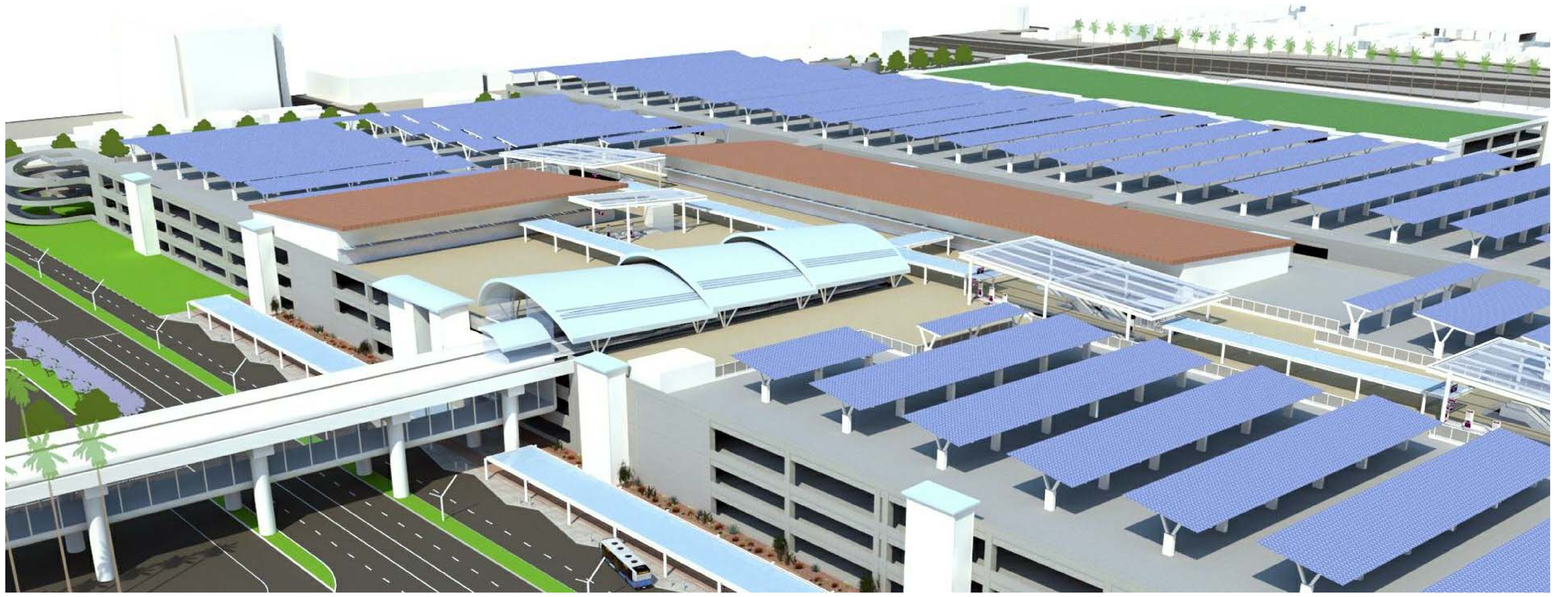
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LOS ANGELES INTERNATIONAL AIRPORT
CONSOLIDATED RENTAL CAR FACILITY

PROJECT NO. DA4881



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VOLUME 5 OF 5 - BUILDING E - CSB & CORES

(G, S, A, M, P, E, T)

ConRAC 2ND REFINEMENT SUBMITTAL

07/01/2016

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SHEET INDEX VOLUME 5

NUMBER	NAME	2016-01-15 50% DESIGN SUBMITTAL	2016-02-26 REFINEMENT SUBMITTAL	2016-07-01 2nd REFINEMENT SUBMITTAL
GENERAL				
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5-G-014	SHEET INDEX VOLUME 5		•	•
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5-S-020	READY RETURN LEVEL 2 OVERALL CORE PLAN			•
5-S-030	READY RETURN LEVEL 3 OVERALL CORE PLAN			•
5-S-040	READY RETURN LEVEL 4 OVERALL CORE PLAN			•
5-S-211	READY RETURN LEVEL 1 CORE PLAN			•
5-S-212	READY RETURN LEVEL 1 CORE PLAN			•
5-S-213	READY RETURN LEVEL 1 CORE PLAN			•
5-S-221	READY RETURN LEVEL 2 CORE PLAN			•
5-S-222	READY RETURN LEVEL 2 CORE PLAN			•
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5-S-231	READY RETURN LEVEL 3 CORE PLAN			•
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5-S-241	READY RETURN LEVEL 4 CORE PLAN			•
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5-S-243	READY RETURN LEVEL 4 CORE PLAN			•
5-S-251	CSB ROOF LEVEL ENLARGED PLANS	•	•	•
5-S-252	CSB ROOF LEVEL ENLARGED PLANS	•	•	•
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5-A-020	CSB & CORES LEVEL 2 OVERALL FLOOR PLAN		•	•
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5-A-920	VIEWS OF SIGNAGE STUDIES AT CORE			•
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5-T-030	CSB & CORES TELECOM LEVEL 3 OVERALL FLOOR PLAN			•
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CONSULTANTS:

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Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

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ASST. CHIEF AIRPORTS ENGINEER

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REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: NTS
DATE: 07/01/2016
DESIGNED BY: JQJ
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:

SHEET INDEX VOLUME 5

SHEET NO.

5-G-015

SHEET OF

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509'-0"

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1580'-0"

1 5-S-211

2 5-S-212

1 5-S-212

2 5-S-211

1 5-S-213

BUILDING D - CSB □ CORES

BUILDING A - DWP □ FIRE COMMAND SEE VOLUME 2

BUILDING A - □ TA SEE VOLUME 2

BUILDING C - IDLE STORAGE SEE VOLUME 3

BUILDING B - □ TA SEE VOLUME 2

1 BUILDING E - CSB □ CORES - LEVEL 1 OVERALL FLOOR PLAN

SCALE: 1" = 60'

D C A B

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PROJ NO:	DA4881
SCALE:	1" : 60
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

CSB □ CORES LEVEL 1 OVERALL FLOOR PLAN

SHEET NO.

5-S-010

SHEET OF

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1580'-0"

BUILDING A - DWP
FIRE COMMAND
SEE VOLUME 2

BUILDING A - TA
SEE VOLUME 2

BUILDING C - IDLE STORAGE
SEE VOLUME 3

BUILDING B - TA
SEE VOLUME 2

BUILDING D - CSB CORES

1 5-S-221

2 5-S-222

1 5-S-222

1 5-S-223

2 5-S-221 SIM

1 BUILDING E - CSB CORES - LEVEL 2 OVERALL FLOOR PLAN
SCALE: 1" = 60'

N

KEYPLAN
D C A B

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DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB CORES
LEVEL 2
OVERALL
FLOOR PLAN

SHEET NO.
5-S-020

SHEET OF

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1580'-0"

BUILDING D - CSB □ CORES

BUILDING A - □TA
SEE VOLUME 2

BUILDING C - IDLE STORAGE
SEE VOLUME 3

BUILDING B - □TA
SEE VOLUME 2

1 5-S-231

1 5-S-231

1 5-S-232

2 5-S-233

2 5-S-231 SIM

1 BUILDING E - CSB □ CORES - LEVEL 3 OVERALL FLOOR PLAN
SCALE: 1" = 60'

N

D C A B

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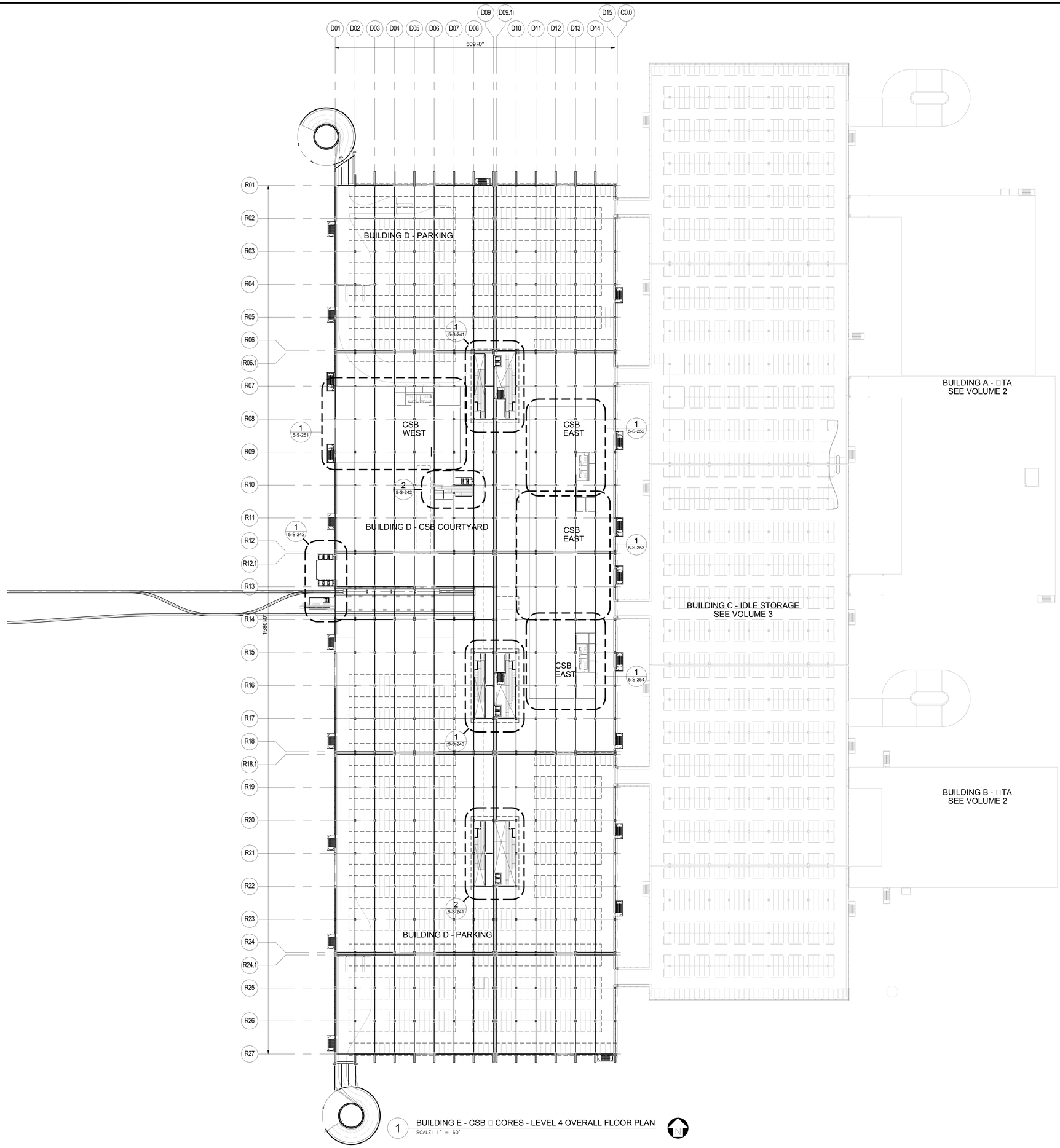
CSB □ CORES
LEVEL 3
OVERALL
FLOOR PLAN

SHEET NO.

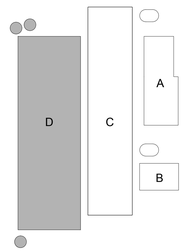
5-S-030

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1 BUILDING E - CSB □ CORES - LEVEL 4 OVERALL FLOOR PLAN
SCALE: 1" = 60'



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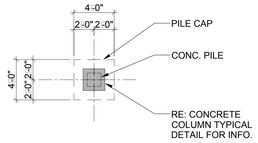
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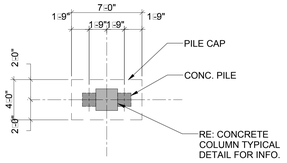
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CSB □ CORES
LEVEL 4
OVERALL
FLOOR PLAN

SHEET NO.
5-S-040
SHEET OF

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PILE CAP TYPE 1 (PC1)



PILE CAP TYPE 2 (PC2)

PLAN NOTES:

1. TOP OF FINISH FLOOR (REFERENCE ELEVATION 0'-0" = -LEVEL 1 = 98'-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
4. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
5. RE: ARCHITECTURAL FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
6. RE: VOLUME 4 FOR INFORMATION NOT SHOWN HERE.
7. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

1. 12" THICK CONC. CAST-IN PLACE ESCALATOR PIT WALL.
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR PIT WALL
3. 8" THICK FULL HEIGHT CMU WALL

PLAN LEGEND:

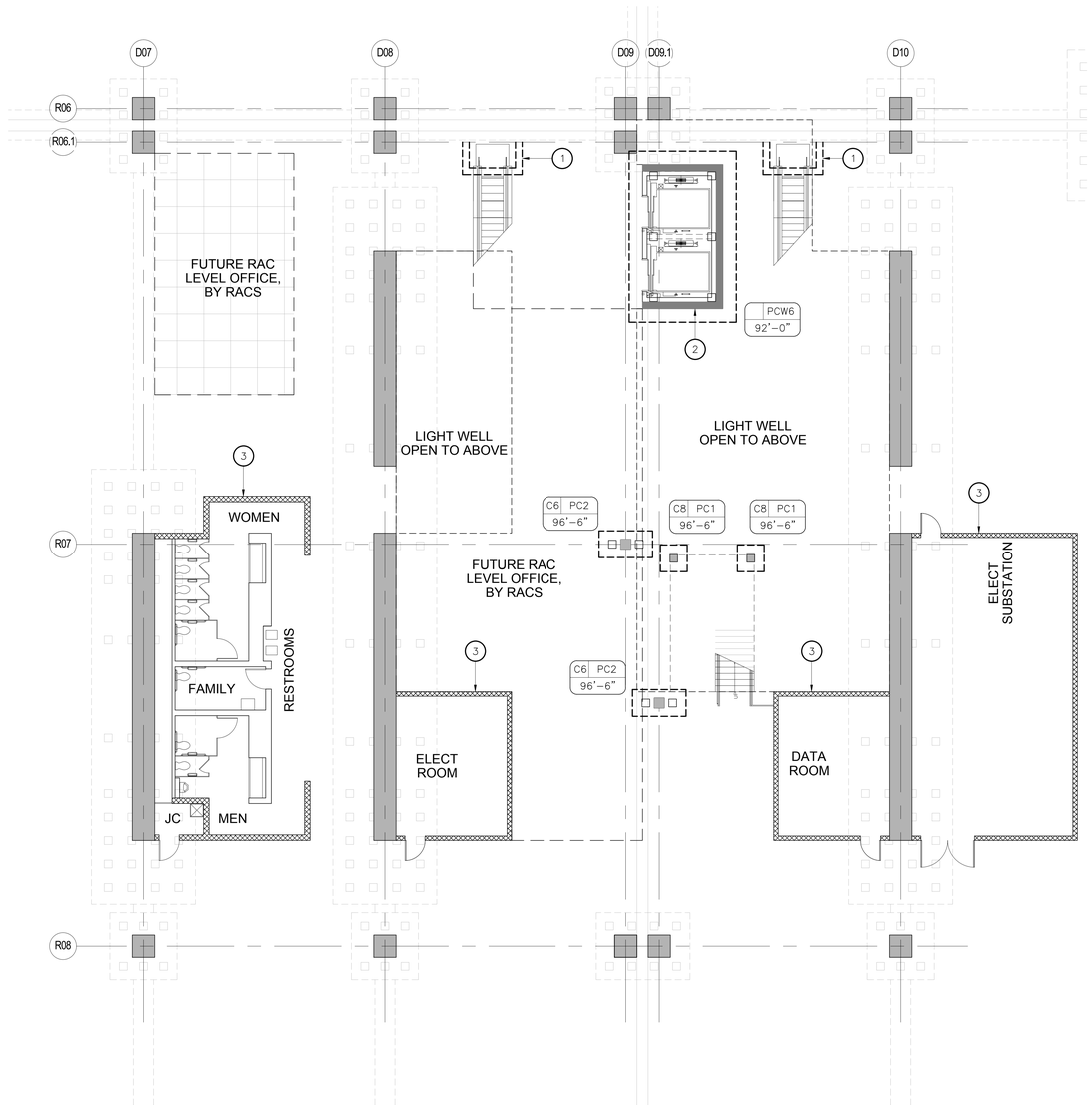
- INDICATES CONCRETE WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE

CONCRETE COLUMN SCHEDULE		
C6	18"X18"	
C7	28"X28"	2" EXTRA COVER FOR COLLISION PROTECTION
C8	12"X12"	

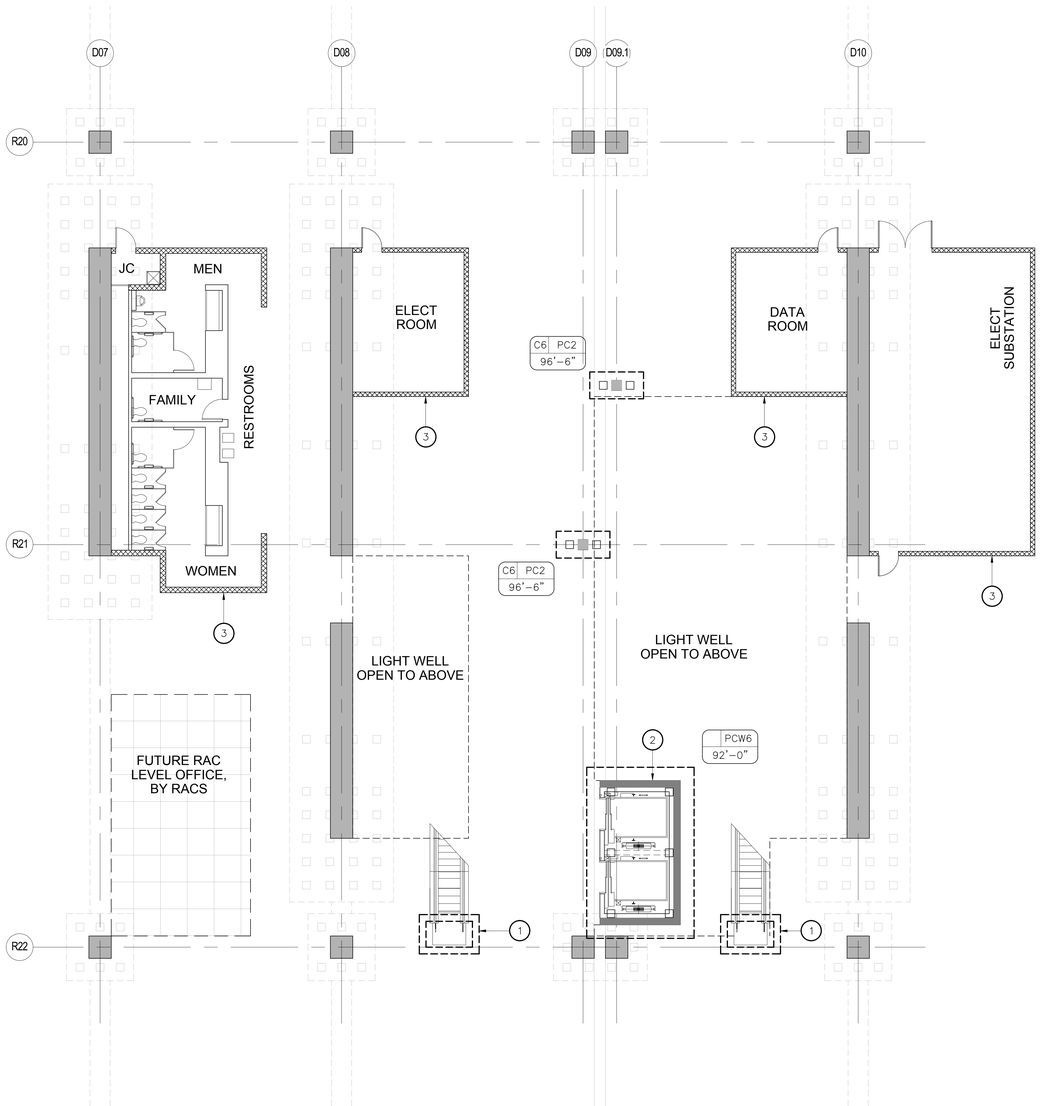
COLUMN PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PC1	4'-0"X4'-0"X2'-0"	1
PC2	7'-0"X4'-0"X3'-0"	2

PILE SCHEDULE	
SIZE	DEPTH BELOW BOTTOM OF PILE CAP
16"X16"	65'-0"

ELEVATOR PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PCW6	16'-0"X25'-6"X4'-6"	6
PCW8	17'-6"X34'-0"X4'-6"	8
TOP OF PILE CAP ELEVATION TO BE VERIFIED BY ELEVATOR MANUFACTURE.		



1 BUILDING E - CSB (CORES - LEVEL 1, CORE 1 PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB (CORES - LEVEL 1, CORE 4 PLAN
SCALE: 1/8" = 1'-0"

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Lo Angele International Airport

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APPROVED BY CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

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PROJ NO:	DA4881
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DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

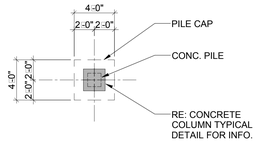
CSB (CORES LEVEL 1 ENLARGED CORE PLANS

SHEET NO.

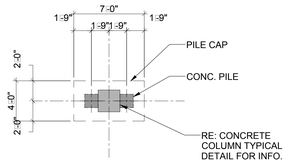
5-S-211

SHEET OF

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PILE CAP TYPE 1 (PC1)



PILE CAP TYPE 2 (PC2)

PLAN NOTES:

1. TOP OF FINISH FLOOR (REFERENCE ELEVATION 0'-0" = -LEVEL 1 = 98'-6"
2. "X" = DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
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KEY PLAN:

1. 12" THICK CONC. CAST-IN PLACE ESCALATOR PIT WALL.
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR PIT WALL
3. 8" THICK FULL HEIGHT CMU WALL

PLAN LEGEND:

INDICATES CONCRETE WALL

INDICATES FULLY GROUTED MASONRY WALL

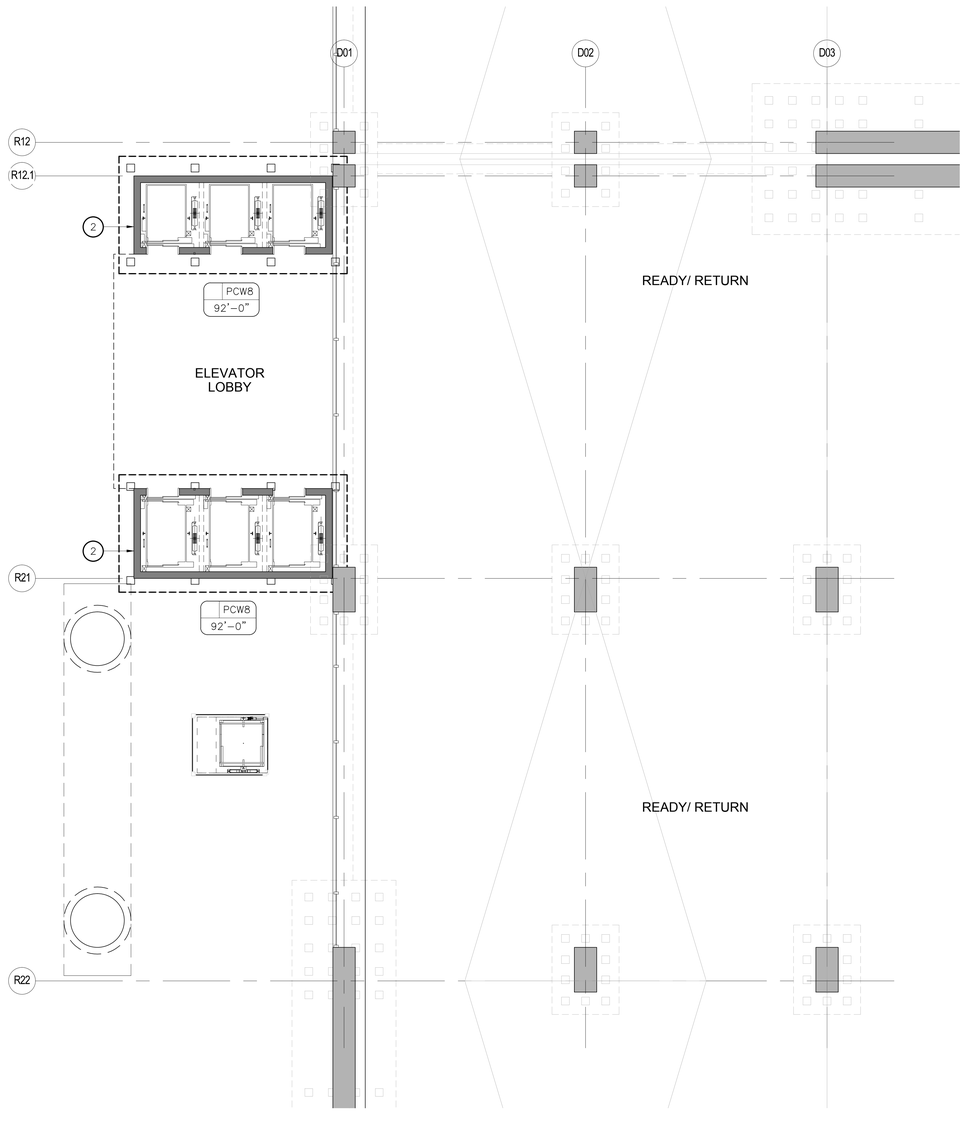
INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE

CONCRETE COLUMN SCHEDULE		
C6	18"X18"	
C7	28"X28"	2" EXTRA COVER FOR COLLISION PROTECTION
C8	12"X12"	

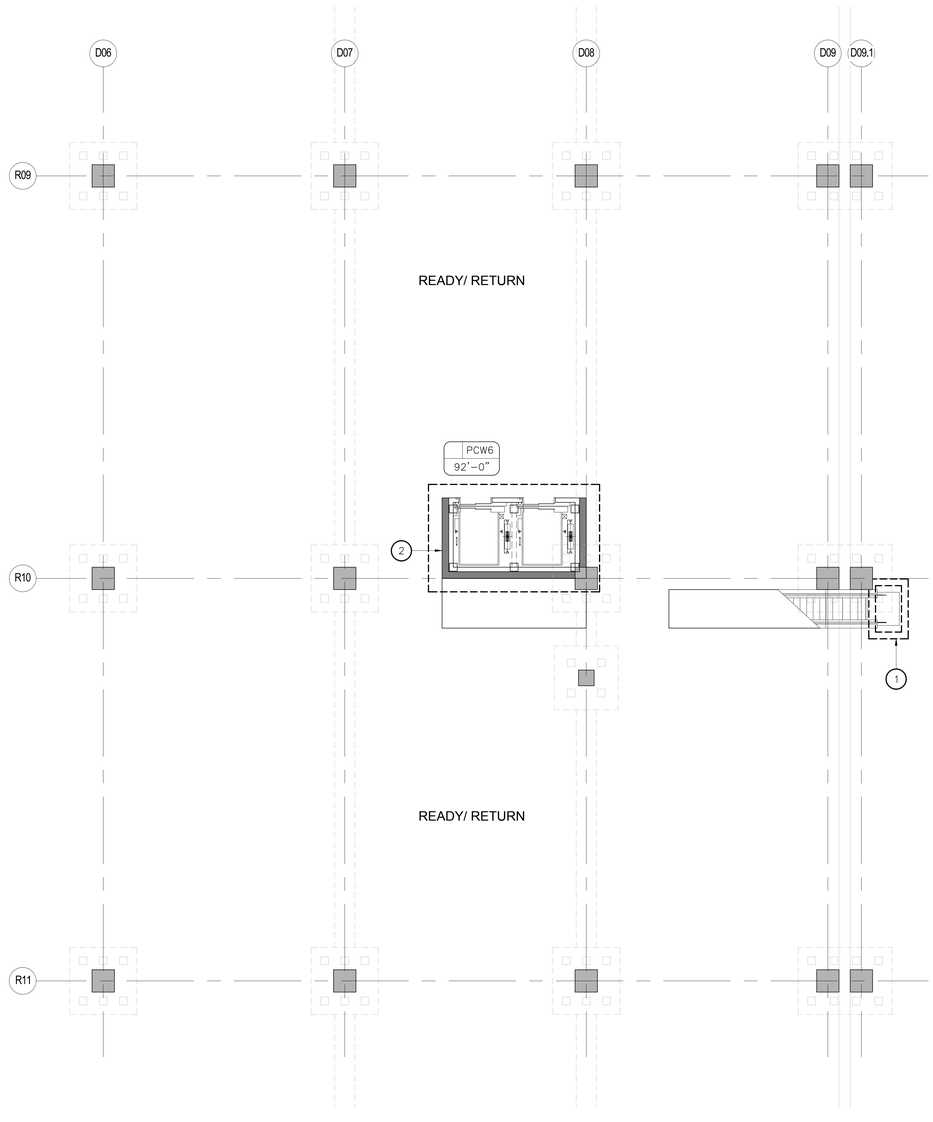
COLUMN PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PC1	4'-0"X4'-0"X2'-0"	1
PC2	7'-0"X4'-0"X3'-0"	2

PILE SCHEDULE	
SIZE	DEPTH BELOW BOTTOM OF PILE CAP
16"X16"	65'-0"

ELEVATOR PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PCW6	16'-0"X25'-6"X4'-6"	6
PCW8	17'-6"X34'-0"X4'-6"	8
TOP OF PILE CAP ELEVATION TO BE VERIFIED BY ELEVATOR MANUFACTURE.		



1 BUILDING E - CSB (CORES - LEVEL 1, CORE WEST PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB (CORES - LEVEL 1, CORE 2 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo Angele International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

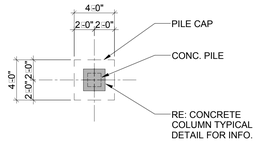
MARK	DATE	DESCRIPTION

PROJ.NO.: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

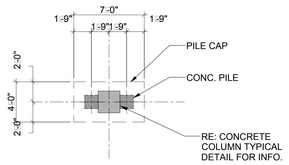
SHEET TITLE:
CSB (CORES
LEVEL 1
ENLARGED
CORE PLANS

SHEET NO.
5-S-212
SHEET OF

C:\Users\...\acad_profile\plotters\5-S-212_LVL1.dwg, Plotted: Jul 01, 2016 - 11:56am
IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



PILE CAP TYPE 1 (PC1)



PILE CAP TYPE 2 (PC2)

PLAN NOTES:

1. TOP OF FINISH FLOOR (REFERENCE ELEVATION 0'-0" = -LEVEL 1 = 98'-6"
2. X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
4. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
5. RE: ARCHITECTURAL FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
6. RE: VOLUME 4 FOR INFORMATION NOT SHOWN HERE.
7. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

1. 12" THICK CONC. CAST-IN PLACE ESCALATOR PIT WALL.
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR PIT WALL
3. 8" THICK FULL HEIGHT CMU WALL

PLAN LEGEND:

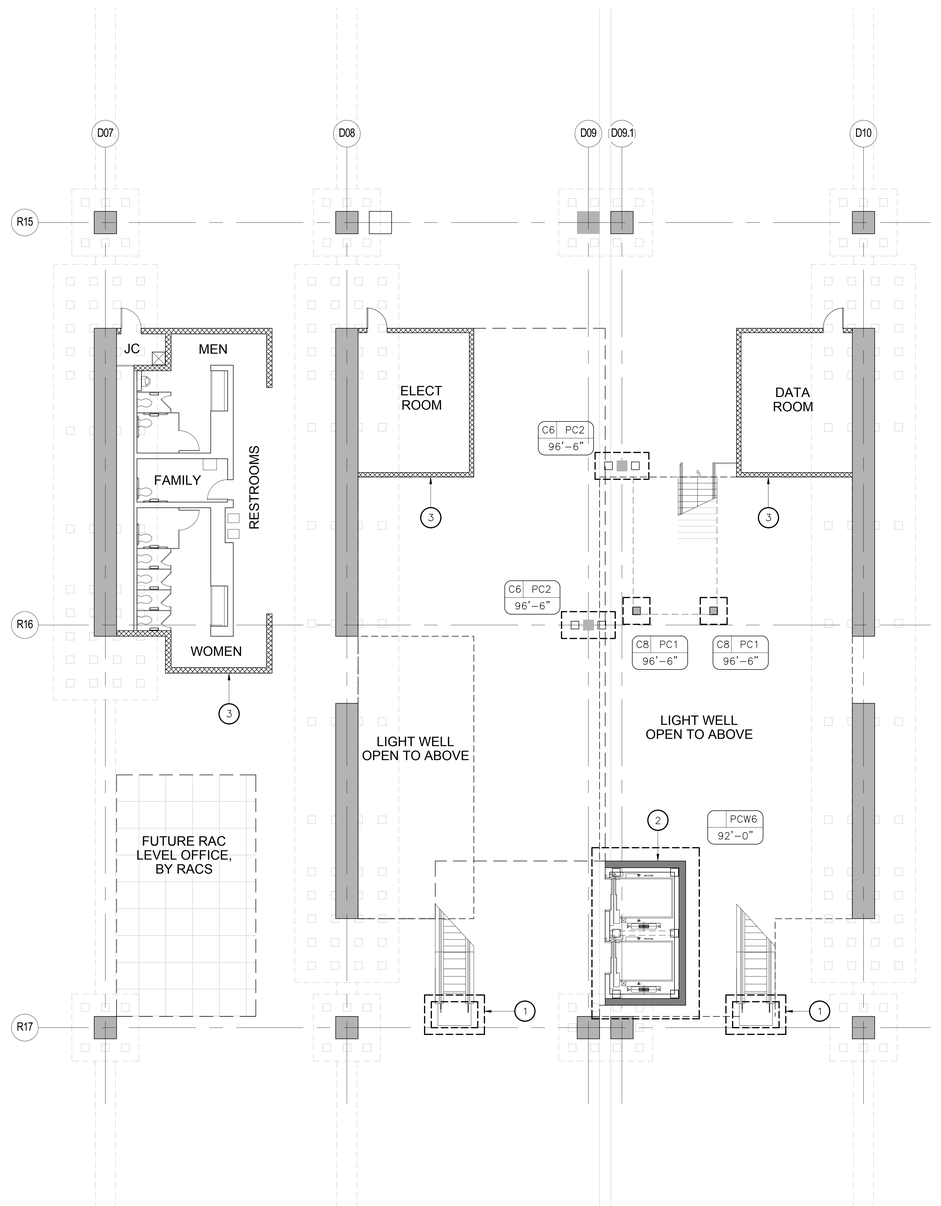
- INDICATES CONCRETE WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE

CONCRETE COLUMN SCHEDULE		
C6	18"X18"	
C7	28"X28"	2" EXTRA COVER FOR COLLISION PROTECTION
C8	12"X12"	

COLUMN PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PC1	4'-0"X4'-0"X2'-0"	1
PC2	7'-0"X4'-0"X3'-0"	2

PILE SCHEDULE	
SIZE	DEPTH BELOW BOTTOM OF PILE CAP
16"X16"	65'-0"

ELEVATOR PILE CAP SCHEDULE		
TYPE	LXBXH	NO OF PILES
PCW6	16'-0"X25'-6"X4'-6"	6
PCW8	17'-6"X34'-0"X4'-6"	8
TOP OF PILE CAP ELEVATION TO BE VERIFIED BY ELEVATOR MANUFACTURE.		



1 BUILDING E - CSB (CORES - LEVEL 1, CORE 3 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo: Angele: International Airport

SUBMITTED BY ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:

CSB (CORES LEVEL 1 ENLARGED CORE PLANS

SHEET NO.

5-S-213

SHEET OF

© Train - \\tm_fpe_local\train - corp.per\Yamamha_WD5000D\DA4881-5-S-213_LE.rwg, Plotted: Jul 01, 2016 - 11:56am

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 2 □115-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   -12" SLAB ON GRADE □2□LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

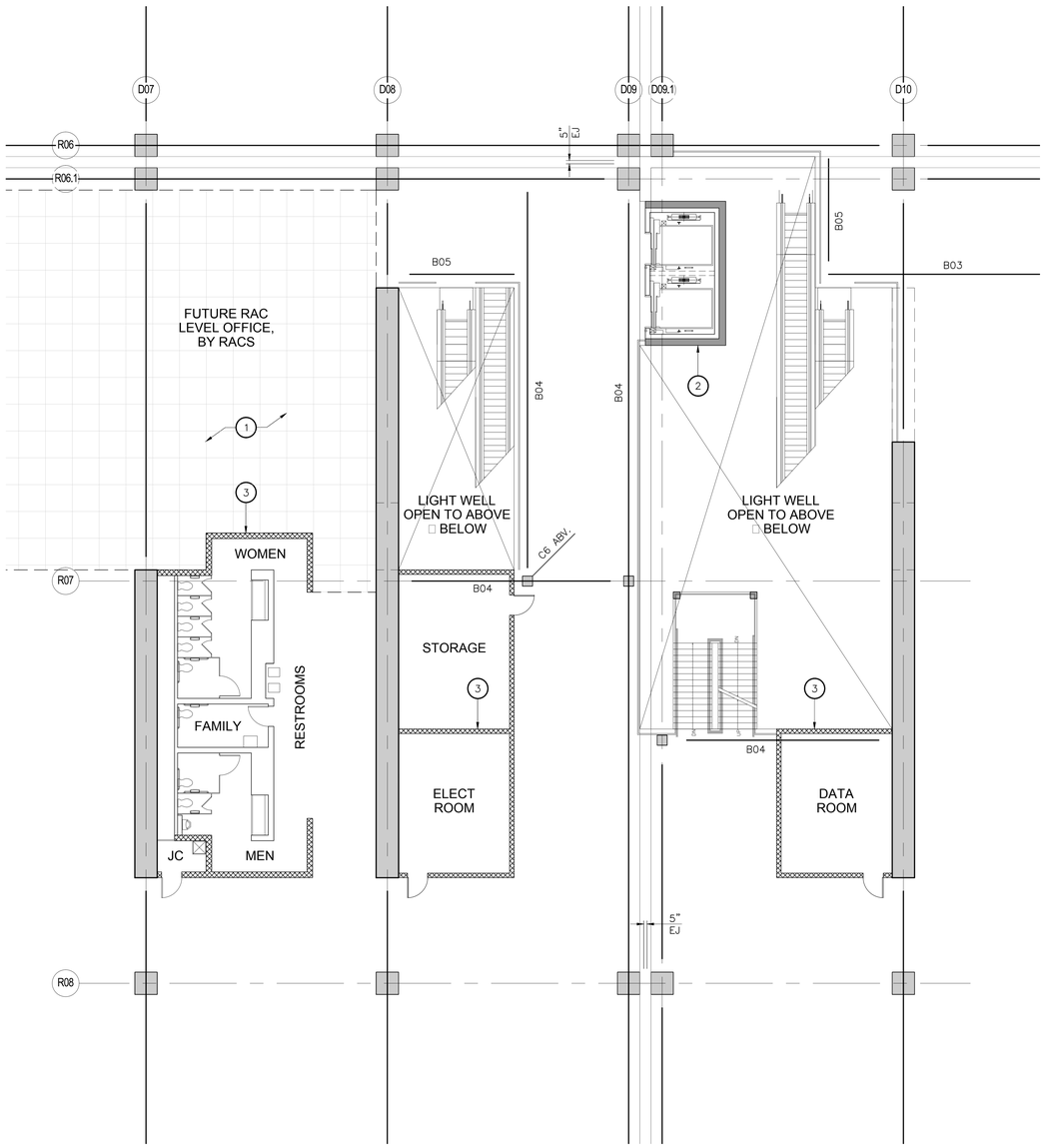
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

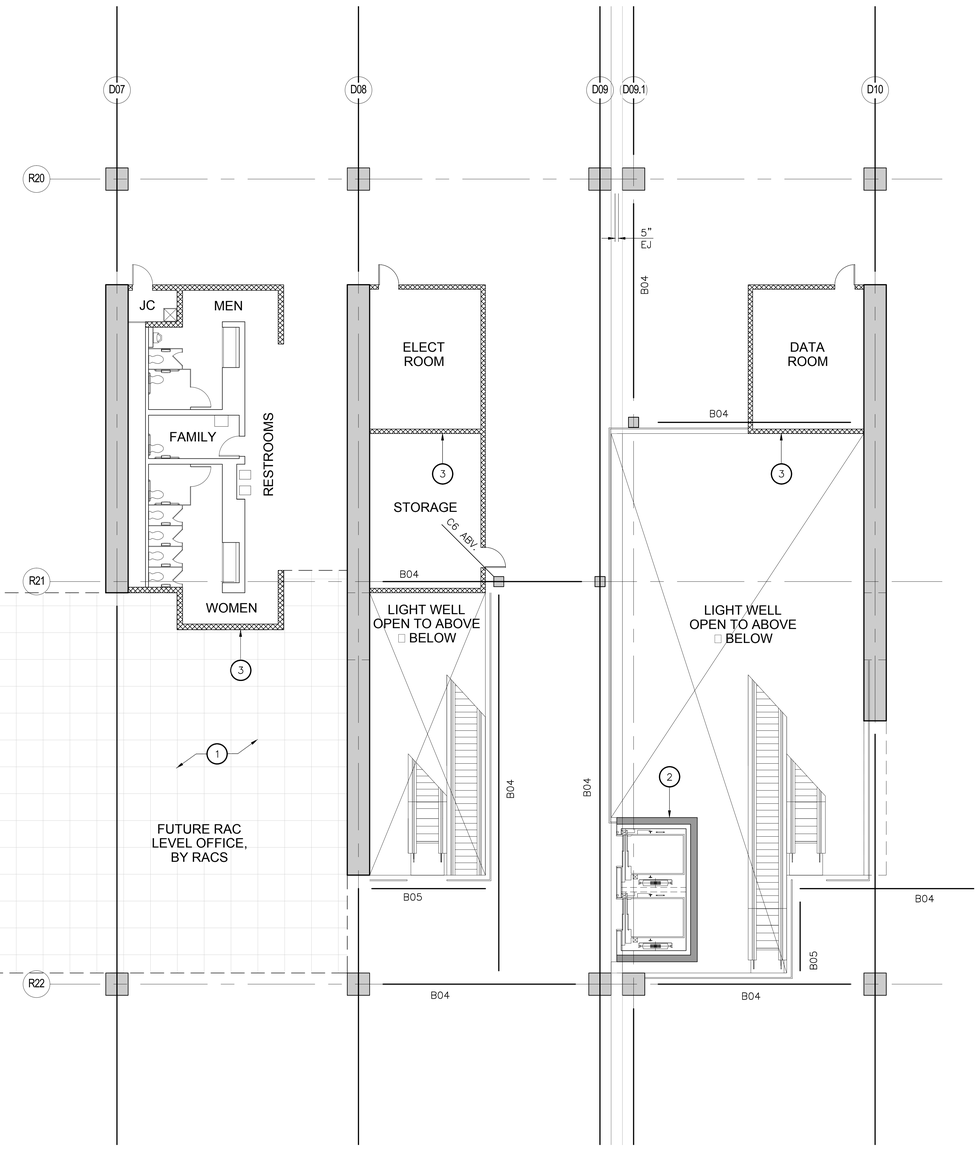
- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES PRECAST DOUBLE-TEES BY PRECAST SUPPLIER
- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 2, CORE 1 PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL 2, CORE 4 PLAN
SCALE: 1/8" = 1'-0"

Urban Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo□ Angele□ International Airport

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY

CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

CSB □ CORES
LEVEL 2
ENLARGED
CORE PLANS

SHEET NO.

5-S-221

SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 2 □ 115'-6"
2. □X"□ DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   -12" SLAB ON GRADE □2□ LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

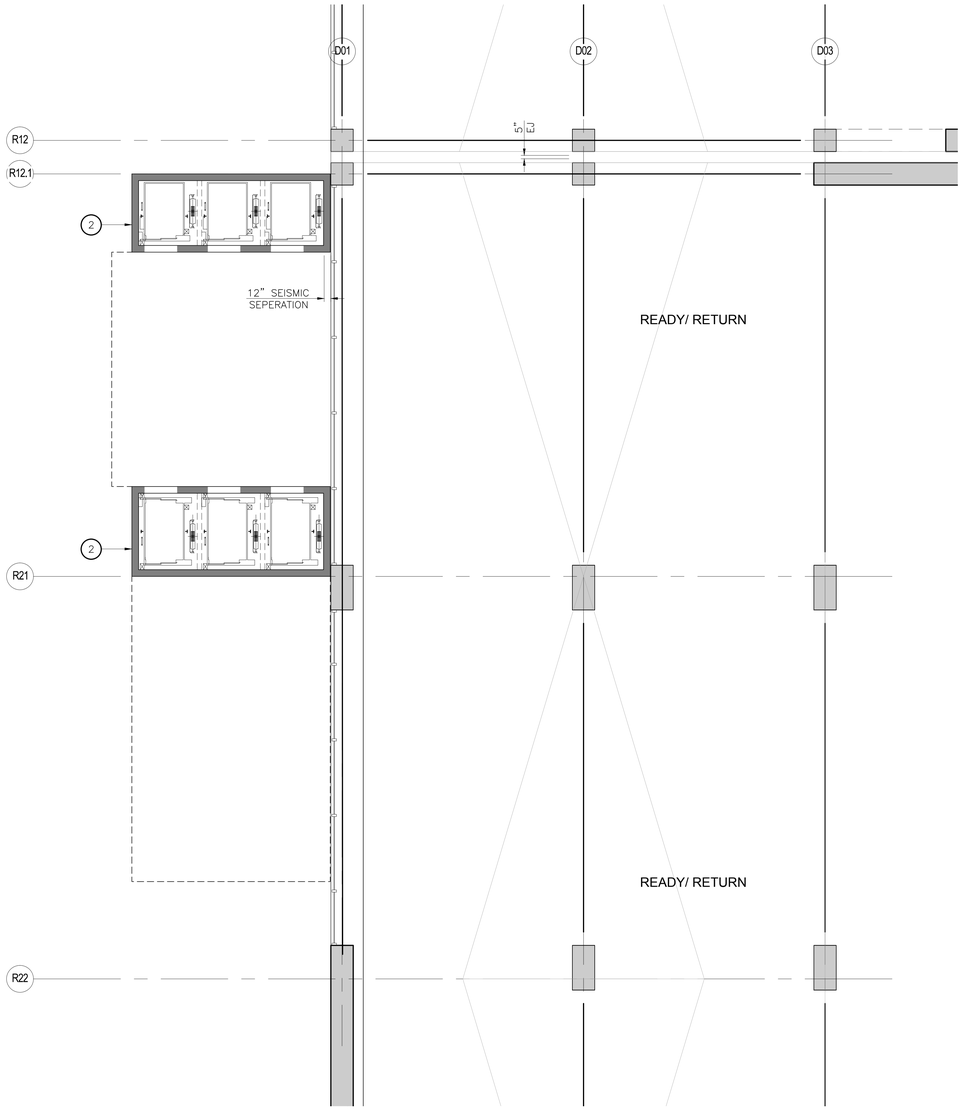
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

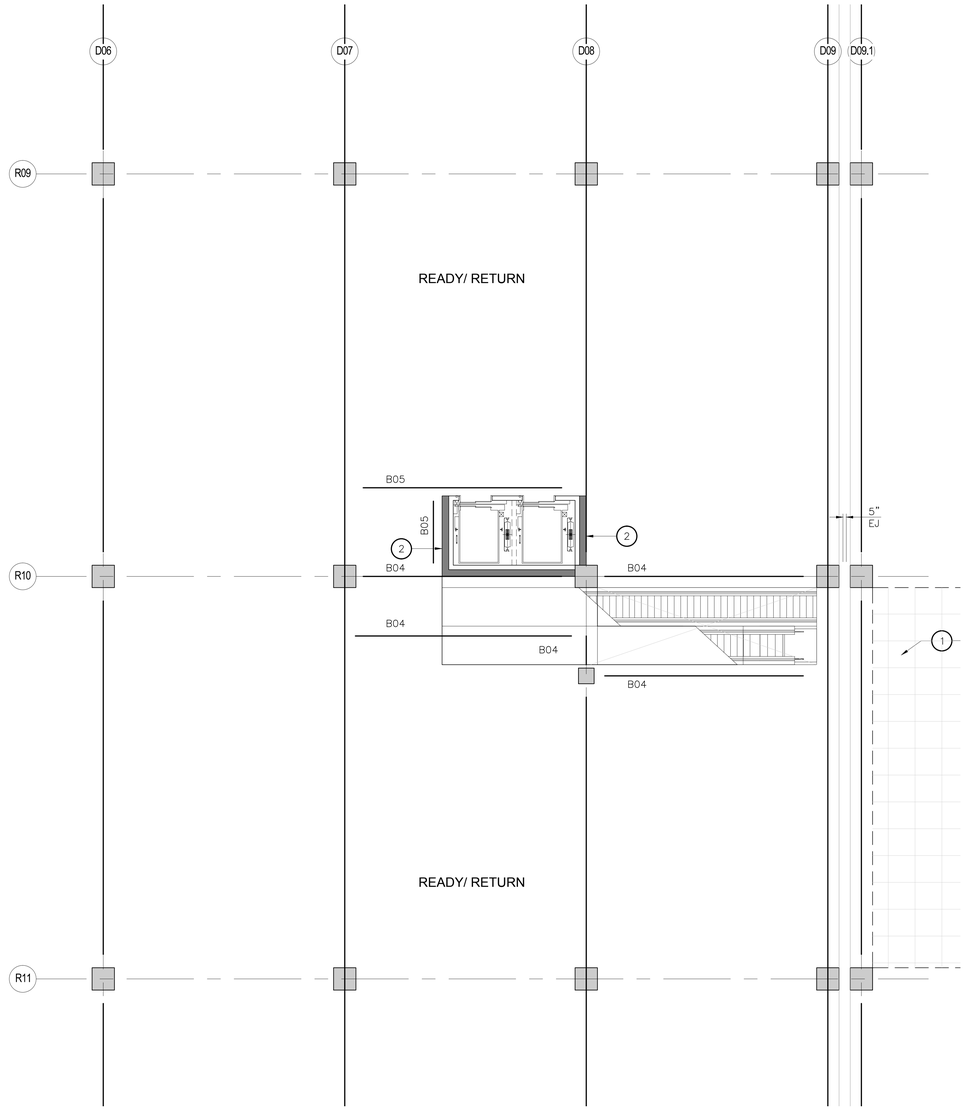
- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES PRECAST DOUBLE-TEES BY PRECAST SUPPLIER
- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 2, CORE WEST PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL 2, CORE 2 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo□ Angele□ International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ.NO:	DA4881
SCALE:	1/8" □ 1'-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:
CSB □ CORES
LEVEL 2
ENLARGED
CORE PLANS

SHEET NO.
5-S-222
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 2 □ 115'-6"
2. □X"□ DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   - -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   - -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   - -12" SLAB ON GRADE □2□ LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

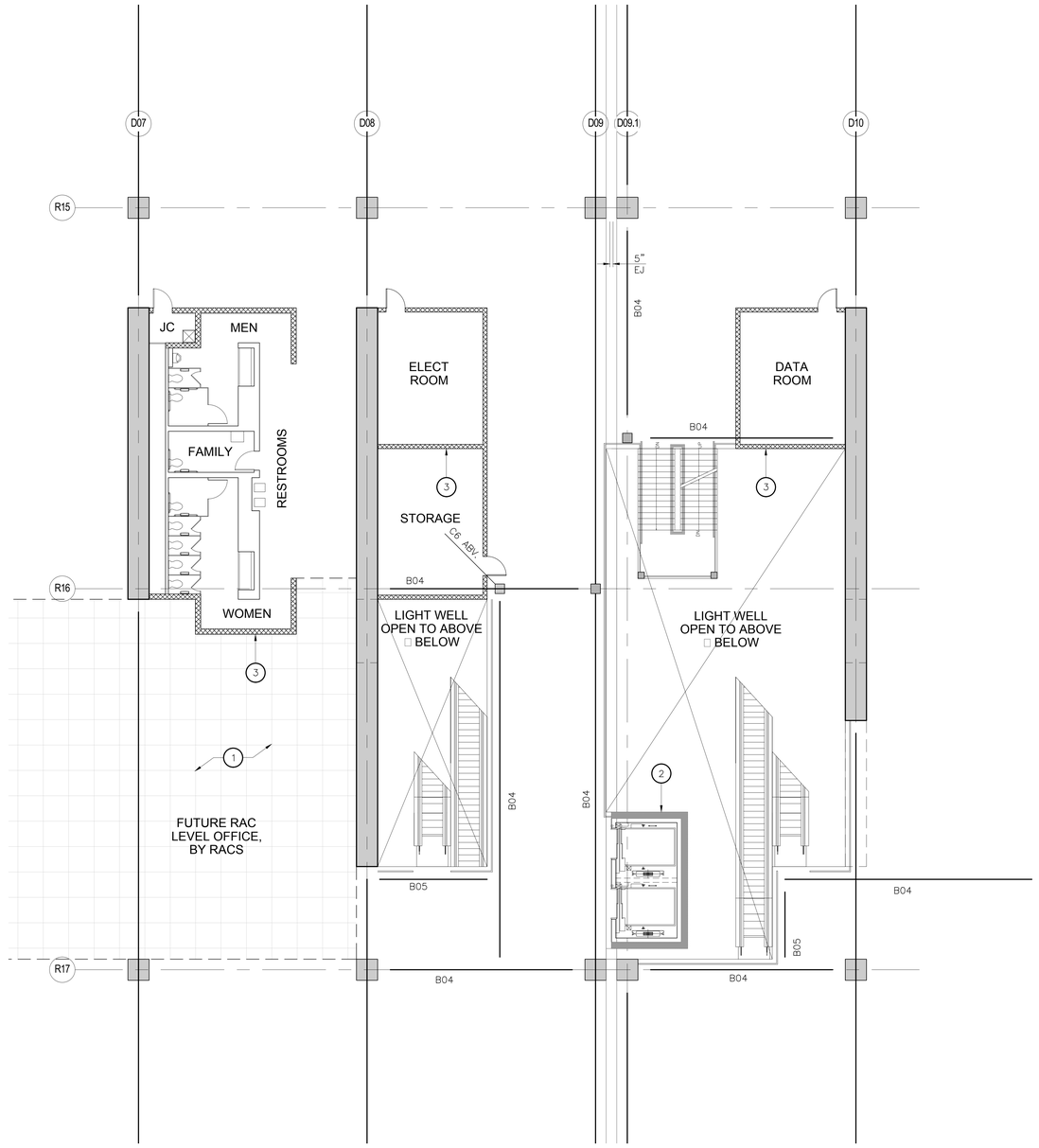
KEY PLAN:

1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES PRECAST DOUBLE-TEES BY PRECAST SUPPLIER
- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE	
TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 2, CORE 3 PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo: Angele: International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" □ 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB □ CORES
LEVEL 2
ENLARGED
CORE PLANS

SHEET NO.
5-S-223

SHEET OF

© Train - \\tm_fpw_local\train - corp\pw\Samantha \d0399995\DA4881-5-S-223_L2E.dwg, Plotted: Jul 01, 2016 - 11:57am

PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 3 □ 136.-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0.-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   -12" SLAB ON GRADE □2□ LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

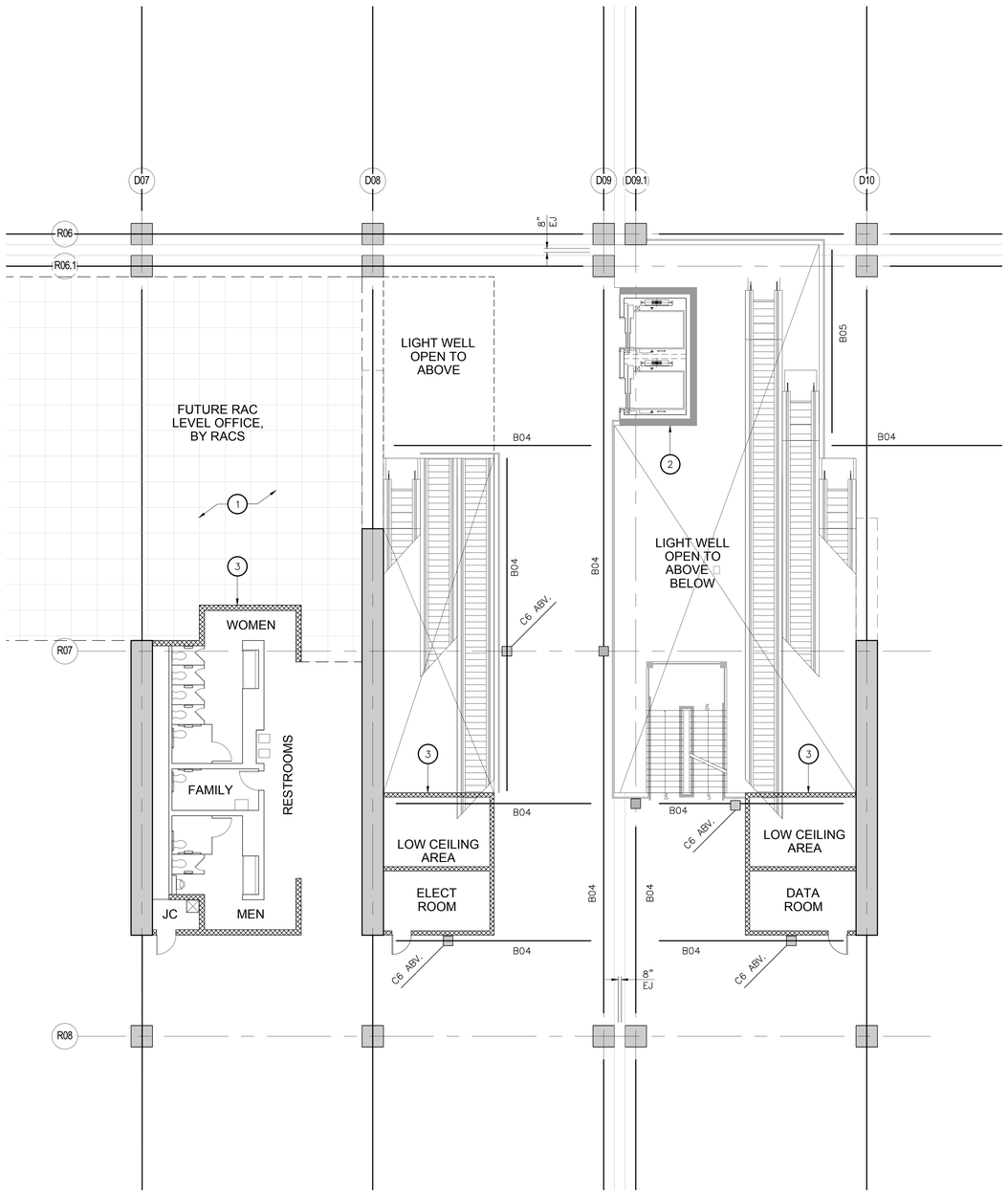
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

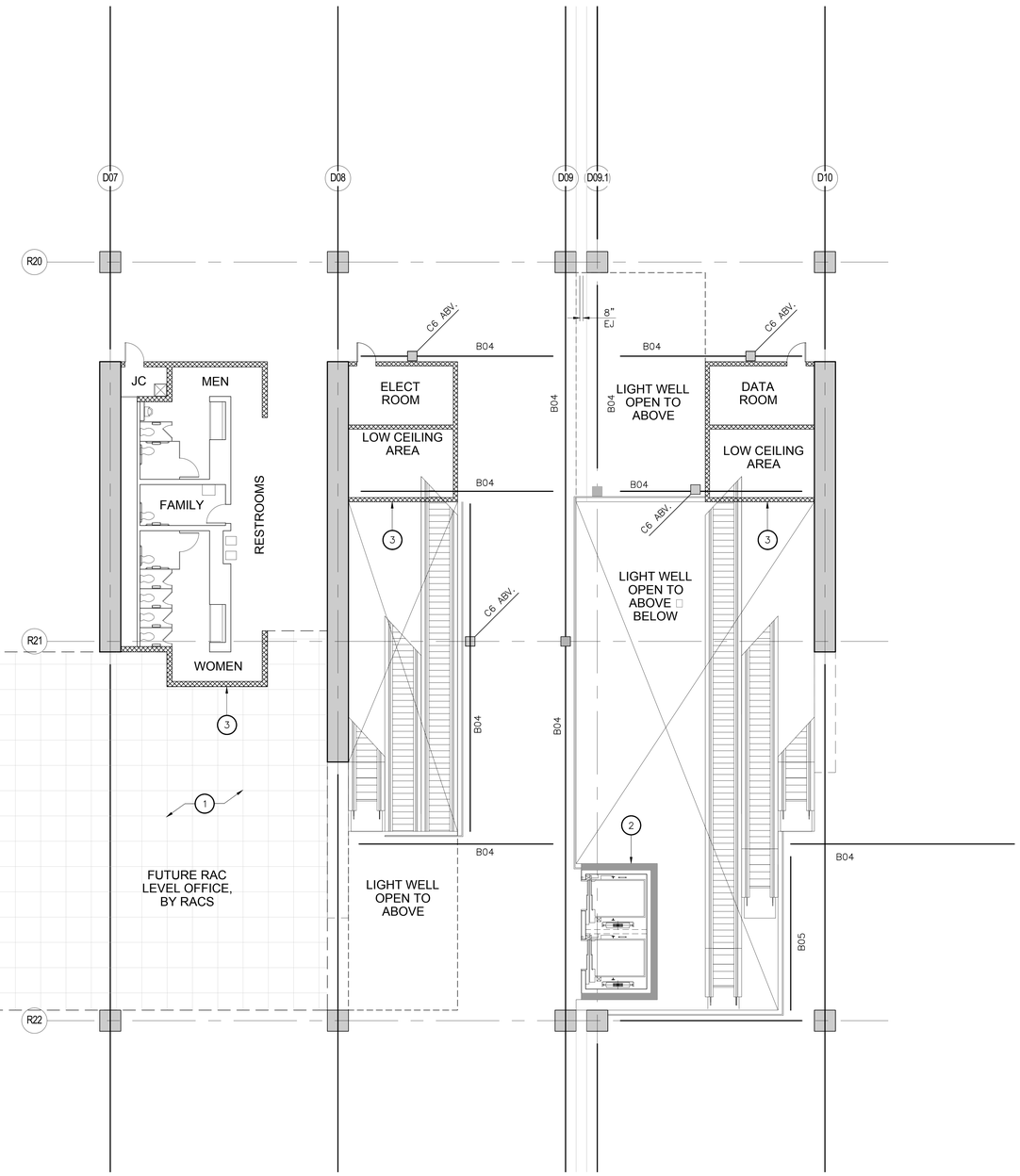
- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
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- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 3, CORE 1 PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL 3, CORE 4 PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

Urban Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594.6974
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NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo□ Angele□ International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER
SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS: MARK DATE DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB □ CORES LEVEL 3 ENLARGED CORE PLANS

SHEET NO.
5-S-231
SHEET OF

C:\Revit - Ian_Ipa_Jonathan - corp.perf.lamarche.v2016\DA4881-5-S-231_L3E.dwg, Plotted: Jul 01, 2016 - 11:58am

PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 3 □ 136.-6"
2. "X"□ DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0.-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   -12" SLAB ON GRADE □2□ LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

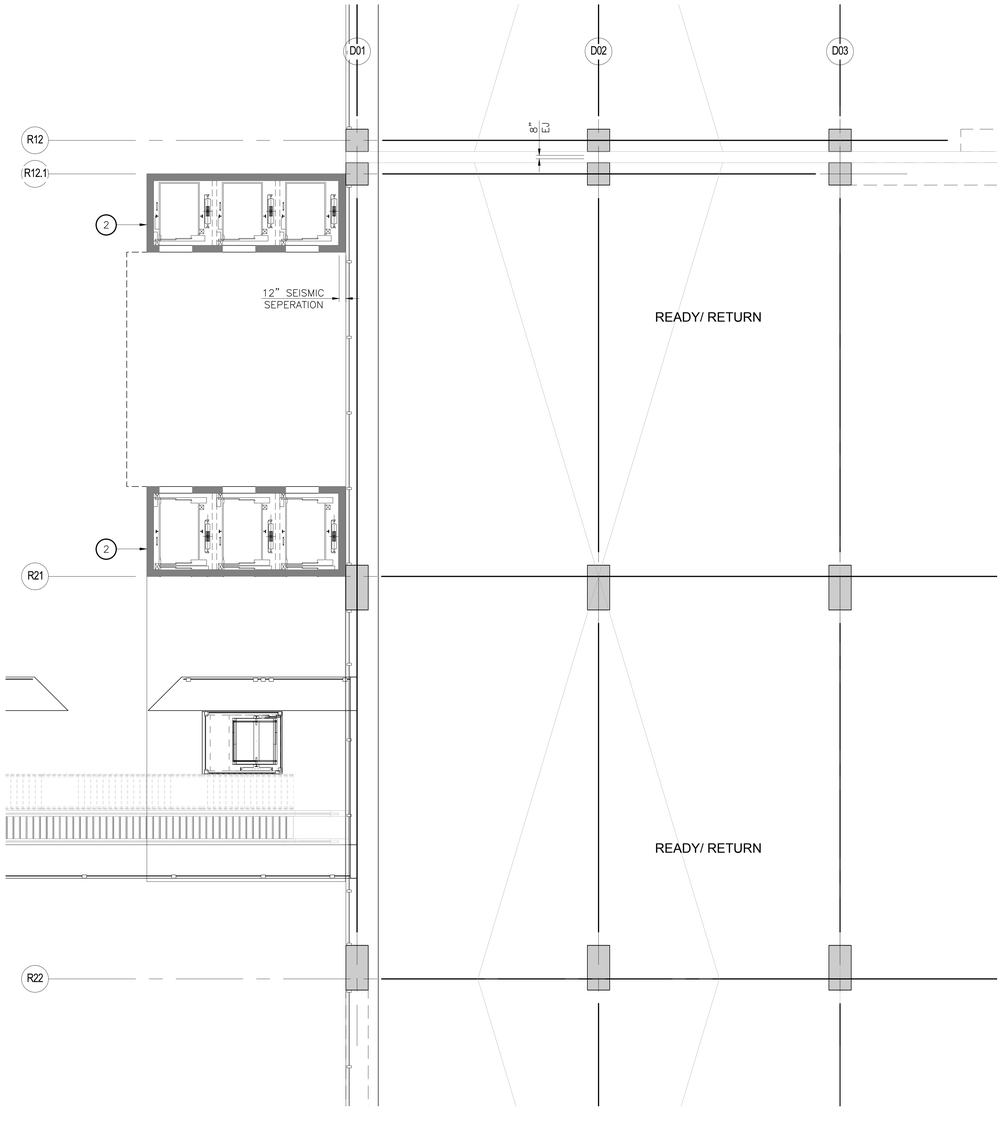
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

