CAMPUS PUBLIC SAFETY BUILDING
DSA SET
COMPTON CCD

APPLICABLE STATE CODES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH:

2013 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. *

2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2012 INTERNATIONAL BUILDING CODE VOLUMES 1-2 & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2011 NATIONAL ELECTRICAL CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2012 UNIFORM MECHANICAL CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2012 UNIFORM PLUMBING CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.

2013 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
(2012 INTERNATIONAL FIRE CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, CCR.

2013 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.

TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2007 ASME A17.1(wA17.1a/CSA B44a-08 addenda) SAFETY CODE FOR ELEVATORS AND ESCALATORS

2. ALL WORK AND MATERIALS SHALL BE IN FULL CONFORMANCE WITH THE REQUIREMENTS OF THESE CODES AND ALL APPLICABLE LOCAL ORDINANCES. WHERE CONTRACT DOCUMENTS EXCEED SUCH REQUIREMENTS, WITHOUT VIOLATING SUCH CODES, REGULATIONS AND ORDINANCES, CONTRACT DOCUMENTS TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY.

3. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

5. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

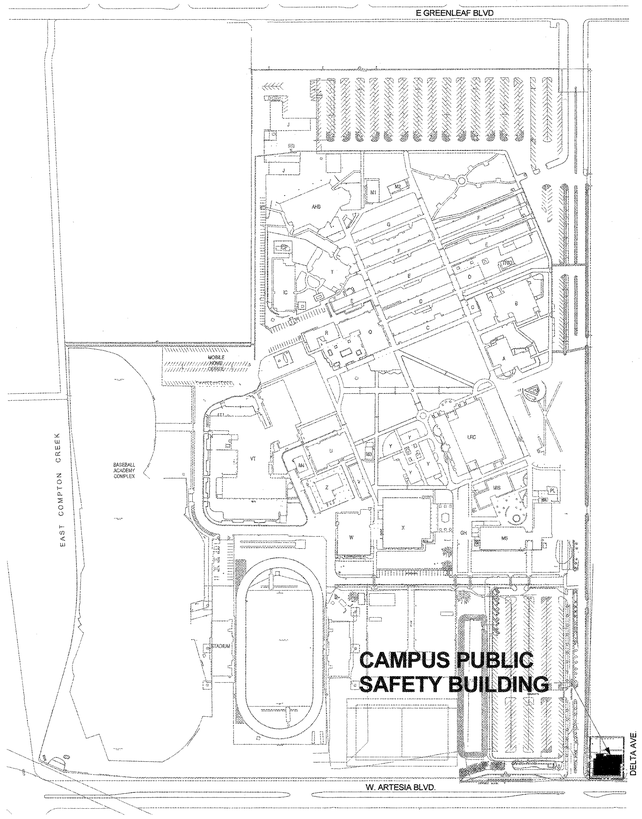
* CALIFORNIA ADMINISTRATIVE CODE, PART 1, CHAPTER 10, ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC).

PARTIAL LIST OF APPLICABLE STANDARDS

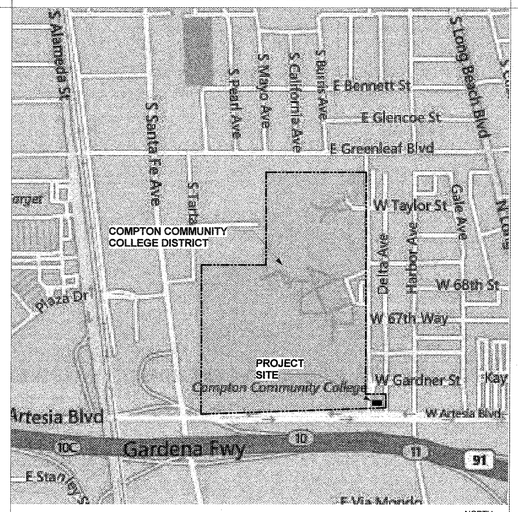
NFPA 10	STANDARD FOR PORTABLE FIRE EXINGUISHERS	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CA AMENDED)	2016 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED)	2016 EDITION
(NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES")		
NFPA 75	STANDARD FOR FIRE PROTECTION OF INFORMATION TECHNOLOGY EQUIPMENT	2013 EDITION
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2013 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

OVER ALL CAMPUS PLAN

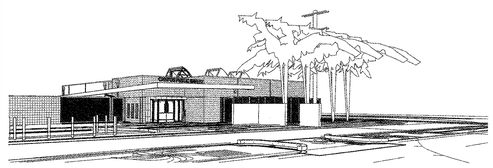


VICINITY MAP



SITE ADDRESS: 1111 E ARTESIA BLVD., COMPTON, CA 90221

PROJECT PERSPECTIVE VIEW



SHEET INDEX

FA0.3.1 FIRE ALARM DETAILS
FA0.3.2 FIRE ALARM DETAILS
TOTAL: 94

DEFERRED APPROVAL ITEMS

INSTALLATION OF DEFERRED APPROVAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER WHO HAS BEEN DELEGATED THE RESPONSIBILITY OF COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION, AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. DEFERRED ITEMS SHALL BE COMPLETED PRIOR TO OCCUPANCY OF BUILDINGS AFFECTED BY THE DEFERRED WORK.

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.

ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

DEFERRED APPROVAL ITEMS ARE AS FOLLOWS:

1. THERE ARE NO DEFERRED APPROVALS ON THIS PROJECT.

THE PLANS AND SPECIFICATIONS SHALL BE STAMPED AND SIGNED BY
THE ARCHITECT AND ENGINEER OF RECORD BEFORE SUBMITTAL TO DSA.

CODE ANALYSIS

BUILDING DATA:

(1) OCCUPANCY GROUP: B
(2) SECONDARY OCCUPANCY GROUP: N/A
(3) RISK CATEGORY: IV
(4) TYPE OF CONSTRUCTION: V-B, NON-RATED
(5) FIRE SPRINKLER: N/A
(6) ACTUAL STORIES: 1-STORY
(7) TOTAL ACTUAL BUILDING AREA: 5,550 SF

(8) PER 2013 CBC TABLE 503, ALLOWABLE BUILDING STORIES:
BASICAL ALLOWABLE STORIES: 2 STORIES.
ACTUAL STORIES: 1 STORY < 2 STORIES, THEREFORE: COMPLIANT

(9) PER 2013 CBC TABLE 503, ALLOWABLE BUILDING HEIGHT:
BASICAL ALLOWABLE HEIGHT: 40 FT
ACTUAL BUILDING HEIGHT: 14' - 8" FT < 40 FT, THEREFORE: COMPLIANT

(10) PER 2013 CBC TABLE 503, ALLOWABLE FLOOR AREA:
BASIC ALLOWABLE FLOOR AREA: 9,000 SF / STORY
ACTUAL BUILDING AREA: 5,550 SF < 9,000 SF, THEREFORE: COMPLIANT

FIRE-RESISTANTANCE RATING REQUIREMENTS PER 2013 CBC TABLE 601

CONSTRUCTION TYPE: VB	REQUIRED	PROVIDED
PRIMARY STRUCTURAL FRAME	0	0
EXT. BEARING WALLS	0	0
INT. BEARING WALLS	0	0
EXT. NON BEARING WALLS & PARTITIONS	0	0
INT. NON BEARING WALLS & PARTITIONS	0	0
FLOOR CONSTRUCTION & SECONDARY MEMBERS	0	0
ROOF CONSTRUCTION & SECONDARY MEMBERS		
ROOF MEMBERS ARE < 20 FT	0	0
ROOF MEMBERS ARE > 20 FT	0	0

FIRE-RESISTANTANCE RATING REQUIREMENTS PER 2013 CBC TABLE 602

CONSTRUCTION TYPE: VB
OCCUPANCY: B
SEPERATION DISTANCE X > 30' 0 0

PLUMBING FIXTURE COUNT PER 2013 CPC TABLE 422.1
36 TOTAL OCCUPANCY OF BUILDING SPACES

	REQ:	WC:	U:	L:	DF:
18 MEN		1 OR	1	1	
18 WOMEN		1		1	
					2
	PROV.	WC.	U:	L:	DF:
18 MEN		1	0	1	
18 WOMEN		1		1	
					2

THEREFOR, ACTUAL PROVIDED PLUMBING FIXTURE COUNT COMPLIANT W/ 2013 CPC.

PROJECT DIRECTORY

PROJECT

CAMPUS PUBLIC SAFETY BUILDING
COMPTON COMMUNITY COLLEGE DISTRICT
1111 E ARTESIA BLVD., COMPTON, CA 90221

OWNER

COMPTON COMMUNITY COLLEGE DISTRICT
1111 E ARTESIA BLVD., COMPTON, CA 90221
(310) 900-1600

ARCHITECT

LITTLE
1300 DOVE STREET, SUITE 100
NEWPORT BEACH, CA 92660
(949) 698-1400
(949) 698-1433 (FAX)

CIVIL

FPL & ASSOCIATES, INC.
10 CORPORATE PARK, SUITE 310
IRVINE, CA 92606
(949) 252-1888

STRUCTURAL

TTG: TMAD TAYLOR & GAINES
901 VIA PIEMONTE, SUITE 400
ONTARIO, CA 91764
(909) 477-8915

MECHANICAL / ELECTRICAL / PLUMBING

dHA + Calpec
150 S. ARROYO PARKWAY, SUITE NO. 100
PASADENA, CA 91105
(626) 445-8580

LANDSCAPE

TCLA, INC.
22792 CENTRE DRIVE, #107
LAKE FOREST, CA 92630
(949) 250-1615
(949) 916-942 (FAX)

CONSTRUCTION MANAGERS

PCM3
970 BRIGHTON CT., 2ND FLOOR
SAN DIMAS, CA 91773
(909) 592-4888

PROJECT DESCRIPTION

WORK UNDER THIS CONTRACT INCLUDES THE FOLLOWING AREAS, AS SHOWN ON THE DRAWINGS, SPECIFIED IN THE PROJECT MANUAL, AND DEFINED IN THE PROJECT CONTRACT DOCUMENTS, INCLUDING BUT NOT NECESSARILY LIMITED TO:

NEW CONSTRUCTION OF MINOR SITE IMPROVEMENTS & A ONE-STORY PUBLIC SAFETY BUILDING CONTAINING LOBBY, OFFICES, LOCKER ROOMS, AND ACCESSORY SUPPORT SPACES.

PROJECT INSPECTOR

A "DSA CERTIFIED" PROJECT INSPECTOR OF RECORD (IOR) EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR AND IR A-7. INSPECTOR SHALL BE CLASS 1.

Statement of General Conformance
FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS,
INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. 03-117873 File No. 19-C1)

☒ The drawings or sheets listed on the cover or index sheet
☐ This drawing, page of specifications/calculations

dha+c have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344* of Title 24, Part 1. *(Title 24, Part 1, Section 4-317 (b))*

I certify that: ☒ All drawings or sheets listed on the cover or index sheet
☐ This drawing or page

☒ is/are in general conformance and
☒ have been coordinated

12/12/17
Signature Date

Architect or Engineer designated to be in general responsible charge

Rita S. Carter
Print Name

C35431 4-30-2019
License Number Expiration Date

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117873
AC MF FLS DO SS RC
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

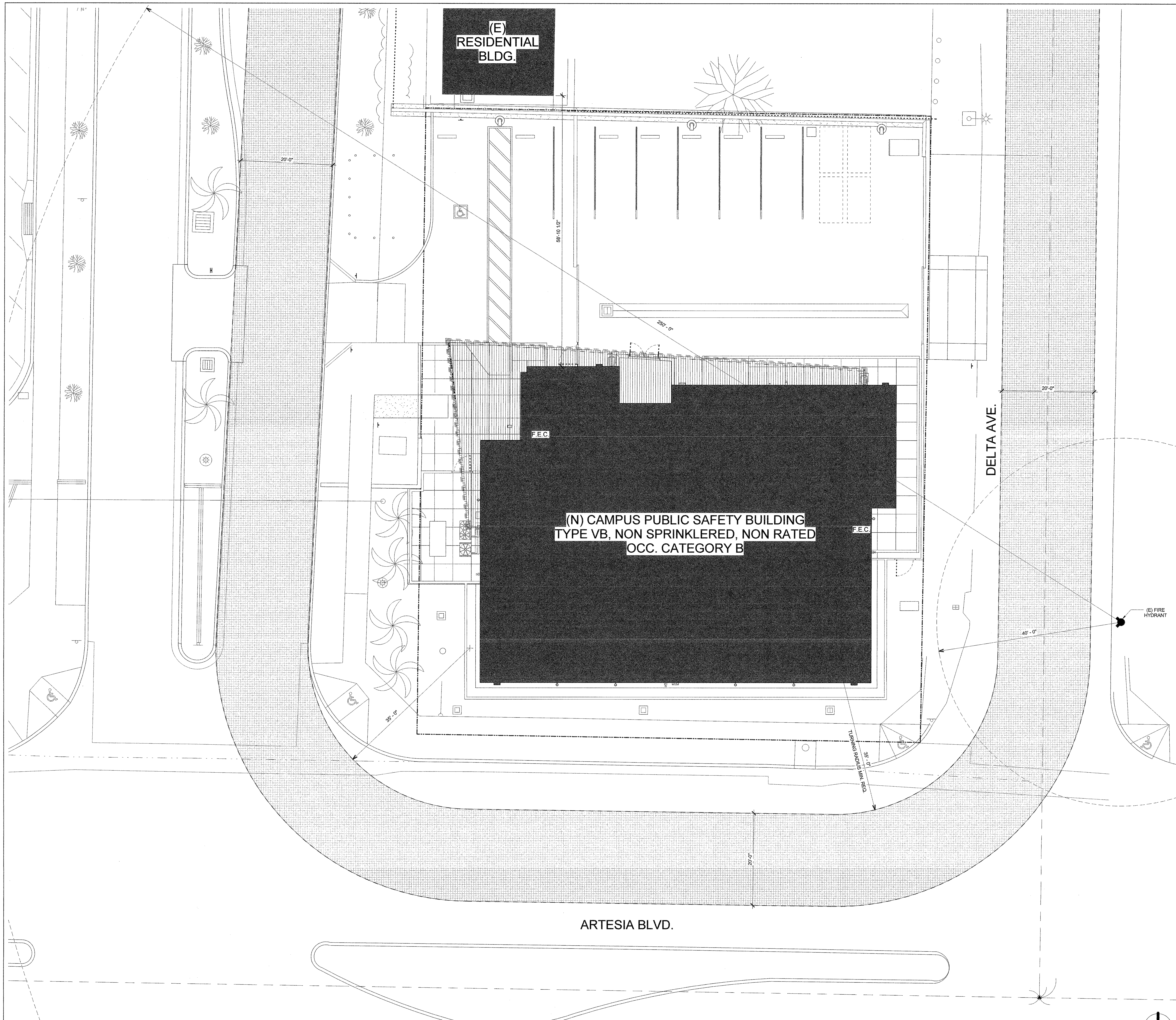
SEAL / SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
TITLE SHEET / SHEET INDEX

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	G0.1.1



LOCAL FIRE AUTHORITY ACCESS SITE PLAN
1 G0.2.3 1/8" = 1'-0"

DSA 810

LOCAL FIRE AUTHORITY REVIEW

To facilitate the Division of the State Architect's (DSA) approval of the Fire/Life Safety portion of a project, DSA requires Local Fire Authority (LFA) review of certain elements as identified in this form. Use of this form is mandatory for projects that add square footage to a campus or if any item on this form is relevant to the project. For additional information, see DSA 810 Instructions and DSA Policy 09-01.

PROJECT INFORMATION

School District/Owner: Compton Community College District
Project Name/School: Campus Public Safety Building
Project Address: 1111 E. Artesia Blvd., Compton, CA 90221

LOCAL FIRE AUTHORITY (LFA)

LFA Agency Name: City of Compton Fire Department
LFA Reviewer Name: James M. Penn | Title: Fire Protection Specialist
Email: jpenn@comptoncity.org | Telephone Number: (310) 605-6271
I have reviewed and responded to the applicable items for this project as listed below.
Note: Only sign this form when it is imaged onto the site plan. A loose form is not acceptable to DSA.
LFA Reviewer's Signature: ______ Date: 9/19/16
Review Key: "Y" = Complies with LFA requirements "N" = Not approved (complete Section 8) "NA" = Not applicable to the project "NR" = LFA elects not to review

	Description	Y	N	NA	NR
1	Where an elevator does not meet medical emergency service cab size, per the California Building Code (CBC), use of stairways for emergency rescue and patient transport is acceptable.		N		
2	Access roads, fire lane markings, pavers and gate entrances are in accordance with Title 19, California Code of Regulations and the California Fire Code, Chapter 5.	Y			
3	Fire hydrant location and distribution complies with the California Fire Code (or see # 4).	Y			
4	Fire hydrant location and distribution complies with NFPA 1142, "Alternate Means." If "NR" is checked, DSA can only approve on-site water storage as an alternate. The signature of the school district official is required to acknowledge the use of alternate means. Signature of School District Official: ______ Date: 9/19/2016 Print the School District Official's Name: Felipe R. Lopez	Y			
5	The location(s) of the proposed post indicator valve and fire department connection meet the requirements of this jurisdiction.			✓	
6	The location(s) of the detector check valve assembly meet the requirements of this jurisdiction.			✓	
7	Is the project located in a hazard severity zone area? (CBC, Chapter 7A, Section 701A.) ☐ Yes ☒ No. Check type if "Yes": ☐ Moderate ☐ High ☐ Very High ☐ WIFA (If one of these boxes is checked, the project design must meet the requirements of Chapter 7A.)				
8	COMMENTS (note deficiencies):				

DSA 810 (rev 05-12-14) Page 1 of 1
DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA

Long Beach Water Department
The Standard in Water Conservation & Environmental Stewardship

CHRISTOPHER J. GARNER, General Manager

September 6, 2016

Mr. David Phan
Little Diversified Architectural Consulting
1300 Dove Street, Suite 100
Newport Beach, CA 92660

Dear Mr. Phan:

In response to your request to perform a fire flow test for **1199 W. Artesia Boulevard**, the following data was furnished:

Flow Test No. 1929 Date of Test: 8/30/16
Flow Location: **Fire Hydrant located at 239 W. Artesia Blvd.**
Pitot Pressure: 26 psi
4" Outlet Chart Reading: 2190 gpm

Pressure Reading: **Fire Hydrant located at 6624 Delta Ave.**
Static Pressure: 57 psi
Residual Pressure: 52 psi
Size of Water Main: 12" CI Main along Artesia Blvd.

The flow test represents data taken on the above date. Flows and pressures are subject to seasonal and time of day demand variations and fluctuations in reservoir levels and these variations may be significant. The data represent hydraulic capacity in the vicinity of the test site only and care should be taken in extrapolating data to other areas.

If you have any questions, please call Dennis Santos at (562) 570-2381.

Sincerely,

Dennis A. Santos, P.E.
Civil Engineer

Att.

cc: Lisa Crowley, Engineering Intern LC

DAS:LC:rc
H:\DEVELOP\CUSERV\FIRE FLOW\WFT2016\1929\WFT1929.docx

1800 E. WARDLOW ROAD & LONG BEACH, CALIFORNIA 90807-4931 & PHONE (562) 570-2300 & FAX (562) 570-2306 & WWW.LBWATER.ORG

SYSTEM HYDRAULIC INFORMATION

DATE: BY:

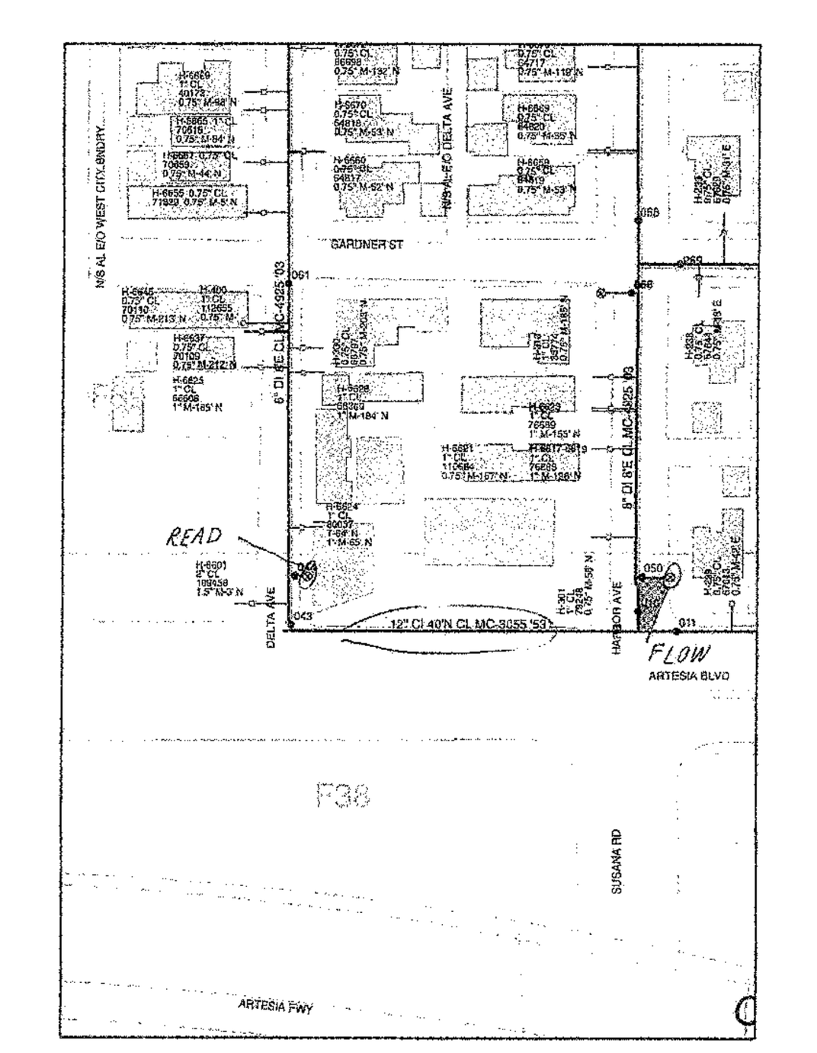
HIGH WATER RESERVOIR LEVEL:	MWD CONNECTION:
ALAMITOS: 24.08 FEET	LB-8: FLOW: 0 MGD PRESSURE: 0 PSI
J. WILL JOHNSON: 25.41 FEET	LB-4: FLOW: 5.77 MGD PRESSURE: 0 PSI

CITIZEN PUMP STATION:	42-INCH WATER MAIN:
FLOW: 3.50 MGD PRESSURE: 67.7 PSI	☐ OPEN ____ MGD ☒ CLOSED

REFERENCE FIRE FLOW TEST NUMBER: 1929

The Alamitos Reservoir Tank Bottom Elevation is 170 Feet.

The J. Will Johnson Reservoir Tank Bottom Elevation is 170 Feet.



LEGEND

FIRE LANE - 20'-0" WIDE MINIMUM, U.N.O.

(E) FIRE HYDRANT

ASSUMED PROPERTY LINE

GENERAL NOTES

1. SEE CIVIL DRAWINGS FOR SITE EXCAVATION, GRADING, DRAINAGE, WATER, SEWER, PAVING, HORIZONTAL AND VERTICAL CONTROL, AND ADDITIONAL SITE AND CONSTRUCTION INFORMATION.

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OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC / FLS SS
DATE DEC 1 2 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

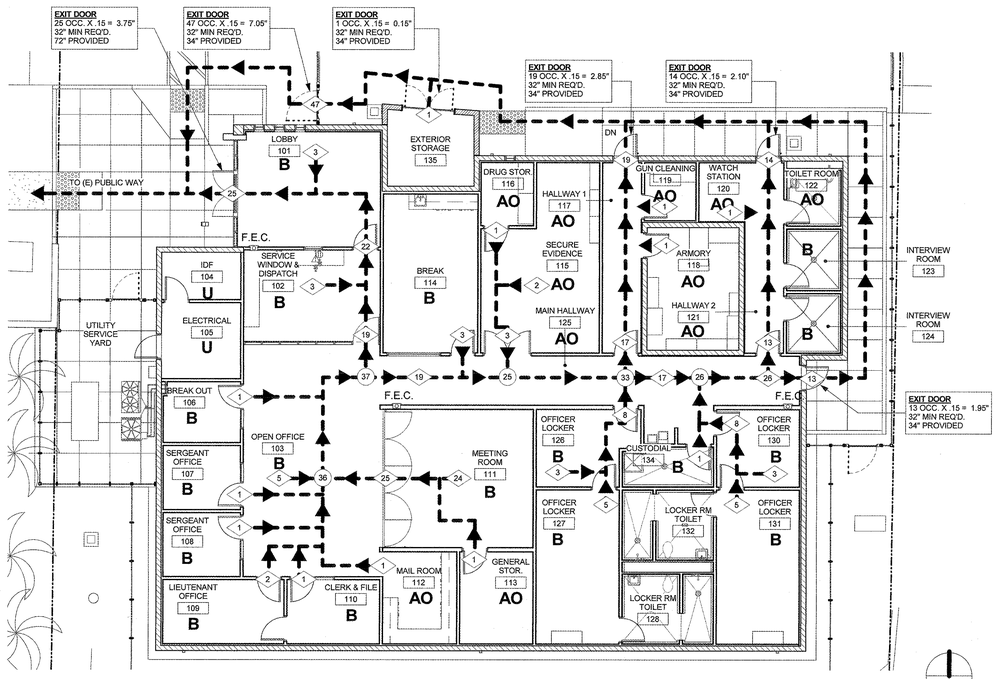
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
FIRE ACCESS SITE PLAN

PROJECT NUMBER
913-4675-00

ISSUE DATE 12/01/16
SHEET NO. G0.2.3



1 G0.3.1 OCCUPANCY & EXIT ANALYSIS
1/8" = 1'-0"

EXITING ANALYSIS

NO.	ROOM NAME	AREA	OCC. TYPE	LOAD FACTOR	OCC. LOAD	# OF EXITS REQ'D	EXIT WIDTH FACTOR	EXIT WIDTH REQ'D	EXIT WIDTH PROVIDED
101	LOBBY	280 SF	B	100	3	1	0.15	0.45	72"
102	SERVICE WINDOW & DISPATCH	211 SF	B	100	3	1	0.15	0.45	34"
103	OPEN OFFICE	406 SF	B	100	5	1	0.15	0.75	34"
104	IDF	63 SF	AO	0		1	0.15	0	34"
105	ELECTRICAL	102 SF	AO	0		1	0.15	0	34"
106	BREAK OUT	79 SF	B	100	1	1	0.15	0.15	34"
107	SERGEANT OFFICE	84 SF	B	100	1	1	0.15	0.15	34"
108	SERGEANT OFFICE	84 SF	B	100	1	1	0.15	0.15	34"
109	LIEUTENANT OFFICE	131 SF	B	100	2	1	0.15	0.3	34"
110	CLERK & FILE	100 SF	B	100	1	1	0.15	0.15	34"
111	MEETING ROOM	348 SF	B - ASSEMBLY	15	24	1	0.15	3.6	>17"
112	MAIL ROOM	116 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
113	GENERAL STOR.	113 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
114	BREAK	255 SF	B	100	3	1	0.15	0.45	34"
115	SECURE EVIDENCE	318 SF	AO - STORAGE	300	2	1	0.15	0.3	68"
116	DRUG STOR.	56 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
117	HALLWAY 1	125 SF	AO	0		1	0.15	0	34"
118	ARMORY	192 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
119	GUN CLEANING	50 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
120	WATCH STATION	44 SF	AO - STORAGE	300	1	1	0.15	0.15	>7"
121	HALLWAY 2	127 SF	AO	0		1	0.15	0	34"
122	TOILET ROOM	51 SF	AO	0		1	0.15	0	34"
123	INTERVIEW ROOM	56 SF	B	100	1	1	0.15	0.15	34"
124	INTERVIEW ROOM	54 SF	B	100	1	1	0.15	0.15	34"
125	MAIN HALLWAY	540 SF	AO	0		1	0.15	0	2 x 34"
126	OFFICER LOCKER	122 SF	B - LOCKER RM	50	3	1	0.15	0.45	34"
127	OFFICER LOCKER	215 SF	B - LOCKER RM	50	5	1	0.15	0.75	34"
128	LOCKER RM TOILET	68 SF	AO	0		1	0.15	0	34"
129	SHOWER	37 SF	AO	0		1			
130	OFFICER LOCKER	108 SF	B - LOCKER RM	50	3	1	0.15	0.45	34"
131	OFFICER LOCKER	215 SF	B - LOCKER RM	50	5	1	0.15	0.75	34"
132	LOCKER RM TOILET	68 SF	AO	0		1	0.15	0	34"
133	SHOWER	37 SF	AO	0		1			
134	CUSTODIAL	59 SF	AO - STORAGE	300	1	1	0.15	0.15	34"
135	EXTERIOR STORAGE	109 SF	AO - STORAGE	300	1	1	0.15	0.15	2 x 36"

LEGEND

ROOM NAME / X — ROOM NAME / ROOM NUMBER

(M) — CUMULATIVE OCCUPANCY

<X> — EXITING OCCUPANTS

——→ — EXIT PATH OF TRAVEL

OCCUPANCY GROUP

B — BUSINESS OCCUPANCY (OFFICE & EDUCATIONAL OCCUPANCIES ABOVE 12TH GRADE.)

AO — ACCESSORY OCCUPANCY (CORRIDORS, TOILET ROOMS, SHOWERS, STORAGE, ETC.)

U — ELECTRICAL & IDF ROOMS

NOTES

1. "DESIGN PROFESSIONAL IN GENERAL, RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.
   DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."
2. PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER FREE ACCESS WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE. EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL MAINTAIN FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM THE WALL AND ABOVE 27" AND LESS THAN 80" (11B-204 & 11B-307). CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVEDUNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 11B-206.
3. PROVIDE SITE DIRECTIONAL ACCESSIBLE ROUTE SIGNAGE (DS-1) AT ALL MAJOR JUNCTIONS PER CBC SEC. 11B-216.6.
4. REFER TO SHEET(S) A9.6.2 FOR EXIT SIGNAGE.
5. DISTRICT HAS CLARIFIED THAT THERE IS NO STORAGE OF HAZARDOUS CHEMICALS OF ANY QUANTITY IN THIS BUILDING THEREFORE H-OCCUPANCY IS NOT REQUIRED.
6. DISTRICT HAS CLARIFIED THAT CAMPUS POLICE SERVICE IS A CONTRACTED SERVICE AND IS NOT AN EMERGENCY DISPATCH CENTER, THEREFORE THE BUILDING IS NOT AN ESSENTIAL SERVICES BUILDING.
7. THE DISTRICT HAS CLARIFIED THAT NO PERSONS WILL BE HELD IN THIS FACILITY, THEREFOR I-OCCUPANCY IS NOT REQUIRED.

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC. FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

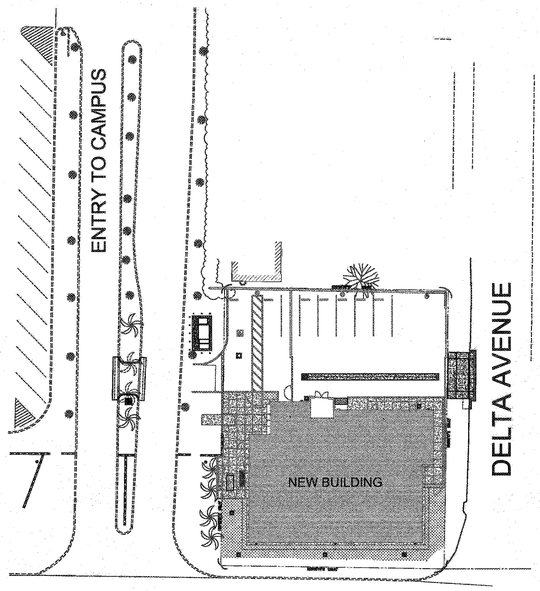
SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
ACCESSIBILITY & BUILDING EXIT ANALYSIS

PROJECT NUMBER
913-4675-00

ISSUE DATE: 12/01/16
SHEET NO.: G0.3.1

SITE IMPROVEMENT PLANS
FOR
COMPTON COMMUNITY COLLEGE
CAMPUS PUBLIC SAFETY BUILDING



INDEX MAP
SCALE: 1"=30'

GENERAL NOTES FOR GRADING

1. ALL WORK SHALL CONFORM WITH THE "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), 2015 EDITION AND THE LATEST REVISIONS THERETO, THE WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H. MANUAL), A.D.A, TITLE 24 REQUIREMENTS, AND THE 2013 C.B.C. UNLESS SPECIFIED OTHERWISE IN THE CONTRACT SPECIFICATIONS.
2. A COPY OF THE DIVISION OF STATE ARCHITECT APPROVED VERSION OF THESE PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE JOB SITE AT ALL TIMES.
3. AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE REGIONAL NOTIFICATION CENTER (UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA – U.S.A. AT 811) TO OBTAIN AN INQUIRY IDENTIFICATION NUMBER AND TO REQUEST THE UTILITY OWNERS TO MARK OR OTHERWISE INDICATE THE LOCATION OF THEIR SUBSURFACE FACILITIES. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES, INCLUDING ALL SERVICE CONNECTIONS, WHICH HAVE BEEN MARKED BY THE RESPECTIVE OWNERS AND WHICH MAY AFFECT OR BE AFFECTED BY ITS OPERATIONS. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL UTILITIES AND ALL STRUCTURES FOUND AT THE SITE.
4. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THE CONTRACTOR SHALL ALSO ABATE DUST NUISANCE BY CLEANING, SWEEPING AND SPRINKLING WITH WATER AND USING DUST FENCES OR OTHER METHODS AS DIRECTED BY THE CONSTRUCTION MANAGER OR FIELD INSPECTOR THROUGHOUT THE CONSTRUCTION OPERATION.
5. KEEP A RECORD OF CHANGES THAT OCCUR DURING CONSTRUCTION AND SUBMIT THIS RECORD TO THE OWNER CERTIFIED AS "RECORD DRAWING" PLANS.
6. ALL DAMAGE CAUSED TO PUBLIC STREETS, INCLUDING HAUL ROUTES, ALLEYS, SIDEWALKS, CURBS OR STREET FURNISHINGS, OR TO PRIVATE PROPERTY SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE PUBLIC WORKS INSPECTOR'S & THE PROJECT CIVIL ENGINEER'S SATISFACTION.
7. THE CONTRACTOR SHALL REMOVE AND REPLACE ANY BROKEN OR DAMAGED SIDEWALK, CURB, GUTTER OR ASPHALT PAVING CAUSED BY THEIR WORK AT THE DIRECTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
8. TRIM TREE ROOTS AS NECESSARY TO CONSTRUCT PAVEMENT AND INSTALL HEADERS. TRIM ROOTS UNDER THE DIRECTION OF A CERTIFIED ARBORIST. THE DISTRICT OAR WILL NOTIFY THE DISTRICT GARDENING SUPERVISOR PRIOR TO TRIMMING ROOTS.
9. UPON MOBILIZATION THE CONTRACTOR SHALL POTHOLE AND EXPOSE THE EXISTING UTILITIES AT ALL CROSSINGS AND AT THE POINT OF TIE–IN; THEN CONTACT THE ENGINEER TO VERIFY THE ELEVATION OF THE EXISTING FACILITIES.
10. SURVEY MONUMENTS SHALL BE PRESERVED AND REFERENCED BEFORE CONSTRUCTION AND RE–PLACED AFTER CONSTRUCTION PURSUANT TO SECTION 2–9 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC).
11. EITHER WATER OR DUST PALLIATIVE, OR BOTH, MUST BE APPLIED FOR THE ALLEVIATION OR PREVENTION OF EXCESSIVE DUST RESULTING FROM THE LOADING OR TRANSPORTATION OF EARTH FROM OR TO THE PROJECT SITE OR PRIVATE AND PUBLIC ROADWAYS.
12. CONSTRUCT STRAIGHT GRADES BETWEEN ELEVATIONS SHOWN ON PLAN UNLESS INTERRUPTED BY A GRADE CHANGE LINE. ANY DEVIATION FROM THE GRADING PLAN MUST HAVE PRIOR APPROVAL FROM THE ENGINEER.
13. ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE INSPECTED AND APPROVED BY THE SOILS ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) AFTER REMOVAL OF UNSUITABLE MATERIAL AND EXCAVATION OF KEYWAYS AND BENCHES, AND PRIOR TO PLACEMENT OF SUBSURFACE DRAINAGE SYSTEMS OR ANY FILLS.
14. ALL SOILS OR ROCK MATERIALS DEEMED UNSUITABLE FOR PLACEMENT IN COMPACTED FILL SHALL BE REMOVED FROM THE SITE. ANY IMPORTED MATERIAL SHALL BE TESTED PER DISTRICT REQUIREMENTS AND APPROVED BY THE SCHOOL DISTRICT AND SOILS ENGINEER PRIOR TO USE IN COMPACTED FILL. BLOCKY MATERIAL SHALL BE BROKEN INTO SUITABLE PARTICLE SIZES, BEFORE BEING USED AS FILL IN CONFORMANCE THE PROJECT SOILS REPORT.
15. ALL TREE ROOTS, ABANDONED IRRIGATION LINES, UTILITY SERVICES, SEPTIC TANKS AND SIMILAR MATERIALS SHALL BE REMOVED FROM THE SITE AND VOIDS CREATED THEREBY SHALL BE PROPERLY FILLED AND COMPACTED AS DIRECTED BY THE GEOTECHNICAL ENGINEER WITHIN THE LIMITS OF ALL OVER–EXCAVATED AREAS.
16. ALL EXCAVATED BACK SLOPES AND KEYS FOR BUTTRESS FILLS MUST BE EXAMINED BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER TO INSURE ALL POTENTIAL PLANES OF FAILURE HAVE BEEN EXPOSED IN THE EXCAVATION AND WILL BE ADEQUATELY SUPPORTED BY THE PROPOSED BUTTRESS FILLS.
17. THE SOILS ENGINEER SHALL SUBMIT RECOMMENDATIONS FOR CORRECTIVE WORK TO INSURE SLOPE STABILITY WHERE UNSTABLE MATERIAL IS EXPOSED AT THE TOP OF CUTS. COORDINATE WITH ARCHITECT OF RECORD AND OWNERS REPRESENTATIVE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STORM DAMAGE PREVENTION MEASURES OR EROSION CONTROL DEVICES AND/OR TO PERFORM CERTAIN GRADING TO PREVENT SOIL OR EXCESS RUNOFF FROM FLOWING INTO PUBLIC STREETS OR ADJACENT PROPERTIES. IN THE EVENT OF SUCH AN OCCURRENCE, CLEANUP SHALL COMMENCE IMMEDIATELY. SHOULD CITY FORCES OR THE CITY CONTRACTOR PERFORM ANY CLEANUP RESULTING FROM THIS DEVELOPMENT, THE CONTRACTOR SHALL PAY THE COST INCURRED WITHIN TEN (10) WORKING DAYS UPON RECEIPT OF BILLING.
19. THE CONTRACTOR OR HIS AGENT SHALL BE RESPONSIBLE FOR REMOVAL AND CLEANUP OF ANY SPILL ON PUBLIC STREETS DURING THE GRADING OPERATION. AS WELL AS REPAIR OF DAMAGE TO HAUL ROUTES AND EXISTING FACILITIES.
20. MAXIMUM SLOPES FOR BOTH CUT AND FILL SHALL BE 2:1.
21. NO OVERSIZE OR OVERWEIGHT LOADS ARE PERMITTED WITHOUT A SEPARATE MOVING PERMIT.
22. ALL EQUIPMENT USED TO HAUL EXCAVATION OR FILL MATERIAL FROM OR TO THE SITE SHALL FOLLOW A DESIGNATED ROUTE OR ROUTES IN GOING TO AND FROM THE SITE. THE CONTRACTOR SHALL BE ENTITLED TO THE DESIGNATION OF A ROUTE PROVIDING ACCESS TO A SPECIFIED PLACE OTHER THAN THE SITE, AFTER SHOWING TO THE SATISFACTION OF THE CITY BUILDING OFFICIAL THAT SUCH SPECIFIED PLACE IS A PLACE WHERE EXCAVATION MATERIAL MAY BE REASONABLY DEPOSITED OR FILL MATERIAL MAY BE OBTAINED. A SEPARATE ENCROACHMENT PERMIT IS REQUIRED WHEN IT IS NECESSARY TO FLAG TRAFFIC OR INSTALL ANY TRAFFIC CONTROL DEVICES NO CITY RIGHT–OF–WAY.
23. FINE GRADING TO BE NO LESS THAN THE FOLLOWING UNLESS STATED OTHERWISE ON THE PLANS:

	CROSS–SLOPE	LONGITUDINAL–SLOPE
PERMIOUS SURFACES	2.00%	1.00%
ASPHALT SURFACES	1.00%	1.00%
CONCRETE SURFACES	0.50%	0.50%

24. THE CONTRACTOR SHALL NOTIFY THE DSA INSPECTOR AND OWNERS REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK:

    (A) INITIAL: WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL AND IT HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. NO FILL SHALL HAVE BEEN PLACED PRIOR TO THIS INSPECTION.

