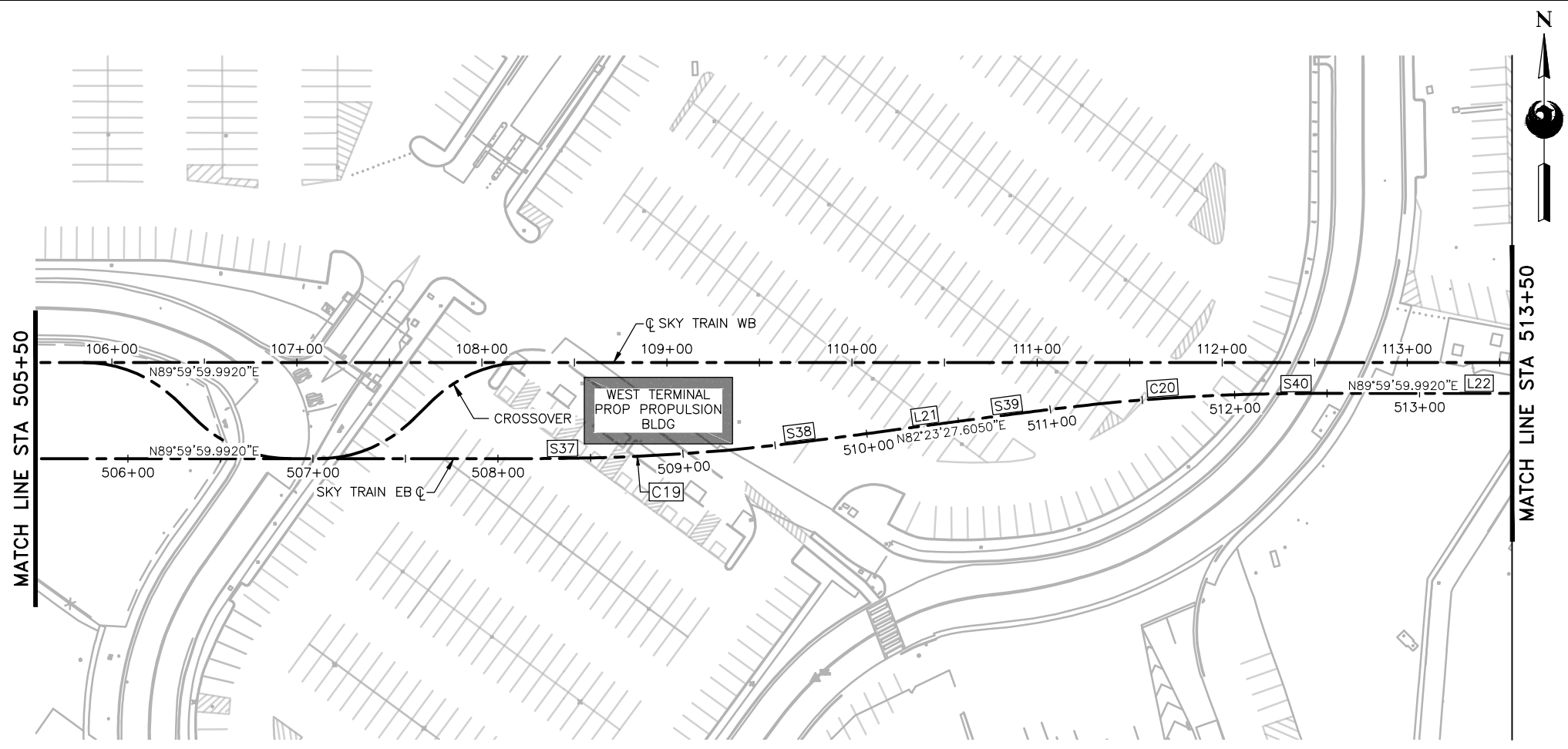


STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
PLAN & PROFILE
EB ALIGNMENT
STA. 497+50 TO STA. 505+50

Package: Sheet Reference No:
B02-MSCV1127
V1 - 035 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\Fred.Stouffer\kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stouffer



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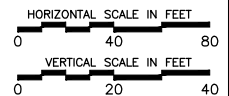
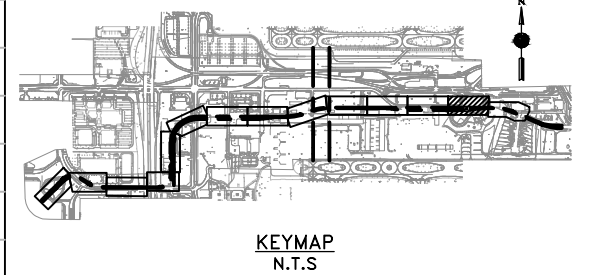
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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PHX AVT GYA
 CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

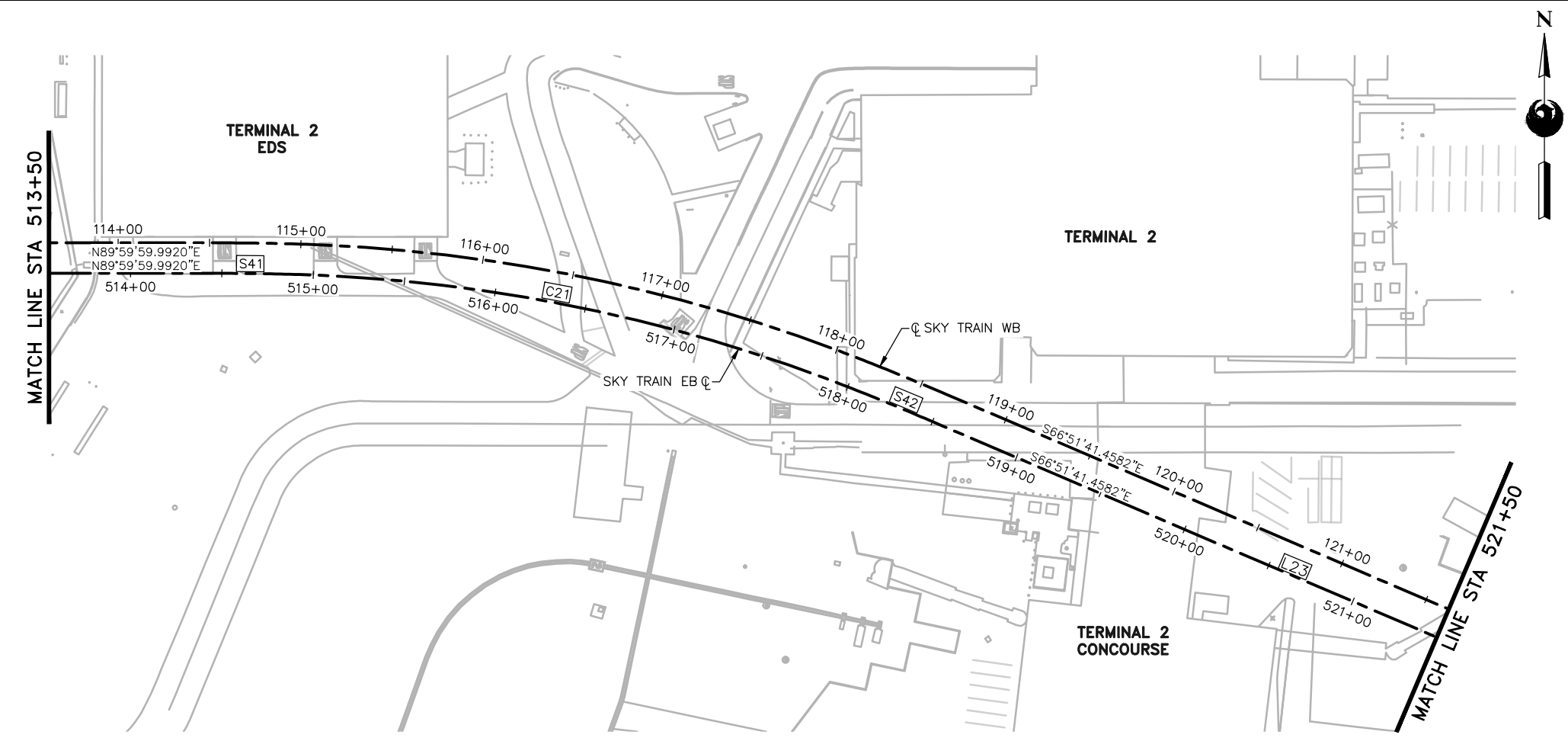
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Drawn by:	FAS
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KIVA No.:	07-5204



STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
PLAN & PROFILE
EB ALIGNMENT
STA. 505+50 TO STA. 513+50

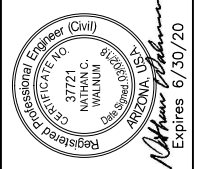
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B02-MSCV1128
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PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



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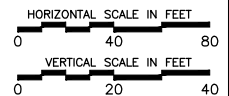
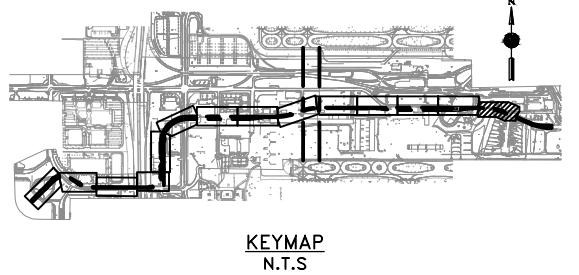
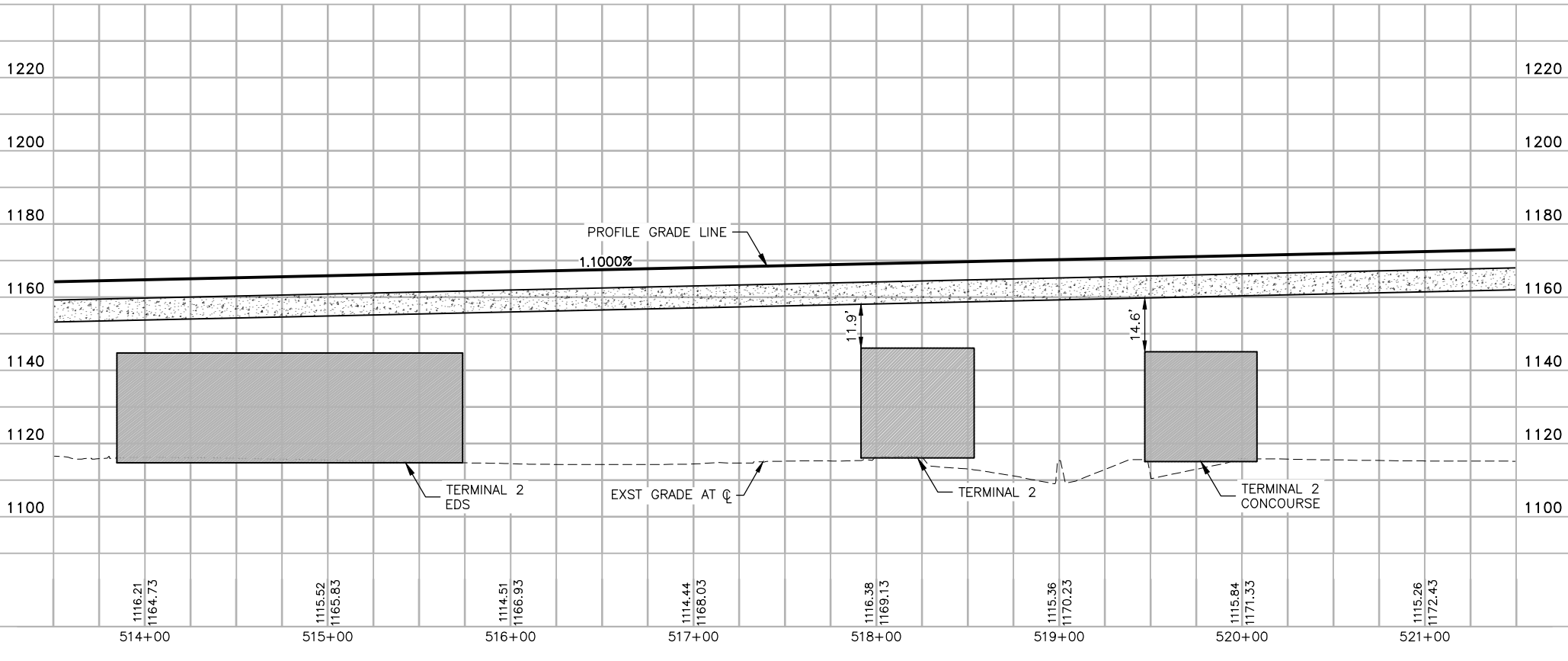


Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
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PHX AVT BYA
 CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

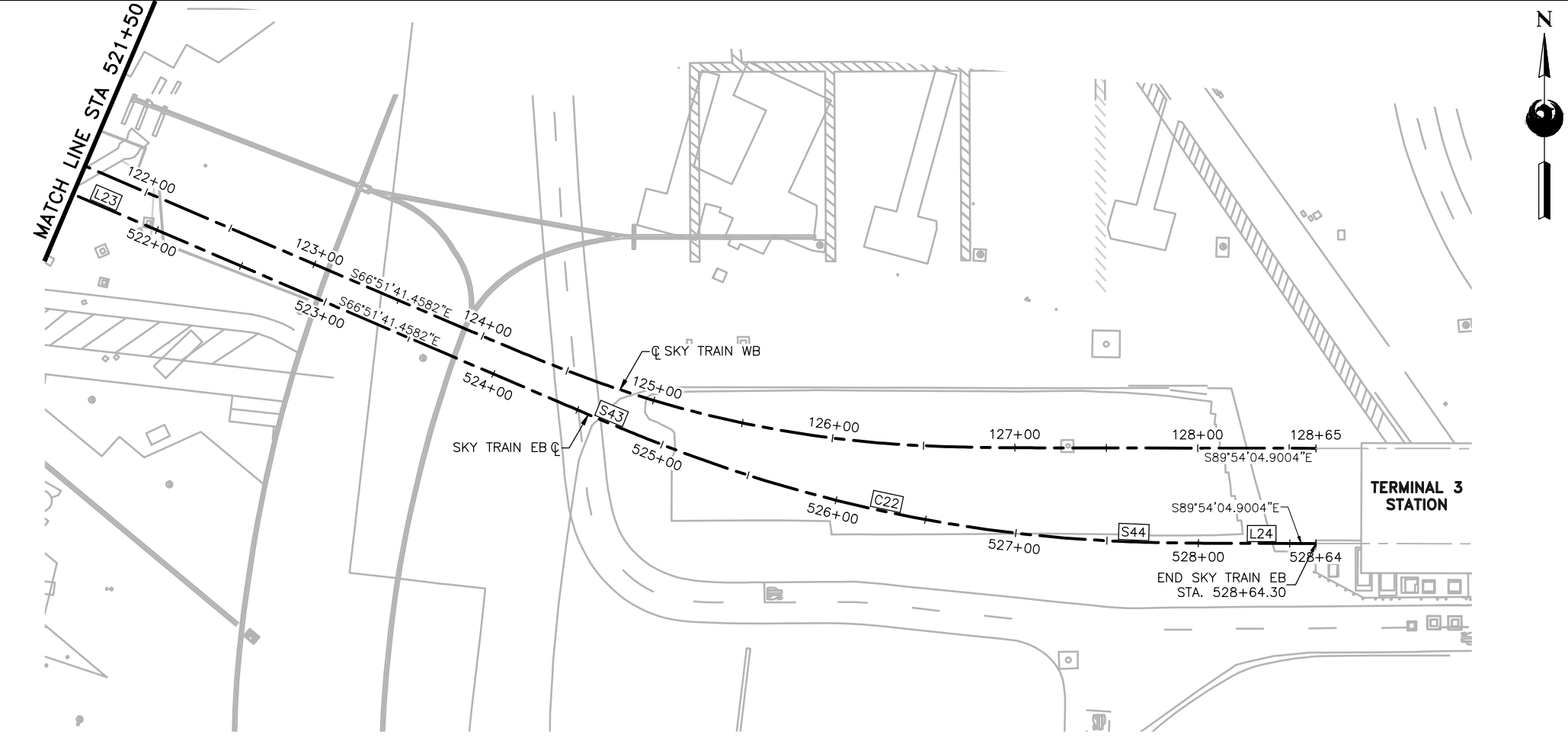


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Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
PLAN & PROFILE
EB ALIGNMENT
STA. 513+50 TO STA. 521+50

Package: Sheet Reference No:
B02-MSCV1129
 V1 - 037 of 083

PLOT DATE: Feb 21, 2018 FILE PATH: C:\pwworking\gfpw01\fred.stauffe@kimley-horn.com\d0673550\AV10000011-S-2-MSCV1102-B02.dwg fred.stauffe



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- PROFILE GRADE LINE (PGL) ELEVATIONS CORRESPOND TO THE STATION PLATFORM FINISH FLOOR ELEVATION, OR 5' ABOVE GUIDEWAY STRUCTURE OUTSIDE OF THE STATION AREAS. REFER TO SHEETS MSCV1101 OR MSCV1116 FOR DETAIL.



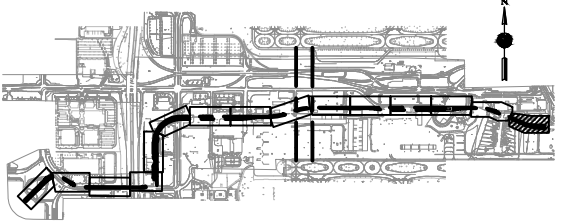
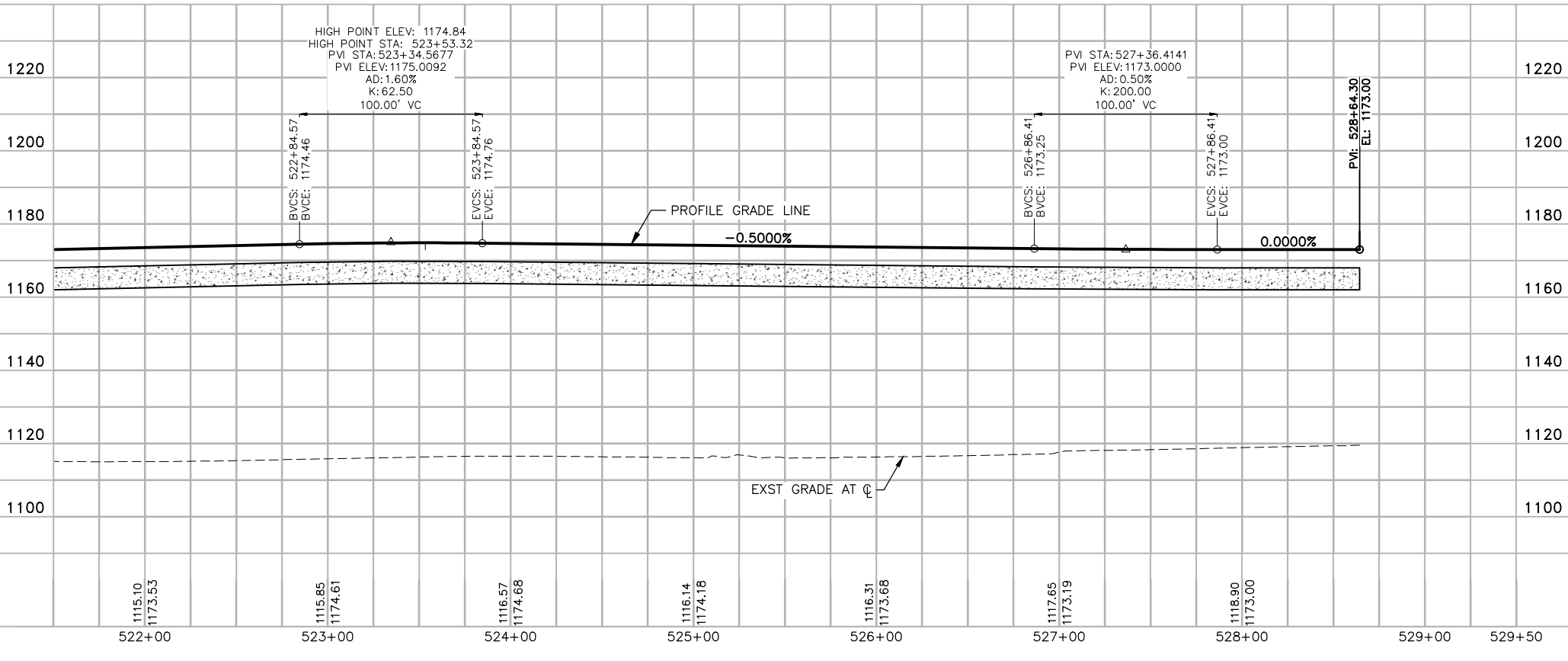
Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming

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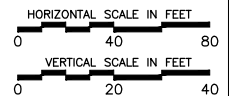
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	FAS
Drawn by:	FAS
Checked by:	NCW
Date:	03/02/2018
Dwg scale:	1"=40'
CIP No.:	AV10000011
KIVA No.:	07-5204



KEYMAP
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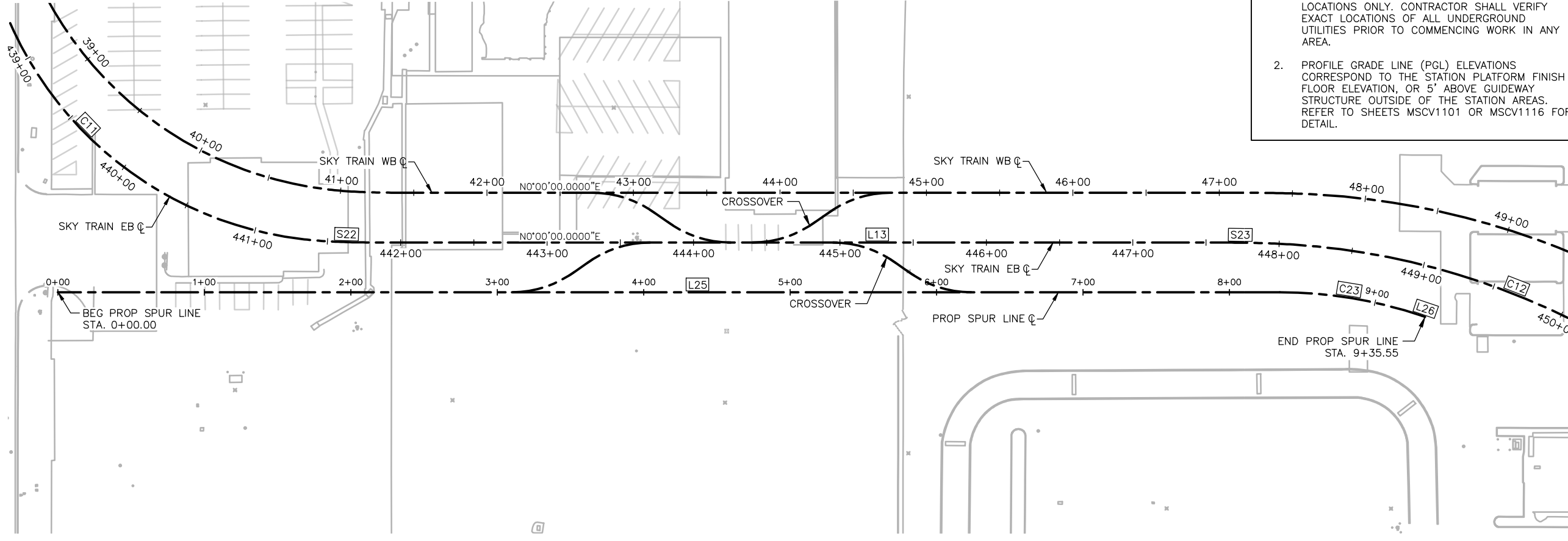


STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 PLAN & PROFILE
 EB ALIGNMENT
 STA. 521+50 TO STA. 528+64.30**

Package: Sheet Reference No:
B02-MSCV1130
 V1 - 038 of 083

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GENERAL NOTES

- EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK IN ANY AREA.
- PROFILE GRADE LINE (PGL) ELEVATIONS CORRESPOND TO THE STATION PLATFORM FINISH FLOOR ELEVATION, OR 5' ABOVE GUIDEWAY STRUCTURE OUTSIDE OF THE STATION AREAS. REFER TO SHEETS MSCV1101 OR MSCV1116 FOR DETAIL.



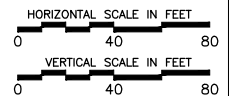
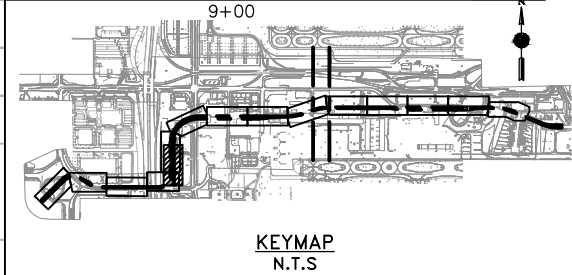
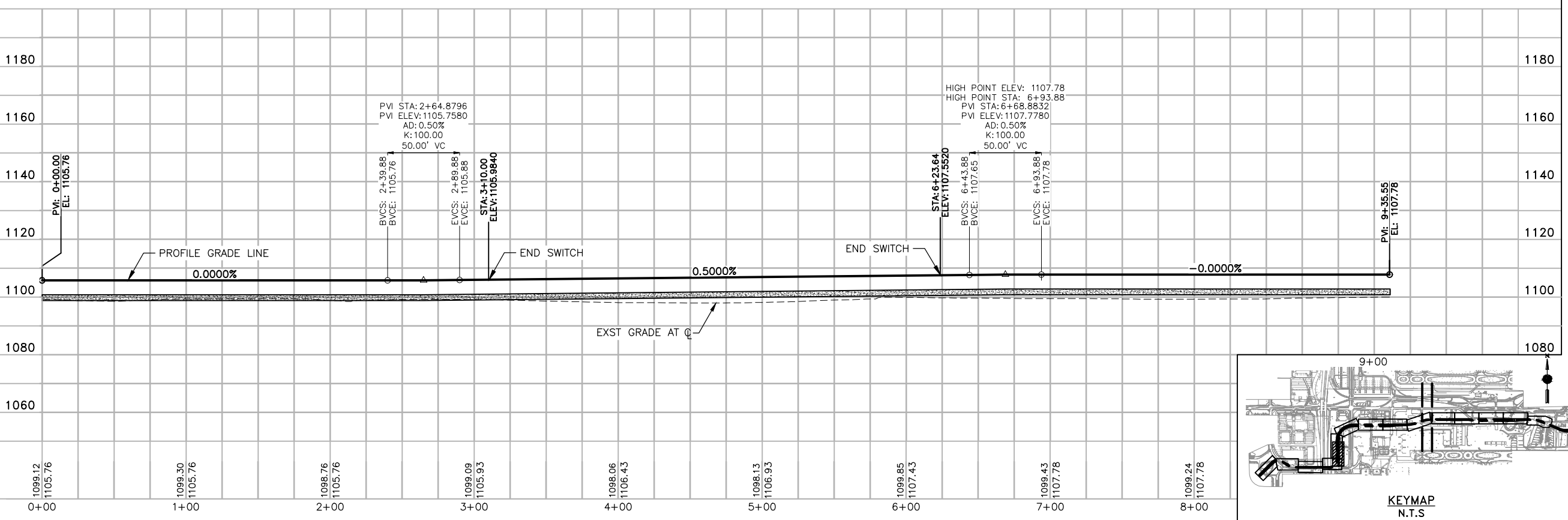
Design Sub-Consultant
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PHX AVIATION DEPARTMENT
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STAGE 2 - B02 DESIGN SUBMISSION

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GUIDEWAY PLAN & PROFILE SPUR LINE ALIGNMENT STA. 0+00 TO STA. 9+35.55

GENERAL NOTES – ELEVATED GUIDEWAY STRUCTURES

A. SPECIFICATIONS

- A1.CONSTRUCTION: PHX SKY TRAIN SPECIFICATIONS.
- A2. DESIGN: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", 17TH EDITION, 2002.

B. LOADINGS

- B1. ALL LOADINGS SHALL BE IN ACCORDANCE WITH THE "AUTOMATED TRAIN PROJECT DESIGN CRITERIA MANUAL FACILITIES DESIGN, REV 3, APRIL 2017", INCLUDING ALL UPDATES. SEE DETAIL 1 THIS SHEET FOR VEHICLE LOADS.
- B2. SIP METAL FORMS 15 psf (MIN) TO 25 psf (MAX)
- UTILITIES 450 plf
- LIGHTING & SIGNALS 10 plf
- EMERGENCY WALKWAY 0 plf (MIN) TO 150 plf (MAX)
- PST RUNNING SURFACE (EACH) 800 plf (MIN) TO 1200 plf (MAX)
- SWITCH LOAD 3500 plf
- FUTURE SUPERIMPOSED DEAD LOADS 10 psf (MIN)

C. MATERIALS

- C1. CONCRETE (MIN. 28-DAY STRENGTHS):
- PIER CAPS AND PIER COLUMNS: $f'c = 4,000$ psi (CLASSAA)
- DRILLED SHAFTS: $f'c = 4,000$ psi (CLASS AA)
- ABUTMENTS, FOOTINGS, WALLS: $f'c = 4,000$ psi (CLASS AA)
- PRECAST U-BEAMS: $f'c = 7,000$ psi (CLASS AAA)
- DECKS, DIAPHRAGMS AND CURBS: $f'c = 4,500$ psi (CLASS AA)

NOTE: REDUCED COARSE AGGREGATE SIZE IS ALLOWED IN BEAMS, DECKS, DIAPHRAGMS AND CURBS TO FACILITATE PLACING AND PROPER CONSOLIDATION OF CONCRETE.

- C2. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4", UNLESS SHOWN OTHERWISE.
- C3. CONSTRUCTION JOINTS SHALL BE MADE WHERE SHOWN ON THE PLAN. ADDITIONAL JOINTS SHALL BE MADE ONLY WITH THE APPROVAL OF THE PROGRAM/PROJECT MANAGER.
- C4. REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60 (BLACK BAR) CONFORMING TO ASTM A615, WITH $f_s = 24,000$ psi.
- C5. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER FOR PRIMARY REINFORCEMENT AND 1 1/2" FOR STIRRUPS, TIES, AND SPIRALS, UNLESS OTHERWISE NOTED. PROVIDE 3" COVER FOR SURFACES CAST AGAINST THE GROUND.
- C6. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS SHALL BE TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
- C7. FIELD ADJUSTMENTS OF REINFORCING STEEL SHALL BE MADE ONLY WITH APPROVAL OF THE PROGRAM/PROJECT MANAGER. CUT BARS MUST HAVE ACCOMPANYING BARS OF THE SAME SIZE WITH THE APPROPRIATE LAP ACROSS THE CUT LOCATION. THE SHOP DRAWINGS SHALL INCLUDE ADDITIONS OR REARRANGEMENT OF REINFORCING STEEL FROM THAT SHOWN ON THE PLANS.
- C8. BAR LAPS, HOOKS AND BENDS SHALL HAVE A MINIMUM LENGTH IN ACCORDANCE WITH AASHTO, OR AS SHOWN ON THE PLANS. SEE SPLICE TABLE ON SHEET GWSG005 FOR TYPICAL LAP SPLICES AND EMBEDMENT LENGTHS.

D. PRESTRESSING AND POST-TENSIONING CONCRETE

- D1. REFER TO PLANS FOR NOTES.

E. DRAINAGE

- E1. DRAINAGE PIPES AND OUTFALLS SHALL BE AS LOCATED AND DETAILED ON THE PLANS AND SPECIFICATIONS.

F. MISCELLANEOUS NOTES

- F1. FALSEWORK SHORING SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 601-3.02 OF THE ADOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," 2008, AND THE AASHTO "GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS," 2017.
- F2. ALL DIMENSIONS SHOWN ON THE PLANS ARE MEASURED HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED. DIMENSIONS SHALL NOT BE MEASURED FROM THE PLANS.
- F3. STRUCTURE ELEVATIONS SHOWN ON THE PLANS ASSUME THE PROFILE GRADE LINE IS 5'-0" ABOVE TOP OF THE STRUCTURAL DECK.
- F4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING EXCAVATION. ANY AND ALL DAMAGE WHICH MIGHT RESULT FROM FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- F5. PRECAST BEAMS SHALL BE ADEQUATELY SUPPORTED DURING CONSTRUCTION TO ENSURE STABILITY.
- F6. VERIFY ALL DIMENSIONS AND GEOMETRY OF EXISTING STRUCTURES IN THE FIELD AS NECESSARY TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION.

- F7. PROVIDE ELECTRICAL GROUNDING OF THE STRUCTURE IN ACCORDANCE WITH THE SPECIFICATIONS.

F8. GUIDEWAY EGRESS REVIEW:

THE FOLLOWING SECTIONS FROM NFPA 130-2017 "STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS" WERE REVIEWED:

6.2.3.2.1 ACCESS TO THE TRAINWAY SHALL BE FROM STATIONS OR BY MOBILE LADDER EQUIPMENT FROM ROADWAYS ADJACENT TO THE TRACKWAY. COMPLIANT.

6.2.3.2.2 IF NO ADJACENT OR CROSSING ROADWAYS EXIST, ACCESS ROADS AT A MAXIMUM OF 762m (2500 ft) INTERVALS SHALL BE REQUIRED. COMPLIANT; ADJACENT CROSSING ROADWAYS EXIST AT INTERVALS LESS THAN 2500 FEET.

6.2.3.2.3 IF SECURITY FENCES ARE USED ALONG TRACKWAY, ACCESS GATES SHALL BE PROVIDED AS DEEMED NECESSARY BY THE AUTHORITY HAVING JURISDICTION. COMPLIANT; NO SECURITY FENCES ARE INSTALLED.

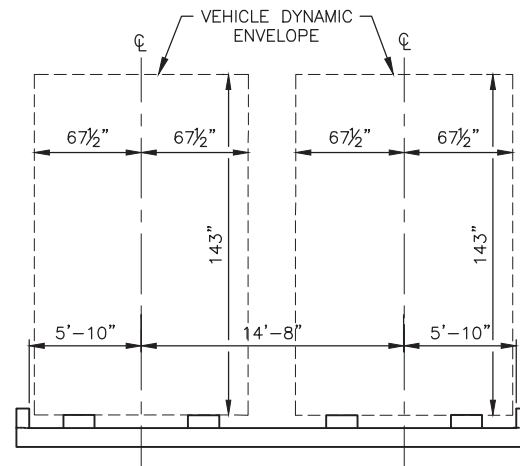
6.2.3.2.4 ADJACENT TO EACH BLUE LIGHT STATION, INFORMATION SHALL BE PROVIDED THAT IDENTIFIES THE ROUTE AND LOCATION OF THE ACCESS. THIS WILL BE INCLUDED IN EACH STATION PLATFORM DESIGN.

6.2.3.2.5 THE GRAPHICS SHALL BE LEGIBLE FROM THE GROUND LEVEL OUTSIDE THE TRACKWAY. EACH BLUE LIGHT STATION WILL HAVE THE APPROPRIATE EGRESS INFORMATION.

- F9. CONTRACTOR SHALL EXERCISE CARE DURING THE EXCAVATION AND CONSTRUCTION FOR NEW STRUCTURES TO AVOID DAMAGE TO EXISTING STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MEANS AND METHODS REQUIRED TO FACILITATE CONSTRUCTION OF THE WORK AND ENSURE SAFETY, STABILITY AND INTEGRITY OF ADJACENT STRUCTURES AND FACILITIES.

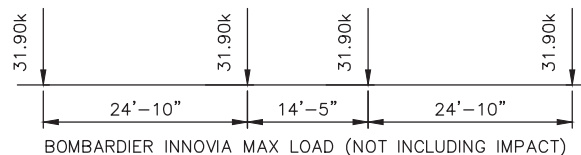
G. BRIDGE AESTHETICS

- G1. ALL EXPOSED CONCRETE SURFACES ON THE ELEVATED GUIDEWAY STRUCTURES FROM SPAN 58 THROUGH SPAN 80 SHALL BE PAINTED (EXCLUDING TOP OF GUIDEWAY DECK SURFACE AND INSIDE FACE OF CURBS AND BARRIERS) UNLESS OTHERWISE NOTED ON THE PLANS OR AS DIRECTED BY THE PROGRAM/PROJECT MANAGER IN ACCORDANCE WITH THE SPECIFICATIONS. PAINT SHALL BE APPLIED TO THE EXPOSED SURFACES AND EXTEND ONE FOOT BELOW FINISH GRADE ELEVATION. THE PAINT SHALL BE TINTED BEIGE AS DIRECTED BY THE PROGRAM/PROJECT MANAGER. THE CONTRACTOR SHALL PREPARE A CONCRETE TEST SPECIMEN FOR VISUAL INSPECTION AND APPROVAL BY THE PROGRAM/PROJECT MANAGER PRIOR TO APPLICATION OF PAINT MATERIAL ONTO THE NEW STRUCTURES.



2 VEHICLE DYNAMIC ENVELOPE
SCALE: NTS

NOTE: CONTRACTOR SHALL ENSURE THAT ALL CONCRETE CURBS, CONCRETE PARAPET WALLS AND ORNAMENTAL SECURITY FENCES DO NOT ENCROACH INTO VEHICLE DYNAMIC ENVELOPE.