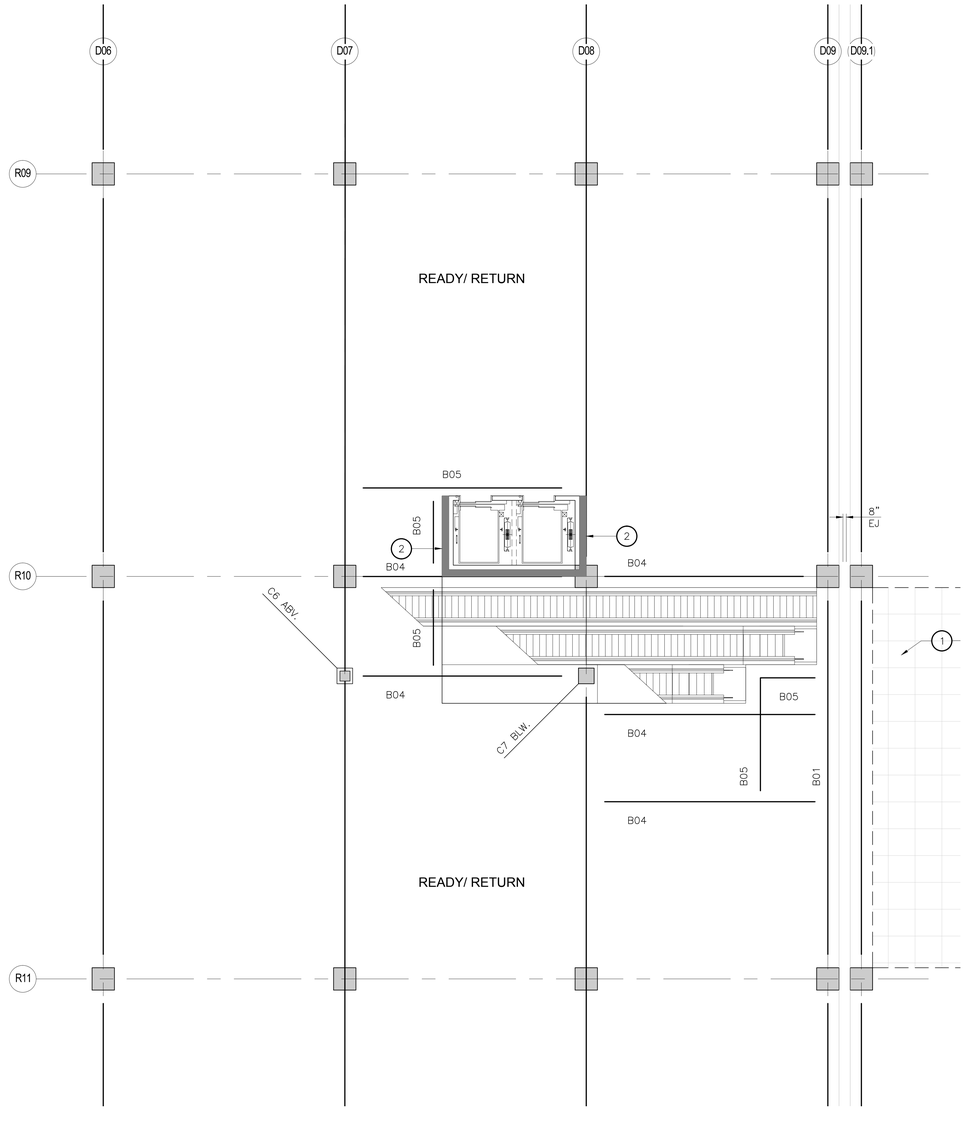
- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES PRECAST DOUBLE-TEES BY PRECAST SUPPLIER
- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 3, CORE WEST PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL 3, CORE 2 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594-6974
FAX: 562. 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo. Angele. International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONE ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ.NO: DA4881
SCALE: 1/8" □ 1-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB □ CORES
LEVEL 3
ENLARGED
CORE PLANS

SHEET NO.
5-S-232
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 3 = 136'-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   - -6" SLAB ON GRADE #5 16" O.C., EACH WAY
   - -8" SLAB ON GRADE #5 12" O.C., EACH WAY
   - -12" SLAB ON GRADE 2 LAYERS #5 16" O.C., EACH WAY
4. (B) INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

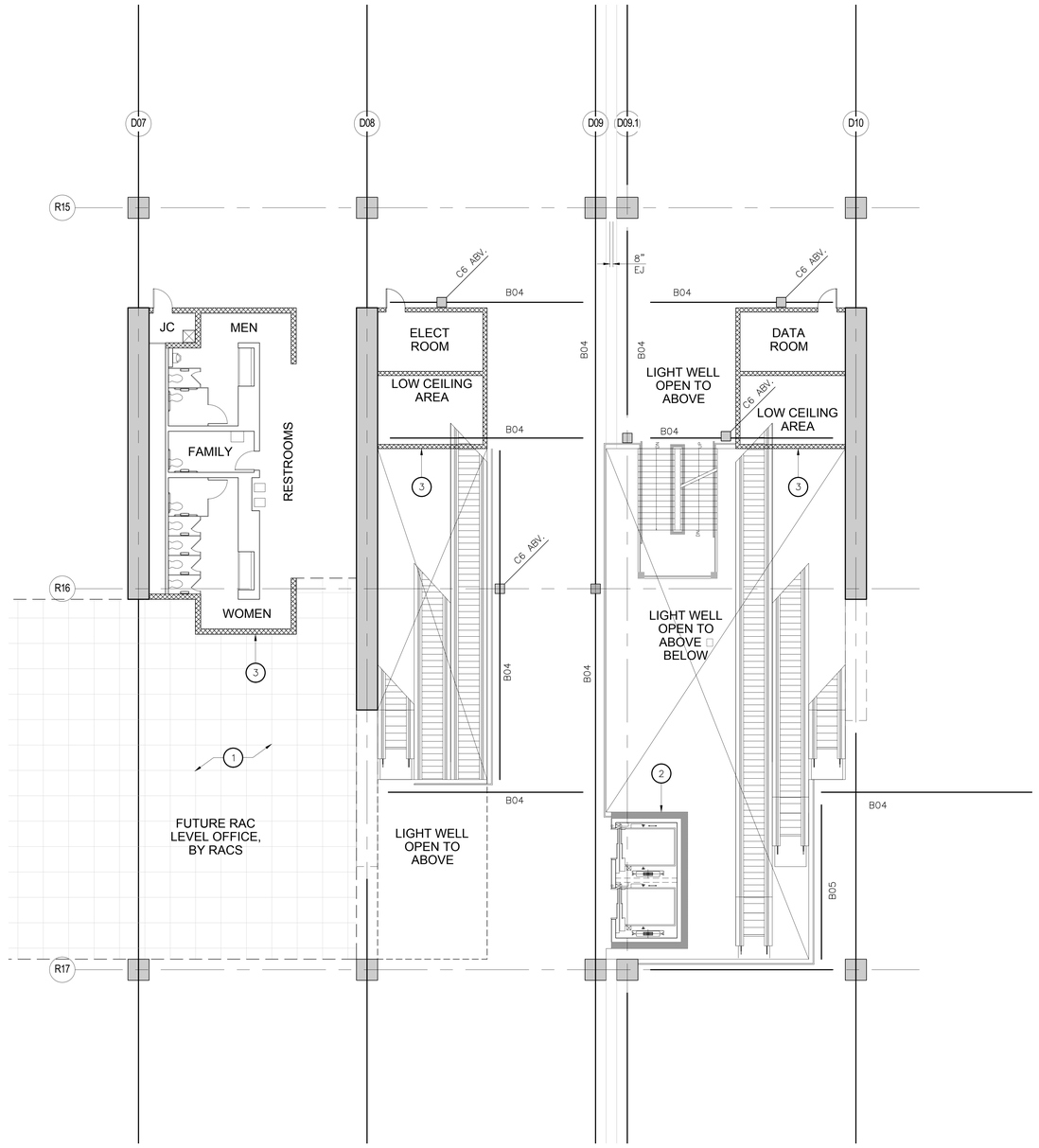
KEY PLAN:

1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ #5 14" O.C. AT MID DEPTH EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
- INDICATES PRECAST DOUBLE-TEES BY PRECAST SUPPLIER
- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE	
TYPE	SIZE "BXH"
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB CORES - LEVEL 3, CORE 3 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY CHIEF AIRPORTS ENGINEER

ONT ONA PMD LAX

REVISIONS:			
MARK	DATE	DESCRIPTION	

PROJ NO:	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:
CSB CORES LEVEL 3 ENLARGED CORE PLANS

SHEET NO.
5-S-233

SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

© Train - Vern Yoe_Jacobsen - corp.per\Samantha - V:\DS\DA\DA4881-5-S-233_L3E.dwg, Plotted: Jul 01, 2016 - 11:58am

PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 4 □152-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   -12" SLAB ON GRADE □2□LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

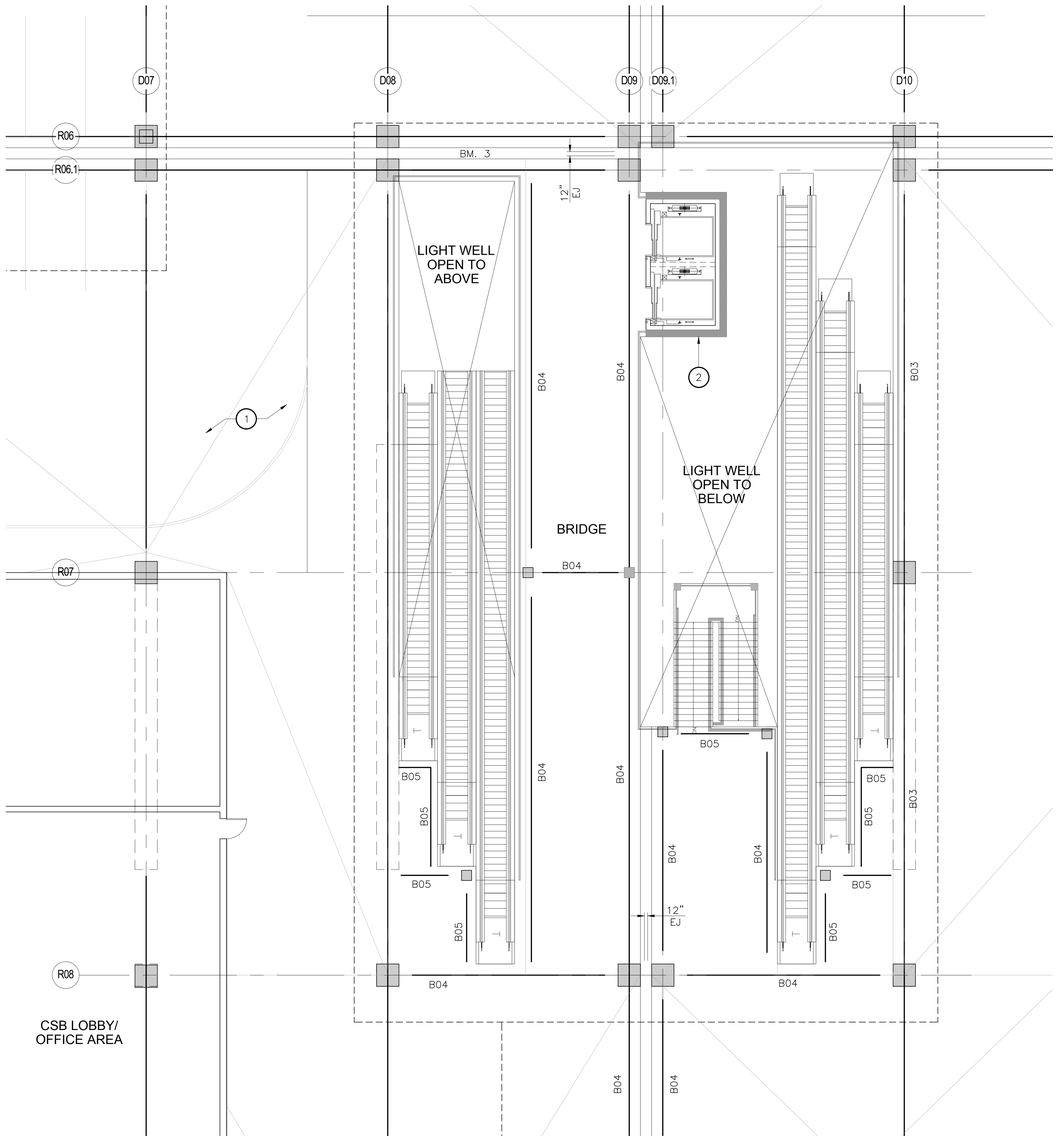
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

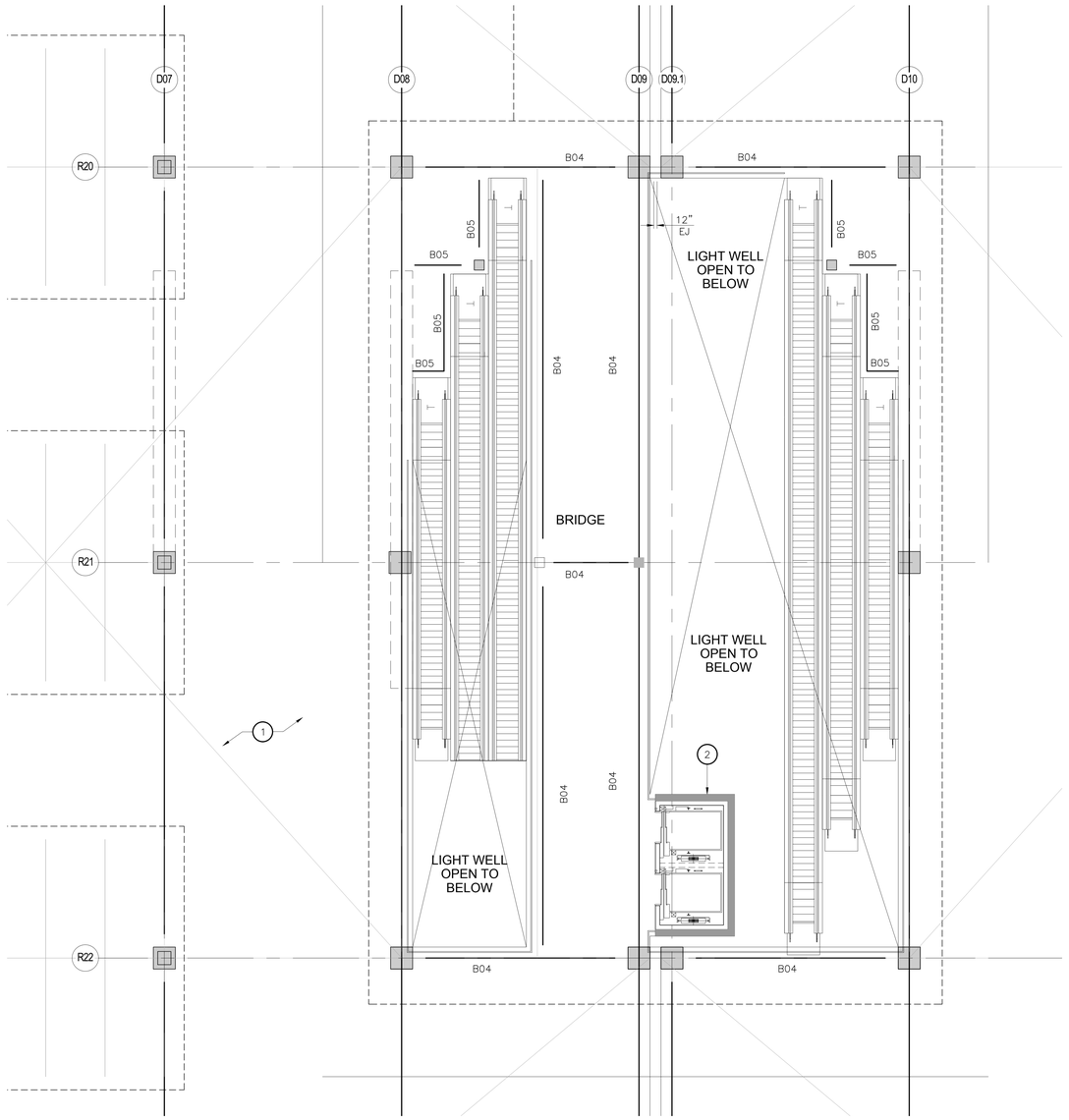
- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
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- INDICATES SLOPING SLAB FOR DRAINAGE
- INDICATES CAST-IN-PLACE / PRECAST CONCRETE COLUMNS SEE SCHEDULE FOR SIZE
- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 4, CORE 1 PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL 4, CORE 4 PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

Urban Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo Angele International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" 1'-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

CSB □ CORES LEVEL 4 ENLARGED CORE PLANS

SHEET NO.
5-S-241

SHEET OF

C:\Users\...\Temp\AcPublish_10232\5-S-241_L4E.dwg, Plotted: Jul 01, 2016 - 11:59am

PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 4 = 152'-6"
2. "X" DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0'-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   - -6" SLAB ON GRADE #5 16" O.C., EACH WAY
   - -8" SLAB ON GRADE #5 12" O.C., EACH WAY
   - -12" SLAB ON GRADE 2 LAYERS #5 16" O.C., EACH WAY
4. "B" INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
9. RE: VOLUME 1 FOR STRUCTURAL GENERAL NOTES.

KEY PLAN:

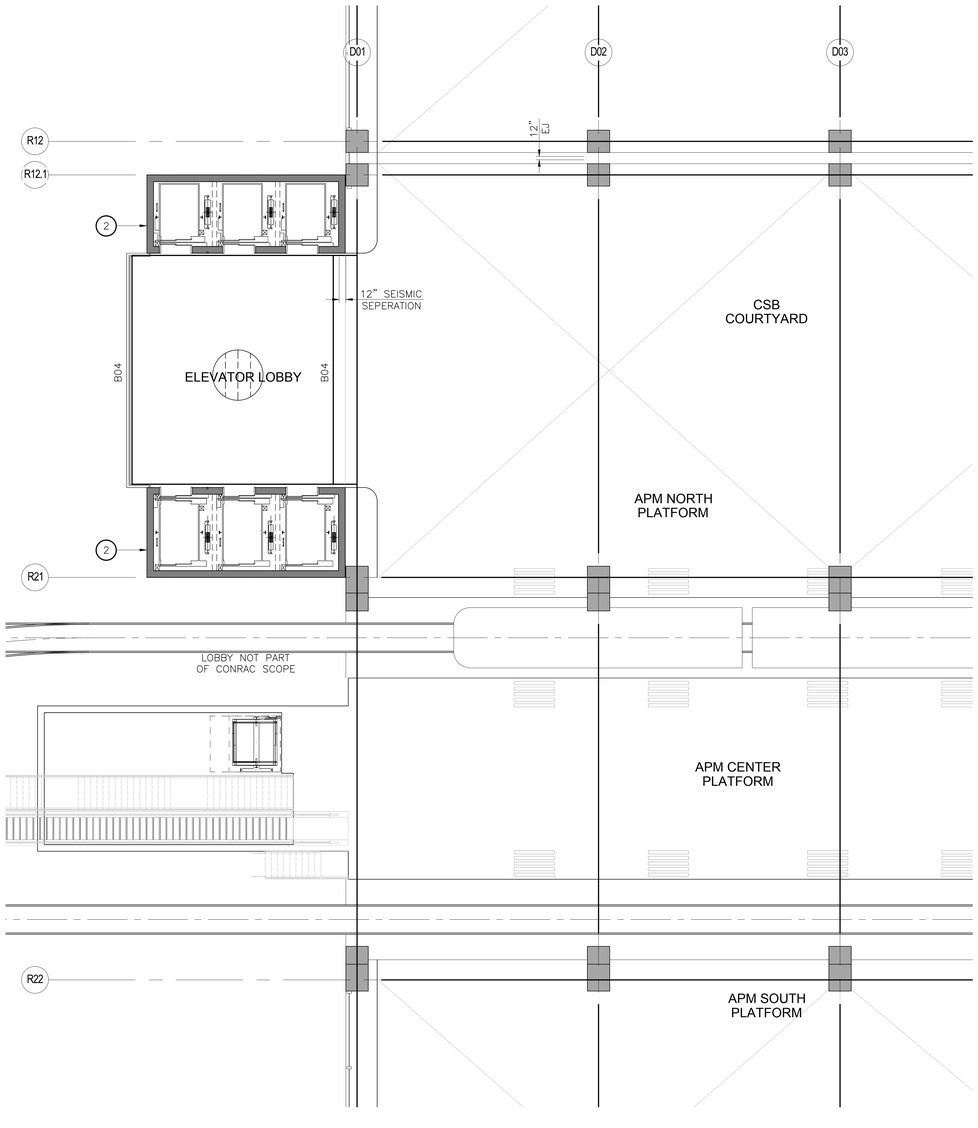
1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ #5 @ 14" O.C. AT MID DEPTH @ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

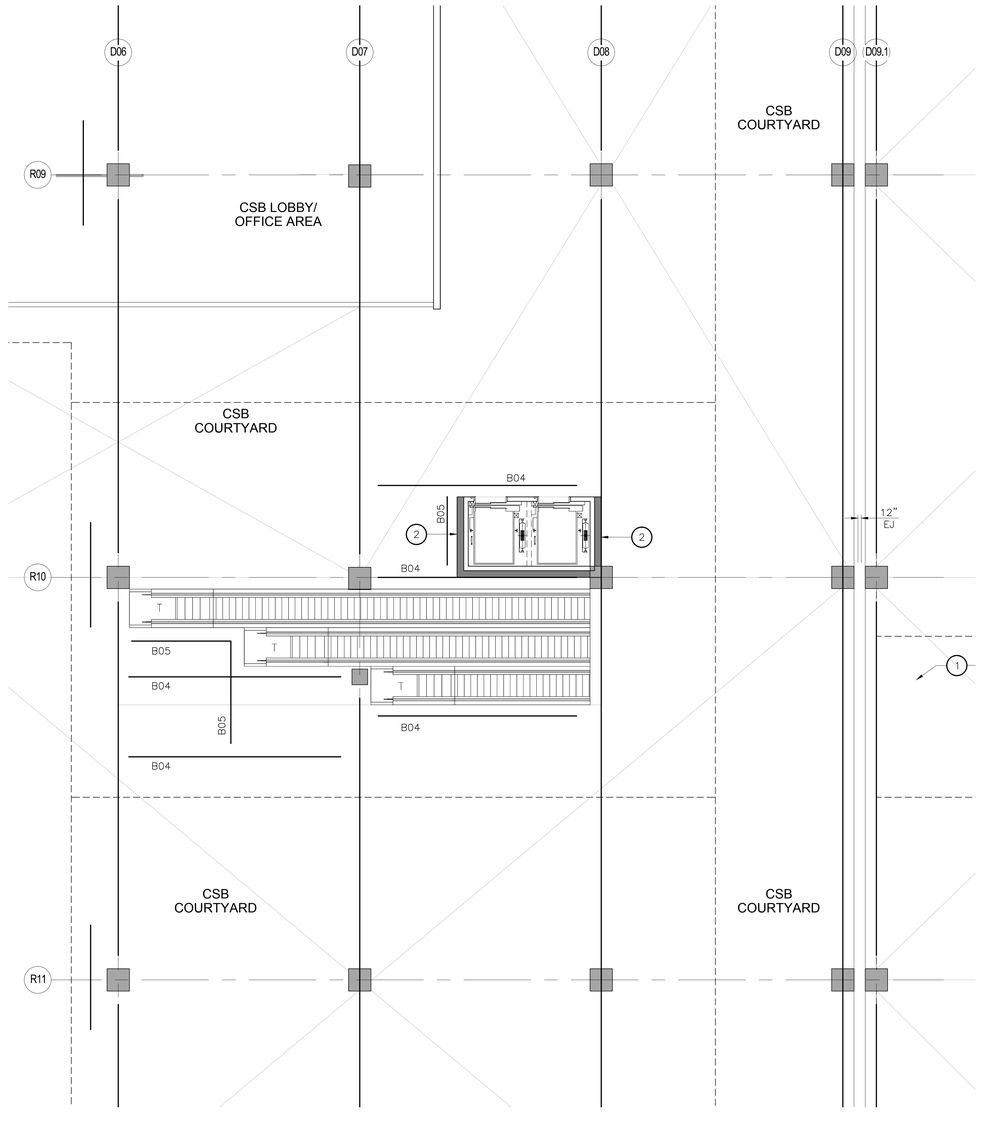
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- EXIT BOTH. ADDITIONAL 25 PSF SUPERIMPOSED DEAD LOAD.
- EJ EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE

TYPE	SIZE (BXH)
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB CORES - LEVEL 4, CORE WEST PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB CORES - LEVEL 4, CORE 2 PLAN
SCALE: 1/8" = 1'-0"

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB CORES LEVEL 4 ENLARGED CORE PLANS

SHEET NO.
5-S-242
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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PLAN NOTES:

1. TOP OF FINISH FLOOR -LEVEL 4 □ 152-6"
2. "X"□ → DENOTES FINISHED FLOOR ELEVATION IN RELATION TO REFERENCE LEVEL 1 ELEVATION 0-0".
3. RE: PLAN FOR SLAB THICKNESS, REINFORCING IS AS FOLLOWS:
   - -6" SLAB ON GRADE □5□ 16" O.C., EACH WAY
   - -8" SLAB ON GRADE □5□ 12" O.C., EACH WAY
   - -12" SLAB ON GRADE □2□ LAYERS □5□ 16" O.C., EACH WAY
4. □B□ INDICATES CAST IN-PLACE PRECAST CONCRETE BEAM TYPE. RE. PLANS, SCHEDULE
5. LOCATE COLUMNS AND BEAMS CENTERED ON GRIDS U.N.O.
6. OPENINGS IN FLOORS AND WALLS TO BE COORDINATED WITH ALL OTHER DISCIPLINES.
7. RE: ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
8. RE: ARCHITECTURAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR PIPES AND DRAIN LOCATIONS AND DETAILS. SLOPE FLOOR TO FLOOR DRAINS.
9. RE: VOLUME 6 FOR INFORMATION NOT SHOWN HERE.
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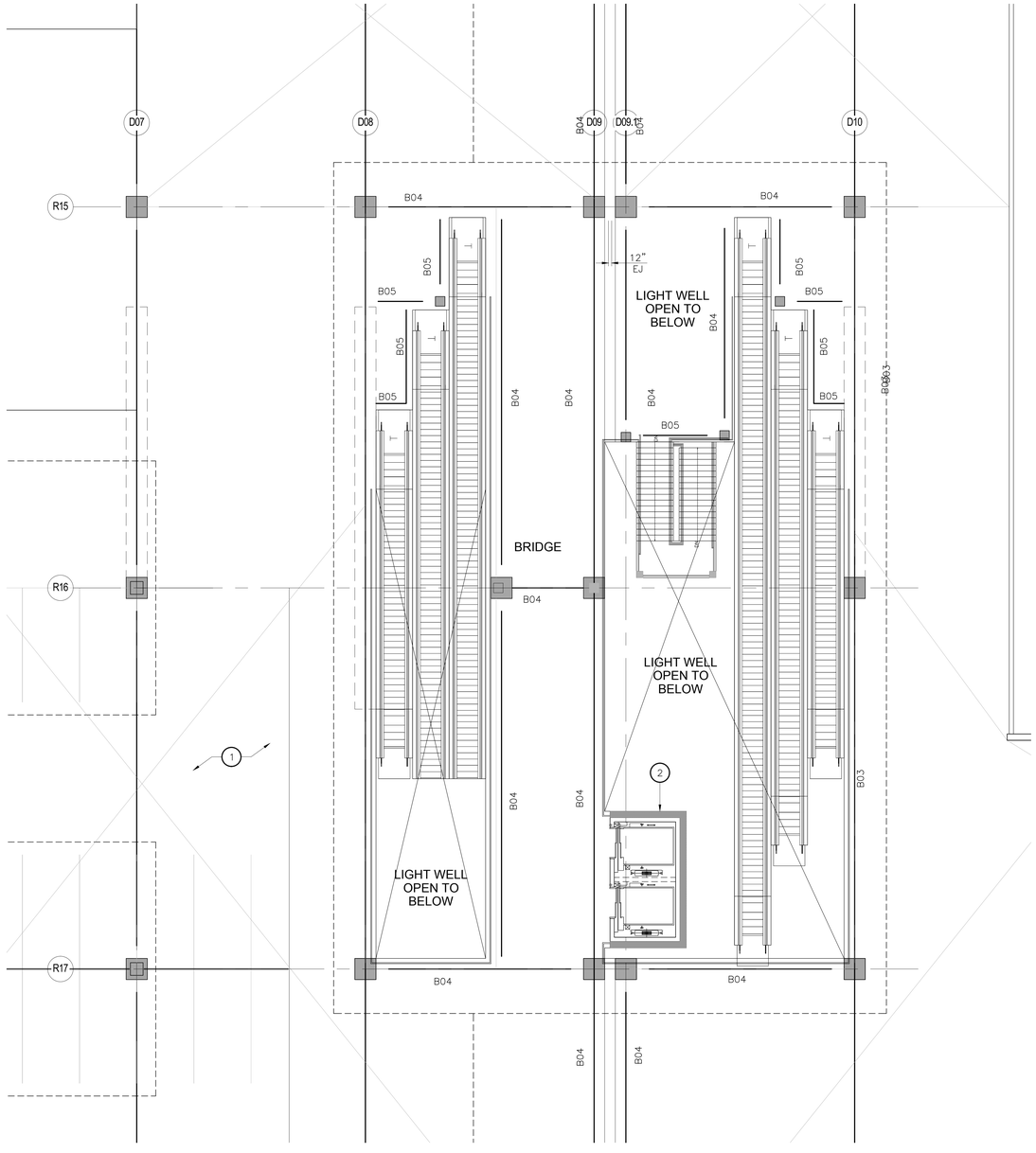
KEY PLAN:

1. CAST IN-PLACE CONCRETE TOPPING SLAB MINIMUM 6" THICK W/ □5□ 14" O.C. AT MID DEPTH □ EACH WAY OVER PRECAST DOUBLE TEE
2. 12" THICK CONC. CAST-IN PLACE ELEVATOR CORE WALL
3. 8" THICK FULL HEIGHT CMU WALL
4. SOLAR PANEL NOT IN SCOPE OF WORK

PLAN LEGEND:

- INDICATES SLAB SPAN DIRECTION
- INDICATES CAST-IN-PLACE CONCRETE SHEAR WALL
- INDICATES FULLY GROUTED MASONRY WALL
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- EJ — EXPANSION JOINT/ SEISMIC SEPARATION

BEAM SCHEDULE	
TYPE	SIZE □BXH□
B01	36"X48"
B02	18"X54"
B03	18"X30"
B04	18"X36"
B05	12"X18"
B06	24"X42"



1 BUILDING E - CSB □ CORES - LEVEL 4, CORE 3 PLAN
SCALE: 1/8" = 1'-0"

N

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo Angele: International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB □ CORES
LEVEL 4
ENLARGED
CORE PLANS

SHEET NO.
5-S-243
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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PLAN LEGEND:

- INDICATES HSS ROUND COLUMN FOR CANOPY FRAMING
- INDICATES STEEL BOX COLUMN FOR CSB FRAMING
- INDICATES FIXED MOMENT WELDED CONNECTION FOR CANTILEVER BEAM.
- INDICATES SPECIAL MOMENT FRAME CONNECTION FOR CSB LATERAL RESISTING SYSTEM.

D01 D02 D03 D04 D05 D06 D07 D08

R06.1 R07 R08 R09 R10

ROOF LEVEL PARKING

BOX COL. 18X18X1 TYP.

18GA. METAL DECK

HSS 12X4X1/2

STAIR TOWER

ELECT

MECH

DATA

CSB SUPPORT SPACE

MEN

FAMILY

WOMEN

JC

RESTROOMS

CSB LOBBY/ OFFICE AREA

CSB LOBBY/ OFFICE AREA

CSB COURTYARD

HSS 12.5X1/2 TYP.

HSS 12X4X1/2 CONT. AT COLS. TYP.

W24X146

W24X146 (LO.) W24X146 (HI.)

W24X176(LO)

W16X31 8'-0" O.C. TYP.

W16X31

W30X191 (HI.)

1 BUILDING E - CSB ROOF PLAN
SCALE: 1/8" = 1'-0"

N

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594-6974
FAX: 562. 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo. Angele. International Airport

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY

CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ.NO.	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

CSB CORES LEVEL 4 ENLARGED CSB PLANS

SHEET NO.

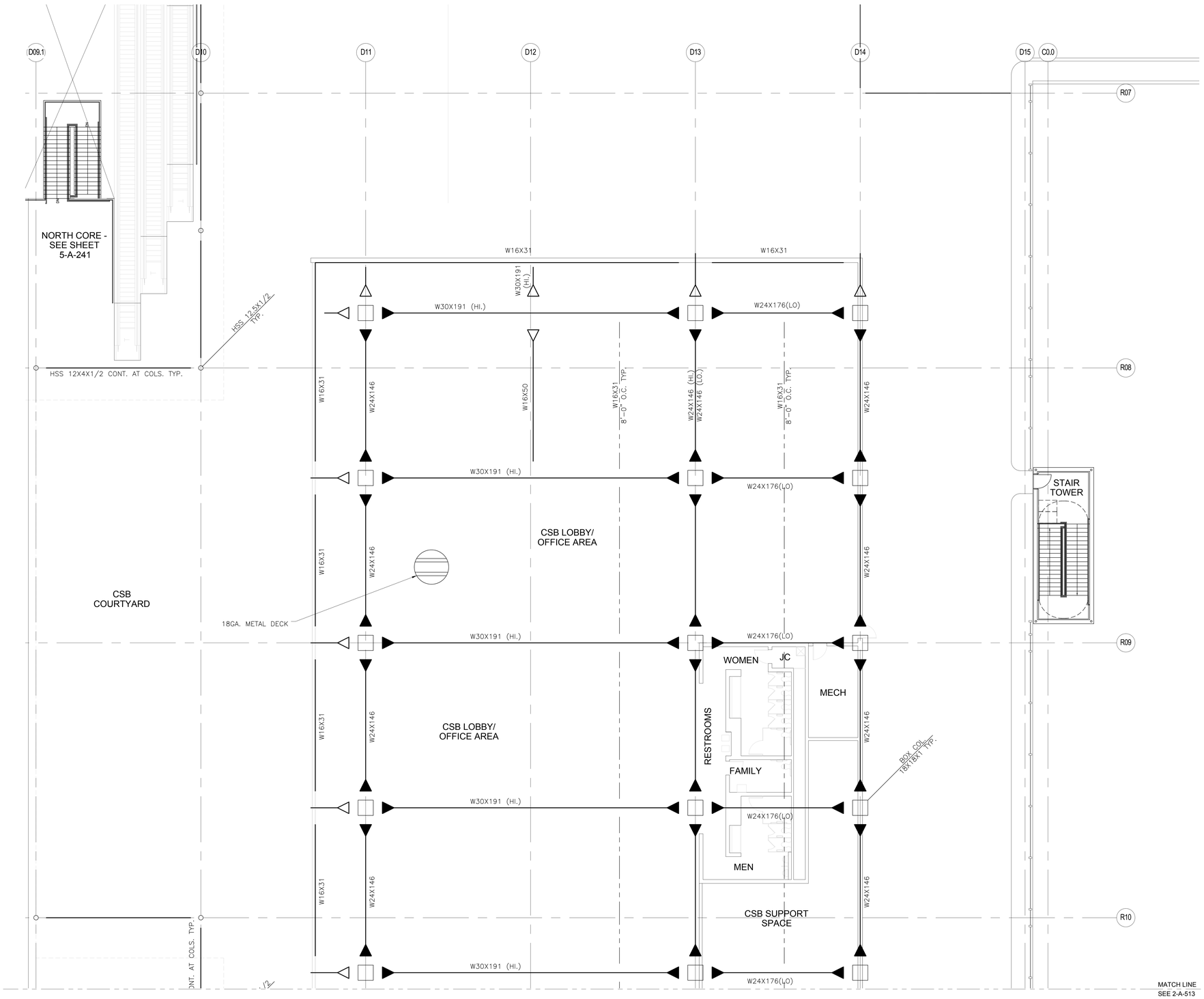
5-S-251

SHEET OF

C:\Revit Local Files\Central Files\DA4881-5-S-251_Level 4 CSB Enlarged Plans_Jul 01, 2016 - 12:00pm

PLAN LEGEND:

- INDICATES HSS ROUND COLUMN FOR CANOPY FRAMING
- INDICATES STEEL BOX COLUMN FOR CSB FRAMING
- INDICATES FIXED MOMENT WELDED CONNECTION FOR CANTILEVER BEAM.
- INDICATES SPECIAL MOMENT FRAME CONNECTION FOR CSB LATERAL RESISTING SYSTEM.



1 BUILDING E - CSB ROOF PLAN
SCALE: 1/8" = 1'-0"

Urban Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594-6974
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NOT FOR CONSTRUCTION

CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo. Angele. International Airport

SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY: CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

SHEET TITLE:
CSB □ CORES
LEVEL 4
ENLARGED
CSB PLANS

SHEET NO.
5-S-252

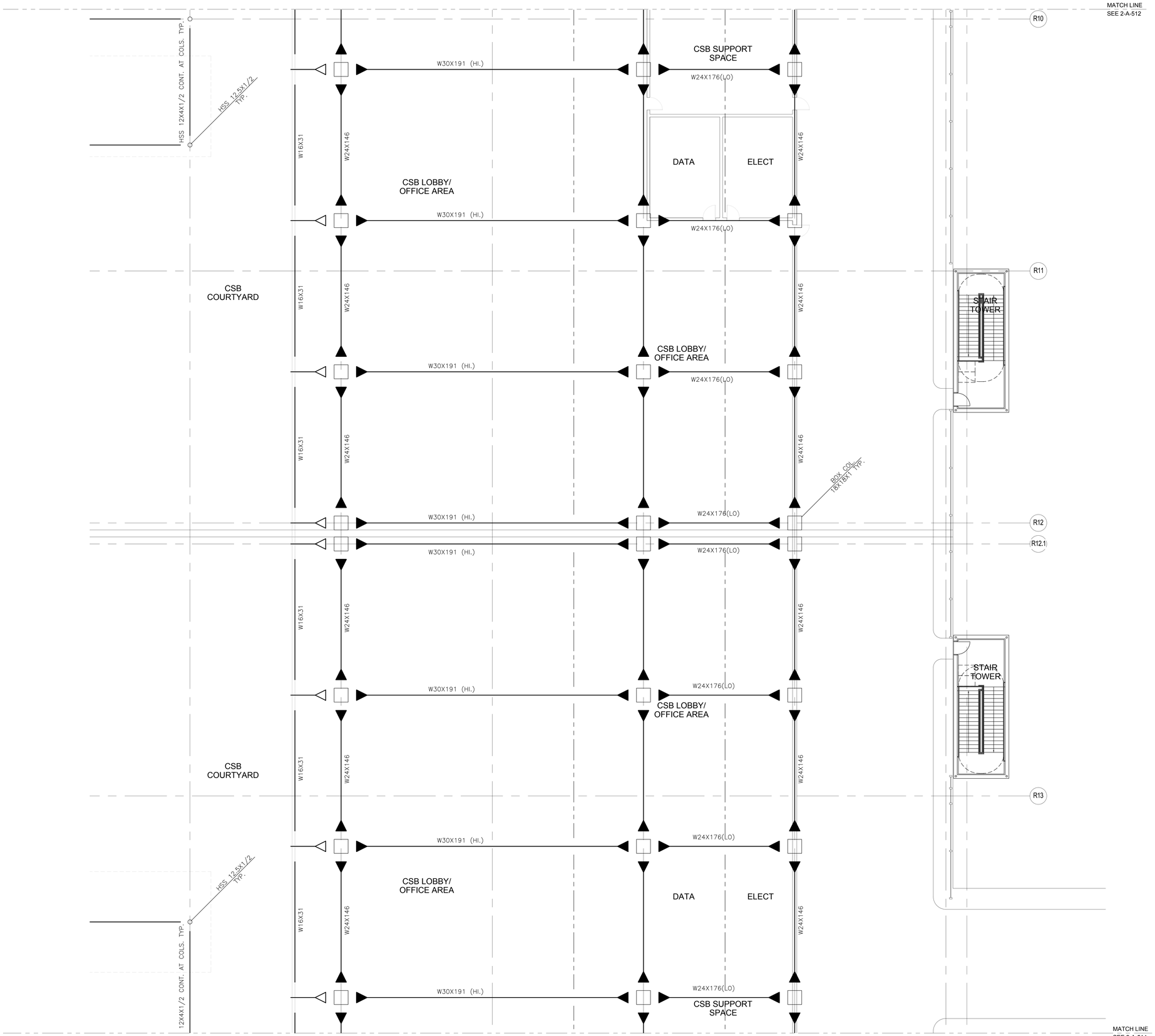
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

C:\team - tam_tpa_kuehhan - corp.pw\tamarine s0036\i0036\DA4881\5-S-252_LAE.dwg, Plotted: Jul 01, 2016 - 12:01pm

PLAN LEGEND:

- INDICATES HSS ROUND COLUMN FOR CANOPY FRAMING
- INDICATES STEEL BOX COLUMN FOR CSB FRAMING
- INDICATES FIXED MOMENT WELDED CONNECTION FOR CANTILEVER BEAM.
- INDICATES SPECIAL MOMENT FRAME CONNECTION FOR CSB LATERAL RESISTING SYSTEM.



1 BUILDING E - CSB ROOF PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

Train Systems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594-6974
FAX: 562. 594-6975

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CONSULTANTS:

Los Angeles World Airports
Project
Consolidated Rental Car Facility
Lo. Angele. International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

LAX ONE PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" 1-0"
DATE: 07/01/16
DESIGNED BY: AA
DRAWN BY: AM
CHECKED BY: AA

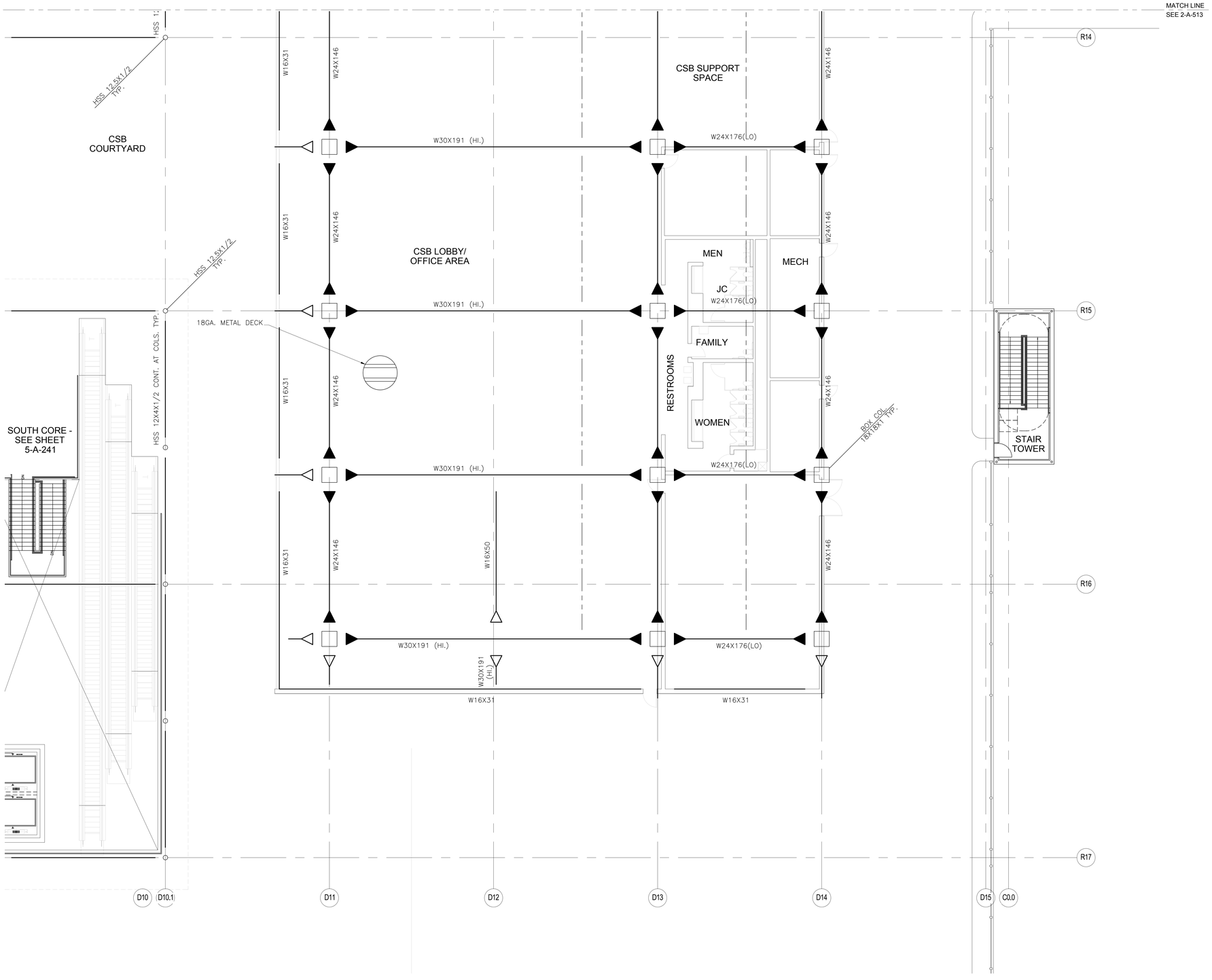
SHEET TITLE:
CSB □ CORES
LEVEL 4
ENLARGED
CSB PLANS

SHEET NO.
5-S-253
SHEET OF

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PLAN LEGEND:

- INDICATES HSS ROUND COLUMN FOR CANOPY FRAMING
- INDICATES STEEL BOX COLUMN FOR CSB FRAMING
- INDICATES FIXED MOMENT WELDED CONNECTION FOR CANTILEVER BEAM.
- INDICATES SPECIAL MOMENT FRAME CONNECTION FOR CSB LATERAL RESISTING SYSTEM.



1 BUILDING E - CSB ROOF PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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801 SOUTH GRAND
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PHONE: 562. 594-6974
FAX: 562. 594-6975

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CONSULTANTS:

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Project
LAX Consolidated Rental Car Facility
Lo. Angele. International Airport

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CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" : 1-0"
DATE:	07/01/16
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:
CSB ☐ CORES
LEVEL 4
ENLARGED
CSB PLANS

SHEET NO.
5-S-254
SHEET OF

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PROJECT NO.	DA6881
SCALE:	1" = 60'-0"
DATE:	07/01/2016
DESIGNED BY:	J. J
DRAWN BY:	A.
CHECKED BY:	NL

SHEET TITLE:
CSB □ CORES
LEVEL 1
OVERALL
FLOOR PLAN

SHEET NO.
5-A-010
SHEET OF

MARK	DATE	DESCRIPTION

REVISIONS:

LAX PMD ONT ANA

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

L□ Angele□ International Airport

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ASST. CHIEF AIRPORTS ENGINEER

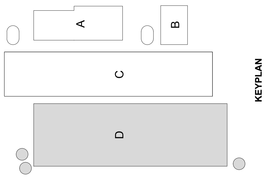
APPROVED BY
CHIEF AIRPORTS ENGINEER

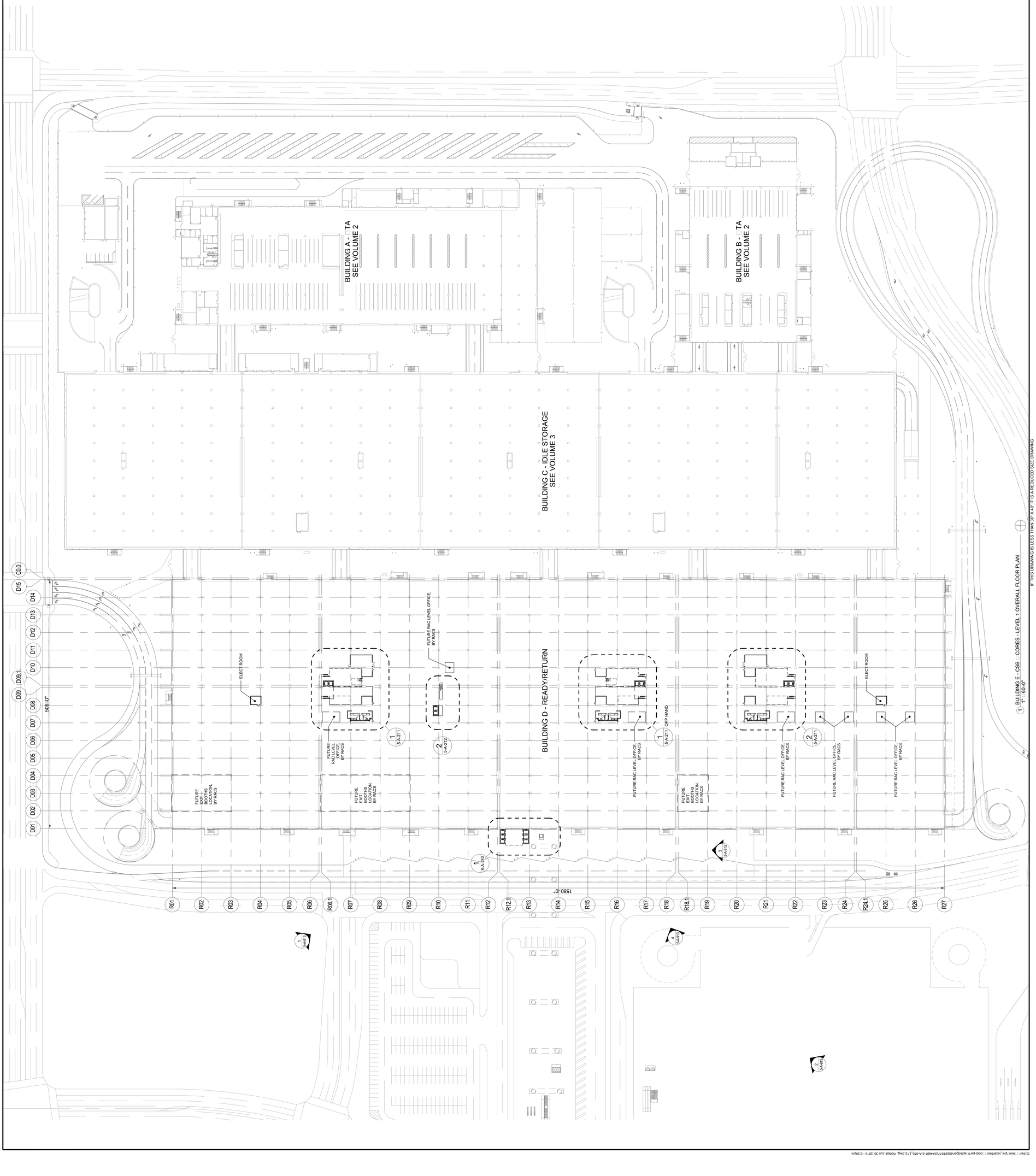
CONSULTANTS:

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TransSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562. 594-6974
FAX: 562. 594-6975

KEYPLAN

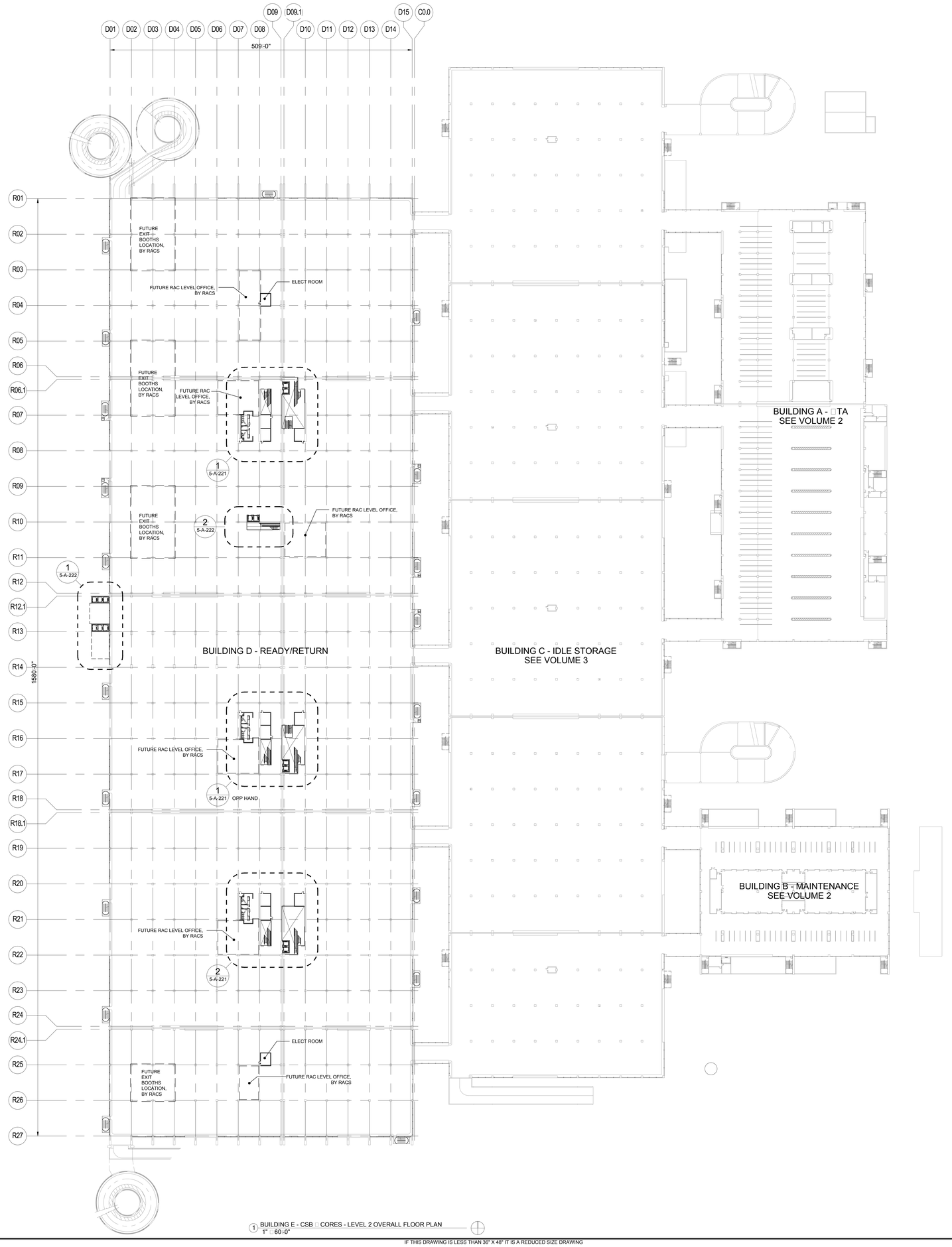




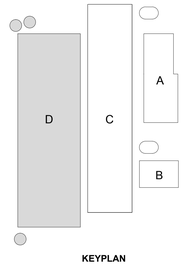
1 BUILDING E - CSB □ CORES - LEVEL 1 OVERALL FLOOR PLAN
1" = 60'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB CORES - LEVEL 2 OVERALL FLOOR PLAN
1" 60'-0"



KEYPLAN

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SUITE 210
LOS ANGELES, CA 90017
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CONSULTANTS:

Los Angeles World Airports

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LAX Consolidated Rental Car Facility

Lo Angele International Airport

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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1" 60'
DATE:	07/01/2016
DESIGNED BY:	J J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:

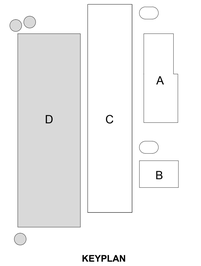
CSB CORES
LEVEL 2
OVERALL
FLOOR PLAN

SHEET NO.
5-A-020
SHEET OF

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1 BUILDING E - CSB CORES - LEVEL 3 OVERALL FLOOR PLAN
1" 60'-0"



KEYPLAN

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SUITE 210
LOS ANGELES, CA 90017
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Lo Angele International Airport

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APPROVED BY
CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1" 60'
DATE:	07/01/2016
DESIGNED BY:	J J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:

CSB CORES
LEVEL 3
OVERALL
FLOOR PLAN

SHEET NO.
5-A-030
SHEET OF

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D01 D02 D03 D04 D05 D06 D07 D08 D09 D09.1 D10 D11 D12 D13 D14 D15 C0.0

509'-0"

R01 R02 R03 R04 R05 R06 R06.1 R07 R08 R09 R10 R11 R12 R12.1 R13 R14 R15 R16 R17 R18 R18.1 R19 R20 R21 R22 R23 R24 R24.1 R25 R26 R27

1580'-0"

1 5-A-911 | 2 5-A-911 | 3 5-A-911 | 4 5-A-911

1 5-A-241 | 1 5-A-251 | 5-A-912 | 1 5-A-252 | 2 5-A-242 | 1 5-A-242 | 1 5-A-253 | 3 5-A-912 | 2 5-A-912 | 1 5-A-254 | 1 5-A-241 OPP HAND | 3 5-A-912 | 2 5-A-241

CSB WEST

BUILDING E - CSB

CSB EAST

BUILDING A - □TA
SEE VOLUME 2

BUILDING C - IDLE STORAGE
SEE VOLUME 3

BUILDING B - MAINTENANCE
SEE VOLUME 2

BUILDING D - PARKING

1 BUILDING E - CSB □ CORES - LEVEL 4 OVERALL FLOOR PLAN
1" □ 60'-0"

KEYPLAN

D C A B

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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SUITE 210
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FAX: 562 594-6975

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SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

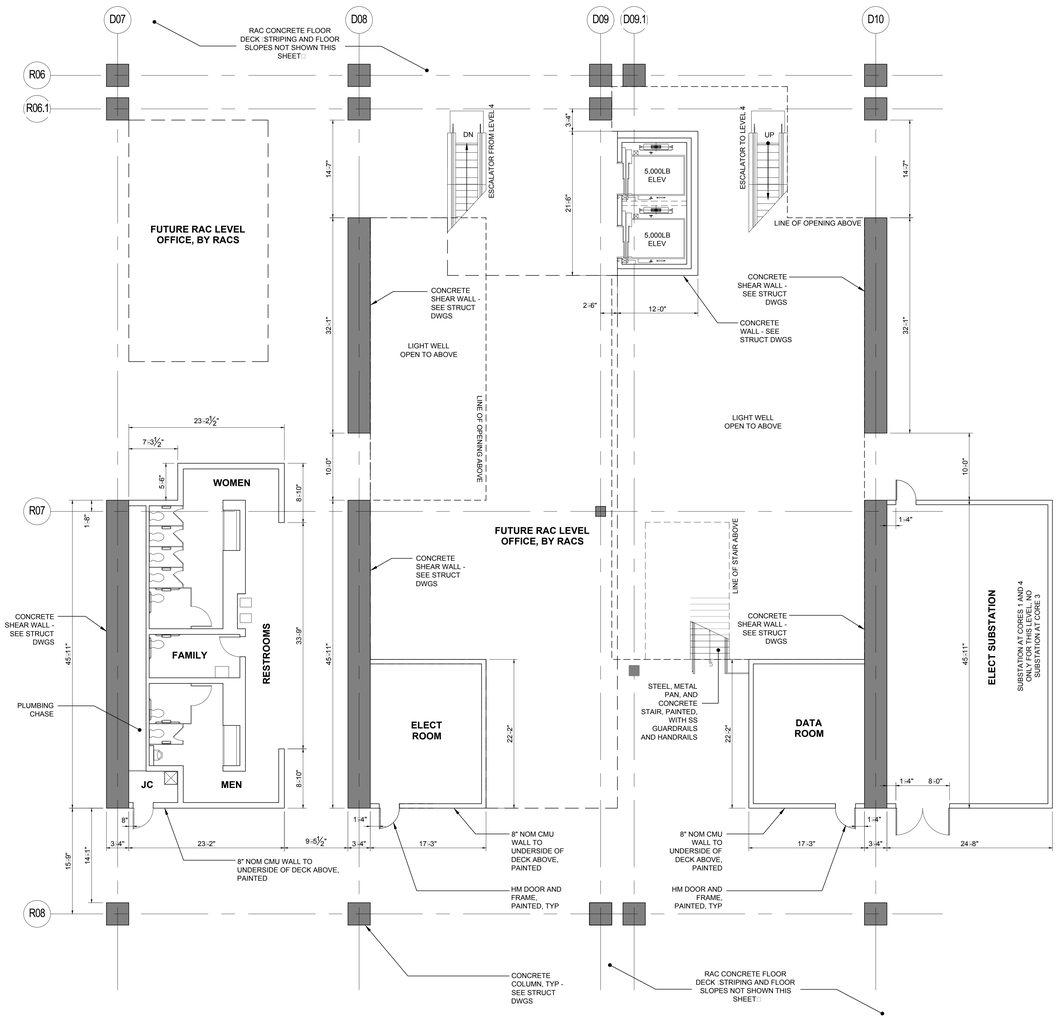
REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1" □ 60'□
DATE: 07/01/2016
DESIGNED BY: J□J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:
CSB □ CORES
LEVEL 4
OVERALL
FLOOR PLAN

SHEET NO.
5-A-040
SHEET OF



1 BUILDING E - CSB □ CORES - LEVEL 1, CORE 1 PLAN □CORE 3 OPP HAND□
1/8" □ 1'-0"

2 BUILDING E - CSB □ CORES - LEVEL 1, CORE 4 PLAN
1/8" □ 1'-0"

TranSystems
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SUITE 210
LOS ANGELES, CA 90017
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FAX: 562 594-6975

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CONSULTANTS:

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Project
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Lo Angele International Airport

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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

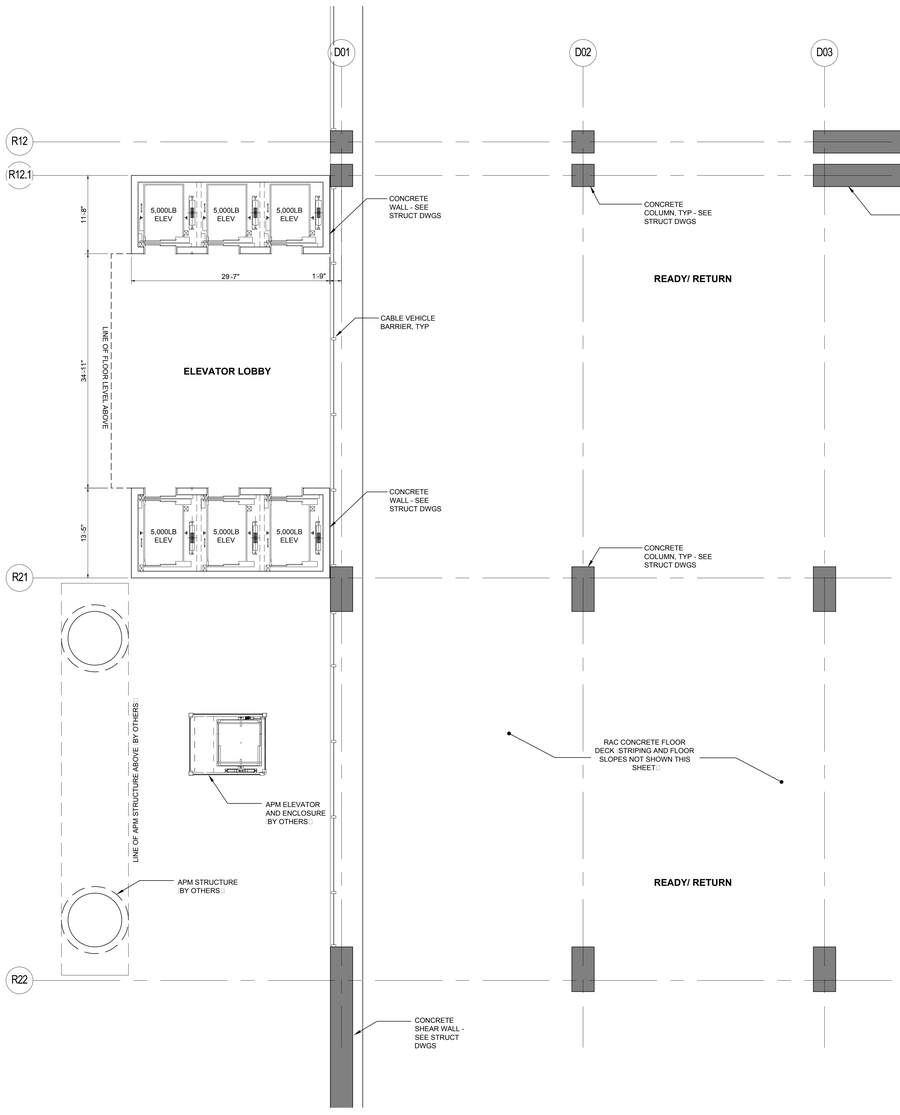
PROJ NO: DA4881
SCALE: 1/8" □ 1'-0"
DATE: 07/01/2016
DESIGNED BY: J□ J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:
CSB □ CORES
LEVEL 1
ENLARGED
CORE PLANS

