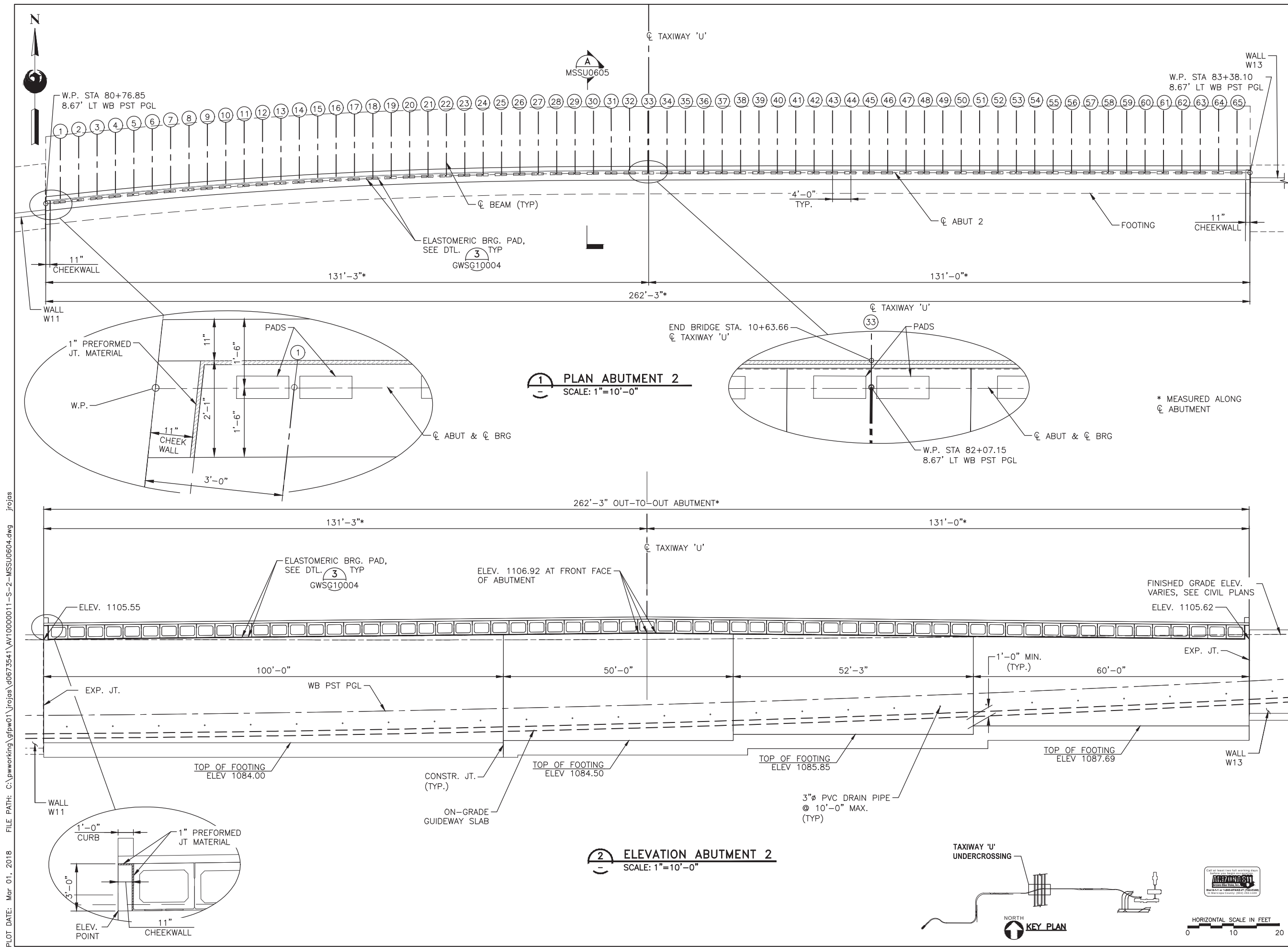
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Designed by: PB
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg. scale!=""=10'-0"
CIP No.: AV10000111
KIWA No.: 07-5204

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



PER CITY OF PHOENIX ORDINANCE G-4396,
THESE PLANS ARE FOR OFFICIAL USE ONLY
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EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

[illegible]

PHX DVI GVR
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

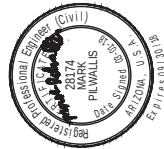
GUIDEWAY TAXIWAYS 'U' & 'V' UNDERCROSSING TAXIWAY 'U' ABOUT 2 PLAN & ELEVATION

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



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

* MEASURED ALONG $\odot$ PIER



Design Sub-Consultant

Design Consultant


Gannett Fleming

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[illegible]

PHX DVT GVR
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'

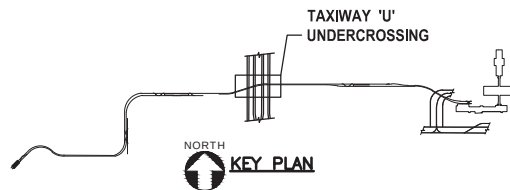
CIP No.: AV10000011

KIVA No.: 07-5204

STAGE 2 – B02 DESIGN SUBMISSION

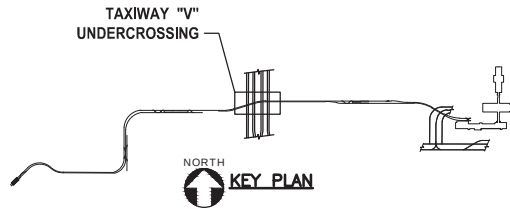
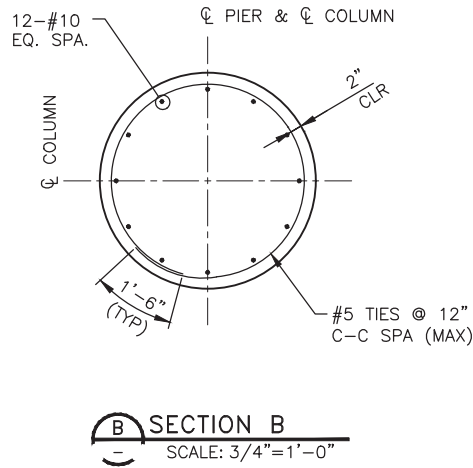
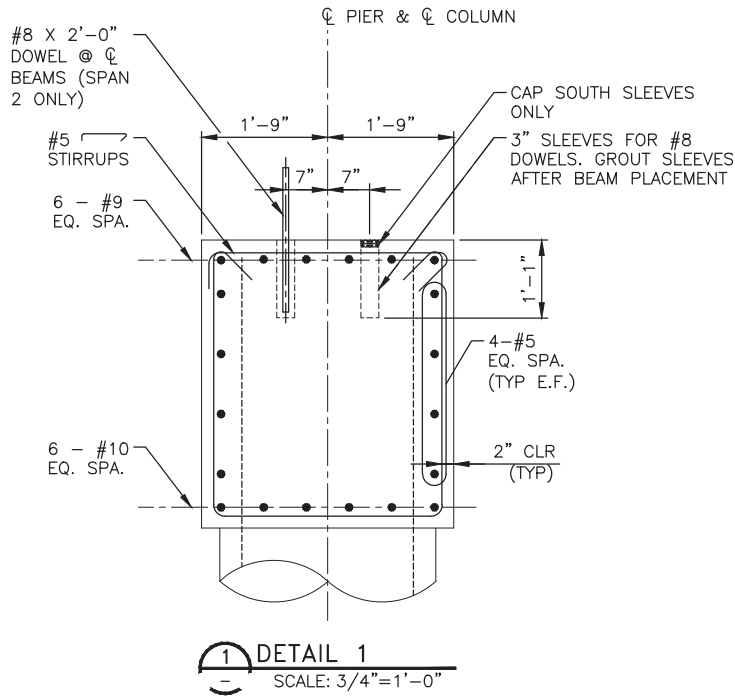
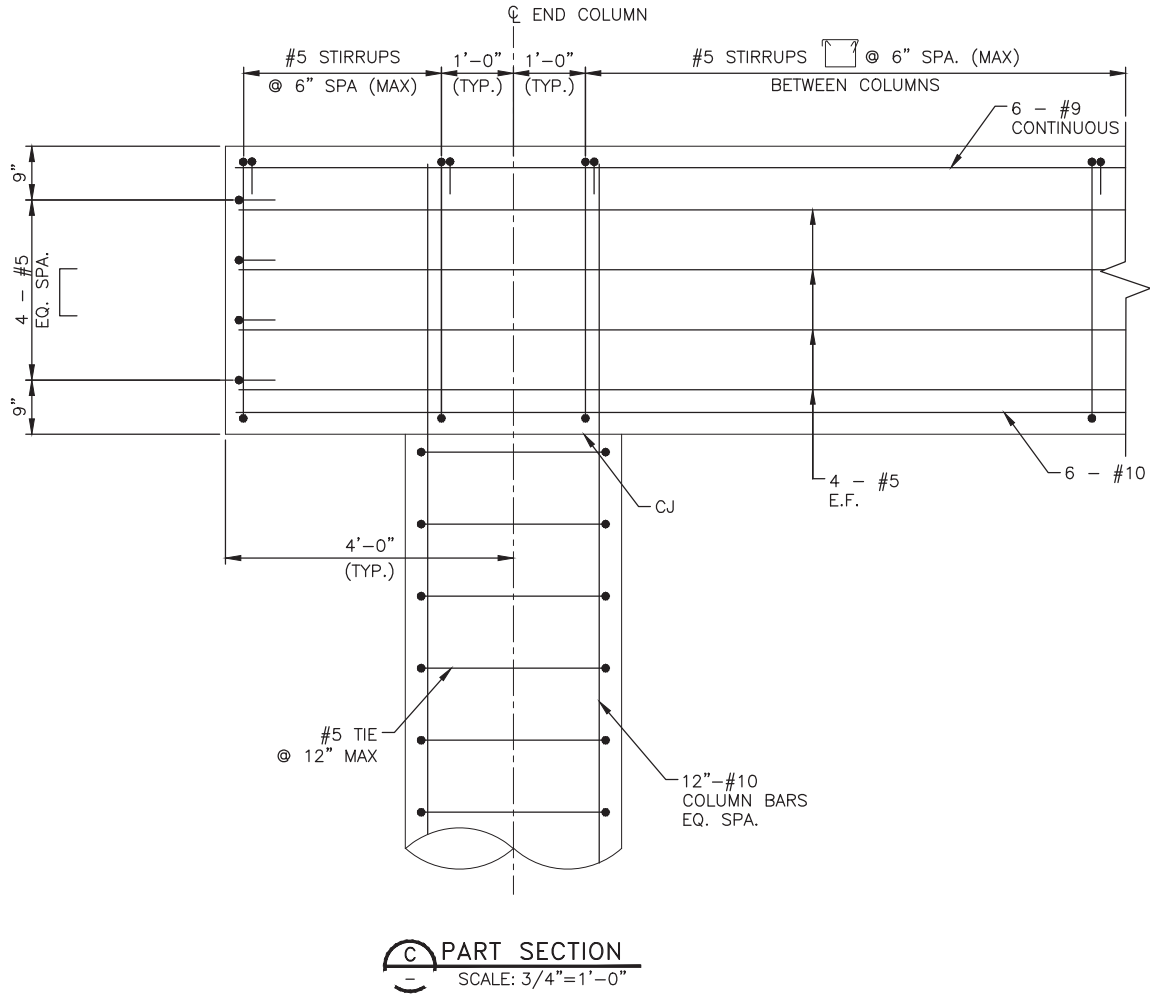
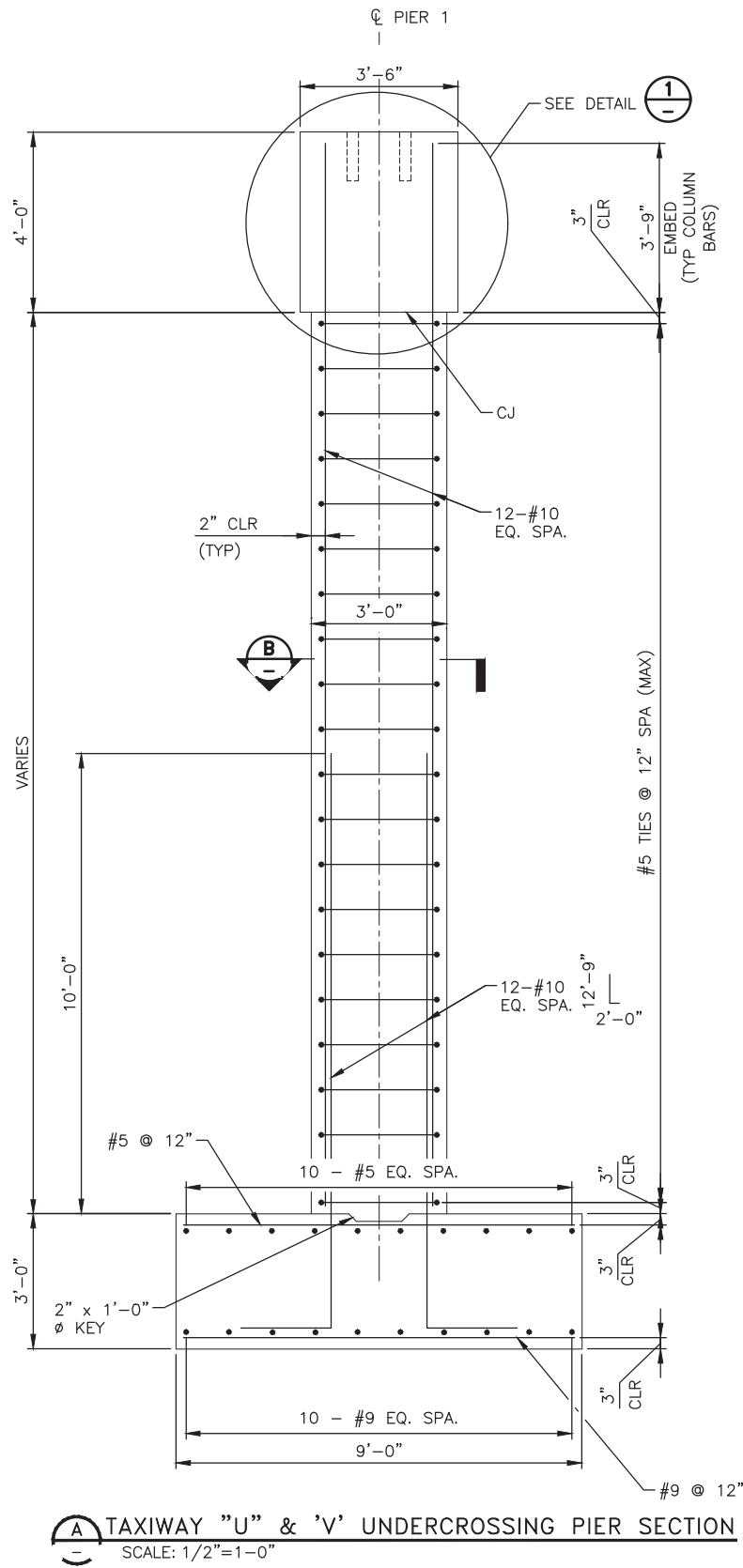
GUDEWAY TAXIWAYS 'U' & 'V' UNDERCROSSING TAXIWAY 'U' PIER 1 PLAN & ELEVATION

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



HORIZONTAL SCALE IN FEET

0 10 20



PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

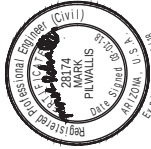
STAGE 2 - B02 DESIGN SUBMISSION

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

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

PER CITY OF PHOENIX ORDINANCE G-4396,
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NO.	REVISIONS / SUBMISSIONS	DATE
03/02/18	ISSUED FOR CONSTRUCTION	
12/15/17	SUBMITTED FOR REVIEW	



Design Sub-Consultant

Design Consultant



FILE PATH: C:\pwworking\gfpw01\charlie.golek@kimley-horn.com\d0673550\AV10000011-S-2-WTCV00NT09.dwg PLOT DATE: Apr 11, 2018

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014 WITH 2015 & 2016 INTERIMS.

ADOT BRIDGE DESIGN GUIDELINES.

PHX SKY TRAIN PROJECT DESIGN CRITERIA MANUAL, FACILITIES DESIGN, REV 3, APRIL 2017, INCLUDING ALL UPDATES.

CONSTRUCTION SPECIFICATIONS

PHX SKY TRAIN PROJECT SPECIFICATIONS.

DESIGN LOADS

ALL LOADINGS SHALL BE IN ACCORDANCE WITH THE "PHX SKY TRAIN PROJECT DESIGN CRITERIA MANUAL FACILITIES DESIGN, REV 3. APRIL 2017." SEE DETAIL 1 THIS SHEET, FOR VEHICLE LOADS.

EMERGENCY WALKWAY 0 plf (MIN) TO 200 plf (MAX)
PST RUNNING SURFACE (EACH) 800 plf (MIN) TO 1200 plf (MAX)

EQUIVALENT FLUID PRESSURE FOR ACTIVE SOIL PRESSURE = 40 pcf (FOR PARAPET WALLS WITH LEVEL BACKFILL)

CONCRETE AND REINFORCEMENT REQUIREMENTS

f'c = 4000 psi (CLASS AA)
fs = 24,000 psi – REINFORCING STEEL (fy = 60,000 psi)

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

ALL BENDS AND HOOKS SHALL MEET THE REQUIREMENTS OF AASHTO ARTICLE 5.10.2. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE TO CENTER OF BARS UNLESS NOTED OTHERWISE.

ALL REINFORCING 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.

CHAMFER

ALL EXPOSED CORNERS SHALL BE CHAMFERED ¾", 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.

FOUNDATIONS

FOUNDATION PREPARATION BETWEEN EB STATIONS
72+61 TO 75+75 AND 85+00 TO 88+00:

ON-GRADE GUIDEWAY SUBGRADE SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. EXISTING SUBGRADE SOILS SHALL BE REMOVED TO A DEPTH OF 2 FEET BELOW EXISTING GRADES. THE OVER-EXCAVATION SOILS SHALL BE REPLACED WITH STRUCTURAL ENGINEERED FILL COMPACTED TO 95% OR MORE RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM D698 AT A MOISTURE CONTENT WITHIN 3% OF ITS OPTIMUM.

FOUNDATION PREPARATION AT ALL OTHER LOCATIONS:

ON-GRADE GUIDEWAY SUBGRADE SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. EXISTING SUBGRADE ON WHICH THE ON-GRADE GUIDEWAY SLAB, OR EMBANKMENT REQUIRED FOR THE ON-GRADE GUIDEWAY SLAB, IS FOUNDED SHALL BE PREPARED BY SCARIFYING THE UPPER 12 INCHES OF SOIL, MOISTURE-CONDITIONING AND RE-COMPACTING TO 95 PERCENT OR MORE RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM D698 AT A MOISTURE CONTENT WITHIN 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.

EMBANKMENT PLACEMENT:

NEW FILL PLACED IN ON-GRADE GUIDEWAY AREAS AND EMBANKMENT AREAS SHALL BE PLACED IN HORIZONTAL LIFTS OF 9-INCH OR LESS LOOSE THICKNESS AND COMPACTED BY APPROPRIATE MEANS TO 95% OR MORE RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM D698 AT A MOISTURE CONTENT WITHIN 3% OF ITS OPTIMUM.

ON-GRADE GUIDEWAY BASE:

ON-GRADE GUIDEWAY SLAB SHALL BE PLACED ON A 6" AGGREGATE BASE COURSE.

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.
- PROVIDE ELECTRICAL GROUNDING AND CORROSION PROTECTION OF THE STRUCTURE IN ACCORDANCE WITH THE SPECIFICATIONS.
- GUIDEWAY EGRESS REVIEW:

THE FOLLOWING SECTIONS FROM NFPA 130-2007 STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS WERE REVIEWED:

6.2.3.2.1 ACCESS TO THE TRAIN WAY SHALL BE FROM STATIONS OR BY MOBILE LADDER EQUIPMENT FROM ROADWAYS ADJACENT TO THE TRACK WAY. 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 THE TRACK WAY, ACCESS GATES SHALL BE PROVIDED AS DEEMED NECESSARY BY THE AUTHORITY HAVING JURISDICTION. COMPLIANT.

FENCE REQUIREMENTS:

FENCE SHALL BE ORNAMENTAL SECURITY FENCE AS SHOWN IN THE PROJECT PLANS. SEE FENCING PLANS FOR FENCE DETAILS.

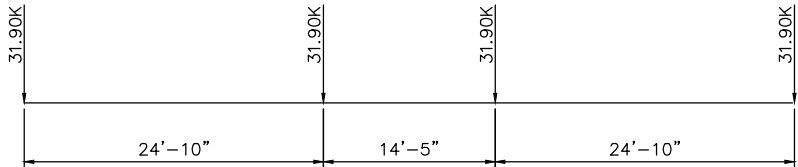
LEGEND

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

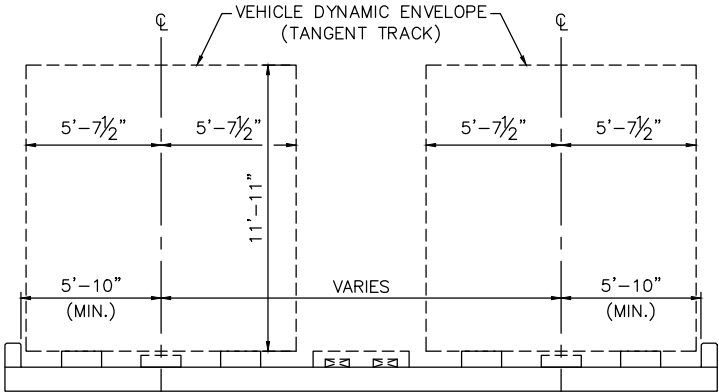
JOINT NOTES

CONSTRUCTION AND EXPANSION JOINTS SHALL BE LOCATED AS SHOWN. ADDITIONAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE PROGRAM/PROJECT MANAGER PRIOR TO CONSTRUCTION.

BAR SPLICE TABLE (BASED ON f'c = 4000 psi)						
MINIMUM LAP SPLICE LENGTH (IN)					MINIMUM EMBEDMENT LENGTH (IN)	
BAR SIZE	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	
	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



1 WHEEL LOAD DETAIL
SCALE: N.T.S.



2 VEHICLE DYNAMIC ENVELOPE
SCALE: N.T.S.



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.

Design Sub-Consultant

Kimley»Horn

Design Consultant

**Gannett Fleming**

ISSUED FOR CONSTRUCTION

SUBMITTED FOR REVIEW

REVISIONS / SUBMISSIONS

NO.

04/13/18

02/02/18

DATE

PHX Sky Train
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg. scale: N/A

CIP No.: AV10000011

KIVA No.: 07-5204

STAGE 2 – B03 DESIGN SUBMISSION

**GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
GENERAL STRUCTURAL NOTES**

Package: **B03-WSCV0001**
V1 - 167 of 339

Sheet Reference No:



SEE ON-GRADE GUIDEWAY FOUNDATIONS
NOTES ON SHEET B03-WSCV0001 FOR
SOIL PREPARATION REQUIREMENTS

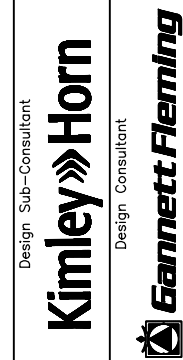
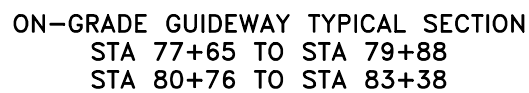
SEE ON-GRADE GUIDEWAY FOUNDATIONS
NOTES ON SHEET B03-WSCV0001 FOR
SOIL PREPARATION REQUIREMENTS

Package: Sheet Reference No:
B03 - WSCV0401
V1 - 168 of 339



ISSUED FOR CONSTRUCTION	04/13/18
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ISSUED FOR CONSTRUCTION	04/13/18
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CITY OF PHOENIX.

[illegible]

PULP DVI EYE
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg scale: N/A

CIP No.: AV10000011

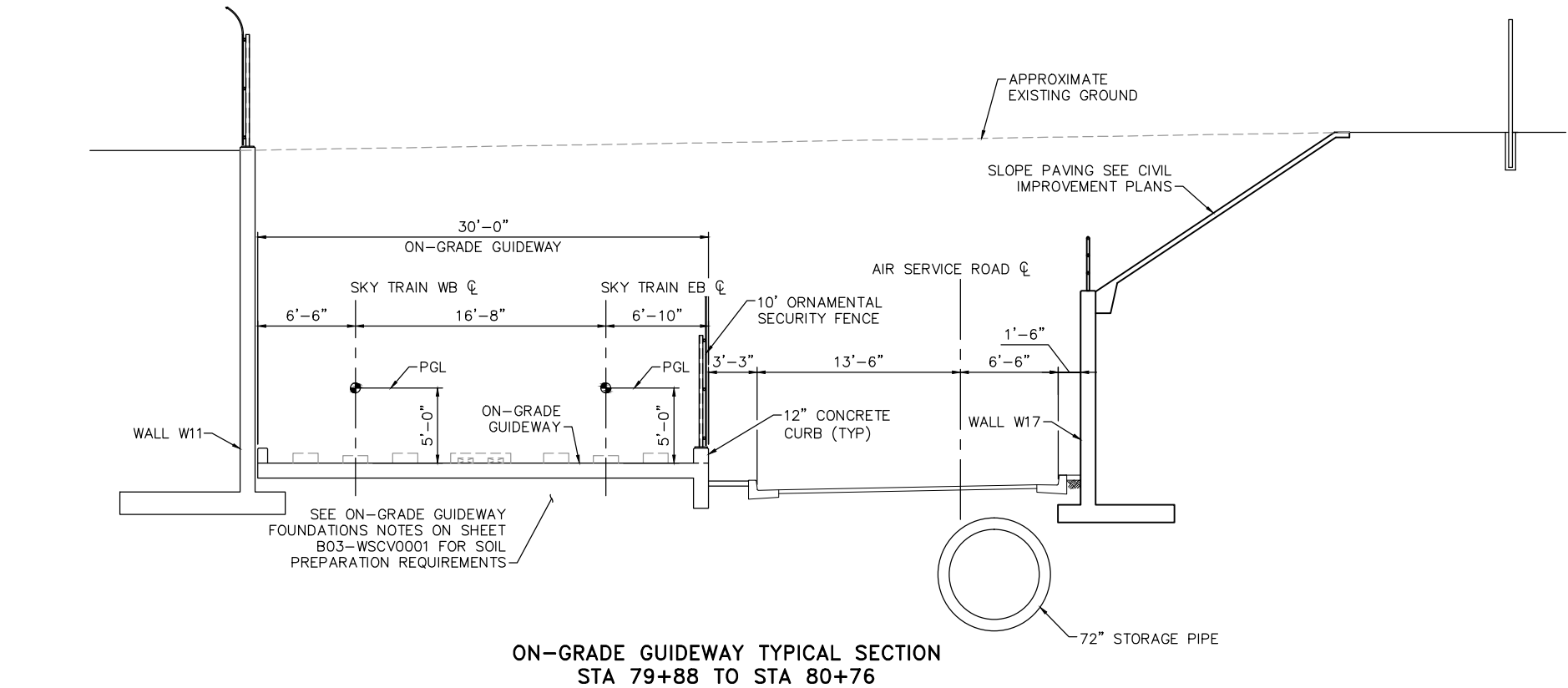
CIVA No: 07-5204

STAGE 2 – BQ3 DESIGN SUBMISSION

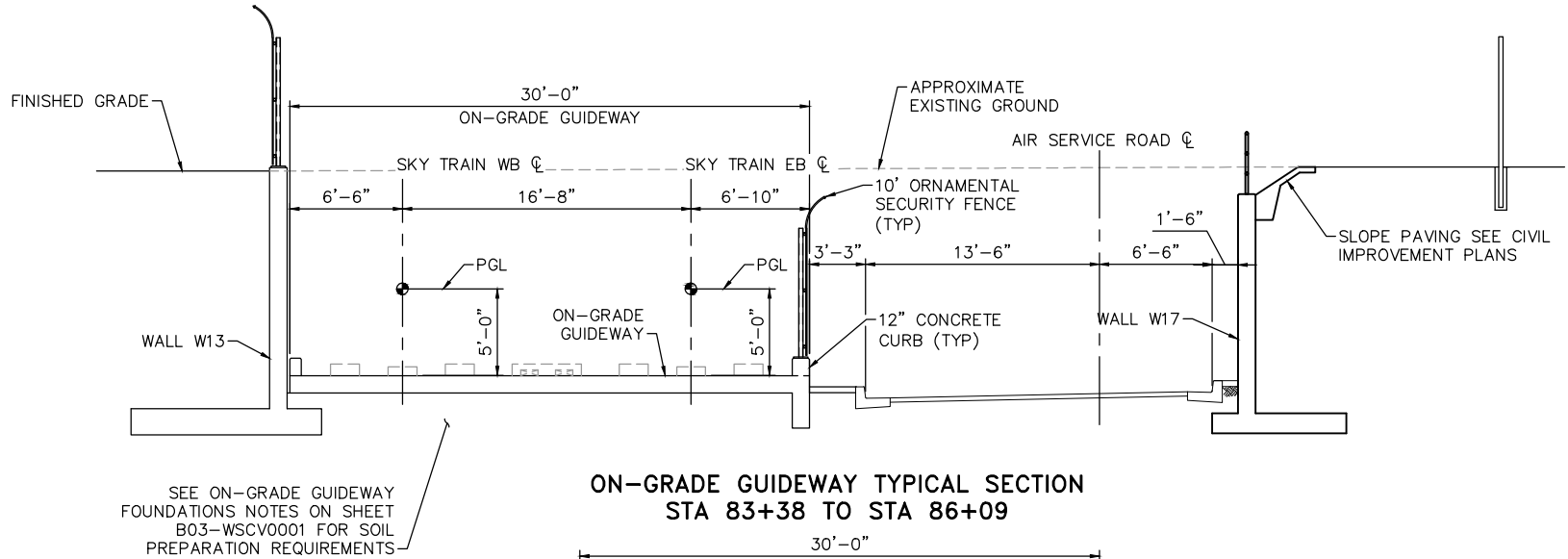
GUIDEWAY U & V CROSSING ON GRADE GUIDEWAY SECTIONS

Package: Sheet Reference No:
B03 - WSCV0402
V1 - 169 of 339

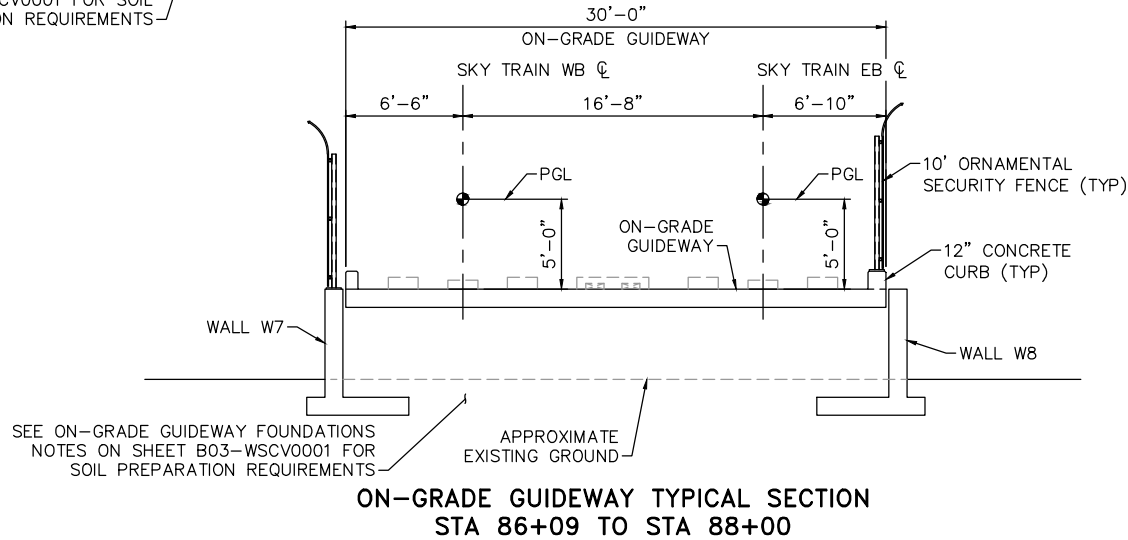
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ON-GRADE GUIDEWAY TYPICAL SECTION
STA 79+88 TO STA 80+76



ON-GRADE GUIDEWAY TYPICAL SECTION
STA 83+38 TO STA 86+09



ON-GRADE GUIDEWAY TYPICAL SECTION
STA 86+09 TO STA 88+00



Design Sub-Consultant

Kimley»Horn

Design Consultant



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PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg. scale: N/A

CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
SECTIONS**

Package: Sheet Reference No:
B03-WSCV0403
v1 - 170 of 339



1. FOR ALIGNMENT DATA OF PST, SEE CIVIL PLANS.
2. FOR SITE CONFIGURATION OF INTERIM CONDITIONS, SEE CIVIL PLANS.



HORIZONTAL SCALE IN FEET

0 $\frac{3}{16}$ $\frac{3}{8}$

GUIDEWAY TAXIWAY "U" & "V" UNDERCROSSING FACILITIES ACCESS ROAD BRIDGE TYPICAL SECTION

Package: Sheet Reference No:
B03 - MSSU0403
V1 - 180 of 339

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[illegible]

PHX DVT HVR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: PB/MH
Drawn by: JRR
Checked by: SWS
Date: 04/13/2018
Dwg scale: $\frac{3}{8}'' = 1' - 0''$
CIP No.: AV10000011
KIVA No.: 07-5204

Design Sub-Consultant

Design Consultant


Gannett Fleming

FILE PATH: C:\pwworking\gfpw01\charlie.golek@kimley-horn.com\d0673550\AV10000011-S-2-WTCV00NT09.dwg PLOT DATE: Apr 11, 2018

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014 WITH 2015 & 2016 INTERIMS.

ADOT BRIDGE DESIGN GUIDELINES.

PHX SKY TRAIN PROJECT DESIGN CRITERIA MANUAL, FACILITIES DESIGN, REV 3, APRIL 2017, INCLUDING ALL UPDATES.

CONSTRUCTION SPECIFICATIONS

PHX SKY TRAIN PROJECT SPECIFICATIONS.

DESIGN LOADS

ALL LOADINGS SHALL BE IN ACCORDANCE WITH THE "PHX SKY TRAIN PROJECT DESIGN CRITERIA MANUAL FACILITIES DESIGN, REV 3. APRIL 2017." SEE DETAIL 1 THIS SHEET, FOR VEHICLE LOADS.

EMERGENCY WALKWAY 0 plf (MIN) TO 200 plf (MAX)
PST RUNNING SURFACE (EACH) 800 plf (MIN) TO 1200 plf (MAX)

EQUIVALENT FLUID PRESSURE FOR ACTIVE SOIL PRESSURE = 40 pcf (FOR PARAPET WALLS WITH LEVEL BACKFILL)

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f'c = 4000 psi (CLASS AA)
fs = 24,000 psi – REINFORCING STEEL (fy = 60,000 psi)

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FOUNDATIONS

FOUNDATION PREPARATION BETWEEN EB STATIONS
72+61 TO 75+75 AND 85+00 TO 88+00:

ON-GRADE GUIDEWAY SUBGRADE SOILS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. EXISTING SUBGRADE SOILS SHALL BE REMOVED TO A DEPTH OF 2 FEET BELOW EXISTING GRADES. THE OVER-EXCAVATION SOILS SHALL BE REPLACED WITH STRUCTURAL ENGINEERED FILL COMPACTED TO 95% OR MORE RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM D698 AT A MOISTURE CONTENT WITHIN 3% OF ITS OPTIMUM.

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NEW FILL PLACED IN ON-GRADE GUIDEWAY AREAS AND EMBANKMENT AREAS SHALL BE PLACED IN HORIZONTAL LIFTS OF 9-INCH OR LESS LOOSE THICKNESS AND COMPACTED BY APPROPRIATE MEANS TO 95% OR MORE RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM D698 AT A MOISTURE CONTENT WITHIN 3% OF ITS OPTIMUM.

ON-GRADE GUIDEWAY BASE:

ON-GRADE GUIDEWAY SLAB SHALL BE PLACED ON A 6" AGGREGATE BASE COURSE.

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- GUIDEWAY EGRESS REVIEW:

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6.2.3.2.1 ACCESS TO THE TRAIN WAY SHALL BE FROM STATIONS OR BY MOBILE LADDER EQUIPMENT FROM ROADWAYS ADJACENT TO THE TRACK WAY. 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.

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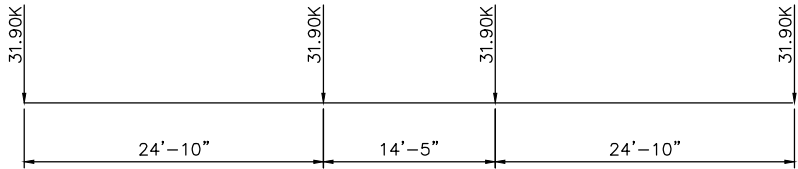
LEGEND

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

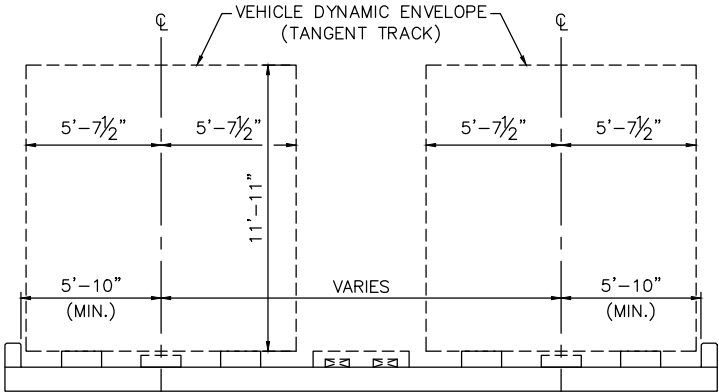
JOINT NOTES

CONSTRUCTION AND EXPANSION JOINTS SHALL BE LOCATED AS SHOWN. ADDITIONAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE PROGRAM/PROJECT MANAGER PRIOR TO CONSTRUCTION.

BAR SPLICE TABLE (BASED ON f'c = 4000 psi)						
MINIMUM LAP SPLICE LENGTH (IN)					MINIMUM EMBEDMENT LENGTH (IN)	
BAR SIZE	CLASS B SPLICE		CLASS C SPLICE		TOP BAR	
	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



1 WHEEL LOAD DETAIL
SCALE: N.T.S.



2 VEHICLE DYNAMIC ENVELOPE
SCALE: N.T.S.



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.

Design Sub-Consultant

Kimley»Horn

Design Consultant



CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg. scale: N/A

CIP No.: AV10000011

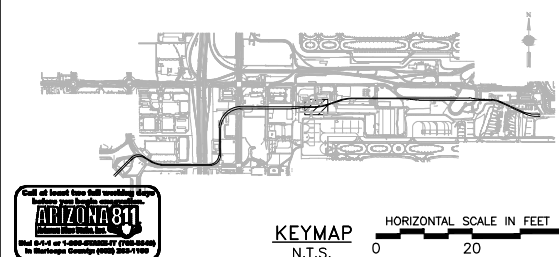
KIVA No.: 07-5204

STAGE 2 – B03 DESIGN SUBMISSION

GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
GENERAL STRUCTURAL NOTES



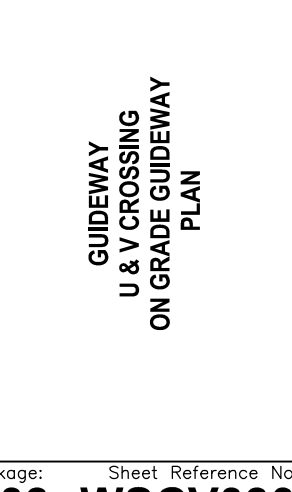
1. REFER TO GUIDEWAY PLAN AND PROFILE SHEETS FOR ADDITIONAL SKY TRAIN ALIGNMENT INFORMATION.
2. UNLESS OTHERWISE NOTED, STATIONING BASED ON SKY TRAIN WB ALIGNMENT.
3. SEE DRAINAGE PLANS AND GRADING AND DRAINAGE PLANS FOR ADDITIONAL DRAINAGE AND TRENCH DRAIN REQUIREMENTS.
4. GRADING CONTOURS WITHIN ON-GRADE GUIDEWAY REPRESENT TOP OF CONCRETE SLAB ELEVATIONS. TOP OF CONCRETE SLAB ELEVATION IS 5'-0" BELOW SKY TRAIN PROFILE GRADE ELEVATION.
5. SEE STRUCTURAL RETAINING WALL PLANS IN PACKAGE B02 AND THIS PACKAGE FOR WALL DETAILS.
6. SEE GUIDEWAY ELEVATED ALIGNMENT PLANS FOR ABUTMENT DETAILS.
7. SEE TAXIWAY "U" & "V" UNDERCROSSING PLANS IN PACKAGE B02 FOR UNDERCROSSING DETAILS.
8. SEE CIVIL IMPROVEMENT PLANS FOR SLOPE PAVING LAYOUT AND DETAILS.

[illegible]

PHX DVT GYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG
Drawn by: CHG
Checked by: KJK
Date: 04/13/2018
Dwg scale: 1"=20'
CIP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 – B03 DESIGN SUBMISSION	
Package: Sheet Reference No: B03 - WSCV0301 V1 - 171 of 339	



1. REFER TO GUIDEWAY PLAN AND PROFILE SHEETS FOR ADDITIONAL SKY TRAIN ALIGNMENT INFORMATION.
2. UNLESS OTHERWISE NOTED, STATIONING BASED ON SKY TRAIN WB ALIGNMENT.
3. SEE DRAINAGE PLANS AND GRADING AND DRAINAGE PLANS FOR ADDITIONAL DRAINAGE AND TRENCH DRAIN REQUIREMENTS.
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7. SEE CIVIL IMPROVEMENT PLANS FOR SLOPE PAVING LAYOUT AND DETAILS.

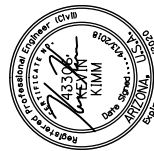


HORIZONTAL SCALE IN FEET

0 20 40

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

Package: Sheet Reference No:
B03 - WSCV0302
V1 - 172 of 339



Design Sub-Consultant

Kimley»»Horn

Design Consultant


Gannett Fleming[illegible]



1. REFER TO GUIDEWAY PLAN AND PROFILE SHEETS FOR ADDITIONAL SKY TRAIN ALIGNMENT INFORMATION.
2. UNLESS OTHERWISE NOTED, STATIONING BASED ON SKY TRAIN WB ALIGNMENT.
3. SEE DRAINAGE PLANS AND GRADING AND DRAINAGE PLANS FOR ADDITIONAL DRAINAGE AND TRENCH DRAIN REQUIREMENTS.
4. GRADING CONTOURS WITHIN ON-GRADE GUIDEWAY REPRESENT TOP OF CONCRETE SLAB ELEVATIONS. TOP OF CONCRETE SLAB ELEVATION IS 5'-0" BELOW SKY TRAIN PROFILE GRADE ELEVATION.
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6. SEE GUIDEWAY ELEVATED ALIGNMENT PLANS FOR ABUTMENT DETAILS.
7. SEE CIVIL IMPROVEMENT PLANS FOR SLOPE PAVING LAYOUT AND DETAILS.



HORIZONTAL SCALE IN FEET

0 20 40

PHX DVI BYA
● CITY OF PHOENIX AVIATION DEPARTMENT

PER CITY OF PHOENIX ORDINANCE G-4396,
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EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

[illegible]

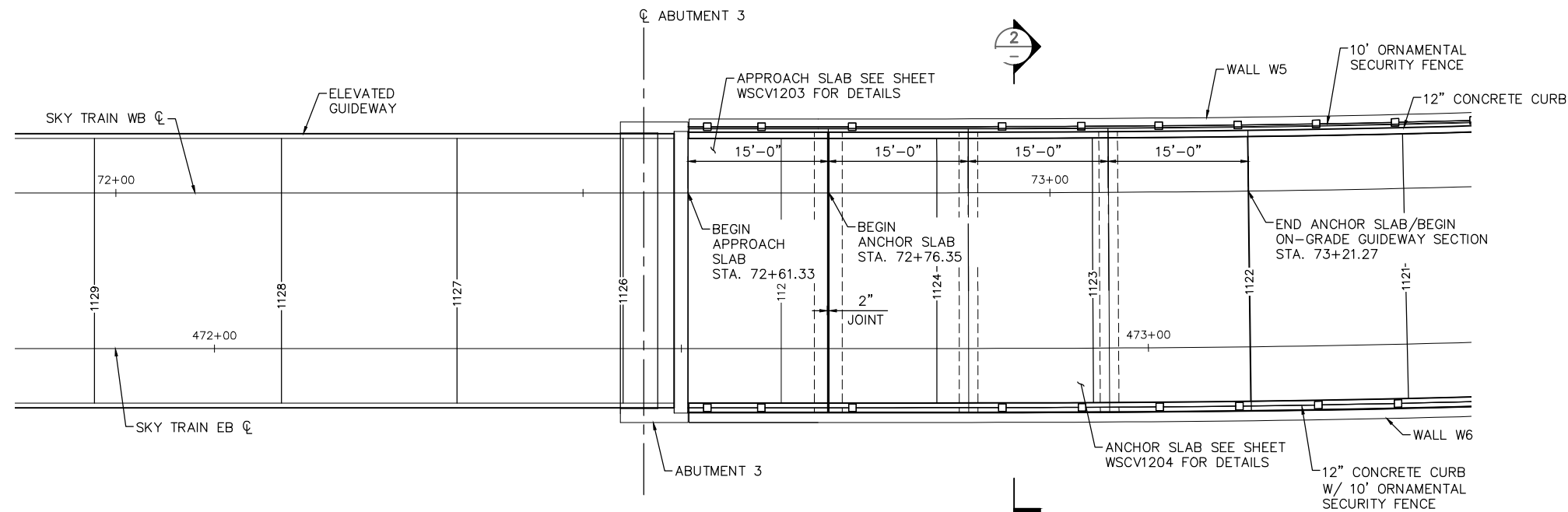
Design Sub-Consultant

Kimley»»Horn

Design Consultant

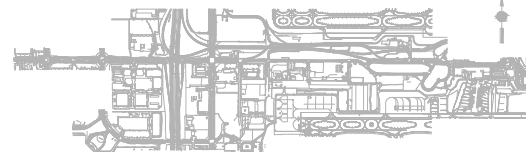

Gannett Fleming

Package: Sheet Reference No:
B03 - WSCV0303
V1 - 173 of 339



NOTE: PST VEHICLE RUNNING AND GUIDEBEAM PLINTHS NOT SHOWN FOR CLARITY

1. RUNNING SURFACE AND WALKWAY SHOWN ARE INDICATIVE,
TO BE PROVIDED BY PST SYSTEM CONTRACTOR.



WSCV0305

[illegible]

Package:	
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**GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
ENLARGED PLAN - ABUTMENTS**

Package: Sheet Reference No:
B03 - WSCV0304
V1 - 174 of 339

PER CITY OF PHOENIX ORDINANCE G-4396,
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CITY OF PHOENIX.



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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg scale:AS NOTED

CIP No.: AV10000011

KIVA No.: 07-5204



Design Sub-Consultant

Kimley»»Horn

Design Consultant

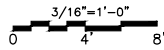

Gannett Fleming


$$\frac{1}{-}$$

SCALE: 3/16" = 1'-0"



KEYMAP
N.T.S.



