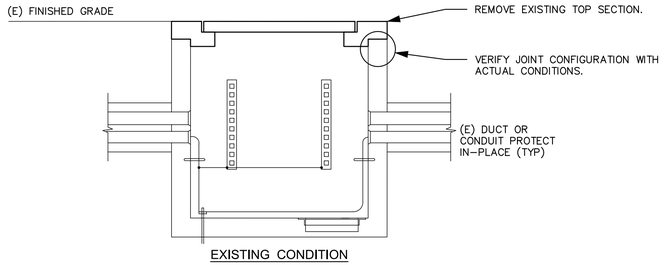
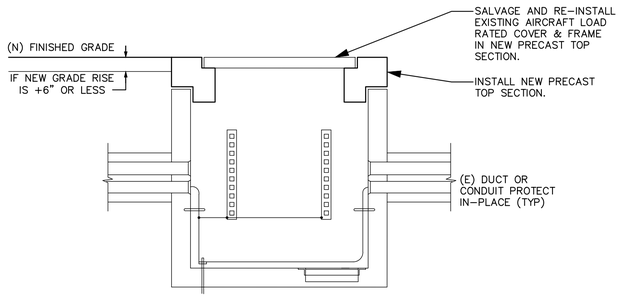
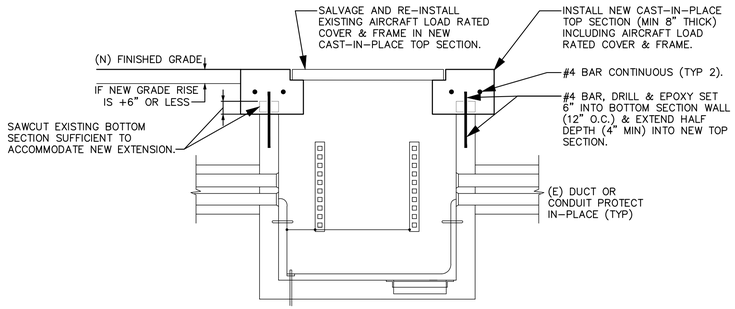


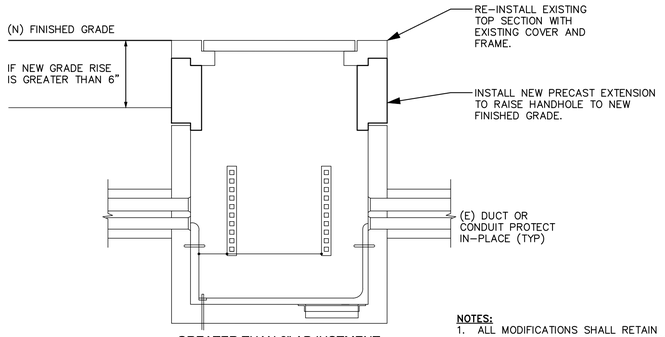
EXISTING CONDITION



LESS THAN 6" ADJUSTMENT - OPTION 1



LESS THAN 6" ADJUSTMENT - OPTION 2



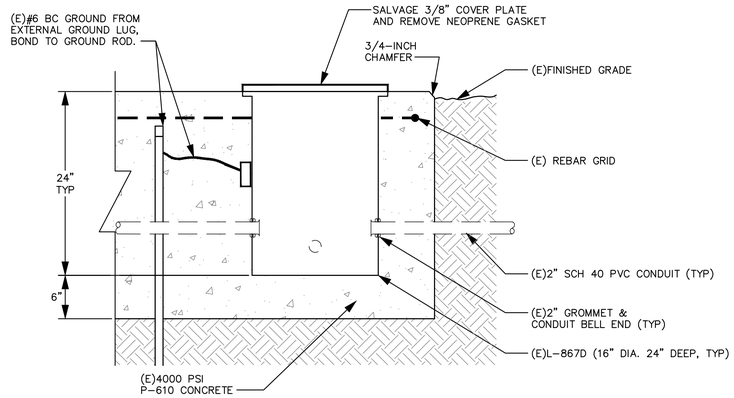
GREATER THAN 6" ADJUSTMENT

NOTES:
1. ALL MODIFICATIONS SHALL RETAIN AIRCRAFT LOAD RATING OF HANDHOLE.
2. REMOVE CONDUCTORS PRIOR TO BEGINNING MODIFICATIONS, OR INSTALL PROTECTION BETWEEN CONDUCTORS AND TOP SECTION OF HANDHOLE PRIOR TO BEGINNING MODIFICATIONS.

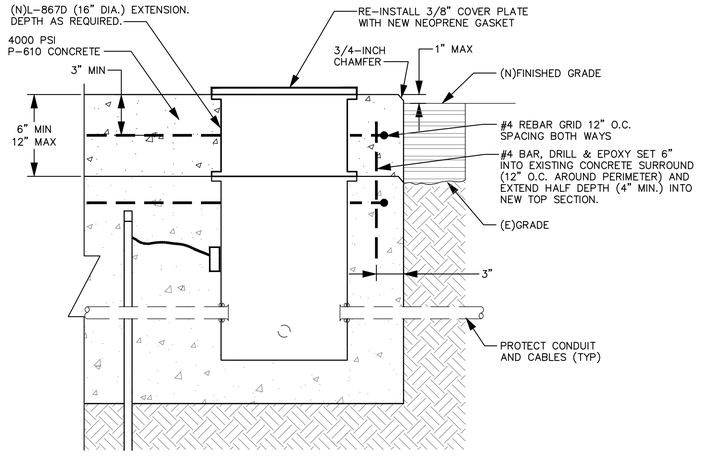
HANDHOLE EXTENSION TO NEW GRADE DETAIL

N.T.S.

NOTE:
SEE JUNCTION CAN PLAZA DETAIL ON DRAWING E3.8 FOR TYPICAL DIMENSIONS AND EXISTING INSTALLATION.



EXISTING JCP SECTION



MODIFIED JCP SECTION

2-CAN JCP - EXTENSION TO NEW GRADE DETAIL

N.T.S.

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84051
LICENSED
PROFESSIONAL ENGINEER
5/27/16

MARK	DATE	DESCRIPTION
ISSUE:		----

PROJECT NO:	33-0019X
FILE NAME:	_33-00193-R1ED-501
DRAWN BY:	CMP
CHECKED BY:	ECL
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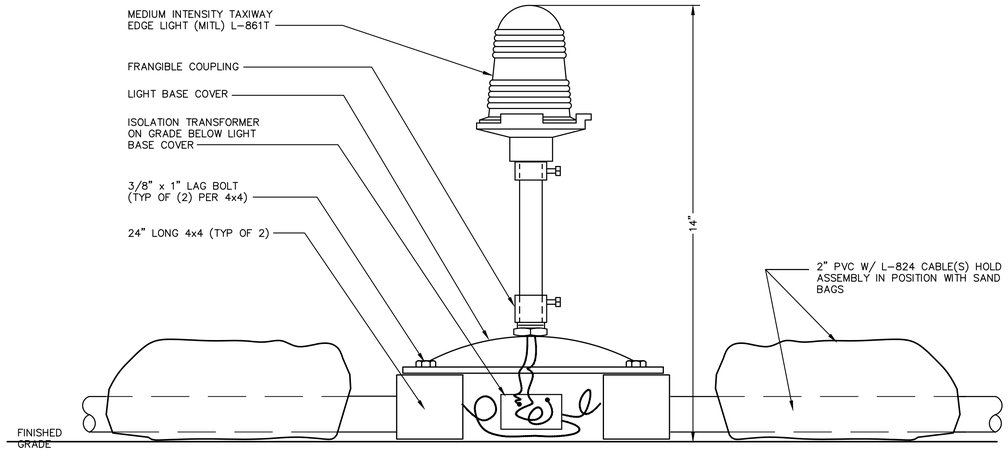
SHEET TITLE:

RAISE STRUCTURES TO GRADE DETAILS

E3.9

SHEET NO. 61 OF 157

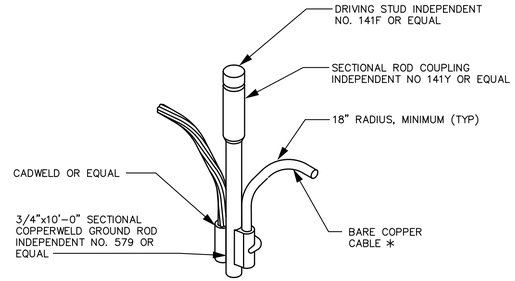
K:\REN_Aviation\19162900-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1ED-501.dwg October 28, 2015 Peterson, Cary



TEMPORARY LIGHTING NOTES:

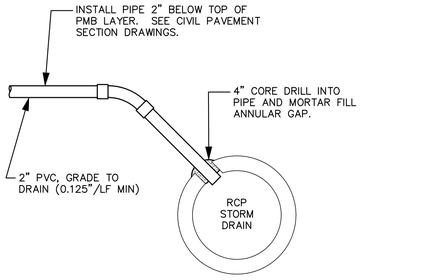
1. CONTRACTOR SHALL IMMEDIATELY REPLACE ANY RIPPED OR BROKEN SANDBAGS AND CLEAN PAVED AREAS OF LOOSE SAND.
2. TURN LIGHT AND BASE OVER TO AIRPORT MAINTENANCE DEPARTMENT AFTER COMPLETION OF CONSTRUCTION.

TEMPORARY TAXIWAY EDGE LIGHT DETAIL
N.T.S.

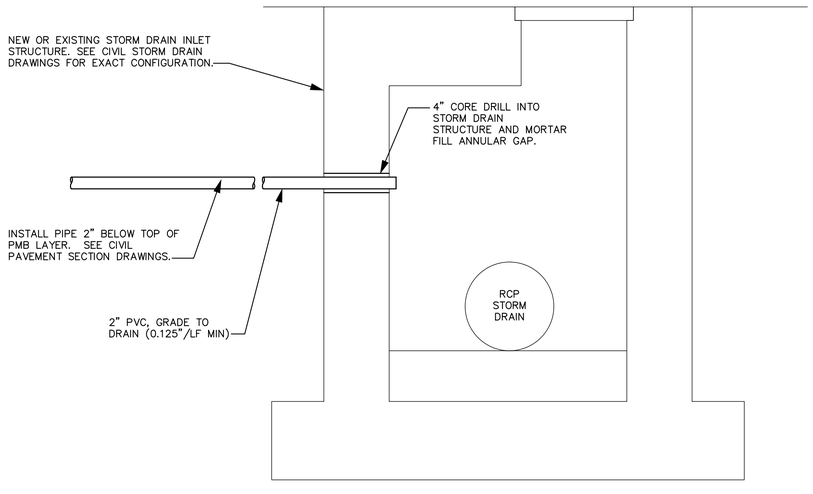


COUNTERPOISE SYSTEM GROUND ROD DETAIL
N.T.S.

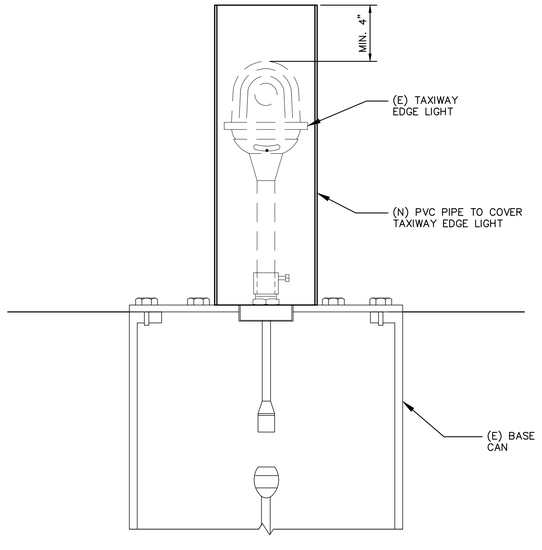
* BARE COPPER CABLE –
#4/0 FOR FAA FACILITIES,
#1/0 FOR FAA DUCTS,
#6 SOLID FOR AIRFIELD LIGHTING



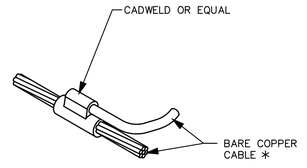
ELECTRICAL SYSTEM DRAIN CONNECTION INTO STORM DRAIN PIPE
N.T.S.