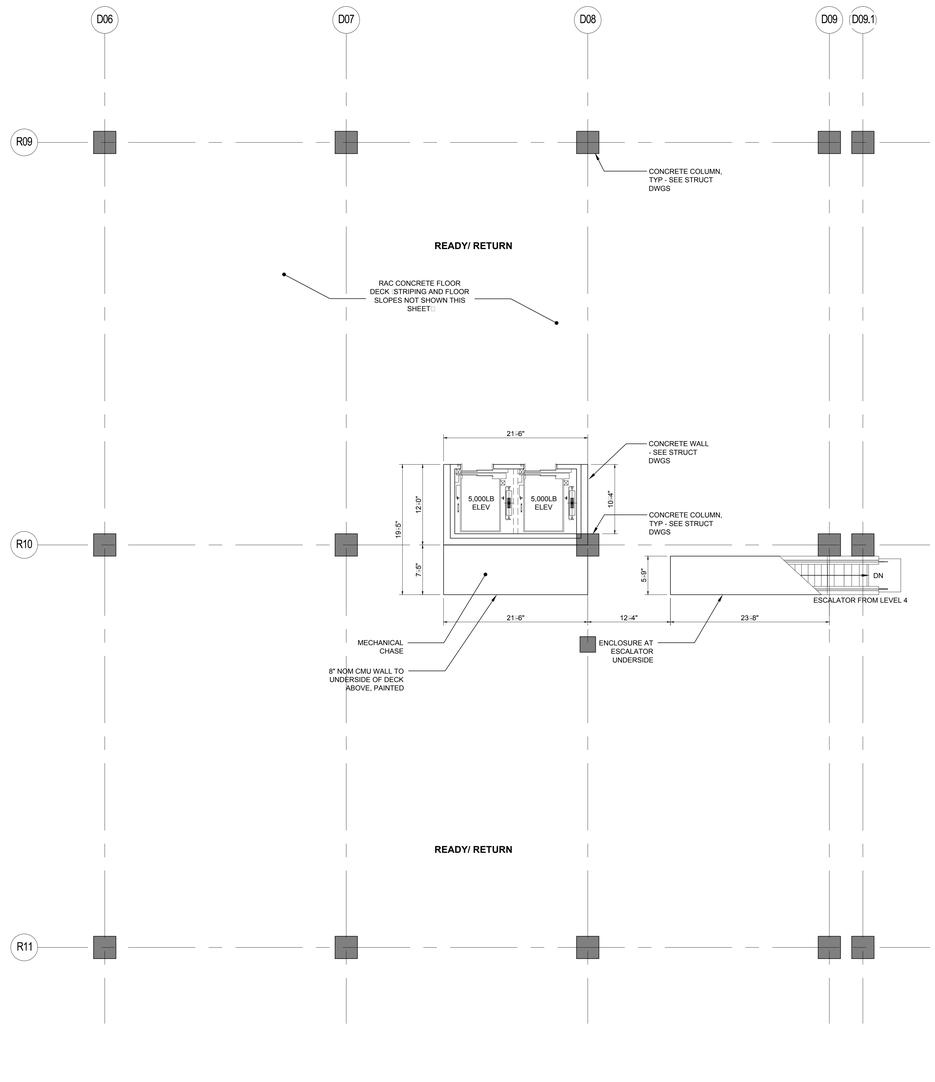
SHEET NO.
5-A-211
SHEET OF

© Trans□ tem□ tive_Kouttran □ ccps par1 dgeleg/prd0028 it\77DA4881-5-A-211_L1E.dwg, Plotted: Jun 30, 2016 - 3:31pm

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB CORES - LEVEL 1, CORE WEST PLAN
1/8" 1'-0"



2 BUILDING E - CSB CORES - LEVEL 1, CORE 2 PLAN
1/8" 1'-0"

TranSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo Angele International Airport

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CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

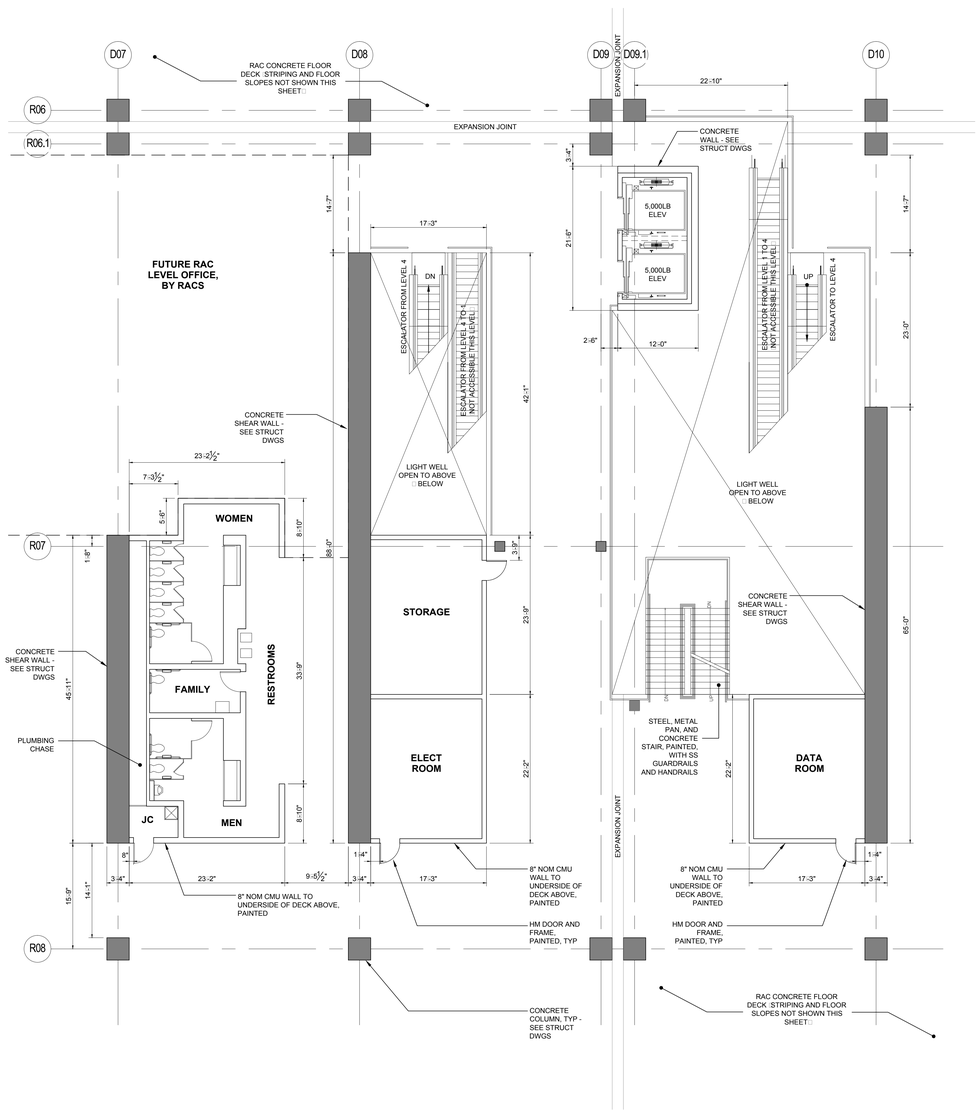
PROJ NO:	DA4681
SCALE:	1/8" 1'-0"
DATE:	07/01/2016
DESIGNED BY:	J. J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:
CSB CORES
LEVEL 1
ENLARGED
CORE PLANS

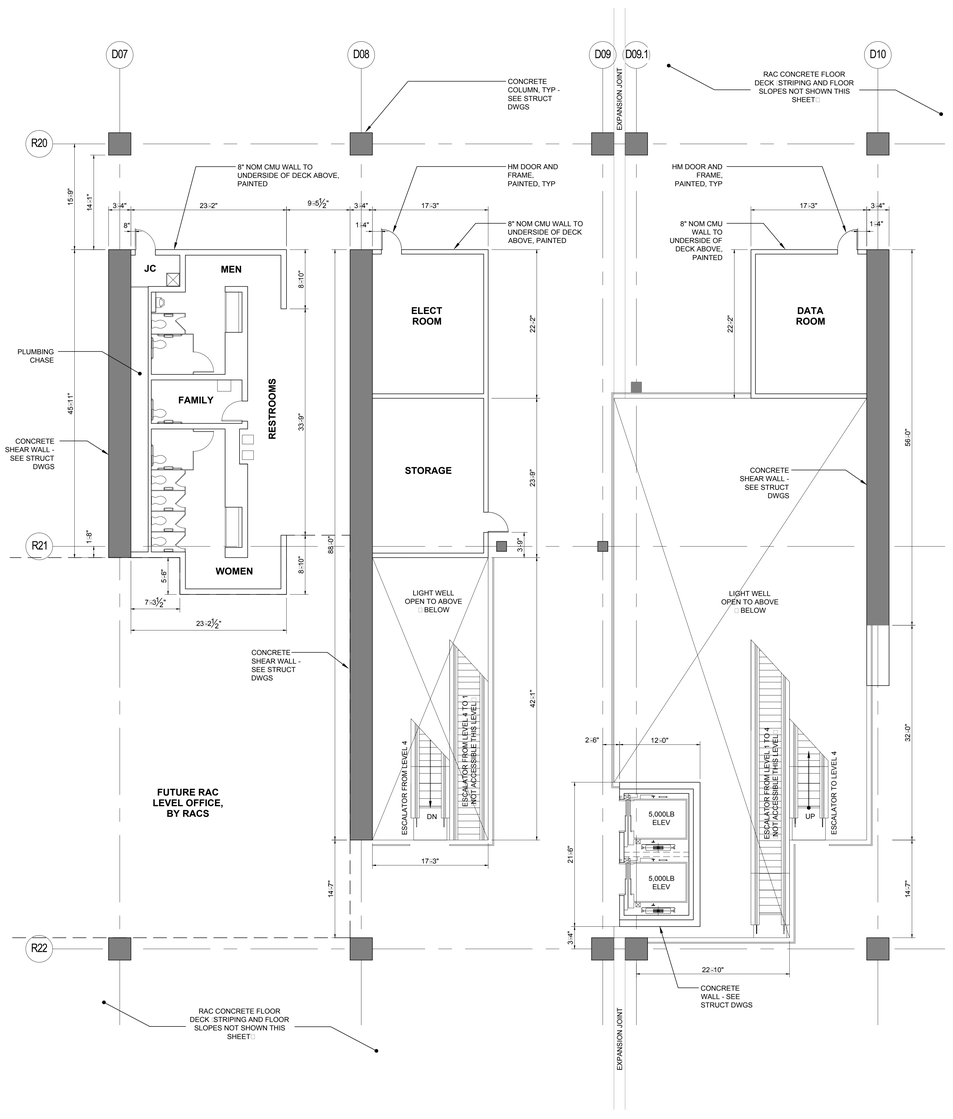
SHEET NO.
5-A-212
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB CORES - LEVEL 2, CORE 1 PLAN CORE 3 OPP HAND
1/8" = 1'-0"



2 BUILDING E - CSB CORES - LEVEL 2, CORE 4 PLAN
1/8" = 1'-0"

TranSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

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Lo Angele International Airport

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SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

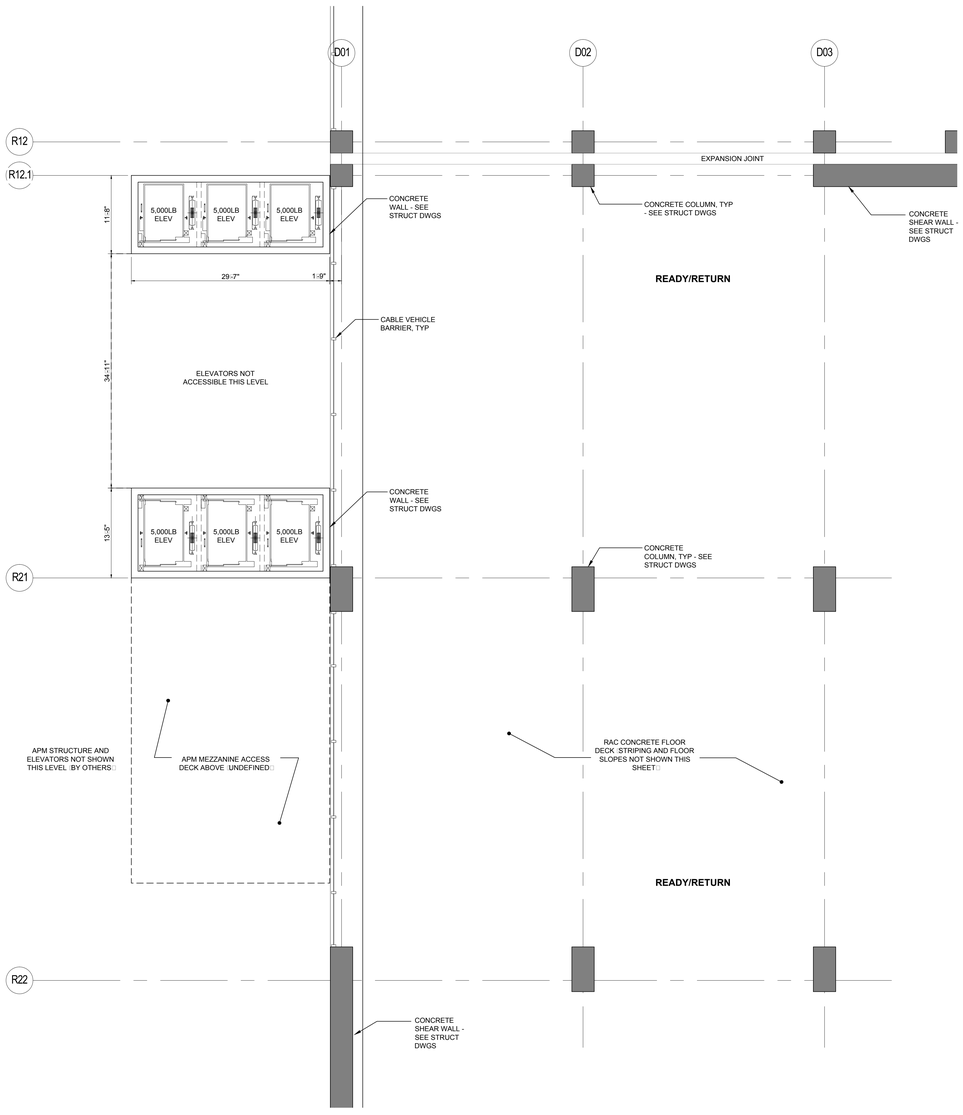
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SCALE: 1/8" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: J. J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:
CSB CORES
LEVEL 2
ENLARGED
CORE PLANS

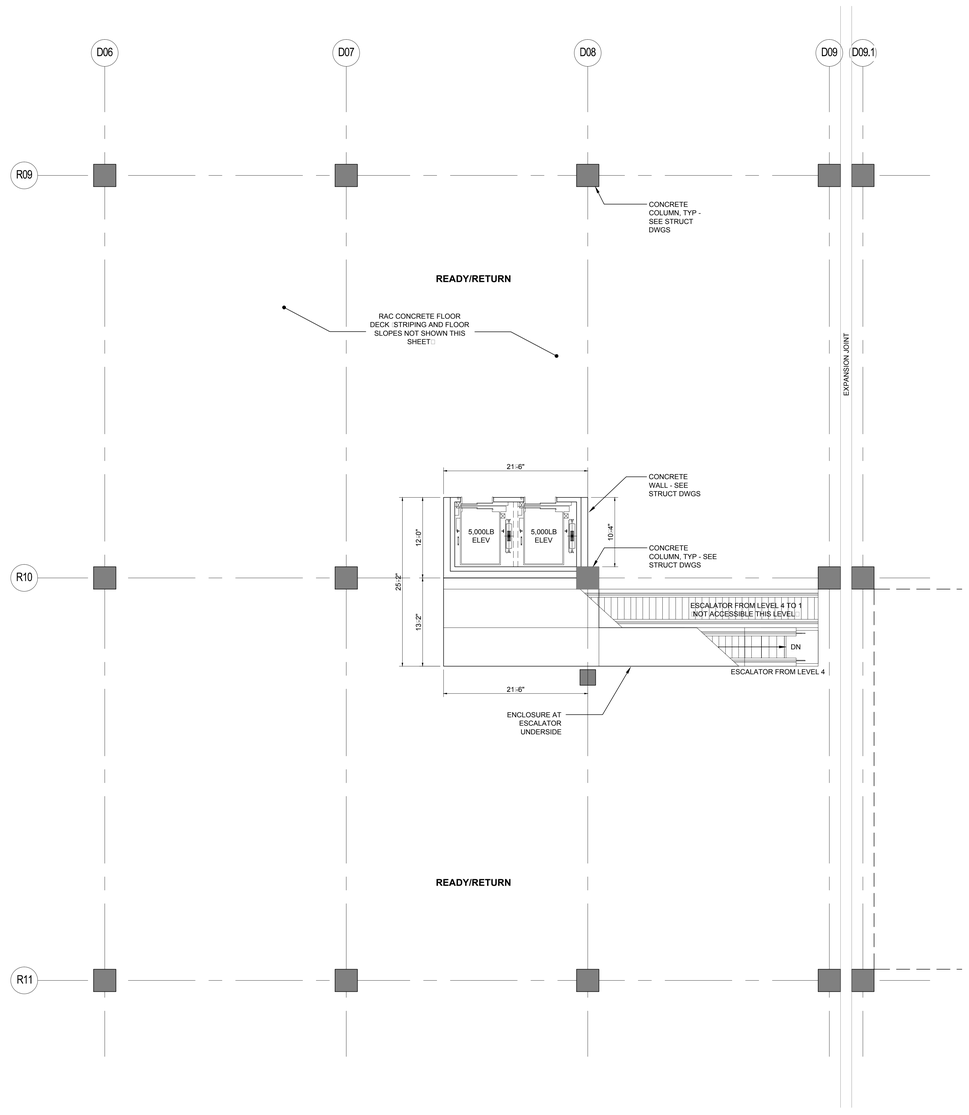
SHEET NO.
5-A-221
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB CORES - LEVEL 2, CORE WEST PLAN
1/8" 1'-0"



2 BUILDING E - CSB CORES - LEVEL 2, CORE 2 PLAN
1/8" 1'-0"

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SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

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CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

JNT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

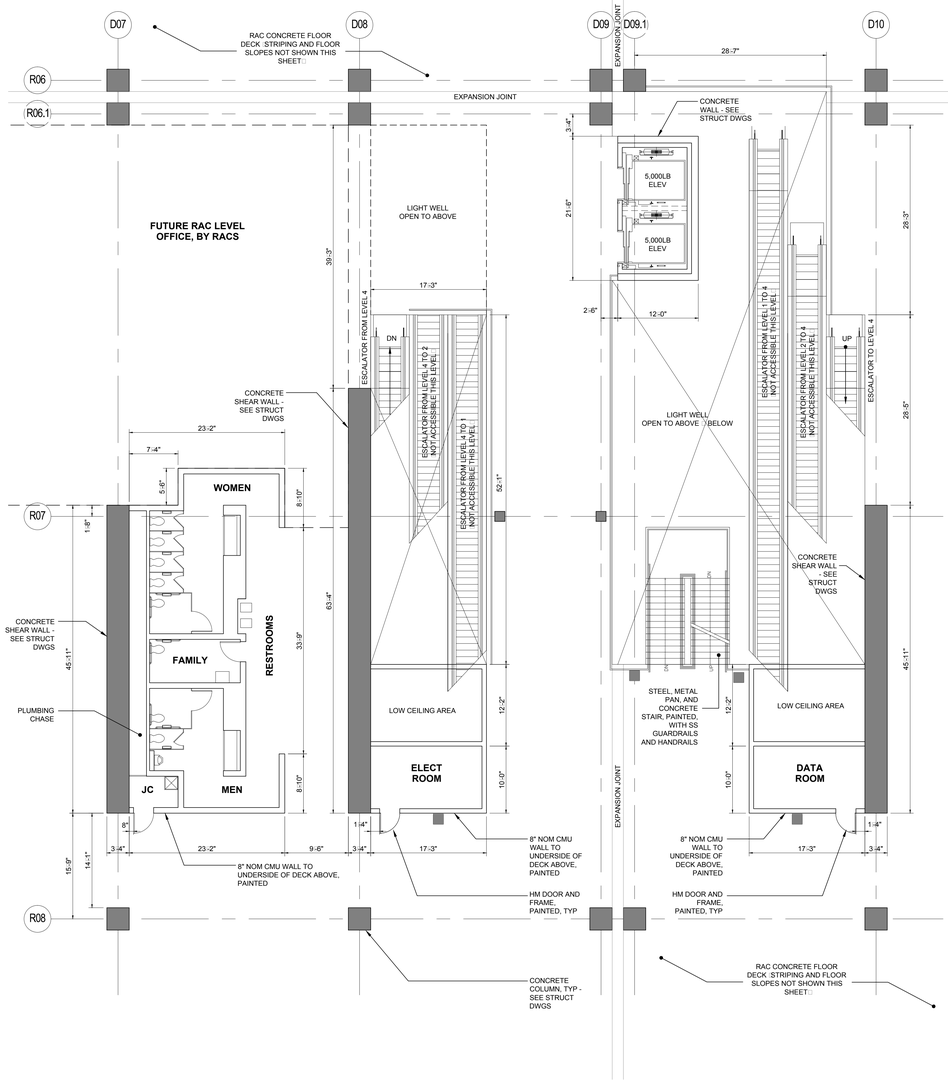
PROJ NO:	DA4681
SCALE:	1/8" 1'-0"
DATE:	07/01/2016
DESIGNED BY:	J. J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:
CSB CORES
LEVEL 2
ENLARGED
CORE PLANS

SHEET NO.
5-A-222
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB CORES - LEVEL 3, CORE 1 PLAN CORE 3 OPP HAND
1/8" = 1'-0"

2 BUILDING E - CSB CORES - LEVEL 3, CORE 4 PLAN
1/8" = 1'-0"

TranSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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Project
LAX Consolidated Rental Car Facility
Lo Angele International Airport

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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

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PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

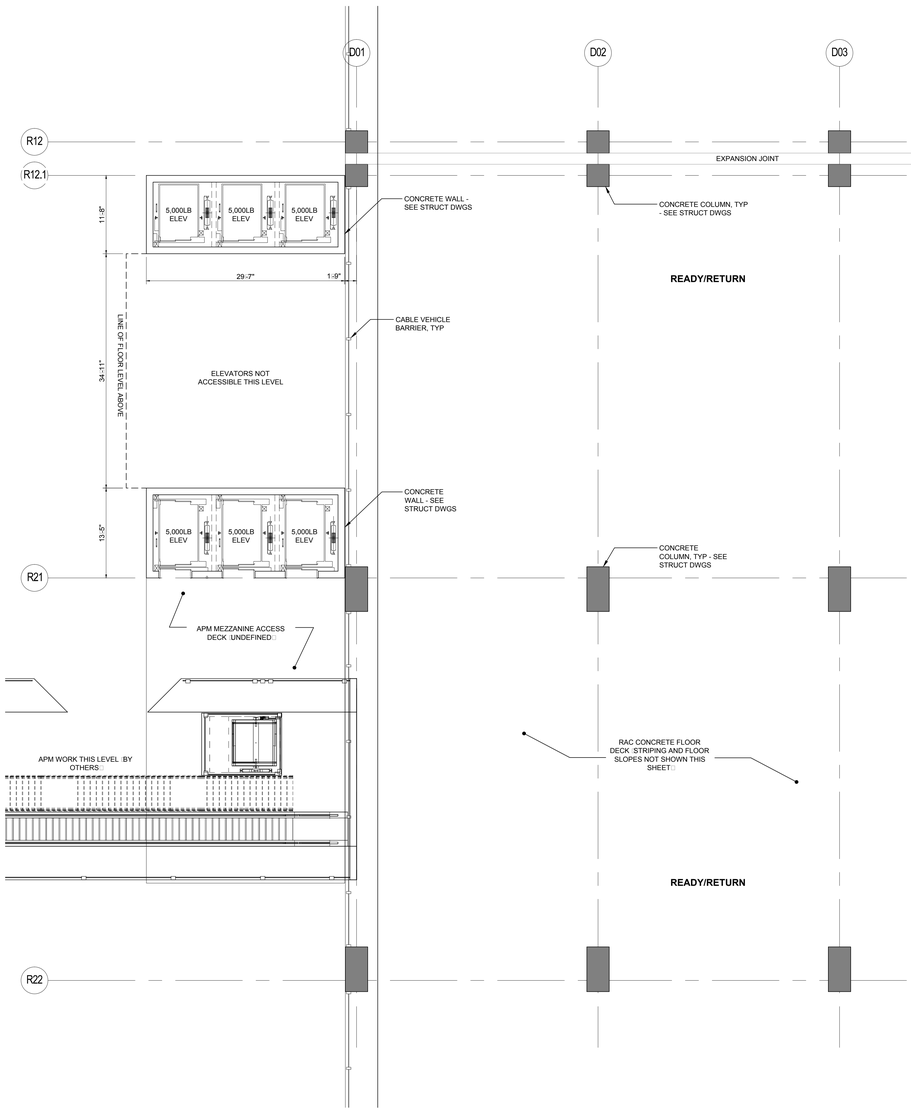
PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: J. J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:
CSB CORES
LEVEL 3
ENLARGED
CORE PLANS

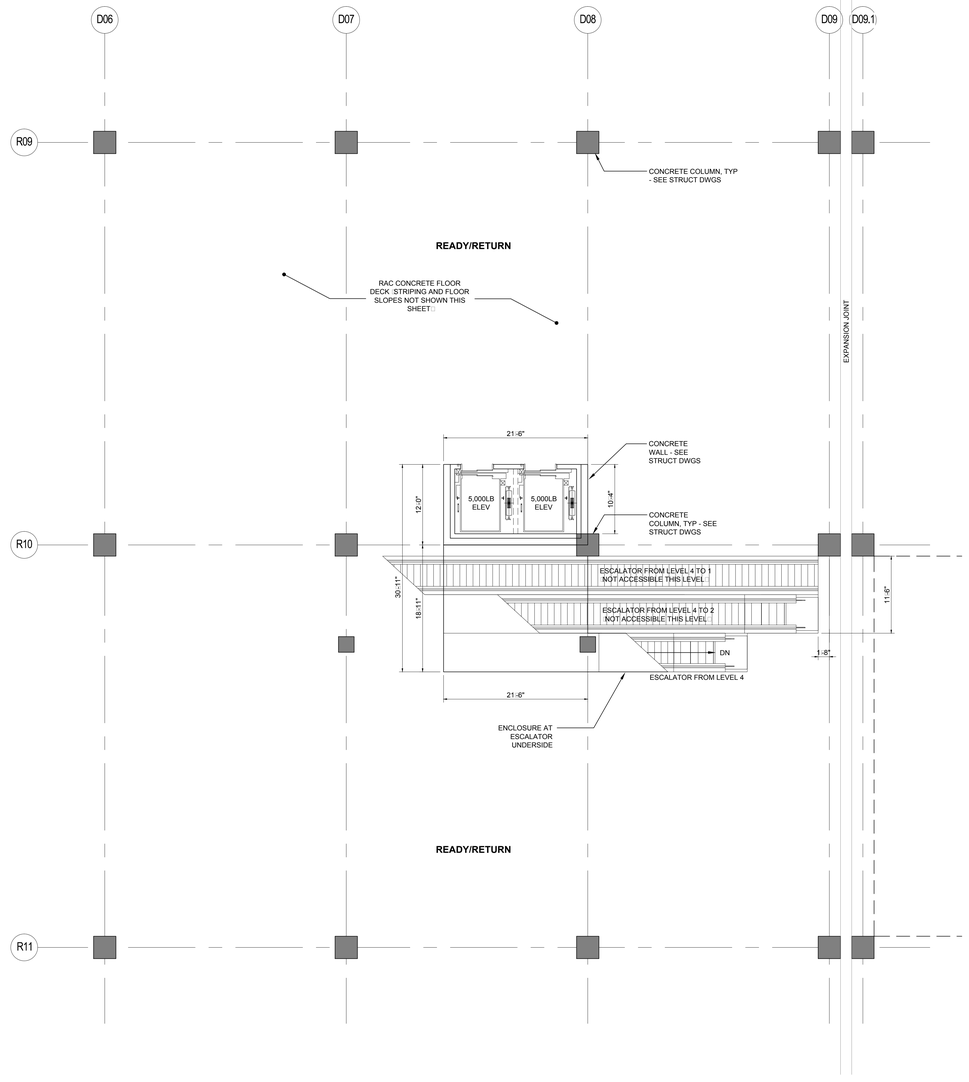
SHEET NO.
5-A-231
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB □ CORES - LEVEL 3, CORE WEST PLAN
1/8" □ 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL3, CORE 2 PLAN
1/8" □ 1'-0"

TranSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo□Angele□International Airport

APPROVED BY

CHIEF AIRPORTS ENGINEER

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4681
SCALE:	1/8" □ 1'-0"
DATE:	07/01/2016
DESIGNED BY:	J□J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:

CSB □ CORES
LEVEL 3
ENLARGED
CORE PLANS

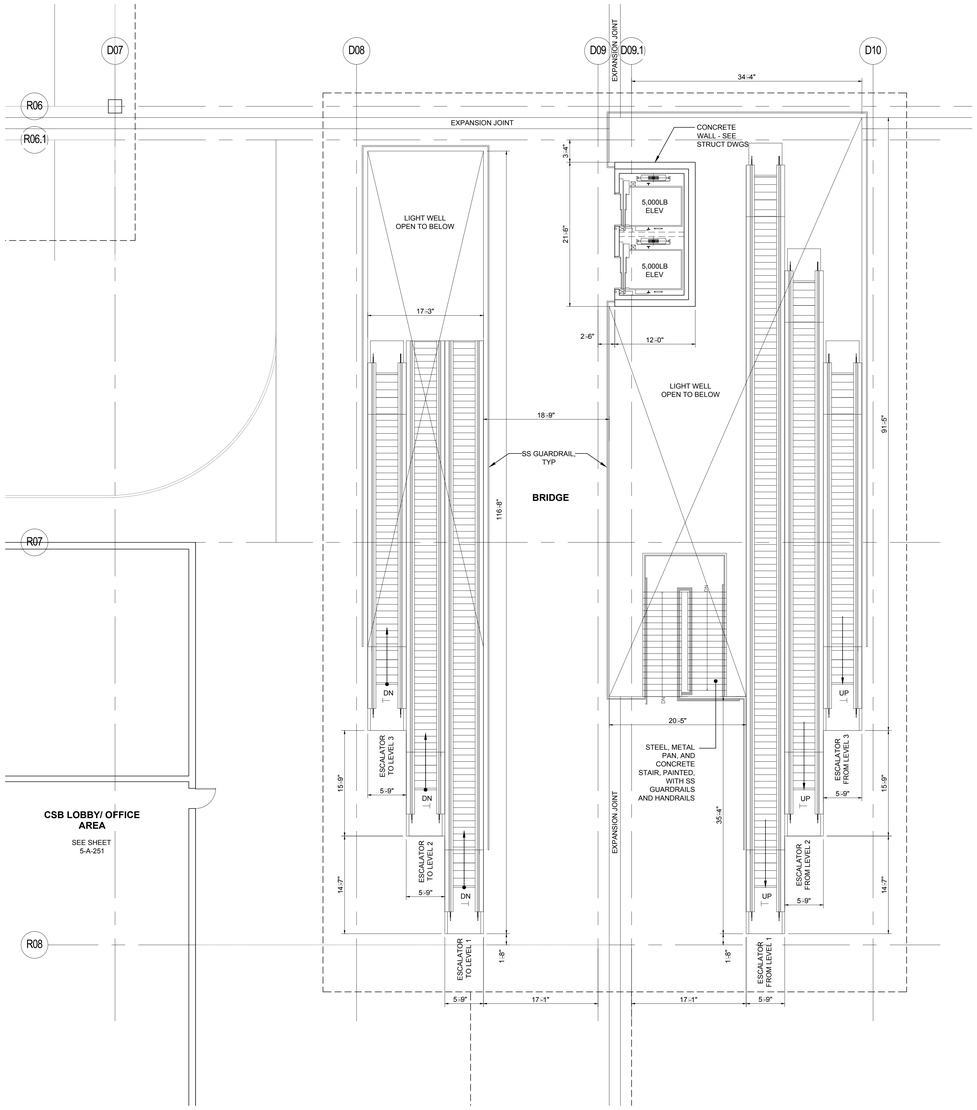
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5-A-232

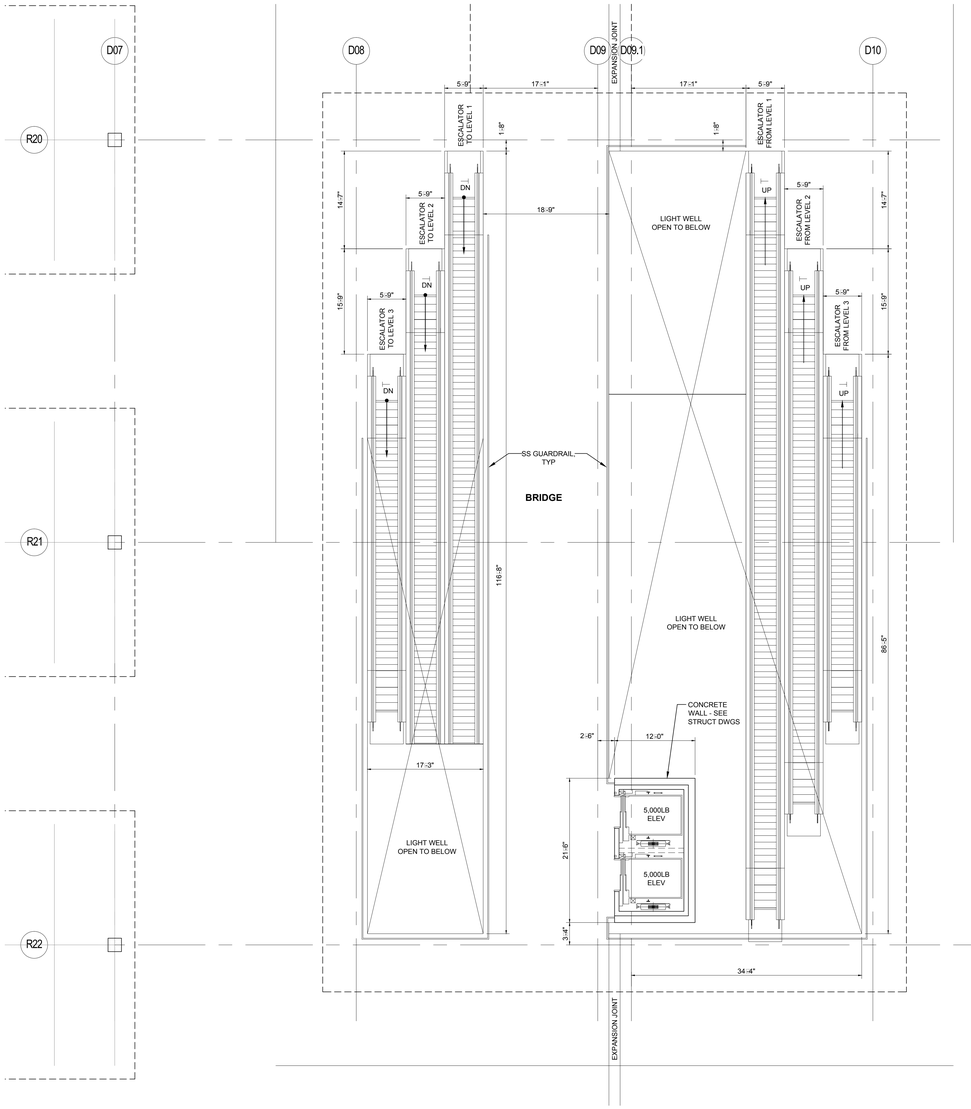
SHEET OF

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IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - LEVEL 4, CORE 1 PLAN □CORE 3 OPP HAND□
1/8" □ 1□0"



2 BUILDING E - CSB □ CORES - LEVEL 4, CORE 4 PLAN
1/8" □ 1□0"

TranSystems
801 SOUTH GRAND
SUITE 210
LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo Angele: International Airport

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY

CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" □ 1□0"
DATE:	07/01/2016
DESIGNED BY:	J□J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:

CSB □ CORES LEVEL 4 ENLARGED CORE PLANS

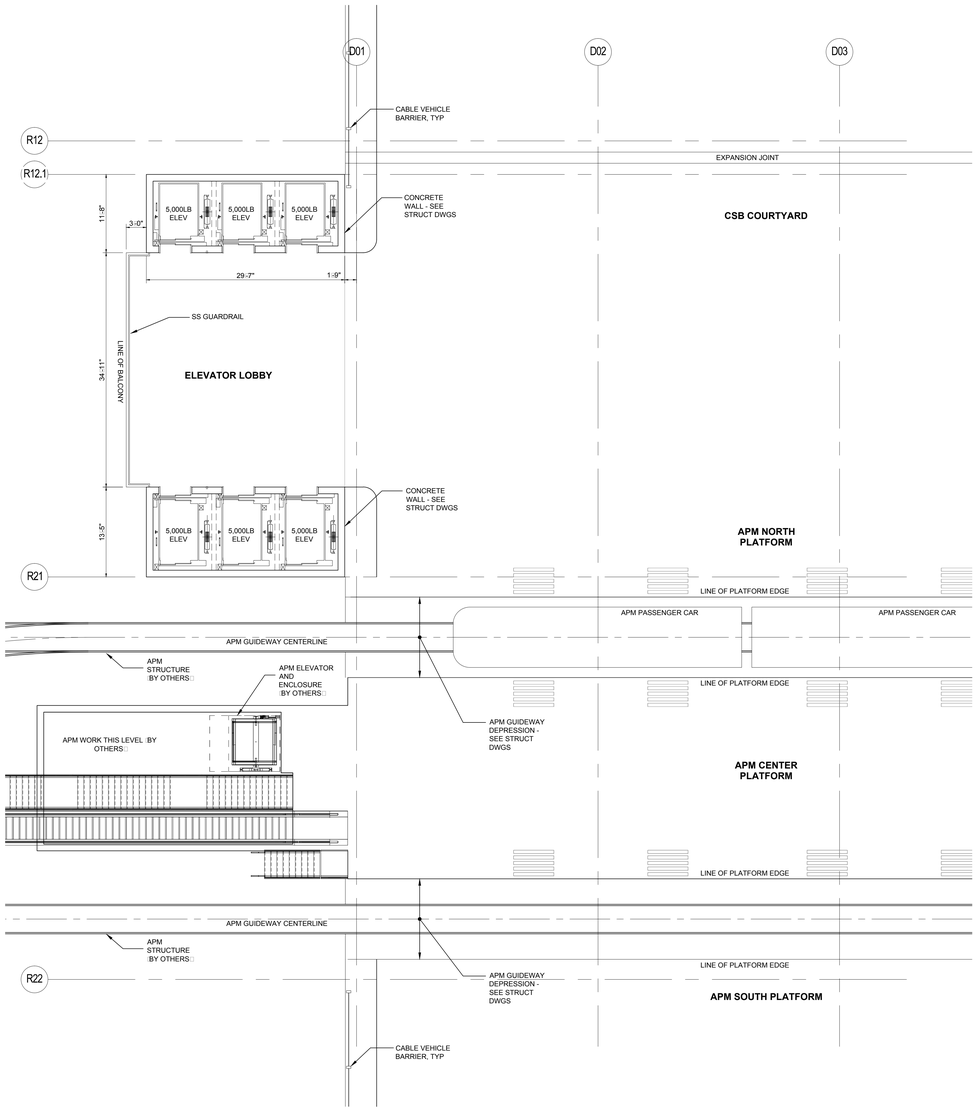
SHEET NO.

5-A-241

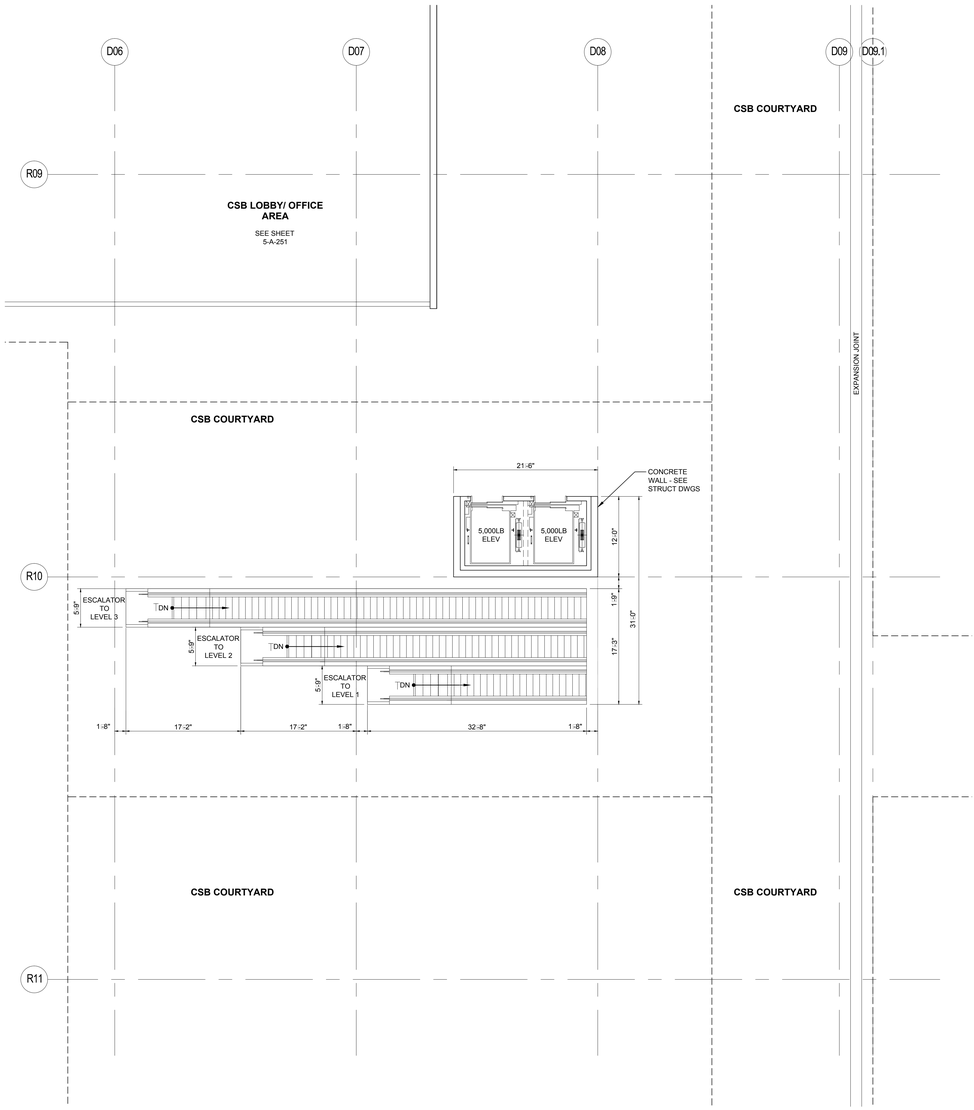
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1 BUILDING E - CSB □ CORES - LEVEL 4, CORE WEST PLAN
1/8" □ 1'-0"



2 BUILDING E - CSB □ CORES - LEVEL4, CORE 2 PLAN
1/8" □ 1'-0"

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LOS ANGELES, CA 90017
PHONE: 562 594-6974
FAX: 562 594-6975

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CONSULTANTS:

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo Angele International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

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DATE: 07/01/2016
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CHECKED BY: NL

SHEET TITLE:
CSB □ CORES
LEVEL 4
ENLARGED
CORE PLANS

SHEET NO.
5-A-242
SHEET OF

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D01 D02 D03 D04 D05 D06 D07 D08

R06.1 R07 R08 R09 R10

CABLE VEHICLE BARRIER, TYP.

ROOF LEVEL PARKING

STAIR

228'-6"

HM DOOR AND FRAME, PAINTED, TYP

12'-0"

1'-0"

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

1'-0" 1'-0" 1'-0" 1'-0" 1'-0" 8'-0"

ELECT ROOM 18'-10" 12'-6"

DATA ROOM 30'-6"

MECH ROOM 20'-0"

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

ELECT SUBSTATION

CSB SUPPORT SPACE 35'-8" 23'-2"

JC

MEN FAMILY WOMEN

RESTROOMS

1'-0"

1'-8" 10'-10" 8'-10" 1'-0"

19'-6" 52'-6" 48'-0"

RESTROOMS AND SUPPORT SPACE: 8" NOM CMU WALL TO UNDERSIDE OF DECK ABOVE, FINISHES UNDEFINED

CORE 1

SEE SHEET 5-A-241

140'-0"

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

CSB LOBBY/ OFFICE AREA

CSB ROOF SUPPORT STRUCTURE NOT SHOWN

CSB LOBBY/ OFFICE AREA

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

STAIR

20'-0"

GLASS STOREFRONT AND ENTRANCES

GLASS STOREFRONT AND ENTRANCES

GLASS STOREFRONT AND ENTRANCES

GLASS STOREFRONT AND ENTRANCES

CABLE VEHICLE BARRIER, TYP.

CSB COURTYARD

CORE 2

SEE SHEET 5-A-242

1 BUILDING E - CSB CORES - LEVEL 4 ENLARGED CSB PLAN
1/8" = 1'-0"

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REVISIONS: MARK DATE DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: J J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:

CSB CORES LEVEL 4 ENLARGED CSB PLANS

SHEET NO.

5-A-251

SHEET OF

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D09.1 D10 D11 D12 D13 D14 D15 C0.0

R07 R08 R09 R10

CORE 1

SEE SHEET 5-A-241

CABLE VEHICLE BARRIER, TYP.

120'-6"

12'-0"

24'-0"

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

GLASS STOREFRONT AND ENTRANCES

CSB LOBBY/ OFFICE AREA

COLD-FORMED METAL FRAMING WITH INTERIOR AND EXTERIOR SHEATHING AND FINISH SYSTEMS

STAIR

CSB COURTYARD

CSB ROOF SUPPORT STRUCTURE NOT SHOWN

HM DOOR AND FRAME, PAINTED, TYP

23'-2"

12'-6"

1'-0"

1'-0"

WOMEN

JC

MECH ROOM

8'-10"

21'-4"

RESTROOMS

FAMILY

52'-8"

MEN

19'-10"

CABLE VEHICLE BARRIER, TYP.

RESTROOMS AND SUPPORT SPACE: 8" NOM CMU WALL TO UNDERSIDE OF DECK ABOVE, FINISHES UNDEFINED

CSB SUPPORT SPACE

MATCH LINE SEE 2-A-513

1 BUILDING E - CSB CORES - LEVEL 4 ENLARGED CSB PLAN
1/8" = 1'-0"

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MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/2016
DESIGNED BY:	AA
DRAWN BY:	AM
CHECKED BY:	AA

SHEET TITLE:

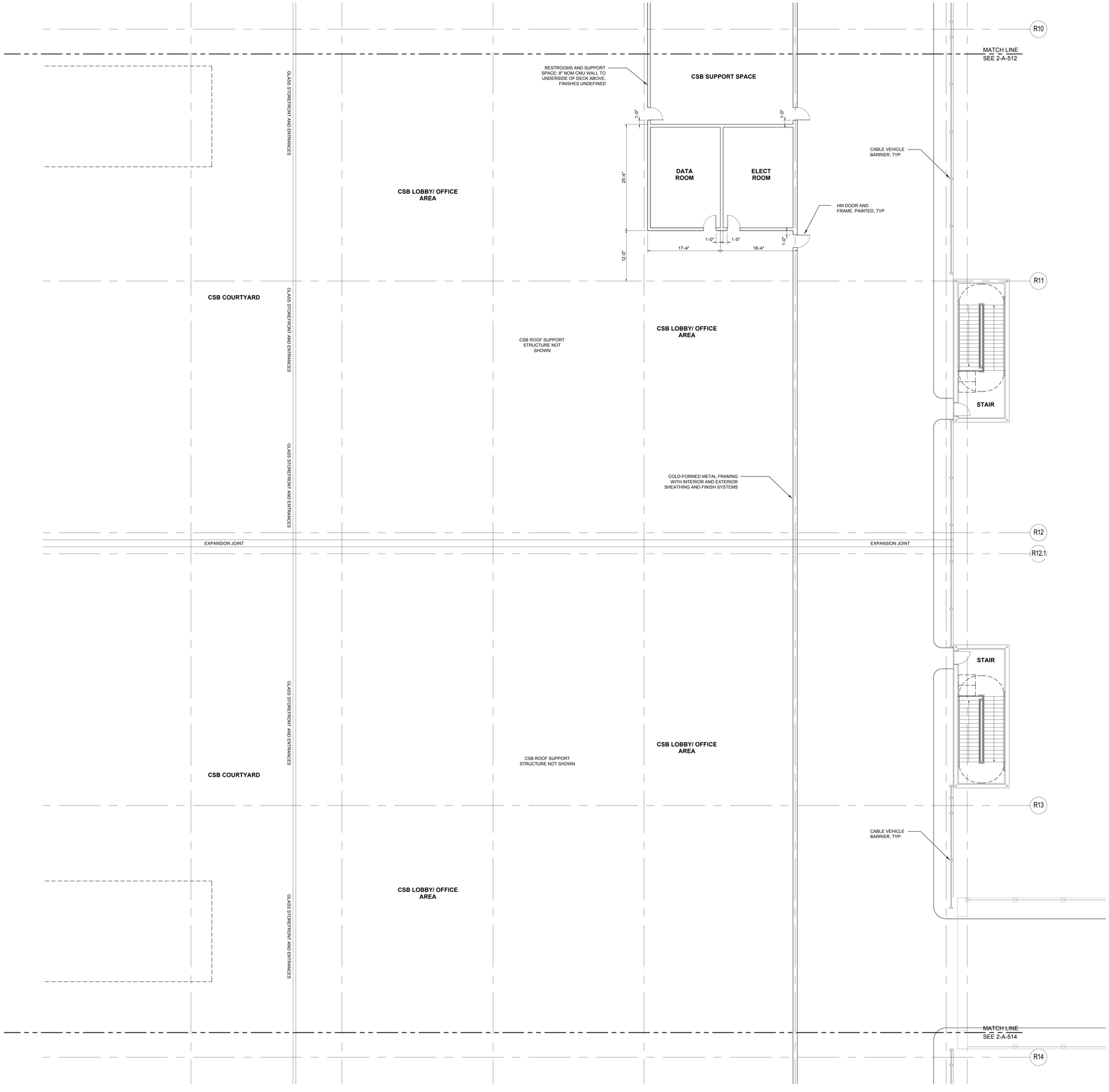
CSB CORES LEVEL 4 ENLARGED CSB PLANS

SHEET NO.

5-A-252

SHEET OF

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1 BUILDING E - CSB CORES - LEVEL 4 ENLARGED CSB PLAN
1/8" = 1'-0"

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ASST. CHIEF AIRPORTS ENGINEER

JOINT VENTURE PMD ANA LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/2016
DESIGNED BY:	J J
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:

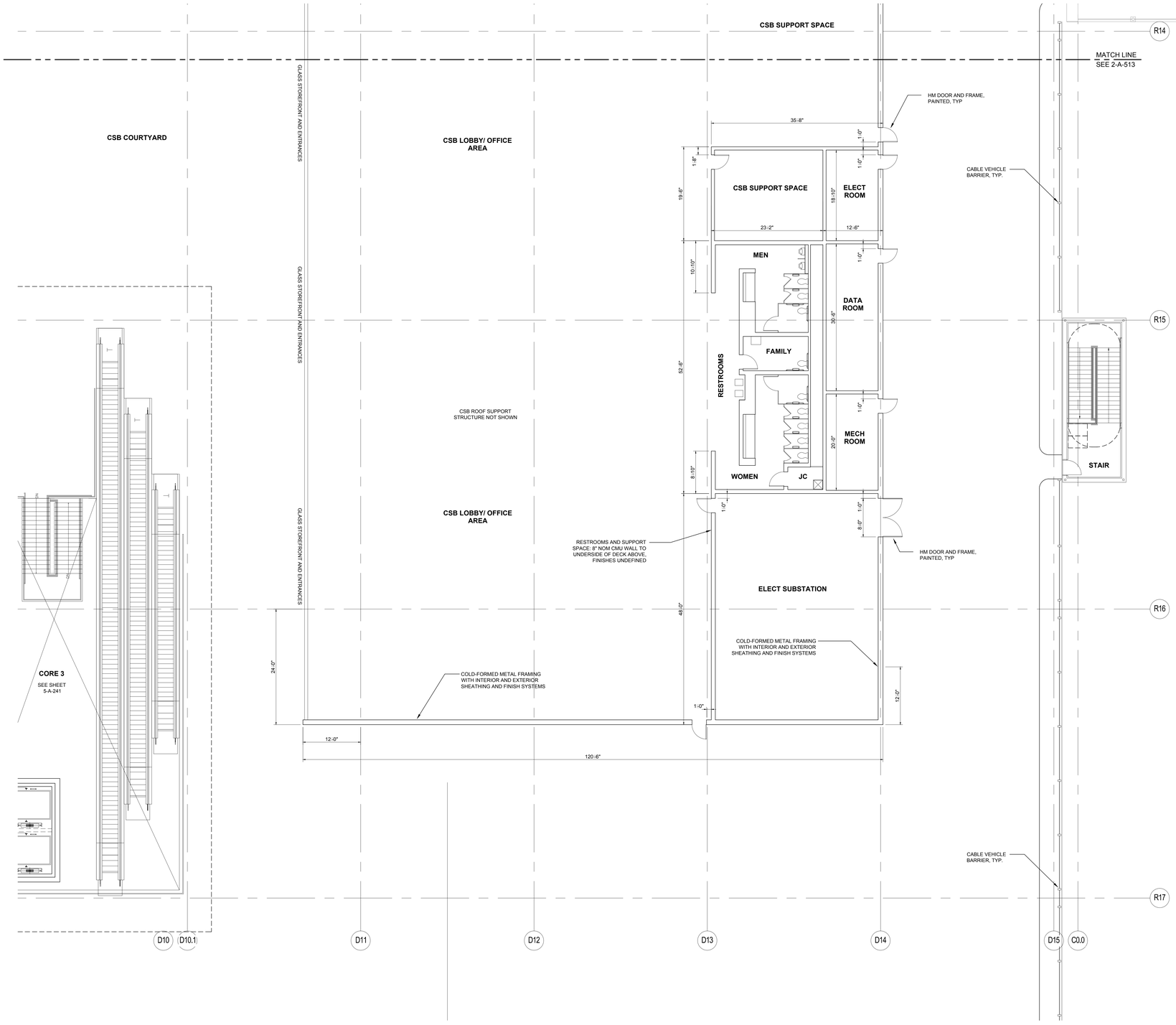
CSB CORES
LEVEL 4
ENLARGED
CSB PLANS

SHEET NO.

5-A-253

SHEET OF

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1 BUILDING E - CSB CORES - LEVEL 4 ENLARGED CSB PLAN
1/8" = 1'-0"

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PMD LAX

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MARK	DATE	DESCRIPTION

PROJ NO:	DA4681
SCALE:	1/8" = 1'-0"
DATE:	07/01/2016
DESIGNED BY:	J. J
DRAWN BY:	JN
CHECKED BY:	NL

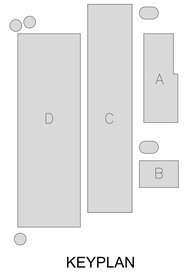
SHEET TITLE:
CSB CORES LEVEL 4 ENLARGED CSB PLANS

SHEET NO.
5-A-254
SHEET OF

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1 TOP AERIAL VIEW OF CONRAC
SCALE: N.T.S.



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SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: RD
DRAWN BY: SB
CHECKED BY: RD

SHEET TITLE:
TOP AERIAL VIEW OF CONRAC

SHEET NO.
5-A-910
SHEET OF

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A1483 - LAX ConRAC De ign\TECH\Dwg Vie\ Volume 5 Ma - 2016\DA4881-5-A-910.dwg Plotted: Jul 01, 2016 - 9:26am



3 SOUTH AERIAL VIEW OF CONRAC
SCALE: N.T.S.



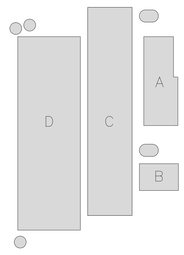
4 WEST AERIAL VIEW OF CONRAC
SCALE: N.T.S.



1 NORTH AERIAL VIEW OF CONRAC
SCALE: N.T.S.



2 EAST AERIAL VIEW OF CONRAC
SCALE: N.T.S.



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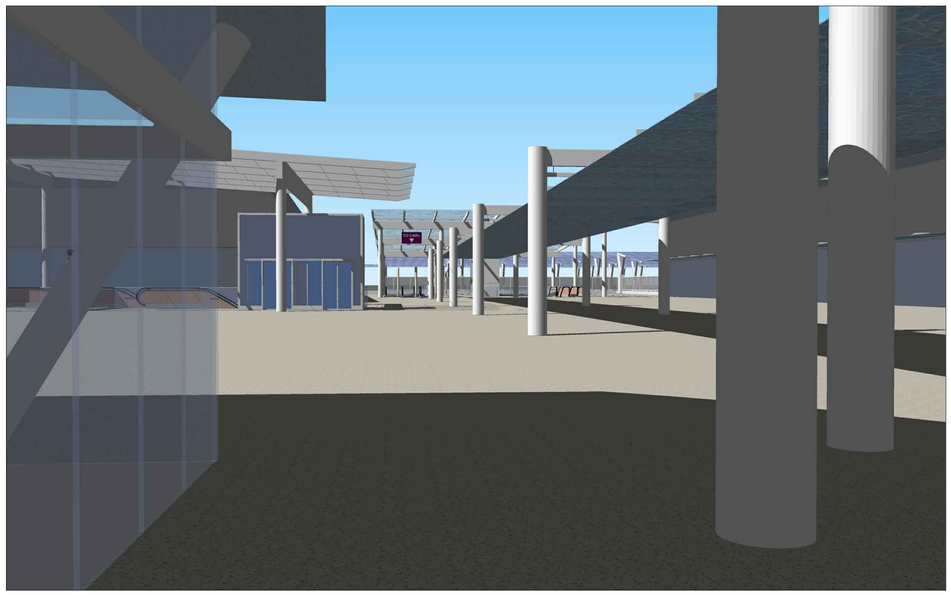
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DATE: 07/01/2016
DESIGNED BY: RD
DRAWN BY: SB
CHECKED BY: RD

SHEET TITLE:
AERIAL VIEWS OF CONRAC

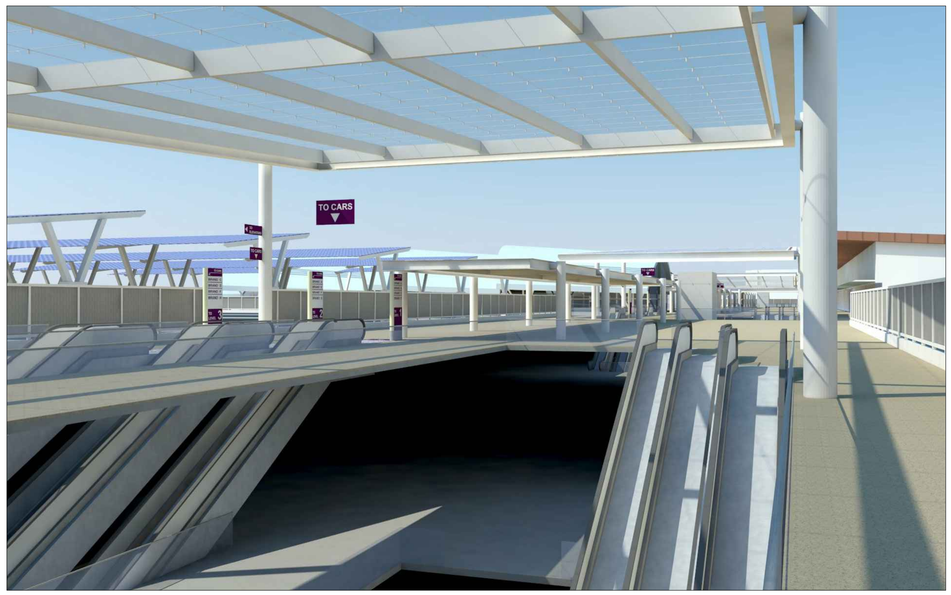
SHEET NO.
5-A-911
SHEET OF

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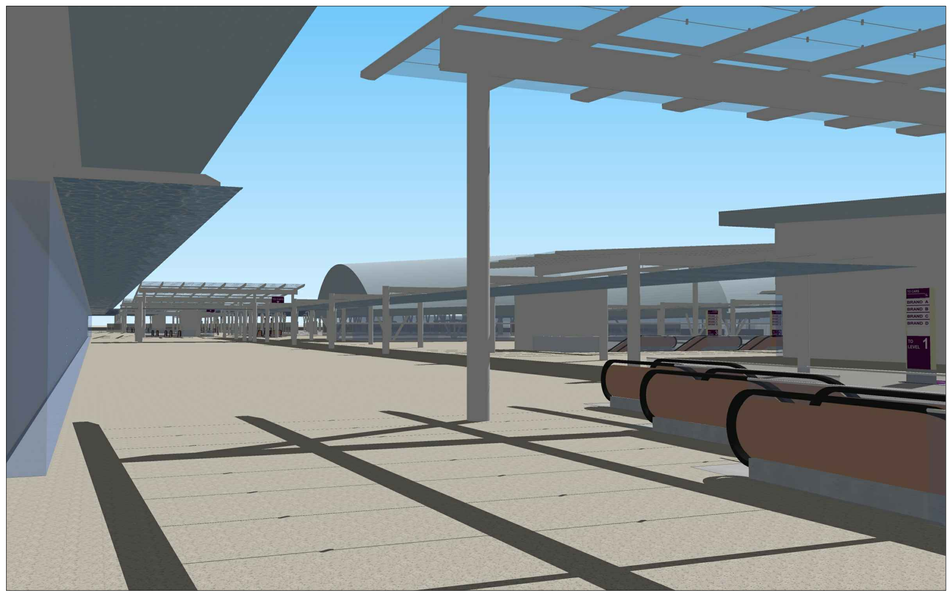
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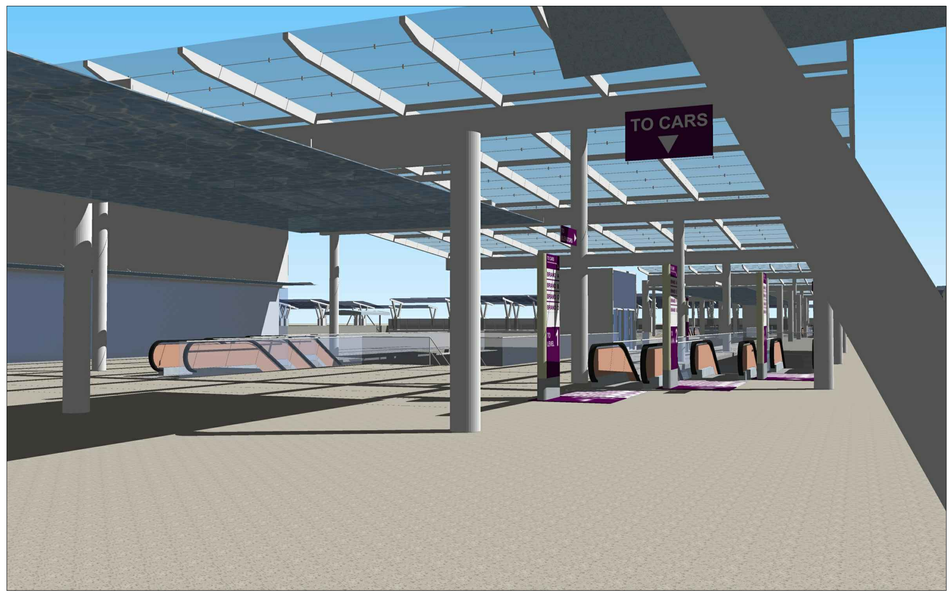
3 VIEW OF NORTH CSB FROM APM
SCALE: N.T.S.



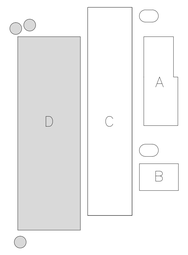
4 VIEW LOOKING AT CSB NORTH
SCALE: N.T.S.



1 VIEW LOOKING AT APM FROM NORTH CSB
SCALE: N.T.S.



2 VIEW LOOKING AT CSB SOUTH OF APM
SCALE: N.T.S.



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CHIEF AIRPORTS ENGINEER

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PROJ NO: DA4881
SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: RD
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CHECKED BY: RD

SHEET TITLE:
VIEWS OF ROOF LEVEL

SHEET NO.
5-A-912
SHEET OF

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3 VIEW OF BUS PLAZA
SCALE: N.T.S.



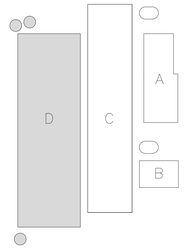
4 VIEW OF BUS PLAZA CURBSIDE
SCALE: N.T.S.



1 NORTH VIEW OF BUS PLAZA
SCALE: N.T.S.



2 SOUTH VIEW OF BUS PLAZA
SCALE: N.T.S.



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SCALE: N.T.S.
DATE: 07/01/2016
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SHEET TITLE:
VIEWS OF BUS PLAZA

SHEET NO.
5-A-913
SHEET OF

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3 SIGNAGE AT CORE ON LEVEL 3
SCALE: N.T.S.



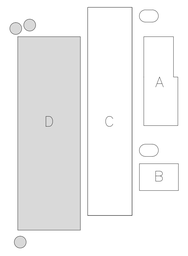
4 SIGNAGE AT CORE ON ROOF LEVEL
SCALE: N.T.S.