STAGE 2 – B03 DESIGN SUBMISSION

**GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
ENLARGED PLAN - ABUTMENT**

Package: Sheet Reference No:
B03 - WSCV0305
V1 - 175 of 339

PER CITY OF PHOENIX ORDINANCE G-4396,
THESE PLANS ARE FOR OFFICIAL USE ONLY
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OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

[illegible]

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

Designed by: CHG

Drawn by: CHG

Checked by: KJK

Date: 04/13/2018

Dwg scale AS NOTED

CIP No.: AV10000011

KIVA No.: 07-5204



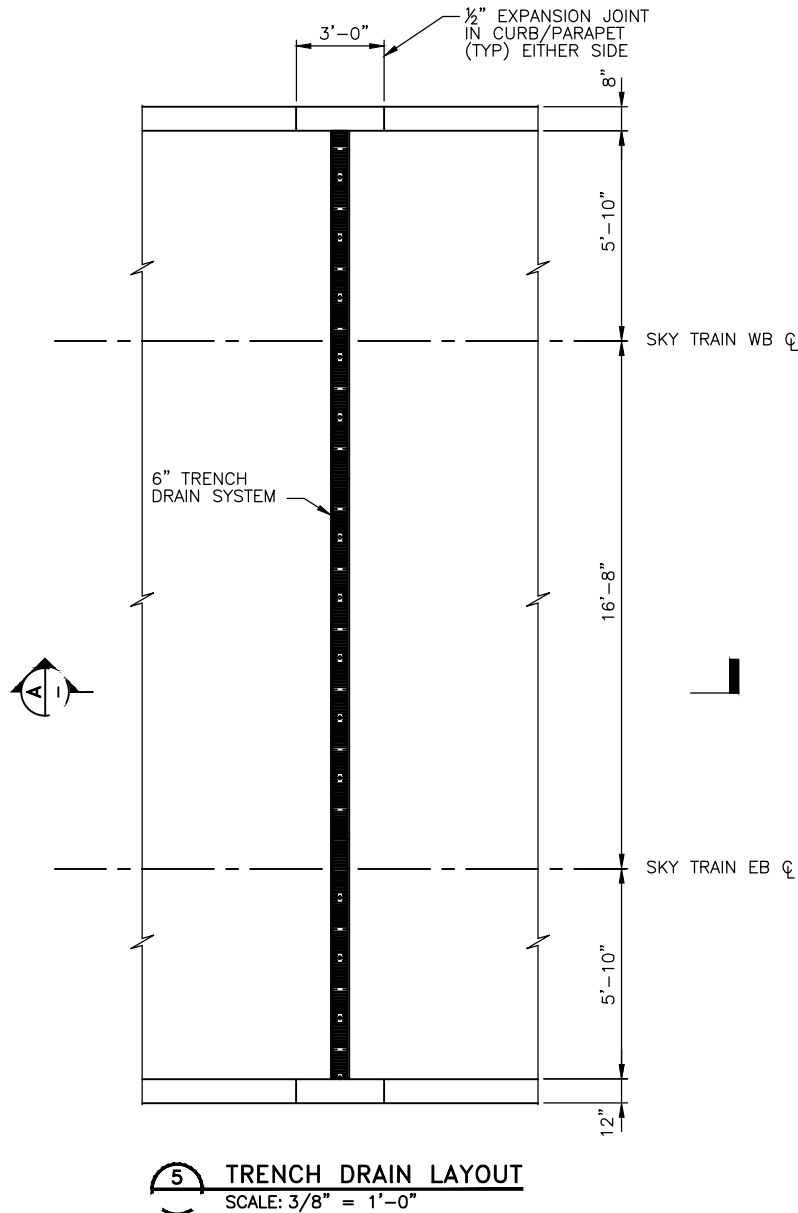
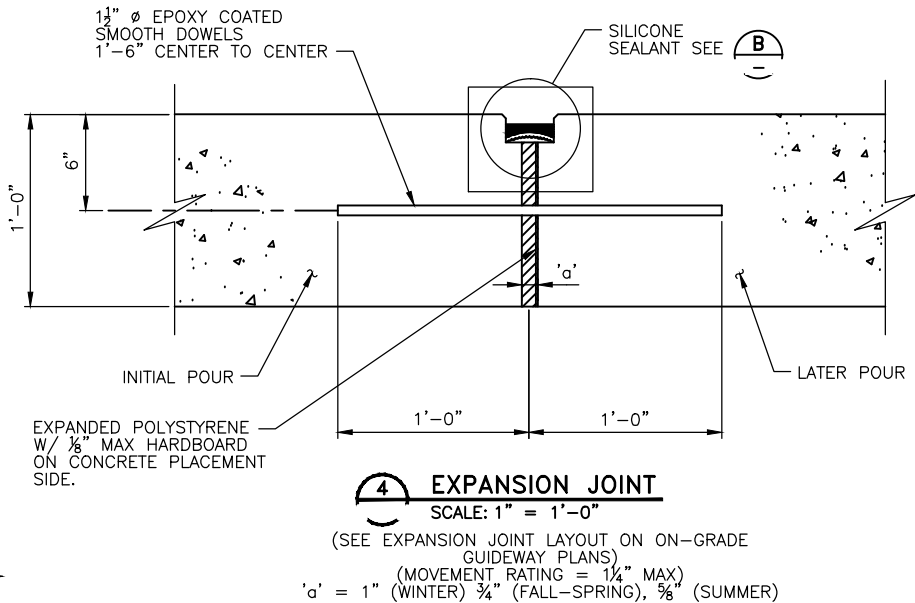
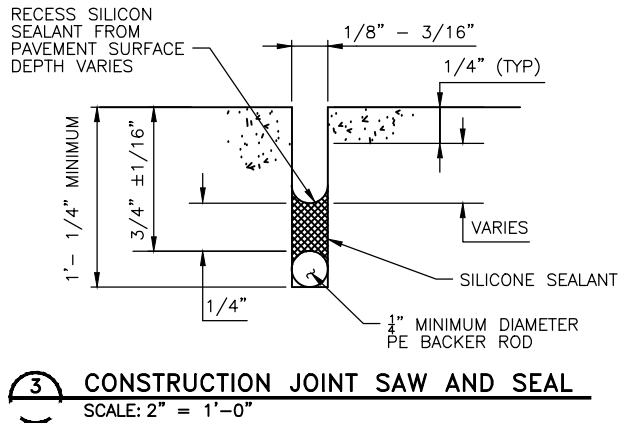
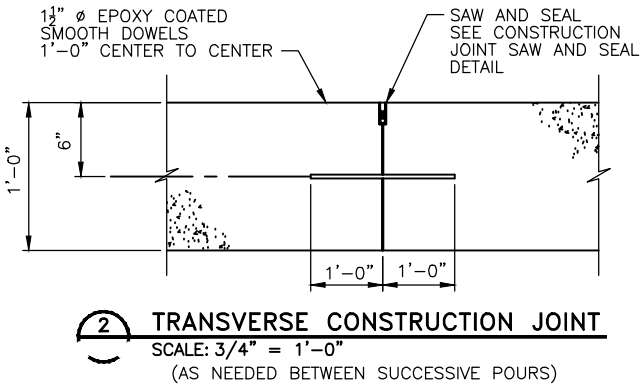
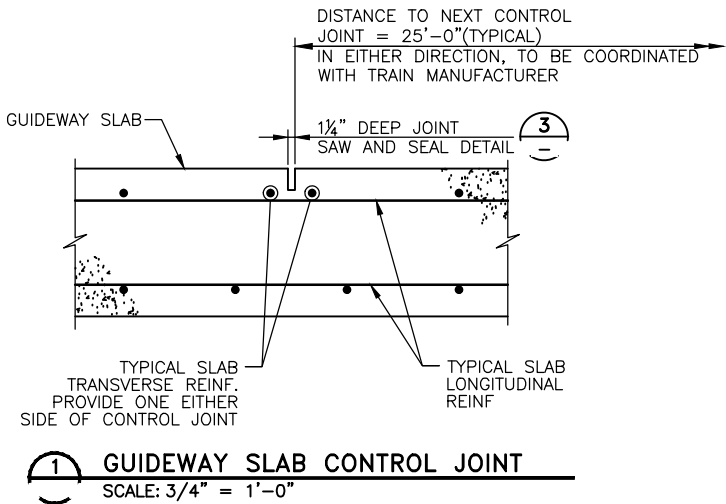
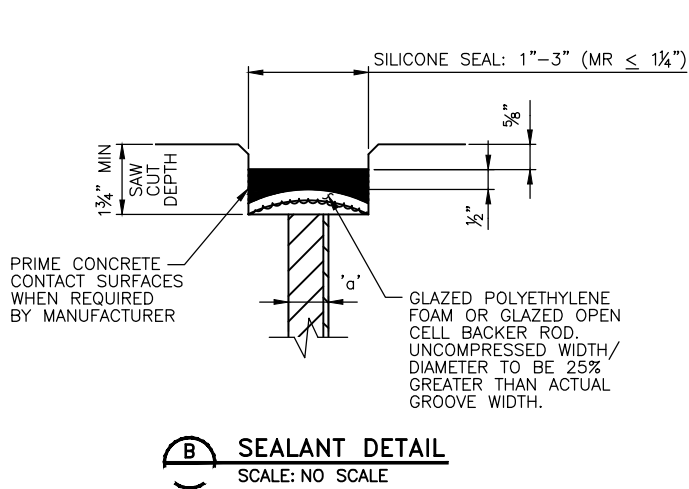
Design Sub-Consultant

Kimley»»Horn

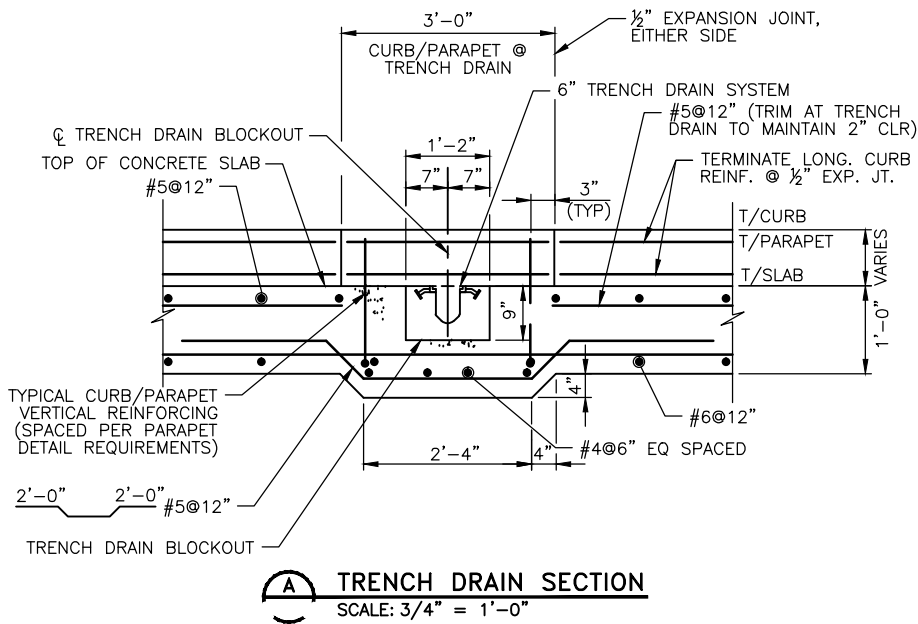
Design Consultant


Gannett Fleming

PLOT DATE: Apr 11, 2018
 FILE PATH: C:\pwworking\gfpw01\charlie.golek@kimley-horn.com\d0673550\AV10000011-S-2-WTCV12SZ04.dwg
 charlie.golek



NOTE: SEE GUIDEWAY DRAINAGE PLANS FOR ADDITIONAL TRENCH DRAIN LAYOUT AND DETAILS.



PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
U & V CROSSING
ON GRADE GUIDEWAY
STRUCTURE DETAILS

Package: Sheet Reference No:
B03-WSCV1202
V1 - 177 of 339

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Design Sub-Consultant

Kimley»Horn

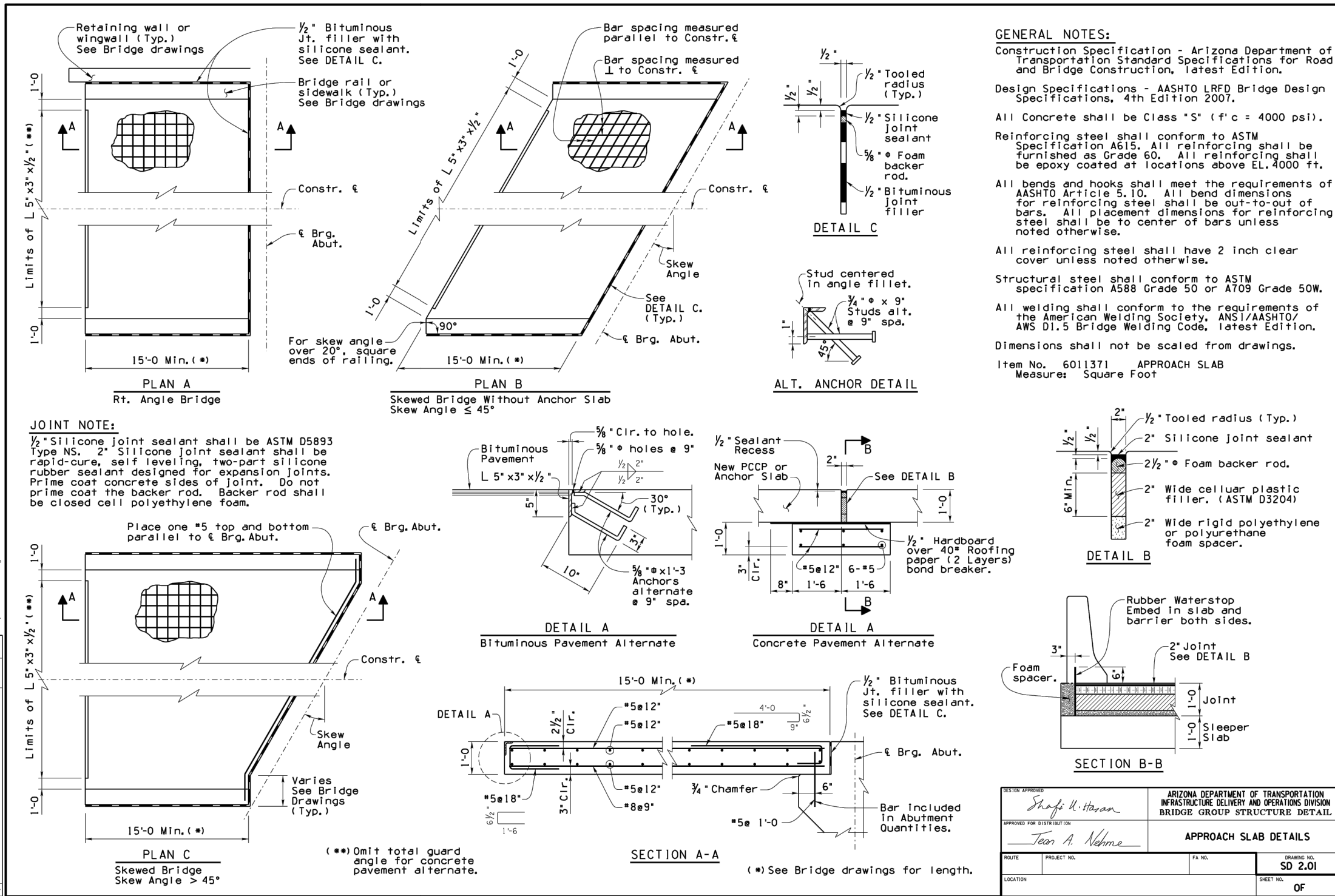
Design Consultant



NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	Original Issue	J.R.P.	11-00
2	General Update	S.J.H.	12-07
3			
4			

Note to Designer:



PER CITY OF PHOENIX ORDINANCE G-4396,
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CITY OF PHOENIX.

Design Sub-Consultant

Kimley»»Horn



PHX DOT DVA
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	CHG
Drawn by:	CHG
Checked by:	KJK
Date:	04/13/2018
Dwg scale:	N/A
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 – B03 DESIGN SUBMISSION

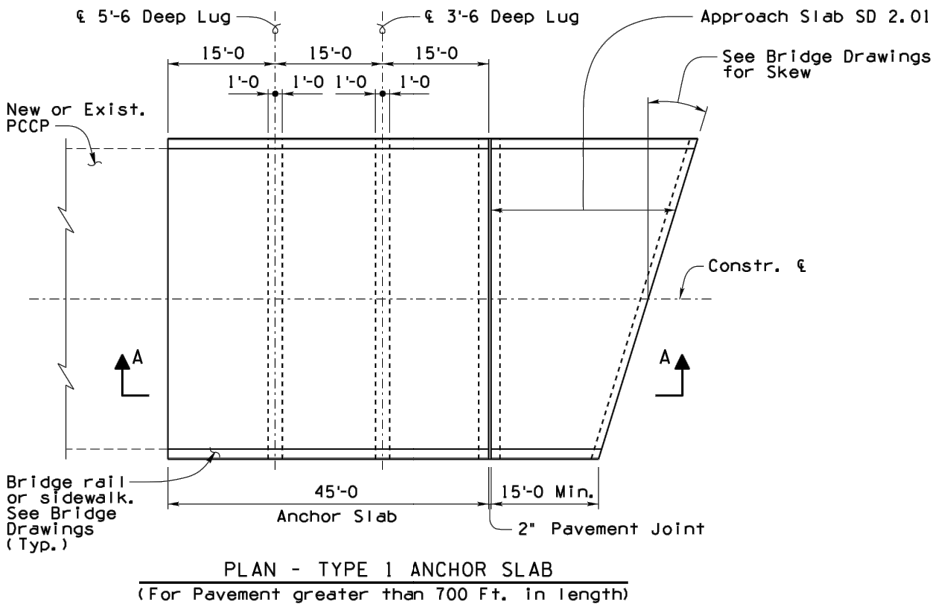
GUIDEWAY U & V CROSSING ON GRADE GUIDEWAY APPROACH SLAB DETAILS

Package:	Sheet Reference No:
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B03- WSCV1203
V1 - 178 of 339

NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	Original Issue	J.B.P.	11-00
2	General Update	S.W.H.	12-07
3			
4			

Note to Designer:
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.



Construction Specification - Arizona Department of
Transportation Standard Specifications for Road
and Bridge Construction, latest Edition.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.

All Concrete shall be Class "S" ($f'_c = 4000$ psi).

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL.4000 ft.

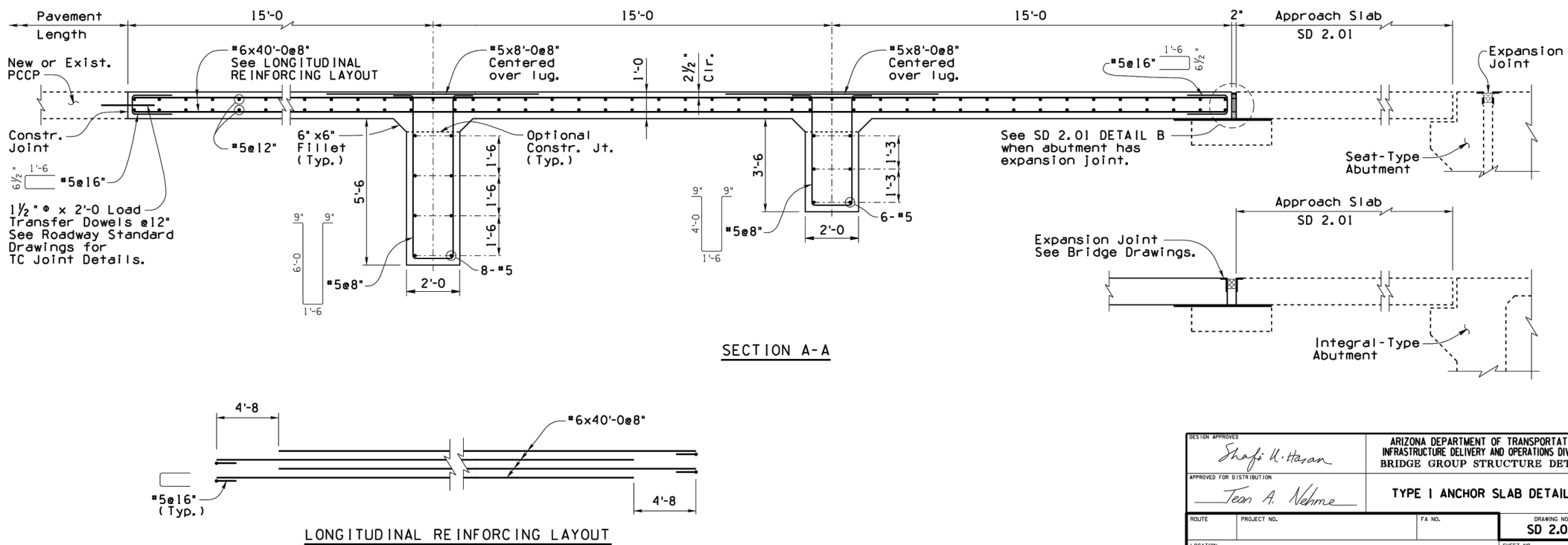
All bends and hooks shall meet the requirements of AASHTO Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 3 inch clear cover unless noted otherwise.

Anchor lugs shall be cast in precompacted roadway embankment or cast in forms and soil compacted to embankment requirements around lugs prior to casting the Anchor Slab.

Dimensions shall not be scaled from drawings.

Item No. 6011372 TYPE 1 ANCHOR SLAB
Measure: Square Foot



DESIGN APPROVED <i>Shafiq H. Hasan</i>		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP STRUCTURE DETAIL	
APPROVED FOR DISTRIBUTION <i>Tean A. Nehme</i>		TYPE 1 ANCHOR SLAB DETAILS	
ROUTE	PROJECT NO.	FA NO.	DRAWING NO. SD 2.02
LOCATION			SHEET NO. OF

STAGE 2 – B03 DESIGN SUBMISSION

Package:	
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GUIDEWAY U & V CROSSING ON GRADE GUIDEWAY ANCHOR SLAB DETAILS

Package:	Sheet Reference No:
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B03 - WSCV1204
V1 - 179 of 339



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



Design Sub-Consultant

Kimley»»Horn

Design Consultant



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

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, fs = 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

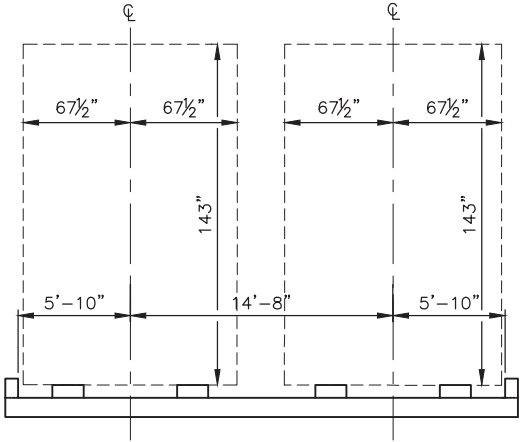
- D1. FOUNDATIONS DESIGNED IN ACCORDANCE WITH "GEOTECHNICAL DESIGN MEMORANDUM – PHX SKY TRAIN STAGE 2 – AT GRADE GUIDEWAY, ABUTMENT 3 TO ABUTMENT 4 AND TAXIWAY U AND V UNDERCROSSING BRIDGES" BY GANNETT FLEMING, DATED 1/24/2018.
- D2. ESTIMATES OF GROUND WATER ELEVATIONS ARE PROVIDED IN THE GEOTECHNICAL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



Design Sub-Consultant

Design Consultant

Gannett Fleming

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03/02/18

12/15/17

DATE

ISSUED FOR CONSTRUCTION

SUBMITTED FOR REVIEW

REVISIONS / SUBMISSIONS

NO.

PHX UV1 BYR

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

KVA No.: 07-5204

STAGE 2 – B02 DESIGN SUBMISSION

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

Package: Sheet Reference No:
B02-MSSU0001
V1 - 062 of 083

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 > $\frac{5}{16}$ "	CONTINUOUS	(2) (3)
	SINGLE PASS FILLET WELDS < OR = $\frac{5}{16}$ "	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	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.

[illegible]

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
PL 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

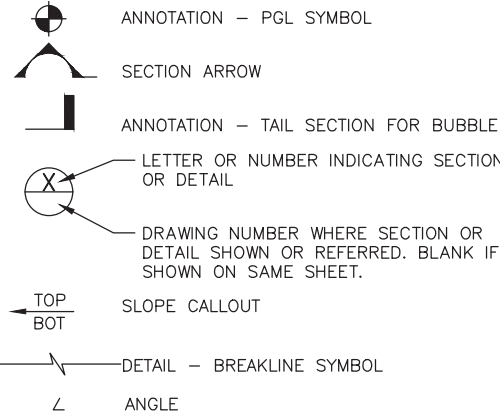
TAN TANGENT
TBD TO BE DETERMINED
TC TANGENT TO CURVE
TOC TOP OF CONCRETE
TOPO TOPOGRAPHY
TP TURNING POINT
TS TANGENT TO SPIRAL
TYP TYPICAL

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)						
MINIMUM LAP SPLICE LENGTH (IN)					MINIMUM EMBEDMENT LENGTH (IN)	
BAR SIZE	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)						
MINIMUM LAP SPLICE LENGTH (IN)					MINIMUM EMBEDMENT LENGTH (IN)	
BAR SIZE	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:

- 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.
- TOP HORIZONTAL OR NEARLY HORIZONTAL REINFORCEMENT HAVE MORE THAN 12" OF CONCRETE CAST BELOW THE REINFORCEMENT.
- INCREASE LAP LENGTHS BY 25% FOR 3-BAR BUNDLE SCENARIOS.
- 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

Design Consultant



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CITY OF PHOENIX.



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

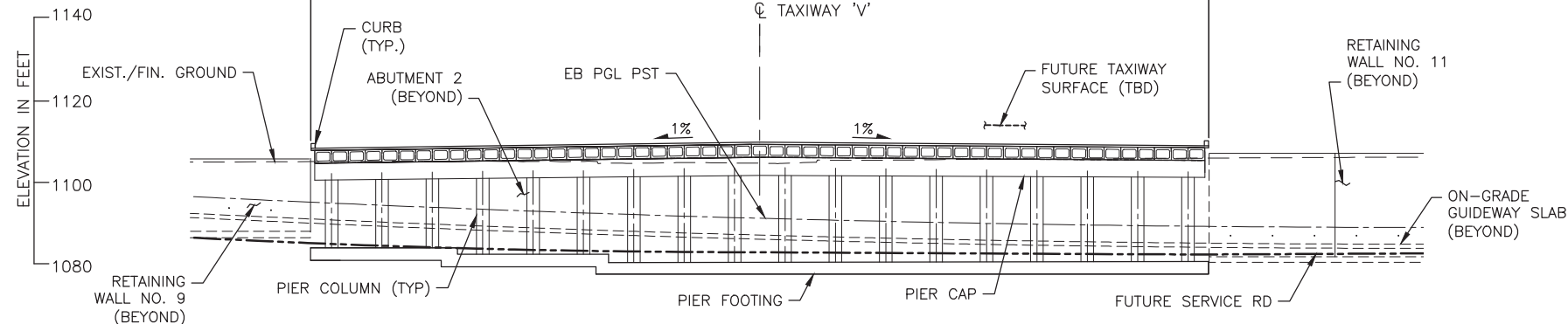
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KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

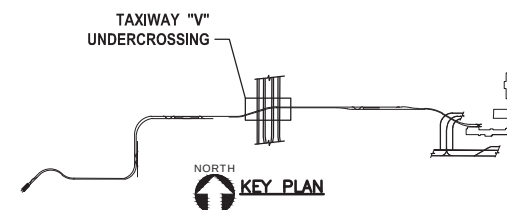
GUIDEWAY
TAXIWAYS "U" & "V" UNDERCROSSING
GENERAL NOTES 3

Package: Sheet Reference No:
B02-MSSU0003
V1 - 064 of 083



NOTE: FACILITIES ACCESS RD.
NOT SHOWN FOR CLARITY.

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

[illegible]

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PHX DVT BYA
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.: A/10000011
Draw No.: 07-5204

STAGE 2 – B02 DESIGN SUBMISSION

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

Package: Sheet Reference No:
B02 - MSSU0201
V1 - 065 of 083



Registered Professional Engineer (Civil)
 28174
 MARK
 PILWALLS
 Date Signed
 APR 2014
 State of Ohio

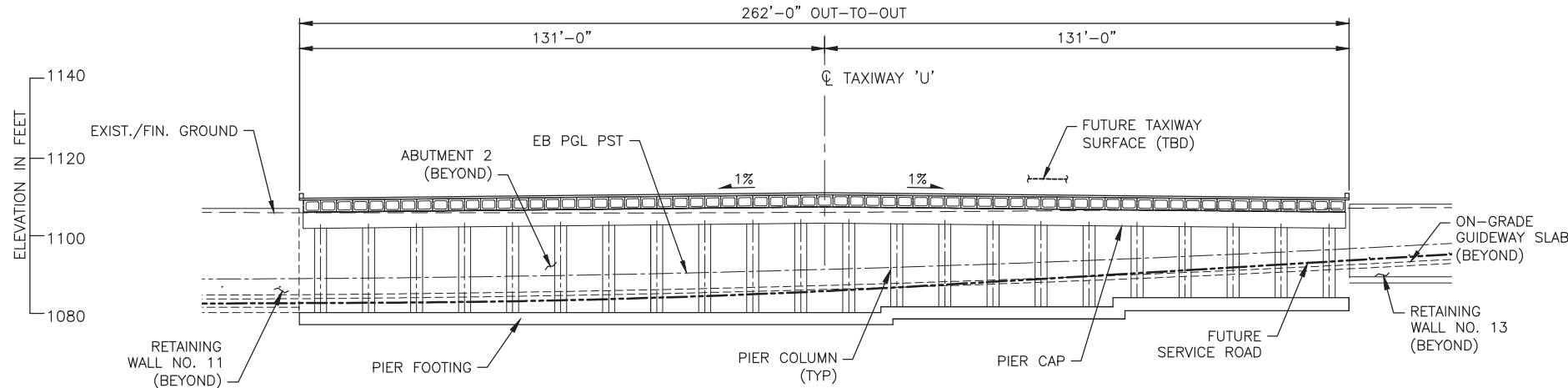
Design Sub-Consultant

Design Consultant

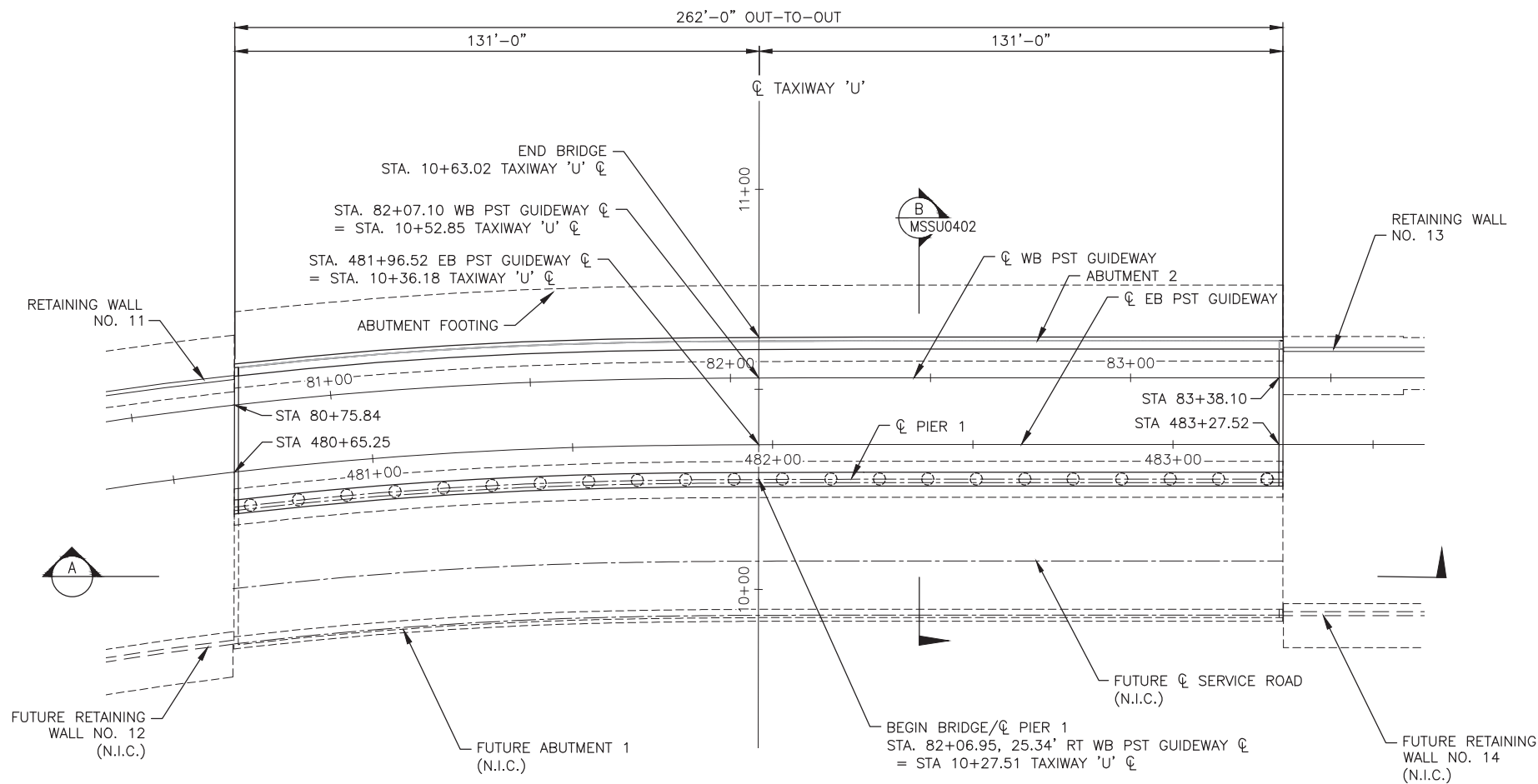


Gannett Fleming
Design Consultant

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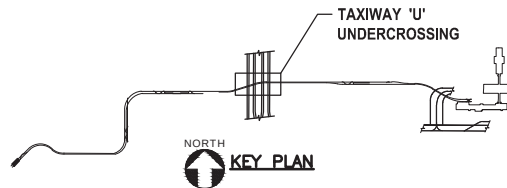


TAXIWAY 'U' UNDERCROSSING SECTION
SCALE: 1"=20'-0"



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

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



STAGE 2 - B02 DESIGN SUBMISSION

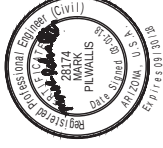
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PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT
**PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034**

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

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

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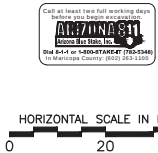
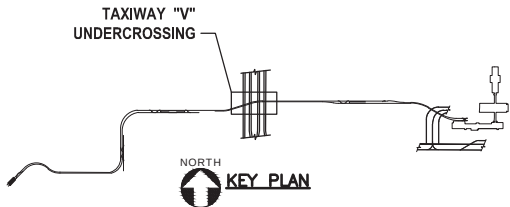
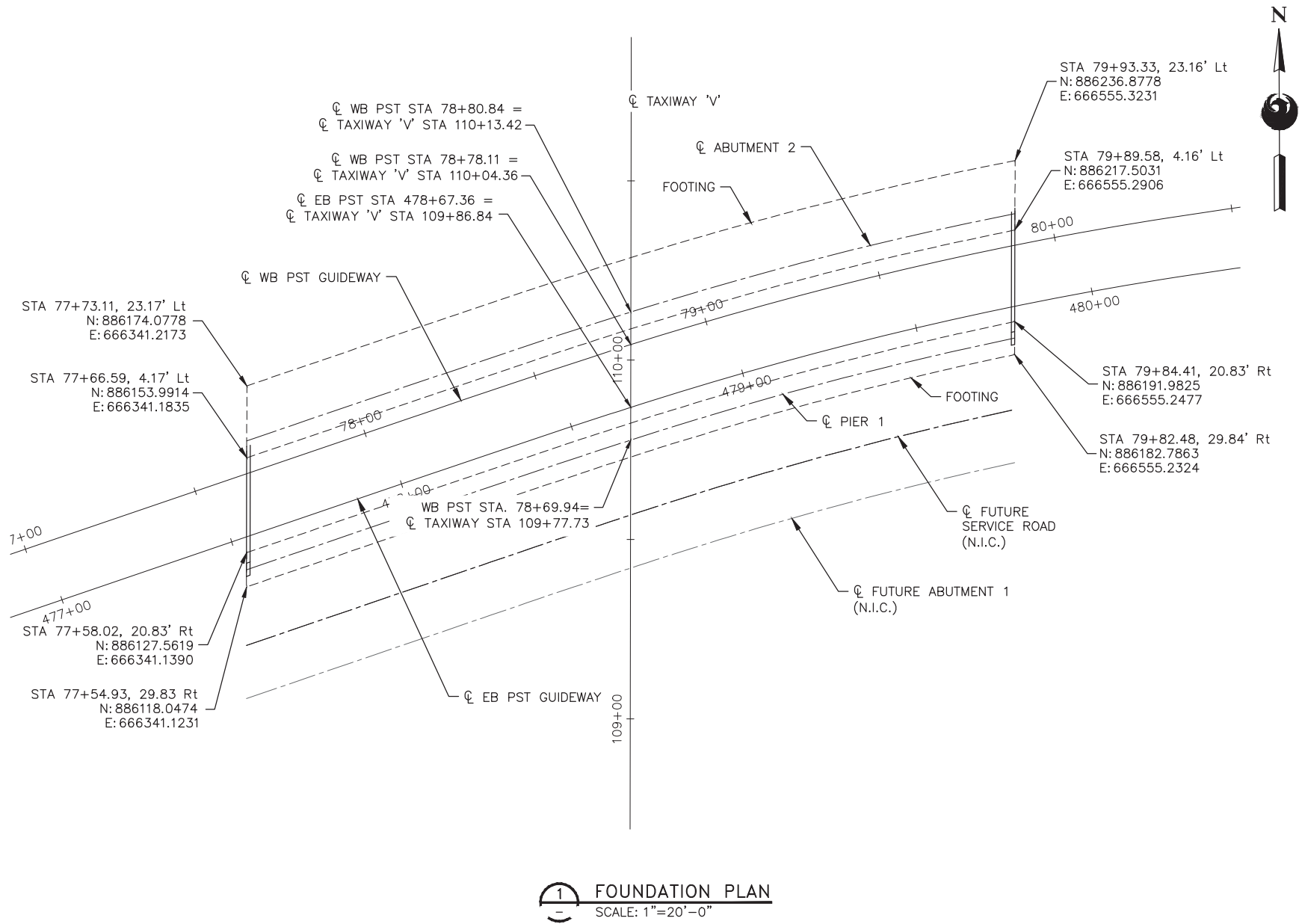
Design Sub-Consultant

Design Consultant



Gannett Fleming

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



NOTES:
1. STATIONS AND OFFSETS FOR FOOTINGS
ARE MEASURED FROM $\oslash$ WB PST GUIDEWAY.

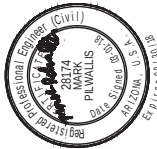
PHX Sky Train
CITY OF PHOENIX AVIATION DEPARTMENT
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=20'	CIP No.: AV10000011	KIVA No.: 07-5204
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STAGE 2 - B02 DESIGN SUBMISSION
GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
TAXIWAY 'V'
FOUNDATION PLAN

Package: Sheet Reference No:
B02-MSSU0501
V1 - 069 of 083

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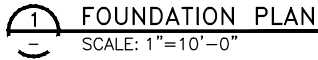


Design Sub-Consultant

Design Consultant



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



Call at least two full working days
before you begin excavation.

ARIZONA 811
Across the State, Inc.

Dial 8-1-1 or 1-800-START-IT (782-5348)

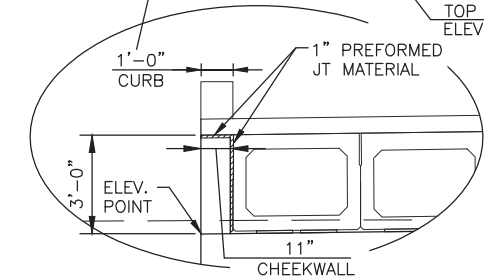
HORIZONTAL SCALE IN

0 10

NOTES:

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

STAGE 2 - B03 DESIGN SUBMISSION		Designed by: PB/JH		PHX DVI BYA CITY OF PHOENIX AVIATION DEPARTMENT		PER CITY OF PHOENIX ORDINANCE G 4306 THESE PLANS ARE FOR OFFICIAL USE ONLY. THESE PLANS MAY NOT BE REPRODUCED, COPIED, OR SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.		Design Sub-Consultant		Design Consultant	
		Drawn by: JRR		PHX SKY TRAIN						Design Consultant	
		Checked by: SWS		STAGE 2 DESIGN							
		Date: 04/13/2018		500 S. 24TH STREET							
		Dwg scale: 1"=20'		PHOENIX, AZ 85034							
		CIP No.: AV10000011				ISSUED FOR CONSTRUCTION				04/13/18	
		KVA No.: 07-S204				SUBMITTED FOR REVIEW				02/02/18	
						NO. REVISIONS / SUBMISSIONS				DATE	

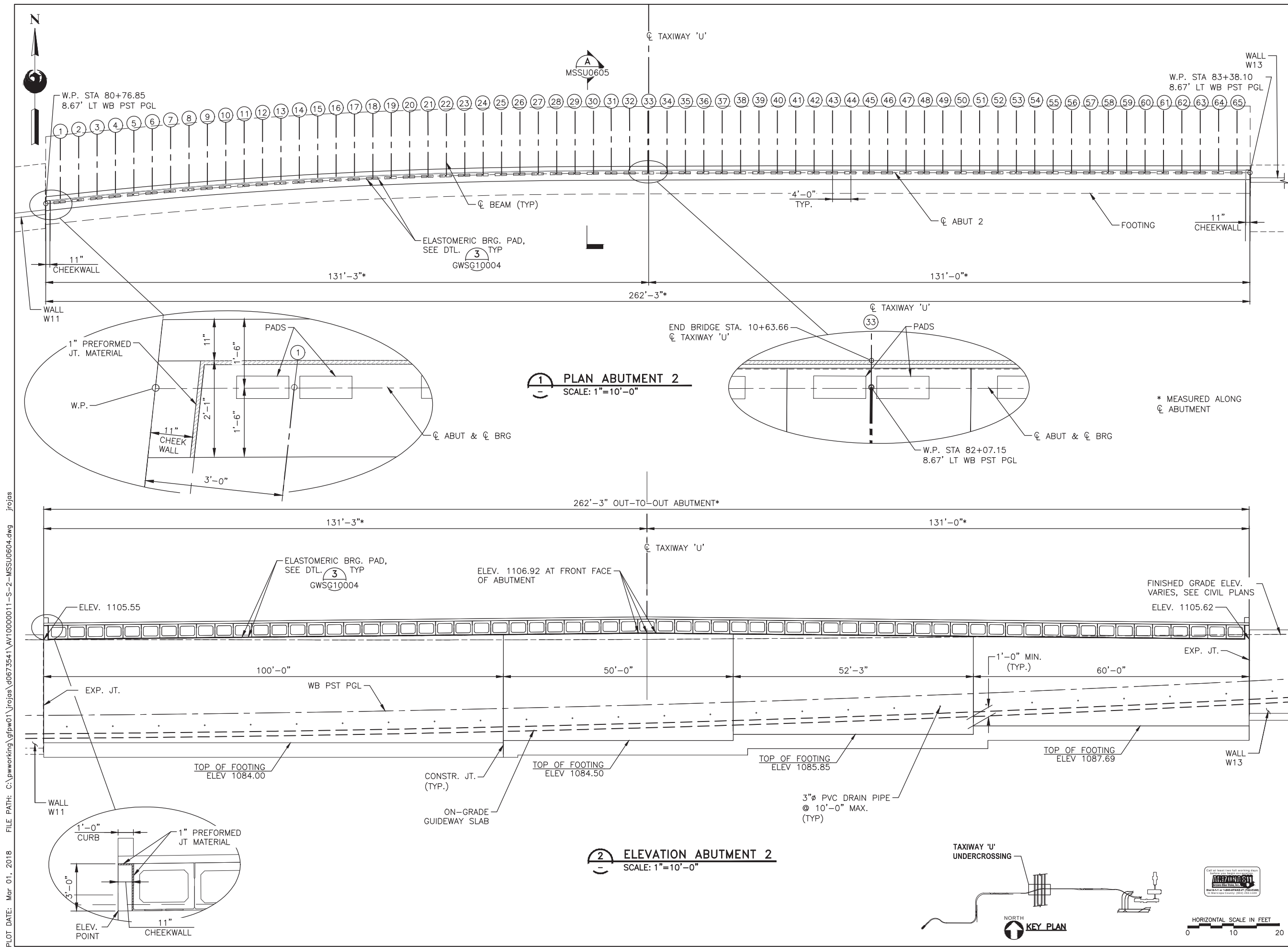
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PHX INT'L EYE
CITY OF PHOENIX AVIATION DEPARTMENT

**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"
DIP No.: AV10000011
KVA 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	



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[illegible]

PHX DVI GVR
CITY OF PHOENIX AVIATION DEPARTMENT

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

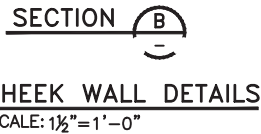
Designed by: PB
Drawn by: JRR
Checked by: SWS
Date: 03/02/2018
Dwg scale: 1"=10'-0"
CIP No.: AV10000011
KIVA No.: 07-5204

GUIDEWAY TAXIWAYS 'U' & 'V' UNDERCROSSING TAXIWAY 'U' ABOUT 2 PLAN & ELEVATION

Package: Sheet Reference No:
B02 - MSSU0604
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-
- Diagram illustrating a step function on the interval $[0, 4]$. The function is defined by the values 0 , 1 , 0 , and 1 on the subintervals $[0, 1)$, $[1, 2)$, $[2, 3)$, and $[3, 4]$ respectively. The value $1/2'' = 1' - 0''$ is indicated above the first step.