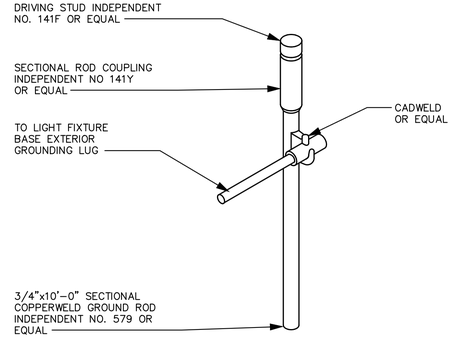
ELECTRICAL SYSTEM DRAIN CONNECTION INTO STORM DRAIN STRUCTURE
N.T.S.



TEMPORARY TAXIWAY EDGE LIGHT COVER DETAIL
N.T.S.



COUNTERPOISE SYSTEM CABLE CONNECTION DETAIL
N.T.S.



LIGHT BASE CAN GROUNDING DETAIL
N.T.S.

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED PROFESSIONAL ENGINEER
5/31/16

MARK	DATE	DESCRIPTION
ISSUE:		----

PROJECT NO:	33-0019X
FILE NAME:	_33-00193-R1ED-501
DRAWN BY:	CMP
CHECKED BY:	ECL
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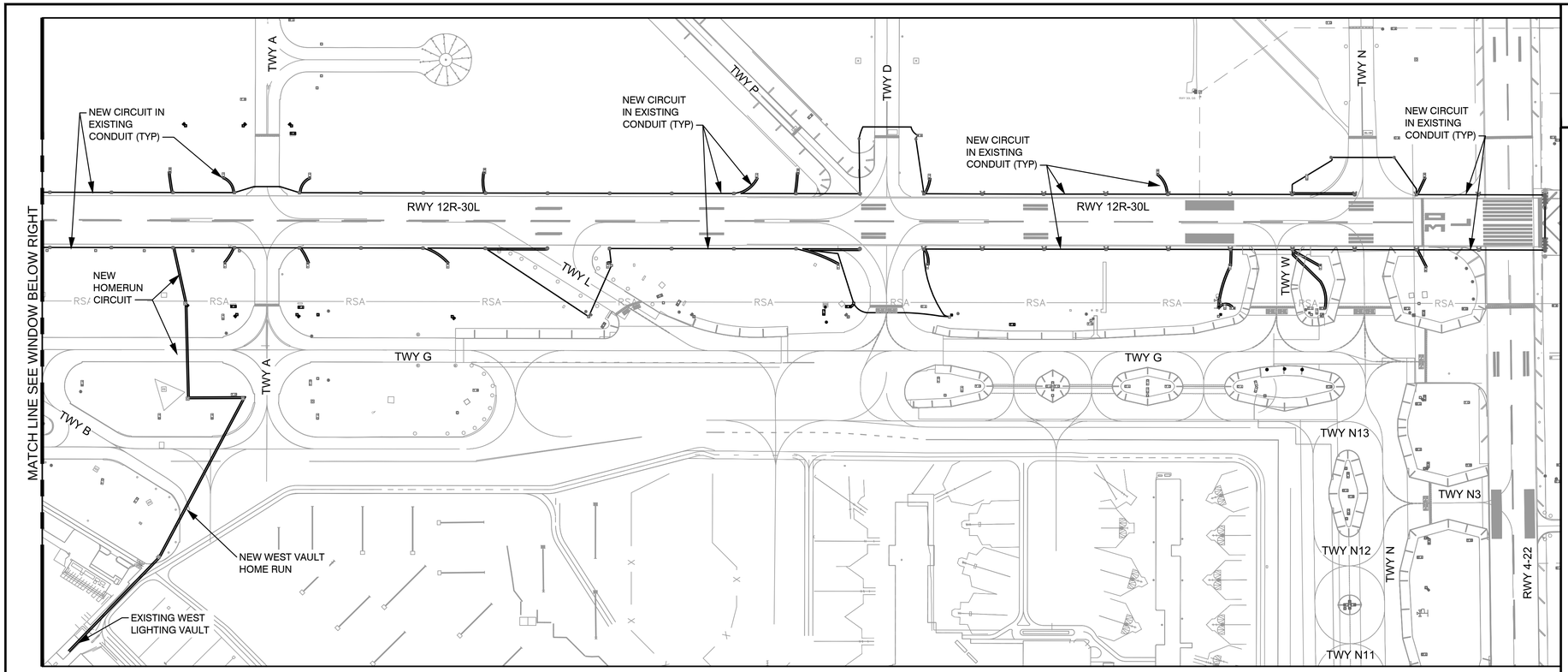
SHEET TITLE:

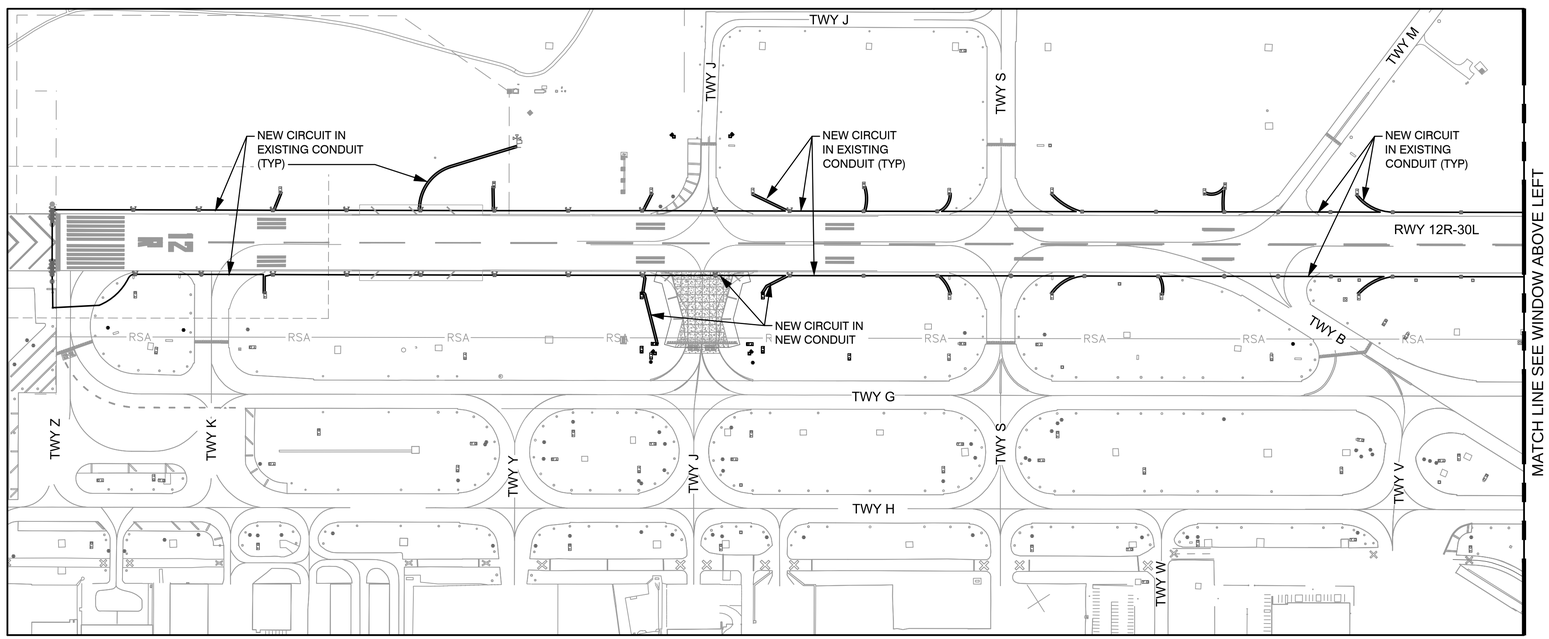
MISCELLANEOUS DETAILS

E3.10

SHEET NO. 62 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1ED-501.dwg October 28, 2015 Peterson, Cory





GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT '12R-30L EDGE' (# 31)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
90	L-862	x 6 '	= 540'
20	L-850C	x 6 '	= 120'
44	SIGNS	x 6 '	= 264'
2	WINDCONES	x 6 '	= 12'
1	L-867 or L-868	x 6 '	= 6'
14	HANDHOLES	x2*12 '	= 336'
6	MANHOLES	x2*18 '	= 216'
	* SLACK CABLE PER SPECS		
	ITEM TOTAL LENGTH		= 1,494'
	+ PLAN CIRCUIT LENGTH		= 29,226'
	= TOTAL CIRCUIT LENGTH		= 30,720'

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#6	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 30,800'

N

200 0 200 400

SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM,
NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
10/28/16

MARK	DATE	DESCRIPTION

ISSUE:	---
PROJECT NO:	33-0019X
FILE NAME:	_33-00193-R1EC-601
DRAWN BY:	CMP
CHECKED BY:	ECL
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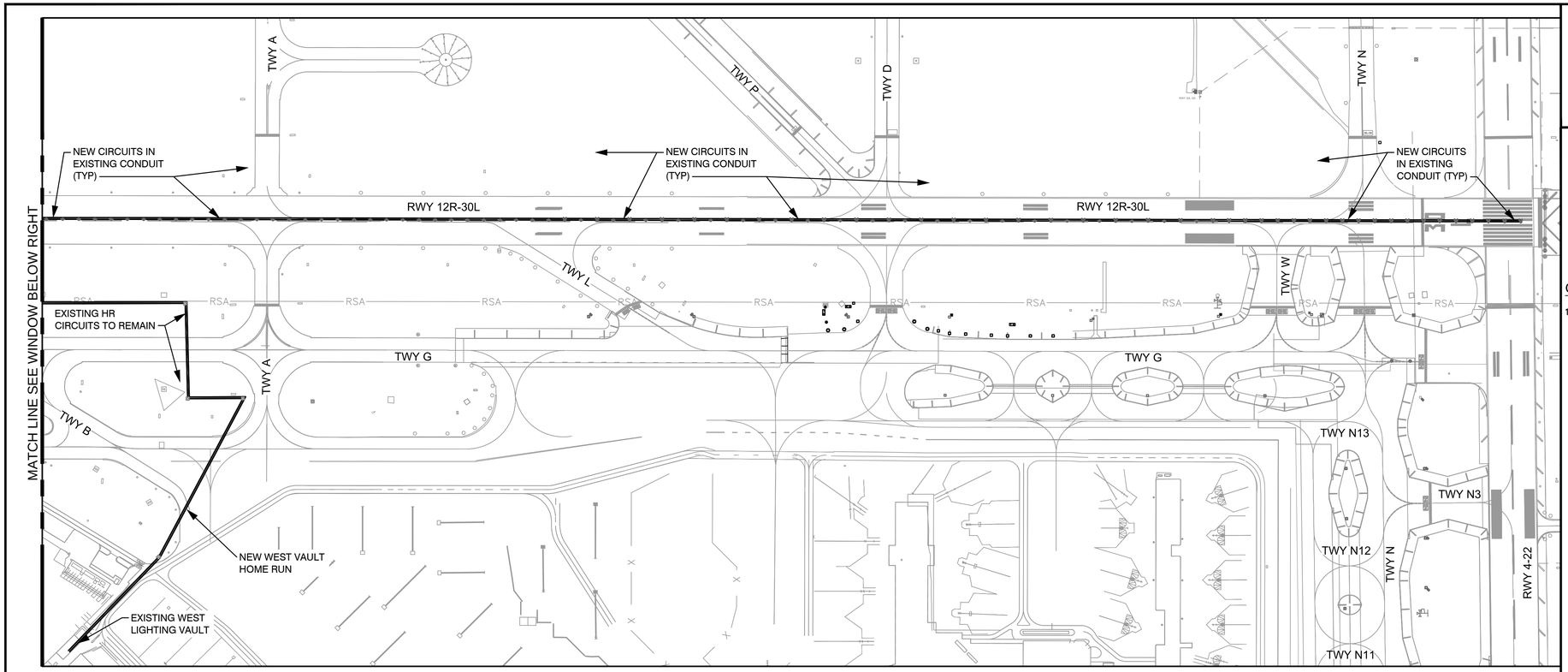
SHEET TITLE:

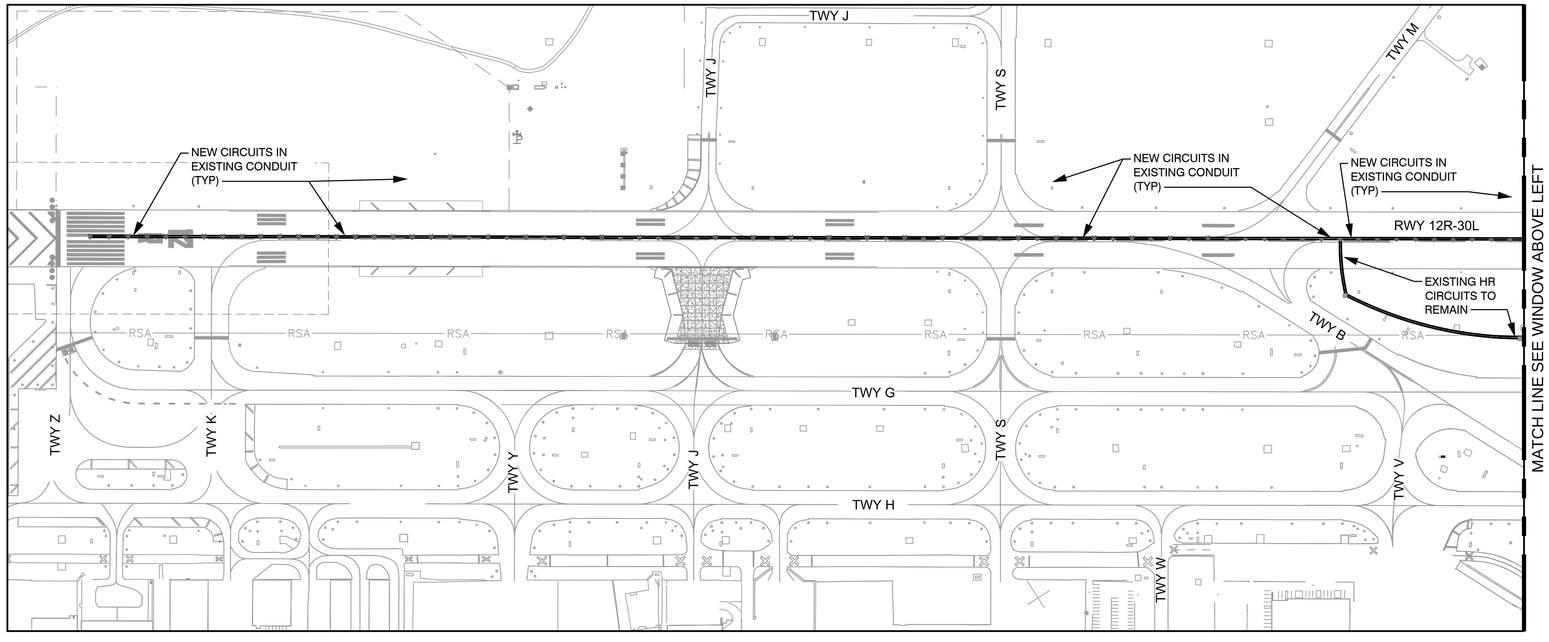
CIRCUIT MAP
12R-30L EDGE
(CKT 31)

E4.1

SHEET NO. 63 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory





GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT '12R C/L' (# 30)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
168	L-850A	x 6 '	= 1,008'
___		x 6 '	= ____'
___		x 6 '	= ____'
___		x 6 '	= ____'
___		x 2*6 '	= ____'
___		x2*12 '	= ____'
6	MANHOLES	x2*18 '	= 216'
* SLACK CABLE PER SPECS			
ITEM TOTAL LENGTH = 1,224'			
+ PLAN CIRCUIT LENGTH = 21,706'			
= TOTAL CIRCUIT LENGTH = 22,930'			

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#6	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 23,000

DATA TABLE - CIRCUIT '30L C/L' (# 32)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
168	L-850A	x 6 '	= 1,008'
___		x 6 '	= ____'
___		x 6 '	= ____'
___		x 6 '	= ____'
___		x 2*6 '	= ____'
___		x2*12 '	= ____'
6	MANHOLES	x2*18 '	= 216'
* SLACK CABLE PER SPECS			
ITEM TOTAL LENGTH = 1,224'			
+ PLAN CIRCUIT LENGTH = 21,706'			
= TOTAL CIRCUIT LENGTH = 22,930'			

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#6	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 23,000

200 0 200 400
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
2016

MARK	DATE	DESCRIPTION
ISSUE:		----

PROJECT NO:	33-0019X
FILE NAME:	_33-00193-R1EC-601
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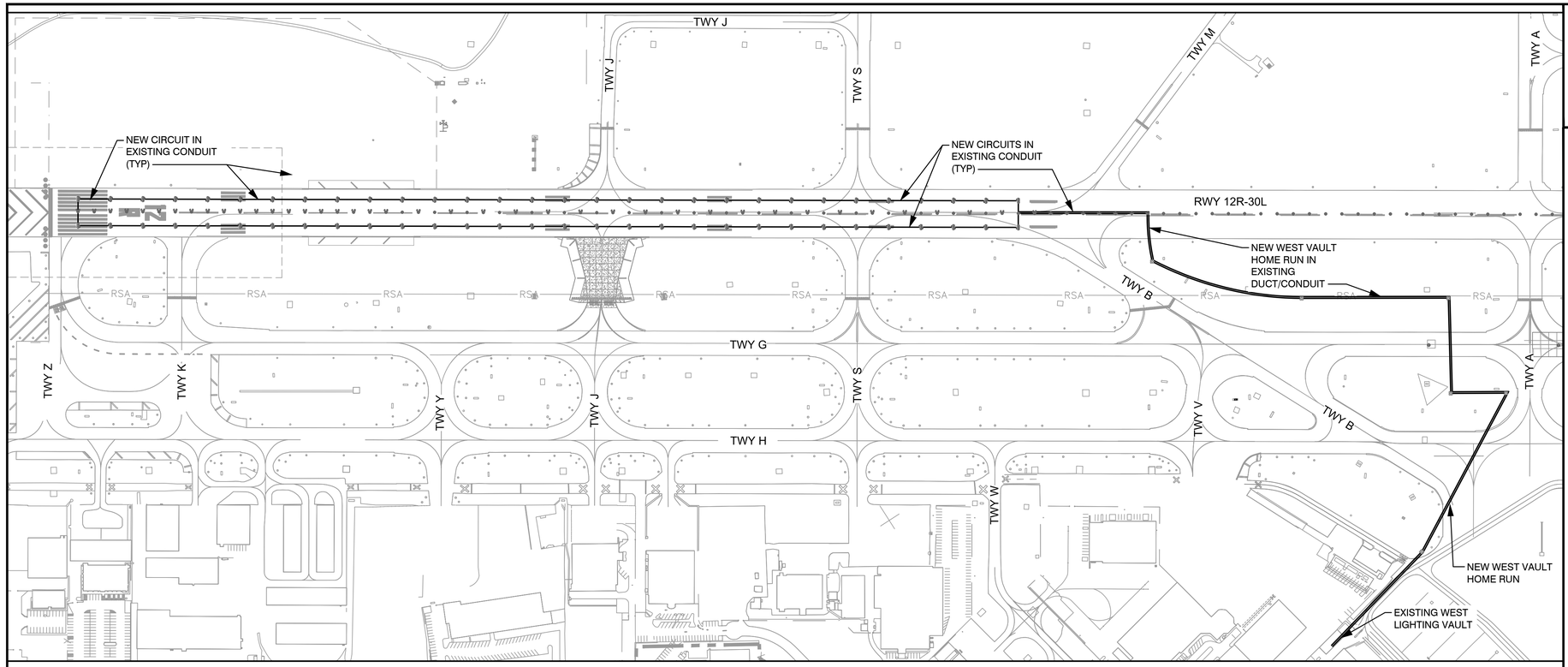
SHEET TITLE:

CIRCUIT MAP
12R & 30L CL
(CKTS 30 & 32)

E4.2
SHEET NO. 64 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory

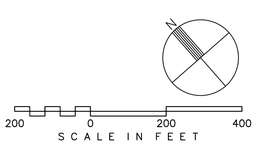


DATA TABLE - CIRCUIT '12R TDZ' (# 33)				
QUANTITY	ITEM DESC.	FT./ITEM *		TOTAL LENGTH
180	L-850B	x 6 '	=	1,080'
		x 6 '	=	'
		x 6 '	=	'
		x 6 '	=	'
9	L-867 or L-868	x 6 '	=	54'
		x2*12 '	=	'
6	MANHOLES	x2*18 '	=	216'
* SLACK CABLE PER SPECS				
ITEM TOTAL LENGTH = 1,350'				
+ PLAN CIRCUIT LENGTH = 12,932'				
= TOTAL CIRCUIT LENGTH = 14,282'				

CIRCUIT DEFINITION		
CABLE SIZE	CABLE TYPE	DESCRIPTION
#6	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108
TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 14,300'		

GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

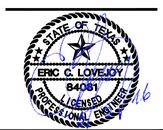


CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)



MARK	DATE	DESCRIPTION
ISSUE:		---
PROJECT NO:		33-0019X
FILE NAME:		_33-00193-R1EC-601
DRAWN BY:		CMP
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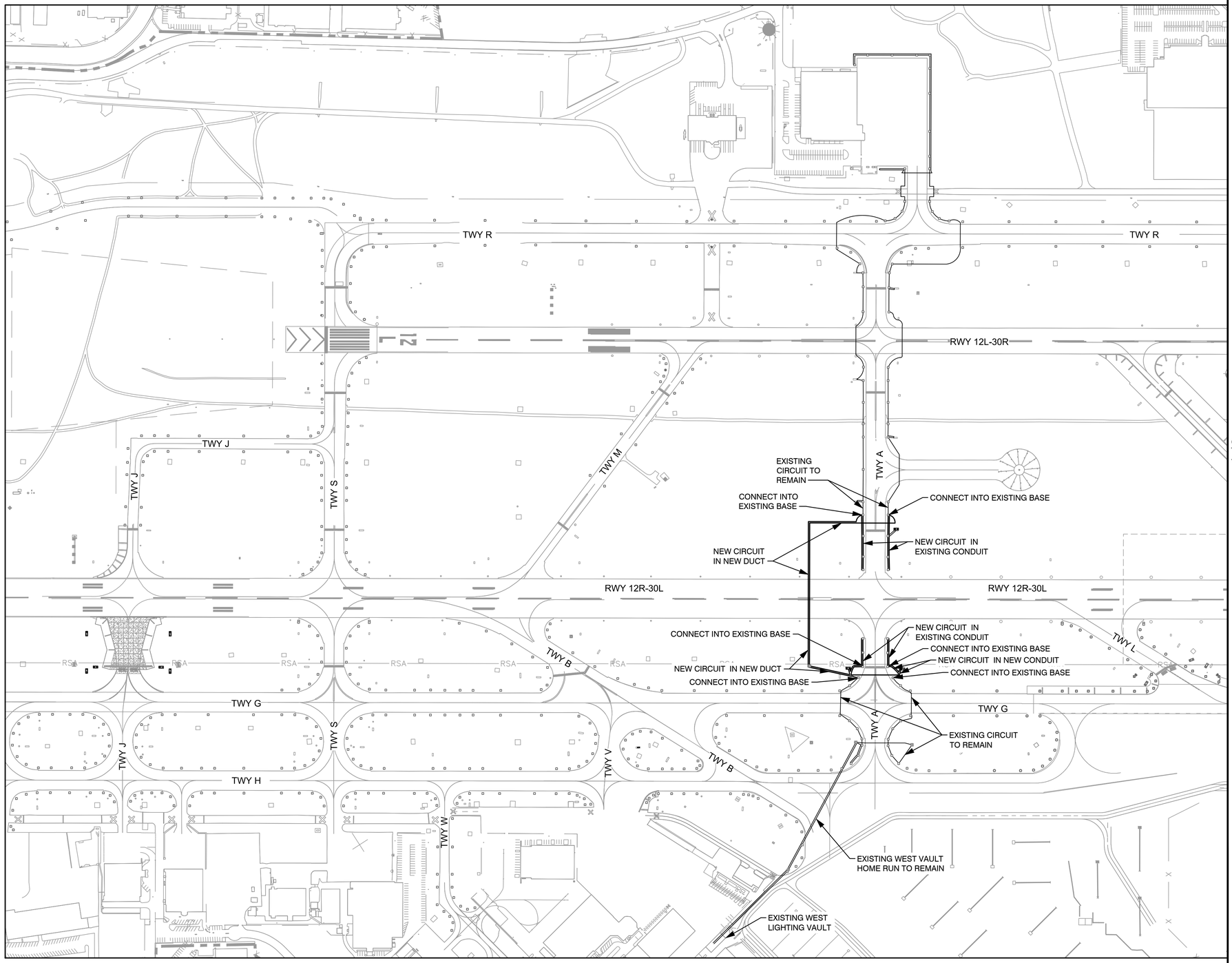
SHEET TITLE:

CIRCUIT MAP 12R TDZ (CKT 33)

E4.3

SHEET NO. 65 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory



GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT 'T/W ALPHA' (# 11)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
70	L-861T	x 6 '	= 420'
0	L-861T(L)	x 6 '	= 0'
6	SIGNS	x 6 '	= 36'
8	J-CANS	x 6 '	= 48'
		x 2*6 '	= '
6	HANDHOLES	x2*12 '	= 144'
3	MANHOLES	x2*18 '	= 108'

* SLACK CABLE PER SPECS

ITEM TOTAL LENGTH = 756'

+ PLAN CIRCUIT LENGTH = 12,554'

= TOTAL CIRCUIT LENGTH = 13,310'

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 4,100'

N

200 0 200 400

SCALE IN FEET

CITY OF
SAN ANTONIO
AVIATION
DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM,
NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
10/28/15

MARK	DATE	DESCRIPTION
ISSUE:		---
PROJECT NO:		33-0019X
FILE NAME:		_33-00193-R1EC-601
DRAWN BY:		CMP
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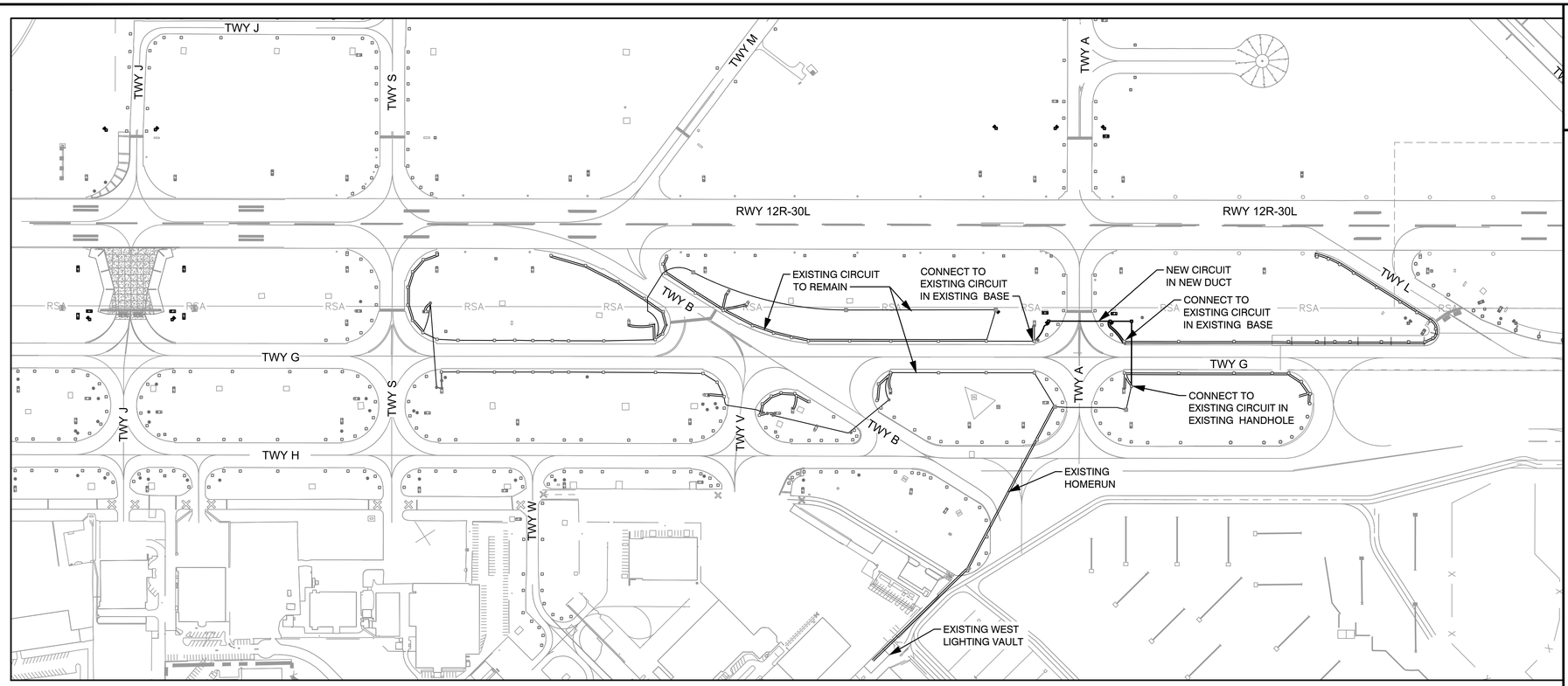
SHEET TITLE:

CIRCUIT MAP
TAXIWAY
ALPHA (CKT 11)

E4.4

SHEET NO. 66 OF 157

K:\REN_Aviation\119629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory



DATA TABLE - CIRCUIT 'T/W EDGE G-2' (# 5)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
94	L-861T	x 6 '	= 564'
0	L-861T(L)	x 6 '	= 0'
12	SIGNS	x 6 '	= 72'
		x 6 '	= '
9	L-867 OR L-868	x 6 '	= 54'
1	HANDHOLES	x2*12 '	= 24'
6	MANHOLES	x2*18 '	= 216'
	* SLACK CABLE PER SPECS		
		ITEM TOTAL LENGTH	= 930'
		+ PLAN CIRCUIT LENGTH	= 17,060'
		= TOTAL CIRCUIT LENGTH	= 17,990'

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 800'

GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

200 0 200 400
SCALE IN FEET

CITY OF
SAN ANTONIO
AVIATION
DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM,
NO. 928

RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
5/11/16

MARK	DATE	DESCRIPTION
ISSUE:		---
PROJECT NO:		33-0019X
FILE NAME:		_33-00193-R1EC-601
DRAWN BY:		CMP
CHECKED BY:		ECL
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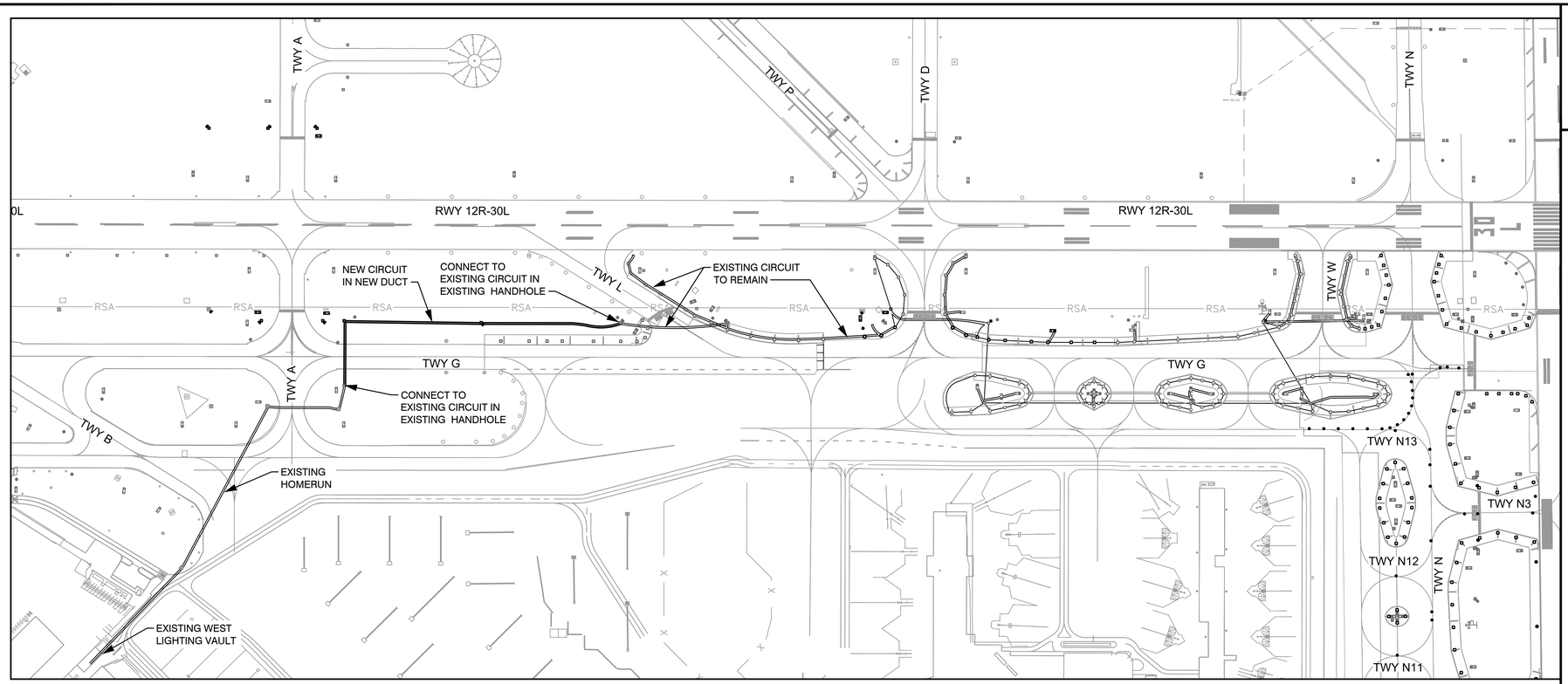
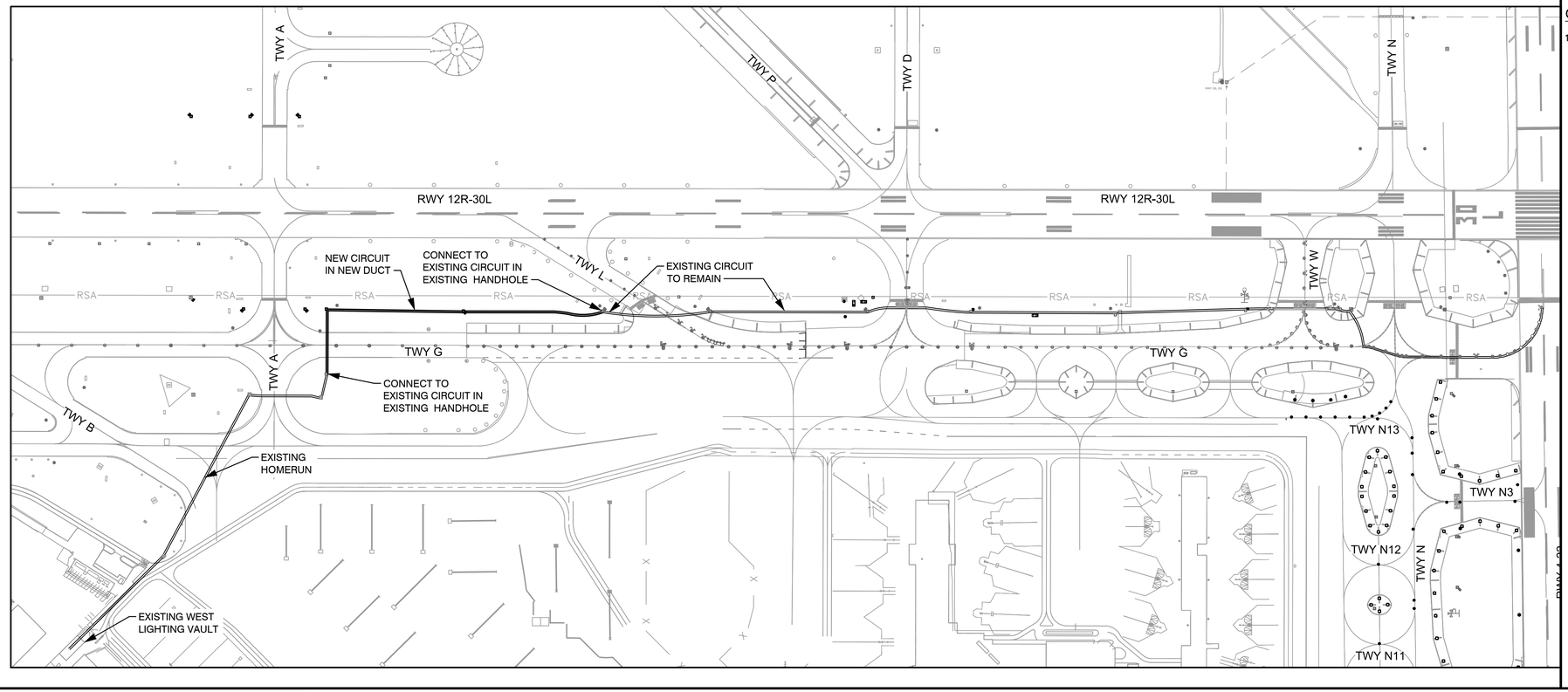
SHEET TITLE:

CIRCUIT MAP
TAXIWAY G2
(CKT 5)

E4.5
SHEET NO. 67 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory





DATA TABLE - CIRCUIT 'T/W EDGE G-3' (# 6)			
QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
12	L-861T	x 6 '	= 72'
116	L-861T(L)	x 6 '	= 696'
23	SIGNS	x 6 '	= 138'
		x 6 '	= '
		x 2*6 '	= '
12	HANDHOLES	x2*12 '	= 288'
3	MANHOLES	x2*18 '	= 108'
* SLACK CABLE PER SPECS			
		ITEM TOTAL LENGTH	= 1,302'
		+ PLAN CIRCUIT LENGTH	= 16,818'
		= TOTAL CIRCUIT LENGTH	= 18,120'

CIRCUIT DEFINITION		
CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108
TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID		2,200'

GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT 'T/W G3-CL' (# N/A)			
QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
22	L-852	x 6 '	= 132'
		x 6 '	= '
		x 6 '	= '
		x 6 '	= '
0	L-867 OR L-868	x 6 '	= 0'
10	HANDHOLES	x2*12 '	= 240'
3	MANHOLES	x2*18 '	= 108'
* SLACK CABLE PER SPECS			
		ITEM TOTAL LENGTH	= 480'
		+ PLAN CIRCUIT LENGTH	= 10,590'
		= TOTAL CIRCUIT LENGTH	= 11,070'

CIRCUIT DEFINITION		
CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108
TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID		2,200'

200 0 200 400
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
5/27/16

MARK	DATE	DESCRIPTION
ISSUE:		----
PROJECT NO:		33-0019X
FILE NAME:		33-00193-R1EC-601
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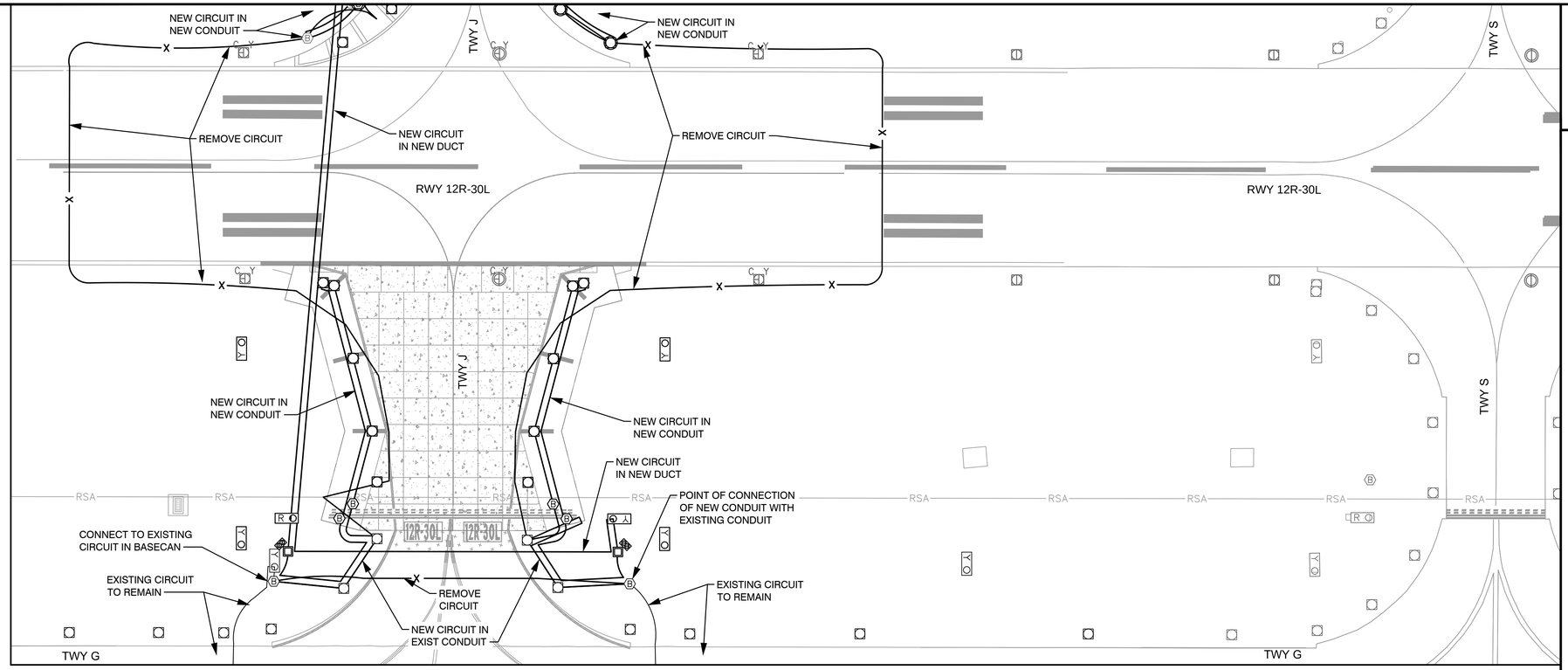
SHEET TITLE:

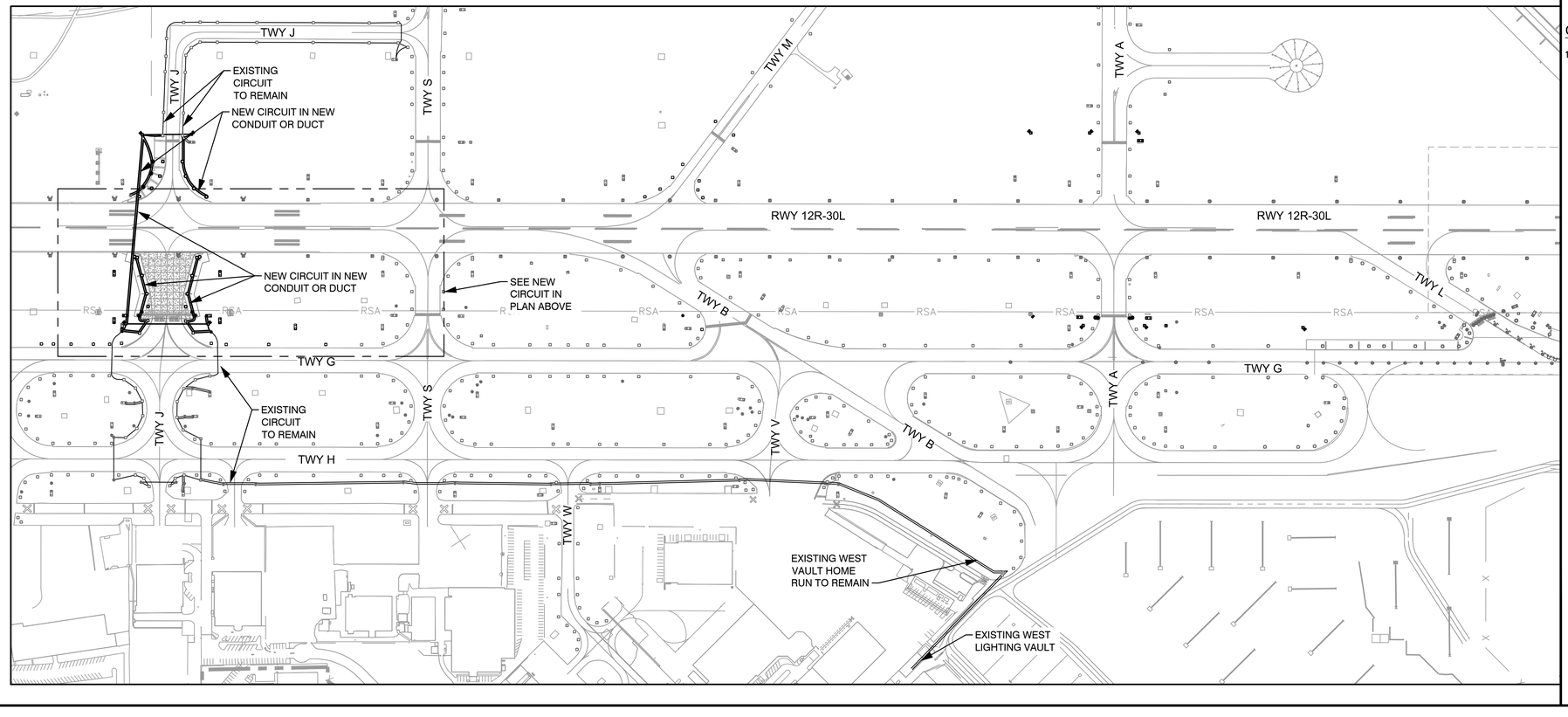
CIRCUIT MAPS
TAXIWAY G-3
(CKT 6) &
TAXIWAY G3-CL
(CKT N/A)

E4.6

SHEET NO. 68 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CAD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cary





50 0 50 100
SCALE IN FEET

GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT 'T/W EDGE J' (# 9)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
64	L-861T	x 6 '	= 384'
0	L-861T(L)	x 6 '	= 0'
4	SIGNS	x 6 '	= 24'
		x 6 '	= '
14	L-867	x 6 '	= 84'
4	HANDHOLES	x2*12 '	= 96'
1	MANHOLES	x2*18 '	= 36'
	* SLACK CABLE PER SPECS		
		ITEM TOTAL LENGTH	= 624'
		+ PLAN CIRCUIT LENGTH	= 13,792'
		= TOTAL CIRCUIT LENGTH	= 14,416'

CIRCUIT DEFINITION - CIRCUIT 'T/W EDGE J' (# 9)

CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 4,100'

200 0 200 400
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
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TEXAS REGISTERED FIRM, NO. 928

RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED
PROFESSIONAL ENGINEER
10/28/16

