CITY OF PHOENIX, ARIZONA

SKY HARBOR INTERNATIONAL AIRPORT

PHOENIX SKY TRAIN

STAGE 2

PACKAGE B04

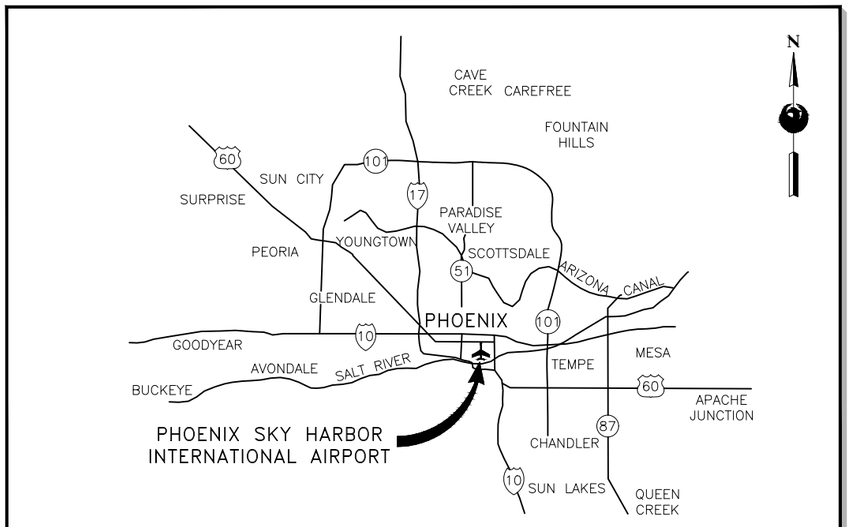
ISSUED FOR CONSTRUCTION

VOLUME 5

JULY 13, 2018

AIP NO. AV10000011

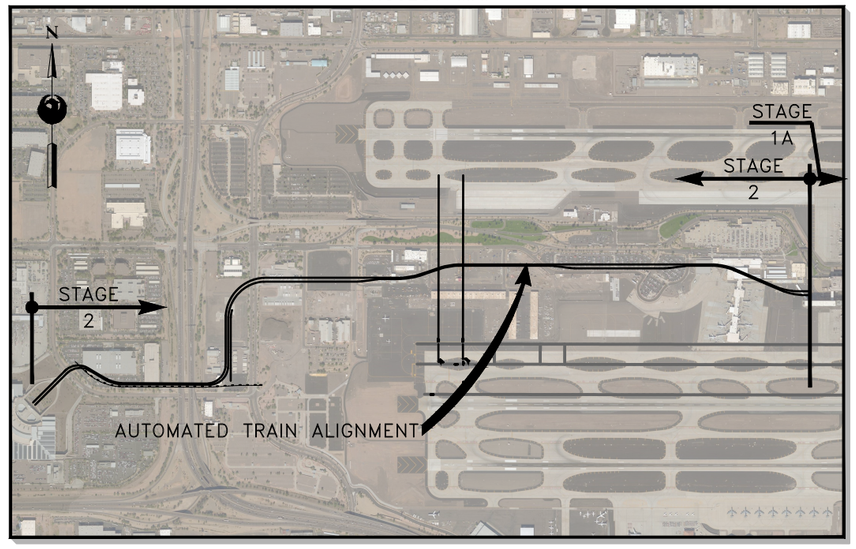
VICINITY MAP



PHOENIX SKY HARBOR
INTERNATIONAL AIRPORT

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

PROJECT MAP



PHOENIX CITY COUNCIL

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

MAYOR

THELDA WILLIAMS

AVIATION ADVISORY BOARD

STEPHANIE FLEISCHMAN CHERNY – CHAIRPERSON

ANDREW M. COHN	LEEZIE KIM
PETE GORRAIZ	KARLENE KEOGH PARKS
ART HAMILTON	VERMA PASTOR
BYRON JONES	SUSAN A. EHRLICH

Registered Professional Engineer CERTIFICATE 28174 MARK PILWALLIS Date Signed 7-13-2018 ARIZONA, U.S.A. EXPIRES 09/30/2018

CITY OF PHOENIX

200 WEST WASHINGTON ST.
PHOENIX, AZ 85003

APPROVAL

JAMES BENNETT
AVIATION DIRECTOR

DATE

PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\rnbiggs\d0667700\AV10000011-S-2-MSGNB040.dwgrnbiggs

THIS DOCUMENT REPRESENTS WORK IN PROGRESS. THE INFORMATION PRESENTED HEREIN IS SUBJECT TO CHANGE AND HAS NOT BEEN COMPLETELY COORDINATED, NOR DOES IT NECESSARILY REPRESENT ACCEPTED DESIGN.

VOLUME 1

GENERAL PLANS

V1 – 001	MSGN0001	COVER SHEET
V1 – 002	MSGN0002	INDEX OF DRAWINGS –1
V1 – 003	MSGN0003	INDEX OF DRAWINGS –2
V1 – 004	MSGN0004	INDEX OF DRAWINGS –3
V1 – 005	MSGN0005	INDEX OF DRAWINGS –4
V1 – 006	MSGN0006	INDEX OF DRAWINGS –5
V1 – 007	MSGN0007	INDEX OF DRAWINGS –6
V1 – 008	MSGN0008	INDEX OF DRAWINGS –7
V1 – 009	MSGN0009	INDEX OF DRAWINGS –8
V1 – 010	MSGN0010	INDEX OF DRAWINGS –9
V1 – 011	MSGN0011	INDEX OF DRAWINGS –10
V1 – 012	MSGN0012	HORIZONTAL AND VERTICAL, CONTROL PLAN
V1 – 013	MSGN0013	HORIZONTAL AND VERTICAL, CONTROL PLAN

OVERALL GUIDEWAY ALIGNMENT

V1 – 014	MSCV0000	GUIDEWAY, OVERALL PLAN LAYOUT
V1 – 015	MSCV0201	GUIDEWAY, ALIGNMENT DEFINITIONS
V1 – 016	MSCV1101	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 11+83.39 TO STA. 19+00
V1 – 017	MSCV1102	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 19+00 TO 27+00
V1 – 018	MSCV1103	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 27+00 TO STA. 35+00
V1 – 019	MSCV1104	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 35+00 TO STA. 41+50
V1 – 020	MSCV1105	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 41+50 TO STA. 49+50
V1 – 021	MSCV1106	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 49+50 TO STA. 57+50
V1 – 022	MSCV1107	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 57+50 TO STA. 65+50
V1 – 023	MSCV1108	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 65+50 TO STA. 73+50
V1 – 024	MSCV1109	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 73+50 TO STA. 81+50
V1 – 025	MSCV1110	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 81+50 TO STA. 89+50
V1 – 026	MSCV1111	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 89+50 TO STA. 97+50
V1 – 027	MSCV1112	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 97+50 TO STA. 105+50
V1 – 028	MSCV1113	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 105+50 TO STA. 113+50
V1 – 029	MSCV1114	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA. 113+50 TO STA. 121+50
V1 – 030	MSCV1115	GUIDEWAY, PLAN & PROFILE, WB ALIGNMENT, STA 121+50 TO STA. 128+64.67
V1 – 031	MSCV1116	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 412+27.00 TO STA. 419+50
V1 – 032	MSCV1117	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 419+50 TO STA. 427+50
V1 – 033	MSCV1118	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 427+50 TO STA. 435+50
V1 – 034	MSCV1119	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 435+50 TO STA. 442+00
V1 – 035	MSCV1120	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 442+00 TO STA. 450+00
V1 – 036	MSCV1121	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 450+00 TO STA.457+50
V1 – 037	MSCV1122	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 457+50 TO STA. 465+50
V1 – 038	MSCV1123	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 465+50 TO STA. 473+50
V1 – 039	MSCV1124	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 473+50 TO STA. 481+50
V1 – 040	MSCV1125	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 481+50 TOS TA. 489+50
V1 – 041	MSCV1126	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 489+50 TO STA. 497+50
V1 – 042	MSCV1127	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA 497+50 TO STA. 505+50
V1 – 043	MSCV1128	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 505+50 TO STA. 513+50
V1 – 044	MSCV1129	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 513+50 TOSTA. 521+50
V1 – 045	MSCV1130	GUIDEWAY, PLAN & PROFILE, EB ALIGNMENT, STA. 521+50 TO STA. 528+64.30
V1 – 046	MSCV1131	GUIDEWAY, PLAN & PROFILE, SPUR LINE ALIGNMENT, STA. 0+00 TO STA. 9+35.55

GUIDEWAY ELEVATED ALIGNMENT

V1 – 047	GWSG0101	GUIDEWAY, ELEVATED ALIGNMENT, PIER W11.5 @ TERMINAL 3 STATION, END CLOSURE REMOVAL DETAIL
V1 – 048	GWSG0202	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 13+48.01 TO STA 18+00.00
V1 – 049	GWSG0203	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 18+00.00 TO STA 22+50.00
V1 – 050	GWSG0204	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 22+50.00 TO 26+75.00
V1 – 051	GWSG0205	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 26+75.00 TO 31+60.04
V1 – 052	GWSG0206	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 49+83.03 TO 53+00.00
V1 – 053	GWSG0207	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 53+00.00 TO STA 56+50.00
V1 – 054	GWSG0208	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 56+50.00 TO STA 59+61.58
V1 – 055	GWSG0209	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 64+41.59 TO STA 68+25.00
V1 – 056	GWSG0210	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 68+25.00 TO STA 72+56.52
V1 – 057	GWSG0211	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 88+05.26 TO STA 92+50.00
V1 – 058	GWSG0212	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 92+50.00 TO STA 97+25.00
V1 – 059	GWSG0213	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 97+25.00 TO STA 100+11.56
V1 – 060	GWSG0214	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 105+51.56 TO STA 110+25.00
V1 – 061	GWSG0215	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 110+25.00 TO STA 114+50.00
V1 – 062	GWSG0216	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA 114+50.00 TO STA 119+00.00
V1 – 063	GWSG0217	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA STA 119+00.00 TO 123+75.00
V1 – 064	GWSG0218	GUIDEWAY, ELEVATED ALIGNMENT, PLAN AND ELEVATION, STA STA 123+75.00 TO 128+64.67
V1 – 065	GWSG0401	GUIDEWAY, ELEVATED ALIGNMENT, PRECAST U–BEAM SPANS, TYPICAL SECTIONS A AND B
V1 – 066	GWSG0402	GUIDEWAY, ELEVATED ALIGNMENT, PRECAST U–BEAM SPANS, TYPICAL SECTIONS C AND D
V1 – 067	GWSG0403	GUIDEWAY, ELEVATED ALIGNMENT, PRECAST U–BEAM SPANS, TYPICAL SECTION E
V1 – 068	GWSG0404	GUIDEWAY, ELEVATED ALIGNMENT, PRECAST U–BEAM SPANS, TYPICAL SECTIONS F AND G
V1 – 069	GWSG0405	GUIDEWAY, ELEVATED ALIGNMENT, PRECAST SPLICED U–BEAM SPANS, TYPICAL SECTION H
V1 – 070	GWSG0902	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 1, 2 & 3
V1 – 071	GWSG0903	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 4 & 5
V1 – 072	GWSG0904	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 6, 7 & 8
V1 – 073	GWSG0905	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 9, 10 & 11
V1 – 074	GWSG0906	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 12, 13, 14 & 15
V1 – 075	GWSG0907	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 16 , 17, 18 & 19
V1 – 076	GWSG0908	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 20, 21 & 22
V1 – 077	GWSG0909	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 23, 24 & 25
V1 – 078	GWSG0910	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 26, 27 & 28
V1 – 079	GWSG0911	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 29 & 30
V1 – 080	GWSG0912	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 31 & 32
V1 – 081	GWSG0913	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 33 & 34
V1 – 082	GWSG0914	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 35 & 36
V1 – 083	GWSG0915	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 37 & 38
V1 – 084	GWSG0916	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 39 & 40
V1 – 085	GWSG0917	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 41 & 42
V1 – 086	GWSG0918	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 43 & 44
V1 – 087	GWSG0919	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 45, 46, 47 & 48
V1 – 088	GWSG0920	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 49 & 50
V1 – 089	GWSG0921	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 51 & 52
V1 – 090	GWSG0922	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 53 & 54
V1 – 091	GWSG0923	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 55 & 56
V1 – 092	GWSG0924	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 57
V1 – 093	GWSG0925	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 58, 59 & 60
V1 – 094	GWSG0926	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 61 & 62
V1 – 095	GWSG0927	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 63 & 64
V1 – 096	GWSG0928	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 65, 66, 67 & 68
V1 – 097	GWSG0929	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 69, 70 & 71
V1 – 098	GWSG0930	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 72 & 73
V1 – 099	GWSG0931	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 74, 75 & 76
V1 – 100	GWSG0932	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 77 & 78
V1 – 101	GWSG0933	GUIDEWAY, ELEVATED ALIGNMENT, FRAMING PLAN, SPAN 79 & 80
V1 – 102	GWSG1000	GUIDEWAY, ELEVATED ALIGNMENT, U–BEAM DETAILS 1 OF 5, SHEAR REINFORCEMENT SCHEDULE
V1 – 103	GWSG1001	GUIDEWAY, ELEVATED ALIGNMENT, U–BEAM DETAILS 2 OF 5, BEAM SECTION & STRAND PATTERN
V1 – 104	GWSG1002	GUIDEWAY, ELEVATED ALIGNMENT, U–BEAM DETAILS 3 OF 5, BEAM REINFORCEMENT DETAILS
V1 – 105	GWSG1003	GUIDEWAY, ELEVATED ALIGNMENT, U–BEAM DETAILS 4 OF 5, MISCELLANEOUS DETAILS
V1 – 106	GWSG1004	GUIDEWAY, ELEVATED ALIGNMENT, U–BEAM DETAILS 5 OF 5, BEARING PAD & PLATE DETAILS
V1 – 107	GWSG1010	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS, BEAM SECTIONS & STRAND PATTERNS
V1 – 108	GWSG1011	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 2
V1 – 109	GWSG1012	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 3
V1 – 110	GWSG1013	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 4
V1 – 111	GWSG1014	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 5
V1 – 112	GWSG1015	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 6
V1 – 113	GWSG1016	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 7
V1 – 114	GWSG1017	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 8
V1 – 115	GWSG1018	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 9
V1 – 116	GWSG1019	GUIDEWAY, ELEVATED ALIGNMENT, SPLICED U–BEAM DETAILS 9
V1 – 117	GWSG1101	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 1 TO 3
V1 – 118	GWSG1102	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 4 AND 5
V1 – 119	GWSG1103	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 6 TO 8
V1 – 120	GWSG1104	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 9 TO 11
V1 – 121	GWSG1105	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 12 AND 13
V1 – 122	GWSG1106	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 14 AND 15
V1 – 123	GWSG1107	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 16 AND 17
V1 – 124	GWSG1108	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 18 AND 19
V1 – 125	GWSG1109	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 20 TO 22
V1 – 126	GWSG1110	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 23 TO 25
V1 – 127	GWSG1111	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 26 TO 28
V1 – 128	GWSG1112	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 29 AND 30
V1 – 129	GWSG1113	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 31 AND 32
V1 – 130	GWSG1114	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 33 AND 34
V1 – 131	GWSG1115	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 35 TO 37
V1 – 132	GWSG1116	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 38 TO 40
V1 – 133	GWSG1117	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 41 AND 42
V1 – 134	GWSG1118	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 43 AND 44
V1 – 135	GWSG1119	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 45 AND 46
V1 – 136	GWSG1120	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 47 AND 48
V1 – 137	GWSG1121	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 49 AND 50
V1 – 138	GWSG1122	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 51 AND 52
V1 – 139	GWSG1123	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 53 AND 54
V1 – 140	GWSG1124	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 55 TO 57
V1 – 141	GWSG1125	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 58 TO 60
V1 – 142	GWSG1126	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 61 AND 62
V1 – 143	GWSG1127	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 63 AND 64
V1 – 144	GWSG1128	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 65 AND 66
V1 – 145	GWSG1129	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 67 AND 68
V1 – 146	GWSG1130	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 69 AND 70
V1 – 147	GWSG1131	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPAN 71
V1 – 148	GWSG1132	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN SPAN 72
V1 – 149	GWSG1133	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPAN 73
V1 – 150	GWSG1134	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPAN 74
V1 – 151	GWSG1135	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 75 AND 76
V1 – 152	GWSG1136	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 77 AND 78
V1 – 153	GWSG1137	GUIDEWAY, ELEVATED ALIGNMENT, DECK PLAN, SPANS 79 AND 80
V1 – 154	GWSG1138	GUIDEWAY, ELEVATED ALIGNMENT, TYPICAL DECK SECTIONS 1
V1 – 155	GWSG1139	GUIDEWAY, ELEVATED ALIGNMENT, TYPICAL DECK SECTIONS 2
V1 – 156	GWSG1140	GUIDEWAY, ELEVATED ALIGNEMNT, DECK CONTINUITY DETAILS
V1 – 157	GWSG1201	GUIDEWAY, ELEVATED ALIGNMENT, DIAPHRAGM DETAILS 1
V1 – 158	GWSG1202	GUIDEWAY, ELEVATED ALIGNMENT, DIAPHRAGM DETAILS 2
V1 – 159	GWSG1203	GUIDEWAY, ELEVATED ALIGNMENT, MISCELLANEOUS DETAILS
V1 – 160	GWSG1401	GUIDEWAY, ELEVATED ALIGNMENT, CONSTRUCTION STAGING, SPANS 71–75

GUIDEWAY DRAINAGE

V1 – 161	MSCV0901	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 162	MSCV0902	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 163	MSCV0903	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 164	MSCV0904	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 165	MSCV0905	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 166	MSCV0906	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 167	MSCV0907	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 168	MSCV0908	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 169	MSCV0909	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN
V1 – 170	MSCV0910	GUIDEWAY, GUIDEWAY DRAINAGE PLAN, TRENCH DRAIN PLAN

RCC SITE FINAL CONFIGURATION

V1 – 171	RSCV0101	CIVIL, RCC SITE, DEMOLITION PLAN
V1 – 172	RSCV0303	CIVIL, RCC SITE, PARKING LOT PLAN
V1 – 173	RSCV0506	CIVIL, RCC SITE, ENTRANCE CROSSOVER PLAN
V1 – 174	RSCV0507	CIVIL, RCC SITE, PARKING LOT STAKING PLAN
V1 – 175	RSCV0508	CIVIL, RCC SITE, TEMPORARY PARKING LOT, DRIVEWAY PLAN

PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV10000011–S–2–MSGNB041.dwg mbiggs

Design Consultant
Gannett Fleming

Design Sub–Consultant

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
MARK PILWALLIS
28174
EXPIRES 6/30/2019

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PER CITY OF PHOENIX ORDINANCE G–4390, THESE PLANS ARE FOR CITY USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07–5204

STAGE 2 – B04 DESIGN SUBMISSION

GENERAL PLANS
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V1 – 176	RSCV0509	CIVIL, RCC SITE, SKY HARBOR CIRCLE STAKING PLAN, DRIVEWAY PLAN
V1 – 177	RSCV0510	CIVIL, RCC SITE, PARKING LOT SIDEWALK, RAMP DETAIL
V1 – 178	RSCV0602	CIVIL, RCC SITE, ENTRANCE CROSSOVER, JOINTING PLAN
V1 – 179	RSCV0803	CIVIL, RCC SITE, STRIPING & SIGNING, NOTES & DETAILS
V1 – 180	RSCV0804	CIVIL, RCC SITE, STRIPING AND SIGNING PLAN
V1 – 181	RSCV0805	CIVIL, RCC SITE, STRIPING AND SIGNING PLAN, EXISTING BUS LOOP

RCC SITE GRADING AND DRAINAGE

V1 – 182	RSCV0501	CIVIL, RCC STATION – SITE, ROOF DRAINS, STORM DRAIN PLAN
V1 – 183	RSCV0502	CIVIL, RCC STATION – SITE, ROOF DRAINS, STORM DRAIN PLAN
V1 – 184	RSCV0901	CIVIL, RCC STATION – SITE, ROOF DRAINS, STORM DRAIN PLAN
V1 – 185	RSCV0902	CIVIL, RCC STATION – SITE, ROOF DRAINS, STORM DRAIN PLAN

ROADWAY 24TH STREET COMPLEX

V1 – 186	TSCV0001	CIVIL, 24TH STREET COMPLEX – ROADWAY, LEGEND AND NOTES
V1 – 187	TSCV0002	CIVIL, 24TH STREET COMPLEX – ROADWAY, GEOMETRIC CONTROL
V1 – 188	TSCV0101	CIVIL, 24TH STREET COMPLEX – ROADWAY, DEMOLITION PLAN, E BUCKEYE ROAD, STA 90+00 TO 93+50, SKY HARBOR EB EXIT RAMP, STA 10+00 TO 11+50, SKY HARBOR WB ENTRANCE RAMP, 10+00 TO 12+00
V1 – 189	TSCV0102	CIVIL, 24TH STREET COMPLEX – ROADWAY, DEMOLITION PLAN, E BUCKEYE ROAD, STA 93+50 TO STA 100+00, SKY HARBOR EB EXIT RAMP, STA 11+50 TO 18+00, SKY HARBOR WB ENTRANCE RAMP, STA 12+00 TO 18+50
V1 – 190	TSCV0103	CIVIL, 24TH STREET COMPLEX – ROADWAY, DEMOLITION PLAN, E BUCKEYE ROAD STA 100+00 TO 106+50, SKY HARBOR EB EXIT RAMP, STA 18+00 TO 22+01.50, SKY HARBOR WB ENTRANCE RAMP, STA 18+50.00 TO 23+90.57, SKY HARBOR EB ENTRANCE RAMP, STA 50+00 TO 53+17.98, COPPERHEAD DR STA 54+50 TO 58+40
V1 – 191	TSCV0104	CIVIL, 24TH STREET COMPLEX – ROADWAY, DEMOLITION PLAN, E BUCKEYE ROAD, STA 106+50 TO 114+50, SKY HARBOR EB ENTRANCE RAMP, STA 53+25 TO 58+83.88
V1 – 192	TSCV0301	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, E BUCKEYE ROAD STA 90+00 TO 93+50, SKY HARBOR EB EXIT RAMP 10+00 TO 11+50, SKY HARBOR EB ENTRANCE RAMP, 10+00 TO 11+50
V1 – 193	TSCV0302	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, E BUCKEYE ROAD, STA 93+50 TO STA 100+00, SKY HARBOR EB EXIT RAMP, 11+50 TO 18+00, SKY HARBOR EB ENTRANCE RAMP, 12+05 TO 18+50
V1 – 194	TSCV0303	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, SKY HARBOR EB EXIT RAMP, 18+00 TO 22+01.50, SKY HARBOR WB ENTRANCE RAMP, 18+50.00 TO 23+80.57, TO SKY HARBOR EB ENTRANCE RAMP, 50+17.98 TO 53+25.00, E BUCKEYE ROAD STA 10+00 TO 106+50, COPPERHEAD DR STA 54+50 TO 58+40
V1 – 195	TSCV0304	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, SKY HARBOR EB ENTRANCE RAMP, STA 53+25 TO 58+50.43, E BUCKEYE ROAD STA 106+50 TO 114+50
V1 – 196	TSCV0305	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, NORTH ROTARY STA 10+00 TO 16+00, SOUTH ROTARY STA 10+00 TO STA 17+10, S 23RD ST STA 40+00 TO 42+50
V1 – 197	TSCV0306	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PLAN, NORTH ROTARY ST 16+00 TO 22+43.25, SOUTH ROTARY STA 17+10 TO 23+56.22, COPPERHEAD DRIVE STA 50+00 TO 54+50
V1 – 198	TSCV0504	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, NORTH ROTARY, S 23RD STREET, BUCKEYE ROAD
V1 – 199	TSCV0505	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, E BUCKEYE ROAD
V1 – 200	TSCV0506	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, COPPERHEAD DR, E BUCKEYE ROAD
V1 – 201	TSCV0507	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, COPPERHEAD DR
V1 – 202	TSCV0508	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, NORTH ROTARY, SOUTH ROTARY
V1 – 203	TSCV0509	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, NORTH ROTARY, SOUTH ROTARY, COPPERHEAD DR
V1 – 204	TSCV0510	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, NORTH ROTARY, SOUTH ROTARY, COPPERHEAD DR
V1 – 205	TSCV0511	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, SKY HARBOR WB ENTRANCE RAMP, SKY HARBOR EB EXIT RAMP
V1 – 206	TSCV0512	CIVIL, 24TH STREET COMPLEX – ROADWAY, ADA RAMP AND DRIVEWAY
V1 – 207	TSCV0513	CIVIL, 24TH STREET COMPLEX – ROADWAY, SWALE STAKING PLAN
V1 – 208	TSCV0514	CIVIL, 24TH STREET COMPLEX – ROADWAY, STAKING PLAN, NORTH ROTARY, SOUTH ROTARY, COPPERHEAD DR
V1 – 209	TSCV0602	CIVIL, 24TH STREET COMPLEX – ROADWAY, WEST ROTARY JOINTING PLAN
V1 – 210	TSCV0603	CIVIL, 24TH STREET COMPLEX – ROADWAY, EAST ROTARY JOINTING PLAN
V1 – 211	TSCV0604	CIVIL, 24TH STREET COMPLEX – ROADWAY, EB SKY HARBOR EXIT RAMP, JOINTING PLAN
V1 – 212	TSCV0605	CIVIL, 24TH STREET COMPLEX – ROADWAY, EB SKY HARBOR EXIT RAMP, JOINTING PLAN
V1 – 213	TSCV0701	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PROFILE, SKY HARBOR EB EXIT RAMP, STA 14+68.20 TO STA 22+25.54
V1 – 214	TSCV0702	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PROFILE, SKY HARBOR WB ENTRANCE RAMP, STA 15+28.81 TO STA 23+97.83
V1 – 215	TSCV0703	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PROFILE, SOUTH 23RD STREET, STA 40+00.00 TO STA 44+80.26
V1 – 216	TSCV0704	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PROFILE, COPPERHEAD DRIVE, STA 47+45.64 TO STA 58+40.00
V1 – 217	TSCV0705	CIVIL, 24TH STREET COMPLEX – ROADWAY, ROADWAY PROFILE, SKY HARBOR EB ENTRANCE RAMP, STA 50+17.98 TO STA 58+50.00
V1 – 218	TSCV1201	CIVIL, 24TH STREET COMPLEX – ROADWAY, TYPICAL SECTIONS AND DETAILS
V1 – 219	TSCV1202	CIVIL, 24TH STREET COMPLEX – ROADWAY, TYPICAL SECTIONS AND DETAILS
V1 – 220	TSCV1203	CIVIL, 24TH STREET COMPLEX – ROADWAY, TYPICAL SECTIONS AND DETAILS
V1 – 221	TSCV1204	CIVIL, 24TH STREET COMPLEX – ROADWAY, PCCP JOINTING DETAILS
V1 – 222	TSCV1205	CIVIL, 24TH STREET COMPLEX – ROADWAY, PCCP JOINTING DETAILS
V1 – 223	TSCV1206	CIVIL, 24TH STREET COMPLEX – ROADWAY, TEMPORARY PHASING PLAN, NORTH ROTARY
V1 – 224	TSCV1207	CIVIL, 24TH STREET COMPLEX – ROADWAY, BOLLARD DETAILS
V1 – 225	TSCV1208	CIVIL, 24TH STREET COMPLEX – ROADWAY, RIP–RAP DETAILS, STAMPED MEDIAN CONCRETE DETAILS

24TH ST GATE ACCESS

V1 – 226	TSCV1301	CIVIL, 24TH STREET COMPLEX SITE, CIVIL IMPROVEMENT PLAN, AIRSIDE GATE ACCESS

ELECTRICAL YARD

V1 – 227	TSEL0401	ELECTRICAL YARD, ELECTRICAL YARD FLOOR PLAN

24TH STREET COMPLEX - DRAINAGE

V1 – 228	TSCV0905	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, SKY HARBOR BLVD
V1 – 229	TSCV0906	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, BUCKEYE ROAD
V1 – 230	TSCV0907	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, BUCKEYE ROAD
V1 – 231	TSCV0908	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, SKY HARBOR BLVD
V1 – 232	TSCV0909	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, SKY HARBOR BLVD
V1 – 233	TSCV0910	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, COPPERHEAD DRIVE
V1 – 234	TSCV0911	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, COPPERHEAD DRIVE
V1 – 235	TSCV0912	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY DRAINAGE PLAN, 23RD STREET
V1 – 236	TSCV1104	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY STORM DRAIN, PROFILES
V1 – 237	TSCV1105	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY STORM DRAIN, PROFILES
V1 – 238	TSCV1106	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY STORM DRAIN, PROFILES
V1 – 239	TSCV1107	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY STORM DRAIN, PROFILES
V1 – 240	TSCV1108	CIVIL, 24TH STREET COMPLEX SITE, ROADWAY STORM DRAIN, PROFILES

24TH STREET COMPLEX GRADING AND DRAINAGE

V1 – 241	TSCV0512	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, NORTH LOT
V1 – 242	TSCV0513	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, NORTH LOT
V1 – 243	TSCV0514	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, SOUTH LOT
V1 – 244	TSCV0515	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, SOUTH LOT
V1 – 245	TSCV0516	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, RETENTION BASIN
V1 – 246	TSCV0517	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, SURCHARGE BASIN
V1 – 247	TSCV0901	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, GUIDEWAY DRAIN CONNECTION
V1 – 248	TSCV0902	CIVIL, 24TH STREET COMPLEX SITE, GRADING AND DRAINAGE PLAN, GUIDEWAY DRAIN CONNECTION
V1 – 249	TSCV0903	CIVIL, 24TH STREET COMPLEX SITE, DRAINAGE PLAN, COB SITE RETENTION
V1 – 250	TSCV0904	CIVIL, 24TH STREET COMPLEX SITE, DRAINAGE PLAN, COB SITE RETENTION
V1 – 251	TSCV1209	CIVIL, 24TH STREET COMPLEX SITE, COB SITE RETENTION, DETAILS (FOR REFERENCE ONLY)
V1 – 252	TSCV1210	CIVIL, 24TH STREET COMPLEX SITE, COB SITE RETENTION, DETAILS (FOR REFERENCE ONLY)
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V1 – 254	TSCV1212	CIVIL, 24TH STREET COMPLEX SITE, COB SITE RETENTION, DETAILS (FOR REFERENCE ONLY)
V1 – 255	TSCV1213	CIVIL, 24TH STREET COMPLEX SITE, COB SITE RETENTION, DETAILS (FOR REFERENCE ONLY)
V1 – 256	TSCV1101	CIVIL, 24TH STREET COMPLEX SITE, STORM DRAIN PROFILES
V1 – 257	TSCV1102	CIVIL, 24TH STREET COMPLEX SITE, STORM DRAIN PROFILES
V1 – 258	TSCV1103	CIVIL, 24TH STREET COMPLEX SITE, STORM DRAIN PROFILES

24TH STREET CAMPUS - LIGHTING PLANS

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V1 – 260	TSEL0102	24TH STREET CAMPUS, NORTHEAST, LIGHTING PLAN

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V1 – 262	TSEL0202	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING DEMOLITION PLAN
V1 – 263	TSEL0203	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING DEMOLITION PLAN
V1 – 264	TSEL0205	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING LAYOUT
V1 – 265	TSEL0206	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING LAYOUT
V1 – 266	TSEL0207	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING LAYOUT
V1 – 267	TSEL0208	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING LAYOUT
V1 – 268	TSEL1001	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, LIGHTING DETAILS
V1 – 269	TSEL1002	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, SINGLE LINE DIAGRAM
V1 – 270	TSEL1003	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, ROADWAY LIGHTING DETAILS
V1 – 271	TSEL1004	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, ROADWAY LIGHTING DETAILS
V1 – 272	TSEL1005	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, ELECTRICAL DETAILS
V1 – 273	TSEL1006	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, ELECTRICAL DETAILS
V1 – 274	TSEL1007	CIVIL, 24TH STREET STATION – SITE, FACILITIES PARKING LOT, PANEL SCHEDULE

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V1 – 276	MSSW0730	STRUCTURAL, RETAINING WALL W15, PLAN AND ELEVATION 1, STA 12+50.00 TO STA 14+30.00
V1 – 277	MSSW0731	STRUCTURAL, RETAINING WALL W15, PLAN AND ELEVATION 2, STA 14+30.00 TO 15+50.00
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V1 – 280	MSSW0734	STRUCTURAL, RETAINING WALL W18, PLAN AND ELEVATION 1, STA 14+42.58 TO STA 16+50.00
V1 – 281	MSSW0735	STRUCTURAL, RETAINING WALL W18, PLAN AND ELEVATION 2, STA 16+50.00 TO STA 18+65.00
V1 – 282	MSSW0736	STRUCTURAL, RETAINING WALL W18, PLAN AND ELEVATION 3, STA 18+65.00 TO STA 20+65.82
V1 – 283	MSSW0737	STRUCTURAL, RETAINING WALL W19, PLAN AND ELEVATION 1, STA 18+39.16 TO STA 20+19.00
V1 – 284	MSSW0738	STRUCTURAL, RETAINING WALL W19, PLAN AND ELEVATION 2, STA 20+19.00 TO STA 21+26.27
V1 – 285	MSSW0740	STRUCTURAL, ELEVATED GUIDEWAY, RETAINING WALL TYPICAL SECTION, WALL W15
V1 – 286	MSSW0741	STRUCTURAL, ELEVATED GUIDEWAY, RETAINING WALL TYPICAL SECTION, WALL W16, W18 & W19

VOLUME 2

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V2 – 004	MSGN0004	INDEX OF DRAWINGS –3
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V2 – 020	WSCV0518	CIVIL, WEST TERMINAL, FACILITIES AND SERVICES LOT, GRADING AND DRAINAGE
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V2 – 023	WSCV0806	CIVIL, WEST TERMINAL, FACILITIES AND SERVICES LOT, PAVEMENT MARKING AND SIGNAGE

PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV100000011-S-2-MSGNB041.dwg mbiggs

PROFESSIONAL ENGINEER (CIVIL) MARK PILWALLIS 28174 DATE OF REGISTRATION 10/31/2008 EXPIRES 6/30/2019

Design Sub–Consultant

Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

STAGE 2 – B04 DESIGN SUBMISSION

GENERAL PLANS
INDEX OF DRAWINGS - 2

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV100000011
KIVA No.:	07–5204

Package: B04 Sheet Reference No: **MSGN0003**
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V2 – 056	ASCV0803	CIVIL, AIRSIDE T2 TO T3, PAVEMENT MARKING , DETAILS
V2 – 057	ASCV1202	CIVIL, AIRSIDE T2 TO T3, PROJECT DETAILS
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 – B04 DESIGN SUBMISSION

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PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV10000011–S–2–MSGNB041.dwg mbiggs

Design Consultant
Gannett Fleming

Design Sub–Consultant

MARK PILWALLIS 28174 ARIZONA U.S.A. REGISTERED PROFESSIONAL ENGINEER (CIVIL) 09/30/2019

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PER CITY OF PHOENIX ORDINANCE G-4390, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN STAGE 2 DESIGN

500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07–5204

STAGE 2 – B04 DESIGN SUBMISSION

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V3 – 224	TBSB0618	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 225	TBSB0619	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 226	TBSB0620	24TH STREET STATION, STRUCTURAL, ENLARGED PLAN
V3 – 227	TBSB0621	24TH STREET STATION, STRUCTURAL, ENLARGED PLAN
V3 – 228	TBSB0622	24TH STREET STATION, STRUCTURAL, ENLARGED PLAN
V3 – 229	TBSB0623	24TH STREET STATION, STRUCTURAL, ENLARGED PLAN
V3 – 230	TBSB0624	24TH STREET STATION, STRUCTURAL, ENLARGED PLAN

PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV10000011-S-2-MSGNB041.dwg mbiggs



Design Sub–Consultant

Design Consultant

Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4390, THESE PLANS ARE FOR CITY USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

STAGE 2 – B04 DESIGN SUBMISSION

GENERAL PLANS
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Designed by: MB	
Drawn by: JV	
Checked by: MD	
Date: 07/13/2018	
Dwg scale: NTS	
CIP No.: AV10000011	
KIVA No.: 07–5204	

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V3 – 232	TBSB0626	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 233	TBSB0627	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 234	TBSB0628	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 235	TBSB0629	24TH STREET STATION, STRUCTURAL, ELEVATOR/STAIR TOWER SECTIONS
V3 – 236	TBSB0630	24TH STREET STATION, STRUCTURAL, ENLARGED PLANS
V3 – 237	TBSB0631	24TH STREET STATION, STRUCTURAL, ENLARGED LOW ROOF FRAMING PLAN
V3 – 238	TBSB0632	24TH STREET STATION, STRUCTURAL, STRUCTURAL STAIR FRAMING
V3 – 239	TBSB0640	24TH STREET STATION, STRUCTURAL, PARTIAL GUIDEWAY PLANS AND SECTIONS
V3 – 240	TBSB0710	24TH STREET STATION, STRUCTURAL, FOUNDATION MISCELLANUOUS CONCRETE
V3 – 241	TBSB0720	24TH STREET STATION, STRUCTURAL, FOUNDATION CONCRETE SLAB ON GRAGE
V3 – 242	TBSB0721	24TH STREET STATION, STRUCTURAL, FOUNDATION SECTIONS AND DETAILS
V3 – 243	TBSB0722	24TH STREET STATION, STRUCTURAL, FOUNDATION SECTIONS AND DETAILS
V3 – 244	TBSB0723	24TH STREET STATION, STRUCTURAL, SECTIONS AND DETAILS
V3 – 245	TBSB0730	24TH STREET STATION, STRUCTURAL, FOUNDATION WALL FOOTINGS
V3 – 246	TBSB0810	24TH STREET STATION, STRUCTURAL, MASONRY DETAILS I
V3 – 247	TBSB0830	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
V3 – 248	TBSB0902	24TH STREET STATION, STRUCTURAL, FOUNDATION CONCRETE WALLS
V3 – 249	TBSB0903	24TH STREET STATION, STRUCTURAL, FOUNDATION CONCRETE WALLS
V3 – 250	TBSB0910	24TH STREET STATION, STRUCTURAL, FRAMING BEAM ELEVATIONS I
V3 – 251	TBSB0911	24TH STREET STATION, STRUCTURAL, GUIDEWAY DECK SLAB DRAINAGE PLAN AND SECTIONS
V3 – 252	TBSB0912	24TH STREET STATION, STRUCTURAL, FRAMING BEAM ELEVATIONS II
V3 – 253	TBSB0913	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
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V3 – 255	TBSB0915	24TH STREET STATION, STRUCTURAL, FRAMING BEAM ELEVATIONS IV
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V3 – 266	TBSB0927	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
V3 – 267	TBSB0928	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
V3 – 268	TBSB0929	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
V3 – 269	TBSB0930	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
V3 – 270	TBSB0931	24TH STREET STATION, STRUCTURAL, FRAMING SECTIONS AND DETAILS
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V4 – 015	TBME0002	24TH STREET STATION, MECHANICAL, GENERAL NOTES
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V4 – 017	TBME021B	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 1 – AREA B
V4 – 018	TBME021C	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 1 – AREA C
V4 – 019	TBME021D	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 1 – AREA D
V4 – 020	TBME021E	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 1 – AREA E
V4 – 021	TBME021F	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 1 – AREA F
V4 – 022	TBME022A	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LOW ROOF LEVEL –, AREA A
V4 – 023	TBME022B	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 2 – AREA B
V4 – 024	TBME022E	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 2 – AREA E
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V4 – 026	TBME023B	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 4 – AREA B
V4 – 027	TBME023C	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 4 – AREA C
V4 – 028	TBME023D	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 4 – AREA D
V4 – 029	TBME023E	24TH STREET STATION, MECHANICAL, FLOOR PLAN – LEVEL 4 – AREA E
V4 – 030	TBME024B	24TH STREET STATION, MECHANICAL, FLOOR PLAN – ROOF LEVEL –, AREA B
V4 – 031	TBME024C	24TH STREET STATION, MECHANICAL, FLOOR PLAN – ROOF LEVEL –, AREA C
V4 – 032	TBME024D	24TH STREET STATION, MECHANICAL, FLOOR PLAN – ROOF LEVEL –, AREA D
V4 – 033	TBME024E	24TH STREET STATION, MECHANICAL, FLOOR PLAN – ROOF LEVEL – AREA, E
V4 – 034	TBME030	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 1 BELOW, GRADE
V4 – 035	TBME031A	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 1 – AREA A
V4 – 036	TBME031B	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 1 – AREA B
V4 – 037	TBME031E	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 1 – AREA E
V4 – 038	TBME031F	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 1 – AREA F
V4 – 039	TBME032A	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 2 – AREA A
V4 – 040	TBME032F	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 2 – AREA F
V4 – 041	TBME033B	24TH STREET STATION, MECHANICAL, PIPING PLAN – LEVEL 4 – AREA B
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V4 – 044	TBME0802	24TH STREET STATION, MECHANICAL, EQUIPMENT SCHEDULES
V4 – 045	TBME0803	24TH STREET STATION, MECHANICAL, EQUIPMENT SCHEDULES
V4 – 046	TBME0804	24TH STREET STATION, MECHANICAL, DETAILS
V4 – 047	TBME0805	24TH STREET STATION, MECHANICAL, DETAILS
V4 – 048	TBME0806	24TH STREET STATION, MECHANICAL, DETAILS
V4 – 049	TBME0807	24TH STREET STATION, MECHANICAL, DETAILS
V4 – 050	TBME0901	24TH STREET STATION, MECHANICAL, CONTROL DIAGRAMS
V4 – 051	TBME0902	24TH STREET STATION, MECHANICAL, CONTROL DIAGRAMS

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V4 – 053	TBEL0002	24TH STREET STATION, ELECTRICAL, SYMBOL LIST
V4 – 054	TBEL0301	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA A
V4 – 055	TBEL0302	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA B
V4 – 056	TBEL0303	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA C
V4 – 057	TBEL0304	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA D
V4 – 058	TBEL0305	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA E
V4 – 059	TBEL0306	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA F
V4 – 060	TBEL0307	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA B
V4 – 061	TBEL0308	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA C
V4 – 062	TBEL0309	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA D
V4 – 063	TBEL0310	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA E
V4 – 064	TBEL0311	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA B
V4 – 065	TBEL0312	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA E
V4 – 066	TBEL0313	24TH STREET STATION, LIGHTING FLOOR PLAN, ELECTRICAL, ELEVATOR SHAFT DETAILS
V4 – 067	TBEL0401	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA A
V4 – 068	TBEL0402	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA B
V4 – 069	TBEL0403	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA C
V4 – 070	TBEL0404	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA D
V4 – 071	TBEL0405	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA E
V4 – 072	TBEL0406	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA F
V4 – 073	TBEL0407	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA B
V4 – 074	TBEL0408	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA C
V4 – 075	TBEL0409	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA D
V4 – 076	TBEL0410	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA E
V4 – 077	TBEL0411	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA B
V4 – 078	TBEL0412	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA E
V4 – 079	TBEL0413	24TH STREET STATION, POWER FLOOR PLAN, ELECTRICAL, ELEVATOR SHAFT DETAILS
V4 – 080	TBEL0414	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA A
V4 – 081	TBEL0415	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA B
V4 – 082	TBEL0416	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA C
V4 – 083	TBEL0417	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA D
V4 – 084	TBEL0418	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLAZA LEVEL, AREA E
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V4 – 086	TBEL0420	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA B
V4 – 087	TBEL0421	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, PLATFORM LEVEL, AREA E
V4 – 088	TBEL0422	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA B
V4 – 089	TBEL0423	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, BRIDGE LEVEL, AREA E
V4 – 090	TBEL0424	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 1, AREA A
V4 – 091	TBEL0425	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 1, AREA B
V4 – 092	TBEL0426	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 1, AREA E
V4 – 093	TBEL0427	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 1, AREA F
V4 – 094	TBEL0428	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 4, AREA B
V4 – 095	TBEL0429	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 4, AREA C
V4 – 096	TBEL0430	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 4, AREA D
V4 – 097	TBEL0431	24TH STREET STATION, MECHANICAL POWER FLOOR PLAN, ELECTRICAL, ROOF PLAN LEVEL 4, AREA E
V4 – 098	TBEL0901	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 099	TBEL0902	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 100	TBEL0903	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 101	TBEL0904	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 102	TBEL0905	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 103	TBEL0906	24TH STREET STATION, PANEL SCHEDULES, ELECTRICAL
V4 – 104	TBEL0907	24TH STREET STATION, PANEL SCHEDULES
V4 – 105	TBEL1001	24TH STREET STATION, ELECTRICAL, SINGLE LINE DIAGRAM
V4 – 106	TBEL1002	24TH STREET STATION, ELECTRICAL GROUNDING SINGLE, LINE DIAGRAM AND GROUNDING DETAIL
V4 – 107	TBEL1003	24TH STREET STATION, ELECTRICAL FEEDER SCHEDULE, CONDUIT, AND CONDUCTORS
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V4 – 117	TBEL1013	24TH STREET STATION, ELECTRICAL, DETAILS
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V4 – 123	TBPL0001	24TH STREET STATION, PLUMBING, SYMBOL LIST AND GENERAL, NOTES
V4 – 124	TBPL021A	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 LOW ROOF –, AREA A
V4 – 125	TBPL021B	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 – AREA B
V4 – 126	TBPL021C	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 – AREA C
V4 – 127	TBPL021D	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 – AREA D
V4 – 128	TBPL021E	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 – AREA E
V4 – 129	TBPL021F	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 1 – AREA F

PER CITY OF PHOENIX ORDINANCE G-4390, THESE PLANS ARE FOR CITY 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 Consultant
Gannett Fleming

Design Sub–Consultant

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: MB
Drawn by: JV
Checked by: MD
Date: 07/13/2018
Dwg scale: NTS
CIP No.: AV10000011
KIVA No.: 07–5204

STAGE 2 – B04 DESIGN SUBMISSION

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V4 – 133	TBPL022D	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 2 – AREA D
V4 – 134	TBPL022E	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 2 – AREA E
V4 – 135	TBPL022F	24TH STREET STATION, PLUMBING, FLOOR PLAN – ROOF LEVEL – AREA, F
V4 – 136	TBPL023B	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 3 – AREA B
V4 – 137	TBPL023C	24TH STREET STATION, PLUMBING, FLOOR PLAN – ROOF LEVEL – AREA, C
V4 – 138	TBPL023D	24TH STREET STATION, PLUMBING, FLOOR PLAN – ROOF LEVEL – AREA, D
V4 – 139	TBPL023E	24TH STREET STATION, PLUMBING, FLOOR PLAN – LEVEL 3 – AREA E
V4 – 140	TBPL024B	24TH STREET STATION, PLUMBING, FLOOR PLAN – ROOF LEVEL – AREA, B
V4 – 141	TBPL024E	24TH STREET STATION, PLUMBING, FLOOR PLAN – ROOF LEVEL – AREA, E
V4 – 142	TBPL0503	24TH STREET STATION, PLUMBING, ROOF & OVERFLOW DRAINS, ISOMETRICS
V4 – 143	TBPL0505	24TH STREET STATION, PLUMBING, MAIN BUILDING ISOMETRICS
V4 – 144	TBPL0509	24TH STREET STATION, PLUMBING, SECTIONS
V4 – 145	TBPL0510	24TH STREET STATION, PLUMBING, DETAILS

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V4 – 147	TBFP031A	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA A
V4 – 148	TBFP031B	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA B
V4 – 149	TBFP031C	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA C
V4 – 150	TBFP031D	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA D
V4 – 151	TBFP031E	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA E
V4 – 152	TBFP031F	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – STREET – LEVEL, 1 – AREA F
V4 – 153	TBFP032B	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – PLATFORM –, LEVEL 2 – AREA B
V4 – 154	TBFP032E	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – PLATFORM –, LEVEL 2 – AREA E
V4 – 155	TBFP034B	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – BRIDGE – LEVEL, 4 – AREA B
V4 – 156	TBFP034C	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – BRIDGE – LEVEL, 4 – AREA C
V4 – 157	TBFP034D	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – BRIDGE – LEVEL, 4 – AREA D
V4 – 158	TBFP034E	24TH STREET STATION, FIRE SPRINKLER, FIRE SPRINKLER PLAN – BRIDGE – LEVEL, 4 – AREA E
V4 – 159	TBFA0001	24TH STREET STATION, FIRE ALARM, FIRE PROTECTION NARRATIVE
V4 – 160	TBFA0002	24TH STREET STATION, FIRE ALARM, FIRE ALARM RISER
V4 – 161	TBFA0003	24TH STREET STATION, FIRE ALARM, FIRE ALARM MATRIX
V4 – 162	TBFA031A	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA A
V4 – 163	TBFA031B	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA B
V4 – 164	TBFA031C	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA C
V4 – 165	TBFA031D	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA D
V4 – 166	TBFA031E	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA E
V4 – 167	TBFA031F	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – STREET – LEVEL 1 –, AREA F
V4 – 168	TBFA032B	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – PLATFORM – LEVEL, 2 – AREA B
V4 – 169	TBFA032E	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – PLATFORM – LEVEL, 2 – AREA E
V4 – 170	TBFA034B	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – BRIDGE – LEVEL 4 –, AREA B
V4 – 171	TBFA034C	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – BRIDGE – LEVEL 4 –, AREA C
V4 – 172	TBFA034D	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – BRIDGE – LEVEL 4 –, AREA D
V4 – 173	TBFA034E	24TH STREET STATION, FIRE ALARM, FIRE ALARM PLAN – BRIDGE – LEVEL 4 –, AREA E
V4 – 174	TBLS0001	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY CODE SUMMARY
V4 – 175	TBLS0031	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, OVERALL
V4 – 176	TBLS0031A	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA A
V4 – 177	TBLS0031B	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA B
V4 – 178	TBLS0031C	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA C
V4 – 179	TBLS0031D	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA D
V4 – 180	TBLS0031E	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA E
V4 – 181	TBLS0031F	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 1 –, AREA F
V4 – 182	TBLS0032	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL, 2 – OVERALL
V4 – 183	TBLS0032B	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL, 2 – AREA B
V4 – 184	TBLS0032C	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL, 2 – AREA C
V4 – 185	TBLS0032D	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL, 2 – AREA D
V4 – 186	TBLES0032E	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL, 2 – AREA E
V4 – 187	TBLS0034	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 4–, OVERALL
V4 – 188	TBLS0034B	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 4–, AREA B
V4 – 189	TBLS0034E	24TH STREET STATION, LIFE SAFETY, LIFE SAFETY PLAN – STREET – LEVEL 4–, AREA E

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V4 – 190	TBC00001	24TH STREET STATION, COMMUNICATIONS, GENERAL NOTES AND LEGEND
V4 – 191	TBC00201	24TH STREET STATION, KEY MAP, COMMUNICATIONS
V4 – 192	TBC00301	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA A
V4 – 193	TBC00302	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA B
V4 – 194	TBC00303	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA C
V4 – 195	TBC00304	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA D
V4 – 196	TBC00305	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA E
V4 – 197	TBC00306	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLAZA LEVEL, AREA F
V4 – 198	TBC00307	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLATFORM LEVEL, AREA B
V4 – 199	TBC00308	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLATFORM LEVEL, AREA C
V4 – 200	TBC00309	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLATFORM LEVEL, AREA D
V4 – 201	TBC00310	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, PLATFORM LEVEL, AREA E
V4 – 202	TBC00311	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, BRIDGE LEVEL, AREA B
V4 – 203	TBC00312	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, BRIDGE LEVEL, AREA E
V4 – 204	TBC00313	24TH STREET STATION, FLOOR PLAN, COMMUNICATIONS, IDF ROOM DETAILS
V4 – 205	TBC00801	24TH STREET STATION, COMMUNICATIONS DETAILS, PEDS/AED
V4 – 206	TBC00802	24TH STREET STATION, COMMUNICATIONS DETAILS, IDF GROUNDING DETAILS
V4 – 207	TBC00803	24TH STREET STATION, COMMUNICATIONS DETAILS, CABINET POWER OUTLET
V4 – 208	TBC00804	24TH STREET STATION, COMMUNICATIONS DETAILS, SECURE DOORS
V4 – 209	TBC00805	24TH STREET STATION, COMMUNICATIONS DETAILS, SECURE DOORS
V4 – 210	TBC00806	24TH STREET STATION, COMMUNICATIONS DETAILS, EMERGENCY EXIT FROM TRACK AREA
V4 – 211	TBC00807	24TH STREET STATION, COMMUNICATIONS DETAILS, EMERGENCY EXIT FROM TRACK AREA
V4 – 212	TBC00808	24TH STREET STATION, COMMUNICATIONS DETAILS, COPPER WALL FIELD
V4 – 213	TBC00809	24TH STREET STATION, COMMUNICATIONS DETAILS, MANHOLE AND PULL BOX DETAILS

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V4 – 215	TBAV0002	24TH STREET STATION, MASS NOTIFICATION (ECS), POWER & GROUNDING DETAILS
V4 – 216	TBAV0010	24TH STREET STATION, MASS NOTIFICATION (ECS), CABLING RISER DIAGRAM
V4 – 217	TBAV0011	24TH STREET STATION, MASS NOTIFICATION (ECS), CONDUIT RISER DIAGRAM
V4 – 218	TBAV0101	24TH STREET STATION, MASS NOTIFICATION (ECS), FLOOR PLAN, CURB LEVEL
V4 – 219	TBAV0102	24TH STREET STATION, MASS NOTIFICATION (ECS), FLOOR PLAN, PLATFORM LEVEL
V4 – 220	TBAV0201	24TH STREET STATION, MASS NOTIFICATION (ECS), REFLECTED CEILING PLAN, CURB LEVEL
V4 – 221	TBAV0202	24TH STREET STATION, MASS NOTIFICATION (ECS), REFLECTED CEILING PLAN, PLATFORM LEVEL
V4 – 222	TBAV0203	24TH STREET STATION, MASS NOTIFICATION (ECS), REFLECTED CEILING PLAN, BRIDGE LEVEL
V4 – 223	TBAV0301	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, CURB LEVEL AREA B
V4 – 224	TBAV0302	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, CURB LEVEL AREA C
V4 – 225	TBAV0303	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, CURB LEVEL AREA D
V4 – 226	TBAV0304	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, CURB LEVEL AREA E
V4 – 227	TBAV0305	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED FLOOR PLAN, PLATFORM LEVEL AREA C
V4 – 228	TBAV0306	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED FLOOR PLAN, PLATFORM LEVEL AREA D
V4 – 229	TBAV0307	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, PLATFORM LEVEL AREA B
V4 – 230	TBAV0308	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, PLATFORM LEVEL AREA C
V4 – 231	TBAV0309	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, PLATFORM LEVEL AREA D
V4 – 232	TBAV0310	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, PLATFORM LEVEL AREA E
V4 – 233	TBAV0311	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, BRIDGE LEVEL AREA B
V4 – 234	TBAV0312	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLAN, BRIDGE LEVEL AREA E
V4 – 235	TBAV0313	24TH STREET STATION, MASS NOTIFICATION (ECS), ENLARGED PLANS, IDF ROOMS
V4 – 236	TBAV0401	24TH STREET STATION, MASS NOTIFICATION (ECS), ELEVATIONS AND SECTIONS, PLATFORM LEVEL
V4 – 237	TBAV0402	24TH STREET STATION, MASS NOTIFICATION (ECS), ELEVATIONS AND SECTIONS, EXTERIOR LOBBIES
V4 – 238	TBAV0501	24TH STREET STATION, MASS NOTIFICATION (ECS), FUNCTION DIAGRAM
V4 – 239	TBAV0502	24TH STREET STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V4 – 240	TBAV0503	24TH STREET STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V4 – 241	TBAV0504	24TH STREET STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V4 – 242	TBAV0505	24TH STREET STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V4 – 243	TBAV0506	24TH STREET STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V4 – 244	TBAV0701	24TH STREET STATION, MASS NOTIFICATION (ECS), RACK ELEVATIONS
V4 – 245	TBAV0801	24TH STREET STATION, MASS NOTIFICATION (ECS), MOUNTING DETAILS

VOLUME 5

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V5 – 026	RBAR0220	RCC STATION, ARCHITECTURAL, OVERALL PLANS – GROUND – LEVEL 1, AND LOW ROOF – LEVEL 2
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V5 – 028	RBAR0240	RCC STATION, ARCHITECTURAL, OVERALL PLAN – ROOF – LEVEL R
V5 – 029	RBAR031A	RCC STATION, ARCHITECTURAL, FLOOR PLAN – GROUND – LEVEL 1 – AREA, A
V5 – 030	RBAR031D	RCC STATION, ARCHITECTURAL, FLOOR PLAN – GROUND – LEVEL 1 – AREA, D
V5 – 031	RBAR032A	RCC STATION, ARCHITECTURAL, FLOOR PLAN – LOW ROOF – LEVEL 2 –, AREA A
V5 – 032	RBAR032D	RCC STATION, ARCHITECTURAL, FLOOR PLAN – LOW ROOF – LEVEL 2 –, AREA D
V5 – 033	RBAR033A	RCC STATION, ARCHITECTURAL, FLOOR PLAN – PARKING – LEVEL 2.5 –, AREA A
V5 – 034	RBAR034A	RCC STATION, ARCHITECTURAL, FLOOR PLAN – PLATFORM – LEVEL 4 –, AREA A
V5 – 035	RBAR034B	RCC STATION, ARCHITECTURAL, FLOOR PLAN – PLATFORM – LEVEL 4 –, AREA B
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V5 – 037	RBAR034E	RCC STATION, ARCHITECTURAL, FLOOR PLAN – PLATFORM – LEVEL 4 –, AREA E
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V5 – 040	RBAR035B	RCC STATION, ARCHITECTURAL, ROOF PLAN – LEVEL R – AREA B
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub–Consultant

Design Consultant

Gannett Fleming

REGISTERED PROFESSIONAL ENGINEER (CIVIL) MARK PILWALLIS 28174 EXPIRES 6/30/2019

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07–5204

STAGE 2 – B04 DESIGN SUBMISSION

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V5 – 062	RBAR0812	RCC STATION, ARCHITECTURAL, INTERIOR ELEVATIONS – SOUTH –, PLATFORM
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V5 – 064	RBAR0960	RCC STATION, ARCHITECTURAL, LONGITUDINAL SECTIONS – STATION
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V5 – 073	RBAR104A	RCC STATION, ARCHITECTURAL, REFLECTED CEILING PLAN – PLATFORM –, LEVEL 4 – AREA A
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V5 – 080	RBAR1208	RCC STATION, ARCHITECTURAL, EXTERIOR DETAILS – ROOF DRAIN, LEADER
V5 – 081	RBAR1210	RCC STATION, ARCHITECTURAL, EXTERIOR DETAILS – ROOF
V5 – 082	RBAR1211	RCC STATION, ARCHITECTURAL, EXTERIOR DETAILS – ROOF
V5 – 083	RBAR1212	RCC STATION, ARCHITECTURAL, EXTERIOR DETAILS – ROOF
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V5 – 085	RBAR1214	RCC STATION, ARCHITECTURAL, EXTERIOR DETAILS – ROOF
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V5 – 094	RBAR1312	RCC STATION, ARCHITECTURAL, INTERIOR DETAILS – PARTITIONS AND, WALL FINISH SYSTEMS
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub–Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07–5204

STAGE 2 – B04 DESIGN SUBMISSION

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V6 – 124	RBFA032A	RCC STATION, FIRE ALARM, FIRE ALARM PLAN, LEVEL 2.5 – AREA A
V6 – 125	RBFA034A	RCC STATION, FIRE ALARM, FIRE ALARM PLAN, PLATFORM LEVEL – AREA A
V6 – 126	RBFA034B	RCC STATION, FIRE ALARM, FIRE ALARM PLAN, PLATFORM LEVEL – AREA B
V6 – 127	RBFA034C	RCC STATION, FIRE ALARM, FIRE ALARM PLAN, PLATFORM LEVEL – AREA C
V6 – 128	RBLS0001	RCC STATION, LIFE SAFETY, LIFE SAFETY PLAN, CODE SUMMARY
V6 – 129	RBLS0031	RCC STATION, LIFE SAFETY, LIFE SAFETY PLAN, LEVEL 1 – OVERALL
V6 – 130	RBLS0032	RCC STATION, LIFE SAFETY, LIFE SAFETY PLAN, LEVEL 2.5 – OVERALL
V6 – 131	RBLS0034	RCC STATION, LIFE SAFETY, LIFE SAFETY PLAN, PLATFORM LEVEL – OVERALL

COMMUNICATION

V6 – 132	RBC00001	RCC STATION, COMMUNICATIONS, GENERAL NOTES AND LEGEND
V6 – 133	RBC0030A	RCC STATION, KEY MAP, COMMUNICATIONS
V6 – 134	RBC0031A	RCC STATION, SITE PLAN, COMMUNICATIONS, LEVEL 1, AREA A AND AREA D
V6 – 135	RBC0034A	RCC STATION, SITE PLAN, COMMUNICATIONS, LEVEL 4 – PLATFORM, AREA A
V6 – 136	RBC0034B	RCC STATION, SITE PLAN, COMMUNICATIONS, LEVEL 4 – PLATFORM, AREA B
V6 – 137	RBC0034C	RCC STATION, SITE PLAN, COMMUNICATIONS, LEVEL 4 – PLATFORM, AREA C
V6 – 138	RBC0061A	RCC STATION, SITE PLAN, COMMUNICATIONS, LEVEL 1 – ENLARGED PLAN, ATC, ELECTRICAL, AND MECHANICAL, ROOMS
V6 – 139	RBC0062A	RCC STATION, DETAILS SITE PLAN, COMMUNICATIONS ENLARGED PLAN, CORE BUILDING AND IDF ROOM, AND PUMP ROOM
V6 – 140	RBC00401	RCC STATION, SECTIONS, COMMUNICATIONS, CONDUIT ROUTING
V6 – 141	RBEL0201	RCC STATION, PRIMARY STATION FEEDER, SITE PLAN, ELECTRICAL
V6 – 142	RBEL0301	RCC STATION, KEY MAP, LIGHTING
V6 – 143	RBC00801	RCC STATION, COMMUNICATIONS DETAILS, PEDS/AED
V6 – 144	RBC00802	RCC STATION, COMMUNICATIONS DETAILS, IDF GROUNDING DETAILS
V6 – 145	RBC00803	RCC STATION, COMMUNICATIONS DETAILS, SECURE DOORS
V6 – 146	RBC00804	RCC STATION, COMMUNICATIONS DETAILS, SECURE DOORS
V6 – 147	RBC00805	RCC STATION, COMMUNICATIONS DETAILS, EMERGENCY EXIT FROM TRAIN AREA
V6 – 148	RBC00806	RCC STATION, COMMUNICATIONS DETAILS, MANHOLE AND PULLBOX DETAILS
V6 – 149	RBC00807	RCC STATION, COMMUNICATIONS DETAILS, CABINET POWER OUTLET
V6 – 150	RBC00808	RCC STATION, COMMUNICATIONS DETAILS, COPPER WALL FIELD

MASS NOTIFICATION (ECS)

V6 – 151	RBAV0001	RCC STATION, MASS NOTIFICATION (ECS), GENERAL NOTES & SCHEDULES
V6 – 152	RBAV0002	RCC STATION, MASS NOTIFICATION (ECS), POWER & GROUNDING DETAILS
V6 – 153	RBAV0010	RCC STATION, MASS NOTIFICATION (ECS), CABLING RISER DIAGRAM
V6 – 154	RBAV0011	RCC STATION, MASS NOTIFICATION (ECS), CONDUIT RISER DIAGRAM
V6 – 155	RBAV0101	RCC STATION, MASS NOTIFICATION (ECS), OVERALL CALLOUT PLANS, VISITOR PARKING LEVEL
V6 – 156	RBAV0102	RCC STATION, MASS NOTIFICATION (ECS), OVERALL CALLOUT PLANS, PLATFORM LEVEL
V6 – 157	RBAV0301	RCC STATION, MASS NOTIFICATION (ECS), ENLARGED FLOOR PLANS, PLATFORM LEVEL (AREA A)
V6 – 158	RBAV0302	RCC STATION, MASS NOTIFICATION (ECS), ENLARGED FLOOR PLANS, PLATFORM LEVEL (AREA B)
V6 – 159	RBAV0303	RCC STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLANS, PLATFORM LEVEL (AREA A)
V6 – 160	RBAV0304	RCC STATION, MASS NOTIFICATION (ECS), ENLARGED REFLECTED CEILING PLANS, PLATFORM LEVEL (AREA B)
V6 – 161	RBAV0305	RCC STATION, MASS NOTIFICATION (ECS), ENLARGED PLANS, IDF ROOM
V6 – 162	RBAV0401	RCC STATION, MASS NOTIFICATION (ECS), ELEVATIONS AND SECTIONS, PLATFORM LEVEL (AREA A)
V6 – 163	RBAV0402	RCC STATION, MASS NOTIFICATION (ECS), ELEVATIONS AND SECTIONS, PLATFORM LEVEL (AREA B)
V6 – 164	RBAV0501	RCC STATION, MASS NOTIFICATION (ECS), FUNCTION DIAGRAM
V6 – 165	RBAV0502	RCC STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V6 – 166	RBAV0503	RCC STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V6 – 167	RBAV0504	RCC STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V6 – 168	RBAV0505	RCC STATION, MASS NOTIFICATION (ECS), SINGLE LINE DIAGRAMS
V6 – 169	RBAV0701	RCC STATION, MASS NOTIFICATION (ECS), RACK ELEVATIONS
V6 – 170	RBAV0801	RCC STATION, MASS NOTIFICATION (ECS), MOUNTING DETAILS
V6 – 171	RBAV0802	RCC STATION, MASS NOTIFICATION (ECS), MOUNTING DETAILS

WEST TERMINAL STATION

ARCHITECTURAL

V6 – 172	WBAR033E	WEST TERMINAL STATION, ARCHITECTURAL, FLOOR PLAN – APRON – LEVEL 3 – AREA E
V6 – 173	WBAR0601	WEST TERMINAL STATION, ARCHITECTURAL, ENLARGED PLANS – STAIR
V6 – 174	WBAR0602	WEST TERMINAL STATION, ARCHITECTURAL, ENLARGED PLANS – STAIR
V6 – 175	WBAR0603	WEST TERMINAL STATION, ARCHITECTURAL, ENLARGED SECTION – STAIR
V6 – 176	WBAR1201	WEST TERMINAL STATION, ARCHITECTURAL, STAIRS AND RAILING SYSTEMS
V6 – 177	WBAR1202	WEST TERMINAL STATION, ARCHITECTURAL, STAIRS AND RAILING SYSTEMS

PER CITY OF PHOENIX ORDINANCE G-4390, THESE PLANS ARE FOR CITY USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant
Gannett Fleming

Design Sub–Consultant

PROFESSIONAL ENGINEER (CIVIL) MARK PILWALLIS 28174 EXPIRES 6/30/2019

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07–5204

STAGE 2 – B04 DESIGN SUBMISSION

GENERAL PLANS
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STRUCTURAL

V6 – 178	WBSB0006	WEST TERMINAL STATION, STRUCTURAL, GENERAL NOTES I
V6 – 179	WBSB0007	WEST TERMINAL STATION, STRUCTURAL, GENERAL NOTES II
V6 – 180	WBSB0008	WEST TERMINAL STATION, STRUCTURAL, GENERAL NOTES III
V6 – 181	WBSB0009	WEST TERMINAL STATION, STRUCTURAL, ABBREVIATIONS
V6 – 182	WBSB0011	WEST TERMINAL STATION, STRUCTURAL, FUTURE BAGGAGE CLAIM LEVEL, FLOOR LOADING MAPS
V6 – 183	WBSB0012	WEST TERMINAL STATION, STRUCTURAL, FUTURE ARRIVALS LEVEL, FLOOR LOADING MAPS
V6 – 184	WBSB0013	WEST TERMINAL STATION, STRUCTURAL, FUTURE DEPARTURES LEVEL, FLOOR LOADING MAPS
V6 – 185	WBSB0015	WEST TERMINAL STATION, STRUCTURAL, FUTURE SECURITY AND BRIDGE LEVEL, FLOOR LOADING MAPS
V6 – 186	WBSB0016	WEST TERMINAL STATION, STRUCTURAL, FUTURE CONCOURSE BRIDGE/, TERMINAL ROOF BELOW GUIDEWAY, FLOOR LOADING MAPS
V6 – 187	WBSB0017	WEST TERMINAL STATION, STRUCTURAL, FUTURE TERMINAL ROOF, FLOOR LOADING MAPS
V6 – 188	WBSB0018	WEST TERMINAL STATION, STRUCTURAL, FUTURE STATION, PLATFORM AND ROOF LEVEL, FLOOR LOADING MAPS
V6 – 189	WBSB0300	WEST TERMINAL STATION, STRUCTURAL, OVERALL GUIDEWAY LEVEL
V6 – 190	WBSB0301	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA A
V6 – 191	WBSB0302	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA B
V6 – 192	WBSB0303	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA C
V6 – 193	WBSB0304	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA D
V6 – 194	WBSB0305	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA E
V6 – 195	WBSB0306	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY LEVEL AREA F
V6 – 196	WBSB0510	WEST TERMINAL STATION, STRUCTURAL, TYPICAL STATION SECTION
V6 – 197	WBSB0511	WEST TERMINAL STATION, STRUCTURAL, PROPOSED DESIGN OF FUTURE, TERMINAL
V6 – 198	WBSB0512	WEST TERMINAL STATION, STRUCTURAL, EMERGENCY STAIR SECTIONS
V6 – 199	WBSB0600	WEST TERMINAL STATION, STRUCTURAL, ENLARGED PLANS – AREA E, EMERGENCY STAIRS FRAMING
V6 – 200	WBSB0601	WEST TERMINAL STATION, STRUCTURAL, PARTIAL GUIDEWAY PLANS AND, SECTIONS
V6 – 201	WBSB0910	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY GIRDER DETAILS
V6 – 202	WBSB0911	WEST TERMINAL STATION, STRUCTURAL, GIRDER DETAILS/ELEVATIONS
V6 – 203	WBSB0912	WEST TERMINAL STATION, STRUCTURAL, GIRDER DETAILS/ELEVATIONS
V6 – 204	WBSB0913	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY GIRDER DETAILS
V6 – 205	WBSB0914	WEST TERMINAL STATION, STRUCTURAL, GUIDEWAY GIRDER DETAILS
V6 – 206	WBSB0980	WEST TERMINAL STATION, STRUCTURAL, STRUCTURAL STAIR FRAMING DETAILS

PLUMBING

V6 – 207	WBPL0001	WEST TERMINAL STATION, PLUMBING, SYMBOLS LEGEND AND ABBREVIATIONS
V6 – 208	WBPL0301	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA A
V6 – 209	WBPL0302	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA B
V6 – 210	WBPL0303	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA C
V6 – 211	WBPL0304	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA D
V6 – 212	WBPL0305	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA E
V6 – 213	WBPL0306	WEST TERMINAL STATION, PLUMBING, GUIDEWAY LEVEL AREA F
V6 – 214	WBPL0401	WEST TERMINAL STATION, PLUMBING, SECTIONS
V6 – 215	WBPL0402	WEST TERMINAL STATION, PLUMBING, SECTIONS
V6 – 216	WBPL0501	WEST TERMINAL STATION, PLUMBING, GUIDEWAY ISOMETRIC

COB - CENTRAL PLANT BUILDING

ARCHITECTURAL

V6 – 217	ACAR0001	COB – CENTRAL PLANT BUILDING, ARCHITECTURAL, GENERAL NOTES
V6 – 218	ACAR0301	COB – CENTRAL PLANT BUILDING, ARCHITECTURAL, FLOOR PLAN, ROOF PLAN, ELEVATIONS, SECTION
V6 – 219	ACAR1201	COB – CENTRAL PLANT BUILDING, ARCHITECTURAL, DETAILS

STRUCTURAL

V6 – 220	ACSB0001	COB – CENTRAL PLANT BUILDING, STRUCTURAL, GENERAL STRUCTURAL NOTES I
V6 – 221	ACSB0002	COB – CENTRAL PLANT BUILDING, STRUCTURAL, GENERAL STRUCTURAL NOTES II
V6 – 222	ACSB0003	COB – CENTRAL PLANT BUILDING, STRUCTURAL, GENERAL STRUCTURAL NOTES III
V6 – 223	ACSB0004	COB – CENTRAL PLANT BUILDING, STRUCTURAL, GENERAL STRUCTURAL NOTES IV
V6 – 224	ACSB0100	COB – CENTRAL PLANT BUILDING, STRUCTURAL, DEMOLITION PLAN
V6 – 225	ACSB0200	COB – CENTRAL PLANT BUILDING, STRUCTURAL, FOUNDATION PLAN
V6 – 226	ACSB0300	COB – CENTRAL PLANT BUILDING, STRUCTURAL, FRAMING PLAN
V6 – 227	ACSB0400	COB – CENTRAL PLANT BUILDING, STRUCTURAL, FULL HEIGHT SECTION
V6 – 228	ACSB0500	COB – CENTRAL PLANT BUILDING, STRUCTURAL, COOLING TOWER SECTIONS
V6 – 229	ACSB0501	COB – CENTRAL PLANT BUILDING, STRUCTURAL, COOLING TOWER SECTIONS
V6 – 230	ACSB0700	COB – CENTRAL PLANT BUILDING, STRUCTURAL, CONCRETE DETAILS
V6 – 231	ACSB0701	COB – CENTRAL PLANT BUILDING, STRUCTURAL, CONCRETE SECTIONS
V6 – 232	ACSB0800	COB – CENTRAL PLANT BUILDING, STRUCTURAL, MASONRY TYPICAL DETAILS
V6 – 233	ACSB0900	COB – CENTRAL PLANT BUILDING, STRUCTURAL, STEEL TYPICAL DETAILS

MECHANICAL

V6 – 234	ACME0001	COB – CENTRAL PLANT BUILDING, MECHANICAL, SYMBOLS LEGEND AND ABBREVIATIONS
V6 – 235	ACME0101	COB – CENTRAL PLANT BUILDING, MECHANICAL, SITE PLAN
V6 – 236	ACMED0201	COB – CENTRAL PLANT BUILDING, MECHANICAL, HVAC DEMOLITION PLAN
V6 – 237	ACME0201	COB – CENTRAL PLANT BUILDING, MECHANICAL, HVAC PLAN
V6 – 238	ACMED0301	COB – CENTRAL PLANT BUILDING, MECHANICAL, PIPING DEMOLITION PLAN
V6 – 239	ACME0301	COB – CENTRAL PLANT BUILDING, MECHANICAL, PIPING PLAN
V6 – 240	ACME0501	COB – CENTRAL PLANT BUILDING, MECHANICAL, DETAILS
V6 – 241	ACME0502	COB – CENTRAL PLANT BUILDING, MECHANICAL, DETAILS
V6 – 242	ACME0503	COB – CENTRAL PLANT BUILDING, MECHANICAL, DETAILS
V6 – 243	ACME0601	COB – CENTRAL PLANT BUILDING, MECHANICAL, PIPING SCHEMATIC
V6 – 244	ACME0701	COB – CENTRAL PLANT BUILDING, MECHANICAL, CONTROLS
V6 – 245	ACME0702	COB – CENTRAL PLANT BUILDING, MECHANICAL, CONTROLS
V6 – 246	ACME0801	COB – CENTRAL PLANT BUILDING, MECHANICAL, SCHEDULES
V6 – 247	ACME0802	COB – CENTRAL PLANT BUILDING, MECHANICAL, SCHEDULES

ELECTRICAL

V6 – 248	ACEL0001	COB – CENTRAL PLANT BUILDING, ELECTRICAL, NOTES
V6 – 249	ACEL0002	COB – CENTRAL PLANT BUILDING, ELECTRICAL SYMBOLS, AND ABBREVIATIONS
V6 – 250	ACEL0301	COB – CENTRAL PLANT BUILDING, LIGHTING FLOOR PLAN, ELECTRICAL
V6 – 251	ACEL0401	COB – CENTRAL PLANT BUILDING, POWER FLOOR PLAN, ELECTRICAL
V6 – 252	ACEL0402	COB – CENTRAL PLANT BUILDING, GROUNDING FLOOR PLAN
V6 – 253	ACEL0901	COB – CENTRAL PLANT BUILDING, ELECTRICAL, PANEL SCHEDULE
V6 – 254	ACEL1001	COB – CENTRAL PLANT BUILDING, ELECTRICAL, SINGLE LINE DIAGRAM – DEMOLITION
V6 – 255	ACEL1002	COB – CENTRAL PLANT BUILDING, ELECTRICAL, SINGLE LINE DIAGRAM – PROPOSED

PLUMBING

V6 – 256	ACPL0001	COB – CENTRAL PLANT BUILDING, PLUMBING, SYMBOLS LEGEND ABBREVIATIONS
V6 – 257	ACPL0002	COB – CENTRAL PLANT BUILDING, PLUMBING, GENERAL AND DEMOLITION NOTES
V6 – 258	ACPLD0201	COB – CENTRAL PLANT BUILDING, PLUMBING, DEMOLITION PLAN
V6 – 259	ACPL0201	COB – CENTRAL PLANT BUILDING, PLUMBING, WASTE AND VENT FLOOR PLAN
V6 – 260	ACPL0202	COB – CENTRAL PLANT BUILDING, PLUMBING, DOMESTIC SERVICES FLOOR PLAN

VOLUME 7

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V7 – 004	MSGN0004	INDEX OF DRAWINGS –3
V7 – 005	MSGN0005	INDEX OF DRAWINGS –4
V7 – 006	MSGN0006	INDEX OF DRAWINGS –5
V7 – 007	MSGN0007	INDEX OF DRAWINGS –6
V7 – 008	MSGN0008	INDEX OF DRAWINGS –7
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V7 – 010	MSGN0010	INDEX OF DRAWINGS –9
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V7 – 012	MSGN0012	HORIZONTAL AND VERTICAL, CONTROL PLAN
V7 – 013	MSGN0013	HORIZONTAL AND VERTICAL, CONTROL PLAN

SECURITY - 24TH STREET STATION

V7 – 014	TBSC0501	24TH STREET STATION, KEY MAP, SECURITY
V7 – 015	TBSC0502	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA A
V7 – 016	TBSC0503	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA B
V7 – 017	TBSC0504	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA C
V7 – 018	TBSC0505	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA D
V7 – 019	TBSC0506	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA E
V7 – 020	TBSC0507	24TH STREET STATION, SECURITY, PLAZA LEVEL, AREA F
V7 – 021	TBSC0508	24TH STREET STATION, SECURITY, PLATFORM LEVEL, AREA B
V7 – 022	TBSC0509	24TH STREET STATION, SECURITY, PLATFORM LEVEL, AREA C
V7 – 023	TBSC0510	24TH STREET STATION, SECURITY, PLATFORM LEVEL, AREA D
V7 – 024	TBSC0511	24TH STREET STATION, SECURITY, PLATFORM LEVEL, AREA E
V7 – 025	TBSC0512	24TH STREET STATION, SECURITY, BRIDGE LEVEL, AREA B
V7 – 026	TBSC0513	24TH STREET STATION, SECURITY, BRIDGE LEVEL, AREA E
V7 – 027	TBSC0801	24TH STREET STATION, SECURITY DETAILS, ACAMS LOGIC DIAGRAM
V7 – 028	TBSC0802	24TH STREET STATION, SECURITY DETAILS, ACAMS LOGIC DIAGRAM
V7 – 029	TBSC0803	24TH STREET STATION, SECURITY, DETAILS
V7 – 030	TBSC0804	24TH STREET STATION, SECURITY, DETAILS
V7 – 031	RBSC0301	RCC STATION,KEY MAP, SECURITY
V7 – 032	RBSC0302	RCC STATION, SECURITY FLOOR PLAN, LEVEL 4 – PLATFORM, AREA A
V7 – 033	RBSC0303	RCC STATION, SECURITY FLOOR PLAN, LEVEL 4 – PLATFORM, AREA B
V7 – 034	RBSC0304	RCC STATION, SECURITY FLOOR PLAN, LEVEL 4 – PLATFORM, AREA C
V7 – 035	RBSC0305	RCC STATION, SECURITY, ENLARGED FLOOR PLAN, CORE BUILDING AND IDF ROOM
V7 – 036	RBSC0306	RCC STATION, SECURITY, LEVEL 1 – ENLARGED PLANS, ATC, ELECTRICAL, AND, MECHANICAL ROOMS
V7 – 037	RBSC0801	RCC STATION, SECURITY, DETAILS
V7 – 038	RBSC0802	RCC STATION, SECURITY, CCTV LOGIC DIAGRAM
V7 – 039	RBSC0803	RCC STATION, SECURITY, DETAILS

PLOT DATE: Jul 10, 2018 FILE PATH: C:\pwworking\gfpw01\mbiggs\d0667700\AV10000011-S-2-MSGNB041.dwg mbiggs

REGISTERED PROFESSIONAL ENGINEER
MARK PILWALLIS
28174
EXPIRES 6/30/2019
Design Sub-Consultant
Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

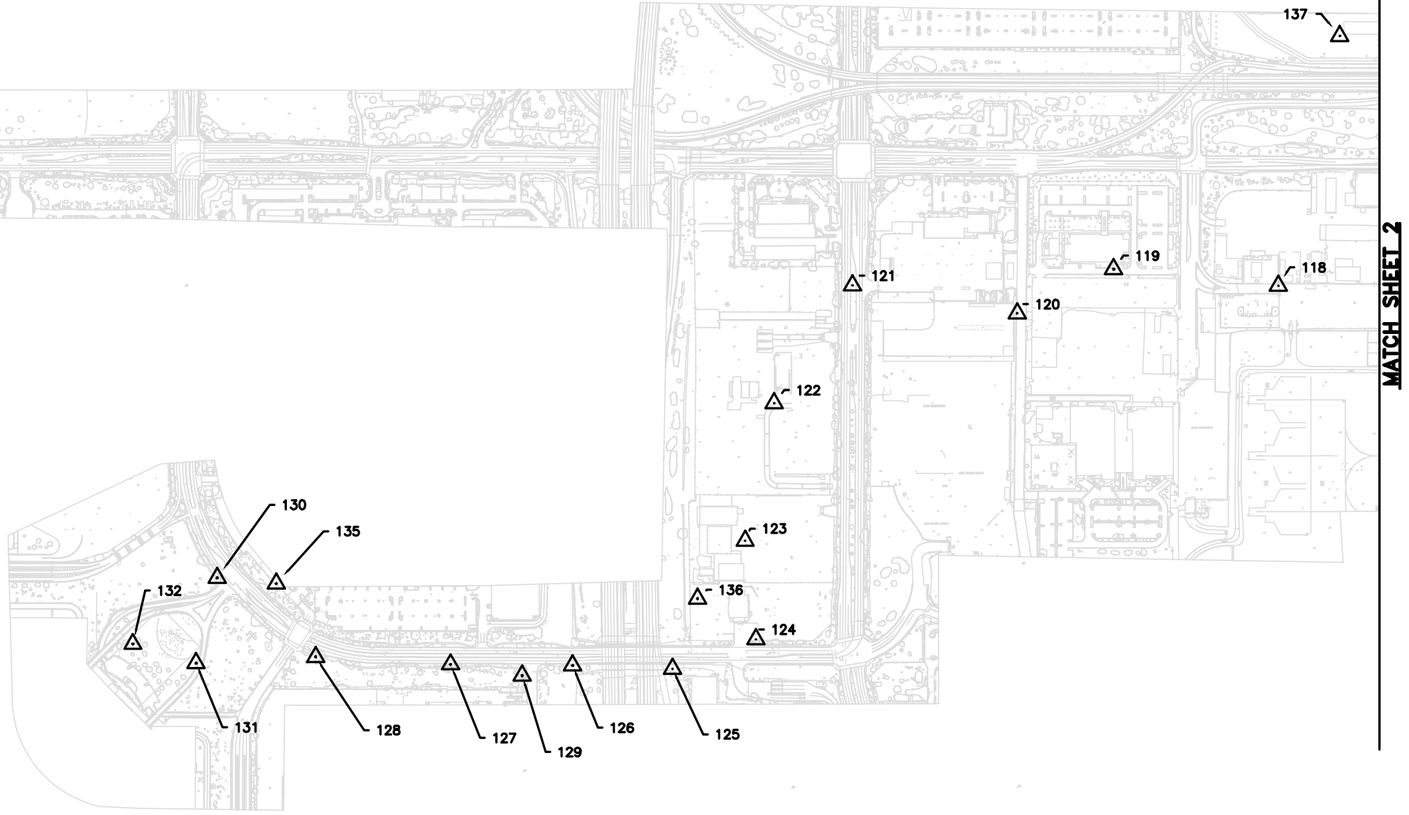
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	MB
Drawn by:	JV
Checked by:	MD
Date:	07/13/2018
Dwg scale:	NTS
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 – B04 DESIGN SUBMISSION

GENERAL PLANS
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GENERAL NOTES

1. ALL COORDINATES LISTED ARE NAD 83 (1992 EPOCH) STATE PLANE GROUND COORDINATES, ARIZONA CENTRAL ZONE, STANDARD TRANSVERSE MERCATOR PROJECTION, WITH A SCALE ORIGIN POINT X=0.000, Y=0.000, USING A COMBINED GRID ADJUSTMENT FACTOR OF 1.0001480129. THESE COORDINATES CAN BE UTILIZED AS GROUND DATUM. TO CONVERT BACK TO GRID COORDINATES DIVIDE THESE VALUES BY 1.0001480129.
2. UNITS = INTERNATIONAL FEET 1 FOOT = .3048 METER EXACTLY
3. THE COORDINATES PRESENTED ON THIS SURVEY ARE SHOWN TO FOUR DECIMAL PLACES FOR CALCULATION PURPOSES, AND ARE NOT A REPRESENTATION OF THE PRECISION OF THE SURVEY MEASUREMENTS.
4. ELEVATIONS LISTED ARE ON THE NAVD 88 VERTICAL DATUM. TO CONVERT TO NGVD 29 ELEVATIONS, SUBTRACT 1.92 FEET FROM THE ELEVATIONS LISTED.
5. THE SURVEY CONTROL POINTS SHOWN ON THIS SHEET WERE ESTABLISHED BY FIELD TRAVERSE METHODS.

BASIS OF BEARING

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

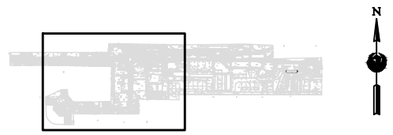
BENCHMARK

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

GRAPHIC SCALE
300 0 150 300 600
(IN FEET)

TABLE 1 STAGE 2 CONTROL

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



Call at least two full working days before you dig to have underground utilities marked
ARIZONA 811

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
ADAM D. REECE
7/13/18
Date Signed
ARIZONA U.S.A.
Expires 3/31/2019

Design Sub-Consultant
AZTEC
4251 E. McDowell Road
Phoenix, AZ 85008-4505
Tel:(602)454-0402
Fax:(602)454-0403
www.aztecus.com

Design Consultant
Gannett Fleming

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

NO.	DATE
REVISIONS / SUBMISSIONS	
SUBMITTED FOR REVIEW	04/06/18
ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

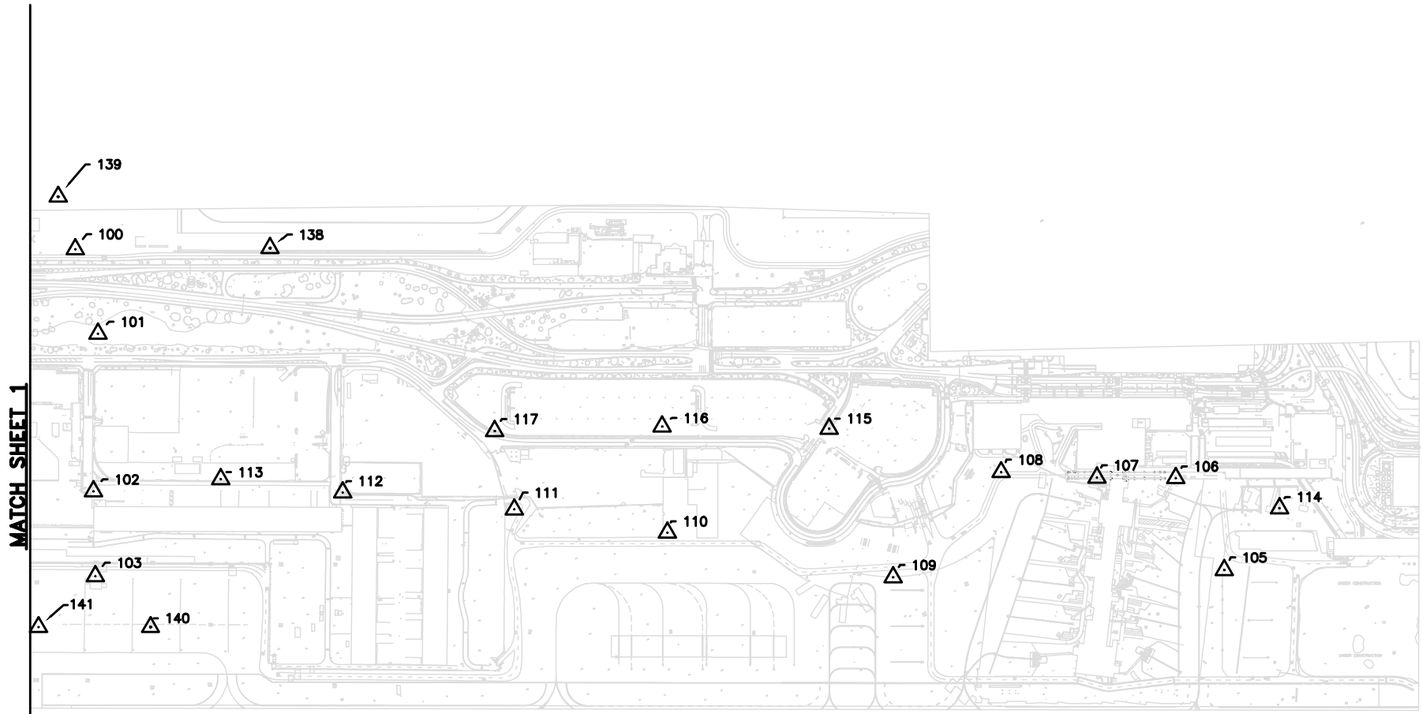
Designed by: ADR
Drawn by: GLG
Checked by: ADR
Date: 07/13/18
Dwg scale: 1"=300'
CIP No.: AV100000011
KWA No.: 07-5204

STAGE 2 – B04 DESIGN SUBMISSION

HORIZONTAL AND VERTICAL CONTROL PLAN

Package: B04 - MSGN0012
Sheet Reference No: V5 - 012 of 218

PLOT DATE: Sep 13, 2017 FILE PATH: R:\Phoenix\Projects\AZSVY1602_PhoenixSkyTrainPhase2\CADD\Survey\Dwg\AV100000011-X-2-MSSV00 00 01.dwg ggreen



GENERAL NOTES

1. ALL COORDINATES LISTED ARE NAD 83 (1992 EPOCH) STATE PLANE GROUND COORDINATES, ARIZONA CENTRAL ZONE, STANDARD TRANSVERSE MERCATOR PROJECTION, WITH A SCALE ORIGIN POINT X=0.000, Y=0.000, USING A COMBINED GRID ADJUSTMENT FACTOR OF 1.0001480129. THESE COORDINATES CAN BE UTILIZED AS GROUND DATUM. TO CONVERT BACK TO GRID COORDINATES DIVIDE THESE VALUES BY 1.0001480129.

2. UNITS = INTERNATIONAL FEET 1 FOOT = .3048 METER EXACTLY

3. THE COORDINATES PRESENTED ON THIS SURVEY ARE SHOWN TO FOUR DECIMAL PLACES FOR CALCULATION PURPOSES, AND ARE NOT A REPRESENTATION OF THE PRECISION OF THE SURVEY MEASUREMENTS.

4. ELEVATIONS LISTED ARE ON THE NAVD 88 VERTICAL DATUM. TO CONVERT TO NGVD 29 ELEVATIONS, SUBTRACT 1.92 FEET FROM THE ELEVATIONS LISTED.

5. THE SURVEY CONTROL POINTS SHOWN ON THIS SHEET WERE ESTABLISHED BY FIELD TRAVERSE METHODS.

BASIS OF BEARING

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

BENCHMARK

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

GRAPHIC SCALE
300 0 150 300 600
(IN FEET)

TABLE 1 STAGE 2 CONTROL

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



Call at least two full working days before you dig
ARIZONA811
Blue Stake, Inc. 1-800-STAKE-IT (782-5348)
Arizona Common Ground Alliance 258-1008

REGISTERED LAND SURVEYOR 23396 ADAM D. REECE 7/13/18 Date Signed

Existing 3/31/2019

Design Sub-Consultant
AZTEC
1551 E. McDowell Road
Phoenix, AZ 85006-4505
Tel(602)454-0402
Fax(602)454-0403
WWW.AZTECGIS.COM

Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: ADR
Drawn by: GLG
Checked by: ADR
Date: 07/13/18
Dwg scale: 1"=300'
CIP No.: AV100000011
KWA No.: 07-5204

STAGE 2 – B04 DESIGN SUBMISSION

HORIZONTAL AND VERTICAL CONTROL PLAN

Package: B04 - MSGN0013
Sheet Reference No: V5 - 013 of 218

PLOT DATE: Sep 13, 2017 FILE PATH: R:\Phoenix\Projects\AZSVY1602_PhoenixSkyTrainPhase2\CADD\Survey\Dwg\AV100000011-X-2-MSSV00 00 02.dwg ggreen

PROJECT GENERAL NOTES

THE FOLLOWING PROJECT GENERAL NOTES APPLY TO THE ENTIRE DRAWING SET AND ARE NOT SPECIFIC TO ANY ONE DISCIPLINE, UNLESS OTHERWISE NOTED:

A. THE CONSTRUCTION DOCUMENTS (DRAWING SET AND SPECIFICATIONS) ARE COMPLEMENTARY AND ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT.

B. THIS DRAWING SET, WHEN COMPLETE, CONSISTS OF ALL SHEETS LISTED BY THE SHEET INDEX. THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE AND MAY REQUIRE REFERENCE TO DRAWINGS OF ANOTHER DISCIPLINE.

PARTIAL DRAWING SETS ARE INCOMPLETE. DO NOT DISTRIBUTE OR UTILIZE PARTIAL DRAWINGS SETS.

C. COLUMN GRID LINES IDENTIFIED BY A LETTER DESIGNATION ARE PARALLEL, UNLESS OTHERWISE NOTED. COLUMN GRID LINES IDENTIFIED BY A NUMBER DESIGNATION ARE PARALLEL AND ARE PERPENDICULAR TO THOSE WITH LETTER DESIGNATIONS, UNLESS OTHERWISE NOTED.

D. DISCIPLINE GENERAL NOTES, SYMBOLS AND DEFINITIONS APPLICABLE TO EACH DISCIPLINE'S DRAWINGS MAY BE FOUND AT THE FRONT OF EACH DISCIPLINE'S PORTION OF THE DRAWING SET AND ARE LISTED AS PART OF THE OVERALL PROJECT SHEET INDEX.

E. THE 'ARCHITECTURAL' SERIES DRAWINGS TAKE PRECEDENCE FOR THE FINISHED APPEARANCE AND LOCATION OF ALL EXPOSED ELEMENTS OF THE WORK OF ALL TRADES, INCLUDING THAT WORK WHICH IS ILLUSTRATED PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES.

F. THE DRAWINGS MAY MAKE REFERENCE TO AND/OR ILLUSTRATE ITEMS WHICH ARE NOT PART OF THE WORK OF THE CONTRACT. THESE "NOT IN CONTRACT" ITEMS AS INDICATED ARE REFERENCED AND/OR ILLUSTRATED FOR THE CONTRACTOR'S REFERENCE, INFORMATION AND COORDINATION ONLY.

G. EXISTING CONDITIONS, IF SHOWN, ARE FROM AVAILABLE RECORD DRAWINGS AND OR VISUAL FIELD SURVEYS. THE CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT THE SITE PRIOR TO SUBMITTING A BID, AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

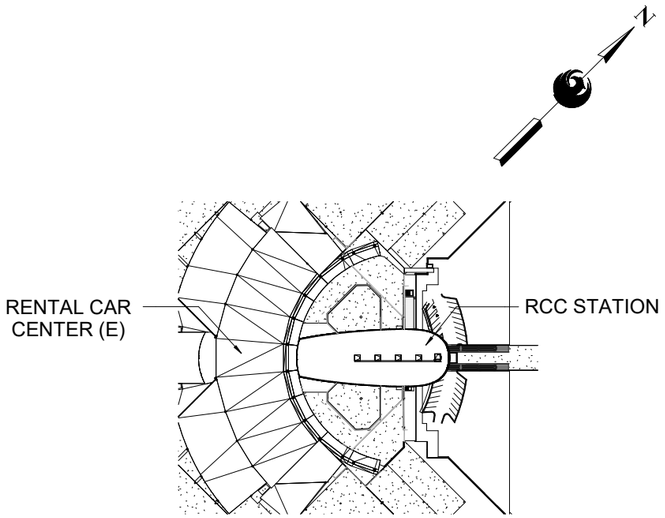
H. TAKE PRECAUTIONS TO MAINTAIN AND PROTECT NEW WORK AS WELL AS EXISTING SYSTEMS AND ELEMENTS, IF ANY, WHICH ARE TO REMAIN. ANY DAMAGE TO SUCH SYSTEMS AND ELEMENTS SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE ARCHITECT. IF SATISFACTORY REPAIRS CANNOT BE MADE, REPLACE SYSTEMS AND ELEMENTS WITH "LIKE NEW" QUALITY ACCEPTABLE TO THE ARCHITECT. ALL REPAIRS AND REPLACEMENT COST SHALL BE THE FINANCIAL RESPONSIBILITY OF THE RESPONSIBLE PARTY.

J. ALL PARTS OF THE WORK, INCLUDING MATERIALS, METHODS, ASSEMBLIES, ETC., MUST COMPLY WITH THE REQUIREMENTS OF THE GOVERNING CODES AND REGULATIONS OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION OVER THE PROJECT, AS WELL AS THOSE GREATER REQUIREMENTS INDICATED BY THE CONTRACT DOCUMENTS. NO PART OF THE CONTRACT DOCUMENTS MAY BE CONSTRUED TO REQUIRE OR PERMIT WORK CONTRARY TO A GOVERNING CODE OR REGULATION

K. IDENTIFY AND NOTIFY THE ARCHITECT/ENGINEER OF CONFLICTS BETWEEN THE WORK OF DIFFERENT PARTIES AT THE EARLIEST POSSIBLE DATE SO AS TO ALLOW REASONABLE AND ADEQUATE TIME FOR THE CONFLICT TO BE RESOLVED WITHOUT DELAYING THE WORK. ALL DEVIATIONS FROM THAT WHICH IS REQUIRED BY THE CONTRACT DOCUMENTS MUST BE APPROVED IN ADVANCE BY THE ARCHITECT/ENGINEER AND OWNER.

L. REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT BEFORE COMMENCING CONSTRUCTION, AND ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.

PROJECT AREA



ROOF LEVEL DIAGRAM

SHEET NUMBERING LEGEND

DRAWING NUMBERING KEY

RBAR032K

AREA

LEVEL

SHEET / MODEL TYPE CODE

00	GENERAL NOTES, ABBREVIATIONS, SYMBOLS, SITE REFERENCE & BUILDING SUMMARY
01	DEMO PLANS AND TEMPORARY WORK
02	OVERALL PLANS
03	FLOOR / ROOF PLANS
04	EXTERIOR ELEVATIONS
05	NOT USED
06	ENLARGED FLOOR PLANS AND SECTIONS
07	NOT USED
08	INTERIOR ELEVATIONS
09	BUILDING SECTIONS
10	REFLECTED CEILING PLANS
11	NOT USED
12	EXTERIOR DETAILS
13	INTERIOR DETAILS AND SCHEDULES
14	NOT USED
15	FLOOR PATTERN PLANS
16	NOT USED

DISCIPLINE CODE

AR	ARCHITECTURAL
CV	CIVIL
EL	ELECTRICAL
FA	FIRE ALARM
FP	FIRE PROTECTION
LS	LIFE SAFETY
ME	MECHANICAL
PL	PLUMBING
SB	STRUCTURAL - BUILDING

SECTOR CODE

MS	MULTIPLE SECTORS
GW	ELEVATED AND AT GRADE GUIDEWAY, GUIDEWAY POWER
TB	24TH STREET STATION
TR	24TH STREET STATION ROADWAY
TS	24TH STREET STATION - SITE (MEP YARD-WEST OF 24TH ST, TRASH YARD, PARKING LOT - NORTH, PARKING LOT - SOUTH, DRAINAGE BASINS, EMPLOYEE/VISITOR PARKING LOT, ROAD OVER U&V CROSSING, GT STAGING LOT)
RB	RCC STATION
RS	RCC STATION - SITE

BUILDING SUMMARY

1.OWNER CITY OF PHOENIX - AVIATION DEPARTMENT
3800 E. SKY HARBOR BLVD
PHOENIX, AZ 85034

2. APPLICABLE CODES, ORDINANCES AND STANDARDS

2012 INTERNATIONAL BUILDING CODE W/ CITY OF PHOENIX AMENDMENTS (PBC)
2012 INTERNATIONAL FIRE CODE W/ CITY OF PHOENIX AMENDMENTS (PBC)
2012 INTERNATIONAL MECHANICAL CODE
2012 UNIFORM PLUMBING CODE
2012 INTERNATIONAL ENERGY CONSERVATION CODE
2012 INTERNATIONAL FUEL GAS CODE
2012 INTERNATIONAL GREEN CONSTRUCTION CODE
2010 EDITION OF ASME A17.1 - SAFETY CODE FOR ELEVATORS AND ESCALATORS
2017 EDITION OF NFPA 130 -
STANDARD FOR FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS
2011 EDITION OF NFPA 70 - NATIONAL ELECTRIC CODE
ADAAG 2010 EDITION - AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES

CITY OF PHOENIX BUILDING STANDARDS AND REVIEW PROCESS

3. GENERAL BUILDING INFORMATION

A. CONSTRUCTION TYPE: 1-A
B. HIGHEST OCCUPIED LEVEL: 'PLATFORM LEVEL' AS INDICATED ON DRAWINGS
C. GROSS ENCLOSED FLOOR AREA: APPROX 41,260 SF

4. FIRE RESISTIVE CONSTRUCTION REQUIREMENTS:

A. EXTERIOR WALLS	
(a) BEARING	3 HRS
(b) NON-BEARING	NON-RATED
B. INTERIOR WALLS	
(a) BEARING	3 HRS (1)
(b) NON-BEARING	NON-RATED
C. STRUCTURAL FRAME	3 HRS (1)
D. COLUMNS	3 HRS
E. SHAFTS	
(a) EXIT STAIRS	2 HRS (2)
(b) OTHER SHAFTS	2 HRS (2)
F. ROOF	1-1/2 HRS (3)
G. FLOOR	2 HRS

1. 2 HRS WHERE SUPPORTING ROOF ONLY
2. SUCH THAT THE FIRE RESISTANCE RATING IS NOT LESS THAN THAT OF THE FLOOR ASSEMBLY PENETRATED.
3. NON-RATED WHERE EVERY PART OF THE ROOF STRUCTURE IS 20 FEET OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW.

REFER TO FIRE PROTECTION NARRATIVE

5. PROJECT STATISTICS: BUILDING HEIGHT

ALLOWABLE NUMBER OF STORIES: UNLIMITED
ALLOWABLE BUILDING HEIGHT: UNLIMITED

6. EXITING REQUIREMENTS:

EXIT WIDTH CALCULATION: REFER TO FIRE PROTECTION NARRATIVE

7. ENERGY DESIGN CRITERIA

A. ROOF	TAPERED INSULATION	R-20ci
B. WALL	UNFACED BLANKET INSULATION	R-13+R-5ci
C. CONCRETE SLABS	MASS	R-5.7ci

1

8. ALL METAL COMPOSITE MATERIAL (MCM) PANELS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF IBC SECTION 1407.10. ALL MCM PANELS SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 WHEN TESTED AS AN ASSEMBLY IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM E84 OR UL 723.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
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PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR	Checked by:	KW	CIP No.:	AV10000011
Drawn by:	JI, MT, TY	Date:	07/13/2018	KIVA No.:	07-5204
		Dwg scale:	AS NOTED		

STAGE 2 - B04 DESIGN SUBMISSION

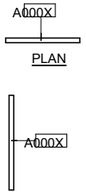
RCC STATION
ARCHITECTURAL
GENERAL NOTES & BUILDING SUMMARY

Package: B04 - RBAR0001
Sheet Reference No: V5 - 014 of 218

Project Number: 21722
7/11/2018 3:04:54 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

ARCHITECTURAL ASSEMBLY SYSTEM TAGS

TYPICAL ARCHITECTURAL ASSEMBLY IDENTIFICATION MARK



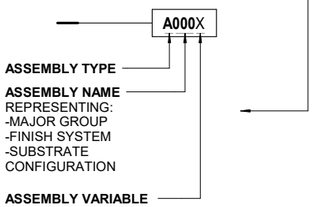
FOR THE ASSEMBLY TYPES LISTED, SEE THE FOLLOWING SHEETS FOR SYSTEM DETAILS AND DESCRIPTIONS:

TYPE **A** = EXTERIOR WALLS - ABOVE GRADE - SHEET A5.0.X
TYPE **B** = EXTERIOR WALLS - BELOW GRADE - SHEET A5.0.X
TYPE **H** = EXTERIOR WALLS - 1/2 HEIGHT AND PARAPETS - SHEET A5.0.X
TYPE **L** = FOUNDATION SLAB SYSTEMS - SHEET A5.0.X
TYPE **R** = ROOFING SYSTEMS - SHEET A5.0.X
TYPE **S** = EXTERIOR SOFFITS - SHEET A5.0.X
TYPE **T** = EXTERIOR TRIM AND COPING - SHEET A5.0.X

TYPE **G** = EXTERIOR GLAZING / PANEL SYSTEMS - SHEET A5.4.X
TYPE **X** = EXTERIOR FENESTRATION SYSTEMS - SHEET A5.4.X
TYPE **W** = EXTERIOR FRAMED WINDOWS AND LOUVERS - SHEET A5.4.X

TYPE **F** = FLOORING SYSTEMS - SHEET A9.1.X
TYPE **P** = INTERIOR WALL PARTITIONS - SHEET A9.2.X
TYPE **C** = INTERIOR CEILINGS - SHEET A9.4.X

TYPE **E** = INTERIOR GLAZING / PANEL SYSTEMS - SHEET A9.3.X
TYPE **Y** = INTERIOR FENESTRATION SYSTEMS - SHEET A9.3.X
TYPE **M** = INTERIOR FRAMED WINDOWS AND LOUVERS - SHEET A9.3.X



ARCHITECTURAL ABBREVIATIONS

A

AB	ANCHOR BOLT
ACT	ACOUSTICAL CEILING TILE
ACP	ACOUSTICAL CEILING PANEL
ACS PNL	ACCESS PANEL
AD	AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFS	ABOVE FINISH SLAB
AGGR	AGGREGATE
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AVG	AVERAGE

B

BB	BULLETIN BOARD
BD	BOARD
BTWN	BETWEEN
BITUM	BITUMINOUS
BLDG	BUILDING
BM	BENCHMARK
BOT	BOTTOM
BOS	BOTTOM OF STEEL
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOFING SYSTEM

C

CAB	CABINET
CB	CATCH BASIN
CCR	CARD CONTROL READER
CCT	CUBICLE CURTAIN TRACK
CCTV	CLOSED CIRCUIT TELEVISION
CG	CORNER GUARD
CEM	CEMENT, CEMENTITIOUS
CER	CERAMIC
CH BD	CHALKBOARD
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRUGATED
CPT	CARPET
CSK	COUNTERSUNK
CSP	COMBINATION STANDPIPE
CSWK	CASEWORK
CT	CERAMIC TILE
CU	CUBIC
CW	COLD WATER

D

D	DEPTH
DBL	DOUBLE
DBL ACT	DOUBLE ACTING
DEG	DEGREE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIM PT	DIMENSION POINT
DISP	DISPENSER
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DT	DRAPERY TRACK
DWG	DRAWING
DWGS	DRAWINGS

E

(E)	EXISTING
EA	EACH
EDR	EQUIPMENT DRAWING
EG	EDGE GUARD
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EPB	ELECTRICAL PANEL BOARD
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESCAL	ESCALATOR
EST	ESTIMATE(D)
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATED
EXH	EXHAUST
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR

F

F/F	FACE TO FACE
FA	FIRE ALARM
FAS	FIRE ALARM STATION
FB	FLAT BAR
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FHC	FIRE HOSE CABINET
FH/FEC	FIRE HOSE / FIRE EXTINGUISHER CABINET
FHMS	FLAT HEAD MACHINE SCREW
FHWS	FLAT HEAD WOOD SCREW
FHY	FIRE HYDRANT
FLAM	FLAMMABLE
FLASH	FLASHING
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FACE OF
FSB	FOLDING SHOWER BENCH
FSTNR	FASTENER
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FXTR	FIXTURE

G

G	GAS
GA	GAUGE, GAGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GLU LAM	GLUE LAMINATED
GLZ	GLAZING
GR	GRADE OR GRADING
GVL	GRAVEL
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER

H

H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HEAD
HDBD	HARDBOARD
HDW	HARDWARE
HDWD	HARDWOOD
HGT	HEIGHT
HM	HOLLOW METAL
HNDRL	HANDRAIL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HOUR
HVAC	HEATING-VENTILATION-AIR CONDITIONING
HW	HOT WATER

I

ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDE, INCLUDING
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
IVT	INTRAVENOUS TRACK

J

JAN	JANITOR
JST	JOIST
JT	JOINT

K

KG	KILOGRAM
KIT	KITCHEN
KPL	KICK PLATE

L

L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE, LAMINATION
LAV	LAVATORY
LB	POUND
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT
LG	LENGTH
LIN	LINEAR
LL	LEAD LINED
LPT	LOW POINT
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING
LVR	LOUVER

M

M	METERS
MACH	MACHINE
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MEDICINE CABINET
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING
MM	MILLIMETERS
MO	MASONRY OPENING
MOD	MODULE, MODULAR
MTD	MOUNTED
MTG	MOUNTING
MVBL	MOVABLE
MULL	MULLION

N

(N)	NEW
NA	NOT APPLICABLE
NAT	NATURAL
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOICE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
NW	NORTHWEST

O

OC	ON CENTER
OA	OVERALL
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED-CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED-OWNER INSTALLED
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OVHD	OVERHEAD
OZ	OUNCE

P

PA	PUBLIC ADDRESS
PART	PARTIAL
PBD	PARTICLEBOARD
PBX	PRIVATE TELEPHONE EXCHANGE
PCF	POUNDS PER CUBIC FOOT
PCI	POUNDS PER CUBIC INCH
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PI	POINT OF INTERSECTION
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNEU	PNEUMATIC
PNL	PANEL
PNL BD	PANEL BOARD
PNT	PAINT
PORT	PORTABLE
PP	PUSH PLATE
PPM	PARTS PER MILLION
PR	PAIR
PRCST	PRECAST
PREP	PREPARATION
PREFAB	PREFABRICATION
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PVMT	PAVEMENT
PWR	POWER

Q

QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY

R

R	RISER
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RCPT	RECEPTACLE
RD	ROOF DRAIN
RECT	RECTANGULAR
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE (D) (ING) (MENT)
REQD	REQUIRED
REQT	REQUIREMENT
RESIL	RESILIENT
RET	RETURN
REV	REVISION
RF	RESILIENT FLOORING
RH	RIGHT HAND
RHMS	ROUND HEAD MACHINE SCREW
RHWS	ROUND HEAD WOOD SCREW
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER

S

S	SOUTH
SA	SUPPLY AIR
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SCRN	SCREEN
SD	STORM DRAIN
SE	SOUTHEAST
SECT	SECTION
SEG	SEGMENT
SEP	SEPARATION OR SEPARATE
SEP JT	SEPARATION JOINT
SHT	SHEET, SHEETING
SHWR	SHOWER
SHV	SHELVES, SHELVING
SIM	SIMILAR
SK	SINK
SMS	SHEET METAL SCREW
SP	SPACE, SPACED, SPACING
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SS	SANITARY SEWER
SSK	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STAG	STAGGERED
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
STS	SELF-TAPPING STEEL
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SVCE	SERVICE
SW	SOUTHWEST
SYMM	SYMMETRICAL
SYST	SYSTEM

T

T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CONCRETE, TOP OF CURB
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPORARY
THERM	THERMAL
THK	THICK, THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMPD GL	TEMPERED GLASS
TO	TOP OF
TOR	TOP OF RAILING
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL

U

UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
UTIL	UTILITY

V

VAC	VACUUM
VB	VALVE BOX
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIT	VITREOUS
VP	VENT PIPE
VOL	VOLUME
VWC	VINYL WALL COVERING

W

W	WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET OR WALL COVERING
WD	WOOD
WDW	WINDOW
WGL	WIRE GLASS
WCHR	WHEELCHAIR
WM	WIRE MESH
WO	WHERE OCCURS
W/O	WITHOUT
WPT	WORKING POINT
WR	WATER RESISTANT
WSCT	WAINSCOT
WSP	WET STANDPIPE
WT	WEIGHT
WTHPRF	WEATHERPROOF
WTRPRF	WATERPROOF
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

X

XFMR	TRANSFORMER

Y

YD	YARD

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7-30-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
GENERAL ABBREVIATIONS

Package: B04 - RBAR0002
Sheet Reference No: V5 - 015 of 218

Project Number: 21722
7/11/2018 3:04:56 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

ARCHITECTURAL FLOOR PLAN SYMBOLS

DIMENSION SYMBOLS

10' - 0" — DIMENSION SHOWN TO:
- STRUCTURAL GRID
- LAYOUT GRID
- CENTERLINE OF ASSEMBLY
- CENTER OF OPENING
- CENTER OF EQUIP/ FURN

GRID OR CENTER LINE TYPICAL

10' - 0" — DIMENSION SHOWN TO:
- PARTITION ASSEMBLY
- EDGE OF DOOR OPENING
- OTHER BUILDING ELEMENT
- WORKING POINT

INDICATED ON DETAIL

GENERAL SYMBOLS

- BASE CABINETS
- BASE AND WALL CABINETS
- WALL CABINETS
- TOILET PARTITION AND DOOR
- HANDRAIL
- BUMPER GUARD
- CG — CORNER GUARD
- EG — EDGE GUARD
- OVERHEAD ITEMS
- UNDER-COUNTER ITEMS
- NIC — NOT-IN-CONTRACT ITEMS

FIRE EXTINGUISHER SYMBOLS

- FEXT — FIRE EXTINGUISHER BRACKET MOUNTED
- FEC — FIRE EXTINGUISHER SURFACE MOUNTED
- FEC — FIRE EXTINGUISHER CABINET SEMI-RECESSED
- FEC — FIRE EXTINGUISHER CABINET RECESSED

PLUMBING SYMBOLS

- TOILET - WALL HUNG
- URINAL - FLOOR/WALL HUNG
- LAVATORY - COUNTERTOP
- LAVATORY - PEDESTAL/WALL HUNG
- UTILITY SINK
- DRINKING FOUNTAIN / EWC
- JANITOR'S RECEPTOR
- BATHTUB
- SHOWER
- FD — FLOOR DRAIN IN SLOPING FLOOR

ARCHITECTURAL DEMOLITION SYMBOLS

- EXISTING PARTITION TO REMAIN
- EXISTING PARTITION TO BE REMOVED
- EXISTING DOOR TO REMAIN
- EXISTING DOOR AND FRAME TO BE REMOVED
- EXISTING WINDOW TO REMAIN
- EXISTING WINDOW TO BE REMOVED
- EXISTING LAY-IN CEILING TO REMAIN
- EXISTING LAY-IN CEILING TO BE REMOVED

ARCHITECTURAL DEMOLITION SYMBOLS

- DOOR OPENING MARK
- SINGLE OPENING DOOR
- DOUBLE ACTING DOOR
- PAIR DOORS - EQUAL SIZES
- PAIR DOORS - UNEQUAL SIZES
- PAIR DOORS - DOUBLE EGRESS
- 2 PANEL BI-FOLD DOOR
- PAIR - BI FOLD DOOR
- OVERHEAD ROLLING DOOR
- INTERIOR GLAZED WINDOW
- DOOR WITH SIDE LIGHT
- SLIDING DOOR - BETWEEN JAMBS
- SLIDING POCKET DOOR

ARCH REFLECTED CEILING PLAN SYMBOLS

ARCHITECTURAL

- 2'X4' LAY IN ACOUSTIC TILE CEILING
- 2'X2' LAY IN ACOUSTIC TILE CEILING
- GYPSUM BOARD
- AP — ACCESS PANEL

MECHANICAL

- SUPPLY GRILLE
- RETURN GRILLE
- EXHAUST GRILLE
- LINEAR DIFFUSER
- SPRINKLER HEAD - CLG MOUNT
- SPRINKLER HEAD - WALL MOUNT

ELECTRICAL

- 2'X4' LIGHTING FIXTURE
- 2'X2' LIGHTING FIXTURE
- 1'X4' LIGHTING FIXTURE
- LIGHTING STRIP FIXTURE
- RECESSED DOWN LIGHT
- WALL WASH
- TRACK LIGHTING
- EXIT SIGN, SINGLE-SIDED
- EXIT SIGN, DOUBLE-SIDED
- F — FIRE ALARM
- S — SPEAKER
- D — SMOKE DETECTOR
- V — WIRELESS INTERNET

MISCELLANEOUS

- +12'-8" — HEIGHT OF CEILING FINISH ABOVE FINISH FLOOR

ARCHITECTURAL MATERIAL INDICATIONS

PLAN AND SECTION

- EARTH
- AGGREGATE BASE COURSE
- CONCRETE
- CONCRETE MASONRY UNIT
- BRICK MASONRY
- PRECAST CONCRETE
- LIMESTONE, SANDSTONE, GRANITE
- MARBLE
- STEEL, STAINLESS STEEL (LARGE SCALE)
- ALUMINUM (LARGE SCALE)
- OTHER METALS (LARGE SCALE)
- WOOD FRAMING - CONTINUOUS (LARGE SCALE)
- WOOD FRAMING - DISCONTINUOUS (LARGE SCALE)
- PLYWOOD (LARGE SCALE)
- FINISH WOOD (LARGE SCALE)
- EIFS INSULATION BOARD (LARGE SCALE)
- SEMI-RIGID INSULATION (LARGE SCALE)
- BATT INSULATION (LARGE SCALE)
- MORTAR, SAND, FIREPROOFING, STUCCO, GYPSUM BOARD
- TERRAZZO (LARGE SCALE)
- COMPOSITE BOARD (LARGE SCALE)
- ACOUSTIC TILE (LARGE SCALE)
- PROTECTION BOARD (LARGE SCALE)
- CERAMIC TILE (LARGE SCALE)
- GLASS (LARGE SCALE)

ELEVATION

- PLASTER CONCRETE
- MASONRY, METAL SIDING (HORIZONTAL)
- GLASS BLOCK, CERAMIC TILE
- METAL SIDING (VERTICAL)
- GLASS

ARCHITECTURAL REFERENCE SYMBOLS

BUILDING SECTION

1 / A101 — SIM
- WALL SECTION NUMBER
- DIRECTION OF VIEW
- SHEET WHERE DRAWN

WALL SECTION

1 / A101 — SIM
- WALL SECTION NUMBER
- SHEET WHERE DRAWN
- DIRECTION OF VIEW

EXTERIOR ELEVATION

AX.X.X
- ELEVATION NUMBER AND DIRECTION
- SHEET WHERE DRAWN

DETAIL REFERENCE

1 / A101 — SIM
- DETAIL NUMBER
- SHEET WHERE DRAWN, HYPHEN INDICATES DETAIL ON SAME SHEET.

SECTION DETAIL REFERENCE

1 / A101 — SIM
- ELEVATION NUMBER AND DIRECTION
- SHEET WHERE DRAWN

INTERIOR ELEVATION REFERENCE

1 / 2 / A101 / 2 / 1
- ELEVATION NUMBER AND DIRECTION OF VIEW
- SHEET WHERE DRAWN

ROOM NAME AND NUMBER

Room Name
101

WINDOW AND LOUVER TYPE MARK

- W-X — SEE CORRESPONDING NUMBER ON SCHEDULE
- M-X — SEE ASSEMBLY TYPE FOR DETAILS.

LEVEL LINE

SECOND LEVEL + 10'-0"
- NAME OF LEVEL
- INDICATES HEIGHT ABOVE PROJECT DATUM

REVISION NUMBER AND EXTENT

1
- REVISION NUMBER - SEE REVISION HISTORY ON THE TITLE BLOCK OF EACH SHEET
- EXTENT OF CURRENT REVISION

SHEET KEYNOTE MARK

A502
- SEE CORRESPONDING NUMBERED KEYNOTE ON SHEET WHERE REFERENCE OCCURS

REFERENCE KEYNOTE MARK

088000.A03
- THE FIRST SIX DIGITS REPRESENT THE SPECIFICATION SECTION
- EXAMPLE 1: THE CHARACTERS FOLLOWING THE PERIOD REPRESENT PARTICULAR ITEMS OF THE SPECIFIED SYSTEM

061600 5/8" PLYWOOD
- EXAMPLE 2: THE TEXT IS THE PRODUCT DESCRIPTION

MATCH LINE REFERENCES

MATCH LINE / SHEET A2.1.1 — REFER TO THE SHEET WHERE CONTINUATION IS FOUND

OR

SHEET A2.1.2 / SHEET A2.1.1 — REFER TO THE SHEETS EITHER SIDE OF THE MATCH LINE

DRAWING TITLE SYMBOLS

1 View Name / SCALE: 1/8" = 1'-0" — BASIC DRAWING TITLE

1 View Name / SCALE: 1/8" = 1'-0" — BASIC DRAWING TITLE WITH LINE

View Name / SCALE: 1/8" = 1'-0" — DRAWING TITLE WHEN ONLY ONE PLAN EXISTS ON THE DRAWING

LAYOUT GRID LINES

A, B, 1, 90.00°
- NEW GRID IDENTIFICATION
- EXISTING GRID IDENTIFICATION

NORTH ARROW REFERENCES

NORTH OR PROJECT NORTH OR TRUE NORTH

ARCH SYMBOLS NOTES

A. THE PURPOSE OF THIS SHEET IS TO ILLUSTRATE AND DEFINE TYPICAL GRAPHIC SYMBOLS WHICH MAY TYPICALLY OCCUR ON THE ARCHITECTURAL DRAWINGS.

B. ADDITIONAL SYMBOLS NOT SHOWN OR DEFINED ON THIS SHEET MAY BE USED ON THE ARCHITECTURAL DRAWINGS AND ARE TYPICALLY DEFINED ON OTHER SHEETS.

C. SYMBOLS ARE NOT DRAWN TO SCALE. TO DETERMINE THE ACTUAL SIZES OF ELEMENTS REPRESENTED BY SYMBOLS, REFER TO THE SPECIFICATIONS AND OTHER SHEETS, AS MAY APPLY.

FIRE RESISTIVE RATING INDICATION

- 0 HR SMOKE PARTITION
- 1 HR FIRE RESISTANCE RATING
- 2 HR FIRE RESISTANCE RATING
- 3 HR FIRE RESISTANCE RATING
- 4 HR FIRE RESISTANCE RATING

REGISTERED ARCHITECT — CERTIFICATE NO. 35861 — MICHAEL L KRAGER — Date Signed 7-31-2018 — ARIZONA, U.S.A. — Expires 3-31-2019

Design Sub-Consultant: SMITHGROUP architecture engineering interiors planning

Design Consultant: Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
GENERAL ANNOTATIONS & SYMBOLS

Package: B04 - RBAR0003

Sheet Reference No: V5 - 016 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:04:59 PM

CONCRETE FILLED STRUCTURAL STEEL DIAGONAL BRACE: THERE IS PRESENTLY A PERFORMANCE-BASED FIRE PROTECTION STUDY THAT IS BEING CONDUCTED. THE INTENT OF THE STUDY IS TO SHOW THE PERFORMANCE OF THE COLUMNS FOR WHICH SUPPORT THE ROOF, AND HAVE AN EQUIVALENT LEVEL OF PERFORMANCE TO THAT OF A 2-HR FIRE RESISTANCE RATING

NON-RATED
ROOF FRAMING 20'-0" ABOVE
FLOOR BELOW

NON-RATED
SECONDARY ROOF FRAMING 20'-0"
ABOVE FLOOR BELOW

CONCRETE FILLED STRUCTURAL STEEL COLUMNS: THERE IS PRESENTLY A PERFORMANCE-BASED FIRE PROTECTION STUDY THAT IS BEING CONDUCTED. THE INTENT OF THE STUDY IS TO SHOW THE PERFORMANCE OF THE COLUMNS FOR WHICH SUPPORT THE ROOF, AND HAVE AN EQUIVALENT LEVEL OF PERFORMANCE TO THAT OF A 2-HR FIRE RESISTANCE RATING

NON-RATED
EXTERIOR WALL-SUPPORTING STEEL

1-1/2-HR RATED
ROOF FRAMING
UNRESTRAINED

3-HR
STRUCTURAL FRAME
GUIDEWAY BEAMS
UNRESTRAINED

2-HR
FLOOR AND FLOOR FRAMING
UNRESTRAINED

2-HR
EXTERIOR WALL

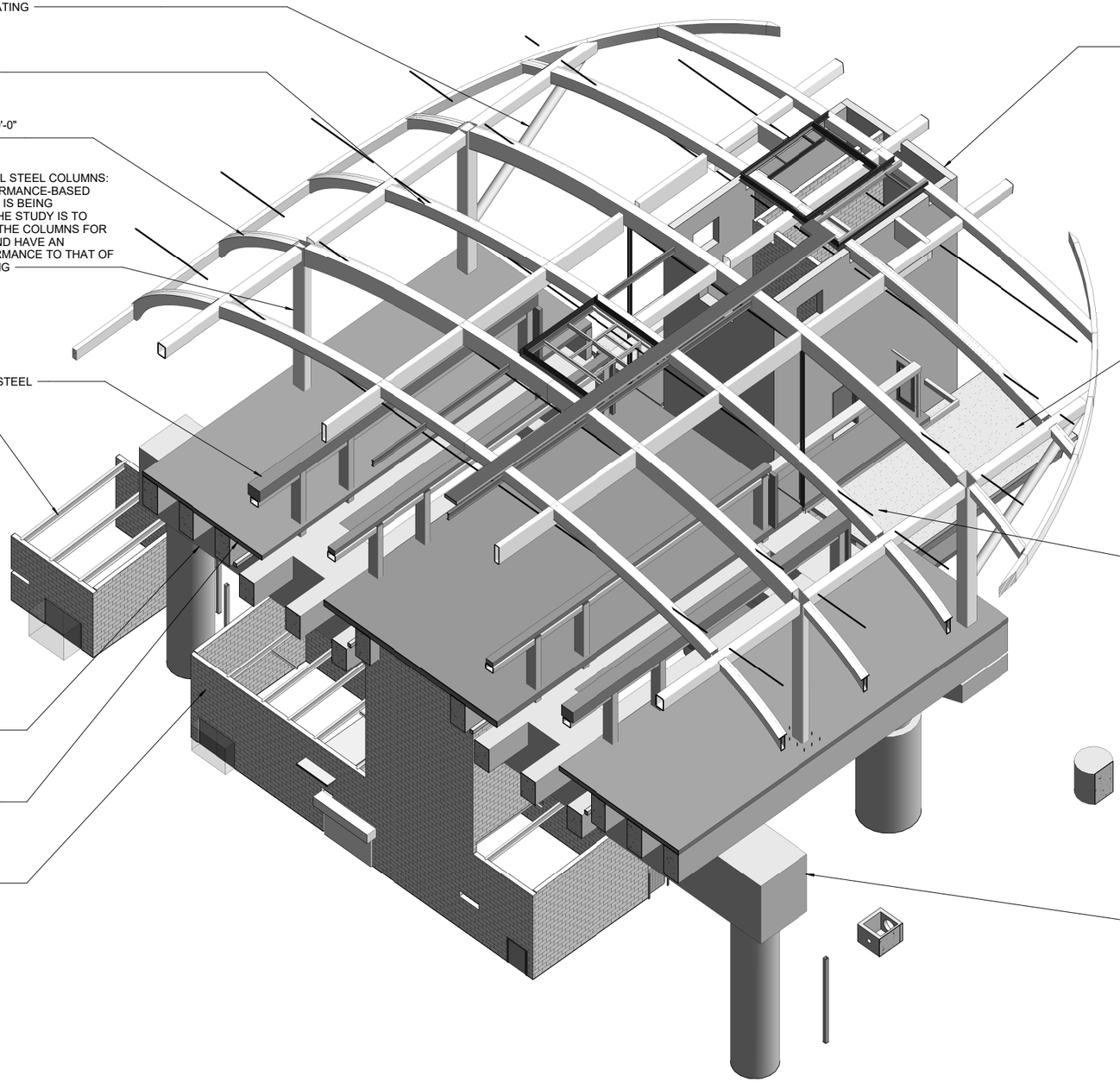
CONSTRUCTION TYPE: 1-A

2-HR SHAFT ENCLOSURE
WHERE NOT SUPPORTING
STRUCTURE ABOVE

NON-RATED
GUIDEWAY TOPPING SLAB
AND PLINTHS

NON-RATED
EXTERIOR NON-BEARING WALLS
(OMITTED FOR CLARITY)

3-HR
STRUCTURAL FRAME -
GIRDERS AND BEAMS REQUIRED
FOR STRUCTURAL DIAPHRAGM
UNRESTRAINED



FIRE RATINGS OF STRUCTURAL ELEMENTS

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	PDD COMMENTS	07/13/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FIRE PROTECTION AXON

Package: B04 - RBAR0010
Sheet Reference No: V5 - 017 of 218

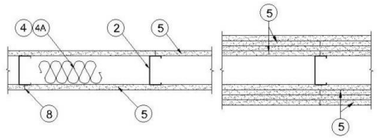
Project Number: 21722
7/12/2018 1:57:26 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

Fire Resistance Ratings - ANSI/UL 263

Design No. U419

January 25, 2018

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5)



1. Floor and Ceiling Runners — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.

See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. (Item 2)	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	O ptional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

6. Fasteners — (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.Three-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. Furring Channels — (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E.

8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. Siding, Brick or Stucco — (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. Caulking and Sealants* — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO — Type AS

11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

13. Lead Batten Strips — (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. Lead Tabs — (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

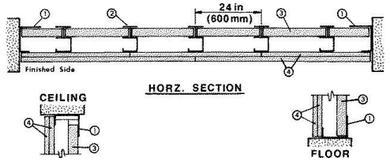
1 UL DESIGN NO. U419
NOT TO SCALE

Fire Resistance Ratings - ANSI/UL 263

Design No. U438

May 15, 2017

Nonbearing Wall Rating — 2 HR.



1. Floor and Ceiling Runners — "J" -shaped runner, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG when Item 4B is used). Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. Steel Studs — "C-H" -shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from 25 MSG galv steel (min 20 MSG when Item 4B, 4D, or 4E is used). Cut to lengths 3/8 to 1/2 in. less than floor to ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4B, 4D, 4E is used).

2A. Steel Studs — (Not shown)-"E" -shaped studs installed in place of "C-H" -shaped studs (Item 2) to secure the closure liner panels at the ends of walls. Fabricated from 25 MSG galv steel (min 20 MSG when Item 4B, 4D, or 4E is used), 2-1/2 in. wide, with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 in. less than floor to ceiling height. Sill and lintel of opening formed with "J" -shaped runners (Item 1) secured to "E" -shaped studs with angle clips and steel screws.

3. Gypsum Board* — 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. or 600 mm (for metric spacing) widths. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" -shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" -runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC.
CGC INC — Type SLX.

UNITED STATES GYPSUM CO — Type SLX.

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. Gypsum Board* — 1/2 in. thick, 4 ft. or 1200 mm (for metric spacing) wide wallboard applied vertically in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC along the edges and in the field of the boards. Outer or face layer attached to studs and "J" -runners with 1-5/8 in. long Type S steel screws spaced 12 in. along the edges and in the field of the boards, staggered from screws in inner layer. Joints between inner and outer layers staggered.
Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound.

As an alternate method, inner wallboard layer applied vertically, outer wallboard layer applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. OC along vertical edges and in the field. Outer layer attached to the studs and "J" runners over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. OC in the field, along the vertical edges and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.

ACADIA DRYWALL SUPPLIES LTD — Type C

AMERICAN GYPSUM CO — Types AG-C .

CERTAINTEED GYPSUM INC — Type FRPC, Type C.

CGC INC — Type C, IP-X2, or WRC.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C.

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSMR-C.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-C.

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air

THAI GYPSUM PRODUCTS PCL — Type C.

UNITED STATES GYPSUM CO — Type C, IP-X2 or WRC.

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C, IP-X2 or WRC.

5. Batts and Blankets* — (Optional) — (Not shown) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt material bearing the UL Classification Marking as to Fire Resistance.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

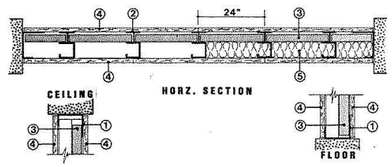
2 UL DESIGN NO. U438
NOT TO SCALE

Fire Resistance Ratings - ANSI/UL 263

Design No. U467

February 05, 2018

Nonbearing Wall Rating — 2 HR.



1. Floor and Ceiling Runners — "J" shaped, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. Steel Studs — "C-H" shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from 25 MSG galv steel spaced 24 in. OC. Vertically restrained walls require studs to be cut 3/8 in. less than floor to ceiling height.

3. Gypsum Board* — 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. widths. Vertical edges inserted in "H" shaped section of "C-H" studs. Free edge of end panels attached to long let of "J" runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC.

CGC INC — Type SLX.

UNITED STATES GYPSUM CO — Type SLX.

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. Gypsum Board* — 1/2 in. or 5/8 in. 4 ft wide applied vertically and attached to studs and runners with 1 in. long Type S steel screws spaced 12 in. OC.

ACADIA DRYWALL SUPPLIES LTD — Type X, Type C, 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — 1/2 or 5/8 in. Type AG-C, 5/8 in. Type AGX-1, 5/8 in. M-Glass, 5/8 in. LightRoc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CERTAINTEED GYPSUM INC — Types 5/8 in. EGRG, 5/8 in. GlasRoc, GlasRoc-2, 5/8 in. SilentFX or 1/2 in. Type C

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRX

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX.

GEORGIA-PACIFIC GYPSUM L L C — 5/8 in. Types 5, 6, 9, C, DGG, DAP, DD, DA, DAPC, DS, GPFS6, LS; 1/2 in. or 5/8 in. Type DAPC, 1/2 or 5/8 in. Type TG-C, 5/8 in. Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type X ComfortGuard Sound Deadening Gypsum Board, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W.

NATIONAL GYPSUM CO — 1/2 in. Types eXP-C, FSW-C, FSK-C, FSMR-C, 5/8 in. Types FSK, FSMR-C, FSW, FSW-C, FSMR-C, FSW-3, FSW-6, FSW-8, FSL.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-C, PG-9, PG-11, PGS-WRS.

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — 1/2 in. Types C, FRX-G, IP-X2, IPC-AR, 5/8 in. Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, WRX, USGX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR, 5/8 in. Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHW, ULX, USGX or WRX

5. Batts and Blankets* — (Optional) — Mineral wool batts partially or completely filling stud cavity.

INDUSTRIAL INSULATION GROUP L L C — Type SAFB

JOHNS MANVILLE — Type SAFB

ROCKWOOL — Type AFB

THERMAFIBER INC — Type SAFB, SAFB FF

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

3 UL DESIGN NO. U467
NOT TO SCALE

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by: MR
Drawn by: JI, MT, TY
Checked by: KW
Date: 07/13/2018
Dwg scale: AS NOTED
CIP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0011
Sheet Reference No: V5 - 018 of 218

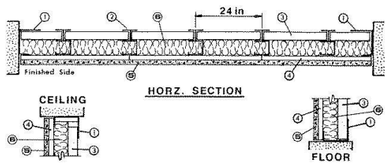
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Project Number: 21722
7/11/2018 3:05:05 PM

Fire Resistance Ratings - ANSI/UL 263

Design No. U459

October 10, 2017

Assembly Rating — 2 HR
Nonbearing Wall



1. Floor and Ceiling Runners — "J" shaped, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 20 MSG (0.0329 in., min bare metal thickness) galv steel. Position runners with short leg towards finish side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. Steel Studs — "C-H" shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min 20 MSG (0.0329 in., min bare metal thickness) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling height and spaced 24 in. OC.

2A. Steel Studs — (not shown) — "E" -shaped studs installed in place of "C-H" -shaped studs (Item 2) around fire rated openings. Fabricated from min 20 MSG (0.0329 in., min bare metal thickness) galv steel, 2-1/2 in. wide, with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 in. less than floor to ceiling height. Sill and lintel of opening formed with "J" -shaped runners (Item 1) secured to "E" -shaped studs with angle clips and steel screws.

3. Gypsum Board* — 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. widths. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runners with 1-5/8 in. long Type S-12 steel screws spaced not greater than 12 in. O. C.

CGC INC — Type SLX.

UNITED STATES GYPSUM CO — Type SLX.

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. Gypsum Board* — 5/8 in. thick, 4 ft wide gypsum wallboard applied vertically and attached to studs with 1 in. long Type S-12 steel screws spaced 24 in. OC.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRX.

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX or WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRX.

5. Cementitious Backer Units* — Board 1/2 or 5/8 in. thick, square edge, attached to studs with 1-5/8 in. long, (1-7/8 in. long when Item 4A is used), Type S-12, corrosion resistant wafer head steel screws spaced 8 in. OC. Joints covered with glass fiber mesh tape.

UNITED STATES GYPSUM CO — Type DCB

6. Batts and Blankets* — Placed to fill interior of stud cavity, 1-1/2 in. min thickness.

ROCKWOOL — Type AFB

THERMAFIBER INC — Type SAFB, SAFB FF.

7. Laminating Adhesive* — (Optional) — Used to bond outer layer of Mineral and Fiber Board (Item 5) to inner layers of Gypsum Board (Item 4). ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building materials Directory for names of Classified companies.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1 UL DESIGN NO. U459
NOT TO SCALE

System No. C-AJ-2001

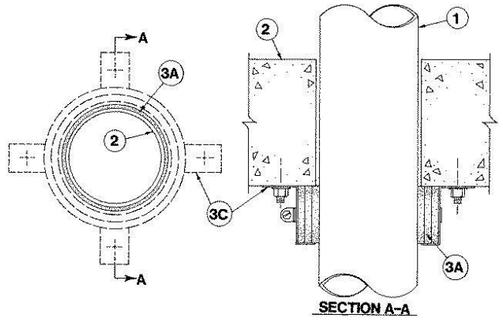
August 29, 2008

F Rating — 2 hr

T Ratings — 0, 1-1/2 and 2 hr (See Item 3)

L Rating at Ambient — 7 CFM/sq ft (See Item 3B)

L Rating at 400 F — 1 CFM/sq ft (See Item 3B)



1. Floor or Wall Assembly — Lightweight or normal weight 1600 - 2400 kg/m3 (100-150 pcf) concrete. Except as footnoted for floor assembly in table under Item 3, min thickness of solid concrete floor or wall assembly is 114 mm (4-1/2 in.). Floor assembly may also be constructed of any min 152 mm (6 in.) thick ULC Listed hollow core Precast Concrete Units. Wall may also be constructed of any ULC Listed Concrete Blocks. Diam of opening through floor or wall to be 0 to 6 mm (0 to 1/4 in.) larger than the outside diam of nom 51 mm (2 in.) diam and smaller pipes or conduits. Diam of opening to be 0 to 13 mm (0 to 1/2 in.) larger than the outside diam of nom 64 mm (2-1/2 in.) diam and larger pipes or conduits. Max diam of opening is 178 mm (7 in.)
See Concrete Blocks and Precast Concrete Units categories in the ULC Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — One nonmetallic pipe or conduit to be centered in the through opening. Pipe or conduit to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 152 mm (6 in.) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Cellular — Core Polyvinyl Chloride (ccPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

C. Chlorinated Polyvinyl Chloride(CPVC) Pipe — Nom 152 mm (6 in.) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Acrylonitrile Butadiene Styrene(ABS) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 solid-core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. Cellular Core Acrylonitrile Butadiene Styrene (ccABS) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

F. Polybutylene (PB) Pipe — Nom 76 mm (3 in.) diam (or smaller) SDR11 (or heavier) PB pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

G. Rigid Nonmetallic Conduit — Nom 102 mm (4 in.) diam (or smaller) (Schedule 40 or 80) PVC conduit.

H. Flame Retardant Polypropylene(FRPP) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 (or heavier) FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Firestop System — The details of the firestop system shall be as follows:

A. Fill, Void or Cavity Materials — Wrap Strip — Nom 6 mm (1/4 in.) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 25 and 51 mm (1 and 2 in.) wide strips. Strips tightly wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the underside of the concrete floor or both sides of wall surface. Sufficient layers of wrap strip shall be installed to lap a min of 5 mm (3/16 in.) on the concrete around the entire perimeter of the through opening. The min wrap strip width and the min number of layers of wrap required is dependent upon the pipe type, the nom pipe diam, the wall of floor thickness and the hourly T Rating required, as shown in the following table.

Pipe Type	Nom Pipe Diam In.	Min Wall or Floor Thkns In.	Wrap Strip Width In.	Min Wrap Strip Layers	T Rating h
PVC, ccPVC or CPVC	1/2 to 1-1/2 (13 to 38)	2-1/2 (64)	1 (25)	1	0
ABS, ccABS or FRPP(a)	1/2 to 1-1/2 (13 to 38)	2-1/2 (64)	1 (25)	1	1
PVC, ccPVC or CPVC	1/2 to 2 (13 to 51)	2-1/2 (64)	2 (51)	1	0
PVC, ccPVC or CPVC	2 (51)	2-1/2 (64)	1 (25)	2	0
ABS, ccABS or FRPP(a)	2 (13 to 38)	2-1/2 (64)	1 (25)	2	1
PVC, ccPVC or CPVC	2-1/2 to 3 (64 to 76)	2-1/2 (64)	2 (51)	2	0
PVC, ccPVC or CPVC	3-1/2 to 4 (89 to 102)	2-1/2 (64)	2 (51)	3	0
PVC, ccPVC or CPVC,	1/2 to 1-1/2 (13 to 38)	4-1/2 (114)	1 (25)	1	2
ABS, ccPVC or FRPP(a)					
PVC, ccPVC, CPVC, ABS,	2 (13 to 38)	4-1/2 (114)	1 (25)	2	2
ABS, ccABS or FRPP(a)					
PVC, ccPVC, CPVC,	2-1/2 to 3 (64 to 76)	4-1/2 (114)	1 (25)	3	2
ABS, ccABS or FRPP(a)					
PVC, ccPVC, CPVC, ABS,	2-1/2 to 3 (64 to 76)	4-1/2 (114)	2 (51)	2	2
ccABS, PB or FRPP(a)					
PVC, ccPVC or CPVC	3-1/2 to 4 (89 to 102)	4-1/2 (114)	2 (51)	2	1-1/2
PVC, ccPVC, CPVC,	3-1/2 to 4 (89 to 102)	4-1/2 (114)	2 (51)	3	2
ABS,ccABS or FRPP(b)					
PVC	6 (152)	4-1/2 (114)	3 (76)	3	0

(a) — Requires use of aluminum tape detailed in Item 3E.

(b) — Requires use of pipe covering detailed in Item 3D.

(c) — For nom 6 in. (152 mm) diam pipe, 1 in. and 2 in., (25 and 51 mm) wide wrap strips are "Stacked" to attain nom 3 in. (76 mm) wrap strip width.

Each layer of wrap strip to be installed with butted seam with butted seams in successive layers staggered. Wrap strip layers temporarily held in position using aluminum foil tape, steel wire tie, or equivalent. In wall assemblies, the wrap strip is to be installed in the same manner used for floor assemblies, but it shall be installed symmetrically on both sides of the wall assembly.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — FS-195+

B. Fill, Void or Cavity Materials — Caulk, Sealant or Putty — (Not Shown) — Generous bead of caulk or putty to be applied to outer perimeter of wrap strip at its interface with floor or wall surface(s).

3M COMPANY 3M FIRE PROTECTION PRODUCTS — CP 25WB+ caulk; FB-3000 WT sealant; Type MP+ Stix putty or IC 15WB+ caulk (Note: L Ratings apply only when Type CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.)

C. Steel Collar — Nom 25, 51 or 76 mm (1, 2 or 3 in.) deep collar, dependent upon wrap strip width, with 32 mm (1-1/4 in.) wide by 51 mm (2 in.) long anchor tabs and min 13 mm (1/2 in.) long tabs to retain wrap strip layers. Coils of precut 0.41 mm (0.016 in.) thick (28 gauge) galv sheet steel available from wrap strip manufacturer. As an alternate, collar may be field-fabricated from min 0.41 mm (0.016 in.) thick (28 gauge) galv sheet steel in accordance with instruction sheet supplied by wrap strip manufacturer. Steel collar, with anchor tabs bent outward 90 deg, wrapped tightly around wrap strip layers with min 25 mm (1 in.) overlap at seam. Anchor tabs to be pressed tightly against floor or wall surface(s), and collar to be compressed around wrap strip layers using a min 13 mm (1/2 in.) wide by 0.71 mm (0.028 in.) thick stainless steel band clamp at the collar midheight. Two band clamps are required for 76 mm (3 in.) high collar on nom 152 mm (6 in.) diam pipe. As an alternate to the band clamps, 25 and 51 mm (1 in. and 2 in.) deep collars may be secured by a means No. 10 by 13 mm (1/2 in.) long sheet metal screws installed in the vertical axis at the center of the 25 mm (1 in.) overlap along the perimeter joint of the collar. A min of two and three screws are required for 25 and 51 mm (1 and 2 in.) deep collars, respectively. Collar to be secured to floor or wall surface(s) with 6 mm (1/4 in.) diam by min 38 mm (1-1/2 in.) long steel expansion bolts, or equivalent, in conjunction with steel nuts and min 32 mm (1-1/4 in.) diam steel fender washers. Anchor bolts to be used with every other anchor tab or as described in the following which ever is greater. Two anchor bolts, symmetrically located, required for nom 13 mm (1/2 in.) to nom 51 mm (2 in.) diam pipes. Three anchor bolts, symmetrically located, required for nom 64 to 76 mm (2-1/2 to 3 in.) diam pipes. Four anchor bolts, symmetrically located, required for nom 89 to 102 mm (3-1/2 and 4 in.) diam pipes. For 152 mm (6 in.) diam pipes, anchor bolts to be used with each anchor tab. Retainer tabs to be bent 90 deg toward pipe to lock wrap strip layers in position.

D. Pipe Covering — Nom 25 mm (1 in.) thick hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket. When required (see table), min 152 mm (6 in.) length of pipe covering installed around pipe at its egress from the steel collar (Item C) on the underside of floor or on both sides of wall. Pipe covering secured to pipe with steel wire ties spaced max 102 mm (4 in.) OC. Edge of pipe covering abutting steel collar to be sealed with a min 6 mm (1/4 in.) diam bead of caulk or putty (Item B).
See Pipe and Equipment Covering — Materials category in ULC Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the ULC Listing Mark with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

E. Foil Tape — When required (see tables), nom 102 mm (4 in.) wide, 3 mil thick aluminum tape installed around pipe prior to installation of wrap strip (Item 3A) or Firestop Device (Item 3F). Min one layer wrapped around pipe with top edge of tape flush with bottom surface of floor and extending downward. In walls, min one layer wrapped around pipe flush with both sides of wall and extending outward.

F. Firestop Device — (Not Shown) — As an alternate to Items A and C when nom 38, 51, 76, 102 or 152 mm (1-1/2, 2, 3, 4 or 6 in.) diam nonmetallic pipes are used, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used. Firestop device to be installed on underside of floor or on both sides of wall in accordance with the accompanying installation instructions.
The firestop device type to be used is dependent upon the wall of floor thickness, the pipe type and nom pipe diam, as tabulated below:

Pipe Type	Nom Pipe Diam In.	Min Wall or Floor Thkns In.	Firestop Device
PVC, ccPVC or CPVC,	1-1/2 (38)	2-1/2 (64)	PPD 1.5 or PPD 150
ABS, ccABS or FRPP(a)			
PVC, ccPVC or CPVC	2 (51)	2-1/2 (64)	PPD 2 or PPD 200
ABS, ccABS or FRPP(a)			
PVC, ccPVC or CPVC	3 (76)	2-1/2 (64)	PPD 300
PVC, ccPVC or CPVC	4 (102)	2-1/2 (64)	PPD 400
PB	1-1/2 (38)	4-1/2 (114)	PPD 150
PB	2 (51)	4-1/2 (114)	PPD 200
PVC, ccPVC or CPVC,	3 (76)	4-1/2 (114)	PPD 3 or PPD 300
ABS, ccABS or FRPP(a)			
PB	3 (76)	4-1/2 (114)	PPD 300
PVC, ccPVC or CPVC,	4 (102)	4-1/2 (114)	PPD 4 or PPD 400
ABS, ccABS or FRPP(a)	4 (102)	4-1/2 (114)	PPD 400
PVC	6 (152)	4-1/2 (114)	PPD 6

(a) — Requires use of aluminum tape detailed in Item 3E.

(b) — Requires use of pipe covering detailed in Item 3D.

3M COMPANY 3M FIRE PROTECTION PRODUCTS

++Bearing the UL Listing Mark

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 C-AJ-2001
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

REGISTERED ARCHITECT
CERTIFICATE NO. 35951
MICHAEL L. KRAGER
Date Signed 7 Sept 2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0012
Sheet Reference No: V5 - 019 of 218

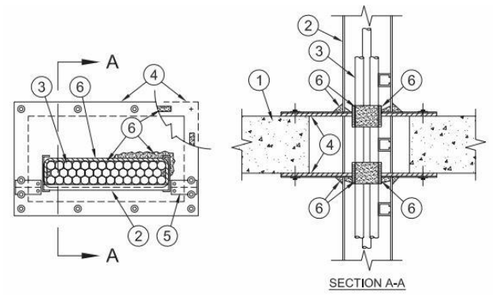
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Project Number: 21722
7/11/2018 3:05:06 PM

System No. C-AJ-4003

January 02, 2009

F Ratings – 2 and 3 Hr (See Item 4)

T Rating – 0 Hr



1. Floor or Wall Assembly – Min 4-1/2 in.(114 mm) thick lightweight or normal weight (100-150 pcf or 1600 - 2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening 36 sq ft (3.3 m2) with one dimension of opening being 36 in. (914 mm) or less.

See Concrete Blocks* (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Cable Tray – Max 36 in. (914 mm) wide by max 6 in. (152 mm) deep steel or aluminum open ladder cable tray. Cable tray to consist of channel-shaped side-rails with boxed channel rungs spaced 9 in. (229 mm) OC. Cable tray side-rails to be formed of min 0.056 in. (1.4 mm) thick (16 ga) galv steel or min 0.125 in. (3.2 mm) thick aluminum. Cable tray rungs to be formed of min 0.029 in. (.8 mm) thick (22 ga) galv steel or min 0.080 in. (2 mm) thick aluminum. When more than one cable tray is installed in opening, min distance between cable trays is 26 in. (660 mm). Min annular space between cable tray and edge of opening is zero in. (point contact). When annular space between cable tray and edge of opening or between multiple cable trays exceeds 6 in., (152 mm), a support channel (Item 7) shall be installed between the cable tray and the edge of the opening to support the edge of the intumescent sheet (Item 4) parallel with the width dimension of the cable tray. Cable trays rigidly supported on both sides of floor or wall assembly.

3. Cables – Aggregate cross-sectional area of cables in cable tray not to exceed 39 percent of the cross-sectional area of the cable tray based on a max 3 in. (76 mm) cable loading depth within the cable tray. Any combination of the following types and sizes of cables may be used:

A. Max 1000 kcmil single-conductor power cables; cross-linked polyethylene insulation.

B. Max No.2 AWG multiconductor power and control cables; cross-linked polyethylene insulation, polyvinyl chloride jacket.

C. Max 300 pair No. 22 AWG (or smaller) copper conductor communication cable with polyvinyl chloride insulation and jacket material.

D. Multiple fiber optical communication cable jacketed with polyvinyl chloride and having a max outside diam of 5/8 in. (16 mm).

E. Max 22 AWG coaxial data cable with polyethylene insulation and polyvinyl chloride jacket.

F. Max 7C No. 12 AWG (or smaller) multi conductor power and control cables; XLPE insulation, XLPE or polyvinyl chloride (PVC) jacket.

G. Max No. 18 AWG RG 6/U coaxial cable with PVC insulation and jacket.

H. Max 4/C No. 2/0 AWG (or smaller) copper or aluminum conductor cables with XLPE or PVC insulation and jacket.

4. Fill, Void or Cavity Materials* – Intumescent Sheet – Rigid aluminum foil-faced sheet with galv steel sheet backer. Sheets cut to tightly follow the contours of the cable tray and the cables. Sheets cut to lap a min of 2 in. (51 mm) on the floor or wall surface on all sides of the opening. Sheet is required to be installed on both sides of the floor or wall assembly to attain the 3 hr F Rating. As an option for steel cable tray in floors, the sheet may be installed on only the top surface of the floor to attain a max 2 hr F Rating. When sheet is installed on only the top surface of the floor, the caulk (Item 6) fill materials are also required to be installed on only the top surface of the floor. Sheet to be installed with the galv steel sheet backer exposed (aluminum foil facing against floor or wall surface) and secured to floor or wall surface with min 3/16 in. (5 mm) diam by 1-1/4 in. (32 mm) long steel anchor screws, or equivalent, in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers. Max spacing of fasteners not to exceed 6 in. (152 mm) with additional fasteners located on each side of butted seams or slits made to permit installation or the sheet around the cable tray.

3M COMPANY – Type CS-195+

5. Steel Cover Strip – Min 2 in. (51 mm) wide strip of min 0.020 in. (.51 mm) thick galv steel centered over entire length of each butted seam or slit made in the intumescent sheet (Item 4). Prior to installation of the steel strip, the seam or slit in the intumescent sheet shall be covered with a nom 1/4 in. (6 mm) diam bead of caulk (Item 6). Steel cover strip secured to galv steel sheet backer of intumescent sheet with steel sheet metal screws or steel rivets spaced max 3 in. (76 mm) OC on each side of seam or slit.

6. Fill, Void or Cavity Materials* – Graphite Seal, Caulk, Sealant or Putty – One layer of 1/2 in. x 1/16 in. (13 mm by 1.6 mm) adhesive backed graphite intumescent seal positioned under intumescent sheet around entire perimeter of through opening or min 1/4 in. (6 mm) diam continuous bead of caulk or putty applied to edge of intumescent sheet at its interface with surface of floor or wall around entire perimeter of through opening. Generous application of caulk or putty to be applied to fill all interstices between cables . Generous application of caulk or putty to be applied around the base of the cable tray side-rails and contour of cables at their egress from the intumescent sheet on both sides of the floor or wall assembly.

3M COMPANY – E-FIS or Ultra GS seals, CP 25WB+ caulk, FB-3000 WT sealant, MP+ putty or IC 15WB+ caulk

7. Support Channel – (Not Shown) – When area of through opening exceeds 1440 sq in.(9290 cm2), an intermediate support channel shall be installed flush with top surface of floor or both surfaces of wall. Support channels to be min 1-5/8 by 1-5/8 in. (41 by 41 mm) and formed of min 0.093 in. (2.4 mm) thick (No. 12 gauge) painted or galv steel. Ends of steel channel bolted or welded to steel angles anchored to inside walls of through opening. When width of cable tray exceed 24 in. (610 mm) and/or when more than one cable tray is installed in the opening, additional support channels are to be installed such that intumescent sheet is supported within 6 in. (152 mm) of each side of the cable tray(s). When steel support channels are centered beneath butted seams of intumescent sheets, no steel cover strip (Item 5) is required over butted seam. Intumescent sheet secured to steel support channels with steel sheet metal screws in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers.

When support channel is used beneath butted seam of intumescent sheets, fasteners spaced max 3 in. (76 mm) OC on each side of butted seam. When support channel is located away from intumescent sheet seam, fasteners spaced max 6 in.(152 mm) OC. Prior to installation of the intumescent sheet(s), a nom 1/4 in. (6 mm) diam continuous bead of caulk (Item 6) shall be applied as gasket over the steel support channel.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

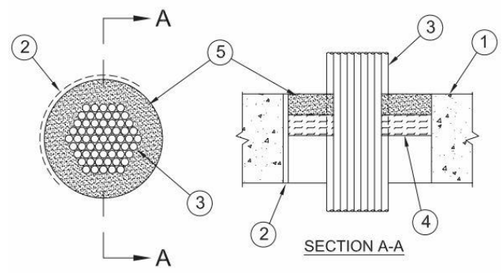
1 C-AJ-4003
NOT TO SCALE

System No. C-AJ-4003

January 02, 2009

F Ratings – 2 and 3 Hr (See Item 4)

T Rating – 0 Hr



1. Floor or Wall Assembly – Min 2-1/2 in. (64 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall mayalso be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in. (203 mm). See Concrete Block (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Sleeve – (Optional) – Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe or nom 6 in. (152 mm) diam (or smaller) Schedule 40 polyvinyl chloride (PVC) pipe cast into floor or wall assembly. Sleeve to be flush with or project max 2 in. (51 mm) from top surface of floor or both surfaces of wall. When PVC sleeve is used, max cable conductor size is No. 12 AWG. As an alternate, nom 8 in. (203 mm) diam (or smaller) sleeve fabricated from nom 0.019 in. (0.48 mm) thick galv steel cast or grouted into floor or wall assembly flush with floor or wall surfaces.

3. Cables – Aggregate cross-sectional area of cables to be min 10 percent to max 40 percent of the cross-sectional area of the opening. Cables to be rigidly supported on both sides of the floor or wall assembly. Any combination of the following types and sizes of cables may be used:

A. Max 1000 kcmil single-conductor copper or aluminum power cable; cross-linked polyethylene insulation.

B. Max No. 2/0 AWG multiconductor copper or aluminum power cables; cross-linked polyethylene, polyvinyl chloride, neoprene rubber, hypalon or silicone rubber insulation and jacket materials.

C. Max No. 12 AWG multiconductor copper control cables; cross-linked polyethylene, polyvinyl chloride, neoprene rubber, hypalon or silicone rubber insulation and jacket materials.

D. Max 400 pair No. 24 AWG copper telephone cables; polyvinyl chloride insulation and jacket materials.

E. Multiple fiber optical communication cable jacketed with PVC and having a max outside diam of 5/8 in.

F. Max 200 pair No. 22 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.

G. Max 3/C No. 3/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.

H. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TECK 90 cable.

I. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable with PVC insulation and jacket.

J. RG/U coaxial cable with fluorinated ethylene (FE) or PVC insulation and jacket.

K. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.

L. Max 3/C No. 12 AWG (or smaller) MC (BX) copper cable with polyvinyl chloride insulation and jacket materials.

M. Through Penetrating Product* – Any cables, Armored Cable+ or Metal Clad Cable+ currently Classified under the Through Penetrating Product category. See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers

4. Packing Material – Min 1 in. (25 mm) thickness of 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or ends of sleeve as required to accommodate the required thickness of fill material (Item 5).

5. Fill, Void or Cavity Material* – Caulk or Sealant – Applied to fill the through opening to a min thickness of 1 in. (25 mm) flush with the top surface of the floor or sleeve or both surfaces of wall or ends of sleeve. Caulk to be forced into interstices of cable group to max extent possible. F Rating of firestop systems is dependent upon the through opening size, the thickness of the concrete, the sleeve type and percent cable fill, as tabulated below:

Max Through Opening Diam In. (mm)	Min Concrete Thkns In. (mm)	Sleeve Type	% Cable Fill	F Rating Hr
6 (152)	2-1/2 (64)	PVC	15-40	2
6 (152)	2-1/2 (64)	PVC	10-15	3
6 (152)	4-1/2 (114)	PVC	10-40	3
6 (152)	4-1/2 (114)	None	10-40	3
6 (152)	4-1/2 (114)	Steel	10-40	3
8 (203)	2-1/2 (64)	None	15-40	1-1/2
8 (203)	4-1/2 (114)	None	15-33	2
8 (203)	2-1/2 (64)	None	10-15	3
8 (203)	2-1/2 (64)	Steel	15-40	1-1/2
8 (203)	2-1/2 (64)	Steel	10-15	3
8 (203)	4-1/2 (114)	Steel	10-22	3

3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 C-AJ-3030
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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by: MR
Drawn by: JI, MT, TY
Checked by: KW
Date: 07/13/2018
Dwg scale: AS NOTED
CIP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0013
Sheet Reference No: V5 - 020 of 218

Project Number: 21722
7/11/2018 3:05:06 PM
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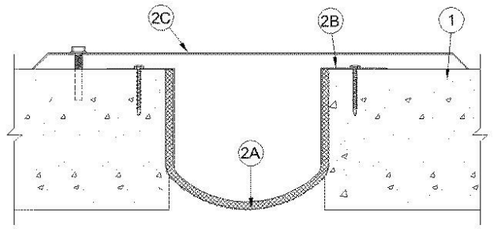
System No. FF-D-1066

March 20, 2006

Assembly Rating — 2 Hr

Nominal Joint Widths — 3, 4, 5 and 6 In. (See Item 2A)

Class II and III Movement Capabilities — 50% Compression, Extension or Horizontal Shear



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) structural concrete.

2. Joint System — Max width of joint (at time of installation of joint system) is 3, 4, 5 or 6 in. (76, 102, 127 or 152 mm). The joint system is designed to accommodate a max 50 percent compression, extension or horizontal shear from its installed width. The joint system consists of the following:

A. Mechanical Joint Assembly — Fire barrier material encased in corrugated metal and provided with metal flanges. Assembly to be installed in floor in accordance with the installation instructions provide with the product. The following assemblies are to be used with the different joint sizes:

Nom Joint Width In. (mm)	Mechanical Joint Designation
3 (76)	MFX-3F
4 (102)	MFX-4F
5 (127)	MFX-5F
6 (152)	MFX-6F

CONSTRUCTION SPECIALTIES INC

B. Retaining Angles — Stair-stepped 20 gauge (or heavier) galvanized steel angles installed over metal flanges of joint assembly in accordance with the installation instructions provide with the product. Angles to extend entire length of joint and are to be attached to floor with min 3/16 in. (5 mm) diam by 1-1/2 in. (38 mm) long masonry anchors spaced a max of 18 in. (457 mm) on center.

C. Joint Cover — Min 0.034 in. (0.9 mm) thick metallic cover plates secured to top side of floor, continuous over full length of joint. Cover plate attached to floor on one side of opening only with min 1-1/2 in. (38 mm) long masonry anchors spaced a max of 18 in. (457 mm) on center. As an alternate, where the linear joint opening is enclosed within a chase wall and is non load bearing, a cover consisting of a creased sheet of min 2 mil (0.05 mm) thick stainless steel foil secured with 1 in. (25 mm) wide continuous galv steel washer strips along each side of the joint opening may be used.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1 FF-D-1066
NOT TO SCALE

System No. HW-D-0003

September 01, 2016

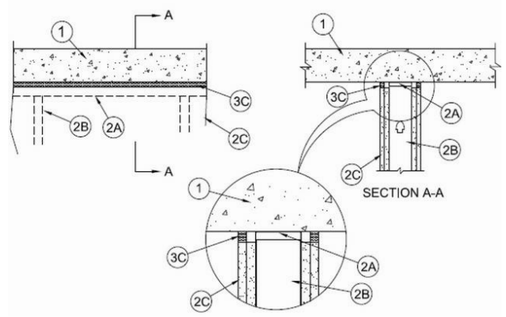
Assembly Ratings — 1 and 2 Hr (See Item 2)

L Rating at Ambient — Less Than 1 CFM/Lin Ft

L Rating at 400°F — Less Than 1 CFM/Lin Ft

Joint Width — 3/4 in. Max

Class II Movement Capabilities —25% Compression Only



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) structural concrete.

2. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 Series or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor and Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B) with min 1-1/4 in. (32 mm) to max 2 in. (51 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 in. to 3/4 in. (13 to 19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, ceiling runner is secured to concrete floor with steel fasteners spaced max 24 in. (610 mm) OC.

A1. Light Gauge Framing* — Slotted Ceiling Runner — As an alternate to the ceiling runner in Item 2A, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Items 2B). Ceiling runner secured to bottom of concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — SDT250, SDT300

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

METAL-LITE INC — The System

OLMAR SUPPLY INC — STT250, STT300

QUAIL RUN BUILDING MATERIALS INC — Slotted Deflection Track

R & P SUPPLY — SCT250, SCT300

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

STEELER INC — Steeler Slotted Ceiling Runner

TELLING INDUSTRIES L L C — True-Action Deflection Track

A2. Light Gauge Framing* — Vertical Deflection Ceiling Runner — As an alternate to the ceiling runner in Item 2A, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clip provided with step bushings for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner secured to floor with steel fasteners spaced max 24 in. (610 mm) OC. When vertical deflection ceiling runner is used, deflection channel (Item 3A) shall not be used.

THE STEEL NETWORK INC — VertiTrack VTD362, VTD400, VTD600 and VTD800

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to floor runner and with top nesting in ceiling runner without attachment. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1/2 in. (13 mm) below the bottom of the deflection channel. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel s crews at midheight of slot on each side of wall. Stud spacing not to exceed 24 in. (610 mm) OC. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through bushings, with steel screws at midheight of each slot.

B1. Light Gauge Framing* — Slotted Studs — Slotted steel stud to be used in conjunction with Light Gauge Framing* — Floor and Ceiling Runners (Item 2A1). Slotted steel studs to be min 3-1/2 in. (89 mm) wide. Slotted steel studs cut 1/2 in. to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to both ceiling and floor runners. Ceiling runner secured to preformed slot within steel stud by means of No. 10 by 3/4 in. (19 mm) long low profile head steel screw. Floor runner attached to bottom of steel stud by means of No. 8 by 1/2 in. (13 mm) long pan head steel screw. Slotted steel stud spacing not to exceed 24 in. (610 mm) OC.

STEELER INC — Steeler Slotted Stud

2 HW-D-0003
NOT TO SCALE

C. Gypsum Board* — Gypsum board sheets installed to a min total thickness of 5/8 in. and 1-1/4 in. (16 and 32 mm) on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a max 3/4 in. (19 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the floor. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is dependent on the hourly fire rating of the wall assembly in which it is installed.

3. Joint System Max separation between bottom of floor and top of wall is 3/4 in. (19 mm). The joint system is designed to accommodate a max 25 percent compression from its installed width. The joint system consists of the following:

A. Deflection Channel — (Optional, Not Shown) — Max 2 in. (51 mm) deep min 24 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel secured to bottom of concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 in. to 3/4 in. (13 to 19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. Forming Material — (Optional, Not Shown) — In 2 hr fire rated wall assemblies, polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fit into joint opening.

C. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within joint opening on both sides of wall, flush with both surfaces of wall. In 1 hr fire rated walls, bond breaker tape applied to ceiling channel (Item 2A, 2A1, 2A2 or 2A3) prior to installation of fill material.

SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0014
Sheet Reference No: V5 - 021 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:06 PM

System No. HW-D-0102

September 01, 2016

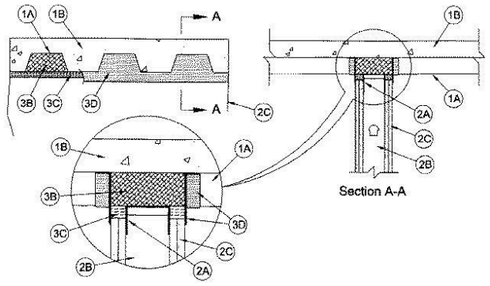
Assembly Ratings — 1, 2, 3 and 4 Hr (See Item 2)

Nominal Joint Widths - 1 and 2 in. (See Item 3)

L Rating At Ambient — Less Than 1 CFM/Lin Ft

L Rating At 400°F — Less Than 1 CFM/Lin Ft

Class II Movement Capabilities — 19 and 25% Compression and Extension (See Item 3)



1. Floor Assembly — The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the floor assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The floor assembly shall include the following construction features:

A. Steel Floor and Floor Units* — Max 3 in. (76 mm) deep galv steel fluted floor units.

B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. Roof Assembly — (Not Shown) — As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

2. Wall Assembly — The 1, 2, 3 or 4 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor and Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs. Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 3 in. (76 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 3/4 in. to 1 in. (19 to 25 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, flange height of ceiling runner shall be min 3/4 in. (19 mm) greater than nom joint width. Ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors or welds spaced max 24 in. (610 mm) OC.

A1. Light Gauge Framing* - Slotted Ceiling Runner — When nom joint width is less than or equal to 1-3/4 in. (44 mm), slotted ceiling runner may be used as an alternate to the ceiling runner in Item 2A., Slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type SLT

METAL-LITE INC — The System

QUAIL RUN BUILDING MATERIALS INC — Slotted Deflection Track

RAM SALES L L C — RAM Slotted Track

SCAFCO STEEL STUD MANUFACTURING CO

STEELER INC — Steeler Slotted Ceiling Runner

TELLING INDUSTRIES L L C — True-Action Deflection Track

A2. Light Gauge Framing* — Vertical Deflection Ceiling Runner — When nom joint width is less than or equal to 1 in. (25 mm) , vertical deflection ceiling runner may be used as an alternate to the ceiling runner in Items 2A and 2A1., Vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Vertical deflection ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors spaced max 24 in. (610 mm) OC. When vertical deflection ceiling runner is used, deflection channel (Item 3A) shall not be used.

THE STEEL NETWORK INC — VertiTrack VTD362, VTD400, VTD600 and VTD800

A3. Light Gauge Framing* - Notched Ceiling Runner — As an alternate to the ceiling runners in Items 2A through 2A3, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors spaced max 24 in. (610 mm) OC. When notched ceiling runner is used, deflection channel (Item 3A) shall not be used.

OLMAR SUPPLY INC — Type SCR

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 3/4 in. (19 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection ceiling runner (Item 2A2) is used, steel studs secured to slotted vertical deflection clips, through the bushings, with steel screws at midheight of each slot. Stud spacing not to exceed 24 in. (610 mm) OC.

C. Gypsum Board* — Gypsum board sheets installed to a min total thickness of 5/8 in., 1-1/4 in., 1-1/2 in. or 2 in. (16, 32, 38 or 51 mm) on each side of wall for 1, 2, 3 and 4 hr fire-rated assemblies, respectively. Wall to be constructed as described in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 1 or 2 in. (25 or 51 mm) gap (See Item 3) shall be maintained between the top of the gypsum board and the bottom plane of the steel floor units. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire-rating of the joint system is equal to the hourly fire-rating of the wall.

3. Joint System — Max separation between bottom of floor or roof deck and top of gypsum board (at time of installation of joint system) is 2 in. (51 mm) for 1 and 2 hr fire ratings and 1 in. (25 mm) for 3 and 4 hr ratings. The joint system is designed to accommodate a max 25 percent compression or extension from its installed width for 1 and 2 hr ratings and a max 19 percent compression or extension from its installed width for 3 and 4 hr ratings. The joint system shall consist of spray applied fire resistive material, forming and fill materials, with or without a deflection channel (Item 3A) as follows:

A. Deflection Channel — Max 3 in. (76 mm) deep min 24 gauge galv steel channel sized to accommodate ceiling runner (Item 2A) and steel studs. Deflection channel installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors or welds spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 to 1 in. gap (13 to 25 mm) between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. Spray Applied Fire Resistive Material* — Min 4-7/8 in., 6-1/8 in., 6-5/8 in. or 7-5/8 in. (124, 156, 168 or 194 mm) depth of spray applied fire resistive material for 1, 2, 3 and 4 hr fire-rated assemblies, respectively, installed into the flutes of the steel floor or roof deck between the top of the deflection channel and the steel deck. Prior to the installation of the spray applied fire resistive material in the flutes of the steel floor or roof deck temporary forms with a thickness equal to the overall thickness of the gypsum board shall be installed to cover the vertical legs of the ceiling runner channel (Item 2A) or deflection channel (Item 3A). The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag and is sprayed and/or troweled to fill the flute above the channel and temporary forms.

ISOLATEK INTERNATIONAL — Type 300, Type II

When Type 300 material is used, the minimum average density of the material shall be 17.5 pcf (280 kg/m3) with a minimum individual density of 16 pcf (256 kg/m3). When Type II material is used, the minimum average density of the material shall be 13 pcf (208 kg/m3) with a minimum individual density of 11 pcf (176 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.

GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY

When MK-6/HY material is used, the minimum average density of the material shall be 15 pcf (240 kg/m3) with a minimum individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.

C. Forming Material* — Strips of nominal 4 pcf (64 kg/m3) density mineral wool batt insulation are to be compressed 50 percent in thickness and installed cut edge first to completely fill the gap between the spray applied fire resistive material and the top of the gypsum board. The forming material shall be installed flush with both surfaces of wall.

INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — Safe

ROCKWOOL — Safe

THERMAFIBER INC — SAF

D. Fill, Void or Cavity Material* — Sealant — Min 1/8 in. (3.2 mm) wet thickness (min 1/16 in. or 1.6 mm dry thickness) of fill material spray applied to cover the spray applied fire resistive material and the forming material on each side of the wall. The material shall be installed to overlap a min of 1/2 in. (13 mm) onto the gypsum board and a min of 1 in. (25 mm) on the steel floor or roof deck on both sides of wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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NOT TO SCALE

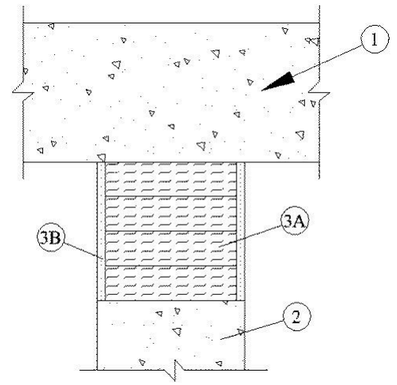
System No. HW-D-1036

November 12, 2002

Assembly Rating — 3 Hr.