    (B) ROUGH: WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPES.

    (C) FINAL: WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE RECORD PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED.
25. ANY EARTH ROCK, GRAVEL, SAND, STONE OR OTHER EXCAVATED MATERIAL DEPOSITED OR CAUSED TO ROLL, FLOW OR WASH UPON ANY PUBLIC PLACE OR PRIVATE PROPERTY SHALL BE REMOVED FROM SUCH PUBLIC PLACE OR PRIVATE PROPERTY BY THE END OF THE WORKDAY BY THE CONTRACTOR RESPONSIBLE FOR THE DEPOSITION. IF AN ADVERSE CONDITION IS CAUSED BY DEPOSIT, THE CONDITION SHALL BE CORRECTED IMMEDIATELY.
26. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON–STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
27. ALL TRUCKS HAULING DIRT, SAND, OIL, OR OTHER LOOSE MATERIALS ON A HIGHWAY ARE TO BE COVERED OR SHOULD MAINTAIN AT LEAST TWO FEET OF FREEBOARD IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA VEHICLE CODE SECTION 23114. (FREEBOARD MEANS VERTICAL SPACE BETWEEN THE TOP OF THE LOAD AND TOP OF THE TRAILER).
28. RAISE UTILITY BOXES TO ULTIMATE FINISH SURFACE IN SCOPE OF WORK AREAS.
29. CONTRACTOR SHALL HIRE A LICENSED SURVEYOR TO STAKE ALL CATCH BASINS, STORM DRAIN PIPE, SAW–CUT LINES, BUILDING PADS, FINISH FLOORS, SWALES AND GRADE BREAKS. TWO STAKES SHALL BE PROVIDED FOR ALL CATCH BASINS.
30. IN ORDER TO MITIGATE THE IMPACTS ON CULTURAL RESOURCES OR LANDSCAPING, IF CULTURAL MATERIAL SUGGESTIVE OF PREHISTORIC OR HISTORIC ORIGIN IS ENCOUNTERED, WORK IN THE VICINITY OF THE FIND SHALL BE STOPPED, AND THE OWNER SHALL BE NOTIFIED. GRADING, CONSTRUCTION OR LANDSCAPING SHALL NOT RESUME UNTIL THE FIND IS EVAULATED AND IT IS DETERMINED WHETHER THE MATERIAL IS ARCHAEOLOGICALLY SIGNIFICANT AND ADDITIONAL MITIGATION IS REQUIRED.
31. NO PERSON SHALL, WHEN HAULING ANY EARTH, SAND, GRAVEL, ROCK, STONE OR OTHER EXCAVATED MATERIAL OR DEBRIS OVER ANY PUBLIC STREET, ALLEY OR OTHER PUBLIC PLACE, ALLOW SUCH MATERIAL TO BLOW OR SPILL OVER UPON SUCH STREET, ALLEY OR PUBLIC PLACE OR ADJACENT PRIVATE PROPERTY OR ANY WATER BODIES, CREEKS OR STREAMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY CONSTRUCTION OR SOILS MATERIALS DEPOSITED ON THE PUBLIC RIGHT–OF–WAY, PUBLIC WATERS OR ADJACENT PRIVATE PROPERTY.

LEGEND

- POWER POLE
- SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- FIRE HYDRANT
- SEWER CLEANOUT
- WATER VALVE
- GAS VALVE
- WATER METER
- GAS METER
- WATER VAULT
- GAS VAULT
- TELEPHONE VAULT
- ELECTRIC VAULT
- WELL
- ELECTRIC PULLBOX
- GUY WIRE
- LIGHT
- (58.00) EXISTING ELEVATION
- 58.00 PROPOSED ELEVATION
- ------58------ = EXISTING CONTOURS
- ═══58═══ = PROPOSED CONTOUR
- SIGN POST
- WIRE FENCE
- CHAIN LINK FENCE
- BLOCK WALL
- TREE
- SURVEY MONUMENT
- FLOW DIRECTION
- EDGE OF PAVEMENT
- FS FINISHED SURFACE
- FF FINISHED FLOOR
- FL FLOW LINE
- CF CURB FACE
- GB GRADE BREAK
- HP HIGH POINT
- INV INVERT
- SD STORM DRAIN
- W DOMESTIC WATER
- S SANITARY SEWER
- G GAS
- E ELECTRICAL/POWER
- C COMMUNICATIONS

DEPTH FROM SURFACE 1'–6"

DEPTHS SHOWN ARE APPROXIMATE. ESTIMATED DEPTHS ARE FROM THE GROUND SURFACE TO THE CENTER OF THE FACILITY, INVERT OF WASTE LINES, OR TO THE FACILITY TRACER WIRE. DEPTH ESTIMATES SHOULD BE USED WITH CAUTION AND MAY VARY ALONG THE LENGTH OF THE FACILITY.

ABBREVIATIONS

ABND	ABANDONED	L T & T	LEAD TACK AND TAG
AC	ASPHALT PAVEMENT	MH	MANHOLE
AP	ANGLE POINT	NG	NATURAL GROUND
BLDG	BUILDING	N.I.C.	NOT IN CONTRACT
BC	BEGINNING OF CURVE	P.C.C.	PORTLAND CEMENT CONRETE
BW	BACK OF WALK	PL	PROPERTY LINE
CL	CENTERLINE	PIV	POST INDICATOR VALVE
CF	CURB FACE HEIGHT	PP	POWER POLE
CLF	CHAIN LINK FENCE	RCE	REGISTERED CIVIL ENGINEER
CONC	CONCRETE	RR	RAILROAD
DCV	DETECTOR CHECK VALVE	S	SLOPE
DESC	DESCRIBED	SDMH	STORM DRAIN MANHOLE
D/W	DRIVEWAY	SL	STREET LIGHT
DI	DROP INLET	SMH	SEWER MANHOLE
DS	DOWN SPOUT	S.P.P.W.C.	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
EP	EDGE OF PAVEMENT	S.S.P.W.C.	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK), 2015 EDITION
EC	END OF CURVE	SW	SIDEWALK
EX	EXISTING	TC	TOP OF CURB
FDC	FIRE DEPARTMENT CONNECTION	TELE	TELEPHONE
FH	FIRE HYDRANT	TG	TOP OF GRATE
FL	FLOWLINE	TCO	TOP OF CLEANOUT
FS	FINISH SURFACE	TS	TRAFFIC SIGN
GA	GUY ANCHOR	TW	TOP OF WALL
GB	GRADE BREAK	TYP.	TYPICAL
GP	GUARD POST	UDG	UNDERGROUND CONDUIT
GV	GAS VALVE	UTIL	UTILITY
HB	HOSE BIBB	WM	WATER METER
HP	HIGH POINT	WV	WATER VALVE
ICV	IRRIGTION CONTROL VALVE	W VLT	WATER VAULT
INV	INVERT	VIF	VERIFY IN FIELD
IP	IRON PIPE	VLT	VAULT
L	LENGTH		
LIP	LIP OF GUTTER		
LP	LIGHT POLE		

FLOOD ZONE INFORMATION

Per Flood Insurance Rate Map Number 06037C1815F, dated September 26, 2008, the flood zone for this area is ZONE X (SHADED). ZONE X (SHADED) is an area of 0.2% (500–year) annual chance flood; areas of 1% (100–year) annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and areas protected by levees from a 1% (100–year) annual chance flood.

SHEET INDEX	
SHEET	DESIGNATION
C1.0	SITE IMPROVEMENT PLAN TITLE SHEET
C1.1	GRADING PLAN
C1.2	GRADING DETAIL SHEET
C1.3	GRADING DETAIL SHEET

FOR WORK WITHIN, OR NEAR, THE PUBLIC RIGHT–OF–WAY

Underground Service Alert

CALL: 811

TWO WORKING DAYS BEFORE YOU DIG

HORIZONTAL CONTROL

AN AUTOCAD GEOMETRC ELECTRONIC FILE SHALL BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST FOR THE CONTRACTOR'S SURVEYOR TO LAYOUT THE CONSTRUCTION STAKING OF THE PROJECT. THE SURVEYOR OR CONTRACTOR WILL NEED TO SIGN A WAIVER FORM BEFORE RELEASE OF ANY CAD ELECTRONIC DRAWINGS.

BENCH MARK INFORMATION:

ADD 0.08 FEET TO ELEVATION SHOWN HEREON TO EQUAL THE LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS 2005 ADJUSTMENT OF THE NORTH AMERICAN DATUM OF 1988 (NAVD88) PER THE FOLLOWING LOS ANGELES COUNTY BENCHMARKS:

GARDENA QUAD, 2005 ADJUSTMENT:

LA COUNTY DPW BM Y12223 2005 ADJ. ELEV. = 63.473' NAVD88 PER COUNTY ELEV.=63.39 PER THIS SURVEY (HENNON & AERIAL MAP) L&DPW TAG IN EAST CURB 1FT. NORTH OF BEGINNING OF CURB RETURN AT NORTHEAST CORNER OF ALAMEDA STREET (EAST BARREL) AND GREENLEAF BLVD. LA COUNTY DPW BM Y12222 2005 ADJ. ELEV.=63.496' NAVD88 PER COUNTY ELEV.=63.42' PER THIS SURVEY (HENNON & AERIAL MAP) L&DPW TAG IN EAST CURB 1 FT. SOUTH OF BEGINNING OF CURB RETURN AT SOUTHEAST CORNER ALAMEDA STREET (EAST BARREL) & GREENLEAF BLVD.

ANY USER OF ELEVATION AND/OR COORDINATES SHOWN HEREON FOR THE CONTROL OF CONSTRUCTION, SHALL VERIFY AT LEAST 3 POINTS SHOWN HEREON, FOR MATHEMATICAL CONSISTENCY PRIOR TO SUCH USE.

EXISTING UNDERGROUND STRUCTURES

THE LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES, AS SHOWN ON THESE PLANS, WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE LOCATIONS OF SUCH UNDERGROUND UTILITIES. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY EXCAVATION OR IMPROVEMENT. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN TO BE PROTECTED HEREON AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN HEREON.

EARTHWORK NOTICE TO CONTRACTOR: NO EARTHWORK ANALYSIS HAS BEEN COMPLETED WITH RESPECT TO VOLUMES OF SOILS TO BE EXCAVATED, PLACED, OR IMPORTED IN ORDER TO PROVIDE THE FINISHED GRADES SHOWN ON THE PLANS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE EARTHWORK QUANTITIES NECESSARY TO COMPLETE THE PROJECT.

GENERAL NOTES TO CONTRACTOR

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7–10, PUBLIC CONVENIENCE AND SAFETY, OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), IN REGARDS TO SAFETY ORDERS.
2. SCOPE OF WORK:

    A. FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT & FACILITIES NECESSARY TO FURNISH, FABRICATE, DELIVER, STORE AND INSTALL ALL WORK NOTED ON THE DRAWINGS.

    B. THE CONTRACTOR SHALL FURNISH & INSTALL ALL WORK NECESSARY TO MAKE A COMPLETE SYSTEM WHETHER OR NOT SUCH DETAILS ARE MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE PLANS, BUT WHICH ARE OBMOUSLY NECESSARY TO MAKE A COMPLETE SYSTEM, EXCEPTING ONLY THOSE PORTIONS THAT ARE SPECIFICALLY MENTIONED HEREIN OR PLAINLY MARKED ON THE ACCOMPANYING DRAWINGS AS BEING INSTALLED UNDER ANOTHER SECTION OF THE SPECIFICATION.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AVAILABLE SPACES FOR INSTALLING THE WORK.
4. COORDINATION: THE DRAWINGS ARE DIAGRAMMATIC & INTENDED TO SHOW SCOPE. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE BEST ARRANGEMENT OF ALL DUCT, PIPES, CONDUIT, ETC.
5. WORKMANSHIP: THE WORK SHALL BE ACCOMPLISHED BY THE USE OF COMPETENT MECHANICS SKILLED IN THEIR TRADE. THE ENGINEER AND ARCHITECT SHALL HAVE THE RIGHT TO INTERPRET COMPLIANCE OF WORKMANSHIP WITH THE CONTRACT DOCUMENTS.
6. MATERIALS: ALL MATERIALS, APPLIANCES & EQUIPMENT SHALL BE NEW & THE BEST OF THEIR RESPECTIVE KIND. FREE FROM ALL DEFECTS AND OF THE MAKE, BRAND, AND QUANTITY SPECIFIED.
7. CLEAN–UP: UPON COMPLETION OF THE WORK UNDER THIS SECTION THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS, EQUIPMENT & DEBRIS INCIDENTAL TO THIS WORK & LEAVE THE PREMISES CLEAN AND ORDERLY.

RECOMMENDATIONS AND CONCLUSIONS OF SOILS REPORT No. 1529–CR, DATED OCTOBER 24, 2016 BY GEOTEK, INC. SHALL BE THOROUGHLY COMPLIED WITH. WHERE CONFLICTING INFORMATION BETWEEN THIS GRADING PLAN AND/OR THE PROJECT EARTHWORK SPECIFICATIONS & THE MENTIONED REPORT OCCUR, NOTIFY THE OWNER.

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

COMPTON

Date: July 12, 2016

To: Division of State Architect, DSA

From: David Dent, Chief Building Official

Re: Compton Community College Swing Space Project - Flood Zone

To whom it may concern,

Most of Compton has been identified to be in flood Zone X (Unshaded) or Zone X (Shaded). These areas have no base flood elevations and are protected from the base flood by a credited flood protection system. The City of Compton does not require new projects in these zones to be built with specific design considerations to protect them from a possible flood. The City of Compton does not require the finish floor of a building to be elevated above a base flood elevation in these zones. The City of Compton does not require special foundations (such as concrete versus wood) for new projects based on if they are in a Zone X (shaded) or Zone X (unshaded).

Sincerely,

David Dent
Chief Building Official

205 S. Willowbrook Avenue, Compton, CA 90220 * (310) 605-5509 * (310) 605-5598

BUILDING A NEW COMPTON

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT
FPL FPL and Associates, Inc.
Traffic • Transportation • Civil • CAD
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1868

REGISTERED PROFESSIONAL ENGINEER — No. 63407 — Exp. 09-30-18 — CIVIL — STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
RC
DRAWN BY
AL

REVISIONS

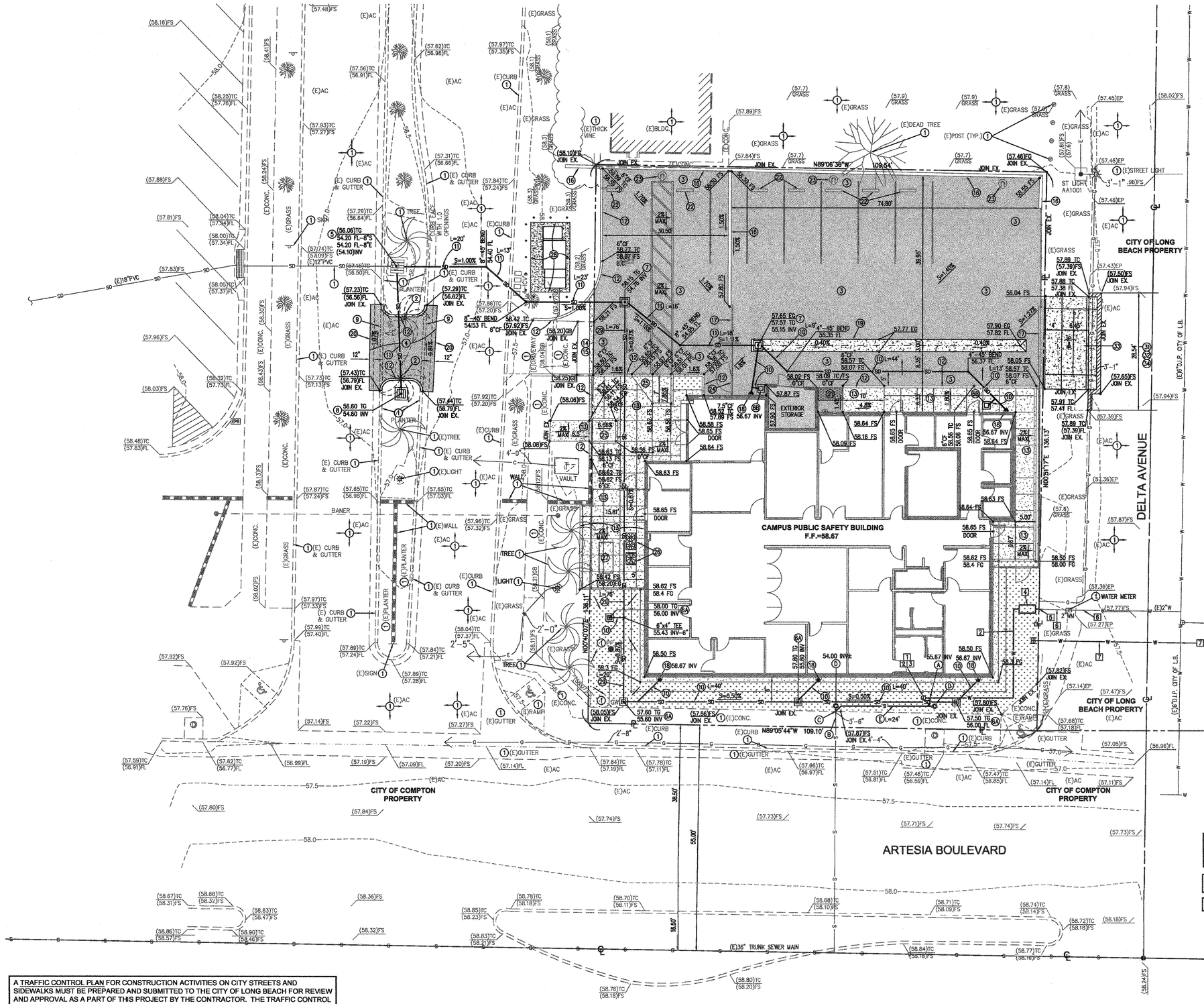
NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE
TITLE SHEET

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	C1.0



CONSTRUCTION NOTES

① PROTECT EXISTING IMPROVEMENTS IN PLACE.
② REMOVE EXISTING PALM TREE & ROOTS.
③ CONSTRUCT ASPHALT PAVEMENT SECTION (LIGHT DUTY) PER TABLE 1, ON SHEET C1.2.
④ CONSTRUCT ASPHALT PAVEMENT SECTION (HEAVY DUTY) PER TABLE 1, ON SHEET C1.2.
⑤ BREAK INTO EXISTING CATCH BASIN AND INSTALL NEW PIPE.
(6A) CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6A ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (PARKWAY RATED, A.D.A, BOLT-DOWN TYPE).
(6B) CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6B ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (PARKWAY RATED, HEEL-PROOF, BOLT-DOWN TYPE).
(6C) CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6C ON SHEET C1.2. FRAME & STEEL GALVANIZED GRATE (TRAFFIC RATED STEEL COVER).
⑦ CONSTRUCT 18" SQUARE CATCH BASIN PER DETAIL 7 ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (TRAFFIC RATED, A.D.A, BOLT-DOWN TYPE).
⑧ CONSTRUCT 24" SQUARE CATCH BASIN PER DETAIL 8 ON SHEET C1.2. INSTALL OLDCASTLE STORMWATER SOLUTIONS FLOGARD CATCH BASIN INSERT FILTER GRATED INLET STYLE MODEL FGP-24F8 OR APPROVED EQUAL.
⑨ REMOVE EXISTING CURB & GUTTER.
⑩ CONSTRUCT 4" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.
⑪ CONSTRUCT 8" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.
⑫ CONSTRUCT CONCRETE CURB PER DETAIL 12 ON SHEET C1.2.
⑬ CONSTRUCT 4" THICK CONCRETE SIDEWALK PER DETAIL 13 ON C1.2.
⑭ REMOVE EXISTING CONCRETE.
⑮ CONSTRUCT 6" THICK CONCRETE OVER 4" CRUSHED AGGREGATE BASE.
⑯ CONSTRUCT MASONRY WALL PER STRUCTURAL PLANS.
⑰ CONSTRUCT STEEL ROLLING GATE PER ARCHITECTURAL PLANS.
⑱ CONNECT UNDERGROUND STORM DRAIN TO ROOF DRAIN DOWNSPOUT WITH FERNCO COUPLING OR APPROVED EQUAL.
⑲ CONSTRUCT 3' WIDE CONCRETE SWALE PER DETAIL 19 ON SHEET C1.2.
⑳ SAWCUT EXISTING ASPHALT PAVEMENT WITH CLEAN EDGE.
㉑ CONSTRUCT DETECTABLE WARNINGS PER ARCHITECTURAL PLANS.
㉒ CONSTRUCT WHEEL STOPS PER DETAIL 6 ON SHEET A1.3.1.
㉓ CONSTRUCT SITE LIGHTING PER ELECTRICAL PLANS.
㉔ CONSTRUCT GATE PER ARCHITECTURAL PLANS.
㉕ CONSTRUCT ACCESSIBLE CURB RAMP PER GRADES HEREON AND DETAILS ON ARCHITECTURAL PLANS.
㉖ CONDENSER UNIT PER SHEET E1.1.1.
㉗ EMERGENCY GENERATOR ENCLOSURE PER SHEET E1.1.1.
㉘ NEW PAD MOUNTED SUB-STATION PER SHEET E1.1.1.
㉙ CONSTRUCT 6" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.

CONSTRUCTION NOTES IN CITY OF LONG BEACH RIGHT-OF-WAY

㉚ PROTECT EXISTING IMPROVEMENTS IN PLACE.
㉛ REMOVE EXISTING CONCRETE DRIVEWAY APPROACH
㉜ REMOVE EXISTING 12" WIDE ASPHALT CONCRETE PAVEMENT IN STREET.
㉝ CONSTRUCT 6" THICK CONCRETE DRIVEWAY PER CITY OF LONG BEACH STANDARD PLAN No. 105, MODIFIED TYPE 1 (X=3', W=16') ON C1.3.
㉞ REPLACE EXISTING ASPHALT PAVEMENT SECTION PER CITY OF LONG BEACH STANDARD PLAN No. 116 ON C1.3.

HATCH LEGEND:

▨	= NEW BUILDING
▒	= NEW CONCRETE PAVEMENT
▓	= NEW ASPHALT PAVEMENT
⍦	= NEW TURF / L.S.

NOTE: STRAIGHT GRADES SHALL BE CONSTRUCTED BETWEEN SPOT ELEVATIONS OR CONTOURS INDICATED, EXCEPT WHERE GRADE BREAKS INTERVENE.

NOTE: CONSTRUCTION TOLERANCES DO NOT PERMIT THE VARIATION OF DIMENSIONS OR GRADES AND SLOPES AND THEIR RELATIONSHIPS REQUIRED BY CODE. ADJUST WORK AS REQUIRED TO COMPLY WITH SUCH REQUIREMENTS.

NOTE: CONTRACTOR IS REQUIRED TO RESTORE ALL EXISTING IMPROVEMENTS TO THE SAME CONDITION, THAT ARE NOT PART OF THIS PROJECT, THAT EXISTED PRIOR TO HIS STARTING CONSTRUCTION.

CONSTRUCTION STORM WATER NOTE:
GRADING WORK ASSOCIATED WITH THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF SOIL AND THUS SHALL NOT BE SUBJECT TO COMPLY WITH THE NPDES STORMWATER CONSTRUCTION GENERAL PERMIT 2009-0009-DWQ.

NOTE: CONTRACTOR SHALL BOLT DOWN ALL NEW GRATES TO FRAME FOR ANTI-THEFT PURPOSES AFTER CONSTRUCTION IS COMPLETED.

SEE ARCHITECTURAL PLANS FOR ALL STRIPING IMPROVEMENTS SHOWN HEREON.

A TRAFFIC CONTROL PLAN FOR CONSTRUCTION ACTIVITIES ON CITY STREETS AND SIDEWALKS MUST BE PREPARED AND SUBMITTED TO THE CITY OF LONG BEACH FOR REVIEW AND APPROVAL AS A PART OF THIS PROJECT BY THE CONTRACTOR. THE TRAFFIC CONTROL PLAN SHALL BE DRAWN TO SCALE AND SHALL DELINEATE THE EXISTING CURBS AND TRAFFIC STRIPING. ALL TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST CALTRANS TRAFFIC MANUAL (CHAPTER 5 - MANUAL OF TRAFFIC CONTROLS) AND THE LATEST WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH MANUAL). TRAFFIC CONTROL PLAN MUST BE APPROVED BY THE CITY PRIOR TO THE ISSUANCE OF A PERMIT.

NOTE TO CONTRACTOR: NO CONSTRUCTION OR EXCAVATION WORK IS ALLOWED WITHIN THE CITY OF LONG BEACH RIGHT-OF-WAY (WHICH INCLUDES THE SIDEWALK AND PARKWAY) WITHOUT AN ENCROACHMENT PERMIT, OBTAINED FROM THE PUBLIC WORKS DEPARTMENT. TO OBTAIN A PERMIT YOU MUST BE A LICENSED AND INSURED CONTRACTOR.

WATER CONSTRUCTION NOTES

[1] SEE PLUMBING PLANS FOR CONTINUATION OF WATER LINE INTO BUILDING.
[2] CONSTRUCT 2" SCH. 80 PVC PIPE, FITTINGS. AND COUPLINGS. SEE CORRESPONDING TRENCH DETAIL ON SHEET C1.2.
[3] CONSTRUCT 2" WATER SHUT-OFF VALVE PER DETAIL 2 ON SHEET C1.3.
[4] CONSTRUCT 2" BACKFLOW PREVENTER PER DETAIL 4 ON C1.3.
[5] CONNECT TO EXISTING WATER LINE WITH APPROPRIATE FITTINGS.
[6] PROTECT EXISTING WATER IMPROVEMENT IN PLACE.
[7] LONG BEACH WATER DEPARTMENT SHALL INSTALL 1" WATER SERVICE INSTALLATION & METER PER LBWD STD. PLAN NO. WDS-001 AND PROVIDE TRENCH RESTORATION PER LBWD WDS-406. CONTRACTOR SHALL DO ALL WORK DOWNSTREAM OF METER.

SEWER CONSTRUCTION NOTES

Ⓐ SEE PLUMBING PLANS FOR CONTINUATION INTO BUILDING.
Ⓑ PROTECT EXISTING SEWER IMPROVEMENT IN PLACE.
Ⓒ CONNECT TO EXISTING 4" SEWER LINE WITH APPROPRIATE FITTINGS.
Ⓓ CONSTRUCT SEWER CLEAN-OUT & YARD BOX PER DETAIL 'D' ON SHEET C1.3.
Ⓔ CONSTRUCT 4" SDR-35 PVC SEWER PIPE. SEE CORRESPONDING TRENCH DETAIL ON SHEET C1.2.

SCALE: 1" = 10'

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC *HL* FLS ~~*CV*~~ SS *RC*
DATE DEC 12 2017

CONSULTANT

FPL and Associates, Inc.
Traffic • Transportation • Civil • CAD
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1688

ALAN WING-CHI LEE
No. C 34971
Exp. 09-30-19
CIVIL

PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
RC
DRAWN BY
AL

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE
GRADING PLAN

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	C1.1

ON-SITE TRENCHING DETAILS - STORM DRAINS, SEWER & WATER LINES

TRENCH EXCAVATION, BEDDING, & BACKFILL NOTES:

EXCAVATION NOTE: EXCAVATION 5.0 FEET AND DEEPER SHALL BE SUPPORTED AS SET FORTH IN THE RULES, ORDERS AND REGULATIONS OF THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL ACCIDENTS. THE CONTRACTOR SHALL SUBMIT A DETAIL SHOWING THE DESIGN OR SHORING; BRACING SLOPING OR OTHER PROVISIONS TO BE MADE FOR WORKER PROTECTION FROM THE HAZARDS OF CAVING GROUND DURING THE EXCAVATION. THE PLAN SUBMITTED SHALL BE SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER CERTIFIED THAT THE PLAN COMPLIES WITH ALL OSHA CONSTRUCTION SAFETY ORDERS.

BEDDING MATERIAL SHALL BE COARSE SAND WITH SAND EQUIVALENT OF 30 OR GREATER. NO ANGULAR STONES OR PEA GRAVELS WILL BE ALLOWED IN PIPE BEDDING.

BEDDING & BACKFILL SHALL BE PLACED IN ACCORDANCE WITH SECTION 306-1.2.1 AND 306-1.3 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (S.S.P.W.C.), LATEST EDITION" AND AS SUPPLEMENTED HEREIN. TRENCH BACKFILL SLURRY PER SECTION 201-1. EXISTING SITE SOILS, WHERE CONDITIONS DICTATE HEREIN, ARE CONSIDERED SUITABLE FOR BACKFILLING OF UTILITY TRENCHES PROVIDED THEY ARE FREE OF DEBRIS, PARTICLES GREATER THAN 4 INCHES IN MAXIMUM DIMENSION, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. PER SECTION 306-1.2.1 OF S..S.P.W.C., IF SOFT, SPONGY, UNSTABLE OR OTHER UNSUITABLE MATERIAL IS ENCOUNTERED UPON WHICH THE BEDDING MATERIAL OR PIPE IS TO BE PLACED, THIS MATERIAL SHALL BE REMOVED TO A DEPTH ORDERED BY THE CIVIL ENGINEER AND REPLACED WITH BEDDING MATERIAL SUITABLY DENSIFIED.

COMPACTION METHODS: ALL BEDDING & BACKFILL COMPACTION SHALL BE BY HAND-OPERATED, PLATE-TYPE, VIBRATORY, OR OTHER SUITABLE HAND-TAMPERS IN AREAS NOT ACCESSIBLE TO LARGER ROLLERS OR COMPACTERS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. WATER DENSIFICATION BY INUNDATION OR JETTING SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM CIVIL ENGINEER.

SHEETING: WHEN EXCAVATION DEPTHS OR SOIL CONDITIONS REQUIRE SHORING OR USE OF A TRENCH BOX, THE BOTTOM OF THE SHORING OR TRENCH BOX SHOULD BE PLACED NO LOWER THEN THE TOP OF THE PIPE. THIS PREVENTS DISRUPTION OF THE BACKFILL ENVELOPE WHEN REMOVING THE SHORING OR TRENCH BOX. IF THIS PRACTICE CANNOT BE FOLLOWED, CONSIDERATION SHOULD BE GIVEN TO LEAVING THE SHORING IN PLACE.

WARNING TAPE NOTES (ON-SITE WATER):

A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED WATER LINE BELOW", IN POLYETHYLENE FILM COLOR BLUE, INSTALLED ABOVE PIPE, 6" WIDE.

WARNING TAPE NOTES (ON-SITE STORM DRAIN):

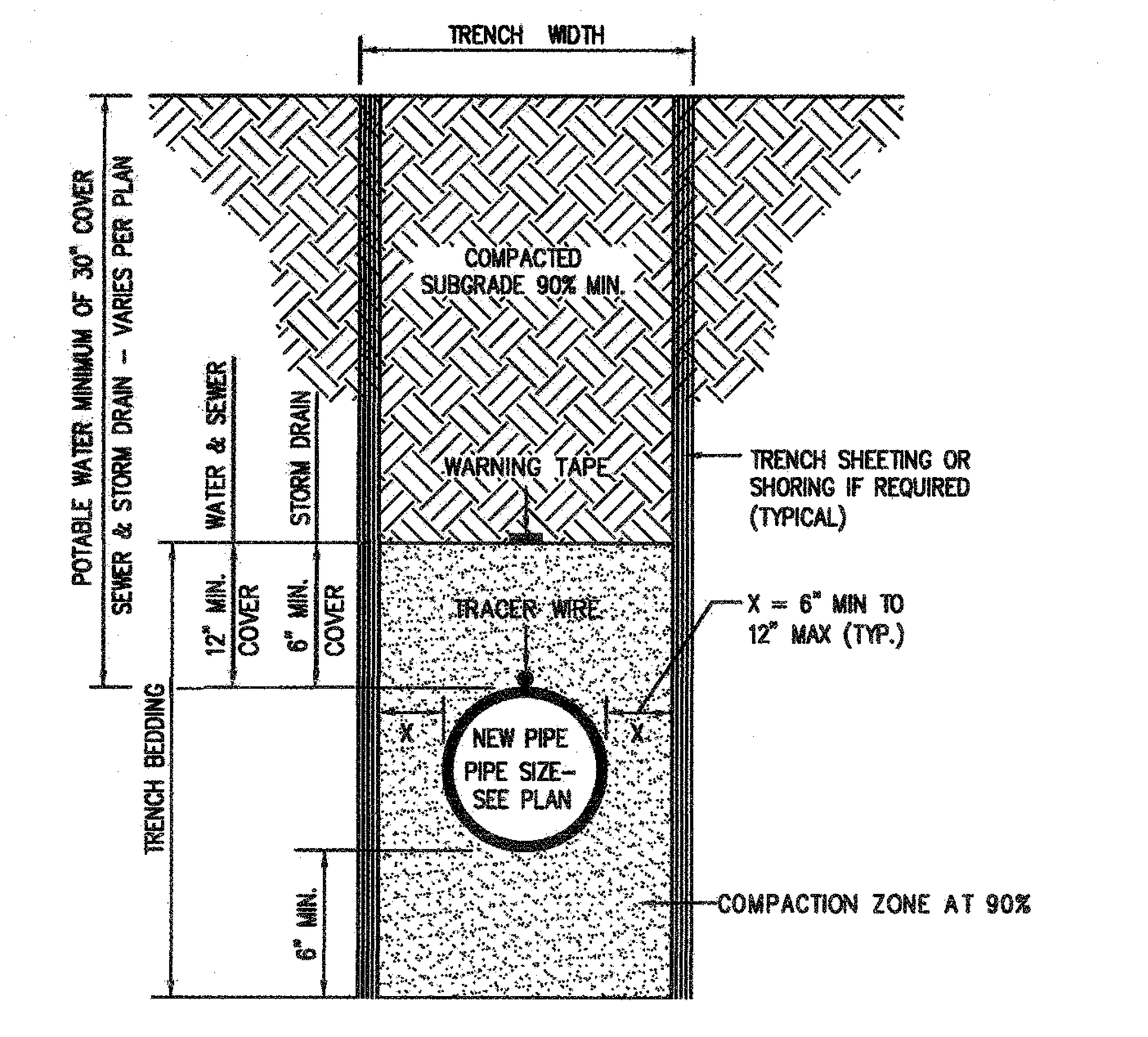
A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION STORM DRAIN LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN, INSTALLED ABOVE PIPE, 6" WIDE.

WARNING TAPE NOTES (ON-SITE SEWER):

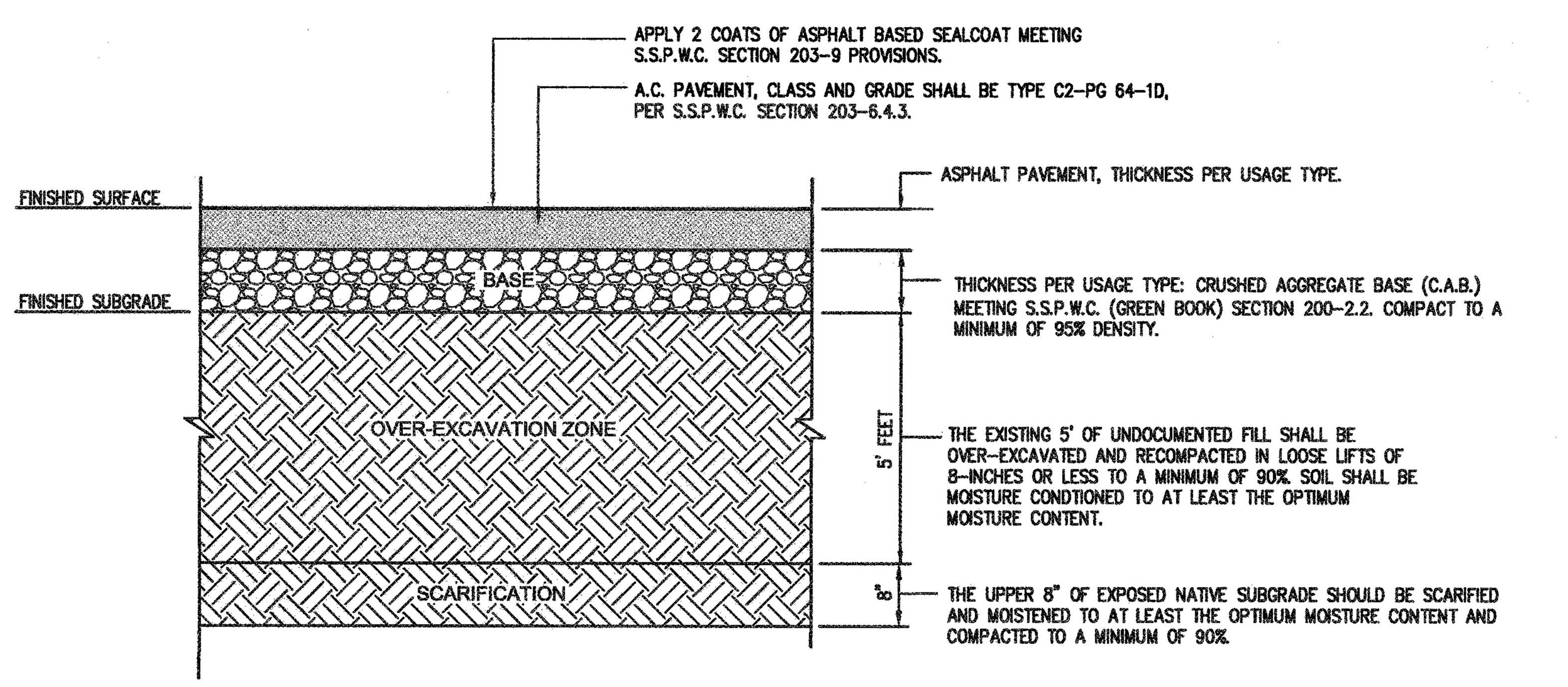
A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED SEWER LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN, INSTALLED ABOVE PIPE, 6" WIDE.

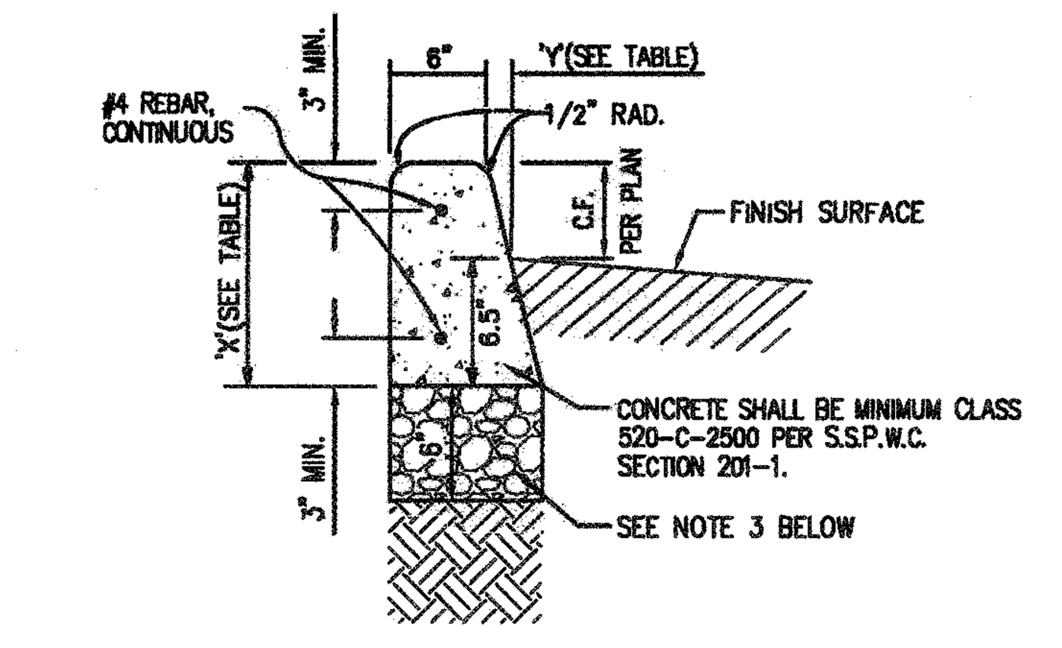
TRACER WIRE NOTES:

COPPER TRACER WIRE SHALL BE INSTALLED ON ALL NON-METALLIC PIPELINES JUST ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE. THE COPPER WIRE SHALL BE THWN, #12 AWG GAUGE, WITH HEAT AND MOISTURE RESISTANT INSULATION.



