SAN ANTONIO INTERNATIONAL AIRPORT

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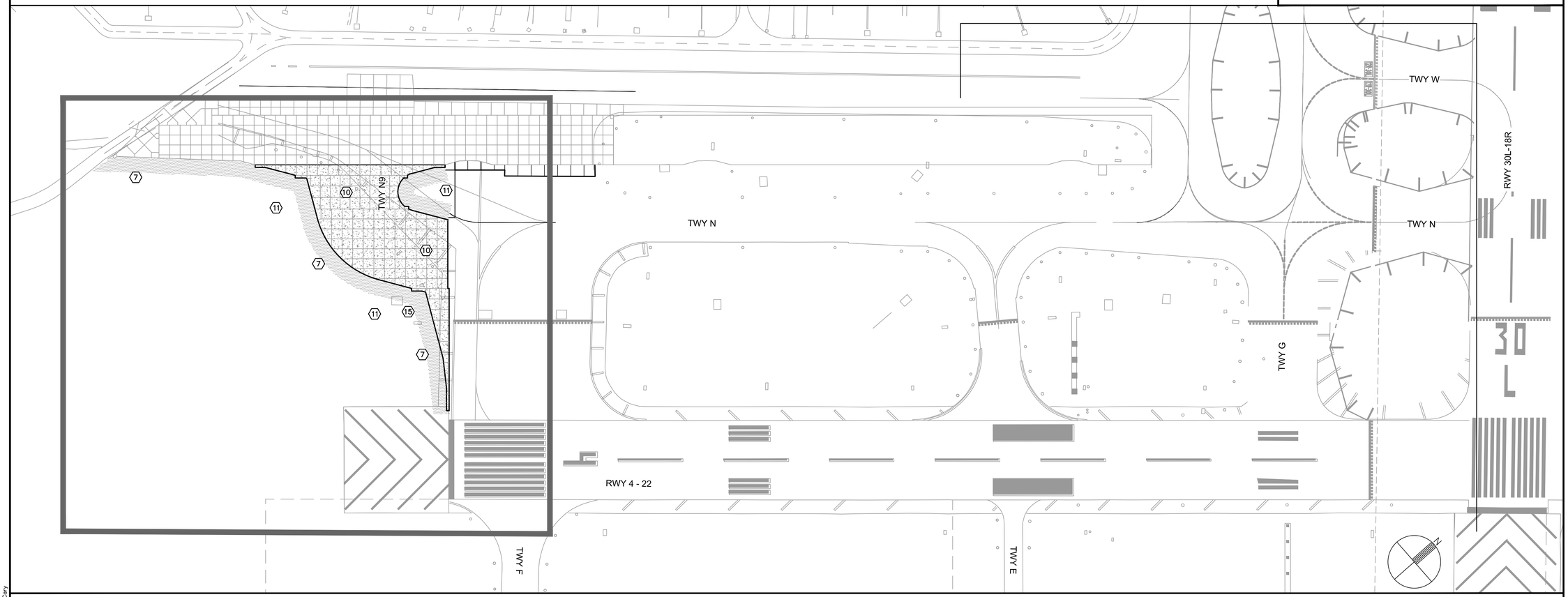

ELECTRICAL SCOPE OF WORK - BASE BID

(7) FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON NEW L-867 BASE CANS WITH NEW CONDUIT AND CABLES ON TAXIWAY 'N' SHOULDER RECONSTRUCTION AREAS.

(10) FURNISH AND INSTALL NEW L-868 BASE CANS WITH NEW CONDUIT FOR FUTURE TAXIWAY CENTERLINE LIGHTS IN NEW PCC PAVEMENT IN TAXIWAY 'G' AND TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREAS.

(11) FURNISH AND INSTALL NEW SIGNS WITH NEW CONCRETE FOUNDATIONS.

(15) FURNISH AND INSTALL NEW PRECASE CONCRETE HANDHOLE AND ADJACENT JUNCTION CAN PLAZA.

TERMINAL AREA TAXIWAY
IMPROVEMENTS -
(PACKAGE 3)

PROJECT NOS. 33-00178 AND 33-00193
FAA AIP 3-48-0192-XX-2013

CITY OF
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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

TERMINAL AREA TAXIWAY
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(PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

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ELECTRICAL
SCOPE OF WORK -
BASE BID

E0.1

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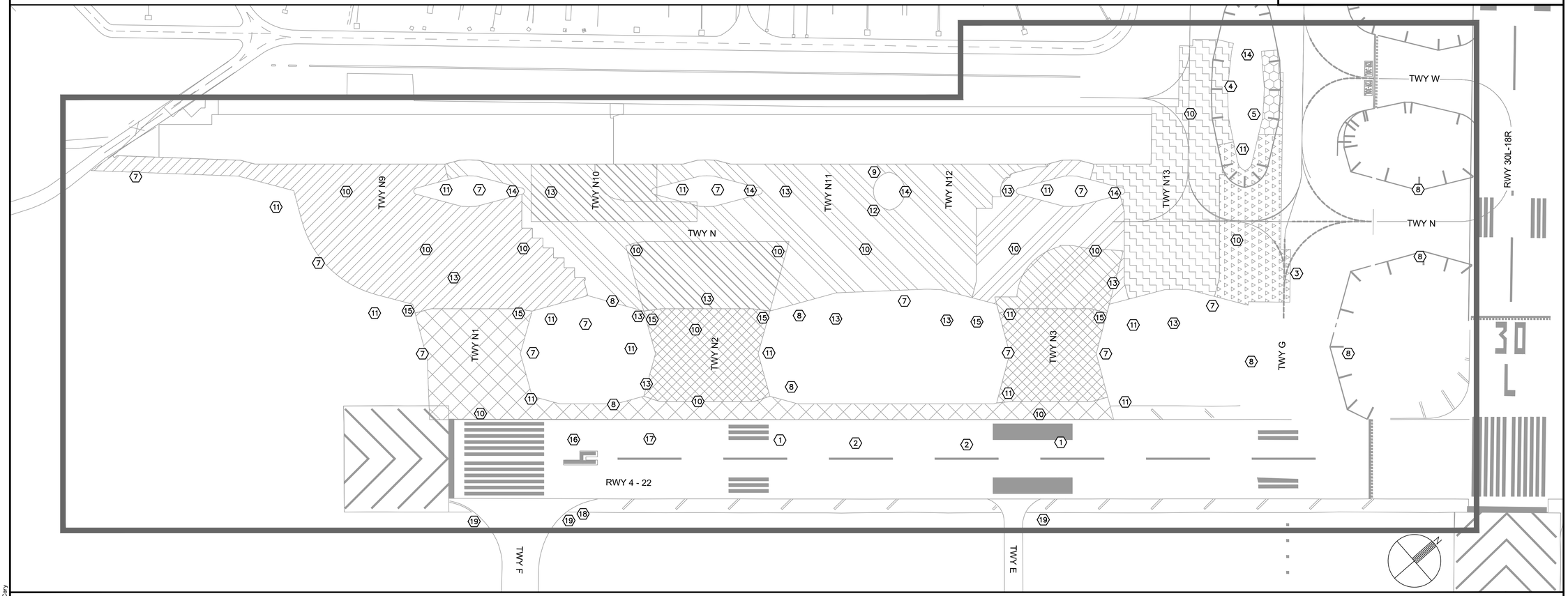

LEGEND

- ALTERNATE 1 PHASE 1
- ALTERNATE 1 PHASE 2
- ALTERNATE 1 PHASE 3
- ALTERNATE 1 PHASE 4
- ALTERNATE 1 PHASE 5
- ALTERNATE 1 PHASE 6
- ALTERNATE 1 PHASE 7
- ALTERNATE 1 PHASE 8
- ALTERNATE 1 PHASE 9

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

PROJECT NOS. 33-00178 AND 33-00193
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ELECTRICAL SCOPE OF WORK - ALTERNATE 1

1. FURNISH AND INSTALL NEW IN-PAVEMENT RUNWAY EDGE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
2. SALVAGE AND REINSTALL EXISTING ELEVATED RUNWAY EDGE LIGHT ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' SHOULDER RECONSTRUCTION AREA.
3. SALVAGE AND REINSTALL EXISTING IN-PAVEMENT TAXIWAY CENTERLINE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'G' RECONSTRUCTION AREAS.
4. SALVAGE AND REINSTALL EXISTING ELEVATED TAXIWAY EDGE LIGHTS ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'G' RECONSTRUCTION AREAS.
5. SALVAGE AND REINSTALL EXISTING SIGN WITH NEW CONCRETE FOUNDATION.
7. FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON NEW L-867 BASE CANS WITH NEW CONDUIT AND CABLES ON TAXIWAY 'N' SHOULDER RECONSTRUCTION AREAS.
8. FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON EXISTING L-867 BASE CANS WITH NEW CABLES ON TAXIWAY 'N' AND TAXIWAY 'G'.
9. FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON NEW L-868 BASE CANS WITH NEW CABLES IN NO-TAXI ISLAND.
10. FURNISH AND INSTALL NEW L-868 BASE CANS WITH NEW CONDUIT FOR FUTURE TAXIWAY CENTERLINE LIGHTS IN NEW PCC PAVEMENT IN TAXIWAY 'G' AND TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREAS.
11. FURNISH AND INSTALL NEW SIGNS WITH NEW CONCRETE FOUNDATIONS.
12. FURNISH AND INSTALL NEW SIZE 2 SIGNS WITH NEW CONCRETE FOUNDATIONS IN NO-TAXI ISLAND.
13. FURNISH AND INSTALL NEW DUCT BANKS IN TAXIWAY 'N' PAVEMENT AREAS.
14. FURNISH AND INSTALL NEW PRECAST CONCRETE HANDHOLE.
15. FURNISH AND INSTALL NEW PRECASE CONCRETE HANDHOLE AND ADJACENT JUNCTION CAN PLAZA.
16. FURNISH AND INSTALL NEW ELEVATED RUNWAY EDGE LIGHT ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
17. FURNISH AND INSTALL NEW IN-PAVEMENT RUNWAY EDGE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
18. FURNISH AND INSTALL NEW L-867 BASE CAN AT END OF DUCT CROSSING AND NEW CONDUIT TO CONNECT TO EXISTING CIRCUIT AT TAXIWAY F.
19. CONNECT TO EXISTING TAXIWAY CIRCUIT ON SOUTHEAST SIDE OF RUNWAY 4-22 AND MODIFY CIRCUIT PER REVISED CIRCUIT MAP.

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LICENSED
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ELECTRICAL SCOPE OF WORK - ALTERNATE 1

E0.1A

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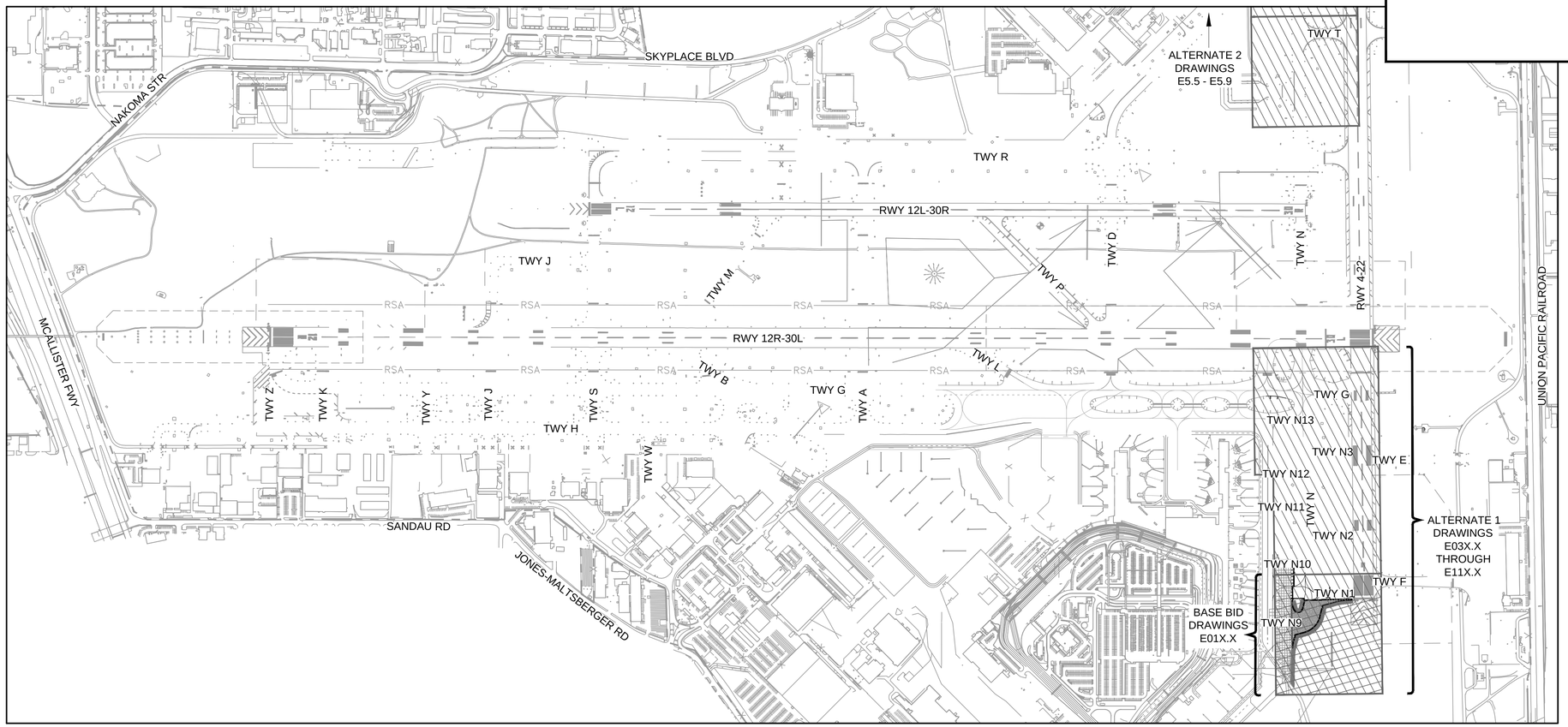