1 SIGNAGE AT CORE ON LEVEL 1
SCALE: N.T.S.



2 SIGNAGE AT CORE ON LEVEL 2
SCALE: N.T.S.



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SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: RD
DRAWN BY: SB
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SHEET TITLE:
VIEWS OF SIGANGE STUDIES AT CORE

SHEET NO.
5-A-920
SHEET OF

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MECHANICAL LEGEND

SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
		NEW SQUARE OR RECTANGULAR DUCT		S.P.	STATIC PRESSURE	CHWS	CHWS	CHILLED WATER SUPPLY
	AC.LN.	NEW DUCT WITH ACOUSTIC LINER (IN ADDITION TO WHERE SPECIFIED)	Ø	DIA.	ROUND (DIAMETER)	CHWR	CHWR	CHILLED WATER RETURN
		EXISTING DUCT OR EQUIPMENT TO REMAIN			OVAL DUCT (MINOR AXIS x MAJOR AXIS)	HWS	HWS	LOW TEMPERATURE HOT WATER SUPPLY
		EXISTING DUCT OR EQUIPMENT TO BE REMOVED		TG	TOP GRILLE	HWR	HWR	LOW TEMPERATURE HOT WATER RETURN
		NEW ROUND DUCT		TR	TOP REGISTER		N.O.	NORMALLY OPEN
		NEW FLEXIBLE ROUND DUCT		BR	BOTTOM REGISTER		N.C.	NORMALLY CLOSED
UP (OR DN)		DUCT SLOPE DIRECTION		B.G.	BOTTOM GRILLE		TEMP.	TEMPERATURE
		DUCT UP OR DOWN		C.G.	CEILING GRILLE		TYP.	TYPICAL
		DUCT TRANSITION		CFM	CUBIC FEET OF AIR PER MINUTE		POR	POINT OF REMOVAL
		RADIUS ELBOW (✳FIG. 2-2)	E. OR EXH.		EXHAUST		POC	POINT OF CONNECTION
		RECTANGULAR/SQUARE DUCT THROAT ELBOW WITH VANES (✳ FIG. 2-2)		(E) OR EXIST	EXISTING		A.D.	ACCESS DOOR
OR		SQUARE 45° ENTRY BRANCH CONNECTION (✳FIG. 2-8)		O.S.A.	OUTSIDE AIR		IBJS	IN BETWEEN JOIST SPACE
		ROUND DUCT WYE FITTING (✳FIG. 3-5)		R. OR RET.	RETURN		UTR	UP THROUGH ROOF
OR		RECTANGULAR DUCT PARALLEL FLOW BRANCH (✳ FIG. 2-7)		S. OR SUPP.	SUPPLY		DTR	DOWN THROUGH ROOF
TH OR TH		THROAT SIZE ON RECTANGULAR DUCT SPLIT		TH.	THROAT		UTF	UP THROUGH FLOOR
OR		DUCT TAKE-OFF FROM BOTTOM		MCA	MINIMUM CIRCUIT AMPS		DTR	DOWN THROUGH ROOF
OR		DUCT TAKE-OFF FROM TOP		MFA	MAXIMUM FUSE AMPS	XX X		EQUIPMENT NUMBER
	M.V.D.	NEW MANUAL VOLUME DAMPER			BALL VALVE	T	T'STAT.	THERMOSTAT WITH ZONE NUMBER
	(E)M.V.D.	EXISTING MANUAL VOLUME DAMPER			GLOBE VALVE		GA.	GAUGE
	F.D.	NEW FIRE DAMPER			BALANCING COCK	S		REMOTE SENSOR
	(E)F.D.	EXISTING FIRE DAMPER			CHECK VALVE	RL	RL	REFRIGERANT LIQUID LINE
		NEW MOTORIZED DAMPER	PRV-X		PRESSURE REDUCING VALVE	RS	RS	REFRIGERANT SUCTION LINE
	FD-SD	NEW FIRE DAMPER & SMOKE DAMPER			FLOW CONTROL VALVE (NON-MOTORIZED)	RD	RD	REFRIGERANT DISCHARGE LINE
	(E) FD-SD	EXISTING FIRE DAMPER & SMOKE DAMPER			WYE STRAINER WITH DRAIN VALVE			THERMOSTATIC EXPANSION VALVE
	CR	CEILING REGISTER (RETURN OR EXHAUST)			STRAINER			DRYER
	CD	CEILING DIFFUSER (SUPPLY)			PUMP			FILTER DRYER
	CR	CEILING REGISTER (OUTSIDE AIR)			THERMOMETER			SIGHT GLASS
		SUPPLY AIR DUCT SECTION		PRV	PRESSURE RELIEF VALVE WITH DISCHARGE TO FLOOR SINK OR OUTSIDE			OIL SEPARATOR
		RETURN OR EXHAUST AIR DUCT SECTION	EJ-X		PIPING EXPANSION JOINT			FILTER
		OUTSIDE AIR DUCT SECTION			PRESSURE GAUGE WITH GAUGE COCK			RECEIVER (VERTICAL)
		SUPPLY AIR DUCT UP THRU FLOOR OR ROOF			ALIGNMENT GUIDE			SOLENOID VALVE
		RETURN OR EXHAUST AIR DUCT UP THRU FLOOR OR ROOF			ANCHOR			REFRIGERATION VALVE
		OUTSIDE AIR DUCT UP THRU FLOOR OR ROOF	MV	MV	MANUAL AIR VENT			VIBRATION ABSORBER
2	LVR.	DOOR LOUVER AND SQUARE FOOT AREA			PLUG COCK	(NAME)		NEW PIPING
		UNDERCUT DOOR 3/4"			THERMOMETER WELL	(NAME)		EXISTING PIPING TO REMAIN
DD		SMOKE DUCT DETECTOR (BY FIRE ALARM CONTRACTOR)	TH			(NAME)		EXISTING PIPING TO BE REMOVED
	GALV.	GALVANIZED		A.A.V.	AUTOMATIC AIR VENT WITH DISCHARGE TO FLOOR SINK OR OUTSIDE	✳		REFERS TO "SMACNA" HVAC DUCT CONSTRUCTION STANDARDS

GENERAL NOTES

1. THE INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING THE FOLLOWING:
   a) 2013 CALIFORNIA BUILDING STANDARD ADMINISTRATIVE CODE PART 1, TITLE 24 C.C.R.
   b) 2013 CITY OF LOS ANGELES BUILDING CODE BASED ON 2010 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.; AND 2009 INTERNATIONAL BUILDING CODE (IBC)
   c) 2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. WITH 2011 L.A CITY AMENDMENTS. (BASED ON 2008 NATIONAL ELECTRICAL CODE)
   d) 2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. WITH 2011 L.A CITY AMENDMENTS. (BASED ON 2009 UNIFORM MECHANICAL CODE)
   e) 2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. WITH 2011 L.A CITY AMENDMENTS. (BASED ON 2009 UNIFORM MECHANICAL CODE)
   f) 2013 BUILDING ENERGY EFFICIENCY STANDARDS (CALIFORNIA ENERGY CODE) PART 6, TITLE 24, C.C.R.
   g) 2013 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. 2010 (2006 UNIFORM FIRE CODE AND 2007 CALIFORNIA AMENDMENTS)
   h) 2013 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 C.C.R. (2006 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)
   i) 2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
   j) 2013 TITLE 19, C.C.R. PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
   k) 2013 LA GREEN BUILDING CODE (LABGC).
2. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES, AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.
3. CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK AND EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BLDG.
4. DUCT CONSTRUCTION, INSTALLATION & INSULATION SHALL COMPLY WITH 2011 CITY OF LA MECHANICAL CODE, CHAPTER-6 AND SMACNA 1995 EDITION.
5. ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH "SMACNA" GUIDELINES AS FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING SYSTEMS. WHERE BRACING DETAILS ARE NOT SHOWN ON DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE TO THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND LAWA ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY "SMACNA" AND APPROVED BY LAWA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIME.
6. ALL FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY SANITARY VENT, EXHAUST FAN DISCHARGE AND FLUE OF OTHER FURNACES. WHEN NECESSARY EXTEND VENTS OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.
7. FIRE DAMPERS AND SMOKE DAMPERS SHALL BE PROVIDED AS REQUIRED BY SECTION 709 AND 710 OF THE CALIFORNIA BUILDING CODE. FIRE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY.
8. FIRE DAMPERS OR DOORS SHALL BE PROVIDED WHERE AIR DUCTS PENETRATE FIRE RATED WALLS OR CEILINGS AS REQUIRED BY CBC 716.5.2. DUCTS AND AIR TRANSFER OPENINGS IN FIRE BARRIERS SHALL BE PROTECTED WITH APPROVED FIRE DAMPERS INSTALLED IN ACCORDANCE WITH THEIR LISTING. PROVIDE COMBINATION FIRE/SMOKE DAMPERS AT THE SHAFT PENETRATIONS AS REQUIRED BY CBC 716.5.3.1.
9. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
10. THE SIZES, WEIGHTS AND CAPACITIES OF ALL EQUIPMENT SCHEDULES ON THE DRAWING HAVE BEEN CAREFULLY COMPUTED. SHOULD EQUAL ITEMS BY DIFFERENT MANUFACTURERS BE SUBMITTED FOR APPROVAL, ALL SUCH SUBMITTALS SHALL INCLUDE 1/4 INCH SCALE SHOP DRAWINGS SHOWING METHOD OF INSTALLATION. PROVIDE LOAD RATINGS AND SEISMIC CALCULATIONS AS APPROVED BY A REGISTERED STRUCTURAL ENGINEER WITH EACH SUBMITTAL.
11. REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL, WHICH MAY BE LIMITED TO IDENTIFYING BY TITLE AND/OR PUBLICATION NUMBER THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT. ONE COPY OF THIS INFORMATION SHALL BE FURNISHED BY THE CONTRACTOR TO THE OWNER.
12. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
13. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, SAW CUTTING, PATCHING AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS SHALL BE SEALED TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING PENETRATED.
15. CUTTING, BORING, SAW CUTTING OR DRILLING THROUGH THE THE EXISTING OR NEW STRUCTURAL ELEMENTS IS NOT TO BE STARTED UNTIL THE THE DETAILS HAVE BEEN REVIEW AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER AND THE FIELD ENGINEER IF THE DETAILS DO NOT SHOW OR CONFORM TO THE APPROVED DRAWINGS.
16. WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.
17. PENETRATIONS OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENING SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A U.L. TESTED AND APPROVED ASSEMBLY APPROVED BY THE STATE FIRE MARSHALL.
18. BEFORE BIDDING THE PROJECT THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE CLEARANCES AVAILABLE TO BRING THE SPECIFIED EQUIPMENT AND MATERIAL TO THE SITE.
19. FINAL LOCATIONS OF THERMOSTAT TO BE VERIFIED WITH THE ELECTRICAL AND MECHANICAL ENGINEER AT JOB SITE.
20. ALL THERMOSTATS ON EXTERIOR WALLS TO BE MOUNTED ON THERMAL ISOLATION BASE.
21. EACH SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2000 CFM IN GROUP A1, 2 & 2.1 GROUP B2 & E OCCUPANCIES SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF. SHUT-OFFS SHALL STOP THE AIR-MOVING EQUIPMENT WHEN SMOKE IS DETECTED IN MAIN SUPPLY AIR DUCT SERVED BY THE SYSTEM. WHEN THE SYSTEM SERVES MORE THAN ONE OCCUPANCY SHUT-OFFS SHALL BE PROVIDED. EXCEPTIONS: DETECTORS NEED NOT BE INSTALLED WHEN ROOMS HAVE A DIRECT EXIT TO THE EXTERIOR OR WHEN SYSTEMS ARE DESIGNED FOR SMOKE CONTROL (SEC. 609. CMC).
22. DUCTS PENETRATING WALLS SHALL BE PROVIDED WITH NECESSARY FRAMES, BRACING AND SMOKE AND ACOUSTICAL SEALANT AROUND THE OPENING.
23. CONTACT BETWEEN DISSIMILAR METALS SHALL BE PROTECTED AS DESCRIBED IN THE SPECIFICATIONS, OR AS NEEDED.
24. THE INSTALLATION OF VALVES, THERMOMETERS, GAUGES, CLEANOUTS, DAMPERS, DUCT ACCESS DOORS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED.
25. ALL EQUIPMENT ANCHORAGE, VIBRATION ISOLATION, AND SEISMIC RESTRAINT SYSTEMS FOR ALL EQUIPMENT SHALL BE ENGINEERED, FABRICATED, SUPPLIED AND INSTALLED BY THE APPROPRIATE SUB CONTRACTOR. PROVIDE CALCULATIONS PREPARED BY A LICENSED STRUCTURAL ENGINEER. SUBMIT DETAILS AND CALCULATIONS TO ARCHITECT AND CITY OFFICIALS. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING DEPARTMENT.
26. PIPING AND DUCT IDENTIFICATION MARKINGS AND COLOR CODES SHALL BE IN ACCORDANCE WITH ANSI A13.1 STANDARDS. MARKING SHALL INCLUDE ARROWS INDICATING DIRECTION OF FLOW. MARKINGS SHALL BE INSTALLED AT A MINIMUM OF EVERY 20' ON STRAIGHT RUNS WHERE THERE ARE NOT VISIBILITY OBSTRUCTIONS. IN AREAS WHERE VISIBILITY OF PIPE OR DUCT IS OBSTRUCTED OR NUMEROUS OTHER PIPES AND DUCTS EXIST, MARKINGS SHALL BE INSTALLED AS APPROVED TO ENABLE PIPES AND DUCTS TO BE EASILY TRACED ALONG ITS ENTIRE PATH. PIPES SHALL BE MARKED AND COLOR-CODED.
27. ANY WORK RELATED TO BUILDING AUTOMATION SYSTEM (BAS) SHALL BE PERFORMED BY BAS SUBCONTRACTOR. ALL CONTROL CONDUITS AND WIRING SHALL BE PROVIDED AND INSTALLED BY BAS SUBCONTRACTOR.
28. BAS CONTRACTOR TO PERFORM DETAILED COORDINATION BETWEEN ELECTRICAL AND MECHANICAL DRAWINGS FOR SCOPE OF WORK FOR CONDUIT AND POWER REQUIREMENTS. BAS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR SUCH PROVISION AND INSTALLATION. THESE REQUIREMENTS ONLY APPLY TO CONNECTION THAT UTILIZES VOLTAGE OF 120V OR LESS.

2013 ENERGY EFFICIENCY STANDARDS : MANDATORY MEASURES - HVAC

EQUIPMENT AND SYSTEMS EFFICIENCY

1. ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE ENERGY COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE. INCLUDED ARE ROOM AIR CONDITIONERS, CENTRAL AIR CONDITIONING HEAT PUMPS (REGARDLESS OF CAPACITY, EXCEPT THAT REQUIREMENTS FOR CENTRAL AIR CONDITIONING HEAT PUMPS WITH COOLING CAPACITY OF 135,000 BTU/HR OR MORE APPLY TO HEATING PERFORMANCE BUT NOT COOLING PERFORMANCE), OTHER CENTRAL AIR CONDITIONERS WITH A COOLING CAPACITY LESS THAN 135,000 BTU/HR, FAN TYPE CENTRAL FURNACES WITH INPUT RATE LESS THAN 400,000 BTU/HR, BOILERS WALL FURNACES, FLOOR FURNACES, ROOM HEATERS, UNIT HEATERS, AND DUCT FURNACES SHALL HAVE BEEN CERTIFIED TO THE ENERGY COMMISSION BY ITS MANUFACTURER TO COMPLY WITH THE APPLIANCE EFFICIENCY STANDARDS.
2. THE FOLLOWING SPACE CONDITIONING EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 112 OF THE ENERGY EFFICIENCY STANDARDS: ALL AIR CONDITIONERS, HEAT PUMPS AND CONDENSING UNITS > 135,000 BTU/HR; ALL WATER CHILLERS; ALL GAS-FIRED BOILERS > 300,000 BTU/HR; ALL OIL-FIRED BOILERS > 225,000 BTU/HR; AND ALL WARM AIR FURNACES AND COMBINATION WARM AIR FURNACES/AIR CONDITIONING UNITS > 225,000 BTU/HR. FAN TYPE CENTRAL FURNACES SHALL NOT HAVE A PILOT LIGHT.
3. PIPING, EXCEPT THOSE CONVEYING FLUIDS AT TEMPERATURES BETWEEN 60F AND 105F, OR WITHIN HVAC EQUIPMENT, SHALL BE INSULATED IN ACCORDANCE WITH STANDARDS 123.
4. AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN CHAPTER 10 OF THE UNIFORM MECHANICAL CODE. DUCTWORK SHALL BE INSULATED AND INSULATION SHALL BE PROTECTED IN ACCORDANCE WITH STANDARDS 124.

CONTROLS

1. THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN F.
2. THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINT STOPS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.

VENTILATION

1. CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.
2. GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.
3. ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.
4. IF APPLICABLE, DEMAND CONTROL VENTILATION DEVICES APPROVED BY THE ENERGY COMMISSION SHALL BE PROVIDED FOR HVAC SYSTEMS SERVING ASSEMBLY AREAS, CONCENTRATED USE (WITHOUT FIXED SEATS)" OR "AUCTION ROOMS", AS IDENTIFIED IN CHAPTER 10 OF THE UBC, IF SUCH AREAS ARE SERVED BY SYSTEMS WITH DESIGN OUTDOOR CAPACITIES EQUAL TO OR EXCEEDING 3,000 CFM. THE DEVICE SHALL INCLUDE A SENSOR LOCATED IN THE SPACE.
5. IF APPLICABLE, DEMAND CONTROL VENTILATION DEVICES SHALL ALLOW THE RATE OF OUTDOOR AIR TO BE REDUCED TO 0.15 CFM PER SQUARE FOOT OF CONDITIONED AREA, IF THE DEMAND CONTROL VENTILATION DEVICE INDICATES THAT THE SPACE CONDITIONS ARE ACCEPTABLE. IF THE DEVICE IS A CARBON-DIOXIDE SENSOR, IT SHALL LIMIT THE CARBON DIOXIDE LEVEL TO NO MORE THAN 800 PPM WHILE THE SPACE IS OCCUPIED.
6. DESIGNATED OUTDOOR SMOKING AREA SHALL BE AT LEAST 25 FEET FROM AN OUTDOOR AIR INTAKE OR OPERABLE WINDOWS.
7. THE BUILDING SHALL MEET OR EXCEED THE PROVISIONS FOR MECHANICAL VENTILATION OF SECTION 1203 OF THE LOS ANGELES BUILDING CODE.
8. IF APPLICABLE, BUILDING THAT USE DEMAND CONTROL VENTILATION SHALL HAVE CO2 SENSORS AND VENTILATION CONTROLS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE CALIFORNIA ENERGY CODE, CCR, TITLE 24, PART 6, SECTION 121(C).
9. THE HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CFC OR HALONS.

COMPLETION AND BALANCING

ALL VENTILATION SYSTEMS SHALL BE DOCUMENTED PER CALIFORNIA SAFETY CODE (TITLE 8, SECTION 5142 (b) TO BE PROVIDING THE MINIMUM REQUIRED VENTILATION RATE AS DETERMINED USING ONE OF THE FOLLOWING PROCEDURES:

1. AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (1989). REFER TO SPECIFICATION SECTION 23 05 93.
2. OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.
3. OUTSIDE AIR MEASUREMENT: THE SYSTEM SHALL BE EQUIPPED WITH A CALIBRATED LOCAL OR REMOTE DEVICE CAPABLE OF MEASURING THE QUANTITY OF OUTSIDE AIR ON A CONTINUOUS BASIS AND DISPLAYING THAT QUANTITY ON A READILY ACCESSIBLE DISPLAY DEVICE.
4. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL INSPECTION. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
5. AN OPERATION AND SYSTEMS MANUAL SHALL BE PROVIDED TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION.
6 ALL DUCT AND OTHER RELATED DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEETMETAL UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT.
7. UNLESS SPECIFIED OTHERWISE, AN AIR FILTER WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8 OR HIGHER SHALL BE INSTALLED IN THE MECHANICAL SYSTEM FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY.
8. PROCEDURE APPROVED BY THE ENERGY COMMISSION.

CALIFORNIA GREEN BUILDINGS STANDARDS CODE 2013

1. UNLESS SPECIFIED OTHERWISE, IN NEW MECHANICAL SYSTEMS, PROVIDE AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST MERV 8.
2. AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM.
3. PROVIDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS.
4. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH NEW SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142 AND OTHER RELATED REGULATIONS.
5. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED AND PROVIDED TO THE FIELD INSPECTOR PRIOR TO FINAL APPROVAL. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES. (2011 LABGC 10.410.4.4).
6. PROVIDE AIR FILTRATION MEDIA MINIMUM OF MERV-11 FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY FOR REGULARLY OCCUPIED AREAS OF THE BUILDING AS PER 2010 CGBSC. SECTION 5.504.5.3 .
7. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, THE HVAC SYSTEM AND COMPONENTS WILL BE TESTED, ADJUSTED AND BALANCED IN ACCORDANCE WITH ONE OF THE FOLLOWING STANDARDS. (2011 LABGC 10.410.4.2).
   - TABB's CONSTRUCTION SPECIFICATIONS INSTITUTE MASTERFORMAT (23 05 93 AND 15990)
   - AABC's NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE (6th EDITION)
   - ASHRAE's STANDARD 111-2008
8. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH INDUSTRY BEST PRACTICES AND APPLICABLE STANDARDS ON EACH SYSTEM AS DETERMINED BY THE BUILDING OFFICIAL.
9. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING NEW HVAC SYSTEMS AND CONTROLS.
10. AN OPERATION AND SYSTEMS MANUAL, SHALL BE PROVIDED TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION. (2011 LABGC 10.410.4.5).
11. PROVIDE TESTING AND ADJUSTING OF HVAC SYSTEMS. SEE PROJECT SPECIFICATION SECTION 23 05 93 "TESTING, ADJUSTING AND BALANCING FOR HVAC" AND SECTION 23 08 00 "COMMISSIONING OF HVAC" FOR DETAILED REQUIREMENTS RELATING TO TESTING, ADJUSTING AND BALANCING OF HVAC SYSTEMS, AS WELL AS RELATED TEST AND BALANCE PROCEDURES, REPORTING, EQUIPMENT OPERATION AND MAINTENANCE MANUALS, INSPECTIONS AND REPORTS."
12. PROVIDE CO2 SENSORS FOR DEMAND CONTROL VENTILATION.
13. PROVIDE TEMPORARY VENTILATION DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 121 CALIFORNIA ENERGY CODE AND AS PER POLLUTION CONTROL SECTION OF 2010 CGBSC. SECTION: 5.714.4.1.
14. PROVIDE COVERS AND PROTECTION ON ANY DUCT OPENINGS AND MECHANICAL EQUIPMENTS AS PER 2010 CGBSC. SECTION: 5.504.3.
15. INDOOR MOISTURE CONTROL SHALL BE IN COMPLY WITH TITLE 24 , PART2 SECTION 1203 AS PER 2010 CGBSC. SECTION 5.505.1.

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NOT FOR CONSTRUCTION

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER
APPROVED BY: CHIEF AIRPORTS ENGINEER

ON LAX PMD

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: VP
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
NOTES, CODES AND LEGEND

SHEET NO.
5-M-001
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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ROOFTOP COOLING ONLY VAV AIR-CONDITIONING UNIT SCHEDULE - CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	BLDG. NO. LOCATION	AREA SERVED	NOMINAL TONS	AIR QUANTITY CFM	EXT. S.P. IN W.G.	ENTERING AIR DB/WB	LEAVING AIR DB/WB	FAN DATA HP	FAN RPM	MOTOR RPM	COOLING (95° D.B. AMB.) TOTAL MBTUH	SENSIBLE MBTUH	SEER (IEER)	EER	AFUE %	ELECTRICAL DATA V-Ø-HZ	FLA	MCA*	MOCP*	GAS HEATING LOW NOX TOTAL INPUT MBTUH	TOTAL OUTPUT MBTUH	MIN. O.S.A. CFM	POWER EXHAUST DATA HP	V-Ø-H	FLA	MAX. CFM	OPER. WEIGHT LBS.	ANCHORAGE DETAIL	REMARKS
AC C4-1	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-2	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-3	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-4	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-5	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-6	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-7	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-8	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-9	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-10	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-11	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-12	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-13	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-14	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-15	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-16	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-17	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-18	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-19	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-20	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5
AC C4-21	CARRIER 50LCQB24D3	ROOF	CSB	20	8000	1.5"			–	–	–	248.9	189.2	17.8	13.2	82%	460-3-60	–	–	–	–	–	2000	1	208-3-60	3.8	3000	1300	–	1 2 3 4 5

REMARKS:
1. –
2. ECONOMIZER WITH POWER EXHAUST FAN.
3. 2" FILTERS, MERV-11
4. COMPLETE WITH DUCT SMOKE DETECTOR. PROVIDED BY DIVISION 26 AND WIRED UNDER DIVISION 26. INSTALL BY DIVISION 23.
5. PROVIDE WITH 2-SPEED INDOOR FAN (VFD) CONTROLLER.

* MCA & MOCP LOAD INCLUDES ECONOMIZER, POWER EXHAUST ELECTRICAL POWER.

EXHAUST FAN SCHEDULE - CSB

ITEM NO.	MANUFACTURER & MODEL NO.	AREA SERVED	LOCATION	FAN TYPE	AIR QTY CFM	ESP IN H_2O	FAN RPM	BHP (W)	MOTOR RPM	MOTOR MIN. H.P.	MOTOR V-Ø-HZ	DRIVE	APPROX. UNIT WT.= LBS.	ANCHORAGE DETAIL	REMARKS
EF C5-1	GREENHECK G-090-VG	UNISEX RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	200	0.8	--	0.12	--	1/4	208-1-60	DIRECT	45	–	
EF C5-2	GREENHECK G-095-VG	MEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	400	0.8	--	0.12	--	1/4	208-1-60	DIRECT	45	–	
EF C5-3	GREENHECK G-098-VG	WOMEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	600	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-4	GREENHECK G-090-VG	UNISEX RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	200	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-5	GREENHECK G-095-VG	MEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	400	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-6	GREENHECK G-098-VG	WOMEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	600	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-7	GREENHECK G-090-VG	UNISEX RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	200	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-8	GREENHECK G-095-VG	MEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	400	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	
EF C5-9	GREENHECK G-098-VG	WOMEN'S RESTROOM	CSB ROOF LEVEL 5	ROOF MOUNTED CENTRIFUGAL FAN	600	0.8	--	0.19	--	1/4	208-1-60	DIRECT	50	–	

REMARKS: 1. PROVIDE NEW ROOF CURB AND BACKDRAFT DAMPER. 2. INTERLOCK WITH ON-OFF LIGHT SWITCH. 3. INTERLOCK WITH THERMOSTAT. 6. PROVIDE RUBBER GOURMET MOUNTING KIT. 4. INTERLOCK WITH GRAVITY VENT AND THERMOSTAT. 5. PROVIDE DIRECT DRIVE.

FAN COIL UNIT SPLIT SYSTEM- INDOOR UNIT

ITEM NO.	MANUFACTURER MODEL NO.	AREA & ROOMS SERVED	CFM (HIGH SPEED)	STATIC PRESSURE (IN. WG)	FAN BHP	FAN FLA	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL V-Ø-HZ	DX COIL TOTAL CAPACITY (BTUH)	DX COIL SENSIBLE CAPACITY (BTUH)	DX COIL EAT DB/WB (°F)	DX COIL LAT DB/WB (°F)	DX COIL COIL ROWS	REFRIG. PIPE DIA. CONNECTION SIZE (INCH) RL	REFRIG. PIPE DIA. CONNECTION SIZE (INCH) RS	UNIT OPERATING WT.= LBS	ANCHORAGE DETAIL	REMARKS
FC C5-5*	CARRIER 40RUA	ELECTRICAL ROOM "TR-CSB1"	4000	0.5	2.08	2.4	5.0	15.0	460-3-60	128.1	119.6	85/67	57.3/56.8	4	-/-	-/-	425	–	
FC C5-6*	CARRIER 40RUA	ELECTRICAL ROOM "TR-CSB2"	4000	0.5	2.08	2.4	5.0	15.0	460-3-60	128.1	119.6	85/67	57.3/56.8	4	-/-	-/-	425	–	

REMARKS: 1. PROVIDE CONDENSATE PUMP, VALVES, AND ACCESSORIES. 2. PROVIDE SECONDARY DRAIN PAN. 3. PROVIDE CONDENSATE HIGH LIMIT OVERFLOW SWITCH. *POWERED FROM OUTDOOR UNIT.

CONDENSING UNIT - OUTDOOR UNIT

ITEM NO.	MANUFACTURER MODEL NO.	UNIT SERVED	EER	IEER	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL V-Ø-HZ	UNIT OPERATING WT.= LBS	ANCHORAGE DETAIL	REMARKS
CU C5-5*	CARRIER 38AUD	FC CE-5-1	11.2	13.0	19	25	460-3-60	516	–	
CU C5-6*	CARRIER 38AUD	FC CE-5-1	11.2	13.0	19	25	460-3-60	516	–	

1. –
2. R-410 REFRIGERANT, 26 LBS EACH

FAN COIL UNIT SPLIT SYSTEM- INDOOR UNIT - CSB

ITEM NO.	MANUFACTURER MODEL NO.	AREA & ROOMS SERVED	CFM (HIGH SPEED)	STATIC PRESSURE (IN. WG)	ELECTRICAL BREAK HP	ELECTRICAL FLA	ELECTRICAL MOCP	ELECTRICAL V-Ø-HZ	DX COIL TOTAL CAPACITY (BTUH)	DX COIL SENSIBLE CAPACITY (BTUH)	DX COIL EAT DB/WB (°F)	DX COIL LAT DB/WB (°F)	DX COIL AIR P.D. (IN.WG)	DX COIL COIL ROWS	REFRIG. PIPE DIA. CONNECTION SIZE (INCH) RL	REFRIG. PIPE DIA. CONNECTION SIZE (INCH) RS	UNIT OPERATING WT.= LBS	ANCHORAGE DETAIL	REMARKS
FC C4-1	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	
FC C4-2	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	
FC C4-3	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	
FC C4-4	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	
FC C4-5	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	
FC C4-6	YORK AHX61D	ELECT/DATA CSB LEVEL 4	1950	0.3	–	–	–	208-1-60	57700	41300	80/69	60.4/57.7	–	–	7/8	5/8	200	–	

REMARKS: 1. PROVIDE CONDENSATE PUMP, VALVES, AND ACCESSORIES. 2. PROVIDE SECONDARY DRAIN PAN. 3. PROVIDE CONDENSATE HIGH LIMIT OVERFLOW SWITCH. *POWERED FROM OUTDOOR UNIT.

CONDENSING UNIT - OUTDOOR UNIT - CSB

ITEM NO.	MANUFACTURER MODEL NO.	UNIT SERVED	COOLING TOTAL (BTU/h)	HEATING LOAD (BTU/h)	EER	IEER	COP	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL V-Ø-HZ	UNIT OPERATING WT.= LBS	ANCHORAGE DETAIL	REMARKS
CU C4-1	YORK YZH060	FC C3-1	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	
CU C4-2	YORK YZH060	FC C3-2	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	
CU C4-3	YORK YZH060	FC C3-3	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	
CU C4-4	YORK YZH060	FC C3-4	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	
CU C4-5	YORK YZH060	FC C3-5	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	
CU C4-6	YORK YZH060	FC C3-6	57700	–	11.5	16.5	–	–	–	208-1-60	500	–	

REMARKS: 1. – 2. R-410 REFRIGERANT, 26 LBS EACH

HOT WATER BOILER SCHEDULE - CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	BOILER TYPE	BOILER EFF.(%)	FUEL TYPE	MIN GAS PRESS.	INPUT MBTUH	OUTPUT MBTUH	MAX NO_x PPM	OPERATING TEMPERATURES IN °F	OPERATING TEMPERATURES OUT °F	FLOW GPM	ELECT.-DATA V-Ø-HZ	BOILER AMPS	OPERATING WEIGHT LBS.	ANCHORAGE DETAIL	REMARKS
B C-1	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2
B C-2	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2
B C-3	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2
B C-4	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2
B C-5	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2
B C-6	RAYPAK HI-DELTA 302B	LOW NOX MOD FIRED	85	NAT. GAS	8"WC	300	252	12	160	190	14	115-1-60	12	990	–	1 2

REMARKS: 1. BOILER SHALL BE FURNISHED WITH FLOW CONTROL VALVE, FLOW SWITCH, CIRCULATING PUMP, FILED INSTALLED.
2. PROVIDE DOUBLE WALL, STAINLESS STEEL, CAT IV FLUE VENT SYSTEM.

CIRCULATING PUMP UNIT SCHEDULE - CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	PUMP TYPE	SYSTEM	LOCATION AND SERVICE	FLOW GPM	TOTAL HEAD (FT.)	MOTOR MIN. H.P.	MOTOR RPM	MOTOR V-Ø-HZ	MINIMUM PUMP EFFICIENCY	WT. LBS.	ANCHORAGE DETAIL	REMARKS
P C-1	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #1	22	54	1	1750	208-1-60	67.5	150	–	1
P C-2	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #1	22	54	1	1750	208-1-60	67.5	150	–	1
P C-3	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #2	22	54	1	1750	208-1-60	67.5	150	–	1
P C-4	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #2	22	54	1	1750	208-1-60	67.5	150	–	1
P C-5	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #3	22	54	1	1750	208-1-60	67.5	150	–	1
P C-6	BELL & GOSSETT ECOCIRC XL B 70-145	IN-LINE	HOT WATER	HOT WATER SYSTEM #3	22	54	1	1750	208-1-60	67.5	150	–	1

REMARKS: 1. BASE MOUNTED, HIGH EFFICIENCY MOTOR, VFD, PRIMARY PUMP AND VIBRATION BASE ISOLATORS.

EXPANSION TANK SCHEDULE - CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	SERVICE LOCATION	SIZE	CAPACITY (GAL)	ACCEPTANCE VOLUME (GAL)	OPER. WEIGHT (LBS)	ANCHOR. DETAIL	REMARKS
ET C-1	WESSELS MODEL NLA 85	HOT WATER SYSTEM #1	16"ø x 38" HIGH	23	23	150	–	1
ET C-2	WESSELS MODEL NLA 85	HOT WATER SYSTEM #2	16"ø x 38" HIGH	23	23	150	–	1
ET C-3	WESSELS MODEL NLA 85	HOT WATER SYSTEM #3	16"ø x 38" HIGH	23	23	150	–	1

REMARKS: 1. ASME, STEEL FABRICATED, HEAVY DUTY, BUTYL BLADDER, REMOVABLE TYPE, 125 PSI

AIR SEPARATOR SCHEDULE - CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	LOCATION	SERVICE	FLOW GPM	TANK DIMENSIONS, IN. DIAMETER	TANK DIMENSIONS, IN. HEIGHT	SYSTEM CONN. FLANGED	STRAINER FREE AREA SQ. INCHES	WEIGHT (LBS.)	REMARKS
AS C-1	BELL & GOSSETT ROLAIRTROL RL2N	CSB PENTHOUSE #1	HOT WATER SYSTEM #1	140	–	–	8"ø	–	100	1 2
AS C-2	BELL & GOSSETT ROLAIRTROL RL2N	CSB PENTHOUSE #2	HOT WATER SYSTEM #2	140	–	–	8"ø	–	100	1 2
AS C-3	BELL & GOSSETT ROLAIRTROL RL2N	CSB PENTHOUSE #3	HOT WATER SYSTEM #3	140	–	–	8"ø	–	100	1 2

REMARKS: 1. PROVIDE MANUAL BLOWDOWN AND DRAIN.
2. PROVIDE DIRT SEPARATION.

CHEMICAL POT FEEDER SCHEDULE -CSB

ITEM NO.	MANUFACTURER AND MODEL NO.	LOCATION	SERVICE	TYPE	INLET/OUTLET SIZE (IN)	CAPACITY GALLONS	OPERATING WT. LESS BRACKETS, LBS.	ANCHORAGE DETAIL	REMARKS
CPF C-1	J.L.WINGERT CO. DB-5HD	CSB PENTHOUSE #1	HOT WATER SYSTEM #1	DOME BOTTOM FILTER FEEDER	3/4"	5	40	–	
CPF C-2	J.L.WINGERT CO. DB-5HD	CSB PENTHOUSE #2	HOT WATER SYSTEM #2	DOME BOTTOM FILTER FEEDER	3/4"	5	40	–	
CPF C-3	J.L.WINGERT CO. DB-5HD	CSB PENTHOUSE #3	HOT WATER SYSTEM #3	DOME BOTTOM FILTER FEEDER	3/4"	5	40	–	

REMARKS: 1. -------

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LAX Consolidated Rental Car Facility
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SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER

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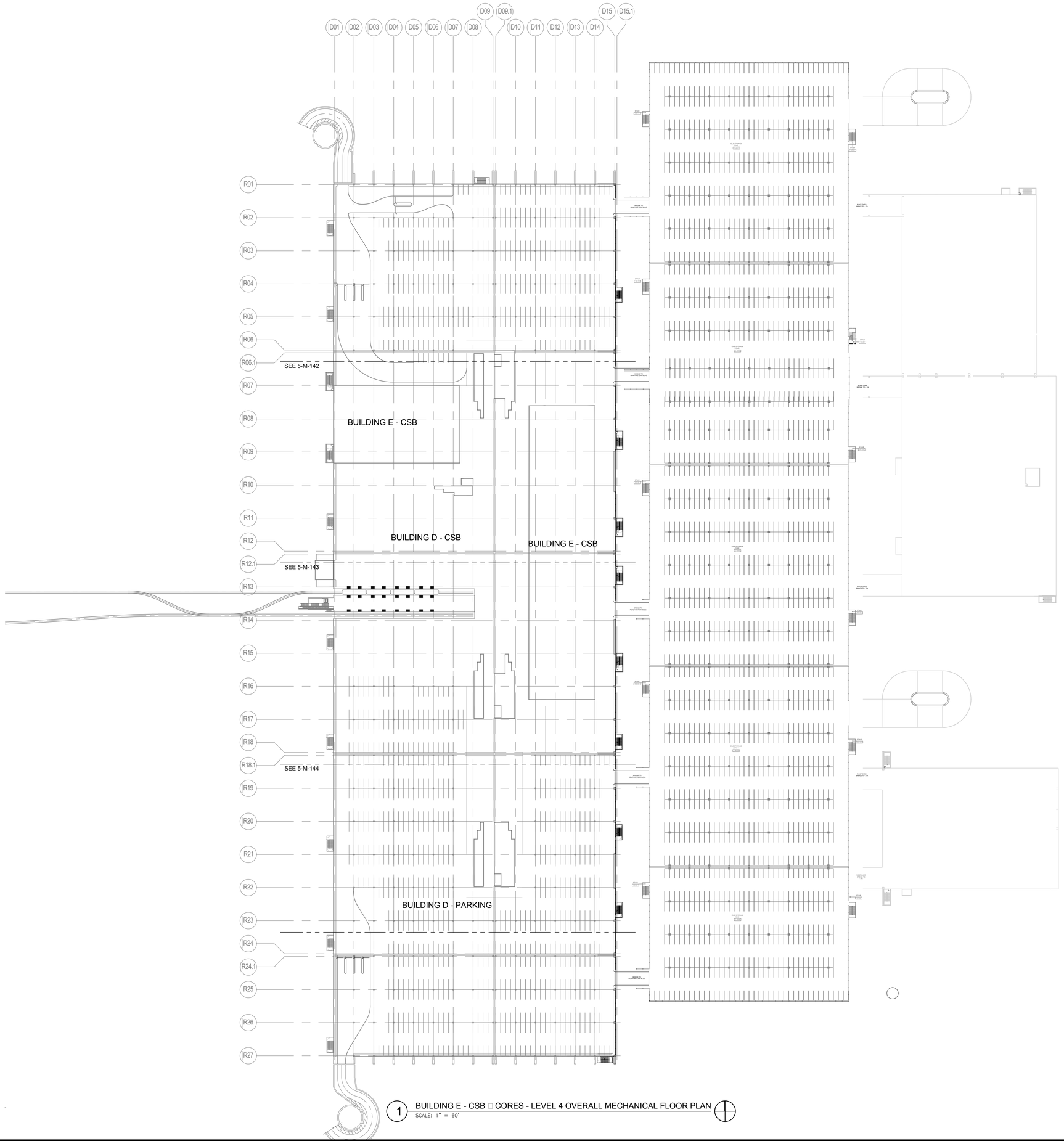
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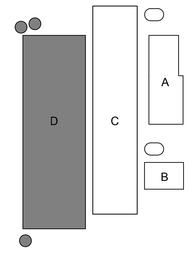
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1 BUILDING E - CSB □ CORES - LEVEL 4 OVERALL MECHANICAL FLOOR PLAN
SCALE: 1" = 60'



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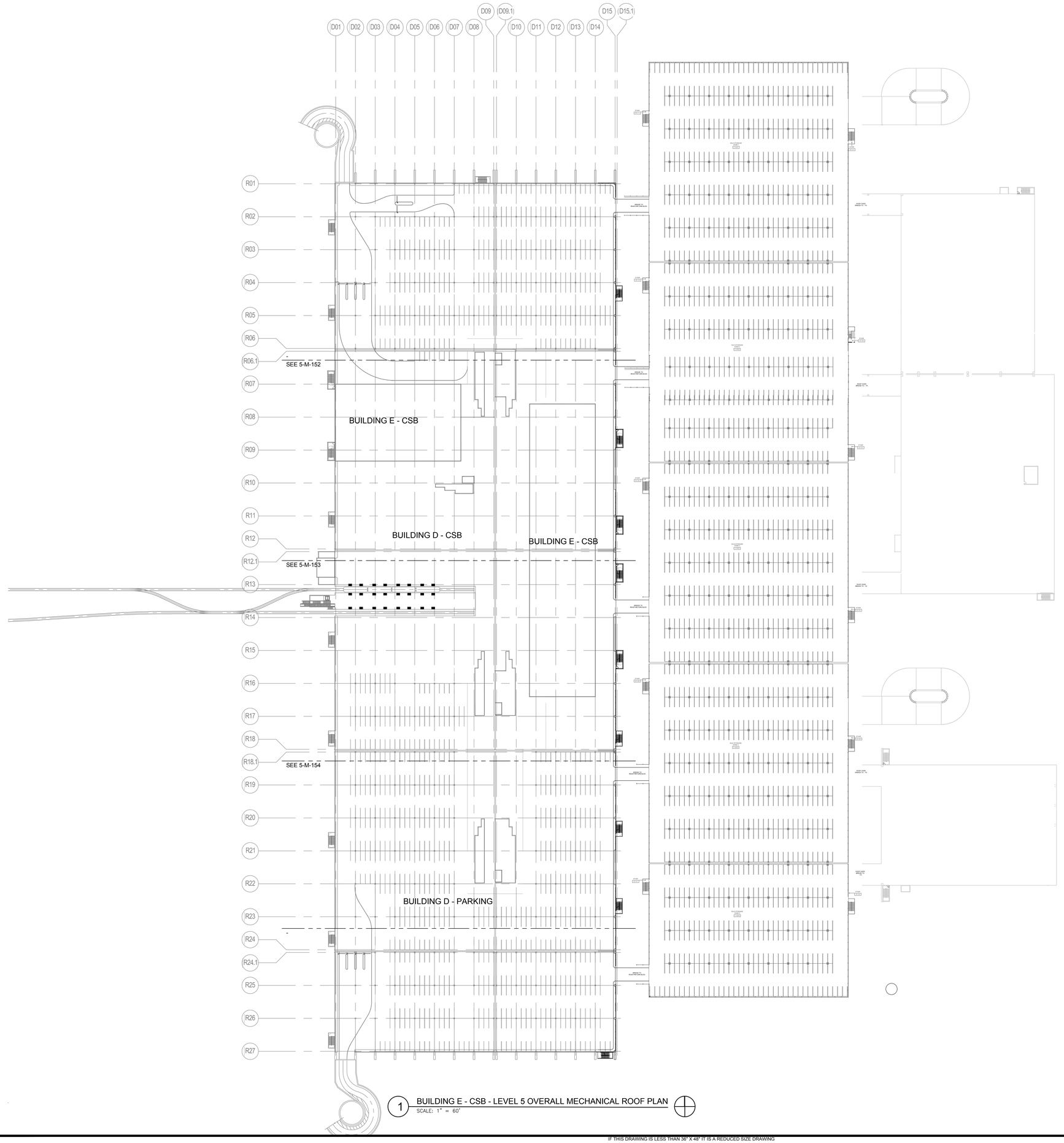
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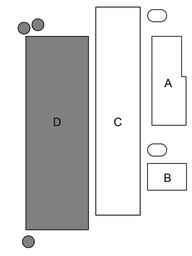
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1 BUILDING E - CSB - LEVEL 5 OVERALL MECHANICAL ROOF PLAN
SCALE: 1" = 60'



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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

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SHEET OF

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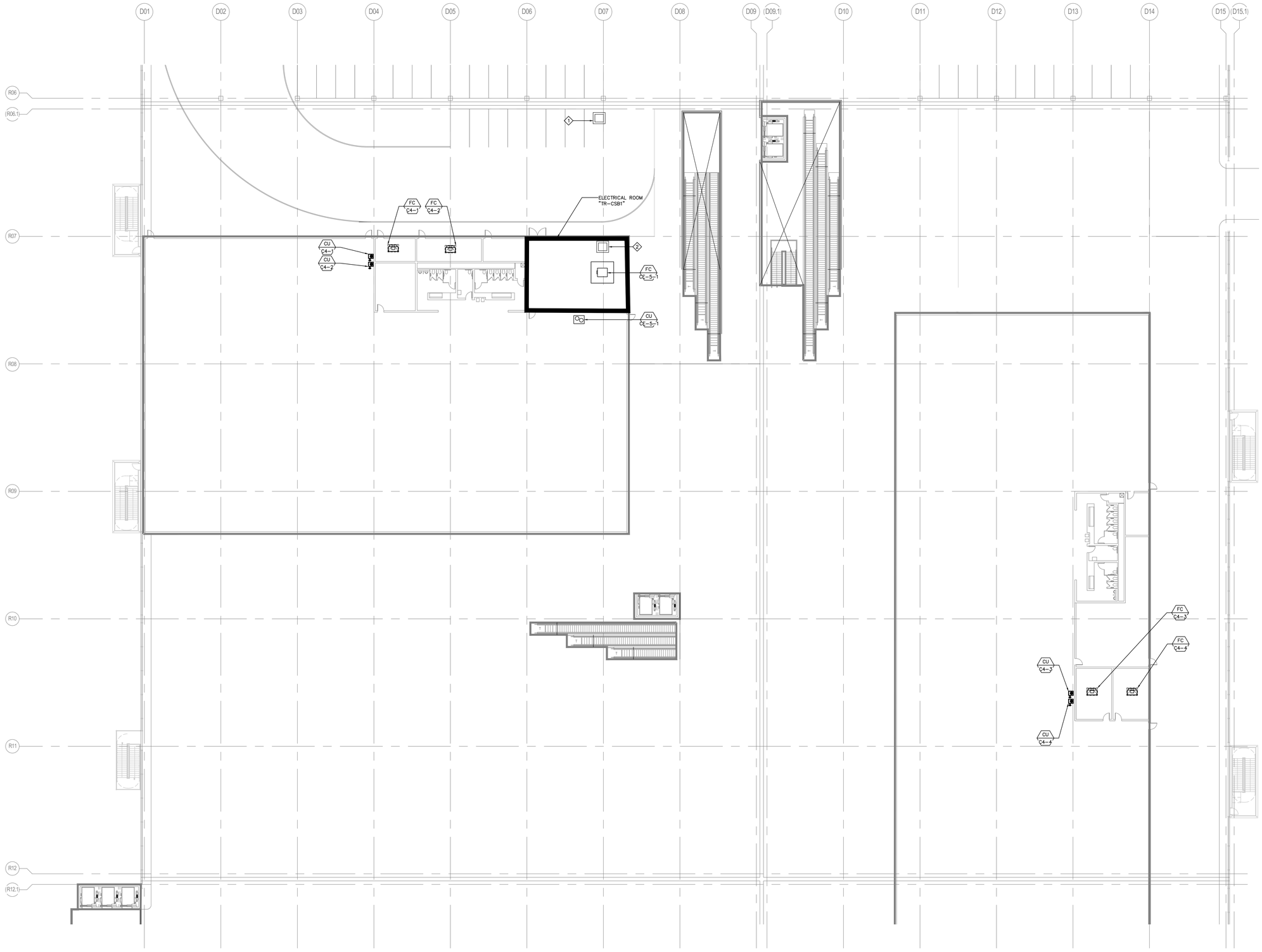
P:\2015\015-067-00\MPE Vol-II\D_CSB\DA4881-13-M-050_LAE.dwg, Printed: Jun 29, 2016 - 2:49pm

GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS AND KEY PLANS FOR SITE LOCATION.
2. FOR EXACT EQUIPMENT, PAD LOCATIONS AND SIZES SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
3. LINED DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS TO INCREASE DUCT SIZE AS NEEDED TO PROVIDE CLEAR DIMENSIONS SHOWN ON DRAWINGS.
4. ROOF MOUNTED EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES.
5. ALL APPLIANCE AND PLUMBING VENTS AND THE DISCHARGE OUTLET OF EXHAUST FANS SHALL BE AT LEAST TEN (10) FEET IN A HORIZONTAL DIRECTION, OR THREE (3) FEET ABOVE THE OUTSIDE-AIR INTAKES FOR HVAC UNITS.

KEY NOTES

1. OUTSIDE AIR SHAFT DN THRU ROOF.
2. EXHAUST AIR SHAFT DN THRU ROOF.



1 BUILDING D - READY/RETURN - LEVEL 4 MECHANICAL FLOOR PLAN - ZONE 2
SCALE: 1/16" = 1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

TranSystems
801 South Grand
Suite 210
Los Angeles, California 90017
Phone: (562) 594-6974
Fax: (562) 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:

PBS ENGINEERS
2100 EAST ROUTE 66, SUITE 101
GLENDORA, CA 91740
Voice: 626.852.0350
Fax: 626.852.0352
Proj. No. 2015-067-00

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB ☐ CORES
LEVEL 4
MECHANICAL
FLOOR PLAN

SHEET NO.
5-M-142
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

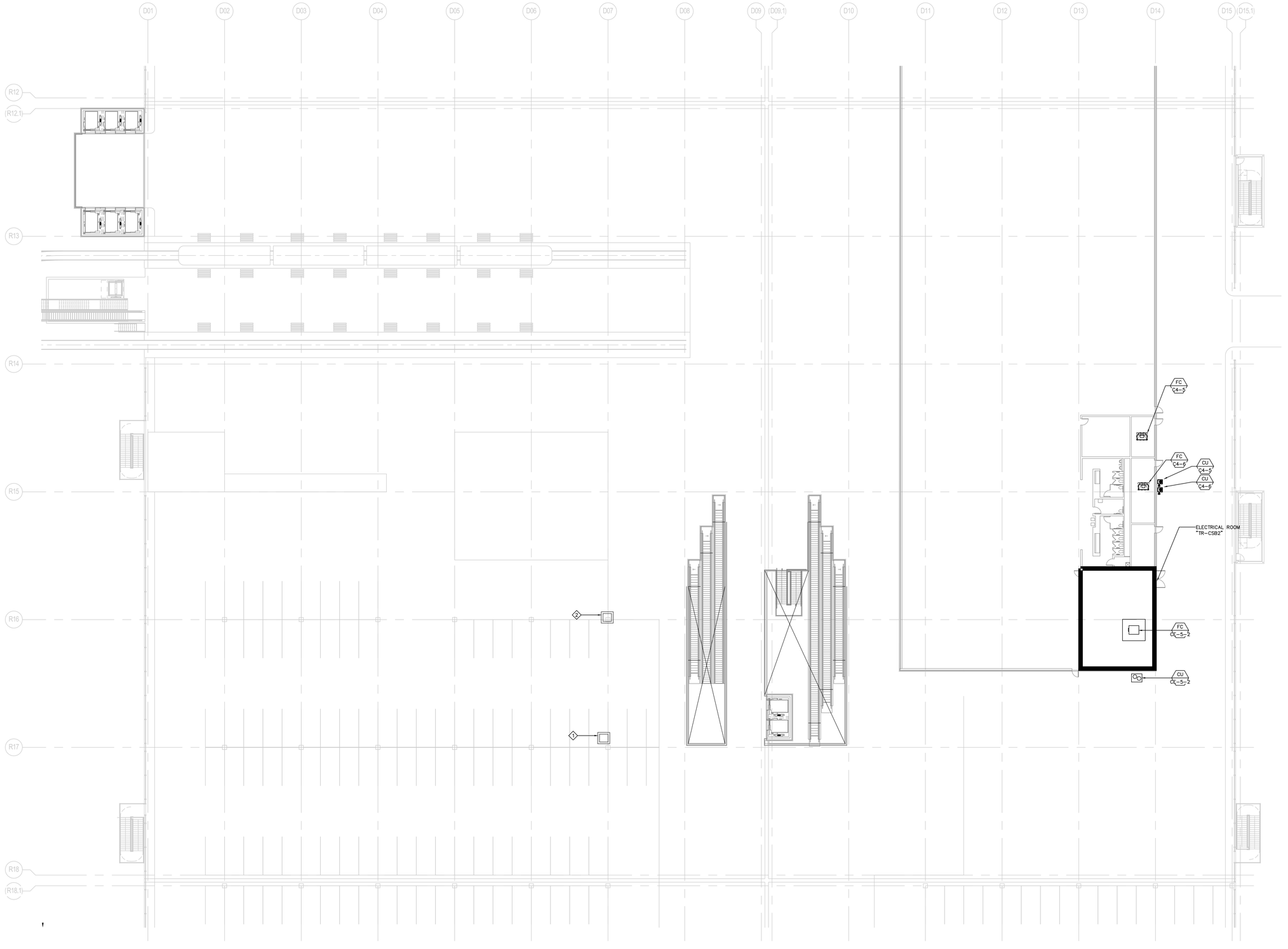
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GENERAL NOTES

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KEY NOTES

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2. EXHAUST AIR SHAFT DN THRU ROOF.



1 BUILDING D - READY/RETURN - LEVEL 4 MECHANICAL FLOOR PLAN - ZONE 3
SCALE: 1/16" = 1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Proj. No. 2015-067-00

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY: CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DESCRIPTION	DATE

PROJ NO: DA4881
SCALE: 1/16" : 1-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

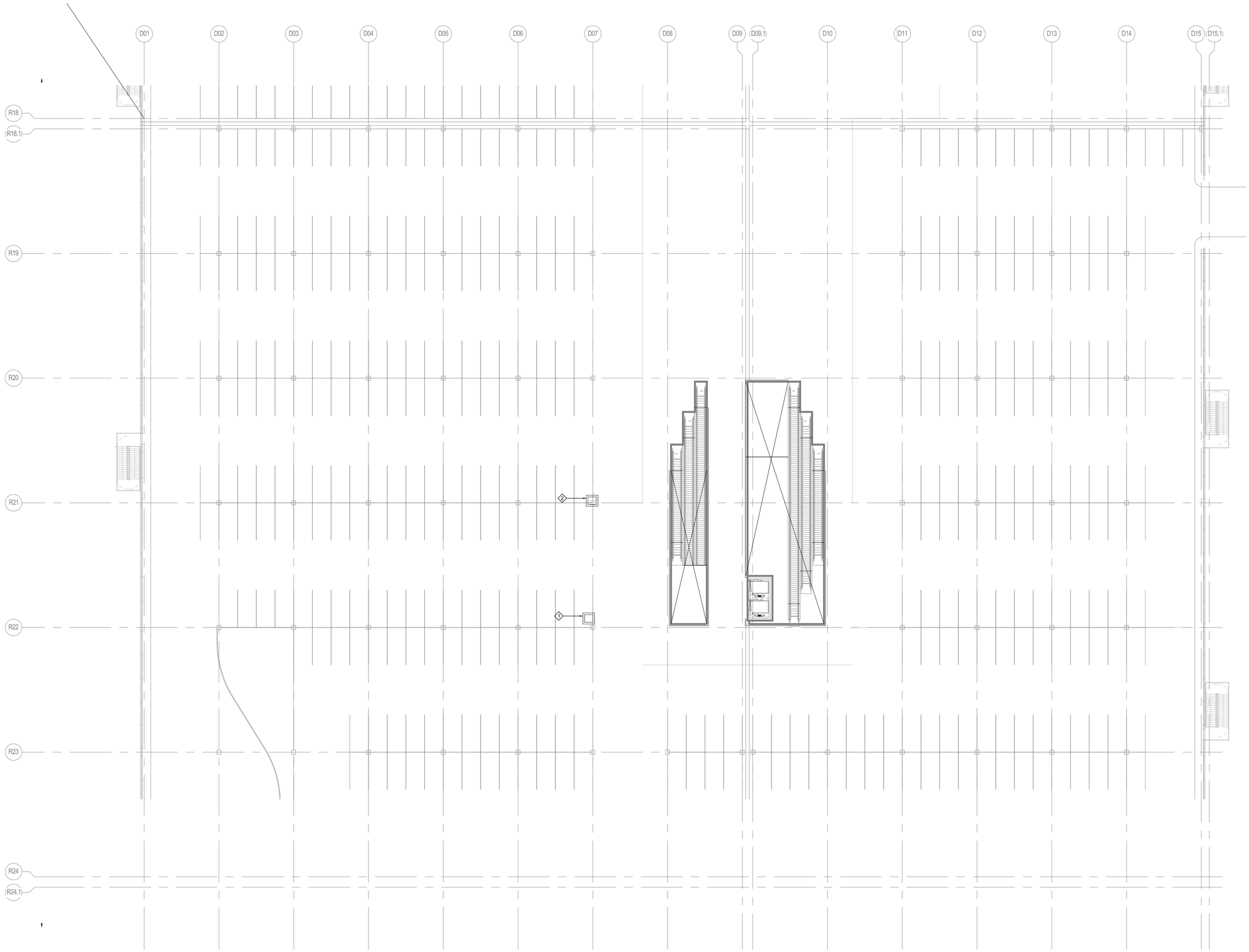
SHEET TITLE:
CSB ☐ CORES
LEVEL 4
MECHANICAL
FLOOR PLAN

SHEET NO.
5-M-143

SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING D - READY/RETURN - LEVEL 4 MECHANICAL FLOOR PLAN - ZONE 4
SCALE: 1/16" = 1'-0"

GENERAL NOTES

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KEY NOTES

1. OUTSIDE AIR SHAFT DN THRU ROOF.
2. EXHAUST AIR SHAFT DN THRU ROOF.

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Proj. No. 2015-067-00

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANY PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB □ CORES
LEVEL 4
MECHANICAL
FLOOR PLAN

SHEET NO.
5-M-144
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS AND KEY PLANS FOR SITE LOCATION.
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KEY NOTES

1. ROOF MOUNTED 20 TONS PACKAGED SYSTEM AC UNIT VAV COOLING ONLY.
2. BOILER SERVING HEATING HOT WATER SYSTEM MOUNTED ON MIN. 4" HIGH CONCRETE PAD.
3. CIRCULATING PUMP SERVING HEATING HOT WATER SYSTEM.
4. EXPANSION TANK SERVING HEATING HOT WATER SYSTEM.
5. AIR SEPARATOR SERVING HEATING HOT WATER SYSTEM.
6. CHEMICAL POT FEEDER SERVING HEATING HOT WATER SYSTEM.
7. OUTSIDE AIR SHAFT DN THRU ROOF.
8. EXHAUST AIR SHAFT DN THRU ROOF.
9. ROOF MOUNTED EXHAUST FAN WITH PRE-FABRICATED CURB.

D01 D02 D03 D04 D05 D06 D07 D08 D09 (D09.1) D10 D11 D12 D13 D14 D15 (D15.1)

R06 (R06.1) R07 R08 R09 R10 R11 R12 (R12.1)

FULL HEIGHT LOUVER

1 BUILDING E - CSB - MECHANICAL ROOF PLAN - ZONE 2
SCALE: 1/16" = 1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Voice: 626.650.0350
Fax: 626.650.0352
Proj. No. 2015-067-00

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

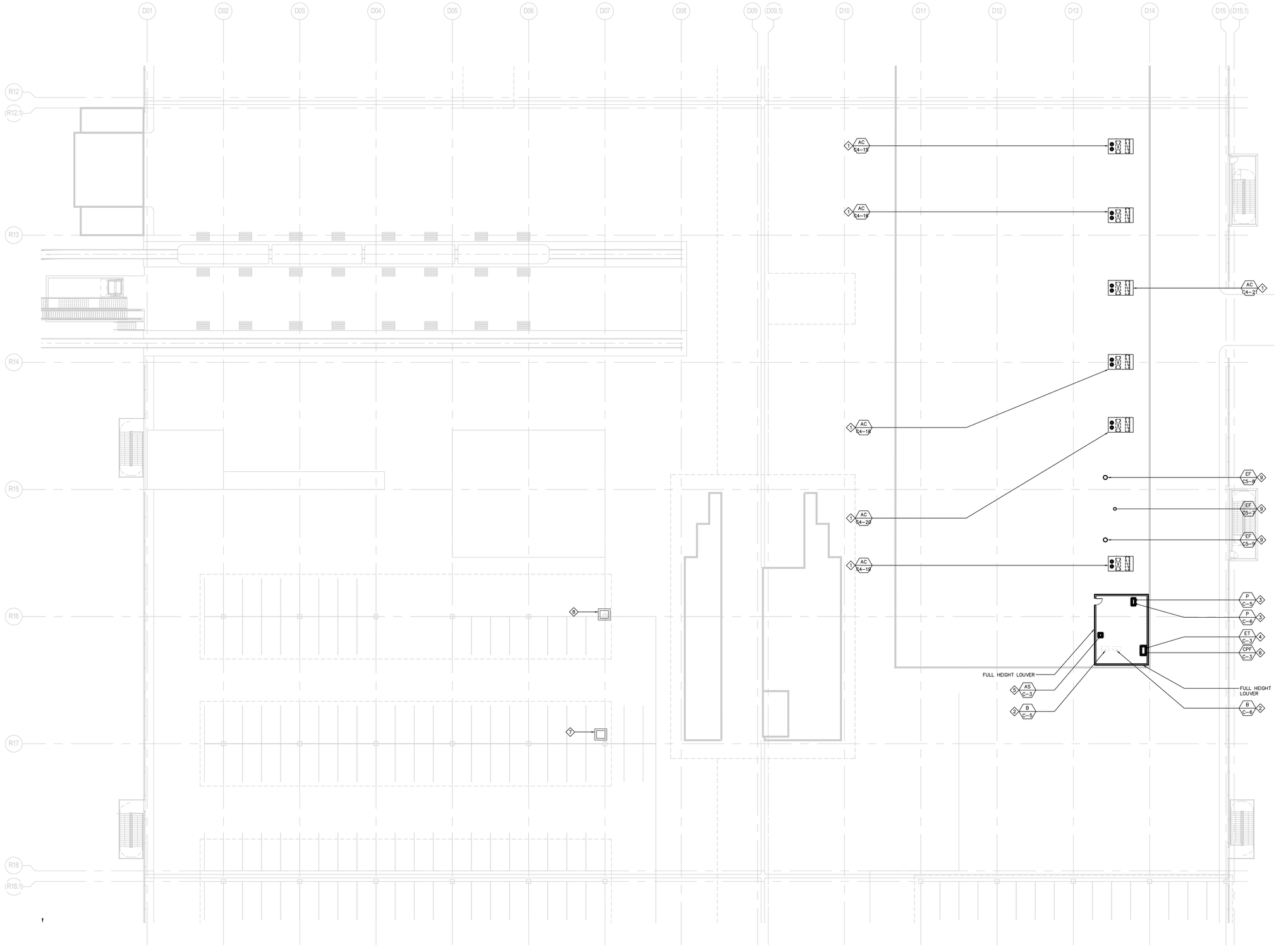
PROJ NO: DA4881
SCALE: 1/16" 1-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB ☐ CORES
LEVEL 5
MECHANICAL
ROOF PLAN

SHEET NO.
5-M-152
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB - MECHANICAL ROOF PLAN - ZONE 3
SCALE: 1/16" = 1'-0"

GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS AND KEY PLANS FOR SITE LOCATION.
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4. EXPANSION TANK SERVING HEATING HOT WATER SYSTEM.
5. AIR SEPARATOR SERVING HEATING HOT WATER SYSTEM.
6. CHEMICAL POT FEEDER SERVING HEATING HOT WATER SYSTEM.
7. OUTSIDE AIR SHAFT DN THRU ROOF.
8. EXHAUST AIR SHAFT DN THRU ROOF.
9. ROOF MOUNTED EXHAUST FAN WITH PRE-FABRICATED CURB.

