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LEE P. BROWN

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ADA EDWARDS
ADDIE WISEMAN
MARK ELLIS
BERT KELLER

CONTROLLER
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CITY COUNCIL MEMBERS

GABRIEL VASQUEZ
CAROL ALVARADO
ANNISE PARKER
GORDON QUAN
SHELLY SEKULA-GIBBS
MICHAEL BERRY
CARROL G. ROBINSON

HOUSTON AIRPORT SYSTEM

PLANS FOR CONSTRUCTION
OF

PHASE 2
INTERNATIONAL SERVICES EXPANSION PROGRAM
APM GUIDEWAY EXTENSION A7
AT
GEORGE BUSH INTERCONTINENTAL AIRPORT, HOUSTON, TEXAS

PROJECT NO. 536D
C.I.P. NO. A-0203

FINAL PLAN SET
DECEMBER 31, 2002

REVISED MARCH 29, 2004 △7

536D

HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida 33607
PH (813) 286-5300
FX (813) 286-4405

RW CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REVISIONS		
2	REVISIONS		
3	REVISIONS		
4	REVISIONS		
5	REVISIONS		
6	REVISIONS		
7	AS BUILT 3-29-04 FB		

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM
APM GUIDEWAY EXTENSION
COVER SHEET

PROJECT MGR:
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DRAWN BY:
CHECKED BY:
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APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO. 536D
H.A.S. NO.
SHEET NO. 1

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DRAWING INDEX

DRAWING NUMBER	DESCRIPTION
1	COVER SHEET
2	DRAWING INDEX
3	REFERENCE MAP
4	GENERAL NOTES AND DETAILS
5	SYSTEM PLAN AND CURVE DATA
6	SYSTEM PLAN AND CURVE DATA
7	RUNNING/GUIDEBEAM LAYOUT (SHEET 1 OF 11)
8	RUNNING/GUIDEBEAM LAYOUT (SHEET 2 OF 11)
6 9	RUNNING/GUIDEBEAM LAYOUT (SHEET 3 OF 11)
6 10	RUNNING/GUIDEBEAM LAYOUT (SHEET 4 OF 11)
11	RUNNING/GUIDEBEAM LAYOUT (SHEET 5 OF 11)
12	RUNNING/GUIDEBEAM LAYOUT (SHEET 6 OF 11)
13	RUNNING/GUIDEBEAM LAYOUT (SHEET 7 OF 11)
14	RUNNING/GUIDEBEAM LAYOUT (SHEET 8 OF 11)
15	RUNNING/GUIDEBEAM LAYOUT (SHEET 9 OF 11)
16	RUNNING/GUIDEBEAM LAYOUT (SHEET 10 OF 11)
17	RUNNING/GUIED BEAM LAYOUT (SHEET 11 OF 11)
18	MAINTENANCE AREA - RUNNING/GUIDEBEAM LAYOUT (SHEET 1 OF 5)
19	MAINTENANCE AREA - RUNNING/GUIDEBEAM LAYOUT (SHEET 2 OF 5)
20	MAINTENANCE AREA - RUNNING/GUIDEBEAM LAYOUT (SHEET 3 OF 5)
21	MAINTENANCE AREA - RUNNING/GUIDEBEAM LAYOUT (SHEET 4 OF 5)
22	MAINTENANCE AREA - RUNNING/GUIDEBEAM LAYOUT (SHEET 5 OF 5)
23	RUNNING BEAM DETAILS (SHEET 1 OF 2)
24	RUNNING BEAM DETAILS (SHEET 2 OF 2)
25	GUIDEBEAM DETAILS (1 OF 2)
26	GUIDEBEAM DETAILS (2 OF 2)
27	PIVOT SWITCH PLAN
28	PIVOT SWITCH DETAIL (1 OF 2)
29	PIVOT SWITCH DETAIL (2 OF 2)
30	PIVOT SWITCH DETAIL 2
31	PIVOT SWITCH DETAIL 3
32	PIVOT SWITCH RUNNING BEAM PLATE DETAILS
33	PIVOT SWITCH GIRDER BEARING DETAILS
34	PIVOT SWITCH GUIDEBEAM DETAILS (SHEET 1 OF 3)
35	PIVOT SWITCH GUIDEBEAM DETAILS (SHEET 2 OF 3)
36	PIVOT SWITCH GUIDEBEAM DETAILS (SHEET 3 OF 3)
37	MOVABLE GUIDEBEAM DETAILS (SHEET 1 OF 3)
38	MOVABLE GUIDEBEAM DETAILS (SHEET 2 OF 3)
39	MOVABLE GUIDEBEAM DETAILS (SHEET 3 OF 3)
40	SHEET NOT USED
41	MAINTENANCE AREA PIVOT SWITCH - GEOMETRY PLAN
42	MAINTENANCE AREA PIVOT SWITCH - STRAIGHT RUNNING BEAM GIRDER
43	MAINTENANCE AREA PIVOT SWITCH - CURVED RUNNING BEAM GIRDER
44	MAINTENANCE AREA PIVOT SWITCH - RUNNING BEAM GIRDER DETAILS
45	MAINTENANCE AREA PIVOT SWITCH - PLAN - FROG APPROACH AREA
46	VEHICLE STOP AND BUFFER PLATE DETAILS
47	APM GUIDEWAY EXTENSION - HORIZONTAL AND VERTICAL CONTROL
48	APM GUIDEWAY EXTENSION - HORIZONTAL AND VERTICAL CONTROL
49	MAINTENANCE AREA - HORIZONTAL AND VERTICAL CONTROL
50	MAINTENANCE AREA - GUIDEBEAM AND RUNNING BEAM DEMOLITION (SHEET 1 OF 2)
51	MAINTENANCE AREA - GUIDEBEAM AND RUNNING BEAM DEMOLITION (SHEET 2 OF 2)
52	MAINTENANCE AREA - MOVEABLE GUIDEBEAM ANCHORAGE DETAILS (SHEET 1 OF 2)
53	MAINTENANCE AREA - MOVEABLE GUIDEBEAM ANCHORAGE DETAILS (SHEET 2 OF 2)
6 54	MODIFIED GUIDEBEAM SUPPORT AND VERTICAL CURVE PROFILE (NEW DRAWING)

DEMOLITION BY OWNER - LIMITS OF DEMOLITION DEFINED ON SHEETS 50 & 51

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1	NEW SHEETS	9/25/02	FPB
2	ADDED NOTE	12/2/02	FPB
6	REVISED SHEETS	12/22/03	FPB

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APM GUIDEWAY EXTENSION

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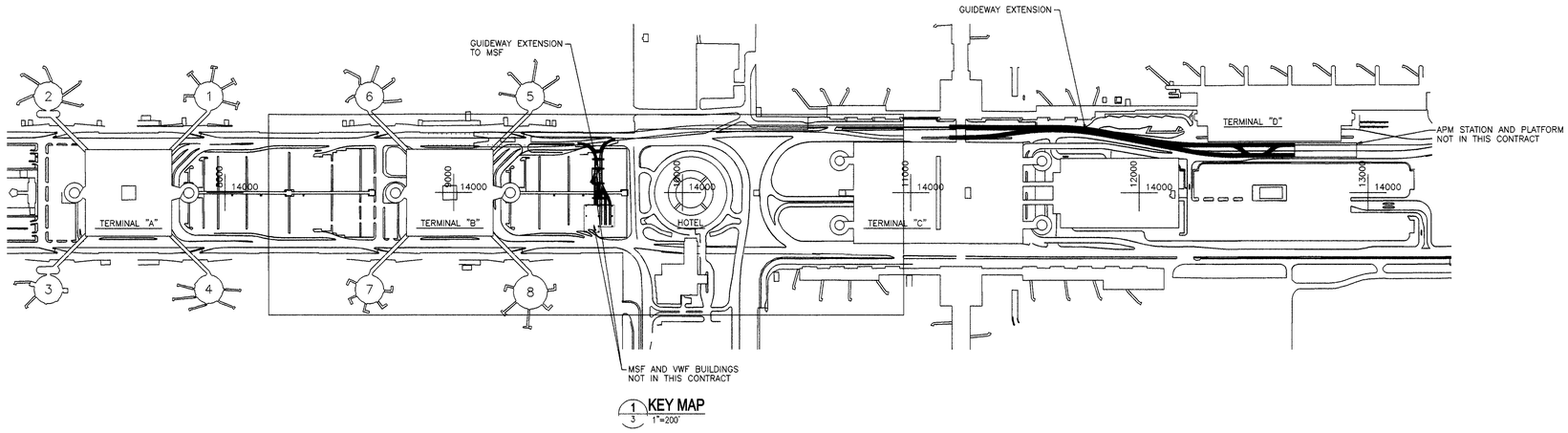
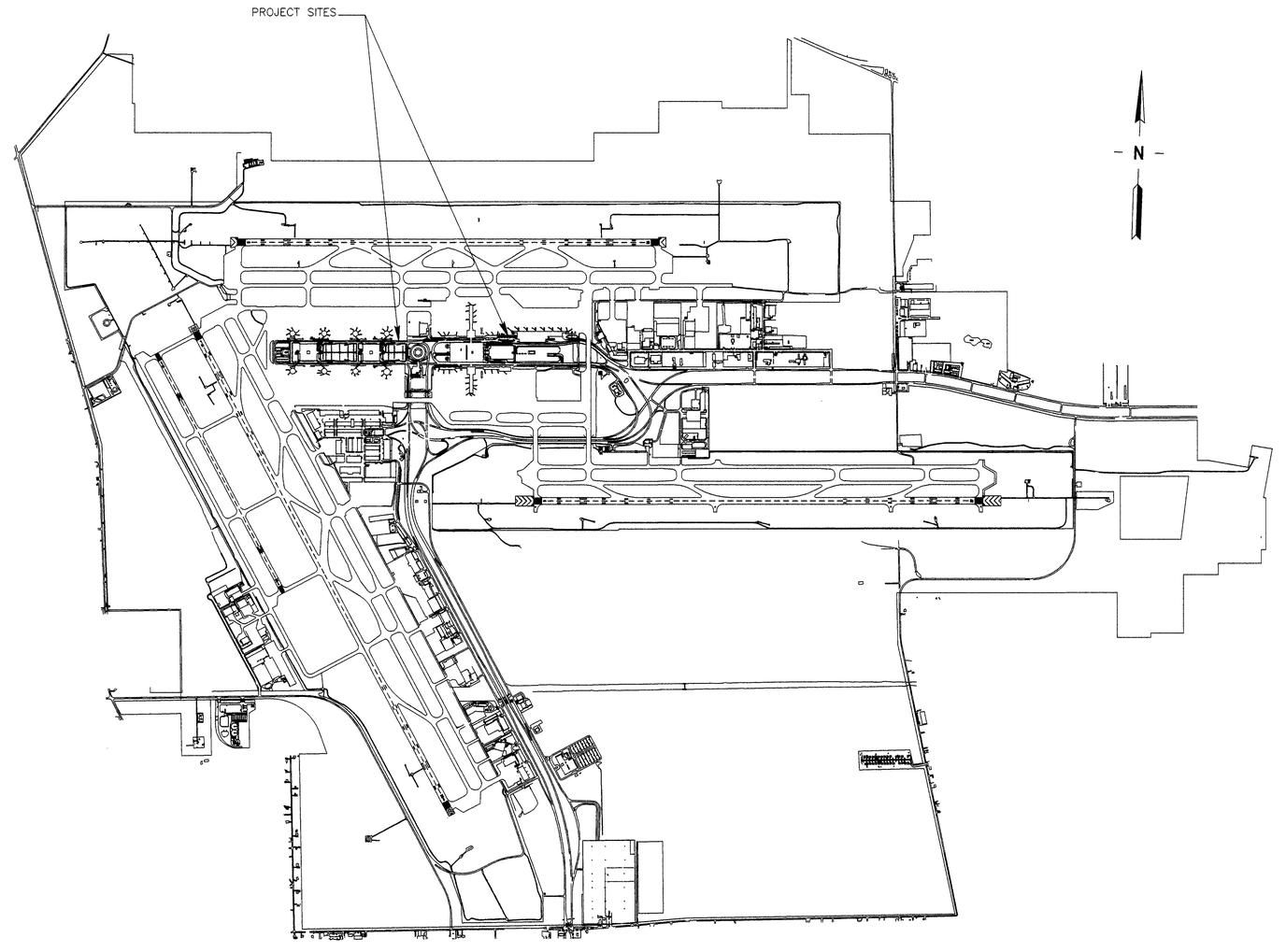
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO. 536D
H.A.S. NO.
SHEET NO. 2 2



1/3 KEY MAP
1"=200'



2/3 LOCATION MAP
1"=1000'

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PROJECT NO.
C.I.P. NO.
H.A.S. NO. 53rd D
SHEET NO.
3 3

GENERAL NOTES

1. DESIGN BASED ON BTTS "CX-100 GENERAL GUIDEWAY DESIGN CRITERIA" REVISION 10.
2. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO) AND THE GENERAL SPECIFICATIONS.
3. DESIGN LOADS

   DESIGN LIVE LOADS:

VEHICLE LOAD	IN ACCORDANCE WITH LOADS PROVIDED BY BTTS
WIND LOADS:	90 MPH BASIC SPEED (EXPOSURE C)

   DESIGN DEAD LOADS:

ELECTRICAL/MECHANICAL LOADS	WEIGHT OF EQUIPMENT FURNISHED + PADS

3. STRUCTURE DIMENSIONS SHALL BE OBTAINED AT 68°F.

   A WEARING SURFACE SHALL BE PLACED ON ALL STEEL SWITCH RUNNING SURFACES AND ON EMBEDDED STEEL PLATES AND ANGLES WHICH ARE AT AND PART OF THE RUNNING SURFACE. WEARING SURFACE SHALL BE PLACED WHERE INDICATED ON THE DRAWINGS IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS.

3. SEQUENCE OF CONSTRUCTION IN ALL SWITCH AREAS
   A. ALL CONCRETE RUNNING BEAMS, STEEL EMBEDDED PLATES, AND GUIDEBEAMS, EXCEPT GUIDEBEAMS WITH LOCKING MECHANISMS, ADJACENT TO THE SWITCHES SHALL NOT BE INSTALLED UNTIL THE SWITCHES ARE INSTALLED. NO RUNNING BEAMS OR GUIDEBEAMS, (EXCEPT AS NOTED) SHALL BE INSTALLED WITHIN THIRTY (30) FEET OF THE SWITCHES.
   B. INSTALL SWITCHES AND TEST IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
   C. COMPLETE CONCRETE RUNNING BEAMS AND GUIDEBEAMS ADJACENT TO THE SWITCHES ASSURING PROPER ALIGNMENT OF THE CONCRETE RUNNING BEAMS (INCLUDING EMBEDDED PLATES AND ANGLES) AND THE GUIDEBEAMS WITH THE SWITCH STRUCTURES.

EMBEDS IN CONCRETE ELEMENTS NOTES

1. EMBED SUPPLIER SHALL PREPARE SHOP DRAWINGS BASED ON STRUCTURAL DETAILS AND GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. INDICATE SPECIFIC LOCATIONS, SIZES, ETC. THESE DRAWINGS SHALL BE USED TO INSTALL EMBEDS.
2. MINIMUM WELD SIZE TO ATTACH SUPPORTED STEEL ANGLES, CHANNELS, ETC., SHALL BE 1/4" CONTINUOUS FILLET WELD.
3. EMBEDS DIRECTLY EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

CONCRETE NOTES

1. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318 AND COMMENTARY (LATEST EDITION).
2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI, UNLESS OTHERWISE NOTED.
3. DETAILING, FABRICATION AND ERECTION OF REINFORCED BARS SHALL COMPLY WITH ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES." (ACI 315).
4. STEEL REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A 615. GRADE 60.
5. CONCRETE COVER
   1. EXCEPT AS OTHERWISE SHOWN, PROVIDE A CLEAR COVER MEASURED FROM REINFORCEMENT TO THE FACE OF THE CONCRETE AS SHOWN ON CONTRACT DRAWINGS.

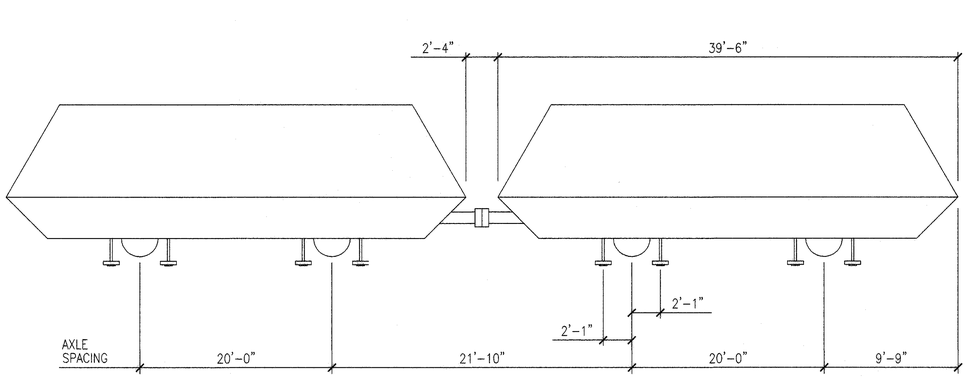
SURFACES	MINIMUM COVER IN INCHES
INTERIOR NOT EXPOSED TO WEATHER	
SLABS AND WALLS	3/4
BEAMS	1-1/2
EXTERIOR NOT IN CONTACT WITH EARTH OR WATER	
SLABS AND WALLS, NO. 5 AND SMALLER BARS	1
SLABS AND WALLS, NO. 6 THRU NO. 11 BARS, FORMED SURFACES	1-1/2
BEAMS	2

6. THE LOCATION OF CONSTRUCTION JOINTS SHALL BE AS SHOWN ON THE DRAWINGS .
7. ALL GROUT SHALL BE OF NON-SHRINKABLE TYPE AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH HIGH STRENGTH OF 5000 PSI.
8. REINFORCING BARS SHALL NOT BE WELDED.
9. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4 INCH CHAMFER, U.O.N.
10. UNIFORMED SURFACES, WITH THE EXCEPTION TO THE RUNNING BEAM SURFACE, SHALL BE STEEL TROWEL FINSHED. RUNNING BEAM SURFACES SHALL BE "LIGHT" BROOM FINISHED WITH A MAXIMUM 1/16" STRIATION IN THE TRANSVERSE DIRECTION.
11. ALL ANCHOR BOLTS SHALL BE GROUTED IN DRILLED OR CORED HOLES WITH SIKADUR 32 HI-MOD NEAT EPOXY OR APPROVED EQUAL. SEE THE GENERAL SPECIFICATIONS.
12. GROUT FOR GUIDEBEAM SUPPORTS TO BE MIN 5000 PSI BEARING HIGH STRENGTH GROUT SURFACE, SHALL BE STEEL TROWEL FINSHED. RUNNING BEAM SURFACES SHALL BE "LIGHT" BROOM FINISHED WITH A MAXIMUM 1/16" STRIATION IN THE TRANSVERSE DIRECTION.

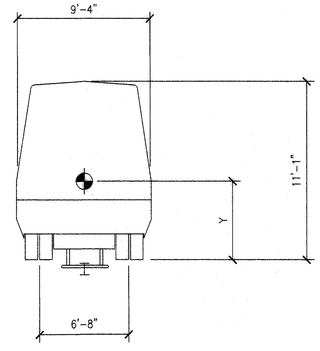
STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL ROLLED SHAPES AND PLATES WITH EXCEPTION OF GUIDEBEAM, SHALL CONFORM TO ASTM A-36. GUIDEBEAM SHALL CONFORM TO ASTM A-709.
2. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55 STEEL UNLESS NOTED OTHERWISE.
3. CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO ASTM A-325.
4. WELDING: WELD DETAILS AND THE WELDING OPERATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
5. PAINTING: ALL STRUCTURAL STEEL SHALL BE PAINTED WITH A SELF-CURING INORGANIC ZINC COATING SYSTEM IN ACCORDANCE WITH SECTION 15.4.1.2 OF THE OWNER'S TECHNICAL PROVISIONS.
6. △4

7. ALL SHOP CONNECTIONS SHALL BE MADE BY WELDING EXCEPT AS SHOWN ON THE DRAWINGS. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT AMERICAN WELDING SOCIETY BRIDGE WELDING CODE ANSI, AASHTO, AWS D1.5.
8. ALL BUTT WELDS AND FLANGE TO WEB WELDS SHALL BE MADE WITH THE SEMI-AUTOMATIC SUBMERGED ARC PROCESS. FOR OTHER WELDS THE SHIELDED ARC METHOD MAY BE USED WITH LOW HYDROGEN ASTM E70 SERIES ELECTRODES.
9. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIA. HOLES EXCEPT AS NOTED ON THE DRAWINGS.
10. ALL HIGH STRENGTH BOLTING SHALL BE DONE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF THE RESEARCH COUNCIL OF RIVETED AND BOLTED JOINTS OF THE ENGINEERING FOUNDATION.



	AXLE LOAD	AXLE LOAD	AXLE LOAD	AXLE LOAD	Y
AW0 EMPTY VEHICLE	16.5 KIPS	16.5 KIPS	16.5 KIPS	16.5 KIPS	44.0"
AW1 NORMAL LOAD (100 PASSENGERS)	24.5 KIPS	24.5 KIPS	24.5 KIPS	24.5 KIPS	54.0"
AW2 MAXIMUM LOAD (150 PASSENGERS)	29.5 KIPS	29.5 KIPS	29.5 KIPS	29.5 KIPS	59.0"



HOUSTON AIRPORT SYSTEM
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NO.	DESCRIPTION	DATE	BY
△4	DEL NOTE	12/02	FB

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APM GUIDEWAY EXTENSION

GENERAL NOTES

PROJECT MGR:
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SCALE:
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DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO. 6300
SHEET NO.
4 4/

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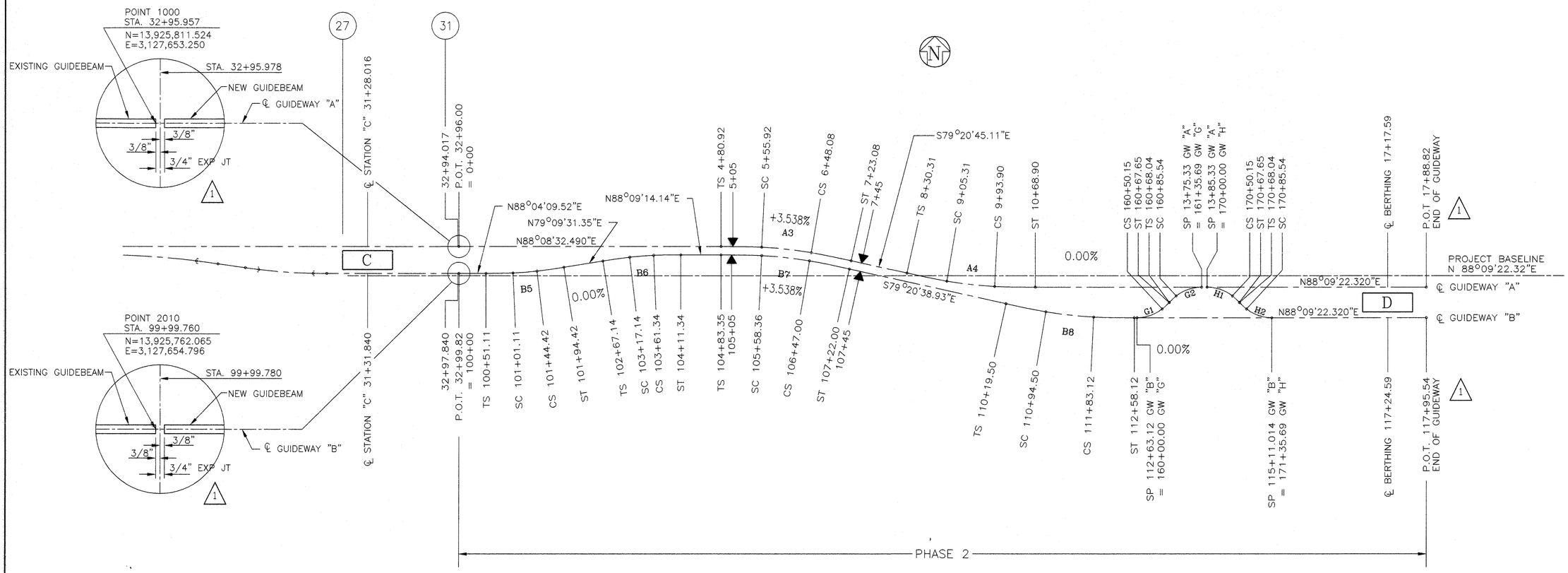


SPIRAL A3_N01B

Spiral = 1001 1002 1003
Theta s = 2° 48' 24.42"
Ls = 75.00'
Rc = 765.50'
Dc = 7° 29' 05.11"
Ys = 1.22'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
TS Sta 4+80.92
SC Sta 5+55.92

CURVE A3_N01

Curve = 1003 1004 1005
D = 7° 29' 05.11"
L = 92.16'
T = 46.14'
R = 765.50'
SC Sta 5+55.92
CS Sta 6+48.08

SPIRAL A3_N01A

Spiral = 1005 1006 1007
Theta s = 2° 48' 24.42"
Ls = 75.00'
Rc = 765.50'
Dc = 7° 29' 05.11"
Ys = 1.22'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
CS Sta 6+48.08
ST Sta 7+23.08

SPIRAL A4_N02B

Spiral = 1008 1009 1010
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
TS Sta 8+30.31
SC Sta 9+05.31

CURVE A4_N02

Curve = 1010 1011 1012
D = 7° 38' 21.97"
L = 88.60'
T = 44.35'
R = 750.00'
SC Sta 9+05.31
CS Sta 9+93.90

SPIRAL A4_N02A

Spiral = 1012 1013 1014
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
CS Sta 9+93.90
ST Sta 10+68.90

CURVE G1_X1

Curve = 3000 3001 3002
D = 76° 23' 39.74"
L = 50.15'
T = 26.06'
R = 75.00'
PC STA 0+00.00 =
112+63.11 GDWY 'B'
CS STA 0+50.15

5

CURVE G2_X2

Curve = 3007 3008 3009
D = 76° 23' 39.74"
L = 50.15'
T = 26.06'
R = 75.00'
SC STA 0+85.54
PT STA 1+35.69 =
13+75.33 GDWY 'A'

CURVE H1_X3

Curve = 4000 4001 4002
D = 76° 23' 39.74"
L = 50.15'
T = 26.06'
R = 75.00'
PC Sta 0+00.00 =
13+85.34 GDWY 'A'
CS Sta 0+50.15

CURVE H2_X4

Curve = 4007 4008 4009
D = 76° 23' 39.74"
L = 50.15'
T = 26.06'
R = 75.00'
SC Sta 0+85.54
PT Sta 1+35.69 =
115+11.01 GDWY 'B'

SPIRAL G1_X1A

Spiral = 3002 3003 3004
Theta s = 6° 41' 04.23"
Ls = 17.50'
Rc = 75.00'
Dc = 76° 23' 39.74"
Ys = 0.68'
Xs = 17.48'
P = 0.17
K = 8.75'
LT = 11.67'
ST = 5.84'
CS Sta 0+50.15
ST Sta 0+67.65

SPIRAL G2_X2B

Spiral = 3005 3006 3007
Theta s = 6° 41' 04.23"
Ls = 17.50'
Rc = 75.00'
Dc = 76° 23' 39.74"
Ys = 0.68'
Xs = 17.48'
P = 0.17
K = 8.75'
LT = 11.67'
ST = 5.84'
TS Sta 0+68.04
SC Sta 0+85.54

SPIRAL H1_X3A

Spiral = 4002 4003 4004
Theta s = 6° 41' 04.23"
Ls = 17.50'
Rc = 75.00'
Dc = 76° 23' 39.74"
Ys = 0.68'
Xs = 17.48'
P = 0.17
K = 8.75'
LT = 11.67'
ST = 5.84'
CS Sta 0+50.15
ST Sta 0+67.65

SPIRAL H2_X4B

Spiral = 4005 4006 4007
Theta s = 6° 41' 04.23"
Ls = 17.50'
Rc = 75.00'
Dc = 76° 23' 39.74"
Ys = 0.68'
Xs = 17.48'
P = 0.17
K = 8.75'
LT = 11.67'
ST = 5.84'
TS Sta 0+68.04
SC Sta 0+85.54

SPIRAL B7_S03B

Spiral = 2015 2016 2017
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
TS Sta 104+83.35
SC Sta 105+58.35

CURVE B7_S03

Curve = 2017 2018 2019
D = 7° 38' 21.97"
L = 88.65'
T = 44.38'
R = 750.00'
SC Sta 105+58.35
CS Sta 106+47.00

SPIRAL B7_S03A

Spiral = 2019 2020 2021
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
CS Sta 106+47.00
ST Sta 107+22.00

SPIRAL B8_S04B

Spiral = 2022 2023 2024
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
TS Sta 110+19.50
SC Sta 110+94.50

CURVE B8_S04

Curve = 2024 2025 2026
D = 7° 38' 21.97"
L = 88.62'
T = 44.36'
R = 750.00'
SC Sta 110+94.50
CS Sta 111+83.12

SPIRAL B8_S04A

Spiral = 2026 2027 2028
Theta s = 2° 51' 53.24"
Ls = 75.00'
Rc = 750.00'
Dc = 7° 38' 21.97"
Ys = 1.25'
Xs = 74.98'
P = 0.31
K = 37.50'
LT = 50.01'
ST = 25.01'
CS Sta 111+83.12
ST Sta 112+58.12

SPIRAL B5_S01B

Spiral = 2001 2002 2003
Theta s = 2° 23' 14.37"
Ls = 50.00'
Rc = 600.00'
Dc = 9° 32' 57.47"
Ys = 0.69'
Xs = 49.99'
P = 0.17
K = 25.00'
LT = 33.34'
ST = 16.67'
TS Sta 100+51.11
SC Sta 101+01.11

CURVE B5_S01

Curve = 2003 2004 2005
D = 9° 32' 57.47"
L = 43.31'
T = 21.67'
R = 600.00'
SC Sta 101+01.11
CS Sta 101+44.42

SPIRAL B5_S01A

Spiral = 2005 2006 2007
Theta s = 2° 23' 14.37"
Ls = 50.00'
Rc = 600.00'
Dc = 9° 32' 57.47"
Ys = 0.69'
Xs = 49.99'
P = 0.17
K = 25.00'
LT = 33.34'
ST = 16.67'
CS Sta 101+44.42
ST Sta 101+94.42

SPIRAL B6_S02B

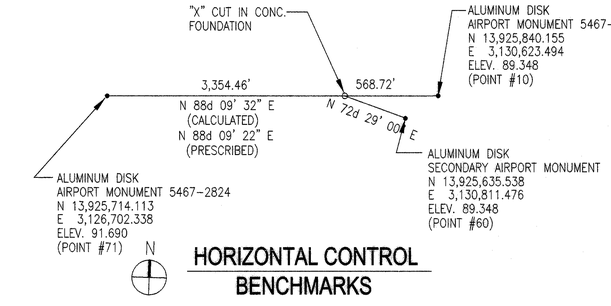
Spiral = 2008 2009 2010
Theta s = 2° 23' 14.37"
Ls = 50.00'
Rc = 600.00'
Dc = 9° 32' 57.47"
Ys = 0.69'
Xs = 49.99'
P = 0.17
K = 25.00'
LT = 33.34'
ST = 16.67'
TS Sta 102+67.14
SC Sta 103+17.14

CURVE B6_S02

Curve = 2010 2011 2012
D = 9° 32' 57.47"
L = 44.20'
T = 22.11'
R = 600.00'
SC Sta 103+17.14
CS Sta 103+61.34

SPIRAL B6_S02A

Spiral = 2012 2013 2014
Theta s = 2° 23' 14.37"
Ls = 50.00'
Rc = 600.00'
Dc = 9° 32' 57.47"
Ys = 0.69'
Xs = 49.99'
P = 0.17
K = 25.00'
LT = 33.34'
ST = 16.67'
CS Sta 103+61.34
ST Sta 104+11.34



HORIZONTAL CONTROL BENCHMARKS

BENCHMARKS:

- CITY OF HOUSTON SURVEY MARKER 5467-2824 LOCATED BETWEEN MARRIOTT HOTEL AND TERMINAL "C" PARKING GARAGE. PREVIOUSLY KNOWN AS A.S.D. POINT #71.
- CITY OF HOUSTON SURVEY MARKER 5467-3325 LOCATED IN THE PARKING LOT NEAR GATE NV12 AND EAST OF TERMINAL "D". PREVIOUSLY KNOWN AS A.S.D. POINT #10.
- CITY OF HOUSTON SECONDARY AIRPORT MONUMENT SURVEY MARKER POINT #60.

NOTE
1. ANCHOR BOLTS FOR GUIDEBEAM SUPPORTS ARE TO BE PLACED IN ACCORDANCE WITH THE ALIGNMENT SHOWN ON THIS SHEET AND THE SUPPORT SPACINGS SHOWN ON SHEETS 7 THRU 17.

1. GEOMETRY HAS BEEN REVISED BASED ON THE LOCATION OF THE EXISTING GUIDEBEAMS.

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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CONSTRUCTORS, JMI

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM & CONFORM TO TRACK PLAN	9/26	FPB
2	REV STA. 7/10		FPB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
SYSTEM PLAN AND CURVE DATA

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO. 5310
SHEET NO.
5

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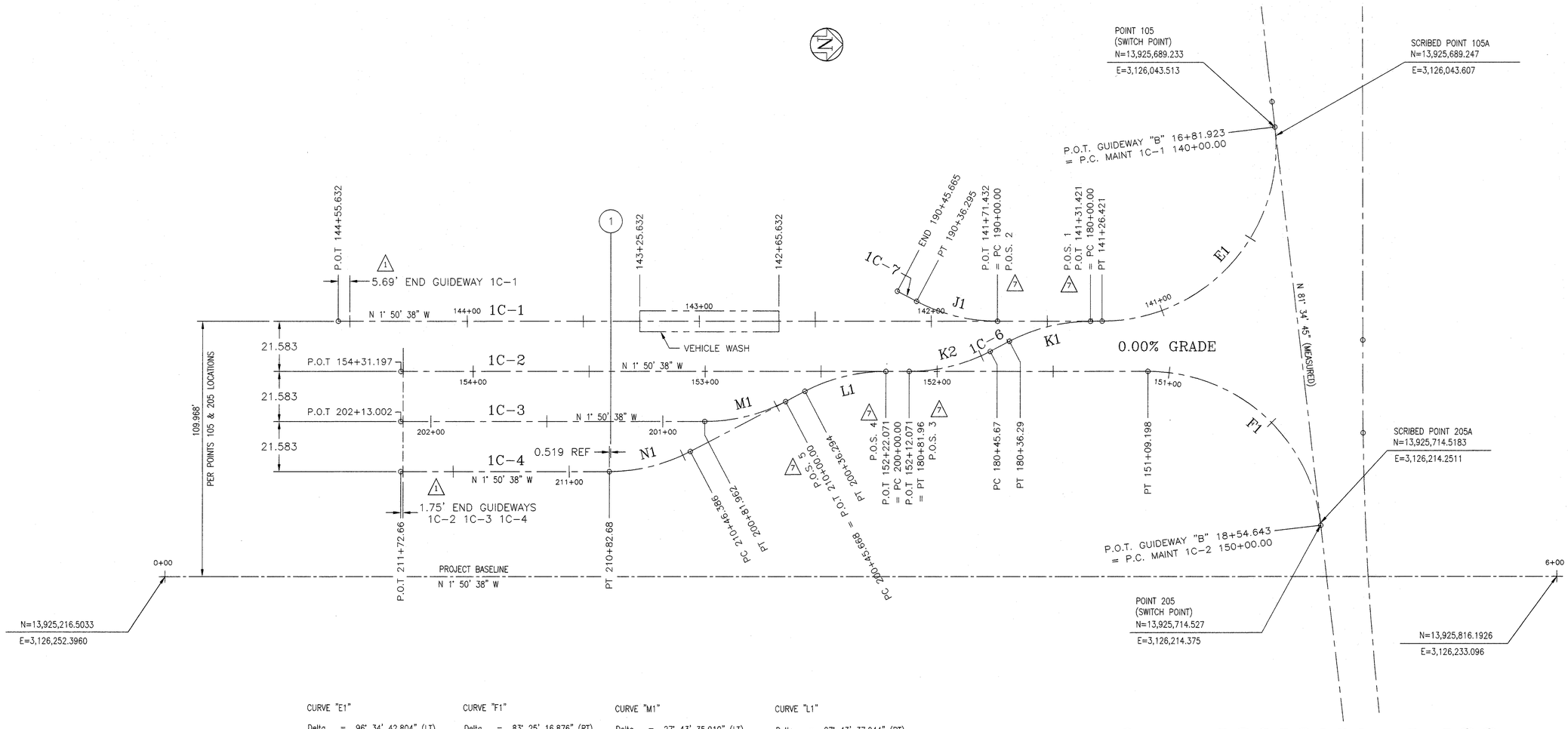

CURVE "E1"

Delta = 96° 34' 42.804" (LT)
T = 84.146
L = 126.421
R = 75.000
PC Sta. = 140+00.00
PT Sta. = 141+26.421

CURVE "F1"

Delta = 83° 25' 16.876" (RT)
T = 66.848
L = 109.198
R = 75.000
PC Sta. = 150+00.00
PT Sta. = 151+09.198

CURVE "M1"

Delta = 27° 43' 35.910" (LT)
T = 18.510
L = 36.294
R = 75.000
PC Sta. = 200+45.668
PT Sta. = 200+81.962

CURVE "L1"

Delta = 27° 43' 37.944" (RT)
T = 18.510
L = 36.295
R = 75.000
PC Sta. = 200+00.00
PT Sta. = 200+36.294

CURVE "N1"

Delta = 27° 43' 35.910" (LT)
T = 18.510
L = 36.294
R = 75.000
PC Sta. = 210+46.386
PT Sta. = 211+82.680

CURVE "K1"

Delta = 27° 43' 23.581" (LT)
T = 18.507
L = 36.290
R = 75.000
PC Sta. = 180+00.000
PT Sta. = 180+36.290

CURVE "K2"

Delta = 27° 43' 23.581" (RT)
T = 18.507
L = 36.290
R = 75.000
PC Sta. = 180+45.670
PT Sta. = 180+81.959

CURVE "J1"

Delta = 27° 43' 37.945" (LT)
T = 18.510
L = 36.295
R = 75.000
PC Sta. = 190+00.00
PT Sta. = 190+36.295

△7

	PROPOSED		EXISTING *	
	NORTH	EAST	NORTH	EAST
P.O.S. 1	13925612.45664	3126129.61815	13925612.19124	3126129.73435
P.O.S. 2	13925572.46634	3126130.90517	13925572.39798	3126130.94282
P.O.S. 3	13925535.09972	3126153.70613	13925535.12344	3126153.79203
P.O.S. 4	13925525.10490	3126154.02780	13925524.52611	3126154.13670
P.O.S. 5	13925482.34899	3126168.38571	13925482.34770	3126168.58718

* EXISTING COORDINATES WERE USED TO LOCATE THE POINT OF SWITCH AS DIRECTED BY THE OWNER. GUIDEWAY GEOMETRY WAS FIELD ADJUSTED TO MEET EXISTING POS COORDINATES.