ABBREVIATION LIST

AB (AB)	ABANDONED CONDUIT OR DUCT (OR ABAND.)
ALV	AIRFIELD LIGHTING VAULT
ATCT	AIR TRAFFIC CONTROL TOWER
BC	BARE COPPER CONDUCTOR
BL	BLANK
C, CNDT	CONDUIT
C.E.	CONCRETE ENCASED (PER P-610)
CKT	CIRCUIT
C/L, ℄	CENTERLINE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CONC	CONCRETE, P-610 FOR ELECTRICAL FACILITIES U.O.N.
C.M.	CONSTRUCTION MANAGER
COVER	BLANK COVER FOR L-867 OR L-868 BASE
CTPB	CEMENT TREATED PERMEABLE BASE
DB. DEB	DIRECT EARTH BURIAL, PER P-152 OR P-153
(E)	EXISTING EQUIPMENT OR FACILITY
EC	EMPTY CONDUIT
FAA	FEDERAL AVIATION ADMINISTRATION
F.O.C.	FIBER OPTIC CABLE
ISO	ISOLATION (TRANSFORMER)
ISO-XFMR	ISOLATION TRANSFORMER
LT	LEFT; USUALLY OFFSET OF SURVEY DATUM
MFGR	MANUFACTURER
(N)	NEW EQUIPMENT OR FACILITY
OFFSET	DISTANCE FROM SURVEY DATUM BASE LINE (LT OR RT)
PB	PULL BOX (L-115)
PCC(P)	PORTLAND CEMENT CONCRETE (PAVEMENT PER P-501)
PMB	PROCESS MISCELLANEOUS BASE (SEE CIVIL DRAWINGS)
P.O.C.	POINT OF CONNECTION (WITH EXISTING CONDUIT OR DUCT)
PR	PROPOSED (NEW) EQUIPMENT OR FACILITY OR PAIR (E.G 12-PR)
PVC	POLYVINYLCHLORIDE: CONDUIT MATERIAL
R.E.	RESIDENT ENGINEER
(R)	REMOVE EQUIPMENT OR FACILITY
(R/R)	REMOVE AND RELOCATE EQUIPMENT OR FACILITY
(REL)	RELOCATED EQUIPMENT OR FACILITY (SEE R/R)
(RL)	RELABEL CIRCUIT OR EQUIPMENT
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
RT	RIGHT; USUALLY OFFSET OF SURVEY DATUM
R/W, RWY	RUNWAY
STA:	STATION, DISTANCE ALONG SURVEY DATUM BASE LINE
STR	STRAND; SINGLE ELEMENT OF CABLE ASSEMBLY
(T), TEMP.	TEMPORARY EQUIPMENT OR FACILITY
TDZ	TOUCHDOWN ZONE
TSA	TAXIWAY SAFETY AREA
T/W, TWY	TAXIWAY
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
WWF	WOVEN WIRE FABRIC STEEL REINFORCEMENT IN P-610
XFMR	TRANSFORMER

SYMBOL LIST

- 56 — E — E — NEW 2" PVC CONDUIT, CONCRETE ENCASED (UNLESS OTHERWISE NOTED) WITH CIRCUIT FILL INFORMATION. SEE E4 SERIES SHEETS FOR CIRCUIT INFORMATION.
- 4-4" D.B. (N)POWER (N) 56 — NEW DUCT (DIRECT BURIED) WITH DETAIL DESIGNATION AND CIRCUIT FILL INFORMATION. SEE SHEET E3.6 FOR DUCT SECTIONS.
- 4-4" C.E. (E)POWER D111 — EXISTING DUCT SECTIONS (CONCRETE ENCASED) AND CIRCUIT FILLS. U.O.N. EXISTING DUCT HAS EXISTING CIRCUITS IN IT.
- E — E — EXISTING CONDUIT.
- CONDUIT TO BE REMOVED
- DUCT TO BE REMOVED
- FAA — FAA CONDUIT OR DUCT
- NEW CONCRETE HANDHOLE AND ADJOINING JUNCTION CAN PLAZA
- EXISTING CONCRETE HANDHOLE
- L-850C IN-PAVEMENT BI-DIRECTIONAL RUNWAY EDGE LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
- L-862 ELEVATED BI-DIRECTIONAL RUNWAY EDGE LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
- L-862E ELEVATED BI-DIRECTIONAL RUNWAY THRESHOLD/END LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
- L-861T ELEVATED OMNI-DIRECTIONAL MEDIUM INTENSITY T/W EDGE LIGHT, BLUE GLOBE UNLESS OTHERWISE NOTED
- L-852A IN-PAVEMENT BI-DIRECTIONAL TAXIWAY CENTERLINE LIGHT (NARROW BEAM) WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
- L-852J IN-PAVEMENT BI-DIRECTIONAL TAXIWAY CENTERLINE LIGHT (TOED WIDE BEAM) WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
- BLANK LOAD RATED COVER ON L-868 BASE
- BLANK COVER ON L-867B LIGHT BASE OR L-867D BASE JUNCTION CAN
- AIRFIELD GUIDANCE SIGN
- WINDCONE
- LINKED LOW LEVEL BARRICADES, SEE CIVIL DRAWINGS
- LOW LEVEL BARRICADES, SEE CIVIL DRAWINGS

GENERAL NOTES

1. REFER TO DRAWING C1.5 FOR CONFINED SPACES INFORMATION.
2. REFER TO C2 SERIES DRAWINGS FOR PHASING NOTES.
3. CONTRACTOR SHALL MAINTAIN ON HAND SUFFICIENT MATERIAL/EQUIPMENT REQUIRED TO PROVIDE TEMPORARY LIGHTING AND CIRCUIT EXTENSIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, FIXTURES, TRANSFORMERS, BASES, CONDUIT, L-824 CABLE & L-823 SPLICE KITS. THESE ITEMS WILL NOT BE AVAILABLE FROM THE SAN ANTONIO INTERNATIONAL AIRPORT MAINTENANCE SHOP.
4. CONTRACTOR SHALL MAINTAIN THE INDICATED MINIMUM STOCK OF THE FOLLOWING ITEMS:
   - 20 EACH TEMPORARY LIGHT FIXTURES WITH BASES
   - 20 EACH L-830 6.6 AMP TRANSFORMERS OF VARIOUS CAPACITIES
   - 200 LF 2" PVC CONDUIT FOR TEMPORARY ABOVE GRADE CONNECTIONS
   - 400 LF L-824, #8 5KV TYPE C CABLE FOR TEMPORARY CONNECTIONS
   - 40 EACH L-823 CONNECTOR KITS
5. THE CONTRACTOR SHALL MAINTAIN QUALIFIED PERSONNEL, WITH THE APPROPRIATE EQUIPMENT, FOR THE INSTALLATION AND SPLICING OF AIRFIELD LIGHTING AND FIBER OPTIC CABLES. SUCH PERSONNEL SHALL BE CAPABLE OF 60 MINUTE RESPONSE TIME IF THEY ARE NOT ALREADY PRESENT ON THE AIRFIELD.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH AIRPORT MAINTENANCE, AIRPORT OPERATIONS, AND THE ENGINEER AS NECESSARY.
7. CONTRACTOR SHALL GIVE 48 HOURS NOTICE PRIOR TO WORKING ON OR AROUND ANY FAA EQUIPMENT, DUCT BANKS, HANDHOLES, ETC.
8. ALL TEMPORARY JUMPERS SHALL BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION, SEE E4 SERIES DRAWINGS.

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ELECTRICAL
SYMBOL LIST AND
GENERAL NOTES

E0.2

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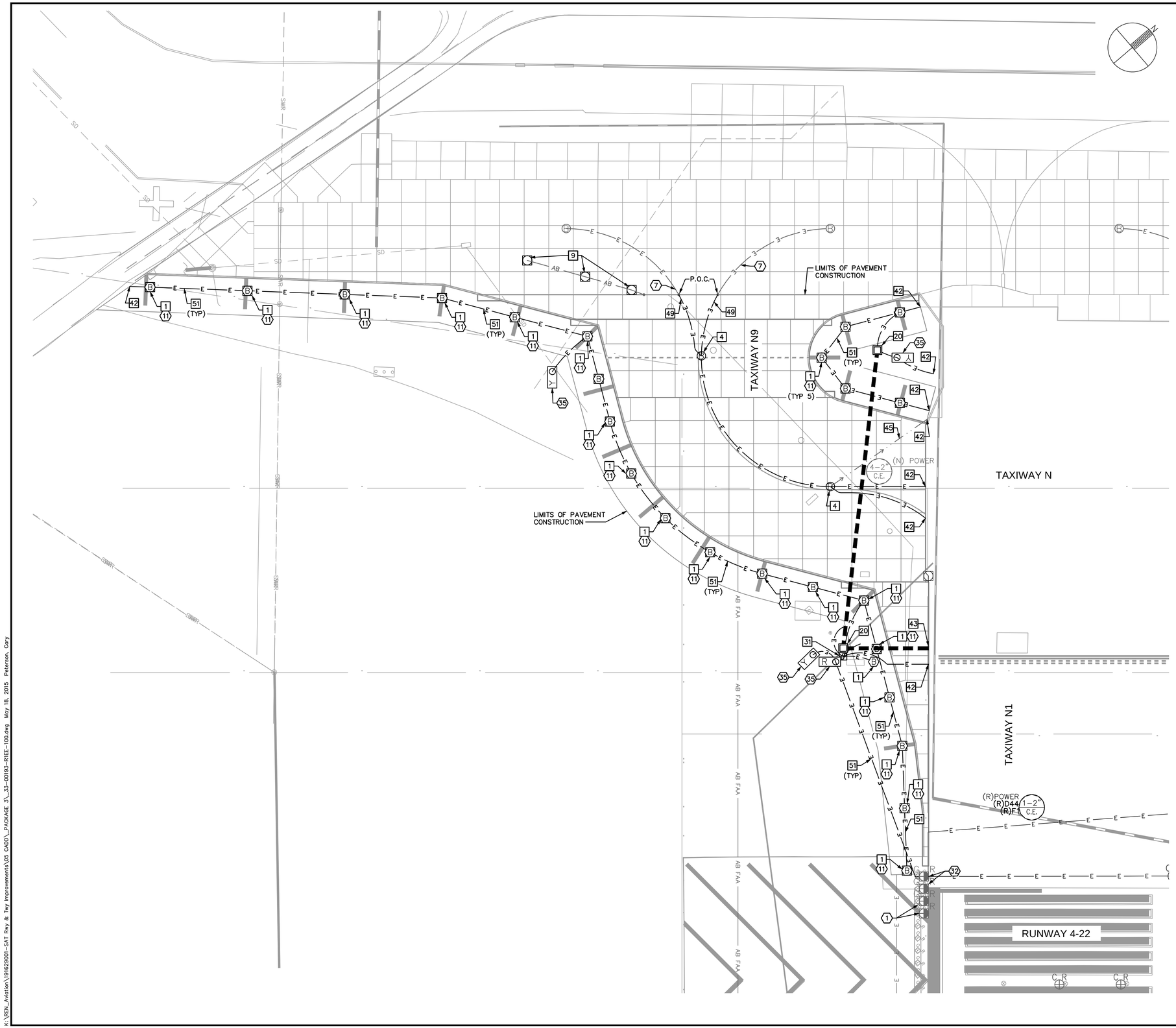


ELECTRICAL CONSTRUCTION NOTES

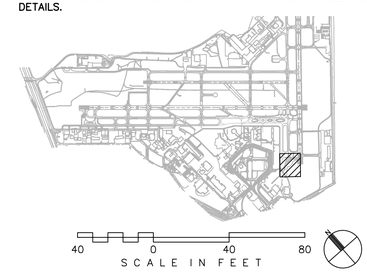
1. EXISTING LIGHT, PROTECT IN PLACE.
7. EXISTING EMPTY CONDUIT, PROTECT IN PLACE.
11. INSTALL NEW L-861T(LED) TAXIWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
32. DURING CONSTRUCTION, REMOVE AND STORE RUNWAY THRESHOLD LIGHT AND INSTALL BLANK COVER. AT END OF PAVING, REINSTALL LIGHT FIXTURE.
35. NEW SIGN AND ISOLATION TRANSFORMER ON NEW CONCRETE FOUNDATION.

BASE CAN, FOUNDATION & CONDUIT NOTES

1. NEW L-867 BASE CAN (WITH 3/8" BLANK COVER IF NOTED IN TABLE) IN NEW ASPHALT PAVEMENT.
4. NEW L-868 BASE CAN (WITH 3/4" BLANK COVER OR 3/4" THICK L-868 TO L-867 ADAPTOR RING IF NOTED IN TABLE) IN NEW PCC PAVEMENT.
9. NEW OR RELOCATED 3/4" BLANK COVER ON EXISTING L-868 BASE CAN.
20. NEW PRECAST CONCRETE HANDHOLE. SEE DATA TABLES IN E2 SERIES DRAWINGS FOR LOCATION & DETAIL DATA.
31. NEW 2-CAN JUNCTION CAN PLAZA, SEE DETAILS ON DRAWING E3.8.
42. STUB AND CAP 1-2"C FOR FUTURE EXTENSION. RECORD STATION, OFFSET AND DEPTH ON RECORD DRAWINGS.
43. STUB AND CAP DUCT FOR FUTURE EXTENSION. RECORD STATION, OFFSET AND DEPTH ON RECORD DRAWINGS.
45. INSTALL 2"C (ITEM L-110) TO DRAIN STRUCTURES. COMBINE DRAIN CONDUITS FROM SEPARATE SYSTEMS INTO COMMON TRENCH WHEN POSSIBLE. SEE DETAILS ON E3.10.
49. CONNECT NEW 2" EMPTY CONDUIT TO EXISTING EMPTY 2" CONDUIT.
51. (N) CABLES (ITEM L-108) IN (N) 2" CONDUIT, DIRECT BURIAL (ITEM L-110), FROM HANDHOLE OR JUNCTION CAN PLAZA, TO OR BETWEEN SIGNS, EDGE LIGHTS, OR WIND CONES. COORDINATE WITH E4 SERIES DRAWINGS FOR CIRCUIT CONTENT.

GENERAL NOTES

1. SEE DWG E2.1 & E2.1A DATA TABLES FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS.
2. SEE CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR TEMPORARY CIRCUITS AND FIXTURES.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE E6 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PLANS.
5. SEE DRAWING E3.6 FOR DUCT CONFIGURATIONS AND INSTALLATION DETAILS.