1 WHEEL LOAD DETAIL
SCALE: NTS

H. DRILLED SHAFT NOTES

- H1. THE CONTRACTOR SHALL LEAVE DRILLED SHAFT EXCAVATIONS, TOP OF DRILLED SHAFTS AND EXPOSED REINFORCING IN A CLEAN UNDAMAGED CONDITION. EXCAVATIONS SHALL BE LEFT IN STABLE CONDITION CAPABLE OF MAINTAINING THAT STABILITY UNDER NORMAL CONSTRUCTION CONDITIONS.
- H2. DIAMETER OF REINFORCED CONCRETE DRILLED SHAFTS SHALL BE AS SHOWN ON THE FOUNDATION PLANS.
- H3. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH "GEOTECHNICAL DESIGN MEMORANDUM PHX SKY TRAIN STAGE 2- ELEVATED GUIDEWAY", DATED 12/21/2017.
- H4. THE CONTRACTOR IS RESPONSIBLE FOR SETTING THE LOCATION OF REBAR SPLICES REQUIRED FOR CONSTRUCTION OF DRILLED SHAFTS SUBJECT TO PHYSICAL CONSTRAINTS AT EACH PIER LOCATION.
- H5. FOR ADDITIONAL REQUIREMENTS RELATED TO THE DRILLED SHAFTS, SEE THE SPECIFICATIONS.
- H6. THE ALLOWABLE CAPACITY FOR THE DRILLED SHAFTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL DESIGN MEMORANDUM.
- H7. ESTIMATE OF GROUND WATER ELEVATIONS ARE PROVIDED IN THE GEOTECHNICAL MEMORANDUM.
- H8. EXCAVATION OF ADJACENT DRILLED SHAFTS WITHIN 4 SHAFT DIAMETERS MEASURED CENTER TO CENTER WILL NOT BE PERMITTED UNTIL 48 HOURS AFTER THE ADJACENT DRILLED SHAFT HAS BEEN CONCRETED.
- H9. IN THE EVENT A WEAK SOIL LAYER IS ENCOUNTERED (SILT, CLAY, LOOSE SAND ETC.) AT THE RECOMMENDED ELEVATION OF THE SHAFT BOTTOM, THE SHAFT SHALL BE EXTENDED TO BEAR ON FIRM SOIL AS DETERMINED BY THE PROGRAM/PROJECT MANAGER. ALL VARIATIONS OF SOIL CONDITIONS SHALL BE EVALUATED BY PROGRAM/PROJECT MANAGER.
- H10. IF THE BOTTOM OF THE SHAFT IS LOCATED LESS THAN OR EQUAL TO 3'-0" BELOW THE ELEVATION SHOWN ON THE PLANS, THE REINFORCING CAGE NEED NOT BE EXTENDED AND CLEARANCE TO THE BOTTOM OF THE SHAFT MAY BE INCREASED TO 3'-6" MAXIMUM. IF THE BOTTOM OF THE SHAFT IS TO BE LOWERED MORE THAN 3'-0" BELOW THE ELEVATION SHOWN ON THE PLANS A REDESIGN MAY BE REQUIRED. THE PROGRAM/PROJECT MANAGER SHALL BE NOTIFIED TO DETERMINE THE EXTENT OF THE MODIFICATION REQUIRED.
- H11. CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN HEREIN ARE NOT PERMITTED IN DRILLED SHAFTS, UNLESS APPROVED BY THE PROGRAM/PROJECT MANAGER.

J. MONITORING NOTES RELATED TO THE EXISTING STRUCTURES

- J1. CONTRACTOR SHALL DEVELOP AND SUBMIT A MONITORING PLAN FOR EXISTING STRUCTURAL ELEMENTS ADJACENT TO WITHIN 100 FT OF THE INSTALLATION OF NEW DRILLED SHAFTS AS FOLLOWS:
 - A) CONTRACTOR SHALL MONITOR THE EXISTING STRUCTURAL ELEMENTS ADJACENT TO THE NEW FOUNDATIONS FOR POSSIBLE SETTLEMENT ASSOCIATED WITH THE INSTALLATION OF DRILLED SHAFT FOUNDATIONS.
 - B) A MONITORING PROGRAM WILL CONSIST OF THE TABULATION OF ELEVATION SURVEY SHOTS ON THE EXISTING STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION OF EACH DRILLED SHAFT, TAKING OF SUBSEQUENT SURVEY SHOTS ON THE SAME LOCATIONS EVERY HOUR DURING THE CONSTRUCTION OPERATION AND FINAL SURVEY SHOT AT THE COMPLETION OF FOUNDATION INSTALLATION.
 - C) CONTRACTOR SHALL DEVELOP A SURVEY SHOT LAYOUT AND SUBMIT TO THE PROGRAM/PROJECT MANAGER FOR APPROVAL PRIOR TO COMMENCING THE CONSTRUCTION.
 - D) THE MONITORING PROGRAM WILL BE VERIFIED BY THE GEOTECHNICAL ENGINEER OF RECORD AS PART OF THE SPECIAL INSPECTIONS PROCESS. THE CONTRACTOR IS RESPONSIBLE FOR THE SURVEY DATA.
 - E) IF SETTLEMENT OF EXISTING STRUCTURES IS OBSERVED, IMMEDIATELY CEASE ALL DRILLED SHAFT CONSTRUCTION OPERATIONS AND NOTIFY THE PROGRAM/PROJECT MANAGER AND GEOTECHNICAL ENGINEER OF RECORD. NO ADDITIONAL CONSTRUCTION ACTIVITIES ON THE DRILLED SHAFT FOUNDATIONS SHALL BE PERMITTED UNTIL THE PROGRAM/PROJECT MANAGER GIVES HIS PERMISSION TO CONTINUE INSTALLATION.

K. HAZARDOUS MATERIALS

- K1. COMPLY WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS WHEN ENCOUNTERING ANY MATERIAL CONTAINING OR SUSPECTED OF CONTAINING HAZARDOUS SUBSTANCES. IN THE EVENT OF A HAZARDOUS MATERIAL SPILL OR A RELEASE OF A HAZARDOUS SUBSTANCE, IMMEDIATELY CONTACT THE AIRPORT COMMUNICATIONS CENTER EMERGENCY NUMBER 602-223-3311.
- K2. AN ASBESTOS AND LEAD SURVEY HAS BEEN DONE FOR THIS PROJECT AND IS CURRENT. ASBESTOS AND LEAD BASED PAINT HAS BEEN IDENTIFIED AND WILL NEED TO BE ABATED PRIOR TO DISTURBANCE. PLEASE CONTACT T.J. INIGUEZ TO HAVE THIS DONE AT (602) 571-2638.



Design Sub-Consultant

Design Consultant



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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	MH/MM	BAM	Checked by:	SWS	Date:	03/02/2018	Dwg scale:	NTS	CIP No.:	AV10000011	KIVA No.:	07-5204
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STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
ELEVATED ALIGNMENT
GENERAL NOTES - 1

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L. SPECIAL STRUCTURAL INSPECTION

- L1. SPECIAL INSPECTION IS REQUIRED OF MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.
- L2. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: IN ACCORDANCE WITH IBC 2012 AS ADOPTED AND AMENDED BY THE CITY OF PHOENIX.

A. INSPECTION OF CONCRETE CONSTRUCTION			
INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
STRUCTURAL CAST-IN-PLACE CONCRETE	REINFORCING STEEL AND PLACEMENT	PERIODIC	(1) (3) (4)
	VERIFICATION OF MIX DESIGN	PERIODIC	(1) (3)
	SAMPLES TAKEN FOR STRENGTH, SLUMP, AIR CONTENT, AND CONCRETE TEMPERATURE	CONTINUOUS	(2) (3)
	INSPECTION OF CONCRETE PLACEMENT	CONTINUOUS	(2) (3)
	MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	(1) (3)
	FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS	PERIODIC	(1) (3)
(ELEVATED GUIDEWAY U-BEAMS)	INSPECTION OF ANCHORS CAST IN CONCRETE	CONTINUOUS	(2) (3)
	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	PERIODIC	(1) (3)
	VERIFYING USE OF REQUIRED DESIGN MIX	PERIODIC	(1) (3)
	INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	(2) (3)
	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	(1) (3)
	APPLICATION OF PRE-STRESSING FORCE	CONTINUOUS	(2) (3)
STRUCTURAL POST-TENSIONED CONCRETE (PRECAST SPLICED U-BEAMS)	ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC	(1) (3)
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC	(1) (3)
	VERIFICATION OF IN-SITE CONCRETE STRENGTH PRIOR TO STRESSING OF THE TENDONS AND PRIOR TO THE REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	PERIODIC	(1) (3)
	APPLICATION OF POST TENSIONING FORCE	CONTINUOUS	(2) (3)
	GROUTING OF TENDONS	CONTINUOUS	(2) (3)

B. INSPECTION OF SOILS			
INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
SOIL PREPARATIONS AND EXCAVATIONS	---	---	(3) (5)

C. INSPECTION OF POST - INSTALLED ANCHORS			
POST - INSTALLED ANCHORS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
	VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS	(2) (3)
	HOLE DEPTH AND CLEANLINESS	CONTINUOUS	(2) (3)
	PRODUCT DESCRIPTION INCLUDING NAME, ROD TYPE, DIAMETER AND LENGTH	CONTINUOUS	(2) (3)
	ADHESIVE EXPIRATION DATE	CONTINUOUS	(2) (3)
	PROPER INSTALLATION TECHNIQUE	PERIODIC	(1) (3)

D. INSPECTION OF DRILLED SHAFTS			
INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
DRILLED SHAFTS	DRILLING OPERATIONS WITH COMPLETE AND ACCURATE RECORDS FOR EACH SHAFT.	CONTINUOUS	(2) (3) (5)
	PLACEMENT LOCATIONS, PLUMBNESS, SHAFT DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END BEARING STRATA CAPACITY.	CONTINUOUS	(2) (3) (5)

M. STRUCTURAL OBSERVATION

- M1. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. THESE OBSERVATIONS DO NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTION AS DEFINED BY SPECIAL INSPECTION.
- M2. THE STRUCTURAL OBSERVER IS NOT INSPECTING FOR OSHA COMPLIANCE AND TEMPORARY CONSTRUCTION, SUCH AS BRACING, SHORING, MEANS AND METHODS, ETC. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE FACILITIES FOR THE STRUCTURAL OBSERVER.
- M3. THE STRUCTURAL OBSERVER IS NOT AUTHORIZED TO DIRECT OR APPROVE ANY CHANGES TO THE CONTRACT DOCUMENTS. IF THE CONTRACTOR WISHES TO QUESTION THE STRUCTURAL OBSERVER'S INTERPRETATION OF THE CONTRACT DOCUMENTS, THIS MAY BE DONE WITH THE APPROPRIATE MEASURES LISTED IN THE CONTRACT DOCUMENTS. THE STRUCTURAL OBSERVER IS NOT AUTHORIZED TO STOP OR DELAY THE WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN WORK AFTER BEING NOTIFIED BY THE STRUCTURAL OBSERVER THAT SUCH WORK IS UNACCEPTABLE, HE DOES SO AT HIS OWN RESPONSIBILITY AND RISK.
- M4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY. DEFICIENCIES SHALL BE REPORTED BY THE STRUCTURAL OBSERVER IN WRITING TO THE PROGRAM/PROJECT MANAGER.
- M5. STRUCTURAL DEVIATIONS FROM THE CONTRACT DOCUMENTS FOUND AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE STRUCTURAL ENGINEER SHALL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY.
- M6. THE ELEMENTS REQUIRING STRUCTURAL OBSERVATION ARE:
 - 1. POST-TENSIONING OF PRECAST SPLICED CONCRETE U-BEAMS

COMMENTS

- 1. PERIODIC SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
- 2. CONTINUOUS SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
- 3. ITEMS NOT SHOWN MAY REQUIRE CONTINUOUS OR PERIODIC SPECIAL STRUCTURAL INSPECTION AT THE DISCRETION OF THE PROGRAM/PROJECT MANAGER. ITEMS LISTED MAY REQUIRE ALTERNATE FREQUENCIES OF INSPECTION OTHER THAN SHOWN UNDER DIRECTION OF THE PROGRAM/PROJECT MANAGER.
- 4. WELDING OF REINFORCING STEEL IS NOT ACCEPTABLE UNLESS DIRECTED BY THE PROGRAM/PROJECT MANAGER.
- 5. VERIFY SOILS INSPECTION REQUIREMENTS WITH PROGRAM/PROJECT MANAGER AS OUTLINED IN SOILS REPORT AND PROJECT SPECIFICATIONS.
- 6. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTIFICATION TO THE PROGRAM/PROJECT MANAGER FOR THE SCHEDULING OF SPECIAL STRUCTURAL INSPECTIONS.



Design Sub-Consultant



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PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/AM	Drawn by: BAM	Checked by: SWS	Date: 03/02/2018	Dwg. scale: NTS	CIP No.: AV10000011	KVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
GENERAL NOTES - 2**

PLOT DATE: Mar 02, 2018 FILE PATH: C:\pwworking\gfpw01\jrojas\d0673541\AV10000011-S-2-GWSG0004.dwg jrojas

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\bmcore\40673541\AV10000011-S-2-GWSG0005.dwg bmoore

ABBREVIATIONS

AASHTO AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
 ADOT ARIZONA DEPARTMENT OF TRANSPORTATION
 APPROX APPROXIMATE
 APS ARIZONA PUBLIC SERVICE
 ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

BM BENCHMARK, BEAM
 BRG BEARING

C-C CENTER TO CENTER
 CF CUBIC FEET
 CIP CAST IN PLACE
 CJ CONSTRUCTION JOINT, CONTROL JOINT
 CL CENTERLINE
 CLR CLEAR, CLEARANCE
 CMP CORRUGATED METAL PIPE
 COL COLUMN
 CONC CONCRETE
 CONT CONTINUOUS
 COP CITY OF PHOENIX
 CTR CENTER
 CY CUBIC YARD

DEMO DEMOLITION
 DIA DIAMETER
 DIM DIMENSION
 DTL DETAIL

(E) EXISTING
 E EAST
 EF EACH FACE
 EA EACH
 EB EASTBOUND
 ED EDITION
 EDS BLD EXPLOSIVE DETECTION SYSTEM BUILDING
 ELEV ELEVATION
 EXST EXISTING
 ES EACH SIDE
 ETC ET CETERA
 EXP EXPANSION

FND FOUNDATION
 FO FIBER OPTICS
 FTG FOOTING
 FS FAR SIDE
 FF FAR FACE

GA GAUGE
 GAL GALLON
 GIR GIRDER

HORZ HORIZONTAL
 HR HOUR

IN INCH, INCHES
 IBC INTERNATIONAL BUILDING CODE

K KILO POUNDS

LF LINEAR FEET
 LL LIVE LOAD
 LLV LONG LEG VERTICAL
 LOC LOCATE, LOCATION, LIMIT OF CONSTRUCTION
 LONG LONGITUDINAL
 LT LEFT
 LVC LENGTH OF VERTICAL CURVE

MSF MAINTENANCE AND STORAGE FACILITY
 MAG MARICOPA ASSOCIATION OF GOVERNMENTS
 MAINT MAINTENANCE
 MAX MAXIMUM
 MED MEDIUM
 MIN MINIMUM
 MISC MISCELLANEOUS

N/A NOT APPLICABLE
 NB NORTHBOUND
 NE NORTHEAST
 NF NEAR FACE
 NIC NOT IN CONTRACT
 NS NEAR SIDE
 NTP NOTICE TO PROCEED
 NTS NOT TO SCALE
 NW NORTHWEST
 N NORTH

OC ON CENTER
 OD OUTSIDE DIAMETER, OUTSIDE DIMENSION
 OPS OPERATIONS
 OSHA OCCUPATIONAL SAFETY AND HEALTH ACT
 O-O OUT TO OUT

P/C PRECAST
 PC POINT OF CURVATURE, PRECAST, PRECAST CONCRETE
 PCC PORTLAND CEMENT CONCRETE
 PCF POUNDS PER CUBIC FOOT
 PGL PROFILE GRADE LINE
 PH PHASE
 PI POINT OF INTERSECTION
 PLF POUNDS PER LINEAR FOOT
 P/PM PROGRAM/PROJECT MANAGER
 POC POINT OF REVERSE CURVE
 PROP PROPOSED
 P/S PRESTRESSED
 PSF POUNDS PER SQUARE FOOT
 PSI POUNDS PER SQUARE INCH
 PSHIA PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
 PST PHX SKY TRAIN
 PT POINT, POINT OF TANGENCY
 P/T POST-TENSIONED
 R PLATE
 PVC POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE
 PVI POINT OF VERTICAL INTERSECTION
 PVT POINT OF VERTICAL TANGENT

QTY QUANTITY

R RADIUS
 RD ROAD
 RDWY ROADWAY
 REBAR CONCRETE REINFORCING BAR
 REINF REINFORCE, REINFORCED, REINFORCING, REINFORCEMENT
 ROW RIGHT OF WAY
 RW RETAINING WALL

S SLOPE, SOUTH
 SB SOUTHBOUND
 SC SPIRAL TO CURVE
 SCH SCHEDULE
 SE SOUTHEAST, SUPERELEVATION
 SF SQUARE FOOT, SQUARE FEET
 SHB SKY HARBOR BOULEVARD
 SHLD SHOULDER
 SHT SHEET
 SPEC SPECIFICATION
 SQ SQUARE
 SR STATE ROUTE
 SRP SALT RIVER PROJECT
 ST STREET
 STA STATION, STATIONING
 STD STANDARD
 SWG SOUTHWEST GAS
 SY SQUARE YARD

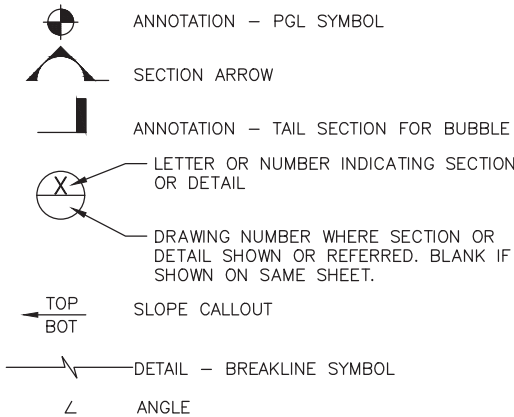
TAN TANGENT
 TBD TO BE DETERMINED
 TC TANGENT TO CURVE
 TOC TOP OF CONCRETE
 TOPO TOPOGRAPHY
 TP TURNING POINT
 TS TANGENT TO SPIRAL
 TYP TYPICAL

UBC UNIFORM BUILDING CODE
 USGS UNITED STATES GEOLOGICAL SURVEY
 UTIL UTILITY

VC VERTICAL CURVE
 VERT VERTICAL

W WEST, WIDE, WIDTH
 WB WESTBOUND
 WP WORKING POINT

LEGEND



BAR SPLICE TABLE (BASED ON f'c = 4000 psi)

BAR SIZE	MINIMUM LAP SPLICE LENGTH (IN)				MINIMUM EMBEDMENT LENGTH (IN)	
	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	OTHER BAR
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR		
#3	17	12	22	16	13	10
#4	22	16	29	21	17	12
#5	28	20	36	26	22	16
#6	33	24	43	31	26	18
#7	42	30	55	39	32	23
#8	55	39	72	51	42	30
#9	70	50	91	65	54	38
#10	88	63	115	82	68	49
#11	108	77	141	101	83	60

BAR SPLICE TABLE (BASED ON f'c = 4500 psi)

BAR SIZE	MINIMUM LAP SPLICE LENGTH (IN)				MINIMUM EMBEDMENT LENGTH (IN)	
	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	OTHER BAR
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR		
#3	17	12	22	16	13	10
#4	22	16	29	21	17	12
#5	28	20	36	26	22	16
#6	33	24	43	31	26	18
#7	40	28	55	39	32	23
#8	52	37	72	51	42	30
#9	66	47	91	65	54	38
#10	83	60	115	82	68	49
#11	102	73	141	101	83	60



Design Sub-Consultant

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

ISSUED FOR CONSTRUCTION	03/02/18	DATE
SUBMITTED FOR REVIEW	12/15/17	DATE
REVISIONS / SUBMISSIONS		
NO.		

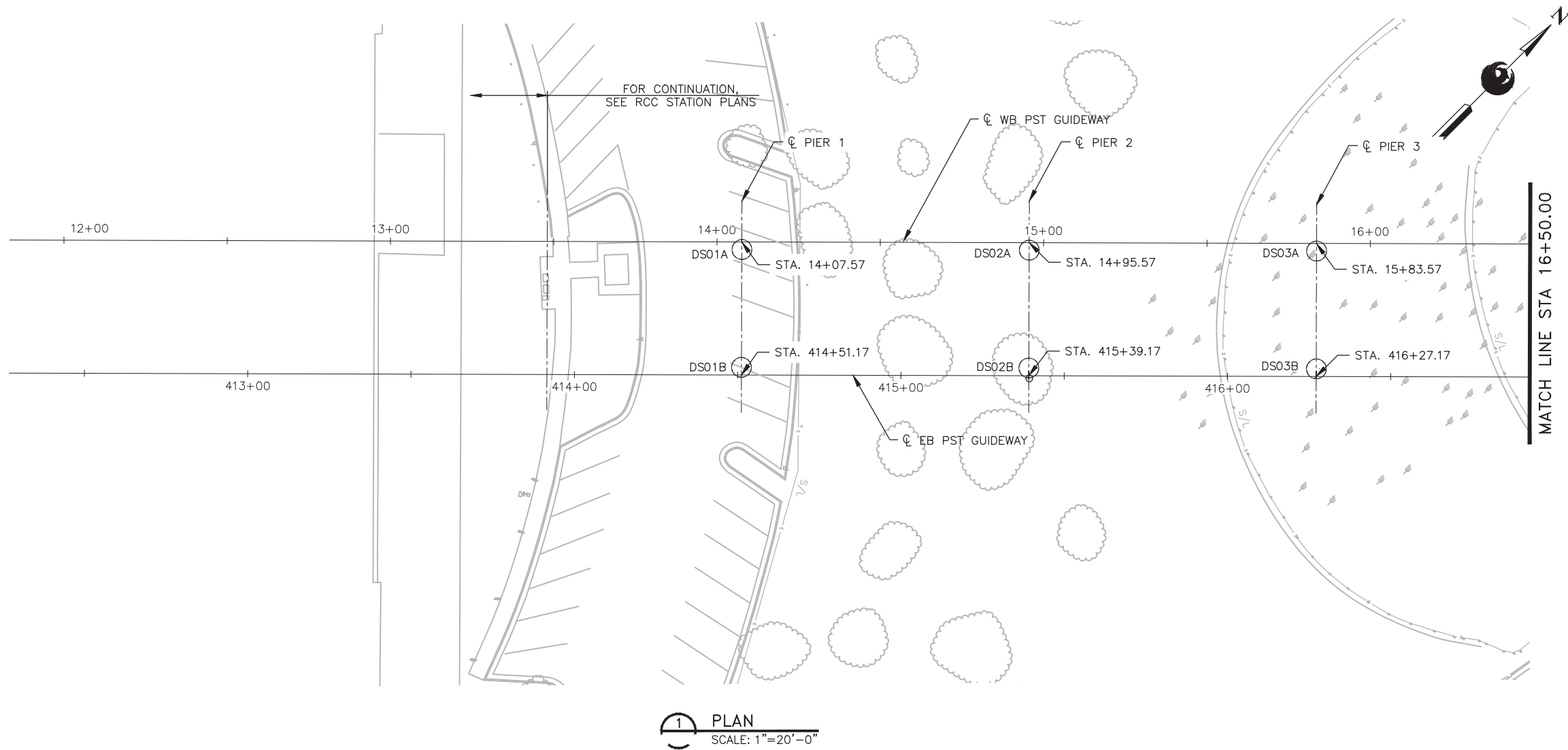
PHX SKY TRAIN
 CITY OF PHOENIX AVIATION DEPARTMENT
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: MH/MM
 Drawn by: BAM
 Checked by: SWS
 Date: 03/02/2018
 Dwg scale: NTS
 CIP No.: AV10000011
 KIVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 ELEVATED ALIGNMENT
 GENERAL NOTES - 3**

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0501.dwg jrojas



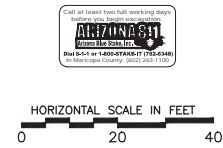
1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS01A	72	1109	1107	1055	52	14+07.57	2.33' Rt	884562.05	661240.43
DS01B	72	1109	1107	1055	52	14+07.56	38.38' Rt	884536.49	661265.84
DS02A	72	1113	1111	1058	53	14+95.57	2.33' Rt	884624.12	661302.82
DS02B	72	1113	1111	1058	53	14+95.56	38.38' Rt	884598.56	661328.23
DS03A	72	1107	1105	1058	47	15+83.57	2.33' Rt	884686.18	661365.21
DS03B	72	1107	1105	1058	47	15+83.56	38.38' Rt	884660.62	661390.62

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NOTES:

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- REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
- STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
- NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
- SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM	JRR
Drawn by: JRR	SWS
Checked by: SWS	03/02/2018
Date: 03/02/2018	1"=20'
Dwg scale: 1"=20'	AV10000011
CIP No.: AV10000011	07-5204
KVA No.: 07-5204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 11+83.43 TO STA 16+50.00**

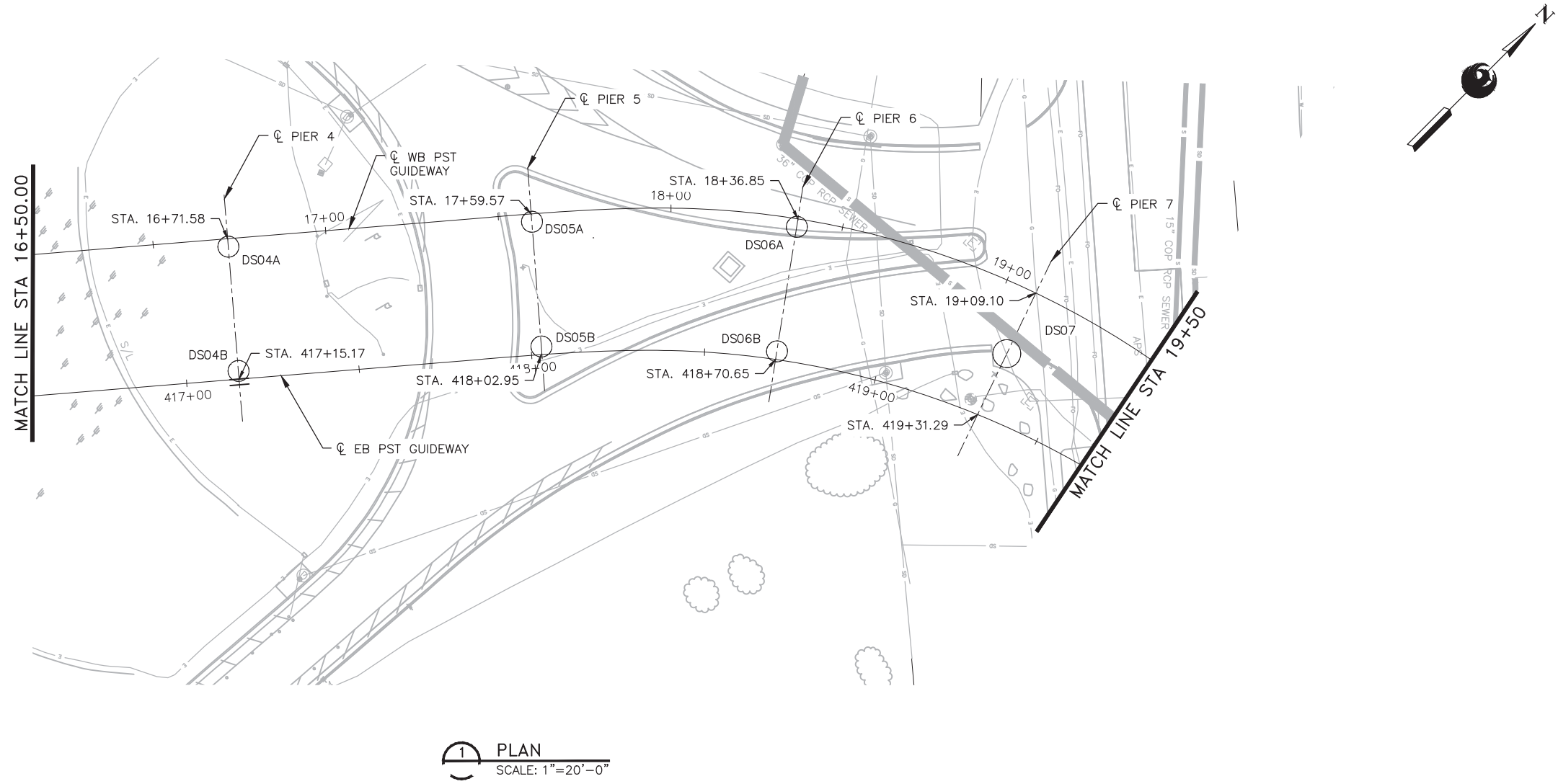
Package: Sheet Reference No:
B02-GWSG0501
V1 - 043 of 083

Professional Engineer (Civil)
28774
PALWALLI
PHOENIX, AZ 85016
EXPIRES 03/31/2018

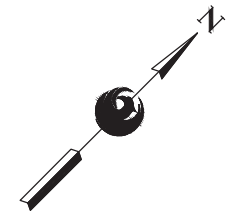
Design Sub-Consultant

Design Consultant
Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojas\0673541\AV10000011-S-2-GWSG0502.dwg jprojas



1 PLAN
SCALE: 1"=20'-0"

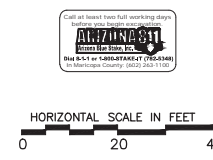


FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS04A	72	1103	1101	1059	42	16+71.57	2.33' Rt	884748.25	661427.59
DS04B	72	1103	1101	1059	42	16+71.57	38.38' Rt	884722.69	661453.00
DS05A	72	1102	1100	1058	42	17+59.57	2.33' Rt	884810.28	661489.99
DS05B	72	1102	1100	1058	42	17+59.57	38.43' Rt	884784.56	661515.31
DS06A	72	1100	1098	1060	38	18+36.85	2.33' Rt	884858.58	661549.35
DS06B	72	1100	1098	1060	38	18+36.85	38.80' Rt	884827.37	661568.21
DS07	96	1098	1096	1058	45	19+09.10	19.46' Rt	884869.72	661619.39

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NOTES:

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2. REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
3. STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
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PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM	JRR
Drawn by: JRR	SWS
Checked by: SWS	03/02/2018
Date: 03/02/2018	1"=20'
Dwg scale: 1"=20'	AV10000011
CIP No.: AV10000011	07-S204
KVA No.: 07-S204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 16+50.00 TO STA 19+50.00**

Package: Sheet Reference No:
B02-GWSG0502
V1 - 044 of 083

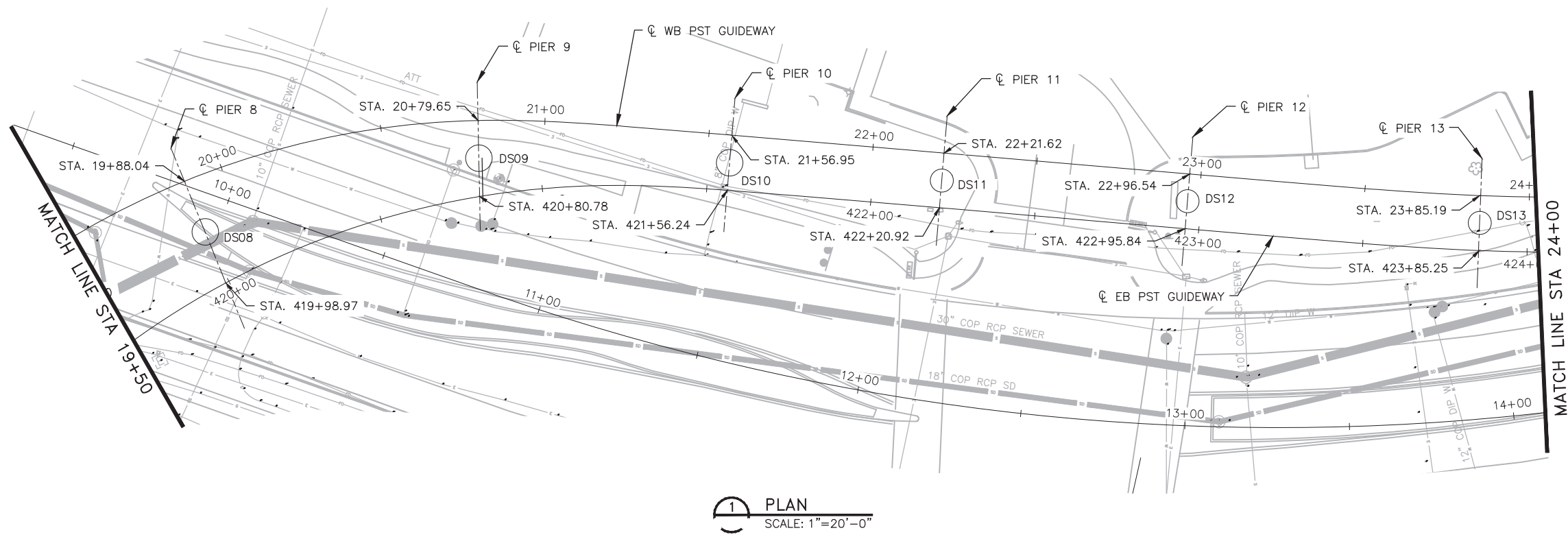
Professional Engineer (Civil)
28774
PALWALLIS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ARIZONA
EXPIRES 03/31/2018

Design Sub-Consultant

Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojas\0673541\AV10000011-S-2-GWSG0503.dwg jprojas

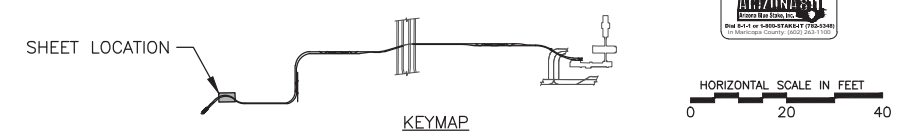


1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS08	96	1097	1095	1050	45	19+88.04	16.67' Rt	884879.51	661691.72
DS09	96	1096	1094	1049	45	20+79.65	11.48' Rt	884863.66	661776.37
DS10	96	1095	1093	1041	52	21+56.95	8.36' Rt	884829.40	661844.43
DS11	84	1096	1094	1049	45	22+21.62	8.33' Rt	884796.59	661900.16
DS12	84	1095	1093	1046	47	22+96.54	8.33' Rt	884758.56	661964.71
DS13	84	1095	1093	1048	43	23+85.19	8.33' Rt	884714.14	662041.85

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- NOTES:
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Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

ISSUED FOR CONSTRUCTION 03/02/18

SUBMITTED FOR REVIEW 12/15/17

REVISIONS / SUBMISSIONS

NO. DATE

Designed by: MH/MM

Drawn by: JRR

Checked by: SWS

Date: 03/02/2018

Dwg scale: 1"=20'

CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 19+50.00 TO STA 24+00.00**

Package: B02-GWSG0503

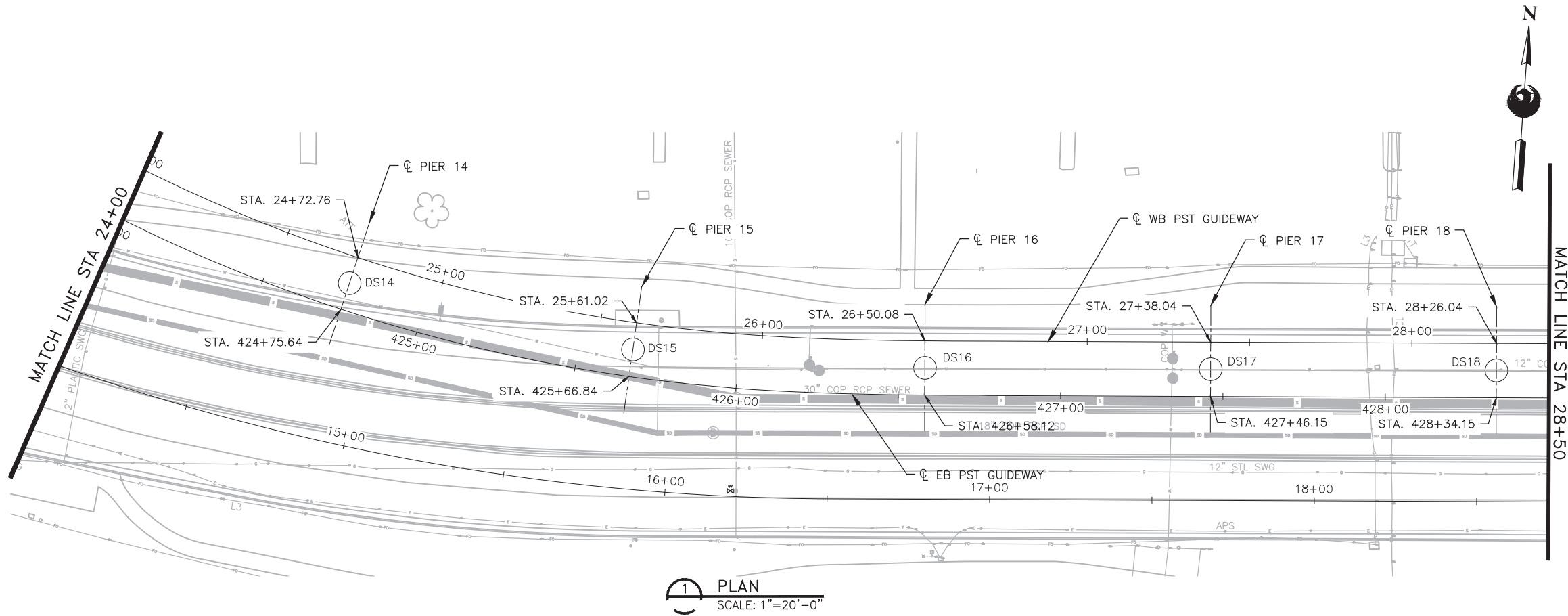
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V1 - 045 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojae\0673541\AV10000011-S-2-GWSG0504.dwg jprojae



1 PLAN
SCALE: 1"=20'-0"



FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS14	84	1095	1093	1047	46	24+72.76	8.34 Rt	884679.14	662123.54
DS15	84	1095	1093	1047	42	25+61.02	8.34 Rt	884658.75	662210.81
DS16	84	1095	1093	1051	42	26+50.08	8.36' Rt	884653.09	662300.73
DS17	84	1095	1093	1051	42	27+38.04	8.33' Rt	884652.71	662388.73
DS18	84	1095	1093	1049	44	28+26.04	8.33' Rt	884652.34	662476.72

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NOTES:

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PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM	JRR
Drawn by: JRR	
Checked by: SWS	
Date: 03/02/2018	
Dwg scale: 1"=20'	
CIP No.: AV10000011	
KVA No.: 07-5204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 24+00.00 TO STA 28+50.00**

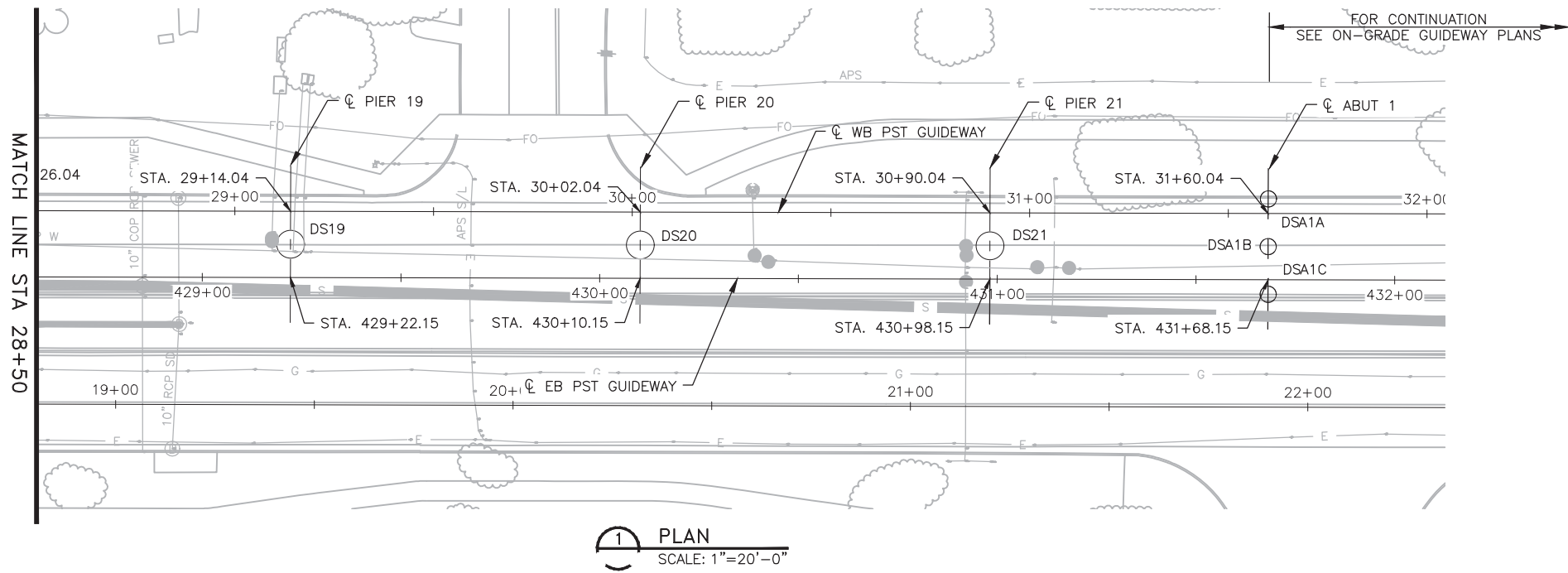
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V1 - 046 of 083

ISSUED FOR CONSTRUCTION	03/02/18
SUBMITTED FOR REVIEW	12/15/17
REVISIONS / SUBMISSIONS	DATE
NO.	