GUIDEWAY TAXIWAY "U" & "V" UNDERCROSSING ABUTMENT DETAILS

Package: Sheet Reference No:
B02 - MSSU0605
V1 - 073 of 083

PHX DVT EYR
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.: AV100000111

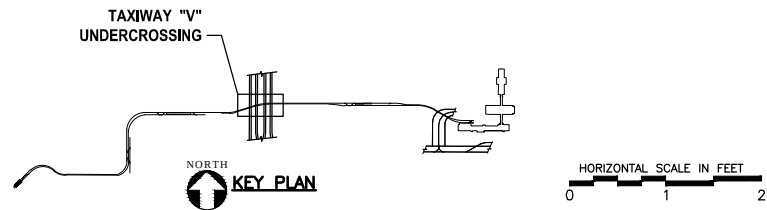
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Design Sub-Consultant

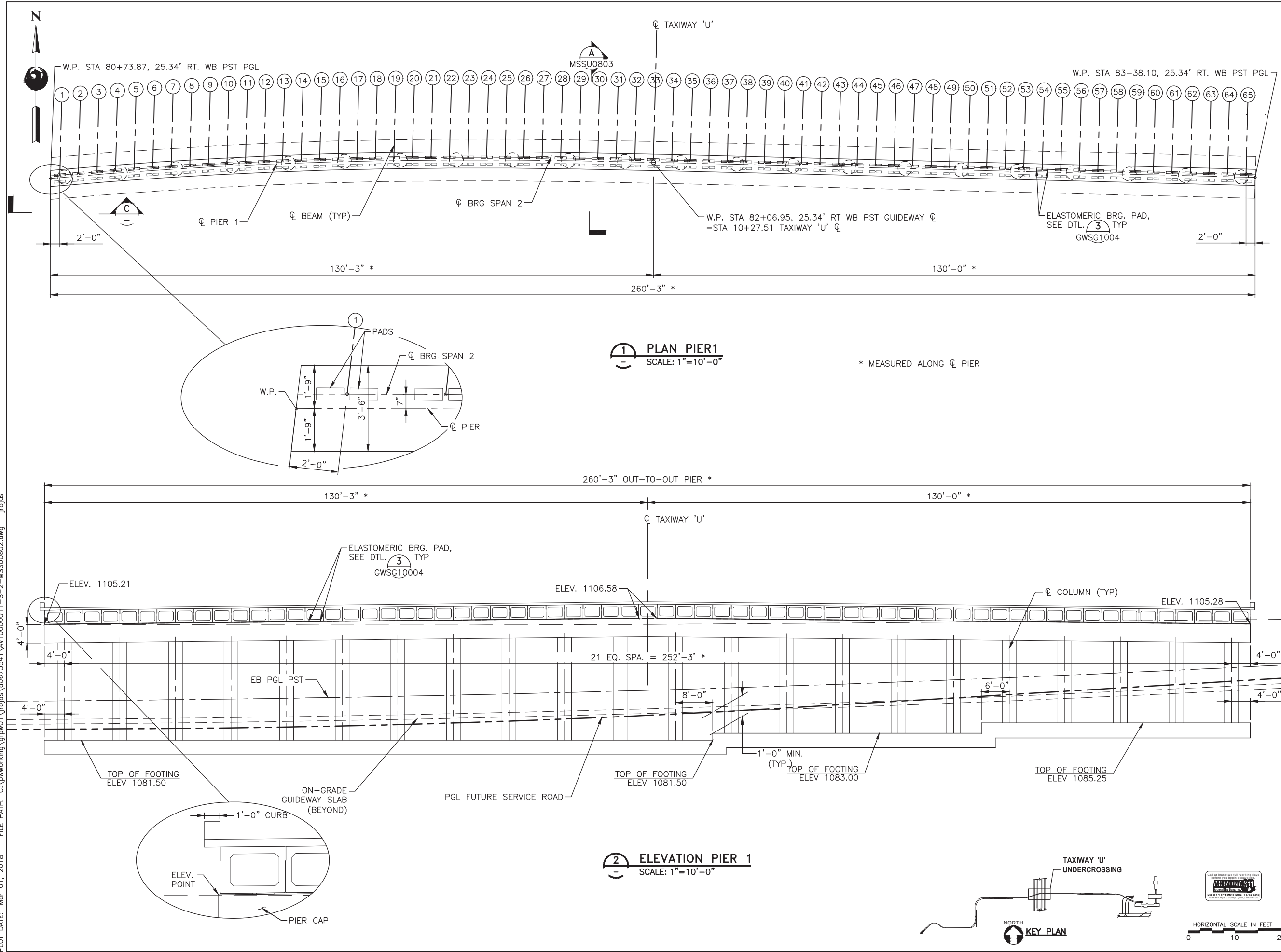
Design Consultant


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STAGE 2 - B03 DESIGN SUBMISSION		Designed by: PB/AH		PHX DVI BYA CITY OF PHOENIX AVIATION DEPARTMENT		PER CITY OF PHOENIX ORDINANCE G-4306, THESE PLANS ARE THE PROPERTY OF THE CITY OF PHOENIX. THEY SHALL BE KEPT IN THE CITY OF PHOENIX OFFICE 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		Design Consultant	
		Drawn by: JRR		PHX SKY TRAIN										Design Sub-Consultant	
		Checked by: SWS		STAGE 2 DESIGN											
		Date: 04/13/2018		500 S. 24TH STREET											
		Dwg scale: 1"=1'-0"		PHOENIX, AZ 85034											
		CIP No.: AV10000011								ISSUED FOR CONSTRUCTION		04/13/18			
		KVA No.: 07-S204								SUBMITTED FOR REVIEW		02/02/18			

Package: Sheet Reference No: - MSSU0607 V1 - 183 of 339



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PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by: PB	Drawn by: JRR	Checked by: SWS	Date: 03/02/2018	Dwg scale: 1"=10'	CIP No.: AV10000111	KWA No.: 07-5204
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STAGE 2 – B02 DESIGN SUBMISSION

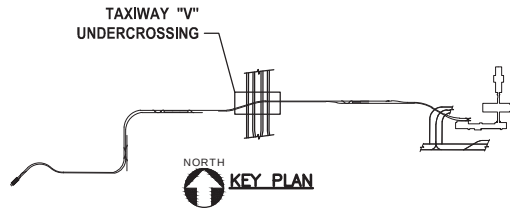
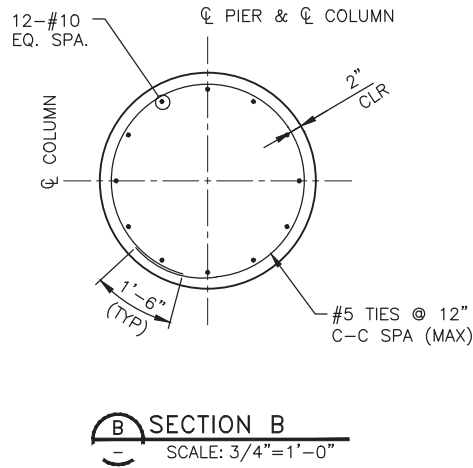
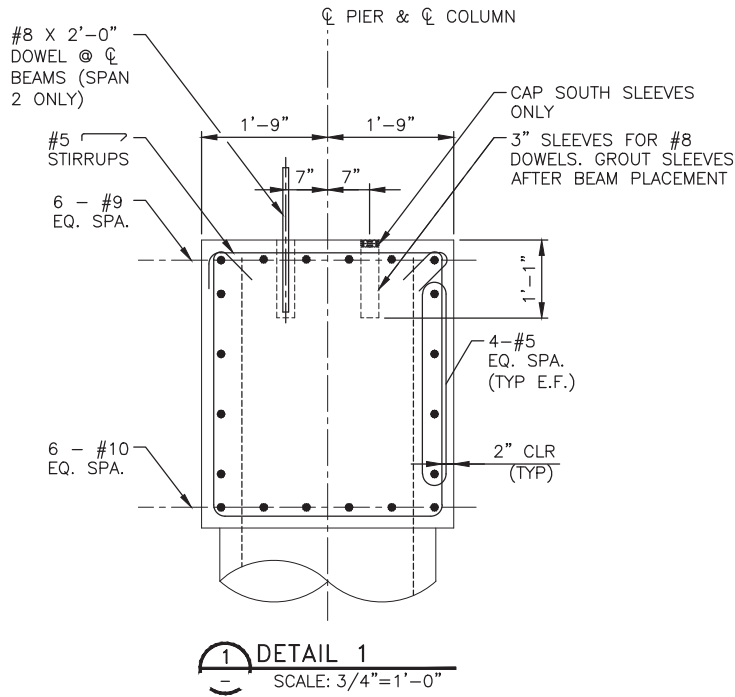
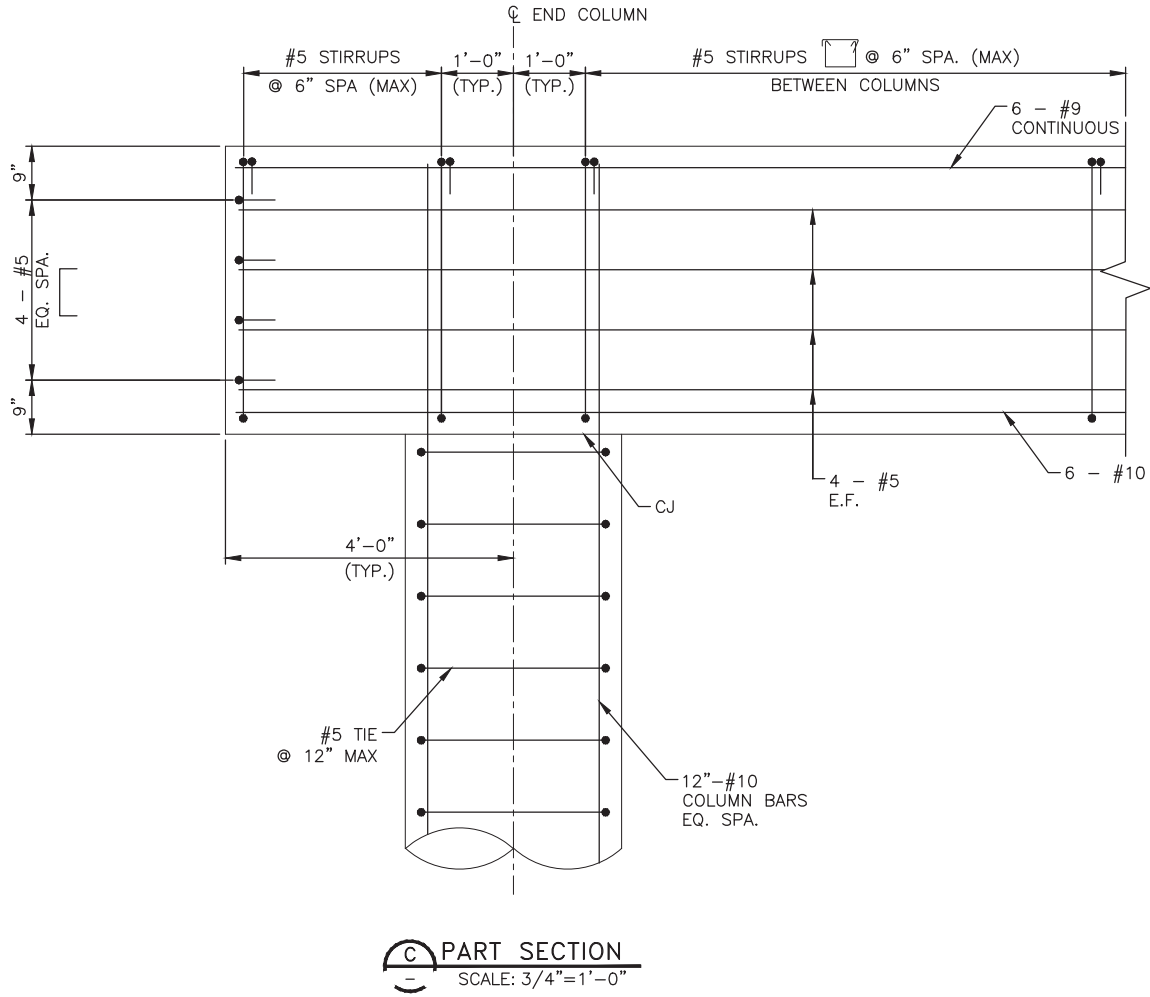
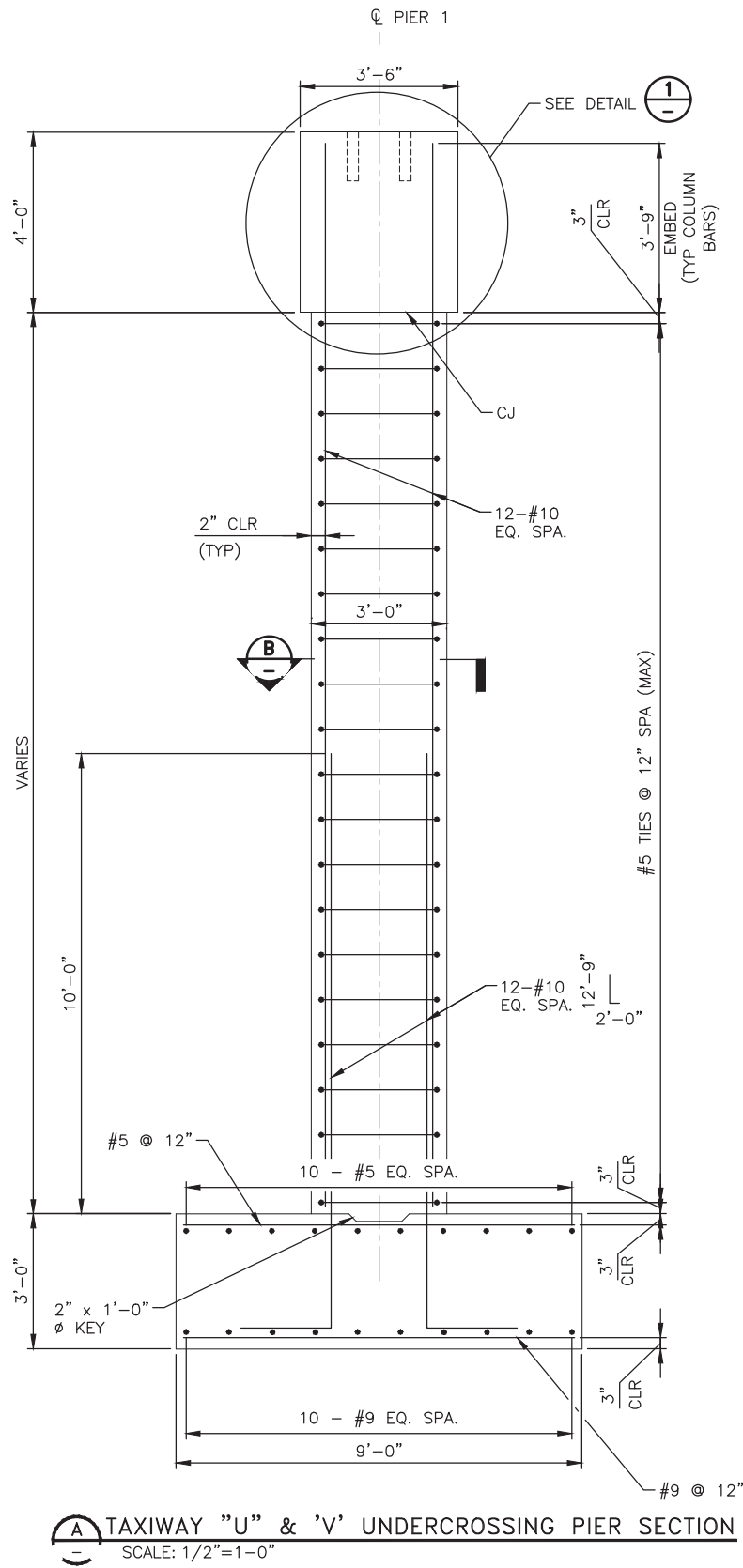
Package: Sheet Reference No:
B02 - MSSU0802
V1 - 075 of 083

Design Sub-Consultant

Design Consultant



Gannett Fleming



PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

STAGE 2 - B02 DESIGN SUBMISSION

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

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

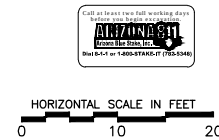
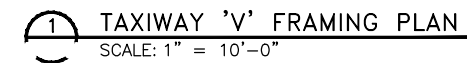
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AND MAY NOT BE SHARED WITH OTHERS
EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF OUR CONTRACT WITH THE
CITY OF PHOENIX.

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

Design Sub-Consultant

Design Consultant





1. ANGLES 'A' & 'B' ARE MEASURED BETWEEN THE $\odot$ BEAMS AND LOCAL TANGENT OF CURVE @ $\odot$ BEAMS @ $\odot$ BRGS.
2. SEE SHEET MSSU0903 FOR BEAM LENGTHS.
3. FOR ADDITIONAL GEOMETRY DATA, SEE CIVIL PLANS.
4. SEE B02 PACKAGE FOR ABUTMENT AND PIER GEOMETRY.



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

STAGE 2 – B03 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAYS 'U' & 'V' UNDERCROSSING
TAXIWAY 'V'
FRAMING PLAN**

Package: Sheet Reference No:
- MSSU0901
V1 - 185 of 339

Design Sub-Consultant

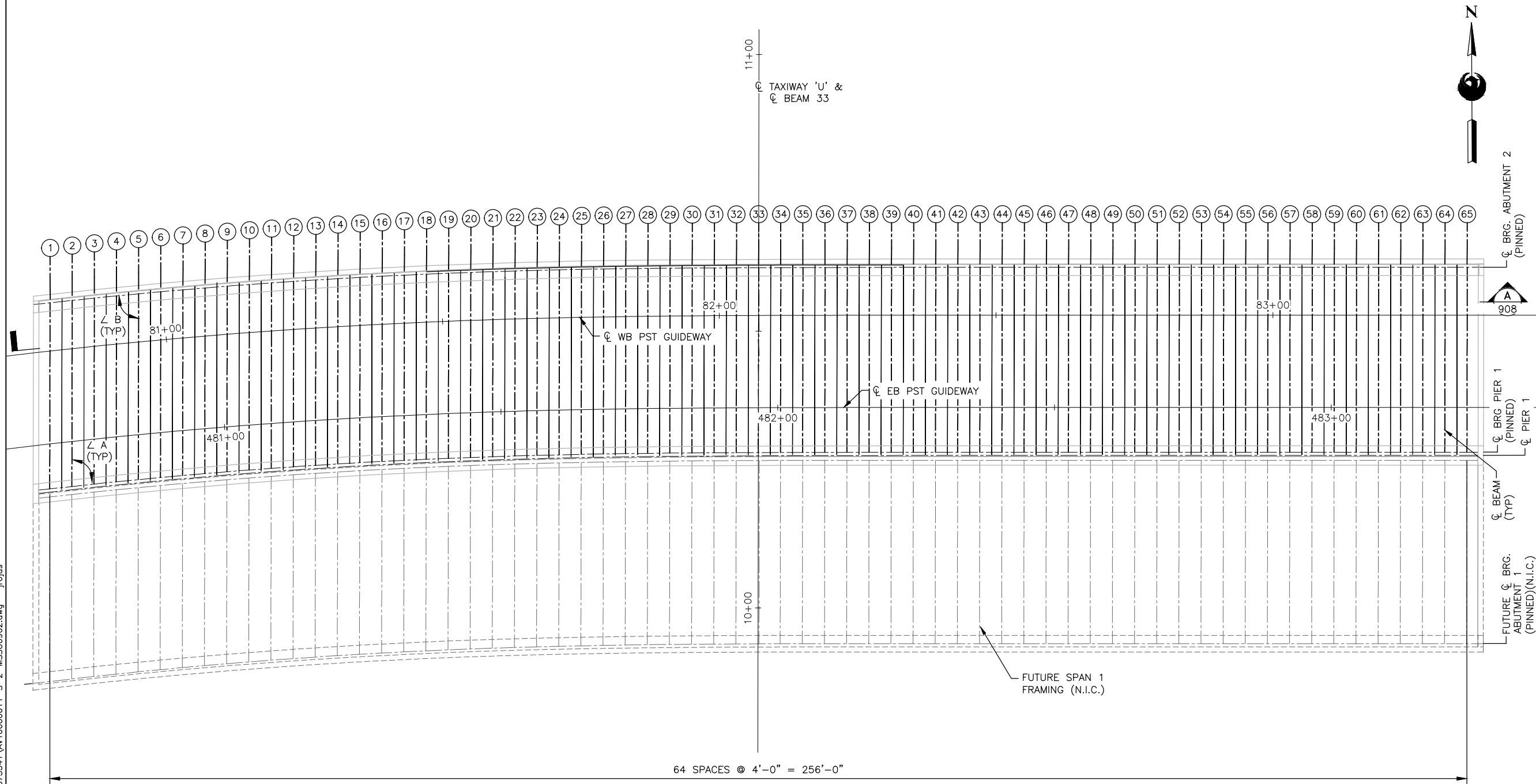
Design Consultant

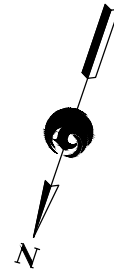
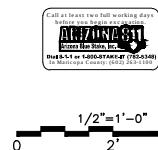
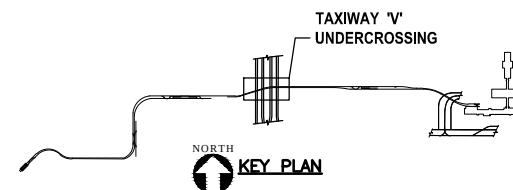
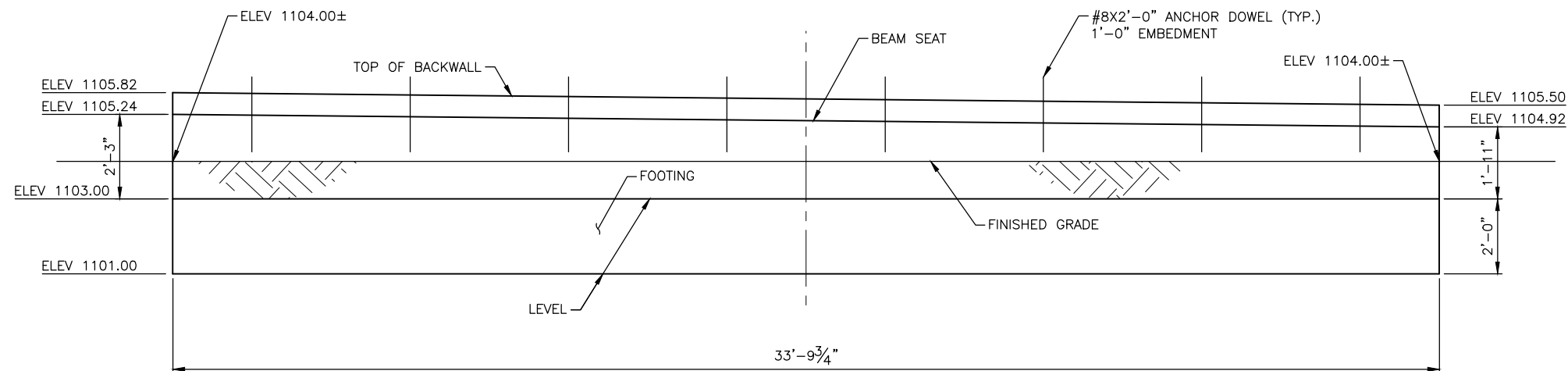
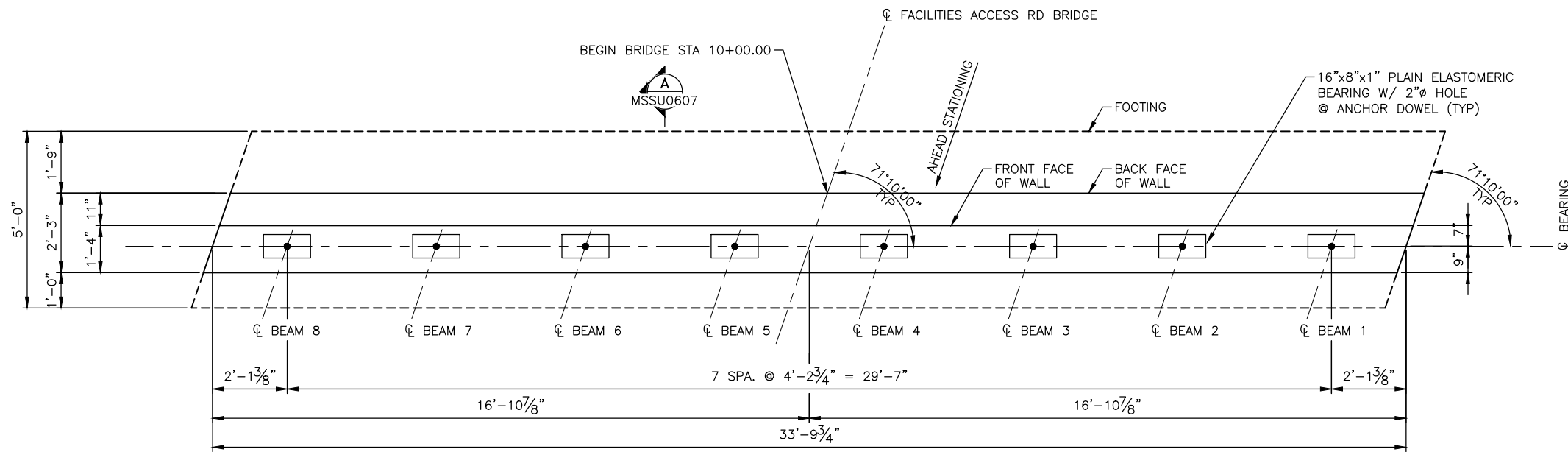

Gannett Fleming

	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
NO.	REVISIONS / SUBMISSIONS	DATE

PHOENIX, AZ 85034

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





PER CITY OF PHOENIX ORDINANCE G-4396,
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AND MAY NOT BE SHARED WITH OTHERS
EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

[illegible]

Design Sub-Consultant

Design Consultant


Gannett Fleming

PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: PB/MH

Drawn by: BAM

Checked by: SWS

Date: 04/13/2018

Dwg scale: $\frac{1}{2}'' = 1' - 0''$

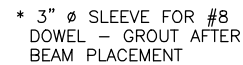
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KIVA No.: 07-5204

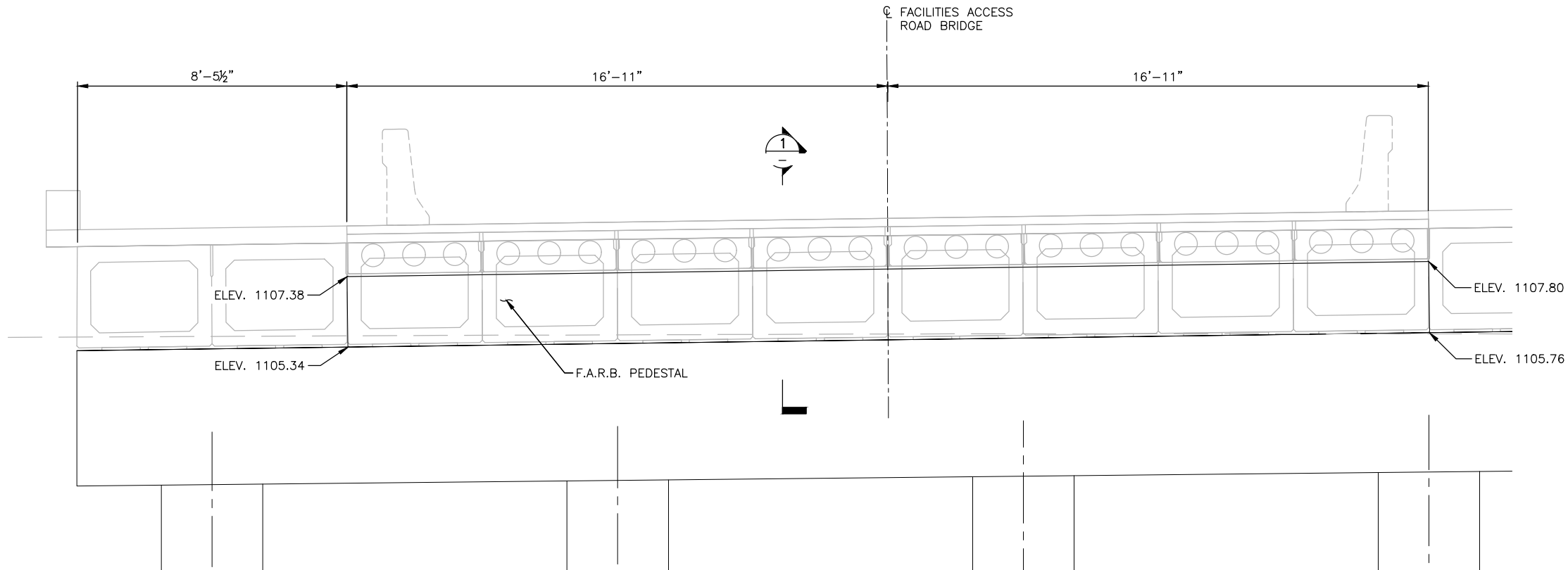
STAGE 2 – B03 DESIGN SUBMISSION

GUIDEWAY

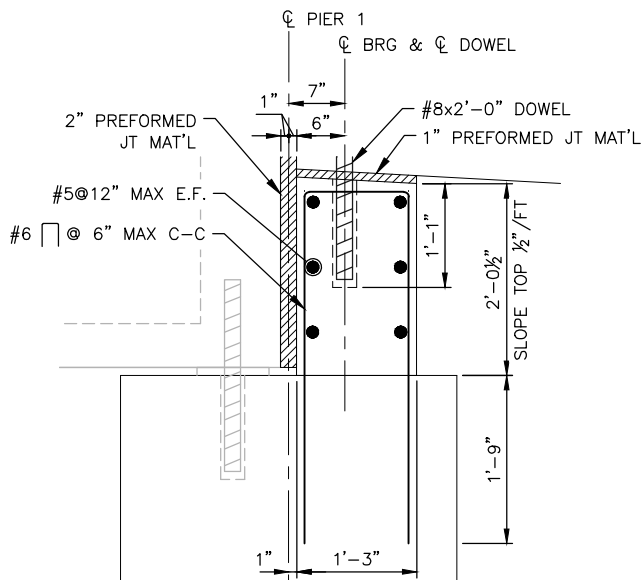
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B03-MSSU0606
V1 - 182 of 339



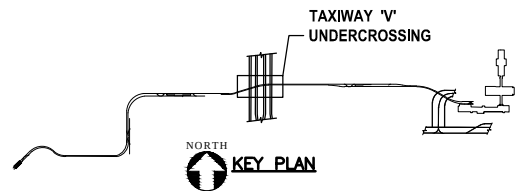
STAGE 2 - B03 DESIGN SUBMISSION		Designed by: PB/JH		 CITY OF PHOENIX AVIATION DEPARTMENT		PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED BY THE RULES OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.			
GUIDEWAY TAXIWAY "U" & "V" UNDERCROSSING FACILITIES ACCESS ROAD BRIDGE ABUTMENT DETAILS		Drawn by: JRR		PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034				Design Sub-Consultant	
		Checked by: SWS							
		Date: 04/13/2018							
		Dwg scale: 1"=1'-0"							
		CIP No.: AV10000011							
KVA No.: 07-S204				ISSUED FOR CONSTRUCTION		04/13/18		Design Consultant	
				SUBMITTED FOR REVIEW		02/02/18		 Gannett Fleming	
				REVISIONS / SUBMISSIONS		NO.		DATE	



PIER 1 PEDESTAL DETAIL
SCALE: 1/2"=1'-0"



SECTION
SCALE: 1" = 1'-0"



HORIZONTAL SCALE IN FEET

0 10 20

STAGE 2 – B03 DESIGN SUBMISSION

Designed by: PB

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: 1"=10'

CIP No.: AV1000001

KIVA No.: 07-520

PHX DVT DVB
CITY OF PHOENIX AVIATION DEPARTMENT

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

PER CITY OF PHOENIX ORDINANCE G-4396,
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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	04/13/18
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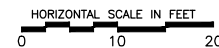
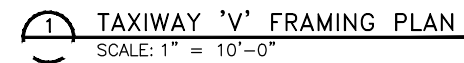
REVISIONS / SUBMISSIONS	DATE
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Design Sub-Consultant

Design Consultant


Gannett Fleming

Package: Sheet Reference No:
B03 - MSSU0608
V1 - 184 of 339



1. ANGLES 'A' & 'B' ARE MEASURED BETWEEN THE $\odot$ BEAMS AND LOCAL TANGENT OF CURVE $\odot$ $\odot$ BEAMS $\odot$ $\odot$ BRGS.
2. SEE SHEET MSSU0903 FOR BEAM LENGTHS.
3. FOR ADDITIONAL GEOMETRY DATA, SEE CIVIL PLANS.
4. SEE B02 PACKAGE FOR ABUTMENT AND PIER GEOMETRY.



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

STAGE 2 – B03 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAYS 'U' & 'V' UNDERCROSSING
TAXIWAY 'V'
FRAMING PLAN**

Package: Sheet Reference No:
B03 - MSSU0901
V1 - 185 of 339

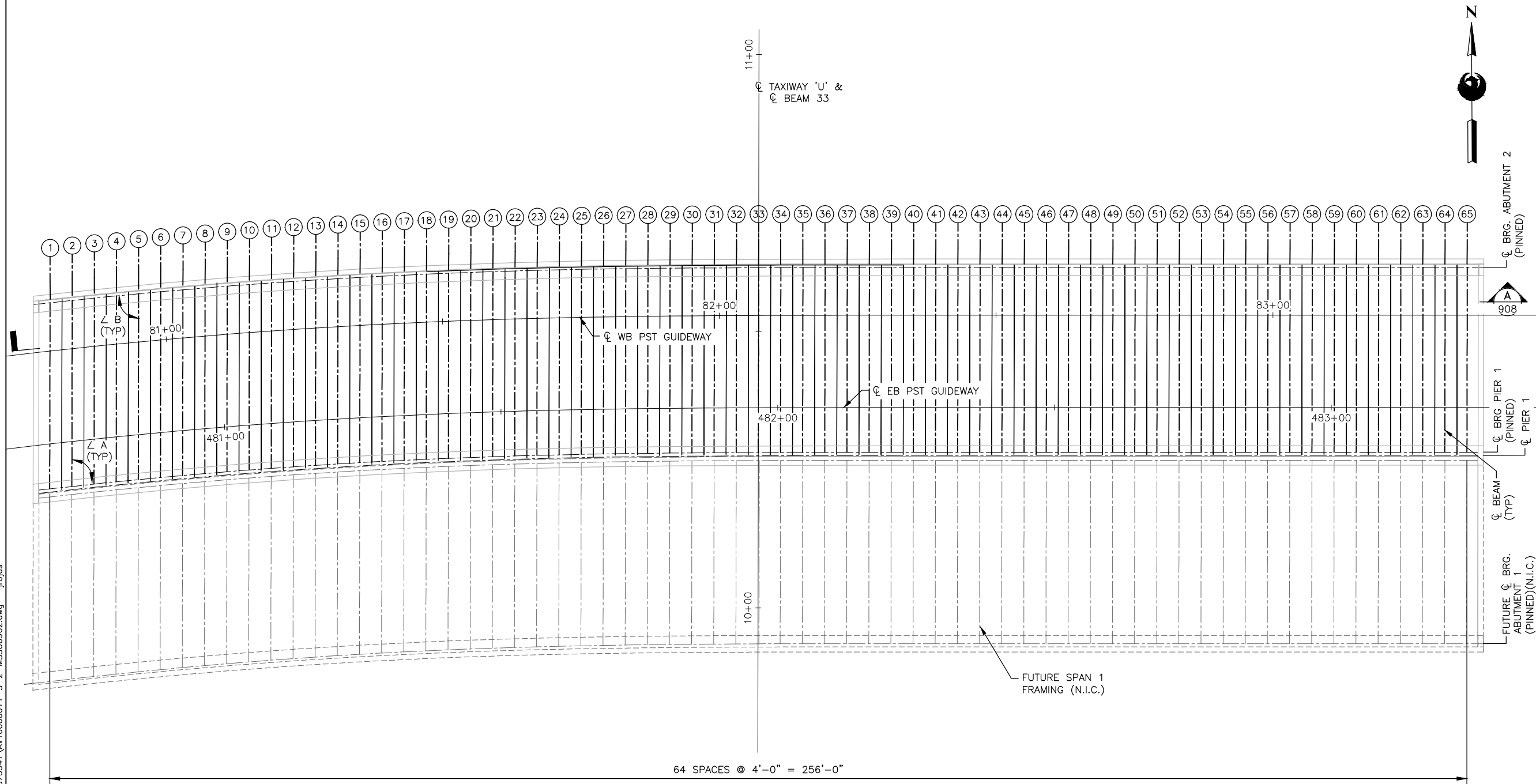
Design Sub-Consultant

Design Consultant


Gannett Fleming

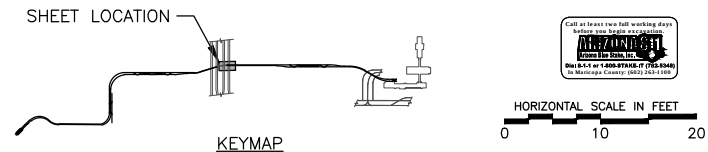
NO.	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
	REVISIONS / SUBMISSIONS	DATE

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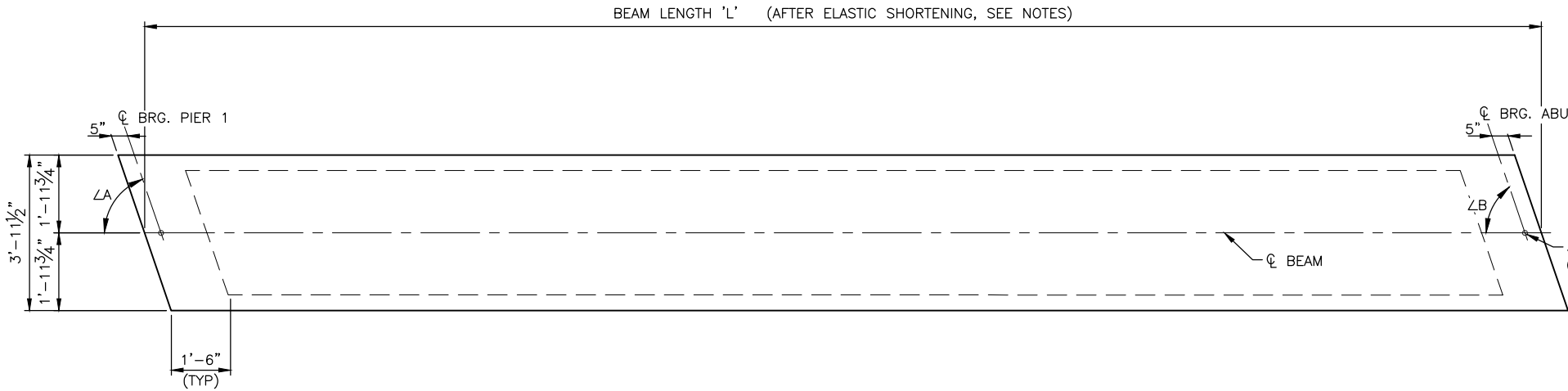


1 TAXIWAY 'U' FRAMING PLAN
SCALE: 1" = 10'-0"

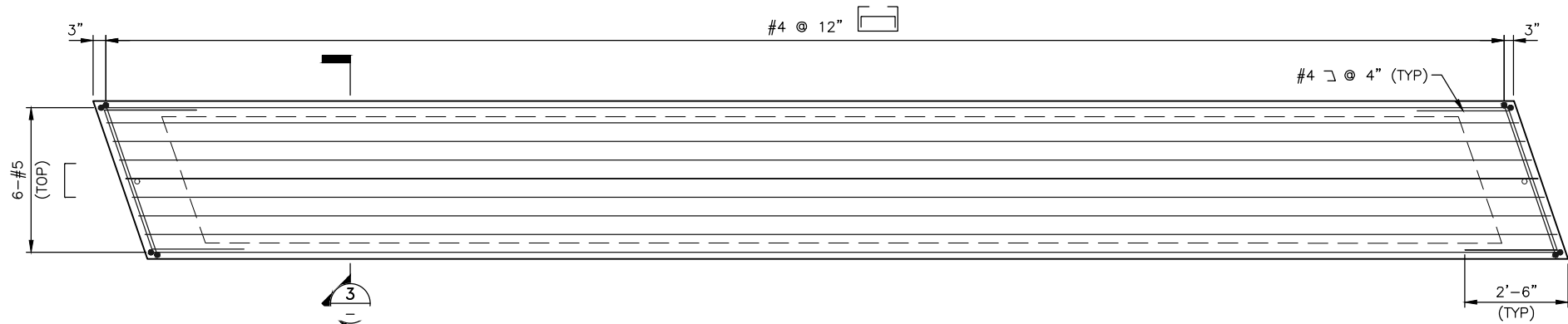
- NOTES:
1. ANGLES 'A' & 'B' ARE MEASURED BETWEEN THE $\odot$ BEAMS AND LOCAL TANGENT OF CURVE @ $\odot$ BEAMS @ $\odot$ BRGS.
 2. SEE SHEET MSSU0903 FOR BEAM LENGTHS.
 3. FOR ADDITIONAL GEOMETRY DATA, SEE CIVIL PLANS.
 4. SEE B02 PACKAGE FOR ABUTMENT AND PIER GEOMETRY.

[illegible]

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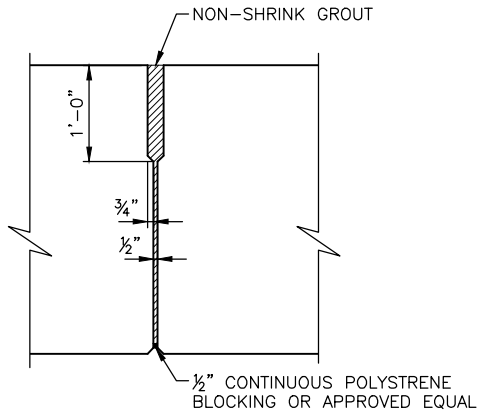
1 PLAN - BOX BEAM
SCALE: 1/2" = 1'-0"



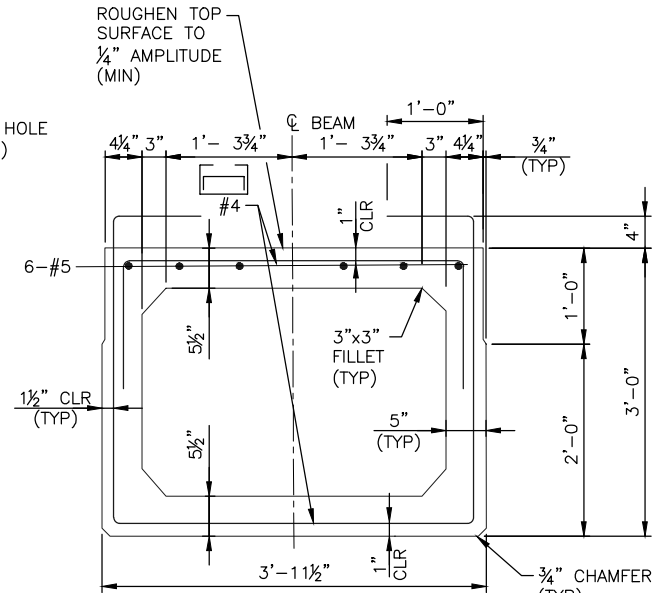
2 REINFORCING PLAN FOR BOX BEAMS
SCALE: 1/2" = 1'-0"

PRESTRESSING NOTES:

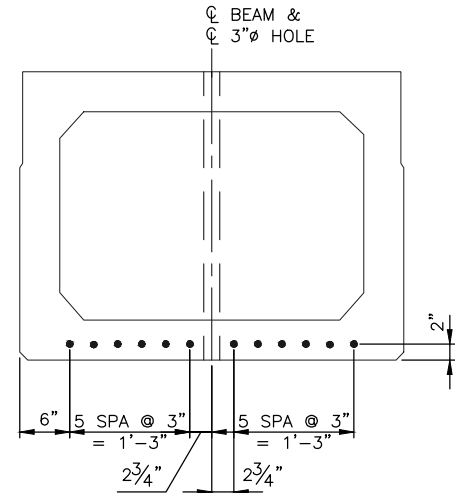
- STRANDS: 12-1/2"Ø 7-WIRE LOW RELAXATION STRANDS (AASHTO M203); (A=0.153 SQ IN, f's = 270 KSI)
- PRESTRESS FORCE: PI=371.8k INITIAL TENSION BEFORE LOSSES.
PW=323.1k WORKING FORCE REMAINING AFTER LOSSES (13% TOTAL LOSS)
ELASTIC SHORTENING AFTER TRANSFER = 1/4". THIS VALUE MUST BE ADDED TO THE BEAM LENGTH IN CASTING BED.
- f'ci = 4500 PSI MINIMUM STRENGTH @ TRANSFER.
f'c = 5500 PSI MINIMUM STRENGTH @ 28 DAYS.
- ALL LOW RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f's.
- ALL BEAMS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
- Yc = DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF BEAM = 2"
- CUT STRANDS FLUSH WITH CONCRETE AND COAT WITH BITUMINOUS MATERIAL.
- THE CONTRACTOR SHALL ADJUST THE DIMENSIONS SHOWN ON THE DRAWING TO ACCOUNT FOR GRADE, ELASTIC SHORTENING OF THE BEAMS AFTER RELEASE OF PRESTRESS FORCE AS WELL AS FOR CREEP AND SHRINKAGE THAT OCCURS BETWEEN TIME OF CASTING AND ERECTING OF THE BEAMS.
- PICK-UP DEVICES SHALL BE ANCHORED ONLY TO THE END ZONES OF THE BEAMS. THE CONTRACTOR SHALL SUBMIT PROPOSED PICK-UP OR LIFTING DEVICE DRAWING FOR APPROVAL, PRIOR TO ERECTION.
- PRESTRESS LOSSES FOR THE BEAMS HAVE BEEN DESIGNED FOR A RELATIVE HUMIDITY OF 40 PERCENT.



5 TYPICAL SHEAR KEY DETAIL
SCALE: 1" = 1'-0"
(NOTE: SHEAR KEY FOR EXTERIOR BEAMS ON INSIDE FACE ONLY)



3 TYPICAL BEAM SECTION 4'-0" x 3'-0"
SCALE: 1" = 1'-0"



4 TYPICAL BEAM STRAND PATTERN
SCALE: 1" = 1'-0"

NOTES:

- FOR BEAM LENGTH 'L' SEE TABLES ON SHEETS MSSU0903 & MSSUU0904. ALSO SEE PRESTRESSING NOTE 8.
- ANGLES 'A' & 'B' ARE MEASURED BETWEEN THE CL BEAMS AND LOCAL TANGENT OF CURVE @ CL BEAMS @ CL BRGS.
- GROUT ALL SHEAR KEYS W/NON-SHRINK, NON-METALLIC GROUT, f'c=4,000 PSI. NO CHLORIDES PERMITTED IN THE GROUT.
- PREVENT GROUT FROM ENTERING LATERAL TIE ROD HOLES AND BEAM VOIDS.



PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE REPRODUCED, COPIED, OR OTHERWISE USED WITHOUT THE WRITTEN PERMISSION OF THE CITY OF PHOENIX.