USAGE TYPE	TABLE 1 ASPHALT CONCRETE PAVEMENT STRUCTURAL SECTION
(3) LIGHT DUTY	3" THICK ASPHALT OVER 4" THICK CRUSHED BASE
(4) HEAVY DUTY	4" THICK ASPHALT OVER 6" THICK CRUSHED BASE



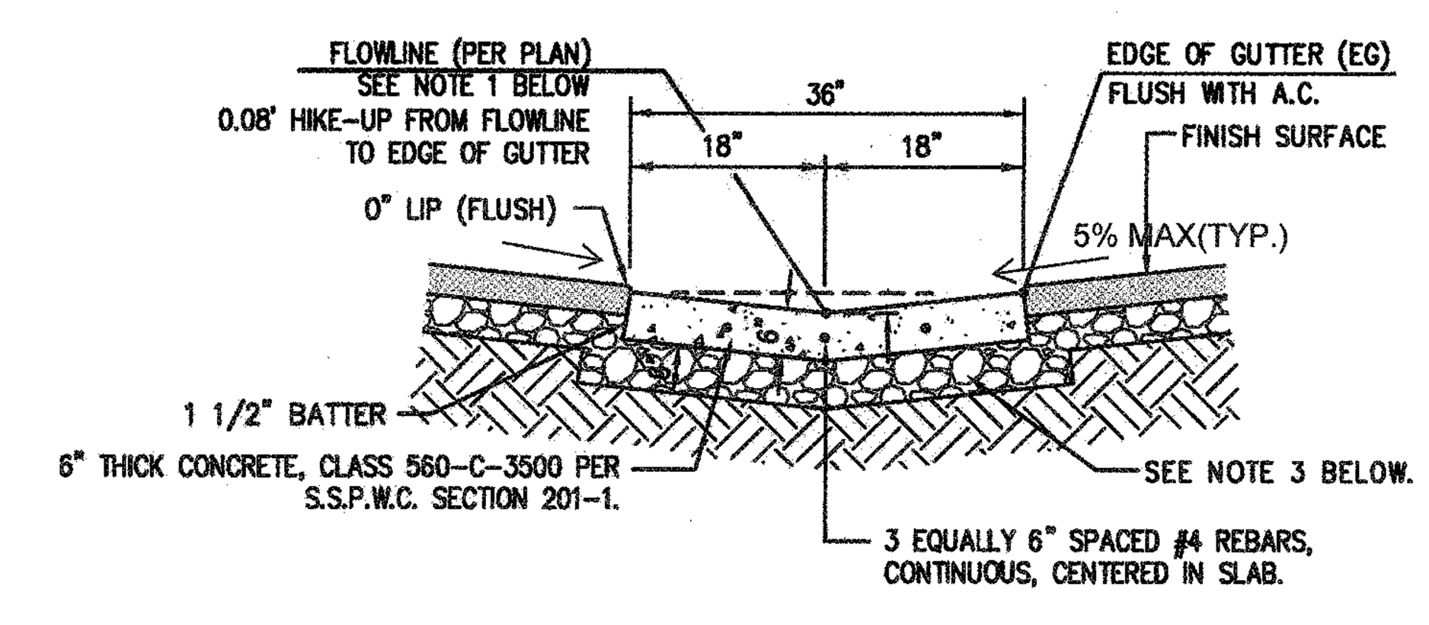


(12) CONCRETE CURB DETAIL
NOT TO SCALE

CURB FACE	0"	4"	5"	6"	8"	9"
'X'	6.5"	10.5"	11.5"	12.5"	14.5"	15.5"
'Y'	0"	1"	1.25"	1.5"	2"	2"

GENERAL NOTES:

1. ALL EXPOSED EDGES SHALL HAVE A 1/2" RADIUS.
2. CONTROL JOINTS SHALL BE PLACED IN CURBING AT REGULAR INTERVALS OF 10'. EXPANSION JOINTS AT 30' INTERVALS, AND AT DRIVE APPROACHES, B.C.'S, E.C.'S, CROSS GUTTERS AND CATCH BASIN TRANSITIONS.
3. A 6" THICK LAYER OF CRUSHED BASE MATERIAL SHALL BE PLACED UNDER ALL CURB. MINIMUM COMPACTION OF 90% ON SUBGRADE AND 95% ON AGGREGATE BASE IS REQUIRED.
4. CONCRETE CURB SHALL BE MINIMUM CLASS 520-C-2500 PER S.S.P.W.C. SECTION 201-1.
5. PLACE CONTINUOUS #4 REBARS, 3" MINIMUM FROM TOP AND 3" MINIMUM FROM BOTTOM OF CURB.

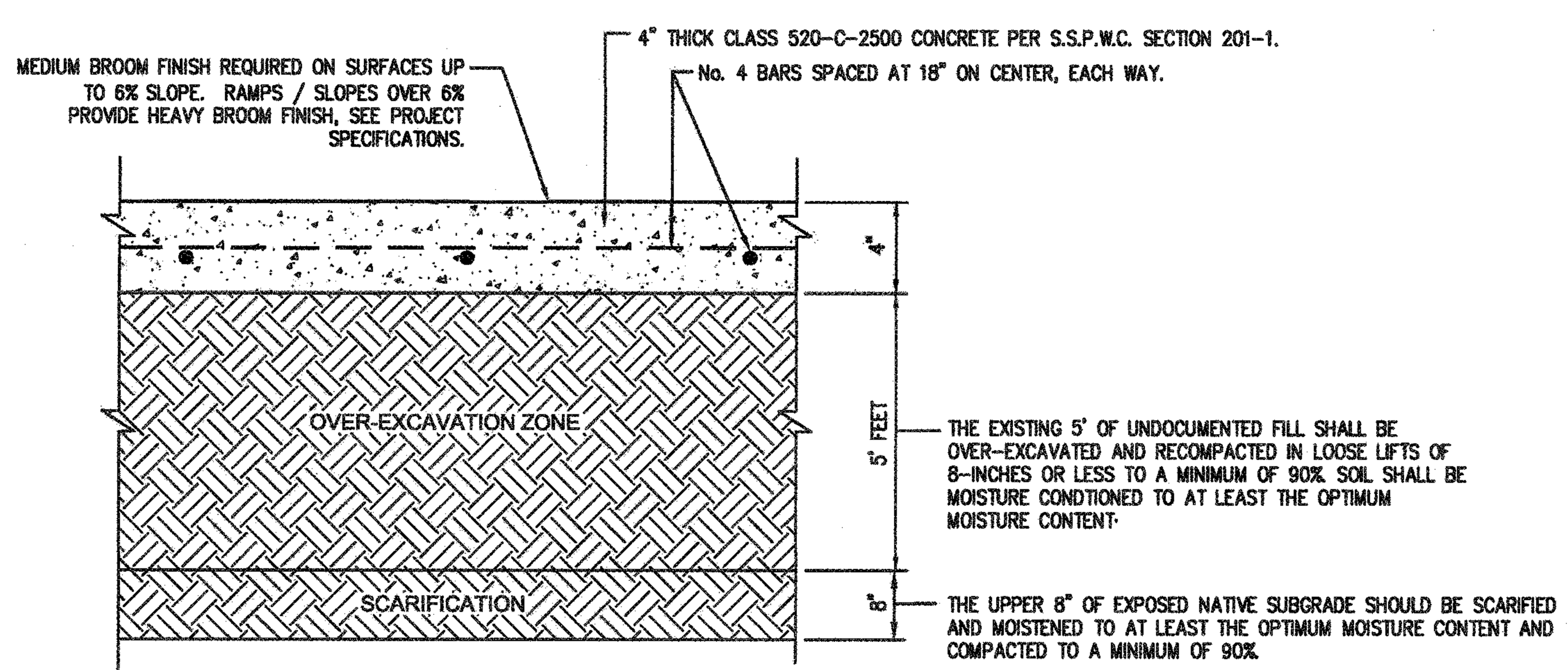


(19) CONCRETE SWALE DETAIL
NOT TO SCALE

CONCRETE SWALE NOTES:

1. CONCRETE SWALE SHALL HAVE AN 4" WIDE FLOWLINE SMOOTH STEEL TROWEL FINISH.
2. CONSTRUCT CONTROL JOINTS IN SWALE AT REGULAR INTERVALS OF 10'.

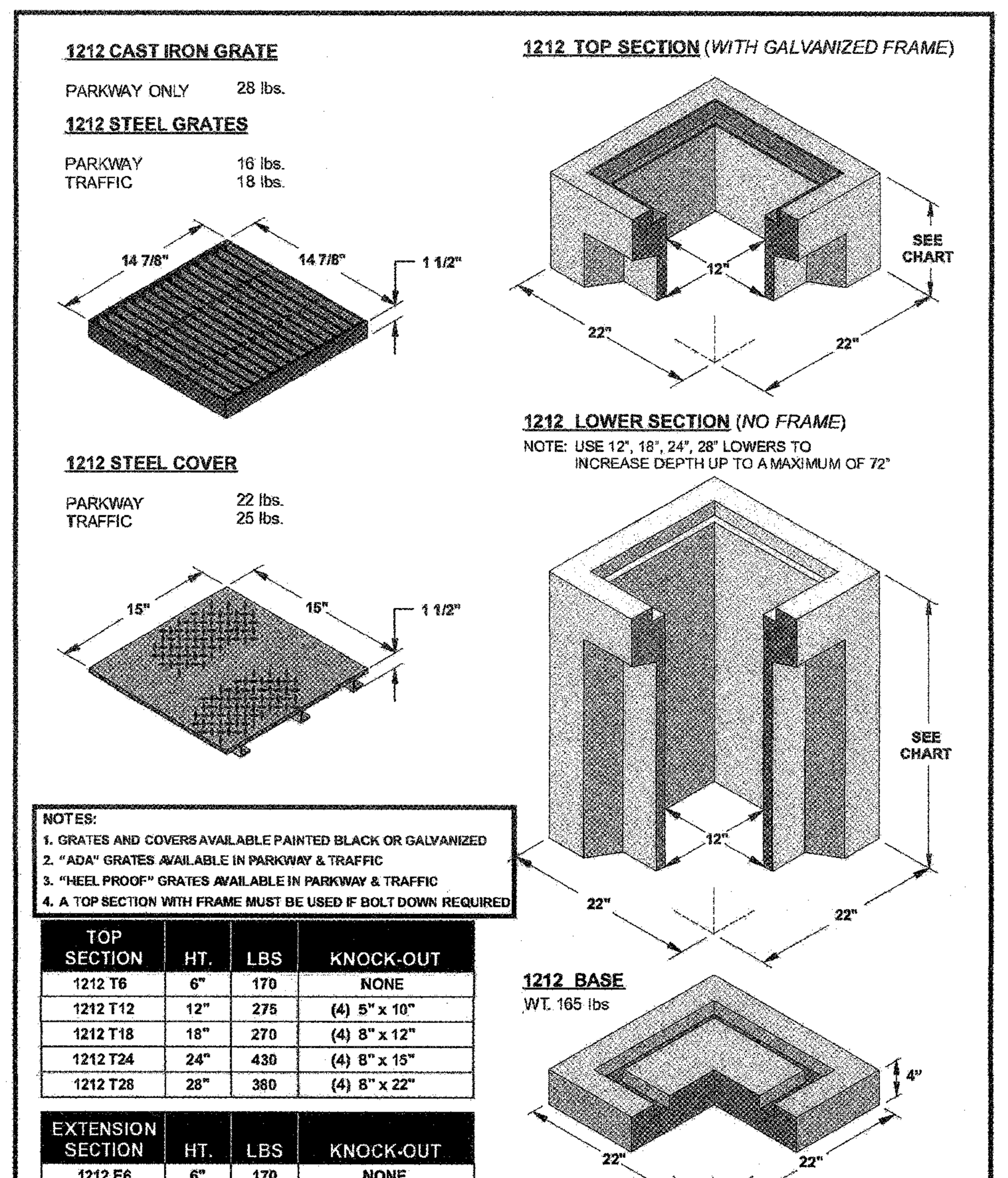
   CONSTRUCT EXPANSION JOINTS WITH REBAR IN SWALE AT REGULAR INTERVALS OF 30'. CONSTRUCT EXPANSION JOINTS WITHOUT REBAR IN SWALE WHERE SWALE ABUTS CONCRETE, PLUS ALL B.C. & E.C.'S.
3. A 6" THICK LAYER OF CRUSHED AGGREGATE BASE MATERIAL SHALL BE PLACED UNDER THE SWALE. MINIMUM COMPACTION OF 95% RELATIVE DENSITY IS REQUIRED.
4. CROSS-SLOPE MUST NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL MUST BE LESS THAN 5% IN AREAS DEFINED AS A PUBLIC WALKING SURFACE.



(13) CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTES:

1. MEDIUM BROOM FINISH REQUIRED ON WALK SURFACES UP TO 6% SLOPE.
2. ADJACENT PAVING, WHERE OCCURS, TO BE FLUSH WITH TOP EDGE OF SLAB.
3. ALL CONCRETE WALKS SHALL BE ASTM C-150 TYPE II PORTLAND CEMENT.
4. ALL CONCRETE WALKS SHALL BE 1" MAXIMUM COARSE AGGREGATE SIZE CONFORMING TO GRADING 'C' OF THE S.P.P.W.C. SECTION 201-1.3.2(A).



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY & TRAFFIC
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

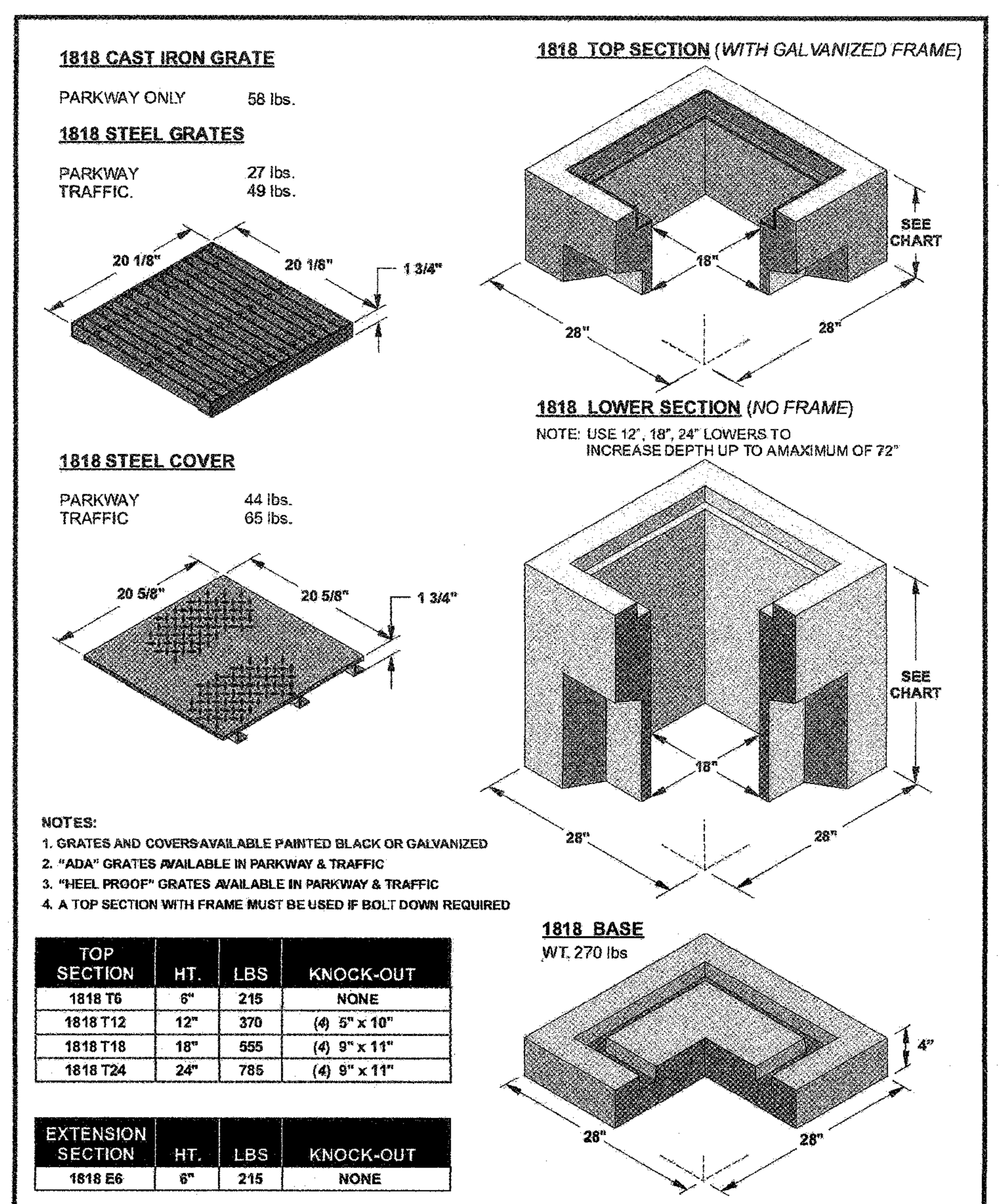
TOP SECTION	HT.	LBS	KNOCK-OUT
1212 T6	6"	170	NONE
1212 T12	12"	275	(4) 5" x 10"
1212 T18	18"	270	(4) 8" x 12"
1212 T24	24"	430	(4) 8" x 15"
1212 T28	28"	380	(4) 8" x 22"

EXTENSION SECTION	HT.	LBS	KNOCK-OUT
1212 E6	6"	170	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUT
1212 L12	12"	275	(4) 5" x 10"
1212 L18	18"	270	(4) 8" x 12"
1212 L24	24"	430	(4) 8" x 15"
1212 L28	28"	380	(4) 8" x 22"

12" x 12" CATCH BASIN — ORG. DWG. DATE 04-20-95 — REV. DATE 05-18-00 — BROOKS PRODUCTS — 1212 CB

(6A)(6B) 12" x 12" CATCH BASIN DETAIL
NOT TO SCALE



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY & TRAFFIC
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

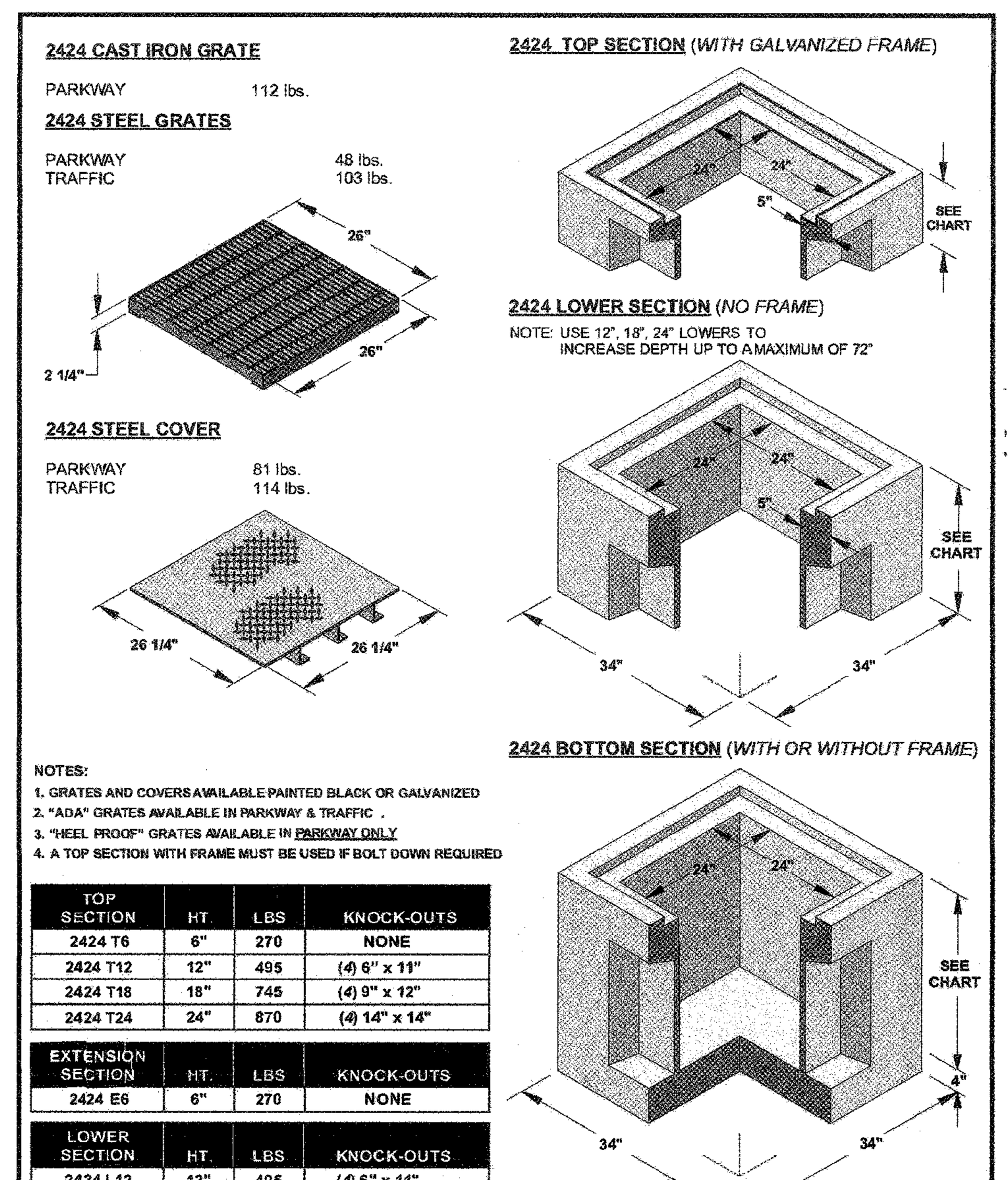
TOP SECTION	HT.	LBS	KNOCK-OUT
1818 T6	6"	215	NONE
1818 T12	12"	370	(4) 5" x 10"
1818 T18	18"	555	(4) 9" x 11"
1818 T24	24"	785	(4) 9" x 11"

EXTENSION SECTION	HT.	LBS	KNOCK-OUT
1818 E6	6"	215	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUT
1818 L12	12"	370	(4) 5" x 10"
1818 L18	18"	555	(4) 9" x 11"
1818 L24	24"	785	(4) 9" x 11"

18" x 18" CATCH BASIN — ORG. DWG. DATE 04-20-95 — REV. DATE 02-28-00 — BROOKS PRODUCTS — 1818 CB

(7) 18" x 18" CATCH BASIN DETAIL
NOT TO SCALE



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC .
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY ONLY
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

TOP SECTION	HT.	LBS	KNOCK-OUTS
2424 T6	6"	270	NONE
2424 T12	12"	495	(4) 6" x 11"
2424 T18	18"	745	(4) 9" x 12"
2424 T24	24"	870	(4) 14" x 14"

EXTENSION SECTION	HT.	LBS	KNOCK-OUTS
2424 E6	6"	270	NONE

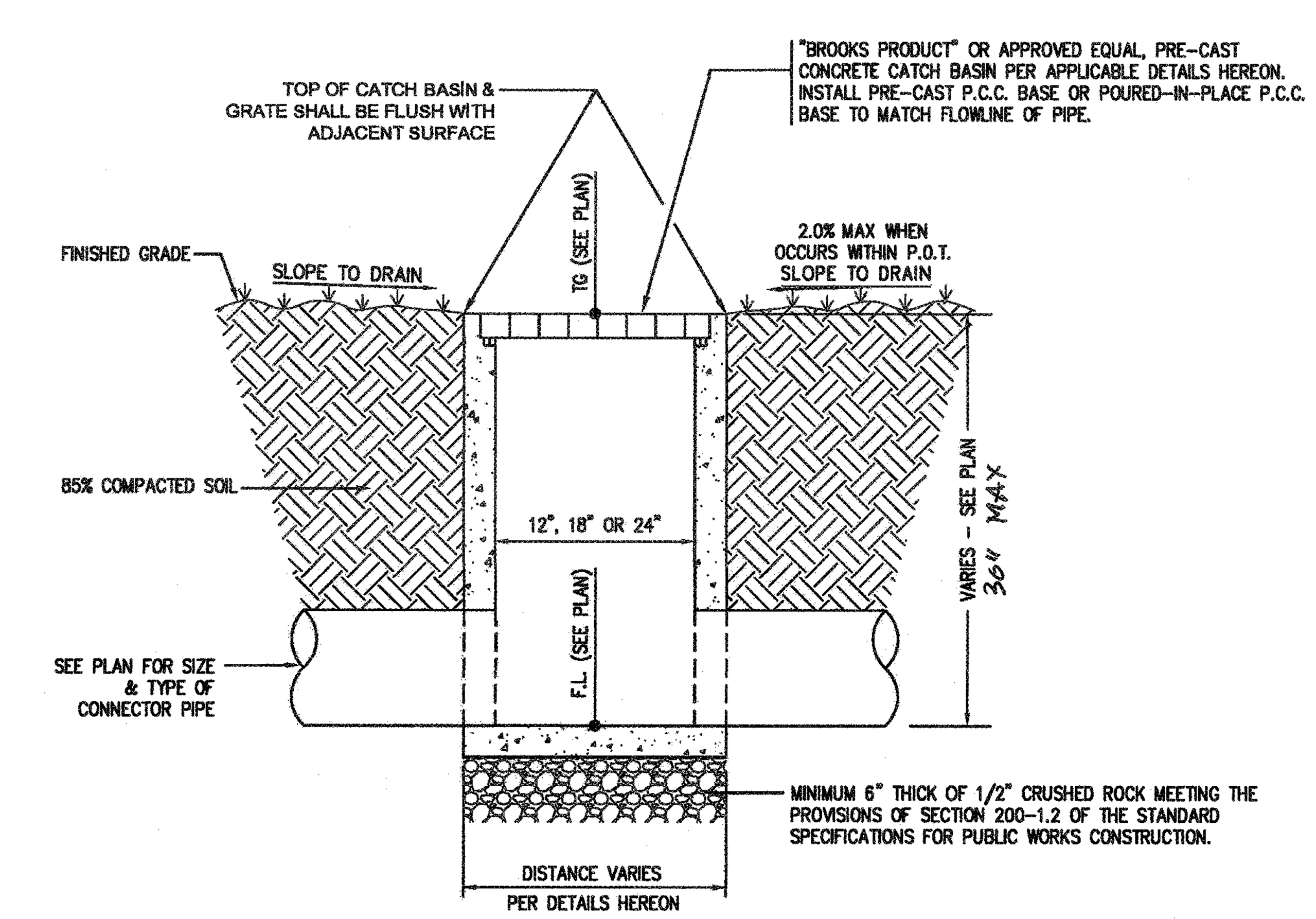
LOWER SECTION	HT.	LBS	KNOCK-OUTS
2424 L12	12"	495	(4) 6" x 11"
2424 L18	18"	745	(4) 9" x 12"
2424 L24	24"	870	(4) 14" x 14"

BOTTOM SECTION	HT.	LBS	KNOCK-OUTS
2424 B30	30"	1595	(4) 18" x 18"
2424 B36	36"	1905	(4) 18" x 18"

24" x 24" CATCH BASIN — ORG. DWG. DATE 11-23-99 — REV. DATE 02-28-00 — BROOKS PRODUCTS — 2424 CB

(8) 24" x 24" CATCH BASIN DETAIL
NOT TO SCALE

GRATE OPENING NOTICE TO CONTRACTOR:
PER THE 2013 C.B.C. 11B-302.4 & 11B-302.3: GRATINGS LOCATED IN GROUND AND FLOOR SURFACES ALONG ACCESSIBLE ROUTES SHALL BE LIMITED TO SPACES NO GREATER THAN 1/2-INCH WIDE IN ANY DIRECTION. FOR THE OPENINGS LOCATED ON THE PUBLIC WALKING SURFACES.



(6A)(6B)(7)(8) CATCH BASIN DETAIL
NOT TO SCALE

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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DATE DEC 12 2017

CONSULTANT

FPL and Associates, Inc.
Traffic • Transportation • Civil • CAD
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1668

PROJECT TEAM
PRINCIPAL IN CHARGE: RC
PROJECT MANAGER: RC
DRAWN BY: AL

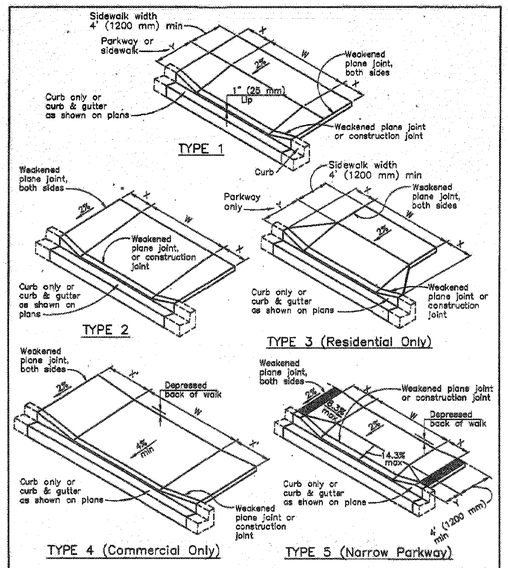
REVISIONS
NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE
GRADING DETAIL SHEET

PROJECT NUMBER
913-4675-00

ISSUE DATE: 12/01/16 — SHEET NO.: C1.2

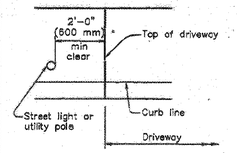


For allowed use of Type 2 and 4, see notes, sheet 3.
Dimensions are in millimeters, except as noted.

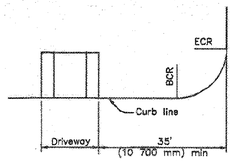
REVISIONS NO.	DATE	CITY OF LONG BEACH, CALIFORNIA DEPARTMENT OF PUBLIC WORKS	STANDARD PLAN NO.
1	07/10/02	DRIVEWAYS	105
2	12/23/02		
3	03/02/06	APPROVED BY: CITY ENGINEER R.E. No. 40589 DATE: 11/23/10 EX. DATE 03/31/11	SHEET 1 OF 3
4	11/10/10		

DRIVEWAY WIDTH (W)

	Minimum	Maximum
Residential–Single Driveway	8' (2400 mm)	10' (3000 mm)
Residential–Double Driveway	16' (4800 mm)	20' (6000 mm)
Commercial Driveway	See Note 8	



DRIVEWAY LOCATION AT STREET LIGHT OR UTILITY POLE



DRIVEWAY LOCATION AT CURB RETURN

TABLE OF X, X' AND Y DIMENSIONS

Curb Face	6" or less (150 or less)	7" (175)	8" (200)	9" (225)	10" (250)	11" (275)	12" (300)
X	3'-0" (900)	3'-3" (975)	3'-6" (1050)	3'-9" (1125)	4'-0" (1200)	4'-3" (1275)	4'-6" (1350)
X' (Type 4)	5'-0" (1500)	6'-0" (1800)	7'-0" (2100)	8'-0" (2400)	9'-0" (2700)	10'-0" (3000)	11'-0" (3300)
*Y min.	4'-0" (1200)	4'-9" (1425)	5'-8" (1700)	6'-6" (1950)	7'-3" (2175)	8'-0" (2400)	8'-9" (2625)

*Except Type 5
For Type 5 driveway, X shall be increased as needed to produce 8.3% (max.) ramp slope.

Dimensions are in millimeters, except as noted.

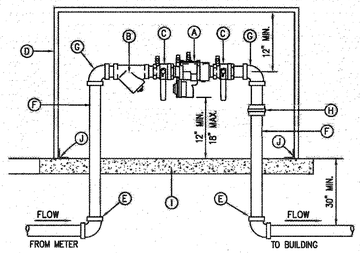
REVISIONS NO.	DATE	CITY OF LONG BEACH, CALIFORNIA DEPARTMENT OF PUBLIC WORKS	STANDARD PLAN NO.
1	05/10/98	DRIVEWAYS	105
2	07/10/02		
3	12/23/02	APPROVED BY: CITY ENGINEER R.E. No. 40589 DATE: 11/23/10 EX. DATE 03/31/11	SHEET 2 OF 3
4	11/10/10		

NOTES:

1. Residential driveways shall be 4" (100 mm) thick portland cement concrete, class 520-C-2500 (310-C-17).
2. Commercial driveways shall be 6" (150 mm) thick portland cement concrete, class 520-C-2500 (310-C-17).
3. The location and number of residential driveways shall conform to sub-section 21.41.253 of the Long Beach Municipal Code.
4. Top of adjacent driveways or top of driveway and alley BCR shall be separated by 4' (1200 mm) minimum, otherwise a common or continuous driveway shall be used.
5. Weakened plane joints shall be installed at approximately 10' (3000 mm) intervals. Where the distance between the sides of the driveway does not exceed 15' (4800 mm) an intermediate weakened plane joint will not be required.
6. Type 1 or Type 3 driveways shall be used by preference whenever site conditions permit. Type 5 driveway (depressed back of walk) shall be used by second preference whenever the parkway width is too narrow to allow proper construction of Type 1 or Type 3 driveways. Type 2 or Type 4 driveways shall be used only with permission of the City Engineer and only where alternate ADA access has been provided along the adjacent property frontage.
7. Depressed curb and driveway shall be constructed separately.
8. Commercial driveway widths greater than 24' (7200 mm) shall be approved by the City Traffic Engineer.

Dimensions are in millimeters, except as noted.

REVISIONS NO.	DATE	CITY OF LONG BEACH, CALIFORNIA DEPARTMENT OF PUBLIC WORKS	STANDARD PLAN NO.
2	07/10/02	DRIVEWAYS	105
3	12/23/02		
4	02/27/03	APPROVED BY: CITY ENGINEER R.E. No. 40589 DATE: 11/23/10 EX. DATE 03/31/11	SHEET 3 OF 3
5	11/10/10		



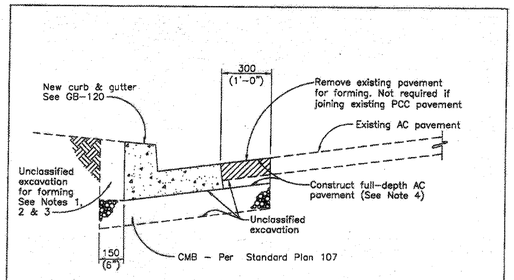
NOTES:

1. ALL ABOVE GROUND MATERIAL TO BE PAINTED WITH ONE COAT DUNN EDWARDS VERSAPRIME 42-44 AND TWO COATS DUNN EDWARDS SYNTHETIC DARK BLUE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, INITIAL TEST AND CERTIFICATION OF ALL NEW OR RELOCATED BACKFLOW PREVENTION DEVICES. BACKFLOW DEVICE MUST BE TESTED BY A LOS ANGELES COUNTY CERTIFIED TESTER, PAID FOR BY THE CONTRACTOR, BEFORE WATER SERVICE IS ACTIVATED.
3. CONTRACTOR SHALL INSTALL A 2-INCH PRESSURE REGULATING VALVE ON THIS ASSEMBLY, IN FRONT OF THE STRAINER, WHERE STATIC WATER PRESSURE IN THE WATER SUPPLY PIPING IS EXCEEDING 80 POUNDS PER SQUARE INCH AS IS REQUIRED BY CALIFORNIA PLUMBING CODE SECTION 608.2.
4. ALL BELOW GROUND FERROUS PIPE AND FITTINGS SHALL BE DOUBLE POLYETHYLENE ENCASED IN SLEEVES, 10-MIL MINIMUM THICKNESS.

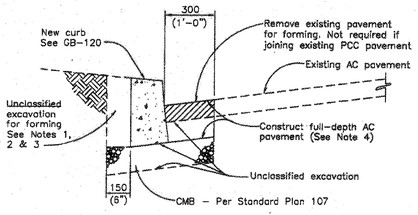
BACKFLOW PREVENTER LIST OF MATERIALS

- (A) 2" "LEAD FREE" REDUCED PRESSURE PRINCIPLE ASSEMBLY APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, USC.
- (B) 2" STRAINER, CAST IRON BODY, THREADED
- (C) 2" BRONZE BALL VALVE
- (D) GREEN EXPANDED METAL VANDAL RESISTANT BACKFLOW COVER COATED WITH POLYMER ALLOY COATING AND PADLOCK.
- (E) COUPLING/ELBOW
- (F) RISER & NIPPLES – TYPE "K" COPPER
- (G) 90° ELBOW – COPPER
- (H) BRASS UNION
- (I) 4" THICK CONCRETE SLAB, MIN. CLASS 520-C-2500. EXACT LOCATION TO BE VERIFIED IN THE FIELD.
- (J) 1/2" HILTI KB TX S.S. WITH 2" MIN EMBEDMENT (ESR-1917).

④ 2" BACKFLOW PREVENTER DETAIL



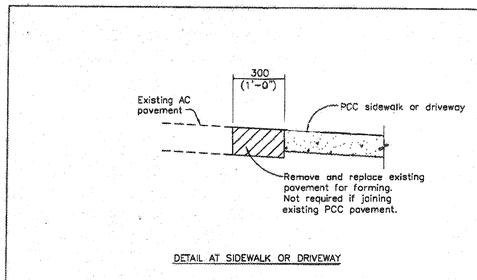
DETAIL AT CURB & GUTTER



DETAIL AT CURB

All dimensions are millimeters, except as noted.

REVISIONS NO.	DATE	CITY OF LONG BEACH, CALIFORNIA DEPARTMENT OF PUBLIC WORKS	STANDARD PLAN NO.
1	11/28/01	CURB & GUTTER, CURB AND SIDEWALK OR DRIVEWAY REPLACEMENT OR CONSTRUCTION	METRIC 116
2	12/23/02		
3		APPROVED BY: CITY ENGINEER R.E. No. 40589 DATE: 4/4/03 EX. DATE 03/31/07	SHEET 1 OF 2
4			



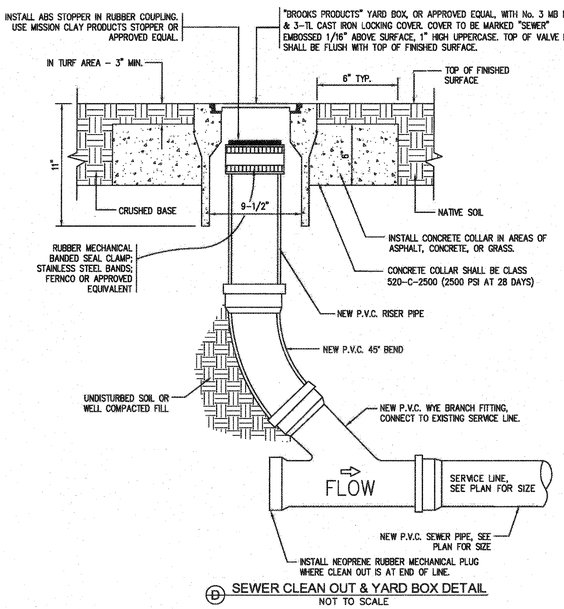
DETAIL AT SIDEWALK OR DRIVEWAY

NOTES:

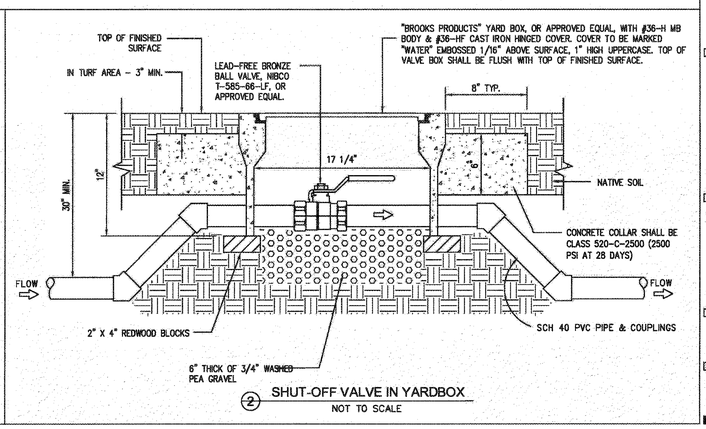
1. Protect existing sprinkler systems, electrical conduit, water meters, service laterals, and all other underground utilities adjacent to curb and gutter replacement.
2. Backfill excavated area with clean earth from excavation.
3. Reseed to match existing lawns in excavated areas.
4. 50 mm (2") asphalt concrete pavement on Class 60-E-1 (200-E-200) slurry may be used in lieu of full-depth asphalt concrete pavement restoration.

All dimensions are millimeters, except as noted.