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FX: (813) 289-4405

RATP CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	9/26/03	FPB
2	AS BUILT	3/29/04	FPB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA

SYSTEN PLAN AND CURVE DATA

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO. 5346
SHEET NO.
6

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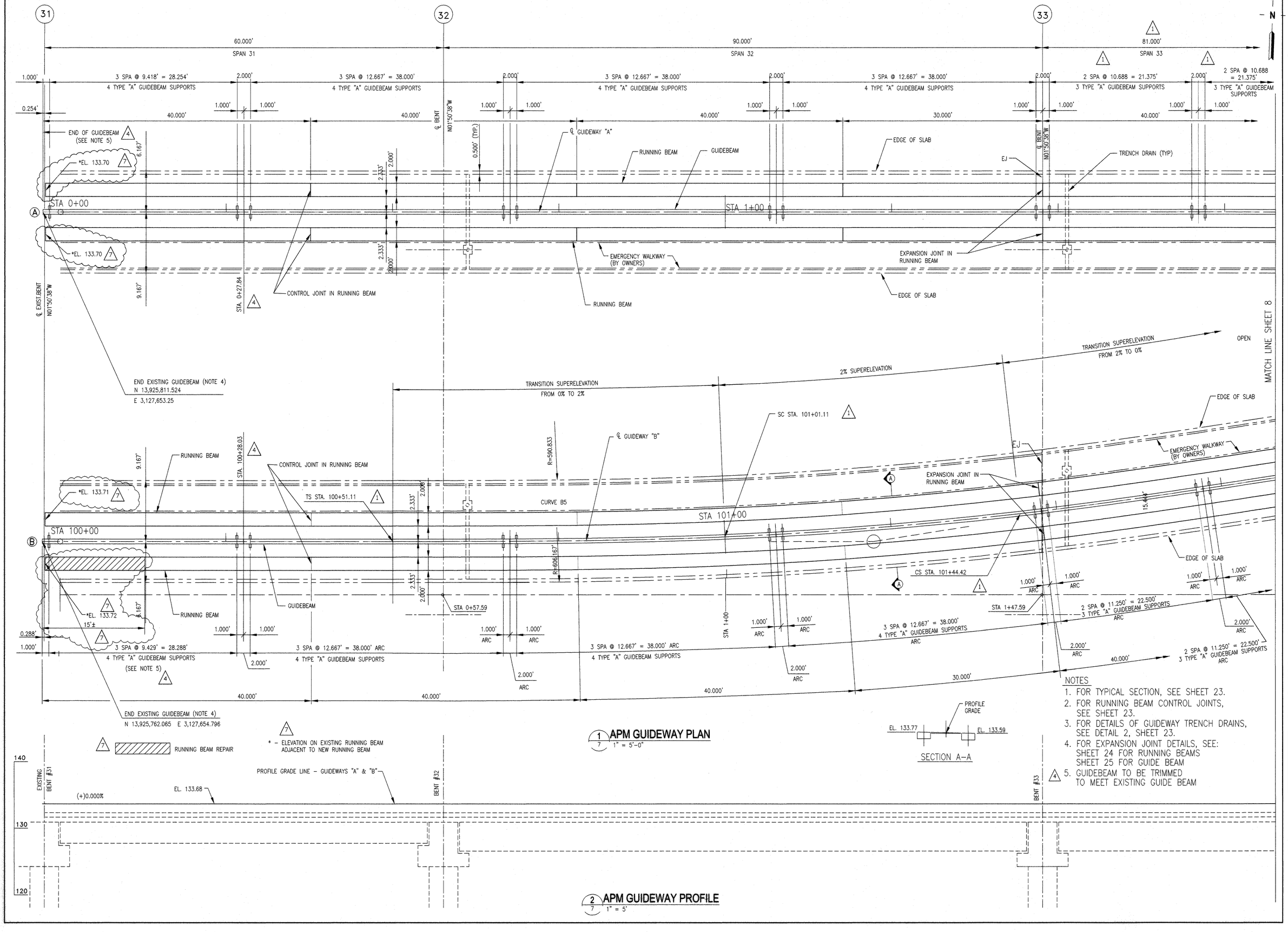

1 APM GUIDEWAY PLAN
7 1" = 5'-0"

2 APM GUIDEWAY PROFILE
7 1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM
5. GUIDEBEAM TO BE TRIMMED TO MEET EXISTING GUIDE BEAM

HOUSTON AIRPORT SYSTEM
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FX (813) 289-4405

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	8-27-02	FB
2	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 1 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:
APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
7

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MATCH LINE SHEET 7

34 35

81.000' SPAN 33

125.750' SPAN 34

40.000' | 3 SPANS @ 40.000' = 120.000' | 23.375' | 23.375'

BENT #34 N01°50'38"W

BENT #35 N01°50'38"W

2 SPA @ 10.688' = 21.375
3 – TYPE "A" GUIDE BEAM SUPPORTS'

3 SPA @ 12.667' = 38.000'
4 – TYPE "A" GUIDEBEAM SUPPORTS'

2.000' | 1.000' | 1.000'

EDGE OF SLAB

RUNNING BEAM

GUIDEBEAM

℄ GUIDEWAY "A"

STA 2+00

STA 3+00

2.333' | 2.000'

16.333'

3.029'

EJ

EMERGENCY WALKWAY (BY OWNER)

EXPANSION JOINT IN RUNNING BEAM

℄ COLUMN

CONTROL JOINT IN RUNNING BEAM

SC STA. 103+17.14

TRANSITION SUPERELEVATION 2% TO 0%

TS STA. 102+67.14

STA 103+00

CURVE B6

℄ GUIDEWAY "B"

ST STA. 101+94.42

2 SPA @ 11.250' = 22.500'
3–TYPE "A" GUIDEBEAM SUPPORTS

3 SPA @ 12.667' = 38.000'
4–TYPE "A" GUIDEBEAM SUPPORTS

3 SPA @ 12.667' = 38.000' SPIRAL
4–TYPE "A" GUIDEBEAM SUPPORTS

3 SPA @ 40.000' = 120.000'

1.000' SPIRAL | 2.000' SPIRAL

1.000' ARC | 2.000' ARC

2 SPA. @ 24.500' = 45.000'

2% SUPERELEVATION

TRANSITION SUPERELEVATION FROM 0% TO 2%

TUG TUNNEL BELOW

STA 3+54.33

MATCH LINE SHEET 9

PROJECT BASELINE
N88°09'22"E

STA 2+28.59

1 APM GUIDEWAY PLAN
8 1" = 5'-0"

PROFILE GRADE
EL. 133.59 EL. 133.77

SECTION B–B

BENT #34

BENT #35

EL 133.68

PROFILE GRADE LINE GUIDEWAYS "A" & "B"

(+) 0.000%

(+) 0.000%

2 APM GUIDEWAY PROFILE
8 1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

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APM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	8-27-02	FB
2	REV LOCATION	12-2-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 2 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

8 8

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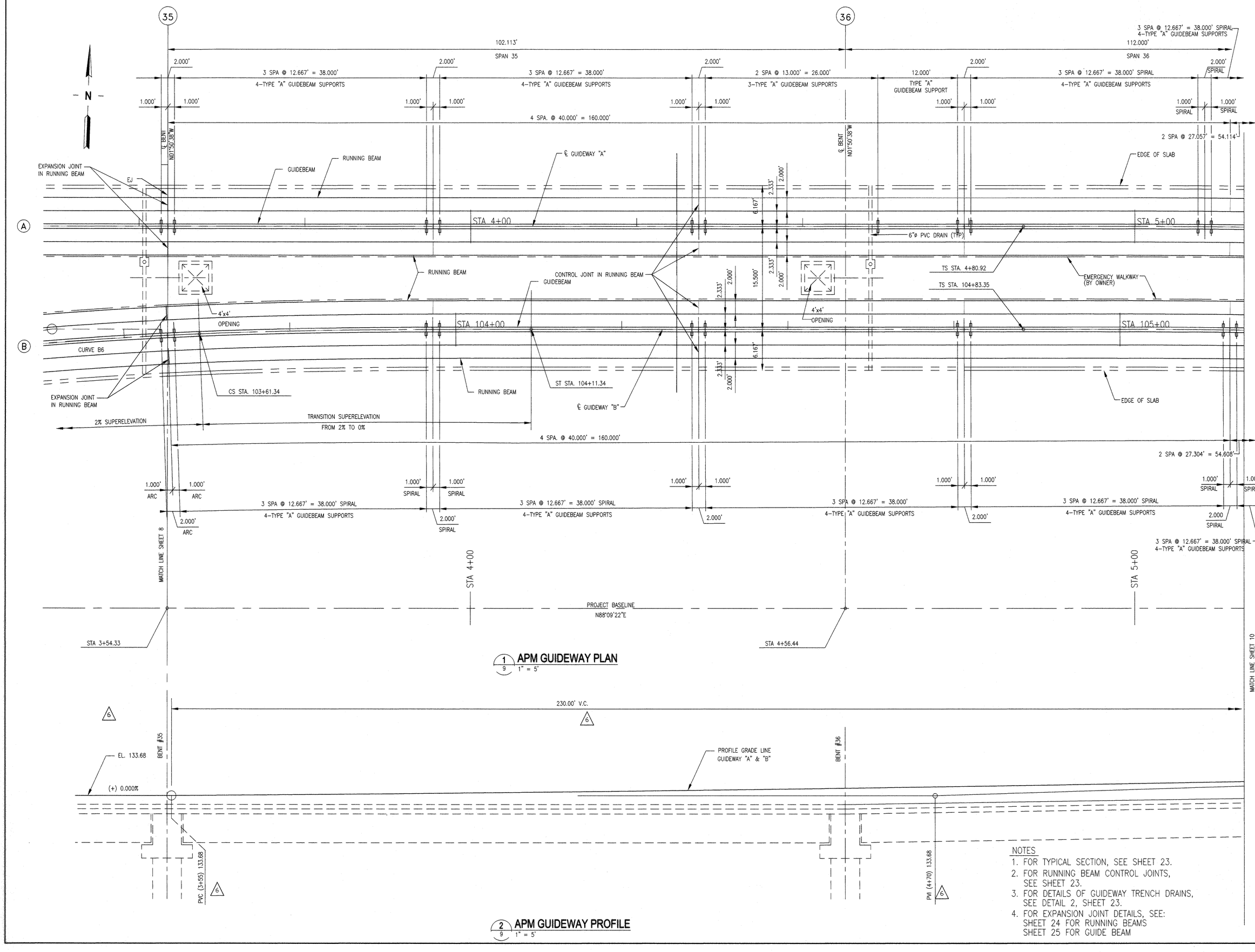

1 9 APM GUIDEWAY PLAN
1" = 5'

2 9 APM GUIDEWAY PROFILE
1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

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TM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	8-27-02	FB
6	REV PROFILE	12-22-03	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 3 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
9 9

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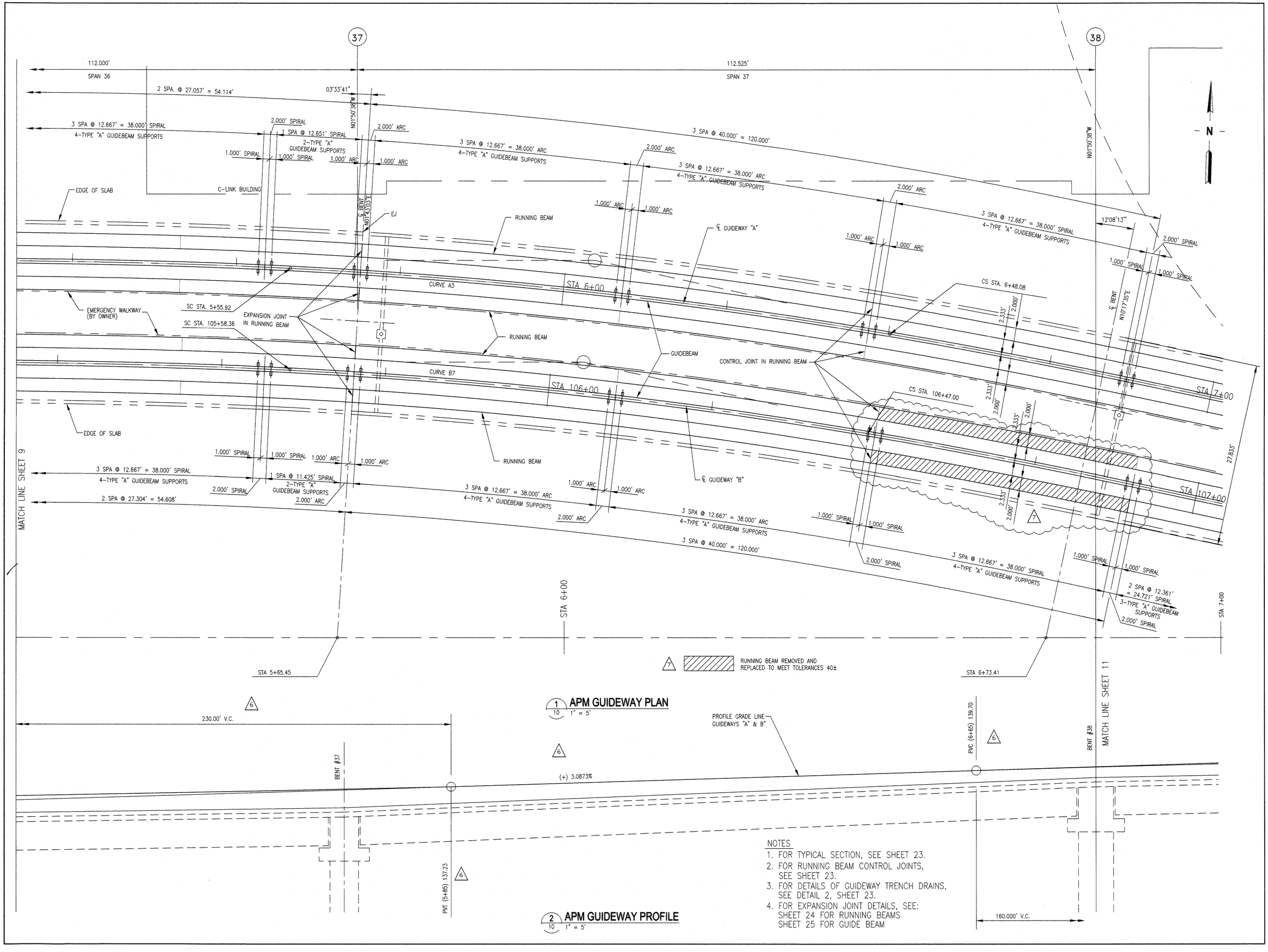

1 10 APM GUIDEWAY PLAN 1" = 5'

2 10 APM GUIDEWAY PROFILE 1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

HOUSTON AIRPORT SYSTEM
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PCM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	8-27-02	FB
6	REV PROFILE	12-22-03	FB
7	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 4 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
10 10

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38

39

111.149'
SPAN 38

112.324'
SPAN 39

12°08'13"

TUG TUNNEL BELOW

N10°50'38"W

2.000' SPIRAL

3 SPA @ 9.026' = 27.077' SPIRAL
4 – TYPE "A" GUIDEBEAM SUPPORTS

1.000' SPIRAL

1.000' SPIRAL

℄ BENT
N10°17'35"E

31.000'

2.000' SPIRAL

3 SPA @ 12.667' = 38.000' SPIRAL
4 – TYPE "A" GUIDEBEAM SUPPORTS

1.000' SPIRAL

1.000' SPIRAL

2.000'

1.000'

N79°20'38"E

1.000'

3 SPA @ 12.667' = 38.000'
4 – TYPE "A" GUIDEBEAM SUPPORTS

12°30'00"

℄ BENT
N10°39'22"E

2.000'

2 SPA @ 6.417' = 12.834'

3 – TYPE "A" GUIDEBEAM SUPPORTS

2.000'

1.000'

1.000'

1.000'

1.000'

3 SPA @ 12.667' = 38.000' SPIRAL
4 – TYPE "A" GUIDEBEAM SUPPORTS

14.834'

5 SPA @ 40.000' = 200.000'

EDGE OF SLAB

MATCH LINE SHEET 12

N

A

B

STA 7+00

2.333'

2.000'

RUNNING BEAM

2 SPA @ 40.000' = 80.000'

℄ GUIDEWAY "A"

ST STA. 7+23.08

ST STA. 107+22.00

STA 107+00

2.333'

2.000'

2.333'

2.000'

RUNNING BEAM

GUIDEBEAM

CONTROL JOINT
IN RUNNING BEAM

EXPANSION JOINT
IN RUNNING BEAM

EJ

STA 8+00

6.167'

22.008'

15.500'

CURVE AS-N02

TS STA. 8+30.31

EMERGENCY WALKWAY
(BY OWNER)

26.634'

3 SPA @ 12.667' = 38.000' SPIRAL
4 – TYPE "A" GUIDEBEAM SUPPORTS

1.000' SPIRAL

1.000' SPIRAL

2 SPA @ 12.361'
= 24.721' SPIRAL
3–TYPE "A" GUIDEBEAM SUPPORTS

STA 7+00

1.000' SPIRAL

1.000' SPIRAL

PROJECT BASELINE
N88°09'22"E

2 SPA @ 40.000' = 80.000'

℄ GUIDEWAY "B"

STA 108+00

2.000' SPIRAL

1.000' SPIRAL

2.000' SPIRAL

STA 6+73.41

3 SPA @ 12.667' = 38.000' SPIRAL
4 – TYPE "A" GUIDEBEAM SUPPORTS

1.000'

1.000'

2.000'

3 SPA @ 12.667' = 38.000'
4 – TYPE "A" GUIDEBEAM SUPPORTS

1.000' (TYP)

6.167'

6.798'

STA 7+90.69

20.540'

1.000'

1.000'

5 SPA @ 40.000' = 200.000'

EDGE OF SLAB

2 SPA @ 9.270' = 18.540'
2–TYPE "A" GUIDEBEAM SUPPORTS

1.000'

1.000'

2.000'

3 SPA @ 12.667' = 38.000'
4 – TYPE "A" GUIDEBEAM SUPPORTS

MATCH LINE SHEET 10

BENT #38

BENT #39
EXP. JT.

PROFILE GRADE LINE
GUIDEWAYS "A" & "B"

PVI (7+45) 142.17

PVT (8+25) 142.17

EL. 142.17

(+)0.000%

160.000' V.C.

1 APM GUIDEWAY PLAN
11 — 1" = 5'

2 APM GUIDEWAY PROFILE
11 — 1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	8-27-02	FB
2	REV DIM	12-2-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 5 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
11

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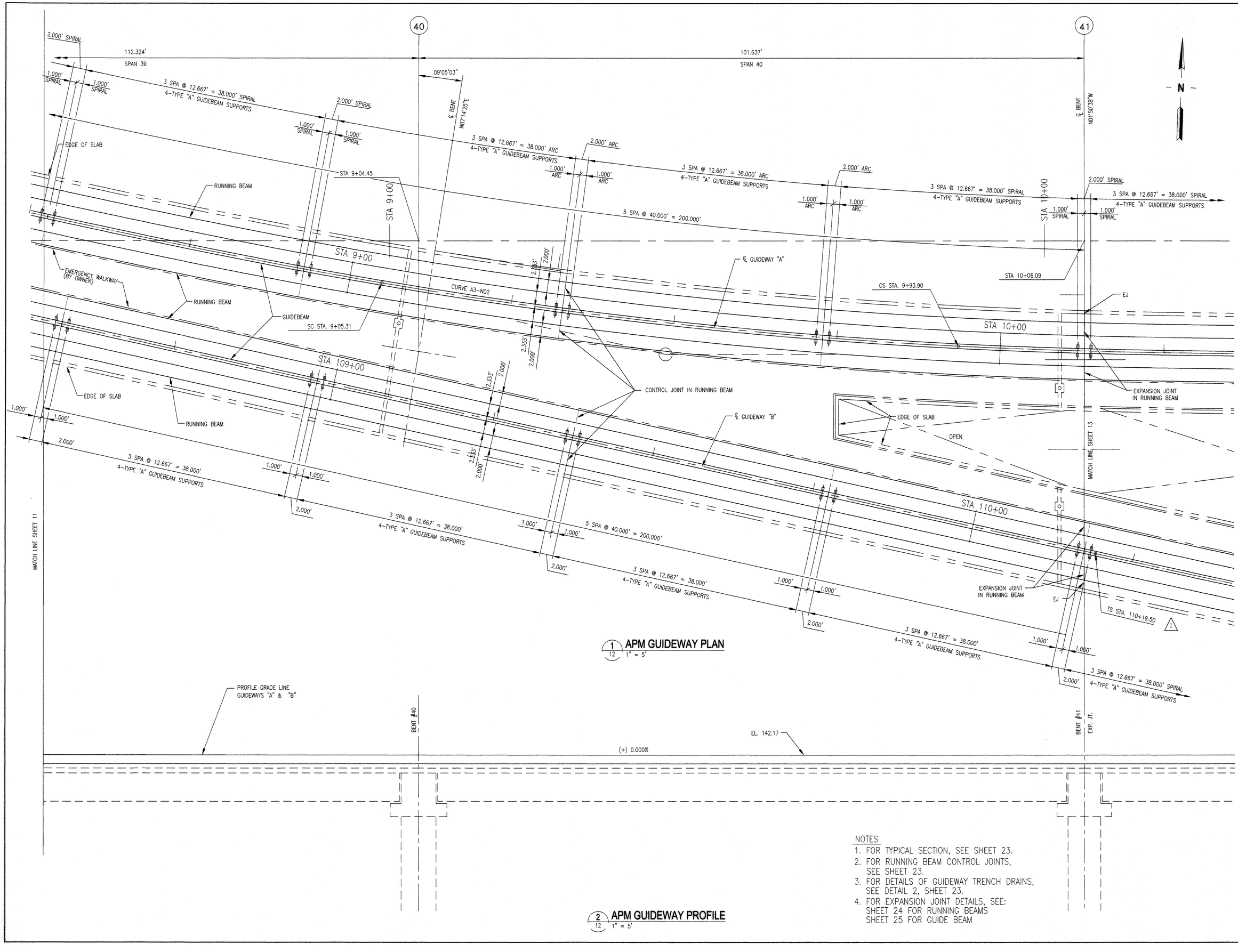

NOTES

1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

HOUSTON AIRPORT SYSTEM
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CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV STA	8-27-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

RUNNING/GUIDEBEAM LAYOUT

(SHEET 6 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

12

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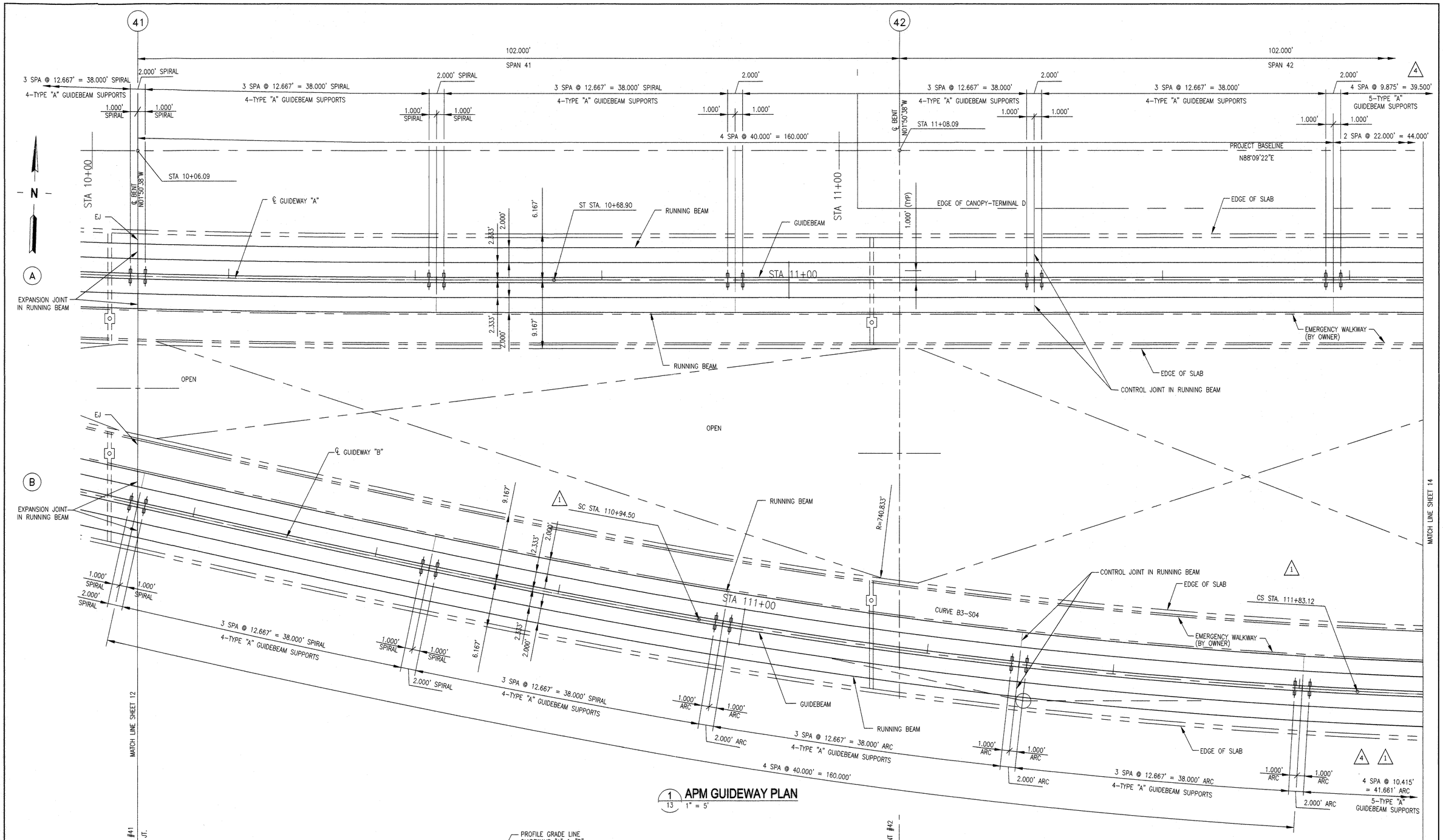

1 APM GUIDEWAY PLAN
13 1" = 5'

2 APM GUIDEWAY PROFILE
13 TO BE ADDED LATER

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM

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APM CONSTRUCTORS, JIN

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV STA	8-27-02	FB
2	REV DIM	12-2-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 7 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
13
13

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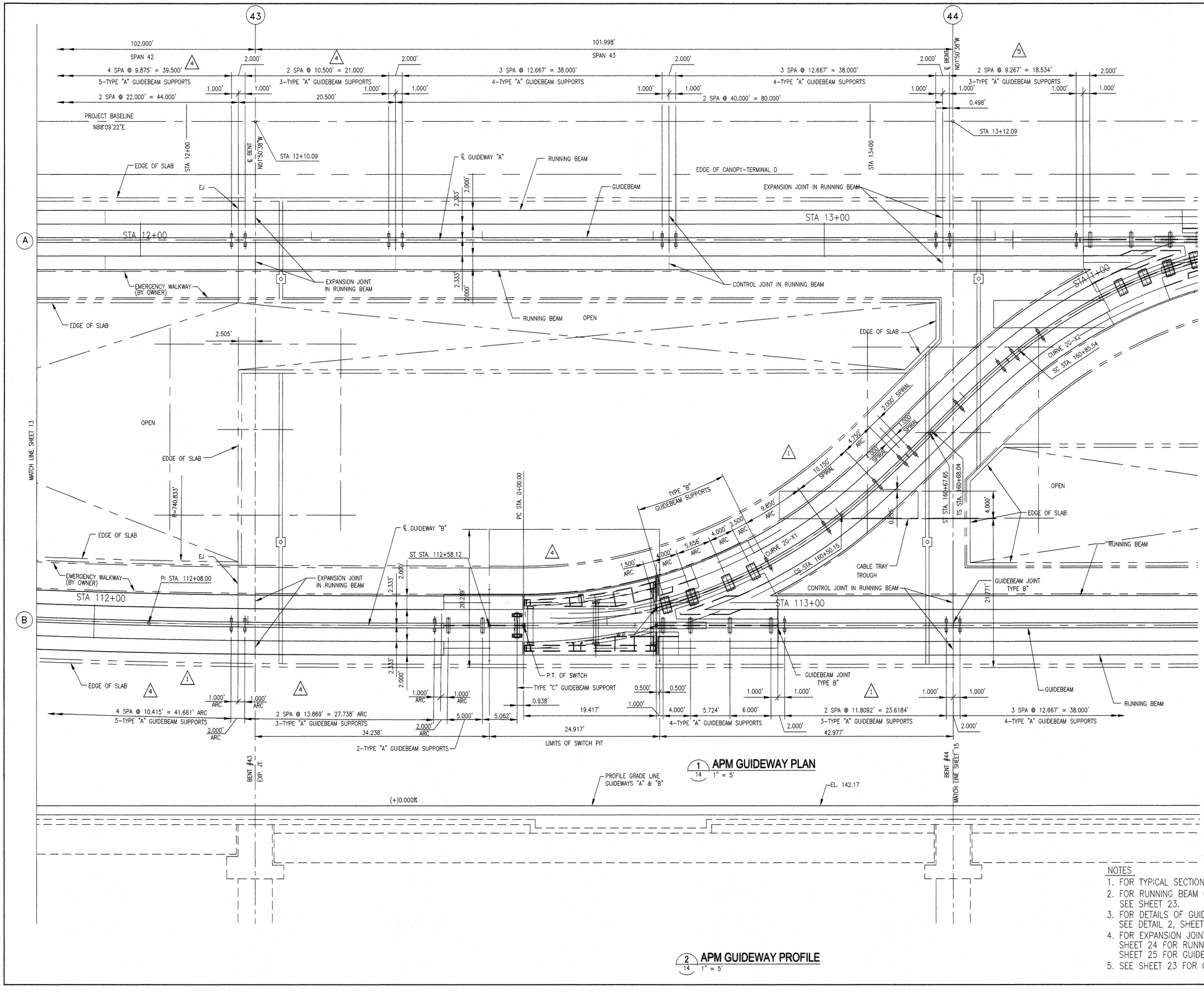

1 APM GUIDEWAY PLAN
14 — 1" = 5'

2 APM GUIDEWAY PROFILE
14 — 1" = 5'

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM
5. SEE SHEET 23 FOR CABLE TRAY TROUGH

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HOUSTON TEXAS

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FX (813) 289-4405

TM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV STA	8-27-02	FB
2	REV DIM	12-2-02	FB
3	REV DIM	6-30-03	FB

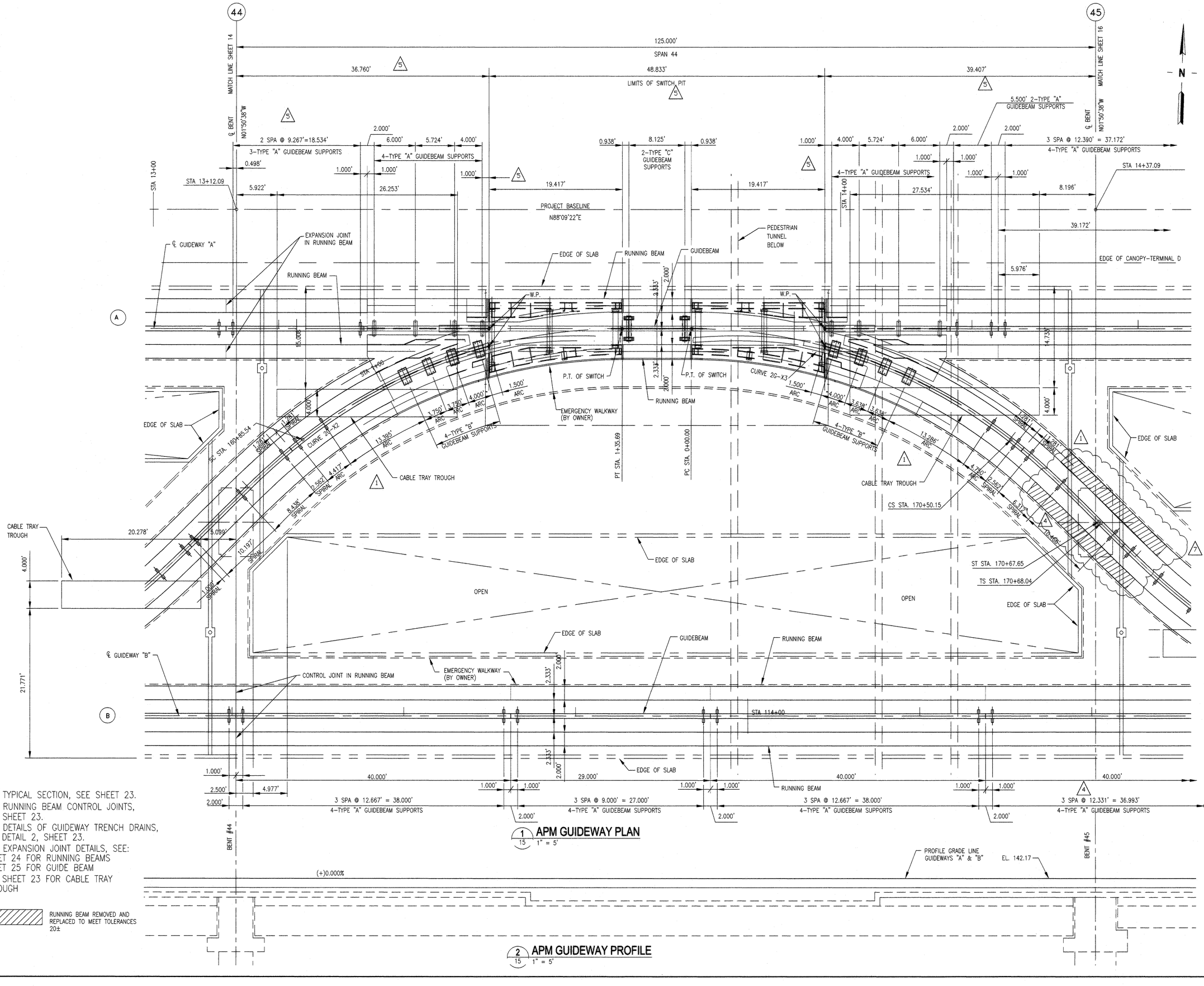
INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 8 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
14 14

H:\HoustonAirport\Parsons\Sheet\plan8.dwg May 17, 2004 - 12:42pm



NOTES

1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE: SHEET 24 FOR RUNNING BEAMS SHEET 25 FOR GUIDE BEAM
5. SEE SHEET 23 FOR CABLE TRAY THROUGH

7 RUNNING BEAM REMOVED AND REPLACED TO MEET TOLERANCES 20±

1/15 APM GUIDEWAY PLAN
1" = 5'

2/15 APM GUIDEWAY PROFILE
1" = 5'

HOUSTON AIRPORT SYSTEM
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HOUSTON TEXAS

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RAM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV STA	8-27-02	FB
2	REV DIM	12-2-02	FB
3	REV DIM	6-30-03	FB
4	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

RUNNING/GUIDEBEAM LAYOUT
(SHEET 9 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

15 15

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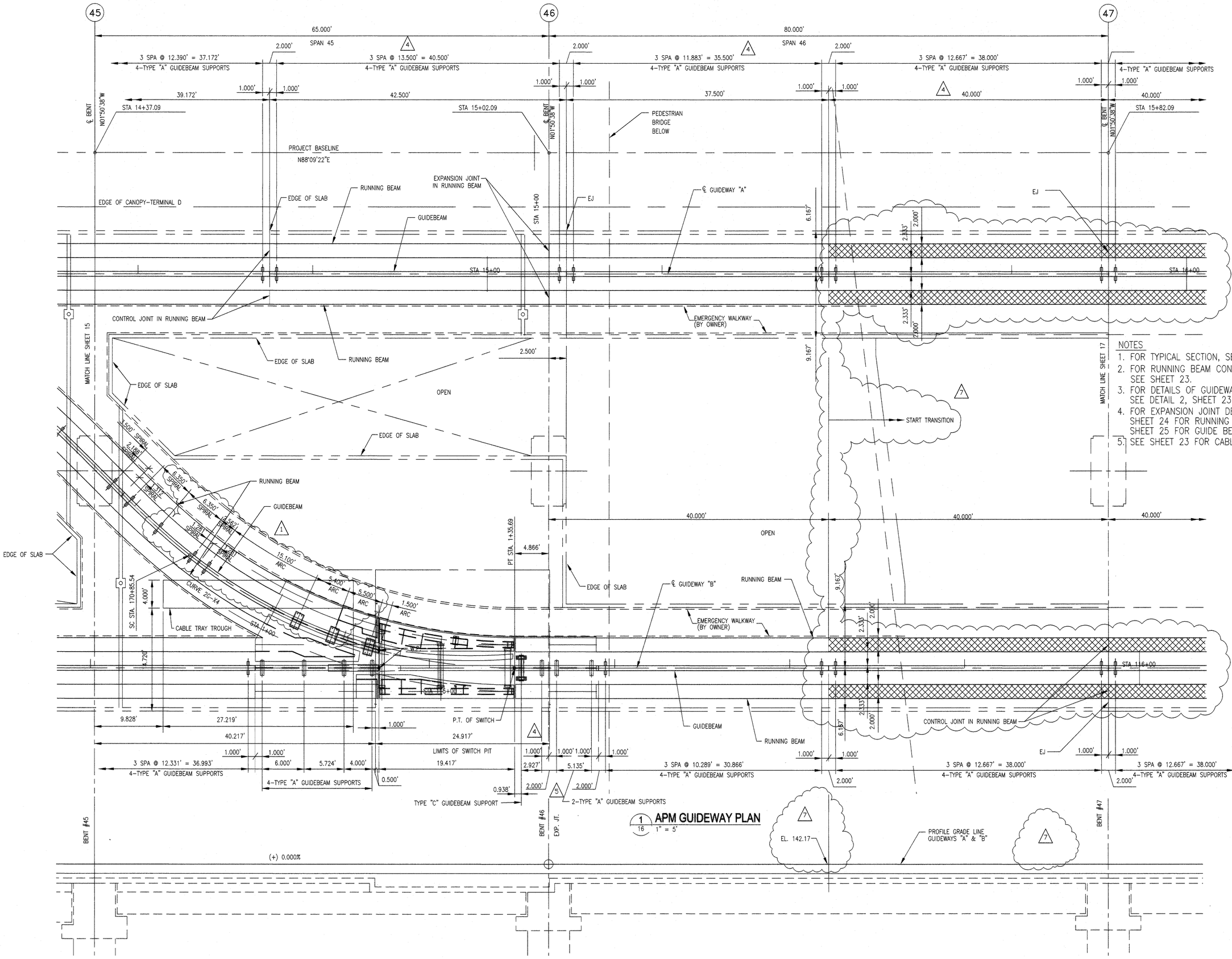

1 16 **APM GUIDEWAY PLAN** 1" = 5'

2 16 **APM GUIDEWAY PROFILE** 1" = 5'

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CONSTRUCTORS, INC

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV STA	8-27-02	FB
2	REV DIM'S	12-2-02	FB
3	REV DIM'S	7-10-03	FB
4	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

RUNNING/GUIDEBEAM LAYOUT

(SHEET 10 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

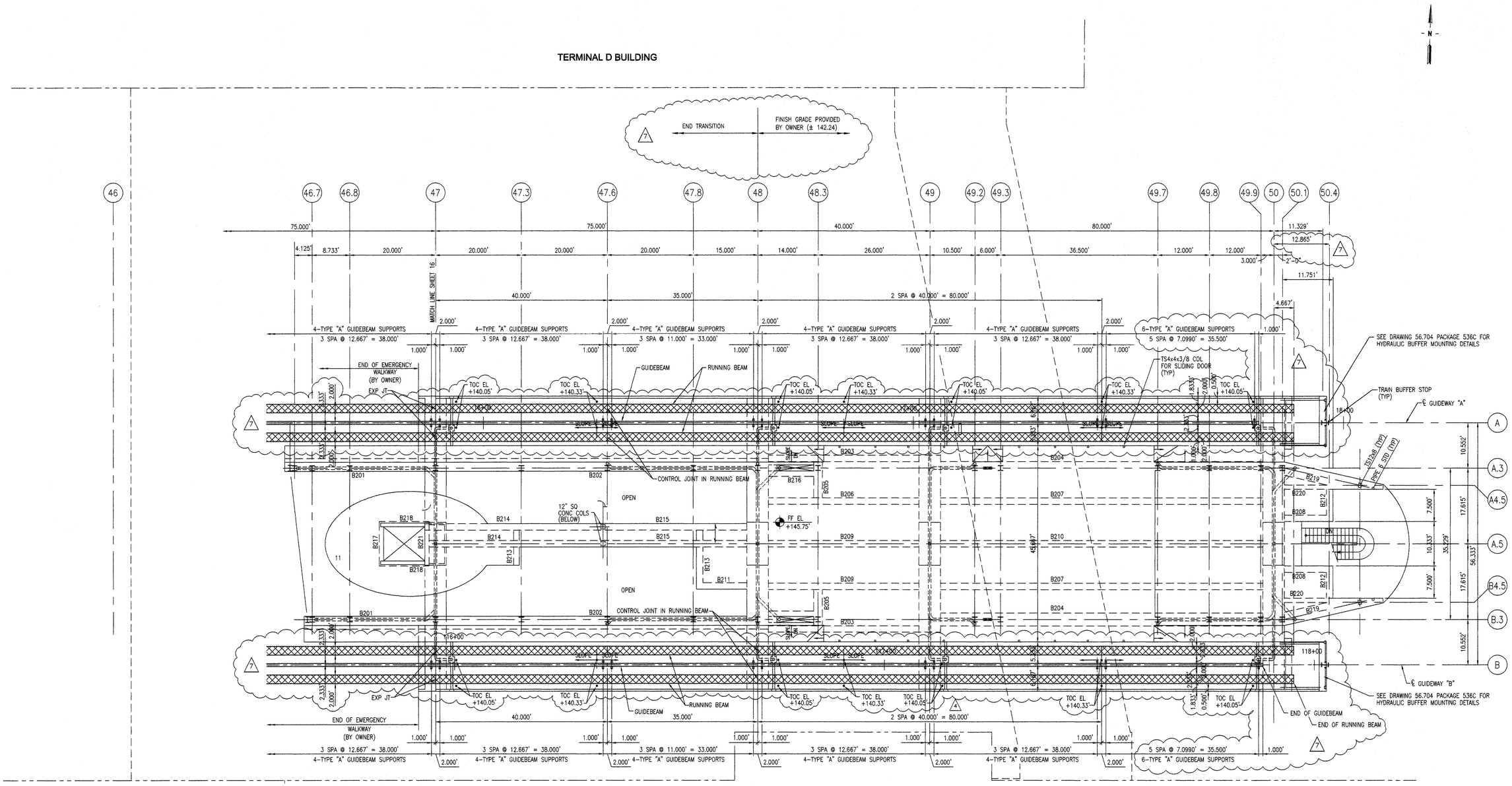
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

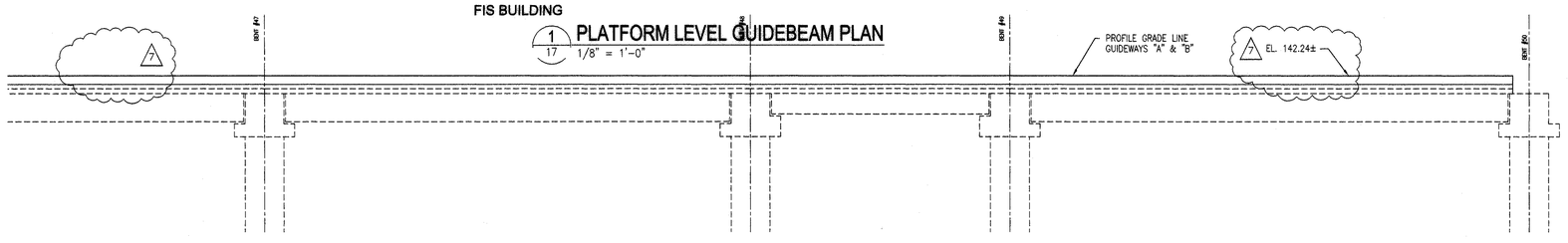
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

16

TERMINAL D BUILDING



FIS BUILDING



1 PLATFORM LEVEL GUIDEBEAM PLAN
17 1/8" = 1'-0"

2 PLATFORM LEVEL GUIDEBEAM PROFILE
17 1/8" = 1'-0"

NOTES
1. FOR TYPICAL SECTION, SEE SHEET 23.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE:
   SHEET 24 FOR RUNNING BEAMS
   SHEET 25 FOR GUIDE BEAM

NOTE: REFER TO GRAPHIC SCALE IF ACTUAL SHEET SIZE IS OTHER THAN 30"x42".