PHX SkyTrain
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: PB/MH

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: As Shown

CIP No.: AV100000011

KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
TAXIWAYS "U" & "V" UNDERCROSSING
BEAM DETAILS

Package: Sheet Reference No:
B03-MSSU0905
V1 - 189 of 339

Design Sub-Consultant

Design Consultant



Gannett Fleming

ISSUED FOR CONSTRUCTION 04/13/18

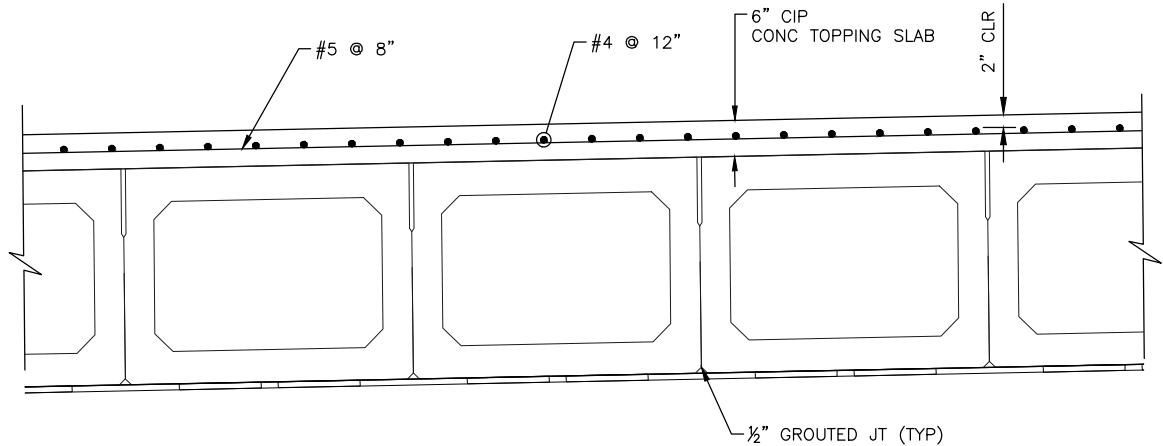
SUBMITTED FOR REVIEW 02/02/18

REVISIONS / SUBMISSIONS

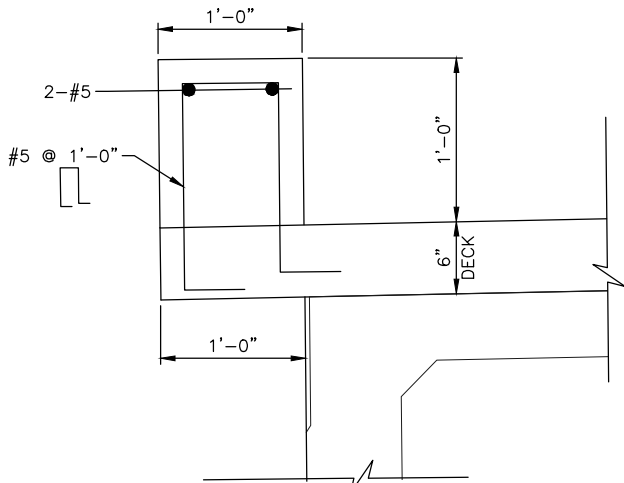
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DATE

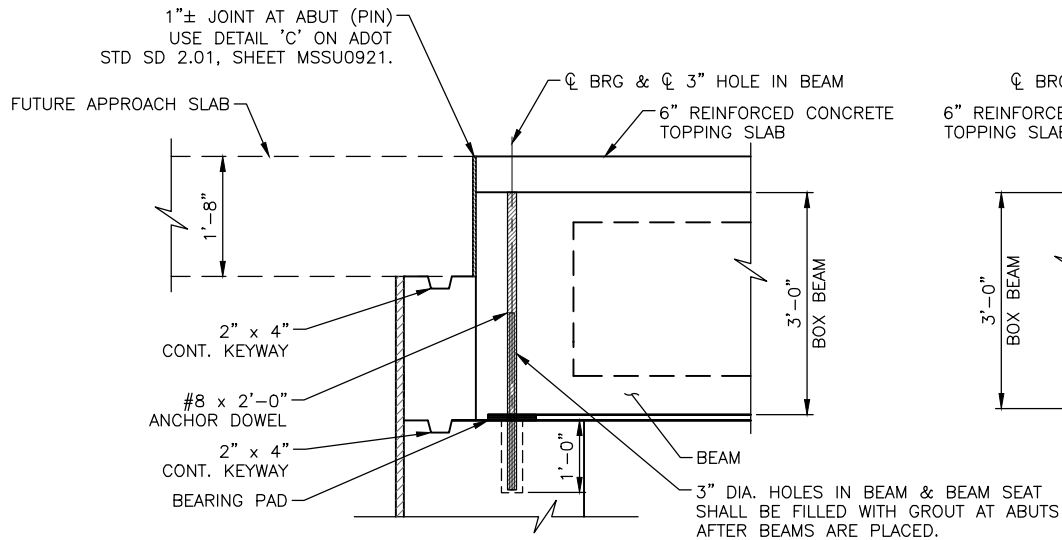
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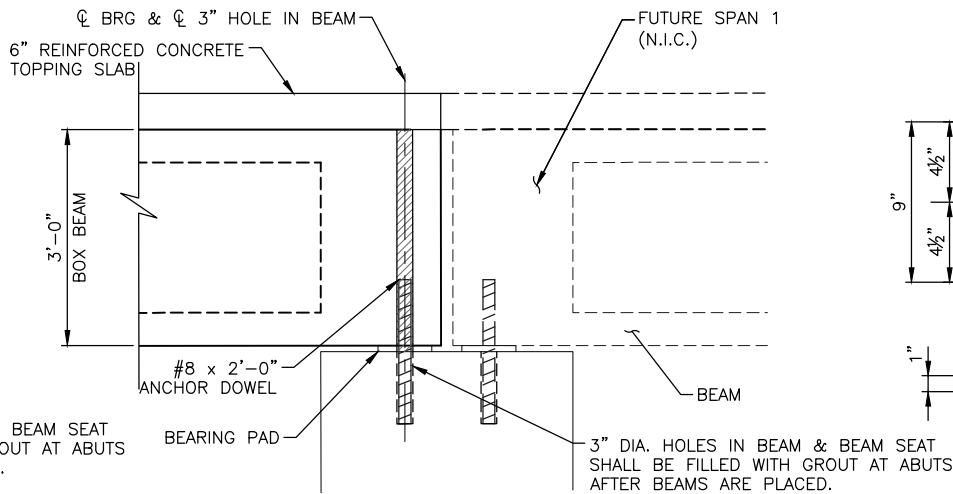
1 TYPICAL DECK SECTION
SCALE: 3/4"=1'-0"



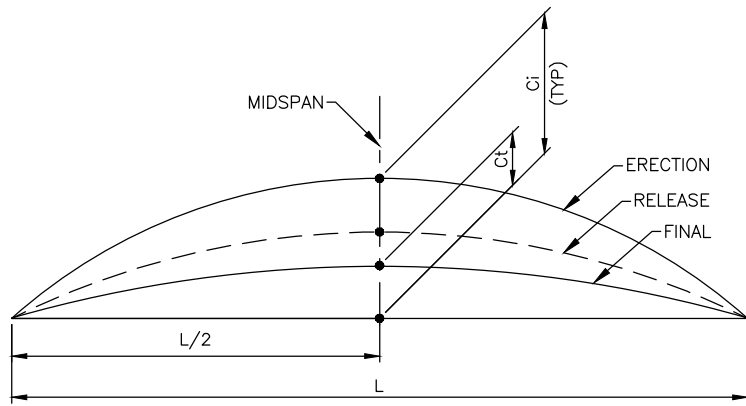
2 CURB DETAIL
SCALE: 1 1/2"=1'-0"



A TYPICAL SECTION AT ABUTMENT
SCALE: 3/4"=1'-0"



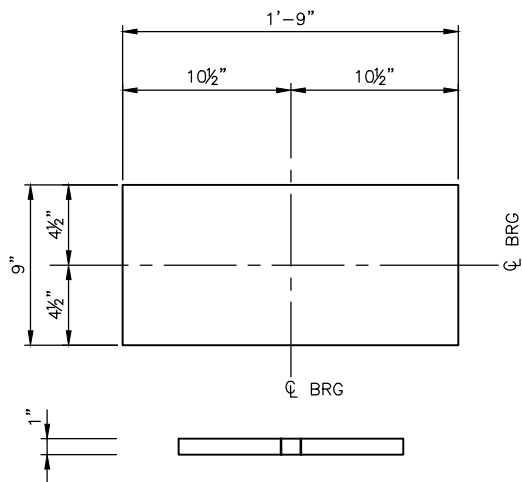
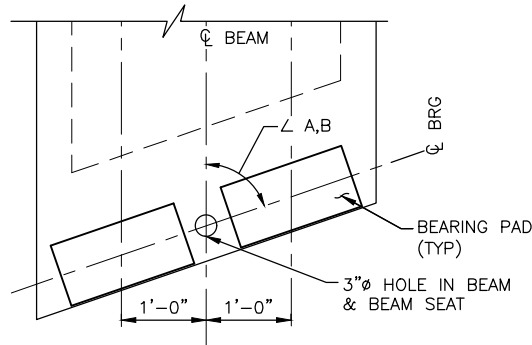
B TYPICAL SECTION AT PIER
SCALE: N.T.S.



CAMBER		
LOAD/STAGE	CAMBER AT MIDSPAN Ct	TOTAL CAMBER AT MIDSPAN Ct
@ P/S RELEASE	+1/2"	+1/2"
@ ERECTION	+1/4"	+3/4"
CONC. W.S.	-1/8"	+3/8"
FINAL	-	+1/4"

- NOTES:
1. POSITIVE CAMBER IS UPWARD; NEGATIVE CAMBER IS DOWNWARD.
 2. BEAM CAMBER AT ERECTION ASSUMED 60 DAYS AFTER RELEASE OF PRESTRESS.
 3. FINAL BEAM CAMBER (Cf) INCLUDES LONG TERM CREEP AND SHRINKAGE EFFECTS.
 4. FOR BEAM LENGTH 'L', SEE NOTE 1 ON MSSU0905.

3 ESTIMATED BEAM CAMBERS
SCALE: NTS



B BEARING PAD DETAILS
SCALE: NTS

BEARING NOTE:
ELASTOMERIC BEARING PADS SHALL BE MADE OF UNREINFORCED 50 DUROMETER HARDNESS NEOPRENE W/ 130 ksi SHEAR MODULUS.



Design Sub-Consultant

Design Consultant



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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: PB/AH

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: As Shown

CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
TAXIWAYS "U" & "V" UNERCROSSING
DECK DETAILS

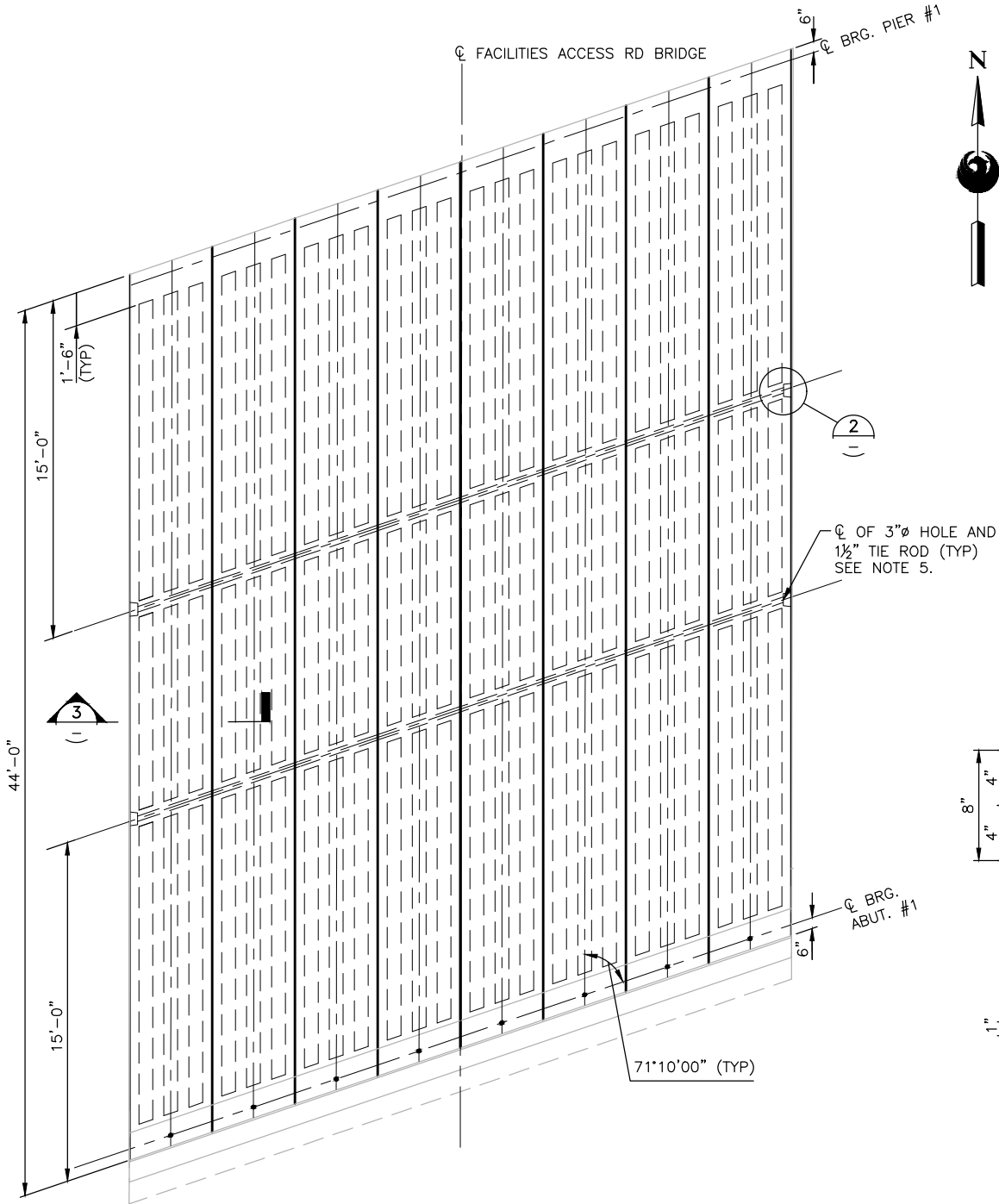
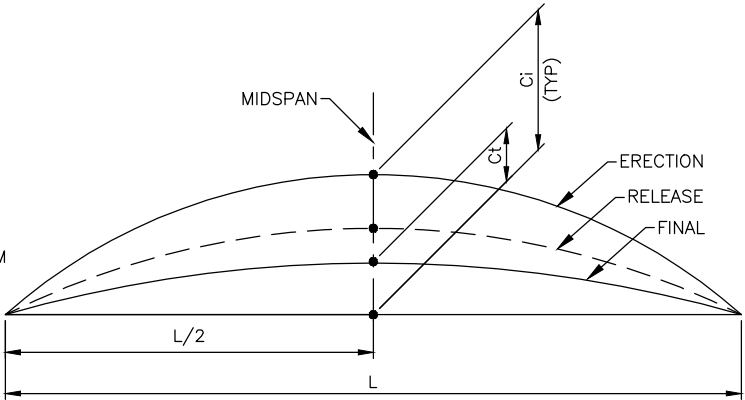
Package: Sheet Reference No:
B03-MSSU0906
V1 - 190 of 339

CAMBER		
LOAD/STAGE	CAMBER AT MIDSPAN Ct	TOTAL CAMBER AT MIDSPAN Ct
⊕ P/S RELEASE	+½"	+½"
⊕ ERECTION	+¼"	+¾"
BARRIERS	-¼"	+½"
CONC. W.S.	-⅛"	+¾"
FINAL	-¼"	+¼"

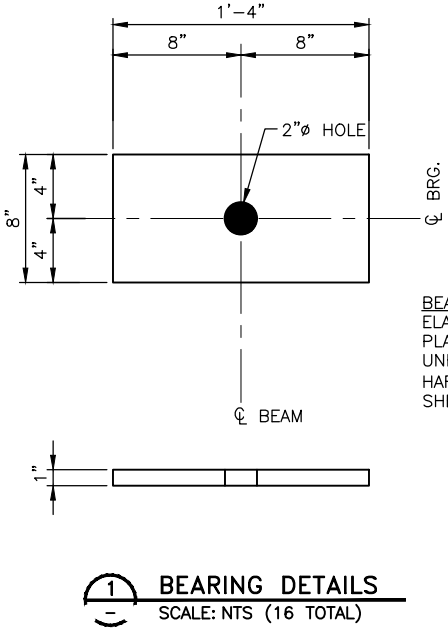
1 ESTIMATED BEAM CAMBERS
SCALE: NTS

NOTES:

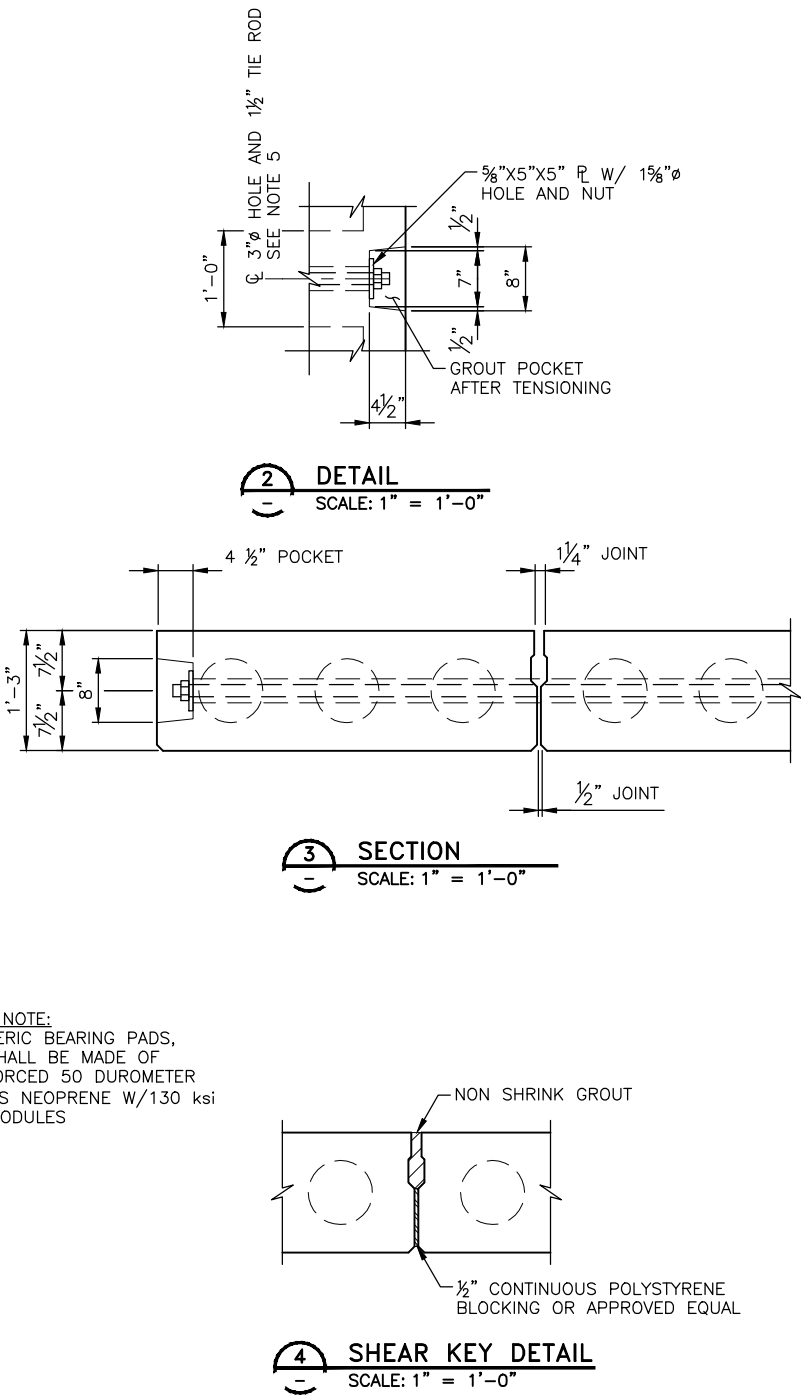
1. POSITIVE CAMBER IS UPWARD; NEGATIVE CAMBER IS DOWNWARD.
2. BEAM CAMBER AT ERECTION ASSUMED 60 DAYS AFTER RELEASE OF PRESTRESS.
3. FINAL BEAM CAMBER INCLUDES LONG TERM CREEP AND SHRINKAGE EFFECTS.



1 FRAMING PLAN
SCALE: 1/4" = 1'-0"



1 BEARING DETAILS
SCALE: NTS (16 TOTAL)



NOTES:

1. GROUT ALL SHEAR KEYS AFTER UNITS ARE IN PLACE AND BEFORE LATERAL TENSIONING. GROUT SHALL BE NON-SHRINK, NON-METALIC GROUT, $f_c' = 4,000$ PSI MIN. NO CHLORIDES PERMITTED IN THE GROUT.
2. SHEAR KEY FOR EXTERIOR BEAM ON INSIDE FACE ONLY.
3. TORQUE TIE ROD NUTS TO PROVIDE 30,000 LBS OF TENSION IN RODS PER ROD MANUFACTURER'S INSTRUCTIONS.
4. TAKE MEASURES TO PREVENT GROUT FROM ENTERING LATERAL TIE ROD HOLES AND BEAM VOIDS.
5. IF TOTAL LENGTH OF THE TIE ROD CANNOT BE FURNISHED IN ONE PIECE THEN THREADED COUPLER WILL BE USED. WHEN COUPLERS ARE USED, THE HOLE THROUGH THE DIAPHRAGM SHOULD BE INCREASED FROM 3" TO 4" DIAMETER.

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
FACILITIES ACCESS ROAD BRIDGE
FRAMING PLAN &
SUPERSTRUCTURE DETAILS

Package: Sheet Reference No:
B03-MSSU0911
V1 - 194 of 339

Designed by: PB/AH

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: As Shown

CIP No.: AV10000011

KVA No.: 07-5204

PHX AVT BYB
CITY OF PHOENIX AVIATION DEPARTMENT

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

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EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

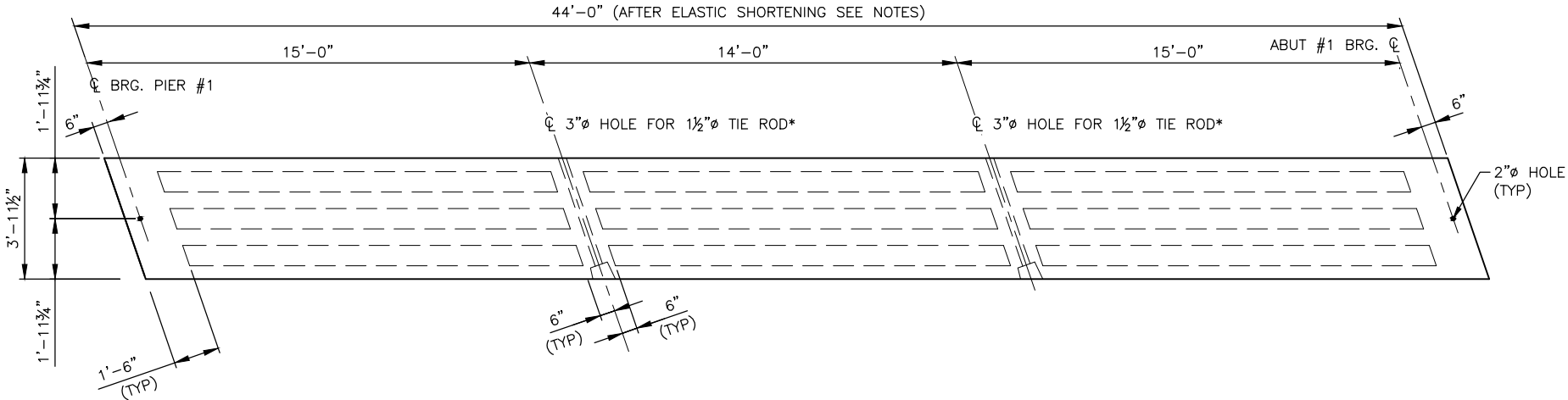
NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18

Design Sub-Consultant

Design Consultant

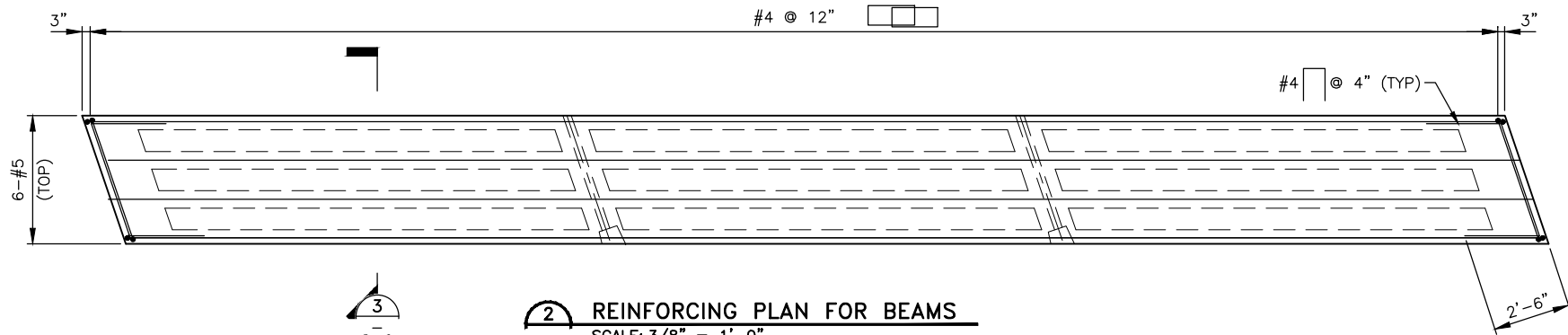
Gannett Fleming

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jrojas

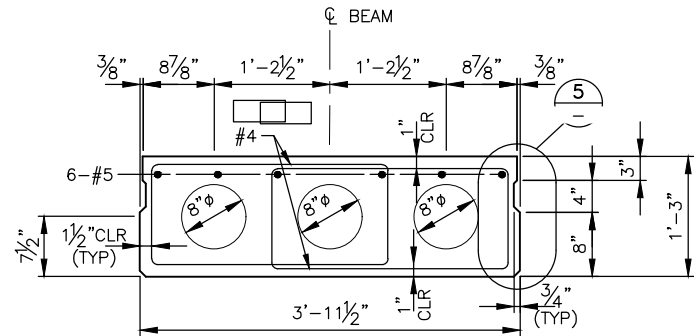


1 PLAN - VOIDED SLAB BEAM
SCALE: 3/8" = 1'-0"

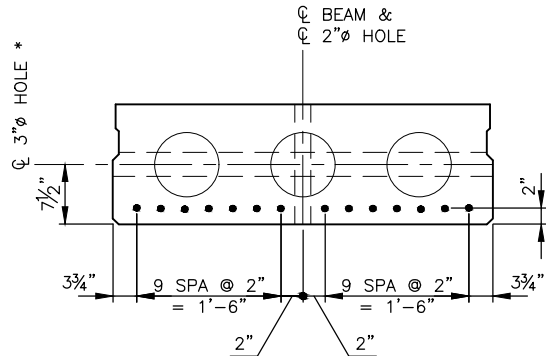
* SEE NOTE 5, SHT MSSU0911



2 REINFORCING PLAN FOR BEAMS
SCALE: 3/8" = 1'-0"



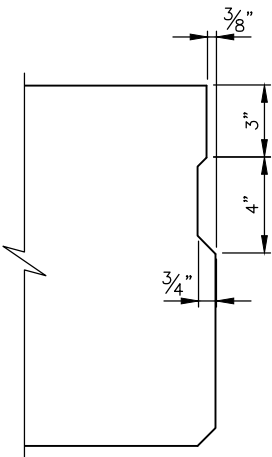
3 TYPICAL BEAM SECTION - AASHTO SII-48
SCALE: 1" = 1'-0"



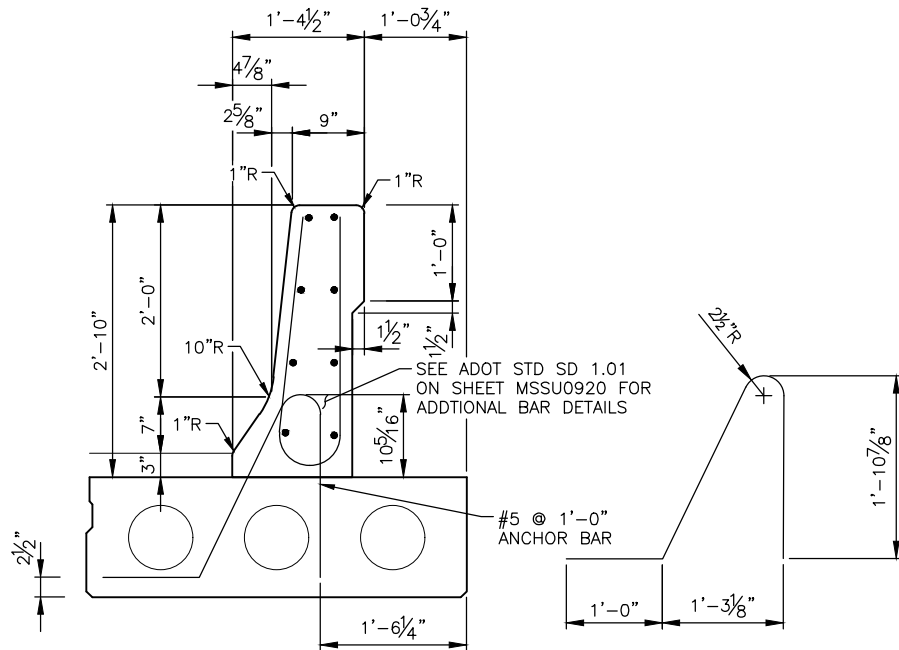
4 TYPICAL BEAM STRAND PATTERN
SCALE: 1" = 1'-0"

PRESTRESSING NOTES:

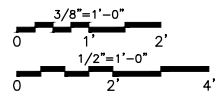
- STRANDS: 20-0.6" ϕ 7-WIRE LOW RELAXATION STRANDS (AASHTO M203); (A=0.217 SQ IN, f's = 270 KSI)
- PRESTRESS FORCE: PI=878.9k INITIAL TENSION BEFORE LOSSES.
PW=703.1k WORKING FORCE REMAINING AFTER LOSSES (20% TOTAL LOSS)
ELASTIC SHORTENING AFTER TRANSFER = 1/4". THIS VALUE MUST BE ADDED TO THE BEAM LENGTH IN CASTING BED.
- f'ci = 5500 PSI MINIMUM STRENGTH @ TRANSFER.
f'c = 7000 PSI MINIMUM STRENGTH @ 28 DAYS.
- ALL LOW RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f's.
- ALL BEAMS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
- Yc = DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF BEAM = 2"
- CUT STRANDS FLUSH WITH CONCRETE AND COAT WITH BITUMINOUS MATERIAL.
- THE CONTRACTOR SHALL ADJUST THE DIMENSIONS SHOWN ON THE DRAWING TO ACCOUNT FOR GRADE, ELASTIC SHORTENING OF THE BEAMS AFTER RELEASE OF PRESTRESS FORCE AS WELL AS FOR CREEP AND SHRINKAGE THAT OCCURS BETWEEN TIME OF CASTING AND ERECTING OF THE BEAMS.
- PICK-UP DEVICES SHALL BE ANCHORED ONLY TO THE END ZONES OF THE BEAMS. THE CONTRACTOR SHALL SUBMIT PROPOSED PICK-UP OR LIFTING DEVICE DRAWING FOR APPROVAL, PRIOR TO ERECTION.
- PRESTRESS LOSSES FOR THE BEAMS HAVE BEEN DESIGNED FOR A RELATIVE HUMIDITY OF 40 PERCENT.



5 TYPICAL SHEAR KEY DETAIL
SCALE: 3" = 1'-0"
(NOTE: SHEAR KEY FOR EXTERIOR BEAMS ON INSIDE FACE ONLY)



6 EXTERIOR VOIDED SLAB BEAM W/ CONCRETE BRIDGE BARRIER
SCALE: 1" = 1'-0"



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AND MAY NOT BE REPRODUCED OR ALTERED
WITHOUT THE WRITTEN APPROVAL OF THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	PB/MH
Drawn by:	JRR
Checked by:	SWS
Date:	04/13/2018
Dwg. scale:	As Shown
CIP No.:	AV100000011
KIVA No.:	07-5204

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
FACILITIES ACCESS ROAD BRIDGE
BEAM DETAILS

Package: Sheet Reference No:
B03 - MSSU0912
V1 - 195 of 339

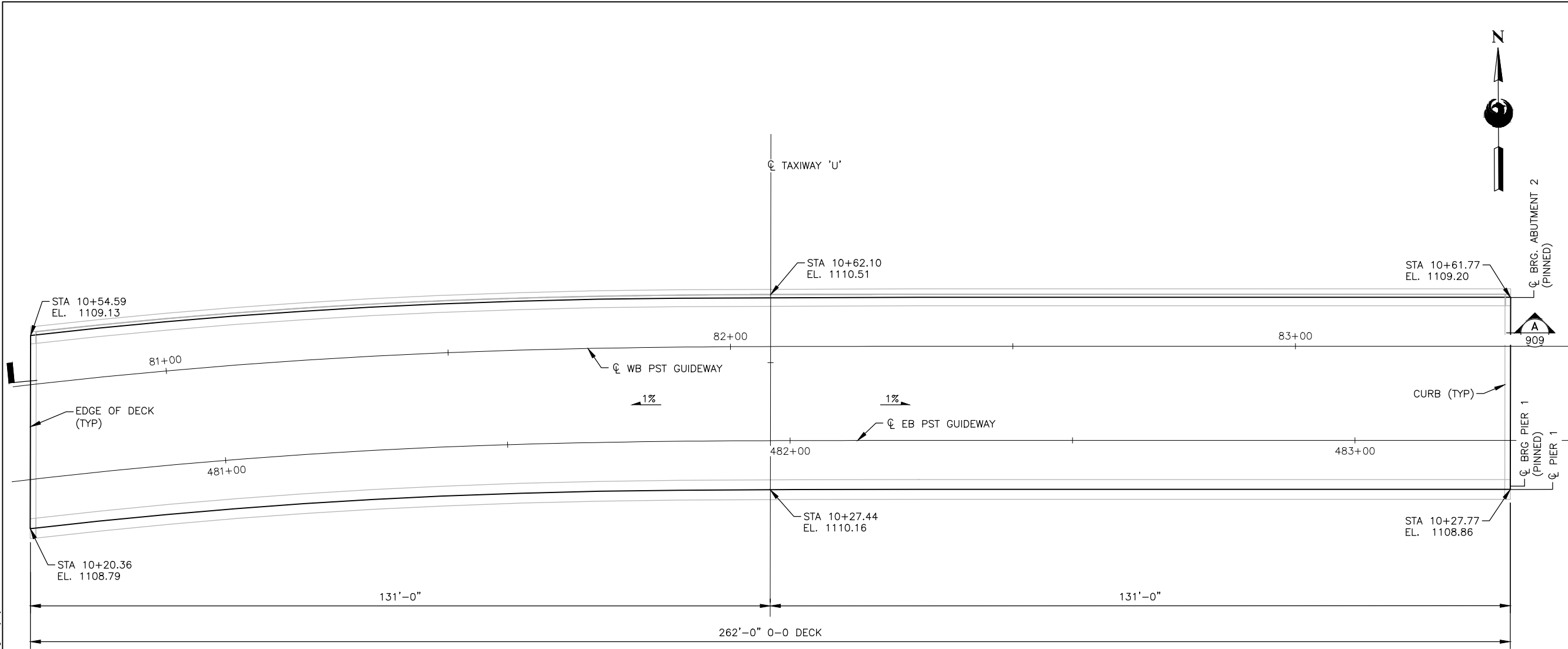
Design Sub-Consultant

Design Consultant



Gannett Fleming

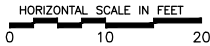
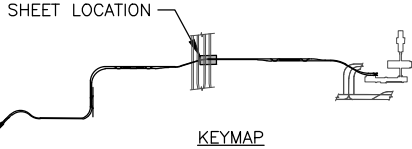
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1 TAXIWAY 'U' DECK PLAN
SCALE: 1" = 10'-0"

NOTES:

- ELEVATIONS SHOWN ARE AT TOP OF DECK.
- FOR ALIGNMENT GEOMETRY, SEE CIVIL PLANS.

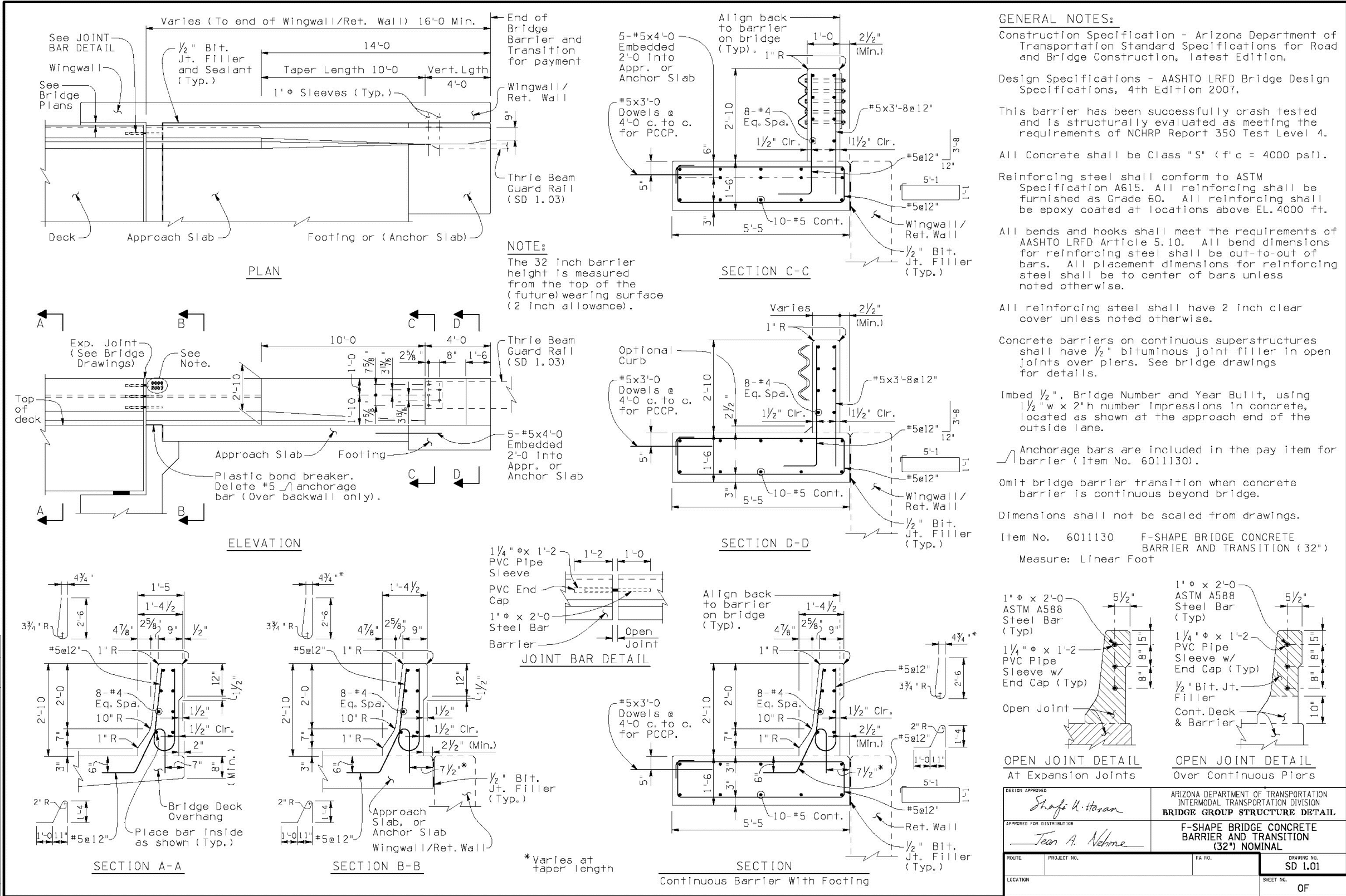


 PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY 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/MH Drawn by: JRR Checked by: SWS Date: 04/13/2018 Dwg. scale: 1"=10' CIP No.: AV100000011 KVA No.: 07-5204	
				Design Sub-Consultant	
				Design Consultant	
				ISSUED FOR CONSTRUCTION 04/13/18 SUBMITTED FOR REVIEW 02/02/18 NO. REVISIONS / SUBMISSIONS DATE	

Package: Sheet Reference No:
B03-MSSU0914
V1 - 197 of 339

NO	DESCRIPTION OF REVISIONS	DATE	BY
1	Original Issue	8-199	
5	General Update	11-07	
6	General Update, Title Block	3-09	
7			

Note to Designer:
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PHX DOT BYB

CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN

STAGE 2 DESIGN

500 S. 24TH STREET

PHOENIX, AZ 85034

Designed by: ADOT

Drawn by: ADOT

Checked by: ADOT

Date: 04/13/2018

Dwg scale: NTS

CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY

TAXWAY 'U' & 'V' UNDERCROSSING

ADOT STANDARD DETAIL SD1.01

32" CONCRETE BARRIER

Package: Sheet Reference No:

B03-MSSU0920

V1 - 198 of 339

Design Sub-Consultant

Design Consultant

ISSUED FOR CONSTRUCTION

SUBMITTED FOR REVIEW

REVISIONS / SUBMISSIONS

NO.

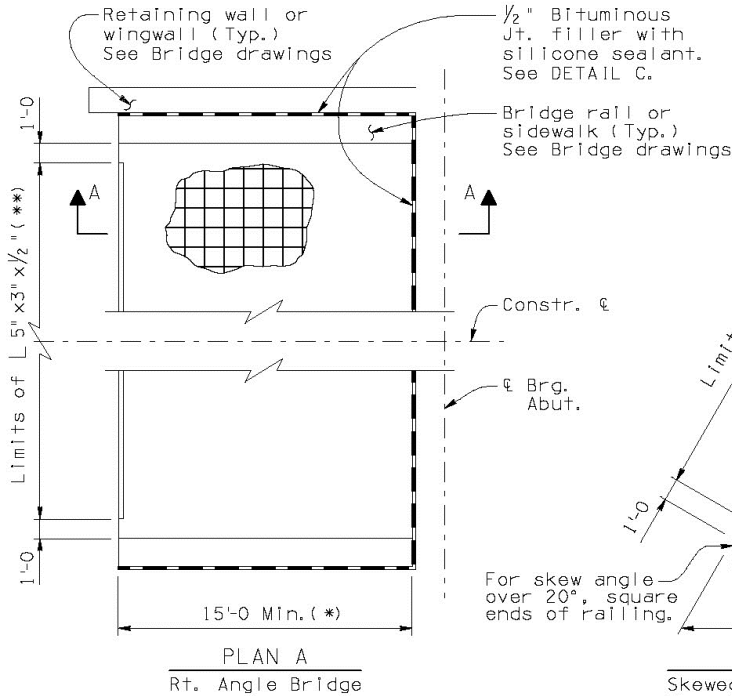
04/13/18

02/02/18

DATE

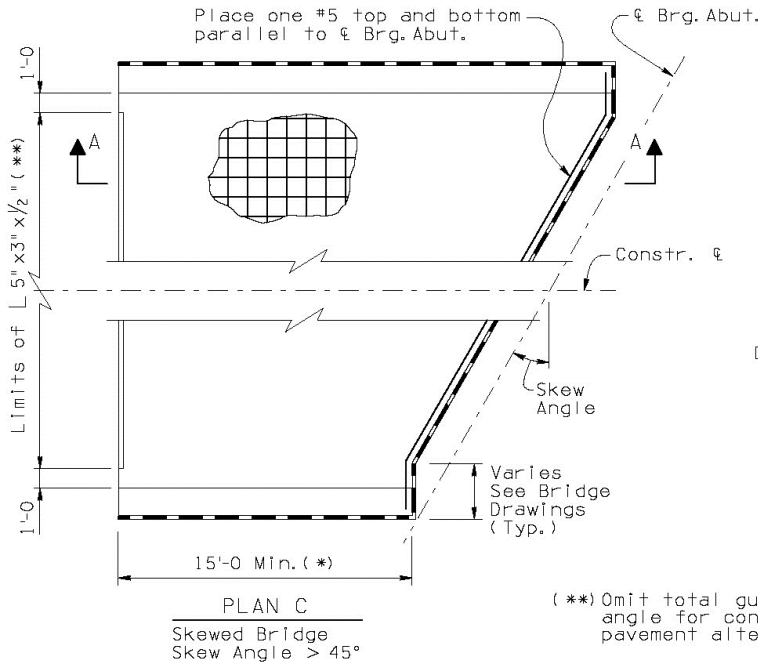
NO	DESCRIPTION OF REVISIONS	DATE	BY
1	Original Issue	11-00	WLP
2	General Update	6-01	WLP
3			
4			

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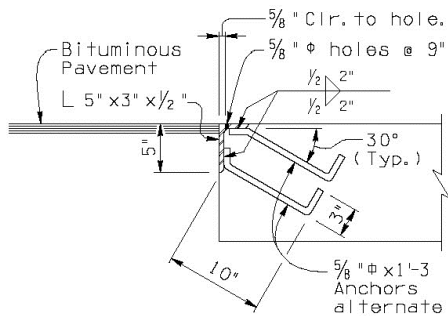
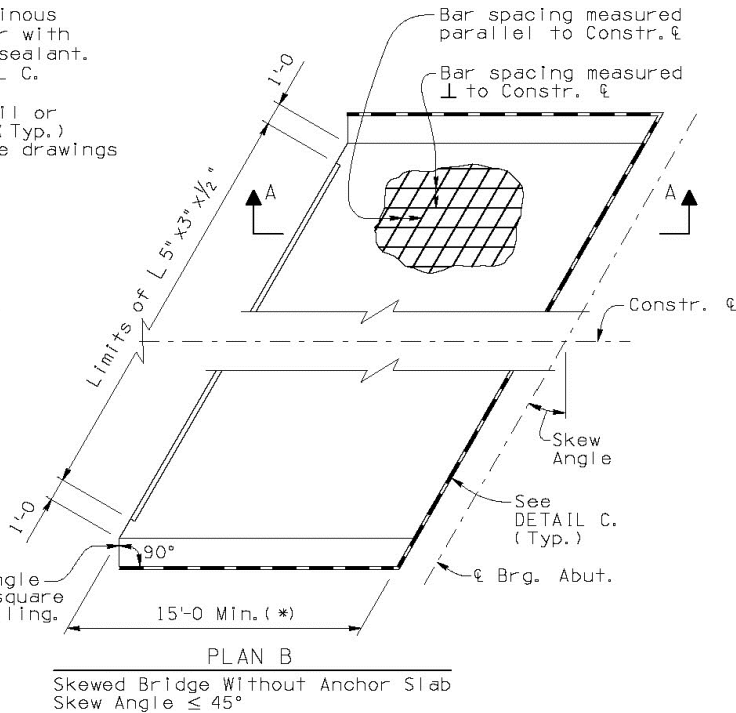


JOINT NOTE:

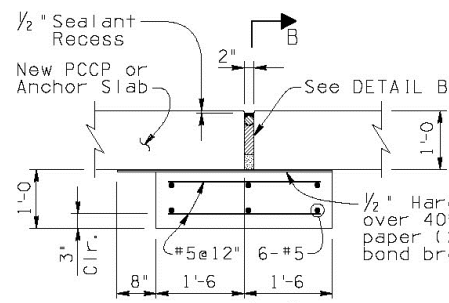
1/2" Silicone joint sealant shall be ASTM D5893 Type NS. 2" Silicone joint sealant shall be rapid-cure, self leveling, two-part silicone rubber sealant designed for expansion joints. Prime coat concrete sides of joint. Do not prime coat the backer rod. Backer rod shall be closed cell polyethylene foam.