REVISIONS NO.	DATE	CITY OF LONG BEACH, CALIFORNIA DEPARTMENT OF PUBLIC WORKS	STANDARD PLAN NO.
1	06/15/98	CURB & GUTTER, CURB AND SIDEWALK OR DRIVEWAY REPLACEMENT OR CONSTRUCTION	METRIC 116
2	12/23/02		
3		APPROVED BY: CITY ENGINEER R.E. No. 40589 DATE: 4/4/03 EX. DATE 03/31/07	SHEET 2 OF 2
4			



Ⓓ SEWER CLEAN OUT & YARD BOX DETAIL
NOT TO SCALE



② SHUT-OFF VALVE IN YARDBOX
NOT TO SCALE

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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FILE NO: 19-C1
A#: 03-117673
AC FLS BS
DATE DEC 12 2017

CONSULTANT
FPL FPL and Associates, Inc.
Traffic • Transportation • Civil • CAD
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1668

PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
RC
DRAWN BY
AL

REVISIONS

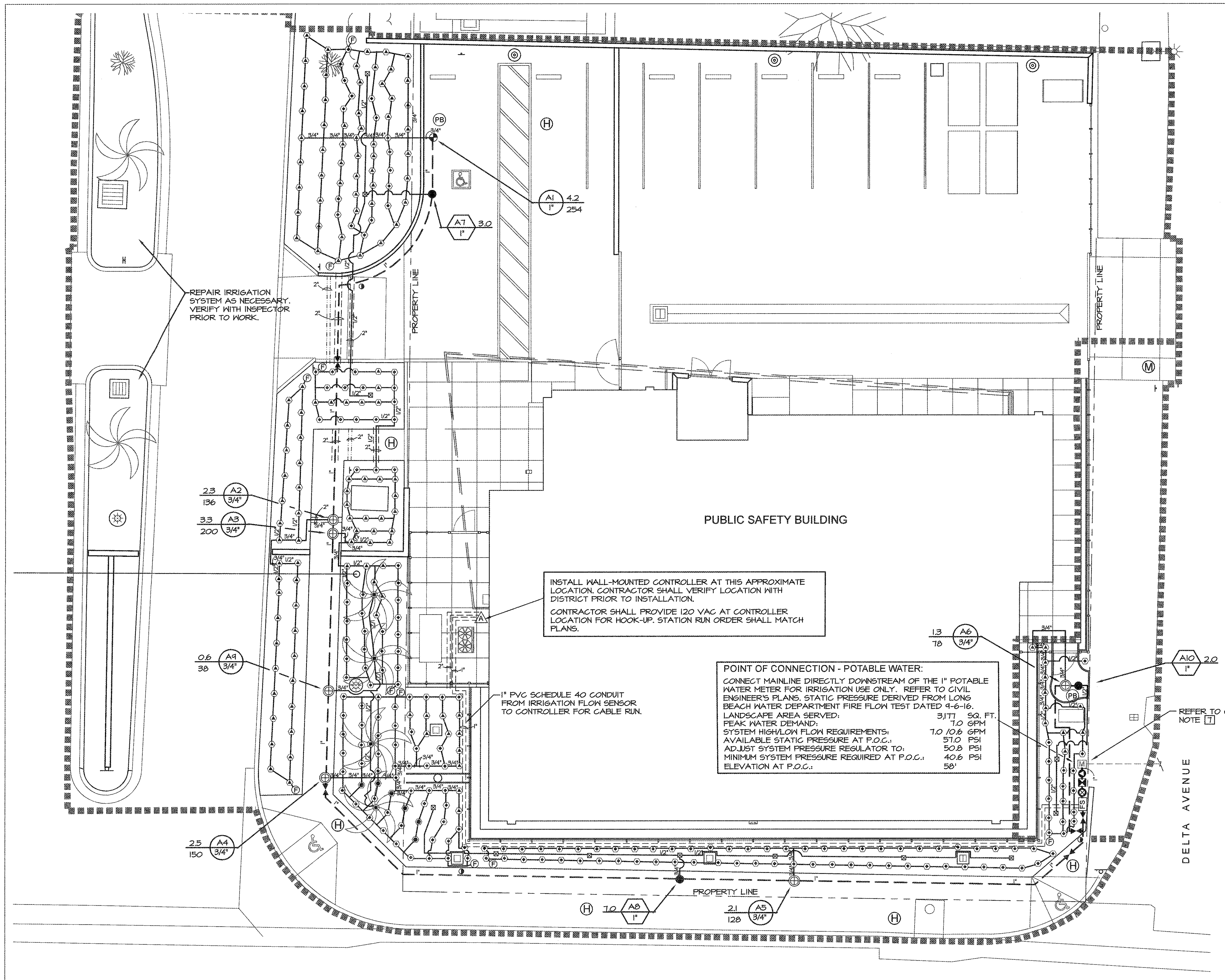
NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE
GRADING DETAIL SHEET

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	C1.3



IRRIGATION NOTES:

1. ALL WORK SHALL CONFORM TO APPLICABLE CODES.
2. T.C.L.A., INC. HAS PREPARED THESE PLANS FROM BASE INFORMATION PROVIDED BY LITTLE DIVERSIFIED ARCHITECTS, NEWPORT BEACH, CALIFORNIA. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THESE PLANS FOR ALL PERTINENT INFORMATION RELATING TO SITE CONSTRUCTION.
3. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. NEVER INSTALL IRRIGATION OUTSIDE OF PROPERTY LINES OR LIMITS INDICATED ON PLAN. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE DISTRICT PRIOR TO INSTALLATION, OR CONTRACTOR MAY BE REQUIRED TO MOVE THIS EQUIPMENT AT THE CONTRACTOR'S OWN COST.
4. DO NOT WILFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE EXISTED AT THE TIME OF THE IRRIGATION DESIGN PREPARATION. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY. IN THE EVENT THIS NOTIFICATION IS NOT GIVEN, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY TO BRING THE SYSTEM TO A PROPER WORKING CONDITION TO THE OWNER'S SATISFACTION.
5. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRING, CONTROL WIRE SLEEVES, LATERAL AND MAINLINE PIPING, AND PIPE SLEEVING UNDER ALL PAVED AREAS PER PLAN, PRIOR TO PAVING. ALL SLEEVING SHALL BE PVC SCHEDULE 40 PIPE AND BE A MINIMUM TWICE THE ENCLOSED PIPE SIZE AND 1-1/2" MINIMUM DIAMETER.
6. 120 V.A.C. ELECTRICAL POWER SHALL BE PROVIDED TO THE CONTROLLER LOCATION BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
7. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE DRAWINGS AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCES BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING THE IRRIGATION POINT OF CONNECTION TO THE DISTRICT.
IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF THE IRRIGATION SYSTEM CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ACQUIRE FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY TO BRING THE SYSTEM TO A PROPER WORKING CONDITION.
8. THE HYDRAULIC CALCULATIONS FOR THIS IRRIGATION SYSTEM HAVE BEEN ESTABLISHED USING THE MATERIALS AS SPECIFIED ON THIS PLAN. SUBSTITUTIONS MADE TO THE MATERIALS BY THE CONTRACTOR WITHOUT PREVIOUS ACCEPTANCE BY THE LANDSCAPE ARCHITECT SHALL PLACE ALL LIABILITY OF THE IRRIGATION SYSTEM ONTO THE IRRIGATION CONTRACTOR. NO SUBSTITUTIONS OF EQUIPMENT WILL BE ACCEPTABLE WITHOUT PRIOR WRITTEN APPROVAL BY THE LANDSCAPE ARCHITECT. THE IRRIGATION CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE ALL SUBSTITUTED EQUIPMENT WITH SPECIFIED EQUIPMENT IF SO ORDERED BY THE DISTRICT.
9. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN IN THE DETAILS. USE TEFLON TAPE ON ALL PVC MALE PIPE THREADS ON ALL SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.
10. CONTRACTOR SHALL PROVIDE AND INSTALL IN-LINE SWING CHECK VALVES AND ADJUSTABLE IN-RISER CHECK VALVES IF CONDITIONS EXIST WHICH REQUIRE CHECK VALVES TO AVOID BACK DRAINAGE TO LOWER EMITTERS AT NO ADDITIONAL COST TO THE OWNER.
11. REFER TO SPECIFICATIONS FOR SUBMITTALS, INSPECTIONS AND OTHER APPLICABLE INFORMATION.
12. THE EMITTERS SELECTED REPRESENT THE BEST ESTIMATE FOR WATER FLOWS BASED ON THE PLANT TYPE, SIZE, WATER USE AND MICROCLIMATE. FIELD ADJUSTMENTS MAY BE REQUIRED DEPENDING ON PLANT PERFORMANCE. CONTRACTOR SHALL ADJUST VALVE TIMING, PROGRAM START TIMES AND EMITTER FLOWS AS REQUIRED FOR BEST GROWTH RESULTS.

DRIP IRRIGATION LEGEND:

SYMBOL	PRODUCT	MODEL	DESCRIPTION	DETAIL
⊕	RAINBIRD	XCZ-075-PRF	LOW-FLOW CONTROL ZONE KIT. KIT INCLUDES 3/4" VALVE, AND 30 PSI INLINE PRESSURE REGULATOR. FLOW RATES FROM 0. 2 GPM TO 5 GPM.	13 / L-4
◕	RAINBIRD	XCZ-100-PRF	MEDIUM-FLOW CONTROL ZONE KIT. KIT INCLUDES 1" VALVE, AND 40 PSI INLINE PRESSURE REGULATOR. FLOW RATES FROM 3 GPM TO 15 GPM.	13 / L-4
Ⓕ	NETAFIM	TLSOV	PVC 1/2" MANUAL FLUSH VALVE FOR SYSTEM FLUSH VALVE WITH 48" FLUSH HOSE	2 / L-5
◉	RAINBIRD	TREE ASSEMBLY	EXISTING PALM IRRIGATION DETAIL USING RAINBIRD XF SERIES DRIPLINE, SEE DETAIL	1 / L-5
◬	RAINBIRD	SHRUB EMITTER	TWO (2)-INDIVIDUAL OUTLETS PER SHRUB, WITH 2-GPH RAINBIRD XERI-BUG DRIP EMITTER USE WITH RAINBIRD XBF2EL 1/4" BARB TRANSFER FITTINGS	14&15 / L-4
◈	RAINBIRD	SHRUB EMITTER	TWO (2)-INDIVIDUAL OUTLETS PER SHRUB, WITH 1-GPH RAINBIRD XERI-BUG DRIP EMITTER USE WITH RAINBIRD XBF2EL 1/4" BARB TRANSFER FITTINGS	14&15 / L-4
●	RAINBIRD	SHRUB EMITTER	TWO (2)-INDIVIDUAL OUTLETS PER SHRUB, WITH 0.5-GPH RAINBIRD XERI-BUG DRIP EMITTER USE WITH RAINBIRD XBF2EL 1/4" BARB TRANSFER FITTINGS	14&15 / L-4

EMITTER LEGEND

EMITTER	PLANT MATERIAL	WUCOLS	CONTAINER SIZE	BASIN DIAM.	BASIN AREA	EMITTER/COLOR	EMITTER GPH	NUMBER EMITTERS PER PLANT	TOTAL GPH PER PLANT
	TREES:								
◉	EXISTING PALMS		EXISTING	6'	30 SF	—	SEE DETAIL	SEE DETAIL	9.5
	SHRUBS:								
●	AGAVE ATTENUATA	L	5 GALLON	2'	3 SF	XB-05PC-1032/BLUE	0.5	2	1.0
◬	CARISSA MACROCARPA	M	5 GALLON	2'	3 SF	XB-20PC-1032/RED	2.0	2	4.0
◬	DIANELLA TASMANICA	M	5 GALLON	2'	3 SF	XB-20PC-1032/RED	2.0	2	4.0
◈	ILEX VOMITORIA 'STOKES'	L	5 GALLON	2'	3 SF	XB-10PC-1032/BLACK	1.0	2	2.0
◈	LANTANA 'NEW GOLD'	L	5 GALLON	2'	3 SF	XB-10PC-1032/BLACK	1.0	2	2.0
◬	LIGUSTRUM JAPONICUM	M	5 GALLON	2'	3 SF	XB-20PC-1032/RED	2.0	2	4.0
◬	MUHLENBERGIA CAPILLARIS	M	5 GALLON	2'	3 SF	XB-20PC-1032/RED	2.0	2	4.0
◈	MYOPORUM PARVIFOLIUM	L	5 GALLON	2'	3 SF	XB-10PC-1032/BLACK	1.0	2	2.0
◈	SALVIA CHAMAEDRYOIDES	L	5 GALLON	2'	3 SF	XB-10PC-1032/BLACK	1.0	2	2.0
◈	SALVIA GREGGII 'RED'	L	5 GALLON	2'	3 SF	XB-10PC-1032/BLACK	1.0	2	2.0

SYMBOL	PRODUCT	MODEL	DESCRIPTION	DETAIL
[M]	——	——	POTABLE IRRIGATION WATER METER. SEE CIVIL ENGINEER'S PLANS.	——
△A	HUNTER	I-CORE	AUTOMATIC 12 STATION IRRIGATION CONTROLLER 'A'. FACTORY ASSEMBLED CONTROLLER WITHIN A "STRONGBOX" WALL-MOUNTED, VANDAL-RESISTANT STAINLESS STEEL ENCLOSURE. IMPERIAL SUPPLY SPECIFICATION NUMBER: ICA16-HU7-12/SP/SOLSW/HF-100C/HFL, GREEN PRODUCT SALES, DARYL GREEN, (949) 584-7311. MOUNT AT HEIGHT FOR EASY OPERATION. OPTIONS INCLUDE: ICA16-HU-12: 12 STATION HUNTER I-CORE CONTROLLER IN WALL-MOUNTED SS ENCLOSURE; SP: SURGE PROTECTION; HF-100C: 1" FLOW SENSOR; HFL: HIGH FLOW SHUT-OFF LIGHT ON ENCLOSURE; SOLSW: WIRELESS SOLAR-SYNCH WEATHER STATION	3 / L-4
(PB)	CARSON	910-12B	10" ROUND PLASTIC CONTROL AND COMMON WIRE PULL BOX. COIL MINIMUM 24" OF WIRE WITHIN BOX. PULL DIFFERENT COLOR WIRE FROM CONTROLLER TO EACH PULL BOX AT THE END OF MAINLINES.	3 / L-4
◭	ZURN-WILKINS	500XL	PRESSURE REDUCING VALVE - LINE SIZE ON BACKFLOW RISER.	4 / L-4
⊠	FEBCO	825Y	RP BACKFLOW PREVENTER - 1". INSTALL WITHIN A "STRONGBOX" LOW PROFILE SMOOTH TOUCH STAINLESS STEEL METAL WIRE MESH ENCLOSURE SBBC-30SS&CR	6 / L-5
⧓	HAMMOND	8201	BRONZE FULL PORT BALL VALVE - LINE SIZE TO 3"	9 / L-4
⊗	RAINBIRD	PESB	NORMALLY-CLOSED MASTER VALVE - 1". PROVIDE WITH RAINBIRD SOL-ADA SOLENOID ADAPTER.	7 / L-4
●	RAINBIRD	PEB	ELECTRIC REMOTE CONTROL VALVE IN BOX - SIZE PER PLAN	3 / L-5
[FS]	CST	IFS-100C	FLOW SENSOR - 1". INSTALL DEVICE AND CABLE PER MANUFACTURER'S SPECIFICATIONS	8 / L-4
◑	RAINBIRD	33DLRC	QUICK COUPLING VALVE WITH YELLOW RUBBER LOCKING CAP - 3/4"	10 / L-4
⊠	RAINBIRD	1402	TWO (2) - 0.5 GPM BUBBLERS PER TREE LOCATION, PLACE OPPOSITE SIDES OF ROOT BALL, WITHIN TREE BASIN	4 / L-4
— — 2" — —			BURIED SCHEDULE 40 PVC PRESSURE MAINLINE PIPING, SIZE PER PLAN.	5&6 / L-4
—— 1/2" ——			BURIED SCHEDULE 40 PVC PRESSURE MAINLINE PIPING. MAIN FEED LINES FROM VALVE ARE SIZED, ALL OTHER EMITTER PIPING SHALL BE ½" UNLESS OTHERWISE DENOTED.	5&6 / L-4
═ 2" ═			PIPE SLEEVE, PVC SCH. 40, FOR IRRIGATION PIPING INSTALLED UNDER PAVING, SIZE NOTED ON PLAN. IF NO SIZE NOTED, USE TWICE THE DIAMETER OF THE INTERIOR PIPE. IRRIGATION CONTRACTOR SHALL INSTALL SLEEVING, INCLUDING WALL PENETRATIONS WHERE NECESSARY.	6 / L-4
::: 2" :::			CONTROL WIRE SLEEVE, PVC SCH. 40, INSTALLED UNDER PAVING BY IRRIGATION CONTRACTOR. SEE "SLEEVE LEGEND" FOR MINIMUM SIZES OF SLEEVES.	6 / L-4

DRIP SYSTEMS:

A6 — DENOTES CONTROLLER (LETTER) AND VALVE (NUMBER) SEQUENCE
21.4 — DENOTES MAXIMUM GALLONS PER MINUTE (GPM) FLOW THROUGH VALVE
128 — DENOTES MAXIMUM GALLONS PER HOUR (GPH) FLOW THROUGH VALVE
1" — DENOTES VALVE SIZE

HYDROZONE LEGEND:

(H) DENOTES AREA WITHIN HIGH WATER USE ZONES, THESE ARE SOUTH AND WEST EXPOSURES WITH FULL SUN.

(M) DENOTES AREA WITHIN MODERATE WATER USE ZONES, THESE ARE NORTH AND EAST EXPOSURES WITH MODERATE SHADE.

▪▪▪▪▪ HYDROZONE BOUNDARY

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

NORTH

TCLA, Inc.
LANDSCAPE ARCHITECTURE - ENVIRONMENTAL DESIGN
CORPORATE OFFICE: JOSEPH A. VARONIN A.S.L.A. CA#1737
27905 SMYTH DRIVE, VALENCIA, CALIFORNIA 91355
(PH) 661-702-1011 (FX) 661-702-0293

LICENSED LANDSCAPE ARCHITECT HARRY H. KOBZEFF NO. 1737 — Signature — 8-31-18 Renewal Date — 11-7-17 Date — STATE OF CALIFORNIA

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
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COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ✓ FLS ✓ SS [signature]
DATE DEC 12 2017

PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

NO	REASON	DATE

IRRIGATION PLAN

913-4675-01

11/21/17 | L-1

MAWA: MAXIMUM APPLIED WATER ALLOWANCE: POINT OF CONNECTION: 1" IRR. METER

MAWA = (ETo x 0.45 x LA x 0.62) + (ETO x 1.0 x SLA x 0.62) = Gallons per year for LA + SLA.
where:
MAWA = Maximum Applied Water Allowance (gallons per year)
ETO = Reference Evapotranspiration (inches per year)
ETAF = Evapotranspiration Adjustment Factor
LA = Landscaped Area (square feet)
SLA = Special Landscaped Area (square feet)
0.45 = ETAF for Landscaped Area, 0.65 for schools)
1.0 = ETAF for Special Landscaped Area
0.62 = Conversion factor (to gallons per square foot)

MAWA Calculation:

	ETo		ETAF		LA or SLA (square ft.)		Conversion		MAWA (Gallons per Year)
MAWA for LA	46.6	x	0.65	x	3,177	x	0.62	=	59,663
MAWA for SLA	46.6	x	1.0	x	0	x	0.62	=	0
							Total MAWA =		59,663

EAWU: ESTIMATED APPLIED WATER USE POINT OF CONNECTION: 1" IRR. METER

EAWU = ETo x K_L x LA x 0.62 / IE = Gallons per year
where:
EAWU = Estimated Applied Water Use (gallons per year)
ETO = Reference Evapotranspiration (inches per year)
K_L = Landscape Coefficient
LA = Landscaped Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
IE = Irrigation Efficiency

LANDSCAPE COEFFICIENT: $K_s \times K_d \times K_{mc} = K_L$
HOT = 0.3 X 0.8 X 1.2 = 0.3
MODERATE = 0.3 X 0.8 X 0.8 = 0.2

K_s = species factor - 0.1 (dry) - 0.9 (wet)
K_d = density factor - 0.5 (sparse) - 1.3 (dense)
K_{mc} = microclimate factor - 0.5 (cool) - 1.4 (hot)

EAWU Calculation:

Hydrozone	ETo		K_L		LA or SLA (square ft.)		Conversion		IE		EAWU (Gallons per Year)
HOT	46.6	x	0.3	x	2,677	x	0.62	/	.81	=	28,646
MODERATE	46.6	x	0.2	x	196	x	0.62	/	.81	=	1,398
D.G.	46.6	x	0	x	304	x	0.62	/	.0	=	0
								Total EAWU =			30,044

DRIP PRESSURE LOSS CHART

VALVE: A1 ELEV. AT POC: 58.0
GPM: 4.2 GPH: 286 STATIC PSI AT POC: 57.0

1" WATER METER	0.2 PSI
1" BACKFLOW PREVENTER	11.0 PSI
1 MASTER VALVE	1.7 PSI
1" FLOW SENSOR, (FIXED)	0.3 PSI
285 LF OF 1" MAINLINE (2.5 GPM)	2.1 PSI
FITTINGS (20% MAINLINE LOSS)	0.4 PSI
ELEVATION TO VALVE (+) UPHILL (58')	0.0 PSI
(1) TOTAL SYSTEM LOSSES TO VALVE INLET:	15.7 PSI
SUMMARY:	
(2) AVAILABLE STATIC PRESSURE AT POC:	57.0 PSI
(3) DESIGN PRESSURE AT POC: (2)X .75	42.8 PSI
(4) TOTAL SYSTEM LOSSES TO VALVE INLET (1)	15.7 PSI
(5) RESIDUAL DYNAMIC PRESSURE @ VALVE: (3) - (4)	27.1 PSI
DOWNSTREAM LATERAL LINE LOSSES:	
(6) 3/4" DRIP VALVE (LFV)	3.8 PSI
(7) 3/4" NYE FILTER (NON-REGULATING)	1.1 PSI
(8) LATERAL LINE LOSSES, (FIXED)	5.0 PSI
(9) CHECK VALVE LOSSES	0.0 PSI
(10) EMITTER/DRIPLINE OPERATING PRESSURE	15.0 PSI
(11) ELEVATION (+) UPHILL	0.0 PSI
(12) TOTAL LATERAL SYSTEM LOSSES (6) THROUGH (11)	24.9 PSI
(13) RESIDUAL LATERAL SYSTEM PRESSURE: (5) - (12)	2.2 PSI
(14) TOTAL SYSTEM PRESSURE LOST: (1) + (12)	40.6 PSI
(15) SET SYSTEM REGULATOR AT: (14) X 1.25	50.8 PSI

CONVENTIONAL PRESSURE LOSS CHART

VALVE: A8 POC ELEV: 58.0
GPM: 7.0 STATIC PSI AT POC: 57.0

1" WATER METER	0.4 PSI
1" BACKFLOW PREVENTER	11.0 PSI
1" MASTER VALVE	1.8 PSI
1" FLOW SENSOR, (FIXED)	0.3 PSI
75 LF OF 1" MAINLINE	1.0 PSI
FITTINGS (20% MAINLINE LOSS)	0.2 PSI
1" REMOTE CONTROL VALVE	1.8 PSI
LATERAL LINE LOSSES, (FIXED)	5.0 PSI
ELEVATION (+) UPHILL, (-) DOWNHILL (58')	0.0 PSI
SPRINKLER OPERATING PRESSURE:	15.0 PSI
(1) TOTAL SYSTEM LOSSES:	36.5 PSI
SUMMARY:	
(2) AVAILABLE STATIC PRESSURE AT POC:	57.0 PSI
(3) AVAILABLE DYNAMIC PRESSURE AT POC: (2)X .75	42.8 PSI
(4) REQ'D SYSTEM MINIMUM DYNAMIC PRESSURE: (1)	36.5 PSI
(5) RESIDUAL DYNAMIC PRESSURE: (3) - (4)	6.3 PSI

TCLA, Inc.
LANDSCAPE ARCHITECTURE - ENVIRONMENTAL DESIGN
CORPORATE OFFICE: JOSEPH A. VARONINA S.L.A. CA#1737
27905 SMYTH DRIVE, VALENCIA, CALIFORNIA 91355
(PH) 661-702-1011 (FX) 661-702-0293

LICENSED LANDSCAPE ARCHITECT HARRY H. ROBERTS No. 2737 8-31-18 Renewal Date STATE OF CALIFORNIA

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OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117873
AC FLS SS
DATE DEC 12 2017

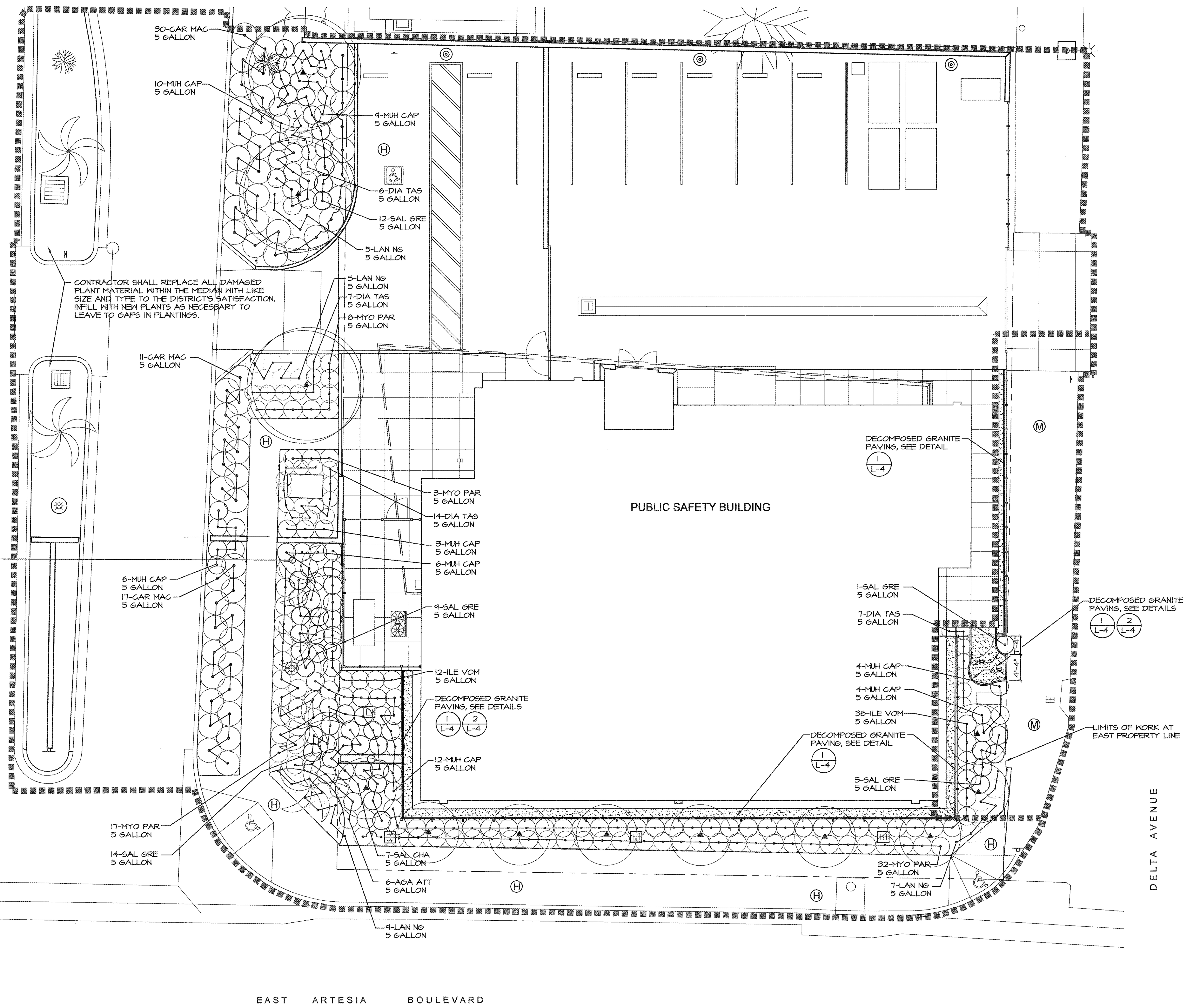
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

NO	REASON	DATE

LANDSCAPE NOTES
& LEGENDS

913-4675-01

11/21/17 L-2



PLANTING NOTES:

1. ALL WORK SHALL CONFORM TO APPLICABLE LOCAL CODES.

2. ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHER WISE SPECIFIED.

3. ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE DISTRICT PRIOR TO PLANTING.

4. ALL PLANT MATERIAL WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ANY PLANT DEEMED UNACCEPTABLE BY THE DISTRICT SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY MATERIAL APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE DISTRICT SHALL BE THE SOLE JUDGE AS TO THE ACCEPTABILITY OF PLANT MATERIAL.

5. IN DRIP IRRIGATED AREAS, A PRE-EMERGENT HERBICIDE SHALL BE APPLIED BETWEEN PLANT MATERIAL.

6. FINISH GRADES SHALL BE INSTALLED 2" BELOW ALL CURBS, TOPS OF UTILITY BOXES, AND PAVING IN SHRUB AREAS.

7. FINISH SURFACE SHALL BE A MINIMUM OF TWO (2) PERCENT AWAY FROM ALL BUILDINGS, AND MATCH CIVIL ENGINEERS FLOW LINES UNLESS OTHERWISE SHOWN.

8. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY FOR THE FOLLOWING: SOIL FERTILITY, ORGANIC MATTER CONTENT, AGRICULTURAL SUITABILITY, AND SALT AND BORON CONTENT. EACH SAMPLE SUBMITTED SHALL CONTAIN APPROXIMATELY ONE QUART OF SOIL, BUT NO LESS. CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE):

   ANALYTICAL RESULTS FOR THE SOILS:
   - SOIL pH
   - NUTRIENTS
   - SALINITY
   - TEXTURE
   - WATER INFILTRATION RATE
   - GENERAL RECOMMENDATIONS

   PLANTING RECOMMENDATIONS:
   - BACKFILL MIXES FOR SHRUBS AND TREES
   - PRE-PLANT SOIL AMENDMENTS AND RATES FOR PLANTING AREAS
   - SOIL PREPARATION, RIPPING AND/OR ROTOTILLING SPECIFICATIONS

   FERTIILIZER PROGRAM:
   - ESTABLISHMENT PHASE FERTILIZERS AND RATES IN PLANTING BEDS.
   - ON-GOING MAINTENANCE PHASE FOR SAME.

9. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS AFTER RECEIVING A CHANGE ORDER FROM THE DISTRICT. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS SHALL BE SUBMITTED TO THE DISTRICT WITH THE REPORT. FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:

   SHRUB AREAS:

   INCORPORATE INTO THE TOP 6" OF SOIL BY MEANS OF ROTO-TILLING AFTER CROSS-RIPPING:

   NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
   AMMONIUM PHOSPHATE 16-20-0 - 15 LBS PER 1,000 S.F.
   AGRICULTURAL GYPSUM - 100 LBS PER 1,000 S.F.

   ALL TREES AND SHRUBS:

   6 PARTS BY VOLUME ON-SITE SOIL
   3 PARTS BY VOLUME NITROGEN STABILIZED ORGANIC AMENDMENT
   10 LBS. 12-12-12 FERTILIZER PER CU.YD.
   10 LBS. AGRICULTURAL GYPSUM PER CU.YD.
   2 LBS. IRON SULPHATE PER CU.YD.

10. ALL SHRUB PLANTING AREAS OTHER THAN SLOPES OVER 4:1 SHALL RECEIVE A SURFACE LAYER OF NITROGEN FORTIFIED SHREDDED TREE AND PLANT MATERIAL MULCH. THE MULCH SHALL CONSIST OF "FOREST FLOOR 0"-4"" MULCH AS MANUFACTURED BY AGUINAGA FERTILIZER COMPANY, IRVINE, CALIFORNIA, (949) 786-9558. PROVIDE DEPTH OF 2" MINIMUM OVER FINISH GRADE IN GENERAL PLANTING AREAS, AND 1" DEPTH WITHIN WATERING BERM AROUND PLANT BASE. NO BARE EARTH SHALL BE SHOWING THROUGH MULCH COVER. CURBS, WALKS OR OTHER PAVING SHALL BE INSTALLED 1" OVER THE TOP OF THE MULCH COVER. PROVIDE SAMPLES OF MULCH FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

11. EXISTING PLANT MATERIAL. ANY EXISTING PALMS OR PLANTS NOT DESIGNATED FOR REMOVAL DAMAGED BY THE CONTRACTOR SHALL BE REPLACED WITH ONE OF THE SAME TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE, AS DETERMINED BY THE DISTRICT.

12. THE CONTRACTOR SHALL BE AWARE OF EXISTING AND PROPOSED UTILITIES, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE UTILITIES AND OR ANY INJURY TO ANY PERSON.

13. THE CONTRACTOR SHALL MAINTAIN THE PROJECT IN A HEALTHY AND WEED-FREE CONDITION FOR A PERIOD OF NINETY (90) DAYS.

PLANTING LEGEND:

7-LIG. JAP. —— DENOTES QUANTITY IN GROUPING & PLANT MATERIAL, SEE LEGEND
15 GALLON —— DENOTES MATERIAL SIZE IN GROUPING

HYDROZONE LEGEND:

(H) DENOTES AREA WITHIN HIGH WATER USE ZONES, THESE ARE SOUTH AND WEST EXPOSURES WITH FULL SUN.

(M) DENOTES AREA WITHIN MODERATE WATER USE ZONES, THESE ARE NORTH AND EAST EXPOSURES WITH MODERATE SHADE.

HYDROZONE BOUNDARY

TREE LEGEND - SUNSET ZONE 22, WUCOLS ZONE 3 (SOUTH COASTAL)

SYMBOL	BOTANIC NAME	COMMON NAME	SIZE	QTY	REMARKS	WUCOLS
	LOPHOSTEMON CONFERTUS STANDARD FORM	BRISBANE BOX	24" BOX	3	10'-12" HIGH X 4'-5' WIDE	M
	RHAPHIOLEPIS INDICA 'MAJESTIC BEAUTY' STANDARD FORM	INDIAN HAWTHORNE	24" BOX	9	8'-9' HIGH X 3'-4' WIDE	M

SHRUB AND GROUNDCOVER LEGEND - SUNSET ZONE 22, WUCOLS ZONE 3 (SOUTH COASTAL)

ABBRV.	BOTANICAL NAME	COMMON NAME	SIZE	QTY	WUCOLS
AGA ATT	AGAVE ATTENUATA	NCN	5 GALLON	6	L
CAR MAC	CARISSA MACROCARPA 'GREEN CARPET'	PROSTRATE NATAL PLUM	5 GALLON	58	M
DIA TAS	DIANELLA TASMANICA 'CASA BLUE'	CASA BLUE FLAX LILY	5 GALLON	33	M
ILE VOM	ILEX VOMITORIA 'STOKES'	YAUPON	5 GALLON	50	L
LAN NG	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	5 GALLON	21	L
MUH CAP	MUHLENBERGIA CAPILLARIS 'REGAL MIST'	REGAL MIST MUHLY	5 GALLON	50	M
MYO PAR	MYOPORUM PARVIFOLIUM 'PUTAH CREEK'	PROSTRATE MYOPORUM	5 GALLON	61	L
SAL CHA	SALVIA CHAMAEDRYOIDES	GERMANDER SAGE	5 GALLON	7	L
SAL GRE	SALVIA GREGGII 'RED'	AUTUMN SAGE	5 GALLON	41	L
	DECOMPOSED GRANITE - CALIFORNIA GOLD COLOR.		STABILIZED ¼" MINUS	304 SQ. FT.	—
NOTE: INSTALL PLANTS PER PLANTING DETAILS					

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

NORTH

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PLANTING PLAN

913-4675-01

11/21/17

L-3

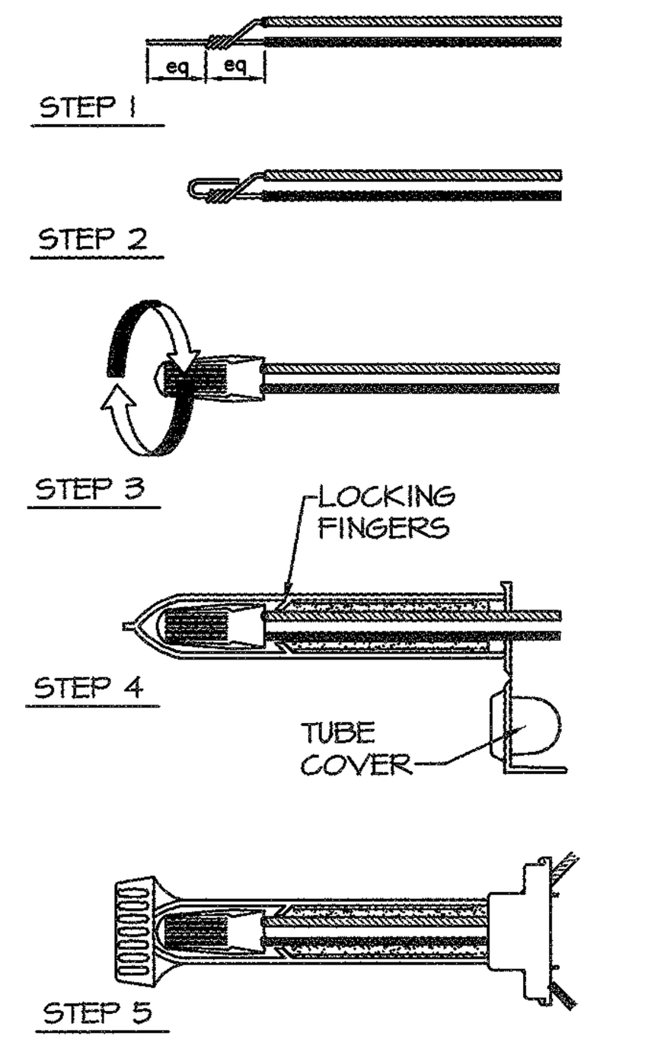
STEP 1
STRIP BOTH WIRES. TWIST STRAND AROUND RIGID STRAND OVER HALF THE LENGTH OF STRIPPED WIRES.

STEP 2
FOLD THE OTHER HALF OF THE RIGID STRAND OVER TWISTED STRAND AS SHOWN.

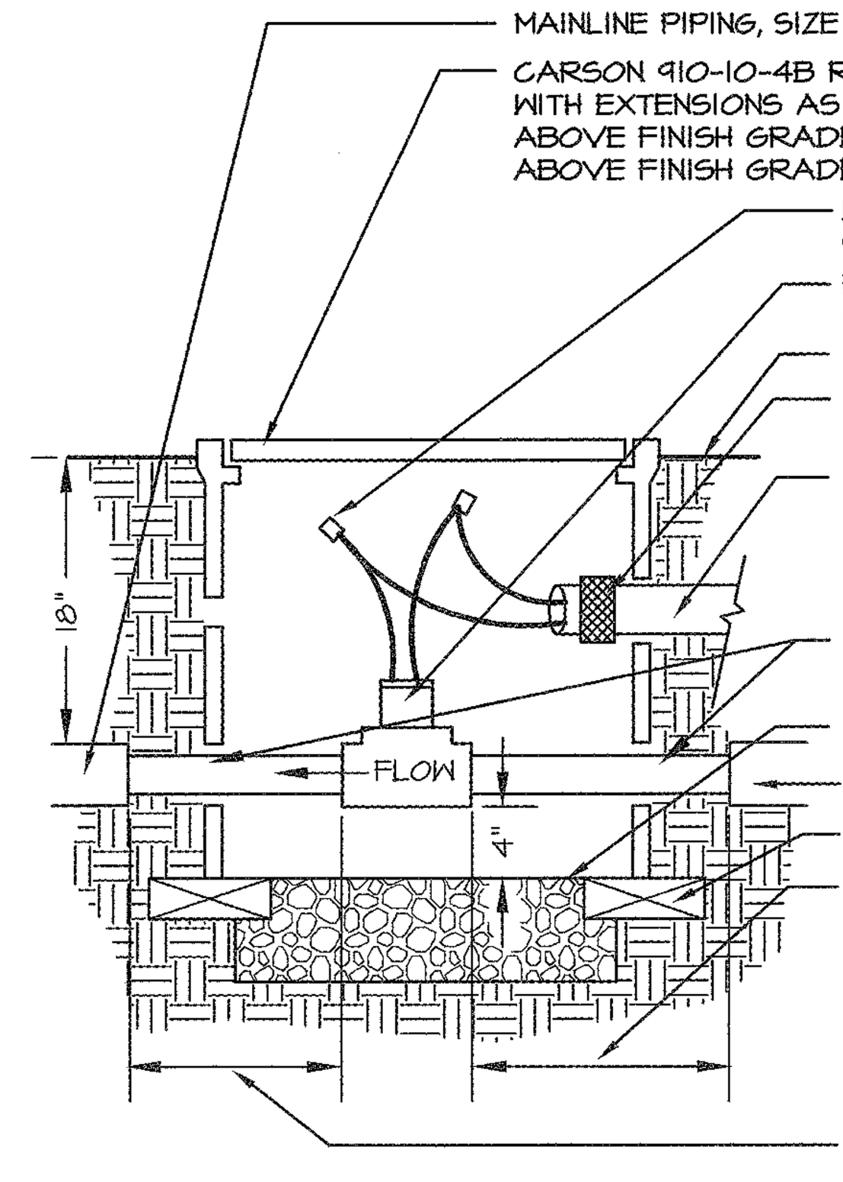
STEP 3
INSERT THE TWISTED SPLICE INTO THE "Y" ELECTRICAL SPRING CONNECTION AND TWIST OVER WIRE STRANDS IN A CLOCKWISE DIRECTION.