0' 4' 8' 16' 24'
SCALE: 1/8" = 1'-0"

7 REMOVED TOP OF RUNNING PAD TO MEET NEW REVISED PGL

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	12-2-02	FB
2	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
RUNNING/GUIDEBEAM LAYOUT
(SHEET 11 OF 11)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE: 1/8"=1'-0"
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
KEY NO.

17

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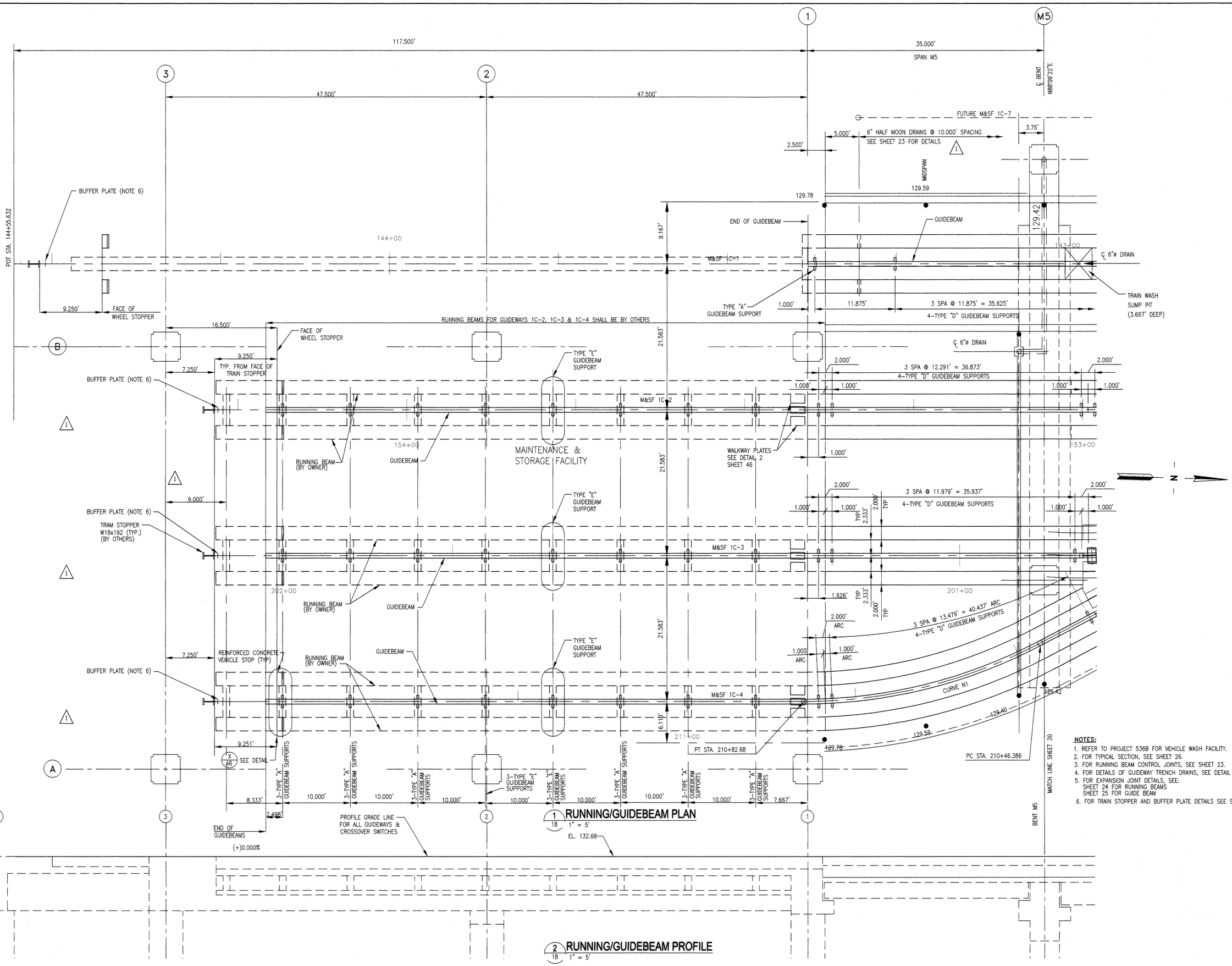

1 18 RUNNING/GUIDEBEAM PLAN
1" = 5'

2 18 RUNNING/GUIDEBEAM PROFILE
1" = 5'

NOTES:

1. REFER TO PROJECT 536B FOR VEHICLE WASH FACILITY.
2. FOR TYPICAL SECTION, SEE SHEET 26.
3. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
4. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
5. FOR EXPANSION JOINT DETAILS, SEE:
   SHEET 24 FOR RUNNING BEAMS
   SHEET 25 FOR GUIDE BEAM
6. FOR TRAIN STOPPER AND BUFFER PLATE DETAILS SEE SHEET 46

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	DEL STA/DIM	8-23-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
RUNNING/GUIDEBEAM LAYOUT
(SHEET 1 OF 5)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
18

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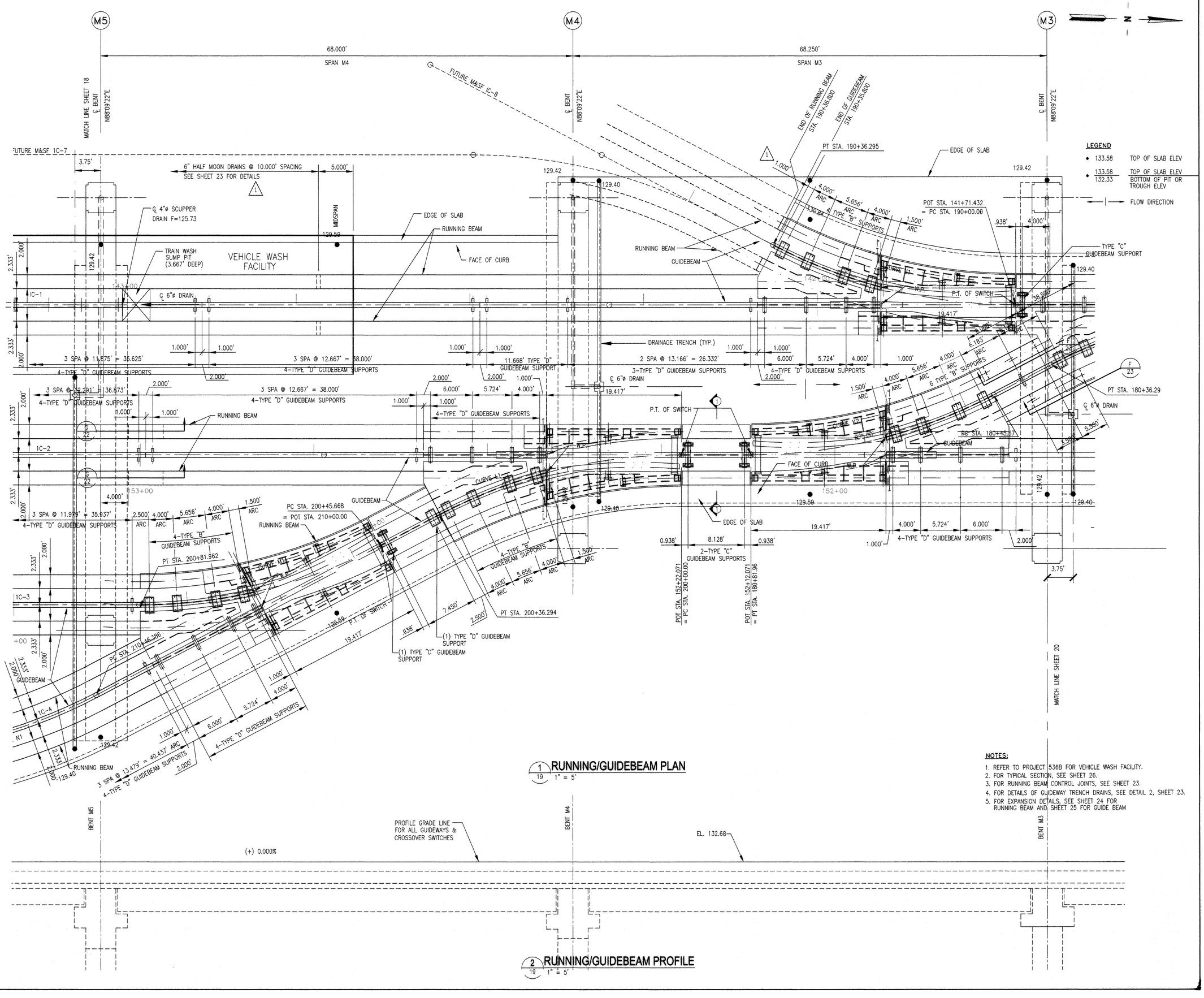

1 RUNNING/GUIDEBEAM PLAN
19 — 1" = 5'

2 RUNNING/GUIDEBEAM PROFILE
19 — 1" = 5'

NOTES:

1. REFER TO PROJECT 536B FOR VEHICLE WASH FACILITY.
2. FOR TYPICAL SECTION, SEE SHEET 26.
3. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
4. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
5. FOR EXPANSION DETAILS, SEE SHEET 24 FOR RUNNING BEAM AND SHEET 25 FOR GUIDE BEAM

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADDED DIM & DRAINS	9-18-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
RUNNING/GUIDEBEAM LAYOUT
(SHEET 2 OF 5)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
19 19

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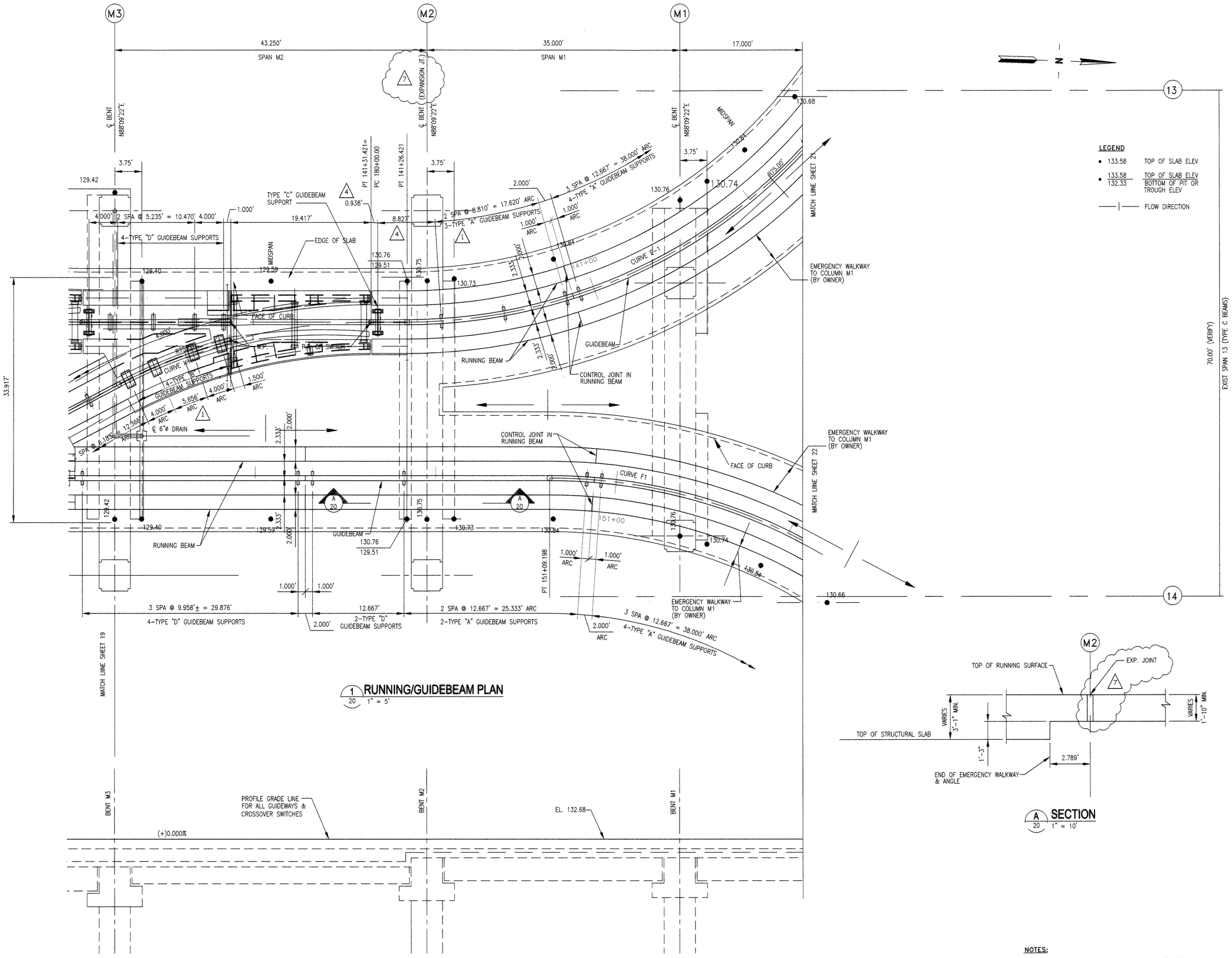

1 / 20 RUNNING/GUIDEBEAM PLAN
1" = 5'

2 / 20 RUNNING/GUIDEBEAM PROFILE
1" = 5'

A / 20 SECTION
1" = 10'

NOTES:

1. REFER TO PROJECT 536B FOR VEHICLE WASH FACILITY.
2. FOR TYPICAL SECTIONS, SEE SHEETS 23 & 26.
3. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
4. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
5. FOR EXPANSION JOINT DETAILS, SEE:
   SHEET 24 FOR RUNNING BEAMS
   SHEET 25 FOR GUIDE BEAM

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CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD DIM.	9-18-02	FB
2	REV DIM	12-2-02	FB
3	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA

RUNNING/GUIDEBEAM LAYOUT
(SHEET 3 OF 5)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
20 20

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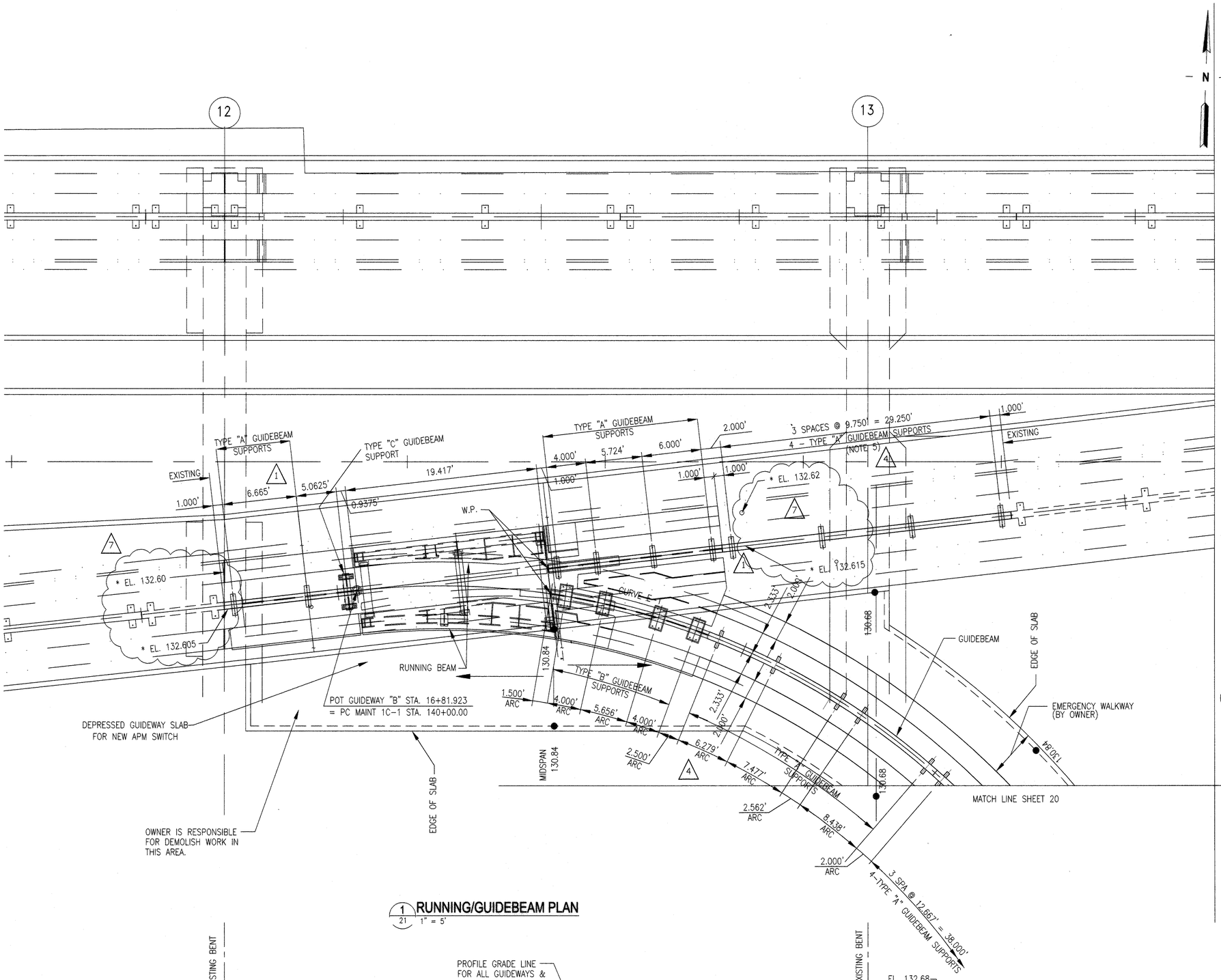
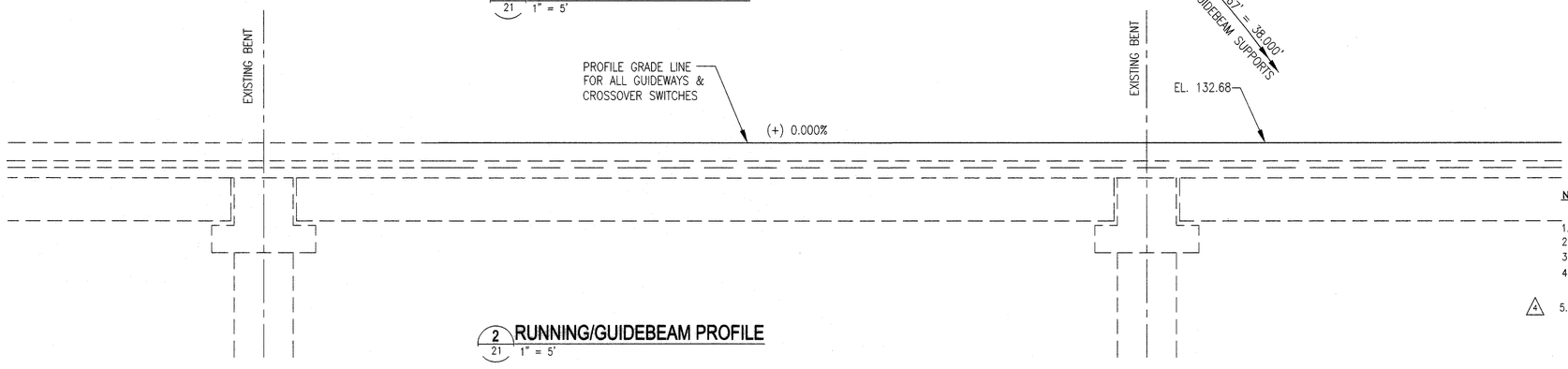


1 RUNNING/GUIDEBEAM PLAN
21 1" = 5'



2 RUNNING/GUIDEBEAM PROFILE
21 1" = 5'

LEGEND

- 133.58 TOP OF SLAB ELEV
- 133.58 / 132.33 TOP OF SLAB ELEV / BOTTOM OF PIT OR TROUGH ELEV
- —|— FLOW DIRECTION

NOTES:

1. FOR TYPICAL SECTION, SEE SHEET 26.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR EXPANSION JOINT DETAILS, SEE:
   SHEET 24 FOR RUNNING BEAMS
   SHEET 25 FOR GUIDE BEAM
5. GUIDEBEAM TO BE TRIMMED TO MEET EXISTING GUIDE BEAM.

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FX: (813) 289-5405

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD SUPPORT	9-18-02	FB
2	CHG SPIRAL	12-2-02	FB
3	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
RUNNING/GUIDEBEAM LAYOUT
(SHEET 4 OF 5)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
21 21

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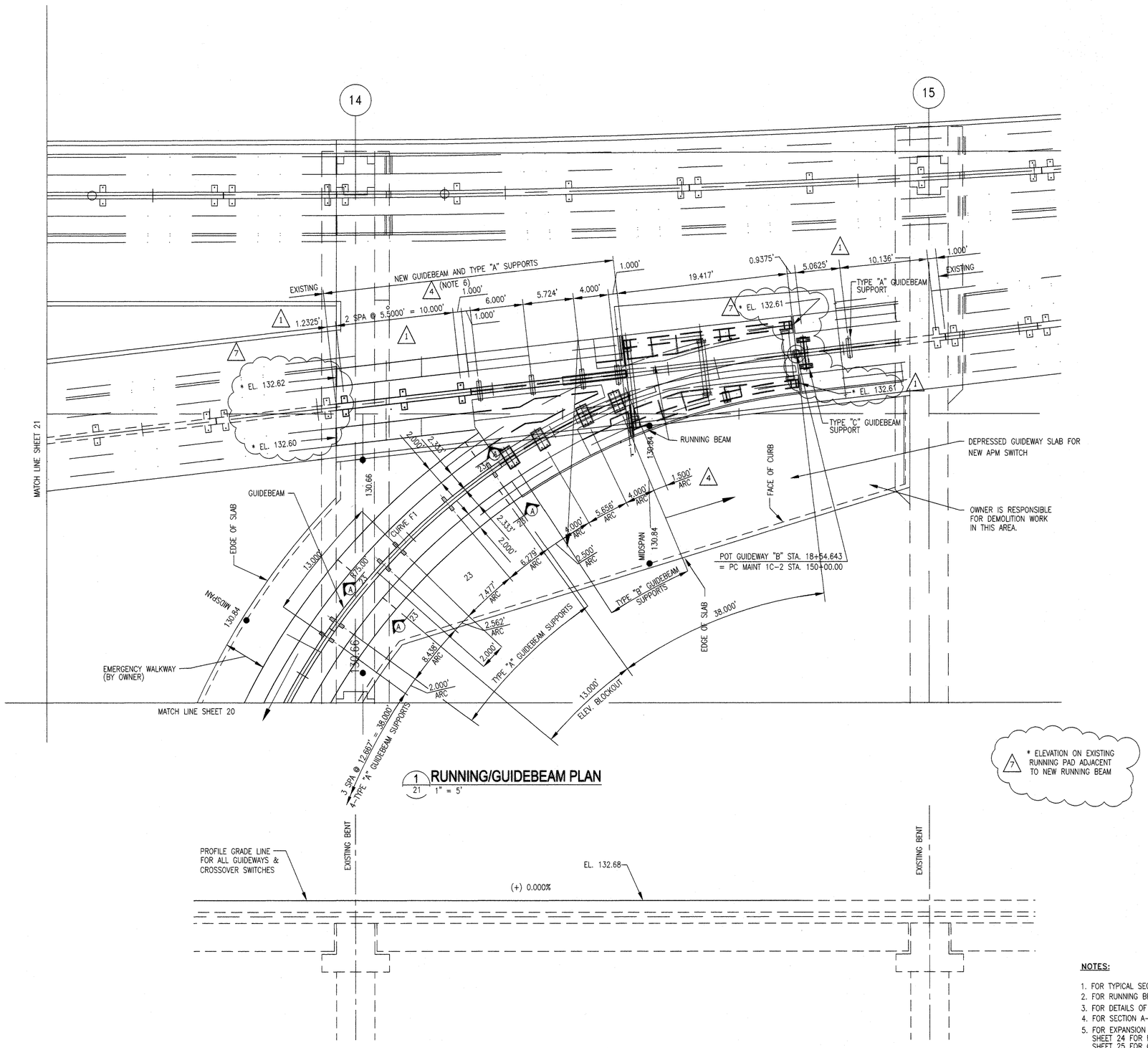

NOTES:

1. FOR TYPICAL SECTION, SEE SHEET 26.
2. FOR RUNNING BEAM CONTROL JOINTS, SEE SHEET 23.
3. FOR DETAILS OF GUIDEWAY TRENCH DRAINS, SEE DETAIL 2, SHEET 23.
4. FOR SECTION A-A, SEE SHEET 23.
5. FOR EXPANSION JOINT DETAILS, SEE:
   SHEET 24 FOR RUNNING BEAMS
   SHEET 25 FOR GUIDE BEAM
4 6. GUIDEBEAM TO BE TRIMMED TO MEET EXISTING GUIDEBEAM

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV DIM	9-18-02	FB
2	CHG SPIRAL	12-2-02	FB
3	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
RUNNING/GUIDEBEAM LAYOUT
(SHEET 5 OF 5)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
22 88

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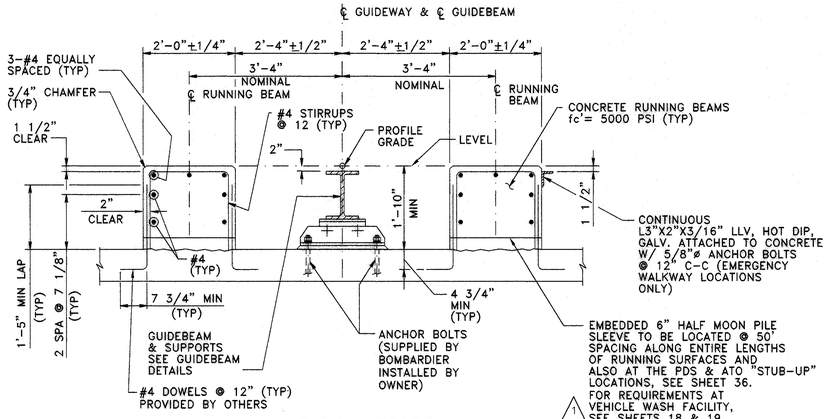
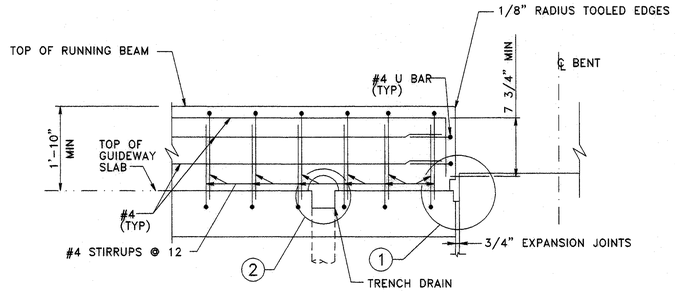
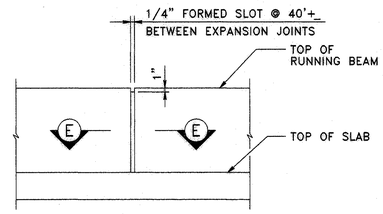


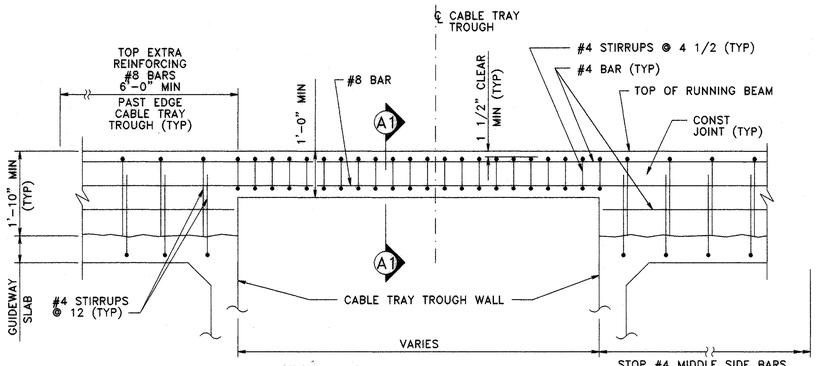
TYPICAL SECTION
3/4"=1'-0"



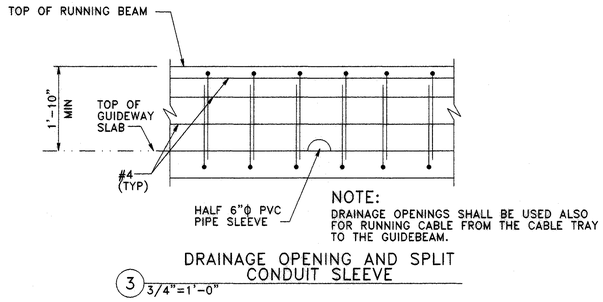
B SECTION – RUNNING BEAM END DETAIL
3/4"=1'-0"



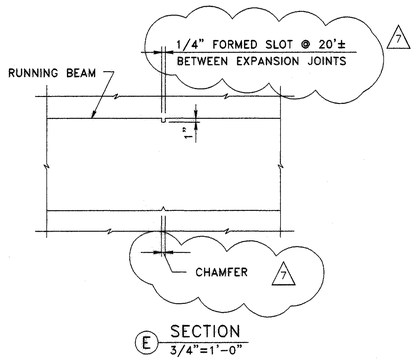
CONTROL JOINT – RUNNING BEAM
3/4"=1'-0"



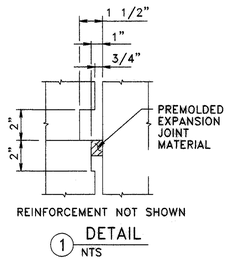
A SECTION – EXTRA REINFORCING DETAIL
3/4"=1'-0"



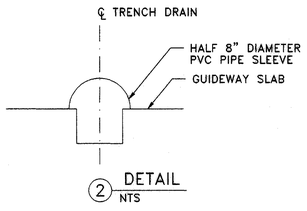
3 DRAINAGE OPENING AND SPLIT CONDUIT SLEEVE
3/4"=1'-0"



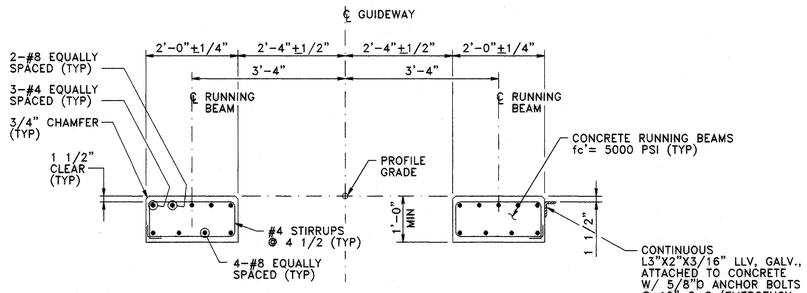
E SECTION
3/4"=1'-0"



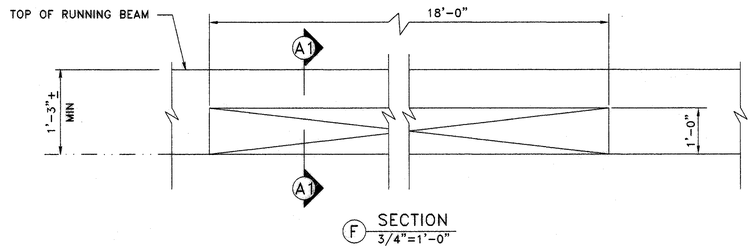
1 DETAIL
NTS



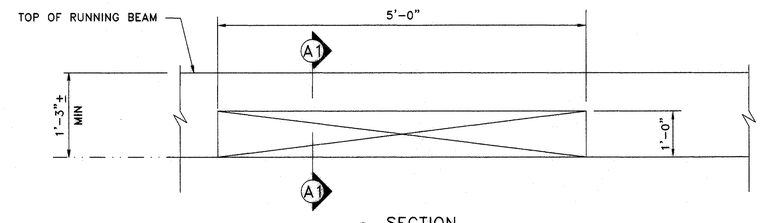
2 DETAIL
NTS



A1 TYPICAL SECTION – EXTRA REINFORCING
3/4"=1'-0"



F SECTION
3/4"=1'-0"



G SECTION
3/4"=1'-0"

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CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV NOTE	9-18-02	FB
2	AS BUILT	3-29-04	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

RUNNING BEAM DETAILS (SHEET 1 OF 2)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
23

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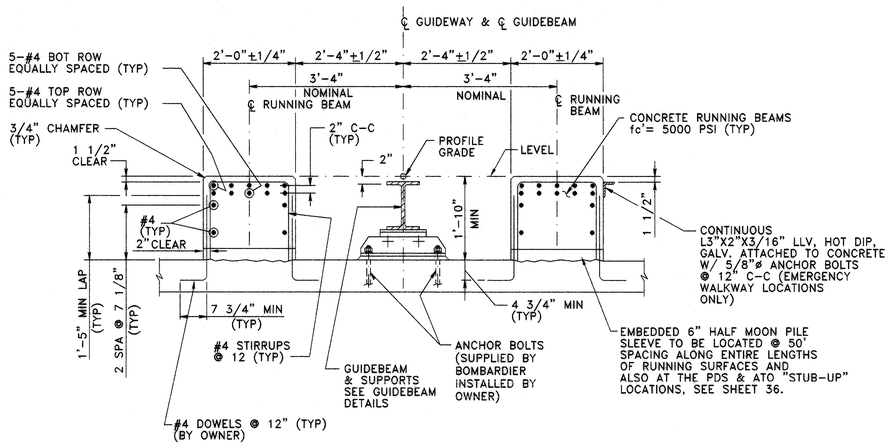
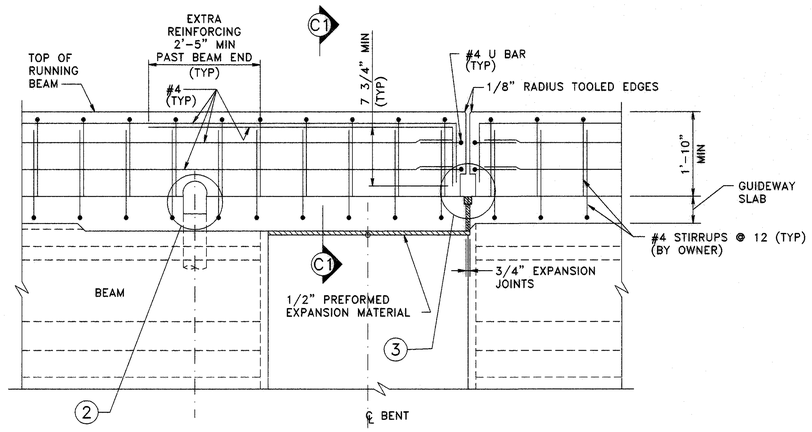
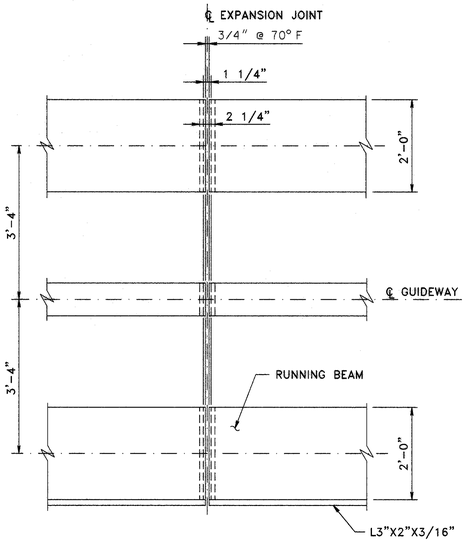


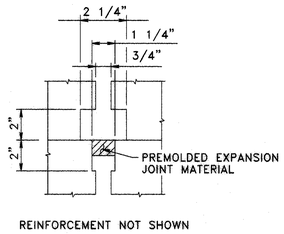
C1 SECTION – EXTRA REINFORCING



D SECTION – EXTRA REINFORCING DETAIL

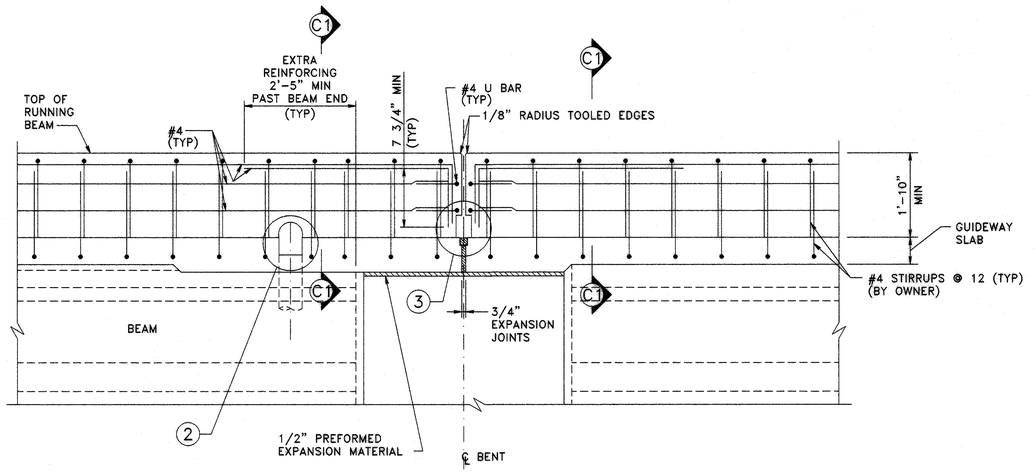


PLAN AT EXPANSION JT
3/4"=1'-0"



REINFORCEMENT NOT SHOWN

3 DETAIL
NTS



C SECTION – EXTRA REINFORCING DETAIL
3/4"=1'-0"

NOTES:
1. FOR DETAIL 2, SEE SHEET 23

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REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

RUNNING BEAM DETAILS (SHEET 2 OF 2)

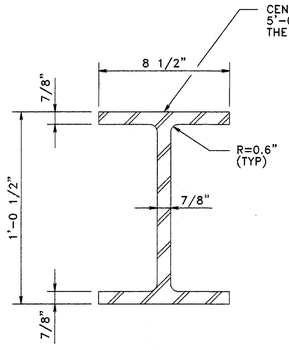
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM

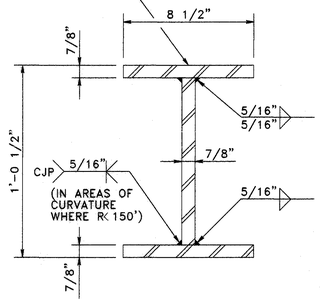
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
24

NOTES:

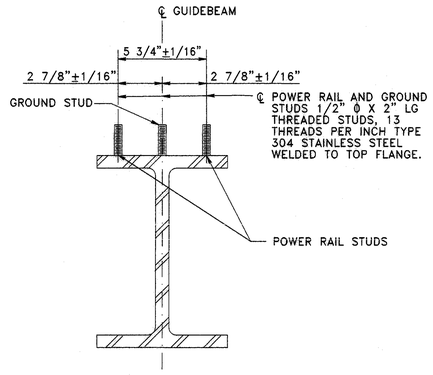
1. GUIDEBEAM MATERIAL SHALL BE ASTM A-709, GRADE 50.
2. GUIDEBEAM JOINT TYPE A TO BE USED AT GUIDEWAY EXPANSION JOINTS. JOINT TYPE B TO BE USED AT ALL OTHER JOINT LOCATIONS.