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PHASE 1 - ELECTRICAL LAYOUT PLAN - BASE BID

E1.1

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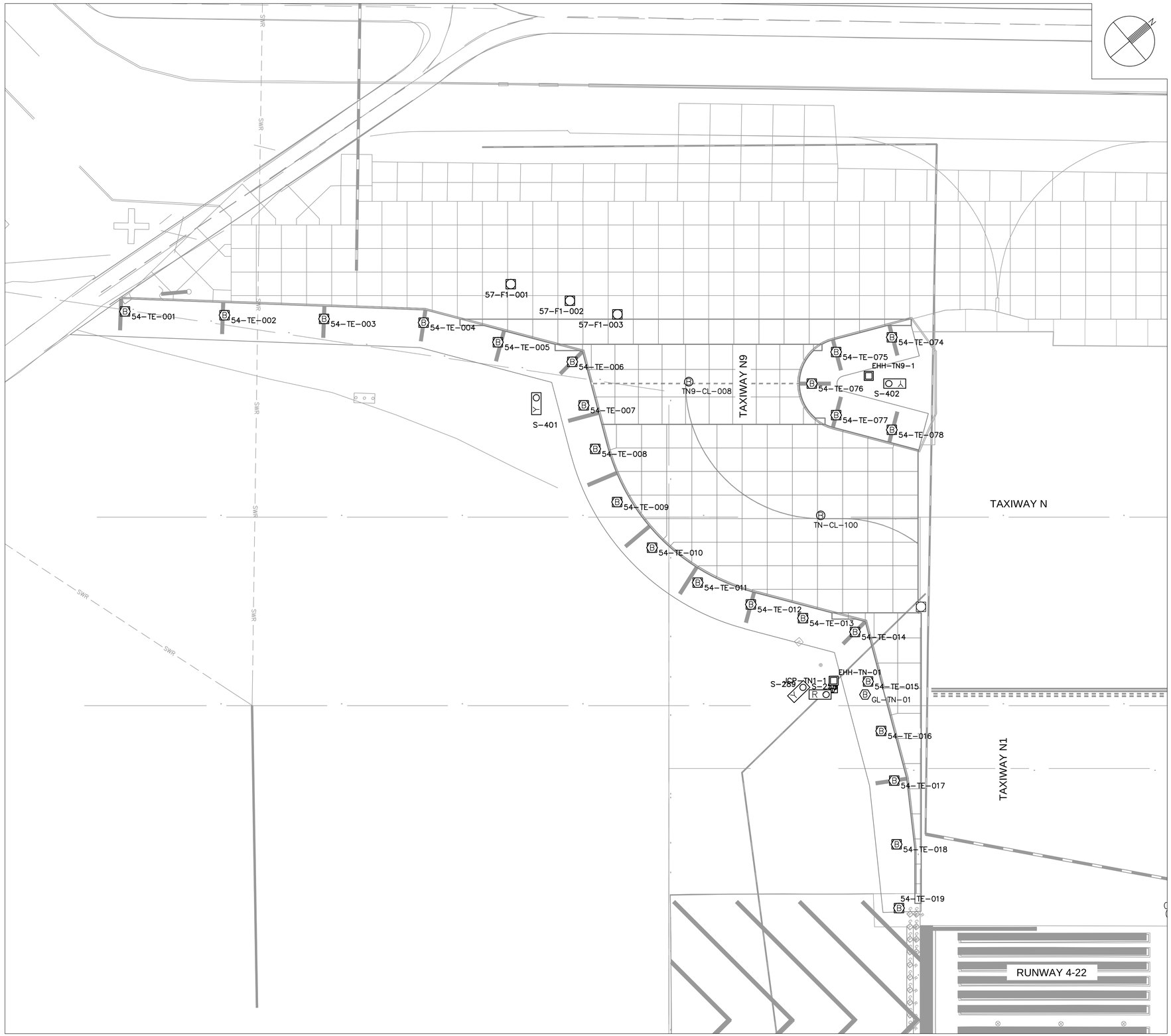
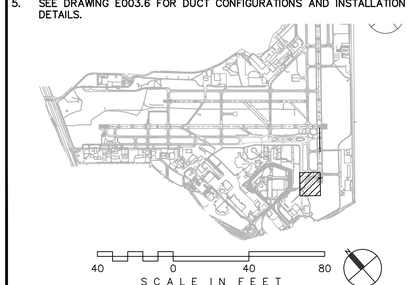


GENERAL NOTES

1. SEE DATA TABLES ON DRAWING E012.2 FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS. ALL ELEMENTS ON THIS DRAWING ARE LOCATED PER "Taxiway N" ALIGNMENT.
2. SEE DRAWING E011.1 FOR NEW ELECTRICAL SYSTEM LAYOUT PLAN.
3. SEE DRAWING E015.1 FOR AIRFIELD SIGN LEGEND.
4. SEE DRAWING E016.1 FOR ELECTRICAL DEMOLITION PLAN.
5. SEE DRAWING E003.6 FOR DUCT CONFIGURATIONS AND INSTALLATION DETAILS.



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PHASE 1 - ELECTRICAL FIXTURE LAYOUT PLAN - BASE BID

E2.1

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E2.1 L–867 DATA TABLE				
FIXT–NUM	STA	OFF	DETAIL	FAA–TYPE
54–TE–001	STA. 400+95.56	164.86' LT.	E3.3	L–867B FOR L–861T
54–TE–002	STA. 401+74.77	161.93' LT.	E3.3	L–867B FOR L–861T
54–TE–003	STA. 402+53.98	158.99' LT.	E3.3	L–867B FOR L–861T
54–TE–004	STA. 403+33.20	156.05' LT.	E3.3	L–867B FOR L–861T
54–TE–005	STA. 403+92.35	140.43' LT.	E3.3	L–867B FOR L–861T
54–TE–006	STA. 404+51.49	124.82' LT.	E3.3	L–867B FOR L–861T
54–TE–007	STA. 404+60.64	90.17' LT.	E3.3	L–867B FOR L–861T
54–TE–008	STA. 404+69.79	55.52' LT.	E3.3	L–867B FOR L–861T
54–TE–009	STA. 404+87.18	13.21' LT.	E3.3	L–867B FOR L–861T
54–TE–010	STA. 405+14.99	23.10' RT.	E3.3	L–867B FOR L–861T
54–TE–011	STA. 405+51.30	50.91' RT.	E3.3	L–867B FOR L–861T
54–TE–012	STA. 405+93.61	68.30' RT.	E3.3	L–867B FOR L–861T
54–TE–013	STA. 406+35.05	79.24' RT.	E3.3	L–867B FOR L–861T
54–TE–014	STA. 406+76.49	90.18' RT.	E3.3	L–867B FOR L–861T
54–TE–015	STA. 406+86.91	129.61' RT.	E3.3	L–867B FOR L–861T
54–TE–016	STA. 406+97.32	169.05' RT.	E3.3	L–867B FOR L–861T
54–TE–017	STA. 407+07.73	208.48' RT.	E3.3	L–867B FOR L–861T
54–TE–018	STA. 407+09.61	259.24' RT.	E3.3	L–867B FOR L–861T
54–TE–019	STA. 407+11.49	310.00' RT.	E3.3	L–867B FOR L–861T
54–TE–074	STA. 407+05.82	144.34' LT.	E3.3	L–867B FOR L–861T
54–TE–075	STA. 406+61.49	132.64' LT.	E3.3	L–867B FOR L–861T
54–TE–076	STA. 406+42.12	107.50' LT.	E3.3	L–867B FOR L–861T
54–TE–077	STA. 406+61.49	82.36' LT.	E3.3	L–867B FOR L–861T
54–TE–078	STA. 407+05.82	70.66' LT.	E3.3	L–867B FOR L–861T
GL–TN–01	STA. 406+84.48	140.00' RT.	E3.3	L–867B FOR L–861T

E2.1 L–868 DATA TABLE				
FIXT–NUM	STA	OFF	DETAIL	FAA–TYPE
TN9–CL–008	STA. 405+44.19	108.96' LT.	E3.4	L–868 W/ COVER
TN–CL–100	STA. 406+49.18	2.50' LT.	E3.4	L–868 W/ COVER

E2.1 SIGN DATA TABLE						
SIGN–NUM	STA	OFF	DETAIL	CIRCUIT	MODULES	SIZE
S–256	STA. 406+53.45	140.00' RT.	E3.1	4–22 EDGE	RT858R4M	MODE 2
S–289	STA. 406+35.09	134.35' RT.	E3.1		RT858Y2M	MODE 2
S–401	STA. 404+22.86	96.18' LT.	E3.1		RT858Y2M	MODE 2
S–402	STA. 407+03.38	107.50' LT.	E3.1		RT858Y3M	MODE 2

E2.1 HANDHOLE DATA TABLE			
HH–NUM	STA	OFF	DETAIL
EHH–TN–01	STA. 406+59.56	129.00' RT.	E3.8
EHH–TN9–1	STA. 406+87.45	113.64' LT.	E3.7

CIRCUIT DESIGNATION SCHEDULE

CIRCUIT NAME	FIELD CIRUIT NUMBER	ALCS NUMBER	REMARKS
WEST VAULT:			
12R–30L EDGE	31	16	MODIFIED CIRCUIT
12R CENTERLINE	30	15	MODIFIED CIRCUIT
30L CENTERLINE	32	17	MODIFIED CIRCUIT
12R TDZ	33	18	MODIFIED CIRCUIT
12L–30R EDGE	35	19	EXISTING CIRCUIT
ALPHA	11	2	EXISTING CIRCUIT
BRAVO	12	1	EXISTING CIRCUIT
G–1	2	12	EXISTING CIRCUIT
G–2	4	7	EXISTING CIRCUIT
G–3	6	8	MODIFIED CIRCUIT
G CENTERLINE WEST	16	13	MODIFIED CIRCUIT
G CENTERLINE EAST	15	14	EXISTING CIRCUIT
G–3 CENTERLINE TO LAHSO	N/A	6	EXISTING CIRCUIT
LAHSO STOP BAR	N/A	27	EXISTING CIRCUIT
H–1 WEST	13	11	EXISTING CIRCUIT
H–2 EAST	14	9	EXISTING CIRCUIT
JULIET	9	3	EXISTING CIRCUIT
LIMA ON 24/7	10	5	EXISTING CIRCUIT
MIKE	7	4	EXISTING CIRCUIT
ROMEO	8	20	EXISTING CIRCUIT
SIERRA R/C	N/A	20	EXISTING CIRCUIT
EAST VAULT:			
4–22 EDGE	N/A	41	EXISTING CIRCUIT
4 CENTERLINE	N/A	43	EXISTING CIRCUIT
22 CENTERLINE	N/A	42	EXISTING CIRCUIT
DELTA	56	35	EXISTING CIRCUIT
FOXTROT	57	34	MODIFIED CIRCUIT
N–1	52	36	EXISTING CIRCUIT
N–2	53	37	EXISTING CIRCUIT
N–3	54	32	EXISTING CIRCUIT
NEW CARGO	51	31	EXISTING CIRCUIT
QUEBEC	55	33	EXISTING CIRCUIT

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601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541–9166

TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE–ISSUED DRAWING

ISSUE: ----

PROJECT NO: 33-00178 and 33-00193
FILE NAME: _33-00193-R1EE-100
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PHASE 1 - ELECTRICAL FIXTURE DATA TABLES - BASE BID

E2.1A

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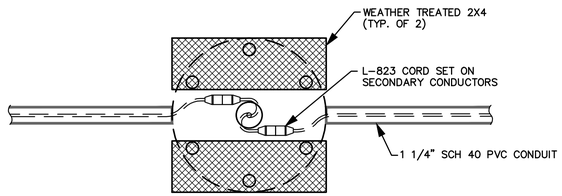
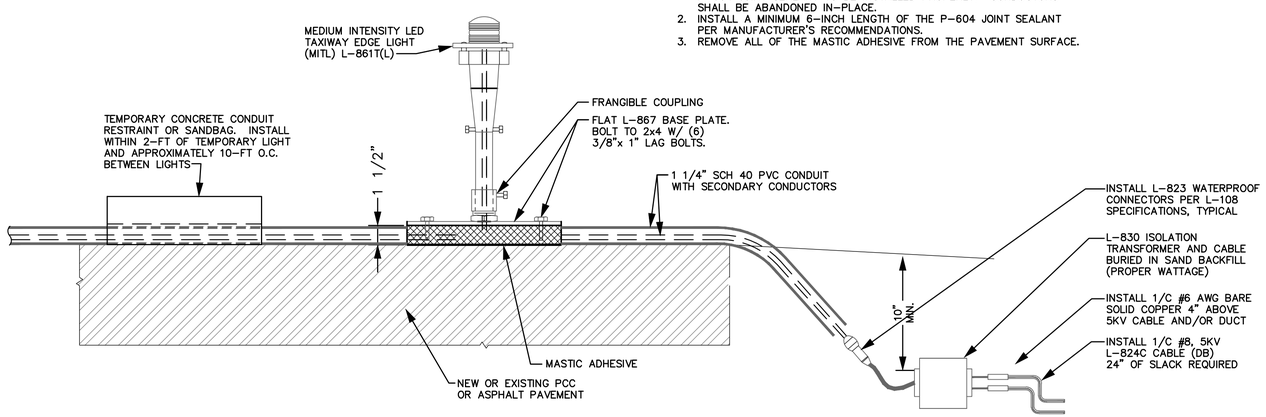


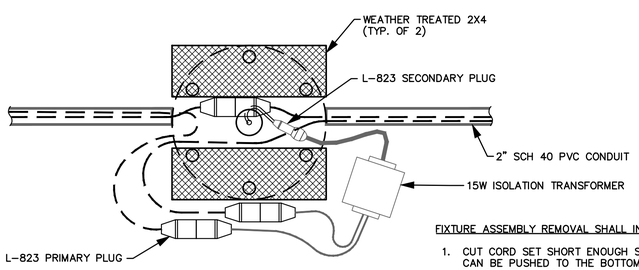
FIXTURE ASSEMBLY REMOVAL SHALL INCLUDE:

1. CUT CORD SET SHORT ENOUGH SO THAT ENDS OF THE CONDUCTORS CAN BE PUSHED TO THE BOTTOM OF THE JOINT KERF AND ALLOW THE P-604 JOINT SEALANT TO BE INSTALLED PROPERLY. CONDUCTORS SHALL BE ABANDONED IN-PLACE.
2. INSTALL A MINIMUM 6-INCH LENGTH OF THE P-604 JOINT SEALANT PER MANUFACTURER'S RECOMMENDATIONS.
3. REMOVE ALL OF THE MASTIC ADHESIVE FROM THE PAVEMENT SURFACE.



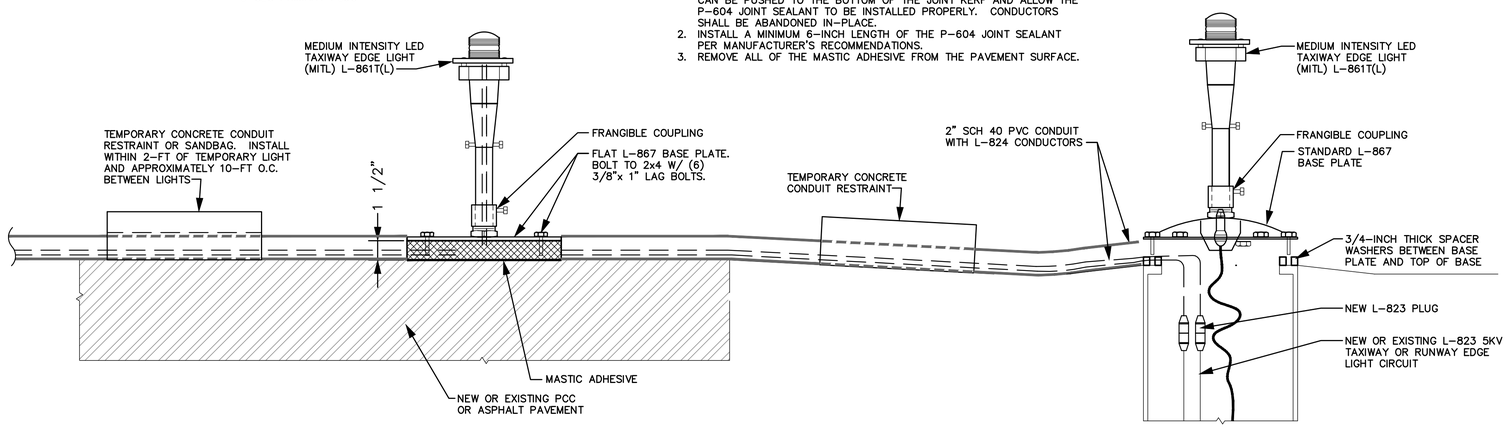
LONG TERM TEMPORARY SURFACE MOUNTED EDGE LIGHT - SECONDARY SERIES CIRCUIT

N.T.S.