STEP 4
INSERT THE CONNECTOR INTO THE GEL-FILLED DIRECT BURY SPLICE KIT. PUSH PAST THE LOCKING FINGERS TO SECURE CONNECTOR INSIDE TUBE.

STEP 5
POSITION ALL THE WIRES THROUGH THE DEDICATED INSULATOR CHANNELS AND SNAP INSULATOR TUBE COVER CLOSED.

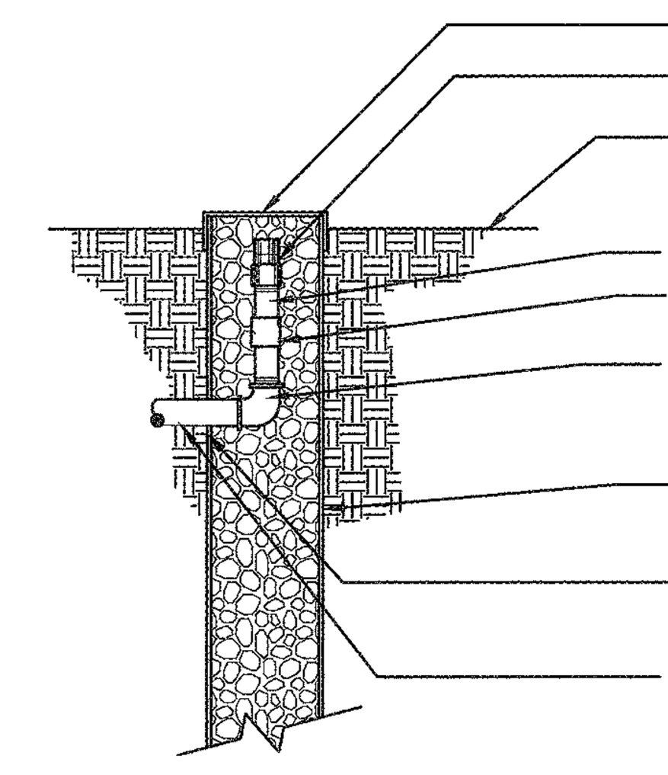


12 IRRIGATION WIRE CONNECTIONS SCALE: NTS

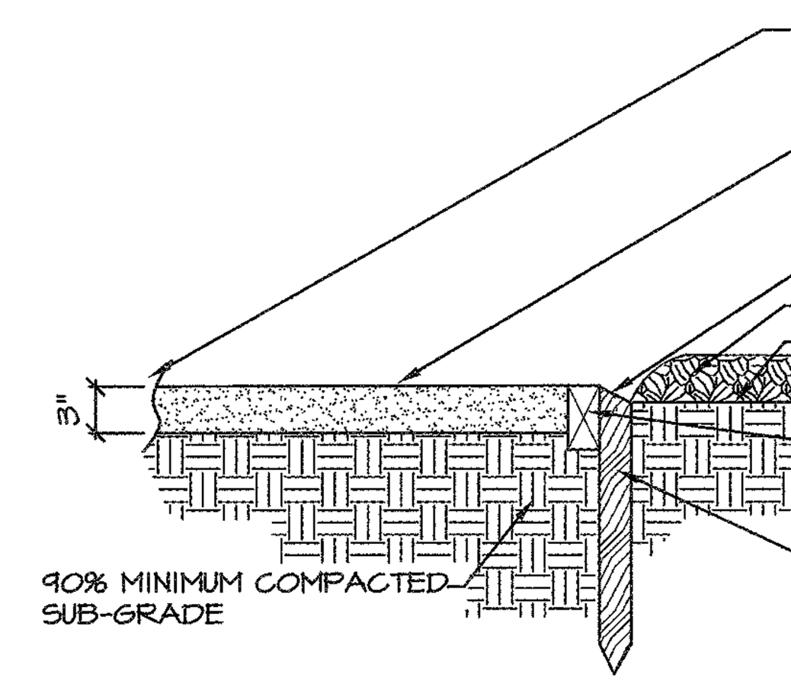


REFER TO MANUFACTURERS INSTALLATION RECOMMENDATIONS FOR FURTHER DIRECTION

8 IRRIGATION FLOW SENSOR SCALE: NTS

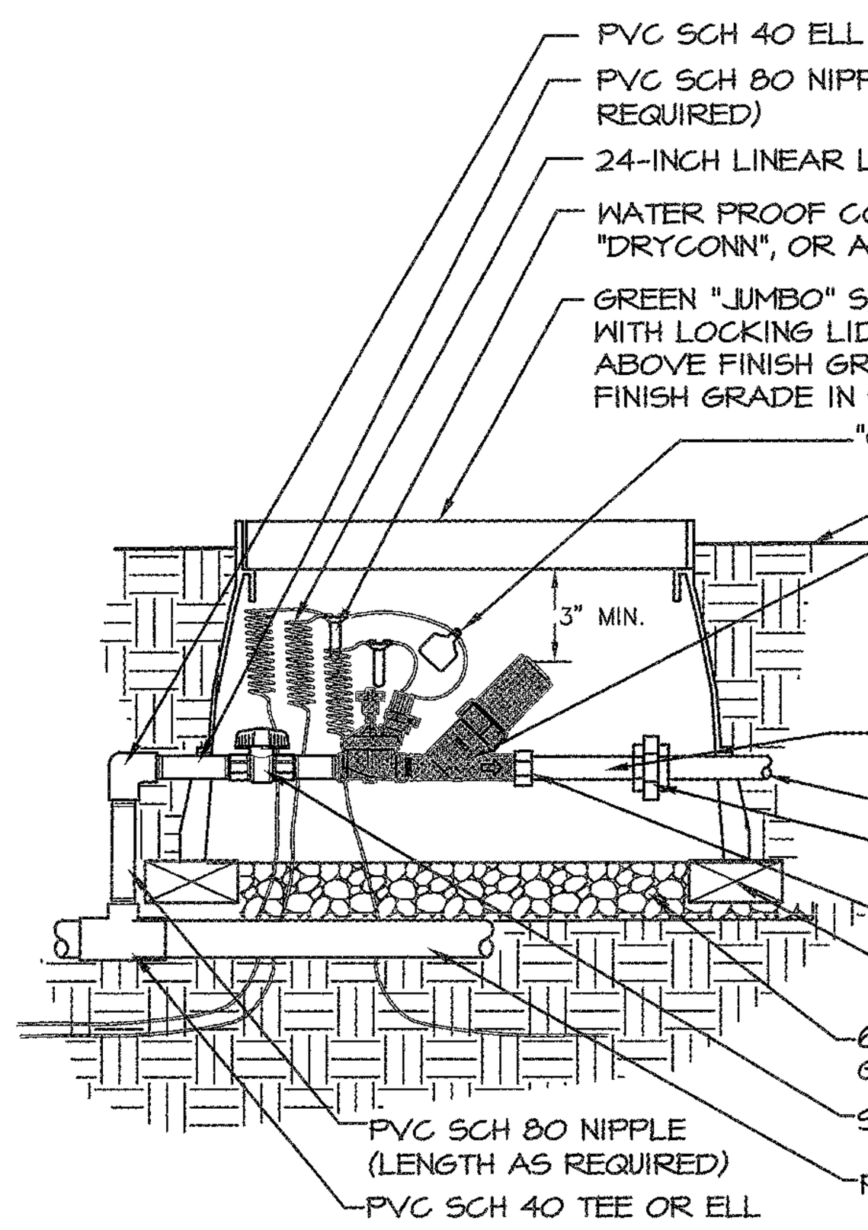


4 BUBBLER WITH DEEP WATERING PIPE SCALE: NTS

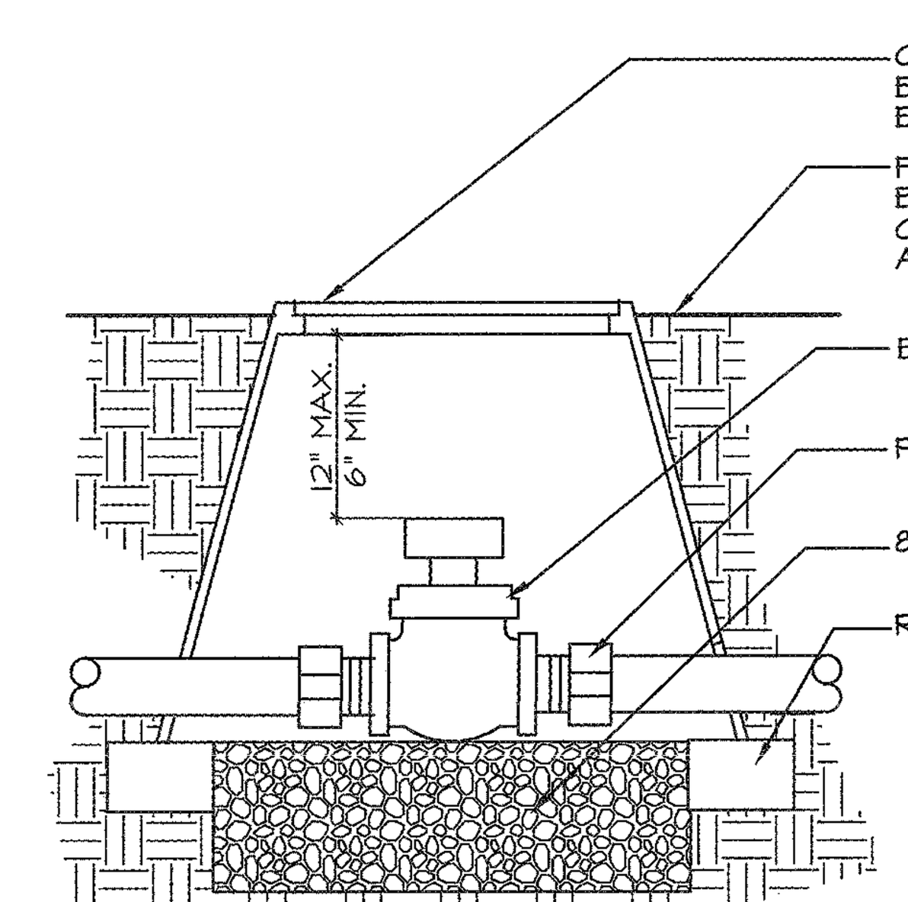


1. ALL DECOMPOSED GRANITE SHALL BE 1/4" MINUS, TAN COLOR. SUBMIT SAMPLES FOR APPROVAL.
2. "STABILIZER" BINDER SHALL BE INCORPORATED THOROUGHLY WITH ALL D.G. AT A RATE OF 12 POUNDS PER TON OF D.G. OR AS RECOMMENDED IN WRITING BY MANUFACTURER FOR APPROVAL.
3. "D.G." & "STABILIZER" SHALL BE INSTALLED IN ONE APPLICATION, DRY, PRE-MIXED AT SUPPLIER OF D.G. & THEN WATERED, THEN ROLLED/COMPACTED TO A MIN. 90% COMPACTION. INSTALLATION INFORMATION AND "STABILIZER" MATERIAL AVAILABILITY CAN BE OBTAINED AT (800) 336-2468.
4. PROVIDE SAMPLE OF D.G. (AS IT WILL BE MIXED WITH "STABILIZER") FOR APPROVAL FROM INSPECTOR PRIOR TO PURCHASE & INSTALLATION.
5. HEADER EDGINGS AS DETAILED ABOVE SHALL BE INSTALLED AT ALL EDGES OF D.G. PAVING EXCEPT AT CURBS, ASPHALT, CONCRETE PAVING, OTHER HARDSCAPES ETC.

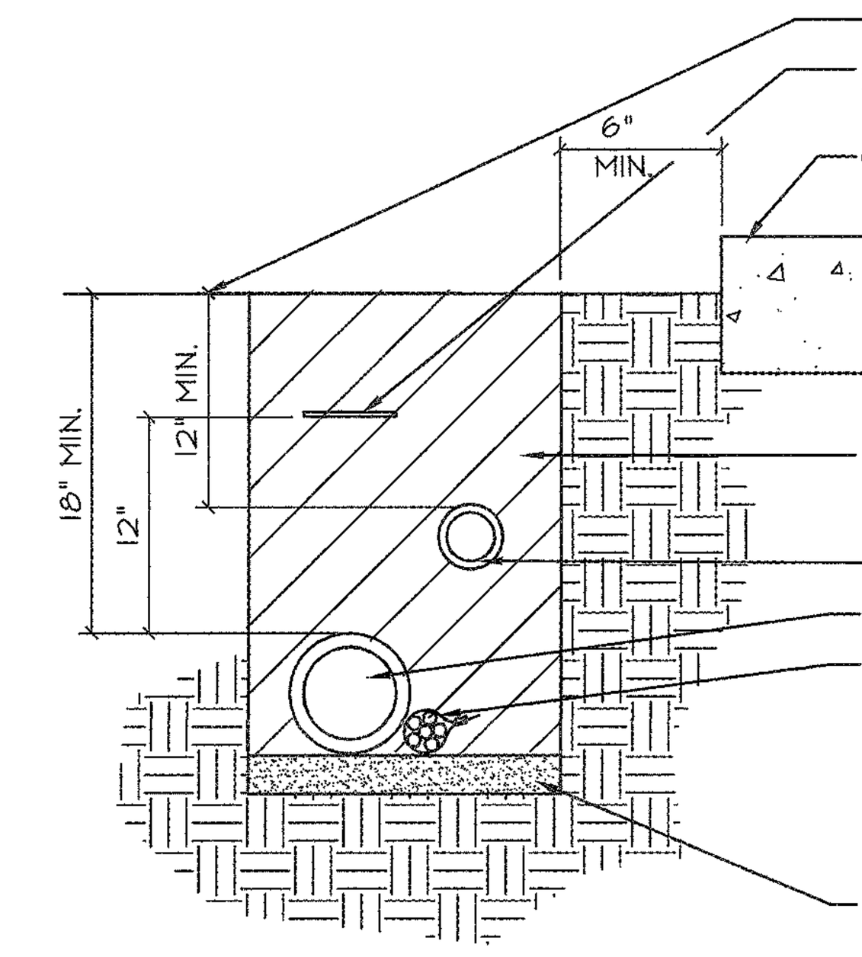
1 D.G. PAVING WITH STRAIGHT EDGE SCALE: 1"=1'-0"



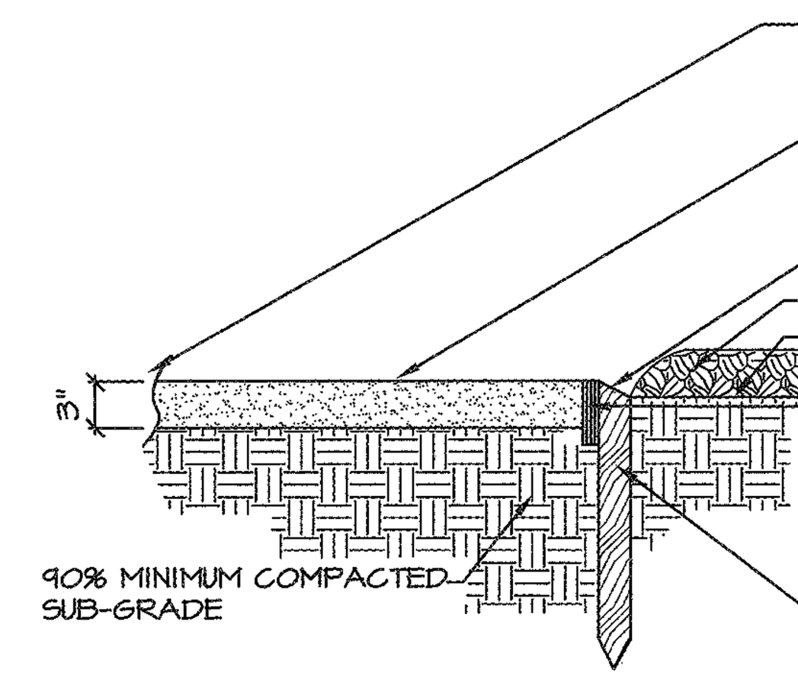
13 DRIP IRRIGATION ZONE KIT SCALE: NTS



9 IRRIGATION BALL VALVE SCALE: NTS



5 IRRIGATION TRENCHING DETAIL SCALE: NTS



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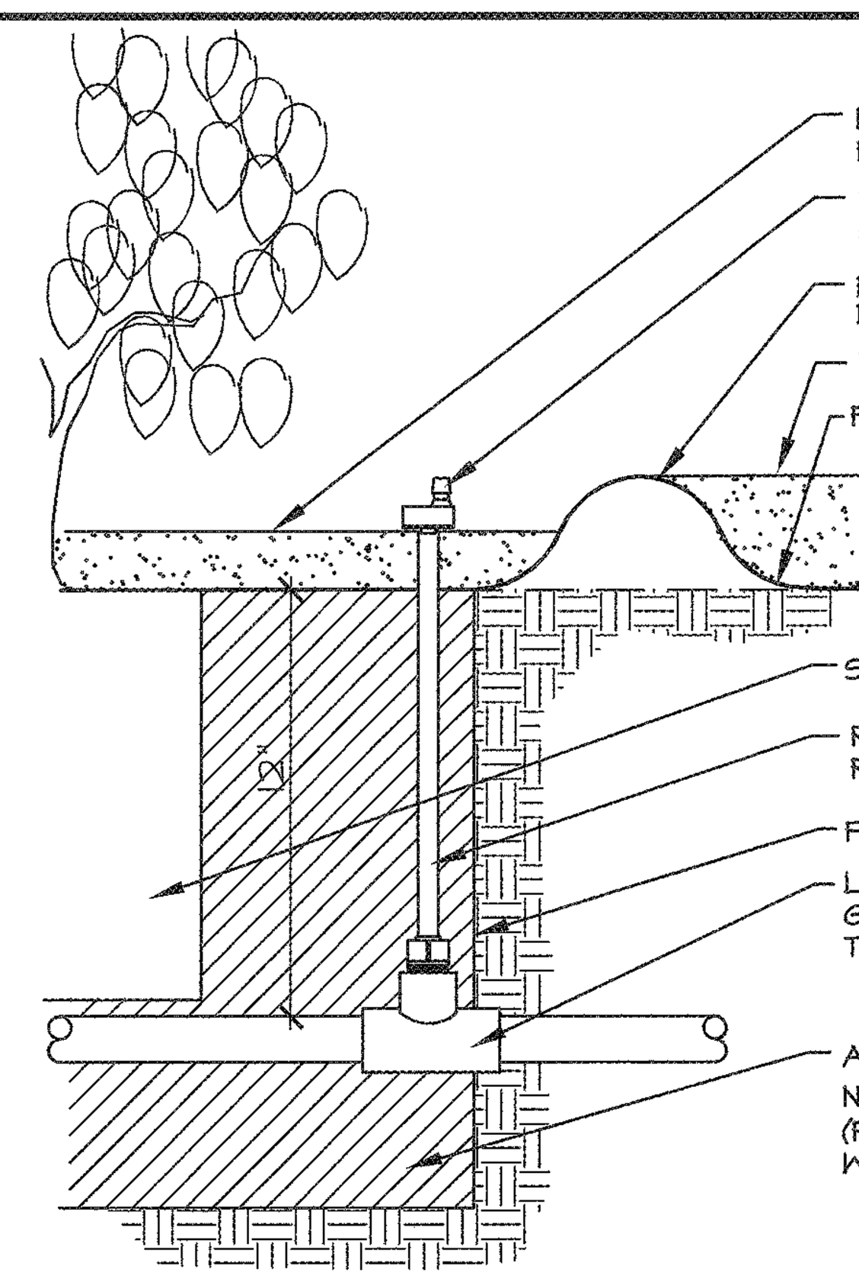
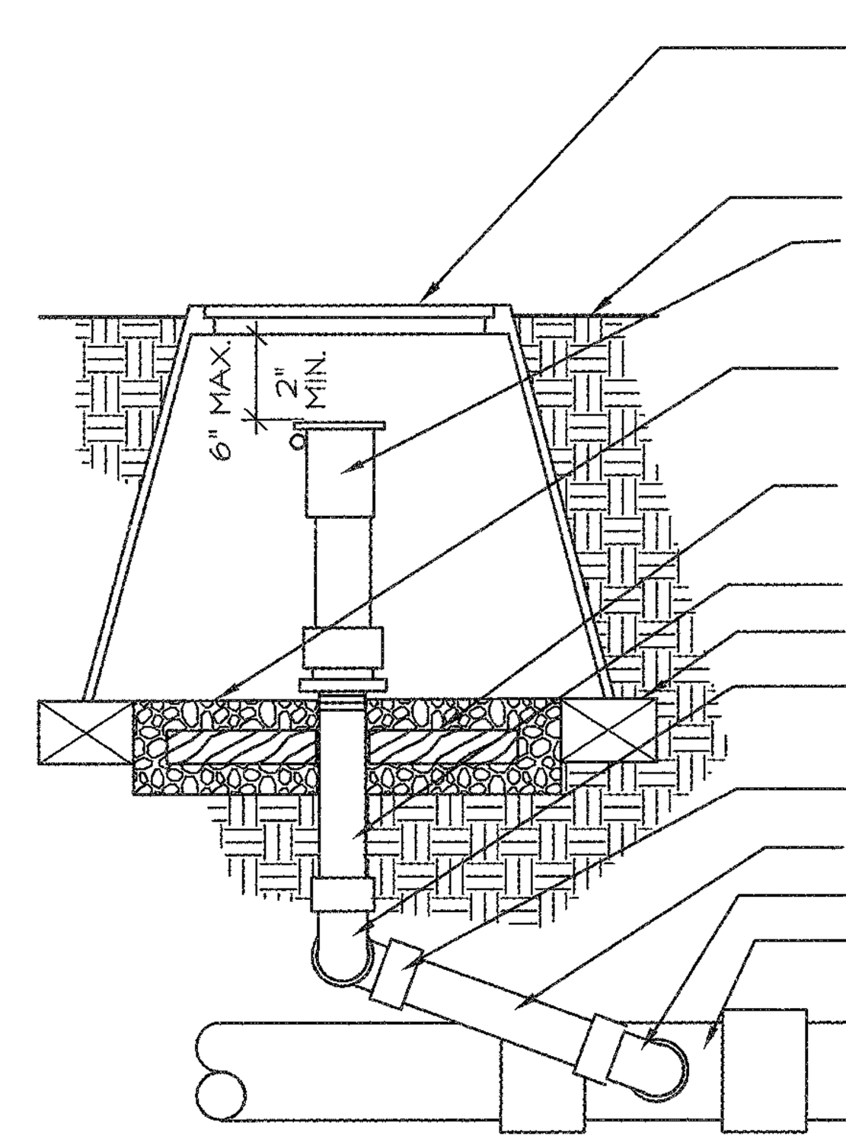
4. PROVIDE SAMPLE OF D.G. (AS IT WILL BE MIXED WITH "STABILIZER") FOR APPROVAL FROM INSPECTOR PRIOR TO PURCHASE & INSTALLATION.
5. HEADER EDGINGS AS DETAILED ABOVE SHALL BE INSTALLED AT ALL EDGES OF D.G. PAVING EXCEPT AT CURBS, ASPHALT, CONCRETE PAVING, OTHER HARDSCAPES ETC.

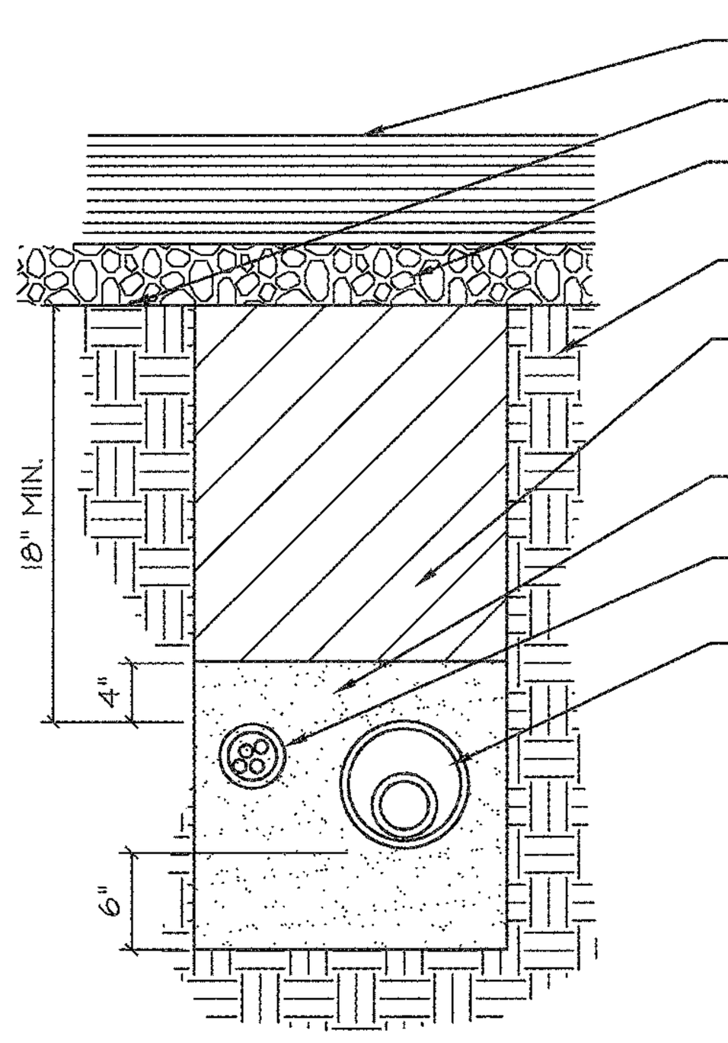
2 D.G. PAVING WITH CURVED EDGE SCALE: 1"=1'-0"



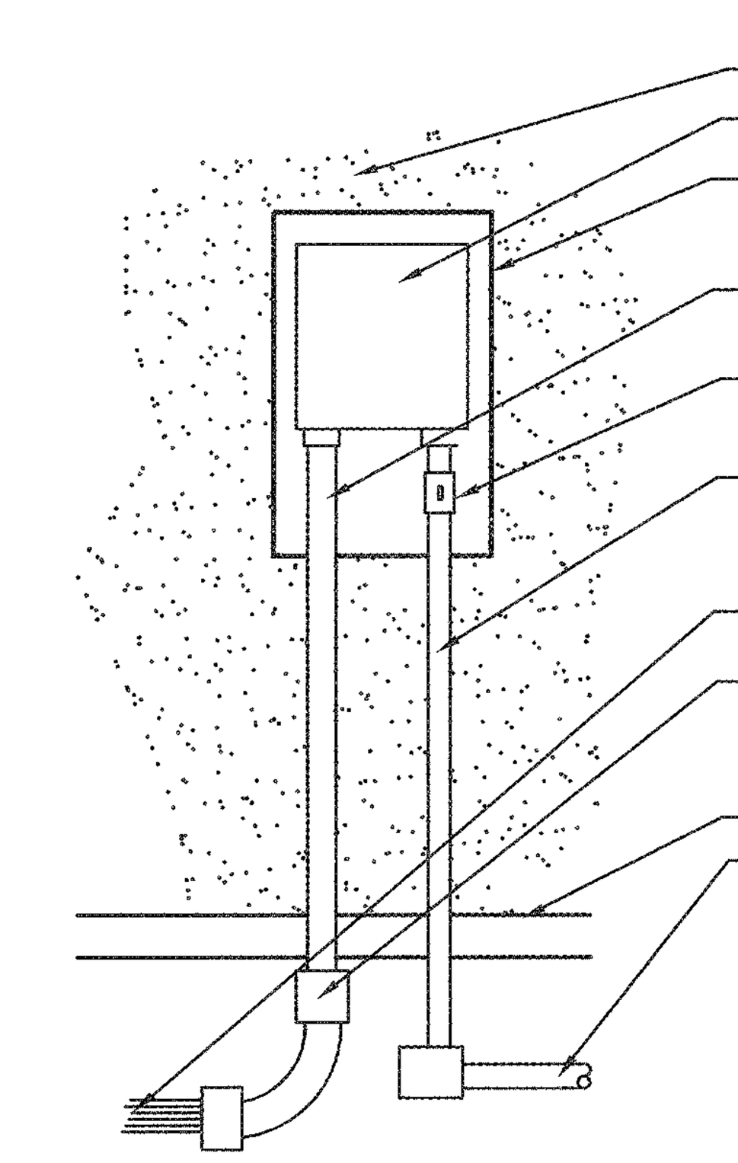
14 DRIP IRRIGATION EMITTER ON FLEX-RISER SCALE: NTS



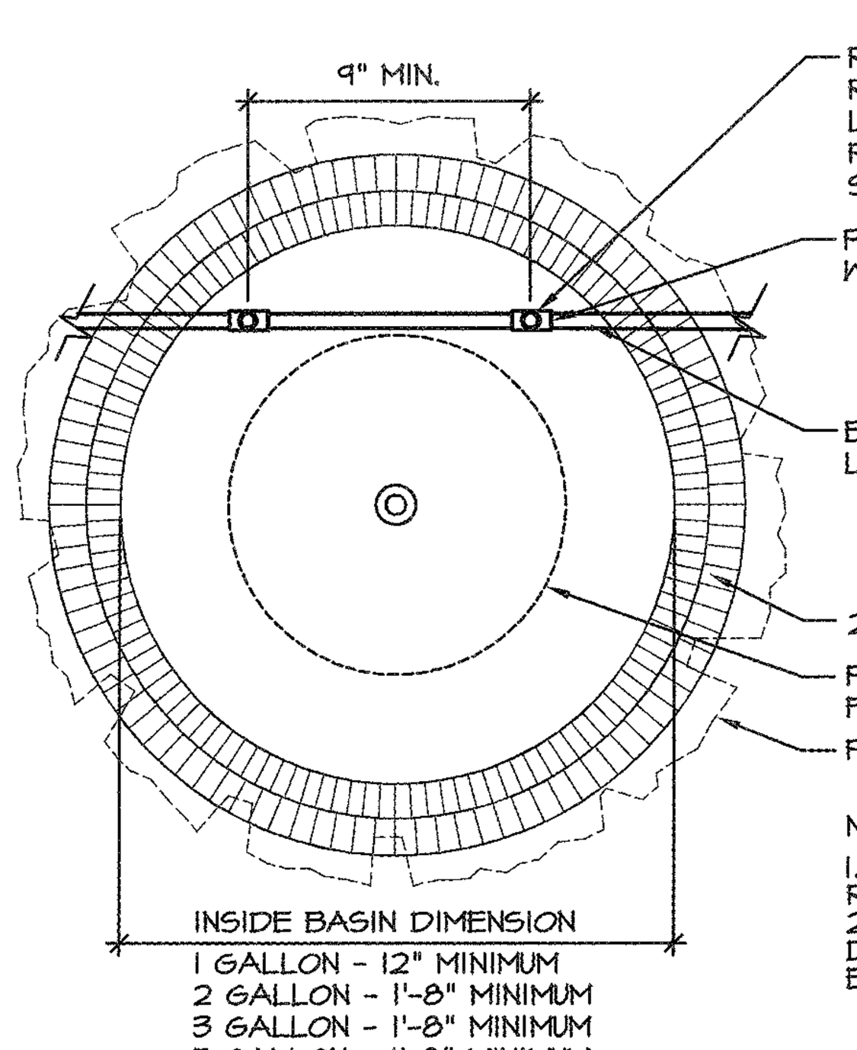
10 IRRIGATION QUICK COUPLING VALVE SCALE: NTS



6 IRRIGATION SLEEVING DETAIL SCALE: NTS



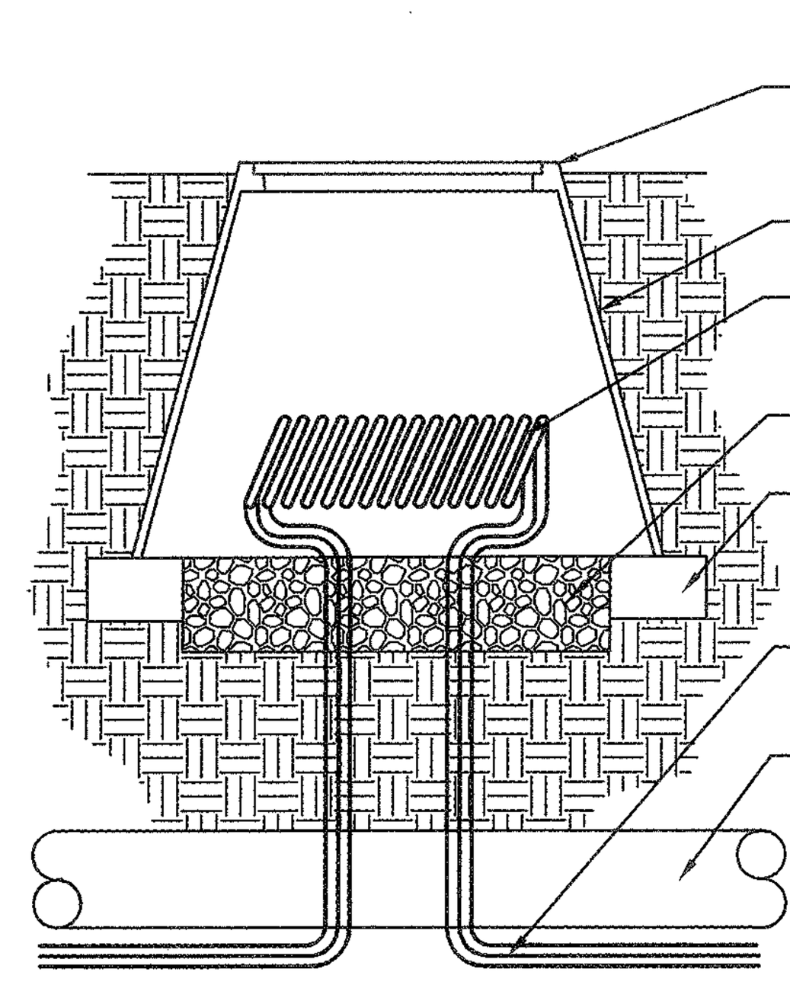
3 WALL-MOUNTED IRRIGATION CONTROLLER SCALE: NTS



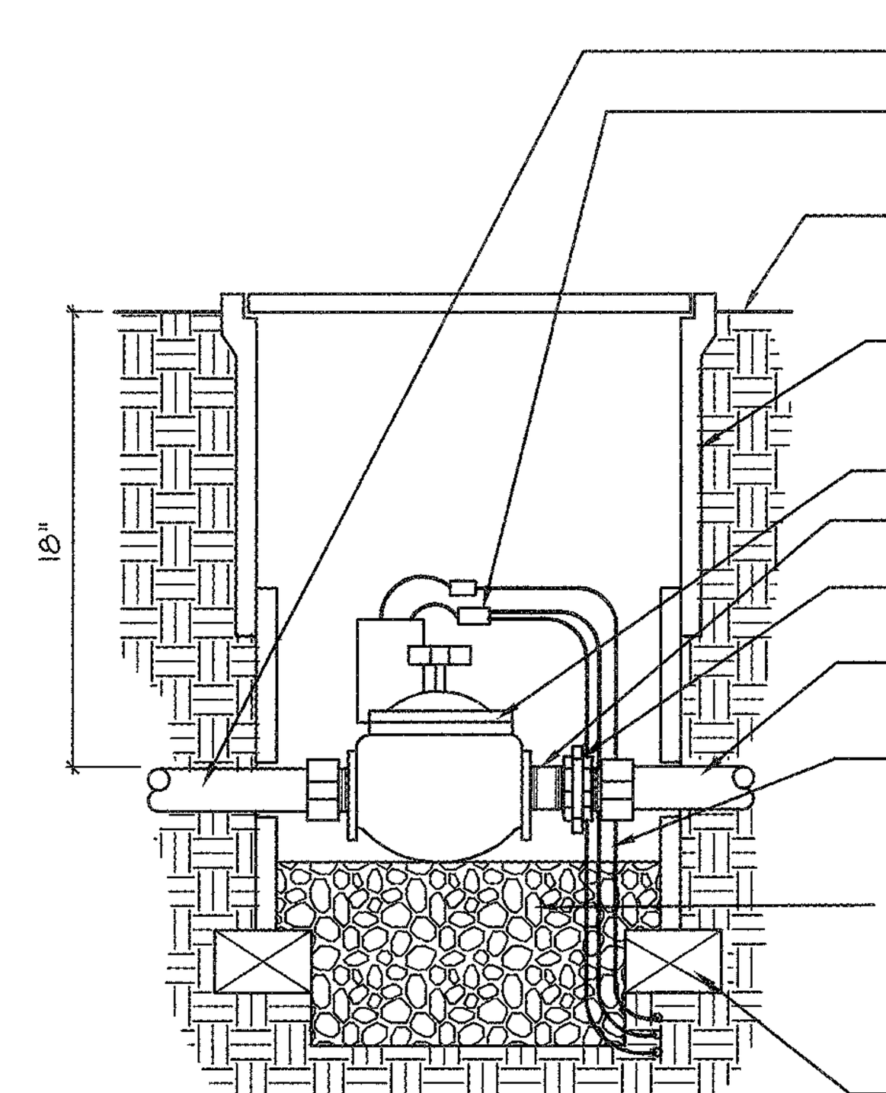
NOTES:
1. INSTALL EMITTER AT PLANT ROOT BALL AS SHOWN.
2. INSTALL RAINBIRD PC DIFFUSER CAPS FOR 5 GPH EMITTERS AND LARGER.