GUIDEBEAM SECTION
NTS



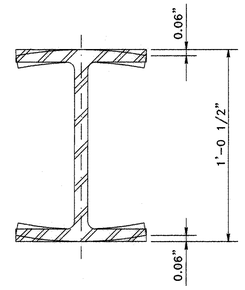
GUIDEBEAM ALTERNATE WELDED SECTION
NTS



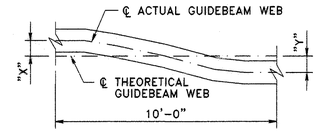
DETAIL - POWER RAIL STUDS
NTS

POWER RAIL STUD SPACING

1. POWER RAIL STUDS SHOULD BE MAINTAINED @ 5'-0" SPACING THROUGHOUT THE ENTIRE LENGTH OF GUIDEBEAMS, WHEREVER POSSIBLE.
2. START POWER RAIL 5'-0" SPACING AT SWITCH ZONE. SEE PIVOT SWITCH GUIDEBEAM DETAILS.
3. STUDS MUST BE LOCATED A MINIMUM DISTANCE OF 8" FROM AN ATO FEED, POWER FEED ASSEMBLY, GUIDEBEAM JOINT, OR GROUND. WHEN A STUD FALLS WITHIN 8" OF ONE ON THESE FEATURES, THE STUD SHALL BE RELOCATED TO A DISTANCE 2'-6" FROM THE PREVIOUS STUD AND THE 5'-0" SPACING SHALL CONTINUE HENCEFORTH.

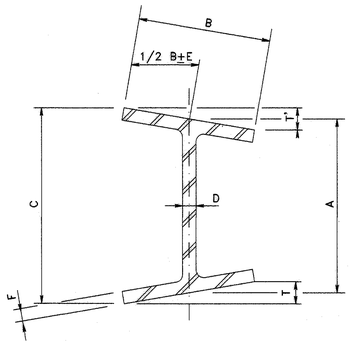


ALLOWABLE FLANGE WARPING
NTS



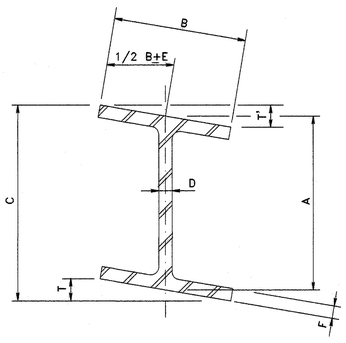
CASE I IF "X" = 1/8" THEN "Y" MAXIMUM = 0"
CASE II IF "X" = 1/16" THEN "Y" MAXIMUM = 1/16"
CASE III IF "X" = 0" THEN "Y" MAXIMUM = 1/8"
ONE "WAVE" ONLY PERMITTED IN ANY 10'-0" LENGTH

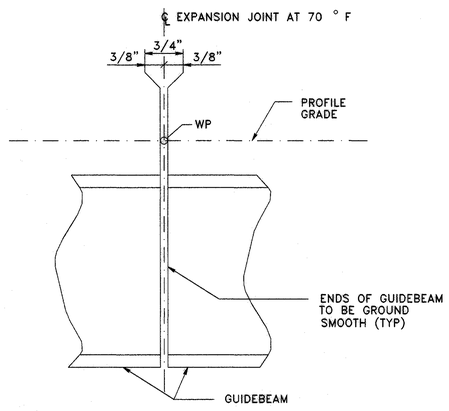
ACCEPTABLE GUIDEBEAM WAVINESS
NTS



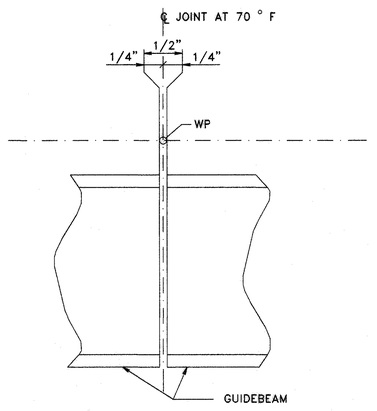
SYM	DIMENSION (IN)
A	12.50±0.12
B	8.50±0.20
C	12.75 MAX
D	0.88±0.05
E	0.19
F	0.81±0.05
T	0.12 MAX
T'	0.12 MAX

GUIDEBEAM ALLOWABLE CROSS SECTION TOLERANCES
NTS





GUIDEBEAM JOINT TYPE "A"
(AT EXPANSION JOINT)
NTS



GUIDEBEAM JOINT TYPE "B"

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APM GUIDEWAY EXTENSION

GUIDEBEAM DETAILS (SHEET 1 OF 2)

PROJECT MGR:
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DRAWING STANDARD:
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25

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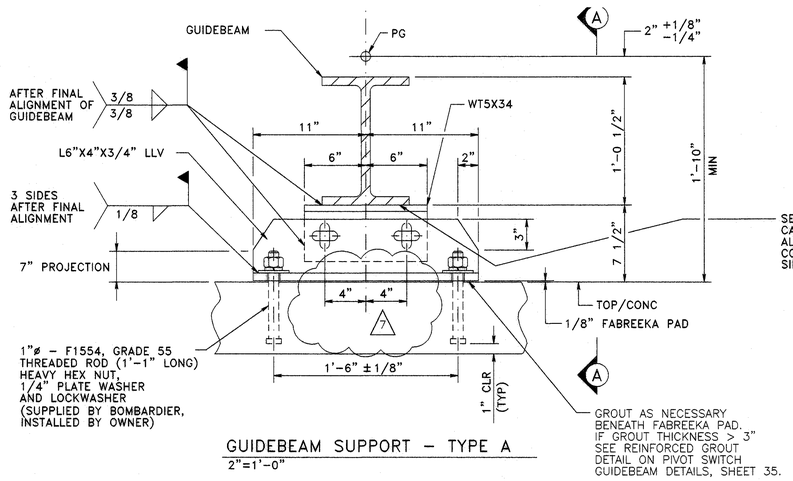
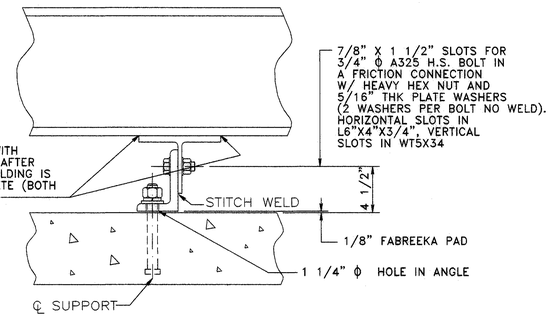


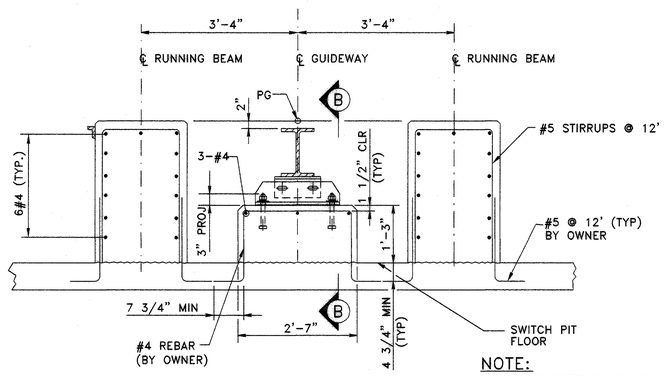
GUIDEBEAM SUPPORT – TYPE A
2"=1'-0"

NOTE: 1. FOR GUIDEBEAM SUPPORTS– TYPE B & C SEE PIVOT SWITCH GUIDEBEAM DETAILS.
2. GROUT PAD NOT SHOWN.



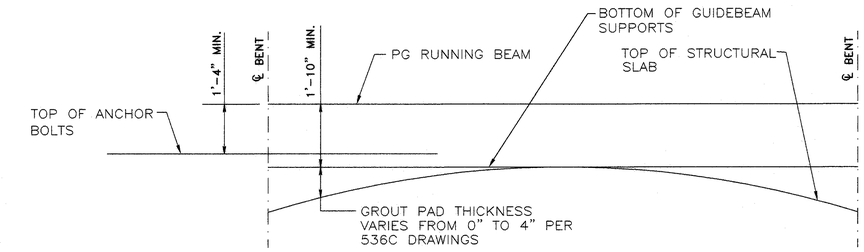
A SECTION
2"=1'-0"

1. PLACE FABREEKA PAD, 3/4" ANGLE, WASHER, LOCKWASHER AND HEAVY HEX NUT ONTO THREADED ROD AND TIGHTEN NUT TO THE "SNUG TIGHT" CONDITION. 1
2. ATTACH THE WT OR 1/2" ANGLE TO THE 3/4" ANGLE WITH 3/4" DIA BOLTS. POSITION THE WT OR 1/2" ANGLE TO THE CORRECT ELEVATION AND CENTERED OVER TOP OF THE 3/4" ANGLE. TEMPORARILY TIGHTEN THE 3/4" DIA BOLTS TO THE "SNUG TIGHT" CONDITION. 1
3. AFTER ALL SUPPORTS ARE IN POSITION, PLACE GUIDEBEAM ON TOP OF SUPPORTS. POSITION THE GUIDEBEAM HORIZONTALLY AND VERTICALLY INTO THE CORRECT ALIGNMENT. TACK WELDS OR CLAMPS CAN BE USED TO HOLD THE GUIDEBEAM IN ITS FINAL POSITION. LOOSEN THE BOLTED CONNECTION IF NECESSARY TO ADJUST HORIZONTALLY OR VERTICALLY.
4. THE ALIGNMENT OF THE GUIDEBEAM SHALL BE CHECKED BY THE ENGINEER. IF THE ALIGNMENT IS REJECTED BY THE ENGINEER, THE GUIDEBEAM SHALL BE REALIGNED AND RECHECKED UNTIL APPROVAL OF THE ENGINEER IS GIVEN.
5. ONCE THE ALIGNMENT IS APPROVED, THE GUIDEBEAMS AND SUPPORTS SHALL BE WELDED INTO THEIR FINAL POSITION. THE BOLTED CONNECTION BETWEEN THE SUPPORT MEMBERS SHALL BE TIGHTENED TO THE REQUIRED TENSION FOR A FRICTION CONNECTION.

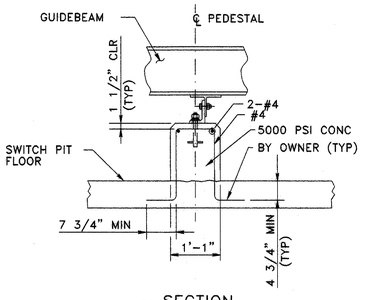


GUIDEBEAM SUPPORT – TYPE D
3/4"=1'-0"

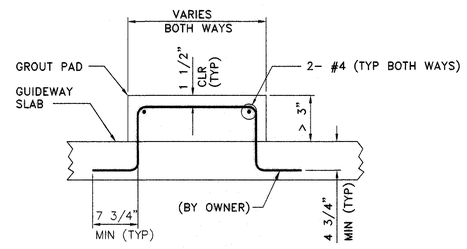
NOTE:
ENTIRE CONCRETE GUIDE BEAM SUPPORT PEDESTAL, INCLUDING REBAR AND DOWELS IS "BY OWNER" WITHIN THE MAINTENANCE YARD.



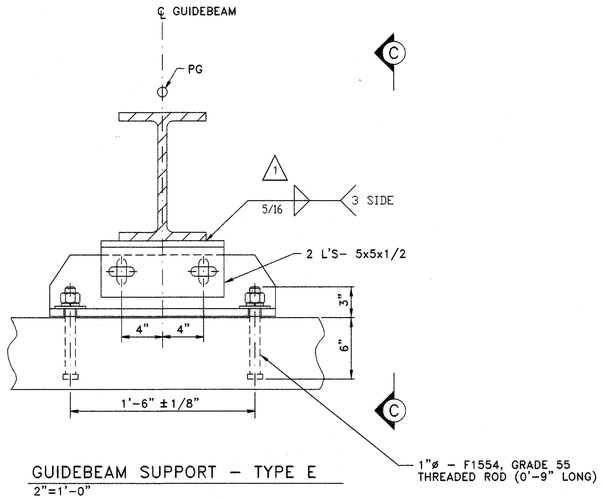
GROUT PAD REQUIREMENTS
NTS



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

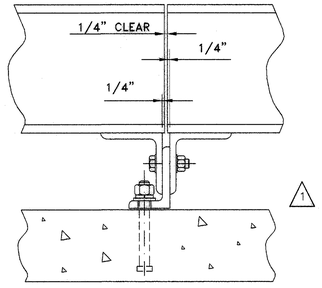


REINFORCED GROUT DETAIL (DEPTH > 3")
NTS



GUIDEBEAM SUPPORT – TYPE E
2"=1'-0"

NOTE: 1. FOR LOCATION, SEE SHEET 18
2. FOR DETAILS NOT SHOWN, SEE GUIDEBEAM SUPPORT – TYPE "A".



C SECTION
2"=1'-0"

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1	REV WELDS	9-18-02	FB
2	AS BUILT	3-29-04	FB

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APM GUIDEWAY EXTENSION

GUIDEBEAM DETAILS (SHEET 2 OF 2)

PROJECT MGR:
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DRAWING STANDARD:
SCALE:
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APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
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SHEET NO.

26 26

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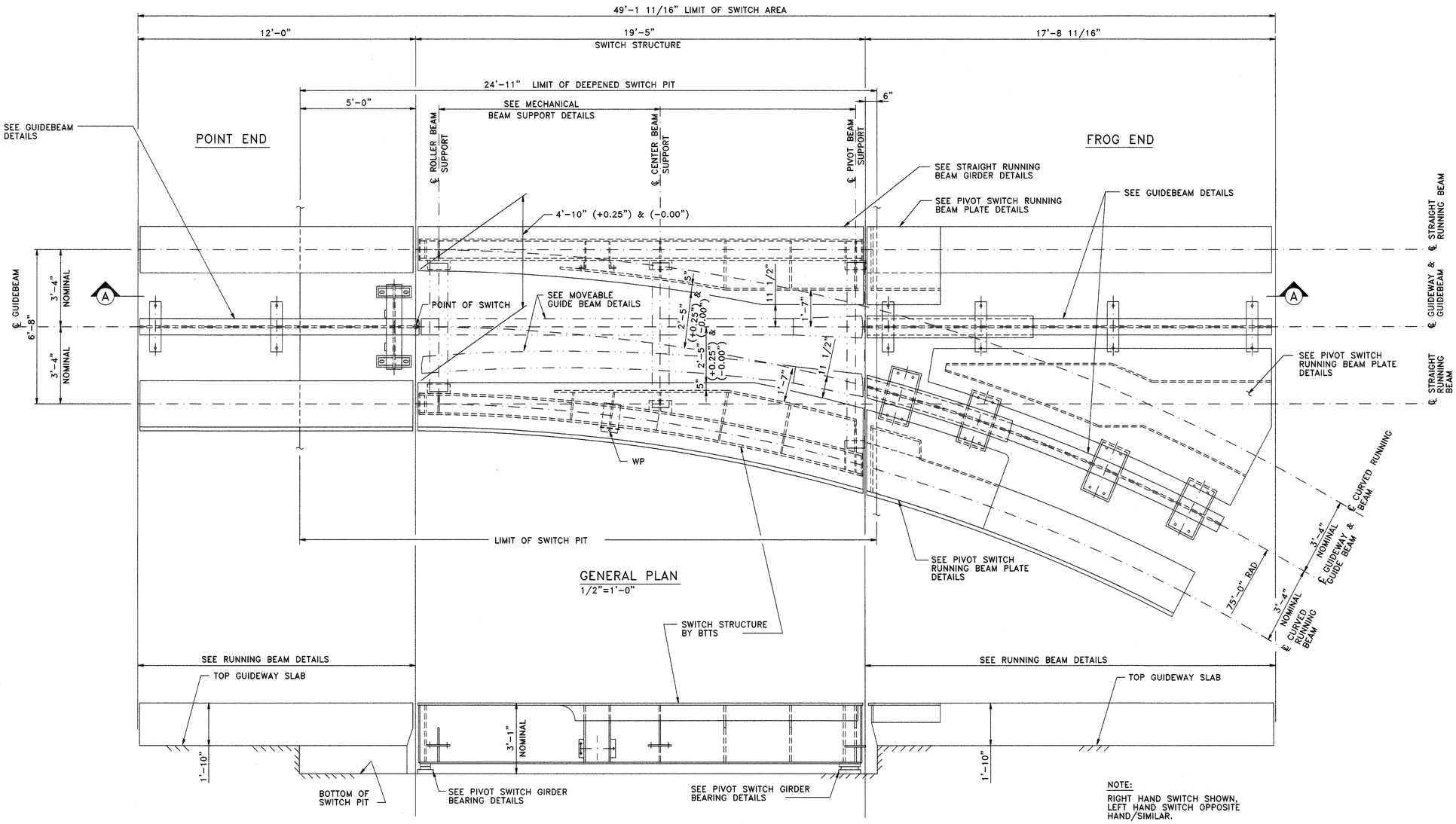

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APM GUIDEWAY EXTENSION
PIVOT SWITCH PLAN

PROJECT MGR:
DESIGNER:
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DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

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27 27

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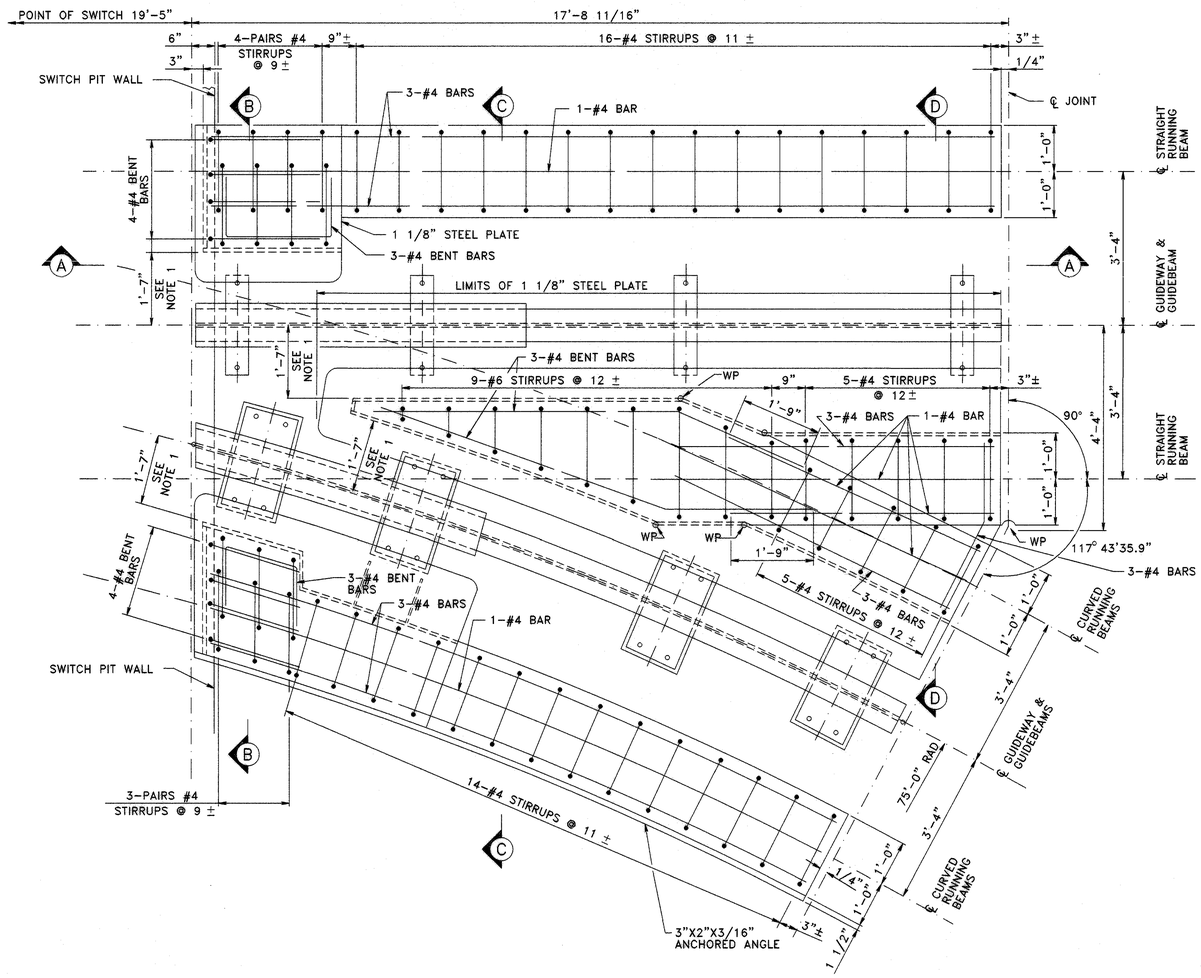

1 FROG END PLAN DETAIL AS SHOWN
3/4"=1'-0"

1B OPPOSITE HAND

1C MIRROR IMAGE

1D OPPOSITE HAND & MIRROR IMAGE

NOTES:

1. DEFINES LIMITS OF CONCRETE UNDER TREAD PLATE
2. FOR GUIDE BEAM AND GUIDE BEAM SUPPORT DETAILS, SEE PIVOT SWITCH GUIDE BEAM DETAILS.
3. FOR 1 1/8" STEEL PLATE DETAILS, SEE PIVOT SWITCH RUNNING BEAM PLATE DETAILS.
4. RUNNING BEAM DIMENSIONS SHOWN ARE NOMINAL DIMENSIONS. SEE SHEET 2 OF 2 FOR DETAIL DIMENSIONS.
5. SEE EMERGENCY WALKWAY DETAILS, FOR WALKWAY CROSSOVER PAINTED SURFACE DETAIL.

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APM GUIDEWAY EXTENSION
PIVOT SWITCH DETAIL 1
(SHEET 1 OF 2)

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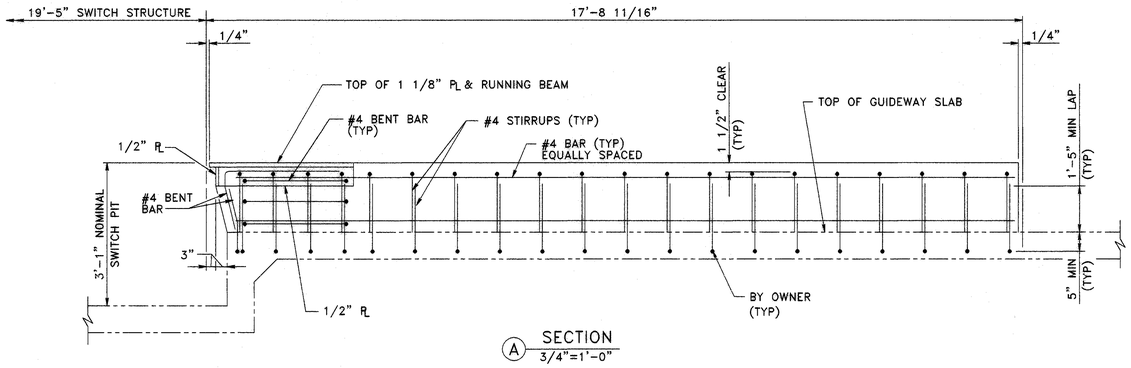
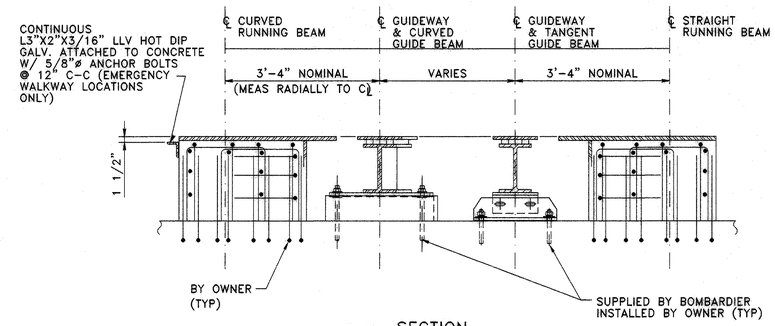
DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
28 32

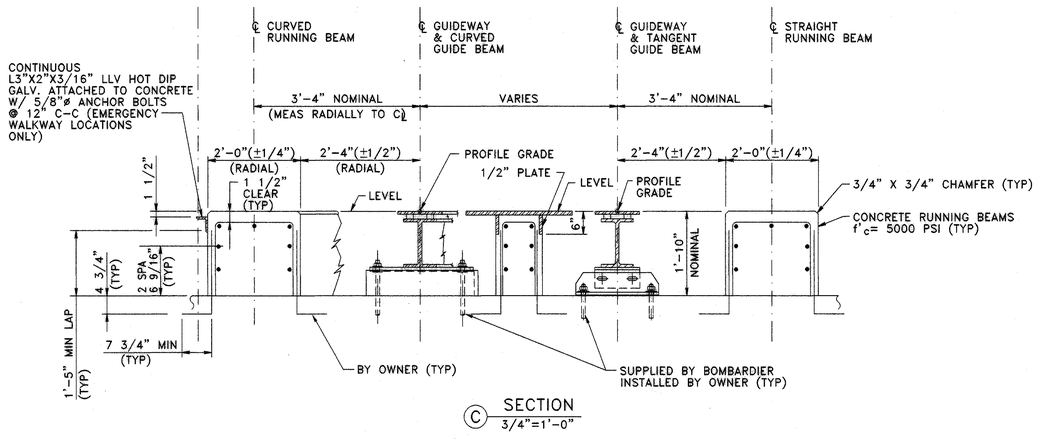


A SECTION
3/4"=1'-0"

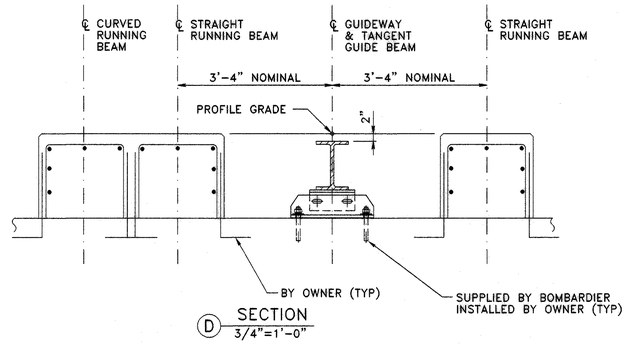


B SECTION
3/4"=1'-0"

FOR INFORMATION NOT SHOWN. SEE SECTION C



C SECTION
3/4"=1'-0"



D SECTION
3/4"=1'-0"

FOR INFORMATION NOT SHOWN. SEE SECTION C

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APM GUIDEWAY EXTENSION
PIVOT SWITCH DETAIL 1 (SHEET 2 OF 2)

PROJECT MGR:
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29 29

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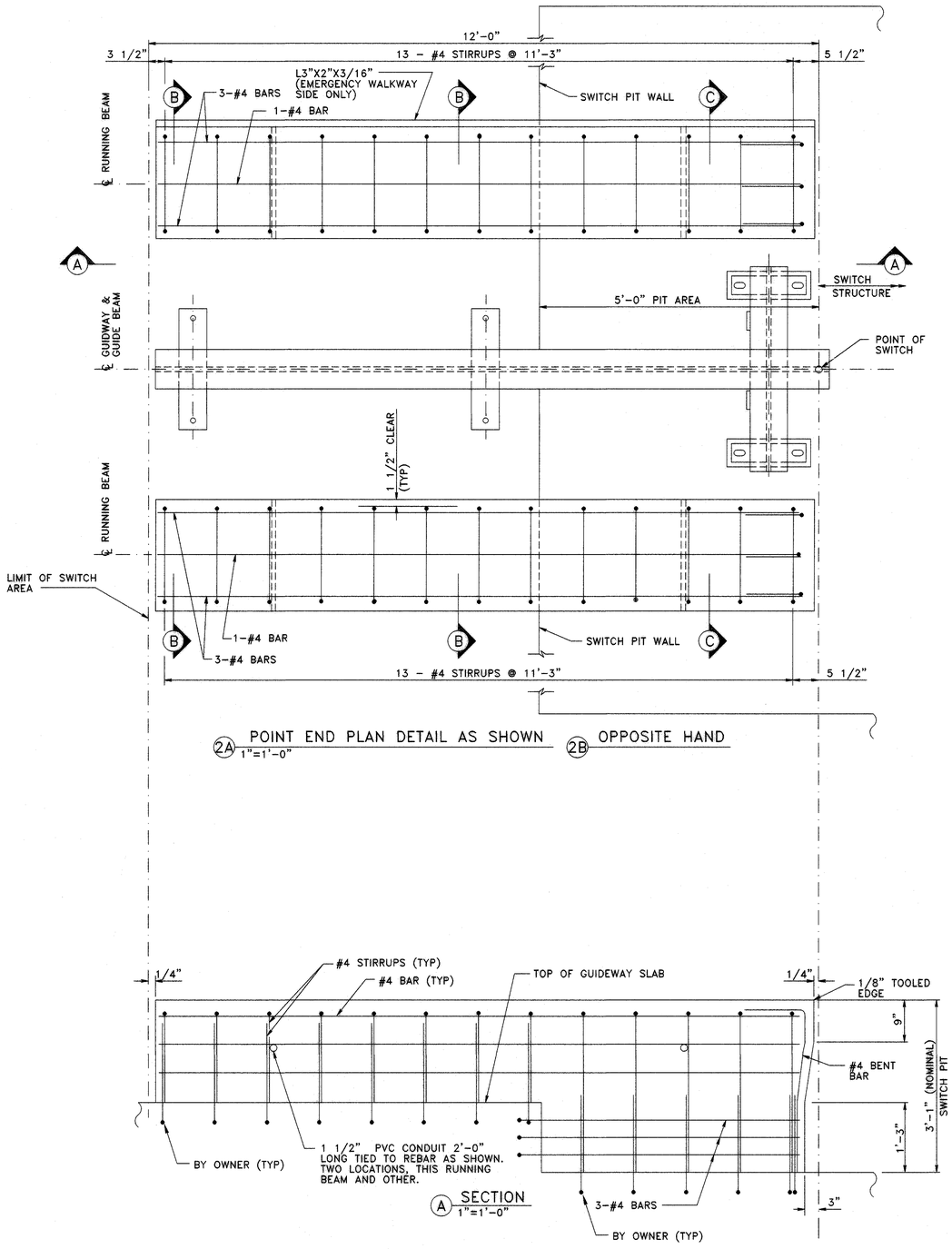


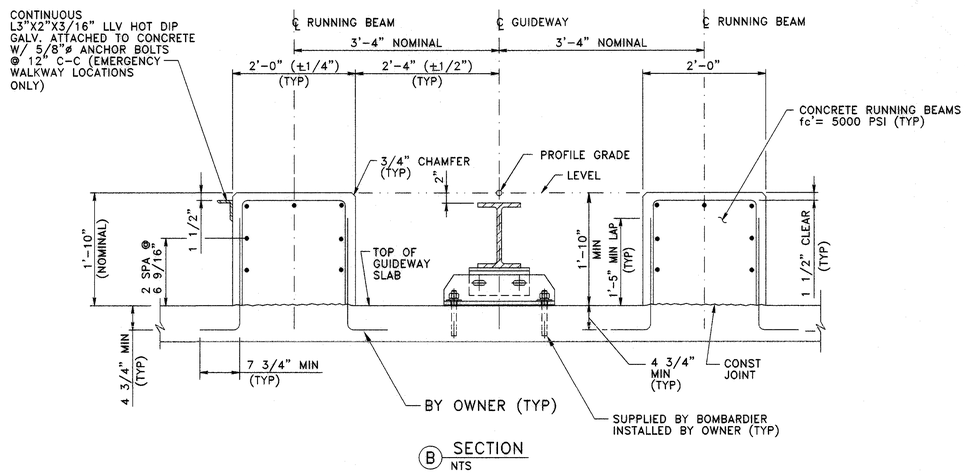
2A POINT END PLAN DETAIL AS SHOWN
1"=1'-0"

2B OPPOSITE HAND

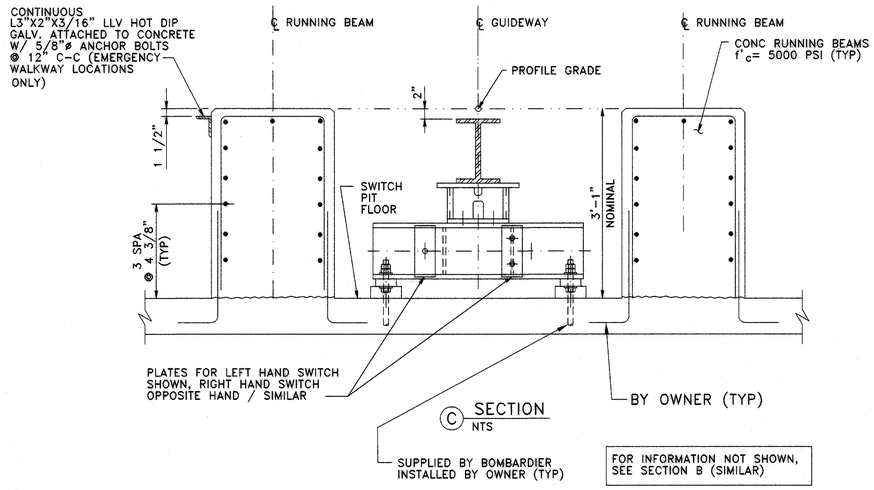
A SECTION
1"=1'-0"

NOTE:

1. FOR GUIDE BEAM & GUIDE BEAM SUPPORT SEE GUIDE BEAM AND PIVOT SWITCH GUIDE BEAM DETAILS.



B SECTION
NTS



C SECTION
NTS

FOR INFORMATION NOT SHOWN, SEE SECTION B (SIMILAR)

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PIVOT SWITCH DETAIL 2

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30 30

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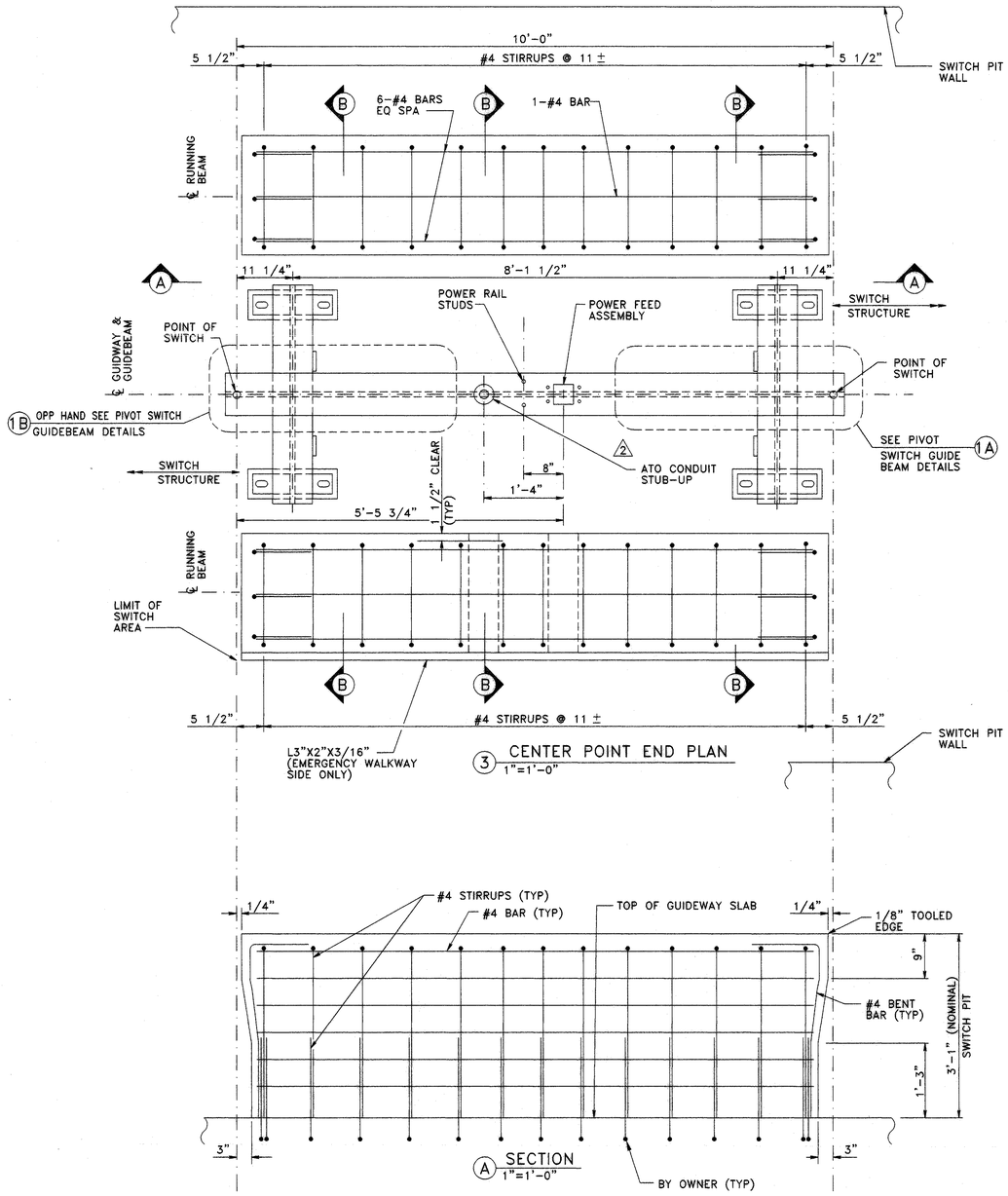
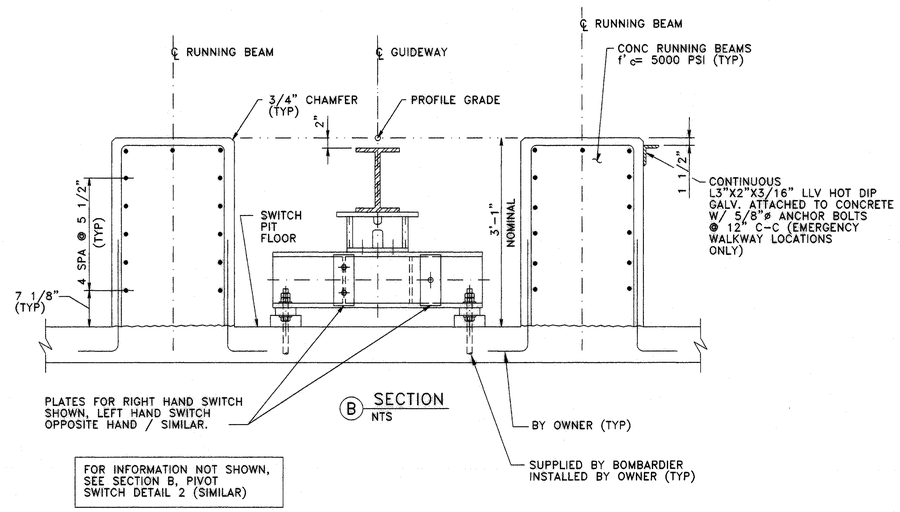


NOTE:

1. FOR GUIDEBEAM & GUIDEBEAM SUPPORT SEE PIVOT SWITCH GUIDEBEAM DETAILS.
2. FOR POWER FEED ASSEMBLY, POWER RAIL STUDS, AND ATO CONDUIT STUB-UP DETAILS SEE PIVOT SWITCH GUIDE BEAM DETAILS.