Nominal Joint Width — 2 and 3-1/2 In. (See Item 3A)

Class II Movement Capabilities — 15% Compression or Extension



1. Floor Assembly — Min 4-1/2 in. thick reinforced lightweight or normal weight (100 - 150 pcf) structural concrete. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core Precast Concrete Units* .
See Precast Concrete Units (CFTV) category in the Fire Resistance Directory for names of manufacturers.

2. Wall Assembly — Min 4-1/2 in. thick reinforced lightweight or normal weight (100 - 150 pcf) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks* .
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. Joint System — Max separation between bottom of floor and top of wall (at time of installation of joint system) is dependent upon the type of forming material used within the joint system as shown on Item 3A. The joint system is designed to accommodate a max 15 percent compression or extension from it's installed width. The joint system shall consist of the following:

A. Forming Material* — Min 4 pcf mineral wool batt insulation installed in joint opening as a permanent form. Pieces of batt cut to min width of 4 in. and installed edge-first into joint opening, parallel with joint direction, such that batt sections are compressed min 42 percent in thickness and that the compressed batt sections are recessed from each surface of the wall as required to accommodate the required thickness of fill material. Adjoining lengths of batt to be tightly-butted with butted seams spaced min 24 in. apart along the length of the joint.
Max width of joint (at time of installation of joint system) is dependent upon the manufacturer and type of forming material used within the joint system as shown in the table below:

Manufacture of Forming Material	Type of Forming Material	Width of Joint, In.
FBX Insulation	FBX Safing Insulation	3-1/2
Roxul	SAFE Mineral Wool	2

ROCKWOOL MALAYSIA SDN BHD — SAFE Mineral Wool

ROCKWOOL — SAFE Mineral Wool

B. Fill, Void or Cavity Material*—Sealant — Min 1/4 in. thickness of fill material applied within the joint, flush with each surface of wall.

EGS NELSON FIRESTOP — ES1399 Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 HW-D-1036
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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming



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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0015
Sheet Reference No:
V5 - 022 of 218

Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:07 PM

System No. W-L-1001

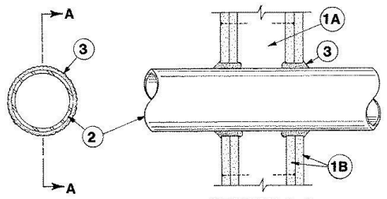
June 15, 2005

F Ratings — 1, 2, 3 and 4 Hr (See Items 2 and 3)

T Ratings — 0, 1, 2, 3, and 4 Hr (See Item 3)

L Rating At Ambient — less than 1 CFM/sq ft

L Rating At 400 F — less than 1 CFM/sq ft



SECTION A-A

1. Wall Assembly — The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetrant — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. Through Penetrating Product* — Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of f loor or wall assembly.

WARD MFG L L C

3. Fill, Void or Cavity Material* — Caulk or Sealant — Min 5/8. , 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

3M COMPANY — CP 25WB+ or FB-3000 WT.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

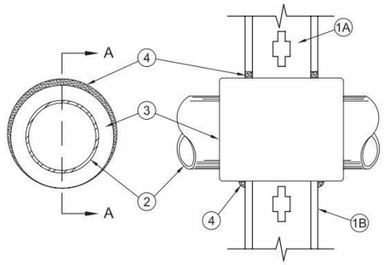
1 W-L-1001
NOT TO SCALE

System No. W-L-1133

September 03, 2004

F Rating – 1 Hr

T Rating – 1/4 Hr



SECTION A-A

1. Wall Assembly – The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-1/2 in. wide and spaced max 24 in. OC.

B. Gypsum Board* – One layer of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 11-1/2 in.

2. Through Penetrants – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe – Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe – Nom 6 in. diam (or smaller) cast or ductile iron pipe.

C. Conduit – Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

3. Pipe Covering* – Nom 2 in. thick hollow cylindrical heavy density glass fiber units with an all service jacket. Pipe covering to be min 12 in. long and installed on penetrant to extend a min of 3-5/8 in. beyond both sides of wall surface. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. Min 18 gauge steel wire ties shall be tightly fastened around outside of pipe covering approximately 1 in. from each end of pipe covering.
The annular space between the pipe covering and periphery of opening shall be min 0 in. (point contact) to max 7/8 in.
See Pipe and Equipment Covering – Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

4. Fill, Void or Cavity Materials* – Caulk or Sealant – Min 5/8 in. thickness of fill material applied within annulus, flush with each surface of wall. A min 1/4 in. diam bead of caulk shall be applied to the pipe covering/wallboard interface at the point contact location on both sides of wall.

3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 W-L-1133
NOT TO SCALE

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

REGISTERED ARCHITECT CERTIFICATE NO. 35861 MICHAEL L. KRAGER Date Signed 7-31-2018 ARIZONA, U.S.A. Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0016

Sheet Reference No: V5 - 023 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
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System No. W-L-2002

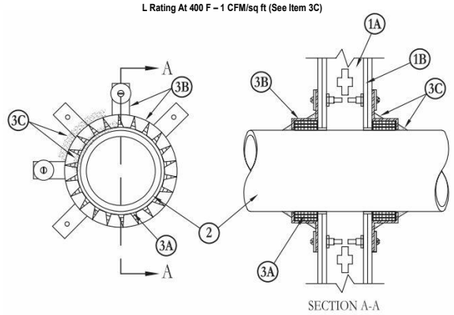
November 20, 2009

F Ratings – 1, 1-1/2 and 2 Hr (See Item 3)

T Ratings – 3/4, 1, 1-1/2 and 2 Hr (See Item 3)

L Rating At Ambient – 7 CFM/sq ft (See Item 3C)

L Rating At 400 F – 1 CFM/sq ft (See Item 3C)



SECTION A-A

1. Wall Assembly – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* – 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 7 in. (178 mm).

2. Nonmetallic Pipe or Conduit – One nonmetallic pipe or conduit is centered within the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall. The following types and sizes of nonmetallic pipes or conduit may be used:

A. Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core polyvinyl chloride (PVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core polyvinyl chloride (PVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

D. Nom 4 in. (102 mm) diam (or smaller) Schedule 40 fire retardant polypropylene (FRPP) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. Nom 4 in. (102 mm) diam (or smaller) Rigid Nonmetallic Conduit formed of PVC.

F. Nom 1 in. (25 mm) diam (smaller) Electrical Nonmetallic Tubing formed of PVC.

G. Nom 6 in. (152 mm) diam (or smaller) SDR13.5 chlorinated polyvinyl chloride (CPVC) pipe for use in closed (process or supply) piping systems.
See Rigid Nonmetallic Conduit (DZKT) and Electrical Nonmetallic Tubing (FKHU) categories in UL Electrical Construction Materials Directory for names of manufacturers.

3. Firestop System – Installed symmetrically on both sides of wall assembly. The hourly F and T Ratings for the firestop system are dependent upon the type and size of nonmetallic pipe or conduit, the piping system type (closed systems such as process or supply piping or vented systems such as drain, waste or vent piping) and the hourly fire rating of the wall assembly in which it is installed, as shown in the following table.

Pipe or Conduit Type	Nom Pipe Diam In. (mm)	Annular Space In. (mm)	Piping System (a)	Wall Fire Rating Hr	F Rating Hr	T Rating Hr
FRPP	1/2 to 2 (13 to 51)	0-3/16 (0-5)	V	2	1-1/2	1-1/2
FRPP, PB	1/2 to 2 (13 to 51)	0-3/16 (0-5)	C	2	2	2
ABS	1/2 to 4 (13 to102)	0-3/16 (0-5)	C,V	1	1	3/4
ABS	1/2 to 4 (13 to102)	0-3/16 (0-5)	C,V	2	1-1/2	1-1/2
PVC	1/2 to 4 (13 to102)	0-3/16 (0-5)	C,V	1	1	1
PVC	1/2 to 4 (13 to102)	0-3/16 (0-5)	C,V	2	2	2
FRPP+	2-1/2 to 4 (64 to 102)	0-3/16 (0-5)	C,V	2	1-1/2	1-1/2
PVC+	5, 6 (127 to 152)	0-3/16 (0-5)	C,V	2	1-1/2	1-1/2

+Pipe covering material wrap required on pipe on both sides of wall.
(a) C = closed systems, V = vented systems.
The details of the firestop system shall be as follows.

A. Fill, Void or Cavity Materials* – Wrap Strip – Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strips tightly wrapped around nonmetallic pipe or conduit (foil side exposed) with the edges butted against the surface of the wall. Sufficient layers of wrap strip shall be installed to lap a min of 3/16 in. (5 mm) on the wall surface around the entire perimeter of the circular through opening. For nom 1/2 in. (13 mm) to nom 2 in. (51 mm) diam pipes or conduits, a min of one layer of wrap strip is required. For nom 2-1/2 in. (64 mm) and nom 3 in. (76 mm) diam pipes, a min of two layers of wrap strip is required. For nom 3-1/2 in. (89 mm) and nom 4 in. (102 mm) diam pipes, a min of three layers of wrap strip is required. For nom 5 and 6 in. (127 and 152 mm) diam, two tiers (4 in. (102 mm)overall length) of three layers of wrap strip is required, with adjoining wrap strip layer edges between tiers tightly butted. Each layer of wrap strip to be installed with butted seam, with butted seams in successive layers staggered. Wrap strip layers temporarily held in position using aluminum foil tape, steel wire tie or equivalent.

3M COMPANY – Type FS-195+

B. Steel Collar – Nom 2 or 4 in. (51 or 102 mm) deep collar with 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs and min 3/4 in. (19 mm) long tabs to retain wrap strip layers. Coils of precut 0.016 in. (0.41 mm) thick (No. 30 28 gauge) galv sheet steel available from wrap strip manufacturer. As an alternate, collar may be field-fabricated from min 0.016 in. (0.41 mm) thick (No. 30 28 gauge) galv sheet steel in accordance with instruction sheet supplied by wrap strip manufacturer.

Steel collar, with anchor tabs bent outward 90 deg, wrapped tightly around wrap strip layers with min 1 in. (25 mm) overlap at the seam. With steel collar anchor tabs pressed tightly against wall surface, compress collar around wrap strip layers using a min 1/2 in. (13 mm) wide by 0.028 in. (0.71 mm) thick stainless steel band clamp with worm drive tightening mechanism at the collar midheight. As an alternate to the stainless steel band clamp, the steel collar may be compressed around nom 4 in. diam (or smaller nonmetallic pipes using two min 16 SWG (0.0625 in. (0.016 mm) diam) steel wires secured with multiple twists. As an alternate to the band clamps or steel wires, collars may be secured by a means No. 10 by 1/2 in. (13 mm) long sheet metal screws installed in the vertical axis at the center of the 1 in. (25 mm) overlap along the perimeter joint of the collar. A min of three screws is required. Secure collar to wall surface with 3/16 in. (5 mm) diam steel toggle bolts in conjunction with min 1-1/2 in. (38 mm) diam steel washers.

Three bolts, symmetrically located, required for 2 in. (51 mm) deep steel collar for nom 1/2 in. (13 mm) to nom 3 in. (76 mm) diam pipes. Four bolts, symmetrically located, required for 2 in. (51 mm) deep steel collar for nom 3-1/2 and 4 in. (89 and 102 mm) diam pipes. Five to seven bolts (every other anchor tab) required for 4 in. (102 mm) deep steel collar for nom 5 and 6 in. (127 and 152 mm) diam pipes. As a final step, bend retainer tabs 90 deg toward pipe to lock wrap strip layers in position.

C. Fill, Void or Cavity Materials* – Caulk, Sealant or Putty – Generous bead of caulk applied to outer perimeter of wrap strip at interface with wall surface and to perimeter of pipe or conduit at its egress from the wrap strip layers.

3M COMPANY – CP 25WB+ caulk and MP+ Stix putty, IC 15WB+ caulk, FireDam 150+ caulk, or FB-3000 WT sealant
(Note: L Ratings apply only when CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

D. Pipe Covering* – (Not Shown) – Nom 1 in. (25 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. When required (see table), min 6 in. (152 mm) length of pipe covering installed around PVC pipe at its egress from steel collar on both sides of wall. Pipe covering secured to pipe with steel wire ties spaced max 4 in. (102 mm) OC. Edge of pipe covering abutting steel collar to be sealed with a min 1/4 in (6 mm). diam bead of caulk (Item C).

See Pipe and Equipment Covering – Materials (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

E. Firestop Device* – (Not shown) – As an alternate to Items A, B and C for nom 1-1/2, 2, 3 or 4 in. (38, 51, 76 or 102 mm) diam nonmetallic pipes, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used. Firestop device to be installed on both sides of wall in accordance with the accompanying installation instructions.

3M COMPANY – Types PPD 150, PPD 200, PPD 300, PPD 400

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1 W-L-2002
NOT TO SCALE

System No. W-L-3030

May 19, 2005

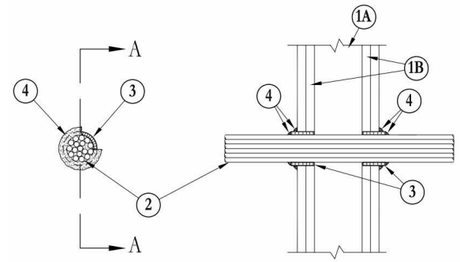
(Formerly System No. 571)

F Ratings – 1 and 2 Hr (See Item 1)

T Rating – 1/2 Hr

L Rating At Ambient – 76 CFM/sq ft (See Item 4)

L Rating At 400 F – 7 CFM/sq ft (See Item 4)



SECTION A-A

1. Wall Assembly – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (51 mm by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 in. by 4 in. (51 mm by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* – Nom 5/8 in. (16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design. Diam of circular cutout in gypsum board layers on each side of wall to be 1/2 in. to 3/4 in. (13 mm to 19 mm) larger than diam of tight cable bundle (Item 2). Max diam of cutouts is 4-1/2 in. (114 mm).
The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.

2. Cables – Max 4 in. (102 mm) diam tight bundle of cables centered in circular cutouts in gypsum board and rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 350 kcmil single-conductor power cables; cross-linked polyethylene (XLPE) or polyvinyl chloride (PVC) insulation.

B. Max 7/C No. 12 AWG cables; PVC insulation and jacket.

C. Max 3/C No. 2/0 AWG multi conductor power and control cables; XLPE or PVC insulation, XLPE or (PVC) jacket.

D. Max 200 pair No. 24 AWG telecommunication cables; PVC insulation and jacket.

E. Max 6/94 Fiber Optic (F.O.) cable; PVC insulation and jacket.

3. Fill, Void or Cavity Material* – Wrap Strip – Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in nom 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly-wrapped around cable bundle (foil side out) with seam butted. Wrap strip layer securely bound with steel wire tie and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip width protrudes from the wall surface on each side of the assembly.

3M COMPANY – FS-195+

4. Fill, Void or Cavity Materials* – Caulk, Sealant or Putty – Min 1/4 in. (6 mm) diam continuous bead of caulk or putty applied to the wrap strip/wall interface and to the exposed edge of the wrap strip approximate 3/4 in. (19 mm) from the wall surface on each side of wall assembly. Caulk or putty to be forced into the interstices of the cable bundle to the max extent possible within the confines of the wrap strip on each side of the wall assembly.

3M COMPANY – CP 25WB+, IC 15WB+, FireDam 150+ caulk, FB-3000 WT sealant or MP+ Stix putty
(Note: L Ratings apply only when CP 25WB+ caulk or FB-3000 WT is used.)

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 W-L-3030
NOT TO SCALE

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0017
Sheet Reference No: V5 - 024 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:08 PM

System No. W-L-3032

September 07, 2004

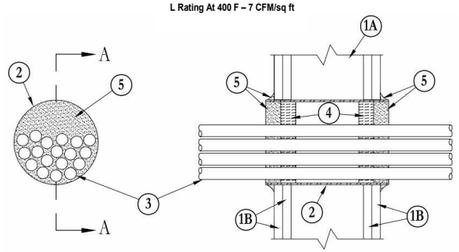
(Formerly System No. 590)

F Ratings – 1 and 2 Hr(See Item 1)

T Rating – 0 and 1/4 Hr (See Item 3F)

L Rating At Ambient – 76 CFM/sq ft

L Rating At 400 F – 7 CFM/sq ft



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-1/2 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.

B. Gypsum Board* — 5/8 in. thick, 4ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6 in.
The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.

2. Steel Sleeve — Cylindrical sleeve fabricated from min 0.019 in. thick (28 gauge) galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus approx 7/8 to 1 in. such that, when installed, the ends of the sleeve will project approx 7/16 to 1/2 in. beyond the surface of the wall on each side of the wall assembly. Sleeve installed by coiling the sheet steel to diam smaller than the max 6 in. diam through openings, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

3. Cables — Aggregate cross-sectional area of cables in opening to be min 8 percent to max 36 percent of the cross-sectional area of the sleeved opening in wall. Cables to be rigidly supported on both sides of wall assembly. The space between cables and periphery of opening shall be min 1/4 in. to max 2-1/2 in. Min separation between Armored Cables and/or Metal-Clad Cables (Item 3F) and between Armored Cables and/or Metal-Clad Cables and all other types of cables shall be 1/4 in. Any combination of the following types and sizes of copper conductor cable may be used:

A. Max 350 kcmil single conductor power cables; cross-linked polyethylene (XLPE) insulation.

B. Max 200 pair No. 24 AWG conductor telecommunication cables; polyvinyl chloride (PVC) insulation and jacket.

C. Max 7/C No. 2/0 AWG multiconductor power and control cables; XLPE or PVC insulation with XLPE or PVC jacket.

D. Max 3/C No. 2/0 AWG cables; PVC insulation and jacket.

E. Max 6/94 Fiber Optic (F.O.) cable; PVC insulation and jacket.

F. Max four copper conductor No. 2/0 AWG (or smaller) aluminum or steel Armored Cable or Metal-Clad Cable Classified as a Through Penetrating Product. The T Rating is 0 Hr when armored cables or metal-clad cables are used.
See Through Penetrating Product* (XHLY) Category in the Fire Resistance Directory for names of manufacturers. Any aluminum or steel Armored Cable or Metal-Clad Cable Classified as a Through Penetrating Product meeting the above specifications may be used.

4. Packing Material — Min 1 in. thickness of mineral wool batt insulation firmly packed into steel sleeve on both sides of the wall assembly as permanent forms. Packing material to be recessed min 1 in. from end of steel sleeve (min 1/2 in. from surface of gypsum wallboard) on both sides of wall assembly.

5. Fill, Void or Cavity Material* — Caulk or Sealant — Min 1 in. thickness of fill material applied within the annulus, flush with both ends of the steel sleeve. A nom 1/4 in. diam continuous bead of caulk shall be applied around the circumference of the steel sleeve at its egress from the gypsum wallboard layers on both sides of the wall assembly.

3M COMPANY — CP 25WB+ or FB-3000 WT

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

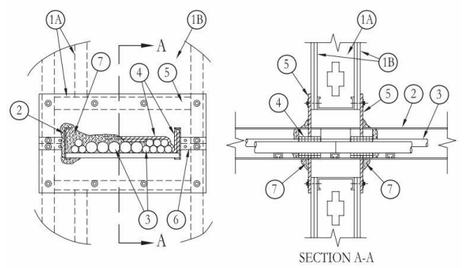
1 W-L-3032
NOT TO SCALE

System No. W-L-4004

May 19, 2005

F Rating – 2 Hr

T Ratings – 0, 1/2 and 1 Hr (See Items 1A and 3)



SECTION A-A

1. Wall Assembly – The fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Studs – Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC. The opening in the wall to accommodate the cable tray (Item 2) shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be min 1/2 in. (13 mm) to max 6 in. (152 mm) wider and higher than the width and height of the cable tray such that, when the cable tray is centered in the opening, a 1/4 to 3 in. (6 to 76 mm) clearance is present between the cable tray and the framing on all four sides.
When the clearance between the cable tray and the framing is less than 2 in. (51 mm), the T Rating is 0 hr.

B. Gypsum Board* – Two layers of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design.

2. Cable Tray – Max 24 in. (610 mm) wide by max 4 in. (102 mm) deep open ladder steel or aluminum cable tray. Cable tray to consist of channel-shaped side-rails with boxed channel rungs spaced 9 in. (229 mm) OC. Cable tray centered in framed opening and rigidly supported on both sides of wall assembly.

3. Cables – Aggregate cross-sectional area of cables in cable tray not to exceed 32 percent of the cross-sectional area of the cable tray based on a max 3 in. (76 mm) cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 350 kcmil single-conductor power cables; cross-linked polyethylene (XLPE) insulation.

B. Max No. 2/0 AWG multiconductor power and control cables; XLPE insulation, XLPE or polyvinyl chloride (PVC) jacket.

C. Max No. 12 AWG multiconductor power and control cables; XLPE insulation, XLPE or PVC jacket.

D. Max 7C No. 12 AWG (or smaller) multi conductor power and control cables; XLPE insulation, XLPE or polyvinyl chloride (PVC) jacket.

E. Max No. 18 AWG RG 6/U coaxial cable with PVC insulation and jacket.

F. Max 1-10/125 Fiber Optic (F.O.) cable with PVC insulation and jacket.

When cables A and B are used in steel cable tray, T Rating is 0 hr.
When cables A and B are used in aluminum cable tray, T Rating is 1/2 hr.
When cables C, D, E and F are used in steel cable tray, T Rating is 1/2 hr.
When cables C, D, E and F are used in aluminum cable tray, T Rating is 1 hr.

4. Fill, Void or Cavity Materials* – Intumescent Sheet – Rigid aluminum foil-faced sheet with galv steel sheet backer. Sheets cut to tightlyfollow the contours of the cables around the entire perimeter of the cable tray and cable fill. Sheets cut to lap a min of 2 in. (51 mm) on the wall on all sides of the opening on both sides of the wall. Prior to installation, a min 1/4 in. (6 mm) diam bead of caulk (Item 7) or a nom 1/8 by 1/2 in. (3.2 by 13 mm) ribbon of putty (Item 7A) shall be applied as a gasket approx 1 in. (25 mm) from and on all sides of the through opening. Sheet to be installed with the galv steel sheet backer exposed (aluminum foil facing against wall surface) and secured to steel framing, through gypsum board layers, with min 1/4 in. (6 mm) diam by 2-1/4 in. (57 mm) long steel screws in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers. Max spacing of fasteners not to exceed 6 in. (152 mm) with additional fasteners located on each side of batted seams or slits made to permit installation of the sheet around the cable tray.

3M COMPANY – Type CS-195+

5. Steel Cover Strip – Min 2 in. (51 mm) wide strip of min 0.020 in. (.51 mm) thick (26 gauge) galv steel centered over entire length of each butted seam or slit made in the intumescent sheet (Item 5). Prior to installation of the steel strip, the seam or slit in the intumescent sheet shall be covered with a nom 1/4 in. (6 mm) diam bead of caulk (Item 7) or a nom 1/8 by 1/2 in. (3.2 by 13 mm) ribbon of putty (Item 7A). Steel cover strip secured to galv steel sheet backer of intumescent sheet with steel sheet metal screws or steel rivets spaced max 3 in. (76 mm) OC on each side of seam or slit.

6. Fill, Void or Cavity Materials* – Graphite Seal, Caulk, Sealant or Putty – One layer of 1/2 in. x 1/16 in. (13 mm by 1.6 mm) adhesive backed graphite intumescent seal positioned under intumescent sheet around entire perimeter of through opening or min 1/4 in. (6 mm) diam continuous bead of caulk or putty applied to edge of intumescent sheet at its interface with surface of floor or wall around entire perimeter of through opening. Caulk applied to fill all interstices between cables and between cables and wrap strip (Item 4). Caulk depth to be min 2 in. (51 mm) within confines of wrap strip on both sides of floor or wall assembly. Generous application of caulk to be applied around the base of the cable tray side-rails and contour applied wrap strips at their egress from the intumescent sheet on both sides of the wall assembly. Caulk also applied to cover all exposed edges of wrap strips to a min thickness of 1/8 in. (3.2 mm).

3M COMPANY – E-FIS or Ultra GS seal, CP 25WB+ caulk, MP+ Stix putty, IC 15WB+ caulk or FB-3000 WT sealant

6A. Fill, Void or Cavity Materials* – Putty – As an alternate to the caulk (Item 6) when steel cable tray is used, nom 1/4 in. (6 mm) thick by 2 in. (51 mm) wide strips of moldable putty shall be applied to follow the contours of the cable fill on the top and bottom of the cable tray prior to installation of the intumescent sheets (Item 5). Moldable putty strips installed to project approx 7/8 in. (22 mm) beyond each face of the intumescent sheet on each side of the wall assembly. After installation of the intumescent sheets, putty pressed into cable fill and against intumescent sheet to fill all openings. Nom 1/2 in. (13 mm) diam "ropes" of putty applied around cable tray side-rail members at their egress from the intumescent sheet and pressed into the intersections. A min 1/8 in. (3.2 mm) thickness of putty shall be applied to cover the short lengths of wrap strip installed to fill the channel of the steel
cable tray side-rails.

3M COMPANY – MP+ Stix

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2 W-L-4004
NOT TO SCALE

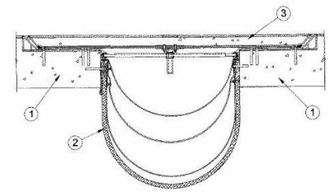
System No. FF-D-2004

March 17, 2000

Assembly Rating — 2 Hr

Nominal Joint Width — 7 to 12 in.

Class II and III Movement Capabilities — 80% Compression, 95% Extension



1. **Floor Assembly** — Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a min thickness of 4-1/2 in. at stepped-edges receiving joint cover (Item 3).

2. **Mechanical Joint Assembly* — Nom width of joint is 7 to 12 in.** Flexible multilayer mat material with galv steel mounting angles on longitudinal edges. The mechanical joint assembly shall be installed in accordance with the installation instructions accompanying the units.
CONSTRUCTION SPECIALTIES INC — FB97-7F-++ LS through FB97-12F-++ LS (++=max width of joint opening)

3. **Joint Cover** — Min 0.030 in. thick joint cover formed of aluminum, bronze, stainless steel or galv steel. As an alternate, where the linear joint opening is enclosed within a chase wall and is non load bearing, a cover consisting of a creased sheet of min 2 mil stainless steel foil secured with 1 in. wide continuous galv steel washer strips along each side of the joint opening may be used. Joint covers anchored to floor slabs on each side of joint opening, continuous over entire length of joint, in accordance with the manufacturer's installation instructions.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

3 UL DESIGN NO. FF-D-2004
NOT TO SCALE

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

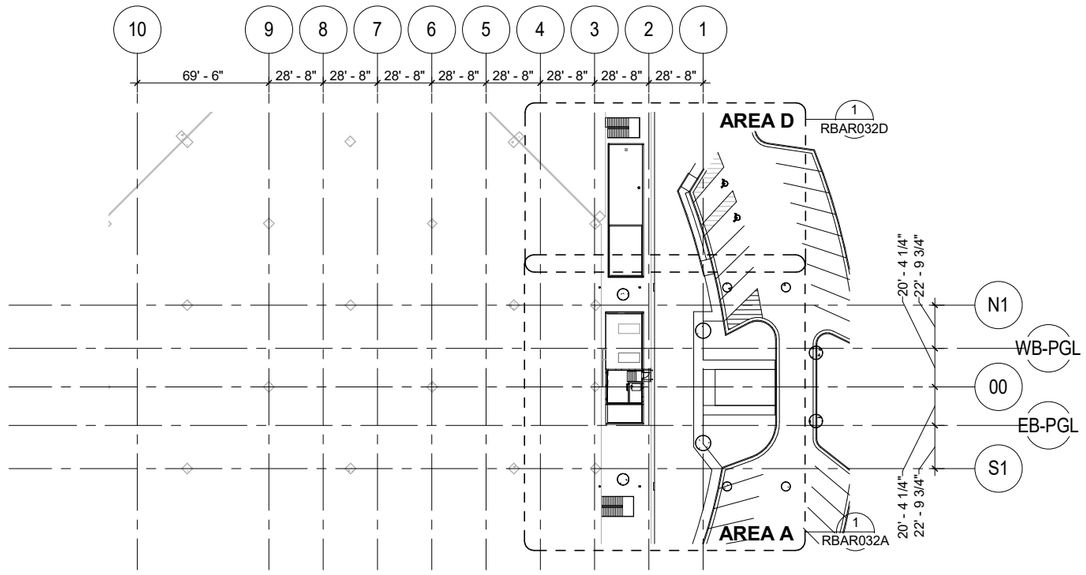
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

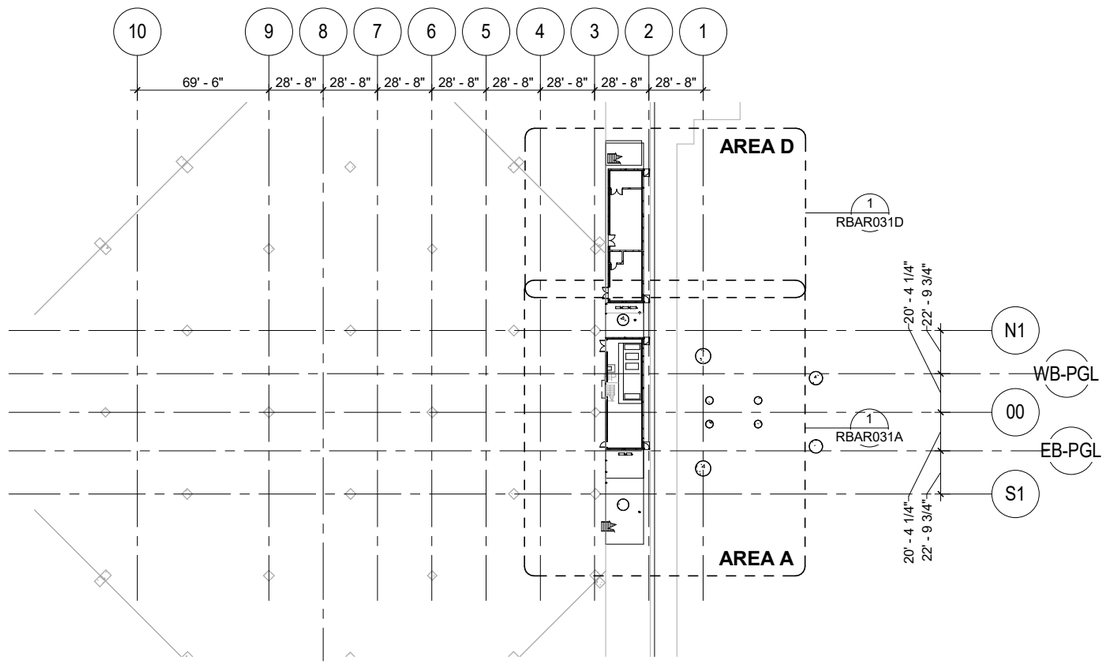
RCC STATION
ARCHITECTURAL
UL DETAILS

Package: B04 - RBAR0018
Sheet Reference No:
V5 - 025 of 218

Project Number: 21722
7/11/2018 3:05:08 PM
Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



2 LEVEL 2 - LOW ROOF
1" = 40'-0"



1 LEVEL 1 - GROUND
1" = 40'-0"

1" = 40'-0"
0 40' 80'

SHEET NOTES

A. REFER TO THE RBAR0-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

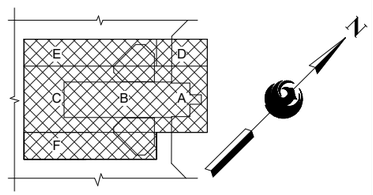
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F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

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KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

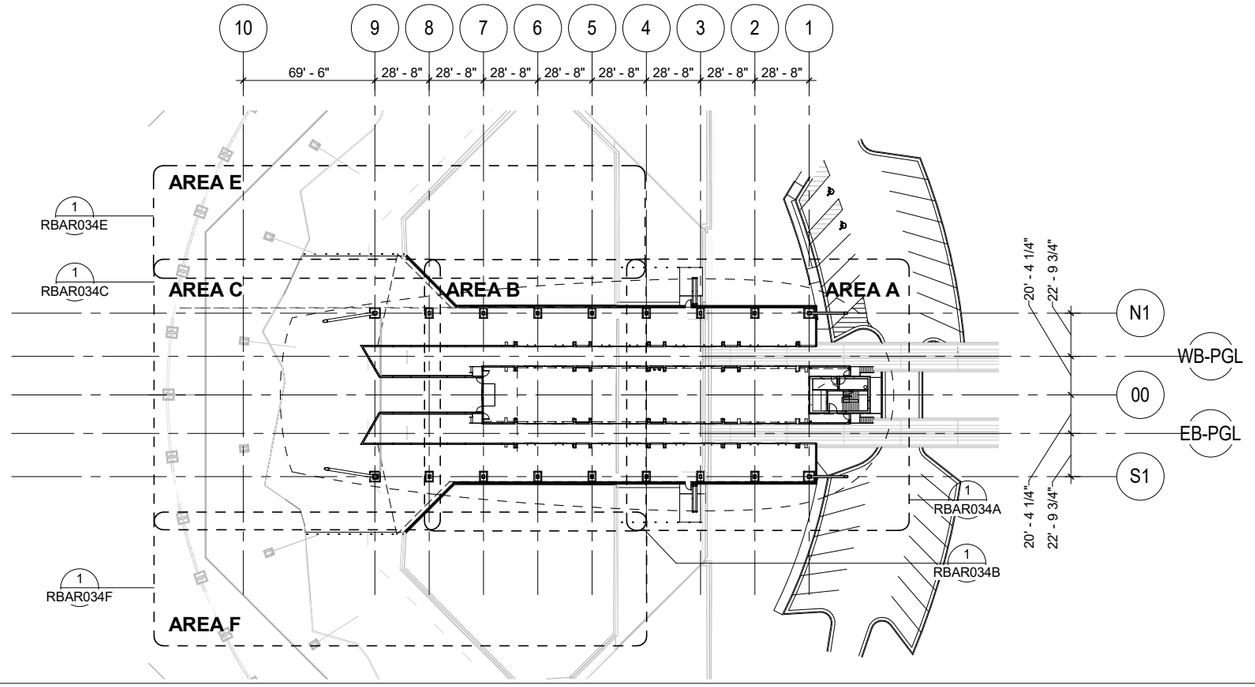
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

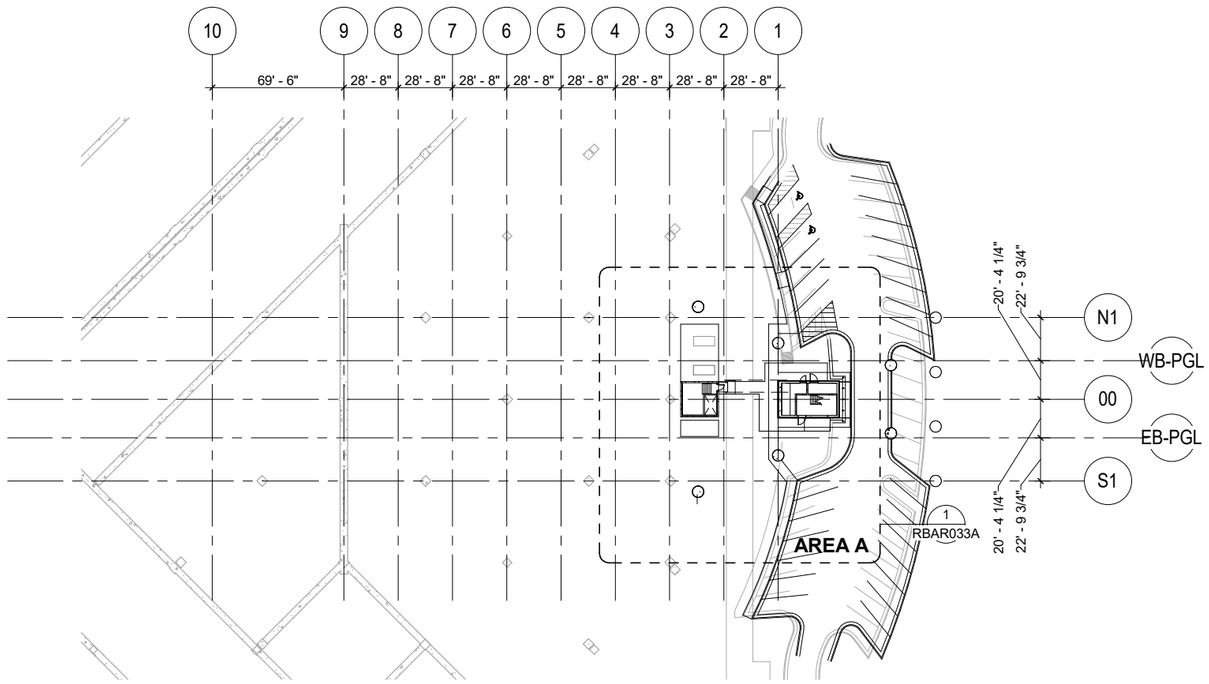
RCC STATION
ARCHITECTURAL
OVERALL PLANS - GROUND - LEVEL 1
AND LOW ROOF - LEVEL 2

Package: B04 - RBAR0220
Sheet Reference No: V5 - 026 of 218

Project Number: 21722
7/11/2018 3:06:45 PM
Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



2 LEVEL 4 - PLATFORM
1" = 40'-0"



1 LEVEL 2.5 - PARKING
1" = 40'-0"

1" = 40'-0"
0 40' 80'

SHEET NOTES

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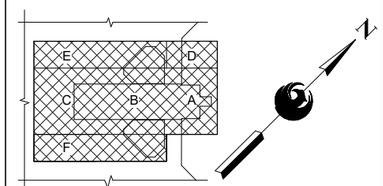
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KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35951
MICHAEL L. KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

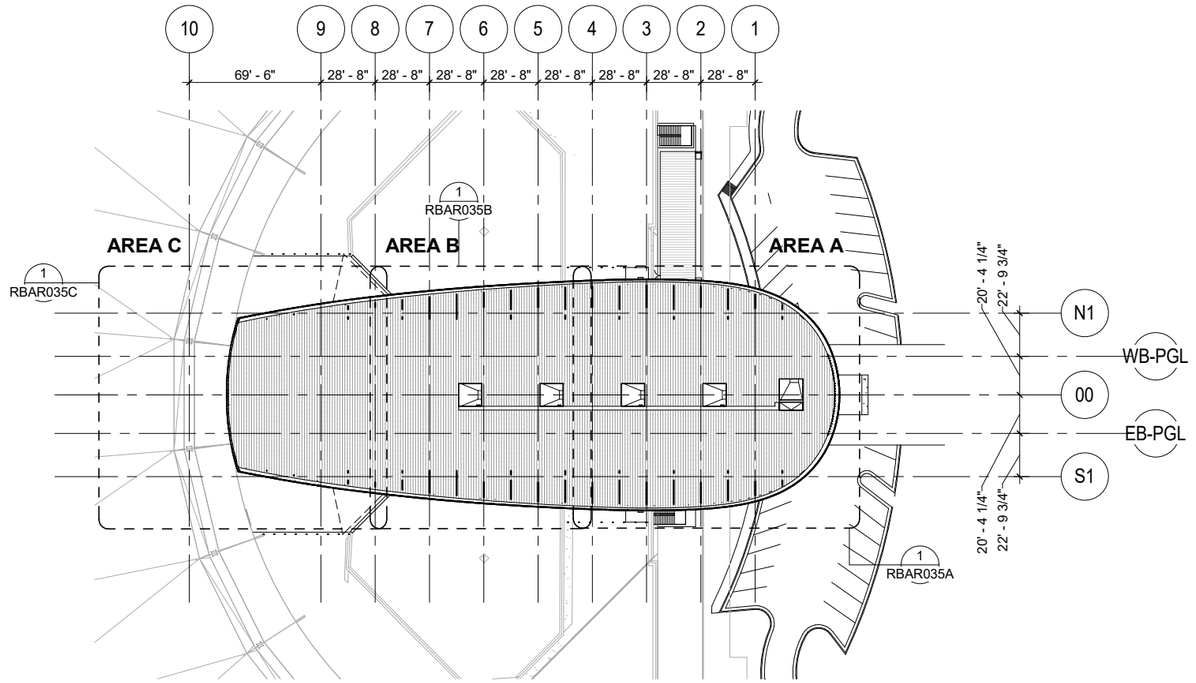
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
OVERALL PLANS - PARKING - LEVEL 2.5
AND PLATFORM - LEVEL 4

Package: B04 - RBAR0230
Sheet Reference No: V5 - 027 of 218

Project Number: 21722
7/11/2018 4:12:53 PM
Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL R - ROOF
1" = 40'-0"

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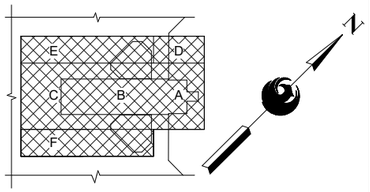
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1" = 40'-0"
0 40' 80'



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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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

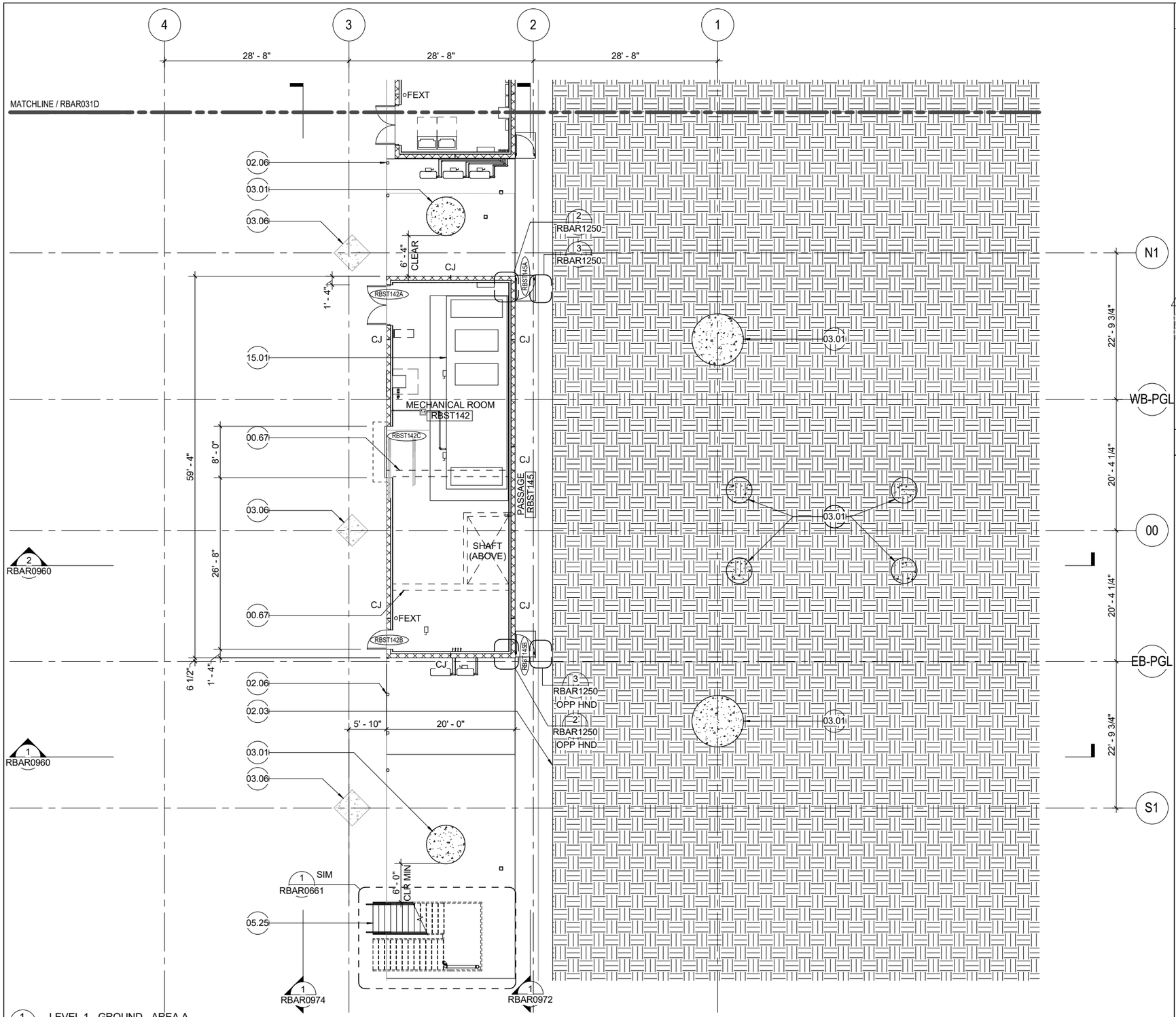
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
OVERALL PLAN - ROOF - LEVEL R

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

Package: **B04 - RBAR0240**
Sheet Reference No:
V5 - 028 of 218

Project Number: 21722
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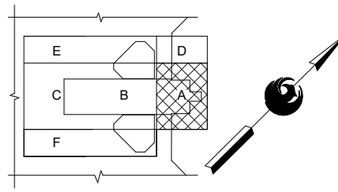
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KEY NOTES

00.67	LINE OF SLAB EDGE AND WALL ABOVE
02.03	MECHANICALLY STABILIZED EARTH WALL (E)
02.06	STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.
03.01	STATION STRUCTURAL COLUMN
03.06	STRUCTURAL COLUMN (E), TYP.
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
15.01	MECHANICAL EQUIPMENT



KEY PLAN

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

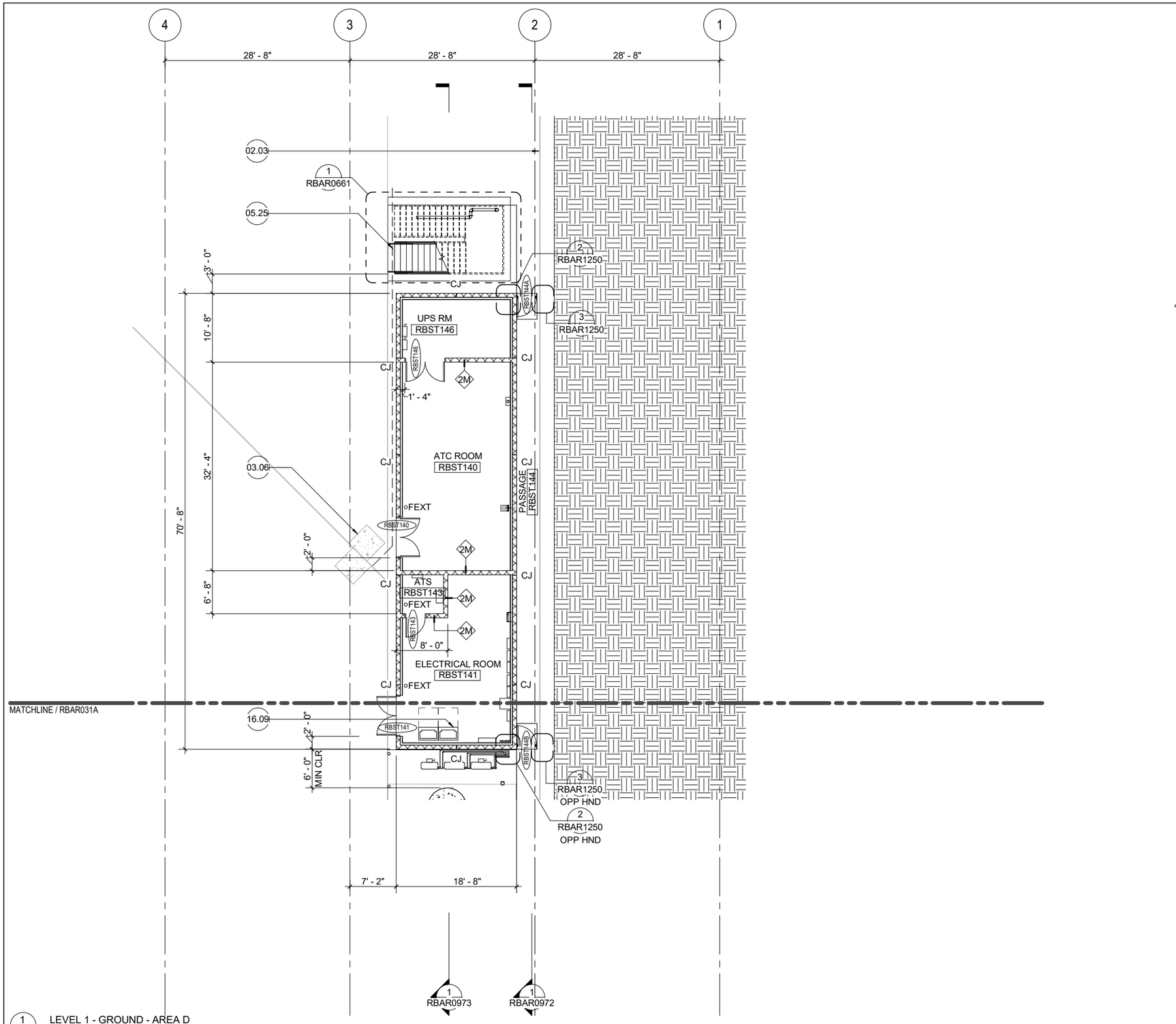
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - GROUND - LEVEL 1 - AREA A

Package: B04 - RBAR031A
Sheet Reference No: V5 - 029 of 218

Project Number: 21722
7/11/2018 3:05:11 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



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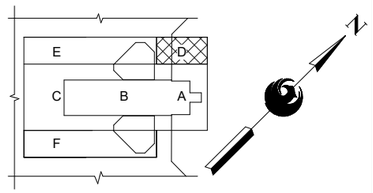
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KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
03.06	STRUCTURAL COLUMN (E), TYP.
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
15.01	MECHANICAL EQUIPMENT
16.09	SWITCHBOARD



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

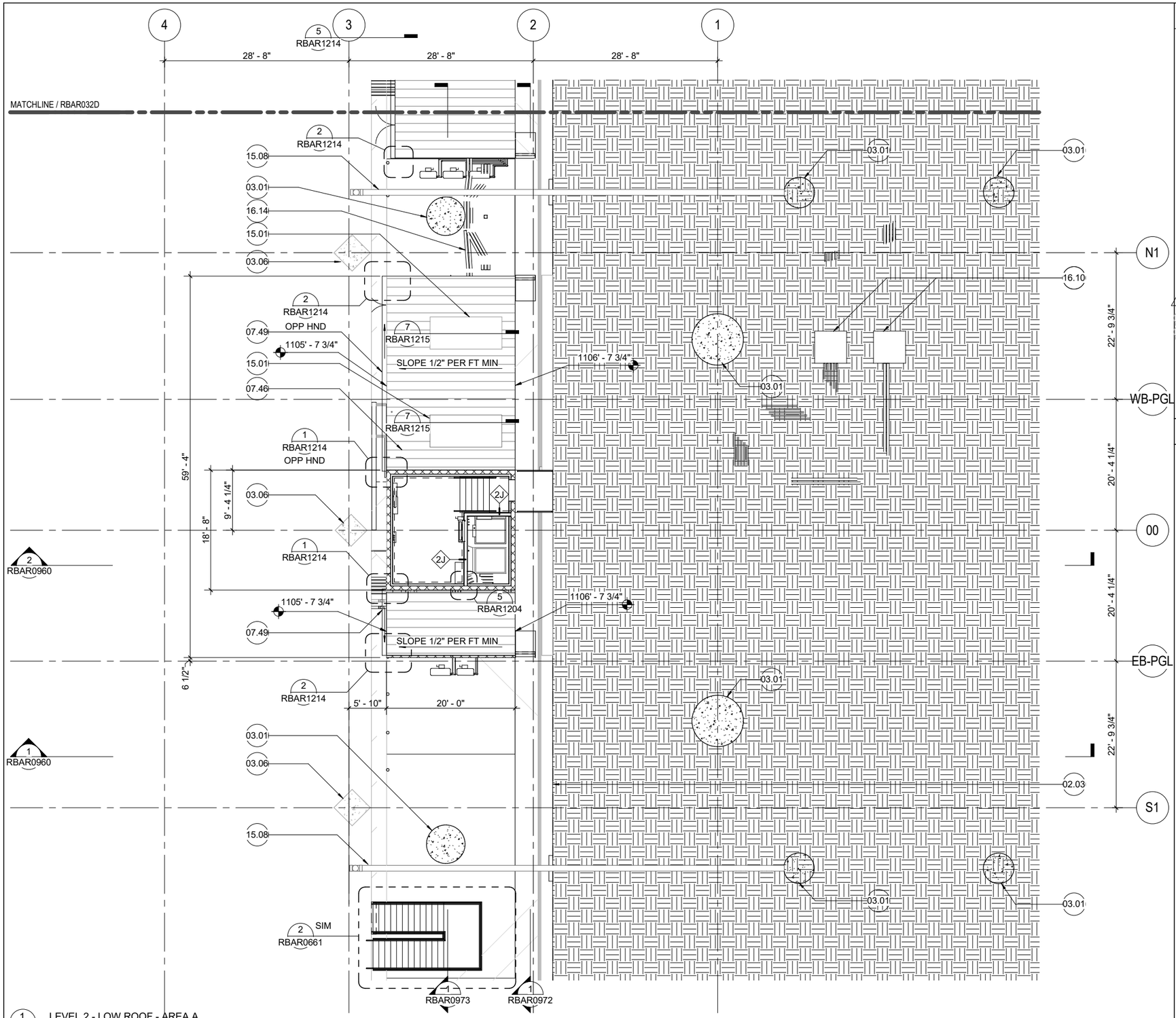
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - GROUND - LEVEL 1 - AREA D

Package: B04 - RBAR031D
Sheet Reference No: V5 - 030 of 218

Project Number: 21722
7/11/2018 3:05:14 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL 2 - LOW ROOF - AREA A
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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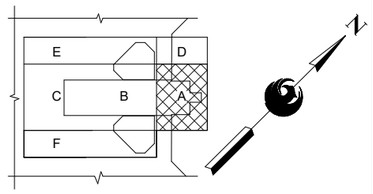
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KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
03.01	STATION STRUCTURAL COLUMN
03.06	STRUCTURAL COLUMN (E), TYP.
03.24	PRECAST PANEL (E)
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.49	SHEET METAL GUTTER: SLOPE 1/8" PER FOOT, MINIMUM
15.01	MECHANICAL EQUIPMENT
15.08	EXPOSED ROOF DRAIN LEADER, PAINT
16.10	PULL BOX
16.14	EXPOSED ELECTRICAL CONDUIT - PAINT TO MATCH ADJACENT SURFACE



KEY PLAN

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	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

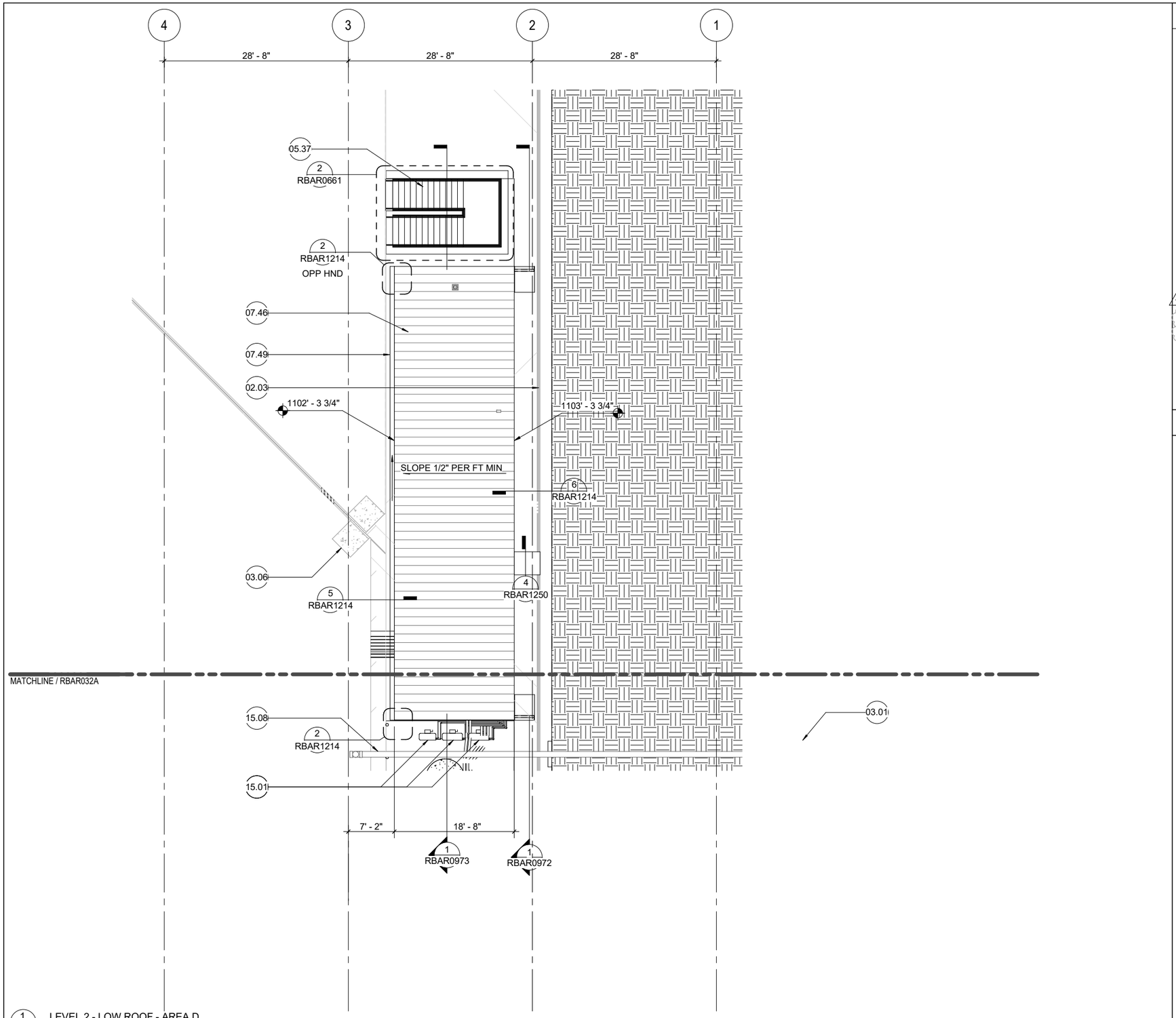
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - LOW ROOF - LEVEL 2 - AREA A

Package: B04 - RBAR032A
Sheet Reference No: V5 - 031 of 218

Local File:BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:18 PM



1 LEVEL 2 - LOW ROOF - AREA D
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR0-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE RBAR10-SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

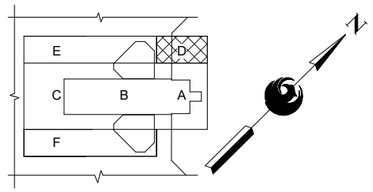
G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

H. BUILDING COORDINATES PER CIVIL DRAWINGS ARE AT THE EXISTING RENTAL CAR CENTER BUILDING GRIDLINES 2/A. COORDINATES ARE: X=660490.02158, Y=883850.95080, ANGLE=0.14868, PGL=1131.75'

1 J. ALL METAL COMPOSITE MATERIAL (MCM) PANELS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF IBC SECTION 1407.10. ALL MCM PANELS SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 WHEN TESTED AS AN ASSEMBLY IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM E84 OR UL 723.

KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
03.01	STATION STRUCTURAL COLUMN
03.06	STRUCTURAL COLUMN (E), TYP.
03.24	PRECAST PANEL (E)
05.37	PAINTED METAL STAIR AND RAILING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.49	SHEET METAL GUTTER: SLOPE 1/8" PER FOOT, MINIMUM
15.01	MECHANICAL EQUIPMENT
15.08	EXPOSED ROOF DRAIN LEADER, PAINT
16.10	PULL BOX
16.14	EXPOSED ELECTRICAL CONDUIT - PAINT TO MATCH ADJACENT SURFACE



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

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PHOENIX, AZ 85034

CITY OF PHOENIX AVIATION DEPARTMENT

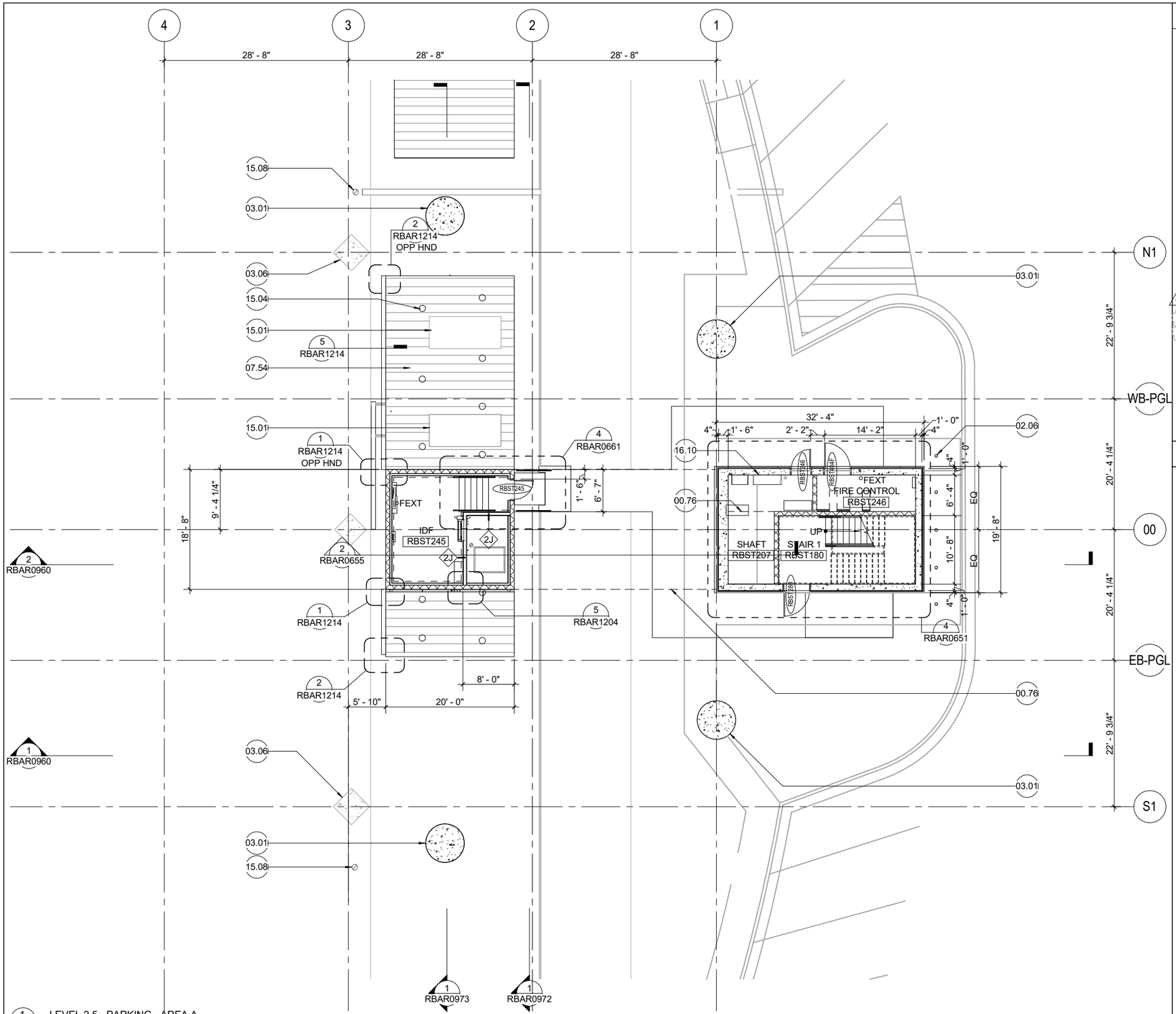
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - LOW ROOF - LEVEL 2 - AREA D

Package: B04 - RBAR032D
Sheet Reference No: V5 - 032 of 218

Project Number: 21722
7/11/2018 3:05:21 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



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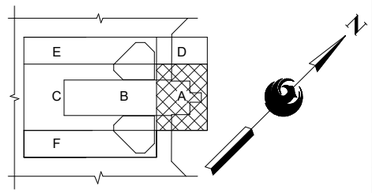
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KEY NOTES

00.76	DASHED LINE INDICATES EDGE OF CEILING ABOVE
02.06	STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.
03.01	STATION STRUCTURAL COLUMN
03.06	STRUCTURAL COLUMN (E), TYP.
07.54	ROOFING SYSTEM BELOW, REFER TO SHEETS RCAR032A AND RCAR032D
15.01	MECHANICAL EQUIPMENT
15.04	PIPING
15.08	EXPOSED ROOF DRAIN LEADER, PAINT
16.10	PULL BOX
16.11	ELECTRICAL CABINET



KEY PLAN

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CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7-31-2018
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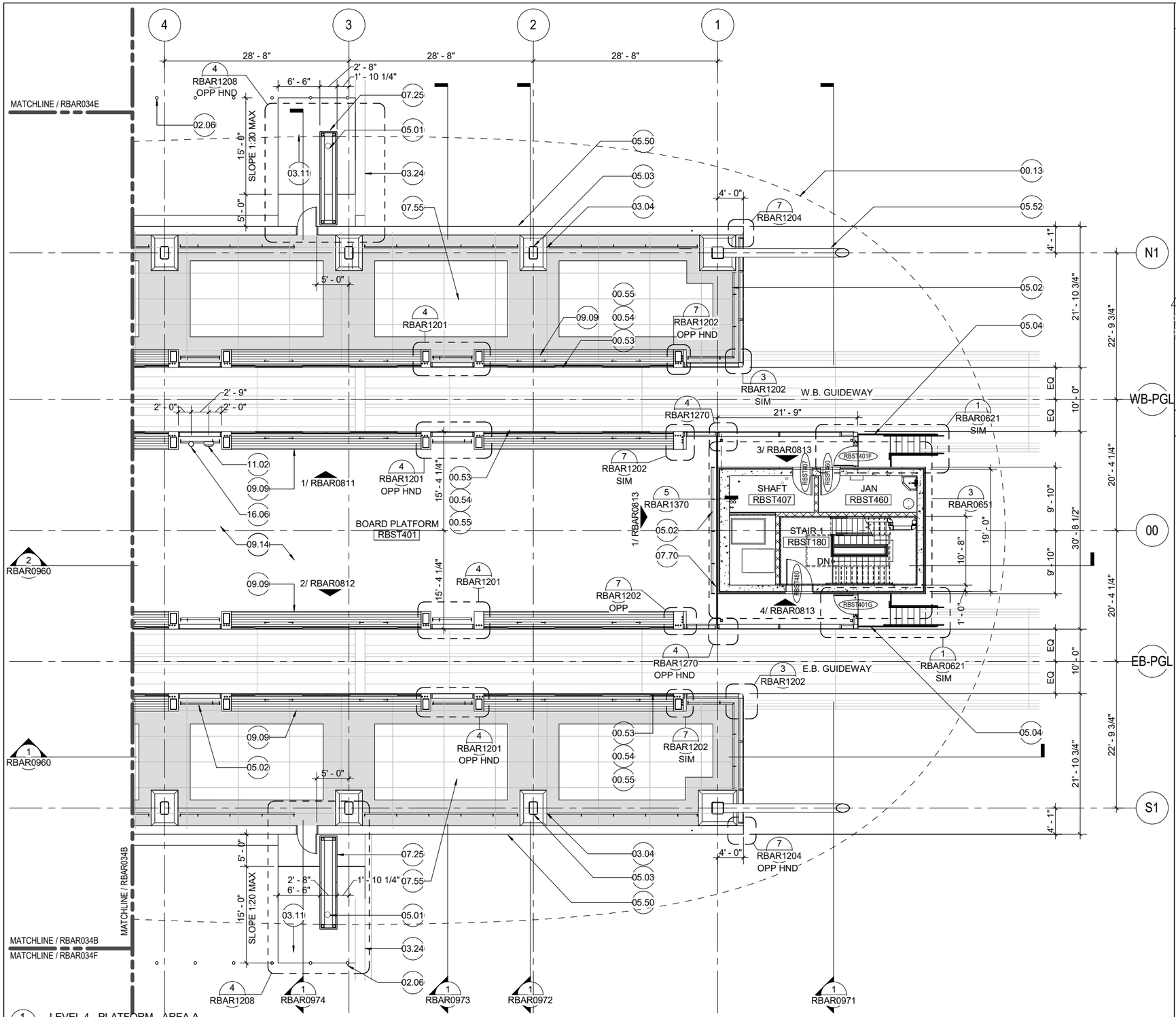
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PARKING - LEVEL 2.5 - AREA A

Package: B04 - RBAR033A
Sheet Reference No: V5 - 033 of 218

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Project Number: 21722
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KEY NOTES

00.13 DASHED LINE INDICATES EDGE OF ROOF OVERHANG ABOVE

00.53 PLATFORM EDGE DOORS, EMERGENCY BREAKOUT PANELS, AND GLASS PANELS PROVIDED BY A.T. CONTRACTOR, TYP.

00.54 A.T. CABLE ZONE, BENEATH PLATFORM, TYP

00.55 DYNAMIC SIGNAGE PROVIDED BY A.T. CONTRACTOR

02.06 STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.

03.03 GUIDEWAY STRUCTURE

03.04 CONCRETE BASE

03.11 SLOPE SLAB 1:20 FROM STATION PLATFORM LEVEL DOWN TO EXISTING SLAB ELEVATION

03.24 PRECAST PANEL (E)

05.01 EXPOSED ROOF DRAIN PIPE LEADER, PAINTED TO MATCH ADJACENT SURFACES

05.02 STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"

05.03 CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING

05.04 EMERGENCY METAL STAIRS WITH HANDRAIL AND GUARDRAIL BY A.T. CONTRACTOR

05.50 9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)

05.52 CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING

07.25 DRY COMPOSITE PANEL SYSTEM ON METAL STUD FRAMING

07.55 FLOOR COATING SYSTEM

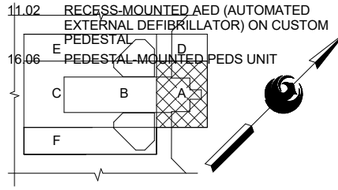
07.70 EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE

09.09 FUTURE PACKAGE - TEXTURED SURFACE TERRAZZO BY CONTRACTOR

09.14 FUTURE PACKAGE - TERRAZZO FLOOR FINISH BY ARTIST. DIVIDER STRIP LOCATIONS SHOWN ON PLAN ARE MINIMUM REQUIRED AND SHALL BE COORDINATED WITH ARTIST'S FINAL DESIGN

11.02 RECESS-MOUNTED AED (AUTOMATED EXTERNAL DEFIBRILLATOR) ON CUSTOM PEDESTAL

16.06 PEDESTAL-MOUNTED PEDS UNIT



KEY PLAN

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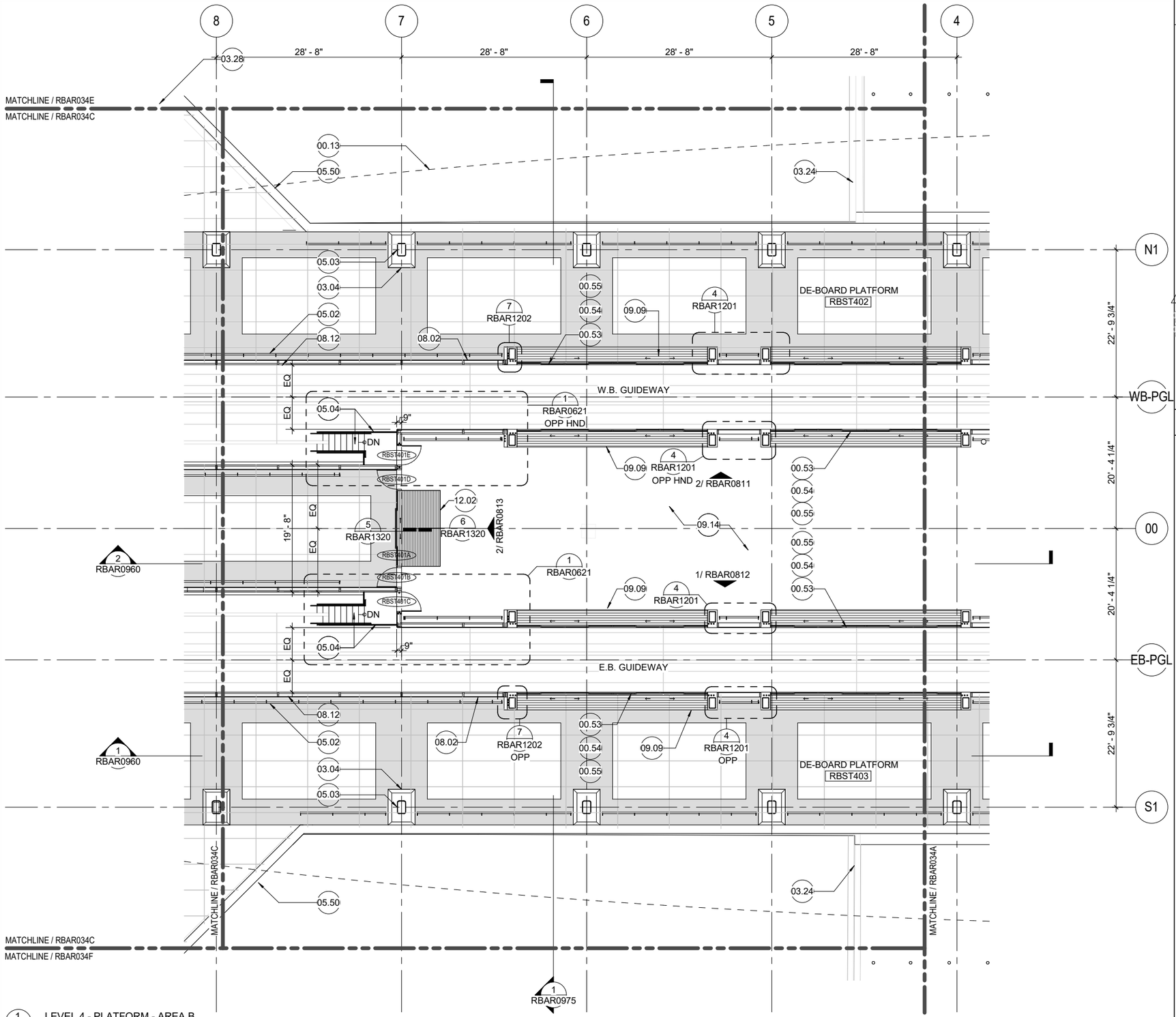
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Date:	07/13/2018
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PLATFORM - LEVEL 4 - AREA A

Package: B04 - RBAR034A
Sheet Reference No: V5 - 034 of 218

Local File:BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV100000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:30 PM



1 LEVEL 4 - PLATFORM - AREA B
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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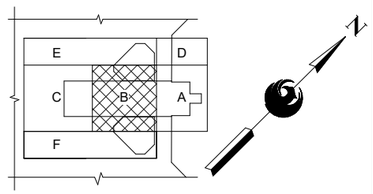
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KEY NOTES

00.13	DASHED LINE INDICATES EDGE OF ROOF OVERHANG ABOVE
00.53	PLATFORM EDGE DOORS, EMERGENCY BREAKOUT PANELS, AND GLASS PANELS PROVIDED BY A.T. CONTRACTOR, TYP.
00.54	A.T. CABLE ZONE, BENEATH PLATFORM, TYP
00.55	DYNAMIC SIGNAGE PROVIDED BY A.T. CONTRACTOR
03.04	CONCRETE BASE
03.24	PRECAST PANEL (E)
03.28	BRUSHED CONCRETE FINISH
05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.04	EMERGENCY METAL STAIRS WITH HANDRAIL AND GUARDRAIL BY A.T. CONTRACTOR
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
09.09	FUTURE PACKAGE - TEXTURED SURFACE TERRAZZO BY CONTRACTOR
09.14	FUTURE PACKAGE - TERRAZZO FLOOR FINISH BY ARTIST. DIVIDER STRIP LOCATIONS SHOWN ON PLAN ARE MINIMUM REQUIRED AND SHALL BE COORDINATED WITH ARTIST'S FINAL DESIGN
12.02	ENTRANCE FLOOR MAT AND FRAME



KEY PLAN

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
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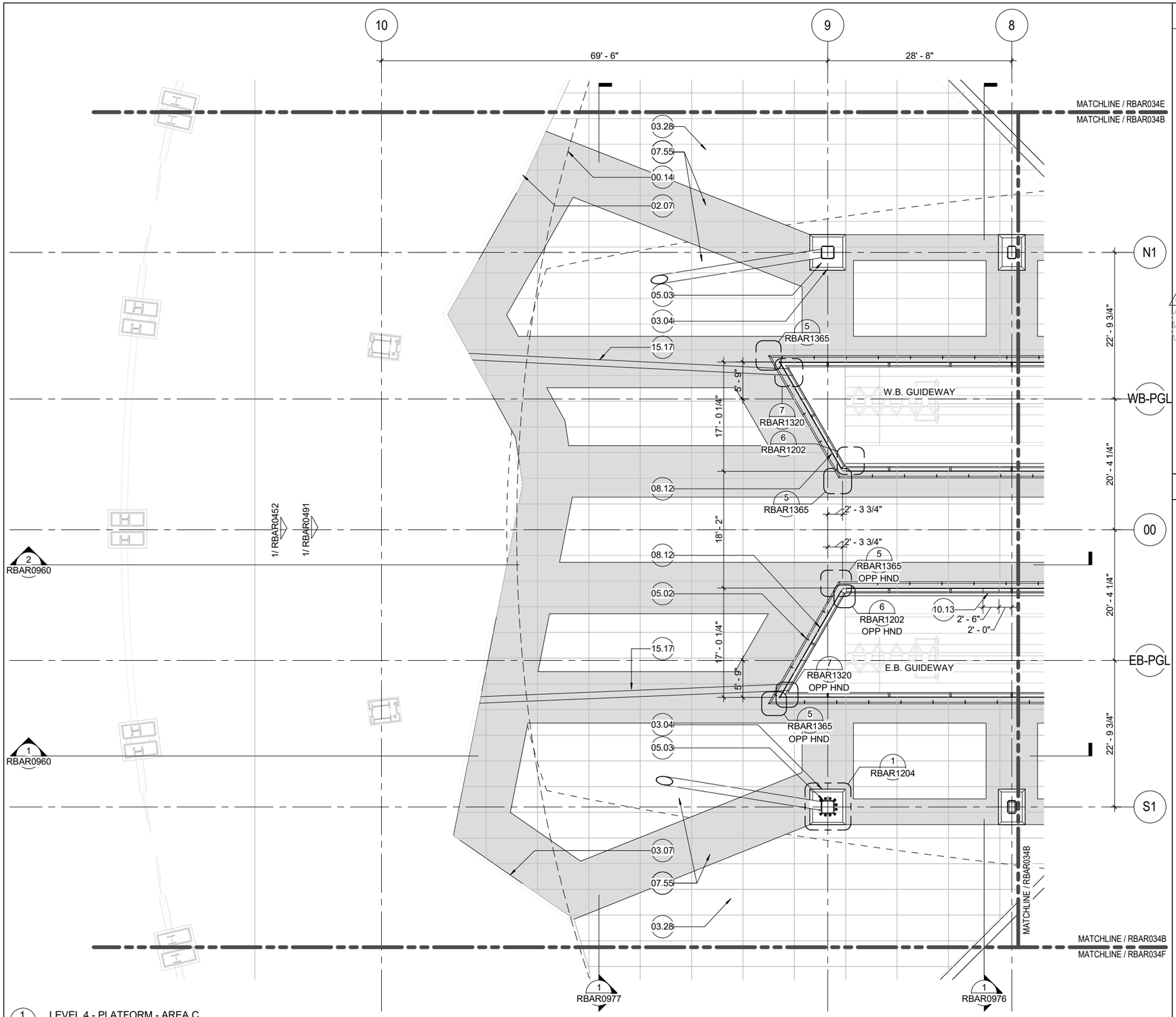
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PLATFORM - LEVEL 4 - AREA B

Package: B04 - RBAR034B
Sheet Reference No: V5 - 035 of 218

Project Number: 21722
7/11/2018 3:05:34 PM
Local File: BIM 360://82421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL 4 - PLATFORM - AREA C
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

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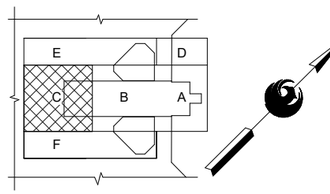
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KEY NOTES

00.13	DASHED LINE INDICATES EDGE OF ROOF OVERHANG ABOVE
00.14	DASHED LINE INDICATES EDGE OF CANOPY ABOVE
02.07	CURB (E)
03.04	CONCRETE BASE
03.07	CURB (E) - USE 02.07
03.28	BRUSHED CONCRETE FINISH
05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
07.55	FLOOR COATING SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
10.13	ACCESS PANEL IN STRUCTURAL WALL BELOW
15.17	TRENCH DRAIN - REFER TO STRUCTURAL DRAWINGS FOR DETAILS



KEY PLAN

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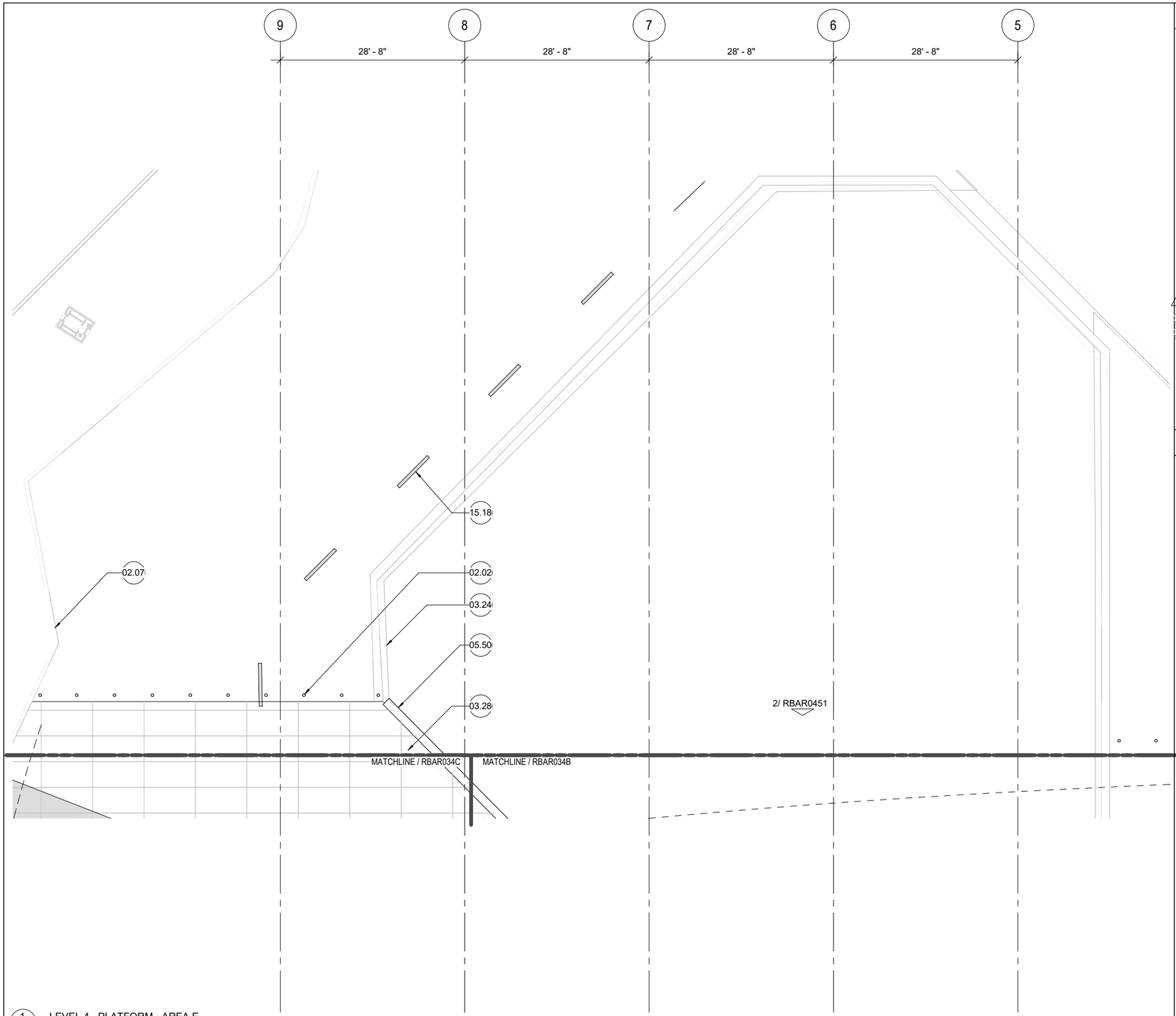
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PLATFORM - LEVEL 4 - AREA C

Package: B04 - RBAR034C
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1 LEVEL 4 - PLATFORM - AREA E
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0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR0-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE RBAR10-SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

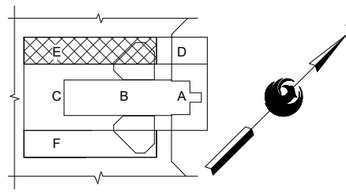
G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

H. BUILDING COORDINATES PER CIVIL DRAWINGS ARE AT THE EXISTING RENTAL CAR CENTER BUILDING GRIDLINES 2/A. COORDINATES ARE: X=660490.02158, Y=883850.95080, ANGLE=0.14868, PGL=1131.75'

1 J. ALL METAL COMPOSITE MATERIAL (MCM) PANELS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF IBC SECTION 1407.10. ALL MCM PANELS SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 WHEN TESTED AS AN ASSEMBLY IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM E84 OR UL 723.

KEY NOTES

00.13	DASHED LINE INDICATES EDGE OF ROOF OVERHANG ABOVE
02.02	REMOVABLE STAINLESS STEEL BOLLARD
02.07	CURB (E)
03.24	PRECAST PANEL (E)
03.28	BRUSHED CONCRETE FINISH
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
07.55	FLOOR COATING SYSTEM
15.18	TRENCH DRAIN (E)



KEY PLAN

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

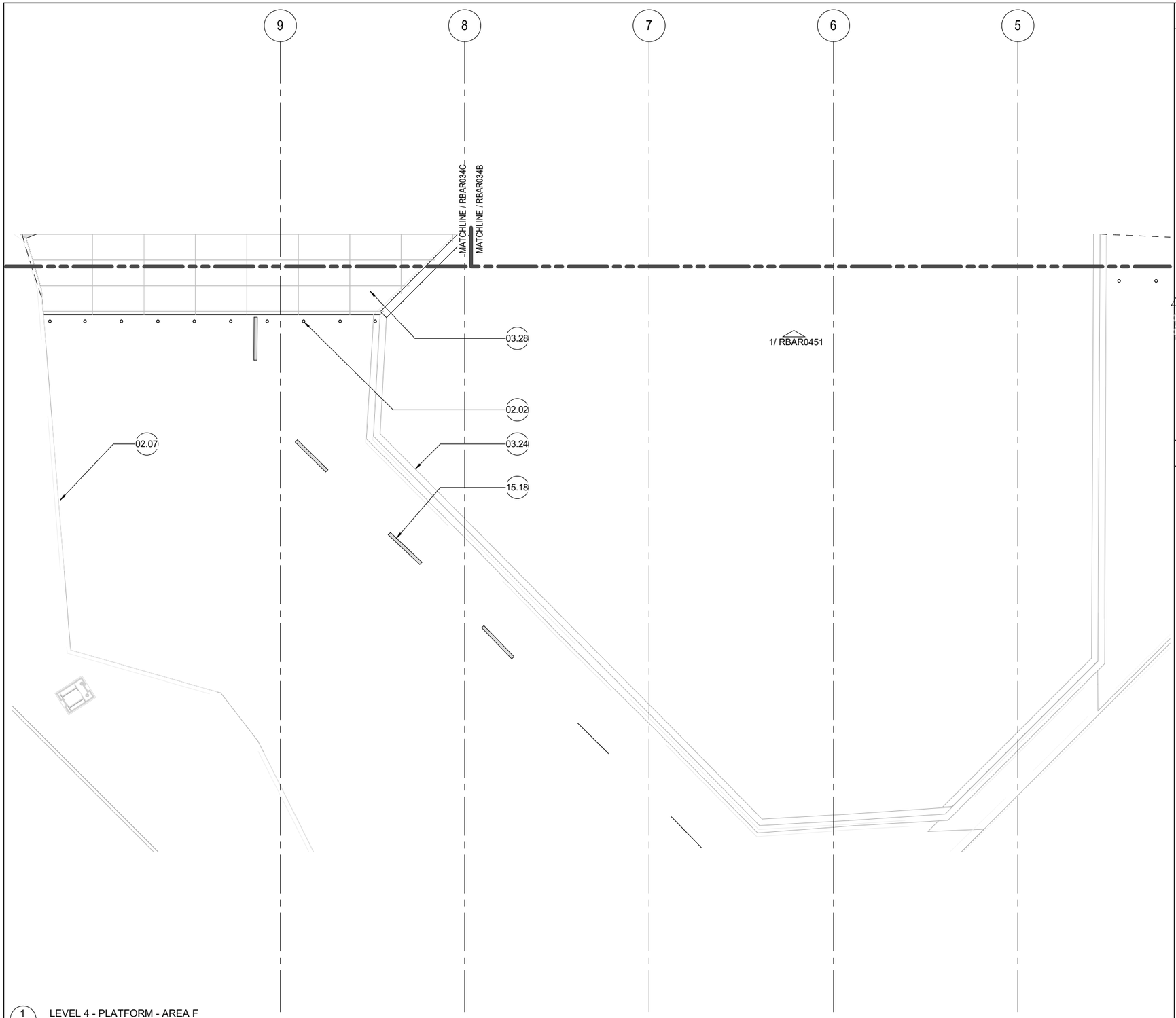
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PLATFORM - LEVEL 4 - AREA E

Package: B04 - RBAR034E
Sheet Reference No: V5 - 037 of 218

Local File:BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:42 PM



1 LEVEL 4 - PLATFORM - AREA F
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR0-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE RBAR10-SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

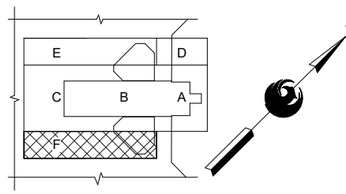
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KEY NOTES

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02.07	CURB (E)
03.24	PRECAST PANEL (E)
03.28	BRUSHED CONCRETE FINISH
15.18	TRENCH DRAIN (E)



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35951
MICHAEL L. KRAGER
Date Signed 7/11/2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

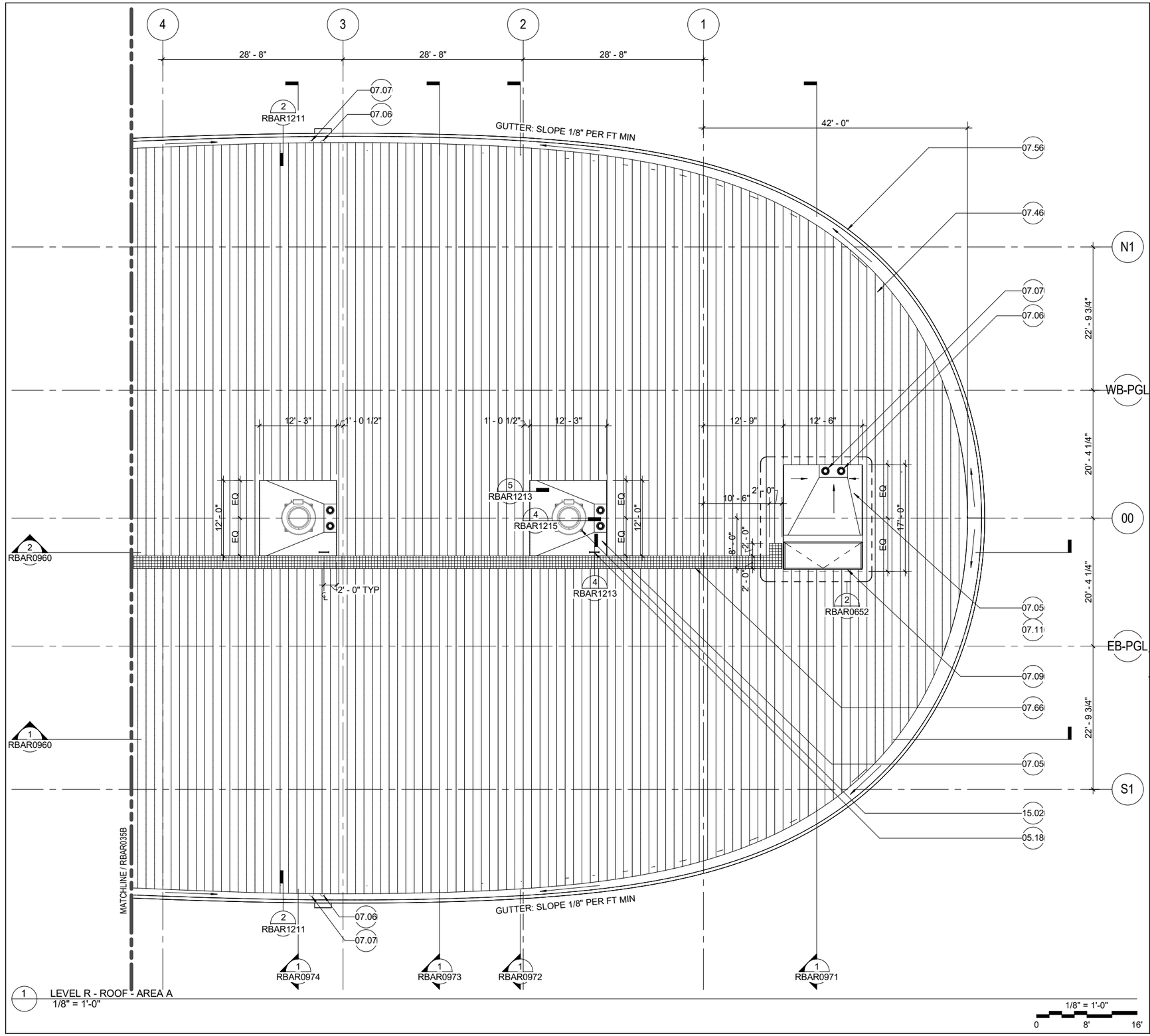
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FLOOR PLAN - PLATFORM - LEVEL 4 - AREA F

Package: B04 - RBAR034F
Sheet Reference No: V5 - 038 of 218

Project Number: 21722
7/11/2018 3:05:45 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



SHEET NOTES

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B. REFER TO AND COORDINATE WITH STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

C. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS SERIES SHEETS

D. REFER TO THE "REFERENCE ELEVATION DEFINITIONS" LOCATED IN THE RBAR06 SERIES SHEETS FOR ROOF ELEVATION DEFINITIONS.

E. REFER TO THE RBAR12- SERIES SHEETS FOR ROOFING DETAILS.

F. ROOF ASSEMBLIES SHALL BE MINIMUM OF CLASS A FIRE CLASSIFICATION, OR AS SPECIFIED IN THE PROJECT MANUAL.

G. REFER TO PLUMBING PLANS FOR ROOF DRAIN SIZES.

H. ROOF ASSEMBLY SHALL BE A MINIMUM VALUE R-20. R-VALUE SHALL BE ACHIEVED WITH CONTINUOUS INSULATION ABOVE ROOF DECK.

I. ROOFING OVER CURBS FOR EQUIPMENT SHALL BE SLOPED FOR POSITIVE DRAINAGE.

J. DELEGATED DESIGN: PROVIDE SAFETY ANCHOR TIE-OFF STEEL POSTS ATTACHED TO STRUCTURAL STEEL PER APPLICABLE LOCAL AND OSHA CODES. COORDINATE ANCHOR POSTS WITH STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

K. ALL PARAPET COPING, ROOF EDGE, AND FLASHING DETAILS SHALL BE CONSTRUCTED PER REQUIRED FM GLOBAL GUIDELINES FOR PERIMETER FLASHING / ATTACHMENT AND WIND UPLIFT.

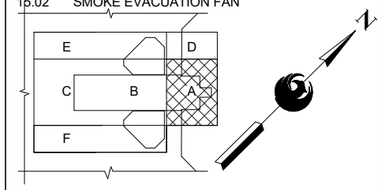
L. ALL ROOFS SHALL MEET A MINIMUM SOLAR REFLECTANCE INDEX OF 78.

M DELEGATED DESIGN: PROVIDE LIGHTNING PROTECTION SYSTEM.

N. GUTTER AND DOWNSPOUT ACCESSORIES FINISH SHALL MATCH THE MECHANICALLY SEAMED METAL ROOFING SYSTEM.

KEY NOTES

05.18	STEEL LADDER
07.05	APP-MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM WITH CAP SHEET
07.06	ROOF DRAIN
07.07	ROOF OVERFLOW DRAIN
07.09	4' X 12' ROOF HATCH WITH OSHA-APPROVED GUARDRAIL INTEGRAL TO THE HATCH
07.11	TAPERED ROOF INSULATION SLOPE MIN 1/4" PER FOOT TO DRAINS
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.66	GRIP STRUT GRATING WITH UTILITY CLAMPS FASTENED TO STANDING SEAM METAL ROOFING SYSTEM
15.02	SMOKE EVACUATION FAN



KEY PLAN

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

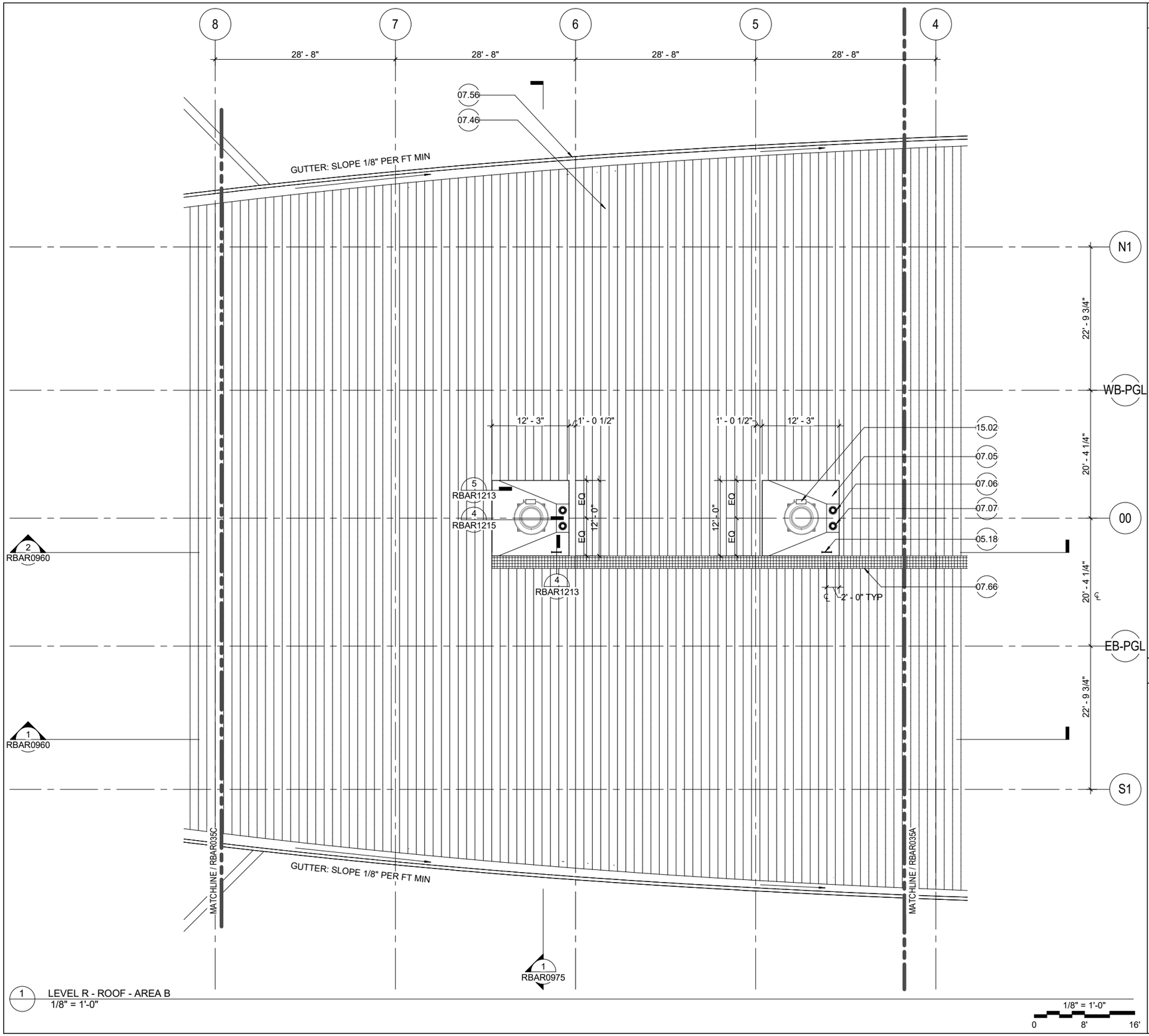
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ROOF PLAN - LEVEL R - AREA A

Package: B04 - RBAR035A

Sheet Reference No: V5 - 039 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:49 PM



SHEET NOTES

A. REFER TO THE RBAR00 SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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G. REFER TO PLUMBING PLANS FOR ROOF DRAIN SIZES.

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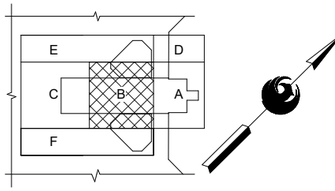
L. ALL ROOFS SHALL MEET A MINIMUM SOLAR REFLECTANCE INDEX OF 78.

M DELEGATED DESIGN: PROVIDE LIGHTNING PROTECTION SYSTEM.

N. GUTTER AND DOWNSPOUT ACCESSORIES FINISH SHALL MATCH THE MECHANICALLY SEAMED METAL ROOFING SYSTEM.

KEY NOTES

05.18	STEEL LADDER
07.05	APP-MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM WITH CAP SHEET
07.06	ROOF DRAIN
07.07	ROOF OVERFLOW DRAIN
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
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15.02	SMOKE EVACUATION FAN



KEY PLAN

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

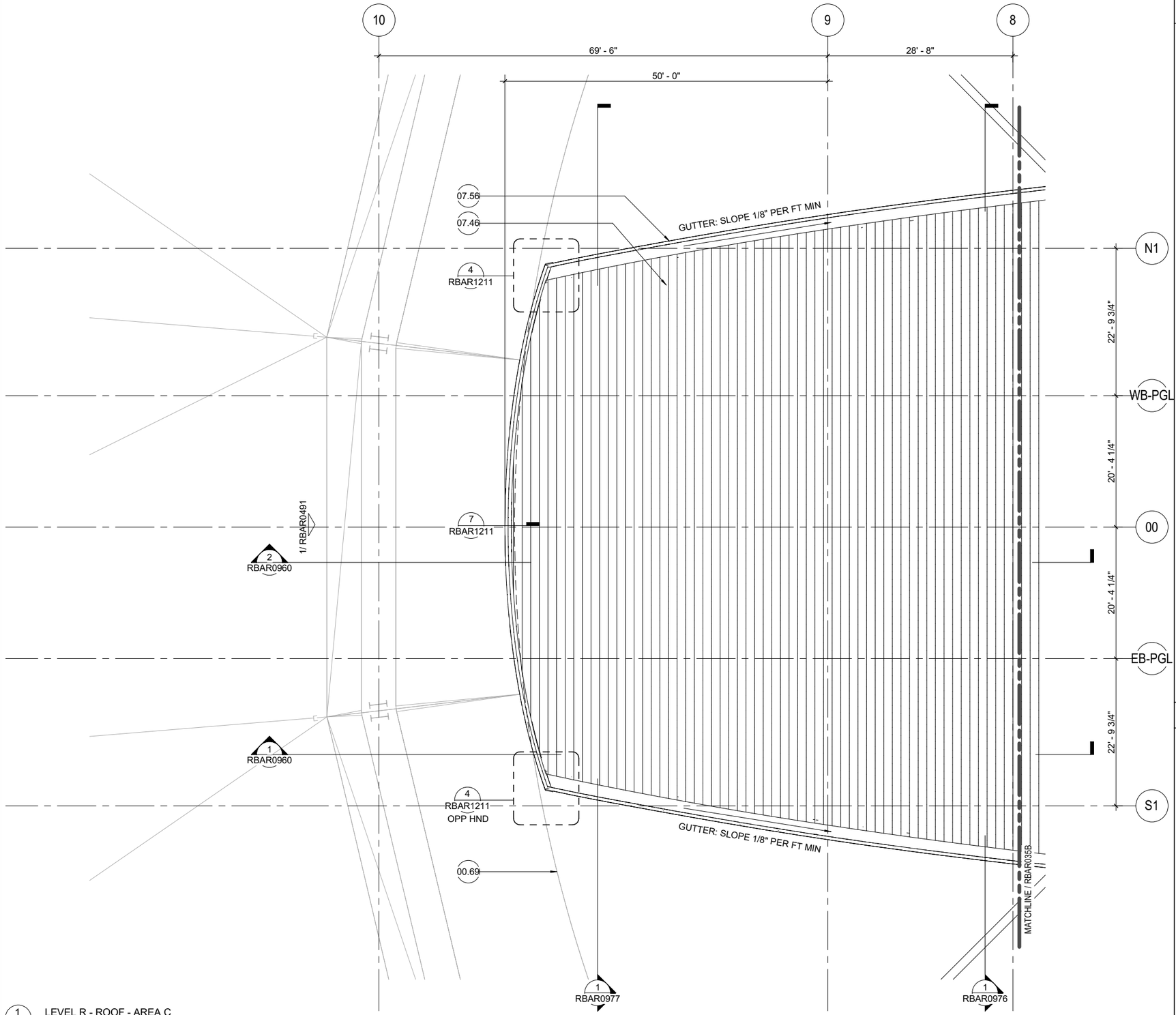
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ROOF PLAN - LEVEL R - AREA B

Package: B04 - RBAR035B
Sheet Reference No: V5 - 040 of 218

Local File:BIM 360://82421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:53 PM



1 LEVEL R - ROOF - AREA C
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00 SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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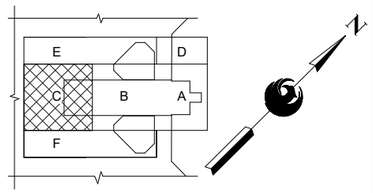
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M DELEGATED DESIGN: PROVIDE LIGHTNING PROTECTION SYSTEM.

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KEY NOTES

00.69 LINE INDICATES EDGE OF CANOPY BELOW (E)
07.46 MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56 CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM



KEY PLAN

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Registered Architect
Certificate No. 35861
Michael L. Krager
Date Signed 7/13/2018
Arizona, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

STAGE 2 - B04 DESIGN SUBMISSION

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

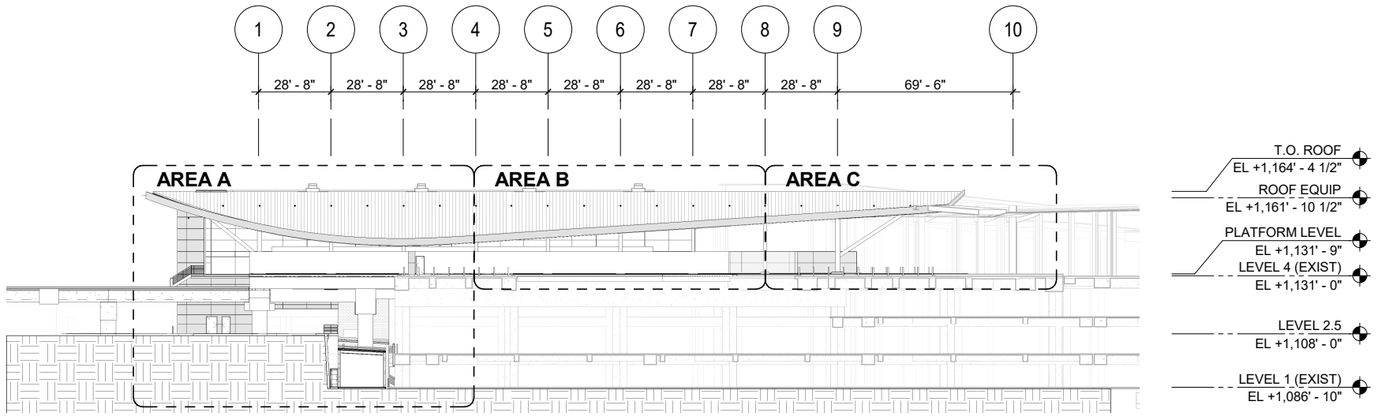
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

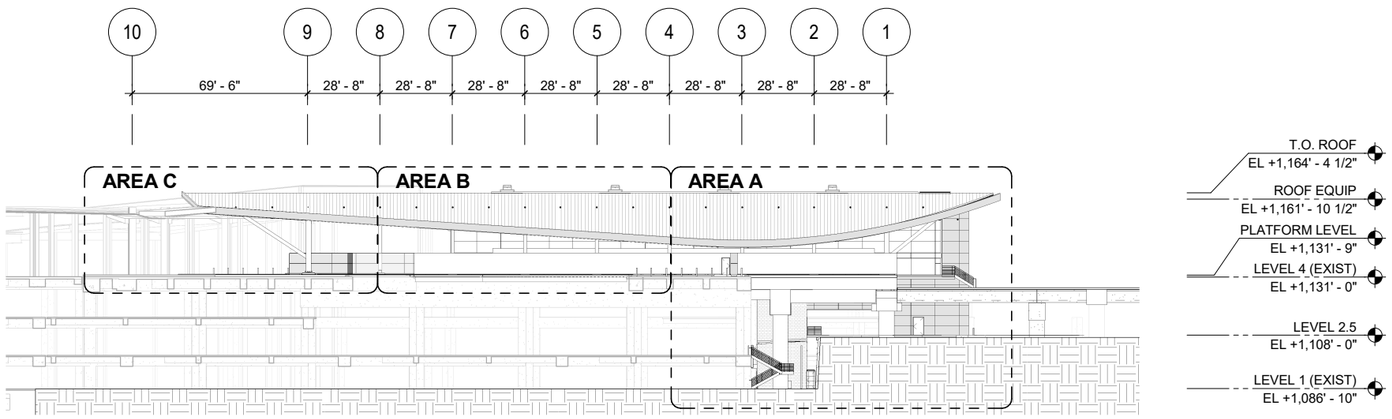
RCC STATION
ARCHITECTURAL
ROOF PLAN - LEVEL R - AREA C

Package: B04 - RBAR035C
Sheet Reference No: V5 - 041 of 218

Local File: BIM 360://82421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:05:56 PM



2 EXTERIOR ELEVATION - OVERALL NORTH
1" = 30'-0"



1 EXTERIOR ELEVATION - OVERALL SOUTH
1" = 30'-0"

1" = 30'-0"
0 30' 60'

SHEET NOTES

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C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires: 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

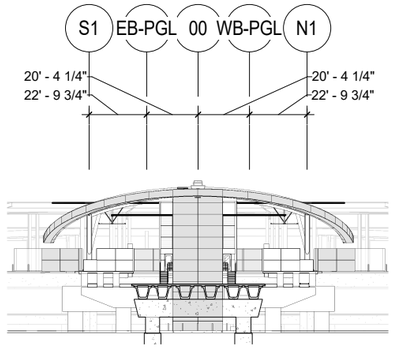
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
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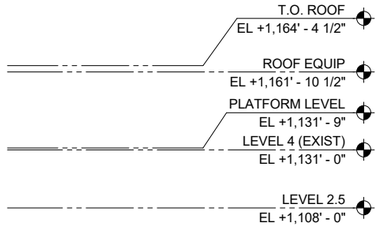
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATIONS - OVERALL
NORTH-SOUTH

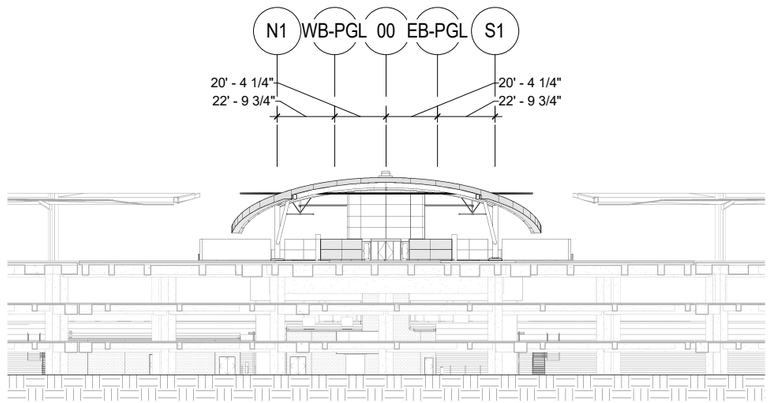
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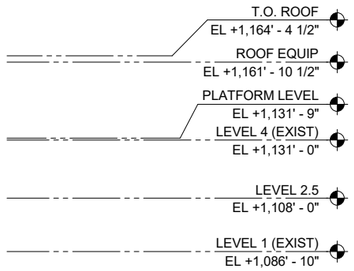
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Project Number: 21722
7/11/2018 3:07:16 PM





2 EXTERIOR ELEVATION - OVERALL EAST
1" = 30'-0"





1 EXTERIOR ELEVATION - OVERALL WEST
1" = 30'-0"

1" = 30'-0"
0 30' 60'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. REFER TO AND COORDINATE WITH STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/11/2018
ARIZONA, U.S.A.
Expires: 3-31-19

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4336, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

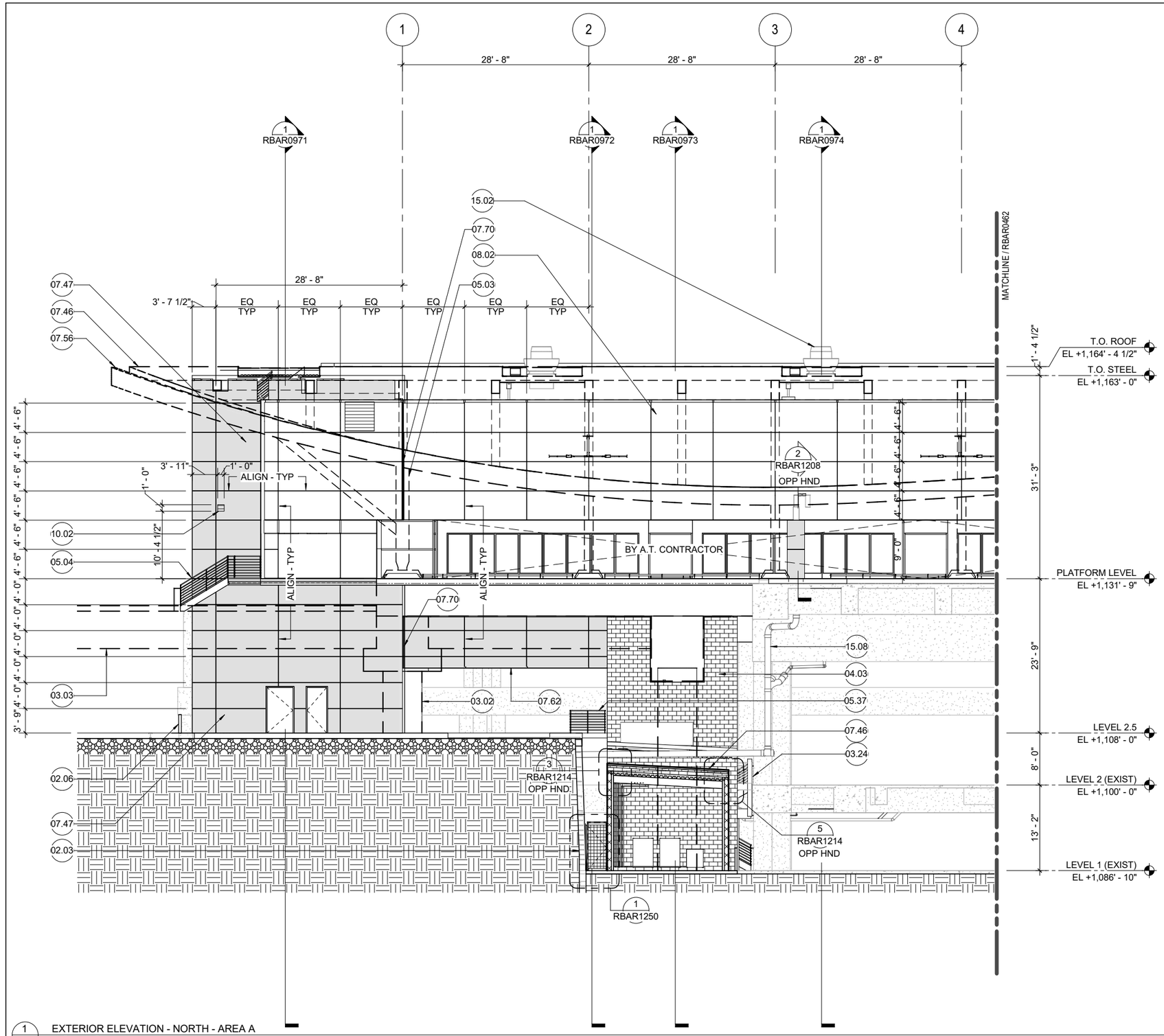
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATIONS - OVERALL
EAST-WEST

Package: B04 - RBAR0452
Sheet Reference No: V5 - 043 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:07:29 PM



1 EXTERIOR ELEVATION - NORTH - AREA A
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

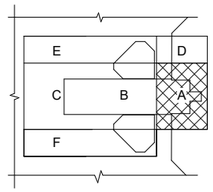
E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
02.06	STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.
03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
03.24	PRECAST PANEL (E)
04.03	INTEGRALLY COLORED CMU WALL
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.04	EMERGENCY METAL STAIRS WITH HANDRAIL AND GUARDRAIL BY A.T. CONTRACTOR
05.37	PAINTED METAL STAIR AND RAILING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.47	EXTERIOR COMPOSITE INSULATED PAINTED METAL PANEL CLADDING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.62	DRY COMPOSITE PANEL SYSTEM TO UNDERSIDE OF STRUCTURE
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
08.02	ALUMINUM FRAMING CURTAIN WALL SYSTEM
10.02	60% PERFORATED AREA ON DRY COMPOSITE PANEL TO CONCEAL MECHANICAL LOUVER. SEE RBAR12-SERIES SHEETS FOR DETAILS.
15.02	SMOKE EVACUATION FAN
15.08	EXPOSED ROOF DRAIN LEADER, PAINT

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

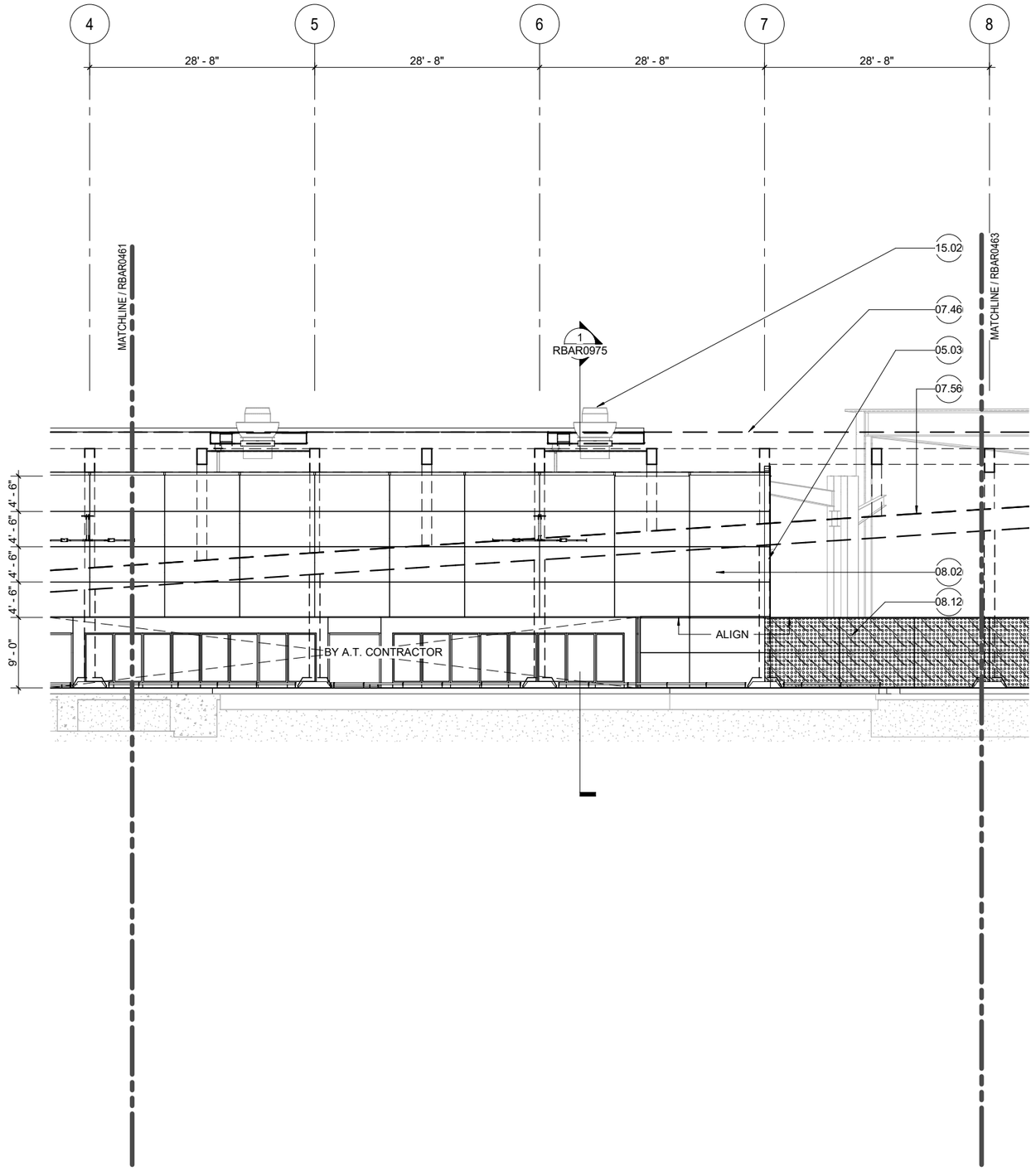
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - NORTH - AREA A

Package: B04 - RBAR0461
Sheet Reference No: V5 - 044 of 218

Project Number: 21722
7/11/2018 3:07:38 PM

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 EXTERIOR ELEVATION - NORTH - AREA B
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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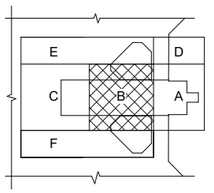
E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.02	SMOKE EVACUATION FAN
15.08	EXPOSED ROOF DRAIN LEADER, PAINT

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR CHECKING ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

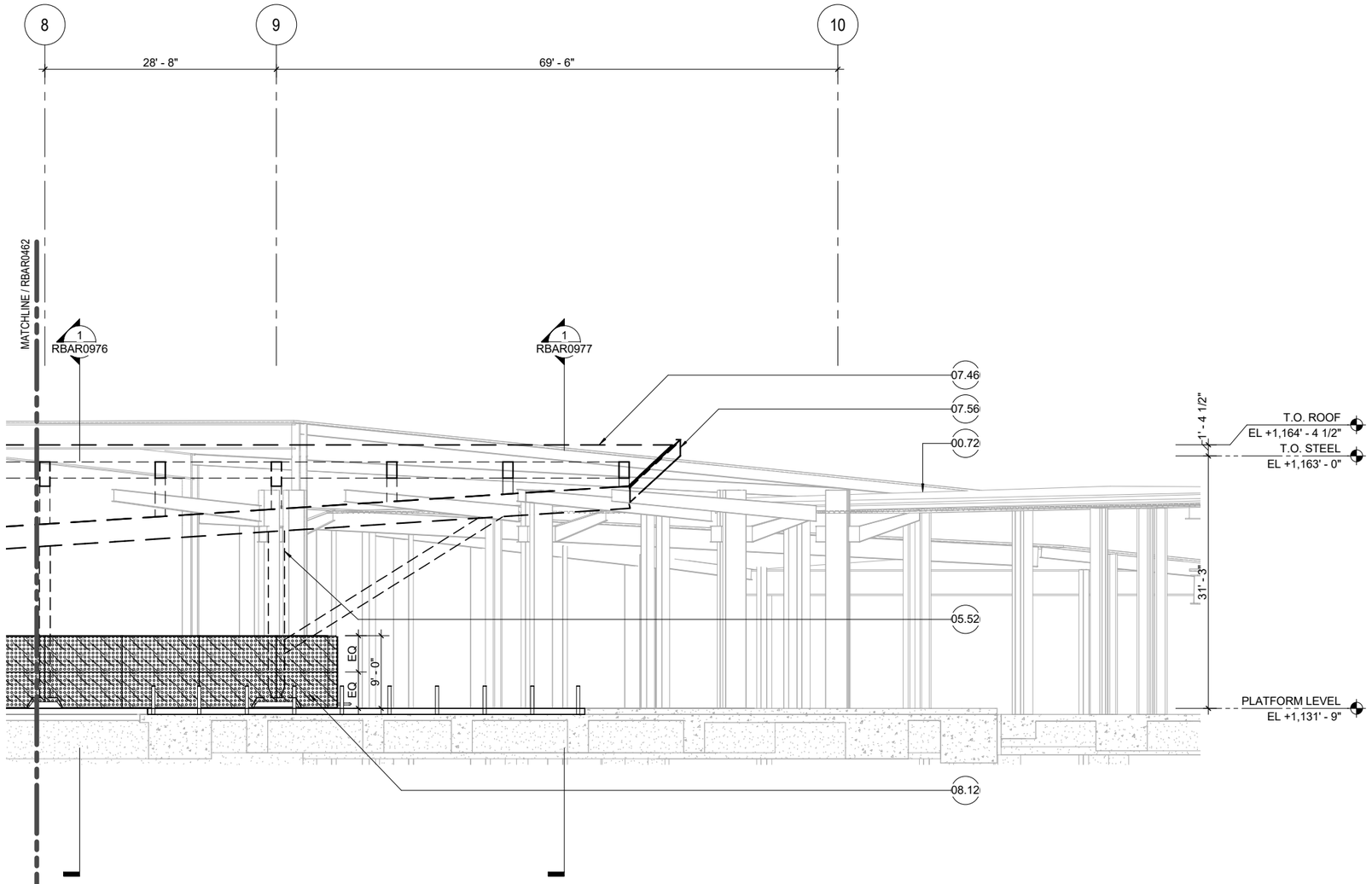
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - NORTH - AREA B

Package: B04 - RBAR0462
Sheet Reference No: V5 - 045 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:07:41 PM



1 EXTERIOR ELEVATION - NORTH - AREA C
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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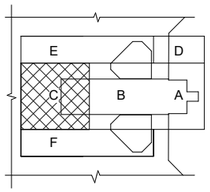
E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

00.72	CANOPY (E)
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.02	SMOKE EVACUATION FAN

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

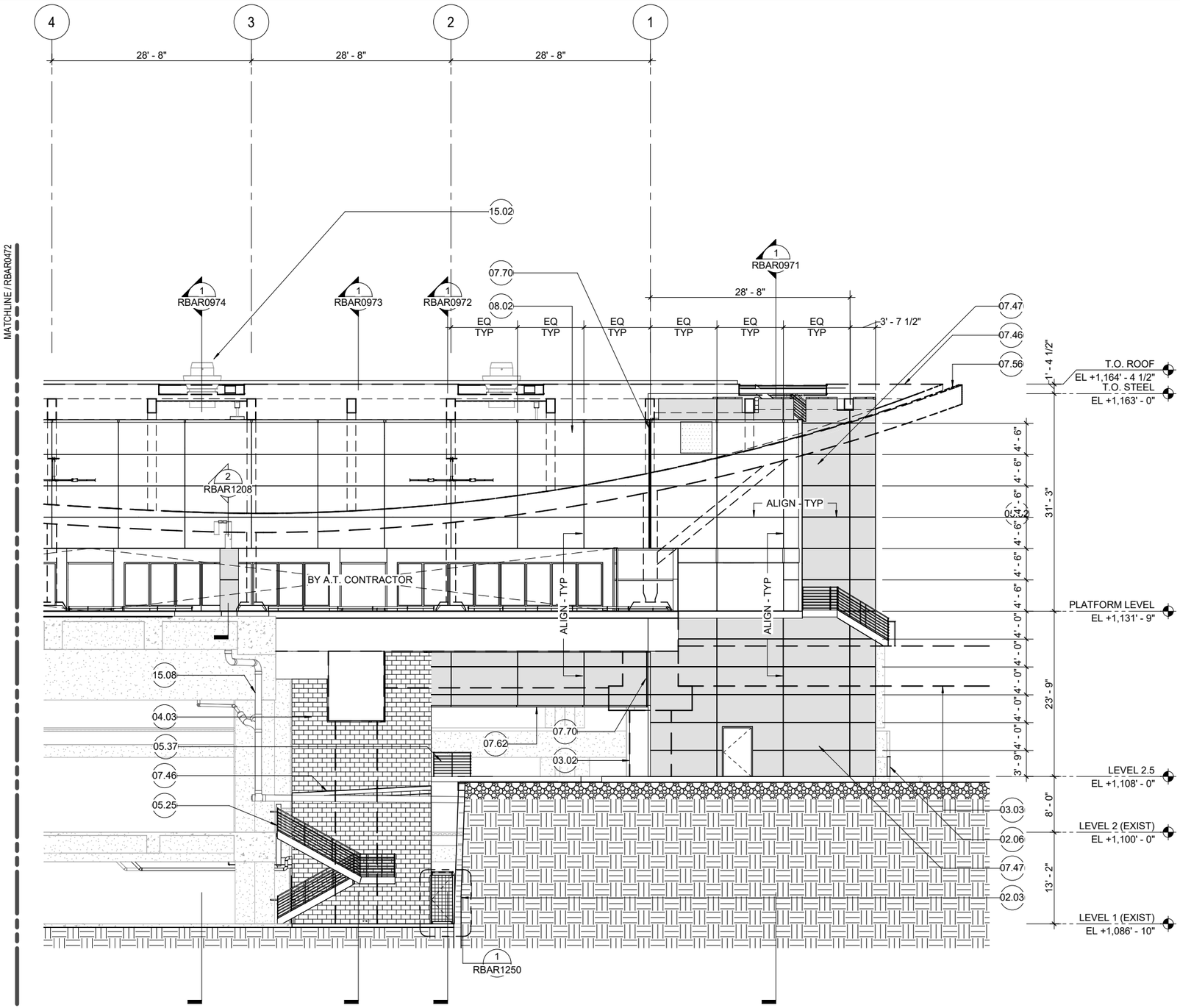
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - NORTH - AREA C

Package: B04 - RBAR0463
Sheet Reference No: V5 - 046 of 218

Project Number: 21722
7/11/2018 3:07:45 PM
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1 EXTERIOR ELEVATION - SOUTH - AREA A
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
02.06	STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.
03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
04.03	INTEGRALLY COLORED CMU WALL
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
05.37	PAINTED METAL STAIR AND RAILING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.47	EXTERIOR COMPOSITE INSULATED PAINTED METAL PANEL CLADDING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.62	DRY COMPOSITE PANEL SYSTEM TO UNDERSIDE OF STRUCTURE
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
~~15.02~~	~~SMOKE EVACUATION FAN~~
15.08	EXPOSED ROOF STRUCTURE, PAINT

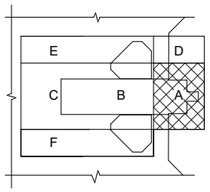
LEGEND

COMPOSITE PANEL

AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS

GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED

GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

REGISTERED ARCHITECT
STATE OF ARIZONA
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
Expires 3-31-2019
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

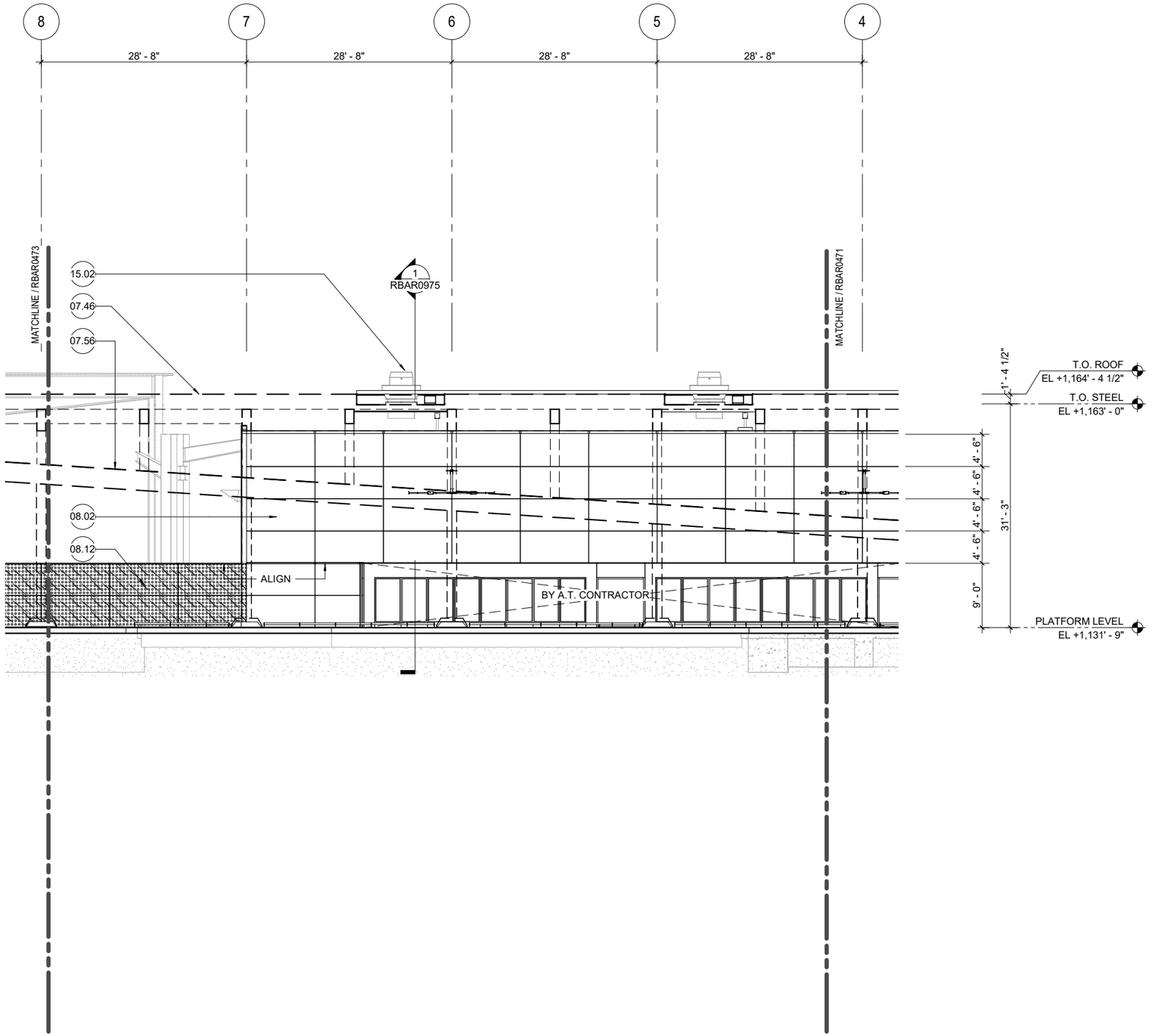
Designed by:	MR
Drawn by:	JI, MT, TY
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - SOUTH - AREA A

Package: B04 - RBAR0471
Sheet Reference No: V5 - 047 of 218

Project Number: 21722
7/11/2018 3:07:54 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 EXTERIOR ELEVATION - SOUTH - AREA B
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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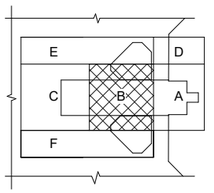
E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

03.03	GUIDEWAY STRUCTURE
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.02	SMOKE EVACUATION FAN
15.08	EXPOSED ROOF DRAIN LEADER, PAINT

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

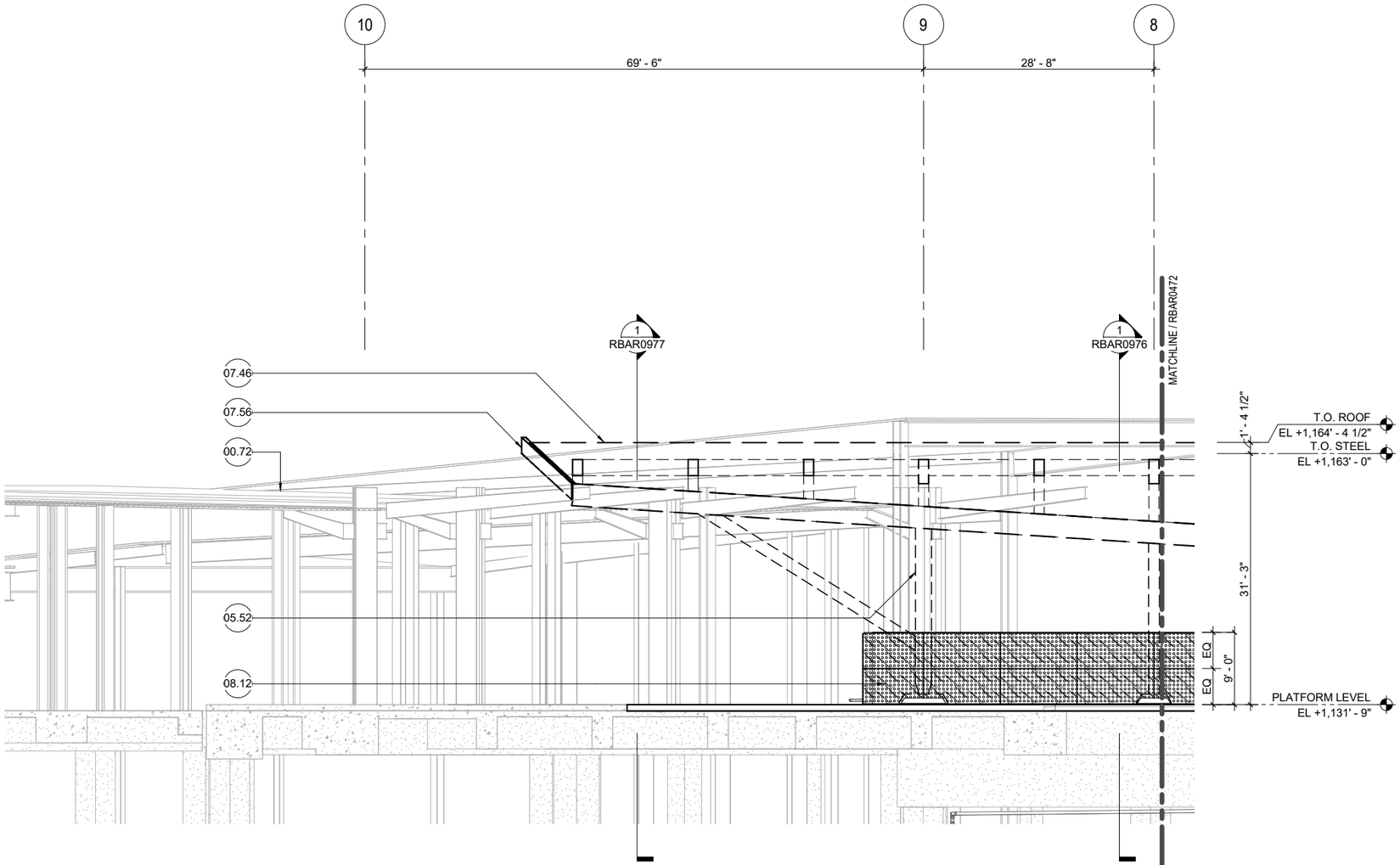
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - SOUTH - AREA B

Package: B04 - RBAR0472
Sheet Reference No: V5 - 048 of 218

Project Number: 21722
7/11/2018 3:07:58 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 EXTERIOR ELEVATION - SOUTH - AREA C
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

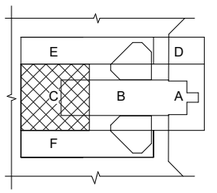
E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

00.72	CANOPY (E)
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.02	SMOKE EVACUATION FAN

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED



KEY PLAN

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

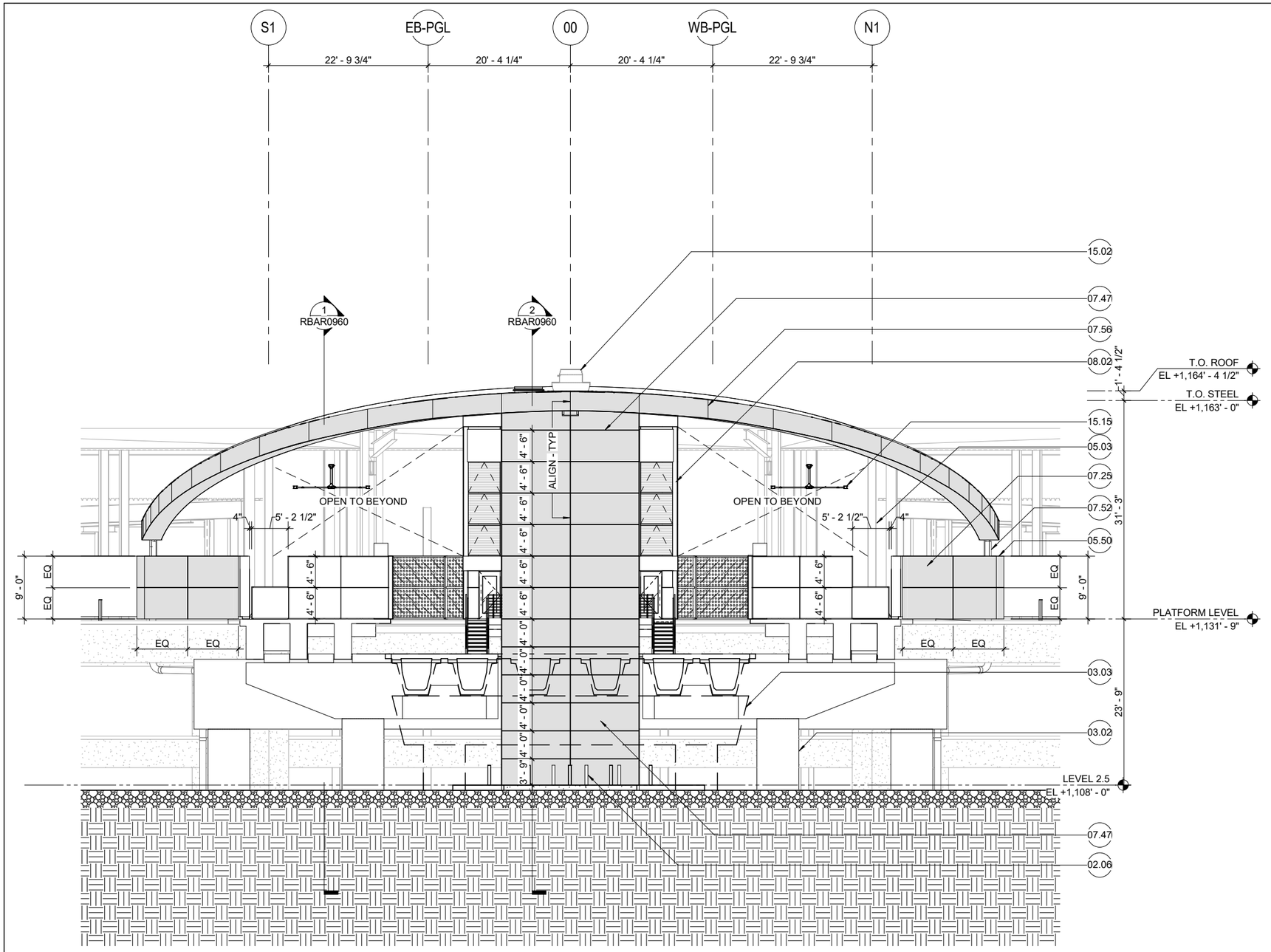
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - SOUTH - AREA C

Package: B04 - RBAR0473
Sheet Reference No: V5 - 049 of 218

Project Number: 21722
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1 EXTERIOR ELEVATION - EAST
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. REFER TO AND COORDINATE WITH STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

02.06	STAINLESS STEEL BOLLARD @ 6'-0" OC TYP.
03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.25	DRY COMPOSITE PANEL SYSTEM ON METAL STUD FRAMING
07.47	EXTERIOR COMPOSITE INSULATED PAINTED METAL PANEL CLADDING SYSTEM
07.52	EXPOSED ROOF DRAIN LEADER
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
15.02	SMOKE EVACUATION FAN
15.15	12'-0" DIAMETER FAN

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
STAGE 2 DESIGN
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PHOENIX, AZ 85034

CITY OF PHOENIX AVIATION DEPARTMENT

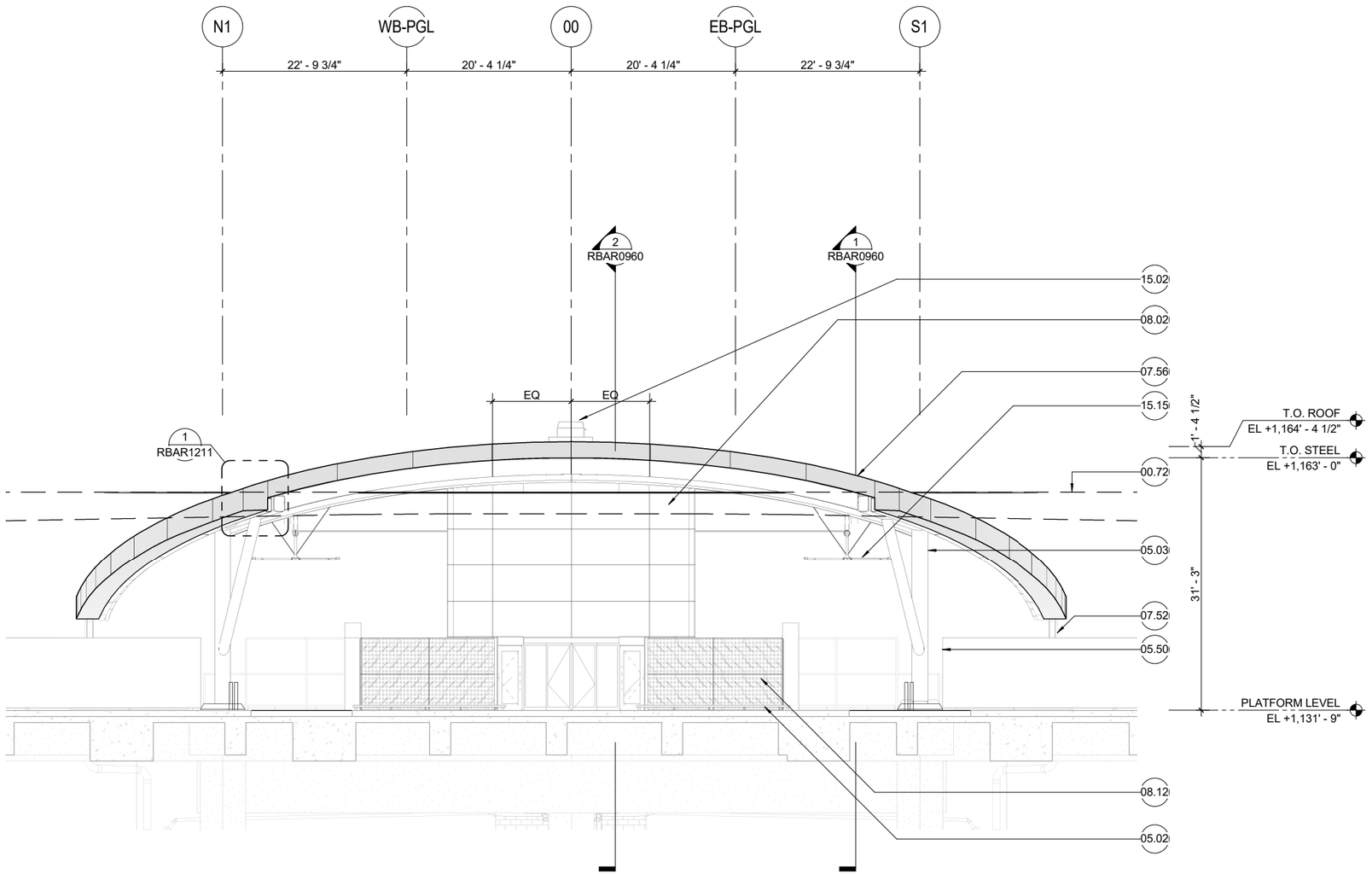
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - EAST

Package: B04 - RBAR0481
Sheet Reference No: V5 - 050 of 218

Project Number: 21722
7/11/2018 3:08:18 PM
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1 EXTERIOR ELEVATION - WEST
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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D. REFER TO THE RBAR04-SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. BUILDING / GUIDEWAY STRUCTURES ARE SHOWN AS DASHED LINES FOR CLARITY.

KEY NOTES

00.72	CANOPY (E)
05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
07.52	EXPOSED ROOF DRAIN LEADER
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.02	SMOKE EVACUATION FAN
15.15	12'-0" DIAMETER FAN

LEGEND

- COMPOSITE PANEL
- AIR INTAKE/EXHAUST LOUVER TO MATCH COMPOSITE PANEL FINISH AND JOINTS
- GLASS TYPE GL-2, WITH HEAT-SOAK TEST AS SPECIFIED
- GLASS TYPE GL-14, WITH FRIT AND HEAT-SOAK TEST AS SPECIFIED

Design Sub-Consultant
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architecture engineering interiors planning
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STAGE 2 DESIGN
500 S. 24TH STREET
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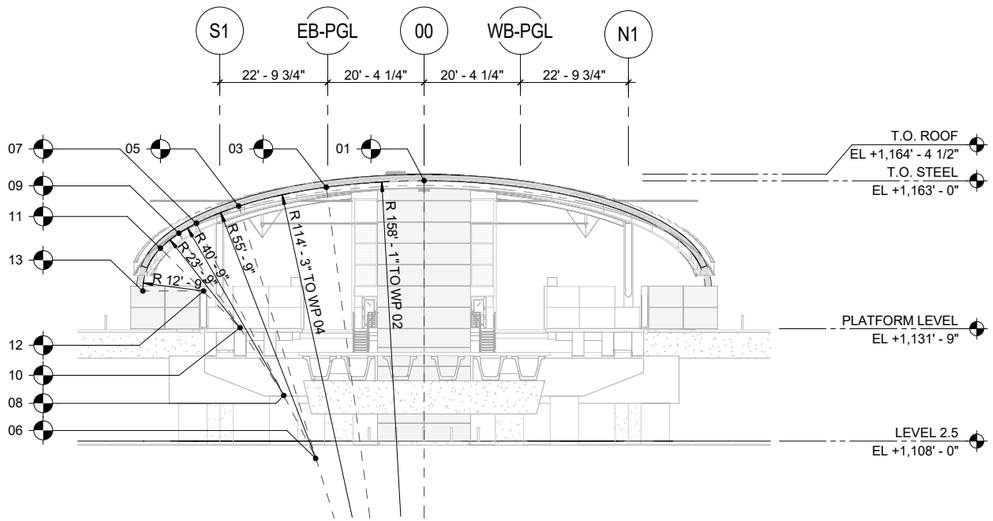
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR ELEVATION - WEST

Package: B04 - RBAR0491
Sheet Reference No: V5 - 051 of 218

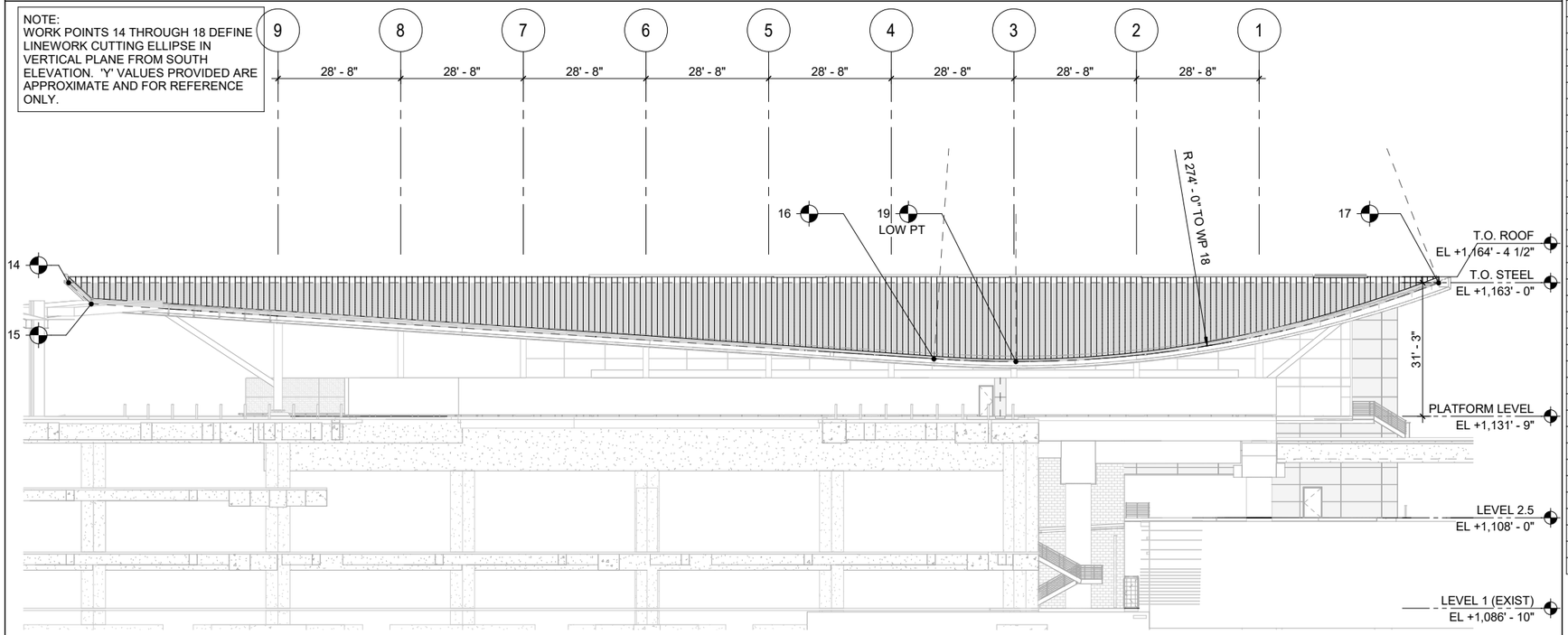
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NOTE:
WORK POINTS 01 THROUGH 13 DEFINE ELLIPSE IN VERTICAL PLANE FROM EAST ELEVATION. ROOF GEOMETRY IS MIRRORED ABOUT THE CENTERLINE OF GRID 00.



1 TOP OF STEEL ROOF DEFINITION (EAST ELEVATION)
1/16" = 1'-0"

NOTE:
WORK POINTS 14 THROUGH 18 DEFINE LINEWORK CUTTING ELLIPSE IN VERTICAL PLANE FROM SOUTH ELEVATION. 'Y' VALUES PROVIDED ARE APPROXIMATE AND FOR REFERENCE ONLY.



2 TOP OF STEEL ROOF DEFINITION (SOUTH ELEVATION)
1/16" = 1'-0"

1/16" = 1'-0"
0 16' 32'

SHEET NOTES

A. ROOF GEOMETRY IS THE RESULTANT OF THE ELLIPSE DIMENSIONED IN EAST ELEVATION CUT BY LINEWORK PROJECTED IN SOUTH ELEVATION

B. DIMENSIONS ARE TO TOP OF STEEL (BOTTOM OF DECK) UNLESS NOTED OTHERWISE

C. DIMENSIONS NOTED AS ±X'-X" ARE APPROXIMATIONS OF THE RESULTANT ROOF GEOMETRY AND ARE FOR REFERENCE ONLY

D. DIMENSIONS NOTED FOR WORKPOINTS ARE ALIGNED TO PLAN ORIENTATION - 'X' VALUES ARE PLAN WEST OR PLAN EAST OF GRIDLINE 1

E. GUTTER SHOWN DASHED FOR CLARITY

ROOF WORK POINTS

WP	'X' VALUE TO GRID 1	'Y' VALUE TO GRID 00	'Z' VALUE
01	-	(N) 0'-0"	1163'-0"
02	-	(N) 0'-0"	±1004'-11"
03	-	(N) ±20'-7 5/8"	±1161'-7 3/4"
04	-	(N) ±5'-8 5/8"	±1048'-4 1/2"
05	-	(N) ±39'-1 1/2"	±1157'-7 5/8"
06	-	(N) ±22'-9 7/8"	±1104'-3 7/8"
07	-	(N) ±48'-1 5/8"	±1153'-11 7/8"
08	-	(N) ±29'-7 5/8"	±1117'-8 1/4"
09	-	(N) ±51'-10"	±1151'-10 3/8"
10	-	(N) ±38'-10 3/4"	±1131'-11 1/4"
11	-	(N) ±55'-8 1/4"	±1148'-8 7/8"
12	-	(N) ±46'-8 1/8"	±1139'-8 5/8"
13	-	(N) ±59'-5 1/8"	±1139'-8 5/8"
14	(W) 278'-4"	(N) 0'-0"	1163'-0"
15	(W) 273'-0"	(N) ±37'-9 3/4"	1158'-0 1/2"
16	(W) 76'-0"	(N) ±58'-2 5/8"	1145'-2 1/2"
17	(E) 42'-0"	(N) 0'-0"	1163'-0"
18	(W) ±56'-10 1/2"	-	±1418'-6 1/2"
19	(W) ±56'-10 1/2"	(N) ±58'-6 1/4"	±1144'-6 1/2"
20	(W) ±137'-3 1/2"	(N) ±0'-4 5/8"	-
21	(W) ±275'-11"	(N) ±26'-4 5/8"	±1162'-1 1/2"
22	(W) ±183'-7 3/8"	(N) ±8'-11 1/8"	-
23	(W) ±149'-11 7/8"	(S) ±536'-10 1/4"	-
24	(W) ±260'-10 1/4"	(N) ±40'-3 3/8"	±1158'-8 1/4"
25	(W) ±105'-6 1/2"	(S) ±782'-8 1/8"	-
26	(W) ±199'-7 1/8"	(N) ±49'-6 1/8"	±1154'-9 3/4"
27	(W) ±50'-2 1/8"	(S) ±1239'-1 1/2"	-
28	(W) ±137'-10 5/8"	(N) ±55'-2 1/8"	±1151'-0 1/2"
29	(W) ±21'-11 1/8"	(S) ±1671'-9 3/8"	-
30	(W) ±56'-11 1/8"	(S) ±557'-7 1/2"	-
31	(W) ±38'-0 5/8"	(N) ±58'-2 3/4"	±1147'-9 3/4"
32	(W) ±47'-3 3/4"	(S) ±245'-4 1/4"	-
33	(W) ±23'-10 3/4"	(N) ±57'-5 5/8"	±1148'-9 5/8"
34	(W) ±38'-3 1/2"	(S) ±128'-6 1/4"	-
35	(W) ±14'-6 1/2"	(N) ±56'-6"	±1149'-10"
36	(W) ±30'-3 1/8"	(S) ±66'-6 1/4"	-
37	(W) ±5'-3 3/4"	(N) ±54'-11 5/8"	±1151'-2 3/4"
38	(W) ±21'-10 1/2"	(S) ±26'-8 1/8"	-
39	(E) ±5'-10 5/8"	(N) ±51'-10 3/8"	±1153'-5 3/8"
40	(W) ±14'-9 1/4"	(S) ±6'-10 7/8"	-
41	(E) ±16'-4 1/2"	(N) ±47'-0 5/8"	±1156'-0 1/4"
42	(W) ±7'-10 3/4"	(N) ±4'-5 1/2"	-
43	(E) ±36'-6 1/8"	(N) ±25'-2 1/2"	±1162'-3 7/8"
44	(W) ±17'-10"	(N) ±0'-2 1/8"	-

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

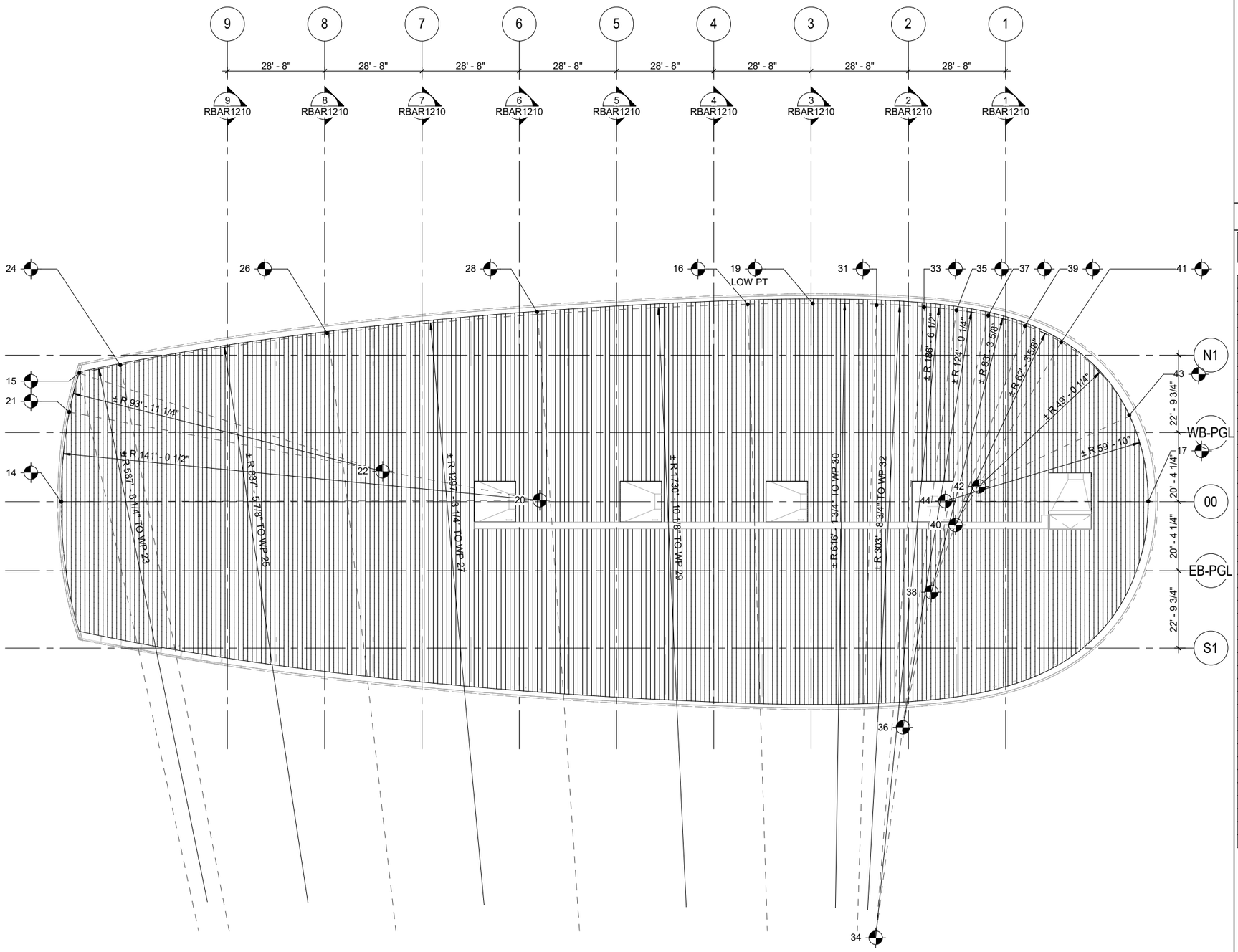
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Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ROOF TOP OF STEEL COORDINATION

Package: **B04 - RBAR0611**
Sheet Reference No: V5 - 052 of 218

Project Number: 21722
7/11/2018 3:09:34 PM
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1 ROOF RESULTANT GEOMETRY PLAN
1/16" = 1'-0"

1/16" = 1'-0"
0 16' 32'

SHEET NOTES

A. ROOF GEOMETRY IS THE RESULTANT OF THE ELLIPSE DIMENSIONED IN EAST ELEVATION CUT BY LINEWORK PROJECTED IN SOUTH ELEVATION

B. DIMENSIONS ARE TO TOP OF STEEL (BOTTOM OF DECK) UNLESS NOTED OTHERWISE

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D. DIMENSIONS NOTED FOR WORKPOINTS ARE ALIGNED TO PLAN ORIENTATION - 'X' VALUES ARE PLAN WEST OR PLAN EAST OF GRIDLINE 1

E. GUTTER SHOWN DASHED FOR CLARITY

ROOF WORK POINTS

WP	'X' VALUE TO GRID 1	'Y' VALUE TO GRID 00	'Z' VALUE
01	-	(N) 0'-0"	1163'-0"
02	-	(N) 0'-0"	±1004'-11"
03	-	(N) ±20'-7 5/8"	±1161'-7 3/4"
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05	-	(N) ±39'-1 1/2"	±1157'-7 5/8"
06	-	(N) ±22'-9 7/8"	±1104'-3 7/8"
07	-	(N) ±48'-1 5/8"	±1153'-11 7/8"
08	-	(N) ±29'-7 5/8"	±1117'-8 1/4"
09	-	(N) ±51'-10"	±1151'-10 3/8"
10	-	(N) ±38'-10 3/4"	±1131'-11 1/4"
11	-	(N) ±55'-8 1/4"	±1148'-8 7/8"
12	-	(N) ±46'-8 1/8"	±1139'-8 5/8"
13	-	(N) ±59'-5 1/8"	±1139'-8 5/8"
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17	(E) 42'-0"	(N) 0'-0"	1163'-0"
18	(W) ±56'-10 1/2"	-	±1418'-6 1/2"
19	(W) ±56'-10 1/2"	(N) ±58'-6 1/4"	±1144'-6 1/2"
20	(W) ±137'-3 1/2"	(N) ±0'-4 5/8"	-
21	(W) ±275'-11"	(N) ±26'-4 5/8"	±1162'-1 1/2"
22	(W) ±183'-7 3/8"	(N) ±8'-11 1/8"	-
23	(W) ±149'-11 7/8"	(S) ±536'-10 1/4"	-
24	(W) ±260'-10 1/4"	(N) ±40'-3 3/8"	±1158'-8 1/4"
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26	(W) ±199'-7 1/8"	(N) ±49'-6 1/8"	±1154'-9 3/4"
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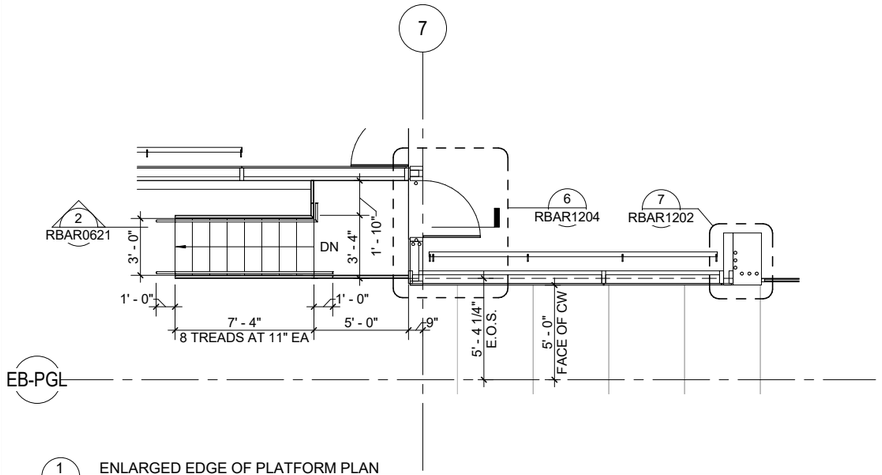
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

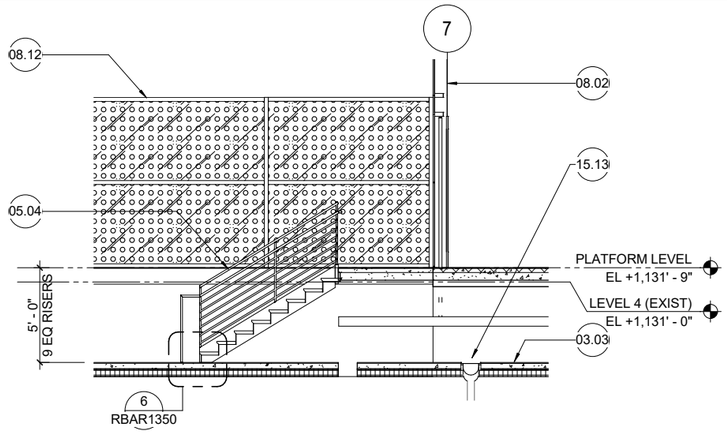
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ARCHITECTURAL
ROOF TOP OF STEEL COORDINATION

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Sheet Reference No: V5 - 053 of 218

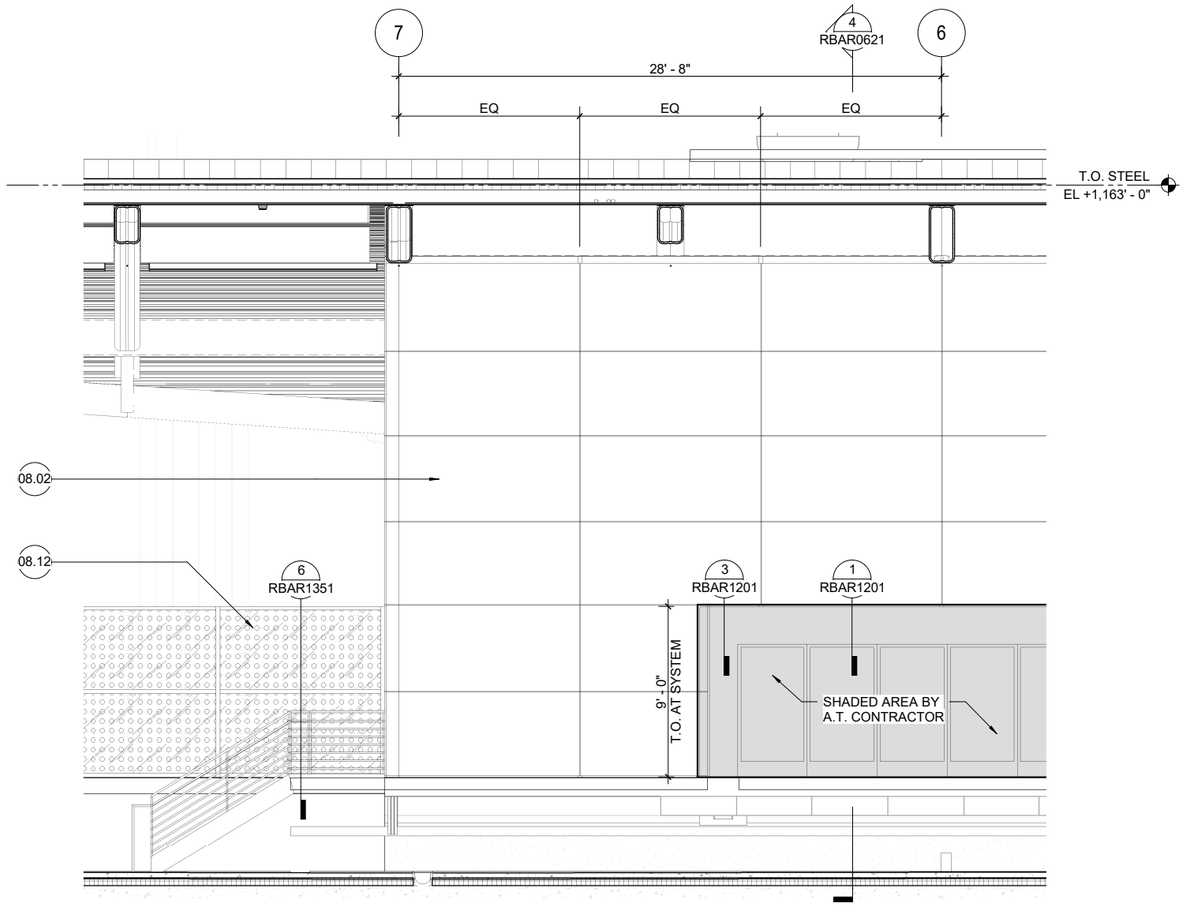
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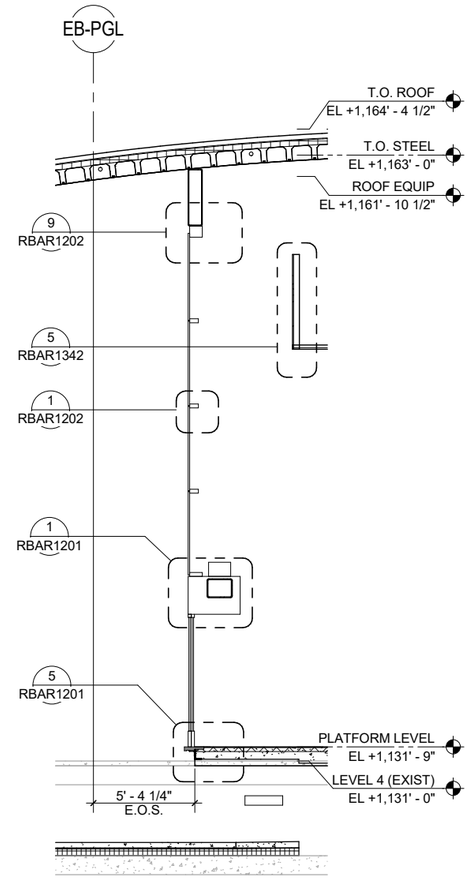
1 ENLARGED EDGE OF PLATFORM PLAN
1/4" = 1'-0"



2 ENLARGED SECTION - EGRESS STAIR
1/4" = 1'-0"



3 ENLARGED EXTERIOR ELEVATION - EDGE OF PLATFORM
1/4" = 1'-0"



4 ENLARGED SECTION - EDGE OF PLATFORM
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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D. REFER TO THE RBAR01-SERIES SHEETS FOR OVERALL LOCATION AND ORIENTATION TO THE BUILDING.