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

REVISIONS:			
MARK	DESCRIPTION	DATE	

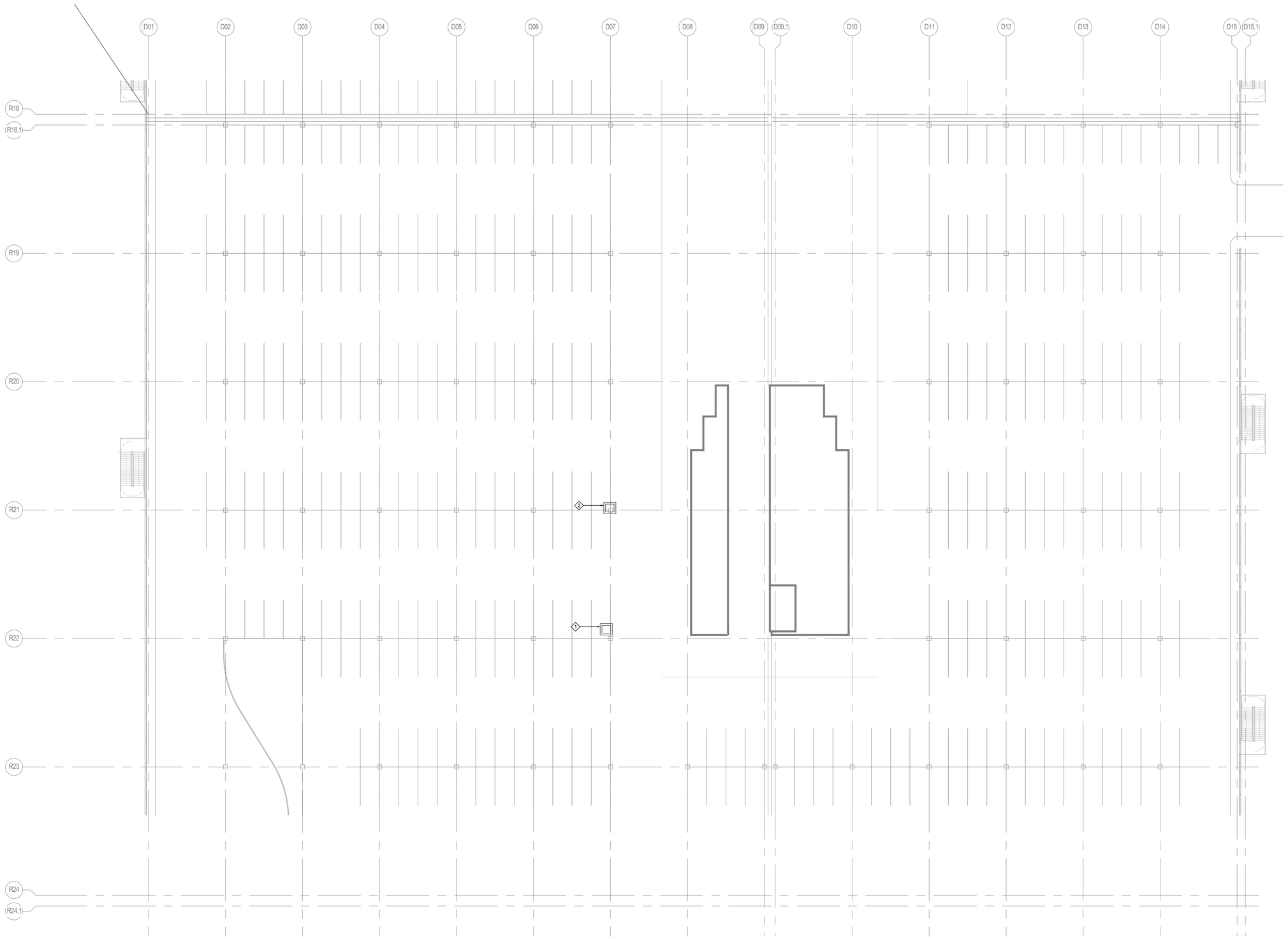
PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB □ CORES
LEVEL 5
MECHANICAL
ROOF PLAN

SHEET NO.
5-M-153
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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1 BUILDING E - CSB - MECHANICAL ROOF PLAN - ZONE 4
SCALE: 1/16" = 1'-0"

GENERAL NOTES

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KEY NOTES

1. OUTSIDE AIR SHAFT DN THRU ROOF.
2. EXHAUST AIR SHAFT DN THRU ROOF.

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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801 South Grand
Suite 210
Los Angeles, California 90017
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Fax: (562) 594-6975

NOT FOR CONSTRUCTION

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Voice: 626.650.0350
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Proj. No.: 2015-067-00

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

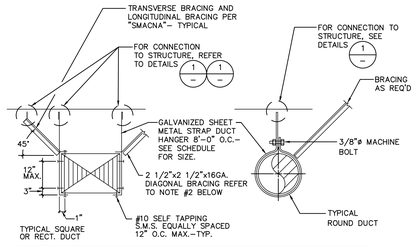
PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB □ CORES
LEVEL 5
ROOF PLAN

SHEET NO.
5-M-154
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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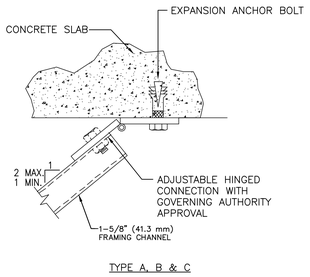
RECTANGULAR DUCT			ROUND DUCT		
MAX. OF DUCT PERIMETER/IN.	PAIR AT 8 FT. SPACING	MAX. LOAD EACH HANGER/LBS.	DIAMETER /INCHES	STRAP AT 12 FT. SPACING	MAX. LOAD EACH HANGER/LBS.
P/2 =72	1"X 20 GA.	320	UP TO 24"	1"X 22 GA.	260
P/2 =96	1"X 18 GA.	420	25" TO 36"	1"X 20 GA.	320
P/2 =120	1"X 16 GA.	700	37" TO 50"	(2)1"X 20 GA.	320

NOTES:

1. EXCEPT FROM TABLES 6-2-A AND 6-2-B OF APPENDIX A, STANDARD 6-2 OF THE 2013 CALIFORNIA MECHANICAL CODE
2. PROVIDE TRANSVERSE BRACING AT 40 FT. AND LONGITUDINAL BRACING AT 80 FT. (1998 SMACNA SEISMIC RESTRAINT MANUAL, 2ND EDITION)

1 DUCT SUPPORT AND CONNECTION TO STRUCTURE DETAILS

SCALE: NOT TO SCALE

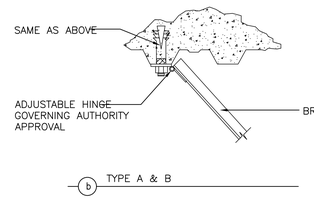


TYPE A, B & C

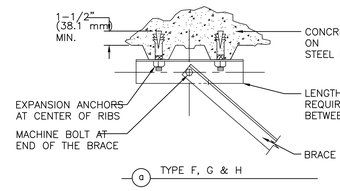
ADJUSTABLE CONN. TO CONCRETE

NOTES:

THIS IS FIGURE 8-2 OF SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS, (SECOND EDITION 1998) AND ADDENDUM NO.1 (SEPTEMBER 2000), BY SMACNA. ALL REFERENCES ARE TO THESE PUBLICATIONS



(b) TYPE A & B

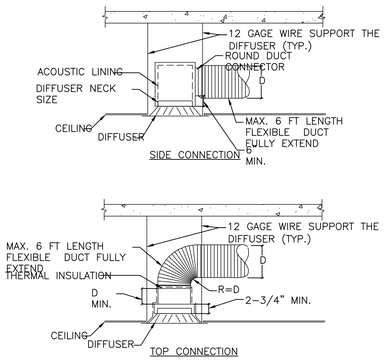


(a) TYPE F, G & H

CONN. CONCRETE FILL ON STEEL DECK

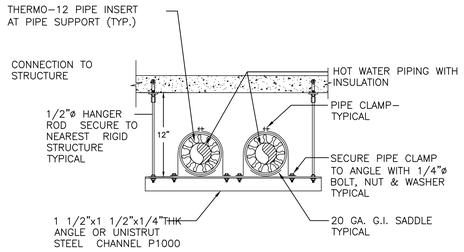
NOTES:

1. THIS IS FIGURE 8-6 OF SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS,
2. SECOND EDITION (1998) AND ADDENDUM NO.1 (SEPTEMBER 2000), BY SMACNA. ALL REFERENCES ARE TO THESE PUBLICATIONS.



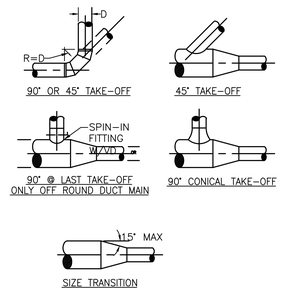
5 CD/CR MOUNTING DETAIL

SCALE: NOT TO SCALE



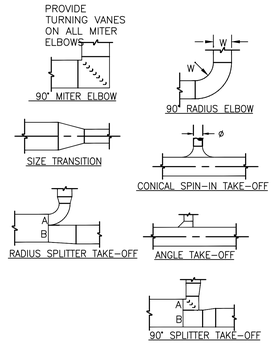
4 TRAPEZE PIPE SUPPORT DETAIL

SCALE: NOT TO SCALE



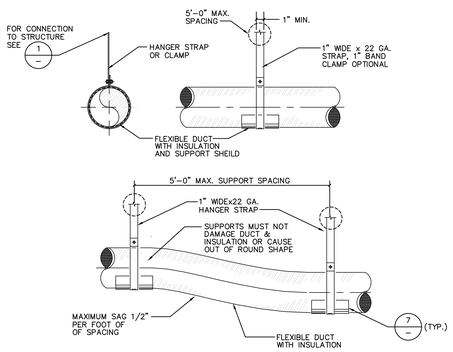
3 ROUND DUCTWORK TRANSITIONS AND CONN. DETAILS

SCALE: NOT TO SCALE



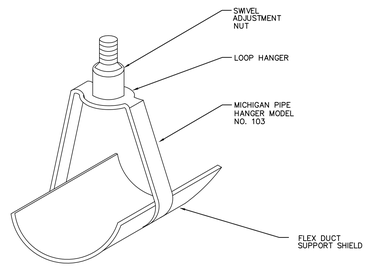
2 RECTANGULAR DUCTWORK TRANSITIONS AND CONN. DETAILS

SCALE: NOT TO SCALE



8 FLEXIBLE DUCT SUPPORT DETAIL

SCALE: NOT TO SCALE



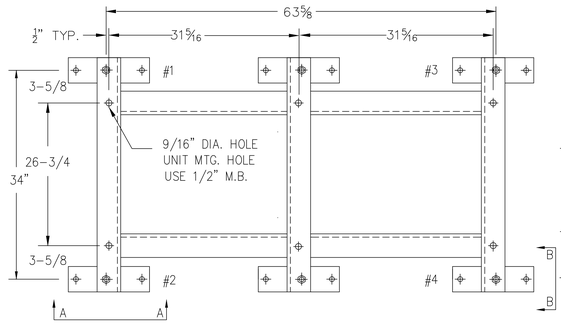
7 FLEX DUCT SUPPORT DETAIL

SCALE: NOT TO SCALE

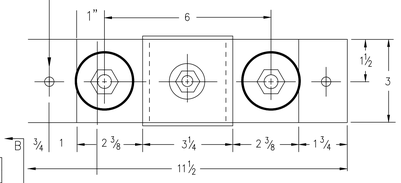
MARK	MAKE	TYPE	SIZE	STEEL SIZE
HP-1	MITSUBISHI	PURY	P144	L3 X 3 X 1/4

MTS	SPRING O.D.	DEFL
1-4	2"	1"

ISOLATORS ARE O.S.H.P.D. PRE-APPROVED No. OPA-0098

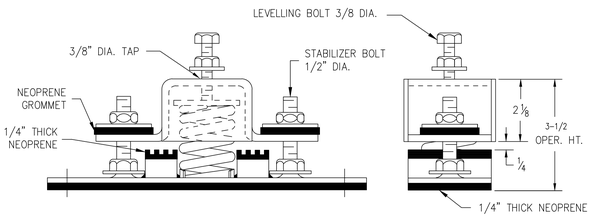


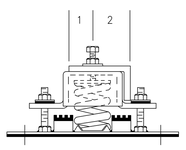
USE 1/2" DIA. HILTI KB TZ ANCHORS IN 3000 PSI HR CONCRETE, 3-5/8" NOMINAL EMBEDMENT, 6" CONCRETE THICKNESS & 8" EDGE DISTANCE. INSTALL WITH SPECIAL INSPECTION PER ICC ESR 1917.



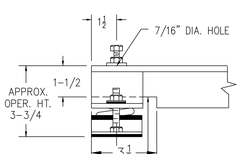
NOTES:

1. APPROX. STEEL WEIGHT INCLUDING ISOLATORS.: 130 LBS.
2. ISOLATORS ARE OSHPD PRE-APPROVED #OPA-0098.
3. M.W. SAUSSE & CO. INC. IS NOT RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE EQUIPMENT WHEN ANCHORED AS SHOWN.
4. NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT.





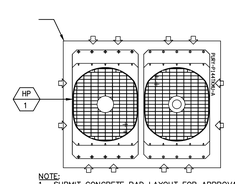
VIEW A-A



VIEW B-B

MAX. ALLOW. LOADS: *HORIZ.* 1100 lbs. *VERT. (UP)* 1400 lbs.

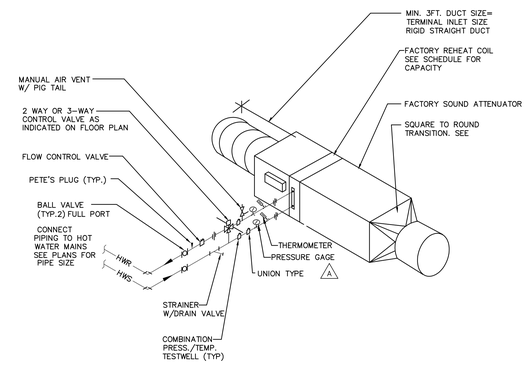
10" CONCRETE PAD/ EQUIPMENT PAD



NOTE:
1. SUBMIT CONCRETE PAD LAYOUT FOR APPROVAL.

6 HEAT PUMP/VRF CHANNEL FRAME AND SPRING ISOLATOR DETAIL

SCALE: NOT TO SCALE

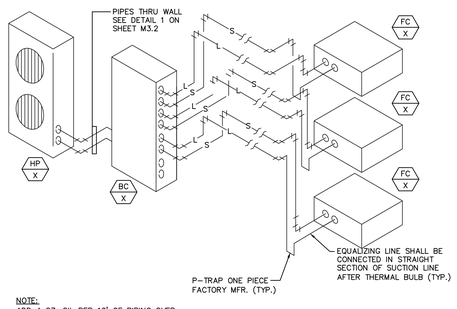


NOTES:

1. COIL PIPING PACKAGE SHALL BE BELL & GOSSETT MODEL MC3Y VALVE KIT PLUS CIRCUIT SETTER
2. PROVIDE 3-WAY CONTROL VALVES FOR THE VAV BOXES ONLY AT THE END OF THE HOT WATER PIPING LOOP. 2-WAY CONTROL SHALL BE AT ALL OTHER VAV BOXES.

10 VARIABLE/CONSTANT AIR VOLUME BOX PIPING DETAIL

SCALE: NOT TO SCALE



NOTE:
ADD 4 OZ. OIL PER 10' OF PIPING OVER 50' MAXIMUM PIPE RUN. INSULATE PIPING PER SPECIFICATIONS.

9 TYPICAL VRF PIPING DIAGRAM

SCALE: NOT TO SCALE

TranSystems
801 South Grand
Suite 210
Los Angeles, California 90017
Phone: (562) 594-6974
Fax: (562) 594-6975

NOT FOR CONSTRUCTION

CONSULTANTS:
PBS ENGINEERS
2100 EAST ROUTE 66, SUITE 101
GLENDORA, CA 91740
Voice: 626.852.0350
Fax: 626.852.0352
Proj. No. 2015-067-00

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

SUBMITTED BY ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY CHIEF AIRPORTS ENGINEER

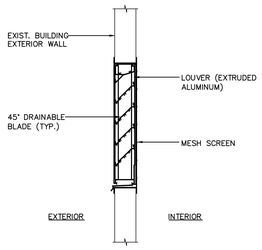
REVISIONS: MARK	DESCRIPTION	DATE

PROJ NO: DA4881
SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: JW
DRAWN BY: JW
CHECKED BY: NP

SHEET TITLE:
DETAILS

SHEET NO.
5-M-501
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

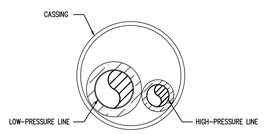


NOTE:

MOUNT AS HIGH AS POSSIBLE. EXACT MOUNTING HEIGHT TO BE FIELD VERIFIED. COORDINATE WITH EXTERIOR & INTERIOR CONDITIONS. SEE DWG. M2.2 FOR SIZE & LOCATION.

2 WALL MOUNTED LOUVER DETAIL

SCALE: NOT TO SCALE

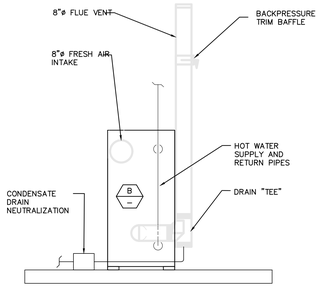


NOTES:

- REFRIGERANT LINES MUST BE INSULATED SEPARATELY
- A MINIMUM OF 1/2" THICK INSULATION IS RECOMMENDED
- IF POSSIBLE, INSTALL CASING AS ONE CONTINUOUS PIECE
- IF THE CASING INCLUDES JOINTS, CONTACT THE MANUFACTURER OR SUPPLIER FOR INSTRUCTIONS ON HOW TO SEAL THE JOINTS TO MAKE THEM WATER TIGHT.

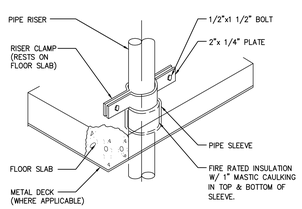
3 TYPICAL CROSS SECTION OF PIPING

SCALE: NOT TO SCALE



4 BOILER FLUE VENT DETAIL

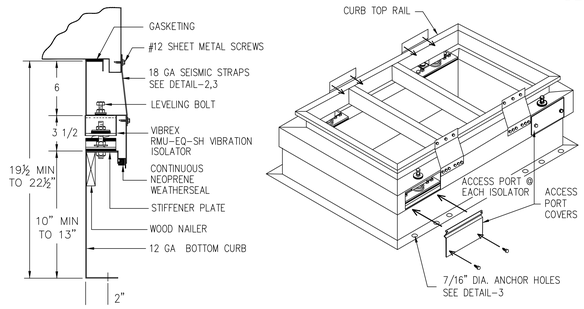
SCALE: NOT TO SCALE



6 PIPE FLOOR PENETRATION DETAIL

SCALE: NOT TO SCALE

DETAIL-1



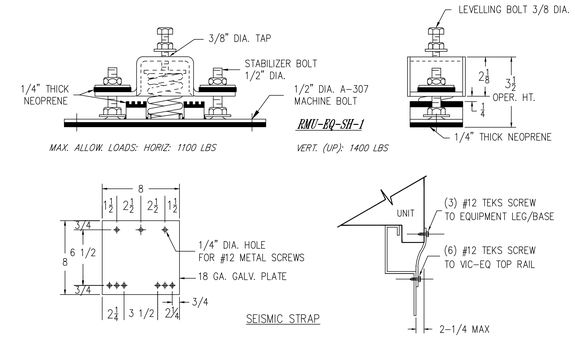
NOTES:

1. FOR ANCHOR REQUIREMENTS AND DETAILS OF ISOLATORS AND SEISMIC STRAPS, SEE DETAIL 2, 3.
2. ROOF SLOPE TO BE VERIFIED BY CONTRACTOR BEFORE FABRICATION & ROOF CURB HEIGHT ARE APPROXIMATE.
3. NOT FOR CONSTRUCTION, ALL DIMENSIONS REQUIRE FINAL REVIEW AT COMMENCEMENT OF PROJECT

DETAIL-2

NOTES: 1) ALL DIMENSIONS IN INCHES
2) SPRING DEFLECTION = 1"

ISOLATORS ARE O.S.H.P.D. PRE-APPROVED No. OPA-0098

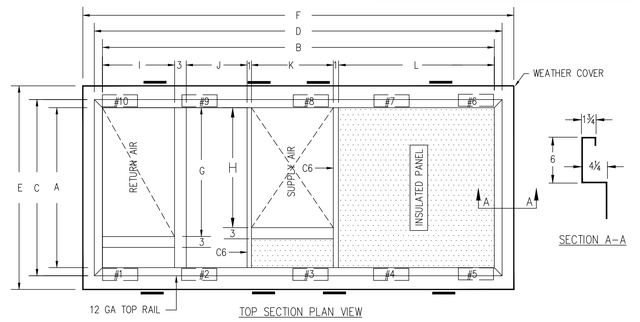


DETAIL-3

NOTES:

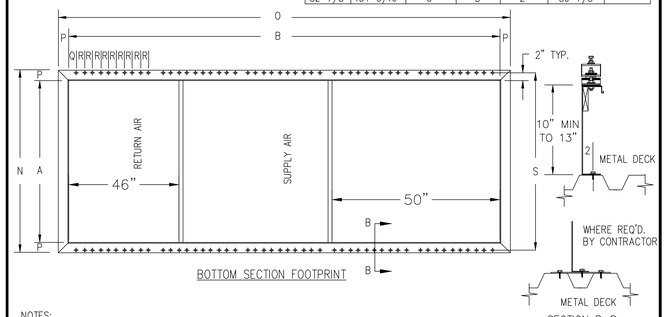
1) ▬ INDICATES SEISMIC TIE-DOWN PLATE. (5) REQUIRED PER LONG SIDE, SEE DETAIL 2.
2) #1 THRU #10 INDICATE ISOLATOR LOCATIONS. SEE DETAIL 2.

MARK	MAKE	TYPE	SIZE	VIC-EQ WT.
–	CARRIER	48LC	24	760#



TOP SECTION PLAN VIEW

A	B	C	D	E	F	G	H	I	J	K	L	M
76-7/8	148-3/16	80-3/8	151-11/16	85-3/8	156-11/16	69-9/16	63-7/8	22-1/4	21-7/8	27-7/8	71-3/16	--
						N	O	P	Q	R	S	T
						82-7/8	154-3/16	3	3	2	80-7/8	

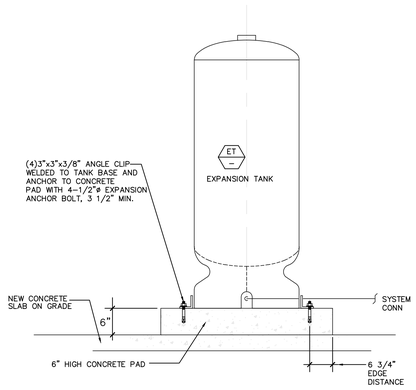


BOTTOM SECTION FOOTPRINT

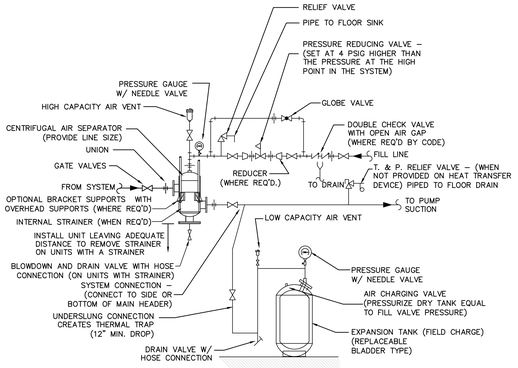
NOTES:

1. R DIMENSIONS ARE CENTERLINES OF ANCHOR HOLES IN CURB BOTTOM FLANGE.
2. USE 1/4" ITW TEKS SCREWS TO MIN. 18 GA METAL DECK. (10) PER ISOLATOR. WHEN CURB FASTENED TO PLATE, USE 1/4" TEKS SCREWS ON EITHER SIDE AS SHOWN.

M□□ □□A□□□□□□ C□□□□C□
28774 W□t□□□□□□



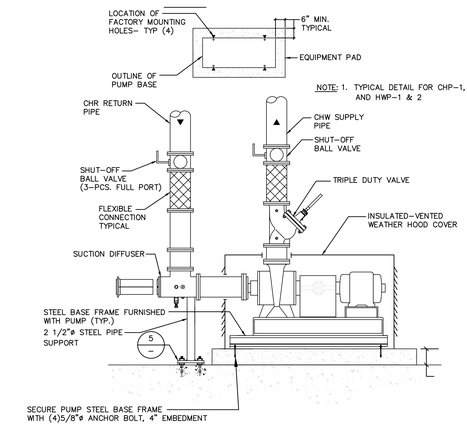
10 EXPANSION TANK MOUNTING DETAIL
SCALE: NOT TO SCALE



NOTE:

INSULATE AND PROVIDE WEATHERPROOF JACKETING OVER AIR SEPARATOR.

7 TYP. AIR SEPARATOR AND EXPANSION TANK PIPING CONN. DETAIL
SCALE: NOT TO SCALE

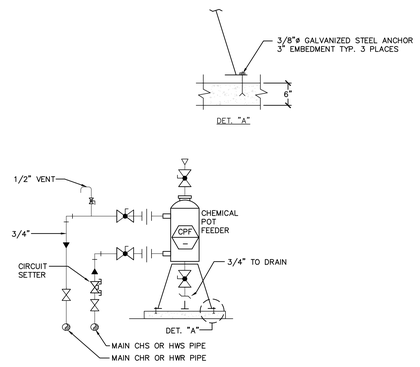


NOTE: 1. TYPICAL DETAIL FOR CHP–1, & 2 AND HWP–1 & 2

NOTE:

ALL EXPOSED PIPES, VALVES AND ACCESSORIES TO BE INSULATED AND COVERED WITH WEATHERPROOF JACKETING.

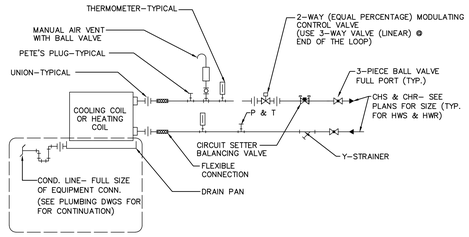
4 TYPICAL PUMP MOUNTING AND PIPING CONNECTION DETAIL
SCALE: NOT TO SCALE



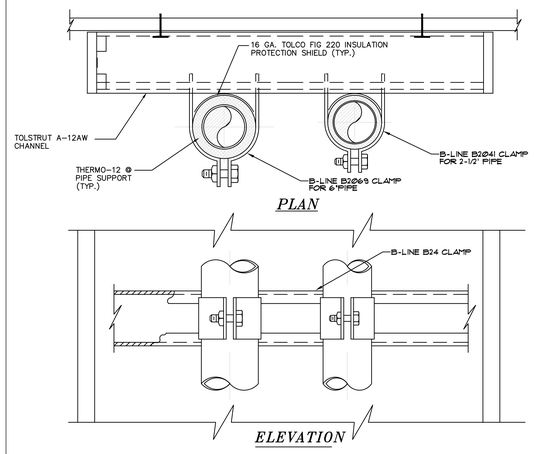
NOTES:

1. TYPICAL DETAIL FOR CPF–1 & 2

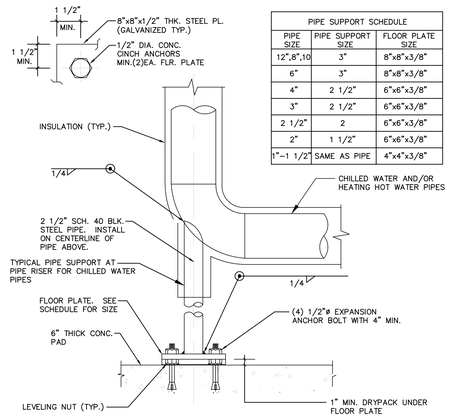
1 CHEMICAL POT FEEDER DETAIL
SCALE: NOT TO SCALE



11 TYP. FAN COIL CLG./HTG. COIL PIPING CONNECTION DETAIL
SCALE: NOT TO SCALE

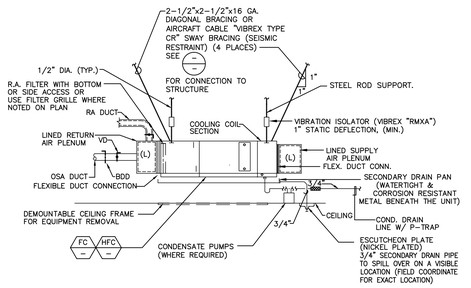


8 HEATING HOT WATER PIPE SUPPORT □ WALL /RISER DETAIL
SCALE: NOT TO SCALE

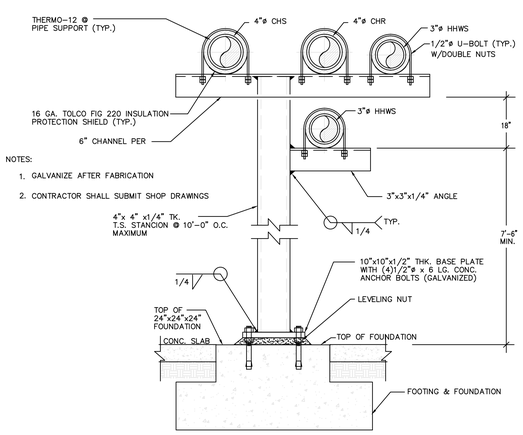


PIPE SUPPORT SCHEDULE		
PIPE SIZE	PIPE SUPPORT SIZE	FLOOR PLATE SIZE
12",8",10	3"	8"x8"x3/8"
6"	3"	8"x8"x3/8"
4"	2 1/2"	6"x6"x3/8"
3"	2 1/2"	6"x6"x3/8"
2 1/2"	2	6"x6"x3/8"
2"	1 1/2"	6"x6"x3/8"
1"–1 1/2"	SAME AS PIPE	4"x4"x3/8"

5 PIPE SUPPORT DETAIL
SCALE: NOT TO SCALE



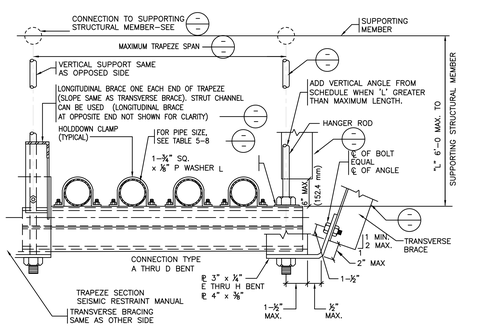
2 FAN COIL INSTALLATION DETAIL
SCALE: NOT TO SCALE



NOTES:

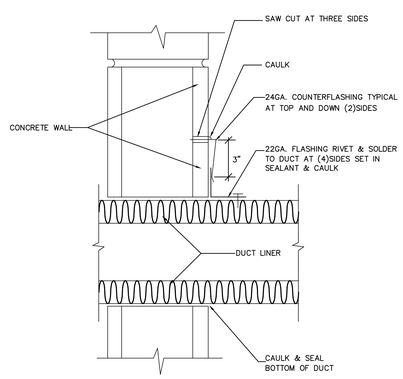
1. GALVANIZE AFTER FABRICATION
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS

12 PIPE SUPPORT □STANCION□ DETAIL
SCALE: NOT TO SCALE



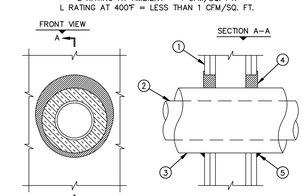
NOTES:
1. THIS IS FIGURE 4–20 OF SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS, SECOND EDITION (1998) AND ADDENDUM NO.1 (SEPTEMBER 2000), BY SMACNA. ALL REFERENCES ARE TO THESE PUBLICATIONS.

9 STRUT BRACING FOR PIPE TRAPEZE
SCALE: NOT TO SCALE



6 DUCT PENETRATION THRU WALL DETAIL
SCALE: NOT TO SCALE

U.L. SYSTEM NO. WL5029
INSULATED METAL PIPE THROUGH 1–HR. OR 2–HR. GYPSUM WALL ASSEMBLY
F RATING = 1–HR. AND 2–HR.
T RATING = 1/2 HR., 1–HR., AND 1–3/4 HR. (SEE U.L. FIRE RESISTANCE DIRECTORY)
L RATING AT AMBIENT = 4 CFM/SQ. FT.
L RATING AT 400°F = LESS THAN 1 CFM/SQ. FT.



1. GYPSUM WALL ASSEMBLY (1–HR. OR 2–HR. FIRE–RATING)(2–HR. SHOWN).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 10" DIAMETER STEEL PIPE (SCHEDULE 40 OR THINNER).
   B. MAXIMUM 2" DIAMETER COPPER PIPE.
   C. 2–1/2" OR LARGER DIAMETER STEEL CONDUIT.
3. MAXIMUM 2" THICK GLASS FIBER PIPE INSULATION WITH AN ALL SERVICE JACKET.
4. ANCHOR BOLT HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT :
   A. MINIMUM 5/8" DEPTH, FOR A 1–HR. FIRE–RATING.
   B. MINIMUM 1–1/4" DEPTH, FOR A 2–HR. FIRE–RATING.
5. MINIMUM 1/2" CROWN HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT PIPE INSULATION/WALL INTERFACE.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 9".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1–1/2".

INSULATED PIPE THRU 1 OR 2–HR GYPS. WALL
SCALE: NOT TO SCALE

3

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Suite 210
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CONSULTANTS:

PBS ENGINEERS
2100 EAST ROUTE 66, SUITE 101
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Proj. No.: 2015-067-00

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

APPROVED BY
CHIEF AIRPORTS ENGINEER

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	N.T.S.
DATE:	07/01/2016
DESIGNED BY:	JW
DRAWN BY:	JW
CHECKED BY:	NP

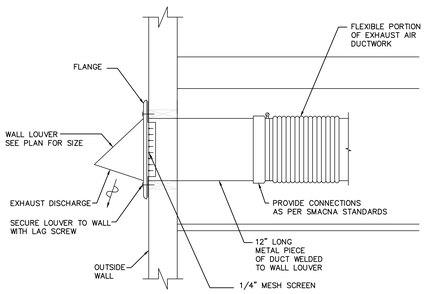
SHEET TITLE:

DETAILS

SHEET NO.
5-M-503
SHEET OF

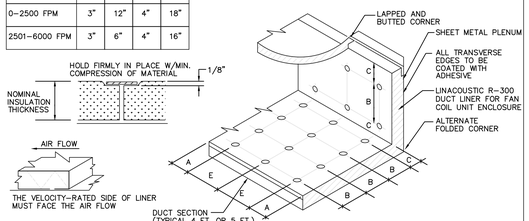
IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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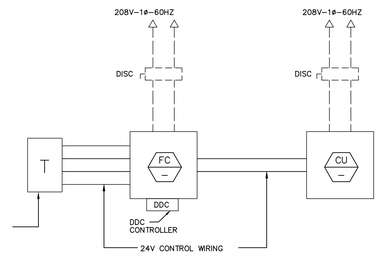
10 EXHAUST AIR DUCT THRU EXTERIOR WALL W/HOOD
SCALE: NOT TO SCALE

MAX. SPACING FOR FASTENER, ACTUAL INTERVALS ARE APPROXIMATE.				
VELOCITY	DIMENSION			
	A	B	C	E
0–2500 FPM	3"	12"	4"	18"
2501–6000 FPM	3"	6"	4"	16"



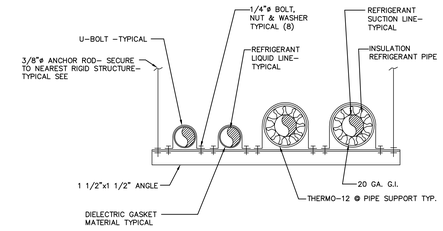
NOTES:
1. LINER ADHERED TO THE DUCT WITH FULL AREA COVERED OF ADHESIVE. ADHESIVE SHALL CONFORM TO ASTM C 916.
2. ALL EXPOSED LEADING EDGES AND TRANSFER JOINTS SHALL BE COATED WITH JOHNS MANVILLE SUPER SEAL DUCT BUTTER, JOHNS MANVILLE SUPER SEAL EDGE TREATMENT OR AN APPROVED ADHESIVE.
3. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE NAIMA FIBROUS GLASS DUCT LINER INSTALLATION STANDARD.
4. THE PERMACOTE LINACOUSTIC R-300 FOR FURNACE UNITS ENCLOSURE SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS SPACED PER THE SCHEDULE SHOWN. THE PIN LENGTH SHOULD SUCH AS TO HOLD THE MATERIAL FIRMLY IN PLACE WITH MIN. COMPRESSION OF THE MATERIAL.

7 DUCT LINER DETAIL
SCALE: NOT TO SCALE



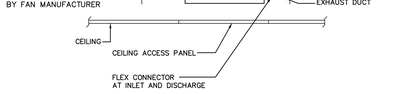
NOTES:
1. SEE (1 / –) FOR WIRING LEGEND.
2. SEE CONTROLS DRAWINGS FOR FURTHER CONTROLS DIAGRAMS.

4 SPLIT DX FAN COIL SYSTEM WIRING DIAGRAM
SCALE: NOT TO SCALE

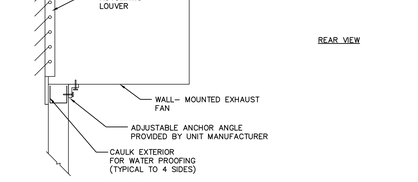


NOTE:
TYPICAL FOR CHILLED AND HOT WATER PIPING SUPPORT.

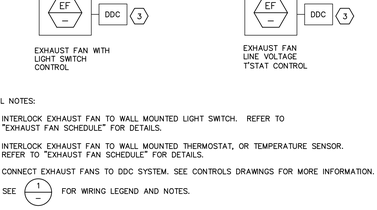
1 REFRIGERANT PIPING MOUNTING DETAIL
SCALE: NOT TO SCALE



11 INLINE EXHAUST FAN MOUNTING DETAIL
SCALE: NOT TO SCALE

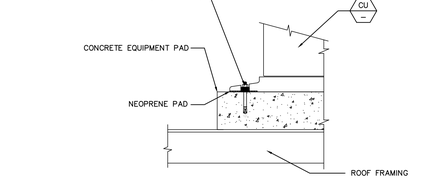


8 WALL THRU EXHAUST FAN MOUNTING DETAIL
SCALE: NOT TO SCALE



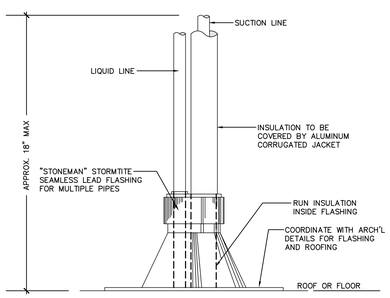
DETAIL NOTES:
1. INTERLOCK EXHAUST FAN TO WALL MOUNTED LIGHT SWITCH. REFER TO "EXHAUST FAN SCHEDULE" FOR DETAILS.
2. INTERLOCK EXHAUST FAN TO WALL MOUNTED THERMOSTAT, OR TEMPERATURE SENSOR. REFER TO "EXHAUST FAN SCHEDULE" FOR DETAILS.
3. CONNECT EXHAUST FANS TO DDC SYSTEM. SEE CONTROLS DRAWINGS FOR MORE INFORMATION.
4. SEE (1 / –) FOR WIRING LEGEND AND NOTES.

5 EXHAUST FAN WIRING DIAGRAM
SCALE: NOT TO SCALE



NOTE: SUBMIT SHOP DRAWING FOR APPROVAL

2 CONDENSING UNIT MOUNTING DETAIL
SCALE: NOT TO SCALE



12 REFRIGERANT PIPING THRU ROOF OR FROM PENETRATION
SCALE: NOT TO SCALE

ALL LINE VOLTAGE CONDUIT, WIRING, AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

ALL LOW VOLTAGE WIRING SHOWN SOLID SHALL BE FURNISHED AND INSTALLED BY THE LOW VOLTAGE CONTROLS CONTRACTOR. VERIFY THE EXACT REQUIREMENT WITH THE EQUIPMENT MANUFACTURER. CONDUIT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

DISCONNECT SWITCHES AND MAGNETIC STARTERS WITH H–O–A, 120V CONTROL TRANSFORMER, AND AUXILIARY CONTACTS INCLUDING RELAYS SHALL BE FURNISHED & INSTALLED BY THE ELECT. DIVISION.

(DD) DUCT SMOKE DETECTORS SHALL BE FURNISHED & WIRED BY THE ELECTRICAL DIVISION AND INSTALLED BY THE MECHANICAL DIVISION.

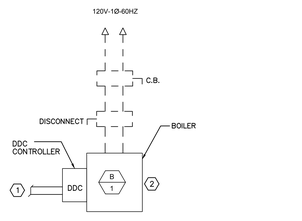
MECHANICAL EQUIPMENT TO BE FURNISHED AND INSTALLED BY MECHANICAL DIVISION.

CB OR FDS CIRCUIT BREAKER OR FUSED DISCONNECT SWITCH BY ELECTRICAL.

(T) THERMOSTAT OR SPACE TEMPERATURE SENSOR BY CONTROLS CONTRACTOR.

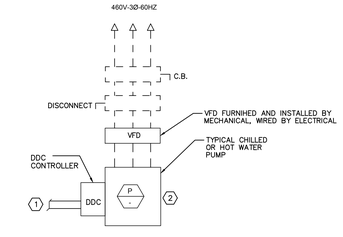
NOTES:
1. ALL LOW VOLTAGE CONDUIT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. ALL LOW VOLTAGE WIRING (24 VAC.) SHALL COMPLY WITH CLASS 2 WIRING CODE. THE MINIMUM LOW VOLTAGE WIRING CONDUCTOR SIZE SHALL BE 16 AWG COPPER. ALL CONDUCTOR QUANTITIES SHALL BE COORDINATED WITH THE EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION. COORDINATION OF ALL LOW VOLTAGE EQUIPMENT WIRING SHALL BE THE RESPONSIBILITY OF THE LOW VOLTAGE CONTROLS CONTRACTOR.

9 WIRING NOTES
SCALE: NOT TO SCALE



NOTES:
1. CONNECT TO DDC SYSTEM. SEE CONTROLS DRAWINGS.
2. SEE (1 / RC–M–504) FOR WIRING LEGENDS AND NOTES.

6 BOILER WIRING DIAGRAM
SCALE: NOT TO SCALE



NOTES:
1. CONNECT TO DDC SYSTEM. SEE CONTROLS DRAWINGS.
2. SEE (1 / RC–M–504) FOR WIRING LEGENDS AND NOTES.

3 TYPICAL PUMP WIRING DIAGRAM
SCALE: NOT TO SCALE

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Proj. No. 2015-067-00

Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Los Angeles International Airport

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SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

ONE LAX PMD

REVISIONS:			
MARK	DATE	DESCRIPTION	

PROJ NO: DA4881
SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: JW
DRAWN BY: JW
CHECKED BY: NP

SHEET TITLE:
DETAILS

SHEET NO.
5-M-504
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED ASCE 7–05 SECTIONS 6.5, 13.3, 13.4 & 13.6.

THE ATTACHMENT OF THE FOLLOWNG ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS.

EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.

TEMPORARY OR MOVABLE EQUIPMENT.

EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.

EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL AND THE FIELD ENGINEER.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7–05 SECTION 13.3 AS DEFINED IN ASCE 7–05 SECTION 13.6.8, 13.6.7. AND 13.4.5.5., ITEM 6. RESPECTIVELY.

THE SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE IN ACCORDANCE WITH THE "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS", PUBLISHED BY RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS", PUBLISHED BY SMACNA AND PPIC, OR ANY SEISMIC BRACING AND ANCHORAGE SYSTEM WITH CURRENT OSHPD OPA #. (ISAT, MASON, B–LINE, ETC...)

COPIES OF THE SMACNA OR OPA MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

APPLICABLE CODES

CODE ANALYSIS

THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

PARTIAL LIST OF APPLICABLE CODES

THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

2013 CALIFORNIA ADMINISTRATIVE CODE – CCR, TITLE 24, PART 1 (2010 CHAPTER 10 APPLIES THRU 06–30–14)

2013 CALIFORNIA BUILDING CODE (CBC) – CCR, TITLE 24, PART 2 – WITH L.A. 2014 AMENDMENTS, BASED ON 2012 IBC

2013 CALIFORNIA ELECTRICAL CODE (CEC) – CCR, TITLE 24, PART 3 – WITH L.A. 2014 AMENDMENTS, BASED ON 2011 NEC

2013 CALIFORNIA MECHANICAL CODE (CMC) – CCR, TITLE 24, PART 4 – WITH L.A. 2014 AMENDMENTS, BASED ON 2012 UMC

2013 CALIFORNIA PLUMBING CODE (CPC) – CCR, TITLE 24, PART 5 – WITH L.A. 2014 AMENDMENTS, BASED ON 2012 UPC

2013 CALIFORNIA ENERGY CODE – CCR, TITLE 24, PART 6 (2013 VERSION APPLIES AFTER 07–01–14)

2013 CALIFORNIA FIRE CODE (CFC) – CCR, TITLE 24, PART 9 – BASED ON 2012 IFCm

2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN) – CCR, TITLE 24, PART 11 – WITH L.A. 2014 AMENDMENTS

2013 CALIFORNIA REFERENCED STANDARDS CODE – CCR, TITLE 24, PART 12

2014 CALIFORNIA PUBLIC SAFETY – CCR, TITLE 19, DIVISION 1 – STATE FIRE MARSHAL

PARTIAL LIST OF STANDARDS, APPLICABLE AS NEEDED

2013 NFPA 13 AUTOMATIC SPRINKLER SYSTEMS

2012 NFPA 101LIFE SAFETY CODE

2013 NFPA 72 NATIONAL FIRE ALARM CODE (WITH CALIFORNIA AMENDMENTS AS APPLICABLE)

GENERAL NOTES

1. OFFSET PIPES AS REQUIRED TO CLEAR MECHANICAL DUCTWORK.
2. FURNISH AND INSTALL A SHUT–OFF VALVE, PLUG COCK OR STOP AT EACH PIECE OF EQUIPMENT FURNISHED BY OTHERS REQUIRING DRAIN, WASTE, WATER, GAS, ETC.
3. SEAL ALL PENETRATIONS WATERTIGHT.
4. REFER TO MECHANICAL DRAWINGS FOR THE EXACT LOCATION OF ALL AC UNITS. IN AN EVENT OF CONFLICT, AC EQUIPMENT GOVERNS THE PLUMBING ROUTE
5. UNLESS OTHERWISE NOTED, ALL CONDENSATE AND GAS DROPS SHALL BE CONCEALED IN WALLS.
6. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. THE CONTRACTOR SHALL LOCATE ALL OFFSETS, BENDS, AND SPECIAL FITTINGS TO SUIT JOB SITE CONDITIONS.
7. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS

   THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
8. WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS.
9. BEFORE ORDERING ANY PIECE OF EQUIPMENT, THE CONTRACTOR SHALL PROVIDE EQUIPMENT SUBMITTALS, AND SHOP DRAWINGS WITH EQUIPMENT DIMENSIONS, AND SITE CLEARANCE AVAILABLE. WHERE REQUIRED BY SPACE LIMITATIONS HAVE UNITS SHIPPED IN SECTIONS.
10. REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF ALL PLUMBING FIXTURES AND FIXTURE HEIGHTS.
11. ALL SINKS, LAVATORY AND URINALS TO HAVE WALL CLEAN–OUTS.
12. ALL HANDICAP ACCESSIBLE PLUMBING FIXTURES SHALL MEET ADA REQUIREMENTS.
13. ALL PIPE BRANCH CONNECTIONS SHALL OFF–SET. NO "BULL HEAD" CONNECTIONS WILL BE ALLOWED.
14. INSTALL WATER HAMMER ARRESTORS IN THE HOT AND COLD WATER SUPPLY TO EACH FIXTURE OR IN THE HEADER SUPPLY TO A BATTERY OF FIXTURES SIZED PER PDI STANDARD WH–201.
15. NEW COLD WATER TO BE SUPPLIED TO 5 FT. FROM BUILDING. PROVIDE SHUT OFF VALVE IN YARD BOX.
16. COORDINATE PLANS FOR CONTINUITY OF WORK.
17. RUN UNDERGROUND PIPING IN COORDINATION WITH STRUCTURAL DETAILS.
18. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
19. COORDINATE ALL EXPOSED PIPING WITH ARCHITECT.
20. ACCESSIBLE PLUMBING FIXTURES SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF CBC SECTION 1115B.
21. HEIGHTS AND LOCATION OF ALL FIXTURES SHALL BE ACCORDING TO CBC SECTION 1115B.4 SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF CBC SECTION 1115B.
22. FIXTURE CONTROLS SHALL COMPLY WITH CBC SECTIONS 1115B.4.3 ITEM 1 FOR LAVATORIES, 1115B.4.1 ITEM 5 FOR TOILETS AND 1115.4.2 ITEM 3 FOR URINALS.
23. EACH ACCESSIBLE SINK SHALL BE A MAXIMUM OF 6 1/2" DEEP. SINKS SHALL BE MOUNTED WITH THE COUNTER OR RIM NO HIGHER THAN 34" ABOVE THE FINISH FLOOR. CBC SECTION 1115B.4.7 ITEM 1.
24. FOR ALL PLUMBING SYSTEM SIZES REFER TO RISER DIAGRAMS.

LEGEND AND ABBREVIATIONS

SYMBOL	ABBREV.	DESCRIPTION
C.W.	C.W.	COLD WATER
H.W.	H.W.	HOT WATER
H.W.R.	H.W.R.	HOT WATER RETURN
G	G.	FUEL GAS
MPG	MPG	MEDIUM PRESSURE GAS
CD	C.D.	CONDENSATE DRAIN
FCD	FCD	FURNACE CONDENSATE DRAIN
V	V	SANITARY VENT
W OR SS	W OR SS	WASTE OR SANITARY SEWER
RW	RW	RECLAIM WATER
RWS	RWS	RECLAIM WATER SUPPLY
SD	SD	STORM DRAIN
OD	OD	OVERFLOW DRAIN
	FWS	FUEL WATER SEPARATOR
	S.O.V.	SHUT OFF VALVE
	G.C.	GAS COCK
	H.B.	HOSE–BIBB
		PIPE–UP OR RISER
		PIPE–DOWN OR DROP
		UNION
	COYB	CLEANOUT IN YARD BOX
	POC	POINT OF CONNECTION
	W/	WITH
	I.E.	INVERT ELEVATION OF PIPE BELOW FLOOR
	ADA	AMERICAN DISABILITIES ACT
	CONC.	CONCRETE
	F.C.O.	FLOOR CLEANOUT
	N.T.S.	NOT TO SCALE
	CONT.	CONTINUATION
	FIN.	FINISH
	F.F.E.	FINISH FLOOR ELEVATION
	FLR.	FLOOR
	F.U.	FIXTURE UNIT
	GR.	GRADE
	LOC.	LOCATION
	ABV.	ABOVE
	BEL.	BELOW
	C.I.	CAST IRON
	CLG.	CEILING
	CONN.	CONNECT OR CONNECTION
	WHA	WATER HAMMER ARRESTOR
	TYP.	TYPICAL
		PLUMBING EQUIPMENT IDENTIFICATION
		PLUMBING FIXTURE IDENTIFICATION
	VTC	VENT THROUGH CANOPY
	VTR	VENT THROUGH ROOF
	W.C.O.	WALL CLEANOUT
	Y.B.	YARD BOX
	TDL	TOTAL DEVELOPED LENGTH
	RD	ROOF DRAIN
	OD	OVERFLOW DRAIN
	S.O.V.	SHUT OFF VALVE ON RISER

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	ROUGH–IN CONNECTIONS WASTE	TRAP	VENT	COLD WATER	HOT WATER	REMARKS
AD 2	AREA DRAIN J.R. SMITH #2233Y	4"	–	–	–	–	CAST IRON BODY WITH FLASHING COLLAR AND CAST IRON TRACTOR GRATE. *PROVIDE 1/2" TRAP PRIMER CONNECTION
FD 1	FLOOR DRAIN J.R. SMITH #2005Y	2"	2"	1–1/2"	*	–	SQUARE TOP CAST IRON BODY WITH FLASHING COLLAR AND NICKEL BRONZE ROUND ADJUSTABLE STRAINER. *PROVIDE 1/2" TRAP PRIMER CONNECTION
AD 1	AREA DRAIN ZURN Z526	4"	–	–	–	–	12" DIAMETER TOP DRAIN, DURA–COATED CAST IRON BODY WITH BOTTOM OUTLET, SEEPAGE PAN, ADJUSTABLE EXTENSION FRAME AND HEAVY DUTY SLOTTED GRATE. *PROVIDE 1/2" TRAP PRIMER CONNECTION WHERE APPLICABLE.
HB 1	HOSE BIBB ACORN 8104	–	–	–	3/4"	–	RECESSED HOSE VALVE BOX WITH LOCKABLE DOOR AND FRAME, WITH VACUUM BREAKER.
HB 2	HOSE BIBB ACORN 8121–CP	–	–	–	3/4"	–	ROUGH BRASS BODY, WALL FLANGE TYPE WITH VACUUM BREAKER, CARTRIDGE OPERATED HOSE VALVE WITH LOCKSHIELD BONNET AND REMOVABLE KEY HANDLE, INTERIOR VALVES SHALL BE POLISHED CHROME FINISH, EXTERIOR VALVES SHALL BE ROUGH CHROME PLATED.
HD 1	HUB DRAIN (FABRICATED)	4"	4"	2"	1/2"	–	4" CAST IRON PIPE WITH 4" TRAP, 2" VENT AND TRAP PRIMER CONNECTION. (SEE DETAIL 5/RC–P–501)
FS 1	FLOOR SINK J.R. SMITH #3100Y	2"	2"	2"	–	–	DUCO CAST IRON RECEPTOR WITH SOLID WATER DAM AND CAST IRON DOME BOTTOM STRAINER, UNDERDECK CLAMP SECURED WITH STAINLESS STEEL VANDAL PROOF SCREWS
TD 1	TRENCH DRAIN	–	–	–	–	–	ZURN Z400H DRAIN. TRENCH DRAIN AND GRATING BY ARCHITECT.
F 1	FUNNEL DRAIN	2"	2"	1 1/2"	–	–	J.R SMITH FIG 3821T DUCO CAST IRON BODY WITH ACID RESISTANT COATED INTERIOR AND EXTERIOR
IR 1	INDIRECT RECEPTOR	–	–	–	–	–	J.R SMITH FIG 3970Y DUCO CAST IRON BODY
AGA 1	AIR GAP ADAPTOR	2"	2"	2"	–	–	J.R SMITH FIG 3955S CAST IRON BODY, BEHIND ACCESS PANEL.

PIPE MATERIAL TABLE

SERVICE	PIPE	FITTINGS	REMARKS
DOMESTIC HOT AND COLD WATER SYSTEM	SEAMLESS COPPER TUBING, TYPE L ABOVE GROUND, DRAWN TEMPER, ASTM B88, TYPE K BELOW GROUND	WROUGHT COPPER, SOLDER – JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16, 23, ANSI 16 , 18	JOINTS: 95 – 5 (TIN AND ANTIMONY) SOLDER. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.
SOIL, WASTE AND VENT	STANDARD WEIGHT CAST IRON NO–HUB TYPE SOIL PIPE, TYLER WIDE BODY OR EQUAL	STANDARD WEIGHT CAST IRON NO–HUB TYPE SOIL FITTINGS WITH NEOPRENE GASKET AND STAINLESS STEEL BANDS AND SHIELD, NO–HUB	NSF LISTED
CONDENSATE DRAIN	SEAMLESS COPPER TUBING, TYPE L HARD DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER – JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16, 23, ANSI 16 , 18	JOINTS: 95 – 5 (TIN AND ANTIMONY) SOLDER.
STORM DRAIN	STANDARD WEIGHT CAST IRON NO–HUB TYPE SOIL PIPE, TYLER WIDE BODY OR EQUAL	STANDARD WEIGHT CAST IRON NO–HUB TYPE SOIL FITTINGS WITH NEOPRENE GASKET AND STAINLESS STEEL BANDS AND SHIELD, NO–HUB COUPLINGS	
NATURAL GAS	STEEL PIPE ASTM A53/A 53M BLACK STEEL SCHEDULE 40 TYPE E OR S GRADE B	MALLEABLE IRON THREADED FITTINGS ASTM B16.3, CLASS 150 STANDARD PATTERN	
RECLAIMED WATER	SEAMLESS COPPER TUBING, TYPE L ABOVE GROUND, DRAWN TEMPER, ASTM B88, PURPLE PVC BELOW GROUND	WROUGHT COPPER, SOLDER – JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16, 23, ANSI 16, 18 PVC–REQT'S OF ASTM F477 & ASTM D3139	ALL PIPES TO BE CONTINUOUSLY WRAPPED WITH PURPLE COLORED PANTONE #512 MYLAR TAPE READING "CAUTION RECLAIMED WATER DO NOT DRINK

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Proj. No.: 2015-067-00

Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

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SUBMITTED BY _____ ASST. CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

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SCALE: N.T.S.
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CHECKED BY: NP

SHEET TITLE:

PLUMBING SCHEDULES

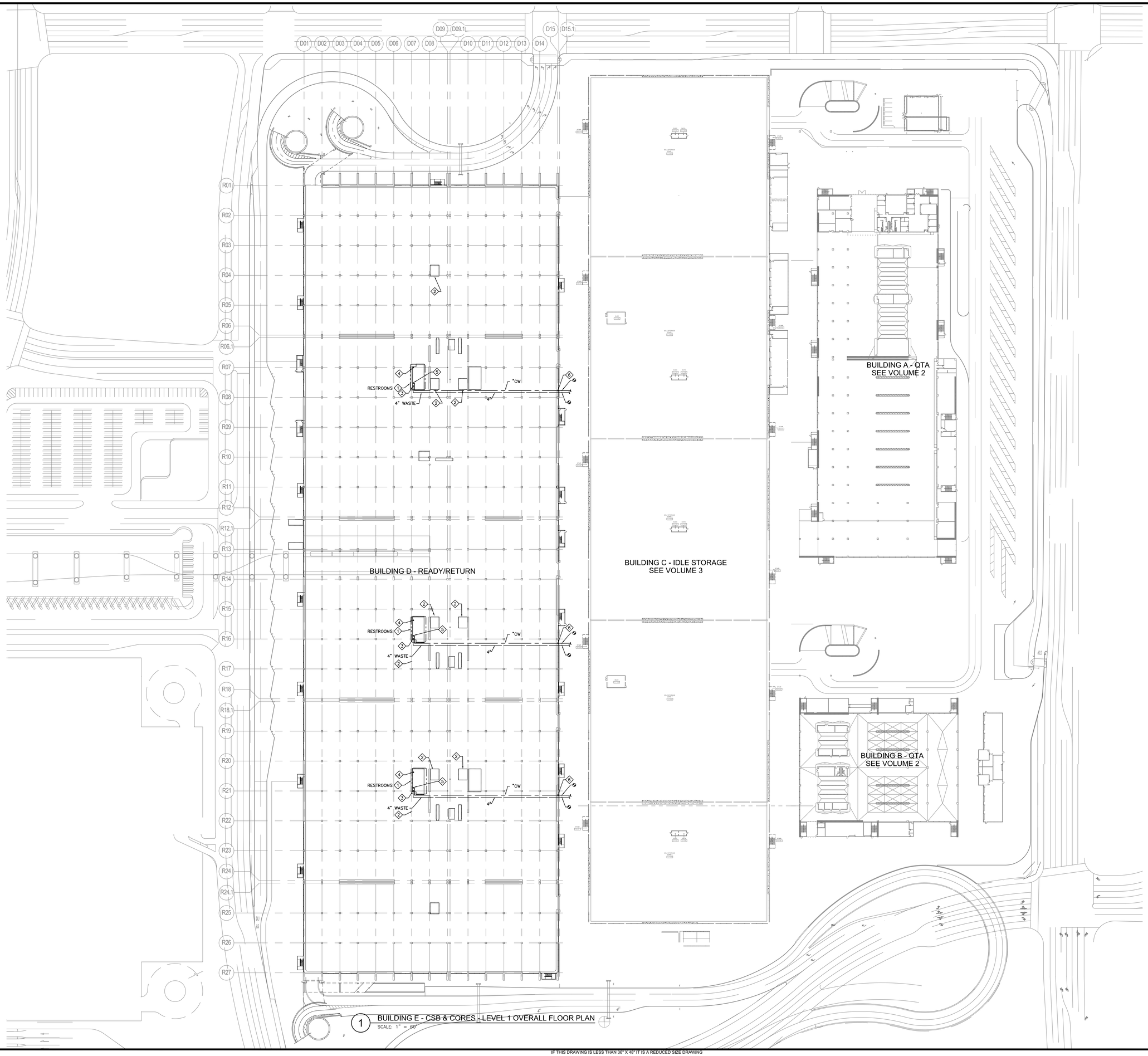
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1 BUILDING E - CSB & CORES - LEVEL 1 OVERALL FLOOR PLAN
SCALE: 1" = 60'

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAINAGE PIPING TO BE PROVIDED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.
3. 4" WASTE RISER DOWN IN PLUMBING CHASE IN RESTROOMS.
4. 4" VENT RISER UP IN PLUMBING CHASE IN RESTROOMS.
5. COLD WATER UP IN PLUMBING CHASE.
6. COLD WATER DOWN IN FURRED WALL TO BELOW GRADE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

KEYPLAN

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

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SCALE: 1" = 60'
DATE: 07/01/2016
DESIGNED BY: JW
DRAWN BY: JW
CHECKED BY: JW

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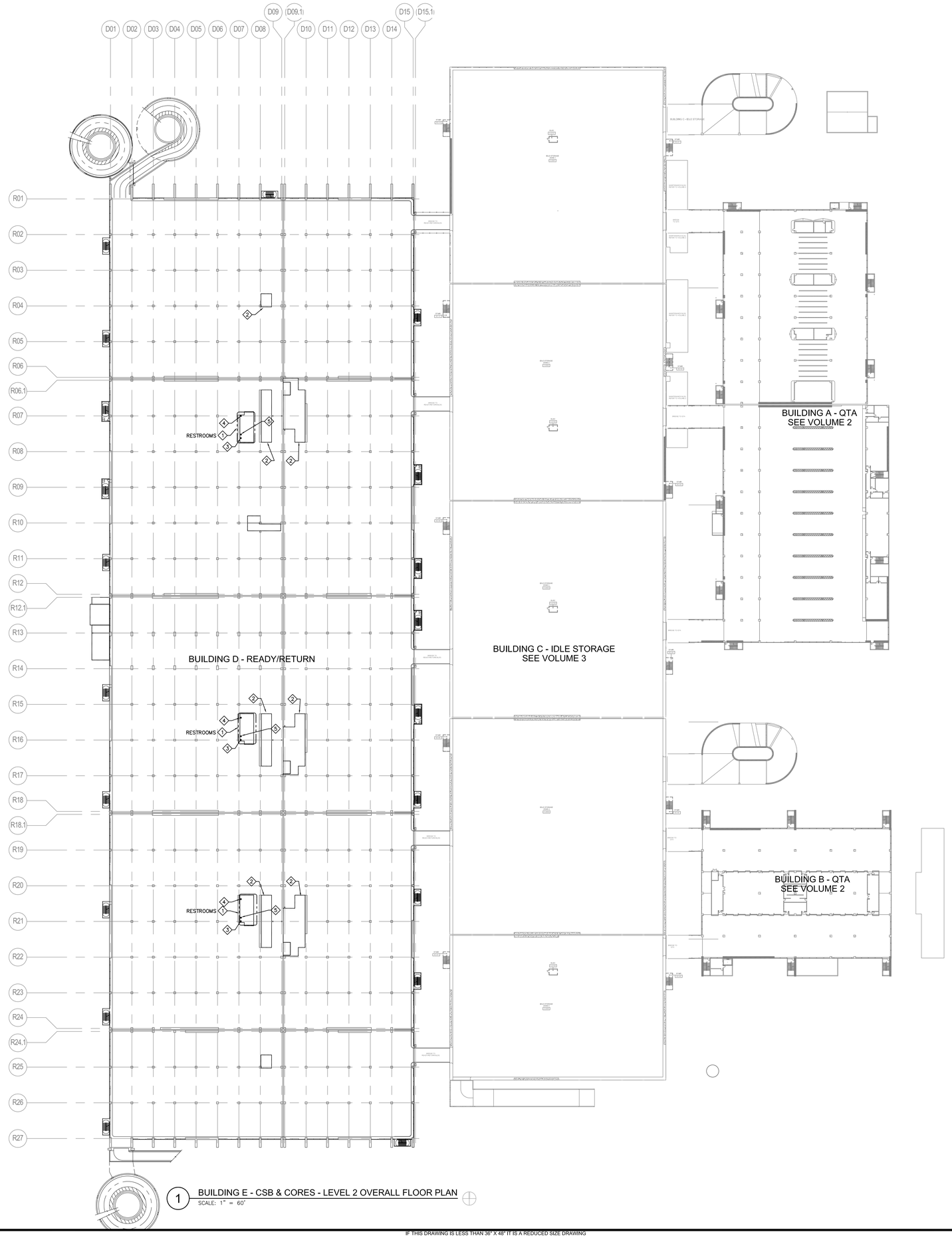
CSB & CORES
LEVEL 1
OVERALL PLUMB
FLOOR PLAN

SHEET NO.
5-P-010

SHEET OF

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1 BUILDING E - CSB & CORES - LEVEL 2 OVERALL FLOOR PLAN
SCALE: 1" = 60'

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAIN PIPING TO BE PROVIDED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.
3. 4" WASTE RISER DOWN AND UP IN PLUMBING CHASE IN RESTROOMS.
4. 4" VENT RISER UP AND DOWN IN PLUMBING CHASE IN RESTROOMS.
5. COLD WATER UP AND DOWN IN PLUMBING CHASE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

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Los Angeles World Airports

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APPROVED BY

CHIEF AIRPORTS ENGINEER

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1" = 60'
DATE:	07/01/2016
DESIGNED BY:	JW
DRAWN BY:	JW
CHECKED BY:	JW

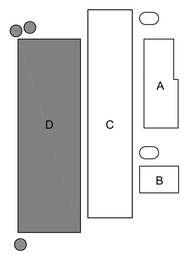
SHEET TITLE:

CSB & CORES
LEVEL 2
OVERALL PLUMB
FLOOR PLAN

SHEET NO.