Design Sub-Consultant



PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\jrojas\0673541\AV10000011-S-2-GWSG0505.dwg jrojas



FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS19	84	1095	1093	1050	43	29+14.04	8.33' Rt	884651.96	662564.72
DS20	84	1095	1093	1051	42	30+02.04	8.33' Rt	884651.58	662652.72
DS21	84	1095	1093	1048	45	30+90.04	8.33' Rt	884651.21	662740.72
DSA1A	48	1095	1093	1058	35	31+60.04	3.66' Rt	884659.24	662740.72
DSA1B	48	1095	1093	1058	35	31+60.04	8.34' Rt	884650.91	662740.72
DSA1C	48	1095	1093	1058	35	31+60.04	16.67' Rt	884642.58	662810.67

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NOTES:

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Professional Engineer (Civil)
 28774
 PALM WALK
 AVONDALE, AZ 85015
 E.P. 1/28/2018

Design Sub-Consultant

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND ARE NOT TO BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
 CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

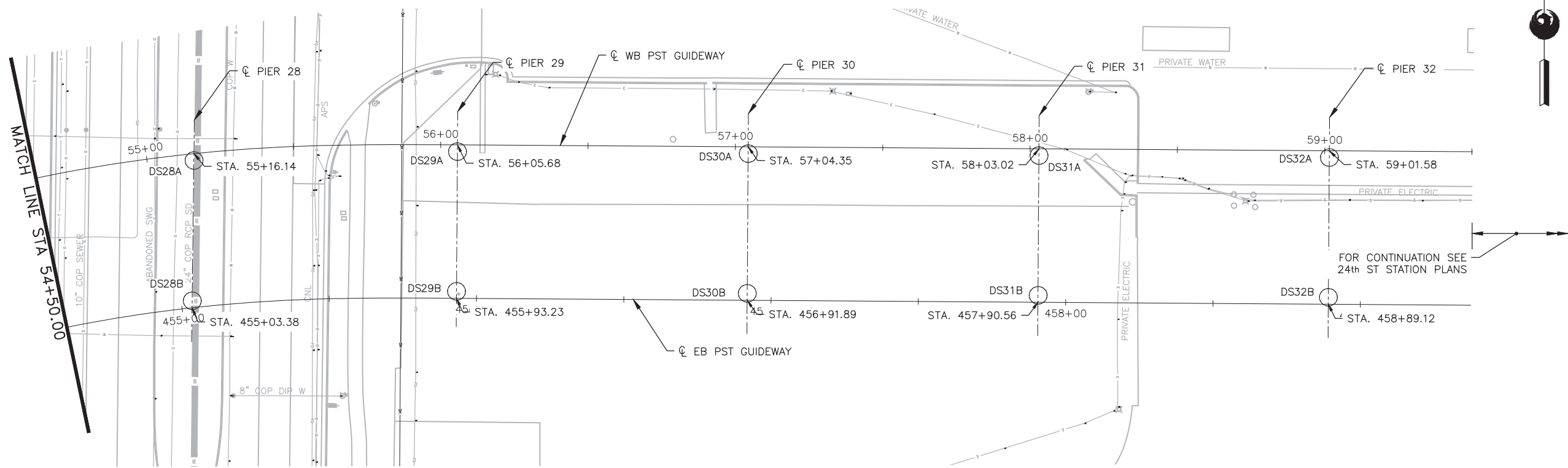
Designed by:	MH/MM	JRR
Drawn by:	JRR	SWS
Checked by:	SWS	03/02/2018
Date:	03/02/2018	1"=20'
Dwg scale:	1"=20'	AV10000011
CIP No.:	AV10000011	07-5204
KVA No.:	07-5204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 ELEVATED ALIGNMENT
 FOUNDATION PLAN
 STA 28+50.00 TO STA 31+60.04**

Package: Sheet Reference No:
B02-GWSG0505
 V1 - 047 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojae\0673541\AV10000011-S-2-GWSG0507.dwg jrojae



1 PLAN
SCALE: 1"=20'-0"

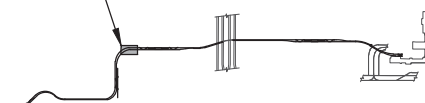
FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS28A	72	1099	1097	1037	40	55+15.87	2.33' Rt	886051.80	664104.42
DS28B	72	1099	1097	1037	40	55+09.81	49.56' Rt	886004.22	664104.16
DS29A	72	1099	1097	1037	40	56+05.68	2.33' Rt	886055.35	664193.85
DS29B	72	1099	1097	1037	40	56+05.68	49.67' Rt	886008.02	664193.85
DS30A	72	1098	1096	1054	42	57+04.35	2.33' Rt	886055.35	664292.52
DS30B	72	1098	1096	1054	42	57+04.28	49.67' Rt	886008.02	664292.52
DS31A	72	1098	1096	1056	40	58+03.02	2.33' Rt	886055.35	664391.18
DS31B	72	1098	1096	1056	40	58+03.02	49.67' Rt	886008.02	664391.18
DS32A	72	1102	1100	1060	40	59+01.58	2.33' Rt	886055.36	664489.75
DS32B	72	1102	1100	1060	40	59+01.58	49.67' Rt	886008.02	664489.75

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".

NOTES:

1. CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
2. REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
3. STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
4. NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
5. SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.

SHEET LOCATION



PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=20'
CIP No.: AV10000011
KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 54+50.00 TO STA 59+01.58**

Package: Sheet Reference No:
B02-GWSG0507
V1 - 049 of 083

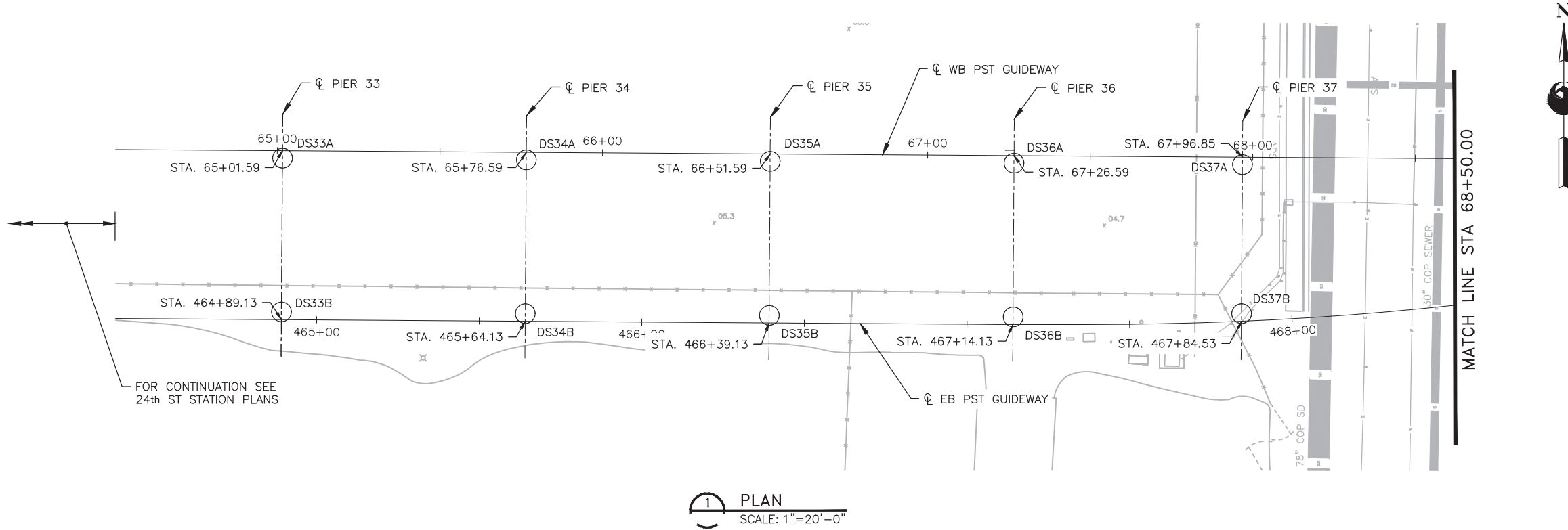
PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR INFORMATION ONLY AND SHALL NOT BE USED FOR CONSTRUCTION EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17
	REVISIONS / SUBMISSIONS	DATE
	NO.	

Professional Engineer (Civil)
28774
PALM WALK
PHOENIX, AZ 85028
E.P. 1253 0130 00 00 00

Design Sub-Consultant

Design Consultant
Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojae\0673541\AV10000011-S-2-GWSG0508.dwg jrojae



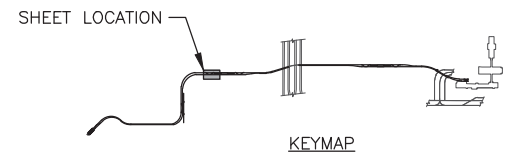
1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS33A	72	1104	1102	1061	41	65+01.59	2.33' Rt	886055.35	665089.75
DS33B	72	1104	1102	1061	41	65+01.59	49.67' Rt	886008.02	665089.75
DS34A	72	1105	1103	1062	41	65+76.59	2.33' Rt	886055.35	665164.75
DS34B	72	1105	1103	1062	41	65+76.59	49.67' Rt	886008.02	665164.75
DS35A	72	1105	1103	1062	41	66+51.59	2.33' Rt	886055.35	665239.75
DS35B	72	1105	1103	1062	41	66+51.59	49.67' Rt	886008.02	665239.75
DS36A	72	1105	1103	1062	41	67+26.59	2.33' Rt	886055.35	665314.75
DS36B	72	1105	1103	1062	41	67+26.59	49.67' Rt	886008.02	665314.75
DS37A	72	1105	1103	1062	41	67+96.85	2.33' Rt	886055.35	665385.01
DS37B	72	1105	1103	1062	41	67+96.85	48.15' Rt	886009.54	665385.01

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NOTES:

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2. REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
3. STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
4. NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
5. SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND ARE NOT TO BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

Professional Engineer (Civil)
28774
PALWALLIS
PHOENIX, AZ 85008
E.P.18.00100.00.00.00

Design Sub-Consultant

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

ISSUED FOR CONSTRUCTION 03/02/18
SUBMITTED FOR REVIEW 12/15/17

NO. REVISIONS / SUBMISSIONS DATE

Designed by: MH/MM
Drawn by: JRR
Checked by: SWS
Date: 02/03/2018
Dwg. scale: 1"=20'
CIP No.: AV10000011
KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

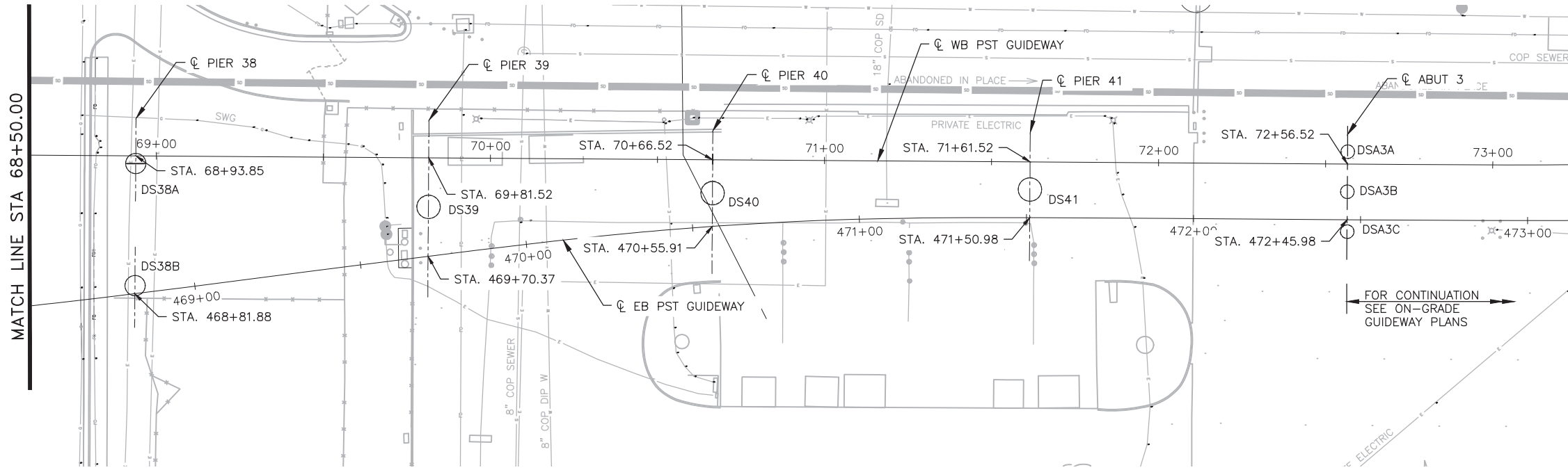
**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 65+01.59 TO STA 68+50.00**

Package: B02-GWSG0508
V1 - 050 of 083

Sheet Reference No:
B02-GWSG0508
V1 - 050 of 083

Design Consultant

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jprojae\0673541\AV10000011-S-2-GWSG0509.dwg jprojae



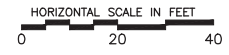
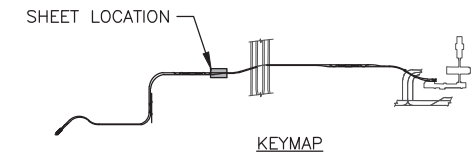
1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS38A	72	1105	1103	1058	45	68+93.85	2.33' Rt	886055.35	665482.01
DS38B	72	1105	1103	1058	45	68+93.85	38.92' Rt	886018.77	665482.01
DS39	84	1105	1103	1060	43	69+81.52	14.76' Rt	886042.93	665569.69
DS40	84	1105	1103	1059	44	70+66.52	9.98' Rt	886047.71	665654.69
DS41	84	1105	1103	1058	45	71+61.52	8.35' Rt	886049.34	665749.68
DSA3A	48	1105	1103	1058	35	72+56.52	3.67' Rt	886061.35	665844.69
DSA3B	48	1105	1103	1058	35	72+56.52	8.33' Rt	886049.35	665844.69
DSA3C	48	1105	1103	1058	35	72+56.52	20.33' Rt	886037.35	665844.69

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NOTES:

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PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM	JRR
Drawn by: JRR	SWS
Checked by: SWS	03/02/2018
Date: 03/02/2018	1"=20'
Dwg scale: 1"=20'	AV10000011
CIP No.: AV10000011	07-5204
KVA No.: 07-5204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 68+50.00 TO STA 72+56.52**

Package: Sheet Reference No:
B02-GWSG0509
V1 - 051 of 083

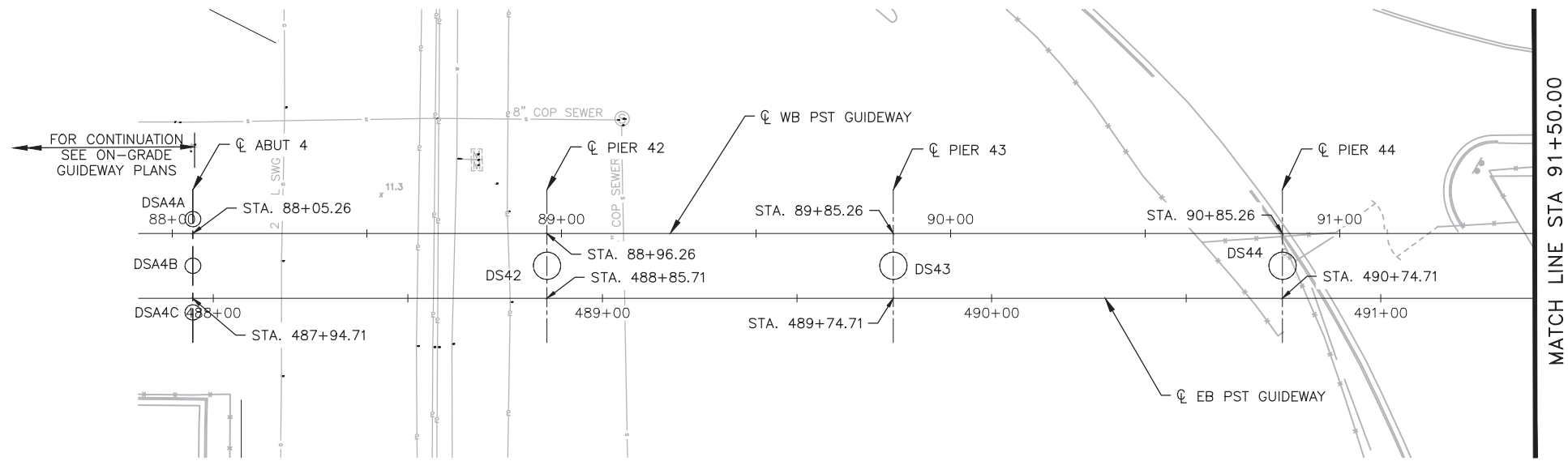
Professional Engineer (Civil)
28774
PALWALLIS
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 03/31/2018

Design Sub-Consultant

Design Consultant
Gannett Fleming

ISSUED FOR CONSTRUCTION	03/02/18
SUBMITTED FOR REVIEW	12/15/17
REVISIONS / SUBMISSIONS	DATE
NO.	

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0510.dwg jrojas



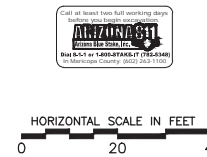
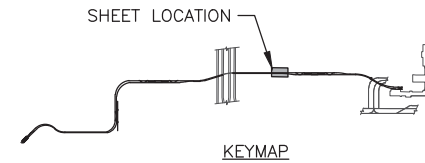
1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DSA4A	48	1108	1106	1071	35	88+05.26	3.67' Lt	886237.24	667370.48
DSA4B	48	1108	1106	1071	35	88+05.26	8.33' Rt	886225.24	667370.48
DSA4C	48	1108	1106	1071	35	88+05.26	20.33' Rt	886213.24	667370.48
DS42	84	1108	1106	1060	46	88+96.26	8.33' Rt	886225.24	667461.48
DS43	84	1108	1106	1063	43	89+85.26	8.33' Rt	886225.24	667550.48
DS44	84	1109	1107	1062	45	90+85.26	8.33' Rt	886225.24	667650.48

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NOTES:

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- STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
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- SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



STAGE 2 - B02 DESIGN SUBMISSION

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

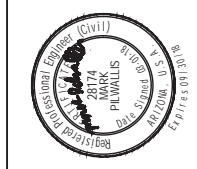
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Drawn by: JRR	
Checked by: SWS	
Date: 03/02/2018	
Dwg scale: 1"=20'	
CIP No.: AV10000011	
KVA No.: 07-5204	

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 88+05.26 TO STA 91+50.00**

Package: Sheet Reference No:
B02-GWSG0510
V1 - 052 of 083

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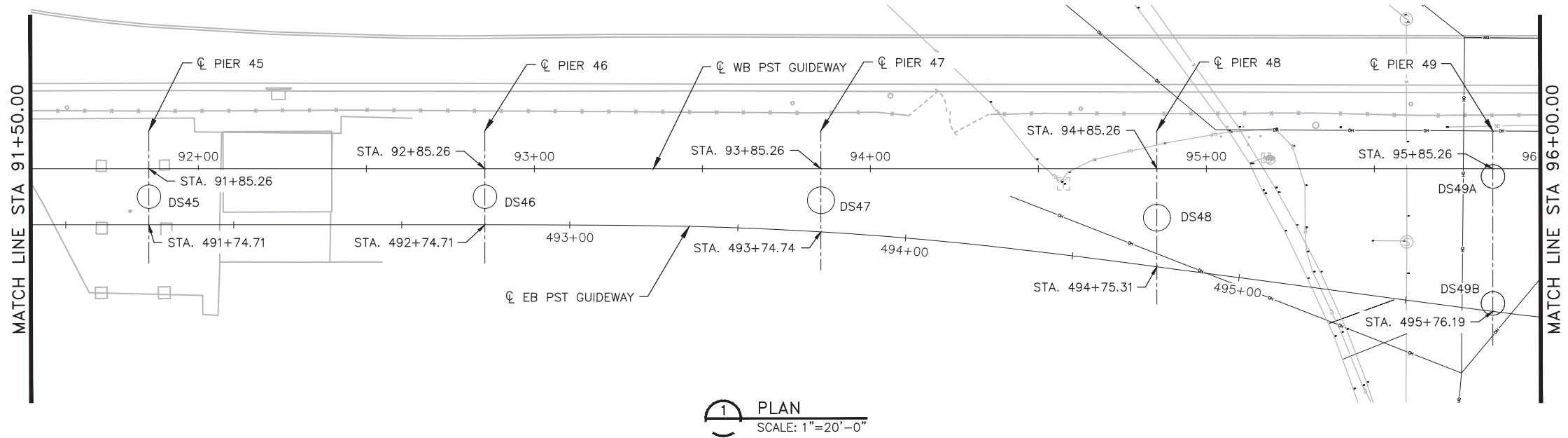
ISSUED FOR CONSTRUCTION	03/02/18
SUBMITTED FOR REVIEW	12/15/17
REVISIONS / SUBMISSIONS	NO.
DATE	DATE



Design Sub-Consultant



PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0511.dwg jrojas

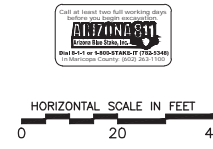
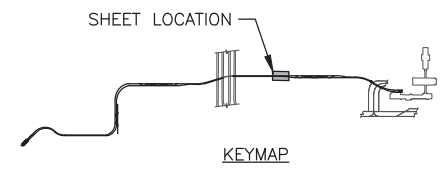


FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
**DS45	84	1111	1109	1034	75	91+85.26	8.33' Rt	886225.24	667750.48
**DS46	84	1111	1109	1036	73	92+85.26	8.33' Rt	886225.24	667850.48
**DS47	96	1111	1109	1031	78	93+85.26	9.37' Rt	886224.21	667950.48
**DS48	96	1111	1109	1029	80	94+85.26	14.56' Rt	886219.01	668050.48
**DS49A	84	1111	1109	1036	73	95+85.26	2.33' Rt	886231.24	668150.48
**DS49B	84	1111	1109	1036	73	95+85.26	40.00' Rt	886193.57	668150.48

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".
 ** USE SMOOTH SURFACE PERMANENT STEEL CASING AT THE TOP 30 FT OF SHAFT TO ACCOUNT FOR FUTURE EXCAVATION FOR CONSTRUCTION OF THE WEST TERMINAL AND RE-ALIGNED WB SKY HARBOR BLVD.

NOTES:

- CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
- REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
- STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
 CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

Designed by: MH/MM	JRR
Drawn by:	SWS
Checked by:	03/02/2018
Date:	1"=20'
Dwg scale:	AV10000011
CIP No.:	07-5204
KVA No.:	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 ELEVATED ALIGNMENT
 FOUNDATION PLAN
 STA 91+50.00 TO STA 96+00.00**

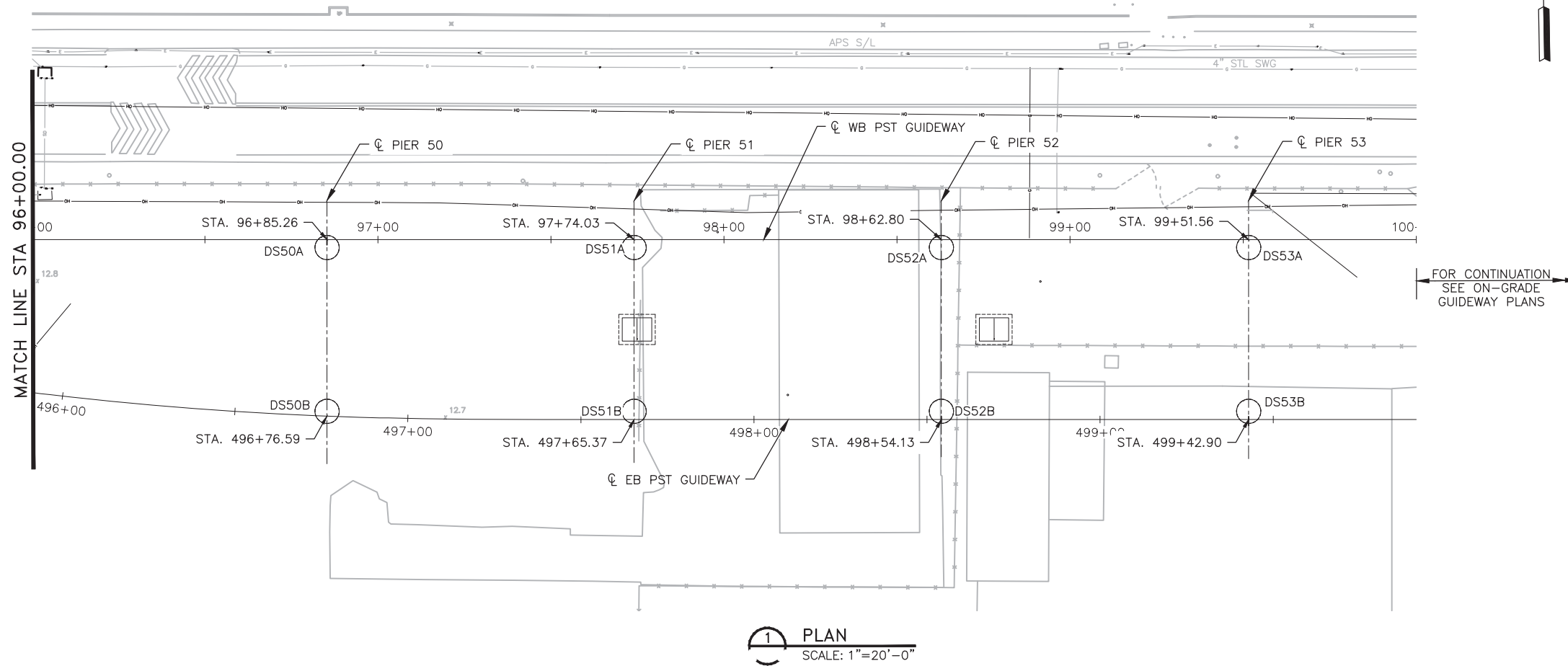
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B02-GWSG0511
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Professional Engineer (Civil)
 28774
 PALWALLIS
 REG. STATE OF ARIZONA
 EXPIRES 01/31/2018

Design Sub-Consultant

Design Consultant
Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0512.dwg jrojas



1 PLAN
SCALE: 1"=20'-0"

FOR CONTINUATION
SEE ON-GRADE
GUIDEWAY PLANS

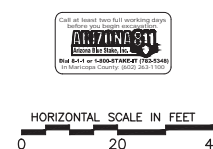
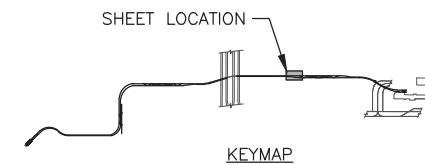
FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
**DS50A	84	1111	1109	1033	76	96+85.26	2.33' Rt	886231.24	668250.48
**DS50B	84	1111	1109	1033	76	96+85.26	48.67' Rt	886184.91	668250.48
**DS51A	84	1111	1109	1033	76	97+74.03	2.33' Rt	886231.24	668339.25
**DS51B	84	1111	1109	1033	76	97+74.03	49.67' Rt	886183.91	668339.25
**DS52A	84	1111	1109	1033	76	98+62.80	2.33' Rt	886231.24	668428.01
**DS52B	84	1111	1109	1033	76	98+62.80	49.67' Rt	886183.91	668428.01
**DS53A	84	1112	1110	1034	76	99+51.56	2.33' Rt	886231.24	668516.78
**DS53B	84	1112	1110	1034	76	99+51.56	49.67' Rt	886183.91	668516.78

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".

** USE SMOOTH SURFACE PERMANENT STEEL CASING AT THE TOP 30 FT OF SHAFT TO ACCOUNT FOR FUTURE EXCAVATION FOR CONSTRUCTION OF THE WEST TERMINAL AND RE-ALIGNED WB SKY HARBOR BLVD.

NOTES:

- CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
- REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
- STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
- NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
- SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



Professional Engineer (Civil)
28774
PALWALLI
REGISTERED PROFESSIONAL ENGINEER
STATE OF ARIZONA
EXPIRES 01/30/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND ARE NOT TO BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

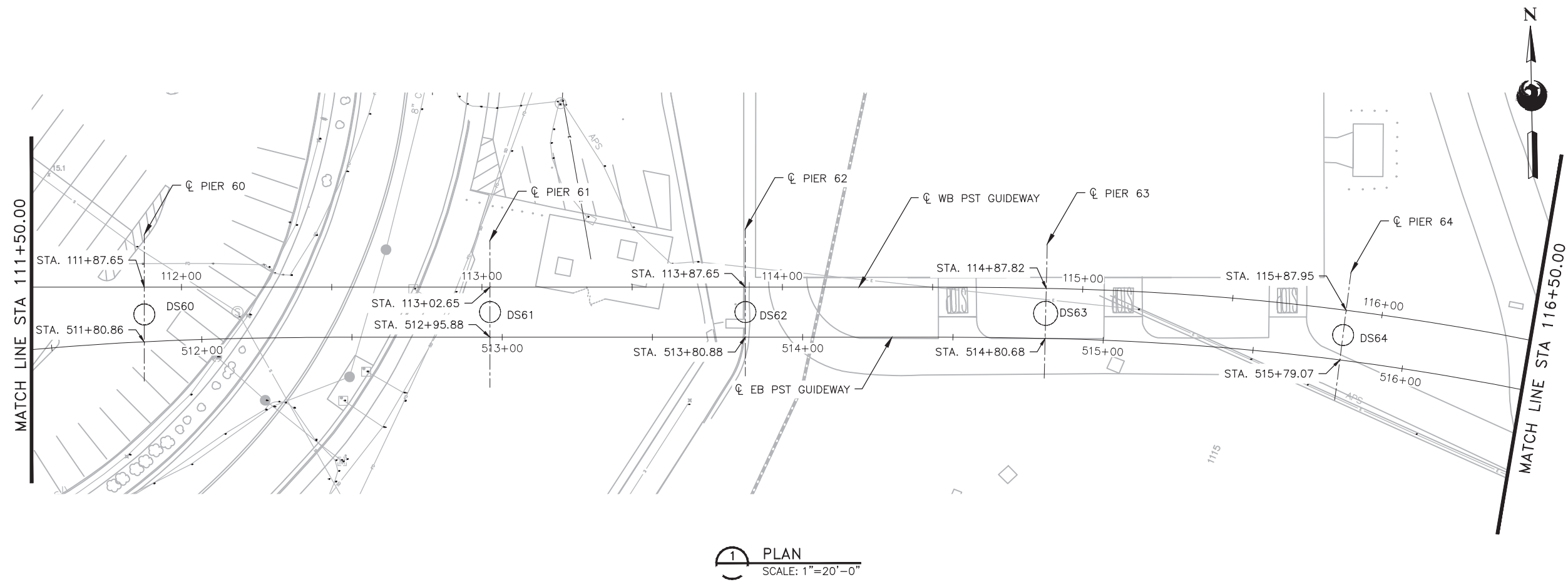
Designed by: MH/MM	JRR
Drawn by: JRR	SWS
Checked by: SWS	03/02/2018
Date: 03/02/2018	1"=20'
Dwg scale: 1"=20'	AV10000011
CIP No.: AV10000011	07-5204
KVA No.: 07-5204	

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 96+00.00 TO STA 99+51.57**

Package: Sheet Reference No:
B02-GWSG0512
V1 - 054 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0514.dwg jrojas

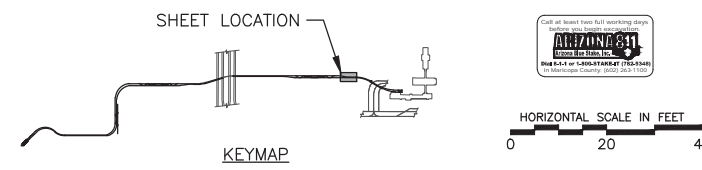


1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
**DS60	84	1116	1114	1038	76	111+87.65	9.10' Rt	886224.47	669752.87
**DS61	84	1116	1114	1041	73	113+02.65	8.33' Rt	886225.24	669867.87
**DS62	84	1116	1114	1041	73	113+87.65	8.33' Rt	886225.24	669952.87
**DS63	96	1116	1114	1034	80	114+87.82	8.33' Rt	886224.81	670052.85
**DS64	84	1115	1113	1040	73	115+87.95	8.33' Rt	886217.58	670151.80

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".
 ** USE SMOOTH SURFACE PERMANENT STEEL CASING AT THE TOP 30 FT OF SHAFT TO ACCOUNT FOR FUTURE EXCAVATION FOR CONSTRUCTION OF THE WEST TERMINAL AND RE-ALIGNED WB SKY HARBOR BLVD.

- NOTES:
- CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
 - REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
 - STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
 - NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
 - SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
03/02/18	ISSUED FOR CONSTRUCTION	03/02/18
12/15/17	SUBMITTED FOR REVIEW	12/15/17

PHX DVT BYR
 CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

Designed by: MH/MM
 Drawn by: JRR
 Checked by: SWS
 Date: 02/03/2018
 Dwg scale: 1"=20'
 CIP No.: AV10000011
 KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
 ELEVATED ALIGNMENT
 FOUNDATION PLAN
 STA 111+50.00 TO STA 116+50.00**

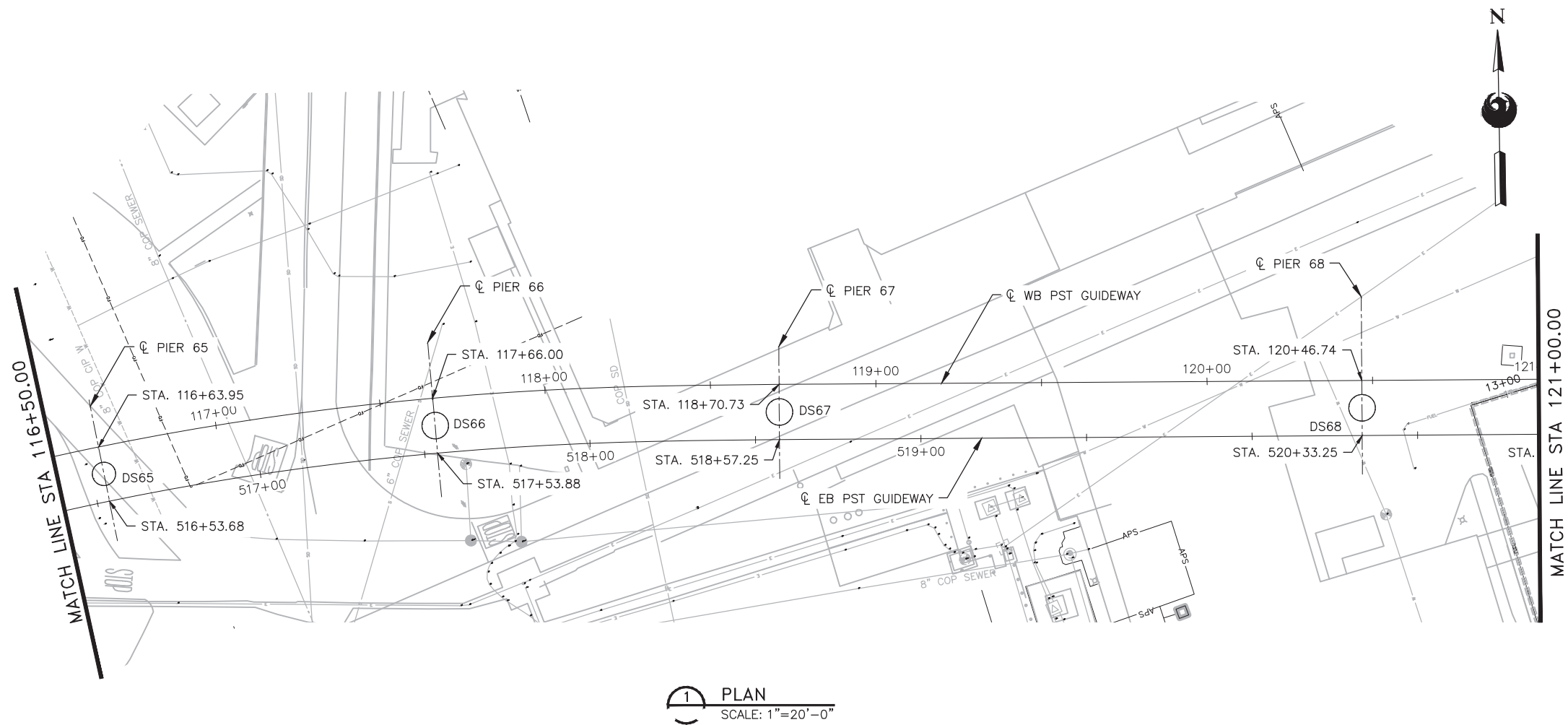
Package: Sheet Reference No:
B02-GWSG0514
 V1 - 056 of 083

Professional Engineer (Civil)
 2874 PALMVALLEY
 PHOENIX, AZ 85028
 EPL 158100100

Design Sub-Consultant

Design Consultant
Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jproja\0673541\AV10000011-S-2-GWSG0515.dwg jproja



1 PLAN
SCALE: 1"=20'-0"

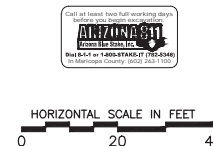
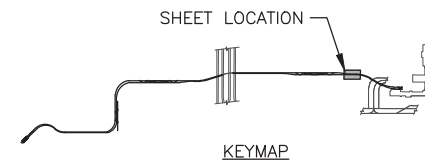
FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
**DS65	84	1115	1113	1040	73	116+63.95	8.33' Rt	886204.95	670226.01
**DS66	96	1116	1114	1034	80	117+66.00	8.33' Rt	886178.41	670323.54
**DS67	96	1110	1108	1028	80	118+70.73	8.33' Rt	886140.69	670420.48
DS68	96	1113	1111	1064	47	120+46.74	8.33' Rt	886071.53	670582.33

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".