E. REFER TO THE RBAR13-SERIES SHEETS FOR DETAILS.

KEY NOTES

03.03	GUIDEWAY STRUCTURE
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
08.12	ALUMINUM FRAMED CURTAIN WALL SYSTEM - WITH 80% FRIT PATTERN
15.13	GUIDEWAY TRENCH DRAIN IN STRUCTURAL SLAB

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

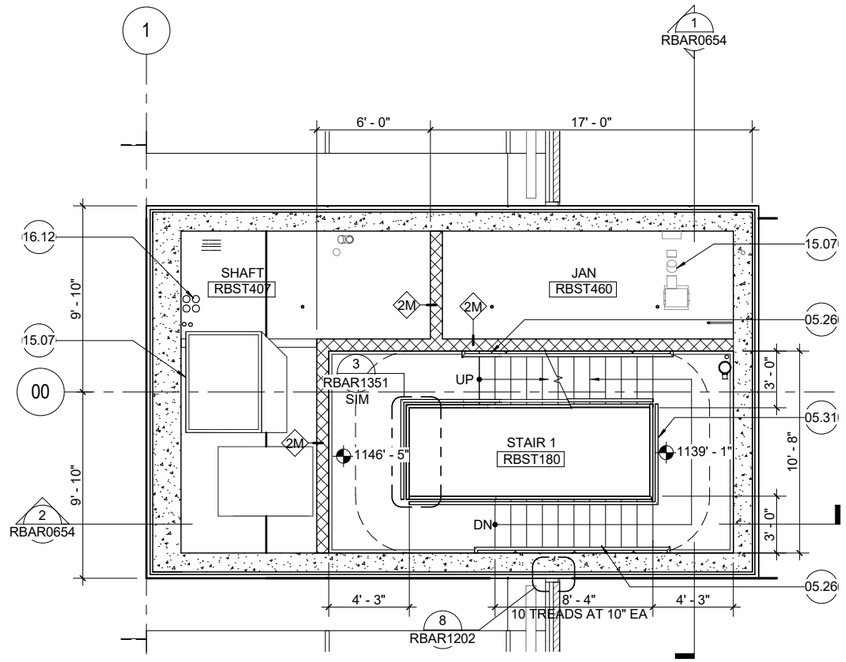
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

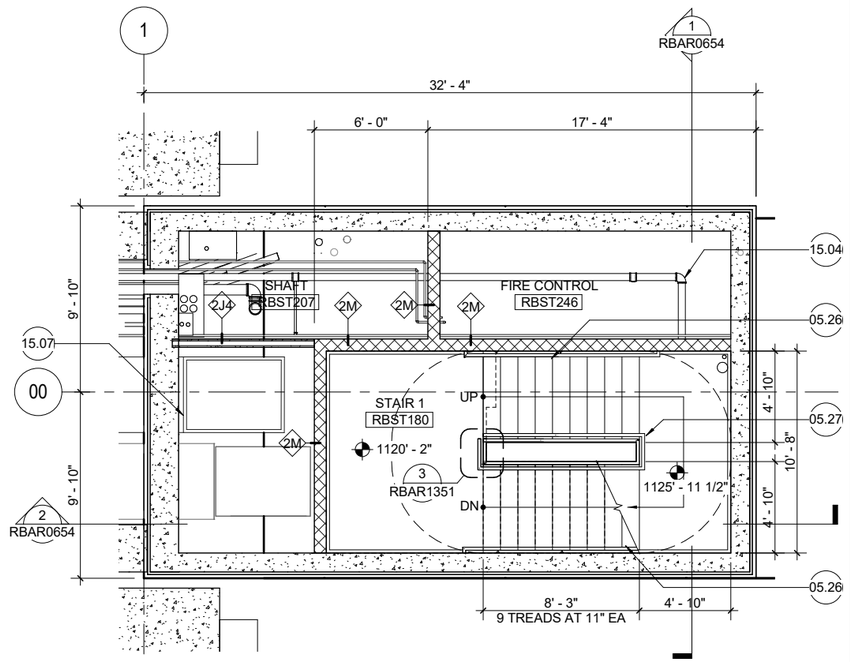
RCC STATION
ARCHITECTURAL
ENLARGED EDGE OF PLATFORM

Package: B04 - RBAR0621
Sheet Reference No: V5 - 054 of 218

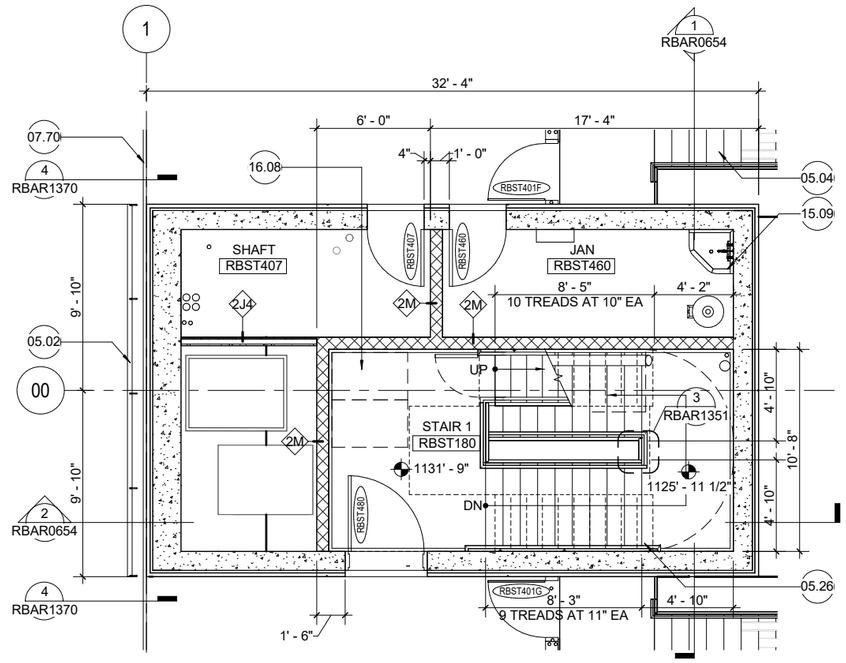
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Project Number: 21722
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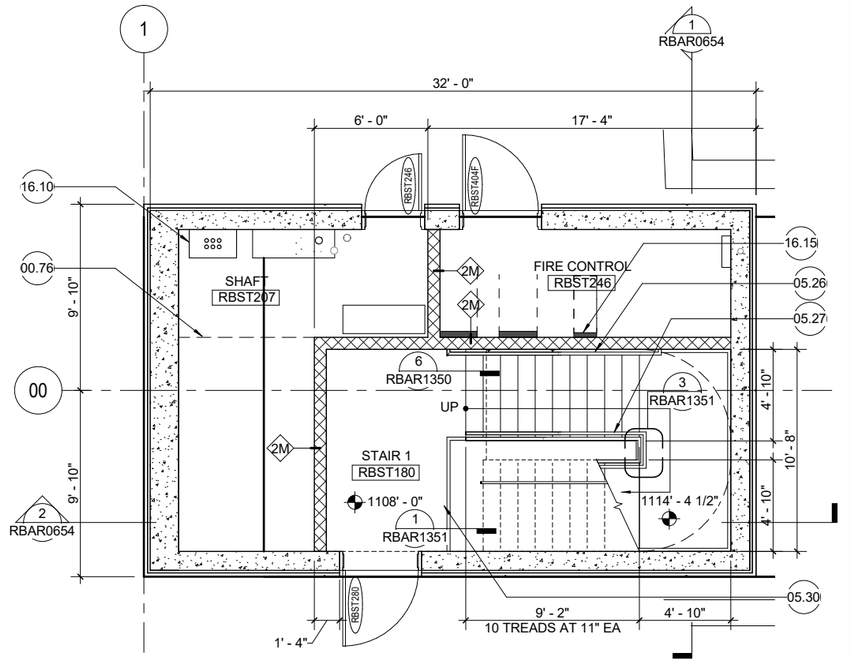
1 ENLARGED PLAN - INTERMEDIATE LANDING - STAIR
1/4" = 1'-0"



2 ENLARGED PLAN - INTERMEDIATE LANDING - STAIR
1/4" = 1'-0"



3 ENLARGED PLAN - PLATFORM LEVEL - STAIR
1/4" = 1'-0"



4 ENLARGED PLAN - LEVEL 2.5 - STAIR
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

SHEET NOTES

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E. REFER TO THE RBAR13-SERIES SHEETS FOR DETAILS.

KEY NOTES

00.76	DASHED LINE INDICATES EDGE OF CEILING ABOVE
05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.04	EMERGENCY METAL STAIRS WITH HANDRAIL AND GUARDRAIL BY A.T. CONTRACTOR
05.26	WALL MOUNTED HANDRAIL - RETURN ENDS TO WALL, TYPICAL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.27	TYPICAL STAIR GUARDRAIL AND HANDRAIL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.30	STEEL PIPE GUARDRAIL AT BASE OF STAIRS. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.31	STAIR GUARDRAIL AND HANDRAIL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
15.04	PIPING
15.07	MECHANICAL DUCTWORK
15.09	MOP SINK
16.08	(2) 30" X 48" AREAS OF REFUGE. GC TO PROVIDE ILLUMINATED AREA OF RESCUE ASSISTANCE SIGNAGE AND 2-WAY EMERGENCY COMMUNICATION SYSTEM MOUNTED 15" MIN / 48" MAX HEIGHT AFF
16.10	PULL BOX
16.12	ELECTRICAL CONDUIT
16.15	ELECTRICAL PANEL

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
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REVISIONS / SUBMISSIONS	

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

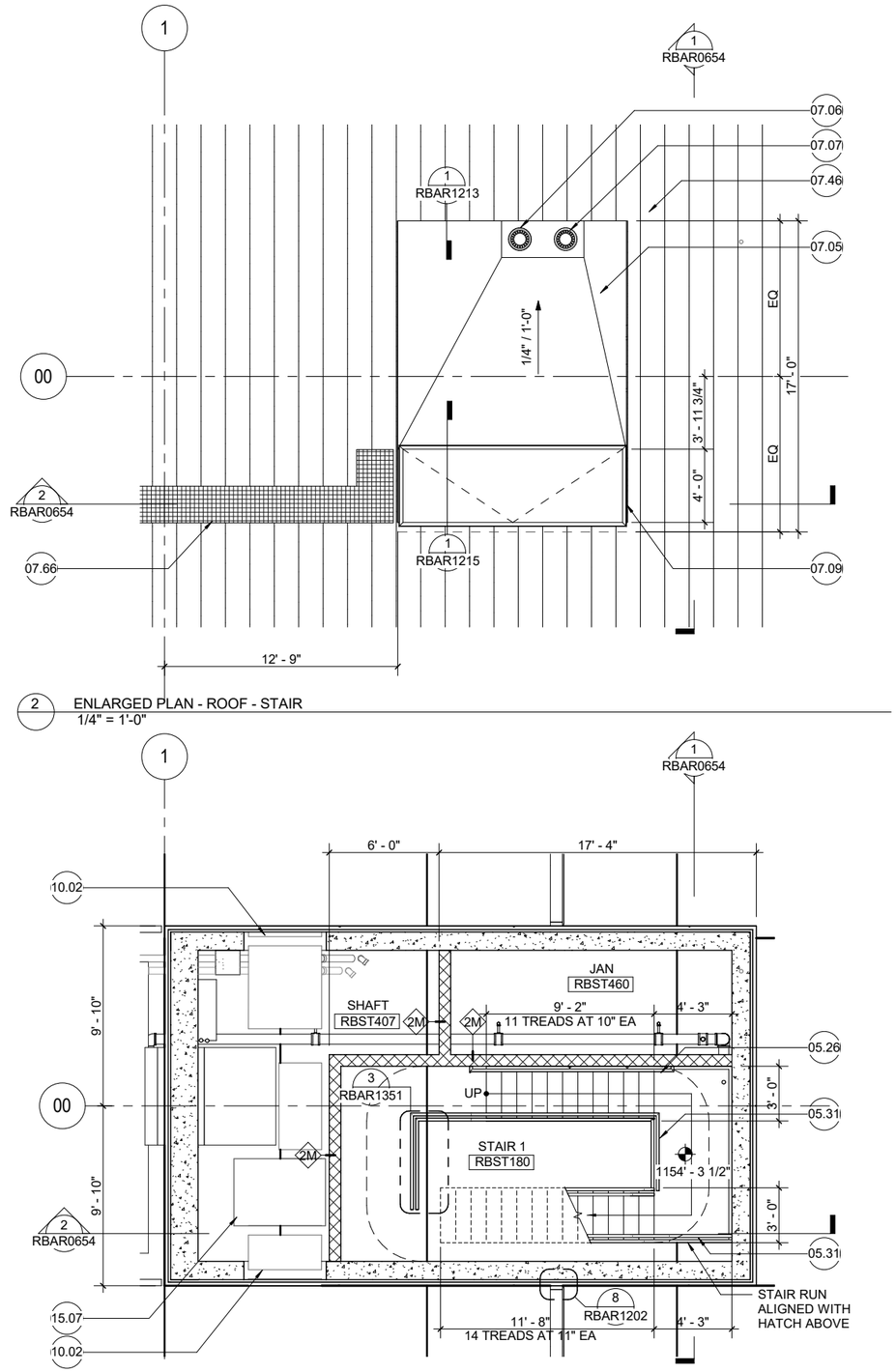
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED PLAN - VERTICAL CIRCULATION CORE

Package: B04 - RBAR0651
Sheet Reference No: V5 - 055 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:10:03 PM



2 ENLARGED PLAN - ROOF - STAIR
1/4" = 1'-0"

1 ENLARGED PLAN - INTERMEDIATE LANDING - STAIR
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

SHEET NOTES

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E. REFER TO THE RBAR13-SERIES SHEETS FOR DETAILS.

KEY NOTES

05.26	WALL MOUNTED HANDRAIL - RETURN ENDS TO WALL, TYPICAL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.31	STAIR GUARDRAIL AND HANDRAIL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
07.05	APP-MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM WITH CAP SHEET
07.06	ROOF DRAIN
07.07	ROOF OVERFLOW DRAIN
07.09	4' X 12' ROOF HATCH WITH OSHA-APPROVED GUARDRAIL INTEGRAL TO THE HATCH
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.66	GRIP STRUT GRATING WITH UTILITY CLAMPS FASTENED TO STANDING SEAM METAL ROOFING SYSTEM
10.02	60% PERFORATED AREA ON DRY COMPOSITE PANEL TO CONCEAL MECHANICAL LOUVER. SEE RBAR12-SERIES SHEETS FOR DETAILS.
15.07	MECHANICAL DUCTWORK

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

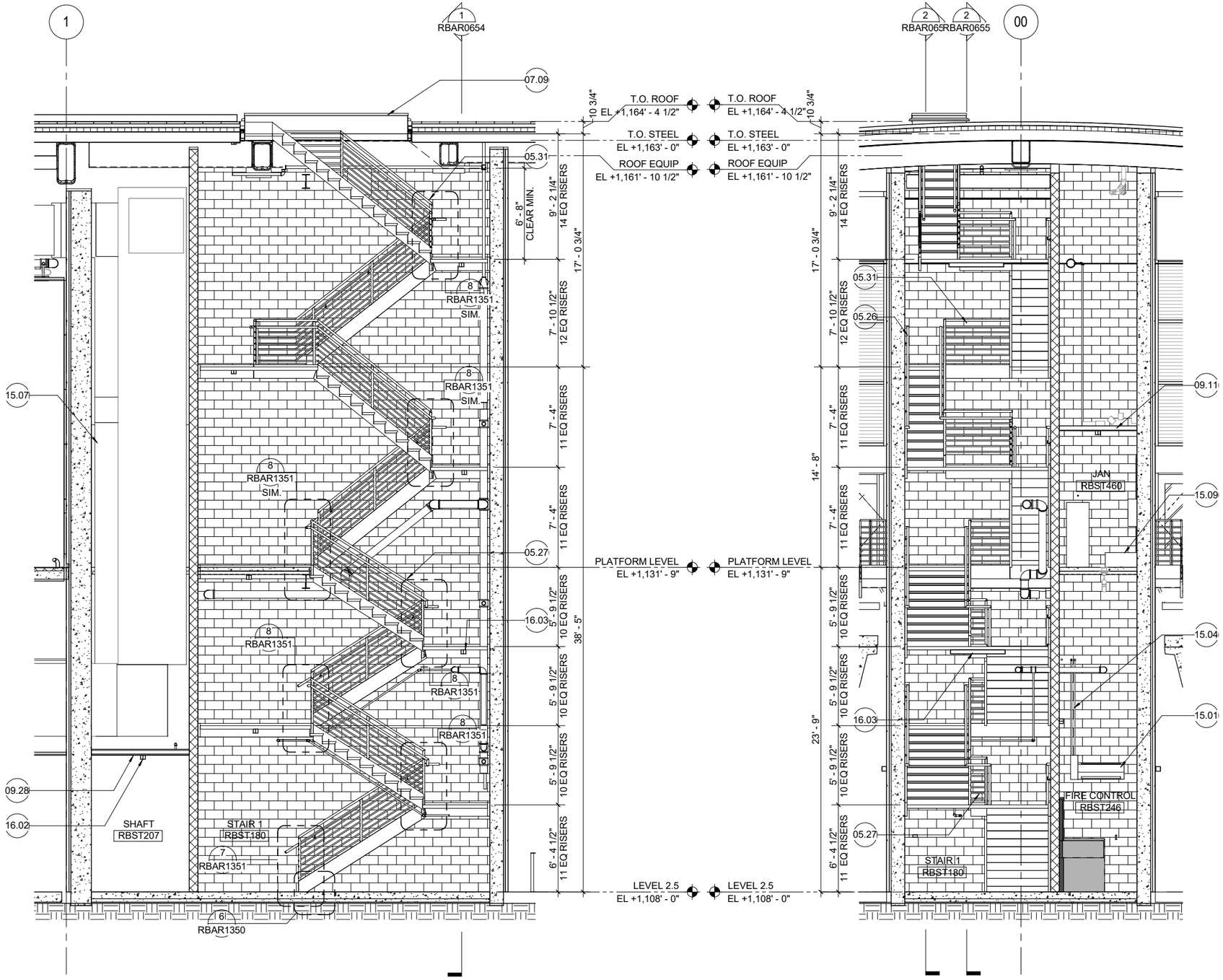
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED PLAN - VERTICAL
CIRCULATION CORE

Package: B04 - RBAR0652
Sheet Reference No: V5 - 056 of 218

Project Number: 21722
7/11/2018 3:10:10 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



2 ENLARGED SECTION - CORE STAIR AND ELEV
1/4" = 1'-0"

1 ENLARGED SECTION - CORE STAIR
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

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KEY NOTES

05.26	WALL MOUNTED HANDRAIL - RETURN ENDS TO WALL, TYPICAL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.27	TYPICAL STAIR GUARDRAIL AND HANDRAIL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
05.31	STAIR GUARDRAIL AND HANDRAIL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.
07.09	4' X 12' ROOF HATCH WITH OSHA-APPROVED GUARDRAIL INTEGRAL TO THE HATCH
09.11	GYPSUM BOARD SUSPENDED CEILING ASSEMBLY
09.28	2 HR FIRE RATED LID. REFER TO RBAR13-SERIES SHEETS FOR RATED GYPSUM BOARD AND SHAFTWALL DETAILS. SEAL ALL PENETRATIONS.
15.01	MECHANICAL EQUIPMENT
15.04	PIPING
15.07	MECHANICAL DUCTWORK
15.09	MOP SINK
16.02	LINEAR LIGHT FIXTURE
16.03	LIGHT FIXTURE

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

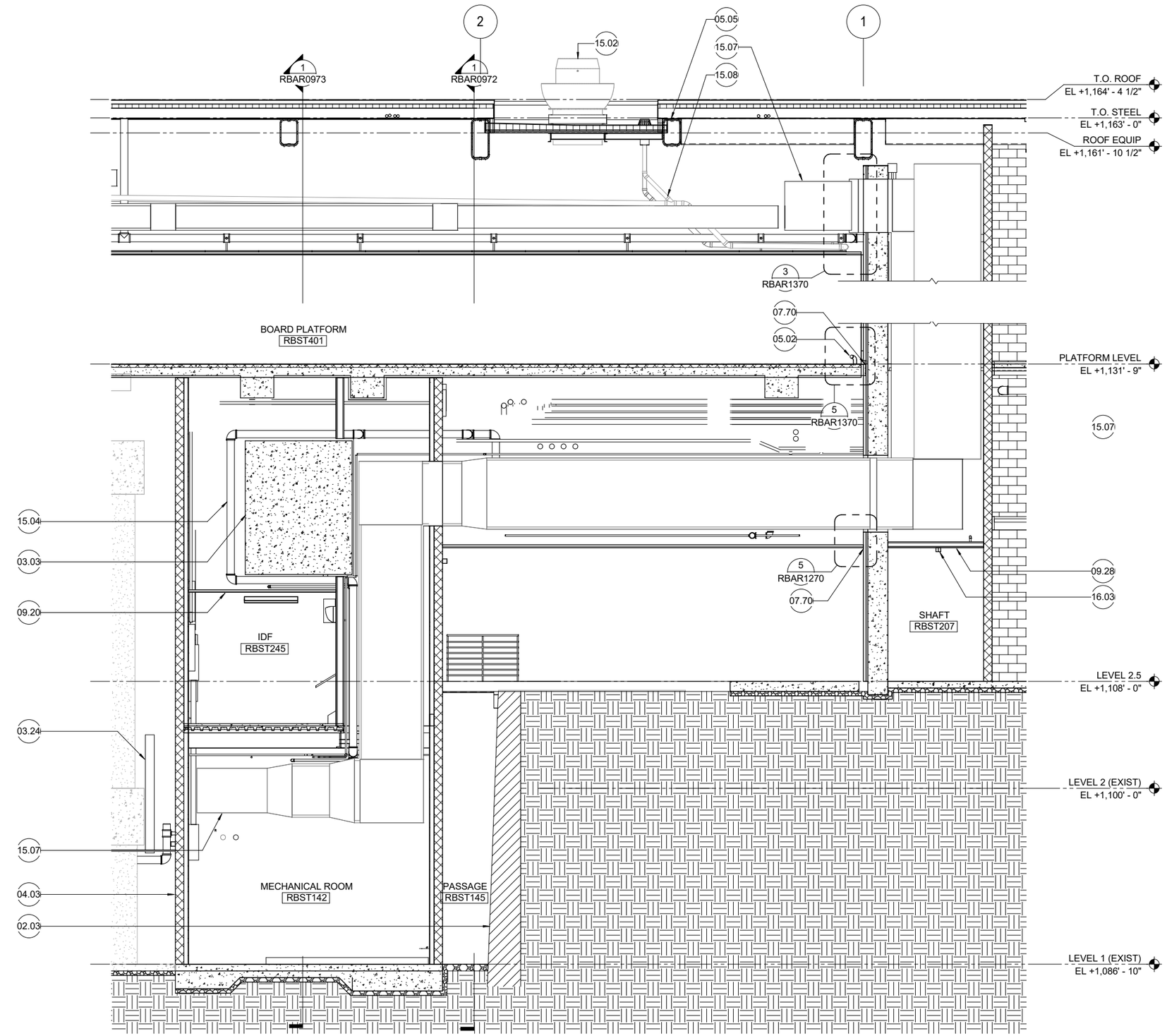
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED SECTIONS - VERTICAL CIRCULATION CORE

Package:
B04 - RBAR0654
Sheet Reference No:
V5 - 057 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:10:20 PM



2 ENLARGED SECTION
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

SHEET NOTES

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KEY NOTES

02.03	MECHANICALLY STABILIZED EARTH WALL (E)
03.03	GUIDEWAY STRUCTURE
03.24	PRECAST PANEL (E)
04.03	INTEGRALLY COLORED CMU WALL
05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.05	STRUCTURAL STEEL BEAMS WITH HIGH PERFORMANCE COATING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
09.20	LAY-IN ACOUSTICAL PANEL CEILING TILE
09.28	2 HR FIRE RATED LID. REFER TO RBAR13-SERIES SHEETS FOR RATED GYPSUM BOARD AND SHAFTWALL DETAILS. SEAL ALL PENETRATIONS.
15.02	SMOKE EVACUATION FAN
15.04	PIPING
15.07	MECHANICAL DUCTWORK
15.08	EXPOSED ROOF DRAIN LEADER, PAINT
16.03	LIGHT FIXTURE

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

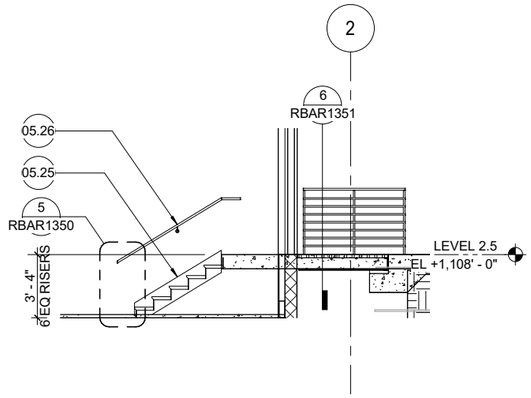
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED SECTIONS

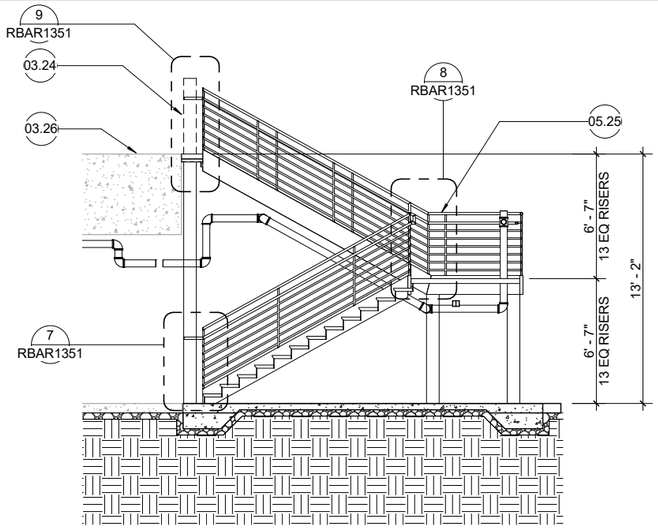
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KIVA No.:	07-5204

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Sheet Reference No: V5 - 058 of 218

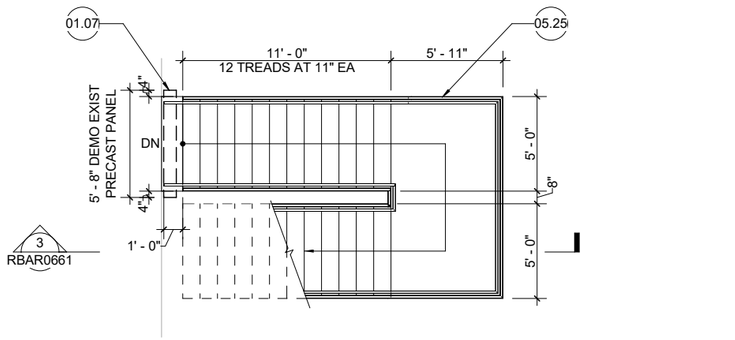
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Project Number: 21722
7/11/2018 3:10:26 PM



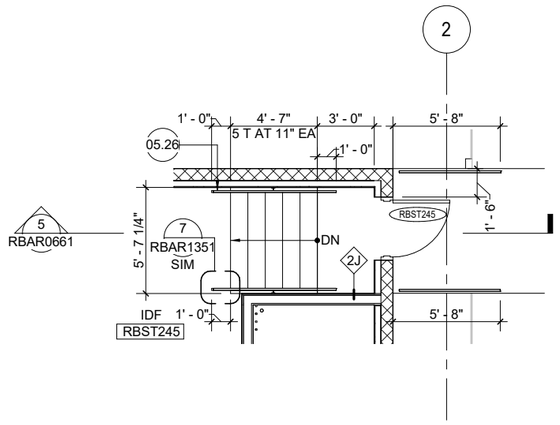
5 ENLARGED SECTION - IDF ROOM STAIR
1/4" = 1'-0"



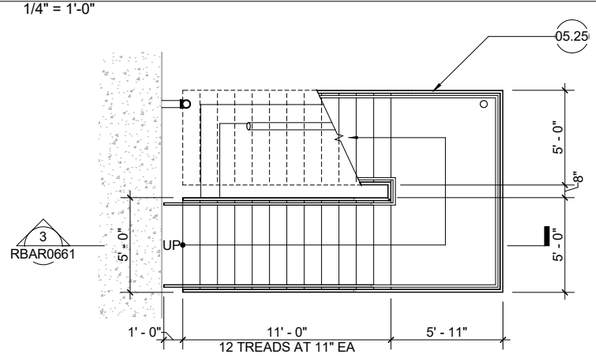
3 ENLARGED SECTION - STAIR 2
1/4" = 1'-0"



2 ENLARGED PLAN - LEVEL 2 - STAIR 2
1/4" = 1'-0"



4 ENLARGED PLAN - IDF ROOM STAIR
1/4" = 1'-0"



1 ENLARGED PLAN - LEVEL 1 - STAIR 2
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

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KEY NOTES

01.07	EXISTING PRECAST PANEL TO BE REMOVED AND REPLACED. REFER TO STRUCTURAL DEMOLITION DRAWINGS FOR MORE INFORMATION
03.24	PRECAST PANEL (E)
03.26	STRUCTURE (E)
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
05.26	WALL MOUNTED HANDRAIL - RETURN ENDS TO WALL, TYPICAL. SEE STAIR AND RAILING SYSTEMS DETAILS FOR DETAILED INFORMATION.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

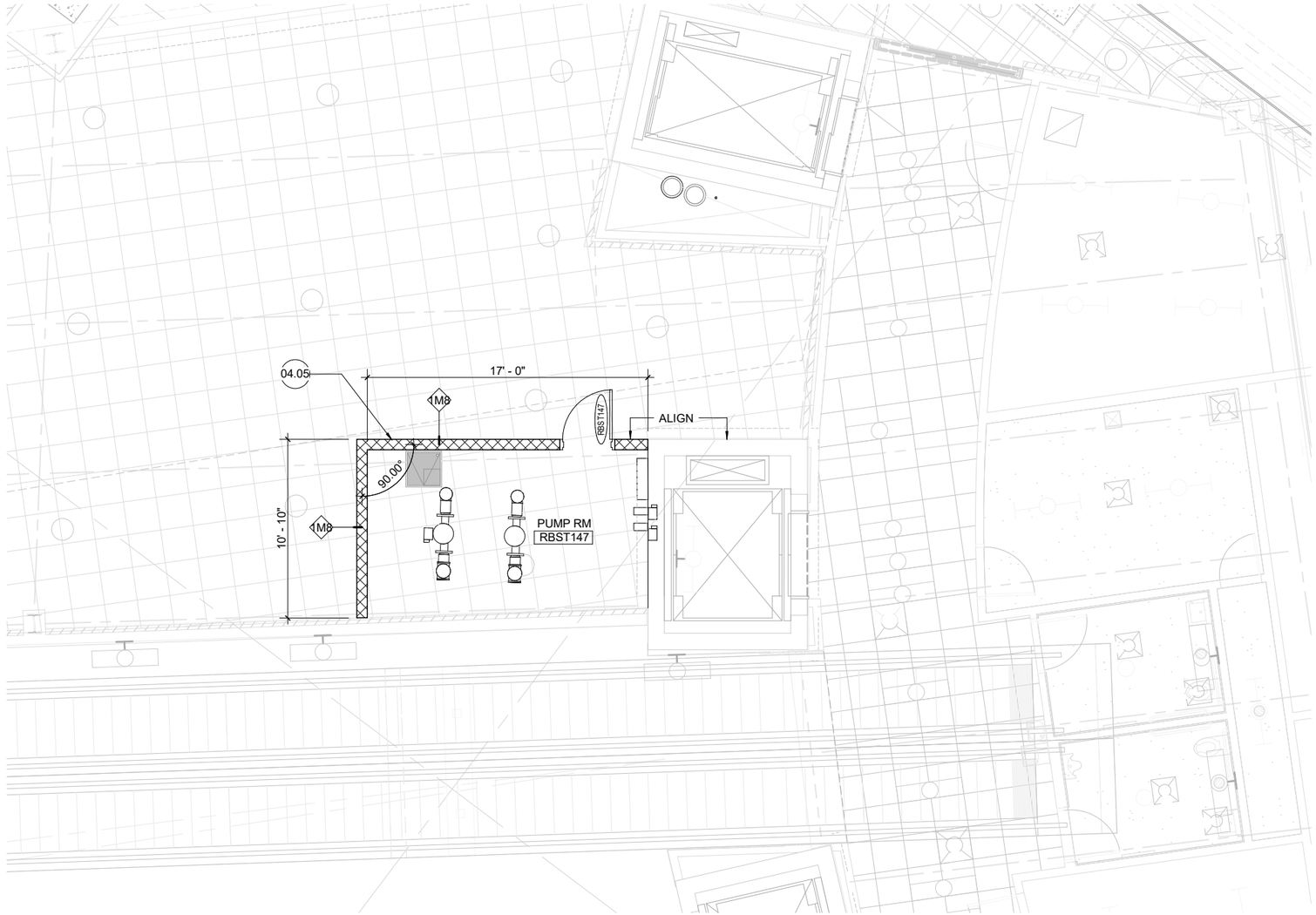
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Drawn by:	JI, MT, TY	Date:	07/13/2018
Dwg scale:	AS NOTED	CIP No.:	AV10000011
KIVA No.:	07-5204		

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED PLANS AND SECTION - STAIR

Package: B04 - RBAR0661
Sheet Reference No: V5 - 059 of 218

Project Number: 21722
7/11/2018 3:10:31 PM
Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL 1 - GROUND - EXISTING PUMP ROOM
1/4" = 1'-0"

1/4" = 1'-0"
0 4' 8'

SHEET NOTES

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B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE RBAR10-SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

H. BUILDING COORDINATES PER CIVIL DRAWINGS ARE AT THE EXISTING RENTAL CAR CENTER BUILDING GRIDLINES 2/A. COORDINATES ARE: X=660490.02158, Y=883850.95080, ANGLE=0.14868, PGL=1131.75'

J. ALL METAL COMPOSITE MATERIAL (MCM) PANELS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF IBC SECTION 1407.10. ALL MCM PANELS SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450 WHEN TESTED AS AN ASSEMBLY IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM E84 OR UL 723.

KEY NOTES

04.05 CMU WALL ON 6" CONCRETE CURB

REGISTERED ARCHITECT CERTIFICATE NO. 35861 MICHAEL L KRAGER Date Signed 7-31-2018 ARIZONA, U.S.A. Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

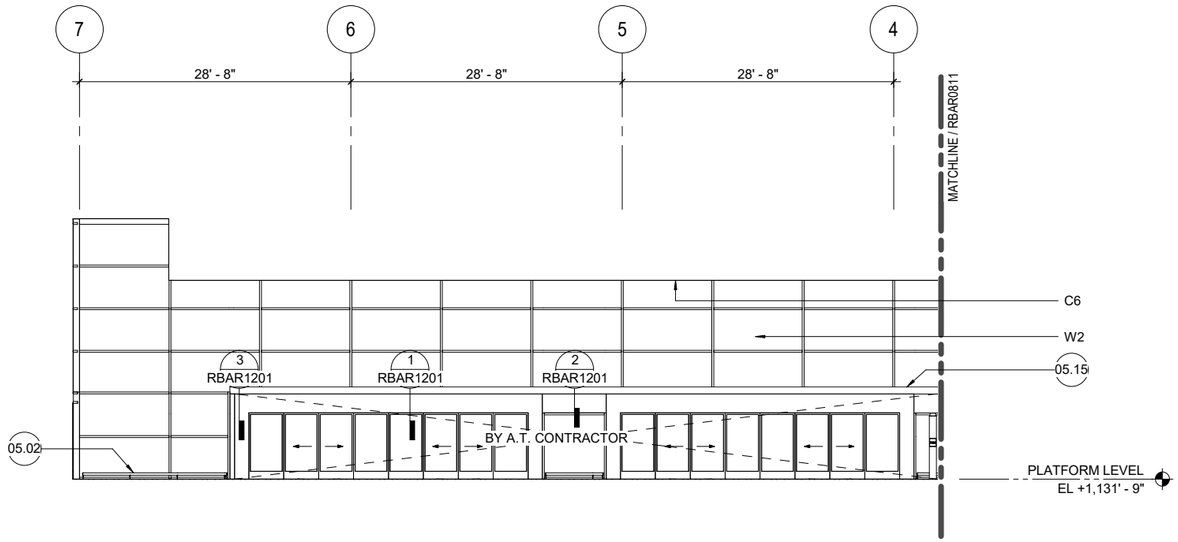
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
ENLARGED PLAN - PUMP ROOM

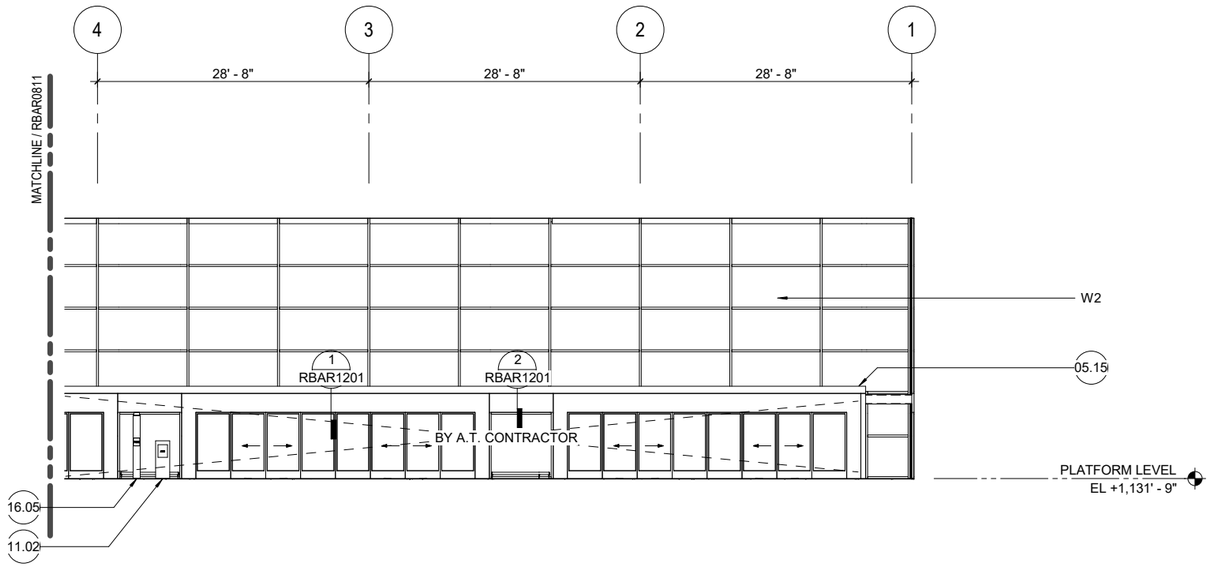
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Project Number: 21722
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Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



2 INTERIOR ELEVATION - PLATFORM LEVEL - NORTH - AREA B
1/8" = 1'-0"



1 INTERIOR ELEVATION - PLATFORM LEVEL - NORTH - AREA A
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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D. REFER TO THE RBAR13 SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

MATERIAL LEGEND

FLOORS

F1 EPOXY TERRAZZO
F2 EPOXY SEALED CONCRETE
F3 GROUND AND POLISHED CONCRETE
F4 SEALED CONCRETE
F5 BRUSHED CONCRETE

BASE

B1 EPOXY COATING - 6" COVE
B2 11 GAUGE STAINLESS STEEL, #4 BRUSHED FIN
B3 RUBBER WALL BASE
B4 EPOXY TERRAZZO

WALLS

W1 INDIVIDUALLY ACCESSIBLE ALUMINUM PANEL
W2 GLAZED CURTAIN WALL SYSTEM
W3 INDIVIDUALLY ACCESSIBLE PATTERNED /STAMPED STAINLESS STEEL PANEL
W4 SEALED CMU
W5 PAINT 1
W6 PAINT 2
W7 PAINT 3
W8 CERAMIC TILE
W9 INDIVIDUALLY ACCESSIBLE STAINLESS STEEL PANEL "SANDSTONE FINISH"
W10 GLASS BALUSTRADE WITH BRUSHED STAINLESS STEEL TOP RAIL
W11 9 FOOT HIGH ART WALL - DESIGN BY OTHERS

CEILINGS

C1 SUSPENDED EXTERIOR METAL PANEL CEILING
C2 EXTERIOR TORSION SPRING SUSPENDED METAL PANEL CEILING "WHITE"
C3 EXTERIOR TORSION SPRING SUSPENDED METAL PANEL CEILING "WOOD GRAIN"
C4 2 X 2 LAY-IN ACOUSTICAL PANEL CEILING TILE
C5 GYPSUM BOARD HARD LID CEILING
C6 PERFORATED TORSION SPRING SUSPENDED METAL PANEL CEILING "WHITE", MIN NRC 0.85
C7 PAINTED LONG SPAN STEEL ROOF DECK

NOTES

1 PAINT TO BE EGGSHELL FINISH
2 PAINT TO BE FLOAT FINISH
3 PAINT TO BE HIGH GLOSS FINISH
4 ABOVE CEILING: PAINT EXPOSED STRUCTURE, DUCTS, PIPES, AND CONDUIT WITH FLAT FINISH

KEY NOTES

05.02 STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.15 METAL FASCIA ABOVE TRAIN DOOR TO MATCH CURTAIN WALL MULLIONS
11.02 RECESS-MOUNTED AED (AUTOMATED EXTERNAL DEFIBRILLATOR) ON CUSTOM PEDESTAL
16.05 WALL-MOUNTED PEDS (PASSENGER EMERGENCY & DURESS SYSTEM) UNIT

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
ARIZONA, U.S.A.
Date Signed 7/13/2018
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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CITY OF PHOENIX AVIATION DEPARTMENT

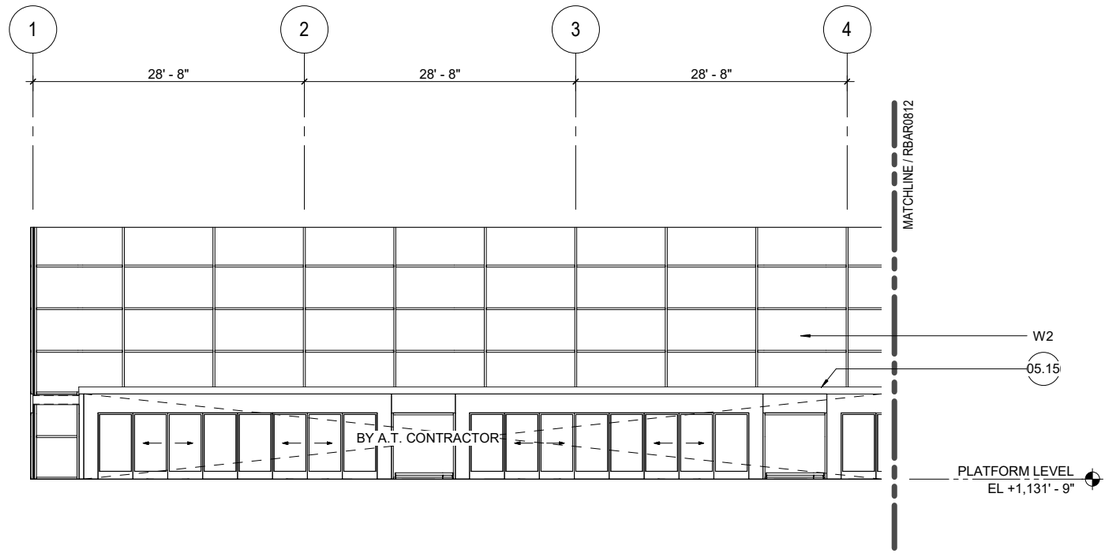
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

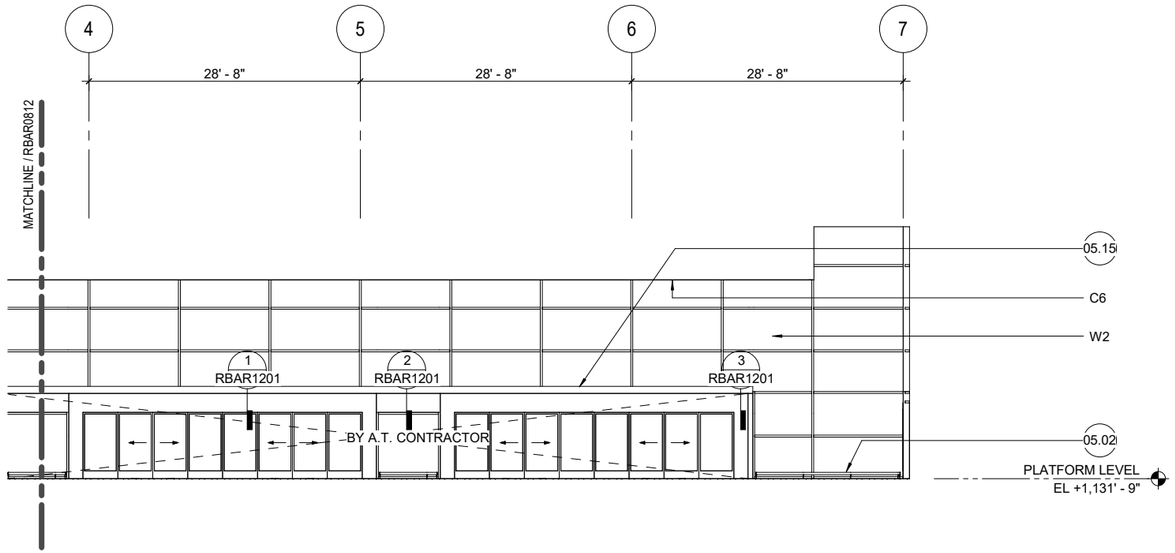
RCC STATION
ARCHITECTURAL
INTERIOR ELEVATIONS - NORTH - PLATFORM

Package: B04 - RBAR0811
Sheet Reference No: V5 - 061 of 218

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Project Number: 21722
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2 INTERIOR ELEVATION - PLATFORM LEVEL - SOUTH - AREA A
1/8" = 1'-0"



1 INTERIOR ELEVATION - PLATFORM LEVEL - SOUTH - AREA B
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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MATERIAL LEGEND

FLOORS

F1 EPOXY TERRAZZO
F2 EPOXY SEALED CONCRETE
F3 GROUND AND POLISHED CONCRETE
F4 SEALED CONCRETE
F5 BRUSHED CONCRETE

BASE

B1 EPOXY COATING - 6" COVE
B2 11 GAUGE STAINLESS STEEL, #4 BRUSHED FIN
B3 RUBBER WALL BASE
B4 EPOXY TERRAZZO

WALLS

W1 INDIVIDUALLY ACCESSIBLE ALUMINUM PANEL
W2 GLAZED CURTAIN WALL SYSTEM
W3 INDIVIDUALLY ACCESSIBLE PATTERNED /STAMPED STAINLESS STEEL PANEL
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W5 PAINT 1
W6 PAINT 2
W7 PAINT 3
W8 CERAMIC TILE
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W11 9 FOOT HIGH ART WALL - DESIGN BY OTHERS

CEILINGS

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C4 2 X 2 LAY-IN ACOUSTICAL PANEL CEILING TILE
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C6 PERFORATED TORSION SPRING SUSPENDED METAL PANEL CEILING "WHITE", MIN NRC 0.85
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KEY NOTES

05.02 STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.15 METAL FASCIA ABOVE TRAIN DOOR TO MATCH CURTAIN WALL MULLIONS

REGISTERED ARCHITECT CERTIFICATE NO. 35861 MICHAEL L KRAGER Date Signed 7/13/2018 ARIZONA, U.S.A. Expires 3-31-19

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
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Date:	07/13/2018
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KIVA No.:	07-5204

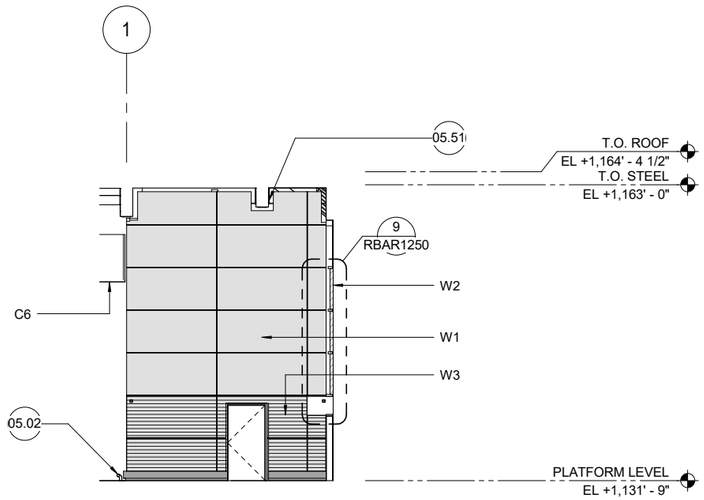
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR ELEVATIONS - SOUTH - PLATFORM

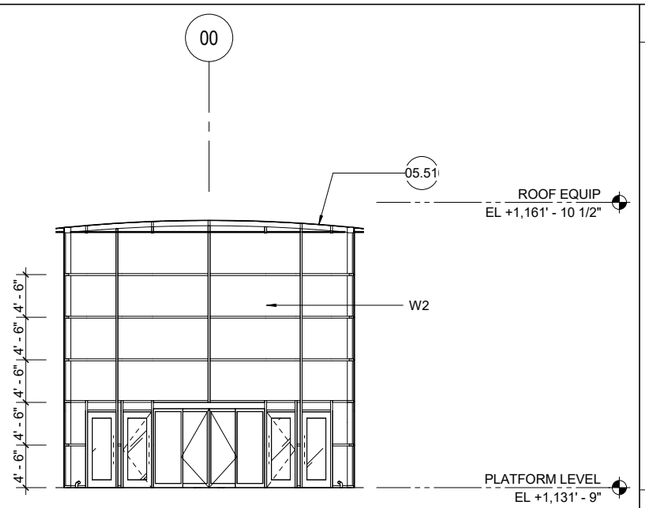
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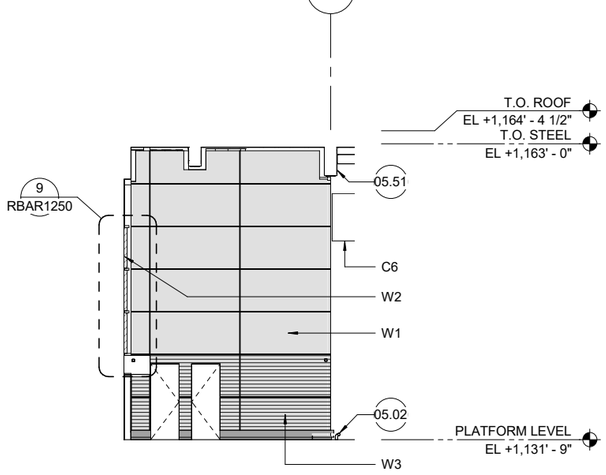
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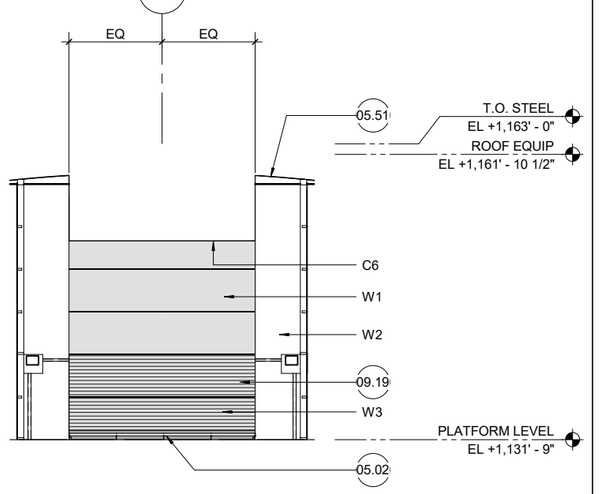
4 INTERIOR ELEVATION - PLATFORM LEVEL - CORE - NORTH
1/8" = 1'-0"



2 INTERIOR ELEVATION - PLATFORM LEVEL - WEST
1/8" = 1'-0"



3 INTERIOR ELEVATION - PLATFORM LEVEL - CORE - SOUTH
1/8" = 1'-0"



1 INTERIOR ELEVATION - PLATFORM LEVEL - EAST
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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FLOORS

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F2 EPOXY SEALED CONCRETE
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F4 SEALED CONCRETE
F5 BRUSHED CONCRETE

BASE

B1 EPOXY COATING - 6" COVE
B2 11 GAUGE STAINLESS STEEL, #4 BRUSHED FIN
B3 RUBBER WALL BASE
B4 EPOXY TERRAZZO

WALLS

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NOTES

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KEY NOTES

05.02 STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.51 HIGH PERFORMANCE PAINT COATED BEAMS
09.19 METAL PANEL CLADDING

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

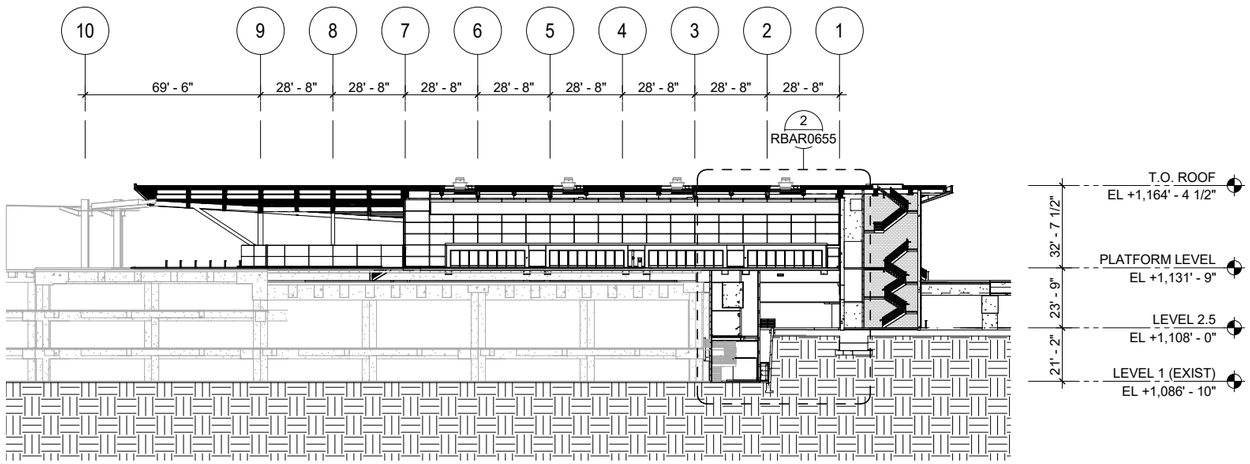
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Drawn by:	JI, JL, WM, TY	Date:	07/13/2018	KIVA No.:	07-5204
		Dwg scale:	AS NOTED		

STAGE 2 - B04 DESIGN SUBMISSION

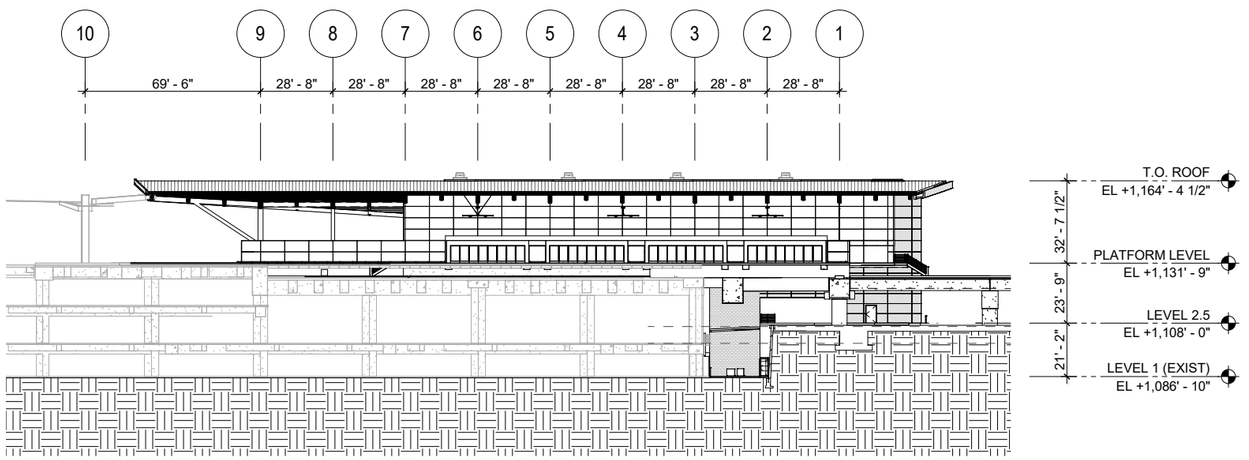
RCC STATION
ARCHITECTURAL
INTERIOR ELEVATIONS - EAST - WEST - PLATFORM

Package: B04 - RBAR0813
Sheet Reference No: V5 - 063 of 218

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Project Number: 21722
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2 LONGITUDINAL SECTION
1" = 30'-0"



1 LONGITUDINAL SECTION
1" = 30'-0"

1" = 30'-0"
0 30' 60'

SHEET NOTES

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REGISTERED ARCHITECT — CERTIFICATE NO. 35861 — MICHAEL L KRAGER — Date Signed 7/13/2018 — ARIZONA, U.S.A. — Expires 3-31-19

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
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PHOENIX, AZ 85034

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

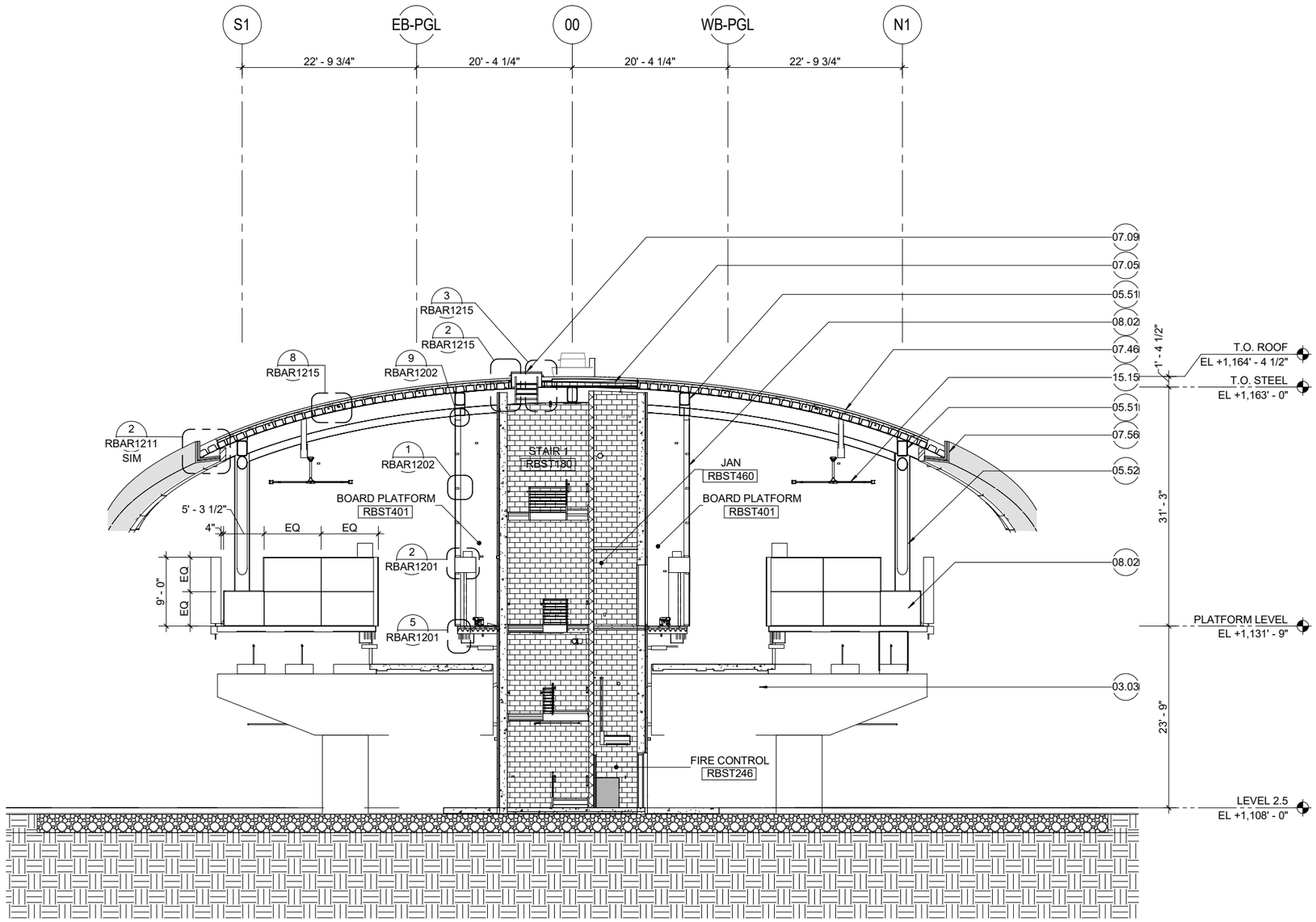
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
LONGITUDINAL SECTIONS - STATION

Package: B04 - RBAR0960
Sheet Reference No: V5 - 064 of 218

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Project Number: 21722
7/11/2018 3:11:37 PM



1 TRANSVERSE SECTION
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

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KEY NOTES

03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.05	APP-MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM WITH CAP SHEET
07.09	4' X 12' ROOF HATCH WITH OSHA-APPROVED GUARDRAIL INTEGRAL TO THE HATCH
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
15.15	12'-0" DIAMETER FAN

Design Sub-Consultant
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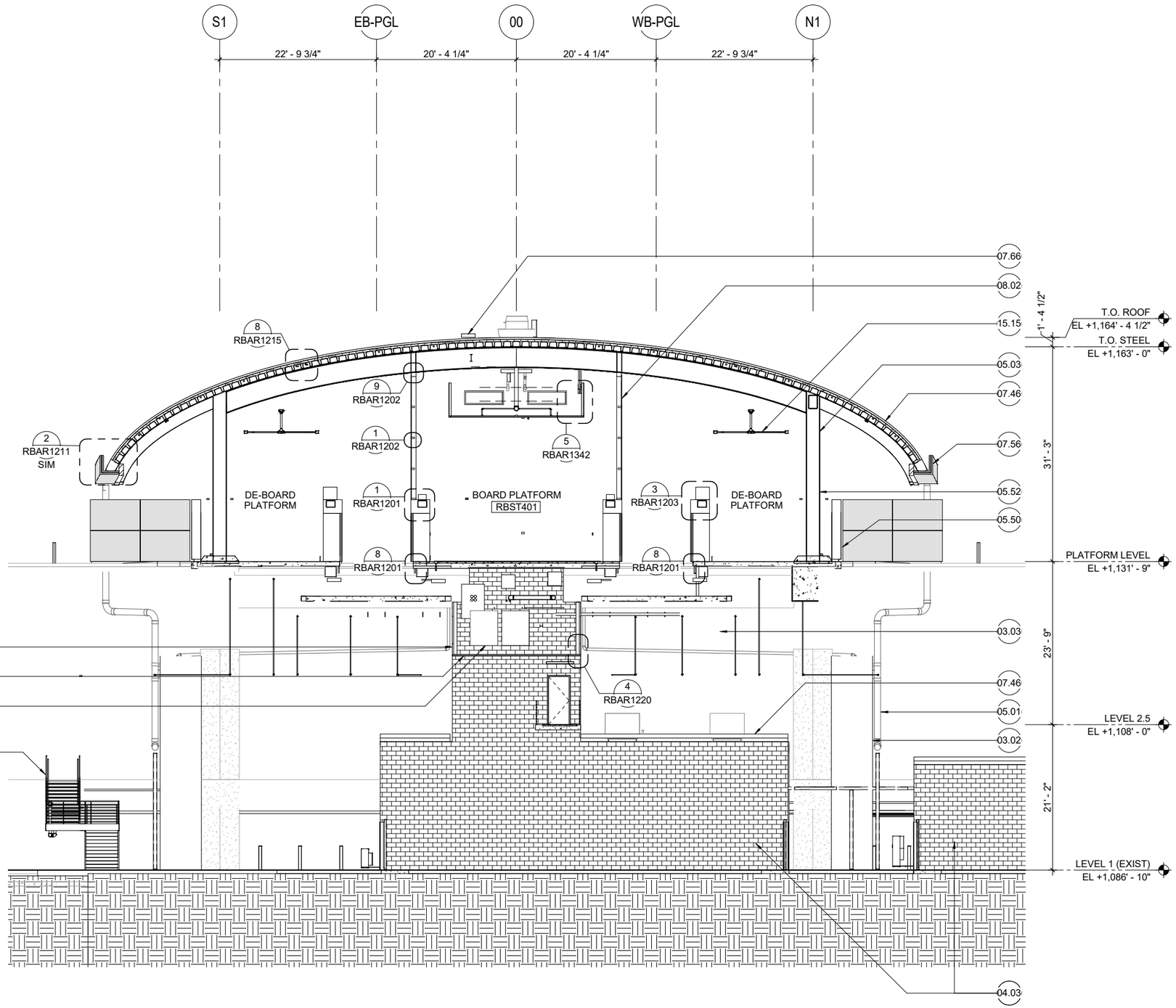
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Dwg scale:	AS NOTED		
CIP No.:	AV10000011		
KIVA No.:	07-5204		

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0971
Sheet Reference No: V5 - 065 of 218

Project Number: 21722
7/11/2018 3:11:48 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 TRANSVERSE SECTION
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. REFER TO AND COORDINATE WITH STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

KEY NOTES

03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
04.03	INTEGRALLY COLORED CMU WALL
05.01	EXPOSED ROOF DRAIN PIPE LEADER, PAINTED TO MATCH ADJACENT SURFACES
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.25	DRY COMPOSITE PANEL SYSTEM ON METAL STUD FRAMING
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.64	METAL PANEL SOFFIT
07.66	GRIP STRUT GRATING WITH UTILITY CLAMPS FASTENED TO STANDING SEAM METAL ROOFING SYSTEM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
15.07	MECHANICAL DUCTWORK
15.15	12'-0" DIAMETER FAN

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

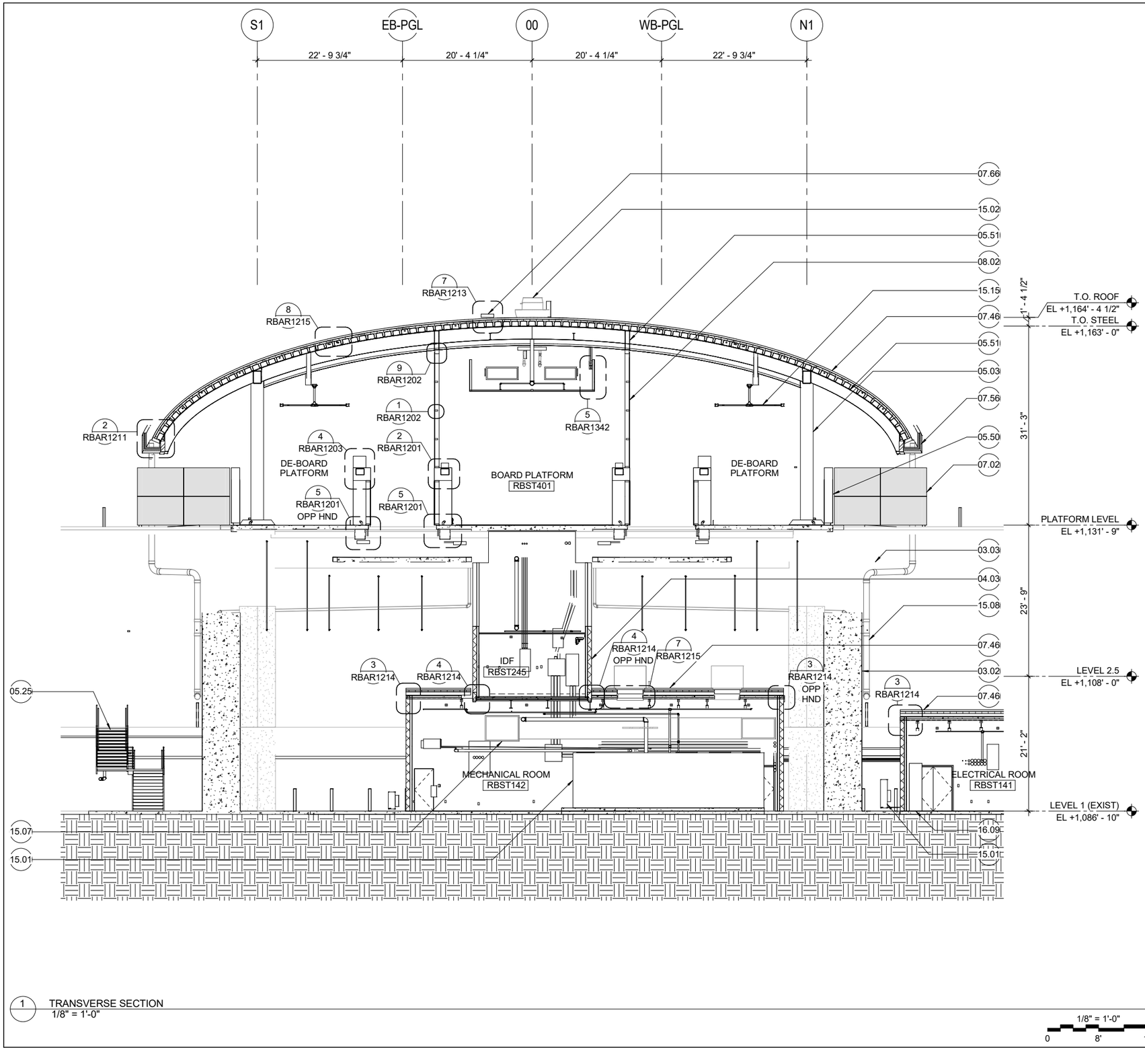
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0972
Sheet Reference No: V5 - 066 of 218

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Project Number: 21722
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1 TRANSVERSE SECTION
1/8" = 1'-0"

SHEET NOTES

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C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

KEY NOTES

03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
04.03	INTEGRALLY COLORED CMU WALL
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.25	CONCRETE FILLED METAL PAN STAIRS WITH STEEL HANDRAIL AND GUARDRAIL
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
07.02	DRY COMPOSITE PANEL SYSTEM OVER METAL STUD WALL ASSEMBLY
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.66	GRIP STRUT GRATING WITH UTILITY CLAMPS FASTENED TO STANDING SEAM METAL ROOFING SYSTEM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
15.01	MECHANICAL EQUIPMENT
15.02	SMOKE EVACUATION FAN
15.07	MECHANICAL DUCTWORK
15.08	EXPOSED ROOF DRAIN LEADER, PAINT
15.15	12'-0" DIAMETER FAN
16.09	SWITCHBOARD

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
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CITY OF PHOENIX AVIATION DEPARTMENT

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

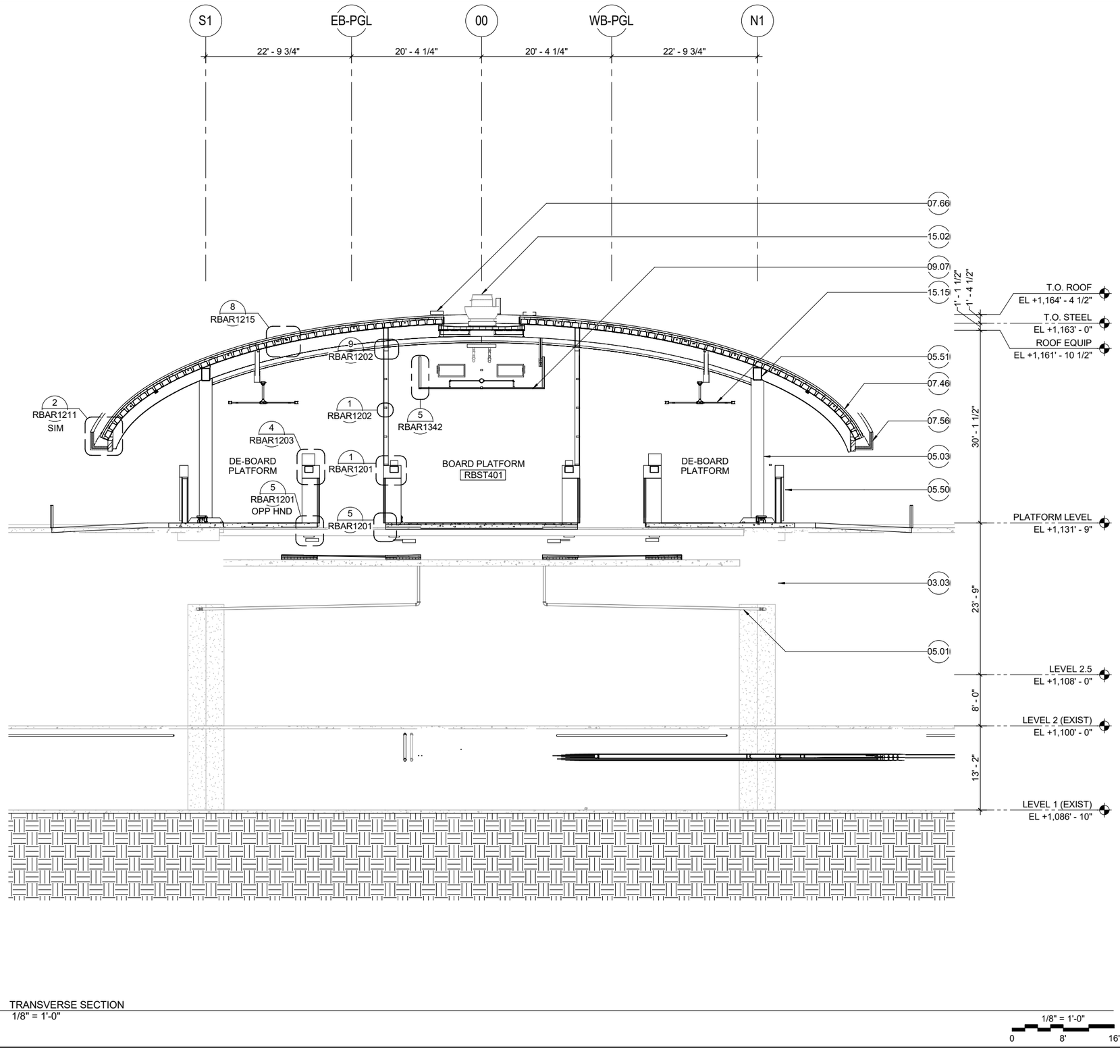
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0973
Sheet Reference No: V5 - 067 of 218

Project Number: 21722
7/11/2018 3:12:11 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARX001_R17_A360.rvt



1 TRANSVERSE SECTION
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0 8' 16'

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C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

KEY NOTES

03.03	GUIDEWAY STRUCTURE
05.01	EXPOSED ROOF DRAIN PIPE LEADER, PAINTED TO MATCH ADJACENT SURFACES
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.66	GRIP STRUT GRATING WITH UTILITY CLAMPS FASTENED TO STANDING SEAM METAL ROOFING SYSTEM
09.07	TORSIONAL SPRING SUSPENDED METAL PANEL CEILING SYSTEM "WHITE"
15.02	SMOKE EVACUATION FAN
15.15	12'-0" DIAMETER FAN

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

REGISTERED ARCHITECT CERTIFICATE NO. 35951 MICHAEL L KRAGER Date Signed 7-31-2018 ARIZONA, U.S.A. Expires 3-31-2019

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

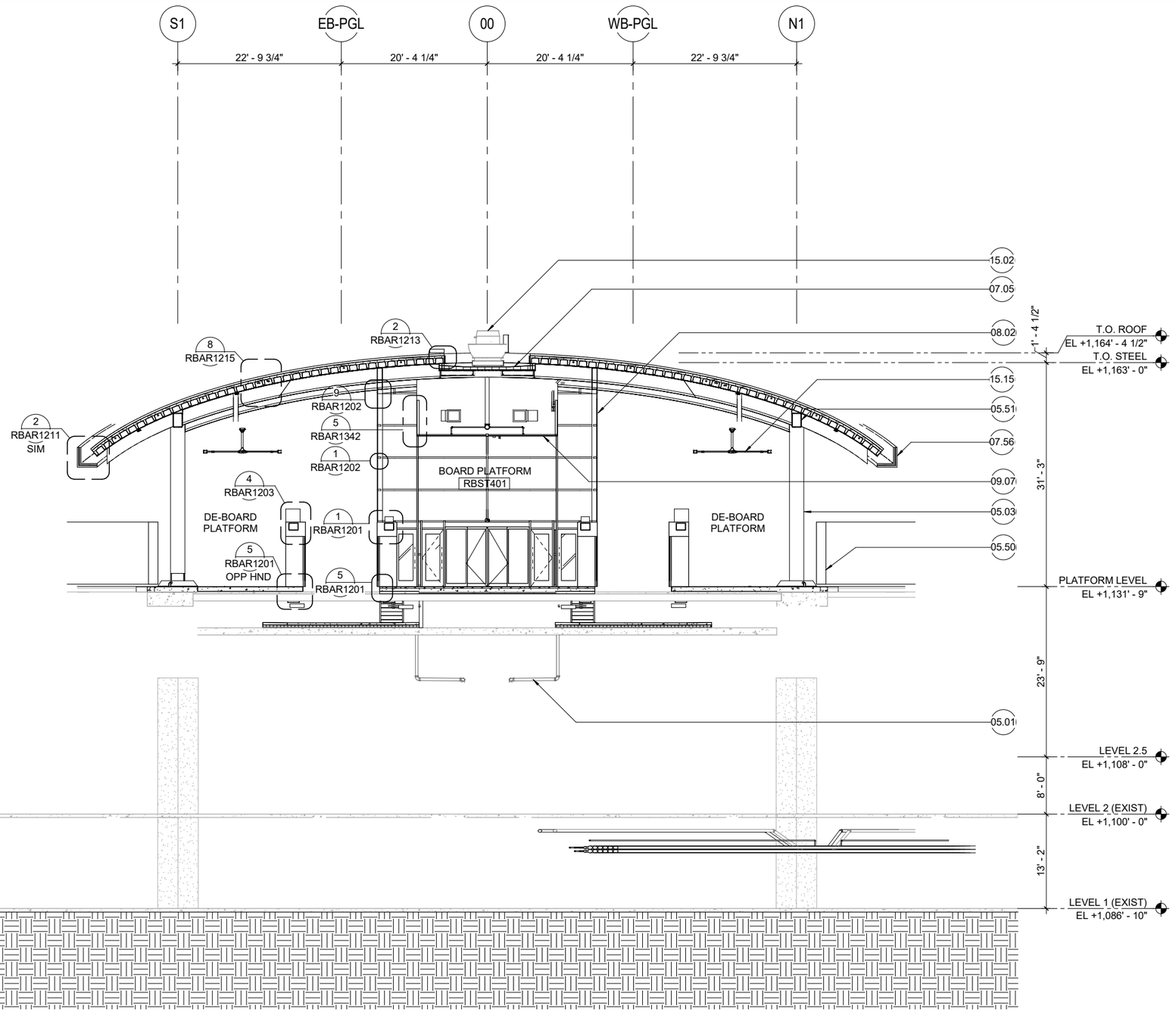
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Checked by:	KW
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Dwg scale:	AS NOTED
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0974
Sheet Reference No: V5 - 068 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:12:22 PM



1 TRANSVERSE SECTION
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

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C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

KEY NOTES

05.01	EXPOSED ROOF DRAIN PIPE LEADER, PAINTED TO MATCH ADJACENT SURFACES
05.03	CONCRETE FILLED STRUCTURAL STEEL COLUMN WITH HIGH PERFORMANCE COATING
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
07.05	APP-MODIFIED BITUMINOUS MEMBRANE ROOFING SYSTEM WITH CAP SHEET
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
09.07	TORSIONAL SPRING SUSPENDED METAL PANEL CEILING SYSTEM "WHITE"
15.02	SMOKE EVACUATION FAN
15.15	12'-0" DIAMETER FAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

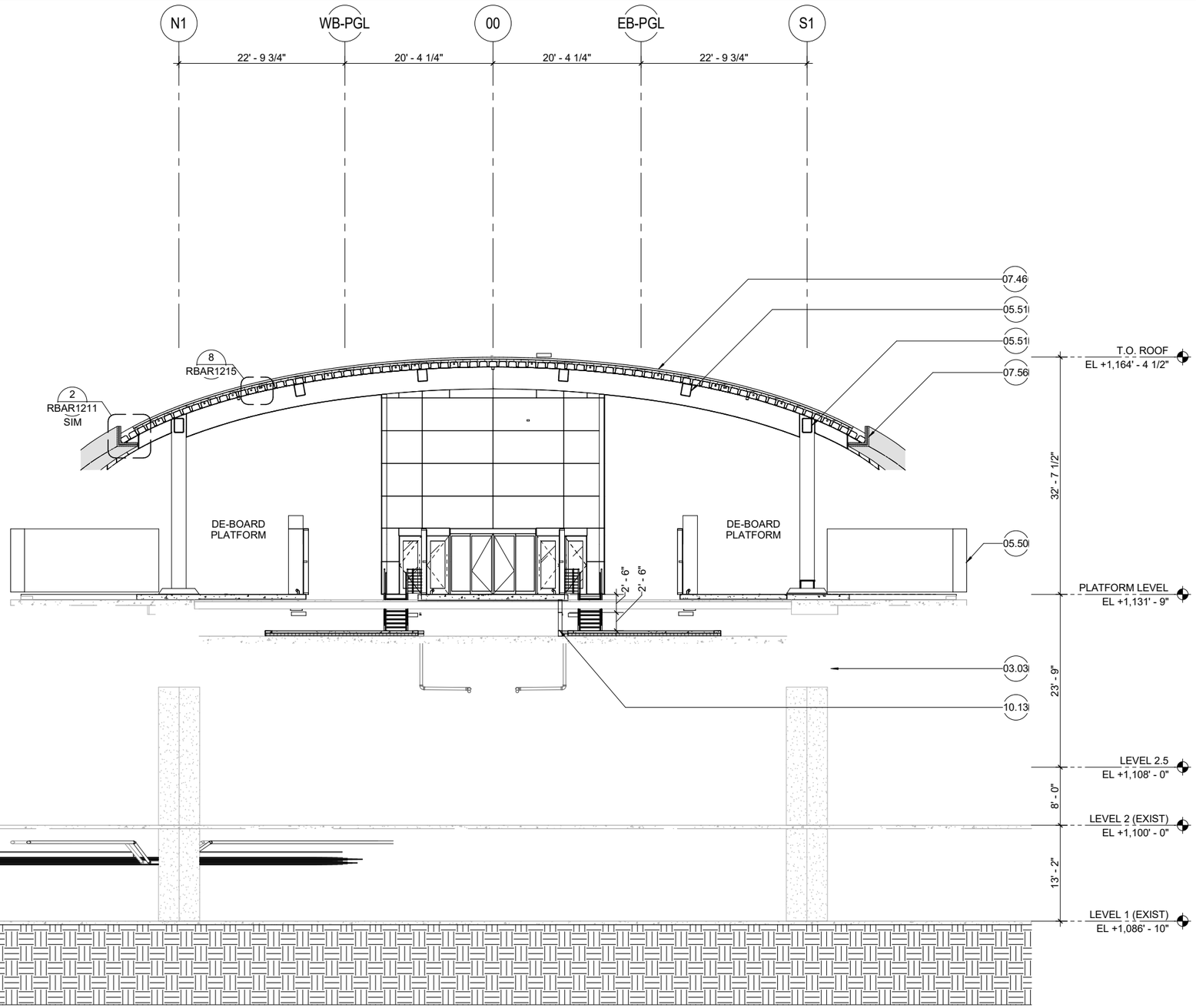
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: **B04 - RBAR0975**
Sheet Reference No: V5 - 069 of 218

Project Number: 21722
7/11/2018 3:12:31 PM
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1 TRANSVERSE SECTION
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

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KEY NOTES

03.03	GUIDEWAY STRUCTURE
05.50	9'-0"H STRUCTURAL TUBE STEEL FRAME, PAINTED, WITH ARTIST INFILL PANELS (TBD)
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
07.46	MECHANICALLY SEAMED METAL ROOFING SYSTEM
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
10.13	ACCESS PANEL IN STRUCTURAL WALL BELOW

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

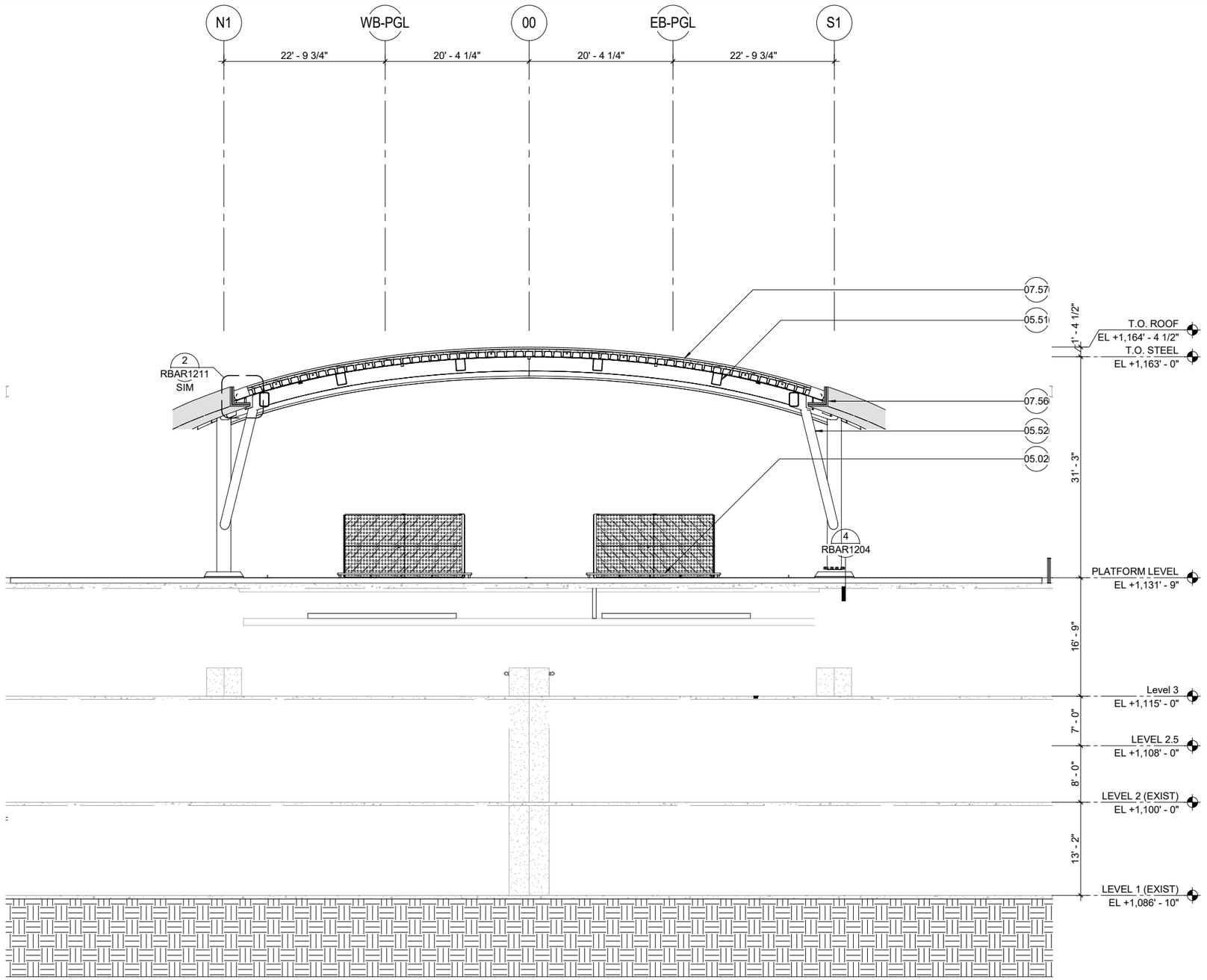
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Checked by:	KW
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0976
Sheet Reference No: V5 - 070 of 218

Project Number: 21722
7/11/2018 3:12:41 PM
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1 TRANSVERSE SECTION
1/8" = 1'-0"

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0 8' 16'

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KEY NOTES

05.02	STAINLESS STEEL BAGGAGE CART PROTECTION RAIL "BRUSHED FINISH"
05.51	HIGH PERFORMANCE PAINT COATED BEAMS
05.52	CONCRETE FILLED STRUCTURAL COLUMN AND BRACEFRAME WITH HIGH PERFORMANCE COATING
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.57	CURVED MECHANICALLY SEAMED METAL ROOFING SYSTEM

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Registered Architect
Certificate No. 35951
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
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PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

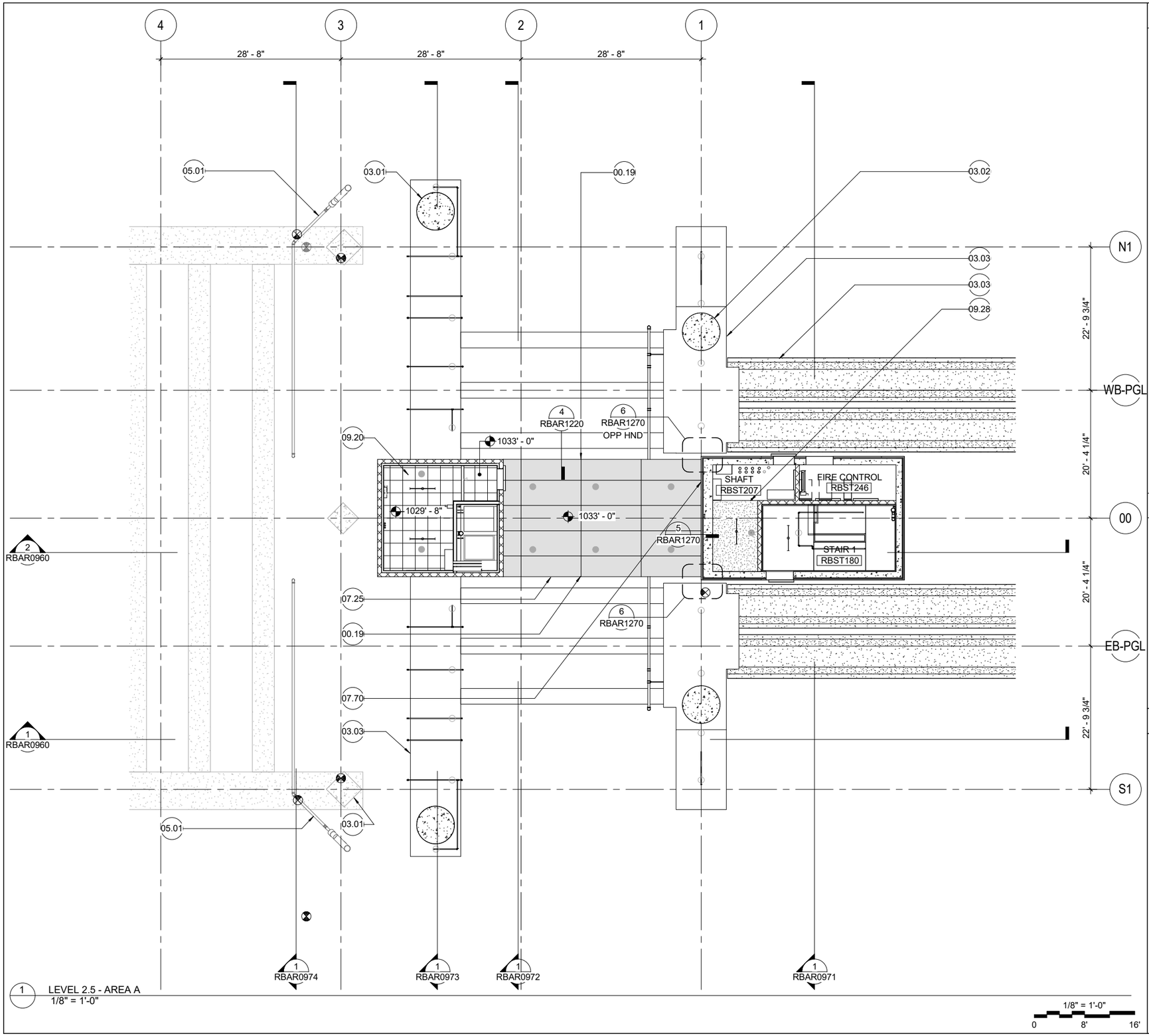
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
TRANSVERSE SECTION

Package: B04 - RBAR0977
Sheet Reference No: V5 - 071 of 218

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Project Number: 21722
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SHEET NOTES

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B. VERTICAL ELEVATIONS ON THIS PLAN ARE SHOWN RELATIVE TO THE FINISH FLOOR DESIGN REFERENCE ELEVATION UNLESS OTHERWISE NOTED. REFER TO THE "REFERENCE ELEVATION DEFINITIONS" LOCATED IN THE RBAR00-SERIES SHEETS.

C. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

D. REFER TO THE RBAR00-SERIES SHEETS FOR TYPICAL RULES AND REQUIREMENTS GOVERNING THE LOCATION OF CEILING ITEMS SHOWN BUT NOT DIMENSIONED ON THE REFLECTED CEILING PLANS.

E. ALL SUSPENDED ACOUSTIC TILE GRID CEILING SYSTEMS SHALL BE CENTERED IN ROOMS UNLESS OTHERWISE NOTED.

F. REFER TO AND COORDINATE WITH PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

G. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION TYPE DESIGNATIONS.

H. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

J. PROVIDE MINIMUM 0.85 NRC RATING FOR INTERIOR CEILING FINISHES.

K. SPRINKLER HEADS TO BE CUSTOM COLOR WHERE REQUIRED TO MATCH CEILING ON WHICH THEY ARE MOUNTED.

L. SPACE ABOVE FINISH CEILING TO BE PAINTED "CYBERSPACE"

M. ALIGN CEILING DIFFUSER BLADES WITH LONG SIDE OF THE CEILING PANELS.

N. ALLOW ADDITIONAL ACCESS PANELS IN THE EXPOSED DECK AREAS FOR CONSTRUCTION PURPOSES. GENERAL CONTRACTOR TO COORDINATE FINAL QUANTITY REQUIRED.

RCP LEGEND

LEGEND

- SUSPENDED EXTERIOR METAL PANEL CEILING
- 2' X 2' LAY-IN ACOUSTIC TILE CEILING
- GYPSUM BOARD HARD LID CEILING
- FINISHED U/S OF ACOUSTICAL STEEL DECK
- EXPOSED STRUCTURE

KEY NOTES

00.19	ALIGN REVEALS WITH VERTICAL REVEALS AND MULLIONS ABOVE, TYP
03.01	STATION STRUCTURAL COLUMN
03.02	GUIDEWAY STRUCTURAL SUPPORT COLUMN
03.03	GUIDEWAY STRUCTURE
05.01	EXPOSED ROOF DRAIN PIPE LEADER, PAINTED TO MATCH ADJACENT SURFACES
05.10	LONG SPAN METAL ROOF DECK, NON-PERFORATED NON-ACOUSTICAL. TYPICAL AT EXTERIOR. PAINT IN FIELD
07.25	DRY COMPOSITE PANEL SYSTEM ON METAL STUD FRAMING
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
09.20	LAY-IN ACOUSTICAL PANEL CEILING TILE
09.28	2 HR FIRE RATED LID. REFER TO RBAR13-SERIES SHEETS FOR RATED GYPSUM BOARD AND SHAFTWALL DETAILS. SEAL ALL PENETRATIONS.

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	04/06/18

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

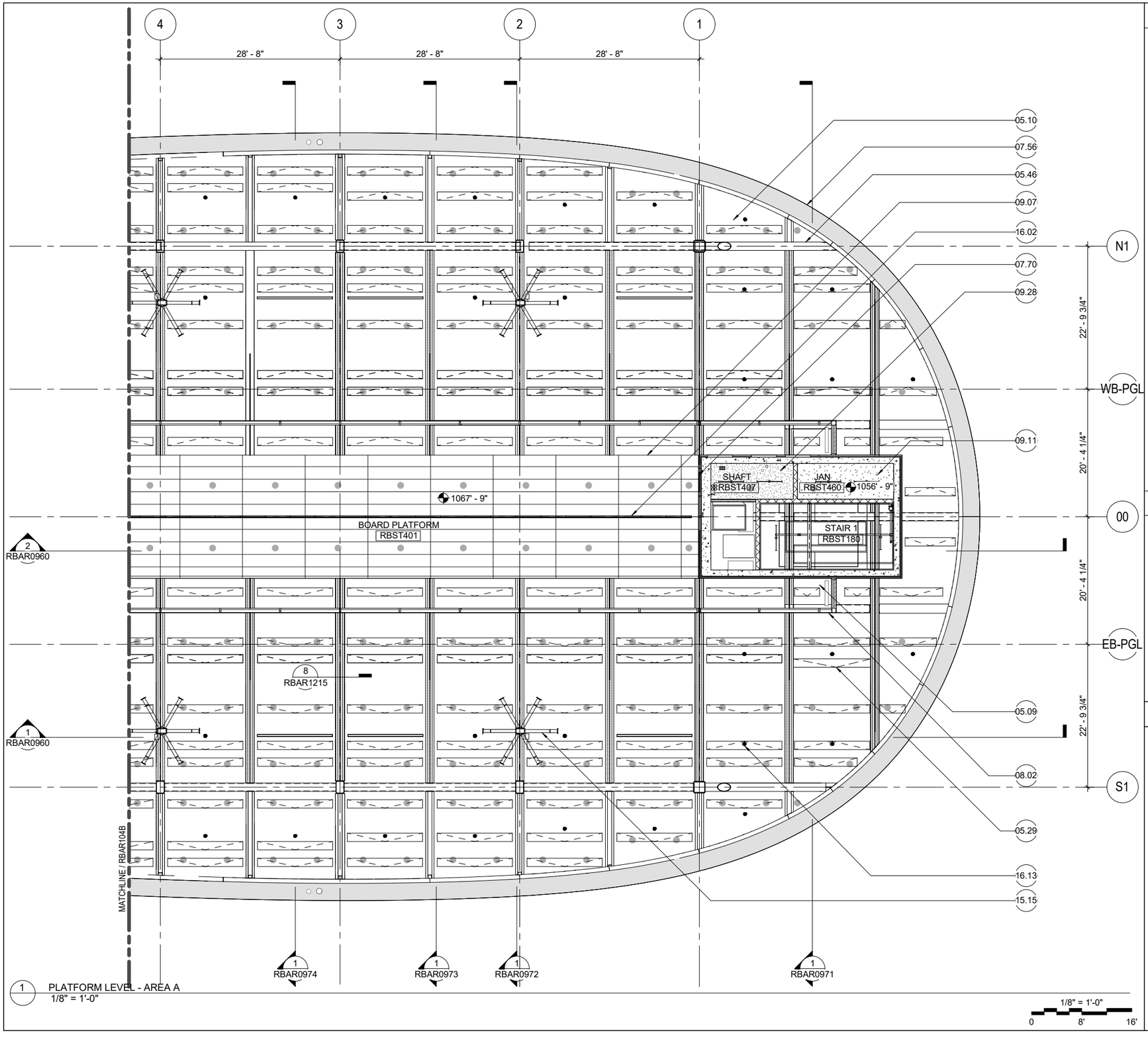
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
REFLECTED CEILING PLAN - PARKING
LEVEL 2.5 - AREA A

Package: B04 - RBAR103A
Sheet Reference No: V5 - 072 of 218

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:06:00 PM



SHEET NOTES

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E. ALL SUSPENDED ACOUSTIC TILE GRID CEILING SYSTEMS SHALL BE CENTERED IN ROOMS UNLESS OTHERWISE NOTED.

F. REFER TO AND COORDINATE WITH PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

G. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION TYPE DESIGNATIONS.

H. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

J. PROVIDE MINIMUM 0.85 NRC RATING FOR INTERIOR CEILING FINISHES.

K. SPRINKLER HEADS TO BE CUSTOM COLOR WHERE REQUIRED TO MATCH CEILING ON WHICH THEY ARE MOUNTED.

L. SPACE ABOVE FINISH CEILING TO BE PAINTED "CYBERSPACE"

M. ALIGN CEILING DIFFUSER BLADES WITH LONG SIDE OF THE CEILING PANELS.

N. ALLOW ADDITIONAL ACCESS PANELS IN THE EXPOSED DECK AREAS FOR CONSTRUCTION PURPOSES. GENERAL CONTRACTOR TO COORDINATE FINAL QUANTITY REQUIRED.

RCP LEGEND

LEGEND

- SUSPENDED EXTERIOR METAL PANEL CEILING
- 2' X 2' LAY-IN ACOUSTIC TILE CEILING
- GYPSUM BOARD HARD LID CEILING
- FINISHED U/S OF ACOUSTICAL STEEL DECK
- EXPOSED STRUCTURE

KEY NOTES

05.09	LONG SPAN METAL ROOF DECK, PERFORATED ACOUSTICAL WITH ACOUSTICAL INSULATION IN CELLS. TYPICAL AT STATION INTERIOR. PAINT IN FIELD
05.10	LONG SPAN METAL ROOF DECK, NON-PERFORATED NON-ACOUSTICAL. TYPICAL AT EXTERIOR. PAINT IN FIELD
05.29	ROOF DECK ACCESS PANELS WITH PIANO HINGE, PAINT (HIGH PERFORMANCE COATING AT EXTERIOR)
05.46	STRUCTURAL BEAM WITH HIGH PERFORMANCE COATING
07.56	CUSTOM STRUCTURAL STEEL GUTTER WITH STAINLESS STEEL LINING AT ROOF PERIMETER. SLOPE 1/8" PER FOOT, MINIMUM
07.70	EXPANSION CONTROL SYSTEM. REFER TO DETAILS AND SCHEDULE ON RBAR12-SERIES DRAWINGS FOR SIZE AND TYPE
08.02	ALUMINUM FRAMED CURTAIN WALL SYSTEM
09.07	TORSIONAL SPRING SUSPENDED METAL PANEL CEILING SYSTEM "WHITE"
09.11	GYPSUM BOARD SUSPENDED CEILING ASSEMBLY
09.28	2 HR FIRE RATED LID. REFER TO RBAR13-SERIES SHEETS FOR RATED GYPSUM BOARD AND SHAFTWALL DETAILS. SEAL ALL PENETRATIONS.
~~15.15~~	~~12' 0" DIAMETER FAN~~
16.02	LINEAR LIGHT FIXTURE
16.13	RADIAL ACCENT LIGHT

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

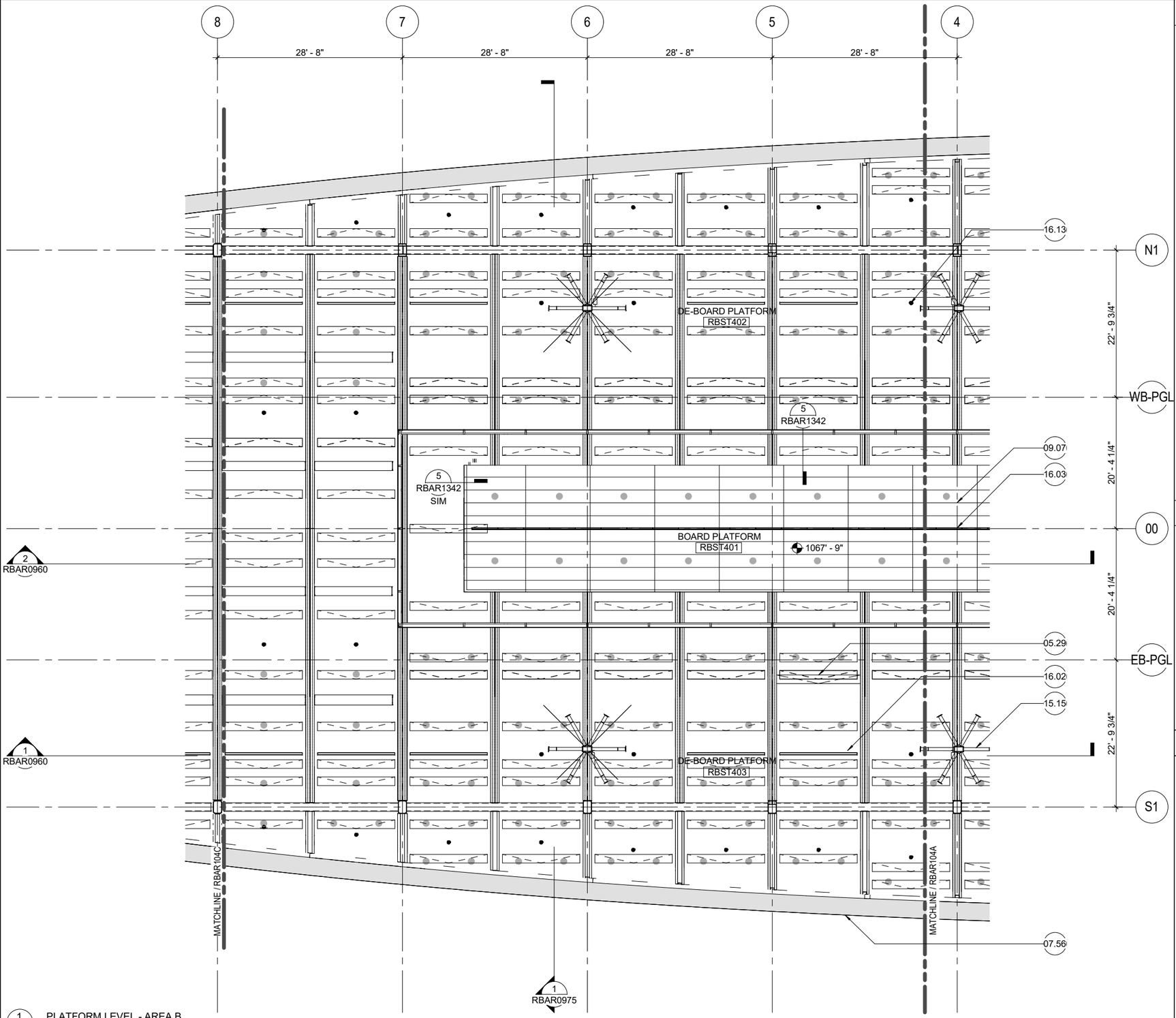
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
REFLECTED CEILING PLAN - PLATFORM - LEVEL 4 - AREA A

Package: B04 - RBAR104A
Sheet Reference No: V5 - 073 of 218

Local File: BIM 360://82421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:06:10 PM



1 PLATFORM LEVEL - AREA B
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR00-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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RCP LEGEND

LEGEND

- SUSPENDED EXTERIOR METAL PANEL CEILING
- 2' X 2' LAY-IN ACOUSTIC TILE CEILING
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- FINISHED U/S OF ACOUSTICAL STEEL DECK
- EXPOSED STRUCTURE

KEY NOTES

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16.02	LINEAR LIGHT FIXTURE
16.03	LIGHT FIXTURE
16.13	RADIAL ACCENT LIGHT

REGISTERED ARCHITECT — CERTIFICATE NO. 35861 — MICHAEL L KRAGER — Date Signed 7/13/2018 — ARIZONA, U.S.A. — Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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CITY OF PHOENIX AVIATION DEPARTMENT

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

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Drawn by:	JI, MT, TY
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CIP No.:	AV10000011
KIVA No.:	07-5204

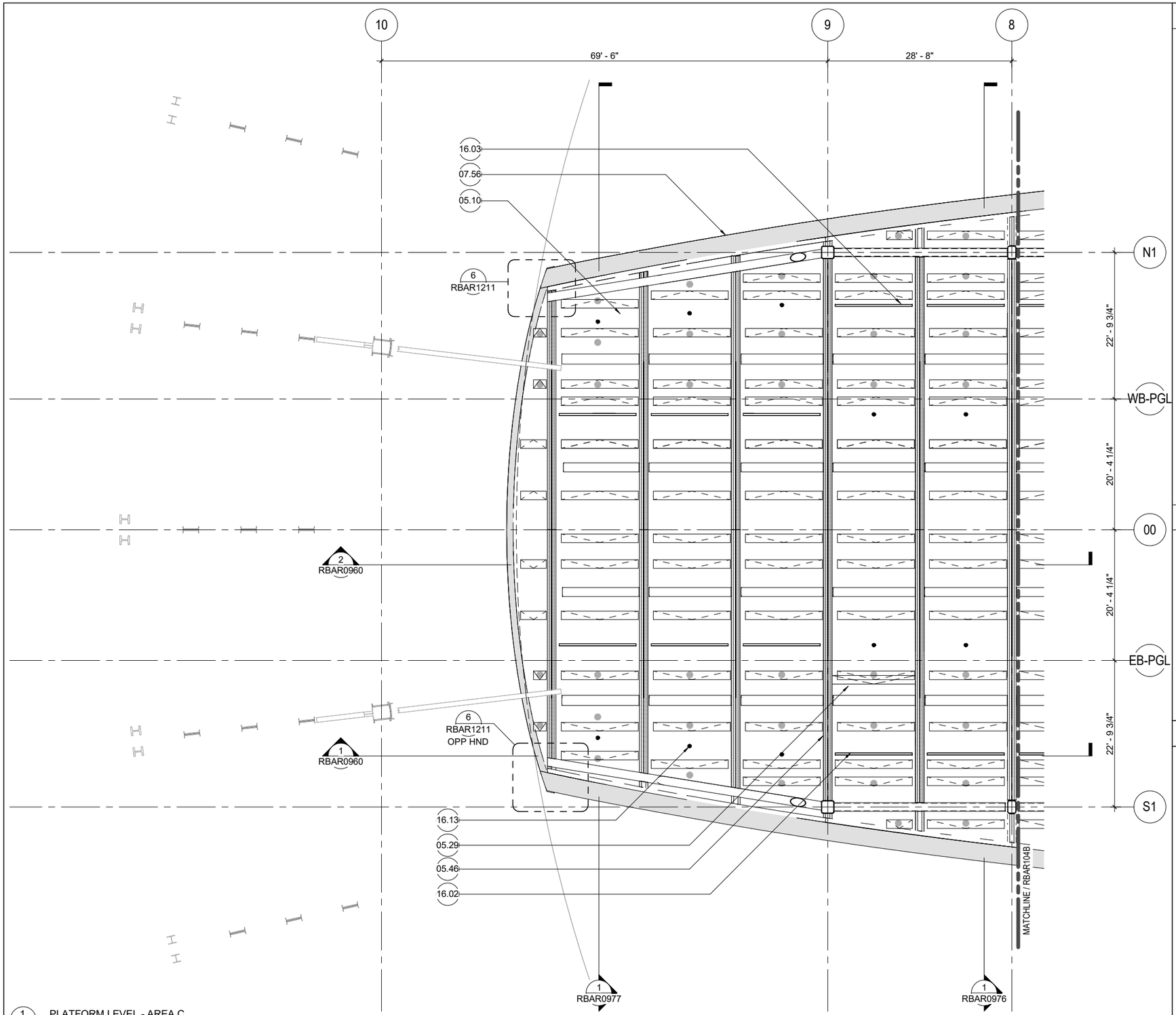
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
REFLECTED CEILING PLAN - PLATFORM - LEVEL 4 - AREA B

Package: B04 - RBAR104B
Sheet Reference No: V5 - 074 of 218

Project Number: 21722
7/11/2018 3:06:17 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 PLATFORM LEVEL - AREA C
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

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- FINISHED U/S OF ACOUSTICAL STEEL DECK
- EXPOSED STRUCTURE

KEY NOTES

00.13	DASHED LINE INDICATES EDGE OF ROOF OVERHANG ABOVE
00.14	DASHED LINE INDICATES EDGE OF CANOPY ABOVE
05.10	LONG SPAN METAL ROOF DECK, NON-PERFORATED NON-ACOUSTICAL. TYPICAL AT EXTERIOR. PAINT IN FIELD
05.29	ROOF DECK ACCESS PANELS WITH PIANO HINGE, PAINT (HIGH PERFORMANCE COATING AT EXTERIOR)
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16.02	LINEAR LIGHT FIXTURE
16.03	LIGHT FIXTURE
16.13	RADIAL ACCENT LIGHT

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

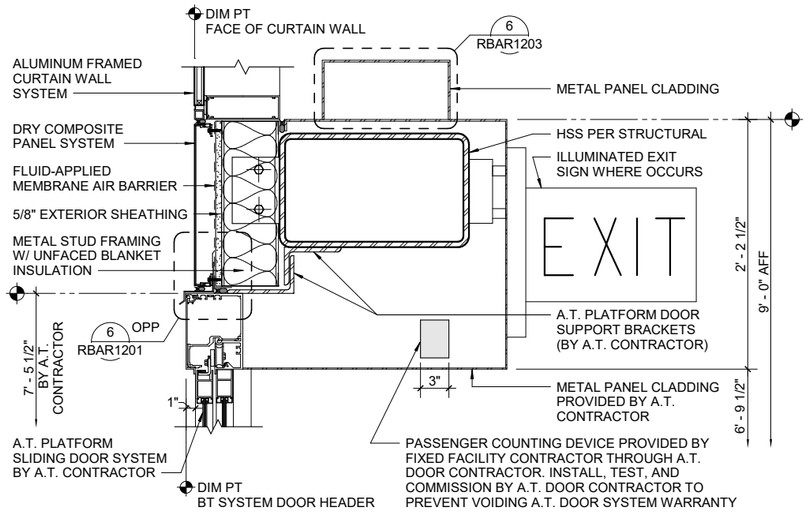
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

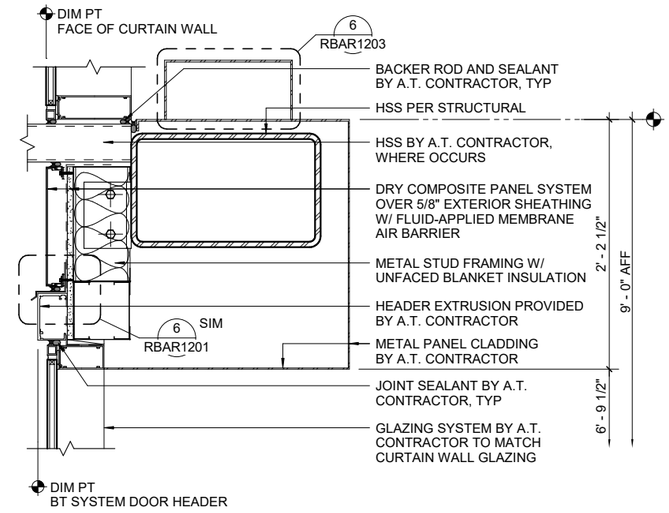
RCC STATION
ARCHITECTURAL
REFLECTED CEILING PLAN - PLATFORM - LEVEL 4 - AREA C

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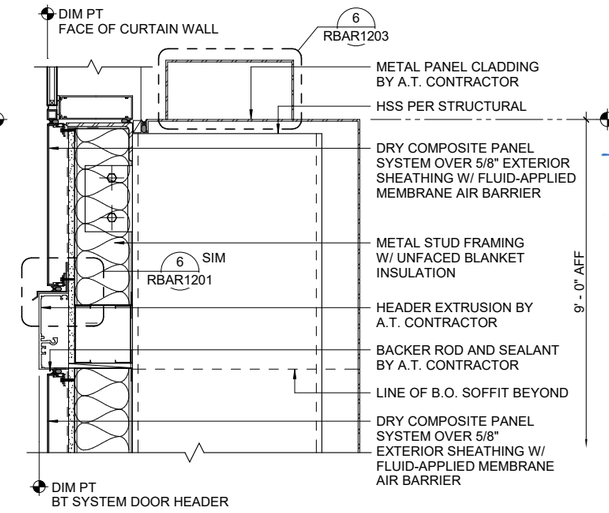
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Project Number: 21722
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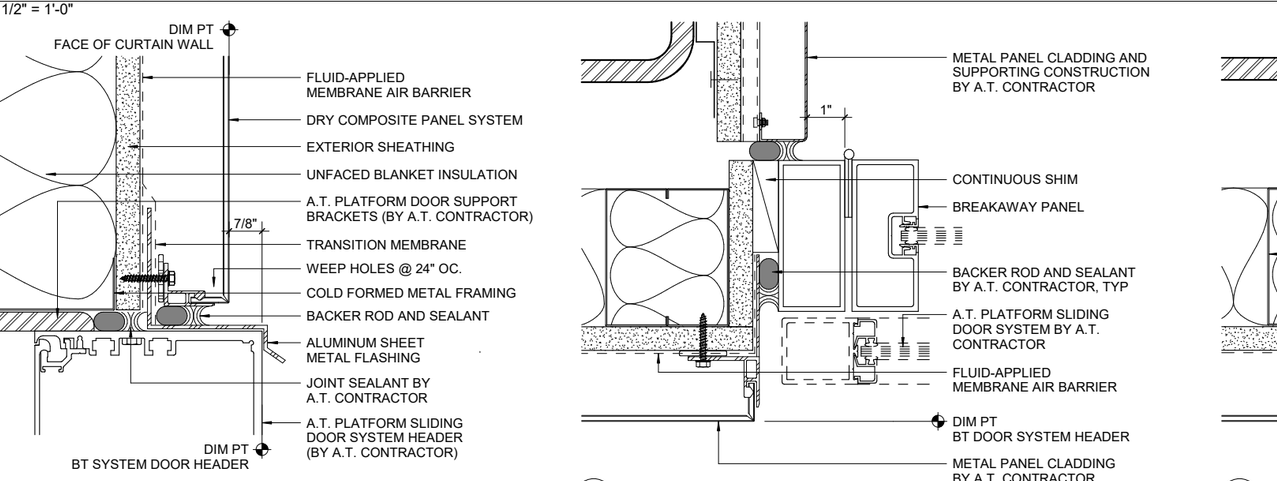
1 METAL CLADDING SECTION AT PLATFORM DOORS
1 1/2" = 1'-0"



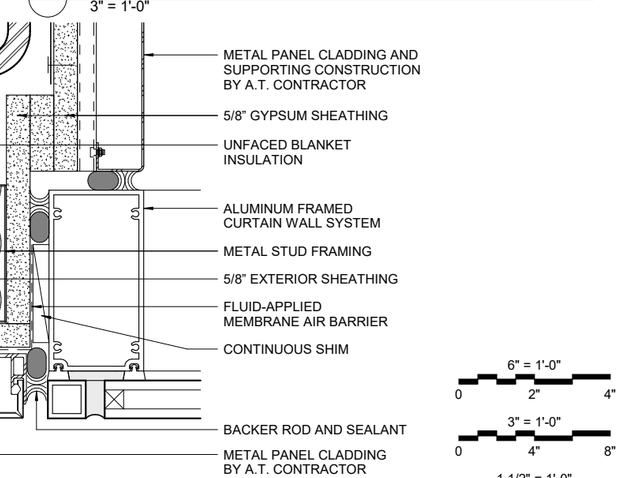
2 METAL CLADDING AT FIXED GLAZING PANEL
1 1/2" = 1'-0"



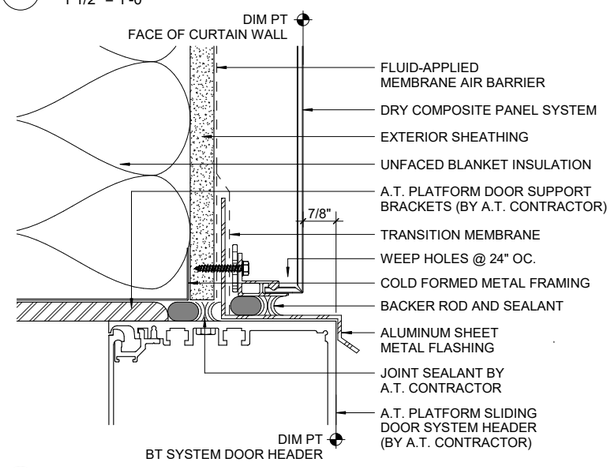
3 METAL CLADDING AT STEEL COLUMNS
1 1/2" = 1'-0"



4 PLATFORM COLUMN CLADDING
1 1/2" = 1'-0"



5 AUTOMATIC DOOR SILL
3" = 1'-0"



6 METAL CLADDING AT PLATFORM DOORS
6" = 1'-0"

7 METAL CLADDING AT PLATFORM DOORS
6" = 1'-0"

8 CURTAIN WALL TO METAL CLADDING
6" = 1'-0"

6" = 1'-0"
0 2" 4"
3" = 1'-0"
0 4" 8"
1 1/2" = 1'-0"
0 8" 16"

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CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
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CIP No.:	AV100000011
KIVA No.:	07-5204

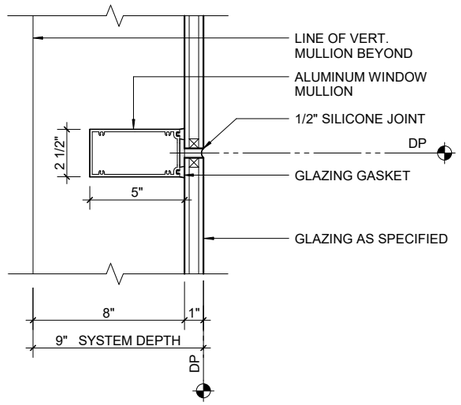
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS

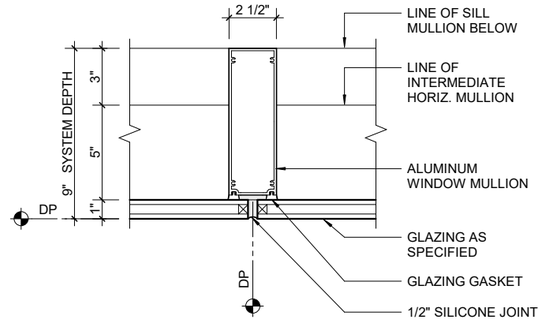
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Project Number: 21722
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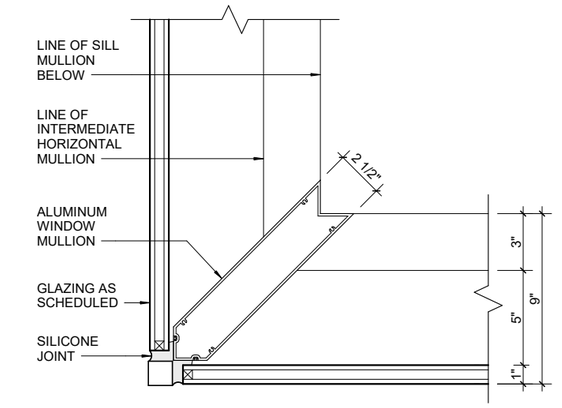
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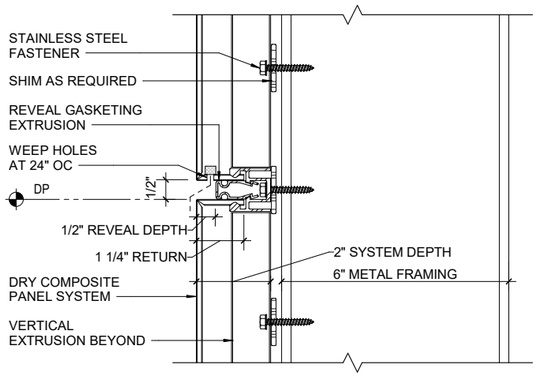
1 TYPICAL HORIZONTAL MULLION - SECTION
3" = 1'-0"



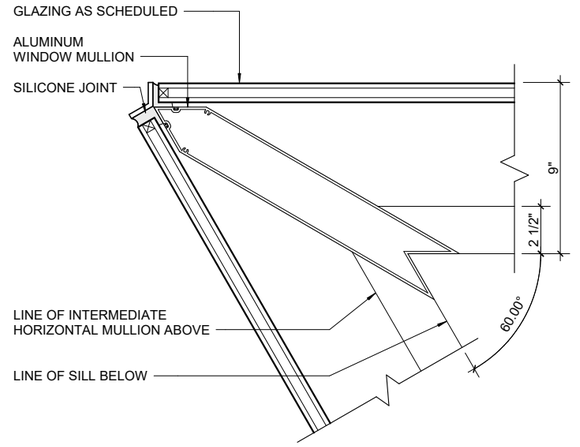
2 TYPICAL VERTICAL MULLION - PLAN
3" = 1'-0"



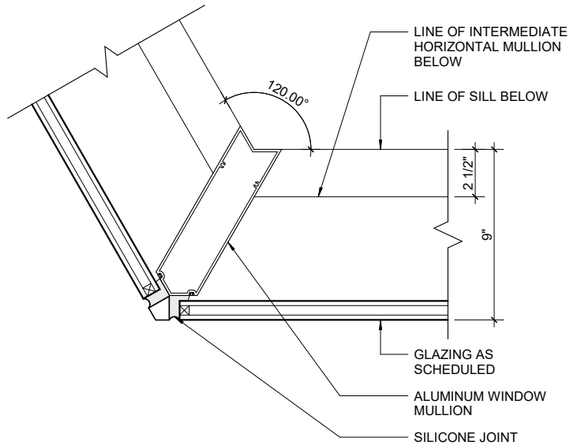
3 TYPICAL CORNER MULLION - PLAN
3" = 1'-0"



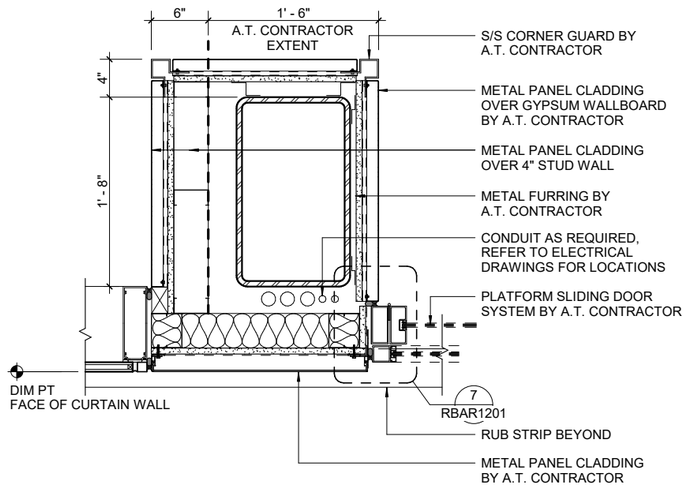
4 COMPOSITE PANEL HORIZONTAL REVEAL AT ROOF DRAIN
6" = 1'-0"



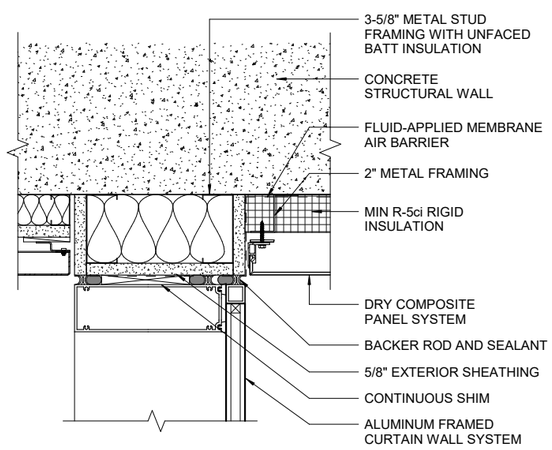
5 ACUTE CORNER MULLION - PLAN
3" = 1'-0"



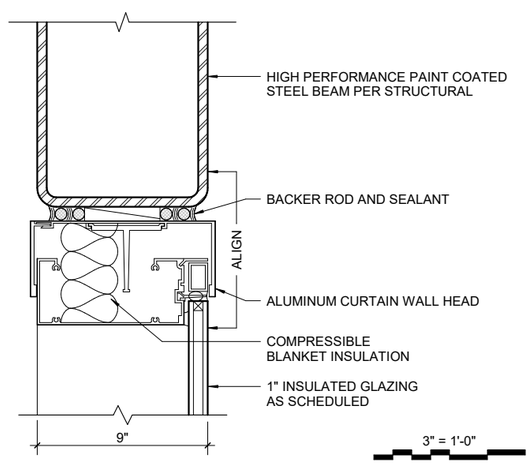
6 OBTUSE CORNER MULLION - PLAN
3" = 1'-0"



7 PLATFORM COLUMN CLADDING AT END COLUMN
1 1/2" = 1'-0"



8 CURTAIN WALL JAMB AT STAIR CORE
3" = 1'-0"



9 CURTAIN WALL HEAD AT STEEL BEAM
3" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

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architecture engineering interiors planning

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PHX DVT EYR
CITY OF PHOENIX AVIATION DEPARTMENT

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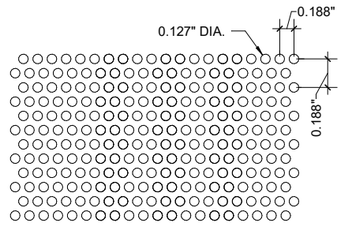
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Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - BOM DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS

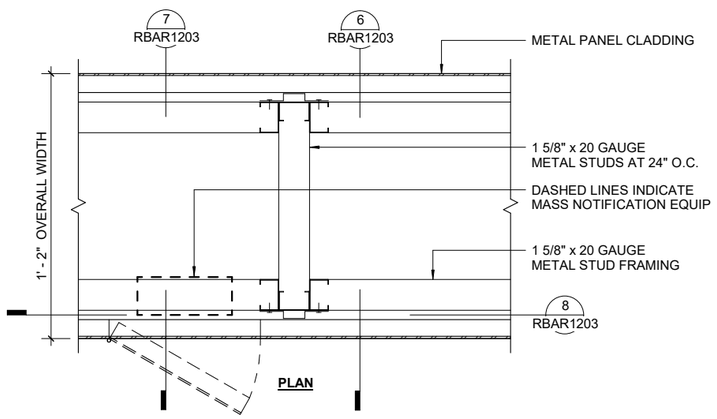
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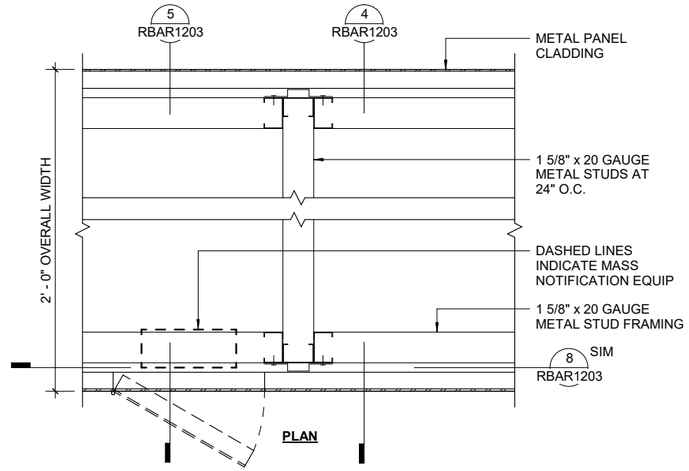
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Project Number: 21722
7/11/2018 3:14:42 PM

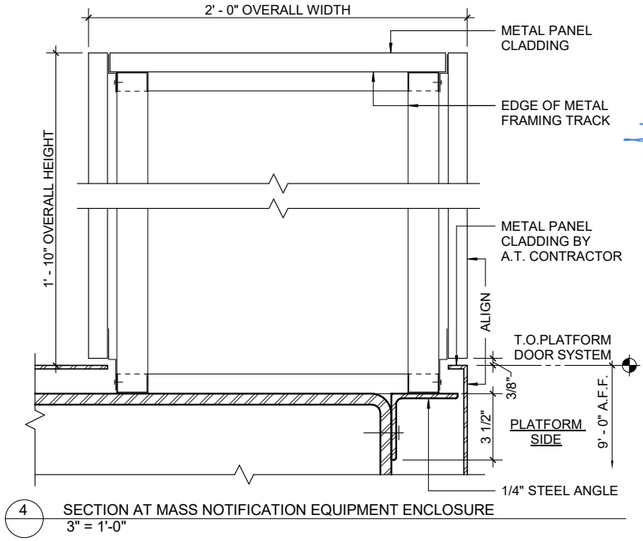


PATTERN TYPE: 60 DEGREE
HOLES PSI: 32.67

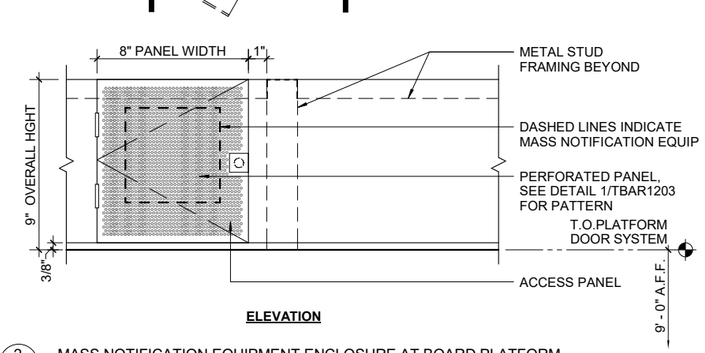
1 CUSTOM PERFORATION PATTERN - 41.39% OPEN AREA
12" = 1'-0"



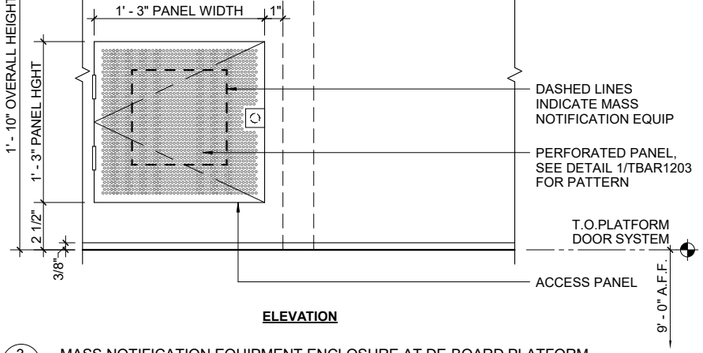




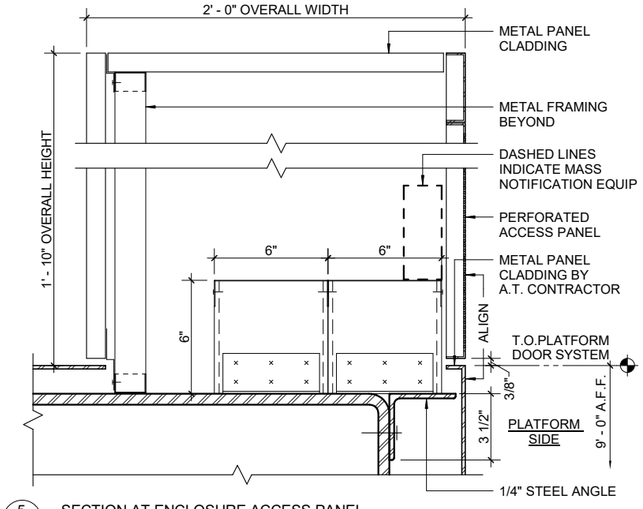
4 SECTION AT MASS NOTIFICATION EQUIPMENT ENCLOSURE
3" = 1'-0"



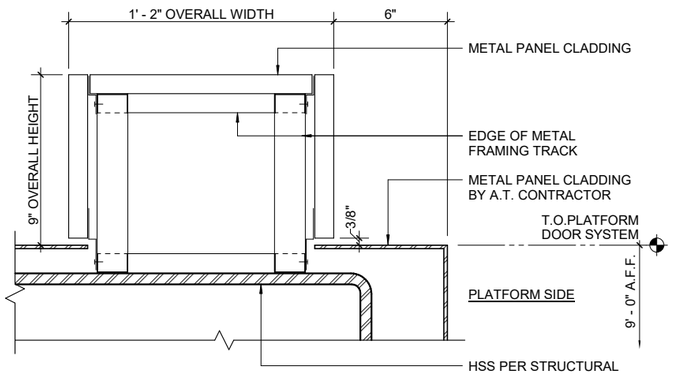
2 MASS NOTIFICATION EQUIPMENT ENCLOSURE AT BOARD PLATFORM
3" = 1'-0"



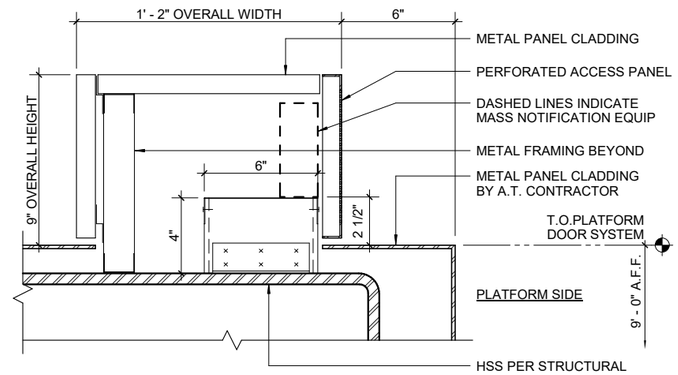
3 MASS NOTIFICATION EQUIPMENT ENCLOSURE AT DE-BOARD PLATFORM
3" = 1'-0"



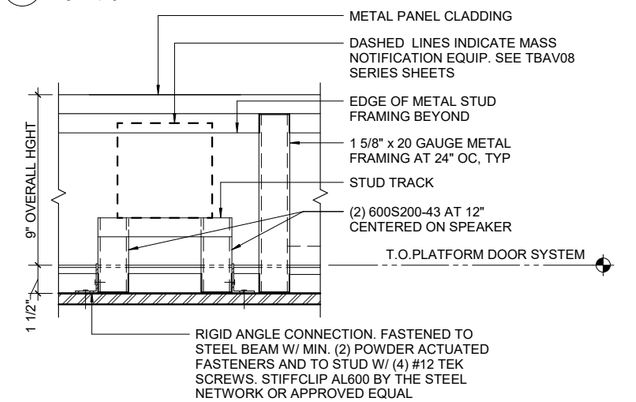
5 SECTION AT ENCLOSURE ACCESS PANEL
3" = 1'-0"



6 SECTION AT MASS NOTIFICATION EQUIPMENT ENCLOSURE
3" = 1'-0"



7 SECTION AT ENCLOSURE ACCESS PANEL
3" = 1'-0"



8 SECTION AT ENCLOSURE FRAMING
3" = 1'-0"

3" = 1'-0"
0 4" 8"

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7-31-2018
ARIZONA, U.S.A.

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

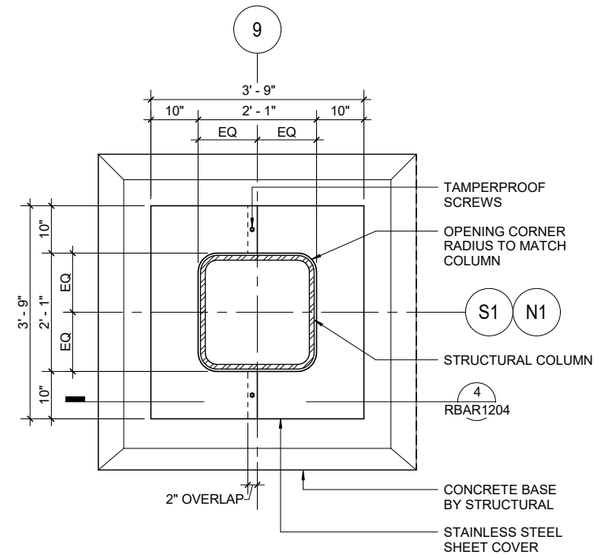
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS

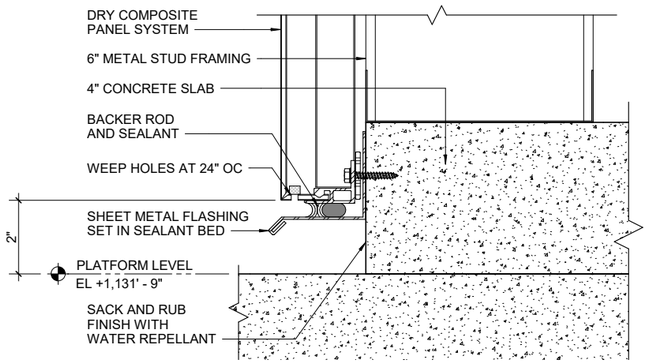
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Sheet Reference No: V5 - 078 of 218

Project Number: 21722
7/11/2018 3:14:43 PM

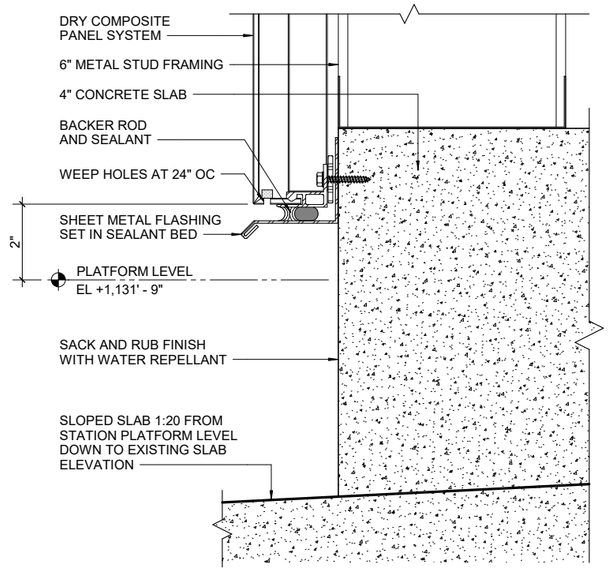
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



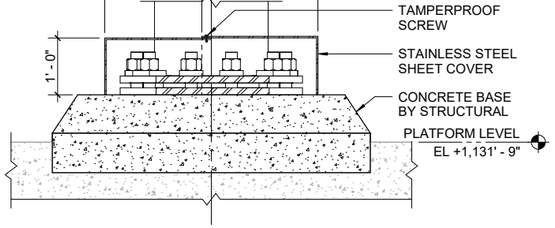
1 COLUMN BASE CAP DETAIL
3/4" = 1'-0"



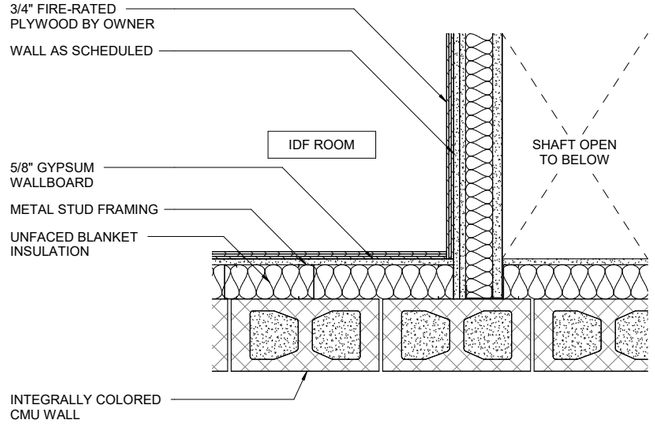
2 COMPOSITE PANEL BASE AT CONCRETE SLAB
6" = 1'-0"



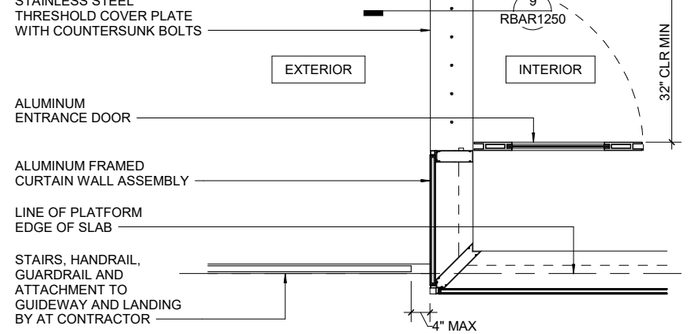
3 COMPOSITE PANEL BASE AT CONCRETE SLAB
6" = 1'-0"



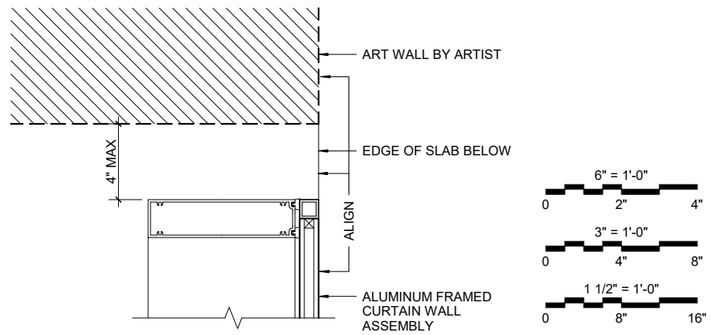
4 COLUMN CAP SECTION
3/4" = 1'-0"



5 WALL INTERSECTION - IDF ROOM
1 1/2" = 1'-0"



6 PLATFORM EGRESS DOOR
3/4" = 1'-0"



7 CURTAIN WALL JAMB AT ART WALL
3" = 1'-0"

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SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

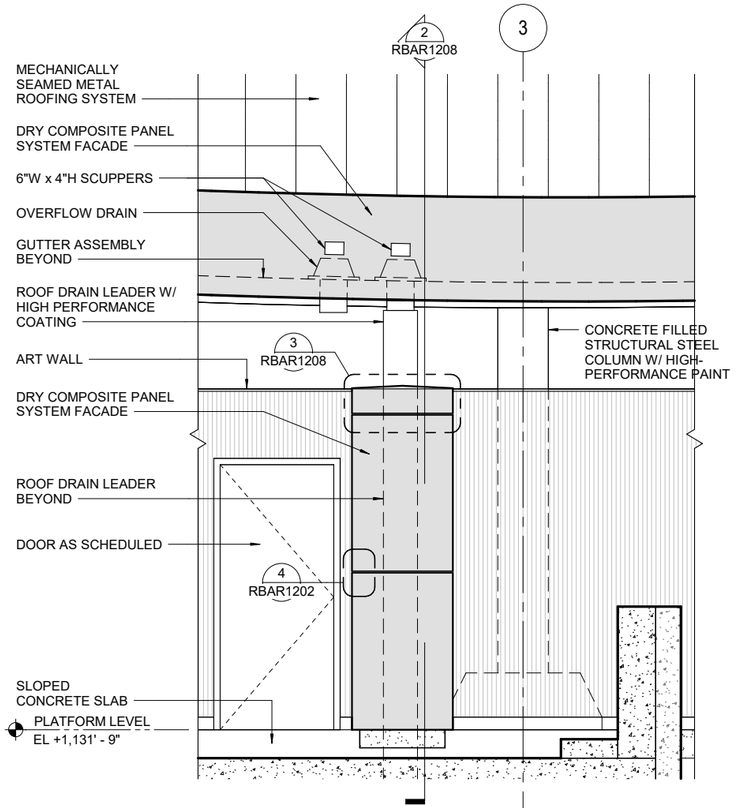
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

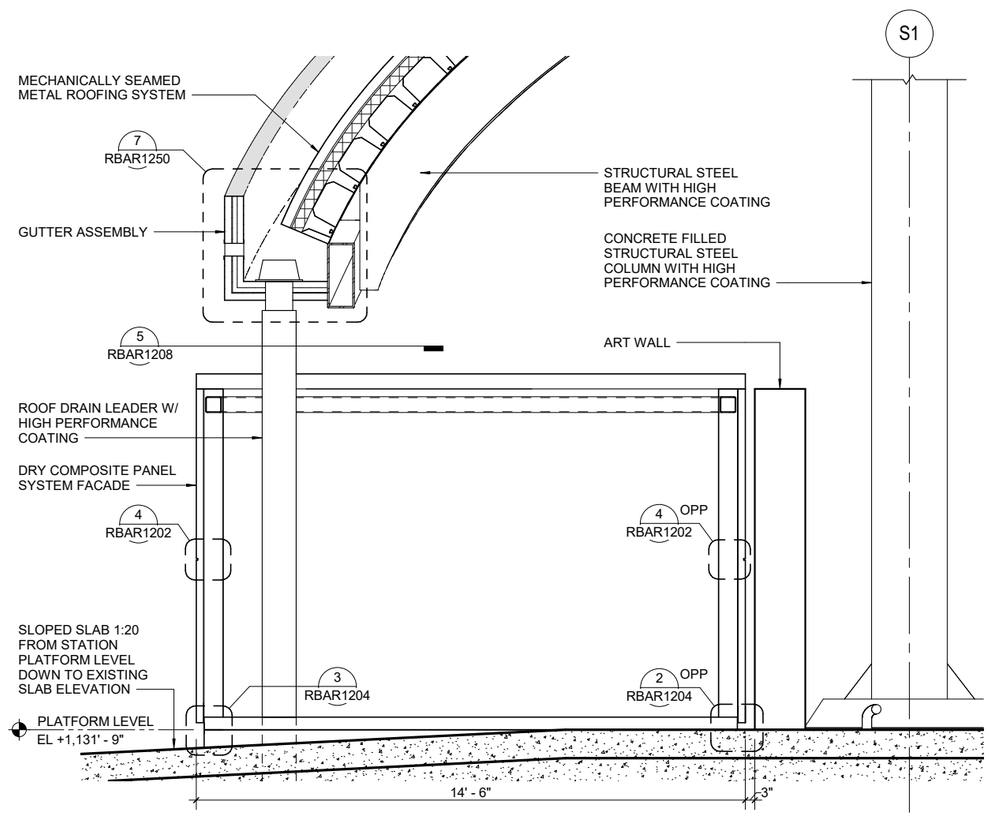
RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS

Package: B04 - RBAR1204
Sheet Reference No: V5 - 079 of 218

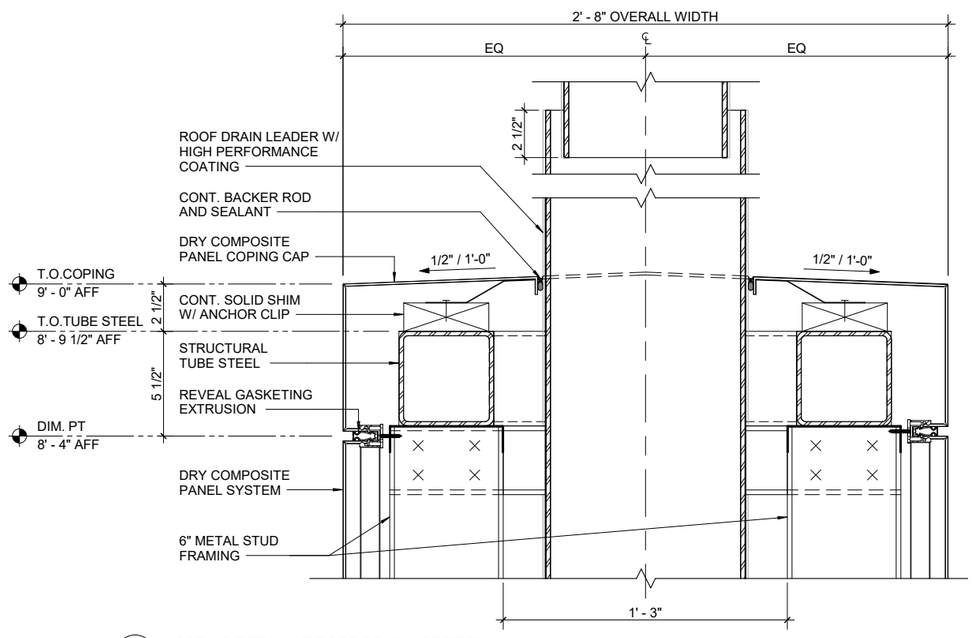
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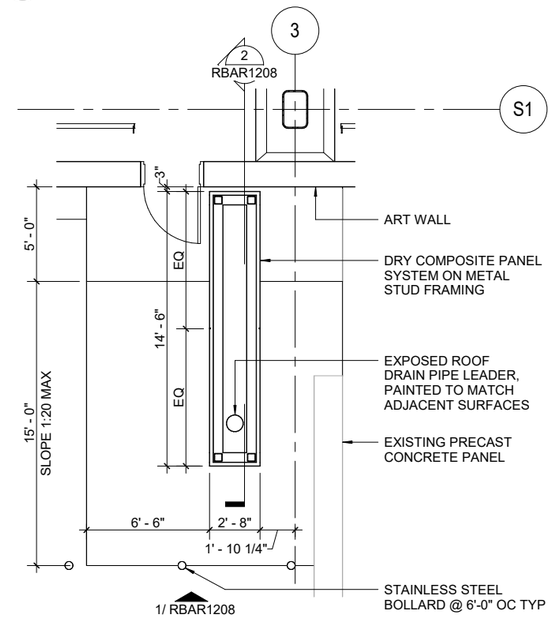
1 EXPOSED ROOF DRAIN LEADER - ELEVATION
1/2" = 1'-0"



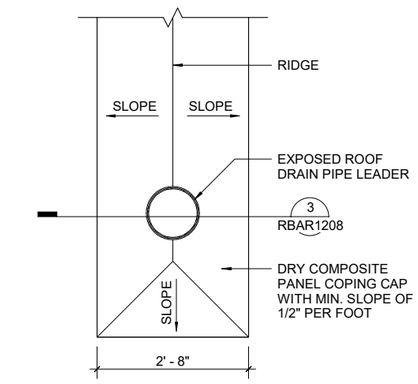
2 EXPOSED ROOF DRAIN LEADER - SECTION
1/2" = 1'-0"



3 COPING DETAIL AT ROOF DRAIN - SECTION
3" = 1'-0"



4 ENLARGED PLAN AT EXPOSED ROOF DRAIN
1/4" = 1'-0"



5 ENLARGED ROOF PLAN AT ROOF DRAIN LEADER
3/4" = 1'-0"

3" = 1'-0"
0 4" 8"

3/4" = 1'-0"
0 1' 2'

1/2" = 1'-0"
0 2' 4'

1/4" = 1'-0"
0 4' 8'

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architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
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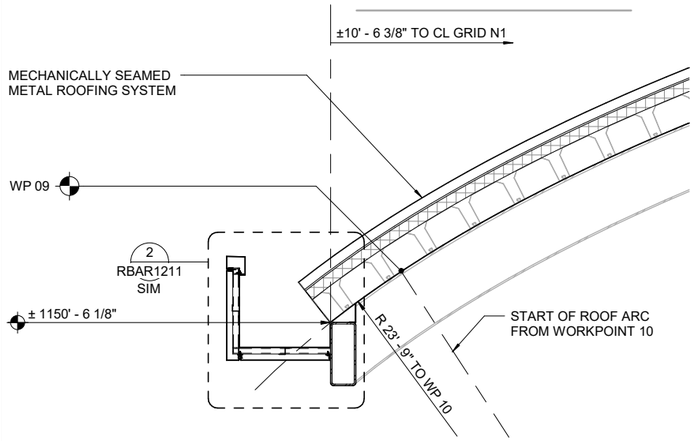
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF DRAIN LEADER

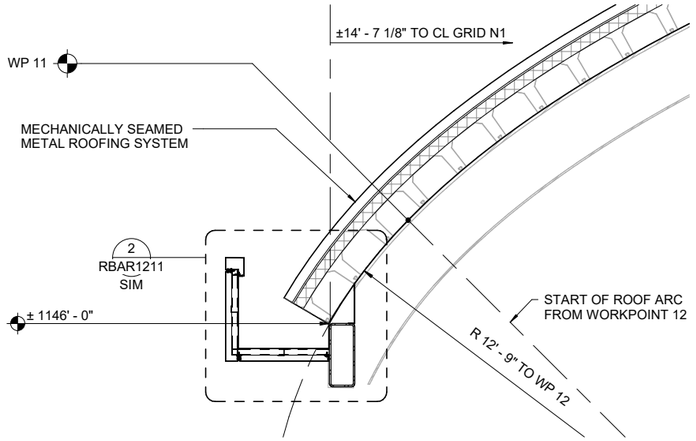
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Sheet Reference No: V5 - 080 of 218

Project Number: 21722
7/11/2018 3:15:02 PM

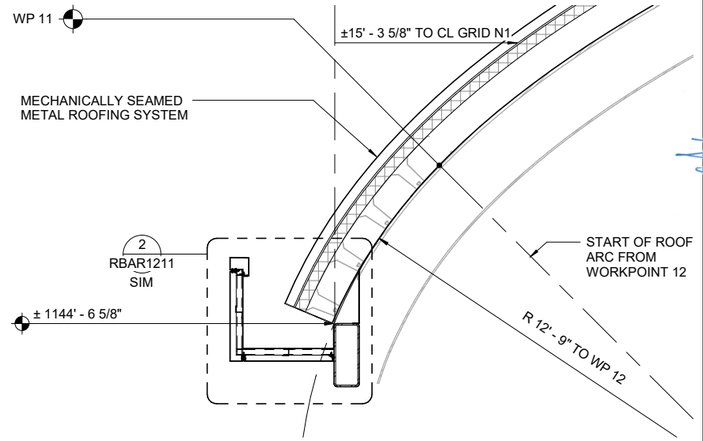
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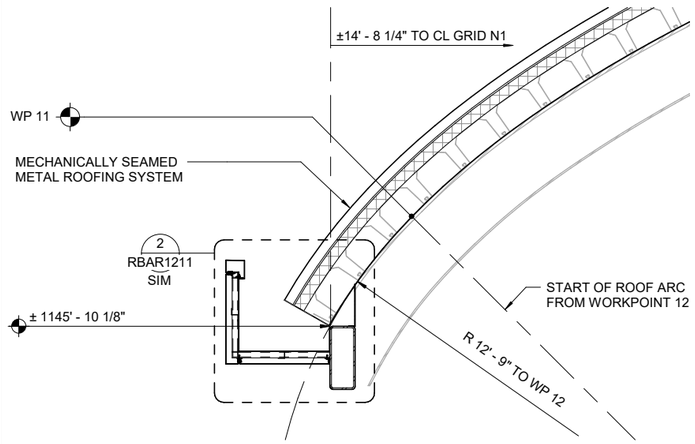
1 T.O. STEEL AT GRIDLINE 1
1/2" = 1'-0"



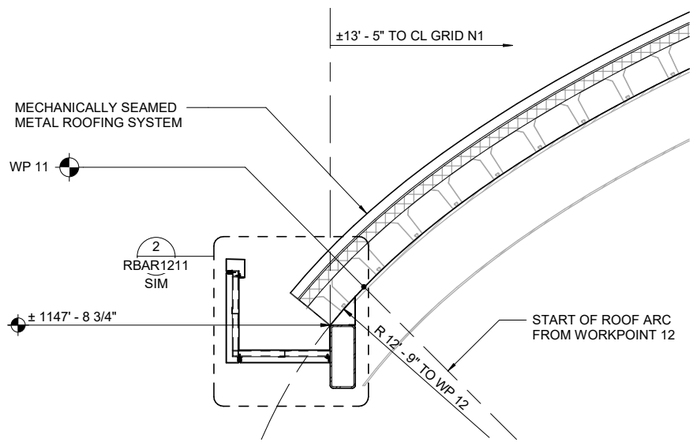
2 T.O. STEEL AT GRIDLINE 2
1/2" = 1'-0"



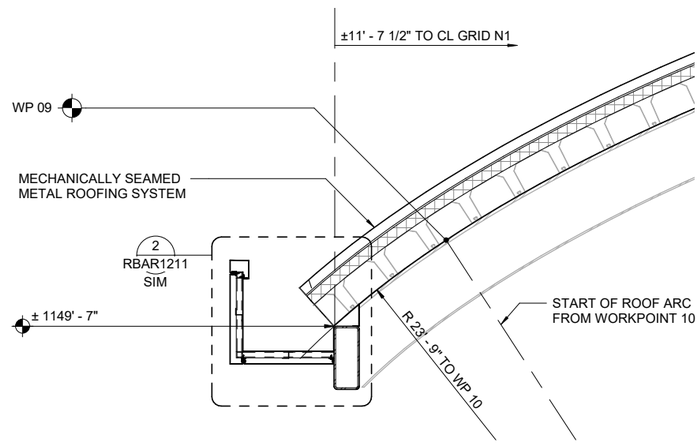
3 T.O. STEEL AT GRIDLINE 3
1/2" = 1'-0"



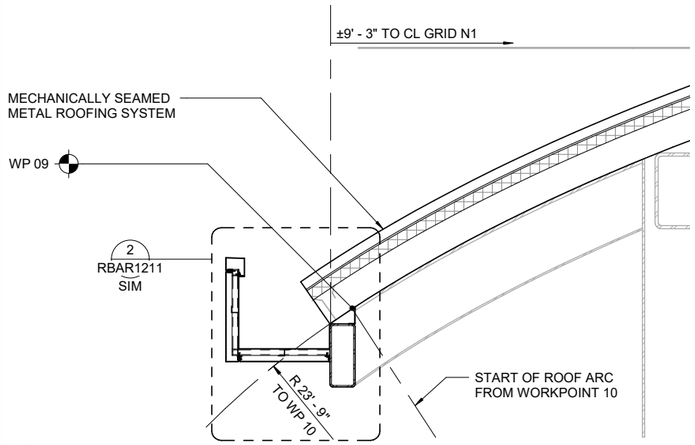
4 T.O. STEEL AT GRIDLINE 4
1/2" = 1'-0"



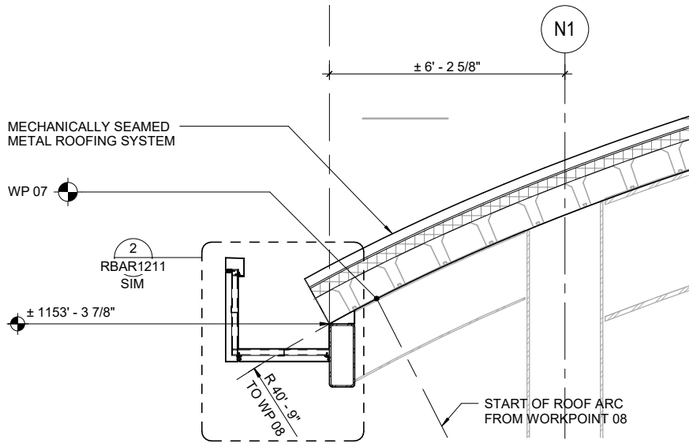
5 T.O. STEEL AT GRIDLINE 5
1/2" = 1'-0"



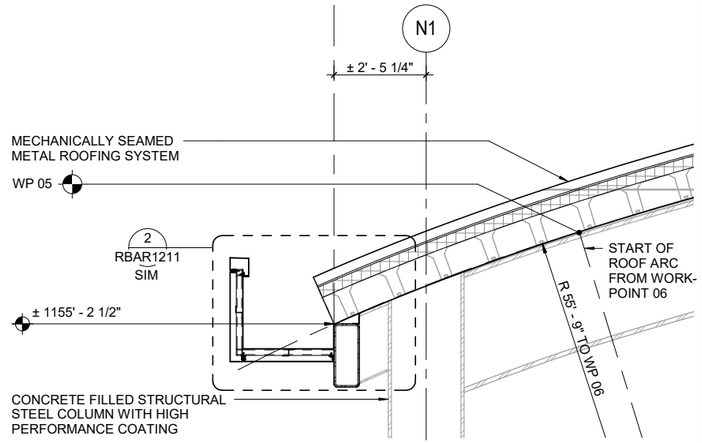
6 T.O. STEEL AT GRIDLINE 6
1/2" = 1'-0"



7 T.O. STEEL AT GRIDLINE 7
1/2" = 1'-0"



8 T.O. STEEL AT GRIDLINE 8
1/2" = 1'-0"



9 T.O. STEEL AT GRIDLINE 9
1/2" = 1'-0"

1/2" = 1'-0"
0 2' 4'

Local File: BIM 360://82421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

Project Number: 21722
7/11/2018 3:15:41 PM

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

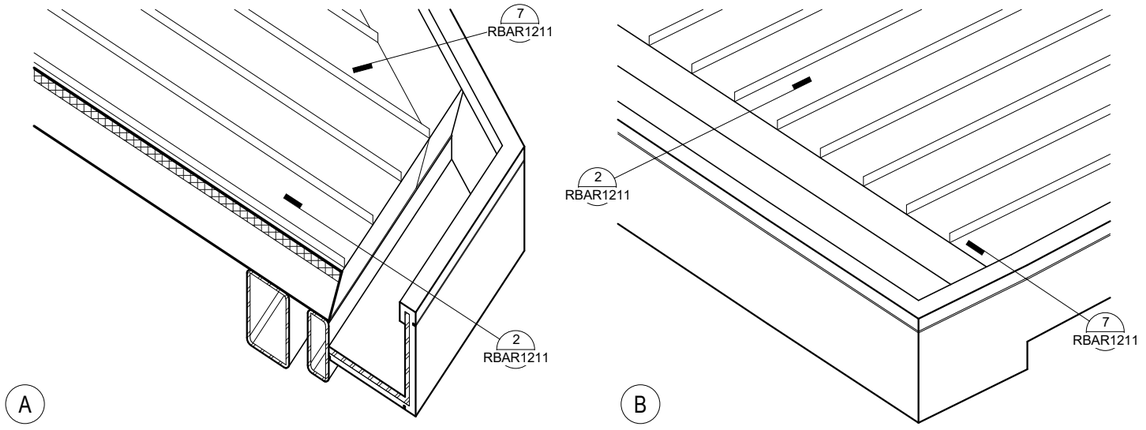
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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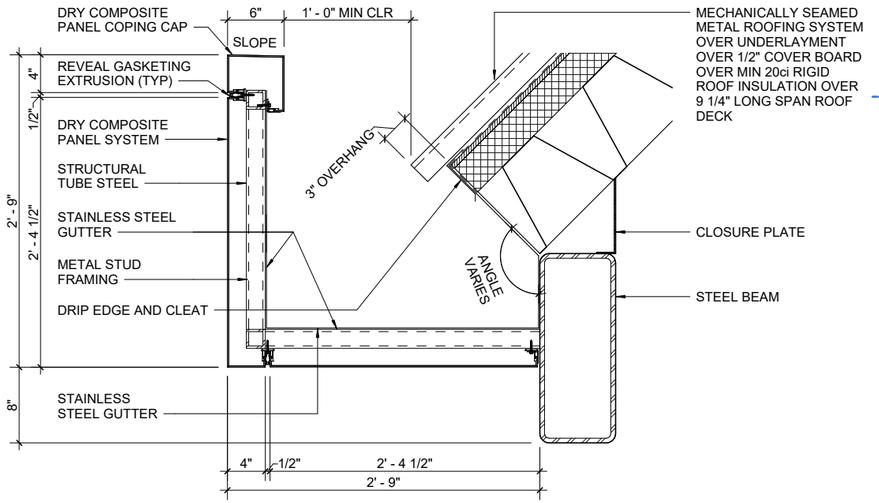
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

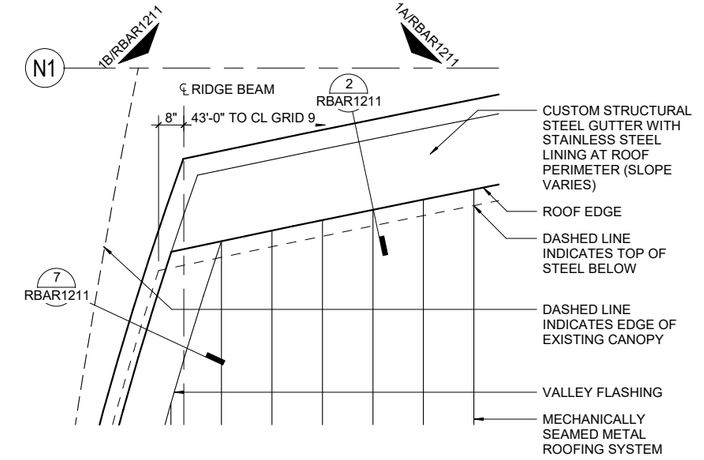
Package: B04 - RBAR1210
Sheet Reference No: V5 - 081 of 218



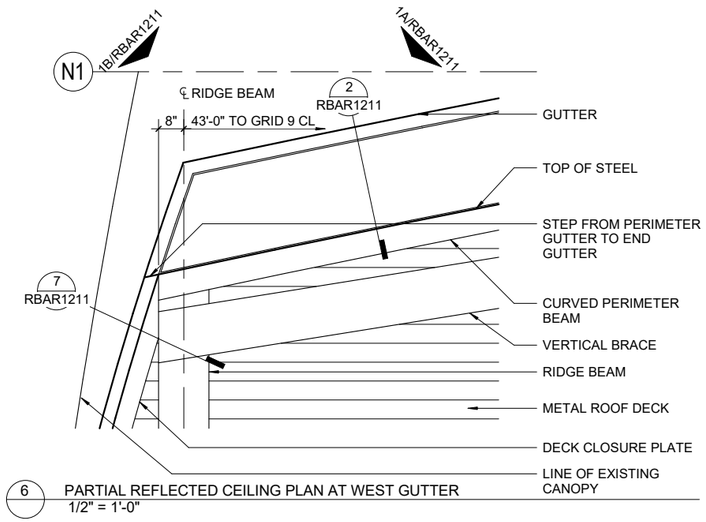
1 GUTTER INTERSECTION - AXON
1/2" = 1'-0"



2 TYPICAL GUTTER AT ROOF PERIMETER
1 1/2" = 1'-0"



4 PARTIAL ROOF PLAN AT WEST GUTTER
1/2" = 1'-0"



6 PARTIAL REFLECTED CEILING PLAN AT WEST GUTTER
1/2" = 1'-0"

7 TYPICAL GUTTER AT WEST ROOF EDGE
3" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

1/2" = 1'-0"
0 2' 4'

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PHOENIX, AZ 85034

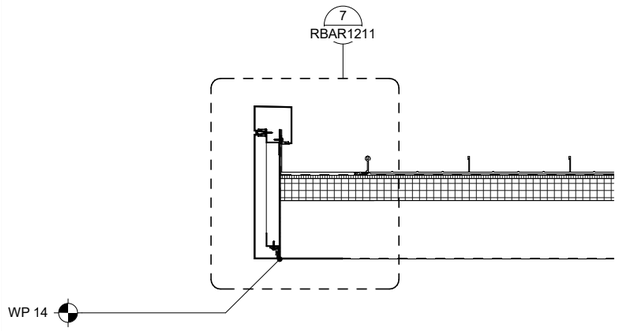
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

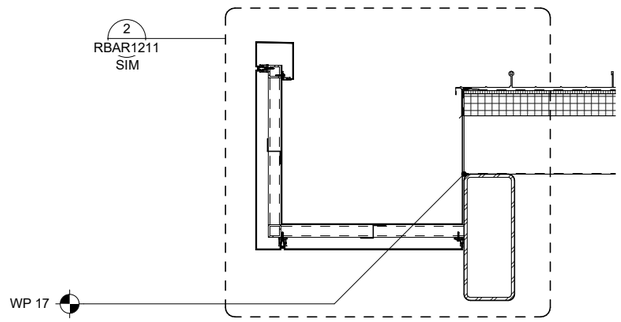
RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

Package: B04 - RBAR1211
Sheet Reference No: V5 - 082 of 218

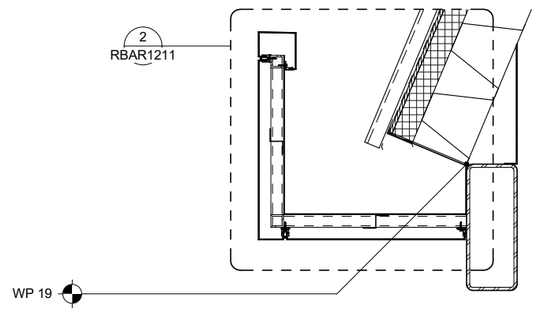
Project Number: 21722
7/11/2018 3:15:41 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



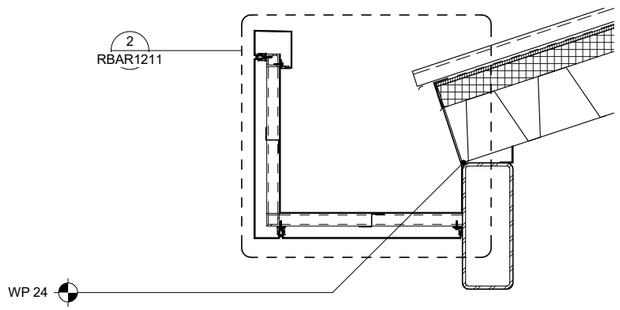
1 GUTTER AT WORKPOINT 14
1" = 1'-0"



2 GUTTER AT WORKPOINT 17
1" = 1'-0"



3 GUTTER AT WORKPOINT 19
1" = 1'-0"



4 GUTTER AT WORKPOINT 24
1" = 1'-0"

1" = 1'-0"
0 1' 2'

Project Number: 21722
7/11/2018 3:15:42 PM

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

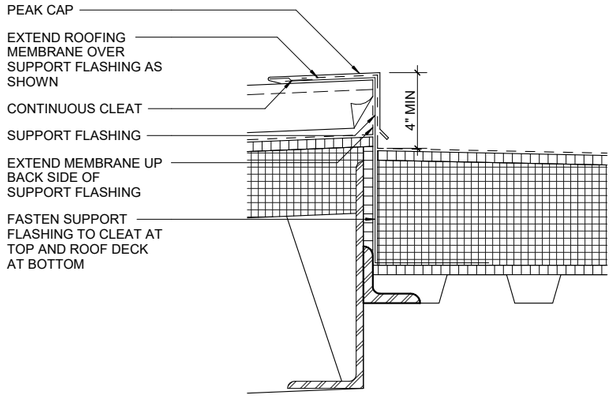
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

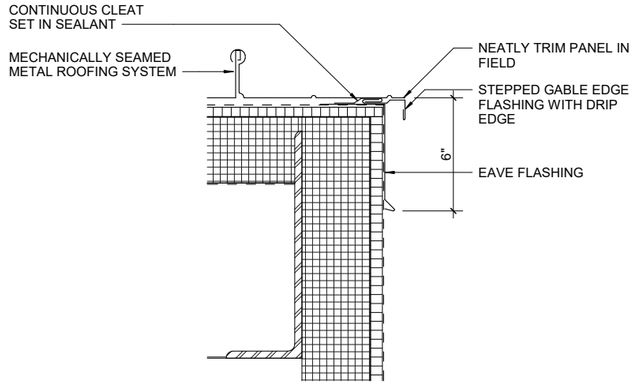
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