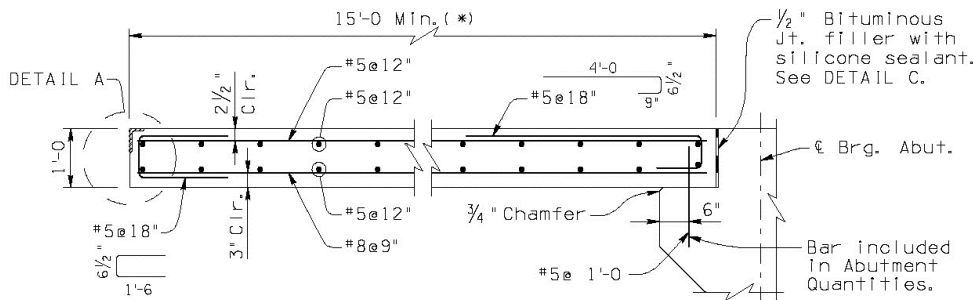
(**) Omit total guard angle for concrete pavement alternate.



DETAIL A
Bituminous Pavement Alternate

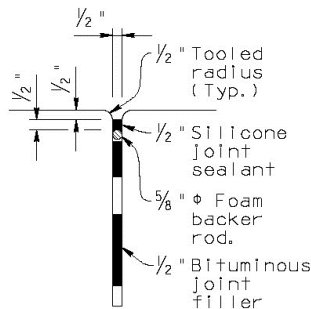


DETAIL A
Concrete Pavement Alternate

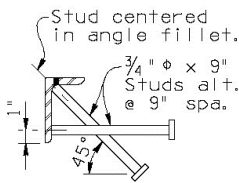


SECTION A-A

(*) See Bridge drawings for length.



DETAIL C



ALT. ANCHOR DETAIL

GENERAL NOTES:

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.

All Concrete shall be Class 'S' (f'c = 4000 psi).

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.

All bends and hooks shall meet the requirements of AASHTO Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

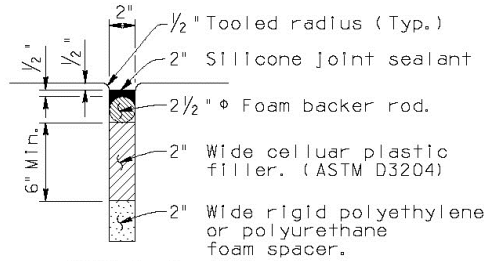
All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Structural steel shall conform to ASTM specification A588 Grade 50 or A709 Grade 50W.

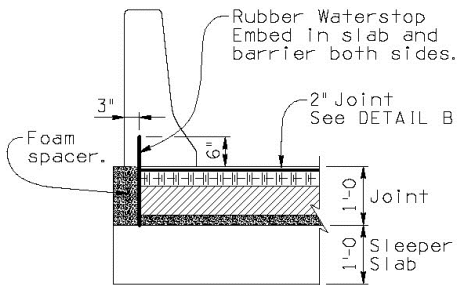
All welding shall conform to the requirements of the American Welding Society, ANSI/AASHTO/AWS D1.5 Bridge Welding Code, latest Edition.

Dimensions shall not be scaled from drawings.

Item No. 6011371 APPROACH SLAB
Measure: Square Foot



DETAIL B



SECTION B-B

DESIGN APPROVED <i>Shafiq H. Hasan</i>		ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL	
APPROVED FOR DISTRIBUTION <i>Tam A. Nehme</i>		APPROACH SLAB DETAILS	
ROUTE	PROJECT NO.	FA NO.	DRAWING NO. SD 2.01
LOCATION			SHEET NO. OF



Design Sub-Consultant

Design Consultant

Gannett Fleming

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PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

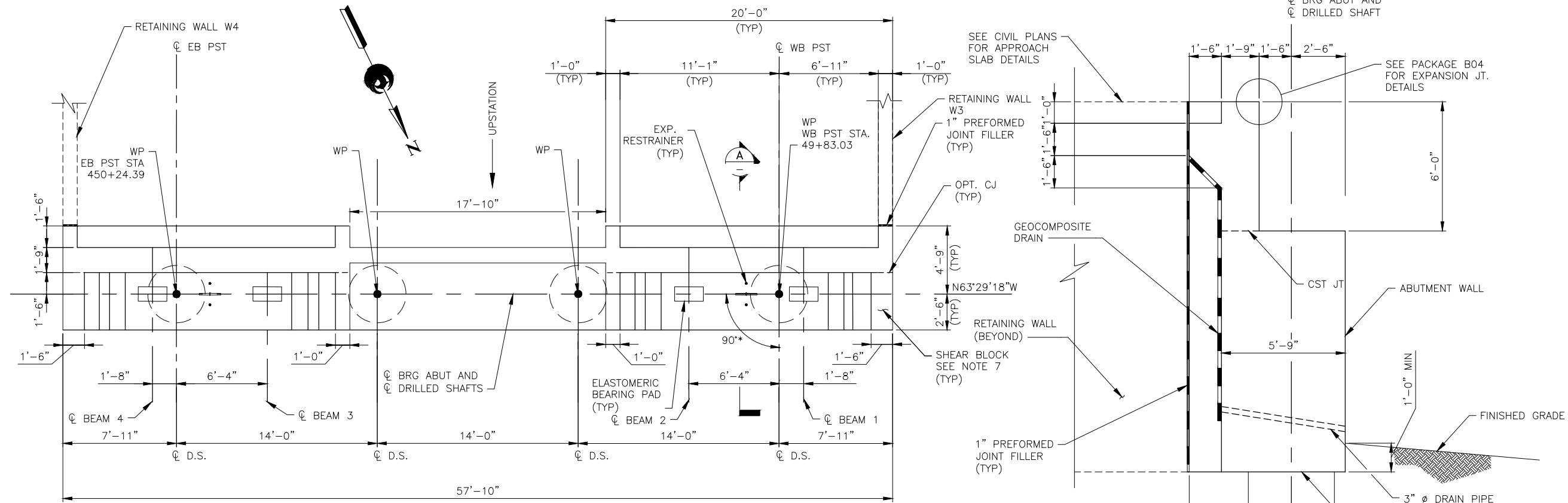
Designed by: ADOT	Drawn by: ADOT	Checked by: ADOT	Date: 04/13/2018	Dwg scale: NTS	CIP No.: AV10000011	KVA No.: 07-5204
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STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
TAXIWAY 'U' & 'V' UNDERCROSSING
ADOT STANDARD DETAIL SD2.01
APPROACH SLABS**

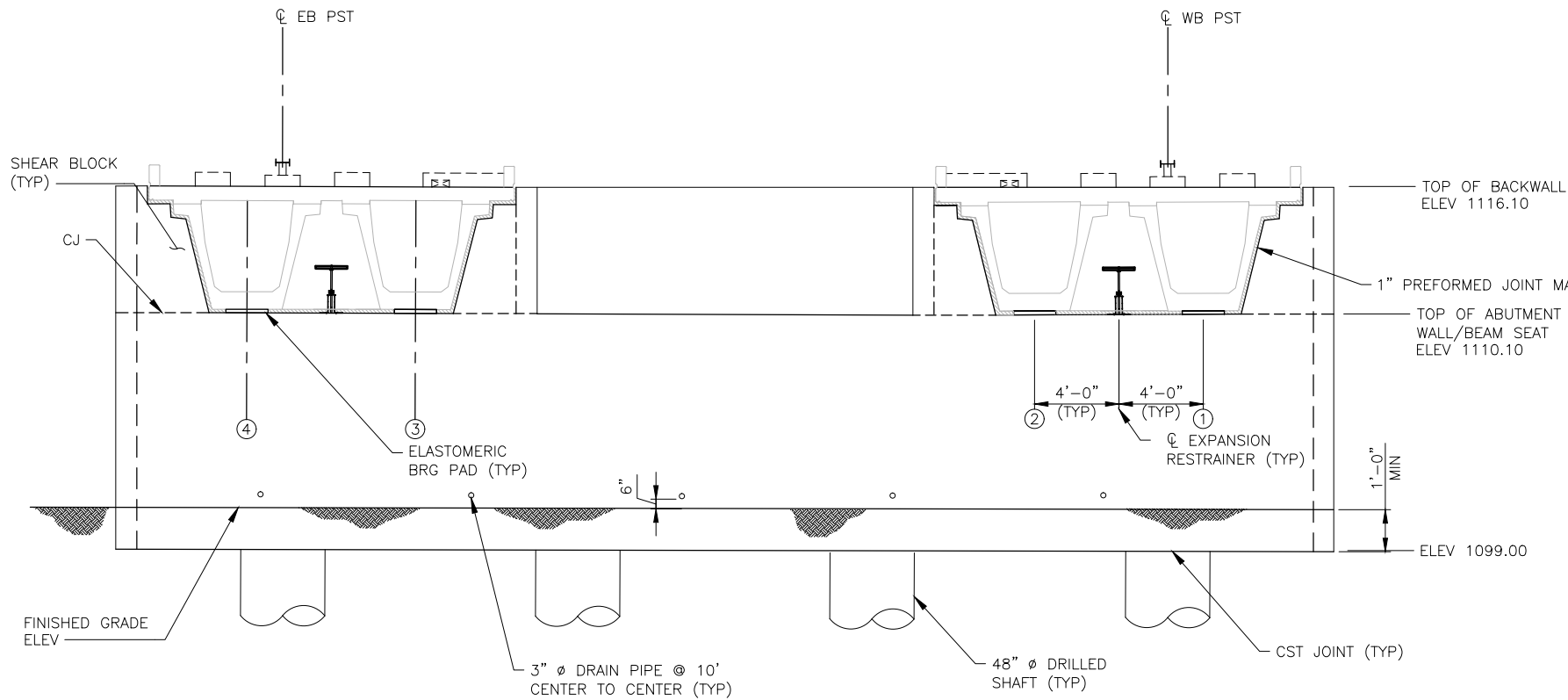
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B03-MSSU0921
V1 - 199 of 339

PLOT DATE: Apr 12, 2018 FILE PATH: C:\pwworking\gfpw01\bmoore\d0673541\AV10000011-S-2-GWSG0602.dwg bmoore

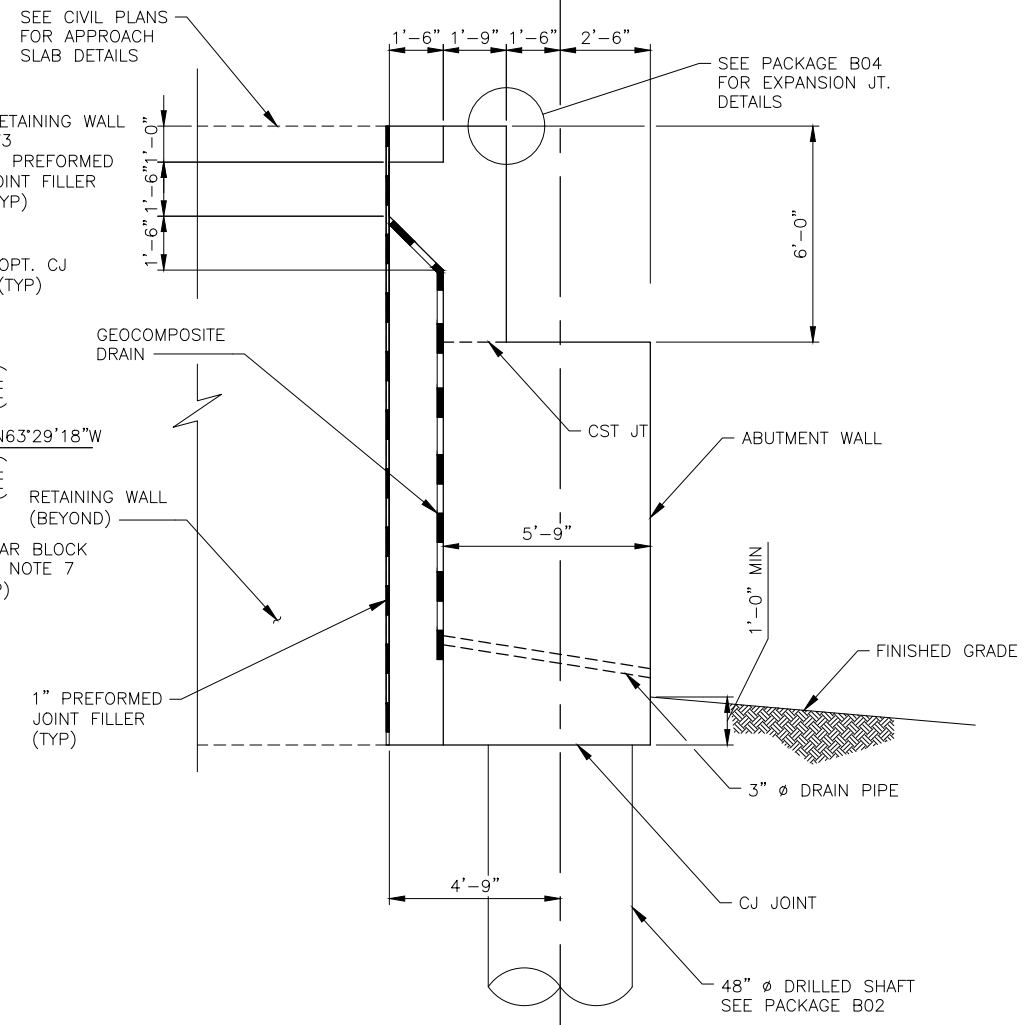


1 ABUTMENT PLAN
SCALE: 1/4" = 1'-0"

* ANGLE MEASURED
BETWEEN ϕ BRG &
LOCAL TANGENT @ WP



2 ABUTMENT ELEVATION
SCALE: 1/4" = 1'-0"



A TYPICAL ABUTMENT SECTION
SCALE: 3/8" = 1'-0"

NOTES:

1. CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
2. SEE CIVIL PLANS FOR ALIGNMENT & UTILITY RELOCATION INFORMATION.
3. SEE SHEETS GWSG0610 AND GWSG0612 FOR ABUTMENT REINFORCING DETAILS.
4. SEE FRAMING PLANS IN PACKAGE B04 FOR BEAM ORIENTATIONS. SEE PACKAGE B04 FOR DETAILS OF BEARING PADS.
5. EXPANSION VERTICAL RESTRAINERS SHALL BE PROVIDED AS SHOWN. SEE SHEET GWSG0891 FOR DETAILS OF RESTRAINERS.
6. SEE SHEET GWSG0612 FOR SHEAR BLOCK DETAILS.
7. ORIENT VERTICAL FACES OF SHEAR BLOCKS PARRELEL TO ADJACENT ϕ BEAM.

PER CITY OF PHOENIX ORDINANCE G-4306,
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CITY OF PHOENIX.

PHX **AVIATION** **DEPARTMENT**

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

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
ELEVATED ALIGNMENT
ABUTMENT 2
PLAN AND ELEVATION**

Package: Sheet Reference No:
- GWSG0602
V1 - 040 of 339

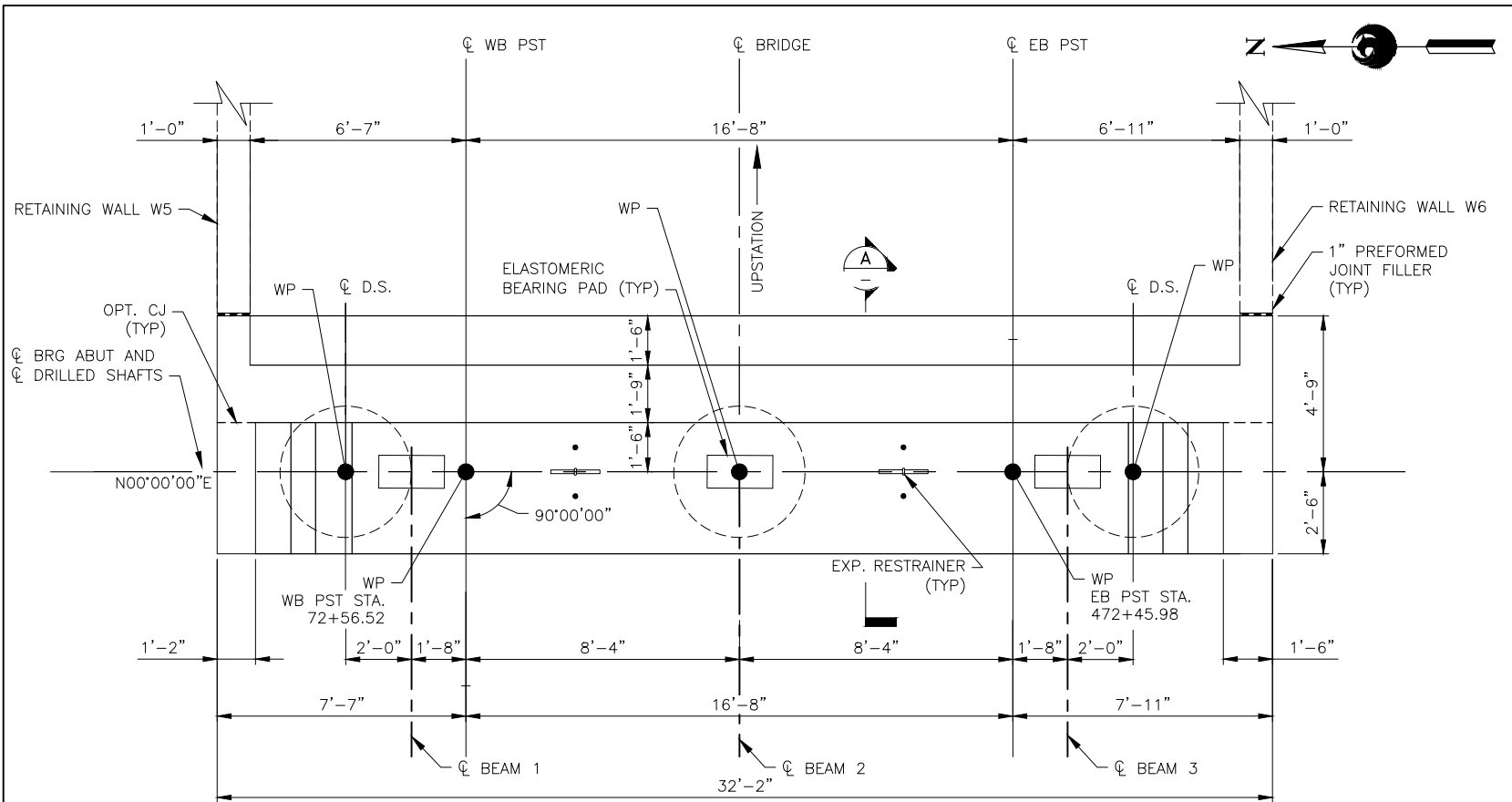


Design Sub-Consultant

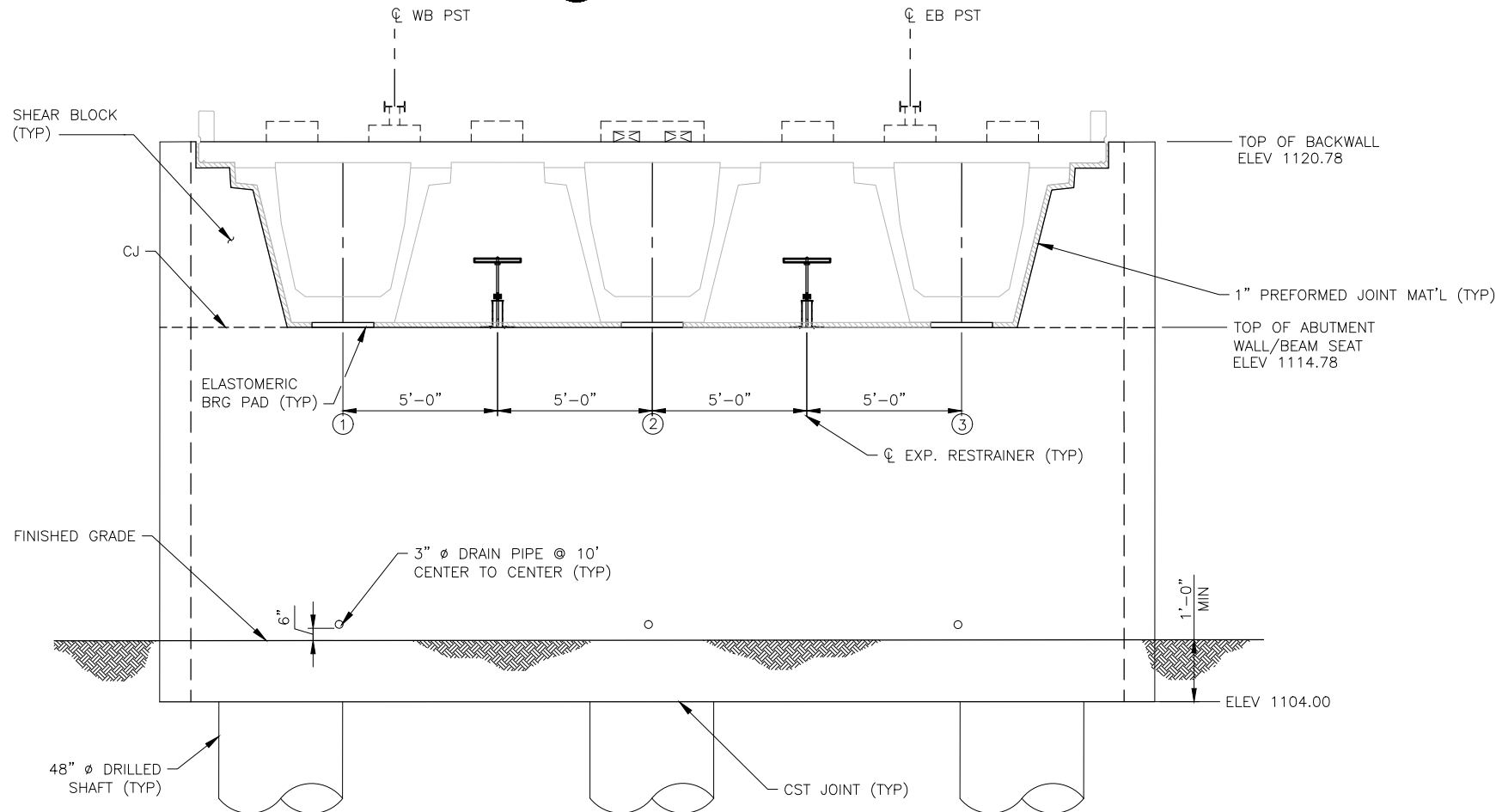
Design Consultant

GannettFleming

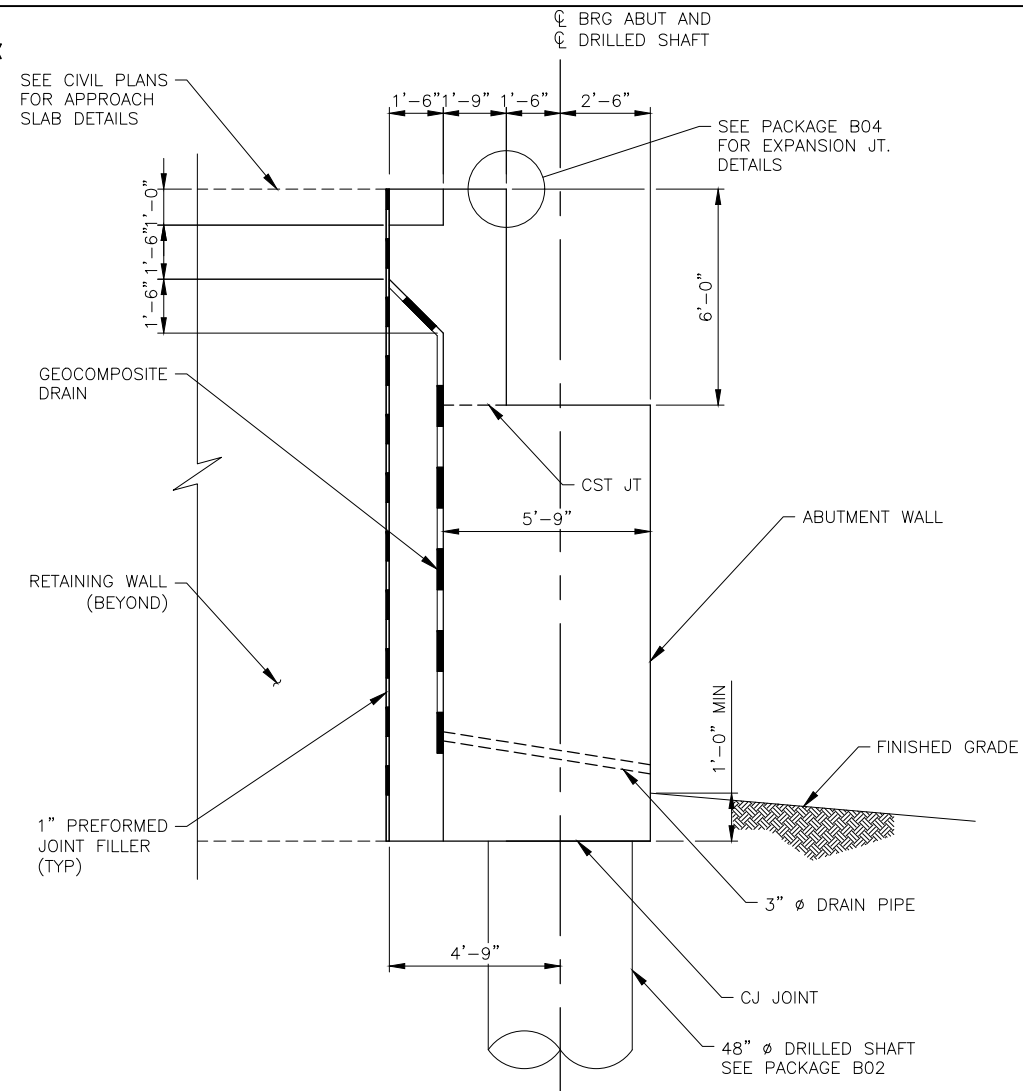
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1 ABUTMENT PLAN
SCALE: 3/8" = 1'-0"



2 ABUTMENT ELEVATION
SCALE: 3/8" = 1'-0"



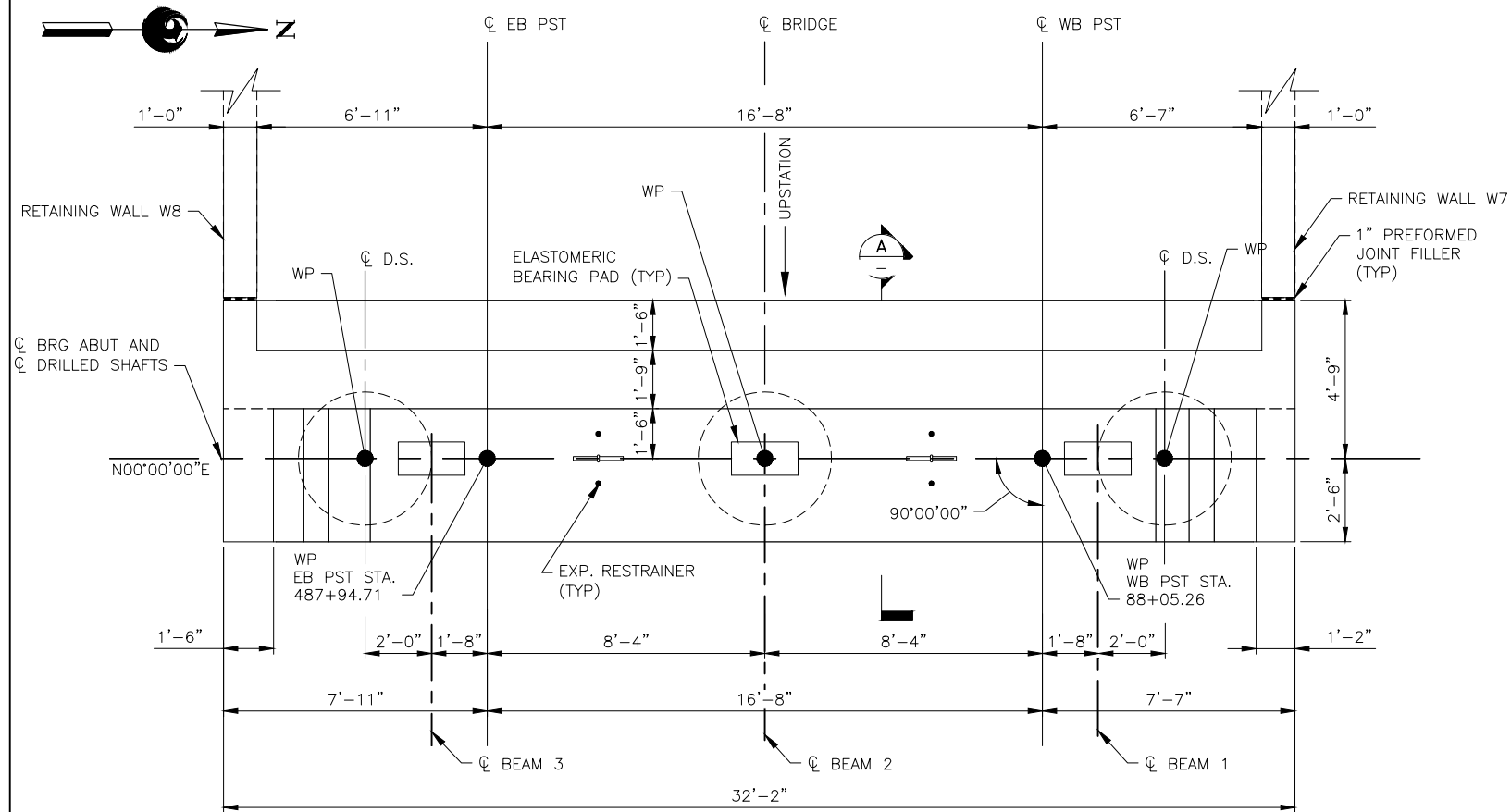
A TYPICAL ABUTMENT SECTION
SCALE: 3/8" = 1'-0"

NOTES:

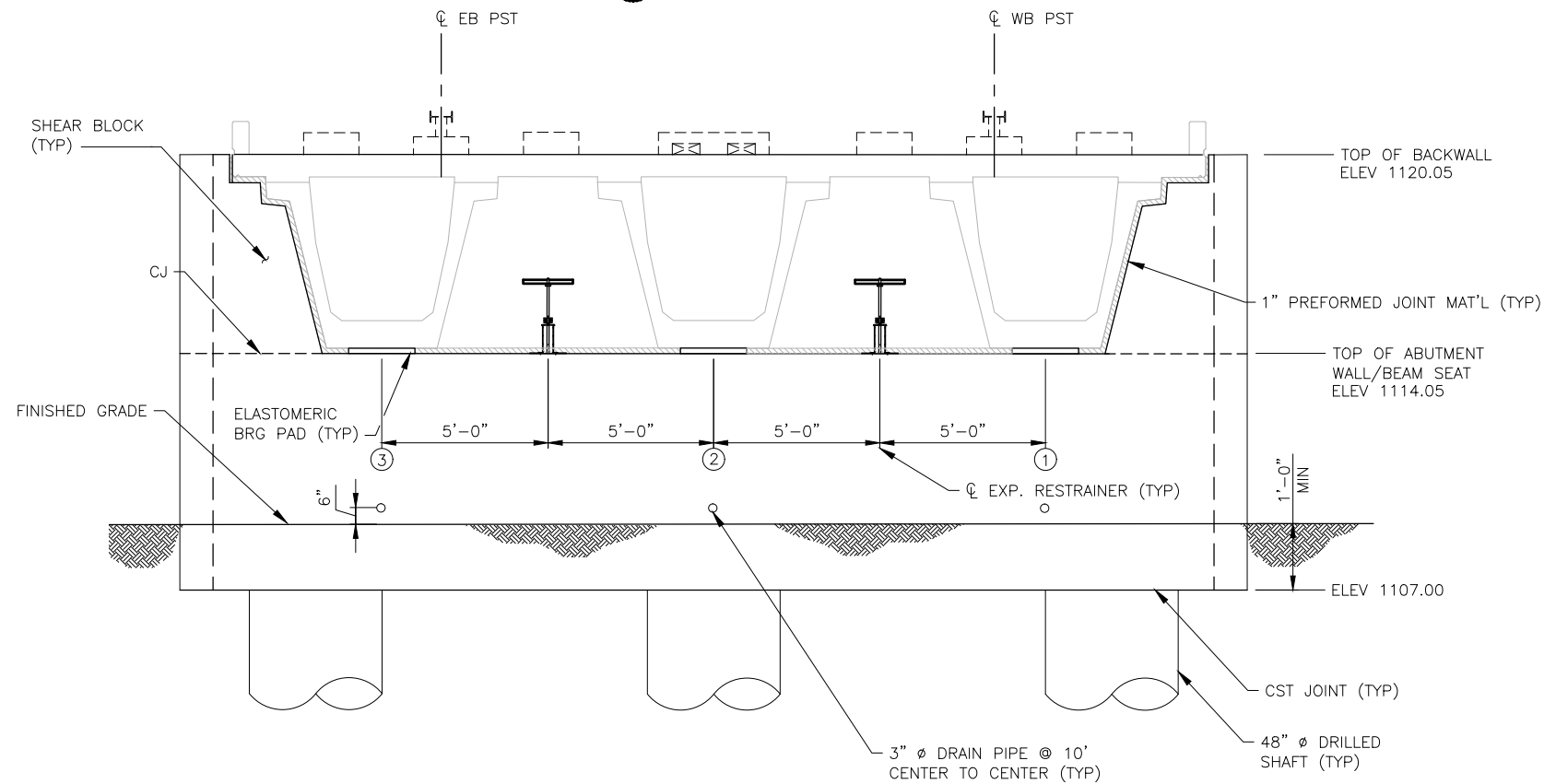
1. CONTRACTOR TO VERIFY ALL GROUND ELEVATIONS, UTILITY LOCATIONS AND EXISTING STRUCTURES BEFORE CONSTRUCTION.
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3. SEE SHEETS GWSG0610 AND GWSG0612 FOR ABUTMENT REINFORCING DETAILS.
4. SEE FRAMING PLANS IN PACKAGE B04 FOR BEAM ORIENTATIONS. SEE PACKAGE B04 FOR DETAILS OF BEARING PADS.
5. EXPANSION VERTICAL RESTRAINERS SHALL BE PROVIDED AS SHOWN. SEE SHEET GWSG0891 FOR DETAILS OF RESTRAINERS.
6. SEE SHEET GWSG0612 FOR SHEAR BLOCK DETAILS.

		Design Sub-Consultant		Design Consultant	
PER CITY OF PHOENIX ORDINANCE G-4306, 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		04/13/18	
		SUBMITTED FOR REVIEW		02/02/18	
		REVISIONS / SUBMISSIONS		DATE	
		NO.			
PHX SkyTrain 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: 04/13/2018	Dwg scale: As Shown	CIP No.: AV10000011
KVA No.: 07-5204					
STAGE 2 - B03 DESIGN SUBMISSION					
GUIDEWAY ELEVATED ALIGNMENT ABUTMENT 3 PLAN AND ELEVATION					
Package: Sheet Reference No: - GWSG0603 V1 - 041 of 339					

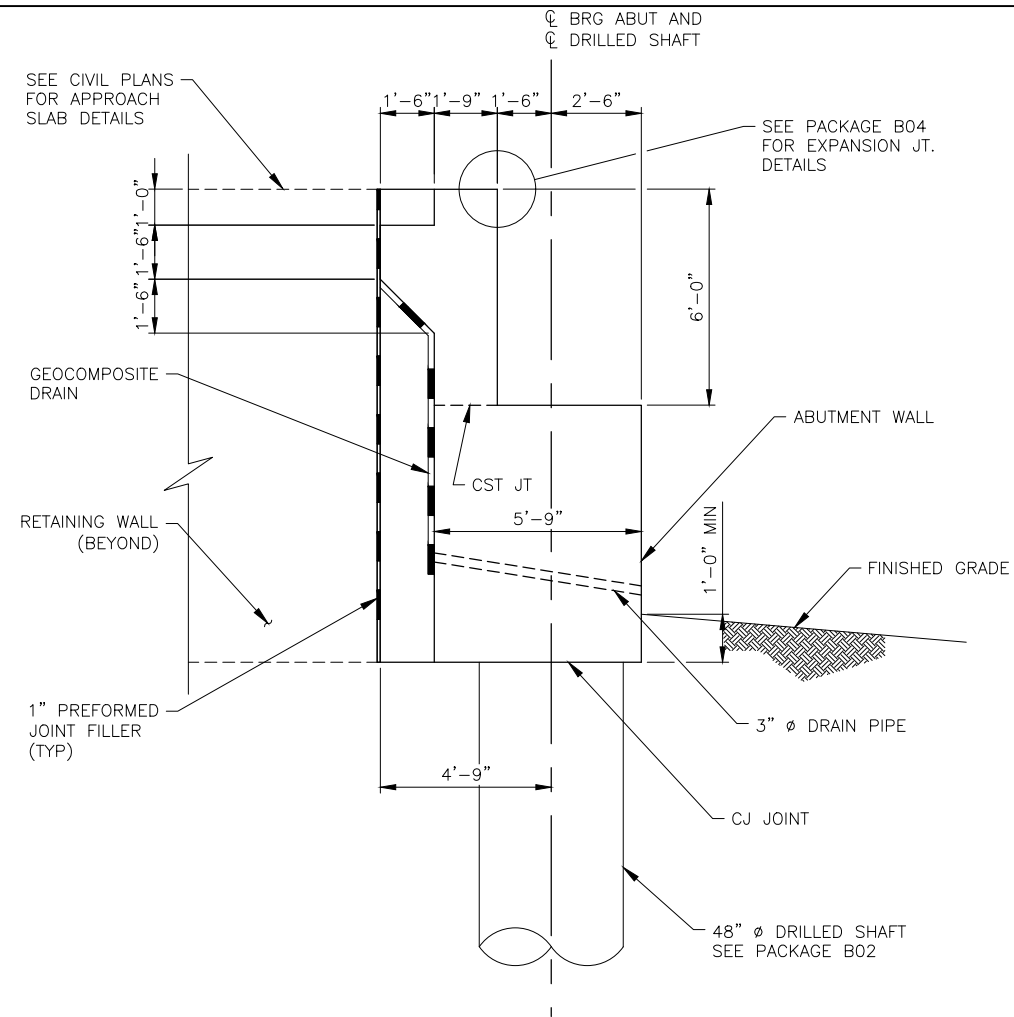
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1 ABUTMENT PLAN
SCALE: 3/8" = 1'-0"



2 ABUTMENT ELEVATION
SCALE: 3/8" = 1'-0"

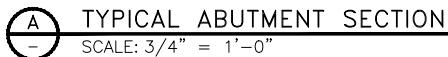


A TYPICAL ABUTMENT SECTION
SCALE: 3/8" = 1'-0"

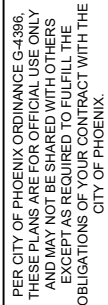
NOTES:

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2. SEE CIVIL PLANS FOR ALIGNMENT & UTILITY RELOCATION INFORMATION.
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6. SEE SHEET GWSG0612 FOR SHEAR BLOCK DETAILS.

		Design Sub-Consultant		Design Consultant	
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		CITY OF PHOENIX AVIATION DEPARTMENT		PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034	
Designed by: MH/MM	Drawn by: BAM	Checked by: SWS	Date: 04/13/2018	Dwg scale: As Shown	CIP No.: AV10000011
			KVA No.: 07-5204		
STAGE 2 - B03 DESIGN SUBMISSION					
GUIDEWAY ELEVATED ALIGNMENT ABUTMENT 4 PLAN AND ELEVATION					
Package: Sheet Reference No: - GWSG0604 V1 - 042 of 339					



1. FOR DIMENSIONS NOT SHOWN, SEE ABUTMENT PLAN AND ELEVATION SHEETS.
2. SEE SHEET GWSG0891 FOR DETAILS OF EXPANSION VERTICAL RESTRAINERS.
3. POSITION BAR TO AVOID BARS FROM DRILLED SHAFTS.



Designed by: MH/MM

Checked by: SWS
Date: 04/13/2018
Dwg scale: As Shown
CIP No.: AV10000011
KVA No.: 07-5204

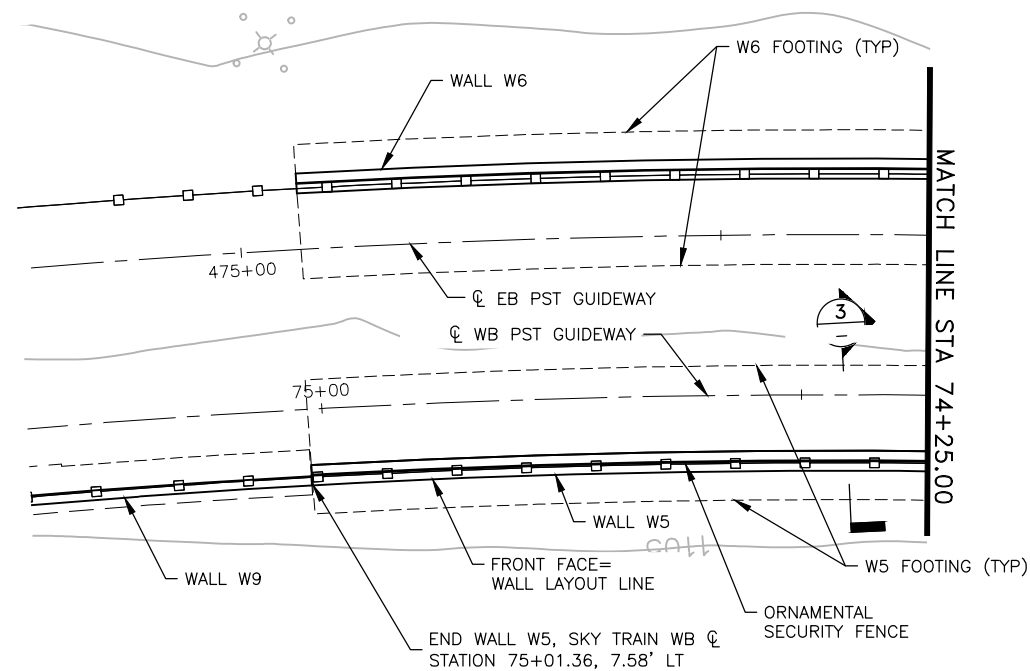
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V1 - 045 of 339

Design Sub-Consultant

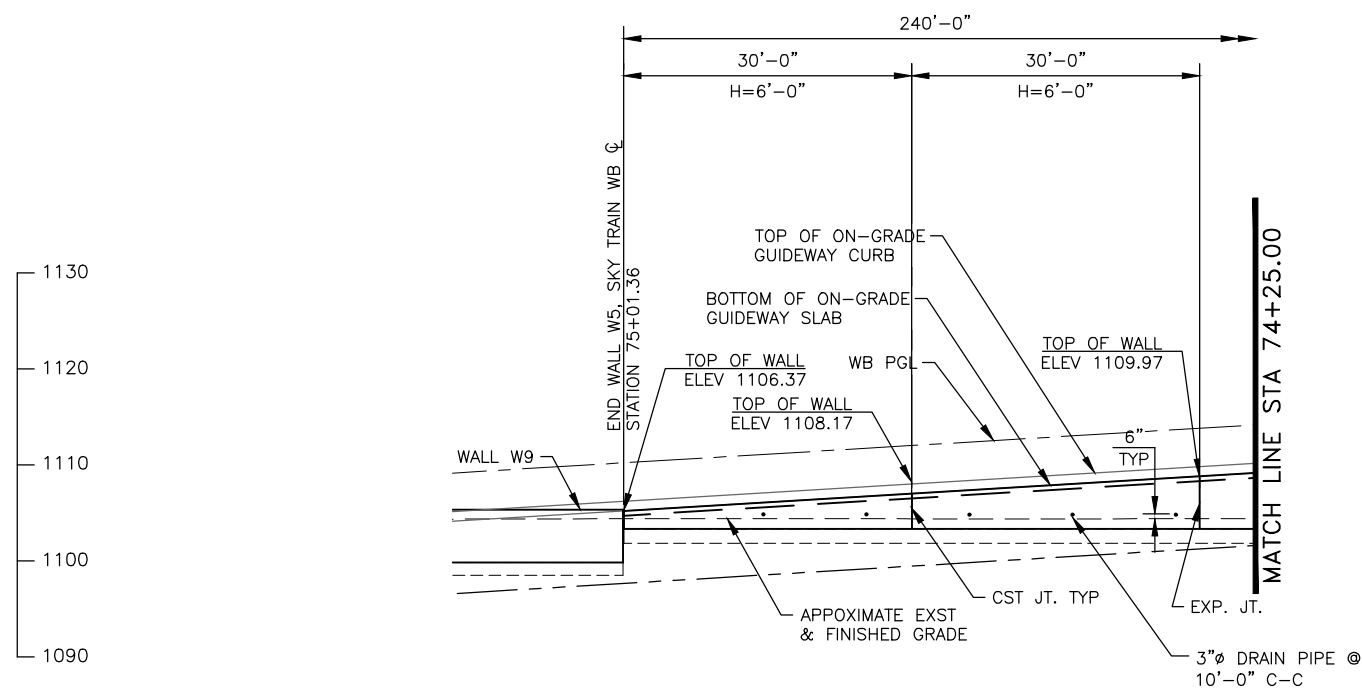
Design Consultant



Gannett Fleming



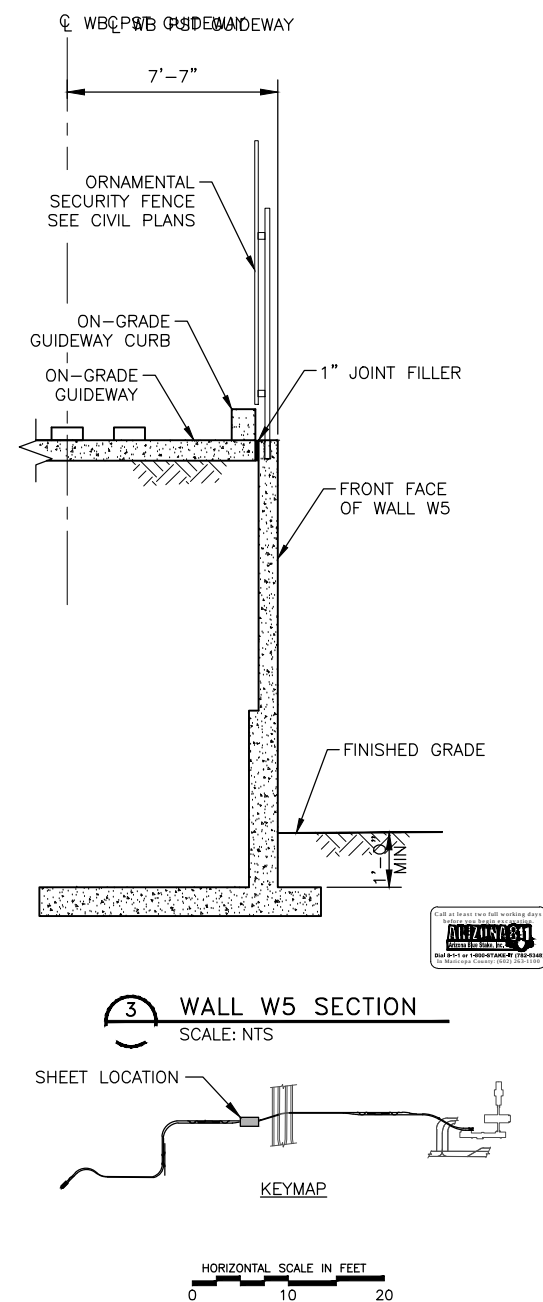
1 WALL W5 PLAN
SCALE: 1"=10'-0"



2 WALL W5 ELEVATION
SCALE: 1"=10'-0"

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

- ## GENERAL NOTES
1. WALL LAYOUT BASED ON C WB PST GUIDEWAY.
WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
 2. FOR EXPANSION AND CONSTRUCTION JOINT
DETAILS SEE SHEET MSSW0729.
 3. FOR WALL DETAILS AND TYPICAL SECTION SEE
SHEET MSSW0729.
 4. FOR WALL CROSS-SECTIONS AND DIMENSIONS
CORRESPONDING TO "H" SHOWN ON WALL
ELEVATION, SEE SHEET MSSW0729.
 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 MSSW0729.