** USE SMOOTH SURFACE PERMANENT STEEL CASING AT THE TOP 30 FT OF SHAFT TO ACCOUNT FOR FUTURE EXCAVATION FOR CONSTRUCTION OF THE WEST TERMINAL AND RE-ALIGNED WB SKY HARBOR BLVD.

NOTES:

- CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
- REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
- STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
- NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
- SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: MH/MM
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=20'
CIP No.: AV10000011
KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 116+50.00 TO STA 121+00.00**

Package: Sheet Reference No:
B02-GWSG0515
V1 - 057 of 083

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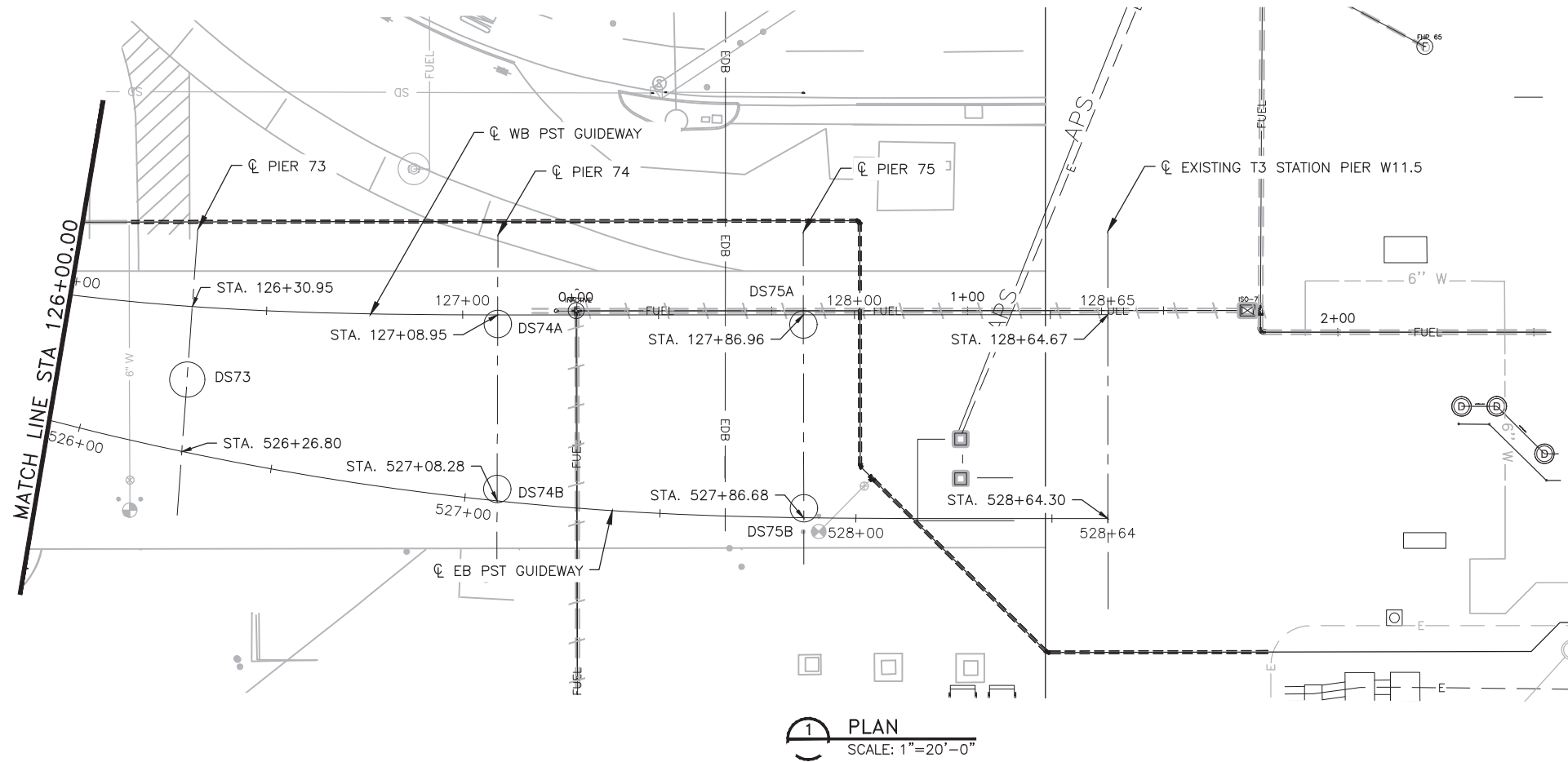
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

Professional Engineer (Civil)
28774
PALWALLI
PHOENIX, AZ 85016
E.P. 118, 0110, 0108

Design Sub-Consultant

Design Consultant
Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projas\0673541\AV10000011-S-2-GWSG0517.dwg jrojas



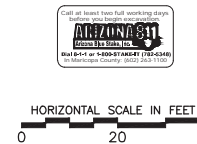
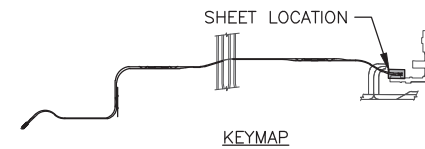
1 PLAN
SCALE: 1"=20'-0"

FOUNDATION SCHEDULE									
MARK	DRILLED SHAFT DIAMETER (IN)	* FINISHED GROUND ELEVATION	TOP OF DRILLED SHAFT ELEVATION	BOTTOM OF DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (ft)	STATION	OFFSET	NORTHING	EASTING
DS73	96	1117	1115	1065	50	126+30.95	18.54' Rt	885863.14	671131.20
DS74A	72	1118	1116	1079	37	127+08.95	2.33' Rt	885877.04	671210.49
DS74B	72	1118	1116	1079	37	127+08.86	45.17' Rt	885834.20	671210.27
DS75A	72	1118	1116	1077	39	127+86.96	2.33' Rt	885876.90	671288.51
DS75B	72	1118	1116	1077	39	127+87.04	49.46' Rt	885829.77	671288.51

* CONTRACTOR SHALL INFORM THE PROGRAM/PROJECT MANAGER IF ACTUAL GROUND ELEVATIONS DIFFER FROM THOSE SHOWN BY MORE THAN 6".

NOTES:

1. CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
2. REFER TO SHEET GWSG522 FOR FOUNDATION DETAILS.
3. STATIONS AND OFFSETS GIVEN ALONG WB PST GUIDEWAY.
4. NORTHINGS AND EASTINGS GIVEN TO CENTER POINTS OF DRILLED SHAFTS. THIS POINT ESTABLISHES THE WORKING POINT (WP) FOR EACH PIER.
5. SEE CIVIL PLANS FOR GUIDEWAY ALIGNMENT, CIVIL IMPROVEMENTS & UTILITY RELOCATION INFORMATION.



STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
ELEVATED ALIGNMENT
FOUNDATION PLAN
STA 126+00.00 TO STA 128+64.58

Package: Sheet Reference No:
B02-GWSG0517
V1 - 059 of 083

Designed by: MH/MM
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=20'
CIP No.: AV10000011
KVA No.: 07-5204

PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

PER CITY OF PHOENIX ORDINANCE G-4386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

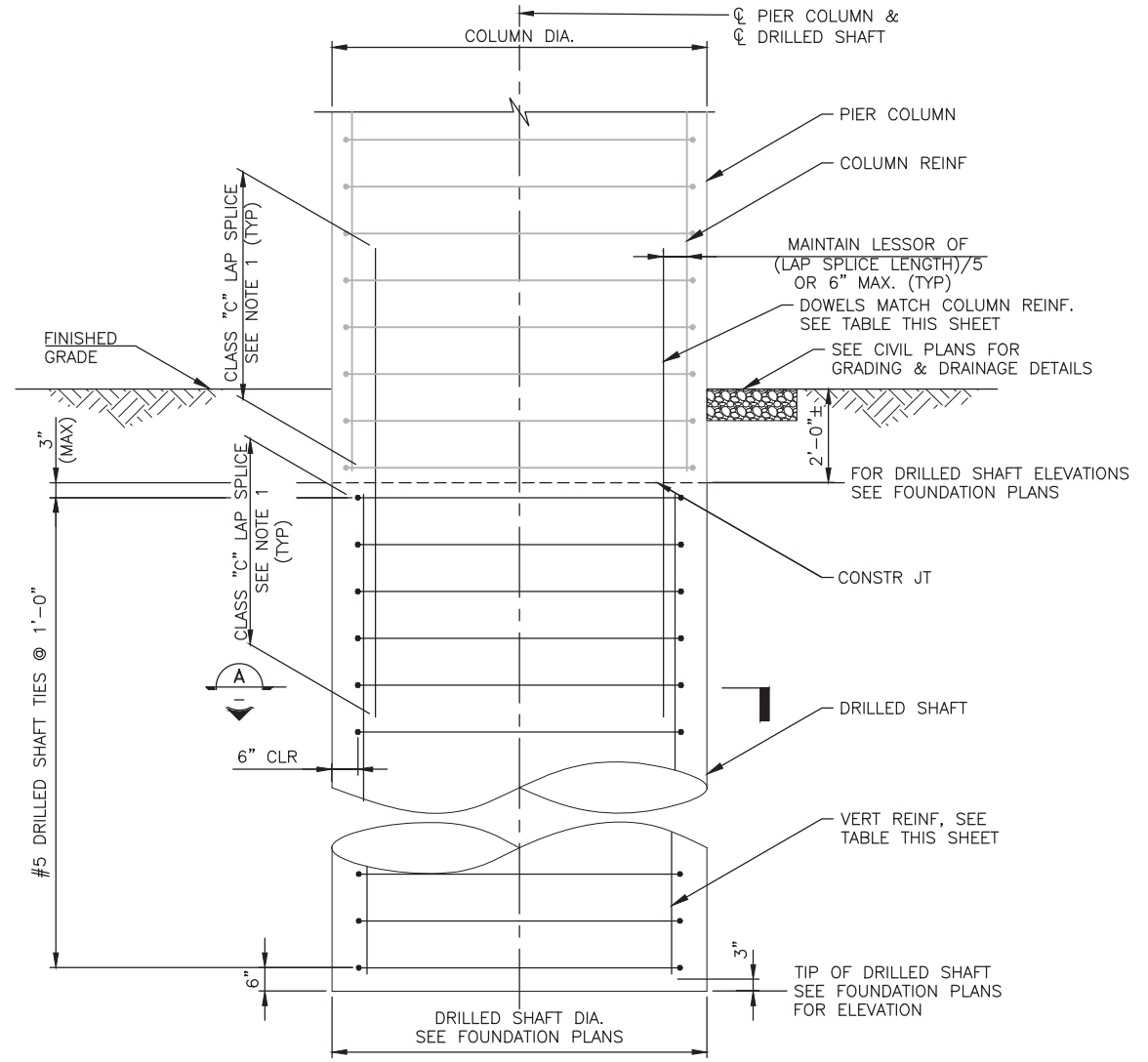
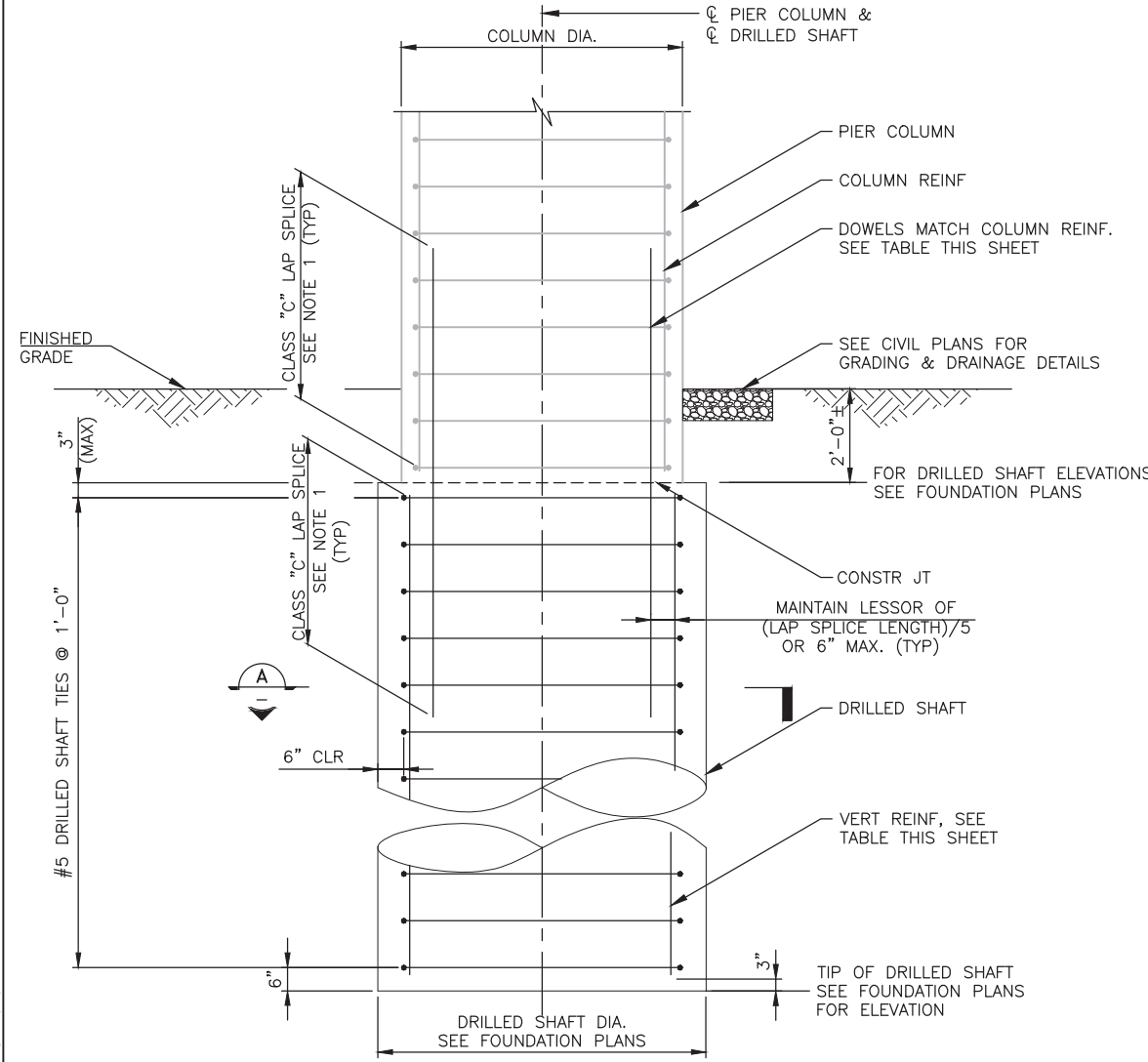
Design Sub-Consultant



Design Consultant



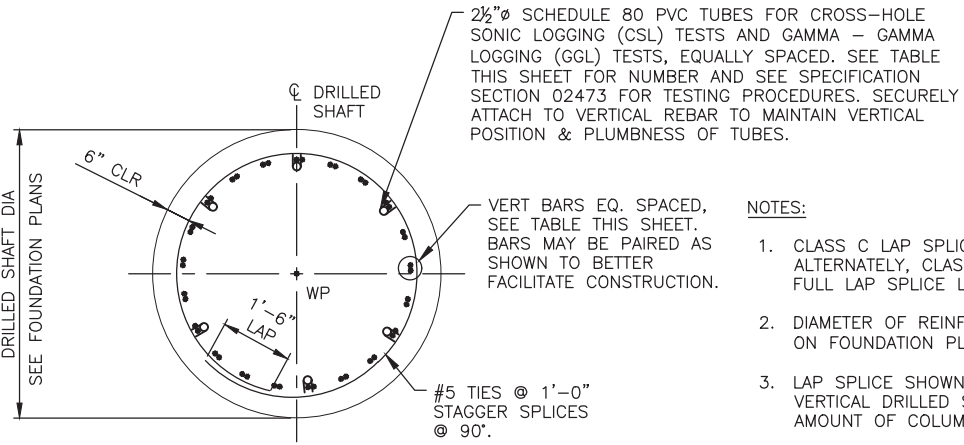
PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jrojas\0673541\AV10000011-S-2-GWSG0522.dwg jrojas



1 DRILLED SHAFT AND COLUMN REINFORCEMENT - UNEQUAL DIAMETERS
SCALE: 1/2" = 1'-0"

2 DRILLED SHAFT AND COLUMN REINFORCEMENT - EQUAL DIAMETERS
SCALE: 1/2" = 1'-0"

FOUNDATION/SUBSTRUCTURE REINFORCING TABLE					
PIER NUMBER	DRILLED SHAFT DIA (IN)	DRILLED SHAFT VERTICAL REBAR	COLUMN DIA. (IN)	COLUMN VERTICAL REBAR	NO. OF PVC TEST TUBES
1-6, 24-38, 74, 75	72	27-#11	60	20-#11	6
7	96	47-#11	84	56-#11	8
8	96	47-#11	84	48-#11	8
9, 68-72	96	47-#11	84	42-#11	8
10	96	47-#11	84	36-#11	8
11, 12 14-21, 40-44	84	36-#11	72	27-#11	7
13, 39	84	36-#11	72	36-#11	7
22	72	27-#11	60	24-#11	6
23	72	27-#11	60	32-#11	6
45, 46, 49-58, 60-62, 64, 65	84	36-#11	84	36-#11	7
47, 48, 59, 63, 66, 67,73	96	48-#11	96	48-#11	8
ABUT 1, 4	48	12-#11	-	-	4
ABUT 2, 3	48	2X9-#11	-	-	4



A TYPICAL DRILLED SHAFT SECTION
SCALE: 1/2" = 1'-0"

- NOTES:**
- CLASS C LAP SPLICE LENGTH SHALL BE PER BAR SPLICE TABLE ON SHEET GWSG0005. ALTERNATELY, CLASS B LAP SPLICE MAY BE USED IF ALTERNATE BARS ARE STAGGERED BY FULL LAP SPLICE LENGTH.
 - DIAMETER OF REINFORCED CONCRETE DRILLED SHAFTS AND COLUMNS SHALL BE AS SHOWN ON FOUNDATION PLANS, "FOUNDATION/SUBSTRUCTURE REINFORCING TABLE".
 - LAP SPLICE SHOWN AT TOP OF SHAFT MAY BE ELIMINATED IF DESIRED BY EXTENDING THE VERTICAL DRILLED SHAFT REINFORCEMENT ABOVE THE TOP OF SHAFT BY THE REQUIRED AMOUNT OF COLUMN LAP SPLICE INDICATED.
 - DRILLED SHAFTS IN VICINITY OF THE FUTURE WEST TERMINAL AND RELOCATED WB SKY HARBOR BLVD., AS DENOTED WITH DOUBLE ASTERISK (**) IN THE DRILLED SHAFT FOUNDATION SCHEDULES SHALL USE SMOOTH SURFACE PERMANENT STEEL CASING AT THE TOP 30 FT OF SHAFT TO ACCOUNT FOR FUTURE EXCAVATION AROUND THESE SHAFTS FOR THE TERMINAL CONSTRUCTION.

Design Sub-Consultant
Design Consultant
Gannett Fleming

ISSUED FOR CONSTRUCTION	03/02/18	DATE	12/15/17	NO.	REVISIONS / SUBMISSIONS	ISSUED FOR REVIEW	12/15/17	NO.	DATE

PER CITY OF PHOENIX ORDINANCE G-0386, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE REPRODUCED OR COPIED EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN

STAGE 2 DESIGN

500 S. 24TH STREET

PHOENIX, AZ 85034

Designed by: MH/MM	BAM	Checked by: SWS	Date: 03/02/2018	Dwg scale: AS SHOWN	CIP No.: AV10000011	KVA No.: 07-5204
Drawn by:						

STAGE 2 - B02 DESIGN SUBMISSION

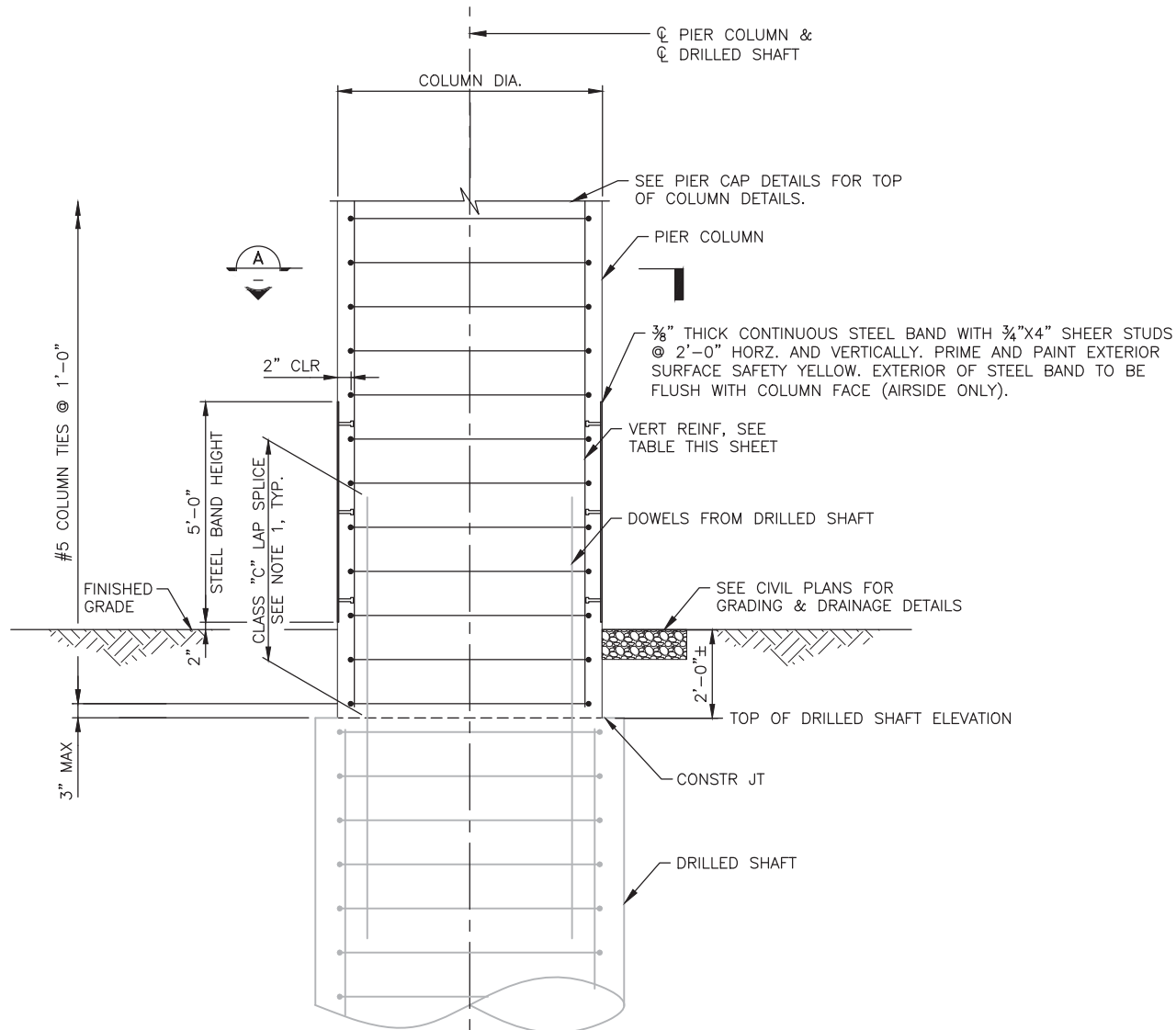
GUIDEWAY ALIGNMENT

ELEVATED ALIGNMENT

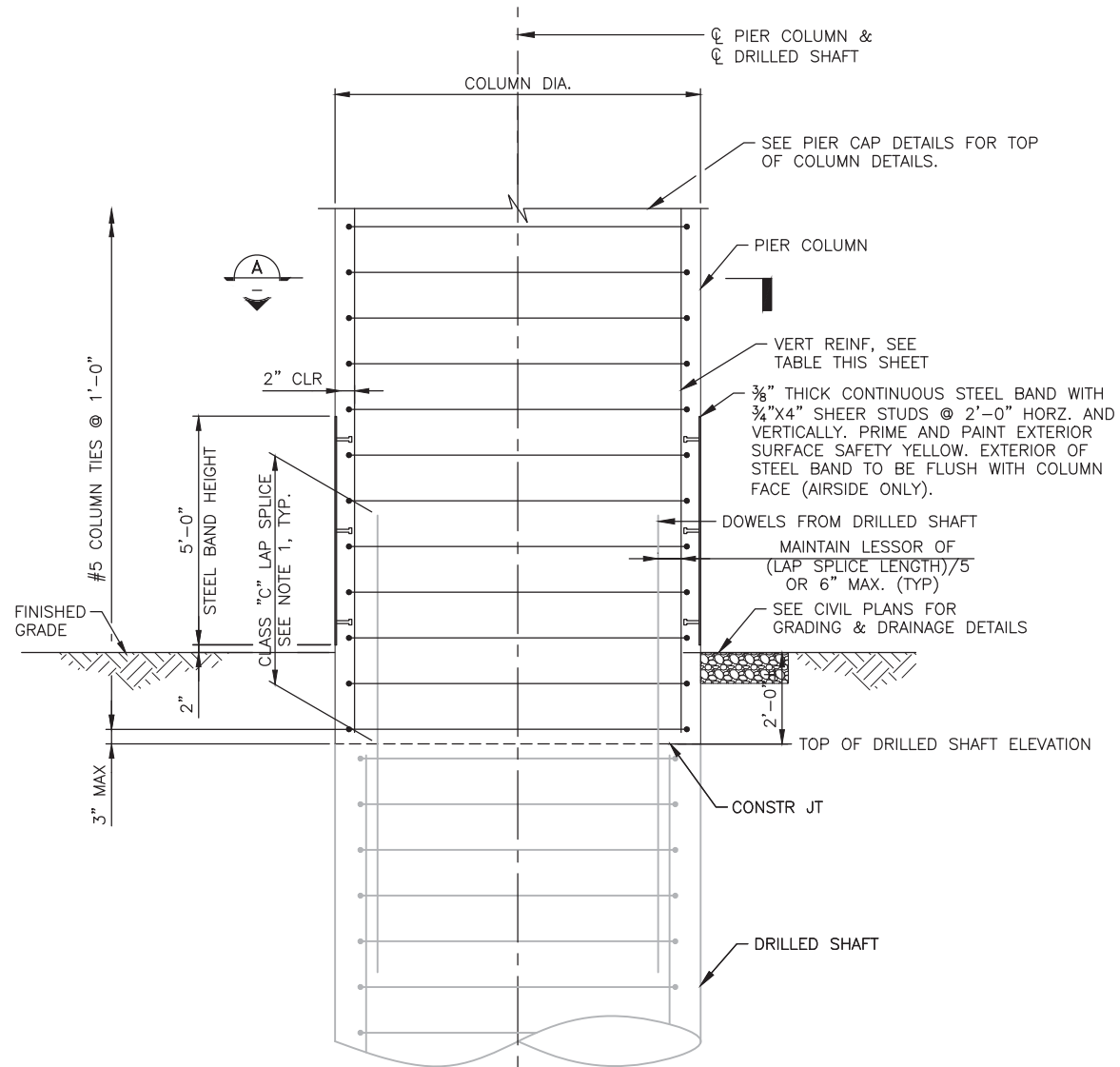
DRILLED SHAFT DETAILS

Package: Sheet Reference No:
B02-GWSG0522
V1 - 060 of 083

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\bmcore\d0673541\AV10000011-S-2-GWSG0801.dwg bmcore

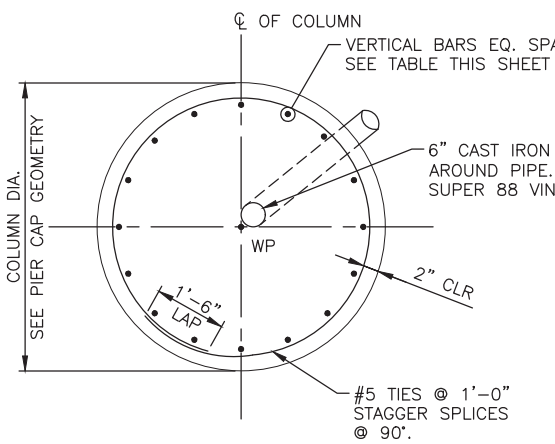


1 COLUMN REINFORCEMENT- UNEQUAL DIAMETERS
SCALE: 1/2" = 1'-0"



2 COLUMN REINFORCEMENT- EQUAL DIAMETERS
SCALE: 1/2" = 1'-0"

SUBSTRUCTURE REINFORCING TABLE		
PIER NUMBER	COLUMN DIA. (IN)	COLUMN VERTICAL REBAR
1-6, 24-38, 74, 75	60	20-#11
7	84	56-#11
8	84	48-#11
9, 68-72	84	42-#11
10	84	36-#11
11, 12 14-21, 40-44	72	27-#11
13, 39	72	36-#11
22	60	24-#11
23	60	32-#11
45, 46, 49-58, 60-62, 64, 65	84	36-#11
47, 48, 59, 63, 66, 67,73	96	48-#11



A TYPICAL COLUMN SECTION
SCALE: 1/2" = 1'-0"

FOR REFERENCE ONLY

NOTES:

- CLASS C LAP SPLICE LENGTH SHALL BE PER BAR SPLICE TABLE ON SHEET GWSG0005. ALTERNATELY, CLASS B LAP SPLICE MAY BE USED IF ALTERNATE BARS ARE STAGGERED BY FULL LAP SPLICE LENGTH.
- DIAMETER OF REINFORCED CONCRETE DRILLED SHAFTS AND COLUMNS SHALL BE AS SHOWN ON FOUNDATION PLANS, "FOUNDATION AND SUBSTRUCTURE SCHEDULE".
- PROVIDE 6"Ø DRAIN PIPES AS INDICATED ON PIER CAP GEOMETRY SHEETS. SEE CIVIL PLANS FOR TRENCH DRAIN AND DRAIN PIPE OUTFALL DETAILS. CONTRACTOR SHALL COORDINATE LOCATION OF DRAIN PIPE INSIDE THE COLUMN TO ACCEPT DRAIN PIPES FROM SUPERSTRUCTURE. VERTICAL PORTION OF DRAIN PIPE IN COLUMN SHALL BE 6" MIN CLEAR OF COLUMN LONGITUDINAL REINFORCEMENT.

<p>PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING</p> <p style="font-size: small;">Design Sub-Consultant</p>	<p style="font-size: x-small;">PER CITY OF PHOENIX ORDINANCE G-4398, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.</p>	<p style="font-size: x-small;">SUBMITTED FOR REVIEW / REVISIONS / SUBMISSIONS</p>	<p style="font-size: x-small;">DATE</p>	<p style="font-size: x-small;">12/15/17</p>	<p style="font-size: x-small;">DATE</p>
<p>PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034</p>					
<p style="font-size: x-small;">Designed by: MH/MM Drawn by: BAM Checked by: SWS Date: 03/02/2018 Dwg scale: 1/2" = 1'-0" CIP No.: AV10000011 KIVA No.: 07-5204</p>	<p style="font-size: x-small;">STAGE 2 - B02 DESIGN SUBMISSION</p> <p style="font-size: x-small;">GUIDEWAY ELEVATED ALIGNMENT COLUMN DETAILS</p>				
<p>Package: Sheet Reference No: B02-GWSG0801 V1 - 061 of 083</p>					



GENERAL NOTES – TAXIWAYS "U" & "V" UNDERCROSSINGS

A. SPECIFICATIONS

- A1. CONSTRUCTION: PHX SKY TRAIN SPECIFICATIONS
- A2. DESIGN: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", 17TH EDITION, 2002.

B. LOADINGS

- B1. REINFORCED CONCRETE DEAD LOAD: 150 pcf
- UTILITIES: 600 plf (PER BRIDGE)
- FUTURE TAXIWAY FILL (0 FT TO 10 FT MAX): 0 PSF TO 1200 PSF
- AIRCRAFT LOADS:
 - AIRCRAFT LOADING IS BASED ON AIRBUS A380 CONFIGURATION FOR A MAXIMUM GROSS WEIGHT OF 1,272,100 LBS. PLUS 30% IMPACT AND BRAKING FORCE OF 0.8G.
- SEISMIC:
 - PERFORMANCE CATEGORY: A (AASHTO)(ACC=0.039)
- WINDS:
 - BASE WIND VELOCITY: 100 MPH (AASHTO)
- TEMPERATURE:
 - MEAN: 70°
 - RISE: 30°
 - FALL: 40°

B2. FACILITIES ACCESS ROAD BRIDGE IS DESIGNED FOR AASHTO HS25 LIVE LOAD.

C. MATERIALS

- C1. CONCRETE (MIN. 28-DAY STRENGTHS):
 - CONCRETE DECK SLAB (CLASS AAA) $f'c = 6,000$ psi
 - PIER CAPS, COLUMNS AND FOOTINGS (CLASS AA) $f'c = 4,000$ psi
 - ABUTMENTS AND FOOTINGS (CLASS AA) $f'c = 4,000$ psi
 - PRECAST CONCRETE BEAMS (CLASS AAA) $f'c = 6,000$ psi
- C2. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4", UNLESS SHOWN OTHERWISE.
- C3. CONSTRUCTION JOINTS SHALL BE MADE ONLY WITH THE APPROVAL OF THE PROGRAM/PROJECT MANAGER OR AS INDICATED ON THE PLANS.
- C4. REINFORCING STEEL:
 - ALL REINFORCING STEEL SHALL BE UNCOATED GRADE 60 CONFORMING TO ASTM A615, $f_s = 24,000$ PSI
- C5. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER FOR PRIMARY REINFORCEMENT, 1 1/2" FOR STIRRUPS, AND 3" COVER FOR UNIFORM SURFACES CAST AGAINST THE GROUND, UNLESS OTHERWISE NOTED.
- C6. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS SHALL BE TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
- C7. FIELD ADJUSTMENTS OF REINFORCING STEEL SHALL BE MADE ONLY WITH APPROVAL OF THE PROGRAM/PROJECT MANAGER. CUT BARS MUST HAVE ACCOMPANYING BARS OF THE SAME SIZE WITH THE APPROPRIATE LAP ACROSS THE CUT LOCATION. THE SHOP DRAWINGS SHALL INCLUDE ADDITIONS OR REARRANGEMENT OF REINFORCING STEEL FROM THAT SHOWN ON THE PLANS.
- C8. BAR LAPS, HOOKS AND BENDS SHALL HAVE A MINIMUM LENGTH IN ACCORDANCE WITH AASHTO, OR AS SHOWN ON THE PLANS. SEE SPLICE TABLE SHEET MSSU003 FOR TYPICAL LAP SPLICES AND EMBEDMENT LENGTHS.

D. FOUNDATION NOTES

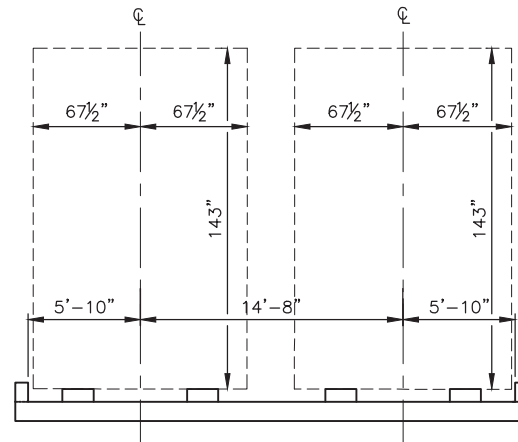
- D1. FOUNDATIONS DESIGNED IN ACCORDANCE WITH "GEOTECHNICAL DESIGN MEMORANDUM – PHX SKY TRAIN STAGE 2 – AT GRADE GUIDEWAY, ABUTMENT 3 TO ABUTMENT 4 AND TAXIWAY U AND V UNDERCROSSING BRIDGES" BY GANNETT FLEMING, DATED 1/24/2018.
- D2. ESTIMATES OF GROUND WATER ELEVATIONS ARE PROVIDED IN THE GEOTECHNICAL DESIGN MEMORANDUM.

E. DRAINAGE

E1. DRAINAGE PIPES AND OUTFALLS SHALL BE AS LOCATED AND DETAILED ON THE PLANS AND SPECIFICATIONS.

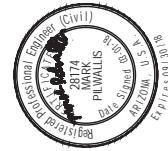
F. MISCELLANEOUS NOTES

- F1. FALSEWORK SHORING SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 601-3.02 OF THE ADOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," 2008, AND THE AASHTO "GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS," 2017.
- F2. CAST-IN-PLACE STRUCTURAL ELEMENTS SHALL BE ADEQUATELY SUPPORTED DURING CONSTRUCTION TO ENSURE STABILITY.
- F3. ALL DIMENSIONS SHOWN ON THE PLANS ARE MEASURED HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED. DIMENSIONS SHALL NOT BE MEASURED FROM THE PLANS.
- F4. VERIFY ALL DIMENSIONS AND GEOMETRY OF EXISTING STRUCTURES IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.
- F5. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING EXCAVATION. ANY AND ALL DAMAGE WHICH MIGHT RESULT FROM FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR
- F6. CONTRACTOR SHALL EXERCISE CARE DURING THE EXCAVATION AND CONSTRUCTION FOR NEW STRUCTURES TO AVOID DAMAGE TO EXISTING STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MEANS AND METHODS REQUIRED TO FACILITATE CONSTRUCTION OF THE WORK AND ENSURE SAFETY, STABILITY AND INTEGRITY OF ADJACENT STRUCTURES AND FACILITIES.