FOR INFORMATION NOT SHOWN, SEE SECTION B, PIVOT SWITCH DETAIL 2 (SIMILAR)

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APM GUIDEWAY EXTENSION

PIVOT SWITCH DETAIL 3

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31 31

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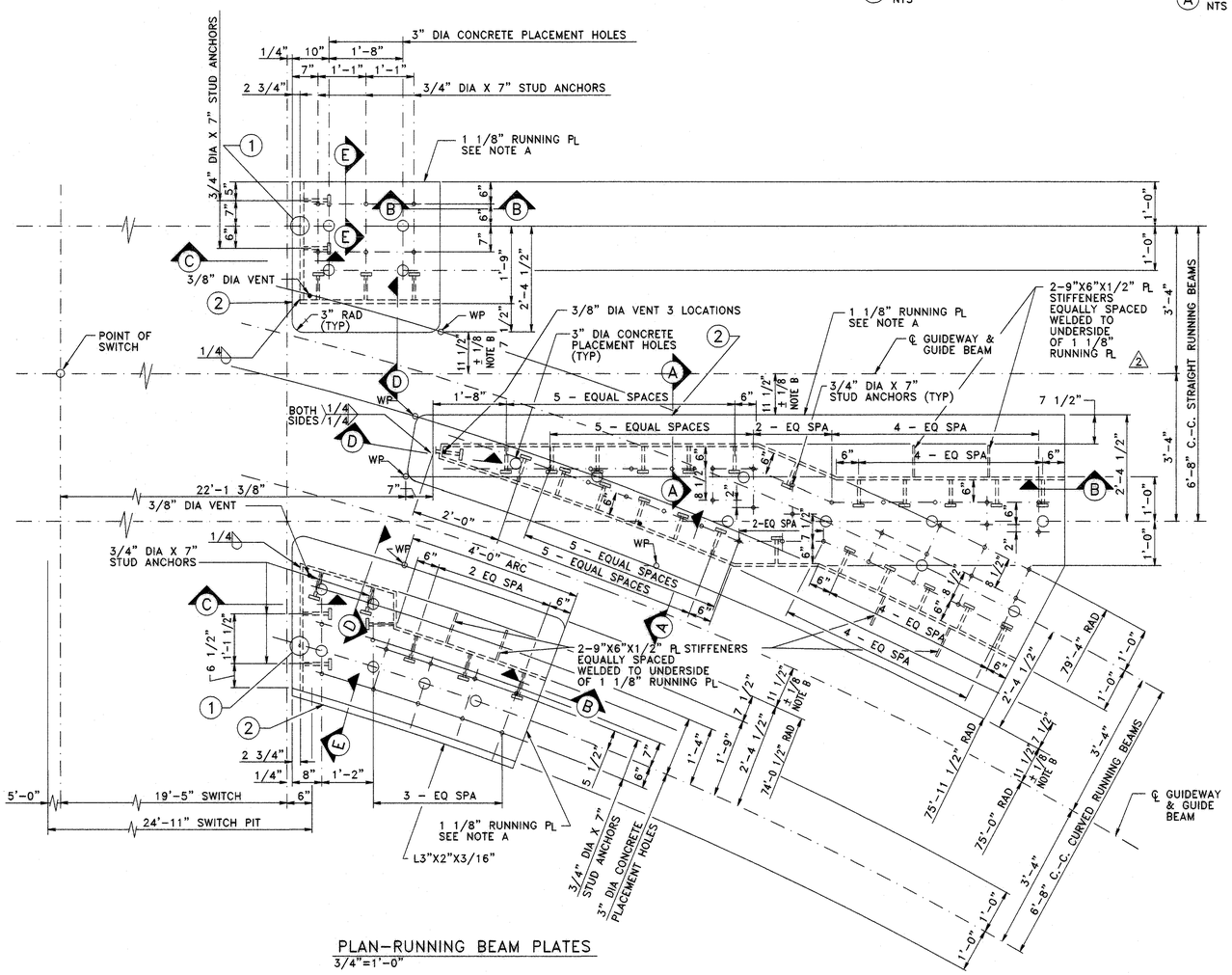
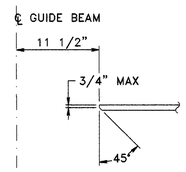
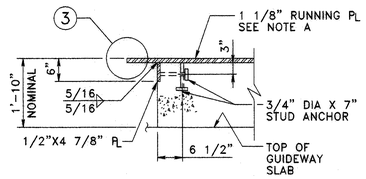


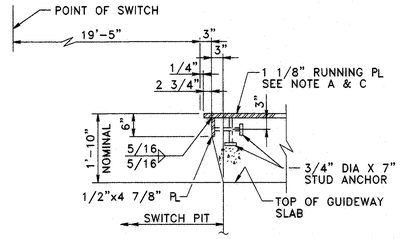
PLAN–RUNNING BEAM PLATES
3/4"=1'-0"



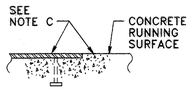
3 DETAIL
NTS



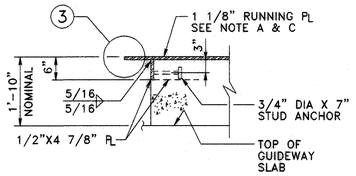
A SECTION
NTS



C SECTION
NTS



B SECTION
NTS



D SECTION
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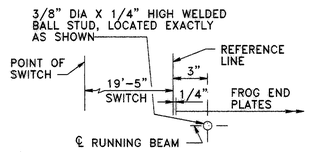
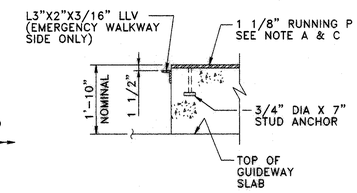


1 BENCH MARK DETAIL
NTS



E SECTION
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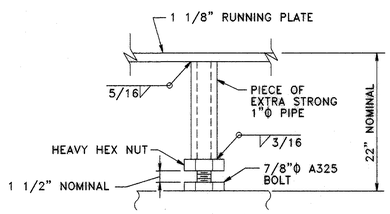

USE ON RUNNING BEAM PLATES. LOCATE AS NECESSARY, 4 PER PLATE MINIMUM REQ

2 LEVELING DEVICE DETAIL
NTS

NOTE A:
PAINT AND PROVIDE WEARING SURFACE IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS.

NOTE B:
THESE DIMENSIONS MUST BE MEASURED TO THE CENTER LINE OF GUIDE BEAM WEB.

NOTE C:
THE TOP SURFACE OF ALL RUNNING PLATES AND CONCRETE RUNNING SURFACES MUST BE IN ONE COMMON PLANE WITHIN 1/8" OF THEORETICAL PROFILE GRADE.

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida 33607
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FX: (813) 289-4405

CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
PIVOT SWITCH RUNNING BEAM PLATE DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

32 32

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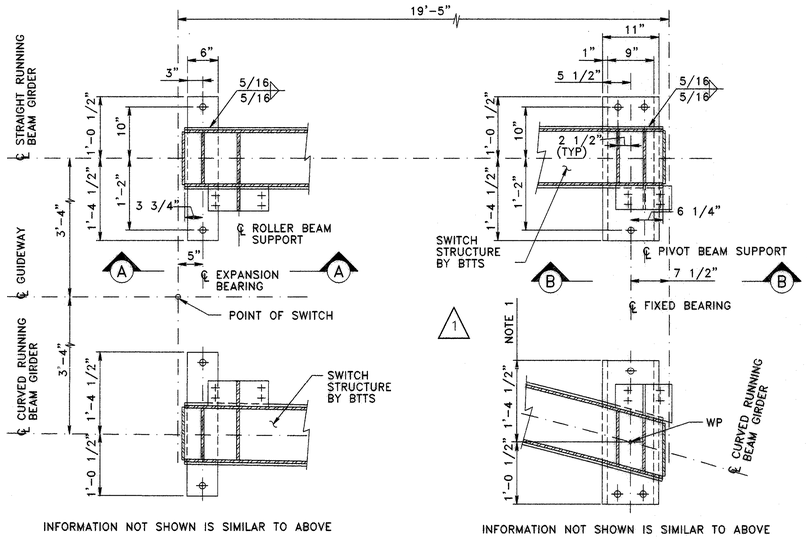
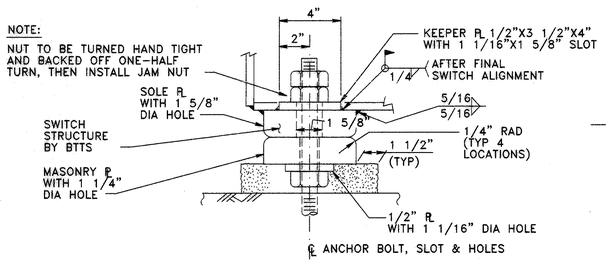
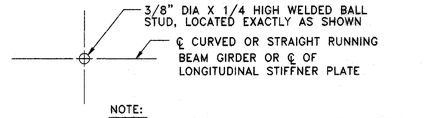


PLAN – SWITCH BEARINGS
1"=1'-0"

1 NOTE 1:
TYPICAL EXCEPT GUIDEWAY B SWITCHES BETWEEN COLUMN LINES 12 AND 15. FOR SWITCH BEARING IN THIS AREA SEE SHEETS 52 & 53.



1 DETAIL
NTS



BENCH MARK DETAIL
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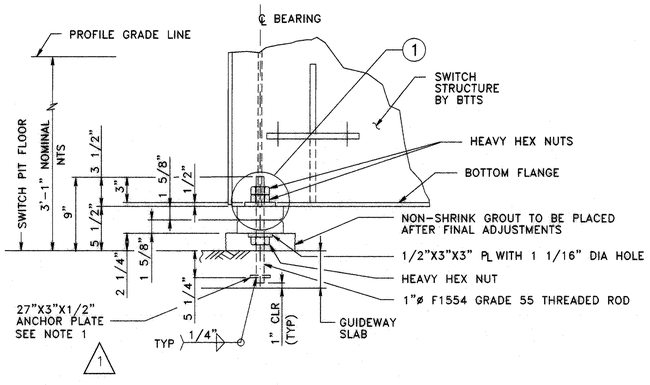

A SECTION
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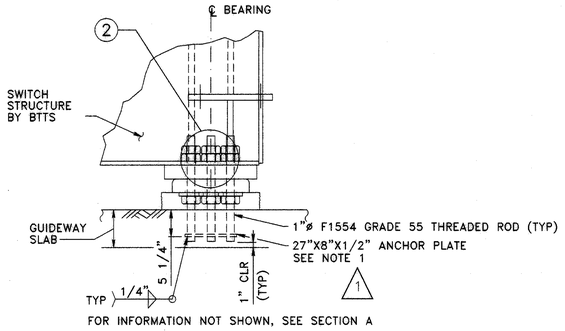

B SECTION
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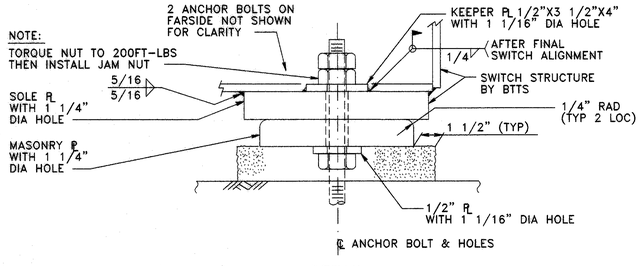

2 DETAIL
NTS

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1	ADDED NOTE	FPB	9/26

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

PIVOT SWITCH GIRDER BEARING DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

33 33

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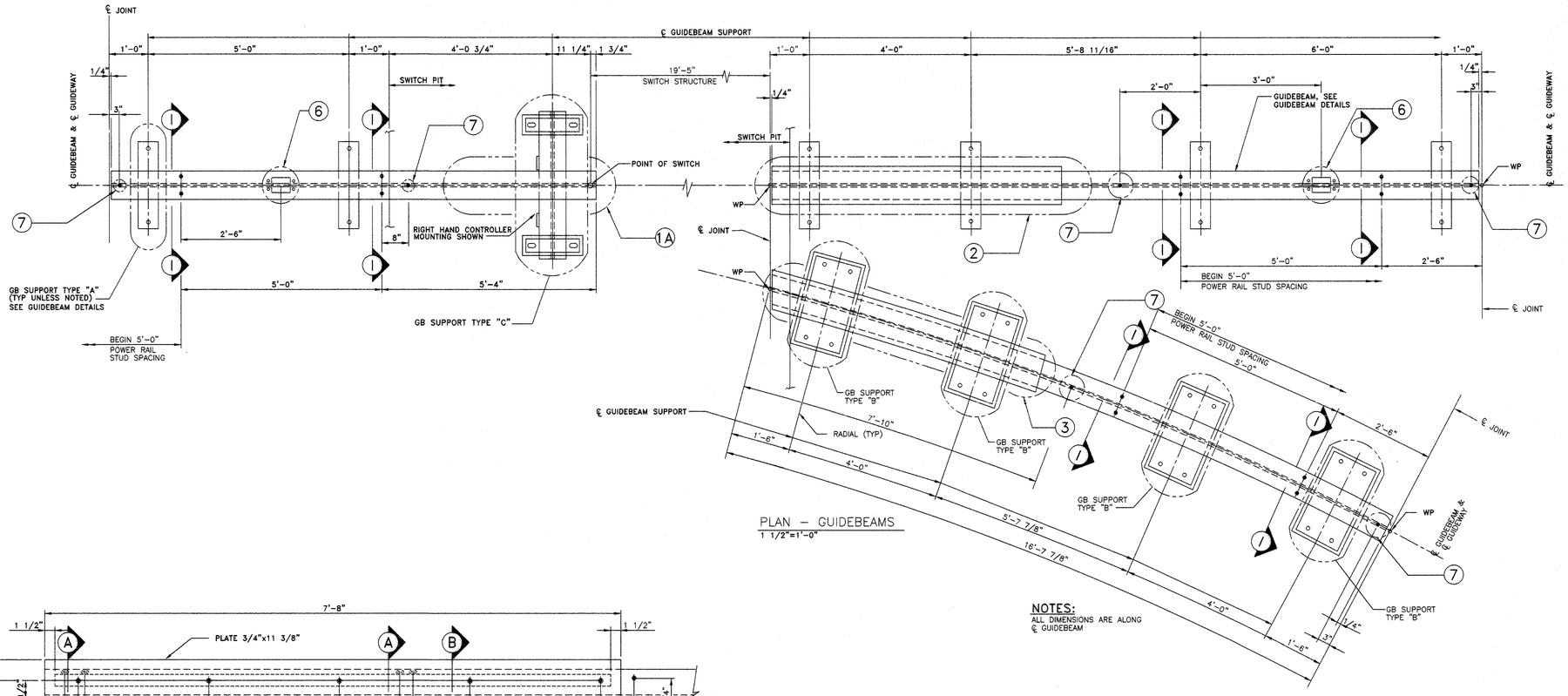
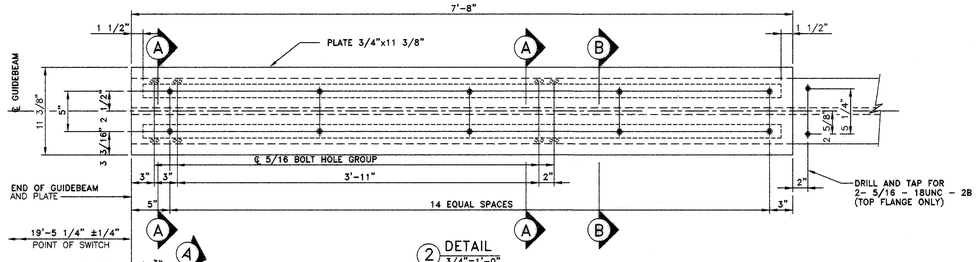
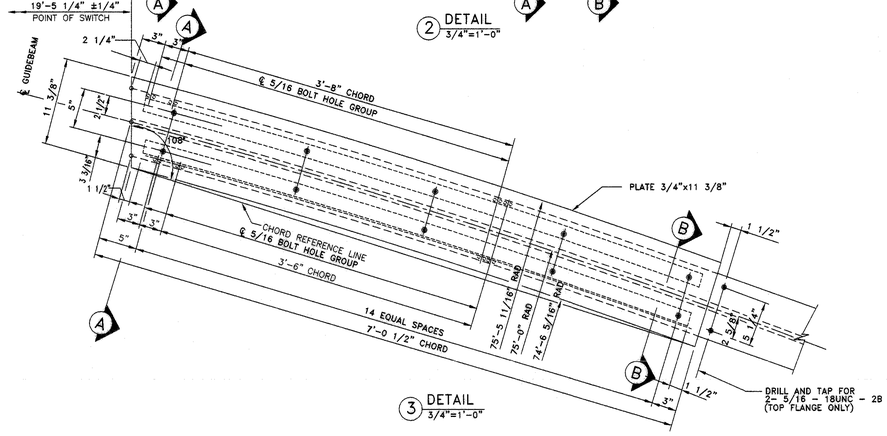


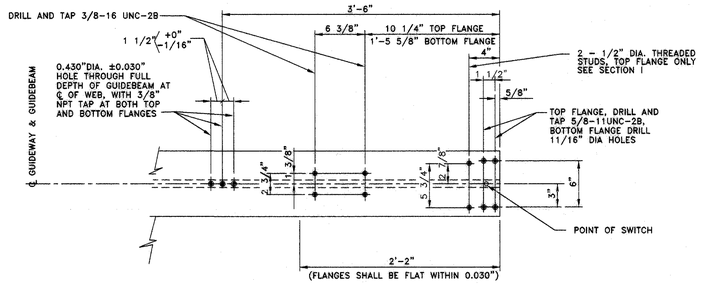
PLAN – GUIDEBEAMS
1 1/2"=1'-0"



2 DETAIL
3/4"=1'-0"

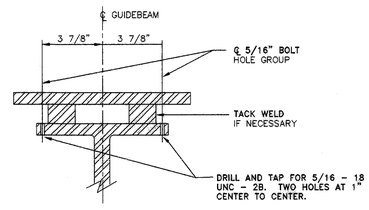


3 DETAIL
3/4"=1'-0"



1A DETAIL AS SHOWN
3/4"=1'-0"
1B OPPOSITE HAND

NOTE:
RIGHT HAND SWITCH SHOWN.
LEFT HAND SWITCH SIMILAR.



A SECTION
3/8"=1'-0"

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REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
PIVOT SWITCH GUIDEBEAM DETAILS
(SHEET 1 OF 3)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

34 34

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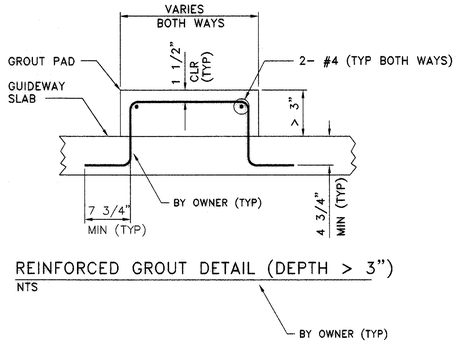
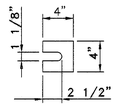
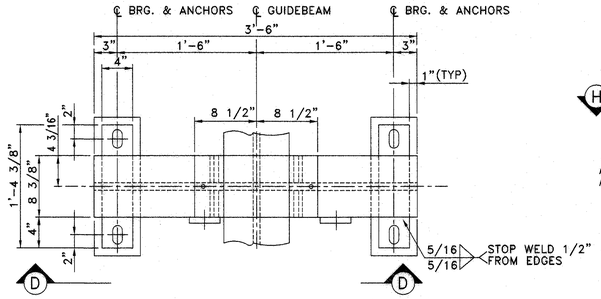


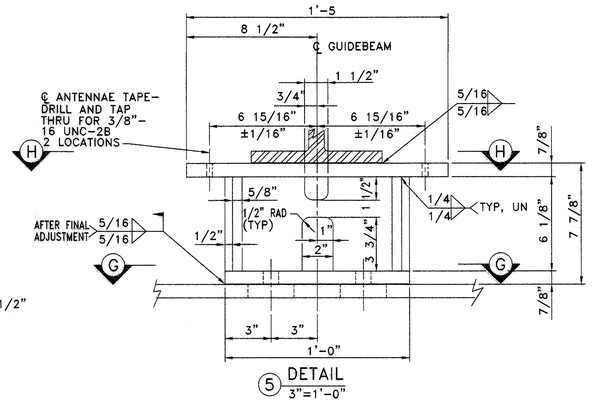
REINFORCED GROUT DETAIL (DEPTH > 3")
NTS



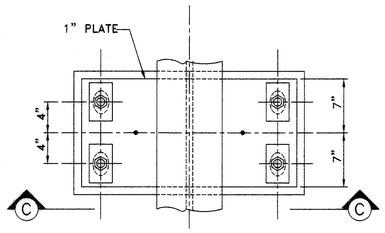
④ DETAIL – 3/8" WASHER
NTS



GUIDEBEAM SUPPORT TYPE C – PLAN
1 1/2"=1'-0"

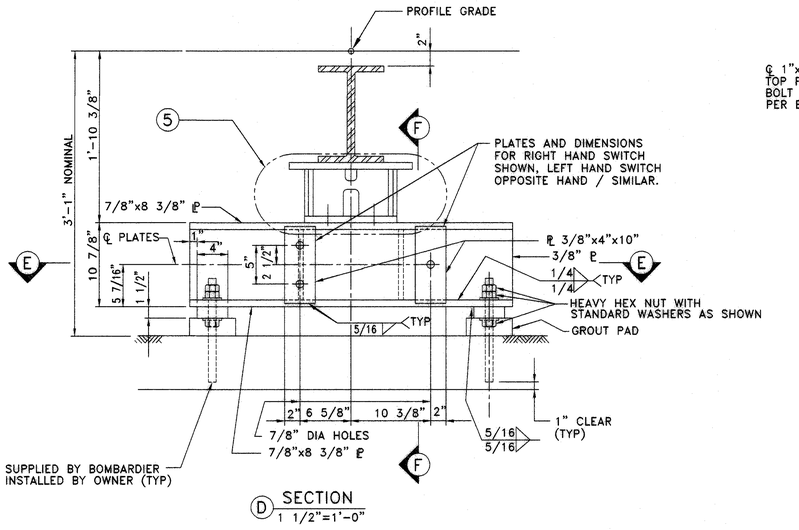


⑤ DETAIL
3"=1'-0"

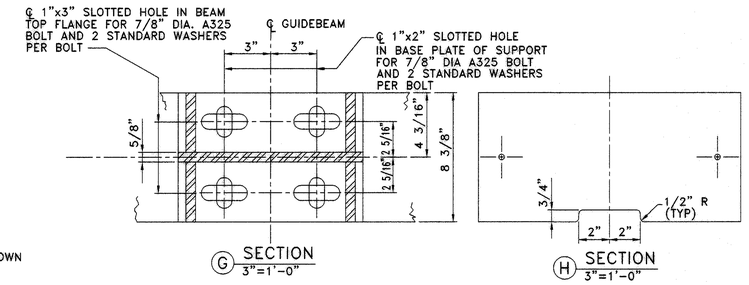


FOR DETAILS NOT SHOWN, SEE
GUIDEBEAM SUPPORT TYPE B

GUIDEBEAM SUPPORT TYPE B – PLAN
1 1/2"=1'-0"

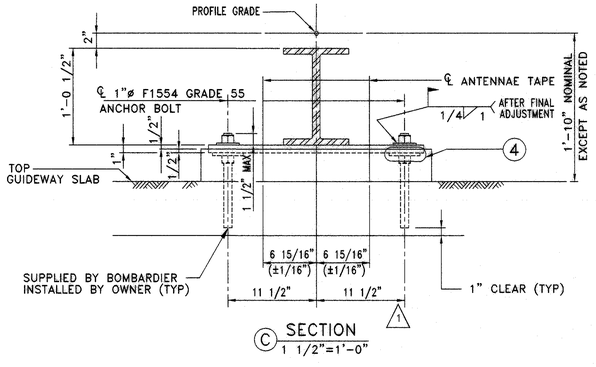


D SECTION
1 1/2"=1'-0"

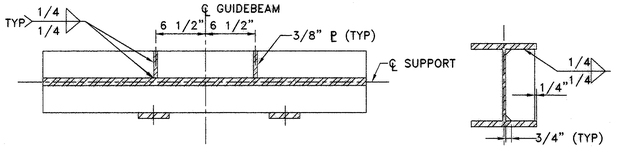


G SECTION
3"=1'-0"

H SECTION
3"=1'-0"

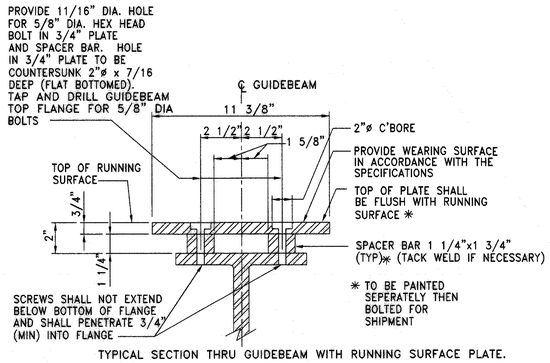


C SECTION
1 1/2"=1'-0"



E SECTION
1 1/2"=1'-0"

F SECTION
1 1/2"=1'-0"



TYPICAL SECTION THRU GUIDEBEAM WITH RUNNING SURFACE PLATE.

B SECTION
3"=1'-0"

NOTE:
GUIDEBEAM SUPPORT MATERIAL MAY BE ASTM-A36.

HOUSTON AIRPORT SYSTEM
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INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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APM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
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INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
PIVOT SWITCH GUIDEBEAM DETAILS
(SHEET 2 OF 3)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

35
35

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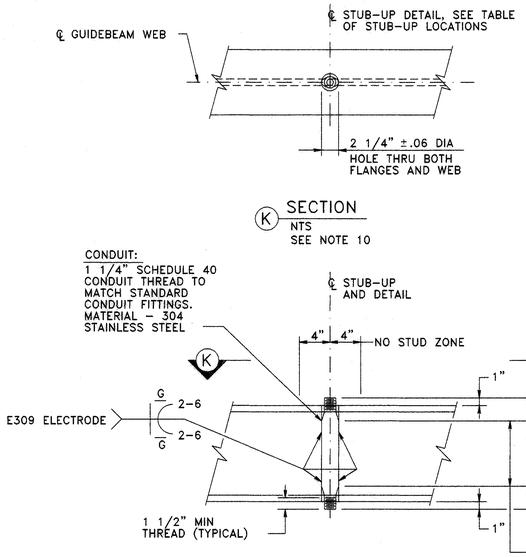
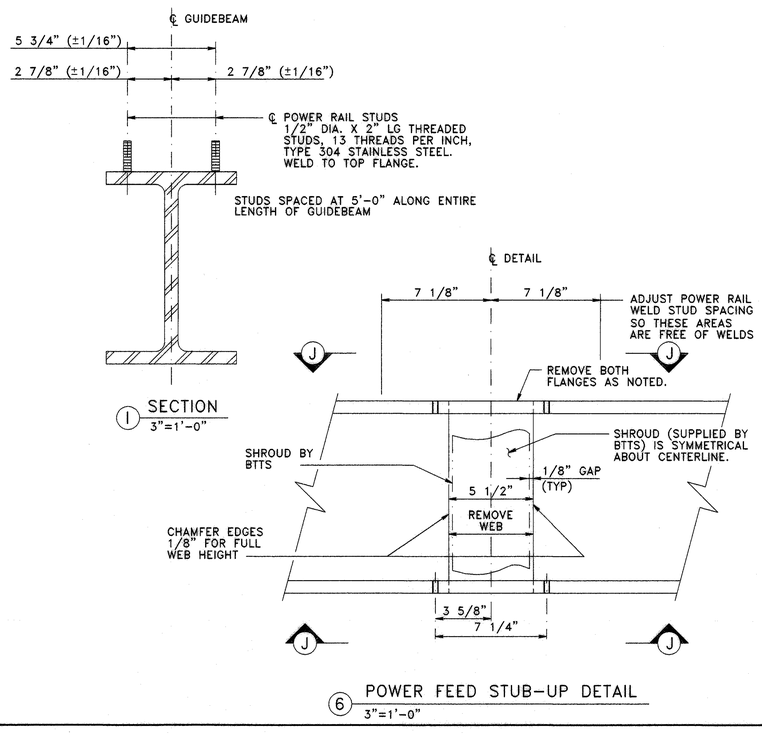


RECOMMENDED GUIDEBEAM INSTALLATION PROCEDURE
GUIDEBEAM SUPPORT TYPES B, C, & D SIMILAR

1. SECURE THE THREADED ROD (ANCHOR BOLT) IN PLACE ASSURING THAT THE ANCHOR BOLT IS SET TO PROVIDE THE DIMENSIONS SHOWN.
2. POUR SLAB AND ADJACENT CONCRETE RUNNING BEAMS.
3. PROTECT THE ANCHOR BOLTS FROM DISTURBANCE UNTIL THE CONCRETE HAS CURED.
4. SUPPORT THE GUIDEBEAM FROM THE RUNNING BEAMS AT THE APPROXIMATE ELEVATION AND ALIGNMENT.
5. INSERT THE 3/8" X 4" X 4" WASHER (SEE PIVOT SWITCH GUIDEBEAM DETAILS, DETAIL 4). INSTALL THE 1/4" X 5" X 3" WASHER AND NUT.
6. CHECK THE GUIDEBEAM FOR PROPER HORIZONTAL AND VERTICAL ALIGNMENT. TORQUE THE TOP NUT TO 400 FT-LBS WHILE HOLDING THE BOTTOM NUT, TO LOCK THE GUIDEBEAM IN THE FINAL ACCEPTED POSITION.
7. FIELD WELD THE WASHER TO THE SUPPORT PLATE AND THE WASHER TO THE NUT TO SECURE THE FINAL ALIGNMENT.
8. REMOVE THE TEMPORARY GUIDEBEAM SUPPORTS.
9. POUR THE GROUT PADS. USE NON-SHRINK GROUT.
10. LOCATIONS ARE ALSO FOR 1/2-6"ø SLEEVE ACCESS HOLES

AN ALTERNATE PROCEDURE MAY BE USED, IF SUBMITTED IN WRITING AND ACCEPTED BY THE BTTS ENGINEER AND THE RESIDENT ENGINEER.



1 PHASE 2

	GUIDEBEAM A				GUIDEBEAM B				REPLACEMENT GUIDEBEAM B			
	ATO	GROUND	PDS	ACCESS HOLES	ATO	GROUND	PDS	ACCESS HOLES	ATO	GROUND	PDS	ACCESS HOLES
1		0+39.98				100+46.56						
2	2+01.983			2+01.983	102+14.96			102+14.96				
3				3+05.00				103+20.00		16+67.00		
4		3+74.983				103+87.96			16+68.76			
5				4+20.00				104+20.00			16+71.24	
6	5+47.983			5+47.983	105+60.96			105+60.96			16+74.24	
7			5+80.00	5+80.00			105+81.00	105+81.00	16+77.90			
8			5+86.00	5+86.00			105+87.00	105+87.00				
9	5+95.00			5+95.00	105+95.00	106+91.44		105+95.00	17+10.06			
10				7+05.00				106+90.00			17+15.06	
11								107+60.00	17+18.81			
12		7+20.98			108+21.91			108+22.00			17+23.06	
13				8+05.00					17+40.00			
14	8+93.983			8+93.983		110+16.02					18+13.50	
15				9+95.00				109+20.00	18+17.45			
16				10+95.00				110+05.00			18+21.50	
17		10+64.65			110+92.91			110+92.91	18+26.50			
18	11+91.32			11+91.32	112+10.12			112+10.12	18+59.164			
19	12+35.32			12+35.32			112+15.11	112+15.11			18+62.33	
20			13+02.19	13+02.19			112+55.44		18+66.39			
21		13+07.82			112+58.60						18+68.33	
22	13+38.44				112+91.26							
23			13+41.89				112+96.26					
24	13+47.19				112+99.98							
25		13+77.87					113+20.32	113+20.32				
26			13+79.33			113+25.80						
27	13+80.80				113+96.48			113+96.48				
28		13+82.87			114+41.48			114+41.48				
29	14+13.47				114+50.32							
30			14+18.47				114+54.32	114+54.32				
31	14+22.22				114+74.20							
32			14+53.30	14+53.30			114+77.87					
33		14+55.31			114+82.87							
34	15+30.29			15+30.29		114+98.694						
35	15+74.29			15+74.29	115+15.53							
36		16+84.44					115+18.70					
37				16+96.00	115+22.76							
38	17+06.59			17+06.59	115+43.54			115+43.54				
39	17+20.00			17+20.00			115+53.32	115+53.32				
40		17+34.09				115+94.54						
41				17+41.00	116+45.54			116+45.54				
42	17+61.59			17+61.59		116+79.54						
43		17+73.04						116+99.00				
44	17+84.49			17+84.49	117.13.54			117+13.54				
45												
46					117+25.00			117+25.00				
47						117+41.04		117+41.00				
48					117+68.54			117+68.54				
49						117+80.00						
50					117+91.45			117+91.45				
51												
52	170+27.42				160+27.42							
53		170+33.92				160+33.92						
54	170+35.99				160+35.99							
55			170+40.30				160+40.297					
56	170+67.845				160+67.845							
57			170+95.393				160+95.393					
58	170+99.70				160+97.70							
59		171+01.76				161+01.76						
60	171+08.27				161+08.27							

1 PHASE 1

	GUIDEBEAM 1C-1				GUIDEBEAM 1C-2				GUIDEBEAM 1C-3				GUIDEBEAM 1C-4			
	ATO	GROUND	PDS	ACCESS HOLES	ATO	GROUND	PDS	ACCESS HOLES	ATO	GROUND	PDS	ACCESS HOLES	ATO	GROUND	PDS	ACCESS HOLES
1	140+27.42								200+27.42					210+27.30		
2	140+35.99				150+27.42						200+32.668		210+28.14			
3			140+40.30		150+35.99						200+37.981					
4				140+45.00			150+40.30								210+33.14	
5		140+59.00				150+74.84			200+41.15			200+40.00	210+36.88			
6	140+61.00			140+61.00	150+61.00					200+14.50			210+51.83			210+51.33
7	140+81.00			140+81.00					200+73.09							
8	140+91.00			140+91.00									210+75.33			210+75.33
9					150+91.00			150+91.00	200+81.62							
10		141+02.00			151+12.67						200+85.97		210+94.161			
11			141+14.73	141+14.00				151+13.00				200+87.66			211+11.33	
12	141+19.67							151+26.00				200+97.66		211+12.00		
13			141+23.73	141+23.00		151+44.87			200+11.66			201+11.66				
14	141+26.90															
15		141+44.72			151+53.071			151+53.00								
16	141+59.562						151+70.00		201+34.50							
17	141+65.91		141+64.56					151+72.00		201+49.83						
18		141+98.73		141+76.00	151+75.18						201+51.67					
19	141+99.57				151+83.93											
20							151+78.931									
21			142+04.572			151+96.57										
22	142+08.32						152+15.071									
23					152+17.55			152+17.00								
24	142+21.50			142+22.00		152+49.377										
25					152+50.21											
26	142+46.00			142+46.00												
27			142+51.50		152+58.96											
28	142+60.00					153+48.63										
29		142+71.32					152+55.211									
30				142+80.00	152+67.071			152+67.00								
31			143+20.23	143+20.23	152+91.071			152+91.00								
32	143+23.73															
33				143+23.73	153+52.198											
34	143+25.73						153+69.87									
35						180+16.28										
36					180+27.42											
37	190+27.42						180+39.30									
38	190+35.993				180+40.48											
39			190+40.30				180+42.66									
40					180+54.54											
41						180+63.97										

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida. 33607
PH: (813) 289-5500
FX: (813) 289-4405

RW CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	REV CHARTS	9/26	FPB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
PIVOT SWITCH GUIDEBEAM DETAILS
(SHEET 3 OF 3)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

36 36

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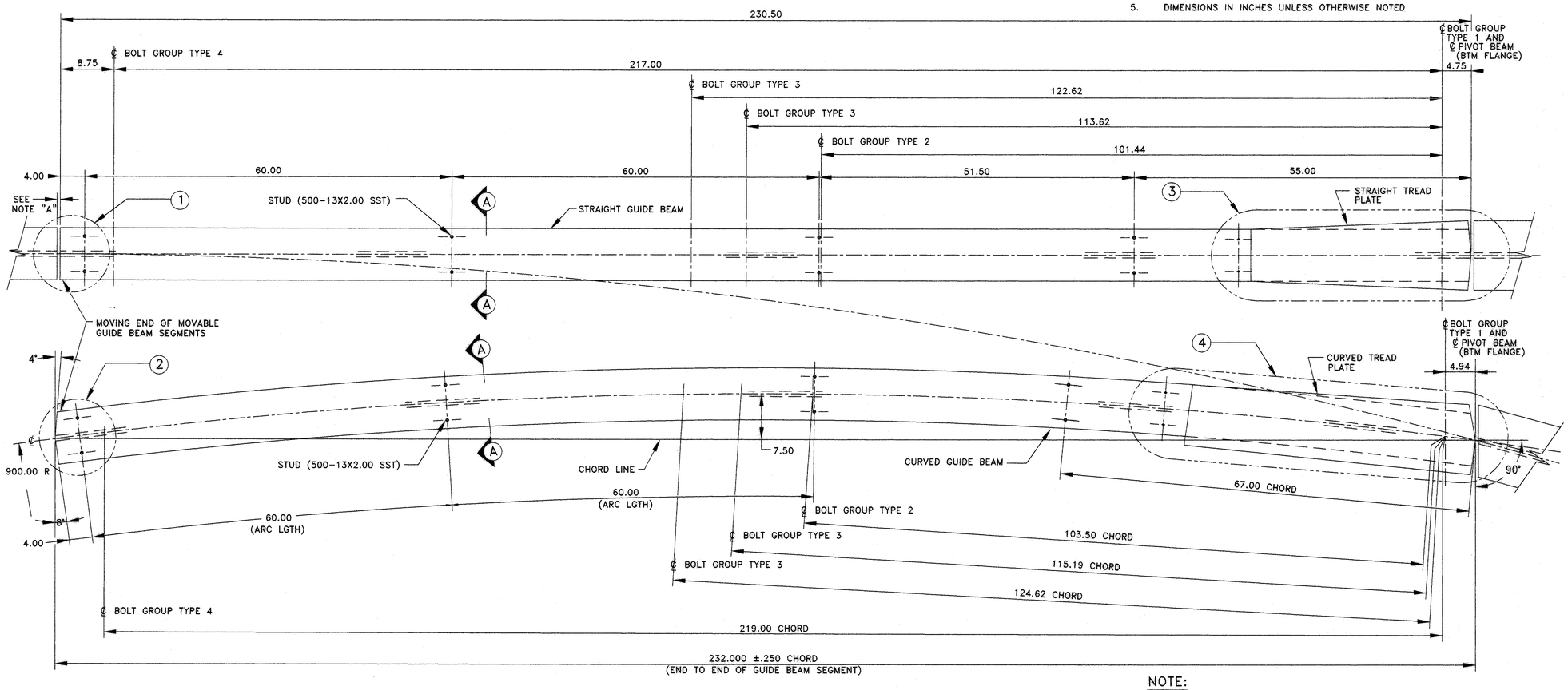
NOTE "A":

CLEARANCE BETWEEN FIXED GUIDE BEAM AND MOVABLE GUIDE BEAM IS AS FOLLOWS:
TANGENT GUIDE BEAM .50 ±.25
CURVED GUIDE BEAM 1.00 ±.25
WHEN ALIGNED WITH FIXED GUIDE BEAM AT MOVING END.