MARK	DATE	DESCRIPTION
ISSUE:		---

PROJECT NO:	33-0019X
FILE NAME:	33-00193-R1EC-601
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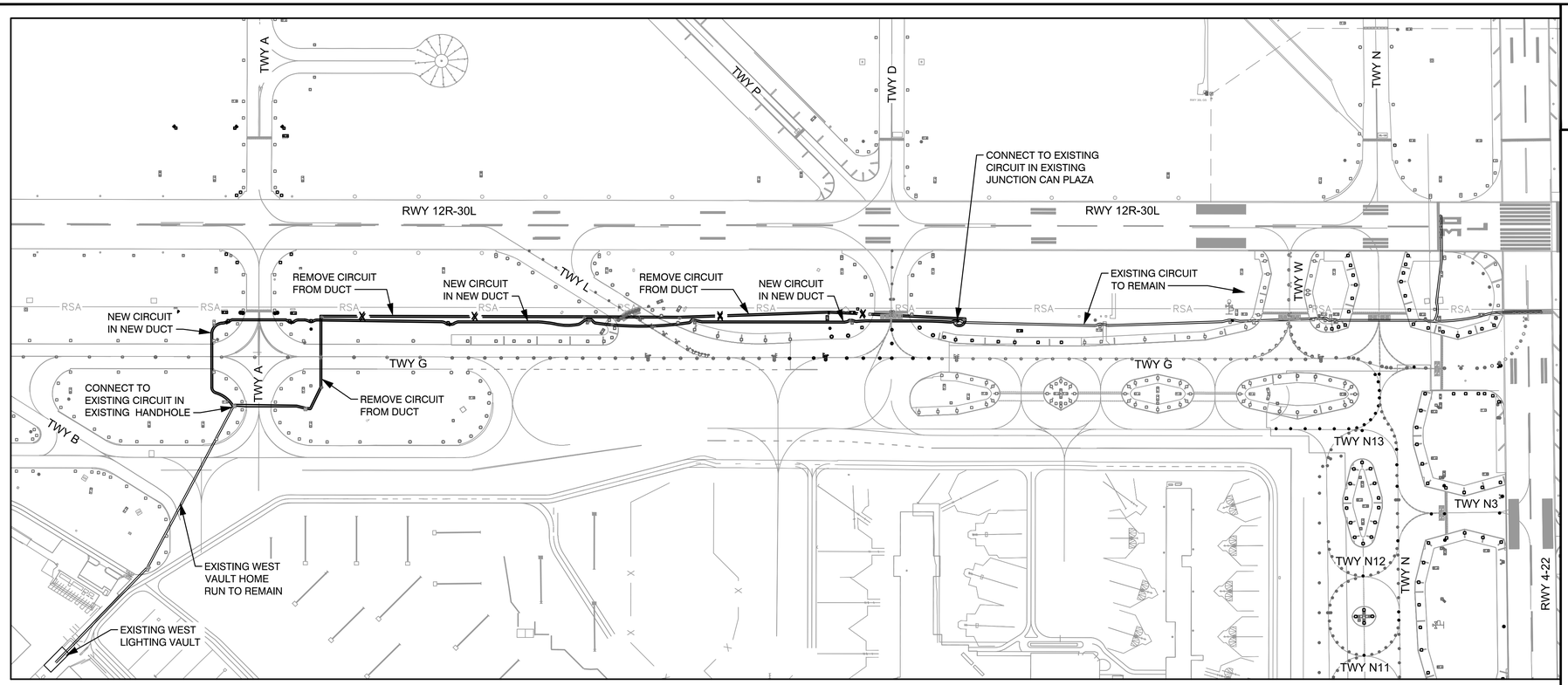
SHEET TITLE:

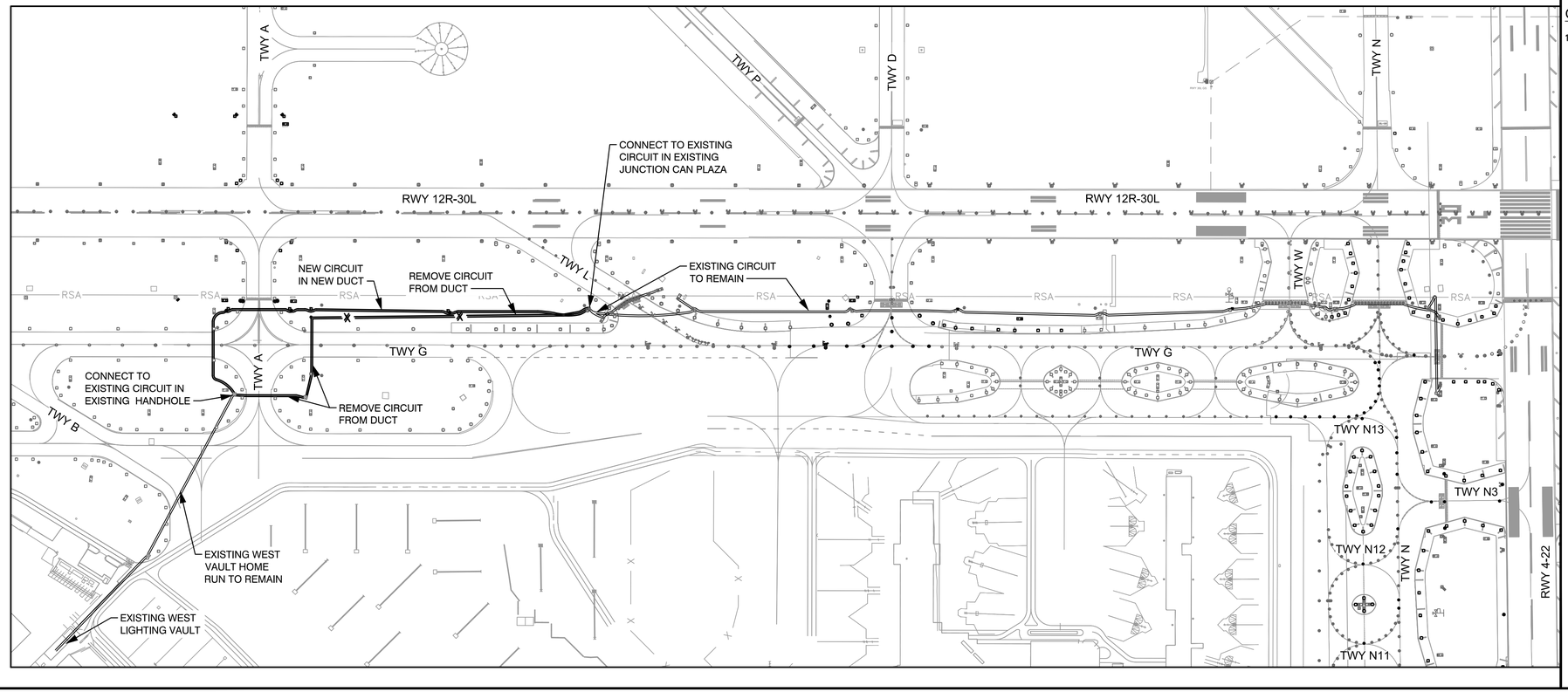
CIRCUIT MAP TAXIWAY JULIET (CKT 9)

E4.7

SHEET NO. 69 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory





DATA TABLE - CIRCUIT 'LAHSO' (# 31)			
QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
11	L-852	x 6 '	= 66'
		x 6 '	= '
		x 6 '	= '
		x 6 '	= '
13	JUNCTION CAN	x 6 '	= 78'
0	HANDHOLES	x2*12 '	= 0'
2	MANHOLES	x2*18 '	= 72'
* SLACK CABLE PER SPECS			
		ITEM TOTAL LENGTH	= 216'
		+ PLAN CIRCUIT LENGTH	= 11,214'
		= TOTAL CIRCUIT LENGTH	= 11,430'

CIRCUIT DEFINITION		
CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108
TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID		5,300'

GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT 'T/W LIMA RGL' (# 10)			
QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
2	L-804	x 6 '	= 12'
8	L-852	x 6 '	= 48'
3	SIGNS	x 6 '	= 18'
2	L-862S	x 6 '	= 12'
29	L-868	x 6 '	= 174'
13	JUNCTION CAN	x 6 '	= 78'
0	HANDHOLES	x2*12 '	= 0'
3	MANHOLES	x2*18 '	= 108'
* SLACK CABLE PER SPECS			
		ITEM TOTAL LENGTH	= 450'
		+ PLAN CIRCUIT LENGTH	= 11,215'
		= TOTAL CIRCUIT LENGTH	= 11,665'

CIRCUIT DEFINITION		
CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108
TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID		3,000'

200 0 200 400
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

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TEXAS REGISTERED FIRM, NO. 928

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STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER
5/27/16

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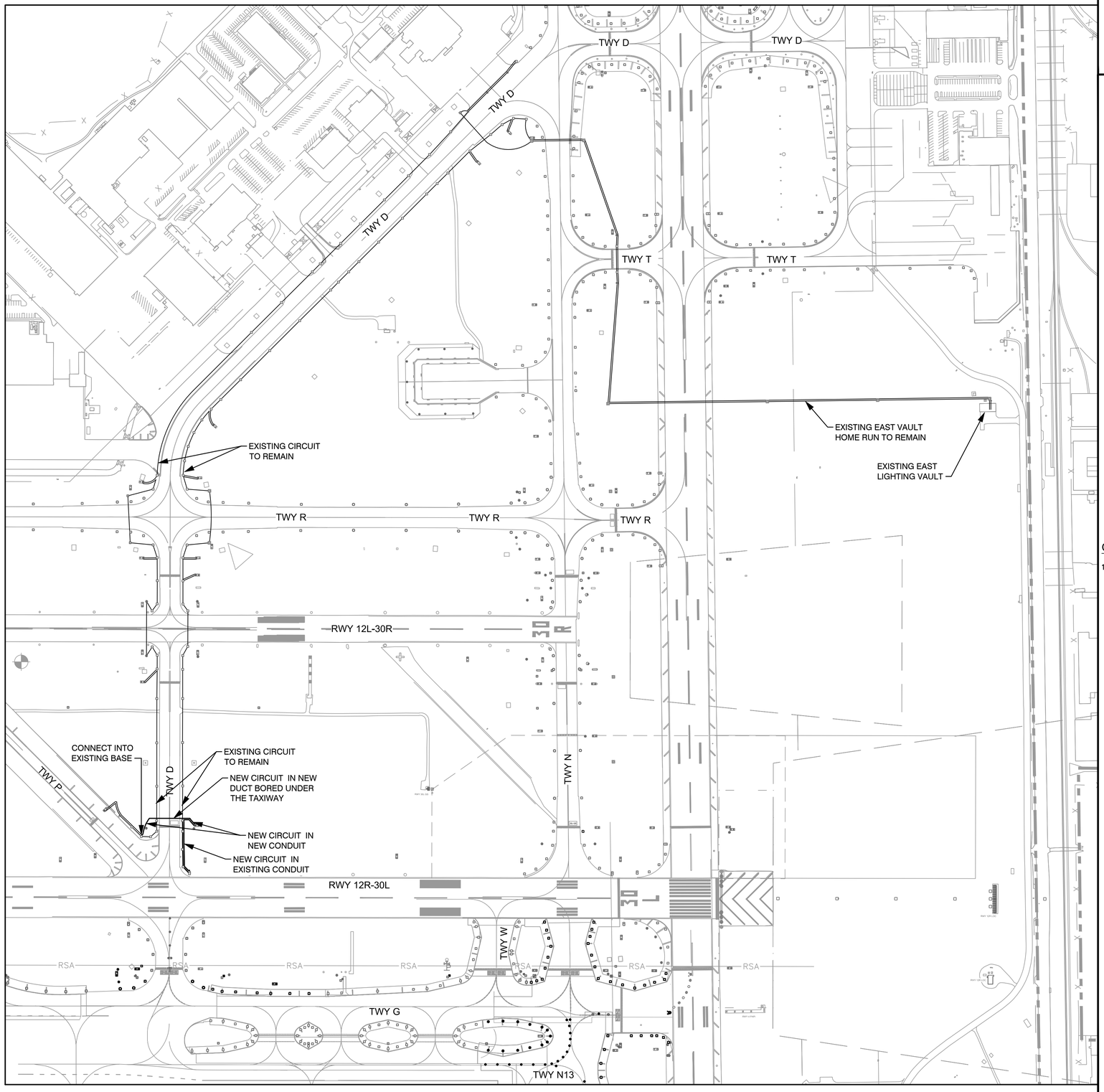
SHEET TITLE:

CIRCUIT MAPS LAHSO (CKT 31) & LIMA & RGL (CKT 10)

E4.8

SHEET NO. 70 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory



GENERAL NOTES

1. ALL WORK ON THIS DRAWING IS PART OF THE BASE BID.

DATA TABLE - CIRCUIT 'T/W DELTA D1' (# 56)

QUANTITY	ITEM DESC.	FT./ITEM *	TOTAL LENGTH
75	L-861T	x 6 '	= 450'
3	L-852	x 6 '	= 18'
10	SIGNS	x 6 '	= 60'
5	L-867	x 6 '	= 30'
		x 2*6 '	= '
8	HANDHOLES	x2*12 '	= 192'
4	MANHOLES	x2*18 '	= 144'
	* SLACK CABLE PER SPECS		
		ITEM TOTAL LENGTH =	894'
		+ PLAN CIRCUIT LENGTH =	15,096'
		= TOTAL CIRCUIT LENGTH =	15,990'