5-P-020

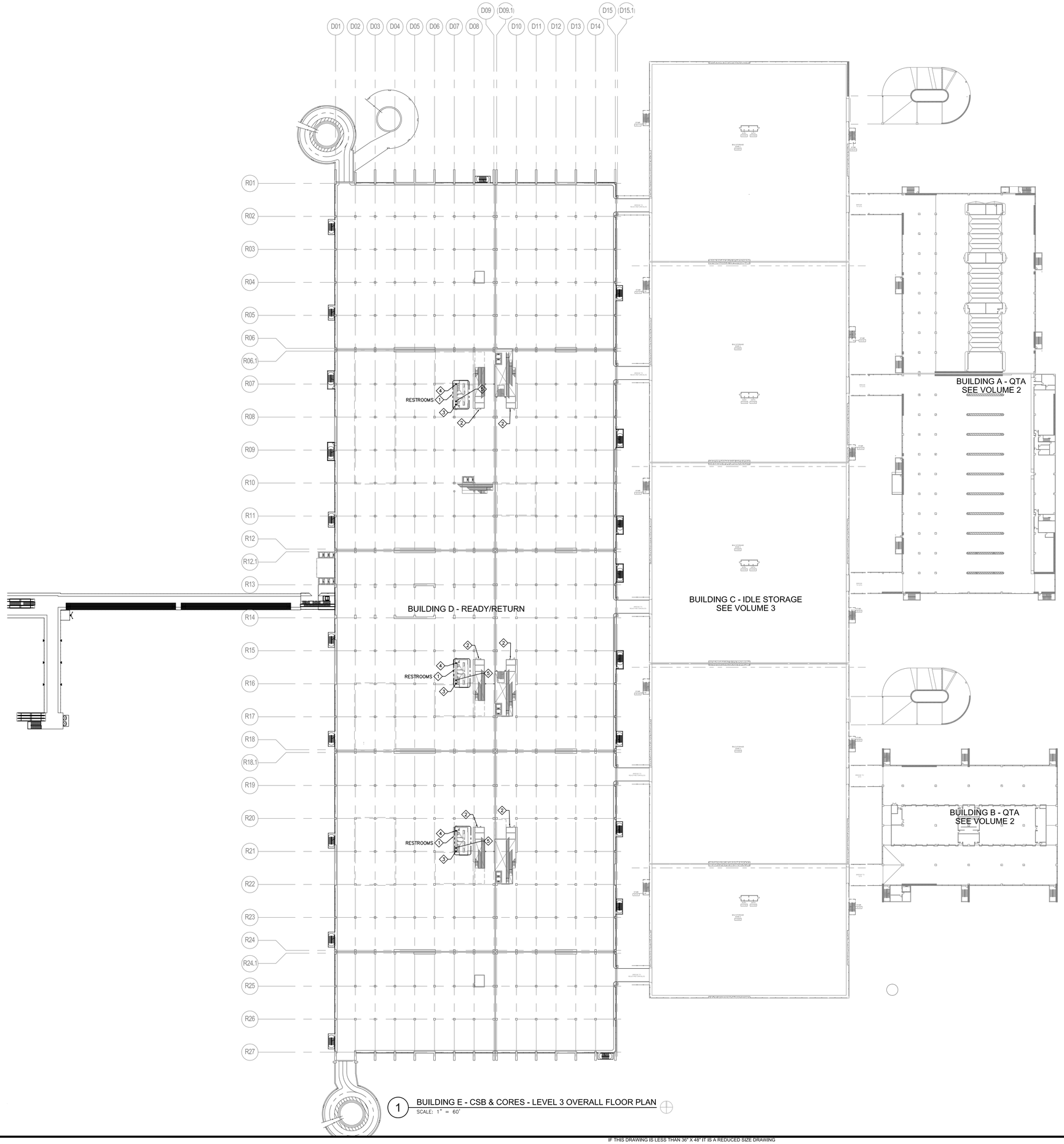
SHEET OF



KEYPLAN

P:\2015\2015-067-00\MEP_Civil\DA4881-5-P-020_LE.dwg Plotted: Jun 29, 2016 - 3:43pm

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB & CORES - LEVEL 3 OVERALL FLOOR PLAN
SCALE: 1" = 60'

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAIN PIPING TO BE PROVIDED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.
3. 4" WASTE RISER DOWN IN PLUMBING CHASE IN RESTROOMS.
4. 4" VENT RISER UP AND DOWN IN PLUMBING CHASE IN RESTROOMS. 4" VENT THROUGH ROOF.
5. COLD WATER UP IN PLUMBING CHASE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

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Los Angeles World Airports
Project
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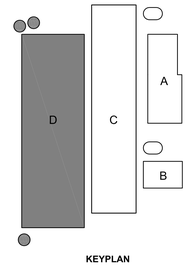
REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1" = 60'
DATE:	07/05/2016
DESIGNED BY:	JOJ
DRAWN BY:	JN
CHECKED BY:	NL

SHEET TITLE:
CSB & CORES
LEVEL 3
OVERALL PLUMB
FLOOR PLAN

SHEET NO.
5-A-030
SHEET OF



KEYPLAN

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D01 D02 D03 D04 D05 D06 D07 D08 D09 (D09.1) D10 D11 D12 D13 D14 D15 (D15.1)

R01 R02 R03 R04 R05 R06 R06.1 R07 R08 R09 R10 R11 R12 R12.1 R13 R14 R15 R16 R17 R18 R18.1 R19 R20 R21 R22 R23 R24 R24.1 R25 R26 R27

RESTROOMS 1 2

RESTROOMS 1 2

RESTROOMS 1 2

BUILDING A - QTA
SEE VOLUME 2

BUILDING C - IDLE STORAGE
SEE VOLUME 3

BUILDING D - READY/RETURN

BUILDING B - QTA
SEE VOLUME 2

1 BUILDING E - CSB & CORES - LEVEL 4 OVERALL FLOOR PLAN
SCALE: 1" = 60'

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAIN PIPING TO BE PROVIDED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

KEYPLAN: D C A B

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA VNY PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1" = 60'
DATE: 07/01/2016
DESIGNED BY: JW
DRAWN BY: JW
CHECKED BY: NP

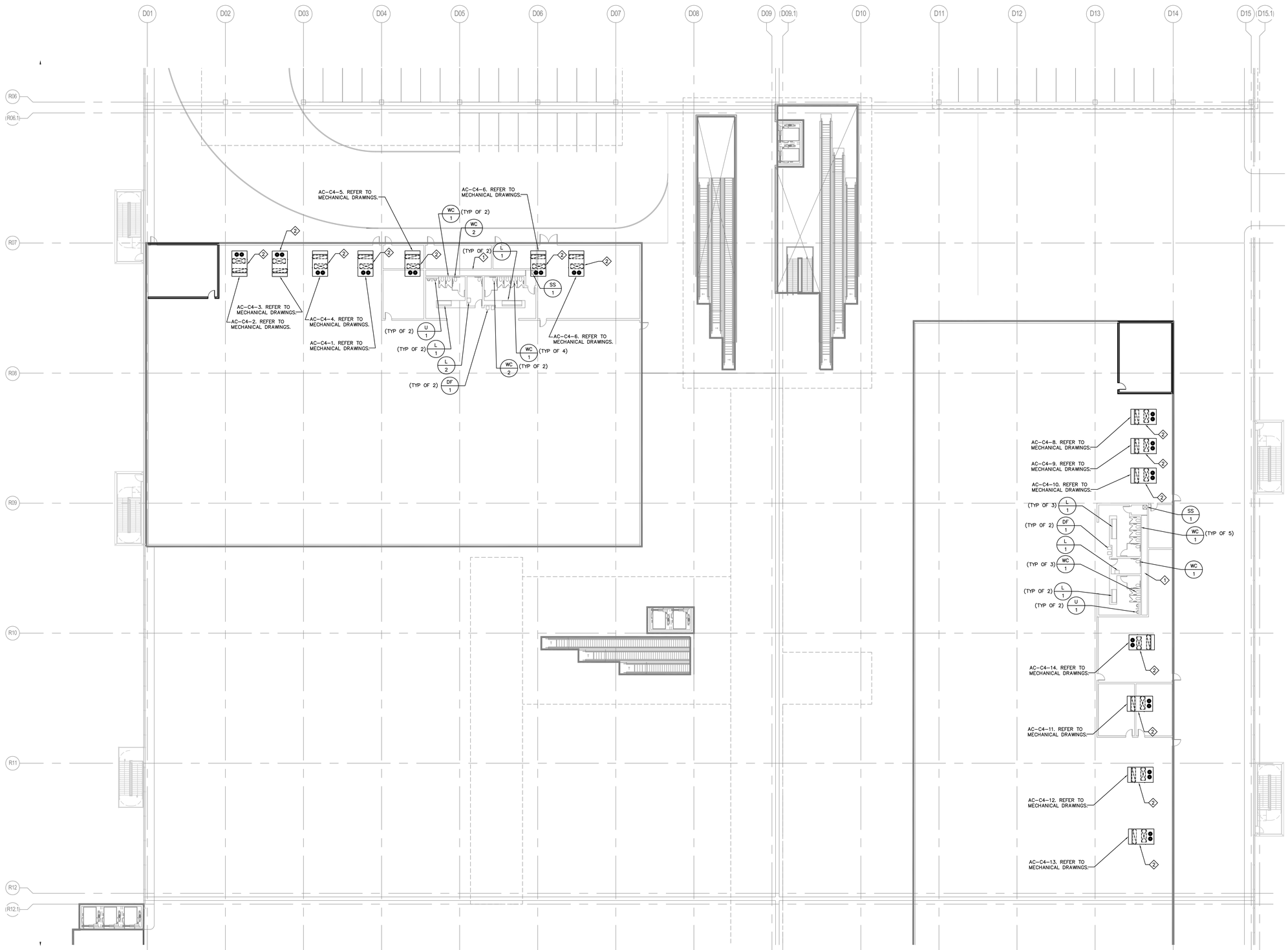
SHEET TITLE:
CSB LEVEL 4 OVERALL PLUMBING FLOOR PLAN

SHEET NO.
5-P-040

SHEET OF

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1 BUILDING E - CSB & CORES - LEVEL 4 ENLARGED CSB PLAN
SCALE: 1/16"= 1'-0"

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAIN PIPING TO BE PROVIDED AND COLLECTED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Los Angeles International Airport

SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER
APPROVED BY: CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

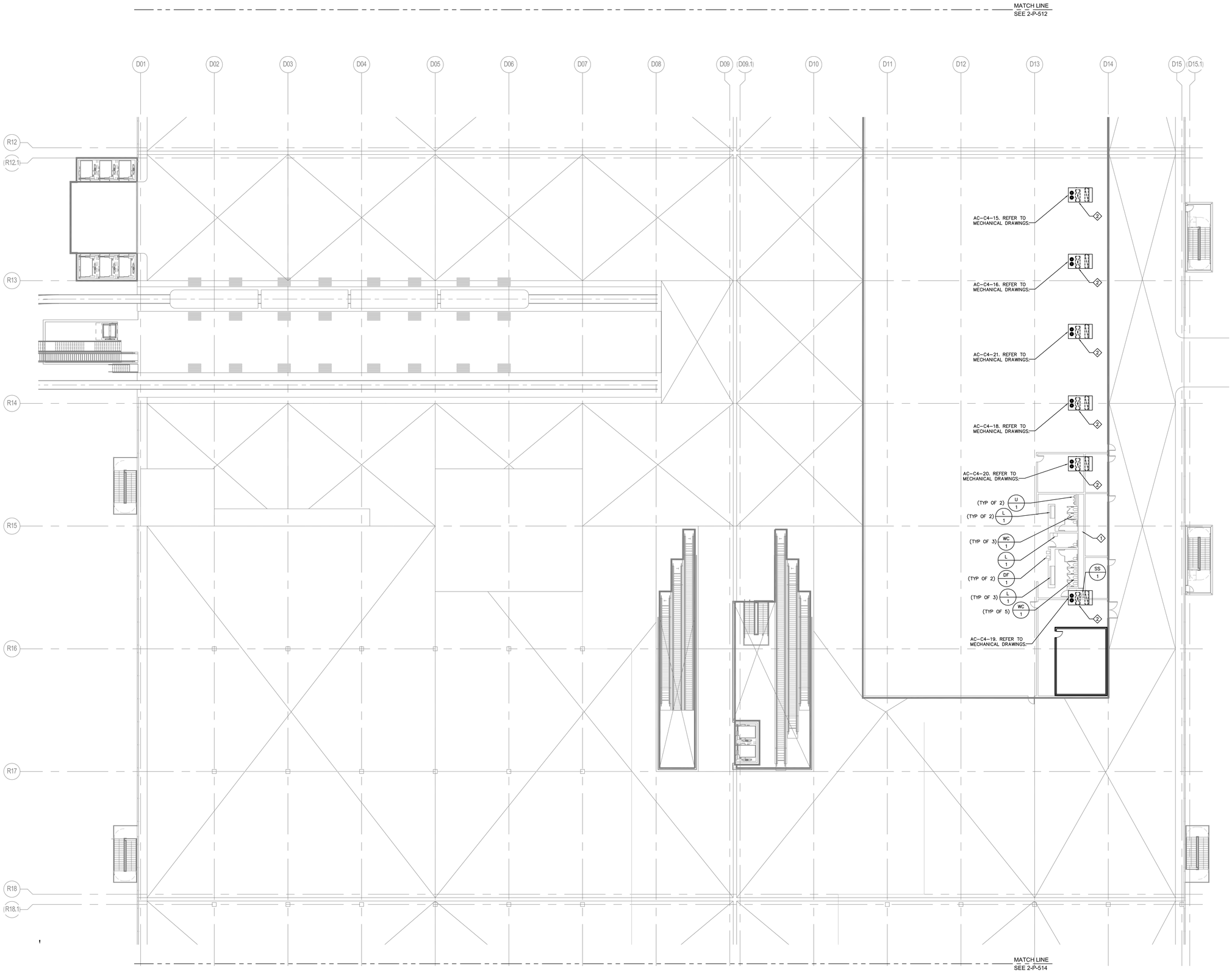
MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:
CSB & CORES
LEVEL 5
ROOF PLAN

SHEET NO.
5-P-152
SHEET OF

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1 BUILDING E - CSB & CORES - LEVEL 4 ENLARGED CSB PLAN
SCALE: 1/16"= 1'-0"

KEY NOTES

1. WASTE, WATER, VENT AND WATER HEATING TO BE PROVIDED FOR ASSOCIATED PUBLIC & STAFF RESTROOMS.
2. CONDENSATE DRAIN PIPING TO BE PROVIDED AND COLLECTED FOR MECHANICAL UNIT CONDENSATE DISCHARGE.

GENERAL NOTES

1. FOR STORM DRAINAGE SEE VOLUME 4 SHEETS.

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Los Angeles International Airport

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SUBMITTED BY:

ASST. CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TH
DRAWN BY: VP
CHECKED BY: NP

SHEET TITLE:

CSB & CORES
LEVEL 5
ROOF PLAN

SHEET NO.
5-P-153
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

P:\2015\2015-067-00\MPE\Vol-05_CSB\DA4881-5-P-153_LAE.dwg, Plotted: Jun 29, 2016 - 3:43pm

LAX CONRAC Facility Preliminary Electrical Load (kVA)			06/29/16
Area Description	**Sq Ft**	**KVA**	**Remarks**
RAC Ready/Return Garage	**3,169,777**	3,380	
Idle Storage Garage	**2,490,511**	1,342	
Customer Service Building	**95,280**	**2,695**	
QTA Buildings	**1,099,947**	**6,778**	
	6,855,515	**14,196**	**KVA**
		1,973	**AMPS @4160V**

LAX CONRAC									06/29/16
Load Type		**Lighting**	General Power	Electric Vehicle Charging	Plumbing	HVAC	Spare Capacity (15%)	Total	Remarks
		0.30	0.15	0.30	0.04	0.02	0.12	0.93	VA/sq Ft
RAC Ready/Return Garage (levels 1, 2 & 3)	**2,448,792**	735	367	730	98	49	297	2,275	
		0.10	0.00	0.33	0.00	0.00	0.06	0.49	
RAC Ready/Return Garage (level 4 = roof))	**704,984**	70	0	230	0	0	45	346	
Special Systems Load (See separate calc)								759	
Roof (APM)	**16,001**								
	3,169,777								
	Sq Ft					Grand Total		3,380	KVA
								470	AMPS @4160V

Assumptions:

Lighting- 0.3W/Sq.ft for RAC garage, considering 10-20FC for sales floor.
Power- General power includes power for receptacles and misc. items such as IT/Security and signage.
Electric Vehicle Charging- Includes 5% of 7600 cars (lvl 1,2,3) =380 carsx16A@120V=729,600VA + 10% of 1200 cars (lvl 4) =120 cars x16A@120V=230,400VA.
HVAC- HVAC includes power for HVAC equipment for booths.

SPECIAL SYSTEM LOAD CALCULATIONS				
	VA, each	QTY	kVA	
Vacuum				Assumed 4 vacuum positions at 14 bays (56 positions) on each floor, or168 positions total at all 3 floors.
25HP/6 Positions	27100	28	759	

LAX CONRAC									06/28/16
Load Type		Lighting	General Power	Vertical Transport	Plumbing	HVAC	Spare Capacity (15%)	Total	**Remarks**
		1.00	3.00	12.60	1.00	7.00	3.69	28.29	VA/sq Ft
Customer Service Building	95,280	95	286	1,201	95	667	352	2,695	
	Sq Ft					Grand Total		2,695	KVA
								375	AMPS @4160V

Assumptions:

VT = (18 Elevators x 40KVA = 720KVA) + (24 Escalators x 20KVA = 480KVA) = 1200KVA
Lighting- 1W/Sq.ft for CSB considering 30-40 FC
Power- General power includes power for receptacles and misc. items such as IT/Security.
HVAC- HVAC includes power for HVAC equipment such AHUs, VAVs, split system and exhaust fans.

LAX CONRAC									05/31/16
Load Type		**Lighting**	**General Power**	**Vertical Transport**	**Plumbing**	**HVAC**	**Spare Capacity (15%)**	**Total**	**Remarks**
		0.60	**0.50**	**0.14**	**0.40**	**0.50**	**0.32**	**2.47**	**VA/sq Ft**
QTA Buildings	**831,841**	499	416	120	333	416	268	2,051	This total KVA does not include QTA System load
QTA roof (green roof)	**268,106**	0	0	0	0	0	0	0	
"QTA System Load (See Separate Calculations)"								4,727	
	1,099,947								
	Sq Ft					**Grand Total**		**6,778**	**KVA**
								942	**AMPS @4160V**

Assumptions:

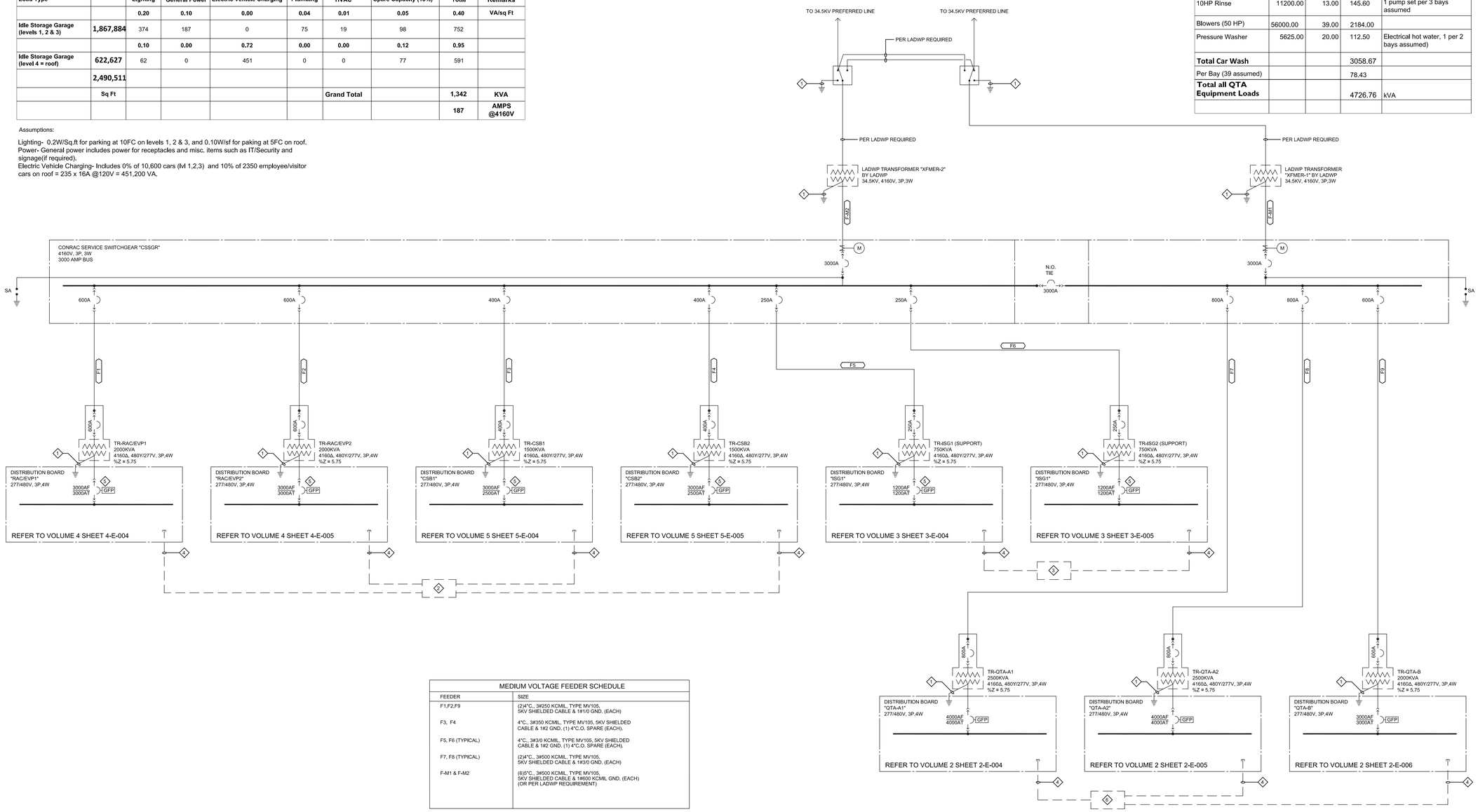
VT = 3 Elevators = 3 x 40KVA = 120KVA
Lighting- 0.6W/Sq.ft for QTA considering different FC levels for different areas
Power- General power includes power for receptacles and misc. items such as IT/Security
HVAC- HVAC includes power for HVAC equipment in restrooms/Offices

QTA SYSTEM LOAD CALCULATIONS				
	VA, each	QTY	kVA	
Gasoline, WWF				
STP 4 HP w VFD	5200.00	30.00	156.00	
Dispenser	600.00	90.00	54.00	
Monitoring	150.00	6.00	0.90	
WWF Pump	6400.00	2.00	12.80	
Misc Control Loads			10.00	
Total Gas, WWF			233.70	
Per Fuel Position		180.00	1.30	
Per Dispenser		90.00	2.60	
Vacuum				
25HP/6 Positions	27100.00	30.00	813.00	
Compressors (15 HP+ Dryer)	16800.00	10.00	168.00	
Lifts (20A/208V)	7196.80	63.00	453.40	
Car Wash (based on 39 Bays Total)				
	VA	Qty	kVA	
Brush Motors - 6.5A/480V	5397.60	39.00	210.51	
RO System (2 HP)	2240.00	24.00	53.76	6000 GPD units assumed, 144,000 GPD total
25HP Reclaim	27100.00	13.00	352.30	1 pump set per 3 bays assumed - assumeds flooder arch
10HP Rinse	11200.00	13.00	145.60	1 pump set per 3 bays assumed
Blowers (50 HP)	56000.00	39.00	2184.00	
Pressure Washer	5625.00	20.00	112.50	Electrical hot water, 1 per 2 bays assumed)
Total Car Wash			3058.67	
Per Bay (39 assumed)			78.43	
Total all QTA Equipment Loads			4726.76	kVA

LAX CONRAC									06/28/16
Load Type		**Lighting**	**General Power**	**Electric Vehicle Charging**	**Plumbing**	**HVAC**	**Spare Capacity (15%)**	**Total**	**Remarks**
		0.20	**0.10**	**0.00**	**0.04**	**0.01**	**0.05**	**0.40**	**VA/sq Ft**
Idle Storage Garage (levels 1, 2 & 3)	**1,867,884**	374	187	0	75	19	98	752	
		0.10	**0.00**	**0.72**	**0.00**	**0.00**	**0.12**	**0.95**	
Idle Storage Garage (level 4 = roof)	**622,627**	62	0	451	0	0	77	591	
	2,490,511								
	Sq Ft					**Grand Total**		**1,342**	**KVA**
								187	**AMPS @4160V**

Assumptions:

Lighting- 0.2W/Sq.ft for parking at 10FC on levels 1, 2 & 3, and 0.10W/sf for paking at 5FC on roof.
Power- General power includes power for receptacles and misc. items such as IT/Security and signage(if required).
Electric Vehicle Charging- Includes 0% of 10,600 cars (lvl 1,2,3) and 10% of 2350 employee/visitor cars on roof = 235 x 16A @120V = 451,200 VA.



MEDIUM VOLTAGE FEEDER SCHEDULE	
FEEDER	SIZE
F1,F2,F9	(2)4"C., 3#250 KCMIL, TYPE MV105, 5KV SHIELDED CABLE & 1#1/0 GND. (EACH)
F3, F4	4"C., 3#350 KCMIL, TYPE MV105, 5KV SHIELDED CABLE & 1#2 GND. (1) 4"C.O. SPARE (EACH).
F5, F6 (TYPICAL)	4"C., 3#3/0 KCMIL, TYPE MV105, 5KV SHIELDED CABLE & 1#2 GND. (1) 4"C.O. SPARE (EACH).
F7, F8 (TYPICAL)	(2)4"C., 3#500 KCMIL, TYPE MV105, 5KV SHIELDED CABLE & 1#3/0 GND. (EACH)
F-M1 & F-M2	(6)5"C., 3#500 KCMIL, TYPE MV105, 5KV SHIELDED CABLE & 1#600 KCMIL GND. (EACH) (OR PER LADWP REQUIREMENT)

OVERALL SINGLE LINE DIAGRAM

SCALE: N.T.S.

GENERAL NOTES

1. ELECTRICAL EQUIPMENT SHOWN ON THIS DRAWING LOCATED OUTDOORS, SHALL BE GASKETTED NEMA 3R STAINLESS STEEL.
2. ENTIRE ELECTRICAL SWITCHBOARD SHALL BE PROVIDED WITH BOTTOM SEAL TO PREVENT GAS INTRUSION COMING FROM THE GROUND.
3. ALL CONDUIT OPENINGS (KNOCK-OUTS) AT BOTTOM OF SWITCHBOARD SHALL BE PROVIDED WITH LADBS APPROVED SEAL TO MAINTAIN EQUIPMENT INTEGRITY.
4. ALL ELECTRICAL CONDUITS FOR THE ENTIRE PROJECT SHALL BE PROVIDED WITH LA CITY APPROVED CONDUIT SEALS FOR METHANE MITIGATION AFTER INSTALLATION OF CONDUCTORS.
5. ALL ELECTRICAL EQUIPMENT, DEVICES AND METHOD OF CONSTRUCTION SHALL COMPLY WITH LOS ANGELES CITY ORDINANCE NO. 175790 FOR METHANE MITIGATION.
6. ALL EQUIPMENT SHOWN ON THIS PLAN SHALL HAVE MINIMUM RATING OF 130%%% OF AVAILABLE FAULT CURRENT AT THAT LOCATION.
7. CONTRACTOR TO COORDINATE WITH LADWP FOR CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR ALL ELECTRICAL WORK RELATED LADWP.

KEY NOTES

1. #1C., 1#4/0 BARE COPPER TO GROUNDING ELECTRODE SYSTEM. SEE SHEET 1-E-XXX DETAIL #XX.
2. PV POWER COLLECTOR/ IN VERTER BY PV CONTRACTOR AT CONRAC/ CSB BUILDING.
3. PV POWER IN VERTER BY PV CONTRACTOR AT IDLE STORAGE BUILDING.
4. (10)4"C.0. EACH FOR FUTURE PV POWER AND CONTROL AS REQUIRED . VERIFY IN FIELD.
5. PROVIDE DOUBLE INCOMING TERMINAL FOR FUTURE TAP IN PV POWER AT MAIN BREAKER. VERIFY IN FIELD.
6. PV POWER IN VERTER BY PV CONTRACTOR AT QTA BUILDING.

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ONT ANA LAX PMD

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CHECKED BY:	KS

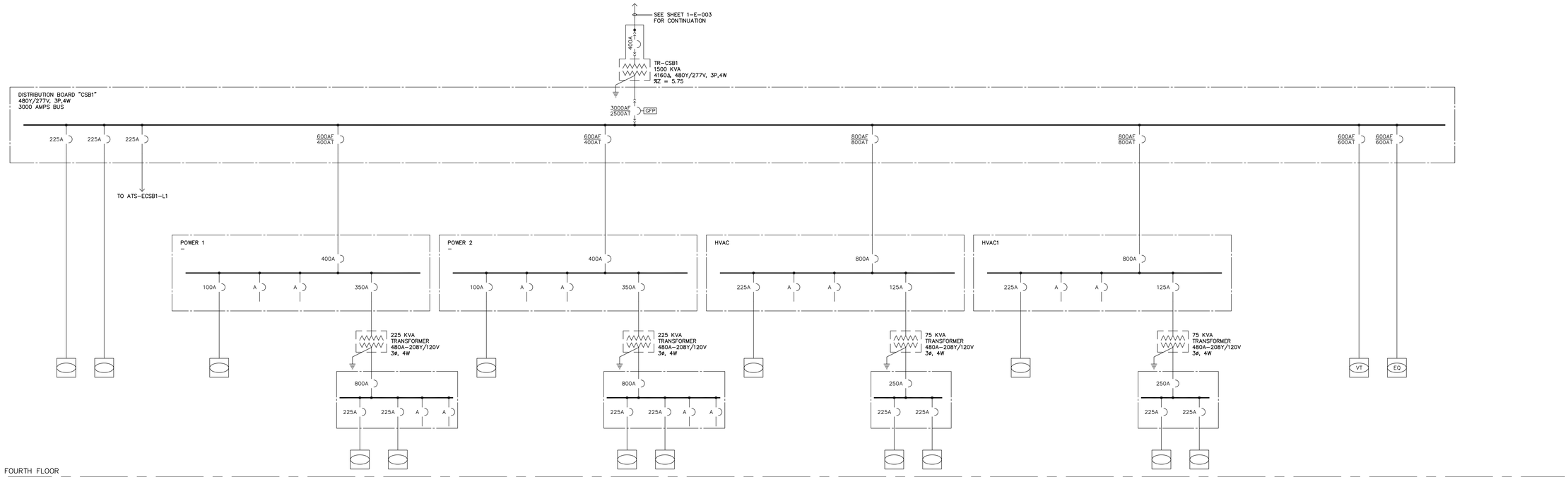
SHEET TITLE:

CSB & CORES OVERALL SINGLE LINE DIAGRAM

SHEET NO.
5-E-003
SHEET OF

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1 **SINGLE LINE DIAGRAM CSB1**
SCALE: N.T.S.

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APPROVED BY
CHIEF AIRPORTS ENGINEER

JOINT PMD ANA LAX

REVISIONS:

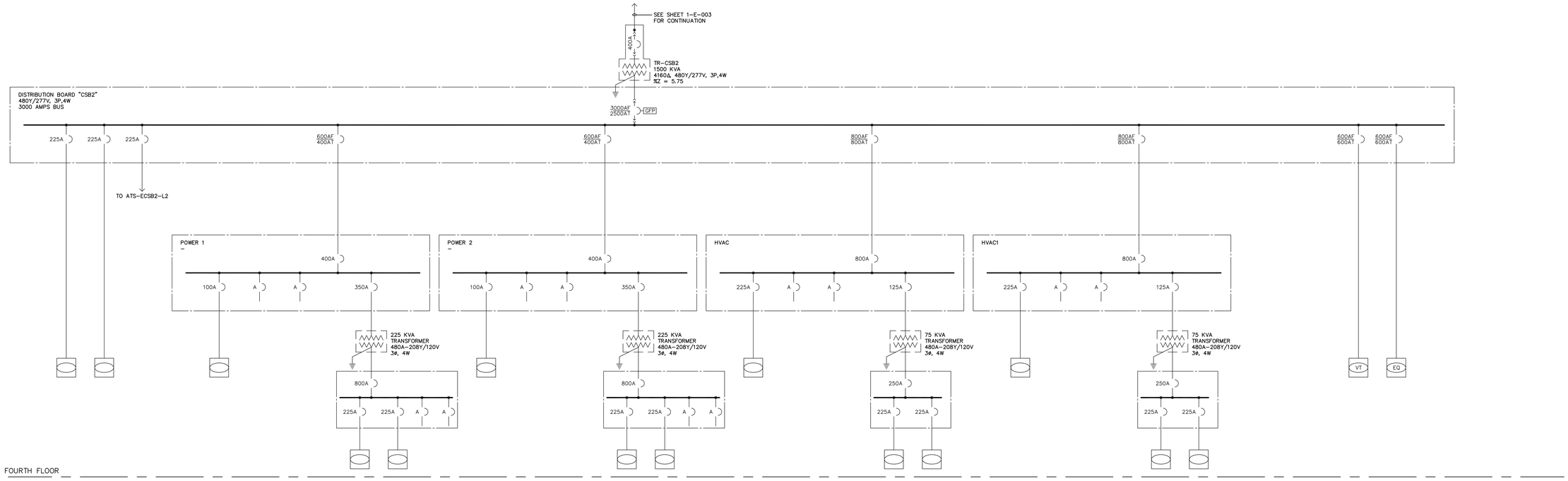
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SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

SHEET TITLE:
CSB & CORES
SINGLE LINE
DIAGRAM CSB1

SHEET NO.
5-E-004
SHEET OF

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1 **SINGLE LINE DIAGRAM CSB2**

SCALE: N.T.S.

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JOINT PMD ANA LAX

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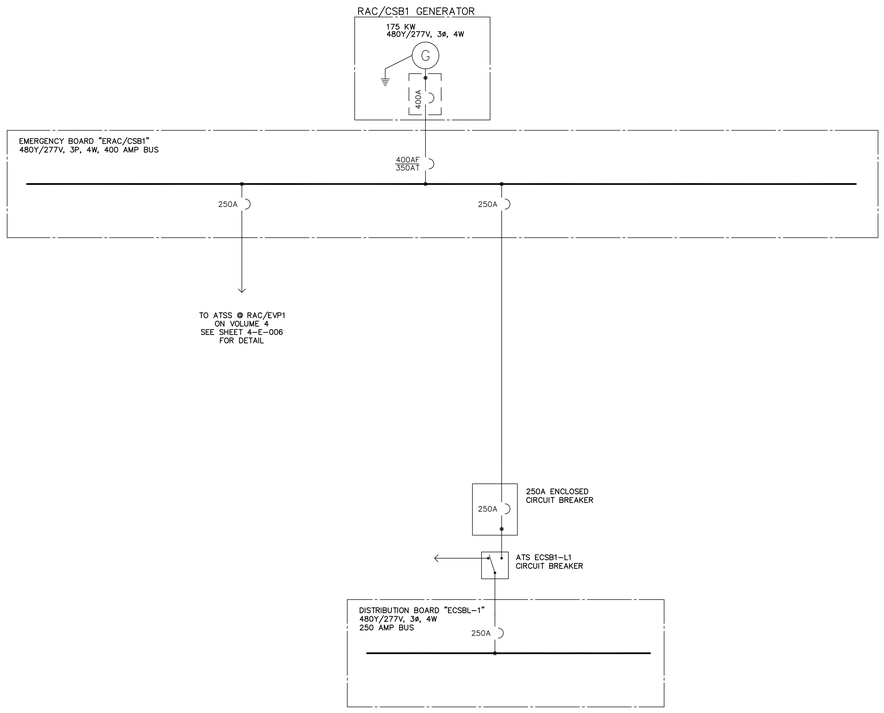
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CHECKED BY: KS

SHEET TITLE:

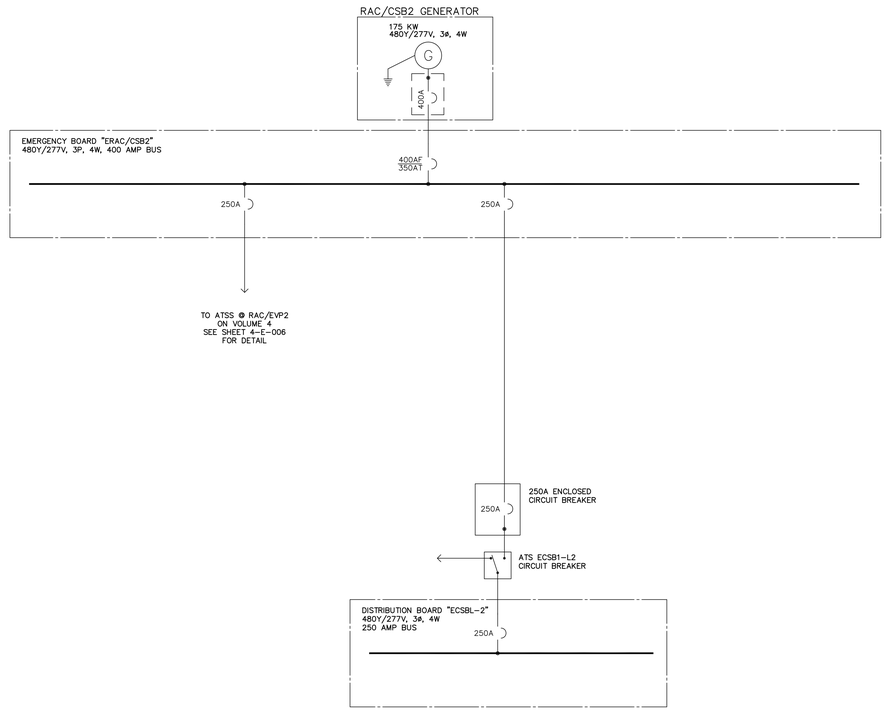
CSB & CORES
SINGLE LINE
DIAGRAM CSB2

SHEET NO.
5-E-005
SHEET OF

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IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 **SINGLE LINE DIAGRAM "ERAC/CSB1"**
SCALE: N.T.S.



2 **SINGLE LINE DIAGRAM "ERAC/CSB2"**
SCALE: N.T.S.

FOURTH FLOOR

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Fax: (562) 594-6975

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Los Angeles International Airport

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CHIEF AIRPORTS ENGINEER

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

JOINT PMD ANA LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	N.T.S.
DATE:	07/01/2016
DESIGNED BY:	NB
DRAWN BY:	AC
CHECKED BY:	KS

SHEET TITLE:

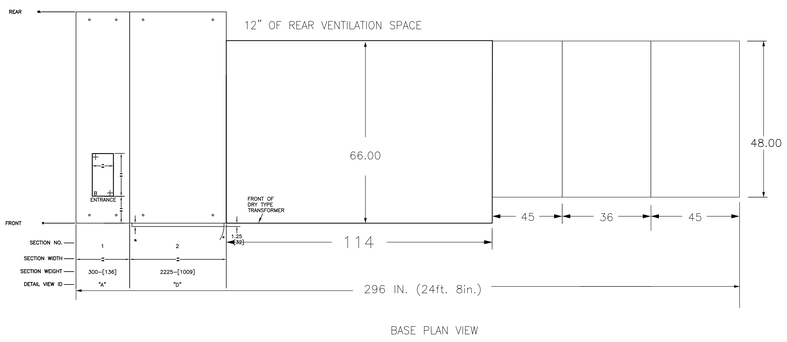
CSB & CORES
SINGLE LINE DIAGRAM
TR-RAC/EVP1 & 2

SHEET NO.
5-E-006

SHEET OF

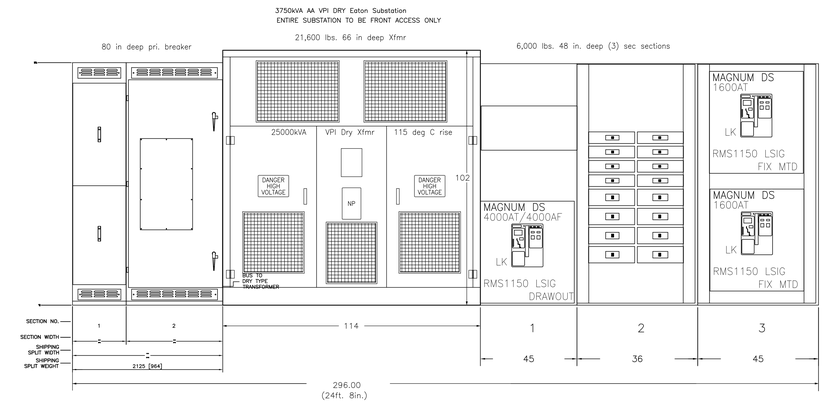
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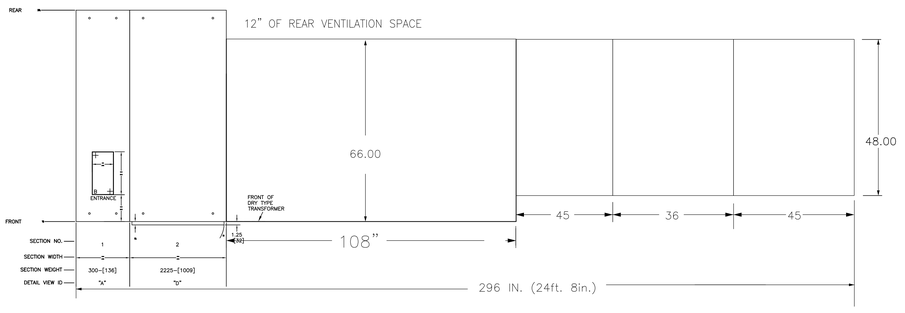
BASE PLAN VIEW

BASE PLAN VIEW



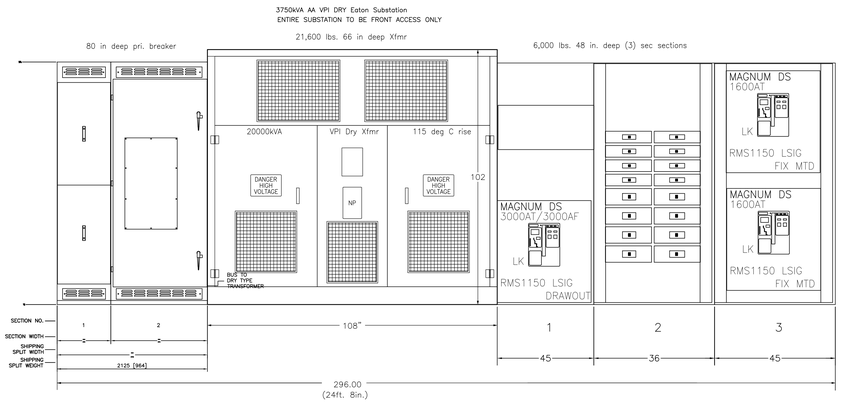
1 **FOR SUB-TR-QTA-A1 & SWB-TR-QTA-A2 (TYPICAL OF 2)**

SCALE: NTS



BASE PLAN VIEW

BASE PLAN VIEW



2 **FOR SUB-TR-QTA-B & SWB-TR-QTA-B2 (TYPICAL OF 2)**

SCALE: NTS

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Project

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Los Angeles International Airport

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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

JON ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: N.T.S.
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

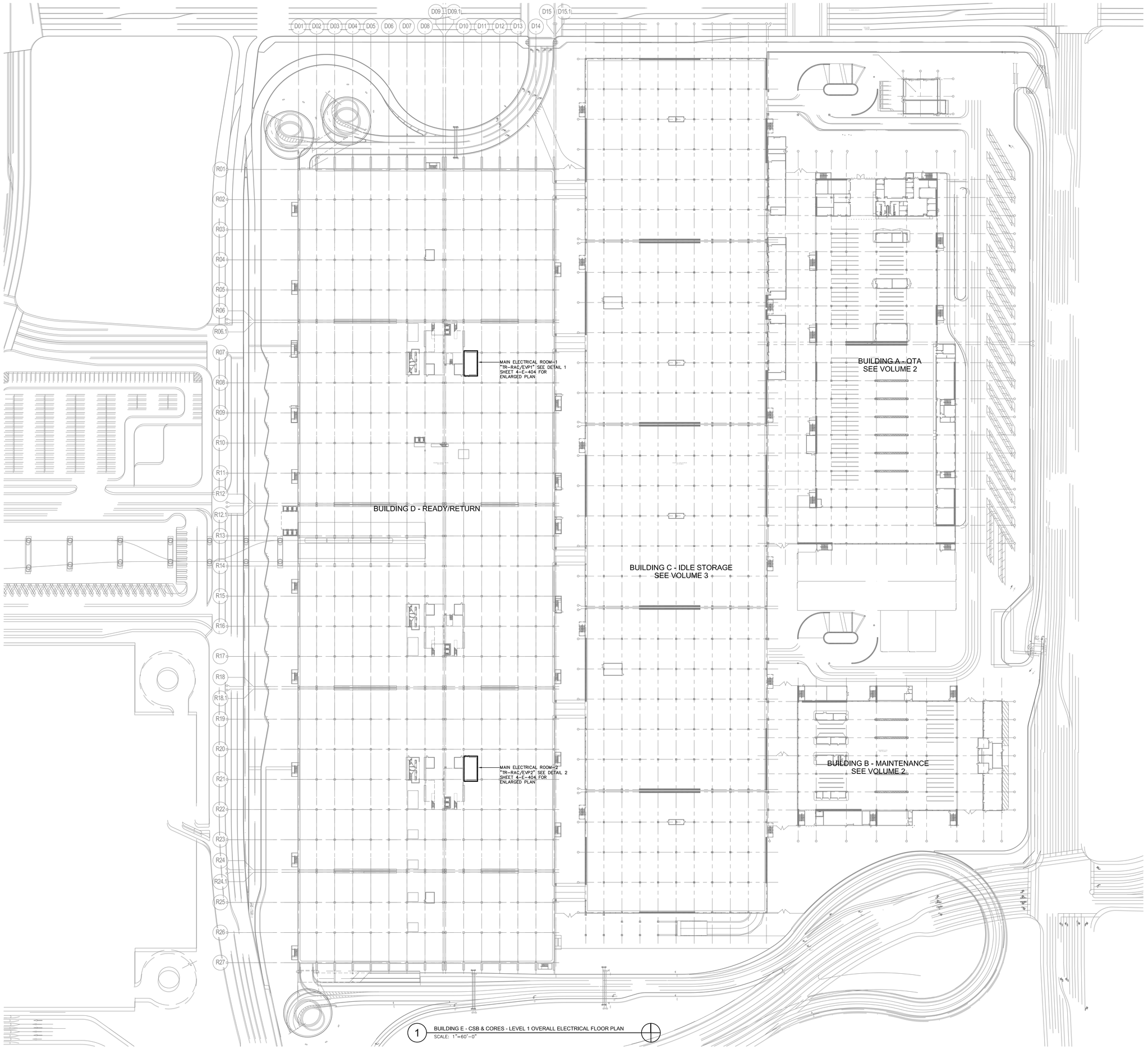
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SWITCHBOARD SECTIONS

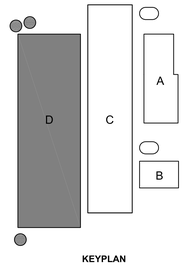
SHEET NO.
5-E-007
SHEET OF

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1 BUILDING E - CSB & CORES - LEVEL 1 OVERALL ELECTRICAL FLOOR PLAN
SCALE: 1"=60'-0"



KEYPLAN

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Proj. No.: 2015-067-00

Los Angeles World Airports

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APPROVED BY
CHIEF AIRPORTS ENGINEER

JONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

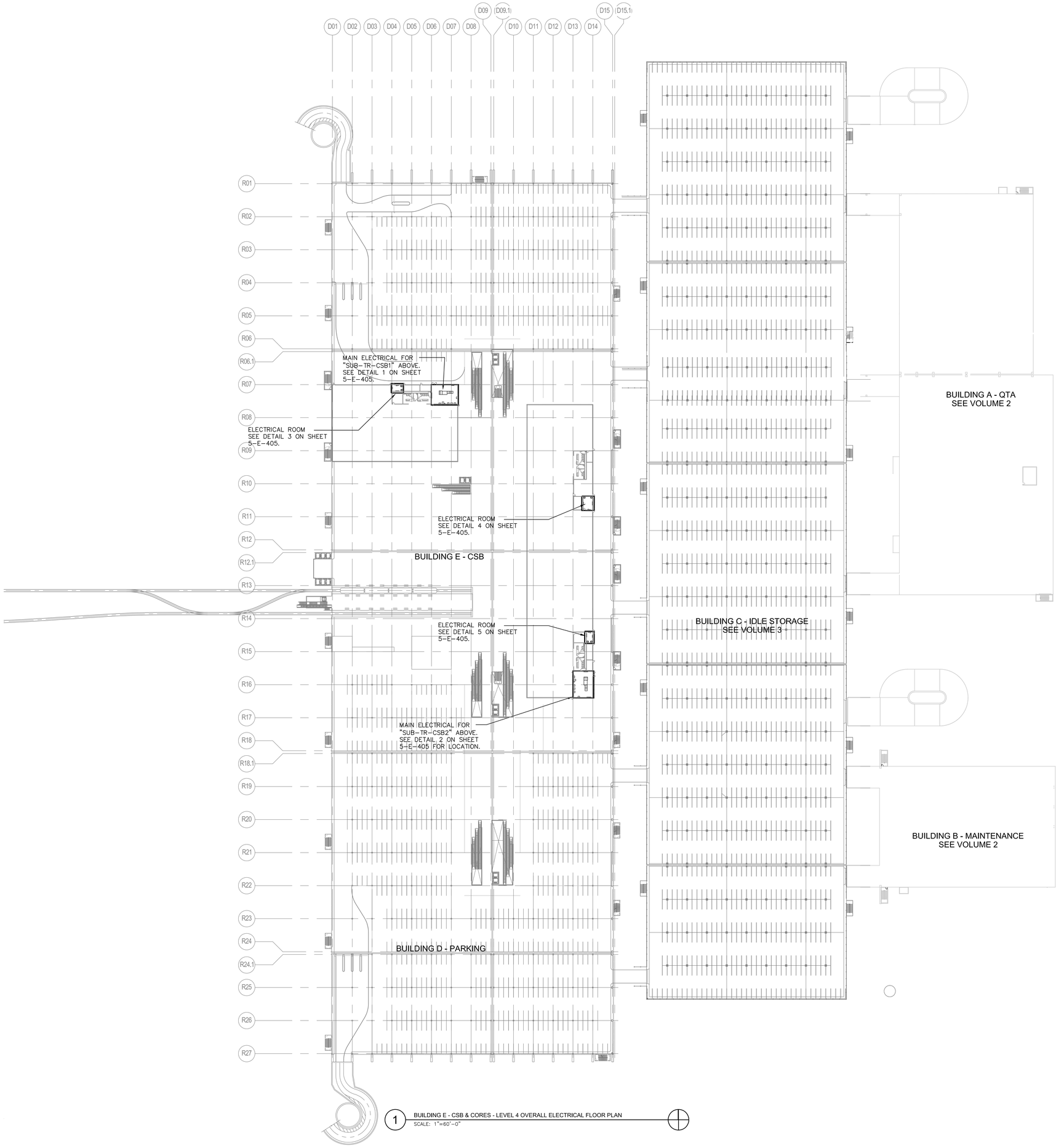
PROJ NO:	DA4881
SCALE:	1"=60'-0"
DATE:	07/01/2016
DESIGNED BY:	NB
DRAWN BY:	AC
CHECKED BY:	KS

SHEET TITLE:

CSB & CORES
LEVEL 1 OVERALL
ELECTRICAL FLOOR PLAN

SHEET NO.
5-E-010
SHEET OF

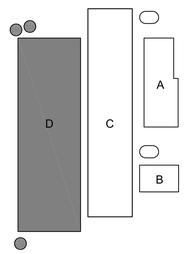
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1 BUILDING E - CSB & CORES - LEVEL 4 OVERALL ELECTRICAL FLOOR PLAN
SCALE: 1"=60'-0"

KEY NOTES

1 xxxxxxx



KEYPLAN

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Los Angeles World Airports
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ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1"=60'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

SHEET TITLE:
CSB & CORES
LEVEL 4 OVERALL
ELECTRICAL FLOOR PLAN

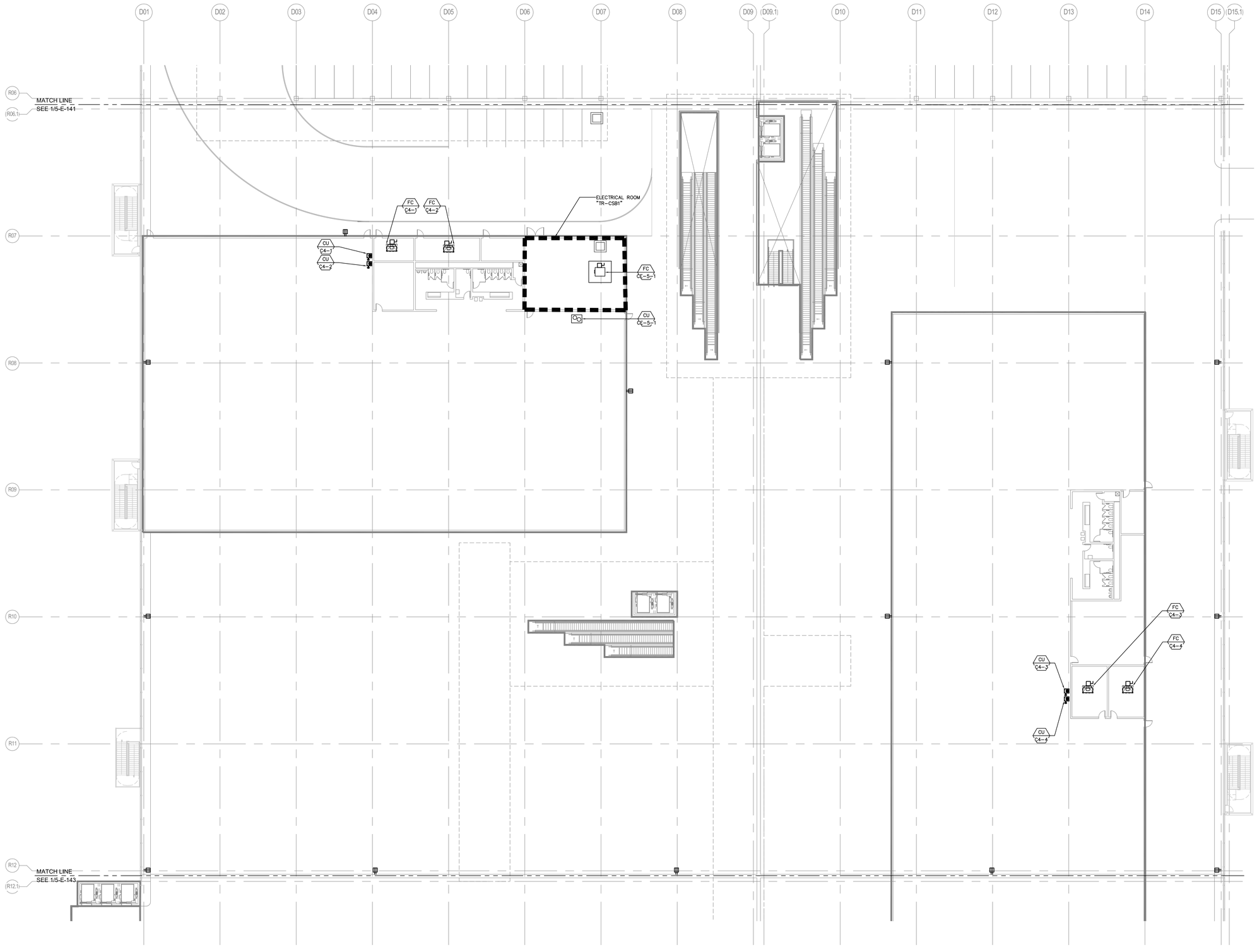
SHEET NO.
5-E-040
SHEET OF

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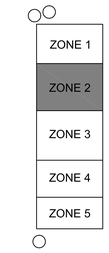
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GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE EXACT POWER REQUIREMENTS FOR ESCALATORS AND ELEVATORS WITH MANUFACTURER.



1 BUILDING D - READY/RETURN - LEVEL 4 ELECTRICAL FLOOR PLAN - ZONE 2
SCALE: 1/16"=1'-0"



BUILDING D KEYPLAN

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Los Angeles World Airports

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APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

SHEET TITLE:

CSB & CORES
LEVEL 4 ELECTRICAL
FLOOR PLAN - ZONE 2

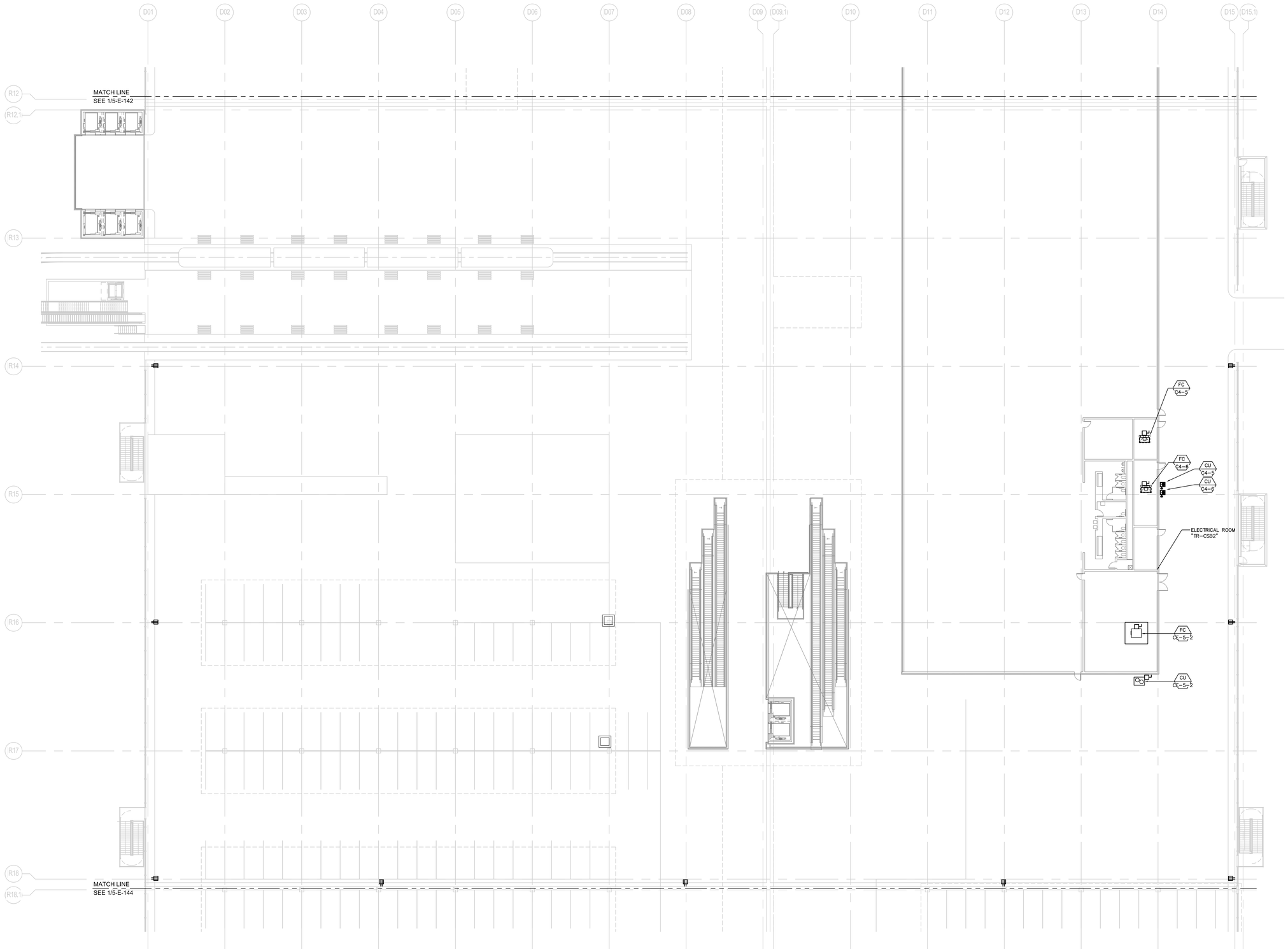
SHEET NO.
5-E-142
SHEET OF

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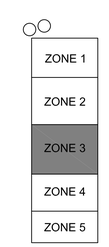
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GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE EXACT POWER REQUIREMENTS FOR ESCALATORS AND ELEVATORS WITH MANUFACTURER.



1 BUILDING D - READY/RETURN - LEVEL 4 ELECTRICAL FLOOR PLAN - ZONE 3
SCALE: 1/16"=1'-0"



BUILDING D KEYPLAN

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Los Angeles World Airports

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APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA
PMD LAX

REVISIONS:

MARK	DESCRIPTION	DATE

PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

SHEET TITLE:
CSB & CORES
LEVEL 4 ELECTRICAL
FLOOR PLAN - ZONE 3

SHEET NO.
5-E-143
SHEET OF

P:\2015\2015-067-00\ABPE\Vol-02_CSB\DA4881-5-E-143_L4E.dwg, Plotted: Jun 29, 2016 - 9:23pm

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE EXACT POWER REQUIREMENTS FOR ESCALATORS AND ELEVATORS WITH MANUFACTURER.