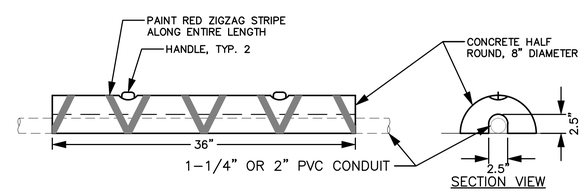
FIXTURE ASSEMBLY REMOVAL SHALL INCLUDE:

1. CUT CORD SET SHORT ENOUGH SO THAT ENDS OF THE CONDUCTORS CAN BE PUSHED TO THE BOTTOM OF THE JOINT KERF AND ALLOW THE P-604 JOINT SEALANT TO BE INSTALLED PROPERLY. CONDUCTORS SHALL BE ABANDONED IN-PLACE.
2. INSTALL A MINIMUM 6-INCH LENGTH OF THE P-604 JOINT SEALANT PER MANUFACTURER'S RECOMMENDATIONS.
3. REMOVE ALL OF THE MASTIC ADHESIVE FROM THE PAVEMENT SURFACE.



LONG TERM TEMPORARY SURFACE MOUNTED EDGE LIGHT WITH ISOLATION TRANSFORMER

N.T.S.



TEMPORARY CONDUIT RESTRAINT DETAIL

N.T.S.

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TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA
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IMPROVEMENTS -
(PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

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TEMPORARY
LIGHTING DETAILS -
ALTERNATE 1

E3.11

SHEET NO. 50A OF 172

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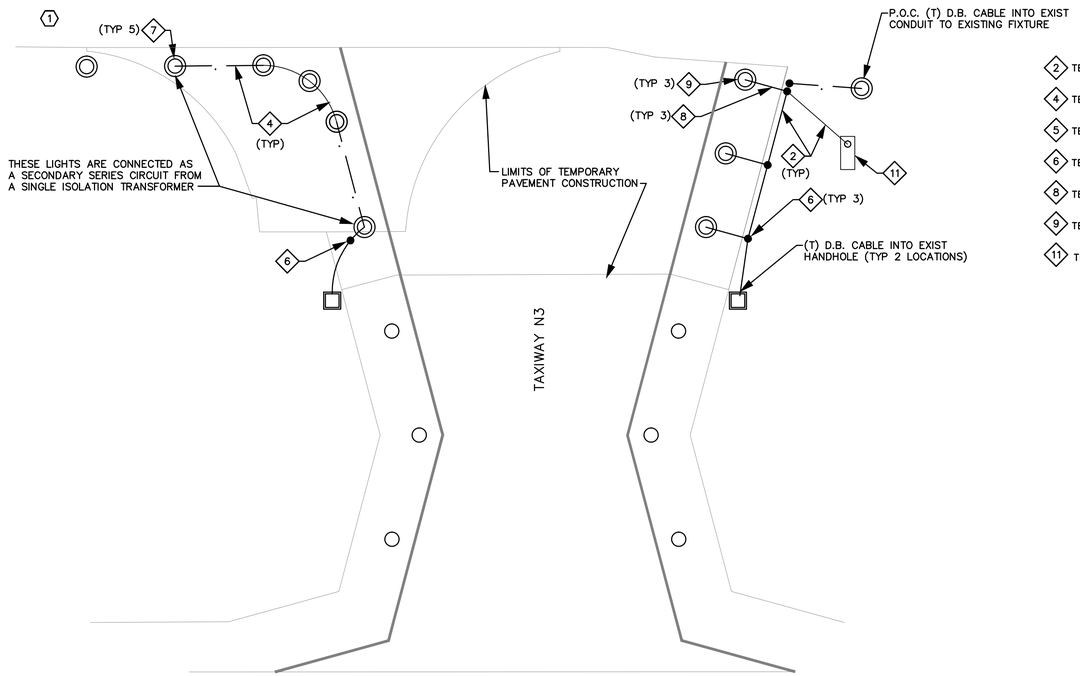


TWY N3 - LONG TERM TEMPORARY CIRCUIT ROUTING
N.T.S.

2 TEMPORARY DIRECT BURIED L-824, TYPE C, 1/C #6, 5 KV CABLE.

4 TEMPORARY SURFACE MOUNTED 2" CONDUIT WITH L-824, TYPE C, #6, 5 KV CABLE(S).

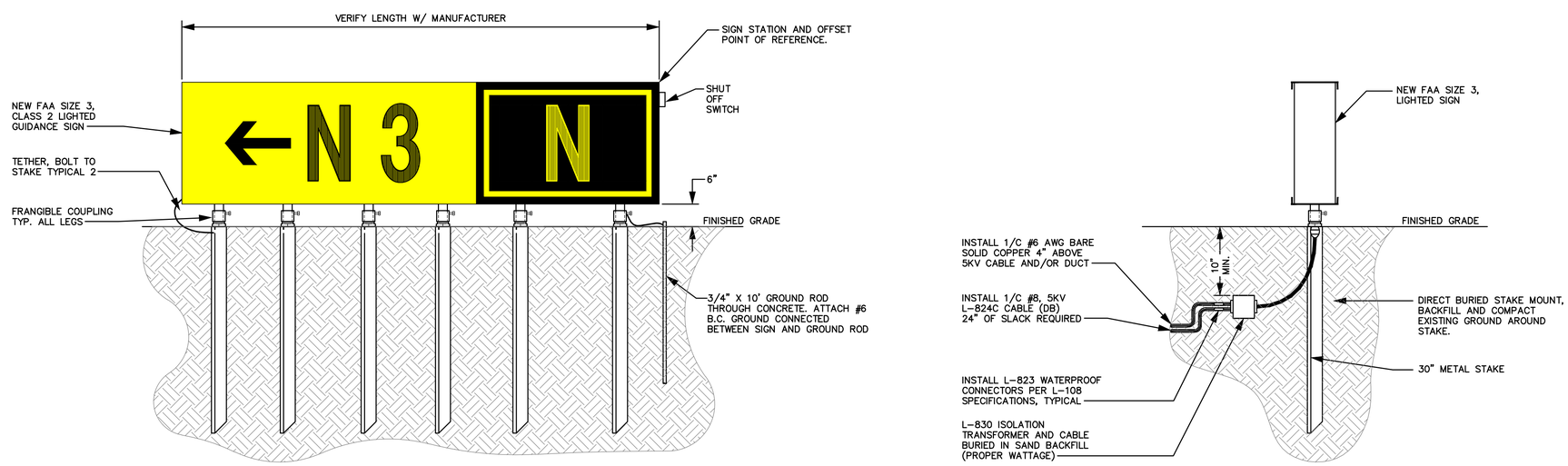
5 TEMPORARY 1-1/4" CONDUIT WITH L-824, TYPE C, #6, 5 KV CABLE(S).

6 TEMPORARY DIRECT BURIAL ISOLATION TRANSFORMER.

8 TEMPORARY SECONDARY CIRCUIT, (2)-1/C #10 IN 1-1/4" CONDUIT.

9 TEMPORARY PAVEMENT MOUNTED TAXIWAY EDGE LIGHT.

11 TEMPORARY STAKE MOUNTED GUIDANCE SIGN & ISOLATION TRANSFORMER. SEE DETAILS E3.12.



TEMPORARY AIRFIELD SIGN - STAKE MOUNTED INSTALLATION DETAIL
N.T.S.

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TEMPORARY SIGNAGE DETAILS - ALTERNATE 1

E3.12

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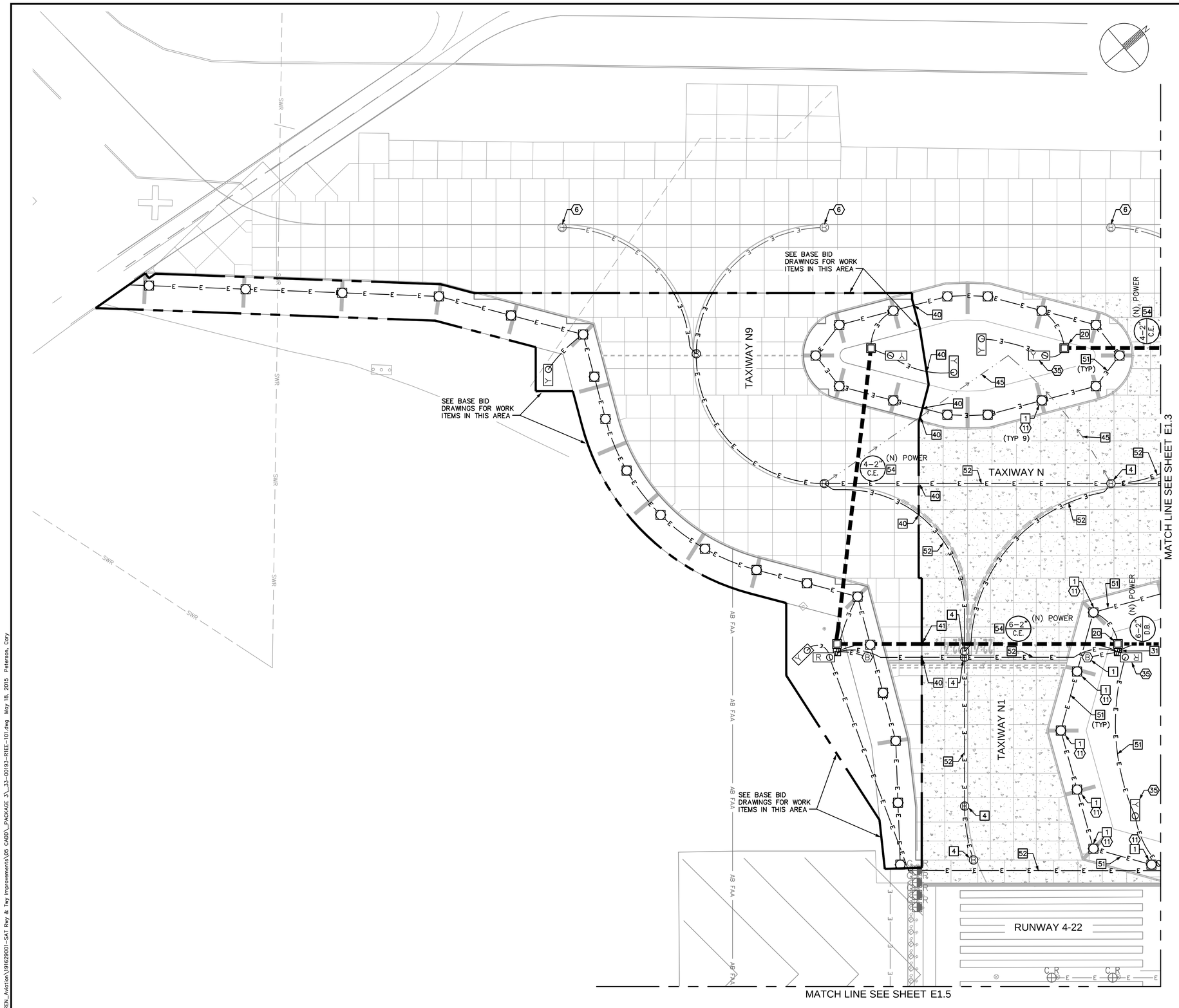


ELECTRICAL CONSTRUCTION NOTES

6 EXISTING BASE CAN, PROTECT IN PLACE.

11 INSTALL NEW L-861T(LED) TAXIWAY EDGE LIGHT AND ISOLATION TRANSFORMER.

35 NEW SIGN AND ISOLATION TRANSFORMER ON NEW CONCRETE FOUNDATION.

BASE CAN, FOUNDATION & CONDUIT NOTES

1 NEW L-867 BASE CAN (WITH 3/8" BLANK COVER IF NOTED IN TABLE) IN NEW ASPHALT PAVEMENT.

4 NEW L-868 BASE CAN (WITH 3/4" BLANK COVER OR 3/4" THICK L-868 TO L-867 ADAPTOR RING IF NOTED IN TABLE) IN NEW PCC PAVEMENT.

20 NEW PRECAST CONCRETE HANDHOLE (ITEM L-115). SEE DATA TABLES IN E2 SERIES DRAWINGS FOR LOCATION & DETAIL DATA.

31 NEW 2-CAN JUNCTION CAN PLAZA (ITEM L-115). SEE DETAILS ON DRAWING E3.8.

40 CONNECT NEW CONDUIT TO EXISTING CONDUIT. INSTALL NEW CONDUCTORS. SEE CIRCUIT MAPS, E4 SERIES DRAWINGS.

41 CONNECT NEW DUCT TO EXISTING DUCT AS SHOWN. INSTALL NEW CONDUCTORS. SEE CIRCUIT MAPS, E4 SERIES DRAWINGS.

45 INSTALL 2"C (ITEM L-110) TO DRAIN STRUCTURES. COMBINE DRAIN CONDUITS FROM SEPARATE SYSTEMS INTO COMMON TRENCH WHEN POSSIBLE. SEE DETAILS ON E3.10.

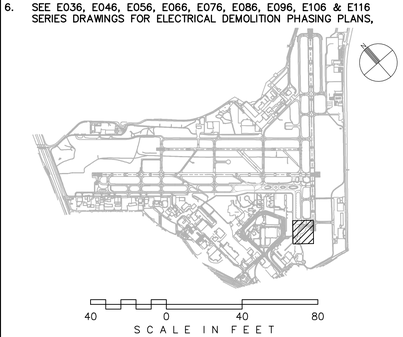
51 (N) 2" CONDUIT, DIRECT BURIAL (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.

52 (N) 2" CONDUIT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.

54 (N) DUCT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108) BETWEEN U.G. ELECTRICAL STRUTURES. SEE E4 SERIES DRAWINGS FOR CIRCUITS.

GENERAL NOTES

1. SEE DWG E2.1 & E2.1A DATA TABLES FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS.
2. SEE CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR TEMPORARY CIRCUITS AND FIXTURES.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE DRAWING E3.6 FOR DUCT CONFIGURATIONS AND INSTALLATION DETAILS.
5. SEE E031, E041, E051, E061, E071, E081, E091, E101 & E111 SERIES DRAWINGS FOR CONSTRUCTION PHASING.
6. SEE E036, E046, E056, E066, E076, E086, E096, E106 & E116 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PHASING PLANS.



CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

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TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

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E1.2

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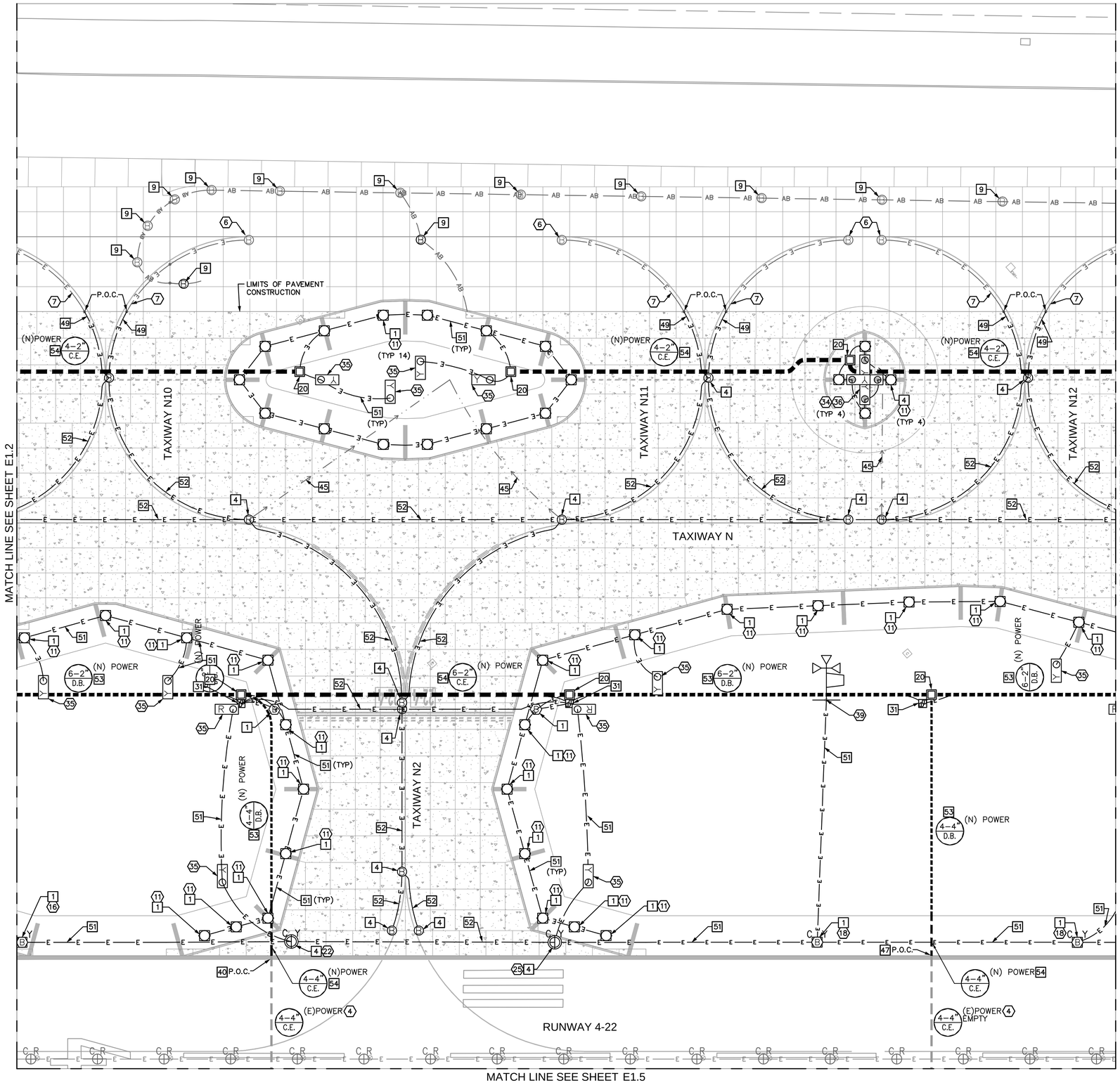


ELECTRICAL CONSTRUCTION NOTES

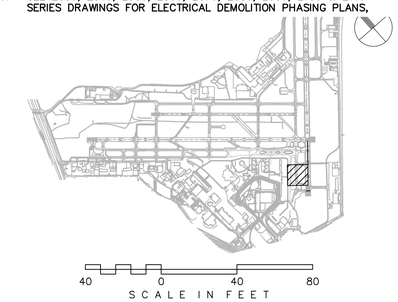
4. EXISTING DUCT, PROTECT IN PLACE. INSTALL NEW CONDUCTOR(S) AS NOTED.
6. EXISTING BASE CAN, PROTECT IN PLACE.
7. EXISTING EMPTY CONDUIT, PROTECT IN PLACE.
11. INSTALL NEW L-861T(LED) TAXIWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
16. INSTALL NEW L-862 RUNWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
18. REINSTALL EXISTING L-862 RUNWAY EDGE LIGHT WITH NEW ISOLATION TRANSFORMER.
22. INSTALL NEW L-850C RUNWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
25. REINSTALL EXISTING L-850C RUNWAY EDGE LIGHT WITH NEW 100 W, 20A ISOLATION TRANSFORMER.
34. SIZE 2 SIGN.
35. NEW SIGN AND ISOLATION TRANSFORMER ON NEW CONCRETE FOUNDATION.
36. NEW SIGN AND ISOLATION TRANSFORMER ON NEW L-868 BASE CAN WITH BLANK COVER IN NEW CONCRETE PAVEMENT.
39. RELOCATE AND REINSTALL LIGHTED WINDCONE WITH NEW ISOLATION TRANSFORMER ON NEW FOUNDATION.

BASE CAN, FOUNDATION & CONDUIT NOTES

1. NEW L-867 BASE CAN (WITH 3/8" BLANK COVER IF NOTED IN TABLE) IN NEW ASPHALT PAVEMENT.
4. NEW L-868 BASE CAN (WITH 3/4" BLANK COVER OR 3/4" THICK L-868 TO L-867 ADAPTOR RING IF NOTED IN TABLE) IN NEW PCC PAVEMENT.
9. NEW 3/4" BLANK COVER ON EXISTING L-868 BASE CAN.
20. NEW PRECAST CONCRETE HANDHOLE (ITEM L-115). SEE DATA TABLES IN E2 SERIES DRAWINGS FOR LOCATION & DETAIL DATA.
31. NEW 2-CAN JUNCTION CAN PLAZA (ITEM L-115). SEE DETAILS ON DRAWING E3.8.
40. CONNECT NEW CONDUIT TO EXISTING CONDUIT. INSTALL NEW CONDUCTORS. SEE CIRCUIT MAPS, E4 SERIES DRAWINGS.
45. INSTALL 2"C (ITEM L-110) TO DRAIN STRUCTURES. COMBINE DRAIN CONDUITS FROM SEPARATE SYSTEMS INTO COMMON TRENCH WHEN POSSIBLE. SEE DETAILS ON E3.10.
47. COORDINATE (N) DUCT OR CONDUIT CROSSING WITH (E) DUCT OR CONDUIT. AT CROSSING, POTHOLE VERIFY EXACT LOCATION AND DEPTH OF EXISTING FACILITY PRIOR TO TRENCH EXCAVATION.
49. CONNECT NEW 2" EMPTY CONDUIT TO EXISTING EMPTY 2" CONDUIT.
51. (N) 2" CONDUIT, DIRECT BURIAL (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.
52. (N) 2" CONDUIT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.
53. (N) DUCT, DIRECT BURIAL (ITEM L-110) W/ (N) CABLES (ITEM L-108) BETWEEN U.G. ELECTRICAL STRUTURES. SEE E4 SERIES DRAWINGS FOR CIRCUITS.
54. (N) DUCT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108) BETWEEN U.G. ELECTRICAL STRUTURES. SEE E4 SERIES DRAWINGS FOR CIRCUITS.

GENERAL NOTES

1. SEE DWG E2.2 & E2.2A DATA TABLES FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS.
2. SEE CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR TEMPORARY CIRCUITS AND FIXTURES.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE DRAWING E3.6 FOR DUCT CONFIGURATIONS AND INSTALLATION DETAILS.
5. SEE E031, E041, E051, E061, E071, E081, E091, E101 & E111 SERIES DRAWINGS FOR CONSTRUCTION PHASING.
6. SEE E036, E046, E056, E066, E076, E086, E096, E106 & E116 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PHASING PLANS.



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SAN ANTONIO AIRPORT SYSTEM

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STATE OF TEXAS
ERIC C. LOVEJOY
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E1.3

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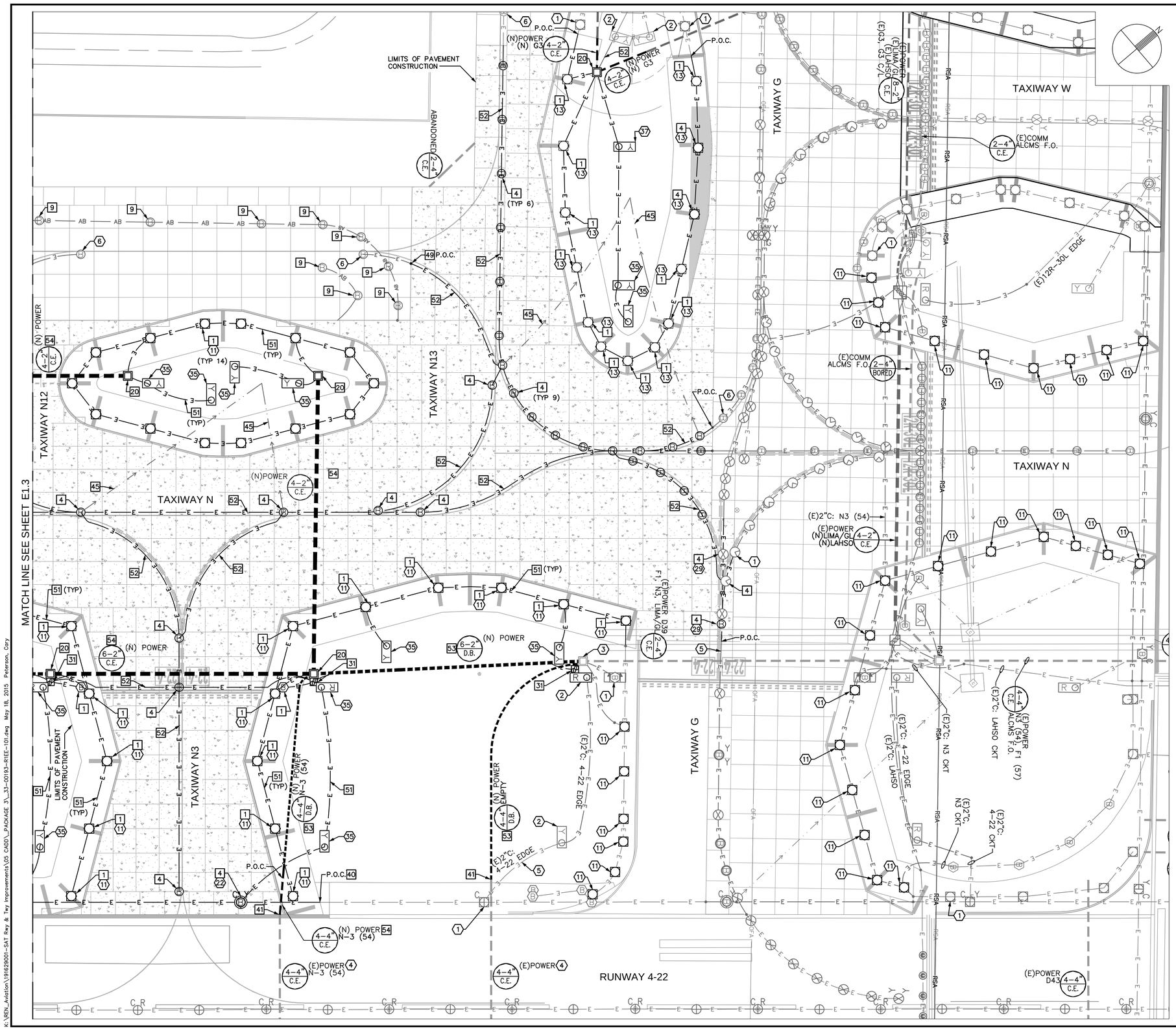


ELECTRICAL CONSTRUCTION NOTES

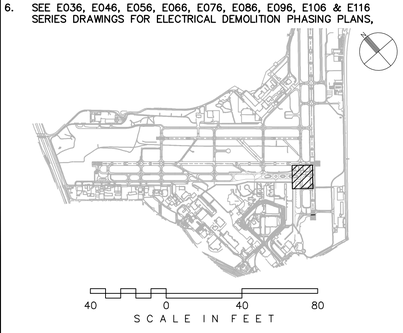
1. EXISTING LIGHT, PROTECT IN PLACE.
2. EXISTING SIGN, PROTECT IN PLACE.
3. EXISTING HANDHOLE, JUNCTION CAN PLAZA OR PULLBOX, PROTECT IN PLACE.
4. EXISTING DUCT, PROTECT IN PLACE. INSTALL NEW CONDUCTOR(S) AS NOTED.
5. EXISTING CONDUIT, PROTECT IN PLACE. INSTALL NEW CONDUCTOR(S) AS NOTED.
6. EXISTING BASE CAN, PROTECT IN PLACE.
11. INSTALL NEW L-861T(LED) TAXIWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
13. REINSTALL EXISTING L-861T(L) TAXIWAY EDGE LIGHT WITH NEW ISOLATION TRANSFORMER.
22. INSTALL NEW L-850C RUNWAY EDGE LIGHT AND ISOLATION TRANSFORMER.
29. REINSTALL EXISTING L-852A TAXIWAY CENTERLINE LIGHT WITH NEW ISOLATION TRANSFORMER.
35. NEW SIGN AND ISOLATION TRANSFORMER ON NEW CONCRETE FOUNDATION.
37. RELOCATE AND REINSTALL SIGN WITH NEW ISOLATION TRANSFORMER ON NEW CONCRETE FOUNDATION.

BASE CAN, FOUNDATION & CONDUIT NOTES

1. NEW L-867 BASE CAN (WITH 3/8" BLANK COVER IF NOTED IN TABLE) IN NEW ASPHALT PAVEMENT.
4. NEW L-868 BASE CAN (WITH 3/4" BLANK COVER OR 3/4" THICK L-868 TO L-867 ADAPTOR RING IF NOTED IN TABLE) IN NEW PCC PAVEMENT.
9. NEW 3/4" BLANK COVER ON EXISTING L-868 BASE CAN.
20. NEW PRECAST CONCRETE HANDHOLE (ITEM L-115). SEE DATA TABLES IN E2 SERIES DRAWINGS FOR LOCATION & DETAIL DATA.
31. NEW 2-CAN JUNCTION CAN PLAZA (ITEM L-115). SEE DETAILS ON DRAWING E3.8.
40. CONNECT NEW CONDUIT TO EXISTING CONDUIT. INSTALL NEW CONDUCTORS. SEE CIRCUIT MAPS, E4 SERIES DRAWINGS.
41. CONNECT NEW DUCT TO EXISTING DUCT AS SHOWN. INSTALL NEW CONDUCTORS. SEE CIRCUIT MAPS, E4 SERIES DRAWINGS.
45. INSTALL 2"C (ITEM L-110) TO DRAIN STRUCTURES. COMBINE DRAIN CONDUITS FROM SEPARATE SYSTEMS INTO COMMON TRENCH WHEN POSSIBLE. SEE DETAILS ON E3.10.
49. CONNECT NEW 2" EMPTY CONDUIT TO EXISTING EMPTY 2" CONDUIT.
51. (N) 2" CONDUIT, DIRECT BURIAL (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.
52. (N) 2" CONDUIT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108). SEE E4 SERIES DRAWINGS FOR CIRCUITS.
53. (N) DUCT, DIRECT BURIAL (ITEM L-110) W/ (N) CABLES (ITEM L-108) BETWEEN U.G. ELECTRICAL STRUTURES. SEE E4 SERIES DRAWINGS FOR CIRCUITS.
54. (N) DUCT, CONCRETE ENCASED (ITEM L-110) W/ (N) CABLES (ITEM L-108) BETWEEN U.G. ELECTRICAL STRUTURES. SEE E4 SERIES DRAWINGS FOR CIRCUITS.