1 GALLON - 12" MINIMUM
2 GALLON - 1'-8" MINIMUM
3 GALLON - 1'-8" MINIMUM
5 GALLON - 1'-8" MINIMUM

15 DRIP IRRIGATION DOUBLE EMITTER PLAN SCALE: NTS



11 IRRIGATION PULL BOX SCALE: NTS



7 IRRIGATION MASTER VALVE SCALE: NTS

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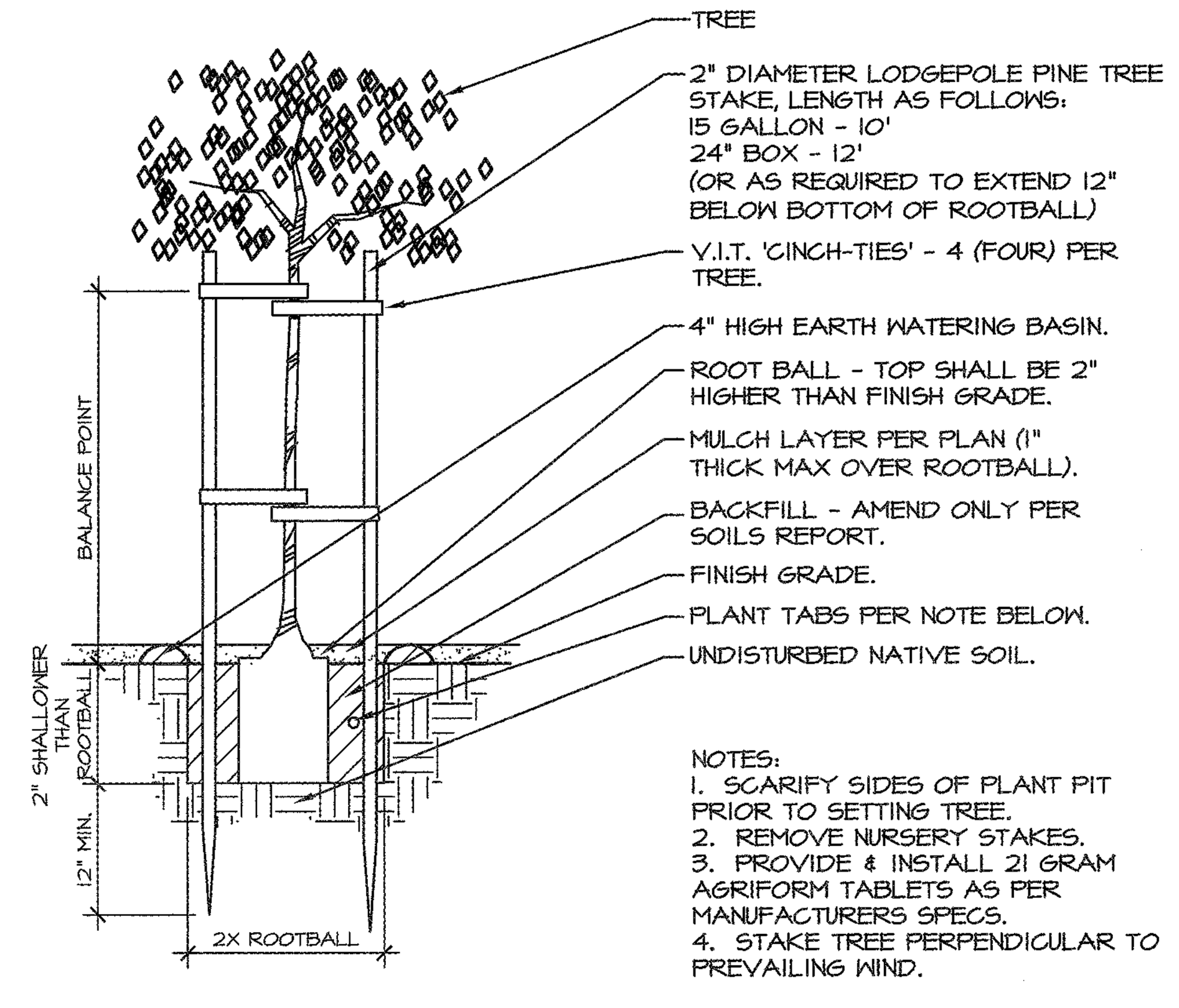
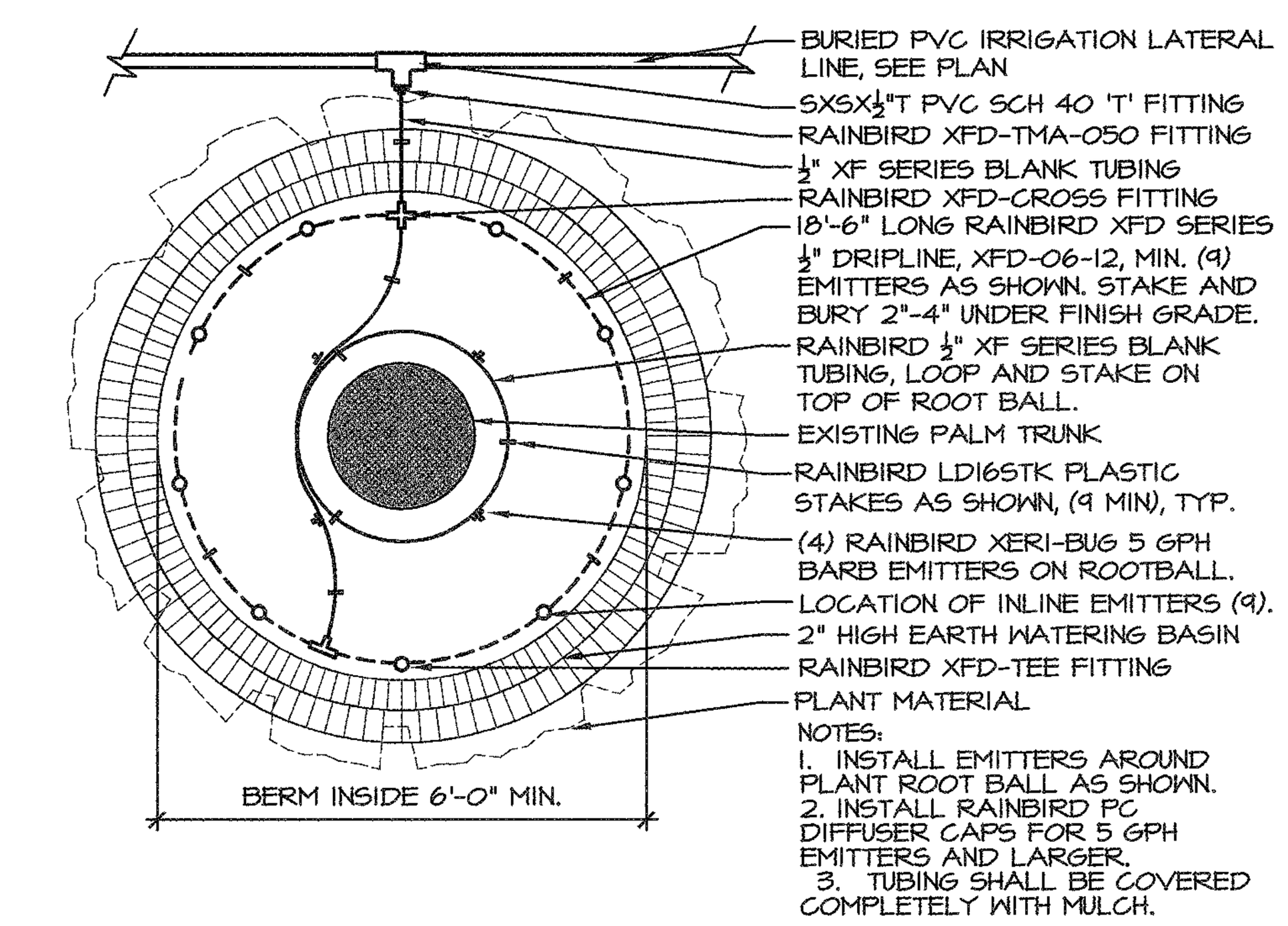
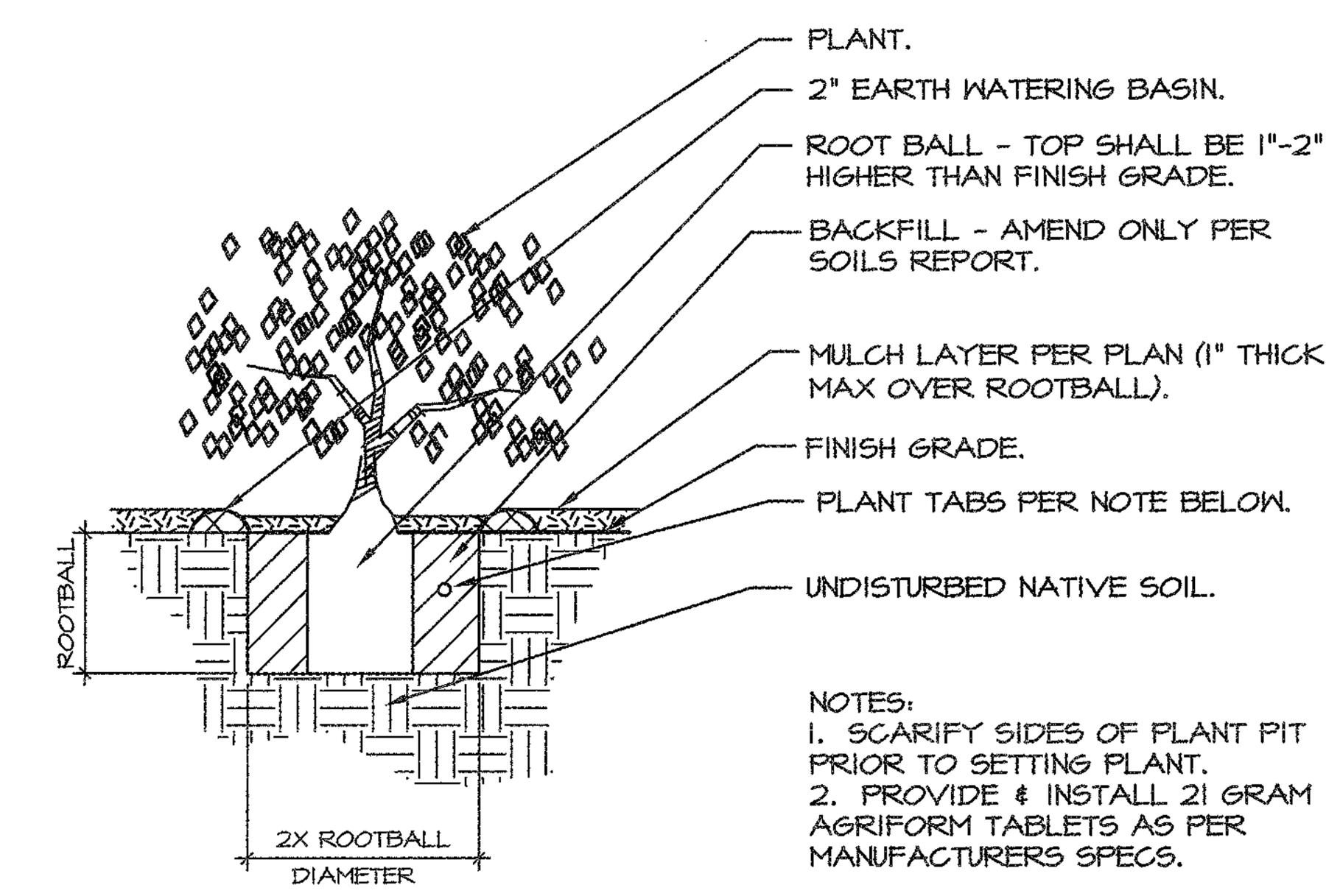


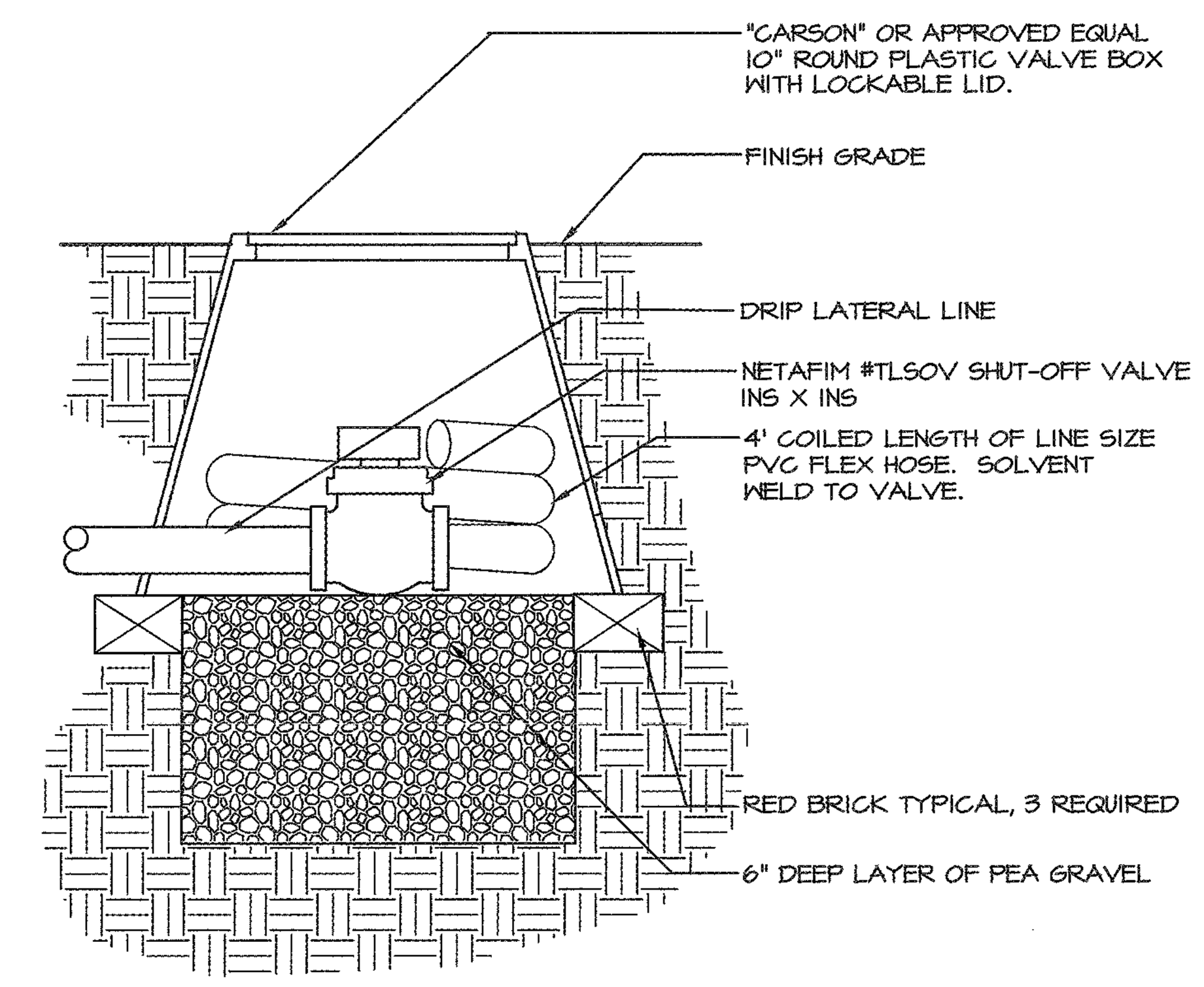
4	TREE DETAIL	SCALE: NTS



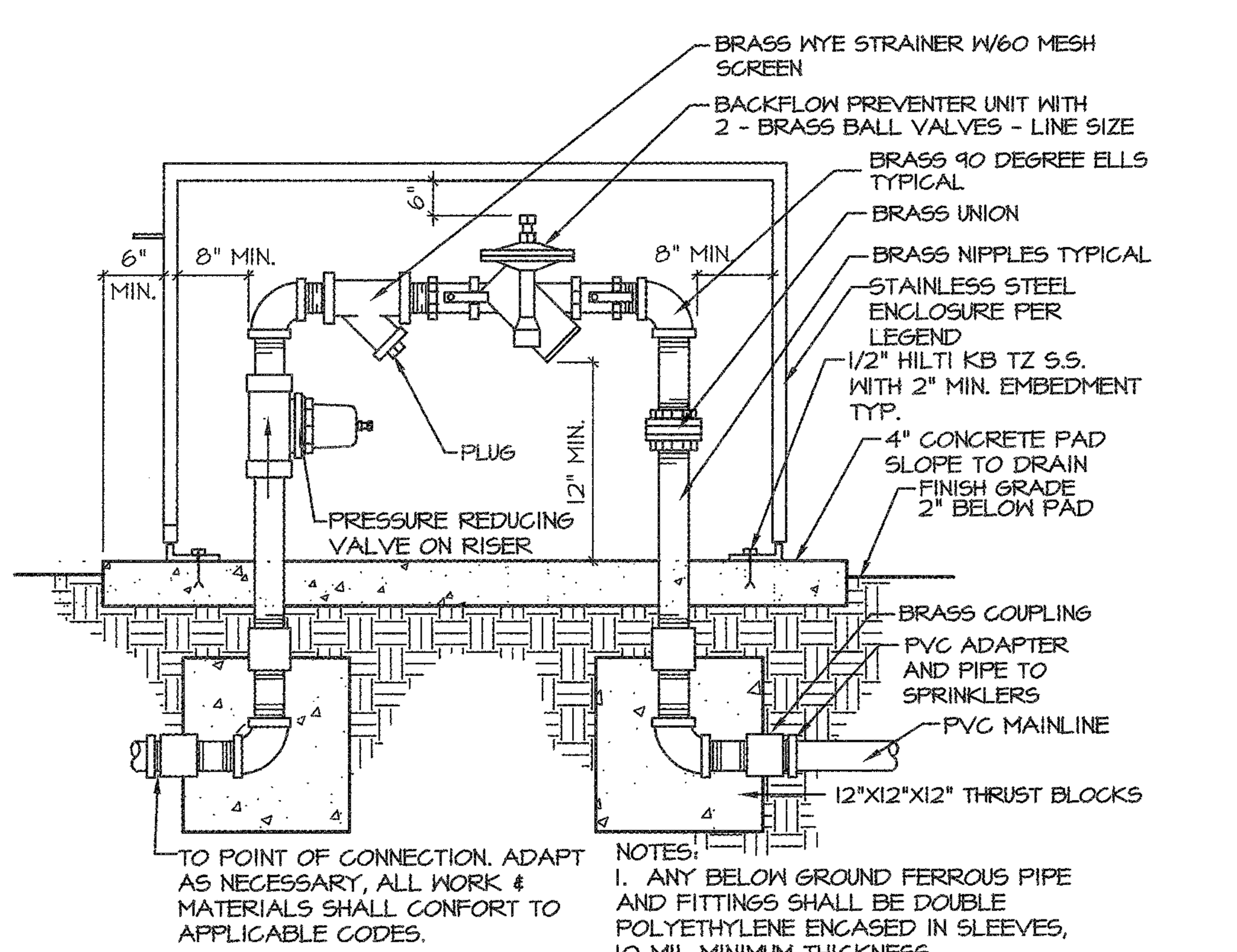
1	EXISTING PALM TREE IRRIGATION DETAIL	SCALE: 1"=1'-0"



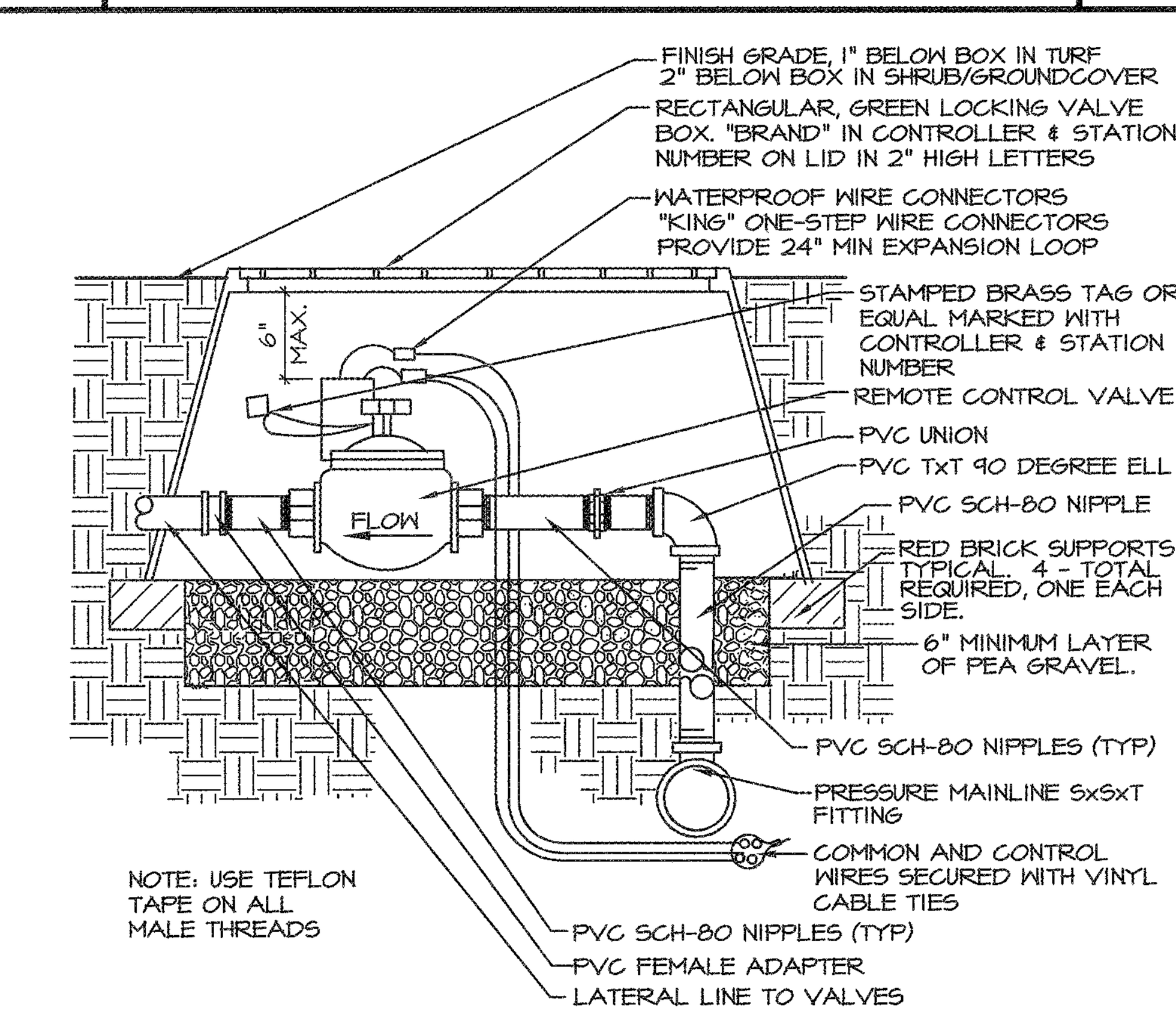
5	SHRUB DETAIL	SCALE: NTS



2	DRIP IRRIGATION FLUSH VALVE	SCALE: 1"=1'-0"



6	IRRIGATION RP BACKFLOW PREVENTER	SCALE: NTS



3	CONVENTIONAL REMOTE CONTROL VALVE	SCALE: NTS

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L-5

GENERAL NOTES

1. FOR APPLICABLE CODES AND STANDARDS, REFER TO SHEET G0.1.1

2. DURING THE ENTIRE CONSTRUCTION PERIOD, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONDITIONS AT THE PROJECT SITE, TO MEET THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND CALIFORNIA OCCUPATIONAL REGULATIONS . THIS PROVISION SHALL COVER THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PERSONS WORKING UPON OR VISITING THE SITE. THE CONTRACTOR SHALL BECOME FULLY INFORMED OF ALL APPLICABLE STANDARDS AND REGULATIONS AND INFORM ALL PERSONS AND REPRESENTATIVES RESPONSIBLE FOR WORK UNDER THIS CONTRACT.

3. CONFIRM ALL NEW AND EXISTING CONDITIONS WITH THE CONTRACT DOCUMENTS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL DISCREPANCIES OR CONFLICTS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.

4. REVIEW THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF SYSTEMS SHOWN ON CONSULTING ENGINEERS DOCUMENTS. DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEER'S DOCUMENTS SHALL BE BROUGHT TO ARCHITECT'S ATTENTION FOR DIRECTION. CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.

5. DO NOT SCALE THE CONSTRUCTION DOCUMENTS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED GRAPHICS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL ADDITIONAL REQUIRED DIMENSIONS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF THE CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.

6. CORRECT ALL WORK INSTALLED IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS BY CONTRACTOR AS DIRECTED BY ARCHITECT AND AT NO ADDITIONAL EXPENSE TO THE OWNER.

7. VISIT JOB SITE PRIOR TO BEGINNING WORK AND VERIFY ALL DIMENSIONS AND CONDITIONS.

8. SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. REQUEST ALL INSPECTIONS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE THE WORK ACCORDINGLY.

9. WHERE WORK OR EQUIPMENT IS INDICATED "N.I.C." (NOT IN CONTRACT) ON THE DRAWINGS, SUCH WORK AND/OR EQUIPMENT SHALL BE PROVIDED BY OTHERS. CONTRACTOR SHALL COORDINATE AND COOPERATE TO EFFECT SUCH INSTALLATION.

10. ALL PLAN DIMENSIONS SHOWN AT CENTER OF WALL REPRESENT CENTER LINE OF STUD OR STRUCTURAL ELEMENT UNLESS NOTED OTHERWISE.

11. ALL PLAN DIMENSIONS FOR MASONRY AND CONCRETE REPRESENT FACE OF MATERIAL AND OPENING UNLESS NOTED OTHERWISE.

12. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD AT NEW CONSTRUCTION AND FACE OF FINISH AT EXISTING CONSTRUCTION, UNLESS NOTED OTHERWISE.

13. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT THE REVIEW OF ARCHITECT UNLESS NOTED (+/-) OR "VERIFY". DIMENSIONS NOTED "HOLD" SHALL BE CONSIDERED AS ABSOLUTE AND USED FOR LAY-OUT CONTROL UNLESS OTHERWISE DIRECTED BY ARCHITECT.

14. ALL HEIGHTS ARE DIMENSIONED FROM TOP OF SLAB UNLESS NOTED "AFF" (ABOVE FINISH FLOOR).

15. "TYPICAL" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED. WHEN A DETAIL OR NOTE IS IDENTIFIED AS "TYPICAL", CONTRACTOR SHALL APPLY THIS DETAIL OR NOTE TO EVERY LIKE CONDITION, WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE. VERIFY DIMENSIONS AND ORIENTATION ON PLANS.

16. PROVIDE WORK NOT SPECIFICALLY DETAILED OR SPECIFIED IN ACCORDANCE WITH DETAILS OR SIZES COVERING SIMILAR WORK.

17. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED VERIFY DIMENSIONS AND ORIENTATION ON PLANS.

18. ABBREVIATIONS THROUGHOUT THE DOCUMENTS COMPLY WITH DOCUMENT ABBREVIATION LIST OR ARE THOSE IN COMMON USE. ARCHITECT WILL DEFINE THE INTENT OF ANY IN QUESTION.

19. REFER TO THE PROJECT MANUAL FOR GENERAL CONDITIONS, SUPPLEMENTARY AND SPECIAL CONDITIONS, AND OTHER REQUIREMENTS.

20. PROVIDE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. PROVIDE TEMPORARY PASSAGES AS REQUIRED. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE, CHECK WITH *[OWNER/ARCHITECT/ RESIDENT INSPECTOR]* FOR ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES USE AREA OUTSIDE THE CONSTRUCTION ZONE WITHOUT PRIOR CLEARANCE FROM THE *[OWNER/ARCHITECT/ RESIDENT INSPECTOR]*. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

21. PROVIDE FOR THE PROPER SEQUENCE OF CONSTRUCTION, LOCATION AND SIZE OF OPENINGS. COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY ARCHITECT.

22. TAKE ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. NOTIFY OWNER IN ADVANCE OF HVAC, ELECTRICAL OR OTHER BUILDING SYSTEM SHUT-OFFS. MINIMIZE NOISE AND DUST GENERATION TO MAXIMUM EXTENT POSSIBLE. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

23. REMOVE ALL TRASH AND DEBRIS DAILY. DO NOT STORE BUILDING MATERIALS IN CORRIDORS AT ANY TIME. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

24. PERFORM ALL CUTTING, PATCHING, AND FINISHING NECESSARY TO RESTORE THE BUILDING AND SITE TO ORIGINAL CONDITION OF ALL EXISTING PORTIONS OF THE BUILDING AND SITE AFFECTED BY CONTRACTORS WORK, TO THE SATISFACTION OF ARCHITECT AND OWNER.

25. VERIFY POINTS OF CONNECTION, INCLUDING SIZES AND LOCATIONS, AND ALL OTHER REQUIRED OPERATING CRITERIA WITH EQUIPMENT MANUFACTURER.

26. COORDINATE THE LOCATION AND TYPE OF ALL ACCESS PANELS REQUIRED FOR ACCESSING MECHANICAL, PLUMBING, ELECTRICAL AND OTHER BUILDING SYSTEMS WITH ARCHITECT.

27. CONTRACTOR SHALL STIPULATE THAT ALL PROPOSED SUBSTITUTIONS ARE EQUAL IN PERFORMANCE AND COMPLY WITH APPLICABLE CODES AND REGULATIONS. CONTRACTOR'S SUBSTITUTION OF ALTERNATE MATERIALS OR SYSTEMS SHALL BE AT NO ADDITIONAL COST TO OWNER.

28. CONTRACTOR SHALL INSURE ALL CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED BY THE INSPECTOR OF RECORD. FOR CONTINUOUS INSPECTION, TESTING, AND OBSERVATION REQUIREMENTS, REFER TO THE TESTING AND OBSERVATION PROGRAM.

29. PROTECTION DURING WELDING: CONFORM TO TITLE 8, C.C.R. FURTHER PROTECT OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATION WHERE WELDING IS BEING PERFORMED. PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT. SEE C.F.C. FOR REQUIREMENTS FOR ON SITE WELDING.

30. ONSITE SOILS ARE HIGHLY CORROSIVE. GC SHALL TAKE PROTECTIVE MEASURES FOR ALL BURIED FERROUS METALS

DSA NOTES

1. ALL WORK TO CONFORM TO 2013 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

2. CHANGES TO THE APPROVED DRAWINGS OR SPECIFCATIONS SHALL BE MADE BY AN ADDENDA OR A CONSTRUCTION CHANGE DOCUMENT (C.C.D.) APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA) PER SECTION 4-338, PART 1, TITLE 24, CCR.

3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT(OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

4. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROADS AND ACCESS REQUIREMENTS NAD ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

EQUIPMENT ANCHORAGE

EQUIPMENT ANCHORAGE NOTES:

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2013 CBC, SECTION 1615A, 1616A, ASCE 7-10 AND CHAPTER 6.

THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS, AND THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS (EQUIPMENT) HAVE BEEN ANCHORED.

A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH ASCE 7-05 SECTION 13.5
C. TEMPORARY OR MOVABLE EQUIPMENT WITH FLEXIBLE CONNECTION TO POWER OR UTILITIES
D. EQUIPMENT WEIGHING LESS THAN 200 POUNDS SUPPORTED BY VIBRATION ISOLATORS
E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF 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

PIPING, DUCTWORK & 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/C SECTION 13.6.8, 13.6.7, 13.6.5.5 ITEM 6, AND 2013 CBC 1615A AND 1616A.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH 2013 CBC 1613A.

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

FINISH NOTES

1. ALL CEILING HEIGHT DIMENSIONS MEASURED TO FINISH SURFACES UNLESS NOTED OTHERWISE.

2. EXTEND BASE MATERIAL BEHIND ALL MOVABLE EQUIPMENT AND INTO ALL ALCOVES, KNEESPACES AND SIMILAR AREAS, UNLESS NOTED OTHERWISE.

3. WHEN COUNTERTOP SPLASH IS REQUIRED, EXTEND SPLASH ON SIDES WHERE COUNTER JOINS ADJACENT WALL SURFACE UNLESS NOTED OTHERWISE.

4. ALL INTERIOR FINISHES SHALL COMPLY WITH, CHAPTERS 8 AND 25A, PART 2, TITLE 24, CCR, INCLUDING TABLE 8-A, AND TABLES 25A-25L.

5. PROVIDE BACKING PLATES OR BLOCKING BEHIND ALL WALL MOUNTED EQUIPMENT, CASEWORK, AND ACCESSORIES AS REQUIRED FOR POSITIVE ATTACHMENT TO STRUCTURE. SEE DETAILS **3 & 8/S1.3**.

6. SEAL ALL PENETRATIONS OF SOUND RATED PARTITIONS, FLOORS OR CEILING ASSEMBLIES , INCLUDING ELECTRICAL DEVICES, CABINETS AND OTHER ELEMENTS WITH APPROVED RESILIENT SEALANT. SEE AGENCY NOTES FOR PENETRATION REQUIREMENTS OF FIRE RATED AND SOUND RATED ASSEMBLIES.

STRUCTURAL NOTES

1. SUPPORT AND BRACE ALL PIPES, DUCTS, AND CONDUITS PER APPROPIATE DETAIL ON ARCHITECTURAL DETAIL SHEET(S) AND THE FOLLOWING STANDARDS OR APPROVED EQUAL:

   * SMACNA SEISMIC RESTRAINT MANUAL

2. PROVIDE ALL TEMPORARY SHORING AND BRACING AS REQUIRED FOR ALL DEMOLITION AND NEW WORK AS REQUIRED. ASSUME FULL RESPONSIBILITY FOR REPAIR AND/OR REPLACEMENT OF DAMAGED AREAS, INCLUDING BUT NOT NECESSARILY LIMITED TO, STRUCTURE, FINISHES, EQUIPMENT AND FURNISHINGS IF DAMAGE OF ANY KIND OCCURS AS RESULT OF IMPROPER OR INADEQUATE SHORING OR BRACING.

3. UNLESS SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS, DO NOT CUT OR OTHERWISE MODIFY STRUCTURAL ELEMENTS WITHOUT DIRECTION FROM ARCHITECT. PROVIDE REINFORCEMENT, SUPPORT, TEMPORARY SHORING SATISFACTORY TO THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CUTTING INTO STRUCTURAL PORTIONS OF ANY BUILDING ELEMENT. PROVIDE ALL CUTTING OF STRUCTURAL ELEMENTS, AND ALL ASSOCIATED REPAIR OR REFINISHING OF ADJACENT SURFACES AT NO ADDITIONAL EXPENSE TO THE OWNER.

4. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING NON-PRE-STRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING PRE-STRESSED REINFORCED CONCRETE (POST OR PRE TENSIONED), USE A NON-DESTRUCTIVE METHOD TO LOCATE TENDONS PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

5. PROVIDE TEMPORARY SHORING FOR EXCAVATIONS THAT REMOVE THE LATERAL SUPPORT FROM AN EXISTING BUILDING OR A PUBLIC WAY. PRIOR TO ISSUANCE OF PERMIT, OBTAIN APPROVAL FROM THE ENFORCING AGENCY FOR EXCAVATIONS ADJACENT TO A PUBLIC WAY.

6. OBTAIN NECESSARY PERMITS, INCLUDING CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, PRIOR TO ISSUANCE OF A BUILDING OR GRADING PERMIT FOR ALL TRENCHING.

FIRE & LIFE SAFETY NOTES

1. ALL INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 8, PART 2, TITLE 24, CCR. ALL FINISHES SHALL HAVE A FLAME SPREAD RATING OF 75 OR LESS AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH U.B.C. STANDARD NO. 8-1, and SHALL HAVE A CLASS I OR II FLAME SPREAD CLASSIFICATION PER TABLE 8-A .

2. ALL INSULATION MATERIALS INSTALLED WITHIN ROOF - CEILING ASSEMBLIES, ATTICS, OR WALLS SHALL HAVE A FLAME - SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH U.B.C. STANDARD NO. 8-1.

3. MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE FOR ALL RATED OPENING ASSEMBLIES.

4. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A-10BC WITHIN A 75 FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR.

5. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 1-BC FOR ELECTRICAL ROOMS, MECHANICAL ROOMS, ELEVATOR MACHINE ROOMS AND TRASH ROOMS.

6. PROVIDE AN APPROPRIATE NUMBER OF PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 4A-60BC FOR PROTECTION DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PEDESTRIAN PROTECTION AS REQUIRED BY LOCAL CODE AND SPECIFICATION.

8. DO NOT BLOCK EXITS AT ANY TIME.

9. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS OF FIRE RATED WALLS, FLOORS, SHAFTS AND CEILINGS. COMBINATION FIRE/SMOKE DAMPERS SHALL BE USED AT DUCT PENETRATIONS OF RATED CORRIDOR WALLS.

10. FIRE DAMPER DETAILS SHOWN FOR REFERENCE ONLY. FIRE DAMPERS SHALL BE APPROVED AND LISTED BY STATE FIRE MARSHAL. INSTALL STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS AND LISTING APPROVAL. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.

11. DUCT INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSTALLATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED.

12. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE, STANDARDS AS DEFINED IN CHAPTER 35 CALIFORNIA BUILDING CODE AND APPLICABLE NFPA STANDARDS.

13. THE CONTRACTOR SHALL PROVIDE PROTECTION COMPLYING WITH TITLE 8, CCR, DURING WELDING. FURTHER PROTECTION SHALL BE PROVIDED TO ANY OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATION WHERE WELDING IS BEING PERFORMED. PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT.

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS BOS PC
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM

PRINCIPAL IN CHARGE
RITA S. CARTER

PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN

DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE

GENERAL NOTES

PROJECT NUMBER

913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	A0.0.1

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
AB	ANCHOR BOLT
ABAN	ABANDON
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
AC	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACOUS	ACOUSTICAL
AC PVG	ASPHALT CONCRETE PAVING
ACP	ACOUSTICAL PANEL
ACT	ACOUSTICAL TILE
ACU	AIR CONDITIONING UNIT
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMT	AMOUNT
ANOD	ANODIZED
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECT/ARCHITECTURAL
ASD	AUTOMATIC SPRINKLER DRAIN
ASPH	ASPHALT
ASSY	ASSEMBLY
AV	AUDIO VISUAL
AWP	ACOUSTICAL WALL PANEL
BAL	BALANCE
BBD	BULLETIN BOARD
BBRG	BALL BEARING
BC	BACK OF CURB
BD	BOARD
BG	BUMPER GUARD
BETW	BETWEEN
BEV	BEVEL
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLKHD	BULKHEAD
BLW	BELOW
BM	BEAM
BM	BENCH MARK
BMU	BRICK MASONRY UNIT
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRG	BEARING
BRS	BRASS
BRZ	BRONZE
BSMNT	BASEMENT
BUR	BUILT-UP ROOF
C_	CENTERLINE
C&G	CURB AND GUTTER
C/C	CENTER TO CENTER
CAB	CABINET
CB	CORNER BEAD
CB	CATCHBASIN
CBD	CHALKBOARD
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTER CLOCKWISE
CEM	CEMENT
CER	CERAMIC
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
CF	CLEAR FINISH COATING
CFX	CLEAR FINISH COATING - EXTERIOR
CG	CORNER GUARD
CL	CENTER LINE
CLG	CEILING
CLG DIFF	CEILING DIFFUSER
CLG HT	CEILING HEIGHT
CLG REG	CEILING REGISTER
CLO	CLOSET
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMPL	COMPLETE
CONC	CONCRETE
CONC FL	CONCRETE FLOOR
COND	CONDENSER/CONDENSATE
CONF	CONFERENCE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS/CONTINUATION
CONTR	CONTRACT/CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
COTG	CLEAN OUT TO GRADE
COV	COVER
COV PL	COVER PLATE
CP	CONCRETE PAVING
CP	CONTROL PANEL
CPT	CARPET
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	CRASHRAIL
CR	COAT RACK/COAT ROD
CRSTL	COLD ROLLED STEEL
CS	CHANGING STATION
CSK	COUNTERSINK
CSMNT	CASEMENT
CT	CERAMIC TILE
CTV	CABLE TELEVISION
CU YD	CUBIC YARD
CW	COLD WATER
CYL	CYLINDER
DAT	DATUM
DBL ACT	DOUBLE ACTING
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIAG	DIAGONAL
DIAM	DIAMETER
DIFF	DIFFERENCE
DIFF	DIFFUSER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISP	DISPENSER
DIV	DIVISION
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DR	DOOR
DRN	DRAIN
DS	DIRECTIONAL SIGN
DS	DOWNSPOUT
DUPL	DUPLICATE
DW	DISHWASHER
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
DWV	DRAIN WASTE & VENT
E	EAST
EA	EACH
(E)	EXISTING
EC	ELASTOMERIC COATING
ECON	ECONOMIZER
ECU	EVAPORATIVE COOLING UNIT
EF	EACH FACE
EHD	ELECTRIC HAND DRYER
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMER	EMERGENCY
ENAM	ENAMEL
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EP	ELECTRICAL PANEL
EOP	EDGE OF PAVEMENT
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ES	EACH SIDE
EST	ESTIMATE
ESMNT	EASEMENT
EW	EACH WAY
EWC	ELECTRICAL WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXIST GR	EXISTING GRADE
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F/F	FACE TO FACE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FEM	FEMALE
FGL	FIBERGLASS
FHC	FIRE HOSE CABINET
FHMS	FLAT HEAD MACHINE SCREW
FHSMS	FLAT HEAD SHEET METAL SCREW
FHWS	FLAT HEAD WOOD SCREW
FH	FIRE HYDRANT
FIN	FINISH
FIXT	FIXTURE
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLASHING
FL	FLOW LINE
FLR	FLOOR/FLOORING
FLR FIN	FLOOR FINISH
FLUOR	FLUORESCENT
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FPM	FEET PER MINUTE
FREQ	FREQUENCY
FS	FLOOR SINK
FSPKR	FIRE SPRINKLER
FSS	FOLDING SHOWER SEAT
FSTNR	FASTENER
FT	FOOT
FTG	FITTING
FTG	FOOTING
FURR	FURRING
FURN	FURNITURE
FUT	FUTURE
FWC	FABRIC WALL COVERING
G	GAS
GA	GAGE/GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GI	GALVANIZED IRON
GL	GLASS
GLU LAM	GLUE LAMINATED
GLBM	GLUE LAMINATED BEAM
GLZ	GLAZING
GMU	GLASS MASONRY UNIT
GND	GROUND
GOVT	GOVERNMENT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE/GRADING
GRC	GRAFFITI RESISTANT COATING
GR BM	GRADE BEAM
GR LN	GRADE LINE
GRTG	GRATING
GRV	GRAVITY ROOF VENTILATOR
GSTL	GALVANIZED STEEL
GV	GRAVITY VENT
GVL	GRAVEL
GVTR	GAS VENT THROUGH ROOF
GYP	GYPSUM
GBD	GYPSUM BOARD
H	HIGH
H PLAM	HIGH PRESSURE LAMINATE
HB	HOSE BIBB
HC	HOLLOW CORE
HC	HOSE CABINET
HD	HEAD
HDBD	HARDBOARD
HDR	HEADER
HDWL	HEADWALL
HDWR	HARDWARE
HGR	HANGER
HGT	HEIGHT
HHWS	HEX HEAD WOOD SCREW
HM	HOLLOW METAL
HO	HOLD-OPEN
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HS	HIGH STRENGTH
HSB	HIGH STRENGTH BOLT
HTG	HEATING
HTR	HEATER
HVY	HEAVY
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT
ID	INSIDE DIAMETER
IF	INSIDE FACE
ILLUM	ILLUMINATION
INCAND	INCANDESCENT
INL	INLET
INSTL	INSTALLATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
INV EL	INVERT ELEVATION
IP	IRON PIPE
IPS	INSIDE PIPE SIZE
IPS	INTERNATIONAL PIPE STANDARD
ISO	ISOMETRIC
IWH	INSTANTANEOUS WATER HEATER
JAN	JANITOR
JB	JUNCTION BOX
JST	JOIST
JT	JOINT
KD	KILN DRIED
KD	KNOCK DOWN
KO	KNOCKOUT
KPL	KICKPLATE
L	LEFT
LAD	LADDER
LAM	LAMINATED
LAT	LATERAL
LAV	LAVATORY
LB	LAG BOLT
LB	POUND
LDG	LANDING
LDR	LEADER
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LIN	LINEAR
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW POINT
LP	LOW PRESSURE
LS	LUMP SUM
LT	LIGHT
LT WT	LIGHTWEIGHT
LTG	LIGHTING
LTG PNL	LIGHTING PANEL
LUB	LUBRICATE
LV	LOW VOLTAGE
LVL	LEVEL
LVR	LOUVER
LVR	LEVER
LWC	LIGHTWEIGHT CONCRETE
M	MIRROR
MACH RM	MACHINE ROOM
MAINT	MAINTENANCE
MAN	MANUAL
MARB	MARBLE
MAS	MASONRY
MATL	MATERIAL
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MB	MACHINE BOLT
MB	MIXING BOX
MBF	THOUSAND BOARD FEET
MBD	MARKER BOARD
MC	MOMENT CONNECTION
MC	MEDICINE CABINET
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAID
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MET	METAL
MEZZ	MEZZANINE
MFGR	MANUFACTURER
MH	MANHOLE
MI	MILE
MIR	MIRROR
MGL	MIRROR GLASS
MLDG	MOLDING
MLWK	MILLWORK
MO	MASONRY OPENING
MOD	MODULE
MON	MONUMENT
MPH	MILES PER HOUR
MR	MOP RACK
MS	MIRROR WITH SHELF
MTD	MOUNTED
MTG	MEETING
MTG	MOUNTING
MTR	METER
MTR	MORTAR
MULL	MULLION
MULT	MULTIPLE
#	NUMBER
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NCP	NON-REINFORCED CONCRETE PIPE
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NRC	NOISE REDUCTION COEFFICIENT
NST	NATURAL STONE TILE
NTS	NOT TO SCALE
O/O	OUT TO OUT
OA	OUTSIDE AIR
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OUTSIDE DIMENSION
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OHD	OVERHEAD
OHWS	OVAL HEAD WOOD SCREW
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OZ	OUNCE
d	PENNY
PAR	PARALLEL
PB	PANIC BAR
PBD	PARTICLEBOARD
PC	PIECE
PC	POINT OF CURVE
PC	PORTLAND CEMENT
PCF	POUNDS PER CUBIC FOOT
PD	PLANTER DRAIN
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PF	PAINT FINISH
PFX	PAINT FINISH - EXTERIOR
PGL	PLASTIC GLAZING
PH	PHASE
PHOTO	PHOTOGRAPH
PHS	PHILLIP HEAD SCREW
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PKG	PACKAGE
PL	PLATE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT
POL	POLISHED
PORT	PORTABLE
POS	POSITIVE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PREP	PREPARATION
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PTS	PNUEMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PVMT	PAVEMENT
PWR	POWER
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
RA	RETURN AIR
RA GR	RETURN AIR GRILLE
RAD	RADIUS
RB	RUBBER BASE
RBR	RUBBER
RC	REINFORCED CONCRETE
RCP	PREINFORCED CONCRETE PIPE
RD	ROAD
RD	ROOF DRAIN
REC	RECESSED
RECD	RECEIVED
RECIRC	RECIRCULATE
RECPT	RECEPTACLE
RECPT	RECEPTIONIST
RECT	RECTANGULAR
REF	REFERENCE
REFL	REFLECTOR
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCED/REINFORCING
REM	REMOVABLE
RE	RIM ELEVATION
REQD	REQUIRED
RESIL	RESILIENT
RET	RETURN
RFG	ROOFING
RH	RELATIVE HUMIDITY
RH	RIGHT HAND
RHMS	ROUND HEAD MACHINE SCREW
RHR	RIGHT HAND REVERSE
RHWS	ROUND HEAD WOOD SCREW
RLG	RAILING
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPW	RIGID PROTECTIVE WALLCOVERING
RS	ROOM SIGN
RSF	RESILIENT SHEET FLOORING
RTF	RESILIENT TILE FLOOR
RWC	RAIN WATER CONDUCTOR
RWF	RESILIENT WOOD FLOOR
RWL	RAIN WATER LEADER
S	SOUTH
S	SHELF
SA	SUPPLY AIR
SAG	SUPPLY AIR GRILLE
SALV	SALVAGE
SAN	SANITARY
SAT	SATURATION
SB	SPLASH BLOCK
SC	SHOWER CURTAIN
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SD	SOAP DISPENSER
SD	STORM DRAIN
SD	SUPPLY DIFFUSER
SDS	SITE DIRECTIONAL SIGN
SEC	SECOND
SECT	SECTION
SGL	SINGLE
SHT	SHEET/SHEETING
SHTHG	SHEATHING
SHV	SHELVES/SHELVING
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SLV	SLEEVE
SM	SHEET METAL
SMS	SHEET METAL SCREW
SNK	SINK
SP	SPACING
SPCL	SPECIAL
SPEC	SPECIFICATION
SPD	SANITARY PRODUCTS DISPENSER
SFRM	SPRAYED FIRE RESISTIVE MATERIAL
SPKLR	SPRINKLER
SPKR	SPEAKER
SPLY	SUPPLY
SPW	SANITARY PRODUCTS WASTE RECEPTACLE
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SS	SANITARY SEWER
SR	SHOWER ROD
SSNK	SERVICE SINK
SSTL	STAINLESS STEEL
ST	STREET
ST	STAIN FINISH
STA	STATION
STAG	STAGGERED
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
STX	STAIN FINISH - EXTERIOR
SUH	SUSPENDED UNIT HEATER
SUSP	SUSPENDED
SV	STONE VENEER
SWHR	SHOWER
SWR	SEWER
SYM	SYMBOL
SYM	SYMMETRICAL
SYNTH	SYNTHETIC
SYS	SYSTEM
T	TEE
T	THERMOSTAT
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TB	TOWEL BAR
TBD	TACKBOARD
TBD	TO BE DETERMINED
TBT	THIN BRICK TILE
TC	TOP OF CONCRETE
TC	TOP OF CURB
TD	TOWEL DISPENSER
TD	TRENCH DRAIN
TDR	TOWEL DISPENSER WASTE RECEPTACLE
TE	TOP ELEVATION
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERED
TEMP	TEMPERATURE
TEMP	TEMPORARY
TER	TERRAZZO
TERM	TERMINAL
THK	THICKNESS
THRESH	THRESHOLD
THRU	THROUGH
TOBM	TOP OF BEAM
TOC	TOP OF CURB
TOF	TOP OF FOOTING
TOL	TOLERANCE
TOM	TOP OF MASONRY
TOP	TOP OF PAVING
TOP	TOP OF PARAPET
TOS	TOP OF SHEATHING
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TPH	TOILET PAPER HOLDER
TPL	TOP OF PLATE
TRANS	TRANSPARENT
TRMS	TAMPER RESISTANT METAL SCREW
TRWS	TAMPER RESISTANT WOOD SCREW
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UNFIN	UNFINISHED
UNGND	UNDERGROUND
UNIF	UNIFORM
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UTIL	UTILITY
UV	ULTRAVIOLET
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VALVE BOX
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VCP	VITRIFIED CLAY PIPE
VCTBD	VINYL COVERED TACKBOARD
VENT	VENTILATOR
VERT	VERTICAL
VEST	VESTIBULE
VIB	VIBRATION
VIT	VITREOUS
VNR	VENEER
VOL	VOLUME
VS	VEHICULAR SIGN
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST
W	WITH
WO	WITHOUT
WW	WALL TO WALL
WC	WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WGL	WIRE GLASS
WH	WALL HYDRANT
WHTR	WATER HEATER
WI	WROUGHT IRON
WIC	WOODWORK INSTITUTE OF CALIFORNIA
WID	WIDTH
WL	WATER LINE
WL	WIND LOAD
WP	WORKING POINT
WP	WATERPROOF
WR	WATER RESISTANT
WR	WASTE RECEPTACLE
WSCT	WAINSCOT
WSP	WET STAND PIPE
WT	WEIGHT
WTR	WATER
WTRPRF	WATERPROOFING
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
YB	YARD BOX
YD	YARD
ZA	ZINC ALLOY

SYMBOLS

NORTH ARROW

ITEM / ELEVATION — SPOT ELEVATION

ITEM / ELEVATION — FINISH FLOOR LEVEL

A / 1 — STRUCTURAL GRID LINES

MATCH LINE

DTL # / SHT # — DETAIL REFERENCE TAG
DETAIL NUMBER / SHEET NUMBER

DTL # / SHT # — BUILDING SECTION TAG
DETAIL NUMBER / SHEET NUMBER

DTL# / SHT# — BUILDING ELEVATION TAG
DETAIL NUMBER / SHEET NUMBER

NAME / NO. / X'-X" — ROOM NAME TAG
ROOM NUMBER / ROOM CEILING HEIGHT

D / C SHT # A / B — INTERIOR ELEVATION TAG
DETAIL NUMBER / SHEET NUMBER

X — WALLTYPE TAG
(SEE SHEET G6.7)

X — WINDOW NUMBER TAG
(SEE WINDOW SCHEDULE)

X — EQUIPMENT TAG
(SEE EQUIPMENT SCHEDULE)

X — DOOR NUMBER TAG
(SEE DOOR / FRAME SCHEDULE)

X — CONSTRUCTION KEYNOTE
(SEE LEGEND EACH SHEET)

X — DEMOLITION KEYNOTE
(SEE LEGEND EACH SHEET)

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
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1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AIR: 03-117673
AC. FLS SS
DATE: DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

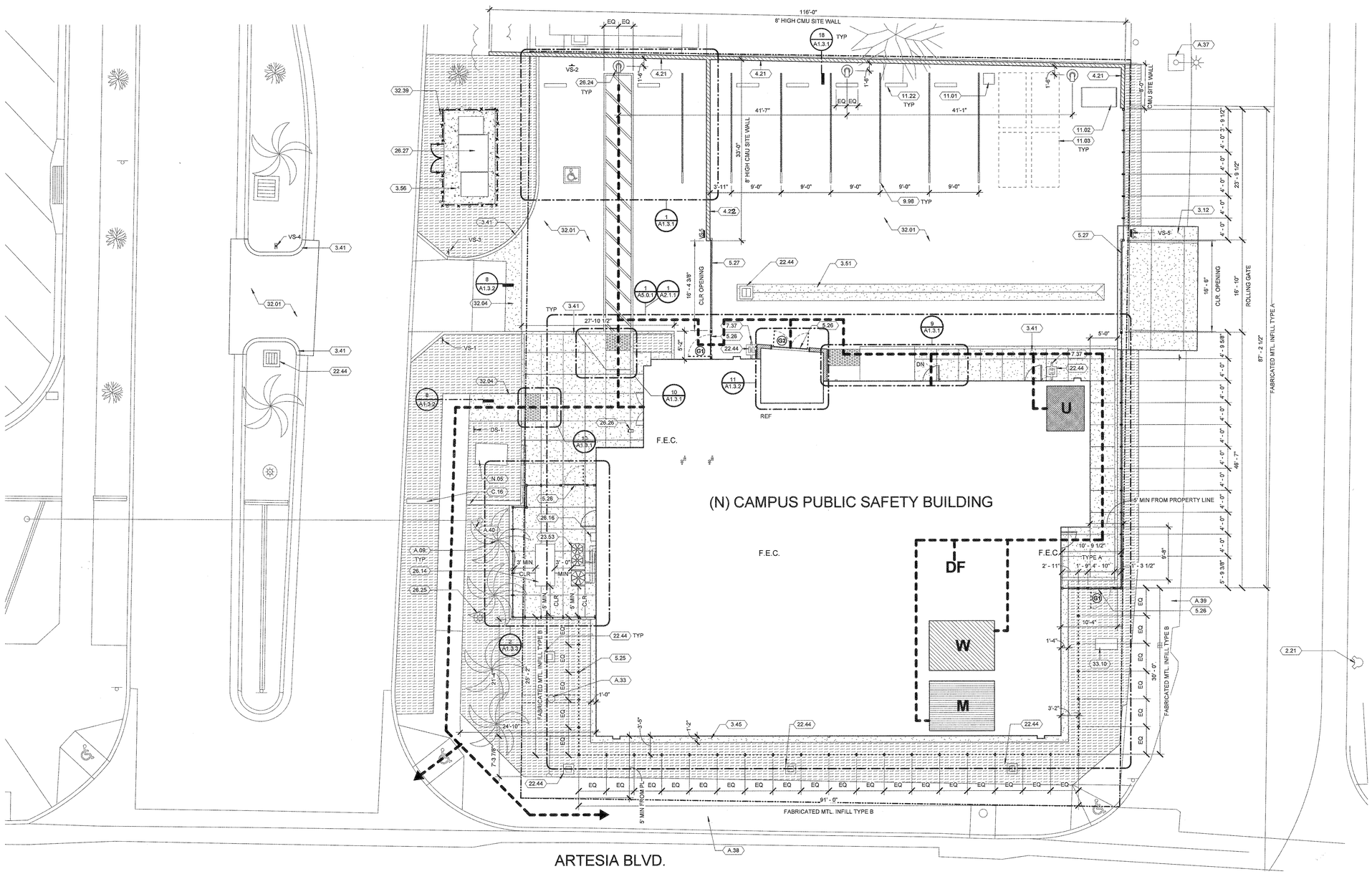
SEAL / SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
SYMBOLS / ABBREVIATIONS

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	A0.2.1



1 A1.1.1 ENLARGED SITE PLAN V3
1/8" = 1'-0"

KEYNOTES

2.21	(E) FIRE HYDRANT
3.12	CONCRETE DRIVEWAY, PER CIVIL - 32 13 13
3.41	CAST-IN-PLACE CONCRETE CURB PER CIVIL, SEE DET 5/A1.3.2 FOR ADD. INFO - 32 13 13
3.45	CAST IN PLACE CONCRETE MOW STRIP, SEE SIM. DET 1/A1.3.2 - 32 13 13
3.51	CONCRETE SWALE, PER CIVIL - 32 13 13
3.56	CONCRETE PAD, SEE CIVIL
4.21	CONCRETE MASONRY UNIT SITE WALL PER 9/S5/2 & METAL COPING CAP PER DETAIL 5/A9.1.1 - 04 2200
4.22	CMU SITE WALL PER 12/S5.2
5.25	FABRICATED STEEL FENCE - 32 13 17
5.26	FABRICATED STEEL GATE - 32 13 17
5.27	FABRICATED STEEL ROLLING GATE, SEE SHEET A1.3.3 - 05 50 00
7.37	METAL DOWNSPOUT - 07 60 00
9.98	PARKING STRIPING - 32 17 23
11.01	AIR COMPRESSOR, SEE PLUMBING
11.02	3 YARD DUMPSTER, NIC
11.03	GOLF CART PARKING LOCATION, GOLF CARTS NIC
11.22	PARKING WHEEL STOP, SEE DET. 6/A1.3.1 - 32 17 13
22.44	CATCH BASIN, PER CIVIL
23.53	HVAC CONDENSING UNIT, PER MECHANICAL - 23 65 00
26.14	EMERGENCY GENERATOR, PER ELECTRICAL
26.16	IRRIGATION CONTROL PANEL, PER LANDSCAPING & ELECTRICAL
26.24	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
26.25	O.I.C.F. SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
26.26	AUTOMATIC DOOR OPERATOR, SEE ELECTRICAL & DETAIL 3/A1.3.3
26.27	SUBSTATION, REFER TO ELECTRICAL
32.01	ASPHALT PAVING, PER CIVIL
32.04	CONCRETE PAVING, REFER TO 3/A1.3.2 - 32 13 13
32.39	PROTECTIVE BOLLARDS - 32 39 13
33.10	BACKFLOW PREVENTER & ENCLOSURE, PER CIVIL
A.09	(E) TREE AND ROOTS TO REMAIN, COORDINATE ALL LANDSCAPE PROTECTION WITH LANDSCAPE
A.33	(E) UTILITY COMPANY POWER POLE AND BRACE TO REMAIN, PROTECT IN PLACE.
A.37	(E) SITE LIGHTING & BASE TO PROTECT IN PLACE
A.38	(E) CITY SIDEWALK
A.39	(E) CITY RIGHT OF WAY
A.40	(E) SIGNAGE POLE TO REMAIN, PROTECT IN PLACE
C.16	EXISTING BRICK VENEER WALL & ASSOCIATED GATES TO REMAIN, PROTECT IN PLACE
N.05	EXISTING UNDERGROUND COMMUNICATIONS VAULT/PULLBOX TO REMAIN, PROTECT IN PLACE

SITE SIGNAGE SCHEDULE

TYPE	DESCRIPTION	SPEC	DETAIL
VS-1	ACCESSIBLE PARKING SITE ENTRANCE	10440	12/A1.3.1
VS-2	VAN ACCESSIBLE PARKING SPACE	10440	7/A1.3.1
VS-3	VEHICLE STOP SIGN	10440	17/A1.3.1
VS-4	NO PEDESTRIAN & VEHCILE CROSSING SIGN	10440	16/A1.3.1
VS-5	AUTHORIZED VEHICLES ONLY SIGN	10440	13/A1.3.1
DS-1	ACCESSIBLE DIRECTIONAL SIGN	10440	15/A1.3.1

NOTES

1. SEE NOTES ON SHEET G0.3.1 FOR MORE ACCESSIBILITY INFORMATION.

LEGEND

- CHAINLINK FENCE & GATE SEE DET: 7/A1.3.3
- ACCESSIBLE PATH OF TRAVEL 4'-0" WIDE MIN. CONCRETE OR A.C. PAVED. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION ON MATERIAL, SLOPES AND ELEVATIONS. SEE NOTES ABOVE.
- ASSUMED PROPERTY LINE
- CONTROL JOINTS, SEE DETAIL 6A A1.3.2
- EXPANSION JOINTS, SEE DETAIL 6B A1.3.2

NOTE: TYP. SITE WORK CONCRETE EXPANSION & CONTROL JOINTS TO BE 5' - 0" MAX OC

- VS-1 MOUNTED SIGNAGE
- VS-1 POLL MOUNTED SIGNAGE
- M MEN'S RESTROOM LOCATION
- W WOMEN'S RESTROOM LOCATION
- U UNISEX RESTROOM LOCATION
- DF DRINKING FOUNTAIN LOCATION
- LANDSCAPING, PER LANDSCAPE DRAWINGS
- DETECTABLE WARNING TILE, SEE DETAIL 11/A1.3.1
- CONCRETE SITE WORK, PER CIVIL DRAWINGS
- FABRICATED STL FENCE TYPE A, SEE SPECS. 32 31 17
- FABRICATED STL FENCE & GATE TYPE B, SEE DETAILS 1-5/A1.3.3 AND SPECS. 32 31 17

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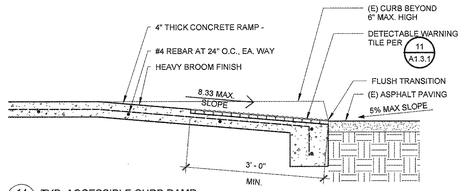
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

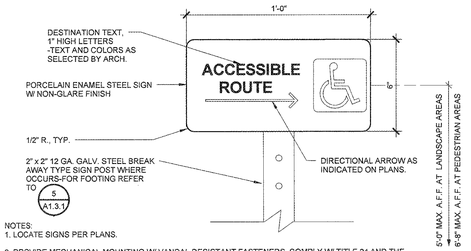
SHEET TITLE
SITE PLAN

PROJECT NUMBER
913-4675-00

ISSUE DATE 12/01/16
SHEET NO. A1.1.1



14 A1.3.1 TYP. ACCESSIBLE CURB RAMP
3/4" = 1'-0"



NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS.

3. ARROW CONFIGURATION **A:** ⇨ **B:** ⇦

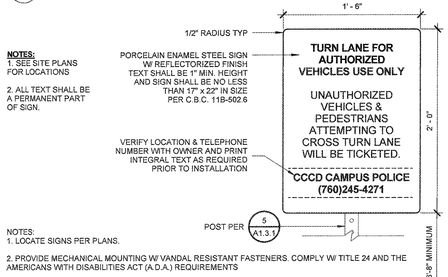
4. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

5. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

6. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

DS-1

15 A1.3.1 ACCESSIBLE DIRECTIONAL SIGN
3" = 1'-0"



NOTES:
1. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.

PORCELAIN ENAMEL STEEL SIGN W/ REFLECTORIZED FINISH TEXT SHALL BE 1" MIN. HEIGHT AND SIGN SHALL BE NO LESS THAN 17" x 22" IN SIZE PER C.B.C. 11B-502.6

VERIFY LOCATION & TELEPHONE NUMBER WITH OWNER AND PRINT INTEGRAL TEXT AS REQUIRED PRIOR TO INSTALLATION

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

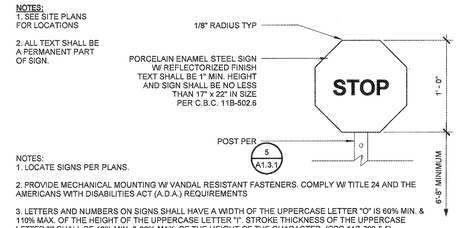
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70% MIN.)

5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-4

16 A1.3.1 NO PEDESTRIAN & VEHICLE CROSSING SIGN
1 1/2" = 1'-0"



NOTES:
1. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.

PORCELAIN ENAMEL STEEL SIGN W/ REFLECTORIZED FINISH TEXT SHALL BE 1" MIN. HEIGHT AND SIGN SHALL BE NO LESS THAN 17" x 22" IN SIZE PER C.B.C. 11B-502.6

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

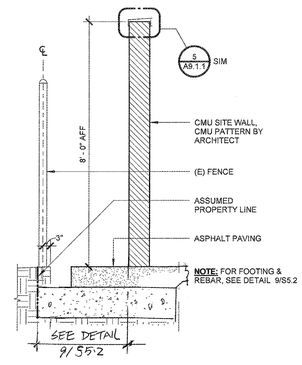
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70% MIN.)

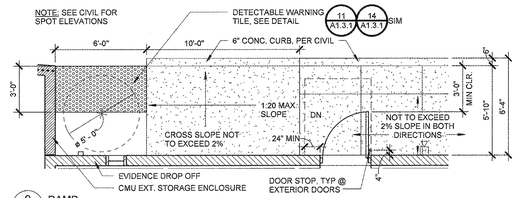
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-3

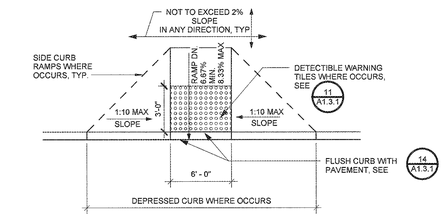
17 A1.3.1 STOP SIGN
1 1/2" = 1'-0"



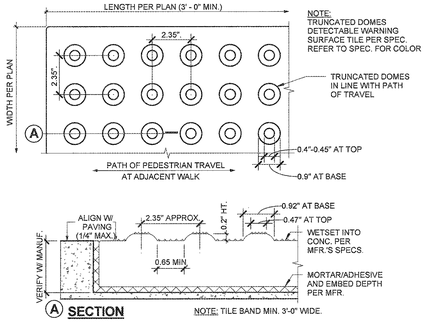
18 A1.3.1 CMU SITE WALL
N.T.S.



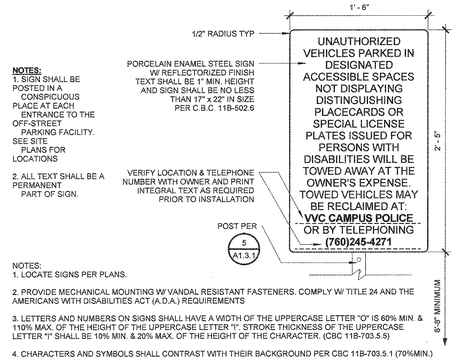
9 A1.3.1 RAMP
1/4" = 1'-0"



10 A1.3.1 ACCESSIBLE CURB RAMP
1/4" = 1'-0"



11 A1.3.1 TYP. DETECTABLE WARNING SURFACE TILE
3/4" = 1'-0"



NOTES:
1. SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO THE OFF-STREET PARKING FACILITY. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.

PORCELAIN ENAMEL STEEL SIGN W/ REFLECTORIZED FINISH TEXT SHALL BE 1" MIN. HEIGHT AND SIGN SHALL BE NO LESS THAN 17" x 22" IN SIZE PER C.B.C. 11B-502.6

VERIFY LOCATION & TELEPHONE NUMBER WITH OWNER AND PRINT INTEGRAL TEXT AS REQUIRED PRIOR TO INSTALLATION

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

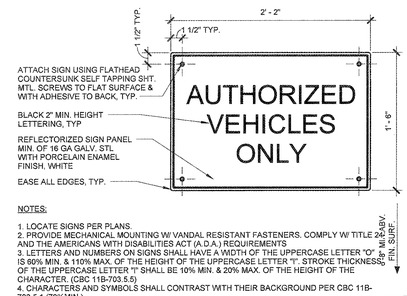
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-1

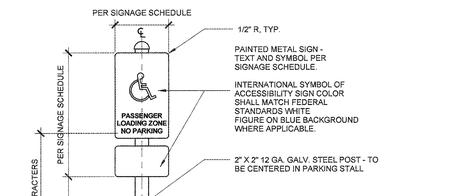
12 A1.3.1 EXISTING ACCESSIBLE PARKING ENTRANCE SIGNAGE
1 1/2" = 1'-0"



NOTES:
1. LOCATE SIGNS PER PLANS.
2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)
4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-5

13 A1.3.1 TYP. SERVICE VEHICLES ONLY SIGN
1 1/2" = 1'-0"



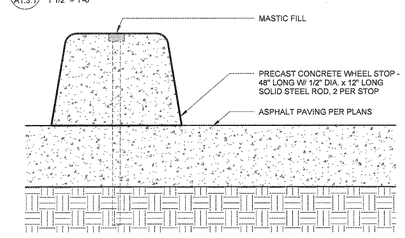
NOTES:
1. THIS DETAIL IS TO SHOW MINIMUM DIMENSIONS AND REQUIRED TEXT. SEE PLAN FOR ACTUAL LOCATIONS

2. SIGN TO BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO THE OFF STREET PARKING FACILITY - SEE PLAN FOR LOCATIONS

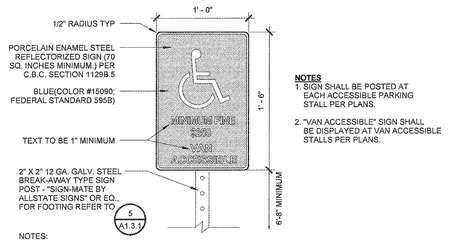
3. SIGN SHALL COMPLY WITH CALIFORNIA CODE OF REGULATIONS TITLE 24 PART 2 SECTION 11B-502.6 1" MIN LETTERS

4. ALL INFORMATION TO BE PERMANENT PART OF FABRICATION OF SIGN

5 A1.3.1 SITE SIGNAGE
1 1/2" = 1'-0"



6 A1.3.1 TYP. PRECAST CONCRETE WHEEL STOP
3" = 1'-0"



NOTES
1. SIGN SHALL BE POSTED AT EACH ACCESSIBLE PARKING STALL PER PLANS.

2. "VAN ACCESSIBLE" SIGN SHALL BE DISPLAYED AT VAN ACCESSIBLE STALLS PER PLANS.

NOTES:

1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

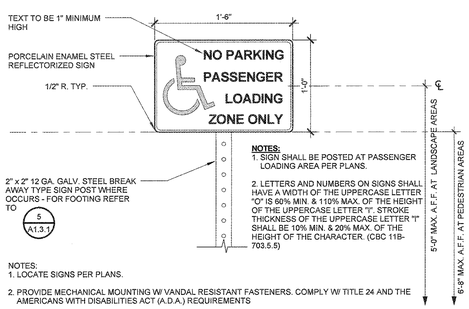
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-2

7 A1.3.1 TYP. VAN ACCESSIBLE PARKING STALL SIGNAGE
1 1/2" = 1'-0"



NOTES:
1. SIGN SHALL BE POSTED AT PASSENGER LOADING AREA PER PLANS.

2. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

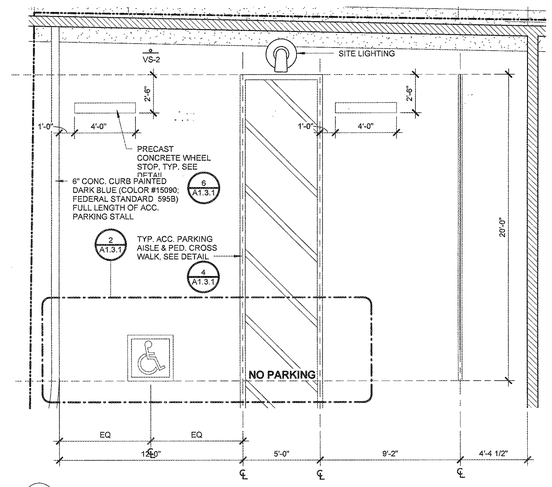
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

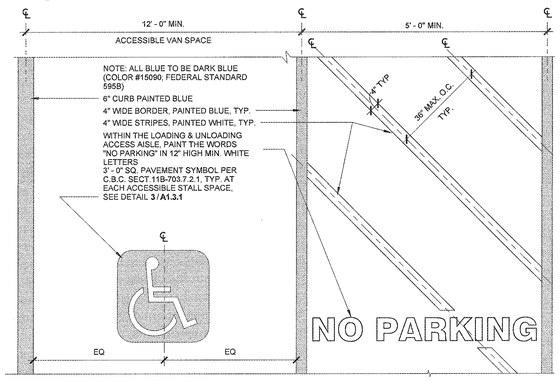
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-4

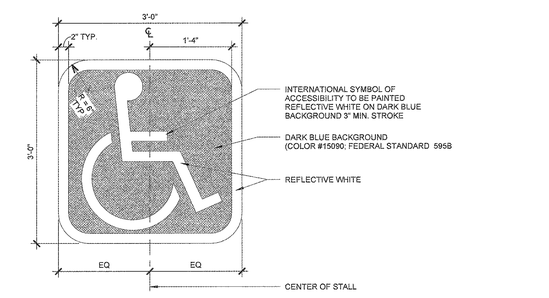
8 A1.3.1 TYP. EXTERIOR PASSENGER LOADING ZONE SIGNAGE
1 1/2" = 1'-0"



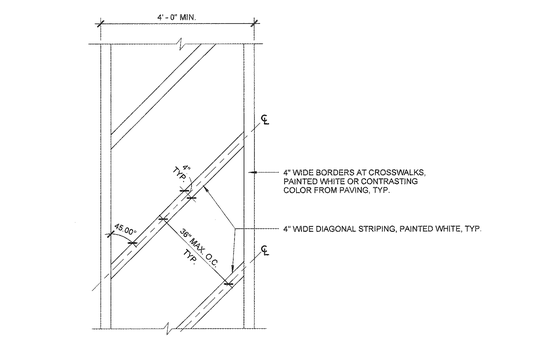
1 A1.3.1 ENLARGED PARKING PLAN
1/4" = 1'-0"



2 A1.3.1 TYP. ACCESSIBLE PARKING ACCESS AISLE
1/2" = 1'-0"



3 A1.3.1 TYP. ACCESSIBLE PARKING STALL SYMBOL
1" = 1'-0"



4 A1.3.1 TYP. ACC. PEDESTRIAN P.O.T. CROSSWALK
1/2" = 1'-0"

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC FLS SS
DATE DEC. 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

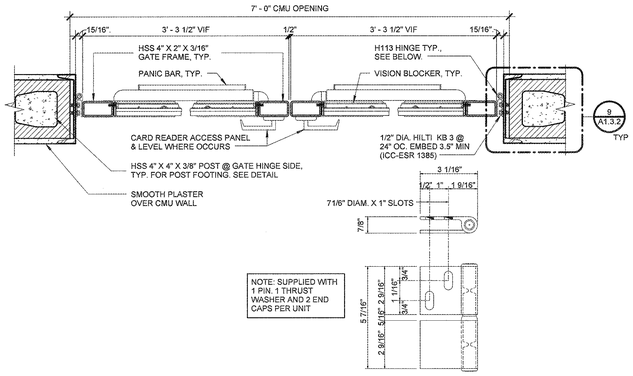
SEAL / SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

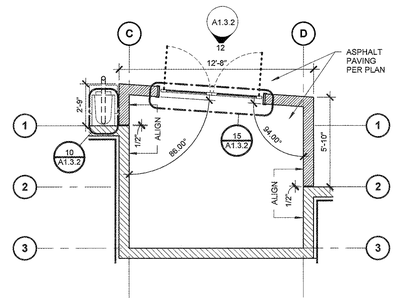
SHEET TITLE
SITE DETAILS

PROJECT NUMBER
913-4675-00

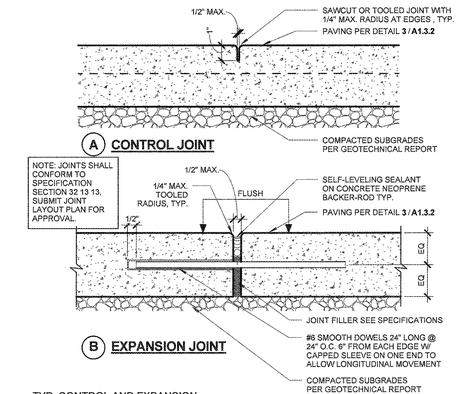
ISSUE DATE 12/01/16
SHEET NO. A1.3.1



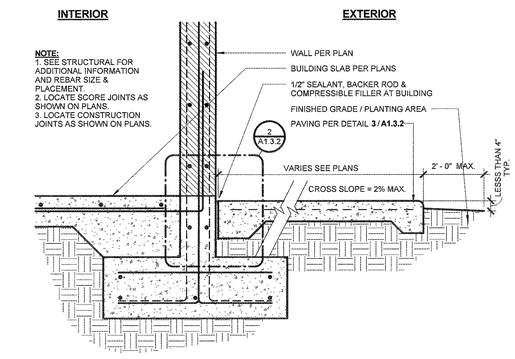
15 A1.3.2 EXT. STORAGE GATE SECTION
1 1/2" = 1'-0"



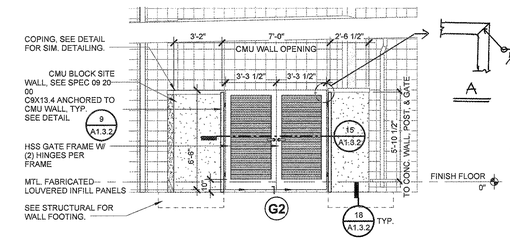
11 A1.3.2 EXTERIOR STORAGE ENCLOSURE - PLAN
1/4" = 1'-0"



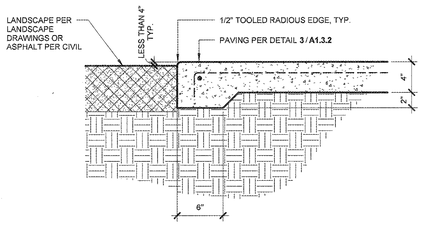
6 A1.3.2 TYP. CONTROL AND EXPANSION JOINTS
3" = 1'-0"



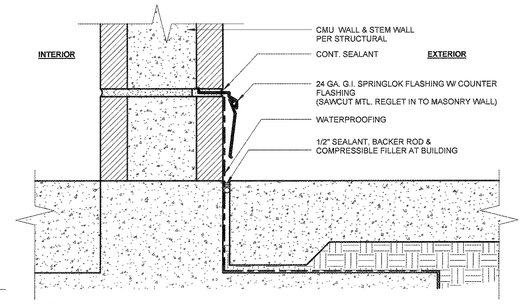
1 A1.3.2 TYP. CONCRETE WALKWAY / MOW STRIP AT BUILDING
1" = 1'-0"



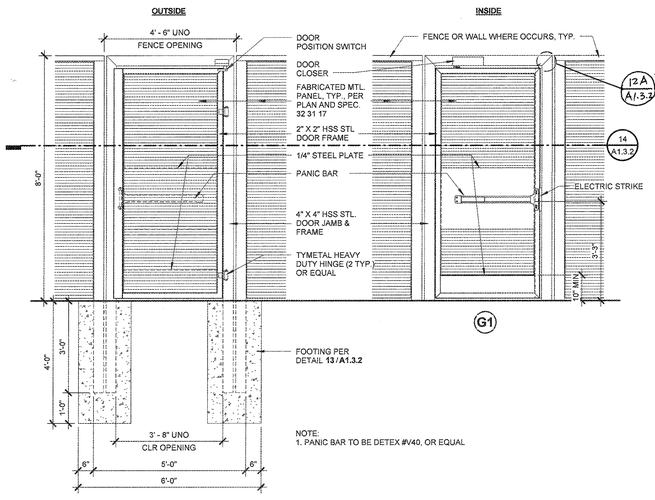
12 A1.3.2 EXT. STORAGE ENCLOSURE N. ELEVATION
1/4" = 1'-0"



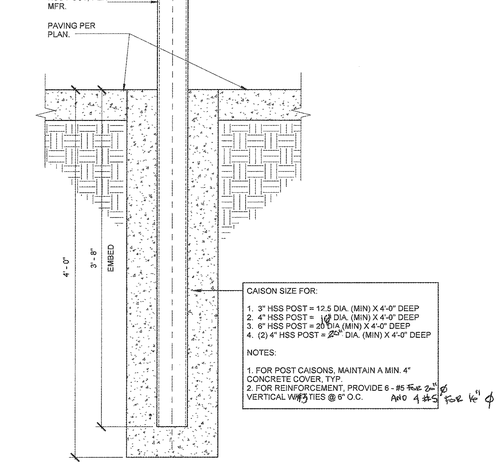
7 A1.3.2 TYP. CONCRETE PAVING AT LANDSCAPE
1 1/2" = 1'-0"



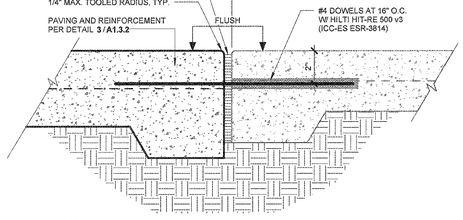
2 A1.3.2 TYP. WATERPROOFING DETAIL
3" = 1'-0"



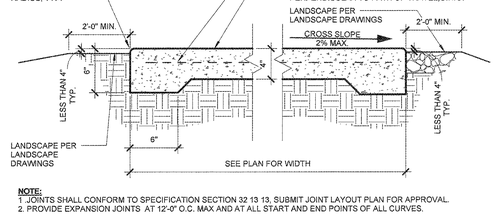
16 A1.3.2 PANIC HARDWARE GATE
1/2" = 1'-0"



13 A1.3.2 SITE POST FOOTING DETAIL
1 1/2" = 1'-0"

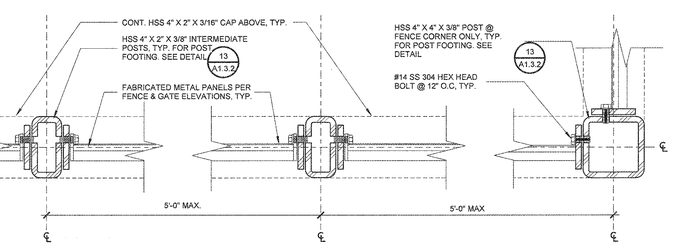


8 A1.3.2 TYP. CONCRETE WALK TO EXISTING CONCRETE WALK
3" = 1'-0"

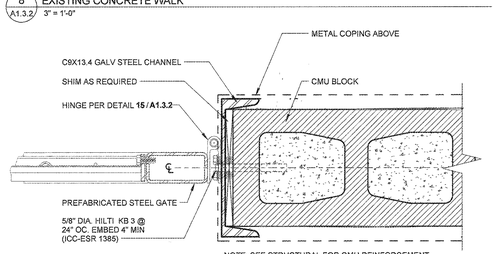


NOTE:
1. JOINTS SHALL CONFORM TO SPECIFICATION SECTION 32 13 13. SUBMIT JOINT LAYOUT PLAN FOR APPROVAL.
2. PROVIDE EXPANSION JOINTS AT 12'-0" O.C. MAX AND AT ALL START AND END POINTS OF ALL CURVES.