D01 D02 D03 D04 D05 D06 D07 D08 D09 D09.1i D10 D11 D12 D13 D14 D15 D15.1i

R18 R18.1i

MATCH LINE
SEE 1/5-E-143

R19 R20 R21 R22 R23 R24 R24.1

MATCH LINE
SEE 1/5-E-145

1 BUILDING D - READY/RETURN - LEVEL 4 ELECTRICAL FLOOR PLAN - ZONE 4
SCALE: 1/16"=1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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Los Angeles World Airports

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REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

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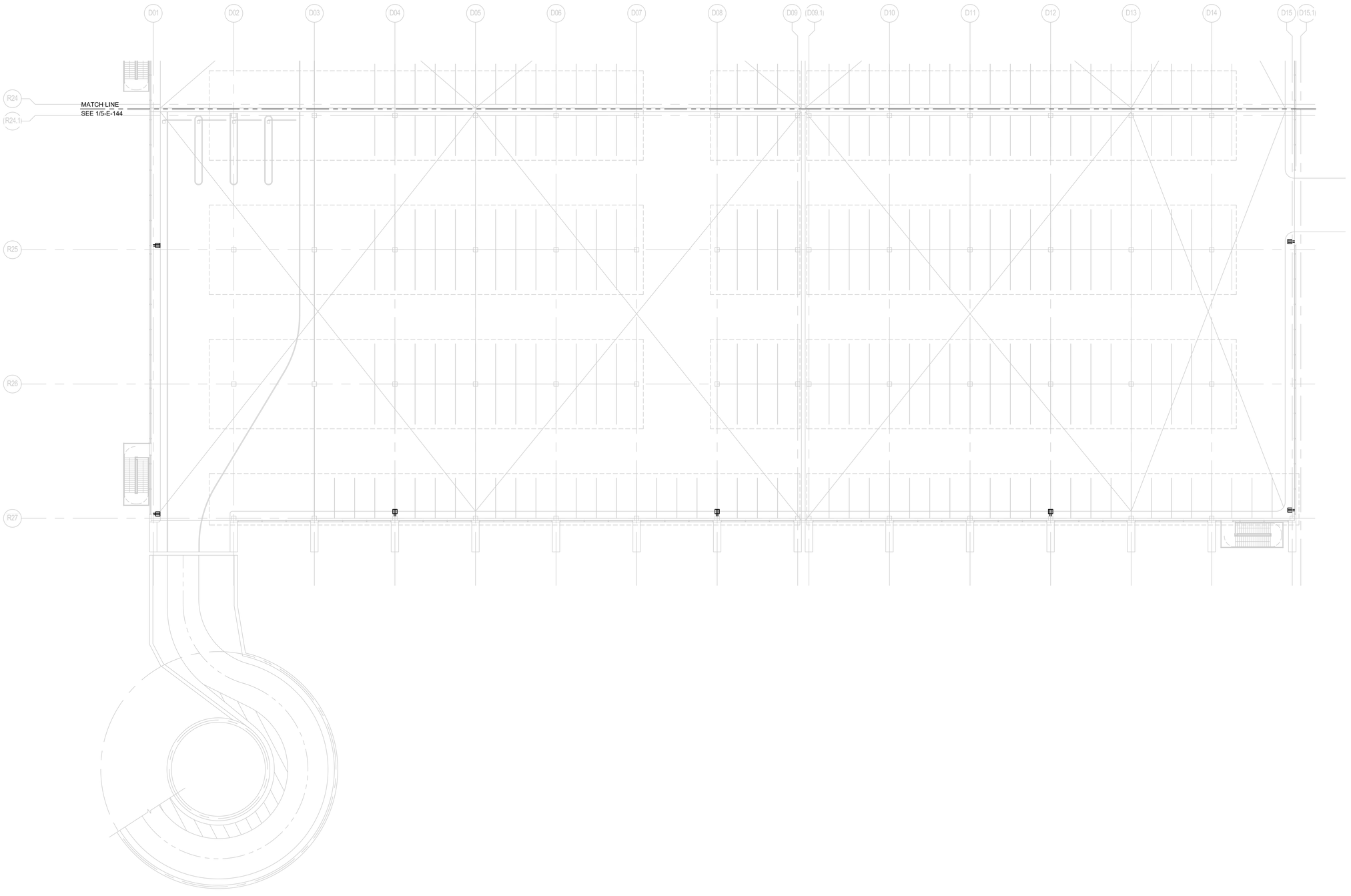
CSB & CORES
LEVEL 4 ELECTRICAL
FLOOR PLAN - ZONE 4

SHEET NO.
5-E-144
SHEET OF

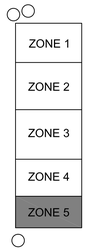
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GENERAL NOTES



1 BUILDING D - READY/RETURN - LEVEL 4 ELECTRICAL FLOOR PLAN - ZONE 5
SCALE: 1/16"=1'-0"



BUILDING D KEYPLAN

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APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

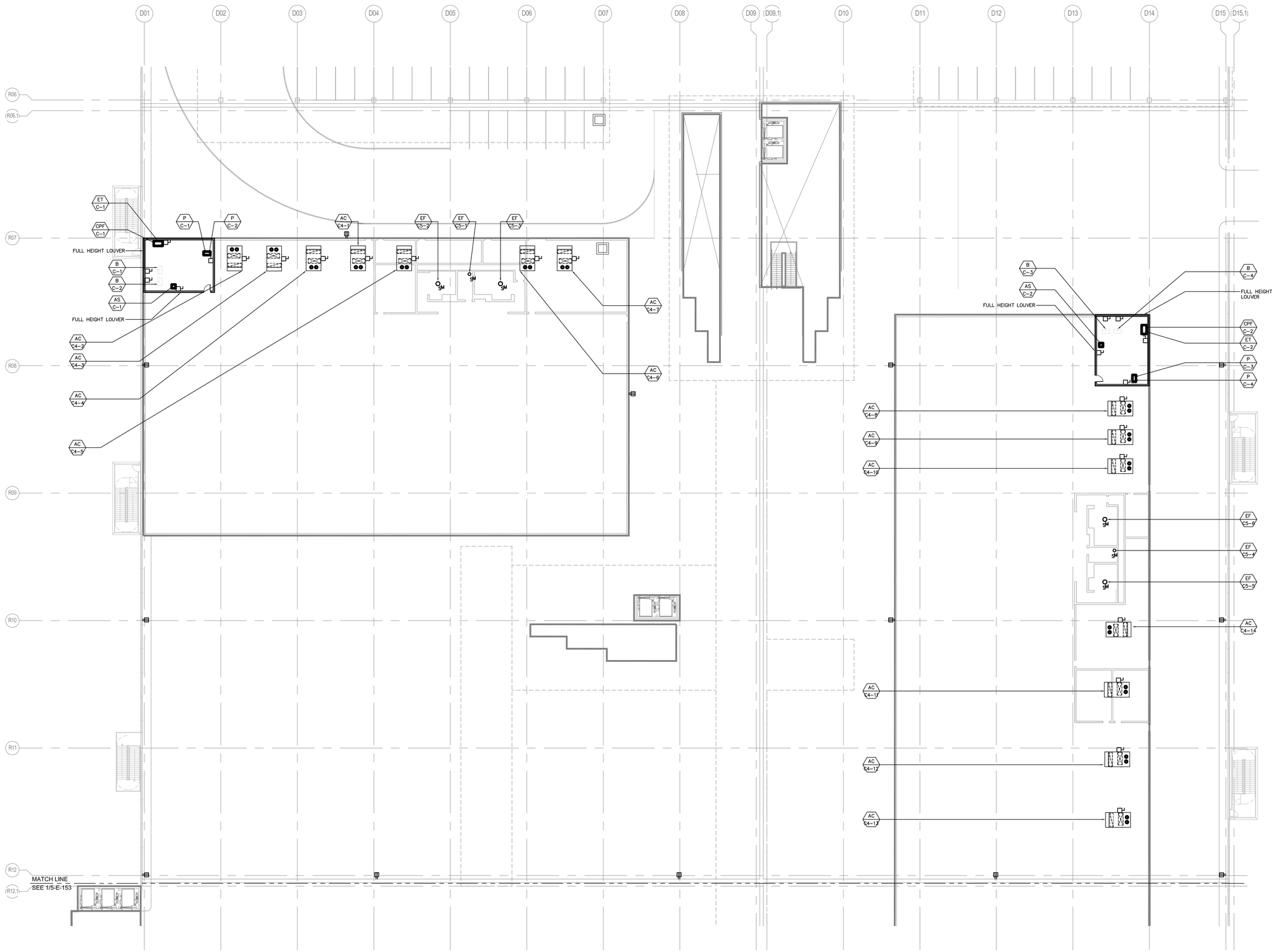
SHEET TITLE:
CSB & CORES
LEVEL 4 ELECTRICAL
FLOOR PLAN - ZONE 5

SHEET NO.
5-E-145
SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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GENERAL NOTES



1 BUILDING D - READY/RETURN - ELECTRICAL ROOF PLAN - ZONE 2
SCALE: 1/16"=1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

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PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

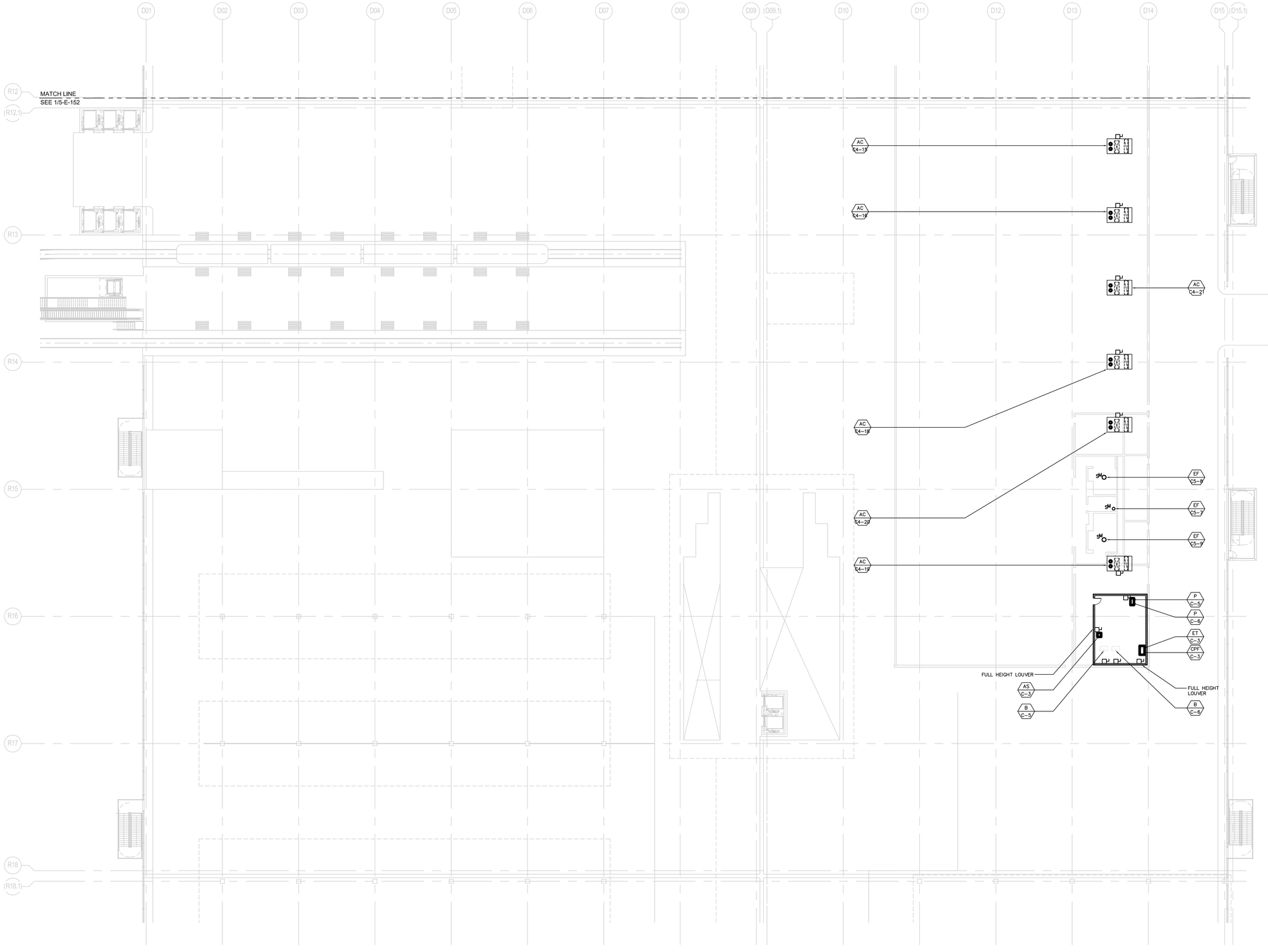
SHEET TITLE:

CSB & CORES
ELECTRICAL
ROOF PLAN - ZONE 2

SHEET NO.
5-E-152
SHEET OF

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1 BUILDING D - READY/RETURN - ELECTRICAL ROOF PLAN - ZONE 3
SCALE: 1/16"=1'-0"

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5

BUILDING D KEYPLAN

GENERAL NOTES

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CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/16"=1'-0"
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

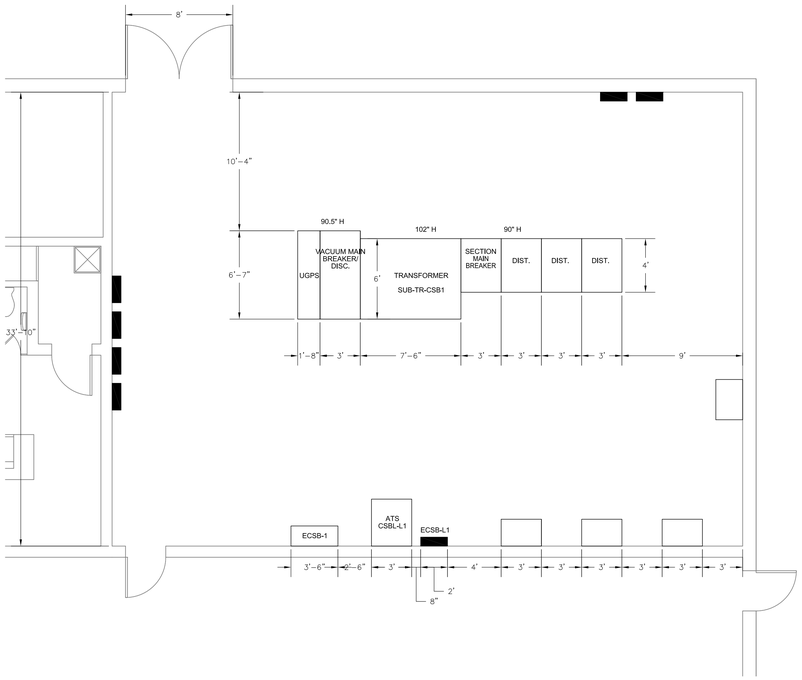
SHEET TITLE:

CSB & CORES
ELECTRICAL
ROOF PLAN - ZONE 3

SHEET NO.
5-E-153
SHEET OF

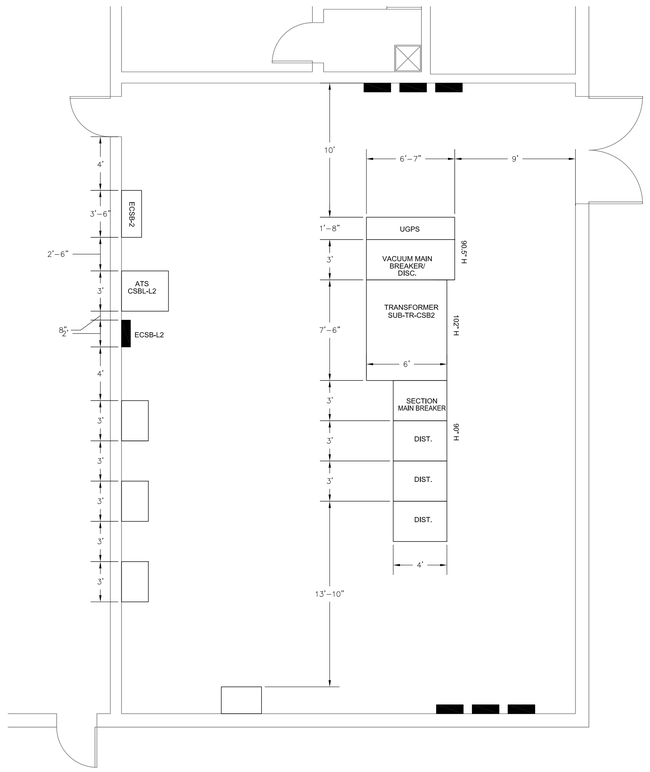
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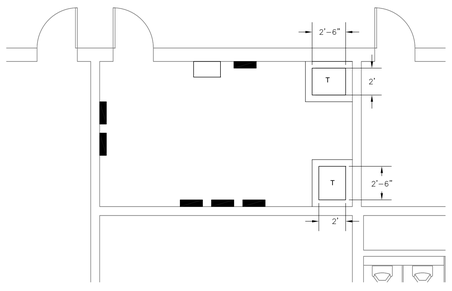
1 MAIN ELECTRICAL ROOM "SUB-TR-CSB1"

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



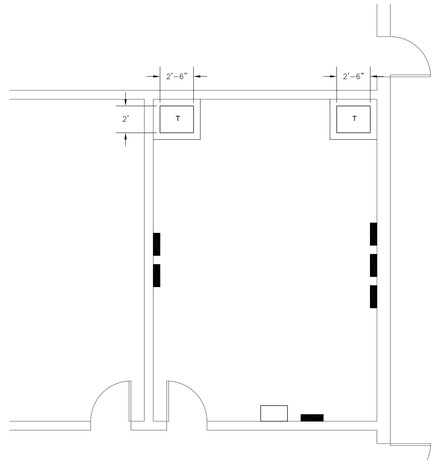
2 MAIN ELECTRICAL ROOM "SUB-TR-CSB2"

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



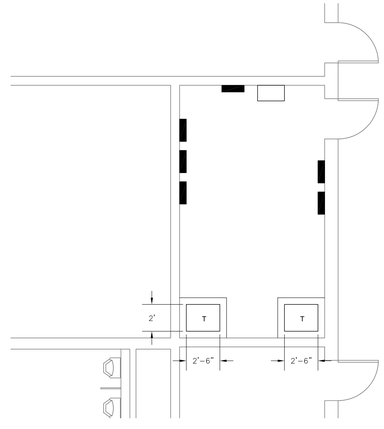
3 ENLARGED ELECTRICAL ROOM

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



4 ENLARGED ELECTRICAL ROOM

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



5 ENLARGED ELECTRICAL ROOM

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

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Los Angeles International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

JOINT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: AS NOTED
DATE: 07/01/2016
DESIGNED BY: NB
DRAWN BY: AC
CHECKED BY: KS

SHEET TITLE:

CSB & CORES ENLARGED ELECTRICAL ROOMS

SHEET NO.

5-E-405

SHEET OF

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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TELECOM SYMBOL LEGENDS

NOTE:

1. ALL SYMBOLS ARE NOT NECESSARILY USED ON THESE PLANS.
2. ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF ALL DEVICES AND E□UIPMENT UON.
3. IN GENERAL, SYMBOLS SHOWN WITH LIGHT LINES DENOTE EXISTING WORK, SYMBOLS SHOWN WITH HEAVY LINES DENOTE NEW WORK.

DRAWING REFERENCES

- 1 / A101 — DETAIL REFERENCE TAG
- A / TXXX — EXTERIOR/INTERIOR ELEVATION
- A / TXXX / B — INTERIOR MULTI-VIEW ELEVATION
- NORTH ARROW
- X — KEYNOTE
- 1 — REVISION NUMBER

JUNCTION AND PULL BOXES

- J — JUNCTION BOX
- P — PULL BOX
- H — HANDHOLE
- MH — MAINTENANCE HOLE

CONDUIT AND RACEWAY

- CONDUIT RUN CONCEALED IN CEILING OR WALL CONSTRUCTION
- CONDUIT RUN IN FLOOR CONSTRUCTION OR UNDERGROUND DUCTBANK
- CONDUIT RUN EXPOSED
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CABLE TRAY REFER TO PLANS FOR SIZE□

WIRELESS

- M — DAS ANTENNA
  - DAS-XY-Z-□□
  - SE□UENCE
  - LEVEL
  - AREA
  - BUILDING

EVIDS

- EVIDS — XXX-Y / XY-Z-□□ — EVIDS DISPLAY
  - TYPE
    BID BAGGAGE INFORMATION
    FID ARRIVALS / DEPARTURES INFORMATION
    GID GATE INFORMATION
  - DISPLAY TYPE, REFER TO EVIDS DETAILS
  - SE□UENCE
  - LEVEL
  - AREA
  - BUILDING

STRUCTURED CABLING

- DATA OUTLET □SURFACE MOUNT□
- DATA OUTLET □FLOOR MOUNT□
- DATA OUTLET □CEILING MOUNT□
- X-XYZ-□□ — DATA OUTLET TAG
  - TYPE, REFER TO OUTLET DETAILS
  - TOTAL PORT □UANTITY
  - SE□UENTIAL NUMBER
  - AREA
  - LEVEL
  - BUILDING
- CP — CONSOLIDATION POINT
- ENCLOSED E□UIPMENT CABINET
  - FRONT OF CABINET
  - CABINET ALLOCATION TAG
- FOUR POST E□UIPMENT RACK
  - CABINET ALLOCATION TAG
  - FRONT OF CABINET
- WALL MOUNT ENCLOSURE
- TELECOMMUNICATIONS MAIN GROUNDING BUSBAR □□18" AFF□□
- TELECOMMUNICATIONS GROUNDING BUSBAR □□18" AFF□□
- PLYWOOD BACKBOARD SHOWN FOR REFERENCE ONLY, REFER TO GENERAL TRADES

TELECOM ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AWG	AMERICAN WIRE GAUGE
BBH	BACKBONE HUB
BC	BELOW CEILING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAT	CATEGORY
CCT	COMMUNICATION CABLE TRAY
CH	CHANNEL
CLG	CEILING
COMM	COMUNICATIONS
CPU	CENTRAL PROCESSING UNIT
CR	COMMUNICATIONS ROOM
DEMO	DEMOLISH
DWG	DRAWING
EA	EACH
EC	EMPTY CONDUIT
ELC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC/ELECTRICAL
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
E□	E□UALIZER
EX	EXISTING
FAR	FEDERAL AVIATION REGULATION
FIS	FEDERAL INSPECTION SERVICE
FO	FIBER OPTIC
GC	GENERAL CONTRACTOR
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
IC	INTERCOM
IDF	INTERMEDIATE DISTRIBUTION FRAME
IR	INFRARED
IRM	INFORMATION AND RESOURCE MANAGEMENT
IT	INFORMATION TECHNOLOGY
JB	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LFMC	LI□UIT TIGHT FLEXIBLE METALLIC CONDUIT
LVL	LEVEL
MCR	MAIN COMMUNICATIONS ROOM
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE
MMFO	MULTI-MODE FIBER OPTIC
MOD	MODULE
MUFIDS	MULTI-USER FLIGHT INFORMATION DISPLAY SYSTEM
NIC	NOT IN CONTRACT
O/P	OUTPUT
OTS	OFF THE SHELF
PA	PUBLIC ADDRESS
PBX	PRIVATE BRANCH EXCHANGE
PC	PERSONAL COMPUTER
PP	PATCH PANEL
PR	PAIR
PVC	POLYVINYL CHLORIDE CONDUIT
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMU	RACK UNIT
RU	RACK MOUNTED UNIT
SHLD	SHIELDED AS IN CABLE□□
SMFO	SINGLE-MODE FIBER OPTIC
SPP	SYSTEM POWER PANEL
SS	STAINLESS STEEL
TBD	TO BE DETERMINED
TDS	TELECOMMUNICATION DISTRIBUTION SYSTEM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERUPTIBLE POWER SUPPLY
USCBP	UNITED STATES CUSTOMS AND BORDER PROTECTION
USCS	UNITED STATES CUSTOMS SERVICE
VA	VETERANS ADMINISTRATION
VAC	VOLT ALTERNATING CURRENT
VDC	VOLT DIRECT CURRENT
VE	VOICE EVACUATION
VoIP	VOICE OVER INTERNET PROTOCOL □IP□□
VSS	VISUAL SURVEILLANCE SYSTEM
W	WALL
WT	WATERTIGHT
XMTR	TRANSMITTER

TELECOM GENERAL NOTES

INSTALLATION REQUIREMENTS

1. BASIC ELECTRICAL RACEWAY SPECIFICATIONS RE□UIREMENTS SHALL APPLY TO THIS WORK. REFER TO ELECTRICAL SPECIFICATIONS.
2. CONTRACTOR SHALL PROVIDE ALL OPTICAL FIBER CABLE, INNERDUCT, E□UIPMENT CABINET, PATCH CORDS, PATCH PANELS, RELATED HARDWARE, TERMINATION E□UIPMENT, AND ANY OTHER APPURTENANCES. CONTRACTOR SHALL PROVIDE ALL E□UIPMENT, MATERIALS, LABOR, AND SERVICES NECESSARY TO TEST, LABEL, AND DOCUMENT THE CABLING SYSTEM, AND TO ENSURE THAT IT IS IN COMPLIANCE WITH RE□UIREMENTS STATED HEREIN.
3. CONTRACTOR SHALL VERIFY THE SIZE OF ALL CONDUCTORS, CONDUIT, AND JUNCTION BOXES □40□ MAXIMUM FILL□ INSTALLATION SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE□NEC□AND ALL LOCAL CODES HAVING JURISDICTION. TELECOM CONDUIT FILL SHALL NOT EXCEED 40□□
4. 120 VAC INPUT POWER CONDUCTORS SHALL NOT BE INSTALLED IN THE SAME CONDUIT OR CABLE TRAY AS LOW VOLTAGE AUDIO, VIDEO, DC POWER, UTP OR ANY OTHER LOW VOLTAGE CABLES.
5. CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER PRIOR TO INSTALLAION OF WORK OF ANY MOUNTING LOCATIONS NOTED ON THE DRAWINGS ARE OBSTRUCTED AND/OR IF ANY CONFLICTS OR PROBLEMS ARE DISCOVERED.
6. INNERDUCT SHALL BE INSTALLED IN ALL CONDUITS IN WHICH FIBER CABLING IS TO BE INSTALLED. ALL OPTICAL FIBER CABLES SHALL BE PLACED WITHIN INNERDUCT. INNERDUCT SHALL MEET NEC 770-53 RE□UIREMENTS, BE 1-INCH DIAMETER, BE ORANGE IN COLOR AND HAVE A UL 910 FLAME RATING UNLESS NOTED OTHERWISE ON DUCT INSTALLATION DRAWINGS OR PREVIOUSLY INSTALLED.
7. INSTALL TRUE TAPE TYPE PULL STRINGS IN ALL DUCTS, CONDUITS OR INNERDUCTS. REPLACE PULL STRINGS THAT ARE USED WITH E□UIVALENT PULL STRINGS.
8. OPTICAL FIBER PATCH PANELS SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND SHALL INCLUDE THE FOLLOWING IN □UANTITIES AS NECESSARY:
   A. BEJED, BJ-1646-047, METAL 6 PORT, SC DIE-CUT ADAPTER PLATE
   B. ALCOA FUJIKURA C080810, GREEN, SC-APC ADAPTERS
   C. BEJED BJ-1742C-011, 24 FIBER SPLICE TRAY INCLUDING METAL ROD REINFORCED HEATH SHRINKABLE FUSION SPLICE PROTECTOR SLEEVES□□
   E. CORNING SC-APC POLISHED PIGTAILS OR E□UIVALENT
   F. PROVIDE CORNING ULTRA-PC POLISHED PIGTAILS OR E□UIVALENT
9. PROVIDE PATCH CABLES OR DUPLEX JUMPERS FROM EXISTING PATCH PANELS TO NEW FIBER PATCH PANELS. VERIFY WITH OWNER CONNECTOR TYPE ON EXISTING PATCH PANELS BEFORE ORDERING PATCH CABLES OR JUMPERS.
10. CONTRACTOR SHALL ONLY FUSION SPLICE PIGTAILS THAT HAVE HAD CONNECTORS INSTALLED AND POLISHED BY THE MANUFACTURER OR LOCAL CABLE ASSEMBLY HOUSE. THE CONTRACTOR SHALL NOT INSTALL OR POLISH FIBER OPTIC CONNECTORS, EITHER IN THE FIELD OR IN THEIR SHOP. PIGTAILS SHALL HAVE THE SAME GLASS SPECIFICATION AS THE FIBER CABLE. FOR SINGLEMODE FIBER, ONLY SC-APC, ANGLE POLISHED PRE-CONNECTORIZED, PRE-TERMINATED PIGTAILS SHALL BE FUSION SPLICED TO THE CABLE. ACCEPTABLE PRODUCTS: CORNING SMF-28e□ GLASS.
11. OUTSIDE PLANT FIBER SHALL BE SINGLEMODE OUTSIDE PLANT RATED CORNING OPTICAL FIBER SMF28e□ OR BETTER APPROVED E□UIVALENT. FIBER CABLE JACKETING SHALL BE EITHER CORNING ALTOS ALL DIELECTRIC GEL FREE OR APPROVED E□UIVALENT.
12. ALL CABLES SHALL BE CONTINUOUS FROM THE SOURCE TO THE DESTINATION AND SHALL NOT HAVE SPLICES IN BETWEEN PATCH PANELS EXCEPT IN MANHOLE 235 AS NOTED ON DRAWINGS.
13. CONTRACTOR SHALL USE FUSION SPLICER WITH VIEWING OPTICS, MAGNIFIED VISUAL DISPLAY, OR OTHER IMAGE PROCESSING SOFTWARE TO PERFORM CORE ALIGNMENT AND □UALITY VERIFICATION□FUJIKURA FSM-50S OR E□UIVALENT□PERMITTED FUSION SPLICE LOSS IS 0.015DB MAXIMUM. SPLICES THAT DO NOT MEET MAXIMUM SPLICE LOSS RE□UIREMENTS SHALL BE RESPLICED AND RETESTED.
14. SERVICE LOOPS OF 15 FEET SHALL BE PROVIDED AT ALL CABLE ENDS. OUTDOOR CABLES IN MANHOLES SHALL HAVE 30 FEET OF SLACK FOR A SERVICE LOOP.

TESTING AND LABELING REQUIREMENTS

1. CONTRACTOR SHALL TEST ALL STRANDS OF OPTICAL FIBER WITH AN APPROVED POWER METER AND LIGHT SOURCE. TESTER SHALL BE CAPABLE OF PERFORMING THE TESTS RE□UIRED BY ANSI/TIA/EIA-568-C 2.1 ANNEX H, ANSI/TIA/EIA-526-14A, AND ANSI/TIA/EIA-526-7.
2. PRIOR TO SHIPMENT OF THE OPTICAL FIBER CABLE, 100 PERCENT OF THE FIBERS SHALL BE TESTED WITH AN OPTICAL TIME DOMAIN REFLECTOMETER□OTDR□□COPIES OF THE TRACES SHALL BE FURNISHED AS PART OF THE SUBMITTALS. UPON DELIVERY TO THE SITE ALL FIBER STRANDS SHALL BE TESTED WITH AN OTDR BEFORE INSTALLATION BEGINS. SUBMIT□2□□ PAPER COPIES BEFORE INSTALLATION BEGINS.
3. THE CONTRACTOR SHALL VERIFY THE INTEGRITY OF THE INSTALLED FIBER BY TESTING WITH AN OTDR. TEST SHALL BE PERFORMED ON 100 PERCENT OF THE FIBERS AND REPEATED FROM THE OPPOSITE END OF EACH FIBER OR PERFORMED WITH A LAUNCH CABLE AT EACH END. SUBMIT COPIES OF TRACES.
4. IF OTDR TEST RESULTS ARE UNSATISFACTORY DUE TO CABLE DAMAGE, CABLE SEGMENT IS UNACCEPTABLE AND SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
5. PROVIDE END-TO-END ATTENUATION TESTING USING AN APPROVED POWER METER AND LIGHT SOURCE PER ANSI/TIA/EIA 455-53A.
6. FIBER SHALL BE TESTED IN BOTH DIRECTIONS AT BOTH 1310 NM AND 1550 NM. PERFORM OPTICAL ATTENUATION MEASUREMENTS FOR EACH OPTICAL FIBER AFTER CABLES HAVE BEEN CONNECTORIZED, DRESSED AND MOUNTED INTO PANELS TO SHOW LOSSES OF CABLE, CONNECTORS AND COUPLERS. ACCEPTABLE ATTENUATION FOR OSP BACKBONE CABLING IS 0.5 DB/KM AT BOTH TEST FRE□UENCIES.
7. ALL CABLES AND PATCH CABLES SHALL HAVE A PERMANENT LABEL ATTACHED AT BOTH ENDS.
8. ALL INDOOR CABLE AND PATCH CABLE LABELS SHALL BE PRE-PRINTED USING BRADY TLS 2200 PRINTER OR E□UIVALENT AND SHALL BE PLACED LOOSE ON THE PATCH CABLE NEAR THE CONNECTOR END WITHOUT HEAT SHRINKING LABELS. LABELS SHALL USE A THREE LINE FORMAT WITH THE ORIGINATION PATCH PANEL AND PORT ON THE FIRST LINE, THE DESTINATION PATCH PANEL AND PORT ON THE SECOND LINE AND THE SYSTEM OR OTHER DESCRIPTIVE INFORMATION ON THE THIRD LINE. SEE LAWA ITMG FOR SAMPLE LABELS.
9. PATCH PANELS SHALL BE LABELED ON THE FRONT PANEL WITH 1" BLACK CHARACTERS ON A "SAFETY ORANGE" BACKGROUND LETTERING 3M KIT 5005-KIT OR E□UIVALENT.
10. ALL OUTDOOR CABLES SHALL BE LABELED WITH ACP FT-LAWATAG-2.5X4 PLASTIC TAGS AND PRE-PRINTED WITH PERMANENT INK. OUTDOOR CABLES SHALL BE LABELED□AND SECURED WITH HEAVY DUTY STRAPS□IN EVERY MANHOLE AND HANDHOLE WITHIN 12 INCHES OF WHERE THE CABLE INTERS THE MANHOLE, WITHIN 12 INCHES OF WHERE THE CABLE EXITS THE MANHOLE AND ON THE SLACK COIL.

SUBMITTAL REQUIREMENTS

1. SUBMIT FOR APPROVAL MANUFACTURER'S DATA SHEETS FOR ALL PROPOSED MATERIALS AND E□UIPMENT. SUBMIT A TWO-FOOT LENGTH SAMPLE OF EACH FIBER CABLE TYPE/COUNT TO BE INSTALLED.
2. SUBMIT CALIBRATION REPORTS FOR ALL TEST E□UIPMENT. THE CALIBRATION SHALL BE PERFORMED BY A MANUFACTURER CERTIFIED CALIBRATION FACILITY AND BE DATED NO MORE THAN SIXTY□60□DAYS PRIOR TO THE START OF TESTING.
3. SUBMIT□5□HARDBOUND COPIES OF ALL CABLE TEST RESULTS AND ONE ELECTRONIC COMPACT DISC.
4. SUBMIT ALL PROPOSED LABELING MATERIALS AND NOMENCLATURE FOR APPROVAL.
5. CONTRACTOR SHALL MAINTAIN A SET OF CONTRACT DRAWINGS DURING INSTALLATION AND RED-LINE MARK THEM TO INDICATE ANY CHANGES AS THEY OCCUR.
6. CONTRACTOR SHALL PROPOSE A TEAM THAT IS □UALIFIED TO PERFORM THE WORK OF THIS PROJECT. SUBMIT PROJECT BRIEFS AND RESUMES□INCLUDING AN EXPERIENCED PROJECT MANAGER THAT WILL SERVE AS A SINGLE POINT OF CONTACT AND RESPONSIBILITY FOR THE CONTRACTORS TEAM.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC MANAGEMENT AND SHALL SUBMIT TO LAWA AIRPORT AND FACILITIES PLANNING DIVISION ALL PROPOSED TRAFFIC MANAGEMENT METHODS AND PRODUCTS FOR APPROVAL. OUTSIDE PLANT CABLE INSTALLATION THAT RE□UIRES OBSTRUCTION OF TRAFFIC SHALL BE DONE ON THE NIGHT SHIFT.
8. THE FIBER CABLING CONTRACTOR SHALL BE A CERTIFIED CORNING OPTICAL CABLE INSTALLER, WITH THE CAPABILITY OF PROVIDING A MANUFACTURER'S CERTIFICATION OF NOT LESS THAN FIFTEEN□15□YEARS FOR THE INSTALLED CABLING AND ASSOCIATED TERMINATION E□UIPMENT. THE CONTRACTOR SHALL SUBMIT PROOF OF CERTIFICATION TO OWNER PRIOR TO COMMENCING WORK. PROVIDE MAXIMUM INSTALLATION WARRANTY OFFERED BY THE MANUFACTURER.
9. PROJECT RECORD DOCUMENTS□AS-BUILTS□WILL BE PROVIDED UPON COMPLETION OF THE INSTALLATION. DRAWINGS WILL BE UPDATED ELECTRONICALLY AND SUBMITTED TO LAWA IN ACCORDANCE WITH THE SCHEDULE PROVIDED FOR THIS BY LAWA. DO NOT WAIT UNTIL THE END OF THE PROJECT. SUBMIT RECORD DRAWING FILES IN AUTOCAD RELEASE 2008 OR LATER.
10. CONTRACTOR WILL BE RE□UIRED TO ATTEND REGULAR WEEKLY PROGRESS MEETINGS AND SUBMIT PROJECT STATUS REPORTS AND UPDATED SCHEDULES.

TELECOM KEYED NOTES

T01 PROVIDE 28" X 38" X 84" HIGH E□UIPMENT CABINETS, DAMAC MODEL CSN1284Z22477-3 IT.

T02 PROVIDE 28" X 44" X 84" HIGH E□UIPMENT CABINETS, DAMAC MODEL CSN1284Z22477-3 IT.

T03 PROVIDE 4□X 8□FIRE RATED AC PLYWOOD WITH CUTOUTS FOR BRACKETS AND OUTLETS AS RE□UIRED. PAINT WHITE AND LEAVE FIRE RATING STAMP EXPOSED.

T04 PROVIDE ELECTRICAL PANELBOARDS. REFER TO ELECTRICAL SHEETS.

T05 PROVIDE GROUND BUS BAR. REFER TO SHEET T3, DETAIL 12 BOND TO GROUND BUSBAR IN ELECTRICAL ROOM.

T06 PROVIDE 12" WIDE X 6" DEEP SUSPENDED CHALFANT SERIES 6 VENTED CABLE TRAY.

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo□Angele□International Airport

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LAX ON PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	NONE
DATE:	07/01/2016
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DRAWN BY:	R B
CHECKED BY:	TW

SHEET TITLE:

TELECOM LEGEND, NOTES, AND ABBREVIATIONS

SHEET NO.

5-T-001

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D01 D02 D03 D04 D05 D06 D07 D08 D10 D11 D12 D13 D14

R01 R02 R03 R04 R05 R06 R06.1 R07 R08 R09 R10 R11 R12 R12.1 R13 R14 R15 R16 R17 R18 R18.1 R19 R20 R21 R22 R23 R24 R24.1 R25 R26 R27

1
5-T-211

2
5-T-211

BUILDING D
READY/RETURN

BUILDING C
IDLE STORAGE

BUILDING A
TA A

BUILDING B
TA B

1 BUILDING E - CSB CORES - TELECOM LEVEL 1 OVERALL FLOOR PLAN
SCALE: 1" = 60'

N

D C A B

KEYPLAN

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ONT ANY PMD LAX

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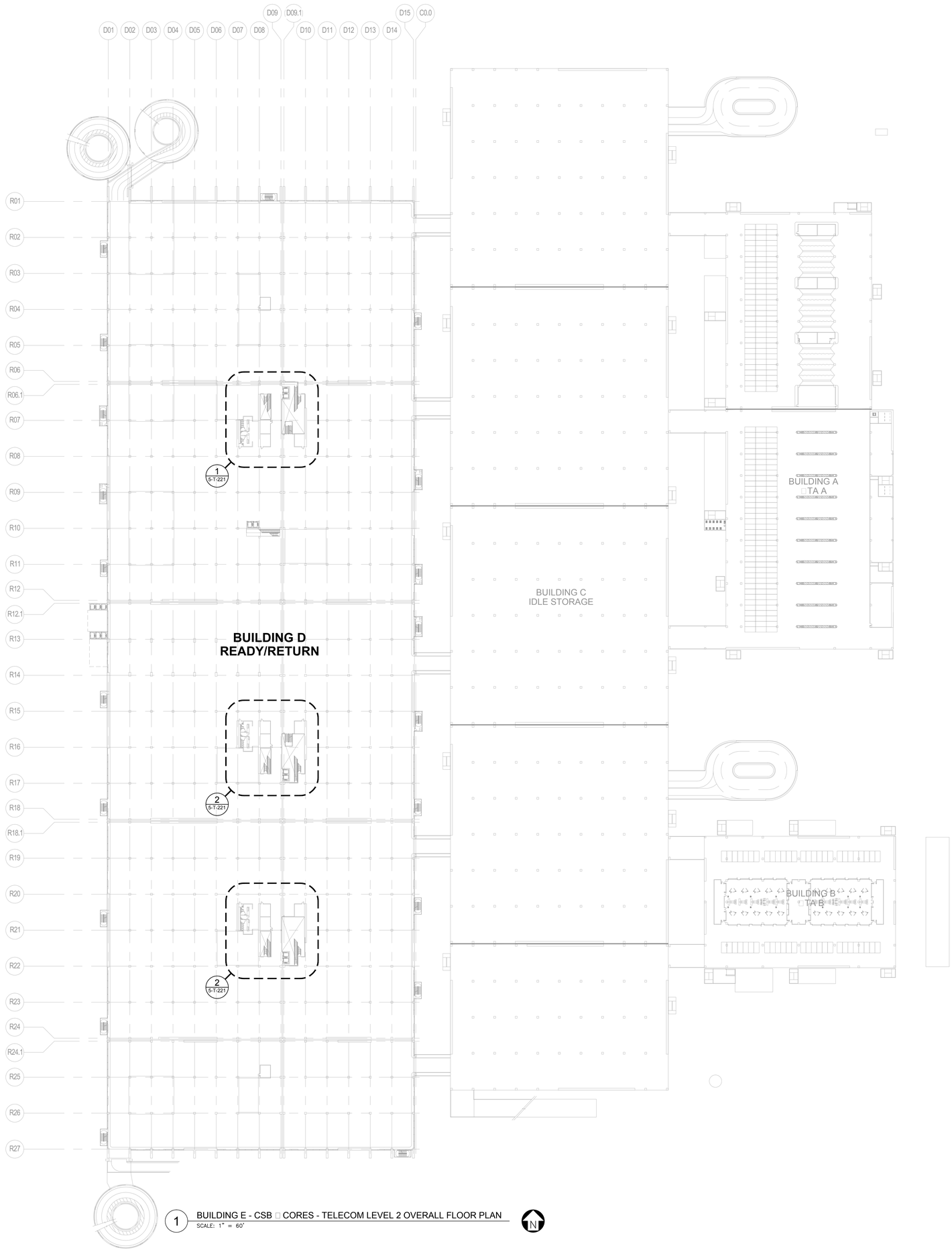
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DESIGNED BY:	TW
DRAWN BY:	R B
CHECKED BY:	TW

SHEET TITLE:

CSB CORES
TELECOM
LEVEL 1 OVERALL
FLOOR PLAN

SHEET NO.
5-T-010



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 2 OVERALL FLOOR PLAN
SCALE: 1" = 60'

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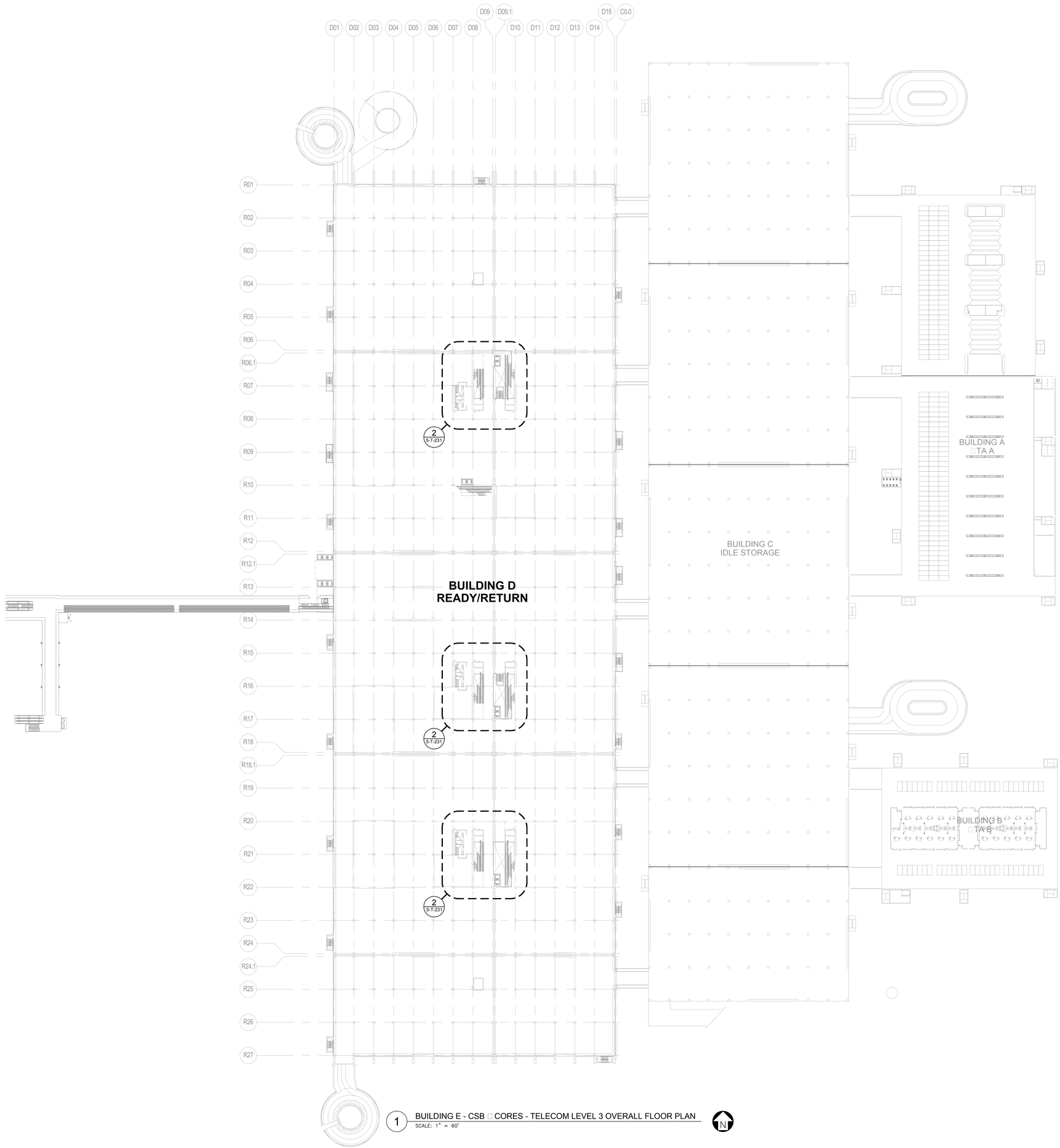
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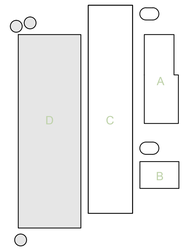
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CSB □ CORES
TELECOM
LEVEL 2 OVERALL
FLOOR PLAN

SHEET NO.
5-T-020



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 3 OVERALL FLOOR PLAN
SCALE: 1" = 60'



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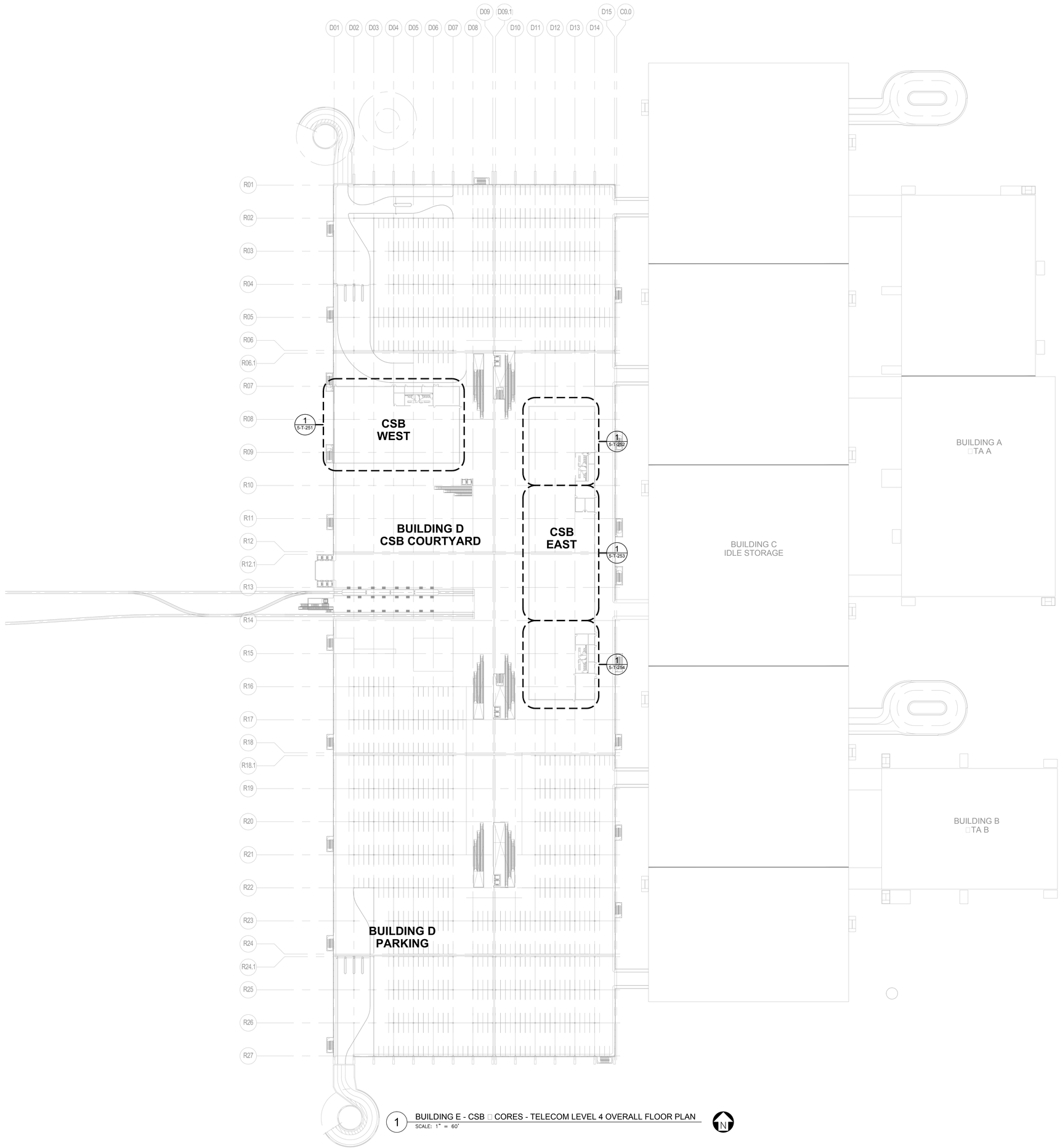
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SHEET TITLE:
CSB □ CORES
TELECOM
LEVEL 3 OVERALL
FLOOR PLAN

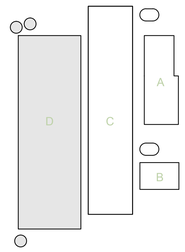
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1 BUILDING E - CSB ☐ CORES - TELECOM LEVEL 4 OVERALL FLOOR PLAN
SCALE: 1" = 60'



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REVISIONS:

MARK	DATE	DESCRIPTION

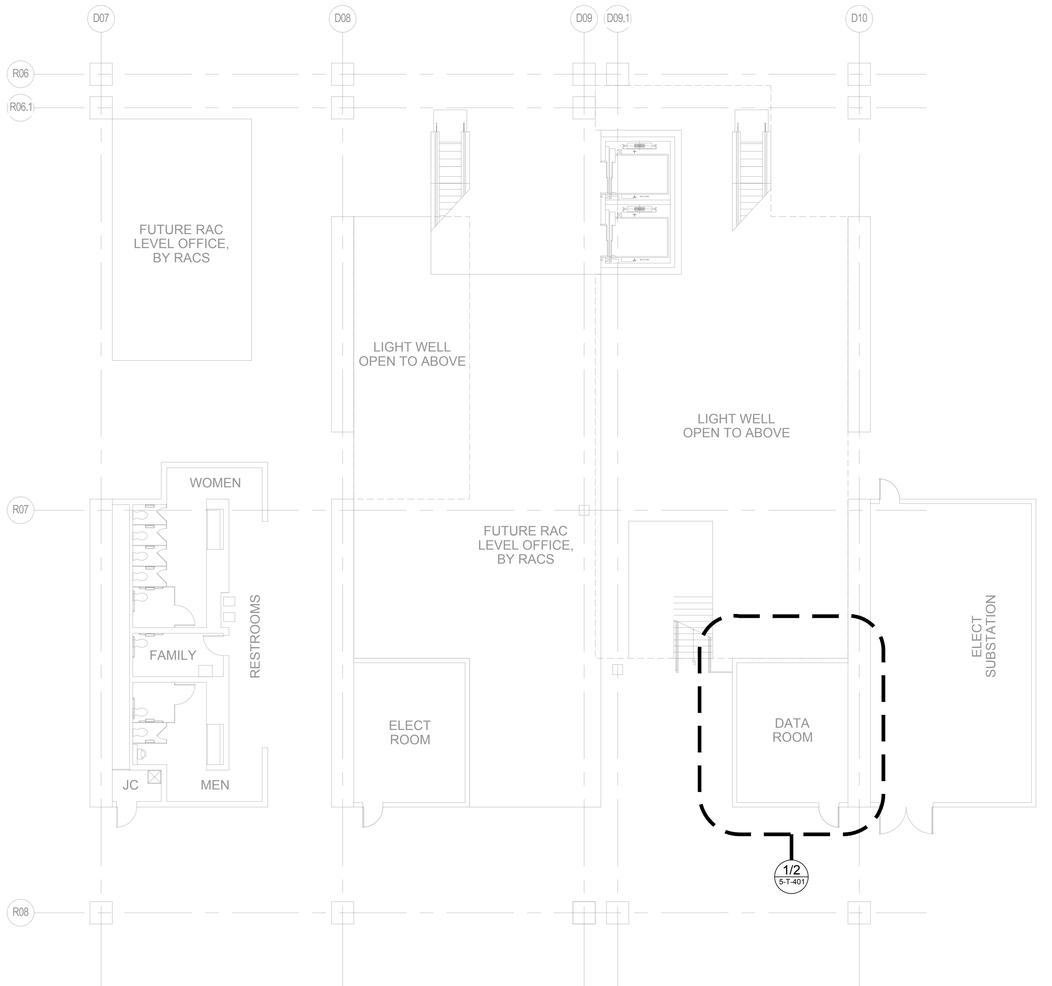
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DATE: 07/01/2016
DESIGNED BY: TW
DRAWN BY: R□B
CHECKED BY: TW

SHEET TITLE:
CSB □ CORES
TELECOM
LEVEL 4 OVERALL
FLOOR PLAN

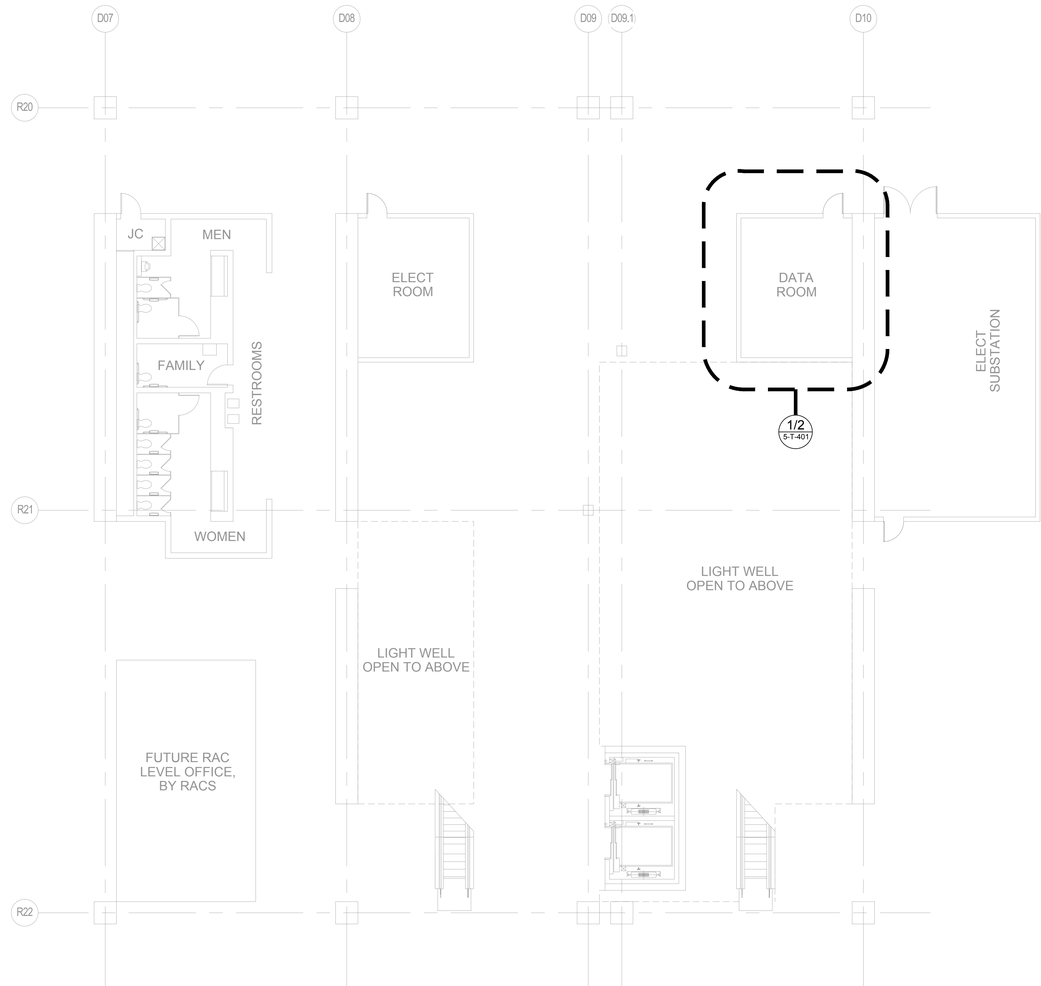
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5-T-040

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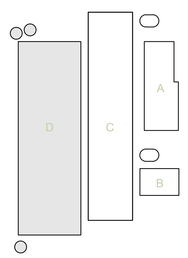
IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 1 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - TELECOM LEVEL 1 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



KEYPLAN

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FAX: 562. 594-6975

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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo Angele - International Airport

SUBMITTED BY
ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY
CHIEF AIRPORTS ENGINEER

ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" : 1'-0"
DATE:	07/01/2016
DESIGNED BY:	TW
DRAWN BY:	R. B
CHECKED BY:	TW

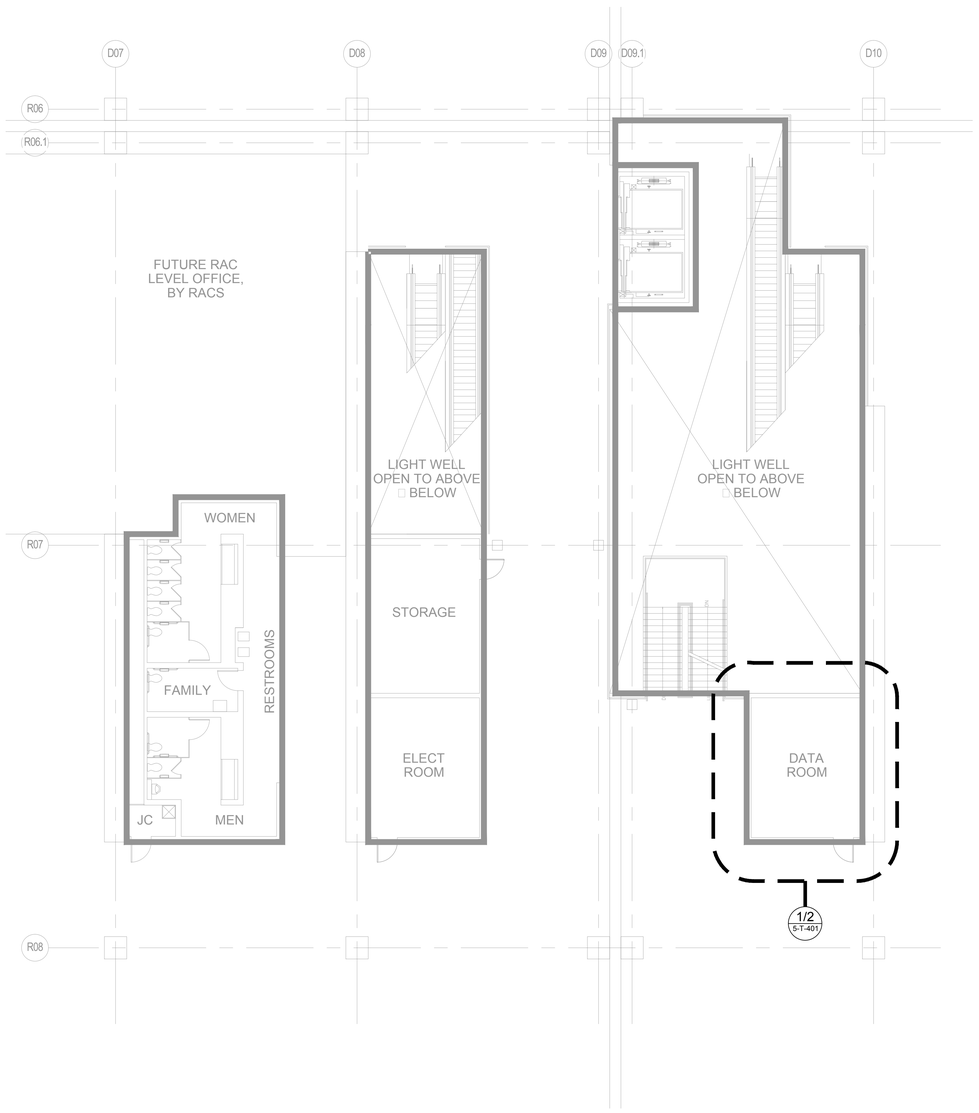
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TELECOM
LEVEL 1
ENLARGED PLANS

SHEET NO.
5-T-211

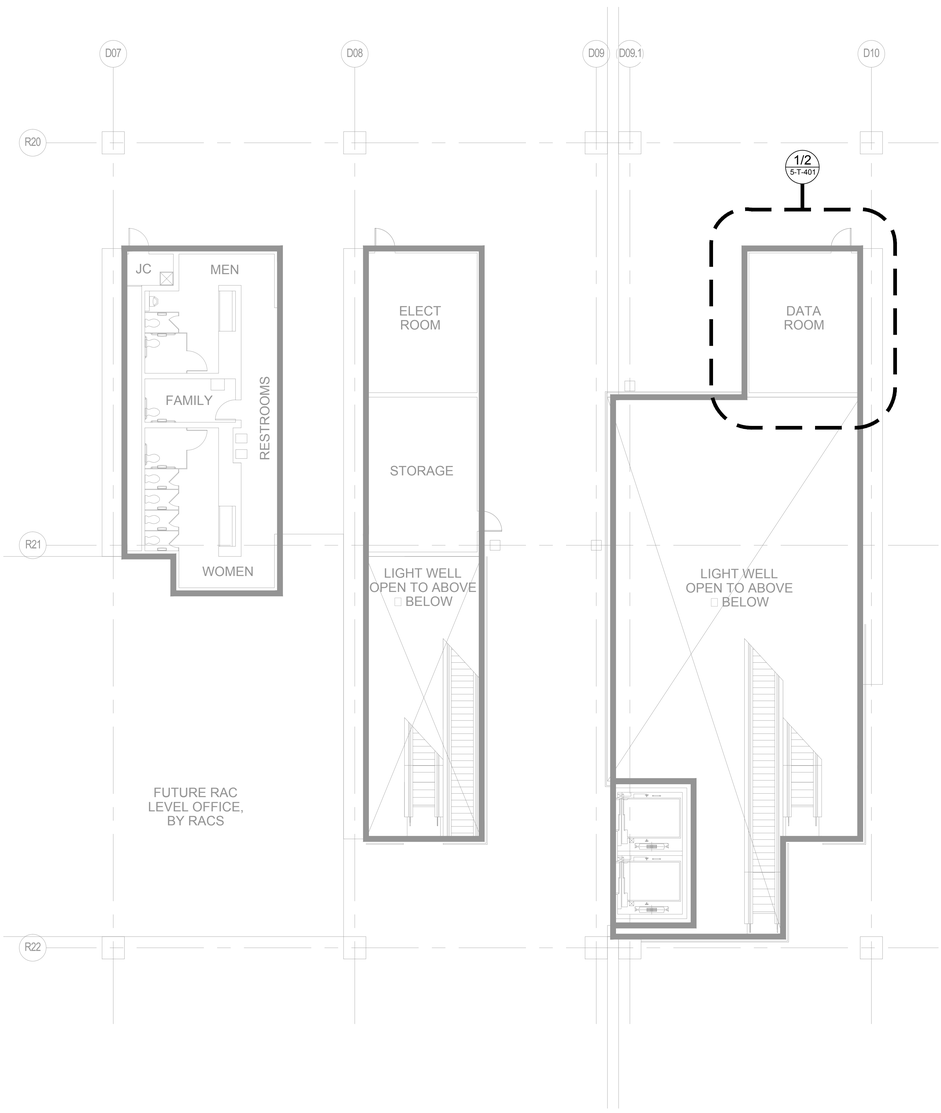
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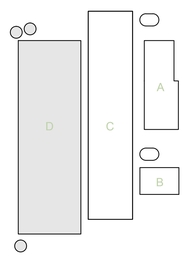
IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 2 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - TELECOM LEVEL 2 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



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ONT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

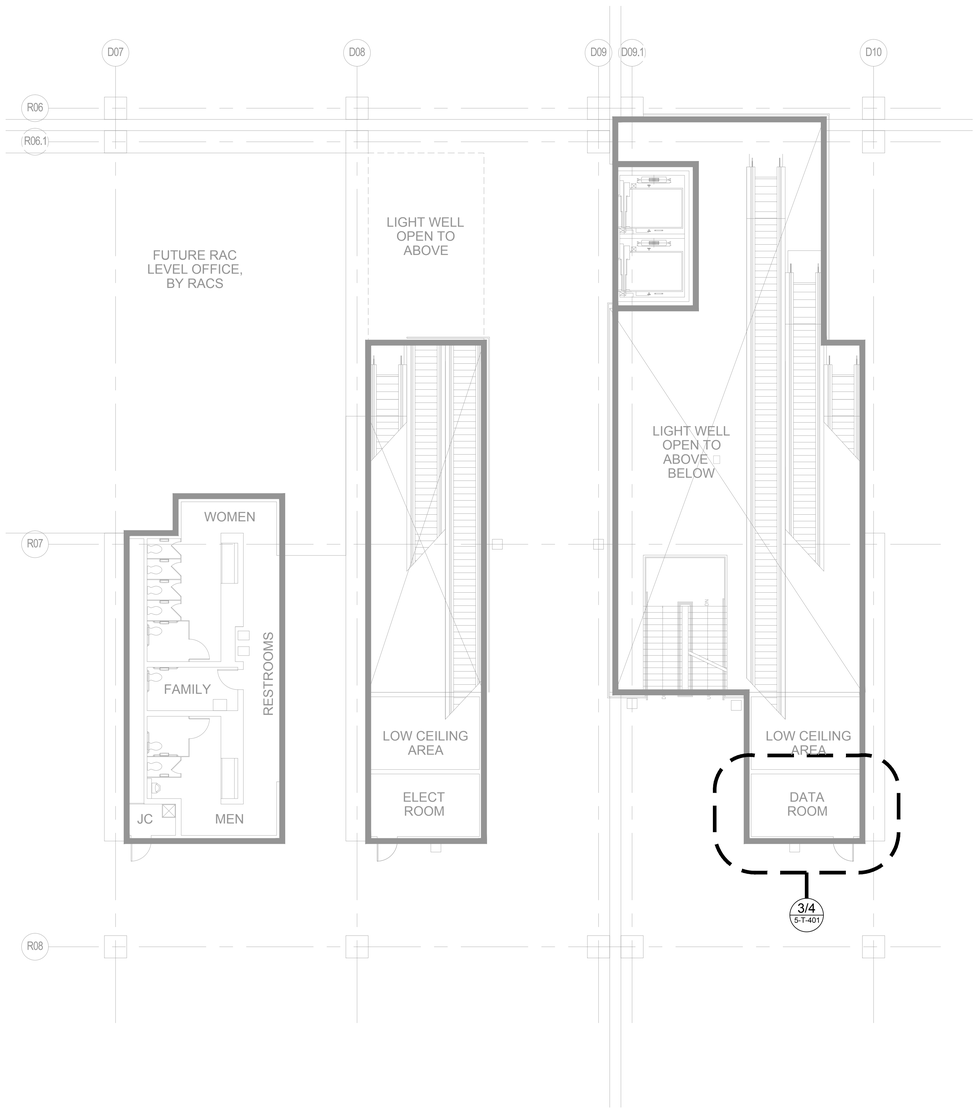
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DATE: 02/26/2016
DESIGNED BY: J. J
DRAWN BY: JN
CHECKED BY: NL