2 VEHICLE DYNAMIC ENVELOPE
SCALE: NTS

NOTE: CONTRACTOR SHALL ENSURE THAT ALL CONCRETE CURBS, CONCRETE PARAPET WALLS AND ORNAMENTAL SECURITY FENCES DO NOT ENCR OACH INTO VEHICLE DYNAMIC ENVELOPE.



Design Sub-Consultant



Design Consultant

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

ISSUED FOR CONSTRUCTION	03/02/18
SUBMITTED FOR REVIEW	12/15/17
REVISIONS / SUBMISSIONS	DATE
NO.	

PHX AVIATION DEPARTMENT
CITY OF PHOENIX

PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB	JRR
Drawn by:	SWS
Checked by:	03/02/2018
Date:	NTS
Dwg scale:	AV10000011
CIP No.:	07-5204
KVA No.:	

STAGE 2 – B02 DESIGN SUBMISSION

GUIDEWAY
TAXIWAYS "U" & "V" UNDERCROSSING
GENERAL NOTES 1

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projcs\40673541\AV10000011-S-2-MSSU0001.dwg jrojs

GENERAL NOTES

G. SPECIAL STRUCTURAL INSPECTION

- G1. SPECIAL INSPECTION IS REQUIRED OF MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.
- G2. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: IN ACCORDANCE WITH IBC 2012 AS ADOPTED AND AMENDED BY THE CITY OF PHOENIX.

A. INSPECTION OF CONCRETE CONSTRUCTION

INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
STRUCTURAL CAST-IN-PLACE CONCRETE	REINFORCING STEEL AND PLACEMENT	PERIODIC	(1) (3)
	VERIFICATION OF MIX DESIGN	PERIODIC	(1) (3)
	SAMPLES TAKEN FOR STRENGTH, SLUMP, AIR CONTENT, AND CONCRETE TEMPERATURE	CONTINUOUS	(2) (3)
	INSPECTION OF CONCRETE PLACEMENT	CONTINUOUS	(2) (3)
	MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	(1) (3)
	FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS	PERIODIC	(1) (3)
	INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING CONCRETE PLACEMENT	CONTINUOUS	(2) (3)
STRUCTURAL PRE-STRESSED CONCRETE	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	PERIODIC	(1) (3)
	VERIFYING USE OF REQUIRED DESIGN MIX	PERIODIC	(1) (3)
	INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	(2) (3)
	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	(1) (3)
	APPLICATION OF PRE-STRESSING FORCE	CONTINUOUS	(2) (3)
	ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC	(1) (3)
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC	(1) (3)

B. INSPECTION OF STEEL CONSTRUCTION

INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
STRUCTURAL WELDING	COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	CONTINUOUS	(2) (3)
	MULTIPASS FILLET WELDS	CONTINUOUS	(2) (3)
	SINGLE PASS FILLET WELDS > 5/16"	CONTINUOUS	(2) (3)
	SINGLE PASS FILLET WELDS < OR = 5/16"	PERIODIC	(1) (3)
ANCHOR BOLTS INSTALLED IN CONCRETE	MATERIAL IDENTIFICATION MARKINGS	PERIODIC	(1) (3)
	SIZE, LOCATION AND PLACEMENT	PERIODIC	(1) (3)

C. INSPECTION OF SOILS

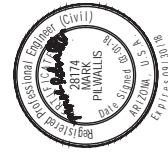
INSPECTION ITEMS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
SOIL PREPARATIONS AND EXCAVATIONS	---	---	(3) (7)

D. INSPECTION OF POST - INSTALLED ANCHORS

POST - INSTALLED ANCHORS	INSPECTION TASK	FREQUENCY OF INSPECTION	COMMENTS
POST - INSTALLED ANCHORS	VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS	(2) (3)
	HOLE DEPTH AND CLEANLINESS	CONTINUOUS	(2) (3)
	PRODUCT DESCRIPTION INCLUDING NAME, ROD TYPE, DIAMETER AND LENGTH	CONTINUOUS	(2) (3)
	ADHESIVE EXPIRATION DATE	CONTINUOUS	(2) (3)
	PROPER INSTALLATION TECHNIQUE	PERIODIC	(1) (3)

COMMENTS:

1. PERIODIC SPECIAL INSPECTION: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF WORK.
2. CONTINUOUS SPECIAL INSPECTION: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.(2006 IBC 1702.1).
3. ITEMS NOT SHOWN MAY REQUIRE CONTINUOUS OR PERIODIC SPECIAL STRUCTURAL INSPECTION AT THE DISCRETION OF THE PROGRAM/PROJECT MANAGER. ITEMS LISTED MAY REQUIRE ALTERNATE FREQUENCIES OF INSPECTION OTHER THAN SHOWN UNDER DIRECTION OF THE PROGRAM/PROJECT MANAGER.
4. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTIFICATION TO THE ENGINEER FOR THE SCHEDULING OF SPECIAL STRUCTURAL INSPECTIONS.
5. SHOP FABRICATION WORK IS SUBJECT TO SPECIAL INSPECTION UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTION.
6. WELDING OF REINFORCING STEEL IS NOT ACCEPTABLE UNLESS DIRECTED BY THE PROGRAM/PROJECT MANAGER.
7. VERIFY SOILS INSPECTION REQUIREMENTS WITH PROGRAM/PROJECT MANAGER AS OUTLINED IN SOILS REPORT AND PROJECT SPECIFICATIONS.



Design Sub-Consultant

Design Consultant



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PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: NTS	CIP No.: AV10000011	KIVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY TAXIWAYS "U" & "V" UNDERCROSSING GENERAL NOTES 2

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\projcs\40673541\AV10000011-S-2-MSSU0002.dwg jrojas

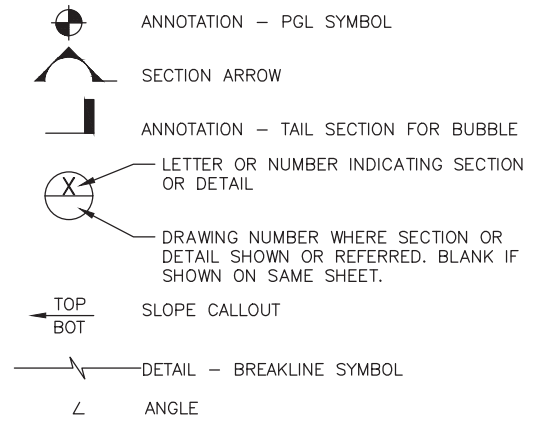
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ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION
APPROX	APPROXIMATE
APS	ARIZONA PUBLIC SERVICE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BF	BACK FACE
BM	BENCHMARK, BEAM
BOT	BOTTOM
BRG	BEARING
C-C	CENTER TO CENTER
CF	CUBIC FEET
CIP	CAST IN PLACE
CJP	CONSTRUCTION JOINT, CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR, CLEARANCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
COP	CITY OF PHOENIX
CTR	CENTER
CY	CUBIC YARD
DEMO	DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DTL	DETAIL
(E)	EXISTING
E	EAST
EF	EACH FACE
EA	EACH
EB	EASTBOUND
ELEV	ELEVATION
EQ	EQUAL
EXST	EXISTING
ES	EACH SIDE
FND	FOUNDATION
FO	FIBER OPTICS
FTG	FOOTING
FS	FAR SIDE
FF	FRONT FACE
GA	GAUGE
GAL	GALLON
GIR	GIRDER
HORZ	HORIZONTAL
LF	LINEAR FEET
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LOC	LOCATE, LOCATION, LIMIT OF CONSTRUCTION
LONG	LONGITUDINAL
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MAINT	MAINTENANCE
MAX	MAXIMUM
MED	MEDIUM
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NB	NORTHBOUND
NE	NORTHEAST
NF	NEAR FACE
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
NW	NORTHWEST
N	NORTH
OC	ON CENTER
OD	OUTSIDE DIAMETER, OUTSIDE DIMENSION
OPS	OPERATIONS
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
O-O	OUT TO OUT
PC	POINT OF CURVATURE, PRECAST, PRECAST CONCRETE
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
P/C	PRECAST
PGL	PROFILE GRADE LINE
PH	PHASE
PI	POINT OF INTERSECTION
P/PM	PROGRAM/PROJECT MANAGER
POC	POINT OF REVERSE CURVE
PROP	PROPOSED
P/S	PRESTRESSED
PSI	POUNDS PER SQUARE INCH

PSHIA	PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
PST	PHX SKY TRAIN
PT	POINT, POINT OF TANGENCY
P/T	POST-TENSIONED
P	PLATE
PVC	POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
QTY	QUANTITY
R	RADIUS
RD	ROAD
RDWY	ROADWAY
REBAR	CONCRETE REINFORCING BAR
REINF	REINFORCE, REINFORCED, REINFORCING, REINFORCEMENT
ROW	RIGHT OF WAY
RW	RETAINING WALL
S	SLOPE, SOUTH
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCH	SCHEDULE
SE	SOUTHEAST, SUPERELEVATION
SF	SQUARE FOOT, SQUARE FEET
SHB	SKY HARBOR BOULEVARD
SHLD	SHOULDER
SHT	SHEET
SPA	SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SR	STATE ROUTE
SRP	SALT RIVER PROJECT
ST	STREET
STA	STATION, STATIONING
STD	STANDARD
SWG	SOUTHWEST GAS
SY	SQUARE YARD
TAN	TANGENT
TBD	TO BE DETERMINED
TC	TANGENT TO CURVE
TOC	TOP OF CONCRETE
TOPO	TOPOGRAPHY
TP	TURNING POINT
TS	TANGENT TO SPIRAL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
USGS	UNITED STATES GEOLOGICAL SURVEY
UTIL	UTILITY
VC	VERTICAL CURVE
VERT	VERTICAL
W	WEST, WIDE, WIDTH
WB	WESTBOUND
WP	WORKING POINT

LEGEND



BAR SPLICE TABLE (BASED ON f'c = 4000 psi)

BAR SIZE	MINIMUM LAP SPLICE LENGTH (IN)				MINIMUM EMBEDMENT LENGTH (IN)	
	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	OTHER BAR
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR		
#3	17	12	23	16	13	10
#4	22	16	29	21	17	12
#5	28	20	36	26	22	15
#6	33	24	43	31	26	18
#7	42	30	55	39	32	23
#8	55	39	72	51	42	30
#9	70	50	91	65	54	38
#10	88	63	115	82	68	49
#11	108	77	141	101	83	60

BAR SPLICE TABLE (BASED ON f'c = 6000 psi)

BAR SIZE	MINIMUM LAP SPLICE LENGTH (IN)				MINIMUM EMBEDMENT LENGTH (IN)	
	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	OTHER BAR
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR		
#3	17	12	23	16	13	12
#4	23	16	29	21	17	12
#5	28	20	36	26	21	15
#6	34	24	45	31	26	18
#7	39	28	51	36	30	21
#8	45	33	58	43	34	25
#9	56	41	74	53	43	31
#10	72	51	94	67	55	39
#11	88	63	114	82	67	48

SPLICE TABLE NOTES:

1. REINFORCEMENT STEEL LAP SPLICES AND EMBEDMENTS SHOWN IN THESE TABLES APPLY FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE. FOR OTHER CONCRETE STRENGTHS, PROVIDE LAP AND EMBEDMENT LENGTHS PER AASHTO.
2. TOP HORIZONTAL OR NEARLY HORIZONTAL REINFORCEMENT HAVE MORE THAN 12" OF CONCRETE CAST BELOW THE REINFORCEMENT.
3. INCREASE LAP LENGTHS BY 25% FOR 3-BAR BUNDLE SCENARIOS.
4. IF MORE THAN 50% OF TOP OR BOTTOM BARS IN ONE DIRECTION ARE SPLICED WITHIN THE REQUIRED LAP LENGTH, THEN CLASS C SPLICES SHALL BE USED, OTHERWISE CLASS B SPLICES ARE ACCEPTABLE.

Design Sub-Consultant
Gannett Fleming
Design Consultant

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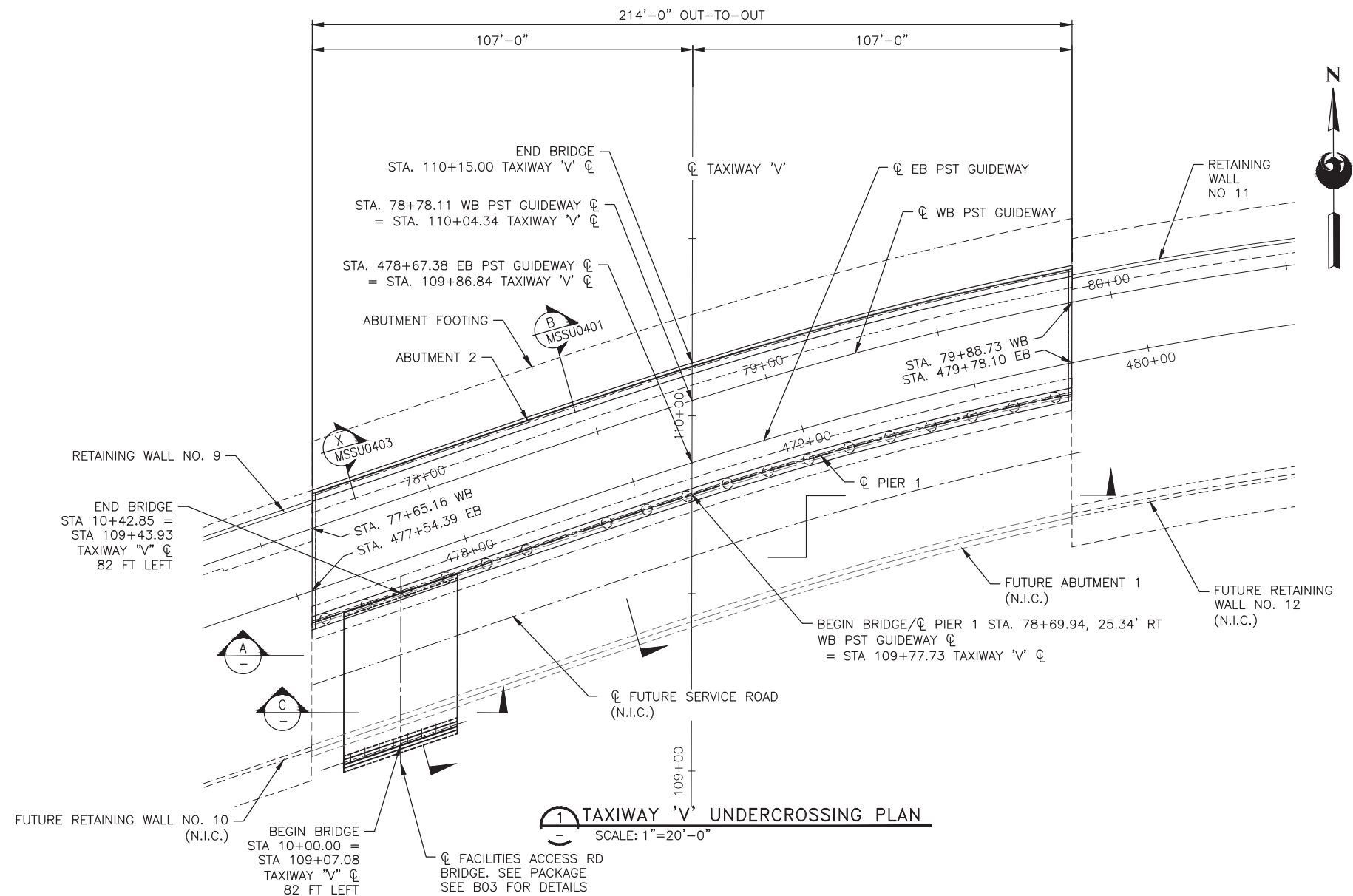
NO.	REVISIONS / SUBMISSIONS	ISSUED FOR CONSTRUCTION	DATE
		03/02/18	12/15/17

CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

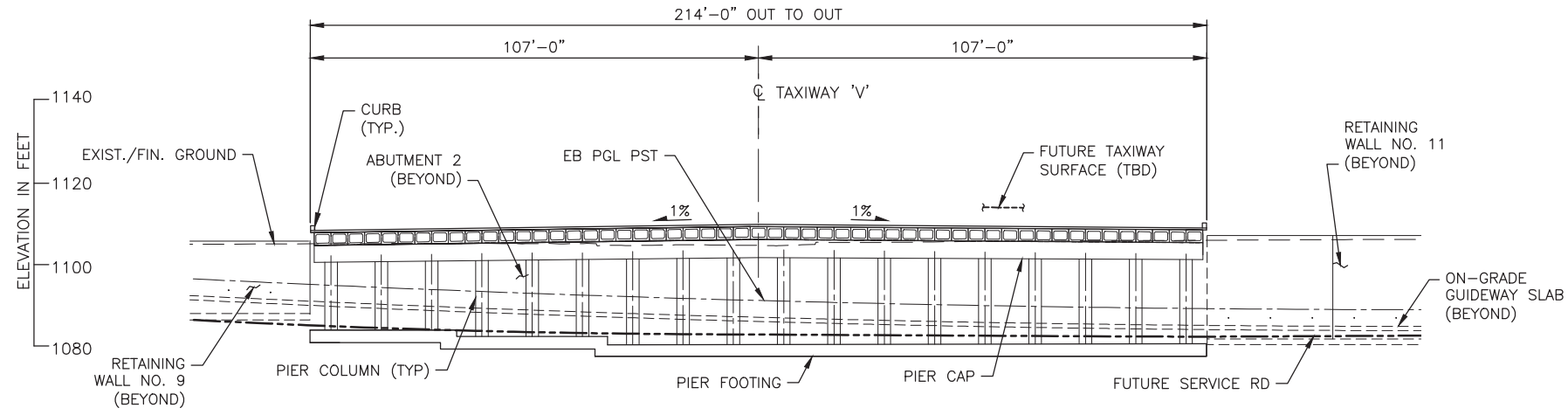
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STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
 TAXIWAYS "U" & "V" UNDERCROSSING
 GENERAL NOTES 3**

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\proj\40673541\AV10000011-S-2-MSSU0201.dwg jrojas

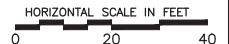
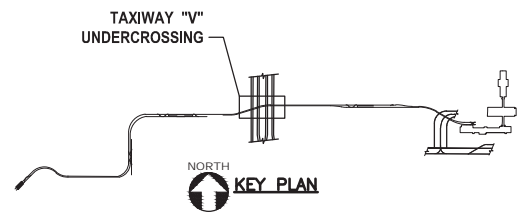


TAXIWAY 'V' UNDERCROSSING PLAN
SCALE: 1"=20'-0"



TAXIWAY 'V' UNDERCROSSING SECTION
SCALE: 1"=20'-0"

NOTE: FACILITIES ACCESS RD.
NOT SHOWN FOR CLARITY.



NOTES:
1. FOR ALIGNMENT DATA, SEE CIVIL PLANS.

Professional Engineer (Civil)
2017
MARK
PLUMMER
No. 0000000000
Expires 01/31/20
Design Sub-Consultant
Gannett Fleming
Design Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

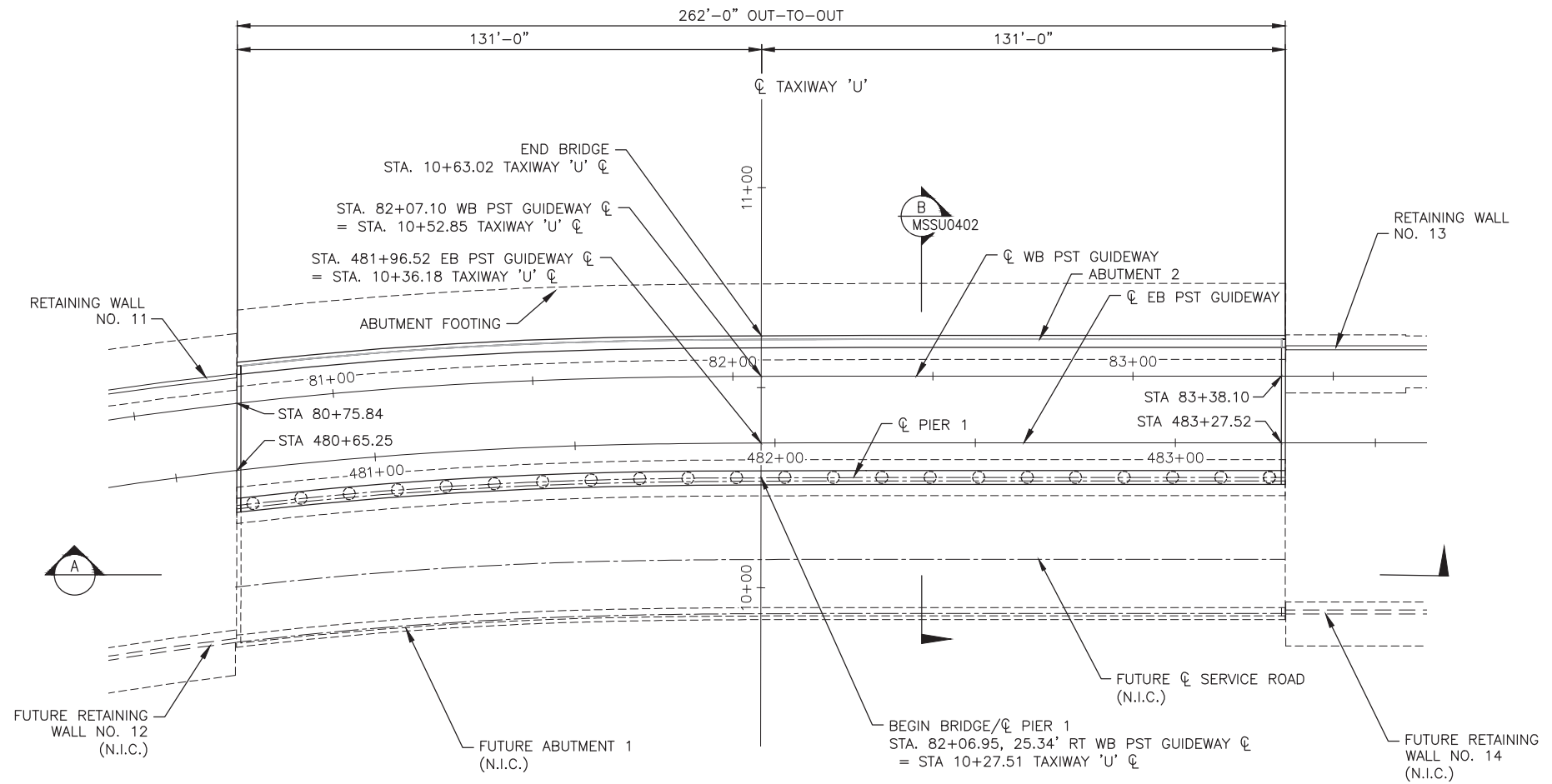
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Drawn by:	JRR
Checked by:	SWS
Date:	03/02/2018
Dwg scale:	1"=20'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

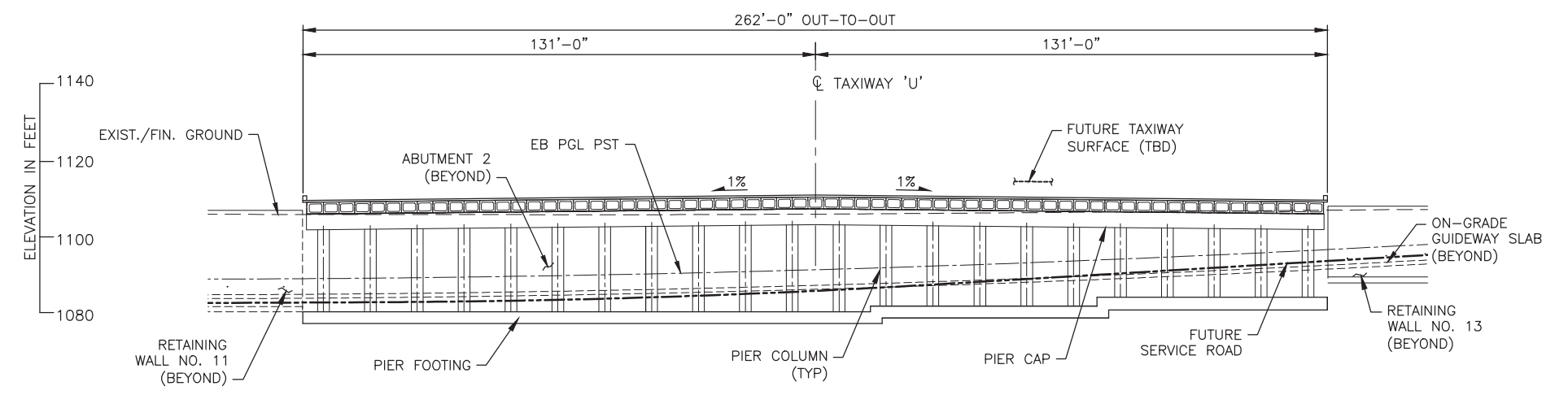
**GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
TAXIWAY 'V'
PLAN & SECTION**

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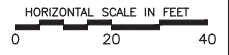
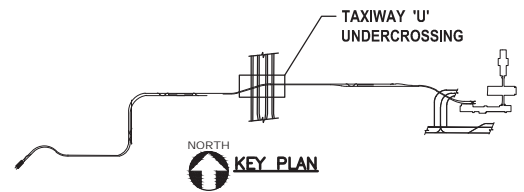
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1 TAXIWAY 'U' UNDERCROSSING PLAN
SCALE: 1"=20'-0"



A TAXIWAY 'U' UNDERCROSSING SECTION
SCALE: 1"=20'-0"



NOTES:
1. FOR ALIGNMENT DATA, SEE CIVIL PLANS.

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
TAXIWAY 'U'
PLAN & SECTION**

Package: Sheet Reference No:
B02-MSSU0202
V1 - 066 of 083

PHX AVIATION
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=20'	CIP No.: AV10000011	KIVA No.: 07-5204
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

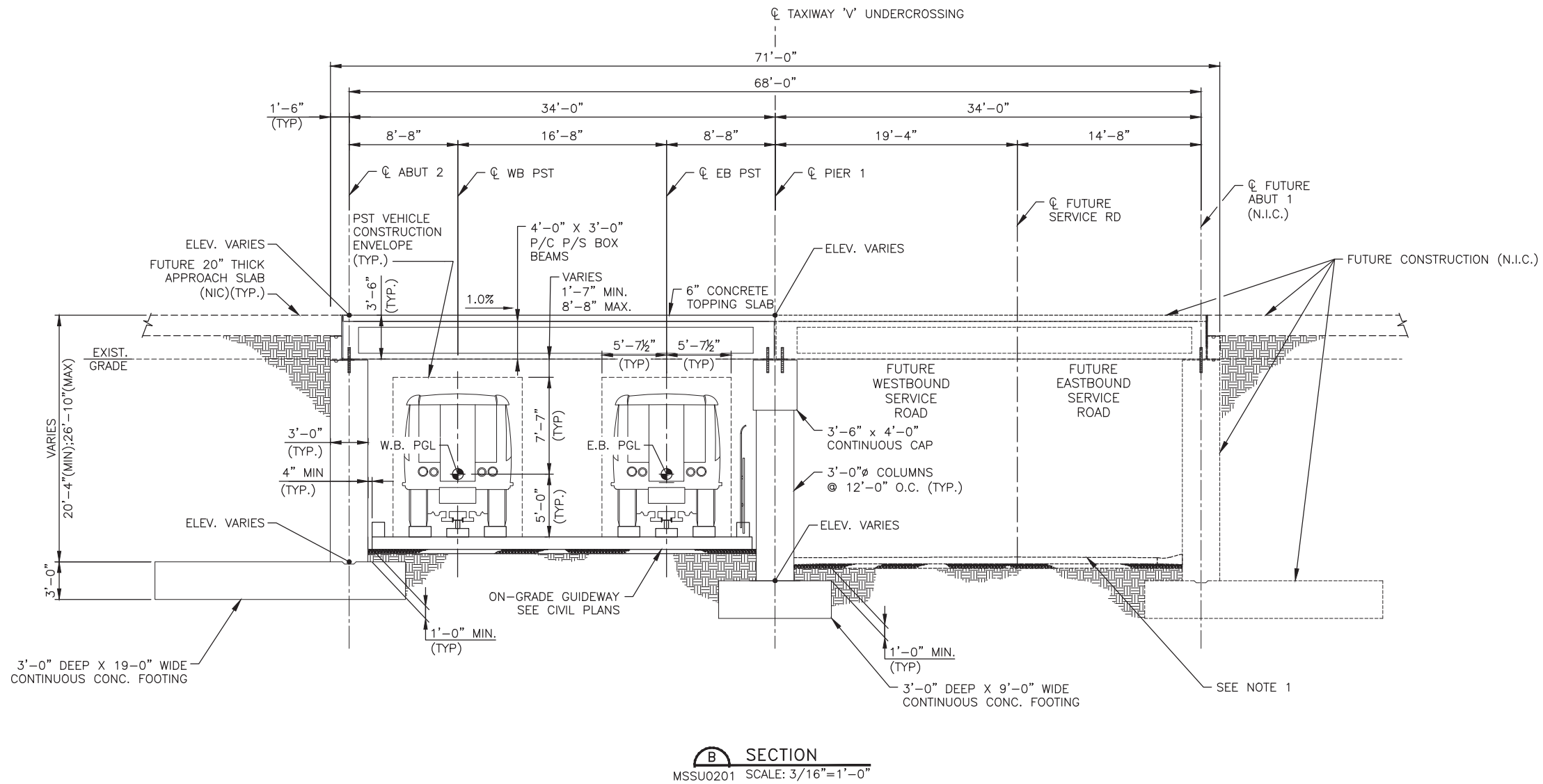
Professional Engineer (Civil)
2017
PLATE NO. 4810
EXPIRES 01/31/20

Design Sub-Consultant

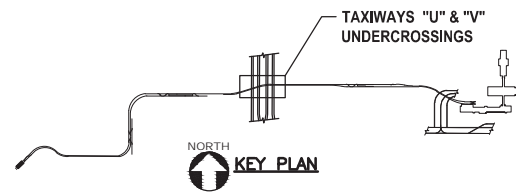
Design Consultant

Gannett Fleming

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projas\0673541\AV10000011-S-2-MSSU0401.dwg jrojas



NOTES:
1. FOR SITE CONFIGURATION OF INTERIM CONDITIONS, SEE CIVIL PLANS.



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PHX DVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: PB	JRR
Drawn by: JRR	
Checked by: SWS	
Date: 03/02/2018	
Dwg scale: 3/16" = 1'-0"	
CIP No.: AV10000011	
KVA No.: 07-S204	

STAGE 2 - B02 DESIGN SUBMISSION
**GUIDEWAY
TAXIWAY "U" & "V" UNDERCROSSING
TAXIWAY "V" TYPICAL SECTION**

Package: Sheet Reference No:
B02-MSSU0401
V1 - 067 of 083

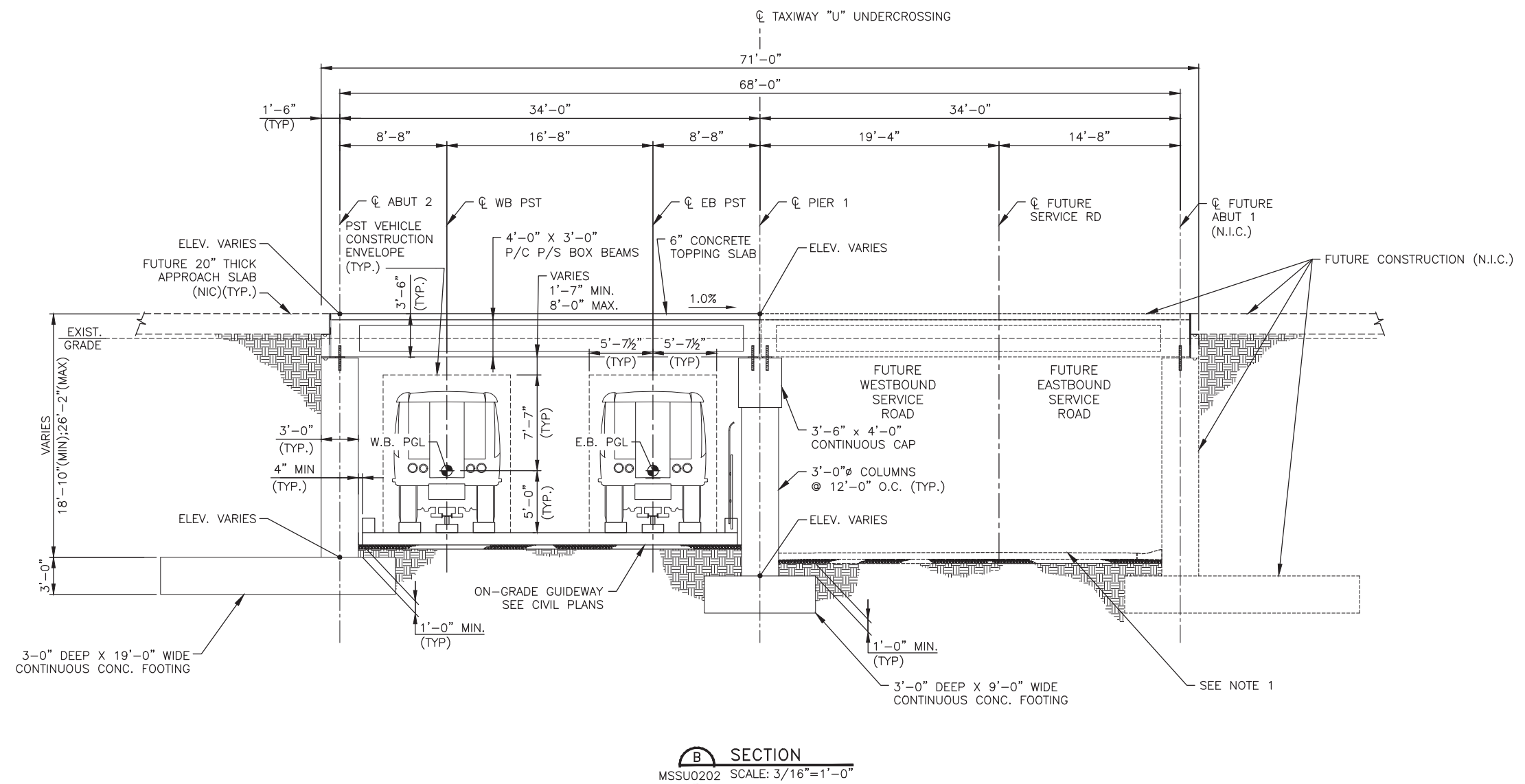


Design Sub-Consultant

Design Consultant
Gannett Fleming

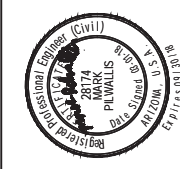
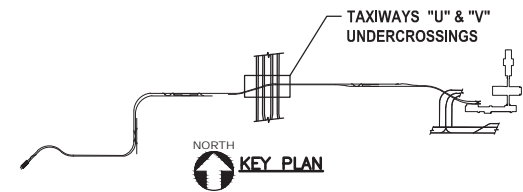
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03/02/18	ISSUED FOR CONSTRUCTION	03/02/18
12/15/17	SUBMITTED FOR REVIEW	12/15/17

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B SECTION
MSSU0202 SCALE: 3/16"=1'-0"

NOTES:
1. FOR SITE CONFIGURATION OF INTERIM CONDITIONS, SEE CIVIL PLANS.



Design Sub-Consultant



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NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	12/15/17
	NO.	

PHX Sky Train
CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

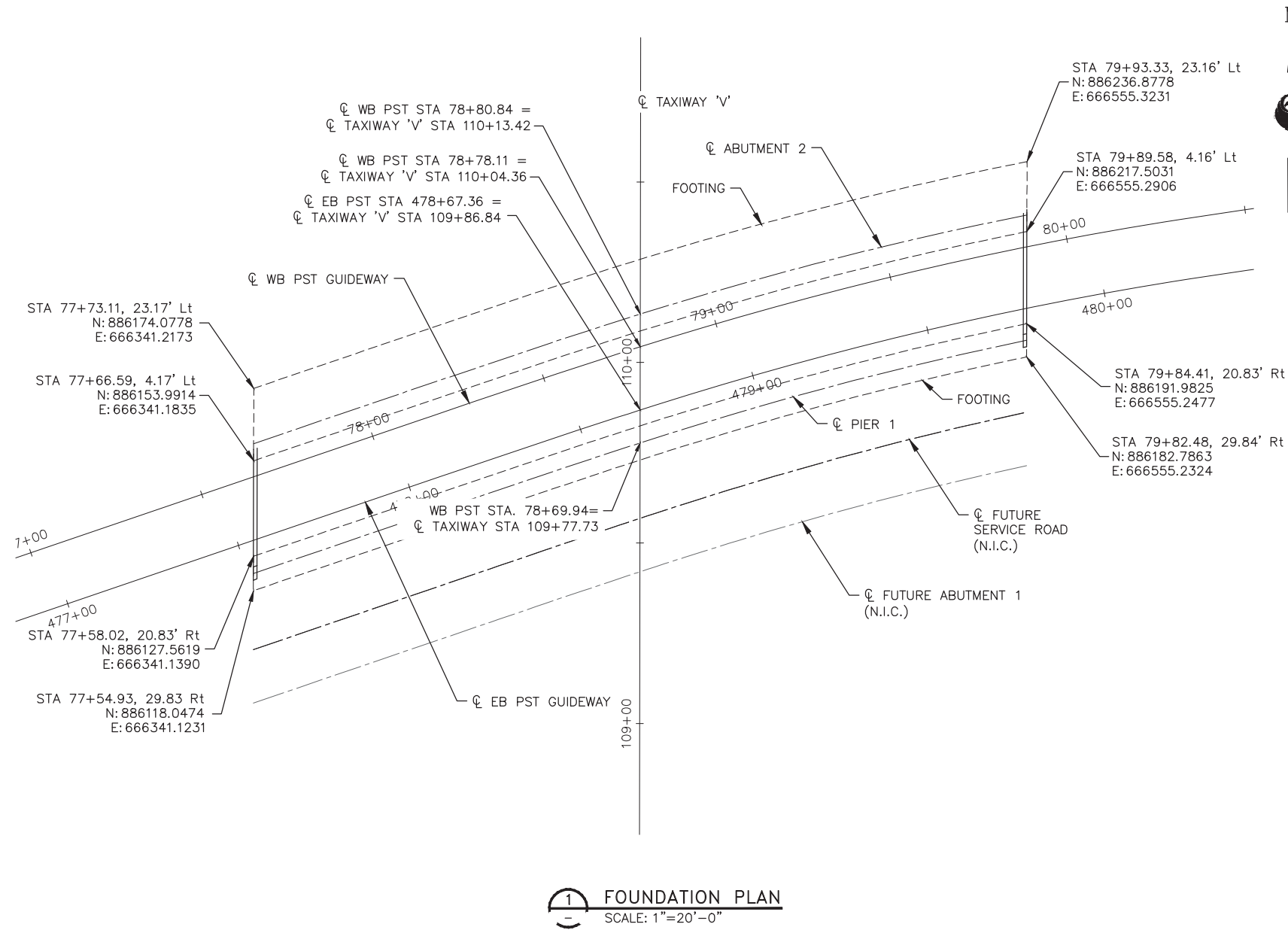
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Checked by: SWS
Date: 03/02/2018
Dwg scale: 3/16"=1'-0"
CJP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
TAXIWAY "U" & "V" UNDERCROSSING
TAXIWAY "U" TYPICAL SECTION

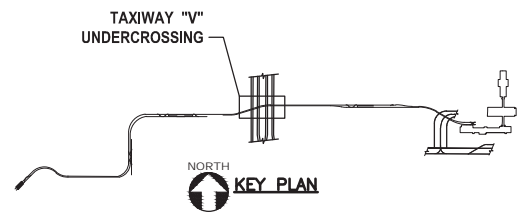
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V1 - 068 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projac\40673541\AV10000011-S-2-MSSU0501.dwg_jrojas



1 FOUNDATION PLAN
SCALE: 1"=20'-0"

NOTES:
1. STATIONS AND OFFSETS FOR FOOTINGS ARE MEASURED FROM CL WB PST GUIDEWAY.