CIRCUIT DEFINITION

CABLE SIZE	CABLE TYPE	DESCRIPTION
#8	L-824 5kV TYPE C	AIRFIELD LIGHTING PER L-108

TOTAL CIRCUIT LENGTH INSTALLED IN THE BASE BID 900'

200 0 200 400
SCALE IN FEET

CITY OF
SAN ANTONIO
AVIATION
DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

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STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED
PROFESSIONAL ENGINEER
5/17/16

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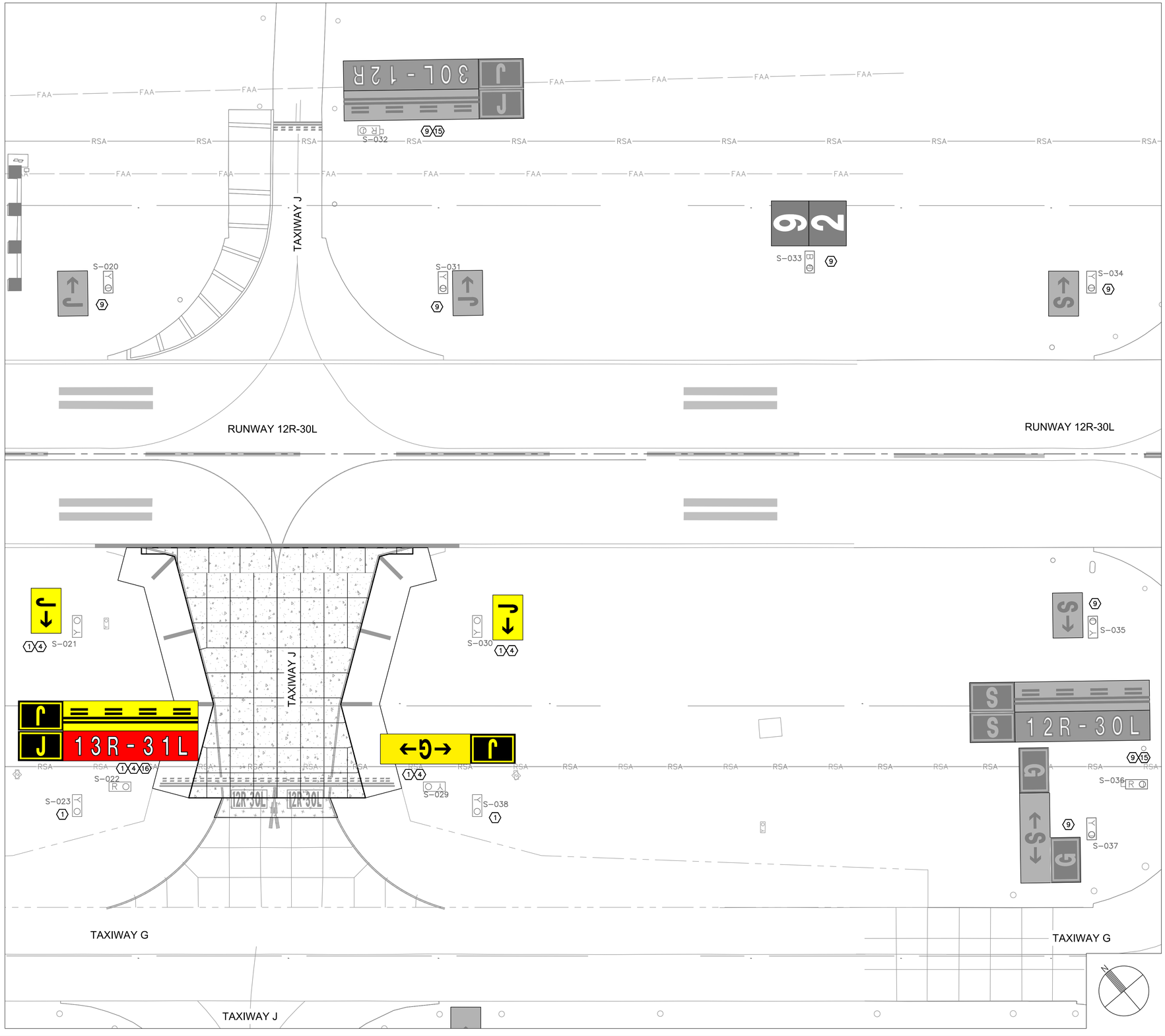
SHEET TITLE:

CIRCUIT MAP
TAXIWAY
DELTA D1 (CKT
56)

E4.9
SHEET NO. 71 OF 157

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 4_33-00193-R1EC-601.dwg October 28, 2015 Peterson, Cory

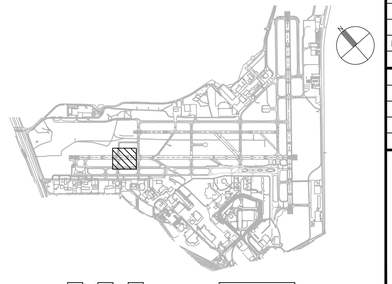


SIGN SHEET NOTES

1. NEW CONCRETE FOUNDATION INSTALLED IN THIS PHASE. SEE DETAILS ON E3.1. SEE E2 SERIES DRAWINGS FOR LOCATIONS.
4. SIGN LEGEND FOR NEW SIGN INSTALLED IN THIS PHASE ON CONCRETE FOUNDATION OR BASE ASSEMBLY.
9. EXISTING SIGN, BASE AND LEGEND TO REMAIN IN THIS PHASE.
15. NEW SIGN PANELS FOR RUNWAY MAGNETIC DECLINATION CHANGE OF EXISTING SIGNS TO BE FURNISHED AND INSTALLED BY THE AIRPORT.
16. PANELS FOR NEW SIGNS TO SHOW THE NEW MAGNETIC DECLINATION CHANGE AS SHOWN.

GENERAL NOTES

1. SEE E1 SERIES DRAWINGS FOR ELECTRICAL SYSTEM LAYOUT PLANS.
2. SEE E2 SERIES DRAWINGS FOR NEW AIRFIELD SIGN LOCATIONS.
3. NEW SIGN MESSAGES ARE SHOWN IN COLORS ON THE ORIGINAL PDF. EXISTING SIGN MESSAGES ARE SHOWN IN GRAY TONES.



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SAN ANTONIO AIRPORT SYSTEM

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RUNWAY 12R-30L ELECTRICAL IMPROVEMENTS AND TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 4)

STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED
PROFESSIONAL ENGINEER
5/27/16

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SHEET TITLE:

AIRFIELD SIGN PLAN - BASE BID

E5.1

SHEET NO. 72 OF 157

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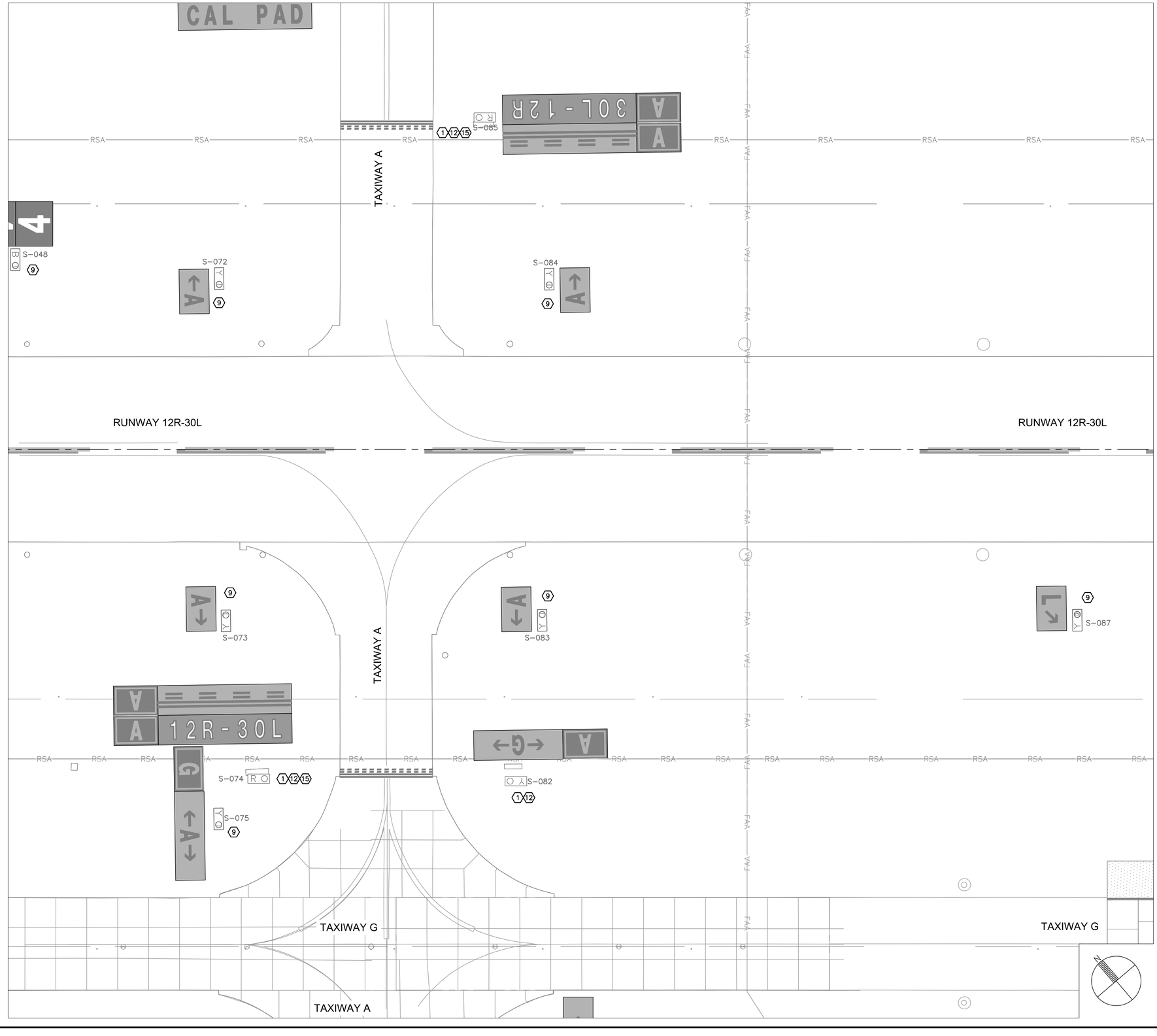
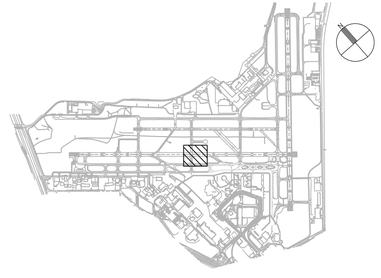


SIGN SHEET NOTES

1. NEW CONCRETE FOUNDATION INSTALLED IN THIS PHASE. SEE DETAILS ON E3.1. SEE E2 SERIES DRAWINGS FOR LOCATIONS.
9. EXISTING SIGN, BASE AND LEGEND TO REMAIN IN THIS PHASE.
12. EXISTING SIGN TO BE REINSTALLED.
15. NEW SIGN PANELS FOR RUNWAY MAGNETIC DECLINATION CHANGE OF EXISTING SIGNS TO BE FURNISHED AND INSTALLED BY THE AIRPORT.

GENERAL NOTES

1. SEE E1 SERIES DRAWINGS FOR ELECTRICAL SYSTEM LAYOUT PLANS.
2. SEE E2 SERIES DRAWINGS FOR NEW AIRFIELD SIGN LOCATIONS.
3. NEW SIGN MESSAGES ARE SHOWN IN COLORS ON THE ORIGINAL PDF. EXISTING SIGN MESSAGES ARE SHOWN IN GRAY TONES.