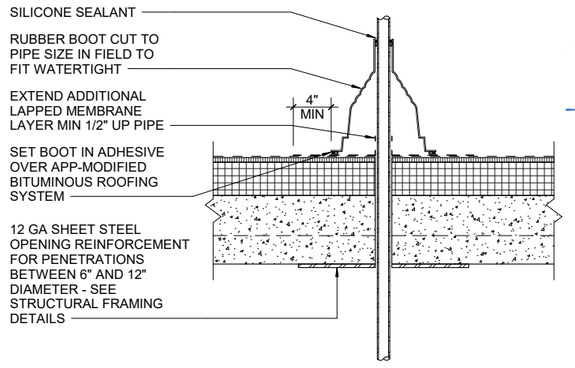
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Sheet Reference No: V5 - 083 of 218



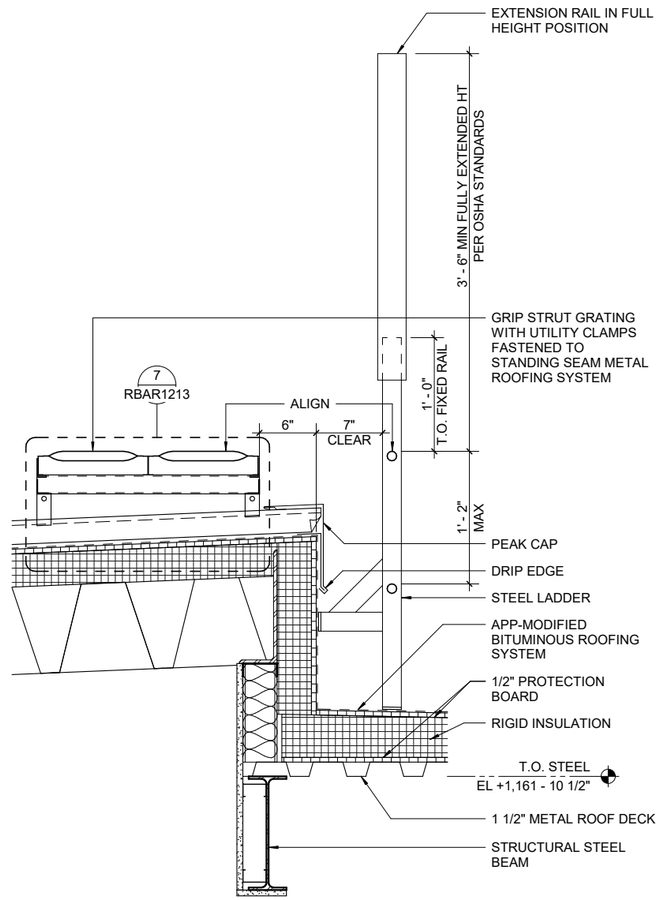
1 ROOF TRANSITION
3" = 1'-0"



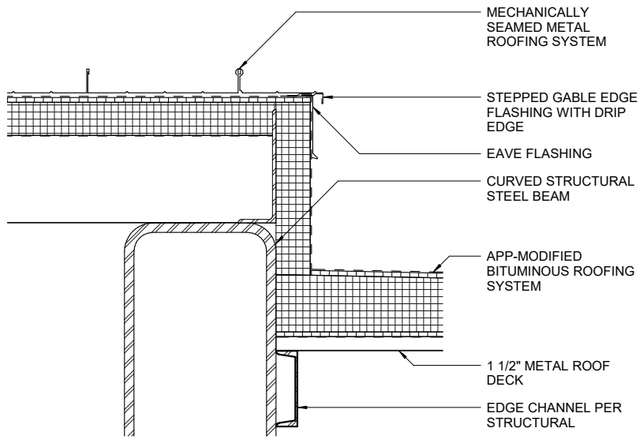
2 GABLE AT EAVE
3" = 1'-0"



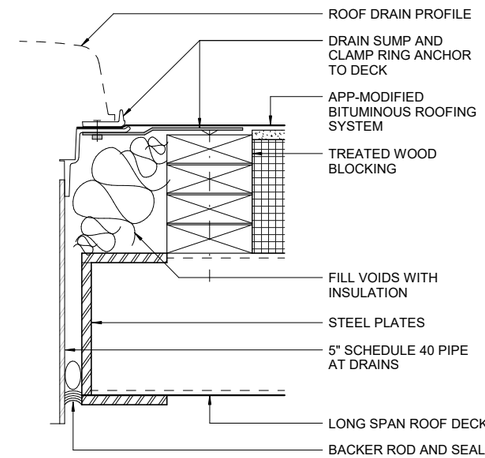
3 MOD BIT PENETRATION DETAIL
1 1/2" = 1'-0"



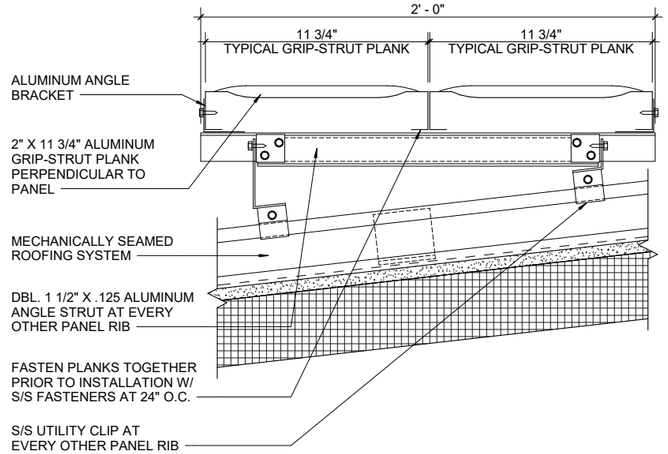
4 ROOF WELL AT LADDER AND WALKWAY
1 1/2" = 1'-0"



5 ROOF WELL - FLASHING AT ROOF TRANSITION
1 1/2" = 1'-0"



6 ROOF DRAIN ATTACHMENT AT ROOFING SYSTEM
3" = 1'-0"



7 MAINTENANCE WALK AT ROOF
3" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

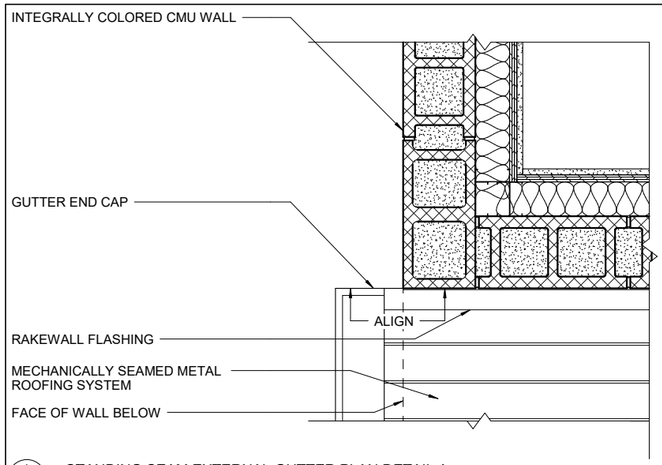
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

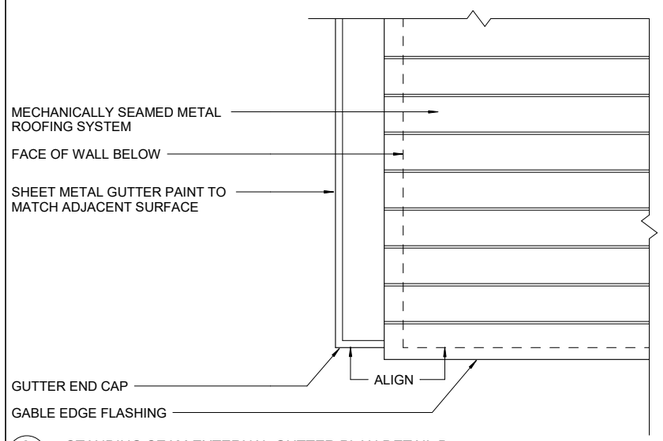
RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

Package: B04 - RBAR1213
Sheet Reference No: V5 - 084 of 218

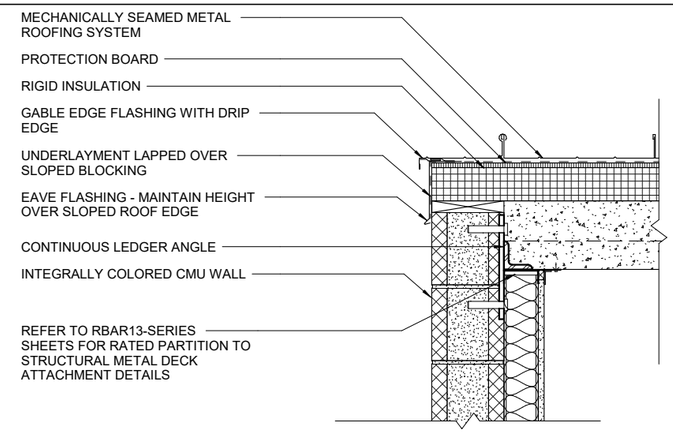
Project Number: 21722
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Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



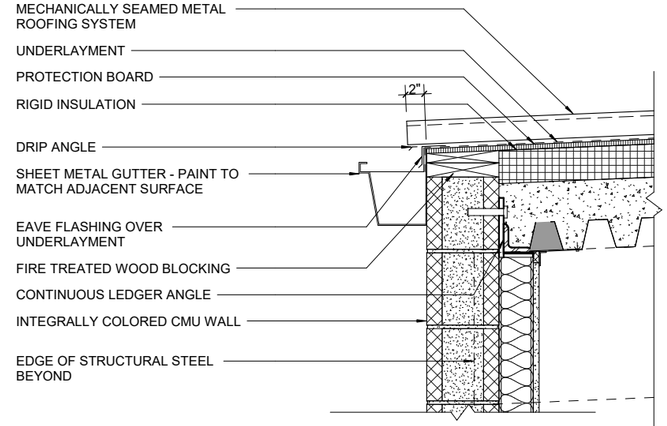
1 STANDING SEAM EXTERNAL GUTTER PLAN DETAIL A
1 1/2" = 1'-0"



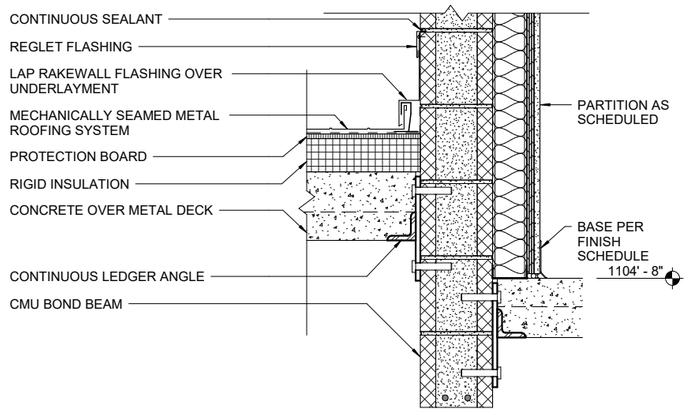
2 STANDING SEAM EXTERNAL GUTTER PLAN DETAIL B
1 1/2" = 1'-0"



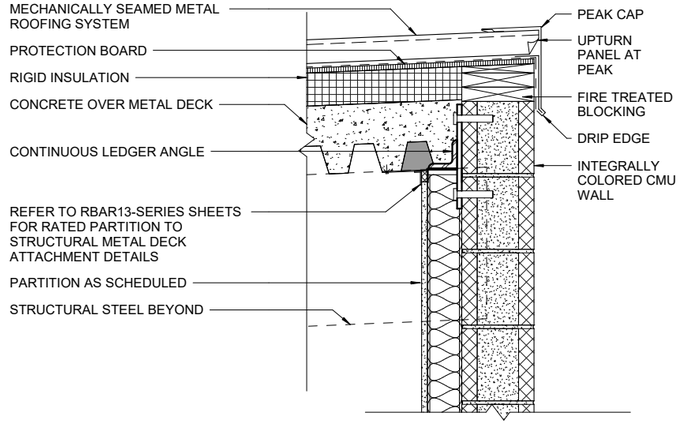
3 STANDING SEAM GABLE DETAIL
1 1/2" = 1'-0"



5 GUTTER AT METAL ROOF
1 1/2" = 1'-0"



4 ROOF FLASHING AT WALL
1 1/2" = 1'-0"



6 STANDING SEAM FIXED PEAK DETAIL
1 1/2" = 1'-0"

1 1/2" = 1'-0"
0 8" 16"

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

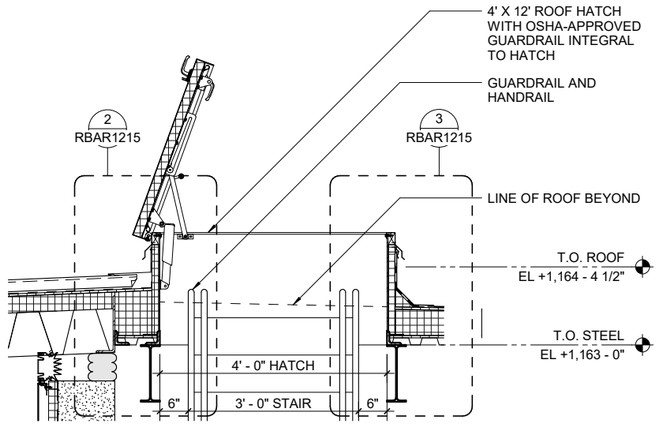
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

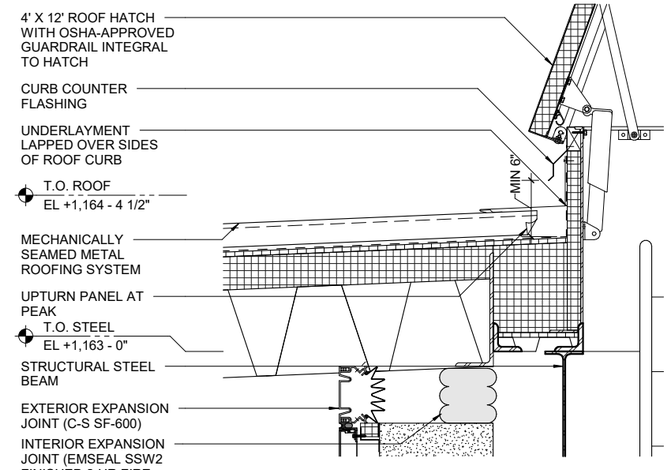
RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

Package: B04 - RBAR1214
Sheet Reference No: V5 - 085 of 218

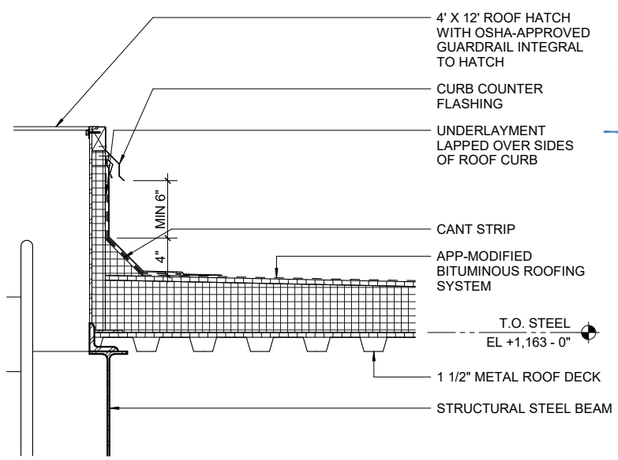
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Project Number: 21722
7/11/2018 3:15:43 PM



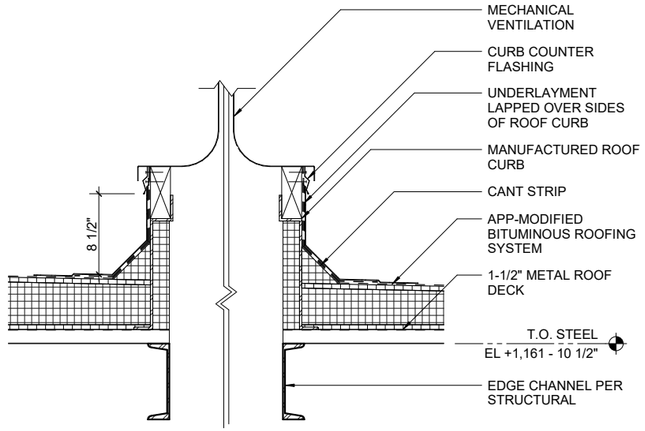
1 ROOF HATCH
3/4" = 1'-0"



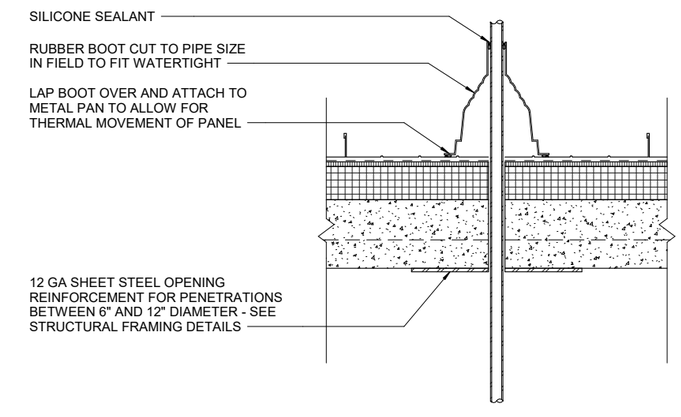
2 ROOF HATCH AT METAL ROOF
1 1/2" = 1'-0"



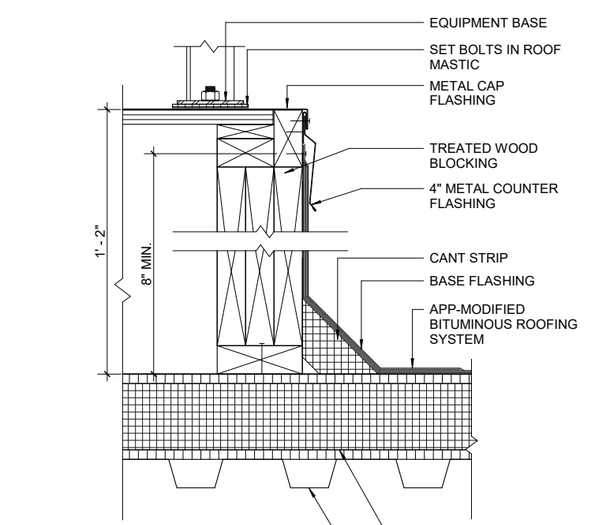
3 ROOF HATCH AT MODIFIED BITUMEN ROOFING
1 1/2" = 1'-0"



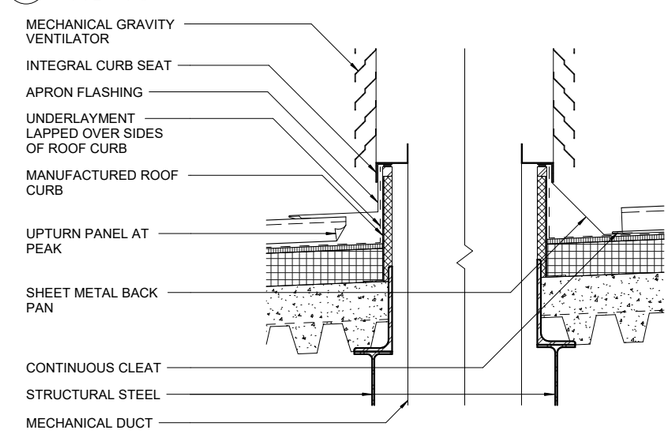
4 ROOF WELL - EXHAUST CURB
1 1/2" = 1'-0"



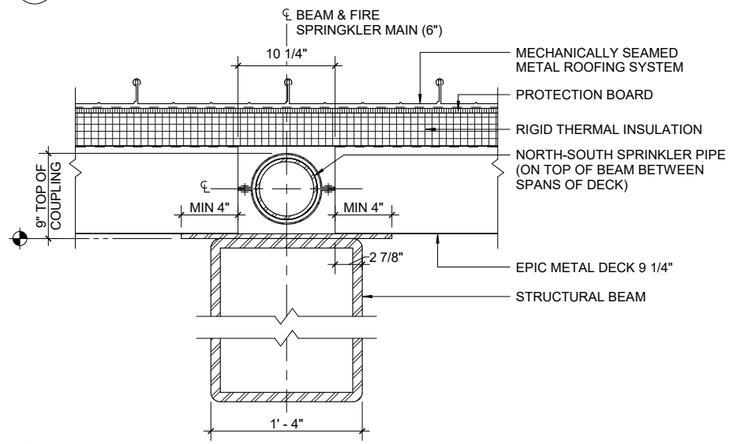
5 STANDING SEAM PENETRATION DETAIL
1 1/2" = 1'-0"



6 EQUIPMENT CURB
3" = 1'-0"



7 STANDING SEAM EQUIPMENT CURB DETAIL
1 1/2" = 1'-0"



8 FIRE SPRINKLER PIPING DETAIL
1 1/2" = 1'-0"

1 1/2" = 1'-0"
0 8" 16"

3" = 1'-0"
0 4" 8"

3/4" = 1'-0"
0 1' 2'

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

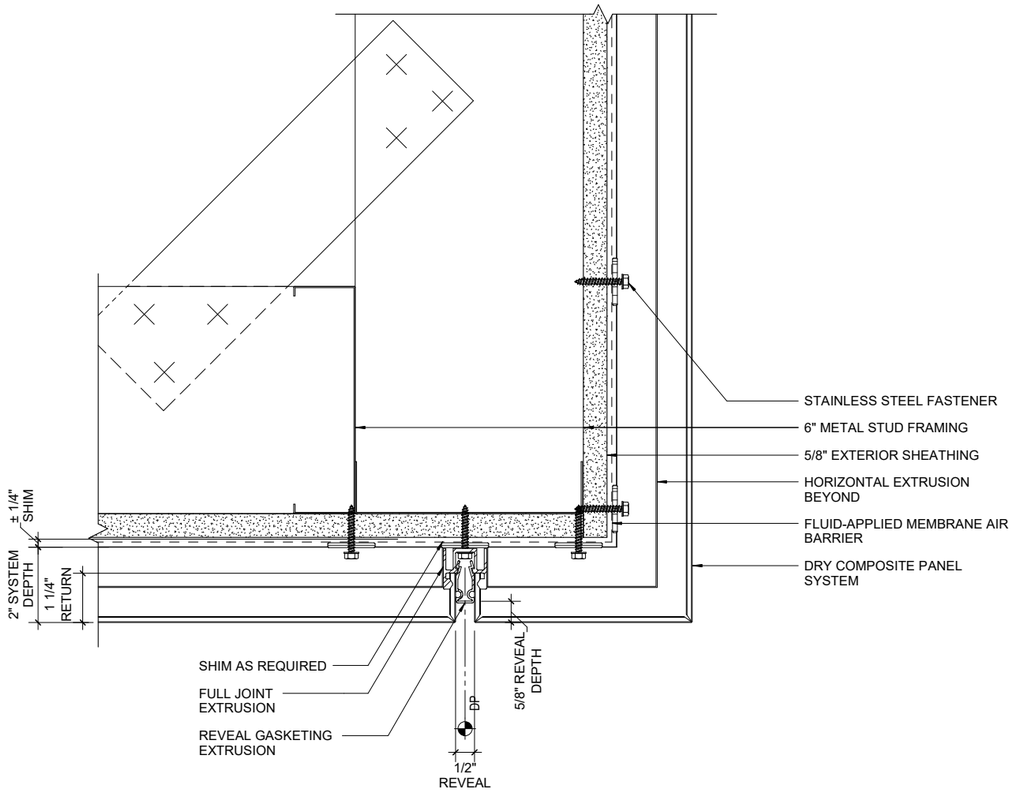
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

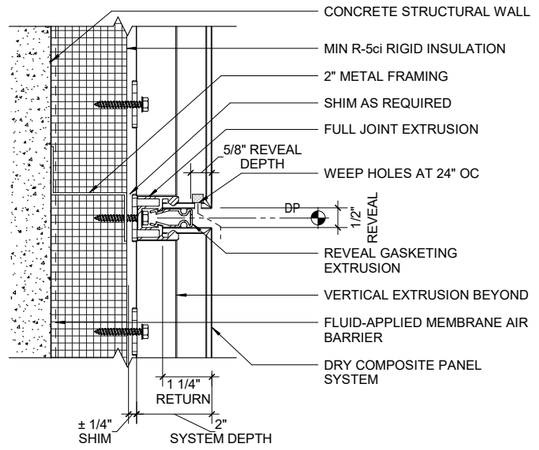
RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - ROOF

Package: B04 - RBAR1215
Sheet Reference No: V5 - 086 of 218

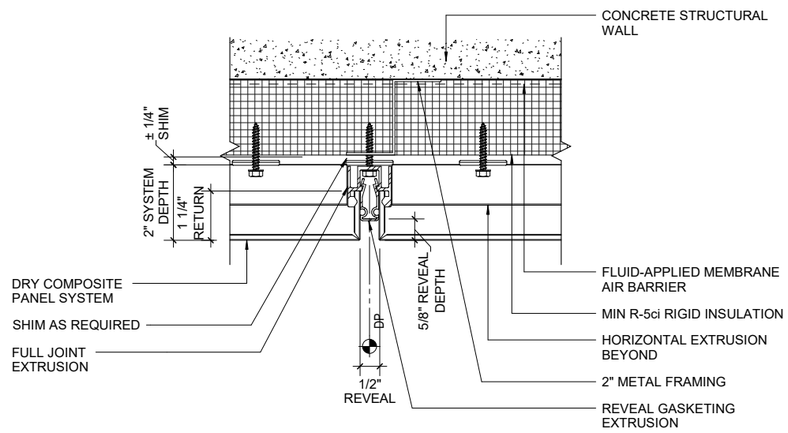
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Project Number: 21722
7/11/2018 3:15:44 PM



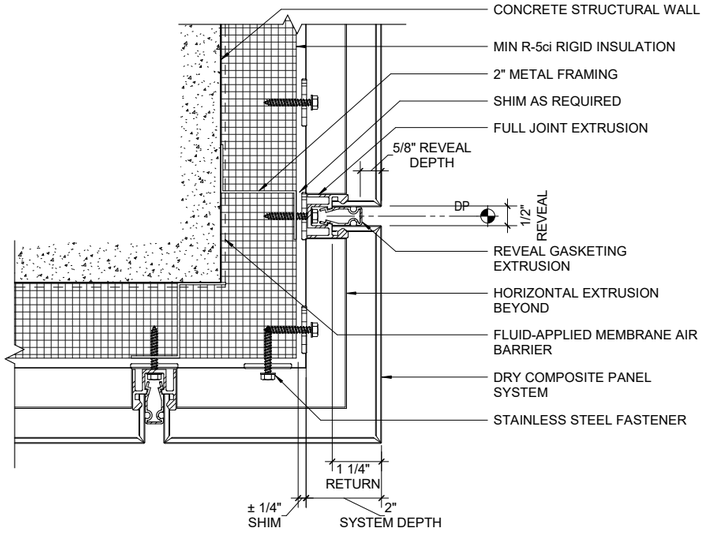
4 COMPOSITE METAL PANEL OUTSIDE SOFFIT CORNER
6" = 1'-0"



1 COMPOSITE PANEL HORIZONTAL REVEAL
6" = 1'-0"



5 COMPOSITE PANEL VERTICAL REVEAL
6" = 1'-0"



2 COMPOSITE PANEL OUTSIDE CORNER
6" = 1'-0"

6" = 1'-0"
0 2" 4"

Project Number: 21722
7/11/2018 3:15:45 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/11/2018
ARIZONA, U.S.A.

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

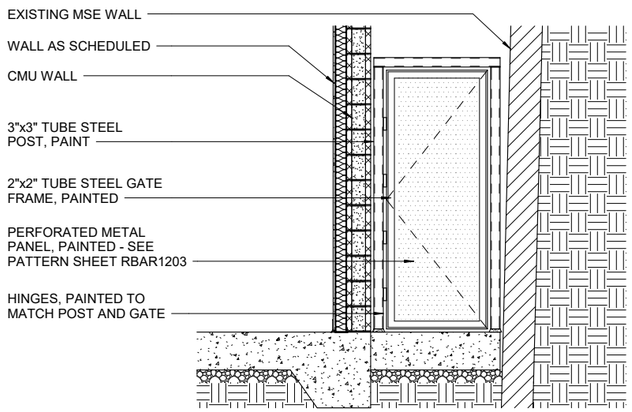
PHX SKY TRAIN
STAGE 2 DESIGN
500 S. 24TH STREET
PHOENIX, AZ 85034

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

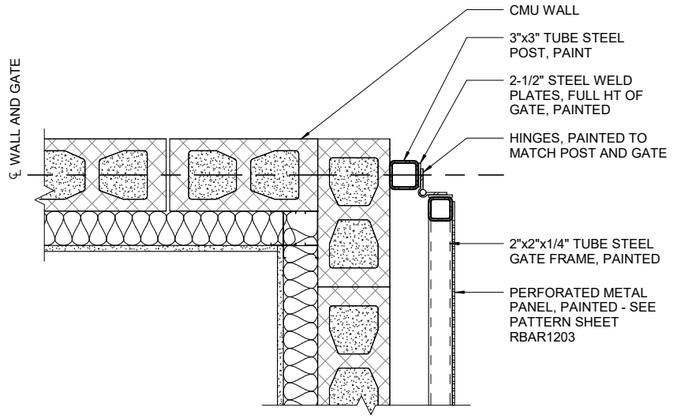
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - COMPOSITE PANEL SYSTEM

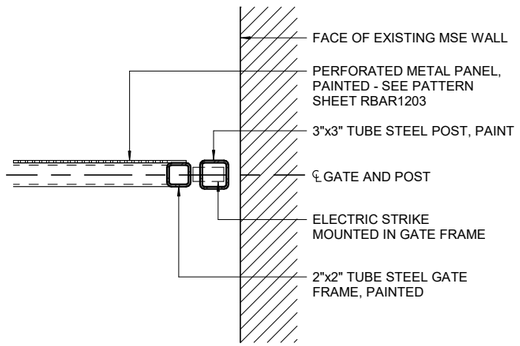
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Sheet Reference No: V5 - 087 of 218



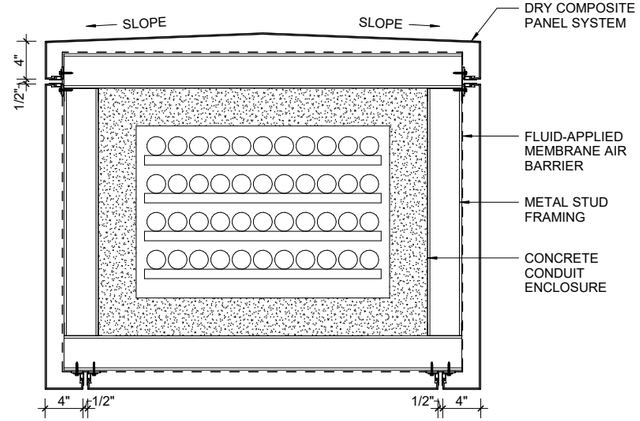
1 GATE - ELEVATION
1/2" = 1'-0"



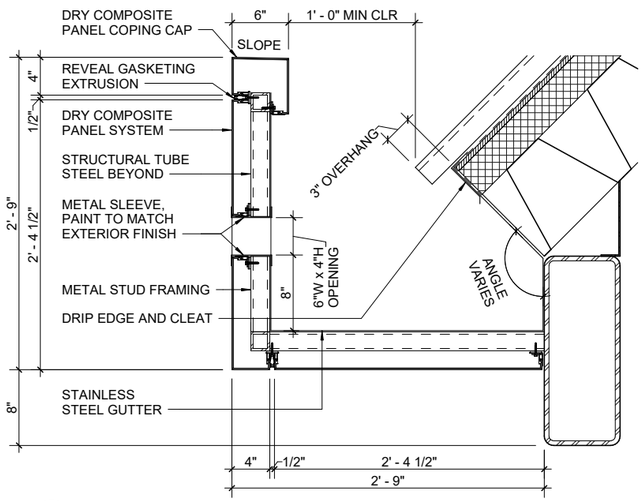
2 GATE - JAMB
1 1/2" = 1'-0"



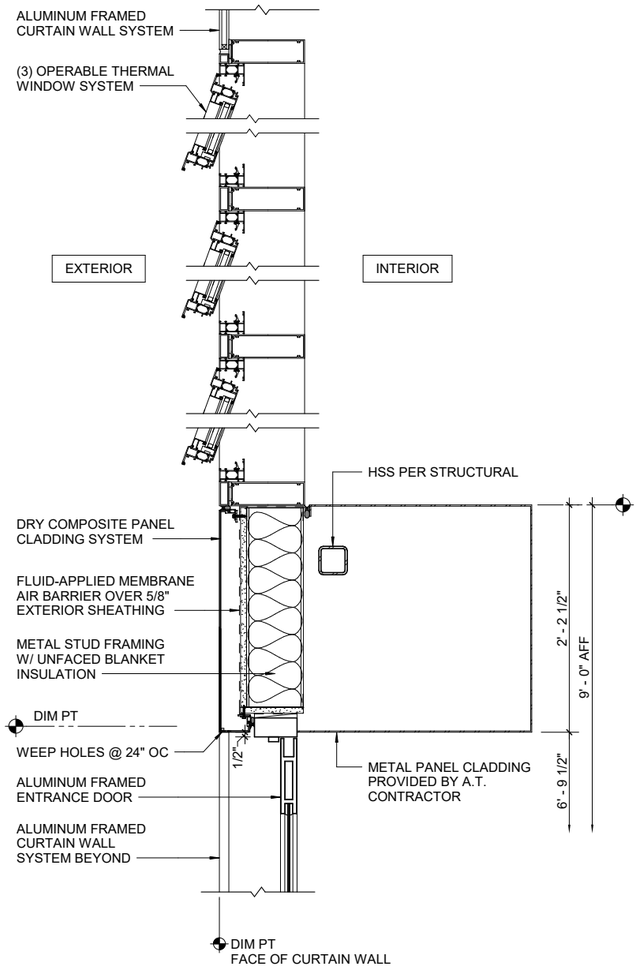
3 GATE - JAMB AT LATCH
1 1/2" = 1'-0"



4 CONDUIT ENCLOSURE
1 1/2" = 1'-0"



7 SCUPPER THRU GUTTER AT ROOF DRAIN
1 1/2" = 1'-0"



9 OPERABLE WINDOW AT CURTAIN WALL
1 1/2" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

1/2" = 1'-0"
0 2' 4'

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

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Design Consultant
Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - OPENINGS

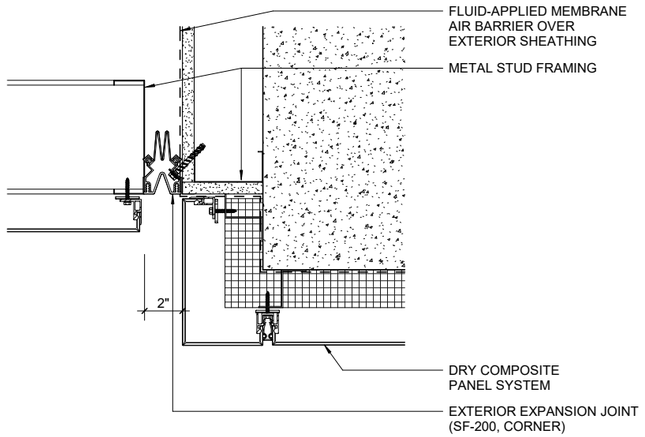
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Sheet Reference No: V5 - 088 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:15:46 PM

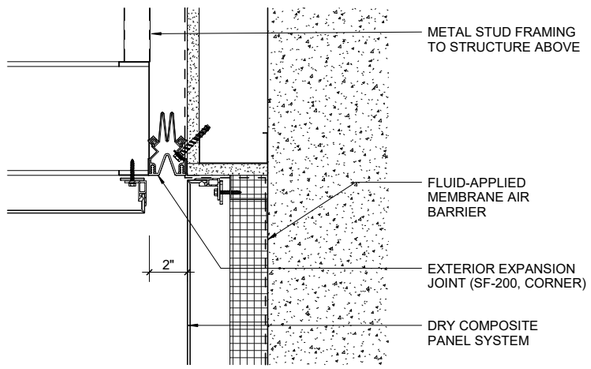
EXPANSION CONTROL SCHEDULE

		STATION - CORE (GRIDLINE 1)		STATION - ROOF
		PARKING - LEVEL 2.5	PLATFORM - LEVEL 4	CORE WALL TO ROOF INTERSECTION
NOMINAL JOINT WIDTH		2"		6"
E/W MOVEMENT		±1"		0"
N/S MOVEMENT		0"		0"
VERTICAL MOVEMENT		0"		3"
HORIZONTAL MOVEMENT		0"		2"
FLOOR		N/A	SSR-200 2-HR FIRE RATED	N/A
WALL	INTERIOR	N/A	FWF-200	FWF-600 (3)
	EXTERIOR	SF-200	SF-200	SF-600
CEILING	INTERIOR	N/A	FWF-200	N/A
	EXTERIOR	SF-200	N/A	N/A
ROOF		N/A	N/A	N/A

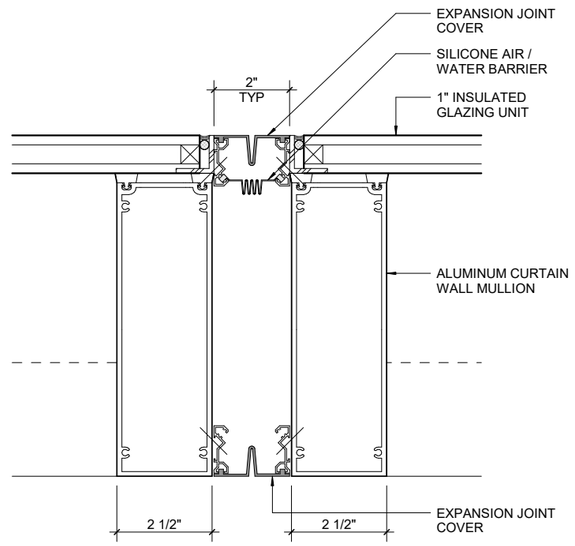
NOTES:
1 - BASIS OF DESIGN FOR ALL MODEL NUMBERS ABOVE IS C/S EXPANSION JOINT COVERS, UNLESS NOTED OTHERWISE.
2 - CONCRETE BLOCKOUTS REQUIRED FOR JOINT COVER INSTALLATION TO BE COORDINATED PRIOR TO CONCRETE SHOP DRAWING SUBMITTAL.
3. AT INTERIOR OF CORE (STAIR, SHAFT, JANITOR CLOSET) USE EMSEAL SSW2 (FINISHED) 2 HR FIRE RATING.



6 EXPANSION JOINT - WALL INTERSECTION AT CORE
3" = 1'-0"



5 EXPANSION JOINT - SUSPENDED EXTERIOR CLG AT CORE
3" = 1'-0"



4 TYPICAL CURTAIN WALL EXPANSION JOINT
6" = 1'-0"

6" = 1'-0"
0 2" 4"

3" = 1'-0"
0 4" 8"

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	PDD COMMENTS	07/13/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
EXTERIOR DETAILS - EXPANSION JOINT CONTROL SYSTEMS

Package: B04 - RBAR1270
Sheet Reference No: V5 - 089 of 218

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
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DOOR SCHEDULE

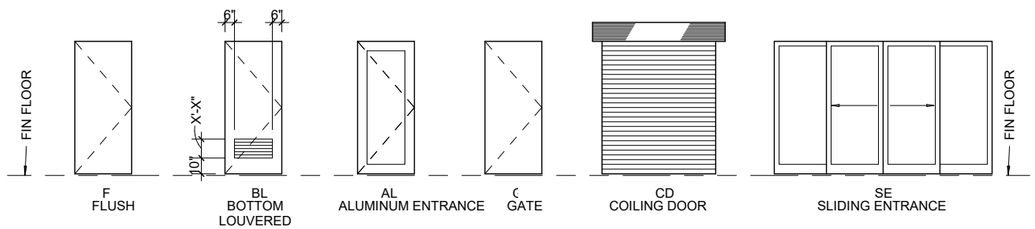
LEVEL	DOOR NUMBER	ROOM NAME	FIRE RATING (HOURS)	DOOR				SIZE		FRAME					HARDWARE GROUP	SPECIAL NOTES AND COMMENTS
				ELEVATION	MATERIAL	FINISH	GLASS TYPE	HEIGHT	WIDTH	TYPE	MATERIAL	FINISH	FRAME HEAD	FRAME JAMB		
LEVEL 1 (EXIST)																
LEVEL 1 (EXIST)	RBST140	ATC ROOM	1 1/2 HR	F	HM	PT		8' - 0"	6' - 0"	A	HM	PT	3/RBAR1330	4/RBAR1330	07	EXTERIOR / ADD WEATHERING
LEVEL 1 (EXIST)	RBST141	ELECTRICAL ROOM	1 1/2 HR	F	HM	PT		7' - 0"	6' - 0"	A	HM	PT	3/RBAR1330	4/RBAR1330	09	EXTERIOR / ADD WEATHERING
LEVEL 1 (EXIST)	RBST142A	MECHANICAL ROOM	1 1/2 HR	F	HM	PT		7' - 0"	6' - 0"	A	HM	PT	3/RBAR1330	4/RBAR1330	09	EXTERIOR / ADD WEATHERING
LEVEL 1 (EXIST)	RBST142B	MECHANICAL ROOM	1 1/2 HR	F	HM	PT		6' - 8"	3' - 0"	A	HM	PT	3/RBAR1330	4/RBAR1330	01	EXTERIOR / ADD WEATHERING
LEVEL 1 (EXIST)	RBST142C	MECHANICAL ROOM	1 1/2 HR	CD				8' - 0"	8' - 0"				1/RBAR1331	2/RBAR1331		HARDWARE BY MANUFACTURER
LEVEL 1 (EXIST)	RBST143	ELECTRICAL ROOM	1 1/2 HR	F	HM	PT		7' - 0"	3' - 0"	A	HM	PT	1/RBAR1330	2/RBAR1330	01	
LEVEL 1 (EXIST)	RBST144A	PASSAGE		F	STL	PT		7' - 0"	3' - 0"	A	STL	PT		2&3/RBAR1250	02	GATE
LEVEL 1 (EXIST)	RBST144B	PASSAGE		F	STL	PT		7' - 0"	3' - 0"	A	STL	PT		2&3/RBAR1250	02	GATE
LEVEL 1 (EXIST)	RBST145A	PASSAGE		F	STL	PT		7' - 0"	3' - 0"	A	STL	PT		2&3/RBAR1250	02	GATE
LEVEL 1 (EXIST)	RBST145B	PASSAGE		F	STL	PT		7' - 0"	3' - 0"	A	STL	PT		2&3/RBAR1250	02	GATE
LEVEL 1 (EXIST)	RBST146	UPS RM	1 1/2 HR	F	HM	PT		7' - 0"	6' - 0"	A	HM	PT	1/RBAR1330	2/RBAR1330	07	EXTERIOR / ADD WEATHERING
LEVEL 1 (EXIST)	RBST147	PUMP RM		F				7' - 0"	3' - 0"				1/RBAR1330	2/RBAR1330		
LEVEL 2.5																
LEVEL 2.5	RBST245	IDF	1 1/2 HR	F	HM	PT		7' - 0"	3' - 0"	A	HM	PT	3/RBAR1330	4/RBAR1330	01	EXTERIOR / ADD WEATHERING
LEVEL 2.5	RBST246	SHAFT	1 1/2 HR	F	HM	PT		7' - 0"	3' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	03	EXTERIOR / ADD WEATHERING
LEVEL 2.5	RBST280	STAIR 1	1 1/2 HR	F	HM	PT		7' - 0"	4' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	02	EXTERIOR / ADD WEATHERING
LEVEL 2.5	RBST404F	FIRE CONTROL	1 1/2 HR	F	HM	PT		7' - 0"	4' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	01	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL																
PLATFORM LEVEL	RBST401A	BOARD PLATFORM		SE				9' - 0"	11' - 9"				3/RBAR1331	4/RBAR1331		HARDWARE BY MANUFACTURER
PLATFORM LEVEL	RBST401B	BOARD PLATFORM		AL	AL/GL	FF	GL	8' - 0"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401C	BOARD PLATFORM		AL	AL/GL	FF	GL	8' - 0"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401D	BOARD PLATFORM		AL	AL/GL	FF	GL	8' - 0"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401E	BOARD PLATFORM		AL	AL/GL	FF	GL	8' - 0"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401F	BOARD PLATFORM		AL	AL/GL	FF	GL	6' - 9 1/2"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401G	BOARD PLATFORM		AL	AL/GL	FF	GL	6' - 9 1/2"	3' - 0"		GL	FF			05	EXTERIOR / ADD WEATHERING
PLATFORM LEVEL	RBST401W	DE-BOARD PLATFORM		F				7' - 0"	3' - 0"							
PLATFORM LEVEL	RBST401Y	DE-BOARD PLATFORM		F				7' - 0"	3' - 0"							
PLATFORM LEVEL	RBST407	SHAFT	1 1/2 HR	F	HM	PT		8' - 0"	3' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	03	
PLATFORM LEVEL	RBST460	JAN	1 1/2 HR	F	HM	PT		8' - 0"	3' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	20	
PLATFORM LEVEL	RBST480	STAIR 1	1 1/2 HR	F	HM	PT		8' - 0"	4' - 0"	A	HM	PT	6/RBAR1330	5/RBAR1330	02	

GLASS TYPES

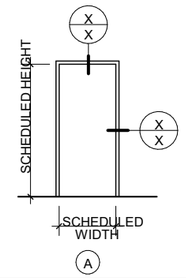
TYPES DEFINED IN THE "GLASS TYPES" COLUMNS UNDER THE "OPENING" AND "FRAME" COLUMNS OF THE SCHEDULE

TYPE 1: 1/4" CLEAR GLASS
TYPE 2: 1/4" TEMPERED SAFETY GLASS
TYPE 3: LAMINATED GLASS (REFER TO SPEC FOR THICKNESS)

DOOR TYPES



FRAME TYPES



SHEET NOTES

A. GENERAL OPENING SCHEDULE HEADINGS:

1. DOOR TYPE: CODE IN SCHEDULE REFERS TO ELEVATION. REFER TO THIS SHEET FOR ELEVATIONS.

2. FRAME TYPE: CODE IN SCHEDULE REFERS TO ELEVATION. REFER TO THIS SHEET FOR ELEVATIONS.

3. DOOR MATERIAL, DOOR FINISH, FRAME MATERIAL, FRAME FINISH: SEE "SCHEDULE ABBREVIATIONS" BELOW FOR MATERIALS USED.

4. HARDWARE GROUP: REFER TO SPECIFICATION SECTION 087100 FOR SPECIFIC REQUIREMENTS.

5. GLASS TYPE: REFER TO "GLASS TYPES" BELOW FOR TYPE OF GLASS USED IN DOOR AND FRAME.

B. WOOD AND HOLLOW METAL DOORS ARE 1-3/4" THICK, TYP. UNLESS OTHERWISE NOTED. FOR ALL OTHER DOORS SEE INDICATED DETAILS AND SPECIFICATIONS.

C. FOR DOOR TYPES WHERE GLAZING IS SHOWN, ALL GLAZING SHALL BE FACTORY INSTALLED. DO NOT INSTALL GLAZING IN THE FIELD.

D. UNDERCUT OF FIRE RATED OPENINGS SHALL BE NO GREATER THAN 3/4" ABOVE THE TOP OF FINISH FLOOR SURFACE OR APPLIED THRESHOLD PER NFPA 80.

E. ALL DOORS TO PROVIDE A MIN. CLEAR OPENING WIDTH OF 32" WITH DOOR OPEN AT 90°.

F. DOOR OPENING FORCE NOT TO EXCEED 5 LBS. AT INTERIOR HINGED, SLIDING OR FOLDING DOORS AND GATES; WITH THE EXCEPTION OF FIRE DOORS.

G. FIRE DOORS SHALL BE SUBJECT TO THE FOLLOWING OPENING FORCES: THE LATCH SHALL RELEASE AT 15 LBS; SET IN MOTION AT 30 LBS.; SWING TO A FULL-OPEN POSITION AT 15 LBS.

H. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT, UNLESS OTHERWISE APPROVED BY THE AHJ.

J. GROUTING OF FRAMES IN GYPSUM BOARD CONSTRUCTION IS PROHIBITED, EXCEPT WHERE SPECIFICALLY IDENTIFIED BY DETAIL OR SPECIFICATION.

K. REFER TO RBAR13-SERIES SHEETS FOR HOLLOW METAL DOOR AND FRAME COLORS

L. ALL GLAZING IN DOORS AND WITHIN 24 INCHES PROXIMITY OF THE VERTICAL EDGE OF THE DOOR SHALL BE SAFETY GLAZING PER IBC SECTION 2406.

ABBREVIATIONS

ABBREVIATIONS USED IN THE "OPENING MATERIAL" AND "FRAME MATERIAL" AND COLUMNS IN THE SCHEDULE

AL	ALUMINIUM
GL	GLASS
HM	HOLLOW METAL
STL	STEEL
WD	WOOD

ABBREVIATIONS USED IN THE "DOOR FINISH" AND THE "FRAME FINISH" COLUMNS IN THE SCHEDULE

AL	ALUMINUM
ANDZ	ANODIZED
NA	NOT APPLICABLE
PLAM	PLASTIC LAMINATE
PNT	PAINT
ST	STAIN

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SMITHGROUP
architecture engineering interiors planning
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:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
DOOR TYPES AND DOOR SCHEDULE

Package: B04 - RBAR1301
Sheet Reference No: V5 - 090 of 218

Project Number: 21722
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Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

ROOM FINISH SCHEDULE

FINISH SCHEDULE									
ROOM NUMBER	ROOM NAME	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING FINISH	Comments
LEVEL 1 (EXIST)									
RBST140	ATC ROOM	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST141	ELECTRICAL ROOM	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST142	MECHANICAL ROOM	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST143	ATS	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST144	PASSAGE	F4	-	-	-	-	W5	NO CEILING	MSE WALL - NO FINISH
RBST145	PASSAGE	F4	-	-	-	-	W5	NO CEILING	MSE WALL - NO FINISH
RBST146	UPS RM	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST147	PUMP RM	SEE COMMENTS							EXISTING FINISHES TO REMAIN
LEVEL 2.5									
RBST207	SHAFT	F2	B3	W5	W5	W5	W5	NO CEILING / C5	SEE RCP
RBST245	IDF	F2	B3	W5	W5	W5	W5	C4	
RBST246	FIRE CONTROL	F2	B3	W5	W5	W5	W5	NO CEILING	
PLATFORM LEVEL									
RBST148	DE-BOARD PLATFORM								
RBST149	DE-BOARD PLATFORM								
RBST180	STAIR 1	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST401	BOARD PLATFORM	F1	Curtain Wall	W2/W9	W3	W2/W9	W2	C6/C7	
RBST407	SHAFT	F2	B3	W5	W5	W5	W5	NO CEILING	
RBST460	JAN	F2	B3	W7	W7	W7	W7	C5	

SHEET NOTES

A. CONCRETE AND TERRAZZO FLOOR FINISHES SHALL HAVE A JOINT DESIGN.

B. GROUT JOINTS IN FLOOR FINISH MATERIALS SHALL BE SMOOTH AND UNIFORMLY FLAT WITH 1/8" MAXIMUM GROUT JOINTS.

C. GROUT SURFACES SHALL HAVE A MAXIMUM 1/32" TOP FACE ELEVATION VARIATION.

MATERIAL LEGEND

FLOORS

F1 EPOXY TERRAZZO
F2 EPOXY SEALED CONCRETE
F3 GROUND AND POLISHED CONCRETE
F4 SEALED CONCRETE
F5 BRUSHED CONCRETE

BASE

B1 EPOXY COATING - 6" COVE
B2 11 GAUGE STAINLESS STEEL, #4 BRUSHED FIN
B3 RUBBER WALL BASE
B4 EPOXY TERRAZZO

WALLS

W1 INDIVIDUALLY ACCESSIBLE ALUMINUM PANEL
W2 GLAZED CURTAIN WALL SYSTEM
W3 INDIVIDUALLY ACCESSIBLE PATTERNED /STAMPED STAINLESS STEEL PANEL
W4 SEALED CMU
W5 PAINT 1
W6 PAINT 2
W7 PAINT 3
W8 CERAMIC TILE
W9 INDIVIDUALLY ACCESSIBLE STAINLESS STEEL PANEL "SANDSTONE FINISH"
W10 GLASS BALUSTRADE WITH BRUSHED STAINLESS STEEL TOP RAIL
W11 9 FOOT HIGH ART WALL - DESIGN BY OTHERS

CEILINGS

C1 SUSPENDED EXTERIOR METAL PANEL CEILING
C2 EXTERIOR TORSION SPRING SUSPENDED METAL PANEL CEILING "WHITE"
C3 EXTERIOR TORSION SPRING SUSPENDED METAL PANEL CEILING "WOOD GRAIN"
C4 2 X 2 LAY-IN ACOUSTICAL PANEL CEILING TILE
C5 GYPSUM BOARD HARD LID CEILING
C6 PERFORATED TORSION SPRING SUSPENDED METAL PANEL CEILING "WHITE", MIN NRC 0.85
C7 PAINTED LONG SPAN STEEL ROOF DECK

NOTES

1 PAINT TO BE EGGSHELL FINISH
2 PAINT TO BE FLOAT FINISH
3 PAINT TO BE HIGH GLOSS FINISH
4 ABOVE CEILING: PAINT EXPOSED STRUCTURE, DUCTS, PIPES, AND CONDUIT WITH FLAT FINISH

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires: 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN
STAGE 2 DESIGN
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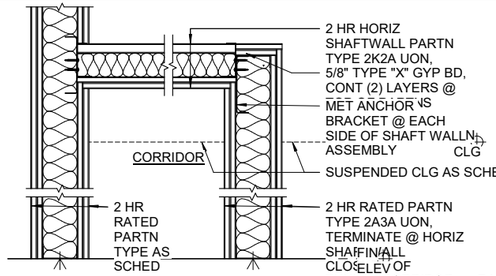
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
FINISH SCHEDULE

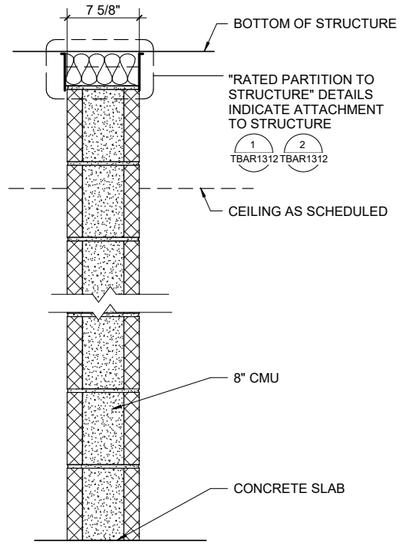
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Sheet Reference No: V5 - 091 of 218

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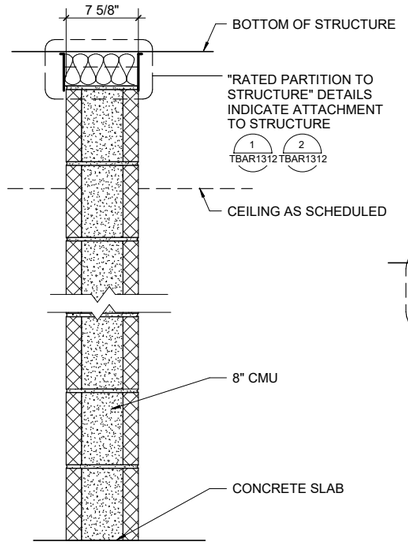


5 TYPE 2L: 2 HR RATED TUNNEL CONSTRUCTION
1 1/2" = 1'-0"

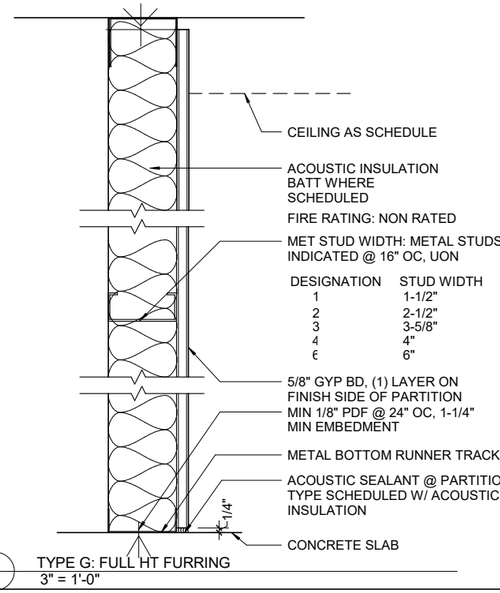
RATING NO:
2 HR PARTN - UL U419
2 HR HORIZ SHAFTWALL - WHI-495-PSH0167



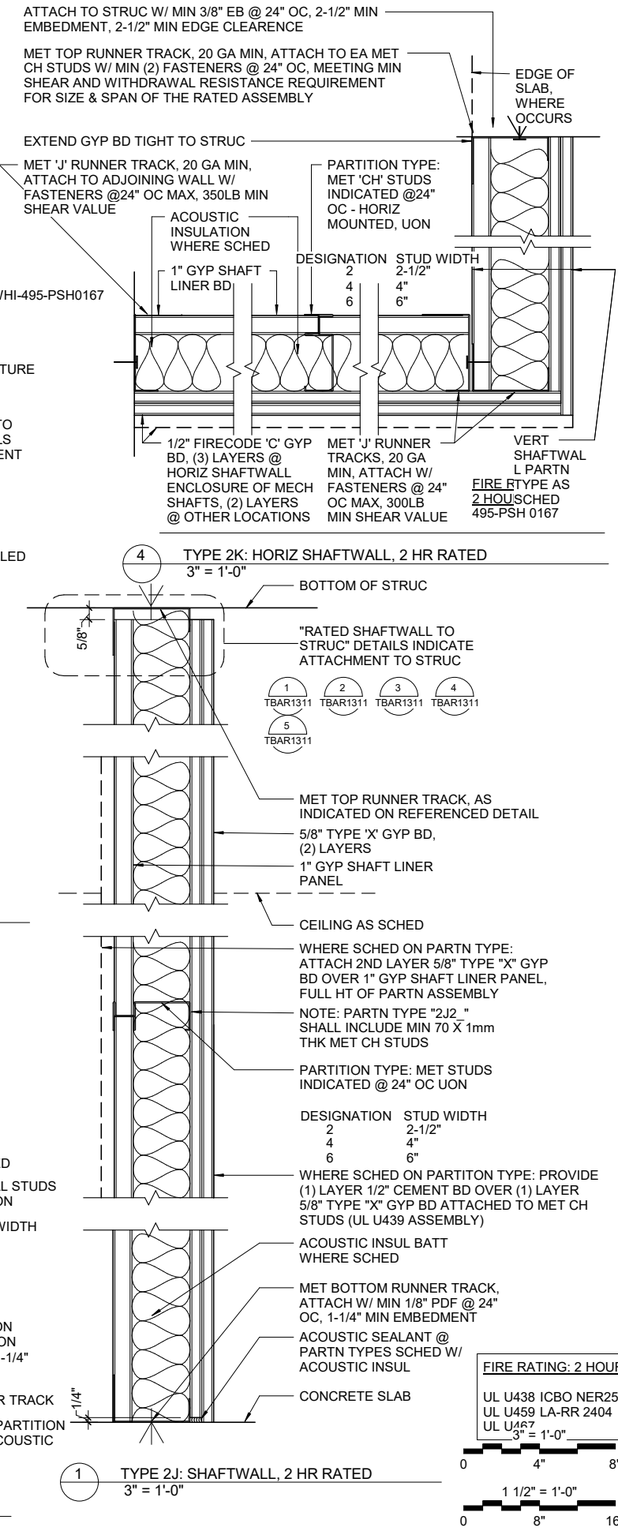
6 TYPE 1M: FULL HT PARTN, 1 HR RATED
1 1/2" = 1'-0"



3 TYPE 2M: FULL HT PARTN, 2 HR RATED
1 1/2" = 1'-0"



2 TYPE G: FULL HT FURRING
3" = 1'-0"



4 TYPE 2K: HORIZ SHAFTWALL, 2 HR RATED
3" = 1'-0"

1 TYPE 2J: SHAFTWALL, 2 HR RATED
3" = 1'-0"

FIRE RATING: 2 HOURS

UL U438 ICBO NER258
UL U459 LA-RR 2404
UL U457

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

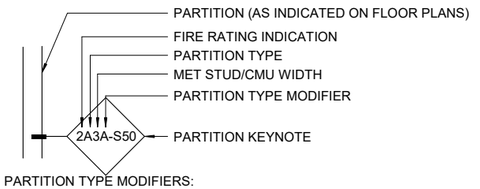
PARTITION TYPE GENERAL NOTES

THE "PARTITION TYPE TAG", ILLUSTRATED BELOW, INDICATES THE ASSEMBLY OF THE COMPLETE EXTENT OF EACH PARTITION INDICATED BY THE TAG ON THE FLOOR PLANS, AND OTHER DRAWINGS IN THE PROJECT DOCUMENTS. REFER TO PARTITION TYPE DETAILS INDICATED BY THE "PARTITION TYPE" CHARACTER ON THE TAG, FOR EXAMPLE: PARTITION TAG ID "A" = REFERENCE TO DETAIL "TYPE A". REFER TO THE "FIRE RATING LEGEND" BELOW FOR THE FIRE-RESISTANCE CLASSIFICATION NOTED BY THE "FIRE RATING INDENTIFICATION" ON THE TAG, FOR EXAMPLE: "1" = 60 MIN FIRE-RESISTANCE RATED PARTITION ASSEMBLY. THE "METAL STUD/CMU NOM WIDTH" CHARACTER ON THE TAG, AND AS SHOWN ON PARTITION TYPE DETAILS, INDICATES THE METAL STUD OR CMU NOM WIDTH. OR EXAMPLE: "3" = 3-5/8" METAL STUDS.
THE "PARTITION TYPE MODIFIER" CHARACTERS REFER TO THE "PARTITION TYPE MODIFIER" NOTES SHOWN BELOW, WHICH APPLY TO THE COMPLETE EXTENT OF EACH PARTITION WHERE SO TAGGED.
THE "PARTITION KEYNOTE" CHARACTERS REFER TO NOTES SHOWN ON DRAWING KEYNOTE LEGENDS, WHICH APPLY TO THE COMPLETE EXTENT OF EACH PARTITION SO TAGGED. FOR EXAMPLE, "S50" = PARTITION SHALL COMPLY WITH SOUND TRANSMISSION CLASS LEVEL STC-50.

GENERAL NOTES - IBC SEISMIC CATEGORY A-C:
ALL METAL STUD PARTN TYPES SHALL COMPLY WITH PARTN TYPE GENERAL NOTES, AND THE "METAL STUD SPAN SCHEDULE" INDICATING MIN METAL STUD WIDTH, SPACING, GAUGE, AND LIMITING VERT SPAN.

GENERAL NOTES - IBC SEISMIC CATEGORY D-F:
ALL METAL STUD PARTN TYPES SHALL COMPLY WITH PARTITION TYPE GENERAL NOTES, AND ALL METAL STUDS SHALL BE MIN 20 GA, UON.
ALL CMU PARTN TYPES SHALL COMPLY WITH PARTITION TYPE GENERAL NOTES, AND REINFORCING AS INDCIATED ON THE STRUCTURAL DRAWINGS, UON.

PARTITION TYPE TAG:



PARTITION TYPE MODIFIERS:

THE FOLLOWING NOTES APPLY TO THE FULL EXTENT OF EACH PARTN, WHERE "PARTN TYPE MODIFIER" CHARACTER(S) ARE SHOWN ON THE TAG:
A. PROVIDE ACOUSTIC BATT INSUL FULL DEPTH OF EACH METAL STUD CAVITY
B. PROVIDE ACOUSTIC BATT INSUL FULL DEPTH OF EACH MET STUD CAVITY, AND ACOUSTIC BATT INSUL ABOVE TOP OF PARTN, MIN 24" EACH DIRECTION PERPENDICULAR TO PARTN
C. PROVIDE (1) ADDITIONAL LAYER OF 5/8" GYP BD ATTACHED TO (1) SIDE OF SCHED PARTN TYPE AS INDICATED, EXTEND FULL HT OF PARTN, PROVIDE ACOUSTIC BATT INSUL FULL WIDTH OF EACH STUD CAVITY
D. PROVIDE (1) ADDITIONAL LAYER OF 5/8" GYP BD ATTACHED TO BOTH SIDES OF SCHED PARTN TYPE, EXTEND FULL HT OF PARTN, PROVIDE ACOUSTIC BATT INSUL FULL WIDTH OF EACH STUD CAVITY
E. PROVIDE ADDITIONAL LAYERS OF 5/8" GYP BD ATTACHED TO SCHED PARTN TYPE - (2) LAYERS ON (1) SIDE, (1) LAYER ON OPPOSITE SIDE OF PARTN AS INDICATED, EXTEND LAYERS FULL HT OF PARTN, AND PROVIDE ACOUSTIC BATT INSUL FULL WIDTH OF EACH STUD CAVITY
F. PROVIDE (2) ADDITIONAL LAYERS OF 5/8" GYP BD ATTACHED TO BOTH SIDES OF SCHED PARTN TYPE - EXTEND LAYERS FULL HT OF PARTN, PROVIDE ACOUSTIC BATT INSUL FULL WIDTH OF EA STUD CAVITY
G. PROVIDE (1) LAYER 5/8" LAM ACOUSTIC GYP BD (TYPE X ON FIRE-RATED PARTN) ATTACHED TO FACE OF MET STUDS ON (1) SIDE OF SCHED PARTN TYPE IN PLACE OF (1) LAYER OF SCHED GYP BD, AND PROVIDE ACOUSTIC BATT INSUL FULL DEPTH OF EACH MET STUD CAVITY
H. PROVIDE (1) LAYER OF 5/8" LAM ACOUSTIC GYP BD (TYPE X ON FIRE-RATED PARTN) ATTACHED TO FACE OF MET STUDS ON BOTH SIDES OF SCHED PARTN TYPE IN PLACE OF (1) LAYER OF SCHED GYP BD ON BOTH SIDES, AND PROVIDE ACOUSTIC BATT INSUL FULL DEPTH OF EACH MET STUD CAVITY
J. TERMINATE ADDITIONAL LAYERS OF GYP BD AS SCHED @ 4" ABOVE FINISH CLG, UON
K. PROVIDE PARTN TYPE AS SCHED, WITH MET STUDS @ 24" OC
L. PROVIDE PARTN TYPE AS SCHED, WITH MIN 20 GA MET STUDS @ 16" OC
M. PROVIDE PARTN TYPE AS SCHED, WITH MIN 18 GA MET STUDS @ 16" OC
N. PROVIDE PARTN TYPE AS SCHED, WITH MIN 16 GA MET STUDS @ 16" OC
P. PROVIDE (1) LAYER 5/8" WR GYP BD IN PLACE OF THE OUTSIDE LAYER OF GYP BD ON SCHED PARTN TYPE, MOUNT ON EACH FACE OF THE PARTN EXPOSED TO MOISTURE - EXTEND FULL HT OF PARTN UON
Q. PROVIDE (1) LAYER OF 1/2" CEMENT BD IN PLACE OF THE OUTSIDE LAYER OF GYP BD ON THE SCHED PARTN TYPE, MOUNT ON EACH FACE OF PARTN INDICATED W/ CERAMIC TILE OR OTHER FINISH
R. PROVIDE METAL CLADDING PANEL AS SCHEDULED TO PARTITION
S. PARTN TYPE 2J: ATTACH 2ND LAYER TYPE X GYP BD OVER 1" GYP SHAFT LINER BD, FULL HT OF SHAFT WALL PARTN
T. PROVIDE THERMAL INSUL BATT FULL HT IN EACH STUD CAVITY, AS SPECIFIED
U. PROVIDE THERMAL INSULATION BATT FULL HEIGHT IN EACH STUD CAVITY, AS SPECIFIED.

FIRE RATING LEGEND

THE COMPLETE ASSEMBLY OF EACH PARTITION WITH A FIRE RATING INDICATION SYMBOL SHOWN ON THE TAG, SHALL COMPLY WITH ALL REQUIREMENTS OF THE FIRE-RESISTANCE RATING CLASSIFICATION:

SYMBOL	RATING CLASSIFICATION
<OMITTED>	NON-RATED PARTITION, UON
1	60 MIN FIRE-RESISTANCE RATED FIRE PARTITION
1S	60 MIN FIRE-RESISTANCE RATED & SMOKE BARRIER PARTITION
2	120 MIN FIRE-RESISTANCE RATED FIRE BARRIER
3	180 MIN FIRE-RESISTANCE RATED FIRE BARRIER
4	240 MIN FIRE-RESISTANCE RATED FIRE BARRIER

PARTITION KEYNOTES

THE FOLLOWING NOTES APPLY TO THE FULL EXTENT OF EACH PARTN, WHERE "PARTN KEYNOTE" CHARACTER(S) ARE SHOWN ON THE TAG: S-- KEYNOTE "S" INDICATES THE COMPLETE PARTN ASSEMBLY SHALL COMPLY WITH THE SOUND TRANSMISSION CLASS LEVEL AS INDICATED - FOR EXAMPLE, S50 = STC 50.

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SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming



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

CITY OF PHOENIX AVIATION DEPARTMENT

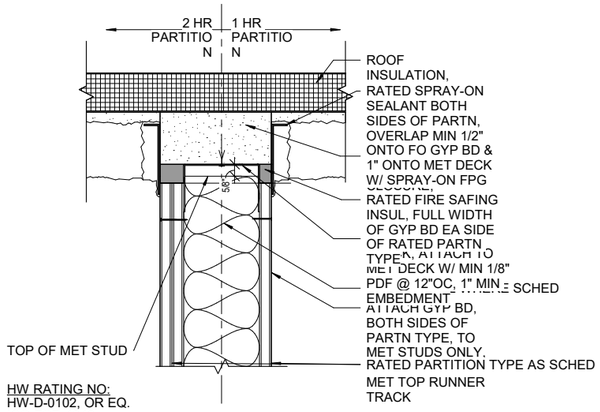
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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - PARTITIONS AND WALL FINISH SYSTEMS

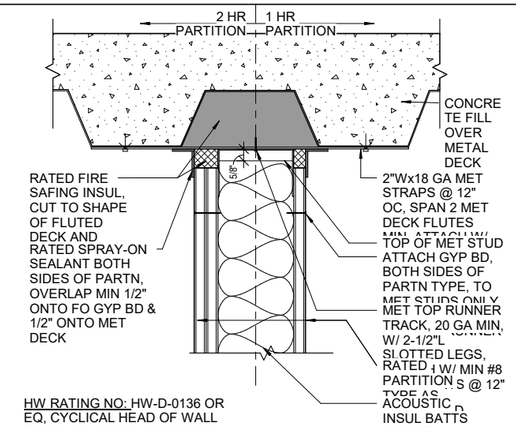
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Project Number: 21722
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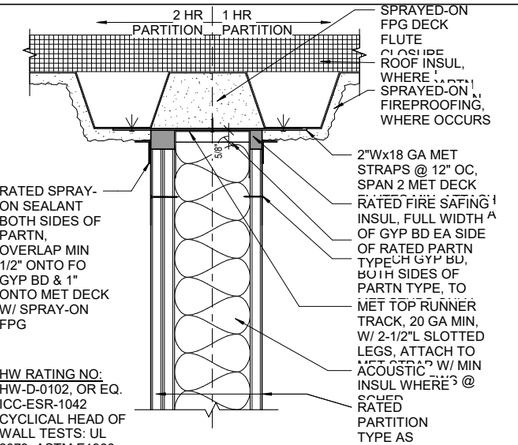
HW RATING NO:
HW-D-0102, OR EQ.
ICC-ESR-1042
CYCLICAL HEAD OF WALL TESTS:
UL 2079, ASTM E1966

7 RATED PARTN TO STRUC MET DECK ROOF A910-3021C
3" = 1'-0"



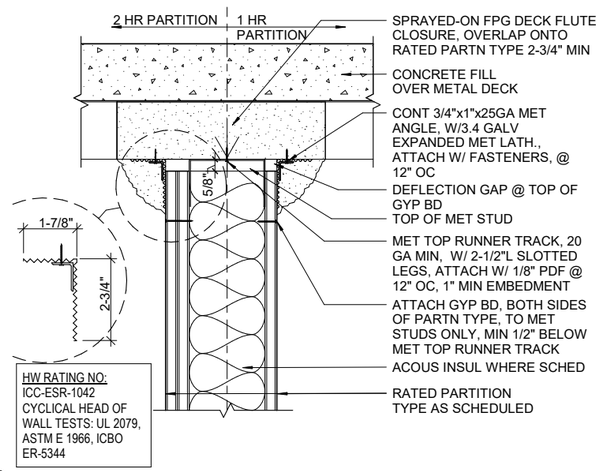
HW RATING NO: HW-D-0136 OR EQ, CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E 1966, ICC-ESR-1042

6 RATED PARTITION TO STRUC MET DECK A910-3012D
3" = 1'-0"



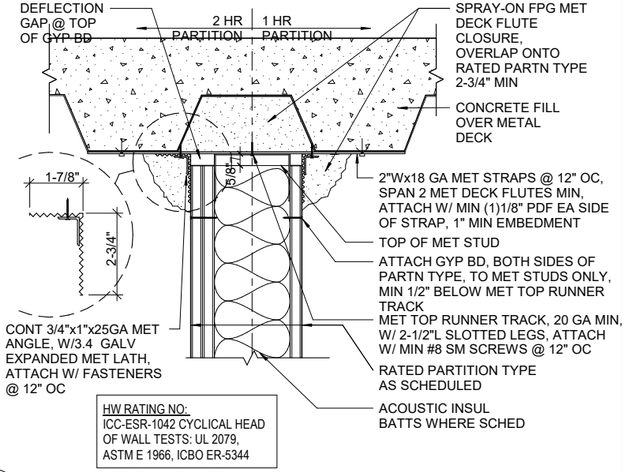
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HW-D-0102, OR EQ.
ICC-ESR-1042
CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E1966

8 RATED PARTN TO STRUC MET DECK ROOF A910-3021D
3" = 1'-0"



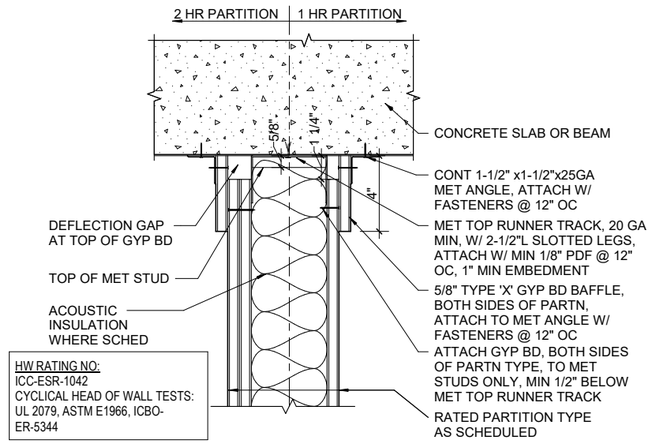
HW RATING NO:
ICC-ESR-1042
CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E 1966, ICBO ER-5344

1 RATED PARTN TO STRUC MET DECK
3" = 1'-0"



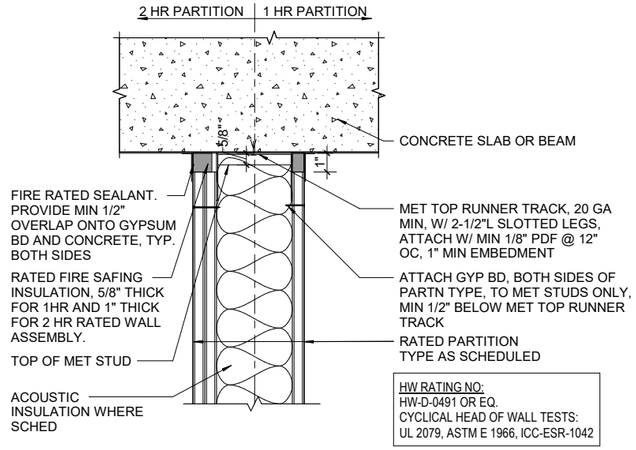
HW RATING NO:
ICC-ESR-1042 CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E 1966, ICBO ER-5344

2 RATED PARTITION TO STRUC MET DECK
3" = 1'-0"



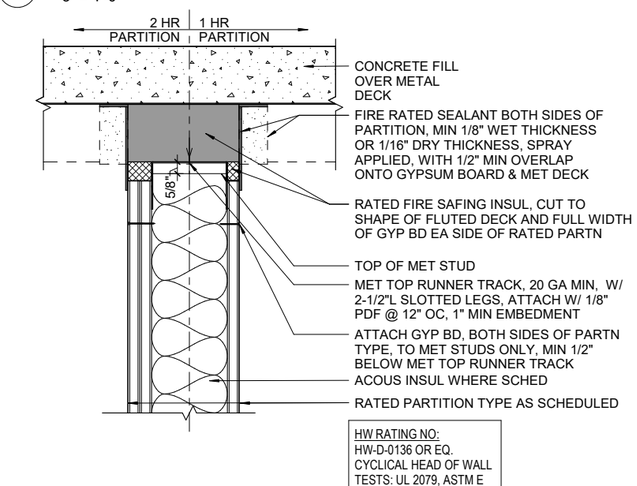
HW RATING NO:
ICC-ESR-1042
CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E1966, ICBO-ER-5344

3 RATED PARTN TO STRUC @ CONC
3" = 1'-0"



HW RATING NO:
HW-D-0491 OR EQ.
CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E 1966, ICC-ESR-1042

4 RATED PARTN TO STRUC @ CONC
3" = 1'-0"



HW RATING NO:
HW-D-0136 OR EQ.
CYCLICAL HEAD OF WALL TESTS: UL 2079, ASTM E 1966, ICC-ESR-1042

5 RATED PARTN TO STRUC MET DECK
3" = 1'-0"

3" = 1'-0"
0 4" 8"

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

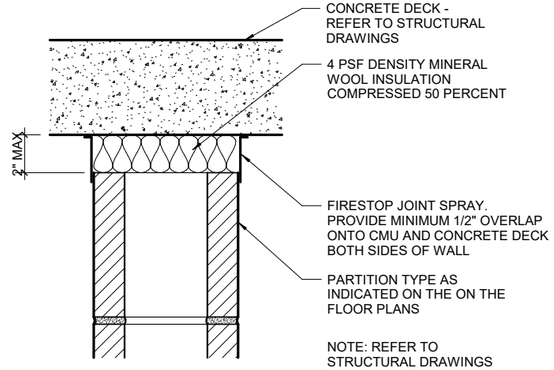
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - PARTITIONS AND WALL FINISH SYSTEMS

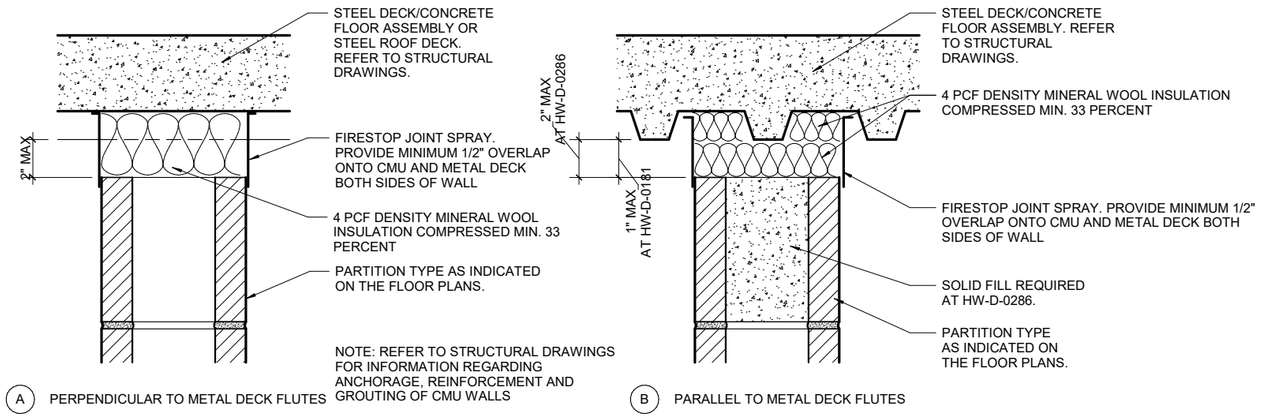
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Sheet Reference No: V5 - 093 of 218

Project Number: 21722
7/11/2018 3:15:55 PM
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AT CMU WALL AND METAL DECK - (UL DESIGN NO. HW-D-0097)

1 TYPICAL FIRE-RATED PARTITION HEAD DETAIL (CMU) - 1 AND 2 HOUR RATED
3" = 1'-0"



AT CMU WALL AND METAL DECK - (UL DESIGN NO. HW-D-0098, HW-D-0181, HW-D-0286)

2 TYPICAL FIRE-RATED PARTITION CMU HEAD - 1 AND 2 HR RATED
3" = 1'-0"

3" = 1'-0"
0 4" 8"

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ARIZONA REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

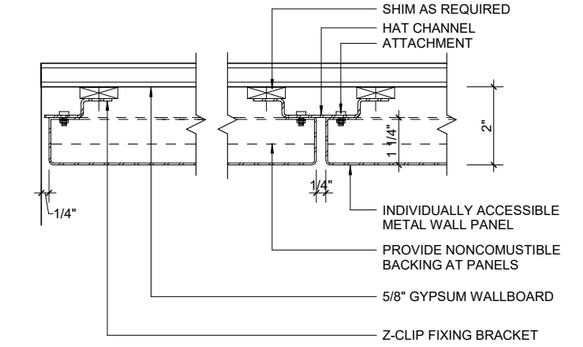
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Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

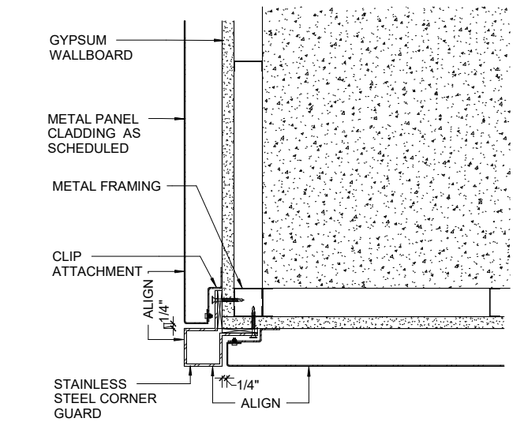
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - PARTITIONS AND WALL FINISH SYSTEMS

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Sheet Reference No: V5 - 094 of 218

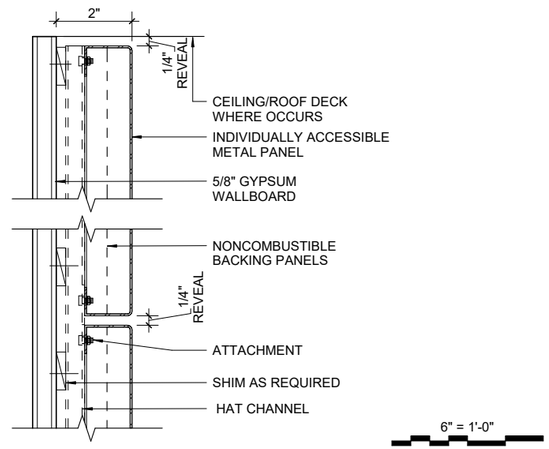
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1 VERTICAL REVEAL AT METAL CLADDING
6" = 1'-0"



3 METAL PANEL CLADDING - OUTSIDE CORNER
3" = 1'-0"



4 HORIZONTAL REVEAL AT METAL CLADDING
6" = 1'-0"

Project Number: 21722
7/11/2018 3:15:56 PM

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

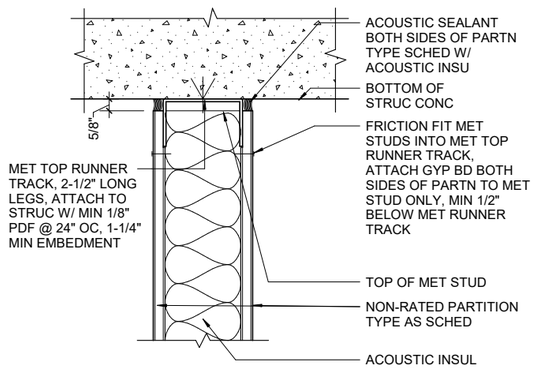
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

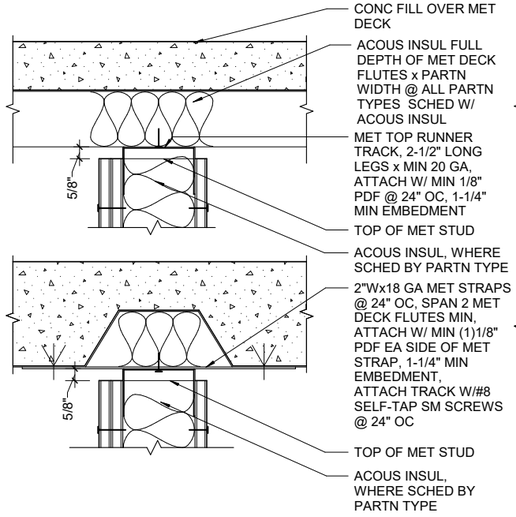
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - PARTITIONS AND WALL FINISH SYSTEMS

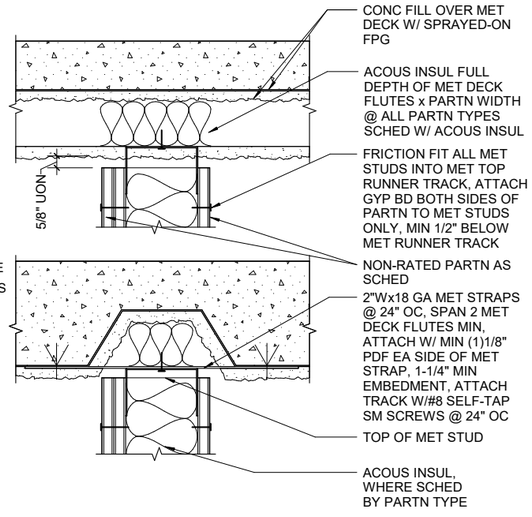
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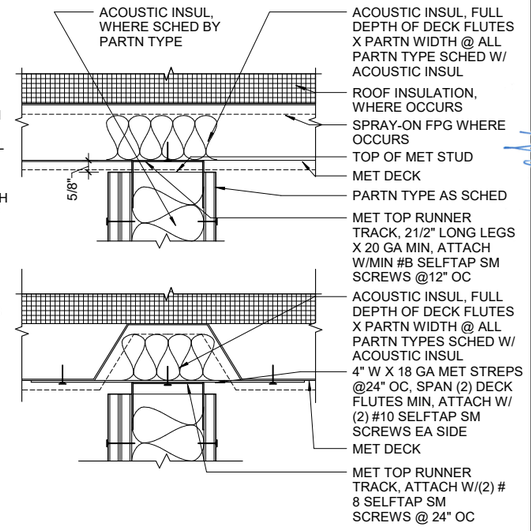
1 NON-RATED PARTN TO STRUC @ CONC
3" = 1'-0" A910-3110A



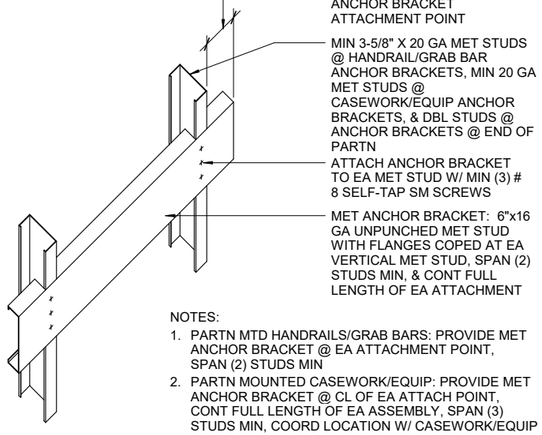
2 NON-RATED PARTN TO STRUC@MET DECK
3" = 1'-0" A910-3111B



3 NON-RATED PARTN TO STRUC@MET DECK
3" = 1'-0" A910-3111A

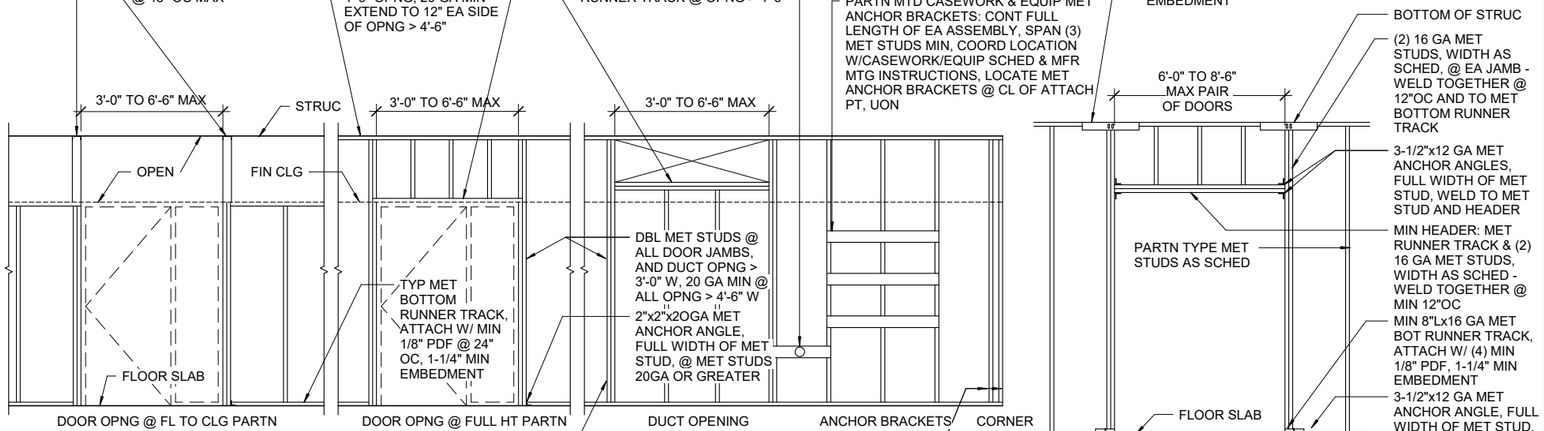


4 NON-RATED PARTN TO STRUC@MET DECK
3" = 1'-0" A910-3111C



NOTES:
1. PARTN MTD HANDRAILS/GRAB BARS: PROVIDE MET ANCHOR BRACKET @ EA ATTACHMENT POINT, SPAN (2) STUDS MIN
2. PARTN MOUNTED CASEWORK/EQUIP: PROVIDE MET ANCHOR BRACKET @ CL OF EA ATTACH POINT, CONT FULL LENGTH OF EA ASSEMBLY, SPAN (3) STUDS MIN, COORD LOCATION W/ CASEWORK/EQUIP SCHED & MFR MOUNTING INSTRUCTIONS

5 TYP MET STUD ANCHOR BRACKET
1 1/2" = 1'-0" A910-3212A



6 TYP MET STUD FRAMING DIAGRAM
3/8" = 1'-0" A910-3211A

7 MET STUD FRAMING@HOLD-OPEN DOORS
3/8" = 1'-0" A910-3211B

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

3/8" = 1'-0"
0 2' 4'

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

CITY OF PHOENIX AVIATION DEPARTMENT

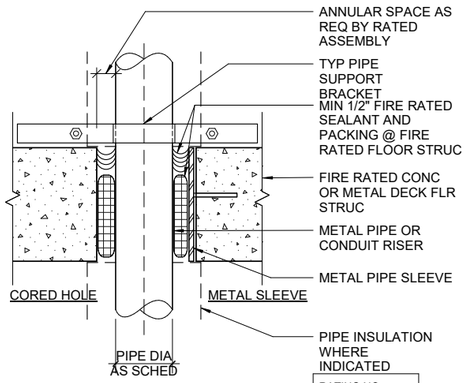
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

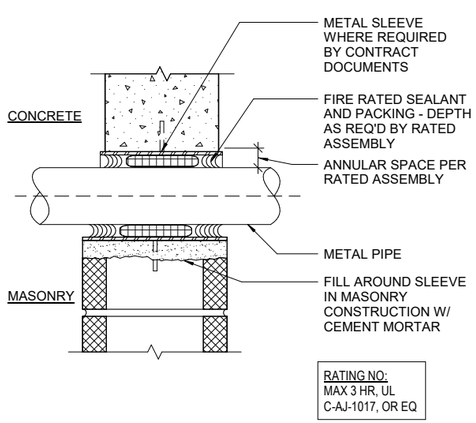
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - PARTITIONS AND WALL FINISH SYSTEMS

Package: B04 - RBAR1314
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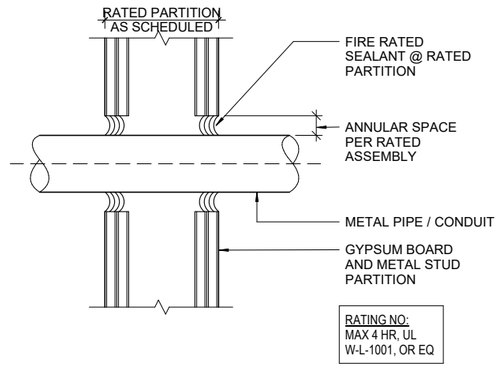
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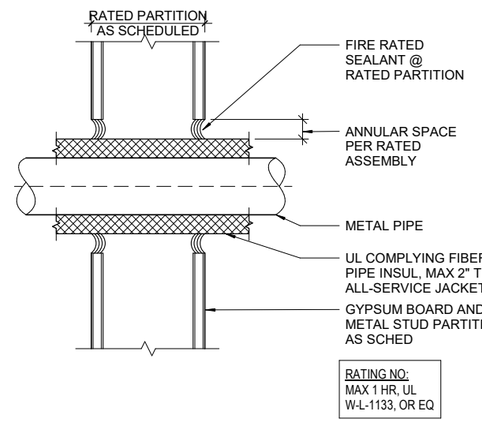
1 TYP PIPE/CONDUIT THRU RATED CONC FLOOR
3" = 1'-0"



2 TYP PIPE/CONDUIT THRU CONC/CMU RATED WALL
3" = 1'-0"



3 TYP PIPE/CONDUIT THRU RATED GYP BD PARTN
3" = 1'-0"



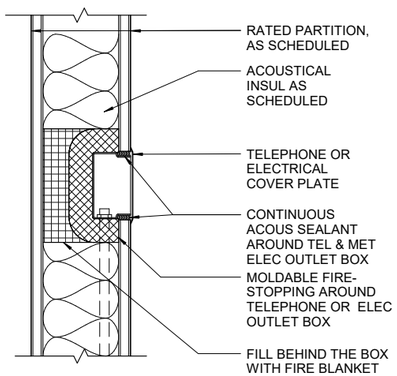
4 TYP INSUL PIPE THRU RATED GYP BD PARTN
3" = 1'-0"

5 TYP PLASTIC PIPE THRU RATED CONC FLOOR
3" = 1'-0"

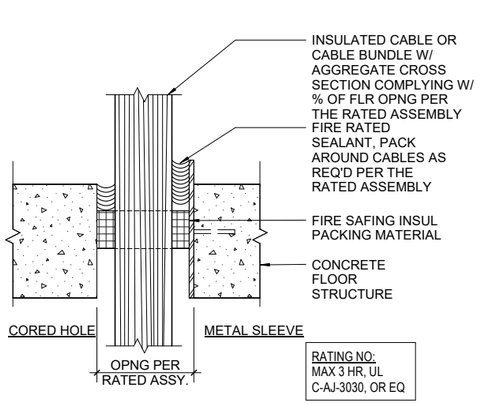
6 TYP PLASTIC PIPE THRU RATED CONC/CMU WALL
3" = 1'-0"

7 TYP PLASTIC PIPE THRU RATED GYP BD PARTN
3" = 1'-0"

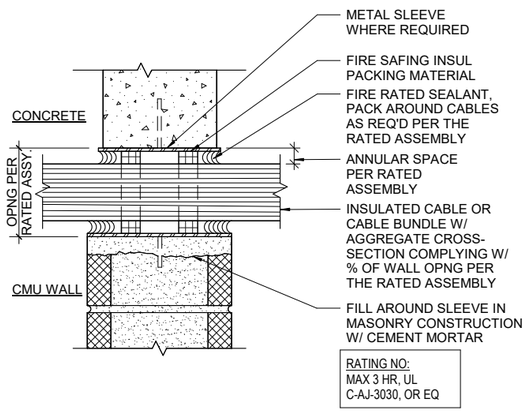
8 TYP "J" BOX @ GYP BD PARTN W/ ACOUS INSUL
3" = 1'-0"



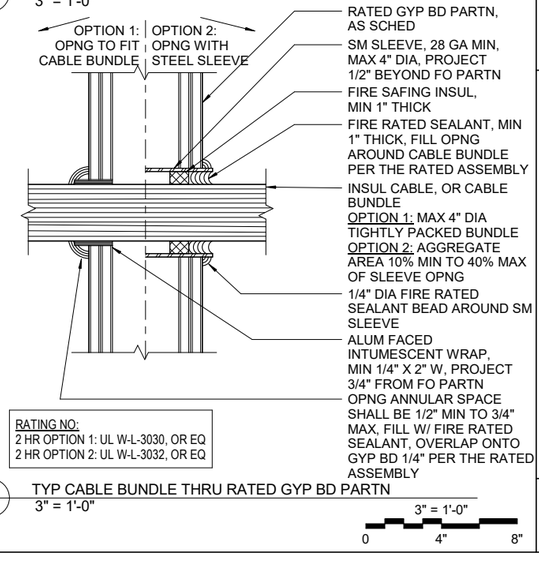
9 TYP "J" BOX @ RATED GYP BD PARTN
3" = 1'-0"



10 TYP INSUL CABLE BUNDLE THRU RATED CONC FLOOR
3" = 1'-0"



11 CABLE BUNDLE THRU CONC/CMU RATED PARTN
3" = 1'-0"



12 TYP CABLE BUNDLE THRU RATED GYP BD PARTN
3" = 1'-0"

3" = 1'-0"
0 4" 8"

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	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

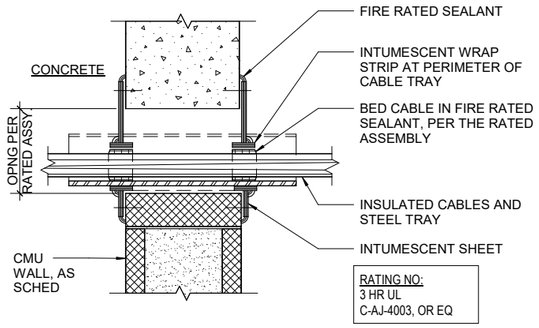
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

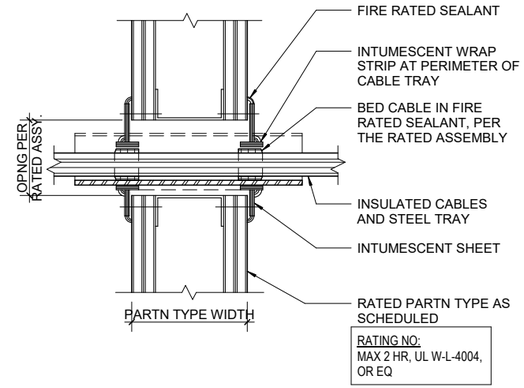
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS -
THROUGH-PENETRATION FIRESTOP SYSTEMS

Package: B04 - RBAR1315
Sheet Reference No: V5 - 097 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:15:58 PM



1 TYP CABLE TRAY THRU CONC/CMU RATED WALL
3" = 1'-0"



2 TYP CABLE TRAY THRU RATED GYP BD PARTN
3" = 1'-0"

3" = 1'-0"
0 4" 8"

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires: 3-31-19

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by: MR
Drawn by: JI, MT, TY
Checked by: KW
Date: 07/13/2018
Dwg scale: AS NOTED
CIP No.: AV10000011
KIVA No.: 07-5204

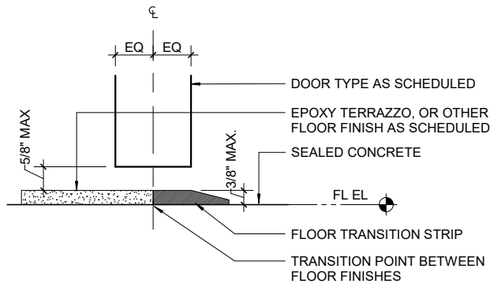
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS -
THROUGH-PENETRATION FIRESTOP SYSTEMS

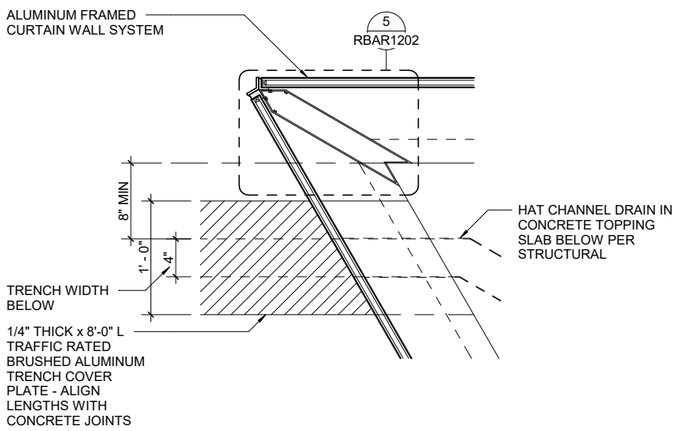
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Project Number: 21722
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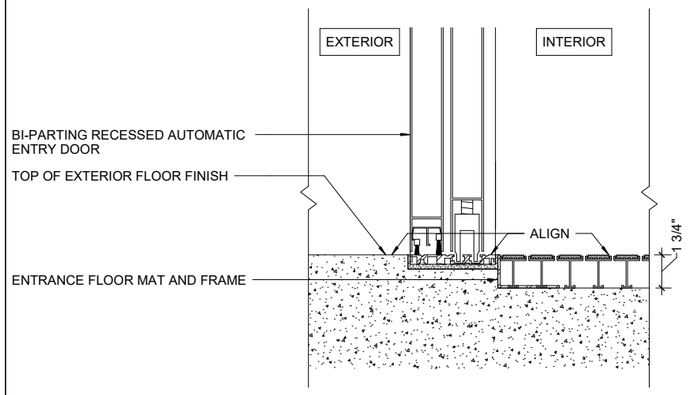
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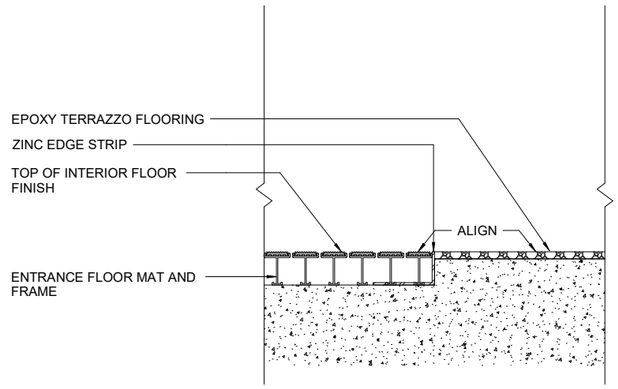
1 FLOOR FINISH TRANSITION
6" = 1'-0"



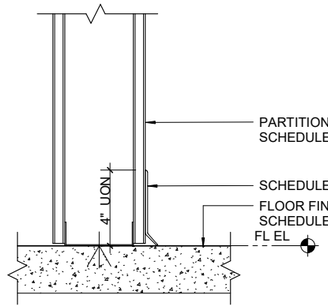
7 TRENCH COVER PLATE
1 1/2" = 1'-0"



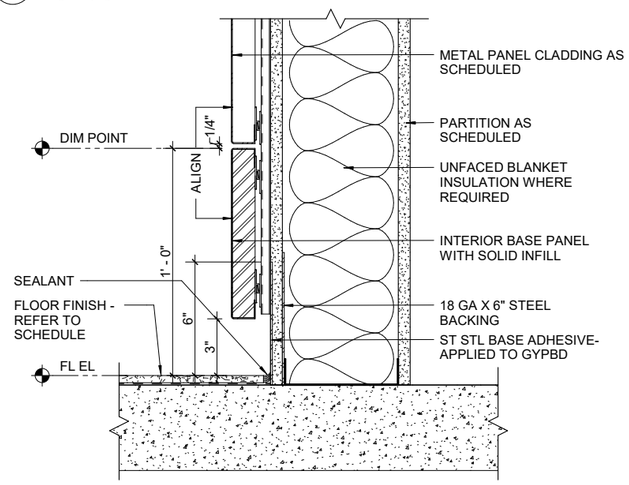
5 ENTRANCE FLOOR MAT AT EXTERIOR SLIDING DOOR SILL
3" = 1'-0"



6 ENTRANCE FLOOR MAT AT TERRAZZO FLOOR (TRANSITION DETAIL)
3" = 1'-0"



3 CONCRETE FLOOR & BASE DETAIL
3" = 1'-0"



4 TYPICAL STAINLESS STEEL BASE DETAIL
3" = 1'-0"

3" = 1'-0"
0 4" 8"

6" = 1'-0"
0 2" 4"

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SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

CITY OF PHOENIX
PHX DVT EYR
PHOENIX AVIATION DEPARTMENT

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

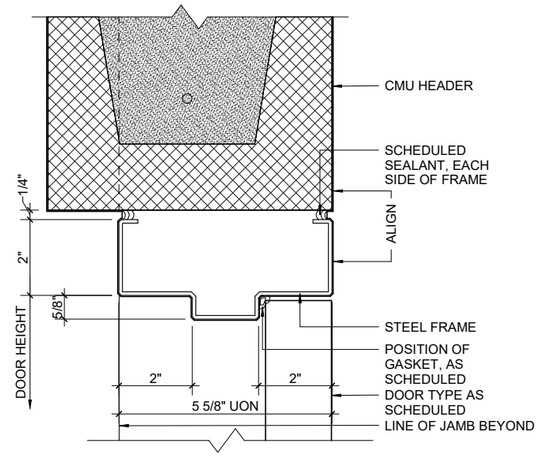
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

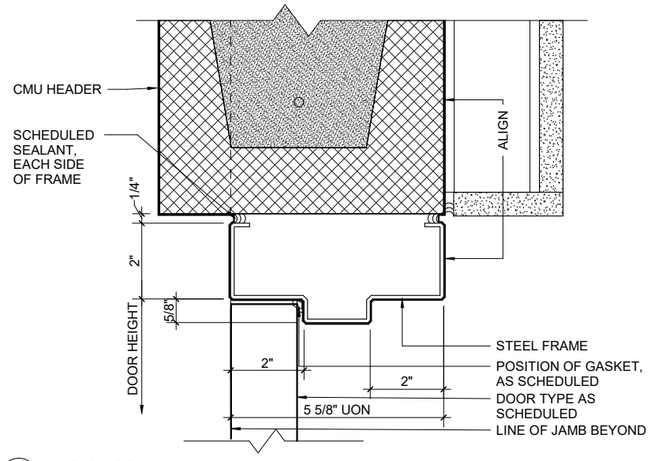
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - FLOOR SYSTEMS

Package: B04 - RBAR1320
Sheet Reference No: V5 - 099 of 218

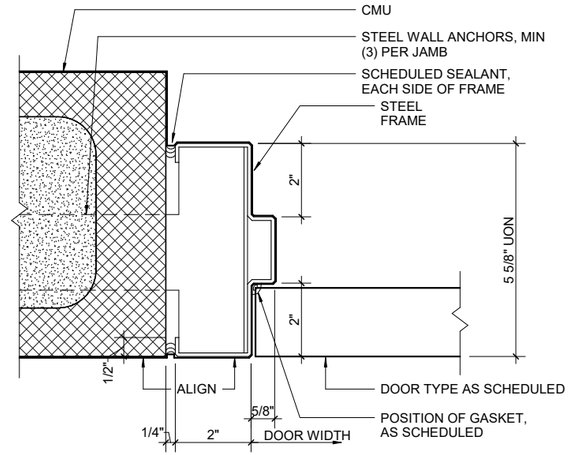
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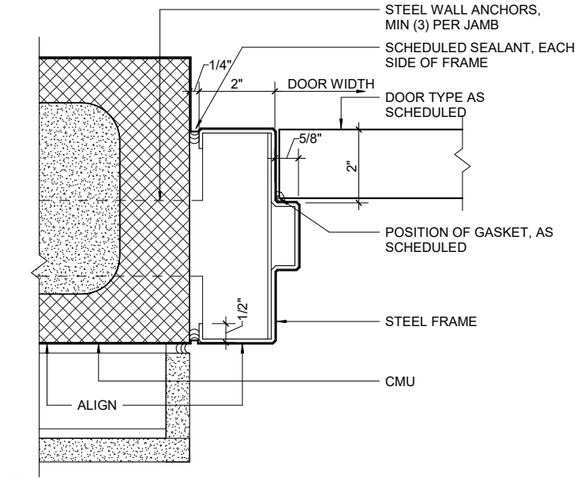
1 HEAD DETAIL
6" = 1'-0"



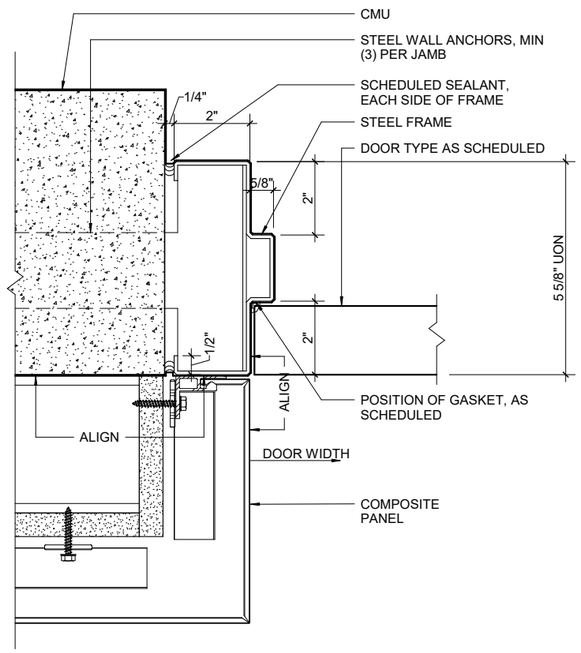
3 HEAD DETAIL
6" = 1'-0"



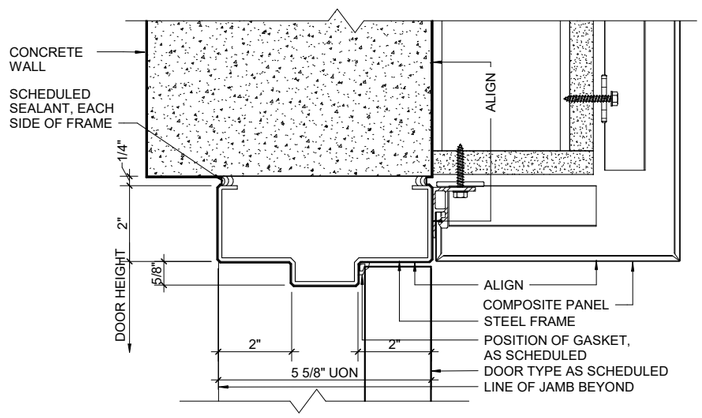
2 JAMB DETAIL
6" = 1'-0"



4 JAMB DETAIL
6" = 1'-0"



5 JAMB DETAIL
6" = 1'-0"



6 HEAD DETAIL
6" = 1'-0"

6" = 1'-0"
0 2" 4"

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Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

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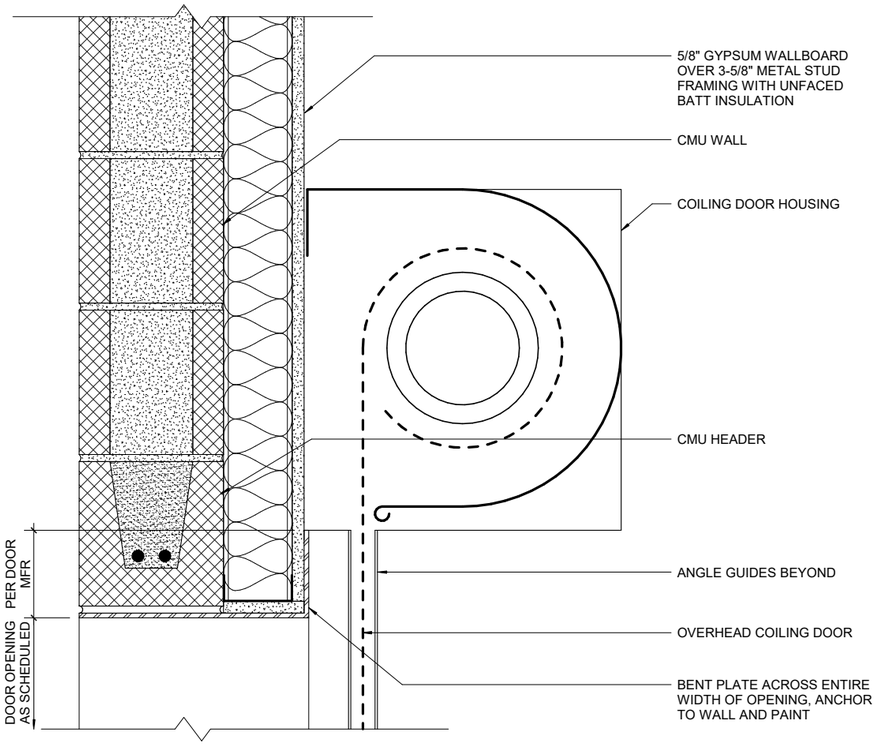
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - DOORS, FRAMES, AND GLAZING

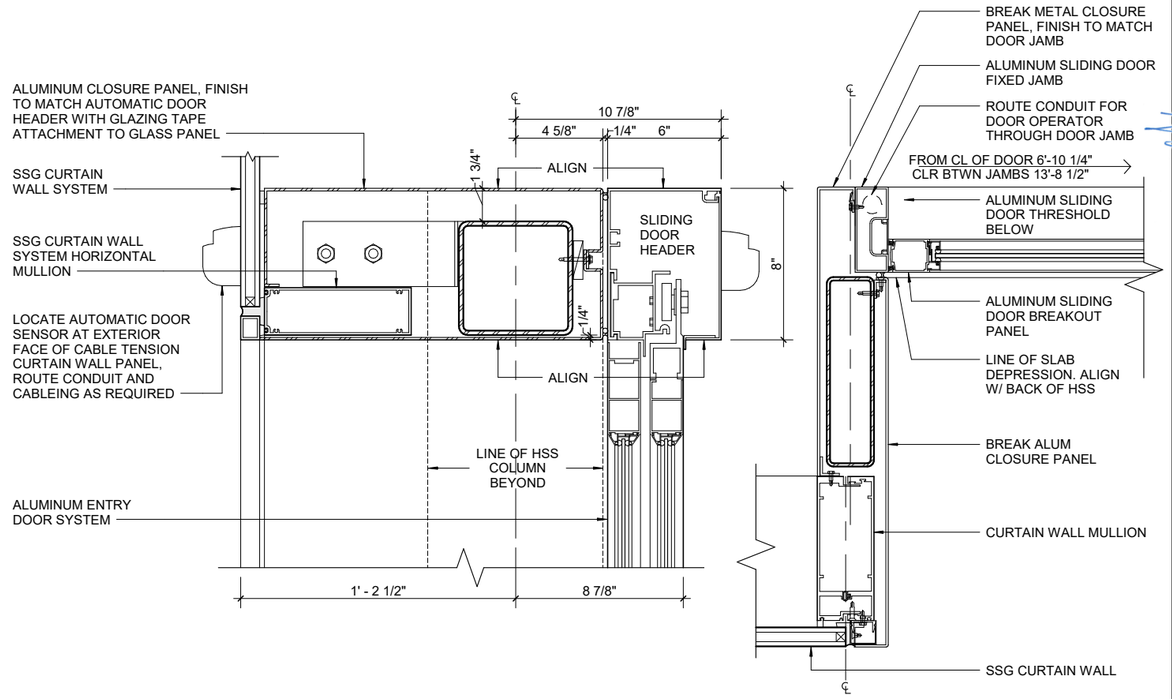
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Sheet Reference No: V5 - 100 of 218

Project Number: 21722
7/11/2018 3:16:00 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

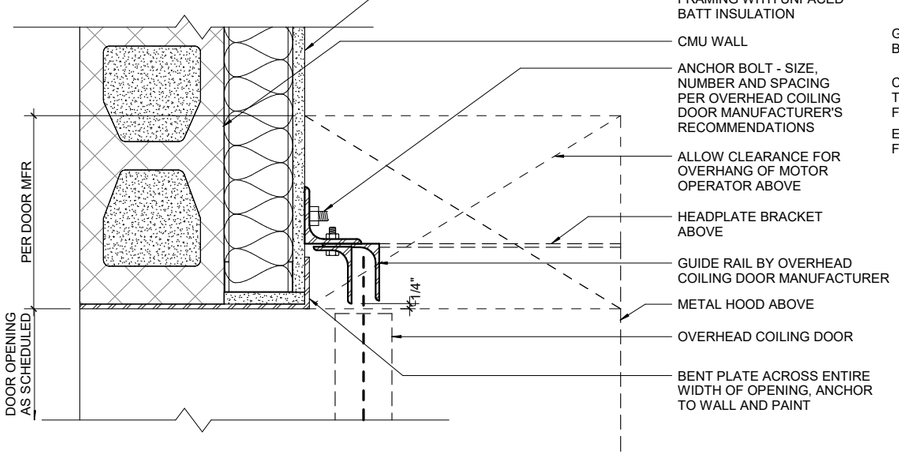


1 HEAD - COILING DOOR
3" = 1'-0"

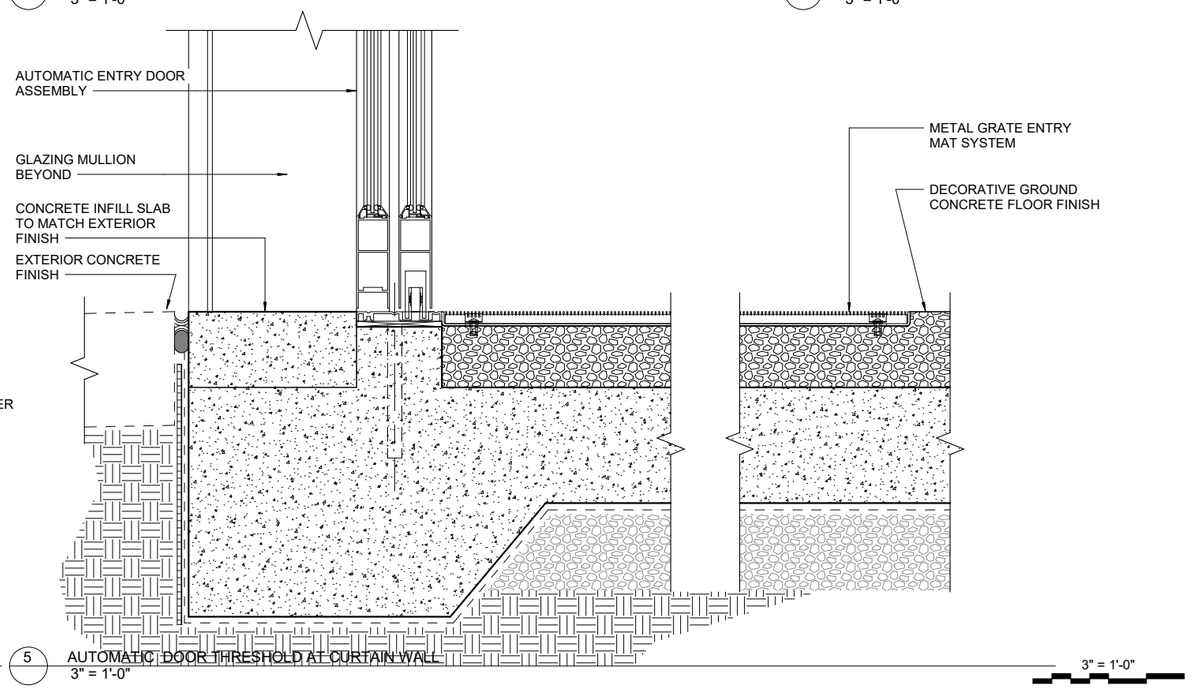


3 AUTOMATIC DOOR HEAD AT CURTAIN WALL
3" = 1'-0"

4 AUTOMATIC DOOR JAMB AT CURTAIN WALL
3" = 1'-0"



2 JAMB - COILING DOOR
3" = 1'-0"



5 AUTOMATIC DOOR THRESHOLD AT CURTAIN WALL
3" = 1'-0"

3" = 1'-0"
0 4" 8"

Local File:BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

Project Number: 21722
7/11/2018 3:16:00 PM

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architecture engineering interiors planning

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Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

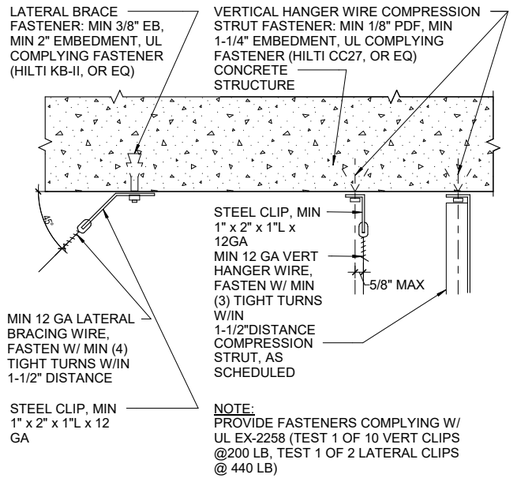
Designed by:	MR
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Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

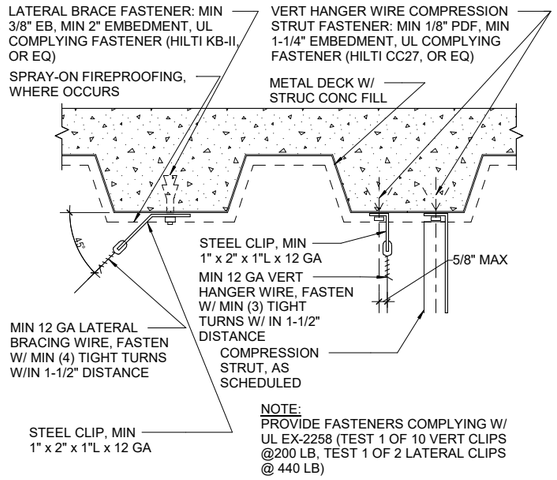
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - DOORS, FRAMES, AND GLAZING

Package: B04 - RBAR1331

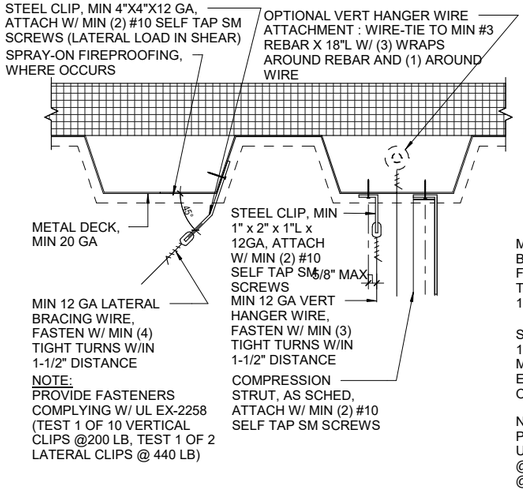
Sheet Reference No: V5 - 101 of 218



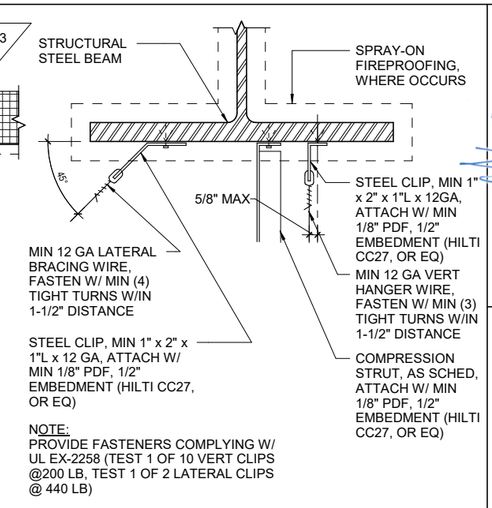
1 WIRE ATTACHMENT - CONC STRUCTURE
3" = 1'-0"



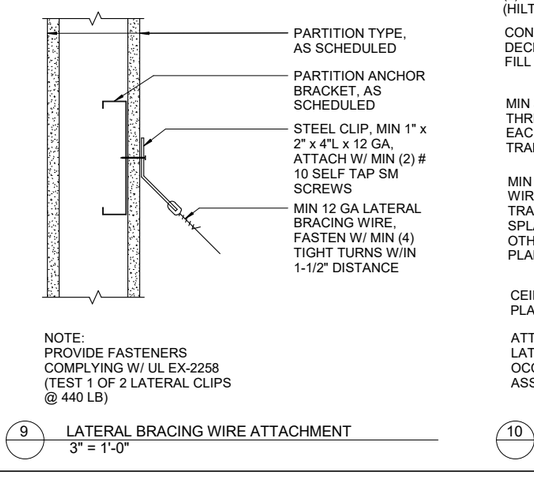
2 WIRE ATTACHMENT - METAL DECK
3" = 1'-0"



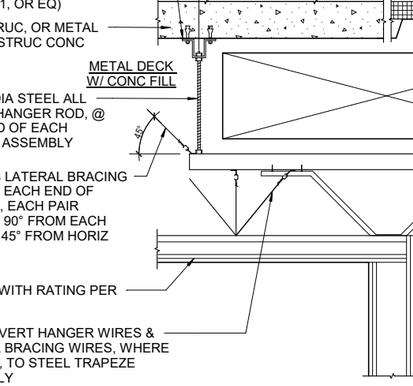
3 WIRE ATTACHMENT-METAL DECK ROOF
3" = 1'-0"



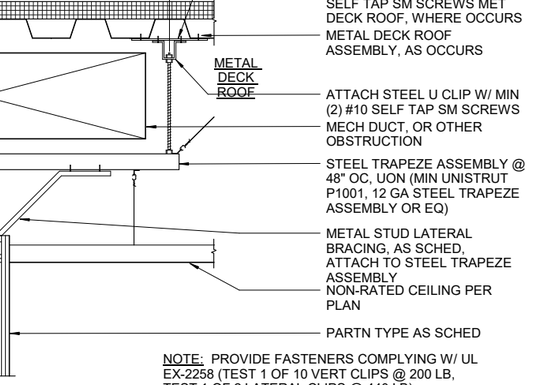
4 WIRE ATTACHMENT - STEEL BEAM
3" = 1'-0"



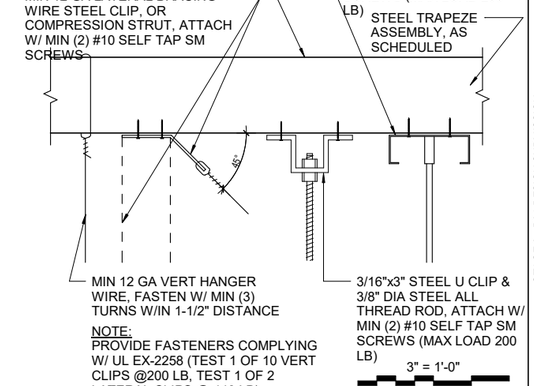
5 WIRE ATTACHMENT - CONC STRUCTURE
3" = 1'-0"



6 WIRE ATTACHMENT - METAL DECK
3" = 1'-0"



7 WIRE ATTACHMENT - NON-STRUC CONC FILL @ MET DECK
3" = 1'-0"



8 ELEC DEVICE ATTACHMENT- METAL DECK DETAIL
3" = 1'-0"

9 LATERAL BRACING WIRE ATTACHMENT
3" = 1'-0"

10 TRAPEZE SUPPORT DETAIL
1" = 1'-0"

11 TRAPEZE CONNECTIONS DETAIL
3" = 1'-0"

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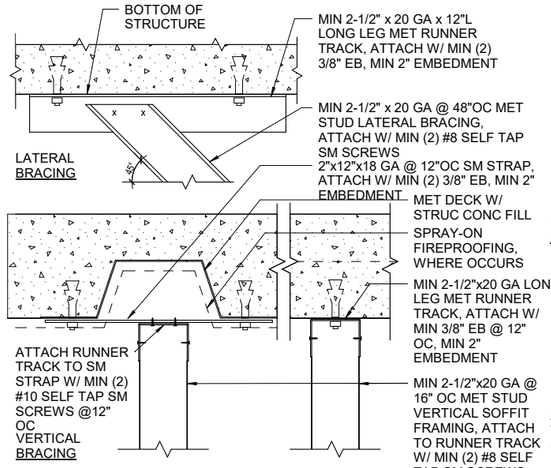
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

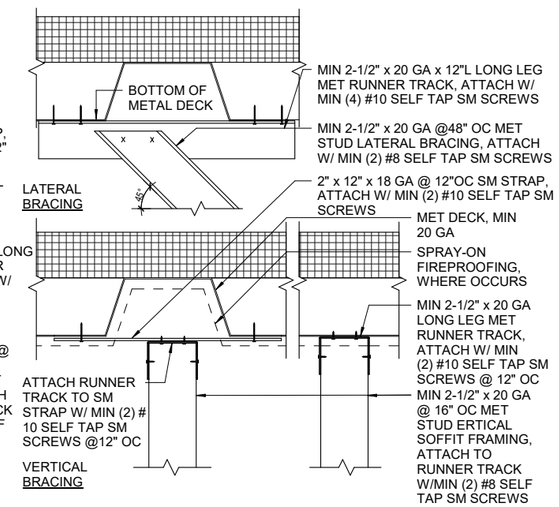
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - CEILING SYSTEMS

Package: B04 - RBAR1340
Sheet Reference No: V5 - 102 of 218

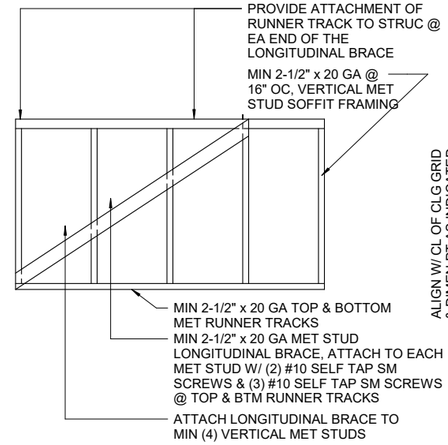
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Project Number: 21722
7/11/2018 3:16:01 PM



1 SOFFIT FRAMING ATTACHMENT DETAIL
3" = 1'-0"

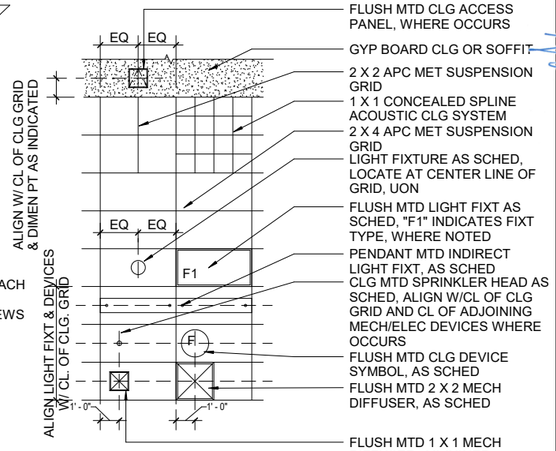


2 SOFFIT FRAMING ATTACHMENT DETAIL
3" = 1'-0"

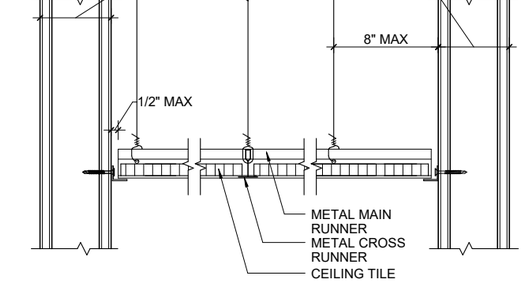


NOTE:
PROVIDE LONGITUDINAL BRACE @MAX 20 FT OC, AT EACH SOFFIT FRAMING ASSEMBLY GREATER THAN 3'H x 8'L

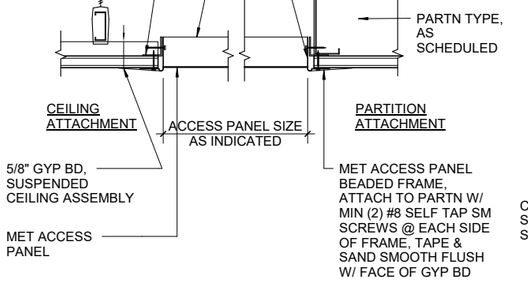
3 SOFFIT FRAMING LONGITUDINAL BRACE
3/4" = 1'-0"



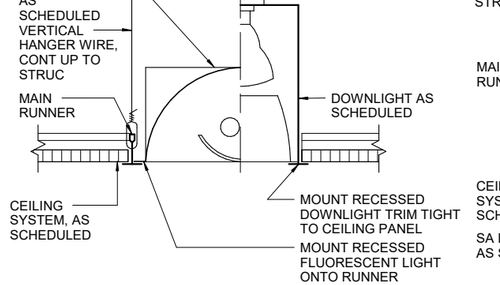
4 CLG SYSTEM RCP/SYMBOL DIAGRAM
1/4" = 1'-0"



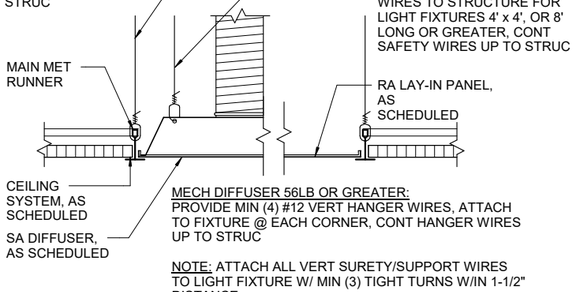
5 SUSPENSION DETAIL
3" = 1'-0"



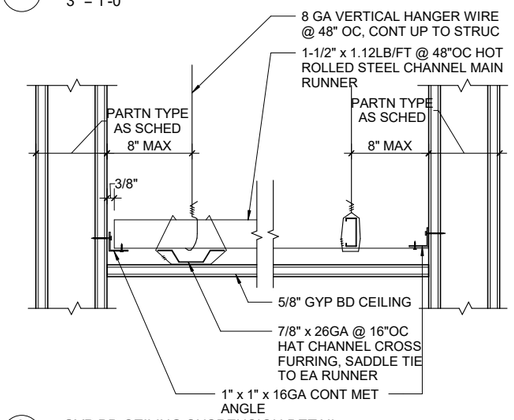
6 ACCESS PANEL DETAIL
3" = 1'-0"



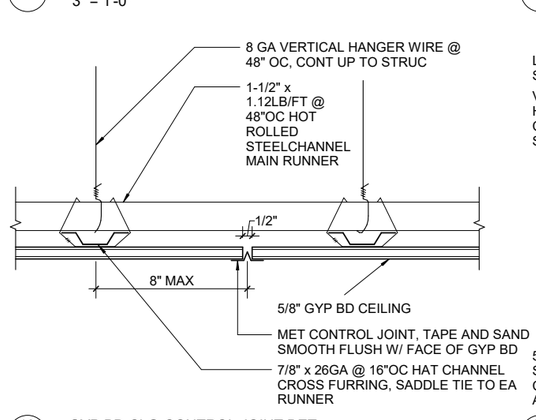
7 RECESSED LIGHT FIXTURE DET
3" = 1'-0"



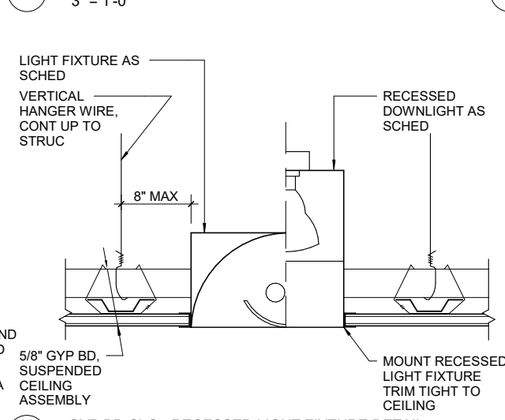
8 MECH DIFFUSER DETAIL
3" = 1'-0"



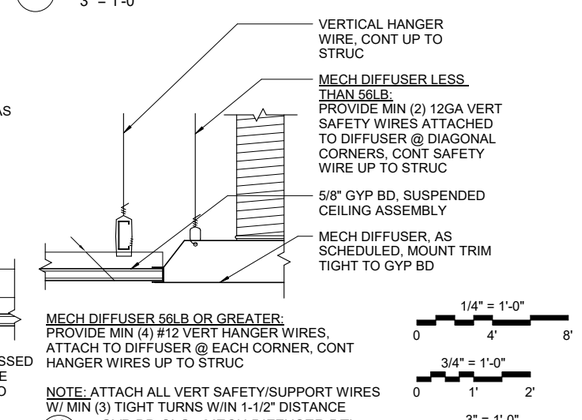
9 GYP BD CEILING SUSPENSION DETAIL
3" = 1'-0"



10 GYP BD CLG-CONTROL JOINT DET
3" = 1'-0"



11 GYP BD CLG - RECESSED LIGHT FIXTURE DETAIL
3" = 1'-0"



12 GYP BD CLG - MECH DIFFUSER DTL
3" = 1'-0"

1/4" = 1'-0"
0 4' 8'
3/4" = 1'-0"
0 1' 2'
3" = 1'-0"
0 4" 8"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

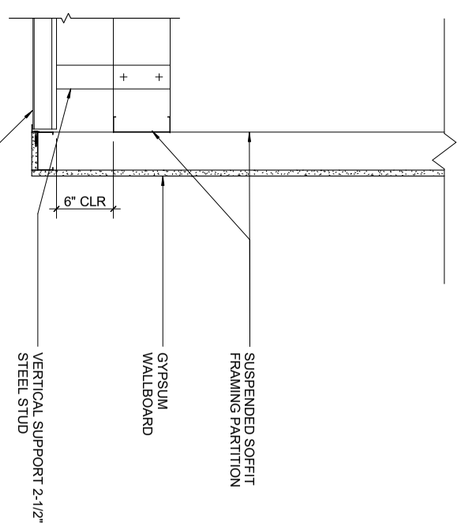
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - CEILING SYSTEMS

Package: B04 - RBAR1341
Sheet Reference No: V5 - 103 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:16:02 PM

5
RBAR1042A TORSION SPRING SOFFIT
1 1/2" = 1'-0"



0 8" 16"
1 1/2" = 1'-0"

Package: B04 - RBAR1342
Sheet Reference No: V5 - 104 of 218

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - CEILING SYSTEMS

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

PHX DVT GYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

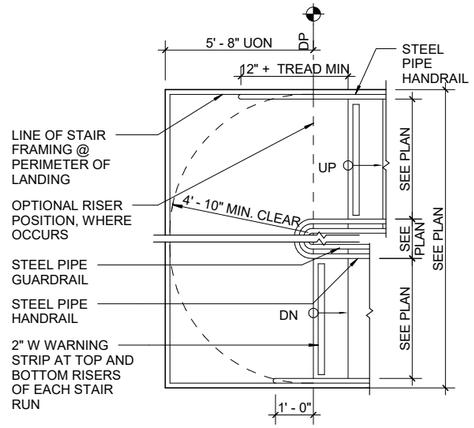
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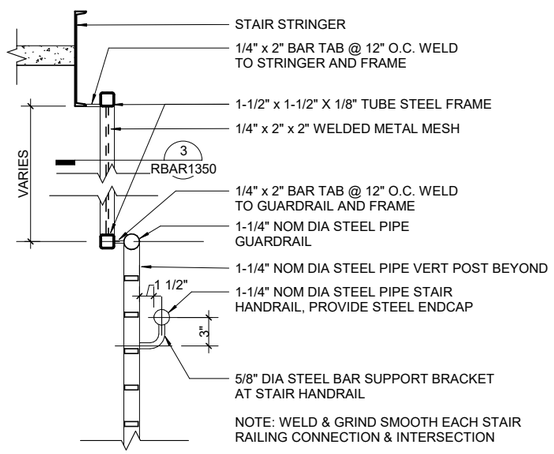
REGISTERED ARCHITECT
CERTIFICATE NO.
35851
MICHAEL L.
KRAGER
Date Signed 7-Dec-2018
ARIZONA, U.S.A.
Expires: 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

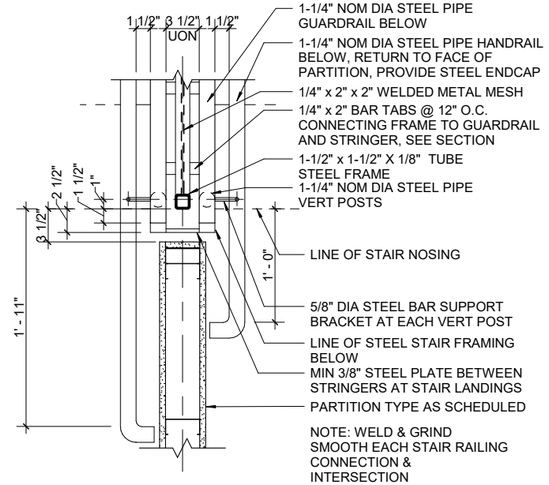
Design Consultant
Gannett Fleming



1 TYPICAL STAIR INTERMEDIATE LANDING PLAN
1/2" = 1'-0"



2 SECTION AT METAL CLOSURE
1 1/2" = 1'-0"



3 PLAN DETAIL AT METAL CLOSURE
RBAR1350 1 1/2" = 1'-0"

4 TYPICAL RAIL DETAIL AT WALL
3/4" = 1'-0"

5 TYPICAL WALL MOUNTED HANDRAIL AT CONCRETE WALL
RBAR0661 3" = 1'-0"

6 TYPICAL STAIR AT FLOOR SLAB DETAIL
RBAR0621 3" = 1'-0"

7 STAIR SECTION DIAGRAM
1/4" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

3/4" = 1'-0"
0 1' 2'

1/2" = 1'-0"
0 2' 4'

1/4" = 1'-0"
0 4' 8'

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

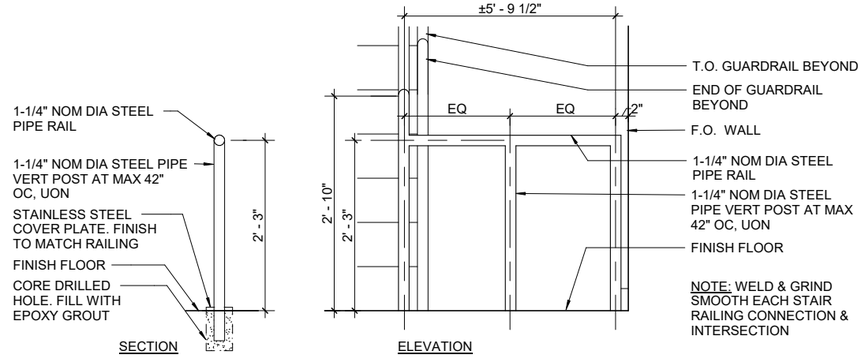
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

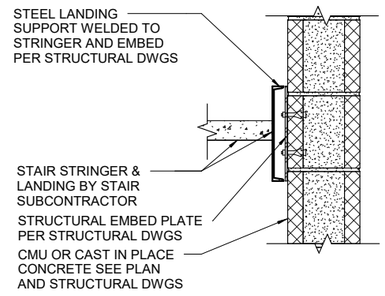
RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - STAIRS AND RAILING SYSTEMS

Package: B04 - RBAR1350
Sheet Reference No: V5 - 105 of 218

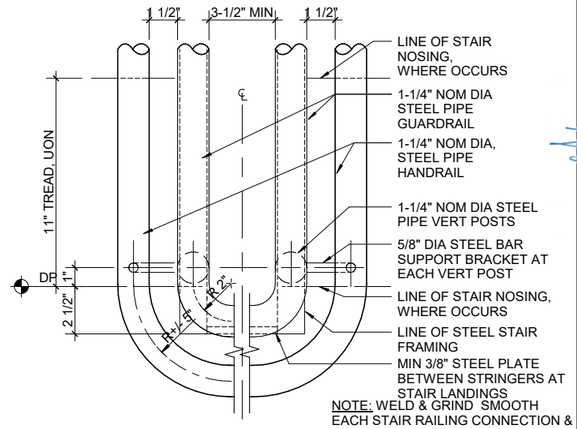
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Project Number: 21722
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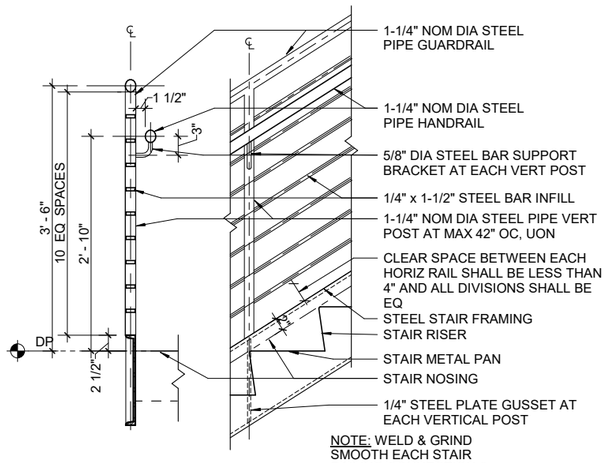
1 TYPICAL GUARD RAIL @ BOTTOM LANDING
1" = 1'-0"



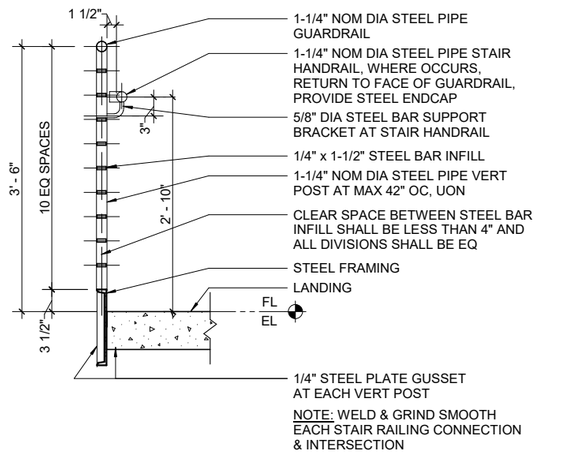
2 LANDING STRUCTURAL SUPPORT AT CMU SHAFTWALL
1 1/2" = 1'-0"



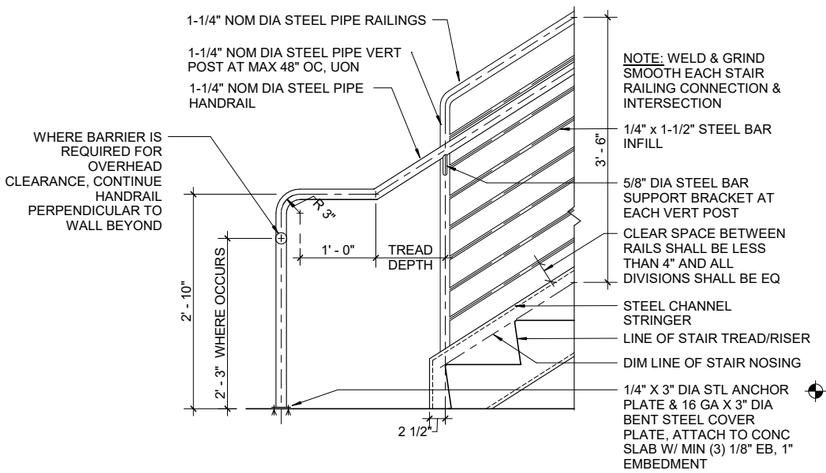
3 TYPICAL STAIR RAILING TRANSITION AT LANDING
3" = 1'-0"



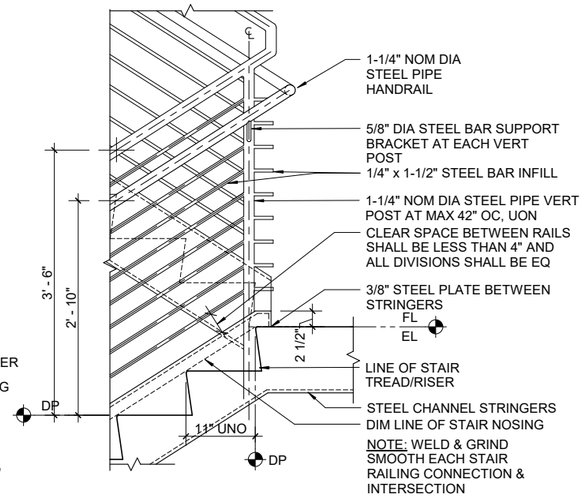
4 TYPICAL STAIR GUARDRAIL SECTION
1" = 1'-0"



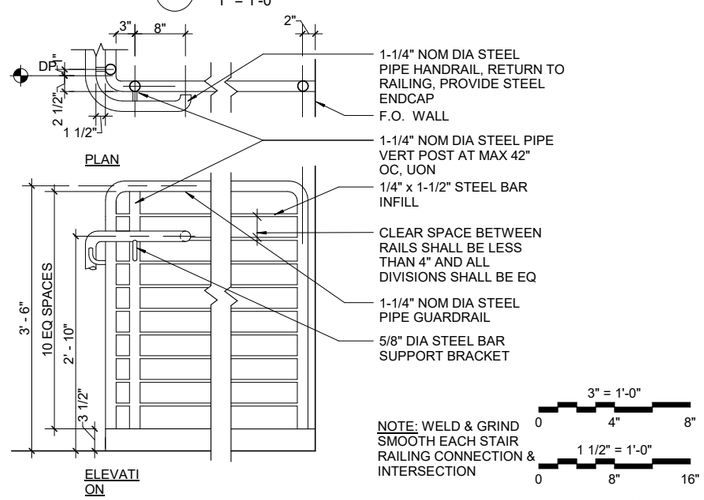
6 TYPICAL GUARDRAIL SECTION
1" = 1'-0"



7 TYPICAL STAIR RAIL TERMINATION AT BOT LANDING
1" = 1'-0"



8 TYPICAL STAIR RAILING TRANSITION AT LANDINGS
1" = 1'-0"



9 TYPICAL STAIR RAIL TERMINATION AT TOP LANDING
1" = 1'-0"

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

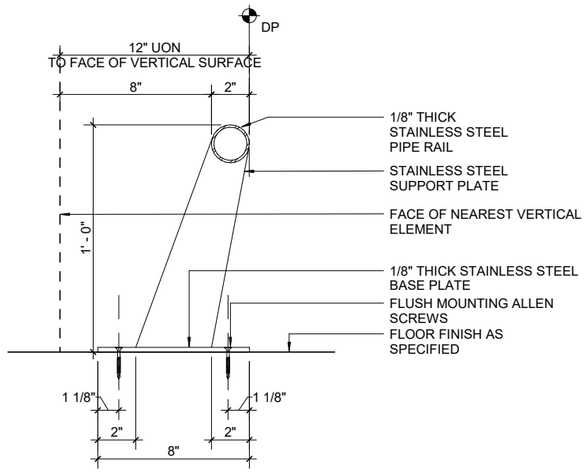
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

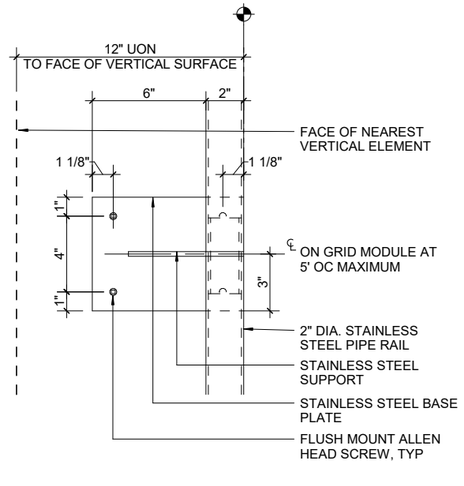
RCC STATION
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INTERIOR DETAILS - STAIRS AND RAILING SYSTEMS

Package: B04 - RBAR1351
Sheet Reference No: V5 - 106 of 218

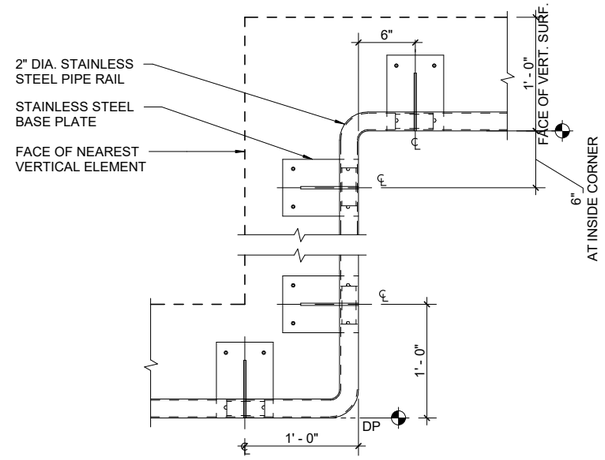
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Project Number: 21722
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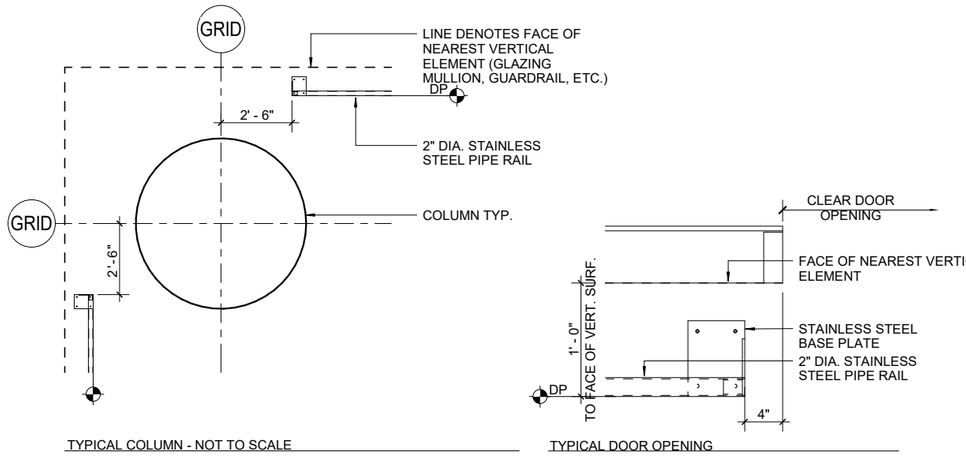
1 BAG CART PROTECTION RAIL SECTION
3" = 1'-0"



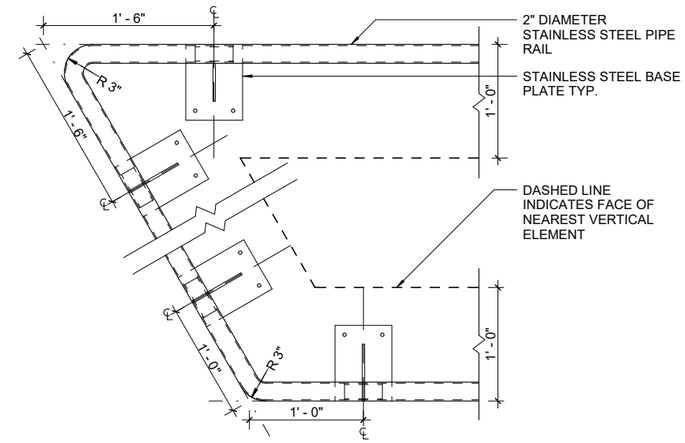
2 BAG CART PROTECTION RAIL PLAN
3" = 1'-0"



3 BAG CART PROTECTION RAIL CORNERS
1 1/2" = 1'-0"



4 BAG CART PROTECTION RAIL TERMINATIONS
1 1/2" = 1'-0"



5 BAG CART PROTECTION RAIL CORNERS AT NON-90 DEGREE ANGLES
1 1/2" = 1'-0"

3" = 1'-0"
0 4" 8"

1 1/2" = 1'-0"
0 8" 16"

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	SUBMITTED FOR REVIEW	04/06/18

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

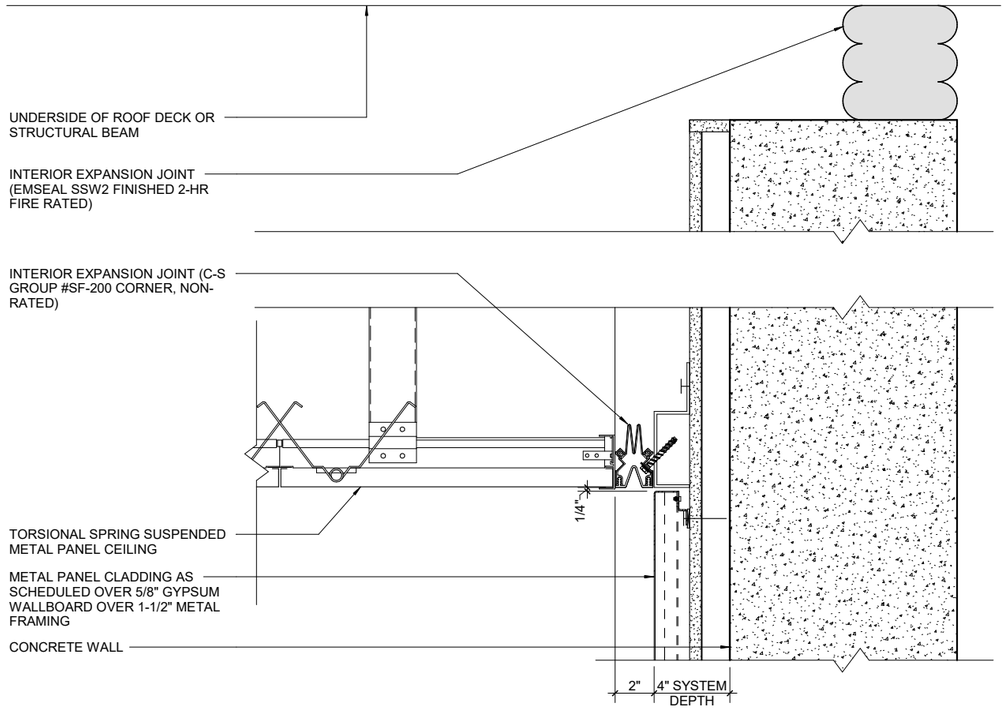
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

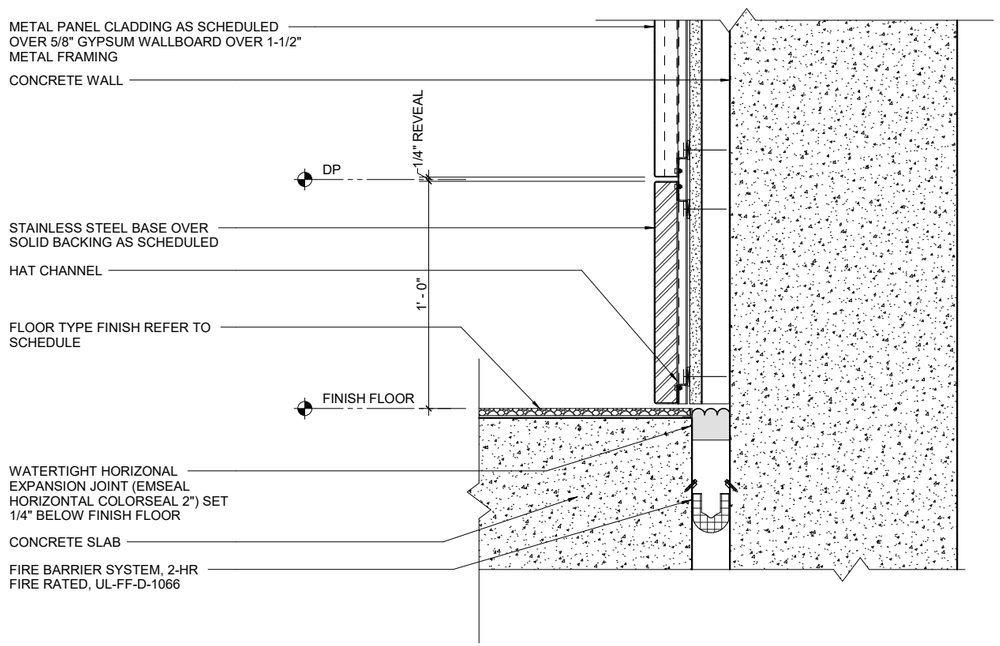
RCC STATION
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INTERIOR DETAILS - DECORATIVE METAL
AND GLASS SYSTEMS

Package: B04 - RBAR1365
Sheet Reference No: V5 - 107 of 218

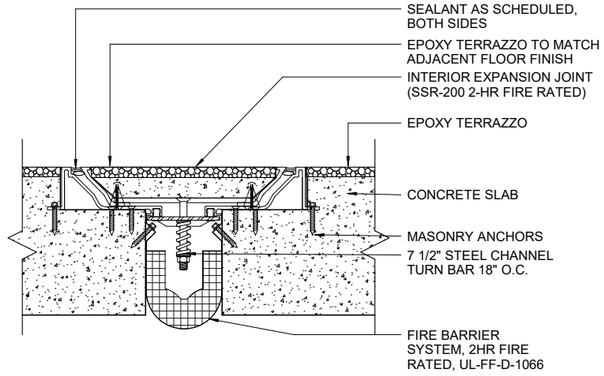
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3 EXPANSION JOINT - AT METAL PANEL CEILING
RBAR0655 3" = 1'-0"



5 EXPANSION JOINT AT SLAB EDGE
RBAR034A 3" = 1'-0"



4 EXPANSION JOINT BTWN TERRAZZO FINISHED FLOORS
RBAR0651 3" = 1'-0"

3" = 1'-0"
0 4" 8"

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7 Sept 2018
ARIZONA, U.S.A.
Expires 3-31-19

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

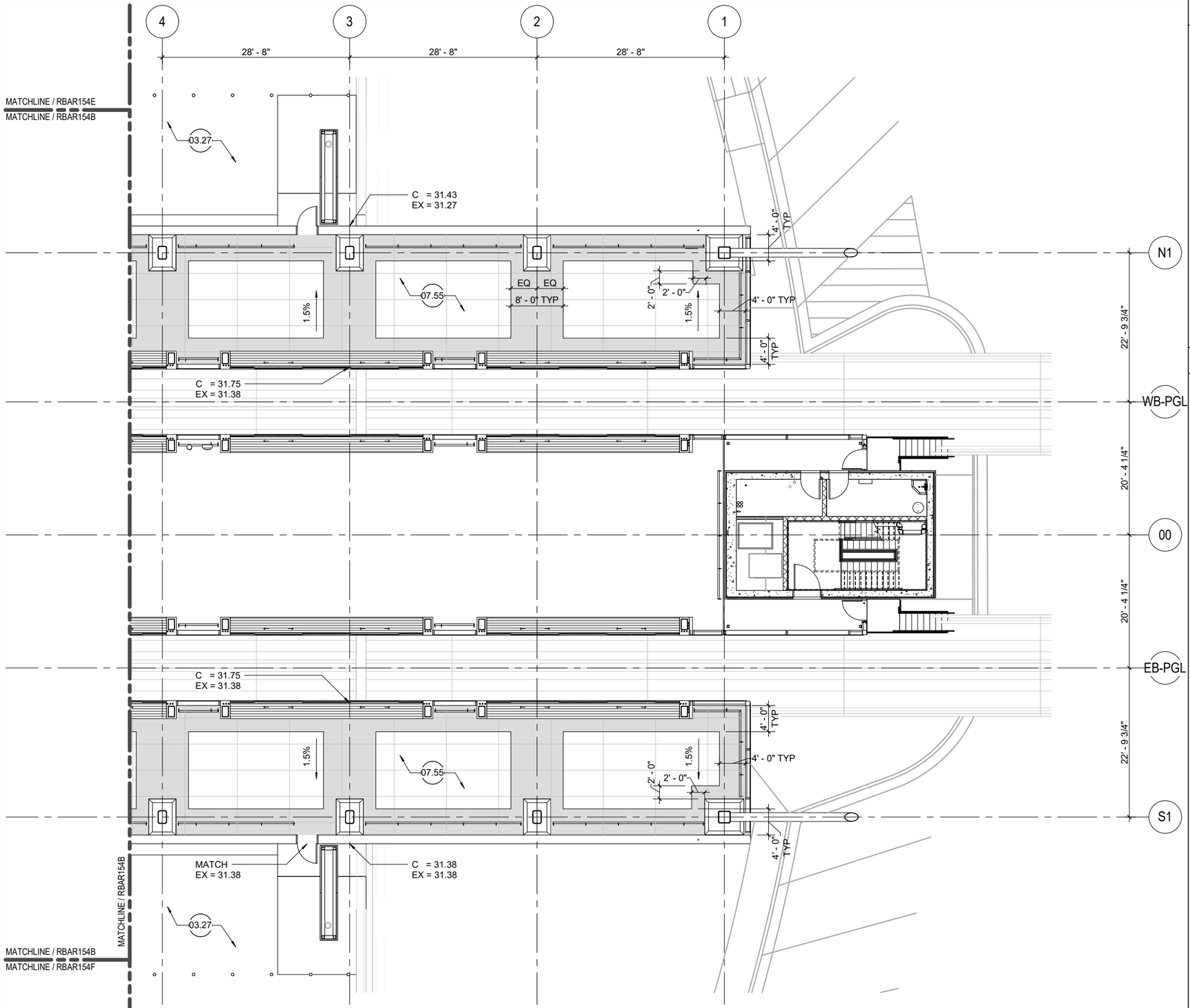
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Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
ARCHITECTURAL
INTERIOR DETAILS - EXPANSION JOINT CONTROL SYSTEMS

Package: B04 - RBAR1370
Sheet Reference No: V5 - 108 of 218

Local File:BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:16:05 PM



1 LEVEL 4 - PLATFORM CJ - AREA A
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

SHEET NOTES

A. REFER TO THE RBAR0-SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE LS-SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE RBAR10-SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

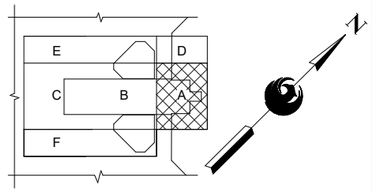
G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

H. BUILDING COORDINATES PER CIVIL DRAWINGS ARE AT THE EXISTING RENTAL CAR CENTER BUILDING GRIDLINES 2/A. COORDINATES ARE: X=660490.02158, Y=883850.95080, ANGLE=0.14868, PGL=1131.75'

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KEY NOTES

03.27 CONCRETE (C)
07.55 FLOOR COATING SYSTEM



KEY PLAN

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

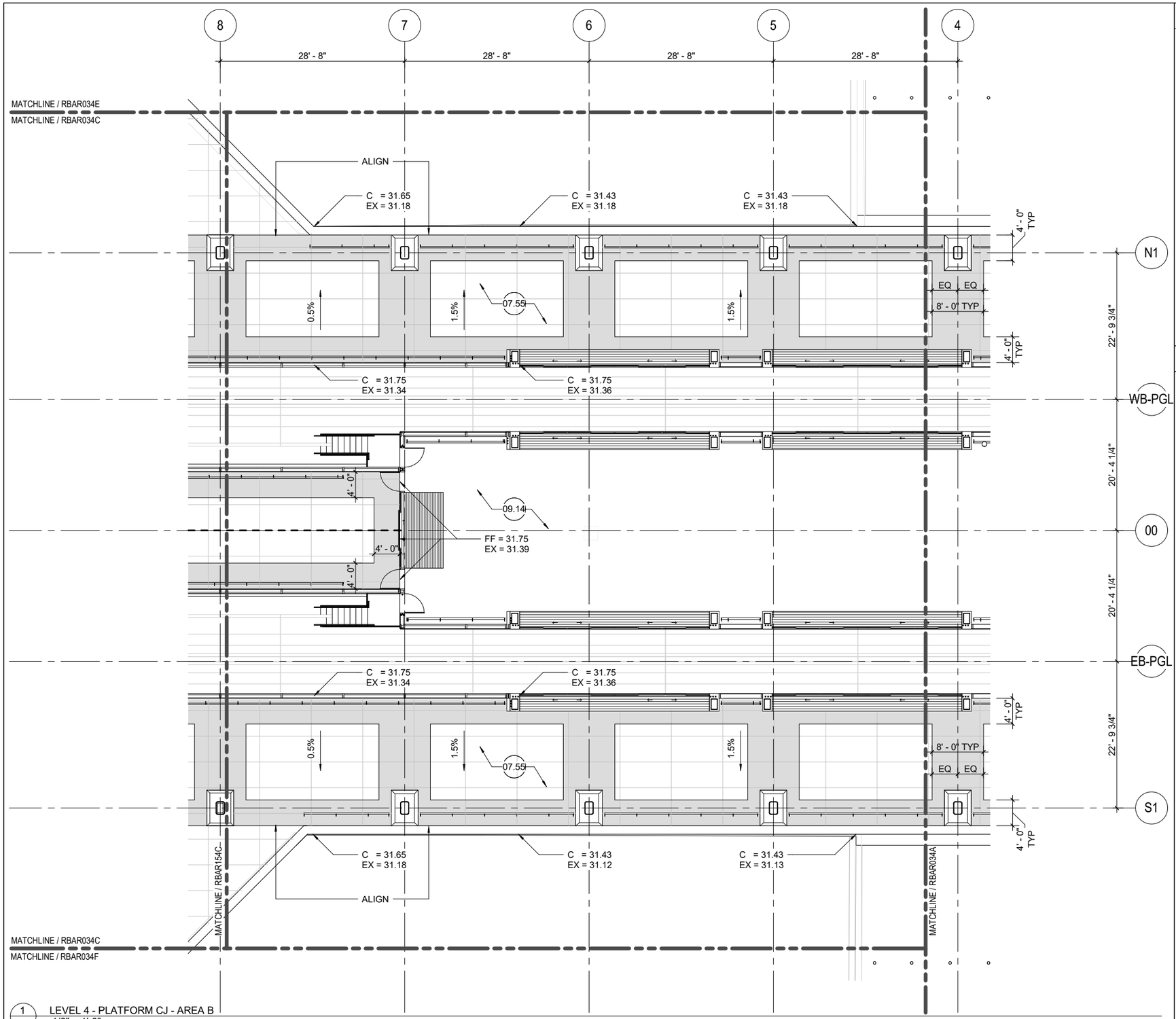
Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
FLOOR PATTERN PLAN - PLATFORM - LEVEL 4 - AREA A

Package: B04 - RBAR154A
Sheet Reference No: V5 - 109 of 218

Project Number: 21722
7/11/2018 3:06:28 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL 4 - PLATFORM CJ - AREA B
1/8" = 1'-0"

SHEET NOTES

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D. REFER TO THE RBAR13-SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE RBAR13-SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE RBAR13-SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO RBAR03-SERIES SHEETS FOR ROOF GENERAL NOTES.