REGISTERED PROFESSIONAL ENGINEER (Civil)
STATE OF ARIZONA
No. 1277
MARK
PLUMMER
Exp. 01/30/20
Gannett Fleming
Design Consultant

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12/15/17	SUBMITTED FOR REVIEW	12/15/17

PHX AVIATION DEPARTMENT
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

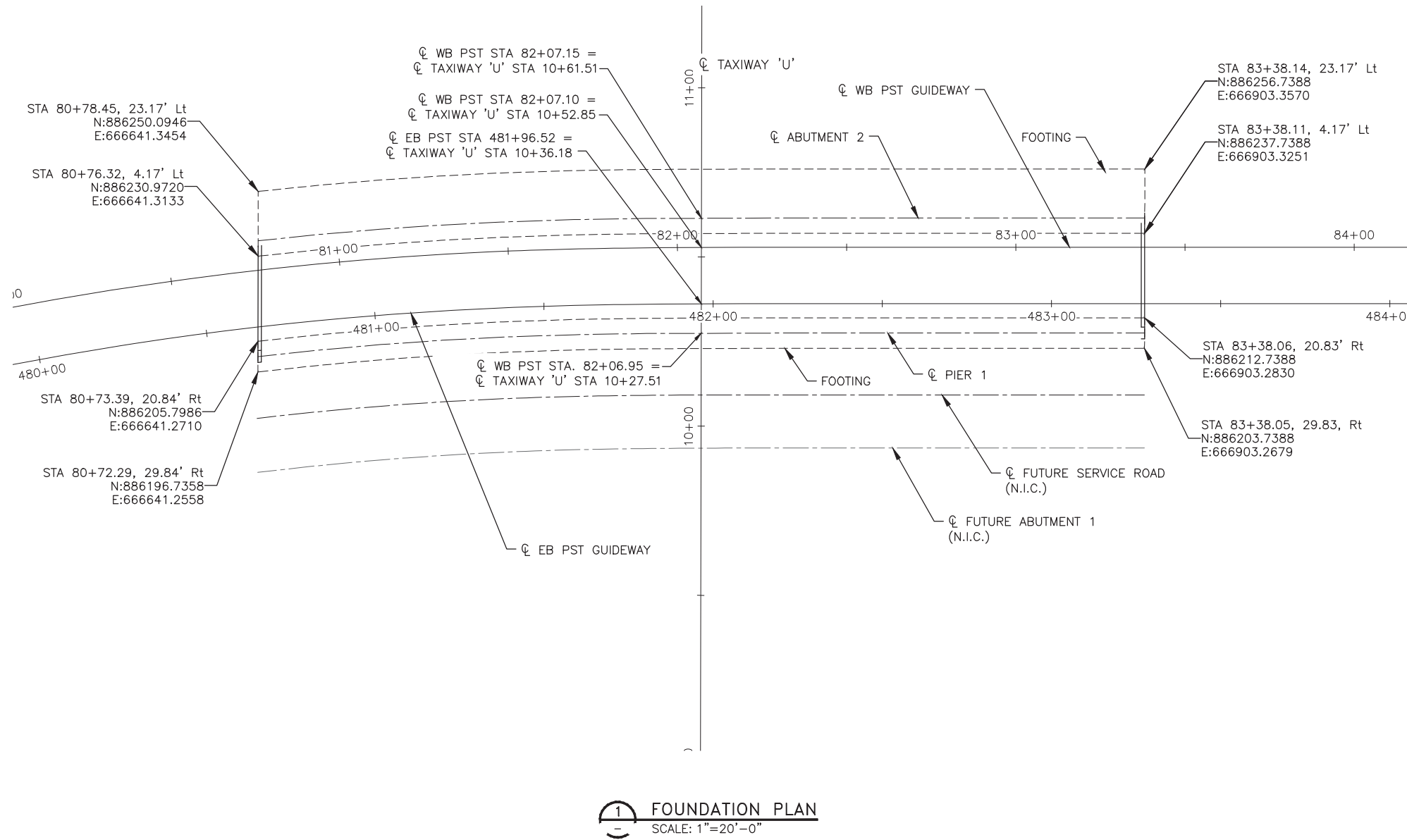
Designed by: PB
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=20'
CIP No.: AV10000011
KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
TAXIWAY 'V'
FOUNDATION PLAN

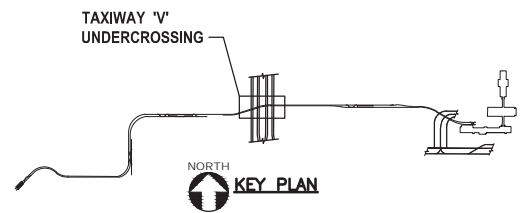
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B02-MSSU0501
V1 - 069 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\rojae\40673541\AV10000011-S-2-MSSU0502.dwg_jrojae



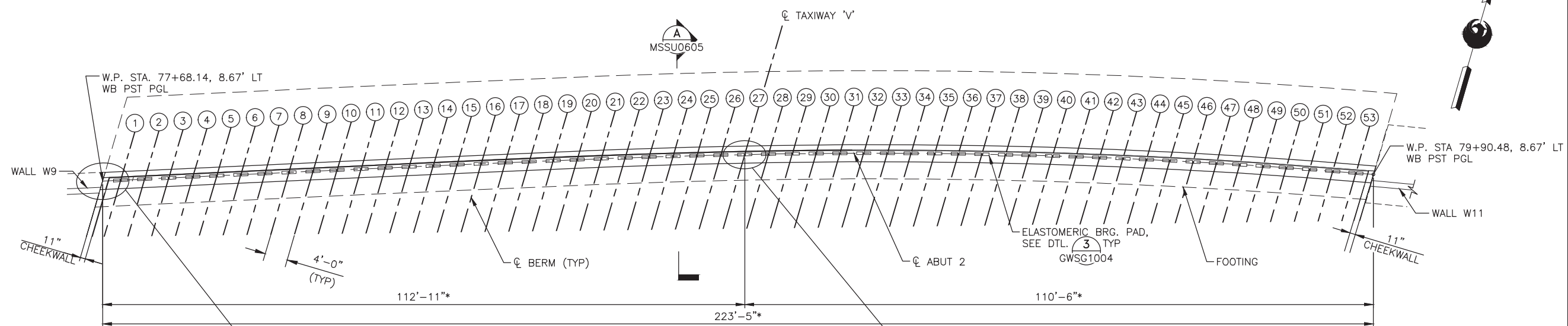
1 FOUNDATION PLAN
SCALE: 1"=20'-0"

NOTES:
1. STATIONS AND OFFSETS FOR FOOTINGS ARE MEASURED FROM ϕ WB PST GUIDEWAY.

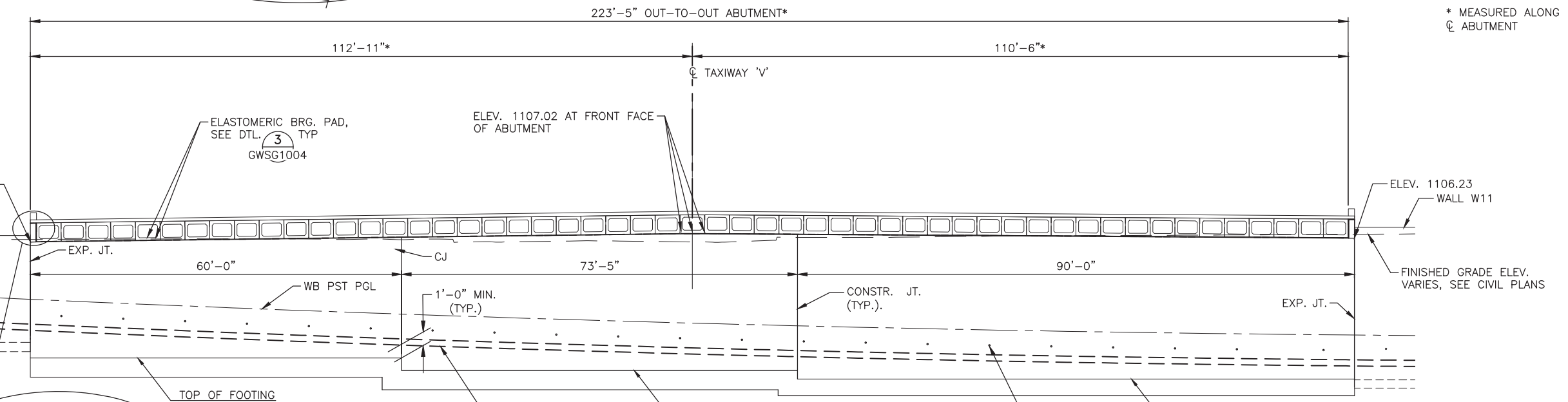
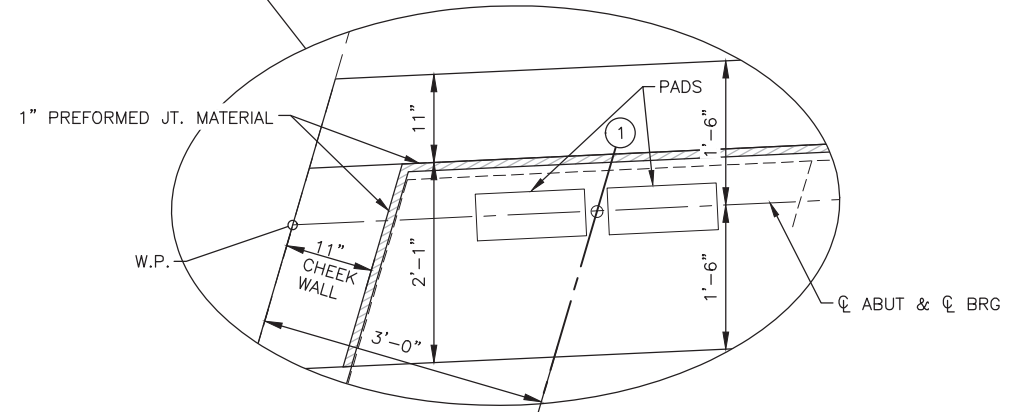
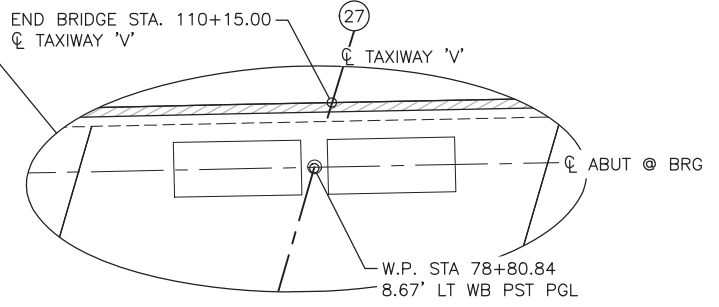


		Design Sub-Consultant	
<p>PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.</p>		<p>ISSUED FOR CONSTRUCTION 03/02/18</p>	
		<p>DATE 12/15/17</p>	
		<p>NO. / SUBMISSIONS</p>	
		<p>REVISIONS / SUBMISSIONS</p>	
		<p>DATE</p>	
		<p>ISSUED FOR CONSTRUCTION 03/02/18</p>	
		<p>DATE 12/15/17</p>	
		<p>NO. / SUBMISSIONS</p>	
		<p>REVISIONS / SUBMISSIONS</p>	
		<p>DATE</p>	
<p>PHX AVIATION DEPARTMENT</p>		<p>Design Consultant</p>	
<p>PHX SKY TRAIN</p>			
<p>STAGE 2 DESIGN</p>		<p>Design Consultant</p>	
<p>500 S. 24TH STREET</p>		<p>Gannett Fleming</p>	
<p>PHOENIX, AZ 85034</p>		<p>Design Consultant</p>	
<p>Designed by: PB</p>	<p>Drawn by: JRR</p>	<p>Checked by: SWS</p>	<p>Date: 03/02/2018</p>
<p>Dwg scale: 1"=20'</p>	<p>CIP No.: AV10000011</p>	<p>KVA No.: 07-5204</p>	
<p>STAGE 2 - B02 DESIGN SUBMISSION</p>			
<p>GUIDEWAY TAXIWAY 'U' & 'V' UNDERCROSSING TAXIWAY 'U' FOUNDATION PLAN</p>			
<p>Package: B02-MSSU0502</p>		<p>Sheet Reference No: V1 - 070 of 083</p>	

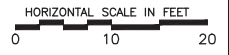
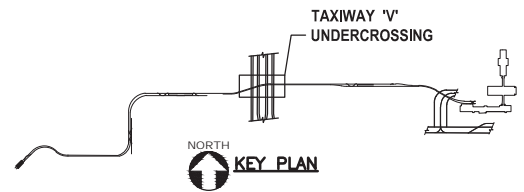
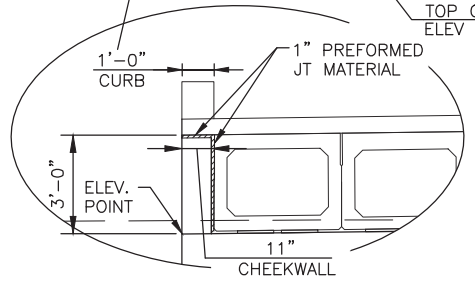
PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\proj\40673541\AV10000011-S-2-MSSU0602.dwg jrojas



1 PLAN ABUTMENT 2 SCALE: 1"=10'-0"



2 ELEVATION ABUTMENT 2 SCALE: 1"=10'-0"



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PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by:	PB
Drawn by:	JRR
Checked by:	SWS
Date:	03/02/2018
Dwg scale:	1"=10'-0"
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAYS 'U' & 'V' UNDERCROSSING
TAXIWAY 'V' ABUT 2
PLAN AND ELEVATION**

Package: Sheet Reference No:
B02-MSSU0602
V1 - 071 of 083

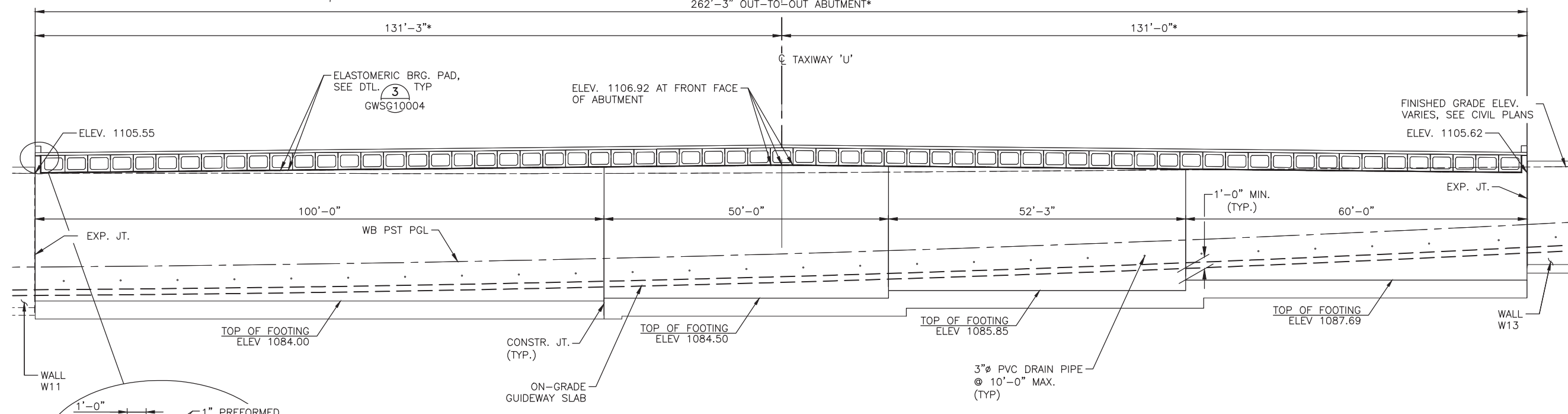
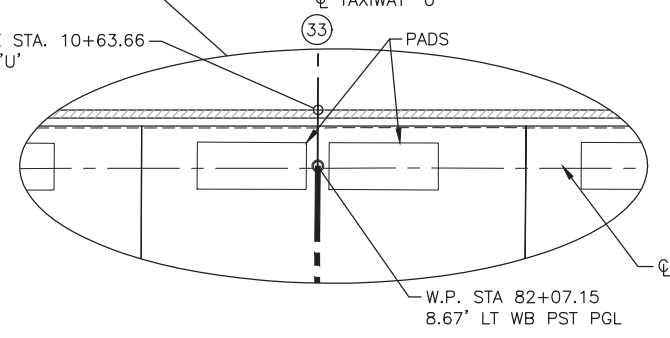
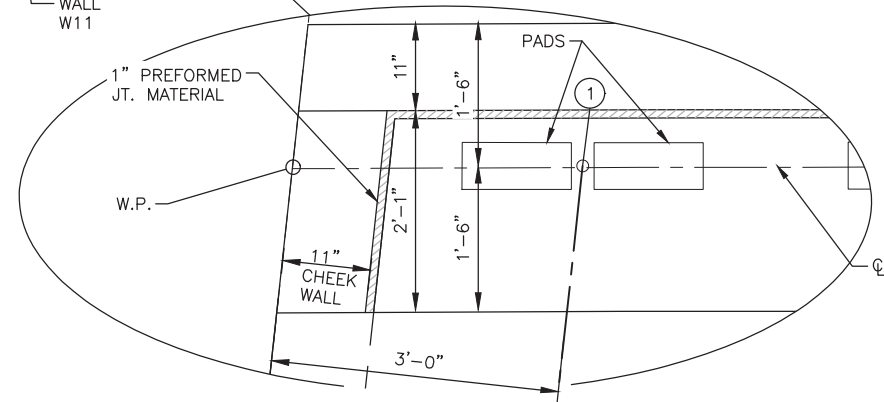
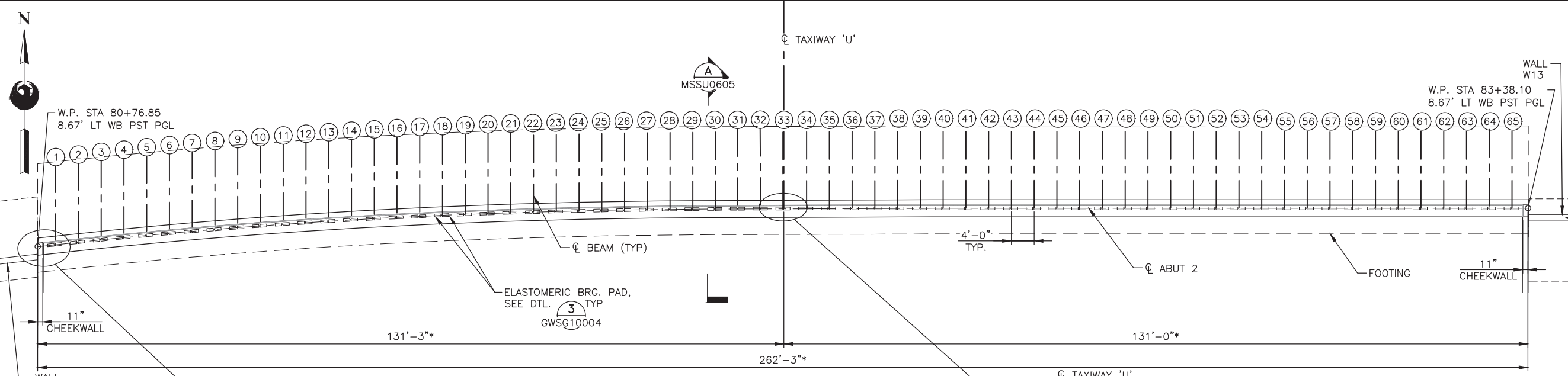
Professional Engineer (Civil)
No. 12172
PLUMBING
No. 12172
Expires 01/31/20

Design Sub-Consultant

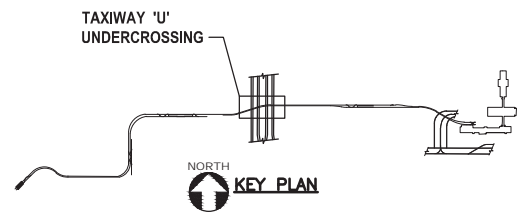
Design Consultant
Gannett Fleming

ISSUED FOR CONSTRUCTION	03/02/18	DATE
SUBMITTED FOR REVIEW	12/15/17	DATE
REVISIONS / SUBMISSIONS		
NO.		

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\jrojas\40673541\AV10000011-S-2-MSSU0604.dwg jrojas



2 ELEVATION ABUTMENT 2
SCALE: 1"=10'-0"



Design Consultant
Gannett Fleming
Design Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
03/02/18 <td>ISSUED FOR CONSTRUCTION <td></td> </td>	ISSUED FOR CONSTRUCTION <td></td>	
12/15/17 <td>SUBMITTED FOR REVIEW <td></td> </td>	SUBMITTED FOR REVIEW <td></td>	

PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

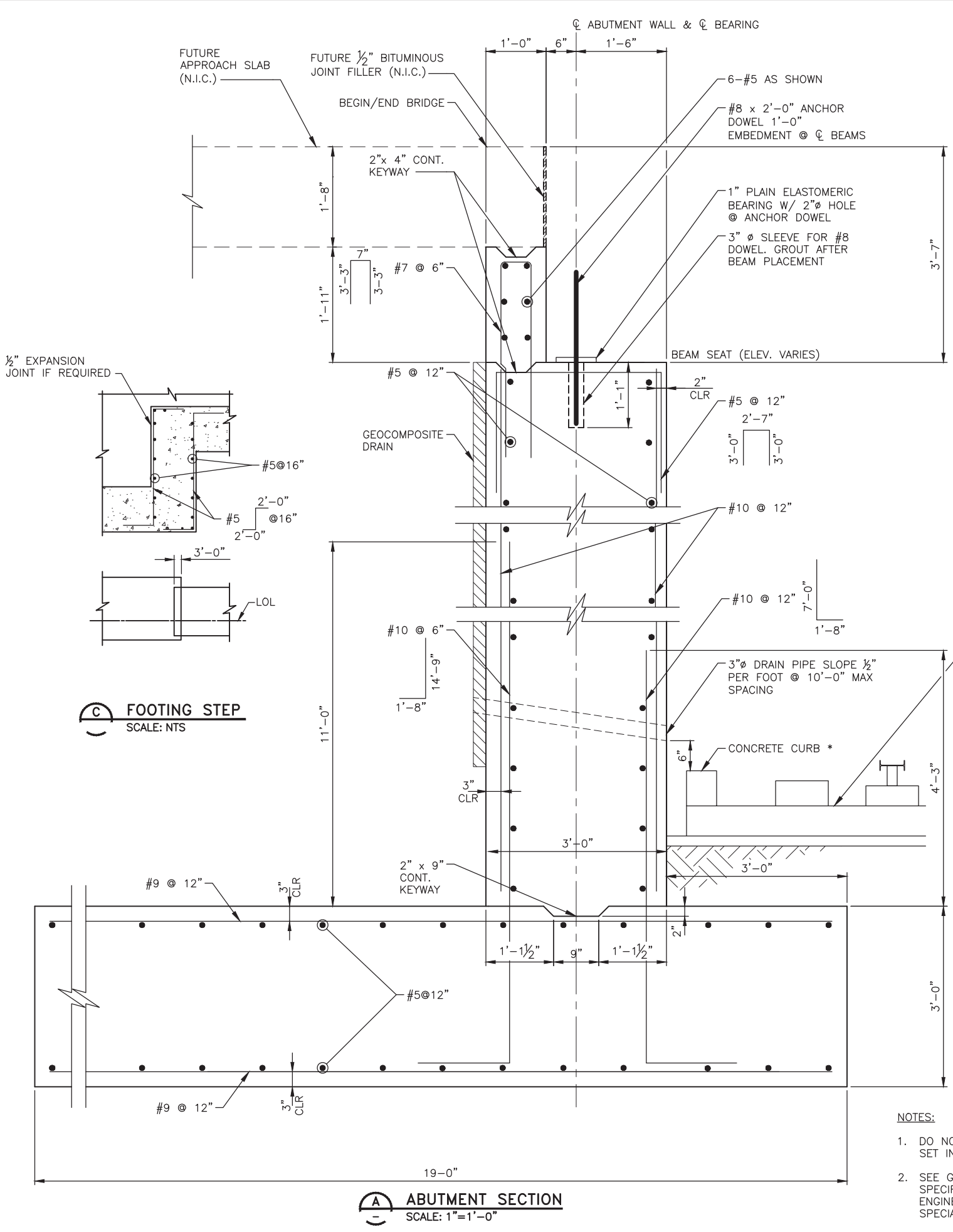
Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=10'-0"	CIP No.: AV10000011	KIVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION

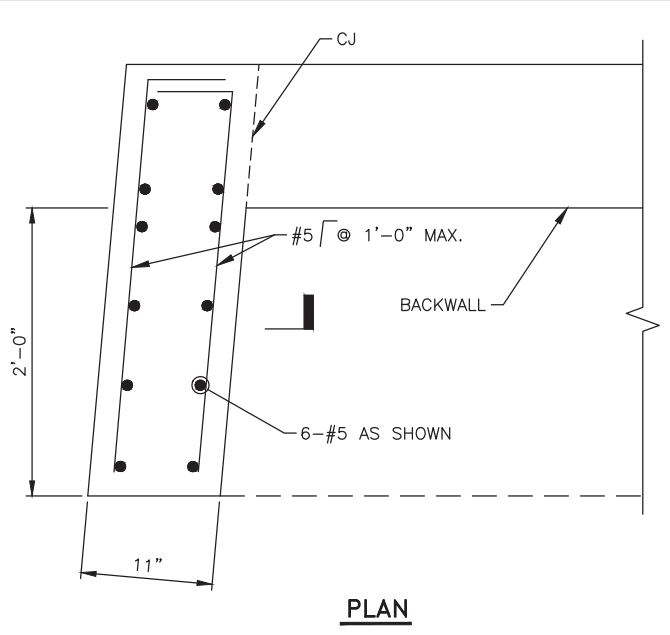
**GUIDEWAY
TAXIWAYS 'U' & 'V' UNDERCROSSING
TAXIWAY 'U' ABUT 2
PLAN & ELEVATION**

Package: Sheet Reference No:
B02-MSSU0604
V1 - 072 of 083

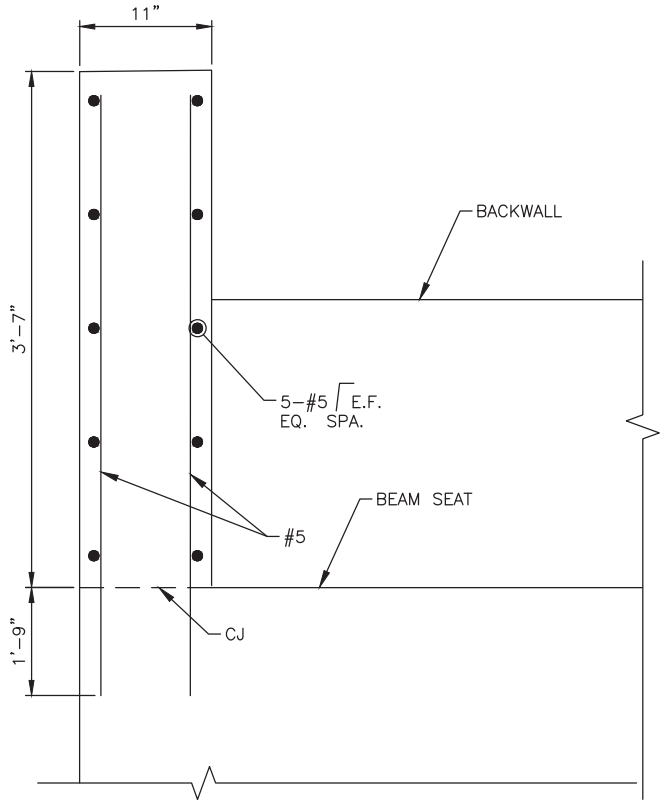
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(A) ABUTMENT SECTION
SCALE: 1"=1'-0"



PLAN



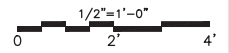
SECTION B

CHEEK WALL DETAILS
SCALE: 1 1/2"=1'-0"

NOTES:

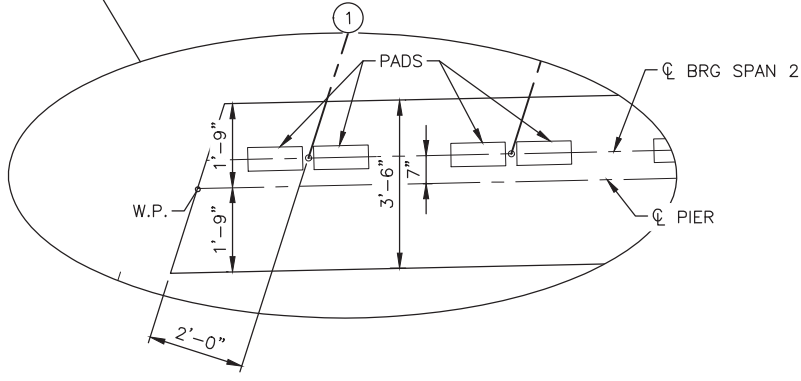
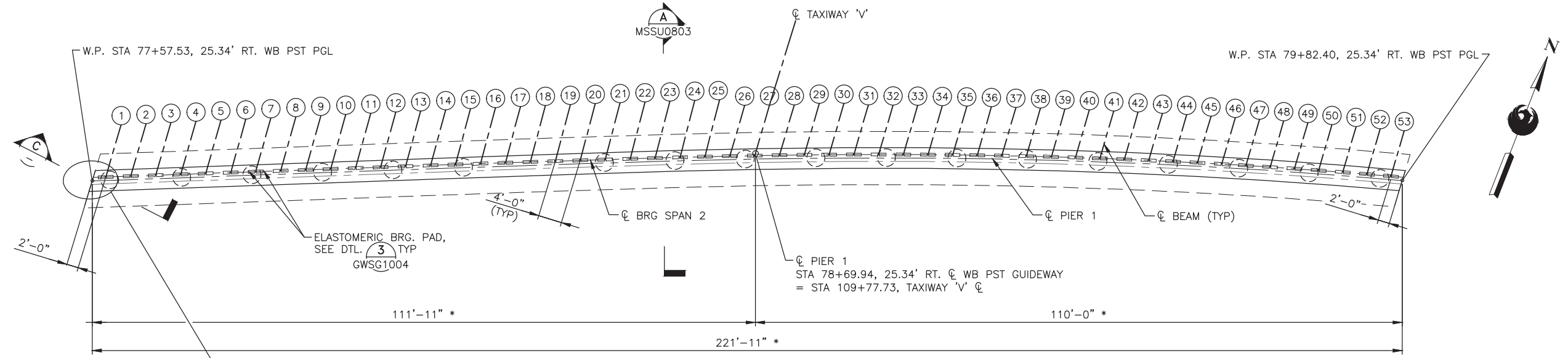
- DO NOT PLACE BACKFILL AGAINST ABUTMENT WALL UNTIL BEAMS ARE SET IN POSITION AND DOWEL HOLES ARE GROUTED.
- SEE GEOTECHNICAL DESIGN MEMORANDUM, AND PROJECT SPECIFICATIONS FOR FOUNDATION SOIL PREPARATION. NOTIFY ENGINEER WHEN SOIL PREPARATION IS COMPLETE AND READY FOR SPECIAL INSPECTION.