SHEET TITLE:
CSB □ CORES
TELECOM
LEVEL 2
ENLARGED PLANS

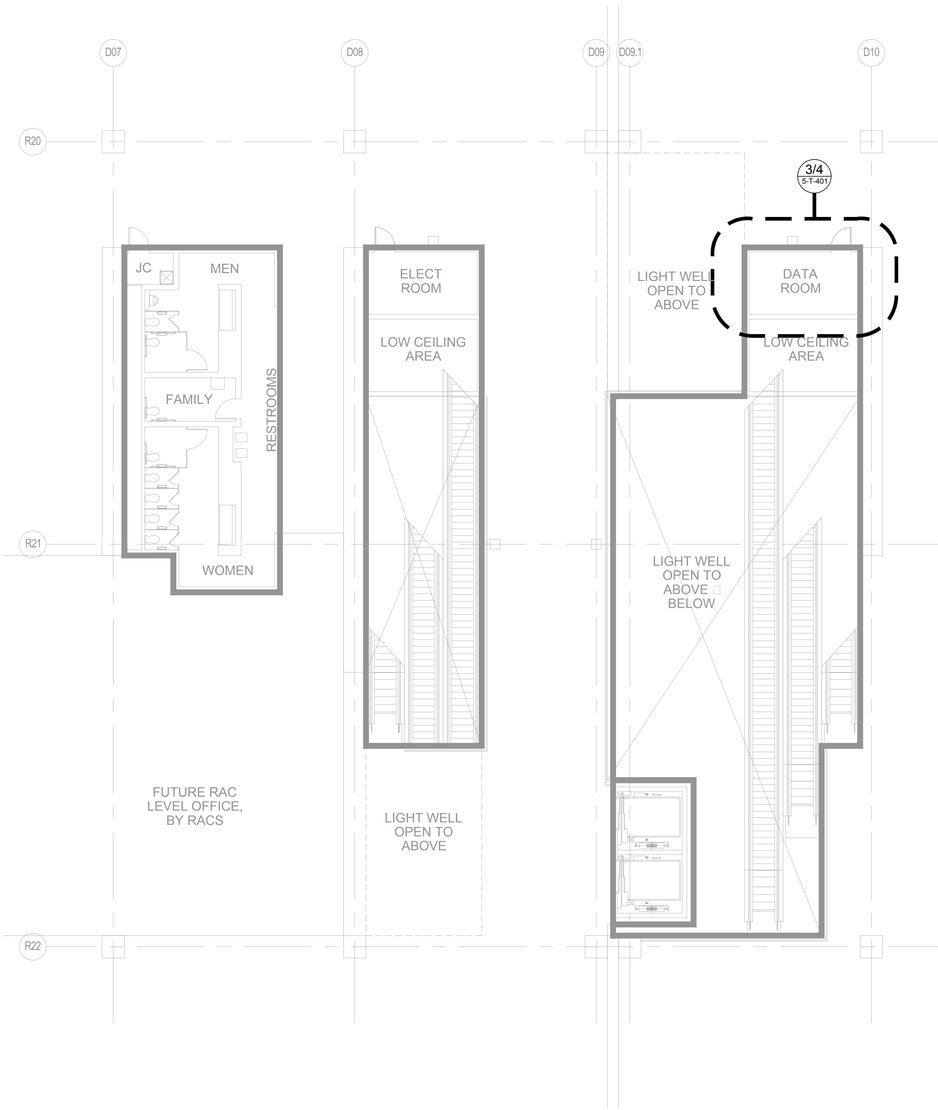
SHEET NO.
5-T-221

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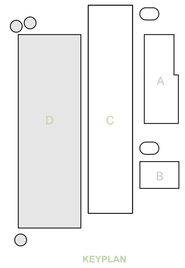
IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 3 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



2 BUILDING E - CSB □ CORES - TELECOM LEVEL 3 CORE ENLARGED PLAN
SCALE: 1/8" = 1'-0"



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REVISIONS:

MARK	DATE	DESCRIPTION

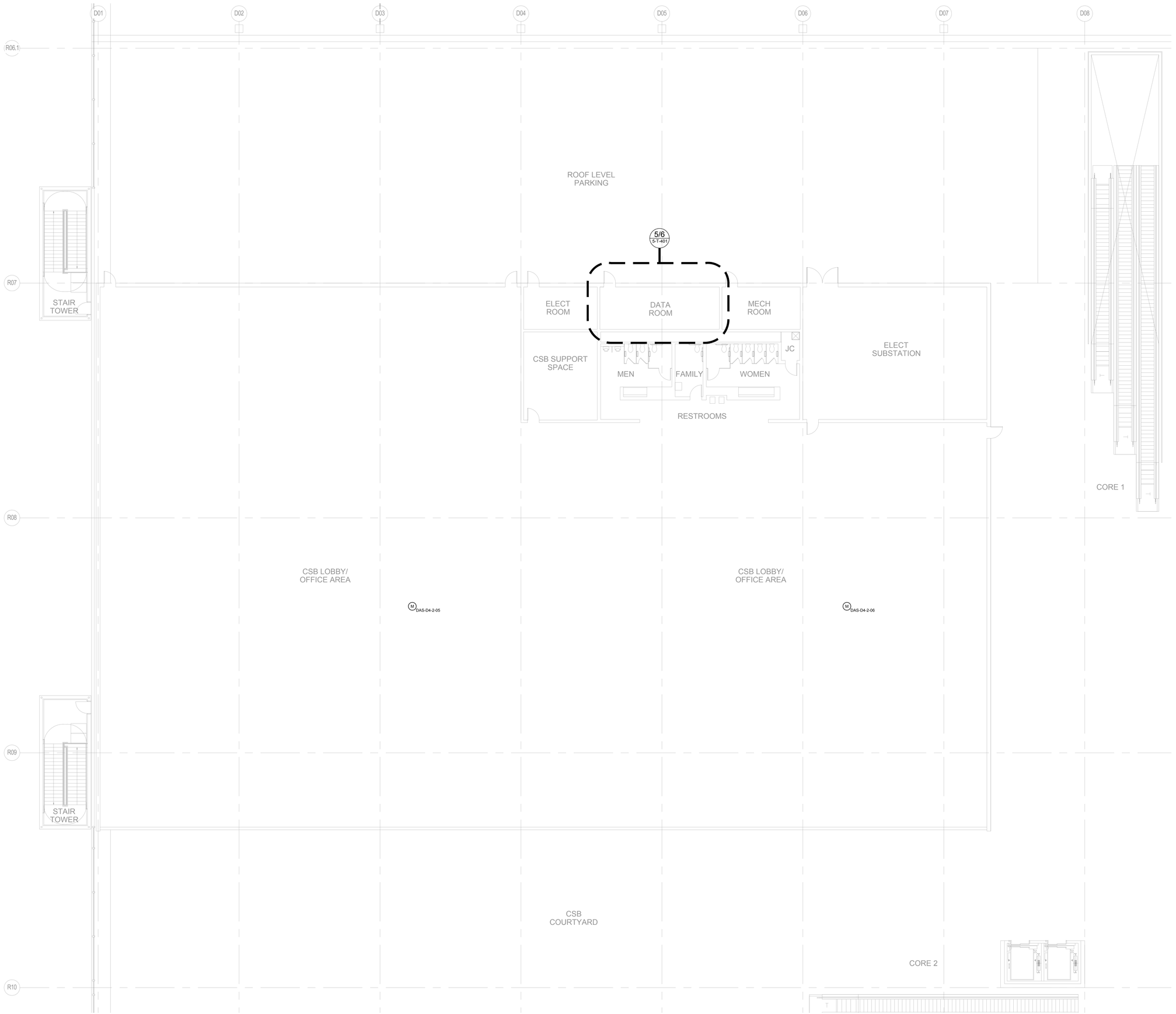
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SCALE:	1/8" = 1'-0"
DATE:	07/01/2016
DESIGNED BY:	TW
DRAWN BY:	R. B
CHECKED BY:	TW

SHEET TITLE:
CSB □ CORES
TELECOM
LEVEL 3
ENLARGED PLANS

SHEET NO.
5-T-231

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5/26/2016 2:09 PM

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 4 ENLARGED PLAN
SCALE: 1/8" = 1'-0"

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

J:\1245-043 CADP TECHNOLOGY\04 OUTPUT VOL 5\DA4881-5-T-251_L4E.DWG
5/26/2016 2:08 PM

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CHIEF AIRPORTS ENGINEER

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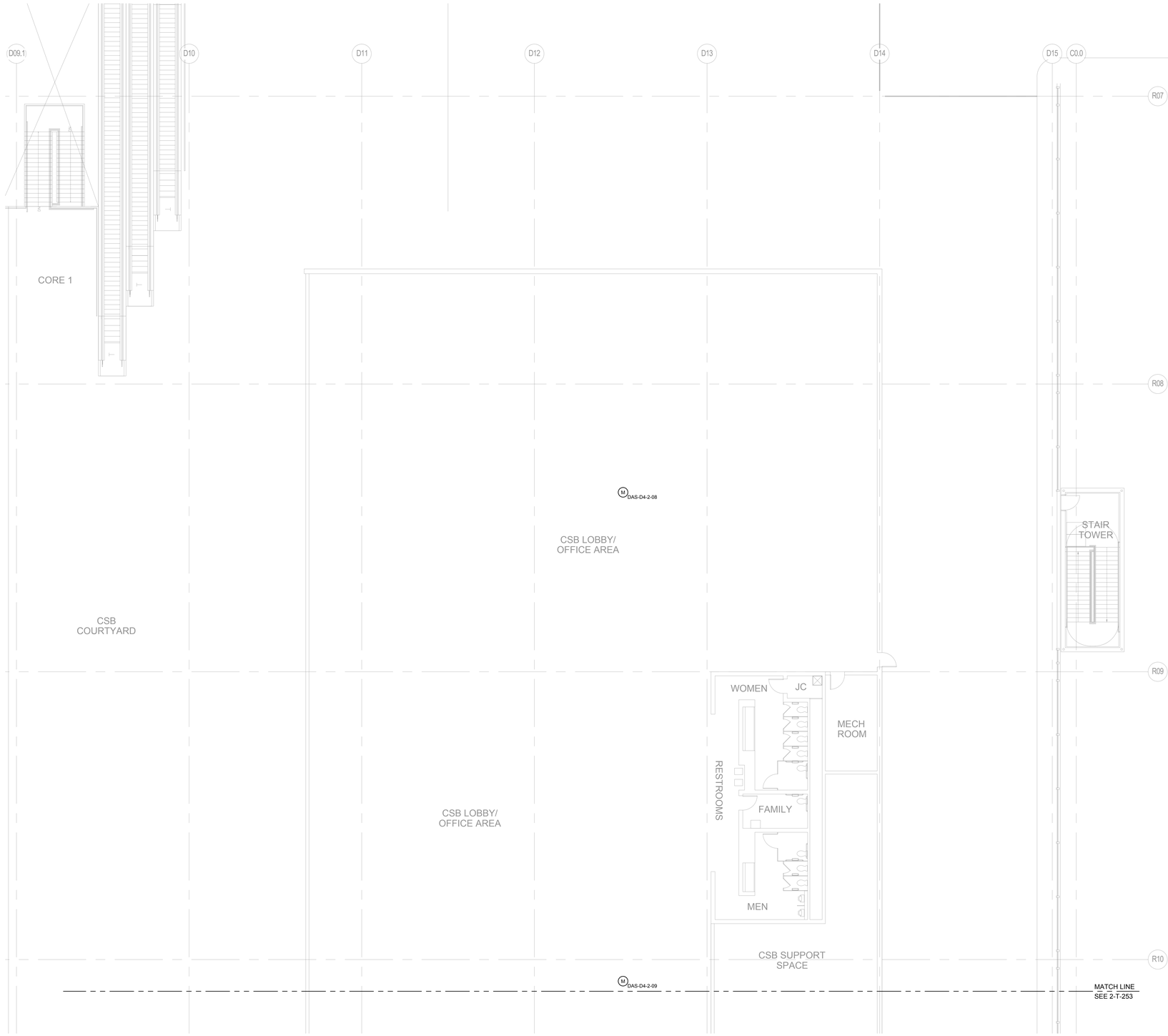
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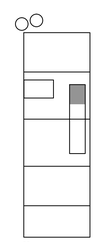
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DATE: 07/01/2016
DESIGNED BY: TW
DRAWN BY: R. B
CHECKED BY: TW

SHEET TITLE:
CSB □ CORES
TELECOM
LEVEL 4
ENLARGED PLAN

SHEET NO.
5-T-251



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 4 ENLARGED PLAN
SCALE: 1/8" = 1'-0"



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SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

JOINT ANA PMD LAX

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TW
DRAWN BY: R. B
CHECKED BY: TW

SHEET TITLE:

CSB □ CORES
TELECOM
LEVEL 4
ENLARGED PLAN

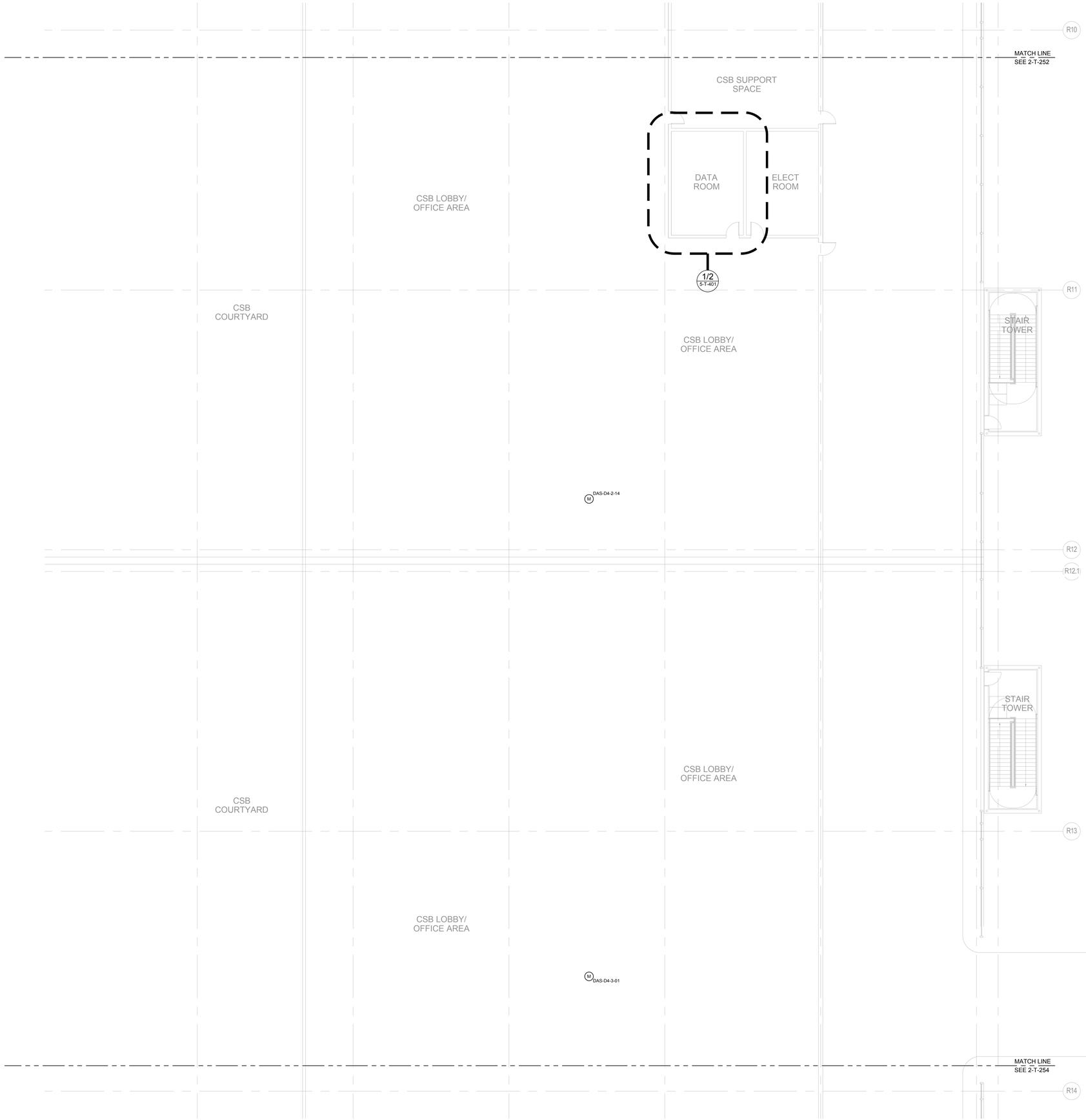
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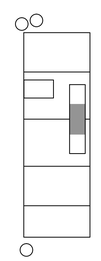
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IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 4 ENLARGED PLAN
SCALE: 1/8" = 1'-0"



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Lo Angele International Airport

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MARK	DATE	DESCRIPTION

PROJ NO: DA4881
SCALE: 1/8" = 1'-0"
DATE: 07/01/2016
DESIGNED BY: TW
DRAWN BY: R. B
CHECKED BY: TW

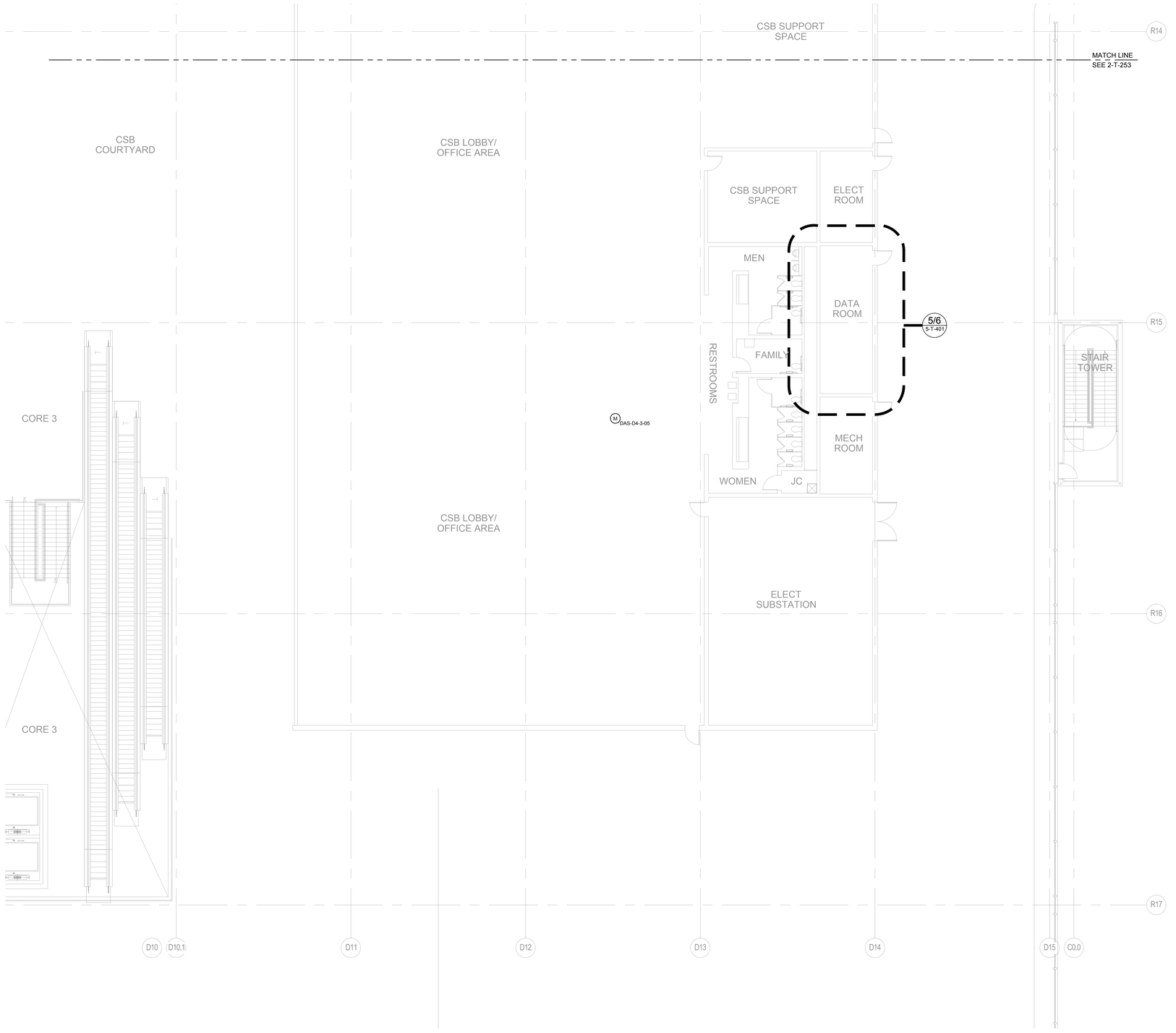
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SHEET NO.
5-T-253

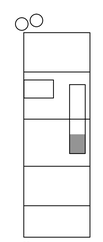
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8/26/2016 2:08 PM

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING



1 BUILDING E - CSB □ CORES - TELECOM LEVEL 4 ENLARGED PLAN
SCALE: 1/8" = 1'-0"



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Los Angeles World Airports

Project

LAX Consolidated Rental Car Facility

Lo: Angele: International Airport

SUBMITTED BY: ASST. CHIEF AIRPORTS ENGINEER

APPROVED BY: CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	1/8" = 1'-0"
DATE:	07/01/2016
DESIGNED BY:	TW
DRAWN BY:	R. B
CHECKED BY:	TW

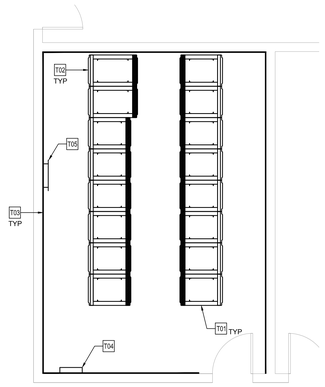
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CSB □ CORES TELECOM LEVEL 4 ENLARGED PLANS

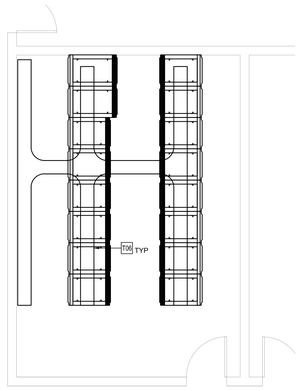
SHEET NO.

5-T-254

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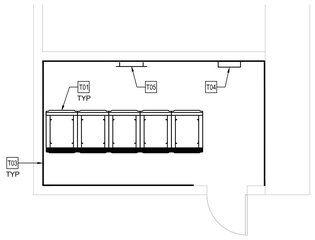
1 BUILDING E - DATA ROOM ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"



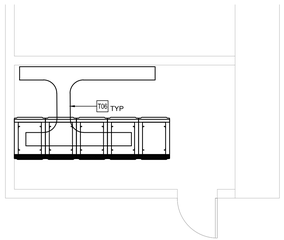
2 BUILDING E - DATA ROOM ENLARGED OVERHEAD PLAN
SCALE: 1/4" = 1'-0"

TELECOM KEYED NOTES

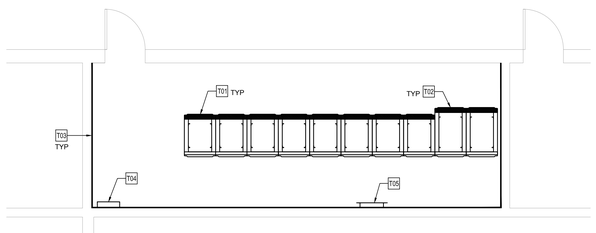
T01	PROVIDE 28" BY 38" BY 84" HIGH E□UIPMENT CABINETS, DAMAC MODEL CSN1284Z22477-3 IT.
T02	PROVIDE 28" 44" BY 84" HIGH E□UIPMENT CABINETS, DAMAC MODEL CSN1284Z22477-3 IT.
T03	PROVIDE 4□X 8□FIRE RATED AC PLYWOOD WITH CUTOUTS FOR BRACKETS AND OUTLETS AS RE□UIRED. PAINT WHITE AND LEAVE FIRE RATING STAMP EXPOSED.
T04	PROVIDE ELECTRICAL PANELBOARDS. REFER TO ELECTRICAL SHEETS.
T05	PROVIDE GROUND BUS BAR. REFER TO SHEET T3, DETAIL 12 BOND TO GROUND BUSBAR IN ELECTRICAL ROOM.
T06	PROVIDE 12" WIDE BY 6" DEEP SUSPENDED CHALFANT SERIES 6 VENTED CABLE TRAY.



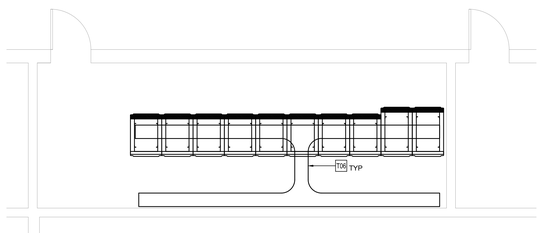
3 BUILDING E - DATA ROOM ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"



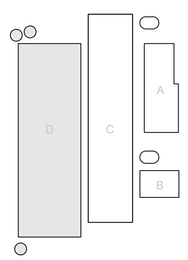
4 BUILDING E - DATA ROOM ENLARGED OVERHEAD PLAN
SCALE: 1/4" = 1'-0"



5 BUILDING E - DATA ROOM ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"



6 BUILDING E - DATA ROOM ENLARGED OVERHEAD PLAN
SCALE: 1/4" = 1'-0"



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Los Angeles World Airports

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APPROVED BY

CHIEF AIRPORTS ENGINEER

SUBMITTED BY

ASST. CHIEF AIRPORTS ENGINEER

ONT ANA LAX PMD

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	AS INDICATED
DATE:	07/01/2016
DESIGNED BY:	TW
DRAWN BY:	R. B
CHECKED BY:	TW

SHEET TITLE:

CSB □ CORES
TYPICAL
DATA ROOM
ENLARGED PLANS

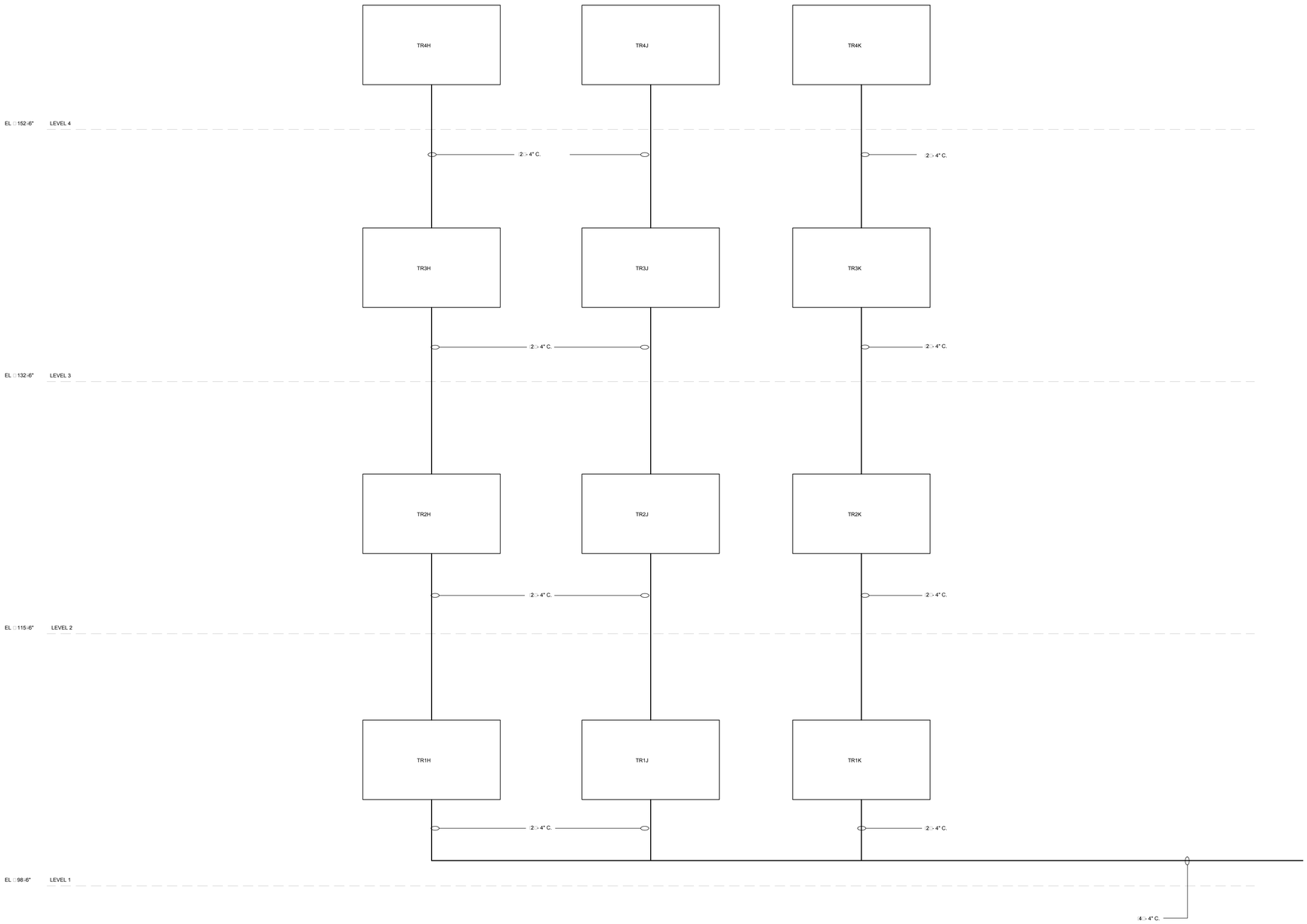
SHEET NO.

5-T-401

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5/26/2016 2:08 PM

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1 BUILDING D/E - IT ROOM RISER DIAGRAM
SCALE: NONE

IF THIS DRAWING IS LESS THAN 36" X 48" IT IS A REDUCED SIZE DRAWING

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5/26/2016 2:08 PM

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CHIEF AIRPORTS ENGINEER

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REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	DA4881
SCALE:	NONE
DATE:	07/01/2016
DESIGNED BY:	TW
DRAWN BY:	R. B
CHECKED BY:	TW

SHEET TITLE:
BUILDING D/E DATA ROOM RISER DIAGRAM

SHEET NO.
5-T-501

SECURITY SYMBOL LEGENDS

NOTE:

1. ALL SYMBOLS ARE NOT NECESSARILY USED ON THESE PLANS.
2. ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF ALL DEVICES AND E□UIPMENT UON.
3. IN GENERAL, SYMBOLS SHOWN WITH LIGHT LINES DENOTE EXISTING WORK, SYMBOLS SHOWN WITH HEAVY LINES DENOTE NEW WORK.

DRAWING REFERENCES

- 1 / A101 — DETAIL REFERENCE TAG
- A / TXXX — EXTERIOR/INTERIOR ELEVATION
- A / TXXX / B — INTERIOR MULTI-VIEW ELEVATION
- NORTH ARROW
- X — KEYNOTE
- 1 — REVISION NUMBER

CONDUIT AND RACEWAY

- CONDUIT RUN CONCEALED IN CEILING OR WALL CONSTRUCTION
- CONDUIT RUN IN FLOOR CONSTRUCTION OR UNDERGROUND DUCTBANK
- CONDUIT RUN EXPOSED
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CABLE TRAY REFER TO PLANS FOR SIZE□

JUNCTION AND PULL BOXES

- J — JUNCTION BOX
- P — PULL BOX
- H — HANDHOLE
- MH — MAINTENANCE HOLE

ACCESS CONTROL SYSTEM

- X / XXX — DOOR TYPE; SACS DOOR DETAIL REFERENCE; ARCHITECTURAL DOOR NUMBER
- DOOR SECURITY LEVEL; HIGHER LEVEL OF SECURITY; LOWER LEVEL OF SECURITY
- SECURE/SIDA DEMARCATION LINE
- STERILE DEMARCATION LINE
- A — AUDIBLE ALARM
- A/V — COMBINATION AUDIBLE/VISUAL ALARM
- DPS — DOOR POSITION SWITCH
- CR — CARD READER
- CR — CARD READER / KEYPAD
- CP — CONTROL PANEL BY DOOR MANUFACTURER□
- D — DOOR INTERFACE BOX
- DA — DURESS ALARM
- HANDSET
- PANIC HARDWARE
- ELEVATOR FLOOR CONTROL BUTTON PANEL
- ELEVATOR CALL CONTROL BUTTON PANEL
- H — DOOR HOLD DEVICE
- INTERCOM STATION
- KP — KEYPAD
- KS — KEYSWITCH
- IFP — INTELLIGENT FIELD PANEL
- MAG — MAGNETIC LOCK
- MAG DE — DELAYED EGRESS MAGNETIC LOCK
- M — MICROPHONE
- MOTOR / CONVEYOR START/STOP STATION
- STOP — OVERHEAD DOOR UP/DOWN CONTROL
- PIR — MOTION DETECTOR
- PS — POWER SUPPLY
- POWER TRANSFER HINGE
- PB — PUSHBUTTON
- V — VISUAL ALARM
- CWS — COMPUTER WORKSTATION

VISUAL SURVEILLANCE SYSTEM

- VSS CAMERA - FIXED POSITION TYPE
- VSS CAMERA - PTZ TYPE
- CAM-X-Y-□□ — LEVEL; ZONE; SE□UENTIAL NUMBER; VSS CAMERA TAG
- X — CAMERA TYPE
- CWS — COMPUTER WORKSTATION
- FPD — FLAT PANEL DISPLAY

SECURITY ABBREVIATIONS

A/V	AUDIO/VISUAL
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIF	ALARM INTERFACE UNIT
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BBH	BACKBONE HUB
BC	BELOW CEILING
BMS	BALANCED MAGNETIC SWITCH
C	CONDUIT
CAM	VSS CAMERA
CAT	CATEGORY
CBIS	CHECKED BAGGAGE INSPECTION SYSTEM
CBP	CUSTOMS AND BORDER PATROL
CBRA	CHECKED BAGGAGE RESOLUTION AREA
CCT	COMMUNICATION CABLE TRAY
CH	CHANNEL
CIB	CAMERA INTERFACE BOX
CLG	CEILING
COMM	COMUNICATIONS
CPU	CENTRAL PROCESSING UNIT
CR	CARD READER
CTX	COMPUTER TOMOGRAPHY X-RAY
DEMO	DEMOLISH
DIB	DOOR INTERFACE BOX
DPDT	DOUBLE POLE DOUBLE THROW
DPS	DOOR POSITION SWITCH
DVR	DIGITAL VIDEO RECORDING
DWG	DRAWING
EA	EACH
EC	EMPTY CONDUIT
EGR	EGRESS
ELC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC/ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
E□	E□UALIZER
EX	EXISTING
F	FIXED POSITION CAMERA
FACP	FIRE ALARM CONTROL PANEL
FAR	FEDERAL AVIATION REGULATION
FIS	FEDERAL INSPECTION SERVICE
FO	FIBER OPTIC
GC	GENERAL CONTRACTOR
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
IC	INTERCOM
IDF	INTERMEDIATE DISTRIBUTION FRAME
IDS	INTRUSION DETECTION SYSTEM
IFP	INTELLIGENT FIELD PANEL
IR	INFRARED
IRM	INFORMATION AND RESOURCE MANAGEMENT
IT	INFORMATION TECHNOLOGY
LAN	LOCAL AREA NETWORK
LFMC	LI□UIT TIGHT FLEXIBLE METALLIC CONDUIT
LMP	LOCAL MICRO PROCESSOR□PANEL□
LVL	LEVEL
MAG	ELECTROMAGNETIC LOCK
MCR	MAIN COMMUNICATIONS ROOM
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE
MMFO	MULTI-MODE FIBER OPTIC
MOD	MODULE
NIC	NOT IN CONTRACT
O/P	OUTPUT
OH	OVERHEAD
OPS	OPERATIONAL
OTS	OFF THE SHELF
PA	PUBLIC ADDRESS
PB	PUSH BUTTON
PBX	PRIVATE BRANCH EXCHANGE
PC	PERSONAL COMPUTER
PIN	PERSONAL IDENTIFICATION NUMBER
PIR	PASSIVE INFRARED
PP	PATCH PANEL
PR	PAIR
PS	PUBLIC SIDE
PTZ	PAN/TILT/ZOOM CAMERA
PVC	POLYVINYL CHLORIDE CONDUIT
REX	RE□UEST FOR EXIT
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMU	RACK UNIT
RU	RACK MOUNTED UNIT
SACS	SECURITY ACCESS CONTROL SYSTEM
SHLD	SHIELDED□AS IN CABLE□□
SIDA	SECURE IDENTIFICATION DISPLAY AREA
SJB	SECURITY JUNCTION BOX
SMFO	SINGLE-MODE FIBER OPTIC
SPP	SYSTEM POWER PANEL
SS	STAINLESS STEEL
SSCP	SECURITY SCREENING CHECKPOINT
TBD	TO BE DETERMINED
TDS	TELECOMMUNICATION DISTRIBUTION SYSTEM
TSA	TRANSPORTATION SECURITY AGENCY
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
USCBP	UNITED STATES CUSTOMS AND BORDER PROTECTION
VA	VOLT AMPS
VAC	VOLT ALTERNATING CURRENT
VDC	VOLT DIRECT CURRENT
VE	VOICE EVACUATION
VoIP	VOICE OVER INTERNET PROTOCOL□IP□□
VSS	VIDEO SURVEILLANCE SYSTEM
W	WALL
WT	WATERTIGHT
XMTR	TRANSMITTER

SECURITY GENERAL NOTES

INSTALLATION REQUIREMENTS

1. BASIC ELECTRICAL RACEWAY SPECIFICATIONS RE□UIREMENTS SHALL APPLY TO THIS WORK. REFER TO ELECTRICAL SPECIFICATIONS.
2. CONTRACTOR SHALL PROVIDE ALL OPTICAL FIBER CABLE, INNERDUCT, E□UIPMENT CABINET, PATCH CORDS, PATCH PANELS, RELATED HARDWARE, TERMINATION E□UIPMENT, AND ANY OTHER APPURTENANCES. CONTRACTOR SHALL PROVIDE ALL E□UIPMENT, MATERIALS, LABOR, AND SERVICES NECESSARY TO TEST, LABEL, AND DOCUMENT THE CABLING SYSTEM, AND TO ENSURE THAT IT IS IN COMPLIANCE WITH RE□UIREMENTS STATED HEREIN.
3. CONTRACTOR SHALL VERIFY THE SIZE OF ALL CONDUCTORS, CONDUIT, AND JUNCTION BOXES□40□MAXIMUM FILL□□INSTALLATION SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE□NEC□AND ALL LOCAL CODES HAVING JURISDICTION. TELECOM CONDUIT FILL SHALL NOT EXCEED 40□□.
4. 120 VAC INPUT POWER CONDUCTORS SHALL NOT BE INSTALLED IN THE SAME CONDUIT OR CABLE TRAY AS LOW VOLTAGE AUDIO, VIDEO, DC POWER, UTP OR ANY OTHER LOW VOLTAGE CABLES.
5. CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER PRIOR TO INSTALLAION OF WORK OF ANY MOUNTING LOCATIONS NOTED ON THE DRAWINGS ARE OBSTRUCTED AND/OR IF ANY CONFLICTS OR PROBLEMS ARE DISCOVERED.
6. INNERDUCT SHALL BE INSTALLED IN ALL CONDUITS IN WHICH FIBER CABLING IS TO BE INSTALLED. ALL OPTICAL FIBER CABLES SHALL BE PLACED WITHIN INNERDUCT. INNERDUCT SHALL MEET NEC 770-53 RE□UIREMENTS. BE 1-INCH DIAMETER, BE ORANGE IN COLOR AND HAVE A UL 910 FLAME RATING UNLESS NOTED OTHERWISE ON DUCT INSTALLATION DRAWINGS OR PREVIOUSLY INSTALLED.
7. INSTALL TRUE TAPE TYPE PULL STRINGS IN ALL DUCTS, CONDUITS OR INNERDUCTS. REPLACE PULL STRINGS THAT ARE USED WITH E□UIVALENT PULL STRINGS.
8. OPTICAL FIBER PATCH PANELS SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND SHALL INCLUDE THE FOLLOWING IN□UANTITIES AS NECESSARY:
   A. BEJED, BJ-1646-047, METAL 6 PORT, SC DIE-CUT ADAPTER PLATE
   B. ALCOA FUJIKURA C080810, GREEN, SC-APC ADAPTERS
   C. BEJED BJ-174ZC-011, 24 FIBER SPLICE TRAY INCLUDING METAL ROD REINFORCED HEATH SHRINKABLE FUSION SPLICE PROTECTOR SLEEVES□□
   E. CORNING SC-APC POLISHED PIGTAILS OR E□UIVALENT
   F. PROVIDE CORNING ULTRA-PC POLISHED PIGTAILS OR E□UIVALENT
9. PROVIDE PATCH CABLES OR DUPLEX JUMPERS FROM EXISTING PATCH PANELS TO NEW FIBER PATCH PANELS. VERIFY WITH OWNER CONNECTOR TYPE ON EXISTING PATCH PANELS BEFORE ORDERING PATCH CABLES OR JUMPERS.
10. CONTRACTOR SHALL ONLY FUSION SPLICE PIGTAILS THAT HAVE HAD CONNECTORS INSTALLED AND POLISHED BY THE MANUFACTURER OR LOCAL CABLE ASSEMBLY HOUSE. THE CONTRACTOR SHALL NOT INSTALL OR POLISH FIBER OPTIC CONNECTORS, EITHER IN THE FIELD OR IN THEIR SHOP. PIGTAILS SHALL HAVE THE SAME GLASS SPECIFICATION AS THE FIBER CABLE. FOR SINGLEMODE FIBER, ONLY SC-APC, ANGLE POLISHED PRE-CONNECTORIZED, PRE-TERMINATED PIGTAILS SHALL BE FUSION SPLICED TO THE CABLE. ACCEPTABLE PRODUCTS: CORNING SMF-28e□GLASS.
11. OUTSIDE PLANT FIBER SHALL BE SINGLEMODE OUTSIDE PLANT RATED CORNING OPTICAL FIBER SMF28e□OR BETTER APPROVED E□UIVALENT. FIBER CABLE JACKETING SHALL BE EITHER CORNING ALTOS ALL DIELECTRIC GEL FREE OR APPROVED E□UIVALENT.
12. ALL CABLES SHALL BE CONTINUOUS FROM THE SOURCE TO THE DESTINATION AND SHALL NOT HAVE SPLICES IN BETWEEN PATCH PANELS EXCEPT IN MANHOLE 235 AS NOTED ON DRAWINGS.
13. CONTRACTOR SHALL USE FUSION SPLICER WITH VIEWING OPTICS, MAGNIFIED VISUAL DISPLAY, OR OTHER IMAGE PROCESSING SOFTWARE TO PERFORM CORE ALIGNMENT AND□UALITY VERIFICATION. FUJIKURA FSM-50S OR E□UIVALENT□PERMITTED FUSION SPLICE LOSS IS 0.01DB MAXIMUM. SPLICES THAT DO NOT MEET MAXIMUM SPLICE LOSS RE□UIREMENTS SHALL BE RESPLICED AND RETESTED.
14. SERVICE LOOPS OF 15 FEET SHALL BE PROVIDED AT ALL CABLE ENDS. OUTDOOR CABLES IN MANHOLES SHALL HAVE 30 FEET OF SLACK FOR A SERVICE LOOP.

TESTING AND LABELING REQUIREMENTS

1. CONTRACTOR SHALL TEST ALL STRANDS OF OPTICAL FIBER WITH AN APPROVED POWER METER AND LIGHT SOURCE. TESTER SHALL BE CAPABLE OF PERFORMING THE TESTS RE□UIRED BY ANSI/TIA/EIA-568-C.2.1 ANNEX H, ANSI/TIA/EIA-526-14A, AND ANSI/TIA/EIA-526-7.
2. PRIOR TO SHIPMENT OF THE OPTICAL FIBER CABLE, 100 PERCENT OF THE FIBERS SHALL BE TESTED WITH AN OPTICAL TIME DOMAIN REFLECTOMETER□OTDR□□COPIES OF THE TRACES SHALL BE FURNISHED AS PART OF THE SUBMITTALS. UPON DELIVERY TO THE SITE ALL FIBER STRANDS SHALL BE TESTED WITH AN OTDR BEFORE INSTALLATION BEGINS. SUBMIT□2□□PAPER COPIES BEFORE INSTALLATION BEGINS.
3. THE CONTRACTOR SHALL VERIFY THE INTEGRITY OF THE INSTALLED FIBER BY TESTING WITH AN OTDR. TEST SHALL BE PERFORMED ON 100 PERCENT OF THE FIBERS AND REPEATED FROM THE OPPOSITE END OF EACH FIBER OR PERFORMED WITH A LAUNCH CABLE AT EACH END. SUBMIT COPIES OF TRACES.
4. IF OTDR TEST RESULTS ARE UNSATISFACTORY DUE TO CABLE DAMAGE, CABLE SEGMENT IS UNACCEPTABLE AND SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
5. PROVIDE END-TO-END ATTENUATION TESTING USING AN APPROVED POWER METER AND LIGHT SOURCE PER ANSI/TIA/EIA 455-53A.
6. FIBER SHALL BE TESTED IN BOTH DIRECTIONS AT BOTH 1310 NM AND 1550 NM. PERFORM OPTICAL ATTENUATION MEASUREMENTS FOR EACH OPTICAL FIBER AFTER CABLES HAVE BEEN CONNECTORIZED, DRESSED AND MOUNTED INTO PANELS TO SHOW LOSSES OF CABLE, CONNECTORS AND COUPLERS. ACCEPTABLE ATTENUATION FOR OSP BACKBONE CABLING IS 0.5 DB/KM AT BOTH TEST FRE□UENCIES.
7. ALL CABLES AND PATCH CABLES SHALL HAVE A PERMANENT LABEL ATTACHED AT BOTH ENDS.
8. ALL INDOOR CABLE AND PATCH CABLE LABELS SHALL BE PRE-PRINTED USING BRADY TLS 2200 PRINTER OR E□UIVALENT AND SHALL BE PLACED LOOSE ON THE PATCH CABLE NEAR THE CONNECTOR END WITHOUT HEAT SHRINKING LABELS. LABELS SHALL USE A THREE LINE FORMAT WITH THE ORIGINATION PATCH PANEL AND PORT ON THE FIRST LINE, THE DESTINATION PATCH PANEL AND PORT ON THE SECOND LINE AND THE SYSTEM OR OTHER DESCRIPTIVE INFORMATION ON THE THIRD LINE. SEE LAWA ITMG FOR SAMPLE LABELS.
9. PATCH PANELS SHALL BE LABELED ON THE FRONT PANEL WITH 1" BLACK CHARACTERS ON A "SAFETY ORANGE" BACKGROUND LETTERING 3M KIT 5005-KIT OR E□UIVALENT.
10. ALL OUTDOOR CABLES SHALL BE LABELED WITH ACP FT-LAWATAG-2.5X4 PLASTIC TAGS AND PRE-PRINTED WITH PERMANENT INK. OUTDOOR CABLES SHALL BE LABELED AND SECURED WITH HEAVY DUTY STRAPS: IN EVERY MANHOLE AND HANDHOLE WITHIN 12 INCHES OF WHERE THE CABLE INTERS THE MANHOLE, WITHIN 12 INCHES OF WHERE THE CABLE EXITS THE MANHOLE AND ON THE SLACK COIL.

SUBMITTAL REQUIREMENTS

1. SUBMIT FOR APPROVAL MANUFACTURER'S DATA SHEETS FOR ALL PROPOSED MATERIALS AND E□UIPMENT. SUBMIT A TWO-FOOT LENGTH SAMPLE OF EACH FIBER CABLE TYPE/COUNT TO BE INSTALLED.
2. SUBMIT CALIBRATION REPORTS FOR ALL TEST E□UIPMENT. THE CALIBRATION SHALL BE PERFORMED BY A MANUFACTURER CERTIFIED CALIBRATION FACILITY AND BE DATED NO MORE THAN SIXTY□60□DAYS PRIOR TO THE START OF TESTING.
3. SUBMIT□5□HARDBOUND COPIES OF ALL CABLE TEST RESULTS AND ONE ELECTRONIC COMPACT DISC.
4. SUBMIT ALL PROPOSED LABELING MATERIALS AND NOMENCLATURE FOR APPROVAL.
5. CONTRACTOR SHALL MAINTAIN A SET OF CONTRACT DRAWINGS DURING INSTALLATION AND RED-LINE MARK THEM TO INDICATE ANY CHANGES AS THEY OCCUR.
6. CONTRACTOR SHALL PROPOSE A TEAM THAT IS□UALIFIED TO PERFORM THE WORK OF THIS PROJECT. SUBMIT PROJECT BRIEFS AND RESUMES□INCLUDING AN EXPERIENCED PROJECT MANAGER THAT WILL SERVE AS A SINGLE POINT OF CONTACT AND RESPONSIBILITY FOR THE CONTRACTORS TEAM.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC MANAGEMENT AND SHALL SUBMIT TO LAWA AIRPORT AND FACILITIES PLANNING DIVISION ALL PROPOSED TRAFFIC MANAGEMENT METHODS AND PRODUCTS FOR APPROVAL. OUTSIDE PLANT CABLE INSTALLATION THAT RE□UIRES OBSTRUCTION OF TRAFFIC SHALL BE DONE ON THE NIGHT SHIFT.
8. THE FIBER CABLING CONTRACTOR SHALL BE A CERTIFIED CORNING OPTICAL CABLE INSTALLER, WITH THE CAPABILITY OF PROVIDING A MANUFACTURER'S CERTIFICATION OF NOT LESS THAN FIFTEEN□15□YEARS FOR THE INSTALLED CABLING AND ASSOCIATED TERMINATION E□UIPMENT. THE CONTRACTOR SHALL SUBMIT PROOF OF CERTIFICATION TO OWNER PRIOR TO COMMENCING WORK. PROVIDE MAXIMUM INSTALLATION WARRANTY OFFERED BY THE MANUFACTURER.
9. PROJECT RECORD DOCUMENTS□AS-BUILTS□WILL BE PROVIDED UPON COMPLETION OF THE INSTALLATION. DRAWINGS WILL BE UPDATED ELECTRONICALLY AND SUBMITTED TO LAWA IN ACCORDANCE WITH THE SCHEDULE PROVIDED FOR THIS BY LAWA. DO NOT WAIT UNTIL THE END OF THE PROJECT. SUBMIT RECORD DRAWING FILES IN AUTOCAD RELEASE 2008 OR LATER.
10. CONTRACTOR WILL BE RE□UIRED TO ATTEND REGULAR WEEKLY PROGRESS MEETINGS AND SUBMIT PROJECT STATUS REPORTS AND UPDATED SCHEDULES.

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Los Angeles World Airports
Project
LAX Consolidated Rental Car Facility
Lo□Angele□International Airport

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SUBMITTED BY _____ ASST. CHIEF AIRPORTS ENGINEER

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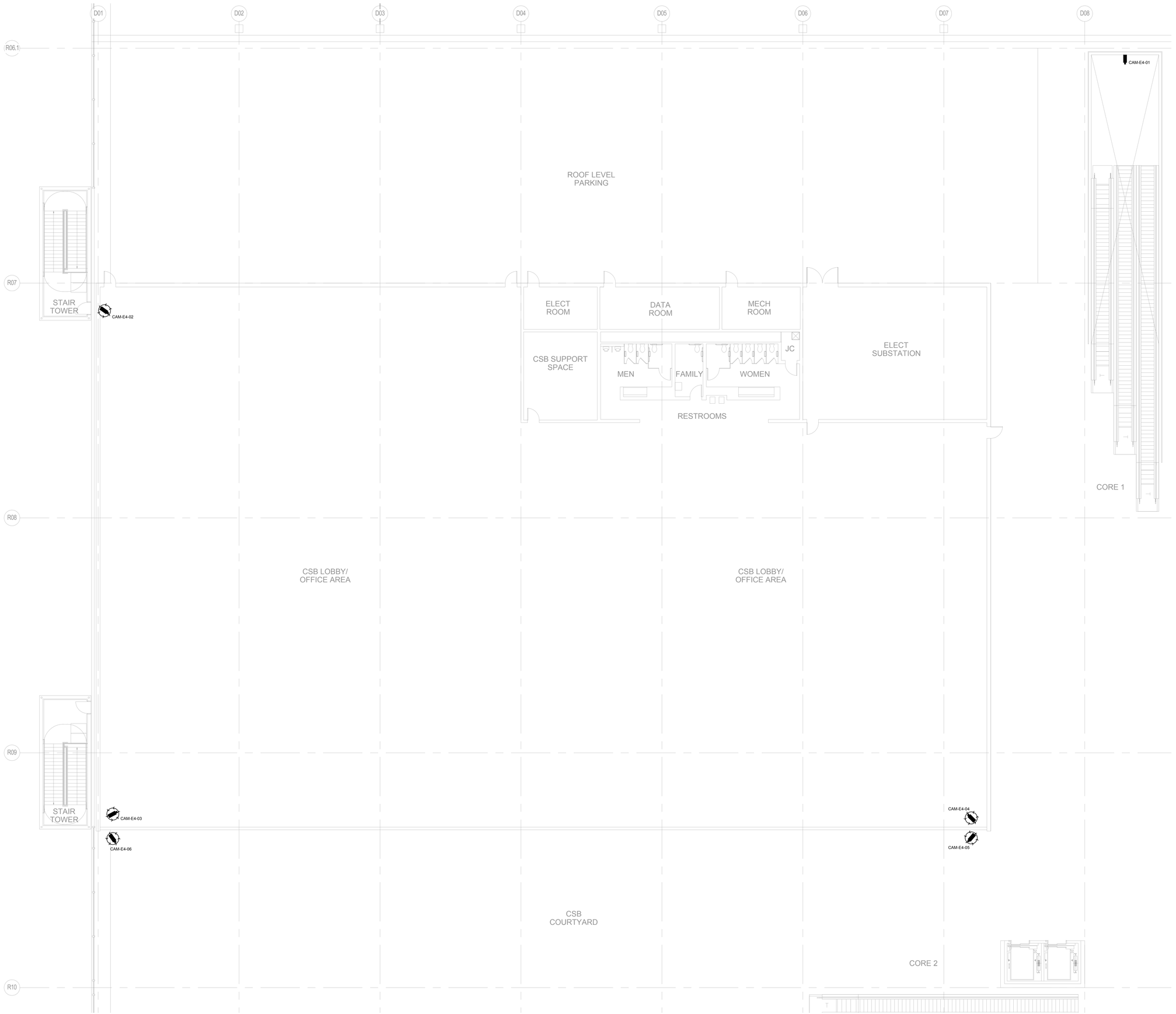
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DRAWN BY:	R. B
CHECKED BY:	TW

SHEET TITLE:
SECURITY LEGEND, NOTES, AND ABBREVIATIONS

SHEET NO.
5-TY-001

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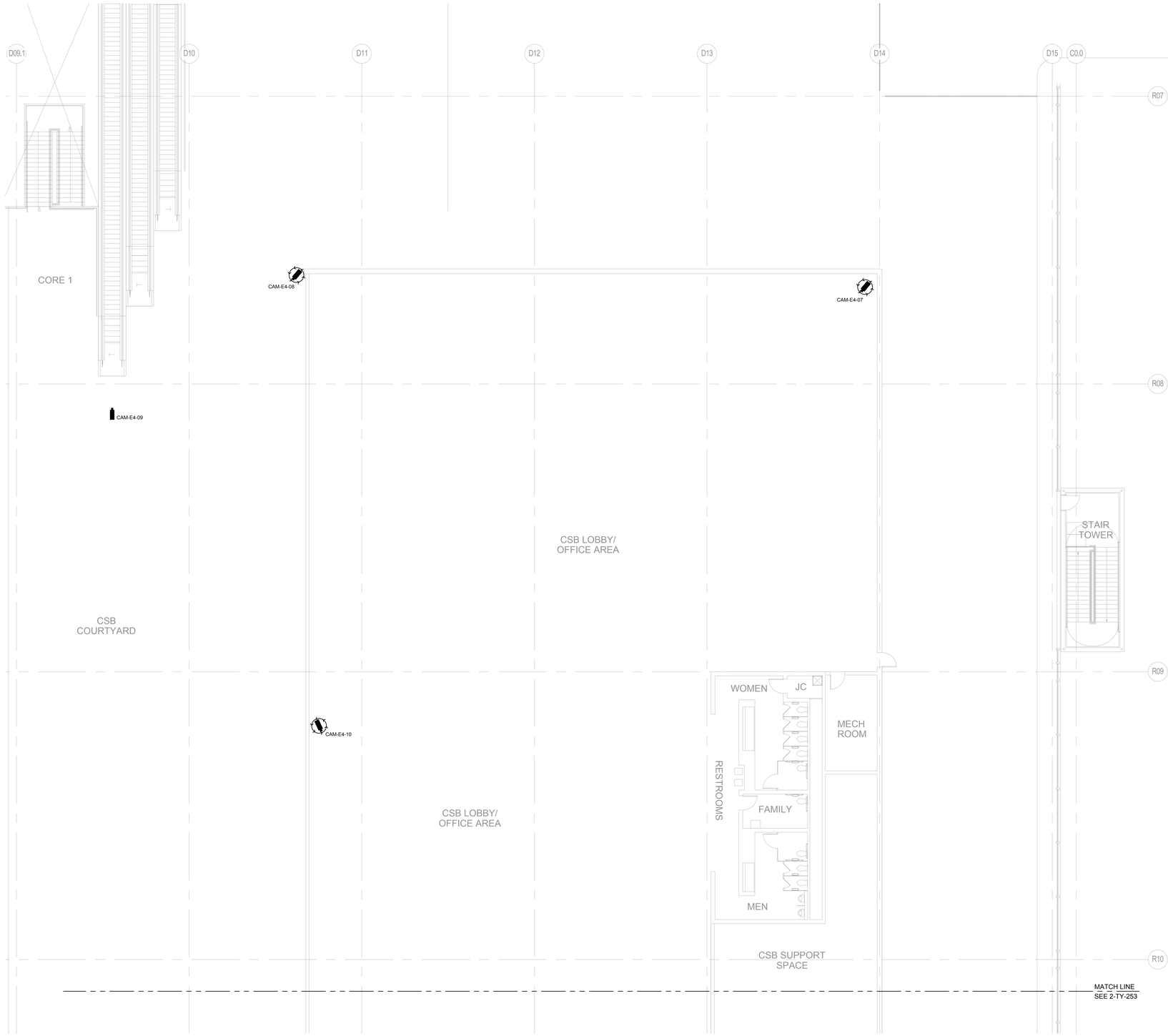
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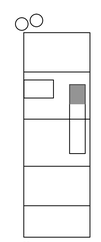
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BUILDING E

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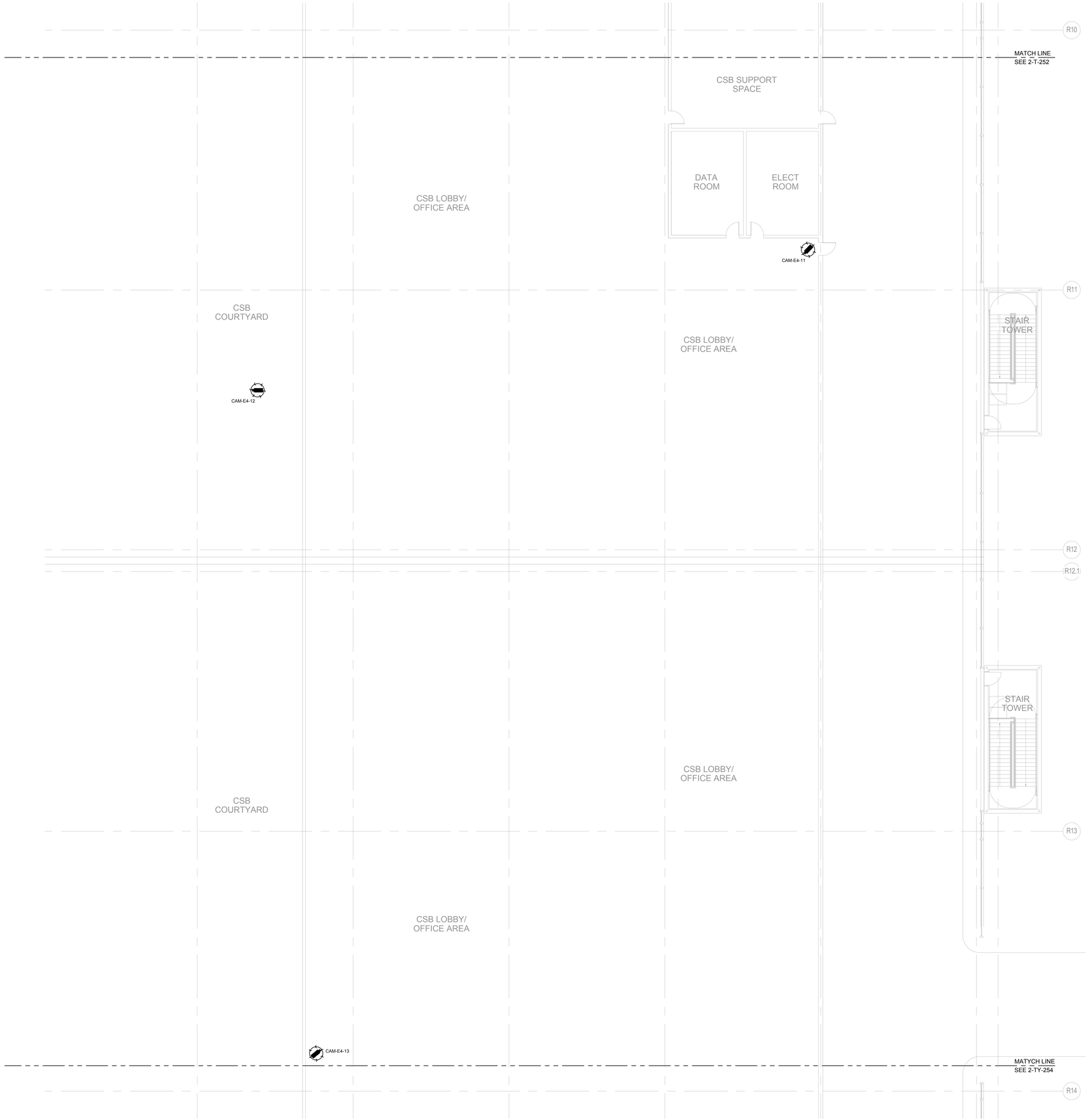
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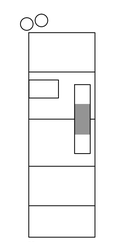
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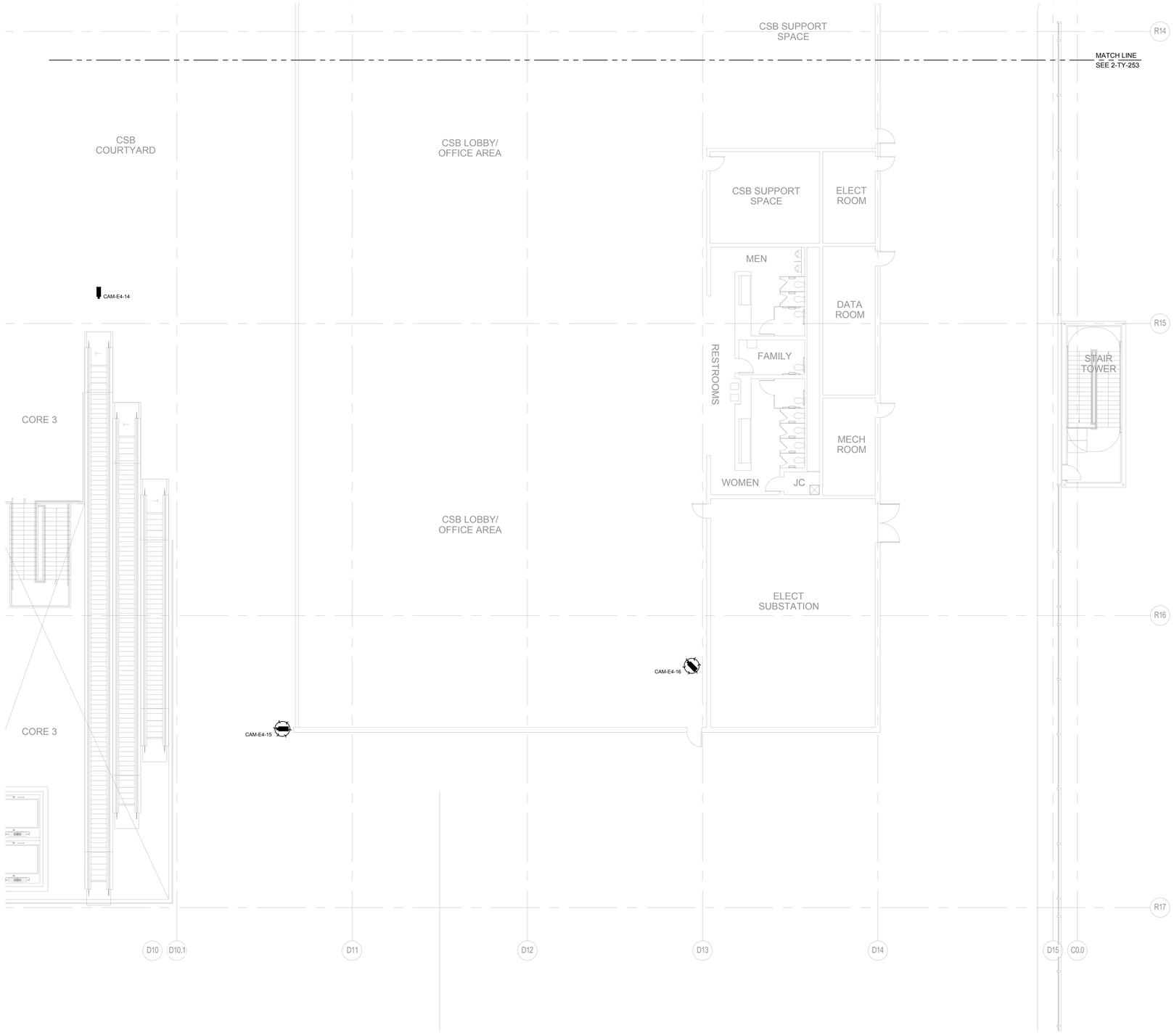
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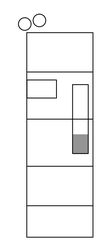
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