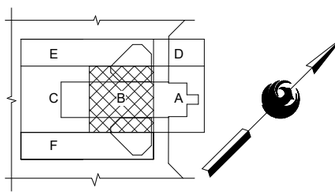
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KEY NOTES

07.55 SEALANT JOINT

09.14 FUTURE PACKAGE - TERRAZZO FLOOR FINISH BY ARTIST. DIVIDER STRIP LOCATIONS SHOWN ON PLAN ARE MINIMUM REQUIRED AND SHALL BE COORDINATED WITH ARTIST'S FINAL DESIGN



KEY PLAN

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Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

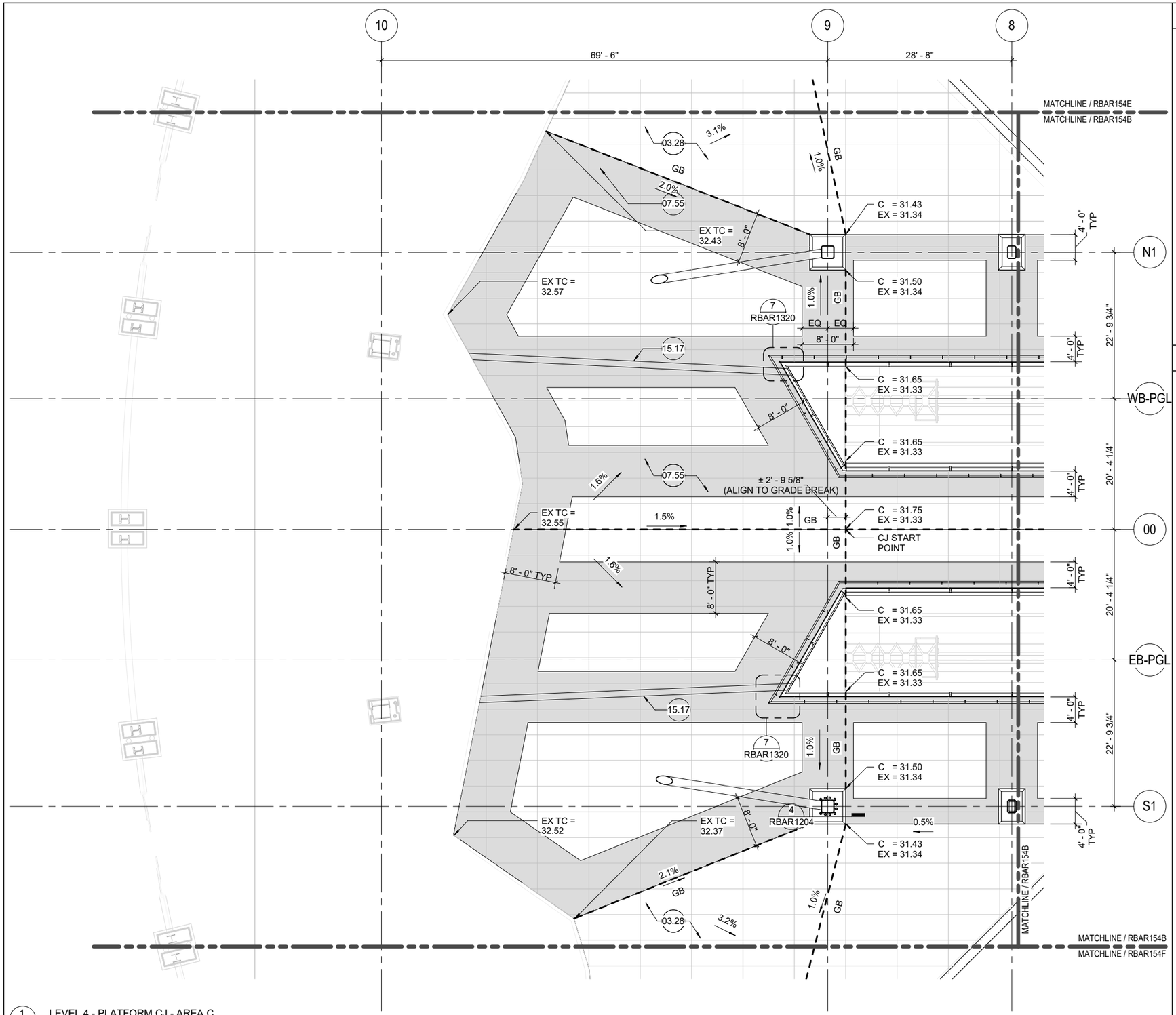
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Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
FLOOR PATTERN PLAN - PLATFORM - LEVEL 4 - AREA B

Package: **B04 - RBAR154B**
Sheet Reference No: V5 - 110 of 218

Local File: BIM 360://82421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt
Project Number: 21722
7/11/2018 3:06:32 PM



1 LEVEL 4 - PLATFORM CJ - AREA C
1/8" = 1'-0"

SHEET NOTES

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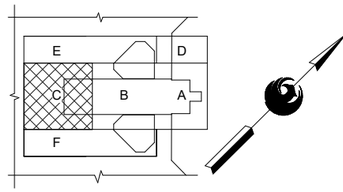
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KEY NOTES

03.28 BROOM FINISH CONCRETE
07.55 FLOOR COATING SYSTEM
15.17 TRENCH DRAIN - REFER TO STRUCTURAL DRAWINGS FOR DETAILS



KEY PLAN

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning
Design Consultant
Gannett Fleming

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

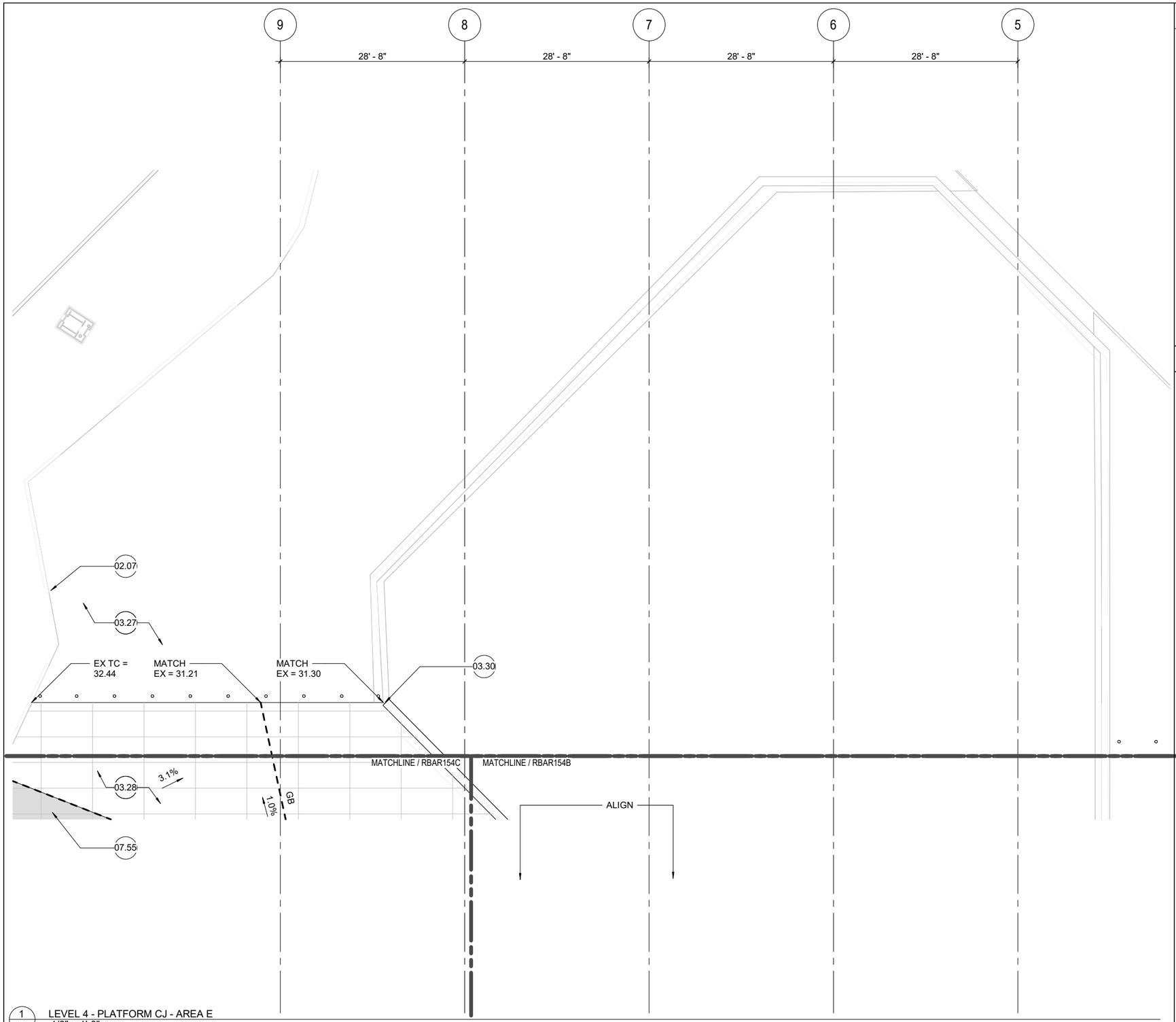
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Drawn by:	JI, MT, TY
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Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
FLOOR PATTERN PLAN - PLATFORM - LEVEL 4 - AREA C

Package: B04 - RBAR154C
Sheet Reference No: V5 - 111 of 218

Project Number: 21722
7/11/2018 3:06:35 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt



1 LEVEL 4 - PLATFORM CJ - AREA E
1/8" = 1'-0"

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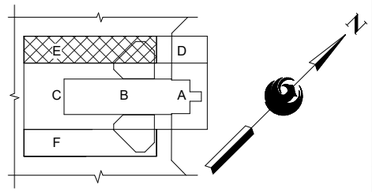
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KEY NOTES

02.07 CONCRETE DECK (E)
03.27 BRUSHED CONCRETE FINISH
03.28
03.30 EXTENT OF CONCRETE TO ALIGN WITH EXISTING CORNER
07.55 FLOOR COATING SYSTEM



KEY PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 35861
MICHAEL L. KRAGER
Date Signed 7/13/2018
ARIZONA, U.S.A.
Expires 3-31-2019

Design Sub-Consultant
SMITHGROUP
architecture engineering interiors planning

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	MR
Drawn by:	JI, MT, TY
Checked by:	KW
Date:	07/13/2018
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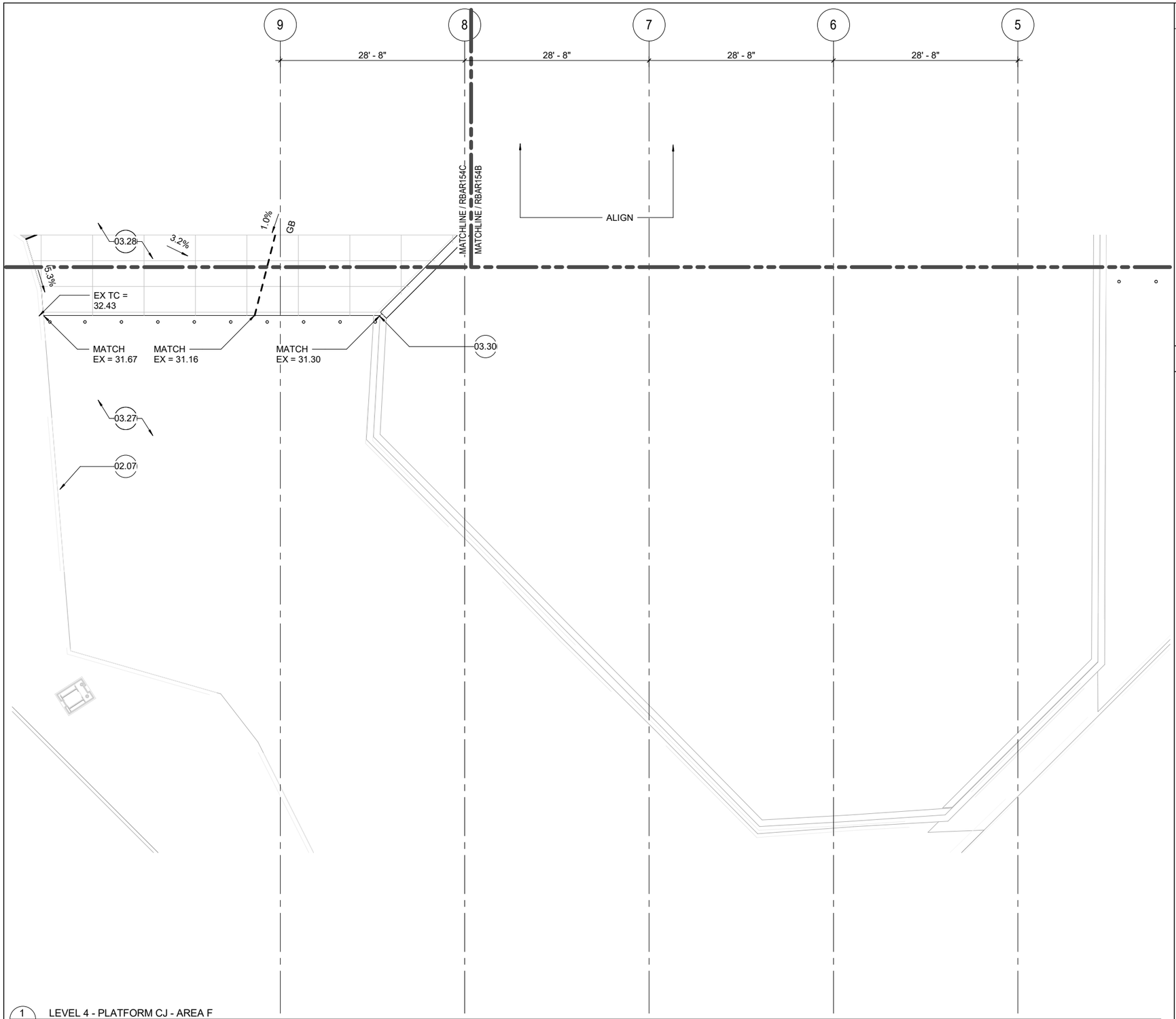
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
FLOOR PATTERN PLAN - PLATFORM - LEVEL 4 - AREA E

Package: B04 - RBAR154E
Sheet Reference No: V5 - 112 of 218

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

Project Number: 21722
7/11/2018 3:06:38 PM



1 LEVEL 4 - PLATFORM CJ - AREA F
1/8" = 1'-0"

1/8" = 1'-0"
0 8' 16'

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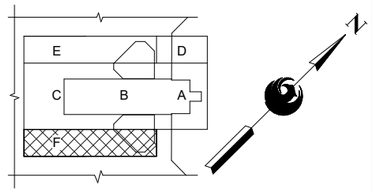
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03.27 BRUSHED CONCRETE FINISH
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
FLOOR PATTERN PLAN - PLATFORM - LEVEL 4 - AREA F

Package: B04 - RBAR154F
Sheet Reference No: V5 - 113 of 218

Project Number: 21722
7/11/2018 3:06:42 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCARXX01_R17_A360.rvt

STRUCTURAL DESIGN PARAMETERS

1.01 GENERAL:
- A. CONSTRUCTION SHALL COMPLY WITH THE BUILDING CODE AND OTHER APPLICABLE CODES AND STANDARDS.
- B. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC 2012) AS ADOPTED AND AMENDED BY THE CITY OF PHOENIX.

2.01 DESIGN CRITERIA:
- A. REFERENCE STANDARDS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-10.
- B. STRUCTURAL RISK CATEGORY = III
- C. SUPERIMPOSED DEAD LOADS
  - i) SEE FLOOR LOADING MAPS
- D. LIVE LOADS:
  - i) ELEVATED FLOOR LIVE LOAD
    - (1) SEE FLOOR LOADING MAPS
    - (2) STAIR LL = 100PSF
    - (3) ALL FLOORS, ROOFS AND STAIRS: 2,000LB CONCENTRATED LL
  - ii) GROUND FLOOR, LL = 250PSF
- E. WIND LOAD PARAMETERS:
  - i) EXPOSURE CATEGORY = C
  - ii) BASIC WIND SPEED = 120 MPH
  - iii) INTERNAL PRESSURE COEFFICIENT: GC(pi) = 0.18±
  - iv) COMPONENTS AND CLADDING WIND PRESSURE: AS REQUIRED BY CHAPTER 30 OF ASCE 7-10
  - v) SERVICEABILITY CONSIDERATIONS: USE 50-YEAR MEAN RECURRENCE INTERVAL (MRI) WIND SPEED, V=90MPH (FOR DRIFT CONSIDERATIONS, NOT FOR STRENGTH)
- F. SEISMIC LOAD PARAMETERS:
  - i) MAPPED SPECTRAL RESPONSE ACCELERATION:
    - (1) AT SHORT PERIODS: S(S)=0.173g
    - (2) AT 1 SECOND: S(1) = 0.057g
  - ii) DESIGN SPECTRAL RESPONSE ACCELERATION:
    - (1) AT SHORT PERIODS: S(DS) = 0.138g
    - (2) AT 1 SECOND: S(D1) = 0.065g
  - iii) SITE CLASS C
  - iv) SEISMIC DESIGN CATEGORY = A
  - v) ESSENTIAL NONSTRUCTURAL COMPONENTS REQUIRED FOR LIFE SAFETY AFTER AN EARTHQUAKE INCLUDING FIRE SUPPRESSION AND EGRESS STAIRS, Ip = 1.5
  - vi) BASIC LATERAL FORCE RESISTING SYSTEM = INTERMEDIATE REINFORCED CONCRETE MOMENT FRAMES AND STEEL ORDINARY MOMENT FRAMES
    - (1) DESIGN BASE SHEAR: 1409 KIPS
    - (2) RESPONSE COEFFICIENT = C(s) = 0.021
    - (3) RESPONSE MODIFICATION FACTOR:
      - R = 5 (INTERMEDIATE REINFORCED CONCRETE MOMENT FRAMES)
      - R = 3.5 (ORDINARY STEEL MOMENT FRAMES)
      - R= 3.5 (INTERMIDIATE REINFORCED MASONRY SHEAR WALLS)
  - vii) ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE ANALYSIS.

GENERAL STRUCTURAL NOTES

1.01 GENERAL:
- A. THE STRUCTURAL DRAWINGS SHOW THE COMPLETED PROJECT. THEY DO NOT INCLUDE COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND AROUND THE JOB SITE DURING CONSTRUCTION.
- B. GENERAL NOTES AND TYPICAL DETAILS APPLY EVEN THOUGH NOT SPECIFICALLY REFERENCED ON STRUCTURAL DRAWINGS, UNLESS NOTED OTHERWISE.

1.02 COORDINATION:
- A. DETAILS ON THE STRUCTURAL DRAWINGS ARE TYPICAL. VERIFY ALL SITE DIMENSIONS, ELEVATIONS, AND SLOPES WITH ARCHITECTURAL, CIVIL, AND GRADING DRAWINGS. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- B. MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DRAWINGS SHALL BE PROVIDED PRIOR TO PLACING CONCRETE. STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS AND SHOP DRAWINGS PROVIDED BY MANUFACTURERS OF EQUIPMENT.

2.01 FIELD EXECUTION:
- A. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING, SHORING, GUYING AND OTHER MEANS TO AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
- B. CONTRACTOR SHALL EXERCISE EXTREME CARE DURING THE CONSTRUCTION OF THE NEW STRUCTURE TO AVOID DAMAGE TO EXISTING STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS REQUIRED TO FACILITATE CONSTRUCTION OF THE WORK AND ENSURING THE SAFETY, STABILITY AND INTEGRITY OF ADJACENT STRUCTURES AND FACILITIES.

DEFERRED SUBMITTALS

1.01 DESCRIPTION:
- A. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION BUT WILL BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIC TIME. DEFERRAL OF ANY SUBMITTAL ITEMS IS SUBJECT TO APPROVAL BY THE BUILDING OFFICIAL.
- B. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL TIME AND EFFORT REQUIRED TO OBTAIN A BUILDING DEPARTMENT REVIEW AND SHALL ALSO INCLUDE ALL TIME AND EFFORT TO SECURE CALCULATIONS AND DRAWINGS APPROPRIATELY SEALED BY AN ENGINEER FOR DEFERRED ITEMS REQUIRING DESIGN.

1.02 SUBMITTALS:
- A. DOCUMENTS FOR DEFERRED SUBMITTALS SHALL BE SUBMITTED TO THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW PRIOR TO THEM BEING FORWARDED TO THE BUILDING OFFICIAL. THE DESIGN PROFESSIONAL WILL REVIEW THE SUBMITTAL DOCUMENTS FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT FOR THE STRUCTURE OR FACILITY.
- B. SUBMITTALS OF ENGINEERING DESIGN PROVIDED BY OTHERS SHALL HAVE DRAWINGS AND CALCULATIONS APPROPRIATELY SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL/CIVIL ENGINEER REGISTERED IN THE STATE IN WHICH THE SUBMITTED ITEMS WILL BE INSTALLED
- C. IN ALL CASES THE COMPONENTS MUST BE DESIGNED AND MANUFACTURED BY A FABRICATOR APPROVED BY THE GOVERNING BODY HAVING JURISDICTION.
- D. SUBMITTALS SHALL INCLUDE KEY PLANS, SECTIONS, AND DETAILS REQUIRED FOR CONSTRUCTION.

1.03 COORDINATION:
- A. THE CONTRACTOR/SUPPLIER SHALL FIELD VERIFY ALL DIMENSIONS BEFORE START OF WORK

2.01 SHOP FABRICATION:
- A. THE FOLLOWING ITEMS ARE DEFERRED SUBMITTAL ITEMS.
  - i) STEEL STAIRS AND ACCESS PLATFORMS
  - ii) GUARDRAILS
  - iii) LOAD BEARING COLD FORMED STEEL STUD ASSEMBLIES
  - iv) BUILDING CLADDING AND GLAZING SUPPORT SYSTEMS
  - v) ROOF FRAMING STEEL CONNECTIONS AS INDICATED ON STRUCTURAL DRAWINGS
  - vi) ELEVATOR EQUIPMENT
  - vii) TEMPORARY SHORING

3.01 FIELD EXECUTION:
- A. FIELD INSTALLATION OF DEFERRED STRUCTURAL ITEMS IS SUBJECT TO SPECIAL STRUCTURAL INSPECTION.
- B. SHOP FABRICATION OF DEFERRED STRUCTURAL ITEMS MAY ALSO BE SUBJECT TO SPECIAL STRUCTURAL INSPECTION, UNLESS NOTED OTHERWISE.

FOUNDATIONS

1.01 DESCRIPTION:
- A. PERFORM WORK IN ACCORDANCE WITH THE BUILDING CODE SOILS AND FOUNDATION REQUIREMENTS, CONTRACT DOCUMENTS, AND GEOTECHNICAL INVESTIGATION REPORT WHEN AVAILABLE.

1.02 COORDINATION:
- A. PERFORM WORK IN ACCORDANCE WITH THE RCC GEOTECHNICAL MEMO FOR MECHANICAL AND ELECTRICAL BUILDINGS BY GANNETT FLEMING, DATED 7/11/2018,
- B. FOUNDATION DESIGN IS BASED ON THE FOLLOWING SOIL PROPERTIES.
  - i) SOIL CLASSIFICATION = CLASS C
  - ii) VERTICAL (GRAVITY) NET BEARING PRESSURE = 3000 PSF AT 2'-0" FT BELOW NATURAL GRADE
  - iii) LATERAL AT-REST PRESSURES = 55 PSF/FT
  - iv) LATERAL ACTIVE PRESSURES = 40 PSF/FT
  - v) LATERAL PASSIVE PRESSURES = 300 PSF/FT
  - vi) BASE FRICTION COEFFICIENT = 0.4
- C. UNLESS OTHERWISE SHOWN, ON ALL STRUCTURAL DRAWINGS THE FINISH GRADE AROUND STRUCTURES IS SHOWN THUS, ▽/▽/▽ INDICATING EITHER GROUND SURFACE, TOP OF CONCRETE SLAB, OR A.C. PAVEMENT. FOR DETAILS OR FINISH SURFACES, SEE CIVIL SITE DRAWINGS. PROVIDE CONCRETE ENCASEMENT FOR ALL UNDERGROUND PIPES BENEATH BUILDING FOUNDATIONS.
- D. CONTRACTOR SHALL SUBMIT SHORING SHOP DRAWINGS AND CALCULATIONS TO THE ENGINEER FOR REVIEW, FOR SHORING REQUIRED TO PROTECT EXISTING STRUCTURES. SHOP DRAWINGS AND CALCULATIONS SHALL BEAR THE SEAL OF A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF ARIZONA.

2.01 CONTROLLED LOW STRENGTH MATERIAL (CLSM)
- A. CLSM SHALL BE USED AS AN UNREINFORCED FILL MATERIAL TO REPLACE EXCAVATED SOIL UNDER STRUCTURE FOUNDATIONS AND AS SHOWN ON DRAWINGS.
- B. PROPORTIONS: CEMENT CONTENT = 94 LBS/CU YD (+/- 5%); SLUMP = 7 INCHES (+/- 1 INCH); COMPRESSIVE STRENGTH AT 28 DAYS= 150 PSI (+/-50 PSI).

3.01 PLACEMENT:
- A. PLACE FOUNDATION CONCRETE ONLY ON CLEAN, FIRM BEARING MATERIAL AT LEAST #'-#" BELOW THE LOWEST ADJACENT FINISH OR NATURAL GRADE, WHICHEVER IS LOWER. VERIFY THE SUITABILITY OF THE BEARING MATERIAL WITH THE GEOTECHNICAL ENGINEER BEFORE PLACING FOUNDATIONS.
- B. PLACE DOWELS AND ANCHOR BOLTS BEFORE POURING CONCRETE. USE TEMPLATES TO ENSURE PROPER PLACEMENT.
- C. CENTER FOUNDATIONS UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE. DRYPACK GROUT ALL COLUMN BASE PLATES BEFORE INSTALLING FRAMING ABOVE.

3.02 BACKFILL REQUIREMENTS
- A. BACKFILL MAY BE PLACED AGAINST A WALL WITHOUT THE TOP SLAB IN PLACE UP TO THE ELEVATION SPECIFICALLY NOTED ON THE DRAWINGS BUT ONLY AFTER THE WALL CONCRETE HAS REACHED 3000 PSI STRENGTH. IF ELEVATION/DEPTH IS NOT NOTED ON THE DRAWINGS, CONTACT THE STRUCTURAL ENGINEER.
- B. HEAVY EQUIPMENT IS PROHIBITED WITHIN A DISTANCE BEING EQUAL TO THE DEPTH OF THE BACKFILL PLACED, OR 10'-0", WHICHEVER IS LESS.
- C. REMAINDER OF BACKFILL (ABOVE THE ELEVATION NOTED) MAY BE PLACED AGAINST THE WALL ONLY AFTER THE TOP SLAB IS IN PLACE AND THE CONCRETE IN THE TOP SLAB HAS REACHED THE STRENGTH EQUAL TO 75% OF THE SPECIFIED STRENGTH OR 3000 PSI, WHICHEVER IS LESS.
- D. COMPACTION EQUIPMENT ALLOWED WITHIN DEPTH OF BACKFILL OR 10'-0", WHICHEVER IS LESS, IS LIMITED TO JUMPING JACKS AND/OR WALK-BEHIND COMPACTORS. A BOBCAT MAY BE USED TO PLACE AND LEVEL BACKFILL.
- E. DEGREE OF COMPACTION (AS PERCENTAGE PROCTOR DENSITY) SHALL BE TESTED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.
- F. FOR WALLS HAVING FILL ON EACH SIDE, PROCEED WITH BACKFILLING OPERATIONS IN UNIFORM LIFTS. DIFFERENTIAL ELEVATION OF TOP OF LIFTS SHALL NOT EXCEED 24 INCHES.

CONCRETE

1.01 DESCRIPTION:
- A. PROVIDE NORMAL WEIGHT CONCRETE (144PCF WET) EXCEPT PROVIDE LIGHT WEIGHT STRUCTURAL CONCRETE (120PCF WET), WHERE NOTED.

1.02 COORDINATION:
- A. INSTALL JOINTS, WATERSTOPS, AND SEALANTS IN CONCRETE WHERE APPLICABLE IN ACCORDANCE WITH OTHER SECTIONS OF THE GENERAL STRUCTURAL NOTES, PLANS, AND PROJECT SPECIFICATIONS.
- B. PATCHING OF CONCRETE SHALL BE CONSIDERED STRUCTURAL. SEE STRUCTURAL CONCRETE REPAIR SECTION OF THE GENERAL STRUCTURAL NOTES.

1.03 QUALITY ASSURANCE:
- A. PRODUCE AND DELIVER CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS IN ACI 301 AND TOLERANCES OF ACI 117. PLACE CONCRETE IN ACCORDANCE WITH ACI 304. CONDUCT HOT WEATHER AND COLD WEATHER CONCRETING IN ACCORDANCE WITH ACI 305 AND ACI 306 RESPECTIVELY.

2.01 MIX WATER:
- A. USE POTABLE WATER FREE FROM MATERIALS THAT ARE DELETERIOUS TO CONCRETE OR STEEL (ASTM C1602). CEMENTITIOUS MATERIALS:
  - i) PORTLAND CEMENT: CONFORM TO ASTM C 150, TYPE II, EXCEPT FOR MASS CONCRETE PROVIDE TYPE IV CEMENT OR ADDITIVES OR OTHER PROVISIONS TO REDUCE THE HEAT OF HYDRATION.
  - ii) FLY ASH: ACCEPTABLE FOR USE IN MIX DESIGN IF COMPLIANT WITH REQUIREMENTS OF CONTRACT DOCUMENTS AND THE MAX RATIO OF FLY ASH TO TOTAL CEMENT AND FLY ASH DOES NOT EXCEED 20 PERCENT BY WEIGHT. CONFORM TO ASTM C 618, TYPE F. DO NOT USE FLYASH IN COLORED CONCRETE WITHOUT WRITTEN APPROVAL.

2.02 AGGREGATE:
- A. PROVIDE A SINGLE SIZE OR A GRADATION OF AGGREGATE WITH THE MAXIMUM SIZE AS SHOWN ON THE MIX DESIGN PROPORTIONS BELOW. DO NOT USE AGGREGATES CONTAINING SOLUBLE SALTS OR OTHER SUBSTANCES SUCH AS IRON SULFIDES, PYRITE, MARCASITE, OCHRE, OR OTHER MATERIALS THAT MAY CAUSE STAINS ON EXPOSED CONCRETE SURFACES.
- B. UNLESS NOTED OTHERWISE, AGGREGATE SHALL BE NORMAL WEIGHT CONFORMING TO ASTM C33.
- C. AGGREGATE FOR LIGHTWEIGHT STRUCTURAL CONCRETE SHALL CONFORM TO ASTM C 330.

2.03 ADMIXTURES:
- A. SUBMIT ADMIXTURES TO THE ENGINEER FOR REVIEW. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE. ADMIXTURES AND COMBINATIONS OF ADMIXTURES SHALL BE THE SAME AS THOSE USED IN THE FIELD OR TRIAL TEST DATA SUBMITTED.
- B. AIR ENTRAINING ADMIXTURE (ASTM C260): DO NOT USE CONTENT OF ENTRAINED AIR GREATER THAN THAT SUBMITTED IN TEST DATA FOR REVIEW. ALLOWABLE TOLERANCE FOR AIR CONTENT AT THE POINT OF DELIVERY IS +/ -1.5 PERCENT.
- C. SUPERPLASTICIZERS (HIGH RANGE WATER REDUCERS) AND WATER REDUCERS: COMPLY WITH ASTM C494 TYPE A AND TYPE F. FOR PLANT-ADDED SUPERPLASTICIZERS, BATCHES ARRIVING ON SITE WITH A SLUMP OF 5" OR LESS WILL NOT BE ACCEPTED. FOR SITE-ADDED SUPERPLASTICIZERS, THE MIX SHALL BE SLUMPED AT THE OB SITE PRIOR TO THE ADDITION OF SUPERPLASTICIZERS. PROVIDE COMPUTER BATCH RECORDS IF SUPERPLASTICIZERS ARE USED. DO NOT ADD ADDITIONAL SUPERPLASTICIZERS ON SITE.
- D. SHRINKAGE REDUCING ADMIXTURE:
  - i) USE IN CONCRETE TOPPINGS FOR STAIR TREADS AND LANDINGS.
  - ii) PROVIDE ADMIXTURE THAT REDUCES CONCRETE DRYING SHRINKAGE BY 41 TO 62 PERCENT WHEN TESTED PER ASTM C157 WITHOUT REDUCING CONCRETE 28-DAY STRENGTH AND IS COMPATIBLE WITH OTHER ADMIXTURES INCLUDING AIR-ENTRAINMENT.

2.04 SLUMP:
- A. TOLERANCE FOR SPECIFIED SLUMP IS +/- 1INCH BEFORE THE ADDITION OF SUPERPLASTICIZERS/WATER REDUCERS PER ACI 117. MAXIMUM SLUMP WITH SUPERPLASTICIZERS IS 8 INCHES. DO NOT ADD WATER ON SITE OR AFTER SUPERPLASTICIZERS HAVE BEEN USED.

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant: Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES I

Package: B04 - RBSB0010

Sheet Reference No:
V5 - 114 of 218

Project Number: 62421
7/13/2018 5:12:09 PM
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

2.05 MIX DESIGN PROPORTIONS (NORMAL WT CONCRETE U.N.O.)
A. PROVIDE COMPUTERIZED BATCH RECORDS WITH ALL LOAD LOCATION.

LOCATION	MIN 28 DAY COMPR. STRENGTH	MAX W/CM RATIO	SLUMP	% AIR	MAX AGG. SIZE
PIPE ENCASEMENTS	2500 PSI	0.65	6"	1.5	1.5"
SLAB ON GRADE	4000 PSI	0.45	4"	1.5	1.5"
STRUCTURAL LIGHT WEIGHT CONCRETE	4000 PSI	0.45	4"		0.75"
REINFORCED STRUCTURAL CONCRETE COLUMNS	6000 PSI	0.45	4"	1.5	1"
REINFORCED STRUCTURAL CONCRETE BEAMS, SUSPENDED SLABS, WALLS & FOOTINGS	4000 PSI	0.45	4"	1.5	1"
GIRDER G1	8000 PSI	0.45	4"	1.5	1.5"
GIRDER G2	6000 PSI	0.45	4"	1.5	1.5"

2.06 NON-SHRINK GROUT:
A. USE PLASTIC OR STIFF (DRY PACK), NON-METALLIC NON-SHRINK GROUT WITH MINIMUM 7,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. CONFORM TO THE REQUIREMENTS OF CRD-C 621 CORPS OF ENGINEERS FOR NON-SHRINK GROUT.
B. SATURATE THE AREA WITH POTABLE WATER FOR 24 HOURS IMMEDIATELY PRIOR TO APPLICATION OF THE GROUT PER THE MANUFACTURER'S RECOMMENDATIONS. WET CURE AND APPLY CURING COMPOUNDS TO EXPOSED GROUT SURFACES.
C. USE BASF CONSTRUCTION GROUT, EUCO DRY PACK GROUT, OR EQUAL.

2.07 STRUCTURAL FIBER REINFORCING:
A. PROVIDE STRUCTURAL FIBER REINFORCING IN CONCRETE TOPPINGS FOR STAIR TREADS AND LANDINGS.
B. FIBERS SHALL BE TYPE III SYNTHETIC FIBERS PER ASTM C 1116 WITH A MINIMUM LENGTH OF 2 INCHES. PROVIDE AT DOSAGE RATE OF 3 LBS/CU YD.
C. AFTER FINISH WORK AND 28 DAYS FROM CONCRETE PLACEMENT,"BURN OFF" EXPOSED FIBERS.

3.01 CONCRETE PLACING:
A. WHEN SPAN EXCEEDS 20'-0", CAMBER UP ALL CONCRETE BEAMS AND SLABS L/400 AT MIDSPAN. CAMBER UP ALL OVERHANGS L/300 AT EDGE OF CANTILEVER. RECORD CAMBERS AT UNDERSIDE OF STRUCTURE IMMEDIATELY BEFORE AND AFTER RESHORING AND IMMEDIATELY AFTER DESHORING.
B. DO NOT PLACE CONCRETE IN CONTACT WITH ALUMINUM.
C. THE MAXIMUM FREE DROP OF CONCRETE IS 6'-0" WITHOUT A TREMIE PIPE TO PREVENT SEGREGATION. DEPOSIT CONCRETE AS NEAR AS POSSIBLE TO ITS FINAL POSITION. DO NOT EMPLOY ANY RACTICES CAUSING SEGREGATION SUCH AS VIBRATING CONCRETE TO SPEED CONVEYANCE.
D. MECHANICALLY VIBRATE CONCRETE, EXCEPT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS AND OTHER ITEMS EMBEDDED IN THE SLAB. REVIBRATE TOPS OF COLUMNS, CAISSONS (DRILLED PIERS), AND THE TOP 5 FEET OF WALLS (OVER 10 FEET IN HEIGHT).
E. DO NOT CAST WALLS OR GRADE BEAMS IN A SINGLE POUR GREATER THAN 40 FEET IN LENGTH. WAIT 48 HOURS BETWEEN ADJACENT CONCRETE CASTINGS.
F. WAIT 28 DAYS MINIMUM AFTER CONCRETE HAS BEEN PLACED BEFORE SAND BLASTING, WATER BLASTING OR OTHER SURFACE TREATMENT.
G. DO NOT PLACE CONCRETE IN STANDING WATER
H. WHERE MASONRY ABUTS AGAINST CONCRETE WALLS OR COLUMNS PROVIDE CONTINUOUS DOVE TAIL SLOTS FOR DOVE TAIL ANCHORS.
I. LOCATE CONSTRUCTION JOINTS IN CONCRETE SLABS, BEAMS, OR GIRDERS WITHIN THE MIDDLE THIRD OF THEIR SPAN. ROUGHN THE SURFACE OF JOINTS TO 1/4" AMPLITUDE. CLEAN JOINT SURFACES OF ALL DEBRIS AND LAITANCE, AND WET SURFACES (REMOVE STANDING WATER) TO PREPARE FOR BOND WITH FRESH CONCRETE PLACEMENT.

3.02 FINISHING:
A. PROVIDE FINISHES ON FORMED SURFACES PER ACI 301 AND FORMED SURFACE IRREGULARITIES PER ACI 117 AS FOLLOWS.
i) ROUGH FORM FINISH: SURFACES NOT EXPOSED TO PUBLIC VIEW. PATCH TIE HOLES, LEAVE TEXTURE IMPARTED BY FORM, REMOVE FINS GREATER THAN 1/2 INCH IN HEIGHT.
ii) SMOOTH FORM FINISH: SURFACES EXPOSED TO PUBLIC VIEW. REMOVE FINS GREATER THAN 1/8 INCH IN HEIGHT.
iii) SURFACES EXPOSED TO VIEW: CLASS B SURFACE WITH ABRUPT IRREGULARITIES LESS THAN 1/4 INCH.
B. THE USE OF WATER OR "SPRINKLING" AS AN AID TO FINISHING UNFORMED SURFACES IS PROHIBITED.
C. PROVIDE 3/4" X 3/4" CHAMFERS AT ALL EXPOSED CORNERS OF SLABS, WALLS, COLUMNS AND BEAMS.

3.03 CURING:
A. CURE CONCRETE PER ACI 318 AND ACI 301 FOR 7 DAYS AFTER PLACEMENT. CURING COMPOUNDS SHALL HAVE A FUGITIVE DYE. CURING COMPOUNDS SHALL BE COMPATIBLE WITH FUTURE TOPPINGS, PAINT, WATERPROOFING AND FINISHES. APPLY TWO HEAVY COATS OF CURING COMPOUND USING A HIGH PRESSURE AIRLESS SPRAYER. APPLY THE SECOND COAT 90 DEGREES TO THE FIRST. CLEAN NOZZLES AFTER EACH USE.
B. OTHER CONCRETE SURFACES CURING COMPOUND SHALL MEET THE MOISTURE RETENTION REQUIREMENTS OF ASTM C-309, TYPE 1-D AT COVERAGE RATE SPECIFIED, AND PASS VOC REQUIREMENTS.
1. USE ATLAS RES-CURE, W.R. MEADOWS 1100 CLEAR, 1300 CLEAR, VOCOMP-20 OR EQUAL.
C. COLUMNS, WALLS, GRADE BEAMS, AND FOUNDATIONS: START CURING IMMEDIATELY UPON THE REMOVAL OF FORMS AND THE COMPLETION OF FINISHING WORK. THE TOPS OF SPREAD FOUNDATIONS REQUIRE CURING COMPOUND.
D. SLAB AND CAST-IN-PLACE FINISHED CONCRETE: START CURING IMMEDIATELY AFTER THE CONCRETE HAS SET ENOUGH TO WALK ON WITHOUT HARMING THE FINISH.

3.04 CONCRETE REPAIR OR MODIFICATION.
A. PATCHING OF CONCRETE SHALL BE CONSIDERED STRUCTURAL. NOTIFY ENGINEER ON A CASE BY CASE BASIS.
B. WHEN DRILLING, CHIPPING, SAWCUTTING, OR CORING INTO CONCRETE, X-RAY OR FERROSCAN EXISTING CONCRETE TO LOCATE REINFORCING. DO NOT CUT, NICK, OR OTHERWISE DAMAGE EXISTING REINFORCING.

REINFORCING STEEL

1.01 COORDINATION:
A. DO NOT DAMAGE OR DISRUPT REINFORCING BARS, STEEL EMBEDS, OR CONNECTORS FROM THEIR PROPER LOCATION BY THE PLACEMENT OF EMBEDDED PIPING OR CONDUIT. PROVIDE REQUIRED CLEARANCE BETWEEN REINFORCEMENT AND EMBEDDED PIPING AND CONDUIT.

2.01 REINFORCEMENT MATERIALS:
A. REINFORCING STEEL SHALL BE DEFORMED EXCEPT #2 BARS, SPIRALS, AND WELDED PLAIN WIRE FABRIC.
B. REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS.
i) #2 BARS - ASTM A 663, GRADE 80
ii) #3 BARS AND LARGER - ASTM A 615, GRADE 60
iii) STIRRUPS AND COLUMN TIES - ASTM A 615, GRADE 60
iv) STEEL WIRE - ASTM A 82
v) WELDED PLAIN (SMOOTH) WIRE FABRIC - ASTM A 185
vi) TENDONS IN PRESTRESSED CONCRETE - ASTM A 416
vii) WELDABLE REINFORCING STEEL - ASTM A 706
viii) REBAR TERMINATORS - ASTM A 576

2.02 REINFORCEMENT CONNECTORS:
A. REINFORCEMENT CONNECTORS ARE ACCESSORIES INCLUDING MECHANICAL BUTT SPLICES, FORM SAVERS, COUPLERS, AND TERMINATORS.
B. REINFORCEMENT CONNECTORS SHALL DEVELOP IN TENSION AND COMPRESSION AT LEAST 125PERCENT OF THE YIELD STRENGTH (Fy) OF THE REINFORCING BAR IN ACCORDANCE WITH ACI 318. INSTALL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
C. SPECIAL INSPECTION WILL INCLUDE RANDOM TORQUE TESTING OF COUPLERS BEFORE AND AFTER INSTALLATION IN FORMS. IF ANY COUPLER DOES NOT PASS THE TORQUE TEST, ALL COUPLERS WILL BE TORQUED BY AN INDEPENDENT TESTING LAB AT THE CONTRACTOR'S EXPENSE. COUPLERS USED IN COLUMNS SHALL NOT BE LONGER THAN 8" OR HAVE A DIAMETER LARGER THAN 2.5 INCHES.

2.03 HEADED DEFORMED BARS (HDB):
A. PROVIDE HEADED ENDS OF REINFORCING BARS EITHER FACTORY-FORGED, FACTORY-WELDED, OR MECHANICALLY ATTACHED AT THE JOBSITE OR FACTORY. HEADED ENDS SHALL DEVELOP THE REINFORCING BAR YIELD SOLELY BY BEARING AT THE HEADED END.
B. PROVIDE ICC-ES REPORT THAT VERIFIES CONFORMANCE TO ASTM A970 AND ACI 318. PROVIDE LABELING OF FACTORY FORGED OR FACTORY WELDED HEADED BARS IN ACCORDANCE WITH SECTION 15 OF ASTM A970.PROVIDE MANUFACTURER'S IDENTIFICATION MARKS ON EACH COMPONENT OF MECHANICALLY ATTACHED HEADS.
C. PROVIDE CLEAR COVER OF 2 BAR DIAMETERS MINIMUM, AND CLEAR SPACING BETWEEN BARS OF 4 BAR DIAMETERS MINIMUM.

3.01 PLACEMENT:
A. SECURELY TIE REINFORCING AND EMBEDDED ITEMS IN POSITION BEFORE PLACING CONCRETE OR GROUT. DO NOT STAB OR SHOVE INTO FRESHLY PLACED CONCRETE.
B. TIE COLUMN CAGES TO FORMS AND SQUARE BEFORE PLACING CONCRETE. CAGES AND FORMS SHALL BE SQUARED UP PLUMB AND CENTERLINE LOCATIONS OF COLUMNS SHALL BE CHECKED BEFORE PLACING CONCRETE.
C. BAR SUPPORTS AND SPACERS SHALL BE PROVIDED IN ACCORDANCE WITH ACI 301 REINFORCING SHOWN ON THE DRAWINGS SHALL NOT BE BURIED ABOVE OR BELOW ITS REQUIRED POSITION AND LAYER. ADDITIONAL BARS MAY BE USED AS BURIED BAR SUPPORTS, BUT ONLY IF THEY ARE IN CONFORMANCE WITH CONCRETE COVER REQUIREMENTS.

3.02 SLAB REINFORCEMENT:
A. SEE DETAILS FOR BARS AT SLAB EDGES AND OPENINGS.
B. SLAB REINFORCEMENT SHALL NOT BE CUT AT PLUMBING OR OTHER OPENINGS. SPREAD REINFORCEMENT AROUND OPENINGS.
C. SUPPORT SLAB TOP REINFORCEMENT ON HIGH CHAIRS. USE #5 BARS AS SUPPORT BARS WHERE REQUIRED. BARS AND CHAIRS MUST BE SECURELY TIED TOGETHER. PROVIDE SUFFICIENT SUPPORT TO MAINTAIN CONCRETE PROTECTION AS SPECIFIED. USE NON-FERROUS CHAIRS WHERE RUST STAINS ARE UNACCEPTABLE.

3.03 WALL REINFORCEMENT:
A. SEE DETAILS FOR BARS AT WALL CORNERS, ENDS,AND OPENINGS.

3.04 COLUMN REINFORCEMENT:
A. HOOKS ON COLUMN TIES SHALL BE 135 DEGREES. PROVIDE 90 DEGREE HOOKS AT TERMINATION OF COLUMN VERTICAL BARS. HOOK VERTICAL REINFORCEMENT INTO SLAB OR BEAMS.

3.05 BEAM REINFORCEMENT:
A. STIRRUP SUPPORT BARS SHALL BE PROVIDED BETWEEN ENDS OF TOP BARS AS REQUIRED. SUPPORT BARS SHALL BE #6 MINIMUM.

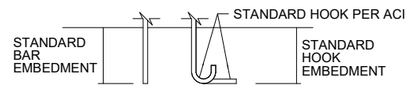
3.06 COVER:
A. CONCRETE COVER FOR REINFORCING BARS (TO FACE OF BAR INCLUDING PRIMARY REINFORCEMENT, STIRRUPS, TIES, AND SPIRALS) UNLESS NOTED OTHERWISE ON DRAWINGS.
B. CAST-IN-PLACE CONCRETE (NON-PRESTRESSED)
i) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:
(1) ALL BARS - 3"
ii) CONCRETE CAST AGAINST FORMS AND PERMANENTLY EXPOSED TO EARTH, LIQUID, WEATHER OR BEARING ON A WORK MAT:
(1) ALL BARS - 2"
iii) CONCRETE NOT EXPOSED TO EARTH, LIQUID OR WEATHER:
(1) SLABS, WALLS, JOISTS #11 BARS AND SMALLER – 3/4"
(2) PRIMARY REINFORCING, STIRRUPS, AND TIES IN BEAMS, COLUMNS, PEDESTALS AND TENSION TIES, STIRRUPS, SPIRALS – 1 1/2"
iv) ALL MECHANICAL SPLICES SHALL COMPLY WITH THE COVER STATED ABOVE.

1 PDD COMMENTS

3.07 SPLICES:
A. REINFORCEMENT SHALL BE CONTINUOUS WITH FULL TENSION LAPS AND TERMINATED WITH A 90 DEGREE STANDARD HOOK, UNLESS NOTED OTHERWISE.
B. WALL REINFORCEMENT AT CORNERS, INTERSECTIONS, AND JUNCTIONS SHALL BE CONTINUOUS AND LAPPED OR TERMINATED IN A 90 DEGREE STANDARD HOOK.
C. SPLICE REINFORCING BARS ONLY AT APPROVED LOCATIONS. SPLICE BOTTOM BARS OVER SUPPORTS AND TOP BARS AT MID-SPAN ONLY, UNLESS NOTED OTHERWISE ON DRAWINGS.
D. DOWEL VERTICAL REINFORCEMENT TO FOUNDATIONS, UNLESS NOTED OTHERWISE ON DRAWINGS. ALL DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCEMENT THAT IT IS SPLICED WITH, UNLESS NOTED OTHERWISE ON DRAWINGS.
E. STAGGER END LAP SPLICES OF WELDED WIRE FABRIC AS REQUIRED FOR MAXIMUM 3 LAYERS OF FABRIC AT ANY LOCATION.
F. PROVIDE THE SAME MINIMUM FIRE RATED COVER TO MECHANICAL SPLICE COUPLERS AS REQUIRED FOR BOTH PRIMARY AND REGULAR REINFORCEMENT. ADJUST STIRRUPS AND TIES AS NOTED IN SPECIAL DETAILS.
G. DRAWINGS DO NOT INDICATE ALL REQUIRED BAR SPLICES. SUBMIT SPLICE LAYOUT AS A PART OF REINFORCING BAR SHOP DRAWINGS, INCLUDING SPLICES ADDED TO IMPLEMENT CONTRACTORS MEANS AND METHODS.

3.08 LAP SPLICE LENGTHS:
A. TOP BARS ARE HORIZONTAL BARS LOCATED WHERE 12 INCHES OR MORE OF FRESH CONCRETE WILL BE PLACED BELOW THE BAR.
B. LAP WELDED WIRE FABRIC TWO FULL SQUARES.
C. LAP SPLICES ARE CLASS 'B' SPLICES, UNLESS NOTED OTHERWISE.
D. MINIMUM LAP SPLICE AND EMBEDMENT LENGTHS FOR CLASS 'B' LAPS AND FOR BARS WITH CONCRETE COVER OF AT LEAST ONE BAR DIAMETER ARE GIVEN IN THE FOLLOWING SCHEDULE, UNLESS NOTED OTHERWISE. PROVIDE STANDARD HOOK PER ACI STANDARD BAR HOOK EMBEDMENT.

REINFORCEMENT LAP SPLICE AND EMBEDMENT LENGTH (f'c≥4000 PSI)							
BAR SIZE NO.	METRIC BAR SIZE NO.	BAR SPACING	MIN LAP LENGTH (IN)		MIN EMBEDMENT LENGTH (IN)		
			TOP BARS	OTHER BARS	STRAIGHT BARS		WITH STANDARD HOOK
			CLASS B	CLASS B	TOP BARS	OTHER BARS	
REQUIREMENTS FOR SLABS & WALLS**							
#3	#10	≥ 3db	28	22	22	17	9
#4	#13		37	29	29	22	11
#5	#16		47	36	36	28	14
#6	#19		56	43	43	33	17
#7	#22		81	63	63	48	20
#8	#25		93	72	72	55	22
#9	#29		105	81	81	62	25
#10	#32		116	89	89	69	28
#11	#36		128	98	98	76	30
REQUIREMENTS FOR BEAMS & COLUMNS**							
#3 THRU #7	#10 THRU #22	≥ 2db	SAME AS SLABS AND WALLS ABOVE				
#8	#25	2db OR LESS	121	93	93	71	19
#9	#29		136	105	105	81	22
#10	#32		153	118	118	91	24
#11	#36		170	131	131	181	27



** FOR BAR SPACING LESS THAN 3 BAR DIAMETER, ADD 50% MORE LENGTH TO LAP AND STRAIGHT EMBEDMENT LENGTHS.

3.09 WELDING:
A. DO NOT WELD REINFORCING STEEL EXCEPT WHERE SUCH WELDING HAS BEEN SUBMITTED TO THE OWNER'S AGENT FOR REVIEW BY THE STRUCTURAL ENGINEER.
B. WELDING WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR TIE WIRES OR TO AID IN SUPPORTING REINFORCING STEEL.
C. WELD REINFORCING BARS IN CONFORMANCE WITH AWS D1.4 USING ELECTRODE E8018-X.
D. SUBMIT WELDER CERTIFICATIONS AND WELDING PROCEDURES PER AWS D1.4.

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NO.	REVISIONS / SUBMISSIONS	DATE
1	PDD COMMENTS	07/13/18
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant: Gannett Fleming

Design Sub-Consultant

Professional Engineer (Structural) — Date Signed 7/13/18 — SHANE E. SWEETEN — 46434 — ARIZONA, U.S.A. — EXPIRES 9/30/19

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES II

Package: B04 - RBSB0011
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Project Number: 62421
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Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

CONSTRUCTION JOINTS

1.01 DESCRIPTION:
- A. LOCATION OF ALL CONSTRUCTION JOINTS SHALL BE AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER. SUBMIT CONSTRUCTION JOINT LOCATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS TO THE ENGINEER FOR REVIEW.
- B. UNLESS NOTED OTHERWISE ON DRAWINGS CONSTRUCTION JOINTS FOR CONCRETE GRADE BEAMS, BEAMS AND SLABS SHALL BE IN THE MIDDLE THIRD OF THE SPAN

1.02 COORDINATION:
- A. PROVIDE AND INSTALL POLYVINYLCHLORIDE (PVC) AND HYDROPHILIC VINYLESTER WATERSTOPS WHERE SHOWN ON DRAWINGS AND AT ALL CONSTRUCTION JOINTS IN WATERBEARING, AND PARTIALLY AND FULLY UNDERGROUND SLABS AND WALLS (INCLUDING ELEVATOR AND ESCALATOR PITS, AND CHEMICAL CONTAINMENT AREAS). WATERSTOPS ARE NOT REQUIRED IN WALLS AND SLABS WHEN THERE IS WATER ON BOTH SIDES UNLESS NOTED OTHERWISE.
- B. PROVIDE AND INSTALL PREFORMED JOINT MATERIAL IN EXPANSION AND ISOLATION JOINTS WHERE NOTED ON DRAWINGS. PROVIDE ELASTOMERIC JOINT SEALANT AND ALL NECESSARY ACCESSORIES SUCH AS BACKER ROD AND BOND BREAKER TAP WHERE EXPANSION JOINT IS TO BE SUBMERGED FOR ANY AMOUNT OF TIME OR WHERE ON DRAWINGS AS NOTED "CAULK AND SEAL".

2.01 MATERIALS:
- A. PROVIDE WATERSTOPS AND JOINT SEALANT SUITABLE FOR THEIR CONDITION OF USE SUCH AS MOVEMENT AND/OR CHEMICAL ATTACK, FOR EXAMPLE, WATER CONTAMINATED WITH SOLVENTS AND HYDROCARBONS).
- B. PROVIDE PREFORMED JOINT FILLER IN ACCORDANCE WITH ASTM D 1752 TYPE I (FOAM RUBBER) OR TYPE II (CORK) AT INTERIOR EXPANSION JOINTS AND AS NOTED ON DRAWINGS. PROVIDE PREFORMED BITUMINOUS JOINT FILLER IN ACCORDANCE WITH ASTM D 1751 FOR EXTERIOR ISOLATION JOINTS AND AS NOTED ON DRAWINGS.

3.01 ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED FOR BOND. CAULK AND SEAL JOINTS PER JOB SPECIFICATIONS AND WHERE NOTED ON DRAWINGS.

3.02 SEE TYPICAL DETAILS FOR INSTALLATION OF CONSTRUCTION JOINTS AND WATERSTOPS IN NEW CONSTRUCTION AND BETWEEN EXISTING AND NEW CONSTRUCTION.

3.03 FOR NON-WATERBEARING SLABS-ON-GRADE, PLACE JOINTS AT MAXIMUM SPACING OF 24 x SLAB THICKNESS AND IN RATIOS NOT TO EXCEED 2:1. TIMING OF JOINT SAWING IS CRITICAL. JOINTS SHOULD BE SAWN AS SOON AS THE CONCRETE IS HARD ENOUGH THAT THE SAWING DOES NOT RAVEL JOINT EDGES OR DISLODGE COURSE AGGREGATE PARTICLES. PROVIDE SAWCUTS IN A RECTANGULAR PATTERN AS SHOWN ON PLANS. WHERE A PATTERN IS NOT SHOWN, SAWCUT ON COLUMN LINES, AT EQUAL SPACES BETWEEN COLUMNS LINES TO PRODUCE THE MAXIMUM SPACING, AND AT ALL RE-ENTRANT CORNERS AND SLAB CHANGES. PROVIDE ISOLATION JOINTS IN A DIAMOND PATTERN AROUND COLUMNS. SUBMIT JOINT LAYOUT PLAN PRIOR TO STARTING WORK.

EMBEDDED PIPING AND CONDUIT

1.01 GENERAL:
- A. SUBMIT LOCATIONS OF PIPES, CONDUIT, DUCTS, REGLETS, OR CHASES TO BE EMBEDDED IN STRUCTURAL CONCRETE FOR REVIEW BY THE STRUCTURAL ENGINEER. COORDINATE WITH CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. DO NOT PLACE PIPING OR CONDUIT NOT SHOWN ON DRAWINGS OR APPROVED BY THE ENGINEER.
- B. CONDUITS, PIPES, OR SLEEVES ARE NOT CONSIDERED TO PROVIDE STRUCTURAL STRENGTH IN SUBSTITUTION FOR THE CONCRETE DISPLACED.
- C. PIPES AND FITTINGS SHALL BE APPROPRIATE FOR THE MATERIALS, PRESSURE AND TEMPERATURE THAT THEY ARE SUBJECTED TO. ALUMINUM WITHOUT EFFECTIVE COATING OR COVERING IS PROHIBITED. PIPING, CONDUIT AND OUTLET BOXES SHALL BE RIGID STEEL OR FLEXIBLE PLASTIC
- D. PIPE PASSING THROUGH WALLS OF A WATER-TIGHT STRUCTURE SHALL HAVE AN INTEGRAL WATERSTOP.

2.01 COLUMNS:
- A. TOTAL AREA OF BOXES, PIPES, CONDUIT AND OTHER NON-STRUCTURAL ITEMS EMBEDDED IN COLUMNS SHALL DISPLACE NO MORE THAN 2% OF THE COLUMN CROSS SECTIONAL AREA CALCULATED FOR STRENGTH.
- B. BOXES, PIPES, CONDUIT, OR OTHER NON-STRUCTURAL EMBEDDED ITEMS SHALL BE PLACED CLOSER TO REINFORCEMENT THAN THE REQUIRED COVER FOR FIRE PROTECTION.
- C. EMBEDMENT OF BOXES SHALL BE NO WIDER THAN 10% OF THE COLUMN DIMENSION AND NO TALLER THAN THE COLUMN OR WALL TIE/HORIZONTAL REINFORCING SPACING LESS 3".

2.02 SUSPENDED SLABS, WALLS, AND BEAMS:
- A. MAXIMUM ALLOWABLE OUTSIDE DIMENSION OF CONDUIT OR PIPING IS 1/3 OF CONCRETE MEMBER OVERALL THICKNESS.
- B. PLACE CONDUIT AND PIPING IN ONE LAYER WITHIN THE MIDDLE THIRD OF THE MEMBER THICKNESS. PLACE CONDUIT OR PIPING IN SLABS BETWEEN TOP AND BOTTOM REINFORCING STEEL.
- C. SPACE CONDUITS AT (3) DIAMETERS OR WIDTHS ON CENTER MINIMUM.

2.03 SLABS ON METAL DECK:
- A. MAXIMUM ALLOWABLE OUTSIDE DIMENSION OF CONDUIT OR PIPING IS 1-1/2 INCHES. RUN CONDUIT ONLY IN DECK FLUTES. PLACE(1) CONDUIT PER FLUTE.
- B. SPACE ADJACENT CONDUITS AT EVERY OTHER FLUTE. DO NOT CROSS OTHER CONDUITS.

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- A. TOTAL AREA OF BOXES, PIPES, CONDUIT AND OTHER NON-STRUCTURAL ITEMS EMBEDDED IN COLUMNS SHALL DISPLACE NO MORE THAN 2% OF THE COLUMN CROSS SECTIONAL AREA CALCULATED FOR STRENGTH.
- B. BOXES, PIPES, CONDUIT, OR OTHER NON-STRUCTURAL EMBEDDED ITEMS SHALL BE PLACED CLOSER TO REINFORCEMENT THAN THE REQUIRED COVER FOR FIRE PROTECTION.
- C. EMBEDMENT OF BOXES SHALL BE NO WIDER THAN 10% OF THE COLUMN DIMENSION AND NO TALLER THAN THE COLUMN OR WALL TIE/HORIZONTAL REINFORCING SPACING LESS 3".

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- A. MAXIMUM ALLOWABLE OUTSIDE DIMENSION OF CONDUIT OR PIPING IS 1/3 OF CONCRETE MEMBER OVERALL THICKNESS.
- B. PLACE CONDUIT AND PIPING IN ONE LAYER WITHIN THE MIDDLE THIRD OF THE MEMBER THICKNESS. PLACE CONDUIT OR PIPING IN SLABS BETWEEN TOP AND BOTTOM REINFORCING STEEL.
- C. SPACE CONDUITS AT (3) DIAMETERS OR WIDTHS ON CENTER MINIMUM.

3.03 SLABS ON METAL DECK:
- A. MAXIMUM ALLOWABLE OUTSIDE DIMENSION OF CONDUIT OR PIPING IS 1-1/2 INCHES. RUN CONDUIT ONLY IN DECK FLUTES. PLACE (1) CONDUIT PER FLUTE.
- B. SPACE ADJACENT CONDUITS AT EVERY OTHER FLUTE. DO NOT CROSS OTHER CONDUITS.

3.04 PLACING:
- A. FABRICATE AND PLACE PIPING AND CONDUIT SO THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCING STEEL FROM ITS PROPER LOCATION IS NOT BE REQUIRED.
- B. DO NOT PLACE CONDUIT OR PIPING NEXT TO REINFORCEMENT SO THAT THE CONCRETE COVER FOR BOND DEVELOPMENT, TRANSFER OF LOAD TO CONCRETE, OR FIRE PROTECTION IS ADVERSELY AFFECTED. CONDUIT AND PIPING PLACEMENT SHALL NOT ADVERSELY AFFECT THE STRENGTH OF THE STRUCTURE.
- C. CONDUIT GROUPS SHALL CONSIST OF NOT MORE THAN (3) SINGLE CONDUITS. PROVIDE 1'-0" SEPARATION BETWEEN GROUPS OF CONDUIT. PROVIDE TEMPERATURE REINFORCEMENT BETWEEN CONDUIT AND CONCRETE SURFACES:
  1. IN STRUCTURES NOT REQUIRED TO BE LIQUID-TIGHT, PLACE #4 @ 12" MINIMUM REINFORCING ABOVE AND BELOW PERPENDICULAR TO THE CONDUIT. ADDED REINFORCING SHALL EXTEND 18 INCHES PAST THE CONDUIT ON BOTH SIDES.
  2. IN STRUCTURES REQUIRED TO BE LIQUID-TIGHT, PLACE MINIMUM TEMPERATURE REINFORCING ABOVE AND BELOW PERPENDICULAR TO THE CONDUIT AS FOLLOWS.
     a. SLABS/WALLS 12" THICK OR LESS: #5 @ 12". EXTEND 18" PAST CONDUIT ON BOTH SIDES.
     b. SLABS/WALLS GREATER THAN 12" THICK: #5 @ 6". EXTEND 18" PAST CONDUIT ON BOTH SIDES.
- D. CONDUIT AND PIPING PLACEMENT SHALL NOT ADVERSELY AFFECT THE STRENGTH OF THE STRUCTURE, AND SHALL NOT REDUCE THE CODE REQUIRED FIRE PROTECTION COVER.
  1. CONDUIT SHALL BE FIRMLY CHAIRED AND TIED TO PREVENT DISPLACEMENT DURING POURING.
  2. PROVIDE MINIMUM CLEARANCE 2 INCHES TO REINFORCING FROM EMBEDDED BOXES, FIXTURES, THRU SLEEVES OR PIPE PENETRATIONS.
  3. FOR LIQUID CONTAINING STRUCTURES, PROVIDE MINIMUM OF 2 INCHES CONCRETE COVER TO CONDUIT, PIPES, AND FITTINGS. FOR CONCRETE SURFACES NOT EXPOSED TO EARTH, CONTAINED LIQUIDS, OR WEATHER PROVIDE MINIMUM OF 1-INCH CONCRETE COVER.

MASONRY CONSTRUCTION

1.01 GENERAL:
- A. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF EACH WYTHE OF CONCRETE MASONRY, F'm = 1500 PSI.

2.01 MATERIALS:
- A. LOAD BEARING HOLLOW CONCRETE MASONRY UNITS: NORMAL WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 PSI ON THE NET AREA. UNITS SHALL CONFORM TO ASTM C-90.
- B. GROUT: 2000 PSI, MINIMUM 28 DAY COMPRESSIVE STRENGTH. MECHANICALLY VIBRATE GROUT IMMEDIATELY AFTER POURING AND AGAIN AFTER NO LATER THAN 20 MINUTES FOR RECONSOLIDATION. GROUT SHALL CONFORM TO ASTM C 476 AND ACI-530 BUILDING CODE. MIX GROUT FOR AT LEAST FIVE MINUTES AND UNTIL MIX HAS BEEN ATTAINED. GROUT SHALL HAVE SUFFICIENT WATER ADDED TO PRODUCE A CONSISTENCY FOR POURING WITHOUT SEGREGATION (8" TO 11" SLUMP). USE GROUT WITHIN 1 1/2 HOURS AFTER ADDING WATER TO THE MIX.
- C. MORTAR SHALL BE PORTLAND CEMENT-LIME TYPE S CONFORMING TO ASTM C 270, WITH A MINIMUM AVERAGE 28 DAY COMPRESSIVE STRENGTH OF 1800 PSI AND MAXIMUM AIR CONTENT OF 12%. DO NOT USE MASONRY CEMENT IN MORTAR. THE MIXTURE OF CEMENTITIOUS MATERIAL, AGGREGATE,AND WATER SHALL CONFORM TO THE FOLLOWING PROPORTIONS BY VOLUME:
  i) 1 PART PORTLAND CEMENT OR BLENDED CEMENT CONFORMING TO ASTM C 150 AND ASTM C515 RESPECTIVELY.
  ii) 1/4 TO 1/2 PARTS HYDRATED LIME OR LIME PUTTY CONFORMING TO ASTM C 207.
  iii) VOLUME OF AGGREGATE, MEASURED IN DAMP LOOSE CONDITION, EQUAL TO 2 1/4 TO 3 TIMES THE SUM OF THE VOLUMES OF THE ABOVE CEMENTITIOUS MATERIALS.

2.02 MINIMUM WALL VERTICAL REINFORCEMENT:
- A. PROVIDE CONTINUOUS FULL HEIGHT VERTICAL REINFORCING IN CENTER OF GROUTED VERTICAL CELLS AS SHOWN ON PLANS. PROVIDE MINIMUM VERTICAL REINFORCEMENT OF (1) #5 AT 48" ON CENTER, UNLESS NOTED OTHERWISE ON DRAWINGS.
- B. FOR OPENINGS 16" AND GREATER, PROVIDE 1 #5 WITHIN 16" OF EACH SIDE OF OPENINGS. EXTEND REINF SAME LENGTH AS ADJACENT WALL REINFORCEMENT. OPENINGS SMALLER THAN 16" ONLY NEED ADDITIONAL REINFORCEMENT IF TYPICAL REINFORCEMENT IS DISRUPTED.
- C. SEE DETAILS FOR REINFORCEMENT AT CORNERS, INTERSECTIONS, EACH SIDE OF MOVEMENT JOINTS, AND AT WALL ENDS.

2.03 MINIMUM WALL HORIZONTAL REINFORCEMENT:
- A. PROVIDE 8" DEEP CONTINUOUS GROUTED BOND BEAMS WITH: (2) #5 AT SLAB ON GRADE (SOG), (2) #5 BARS AT WALL MIDHEIGHT (8'-0" MAX ABOVE FINISHED FLOOR), ROOF DIAPHRAGM CONNECTION, AND (2) #5 AT TOP OF PARAPETS. EXTEND REINFORCING THROUGH EXPANSION AND CONTROL JOINTS, WRAPPING BARS WITH TWO-LAYERS OF 1/8" THICK BOND BREAKING TAPE 2'-0" BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT. PROVIDE BOND BEAM TYPE BLOCK FOR ALL HORIZONTAL REINFORCING.
- B. JOINT REINFORCEMENT: PROVIDE GALVANIZED LADDER TYPE #9 JOINT REINFORCING AT 16" VERTICAL SPACING OF CROSS WIRES AT 16" SPACING DO NOT USE TRUSS TYPE JOINT REINFORCING. CONFORM TO ASTM A951
- C. AT PITCHED ROOF LINES, BOND BEAM SHALL BE STEPPED TO MATCH THE WALL/DIAPHRAGM JUNCTION.
- D. PROVIDE (1) #5 BAR ABOVE AND BELOW ALL OPENINGS WITH ENDS EXTENDING 24" PAST THE OPENING. UNLESS OTHERWISE NOTED ON DRAWING OR BY LINTEL DETAILS OR LINTEL SCHEDULE.

2.04 SPLICES:
- A. REBAR LAP SPLICES

BAR SIZE	LAP LENGTH
#3	16"
#4	36"
#5	45"
#6	54"

- B. LAP JOINT REINFORCING 12" MINIMUM AT SPLICES. SPLICES SHALL CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT IN THE LAPPED DISTANCE.

2.05 JOINTS:
- A. SEE PLANS FOR MASONRY CONTROL JOINTS (MCJ) LOCATIONS. SPACE MASONRY CONTROL JOINTS 24'-0" ON CENTER UNLESS SHOWN OTHERWISE. LOCATE CONTROL JOINTS NO MORE THAN 12'-0" FROM WALL CORNERS. LOCATE CONTROL JOINTS AT VERTICAL INTERFACES OF CHANGES IN WALL HEIGHT OR WALL THICKNESS UNLESS SHOWN DIFFERENT ON DRAWINGS.
- B. EXPANSION JOINTS, CONTROL JOINTS, AND CONTINUOUS VERTICAL MORTAR JOINTS, SHALL BE AT LEAST 16" AWAY FROM BEARING PLATES AND OPENINGS OF JAMBS.

3.01 MASONRY UNIT PLACEMENT:
- A. LAY UNITS IN RUNNING BOND. CORNERS SHALL BE STANDARD BOND WITH OVERLAPPING UNITS.
- B. MAXIMUM GROUT LIFT WITHOUT CLEAN-OUTS AND INSPECTION OF CLEANOUTS SHALL BE 5'-4".
- C. PROVIDE LINTEL TYPE BLOCKS AT THE BOTTOM OF LINTELS. PROVIDE DOUBLE OPEN END HALF WEB HEIGHT BLOCK FOR REMAINDER OF LINTEL DEPTH. PLACE ALL BLOCKS OF LINTEL IN RUNNING BOND THROUGHOUT SPAN AND AT JAMBS.
- D. CONCRETE MASONRY UNITS SHALL NOT BE WETTED.

3.02 REINFORCING PLACEMENT:
- A. TIE VERTICAL REINFORCING AT EACH END OF BAR AND AT 4'-0" MAXIMUM VERTICAL SPACING USING SINGLE WIRE LOOP TYPE TIES AS MANUFACTURED BY A.A. WIRE PRODUCTS COMPANY OR APPROVED ALTERNATE.
- B. REINFORCING SHALL BE CLEAR OF MASONRY FACE SHELLS AND OTHER REINFORCING NOT SPLICED: 1/4" FOR FINE GROUT AND 1/2" FOR COURSE GROUT.

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR STAGE 2 ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

Professional Engineer (Structural)
Shane E. Sweeten
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES III

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3.03 GROUT PLACEMENT:
- A. PRIOR TO GROUTING, CLEAN OUT SPACES TO BE FILLED WITH GROUT. REMOVE MORTAR PROJECTIONS GREATER THAN 1/2 INCH, MORTAR DROPPINGS AND OTHER FOREIGN MATERIAL. SPACES DESIGNATED TO BE GROUTED SHALL BE FILLED COMPLETELY WITH GROUT AND THE GROUT SHALL BE CONFINED TO THOSE SPECIFIC SPACES. REMOVE DEBRIS FROM BOTTOM OF MASONRY CELLS PRIOR TO GROUTING.
- B. GROUT SOLID WALLS IN CONTACT WITH EARTH (RETAINING WALLS, STEM WALLS, ETC.) AND AS NOTED ON DRAWINGS MASONRY SHALL BE CONSTRUCTED IN SUCH A MANNER THAT ALL ELEMENTS OF THE MASONRY ACT TOGETHER AS A STRUCTURAL ELEMENT.
- C. THE GROUTING OF ANY SECTION OF WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.
- D. BETWEEN GROUT POURS, A HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING ALL WYTHES AT THE SAME ELEVATION AND WITH THE GROUT STOPPING A MINIMUM OF 1 1/2 INCHES BELOW A MORTAR JOINT, EXCEPT AT THE TOP OF THE WALL. WHERE BOND BEAMS OCCUR, THE GROUT POUR SHALL BE STOPPED A MINIMUM OF 1/2 INCH BELOW THE TOP OF THE MASONRY.
- E. CELLS AND SPACES CONTAINING REINFORCEMENT, ANCHOR BOLTS, OR HEADED ANCHOR STUDS (HAS) SHALL BE FILLED WITH GROUT. EMBEDS SHALL BE TIED OR FIXED IN PLACE PRIOR TO GROUTING.
- F. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS GREATER THAN 12 INCHES IN HEIGHT WILL BE RECONSOLIDATED BY MECHANICAL VIBRATION TO MINIMIZE VOIDS. GROUT POURS 12 INCHES OR LESS IN HEIGHT SHALL BE MECHANICALLY VIBRATED OR PUDDLED AND RODDED WITH SMOOTH BAR WITH ROUNDED END. VIBRATORS SHALL BE 120V, 60 HERTZ, BATTERY POWERED VIBRATOR ARE PROHIBITED.
- G. PROVIDE CONTINUOUS WIRE LATH GROUT BARRIERS AT TOP AND BOTTOM OF BOND BEAMS IN PARTIALLY GROUTED WALLS TO REVENT GROUT FROM FLOWING UP AND OUT OF CELLS.
- H. BEAM POCKETS SHALL BE GROUTED FULL WITH NON-SHRINK GROUT AFTER ALL WELDS/CONNECTION HAVE BEEN STRUCTURALLY INSPECTED
- I. DO NOT DISTURB VERTICAL BARS WITHIN 24HOURS OF PLACING GROUT. COORDINATE WORK TO AVOID LAYING BLOCK ON A PORTION OF WALL THAT WAS GROUTED THE SAME DAY.

3.04 EMBEDDED ITEMS:
- A. WHERE MASONRY ENCOMPASSES STEEL BEAMS PROVIDE DOVETAIL ANCHORS AT 16 INCHES ON CENTER.
- B. HOLES IN MASONRY UNITS SHALL BE DRILLED. HOLES MADE BY CHIPPING WILL NOT BE ACCEPTED.
- C. MINIMUM EMBEDMENT OF BOLTS IN MASONRY OR GROUT PERPENDICULAR TO THE PLANE OF THE WALL SHALL BE 6" WITH A HEAD AT THE EMBEDDED END. MINIMUM EMBEDMENT OF BOLTS PROJECTING VERTICAL OUT OF THE TOP OF MASONRY WALL SHALL BE 8" WITH A HEAD BOLT AT THE EMBEDDED END OR 5" WITH A 3" HOOK AT THE EMBEDDED END.
- D. PROVIDE DOVETAIL ANCHORS AT 16 INCHES o.c. WHEN NEW MASONRY WALLS ABUT WITH NEW CONCRETE WALLS AND COLUMNS
- E. WHERE DRAWING CALL FOR THE USE OF SPLIT-FACE TYPE BLOCK OR FLUTED TYPE BLOCK THE CONTRACTOR SHALL CHIP OFF AND GRIND SMOOTH SPLIT-FACE AND CHIPPED SURFACE AREAS SO THAT FACE MOUNTED STEEL EMBED PLATES WILL BE INSTALLED FLUSH TO BLOCK SURFACE. CONTRACTOR MAY BE REQUIRED TO SUPPLY ADDITIONAL STEEL SPACER PLATES OF DIFFERENT THICKNESS TO ALIGN EMBEDS

STRUCTURAL STEEL

1.01 GENERAL:
- A. STEEL CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS AS CONTAINED IN THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL, INCLUDING THE COMMENTARY AND SUPPLEMENTS.
- B. ALL STEEL FABRICATION WORK SHALL BE PREFORMED BY A FABRICATOR APPROVED BY THE OWNER.
- C. DO NOT USE "JET" WELDING RODS (E8024) FOR ANY STRUCTURAL WELDING. 1.04 STRUCTURAL STEEL FABRICATOR'S QUALIFICATIONS:
  - i) STRUCTURAL STEEL FABRICATOR MUST BE ON THE CITY'S PRE-APPROVED LIST OR PARTICIPATE IN THE AISC CERTIFICATION PROGRAM DESCRIBED IN AISC 201, AND BE DESIGNATED AN AISC CERTIFIED PLANT, CATEGORY STANDARD.

2.01 MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS, UNLESS NOTED OTHERWISE ON DRAWINGS:
- A. W-SHAPES - ASTM A992, FY=50 KSI
- B. PLATES FOR W-SHAPE MEMBERS AND STRUCTURAL TUBES - ASTM A572 GR 50
- C. OTHER ROLLED SECTIONS (ANGLES, CHANNELS, PLATES, ETC.) - ASTM A36, FY=36 KSI
- D. WHERE NOTED 50 KSI ON DRAWINGS - ASTM A572, FY=50 KSI
- E. STEEL PIPE - ASTM A53, TYPE E, GR.B, FY=35KSI F. STRUCTURAL ROUND (HSS) - ASTM A500, GR.B, FY=42KSI
- F. STRUCTURAL TUBES (HSS) - ASTM A500, GR B, FY=46KSI
- G. STRUCTURAL BOLTS U.N.O. - ASTM A325 (TYPE N CONNECTION)
- H. ANCHOR RODS/BOLTS - ASTM F1554, GRADE 36,
- I. SHEET STEEL - ASTM A1011 GR36
- J. WELDING RODS - E-70XX SERIES LOW HYDROGEN.

2.02 ANCHOR RODS:
- A. PROVIDE HEADED OR THREADED AND NUTTED ANCHOR RODS. HOOKED ANCHOR RODS ARE NOT ACCEPTABLE.
- B. FOR THREADED ANCHOR RODS, PROVIDE A SINGLE HEAVY HEX NUT. TACK WELD THE BOTTOM OF THE NUT TO THE ROD AT THE EMBEDDED END, UNLESS NOTED OTHERWISE. THE TOP OF THE EMBEDDED HEAD OR NUT IS THE BASIS FOR MEASUREMENT OF EMBEDMENT. PROVIDE A RIGID TEMPORARY STEEL TEMPLATE TO LOCATE ANCHOR RODS DURING CONCRETE PLACEMENT.
- C. DO NOT HEAT OR BEND ANCHOR RODS.

2.03 HEADED ANCHOR STUDS (HAS)/SHEAR CONNECTOR STUDS:
- A. NELSON HEADED STUDS TYPE-B ICC-ES EVALUATION REPORT #ESR-2856 (Fy=65 KSI) OR APPROVED EQUAL. STUDS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE STUD WELDING EQUIPMENT.
- B. USE 3/4" MINIMUM DIAMETER STUDS. STUDS SHALL BE AT LEAST 3" LONG, AND SHALL EXTEND AT LEAST 1 1/2" ABOVE THE TOP FLUTE OF THE ADJACENT METAL DECK. STUDS SHALL BE EQUALLY SPACED ACROSS BEAM OR SPACED AS SHOWN ON DRAWINGS. STUDS MAY BE HAMMER TESTED BY BENDING 15 DEGREES FROM THE VERTICAL.
- C. WELDING AND INSPECTION SHALL BE IN ACCORDANCE WITH AWS D1.1.
- D. CONTRACTOR TO VERIFY SOUND WELDS BY 100% ACOUSTICAL TESTING. CONTRACTOR TO REPLACE STUDS OR REPAIR DEFICIENT WELDS IN ACCORDANCE WITH AWS D1.1.

2.04 DEFORMED BAR ANCHORS (D2L ON DWGS):
- A. DEFORMED BAR ANCHORS (D2L ON DRAWINGS) SHALL BE NELSON DEFORMED ANCHORS ICC-ES EVALUATION REPORT ESR-2907 OR APPROVED EQUAL. ANCHORS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE NELSON STUD WELDING EQUIPMENT. ALL WELDS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NELSON STUD WELDING COMPANY, WWW.NELSONSTUD.COM DEFORMED BAR ANCHORS SHALL BE OF SIZE, LENGTH AND SPACING PER THE DRAWINGS.

2.05 FINISHES:
- A. STEEL COMPLETELY ENCASED IN CONCRETE SHALL NOT BE PAINTED AND AT THE TIME THE CONCRETE IS PLACED, SHALL BE CLEAN AND FREE FROM ANY SUBSTANCE THAT MIGHT IMPAIR THE BOND BETWEEN THE STEEL AND THE CONCRETE. 2.06 STEEL STAIRS PROVIDED BY OTHERS:
  - i) STEEL STAIRS AND RAILINGS SHALL CONFORM TO THE CURRENT EDITION OF THE METAL STAIRS MANUAL BY NAAMM, 221 NORTH LASALLE STREET, CHICAGO ILLINOIS. USE 12 GAGE PANS MIN.
  - ii) IF EXPANSION ANCHORS ARE USED IN MASONRY, ALL ANCHORS SHALL BE 3/4 INCH MIN. INSTALL IN SOLID GROUTED CELLS AND SUBMIT PRODUCT DATA SHEETS AND ICC-ES EVALUATION REPORT FOR APPROVAL.
- B. SEE ARCHITECT FOR EXACT STAIR CONFIGURATION.

3.01 FIELD WELDING:
- A. FIELD WELDING, CUTTING AND GRINDING OF STEEL INSIDE THE PUBLIC OCCUPIED BUILDING SHALL NOT BE ALLOWED WITHOUT OWNERS APPROVAL. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND THE STEEL ERECTOR THE LOCATIONS, THE TIME OF DAY, SMOKE-FIRE ALARM SYSTEMS CONTROLS AND OTHER FIELD CONDITIONS UNDER WHICH WORK MAY OCCUR INSIDE THE PUBLIC OCCUPIED BUILDING DURING ALL PHASED CONSTRUCTION WORK.
- B. PROVIDE HOT WORK PERMITS. HOT WORK IS ANY WORK INVOLVING WELDING, TORCH CUTTING, GRINDING, OPEN-FLAME SOLDERING, BRAZING OR SIMILAR OPERATIONS CAPABLE OF INITIATING FIRES OR EXPLOSIONS.
- C. WELDING SHALL CONFORM TO THE FOLLOWING AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODES AS APPLICABLE.
  - i) AWS D1.1 STRUCTURAL WELDING CODE-STEEL.
  - ii) AWS D1.4 STRUCTURAL WELDING CODE-REINF'G STEEL
- D. WELDERS SHALL HOLD VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY WITHIN THE LAST 12 MONTHS. IF ANY CERTIFICATE IS MORE THAN 12 MONTHS OLD SUBMIT DETAILS OF COMPANY QUALITY CONTROL
- E. WELDERS SHALL SUBMIT WELDER QUALIFICATIONS AND WELDING PROCEDURE SPECIFICATIONS (WPS) TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF WORK. QUALIFICATIONS AND WPS SHALL BE AVAILABLE ON SITE FOR REVIEW.
- F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS. SPLICES OF STEEL MEMBERS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF WORK.
- G. GRIND SMOOTH ALL EXPOSED WELDS AND CUT EDGES. FINAL APPROVAL IS BY THE ARCHITECT.
- H. WELDING SHALL BE BY EITHER THE SHIELDED METAL ARC WELDING (SMAW) METHOD OR SHALL CONFORM TO AWS CODE FOR ARC AND GAS WELDING CONSTRUCTION.
  - i) MECHANICAL PROPERTIES FOR THE IN-PLACE WELD (FILLER MATERIAL) SHALL HAVE CHARPY V-NOTCH IMPACT TOUGHNESS OF AT LEAST 20 FOOT-POUNDS AT 0 DEGREES.
  - ii) FIELD WELDS MAY NOT BE APPLIED OVER SHOP WELDS UNLESS A MANUFACTURER APPROVED COMPATIBLE ELECTRODE IS USED IN BOTH THE SHOP AND FIELD.
  - iii) CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATION AND WELDING PROCEDURES, BUT NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS AND TRANSITIONS OF UNEQUAL PARTS.
- I. PROVIDE MINIMUM WELD SIZES PER AISC SPECIFICATIONS FOR GENERAL PROVISIONS FOR CONNECTIONS, JOINTS AND FASTENERS UNLESS SHOWN OTHERWISE ON DRAWINGS.
- J. FILLER MATERIAL OF LOW HYDROGEN CLASSIFICATION(S) SHALL BE STORED IN ACCORDANCE WITH AWS REQUIREMENTS AND PARAMETERS. LOW HYDROGEN ELECTRODES SHALL BE USED WITHIN 4 HOURS OF OPENING THEIR THERMETICALLY SEALED CONTAINERS. ELECTRODES THAT HAVE BEEN WET SHALL NOT BE USED AND SHALL BE REMOVED FROM THE SITE.

3.02 NONDESTRUCTIVE TESTING (NDT):
- A. VISUAL INSPECTION WILL BE PERFORMED ON ALL WELDING PRIOR TO COMPLETION OR PRIOR TO SHIPMENT OF SHOP WELDING.
- B. PERIODIC WELDING INSPECTIONS REQUIRE THAT THE MATERIALS, WELDING PROCEDURES AND QUALIFICATIONS OF WELDERS ARE VERIFIED PRIOR TO THE START OF WORK; PERIODIC INSPECTIONS ARE MADE DURING THE WORK; AND ALL WELDS RECEIVE A FINAL VISUAL INSPECTION.
- C. MAGNETIC PARTICLE TESTING
  - i) TEST ENDS OF FULL PENETRATION WELDS AFTER REMOVING RUN-OFF TABS AND GRINDING SMOOTH, AND PRIOR TO ULTRASONIC TESTING.
  - ii) TEST FILLET WELDS IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- D. ULTRASONIC TESTING
  - i) TEST BASE METAL THICKER THAN 1.5 INCHES IN THICKNESS AND CORNER JOINTS FOR DISCONTINUITIES BEHIND AND ADJACENT TO WELDS AFTER JOINT COMPLETION.
  - ii) TEST ENTIRE LENGTH OF FULL PENETRATION WELDS.

3.03 BOLTING:
- A. MANUFACTURER CERTIFICATIONS OF BOLTING FOR FASTENER COMPONENTS USED IN THE FASTENER ASSEMBLIES SHALL BE MADE AVAILABLE TO THE ENGINEER OF RECORD AND INSPECTOR PRIOR TO ASSEMBLY OR ERECTION OF STRUCTURAL STEEL.
- B. HIGH STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED AND INSPECTED IN ACCORDANCE WITH THE AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
- C. THE USE OF FULL TENSION TORQUE CONTROL BOLT ASSEMBLIES IN SNUG TIGHT BEARING CONNECTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- D. BOLTING SHALL BE TESTED AND REQUIRED VERIFICATIONS PERFORMED IN ACCORDANCE TO AISC SPECIFICATIONS PRIOR TO INSTALLATION.
- E. FASTENER COMPONENTS SHALL BE STORED ON SITE IN ACCORDANCE WITH AISC SPECIFICATIONS.
- F. PROVIDE WASHERS IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS," SECTION 6. PROVIDE PLATE WASHERS WHEN OVERSIZED OR LONG SLOTTED HOLES ARE IN THE OUTER PLY OF A CONNECTION.

3.04 THERMAL CUTTING:
- A. DO NOT FLAME CUT STEEL MEMBERS IN THE FIELD UNLESS APPROVED BY THE ENGINEER.

METAL DECK

1.01 GENERAL:
- A. PROVIDE FIRE-STOP BETWEEN DECK AND MASONRY OR CONCRETE SURFACE AT ALL FIRE RATED ASSEMBLIES.
- B. FOR INSULATING CONCRETE MATERIALS, SEE CONCRETE SECTION OF GENERAL STRUCTURAL NOTES.

2.01 TYPE "N" ROOF DECK:
- A. ALL SHEETS TO BE 20 GAGE, 3" DEEP, AND 24" WIDE PER ICC-EVALUATION SERVICE REPORT #ESR-1735P OR EQUAL. NARROWER CLOSURE STRIPS SHALL NOT BE LESS THAN 1'-6" WIDE AND SHALL BE FASTENED TO ADJACENT FULL SHEET WITH TYPICAL SIDE SEAM ATTACHMENT.
- B. PROVIDE STEEL DECK CONFORMING TO ASTM A 653, SS GRADE 33 (MIN) WITH GALVANIZED COATING DESIGNATION G60.
- C. MINIMUM DECK PROPERTIES ARE AS FOLLOWS:
  - i) YIELD STRENGTH, Fy = 38 KSI
  - ii) POSITIVE BENDING EFFECTIVE SECTION MODULUS (DECK TOP IN COMPR) a. +Sx = 0.466 IN^3/FT
  - iii) NEGATIVE BENDING EFFECTIVE SECTION MODULUS (DECK BOTTOM IN COMPR) a. -Sx = 0.548 IN^3/FT
  - iv) DEFLECTION a. Id = 0.917 IN^4/FT
- D. FASTEN DECK WITH 3/4" PUDDLE WELD (1/2 FUSION AREA) TO:
  - i) ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.) FOUR WELDS PER SHEET = WELD EACH SIDE OF SEAM AND AT TWO INTERMEDIATE FLUTES.
  - ii) ALL STEEL PARALLEL TO FLUTES AT 12"o.c.
  - iii) EACH FLUTE AND AT 6"o.c. AT OPENING EDGES
  - iv) STANDING SEAM SIDE LAPS 1-1/2" LONG TOP SEAM WELD OR BUTTON PUNCH WITH PIERCING TOOL AT 12"o.c.

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

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Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX PHX SKY TRAIN
PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES IV

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

2.02 TYPE "B" FORMLOK ROOF DECK:
A. ALL SHEETS TO BE 20 GAGE, 1-1/2" DEEP, AND 36" WIDE PER ICC-EVALUATION SERVICE REPORT #ESR-1735P OR EQUAL. NARROWER CLOSURE STRIPS SHALL NOT BE LESS THAN 1'-6" WIDE AND SHALL BE FASTENED TO ADJACENT FULL SHEET WITH TYPICAL SIDE SEAM ATTACHMENT.
B. PROVIDE STEEL DECK CONFORMING TO ASTM A 653, SS GRADE 33 (MIN) WITH GALVANIZED COATING DESIGNATION G60.
C. MINIMUM DECK PROPERTIES ARE AS FOLLOWS:
i) YIELD STRENGTH, Fy = 38 KSI
ii) POSITIVE BENDING EFFECTIVE SECTION MODULUS (DECK TOP IN COMPR) a. +Sx = 0.235 IN^3/FT
iii) NEGATIVE BENDING EFFECTIVE SECTION MODULUS (DECK BOTTOM IN COMPR) a. -Sx = 0.248 IN^3/FT
iv) DEFLECTION a. Id = 0.216 IN^4/FT
D. FASTEN DECK WITH 3/4"DIA PUDDLE WELD (1/2 FUSION AREA) TO:
i) ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.) 6 WELDS PER SHEET = WELD ONE SIDE OF SEAM AND AT ALL INTERMEDIATE FLUTES.
ii) ALL STEEL PARALLEL TO FLUTES AT 18"o.c.
iii) EACH FLUTE AND AT 6"o.c. AT OPENING EDGES
iv) STANDING SEAM SIDE LAPS BUTTON PUNCH WITH PIERCING TOOL AT 24"o.c.

2.03 TYPE "PLW3-36" FORMLOK ROOF DECK:
A. ALL SHEETS TO BE 20 GAGE, 3" DEEP, AND 36" WIDE PER CODE EVALUATION REPORT BY IAPMO ES. REPORT NO.217 OR APPROVED EQUAL. NARROWER CLOSURE STRIPS SHALL NOT BE LESS THAN 1'-6" WIDE AND SHALL BE FASTENED TO ADJACENT FULL SHEET WITH TYPICAL SIDE SEAM ATTACHMENT.
B. PROVIDE STEEL DECK CONFORMING TO ASTM A 653, SS GRADE 33 (MIN.) WITH GALVANIZED COATING DESIGNATION G60.
C. MINIMUM DECK PROPERTIES ARE AS FOLLOWS:
i) YIELD STRENGTH, Fy = 50 KSI
ii) POSITIVE BENDING EFFECTIVE SECTION MODULUS (DECK TOP IN COMPR) a. +Sx = 0.510 IN^3/FT
iii) NEGATIVE BENDING EFFECTIVE SECTION MODULUS (DECK BOTTOM IN COMPR) a. -Sx = 0.528 IN^3/FT
iv) DEFLECTION a. Id = 0.914 IN^4/FT
D. FASTEN DECK WITH 3/4" DIA PUDDLE WELD (1/2 FUSION AREA) TO:
i) ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.) FOUR WELDS PER SHEET = WELD EACH SIDE OF SEAM AND AT TWO INTERMEDIATE FLUTES.
ii) ALL STEEL PARALLEL TO FLUTES AT 12"o.c.
iii) EACH FLUTE AND AT 6"o.c. AT OPENING EDGES
E. ALTERNATE SCREW ATTACHMENT:
i) FASTEN TO STRUCTURAL FRAMING WITH HILTI X-EDN19-THQ12 AT:
a. ALL FLUTES AT TRANSVERSE SUPPORTS AND AT
b. ALL STEEL MEMBERS PARALLEL TO FLUTES @ 6" O.C.
iv) FASTEN SIDE-LAPS WITH HILTI VSC2 @ 24" O.C.

2.04 LONG SPAN METAL ROOF DEEP DECK PANELS:
A. PROVIDE 9.25" DEEP BY 16" COVER WIDTH CELLULAR PANELS WITH MIN. 18 GAGE SHEET STEEL. SEE OTHER SECTIONS OF CONTRACT DRAWINGS, ESPECIALLY ARCHITECTURAL "RBAR" DRAWINGS, FOR DESIGNATIONS OF ACOUSTICAL AND OTHER SPECIAL CONSIDERATIONS. ACCEPTABLE MANUFACTURERS ARE AS FOLLOWS:
i) EPIC METALS CORPORATION, TYPE ENVISTA FN9.4A PANELS
ii) OR APPROVED EQUAL.
B. MINIMUM DECK PROPERTIES ARE AS FOLLOWS:
i) YIELD STRENGTH, Fy = 40 KSI
ii) NOISE REDUCTION COEFFICIENT (NRC) = 1.0 MINIMUM.
iii) POSITIVE BENDING (DECK TOP IN COMPRESSION)
(1) +Ix = 15.24 IN^4/FT
(2) +Sx = 2.83 IN^3/FT
iv) NEGATIVE BENDING (DECK BOTTOM IN COMPRESSION)
(1) -Ix = 15.24 IN^4/FT
(2) -Sx = 2.65 IN^3/FT
v) NOMINAL DIAPHRAGM SHEAR STRENGTH - 20FT SIMPLE SPAN AT 751 PLF WITH SIDE LAP FASTENERS OF #12 SCREWS AT 24 IN O.C.
C. PROVIDE STEEL SHEET CONFORMING TO ASTM A653 STRUCTURAL QUALITY GRADE 40 WITH MINIMUM YEILD STRENGTH OF 40 KSI, WITH HOT-DIPPED GALVANIZED COATING CONFORMING TO ASTM A924 CLASS G60 (MIN) AS DEFINED IN ASTM A653.
i) THE MINIMUM UNCOATED THICKNESS OF THE STEEL FURNISHED SHALL NOT BE LESS THAT 95% OF THE DESIGN THICKNESS.
D. THE ROOF DEEP DECK SHALL BE COLD-FORMED BY THE CONTINUOUS ROLL FORMING PROCESS. CONNECTIONS USED TO ATTACH THE BOTTOM PLATE TO THE PANEL SHALL NOT BE EXPOSED. THERE SHALL BE NO SPOT WELDS ON THE UNDERSIDE OF THE DECK PLATE.
i) ROOF DECK SHALL HAVE INTERLOCKING SELF-ALIGNING SIDE LAP JOINTS TO ASSIST IN CREATING TIGHT SEAMS IN THE SIDELAPS.
ii) ROOF DECK SHALL HAVE ROLL-FORMED EMBOSSMENTS IN THE TOP FLANGE LOCATED BETWEEN THE LONGITUDINAL STIFFENING WEBS. EMBOSSMENTS SHALL ALSO BE PROVIDED HORIZONTALLY IN THE LONGITUDINAL STIFFENING WEBS TO ENHANCE STRUCTURAL PERFORMANCE.
iii) SHALLOW STIFFENING RIBS SHALL BE ROLL-FORMED INTO THE BOTTOM PLATES OF THE ROOF DECK BETWEEN THE STIFFENING WEBS TO ENHANCE FLATNESS OF THE BOTTOM PLATE.
iv) THE FLAT AREAS OF THE BOTTOM PLATE, AND THE FLAT AREAS OF FACTORY ATTACHED HINGED RACEWAY DOORS, SHALL BE PERFORATED WITH UNIFORM ROWS OF HOLES FOR ENHANCED ACOUSTIC PERFORMANCE. ACOUSTICAL ELEMENTS ABOVE THE BOTTOM PLATE SHALL BE FACTORY INSTALLED WITH STAND-OFF SEPARATOR CLIPS TO INSURE THE INSULATION IS RAISED ABOVE THE PERFORATIONS FOR FIELD PAINTING.

E. ACCESS OPENINGS:
i) ROOF DECK PANEL SECTIONS REQUIRING ACCESS OPENINGS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS.
ii) OPENINGS SHALL BE FACTORY CUT IN THE BOTTOM PLATE AREA BETWEEN THE STIFFENING RIBS TO THE LIMITS SHOWN ON THE ARCHITECTURAL DRAWINGS.
iii) ACCESS DOORS SHALL BE FABRICATED TO MATCH THE FINISH AND PROFILE OF THE ADJACENT DECK SURFACE, INCLUDING ANY STIFFENING RIBS, PERFORATIONS, AND EMBOSSING PATTERNS.
iv) ACCESS DOORS SHALL BE FLUSH MOUNTED TO UNDERSIDE OF DECK WITH A CONTINUOUS HINGE.
v) EACH PANEL WITH ACCESS OPENINGS SHALL CONTAIN FACTORY INSTALLED UNISTRUT TYPE MATERIALTO WHICH CONDIUT/PIPING CAN BE ATTACHED. SPACING OF UNISTRUT TYPE MATERIAL SHALL BE BASED UPON THE LOADS TO BE CARRIED.
(1) DESIGN UNISTRUT SUPPORTS FOR THE FOLLOWING PIPE WEIGHTS WHERE APPLICABLE:
4" DIA. PIPE = 25 PLF
5" DIA. PIPE = 33 PLF
6" DIA. PIPE = 40 PLF
8" DIA. PIPE = 60 PLF
10" DIA. PIPE = 80 PLF
(2) SEE OTHER SECTIONS OF CONTRACT DRAWINGS FOR ADDITIONAL LOADING INFORMATION.
F. DECK PENETRATIONS:
i) PROVIDE OPENINGS ONLY AS SHOWN ON STRUCTURAL DRAWINGS COMPLETE WITH REINFORCEMENT AS REQUIRED. DO NOT CUT ANY OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS WITHOUT PRIOR APPROVAL AND REINFORCEMENT FROM THE STRUCTURAL ENGINEER THROUGH THE PROGRAM/PROJECT MANAGER.
G. ACCESSORIES:
i) WHERE PANELS CONTINUE FROM THE INTERIOR OF THE BUILDING THROUGH TO THE EXTERIOR BUILDING: AIR DAMS WILL BE PROVIDED TO BLOCK THE MOVEMENT OF CONDITIONED AIR FROM THE INTERIOR OF THE BUILDING TO THE EXTERIOR.
H. FASTEN DECK WITH:
i) HILTI X-ENP-19 L15 PIN OR APPROVED EQUAL IN 16/2 PATTERN AT EACH END (2 PINS EA. END, ONE IN EA. DOWN FLUTE).
ii) HILTI X-ENP-19 L15 PIN OR APPROVED EQUAL AT ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.) (2 PINS EA. LOCATION, ONE IN EA. DOWN FLUTE).
iii) #12 x ¾" MAX. LENGTH SCREWS AT 24" O.C. AT SIDE LAPS SEAMS.
iv) SCREW MANUFACTURERS:
(1) HILTI KWIK-PRO SELF-DRILLING TAPPING SCREWS - ICC-ES NO. ESR-2196
(2) ITW BUILDEX TEKS SELF-DRILLING TAPPING SCREWS - ICC-ES NO. ESR-1976
J. INSTALLATION:
i) PLACE UNITS ON STRUCTURAL STEEL FRAMING WITH 4" MIN BEARING LENGTH EACH END. PLACE UNITS IN LENGTHS TO SPAN BETWEEN SUPPORTS (SINGLE SPAN CONDITION). CANTILEVER UNITS WHERE SHOWN ON PLANS.
ii) CUTTING OF DECK PANELS TO SUIT JOBSITE CONDITIONS SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. ONLY THOSE OPENINGS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE CUT. ANY OTHER CUT OPENINGS REQUIRED SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
iii) CONSTRUCTION LOADS SHALL NOT BE APPLIED TO DECK PANELS UNTIL AFTER THE PANELS ARE PERMANENTLY FASTENED TO THE SUPPORT MEMBERS AND THE SIDELAP SEAMS ARE CONNECTED.
iv) ITEMS SUCH AS LIGHT FIXTURES, CONDUIT, AND PIPE MAY BE SUSPENDED WITHIN FROM UNISTRUT TYPE MATERIAL WITHIN DECK CELLS AS SHOWN ON DECK ERECTION DRAWINGS ONLY. PROVIDE SECONDARY SUPPORT FRAMING BEARING DIRECTLY ON STRUCTURAL FRAMING MEMBERS FOR SUPPORT OF SUCH ITEMS AS ROOF DRAIN PIPING, FIRE SPRINKLER TRUNK LINES, MECHANICAL DUCTWORK OR COMPARABLE ITEMS. SUSPENSION OF ANY OTHER ITEMS FROM THE DECK SHALL NOT BE PERMITTED WITHOUT SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER.

POST-INSTALLED ANCHORS

1.01 GENERAL:
A. DO NOT USE POST-INSTALLED ADHESIVE ANCHOR OR DOWELS SYSTEMS TO RESIST GRAVITY LOADS IN FIRE RATED CONSTRUCTION.
B. POST INSTALLED ANCHORS AND DOWELS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING ANY STRUCTURAL POST INSTALLED ANCHORS OR DOWELS THAT MAY BE USED TO REPLACE MISSING OR MISPLACED CAST-IN-PLACE ANCHORS OR DOWELS.
C. ANCHORS SHALL NOT BE USED TO SUPPORT FIRE-RESISTANCE-RATED CONSTRUCTION UNLESS SPECIAL FIRE PROTECTED DETAILS HAVE BEEN DEVELOPED USING APPROVED FIRE-RESISTANCE-RATE MATERIALS.

1.02 QUALITY ASSURANCE:
A. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH THE APPLICABLE ICC-ES REPORT, THE BUILDING CODE, AND THE GENERAL STRUCTURAL NOTES.
B. INSTALL ALL ADHESIVE ANCHORS, DOWELS AND MECHANICAL ANCHORS PER ADHESIVE MANUFACTURER'S REQUIREMENTS.

2.01 ANCHORS RODS, BOLTS, AND SLEEVES:
A. SUBMERGED, EXTERIOR, OR BURIED CONDITIONS: PROVIDE ASTM F593 AISI TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH ASTM F594 STAINLESS STEEL NUTS.
B. INTERIOR CONDITIONS: PROVIDE ASTM A307 CARBON STEEL ANCHOR RODS (U.N.O.).

2.02 MECHANICAL ANCHORS FOR GROUT FILLED MASONRY (CMU):
A. KWIK BOLT 3 EXPANSION ANCHOR BY HILTI (ICC-ES REPORT #ESR-1385) (STAINLESS STEEL BODY FOR EXTERIOR OR DAMP EXPOSURE),
B. WEDGE-ALL ANCHOR BY SIMPSON (ICC-ES REPORT #ESR-1396), (STAINLESS STEEL BODY FOR EXTERIOR OR DAMP EXPOSURE)
C. OR APPROVED EQUAL.

2.03 MECHANICAL ANCHORS FOR CONCRETE:
A. KWIK BOLT TZ EXPANSION ANCHOR BY HILTI (ICC-ES REPORT #ESR-1917) (USE STAINLESS STEEL ANCHORS FOR EXTERIOR OR DAMP EXPOSURE) U.N.O.
B. STRONG-BOLT WEDGE ANCHOR BY SIMPSON (ICC-ES REPORT #ESR-1771) (DRY INTERIOR LOCATIONS ONLY),
C. OR APPROVED EQUAL.

2.04 ADHESIVES FOR ANCHORS AND DOWELS IN GROUT FILLED MASONRY (CMU):
A. HIT HY 150 MAX BY HILTI (ICC-ES REPORT #ESR-1967),
B. SET ADHESIVE ANCHOR SYSTEM BY SIMPSON (ICC-ES REPORT #ESR-1772),
C. OR APPROVED EQUAL.

2.05 ADHESIVES FOR ANCHORS AND DOWELS IN CONCRETE:
A. HIT-RE 500 SD BY HILTI (ICC-ES REPORT #ESR-2322),
B. SET-XP BY SIMPSON (ICC-ES REPORT #ESR-2508),
C. OR APPROVED EQUAL.

2.06 SCREW ANCHORS FOR CRACKED AND UN-CRACKED CONCRETE:
A. DO NOT INSTALL SCREW ANCHORS UNTIL THE CONCRETE MEMBER/ELEMENT HAS REACHED ITS ACCEPTABLE F'c DESIGN STRENGTH.
B. DO NOT USE CARBON STEEL SCREW ANCHORS AT EXTERIOR LOCATIONS OR IN WET ENVIRONMENTS.
C. REUSE SCREW ANCHORS SHALL NOT BE ALLOWED. NOTIFY ENGINEER OF RECORD BEFORE REUSING ANY EXISTING DRILLED AND TAPPED HOLES WITH NEW SCREW ANCHORS.
D. SCREW ANCHORS SHALL BE INSTALLED IN A CLEANED PRE-DRILLED HOLE USING A CALIBRATED POWERED IMPACT WRENCH OR INSTALLED WITH A CALIBRATED TORQUE WRENCH UNTIL THE PROPER NOMINAL EMBEDMENT DEPTH IS OBTAINED AND MAXIMUM INSTALLATION TORQUE HAS BEEN REACHED.
E. ACCEPTABLE SCREW ANCHORS FOR CRACKED AND UN-CRACKED CONCRETE:
i) KWIK HUS-EZ (KH-EZ) SCREW ANCHORS BY HILTI (ICC-ES REPORT #ESR-3027).
ii) TITEN HD SCREW ANCHORS BY SIMPSON (ICC-ES REPORT #ESR-2713).
iii) OR APPROVED EQUAL.

2.07 SCREW ANCHORS FOR SOLID COARSE GROUTED UN-CRACKED MASONRY:
A. MASONRY SHALL BE FULLY GROUTED CLOSED-END CONCRETE MASONRY UNITS CONFORMING TO ASTM C-90, GRADE-N, TYPE-II, DESIGNED F'm = 1500 PSI STRENGTH.
B. DO NOT USE CARBON STEEL SCREW ANCHORS AT EXTERIOR LOCATIONS OR IN WET ENVIRONMENTS.
C. REUSE SCREW ANCHORS SHALL NOT BE ALLOWED. NOTIFY ENGINEER OF RECORD BEFORE REUSING ANY EXISTING DRILLED AND TAPPED HOLES WITH NEW SCREW ANCHORS.
D. SCREW ANCHORS SHALL BE INSTALLED IN A CLEANED PRE-DRILLED HOLE USING A POWERED IMPACT WRENCH OR INSTALLED WITH A TORQUE WRENCH UNTIL THE PROPER NOMINAL EMBEDMENT DEPTH IS OBTAINED.
E. ACCEPTABLE SCREW ANCHORS FOR SOLID COURSE GROUTED UN-CRACKED MASONRY:
i) TITEN HD SCREW ANCHORS BY SIMPSON (ICC-ES REPORT #ESR-1056).
ii) OR APPROVED EQUAL.

2.08 UNDERCUT ANCHORS FOR CRACKED AND UN-CRACKED CONCRETE:
A. DO NOT USE CARBON STEEL ZINC COATED ANCHORS AT EXTERIOR LOCATIONS OR IN WET ENVIRONMENTS. USE STAINLESS STEEL IN EXTERIOR LOCATIONS AND WET ENVIRONMENTS.
B. UNDERCUT ANCHORS SHALL BE INSTALLED IN A CLEANED PRE-DRILLED HOLE USING THE MANUFACTURER'S REQUIRED TOOLS. INSTALL/TIGHTEN WITH A CALIBRATED TORQUE WRENCH UNTIL THE MAXIMUM INSTALLATION TORQUE HAS BEEN REACHED.
C. ACCEPTABLE UNDERCUT ANCHORS FOR CRACKED AND UN-CRACKED CONCRETE:
i) HDA-CARBON STEEL AND STAINLESS STEEL ANCHORS BY HILTI (ICC-ES REPORT #ESR-1546).
ii) TORQ-CUT CARBON STEEL ANCHORS BY SIMPSON (ICC-ES REPORT #ESR-2705).
iii) OR APPROVED EQUAL.

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CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
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STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
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GENERAL STRUCTURAL NOTES V

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

3.01 FIELD INSTALLATION:
- A. INSTALL ANCHORS ONLY AFTER CONCRETE OR GROUT HAS REACHED ITS MINIMUM SPECIFIED STRENGTH.
- B. LOCATE ANCHORS TO AVOID DAMAGE TO REINFORCEMENT. USE GROUND PENETRATING RADAR (GPR) TO LOCATE THE EXISTING REINFORCING. MARK REINFORCING LOCATIONS ON THE CONCRETE SURFACE. COORDINATE LOCATIONS OF HOLES TO BE DRILLED WITH MARKS TO CLEAR THE EXISTING REINFORCING.
- C. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. SEE SPECIAL INSPECTION REQUIREMENTS AND PRODUCT ICC-ES EVALUATION REPORT FOR INSPECTION REQUIREMENTS.
- D. CLEAN DRILLED HOLES USING WIRE BRUSH AND COMPRESSED AIR AS REQUIRED TO REMOVE PARTICULATE DEBRIS AND TO ACHIEVE A DUST FREE SURFACE.
- E. TORQUE ADHESIVE ANCHORS UPON INSTALLING BASE MATERIAL, BUT ONLY AFTER ADHESIVE IS FULLY CURED AND LOAD TEST HAVE BEEN PERFORMED..

3.02 CONNECTION OF NEW STEEL PLATES TO EXISTING CONCRETE:
- A. SHIP CONNECTION PLATES TO THE JOBSITE WITHOUT HOLES.
- B. USE GROUND PENETRATING RADAR (GPR) TO LOCATE THE EXISTING REINFORCING. MARK REINFORCING LOCATIONS ON CONCRETE. MARK CONNECTION PLATE LOCATIONS ON THE CONCRETE SURFACE. DO NOT CUT EXISTING REINFORCING.
- C. DRILL HOLES PER THE MARKS. PLACE TO MISS EXISTING REINFORCING. DO NOT CUT EXISTING REINFORCING.
- D. PLACE CONNECTION PLATES OR TEMPLATE AGAINST EXISTING CONCRETE AND MARK HOLES LOCATIONS ON PLATES FROM MARKS PLACED ON THE CONCRETE SURFACE. VERIFY MARKS WITH DRILLED HOLES.
- E. REMOVE CONNECTION PLATE OR TEMPLATE FROM CONCRETE SURFACE AND FIELD DRILL HOLES.
- F. PLACE EXISTING PLATES AGAINST CONCRETE AND ALIGN HOLES IN PLATES WITH HOLES IN CONCRETE AND INSTALL ANCHORS.

3.03 LOAD TEST FOR ADHESIVE ANCHORS AND DOWELS REQUIREMENTS:
- A. THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE TESTING BY AN INDEPENDENT LABORATORY OF A MINIMUM OF 5% CHOSEN AT RANDOM BY THE TESTING LABORATORY AND CONFIRMED BY THE STRUCTURAL ENGINEER (BUT NO LESS THAN 15) OF EACH TYPE OF ANCHOR INSTALLED. IF ANY ANCHOR FAILS, THE TESTING SHALL BE INCREASED TO 20% (BUT NO LESS THAN 30) AND MAY BE FURTHER INCREASED AFTER REVIEW BY THE STRUCTURAL ENGINEER.
- B. FOR ANCHORS REQUIRING LOAD TESTING, APPLY TWICE THE MANUFACTURER'S ALLOWABLE TENSION CAPACITY BASED ON EFFECTIVE EMBEDMENT, CONCRETE STRENGTH, AND EDGE CONDITIONS. SUSTAIN THE TENSION TEST LOAD FOR 5 MINUTES WITH NO DISCERNABLE MOVEMENT FROM THE ANCHOR.

3.04 TORQUE TEST FOR MECHANICAL ANCHORS, SCREW ANCHORS, & UNDERCUT ANCHORS:
- A. THE CONTRACTOR SHALL INCLUDE IN HIS BID TESTING BY AN INDEPENDENT LABORATORY OF A MINIMUM OF 5% CHOSEN AT RANDOM BY THE TESTING LABORATORY AND CONFIRMED BY THE STRUCTURAL ENGINEER (BUT NO LESS THAN 15) OF EACH TYPE OF ANCHOR INSTALLED. IF ANY ANCHOR FAILS, THE TESTING SHALL BE INCREASED TO 20% (BUT NO LESS THAN 30) AND MAY BE FURTHER INCREASED AFTER REVIEW BY THE STRUCTURAL ENGINEER.

GUARDRAILS AND HANDRAILS

1.01 DESCRIPTION:
- A. PROVIDE AND INSTALL GUARDRAIL AND HANDRAIL SYSTEM COMPLETE WITH VERTICAL POSTS, TOP RAIL, INTERMEDIATE RAILS, HANDRAILS, TOE BOARD ("KICK PLATE"), AND BASE CONNECTION COMPONENTS AND ACCESSORIES INCLUDING, BUT NOT LIMITED TO, EMBEDDED SLEEVES OR ANCHORED PLATES.
- B. DESIGN SHALL COMPLY WITH LOCAL LIFE SAFETY AND BUILDING CODE REQUIREMENTS.
- C. FIELD WELDING OF GUARDRAIL AND HANDRAIL SYSTEM SHALL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

2.01 MATERIAL:
- A. FRP PREMIUM GRADE, FIRE RETARDANT VINYLESTER RESIN WITH GLASS REINFORCEMENT CONSTRUCTED BY THE PULTRUSION METHOD. FIRE RESISTANCE PROPERTIES SHALL CONFORM STM E-84 (LESS THAN 25) AND ASTM D-635, SELF-EXTINGUISHING. ALL HARDWARE USED SHALL BE TYPE 316 STAINLESS STEEL.
- B. ALUMINUM PIPE (6061-T6) --------- Fy =35KSI AND Fb = 24KSI
- C. CARBON STEEL (A53-TYPE F)---------Fy = 25KSI Fb =18KSI

2.02 LOADING REQUIREMENTS:
- A. ATTACHMENTS AND ATTACHMENT DEVICES ARE CONSIDERED PART OF THE GUARDRAIL AND HANDRAIL SYSTEM AND MUST BE ABLE TO TRANSFER THE FOLLOWING MINIMUM LOADING REQUIREMENTS TO THE PRIMARY STRUCTURE.
  - i) LINEARLY DISTRIBUTED LIVE LOAD OF 50 PLF APPLIED IN ANY DIRECTION AT THE TOP.
  - ii) CONCENTRATED LIVE LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP.
- B. DESIGN COMPONENTS OF THE GUARDRAIL SYSTEM SUCH AS INTERMEDIATE RAILS, BALUSTERS, AND PANEL FILLERS FOR THE FOLLOWING MINIMUM LOADING REQUIREMENTS IN ACCORDANCE WITH THE BUILDING CODE THIS LOADING NEED NOT APPLY SIMULTANEOUSLY WITH OTHER LIVE LOADS MENTIONED ABOVE.
  - i) CONCENTRATED LIVE LOAD OF 50 LBS ON AN EQUIVALENT AREA OF 1FT X 1FT INCLUDING OPENINGS AND SPACE BETWEEN RAILS.

SPECIAL INSPECTION

1.01 DESCRIPTION:
- A. THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL STRUCTURAL INSPECTORS IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.

1.02 CONTRACTOR AND INSPECTOR RESPONSIBILITIES:
- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL INSPECTION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.
- B. THE STRUCTURAL INSPECTOR IS NOT AUTHORIZED TO STOP OR DELAY THE WORK.
- C. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE FACILITIES FOR THE STRUCTURAL INSPECTOR TO INSPECT THE WORK SAFELY AND EFFICIENTLY. TWENTY-FOUR (24) HOUR NOTICE IS REQUIRED PRIOR TO INSPECTION.
- D. WORK MUST BE COMPLETED AT TIME OF INSPECTION.
- E. INSPECTION OF WORK PROVIDED BY THE CONTRACTOR SUCH AS TEMPORARY SHORING OR JACKING SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR'S DESIGN ENGINEER FOR THOSE SYSTEMS. THE CONTRACTOR/ENGINEER SHALL PROVIDE A LETTER/REPORT TO BOTH THE OWNER AND ENGINEER OF RECORD THAT THESE INSPECTIONS HAVE BEEN COMPLETED BEFORE EACH PHASE OF SUCH WORK CAN PROCEED.
- F. THE STRUCTURAL INSPECTOR IS NOT INSPECTING FOR ANY OSHA COMPLIANCE OR FOR TEMPORARY CONSTRUCTION, SUCH AS BRACING.
- G. THE STRUCTURAL INSPECTOR IS NOT AUTHORIZED TO DIRECT OR APPROVE CHANGES FROM THE CONTRACT DOCUMENTS. IF THE CONTRACTOR WISHES TO QUESTION THE STRUCTURAL INSPECTOR'S INTERPRETATION OF THE CONTRACT DOCUMENTS, HE MAY DO SO DIRECTLY WITH THE STRUCTURAL ENGINEER OF RECORD.

2.01 SHOP ACTIONS:
- A. SHOP FABRICATION WORK IS SUBJECT TO SPECIAL INSPECTION UNLESS THE FABRICATOR IS REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT SPECIAL INSPECTION.
- B. FABRICATOR SHALL SUBMIT CERTIFICATE OF COMPLIANCE STATING WORK PREFORMED WAS IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

3.01 REQUIRED VERIFICATION AND SPECIAL INSPECTIONS:

INSPECTION OF SOILS	
INSPECTION TIME	FREQUENCY OF INSPECTION
1. SUBGRADE STABILITY, PREPARATION AND EXCAVATION	PERIODIC
2. FILL MATERIALS USED AND PLACEMENT	CONTINUOUS

INSPECTION OF CONCRETE CONSTRUCTION	
INSPECTION ITEM	FREQUENCY OF INSPECTION
A. STRUCTURAL CAST-IN-PLACE CONCRETE:	
1. REINFORCING STEEL MATERIALS AND PLACEMENT	PERIODIC
2. BOLTS INSTALLED IN CONCRETE PRIOR TO AND DURING CONCRETE PLACEMENT	CONTINUOUS
3. VERIFY USE OF REQUIRED MIX DESIGN	PERIODIC
4. SAMPLING OF FRESH CONCRETE	CONTINUOUS
5. CONCRETE AND SHOTCRETE PLACEMENT TECHNIQUE	CONTINUOUS
6. MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC
7. FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS	PERIODIC
D. PRECAST CONCRETE:	
1. ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC
2. CONNECTION OF PRECAST MEMBERS	PERIODIC

H. INSPECTION OF FIBER-REINFORCED POLYMER CONCRETE REHABILITATION:	
INSPECTION ITEM	FREQUENCY OF INSPECTION
FIBER-REINFORCED POLYMER CONCRETE REHABILITATION:	
A. TENSIONS PULL –OFF TEST OF CONCRETE SURFACE	PERIODIC
a. AFTER SURFACE PREPARATION	PERIODIC
b. AFTER INSTALLATION OF COMPOSITE	PERIODIC
c. AFTER INSTALLATION OF FIRE RESISTANT SYSTEM	PERIODIC
B. DAILY INSPECTION MUST BE IN ACCORDANCE WITH THE ICC-ES ACI78 ACCEPTANCE CRITERIA FOR INSPECTION AND VERIFICATION OF CONCRETE STRENGTHENING USING FIBER REINFORCED PLOYMER COMPOSITE SYSTEMS DATE JUNE 2003	PERIODIC
C. COMPLY WITH REQUIREMENTS STATED IN THE QUALITY CONTROL MANUAL PROVIDED BY THE DESIGN ENGINEER/COMPANY FURNISHING THE FIBER-REINFORCED POLYMER CONCRETE REHABILITATION SYSTEM	PERIODIC

INSPECTION OF LEVEL 1 MASONRY CONSTRUCTION NON-ESSENTIAL FACILITIES	
INSPECTION ITEM	FREQUENCY OF INSPECTION
A. STRUCTURAL REINFORCED MASONRY:	
1. PROPORTIONS OF SITE-PREPARED MORTAR	PERIODIC
2. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	PERIODIC
3. LOCATION OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES	PERIODIC
4. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	PERIODIC
5. TYPE, SIZE, AND LOCATION OF ANCHORS	PERIODIC
6. REINFORCEMENT SIZE, GRADE, AND TYPE	PERIODIC
7. WELDING OF REINFORCING BARS	CONTINUOUS
8. PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER	PERIODIC
9. GROUT SPACE IS CLEAN	PERIODIC
10. GROUT PLACEMENT	CONTINUOUS
11. OBSERVE PREPARATION OF REQUIRED GROUT SPECIMENS, MORTAR SPECIMENT, AND/OR PRISMS	CONTINUOUS
12. VERIFY COMPLIANCE WITH THE REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS.	PERIODIC

INSPECTION OF STRUCTURAL STEEL CONSTRUCTION	
INSPECTION ITEM/TASK	FREQUENCY OF INSPECTION
A. WELDING	
PRIOR TO WELDING...	
1. WELDING PROCEDURE SPECIFICATIONS (WPS)	CONTINUOUS / PERFORM
2. MFR CERTIFICATIONS FOR WELDING CONSUMABLES	CONTINUOUS / PERFORM
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	PERIODIC/ OBSERVE
4 . WELDER IDENTIFICATION SYSTEM	PERIODIC/ OBSERVE
5. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) & FILLET WELDS	PERIODIC/ OBSERVE
6. CONFIGURATION AND FINISH OF ACCESS HOLES	PERIODIC/ OBSERVE
DURING WELDING...	
1. QUALIFICATION OF WELDERS	PERIODIC/ OBSERVE
2. CONTROL AND HANDLING OF WELDING CONSUMABLES	PERIODIC/ OBSERVE
3. NO WELDING OVER CRACKED TACK WELDS	PERIODIC/ OBSERVE
4. ENVIRONMENTAL CONDITIONS	PERIODIC/ OBSERVE
5. WPS FOLLOWED & WELDING TECHNIQUES	PERIODIC/ OBSERVE

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19
Design Sub-Consultant
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES VI

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INSPECTION OF STRUCTURAL STEEL CONSTRUCTION CONTINUED	
INSPECTION ITEM/TASK	FREQUENCY OF INSPECTION
AFTER WELDING...	
1. WELDS CLEANED	PERIODIC/ OBSERVE
2. SIZE, LENGTH, AND LOCATION OF WELDS	CONTINUOUS / PERFORM
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	CONTINUOUS / PERFORM
4. ARC STRIKES	CONTINUOUS / PERFORM
5. K-AREA	CONTINUOUS / PERFORM
6. BACKING REMOVED AND WELD TABS REMOVED (IF REQ'D)	CONTINUOUS / PERFORM
7. REPAIR ACTIVITIES	CONTINUOUS / PERFORM
8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	CONTINUOUS / PERFORM
B. BOLTING	
PRIOR TO BOLTING...	
1. MANUFACTURER'S CERTIFICATION FOR FASTENER MATERIALS	CONTINUOUS / PERFORM
2. MATERIAL IDENTIFICATION MARKINGS IN ACCORDANCE WITH ASTM	CONTINUOUS / PERFORM
3. PROPER FASTENER FOR JOINT (GRADE, TYPE, LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE	PERIODIC/ OBSERVE
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	PERIODIC/ OBSERVE
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEETS REQUIREMENTS	PERIODIC/ OBSERVE
6. PROPER STORAGE OF FASTENERS AND COMPONENTS	PERIODIC/ OBSERVE
DURING BOLTING...	
1. FASTENER ASSEMBLIES, INCLUDING WASHERS IF REQUIRED, ARE IN SUITABLE CONDITION AND POSITIONED AS REQUIRED	PERIODIC/ OBSERVE
2. JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO PRETENSIONING	PERIODIC/ OBSERVE
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH IS PREVENTED FROM ROTATING	PERIODIC/ OBSERVE
AFTER BOLTING...	
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	CONTINUOUS / PERFORM
C. GENERAL STRUCTURAL STEEL	
1. EMBEDDED ITEMS SUPPORTING STRUCTURAL STEEL	CONTINUOUS / PERFORM
2. FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH CONSTRUCTION DOCUMENT DETAILS AND SPECIFICATIONS	CONTINUOUS / PERFORM

INSPECTION OF STRUCTURAL STEEL CONSTRUCTION	
INSPECTION ITEM/TASK	FREQUENCY OF INSPECTION
D. STEEL ELEMENTS OF COMPOSITE CONSTRUCTION	
BEFORE CONCRETE PLACEMENT...	
1. DETERMINATION OF CARBON EQUIVALENT FOR REINFORCING STEEL OTHER THAN ASTM A706	PERIODIC/ OBSERVE
2. REINF'G STEEL HAS NOT BEEN REBENT IN THE FIELD	PERIODIC/ OBSERVE
3. REINF'G STEEL MATERIAL, SIZE & PLACEMENT	PERIODIC/ OBSERVE
4. REINF'G STEEL CLEARANCE HAVE BEEN PROVIDED	PERIODIC/ OBSERVE
5. COMPOSITE MEMBER HAS REQUIRED SIZE	PERIODIC/ OBSERVE
6. PLACEMENT AND INSTALLATION OF STEEL DECK	CONTINUOUS / PERFORM
7. PLACEMENT AND INSTALLATION OF STEEL HEADED ANCHOR STUDS	CONTINUOUS / PERFORM
8. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	CONTINUOUS / PERFORM
DURING CONCRETE PLACEMENT...	
(SEE INSPECTION OF CONCRETE CONSTRUCTION)	PERIODIC/ OBSERVE

TESTING OF STRUCTURAL STEEL CONSTRUCTION		
TESTING ITEM/TASK	EXTENT	FREQUENCY OF TESTING
A. NON DESTRUCTIVE TESTING OF WELDED JOINTS		
1. UT OF CJP WELDS	CJP GROOVE WELDS IN MATLS 5/16-IN THICK AND GREATER	CONTINUOUS / PERFORM
2. UT OF BASE METAL FOR LAMELLAR TEARING AND LAMINATIONS	CONDITIONS CAUSING THROUGH-THICKNESS WELD SHRINKAGE STRAINS IN BASE METALS GREATER THAN 1.5-IN. IN T- OR CORNER JOINTS, WHERE THE CONNECTED METAL IS GREATER THAN 3/4-IN, AND CONTAINS CJP WELDS	CONTINUOUS / PERFORM
3. MT OR PT OF THERMALLY CUT ACCESS HOLES	ROLLED SHAPES WITH FLANGES GREATER THAN 2-IN THICK, OR BUILT-UP SHAPES WITH WEBS GREATER THAN 2-IN THICK	CONTINUOUS / PERFORM
4. MT OR PT OF THERMALLY CUT ACCESS HOLES AND BEAM COPES	ROLLED SHAPES WITH FLANGES GREATER THAN 1.5-IN THK OR BUILT-UP SHAPES WITH WEB GREATER THAN 1.5-IN THK	CONTINUOUS / PERFORM
5. CHARPY V-NOTCH IMPACT TEST IN ACCORDANCE WITH ASTM A63/A673M	MEMBERS BENT THROUGH ROLLING OR HEAT INDUCTION TO A RADIUS THAT PRODUCES A STRAIN GREATER THAN 3% CALCULATED AS FOLLOWS. STRAIN, % = $\frac{Dx100}{2R}$ WHERE D = SECTION DEPTH R = MEAN RADIUS	CONTINUOUS / PERFORM
STRUCTURAL STEEL CONSTRUCTION TABLE NOTES:		
a. PROCEDURES FOR ULTRASONIC TESTING (UT), MAGNETIC PARTICLE TESTING (MT), PENTRANT TESTING (PT), RADIOGRAPHIC TESTING (RT) TO FOLLOW AWS D1.1		
b. THE ICC CODE DESCRIBES INSPECTIONS AS PERIODIC OR CONTINUOUS INSPECTIONS. THE AISC DESCRIBES INSPECTIONS AS OBSERVE OR PERFORM. PERIODIC/OBSERVE INSPECTIONS ARE VERIFICATIONS OF FUNCTIONS ON A RANDOM, DAILY BASIS. CONTINUOUS/PERFORM INSPECTIONS ARE VERIFICATION TASKS FOR EACH JOINT OR MEMBER PRIOR TO FINAL ACCEPTANCE.		

INSPECTION OF POST-INSTALLED ANCHORS AND DOWELS	
INSPECTION ITEM	FREQUENCY OF INSPECTION
A. ADHESIVE ANCHORS AND REINFORCEMENT DOWELS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ROD TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. ADHESIVE EXPIRATION DATE	CONTINUOUS
5. PROPER INSTALLATION TECHNIQUE FOR ADHESIVE ANCHORS	CONTINUOUS
B. MECHANICAL ANCHORS, UNDERCUT ANCHORS, AND SCREW ANCHORS:	
1. VERIFY DRILL BIT TYPE AND SIZE	CONTINUOUS
2. HOLE DEPTH AND CLEANING PROCEDURE	CONTINUOUS
3. PRODUCT DESCRIPTION INCLUDING NAME, ANCHOR TYPE, DIAMETER, AND LENGTH	CONTINUOUS
4. PROPER INSTALLATION TECHNIQUE FOR MECHANICAL ANCHORS AND TIGHTENING TORQUE	CONTINUOUS

i) "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.
ii) "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.
iii) ITEMS NOT SHOWN MAY REQUIRE CONTINUOUS OR PERIODIC SPECIAL STRUCTURAL INSPECTION AT THE DISCRETION OF THE ENGINEER OF RECORD. ITEMS LISTED MAY REQUIRE ALTERNATE FREQUENCIES OF INSPECTION OTHER THAN SHOWN ABOVE UNDER DIRECTION OF THE ENGINEER OF RECORD.
iv) WELDING OF REINFORCING STEEL NOT ACCEPTABLE UNLESS DIRECTED BY THE ENGINEER OF RECORD.
v). VERIFY SOILS INSPECTION REQUIREMENTS WITH PROJECT SOILS ENGINEER/CONSULTANT AS OUTLINED IN SOILS REPORT AND PROJECT SPECIFICATIONS

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Design Consultant
Gannett Fleming
Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES VII

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

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CARBON FIBER STRENGTHENING

1.01 GENERAL
- A. PROVIDE CARBON FIBER REINFORCED POLYMER (CFRP, CARBON FIBER WRAP, ETC) WHERE SHOWN ON DRAWING.
- B. SUBMIT THE FOLLOWING PRIOR TO INSTALLATION.
  1. PRODUCT DATA
  2. COMPOSITE SYSTEM THIRD PARTY EVALUATION REPORT
  3. SHOP DRAWINGS
  4. INSTALLATION SCHEDULE AND SEQUENCE
  5. ENGINEER DESIGN FOR ALTERNATE SYSTEM IF APPLICABLE
- C. PROVIDE WRITTEN VERIFICATION FROM THE MATERIAL MANUFACTURER THAT THE ONSITE SUPERVISOR, FOREMAN AND SATURATION/MIXING TECHNICIAN ARE TRAINED AND CERTIFIED TO INSTALL THE PROPOSED SYSTEM.

2.01 MATERIAL
- A. PROVIDE THE CARBON FIBER STRENGTHENING SYSTEM 'SIKAWRAP' BY SIKA (ICC ESR #3288) AS INDICATED AT ALL IDENTIFIED LOCATIONS IN THE CONTRACT DRAWINGS. ALTERNATE FRP COMPOSITE SYSTEM SHALL HAVE AN ICC EVALUATION SERVICE REPORT COMPLIANT WITH THE 2012 IBC AND SHALL SUBMIT STAMPED CALCULATIONS VERIFYING EQUIVALENCY TO THE EXISTING DETAIL.
- B. ALTERNATE SIKAWRAP SHEET SYSTEM MUST MEET REQUIREMENT SIKA WRAP HEX 103C, AS INDICATED AT ALL IDENTIFIED LOCATIONS IN THE PLANS. MODULUS AND ASSOCIATED AREA SHALL BE BASED ON PUBLISHED DESIGN VALUES CONSISTENT WITH LONG TERM DURABILITY EXPOSURE TESTING AS DEFINED IN ICC AC 125.
- C. ALTERNATE SIKAWRAP ANCHOR SYSTEMS MUST MEET THE MINIMUM WEIGHT REQUIREMENTS AS INDICATED IN THE PLANS.

3.01 INSTALLATION NOTES
- A. MARK PERIMETER OF AREAS TO BE STRENGTHENED. THE PERIMETER LINE SHOULD EXTEND BEYOND THE EXACT LIMITS TO ENSURE THAT ALL REQUIRED AREAS ARE ROUGHENED.
- B. PREPARE ALL SURFACES TO RECEIVE COMPOSITE STRENGTHENING BY GRINDING.
- C. REMOVE DUST AND DEBRIS FROM SURFACES USING COMPRESSED AIR, BROOMS OR VACUUM.
- D. CLEARLY MARK ALL LOCATIONS.
- E. APPLY ON PRIME COAT TO ALL AREAS TO RECEIVE COMPOSITE STRENGTHENING (EPOXY MAY BE THICKENED ON THE SITE CONDITION AS DETERMINED BY THE ON-SITE TECHNICIAN).
- F. IMMEDIATELY APPLY THE PRE-CUT AND PRE-SATURATED CARBON SYSTEM TO THE REQUIRED LOCATIONS AS DETAILED.
- G. FINISH ALL SEAMS AND EDGES WITH THICKENED EPOXY.
- H. ALLOW APPROXIMATELY 12 HOURS (TIME MAY BE ADJUSTED BY THE ON-SITE TECHNICIAN OF CURE TIME PRIOR TO FINISH COATING.
- I. REMOVE ALL DUST AND DEBRIS FROM COMPOSITE SURFACE AS NECESSARY.
- J. APPLY PRIMER ON THE COMPOSITE SURFACE USING SPRAY GUN OR ROLLER.
- K. SPRAY APPLY THE FIREPROOF COATING MATERIAL.
- L. SPRAY APPLY THICKNESS FOR 4 HOUR PROTECTION AND EXTEND 5" MIN PAST ALL COMPOSITE SURFACES. APPLY THE FINISH COAT BY SPRAY GUN AS REQUIRED.

3.02 INSPECTION AND TESTING
- A. COMPOSITE SYSTEM APPLICATOR SHALL SUBMIT WITNESS PANELS PREPARED AT THE JOBSITE FOR MATERIALS TESTING (ASTM D7565/ASTM D3039). THE TESTING (AT THE OWNER'S DISCRETION) SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY TO VERIFY ALL SUBMITTED DESIGN PROPERTIES. TESTING SHALL BE PAID FOR BY THE OWNER. FIELD TEST RESULTS THAT ARE LOWER THAN THE DESIGN PROPERTIES SUBMITTED SHALL REQUIRE THE CONTRACTOR TO PAY FOR REMEDIAL MEASURES TO BE APPROVED BY THE ENGINEER-OF-RECORD.
- B. DIRECT TENSION ADHESION TESTING OF CORED SAMPLES SHALL BE CONDUCTED USING THE METHOD DESCRIBED BY ASTM D7522 AND/OR ASTM D4541. A MINIMUM OF THREE TESTS SHALL BE PERFORMED FOR EACH DAY OF PRODUCTION OR FOR EACH 500 SQ FT (45 SQ M) OF FRP APPLICATION, WHICHEVER IS LESS. PULL-OFF TESTS SHALL BE PERFORMED ON A REPRESENTATIVE ADJACENT AREA TO THE AREA BEING STRENGTHENED WHENEVER POSSIBLE. TESTS SHALL BE PERFORMED ON EACH TYPE OF SUBSTRATE OR FOR EACH SURFACE PREPARATION TECHNIQUE USED. THE MINIMUM ACCEPTABLE VALUE FOR ANY SINGLE TENSION TEST IS 200 PSI.
- C. SPECIAL INSPECTION DURING THE INSTALLATION OF THE SYSTEM MUST BE IN ACCORDANCE WITH THE ICC-ES ACCEPTANCE CRITERIA FOR INSPECTION AND VERIFICATION OF CONCRETE AND UNREINFORCED MASONRY STRENGTHENING USING FIBER-REINFORCED POLYMER (FRP) COMPOSITE SYSTEMS (AC178), DATED JUNE 2003 (EDITORIALLY REVISED JUNE 2008).

ABBREVIATIONS

AB	-ANCHOR BOLT(S)
ABC	-AGGREGATE BASE COURSE
ACI	-AMERICAN CONCRETE INSTITUTE
A.F.F.	-ABOVE FINISH FLOOR
AISC	-AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	-ALTERNATE
ALUM	-ALUMINUM
APPROX	-APPROXIMATE
AR	-ANCHOR ROD(S)
ARCH	-ARCHITECT OR ARCHITECTURAL DOCUMENTS
ASTM	-AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	-AMERICAN WELDING SOCIETY
AVG	-AVERAGE
BLDG	-BUILDING
BLK	-BLOCK
BM	-BEAM
BOTT	-BOTTOM
BRG	-BEARING
BTWN	-BETWEEN
CALCS	-CALCULATIONS
℄ TO ℄	-CENTER TO CENTER
CHKD PL	-CHECKERED PLATE
CLG	-CEILING
CIP	-CAST IN PLACE
CJ	-CONTROL JOINT OR CONSTRUCTION JOINT
CLR	-CLEAR
CMU	-CONCRETE MASONRY UNIT
C/L	-CENTER LINE
COL	-COLUMN
CONC	-CONCRETE
CONN	-CONNECTION
CONSTR	-CONSTRUCTION
CONT	-CONTINUE OR CONTINUOUS
DBL	-DOUBLE
DEPR	-DEPRESSION
DIA, ø	-DIAMETER
DIAG	-DIAGONAL
DIM	-DIMENSION
DL	-DEAD LOAD
DN	-DOWN
DP	-DEEP OR DEPTH
DTL	-DETAIL
DWG(S)	-DRAWING(S)
DWL(S)	-DOWEL(S)
E (PSI)	-MODULUS OF ELASTICITY
EA	-EACH
EF	-EACH FACE
EJ	-EXPANSION JOINT
ELEC	-ELECTRICAL
EL	-ELEVATION
EQ	-EQUAL
EQUIP	-EQUIPMENT
ES	-EACH SIDE
EW	-EACH WAY
EXP	-EXPANSION
EXT	-EXTERIOR
FB	-FLAT BAR
FF	-FAR FACE
FDN	-FOUNDATION
FIN	-FINISH
FLG	-FLANGE
FLR	-FLOOR
FRMG	-FRAMING
FS	-FAR SIDE
FT	-FOOT,FEET
FTG	-FOOTING
FY	-YIELD STRESS OF STEEL
GA	-GAGE OR GAUGE
GALV	-GALVANIZED
GPR	-GROUND PENETRATING RADAR
GSN	-GENERAL STRUCTURAL NOTES
HAS	-HEADED ANCHOR STUD
HK	-HOOK
HORIZ	-HORIZONTAL
H.P.	-HIGH POINT
HS	-HIGH STRENGTH
HSS	-HOLLOW STRUCTURAL SECTION
HT	-HEIGHT
I (in^4)	-MOMENT OF INERTIA
IBC	-INTERNATIONAL BUILDING CODE
ICC	-INTERNATIONAL CODE COUNCIL
ID	-INSIDE DIAMETER
I.F.	-INSIDE FACE
IN	-INCH
INFO	-INFORMATION
INT	-INTERIOR
JT	-JOINT
K	-KIP = 1000 LBS.
LBF	-POUND-FORCE
LBS	-POUND(S)
LG	-LONG
LL	-LIVE LOAD
LLH	-LONG LEG HORIZONTAL
LLV	-LONG LEG VERTICAL
L.P.	-LOW POINT
L.S.H.	-LONG SIDE HORIZONTAL
LWC	-LIGHT WEIGHT CONCRETE
MAS	-MASONRY
MATL	-MATERIAL
MAX	-MAXIMUM
MCJ	-MASONRY CONTROL JOINT
MECH	-MECHANICAL
MEJ	-MASONRY EXPANSION JOINT
MEZZ	-MEZZANINE
MFR	-MANUFACTURER
MID	-MIDDLE
MIN	-MINIMUM
MISC	-MISCELLANEOUS
M.O.	-MASONRY OPENING
MPE	-MECHANICAL, PLUMBING & ELECTRICAL
MTL	-METAL
NAAMM	-NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
NF	-NEAR FACE
NIC	-NOT IN CONTRACT
NO., #	-NUMBER
NS	-NEAR SIDE
NTS	-NOT TO SCALE
o.c.	-ON CENTER (LOWERCASE)
OD	-OUTSIDE DIAMETER
O.F.	-OPENING
OUT/OUT	-OUT TO OUT
OH	-OVERHANG
OPP	-OPPOSITE
OPP HD	-OPPOSITE HAND
PCI	-PRESTRESSED CONCRETE INSTITUTE
PC	-PRECAST PRECAST DOUBLE TEE PRECAST INVERTED TEE BEAM
PCF	-POUNDS PER CUBIC FOOT
PEN	-PENETRATION
PERP	-PERPENDICULAR
PGL	-PROFILE GRADE LINE
PJP	-PARTIAL JOINT PENETRATION
PL ℄	-PROPERTY LINE, PLATE
PL OR	-PLATE
PLF	-POUNDS PER LINEAL FOOT
PRELIM	-PRELIMINARY
PROJ	-PROJECTION
PSI	-POUNDS PER SQUARE INCH
PT, P/T	-POST-TENSIONED
R, RAD	-RADIUS
R	-RISER (STAIR)
REINF	-REINFORCED OR REINFORCING
REQ'D	-REQUIRED
R/W	-REINFORCED WITH
R.O.	-ROUGH OPENING
RTU	-ROOF TOP UNIT
SCHED	-SCHEDULE
SGC	-SAND, GRAVEL, COBBLES SOIL LAYER
SHT	-SHEET
SIM	-SIMILAR
SJI	-STEEL JOIST INSTITUTE
SLV	-SLEEVE OR SHORT LEG VERTICAL
SLH	-SHORT LEG HORIZONTAL
SOG	-SLAB ON GRADE
SPA	-SPACES
SPEC	-SPECIFICATION
SQ	-SQUARE
S.S.	-STAINLESS STEEL
STD	-STANDARD
STIFF	-STIFFENER
STL	-STEEL
STRUC	-STRUCTURE OR STRUCTURAL
SYMM	-SYMMETRICAL
T	-TREAD (STAIR)
T&B	-TOP AND BOTTOM
THK	-THICK OR THICKNESS
TL	-TOTAL LOAD
TOC	-TOP OF CONCRETE
TOG	-TOP OF GROUT
TOS	-TOP OF STEEL
TOW	-TOP OF WALL
TYP	-TYPICAL
UNO	-UNLESS NOTED OTHERWISE
U/S	-UNDERSIDE
UT	-ULTRASONIC TESTING
VERT	-VERTICAL
w/	-WITH (LOWERCASE)
w/o	-WITHOUT (LOWERCASE)
WD	-WOOD
WP	-WORK POINT
WWF	-WELDED WIRE FABRIC
X-BRACE	-CROSS BRACING
X-STRONG	-EXTRA STRONG
XX-STRONG	-DOUBLE EXTRA STRONG
&	-AND
@	-AT
#	-NUMBER
%	-PERCENT
ø	-DIAMETER

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant
Gannett Fleming

Design Sub-Consultant

Professional Engineer (Structural)
Shane E. Sweeten
Date Signed 7/13/18
Arizona, U.S.A.
Expires 9/30/19

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

PHX SKY TRAIN
City of Phoenix Aviation Department

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

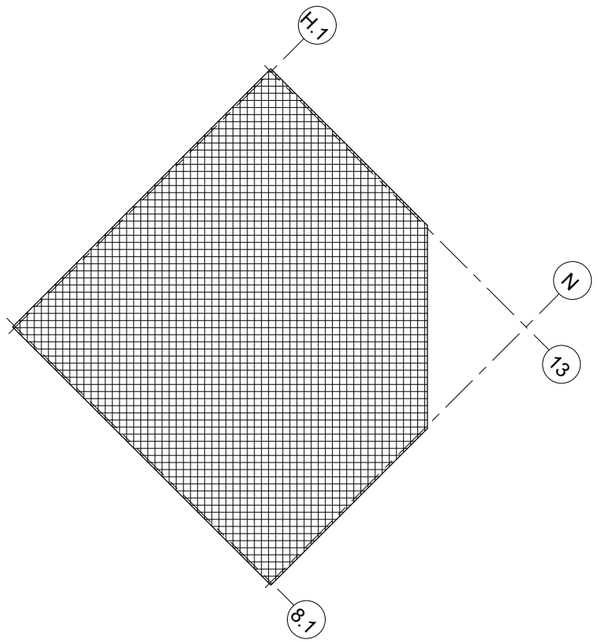
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GENERAL STRUCTURAL NOTES VIII

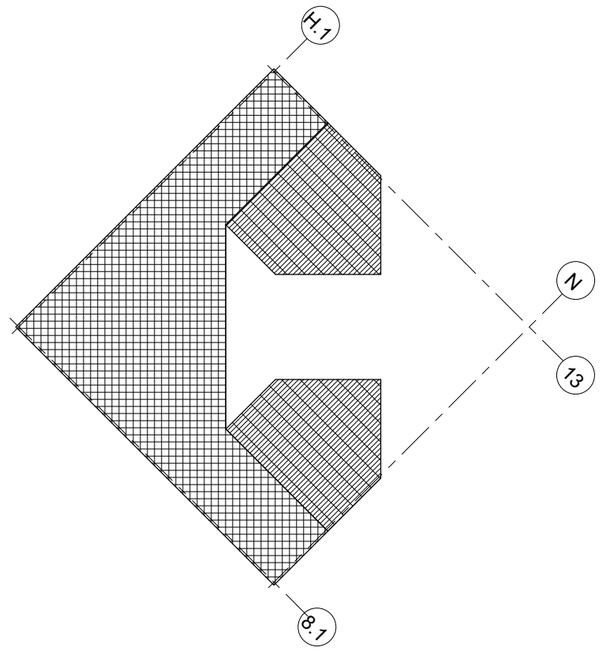
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Sheet Reference No:
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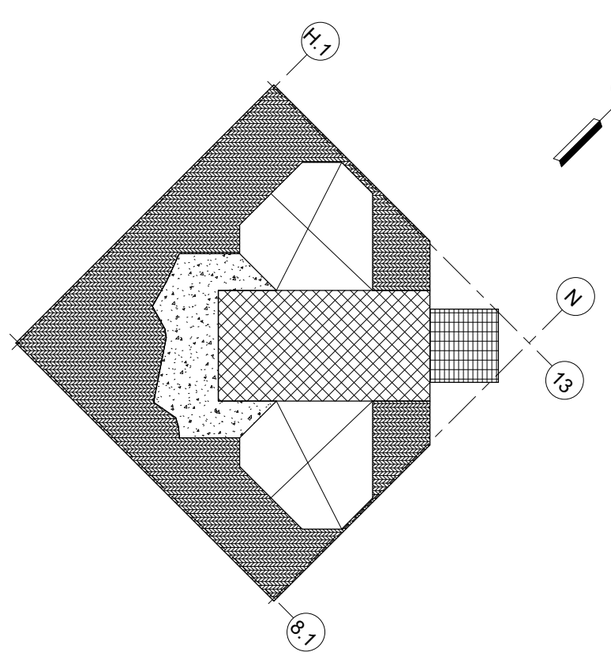
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



EXISTING RCC LEVEL 2 LOADS
SCALE: NTS



EXISTING RCC LEVEL 3 LOADS
SCALE: NTS



EXISTING RCC LEVEL 4 AND NEW GUIDEWAY LOADS
SCALE: NTS

LOADING MAP LEGEND			
MARK	**TYPE**	**SDL**	**LL**
	EXISTING RCC LEVEL 4	6 PSF	100 PSF AND AASHTO BUS LOADS
	ROOF w/ MECHANICAL	20 PSF	20 PSF
	EXISTING FLOOR	6 PSF	40 PSF
	STAIRS & PUBLIC ASSEMBLY	10 PSF	100 PSF
	GUIDEWAY	100 PSF	SEE SHEET RBSB0022
	STATION PLATFORM	50 PSF	125 PSF
	EXISTING ROOF	15 PSF	20 PSF
	ROOF	22 PSF	20 PSF
	NEW CONC OVER HIGH DENSITY FOAM	70 PSF	SEE EXISTING RCC LEVEL 4

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Design Sub-Consultant

Design Consultant
Gannett Fleming

Professional Engineer (Structural)
Shane E. Sweeten
No. 44434
Date Signed 7/9/18
Arizona, U.S.A.
Expires 9/30/19

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

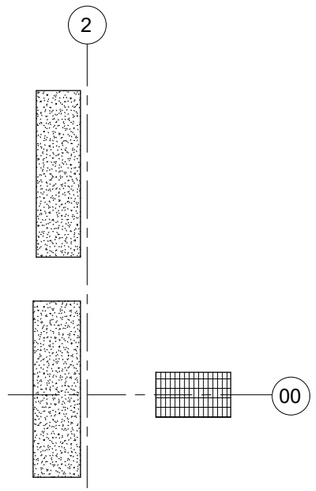
Designed by:	ACK
Drawn by:	HY
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

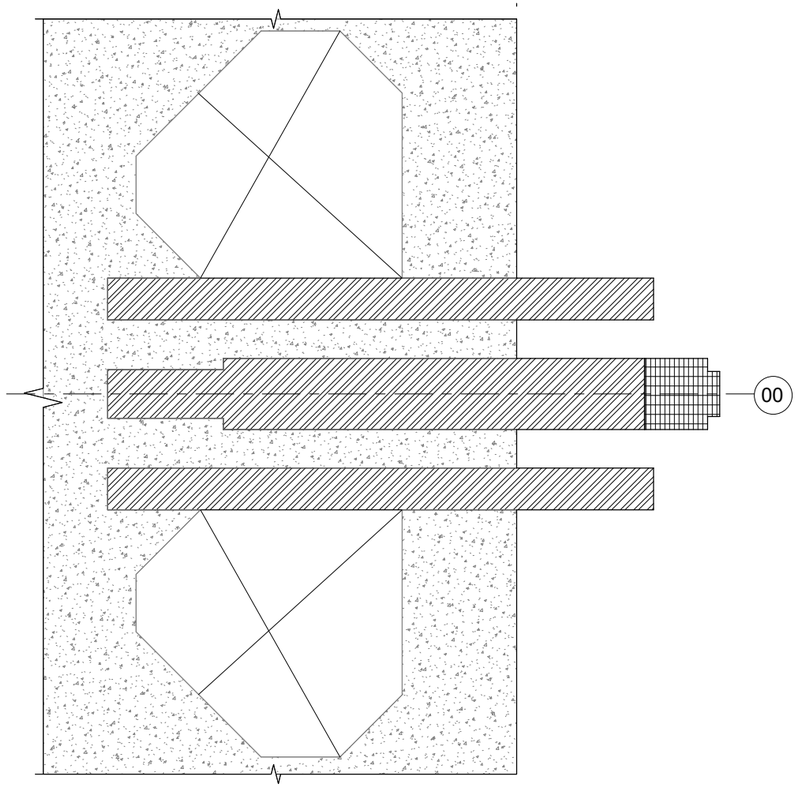
RCC STATION
STRUCTURAL
FLOOR LOADING MAPS

Package: **B04 - RBSB0020**
Sheet Reference No:
V5 - 122 of 218

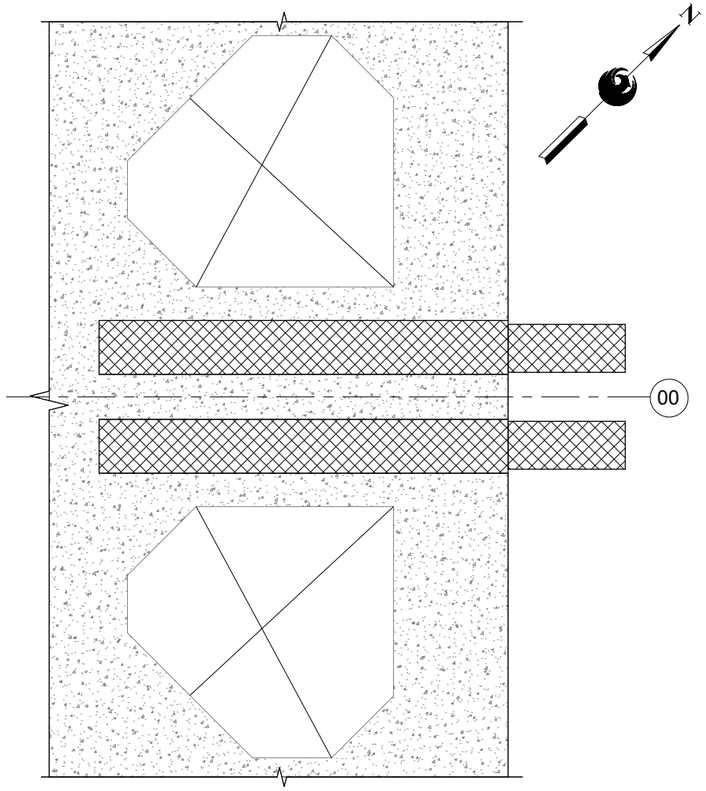
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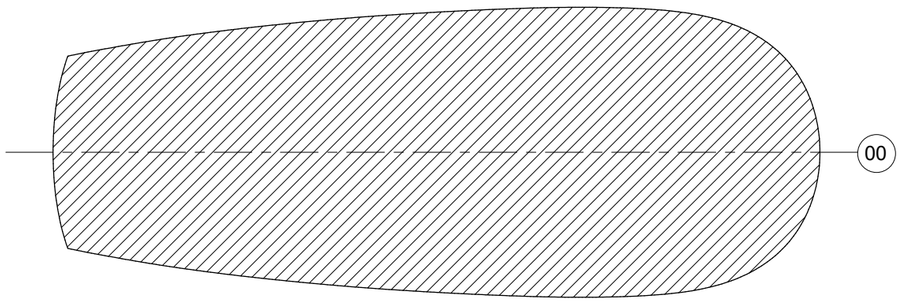
VISITOR PARKING LEVEL PLAN
SCALE: NTS



PLATFORM LEVEL PLAN
SCALE: NTS



GUIDEWAY LEVEL PLAN
SCALE: NTS



ROOF PLAN
SCALE: NTS

LOADING MAP LEGEND			
MARK	TYPE	SDL	LL
	EXISTING RCC LEVEL 4	6 PSF	100 PSF AND AASHTO BUS LOADS
	ROOF w/ MECHANICAL	20 PSF	20 PSF
	EXISTING FLOOR	6 PSF	40 PSF
	STAIRS & PUBLIC ASSEMBLY	10 PSF	100 PSF
	GUIDEWAY	100 PSF	SEE SHEET RBSB0022
	STATION PLATFORM	50 PSF	125 PSF
	EXISTING ROOF	15 PSF	20 PSF
	ROOF	22 PSF	20 PSF
	NEW CONC OVER HIGH DENSITY FOAM	70 PSF	SEE EXISTING RCC LEVEL 4

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7/13/2018 5:12:17 PM

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	SUBMITTED FOR REVIEW	04/06/18

Registered Professional Engineer (Structural)
Shane E. Sweeten
No. 44434
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

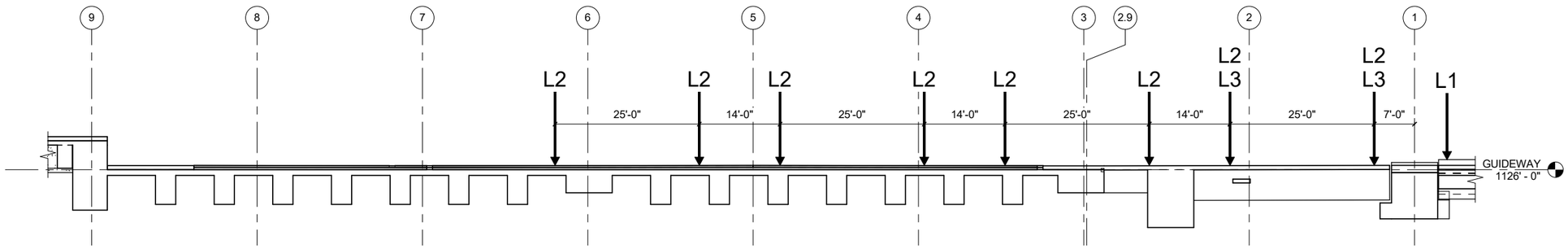
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	HY
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FLOOR LOADING MAPS

Package: B04
Sheet Reference No: **RBSB0021**



1 RBSB0022 **STATION TRAIN LOADING DIAGRAM**
SCALE: 3/32" = 1'-0"

L1 GUIDEWAY REACTIONS				
GUIDEWAY BEAM / LOAD TYPE	**DL (KIPS)**	**LL (KIPS)**	**WL (HORIZ LOAD KIPS)**	**M_{WL} (KIP-FT)**
INNER BEAM	140	45	4.2	38.7
OUTER BEAM	130	35	4.2	38.7

L2 TRAIN LOADS			
LOAD CASE / LOAD TYPE	**VERTICAL LOAD (KIPS)**	**HORIZONTAL LOAD (KIPS)**	**MOMENT (KIP-FT)**
IMPACT LOAD (IV)	9.6	-	-
TRAIN LL	31.9	-	-
IMPACT LOAD (IN)	-	3.19	22.3
2-CAR RECOVERY	26	-	-

L3 TRAIN LOADS			
LOAD CASE / LOAD TYPE	**VERTICAL LOAD (KIPS)**	**HORIZONTAL LOAD (KIPS)**	**MOMENT (KIP-FT)**
DERAILMENT 4-CAR	63.8	6.38	242.4
ROLLING FORCE	-	-	22.3

NOTE:
THESE LOAD CASES WERE APPLIED INDEPENDENTLY AND FOR EACH OF THE TWO TRAINS IN THE STATION PER THE APPLICABLE AASHTO LOAD COMBINATIONS.

Project Number: 62421
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming
Design Sub-Consultant
SHANE E. SWEETEN
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

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

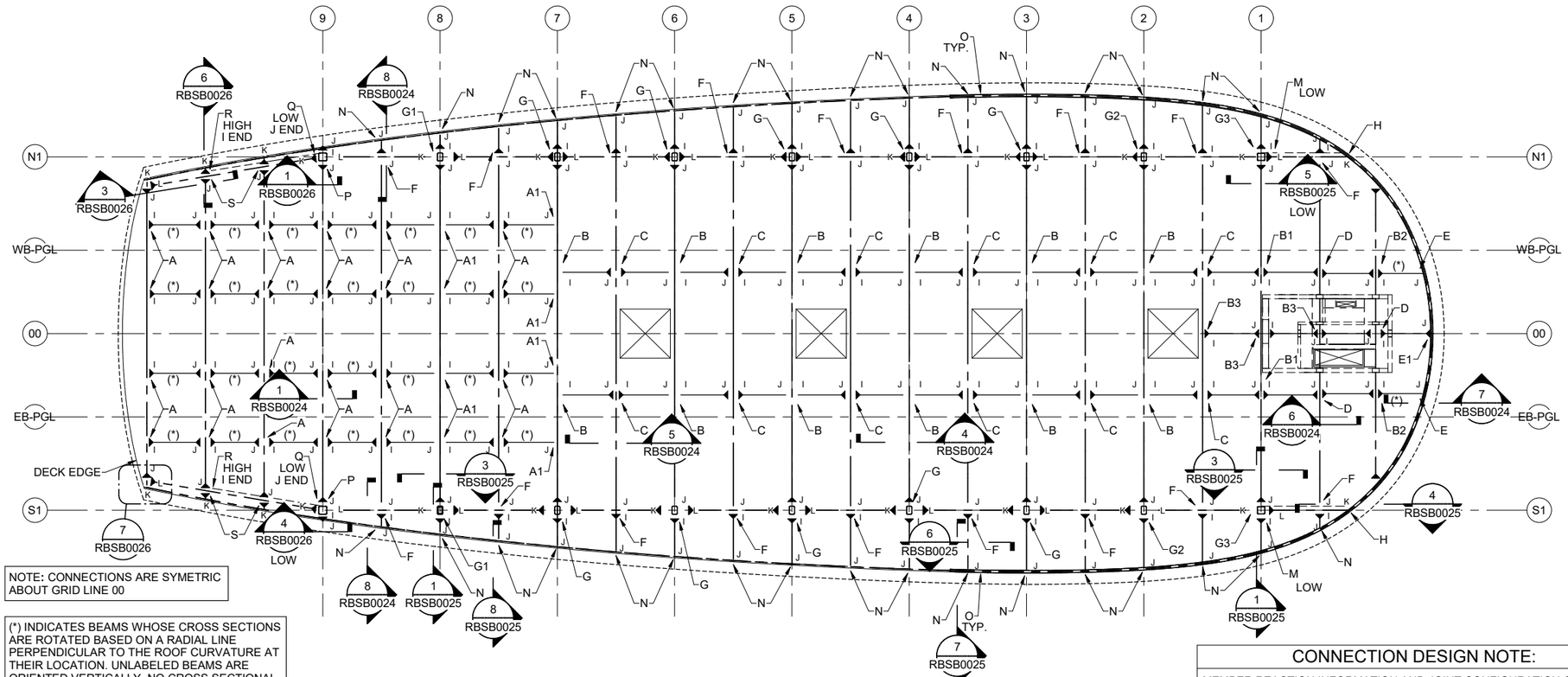
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
RCC STATION LOADING DIAGRAM

Package: **B04 - RBSB0022**
Sheet Reference No:
V5 - 124 of 218



NOTE: CONNECTIONS ARE SYMETRIC ABOUT GRID LINE 00

(*) INDICATES BEAMS WHOSE CROSS SECTIONS ARE ROTATED BASED ON A RADIAL LINE PERPENDICULAR TO THE ROOF CURVATURE AT THEIR LOCATION. UNLABELED BEAMS ARE ORIENTED VERTICALLY, NO CROSS SECTIONAL ROTATION.

1 RBSB0023 ROOF MEMBER CONNECTION DESIGN DATA

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

CONNECTION DESIGN NOTE:

MEMBER REACTION INFORMATION AND JOINT CONFIGURATION ON THIS SHEET IS PROVIDED AS PERFORMANCE CRITERIA FOR THE DESIGN OF CONNECTIONS DELEGATED TO THE STEEL FABRICATOR.

CONN. LABEL / TYPE		SERVICE LOAD MEMBER FORCE END REACTIONS					
		Axial (k)	y Shear (k)	z Shear (k)	Torque (k-ft)	yy Mom (k-ft)	zz Mom (k-ft)
A, A1	I END MAX	0.35	21.29	16.66	30.09	130.92	213.15
	I END MIN	-53.99	-11.42	-16.66	-30.09	-130.93	-112.33
	J END MAX	0.35	18.81	17.07	30.09	112.62	143.77
	J END MIN	-53.99	-13.09	-17.07	-30.09	-112.61	-112.18
B	I END MAX	-5.63	11.20	2.55	11.96	21.56	0.00
	I END MIN	-55.23	0.20	-4.22	-11.95	-9.19	0.00
	J END MAX	-5.42	-0.16	2.33	11.44	8.02	0.00
	J END MIN	-51.44	-10.47	-1.98	-8.60	-5.38	0.00
B1	I END MAX	-2.79	23.84	3.30	5.85	15.36	298.41
	I END MIN	-39.81	-0.03	-3.28	-7.61	-15.56	0.66
	J END MAX	-4.27	-0.11	1.55	25.48	9.38	225.21
	J END MIN	-49.18	-19.66	-1.45	-25.50	-11.14	-5.44
B2	I END MAX	-2.15	1.18	1.53	3.55	18.69	6.38
	I END MIN	-29.15	-0.62	-1.71	-3.55	-16.56	-18.95
	J END MAX	-1.60	4.30	6.62	28.24	44.46	5.45
	J END MIN	-33.13	-0.47	-6.66	-27.93	-44.67	-29.54
B3	I END MAX	-0.71	10.99	0.03	0.03	20.08	164.12
	I END MIN	-11.05	-1.50	-2.77	-4.01	-0.21	-4.62
	J END MAX	-0.71	8.17	0.03	0.03	0.20	83.13
	J END MIN	-10.47	-4.32	-2.77	-0.97	-19.58	-8.21
C	I END MAX	-4.27	1.18	2.97	24.82	12.93	7.00
	I END MIN	-53.79	-17.51	-2.95	-24.83	-11.75	-153.76
	J END MAX	-5.63	9.05	2.28	9.52	6.62	6.35
	J END MIN	-51.61	-0.75	-2.02	-3.07	-5.48	-62.34
D	I END MAX	-0.74	6.71	6.62	28.24	46.34	45.64
	I END MIN	-33.13	-4.04	-6.66	-27.93	-45.95	-26.23
	J END MAX	-1.38	21.69	2.30	6.46	13.53	10.66
	J END MIN	-39.81	-1.32	-1.79	-6.46	-13.39	-42.24

CONN. LABEL / TYPE		SERVICE LOAD MEMBER FORCE END REACTIONS					
		AXIAL (k)	y Shear (k)	z Shear (k)	Torque (k-ft)	yy Mom (k-ft)	zz Mom (k-ft)
E	J END MAX	0.00	0.00	1.32	3.55	0.00	0.00
	J END MIN	-29.15	-6.42	-1.51	-3.55	0.00	0.00
E1	J END MAX	0.00	0.00	1.32	3.55	2.97	49.86
	J END MIN	-29.5	-6.42	-1.51	-3.55	0.47	5.03
F	I END MAX	3.25	10.54	2.23	11.39	7.87	97.14
	I END MIN	-8.09	-10.54	-2.23	-11.35	-2.94	-21.77
	J END MAX	22.88	19.79	6.38	79.10	93.91	0.00
	J END MIN	-6.02	-19.84	-6.38	-79.17	-11.43	0.00
G	I END MAX	-0.28	17.23	2.25	13.58	15.00	168.85
	I END MIN	-11.67	-17.24	-2.25	-13.60	-1.30	-30.79
	J END MAX	52.52	52.66	7.80	7.13	66.68	777.10
	J END MIN	-3.47	-52.65	-7.81	-7.13	-26.03	-37.46
	K END MAX	3.81	1.49	7.07	61.29	51.71	98.16
	K END MIN	-65.58	-16.98	-7.06	-61.08	-51.69	-69.78
	L END MAX	4.75	26.54	9.71	81.96	101.55	208.52
	L END MIN	-64.85	-5.50	-9.74	-82.08	-101.36	-73.48
G1	SEE G FOR I & L END MAX's AND MIN's						
	J END MAX	59.43	79.42	7.80	105.23	79.39	1147.35
	J END MIN	-3.47	-79.42	-7.81	-105.43	-26.03	-37.46
	K END MAX	3.81	1.49	7.07	61.29	0.00	0.00
	K END MIN	-65.58	-16.98	-7.06	-61.08	0.00	0.00
G2	SEE G FOR I, J, K END MAX's AND MIN's						
	L END MAX	4.75	26.54	9.71	81.96	0.00	0.00
	L END MIN	-64.85	-5.50	-9.74	-82.08	0.00	0.00
G3	SEE G FOR I, J, L END MAX's AND MIN's						
	K END MAX	3.81	1.49	7.07	61.29	0.00	0.00
	K END MIN	-65.58	-16.98	-7.06	-61.08	0.00	0.00

CONN. LABEL / TYPE		SERVICE LOAD MEMBER FORCE END REACTIONS					
		AXIAL (k)	y Shear (k)	z Shear (k)	Torque (k-ft)	yy Mom (k-ft)	zz Mom (k-ft)
H	J END MAX	109.36	0.00	3.68	43.90	74.49	8.64
	J END MIN	8.77	-2.06	-3.67	-43.88	-74.49	1.58
	K END MAX	19.40	33.47	13.14	160.81	43.61	132.77
	K END MIN	-0.89	0.00	-13.13	-161.04	-43.50	0.00
M	I END MAX	113.37	3.99	3.68	43.90	20.25	40.08
	I END MIN	11.18	1.65	-3.67	-43.88	-20.28	9.02
N	J END MAX	3.84	3.78	2.26	12.32	4.06	9.74
	J END MIN	-7.72	-8.11	-2.26	-12.34	-14.59	-9.60
O	CONNECTION SHALL DEVELOP FULL STRENGTH OF BEAM.						
P	I END MAX	-0.36	13.78	15.85	56.39	37.59	23.99
	I END MIN	-3.04	-13.63	-15.87	-56.55	3.72	4.30
	J END MAX	73.98	79.05	4.69	45.88	-3.11	954.23
	J END MIN	11.68	-79.02	-4.69	-45.77	-65.71	84.08
	K END MAX	-20.96	5.74	7.05	104.91	54.95	-6.51
	K END MIN	-117.58	-0.46	-7.05	-104.88	-54.94	-101.07
	L END MAX	-11.06	5.67	0.87	18.18	0.00	0.00
	L END MIN	-58.37	0.96	-0.88	-17.85	0.00	0.00
Q	J END MAX	235.93	-2.53	1.78	33.19	8.82	69.66
	J END MIN	46.05	-5.27	-1.78	-33.17	-8.83	21.89
R	I END MAX	231.49	2.89	1.78	33.19	51.73	17.64
	I END MIN	43.39	1.48	-1.78	-33.17	-51.71	9.51
S	I END MAX	3.76	13.22	9.92	4.12	5.80	29.77
	I END MIN	-2.47	-13.16	-9.92	-4.18	-19.18	-7.71
	J END MAX	17.28	37.04	27.50	62.18	20.50	141.11
	J END MIN	-2.28	-36.98	-27.50	-62.19	-179.50	-2.60
	K END MAX	3.94	7.62	6.70	2.98	0.56	29.64
	K END MIN	-2.46	-13.16	-9.92	-4.18	-19.18	-5.68

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

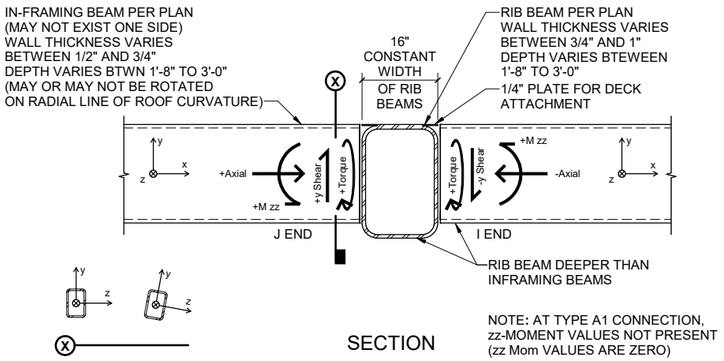
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONNECTION DESIGN DATA

Package: B04 - RBSB0023

Sheet Reference No: V5 - 125 of 218

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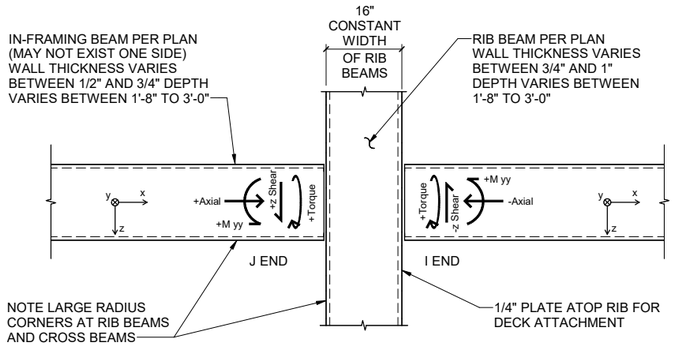


SECTION

NOTE: AT TYPE A1 CONNECTION, zz-MOMENT VALUES NOT PRESENT (zz Mom VALUES ARE ZERO)

NOTE: THE LOCAL x-AXIS CORRESPONDS TO THE MEMBER CENTERLINE. THE CENTERLINE DESIGNATES THE MEMBER CROSS SECTION'S CENTROID LOCATION. THE POSITIVE DIRECTION OF THIS LOCAL x-AXIS IS FROM THE I-END JOINT TOWARDS THE J-END JOINT. THE MEMBER'S LOCAL z-AXIS LIES IN A HORIZONTAL PLANE OR ON A SLOPING PLANE IF THE MEMBER HAS BEEN ROTATED ABOUT IT'S LOCAL x-AXIS. A LINE NORMAL TO THE PLANE CREATED BY THE x-AXIS AND z-AXIS DIRECTION VECTORS SETS THE y-AXIS DIRECTION.

1 RBSB0024 **TYPE A - BEAM TO RIB SECTION**
SCALE: 3/4" = 1'-0"



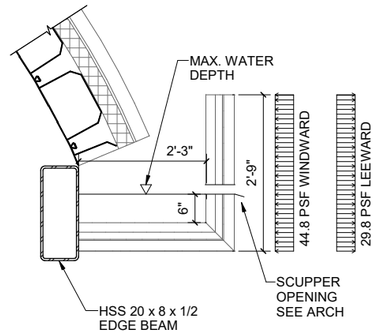
ENLARGED PLAN

NOTE: THE LOCAL x-AXIS CORRESPONDS TO THE MEMBER CENTERLINE. THE CENTERLINE DESIGNATES THE MEMBER CROSS SECTION'S CENTROID LOCATION. THE POSITIVE DIRECTION OF THIS LOCAL x-AXIS IS FROM THE I-END JOINT TOWARDS THE J-END JOINT. THE MEMBER'S LOCAL z-AXIS LIES IN A HORIZONTAL PLANE OR ON A SLOPING PLANE IF THE MEMBER HAS BEEN ROTATED ABOUT IT'S LOCAL x-AXIS. A LINE NORMAL TO THE PLANE CREATED BY THE x-AXIS AND z-AXIS DIRECTION VECTORS SETS THE y-AXIS DIRECTION.

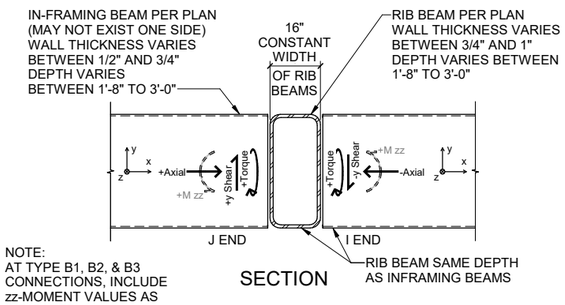
2 RBSB0024 **TYPE A - BEAM TO RIB ENLARGED PLAN**
SCALE: 3/4" = 1'-0"

CONNECTION DESIGN NOTE:

MEMBER REACTION INFORMATION AND JOINT CONFIGURATION ON THIS SHEET IS PROVIDED AS PERFORMANCE CRITERIA FOR THE DESIGN OF CONNECTIONS DELEGATED TO THE STEEL FABRICATOR.