* SEE CIVIL PLANS



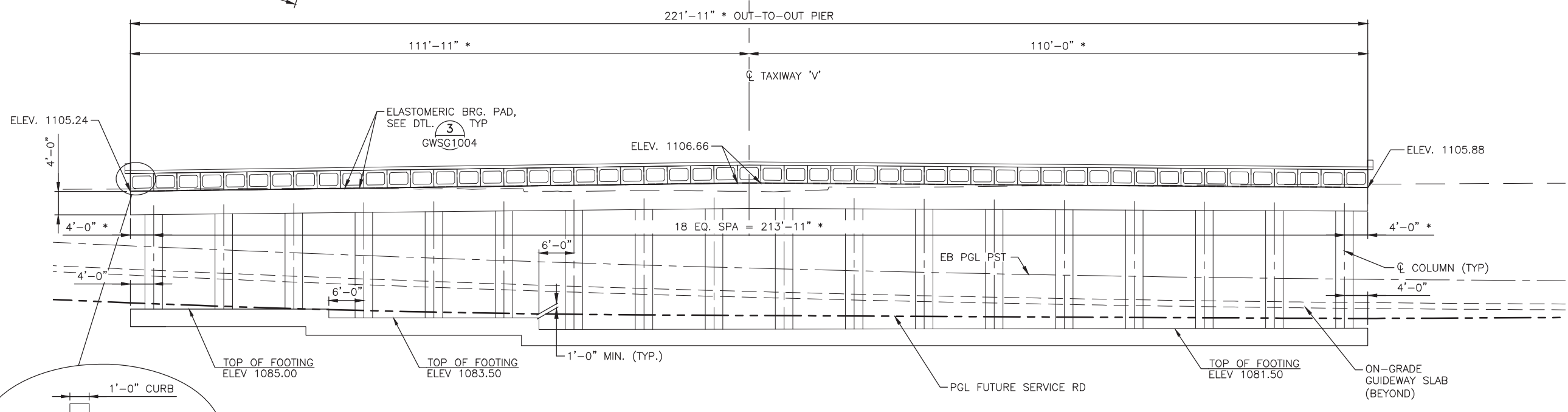
		Design Consultant	
<p>PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.</p>		ISSUED FOR CONSTRUCTION	03/02/18
		SUBMITTED FOR REVIEW	12/15/17
		REVISIONS / SUBMISSIONS	DATE
		NO.	
		<p>PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034</p>	
Designed by:	PB	Date:	03/02/2018
Drawn by:	JRR	Dwg scale:	1"=10'
Checked by:	SWS	CIP No.:	AV10000011
		KIVA No.:	07-5204
<p>STAGE 2 - B02 DESIGN SUBMISSION</p> <p>GUIDEWAY TAXIWAY "U" & "V" UNDERCROSSING ABUTMENT DETAILS</p>			
Package:		Sheet Reference No:	
B02-MSSU0605		B02-MSSU0605	
		V1 - 073 of 083	

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\projcs\40673541\AV10000011-S-2-MSSU0801.dwg jrojas

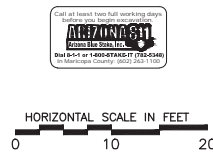
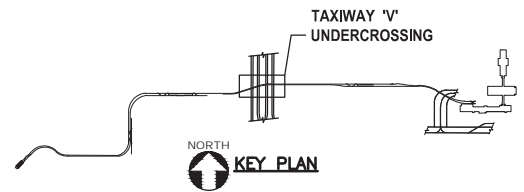
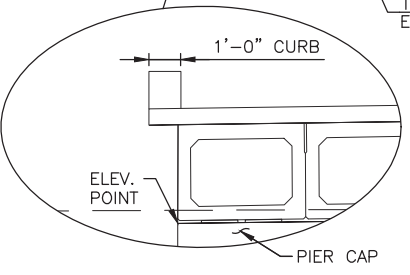


1 PLAN PIER 1
SCALE: 1"=10'-0"

* MEASURED ALONG C PIER



1 ELEVATION PIER 1
SCALE: 1"=10'-0"



Professional Engineer (Civil)
No. 1277
Mark
Gannett Fleming
Expires 01/31/20

Design Sub-Consultant

Design Consultant

Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

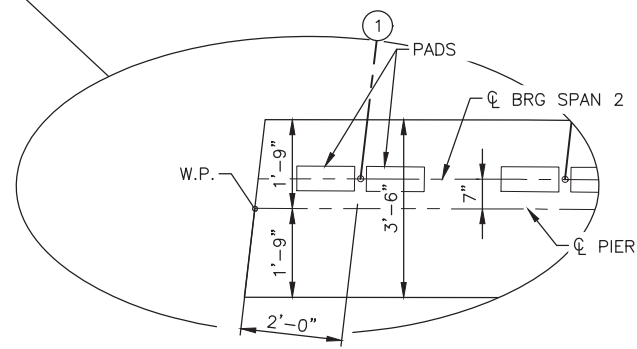
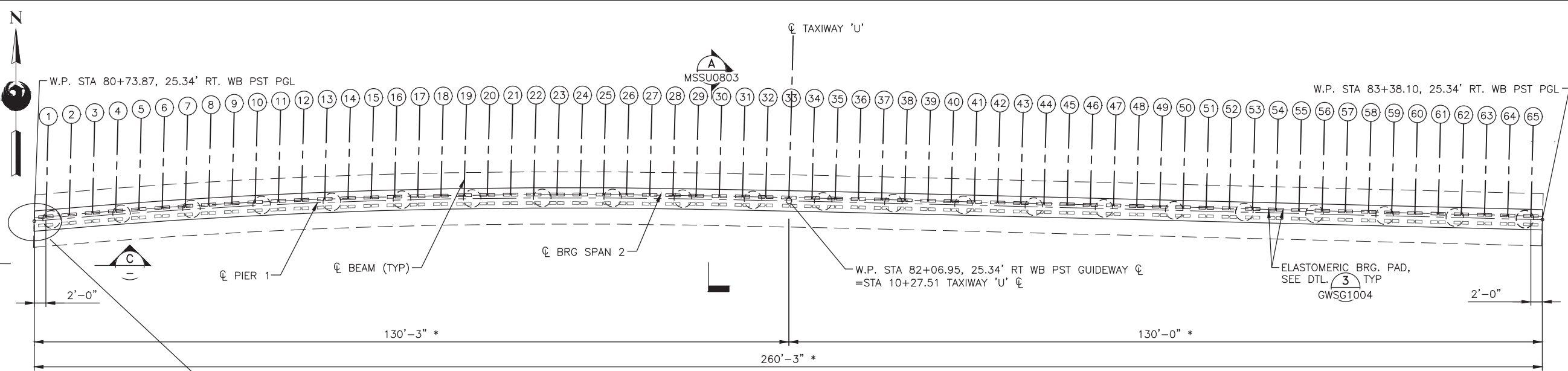
Designed by:	PB
Drawn by:	JRR
Checked by:	SWS
Date:	03/02/2018
Dwg scale:	1"=10'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAYS "U" & "V" UNDERCROSSING
TAXIWAY "V" PIER
PLAN & ELEVATION**

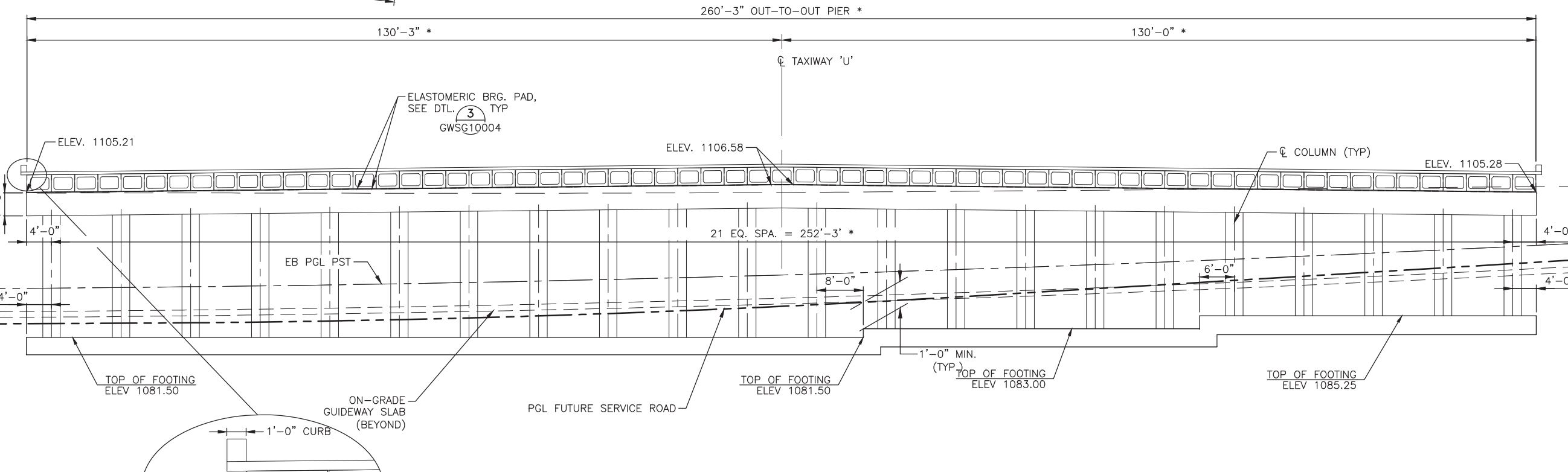
Package: Sheet Reference No:
B02-MSSU0801
V1 - 074 of 083

PLOT DATE: Mar 01, 2018 FILE PATH: C:\pwworking\gfpw01\proj\40673541\AV10000011-S-2-MSSU0802.dwg jrojas

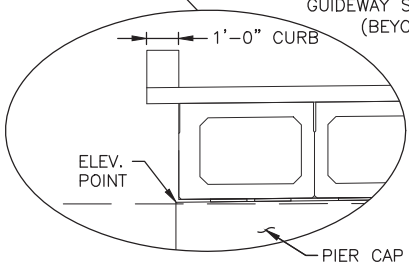


1 PLAN PIER 1
SCALE: 1"=10'-0"

* MEASURED ALONG CL PIER



2 ELEVATION PIER 1
SCALE: 1"=10'-0"



Professional Engineer (Civil)
GANNETT FLEMING
PHOENIX, ARIZONA
EXPIRES 03/31/18

Design Consultant

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
03/02/18	ISSUED FOR CONSTRUCTION	
12/15/17	SUBMITTED FOR REVIEW	

PHX AVIATION
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

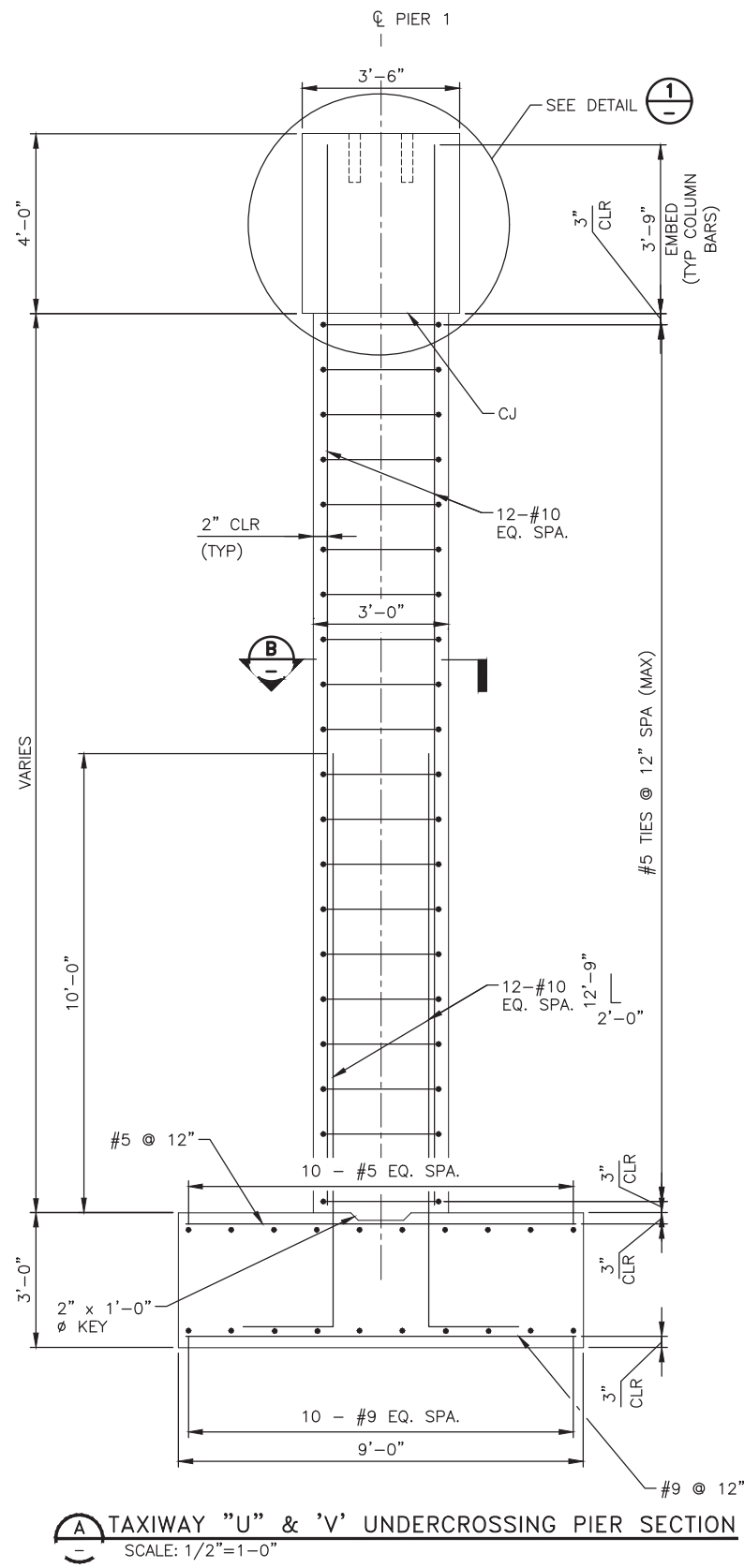
Designed by:	PB
Drawn by:	JRR
Checked by:	SWS
Date:	03/02/2018
Dwg scale:	1"=10'
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B02 DESIGN SUBMISSION

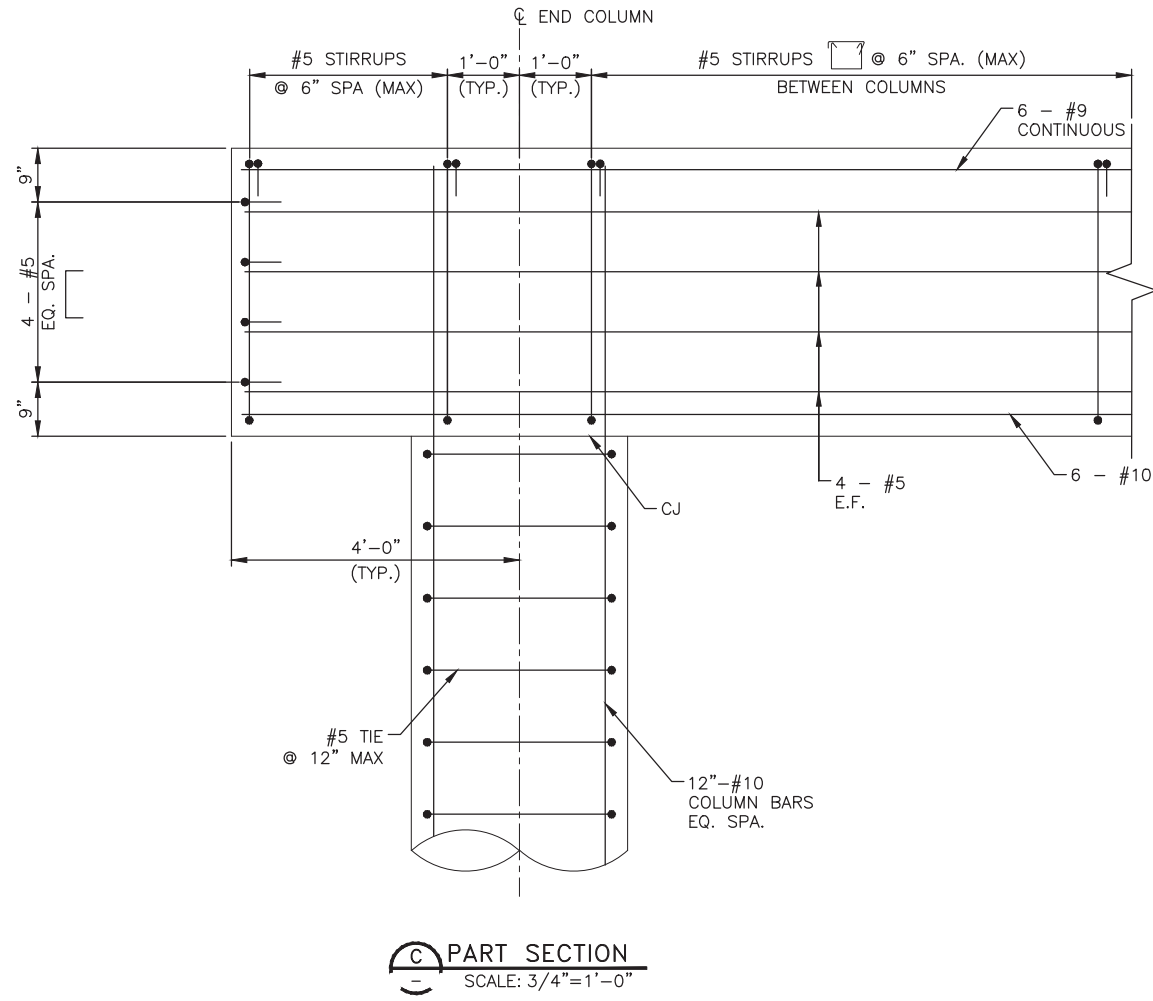
**GUIDEWAY
TAXIWAYS 'U' & 'V' UNDERCROSSING
TAXIWAY 'U' PIER 1
PLAN & ELEVATION**

Package: Sheet Reference No:
B02-MSSU0802
V1 - 075 of 083

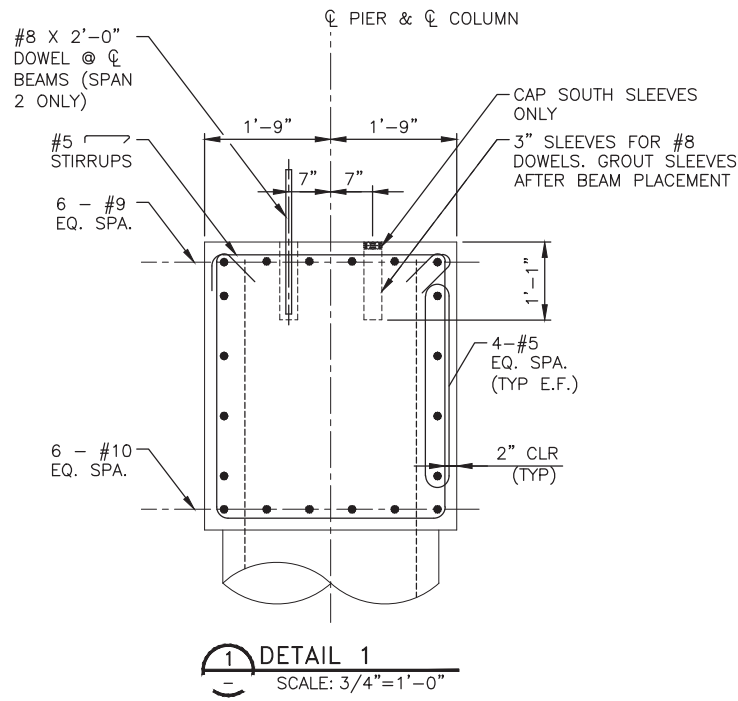
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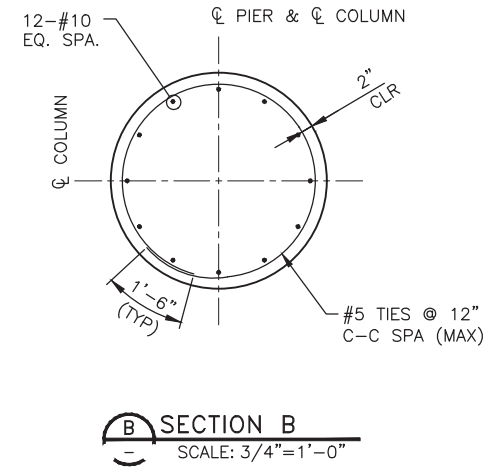
A TAXIWAY "U" & "V" UNDERCROSSING PIER SECTION
SCALE: 1/2"=1'-0"



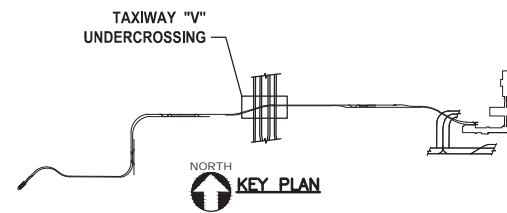
C PART SECTION
SCALE: 3/4"=1'-0"



1 DETAIL 1
SCALE: 3/4"=1'-0"



B SECTION B
SCALE: 3/4"=1'-0"



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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	03/02/18
	SUBMITTED FOR REVIEW	12/15/17

PHX AVI BYR
CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

Designed by: PB	JRR
Drawn by:	SWS
Checked by:	03/02/2018
Date:	Dwg scale: AS SHOWN
CIP No.: AV10000011	KIVA No.: 07-S204

STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
TAXIWAY 'U' & 'V' PIER SECTIONS**

Package: Sheet Reference No:
B02-MSSU0803
V1 - 076 of 083

Design Sub-Consultant

Design Consultant
Gannett Fleming

DESIGN SPECIFICATIONS

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, 2002,
 ADOT BRIDGE DESIGN GUIDELINES.
 AUTOMATED TRAIN PROJECT DESIGN CRITERIA MANUAL, FACILITIES DESIGN, REV 3.
 APRIL 2017, INCLUDING ALL UPDATES.

CONSTRUCTION SPECIFICATIONS

PHOENIX AUTOMATED TRAIN PROJECT SPECIFICATIONS.

DESIGN LOADS

GUIDEWAY RETAINING WALLS W1-W16

DEAD LOAD - WEIGHT OF BACKFILL = 125 pcf
 EQUIVALENT FLUID PRESSURE FOR ACTIVE SOIL PRESSURE = 40 pcf

COEFFICIENT OF FRICTION=0.42 (WALLS W9, W13)
 COEFFICIENT OF FRICTION=0.55 (WALL W11)

LIVE LOAD SURCHARGE FOR WALLS SUPPORTING BACKFILL SUBJECT TO HIGHWAY
 VEHICLE LOADING IS EQUAL TO WEIGHT OF 2'-0" OF BACKFILL MATERIAL.

LIVE LOAD SURCHARGE FOR WALLS SUPPORTING ON-GRADE GUIDEWAY IS EQUAL TO
 WEIGHT OF 3'-0" OF BACKFILL MATERIAL.

CONCRETE AND REINFORCEMENT REQUIREMENTS

f'c = 4,000 psi (CLASS AA) - WALLS AND FOOTINGS
 f's = 24,000 psi - REINFORCING STEEL (fy = 60,000 psi)

REINFORCING STEEL BARS SHALL CONFORM TO ASTM A615, EXCEPT REINFORCING BARS
 WHICH ARE TO BE WELDED SHALL CONFORM TO ASTM A706.

ALL BENDS AND HOOKS SHALL MEET THE REQUIREMENTS OF AASHTO 8.23.
 ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL
 PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE CENTER OF BARS UNLESS
 NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

FIELD ADJUSTMENTS OF REINFORCING STEEL SHALL BE MADE ONLY WITH APPROVAL OF
 THE PROGRAM/PROJECT MANAGER. CUT BARS MUST HAVE ACCOMPANYING BARS OF
 THE SAME SIZE WITH THE APPROPRIATE LAP ACROSS THE CUT LOCATION. THE SHOP
 DRAWINGS SHALL INCLUDE ADDITIONS OR REARRANGEMENT OF REINFORCING STEEL FROM
 THAT SHOWN ON THE PLANS.

BAR LAPS, HOOKS AND BENDS SHALL HAVE A MINIMUM LENGTH IN ACCORDANCE WITH
 AASHTO, OR AS SHOWN ON THE PLANS.

RETAINING WALL GEOMETRY

ALL ELEVATIONS SHOWN ARE DEVELOPED ELEVATIONS.

WALL CROSS-SECTIONS AND DIMENSIONS SHALL BE PER "H" INDICATED IN THE WALL
 ELEVATION DRAWINGS. TOP OF WALL AND TOP OF FOOTING ELEVATIONS SHALL BE AS
 SHOWN ON WALL ELEVATION DRAWINGS, REGARDLESS OF THE VALUE OF "H".

RETAINING WALL LAYOUT LINE IS REFERENCED TO THE EXPOSED FACE OF THE
 RETAINING WALL AS SHOWN ON WALL TYPICAL SECTION.

ALL OFFSETS TO WALL LAYOUT LINE ARE MEASURED FROM CONSTRUCTION CENTERLINE
 OF WB PST OR EB PST.

WALL ELEVATIONS FOR WALLS W1-W13 ASSUME THE PROFILE GRADE LINE (PGL) IS
 5'-0" ABOVE THE TOP OF THE ON-GRADE GUIDEWAY SLAB.

CHAMFER

ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4", UNLESS NOTED OTHERWISE.

DIMENSIONS

DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.

COORDINATION

CONTRACTOR SHALL COORDINATE ALL EXISTING CONDITIONS DURING CONSTRUCTION OF
 PROJECT. UTILITY INFORMATION SHOWN ON THE PLANS MAY NOT BE COMPLETE OR
 ACCURATELY DEPICT THE LOCATION OF THE FACILITIES SHOWN. THE CONTRACTOR SHALL
 COORDINATE THE LOCATION OF ALL EXISTING, NEW, RELOCATED AND ABANDONED
 UTILITIES WITH THE PROJECT PLANS AND NOTIFY RESPECTIVE OWNERS BEFORE
 COMMENCING THE WORK OF EXCAVATION, INCLUDING ANY DRILLING OR PILING REQUIRED
 FOR TEMPORARY SHORING. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE
 PROGRAM/PROJECT MANAGER AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK.

JOINT NOTES

RETAINING WALLS:

ALL RETAINING WALLS SHALL HAVE CONSTRUCTION JOINTS SPACED AT NOT
 MORE THAN 30'-0" APART OR AS SHOWN UNLESS APPROVED BY THE
 PROGRAM/PROJECT MANAGER. REINFORCING STEEL SHALL PROJECT THROUGH
 THE JOINT.

EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 90'-0",
 OR AS SHOWN.

FOOTINGS MAY BE CONTINUOUS WITH NO JOINTS.

FOUNDATIONS

RETAINING WALLS:

FOUNDATION DESIGN FOR WALLS W1-W4 IS BASED ON "GEOTECHNICAL DESIGN
 MEMORANDUM, PHX SKY TRAIN STAGE 2 - AT-GRADE GUIDEWAY, ABUTMENT 1
 TO ABUTMENT 2 BY GANNETT FLEMING, DATED 1/29/2018.

FOUNDATION DESIGN FOR WALLS W5-W8 AND W9-W13 IS BASED ON
 "GEOTECHNICAL DESIGN MEMORANDUM -PHX SKY TRAIN STAGE 2, AT GRADE
 GUIDEWAY, ABUTMENT 3 TO ABUTMENT 4 AND TAXIWAY U AND V
 UNDERCROSSING BRIDGES", BY GANNETT FLEMING, DATED 1-24-2018

FOUNDATION PREPARATION: RETAINING WALL SUBGRADE SOILS SHALL BE
 APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF
 REINFORCEMENT AND CONCRETE. SEE THE GEOTECHNICAL REQUIREMENTS
 STATED IN THE AFOREMENTIONED REPORT AND THE PROJECT SPECIFICATIONS
 FOR FOUNDATION SOIL PREPARATION AND FILL PLACEMENT WHERE REQUIRED.

LEGEND

BUBBLES:

LETTER OR NUMBER INDICATING
 SECTION OR DETAIL

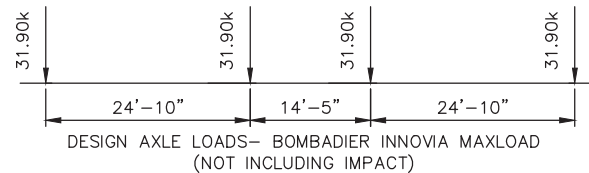


DRAWING NUMBER WHERE SECTION OR DETAIL
 SHOWN OR REFERRED. BLANK IF SHOWN ON
 SAME SHEET.

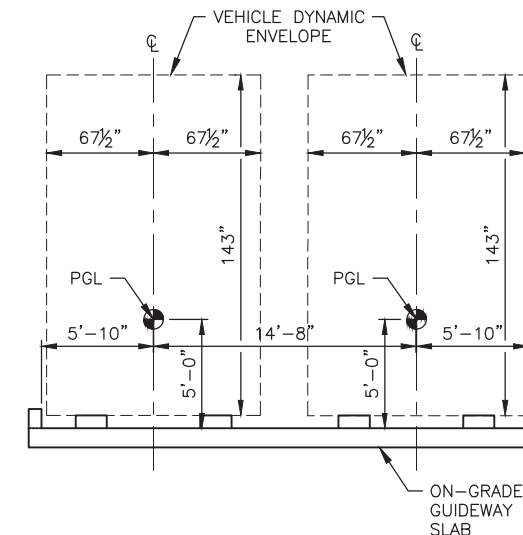
SHORING

TEMPORARY SHORING MAY BE REQUIRED FOR EXCAVATION AND CONSTRUCTION OF
 WALLS. THE CONTRACTOR SHALL DETERMINE THE EXACT LIMITS AND TYPES OF
 NECESSARY SHORING SYSTEMS.

THE DETAILS FOR THE SHORING SHALL BE SUBMITTED TO THE PROGRAM/PROJECT
 MANAGER AND THE GEOTECHNICAL ENGINEER FOR REVIEW. THE DETAILS AND
 ASSOCIATED CALCULATIONS SUBMITTED SHALL BE SEALED/SIGNED BY A
 PROFESSIONAL ENGINEER LICENSED IN THE STATE OF ARIZONA.



1 TRAIN VEHICLE LOAD DETAIL
 SCALE: NTS



2 VEHICLE DYNAMIC ENVELOPE
 SCALE: NTS

NOTE: CONTRACTOR SHALL ENSURE THAT ALL 12"
 CONCRETE CURBS, CONCRETE PARAPET WALLS
 AND ORNAMENTAL SECURITY FENCES DO NOT
 ENCROACH INTO VEHICLE DYNAMIC ENVELOPE.

MISCELLANEOUS NOTES

- ALL DIMENSIONS SHOWN ON THE PLANS ARE MEASURED HORIZONTALLY OR
 VERTICALLY UNLESS OTHERWISE NOTED. DIMENSIONS SHALL NOT BE SCALED FROM
 THE PLANS.
- VERIFY ALL DIMENSIONS AND GEOMETRY OF EXISTING STRUCTURES IN THE FIELD AS
 NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

FENCE REQUIREMENTS:

SEE CIVIL PLANS



Design Sub-Consultant



PER CITY OF PHOENIX ORDINANCE G-4396,
 THESE PLANS ARE FOR OFFICIAL USE ONLY
 AND MAY NOT BE SHARED WITH OTHERS
 EXCEPT AS REQUIRED TO FULFILL THE
 OBLIGATIONS OF YOUR CONTRACT WITH THE
 CITY OF PHOENIX.

PHX SKY TRAIN
 CITY OF PHOENIX AVIATION DEPARTMENT

**PHX SKY TRAIN
 STAGE 2 DESIGN
 500 S. 24TH STREET
 PHOENIX, AZ 85034**

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: NTS	CIP No.: AV10000011	KIVA No.: 07-5204
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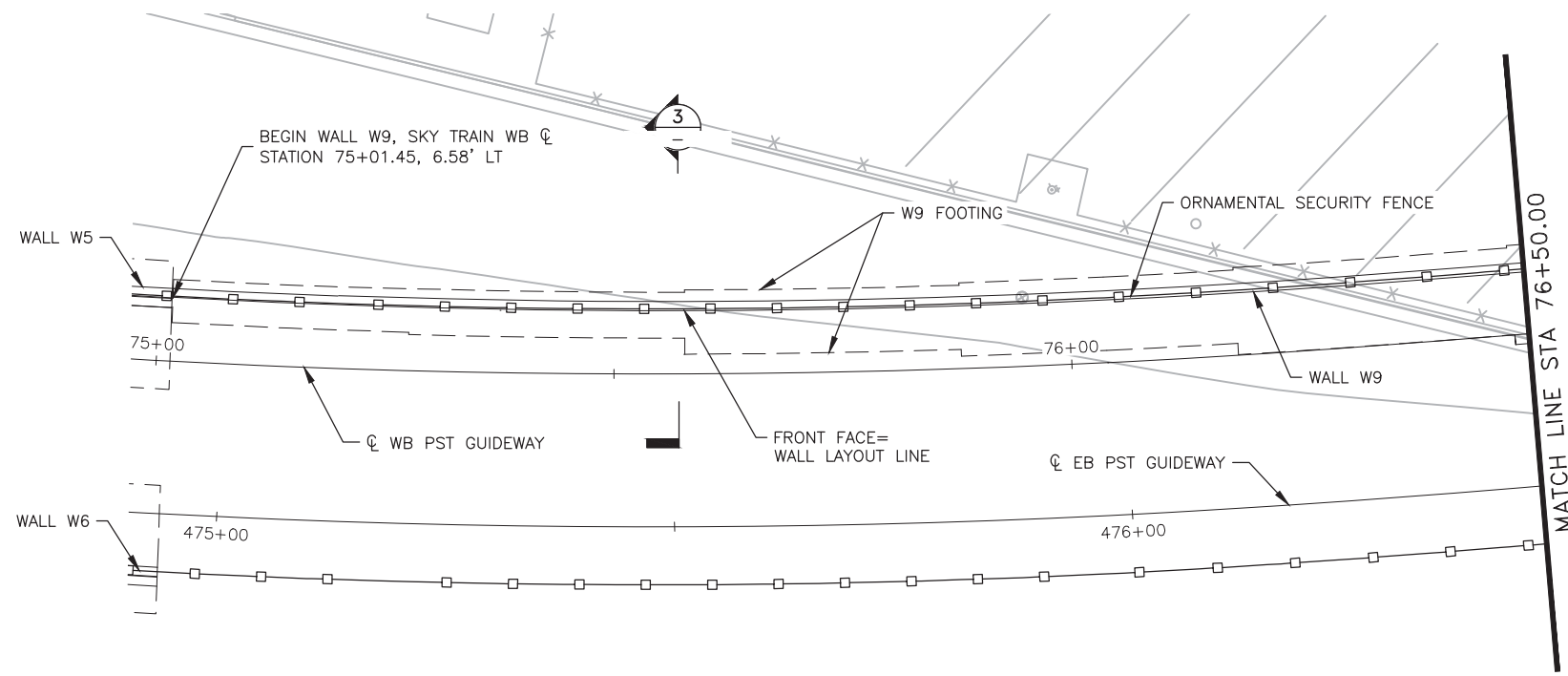
STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
 RETAINING WALLS
 GENERAL STRUCTURAL NOTES**

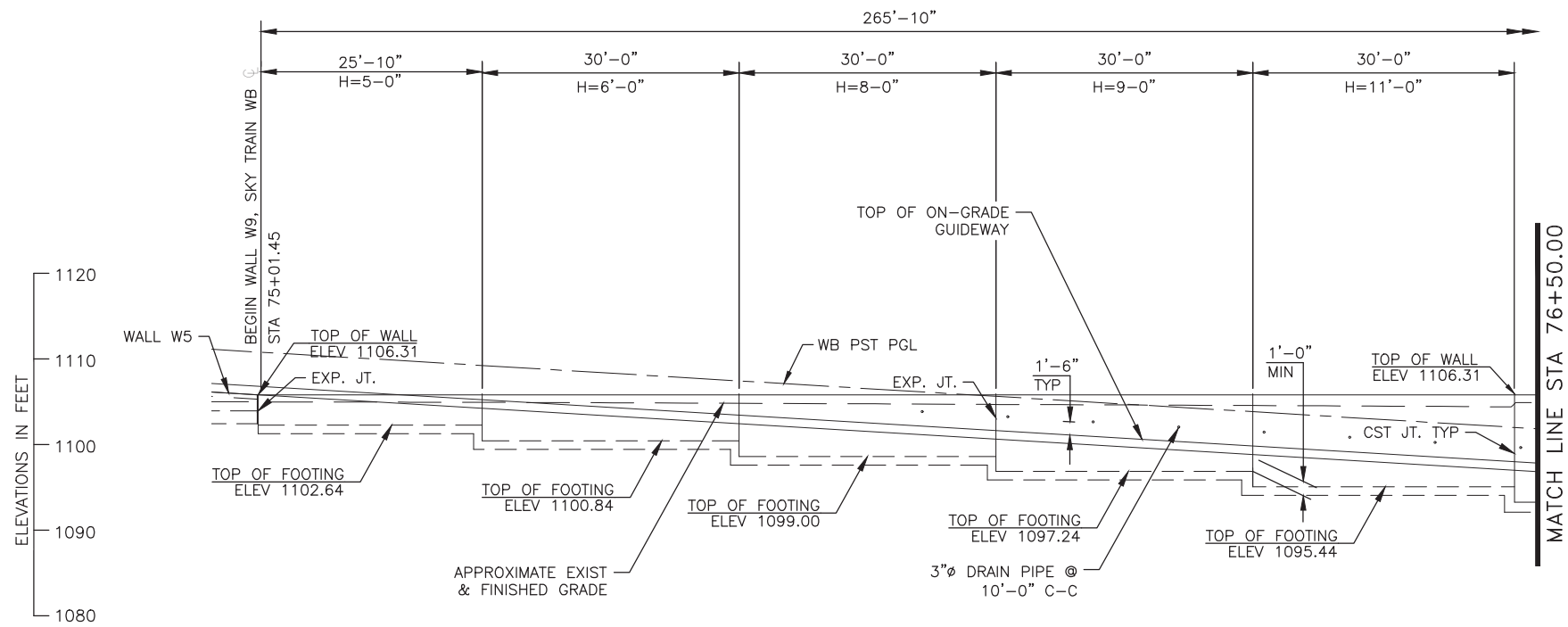
Package: Sheet Reference No:
B02-MSSW0700
 V1 - 077 of 083

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\proj\40673541\AV10000011-S-2-MSSW0700.dwg jrojs

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\jroja\0673541\AV10000011-S-2-MSSW0718.dwg jroja



1 WALL W9 PLAN
SCALE: 1"=10'-0"



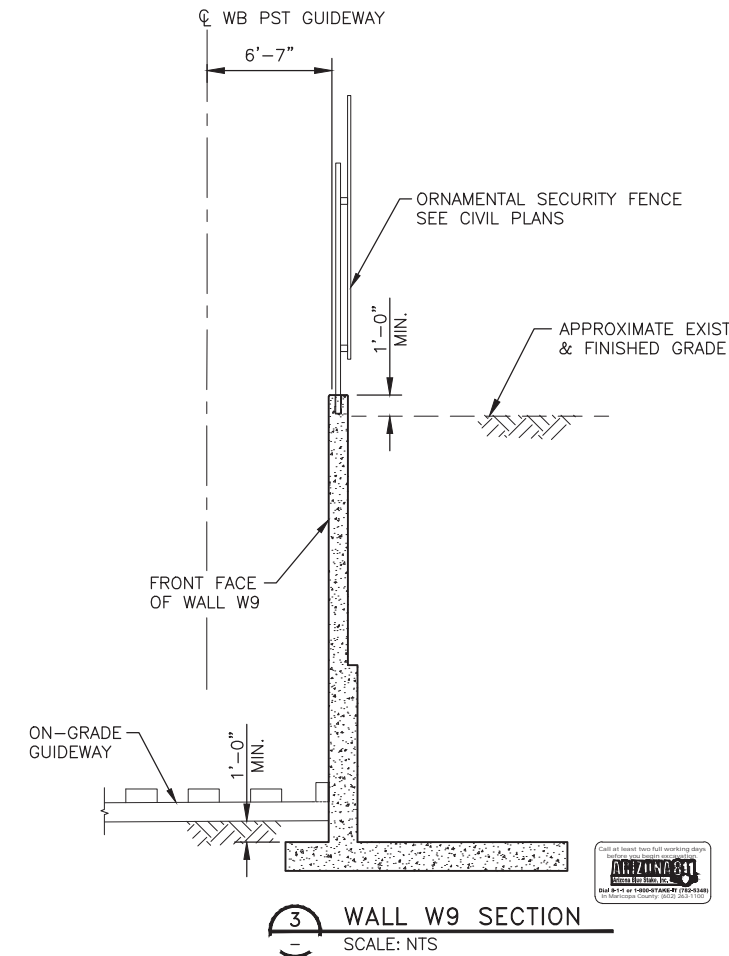
2 WALL W9 ELEVATION
SCALE: 1"=10'-0"

NOTE:
FENCE ALONG ON-GRADE GUIDEWAY
NOT SHOWN FOR CLARITY.

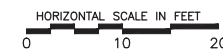
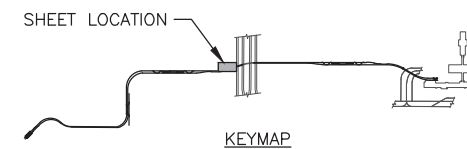


GENERAL NOTES

1. WALL LAYOUT BASED ON ϕ WB PST GUIDEWAY. WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
2. FOR EXPANSION AND CONSTRUCTION JOINT DETAILS SEE SHEET MSSW0725.
3. FOR WALL DETAILS AND TYPICAL SECTION SEE SHEET MSSW0725.
4. FOR WALL CROSS-SECTIONS AND DIMENSIONS CORRESPONDING TO "H" SHOWN ON WALL ELEVATION, SEE SHEET MSSW0725.
5. SEE EXISTING CONDITIONS PLANS FOR EXISTING UTILITY INFORMATION AND DETAILS.
6. SEE DEMOLITION PLANS FOR SITE DEMOLITION DETAILS.
7. SEE FENCING PLAN FOR THE FENCE TYPE AND DETAILS AND FENCE LIMITS.
8. FOR FOOTING STEP DETAILS, SEE SHEET MSSW0725.