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SAN ANTONIO AIRPORT SYSTEM

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SAN ANTONIO, TEXAS 78216
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AIRFIELD SIGN PLAN - BASE BID

E5.2

SHEET NO. 73 OF 157

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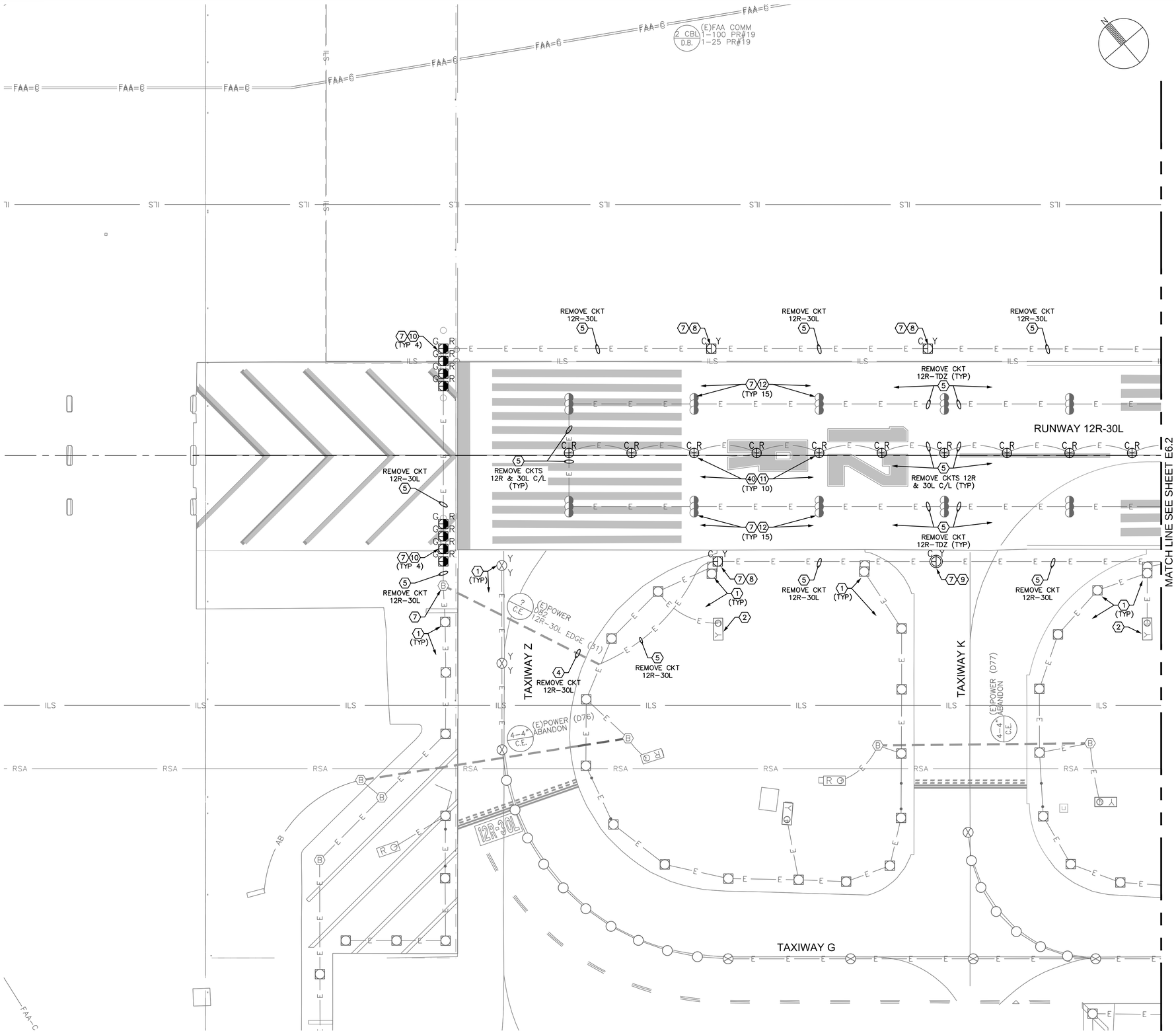
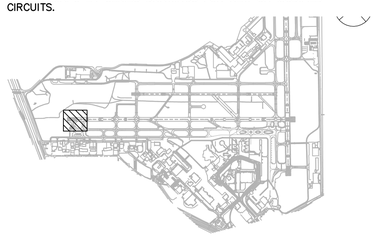


ELECTRICAL DEMOLITION NOTES

1. EXISTING LIGHT, PROTECT IN PLACE.
2. EXISTING SIGN OR SIGN FOUNDATION, PROTECT IN PLACE.
4. EXISTING DUCT, PROTECT IN PLACE. REMOVE CONDUCTOR(S) AS NOTED.
5. EXISTING CONDUIT, PROTECT IN PLACE. REMOVE CONDUCTOR(S) AS NOTED.
7. EXISTING BASECAN, PROTECT IN PLACE.
8. SALVAGE EXISTING ELEVATED RUNWAY EDGE LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER. SEE E1 SERIES DRAWINGS FOR REINSTALLATION OF EDGE LIGHT.
9. SALVAGE EXISTING IN-PAVEMENT RUNWAY EDGE LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER. SEE E1 SERIES DRAWINGS FOR REINSTALLATION OF EDGE LIGHT.
10. SALVAGE EXISTING RUNWAY THRESHOLD\END LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER. SEE E1 SERIES DRAWINGS FOR REINSTALLATION OF THRESHOLD/END LIGHT.
11. SALVAGE EXISTING IN-PAVEMENT RUNWAY CENTERLINE LIGHT TO OWNER AND REMOVE EXISTING ISOLATION TRANSFORMER.
12. SALVAGE EXISTING TOUCHDOWN ZONE LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER.
40. MODIFY BASECAN PER BASECAN, FOUNDATIONS & CONDUITS NOTE 70 ON E1.XX SERIES DRAWINGS.

GENERAL NOTES

1. SEE E0 SERIES DRAWINGS FOR TEMPORARY CIRCUITS AND FIXTURES.
2. SEE DRAWING E1.1 FOR ELECTRICAL LAYOUT PLAN.
3. CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR MODIFIED CIRCUITS.



40 0 40 80
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SAN ANTONIO AIRPORT SYSTEM

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STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED
PROFESSIONAL ENGINEER
5/27/16

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ELECTRICAL DEMOLITION PLAN - BASE BID

E6.1

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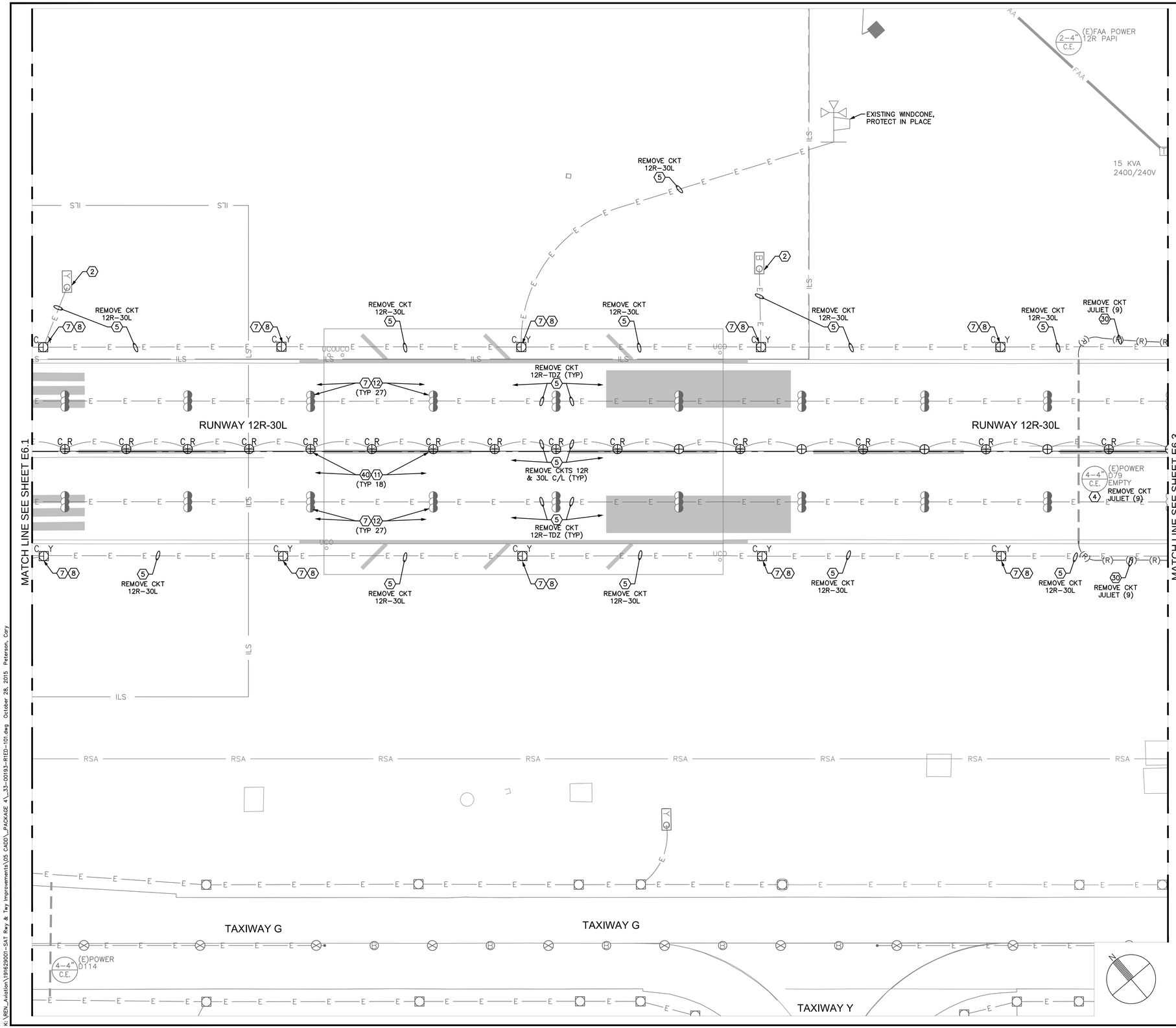
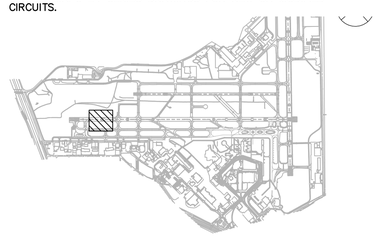


ELECTRICAL DEMOLITION NOTES

- (2) EXISTING SIGN OR SIGN FOUNDATION, PROTECT IN PLACE.
- (4) EXISTING DUCT, PROTECT IN PLACE. REMOVE CONDUCTOR(S) AS NOTED.
- (5) EXISTING CONDUIT, PROTECT IN PLACE. REMOVE CONDUCTOR(S) AS NOTED.
- (7) EXISTING BASECAN, PROTECT IN PLACE.
- (8) SALVAGE EXISTING ELEVATED RUNWAY EDGE LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER. SEE E1 SERIES DRAWINGS FOR REINSTALLATION OF EDGE LIGHT.
- (11) SALVAGE EXISTING IN-PAVEMENT RUNWAY CENTERLINE LIGHT TO OWNER AND REMOVE EXISTING ISOLATION TRANSFORMER.
- (12) SALVAGE EXISTING TOUCHDOWN ZONE LIGHT FOR REINSTALLATION. REMOVE EXISTING ISOLATION TRANSFORMER.
- (30) REMOVE EXISTING CONDUIT. REMOVE CONDUCTORS BACK TO EXISTING STRUCTURE TO REMAIN OR AS NOTED.
- (40) MODIFY BASECAN PER BASECAN, FOUNDATIONS & CONDUITS NOTE 70 ON E1.XX SERIES DRAWINGS.

GENERAL NOTES

1. SEE E0 SERIES DRAWINGS FOR TEMPORARY CIRCUITS AND FIXTURES.
2. SEE DRAWING E1.2 FOR ELECTRICAL LAYOUT PLAN.
3. CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR MODIFIED CIRCUITS.



40 0 40 80
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STATE OF TEXAS
ERIC C. LOVEJOY
84061
LICENSED
PROFESSIONAL ENGINEER
5/17/16

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ELECTRICAL DEMOLITION PLAN - BASE BID

E6.2

SHEET NO. 75 OF 157

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