3 WALL W5 SECTION
SCALE: NTS

STAGE 2 – B03 DESIGN SUBMISSION

1000000

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: 1"=10'

CIP No.: AV10000011

KIVA No.: 07-5204

PHX DVT EYR
CITY OF PHOENIX AVIATION
DEPARTMENT

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

**GUIDEWAY
RETAINING WALL W5
PLAN AND ELEVATION 2
STA 74+25.00 TO STA 75+01.36**

Package: Sheet Reference No:
B03 - MSSW0710
V1 - 210 of 339

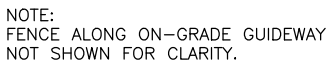
Design Sub-Consultant

Design Consultant

Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396.
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CITY OF PHOENIX.

	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
NO	REVISIONS / SUBMISSIONS	DATE



-
- WB PST GUIDEWAY
- 7'-7"
- ORNAMENTAL SECURITY FENCE SEE CIVIL PLANS
- ON-GRADE GUIDEWAY CURB
- ON-GRADE GUIDEWAY
- 1" JOINT FILLER
- FRONT FACE OF WALL W5
- FINISHED GRADE
- 1'-11"
- 3** WALL W5 SECTION
- SCALE: NTS
- SHEET LOCATION
- KEYMAP
- HORIZONTAL SCALE IN FEET
- 0 10 20
- Call all front yard...
 11/2/08
 11/2/08
 11/2/08

PER CITY OF PHOENIX ORDINANCE G-4396,
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PHX DVT EYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: 1"=10'

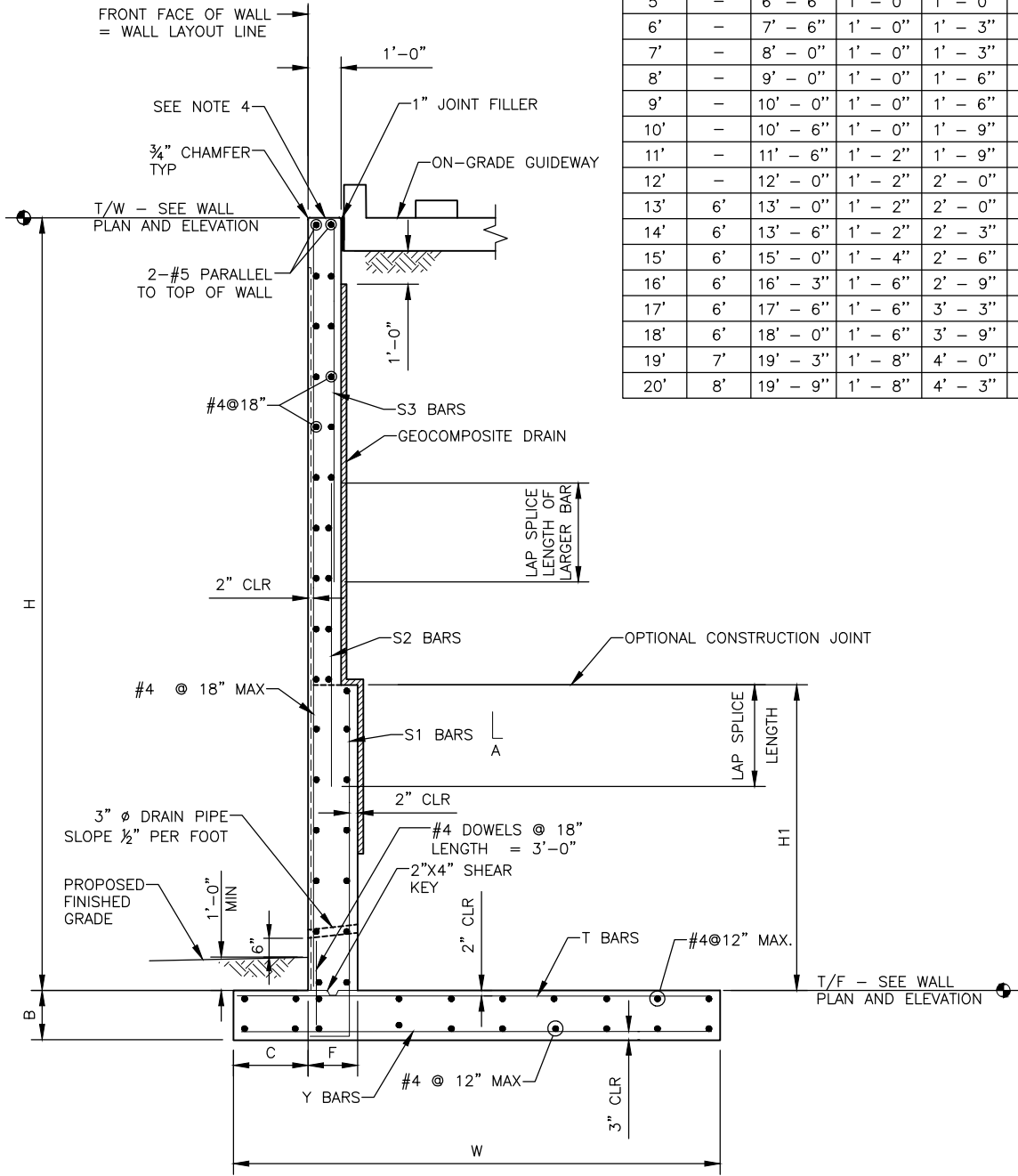
CIP No.: AV10000011

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
RETAINING WALL W5
PLAN AND ELEVATION 1
STA 72+61.35 TO STA 74+25.00**

Package: Sheet Reference No:
B03 - MSSW0709
V1 - 209 of 339

PLOT DATE: Apr 09, 2018 FILE PATH: C:\pwworking\gfpw01\roja\40673541\AV10000011-S-2-MSSW0729.dwg jrojas



1 WALL TYPICAL SECTION - WALLS W1-W8
SCALE: NTS

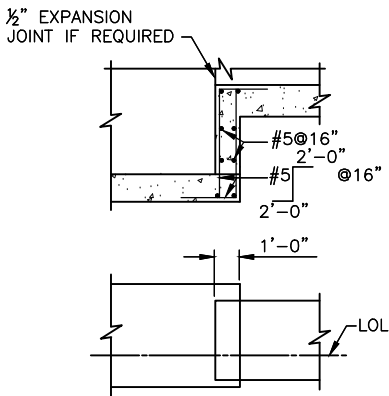
DIMENSIONS						REINFORCING STEEL LIST																
						S1			S2			S3			Y bar (Toe)			T bar (Heel)				
H (ft)	H1 (ft)	W (ft)	B (in)	C (ft)	F (in)	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	MAX. TOE PRESSURE (PSF)	
3'	—	4' – 6"	1' – 0"	1' – 0"	—	#5	12"	4' – 8"	—	—	—	—	—	—	#5	12"	4' – 0"	#5	12"	4' – 0"	760	
4'	—	5' – 6"	1' – 0"	1' – 0"	—	#5	12"	5' – 8"	—	—	—	—	—	—	#5	12"	5' – 0"	#5	12"	5' – 0"	877	
5'	—	6' – 6"	1' – 0"	1' – 0"	—	#5	12"	6' – 8"	—	—	—	—	—	—	#5	12"	6' – 0"	#5	12"	6' – 0"	1025	
6'	—	7' – 6"	1' – 0"	1' – 3"	—	#5	12"	7' – 8"	—	—	—	—	—	—	#5	12"	7' – 0"	#5	12"	7' – 0"	1105	
7'	—	8' – 0"	1' – 0"	1' – 3"	—	#5	12"	8' – 8"	—	—	—	—	—	—	#5	12"	7' – 6"	#5	12"	7' – 6"	1291	
8'	—	9' – 0"	1' – 0"	1' – 6"	—	#5	9"	9' – 8"	—	—	—	—	—	—	#5	12"	8' – 6"	#5	12"	8' – 6"	1363	
9'	—	10' – 0"	1' – 0"	1' – 6"	—	#5	9"	10' – 8"	—	—	—	—	—	—	#5	12"	9' – 6"	#6	12"	9' – 6"	1518	
10'	—	10' – 6"	1' – 0"	1' – 9"	—	#5	6"	4' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	10' – 0"	#6	12"	10' – 0"	1619	
11'	—	11' – 6"	1' – 2"	1' – 9"	—	#5	6"	5' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 0"	#6	12"	11' – 0"	1828	
12'	—	12' – 0"	1' – 2"	2' – 0"	—	#6	6"	6' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 6"	#7	12"	11' – 6"	1929	
13'	6'	13' – 0"	1' – 2"	2' – 0"	1' – 2"	#6	6"	7' – 8"	#5	12"	9' – 3"	—	—	—	#6	12"	12' – 6"	#7	12"	12' – 6"	2077	
14'	6'	13' – 6"	1' – 2"	2' – 3"	1' – 4"	#6	6"	8' – 0"	#5	9"	9' – 3"	—	—	—	#6	12"	13' – 0"	#7	12"	13' – 0"	2131	
15'	6'	15' – 0"	1' – 4"	2' – 6"	1' – 4"	#7	6"	8' – 0"	#5	9"	10' – 3"	—	—	—	#6	12"	14' – 6"	#7	12"	14' – 6"	2245	
16'	6'	16' – 3"	1' – 6"	2' – 9"	1' – 6"	#7	6"	8' – 0"	#6	9"	11' – 3"	#5	12"	SEE NOTE 3	#6	12"	15' – 9"	#8	12"	15' – 9"	2336	
17'	6'	17' – 6"	1' – 6"	3' – 3"	1' – 6"	#8	6"	8' – 3"	#6	6"	12' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 0"	#8	12"	17' – 0"	2294	
18'	6'	18' – 0"	1' – 6"	3' – 9"	1' – 6"	#8	6"	8' – 3"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 6"	#8	12"	17' – 6"	2297	
19'	7'	19' – 3"	1' – 8"	4' – 0"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	18' – 9"	#8	12"	18' – 9"	2396	
20'	8'	19' – 9"	1' – 8"	4' – 3"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	19' – 6"	#9	12"	19' – 6"	2487	

LAP SPLICE AND HOOK LENGTH TABLE

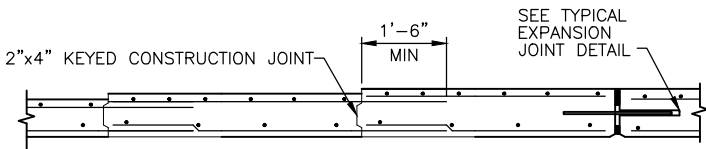
BAR SIZE	LAP SPLICE LENGTH	A
#5	2'-2"	0'-8"
#6	2'-7"	0'-9"
#7	3'-3"	0'-11"
#8	4'-3"	1'-0"
#9	5'-5"	1'-2"

NOTES:

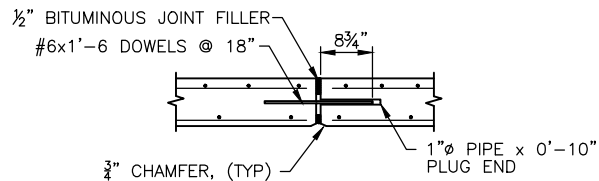
- S1 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL.
- S2 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S1 BAR.
- S3 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S2 BAR.
- FOR DETAILS OF FENCE ON WALLS W5 & W7, SEE CIVIL PLANS.



2 FOOTING STEP
SCALE: NTS



3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS



4 TYPICAL EXPANSION JOINT DETAIL
SCALE: NTS



Design Sub-Consultant

Design Consultant



PER CITY OF PHOENIX ORDINANCE G-9396,
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CITY OF PHOENIX.

PHX AVIATION DEPARTMENT
CITY OF PHOENIX

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale:

CIP No.: AV10000011

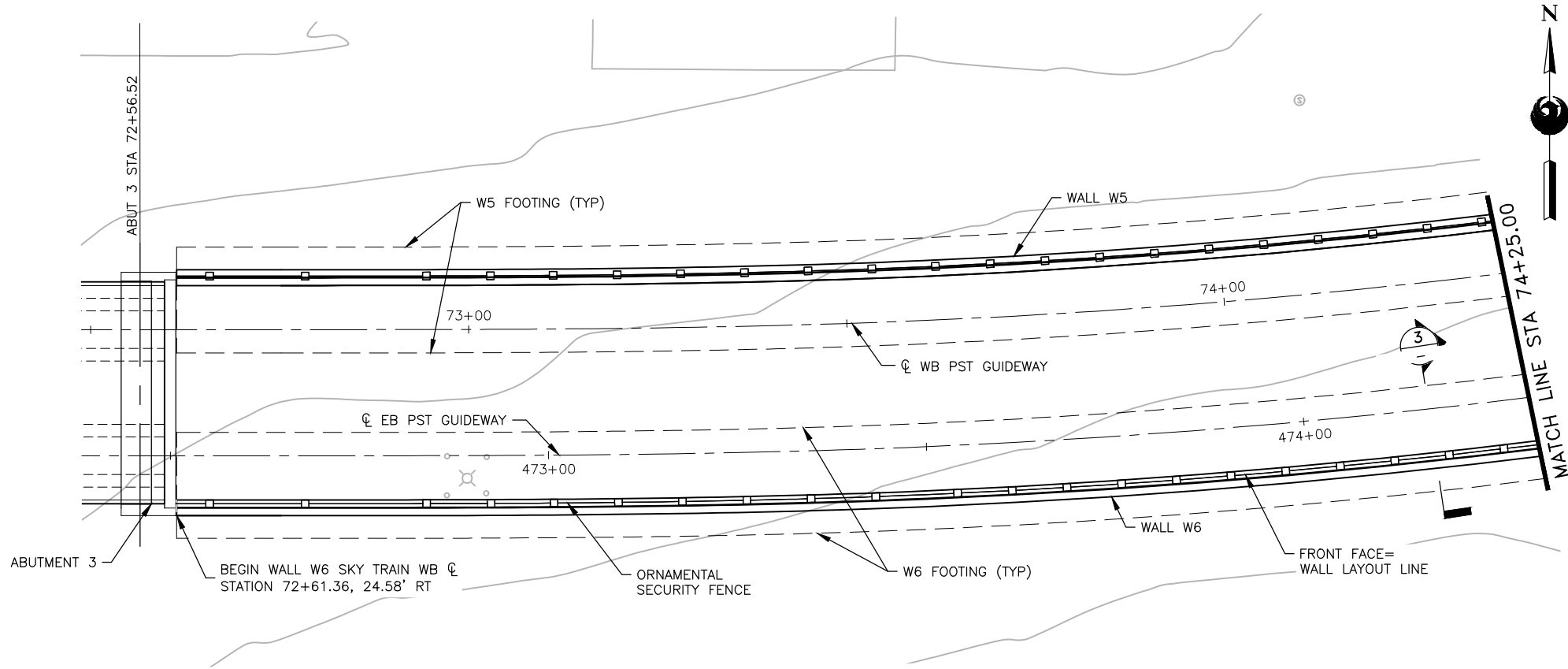
KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

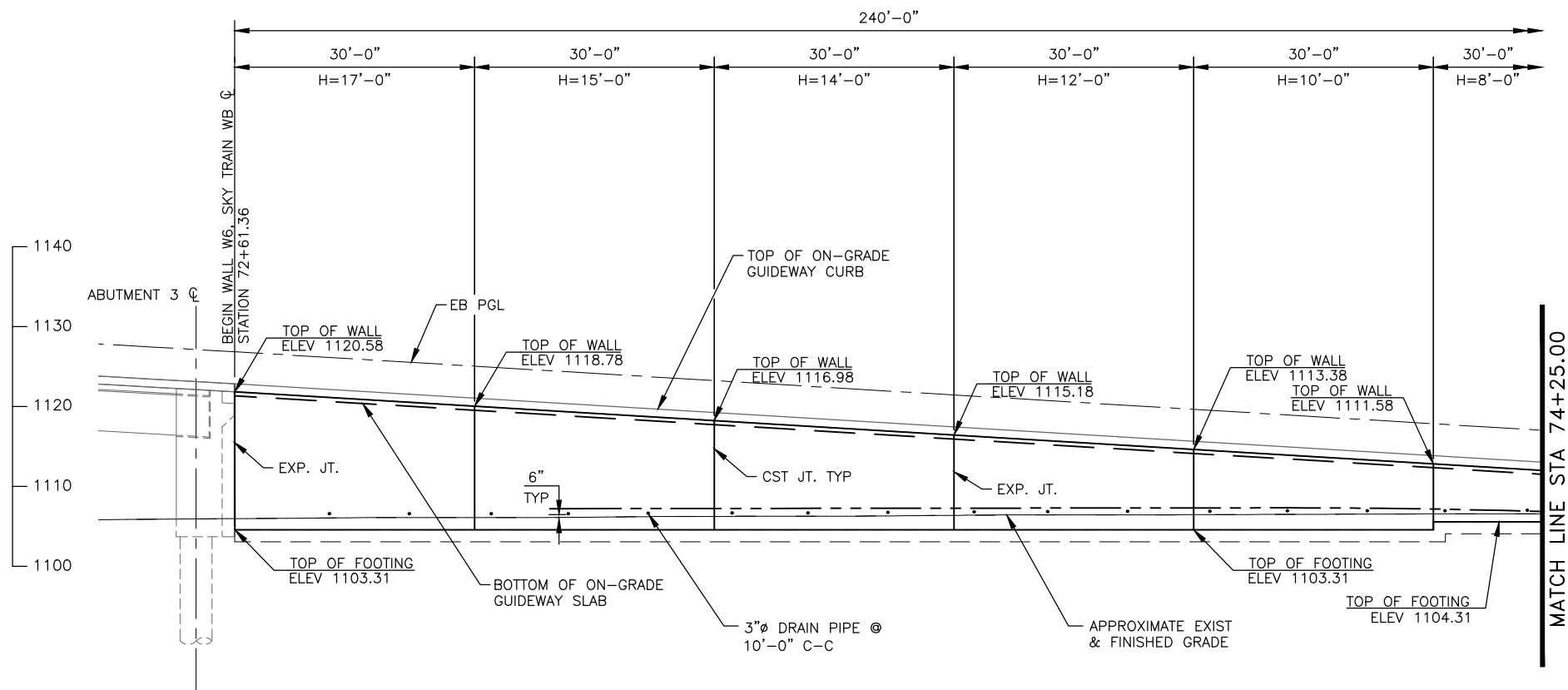
GUIDEWAY
ELEVATED GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W1, W2, W3, W4, W5, W6, W7, W8

Package: Sheet Reference No:
B03-MSSW0729
V1 - 217 of 339

PLOT DATE: Apr 10, 2018 FILE PATH: C:\pwworking\gfpw01\roja\40673541\AV10000011-S-2-MSSW0711.dwg jroja



1 WALL W6 PLAN
SCALE: 1"=10'-0"

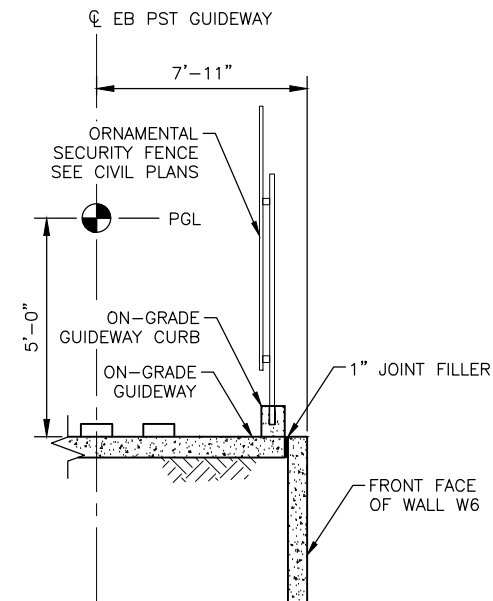


2 WALL W6 ELEVATION
SCALE: 1"=10'-0"

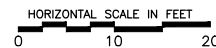
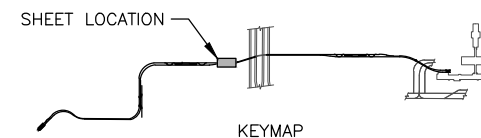
NOTE:
FENCE ALONG ON-GRADE GUIDEWAY
NOT SHOWN FOR CLARITY.

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 MSSW0729.
3. FOR WALL DETAILS AND TYPICAL SECTION SEE SHEET MSSW0729.
4. FOR WALL CROSS-SECTIONS AND DIMENSIONS CORRESPONDING TO "H" SHOWN ON WALL ELEVATION, SEE SHEET MSSW0729.
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 MSSW0729.



3 WALL W6 SECTION
SCALE: NTS



PER CITY OF PHOENIX ORDINANCE G-4396,
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CITY OF PHOENIX.

PHX AVT BYB
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 02/02/2018

Dwg scale: 1"=10'

CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

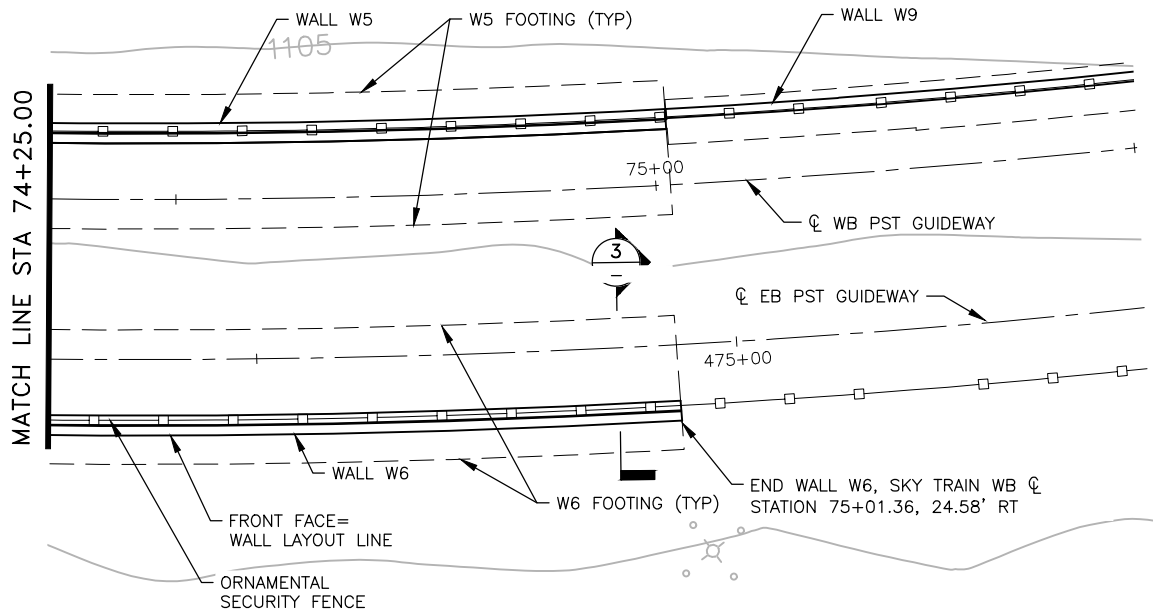
**GUIDEWAY
RETAINING WALL W6
PLAN AND ELEVATION 1
STA 72+61.36 TO STA 74+25.00**

Package: Sheet Reference No:
B03-MSSW0711
V1 - 211 of 339

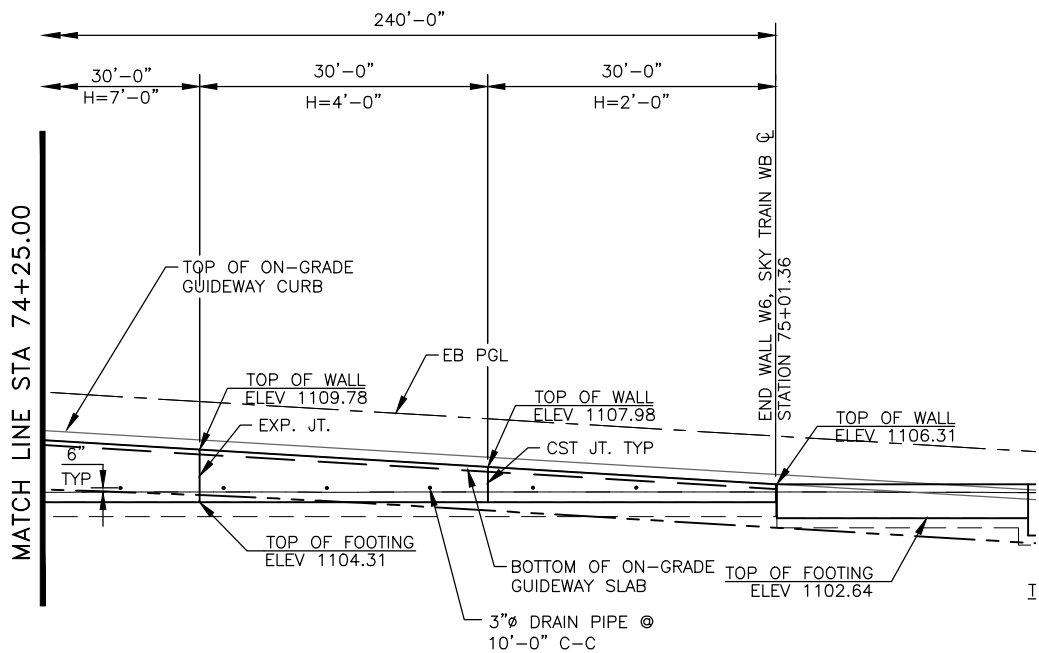
Design Sub-Consultant

Design Consultant

Gannett Fleming



1 WALL W6 PLAN
SCALE: 1"=10'-0"



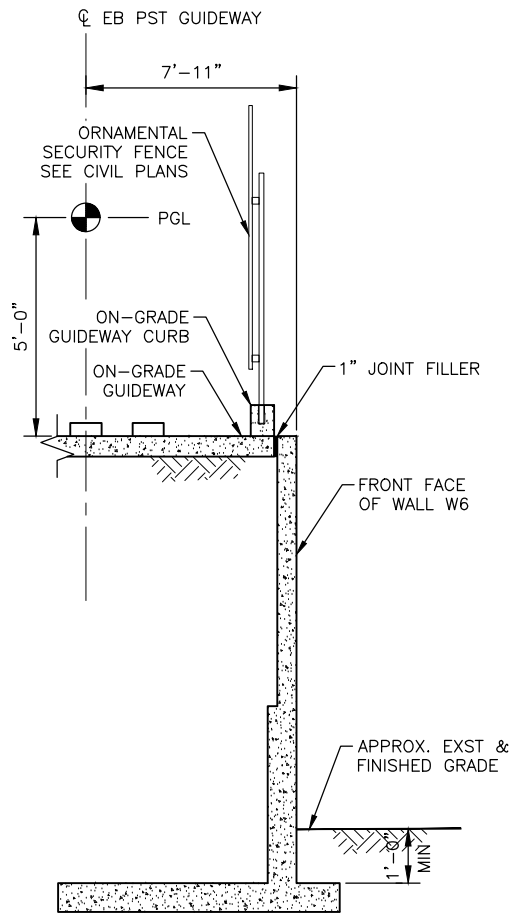
2 WALL W6 ELEVATION
SCALE: 1"=10'-0"

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

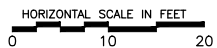
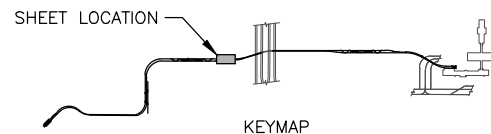


GENERAL NOTES

1. WALL LAYOUT BASED ON CL WB PST GUIDEWAY. WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
2. FOR EXPANSION AND CONSTRUCTION JOINT DETAILS SEE SHEET MSSW0729.
3. FOR WALL DETAILS AND TYPICAL SECTION SEE SHEET MSSW0729.
4. FOR WALL CROSS-SECTIONS AND DIMENSIONS CORRESPONDING TO "H" SHOWN ON WALL ELEVATION, SEE SHEET MSSW0729.
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 MSSW0729.



3 WALL W6 SECTION
SCALE: NTS



Design Sub-Consultant

Design Consultant



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CITY OF PHOENIX.



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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: 1"=10'

CIP No.: AV10000011

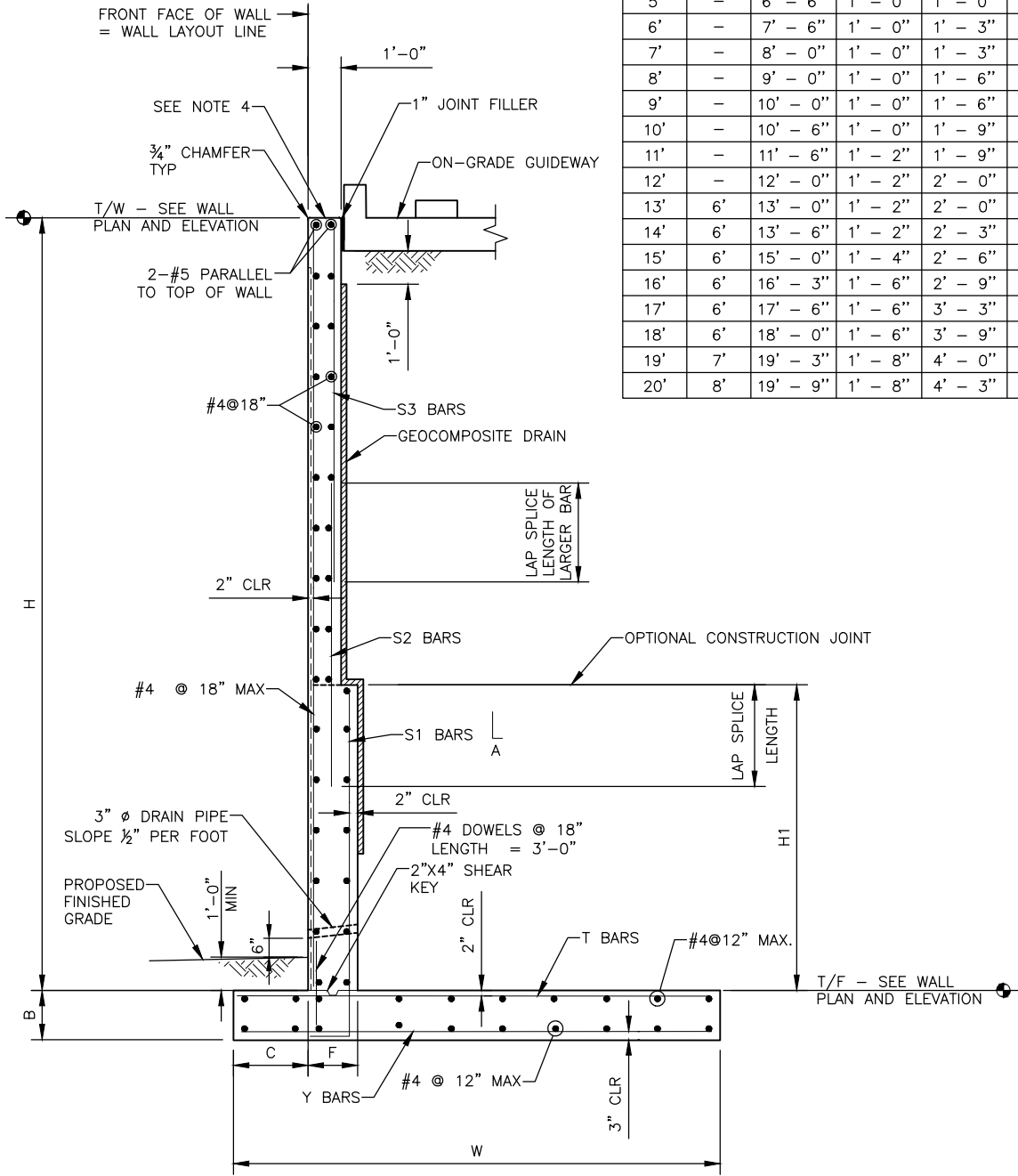
AVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
RETAINING WALL W6
PLAN AND ELEVATION 2
STA 74+25.00 TO STA 75+01.36

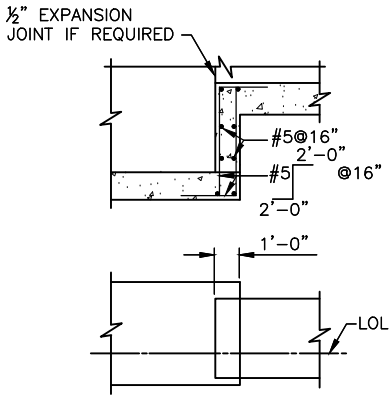
Package: Sheet Reference No:
B03-MSSW0712
V1 - 212 of 339

PLOT DATE: Apr 09, 2018 FILE PATH: C:\pwworking\gfpw01\roja\40673541\AV10000011-S-2-MSSW0729.dwg jrojas

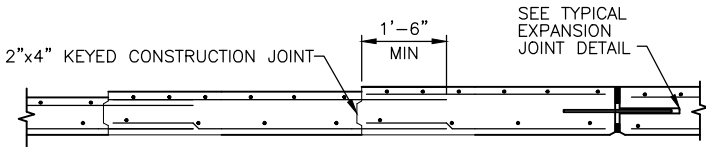


1 WALL TYPICAL SECTION - WALLS W1-W8
SCALE: NTS

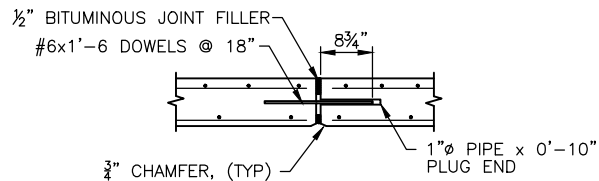
DIMENSIONS						REINFORCING STEEL LIST																	MAX. TOE PRESSURE (PSF)
						S1			S2			S3			Y bar (Toe)			T bar (Heel)					
H (ft)	H1 (ft)	W (ft)	B (in)	C (ft)	F (in)	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH			
3'	—	4' – 6"	1' – 0"	1' – 0"	—	#5	12"	4' – 8"	—	—	—	—	—	—	#5	12"	4' – 0"	#5	12"	4' – 0"	760		
4'	—	5' – 6"	1' – 0"	1' – 0"	—	#5	12"	5' – 8"	—	—	—	—	—	—	#5	12"	5' – 0"	#5	12"	5' – 0"	877		
5'	—	6' – 6"	1' – 0"	1' – 0"	—	#5	12"	6' – 8"	—	—	—	—	—	—	#5	12"	6' – 0"	#5	12"	6' – 0"	1025		
6'	—	7' – 6"	1' – 0"	1' – 3"	—	#5	12"	7' – 8"	—	—	—	—	—	—	#5	12"	7' – 0"	#5	12"	7' – 0"	1105		
7'	—	8' – 0"	1' – 0"	1' – 3"	—	#5	12"	8' – 8"	—	—	—	—	—	—	#5	12"	7' – 6"	#5	12"	7' – 6"	1291		
8'	—	9' – 0"	1' – 0"	1' – 6"	—	#5	9"	9' – 8"	—	—	—	—	—	—	#5	12"	8' – 6"	#5	12"	8' – 6"	1363		
9'	—	10' – 0"	1' – 0"	1' – 6"	—	#5	9"	10' – 8"	—	—	—	—	—	—	#5	12"	9' – 6"	#6	12"	9' – 6"	1518		
10'	—	10' – 6"	1' – 0"	1' – 9"	—	#5	6"	4' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	10' – 0"	#6	12"	10' – 0"	1619		
11'	—	11' – 6"	1' – 2"	1' – 9"	—	#5	6"	5' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 0"	#6	12"	11' – 0"	1828		
12'	—	12' – 0"	1' – 2"	2' – 0"	—	#6	6"	6' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 6"	#7	12"	11' – 6"	1929		
13'	6'	13' – 0"	1' – 2"	2' – 0"	1' – 2"	#6	6"	7' – 8"	#5	12"	9' – 3"	—	—	—	#6	12"	12' – 6"	#7	12"	12' – 6"	2077		
14'	6'	13' – 6"	1' – 2"	2' – 3"	1' – 4"	#6	6"	8' – 0"	#5	9"	9' – 3"	—	—	—	#6	12"	13' – 0"	#7	12"	13' – 0"	2131		
15'	6'	15' – 0"	1' – 4"	2' – 6"	1' – 4"	#7	6"	8' – 0"	#5	9"	10' – 3"	—	—	—	#6	12"	14' – 6"	#7	12"	14' – 6"	2245		
16'	6'	16' – 3"	1' – 6"	2' – 9"	1' – 6"	#7	6"	8' – 0"	#6	9"	11' – 3"	#5	12"	SEE NOTE 3	#6	12"	15' – 9"	#8	12"	15' – 9"	2336		
17'	6'	17' – 6"	1' – 6"	3' – 3"	1' – 6"	#8	6"	8' – 3"	#6	6"	12' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 0"	#8	12"	17' – 0"	2294		
18'	6'	18' – 0"	1' – 6"	3' – 9"	1' – 6"	#8	6"	8' – 3"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 6"	#8	12"	17' – 6"	2297		
19'	7'	19' – 3"	1' – 8"	4' – 0"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	18' – 9"	#8	12"	18' – 9"	2396		
20'	8'	19' – 9"	1' – 8"	4' – 3"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	19' – 6"	#9	12"	19' – 6"	2487		



2 FOOTING STEP
SCALE: NTS



3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS



4 TYPICAL EXPANSION JOINT DETAIL
SCALE: NTS

LAP SPLICE AND HOOK LENGTH TABLE

BAR SIZE	LAP SPLICE LENGTH	A
#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"

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.
- FOR DETAILS OF FENCE ON WALLS W5 & W7, SEE CIVIL PLANS.



Design Sub-Consultant

Design Consultant



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PHX AVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale:

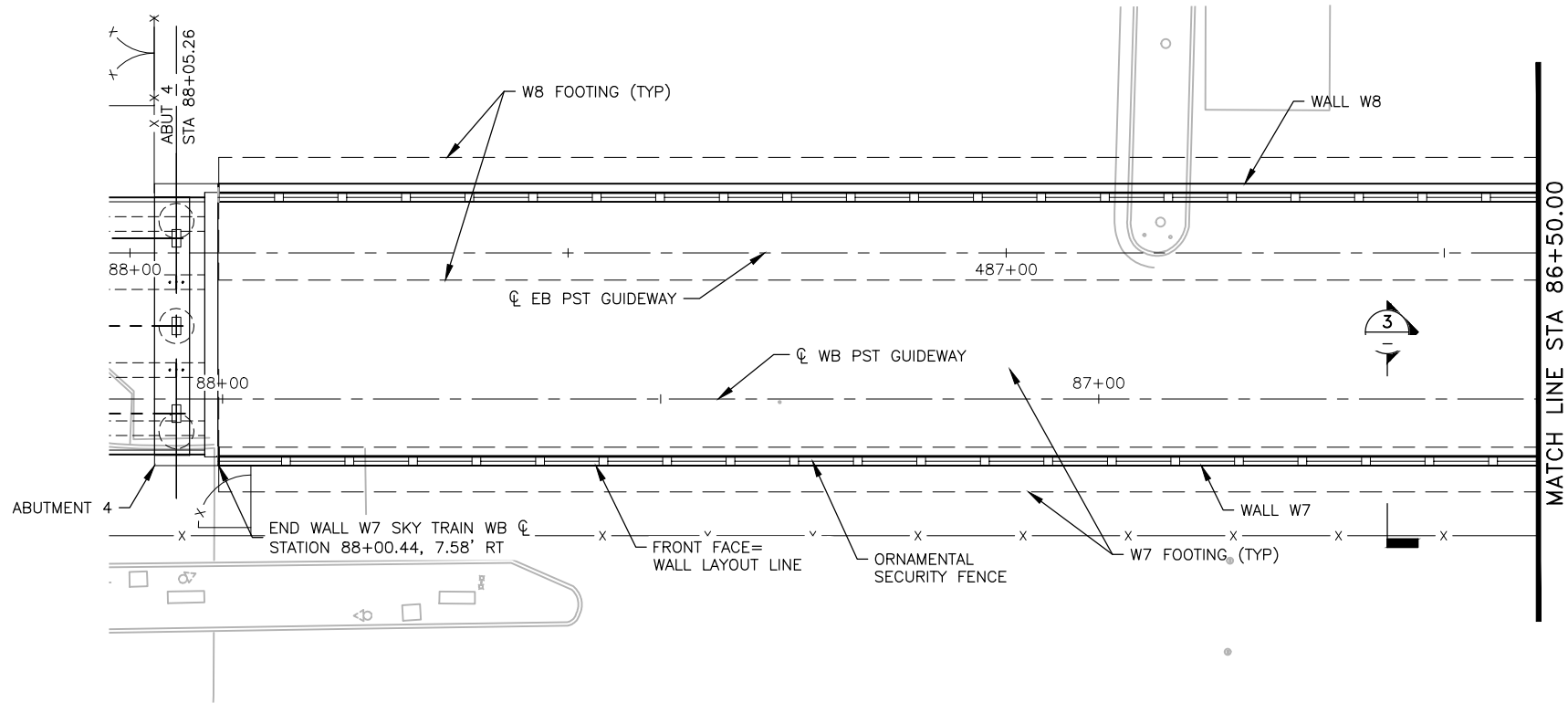
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KVA No.: 07-5204

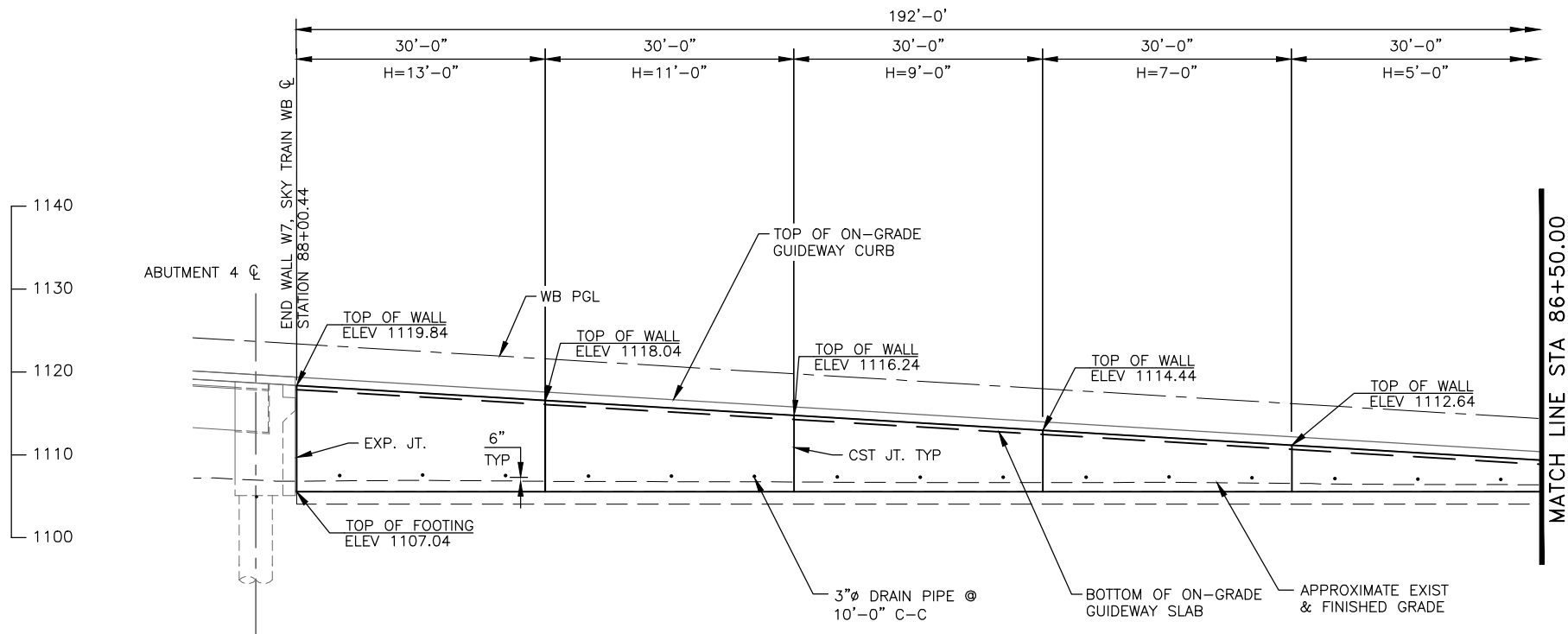
STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
ELEVATED GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W1, W2, W3, W4, W5, W6, W7, W8

Package: Sheet Reference No:
B03-MSSW0729
V1 - 217 of 339



1 WALL W7 PLAN
SCALE: 1"=10'-0"

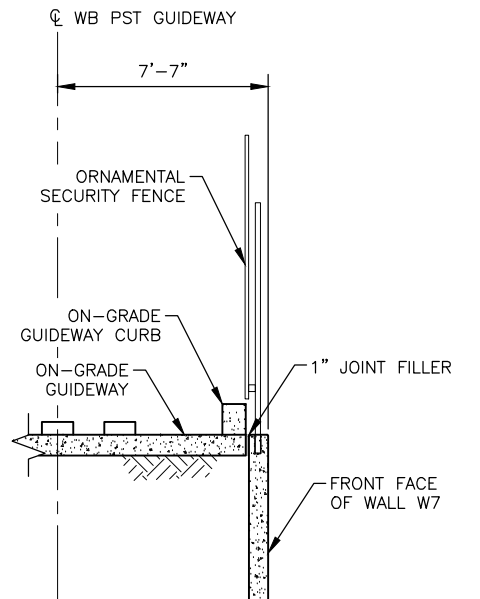


2 WALL W7 ELEVATION
SCALE: 1"=10'-0"

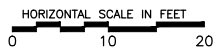
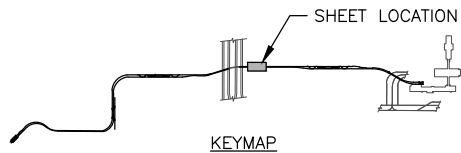
NOTE:
FENCE ALONG ON-GRADE GUIDEWAY
NOT SHOWN FOR CLARITY.

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 MSSW0729.
3. FOR WALL DETAILS AND TYPICAL SECTION SEE SHEET MSSW0729.
4. FOR WALL CROSS-SECTIONS AND DIMENSIONS CORRESPONDING TO "H" SHOWN ON WALL ELEVATION, SEE SHEET MSSW0729.
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 MSSW0729.