3 WALL W9 SECTION
SCALE: NTS



Design Sub-Consultant



PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PHX AVIATION DEPARTMENT
PHX SKY TRAIN

STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=10'	CIP No.: AV10000011	KIVA No.: 07-5204
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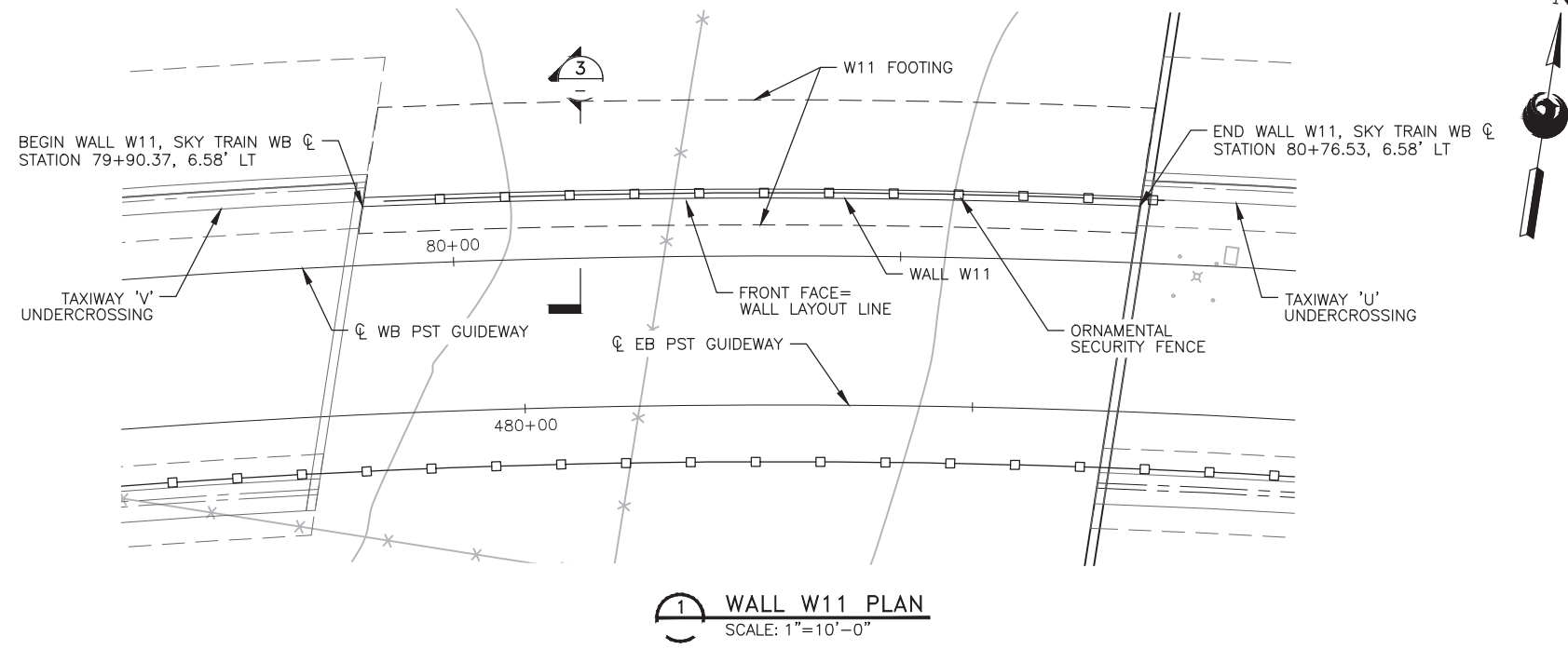
STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
RETAINING WALL W9
PLAN AND ELEVATION 1
STA 75+01.45 TO STA 76+50.00

Package: Sheet Reference No:
B02-MSSW0715
V1 - 078 of 083

ISSUED FOR CONSTRUCTION	03/02/18	DATE
SUBMITTED FOR REVIEW <td>12/15/17 <td>DATE</td> </td>	12/15/17 <td>DATE</td>	DATE
REVISIONS / SUBMISSIONS <td></td> <td></td>		
NO.		

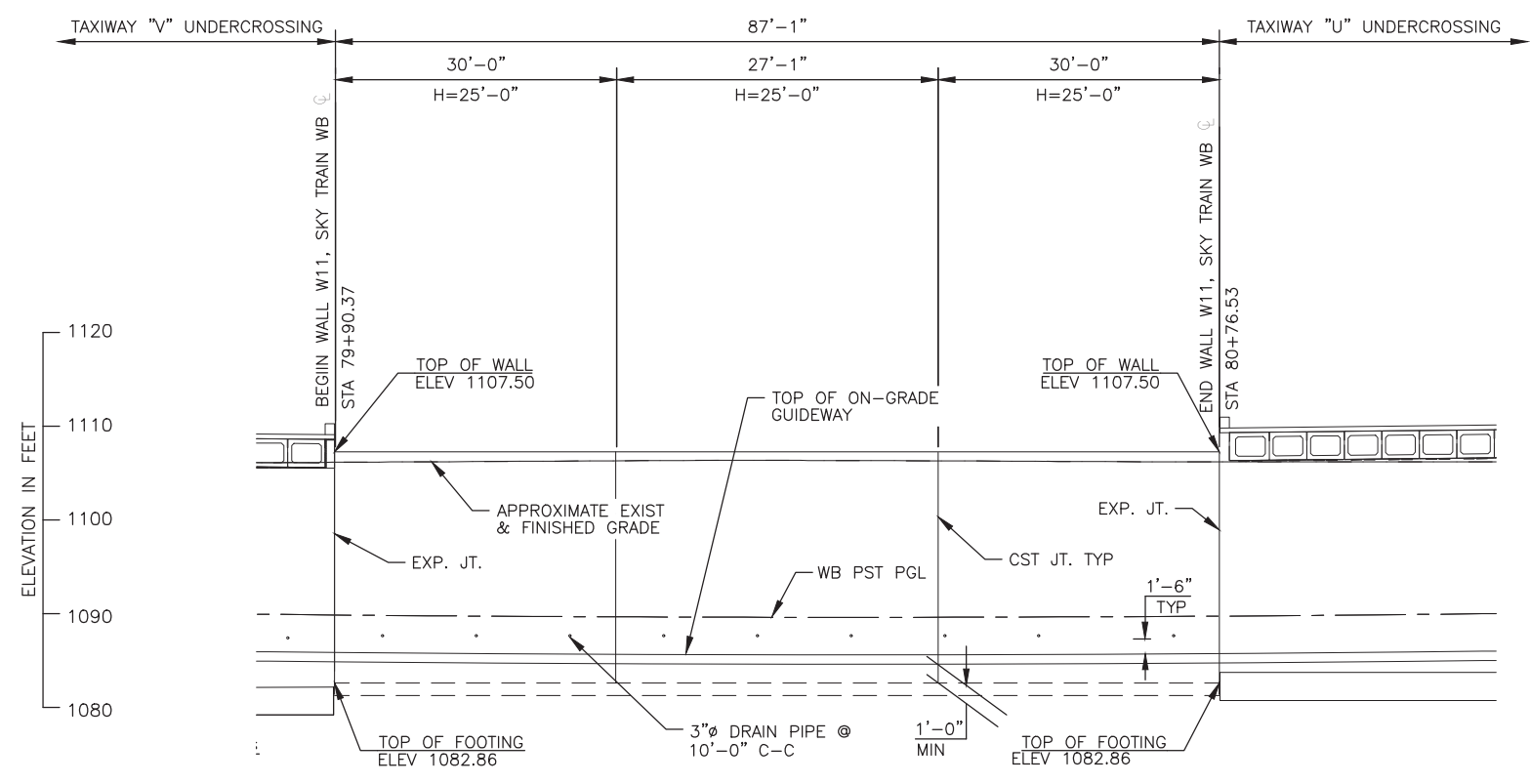
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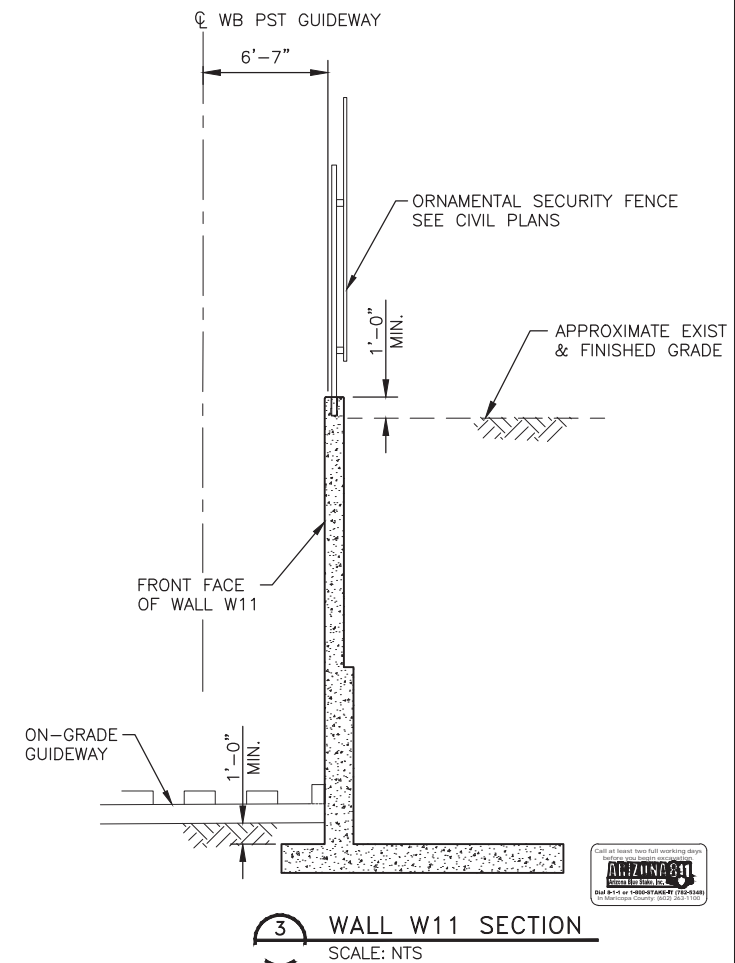
1 WALL W11 PLAN
SCALE: 1"=10'-0"

GENERAL NOTES

1. WALL LAYOUT BASED ON CL WB PST GUIDEWAY. WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
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3. FOR WALL DETAILS AND TYPICAL SECTION SEE SHEET MSSW0725.
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5. SEE EXISTING CONDITIONS PLANS FOR EXISTING UTILITY INFORMATION AND DETAILS.
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7. SEE FENCING PLAN FOR THE FENCE TYPE AND DETAILS AND FENCE LIMITS.
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2 WALL W11 ELEVATION
SCALE: 1"=10'-0"



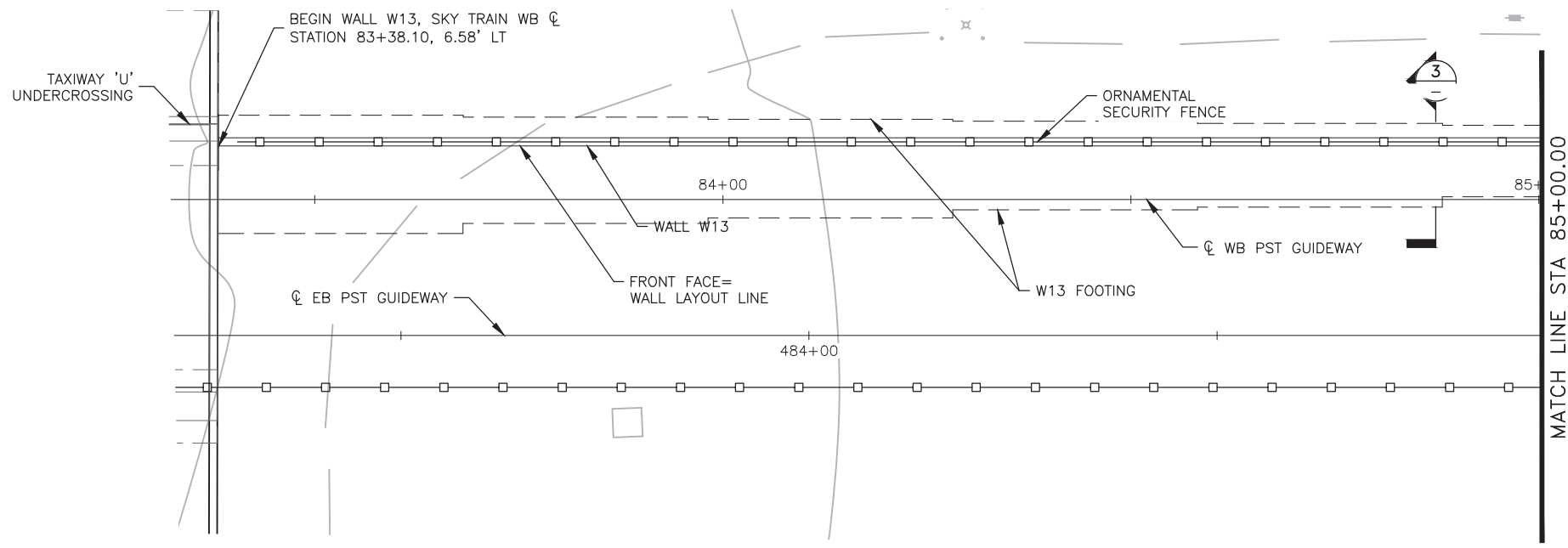
3 WALL W11 SECTION
SCALE: NTS



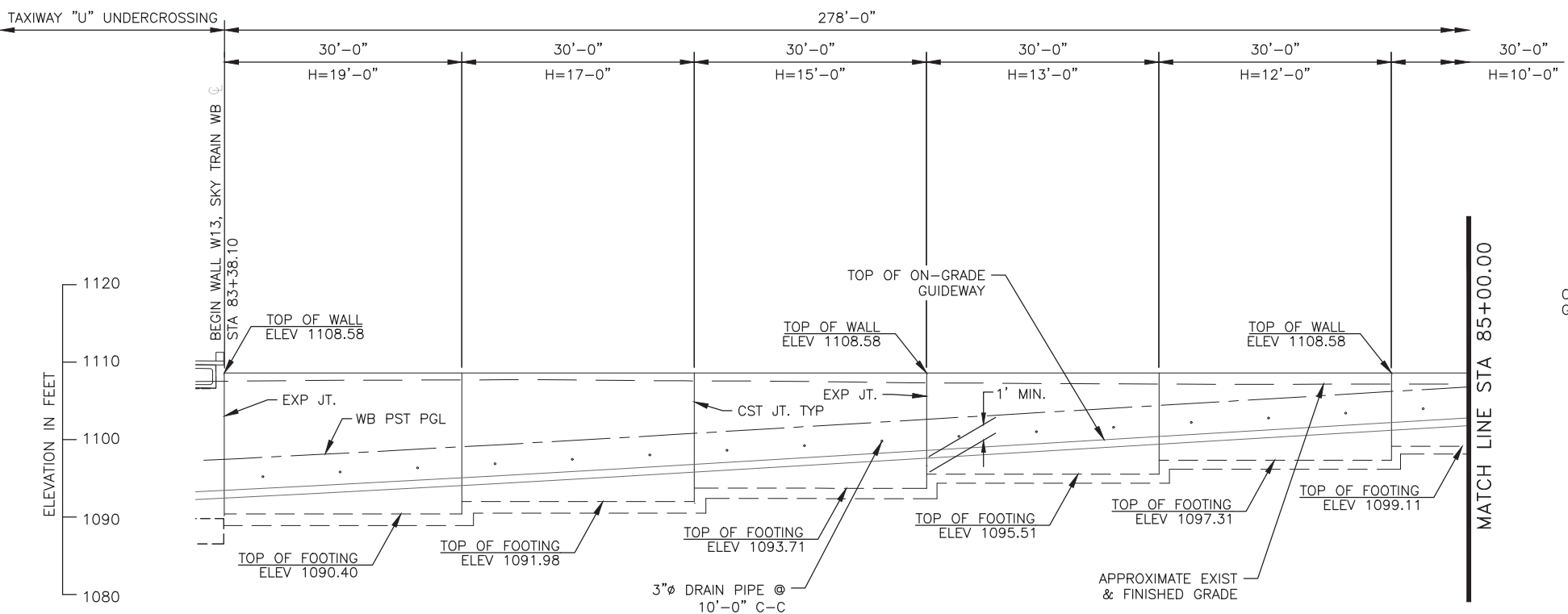
		Design Sub-Consultant
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.		ISSUED FOR CONSTRUCTION 03/02/18 SUBMITTED FOR REVIEW 12/15/17 REVISIONS / SUBMISSIONS NO. DATE
PHX SKY TRAIN CITY OF PHOENIX AVIATION DEPARTMENT STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034		
Designed by: PB	Drawn by: JRR	Checked by: SWS
Date: 03/02/2018	Dwg scale: 1"=10'	CIP No.: AV10000011
KIVA No.: 07-5204		
STAGE 2 - B02 DESIGN SUBMISSION GUIDEWAY RETAINING WALL W11 PLAN AND ELEVATION STA 79+90.37 TO STA 80+76.53		
Package: B02-MSSW0719		Sheet Reference No: V1 - 080 of 083



PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projss\40673541\AV10000011-S-2-MSSW0724.dwg jrojas



1 WALL W13 PLAN
SCALE: 1"=10'-0"

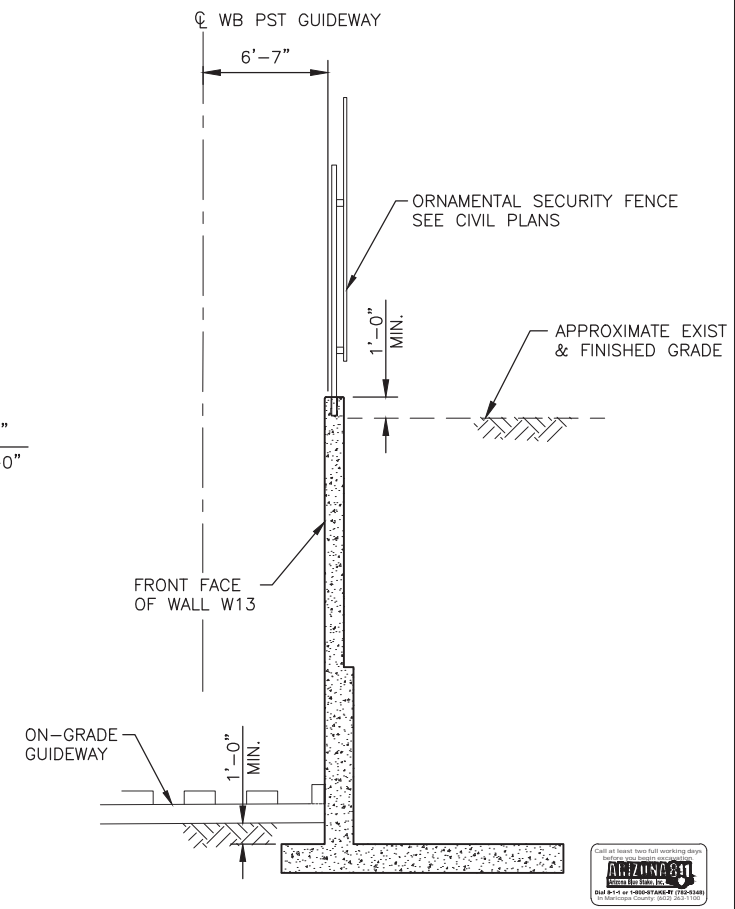


2 WALL W13 ELEVATION
SCALE: 1"=10'-0"



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3 WALL W13 SECTION
SCALE: NTS



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PHX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=10'	CIP No.: AV10000011	KIVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION

**GUIDEWAY
RETAINING WALL W13
PLAN AND ELEVATION 1
STA 83+38.10 TO STA 85+00.00**

Package: Sheet Reference No:
B02-MSSW0721
 V1 - 081 of 083

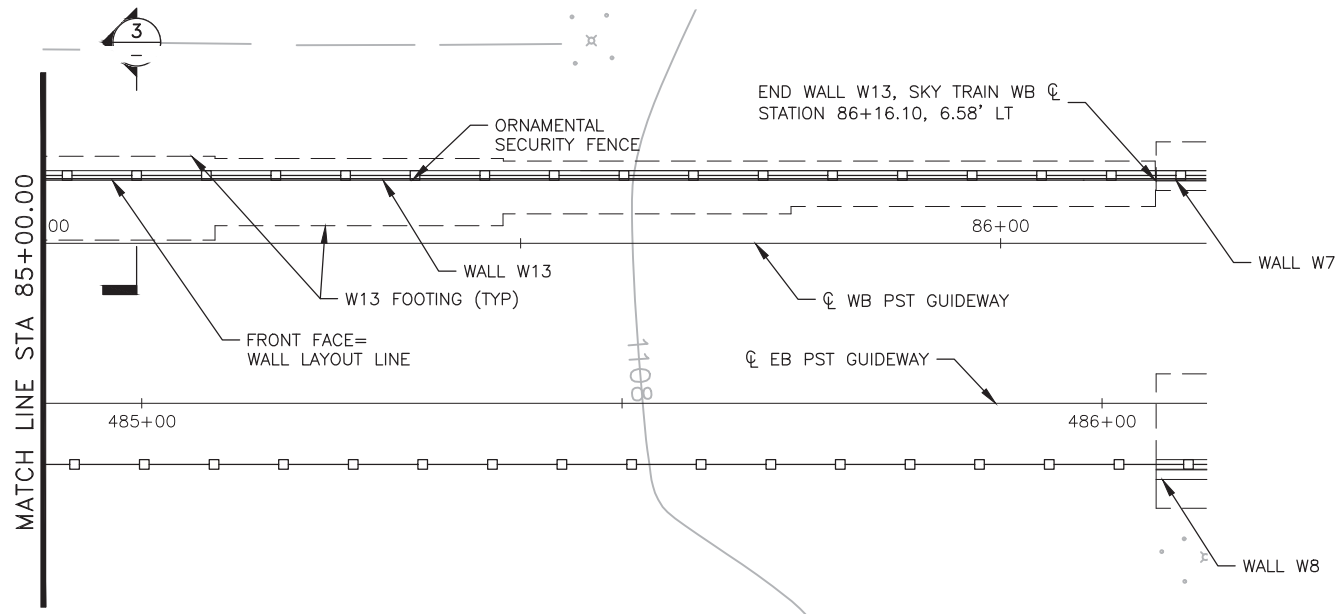
Design Sub-Consultant

Design Consultant

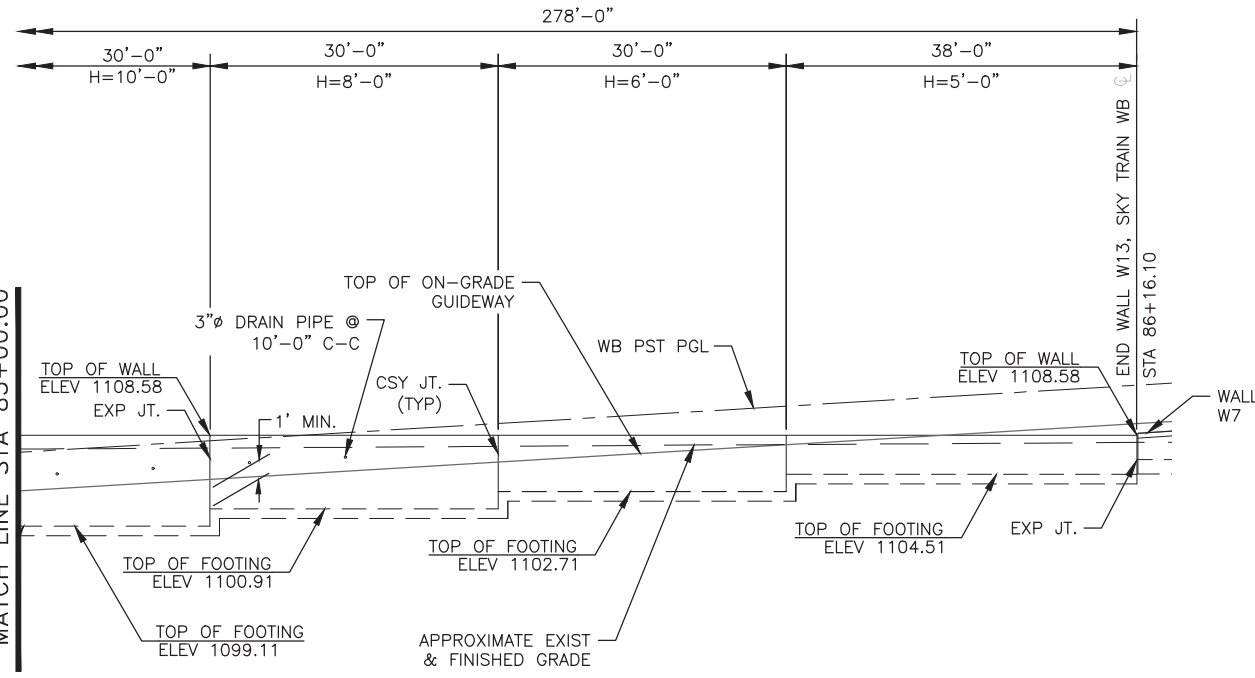
Gannett Fleming

ISSUED FOR CONSTRUCTION	03/02/18	DATE
SUBMITTED FOR REVIEW	12/15/17	DATE
REVISIONS / SUBMISSIONS		
NO.		

PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\rojas\40673541\AV10000011-S-2-MSSW0725.dwg jrojas



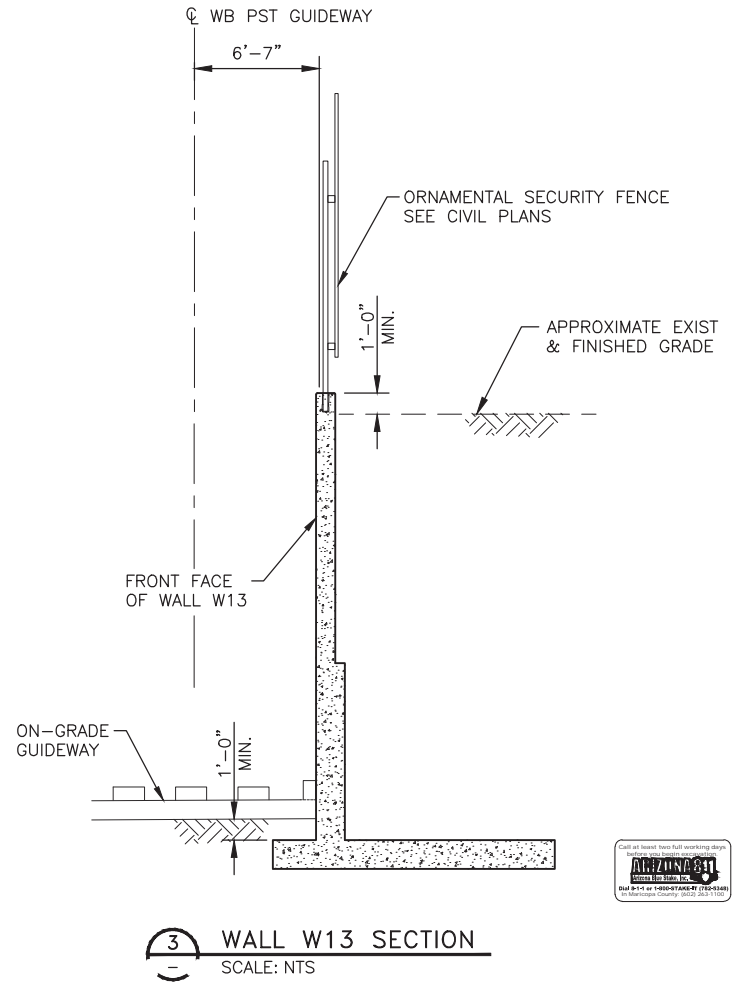
1 WALL W13 PLAN
SCALE: 1"=10'-0"



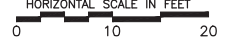
2 WALL W13 ELEVATION
SCALE: 1"=10'-0"

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3 WALL W13 SECTION
SCALE: NTS



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PHX AVIATION DEPARTMENT
CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=10'
CIP No.: AV10000011
KIVA No.: 07-5204

Design Sub-Consultant
Gannett Fleming
Design Consultant

NO.	ISSUED FOR CONSTRUCTION	03/02/18	DATE
	SUBMITTED FOR REVIEW	12/15/17	DATE
	REVISIONS / SUBMISSIONS		

STAGE 2 - B02 DESIGN SUBMISSION

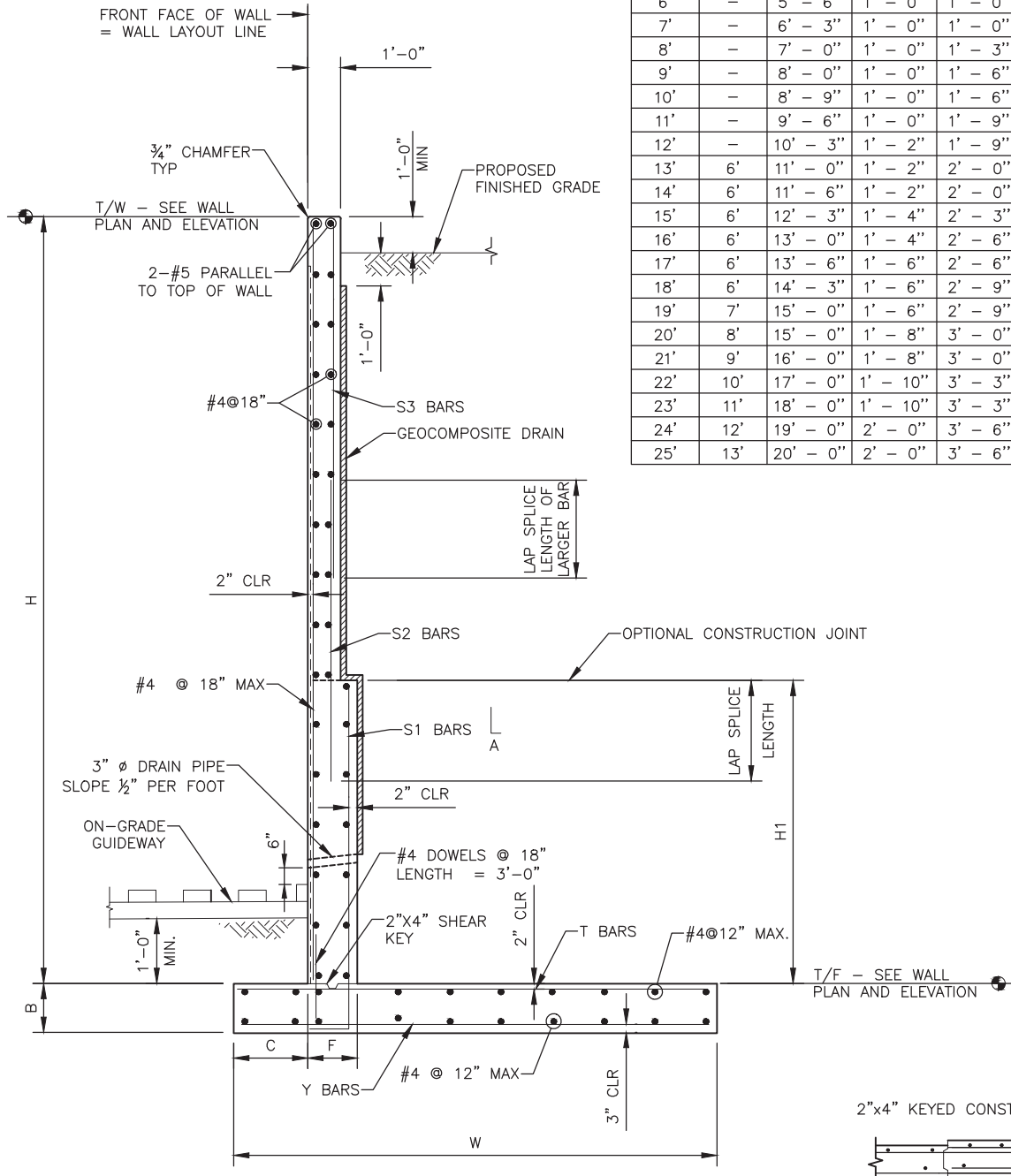
GUIDEWAY
RETAINING WALL W13
PLAN AND ELEVATION 2
STA 85+00.00 TO STA 86+16.10

Package: Sheet Reference No:
B02-MSSW0722
V1 - 082 of 083

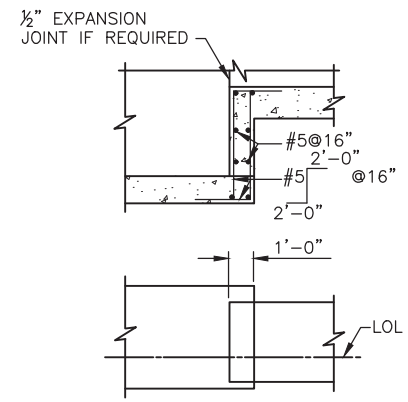
PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\projcs\40673541\AV10000011-S-2-MSSW0725.dwg jrojas

RETAINING WALL DIMENSIONS AND REINFORCING

DIMENSIONS							REINFORCING STEEL LIST															
H (ft)	H1 (ft)	W (ft)	B (ft)	C (ft)	F (in)		S1			S2			S3			Y			T			MAX. TOE PRESSURE (PSF)
							BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	
5'	-	4' - 9"	1' - 0"	1' - 0"	1' - 0"		#5	12"	6' - 10"	-	-	-	-	-	-	#5	12"	4' - 5"	#5	12"	4' - 5"	821
6'	-	5' - 6"	1' - 0"	1' - 0"	1' - 0"		#5	12"	7' - 10"	-	-	-	-	-	-	#5	12"	5' - 2"	#5	12"	5' - 2"	1,020
7'	-	6' - 3"	1' - 0"	1' - 0"	1' - 0"		#5	12"	8' - 10"	-	-	-	-	-	-	#5	12"	5' - 11"	#5	12"	5' - 11"	1,220
8'	-	7' - 0"	1' - 0"	1' - 3"	1' - 0"		#5	12"	9' - 10"	-	-	-	-	-	-	#5	12"	6' - 8"	#5	12"	6' - 8"	1,295
9'	-	8' - 0"	1' - 0"	1' - 6"	1' - 0"		#5	9"	4' - 0"	#5	12"	4' - 2"	-	-	-	#5	12"	7' - 8"	#5	12"	7' - 8"	1,345
10'	-	8' - 9"	1' - 0"	1' - 6"	1' - 0"		#5	9"	4' - 10"	#5	12"	4' - 2"	-	-	-	#5	12"	8' - 5"	#5	12"	8' - 5"	1,536
11'	-	9' - 6"	1' - 0"	1' - 9"	1' - 0"		#5	6"	5' - 10"	#5	12"	4' - 2"	-	-	-	#6	12"	9' - 2"	#5	12"	9' - 2"	1,607
12'	-	10' - 3"	1' - 2"	1' - 9"	1' - 0"		#6	6"	7' - 1"	#5	12"	4' - 7"	-	-	-	#6	12"	9' - 11"	#5	12"	9' - 11"	1,858
13'	6'	11' - 0"	1' - 2"	2' - 0"	1' - 2"		#6	6"	8' - 2"	#5	12"	4' - 7"	-	-	-	#7	12"	10' - 8"	#5	12"	10' - 8"	1,923
14'	6'	11' - 6"	1' - 2"	2' - 0"	1' - 2"		#6	6"	8' - 2"	#5	12"	5' - 3"	-	-	-	#7	12"	11' - 2"	#6	12"	11' - 2"	2,141
15'	6'	12' - 3"	1' - 4"	2' - 3"	1' - 2"		#7	6"	8' - 5"	#5	9"	7' - 5"	#5	12"	SEE NOTE 3	#7	12"	11' - 11"	#6	12"	11' - 11"	2,271
16'	6'	13' - 0"	1' - 4"	2' - 6"	1' - 4"		#7	6"	8' - 5"	#5	9"	8' - 5"	#5	12"	SEE NOTE 3	#8	12"	12' - 8"	#6	12"	12' - 8"	2,336
17'	6'	13' - 6"	1' - 6"	2' - 6"	1' - 6"		#7	6"	8' - 8"	#6	9"	9' - 10"	#5	12"	SEE NOTE 3	#8	12"	13' - 2"	#6	12"	13' - 2"	2,617
18'	6'	14' - 3"	1' - 6"	2' - 9"	1' - 6"		#8	6"	8' - 8"	#7	9"	12' - 6"	#5	12"	SEE NOTE 3	#8	12"	13' - 11"	#6	12"	13' - 11"	2,682
19'	7'	15' - 0"	1' - 6"	2' - 9"	1' - 6"		#8	6"	9' - 8"	#7	9"	12' - 6"	#5	12"	SEE NOTE 3	#9	12"	14' - 8"	#6	12"	14' - 8"	2,871
20'	8'	15' - 0"	1' - 8"	3' - 0"	1' - 8"		#8	6"	10' - 10"	#7	9"	12' - 6"	#5	12"	SEE NOTE 3	#9	12"	14' - 8"	#7	12"	14' - 8"	3,115
21'	9'	16' - 0"	1' - 8"	3' - 0"	1' - 8"		#9	6"	11' - 10"	#7	9"	13' - 8"	#5	12"	SEE NOTE 3	#9	12"	15' - 8"	#7	12"	15' - 8"	3,264
22'	10'	17' - 0"	1' - 10"	3' - 3"	1' - 10"		#9	6"	13' - 2"	#7	9"	13' - 8"	#5	12"	SEE NOTE 3	#9	12"	16' - 8"	#7	12"	16' - 8"	3,357
23'	11'	18' - 0"	1' - 10"	3' - 3"	2' - 0"		#9	6"	14' - 2"	#7	9"	13' - 8"	#5	12"	SEE NOTE 3	#10	12"	17' - 8"	#7	12"	17' - 8"	3,510
24'	12'	19' - 0"	2' - 0"	3' - 6"	2' - 0"		#10	6"	15' - 6"	#7	9"	15' - 1"	#5	12"	SEE NOTE 3	#10	12"	18' - 8"	#7	12"	18' - 8"	3,607
25'	13'	20' - 0"	2' - 0"	3' - 6"	2' - 0"		#10	6"	16' - 6"	#7	9"	15' - 1"	#5	12"	SEE NOTE 3	#10	12"	19' - 8"	#8	12"	19' - 8"	3,763



1 WALL TYPICAL SECTION - WALLS W9, W11, W13 SCALE: NTS

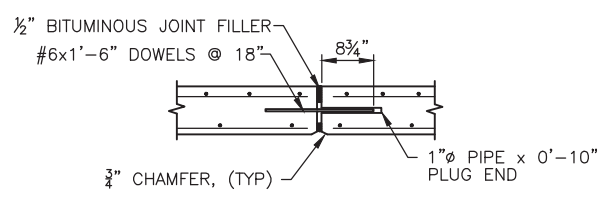


2 TYPICAL CONSTRUCTION JOINT DETAIL SCALE: NTS

LAP SPLICE AND HOOK LENGTH TABLE

BAR SIZE	LAP SPLICE	HOOK LENGTH "A" (12*db)
#5	2'-2"	0'-8"
#6	2'-7"	0'-9"
#7	3'-3"	0'-11"
#8	4'-3"	1'-0"
#9	5'-5"	1'-2"
#10	6'-10"	1'-4"

- NOTES:
- S1 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL.
 - S2 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S1 BAR.
 - S3 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S2 BAR.



4 TYPICAL EXPANSION JOINT DETAIL SCALE: NTS

Professional Engineer (Civil) License No. 10000011
 Design Sub-Consultant
Gannett Fleming
 Design Consultant

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PHX AVIATION DEPARTMENT
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PHX SKY TRAIN
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PHOENIX, AZ 85034

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: NTS	CIP No.: AV10000011	KIVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
 RETAINING WALL TYPICAL SECTION
 WALL W9, W11 & W13

Package: Sheet Reference No:
B02-MSSW0725
 V1 - 083 of 083