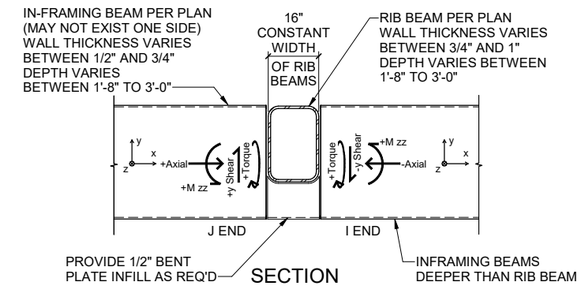
3 RBSB0024 **RAIN GUTTER LOADING**
SCALE: 3/4" = 1'-0"



NOTE:
AT TYPE B1, B2, & B3
CONNECTIONS, INCLUDE
zz-MOMENT VALUES AS
INDICATED

NOTE: SEE TYPE A CONNECTION, SECTION AND ENLARGED PLAN, FOR MORE INFORMATION

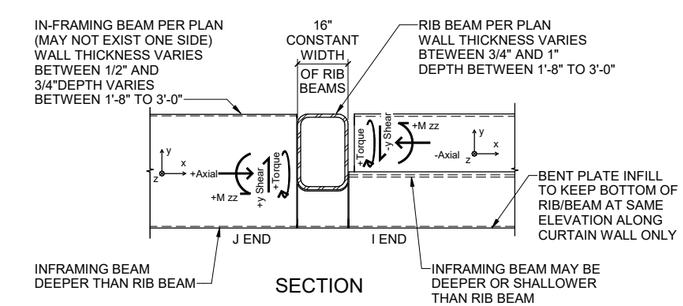
4 RBSB0024 **TYPE B - BEAM TO RIB SECTION**
SCALE: 1/2" = 1'-0"



SECTION

NOTE: SEE TYPE A CONNECTION, SECTION AND ENLARGED PLAN, FOR MORE INFORMATION

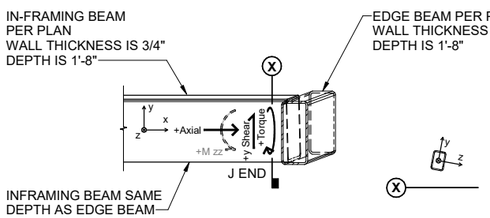
5 RBSB0024 **TYPE C - BEAM TO RIB SECTION**
SCALE: 1/2" = 1'-0"



SECTION

NOTE: SEE TYPE A CONNECTION, SECTION AND ENLARGED PLAN, FOR MORE INFORMATION

6 RBSB0024 **TYPE D - BEAM TO RIB SECTION**
SCALE: 1/2" = 1'-0"

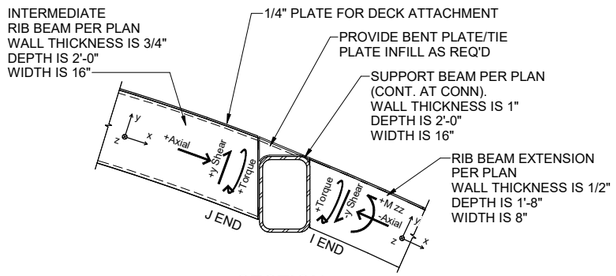


TYPE E - BEAM TO EDGE BEAM

NOTE: AT TYPE E1 CONNECTION INCLUDE
zz-MOMENT VALUES AS INCIDATED

NOTE: SEE TYPE A CONNECTION, SECTION AND ENLARGED PLAN, FOR MORE INFORMATION

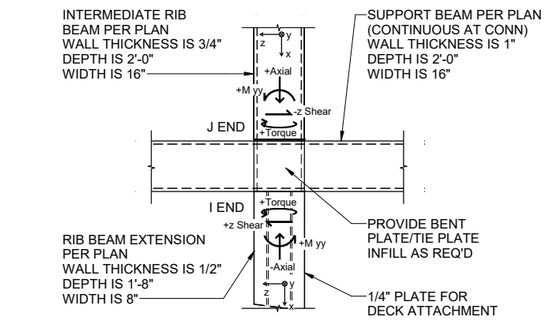
7 RBSB0024 **SECTION**
SCALE: 1/2" = 1'-0"



SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

8 RBSB0024 **TYPE F - RIB/RIB EXTENSION TO BEAM SECTION**
SCALE: 1/2" = 1'-0"



ENLARGED PLAN

NOTE: SEE TYPE A CONNECTION ENLARGED PLAN FOR MORE INFORMATION

9 RBSB0024 **TYPE F - RIB/RIB EXTENSION TO BEAM ENLARGED PLAN**
SCALE: 1/2" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN

STAGE 2 DESIGN

500 S 24TH STREET

PHOENIX, AZ 85034

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

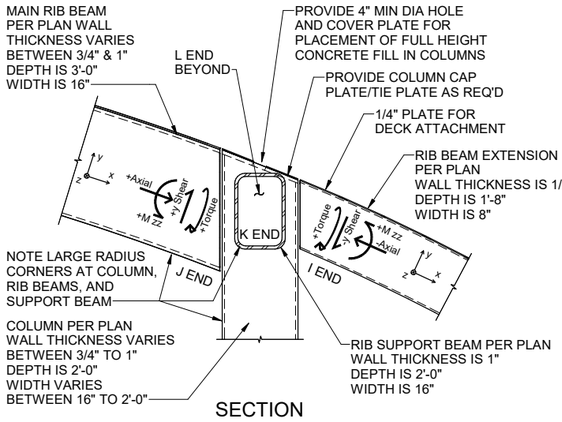
RCC STATION
STRUCTURAL
CONNECTION DESIGN DETAILS

Package: B04 - RBSB0024

Sheet Reference No: V5 - 126 of 218

Project Number: 62421
7/13/2018 5:12:34 PM

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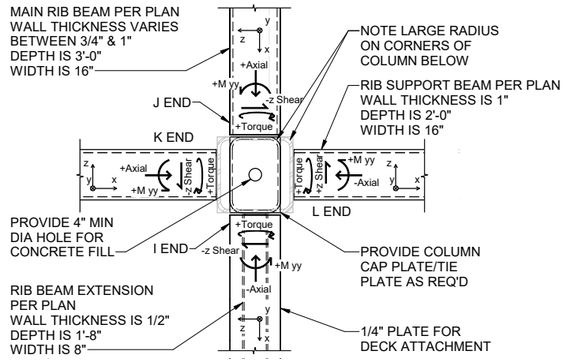


SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

1 TYPE G - RIB/RIB EXTENSION TO COLUMN SECTION

RBSB0025 SCALE: 1/2" = 1'-0"

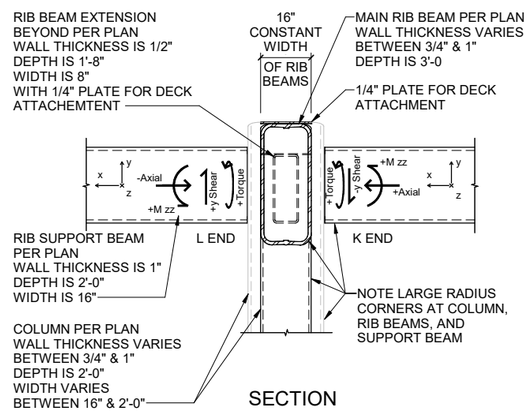


ENLARGED PLAN

NOTE: SEE TYPE A CONNECTION ENLARGED PLAN FOR MORE INFORMATION

2 TYPE G - RIB/RIB EXTENSION TO COLUMN ENLARGED PLAN

RBSB0025 SCALE: 1/2" = 1'-0"



SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

3 TYPE G - SUPPORT BEAM TO COLUMN SECTION

RBSB0025 SCALE: 1/2" = 1'-0"

SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

4 TYPE H - EDGE BEAM TO SUPPORT BEAM AT BRACE

RBSB0025 SCALE: 1/2" = 1'-0"

SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

5 TYPE M - BRACE IN-LINE WITH COLUMN

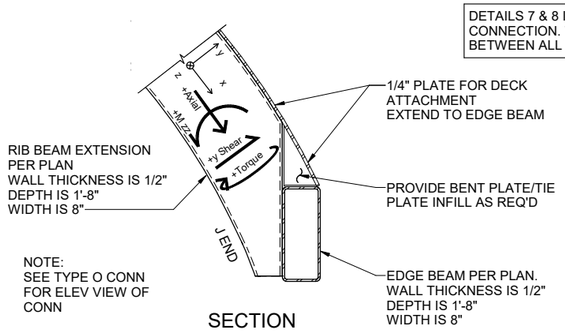
RBSB0025 SCALE: 1/2" = 1'-0"

NOTE: CONNECTION OCCURS AS REQ'D ALONG EDGE BEAM MAXIMIZING ERECTION LENGTHS

6 TYPE O - EDGE BEAM TO EDGE BEAM

RBSB0025 SCALE: 3/4" = 1'-0"

DETAILS 7 & 8 ILLUSTRATE TWO LOCATIONS OF THE TYPE N CONNECTION. THE ANGLE OF RIB BEAM EXTENSION VARIES BETWEEN ALL THE TYPE N CONNECTIONS.

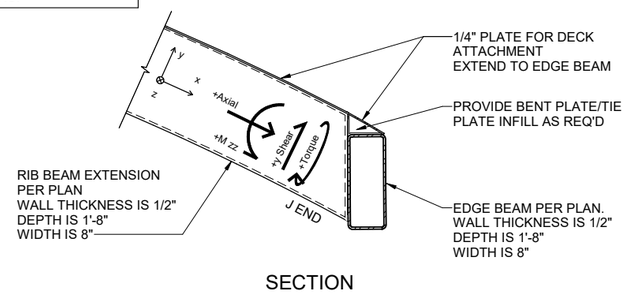


SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

7 TYPE N - EDGE BEAM TO RIB BEAM EXTENSION

RBSB0025 SCALE: 3/4" = 1'-0"



SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

8 TYPE N - EDGE BEAM TO RIB BEAM EXTENSION

RBSB0025 SCALE: 3/4" = 1'-0"

CONNECTION DESIGN NOTE:
MEMBER REACTION INFORMATION AND JOINT CONFIGURATION ON THIS SHEET IS PROVIDED AS PERFORMANCE CRITERIA FOR THE DESIGN OF CONNECTIONS DELEGATED TO THE STEEL FABRICATOR.

Design Sub-Consultant

Design Consultant

Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

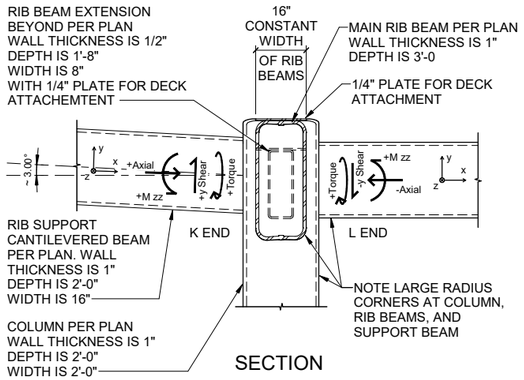
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONNECTION DESIGN DETAILS

Package: B04 - RBSB0025

Sheet Reference No: V5 - 127 of 218

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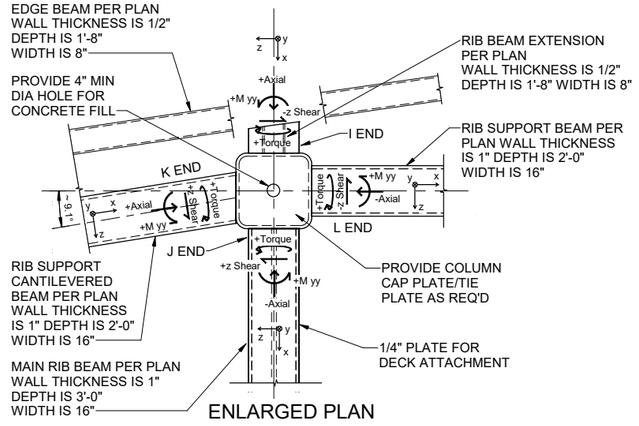


SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

1 RBSB0026 TYPE P - SUPPORT BEAM TO COLUMN SECTION

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

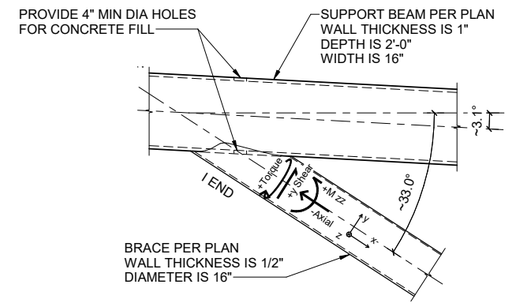


ENLARGED PLAN

NOTE: SEE TYPE A CONNECTION ENLARGED PLAN FOR MORE INFORMATION

2 RBSB0026 TYPE P - SUPPORT BEAM TO COLUMN ENLARGED PLAN

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

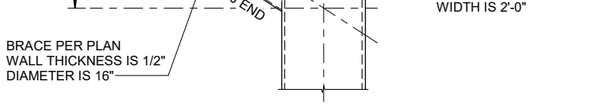


SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

3 RBSB0026 TYPE R - BRACE IN LINE w/ ANGLED BEAM SECTION

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



SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

4 RBSB0026 TYPE Q - BRACE AT ANGLE WITH COLUMN SECTION

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

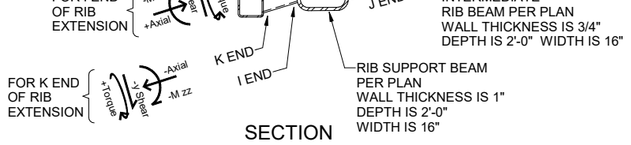


ENLARGED PLAN

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

5 RBSB0026 TYPE Q - BRACE AT ANGLE WITH COLUMN ENLARGED PLAN

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

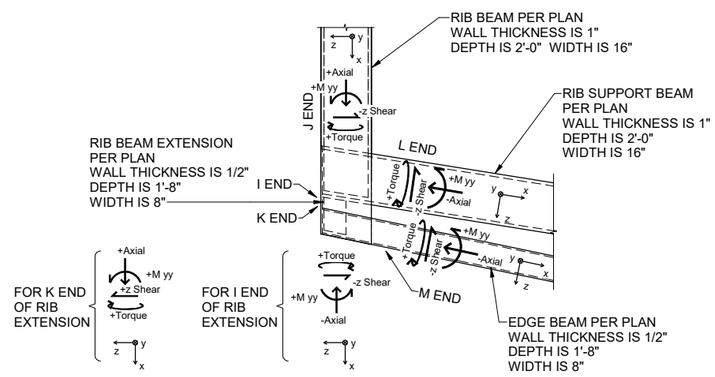


SECTION

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

6 RBSB0026 TYPE S - RIB/RIB EXT. TO SUPPORT BEAM SECTION

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



ENLARGED PLAN

NOTE: SEE TYPE A CONNECTION SECTION FOR MORE INFORMATION

7 RBSB0026 TYPE T - RIB AT SUPPORT BEAM AT EDGE BEAM ENLARGED PLAN

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

CONN. LABEL		SERVICE LOAD MEMBER FORCE END REACTIONS					
TYPE		Axial (k)	y Shear (k)	z Shear (k)	Torque (k-ft)	yy Mom (k-ft)	zz Mom (k-ft)
T	I END MAX	0.24	3.35	11.12	3.37	3.11	-0.75
	I END MIN	-1.99	-3.34	-11.12	-3.24	-20.31	-6.14
	J END MAX	19.98	19.42	34.75	34.03	-17.31	1.36
	J END MIN	2.37	-19.41	-34.75	-34.06	-173.22	-61.74
	K END MAX	0.25	3.59	11.12	3.37	-0.54	-0.44
	K END MIN	-1.96	-3.56	-11.12	-3.24	-5.86	-2.25
	L END MAX	49.22	-3.92	11.90	15.41	122.67	-10.66
	L END MIN	7.72	-23.16	-11.90	-15.39	-122.66	-46.51
	M END MAX	-2.00	-0.55	0.35	1.58	5.52	-0.77
	M END MIN	-11.12	-3.95	-0.64	-1.58	-5.52	-4.39

CONNECTION DESIGN NOTE:

MEMBER REACTION INFORMATION AND JOINT CONFIGURATION ON THIS SHEET IS PROVIDED AS PERFORMANCE CRITERIA FOR THE DESIGN OF CONNECTIONS DELEGATED TO THE STEEL FABRICATOR.

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
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Project Number: 62421
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PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR SINGLE USE ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant: Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

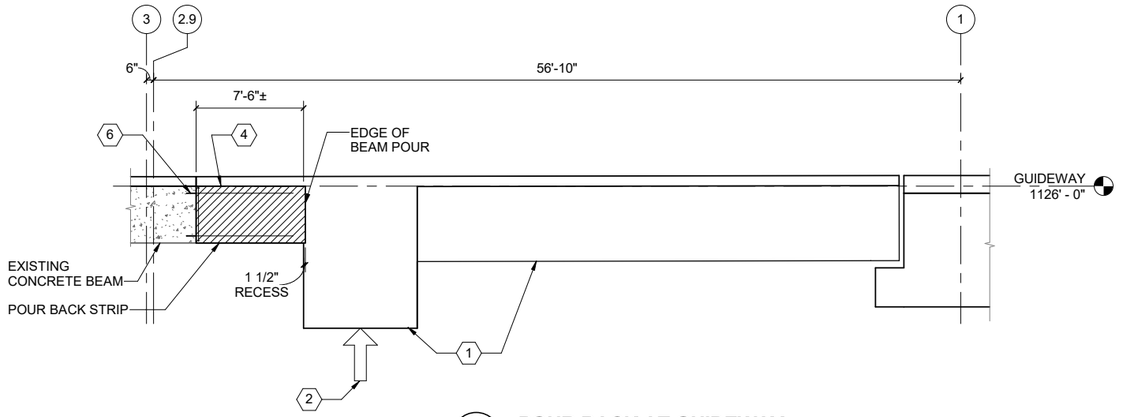
Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

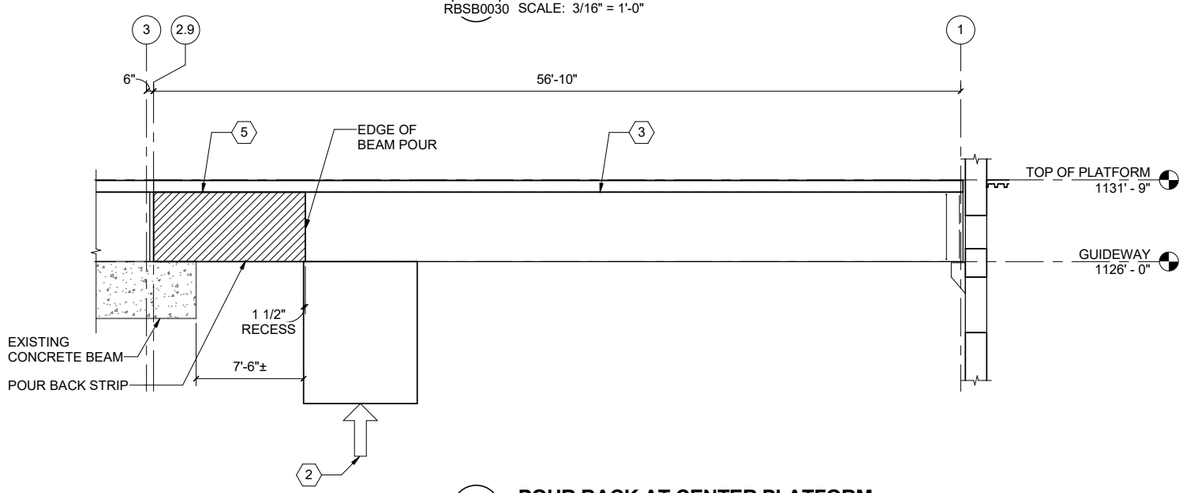
RCC STATION
STRUCTURAL
CONNECTION DESIGN DETAILS

Package: **B04 - RBSB0026**

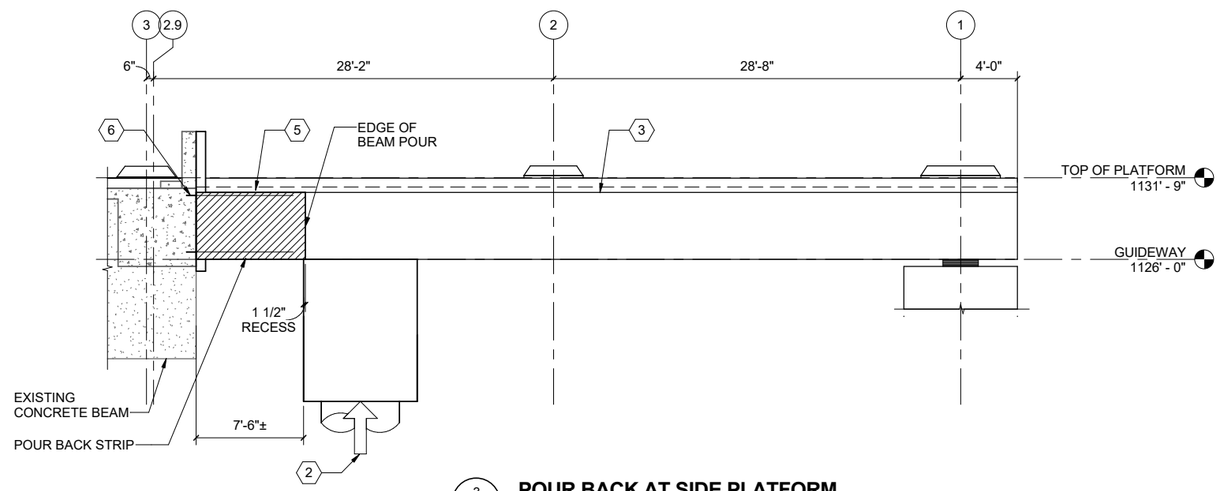
Sheet Reference No:
V5 - 128 of 218



1 RBSB0030 **POUR BACK AT GUIDEWAY** SCALE: 3/16" = 1'-0"



2 RBSB0030 **POUR BACK AT CENTER PLATFORM** SCALE: 3/16" = 1'-0"



3 RBSB0030 **POUR BACK AT SIDE PLATFORM** SCALE: 3/16" = 1'-0"

CONSTRUCTION SEQUENCE NOTES:

1. **POUR GUIDEWAY LEVEL CONCRETE BEAMS.**
2. **SHORE CONCRETE BEAM UNTIL BEAM REACHES SPECIFIED 28 DAY COMPRESSIVE STRENGTH.**
3. **PLACE PLATFORM BEAM CONCRETE.**
4. **PLACE POUR BACK STRIP CONCRETE 56 DAYS (MINIMUM) AFTER PLACEMENT OF GUIDEWAY LEVEL CONCRETE BEAMS.**
5. **PLACE POUR BACK STRIP 56 DAYS (MINIMUM) AFTER PLACEMENT OF PLATFORM CONCRETE.**
6. **CONTRACTOR TO COORDINATE PLACEMENT OF DOWELS WITH CONSTRUCTION SEQUENCE.**

PER CITY OF PHOENIX ORDINANCE G-4336, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Registered Professional Engineer (Structural)
Shane E. Sweeten
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

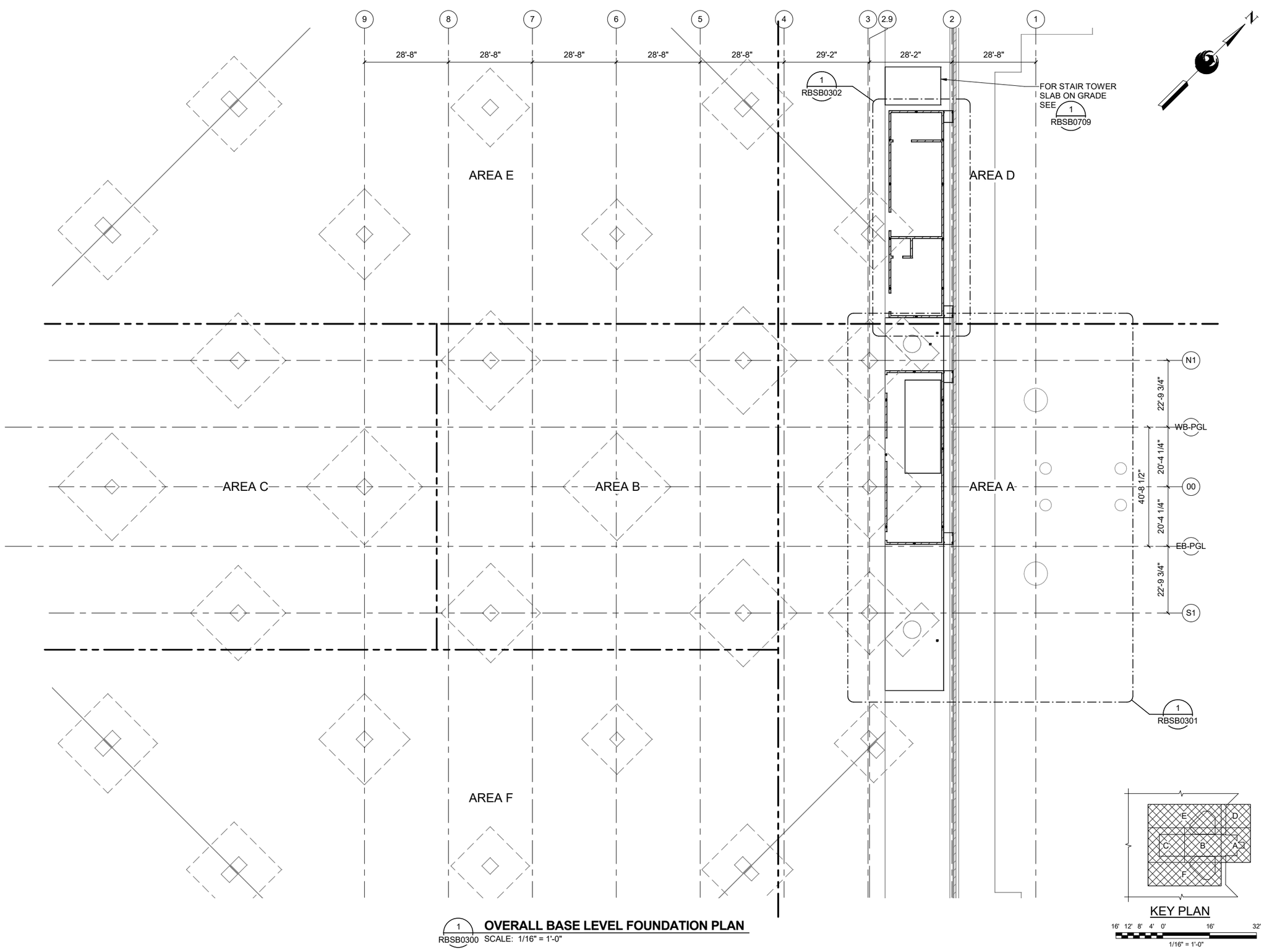
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONSTRUCTION SEQUENCE AT CONCRETE POUR BACK

Package: **B04 - RBSB0030**

Sheet Reference No:
V5 - 129 of 218

Project Number: 62421
7/13/2018 5:12:47 PM
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



1 RBSB0300 **OVERALL BASE LEVEL FOUNDATION PLAN**
SCALE: 1/16" = 1'-0"

KEY PLAN

16' 12' 8' 4' 0' 16' 32'
1/16" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

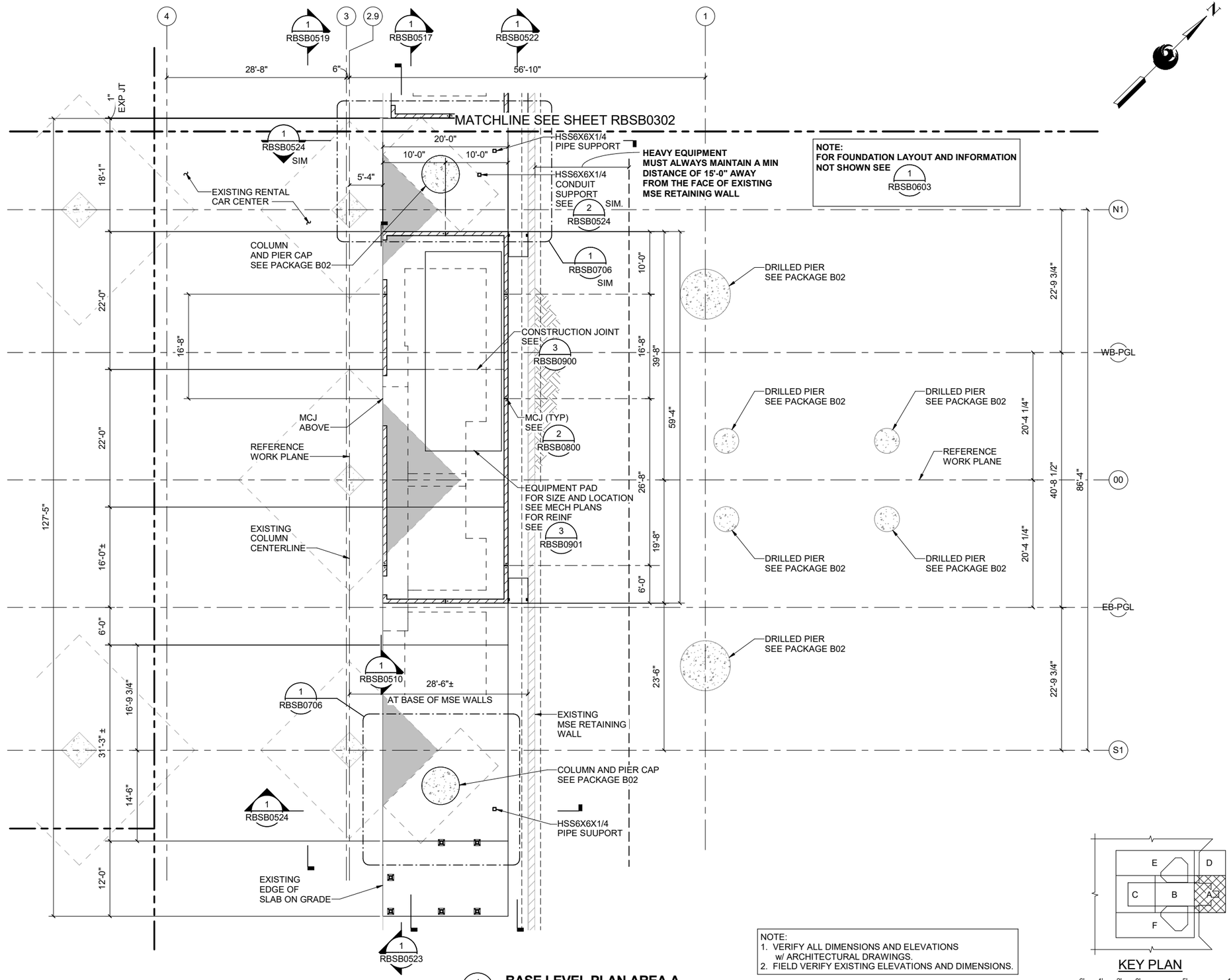
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
OVERALL BASE LEVEL PLAN

Package: **B04 - RBSB0300**
Sheet Reference No: V5 - 130 of 218

Project Number: 62421
7/13/2018 5:12:48 PM

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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0300 **BASE LEVEL PLAN AREA A** SCALE: 1/8" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

KEY PLAN

6' 4' 2' 0' 5' 10'

3/16" = 1'-0"

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
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Registered Professional Engineer (Structural)
Shane E. Sweeten
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ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

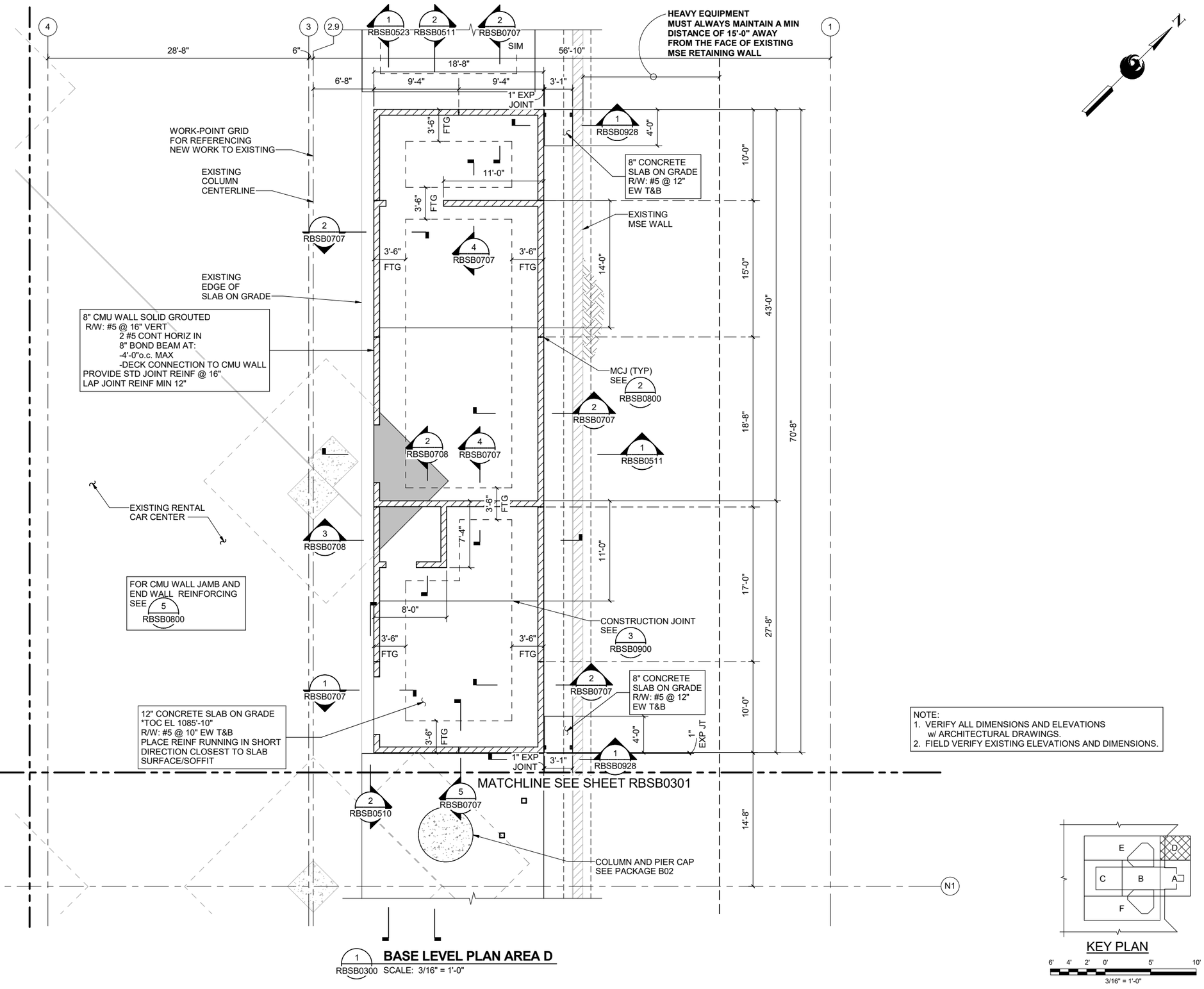
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
BASE LEVEL PLAN AREA A

Package: **B04 - RBSB0301**

Sheet Reference No:



1 BASE LEVEL PLAN AREA D
RBSB0300 SCALE: 3/16" = 1'-0"

KEY PLAN

6' 4' 2' 0' 5' 10'
3/16" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

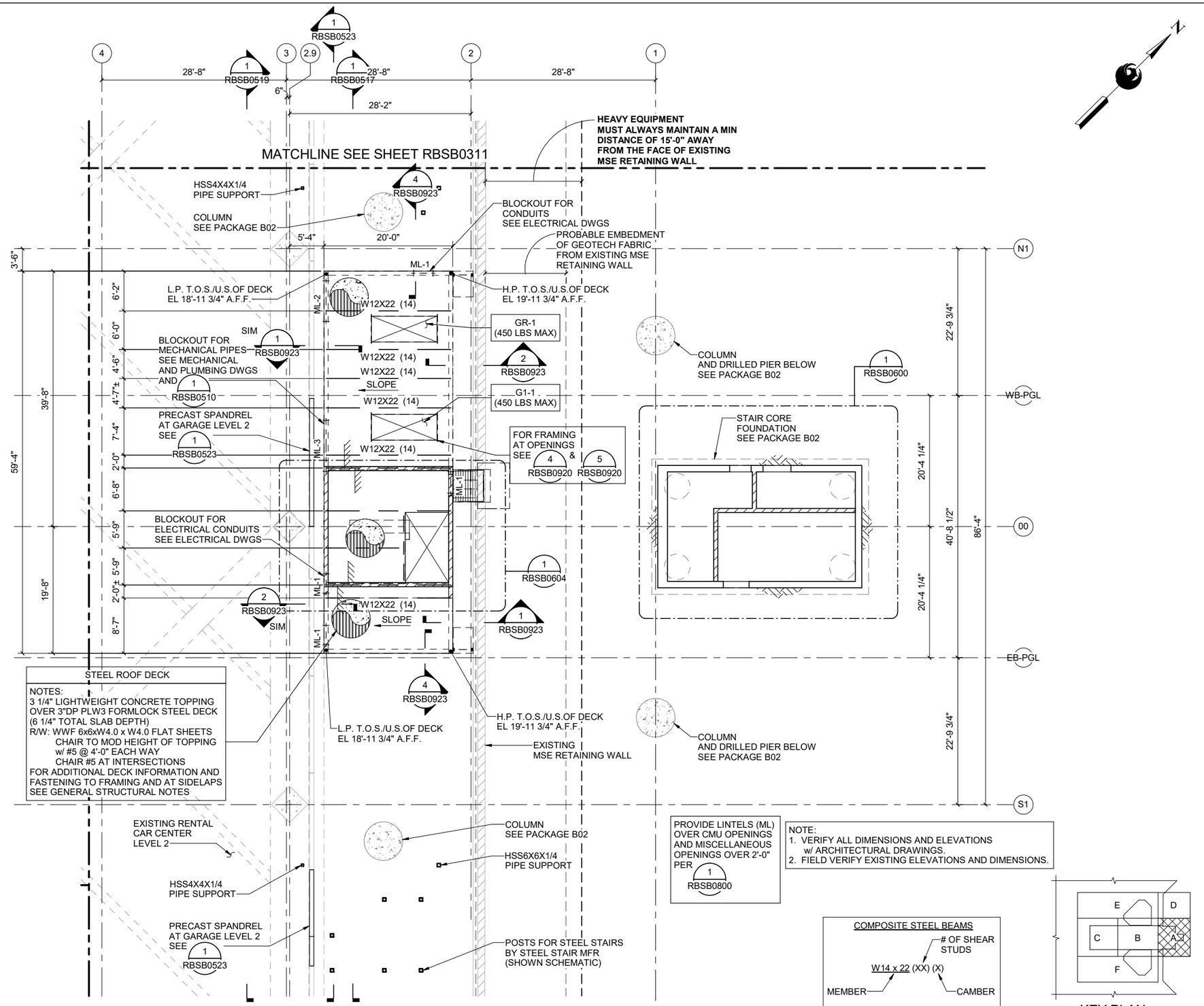
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
BASE LEVEL PLAN AREA D

Package: B04 - RBSB0302
Sheet Reference No: V5 - 132 of 218

Project Number: 62421
7/13/2018 5:12:50 PM

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant: Gannett Fleming

Design Sub-Consultant

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

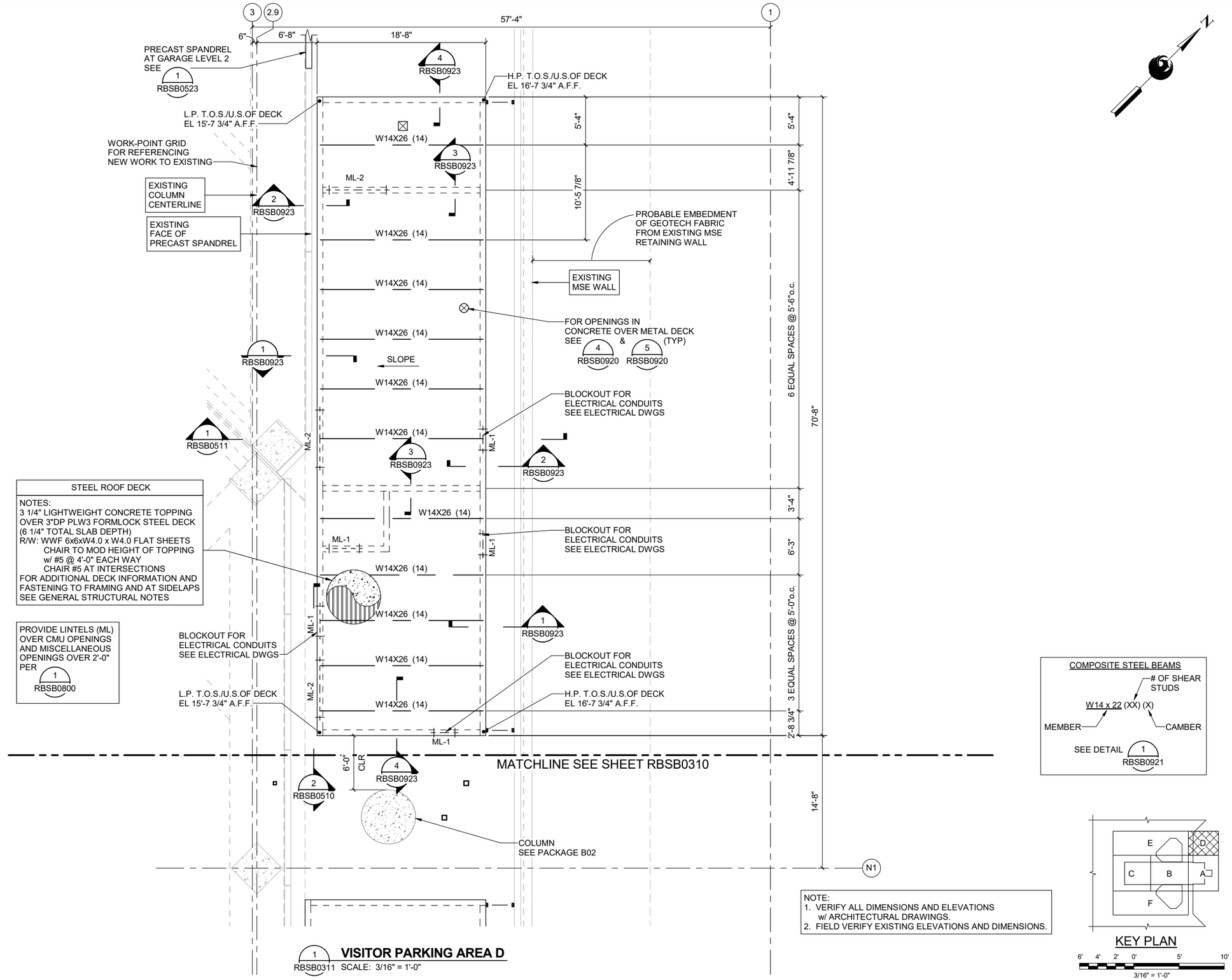
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
VISITOR PARKING LEVEL AREA A

Package: B04 - RBSB0310

Sheet Reference No: V5 - 133 of 218

Project Number: 62421
7/13/2018 5:12:51 PM
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



1 RBSB0311 **VISITOR PARKING AREA D** SCALE: 3/16" = 1'-0"

COMPOSITE STEEL BEAMS

W14 x 22 (XX) (X)
- # OF SHEAR STUDS
- MEMBER
- CAMBER
- SEE DETAIL 1 RBSB0921

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

KEY PLAN

6' 4' 2' 0' 5' 10'
3/16" = 1'-0"

Local File:BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:12:52 PM

Design Consultant: Gannett Fleming

Design Sub-Consultant

PROFESSIONAL ENGINEER (Structural) SHANE E. SWEETEN 24434 ARIZONA, U.S.A. Date Signed 7/13/18 EXPIRES 9/30/19

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

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

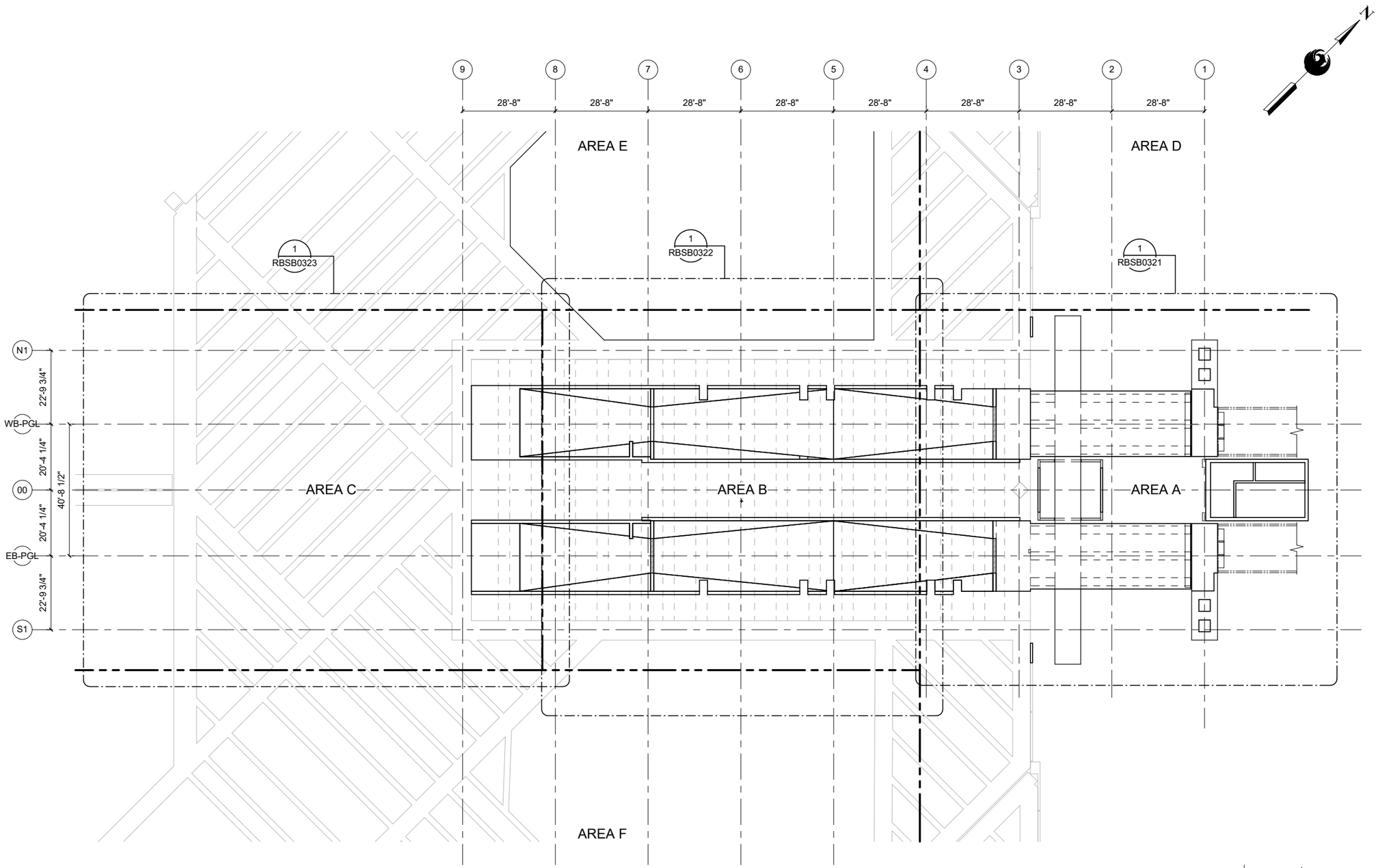
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

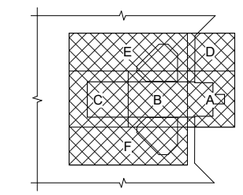
RCC STATION STRUCTURAL VISITOR PARKING AREA D

Package: B04 - RBSB0311

Sheet Reference No: V5 - 134 of 218



1 RBSB0320 **OVERALL GUIDEWAY PLAN**
SCALE: 1/16" = 1'-0"



KEY PLAN

16' 12' 8' 4' 0' 16' 32'
1/16" = 1'-0"

Project Number: 62421
7/13/2018 5:12:53 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBX001_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt

Licensed Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

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	ISSUED FOR CONSTRUCTION	07/13/18
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

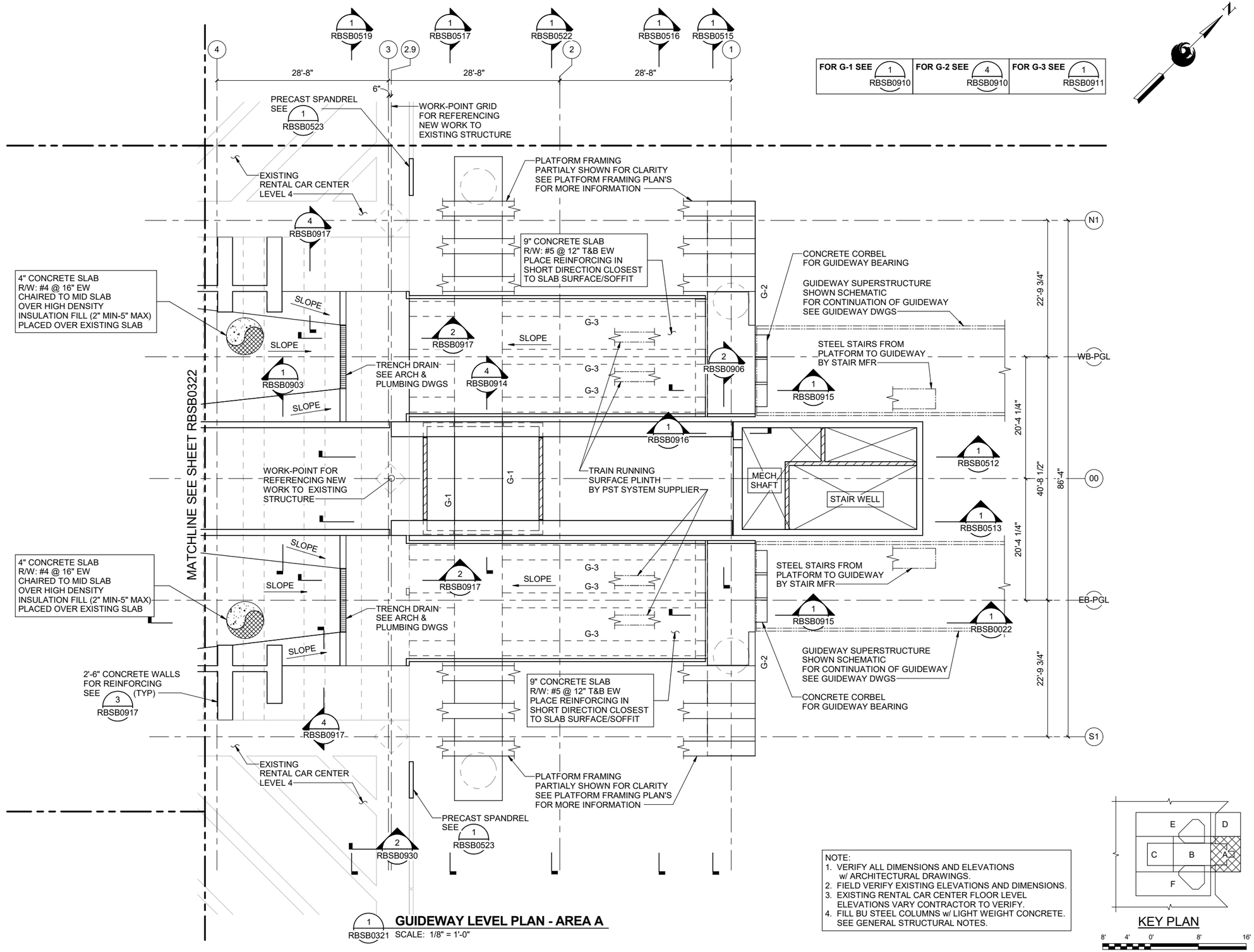
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
OVERALL GUIDEWAY PLAN

Package: **B04 - RBSB0320**
Sheet Reference No:
V5 - 135 of 218



1 RBSB0321 **GUIDEWAY LEVEL PLAN - AREA A**
SCALE: 1/8" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.
3. EXISTING RENTAL CAR CENTER FLOOR LEVEL ELEVATIONS VARY CONTRACTOR TO VERIFY.
4. FILL BU STEEL COLUMNS w/ LIGHT WEIGHT CONCRETE. SEE GENERAL STRUCTURAL NOTES.

KEY PLAN
8' 4' 0' 8' 16'
1/8" = 1'-0"

Local File: BIM 360://62421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:12:54 PM

Registered Professional Engineer (Structural)
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EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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	ISSUED FOR CONSTRUCTION	07/13/18
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

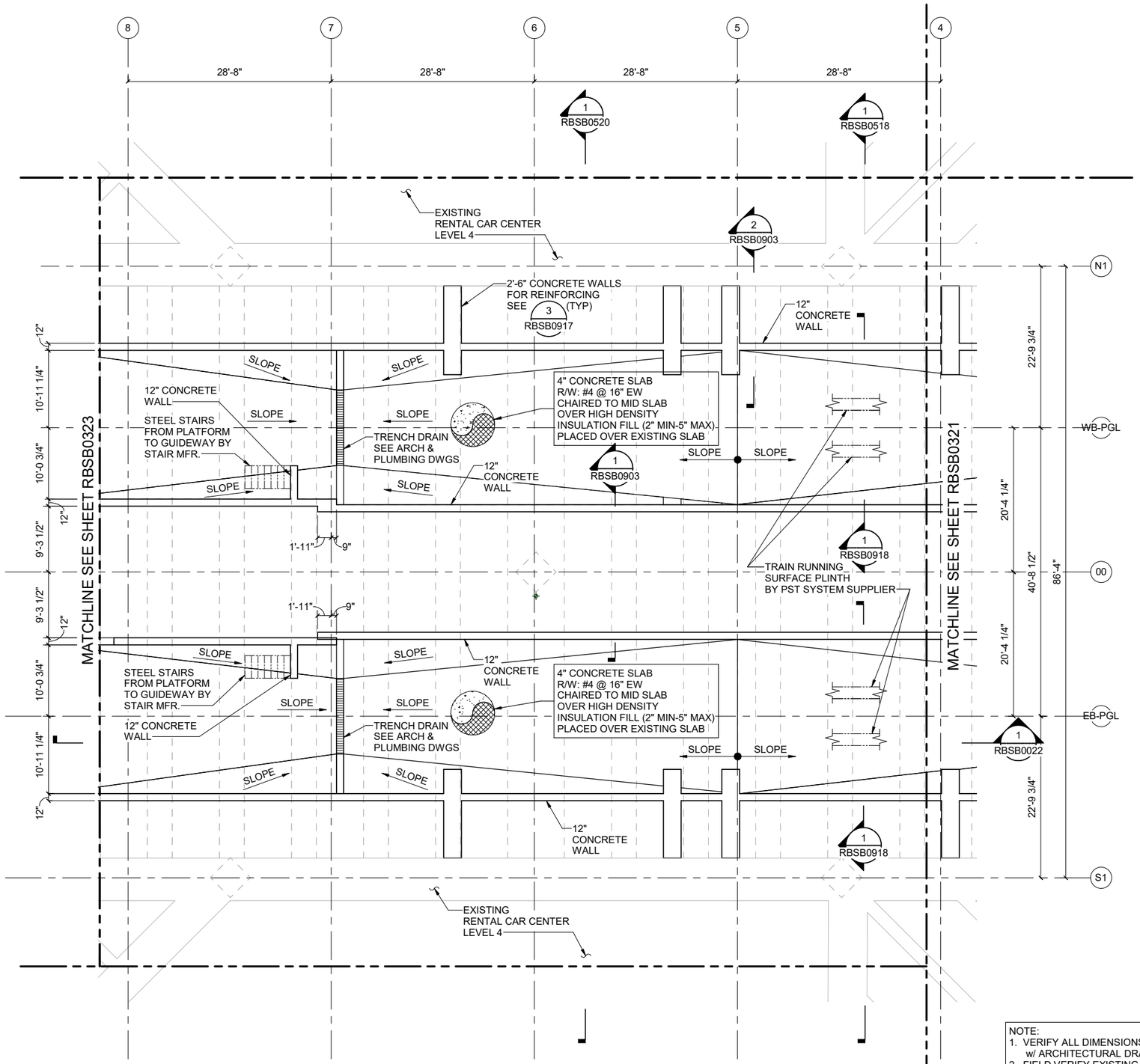
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

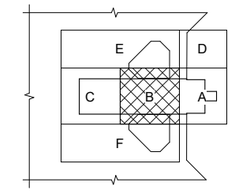
RCC STATION
STRUCTURAL
GUIDEWAY LEVEL PLAN AREA A

Package: B04 - RBSB0321
Sheet Reference No:
V5 - 136 of 218



1 RBSB0322 **GUIDEWAY LEVEL PLAN - AREA B**
SCALE: 1/8" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.
3. EXISTING RENTAL CAR CENTER FLOOR LEVEL ELEVATIONS VARY CONTRACTOR TO VERIFY.
4. FILL BU STEEL COLUMNS w/ LIGHT WEIGHT CONCRETE. SEE GENERAL STRUCTURAL NOTES.



KEY PLAN
8' 4' 0' 8' 16'
1/8" = 1'-0"

Project Number: 62421
7/13/2018 5:12:55 PM

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Design Sub-Consultant

Design Consultant
Gannett Fleming

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

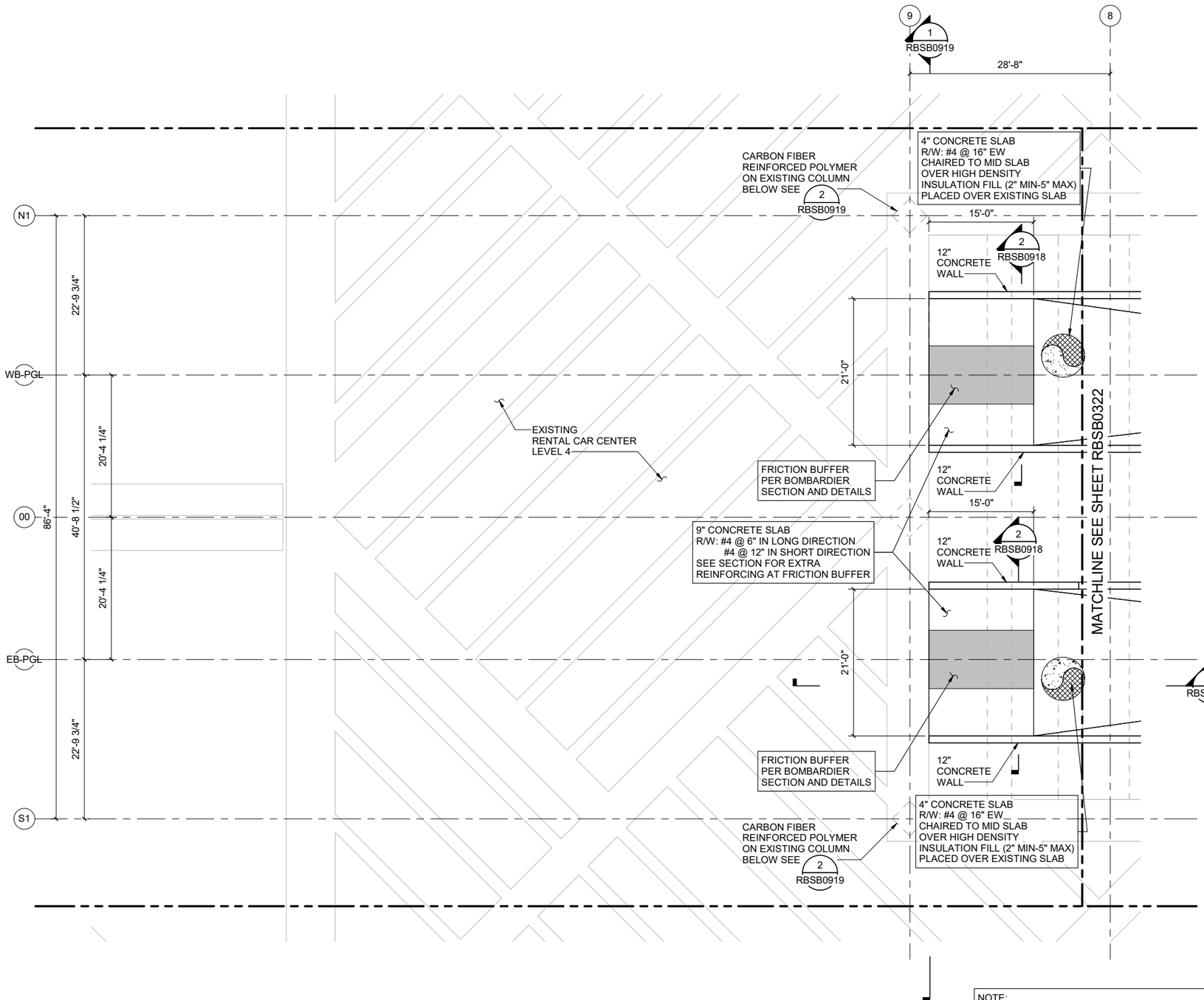
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

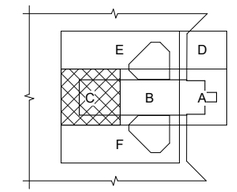
RCC STATION
STRUCTURAL
GUIDEWAY LEVEL PLAN AREA B

Package: B04 - RBSB0322
Sheet Reference No:
V5 - 137 of 218



1 RBSB0323 **GUIDEWAY LEVEL PLAN - AREA C**
SCALE: 1/8" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.
3. EXISTING RENTAL CAR CENTER FLOOR LEVEL ELEVATIONS VARY CONTRACTOR TO VERIFY.
4. FILL BU STEEL COLUMNS w/ LIGHT WEIGHT CONCRETE. SEE GENERAL STRUCTURAL NOTES.



KEY PLAN
8' 4' 0' 8' 16'
1/8" = 1'-0"

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Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

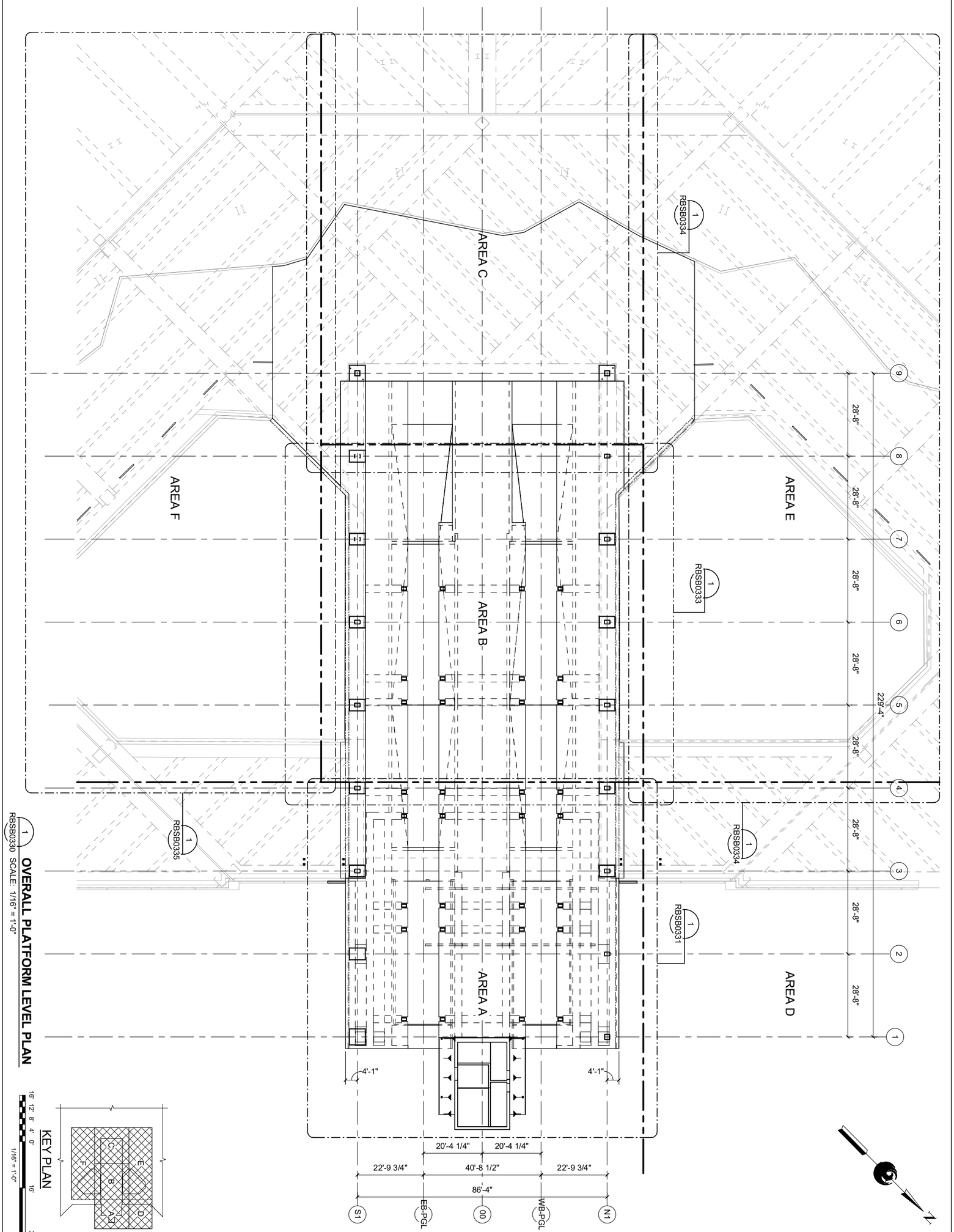
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Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
GUIDEWAY LEVEL PLAN AREA C

Package: **B04 - RBSB0323**
Sheet Reference No:
V5 - 138 of 218

Project Number: 62421
7/13/2018 5:12:57 PM
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



1 RBSB0330 **OVERALL PLATFORM LEVEL PLAN**
SCALE: 1/16" = 1'-0"

Package: **B04 - RBSB0330**
Sheet Reference No: V5 - 139 of 218

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
OVERALL PLATFORM LEVEL PLAN

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

PHX DVT GYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

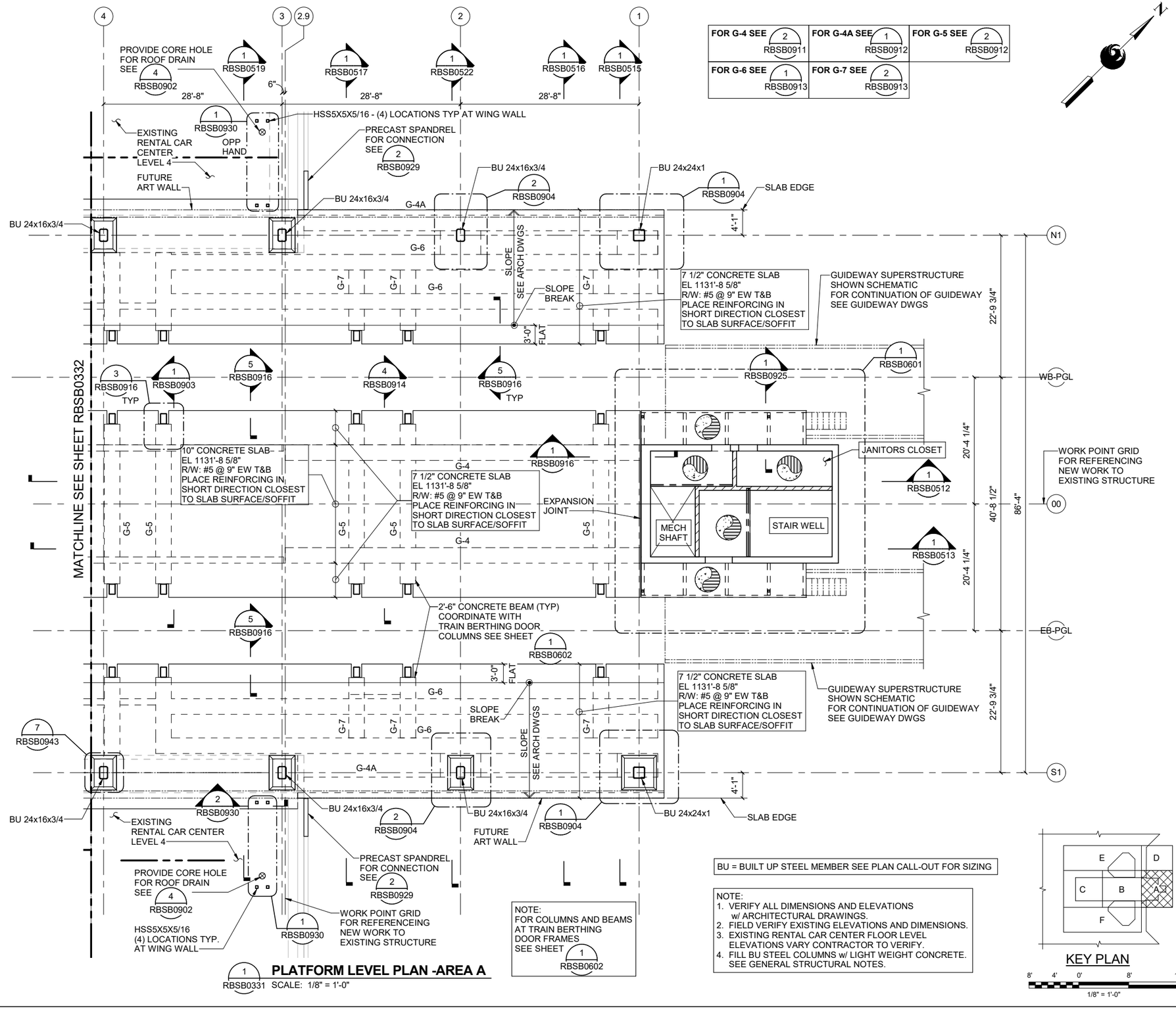
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	SUBMITTED FOR REVIEW	04/06/18

48434
SHANE E. SWEETEN
REGISTERED PROFESSIONAL ENGINEER
ARIZONA, U.S.A.
EXPIRES 9/30/18

Design Sub-Consultant

Design Consultant
Gannett Fleming



Project Number: 62421
7/13/2018 5:13:01 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
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Design Consultant: Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

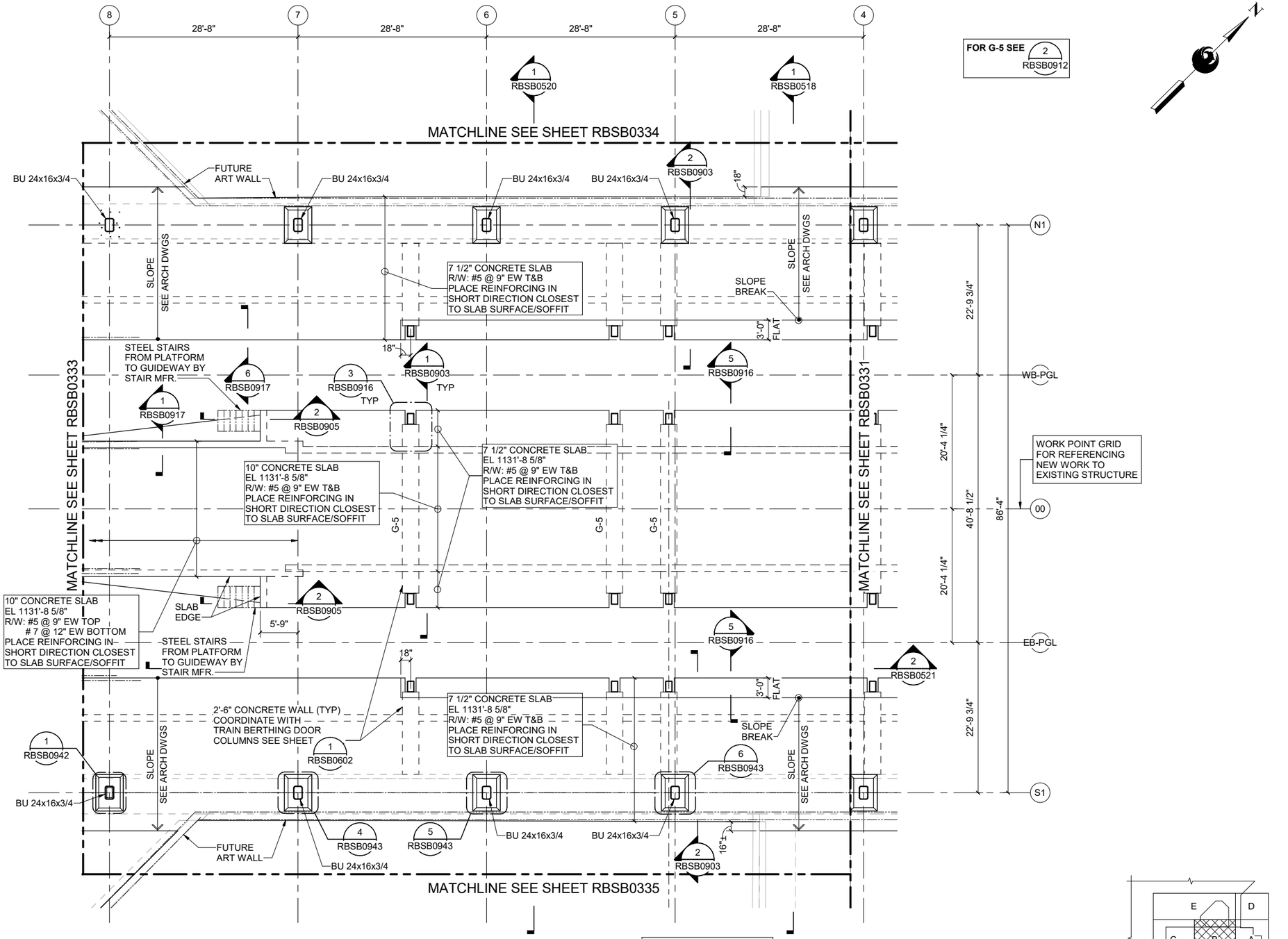
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PLATFORM LEVEL PLAN AREA A

Package: B04 - RBSB0331
Sheet Reference No:
V5 - 140 of 218

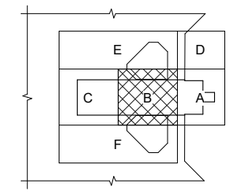


1 PLATFORM LEVEL PLAN - AREA B
1 RBSB0332 SCALE: 1/8" = 1'-0"

NOTE:
FOR COLUMNS AND BEAMS
AT TRAIN BERTHING
DOOR FRAMES
SEE SHEET 1 RBSB0602

BU = BUILT UP STEEL MEMBER SEE PLAN CALL-OUT FOR SIZING

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.
3. EXISTING RENTAL CAR CENTER FLOOR LEVEL ELEVATIONS VARY CONTRACTOR TO VERIFY.
4. FILL BU STEEL COLUMNS w/ LIGHT WEIGHT CONCRETE. SEE GENERAL STRUCTURAL NOTES.



KEY PLAN

8' 4' 0' 8' 16'
1/8" = 1'-0"

Design Consultant: Gannett Fleming

Design Sub-Consultant

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR REVIEW PURPOSES ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

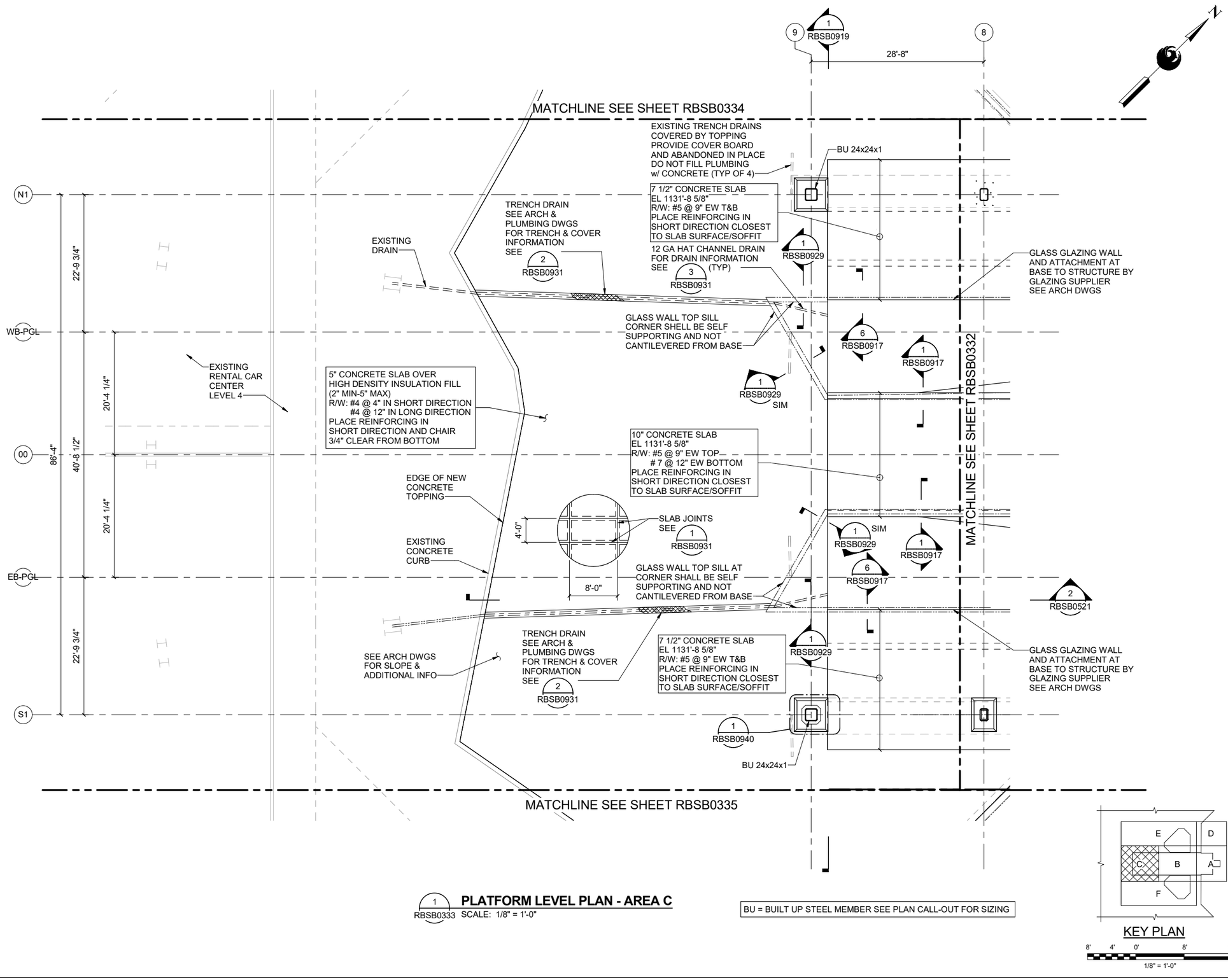
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PLATFORM LEVEL PLAN AREA B

Package: B04 - RBSB0332
Sheet Reference No:
V5 - 141 of 218

Project Number: 62421
7/13/2018 5:13:02 PM

Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0333 **PLATFORM LEVEL PLAN - AREA C**
SCALE: 1/8" = 1'-0"

BU = BUILT UP STEEL MEMBER SEE PLAN CALL-OUT FOR SIZING

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:04 PM

Design Consultant: Gannett Fleming

Design Sub-Consultant

Professional Engineer (Structural) — Expires 9/30/19 — Shane E. Sweeten — 46434 — Arizona, U.S.A.

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

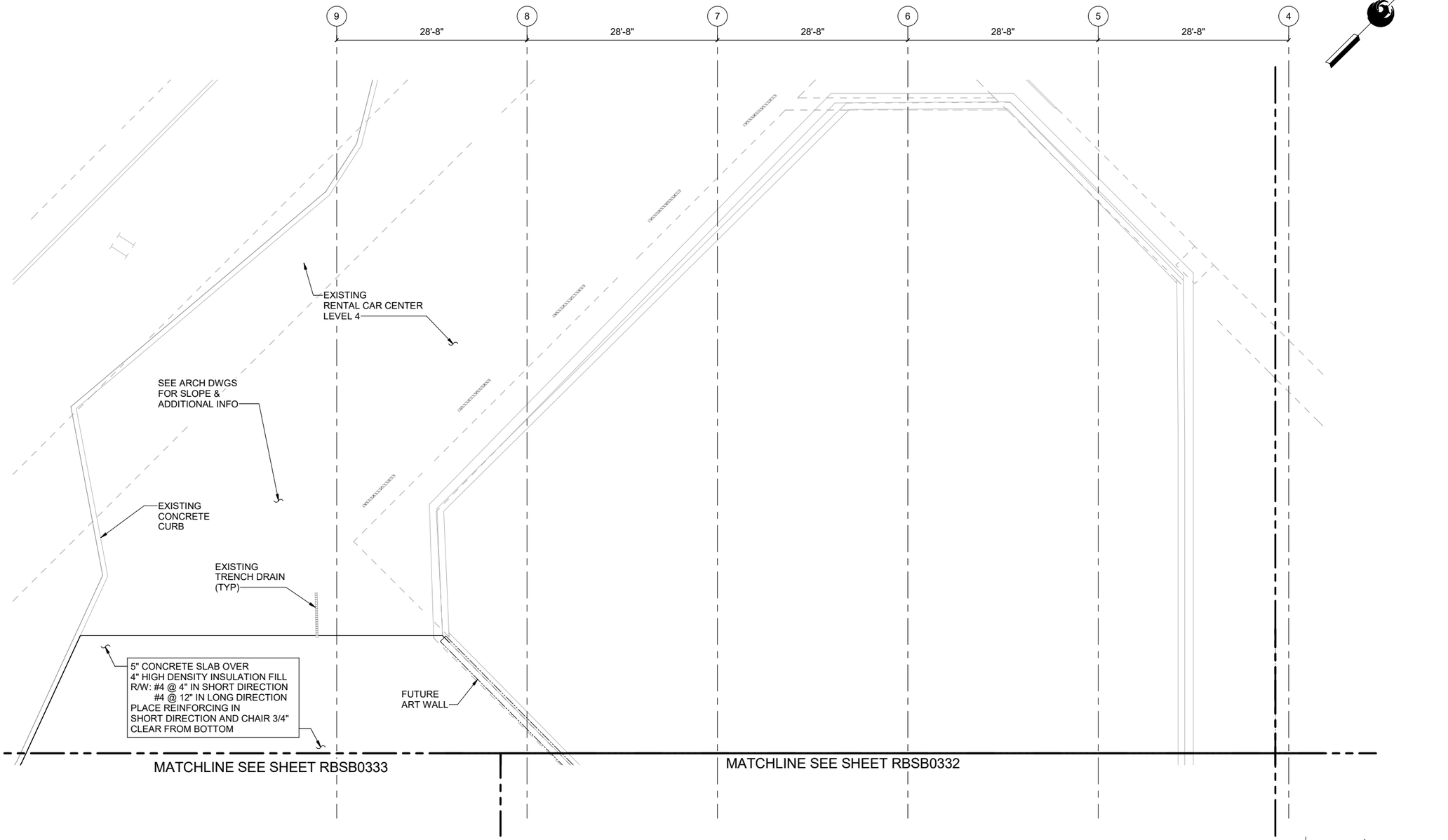
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

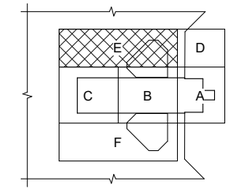
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PLATFORM LEVEL PLAN AREA C

Package: **B04 - RBSB0333**
Sheet Reference No: V5 - 142 of 218



1 RBSB0334 **PLATFORM LEVEL PLAN - AREA E**
SCALE: 1/8" = 1'-0"



KEY PLAN

8' 4' 0' 8' 16'
1/8" = 1'-0"

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:05 PM

Design Consultant
Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PLATFORM LEVEL PLAN AREA E

Package: B04 - RBSB0334
Sheet Reference No: V5 - 143 of 218

MATCHLINE SEE SHEET RBSB0333

MATCHLINE SEE SHEET RBSB0332

5" CONCRETE SLAB OVER
4" HIGH DENSITY INSULATION FILL
R/W: #4 @ 4" IN SHORT DIRECTION
#4 @ 12" IN LONG DIRECTION
PLACE REINFORCING IN
SHORT DIRECTION AND CHAIR
3/4" CLEAR FROM BOTTOM

FUTURE
ART WALL

EXISTING
TRENCH DRAIN
(TYP)

EXISTING
CONCRETE
CURB

EXISTING
RENTAL CAR CENTER
LEVEL 4

28'-8" | 28'-8" | 28'-8" | 28'-8" | 28'-8"

9 8 7 6 5 4

1 RBSB0335 **PLATFORM LEVEL PLAN - AREA F**
SCALE: 1/8" = 1'-0"

KEY PLAN

E D
C B A
F

8' 4' 0' 8' 16'
1/8" = 1'-0"

Project Number: 62421
7/13/2018 5:13:06 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4336, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

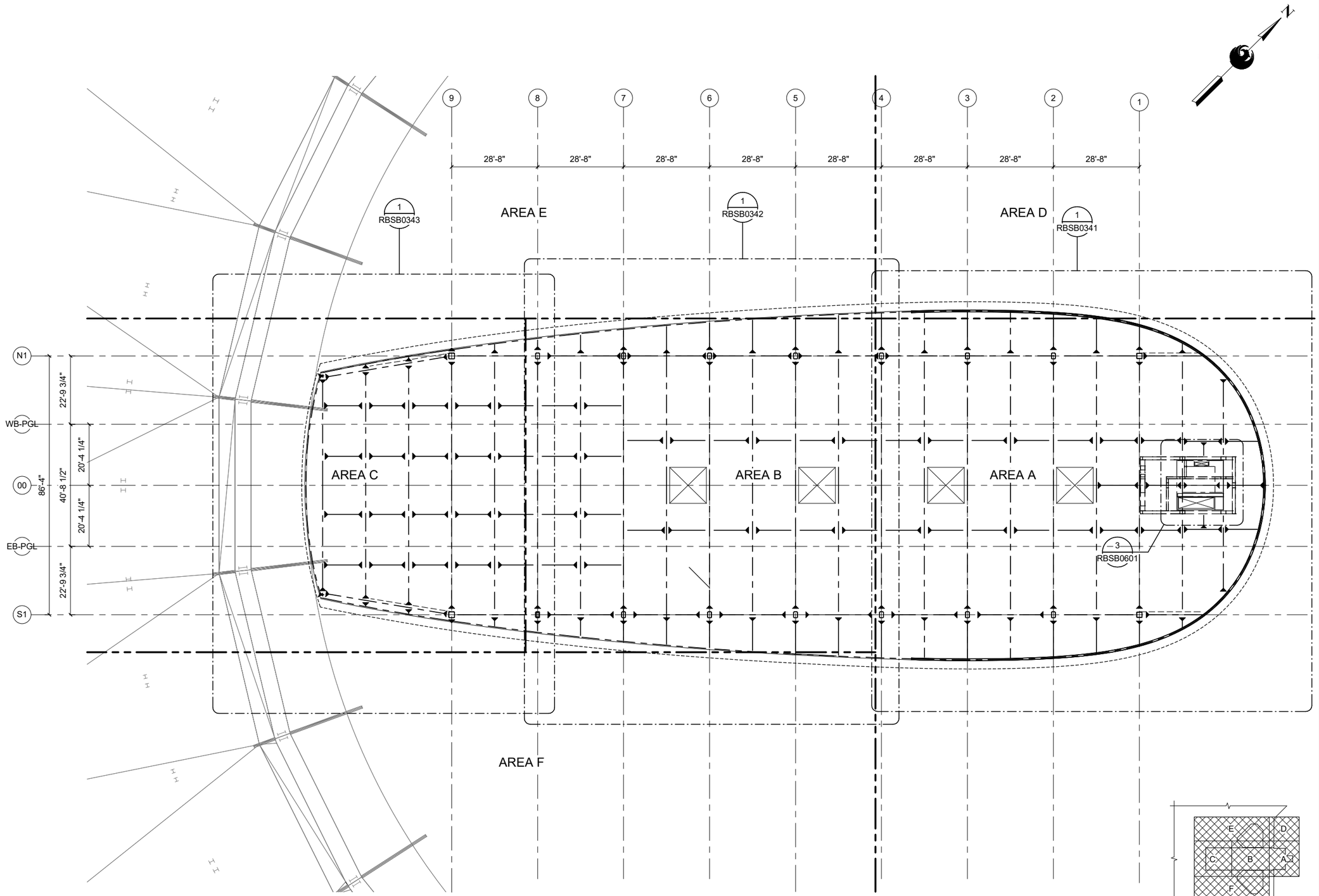
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PLATFORM LEVEL PLAN AREA F

Package: B04 - RBSB0335
Sheet Reference No:
V5 - 144 of 218



1 RBSB0340 **OVERALL ROOF PLAN**
SCALE: 1/16" = 1'-0"

Local File:BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:07 PM

Licensed Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR CHALLENGE ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
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	SUBMITTED FOR REVIEW	04/06/18

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

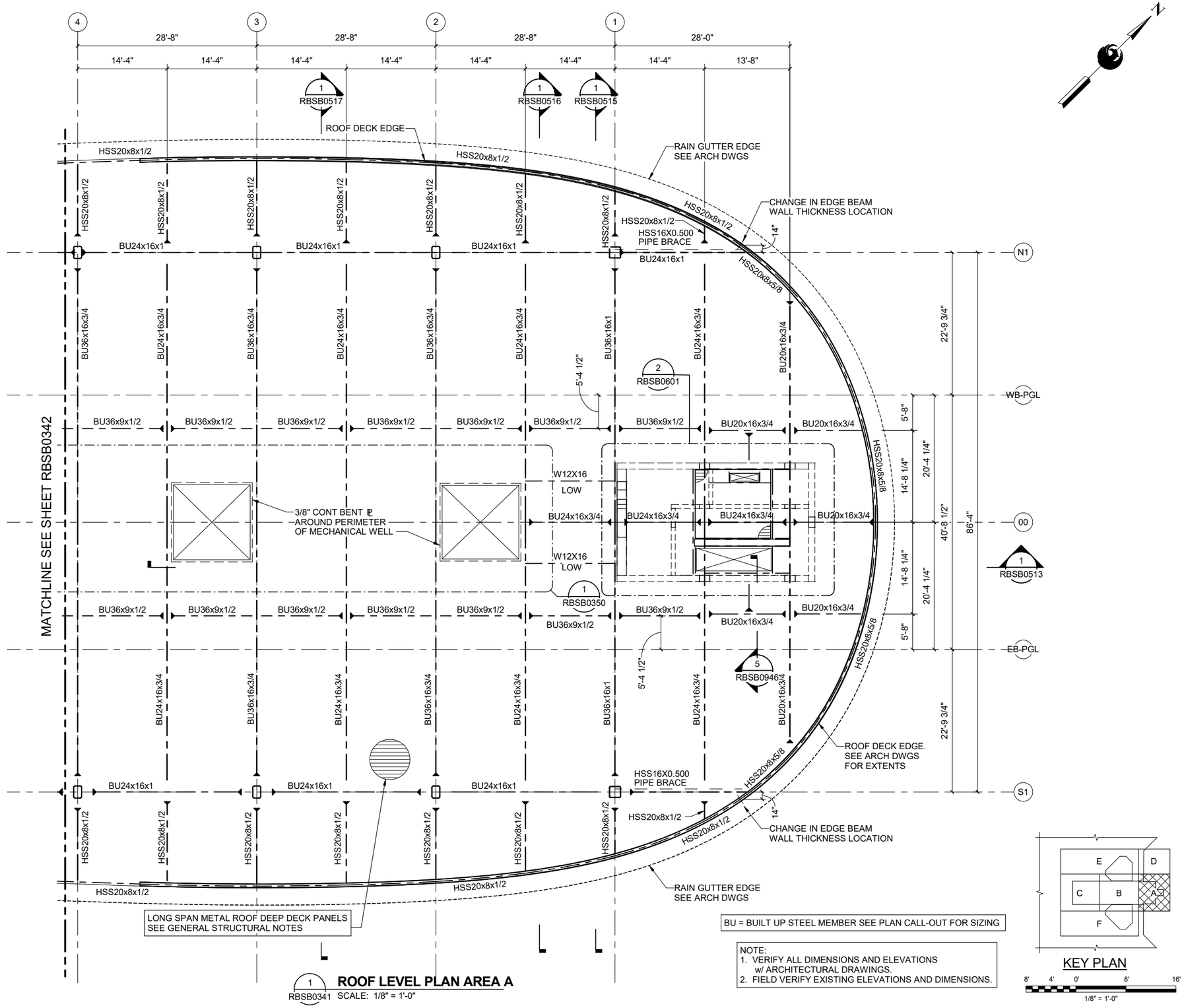
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	PEK	Checked by:	SES
Drawn by:	PEK	Date:	07/13/2018
Dwg scale:	AS NOTED	CIP No.:	AV10000011
		KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
OVERALL ROOF PLAN

Package: **B04 - RBSB0340**
Sheet Reference No:
V5 - 145 of 218



1 RBSB0341 **ROOF LEVEL PLAN AREA A**
SCALE: 1/8" = 1'-0"

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	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
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CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
ROOF LEVEL PLAN AREA A

Package: B04 - RBSB0341
Sheet Reference No: V5 - 146 of 218

Project Number: 62421
7/13/2018 5:13:08 PM

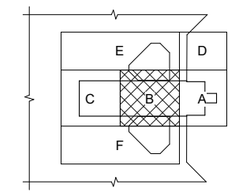
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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



1 RBSB0342 **ROOF LEVEL - AREA B**
SCALE: 1/8" = 1'-0"

BU = BUILT UP STEEL MEMBER SEE PLAN CALL-OUT FOR SIZING

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.



KEY PLAN

8' 4' 0' 8' 16'
1/8" = 1'-0"

Project Number: 62421
7/13/2018 5:13:09 PM

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	SUBMITTED FOR REVIEW	04/06/18

Design Consultant
Gannett Fleming

Design Sub-Consultant

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

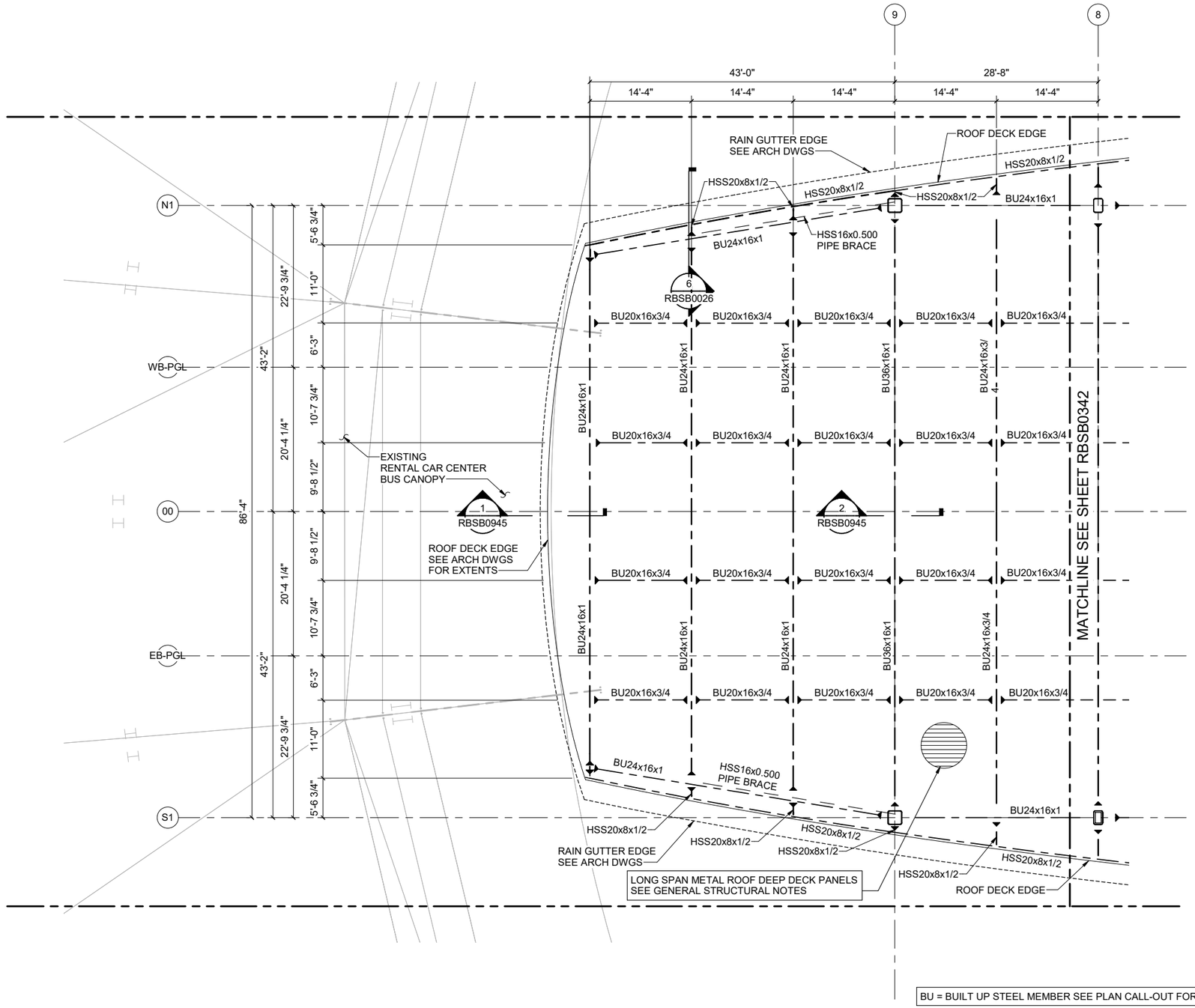
CITY OF PHOENIX PHOENIX AVIATION DEPARTMENT

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
ROOF LEVEL PLAN AREA B

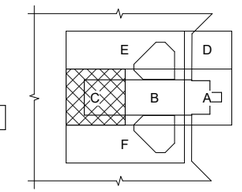
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Sheet Reference No:
V5 - 147 of 218



1 RBSB0343 **ROOF LEVEL - AREA C**
SCALE: 1/8" = 1'-0"

BU = BUILT UP STEEL MEMBER SEE PLAN CALL-OUT FOR SIZING

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.



KEY PLAN
8' 4' 0' 8' 16'
1/8" = 1'-0"

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

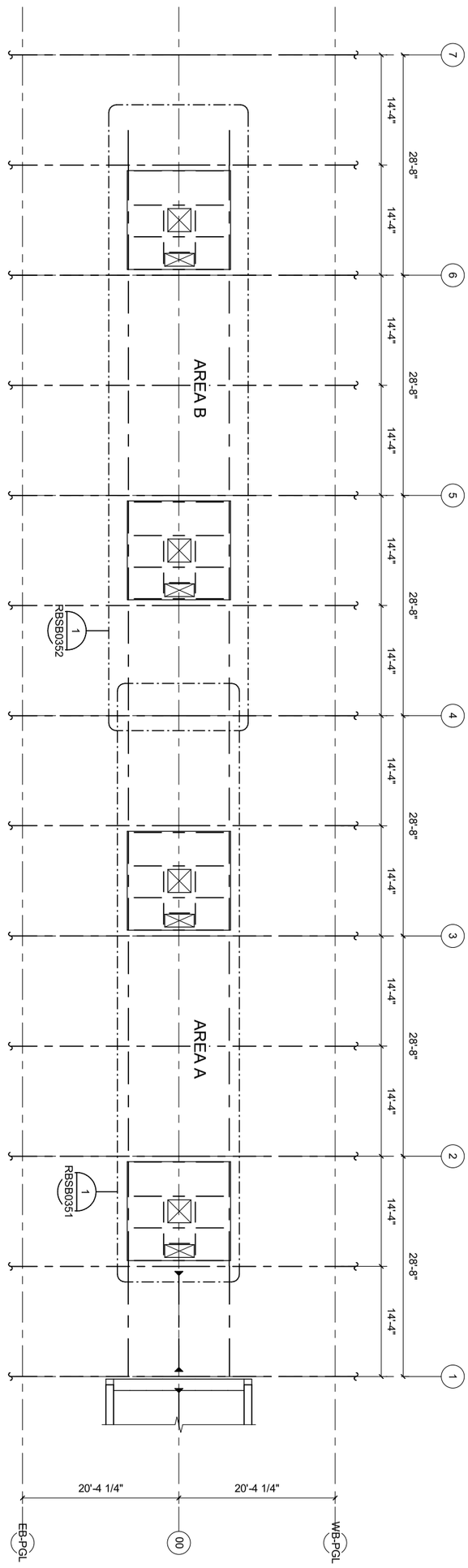
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Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

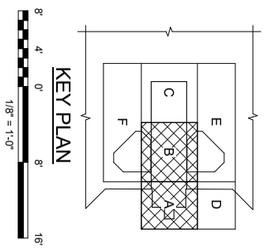
RCC STATION
STRUCTURAL
ROOF LEVEL PLAN AREA C

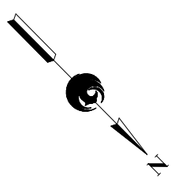
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Project Number: 62421
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0350 **OVERALL MECHANICAL PLAN**
SCALE: 1/8" = 1'-0"





Package: **B04 - RBSB0350** Sheet Reference No: V5 - 149 of 218

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
OVERALL MECHANICAL PLAN

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

PHX DVT GYR
CITY OF PHOENIX AVIATION DEPARTMENT

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

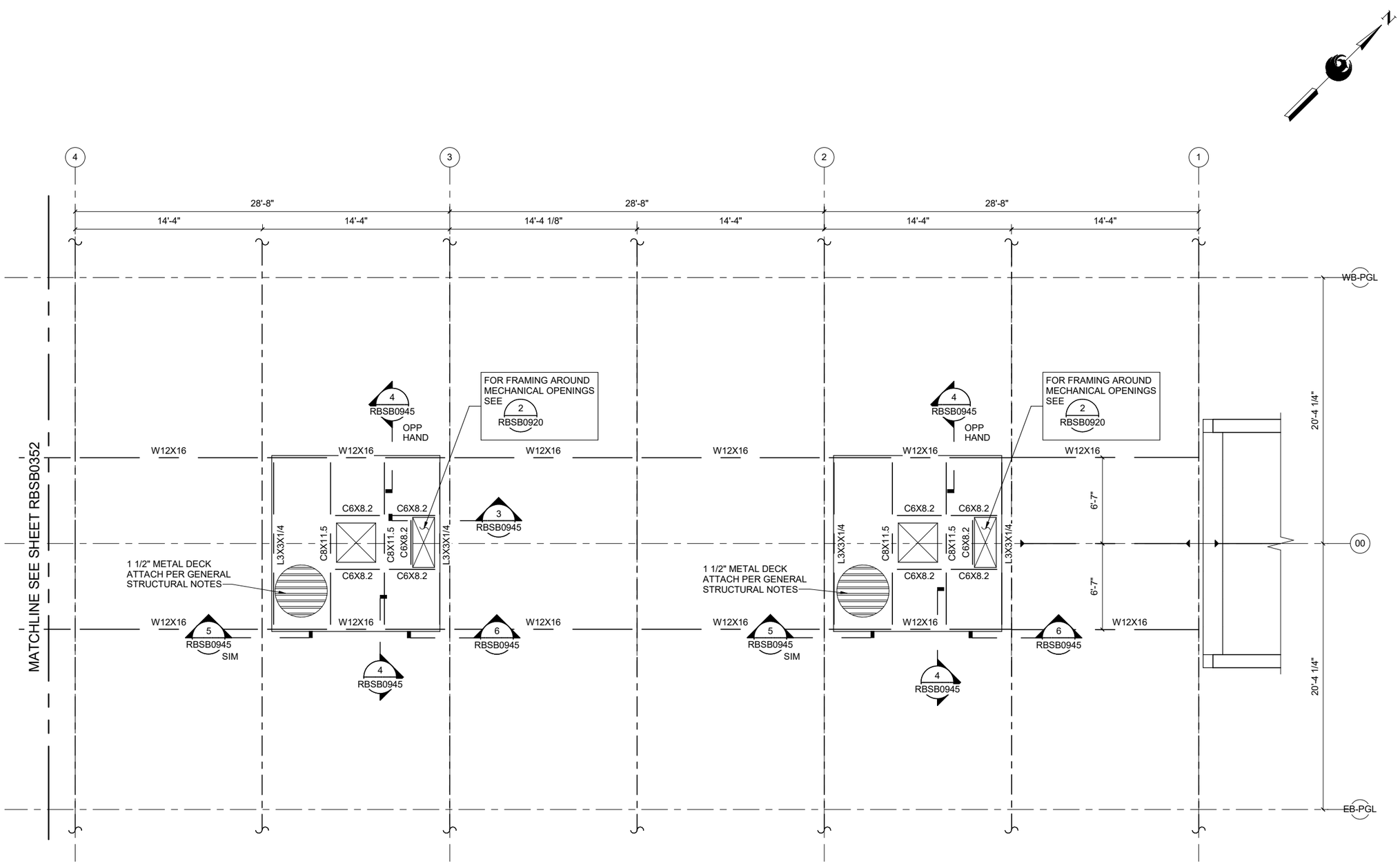
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICAIL USE ONLY AND MAY NOT BE SHARED WITH OTHRES EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

48434
SHANE E. SWEETEN
7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/18

Design Sub-Consultant

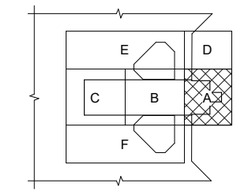
Design Consultant
Gannett Fleming



1 RBSB0351 **MECHANICAL LEVEL PLAN AREA A**

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

FOR BUILT UP ROOF BEAMS SEE ROOF FRAMING SHEETS



KEY PLAN

4' 2' 0' 4' 8'

1/4" = 1'-0"

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	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	PEK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MECHANICAL LEVEL PLAN AREA A

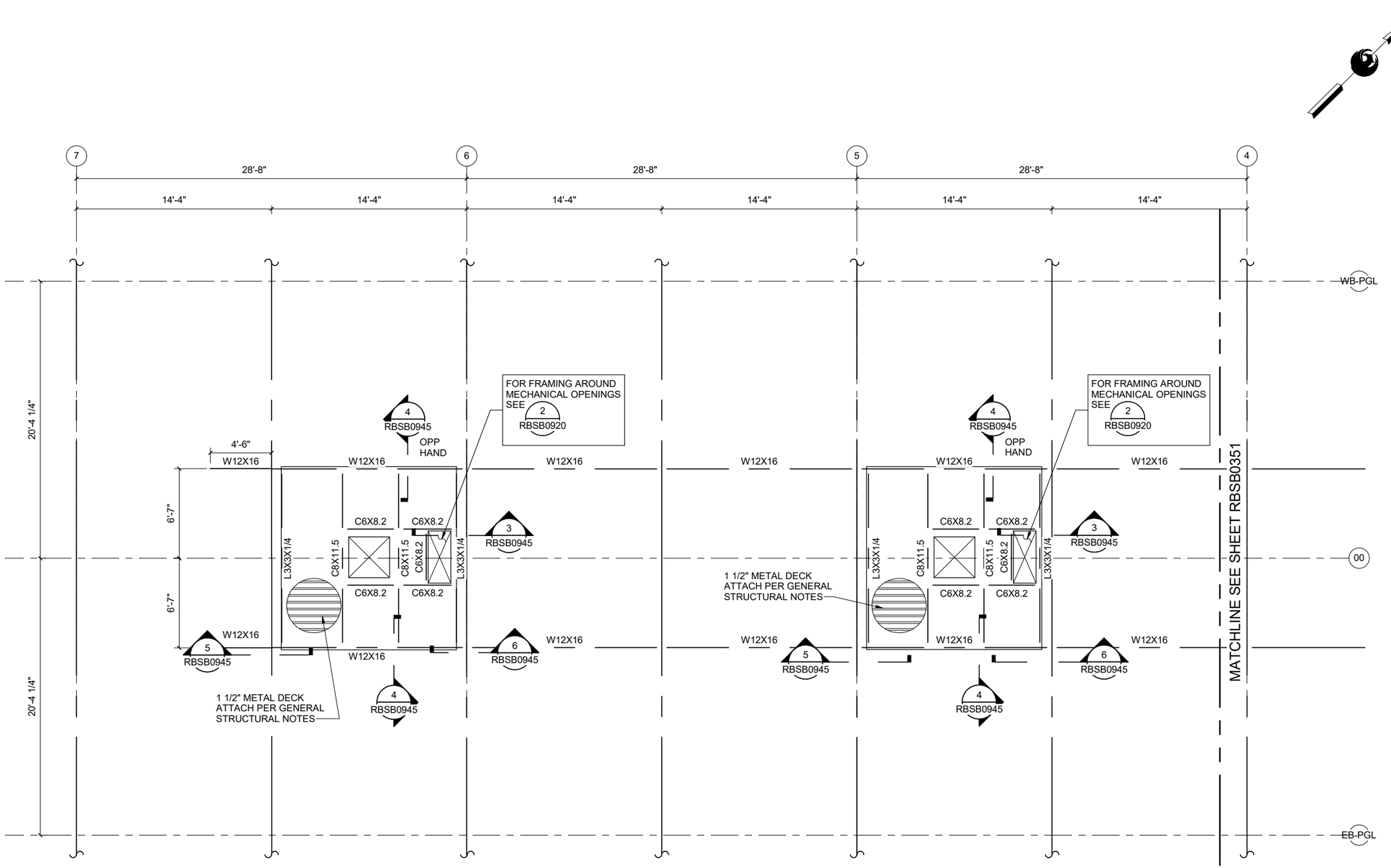
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Sheet Reference No:

V5 - 150 of 218

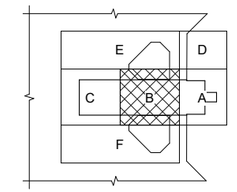
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7/13/2018 5:13:13 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0352 **MECHANICAL LEVEL PLAN AREA B**
SCALE: 1/4" = 1'-0"

FOR BUILT UP ROOF BEAMS
SEE ROOF FRAMING SHEETS



KEY PLAN

4' 2' 0' 4' 8'
1/4" = 1'-0"

Project Number: 62421
7/13/2018 5:13:14 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

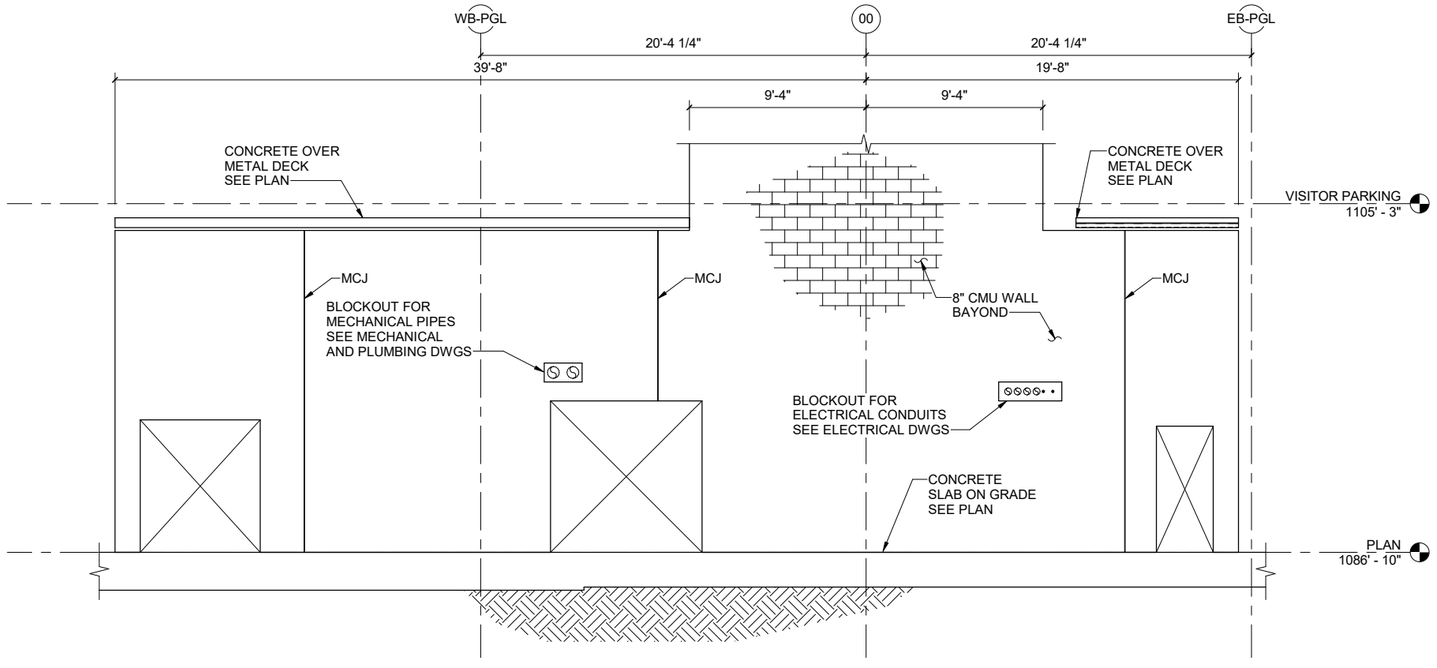
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	PEK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

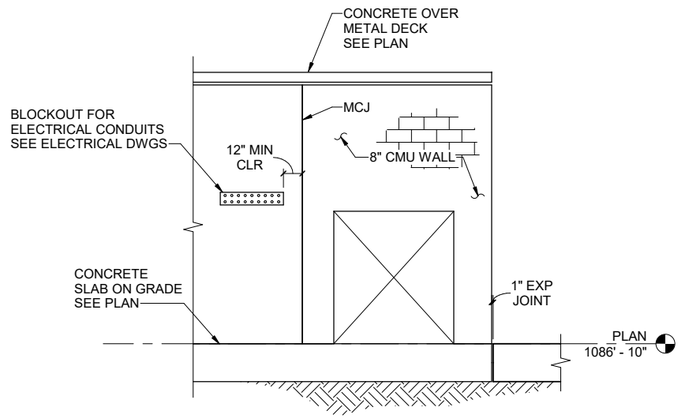
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MECHANICAL LEVEL PLAN AREA B

Package: B04 - RBSB0352
Sheet Reference No: V5 - 151 of 218



1 RBSB0510 **SECTION**
SCALE: 1/4" = 1'-0"



2 RBSB0510 **SECTION**
SCALE: 1/4" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	1/4" = 1'-0"
CIP No.:	AV10000011
KIVA No.:	07-5204

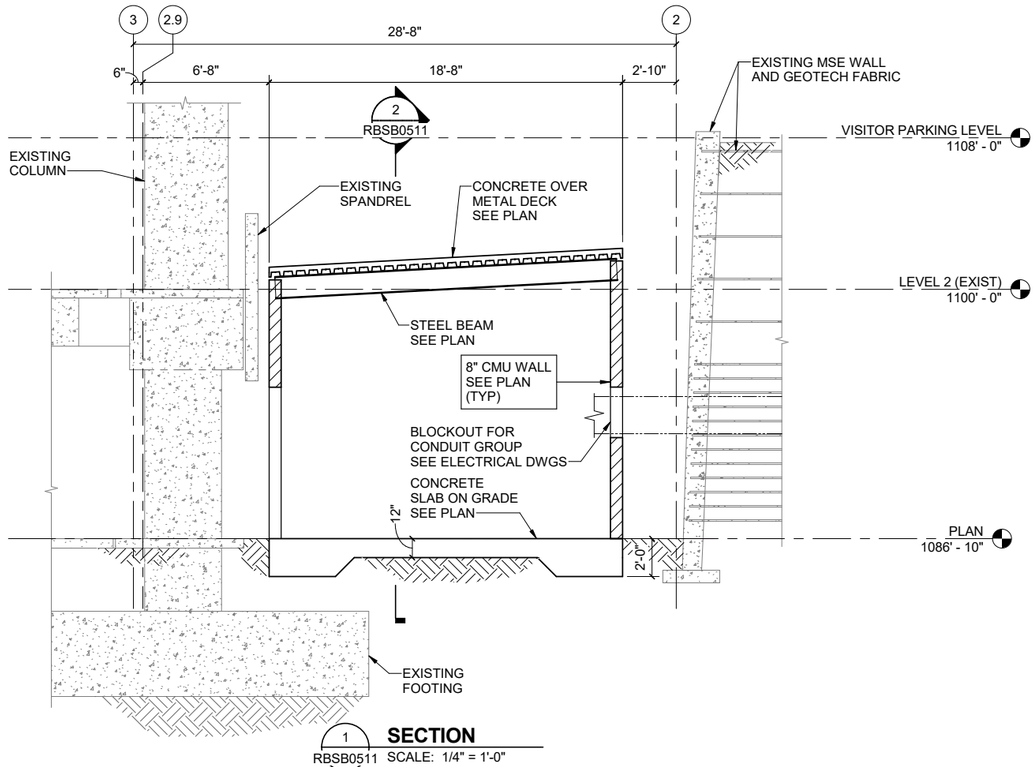
STAGE 2 - B04 DESIGN SUBMISSION

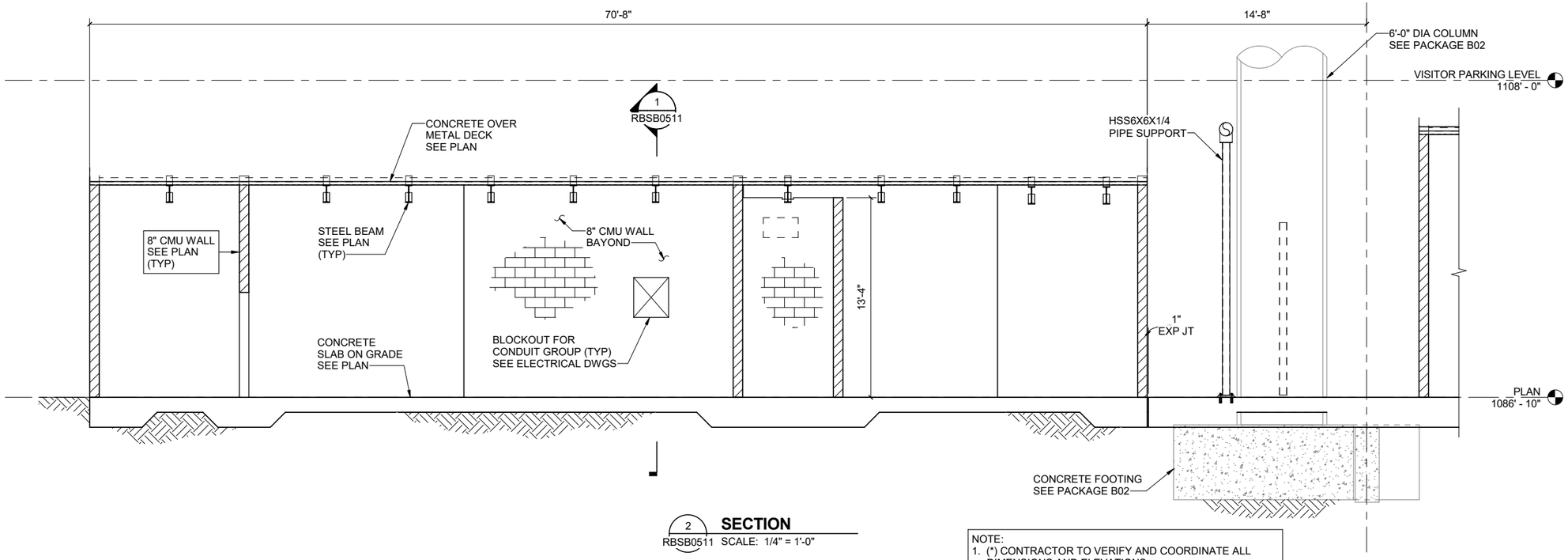
RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0510**

Sheet Reference No:
V5 - 152 of 218

Project Number: 62421
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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt





N1

NOTE:
1. (*) CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS .
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

Project Number: 62421
7/13/2018 5:13:16 PM

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

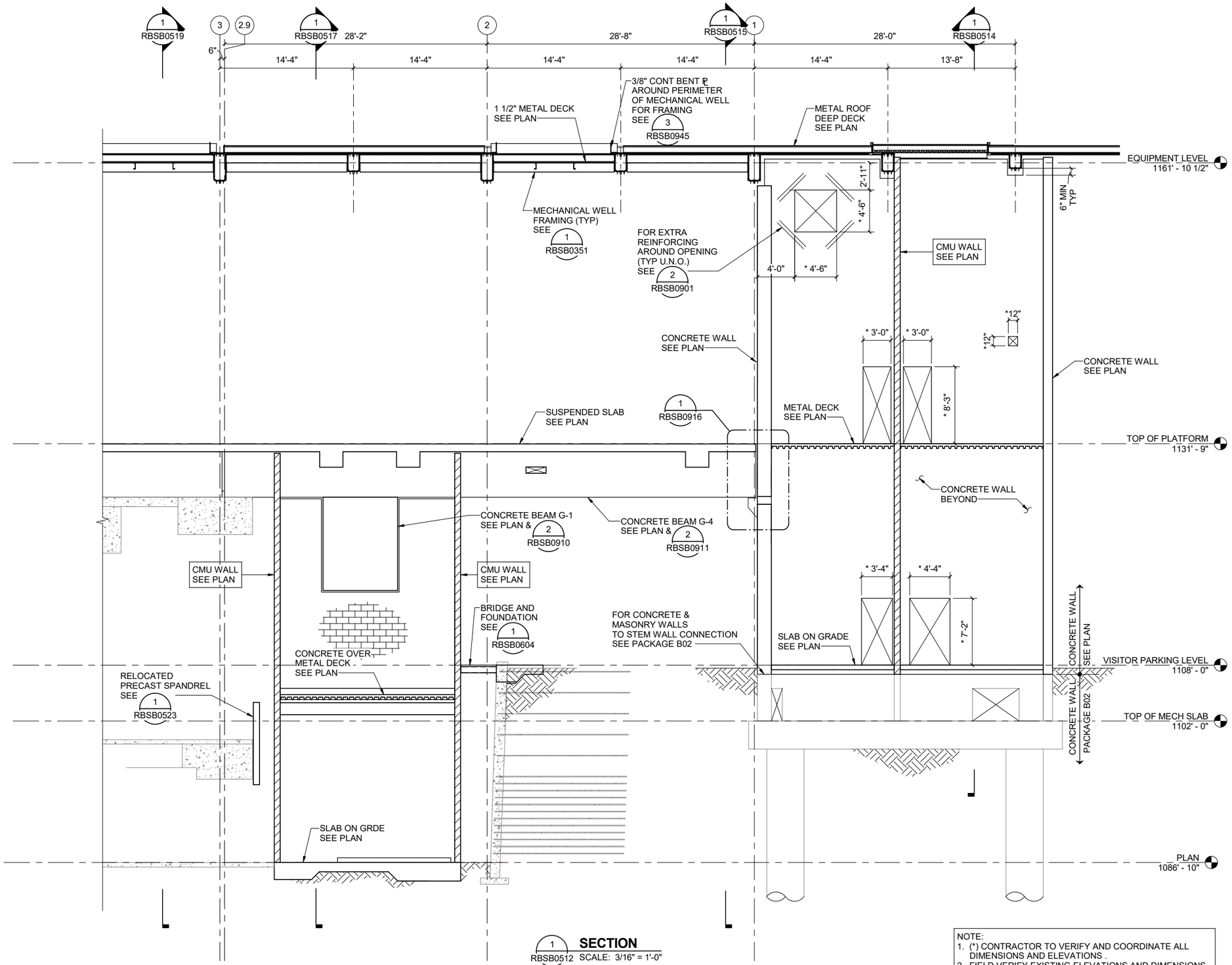
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04

Sheet Reference No:
B04 - RBSB0511
V5 - 153 of 218



1 RBSB0512 **SECTION** SCALE: 3/16" = 1'-0"

NOTE:
1. (*) CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS .
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06242 1_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:21 PM

Design Consultant: Gannett Fleming

Design Sub-Consultant

Professional Engineer (Structural) — Date Signed 7/13/18 — SHANE E. SWEETEN — 44434 — ARIZONA, U.S.A. — EXPIRES 9/30/19

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

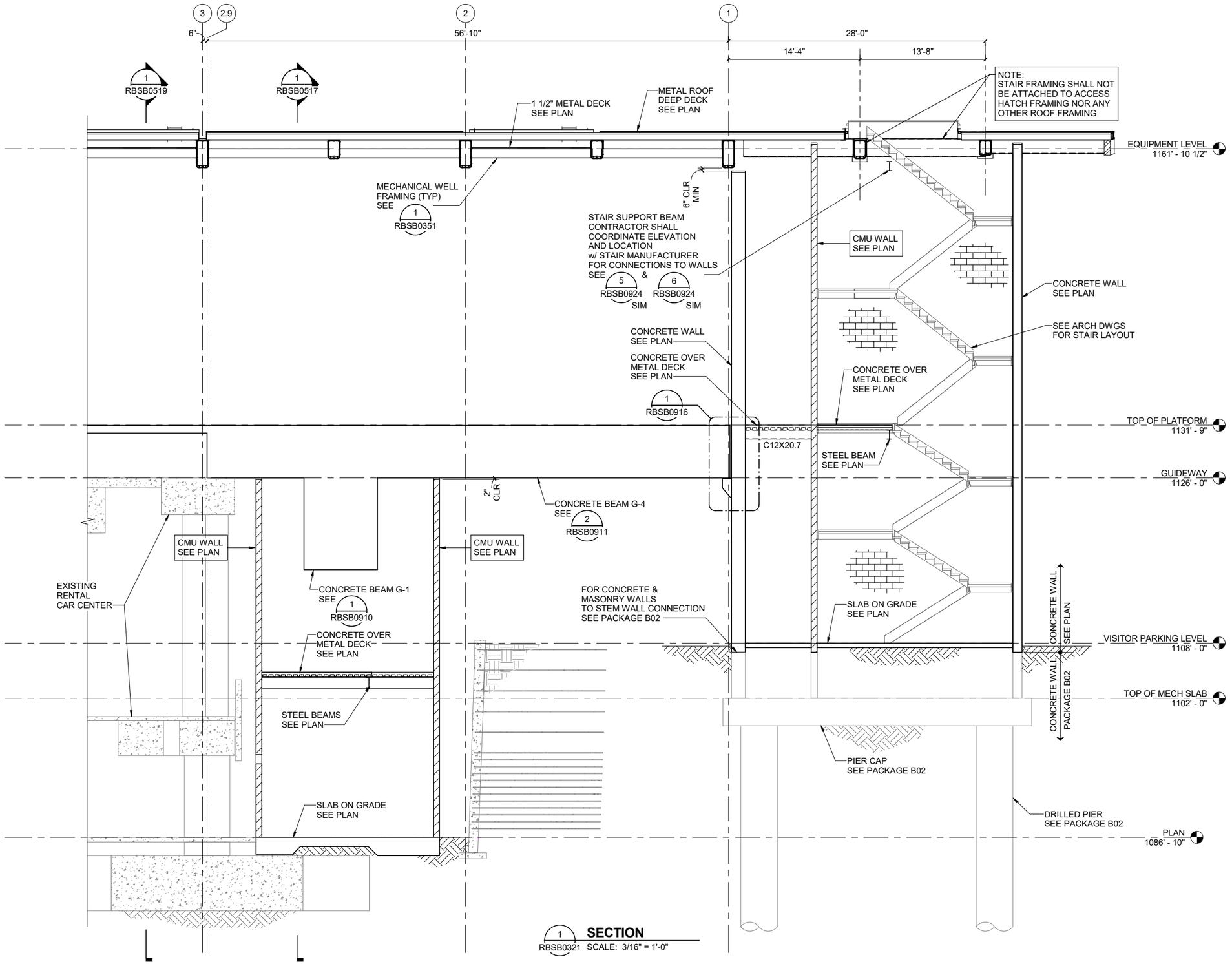
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04 - RBSB0512
Sheet Reference No:
V5 - 154 of 218



1 RBSB0321 **SECTION**
SCALE: 3/16" = 1'-0"

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:25 PM

Professional Engineer (Structural) — Registered in Arizona — Shane E. Sweeten — 44434 — Date Signed 7/13/18 — Expires 9/30/19

Design Sub-Consultant

Design Consultant

Gannett Fleming

PER CITY OF PHOENIX ORDINANCE G-4336, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

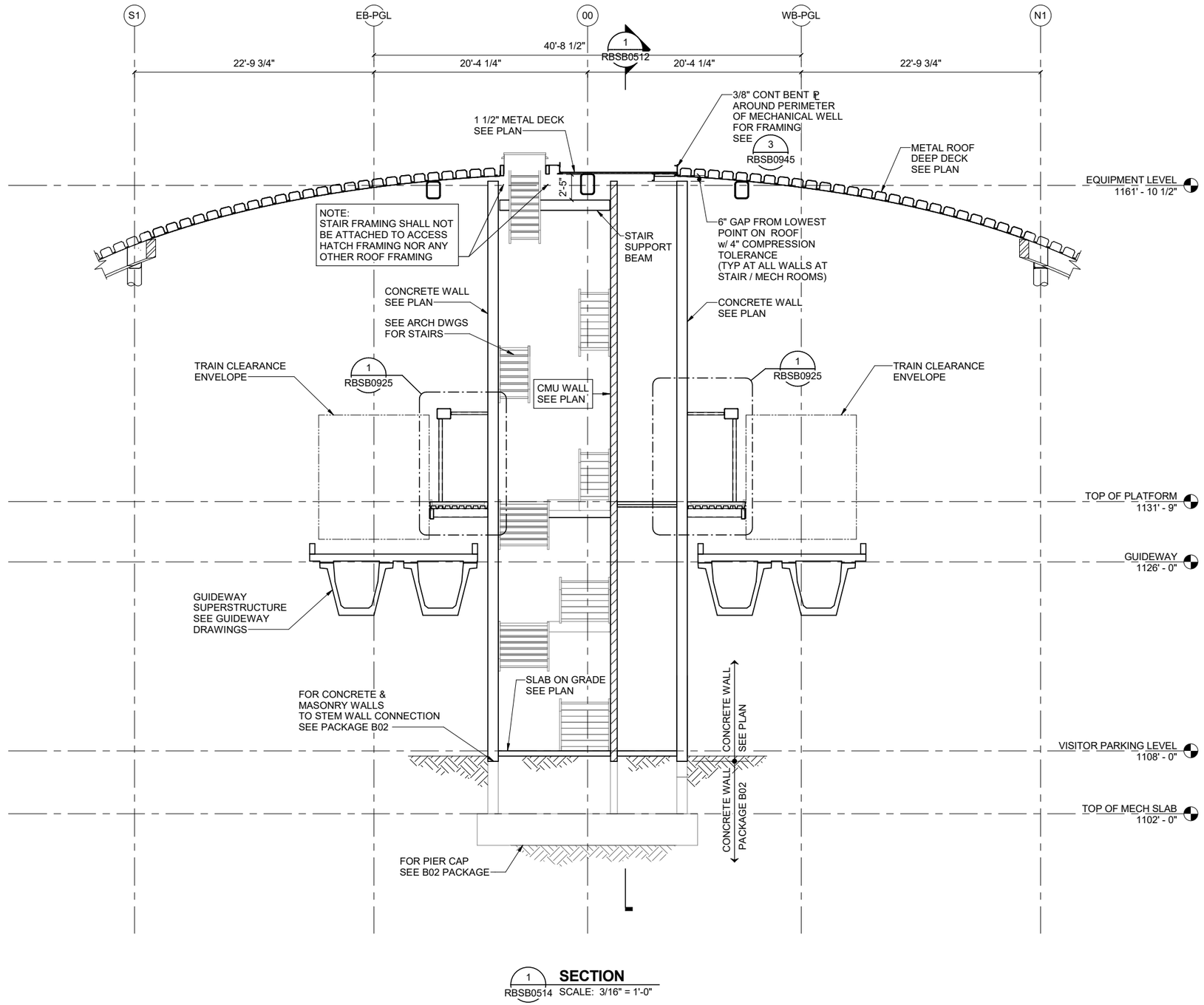
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK	Drawn by:	MWK	Checked by:	SES	Date:	07/13/2018
Dwg scale:	AS NOTED	CIP No.:	AV10000011	KIVA No.:	07-5204		

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04 - RBSB0513
Sheet Reference No: V5 - 155 of 218



1 RBSB0514 **SECTION**
SCALE: 3/16" = 1'-0"

Design Consultant
Gannett Fleming

Design Sub-Consultant

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

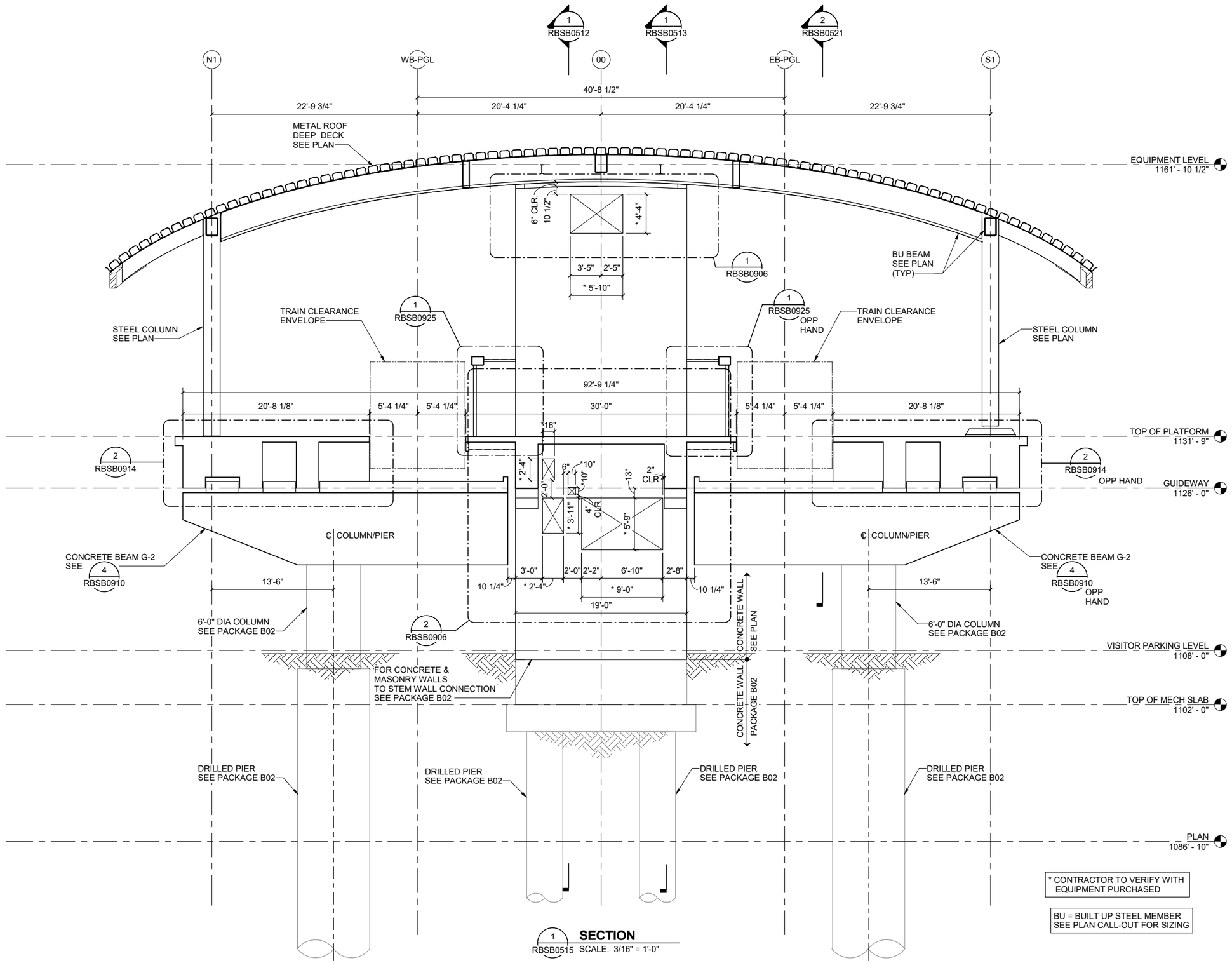
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0514**
Sheet Reference No:
V5 - 156 of 218

Project Number: 62421
7/13/2018 5:13:30 PM
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0515 **SECTION** SCALE: 3/16" = 1'-0"

* CONTRACTOR TO VERIFY WITH EQUIPMENT PURCHASED

BU = BUILT UP STEEL MEMBER SEE PLAN CALL-OUT FOR SIZING

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

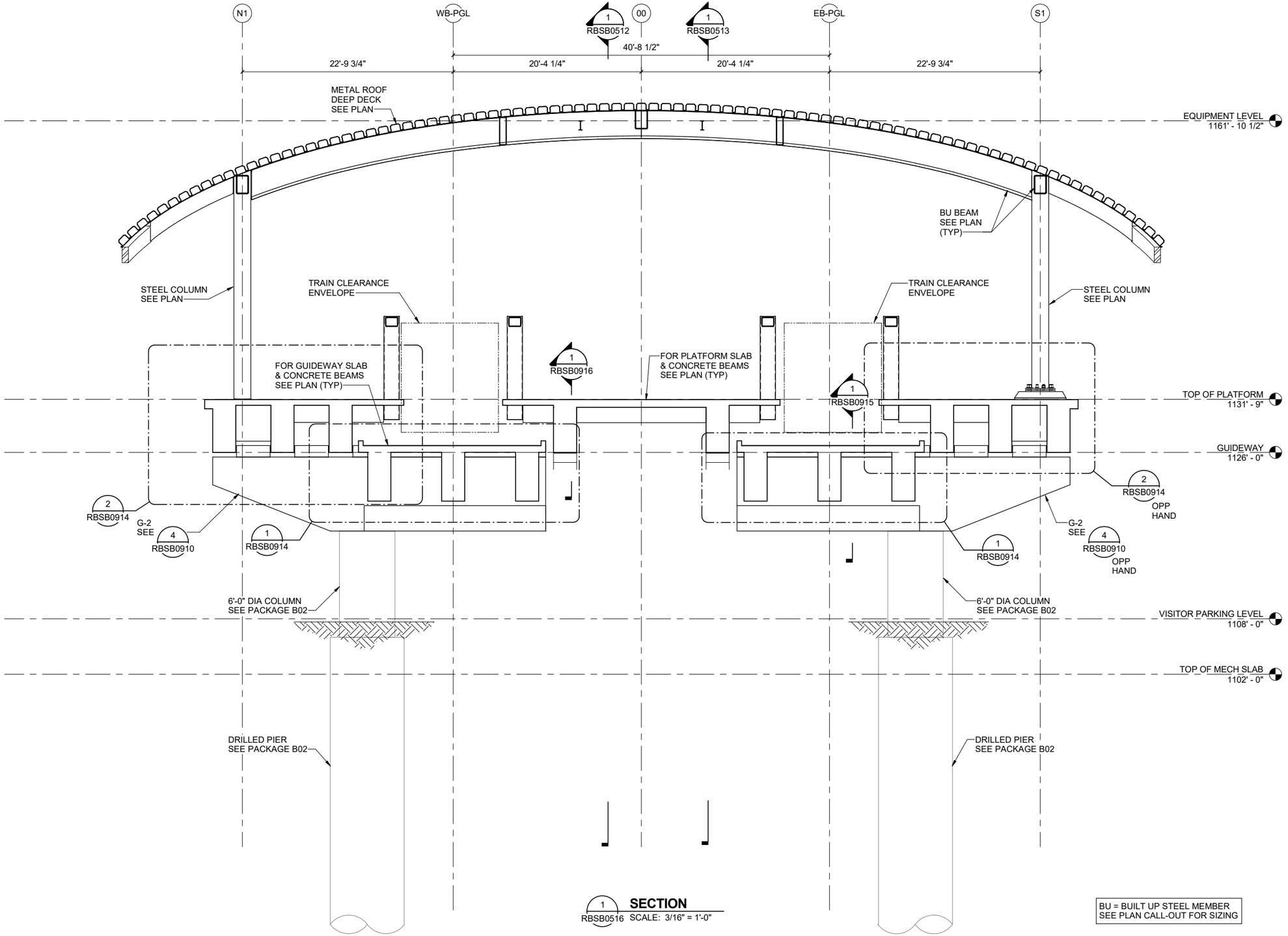
RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0515**

Sheet Reference No:
V5 - 157 of 218

Project Number: 62421
7/13/2018 5:13:35 PM

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0516 **SECTION**
SCALE: 3/16" = 1'-0"

BU = BUILT UP STEEL MEMBER
SEE PLAN CALL-OUT FOR SIZING

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

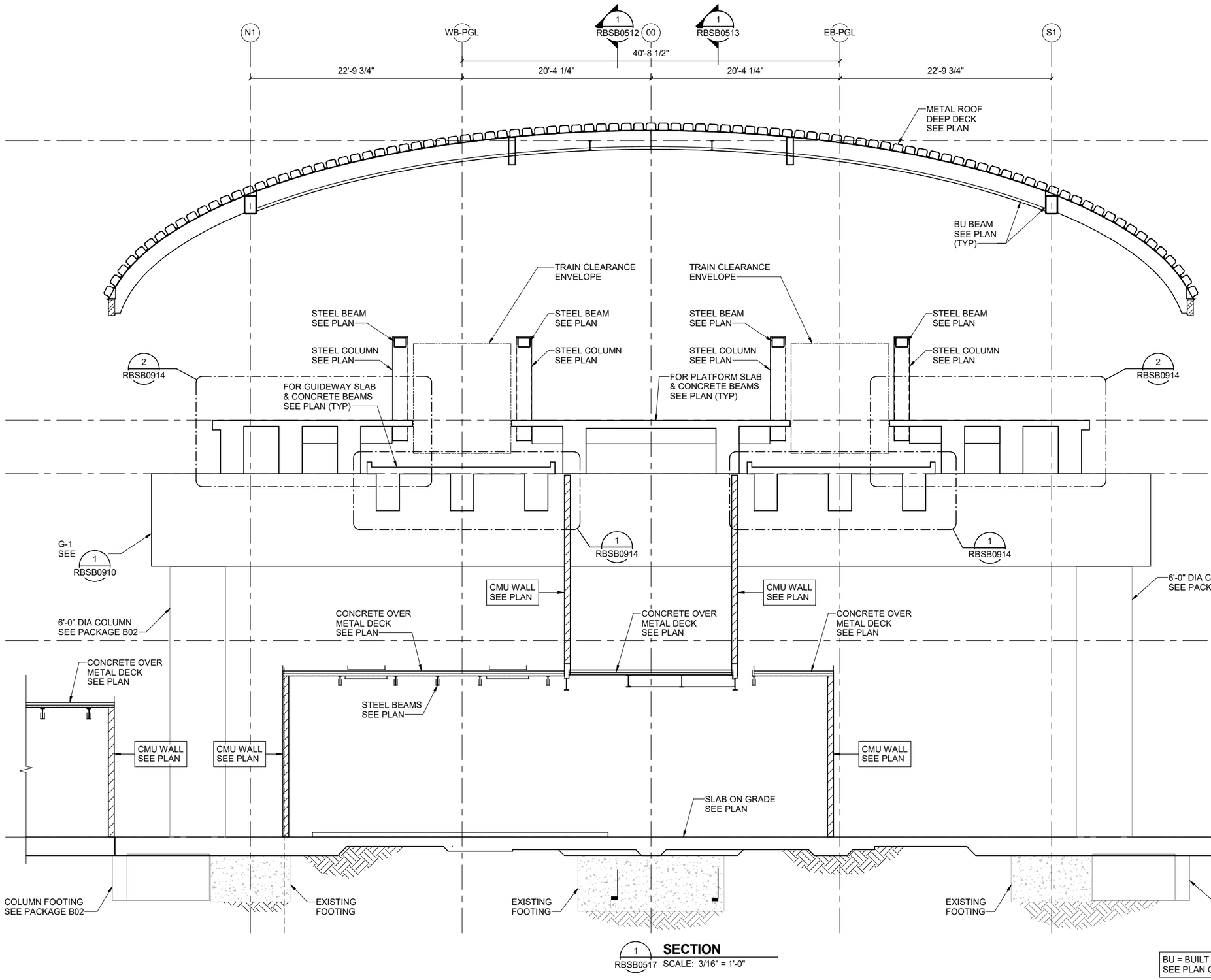
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Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04 - RBSB0516
Sheet Reference No: V5 - 158 of 218

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:13:41 PM



1 RBSB0517 **SECTION** SCALE: 3/16" = 1'-0"

BU = BUILT UP STEEL MEMBER
SEE PLAN CALL-OUT FOR SIZING

Local File: BIM 360://62421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:13:47 PM

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

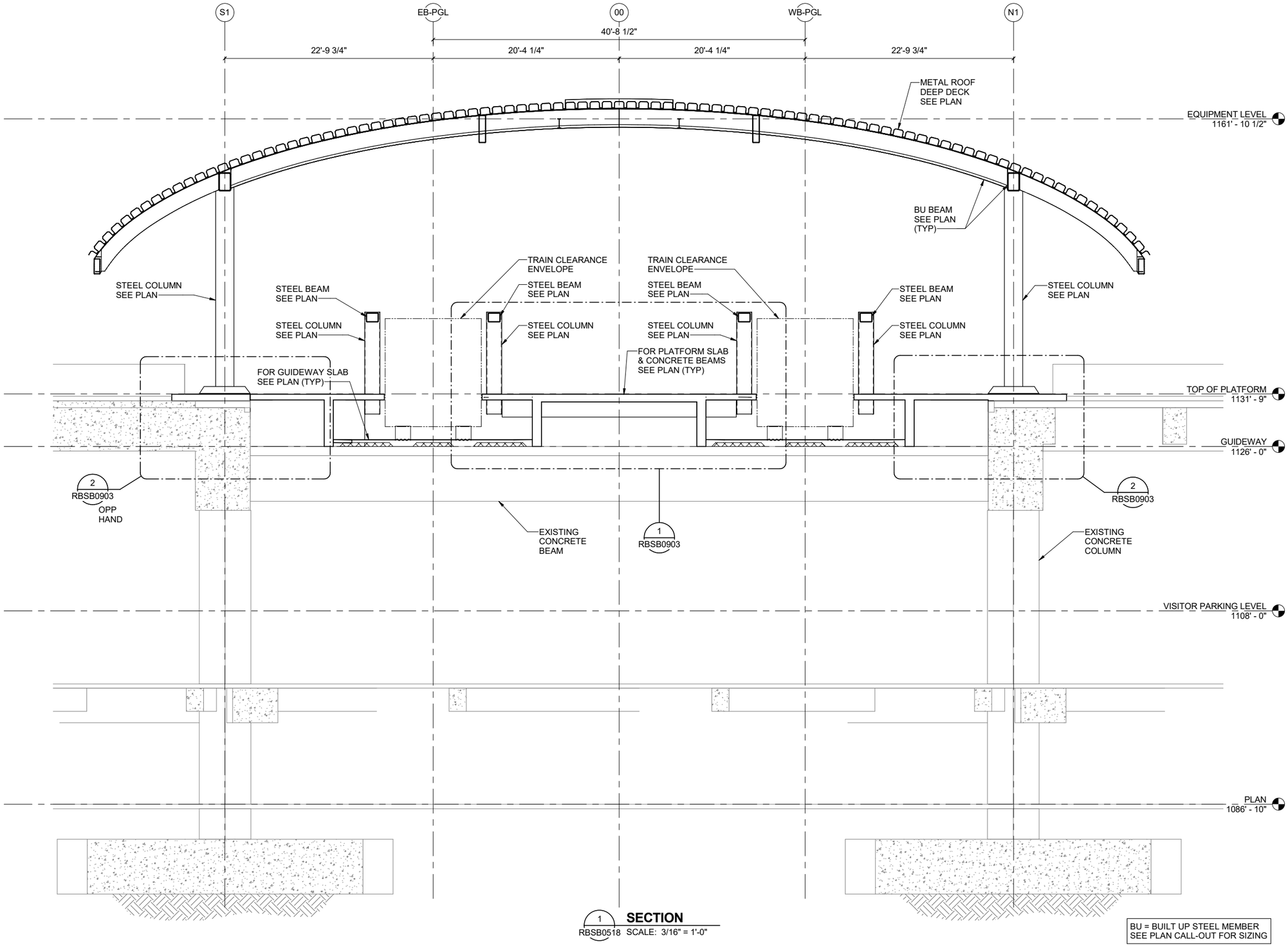
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04 - RBSB0517
Sheet Reference No:
V5 - 159 of 218



1 RBSB0518 **SECTION** SCALE: 3/16" = 1'-0"

BU = BUILT UP STEEL MEMBER
SEE PLAN CALL-OUT FOR SIZING

Project Number: 62421
7/13/2018 5:13:54 PM

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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

SHANE E. SWEETEN
ARIZONA, U.S.A.
No. 44434
Date Signed 7/13/18
EXPIRES 9/30/19

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

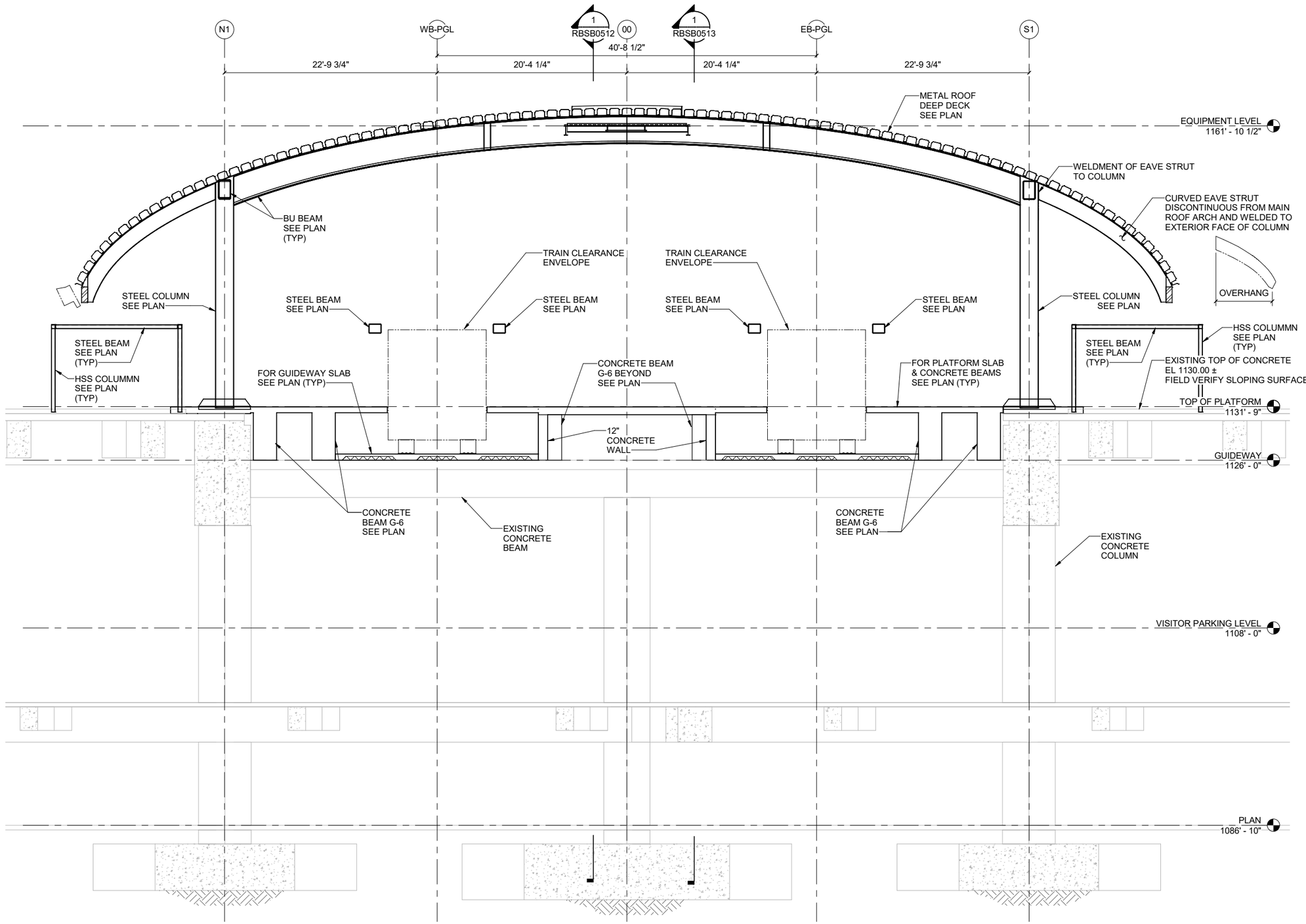
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0518**

Sheet Reference No:



1 RBSB0519 **SECTION**
SCALE: 3/16" = 1'-0"

BU = BUILT UP STEEL MEMBER
SEE PLAN CALL-OUT FOR SIZING

Project Number: 62421
7/13/2018 5:14:02 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06242 1_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

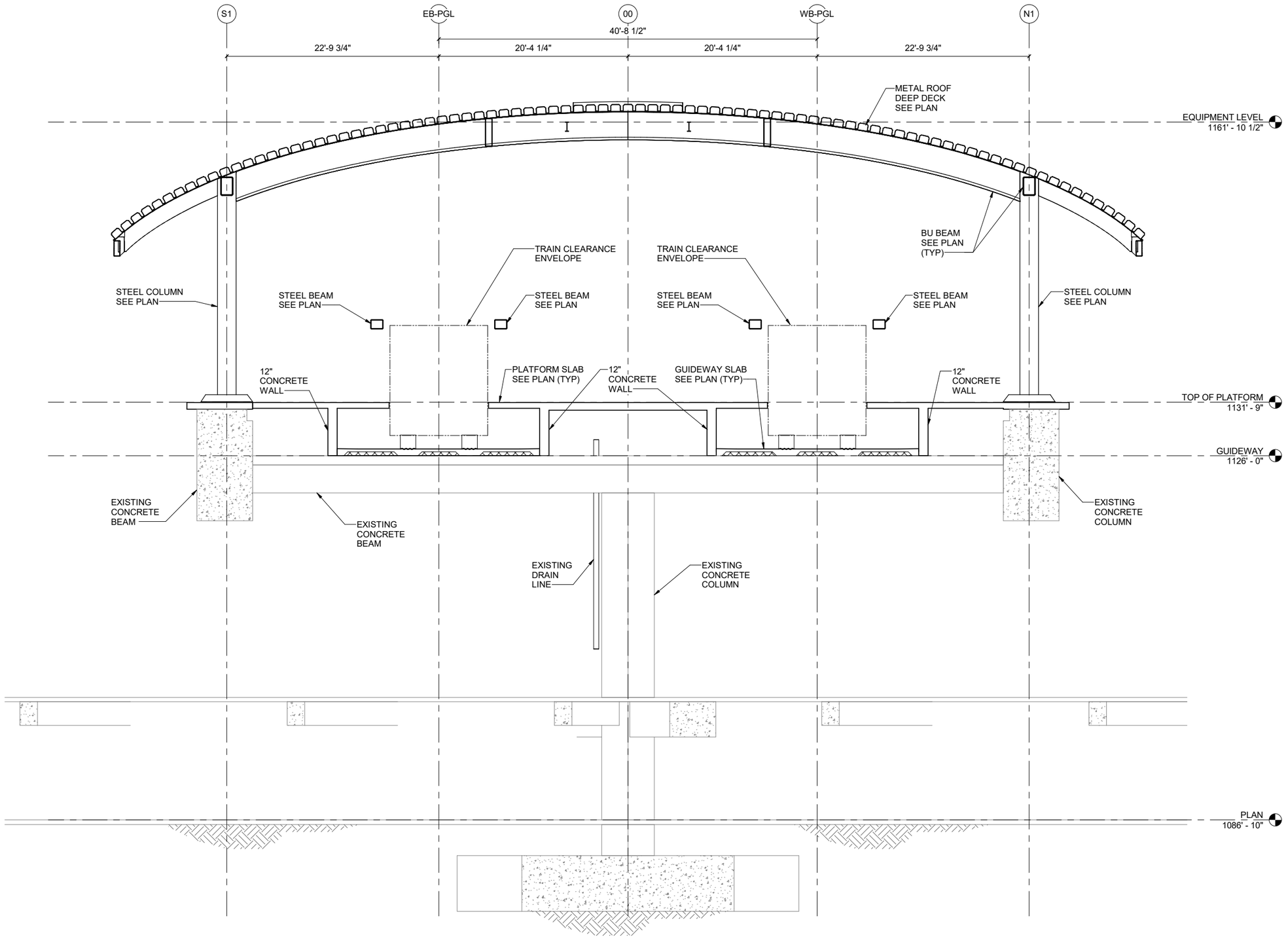
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0519**
Sheet Reference No:
V5 - 161 of 218



BU = BUILT UP STEEL MEMBER
SEE PLAN CALL-OUT FOR SIZING

1 RBSB0520 **SECTION** SCALE: 3/16" = 1'-0"

Project Number: 62421
7/13/2018 5:14:08 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

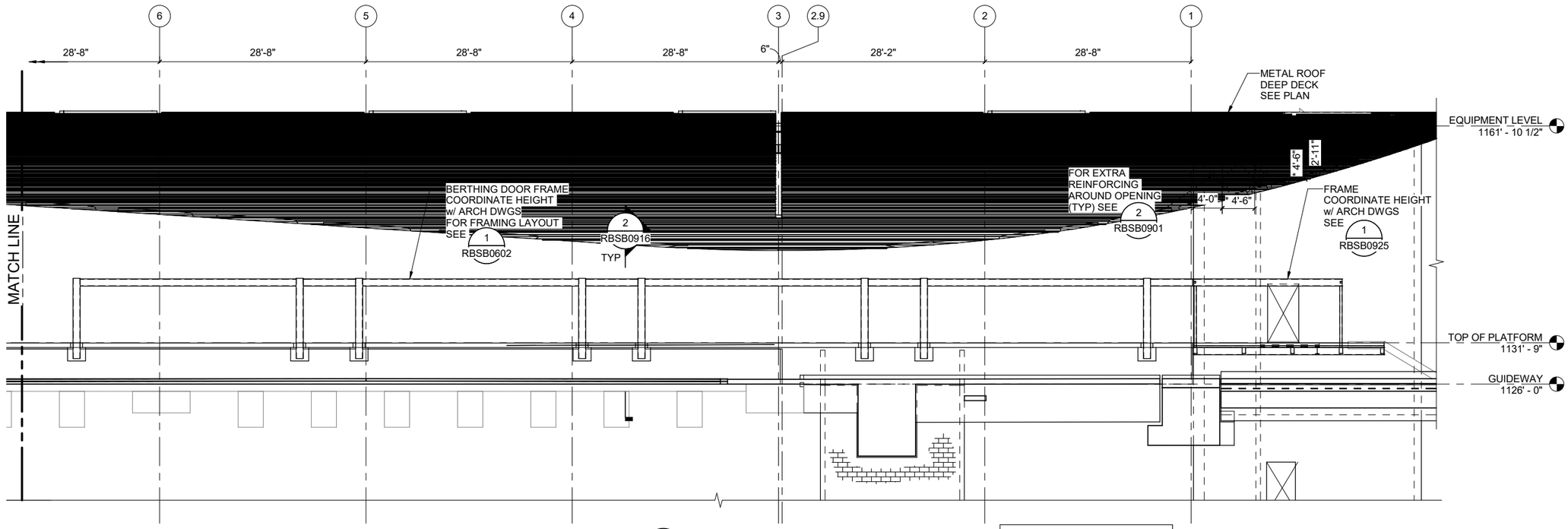
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

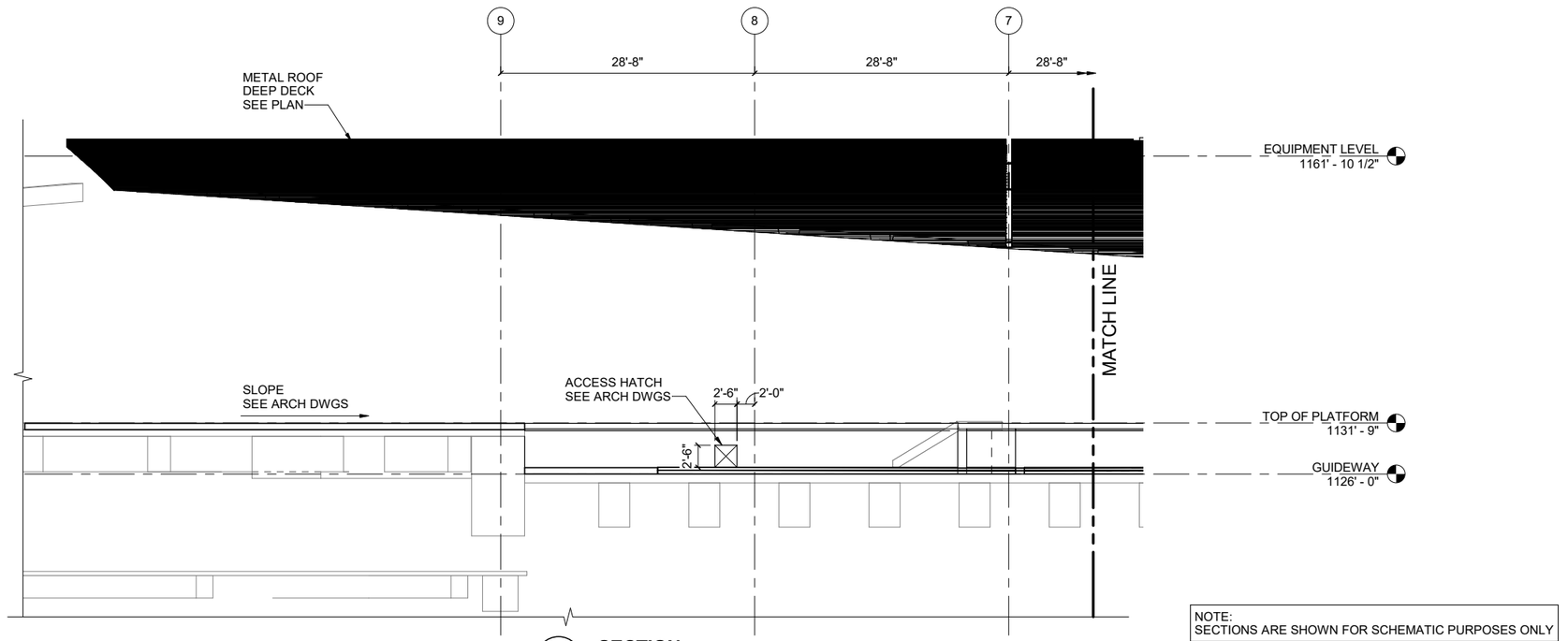
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KIVA No.:	07-5204

Package: **B04 - RBSB0520**
Sheet Reference No:
V5 - 162 of 218



1 RBSB0521 **SECTION**
SCALE: 1/8" = 1'-0"

* CONTRACTOR TO VERIFY WITH EQUIPMENT PURCHASED



2 RBSB0521 **SECTION**
SCALE: 1/8" = 1'-0"

NOTE:
SECTIONS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY

Project Number: 62421
7/13/2018 5:14:11 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

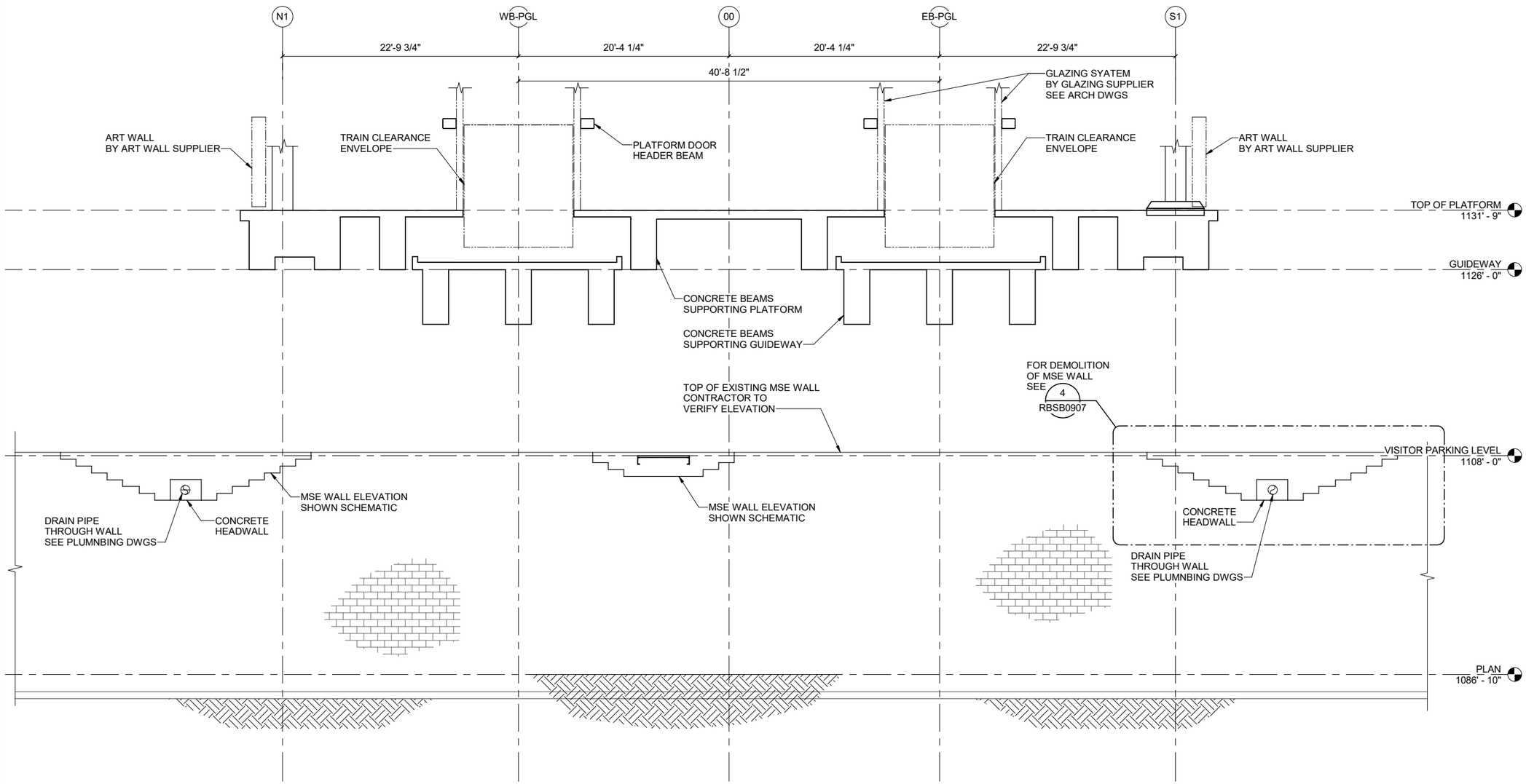
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0521**
Sheet Reference No:
V5 - 163 of 218



1 RBSB0522 **SECTION**
SCALE: 3/16" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

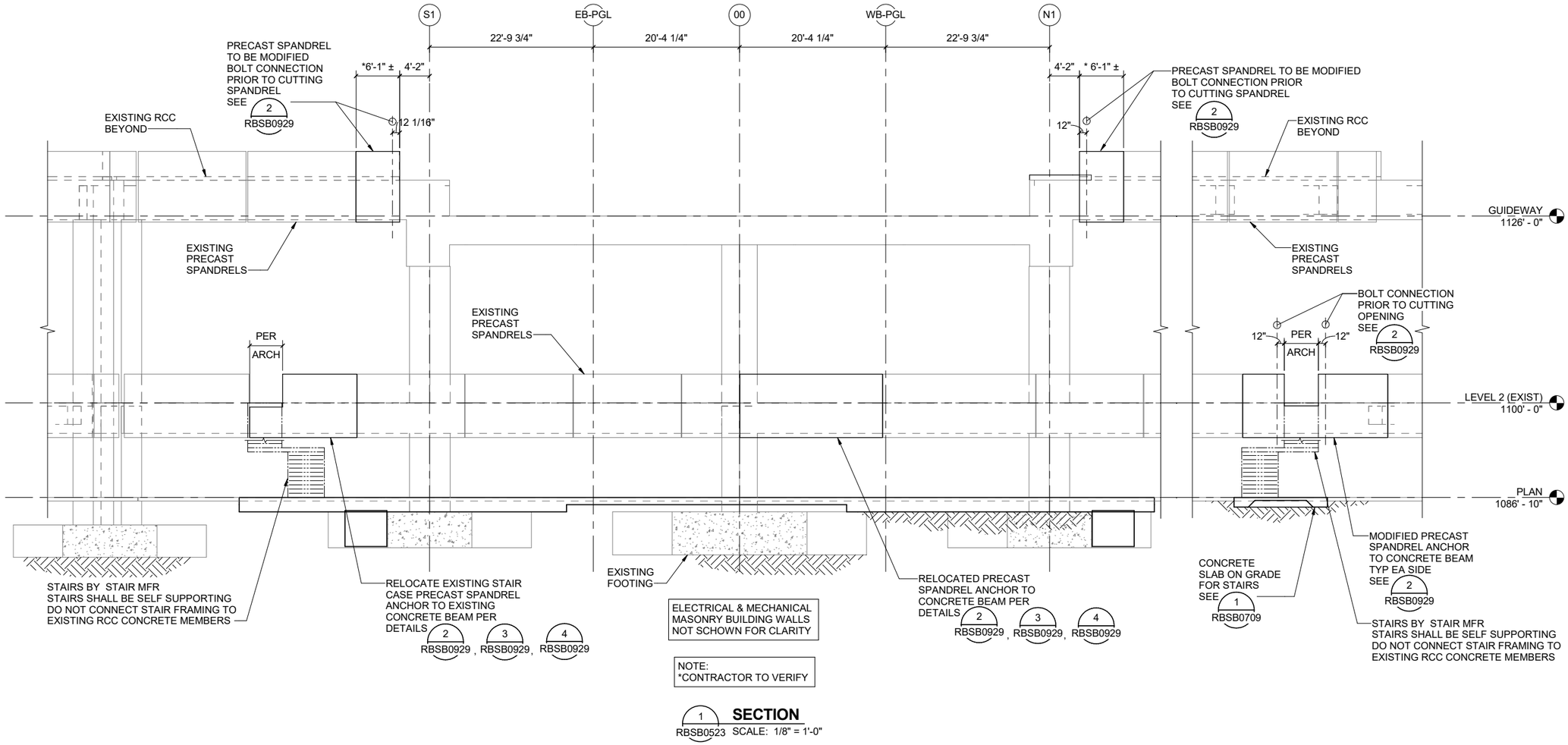
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Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0522**
Sheet Reference No:
V5 - 164 of 218

Project Number: 62421
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0523 **SECTION** SCALE: 1/8" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

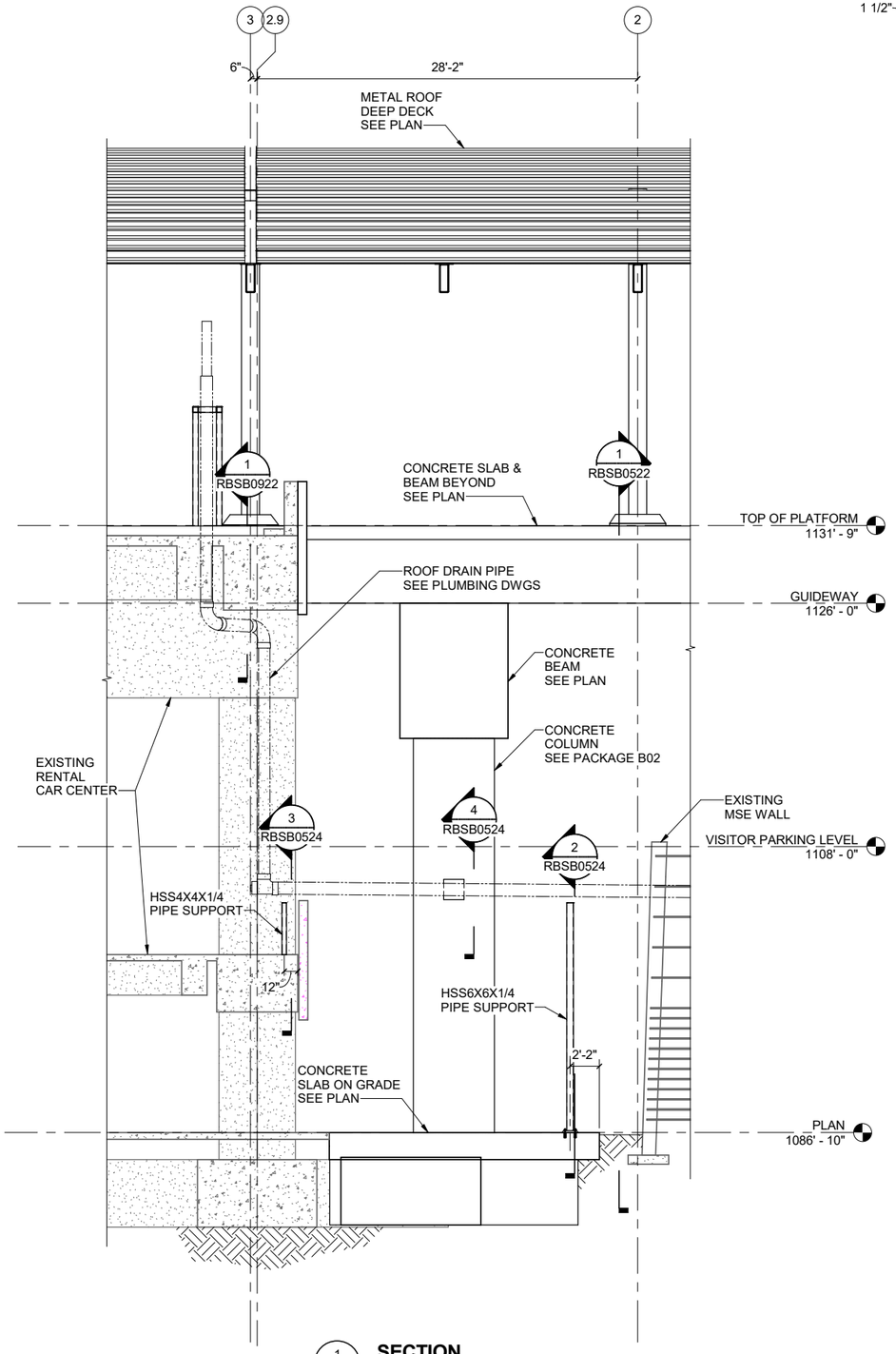
RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: **B04 - RBSB0523**

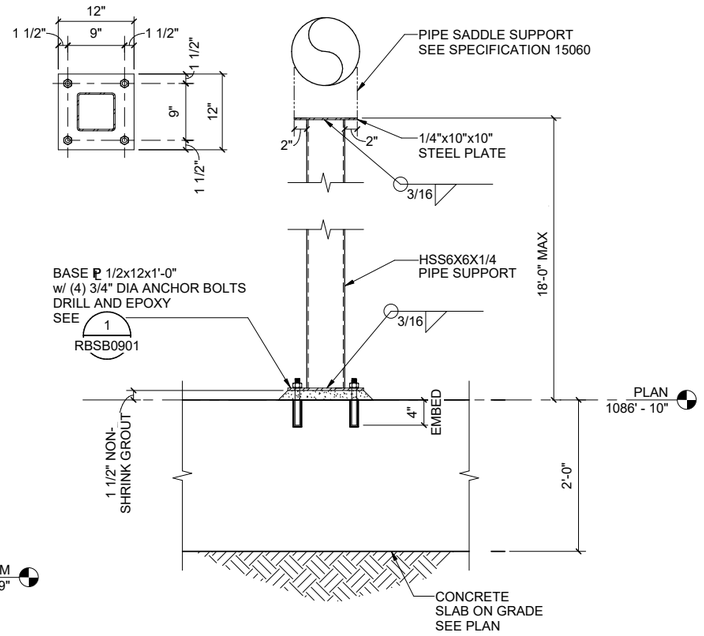
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Project Number: 62421
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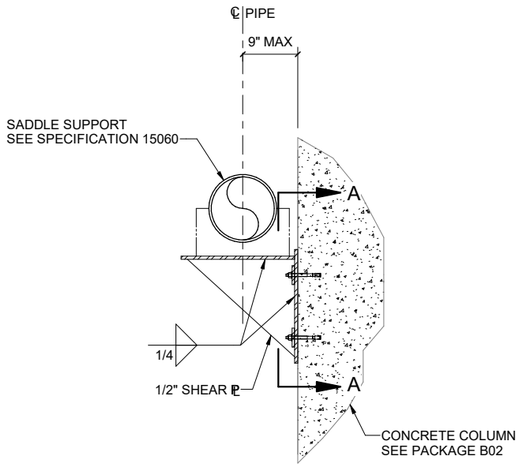
1 **SECTION**
RBSB0524 SCALE: 3/16" = 1'-0"



PIPE SUPPORT AT CONCRETE SLAB

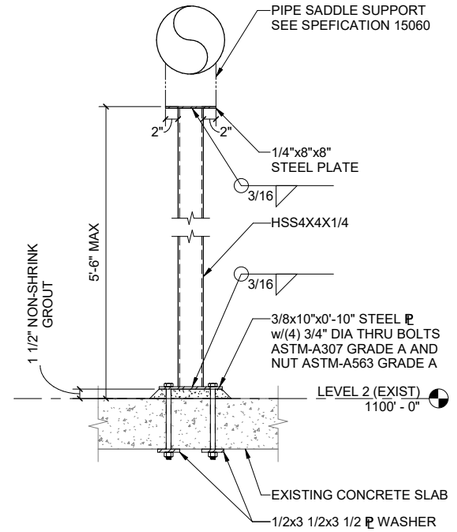
2 **SECTION**
RBSB0524 SCALE: 1" = 1'-0"

NOTE:
CONTRACTOR TO SCAN EXISTING SLABS, WALLS & COLUMNS WITH 3D GROUND PENETRATION RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING



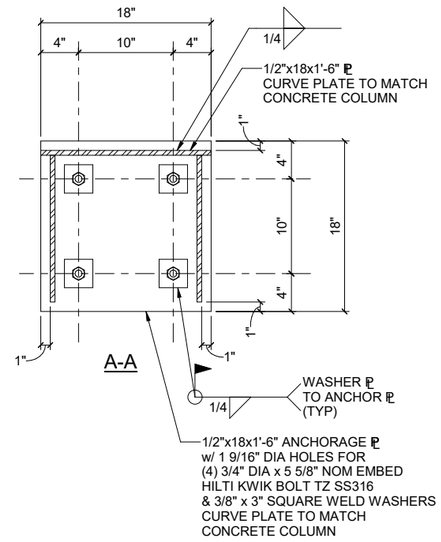
PIPE SUPPORT AT CONCRETE COLUMN

4 **SECTION**
RBSB0524 SCALE: 1" = 1'-0"



PIER SUPPORT AT EXISTING CONCRETE SLAB

3 **DETAIL**
RBSB0524 SCALE: 1" = 1'-0"



Project Number: 62421
7/13/2018 5:14:19 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

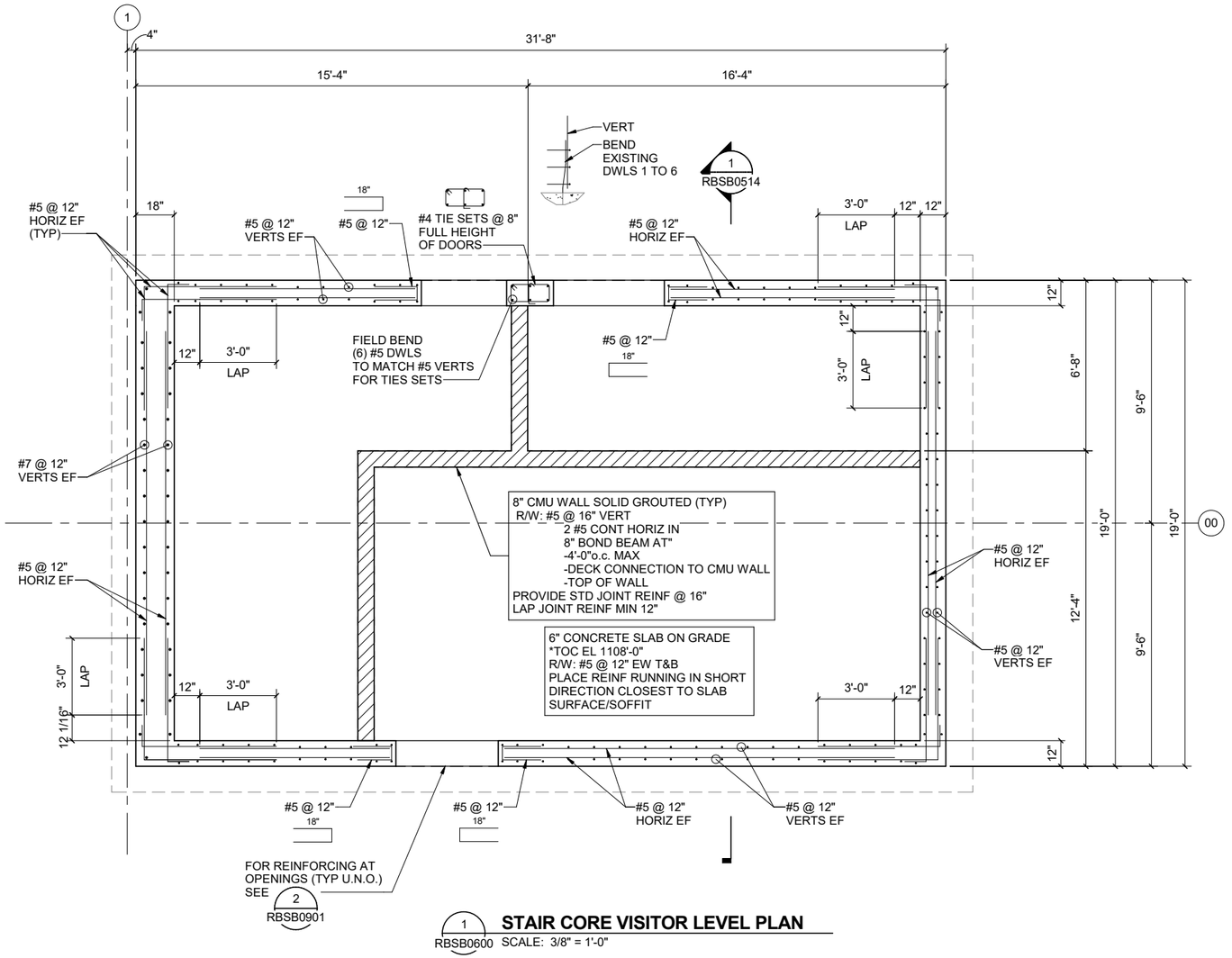
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

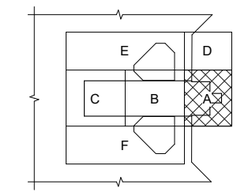
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FULL HEIGHT BUILDING SECTION

Package: B04
Sheet Reference No: **RBSB0524**



1 RBSB0600 **STAIR CORE VISITOR LEVEL PLAN**
SCALE: 3/8" = 1'-0"



KEY PLAN

6' 4' 2' 0' 5' 10'
3/16" = 1'-0"

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Design Sub-Consultant

Design Consultant

Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

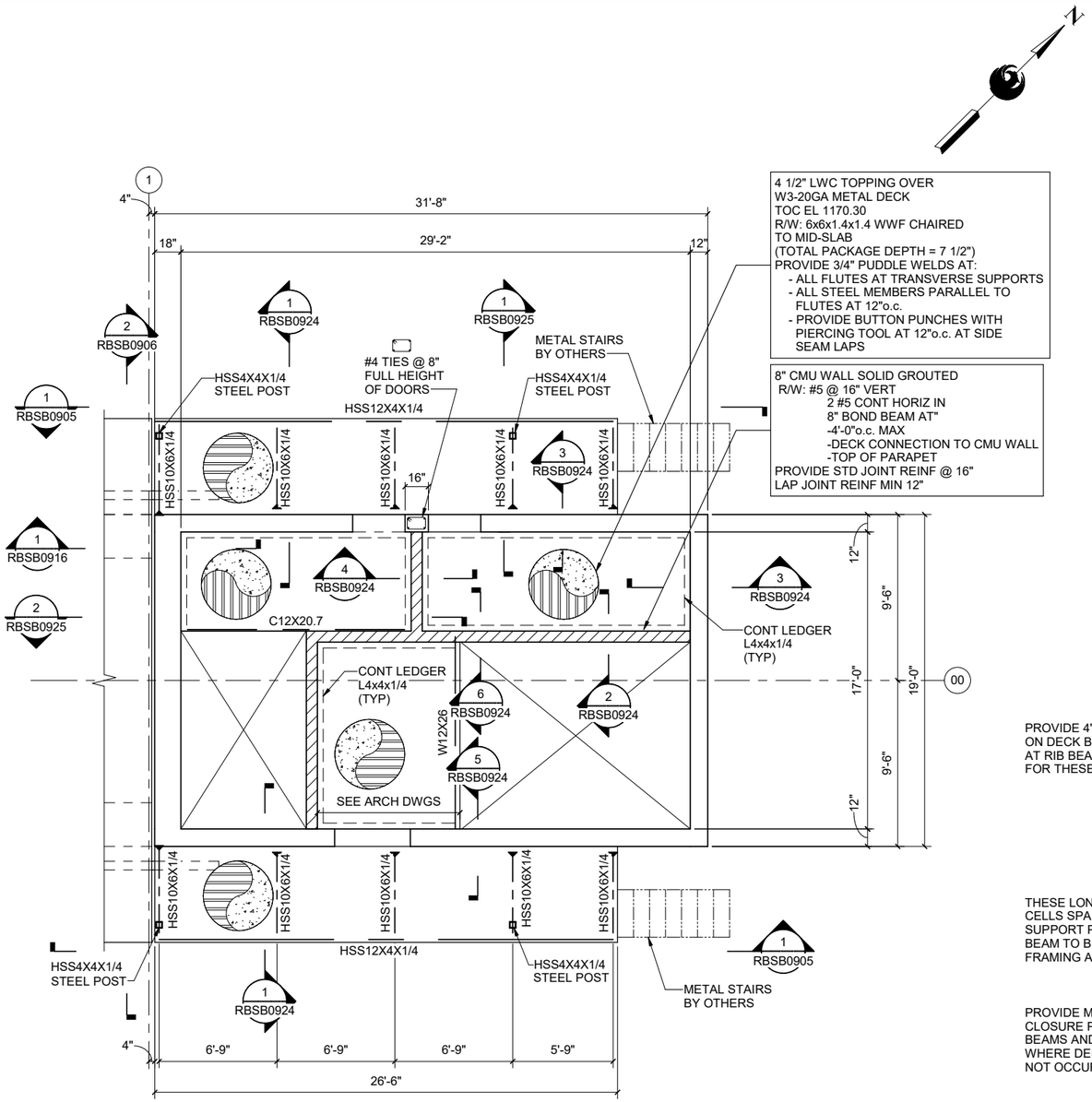
RCC STATION
STRUCTURAL
ENLARGED STAIR CORE VISITOR PLAN

Package: **B04 - RBSB0600**

Sheet Reference No:
V5 - 167 of 218

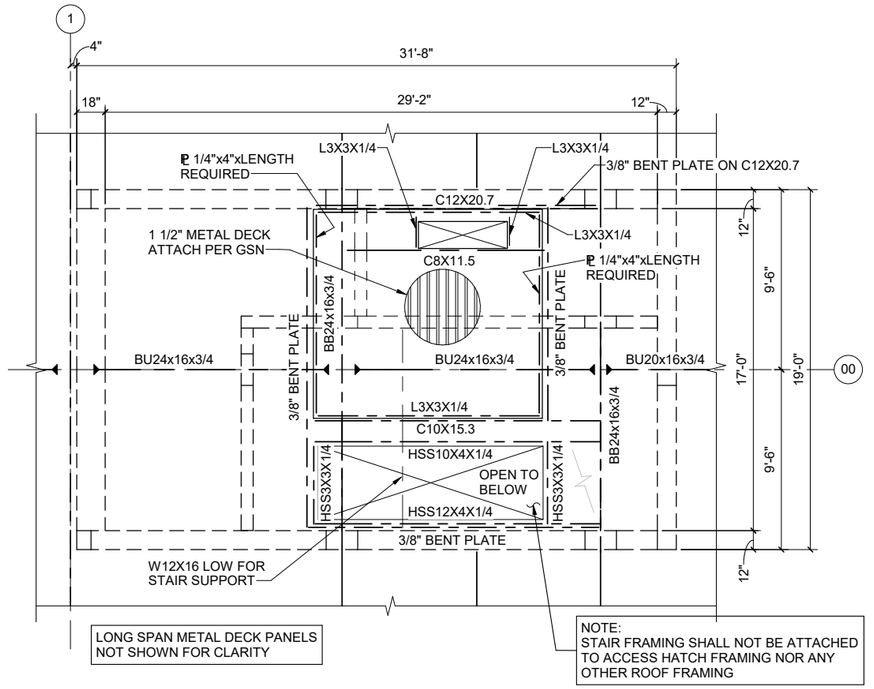
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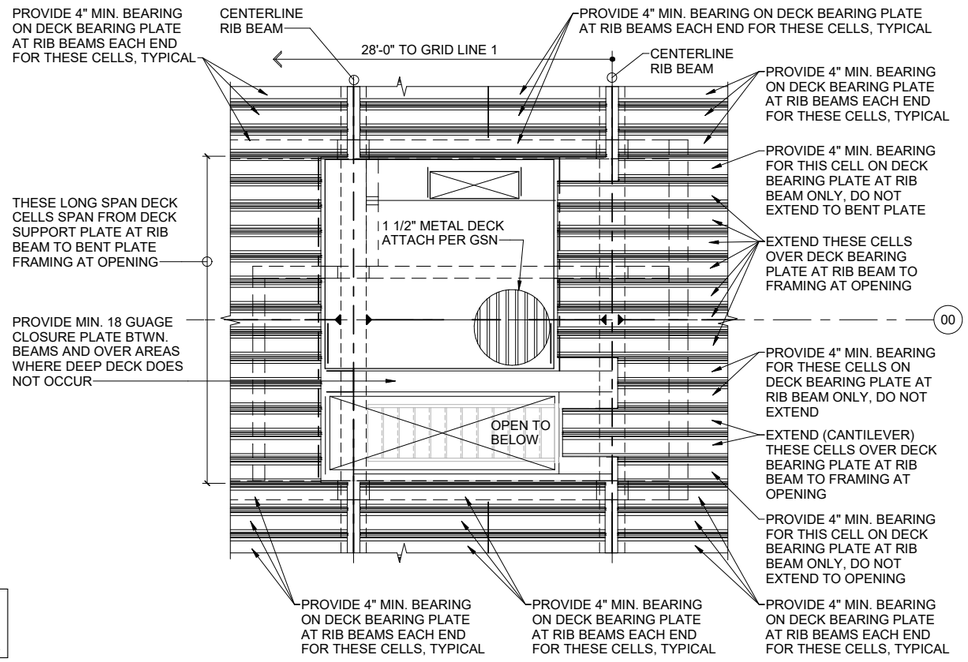


1 RBSB0601 **STAIR CORE PLATFORM PLAN (ENLARGED PLAN)**
SCALE: 1/4" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.