3 WALL W7 SECTION
SCALE: NTS



Design Sub-Consultant

Design Consultant



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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: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale: 1"=10'

CIP No.: AV10000011

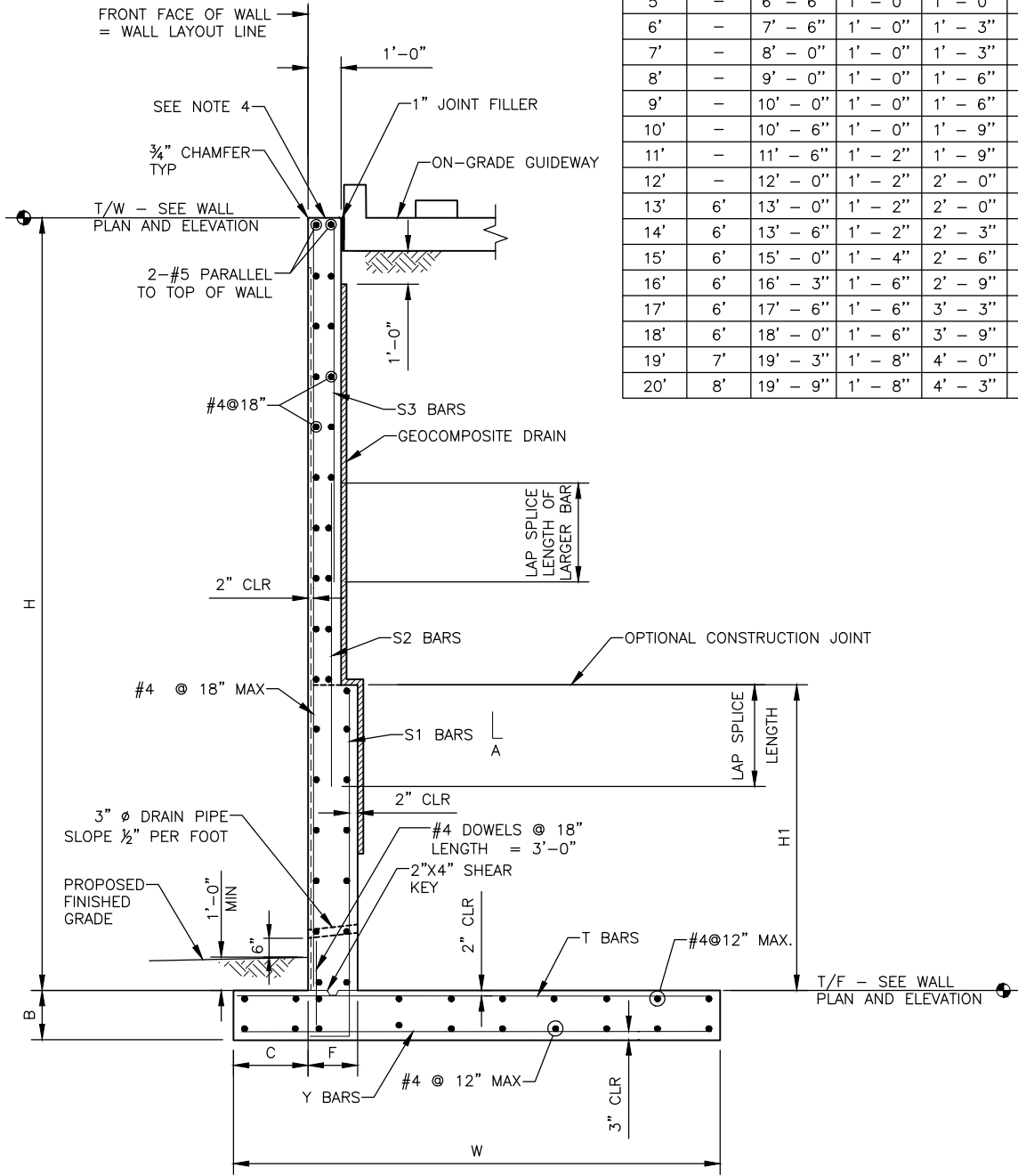
KVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
RETAINING WALL W7
PLAN AND ELEVATION 1
STA 88+00.44 TO STA 86+50.00**

Package: Sheet Reference No:
B03-MSSW0713
V1 - 213 of 339

PLOT DATE: Apr 09, 2018 FILE PATH: C:\pwworking\gfpw01\roja\40673541\AV10000011-S-2-MSSW0729.dwg jrojas



1 WALL TYPICAL SECTION - WALLS W1-W8
SCALE: NTS

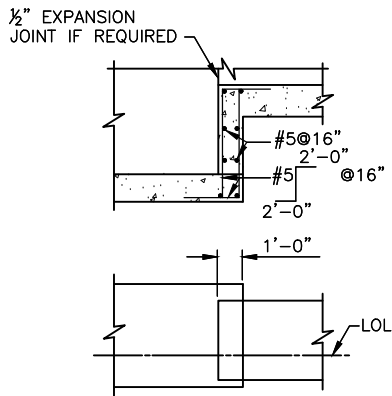
DIMENSIONS						REINFORCING STEEL LIST																
						S1			S2			S3			Y bar (Toe)			T bar (Heel)				
H (ft)	H1 (ft)	W (ft)	B (in)	C (ft)	F (in)	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	MAX. TOE PRESSURE (PSF)	
3'	—	4' – 6"	1' – 0"	1' – 0"	—	#5	12"	4' – 8"	—	—	—	—	—	—	#5	12"	4' – 0"	#5	12"	4' – 0"	760	
4'	—	5' – 6"	1' – 0"	1' – 0"	—	#5	12"	5' – 8"	—	—	—	—	—	—	#5	12"	5' – 0"	#5	12"	5' – 0"	877	
5'	—	6' – 6"	1' – 0"	1' – 0"	—	#5	12"	6' – 8"	—	—	—	—	—	—	#5	12"	6' – 0"	#5	12"	6' – 0"	1025	
6'	—	7' – 6"	1' – 0"	1' – 3"	—	#5	12"	7' – 8"	—	—	—	—	—	—	#5	12"	7' – 0"	#5	12"	7' – 0"	1105	
7'	—	8' – 0"	1' – 0"	1' – 3"	—	#5	12"	8' – 8"	—	—	—	—	—	—	#5	12"	7' – 6"	#5	12"	7' – 6"	1291	
8'	—	9' – 0"	1' – 0"	1' – 6"	—	#5	9"	9' – 8"	—	—	—	—	—	—	#5	12"	8' – 6"	#5	12"	8' – 6"	1363	
9'	—	10' – 0"	1' – 0"	1' – 6"	—	#5	9"	10' – 8"	—	—	—	—	—	—	#5	12"	9' – 6"	#6	12"	9' – 6"	1518	
10'	—	10' – 6"	1' – 0"	1' – 9"	—	#5	6"	4' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	10' – 0"	#6	12"	10' – 0"	1619	
11'	—	11' – 6"	1' – 2"	1' – 9"	—	#5	6"	5' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 0"	#6	12"	11' – 0"	1828	
12'	—	12' – 0"	1' – 2"	2' – 0"	—	#6	6"	6' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 6"	#7	12"	11' – 6"	1929	
13'	6'	13' – 0"	1' – 2"	2' – 0"	1' – 2"	#6	6"	7' – 8"	#5	12"	9' – 3"	—	—	—	#6	12"	12' – 6"	#7	12"	12' – 6"	2077	
14'	6'	13' – 6"	1' – 2"	2' – 3"	1' – 4"	#6	6"	8' – 0"	#5	9"	9' – 3"	—	—	—	#6	12"	13' – 0"	#7	12"	13' – 0"	2131	
15'	6'	15' – 0"	1' – 4"	2' – 6"	1' – 4"	#7	6"	8' – 0"	#5	9"	10' – 3"	—	—	—	#6	12"	14' – 6"	#7	12"	14' – 6"	2245	
16'	6'	16' – 3"	1' – 6"	2' – 9"	1' – 6"	#7	6"	8' – 0"	#6	9"	11' – 3"	#5	12"	SEE NOTE 3	#6	12"	15' – 9"	#8	12"	15' – 9"	2336	
17'	6'	17' – 6"	1' – 6"	3' – 3"	1' – 6"	#8	6"	8' – 3"	#6	6"	12' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 0"	#8	12"	17' – 0"	2294	
18'	6'	18' – 0"	1' – 6"	3' – 9"	1' – 6"	#8	6"	8' – 3"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 6"	#8	12"	17' – 6"	2297	
19'	7'	19' – 3"	1' – 8"	4' – 0"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	18' – 9"	#8	12"	18' – 9"	2396	
20'	8'	19' – 9"	1' – 8"	4' – 3"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	19' – 6"	#9	12"	19' – 6"	2487	

LAP SPLICE AND HOOK LENGTH TABLE

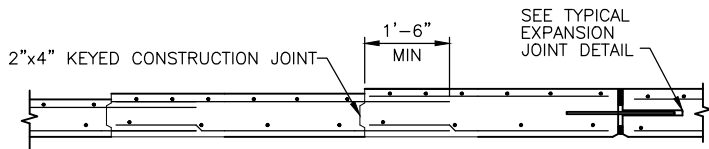
BAR SIZE	LAP SPLICE LENGTH	A
#5	2'-2"	0'-8"
#6	2'-7"	0'-9"
#7	3'-3"	0'-11"
#8	4'-3"	1'-0"
#9	5'-5"	1'-2"

NOTES:

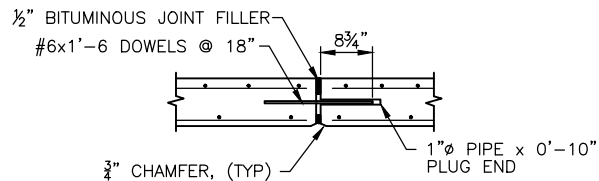
- S1 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL.
- S2 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S1 BAR.
- S3 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL AND PROVIDE REQUIRED LAP LENGTH WITH S2 BAR.
- FOR DETAILS OF FENCE ON WALLS W5 & W7, SEE CIVIL PLANS.



2 FOOTING STEP
SCALE: NTS



3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS



4 TYPICAL EXPANSION JOINT DETAIL
SCALE: NTS



Design Sub-Consultant

Design Consultant



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EXCEPT AS REQUIRED TO FULFILL THE
OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

PHX AVT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale:

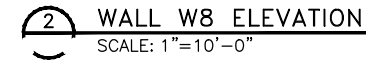
CIP No.: AV10000011

KVA No.: 07-5204

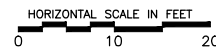
STAGE 2 - B03 DESIGN SUBMISSION

GUIDEWAY
ELEVATED GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W1, W2, W3, W4, W5, W6, W7, W8

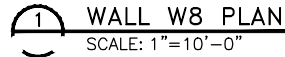
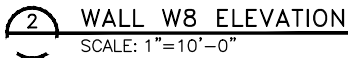
Package: Sheet Reference No:
B03-MSSW0729
V1 - 217 of 339



3 WALL W8 SECTION
SCALE: NTS



STAGE 2 — B03 DESIGN SUBMISSION	
GUIDEWAY RETAINING WALL W8 PLAN AND ELEVATION 1 STA 88+00.46 TO STA 86+50.00	
Package:	Sheet Reference No:
B03-MSSW0715	
V1 - 215 of 339	



Package: Sheet Reference No:
B03 - MSSW0716
V1 - 216 of 339

STAGE 2 — B03 DESIGN SUBMISSION

Designed by: SWS
Drawn by: JRR
Checked by: SWS
Date: 04/13/2018
Dwg scale: 1"=10'
CIP No.: AV100000111
AVA No.: 07-5204

PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

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NO	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
	REVISIONS / SUBMISSIONS	DATE

Design Sub-Consultant

Design Consultant



Gannett Fleming

STAGE 2 – B03 DESIGN SUBMISSION

Package:	Sheet Reference No:
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B03- MSSW0716
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GUIDEWAY
RETAINING WALL W8
PLAN AND ELEVATION 2
STA 86+08.46 TO STA 86+50.00

STA 86+08.46 TO STA 86+50.00

CIP No.: AV10000011

PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

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	REVISIONS / SUBMISSIONS	DATE

Design Sub-Consultant

Design Consultant



Gannett Fleming

STAGE 2 – B03 DESIGN SUBMISSION

Package:	Sheet Reference No:
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B03- MSSW0716
V1 - 216 of 339

GUIDEWAY
RETAINING WALL W8
PLAN AND ELEVATION 2
STA 86+08.46 TO STA 86+50.00

STA 86+08.46 TO STA 86+50.00

CIP No.: AV10000011

PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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NO	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
	REVISIONS / SUBMISSIONS	DATE

Design Sub-Consultant

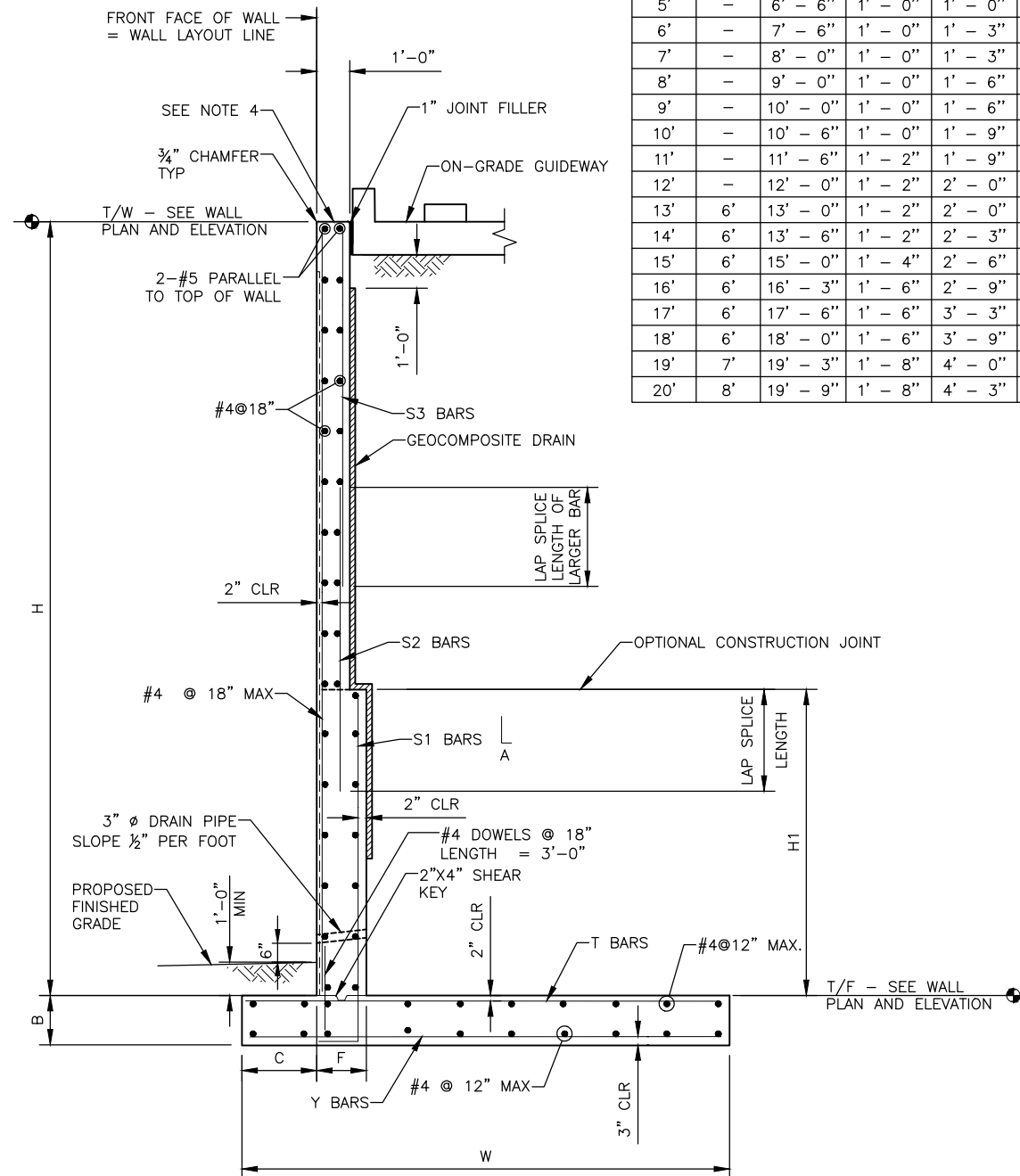
Design Consultant



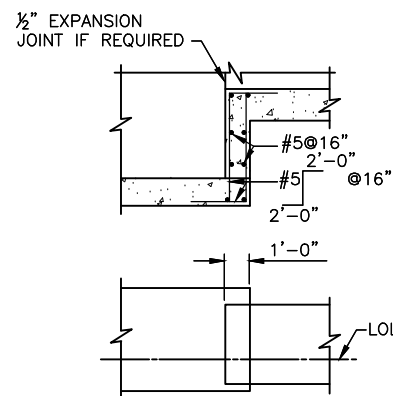
Gannett Fleming

RETAINING WALL DIMENSIONS AND REINFORCING

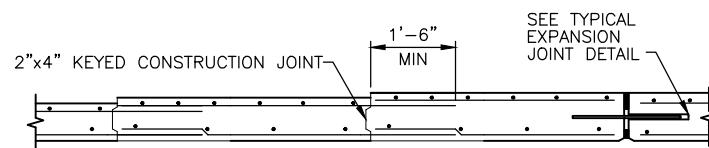
DIMENSIONS						REINFORCING STEEL LIST															
H (ft)	H1 (ft)	W (ft)	B (in)	C (ft)	F (in)	S1			S2			S3			Y bar (Toe)			T bar (Heel)			MAX. TOE PRESSURE (PSF)
						BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	
3'	—	4' – 6"	1' – 0"	1' – 0"	—	#5	12"	4' – 8"	—	—	—	—	—	—	#5	12"	4' – 0"	#5	12"	4' – 0"	760
4'	—	5' – 6"	1' – 0"	1' – 0"	—	#5	12"	5' – 8"	—	—	—	—	—	—	#5	12"	5' – 0"	#5	12"	5' – 0"	877
5'	—	6' – 6"	1' – 0"	1' – 0"	—	#5	12"	6' – 8"	—	—	—	—	—	—	#5	12"	6' – 0"	#5	12"	6' – 0"	1025
6'	—	7' – 6"	1' – 0"	1' – 3"	—	#5	12"	7' – 8"	—	—	—	—	—	—	#5	12"	7' – 0"	#5	12"	7' – 0"	1105
7'	—	8' – 0"	1' – 0"	1' – 3"	—	#5	12"	8' – 8"	—	—	—	—	—	—	#5	12"	7' – 6"	#5	12"	7' – 6"	1291
8'	—	9' – 0"	1' – 0"	1' – 6"	—	#5	9"	9' – 8"	—	—	—	—	—	—	#5	12"	8' – 6"	#5	12"	8' – 6"	1363
9'	—	10' – 0"	1' – 0"	1' – 6"	—	#5	9"	10' – 8"	—	—	—	—	—	—	#5	12"	9' – 6"	#6	12"	9' – 6"	1518
10'	—	10' – 6"	1' – 0"	1' – 9"	—	#5	6"	4' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	10' – 0"	#6	12"	10' – 0"	1619
11'	—	11' – 6"	1' – 2"	1' – 9"	—	#5	6"	5' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 0"	#6	12"	11' – 0"	1828
12'	—	12' – 0"	1' – 2"	2' – 0"	—	#6	6"	6' – 8"	#5	12"	9' – 3"	—	—	—	#5	12"	11' – 6"	#7	12"	11' – 6"	1929
13'	6'	13' – 0"	1' – 2"	2' – 0"	1' – 2"	#6	6"	7' – 8"	#5	12"	9' – 3"	—	—	—	#6	12"	12' – 6"	#7	12"	12' – 6"	2077
14'	6'	13' – 6"	1' – 2"	2' – 3"	1' – 4"	#6	6"	8' – 0"	#5	9"	9' – 3"	—	—	—	#6	12"	13' – 0"	#7	12"	13' – 0"	2131
15'	6'	15' – 0"	1' – 4"	2' – 6"	1' – 4"	#7	6"	8' – 0"	#5	9"	10' – 3"	—	—	—	#6	12"	14' – 6"	#7	12"	14' – 6"	2245
16'	6'	16' – 3"	1' – 6"	2' – 9"	1' – 6"	#7	6"	8' – 0"	#6	9"	11' – 3"	#5	12"	SEE NOTE 3	#6	12"	15' – 9"	#8	12"	15' – 9"	2336
17'	6'	17' – 6"	1' – 6"	3' – 3"	1' – 6"	#8	6"	8' – 3"	#6	6"	12' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 0"	#8	12"	17' – 0"	2294
18'	6'	18' – 0"	1' – 6"	3' – 9"	1' – 6"	#8	6"	8' – 3"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#6	12"	17' – 6"	#8	12"	17' – 6"	2297
19'	7'	19' – 3"	1' – 8"	4' – 0"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	18' – 9"	#8	12"	18' – 9"	2396
20'	8'	19' – 9"	1' – 8"	4' – 3"	1' – 8"	#9	6"	10' – 9"	#6	6"	13' – 3"	#5	12"	SEE NOTE 3	#7	12"	19' – 6"	#9	12"	19' – 6"	2487



1 WALL TYPICAL SECTION - WALLS W1-W8
SCALE: NTS



2 FOOTING STEP
SCALE: NTS



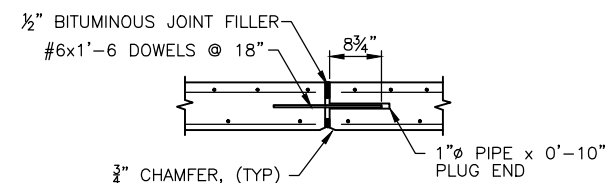
3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS

LAP SPLICE AND HOOK LENGTH TABLE

BAR SIZE	LAP SPLICE LENGTH	A
#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"

NOTES:

1. S1 BAR LENGTH SHALL BE AS REQUIRED TO PLACE BAR TO FINISHED GRADE ON FILL FACE OF WALL.
2. 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.
3. 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. FOR DETAILS OF FENCE ON WALLS W5 & W7, SEE CIVIL PLANS.



4 TYPICAL EXPANSION JOINT DETAIL
SCALE: NTS



Design Sub-Consultant

Design Consultant



Gannett Fleming

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[illegible]

PHX DVT EVER
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: SWS

Drawn by: JRR

Checked by: SWS

Date: 04/13/2018

Dwg scale:

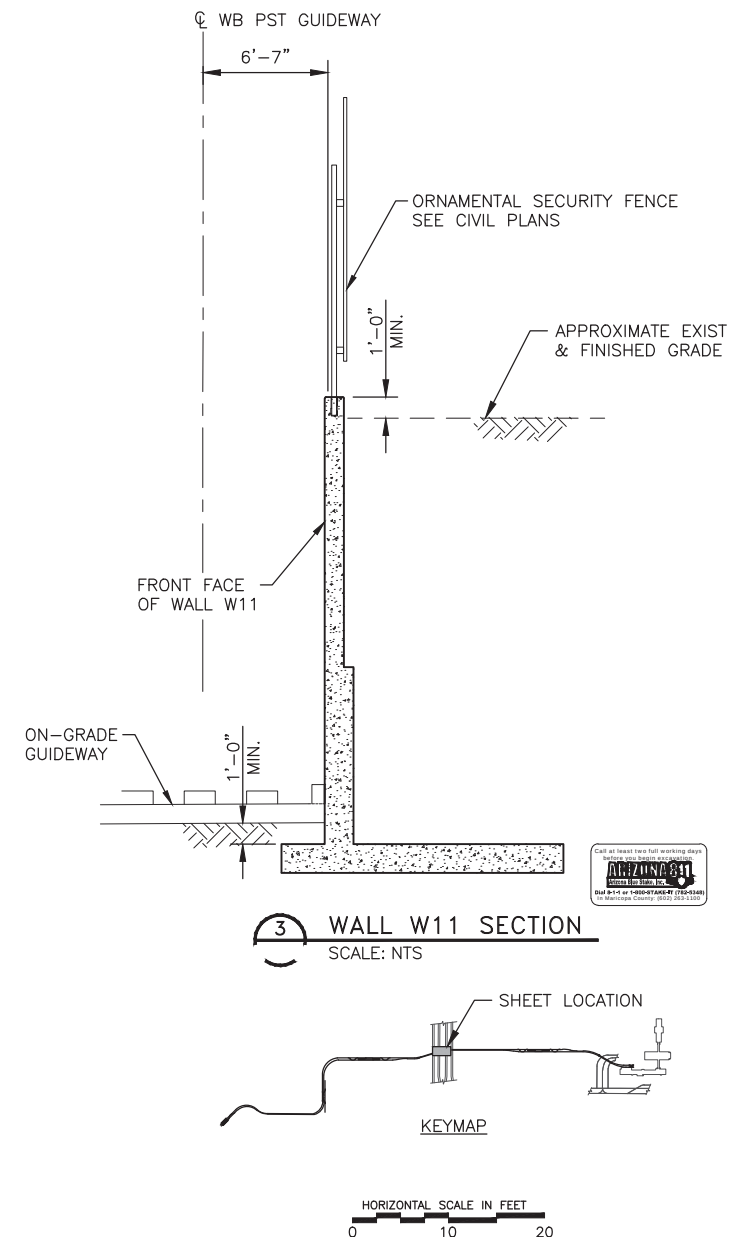
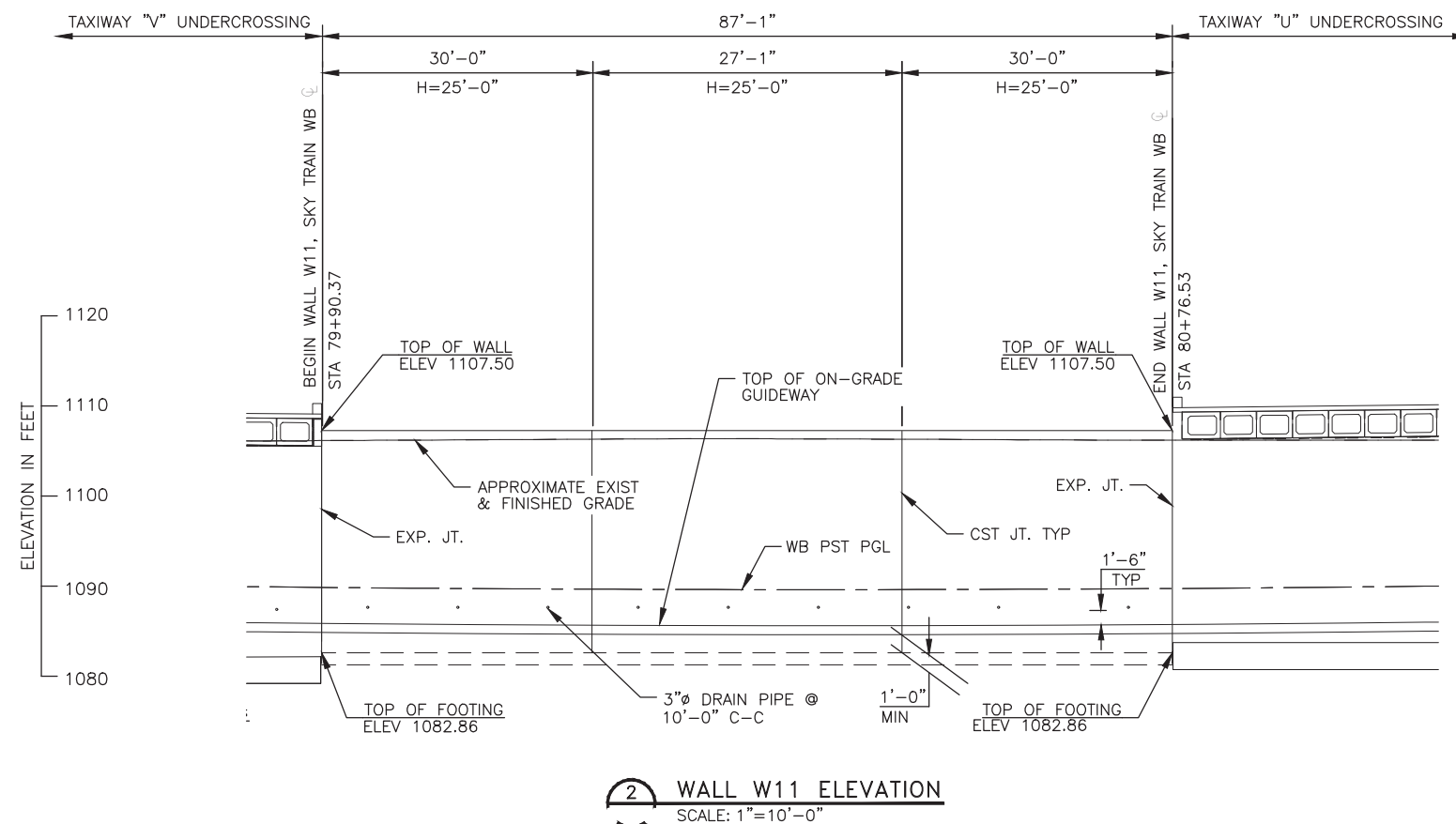
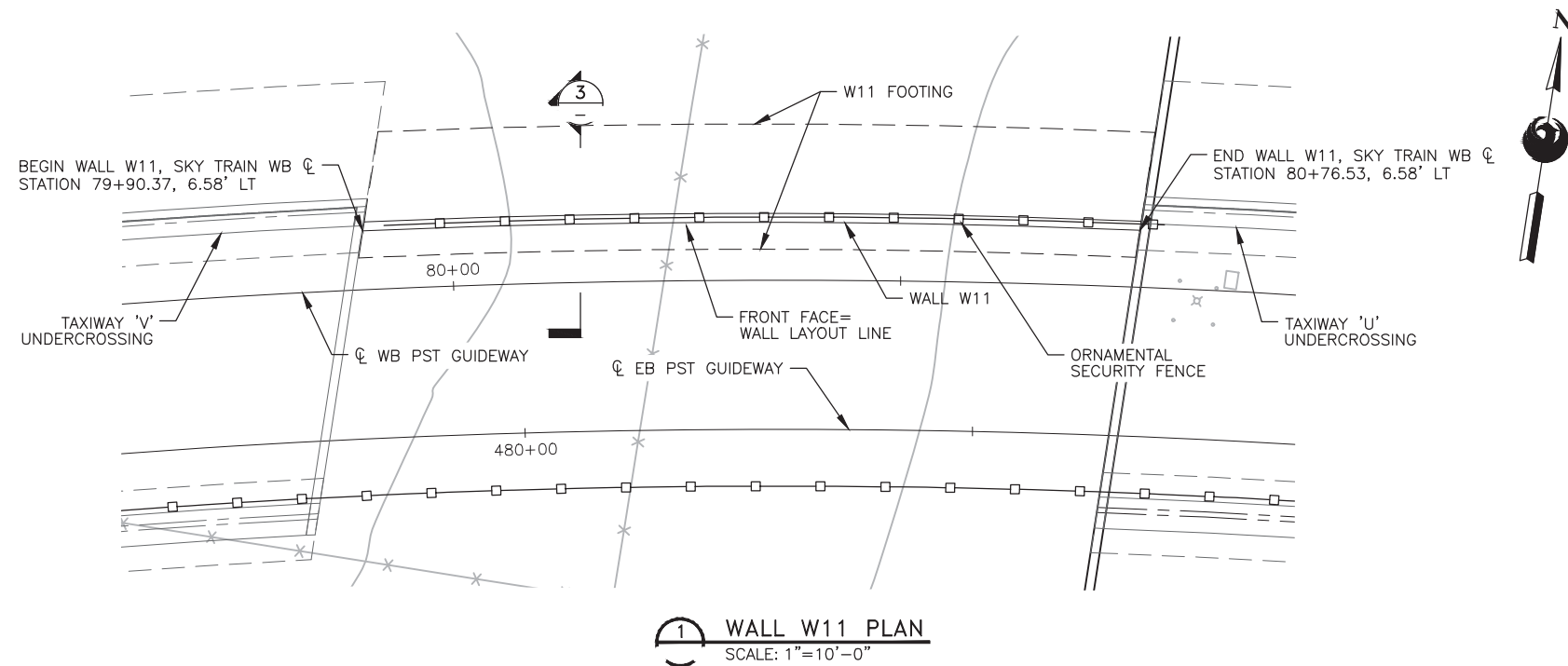
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KIVA No.: 07-5204

STAGE 2 – B03 DESIGN SUBMISSION

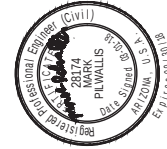
**GUIDEWAY
ELEVATED GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W1, W2, W3, W4, W5, W6, W7, W8**

Package: Sheet Reference No:
B03 - MSSW0729
V1 - 217 of 339



GENERAL NOTES

1. WALL LAYOUT BASED ON C 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.



Design Sub-Consultant

Design Consultant



Gannett Fleming
Design Consultants

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[illegible]

PHX DOT BYR
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

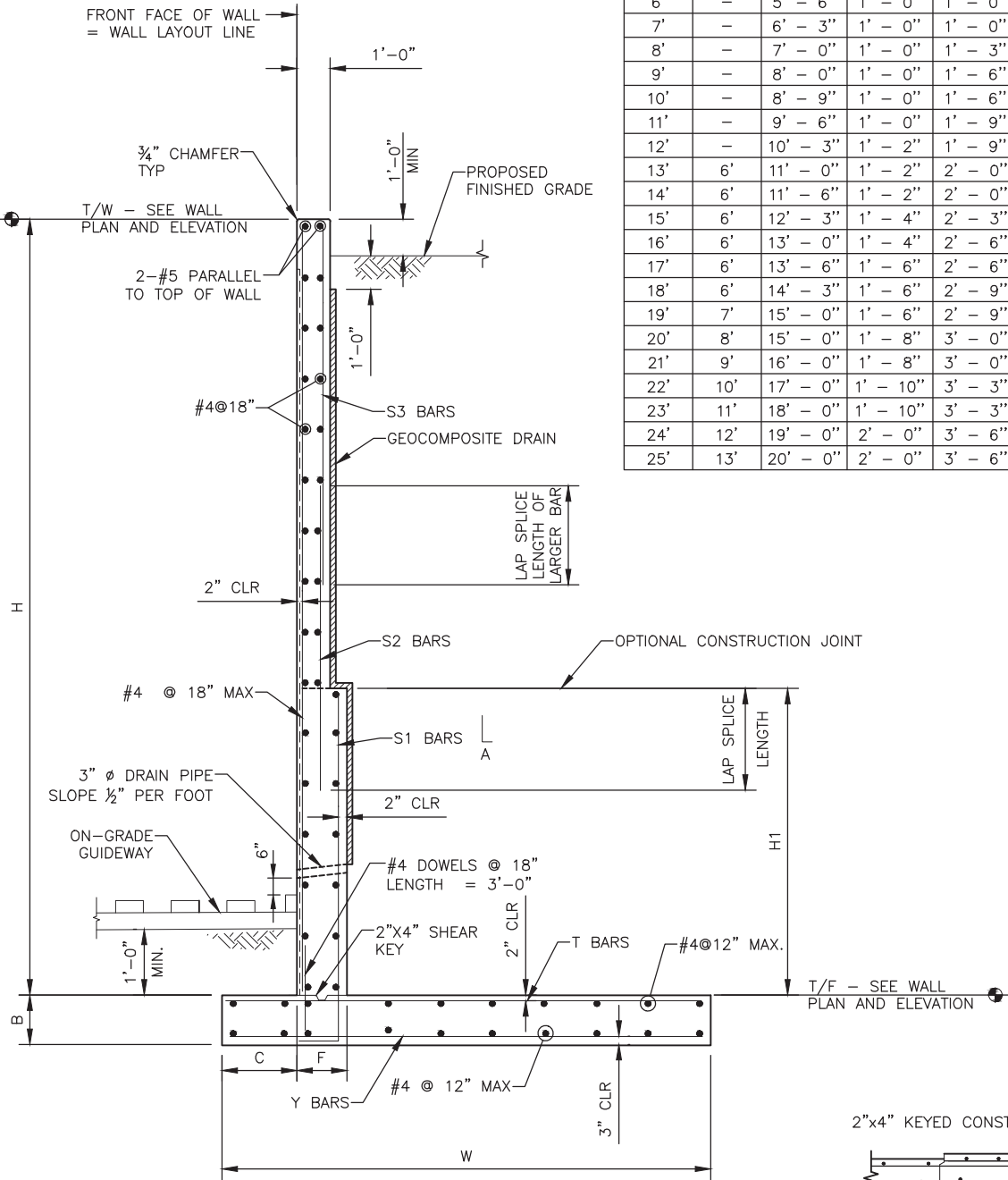
**GUIDEWAY
RETAINING WALL W11
PLAN AND ELEVATION
STA 79+90.37 TO STA 80+76.53**

Package: Sheet Reference No:
B02 - MSSW0719
V1 - 080 of 083

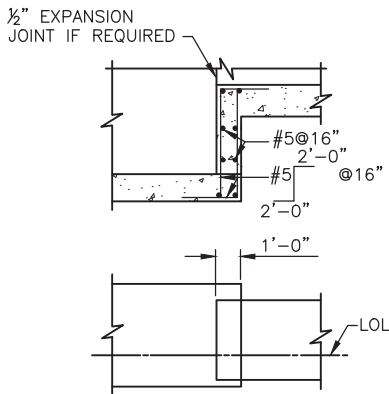
PLOT DATE: Feb 28, 2018 FILE PATH: C:\pwworking\gfpw01\rojas\40673541\AV10000011-S-2-MSSW0728.dwg jrojas

RETAINING WALL DIMENSIONS AND REINFORCING

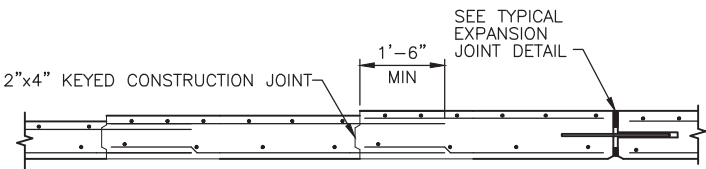
DIMENSIONS						REINFORCING STEEL LIST																
H (ft)	H1 (ft)	W (ft)	B (ft)	C (ft)	F (in)	S1			S2			S3			Y			T			MAX. TOE PRESSURE (PSF)	
						BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH		
5'	—	4' — 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 FOOTING STEP
SCALE: NTS



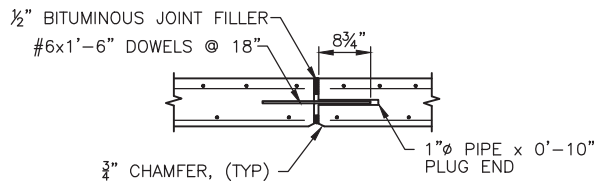
3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS

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



Design Sub-Consultant

Design Consultant



PER CITY OF PHOENIX ORDINANCE G-4396,
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OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

PHX W11 W9
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

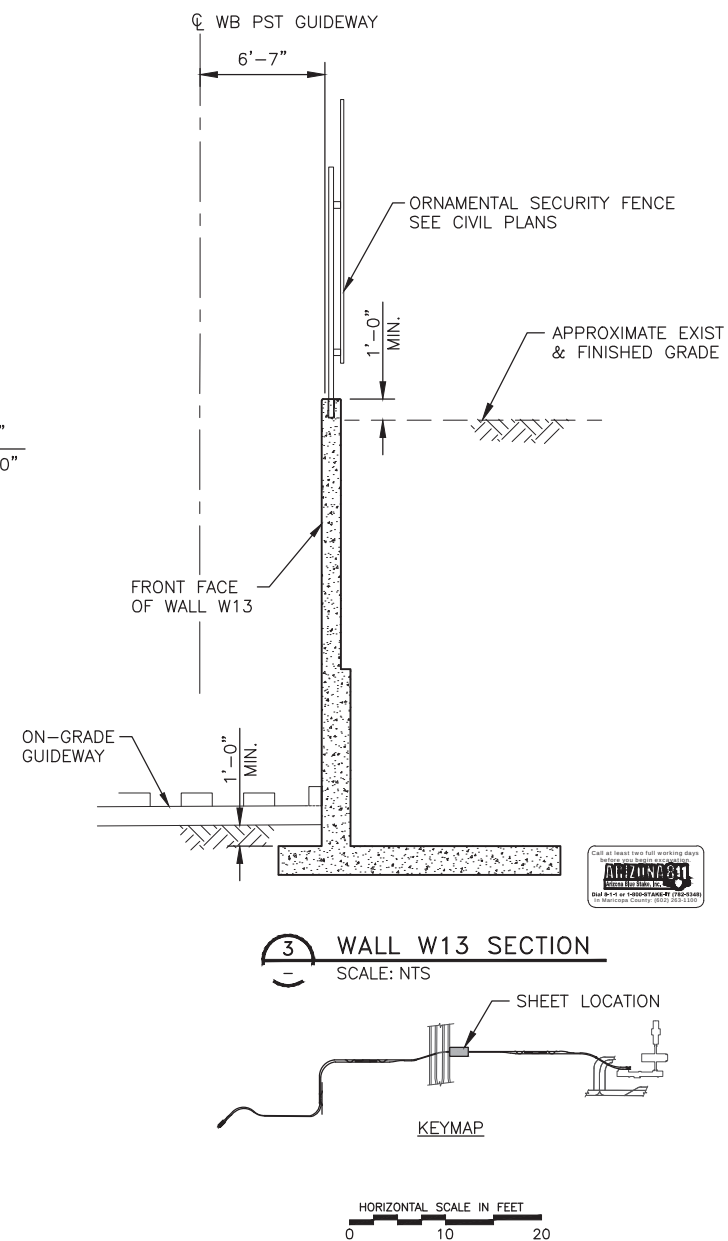
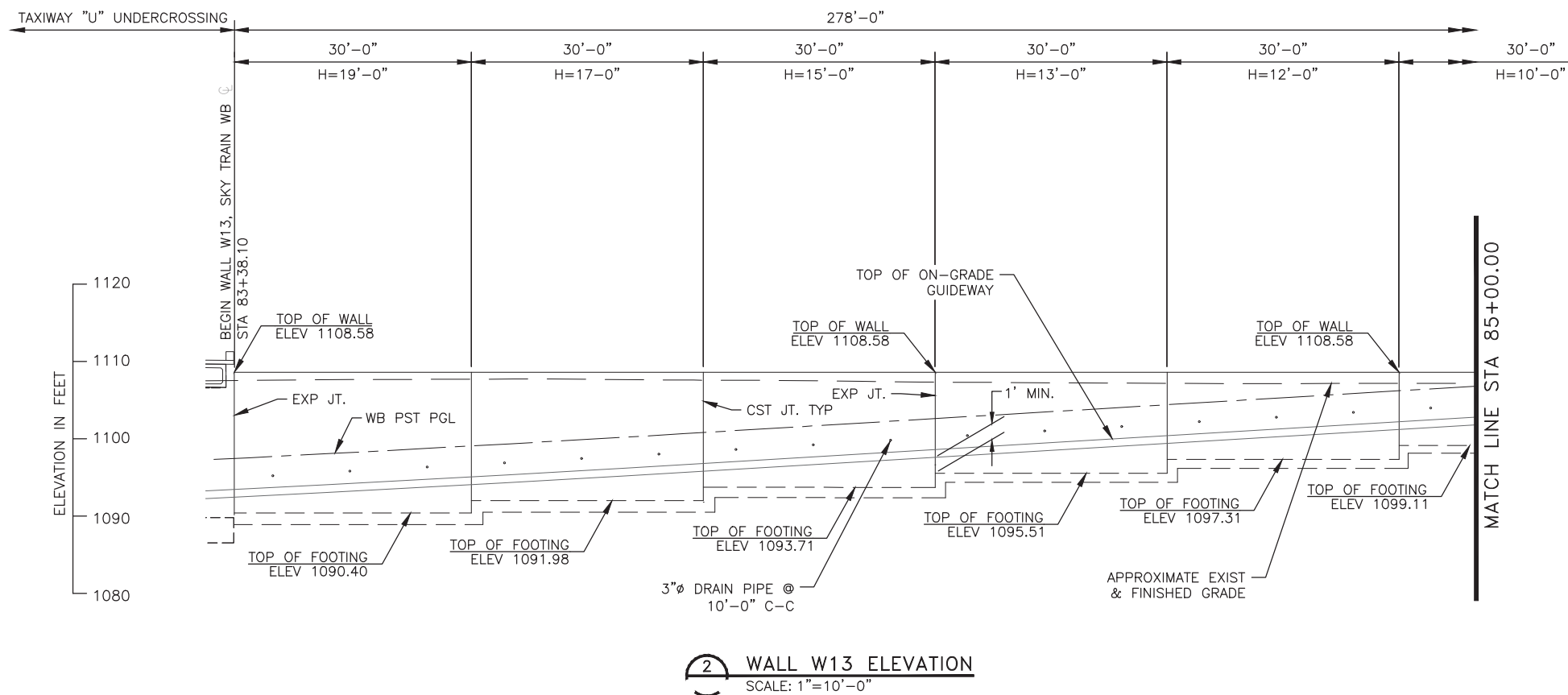
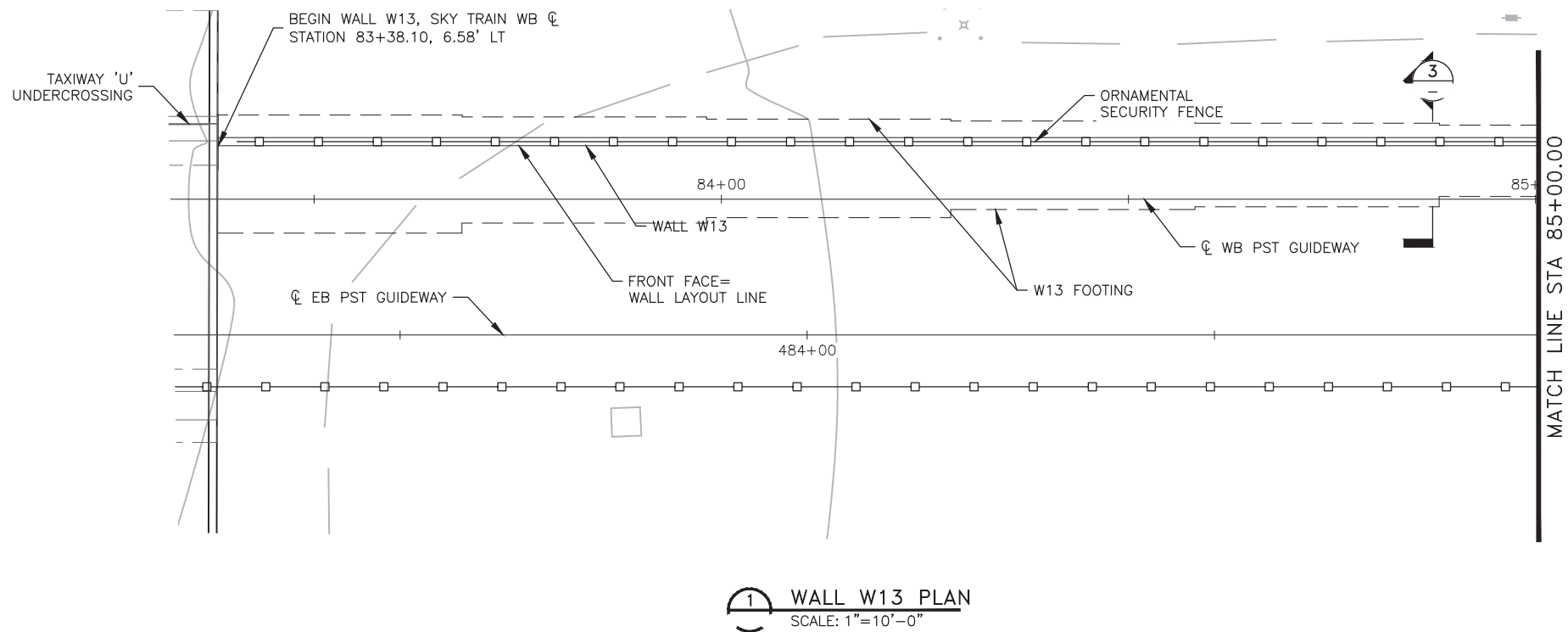
CIP No.: AV10000011

KVA No.: 07-5204

STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W9, W11 & W13

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



- ### GENERAL NOTES

1. WALL LAYOUT BASED ON C 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.



PER CITY OF PHOENIX ORDINANCE G-4396,
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OBLIGATIONS OF YOUR CONTRACT WITH THE
CITY OF PHOENIX.