NOTES:

1. GUIDE BEAM OUTER FLANGE SURFACE AREA WITHIN 6.00 FROM THE CENTER LINE OF EACH BOLT GROUP TYPE 1 THRU BOLT GROUP TYPE 4 SHALL BE CLEAN OF ALL BURRS AND HIGH SPOTS, AND SHALL BE SMOOTH AND FLAT.
2. BEVEL ENDS OF BEAM WEBS .12 x .12 FULL HEIGHT, BOTH SIDES.
3. FLANGE TO BE FLAT WITHIN ±.03 IN THIS AREA.
4. MATERIAL TO BE ASTM A-36 UNLESS NOTED OTHERWISE.
5. DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED



PLAN – MOVABLE GUIDE BEAM SEGMENTS

NOTE:
RIGHT HAND SWITCH SHOWN, LEFT HAND SWITCH OPPOSITE HAND/SIMILAR.

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HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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FX (813) 289-4405

CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
MOVEABLE GUIDE BEAM DETAILS
(SHEET 1 OF 3)

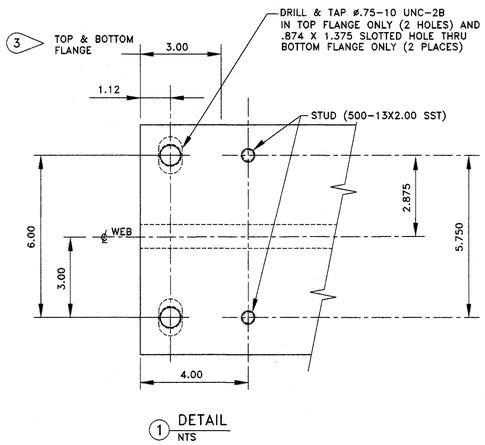
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

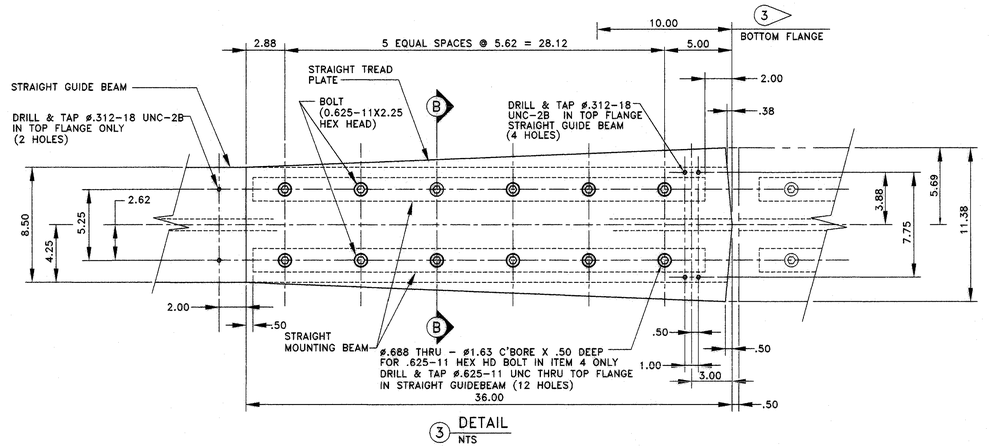
DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

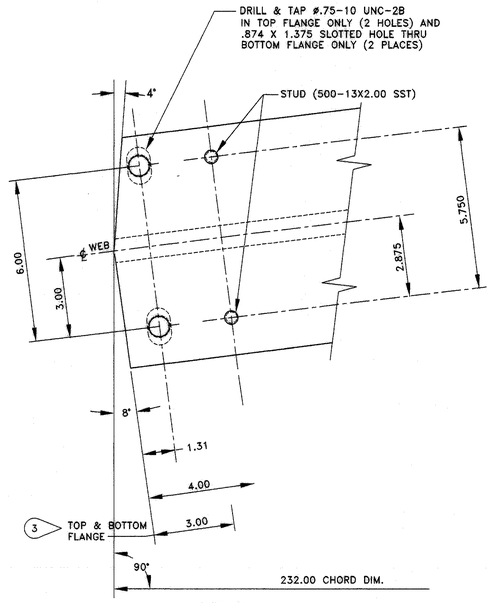
37 37



1 DETAIL NTS



3 DETAIL NTS



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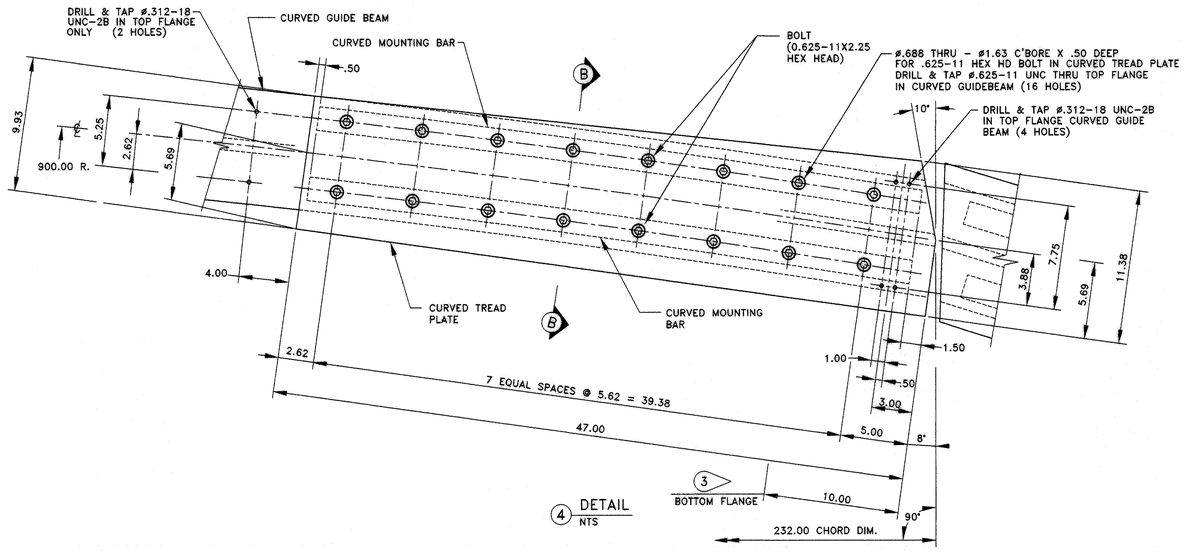

4 DETAIL NTS

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HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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5405 West Cypress St.
Suite 300
Tampa, Florida 33607
PH (813) 286-8300
FX (813) 286-4405

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
MOVEABLE GUIDEBEAM DETAILS
(SHEET 2 OF 3)

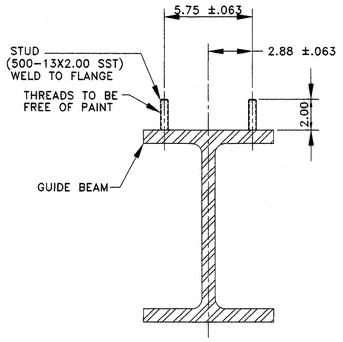
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

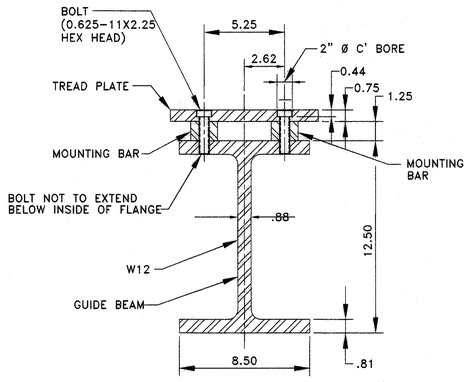
APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.



A SECTION



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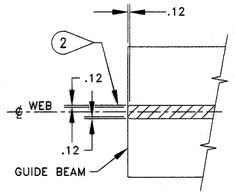
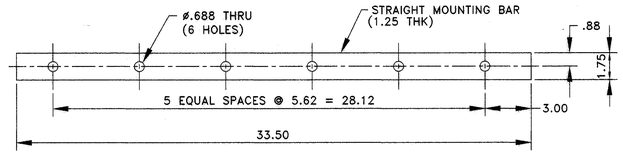
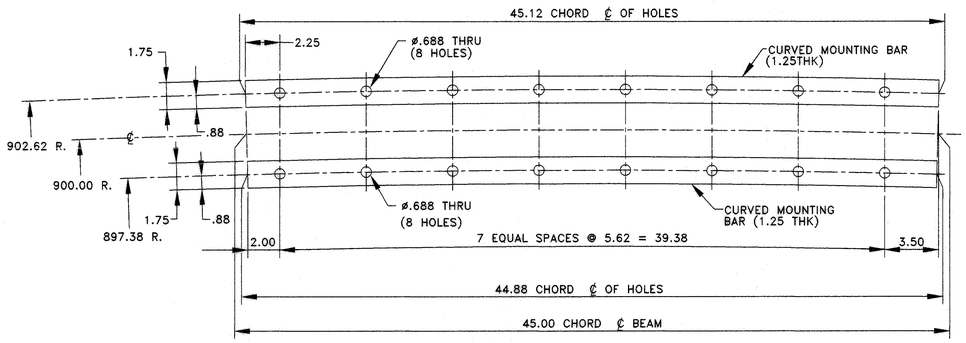
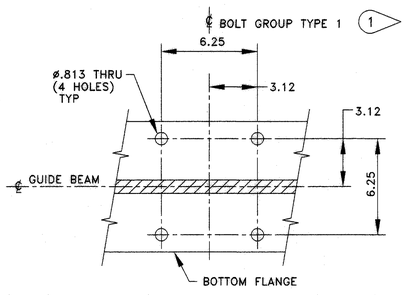


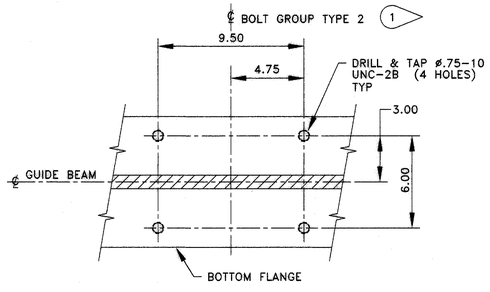
TYP. MOVABLE GUIDE BEAM
END DETAIL



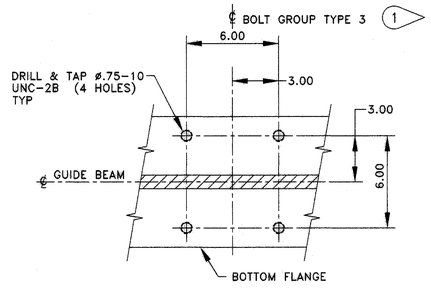




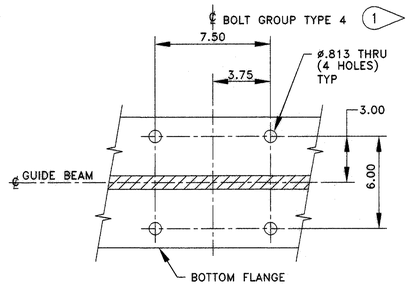
PLAN – BOLT GROUP TYPE 1



PLAN – BOLT GROUP TYPE 2



PLAN – BOLT GROUP TYPE 3



PLAN – BOLT GROUP TYPE 4

HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons
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5406 West Cypress St.
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PH (813) 289-5300
FX (813) 289-4405

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
MOVEABLE GUIDEBEAM DETAILS
(SHEET 3 OF 3)

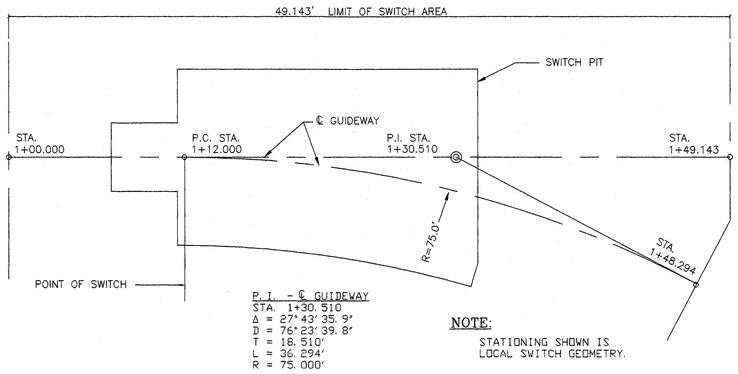
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

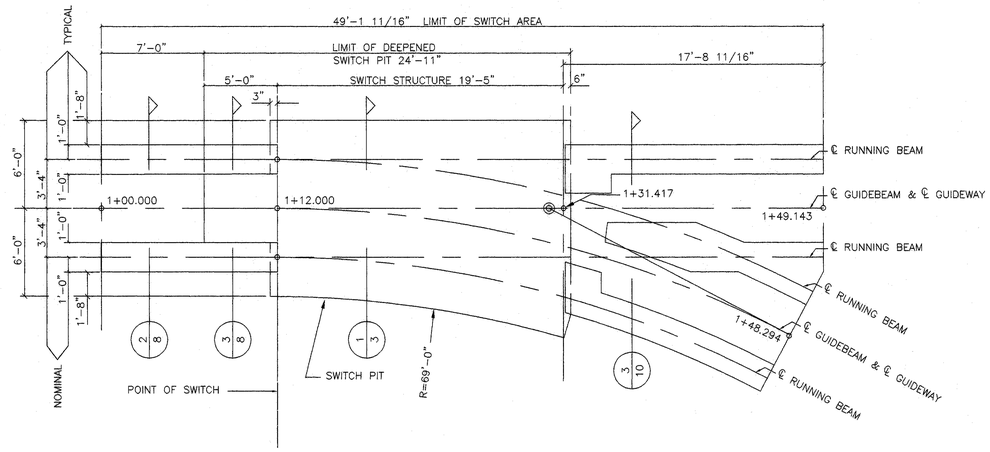
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

39



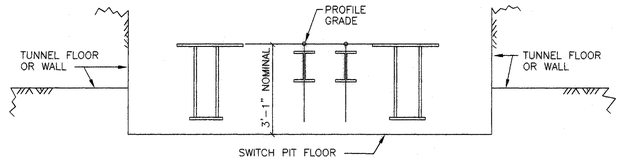
GEOMETRY PLAN

5' 0 5' 10'



PLAN

5' 0 5' 10'



1/3 SECTION

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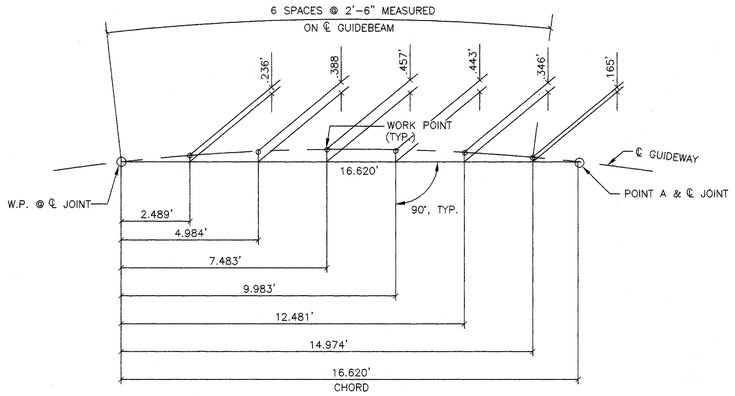
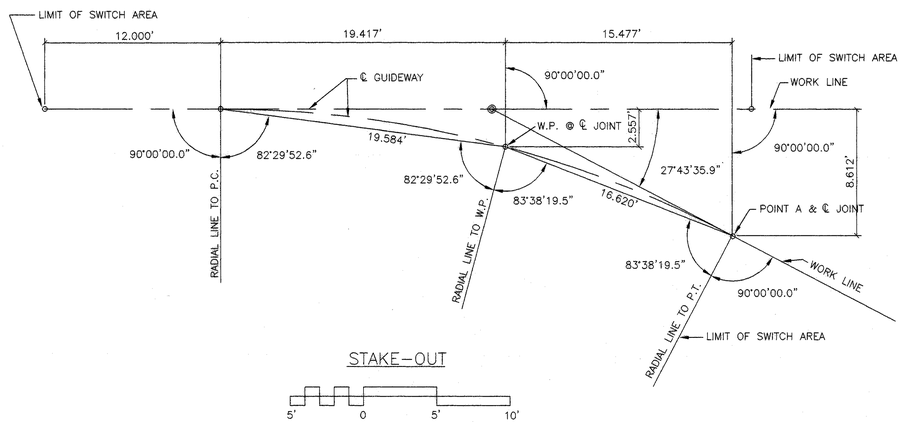


LAYOUT - FIXED, CURVED GUIDEBEAM

32" 16" 0 2.67' 5.33'



STAKE-OUT

5' 0 5' 10'

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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Suite 300
Tampa, Florida 33607
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FX: (813) 289-4405

RAM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA

PIVOT SWITCH - GEOMETRY PLAN
PLAN, LAYOUT & STAKEOUT (RH)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

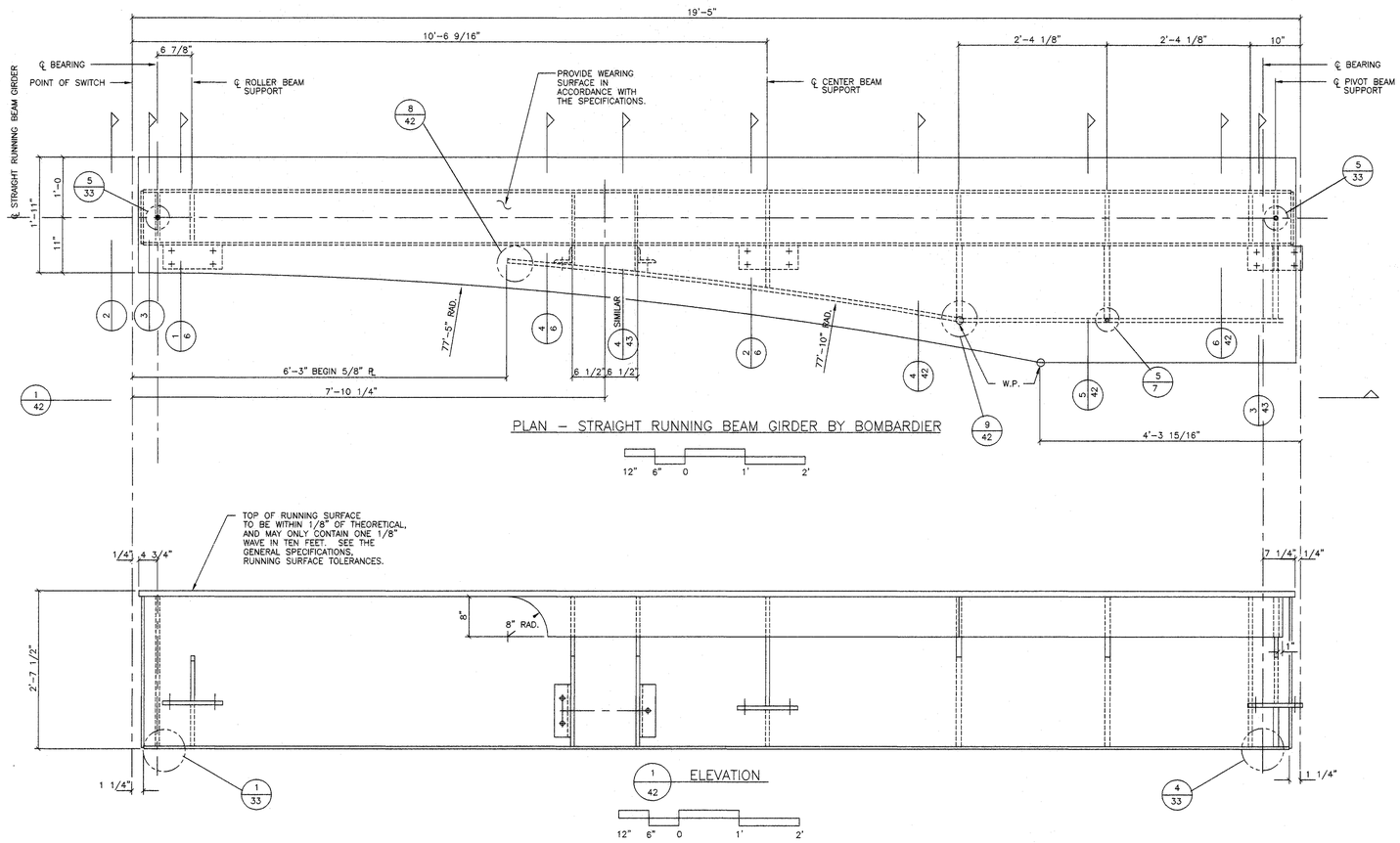
APPROVED BY: DATE:

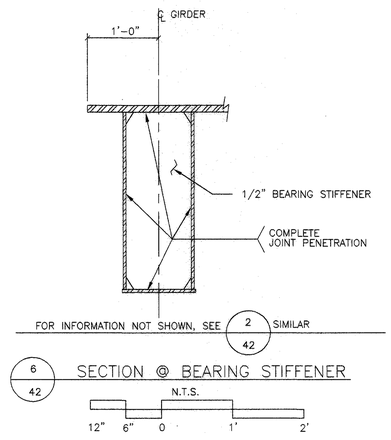
DIRECTOR HOUSTON AIRPORT SYSTEM

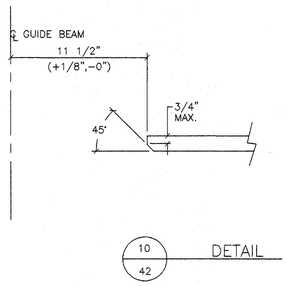
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

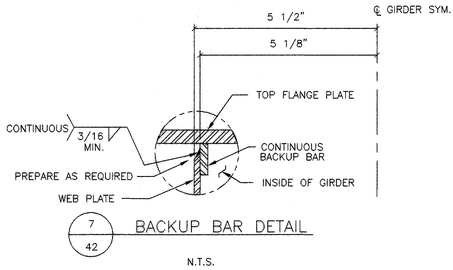
41 40

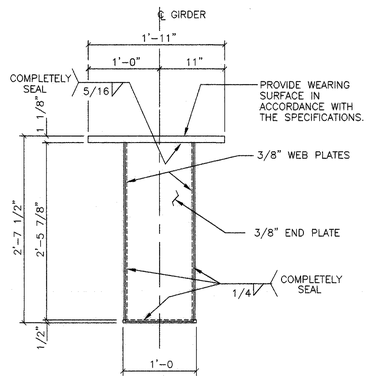
H:\HoustonAirport\Parsons\Sheet\PAR20.dwg May 17, 2004 - 11:32am

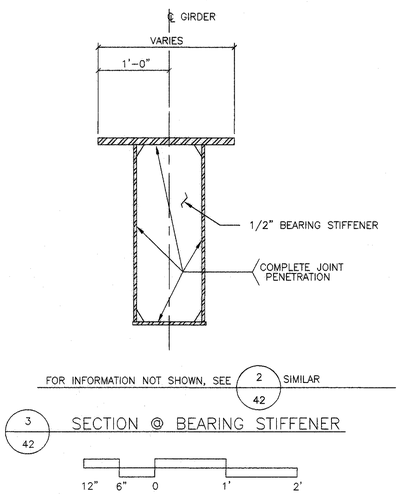


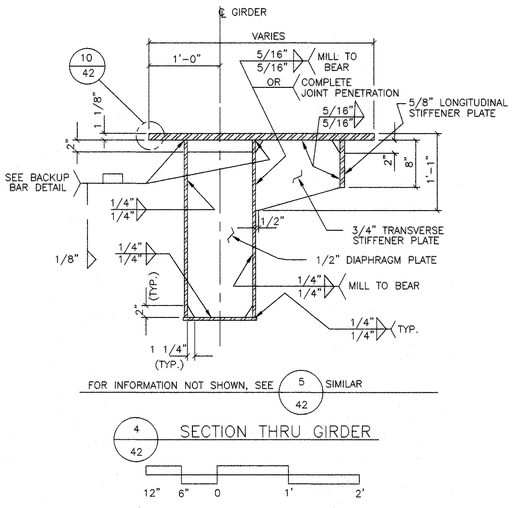


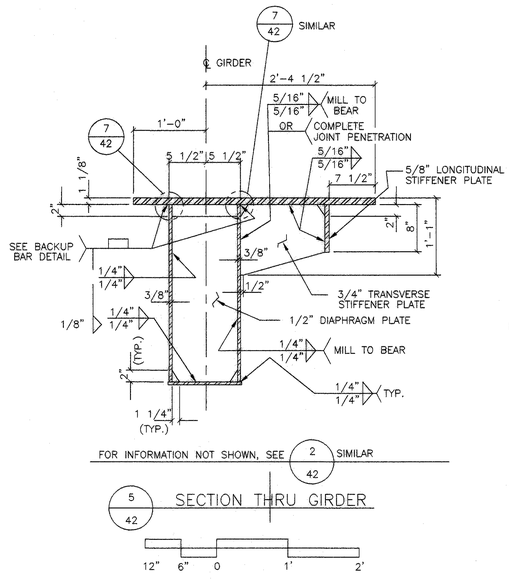


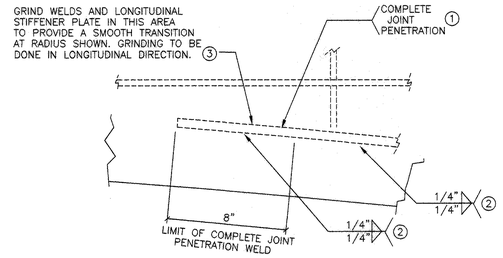


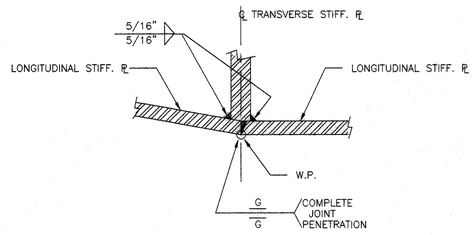












HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 900
Tampa, Florida 33607
PH (813) 289-5300
FX (813) 289-5405

REVISIONS

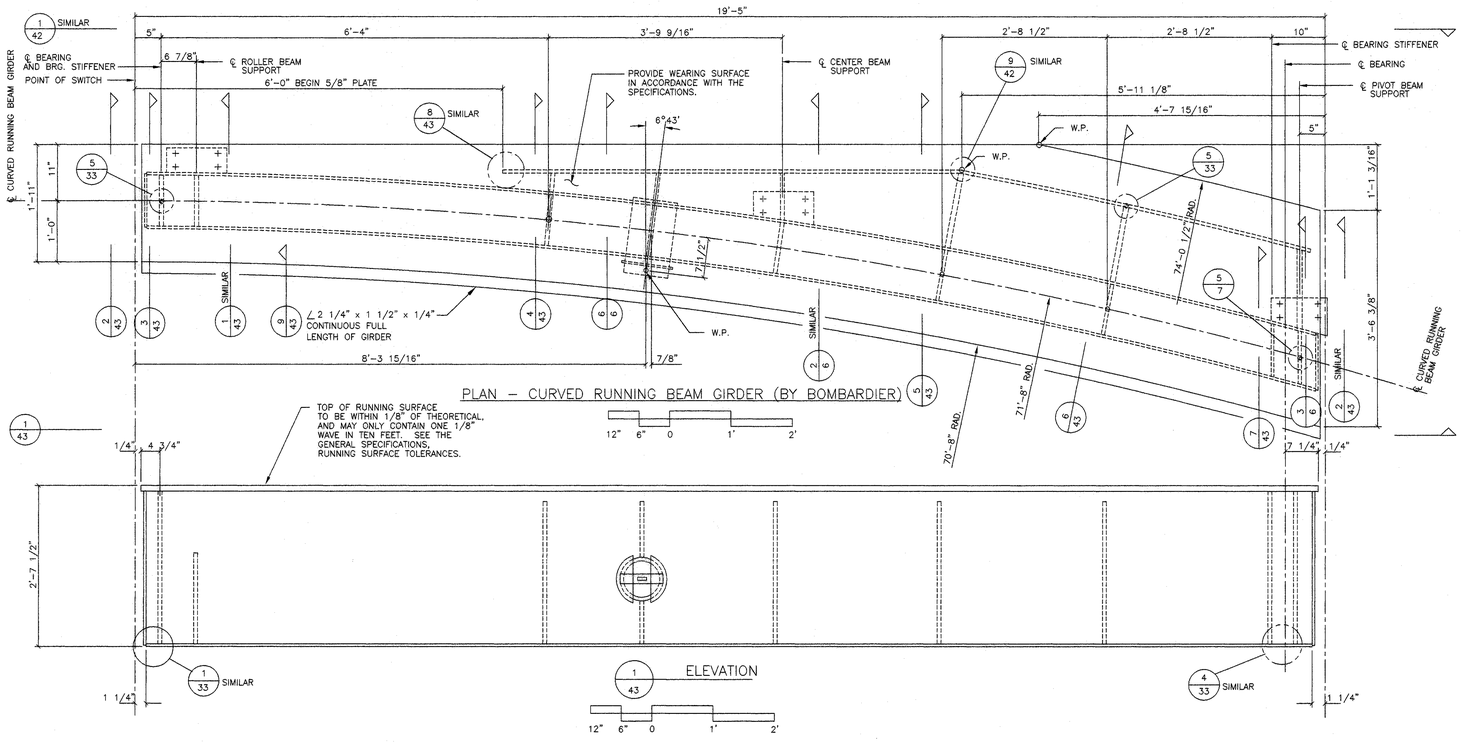
NO.	DESCRIPTION	DATE	BY

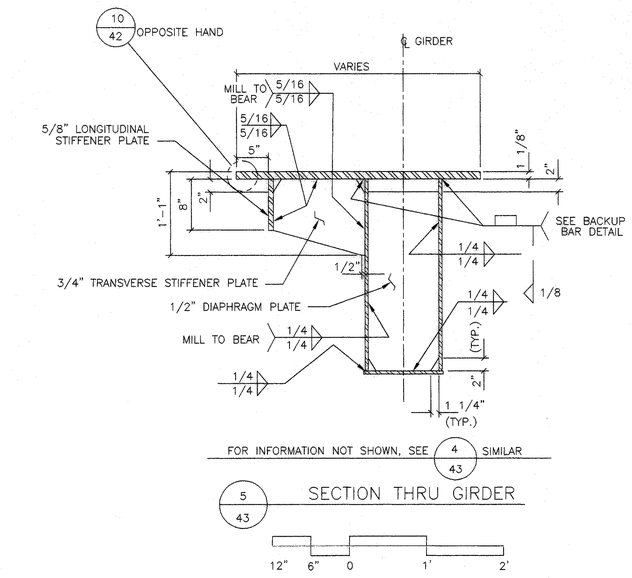
INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

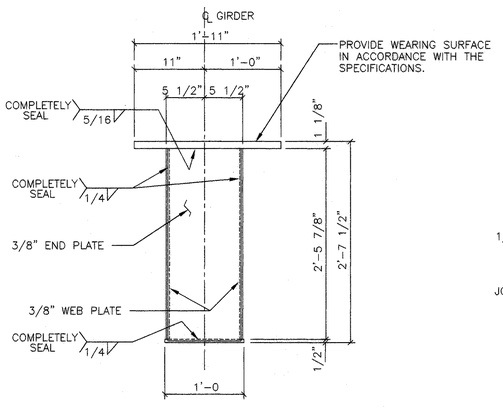
MAINTENANCE AREA
PIVOT SWITCH
STRAIGHT RUNNING BEAM GIRDER (RH)

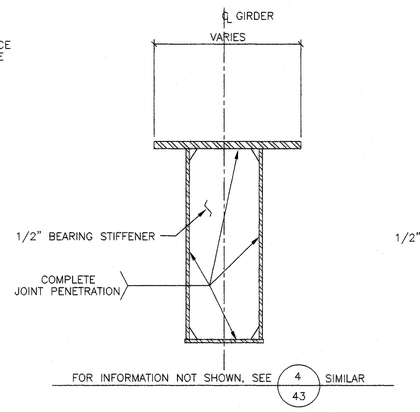
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:
APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
42 of 11

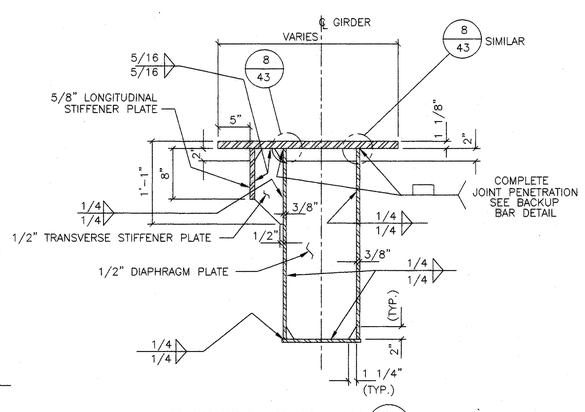
H:\HoustonAirport\Parsons\Sheet\PAR21.dwg May 17, 2004 - 11:31am

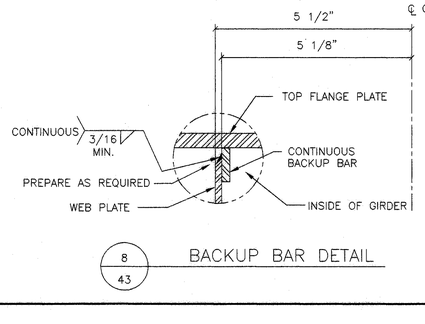


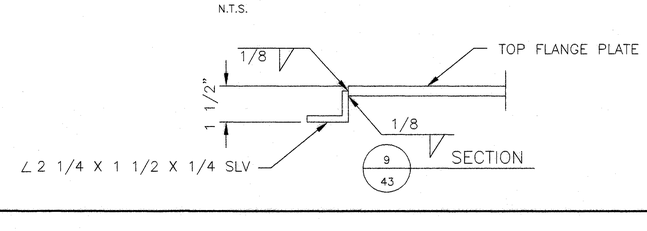












HOUSTON AIRPORT SYSTEM
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Tampa, Florida 33607
PH: (813) 289-5300
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REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
PIVOT SWITCH
CURVED RUNNING BEAM GIRDER (RH)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:
APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

43 42

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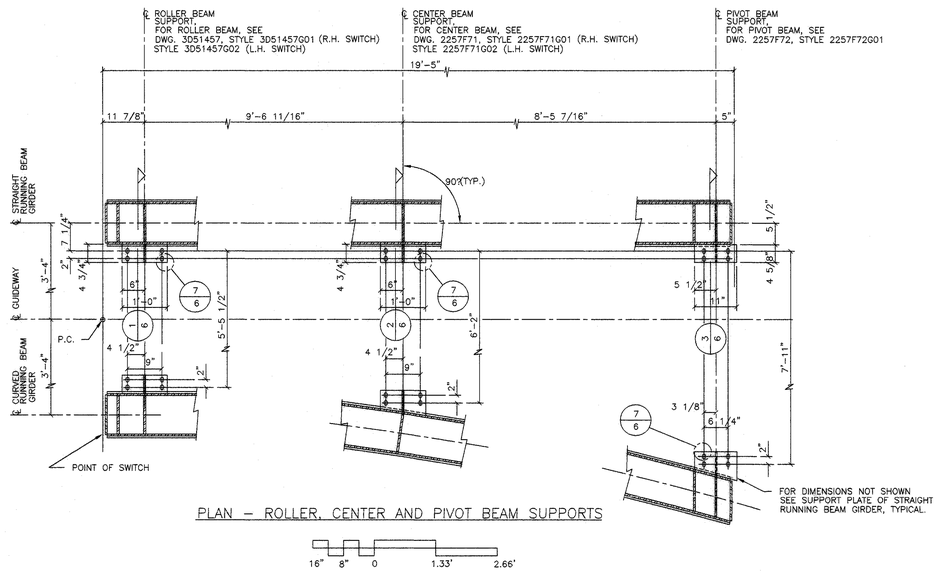
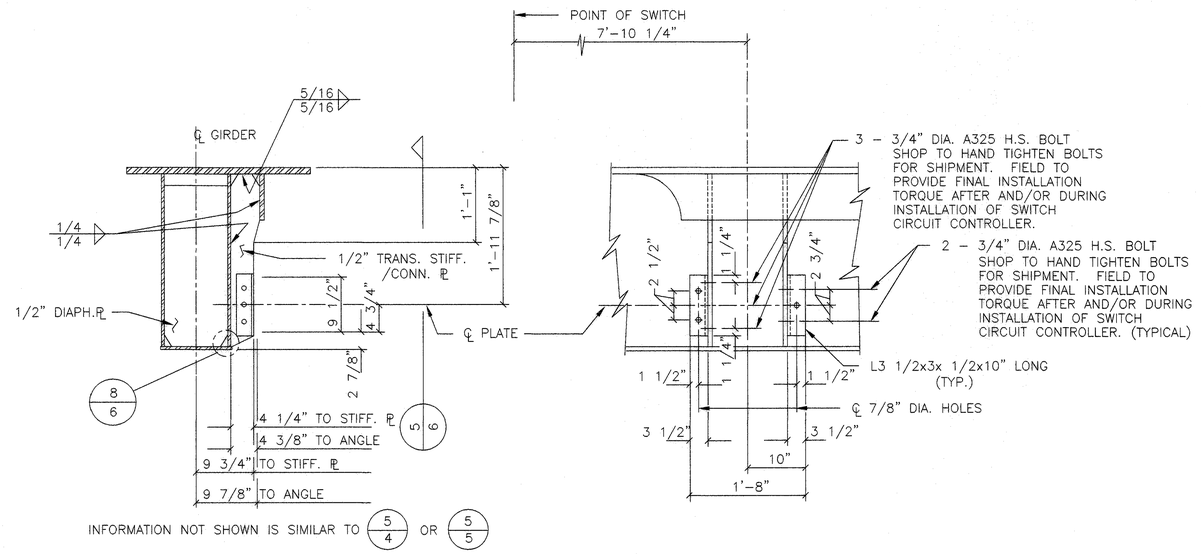


PLAN – ROLLER, CENTER AND PIVOT BEAM SUPPORTS

16" 8" 0 1.33' 2.66'



INFORMATION NOT SHOWN IS SIMILAR TO (5/4) OR (5/5)

4/4,6 DETAIL @ SWITCH CIRCUIT CONTROLLER

16" 8" 0 1.33' 2.66'

5/6,6 FRONT VIEW

16" 8" 0 1.33' 2.66'

INFORMATION NOT SHOWN IS SIMILAR TO (5/4) OR (5/5)

1/4,5,6 & 6 SECTION @ ROLLER BEAM SUPPORT

16" 8" 0 1.33' 2.66'

INFORMATION NOT SHOWN IS SIMILAR TO (5/4) OR (5/5)

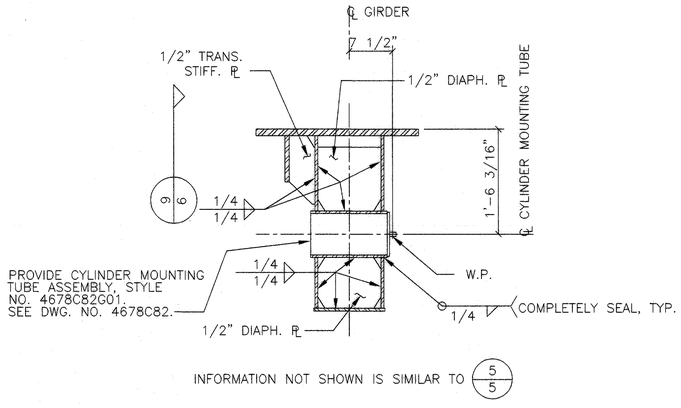
2/4,5,6 & 6 SECTION @ CENTER BEAM SUPPORT

16" 8" 0 1.33' 2.66'

INFORMATION NOT SHOWN IS SIMILAR TO (5/4) OR (5/5)

3/4,5,6 & 6 SECTION @ PIVOT BEAM SUPPORT

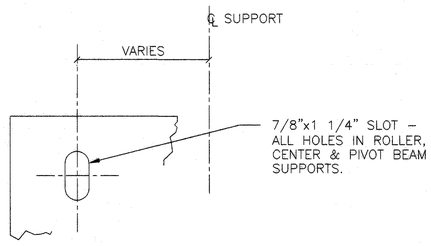
16" 8" 0 1.33' 2.66'



INFORMATION NOT SHOWN IS SIMILAR TO (5/5)

6/5,6 SECTION @ CYLINDER MOUNTING TUBE

16" 8" 0 1.33' 2.66'



7/6,6 SLOT DETAIL

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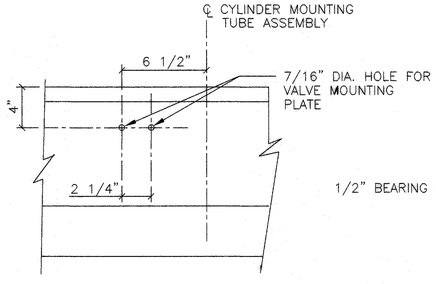
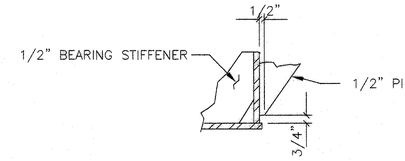


9/6,6 VIEW

N.T.S.