2 RBSB0601 **ROOF ACCESS HATCH ENLARGED PLAN**
SCALE: 1/4" = 1'-0"



3 RBSB0601 **ENLARGED PLAN OF DEEP DECK AROUND ROOF ACCESS HATCH**
SCALE: 1/4" = 1'-0"

Design Consultant: Gannett Fleming

Design Sub-Consultant

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

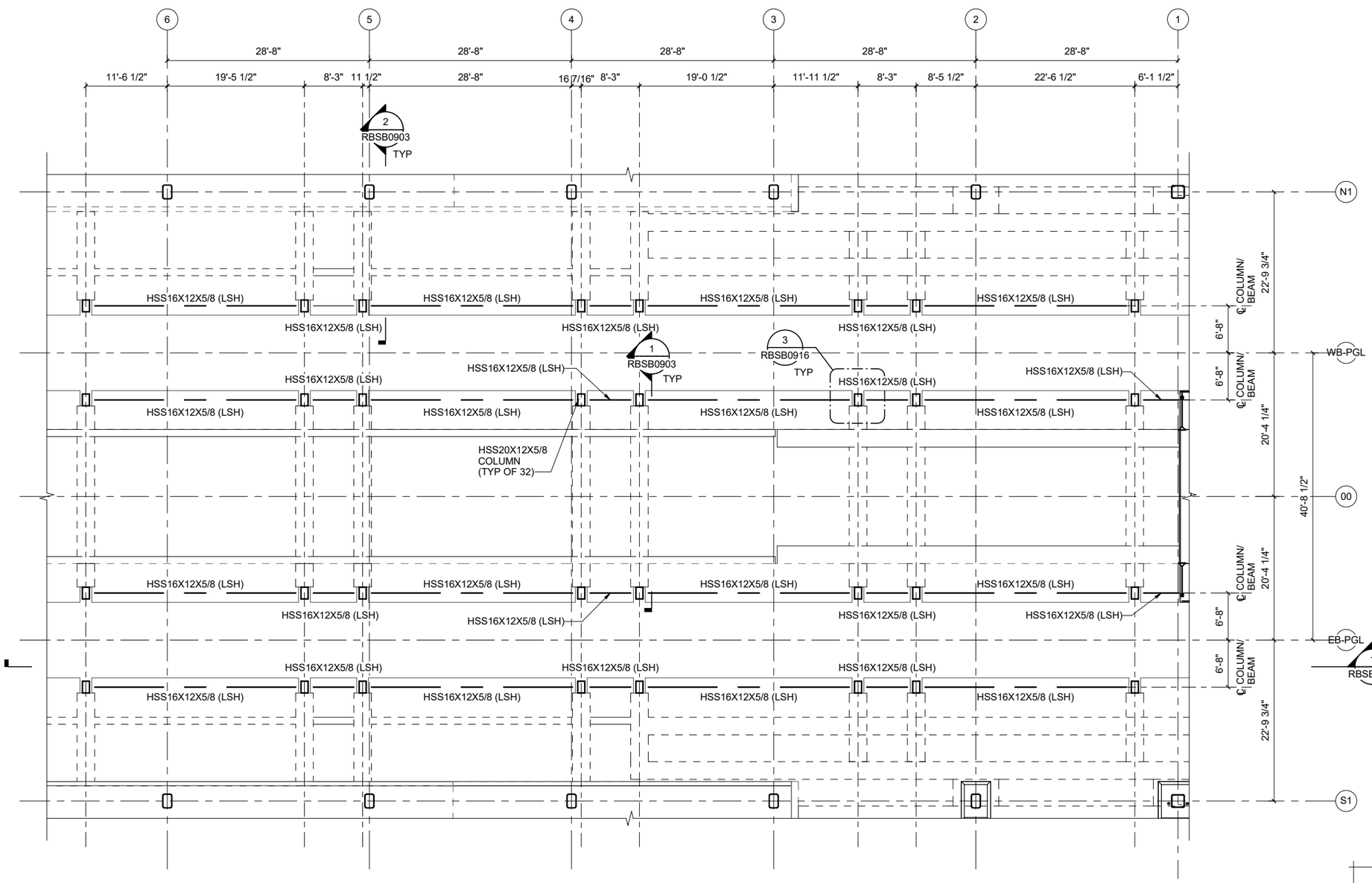
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
ENLARGED STAIR CORE PLATFORM AND ROOF PLANS

Package: **B04 - RBSB0601**
Sheet Reference No:
V5 - 168 of 218

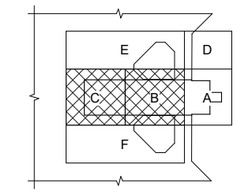
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:14:23 PM



1 RBSB0602 **PLATFORM TRAIN BERTHING DOOR FRAMING PLAN**
SCALE: 1/8" = 1'-0"

NOTE:
1. VERIFY ALL DIMENSIONS AND ELEVATIONS w/ ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.



KEY PLAN

8' 4' 0' 8' 16'
1/8" = 1'-0"

Design Consultant
Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

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

CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK	Checked by:	SES	Dwg scale:	AS NOTED	CIP No.:	AV10000011	KIVA No.:	07-5204
Drawn by:	MWK	Date:	07/13/2018						

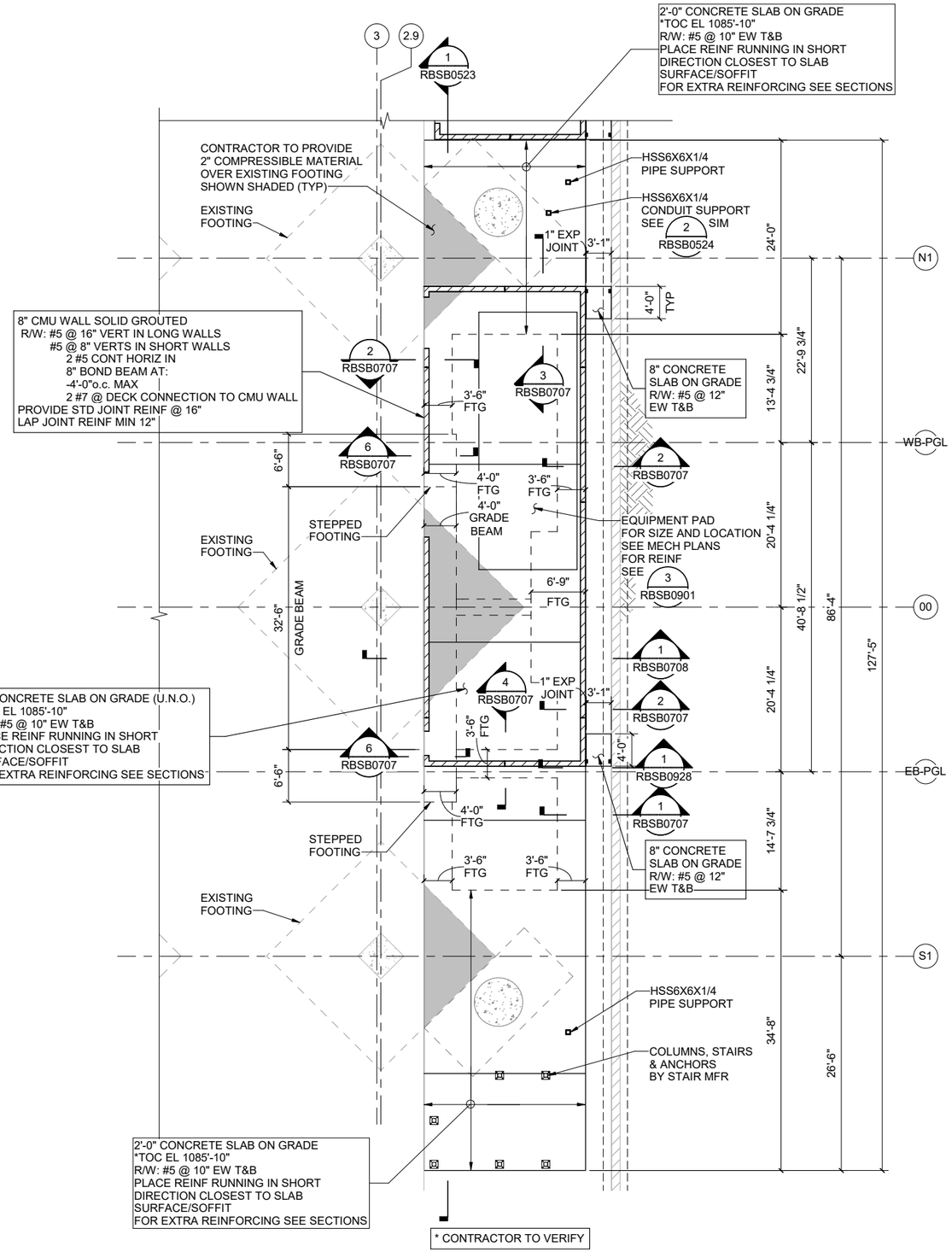
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
ENLARGED PLAN PLATFORM ACCESS DOOR FRAMING PLAN

Package: B04 - RBSB0602
Sheet Reference No: V5 - 169 of 218

Project Number: 62421
7/13/2018 5:14:24 PM

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0603 **ENLARGED BASE LEVEL PLAN AREA A**
SCALE: 1/8" = 1'-0"

Project Number: 62421
7/13/2018 5:14:25 PM

Local File: BIM 360://62421 – Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

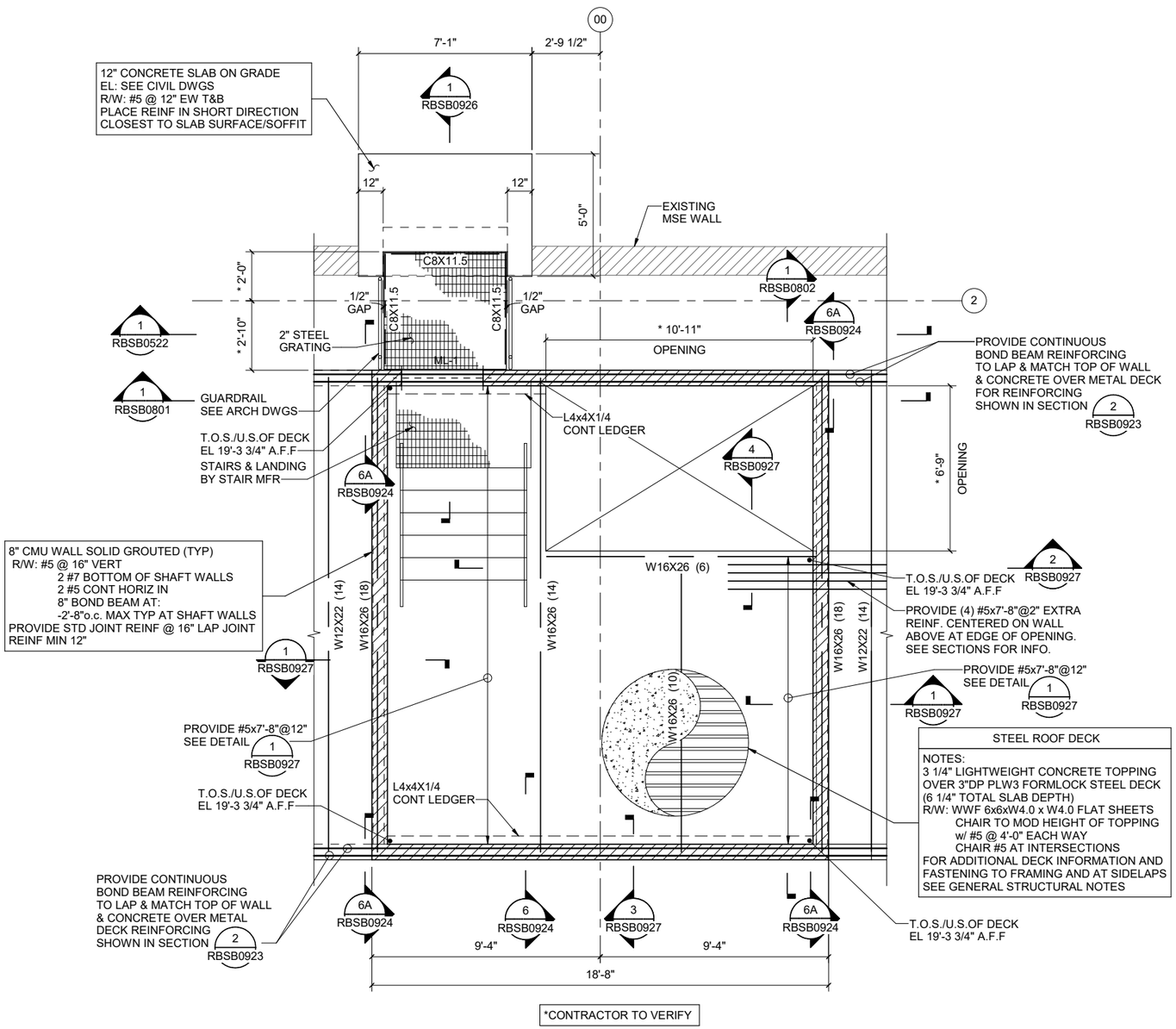
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	Designer
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
ENLARGED BASE LEVEL PLAN AREA A

Package: **B04 - RBSB0603**
Sheet Reference No:
V5 - 170 of 218



1 RBSB0604 **PARTIAL MECHANICAL ROOF PLAN**
SCALE: 3/8" = 1'-0"

COMPOSITE STEEL BEAMS
OF SHEAR STUDS
W14 x 22 (XX) (X)
MEMBER
CAMBER
SEE DETAIL 1 RBSB0921

12" 0' 1' 2' 3' 4' 5' 6' 7'
3/8" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

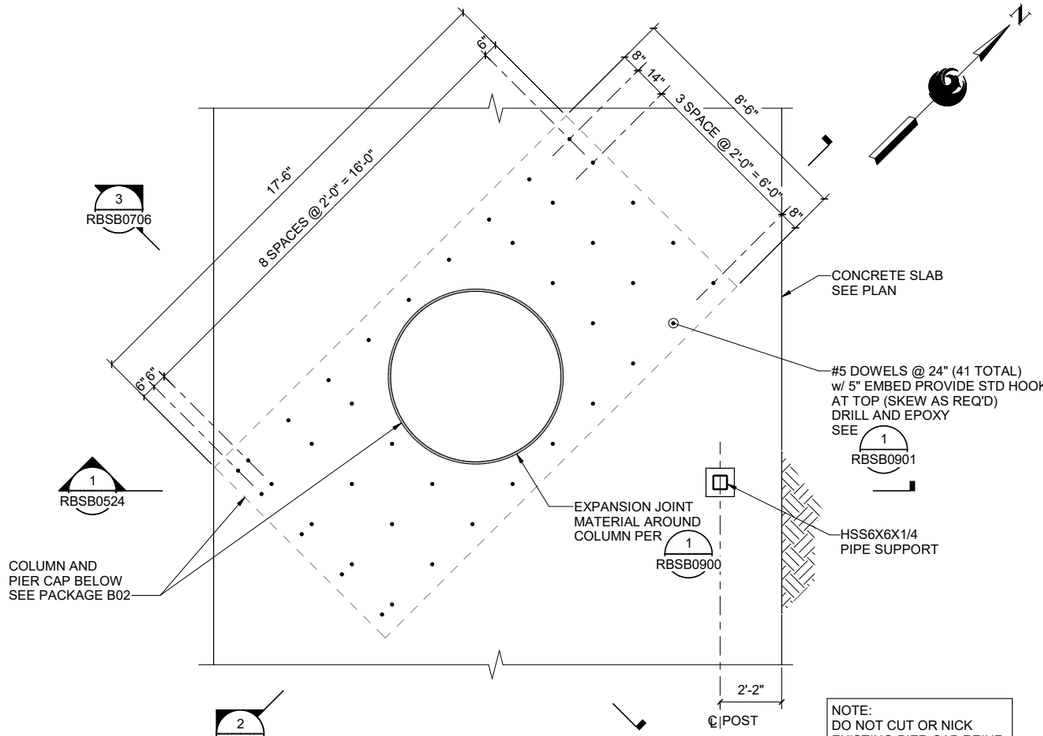
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PARTIAL MECHANICAL ROOF PLAN

Package: B04 - RBSB0604
Sheet Reference No:
V5 - 171 of 218

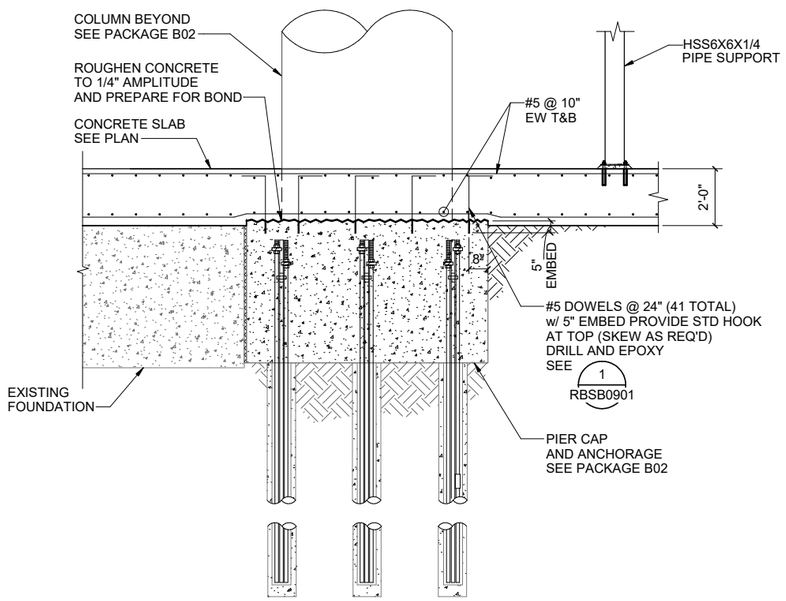
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ENLARGED SLAB AT PIER CAP PLAN VIEW

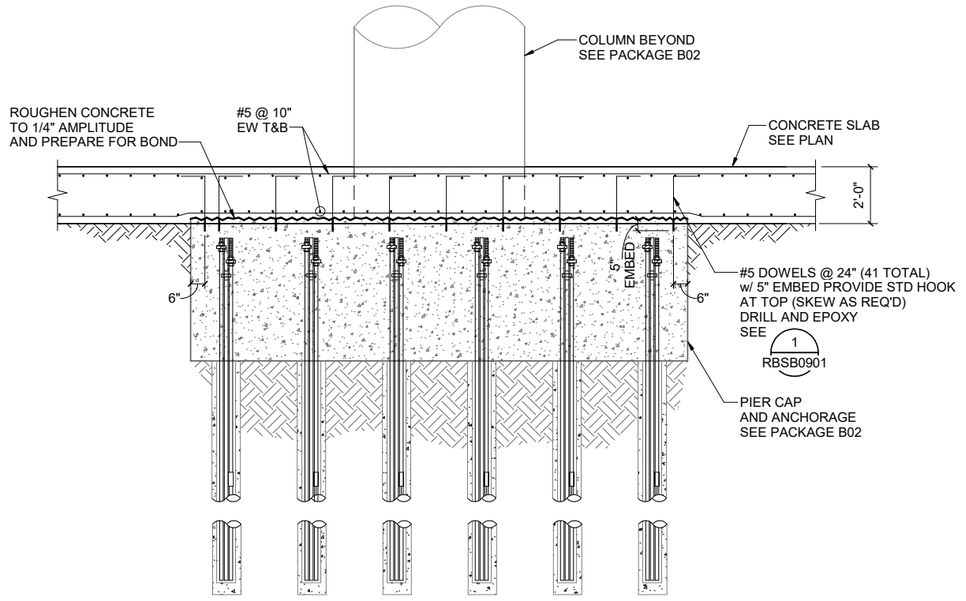
NOTE:
DO NOT CUT OR NICK
EXISTING PIER CAP REINF
AND MICROPILES

1 RBSB0706 **DETAIL** SCALE: 3/8" = 1'-0"



DOWELS AT EXISTING PIER CAP

3 RBSB0706 **SECTION** SCALE: 3/8" = 1'-0"



DOWELS AT EXISTING PIER CAP

2 RBSB0706 **SECTION** SCALE: 3/8" = 1'-0"

Project Number: 62421
7/13/2018 5:14:27 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt

Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
ARIZONA, U.S.A.
Date Signed 7/13/18
EXPIRES 9/30/19
Design Sub-Consultant
Design Consultant
Gannett Fleming

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

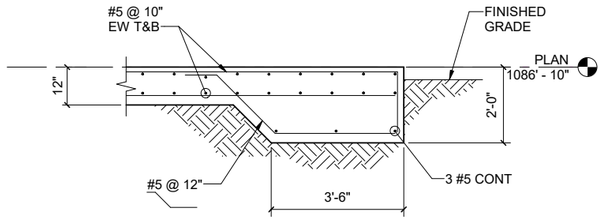
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	HY
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

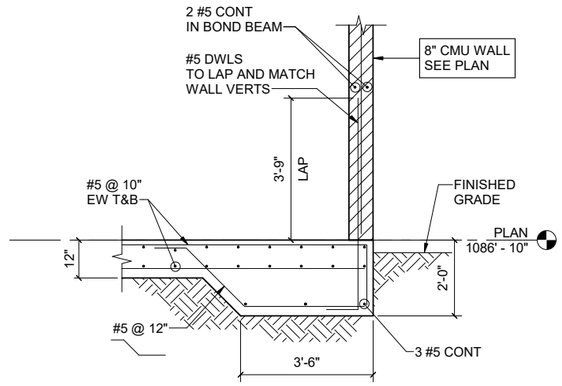
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
PIER CAP PLAN AND DETAILS

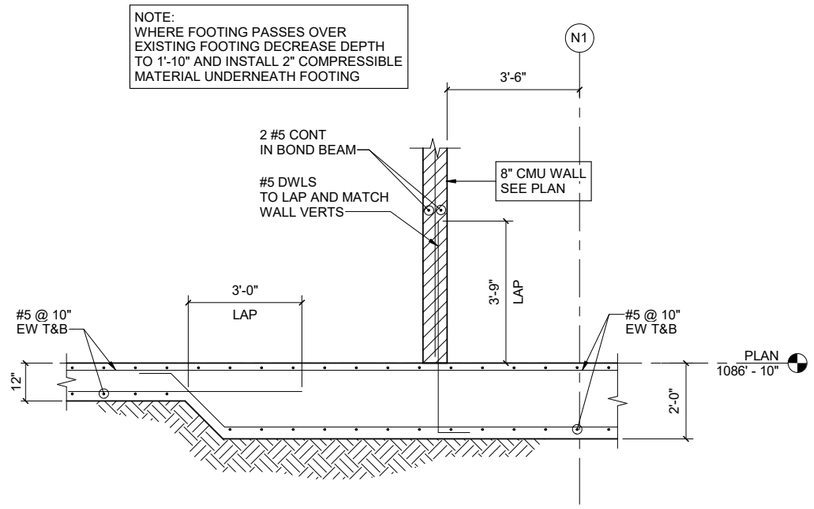
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Sheet Reference No:
V5 - 172 of 218



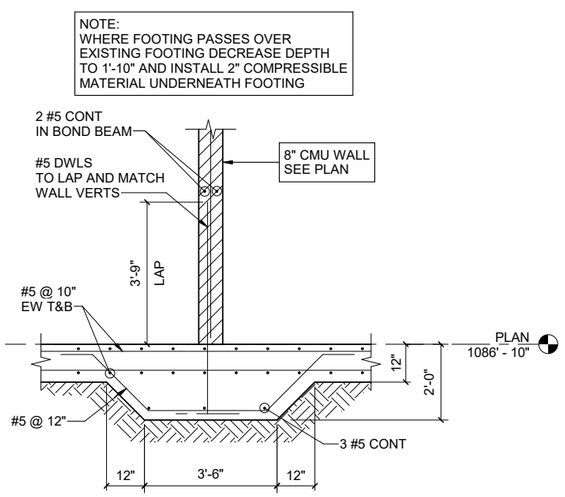
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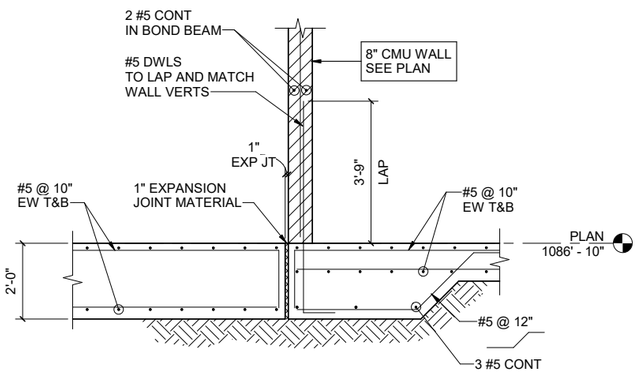
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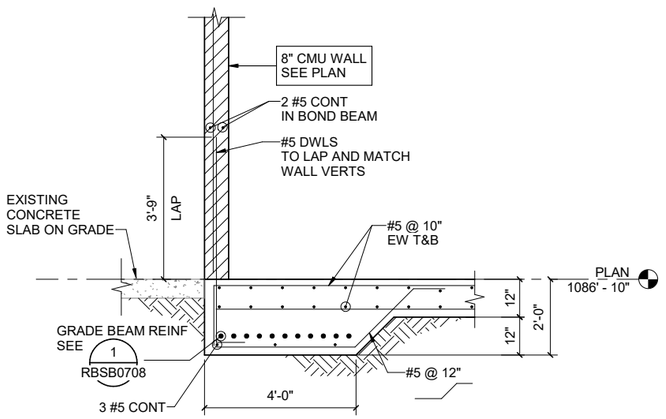
3 **SECTION**
RBSB0707 SCALE: 1/2" = 1'-0"



4 **SECTION**
RBSB0707 SCALE: 1/2" = 1'-0"



5 **SECTION**
RBSB0707 SCALE: 1/2" = 1'-0"



6 **SECTION**
RBSB0707 SCALE: 1/2" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Consultant
Gannett Fleming

Design Sub-Consultant

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

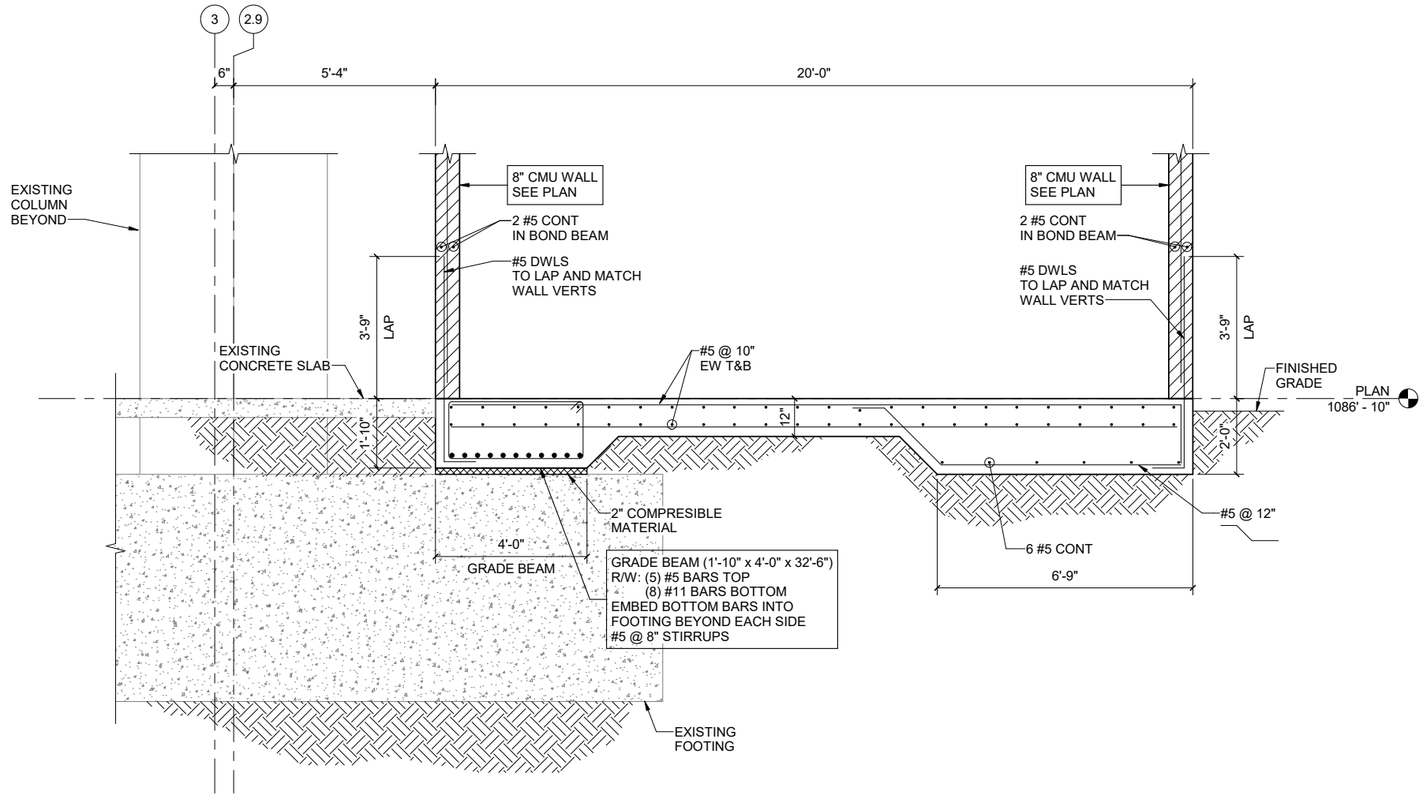
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

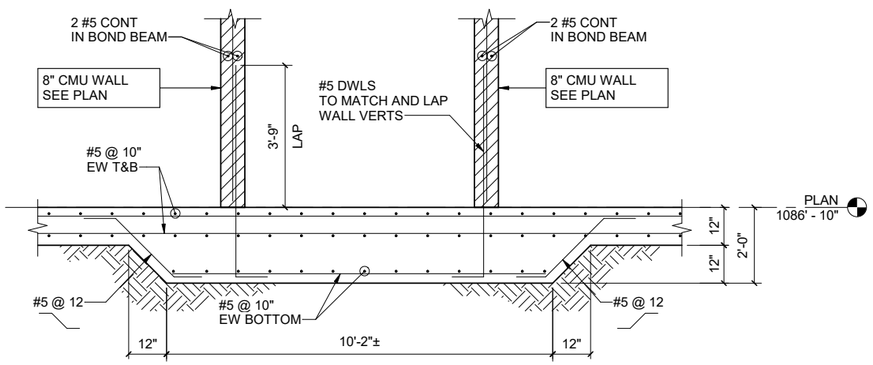
RCC STATION
STRUCTURAL
FOUNDATION SECTIONS AND DETAILS

Package: B04 - RBSB0707
Sheet Reference No:
V5 - 173 of 218

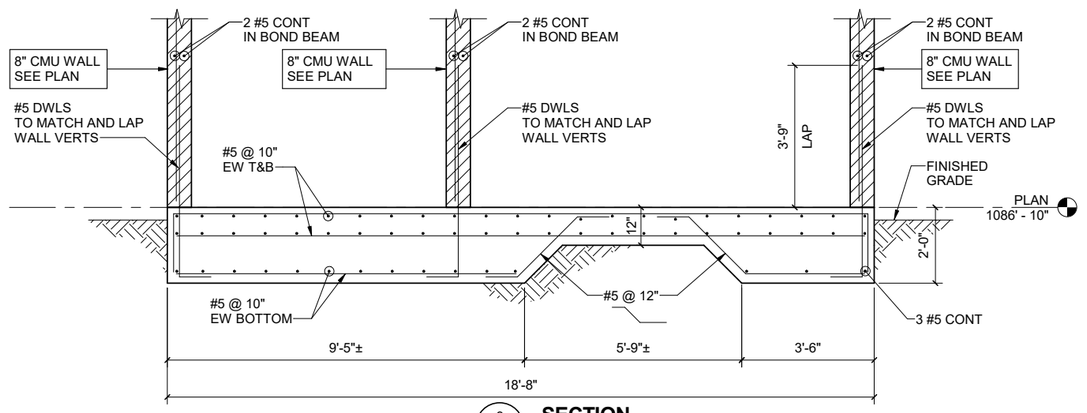
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



1 RBSB0708 **SECTION** SCALE: 1/2" = 1'-0"



2 RBSB0708 **SECTION** SCALE: 1/2" = 1'-0"



3 RBSB0708 **SECTION** SCALE: 1/2" = 1'-0"

Design Consultant
Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

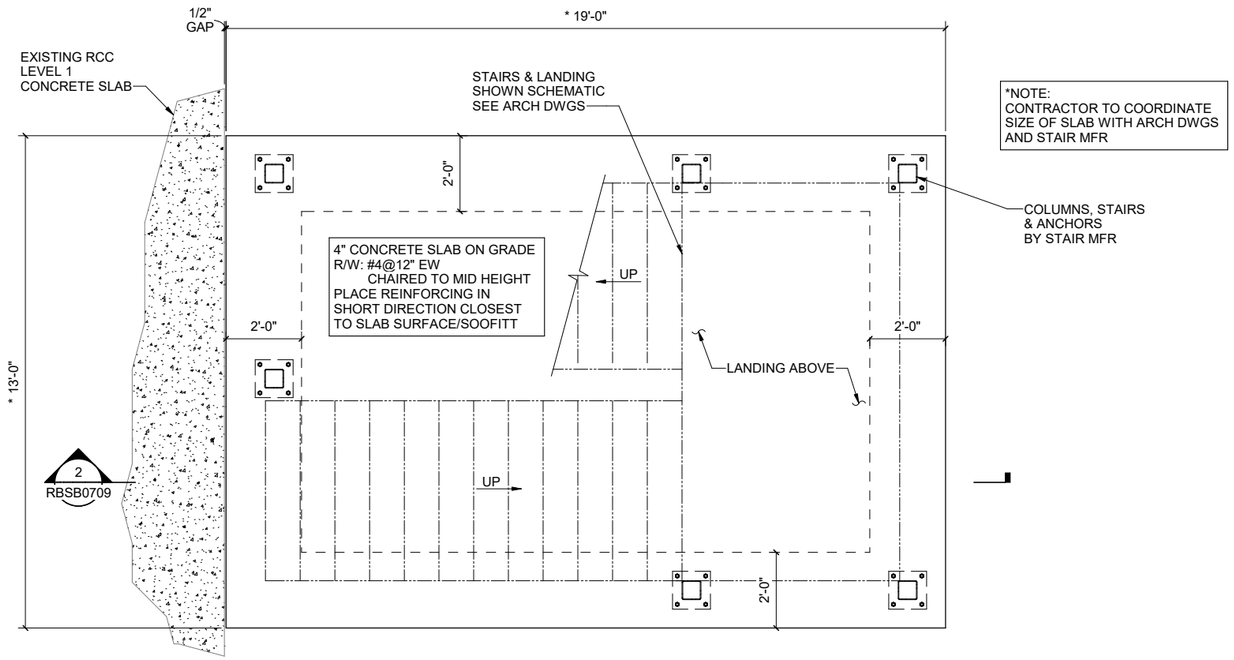
RCC STATION
STRUCTURAL
FOUNDATION SECTIONS AND DETAILS

Package: **B04 - RBSB0708**

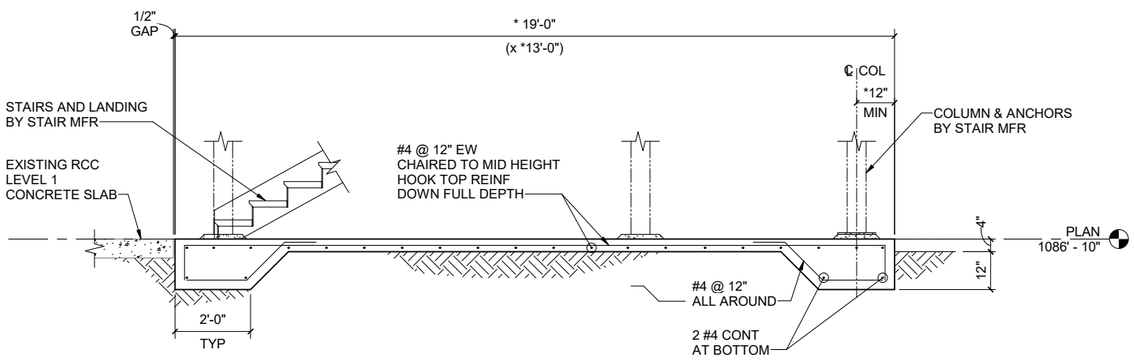
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:14:31 PM



1 RBSB0709 **STAIR TOWER AREA D PLAN** SCALE: 1/2" = 1'-0"



*NOTE:
CONTRACTOR TO COORDINATE
SIZE OF SLAB WITH ARCH DWGS
AND STAIR MFR

2 RBSB0709 **SECTION** SCALE: 1/2" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

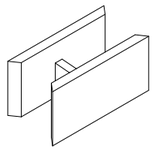
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Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

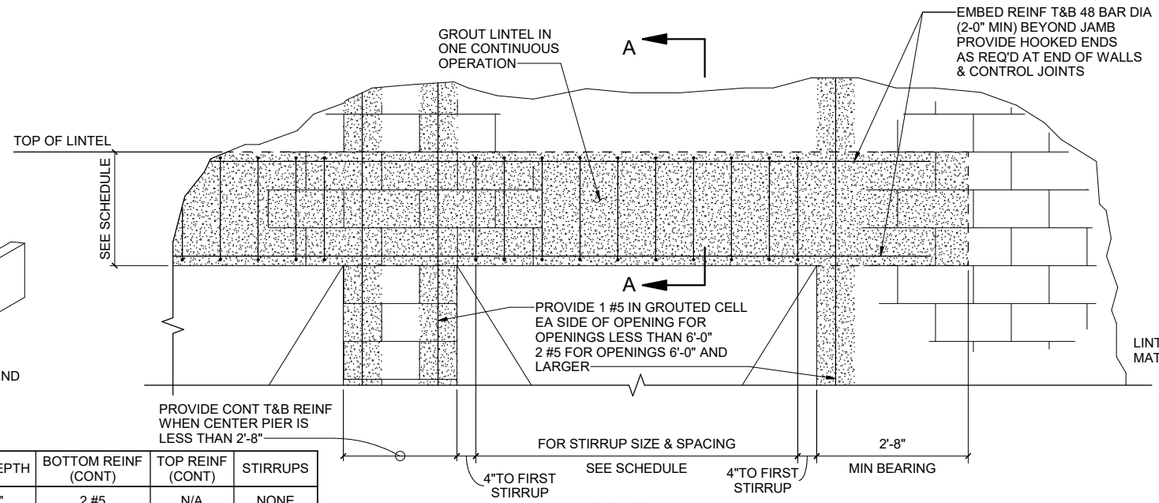
RCC STATION
STRUCTURAL
FOUNDATION SECTION AND DETAILS

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V5 - 175 of 218

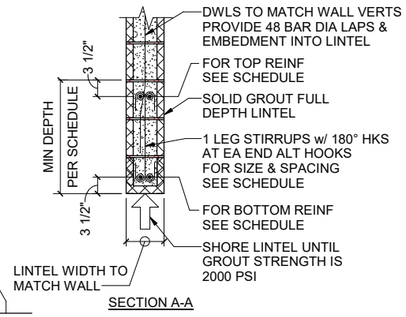
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



DOUBLE OPEN END
BOND BEAM



ELEVATION



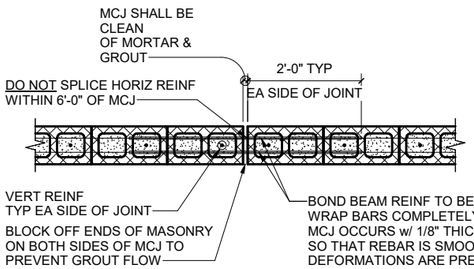
SECTION A-A

MASONRY COURSING SHOWN SCHEMATIC

MARK	SPAN	MIN DEPTH	BOTTOM REINF (CONT)	TOP REINF (CONT)	STIRRUPS
ML1	0" TO 4'-0"	16"	2 #5	N/A	NONE
ML2	4'-1" TO 7'-0"	24"	2 #5	2 #5	NONE
ML3	7'-1" TO 10'-0"	32"	2 #5	2 #5	NONE
ML4	SEE PLAN	40"	2 #5	2 #5	#3@8"
ML5	8'-0"	16"	2 #5	N/A	NONE

NOTES:
1. PROVIDE LINTEL TYPE BLOCKS AT BOTTOM COURSE OF LINTELS (TYP)
2. NO VERTICAL JOINTS ARE ALLOWED AT JAMB EDGE
3. SPANS NOTED ABOVE APPLY TO ALL LINTELS U.N.O. ON SECTIONS AND DETAILS

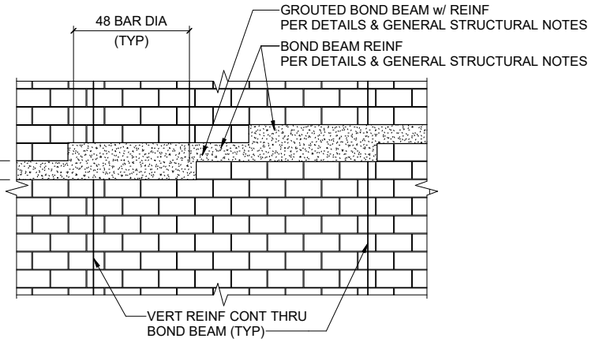
1 RBSB0800 **MASONRY LINTEL** SCALE: 3/4" = 1'-0"



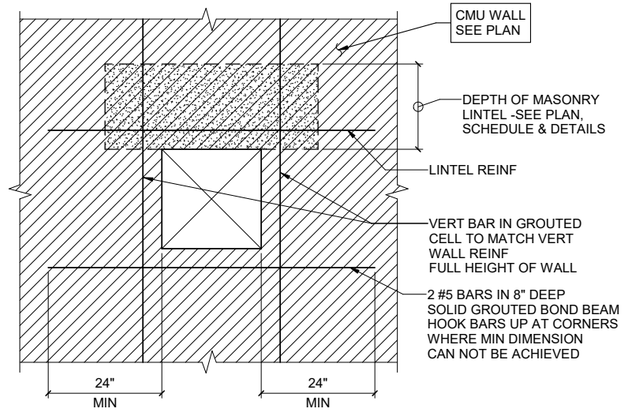
SPACE MASONRY CONTROL JOINTS @ 24'-0"oc, AND NO CLOSER THAN 2'-8" TO JAMBS AND WALL ENDS AND NO MORE THAN 12'-0" FROM CORNERS UNLESS OTHERWISE SHOWN ON DRAWINGS

PLAN VIEW

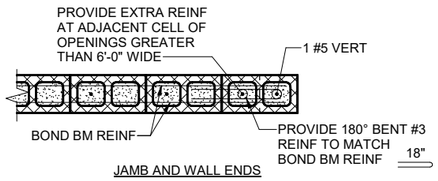
2 RBSB0800 **MASONRY CONTROL JOINT(MCJ)** SCALE: 3/4" = 1'-0"



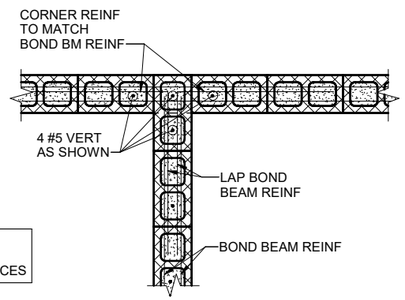
3 RBSB0800 **STEPPED BOND BEAM** SCALE: 3/4" = 1'-0"



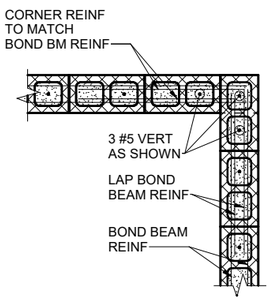
4 RBSB0800 **OPENING IN MASONRY WALL** SCALE: 3/4" = 1'-0"



JAMB AND WALL ENDS



INTERSECTIONS



CORNERS

NOTES:
1. GROUT ALL MASONRY WALLS SOLID
2. LAP REINFORCING 48 BAR DIAMETERS AT SPLICES

TYPICAL CMU WALL REINFORCING PLAN VIEW

5 RBSB0800 **DETAIL** SCALE: 3/4" = 1'-0"

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:14:34 PM

Design Consultant: Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

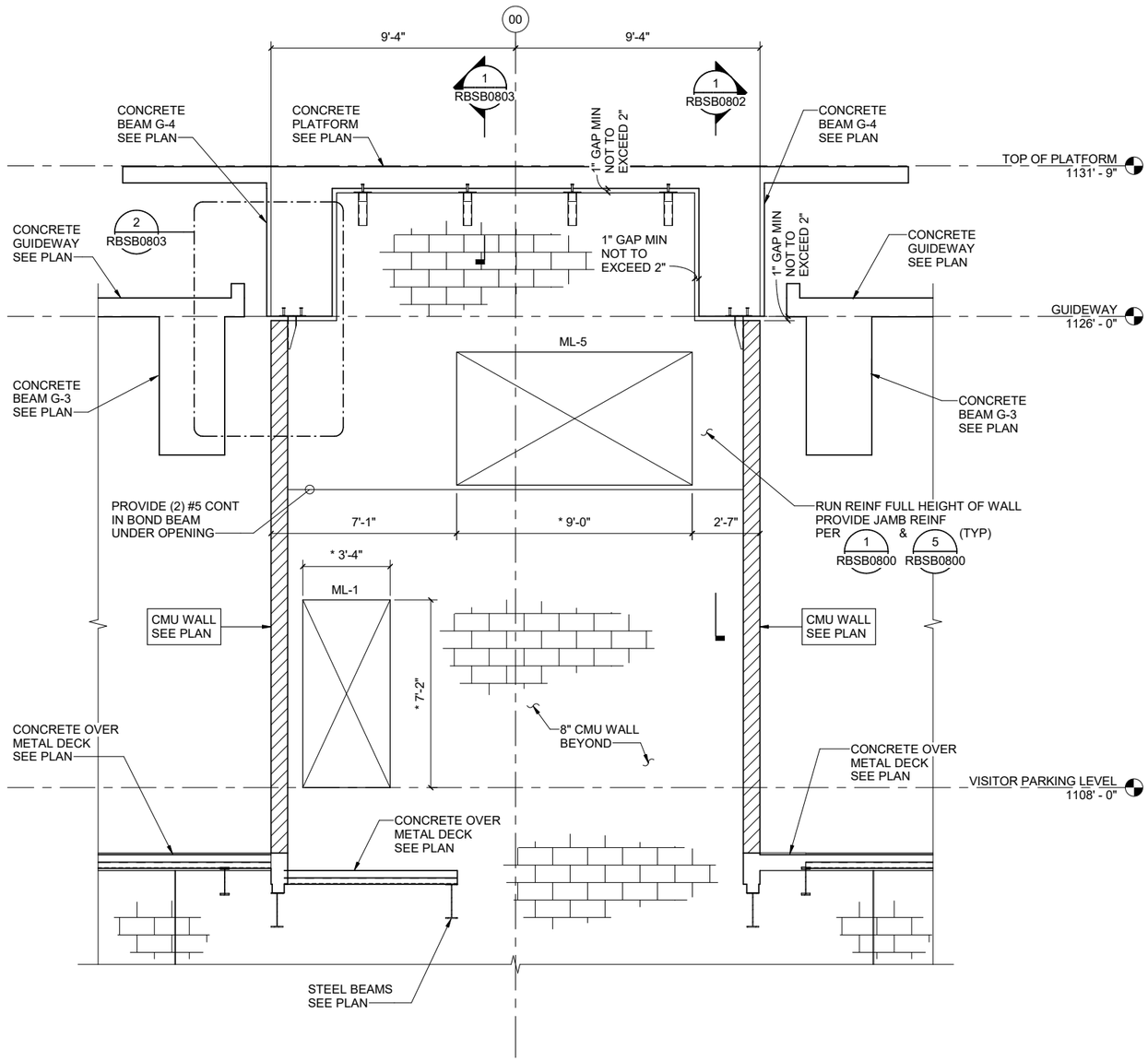
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MASONRY DETAILS I

Package: **B04 - RBSB0800**
Sheet Reference No:
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1 RBSB0801 **SECTION**
SCALE: 3/8" = 1'-0"

NOTE:
1. (*) CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS .
2. FIELD VERIFY EXISTING ELEVATIONS AND DIMENSIONS.

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Design Sub-Consultant

Design Consultant
Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

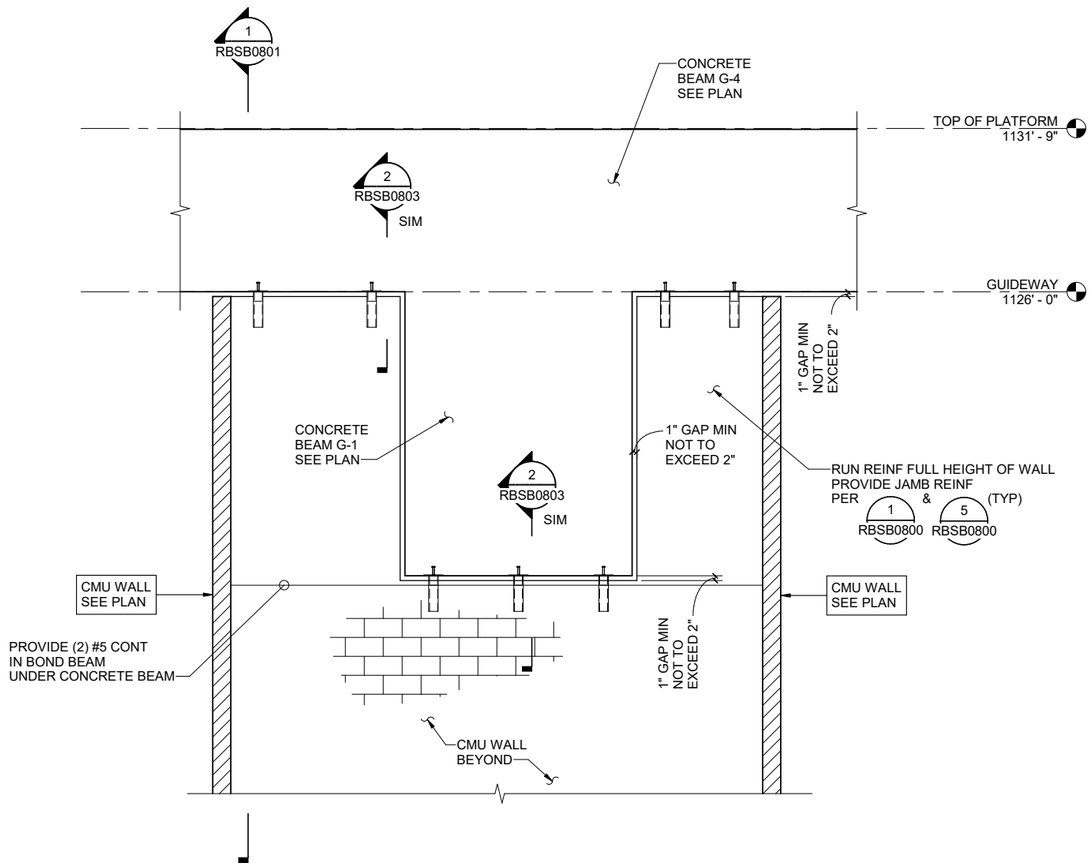
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Checked by:	SES
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MASONRY SECTIONS AND DETAILS

Package: **B04 - RBSB0801**
Sheet Reference No:
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Project Number: 62421
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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



1 RBSB0802 **SECTION**
SCALE: 3/8" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	3/8" = 1'-0"
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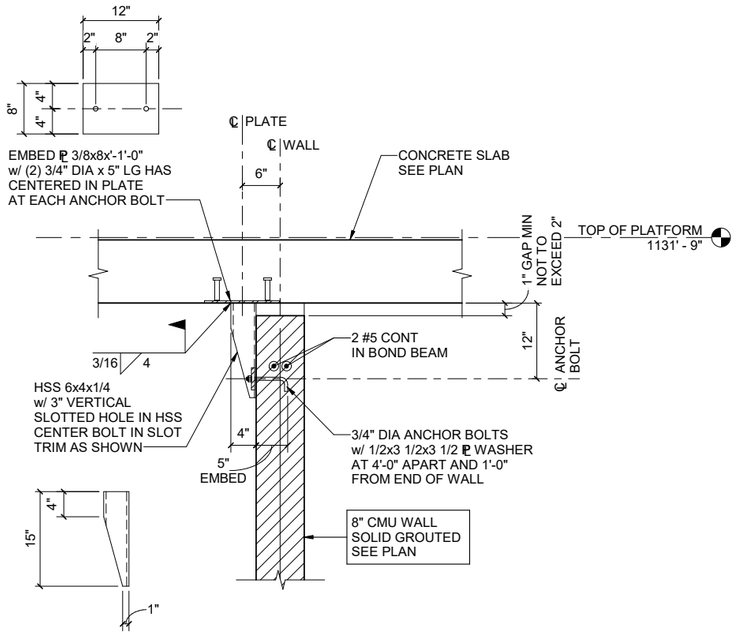
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MASONRY SECTIONS AND DETAILS

Package: **B04 - RBSB0802**
Sheet Reference No:
V5 - 178 of 218

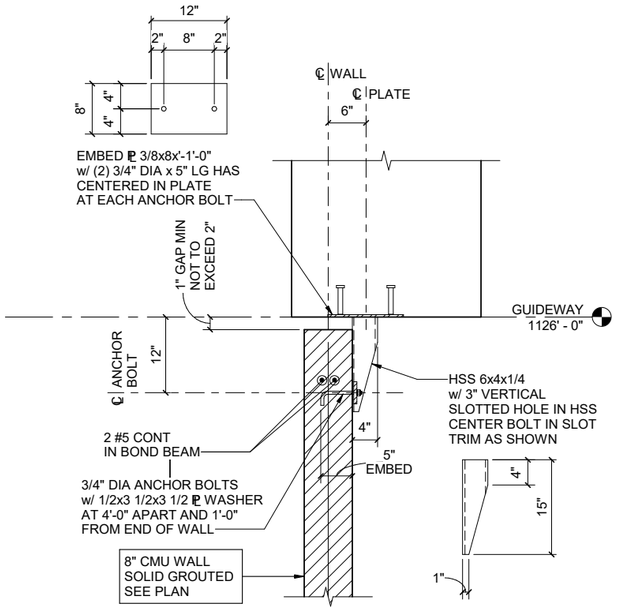
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



MASONRY WALL AT CONCRETE SLAB

1 **SECTION**
RBSB0803 SCALE: 1" = 1'-0"



MASONRY WALL AT CONCRETE BEAM

2 **SECTION**
RBSB0803 SCALE: 1" = 1'-0"

Project Number: 62421
7/13/2018 5:14:36 PM

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/06242 1_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

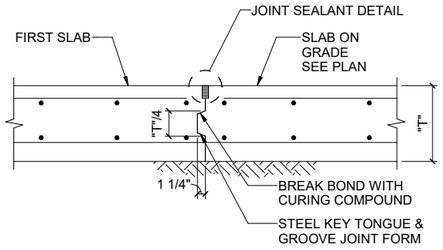
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by: ACK
Drawn by: MWK
Checked by: SES
Date: 07/13/2018
Dwg scale: AS NOTED
CIP No.: AV10000011
KIVA No.: 07-5204

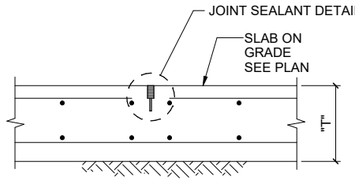
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MASONRY SECTIONS AND DETAILS

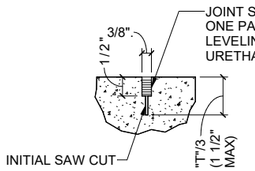
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Sheet Reference No:
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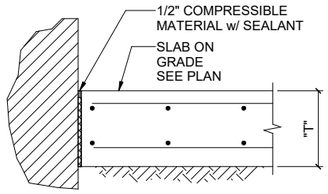
FORMED CONTROL JOINT (CJ)



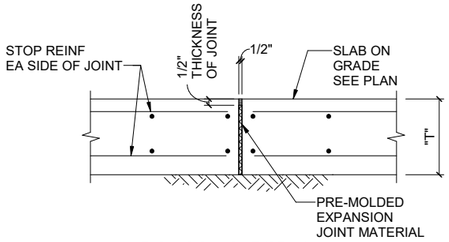
SAW CONTROL JOINT (CJ)



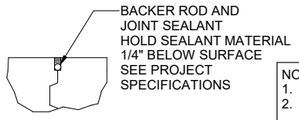
JOINT SEALANT DETAIL



ISOLATION JOINT



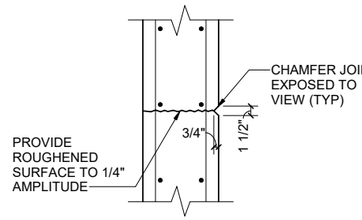
EXPANSION JOINT (SEJ-1)



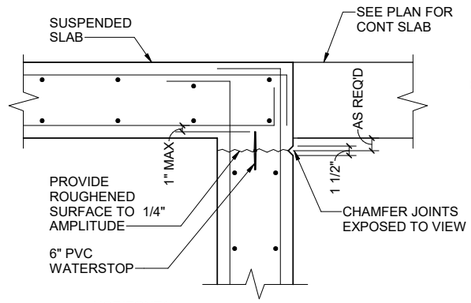
JOINT SEALANT DETAIL AT CONSTRUCTION JOINT

NOTES:
1. CONTROL JOINTS INDICATED ON PLAN AS "CJ" MAY BE FORMED OR SAWN IN.
2. IF CONSTRUCTION IS STOPPED BETWEEN INDICATED JOINTS, PROVIDE CONSTRUCTION JOINT SHOWN WITH #5 x 2'-6" DWLS @ 24" CENTERED IN SLAB AND JOINT.
3. SAW JOINT SHALL BE PREFORMED OR SAWED. IF SAWED, THE SAW CUTS SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING BUT NOT SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. SAW CUTS SHALL BE MADE WITHIN 12 HOURS OF PLACEMENT.
4. MAXIMUM RATIO OF CONTROL JOINT LAYOUT SPACING, L:W=2:1

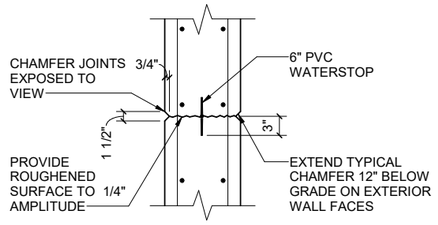
1 SLAB ON GRADE CONTROL JOINTS
RBSB0900 SCALE: 1" = 1'-0"



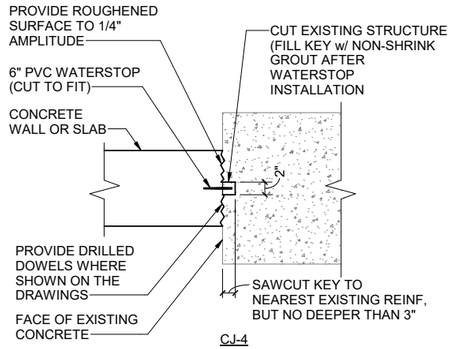
HORIZONTAL CJ-1



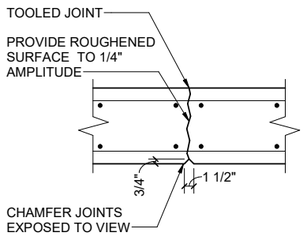
HORIZONTAL CJ-2



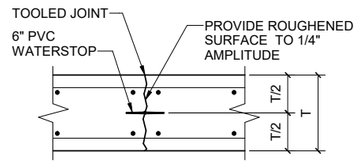
VERTICAL CJ-3



CJ-4



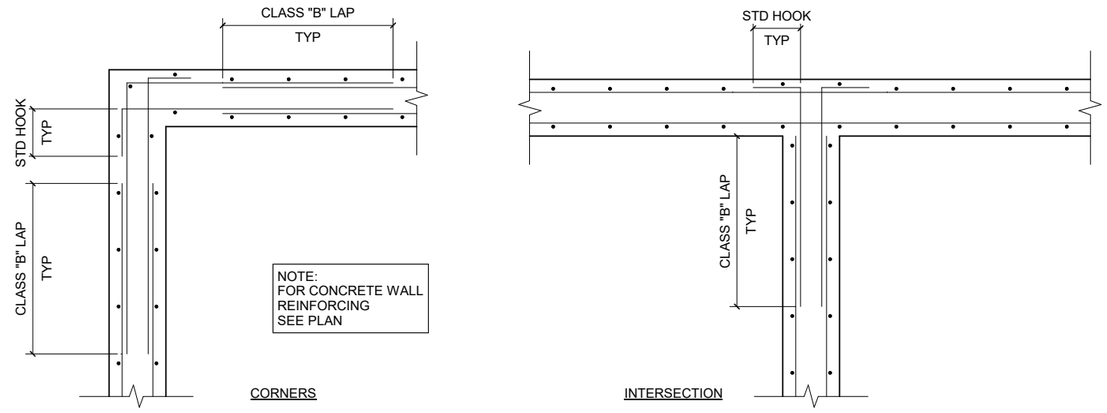
ELEVATED SLAB
CJ-6



T = 12" OR GREATER

SLAB-ON-GRADE CJ-5

3 CONSTRUCTION JOINT DETAILS
RBSB0900 SCALE: 1" = 1'-0"



PLAN VIEW

2 CONCRETE WALL REINFORCING
RBSB0900 SCALE: 1" = 1'-0"

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Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

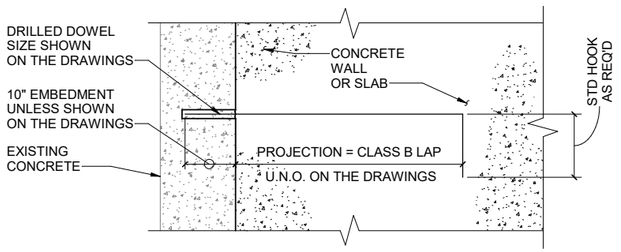
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE DETAILS I

Package: **B04 - RBSB0900**

Sheet Reference No:
V5 - 180 of 218

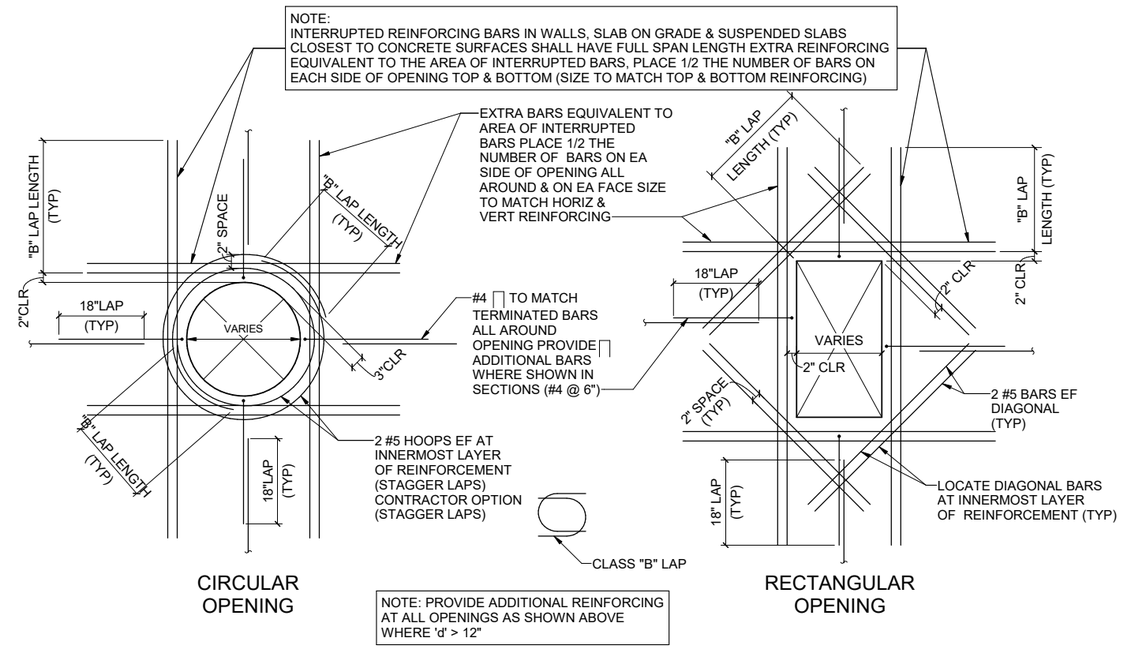
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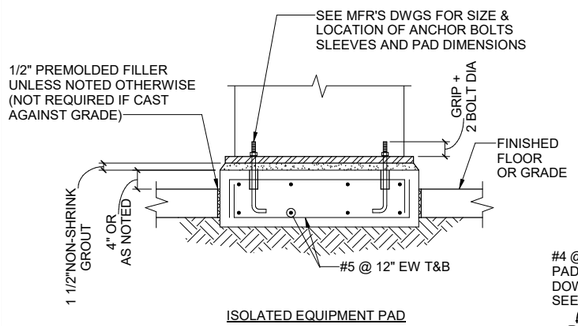
DRILLED DOWEL NOTES

1. USE ROTARY PERCUSSION DRILL TO AVOID CUTTING EXISTING REINFORCING BARS. DO NOT USE CORE DRILL.
2. DRILL HOLE DIAMETER OF SIZE PER ADHESIVE MANUFACTURER'S INSTRUCTIONS AND ICC-ES REPORT.
3. THOROUGHLY CLEAN HOLE AND INSTALL DWLS PER ADHESIVE MANUFACTURER'S INSTRUCTIONS AND ICC-ES REPORT.
4. ADHESIVE SHALL BE HILTI HIT-RE 500-V3 (ICC REPORT ESR 3814) OR APPROVED EQUAL)
5. DO NOT CUT EXISTING REINFORCING.

1 RBSB0901 **DRILLED IN DOWEL**
SCALE: 1" = 1'-0"

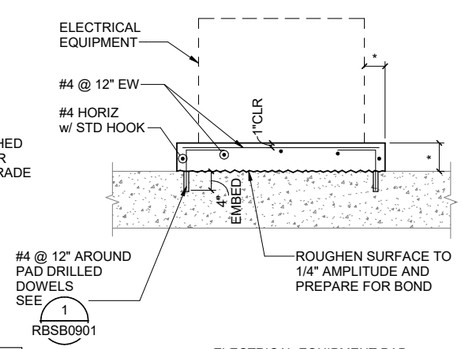


2 RBSB0901 **OPENING REINFORCING DETAILS**
SCALE: 3/4" = 1'-0"



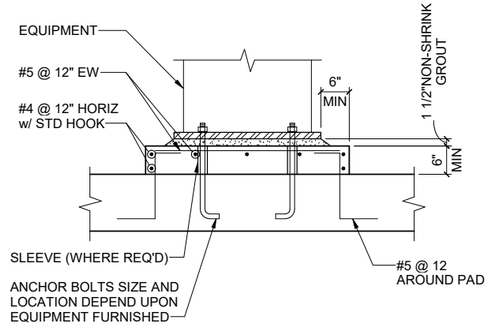
ISOLATED EQUIPMENT PAD

NOTES
1. SIZE OF PAD TO BE VERIFIED WITH EQUIPMENT PURCHASED. CONTRACTOR SHALL FURNISH ANCHOR BOLTS, ETC, AS REQUIRED TO MAKE A COMPLETE INSTALLATION. TYPICAL FOR PADS SHOWN OTHERWISE.
2. PAD WEIGHTS SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS BUT SHALL NOT BE LESS THAN THE FOLLOWING:
   A. RECIPROCATING EQUIP - 4 TIMES WEIGHT OF EQUIPMENT
   B. CENTRIFUGAL EQUIP - 3 TIMES WEIGHT OF EQUIPMENT

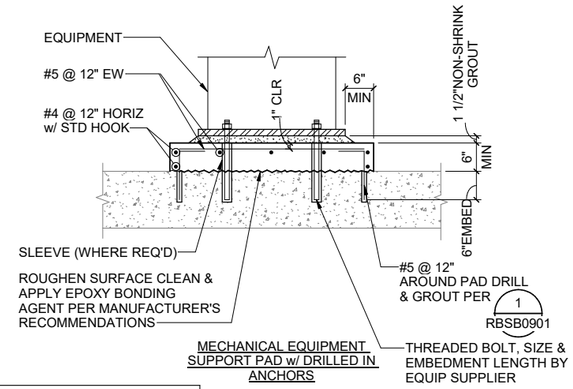


ELECTRICAL EQUIPMENT PAD w/ DRILLED IN ANCHORS

* SEE ELECTRICAL DWGS AND EQUIPMENT REQUIREMENTS CONTRACTOR TO MEET ALL CODE REQUIREMENTS



EQUIPMENT SUPPORT PAD DETAIL ON NEW CONSTRUCTION



MECHANICAL EQUIPMENT SUPPORT PAD w/ DRILLED IN ANCHORS

NOTES:
1. PROVIDE 1 1/2" NON-SHRINK GROUT UNLESS GREATER THICKNESS IS REQUIRED BY THE EQUIPMENT MANUFACTURER. REQUIREMENTS, AND WITH THE BUILDING CODE.
2. DIMENSION ELECTRICAL EQUIPMENT PADS IN CONFORMANCE WITH THE ELECTRICAL DRAWINGS, EQUIPMENT REQUIREMENTS, AND WITH THE BUILDING CODE.
3. PROVIDE CRACK CONTROL JOINTS IN EQUIPMENT PADS AS FOLLOWS.
   A. TO MATCH JOINTS IN BASE SLAB.
   B. AT SPACING NOT TO EXCEED PAD THICKNESS x 30
   C. TO DIVIDE PAD INTO RECTANGULAR PANELS WITH ASPECT RATIO NOT EXCEEDING 2:1

3 RBSB0901 **EQUIPMENT PAD**
SCALE: 3/4" = 1'-0"

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CITY OF PHOENIX AVIATION DEPARTMENT

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

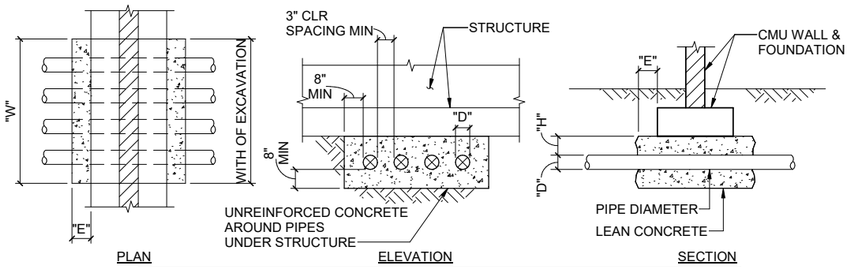
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Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE DETAILS II

Package: B04 - RBSB0901
Sheet Reference No: V5 - 181 of 218

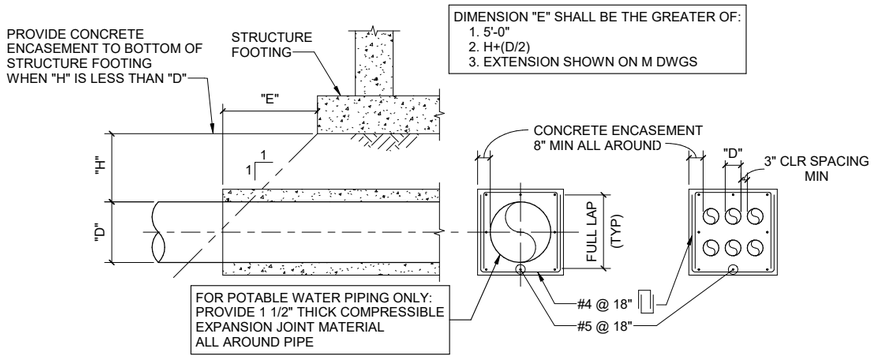
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
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NOTES:
1. IF "H" < 5'-0" OR "W" > 3'-0" USE LEAN CONCRETE AS FILL BETWEEN TOP OF PIPE TO BOTTOM OF FOUNDATION
2. LET DIMENSION "E" EQUAL "H", BUT 6" MIN
3. DIMENSION "H" MAY EQUAL ZERO, BUT IN NO CASE MAY PIPE ENTER FOOTING
4. USE THIS DETAIL FOR PIPE DIAMETERS LESS THAN 8" AND PLACED IN A SINGLE LAYER.

1 UNREINFORCED CONCRETE PIPE ENCASEMENT UNDER STRUCTURES

RBSB0902 SCALE: 3/8" = 1'-0"

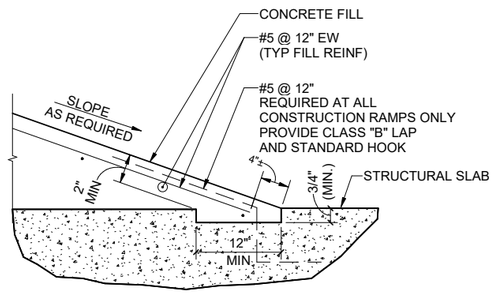


DIMENSION "E" SHALL BE THE GREATER OF:
1. 5'-0"
2. H+(D/2)
3. EXTENSION SHOWN ON M DWGS

NOTES:
1. USE THIS DETAIL FOR A SINGLE PIPE GREATER THAN 8" IN DIAMETER OR THE CO-LOCATION OF SMALLER ELEMENTS STACKED IN MULTIPLE LAYERS.
2. ALL PIPES, CONDUITS, ELECTRICAL LINES ETC. ARE TO BE ENCASED AS FOLLOWS:
   A. ELEMENTS WHICH ENCOMPASS A DIAMETER OF 8" EITHER BY ITSELF OR THE CO-LOCATION OF SMALLER ELEMENTS STACKED IN MULTIPLE LAYERS EQUALING 8" IN DIAMETER
   B. ELEMENTS WHEN THEY ARE LOCATED LESS THAN 2'-0" BELOW BOTTOM OF CONCRETE SLAB, FOUNDATION ETC.
3. THIS REQUIREMENT MUST TAKE INTO ACCOUNT ALL APPLICABLE CODES AND REQUIREMENTS WHERE ENCASEMENT IS NOT ALLOWED BY SAID CODES.
   A. WHERE ENCASEMENT IS NOT PERMITTED, ELEMENTS WHICH ARE REGULATED SHALL BE PLACED AS THE CODE REQUIRES FOR THAT PARTICULAR ITEM OR ITEMS. IN THOSE CASES THE ITEM WHICH MAY NOT BE ENCASED SHALL BE PLACED MORE THAN 2'-0" BELOW THE STRUCTURAL CONCRETE.
4. FOR POTABLE WATER PIPING ONLY PROVIDE 1 1/2" THICK COMPRESSIBLE EXPANSION JOINT MATERIAL ALL AROUND PIPE.

2 REINFORCED CONCRETE PIPE ENCASEMENT UNDER STRUCTURES

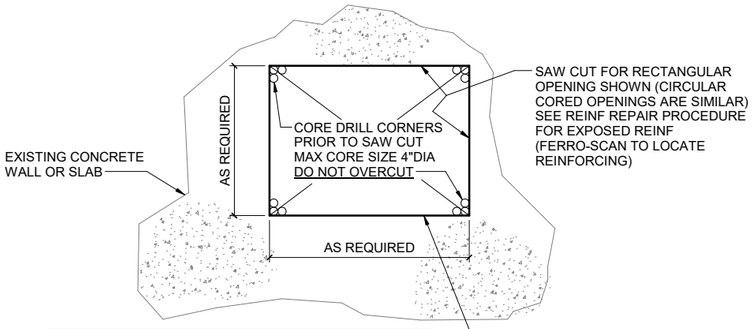
RBSB0902 SCALE: 1/4" = 1'-0"



NARROW ANGLE CONCRETE FILL TERMINATION

3 CONCRETE FILL TERMINATION DETAIL

RBSB0902 SCALE: 3/16" = 1'-0"

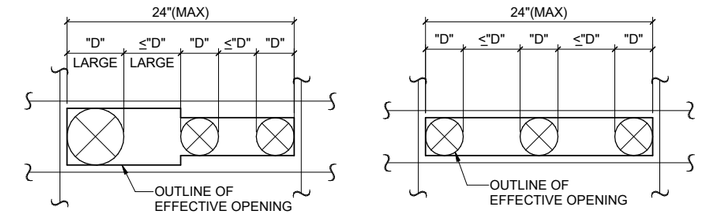


NOTES:

1. SIZES AND LOCATIONS OF ALL OPENINGS MUST BE APPROVED BY ENGINEER PRIOR TO BEGINNING CUTTING OPERATION.
2. REPAIR AND EXTEND EXISTING CONCRETE LINERS AND COATINGS TO MATCH EXISTING CONSTRUCTION.
3. RECTANGULAR OPENING IS SHOWN. PROVIDE SIMILAR PROCEDURE FOR CORED CIRCULAR OPENINGS.

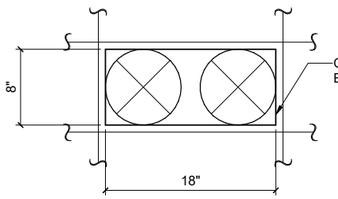
4 OPENING IN EXISTING CONCRETE WALL OR SLAB

RBSB0902 SCALE: 1" = 1'-0"

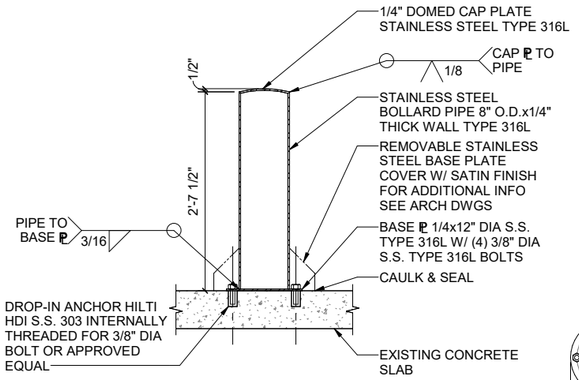


5 MULTIPLE SLEEVE OPENINGS (PLAN VIEW)

RBSB0902 SCALE: 1 1/2" = 1'-0"



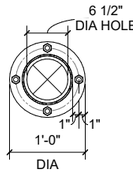
NOTE:
THESE CONDITIONS NEED 1 #5 T&B TRIM BARS ALL AROUND EFFECTIVE OPENING W/ A 12" EMBEDMENT PAST THE OPENING EDGE DIAGONAL BARS ARE NOT NECESSARY AT THESE CONDITIONS

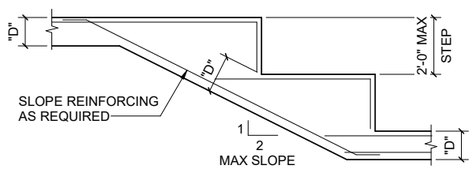


7 DECORATIVE BOLLARD

RBSB0902 SCALE: 1" = 1'-0"

NOTES:
1. SCAN CONCRETE WITH GPR PRIOR TO DRILLING. DO NOT LOCATE ANCHORS OVER EXISTING REINF AND DO NOT DAMAGE EXISTING REINF.
2. SELECT BOLT LENGTH THAT ALLOWS BOLTS TO BE TIGHTENED FLUSH WITH DROP-IN ANCHOR AT TIMES WHEN BOLLARD IS REMOVED.
3. THIS BOLLARD ASSEMBLY IS A DETERRANT AND NOT INTENDED TO WITHSTAND VEHICLE IMPACT.
4. PROVIDE SATIN FINISH TO ALL EXPOSED STAINLESS STEEL SURFACES.





NOTE: "D" DEPTH OF STRIP FOOTING, SEE PLAN

6 STEPPED FOOTING (WALLS)

RBSB0902 SCALE: 3/8" = 1'-0"

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STAGE 2 - B04 DESIGN SUBMISSION

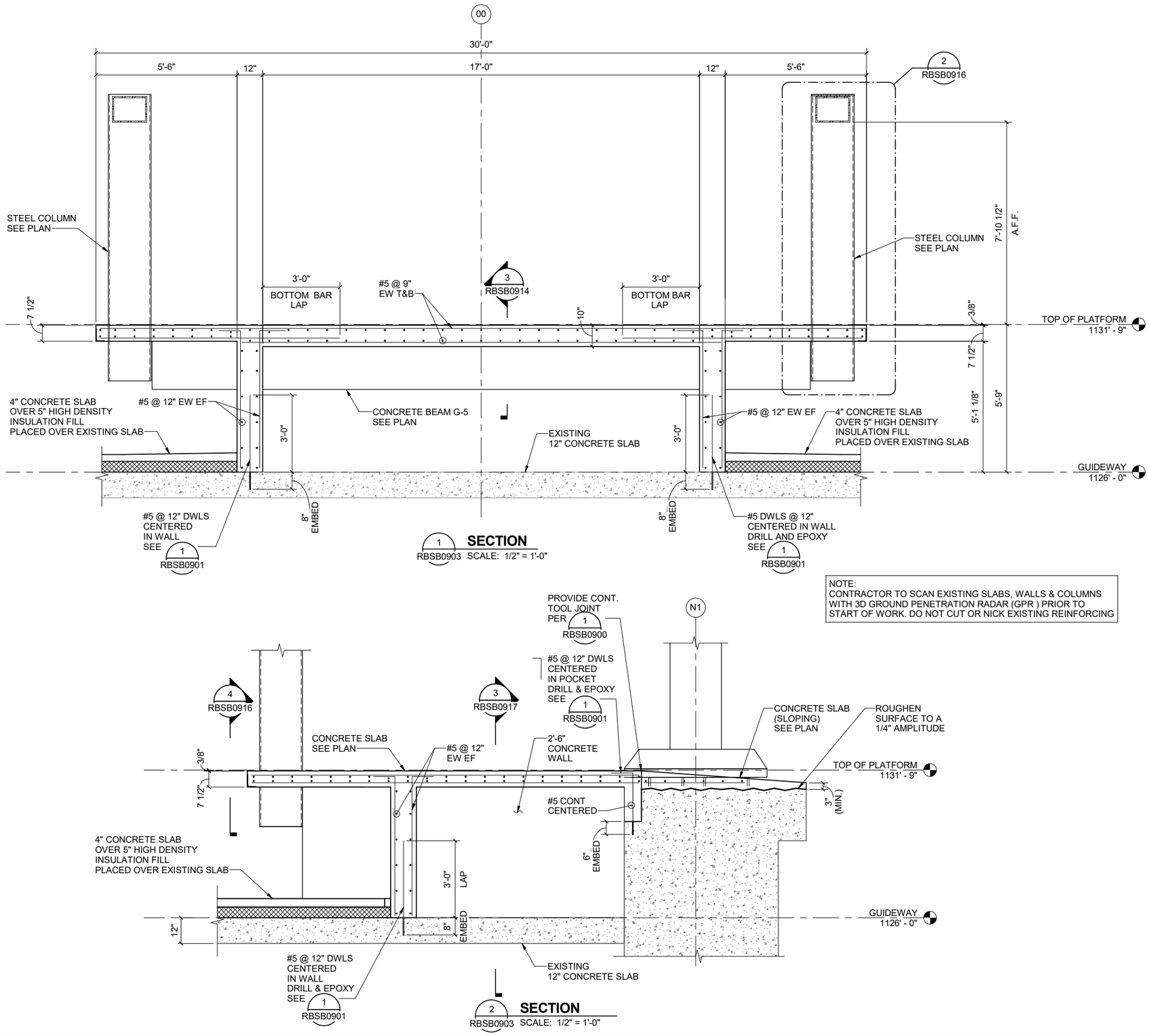
RCC STATION
STRUCTURAL
CONCRETE DETAILS III

Package: B04 - RBSB0902

Sheet Reference No: V5 - 182 of 218

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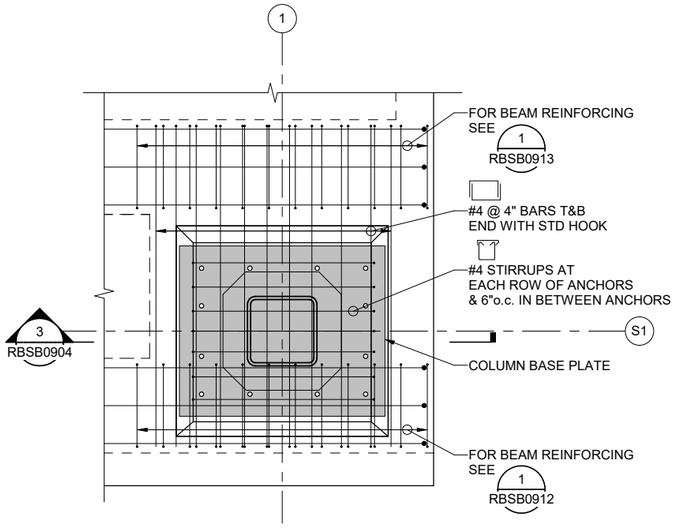
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE SECTIONS AND DETAILS

Package: **B04 - RBSB0903**

Sheet Reference No:
V5 - 183 of 218

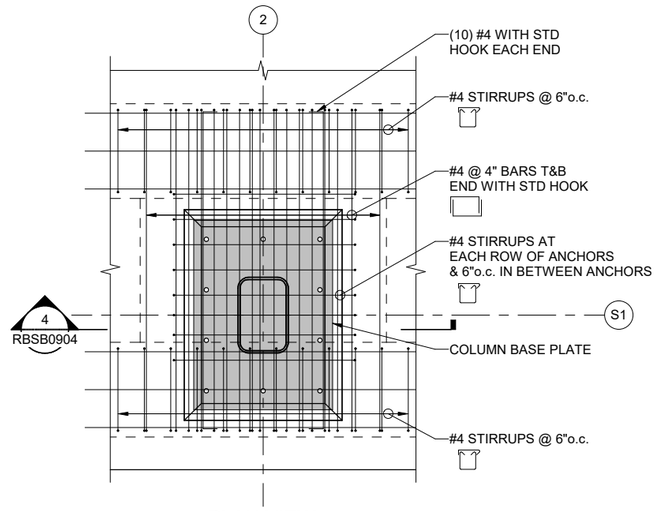
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



PLAN VIEW

STEEL COLUMN CONCRETE REINFORCEMENT

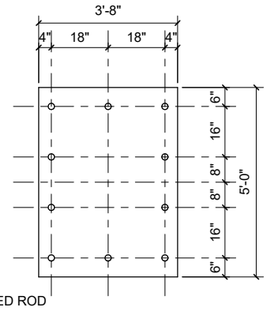
1 **DETAIL**
RBSB0904 SCALE: 1/2" = 1'-0"

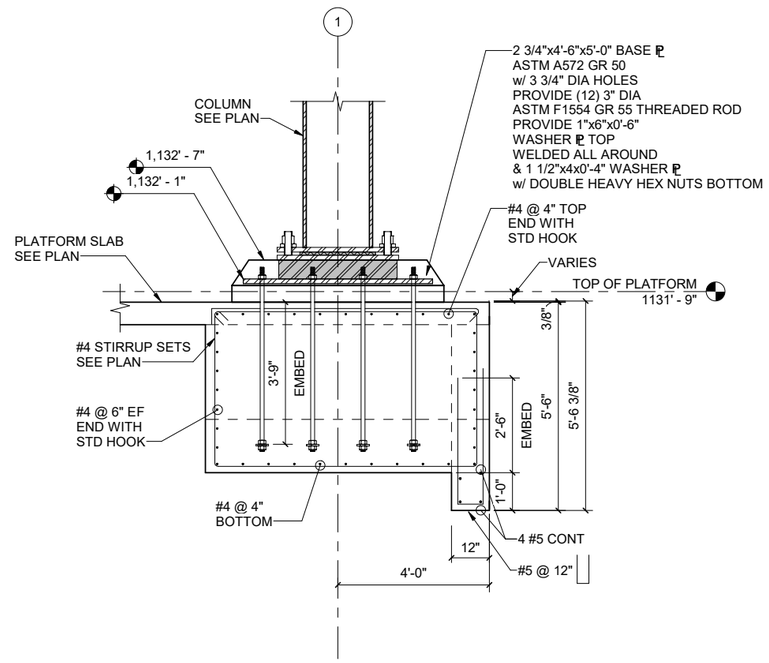


PLAN VIEW

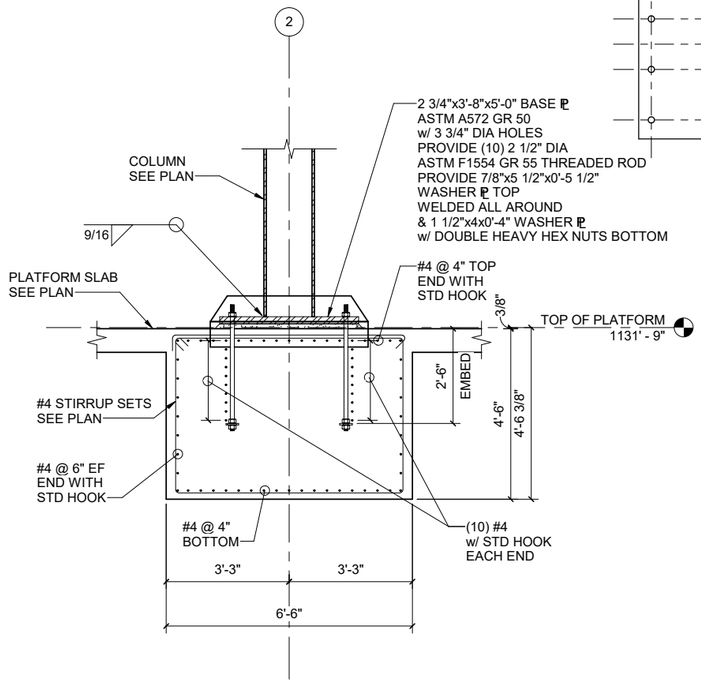
STEEL COLUMN CONCRETE REINFORCEMENT

2 **DETAIL**
RBSB0904 SCALE: 1/2" = 1'-0"





3 **SECTION**
RBSB0904 SCALE: 1/2" = 1'-0"



4 **SECTION**
RBSB0904 SCALE: 1/2" = 1'-0"

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

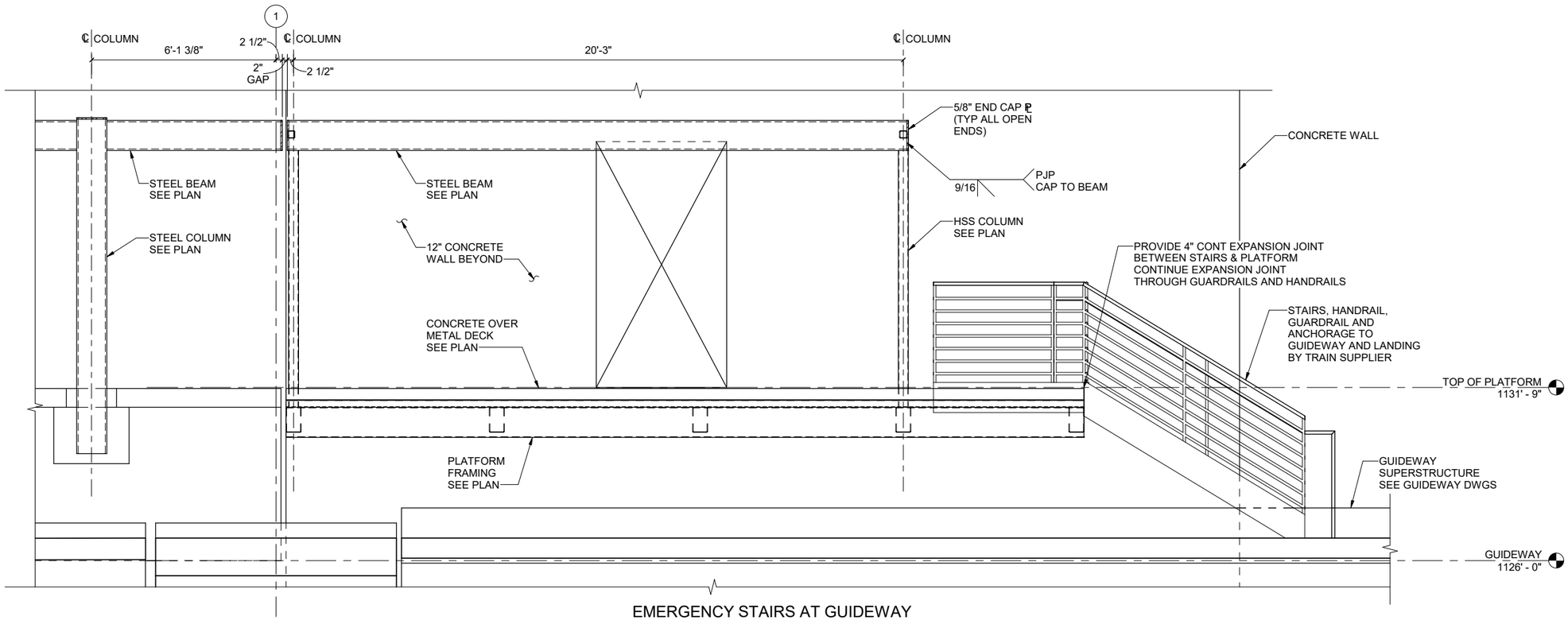
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE SECTIONS AND DETAILS

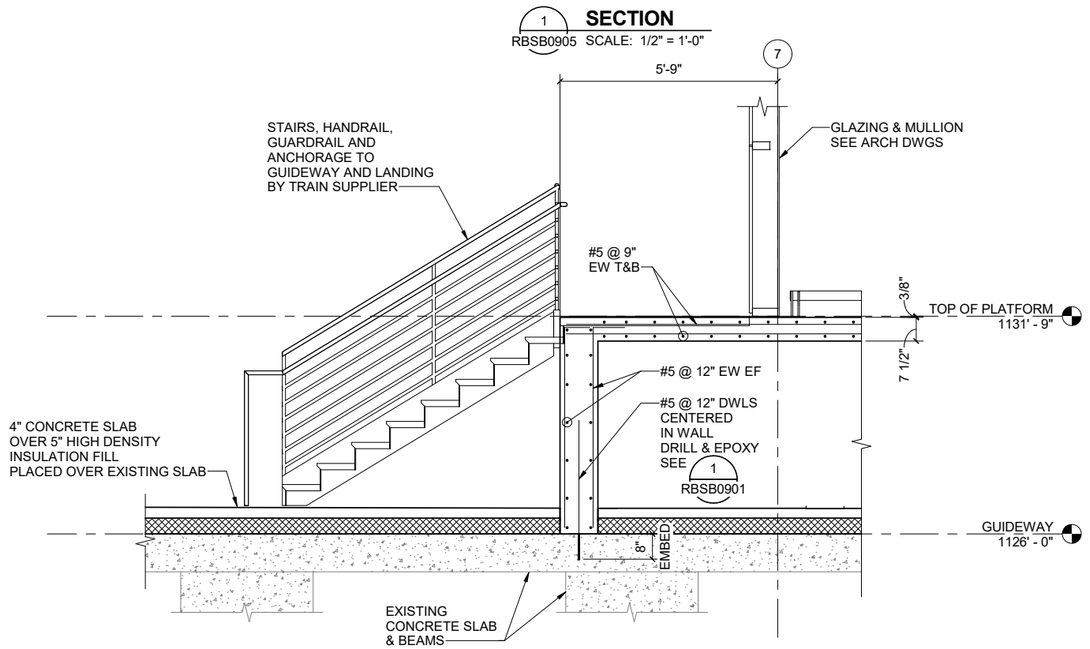
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Project Number: 62421
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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



EMERGENCY STAIRS AT GUIDEWAY



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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

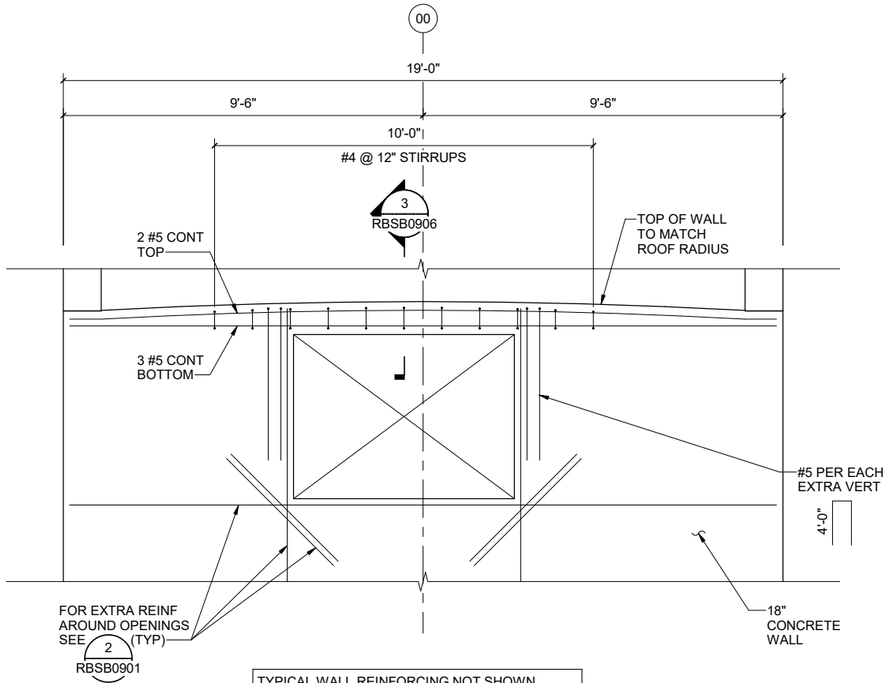
RCC STATION
STRUCTURAL
CONCRETE SECTIONS AND DETAILS

Package: **B04 - RBSB0905**

Sheet Reference No:
V5 - 185 of 218

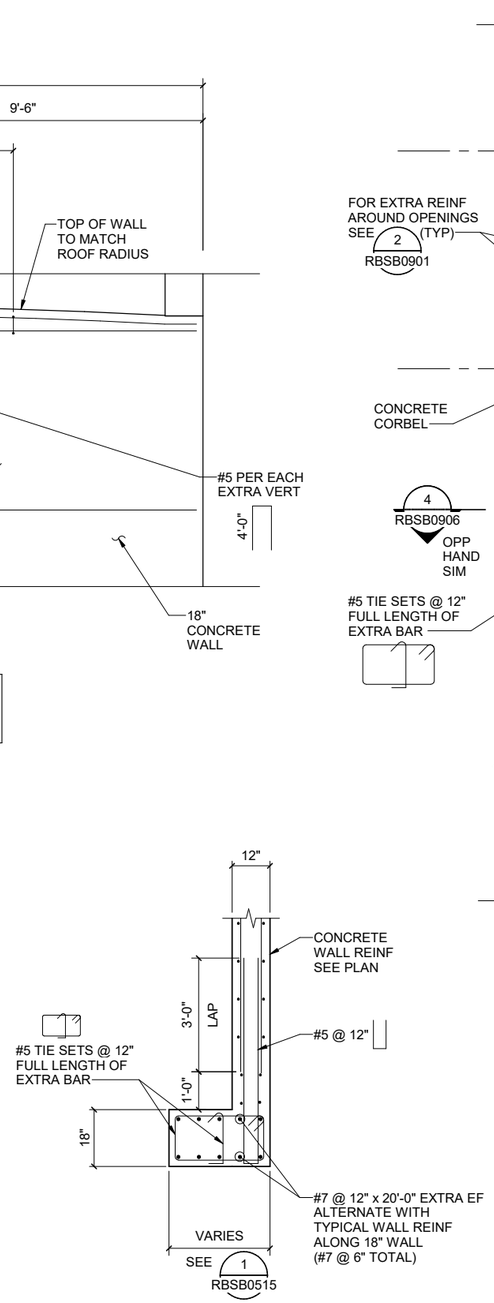
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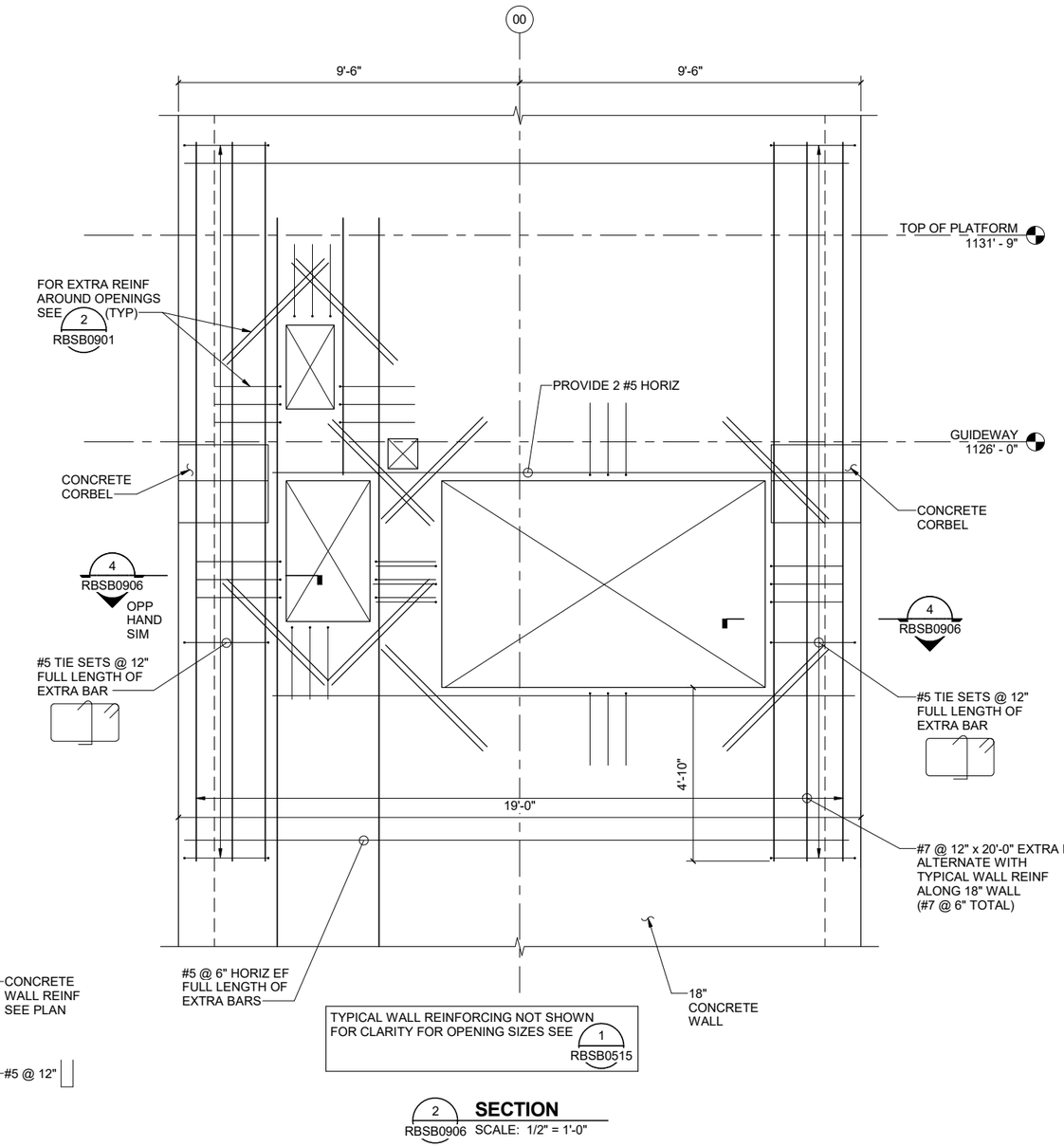
1 RBSB0906 **SECTION** SCALE: 1/2" = 1'-0"

3 RBSB0906 **SECTION** SCALE: 1" = 1'-0"



PLAN VIEW
CONCRETE CORNER REINFORCING

4 RBSB0906 **SECTION** SCALE: 1/2" = 1'-0"



2 RBSB0906 **SECTION** SCALE: 1/2" = 1'-0"

Project Number: 62421
7/13/2018 5:14:50 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant
Gannett Fleming

Design Sub-Consultant

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

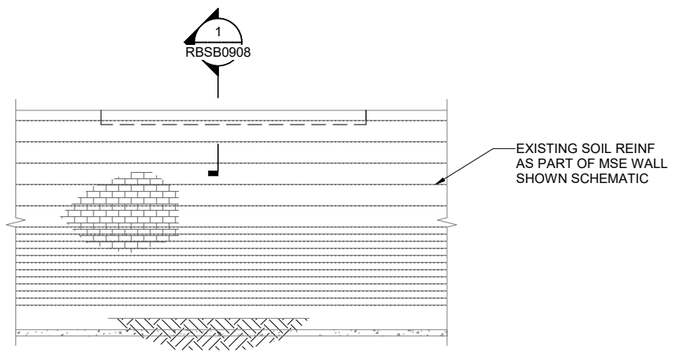
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

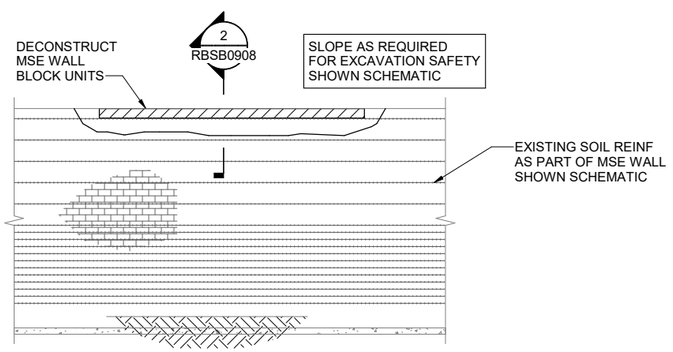
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE SECTIONS AND DETAILS

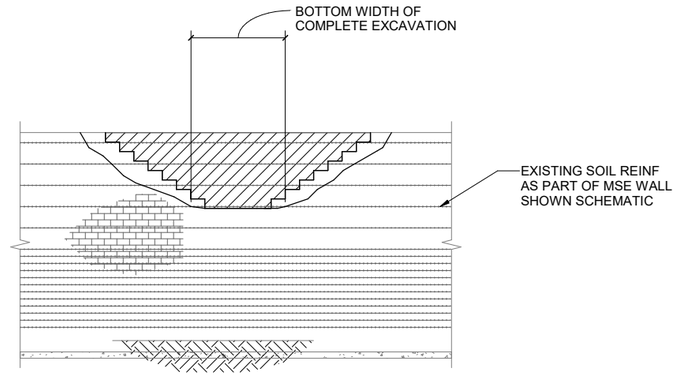
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Sheet Reference No:
V5 - 186 of 218



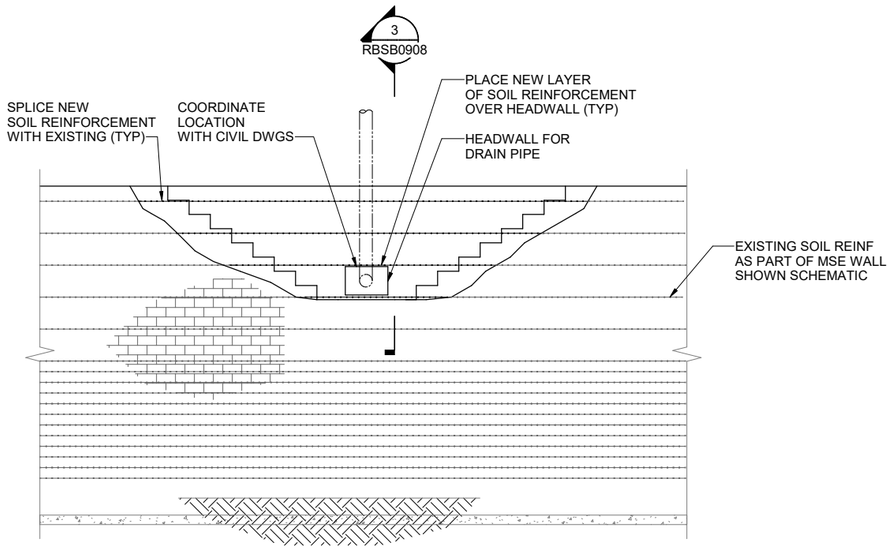
1 RBSB0907 **INITIAL VACUUM EXCAVATION** SCALE: 1/8" = 1'-0"



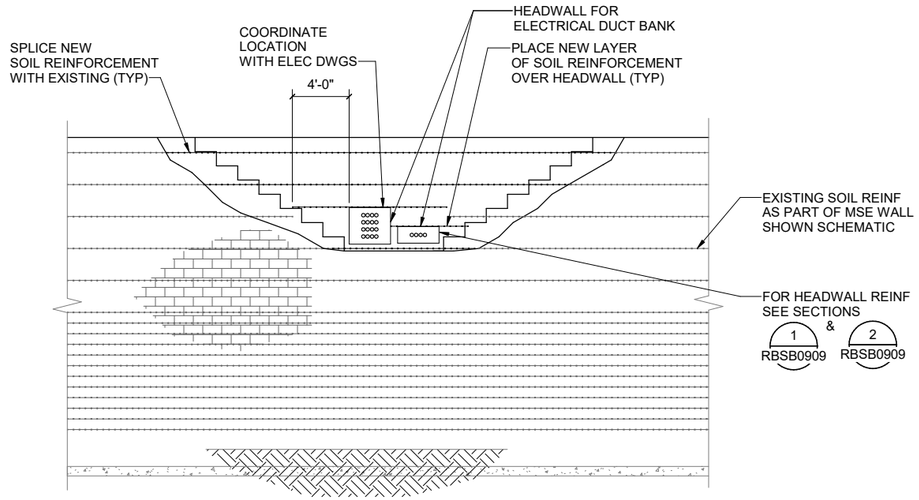
2 RBSB0907 **INITIAL MASS EXCAVATION** SCALE: 1/8" = 1'-0"



3 RBSB0907 **FINAL LIFT EXCAVATION** SCALE: 1/8" = 1'-0"



4 RBSB0907 **BACKFILL REPLACEMENT AT DRAIN PIPE** SCALE: 3/16" = 1'-0"



5 RBSB0907 **BACKFILL REPLACEMENT AT ELECTRICAL DUCT BANKS** SCALE: 3/16" = 1'-0"

MSE WALL NOTES:

1.01 GENERAL:
- A. CONTRACTOR PROVIDE ENGINEERED DESIGN FOR EXCAVATION PLAN AND BACK FILL REPLACEMENT INCLUDING MATERIALS AND DETAILED PROCEDURES. THE EXCAVATION AND BACKFILL REPLACEMENT SHOWN HERE ARE INTENDED TO DEMONSTRATE FEASIBILITY, ESTABLISH MINIMUM PERFORMANCE CRITERIA, AND BE USED FOR PRICING ESTIMATES. PROVIDE DESIGN BY TERRACON (ORIGINAL DESIGNERS) OR APPROVED EQUAL.

1.02 MSE WALL EXCAVATION
- A. THE PROCESS OF EXCAVATION BEHIND THE MSE WALL MUST FOLLOW A DECONSTRUCTION PROCEDURE THAT IS OPPOSITE HOW THE WALL WAS BUILT. SOIL WAS PLACED ONE LEVEL OF SOIL REINFORCEMENT AT A TIME. VACUUM EXCAVATION AND CUTTING OF SOIL REINFORCEMENT MUST NOT EXTEND BEYOND MORE LAYERS THAN THE WALL CAN SUPPORT WITHOUT REINFORCEMENT. IT IS IMPORTANT TO CUT SOIL REINFORCEMENT FABRIC BEFORE CONDUCTING MASS EXCAVATION WITH MACHINERY. ANY SOIL REINFORCEMENT FABRIC THAT IS CAUGHT BY EXCAVATION MACHINERY MAY CAUSE DAMAGE TO THE INTEGRITY OF THE RETAINING WALL SYSTEM BY PULLING FROM THE BLOCK OR ADJACENT EMBEDMENT.
- B. SLOPES OF EXCAVATION ARE SHOWN SCHEMATIC. CONTRACTOR COORDINATE LAYBACK SLOPES AS REQUIRED FOR EXCAVATION SAFETY.
- C. SALVAGE ORIGINAL WALL BLOCK UNITS TO EXTENT POSSIBLE.
- D. EXAMPLE EXCAVATION SEQUENCE:
  - STEP 1) VACUUM EXCAVATE DOWN TO SOIL REINFORCING FABRIC ON THREE SIDES: PERPENDICULAR TO WALL FOR THE FULL EMBEDMENT LENGTH OF SOIL REINFORCEMENT, AND ALONG WALL BETWEEN LIMITS OF EXCAVATION.
  - STEP 2) CUT FABRIC. THIS WILL ALLOW BULK EXCAVATION BETWEEN VACUUM EXCAVATION LINES WITHOUT DAMAGING ADJACENT WALL INTEGRITY. CAUTION: TO MAINTAIN STABILITY OF THE MSE RETAINING WALL SYSTEM, DO NOT EXCAVATE MORE THAN ONE LAYER OF SOIL REINFORCEMENT AT A TIME.
  - STEP 3) EXCAVATION BETWEEN VACUUM EXCAVATION TRENCHES TO A DEPTH JUST ABOVE THE NEXT LAYER OF SOIL REINFORCEMENT.

1.03 MSE WALL REPLACEMENT
- A. REPLACE MSE WALL IN-KIND. COORDINATE SIZE AND LOCATIONS OF HEADWALLS WITHIN WALL SYSTEM WITH HEAD JOINTS AND BED JOINTS.
- B. REPLACE GUARD RAIL SYSTEM AT TOP OF WALL INCLUDE GUARDRAIL SYSTEM WITH ENGINEERED DESIGN.

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:14:52 PM

Professional Engineer (Structural)
Shane E. Sweeten
Date Signed 7/13/18
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ARIZONA, U.S.A.
EXPIRES 9/30/19
Design Sub-Consultant
Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

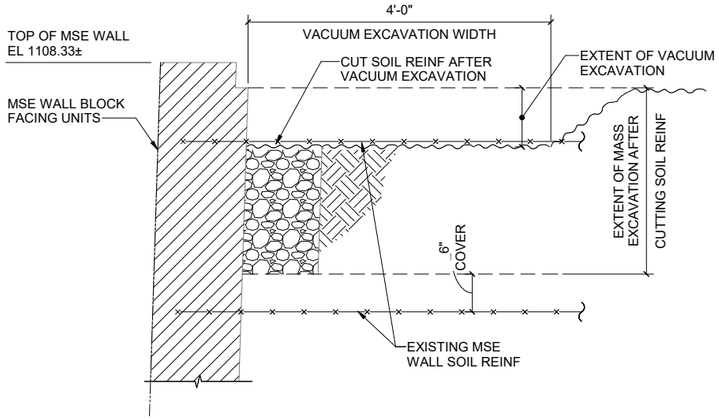
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	HY
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

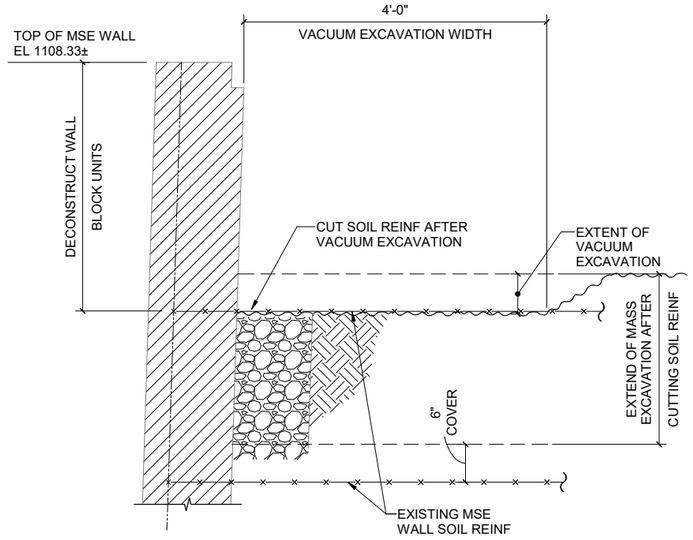
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
MSE PARTIAL WALL ELEVATIONS

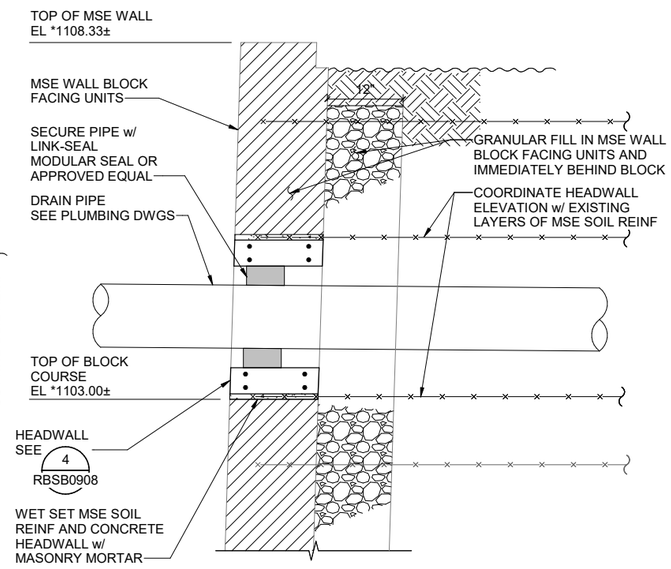
Package: B04 - RBSB0907
Sheet Reference No:
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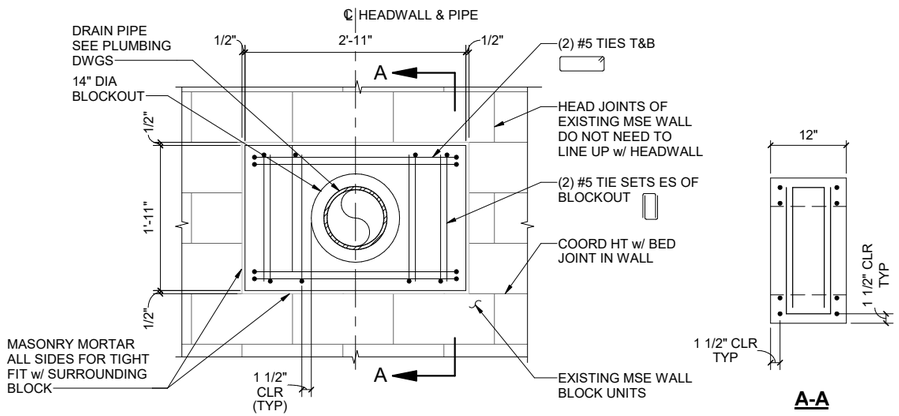
1 RBSB0908 **SECTION** SCALE: 1" = 1'-0"



2 RBSB0908 **SECTION** SCALE: 1" = 1'-0"



3 RBSB0908 **SECTION** SCALE: 1" = 1'-0"



NOTES:
1. PRECAST CONCRETE HEADWALL
2. FIELD VERIFY THAT EXISTING MSE WALL BLOCK UNITS ARE 8" Hx12" Wx18" LG
3. VERTICAL HEIGHT (ELEVATION) OF CONCRETE HEADWALL MUST CORRESPOND WITH SPACE BETWEEN MSE GEOGRID SOIL REINFORCEMENT

HEADWALL AT DRAIN PIPE

4 RBSB0908 **DETAIL** SCALE: 1" = 1'-0"

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:14:53 PM

Design Consultant: Gannett Fleming

Design Sub-Consultant

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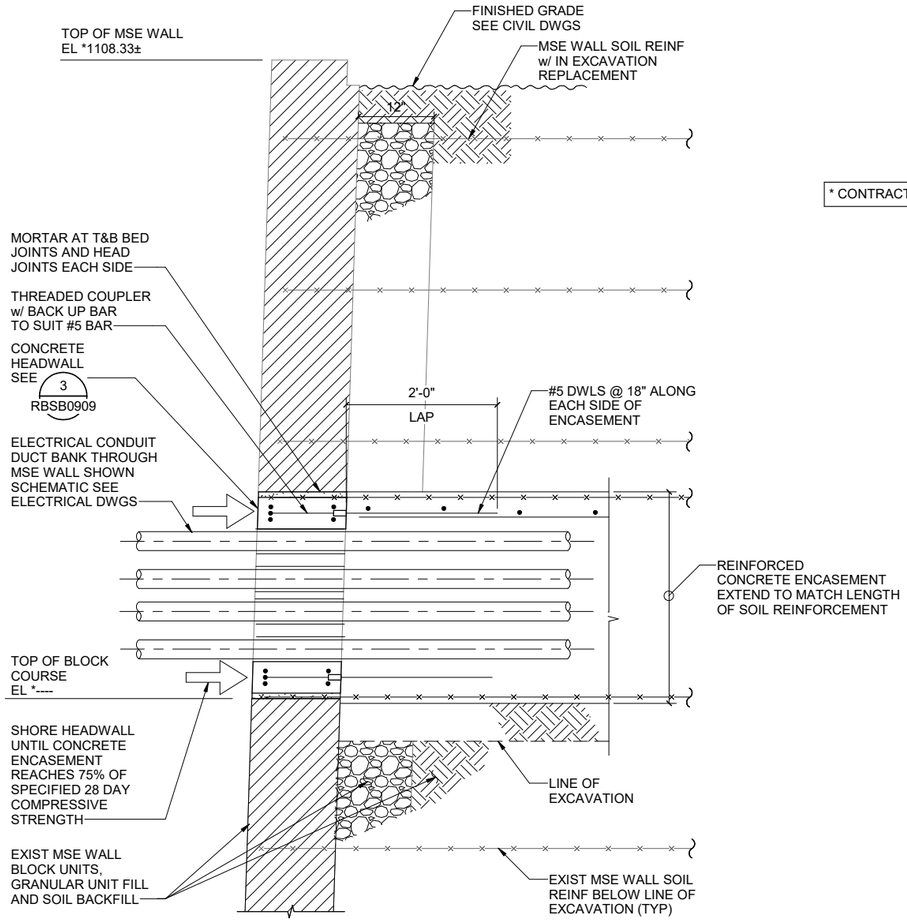
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	HY
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

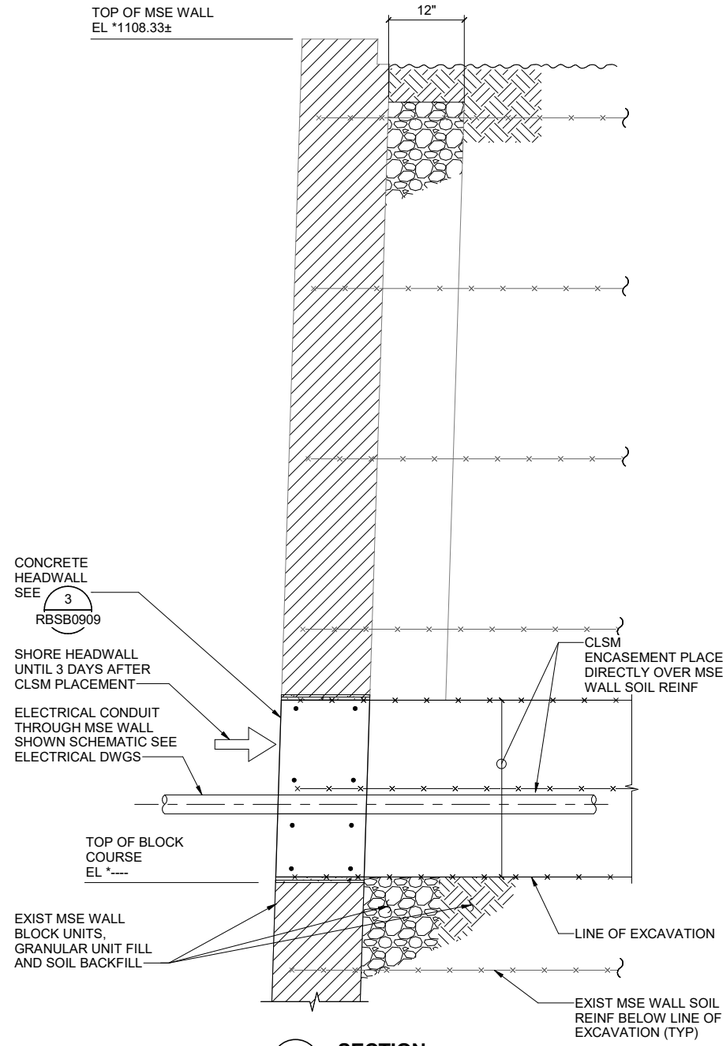
RCC STATION
STRUCTURAL
SECTIONS AND DETAILS

Package: **B04 - RBSB0908**
Sheet Reference No:
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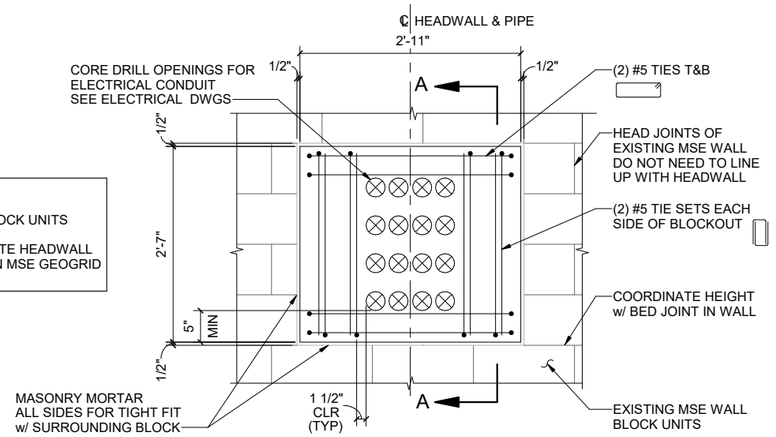
1 RBSB0909 **SECTION** SCALE: 1" = 1'-0"

* CONTRACTOR TO FIELD VERIFY



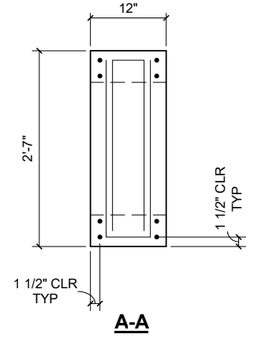
2 RBSB0909 **SECTION** SCALE: 1" = 1'-0"

NOTES:
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2. FIELD VERIFY THAT EXISTING MSE WALL BLOCK UNITS ARE 8" Hx12" Wx18" LG
3. VERTICAL HEIGHT (ELEVATION) OF CONCRETE HEADWALL MUST CORRESPOND WITH SPACE BETWEEN MSE GEOGRID SOIL REINFORCEMENT



PRECAST HEADWALL AT CONDUIT DUCT BANK

3 RBSB0909 **DETAIL** SCALE: 1" = 1'-0"



A-A

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Design Consultant: Gannett Fleming

Design Sub-Consultant

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	HY
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
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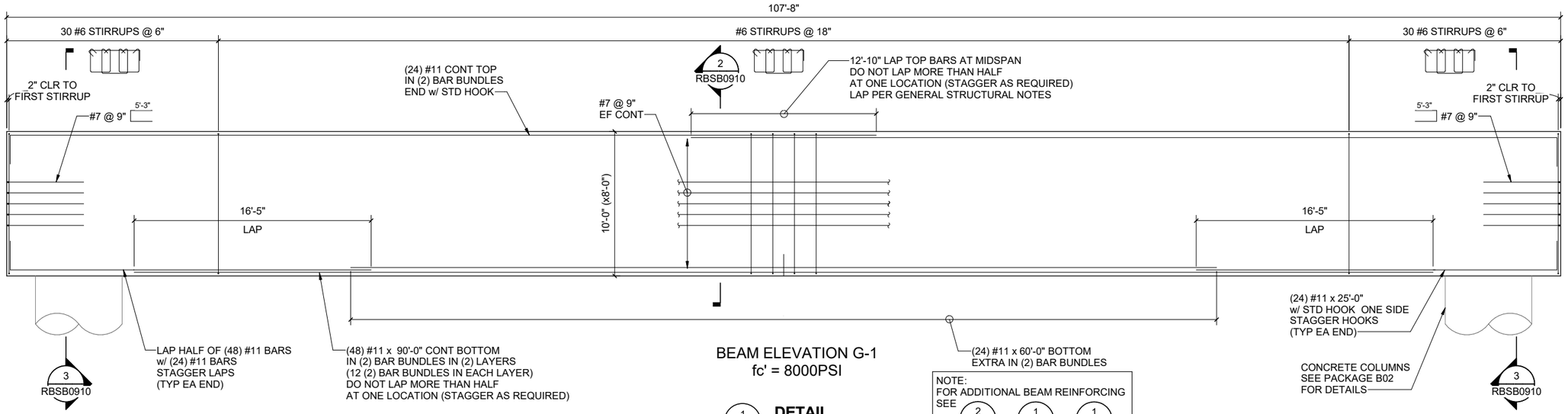
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
SECTIONS AND DETAILS

Package: **B04 - RBSB0909**

Sheet Reference No:
V5 - 189 of 218

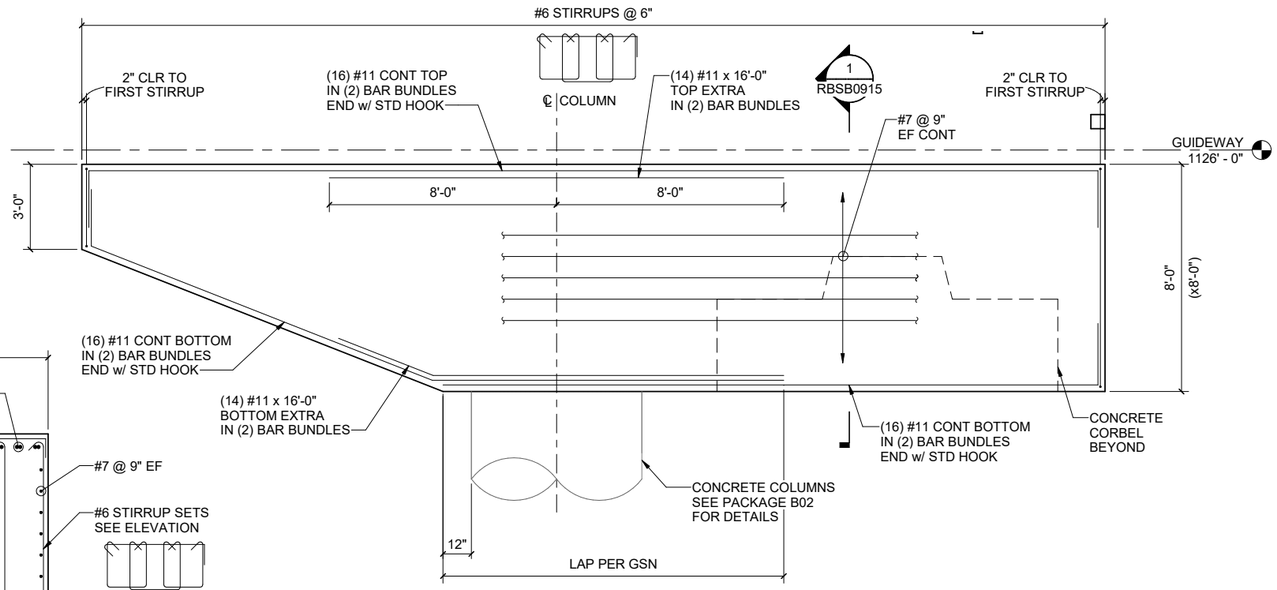
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



BEAM ELEVATION G-1
fc' = 8000PSI

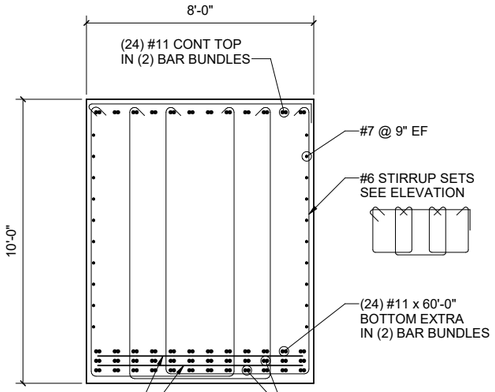
1 RBSB0910 **DETAIL** SCALE: 1/4" = 1'-0"

NOTE:
FOR ADDITIONAL BEAM REINFORCING SEE
2 RBSB0911 1 RBSB0912 1 RBSB0913



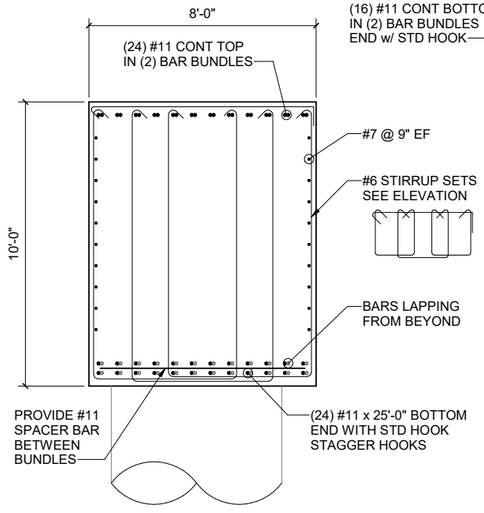
BEAM ELEVATION G-2
fc' = 6000 PSI

4 RBSB0910 **DETAIL** SCALE: 3/8" = 1'-0"



G-1
fc' = 8000PSI

2 RBSB0910 **SECTION** SCALE: 3/8" = 1'-0"



3 RBSB0910 **SECTION** SCALE: 3/8" = 1'-0"

Project Number: 62421
7/13/2018 5:14:55 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
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Design Consultant: Gannett Fleming

Design Sub-Consultant

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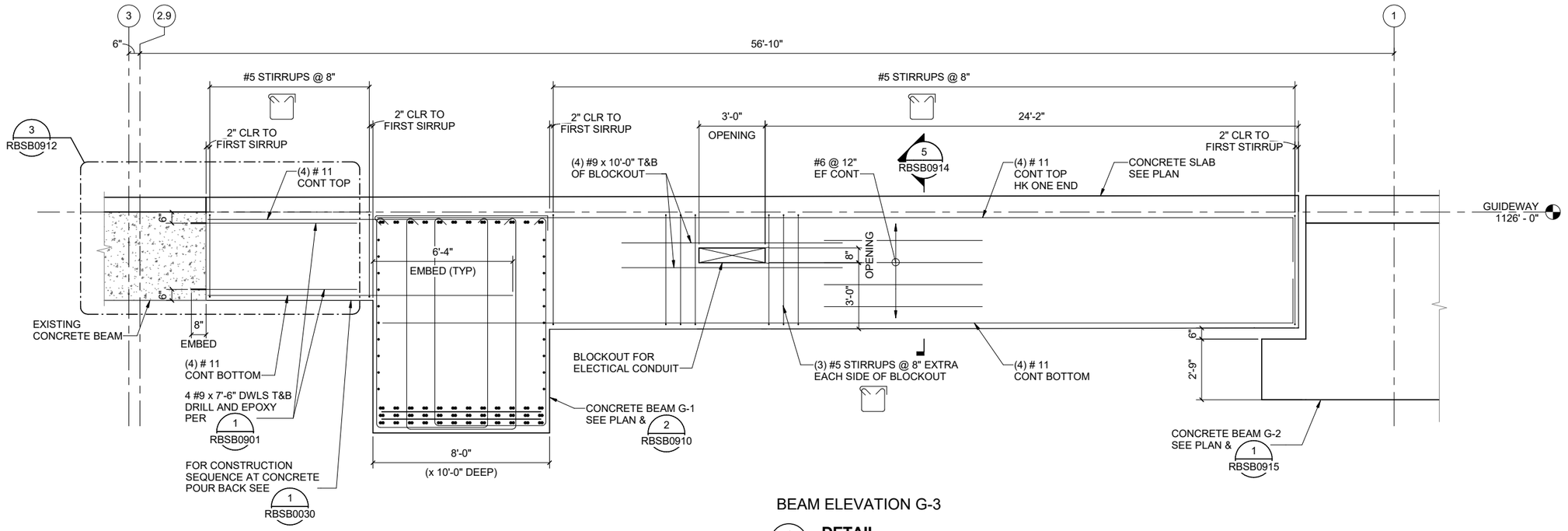
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
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Dwg scale:	AS NOTED
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STAGE 2 - B04 DESIGN SUBMISSION

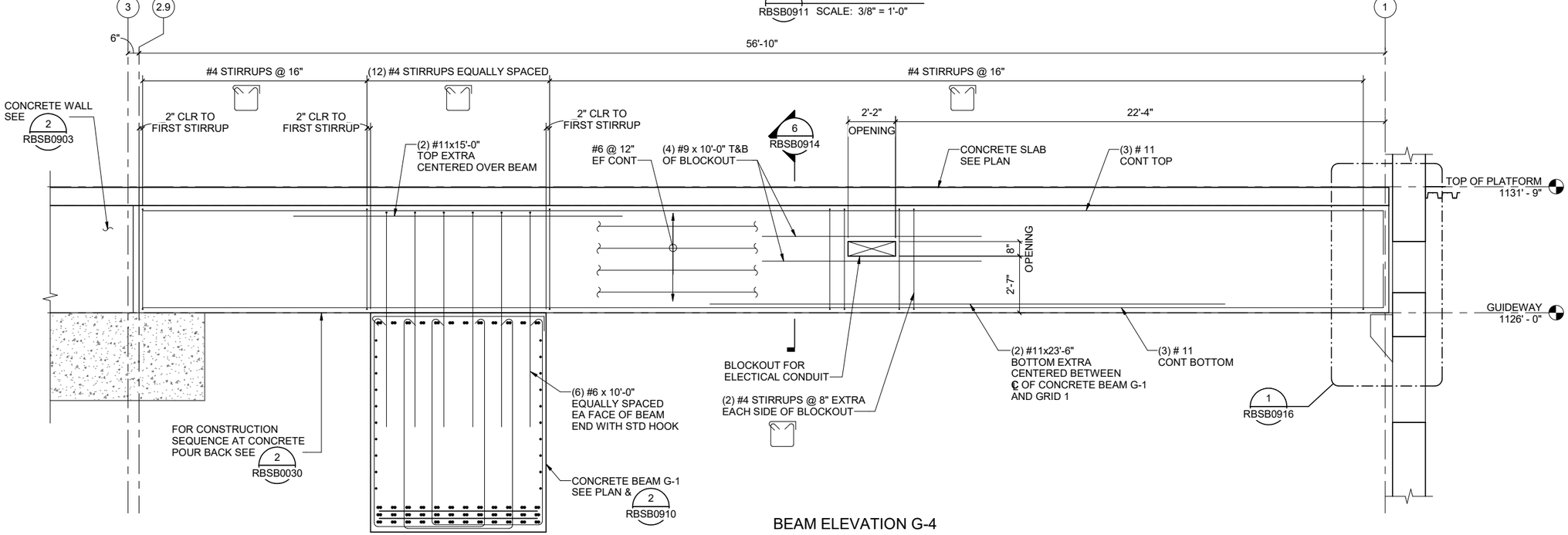
RCC STATION STRUCTURAL BEAM ELEVATIONS

Package: **B04 - RBSB0910**
Sheet Reference No: V5 - 190 of 218



BEAM ELEVATION G-3

1 RBSB0911 **DETAIL** SCALE: 3/8" = 1'-0"



BEAM ELEVATION G-4

2 RBSB0911 **DETAIL** SCALE: 3/8" = 1'-0"

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:14:56 PM

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

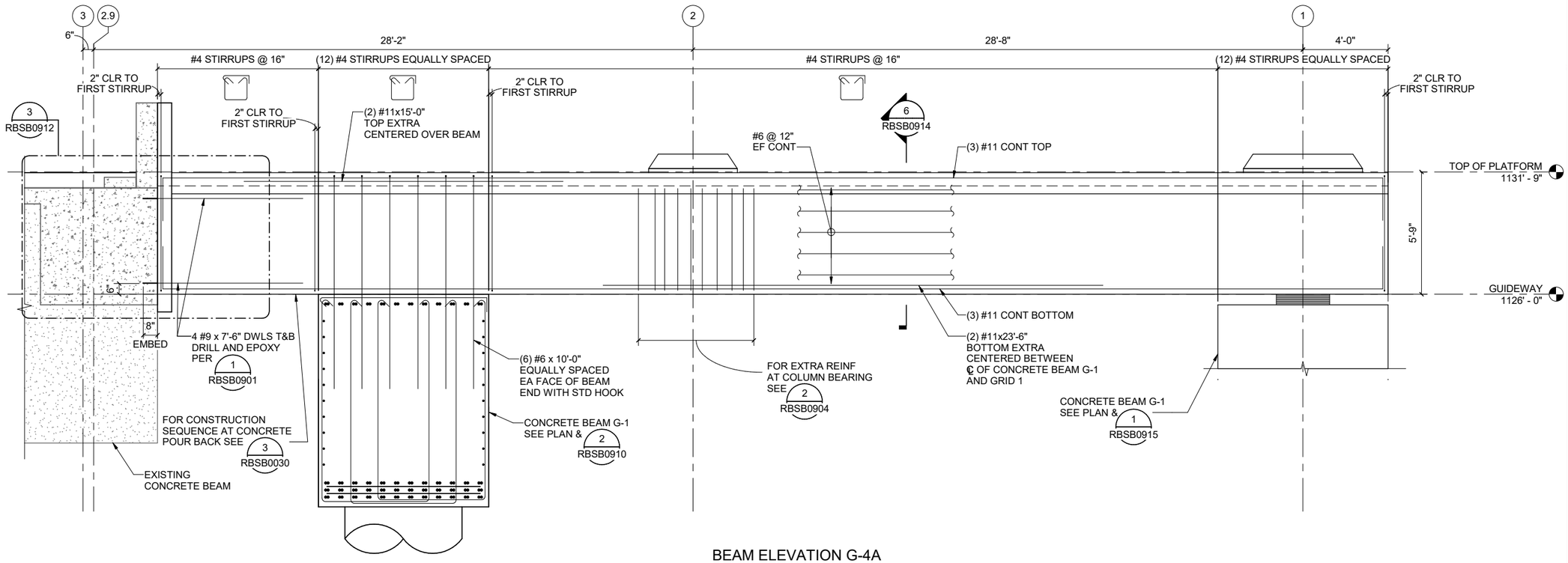
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

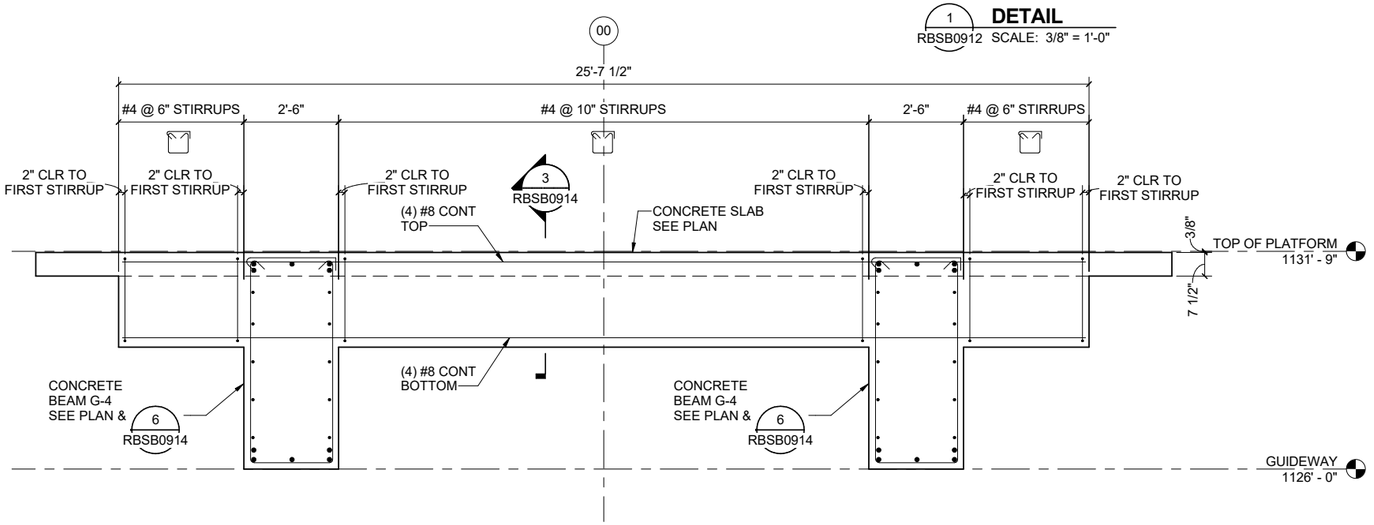
RCC STATION
STRUCTURAL
BEAM ELEVATIONS

Package: B04 - RBSB0911
Sheet Reference No:
V5 - 191 of 218



BEAM ELEVATION G-4A

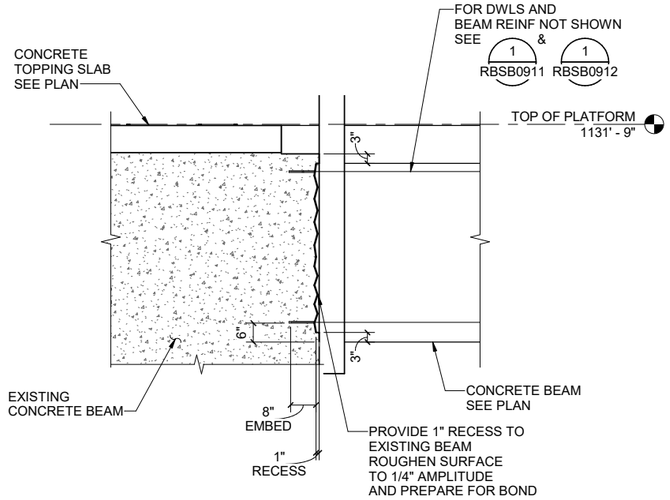
1 RBSB0912 **DETAIL** SCALE: 3/8" = 1'-0"



BEAM ELEVATION G-5

2 RBSB0912 **DETAIL** SCALE: 1/2" = 1'-0"

NOTE:
CONTRACTOR TO SCAN EXISTING BEAMS WITH 3D GROUND PENETRATION RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING



POUR BACK AT EXISTING CONCRETE

3 RBSB0912 **DETAIL** SCALE: 1/2" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

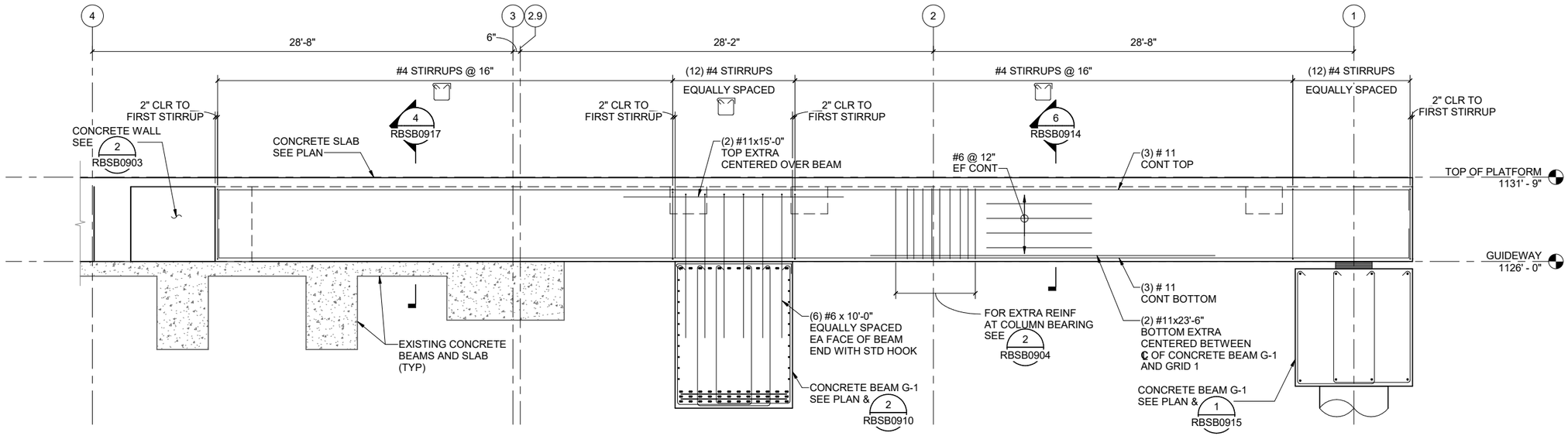
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
BEAM ELEVATIONS

Package: **B04 - RBSB0912**

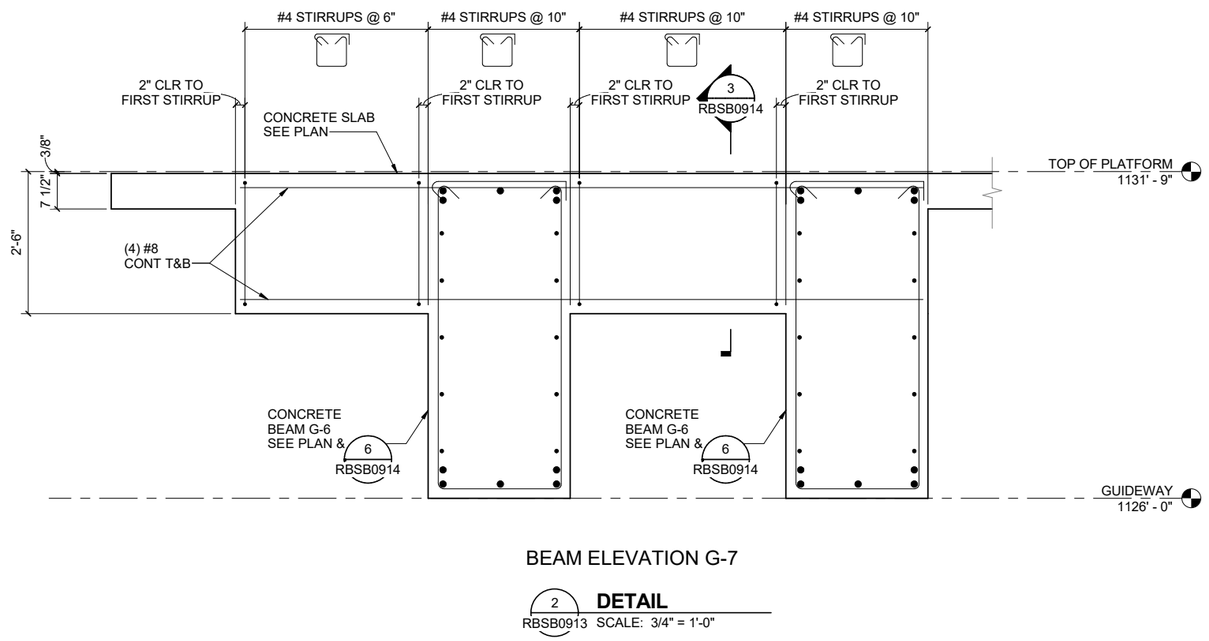
Sheet Reference No:
V5 - 192 of 218

Project Number: 62421
7/13/2018 5:14:59 PM
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



BEAM ELEVATION G-6

1 RBSB0913 **DETAIL** SCALE: 1/4" = 1'-0"



BEAM ELEVATION G-7

2 RBSB0913 **DETAIL** SCALE: 3/4" = 1'-0"

Project Number: 62421
7/13/2018 5:15:00 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/06242 1_FR01_S_central_R17_A360.rvt

Design Consultant: Gannett Fleming

Design Sub-Consultant

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

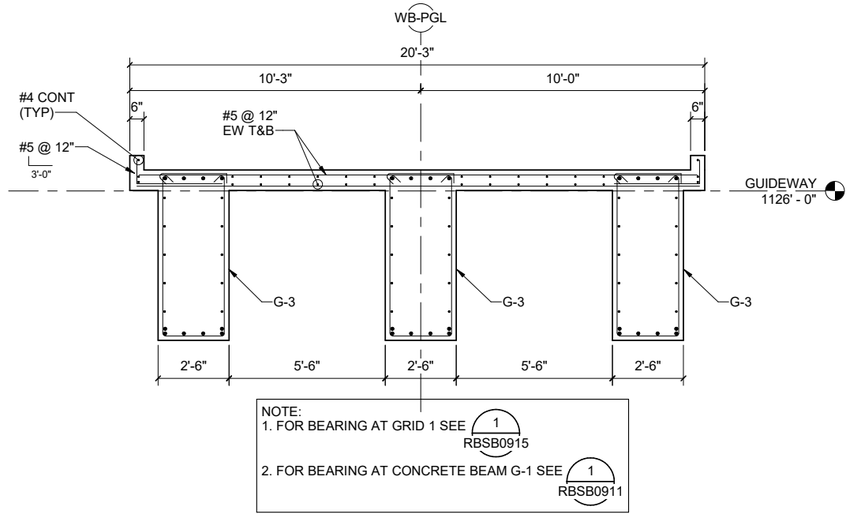
Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
BEAM ELEVATIONS

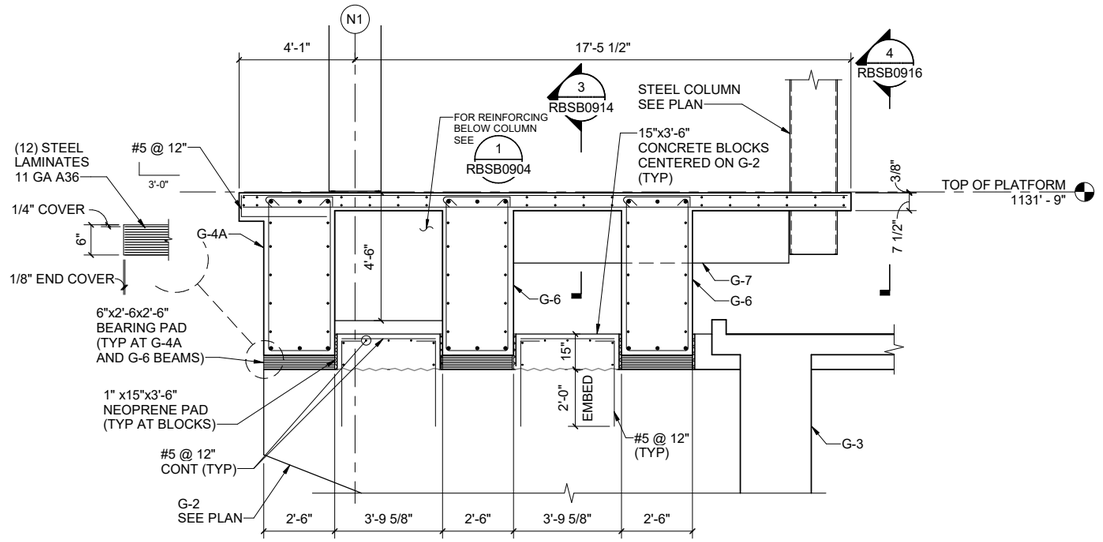
Package: **B04 - RBSB0913**

Sheet Reference No:



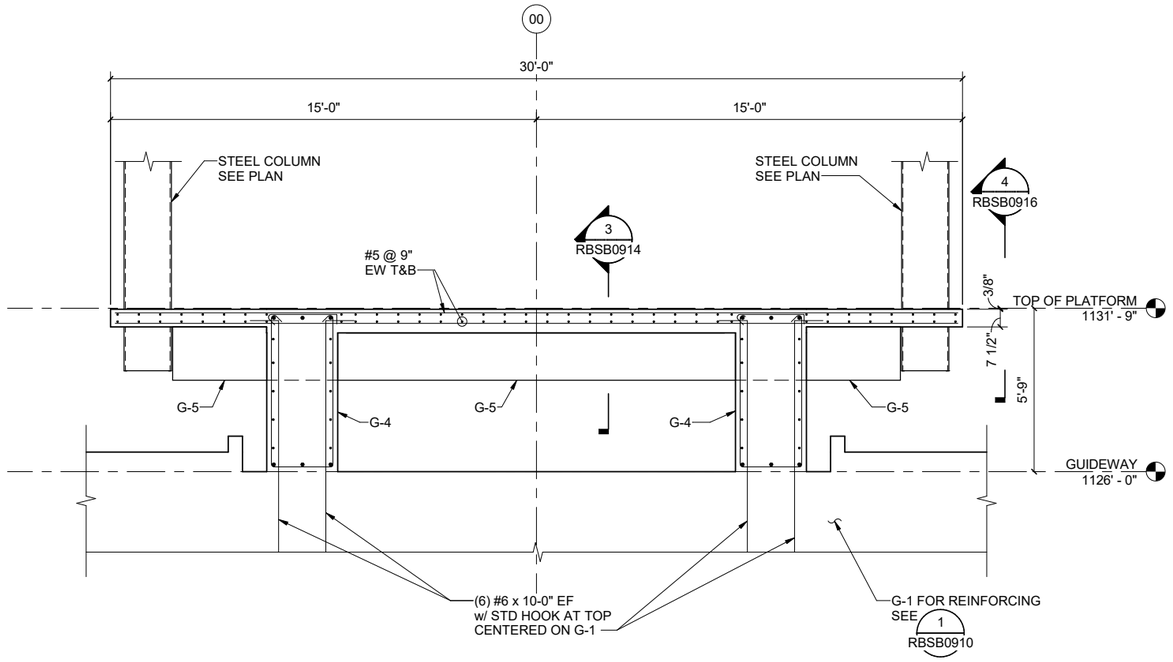
PLATFORM BEAM BEARING AT GRID 1 AND CONCRETE BEAM G-1