GENERAL NOTES

1. SEE DWG E2.3 & E2.3A DATA TABLES FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS.
2. SEE CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR TEMPORARY CIRCUITS AND FIXTURES.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE DRAWING E3.6 FOR DUCT CONFIGURATIONS AND INSTALLATION DETAILS.
5. SEE E031, E041, E051, E061, E071, E081, E091, E101 & E111 SERIES DRAWINGS FOR CONSTRUCTION PHASING.
6. SEE E036, E046, E056, E066, E076, E086, E096, E106 & E116 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PHASING PLANS,



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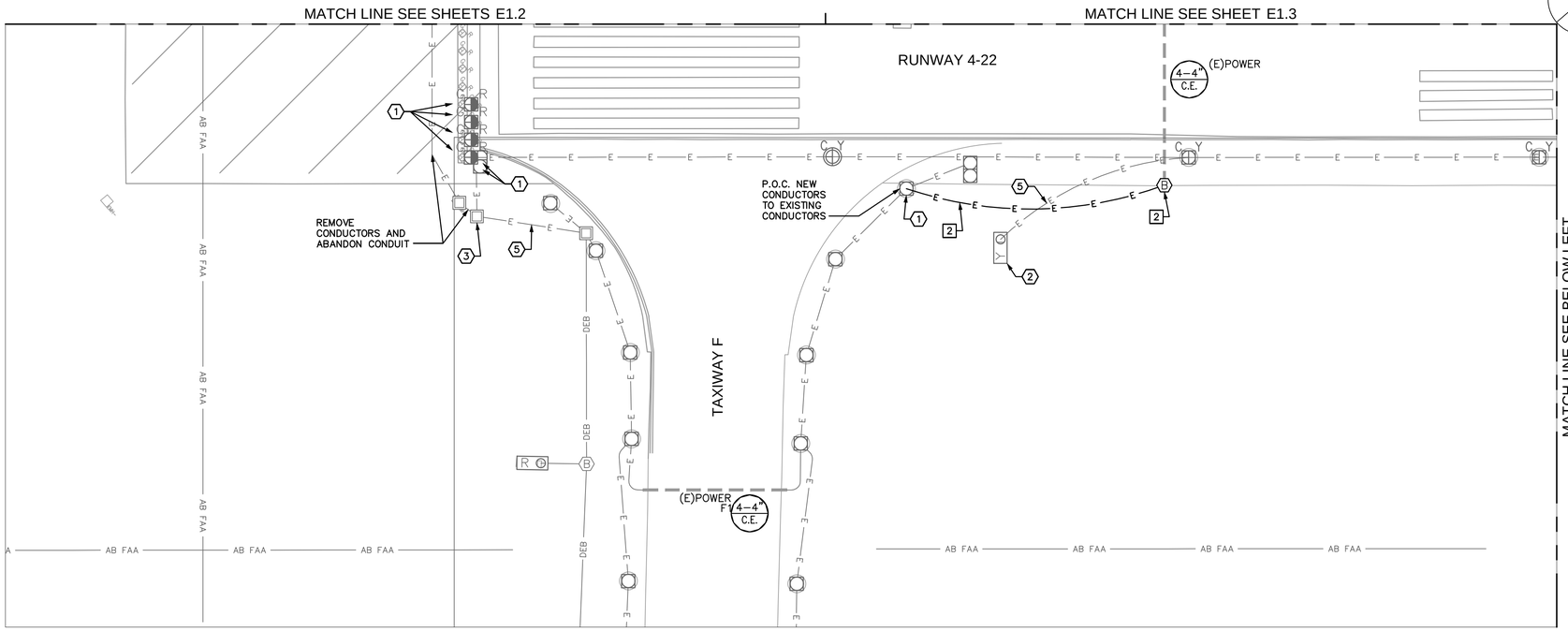
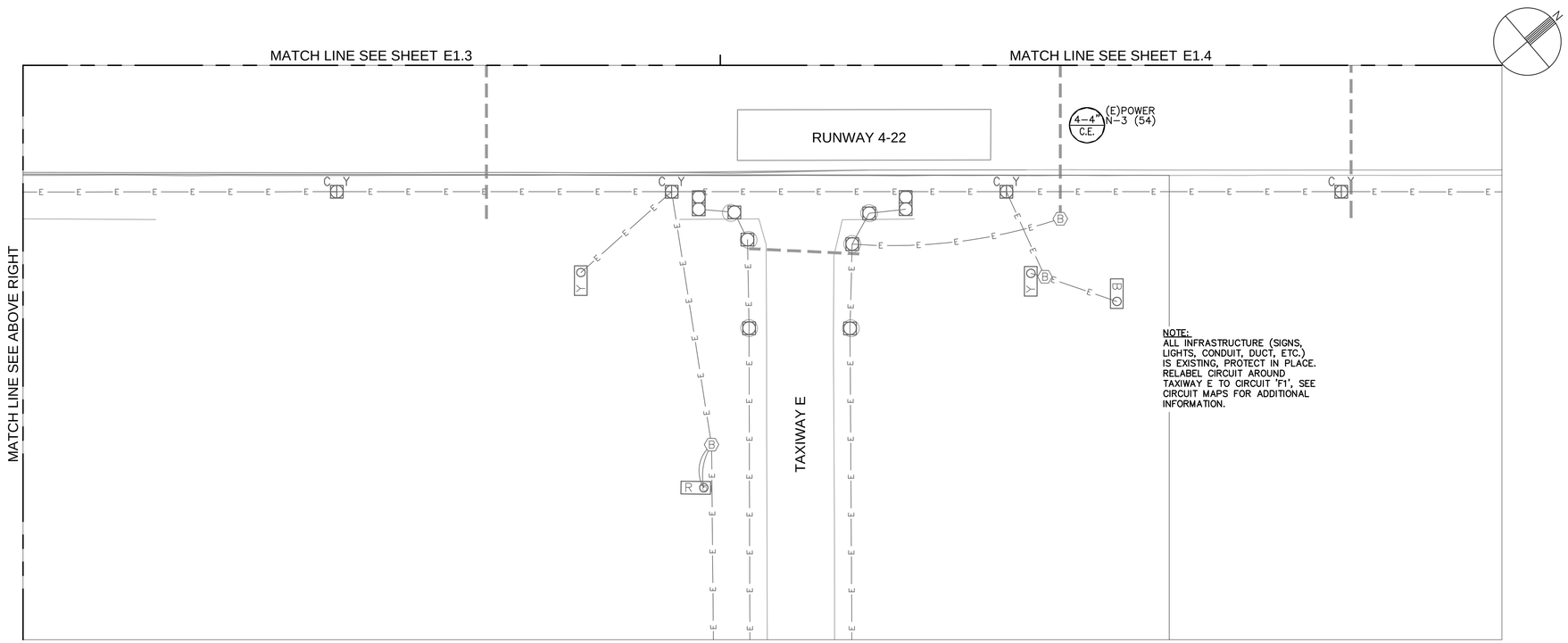
E1.4

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 3_33-00193-R1EE-101.dwg May 18, 2015 Peterson, Cory





NOTE:
ALL INFRASTRUCTURE (SIGNS, LIGHTS, CONDUIT, DUCT, ETC.) IS EXISTING, PROTECT IN PLACE. RELABEL CIRCUIT AROUND TAXIWAY E TO CIRCUIT 'F1', SEE CIRCUIT MAPS FOR ADDITIONAL INFORMATION.

ELECTRICAL CONSTRUCTION NOTES

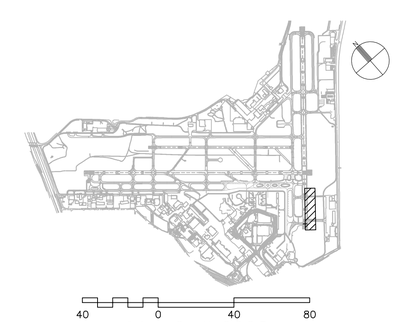
1. EXISTING LIGHT, PROTECT IN PLACE.
2. EXISTING SIGN, PROTECT IN PLACE.
3. EXISTING HANDHOLE, JUNCTION CAN PLAZA OR PULLBOX, PROTECT IN PLACE.
5. EXISTING CONDUIT, PROTECT IN PLACE. INSTALL NEW CONDUCTOR(S) AS NOTED.

BASE CAN, FOUNDATION & CONDUIT NOTES

2. NEW L-867 BASE CAN (WITH 3/8" BLANK COVER IF NOTED IN TABLE) IN EXISTING ASPHALT PAVEMENT.

GENERAL NOTES

1. SEE CIRCUIT MAPS E4 SERIES DRAWINGS FOR NEW OR TEMPORARY CIRCUITS AND FIXTURES.
2. SEE E031, E041, E051, E061, E071, E081, E091, E101 & E111 SERIES DRAWINGS FOR CONSTRUCTION PHASING.



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

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE-ISSUED DRAWING

ISSUE: ----

PROJECT NO:	33-00178 and 33-00193
FILE NAME:	_33-00193-R1EE-101
DRAWN BY:	CMP
CHECKED BY:	ECL
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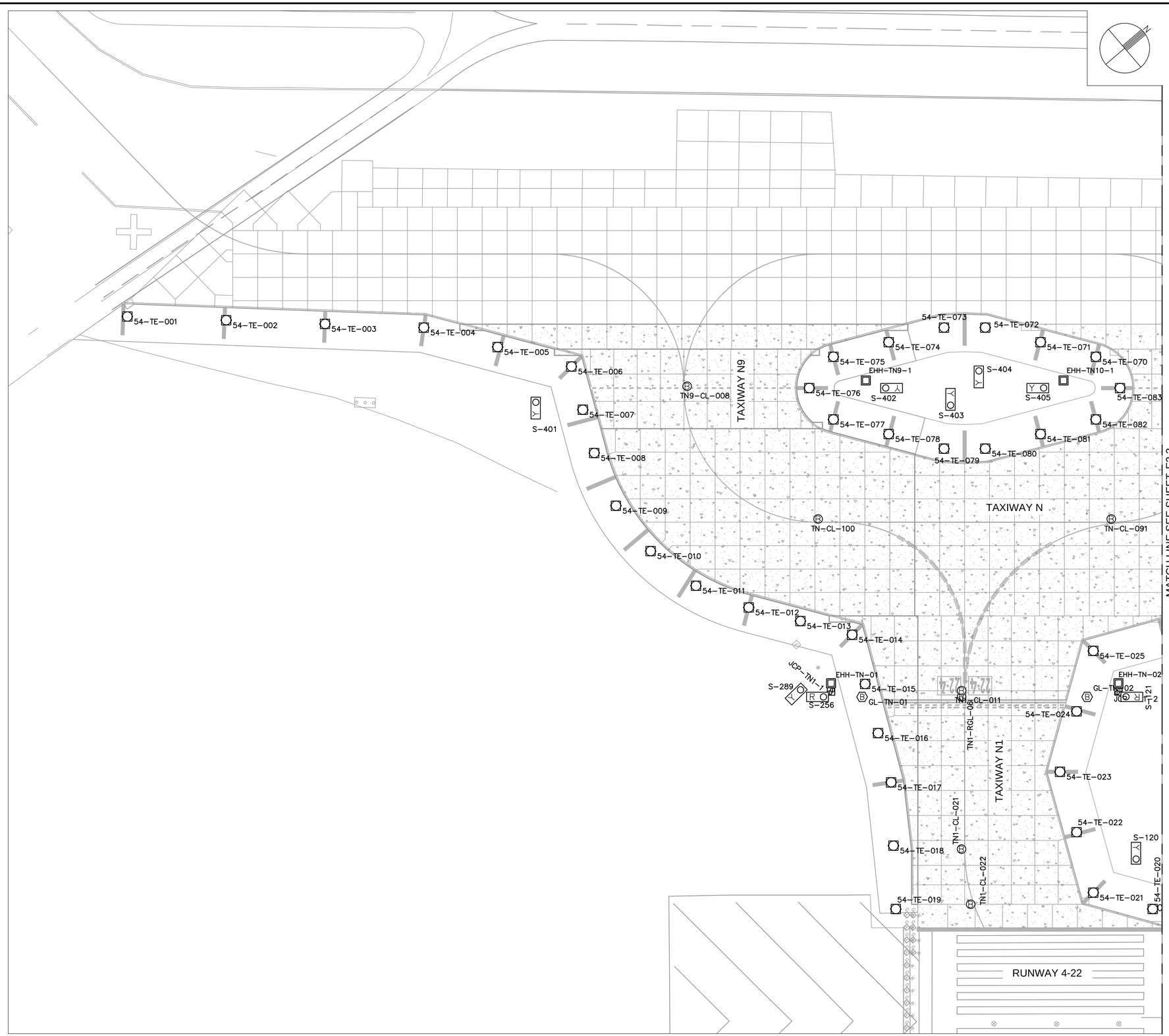
SHEET TITLE:

END STATE ELECTRICAL LAYOUT PLAN

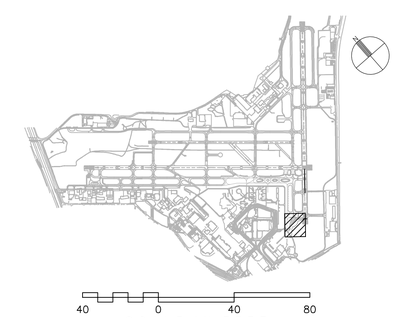
E1.5

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 3_33-00193-R1EE-101.dwg May 18, 2015 Peterson, Cary



GENERAL NOTES

1. SEE DATA TABLES ON DRAWING E2.1A FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS. ALL ELEMENTS ON THIS DRAWING ARE LOCATED PER "Taxiway N" ALIGNMENT.
2. SEE EXX1 DRAWINGS FOR NEW ELECTRICAL SYSTEM LAYOUT PLANS.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE E6 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PLANS.