Design Sub-Consultant

Design Consultant



Gannett Fleming
Design Consultant

PIA DVT BYR
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

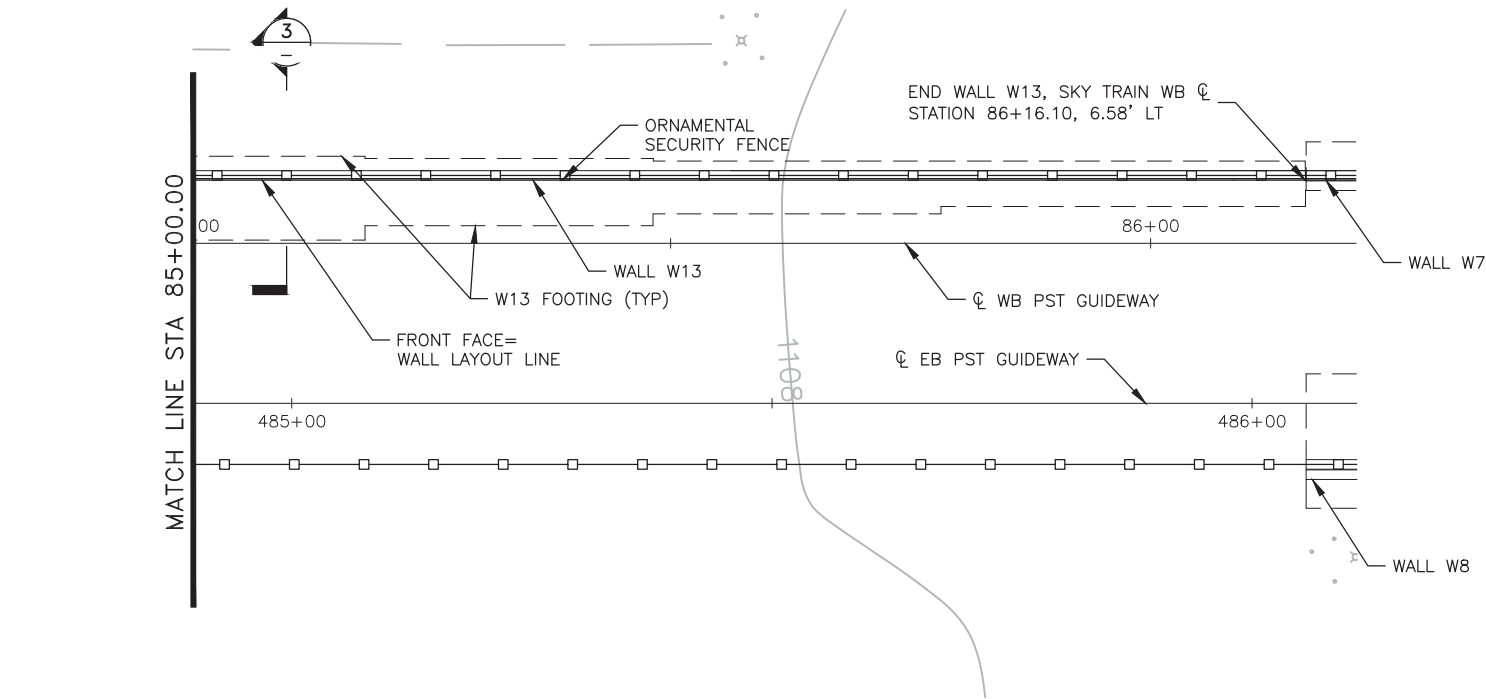
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CIP No.: AV10000011

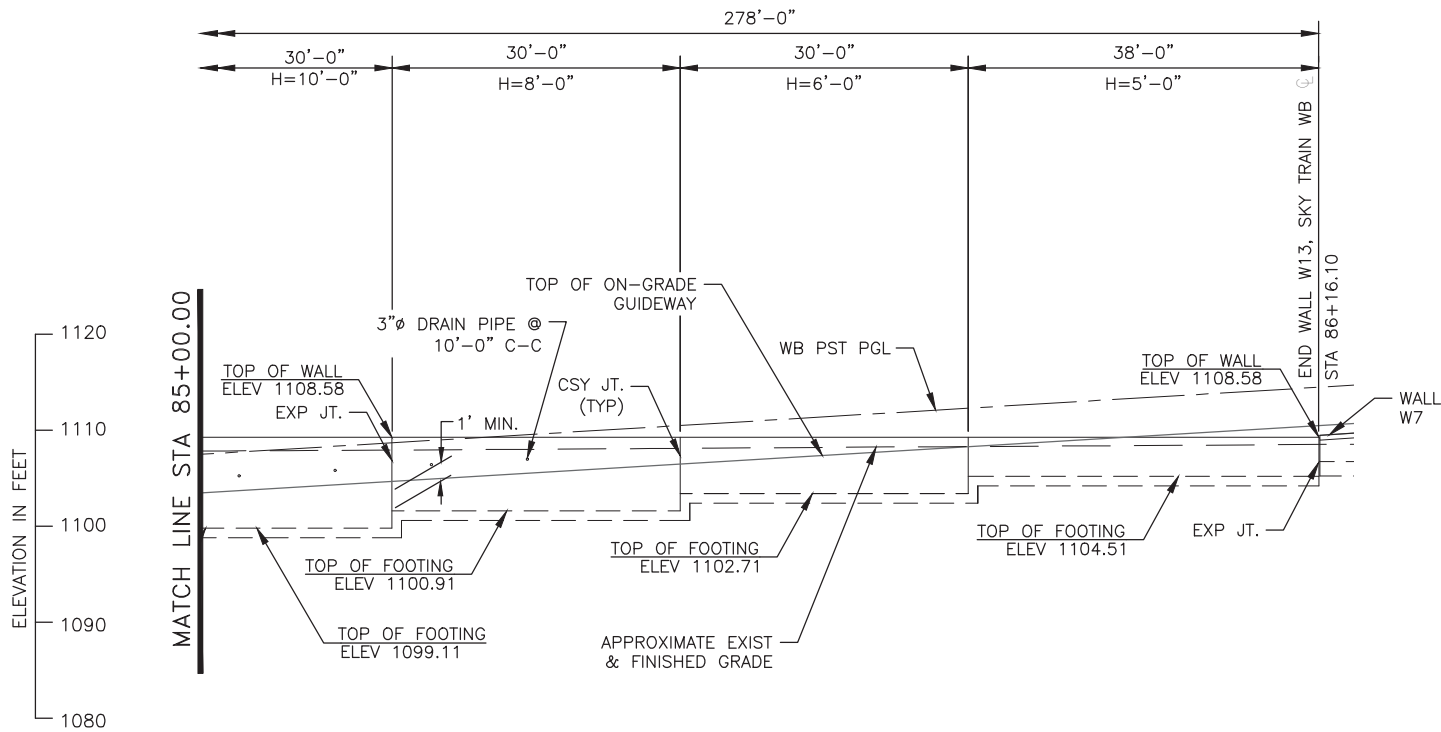
STAGE 2 - B02 DESIGN SUBMISSION

**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



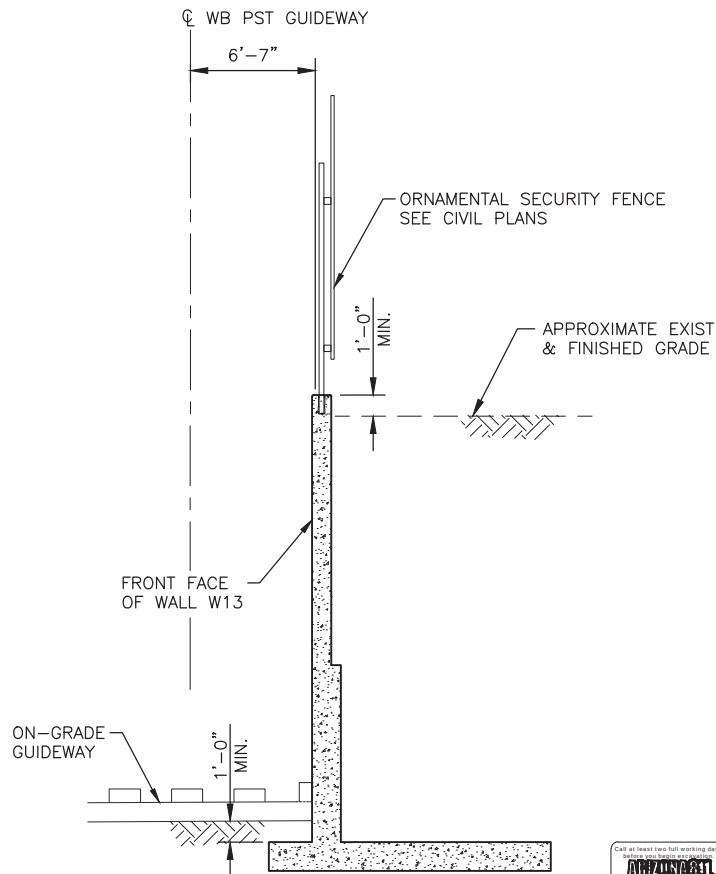
1 WALL W13 PLAN
SCALE: 1"=10'-0"



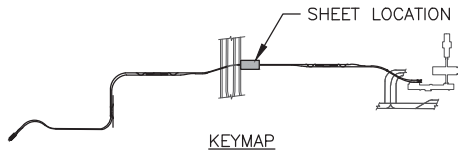
2 WALL W13 ELEVATION
SCALE: 1"=10'-0"

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 W13 SECTION
SCALE: NTS



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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: 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 W13
PLAN AND ELEVATION 2
STA 85+00.00 TO STA 86+16.10**

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



Design Sub-Consultant

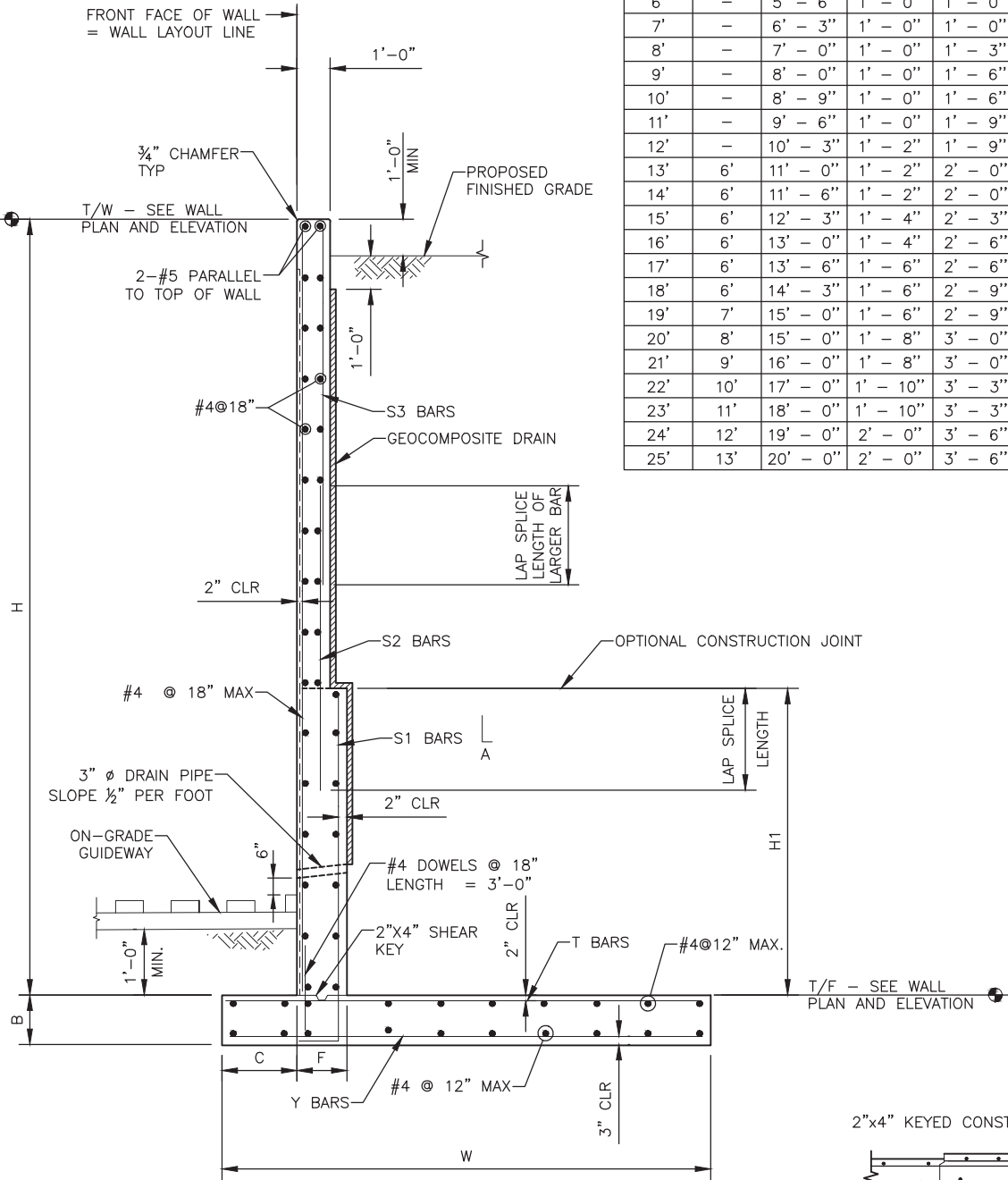
Design Consultant



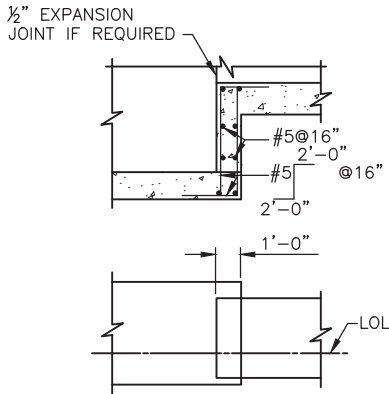
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RETAINING WALL DIMENSIONS AND REINFORCING

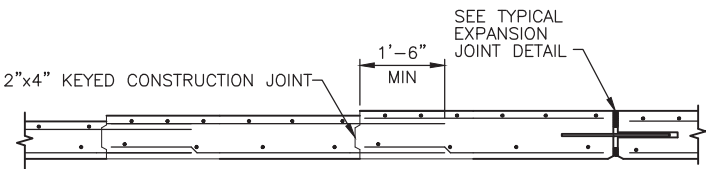
DIMENSIONS						REINFORCING STEEL LIST															
H (ft)	H1 (ft)	W (ft)	B (ft)	C (ft)	F (in)	S1			S2			S3			Y			T			MAX. TOE PRESSURE (PSF)
						BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING (in)	LENGTH	BAR SIZE	SPACING (in)	LENGTH	
5'	-	4' - 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 FOOTING STEP
SCALE: NTS



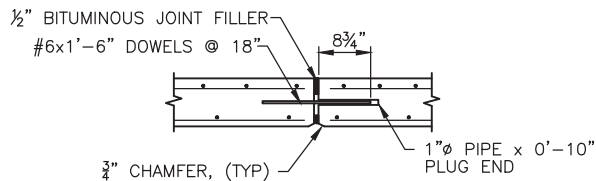
3 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: NTS

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

PER CITY OF PHOENIX ORDINANCE G-4396,
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CITY OF PHOENIX.

PHX W11 W9
CITY OF PHOENIX AVIATION DEPARTMENT

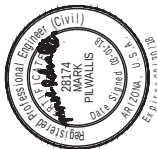
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

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

STAGE 2 - B02 DESIGN SUBMISSION

GUIDEWAY
RETAINING WALL TYPICAL SECTION
WALL W9, W11 & W13

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



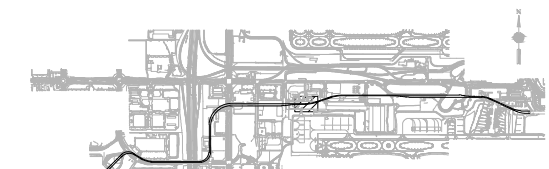
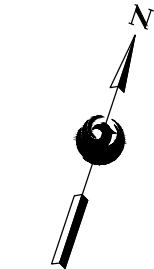
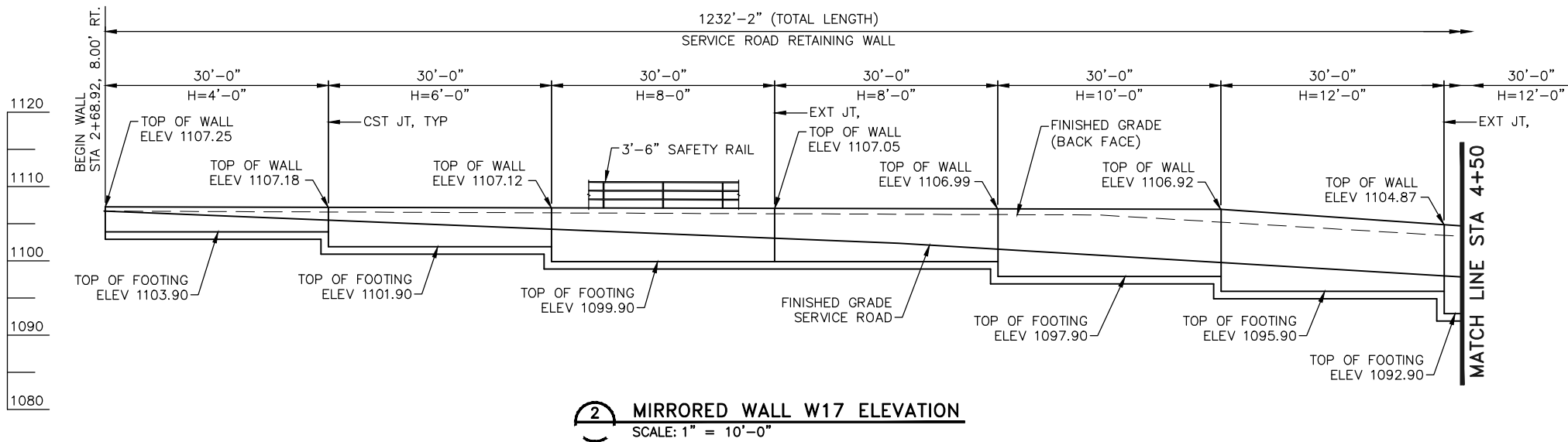
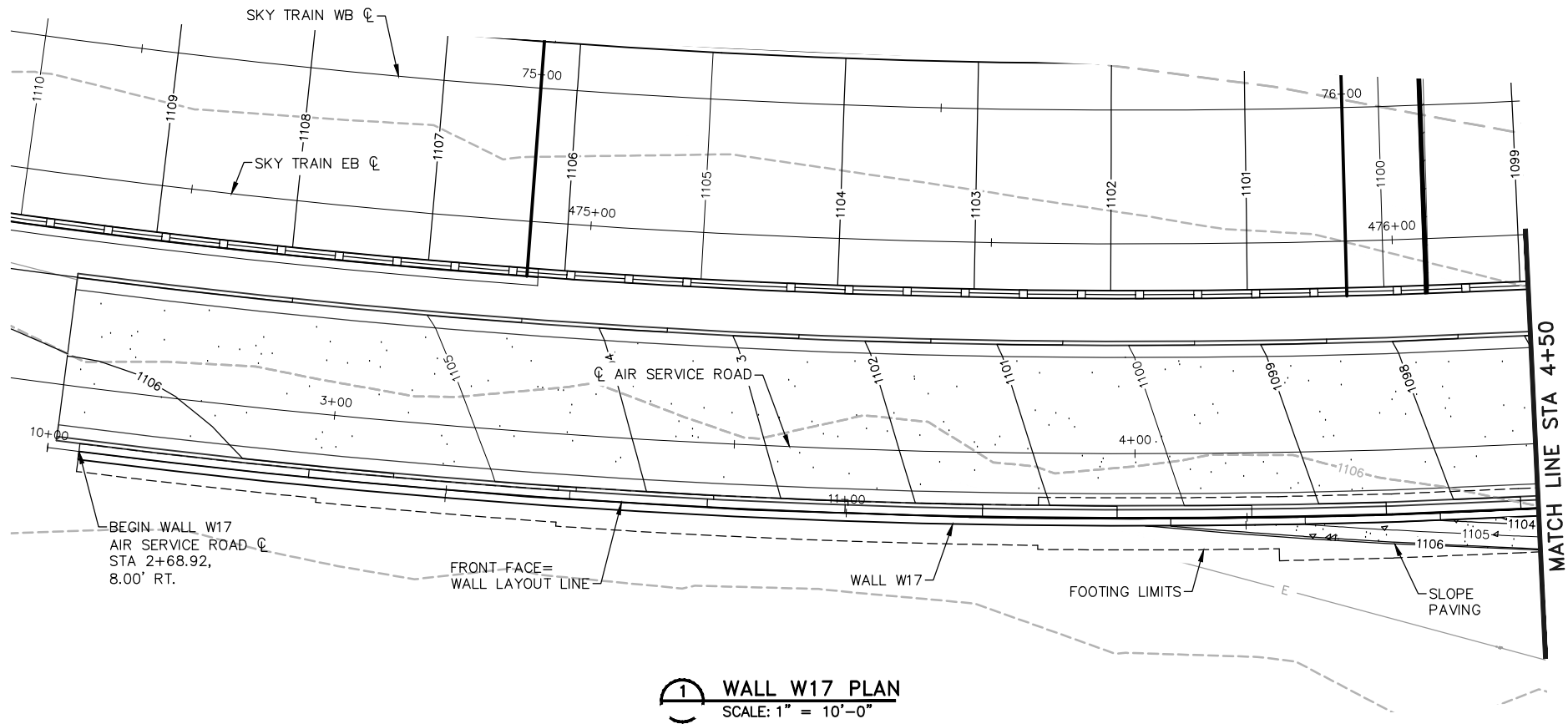
Design Sub-Consultant

Design Consultant

Gannett Fleming

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

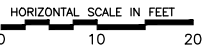
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KEYMAP
N.T.S. 0 10 20
HORIZONTAL SCALE IN FEET

- GENERAL NOTES**
1. WALL LAYOUT BASED ON AIR SERVICE ROAD ϕ . WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
 2. FOR FOOTING STEP DETAILS SEE SHEET MSSW0759.
 3. FOR EXPANSION AND CONSTRUCTION JOINT DETAILS SEE SHEET MSSW0758.
 4. FOR WALL DETAILS AND TYPICAL SECTIONS SEE SHEET MSSW0759.
 5. FOR WALL CROSS-SECTIONS AND DIMENSIONS CORRESPONDING TO "H" SHOWN ON WALL ELEVATION, SEE SHEET MSSW0759.
 6. SEE EXISTING CONDITIONS PLANS FOR EXISTING UTILITY INFORMATION AND DETAILS.
 7. SEE DEMOLITION PLANS FOR SITE DEMOLITION DETAILS.
 8. SEE GRADING AND DRAINAGE PLANS FOR SITE GRADING AND DRAINAGE REQUIREMENTS.
 9. SEE CIVIL IMPROVEMENT PLANS FOR SLOPE PAVING LAYOUT AND DETAILS.

 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.		Design Sub-Consultant		Design Consultant	
		Kimley»Horn		Gannett Fleming	
PHX Sky Train CITY OF PHOENIX AVIATION DEPARTMENT PHX SKY TRAIN STAGE 2 DESIGN 500 S. 24TH STREET PHOENIX, AZ 85034		ISSUED FOR CONSTRUCTION		04/13/18	
		SUBMITTED FOR REVIEW		02/02/18	
		REVISIONS / SUBMISSIONS		DATE	
		NO.			
STAGE 2 - B03 DESIGN SUBMISSION		Designed by: CHG		Drawn by: CHG	
GUIDEWAY RETAINING WALL W17 PLAN AND ELEVATION STA. 2+68 TO STA 4+50		Checked by: KJK		Date: 04/13/2018	
		Dwg. scale: 1"=10'		CIP No.: AV10000011	
		KIVA No.: 07-5204			
		Package: B03-MSSW0750		Sheet Reference No: V1 - 218 of 339	



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Design Sub-Consultant

Kimley»»Horn



Design Consultant


Gannett Fleming

	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18
NO.	REVISIONS / SUBMISSIONS	DATE

PHX DVI EYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG
Drawn by: CHG
Checked by: KJK
Date: 04/13/2018
Dwg scale: 1"=10'
CIP No.: AV10000011
KIVA No.: 07-5204

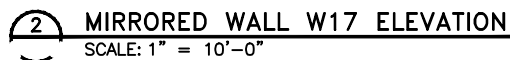
STAGE 2 – B03 DESIGN SUBMISSION

GUIDEWAY RETAINING WALL W17 PLAN AND ELEVATION STA. 4+50 TO STA. 6+20

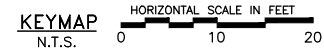
Package: Sheet Reference No:
B03- MSSW0751
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1 WALL W17 PLAN
SCALE: 1" = 10'-0"



1. WALL LAYOUT BASED ON AIR SERVICE ROAD C. WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
2. FOR FOOTING STEP DETAILS SEE SHEET MSSW0759.
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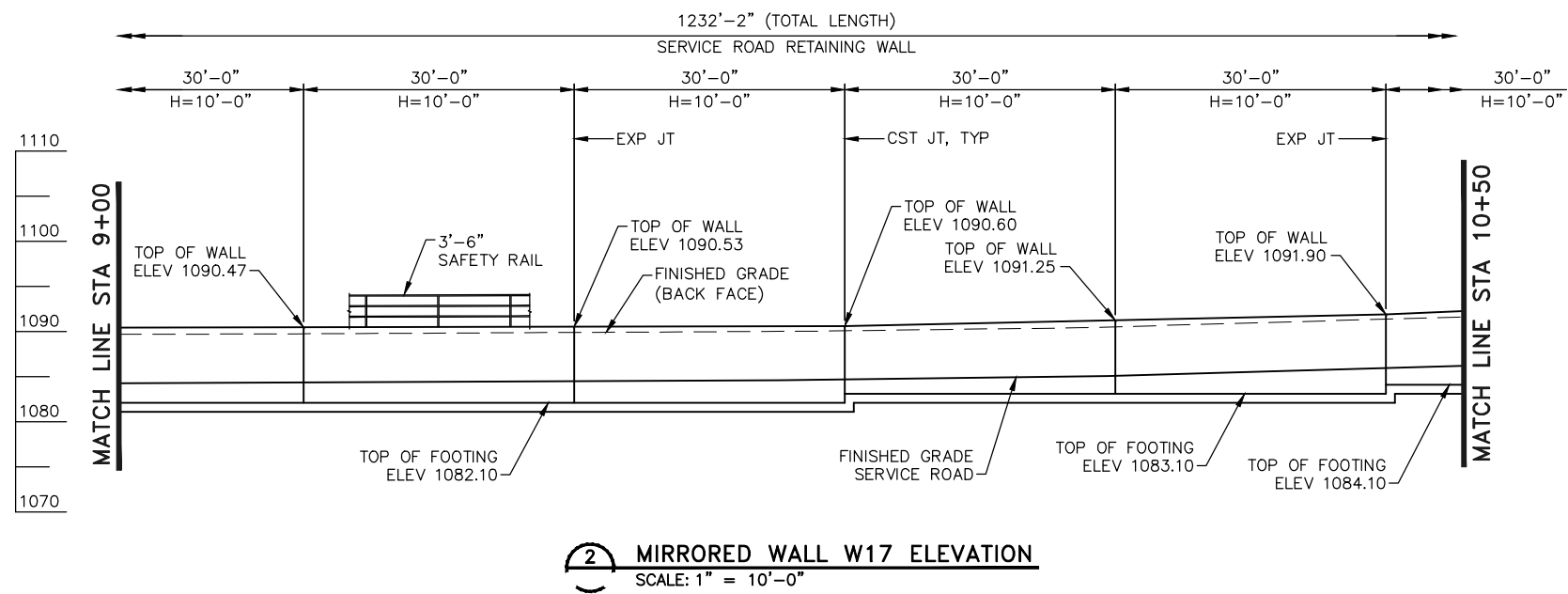
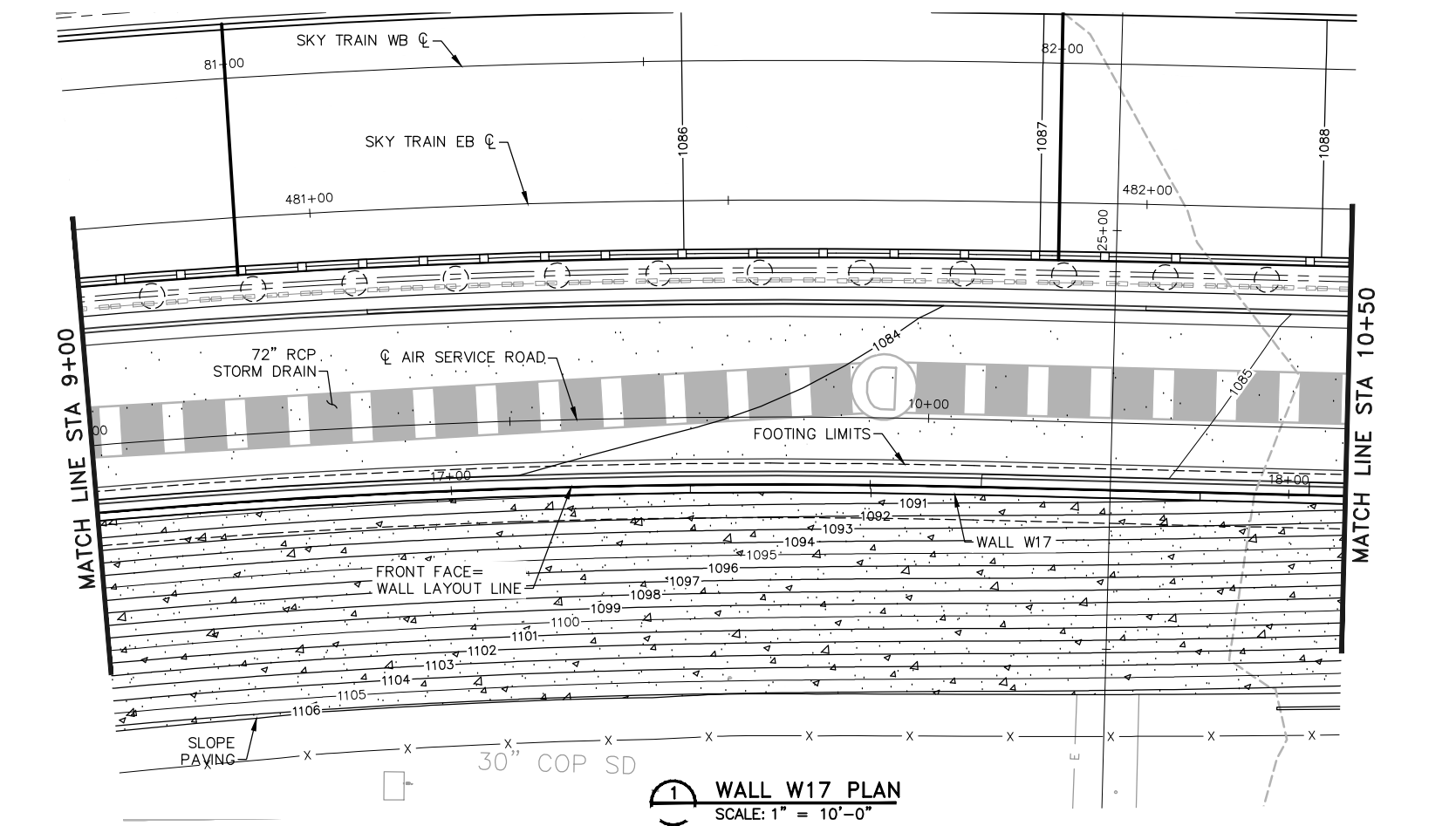
PHX DVT GYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	CHG
Drawn by:	CHG
Checked by:	KJK
Date:	04/13/2018
Dwg scale:	1"=10'
CIP No.:	AV10000011
KIVA No.:	07-5204

**GUIDEWAY
RETAINING WALL W17
PLAN AND ELEVATION
STA. 7+50 TO STA. 9+00**

Package: Sheet Reference No:
B03 - MSSW0753
V1 - 221 of 339



GENERAL NOTES

1. WALL LAYOUT BASED ON AIR SERVICE ROAD C. WALL LENGTH IS MEASURED ALONG WALL LAYOUT LINE.
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Design Sub-Consultant

Kimley»»Horn

Design Consultant



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DAILY CONSTRUCTION			
N ^{O.}	ISSUED FOR CONSTRUCTION SUBMITTED FOR REVIEW	REVISIONS / SUBMISSIONS	DATE
			04/13/18
			02/02/18

PHX DOT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

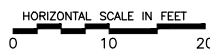
Designed by: CHG
Drawn by: CHG
Checked by: KJK
Date: 04/13/2018
Dwg scale: 1"=10'
CIP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
RETAINING WALL W17
PLAN AND ELEVATION
STA. 9+00 TO STA. 10+50**

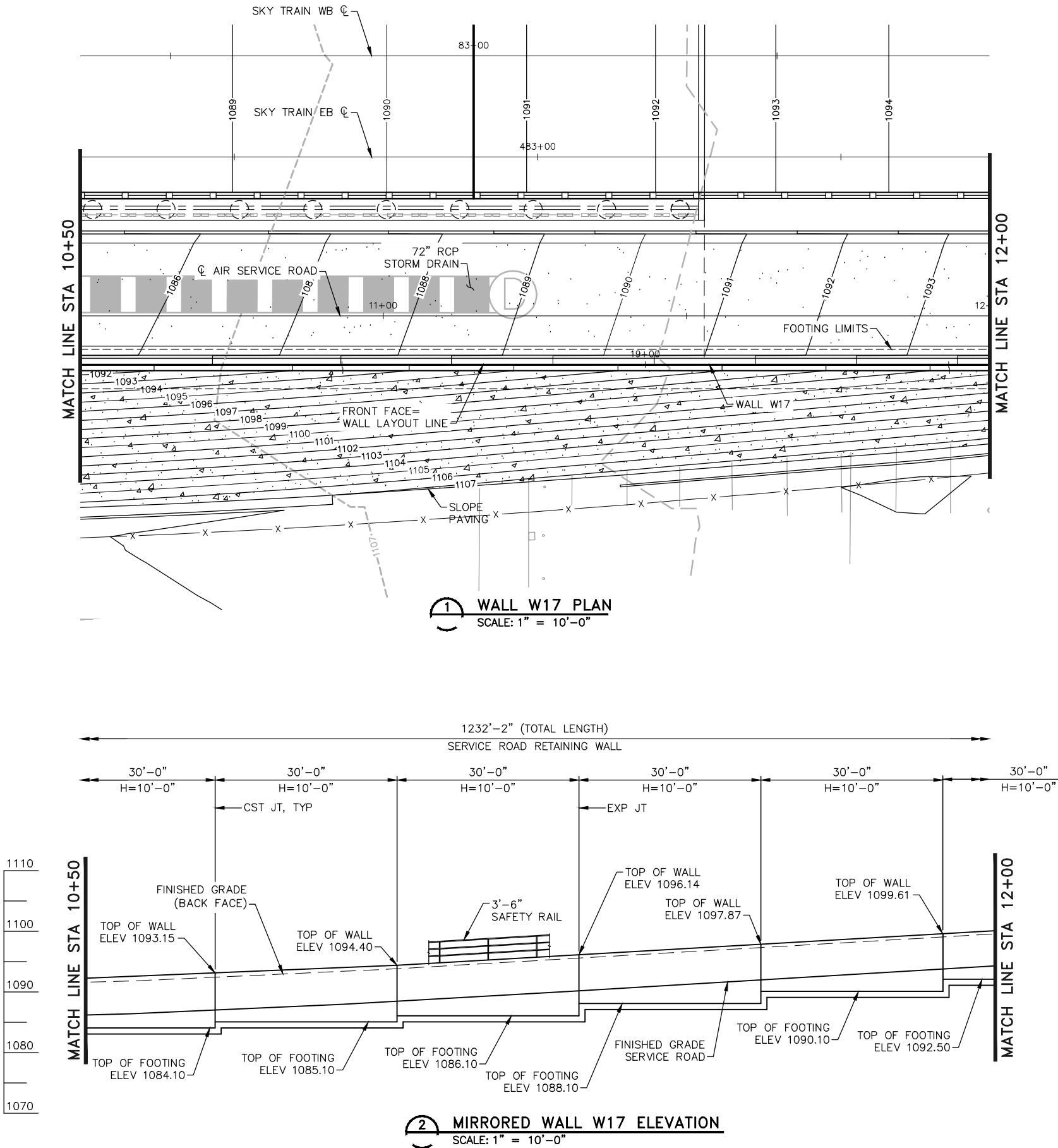


KEYMAP
N.T.S.



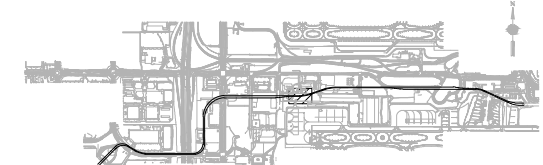
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B03 - MSSW0754
V1 - 222 of 339

PLOT DATE: Apr 11, 2018
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 charlie.golek



GENERAL NOTES

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KEYMAP
 N.T.S.
 HORIZONTAL SCALE IN FEET
 0 10 20

PHX DOT BYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: CHG	Drawn by: CHG	Checked by: KJK	Date: 04/13/2018	Dwg. scale: 1"=10'	CIP No.: AV10000011	KVA No.: 07-5204
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STAGE 2 - B03 DESIGN SUBMISSION
 GUIDEWAY
 RETAINING WALL W17
 PLAN AND ELEVATION
 STA. 10+50 TO STA. 12+00

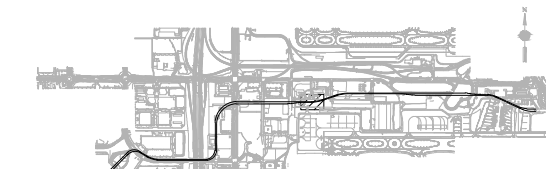
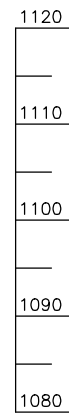
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B03- MSSW0755
 V1 - 223 of 339

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	04/13/18
	SUBMITTED FOR REVIEW	02/02/18



Design Sub-Consultant
Kimley»Horn
 Design Consultant
Gannett Fleming



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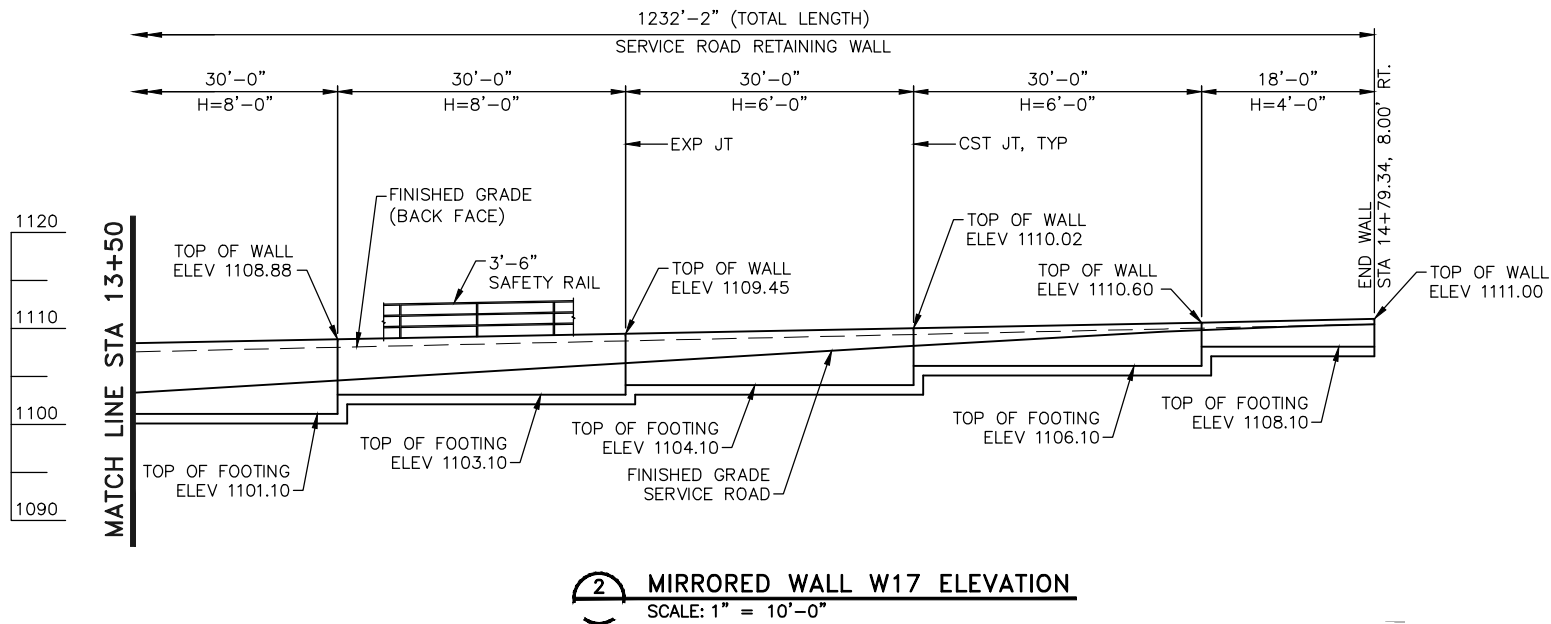
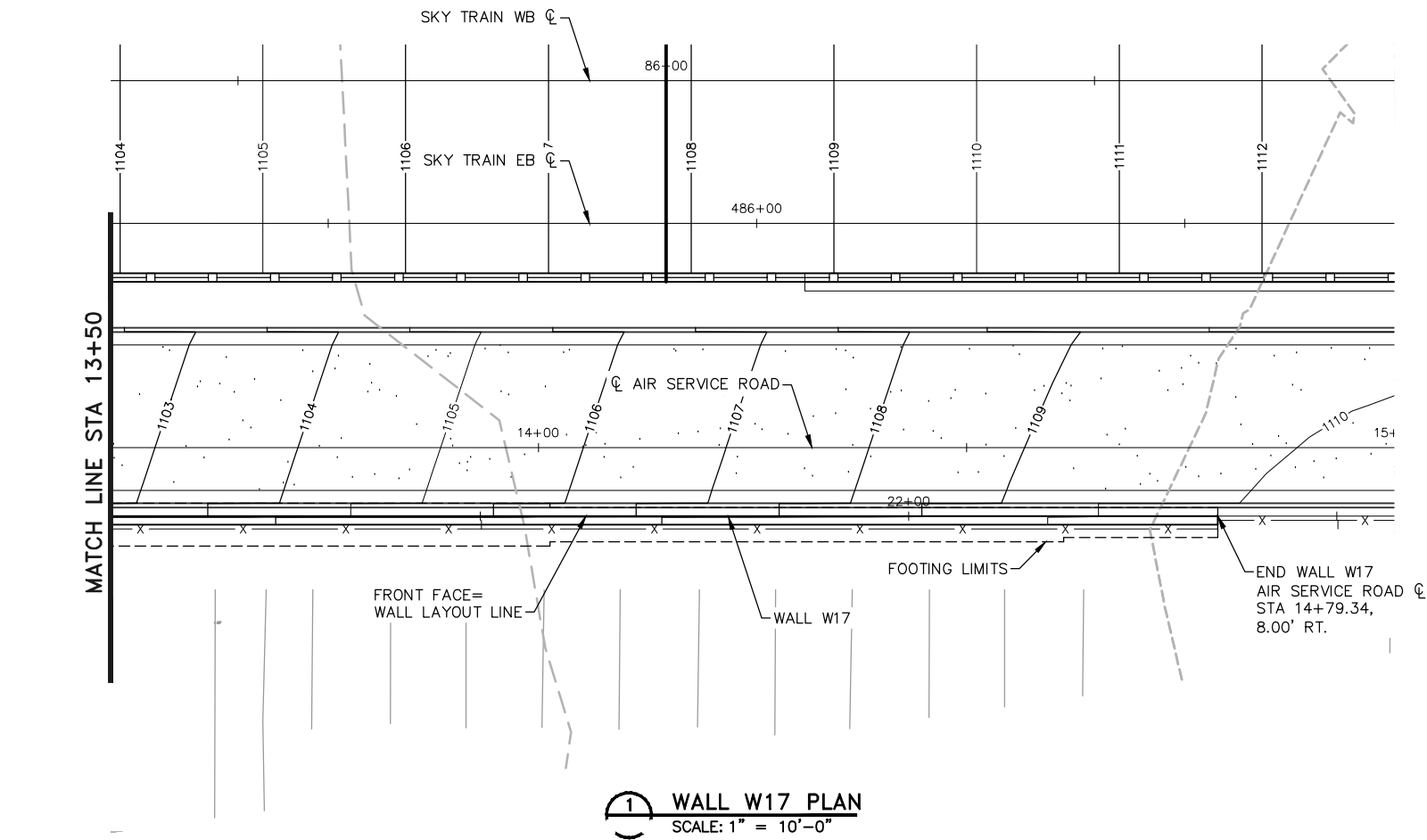
PHX DVT BYA
CITY OF PHOENIX AVIATION DEPARTMENT

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

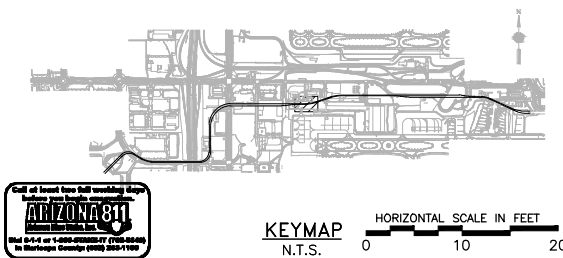
Designed by:	CHG
Drawn by:	CHG
Checked by:	KJK
Date:	04/13/2018
Dwg scale:	1"=10'
ICIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 — B03 DESIGN SUBMISSION

Package: Sheet Reference No:
B03- MSSW0756
V1 - 224 of 339



- ### GENERAL NOTES
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NO.		REVISIONS		/		SUBMISSIONS		DATE	



CITY OF PHOENIX AVIATION DEPARTMENT

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

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KVA No.:	07-5204

STAGE 2 - B03 DESIGN SUBMISSION

**GUIDEWAY
RETAINING WALL W17
PLAN AND ELEVATION
STA. 13+50 TO STA. 14+80**

Package: Sheet Reference No:

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