1 RBSB0914 **SECTION** SCALE: 3/8" = 1'-0"



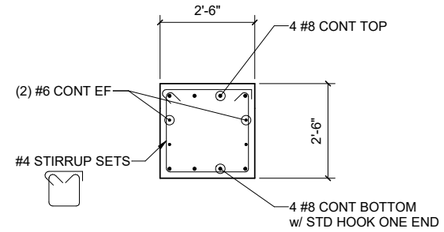
PLATFORM BEAM BEARING AT GRID 1

2 RBSB0914 **SECTION** SCALE: 3/8" = 1'-0"



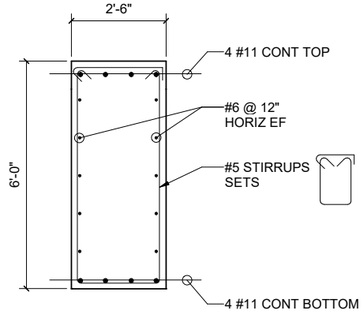
PLATFORM BEAM BEARING AT BEAM G-1

4 RBSB0914 **SECTION** SCALE: 3/8" = 1'-0"



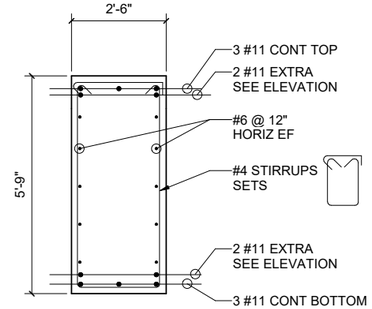
CONCRETE BEAM G-5 & G-7

3 RBSB0914 **SECTION** SCALE: 1/2" = 1'-0"



CONCRETE BEAM G-3

5 RBSB0914 **SECTION** SCALE: 1/2" = 1'-0"



CONCRETE BEAM G-4, G-4A, G-6

6 RBSB0914 **SECTION** SCALE: 1/2" = 1'-0"

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Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

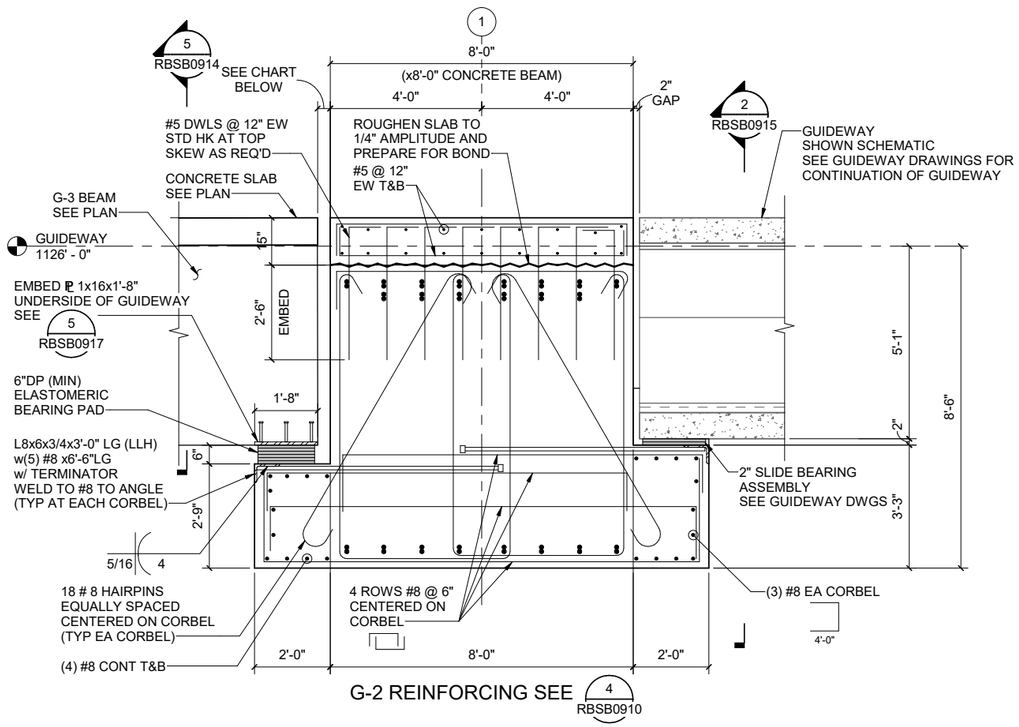
RCC STATION STRUCTURAL BEAM ELEVATIONS

Package: **B04 - RBSB0914**

Sheet Reference No:
V5 - 194 of 218

Project Number: 62421
7/13/2018 5:15:03 PM

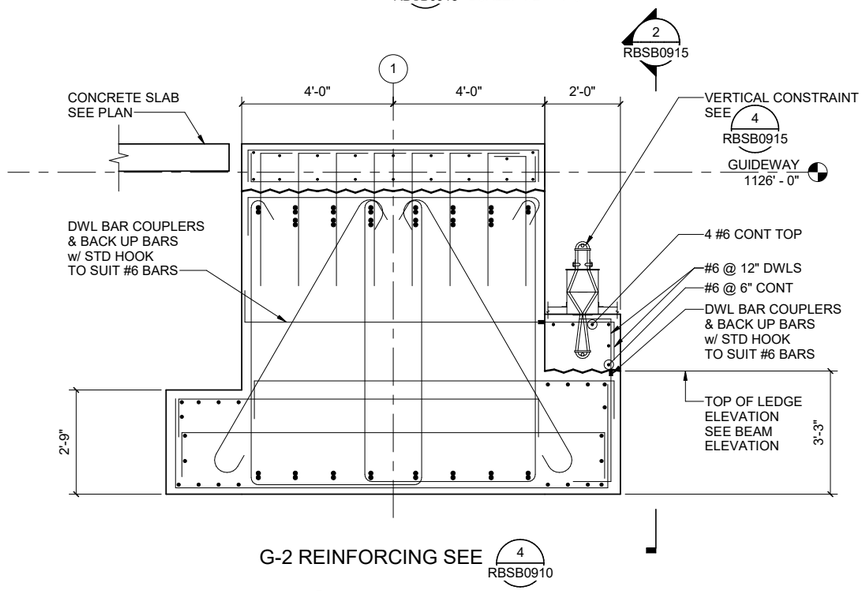
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



G-2 REINFORCING SEE 4 RBSB0910

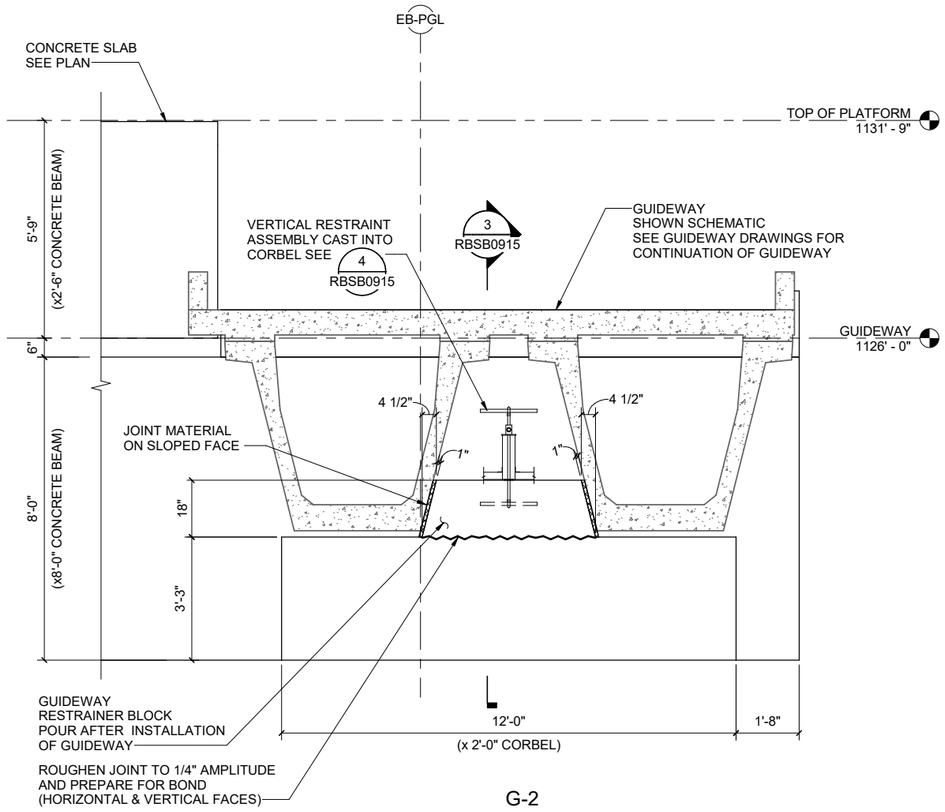
JOINT WIDTH AT TIME OF POUR								
AMBIENT TEMP	30°	40°	50°	60°	70°	80°	90°	100°
JOINT SIZE	3"	2 7/8"	2 1/2"	2 3/8"	2 1/4"	2"	1 7/8"	1 3/4"

1 RBSB0915 **SECTION** SCALE: 1/2" = 1'-0"



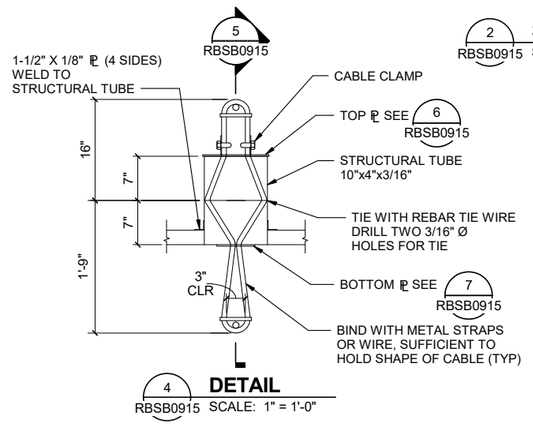
G-2 REINFORCING SEE 4 RBSB0910

3 RBSB0915 **SECTION** SCALE: 1/2" = 1'-0"

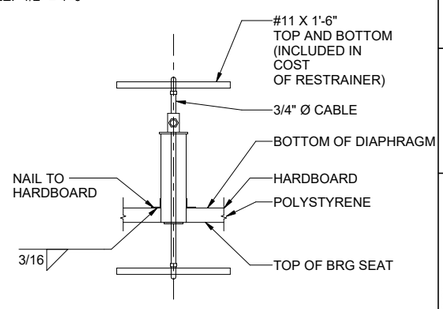


G-2

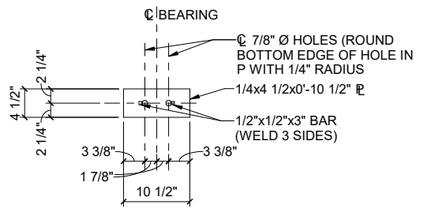
2 RBSB0915 **SECTION** SCALE: 1/2" = 1'-0"



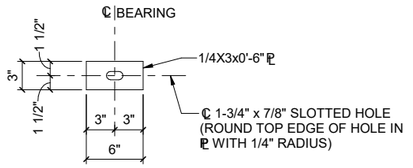
4 RBSB0915 **DETAIL** SCALE: 1" = 1'-0"



5 RBSB0915 **DETAIL** SCALE: 1" = 1'-0"



6 RBSB0915 **DETAIL** SCALE: 1" = 1'-0"



7 RBSB0915 **DETAIL** SCALE: 1 1/2" = 1'-0"

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Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

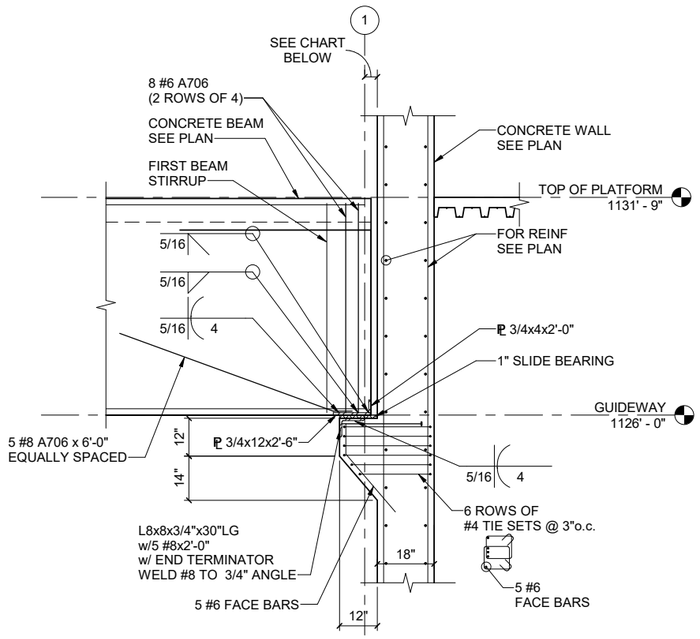
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
SECTIONS AND DETAILS

Package: **B04 - RBSB0915**

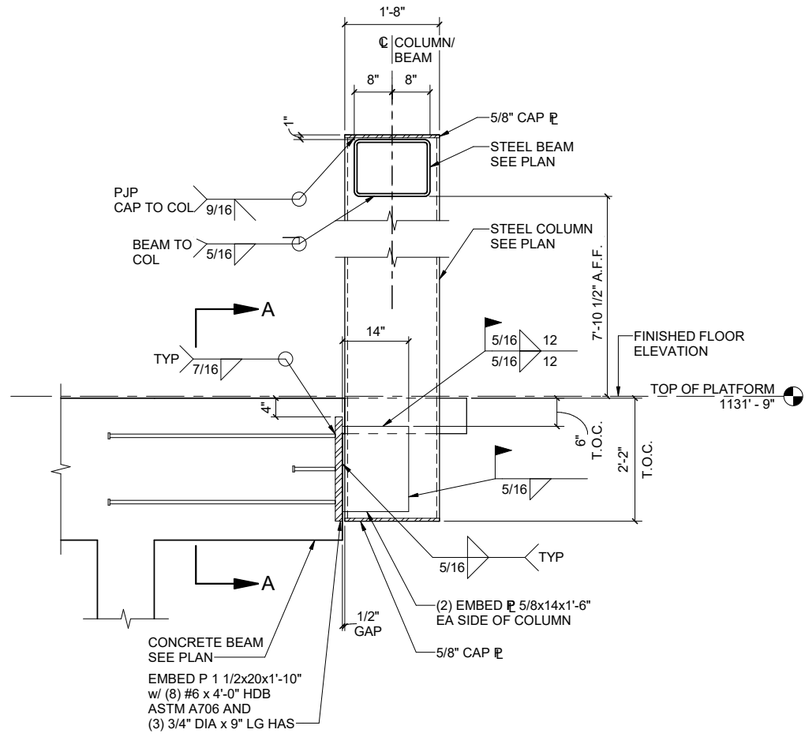
Sheet Reference No: V5 - 195 of 218

Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt
Project Number: 62421
7/13/2018 5:15:05 PM

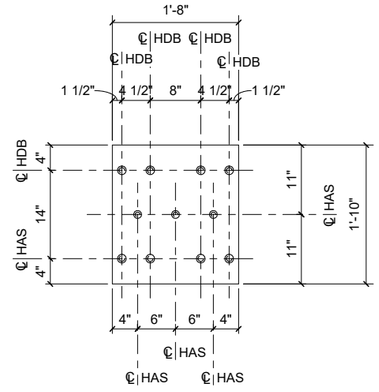


JOINT WIDTH AT TIME OF POUR								
AMBIENT TEMP	30°	40°	50°	60°	70°	80°	90°	100°
JOINT SIZE	3 7/8"	3 5/8"	3 1/2"	3 3/8"	3 1/8"	3"	2 7/8"	2 3/4"

CONCRETE BEAM AT CONCRETE WALL

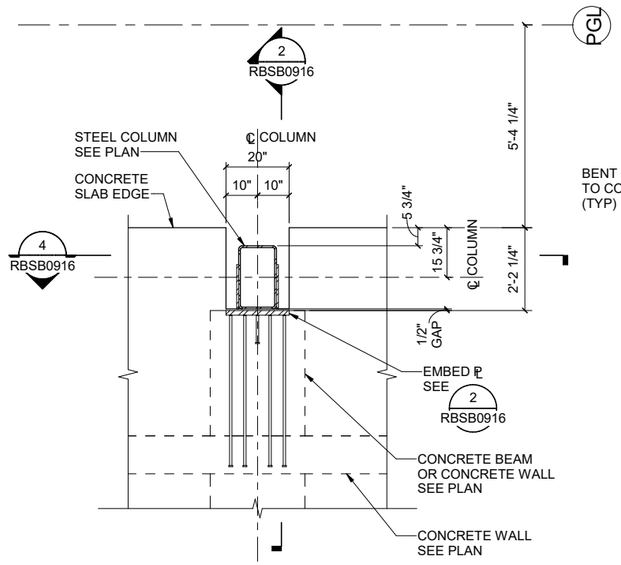


STEEL COLUMN AT CONCRETE SLAB



A-A

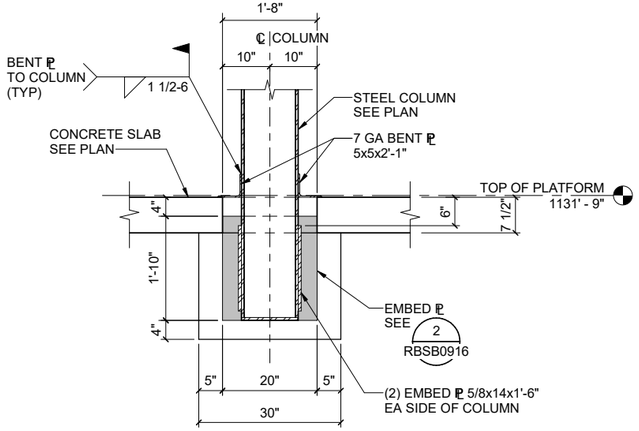
1 SECTION
RBSB0916 SCALE: 1/2" = 1'-0"



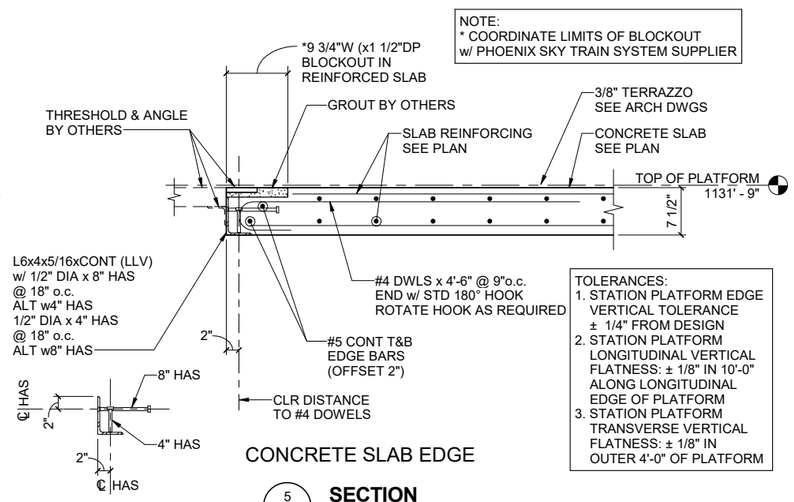
PLAN VIEW

3 DETAIL
RBSB0916 SCALE: 1/2" = 1'-0"

2 SECTION
RBSB0916 SCALE: 3/4" = 1'-0"



4 SECTION
RBSB0916 SCALE: 3/4" = 1'-0"



CONCRETE SLAB EDGE

5 SECTION
RBSB0916 SCALE: 1" = 1'-0"

Project Number: 62421
7/13/2018 5:15:08 PM
Local File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt

Design Sub-Consultant

Design Consultant

Gannett Fleming

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

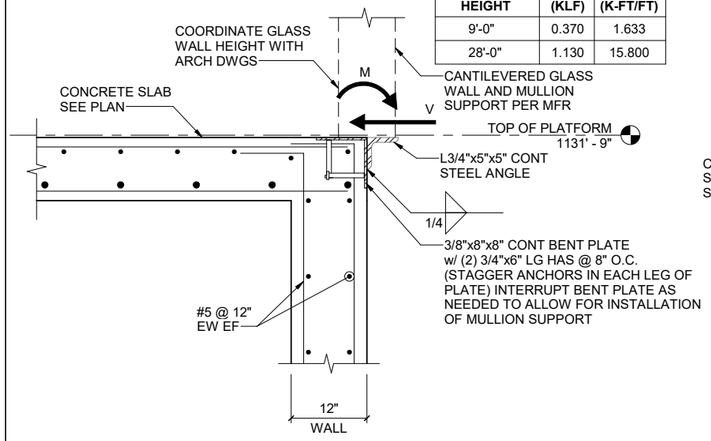
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
SECTIONS AND DETAILS

Package: B04 - RBSB0916

Sheet Reference No:
V5 - 196 of 218

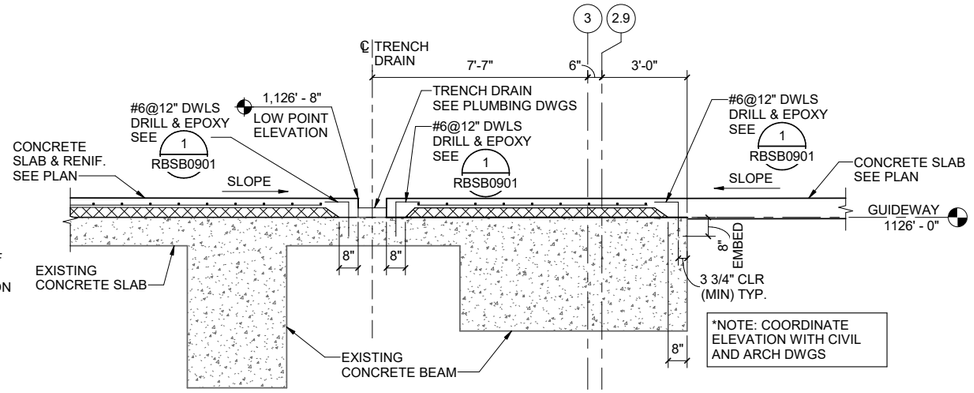
GLASS WALL MAXIMUM DESIGN LOADS (WIND LOAD LRFD)		
GLASS WALL HEIGHT	V (KLF)	M (K-FT/FT)
9'-0"	0.370	1.633
28'-0"	1.130	15.800



CANTILEVERD GLASS WALL MULLION SUPPORT AT CONCRETE WALL

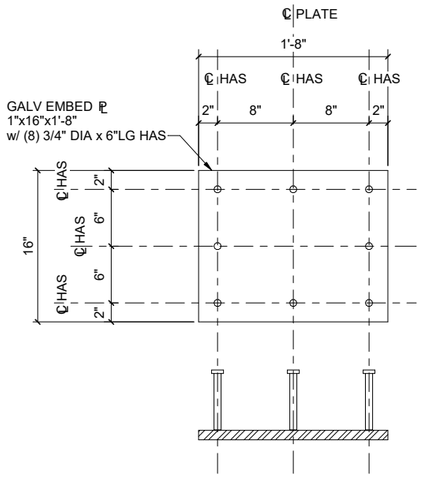
1 / RBSB0917 **SECTION** SCALE: 1" = 1'-0"

1 PDD COMMENTS



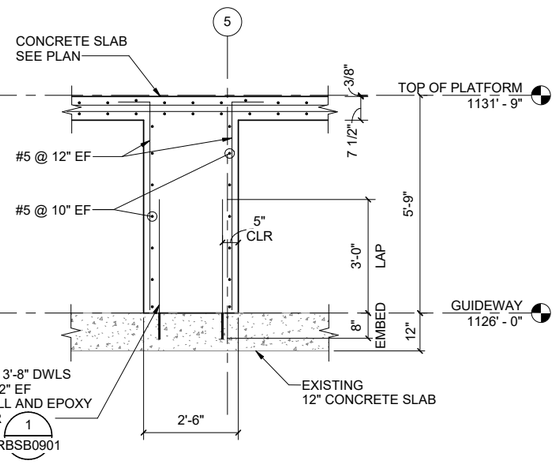
TRENCH DRAIN

2 / RBSB0917 **SECTION** SCALE: 3/8" = 1'-0"



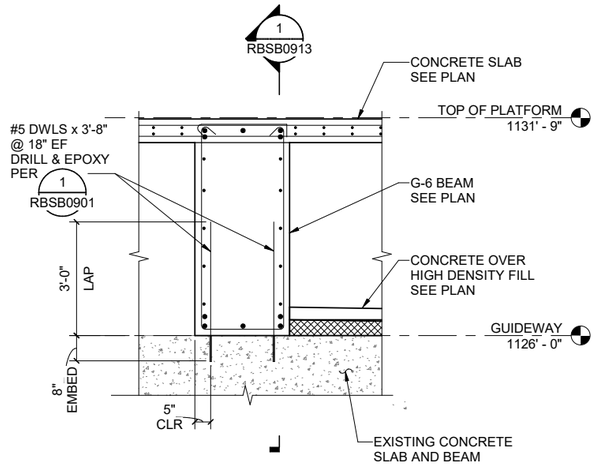
CORBEL EMBED PLATE

5 / RBSB0917 **DETAIL** SCALE: 1 1/2" = 1'-0"



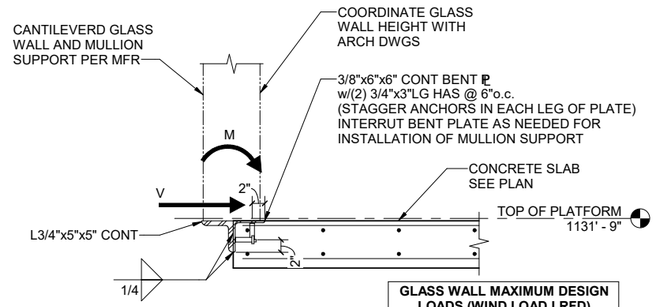
CONCRETE WALL AT EXISTING CONCRETE SLAB

3 / RBSB0917 **SECTION** SCALE: 1/2" = 1'-0"



CONCRETE BEAM AT EXISTING CONCRETE SLAB

4 / RBSB0917 **SECTION** SCALE: 1/2" = 1'-0"



GLASS WALL MAXIMUM DESIGN LOADS (WIND LOAD LRFD)		
GLASS WALL HEIGHT	V (KLF)	M (K-FT/FT)
9'-0"	0.370	1.633
28'-0"	1.130	15.800

CANTILEVERD GLASS WALL SUPPORT CONCRETE SLAB

6 / RBSB0917 **SECTION** SCALE: 1" = 1'-0"

1 PDD COMMENTS

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Drawn by: MWK
Checked by: SES
Date: 07/13/2018
Dwg scale: AS NOTED
CIP No.: AV10000011
KIVA No.: 07-5204

Design Consultant: Gannett Fleming

Design Sub-Consultant

REGISTERED PROFESSIONAL ENGINEER (Structural) 24434 SHANE E. SWEETEN Date Signed 7/13/18 ARIZONA, U.S.A. EXPIRES 9/30/19

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

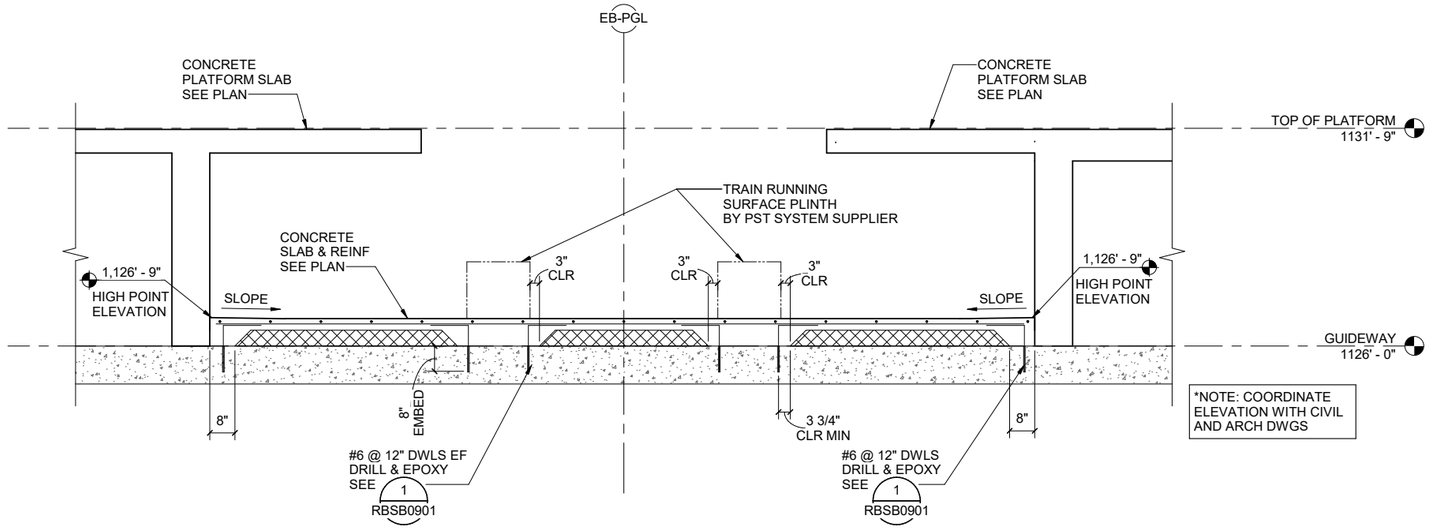
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION STRUCTURAL SECTIONS AND DETAILS

Package: B04 - RBSB0917

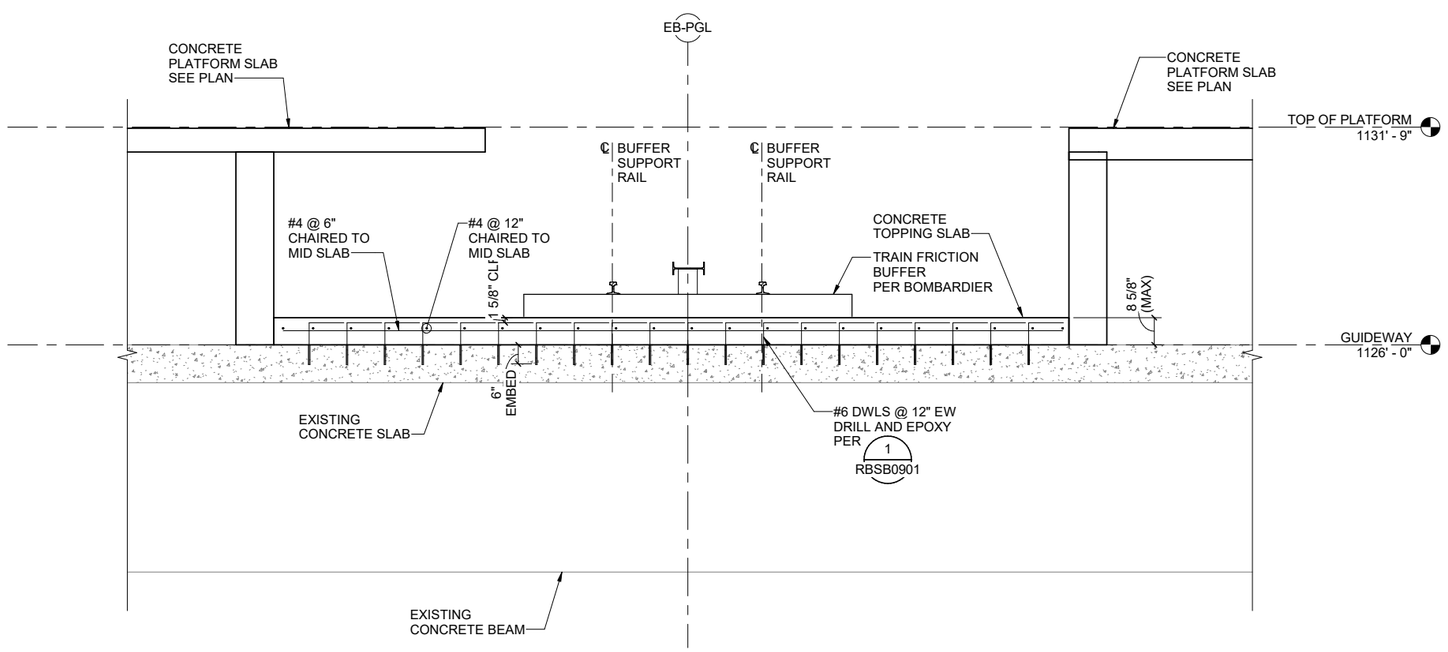
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Project Number: 62421
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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



PLINTHS AT EXISTING CONCRETE SLAB

1 RBSB0918 **SECTION** SCALE: 1/2" = 1'-0"



FRICTION BUFFER CONCRETE TOPPING SLAB

2 RBSB0918 **SECTION** SCALE: 1/2" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

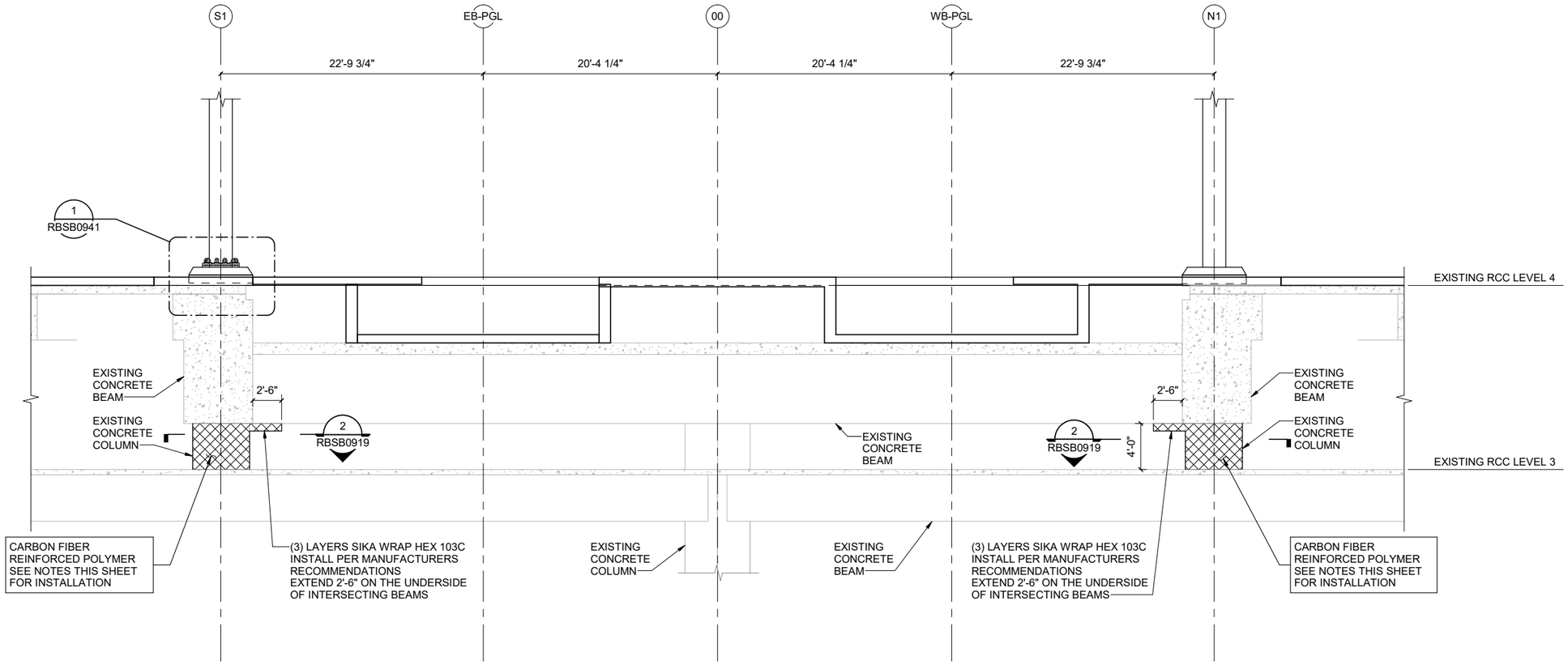
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RCC STATION
STRUCTURAL
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Package: **B04 - RBSB0918**

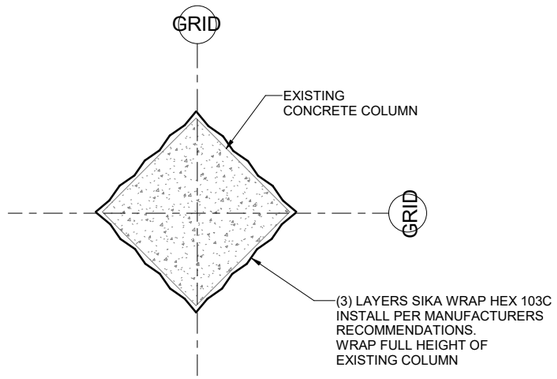
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V5 - 198 of 218

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/06241_FR01_S_central_R17_A360.rvt



EXISTING CONCRETE FRAME

1 RBSB0919 **SECTION** SCALE: 3/16" = 1'-0"



2 RBSB0919 **SECTION** SCALE: 1/2" = 1'-0"

FRP REINFORCEMENT NOTES:

FRP SYSTEM SHALL BE INSTALLED AT LOCATIONS AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

FRP SYSTEM SHALL BE INSTALLED BY A CONTRACTOR WHO HAS RECEIVED TRAINING BY THE SIKA CORPORATION, WHICH IS SPECIFIED TO THE INSTALLATION OF FRP SYSTEMS.

FRP SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S PUBLISHED PRODUCT DATA SHEETS AND INSTALLATION METHODS.

EXISTING CONCRETE SURFACES SHALL BE PREPARED FOR BONDING OF THE FRP SYSTEM BY MEANS OF ABRASIVE MEASURES IN ORDER TO ACHIEVE A SURFACE PROFILE THAT MEETS ICRI CSP-03.

FRP REINFORCEMENT SHALL BE PROVIDED BY SIKA CORPORATION. NO SUBSTITUTIONS OR ALTERNATE SYSTEMS ARE ACCEPTABLE.

THE FRP PRODUCTS ARE AS FOLLOWS:
FRP SYSTEM REINFORCEMENT: SIKAWRAP HEX 103C
FRP SYSTEM EPOXY ADHESIVE: SIKADUR 300/HEX 300 EPOXY
FIRE PROTECTION COATING: SIKACRETE 213F

FRP COMPOSITE PROPERTIES (MINIMUM):
TENSILE STRENGTH = 550 KSI
TENSILE MODULES = 34,000 KSI
TENSILE STRAIN: = 0.015 IN./IN.
LAMINATE THICKNESS = 0.04 INCH

FRP SYSTEM SHALL NOT BE DAMAGED, PENETRATED, ALTERED OR CUT WITHOUT DOCUMENTED ACCEPTANCE OF THE ENGINEER OF RECORD.

FRP SYSTEM SHALL BE INSPECTED/OBSERVED BY A THIRD PARTY TO ASSURE THE USE OF SPECIFIED PRODUCTS, SIZES, SPACING AND LENGTHS.

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Design Sub-Consultant

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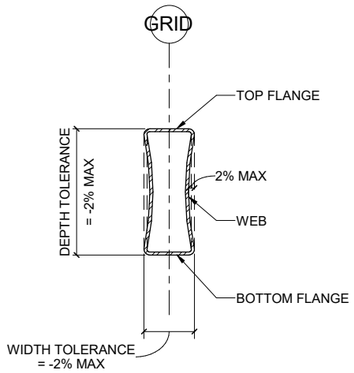
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
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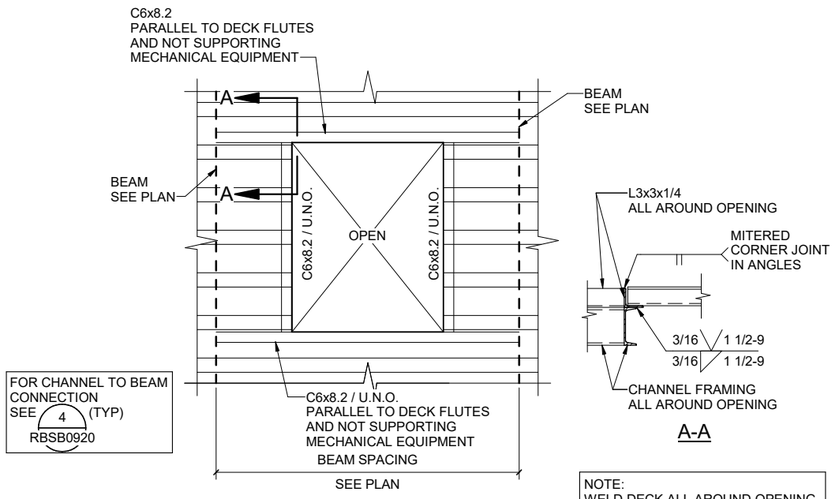
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



TOLERANCE IN CROSS SECTION
DISTORTION FROM COLD BENDING

1 RBSB0920 **DETAIL**
SCALE: 1" = 1'-0"

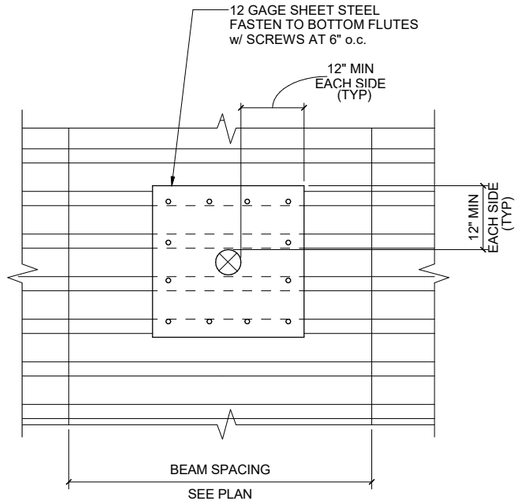


A-A

NOTE:
WELD DECK ALL AROUND OPENING
SEE GENERAL STRUCTURAL NOTES

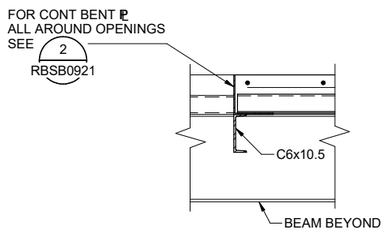
NOTE:
1. THIS DETAIL APPLIES TO THE FOLLOWING OPENINGS:
   A. ACCESS HATCH
   B. EXHAUST FAN
   C. DUCT OPENINGS NOT SUPPORTING EQUIPMENT
   D. RELIEF HOOD

2 RBSB0920 **OPENING IN METAL DECK**
SCALE: 1" = 1'-0"

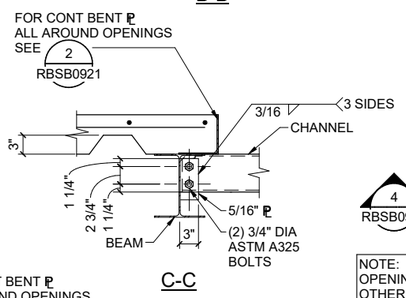


NOTES:
1. PROVIDE OPENING REINFORCEMENT FOR 6" DIA MIN TO 12" DIA MAX PENETRATIONS.
2. REINFORCEMENT NOT REQUIRED FOR PENETRATIONS LESS THAN 6" DIA.

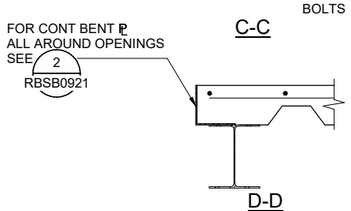
3 RBSB0920 **SMALL OPENINGS IN METAL DECK**
SCALE: 1" = 1'-0"



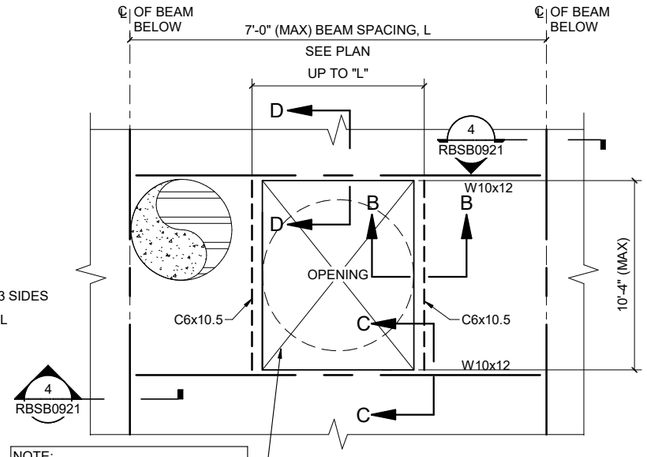
B-B



C-C



D-D

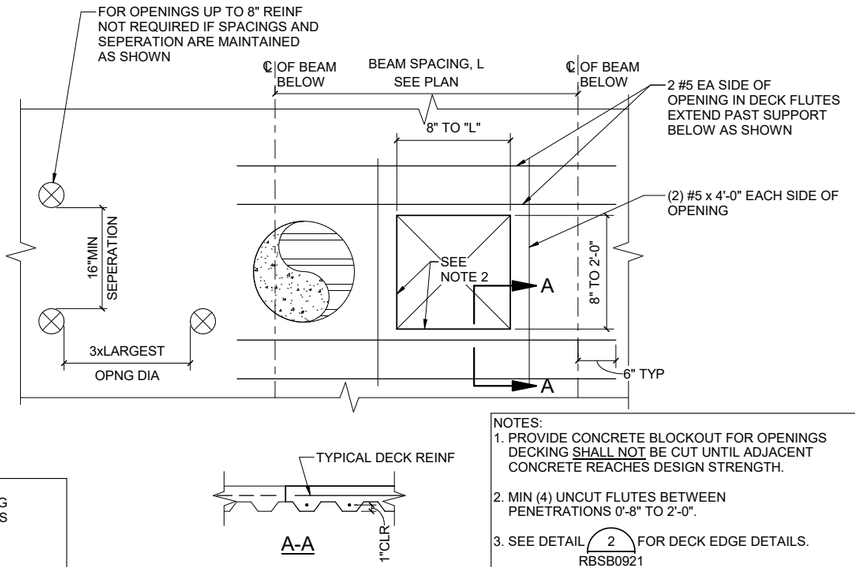


NOTE:
OPENING MAY HAVE ANY SHAPE
OTHER THAN SHOWN HERE
USE CIRCUMSCRIBING RECTANGLE
FOR REINFORCING APPLICATION

NOTES:
1. PROVIDE CONCRETE BLOCKOUT FOR OPENINGS. DECKING SHALL NOT BE CUT UNTIL ADJACENT CONCRETE REACHES DESIGN STRENGTH
2. COORDINATE OPENING SIZE AND LOCATION WITH OTHER DESIGN DRAWINGS AND WITH EQUIPMENT PURCHASED.
3. SEE TYPICAL SLAB EDGE DETAILS.
4. FASTEN DECK ALL AROUND OPENING SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

2'-1"- 10'-4" OPENINGS IN
METAL DECK w/ CONCRETE SLAB

4 RBSB0920 **DETAIL**
SCALE: 1" = 1'-0"



A-A

NOTES:
1. PROVIDE CONCRETE BLOCKOUT FOR OPENINGS DECKING SHALL NOT BE CUT UNTIL ADJACENT CONCRETE REACHES DESIGN STRENGTH.
2. MIN (4) UNCUT FLUTES BETWEEN PENETRATIONS 0'-8" TO 2'-0".
3. SEE DETAIL 2 RBSB0921 FOR DECK EDGE DETAILS.

FOR OPENINGS UP TO 2'-0" IN
METAL DECK w/ CONCRETE SLAB

5 RBSB0920 **DETAIL**
SCALE: 1" = 1'-0"

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Design Consultant
Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
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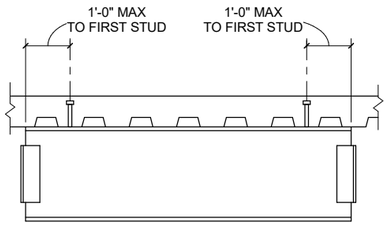
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Drawn by:	MWK
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Date:	07/13/2018
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KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

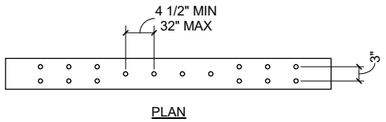
RCC STATION
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Package: **B04 - RBSB0920**
Sheet Reference No: V5 - 200 of 218

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BEAM



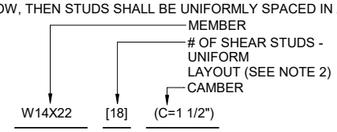
PLAN

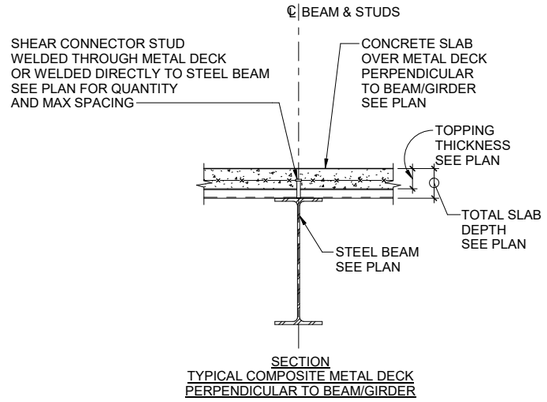
SHEAR STUD PLACEMENT NOTES:

1. ALL SHEAR STUDS TO BE 3/4" DIA. 1 1/2" ABOVE DECK FLUTE UNLESS NOTED OTHERWISE.
2. THE NUMBER OF STUDS IS INDICATED ON THE PLANS THUSLY [XX].
3. MINIMUM CENTER TO CENTER SPACING OF STUDS ALONG THE LONGITUDINAL AXIS OF THE COMPOSITE BEAM SHALL BE 4 1/2" AND THE MAXIMUM CENTER TO CENTER SPACING SHALL BE 32". MINIMUM CENTER TO CENTER SPACING ALONG THE TRANSVERSE AXIS SHALL BE 3"
4. WHERE DECK IS PERPENDICULAR TO THE COMPOSITE BEAMS, STUDS SHALL BE PLACED AS FOLLOW.

   CASE #1 (MORE DECK FLUTES THAN STUDS)
   PLACE ONE STUD IN EVERY OTHER DECK FLUTE, THEN STARTING AT EACH END OF THE BEAM, PLACE THE REMAINING STUDS IN UNUSED DECK FLUTES. THE NUMBER OF STUDS ON EACH HALF OF THE BEAM SHOULD BE EQUAL. SEE NOTE 3 FOR SPACING LIMITATIONS.
   CASE #2 (MORE STUDS THAN DECK FLUES)
   PLACE ONE STUD IN EVERY DECK FLUTE, THEN STARTING AT EACH END OF THE BEAM, DOUBLE STUDS EVERY DECK FLUTE UNTIL REMAINING STUDS ARE USED. THE NUMBER OF STUDS ON EACH HALF OF THE BEAM SHOULD BE EQUAL. SEE NOTE 3 FOR SPACING LIMITATIONS.

5. WHERE DECK IS PARALLEL TO THE COMPOSITE BEAM, THE STUDS SHALL BE UNIFORMLY SPACED IN A SINGLE ROW. IF A MINIMUM STUD SPACING OF 4 1/2" CENTER TO CENTER CANNOT BE MAINTAINED IN A SINGLE ROW, THEN STUDS SHALL BE UNIFORMLY SPACED IN A DOUBLE ROW.
6. COMPOSITE BEAM NOTATION:

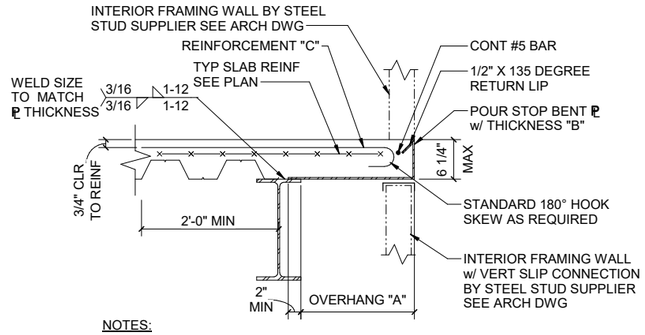




SECTION
TYPICAL COMPOSITE METAL DECK
PERPENDICULAR TO BEAM/GIRDER

1 RBSB0921 **DETAIL**
SCALE: 3/4" = 1'-0"

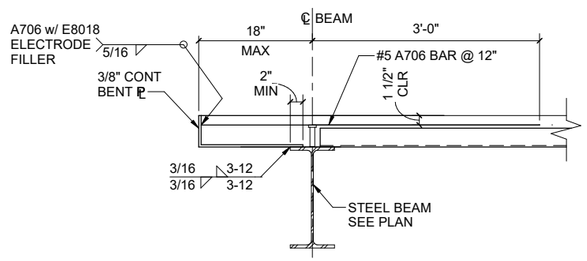
OVERHANG "A"	BENT PLATE THICKNESS "B"	REINFORCEMENT "C"
4"	14 GA (0.0747")	6X6-W1.4xW1.4
9"	10 GA (0.1345")	W1.4xW1.4
15"	0.25"	#4 BAR @12"



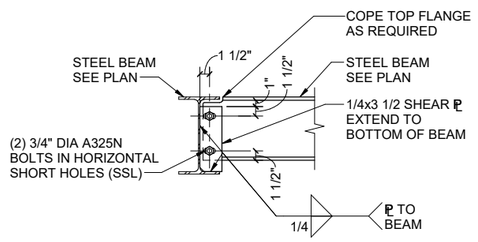
NOTES:

1. THIS SLAB EDGE DETAIL IS ONLY SUITABLE FOR INTERIOR SLAB EDGES SUPPORTING WALL FRAMING.
2. DO NOT USE THIS DETAIL TO SUPPORT HANDRAILS, GUARDRAILS, OR ATTACHMENT OF EXTERIOR PARTIONS.
3. DO NOT ATTACH TO VERT LEG OF POUR STOP TO TRANSFER GRAVITY OR LATERAL LOAD - ATTACH TO CONCRETE.
4. WHEN OVERHANG DISTANCE IS EXCEEDED REFER TO SLAB EDGE DETAILS 3 RBSB0921 AND 5 RBSB0921 AS REQUIRED

2 RBSB0921 **INTERIOR SLAB EDGE DETAIL**
SCALE: 1" = 1'-0"

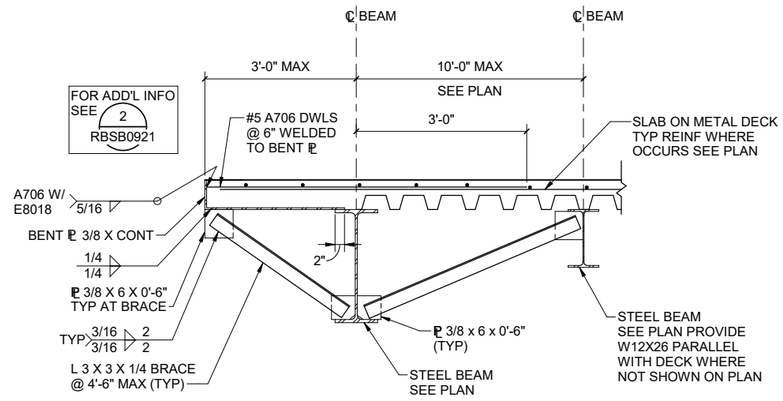


3 RBSB0921 **EXTERIOR SLAB EDGE DETAIL**
SCALE: 1" = 1'-0"



STEEL BEAM TO STEEL BEAM CONNECTION

4 RBSB0921 **DETAIL**
SCALE: 1" = 1'-0"



5 RBSB0921 **EXTENDED EXTERIOR SLAB EDGE DETAIL**
SCALE: 3/4" = 1'-0"

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Design Sub-Consultant

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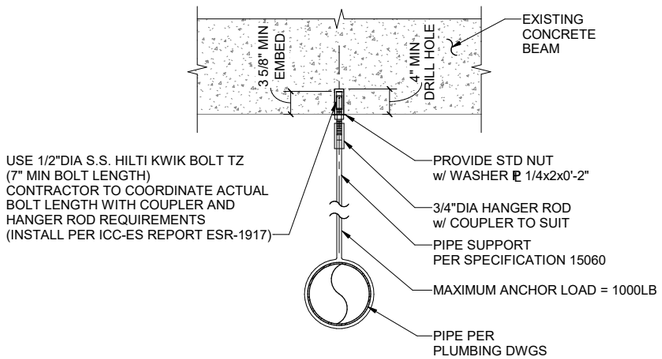
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STAGE 2 - B04 DESIGN SUBMISSION

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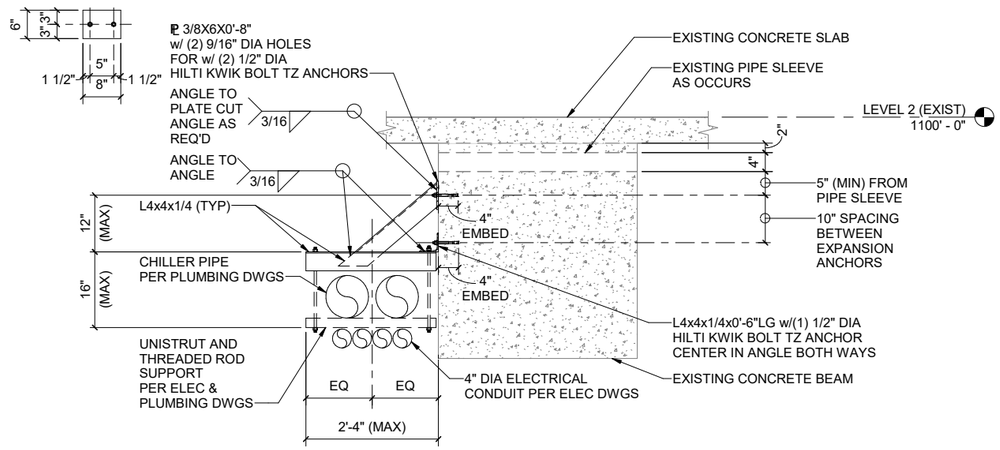
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Project Number: 62421
7/13/2018 5:15:18 PM



NOTES:
1. CONTRACTOR TO SCAN EXISTING BEAMS WITH 3D GROUND PENETRATTION RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING.
2. PROVIDE MINIMUM EDGE DISTANCE OF 9" FROM CENTERLINE OF ANCHOR TO EDGE OF EXISTING CONCRETE BEAM.

PIER SUPPORT AT EXISTING CONCRETE BEAM

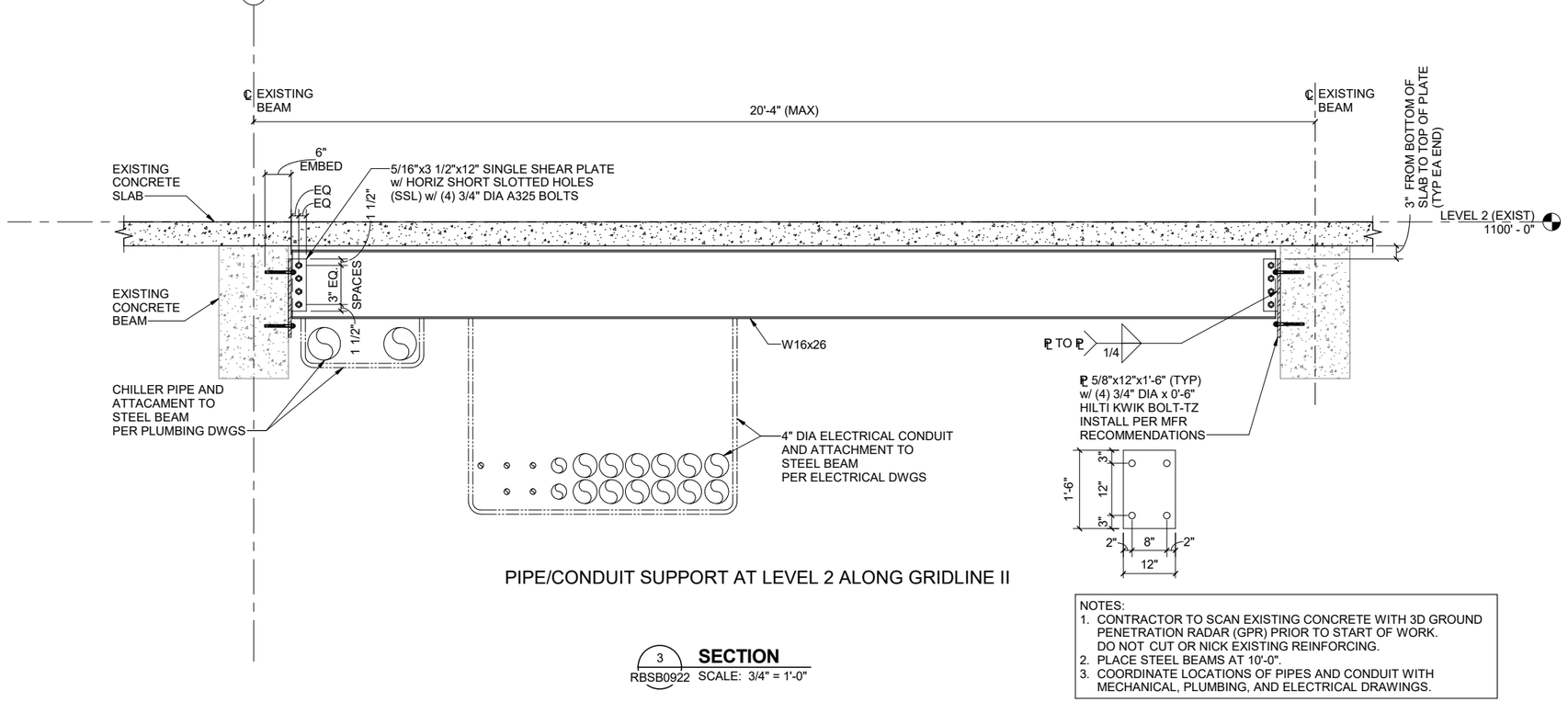
1 RBSB0922 **SECTION** SCALE: 1" = 1'-0"



PIPE/CONDUIT SUPPORT AT LEVEL 2 ALONG GRIDLINE G

NOTES:
1. CONTRACTOR TO SCAN EXISTING CONCRETE WITH 3D GROUND PENETRATION RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING.
2. PLACE PIPE SUPPORTS AT 5'-1" (MAX).
3. COORDINATE LOCATIONS OF PIPES AND CONDUIT WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.

2 RBSB0922 **SECTION** SCALE: 3/4" = 1'-0"



PIPE/CONDUIT SUPPORT AT LEVEL 2 ALONG GRIDLINE II

NOTES:
1. CONTRACTOR TO SCAN EXISTING CONCRETE WITH 3D GROUND PENETRATION RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING.
2. PLACE STEEL BEAMS AT 10'-0".
3. COORDINATE LOCATIONS OF PIPES AND CONDUIT WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.

3 RBSB0922 **SECTION** SCALE: 3/4" = 1'-0"

Project Number: 62421
7/13/2018 5:15:19 PM

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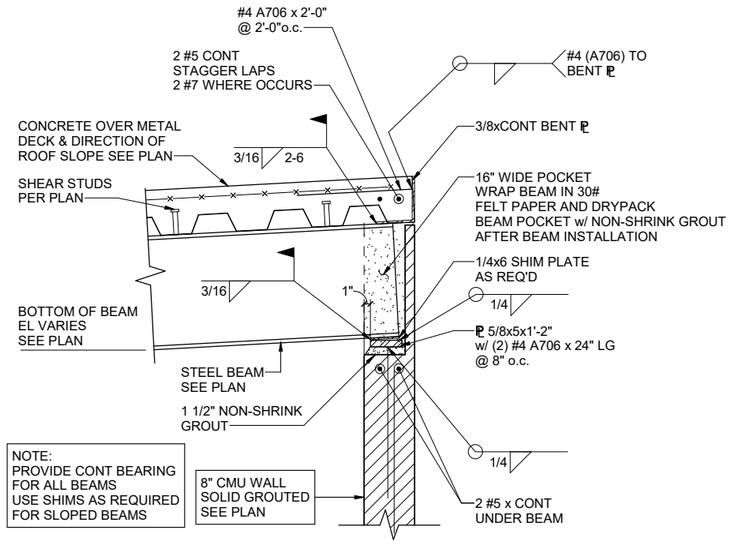
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Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

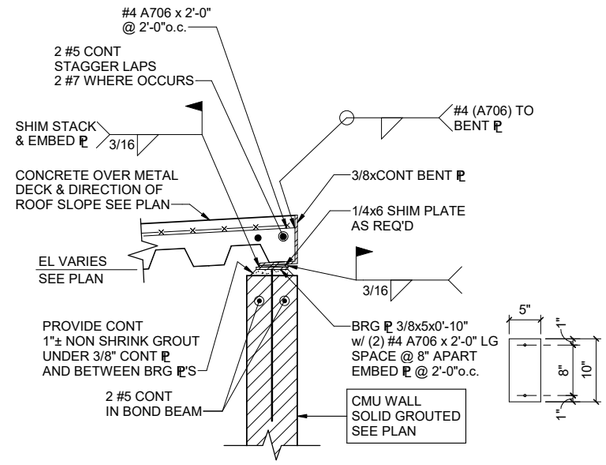
RCC STATION
STRUCTURAL
STANDARD FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0922**
Sheet Reference No:
V5 - 202 of 218



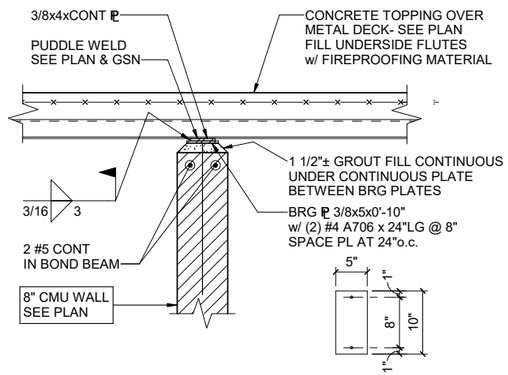
STEEL BEAM AT MASONRY WALL

1 **SECTION**
RBSB0923 SCALE: 1" = 1'-0"



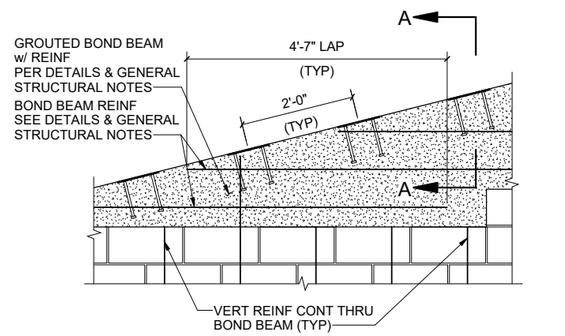
CONCRETE OVER STEEL
DECK AT MASONRY WALL

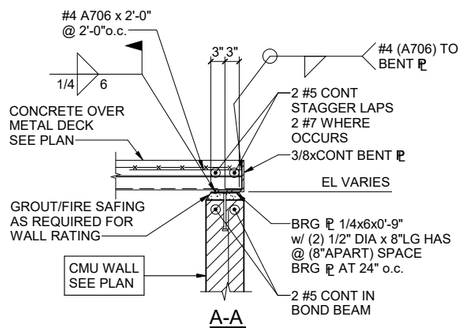
2 **SECTION**
RBSB0923 SCALE: 1" = 1'-0"



CONCRETE OVER STEEL DECK
AT INTERIOR MASONRY WALL

3 **SECTION**
RBSB0923 SCALE: 1" = 1'-0"





TYPICAL STEPPED BOND BEAM (SLOPED)

4 **SECTION**
RBSB0923 SCALE: 3/4" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant: Gannett Fleming

Design Sub-Consultant

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

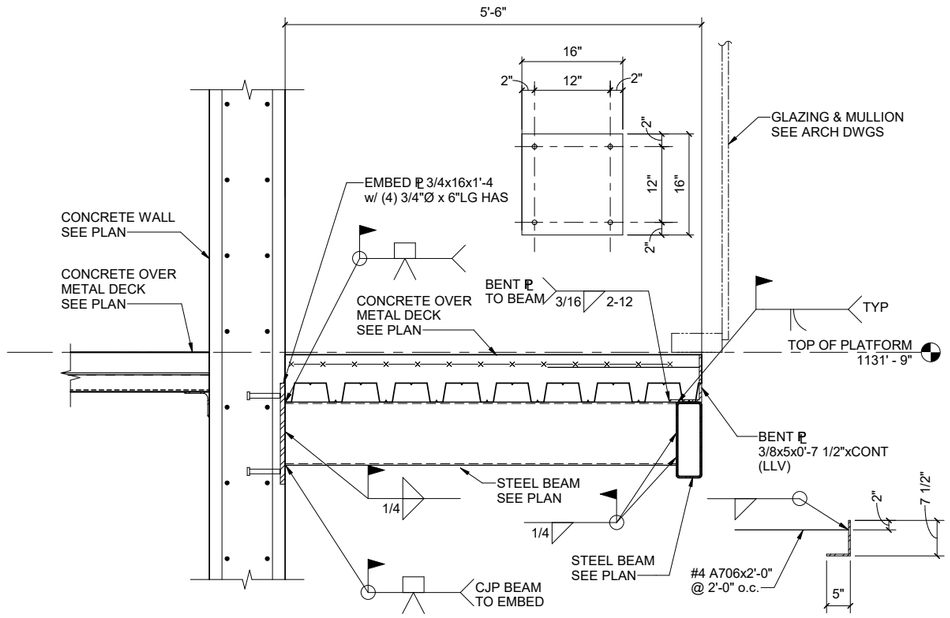
Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

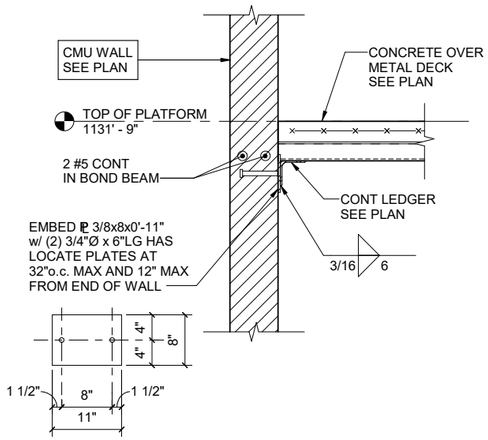
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Sheet Reference No: V5 - 203 of 218

Project Number: 62421
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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt



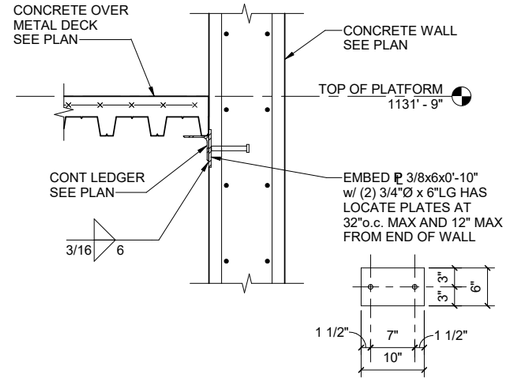
PLATFORM BEAM AT STAIR CORE

1 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"



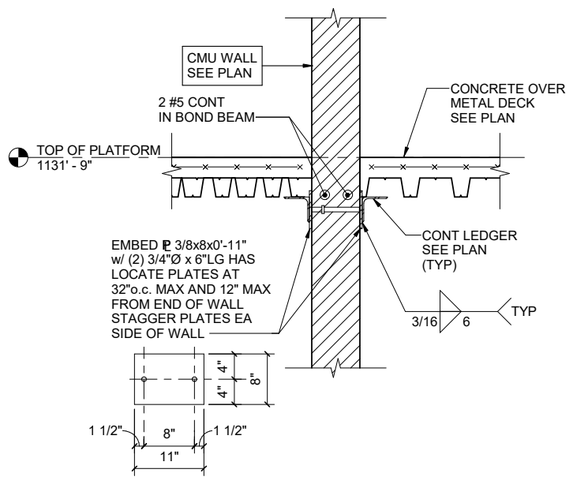
STEEL LEDGER AT MASONRY WALL

2 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"



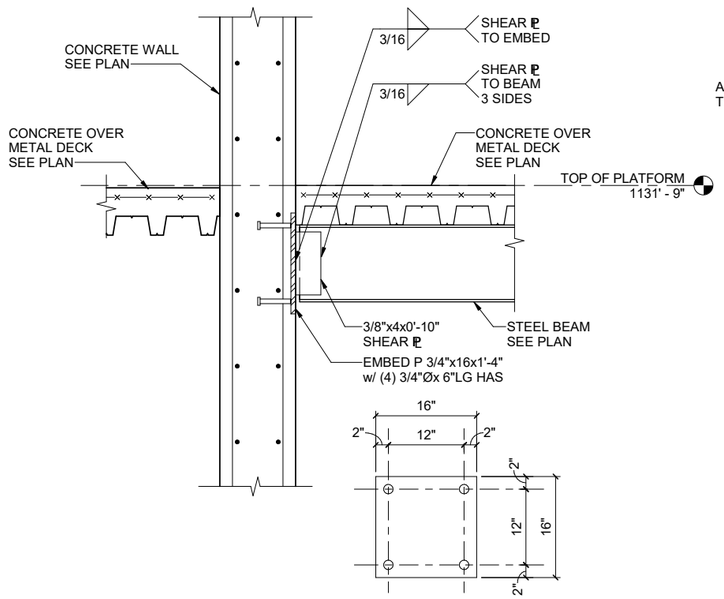
STEEL LEDGER AT CONCRETE WALL

3 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"



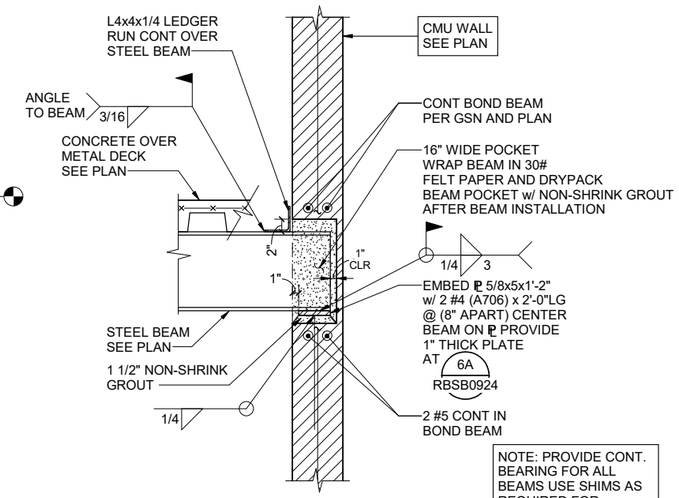
STEEL LEDGERS AT MASONRY WALL

4 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"



STEEL BEAM AT CONCRETE WALL

5 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"



NOTE: PROVIDE CONT. BEARING FOR ALL BEAMS USE SHIMS AS REQUIRED FOR SLOPED BEAMS

STEEL BEAM AT MASONRY WALL

6 **SECTION**
RBSB0924 SCALE: 1" = 1'-0"

6A **SECTION**
RBSB0924 SCALE: 1" = 1'-0"

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	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant: Gannett Fleming

Design Sub-Consultant

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV100000011
KIVA No.:	07-5204

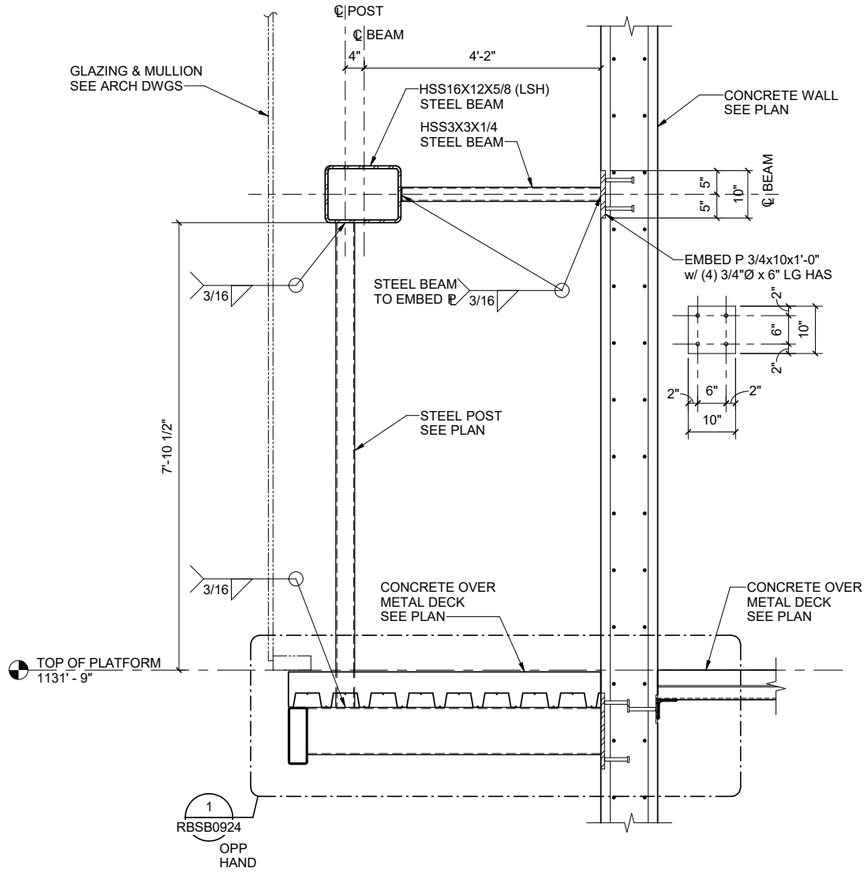
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0924**
Sheet Reference No: V5 - 204 of 218

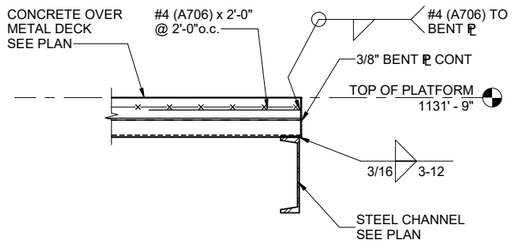
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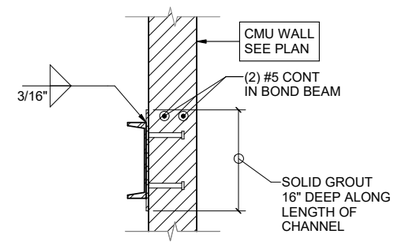
HEADER FRAME

1 **SECTION**
RBSB0925 SCALE: 3/4" = 1'-0"

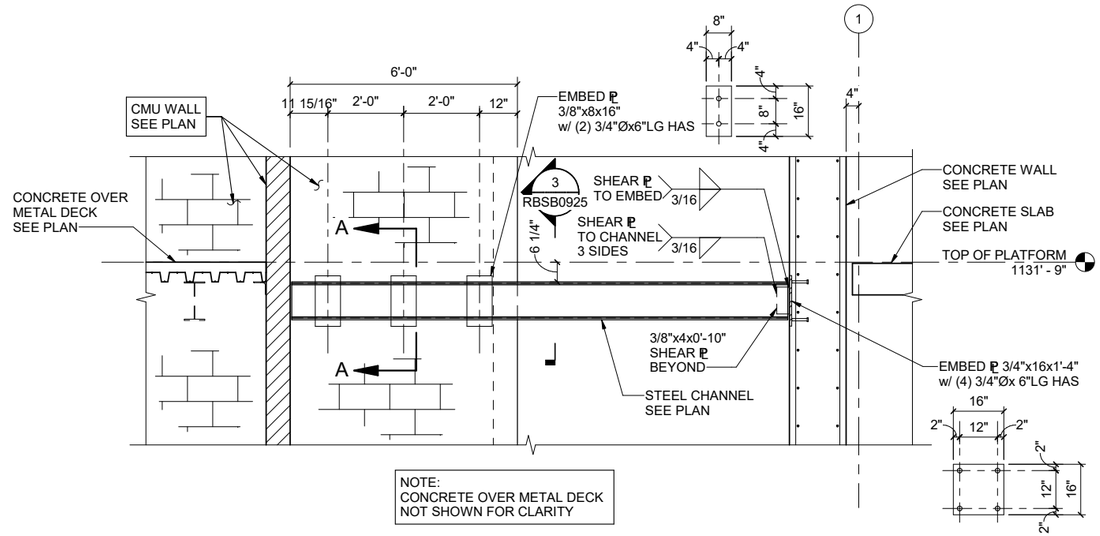


CONCRETE OVER METAL DECK AT EDGE CHANNEL

3 **SECTION**
RBSB0925 SCALE: 1" = 1'-0"



A-A



NOTE:
CONCRETE OVER METAL DECK
NOT SHOWN FOR CLARITY

EDGE CHANNEL AT MASONRY WALL

2 **SECTION**
RBSB0925 SCALE: 1/2" = 1'-0"

Local File:BIM 360://62421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Project Number: 62421
7/13/2018 5:15:25 PM

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/13/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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

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	SUBMITTED FOR REVIEW	04/06/18

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

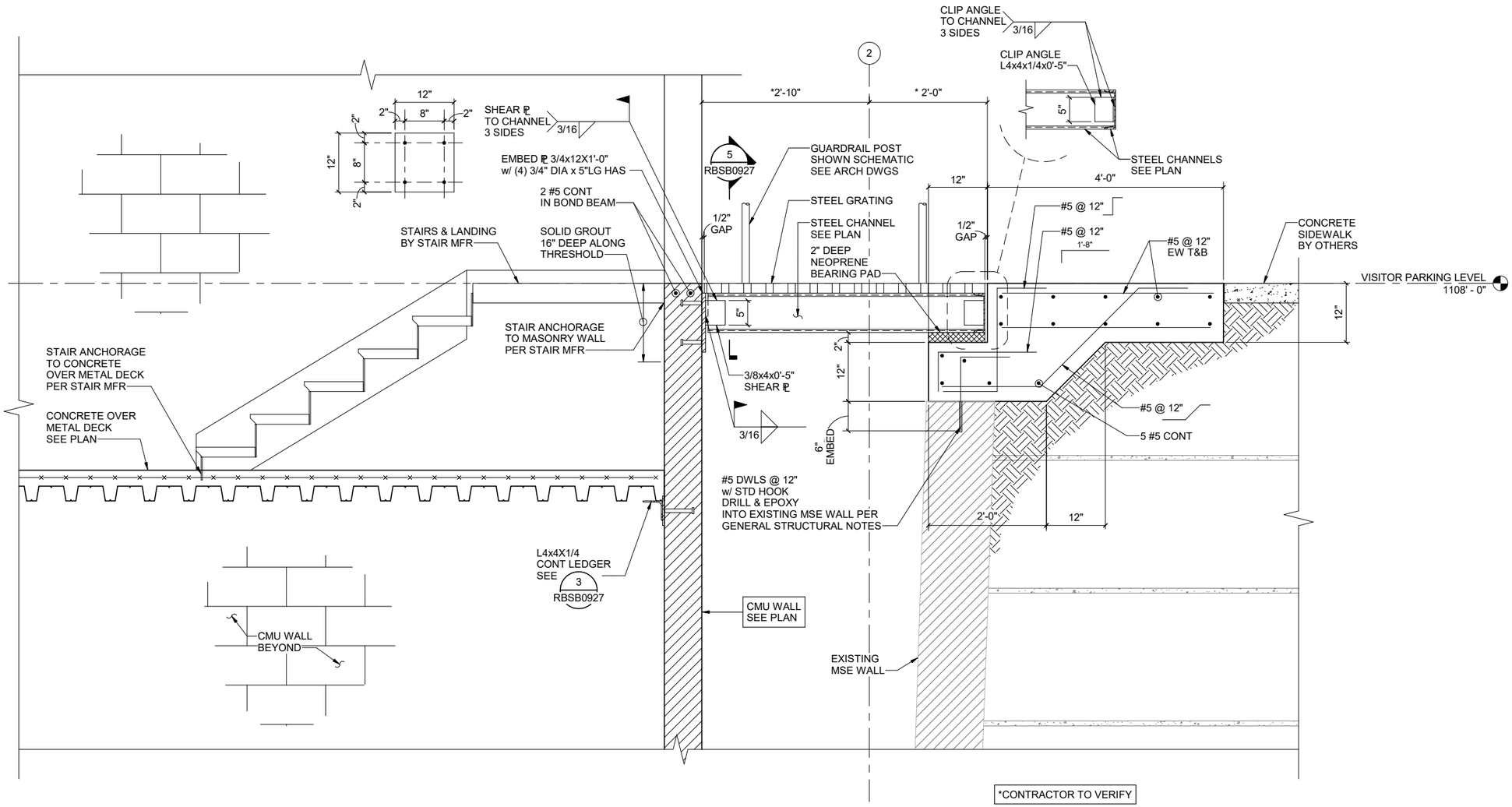
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0925**
Sheet Reference No:
V5 - 205 of 218



STEEL BEAM AT MASONRY WALL AND CONCRETE SLAB

1 RBSB0926 **SECTION**
SCALE: 1" = 1'-0"

Project Number: 62421
7/13/2018 5:15:26 PM
Local File:BIM 360://62421 – Phoenix Sky Train Project - Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Registered Professional Engineer (Structural)
SHANE E. SWEETEN
No. 44434
Date Signed 7/9/18
ARIZONA, U.S.A.
EXPIRES 9/30/19

Design Sub-Consultant

Design Consultant
Gannett Fleming

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	ISSUED FOR CONSTRUCTION	07/13/18

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

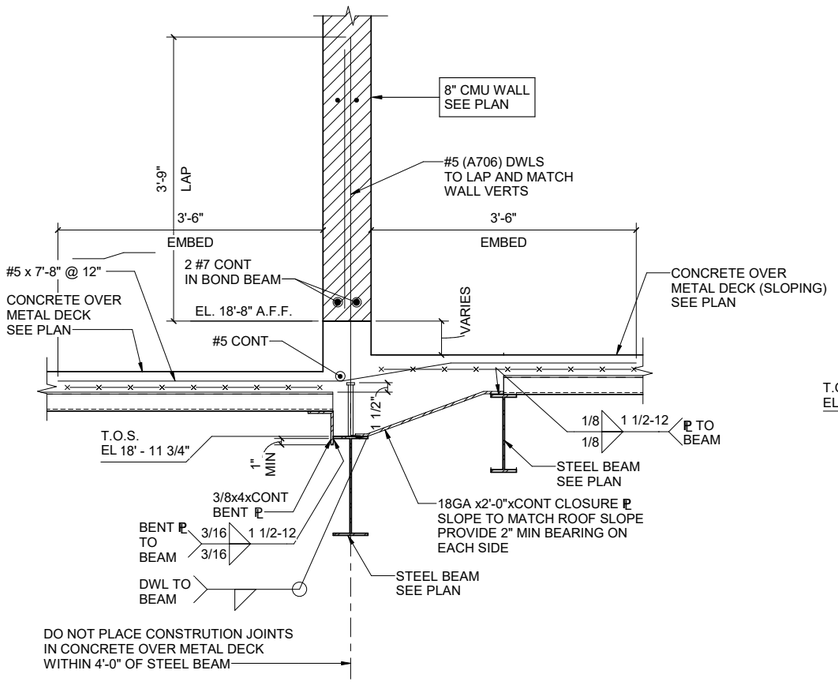
PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

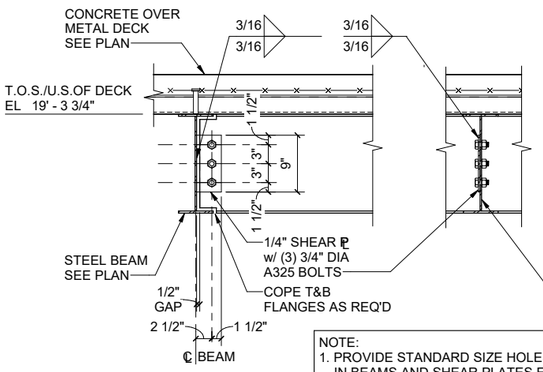
RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0926**
Sheet Reference No:
V5 - 206 of 218



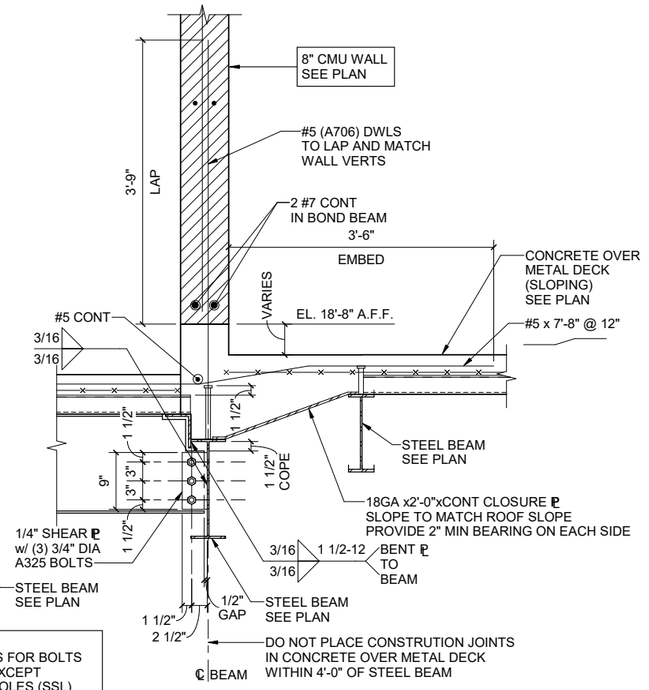
CONCRETE SLAB OVER METAL DECK AT STEEL BEAM

1 RBSB0927 **SECTION**
SCALE: 1" = 1'-0"

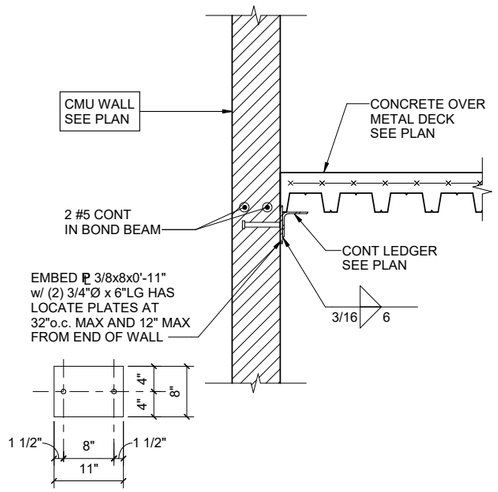


NOTE:
1. PROVIDE STANDARD SIZE HOLES FOR BOLTS IN BEAMS AND SHEAR PLATES EXCEPT HORIZONTAL SHORT SLOTTED HOLES (SSL) MAY BE PROVIDED IN SHEAR PLATE
2. ADJACENT FRAMING NOT SHOWN FOR CLARITY
3. FOR INFORMATION NOT SHOWN SEE 1 RBSB0927

STEEL BEAM TO STEEL BEAM CONNECTION

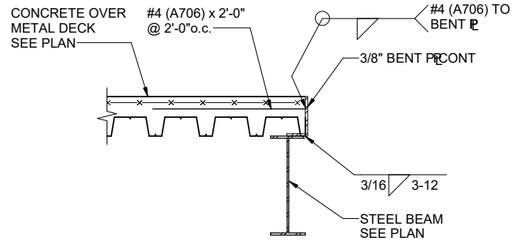


2 RBSB0927 **SECTION**
SCALE: 1" = 1'-0"



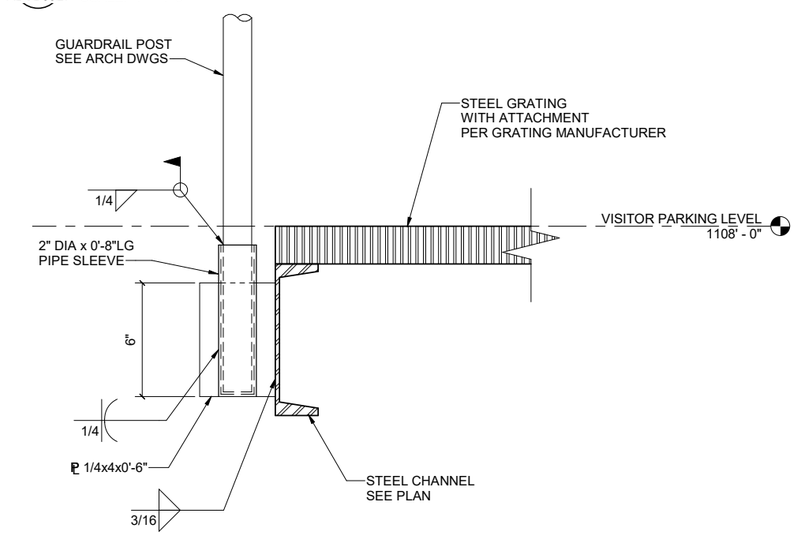
STEEL LEDGER AT MASONRY WALL

3 RBSB0927 **SECTION**
SCALE: 1" = 1'-0"



CONCRETE OVER METAL DECK AT STEEL BEAM CHANNEL

4 RBSB0927 **SECTION**
SCALE: 1" = 1'-0"



GUARDRAIL AT STEEL CHANNEL

5 RBSB0927 **SECTION**
SCALE: N.T.S.

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

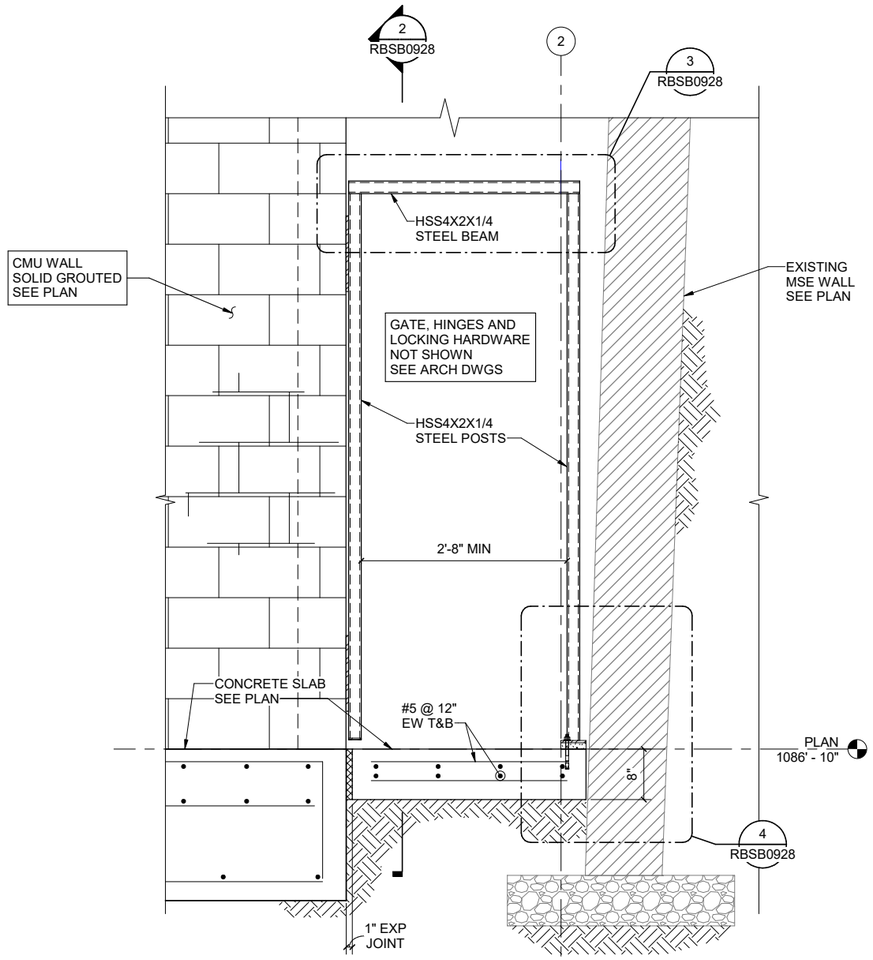
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: B04 - RBSB0927

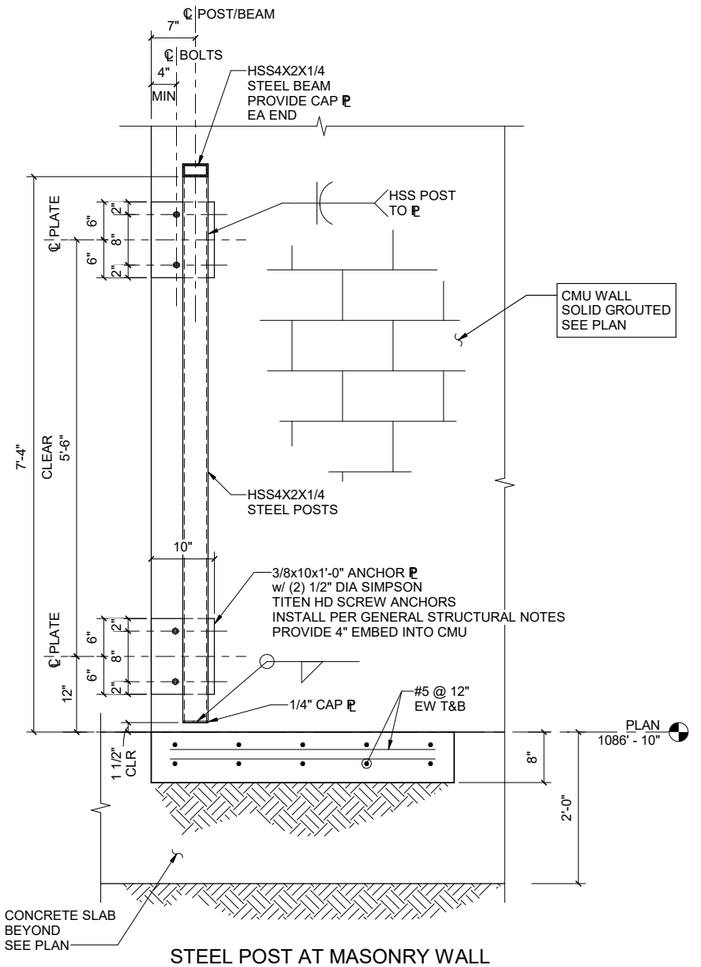
Sheet Reference No: V5 - 207 of 218

Project Number: 62421
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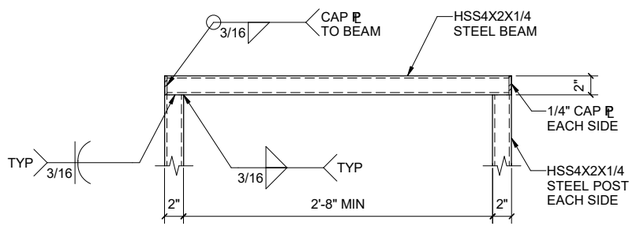
GATE FRAME

1 RBSB0928 **SECTION** SCALE: 1" = 1'-0"



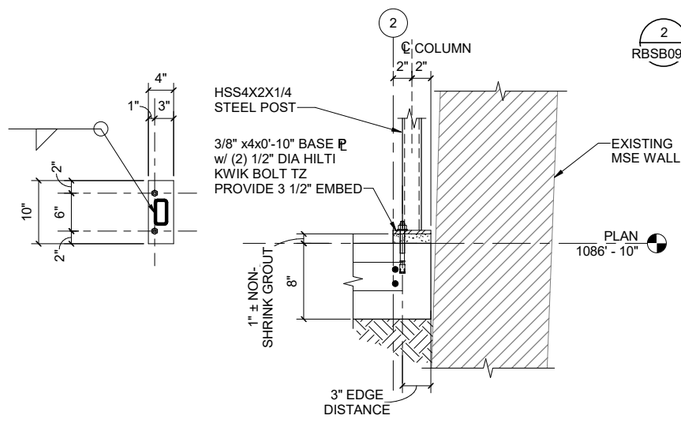
STEEL POST AT MASONRY WALL

2 RBSB0928 **SECTION** SCALE: 1" = 1'-0"



STEEL BEAM AT STEEL POST

3 RBSB0928 **DETAIL** SCALE: 1 1/2" = 1'-0"



STEEL POST AT CONCRETE SLAB

4 RBSB0928 **DETAIL** SCALE: 1 1/2" = 1'-0"

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Design Sub-Consultant

Design Consultant

Gannett Fleming

CITY OF PHOENIX AVIATION DEPARTMENT

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

Designed by:	ACK	Drawn by:	MWK	Checked by:	SES	Date:	07/13/2018
Dwg scale:	AS NOTED	CIP No.:	AV10000011	KIVA No.:	07-5204		

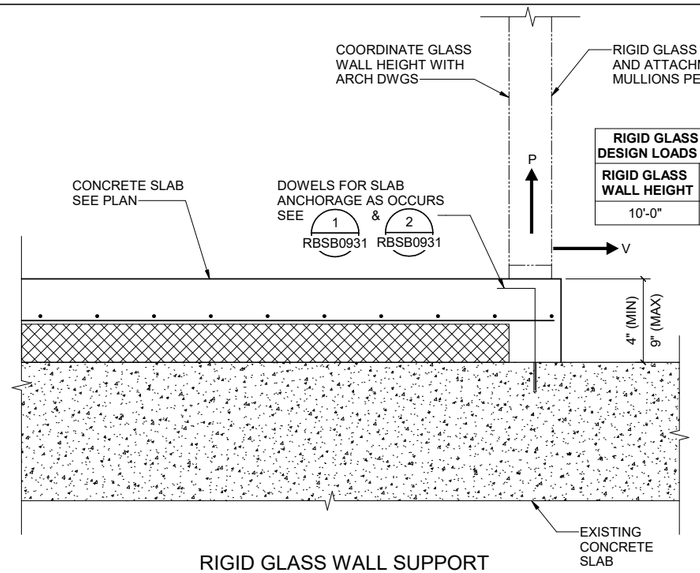
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0928**

Sheet Reference No:
V5 - 208 of 218

Project Number: 62421
7/13/2018 5:15:30 PM
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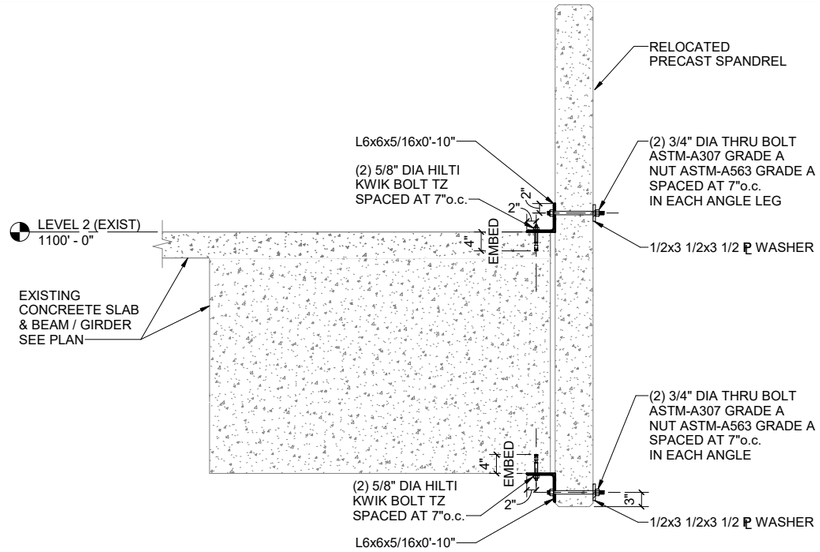


RIGID GLASS WALL MAXIMUM DESIGN LOADS (WIND LOAD LRFD)		
RIGID GLASS WALL HEIGHT	P (KLF)	V (KLF)
10'-0"	0.100	0.400

RIGID GLASS WALL SUPPORT AT CONCRETE SLAB

1 RBSB0929 **SECTION** SCALE: 3/4" = 1'-0"

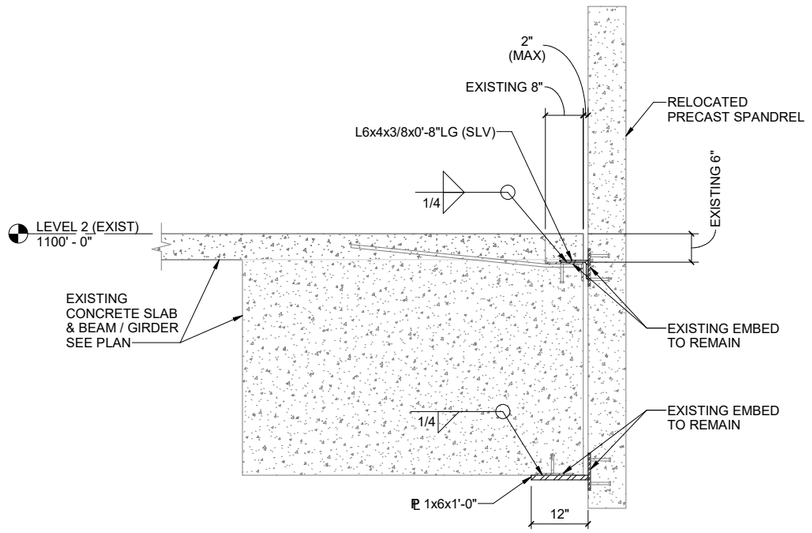
1 PDD COMMENTS



NOTES:
1. CONTRACTOR TO SCAN EXISTING CONCRETE WITH 3D GROUND PENETRATING RADAR (GPR) PRIOR TO START OF WORK. DO NOT CUT OR NICK EXISTING REINFORCING.
2. PROVIDE THREE EMBEDMENTS (MIN) ALONG THE LENGTH OF THE SPANDREL. LOCATE EMBEDS 2'-0" (MIN) FROM EXISTING SPANDREL JOINTS.

RELOCATED PRECAST SPANDREL AT EXISTING CONCRETE BEAM

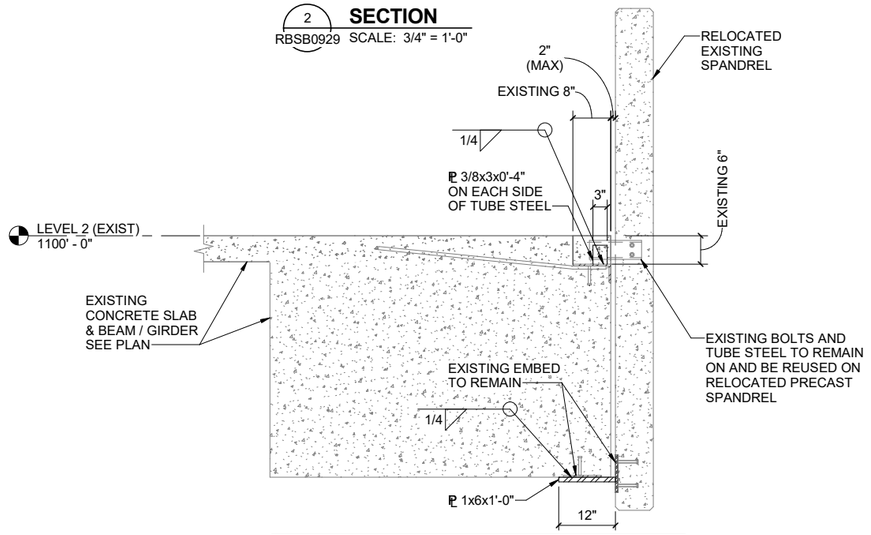
2 RBSB0929 **SECTION** SCALE: 3/4" = 1'-0"



NOTES:
1. USE THIS DETAIL IF THE EXISTING EMBEDS ON THE CONCRETE BEAM MATCH THE EXISTING EMBEDS ON THE RELOCATED SPANDREL. IF THIS DOES NOT OCCUR INSTALL EMBEDS PER 2 RBSB0929.
2. FIELD VERIFY ALL EXISTING CONDITIONS.

RELOCATED PRECAST SPANDRAL AT EXISTING CONCRETE BEAM BLOCKOUT

3 RBSB0929 **SECTION** SCALE: 3/4" = 1'-0"



NOTES:
1. USE THIS DETAIL IF THE EXISTING EMBEDS ON THE CONCRETE BEAM MATCH THE EXISTING EMBEDS ON THE RELOCATED SPANDREL. IF THIS DOES NOT OCCUR INSTALL EMBEDS PER 2 RBSB0929.
2. FIELD VERIFY ALL EXISTING CONDITIONS.

RELOCATED PERCAST SPRANDREL AT EXISTING CONCRETE BEAM BLOCKOUT (END CONDITION)

4 RBSB0929 **SECTION** SCALE: 3/4" = 1'-0"

PER CITY OF PHOENIX ORDINANCE G-4336, THESE PLANS ARE FOR CITY USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATION OF YOUR CONTRACT WITH THE CITY OF PHOENIX

NO.	REVISIONS / SUBMISSIONS	DATE
1	PDD COMMENTS	07/13/18
	ISSUED FOR CONSTRUCTION	07/13/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

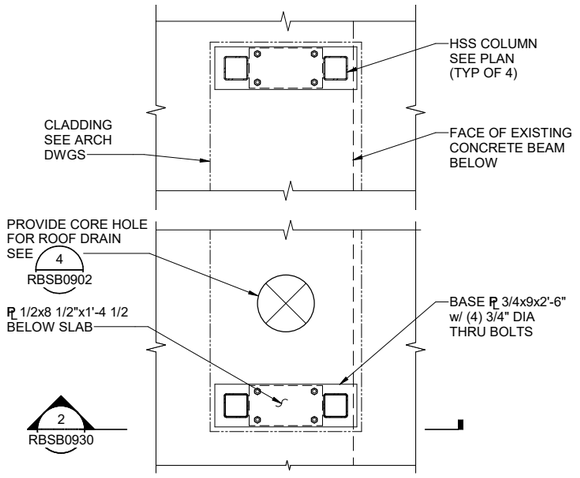
STAGE 2 - B04 DESIGN SUBMISSION

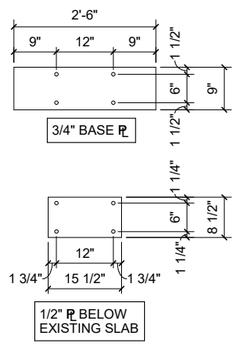
RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0929**

Sheet Reference No:
V5 - 209 of 218

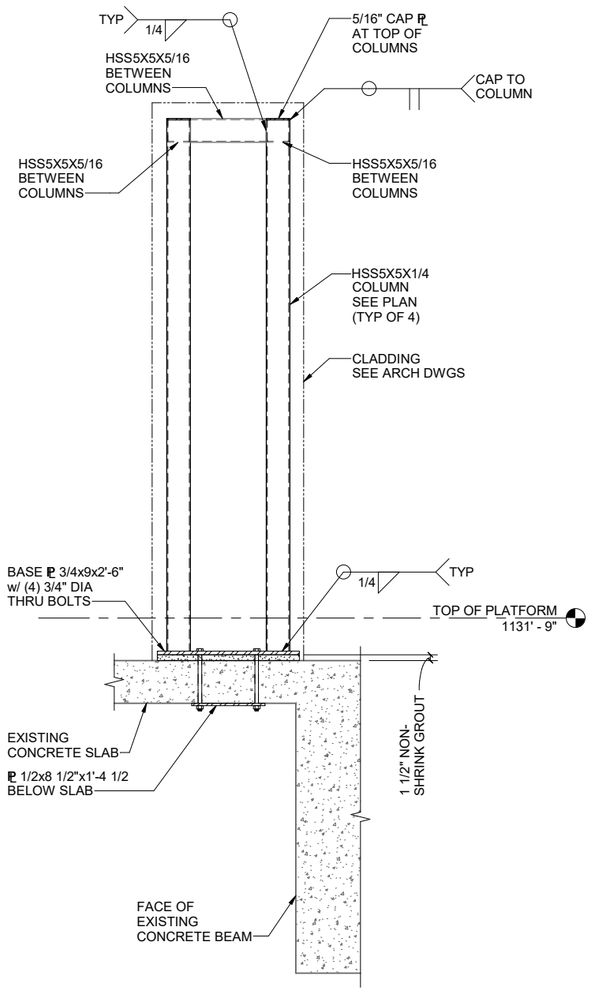
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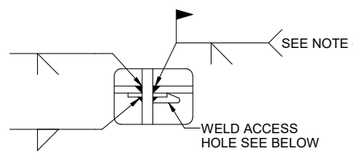
WING WALL BASE PLATE CONNECTION

1 RBSB0930 **DETAIL** SCALE: 3/4" = 1'-0"

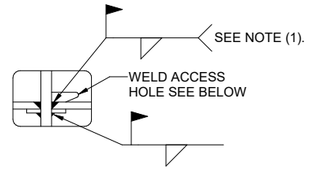


WING WALL TOP AND BOTTOM CONNECTION

2 RBSB0930 **SECTION** SCALE: 3/4" = 1'-0"



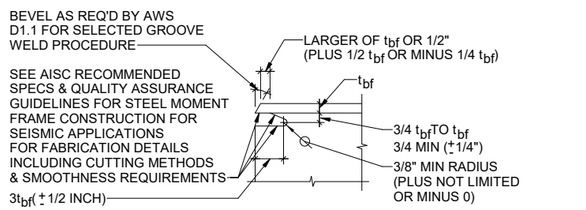
TOP ACCESS HOLE



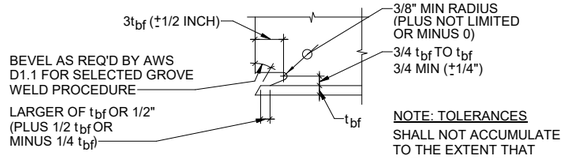
BOTTOM ACCESS HOLE

NOTES:

1. CJP GROOVE WELD AT TOP & BOTTOM FLANGES. AT TOP FLANGE, EITHER (1) REMOVE WELD BACKING, BACKGOUGE, & ADD 5/16" MIN FILLET WELD, OR AT BOTTOM FLANGE, REMOVE WELD BACKING, BACKGOUGE, AND ADD 5/16" MINIMUM FILLET WELD.
2. CJP GROVE WELD FULL LENGTH OF WEB BETWEEN WELD ACCESS HOLES. PROVIDE NON FUSIBLE WELD TABS. REMOVE WELD TABS & GRIND END OF WELD SMOOTH AT ACCESS HOLE.



ACCESS HOLE AT TOP FLANGE



ACCESS HOLE AT BOTTOM FLANGE

NOTE: TOLERANCES

SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25°

MOMENT CONNECTION

3 RBSB0930 **SECTION** SCALE: 3/4" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Consultant: Gannett Fleming

Design Sub-Consultant

Registered Professional Engineer (Structural)
Date Signed 7/13/18
SHANE E. SWEETEN
No. 44434
ARIZONA, U.S.A.
EXPIRES 9/30/19

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

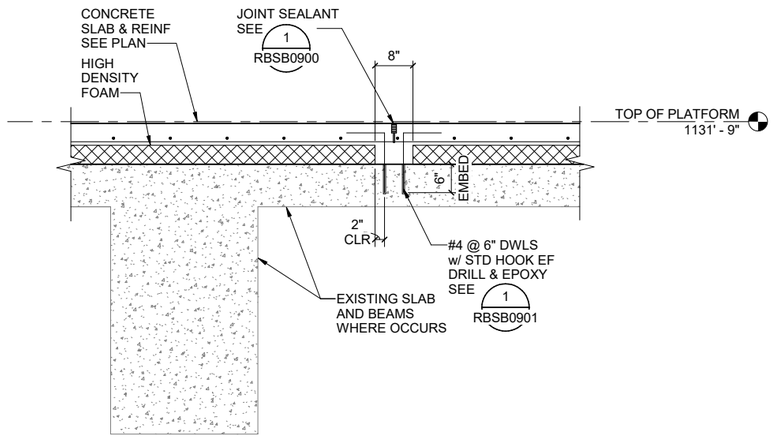
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0930**

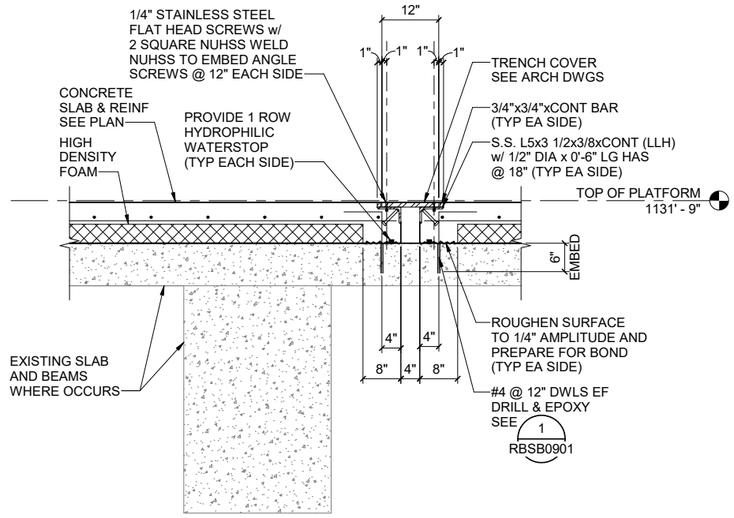
Sheet Reference No: V5 - 210 of 218

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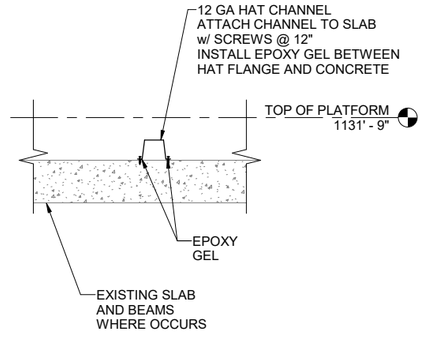
NOTE:
1. FOR RIGID INSULATION FOAM PROVIDE CELLULAR POLYSTYRENE THERMAL INSULATION COMPLIANT WITH ASTM C587 TYPE VII. PROVIDE STYROFOAM HIGHLOAD.

CONCRETE SLAB OVER HIGH DENSITY FOAM SLAB JOINTS



NOTE:
1. FOR RIGID INSULATION FOAM PROVIDE CELLULAR POLYSTYRENE THERMAL INSULATION COMPLIANT WITH ASTM C587 TYPE VII. PROVIDE STYROFOAM HIGHLOAD.

DRAINAGE CHANNEL AT EXISTING CONCRETE



DRAINAGE CHANNEL AT EXISTING CONCRETE

1 RBSB0931 **SECTION** SCALE: 3/4" = 1'-0"

2 RBSB0931 **SECTION** SCALE: 3/4" = 1'-0"

3 RBSB0931 **SECTION** SCALE: 3/4" = 1'-0"

Project Number: 62421
7/13/2018 5:15:34 PM

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Central File: BIM 360://62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant: Gannett Fleming

Design Sub-Consultant

Registered Professional Engineer (Structural) — Date Signed 7/13/18 — 44434 — SHANE E. SWEETEN — ARIZONA, U.S.A. — EXPIRES 9/30/19

NO.	REVISIONS / SUBMISSIONS	DATE

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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

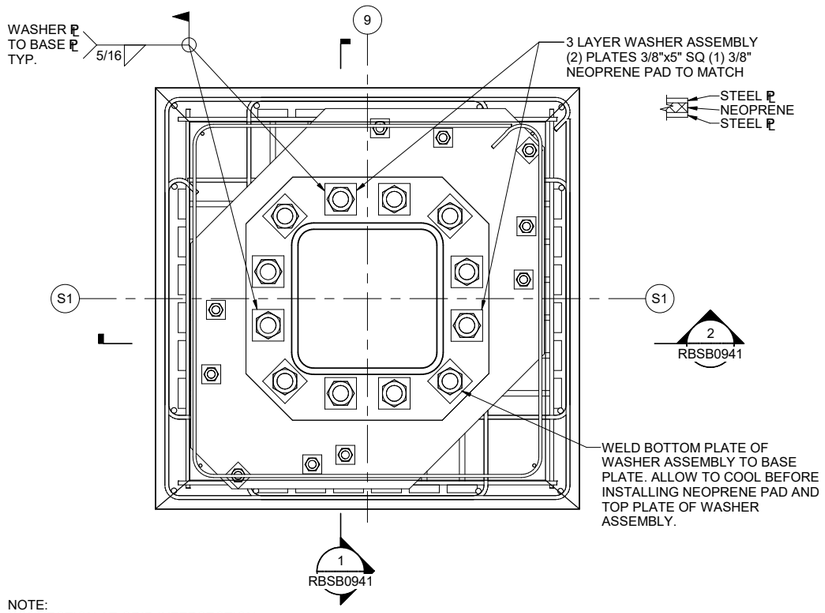
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	ACK
Drawn by:	MWK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	3/4" = 1'-0"
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
CONCRETE SECTIONS AND DETAILS

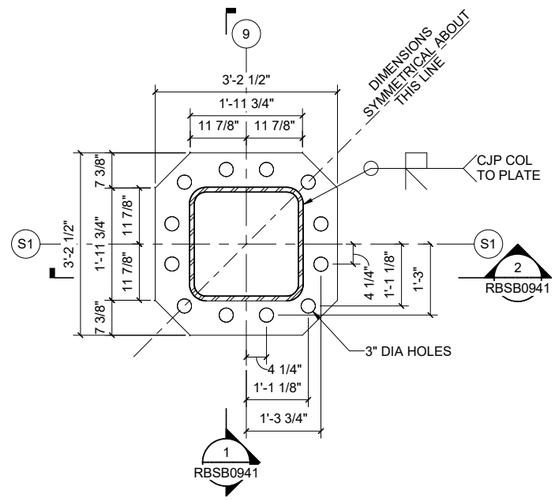
Package: **B04 - RBSB0931**
Sheet Reference No:
V5 - 211 of 218



NOTE:
CONNECTION AT GRID INTERSECTION N1& GRID 9 SIMILAR

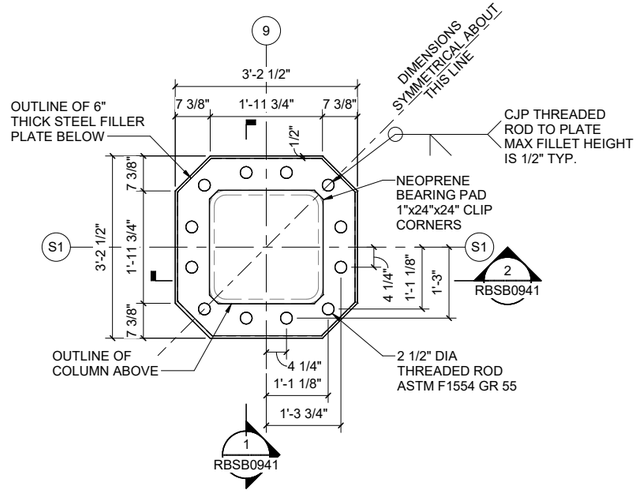
PLAN VIEW

1 RBSB0940 **PINNED COLUMN - BASE CONN. ENLARGED VIEW**
SCALE: 1" = 1'-0"



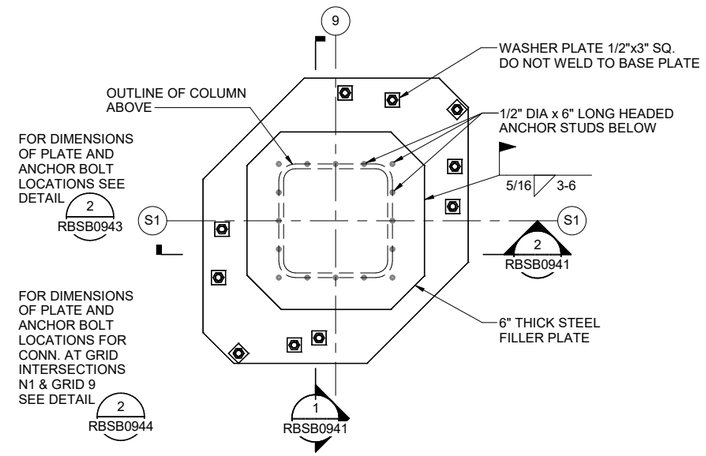
PLAN VIEW

2 RBSB0940 **PINNED COLUMN - COLUMN BASE PLATE**
SCALE: 3/4" = 1'-0"



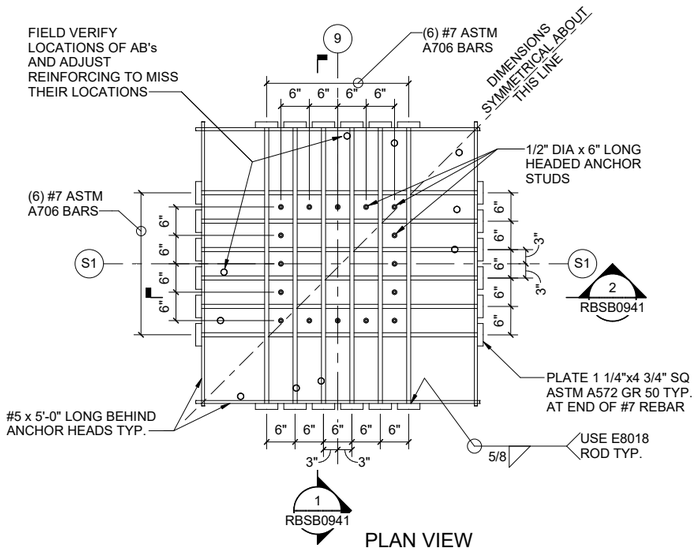
PLAN VIEW

3 RBSB0940 **PINNED COLUMN - BEARING PLATE**
SCALE: 3/4" = 1'-0"



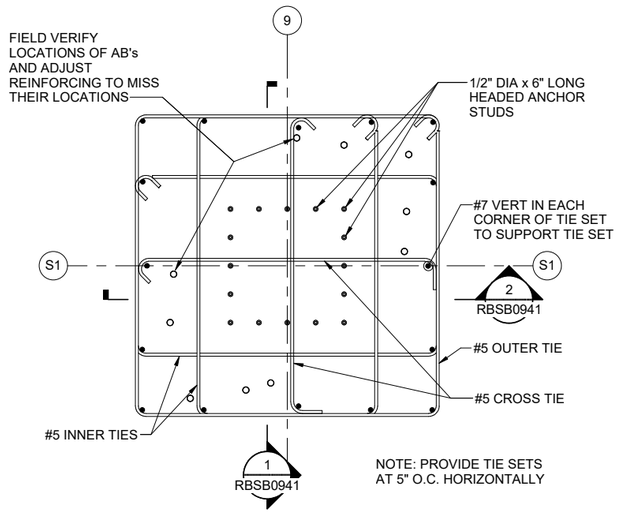
PLAN VIEW

4 RBSB0940 **PINNED COLUMN - MAIN BASE PLATE**
SCALE: 3/4" = 1'-0"



PLAN VIEW

5 RBSB0940 **PINNED COLUMN - MAIN TRANSFER REINF**
SCALE: 3/4" = 1'-0"



PLAN VIEW

6 RBSB0940 **PINNED COLUMN - CONFINEMENT REINF**
SCALE: 3/4" = 1'-0"

Project Number: 62421
7/13/2018 5:15:37 PM

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Central File: BIM 360/62421 - Phoenix Sky Train Project - Stage 2/062421_FR01_S_central_R17_A360.rvt

Design Consultant: Gannett Fleming

Design Sub-Consultant

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

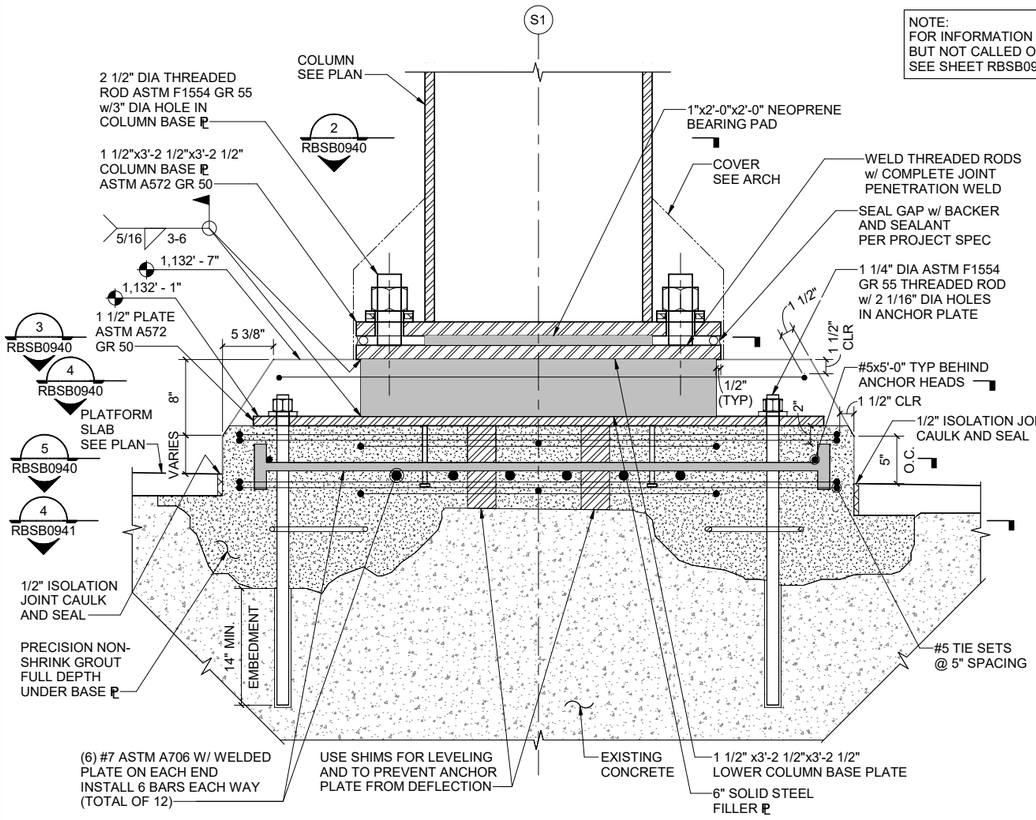
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	SES	
Drawn by:	PEK	
Checked by:	SES	
Date:	07/13/2018	
Dwg scale:	AS NOTED	
CIP No.:	AV10000011	
KIVA No.:	07-5204	

STAGE 2 - B04 DESIGN SUBMISSION

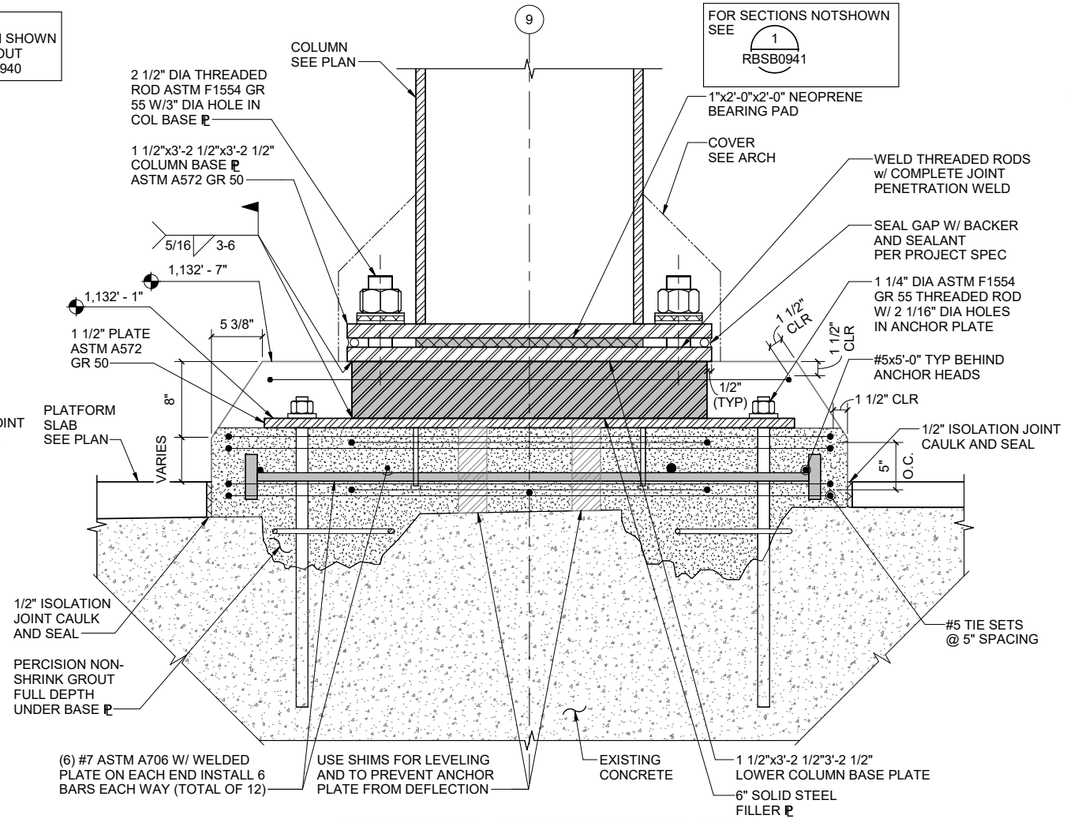
RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: B04 - RBSB0940
Sheet Reference No:
V5 - 212 of 218



NOTE:
FOR INFORMATION SHOWN BUT NOT CALLED OUT SEE SHEET RBSB0940

COLUMN BASE CONNECTION AT S1-GRID 9

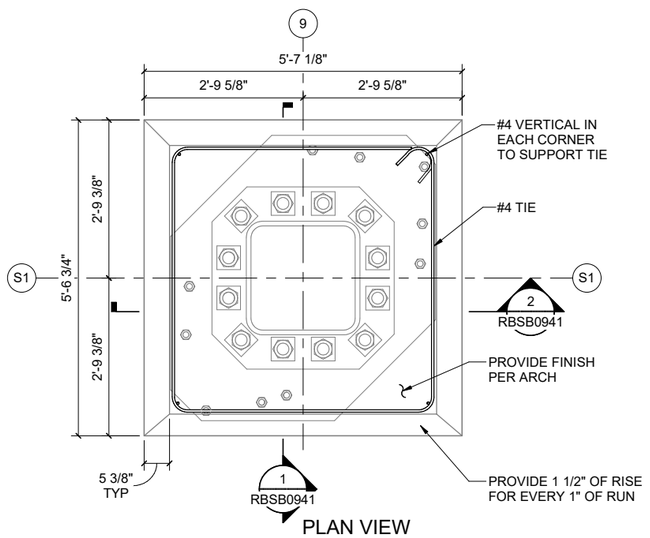


FOR SECTIONS NOTSHOWN SEE 1 RBSB0941

COLUMN BASE - CONNECTION AT S1-GRID 9

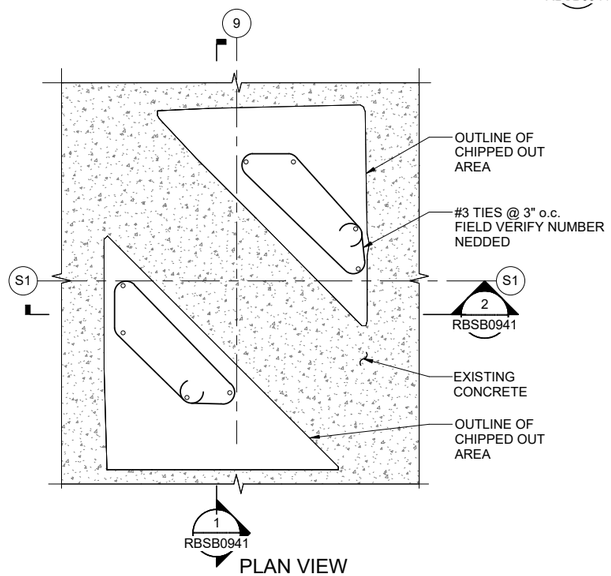
1 RBSB0941 **SECTION** SCALE: 1 1/2" = 1'-0"

2 RBSB0941 **SECTION** SCALE: 1 1/2" = 1'-0"



PLAN VIEW

3 RBSB0941 **PINNED COLUMN - CONC. CAP REINF** SCALE: 3/4" = 1'-0"



PLAN VIEW

4 RBSB0941 **PINNED COLUMN - AB CONTAINMENT REINF** SCALE: 3/4" = 1'-0"

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NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	SES
Drawn by:	PEK
Checked by:	PEK
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

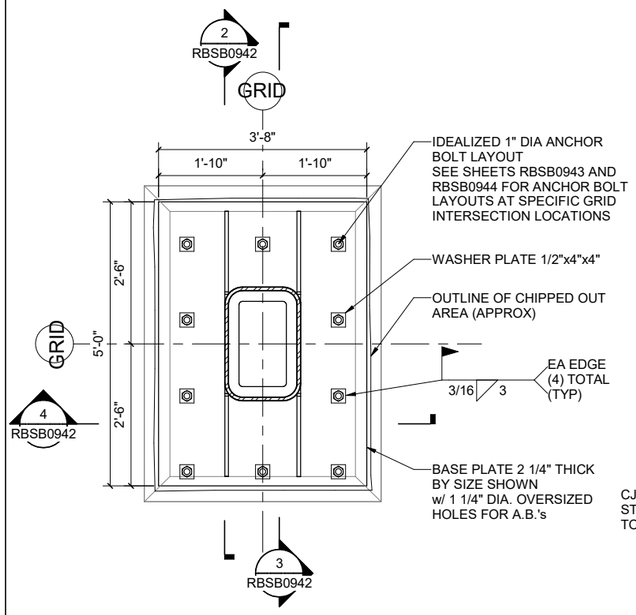
RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: B04 - RBSB0941

Sheet Reference No: V5 - 213 of 218

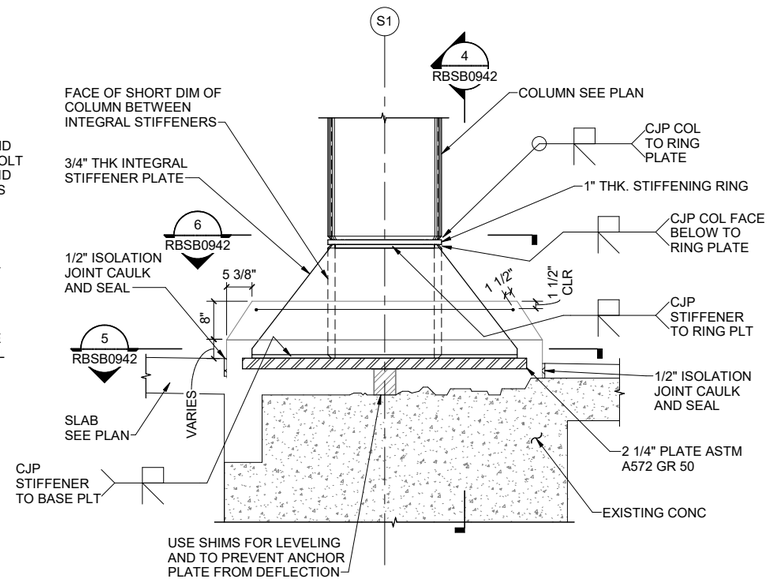
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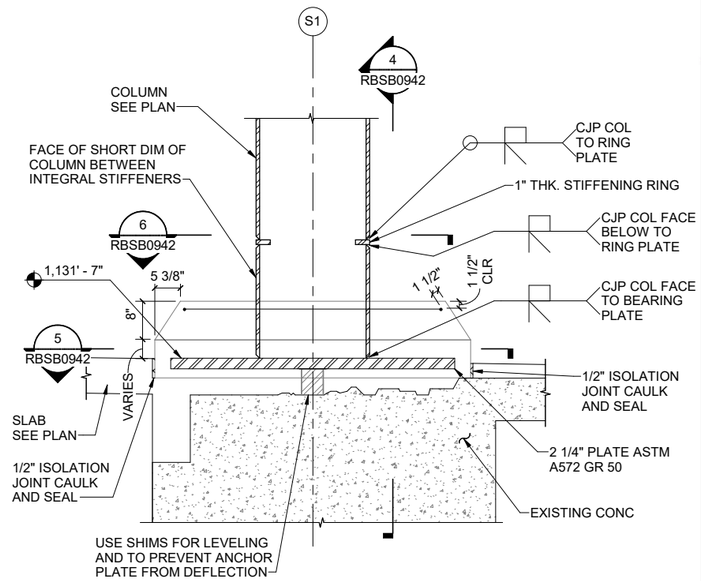
PLAN VIEW

1 **FIXED COLUMN BASE CONN OVERALL VIEW**
RBSB0942 SCALE: 3/4" = 1'-0"



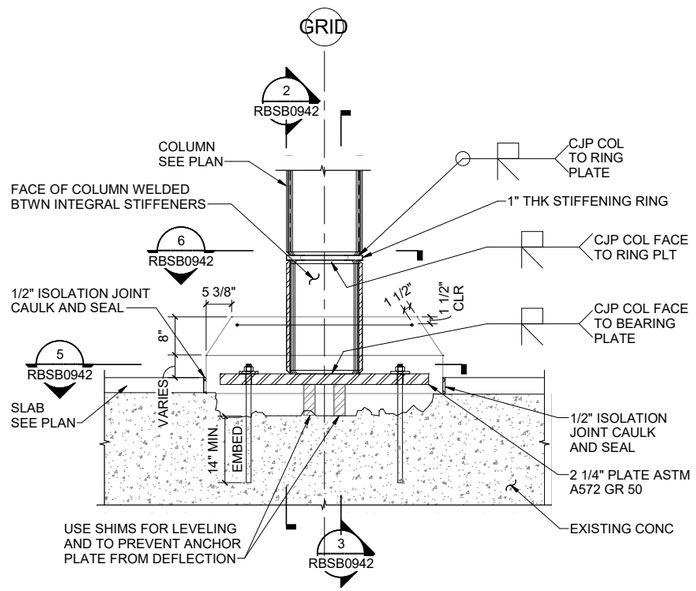
TYP. STIFFENERS AT COLUMN BASE CONN.

2 **SECTION**
RBSB0942 SCALE: 3/4" = 1'-0"



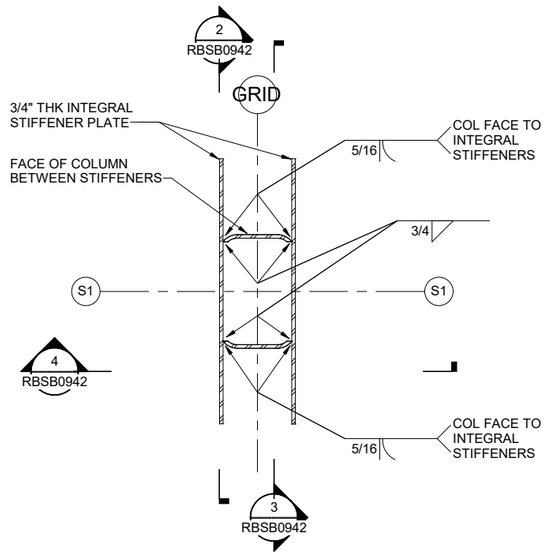
TYP. COLUMN BASE CONN.
ALONG GRIDS G3 TO G8

3 **SECTION**
RBSB0942 SCALE: 3/4" = 1'-0"



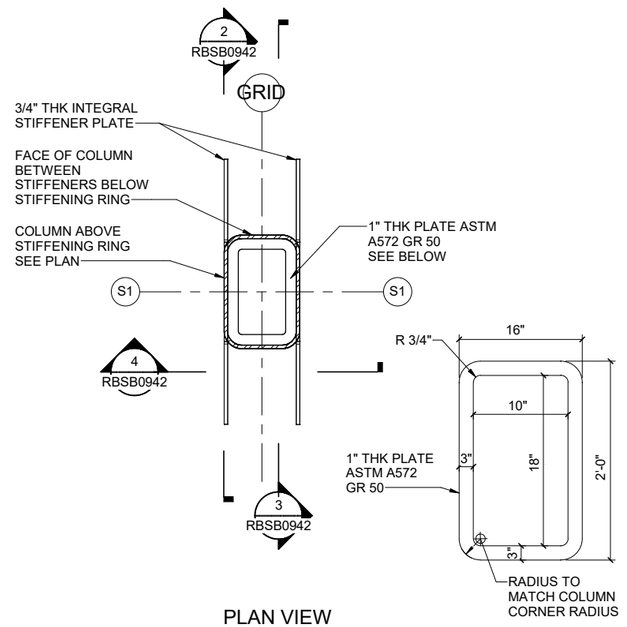
TYP. FIXED COLUMN BASE
CONN. ALONG GRIDS S1/N1

4 **SECTION**
RBSB0942 SCALE: 3/4" = 1'-0"



PLAN VIEW

5 **FIXED BASE COLUMN INTEGRAL STIFFENERS**
RBSB0942 SCALE: 3/4" = 1'-0"



PLAN VIEW

6 **FIXED BASE COLUMN INTERNAL STIFFENING RING**
RBSB0942 SCALE: 3/4" = 1'-0"

Project Number: 62421
7/13/2018 5:15:42 PM

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Central File: BIM 360//62421 - Phoenix Sky Train Project - Stage 2/06242_FR01_S_central_R17_A360.rvt

Design Consultant: Gannett Fleming

Design Sub-Consultant

Professional Engineer (Structural) — Expires 9/30/19 — Date Signed 7/13/18 — 64434 — SHANE E. SWEETEN — ARIZONA, U.S.A.

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

NO.	REVISIONS / SUBMISSIONS	DATE
	ISSUED FOR CONSTRUCTION	07/13/18
	SUBMITTED FOR REVIEW	04/06/18

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

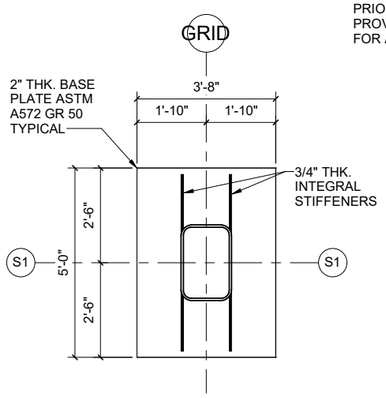
PHX SKY TRAIN
STAGE 2 DESIGN
500 S 24TH STREET
PHOENIX, AZ 85034

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: B04 - RBSB0942
Sheet Reference No:
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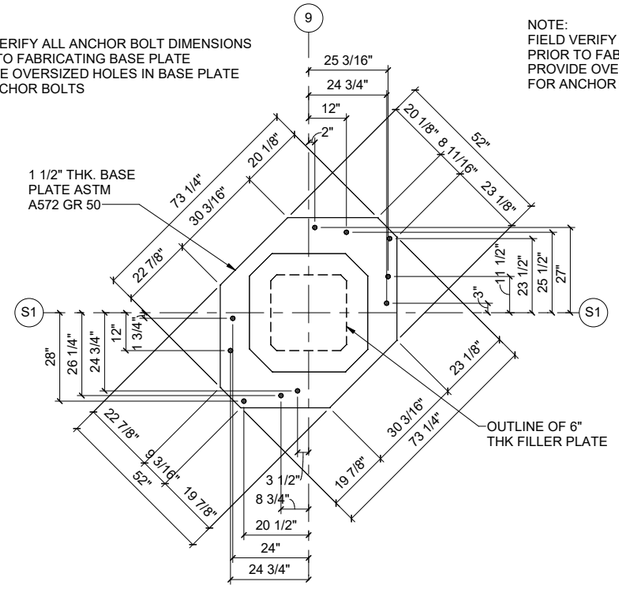
NOTE:
SEE DETAILS THIS SHEET FOR ANCHOR BOLT LOCATIONS

PLAN VIEW

1 RBSB0943 **BASE PLATE AND STIFFENERS**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

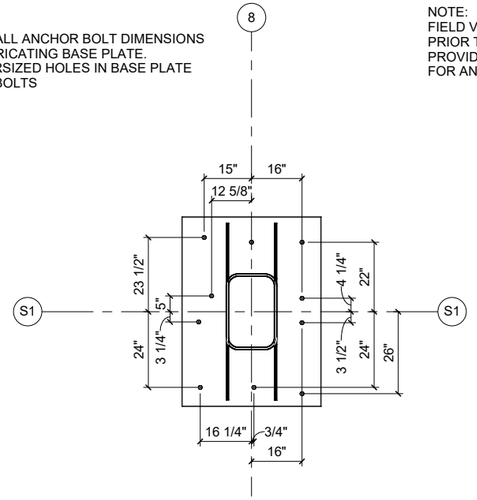


PLAN VIEW

2 RBSB0943 **S1-G9 - BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE.
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

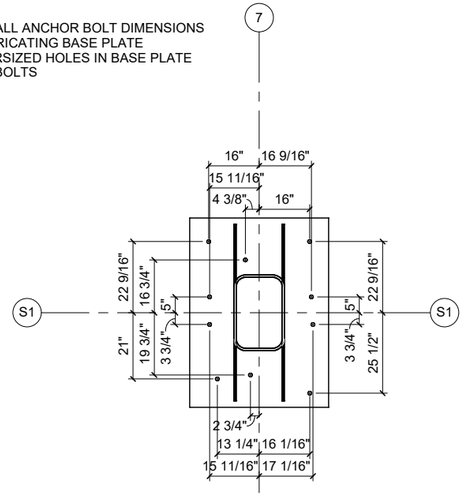


PLAN VIEW

3 RBSB0943 **S1-G8 - BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

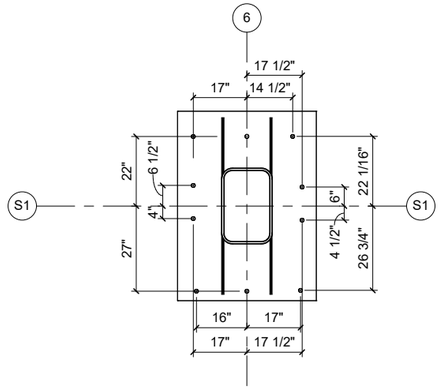


PLAN VIEW

4 RBSB0943 **S1-G7 -BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

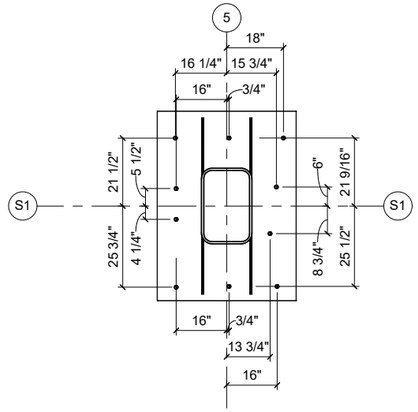


PLAN VIEW

5 RBSB0943 **S1-G6 - BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

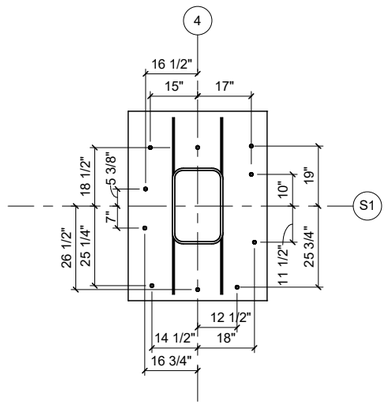


PLAN VIEW

6 RBSB0943 **S1-G5 - BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS

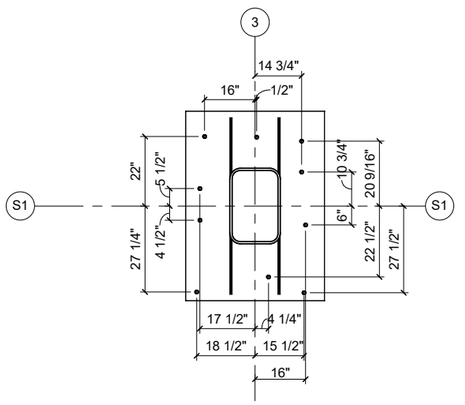


PLAN VIEW

7 RBSB0943 **S1-G4 - BASE PLATE & AB LAYOUT**

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

NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE FOR ANCHOR BOLTS



PLAN VIEW

8 RBSB0943 **S1-G3 - BASE PLATE & AB LAYOUT**

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

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	SUBMITTED FOR REVIEW	04/06/18

Design Sub-Consultant

Design Consultant

Gannett Fleming

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

PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

Designed by:	PEK
Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

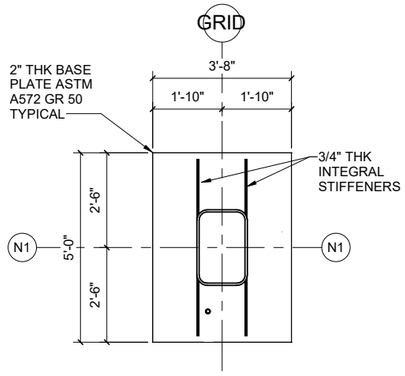
STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
COLUMN BASE PLATES - GRID S1

Package: **B04 - RBSB0943**

Sheet Reference No:
V5 - 215 of 218

Project Number: 62421
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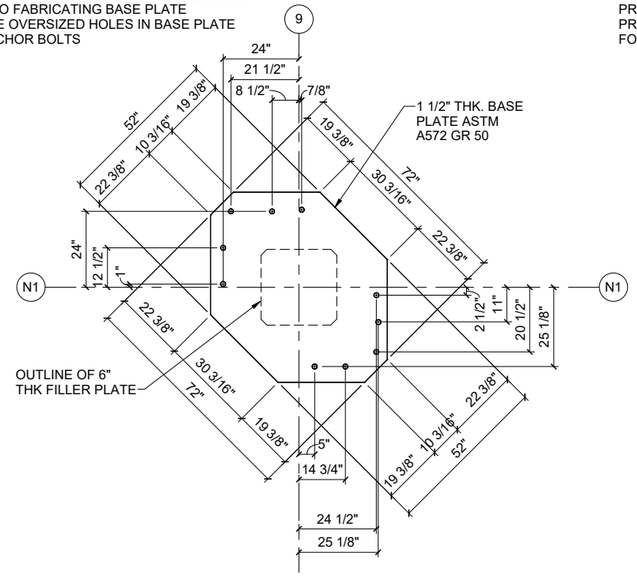


NOTE:
SEE DETAILS THIS SHEET FOR ANCHOR BOLT LOCATIONS

PLAN VIEW

1 **BASE PLATE AND STIFFENERS**
RBSB0944 SCALE: 1/2" = 1'-0"

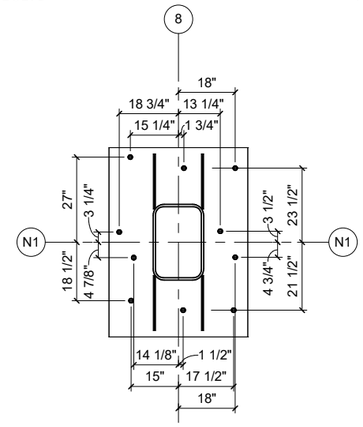
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

2 **N1-G9 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

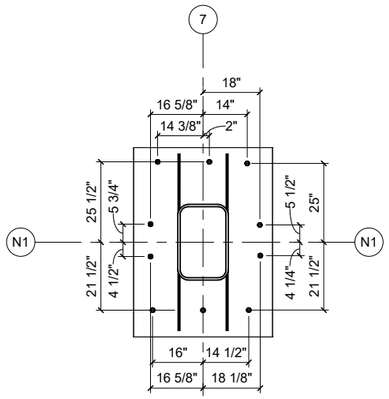
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

3 **N1-G8 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

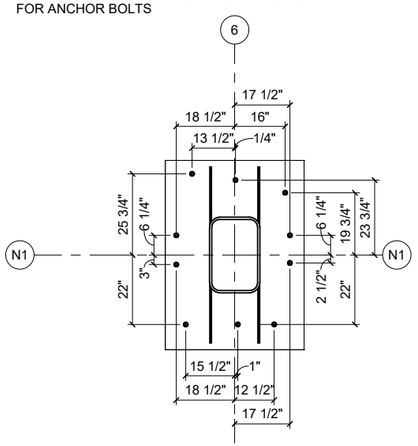
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

4 **N1-G7 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

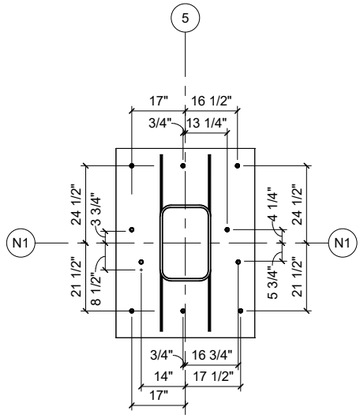
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

5 **N1-G6 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

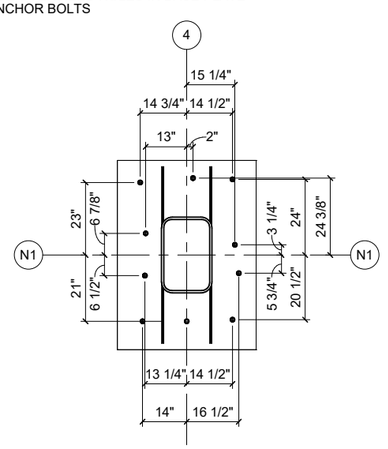
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

6 **N1-G5 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

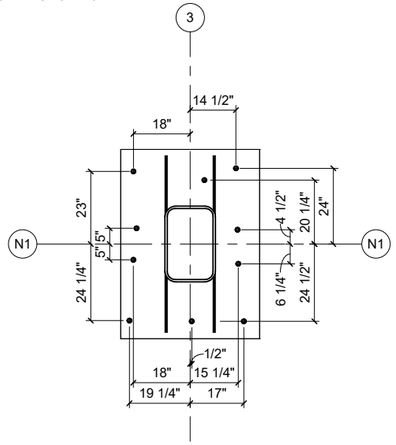
NOTE:
FIELD VERIFY ALL ANCHOR BOLT DIMENSIONS
PRIOR TO FABRICATING BASE PLATE
PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

7 **N1-G4 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

NOTE:
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PROVIDE OVERSIZED HOLES IN BASE PLATE
FOR ANCHOR BOLTS



PLAN VIEW

8 **N1-G3 - BASE PLATE & AB LAYOUT**
RBSB0944 SCALE: 1/2" = 1'-0"

Design Consultant: Gannett Fleming

Design Sub-Consultant

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

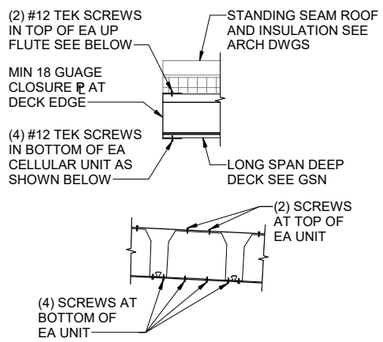
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Drawn by: PEK
Checked by: SES
Date: 07/13/2018
Dwg scale: 1/2" = 1'-0"
CIP No.: AV10000011
KIVA No.: 07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
COLUMN BASE PLATES - GRID N1

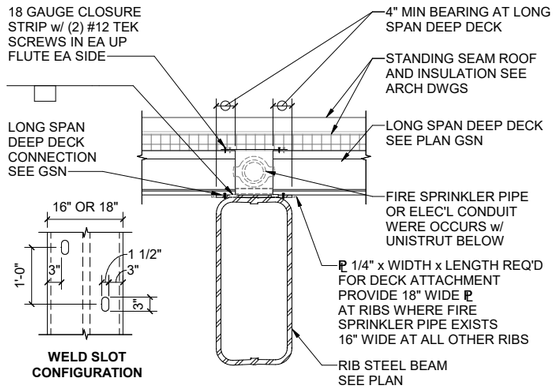
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Sheet Reference No:
V5 - 216 of 218

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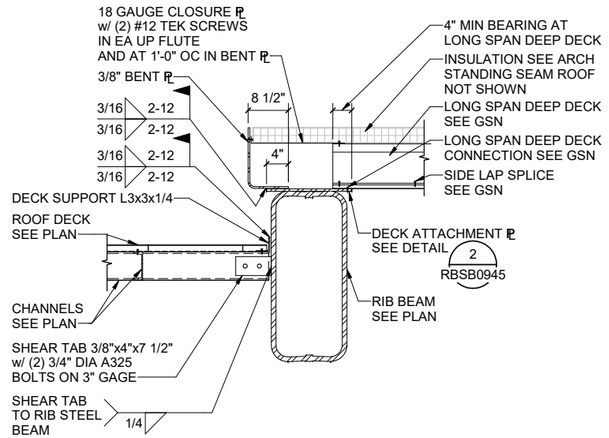
CLOSURE PLATE AT DECK EDGE

1 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



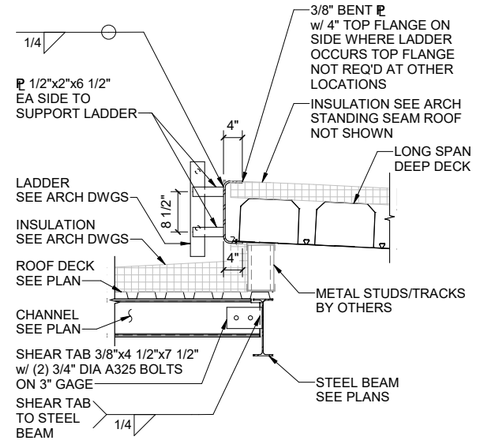
DECK ATTACHMENT PLATE AT RIB BEAM

2 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



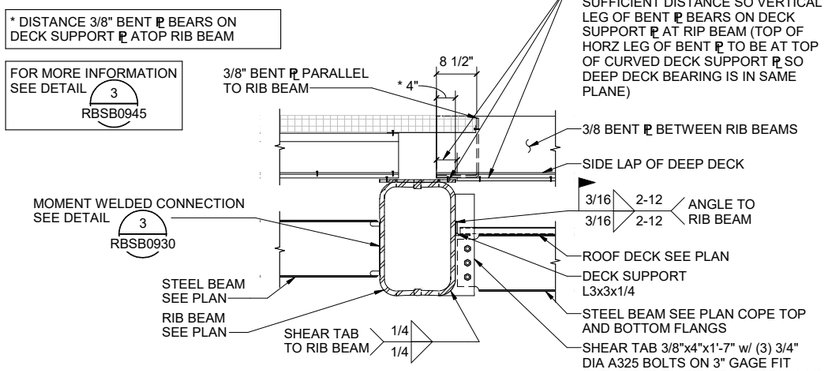
DECK SUPPORT AT MECH'L WELL

3 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



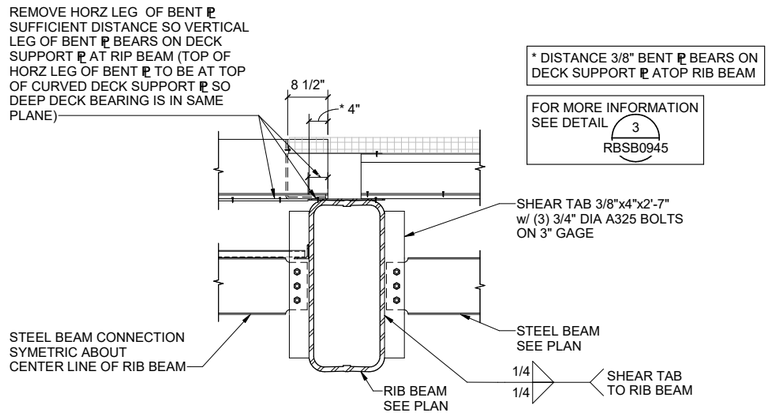
BENT PLATE AT EDGE OF MECH'L WELL

4 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



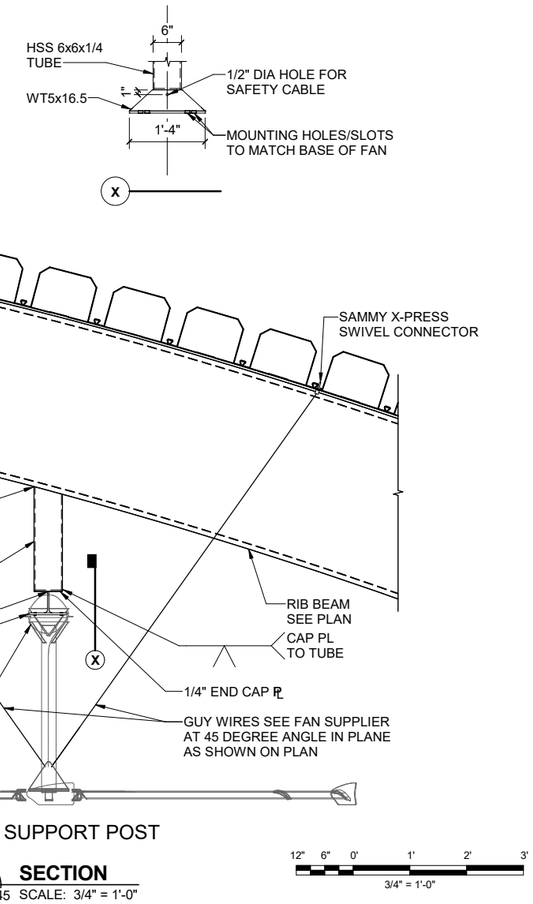
MECH'L WELL FRAMING AT RIB BEAM

5 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



MECH'L WELL FRAMING AT DEEP RIB BEAM

6 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"



FAN SUPPORT POST

7 SECTION
RBSB0945 SCALE: 3/4" = 1'-0"

12" 6" 0' 1' 2' 3'
3/4" = 1'-0"

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Design Sub-Consultant

Design Consultant

Gannett Fleming

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

CITY OF PHOENIX AVIATION DEPARTMENT

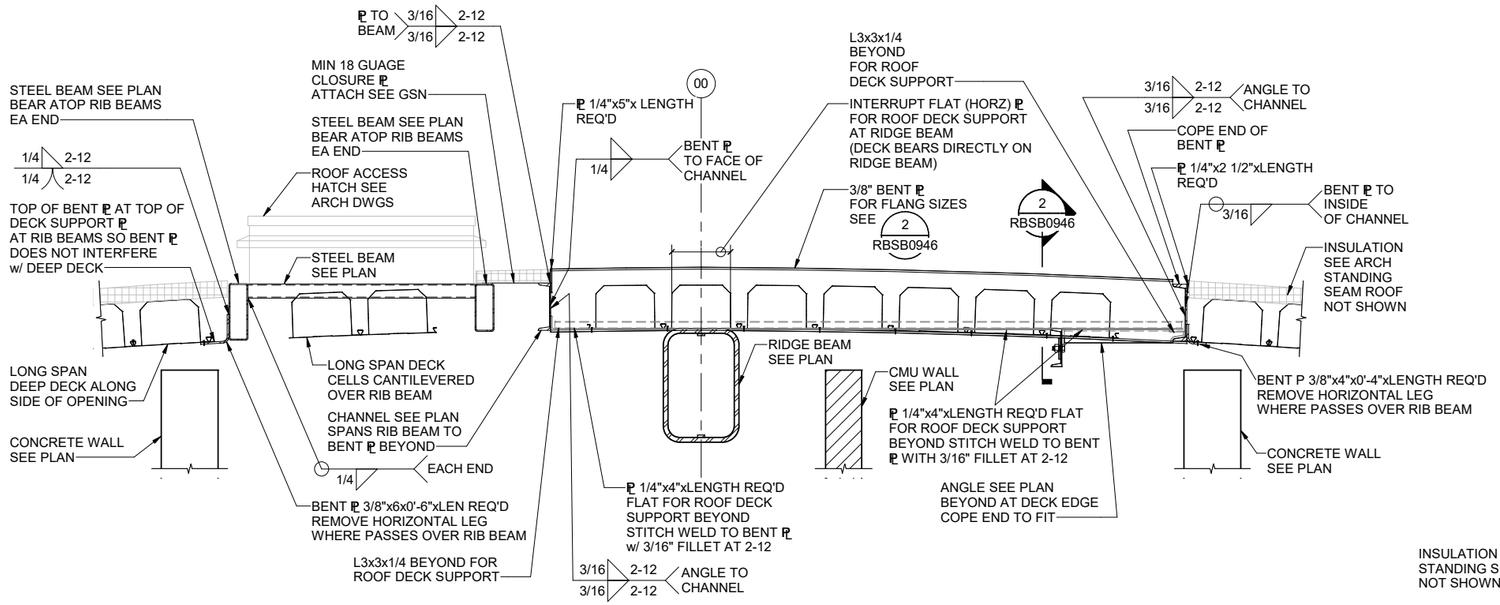
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Drawn by:	PEK
Checked by:	SES
Date:	07/13/2018
Dwg scale:	AS NOTED
CIP No.:	AV10000011
KIVA No.:	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

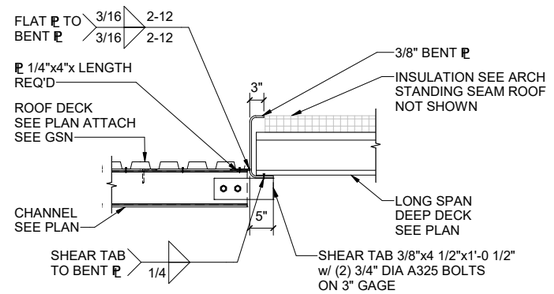
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Sheet Reference No: V5 - 217 of 218

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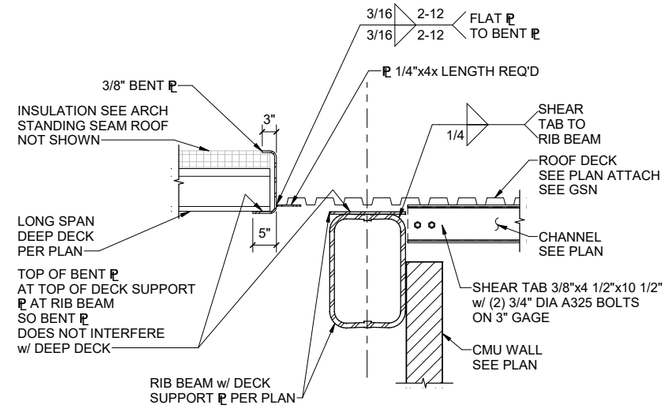
EAST EDGE FRAMING AT ROOF HATCH AREA

1 RBSB0946 **SECTION** SCALE: 3/4" = 1'-0"



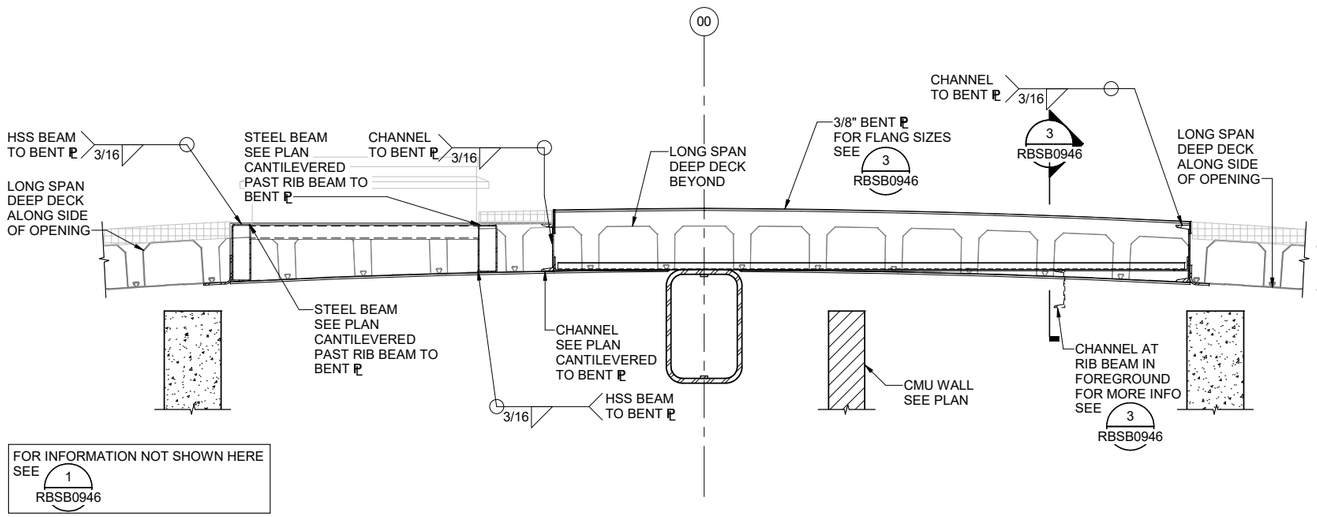
CHANNEL AT BENT PLATE

2 RBSB0946 **SECTION** SCALE: 3/4" = 1'-0"



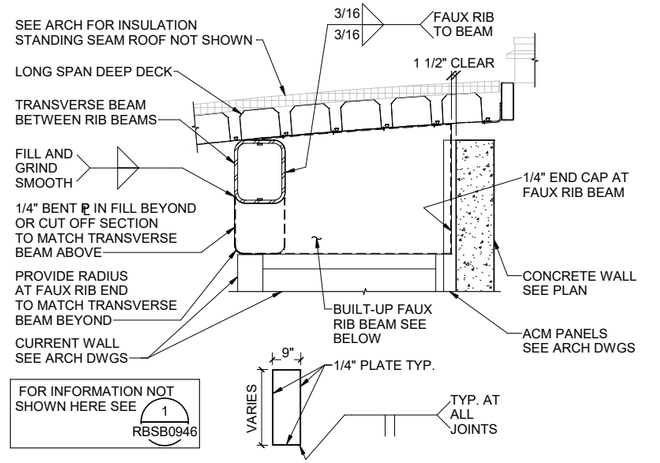
CHANNEL AT RIB BEAM

3 RBSB0946 **SECTION** SCALE: 3/4" = 1'-0"



WEST EDGE FRAMING AT ROOF HATCH AREA

4 RBSB0946 **SECTION** SCALE: 3/4" = 1'-0"



FAUX RIB BEAM AT CURTAINWALL

5 RBSB0946 **SECTION** SCALE: 1/2" = 1'-0"

Project Number: 62421
7/13/2018 5:16:17 PM

Local File: BIM 360://62421 - Phoenix Sky Train Project – Stage 2/AV10000011-S-2-RCSBXX01_R17_A360.rvt
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PHX SKY TRAIN
CITY OF PHOENIX AVIATION DEPARTMENT

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

	Designed by:	Drawn by:	Checked by:	Date:	Dwg scale:	CIP No.:	KIVA No.:
	PEK	PEK	SES	07/13/2018	AS NOTED	AV10000011	07-5204

STAGE 2 - B04 DESIGN SUBMISSION

RCC STATION
STRUCTURAL
FRAMING SECTIONS AND DETAILS

Package: **B04 - RBSB0946**

Sheet Reference No: V5 - 218 of 218