8/6,6 DETAIL

N.T.S.

HOUSTON AIRPORT SYSTEM
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FX (813) 289-5405

CONSTRUCTORS, INC.

REVISIONS

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INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA
PIVOT SWITCH
RUNNING BEAM GIRDER DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

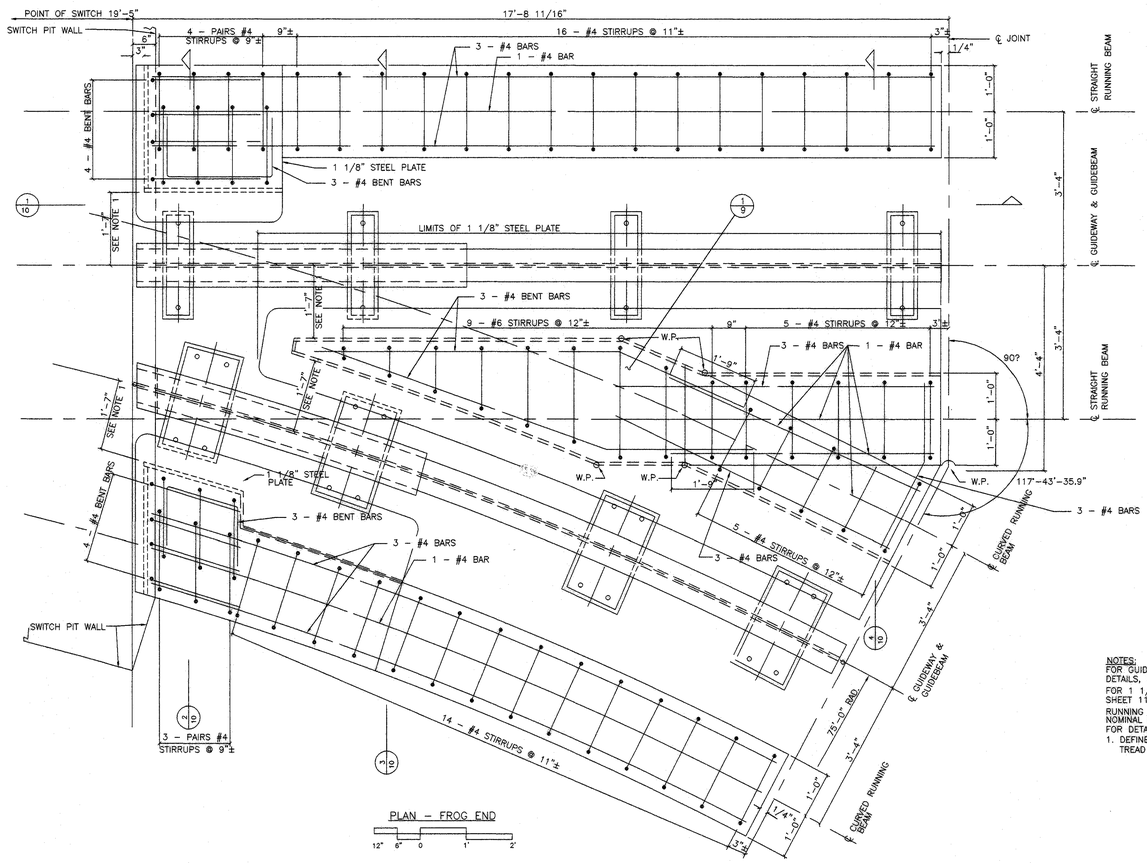
APPROVED BY: DATE:

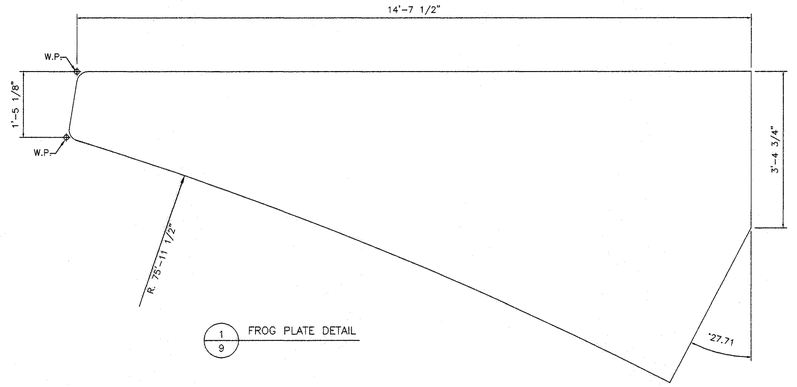
DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

44 43

H:\HoustonAirport\Parsons\Sheet\PAR23.dwg May 17, 2004 - 11:27am





FROG PLATE DETAIL

NOTES:
FOR GUIDEBEAM AND GUIDEBEAM SUPPORT DETAILS, SEE SHEETS 12, 13 & 14
FOR 1 1/8" STEEL PLATE DETAILS, SEE SHEET 11
RUNNING BEAM DIMENSIONS SHOWN ARE NOMINAL DIMENSIONS. SEE SHEET 8 FOR DETAIL DIMENSIONS.
1. DEFINES LIMITS OF CONCRETE UNDER TREAD PLATE.

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida 33607
PH (813) 289-5300
FX (813) 289-4405

R.W. CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL ♦ SERVICES ♦ EXPANSION ♦ PROGRAM

MAINTENANCE AREA
PIVOT SWITCH
PLAN - FROG APPROACH AREA (RH)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.
45 44

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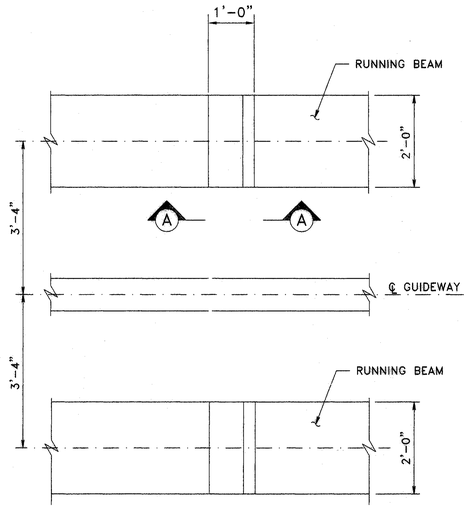
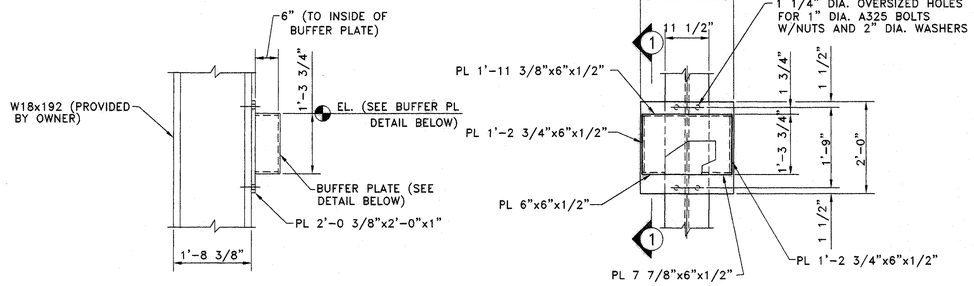


VEHICLE STOP – DETAIL X

FOR LOCATIONS, SEE SHEET 18

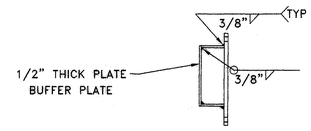
3/4"=1'-0"



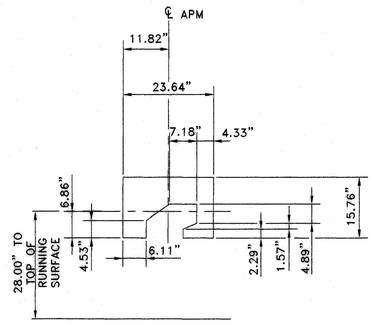
TRAIN STOPPER

FOR LOCATIONS, SEE SHEET S3.002

3/4"=1'-0"



1 SECTION



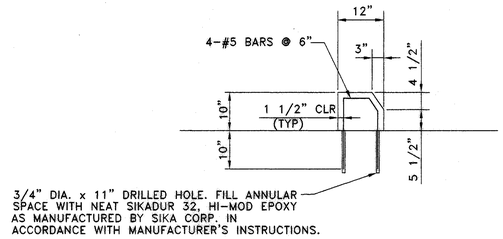
BUFFER PLATE (VEHICLE COUPLER INTERFACE) DETAIL

(4 REQUIRED)

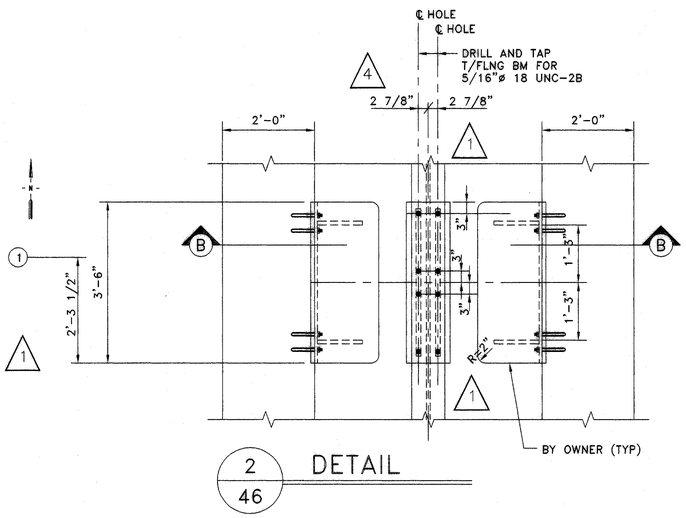
3/4"=1'-0"

NOTES:

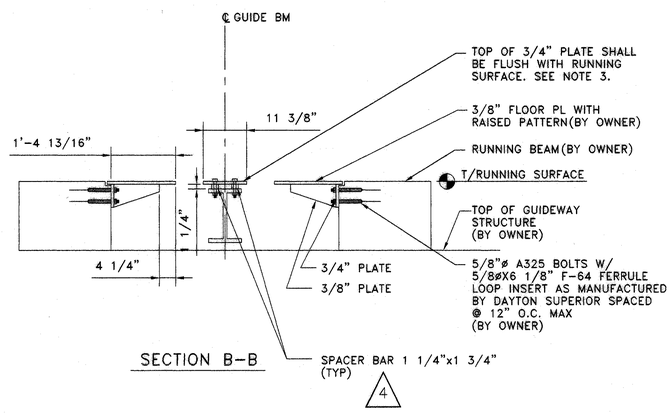
1. MATERIAL TO BE A36 STEEL.
2. PLATE TO BE MINIMUM 1/2" THICK.
3. BACK OF PLATE TO BE MOUNTED A MINIMUM OF 0'-6" FROM THE FACE OF THE OWNER'S STRUCTURAL STEEL WITHIN THE MSF BUILDING.
4. CUT OUT SECTION OF PLATE MUST REMAIN FREE OF OBSTRUCTIONS FOR A MINIMUM DISTANCE OF 0'-6" BEHIND.
5. BUFFER PLATES AND ASSOCIATED MOUNTS SHALL BE COATED WITH AN ORGANIC PAINT IN ACCORDANCE WITH SECTION 15.4.1.2 OF THE OWNER'S TECHNICAL SPECIFICATIONS.



SECTION A–A



2 / 46 DETAIL



SECTION B–B

NOTES:

1. FOR NOTES, SEE SHEET 4
2. FILL CHAMFER ADJACENT TO WALK PLATE WITH SILICON SEALANT AFTER INSTALLATION OF WALK PLATE. ADJUST TOP COVER ON CORNER LONGITUDINAL RUNNING BEAM REBAR TO CLEAR INSERTS

4

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida 33607
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FX (813) 289-4405

RATP CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD DIM	9-18-02	FB
2	REV NOTE	12-2-02	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

VEHICLE STOP AND BUFFER PLATE DETAILS

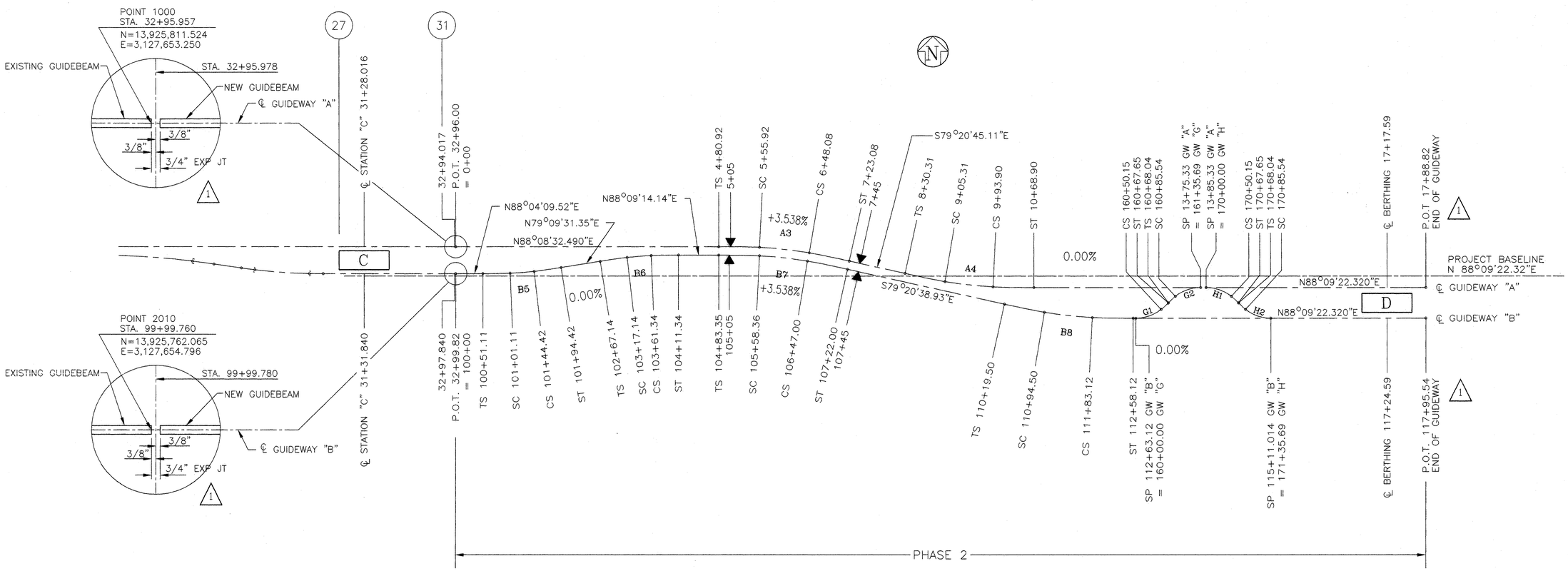
PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

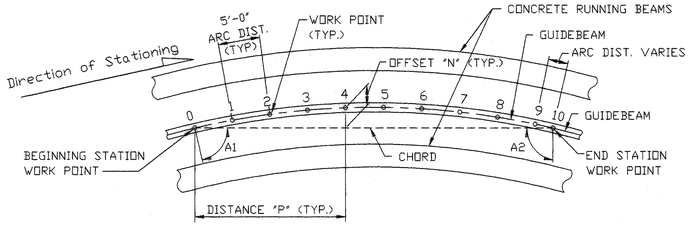
APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

46 15





TYPICAL SPAN FOR HORIZONTAL & VERTICAL CONTROL TABLES
HYPOTHETICAL SPAN SHOWN
NO SCALE

HORIZONTAL AND VERTICAL CONTROL:

1. ALL GUIDEBEAMS ARE TO BE FABRICATED AND ERECTED ACCORDING TO THE HORIZONTAL & VERTICAL ALIGNMENT SHOWN IN THE DRAWINGS.

2. ALL PLAN DIMENSIONS AND ANGLES ARE MEASURED IN A HORIZONTAL PLANE.

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
A	5100	4+77.00	0
	5101	4+82.00	−0.01
	5102	4+87.00	−0.03
	5103	4+92.00	−0.04
	5104	4+97.00	−0.04
	5105	5+02.00	−0.04
	5106	5+07.00	−0.03
	5107	5+12.00	−0.01
	5108	5+17.00	−0.06
	5109	5+22.00	−0.12
	5110	5+27.00	−0.16
	5111	5+32.00	−0.18
	5112	5+37.00	−0.18
	5113	5+42.00	−0.16
	5114	5+47.00	−0.1
	5115	5+52.00	−0.02
	5116	5+57.00	−0.03
	5117	5+62.00	−0.03
	5118	5+67.00	−0.01
	5119	5+72.00	−0.1
	5120	5+77.00	−0.19
	5121	5+82.00	−0.24
	5122	5+87.00	−0.26
	5123	5+92.00	−0.25
	5124	5+97.00	−0.21
	5125	6+02.00	−0.13
	5126	6+07.00	−0.02
	5127	6+12.00	−0.1
	5128	6+17.00	−0.19
	5129	6+22.00	−0.24
	5130	6+27.00	−0.26
	5131	6+32.00	−0.25
	5132	6+37.00	−0.21
	5133	6+42.00	−0.13
	5134	6+47.00	−0.02
	5135	6+52.00	−0.08
	5136	6+57.00	−0.15
	5137	6+62.00	−0.18
	5138	6+67.00	−0.19
	5139	6+72.00	−0.18
	5140	6+77.00	−0.14
	5141	6+82.00	−0.09
	5142	6+87.00	−0.01
	5143	6+92.00	−0.02
	5144	6+97.00	−0.04
	5145	7+02.00	−0.04
	5146	7+07.00	−0.04
	5147	7+12.00	−0.02
	5148	7+17.00	−0.01
	5149	7+22.00	0
	5150	7+27.00	0
	5151	7+32.00	0
	5152	7+37.00	0
	5153	7+42.00	0
	5154	7+47.00	0

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
A	5155	7+52.00	0
	5156	7+57.00	0
	5157	7+62.00	0
	5158	7+67.00	0
	5159	7+72.00	0
	5160	7+77.00	0
	5161	7+82.00	0
	5162	7+87.00	0
	5163	7+92.00	0
	5164	7+97.00	0
	5165	8+02.00	0
	5166	8+07.00	0
	5167	8+12.00	0
	5168	8+17.00	0
	5169	8+22.00	0.01
	5170	8+27.00	0.01
	5171	8+32.00	0.02
	5172	8+37.00	0.02
	5173	8+42.00	0.02
	5174	8+47.00	0.02
	5175	8+52.00	0.01
	5176	8+57.00	0.04
	5177	8+62.00	0.09
	5178	8+67.00	0.13
	5179	8+72.00	0.15
	5180	8+77.00	0.15
	5181	8+82.00	0.14
	5182	8+87.00	0.09
	5183	8+92.00	0.03
	5184	8+97.00	0.08
	5185	9+02.00	0.17
	5186	9+07.00	0.23
	5187	9+12.00	0.26
	5188	9+17.00	0.26
	5189	9+22.00	0.22
	5190	9+27.00	0.15
	5191	9+32.00	0.04
	5192	9+37.00	0.08
	5193	9+42.00	0.18
	5194	9+47.00	0.24
	5195	9+52.00	0.26
	5196	9+57.00	0.26
	5197	9+62.00	0.22
	5198	9+67.00	0.15
	5199	9+72.00	0.04
	5200	9+77.00	0.08
	5201	9+82.00	0.17
	5202	9+87.00	0.23
	5203	9+92.00	0.25
	5204	9+97.00	0.25
	5205	10+02.00	0.21

HOUSTON AIRPORT SYSTEM
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CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

HORIZONTAL AND VERTICAL CONTROL

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

47 of 46

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GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
B	6100	100+30.29	0.00
	6101	100+35.29	0.00
	6102	100+40.29	0.01
	6103	100+45.29	0.01
	6104	100+50.29	0.02
	6105	100+55.29	0.02
	6106	100+60.29	0.03
	6107	100+65.29	0.02
	6108	100+70.29	0.00
	6109	100+75.29	0.10
	6110	100+80.29	0.18
	6111	100+85.29	0.23
	6112	100+90.29	0.26
	6113	100+95.29	0.25
	6114	101+00.29	0.21
	6115	101+05.29	0.13
	6116	101+10.29	0.00
	6117	101+15.29	0.15
	6118	101+20.29	0.25
	6119	101+25.29	0.31
	6120	101+30.29	0.33
	6121	101+35.29	0.31
	6122	101+40.29	0.25
	6123	101+45.29	0.14
	6124	101+50.29	0.00
	6125	101+55.29	0.06
	6126	101+60.29	0.08
	6127	101+65.29	0.07
	6128	101+70.29	0.04
	6129	101+75.29	0.00
	6130	101+80.29	0.02
	6131	101+85.29	0.02
	6132	101+90.29	0.02
	6133	101+95.29	0.01
	6134	102+00.29	0.00
	6135	102+05.29	0.00
	6136	102+10.29	0.00
	6137	102+15.29	0.00
	6138	102+20.29	0.00
	6139	102+25.29	0.00
	6140	102+30.29	0.00
	6141	102+35.29	0.00
	6142	102+40.29	0.00
	6143	102+45.29	0.00
	6144	102+50.29	0.00
	6145	102+55.29	0.00
	6146	102+60.29	0.01
	6147	102+65.29	0.01
	6148	102+70.29	0.01
	6149	102+75.29	0.01
	6150	102+80.29	0.02
	6151	102+85.29	0.09
	6152	102+90.29	0.15
	6153	102+95.29	0.20
	6154	103+00.29	0.22
	6155	103+05.29	0.21
	6156	103+10.29	0.17
	6157	103+15.29	0.09
	6158	103+20.29	0.03
	6159	103+25.29	0.17
	6160	103+30.29	0.27
	6161	103+35.29	0.32
	6162	103+40.29	0.33
	6163	103+45.29	0.30
	6164	103+50.29	0.23
	6165	103+55.29	0.12
	6166	103+60.29	0.02
	6167	103+65.29	0.12
	6168	103+70.29	0.19
	6169	103+75.29	0.21
	6170	103+80.29	0.21
	6171	103+85.29	0.18
	6172	103+90.29	0.13
	6173	103+95.29	0.06
	6174	104+00.29	0.00
	6175	104+05.29	0.01
	6176	104+10.29	0.01
	6177	104+15.29	0.01
	6178	104+20.29	0.00
	6179	104+25.29	0.00
	6180	104+30.29	0.00
	6181	104+35.29	0.00
	6182	104+40.29	0.00
	6183	104+45.29	0.00
	6184	104+50.29	0.00
	6185	104+55.29	0.00
	6186	104+60.29	0.00
	6187	104+65.29	0.00
	6188	104+70.29	0.00
	6189	104+75.29	0.00
	6190	104+80.29	0.00
	6191	104+85.29	0.02
	6192	104+90.29	0.04
	6193	104+95.29	0.05
	6194	105+00.29	0.06
	6195	105+05.29	0.06
	6196	105+10.29	0.05
	6197	105+15.29	0.03
	6198	105+20.29	0.02
	6199	105+25.29	0.09
	6200	105+30.29	0.15
	6201	105+35.29	0.19
	6202	105+40.29	0.20
	6203	105+45.29	0.19
	6204	105+50.29	0.15
	6205	105+55.29	0.08
	6206	105+60.29	0.01
	6207	105+65.29	0.03
	6208	105+70.29	0.03
	6209	105+75.29	0.04
	6210	105+80.29	0.14
	6211	105+85.29	0.22
	6212	105+90.29	0.26
	6213	105+95.29	0.27
	6214	106+00.29	0.24
	6215	106+05.29	0.18
	6216	106+10.29	0.09
	6217	106+15.29	0.04
	6218	106+20.29	0.14
	6219	106+25.29	0.22
	6220	106+30.29	0.26

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
B	6221	106+35.29	0.26
	6222	106+40.29	0.24
	6223	106+45.29	0.18
	6224	106+50.29	0.09
	6225	106+55.29	0.03
	6226	106+60.29	0.10
	6227	106+65.29	0.15
	6228	106+70.29	0.17
	6229	106+75.29	0.17
	6230	106+80.29	0.15
	6231	106+85.29	0.11
	6232	106+90.29	0.05
	6233	106+95.29	0.01
	6234	107+00.29	0.02
	6235	107+05.29	0.02
	6236	107+10.29	0.02
	6237	107+15.29	0.01
	6238	107+20.29	0.00
	6239	107+25.29	0.00
	6240	107+30.29	0.00
	6241	107+35.29	0.00
	6242	107+40.29	0.00
	6243	107+45.29	0.00
	6244	107+50.29	0.00
	6245	107+55.29	0.00
	6246	107+60.29	0.00
	6247	107+65.29	0.00
	6248	107+70.29	0.00
	6249	107+75.29	0.00
	6250	107+80.29	0.00
	6251	107+85.29	0.00
	6252	107+90.29	0.00
	6253	107+95.29	0.00
	6254	108+00.29	0.00
	6255	108+05.29	0.00
	6256	108+10.29	0.00
	6257	108+15.29	0.00
	6258	108+20.29	0.00
	6259	108+25.29	0.00
	6260	108+30.29	0.00
	6261	108+35.29	0.00
	6262	108+40.29	0.00
	6263	108+45.29	0.00
	6264	108+50.29	0.00
	6265	108+55.29	0.00
	6266	108+60.29	0.00
	6267	108+65.29	0.00
	6268	108+70.29	0.00
	6269	108+75.29	0.00
	6270	108+80.29	0.00
	6271	108+85.29	0.00
	6272	108+90.29	0.00
	6273	108+95.29	0.00
	6274	109+00.29	0.00
	6275	109+05.29	0.00
	6276	109+10.29	0.00
	6277	109+15.29	0.00
	6278	109+20.29	0.00
	6279	109+25.29	0.00
	6280	109+30.29	0.00
	6281	109+35.29	0.00
	6282	109+40.29	0.00
	6283	109+45.29	0.00
	6284	109+50.29	0.00
	6285	109+55.29	0.00
	6286	109+60.29	0.00
	6287	109+65.29	0.00
	6288	109+70.29	0.00
	6289	109+75.29	0.00
	6290	109+80.29	0.00
	6291	109+85.29	0.00
	6292	109+90.29	0.00
	6293	109+95.29	0.00
	6294	110+00.29	0.00
	6295	110+05.29	0.00
	6296	110+10.29	0.00
	6297	110+15.29	0.00
	6298	110+20.29	0.00
	6299	110+25.29	0.02
	6300	110+30.29	0.05
	6301	110+35.29	0.06
	6302	110+40.29	0.08
	6303	110+45.29	0.08
	6304	110+50.29	0.07
	6305	110+55.29	0.05
	6306	110+60.29	0.01
	6307	110+65.29	0.08
	6308	110+70.29	0.15
	6309	110+75.29	0.19
	6310	110+80.29	0.22
	6311	110+85.29	0.21
	6312	110+90.29	0.18
	6313	110+95.29	0.12
	6314	111+00.29	0.02
	6315	111+05.29	0.10
	6316	111+10.29	0.19
	6317	111+15.29	0.24
	6318	111+20.29	0.27
	6319	111+25.29	0.25
	6320	111+30.29	0.21
	6321	111+35.29	0.13
	6322	111+40.29	0.02
	6323	111+45.29	0.10
	6324	111+50.29	0.19
	6325	111+55.29	0.24
	6326	111+60.29	0.27
	6327	111+65.29	0.25
	6328	111+70.29	0.21
	6329	111+75.29	0.13
	6330	111+80.29	0.02
	6331	111+85.29	0.09
	6332	111+90.29	0.16
	6333	111+95.29	0.21
	6334	112+00.29	0.23
	6335	112+05.29	0.22
	6336	112+10.29	0.19
	6337	112+15.29	0.13
	6338	112+20.29	0.06
	6339	112+25.29	0.01
	6340	112+30.29	0.04
	6341	112+35.29	0.05

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
B	6342	112+40.29	0.06
	6343	112+45.29	0.05
	6344	112+50.29	0.04
	6345	112+55.29	0.03
	6346	112+60.29	0.02
	6347	112+65.29	0.00
	6348	112+70.29	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
G	7000	160+00.00	out of chain.
	7001	160+05.00	1.99
	7002	160+10.00	3.67
	7003	160+15.00	5.03
	7004	160+20.00	6.06
	7005	160+25.00	6.77
	7006	160+30.00	7.15
	7007	160+35.00	7.20
	7008	160+40.00	6.91
	7009	160+45.00	6.29
	7010	160+50.00	5.34
	7011	160+55.00	4.08
	7012	160+60.00	2.58
	7013	160+65.00	0.95
	7014	160+70.00	0.72
	7015	160+75.00	2.37
	7016	160+80.00	3.88
	7017	160+85.00	5.18
	7018	160+90.00	6.18
	7019	160+95.00	6.84
	7020	161+00.00	7.18
	7021	161+05.00	7.18
	7022	161+10.00	6.84
	7023	161+15.00	6.18
	7024	161+20.00	5.19
	7025	161+25.00	3.87
	7026	161+30.00	2.24
	7027	161+35.00	0.29

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
H	7300	170+00.00	out of chain.
	7301	170+05.00	1.99
	7302	170+10.00	3.67
	7303	170+15.00	5.03
	7304	170+20.00	6.06
	7305	170+25.00	6.77
	7306	170+30.00	7.15
	7307	170+35.00	7.20
	7308	170+40.00	6.91
	7309	170+45.00	6.29
	7310	170+50.00	5.34
	7311	170+55.00	4.08
	7312	170+60.00	2.58
	7313	170+65.00	0.95
	7314	170+70.00	0.72
	7315	170+75.00	2.37
	7316	170+80.00	3.88
	7317	170+85.00	5.18
	7318	170+90.00	6.18
	7319	170+95.00	6.84
	7320	171+00.00	7.18
	7321	171+05.00	7.18
	7322	171+10.00	6.84
	7323	171+15.00	6.18
	7324	171+20.00	5.19
	7325	171+25.00	3.87
	7326	171+30.00	2.24
	7327	171+35.00	0.29

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HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
Tampa, Florida 33607
PH (813) 289-5300
FX (813) 289-4405

TIM CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION

HORIZONTAL AND VERTICAL CONTROL

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

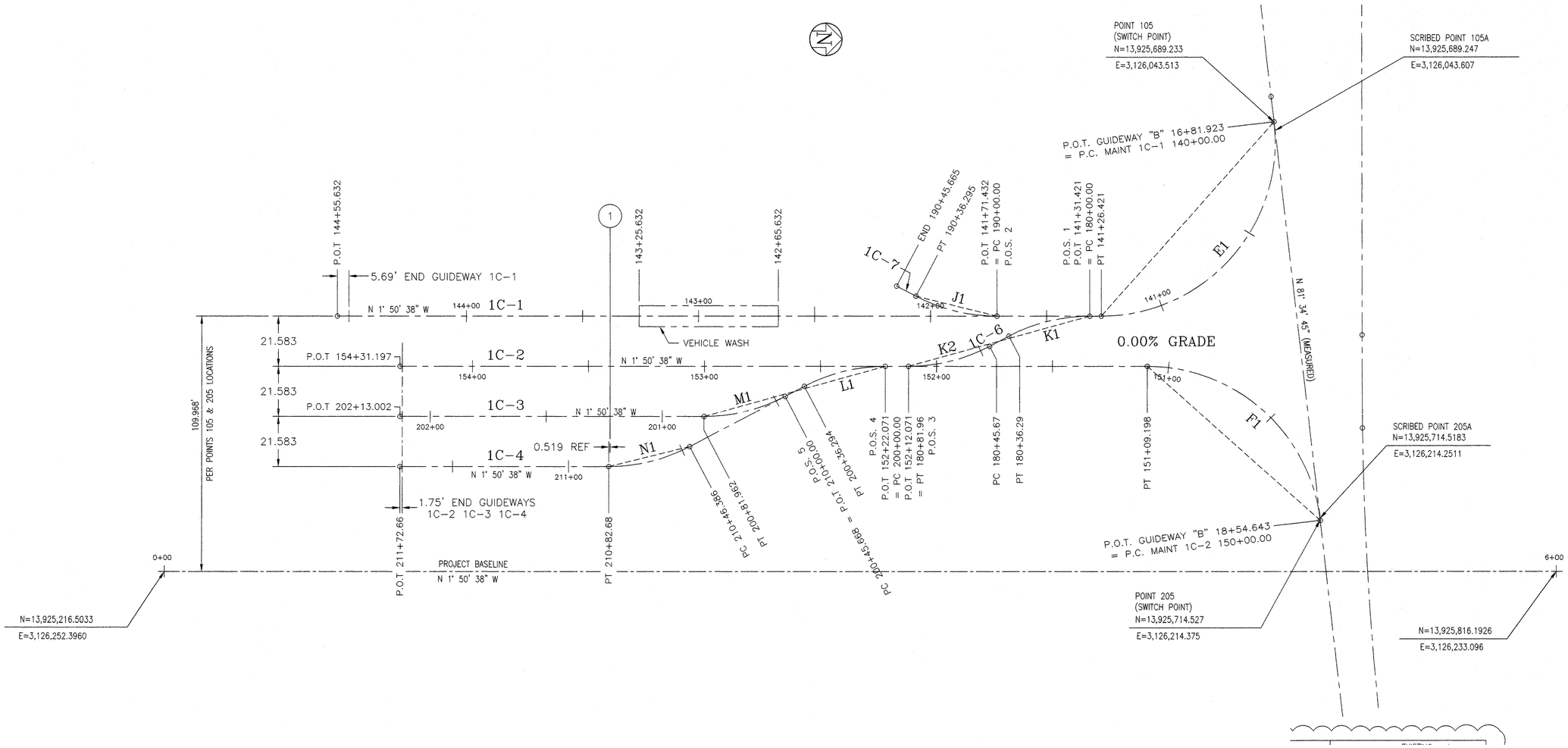
DIRECTOR
HOUSTON AIRPORT SYSTEM

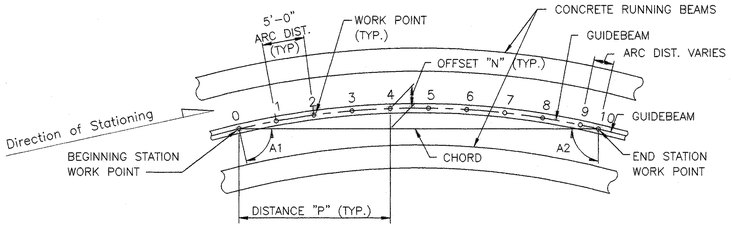
PROJECT NO.

C.I.P. NO.

H.A.S. NO.

SHEET NO.





TYPICAL SPAN FOR HORIZONTAL & VERTICAL CONTROL TABLES
HYPOTHETICAL SPAN SHOWN
NO SCALE

HORIZONTAL AND VERTICAL CONTROL:

1. ALL GUIDEBEAMS ARE TO BE FABRICATED AND ERECTED ACCORDING TO THE HORIZONTAL & VERTICAL ALIGNMENT SHOWN IN THE DRAWINGS.
2. ALL PLAN DIMENSIONS AND ANGLES ARE MEASURED IN A HORIZONTAL PLANE.