CITY OF
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TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE-ISSUED DRAWING

ISSUE:	---
PROJECT NO:	33-00178 and 33-00193
FILE NAME:	_33-00193-R1EE-421
DRAWN BY:	CMP
CHECKED BY:	ECL
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SHEET TITLE:

ELECTRICAL
FIXTURE
LAYOUT PLAN -
ALTERNATE 1

E2.2

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 3_33-00193-R1EE-421.dwg May 18, 2015 Peterson, Cary

E2.2 L-867 DATA TABLE

FIXT-NUM	STA	OFF	DETAIL	FAA-TYPE
54-TE-001	STA. 400+95.56	164.86' LT.	E3.3	L-867B FOR L-861T
54-TE-002	STA. 401+74.77	161.93' LT.	E3.3	L-867B FOR L-861T
54-TE-003	STA. 402+53.98	158.99' LT.	E3.3	L-867B FOR L-861T
54-TE-004	STA. 403+33.20	156.05' LT.	E3.3	L-867B FOR L-861T
54-TE-005	STA. 403+92.35	140.43' LT.	E3.3	L-867B FOR L-861T
54-TE-006	STA. 404+51.49	124.82' LT.	E3.3	L-867B FOR L-861T
54-TE-007	STA. 404+60.64	90.17' LT.	E3.3	L-867B FOR L-861T
54-TE-008	STA. 404+69.79	55.52' LT.	E3.3	L-867B FOR L-861T
54-TE-009	STA. 404+87.18	13.21' LT.	E3.3	L-867B FOR L-861T
54-TE-010	STA. 405+14.99	23.10' RT.	E3.3	L-867B FOR L-861T
54-TE-011	STA. 405+51.30	50.91' RT.	E3.3	L-867B FOR L-861T
54-TE-012	STA. 405+93.61	68.30' RT.	E3.3	L-867B FOR L-861T
54-TE-013	STA. 406+35.05	79.24' RT.	E3.3	L-867B FOR L-861T
54-TE-014	STA. 406+76.49	90.18' RT.	E3.3	L-867B FOR L-861T
54-TE-015	STA. 406+86.91	129.61' RT.	E3.3	L-867B FOR L-861T
54-TE-016	STA. 406+97.32	169.05' RT.	E3.3	L-867B FOR L-861T
54-TE-017	STA. 407+07.73	208.48' RT.	E3.3	L-867B FOR L-861T
54-TE-018	STA. 407+09.61	259.24' RT.	E3.3	L-867B FOR L-861T
54-TE-019	STA. 407+11.49	310.00' RT.	E3.3	L-867B FOR L-861T
54-TE-020	STA. 409+17.41	310.00' RT.	E3.3	L-867B FOR L-861T
54-TE-021	STA. 408+69.81	296.87' RT.	E3.3	L-867B FOR L-861T
54-TE-022	STA. 408+56.45	248.43' RT.	E3.3	L-867B FOR L-861T
54-TE-023	STA. 408+43.09	200.00' RT.	E3.3	L-867B FOR L-861T
54-TE-024	STA. 408+56.45	151.57' RT.	E3.3	L-867B FOR L-861T
54-TE-025	STA. 408+69.81	103.13' RT.	E3.3	L-867B FOR L-861T
54-TE-070	STA. 408+71.87	132.64' LT.	E3.3	L-867B FOR L-861T
54-TE-071	STA. 408+27.53	144.34' LT.	E3.3	L-867B FOR L-861T
54-TE-072	STA. 407+83.20	156.05' LT.	E3.3	L-867B FOR L-861T
54-TE-073	STA. 407+50.16	156.05' LT.	E3.3	L-867B FOR L-861T
54-TE-074	STA. 407+05.82	144.34' LT.	E3.3	L-867B FOR L-861T
54-TE-075	STA. 406+61.49	132.64' LT.	E3.3	L-867B FOR L-861T
54-TE-076	STA. 406+42.12	107.50' LT.	E3.3	L-867B FOR L-861T
54-TE-077	STA. 406+61.49	82.36' LT.	E3.3	L-867B FOR L-861T
54-TE-078	STA. 407+05.82	70.66' LT.	E3.3	L-867B FOR L-861T
54-TE-079	STA. 407+50.16	58.95' LT.	E3.3	L-867B FOR L-861T
54-TE-080	STA. 407+83.20	58.95' LT.	E3.3	L-867B FOR L-861T
54-TE-081	STA. 408+27.53	70.66' LT.	E3.3	L-867B FOR L-861T
54-TE-082	STA. 408+71.87	82.36' LT.	E3.3	L-867B FOR L-861T
54-TE-083	STA. 408+91.23	107.50' LT.	E3.3	L-867B FOR L-861T
GL-TN-01	STA. 406+84.48	140.00' RT.	E3.3	L-867B FOR L-861T
GL-TN-02	STA. 408+64.84	140.00' RT.	E3.3	L-867B FOR L-861T

E2.2 L-868 DATA TABLE

FIXT-NUM	STA	OFF	DETAIL	FAA-TYPE
TN1-CL-011	STA. 407+64.18	135.00' RT.	E3.4	L-868 W/ COVER
TN1-CL-021	STA. 407+64.18	262.00' RT.	E3.5 ECCENTRIC CORE	L-868 W/ COVER
TN1-CL-022	STA. 407+71.49	306.25' RT.	E3.5 ECCENTRIC CORE	L-868 W/ COVER
TN1-RGL-06	STA. 407+64.18	140.00' RT.	E3.5 ECCENTRIC CORE	L-868 W/ COVER
TN9-CL-008	STA. 405+44.19	108.96' LT.	E3.4	L-868 W/ COVER
TN-CL-091	STA. 408+84.18	2.50' LT.	E3.4	L-868 W/ COVER
TN-CL-100	STA. 406+49.18	2.50' LT.	E3.4	L-868 W/ COVER

E2.2 SIGN DATA TABLE

SIGN-NUM	STA	OFF	DETAIL	CIRCUIT	MODULES	SIZE
S-401	STA. 404+22.86	96.18' LT.	E3.1		RT858Y2M	MODE 2
S-402	STA. 407+03.38	107.50' LT.	E3.1		RT858Y3M	MODE 2
S-403	STA. 407+55.34	93.78' LT.	E3.1		RT858Y2M	MODE 2
S-404	STA. 407+78.02	121.22' LT.	E3.1		RT858Y2M	MODE 2
S-405	STA. 408+29.97	107.50' LT.	E3.1		RT858Y1M	MODE 2

E2.2 HANDHOLE DATA TABLE

HH-NUM	STA	OFF	DETAIL
EHH-TN-01	STA. 406+59.57	129.00' RT.	E3.8
EHH-TN-02	STA. 408+89.98	129.00' RT.	E3.8
EHH-TN10-1	STA. 408+45.91	113.64' LT.	E3.7
EHH-TN9-1	STA. 406+87.45	113.64' LT.	E3.7

CIRCUIT DESIGNATION SCHEDULE

CIRCUIT NAME	FIELD CIRUIT NUMBER	ALCS NUMBER	REMARKS
WEST VAULT:			
12R-30L EDGE	31	16	MODIFIED CIRCUIT
12R CENTERLINE	30	15	MODIFIED CIRCUIT
30L CENTERLINE	32	17	MODIFIED CIRCUIT
12R TDZ	33	18	MODIFIED CIRCUIT
12L-30R EDGE	35	19	EXISTING CIRCUIT
ALPHA	11	2	EXISTING CIRCUIT
BRAVO	12	1	EXISTING CIRCUIT
G-1	2	12	EXISTING CIRCUIT
G-2	4	7	EXISTING CIRCUIT
G-3	6	8	MODIFIED CIRCUIT
G CENTERLINE WEST	16	13	MODIFIED CIRCUIT
G CENTERLINE EAST	15	14	EXISTING CIRCUIT
G-3 CENTERLINE TO LAHSO	N/A	6	EXISTING CIRCUIT
LAHSO STOP BAR	N/A	27	EXISTING CIRCUIT
H-1 WEST	13	11	EXISTING CIRCUIT
H-2 EAST	14	9	EXISTING CIRCUIT
JULIET	9	3	EXISTING CIRCUIT
LIMA ON 24/7	10	5	EXISTING CIRCUIT
MIKE	7	4	EXISTING CIRCUIT
ROMEO	8	20	EXISTING CIRCUIT
SIERRA R/C	N/A	20	EXISTING CIRCUIT
EAST VAULT:			
4-22 EDGE	N/A	41	EXISTING CIRCUIT
4 CENTERLINE	N/A	43	EXISTING CIRCUIT
22 CENTERLINE	N/A	42	EXISTING CIRCUIT
DELTA	56	35	EXISTING CIRCUIT
FOXTROT	57	34	MODIFIED CIRCUIT
N-1	52	36	EXISTING CIRCUIT
N-2	53	37	EXISTING CIRCUIT
N-3	54	32	EXISTING CIRCUIT
NEW CARGO	51	31	EXISTING CIRCUIT
QUEBEC	55	33	EXISTING CIRCUIT

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TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE-ISSUED DRAWING

ISSUE: ----

PROJECT NO: 33-00178 and 33-00193
FILE NAME: _33-00193-R1EE-421
DRAWN BY: CMP
CHECKED BY: ECL
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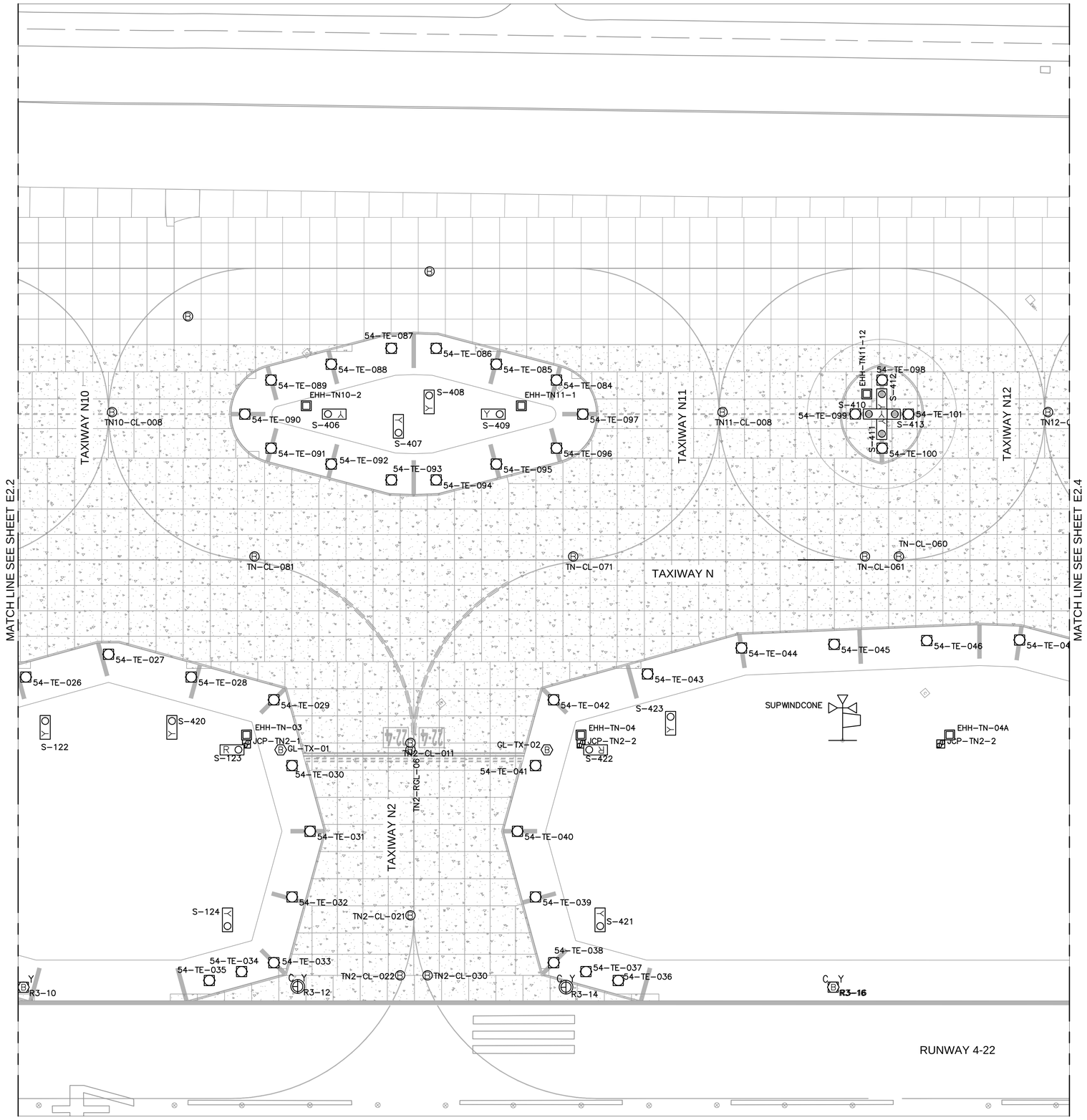
ELECTRICAL FIXTURE DATA TABLES - ALTERNATE 1

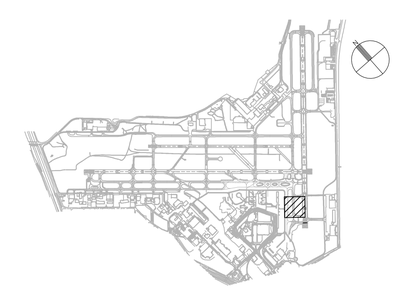
E2.2A

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 3_33-00193-R1EE-421.dwg May 18, 2015 Peterson, Cary



GENERAL NOTES

1. SEE DATA TABLES ON DRAWING E2.2A FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS. ALL ELEMENTS ON THIS DRAWING ARE LOCATED PER "Taxiway N" ALIGNMENT.
2. SEE EXX1 DRAWINGS FOR NEW ELECTRICAL SYSTEM LAYOUT PLANS.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE E6 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PLANS.