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
E1	10102	140+00.00	0.00
	10103	140+05.00	3.62
	10104	140+10.00	7.00
	10105	140+15.00	10.13
	10106	140+20.00	12.99
	10107	140+25.00	15.57
	10108	140+30.00	17.86
	10109	140+35.00	19.85
	10110	140+40.00	21.53
	10111	140+45.00	22.90
	10112	140+50.00	23.94
	10113	140+55.00	24.65
	10114	140+60.00	25.03
	10115	140+65.00	25.07
	10116	140+70.00	24.79
	10117	140+75.00	24.17
	10118	140+80.00	23.22
	10119	140+85.00	21.95
	10120	140+90.00	20.36
	10121	140+95.00	18.46
	10122	141+00.00	16.25
	10123	141+05.00	13.75
	10124	141+10.00	10.97
	10125	141+15.00	7.91
	10126	141+20.00	4.60
	10127	141+25.00	1.05
	10128	141+26.42	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
F1	10202	150+00.00	0.00
	10203	150+05.00	3.20
	10204	150+10.00	6.14
	10205	150+15.00	8.80
	10206	150+20.00	11.17
	10207	150+25.00	13.25
	10208	150+30.00	15.01
	10209	150+35.00	16.47
	10210	150+40.00	17.60
	10211	150+45.00	18.40
	10212	150+50.00	18.87
	10213	150+55.00	19.01
	10214	150+60.00	18.82
	10215	150+65.00	18.29
	10216	150+70.00	17.44
	10217	150+75.00	16.25
	10218	150+80.00	14.75
	10219	150+85.00	12.93
	10220	150+90.00	10.81
	10221	150+95.00	8.39
	10222	151+00.00	5.69
	10223	151+05.00	2.71
	10224	151+09.20	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
L1&M1	10302	200+00.00	0.00
	10303	200+05.00	1.17
	10304	200+10.00	2.02
	10305	200+15.00	2.53
	10306	200+20.00	2.71
	10307	200+25.00	2.56
	10308	200+30.00	2.08
	10309	200+35.00	1.26
	10310	200+40.00	0.21
	10311	200+45.00	0.86
	10312	200+50.00	1.80
	10313	200+55.00	2.41
	10314	200+60.00	2.69
	10315	200+65.00	2.64
	10316	200+70.00	2.26
	10317	200+75.00	1.54
	10318	200+80.00	0.50
	10319	200+81.96	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
K1&K2	10602	180+00.00	0.00
	10603	180+05.00	1.17
	10604	180+10.00	2.01
	10605	180+15.00	2.53
	10606	180+20.00	2.71
	10607	180+25.00	2.56
	10608	180+30.00	2.08
	10609	180+35.00	1.26
	10610	180+40.00	0.21
	10611	180+45.00	0.86
	10612	180+50.00	1.80
	10613	180+55.00	2.41
	10614	180+60.00	2.69
	10615	180+65.00	2.64
	10616	180+70.00	2.26
	10617	180+75.00	1.54
	10618	180+80.00	0.50
	10619	180+81.96	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
N1	10402	210+46.39	0.00
	10403	210+51.29	1.04
	10404	210+56.29	1.75
	10405	210+61.29	2.12
	10406	210+66.29	2.17
	10407	210+71.29	1.88
	10408	210+76.29	1.26
	10409	210+81.29	0.31
	10410	210+82.68	0.00

GUIDEBEAM GEOMETRY			
CURVE	WORK POINT	STATION (FT)	OFFSET "N" (FT)
J1	10702	190+00.00	0.00
	10703	190+05.00	1.04
	10704	190+10.00	1.74
	10705	190+15.00	2.12
	10706	190+20.00	2.16
	10707	190+25.00	1.87
	10708	190+30.00	1.25
	10709	190+35.00	0.30
	10710	190+36.29	0.00

SEE SHEET 6 FOR POS LOCATIONS 7

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 300
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FX (813) 289-4405

REVISIONS

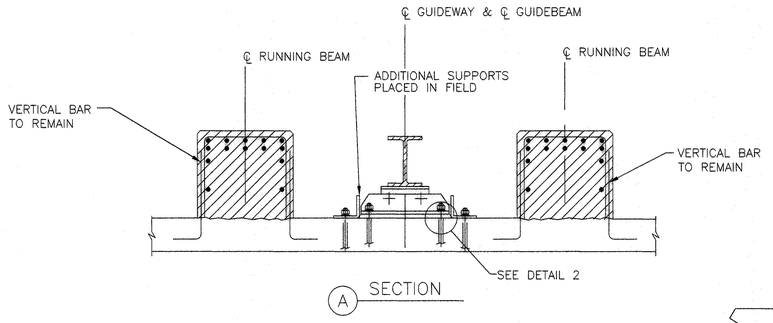
NO.	DESCRIPTION	DATE	BY

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

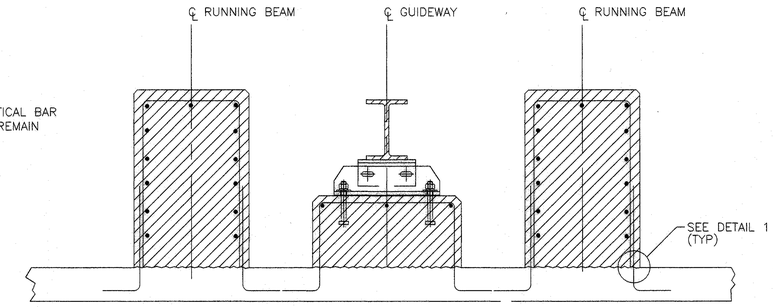
MAINTENANCE AREA
HORIZONTAL AND VERTICAL CONTROL

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO. 49



A SECTION



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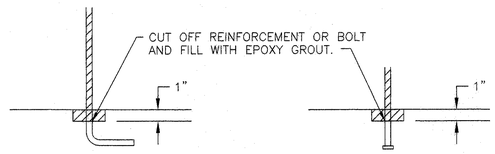


1 DETAIL

2 DETAIL

DEMOLITION NOTES:

GUIDEBEAMS

1. REMOVE EXISTING GUIDEBEAMS AND CONCRETE RUNNING BEAMS FOR GUIDEWAY "B" BETWEEN COLUMN LINES 12 & 15 AS SHOWN. ON SHEETS 21 AND 22.
2. CUT OFF ANCHOR BOLTS FOR GUIDEBEAM SUPPORT 1" BELOW THE CONCRETE DECK.
3. CORE MIN. 2" DIAMETER HOLE FOR EACH NEW GUIDEBEAM SUPPORT ANCHOR BOLTS. WHERE NEW ANCHOR BOLT INTERFERES WITH EXISTING ANCHOR BOLT, SHIFT GUIDEBEAM SUPPORT TO CLEAR.
4. EPOXY GROUT HOLES FOR EXISTING ANCHOR BOLTS REMOVED IN ITEM 2.

CONCRETE RUNNING SURFACES

1. REMOVE CONCRETE RUNNING BEAMS FOR GUIDEWAY "B" BETWEEN COLUMN LINES 12 & 15. AS SHOWN.
2. REMOVE ALL REINFORCING STEEL EXCEPT FOR THE VERTICAL DOWEL BARS.
3. LEAVE VERTICAL REINFORCING STEEL DOWELS IN PLACE EXCEPT FOR THOSE WITHIN THE SWITCH PITS.

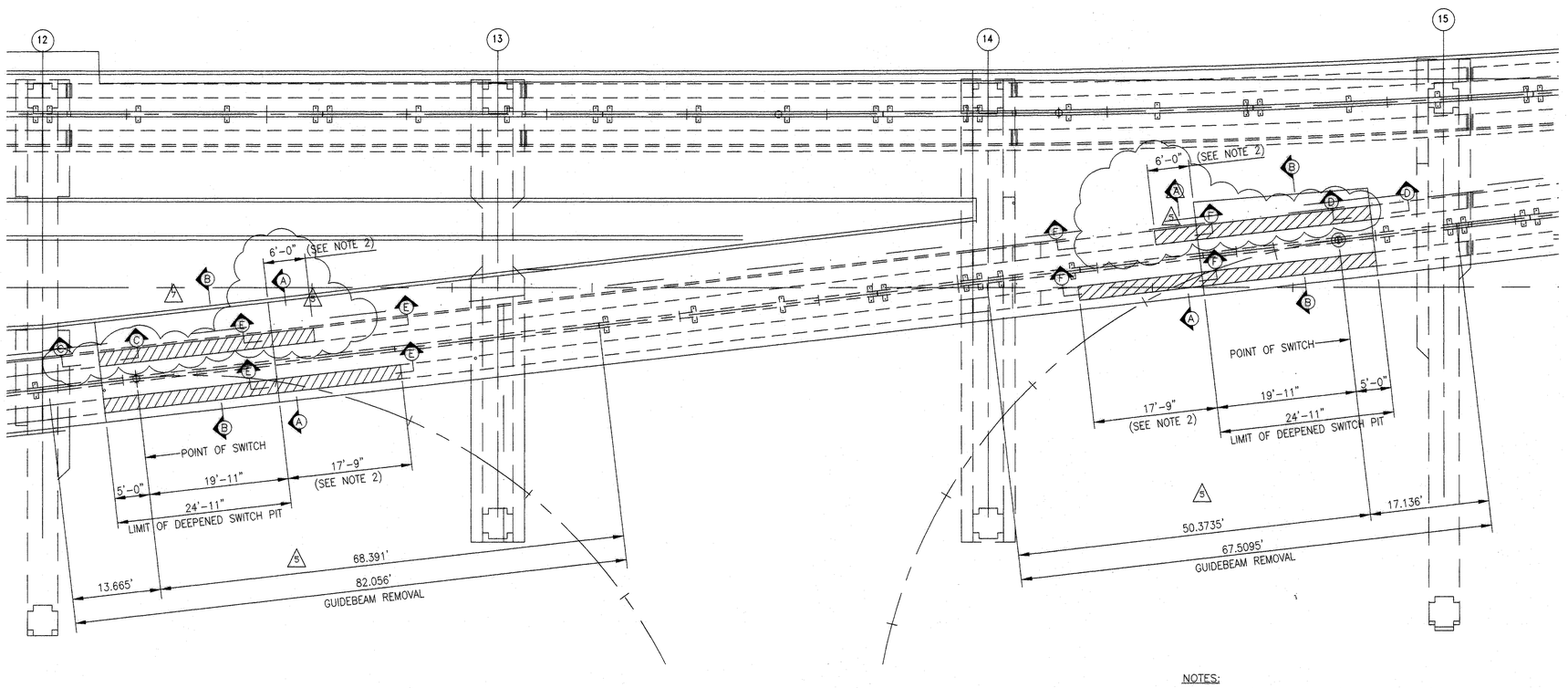
DEMOLITION NOTES:

GUIDEBEAMS

1. REMOVE EXISTING GUIDEBEAMS AND CONCRETE RUNNING BEAMS & CONCRETE GUIDEBEAM PEDESTALS FOR GUIDEWAY "B" WITHIN THE SWITCH PIT AREAS.

CONCRETE RUNNING SURFACES

1. REMOVE CONCRETE RUNNING BEAMS AND CONCRETE GUIEBEAM SUPPORTS FOR GUIDEWAY "B" WITHIN THE SWITCH PIT AREAS.
2. CUT VERTICAL DOWEL BARS OFF 1" BELOW THE CONCRETE DECK SLAB AND FILL HOLES WITH EPOXY GROUT. REMOVE ALL REINFORCING STEEL.



N

NOTES:

1. SEE SHEET NO. 51 FOR SECTIONS C, D, E, F, G, & H.
2. IF EXISTING RUNNING PAD JOINT IS LESS THAN 5'-0" FROM DEMOLITION LIMITS, REMOVE RUNNING PAD TO EXISTING JOINT.

ALL DEMOLITION BY OWNER – LIMITS AS DEFINED ON THIS SHEET.

PLAN

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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J.W. CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	NEW SHEET	9/26	FPB
2	ADD NOTE	12-2-02	FPB
3	REV DEMO.	12-31-02	FPB
4	ASBUILT	3-29-04	FPB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

MAINTENANCE AREA

GUIDEBEAM AND RUNNING BEAM DEMOLITION
(SHEET 1 OF 2)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.

C.I.P. NO.

H.A.S. NO.

SHEET NO.

50 of 99 1

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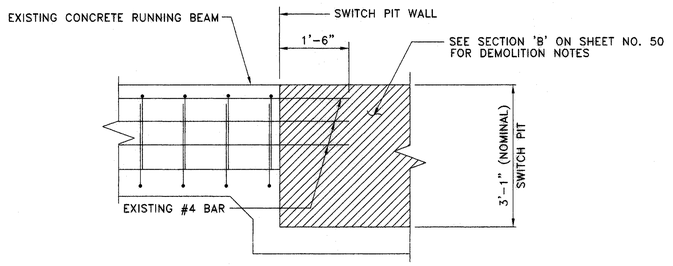
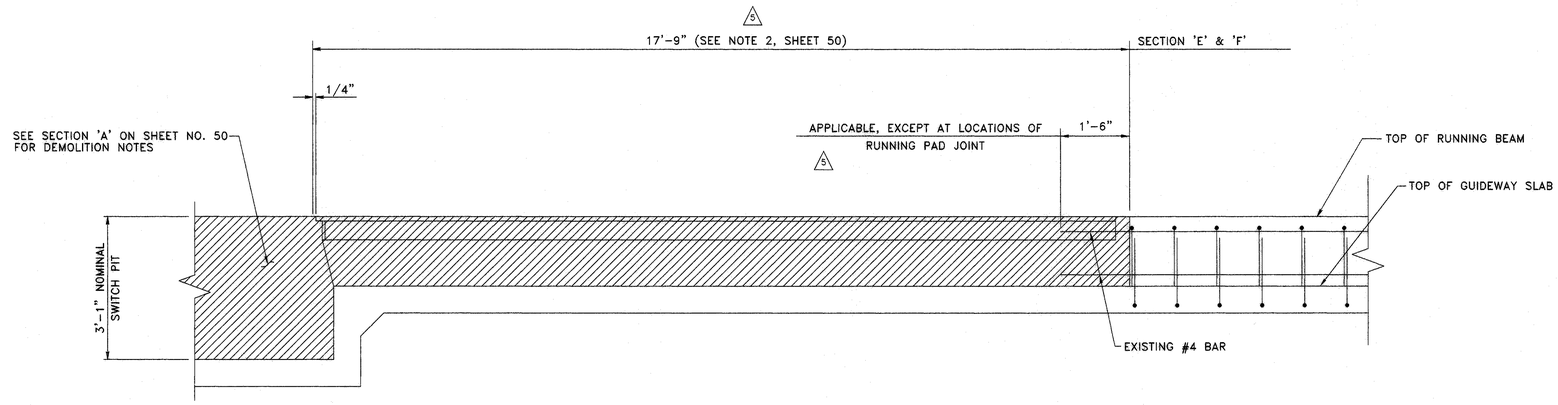


(C) SECTION (AS SHOWN)
3/4"=1'-0"

(D) SECTION (OPPOSITE HAND)
3/4"=1'-0"



(E) SECTION (AS SHOWN)
3/4"=1'-0"

(F) SECTION (OPPOSITE HAND)
3/4"=1'-0"

5

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GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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5405 West Cypress St.
Suite 300
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FX: (813) 289-4405

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	NEW SHEET	9/26	FPB
2	REV DIM.	12/31	FPB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
GUIDEBEAM & RUNNING BEAM DEMOLITION
(SHEET 2 OF 2)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

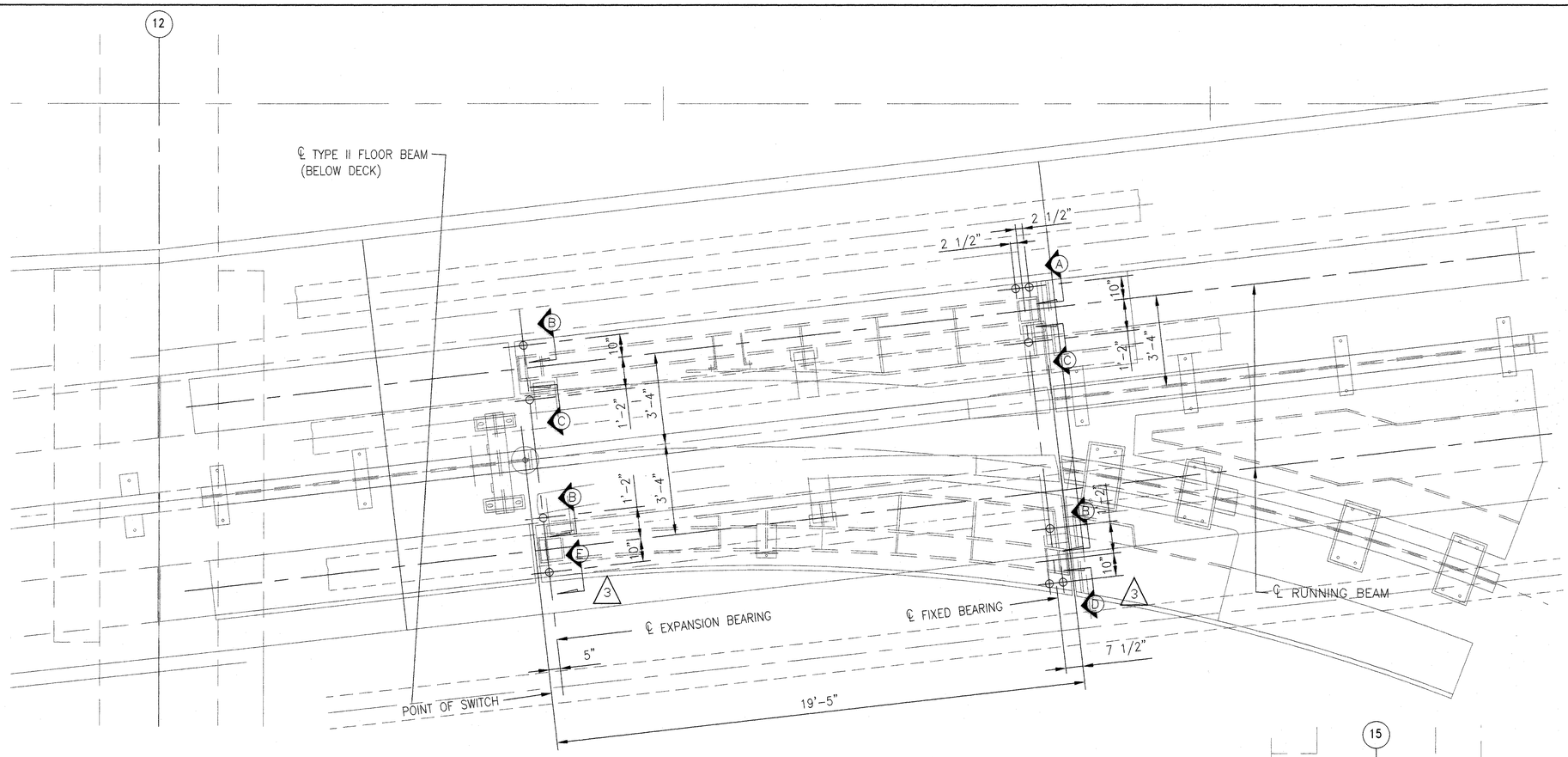
SCALE:
DATE:

APPROVED BY: DATE:

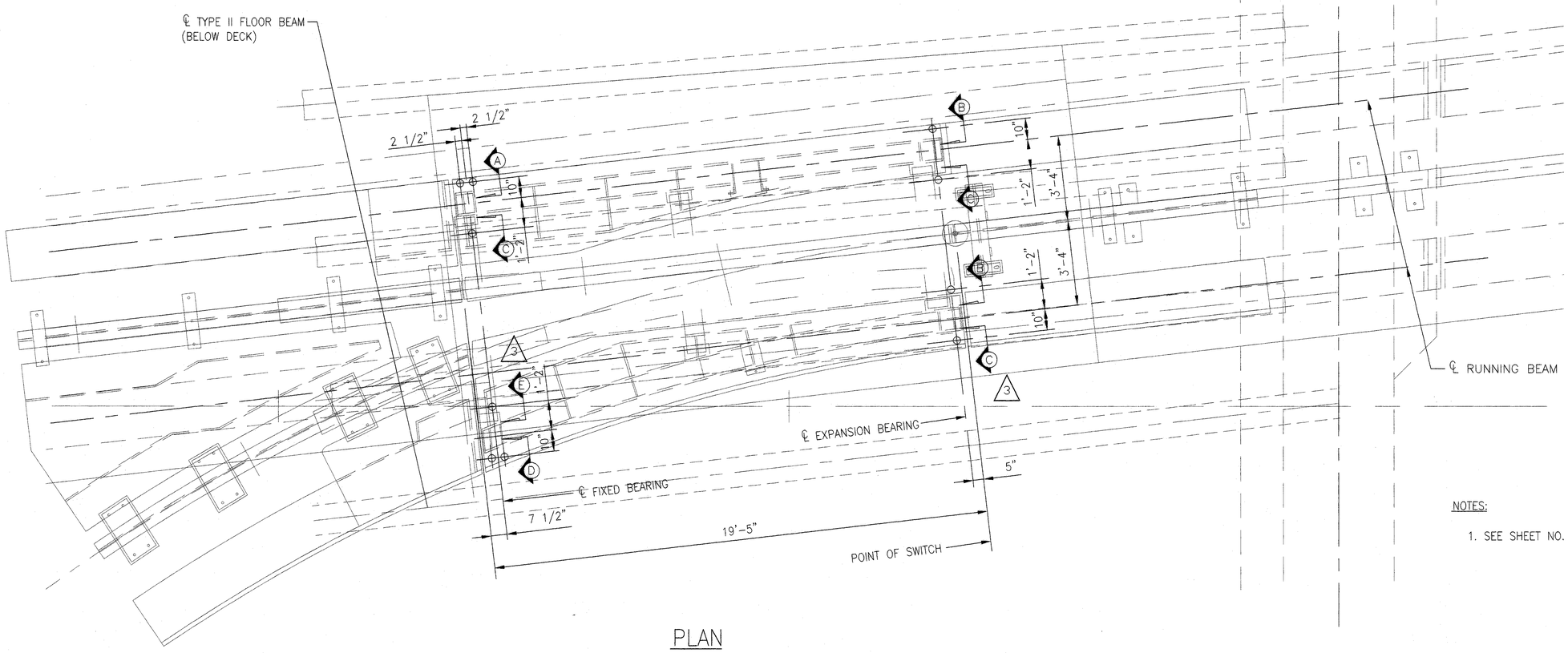
DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

51 of 80 (1)



PLAN



PLAN

NOTES:

1. SEE SHEET NO. 53 FOR SECTIONS A, B & C.

N

HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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REVISIONS

NO.	DESCRIPTION	DATE	BY
1	NEW SHEET	9/26	FPB
2	REV SHEET	11/4	FPB
3	REV SHEET	11/11	FPB

INTERNATIONAL ✦ SERVICES ✦ EXPANSION ✦ PROGRAM

MAINTENANCE AREA

MOVEABLE GUIDEBEAM ANCHORAGE DETAILS
(SHEET 1 OF 2)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:

SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR
HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

52 of 53 (3)

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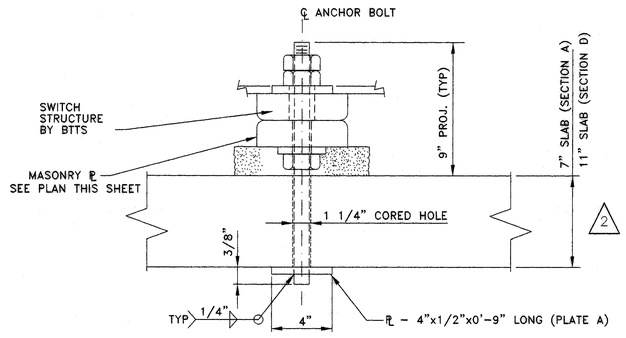
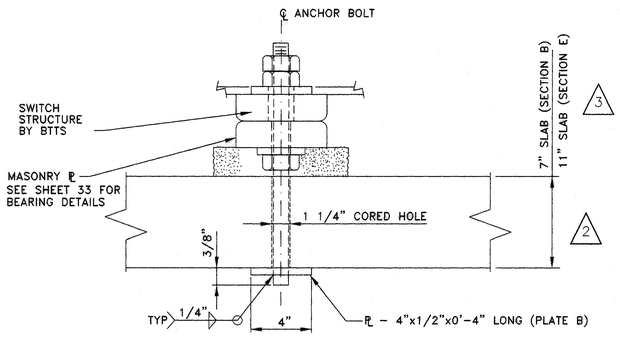


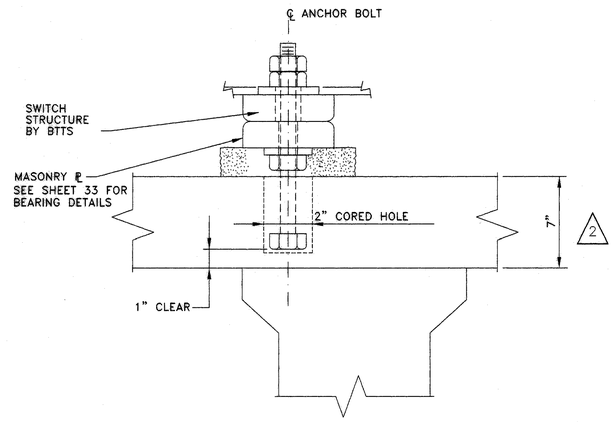
NOTES:
1. CORE 1 1/4" HOLE(S) THRU EXISTING DECK SLAB.
2. SECURE PLATE TO UNDERNEATH OF DECK SLAB WITH 1/2" EXPANSION BOLTS.
3. GROUT VOID BETWEEN ANCHOR BOLT AND EXISTING SLAB.
4. AFTER GROUT HAS SET FOR ONE DAY, ERECT SWITCH GIRDERS.

△2 (A) SECTION (AS SHOWN AND NOTED) NTS
(D) SECTION (AS SHOWN AND NOTED) NTS



NOTES:
1. CORE 1 1/4" HOLE(S) THRU EXISTING DECK SLAB.
2. SECURE PLATE TO UNDERNEATH OF DECK SLAB WITH 1/2" EXPANSION BOLTS.
3. GROUT VOID BETWEEN ANCHOR BOLT AND EXISTING SLAB.
4. AFTER GROUT HAS SET FOR ONE DAY, ERECT SWITCH GIRDERS.

△3 (B) SECTION (AS SHOWN AND NOTED) NTS
(E) SECTION (AS SHOWN AND NOTED) NTS



NOTES:
1. CORE 2" HOLES TO WITHIN 1" OF THE BOTTOM OF THE SLAB.
2. SET 1" DIAMETER ANCHOR BOLT AND GROUT IN PLACE.
3. AFTER GROUT HAS SET FOR ONE DAY, ERECT SWITCH GIRDERS.

(C) SECTION NTS

GROUT NOTE:
GROUT TO BE HIGH PERFORMANCE, CEMENTITIOUS GROUT, SUCH AS SIKA GROUT 212 OR APPROVED EQUAL.

NOTE: FOR BEARING INFORMATION NOT SHOWN, SEE SHEET 33.

△2

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

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Tampa, Florida 33607
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FX: (813) 289-4405

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	NEW SHEET	9/26	FPB
2	REV. DETAILS	11/4	FPB
3	REV. DETAILS	11/11	FPB

INTERNATIONAL ♦ SERVICES ♦ EXPANSION ♦ PROGRAM

MAINTENANCE AREA
MOVEABLE GUIDEBEAM ANCHORAGE DETAILS (SHEET 2 OF 2)

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:
DIRECTOR HOUSTON AIRPORT SYSTEM
PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

53 52 △3

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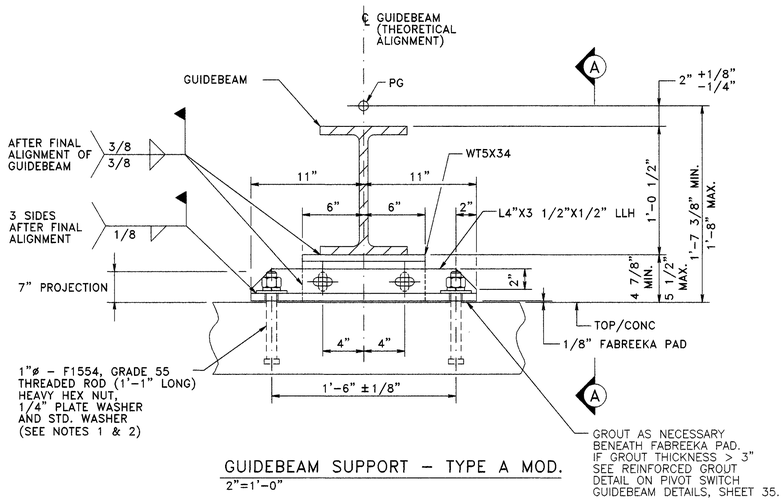
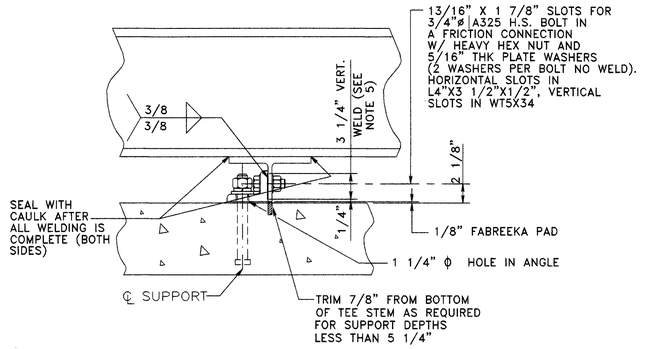


GUIDEBEAM SUPPORT - TYPE A MOD.
2"=1'-0"



A SECTION
2"=1'-0"

NOTES:
1. PROVIDE NEW 3"x3"x1/4" SQUARE PLATE WASHERS WITH 1 1/16"x 1 5/16" SLOTTED HOLE. SLOTTED HOLE TO BE PARALLEL TO GUIDEBEAM.
2. REPLACE LOCK WASHERS WITH STANDARD GALVANIZED WASHERS.
3. SNUG BOLTS DOWN AND BURR ANCHOR BOLT THREADS TO PREVENT NUTS FROM BACKING OFF.
4. REPLACE L6"x4"x3/4" WITH L4"x3 1/2"x1/2", ASTM A-36 STEEL.
5. PROVIDE 3/8" FILLET WELD TO CONNECT ANGLE TO TEE SECTION (MIN. WELD LENGTH IS 3 1/4"). USE 1/8" DIA. RODS TO BUILD UP 3/8" WELDS TO PREVENT DAMAGE TO THE FABREEKA PAD. AS AN ADDED PRECAUTION, DO NOT WELD THE BOTTOM 1/4" OF THE ANGLE.
6. MINIMUM HEIGHT OF SUPPORT IS 4 7/8". CHIP OUT SLAB CONCRETE WHERE THIS HEIGHT CANNOT BE OBTAINED.
7. BEVEL EDGE 3x3x5/16 PL WASHERS (MARK 22pb902) FOR FILLET OF ANGLE WHERE REQ'D

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
STATION	AS-BUILT T/DECK	Min. PGL	NEW PGL	(NEW)-(MIN) FT.	COMMENTS
GUIDEWAY -A					
3+53.583	131.840	133.680	133.680		
PC 3+55.000			133.680	133.680	New PC
3+55.583	131.630	133.680	133.680	0.000	
3+68.249	131.750	133.680	133.692	0.012	
3+80.916	131.860	133.693	133.725	0.032	
3+93.583	131.990	133.823	133.780	-0.043	Type A Mod. Support
3+95.616	132.010	133.843	133.791	-0.052	Type A Mod. Support
4+08.249	132.190	134.023	133.870	-0.153	Type A Mod. Support
4+20.916	132.350	134.183	133.972	-0.211	Type A Mod. Support + grind conc.
4+33.583	132.500	134.333	134.094	-0.239	Type A Mod. Support + grind conc.
4+35.583	132.530	134.363	134.116	-0.247	Type A Mod. Support + grind conc.
4+48.583	132.650	134.483	134.268	-0.215	Type A Mod. Support + grind conc.
4+61.583	132.720	134.553	134.442	-0.111	Type A Mod. Support
4+73.583	132.730	134.563	134.624	0.061	
4+75.583	132.770	134.603	134.656	0.021	
4+88.240	132.930	134.763	134.871	0.108	
5+00.916	133.150	134.983	135.109	0.126	
5+13.583	133.380	135.213	135.368	0.155	
5+15.580	133.440	135.273	135.411	0.138	
5+28.250	133.860	135.693	135.694	0.001	
5+40.915	134.150	135.983	136.000	0.017	
5+53.583	134.350	136.183			
5+55.583	134.410	136.243	136.380	0.137	
5+68.234	134.750	136.583	136.732	0.149	
5+70.234	134.780	136.613	136.789	0.176	
5+82.900	135.110	136.943	137.166	0.223	
PVT 5+85.00	xxxx	xxxx	137.230	xxxx	Grade from PVT @ 5+85 to
5+95.567	135.630	137.463	137.547	0.084	PVC @ 6+65 = 3.0873%
6+08.234	136.080	137.913	137.948	0.035	
6+10.234	136.150	137.983	138.009	0.026	
6+22.901	136.540	138.813	138.400	-0.413	Type A Mod. Support
6+35.567	136.980	138.813	138.791	-0.022	Type A Mod. Support
6+48.234	137.380	139.213	139.183	-0.030	Type A Mod. Support
6+50.234	137.480	139.313	139.244	-0.069	Type A Mod. Support
6+62.901	137.950	139.117	139.635	0.518	Type A Mod. Support
PVC 6+65.00	xxxx	139.855	139.700		
6+75.567	138.350	140.183	140.016	-0.167	Type A Mod. Support
6+88.234	138.600	140.433	140.365	-0.068	Type A Mod. Support
6+90.234	138.620	140.453	140.418	-0.035	Type A Mod. Support
6+99.260	138.720	140.553	140.645	0.092	
7+08.250	138.880	140.713	140.855	0.142	
7+17.311	139.030	140.863	141.051	0.188	
7+19.311	139.080	140.913	141.092	0.179	
7+31.978	139.320	141.153	141.335	0.182	
7+44.644	139.540	141.373	141.547	0.174	
7+57.311	139.760	141.593	141.728	0.135	
7+71.978	140.040	141.873	141.899	0.026	
7+84.644	140.160	141.993	142.013	0.020	
7+97.311	140.280	142.113	142.096	-0.017	
7+99.311	140.210	142.043	142.106	0.063	
8+05.728	140.230	142.063	142.134	0.071	
8+12.145	140.320	142.153	142.154	0.001	
8+14.145	140.330	142.163	142.159	-0.004	
PVT 8+25.00	xxxx		142.170		
8+26.812	140.420	142.253	142.170	-0.083	Type A Mod. Support
8+39.479	140.390	142.223	142.170	-0.053	Type A Mod. Support
8+52.145	140.450	142.283	142.170	-0.113	Type A Mod. Support
8+54.145	140.440	142.273	142.170	-0.103	Type A Mod. Support
8+66.812	140.420	142.253	142.170	-0.083	Type A Mod. Support
8+79.479	140.400	142.233	142.170	-0.063	Type A Mod. Support
8+92.145	140.360	142.193	142.170	-0.023	Type A Mod. Support
8+94.145	140.350	142.183	142.170	-0.013	
9+06.812	140.220	142.053	142.170	0.117	

COL 1	COL 2	COL 3	COL 4	COL 5	COL 6
STATION	AS-BUILT T/DECK	MIN PGL	NEW PGL	(NEW)-(MIN) FT.	COMMENTS
GUIDEWAY - B					
103+55.000			133.680		New PC
103+56.032	131.84	133.680	133.681	0.001	
103+58.032	131.85	133.680	133.697	0.017	
103+70.699	131.74	133.680	133.707	0.027	
103+83.366	131.90	133.733	133.734	0.001	
103+96.032	132.00	133.833	133.793	-0.040	Type A Mod. Support
103+98.032	132.00	133.833	133.804	-0.029	
104+10.699	132.16	133.993	133.888	-0.105	Type A Mod. Support
104+23.366	132.34	134.173	133.994	-0.179	Type A Mod. Support
104+36.033	132.45	134.283	134.121	-0.162	Type A Mod. Support
104+38.033	132.48	134.313	134.143	-0.170	Type A Mod. Support
104+50.699	132.65	134.483	134.295	-0.188	Type A Mod. Support
104+63.366	132.69	134.523	134.468	-0.055	Type A Mod. Support
104+76.366	132.85	134.68	134.669	-0.014	
104+78.033	132.88	134.713	134.696	-0.017	
104+90.699	133.04	134.873	134.916	0.043	
105+03.366	133.09	134.923	135.157	0.234	
105+16.033	133.41	135.243	135.420	0.177	
105+18.033	133.49	135.323	135.464	0.141	
105+30.699	133.85	135.683	135.752	0.069	
105+43.366	134.22	136.053	136.061	0.008	
105+56.033	134.54	136.373	136.392	0.019	
105+58.033	134.61	136.443	136.447	0.004	
105+69.458	134.74	136.573	136.767	0.194	
105+71.458	134.75	136.583	136.825	0.242	
105+84.124	135.15	136.983	137.203	0.220	
PVT 105+85.00	xxxx		137.230	xxxx	Grade from PVT @ 105+85 to
105+96.791	135.71	137.543	137.594	0.051	PVC @106+65 = 3.0873%
106+09.458	136.15	137.983	137.985	0.002	
106+11.458	136.18	138.013	138.047	0.034	
106+24.125	136.55	138.383	138.438	0.055	
106+36.792	137.00	138.833	138.829	-0.004	
106+49.459	137.42	139.253	139.220	-0.033	Type A Mod. Support
106+51.459	137.48	139.313	139.282	-0.031	
106+64.125	137.93	139.763	139.673	-0.090	Type A Mod. Support
PVC106+65.00	xxxx		139.700	xxxx	
106+76.792	138.42	140.253	140.051	-0.202	Type A mod. support
106+89.45	138.61	140.443	140.397	-0.046	Type A mod. support
106+91.459	138.67	140.503	140.450	-0.053	Type A mod. support
107+03.819	138.78	140.613	140.753	0.140	
107+16.18	139.08	140.913	141.028	0.115	
107+18.18	139.12	140.953	141.069	0.116	
107+30.847	139.30	141.133	141.315	0.182	
107+43.513	139.53	141.363	141.529	0.166	
107+56.18	139.77	141.603	141.713	0.110	
107+58.18	139.82	141.653	141.739	0.086	
107+70.847	140.01	141.843	141.887	0.044	
107+83.514	140.17	142.003	142.004	0.001	
107+96.18	140.28	142.113	142.090	-0.023	
107+98.18	140.20	142.033			
108+07.45	140.30	142.133	142.140	0.007	
108+16.72	140.31	142.143	142.163	0.020	
108+18.72	140.33	142.163	142.166	0.003	
PVT108+25.00	xxxx	142.170	142.170	0.000	
108+31.387	140.38	142.213	142.170	-0.043	Type A Mod. Support
108+44.054	140.42	142.253	142.170	-0.083	Type A Mod. Support
108+56.72	140.41	142.243	142.170	-0.073	Type A Mod. Support
108+58.72	140.41	142.243	142.170	-0.073	Type A Mod. Support
108+71.387	140.38	142.213	142.170	-0.043	Type A Mod. Support
108+84.054	140.38	142.213	142.170	-0.043	Type A Mod. Support
108+96.72	140.35	142.183	142.170	-0.013	
108+98.72	140.35	142.183	142.170	-0.013	
109+11.387	140.24	142.183	142.170	-0.013	
109+24.054	140.25	142.183	142.170	-0.013	

COL. NOTES:
1 STATION OF AS-BUILT GUIDEBEAM SUPPORTS.
2 AS-BUILT ELEVATION PROVIDED BY GUIDEWAY CONTRACTOR.
3 AS-BUILT ELEVATION +1.833' (TYP. TYPE "A" GUIDEBEAM SUPPORTS- DWG. 26)
4 NEW PROFILE ELEVATION @ AS-BUILT GUIDEBEAM SUPPORT.
5 DIFFERENCE BETWEEN COLUMNS 3 & 4.
6 COMMENTS BASED ON AS-BUILT SURVEY PROVIDED BY GUIDEWAY CONTRACTOR. NOTIFY EOR IF ANY DISCREPANCIES FOUND

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

Parsons Brinckerhoff
5405 West Cypress St.
Suite 500
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CONSTRUCTORS, INC.

REVISIONS

NO.	DESCRIPTION	DATE	BY
6	NEW DWG.	12-22-03	FB

INTERNATIONAL • SERVICES • EXPANSION • PROGRAM

APM GUIDEWAY EXTENSION
MODIFIED GUIDEBEAM SUPPORT DETAILS

PROJECT MGR:
DESIGNER:
DRAWN BY:
CHECKED BY:
DRAWING STANDARD:
SCALE:
DATE:

APPROVED BY: DATE:

DIRECTOR HOUSTON AIRPORT SYSTEM

PROJECT NO.
C.I.P. NO.
H.A.S. NO.
SHEET NO.

54 ⚠ NEW DRAWING
53

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