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TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE-ISSUED DRAWING

ISSUE: ----

PROJECT NO:	33-00178 and 33-00193
FILE NAME:	_33-00193-R1EE-421
DRAWN BY:	CMP
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SHEET TITLE:

ELECTRICAL
FIXTURE
LAYOUT PLAN -
ALTERNATE 1

E2.3

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E2.3 L-867 DATA TABLE

FIXT-NUM	STA	OFF	DETAIL	FAA-TYPE
54-TE-026	STA. 409+30.74	86.32' RT.	E3.3	L-867B FOR L-861T
54-TE-027	STA. 409+91.68	69.51' RT.	E3.3	L-867B FOR L-861T
54-TE-028	STA. 410+52.61	86.32' RT.	E3.3	L-867B FOR L-861T
54-TE-029	STA. 411+13.55	103.13' RT.	E3.3	L-867B FOR L-861T
54-TE-030	STA. 411+26.91	151.57' RT.	E3.3	L-867B FOR L-861T
54-TE-031	STA. 411+40.27	200.00' RT.	E3.3	L-867B FOR L-861T
54-TE-032	STA. 411+26.91	248.43' RT.	E3.3	L-867B FOR L-861T
54-TE-033	STA. 411+13.55	296.87' RT.	E3.3	L-867B FOR L-861T
54-TE-034	STA. 410+89.75	303.43' RT.	E3.3	L-867B FOR L-861T
54-TE-035	STA. 410+65.95	310.00' RT.	E3.3	L-867B FOR L-861T
54-TE-036	STA. 413+67.41	310.00' RT.	E3.3	L-867B FOR L-861T
54-TE-037	STA. 413+43.61	303.43' RT.	E3.3	L-867B FOR L-861T
54-TE-038	STA. 413+19.81	296.87' RT.	E3.3	L-867B FOR L-861T
54-TE-039	STA. 413+06.45	248.43' RT.	E3.3	L-867B FOR L-861T
54-TE-040	STA. 412+93.09	200.00' RT.	E3.3	L-867B FOR L-861T
54-TE-041	STA. 413+06.45	151.57' RT.	E3.3	L-867B FOR L-861T
54-TE-042	STA. 413+19.81	103.13' RT.	E3.3	L-867B FOR L-861T
54-TE-043	STA. 413+89.02	84.04' RT.	E3.3	L-867B FOR L-861T
54-TE-044	STA. 414+58.23	64.95' RT.	E3.3	L-867B FOR L-861T
54-TE-045	STA. 415+26.55	62.18' RT.	E3.3	L-867B FOR L-861T
54-TE-046	STA. 415+94.87	59.42' RT.	E3.3	L-867B FOR L-861T
54-TE-047	STA. 416+63.20	58.95' RT.	E3.3	L-867B FOR L-861T
54-TE-048	STA. 417+22.35	74.57' RT.	E3.3	L-867B FOR L-861T
54-TE-084	STA. 413+21.87	132.64' LT.	E3.3	L-867B FOR L-861T
54-TE-085	STA. 412+77.53	144.34' LT.	E3.3	L-867B FOR L-861T
54-TE-086	STA. 412+33.20	156.05' LT.	E3.3	L-867B FOR L-861T
54-TE-087	STA. 412+00.16	156.05' LT.	E3.3	L-867B FOR L-861T
54-TE-088	STA. 411+55.82	144.34' LT.	E3.3	L-867B FOR L-861T
54-TE-089	STA. 411+11.49	132.64' LT.	E3.3	L-867B FOR L-861T
54-TE-090	STA. 410+92.12	107.50' LT.	E3.3	L-867B FOR L-861T
54-TE-091	STA. 411+11.49	82.36' LT.	E3.3	L-867B FOR L-861T
54-TE-092	STA. 411+55.82	70.66' LT.	E3.3	L-867B FOR L-861T
54-TE-093	STA. 412+00.16	58.95' LT.	E3.3	L-867B FOR L-861T
54-TE-094	STA. 412+33.20	58.95' LT.	E3.3	L-867B FOR L-861T
54-TE-095	STA. 412+77.53	70.66' LT.	E3.3	L-867B FOR L-861T
54-TE-096	STA. 413+21.87	82.36' LT.	E3.3	L-867B FOR L-861T
54-TE-097	STA. 413+41.23	107.50' LT.	E3.3	L-867B FOR L-861T
54-TE-098	STA. 415+61.87	132.64' LT.	E3.3	L-867B FOR L-861T
54-TE-099	STA. 415+42.12	107.58' LT.	E3.3	L-867B FOR L-861T
54-TE-100	STA. 415+61.87	82.36' LT.	E3.3	L-867B FOR L-861T
54-TE-101	STA. 415+81.23	107.50' LT.	E3.3	L-867B FOR L-861T
GL-TX-01	STA. 411+18.53	139.99' RT.	E3.3	L-867B FOR L-861T
GL-TX-02	STA. 413+14.83	139.98' RT.	E3.3	L-867B FOR L-861T
R3-10	STA. 409+28.94	315.00' RT.	E3.3	L-867B FOR L-862
R3-16	STA. 415+25.89	314.93' RT.	E3.3	L-867B FOR L-862
R3-18	STA. 417+21.26	315.00' RT.	E3.3	L-867B FOR L-862

E2.3 L-868 DATA TABLE

FIXT-NUM	STA	OFF	DETAIL	FAA-TYPE
R3-12	STA. 411+31.10	314.48' RT.	E3.4	L-868 FOR L-850C
R3-14	STA. 413+28.83	315.00' RT.	E3.4	L-868 FOR L-850C
TN10-CL-008	STA. 409+94.19	108.97' LT.	E3.4	L-868 W/ COVER
TN11-CL-008	STA. 414+44.19	108.97' LT.	E3.4	L-868 W/ COVER
TN12-CL-008	STA. 416+84.19	108.97' LT.	E3.4	L-868 W/ COVER
TN2-CL-011	STA. 412+14.18	135.00' RT.	E3.4	L-868 W/ COVER
TN2-CL-021	STA. 412+14.18	262.00' RT.	E3.4	L-868 W/ COVER
TN2-CL-022	STA. 412+06.57	306.25' RT.	E3.4	L-868 W/ COVER
TN2-CL-030	STA. 412+26.78	306.25' RT.	E3.4	L-868 W/ COVER
TN2-RGL-06	STA. 412+14.18	139.99' RT.	E3.5 ECCENTRIC CORE	L-868 W/ COVER
TN-CL-060	STA. 415+74.18	2.50' LT.	E3.4	L-868 W/ COVER
TN-CL-061	STA. 415+49.18	2.50' LT.	E3.4	L-868 W/ COVER
TN-CL-071	STA. 413+34.18	2.50' LT.	E3.4	L-868 W/ COVER
TN-CL-081	STA. 410+99.18	2.50' LT.	E3.4	L-868 W/ COVER

E2.3 SIGN DATA TABLE

SIGN-NUM	STA	OFF	DETAIL	CIRCUIT	MODULES	SIZE
S-122	STA. 409+44.97	118.70' RT.	E3.1		RT858Y3M	MODE 2
S-123	STA. 410+87.41	139.99' RT.	E3.1	4-22 EDGE	RT858R4M	MODE 2
S-124	STA. 410+79.33	270.00' RT.	E3.1		RT858Y2M	MODE 2
S-406	STA. 411+53.38	107.50' LT.	E3.1		RT858Y3M	MODE 2
S-407	STA. 412+05.34	93.78' LT.	E3.1		RT858Y3M	MODE 2
S-408	STA. 412+28.02	121.22' LT.	E3.1		RT858Y2M	MODE 2
S-409	STA. 412+79.97	107.50' LT.	E3.1		RT858Y2M	MODE 2
S-410	STA. 415+52.12	107.55' LT.	E3.2		RT858Y3M	MODE 2
S-411	STA. 415+61.68	92.94' LT.	E3.2		RT858Y3M	MODE 2
S-412	STA. 415+61.68	122.14' LT.	E3.2		RT858Y2M	MODE 2
S-413	STA. 415+71.23	107.50' LT.	E3.2		RT858Y2M	MODE 2
S-420	STA. 410+38.38	118.70' RT.	E3.1		RT858Y3M	MODE 2
S-421	STA. 413+54.02	270.00' RT.	E3.1		RT858Y2M	MODE 2
S-422	STA. 413+45.95	139.98' RT.	E3.1	4-22 EDGE	RT858R4M	MODE 2
S-423	STA. 414+05.96	115.67' RT.	E3.1		RT858Y2M	MODE 2
S-424	STA. 417+05.44	106.30' RT.	E3.1		RT858Y2M	MODE 2

E2.3 HANDHOLE DATA TABLE

HH-NUM	STA	OFF	DETAIL
EHH-TN-03	STA. 410+93.37	129.00' RT.	E3.8
EHH-TN-04	STA. 413+39.98	129.00' RT.	E3.8
EHH-TN-04A	STA. 416+11.70	129.00' RT.	E3.8
EHH-TN10-2	STA. 411+37.45	113.64' LT.	E3.7
EHH-TN11-1	STA. 412+95.91	113.64' LT.	E3.7
EHH-TN11-12	STA. 415+50.58	122.35' LT.	E3.7

CIRCUIT DESIGNATION SCHEDULE

CIRCUIT NAME	FIELD CIRUIT NUMBER	ALCS NUMBER	REMARKS
WEST VAULT:			
12R-30L EDGE	31	16	MODIFIED CIRCUIT
12R CENTERLINE	30	15	MODIFIED CIRCUIT
30L CENTERLINE	32	17	MODIFIED CIRCUIT
12R TDZ	33	18	MODIFIED CIRCUIT
12L-30R EDGE	35	19	EXISTING CIRCUIT
ALPHA	11	2	EXISTING CIRCUIT
BRAVO	12	1	EXISTING CIRCUIT
G-1	2	12	EXISTING CIRCUIT
G-2	4	7	EXISTING CIRCUIT
G-3	6	8	MODIFIED CIRCUIT
G CENTERLINE WEST	16	13	MODIFIED CIRCUIT
G CENTERLINE EAST	15	14	EXISTING CIRCUIT
G-3 CENTERLINE TO LAHSO	N/A	6	EXISTING CIRCUIT
LAHSO STOP BAR	N/A	27	EXISTING CIRCUIT
H-1 WEST	13	11	EXISTING CIRCUIT
H-2 EAST	14	9	EXISTING CIRCUIT
JULIET	9	3	EXISTING CIRCUIT
LIMA ON 24/7	10	5	EXISTING CIRCUIT
MIKE	7	4	EXISTING CIRCUIT
ROMEO	8	20	EXISTING CIRCUIT
SIERRA R/C	N/A	20	EXISTING CIRCUIT
EAST VAULT:			
4-22 EDGE	N/A	41	EXISTING CIRCUIT
4 CENTERLINE	N/A	43	EXISTING CIRCUIT
22 CENTERLINE	N/A	42	EXISTING CIRCUIT
DELTA	56	35	EXISTING CIRCUIT
FOXTROT	57	34	MODIFIED CIRCUIT
N-1	52	36	EXISTING CIRCUIT
N-2	53	37	EXISTING CIRCUIT
N-3	54	32	EXISTING CIRCUIT
NEW CARGO	51	31	EXISTING CIRCUIT
QUEBEC	55	33	EXISTING CIRCUIT

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

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
ERIC C. LOVEJOY
84081
LICENSED
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
1	06/08/15	RE-ISSUED DRAWING

ISSUE: ----

PROJECT NO: 33-00178 and 33-00193
FILE NAME: _33-00193-R1EE-421
DRAWN BY: CMP
CHECKED BY: ECL
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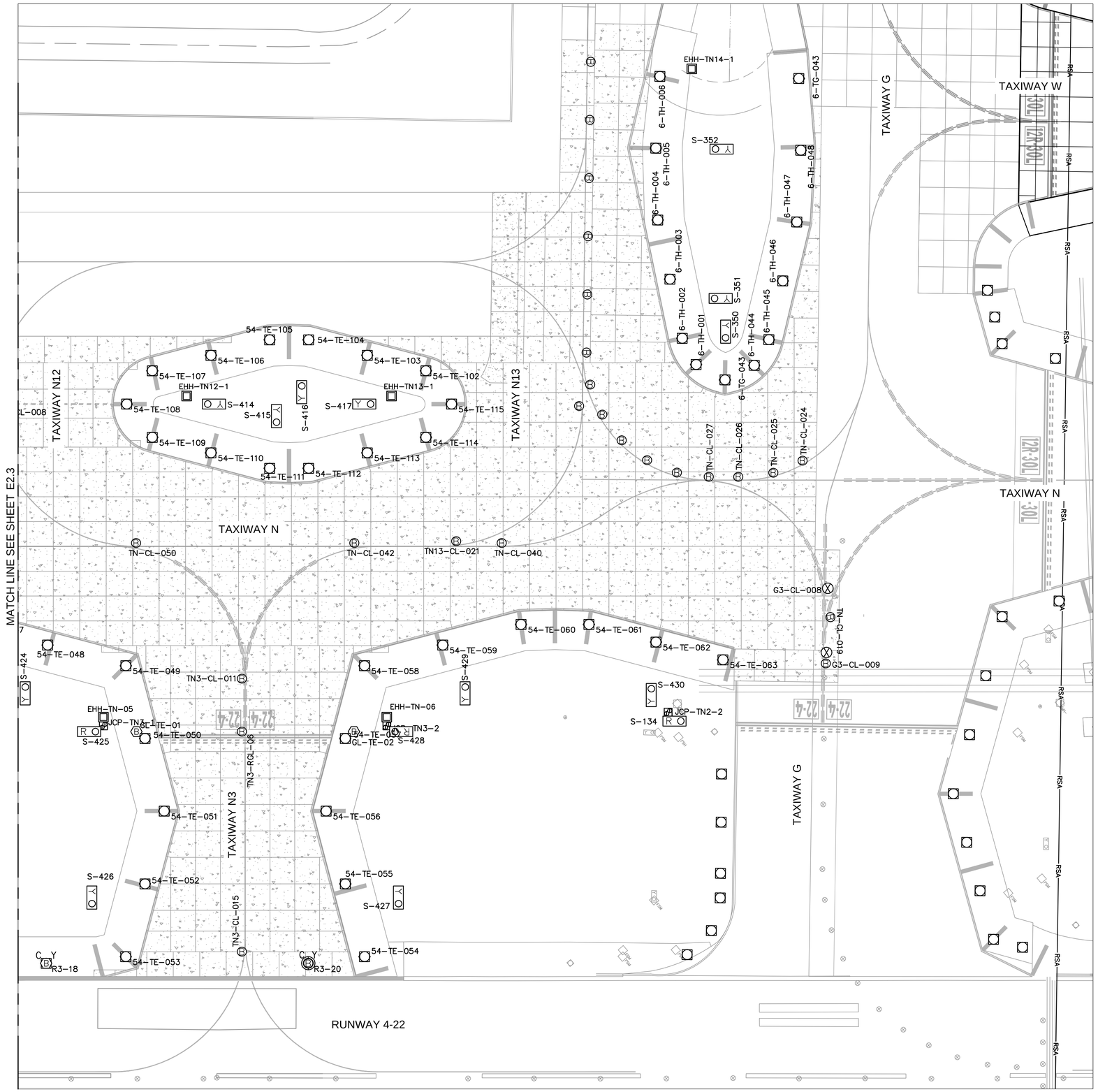
SHEET TITLE:

ELECTRICAL FIXTURE DATA TABLES - ALTERNATE 1

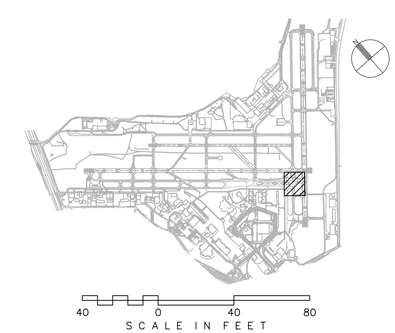
E2.3A

K:\REN_Aviation\19162900-SAT Rwy & Twy improvements\05 CADD_PACKAGE 3_33-00193-R1EE-421.dwg May 18, 2015 Peterson, Cory



GENERAL NOTES

1. SEE DATA TABLES ON DRAWING E2.3A FOR NEW FIXTURE, HANDHOLE, JUNCTION CAN, BASE CAN, AND SIGN FOUNDATION LOCATIONS. ALL ELEMENTS ON THIS DRAWING ARE LOCATED PER "Taxiway N" ALIGNMENT.
2. SEE EXX1 DRAWINGS FOR NEW ELECTRICAL SYSTEM LAYOUT PLANS.
3. SEE E5 SERIES DRAWINGS FOR AIRFIELD SIGN LEGENDS.
4. SEE E6 SERIES DRAWINGS FOR ELECTRICAL DEMOLITION PLANS.



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ELECTRICAL
FIXTURE
LAYOUT PLAN -
ALTERNATE 1

E2.4

K:\REN_Aviation\191629001-SAT Rwy & Twy Improvements\05 CADD_PACKAGE 3_33-00193-R1EE-421.dwg May 18, 2015 Peterson, Cary