3 A1.3.2 TYP. CONCRETE WALKWAY PAVING
1 1/2" = 1'-0"

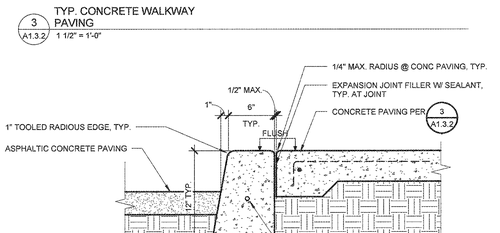


17 A1.3.2 TYP. FENCE SECTION DET.
3" = 1'-0"

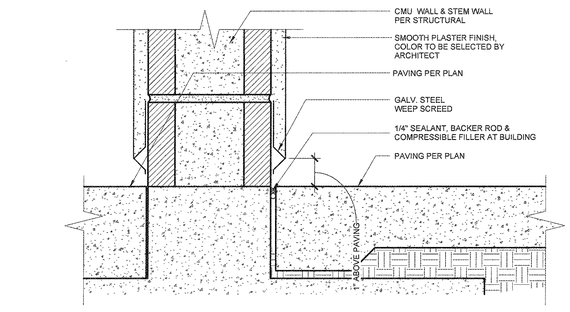


NOTE: SEE STRUCTURAL FOR CMU REINFORCEMENT

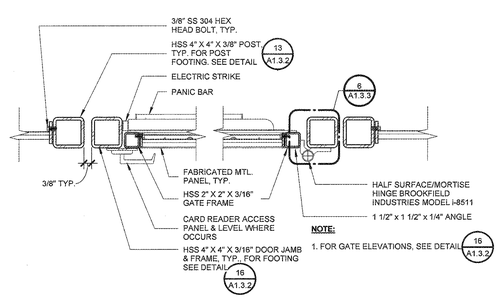
9 A1.3.2 GATE HINGE DETAIL @ EXT. STORAGE ENCLOSURE
3" = 1'-0"



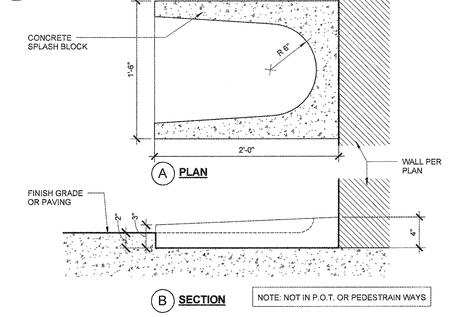
4 A1.3.2 TYP. CONCRETE CURB TO ASPHALT PAVING
1 1/2" = 1'-0"



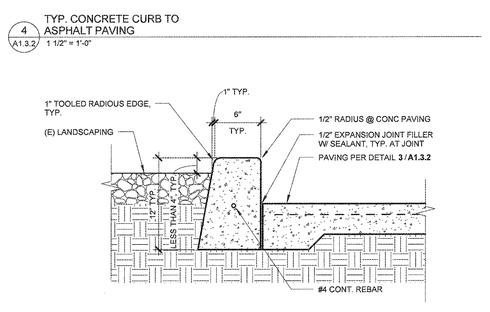
18 A1.3.2 WEEP SCREED DETAIL
3" = 1'-0"



14 A1.3.2 TYP. GATE SECTION
1 1/2" = 1'-0"



10 A1.3.2 TYP. CONCRETE SPLASH BLOCK ON GRADE
1 1/2" = 1'-0"



5 A1.3.2 TYP. CONCRETE CURB TO EXISTING LANDSCAPING
1 1/2" = 1'-0"

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC FLS SS
DATE: DEC 1 2 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

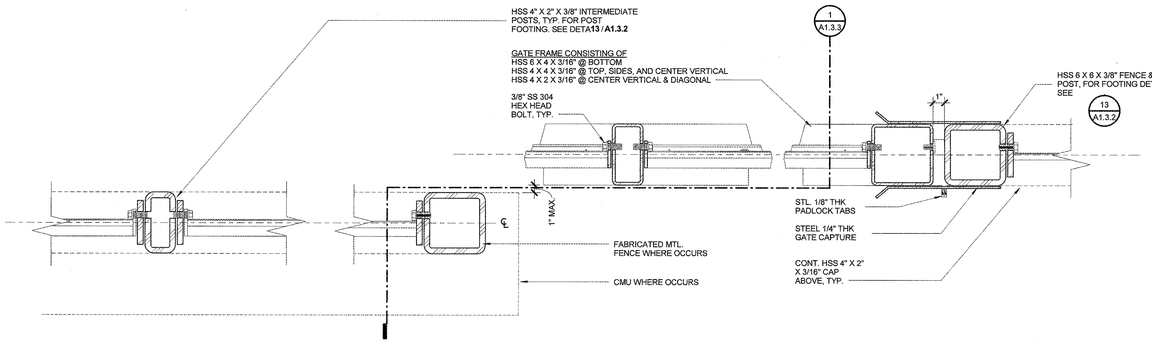
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C33431 REN. 4-30-19 STATE OF CALIFORNIA

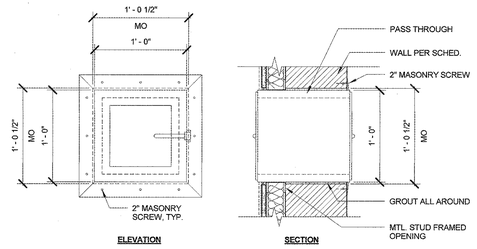
SHEET TITLE
SITE DETAILS

PROJECT NUMBER
913-4675-00

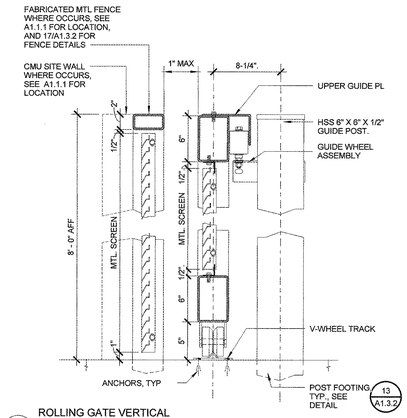
ISSUE DATE	SHEET NO.
12/01/16	A1.3.2



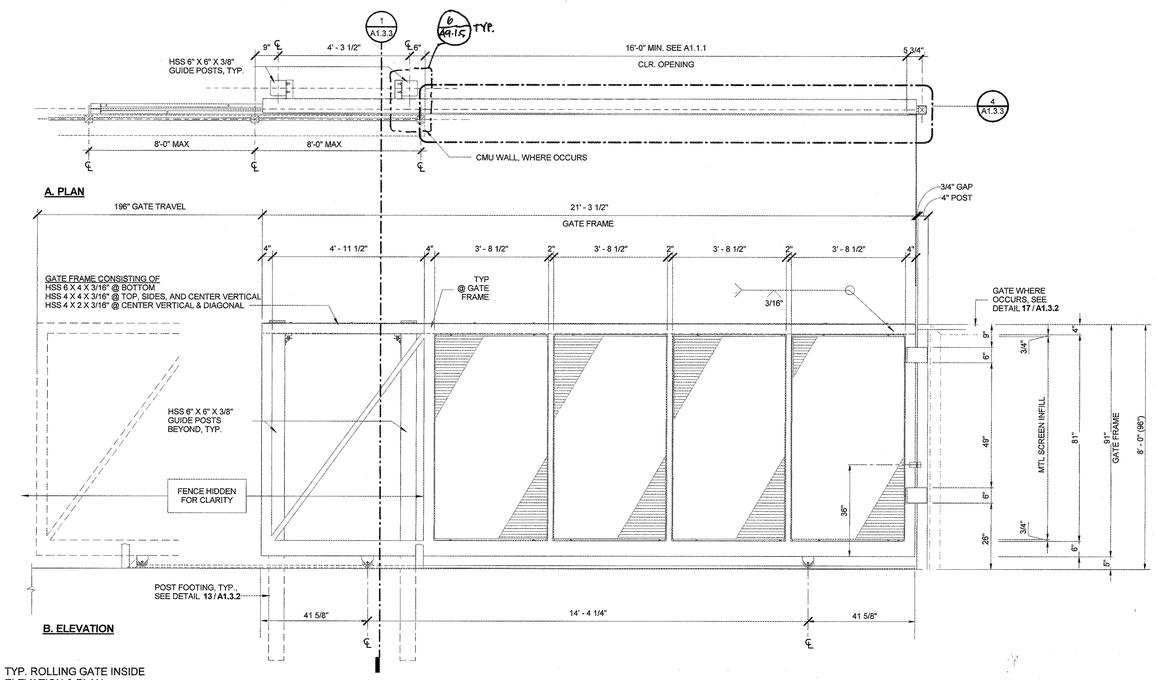
4 A1.3.3 ROLLING GATE HORIZONTAL SECTION
3" = 1'-0"



8 A1.3.3 PASS-THROUGH DETAIL
1 1/2" = 1'-0"

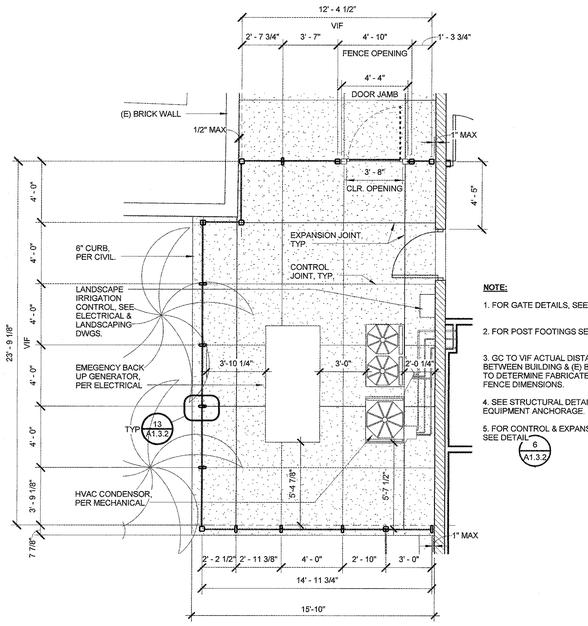


1 A1.3.3 ROLLING GATE VERTICAL SECTION
1 1/2" = 1'-0"

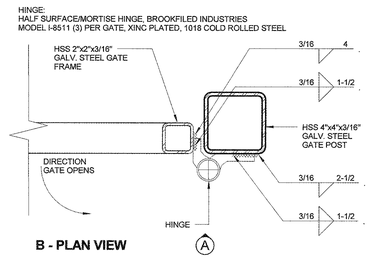


5 A1.3.3 TYP. ROLLING GATE INSIDE ELEVATION & PLAN
1/2" = 1'-0"

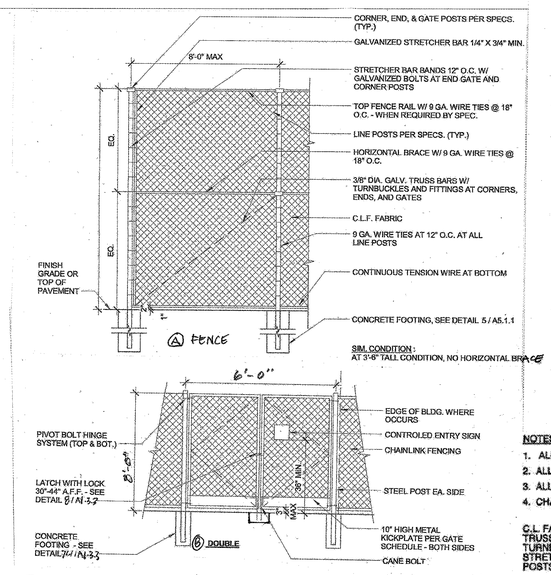
8 A1.3.3 GATE LATCH
NTS



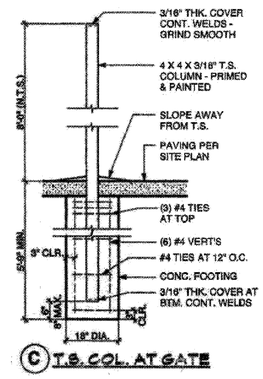
2 A1.3.3 ENLARGED EQUIPMENT ENCLOSURE PLAN
1/4" = 1'-0"



6 A1.3.3 HINGE@IRON GATE
3" = 1'-0"

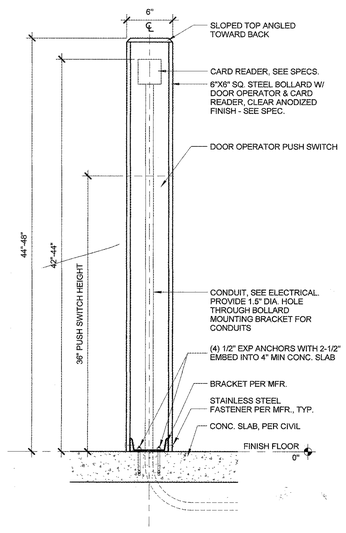


7 A1.3.3 FENCE & GATE DETAIL FOR ELECTRICAL ENCLOSURE
1/2" = 1'-0"



NOTES:
1. ALL COMPONENTS OF FENCING SYSTEM THAT ARE STEEL SHALL BE GALVANIZED.
2. ALL CHAIN LINK FABRIC - KNUCKLED SELVAGE, TOP AND BOTTOM.
3. ALL FENCING TO HAVE TOP AND BOTTOM RAIL
4. CHAIN LINK FABRIC SHALL BE ON PLAZA SIDE OF FENCE.

C.L. FABRIC - 2" MESH, 9 GAUGE
TRUSS RODS - 3/8" DIAMETER
TURNBUCKLES - 3-1/8" X 7-1/8"
STRETCHER BAR - 1/4" X 3/4"
POSTS AND RAILS - STANDARD STEEL PIPE



3 A1.3.3 DOOR OPERATOR POST
1 1/2" = 1'-0"

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

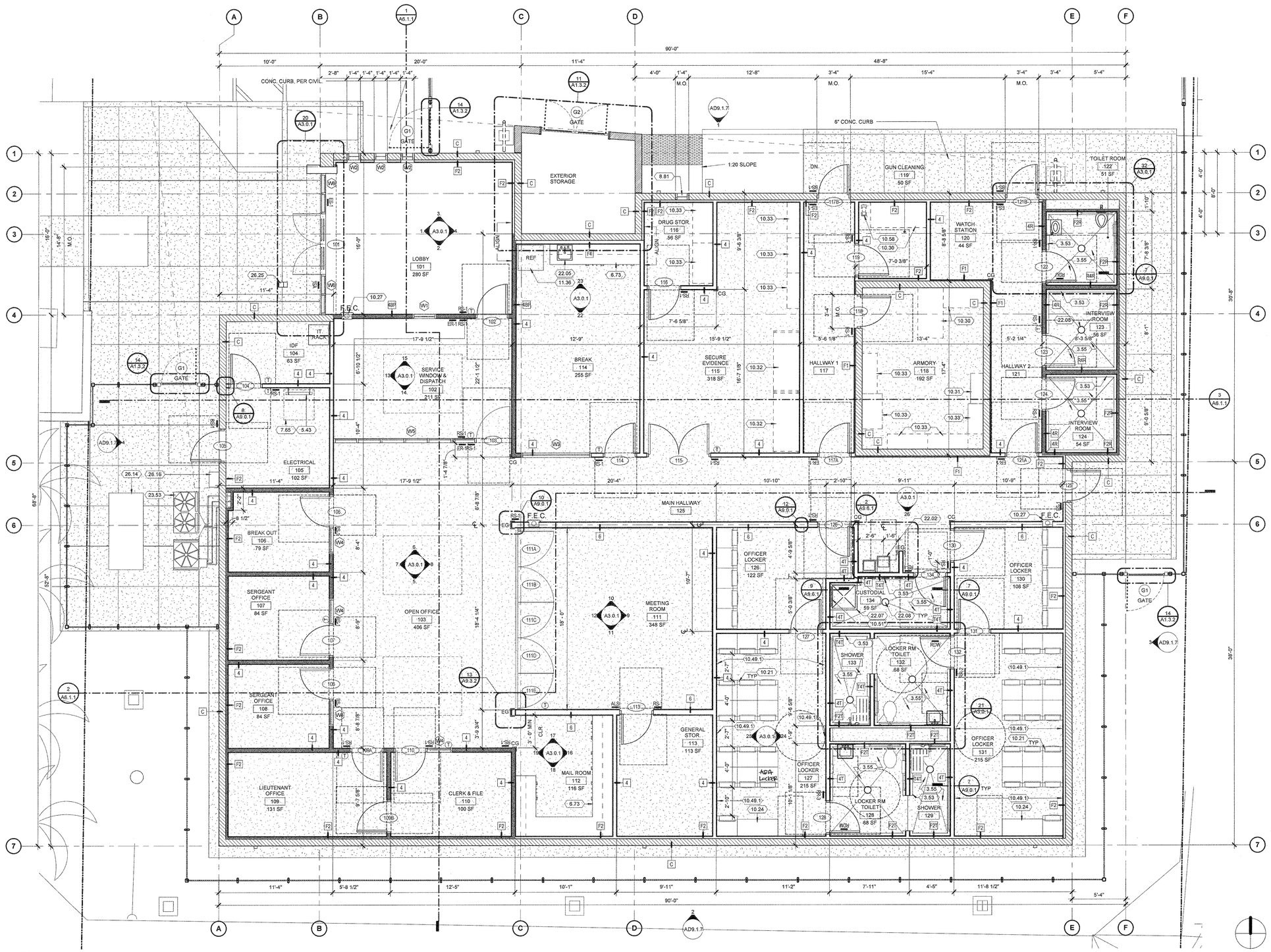
SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C28431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
SITE DETAILS

PROJECT NUMBER
913-4675-00

ISSUE DATE
12/01/16

SHEET NO.
A1.3.3



1 FINISH FLOOR
A2.1.1 1/4" = 1'-0"

KEYNOTES

3.53	CONCRETE COVE BASE, TYP. SEE DET. 6 & 7/A9.0.1
3.55	2-1/2" DEPRESSED CONCRETE SLAB PER STRUCTURAL
5.43	PREFABRICATED ALUMINUM ACCESS LADDER, SEE DETAIL 7/A9.1.1 - 05 50 00
6.73	LAMINATE COUNTERTOP, SEE INT. ELEVATION FOR MORE INFORMATION - 06 41 00
7.65	ROOF ACCESS HATCH - 07 72 00
8.81	STEEL PASS-THROUGH EVIDENCE DROP-OFF, SEE DETAIL 8/A1.3.3
10.21	LOCKERS, SEE DETAIL 17/A9.6.1 - 10 51 13
10.24	48" x 24" ADA BENCH, SEE 4/A9.6.1 FOR ANCHORAGE - 10 51 13
10.27	FIRE EXTINGUISHER CABINET, SEMI-RECESSED, SEE DETAIL 6/A9.6.1 - 10 44 00
10.30	ROUSSEAU DESK WITH UPPER WALL MOUNT UNITS - 10 56 13
10.31	WEAPONWRX SHELVING - 10 56 13
10.32	WIDESPAN SHELVING - 10 56 13
10.33	SPACESAVER 4-POST METAL STORAGE SHELVING - 10 56 13
10.49.1	LOCKER ROOM FULL HEIGHT MIRROR, TYP. - 10 28 00
10.51	MOP RACK - 10 28 00
10.58	EMERGENCY-CLEAR CLEARING BARREL
11.36	SIDE BY SIDE OR FREEZER ON BOTTOM REFRIGERATOR TO BE OWNER PROVIDED, OWNER INSTALLED. NIC
22.02	DRINKING FOUNTAIN, PER PLUMBING DRAWINGS
22.05	SINK, PER PLUMBING DRAWINGS
22.07	MOP SINK, PER PLUMBING DRAWINGS
22.08	FLOOR DRAIN, PER PLUMBING DRAWINGS
23.53	HVAC CONDENSING UNIT, PER MECHANICAL - 23 65 00
26.14	EMERGENCY GENERATOR, PER ELECTRICAL
26.16	IRRIGATION CONTROL PANEL, PER LANDSCAPING & ELECTRICAL
26.25	O.I.C.F. SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL

SIGNAGE SCHEDULE

ER-1	EXIT ROUTE, SEE DETAIL 3/A9.6.2
ES-1	EXIT SIGNAGE, SEE DETAIL 3/A9.6.2
ALS	ASSISTED LISTENING SYSTEM 11/A9.6.2
RS-1	TYP. ROOM SIGNAGE, SEE DETAIL 5/A9.6.2
BS-1	EXTERIOR BUILDING SIGNAGE, SEE DETAIL 5/A9.6.2
RR-1	RESTROOM SIGNAGE ON WALL, SEE DETAIL 6/A9.6.2
RDW RDM RDU	RESTROOM SIGNAGE ON DOOR, SEE DETAIL 6/A9.6.2

WALL LEGEND

XX	WALL TYPES PER SHEET A9.0.1
	NON-RATED PARTITION
	ACOUSTICAL PARTITION
EG CG	CORNER & END WALL GUARDS, SEE DETAIL 10/A9.0.1 & SPEC. SECTION 10 26 00

GENERAL NOTES

1. FIRST FLOOR FINISH FLOOR IS ASSUMED TO BE 0'-0", REFER TO CIVIL FOR ACTUAL ELEVATION
2. DOOR FRAMES LOCATED NEAR ADJACENT WALLS OR CASEWORK TO BE 4" FROM INSIDE CORNER, OR TO NEAREST BLOCK MODULE AT CMU WALLS, U.N.O.
3. COORDINATE AND CONFIRM EXACT LOCATIONS OF ALL FLOOR MOUNTED OUTLETS PRIOR TO CONCRETE PLACEMENT, SEE ELECT.
4. FOR WALL TYPES, SEE SHEET A9.0.1, A9.0.2 & REFER TO STRUCTURAL FOR TYPICAL WALL FRAMING DETAILS.
5. FOR TYPICAL MOUNTING AND ACCESSIBILITY HEIGHTS, SEE SHEET A3.0.1
6. FOR ALL WALLS THAT REQUIRE BACKING, PROVIDE 16 GA MTL STUDS
7. SEE DETAIL 9/A9.3.1 FOR TRANSITIONS STRIPS BETWEEN MATERIALS
8. ROOM IDENTIFICATION SIGNAGE - SPEC SECTION 10 14 00 FOR MOUNTING HEIGHT SEE DETAIL 9 / A9.6.2
9. TOILET ROOM SYMBOLS - SPEC SECTION 10 14 00. FOR MOUNTING HEIGHT SEE DETAIL 6 & 7/A9.6.2
10. SEE DETAIL 15/A9.6.1 FOR FLOOR AND WALL ANCHORAGE OF ROUSSEAU DESK WITH UPPER WALL MOUNTED UNITS, WEAPONWRX SHELVING, WIDESPAN SHELVING, AND SPACESAVER 4-POST METAL STORAGE SHELVING UNITS.
11. PROVIDE (1) ACCESSIBLE LOCKER AT EACH LOCKER ROOM.
12. PROVIDE CURB IN ALL RESTROOMS, SHOWERS, TOILETS, CUSTODIAL ROOM, AND INTERVIEW ROOMS, PER DETAIL 7/A9.0.1

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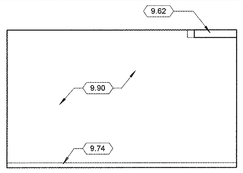
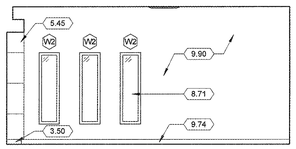
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

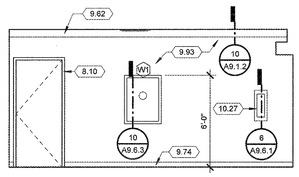
SHEET TITLE
FLOOR PLAN

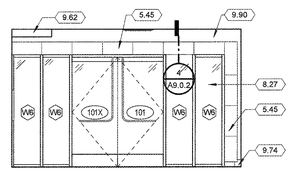
PROJECT NUMBER
913-4675-00

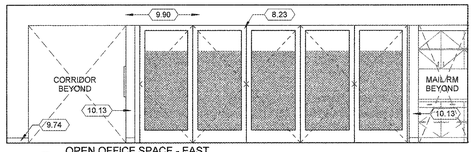
ISSUE DATE	SHEET NO.
12/01/16	A2.1.1

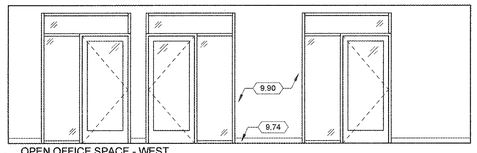


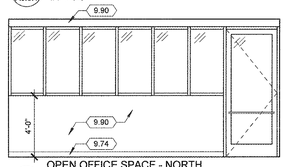


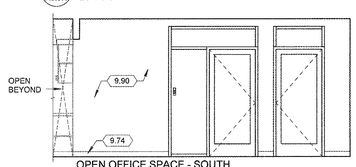


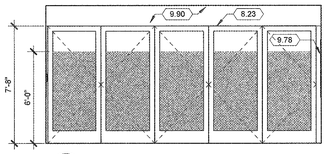


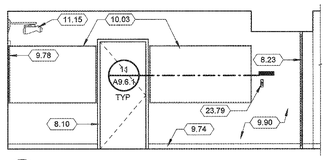


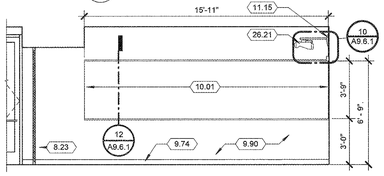


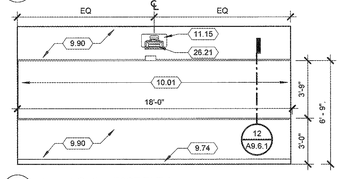


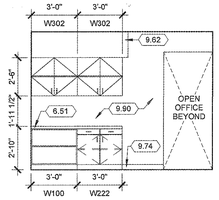


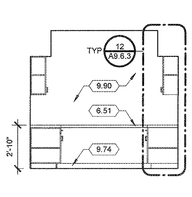


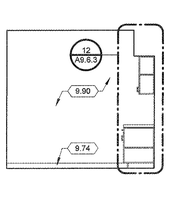


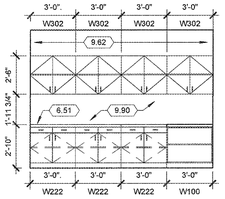


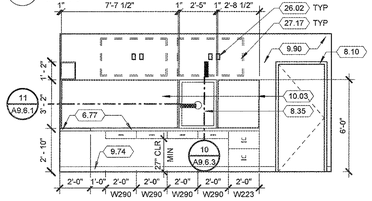


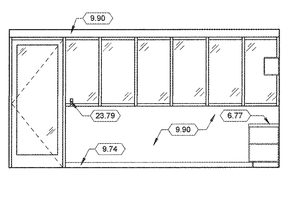


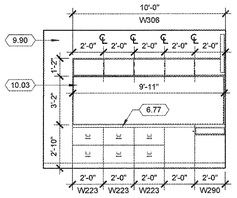


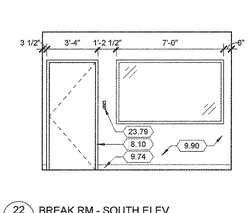


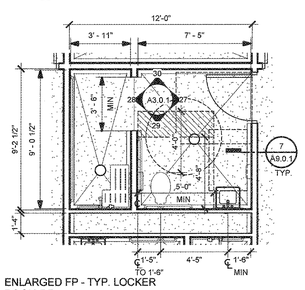


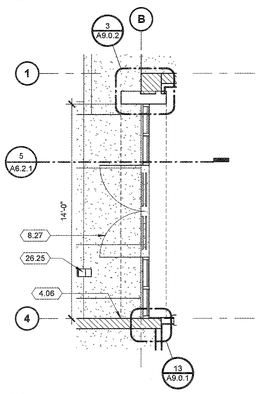


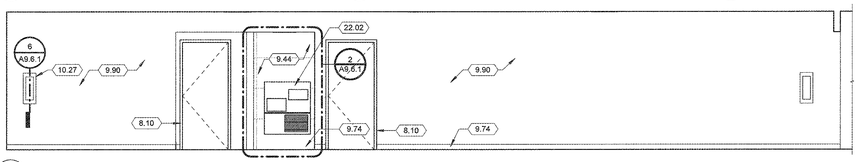


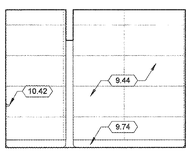


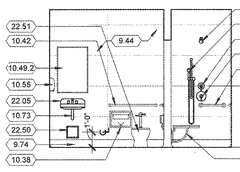


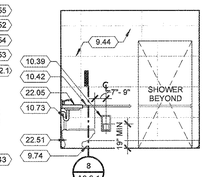


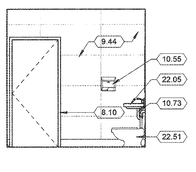


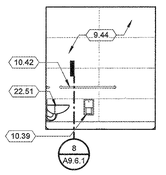


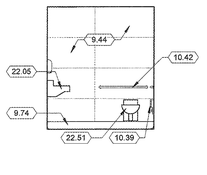


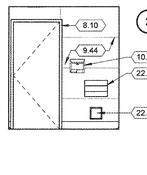


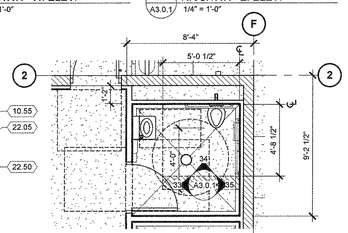


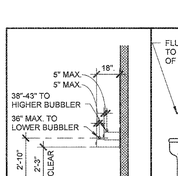












4 LOBBY - EAST ELEV.
A3.0.1 1/4" = 1'-0"

3 LOBBY - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

2 LOBBY - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

1 LOBBY - WEST ELEV.
A3.0.1 1/4" = 1'-0"

8 OPEN OFFICE SPACE - EAST ELEV.
A3.0.1 1/4" = 1'-0"

7 OPEN OFFICE SPACE - WEST ELEV.
A3.0.1 1/4" = 1'-0"

6 OPEN OFFICE SPACE - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

5 OPEN OFFICE SPACE - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

12 MEETING RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"

11 MEETING RM - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

10 MEETING RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

9 MEETING RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"

19 MAIL RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"

18 MAIL RM - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

17 MAIL RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

16 MAIL RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"

15 SERVICE - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

14 SERVICE - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

13 SERVICE - WEST ELEV.
A3.0.1 1/4" = 1'-0"

25 LOCKER RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"

24 LOCKER RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"

23 BREAK RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

22 BREAK RM - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

21 ENLARGED FP - TYP. LOCKER ROOM RR
A3.0.1 1/4" = 1'-0"

20 ENLARGED FP - BLDG. ENTRY
A3.0.1 1/4" = 1'-0"

26 HALL WAY - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

30 RR/SHWR - N. ELEV.
A3.0.1 1/4" = 1'-0"

29 RR/SHWR - S. ELEV.
A3.0.1 1/4" = 1'-0"

28 RR/SHWR - W. ELEV.
A3.0.1 1/4" = 1'-0"

27 RR/SHWR - E. ELEV.
A3.0.1 1/4" = 1'-0"

31 ACCESSIBLE MOUNTING SCHEDULE
A3.0.1 1/4" = 1'-0"

35 UNISEX - E. ELEV.
A3.0.1 1/4" = 1'-0"

34 UNISEX - N. ELEV.
A3.0.1 1/4" = 1'-0"

33 UNISEX - W. ELEV.
A3.0.1 1/4" = 1'-0"

32 ENLARGED FP - UNISEX RR
A3.0.1 1/4" = 1'-0"

KEYNOTES

3.50	EXPOSED CAST-IN-PLACE CONCRETE - 32 30 00
4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
5.45	COMPOSITE METAL PANEL SYSTEM - 07 42 13
6.51	PLASTIC LAMINATE COUNTERTOP - 06 41 00
6.72	PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH - 06 41 00
6.77	STAINLESS STEEL LAMINATED COUNTERTOP - 06 41 00
8.10	PREFINISHED HOLLOW METAL FRAMES - 08 12 13
8.23	GLASS PANEL DOORS - 08 35 14
8.27	ALUMINUM STOREFRONT SYSTEM - 08 41 00
8.35	ALUMINUM PASS THRU WINDOW - 08 58 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00
9.44	CERAMIC TILE - 09 30 13
9.62	SOFFIT, SEE DETAIL 10/A9.1.2
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.78	NON-GLARE, PROJECTABLE MARKERBOARD WALL COVERING - 09 72 00
9.90	PAINT FINISH - INTERIOR, SEE FINISH SCHEDULE - 09 91 00
9.93	VINYL WALL COVERING - 09 72 17
10.01	NON-GLARE, PROJECTABLE MARKERBOARD WALL COVERING - 10 11 16
10.03	TACKBOARD PANEL - 10 11 16
10.13	CORNER/END GUARD(S) - 10 26 13
10.21	LOCKERS, SEE DETAIL 17/A9.6.1 - 10 51 13
10.27	FIRE EXTINGUISHER CABINET, SEMI-RECESSED, SEE DETAIL 6/A9.6.1 - 10 44 00
10.38	SEAT COVER DISPENSER - 10 28 00
10.39	SANITARY PRODUCTS DISPENSER - 10 28 00
10.42	GRAB BAR - 10 28 00
10.42.1	SHOWER GRAB BAR - 10 28 00
10.43	FOLDING SHOWER SEAT - 10 28 00
10.49.1	LOCKER ROOM FULL HEIGHT MIRROR, TYP. - 10 28 00
10.49.2	RESTROOM MIRROR - 10 28 00
10.55	ELECTRIC HAND DRYER - 10 28 00
10.73	BURN PROTECTION TRAP/WATER PIPE WRAP - 10 28 00
11.15	PROJECTOR MOUNT - 11 52 00
11.30	STAINLESS STEEL SINK, SEE PLUMBING
11.36	SIDE BY SIDE OR FREEZER ON BOTTOM REFRIGERATOR TO BE OWNER PROVIDED, OWNER INSTALLED. NIC
22.02	DRINKING FOUNTAIN, PER PLUMBING DRAWINGS
22.05	SINK, PER PLUMBING DRAWINGS
22.50	RECESSED HOSE BIB BOX, SEE PLUMBING
22.51	WALL HUNG TOILET, SEE PLUMBING
22.52	HAND SHOWER, SEE PLUMBING
22.53	THERMOSTATIC MIXING VALVE, SEE PLUMBING
22.54	DIVERTER, SEE PLUMBING
22.55	SHOWER HEAD, SEE PLUMBING
23.79	THERMOSTAT CONTROLLER, SEE MECHANICAL
26.02	ELECTRICAL & DATA OUTLETS, SEE ELECTRICAL
26.21	PROJECTOR,SEE DET. 10/A9.6.1 FOR MOUNTING
26.25	O.I.C.F. SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
27.17	SECURITY MONITORS OWNER PROVIDED & INSTALLED, TYP. SEE DET. 13/A9.6.1 FOR MOUNTING DETAIL

CASEWORK SCHEDULE

TYPE	DETAIL #
W100	1/A9.6.3
W152	4/A9.6.3
W212	2/A9.6.3
W222	2/A9.6.3
W223	3/A9.6.3
W290	5/A9.6.3
W302	7/A9.6.3
W306	8/A9.6.3

GENERAL NOTES

1. ALL MILLWORK FINISH IS PL-2 FOR UPPER AND PL-3 FOR LOWER CABINETS, U.O.N.
2. ALL COUNTERTOPS ARE PL-1, U.O.N.
3. ALL PLAM GRAIN TO RUN VERTICAL
4. SEE SPEC SECTION 06 41 00 FOR ACCESSORIES AND ADDITIONAL INFORMATION.
5. MILLWORK BASED ON ARCHITECTURAL WOODWORK STANDARDS' CABINET DESIGN SERIES.
6. DIMENSIONS SHOWN OF CASEWORK WIDTH ARE GENERAL ESTIMATIONS GIVING DESIGN INTENT. GENERAL CONTRACTOR TO FIELD VERIFY OVERALL DIMENSIONS OF CASEWORK LOCATION AND ADJUST CASEWORK DIMENSIONS ACCORDINGLY.
7. SCRIBE BASE CABINET END PANELS TO MATCH SELF COVE BASE PROFILE WHERE OCCURS.
8. FOR ACCESSIBLE FIXTURES AND EQUIPMENT HEIGHTS, REFER TO 31/A3.0.1

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433

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PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
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AC FLS SS
DATE DEC 1 2 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

RITA S. CARTER
NO. C35431
REN. 4-30-19

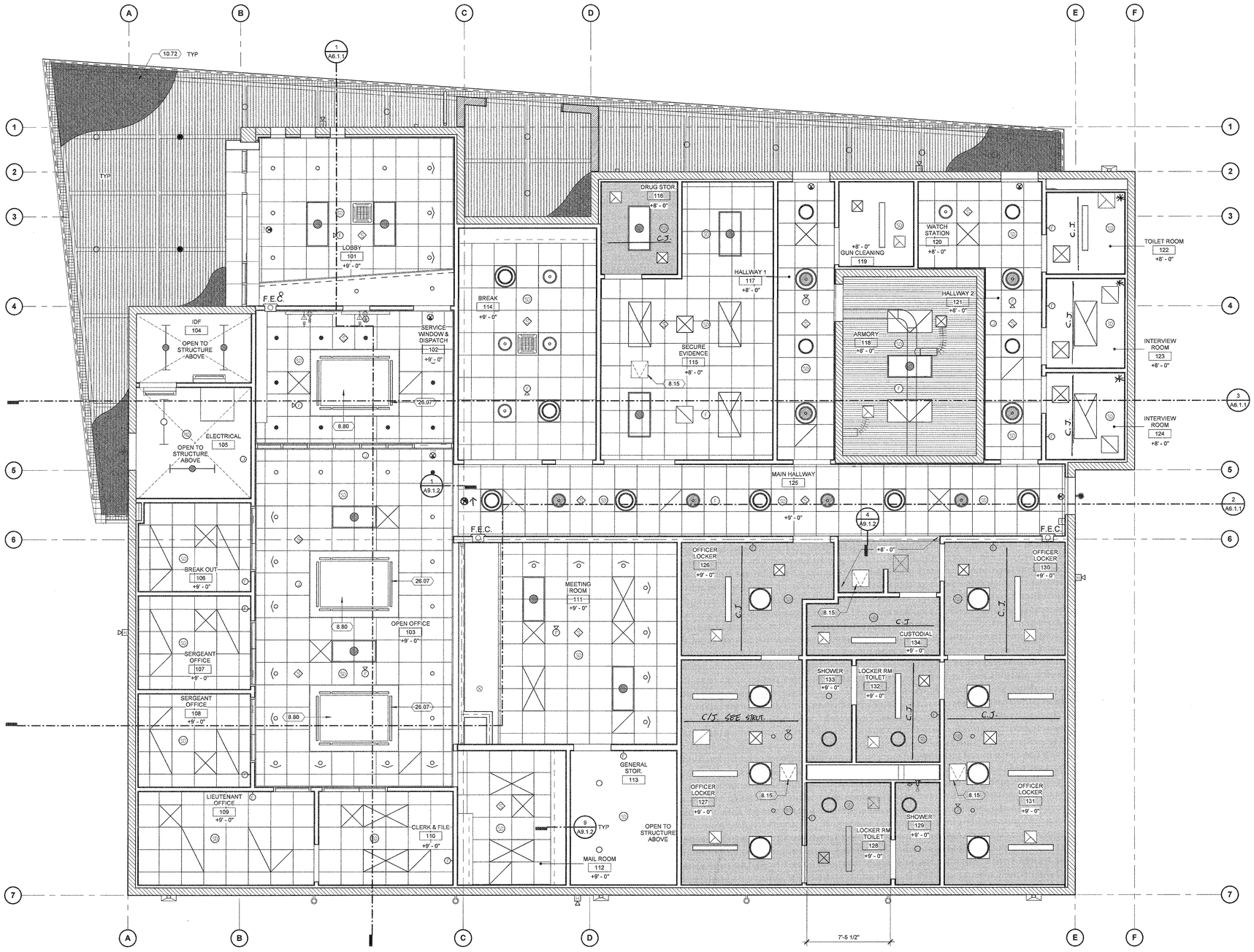
SHEET TITLE

DETAILED FLOOR PLANS & INTERIOR ELEVATIONS

PROJECT NUMBER

913-4675-00

ISSUE DATE 12/01/16
SHEET NO. A3.0.1



1 A4.1.1 REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

5.43	PREFABRICATED ALUMINUM ACCESS LADDER, SEE DETAIL 7/A9.1.1 - 05 50 00
5.51	HOT DIP GALVANIZED CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
7.65	ROOF ACCESS HATCH - 07 72 00
8.15	CEILING ACCESS PANEL, SEE DET. 13/A9.1.2 - 08 31 13
8.80	CLERESTORY WINDOW
10.72	BIRD NETTING - 10 81 13
26.07	LIGHT FIXTURE, SEE ELECTRICAL

LEGEND

- EXPOSED METAL DECK, SEE STRUCT.
- 2'-0" x 2'-0" SUSPENDED ACOUSTICAL GRID PANELS PER ROOM FINISH SCHEDULE
- GYPSUM BOARD PER FINISH SCHEDULE, FOR MORE INFO. SEE DETAIL 5 & 7/A9.1.2
- +'X'-'X" HEIGHT OF CEILING / SOFFIT
- (S) SWITCH, SEE ELECTRICAL
- (SD) SMOKE DETECTOR, SEE FIRE ALARM DWGS.
- (F) FIRE HORN, SEE FIRE ALARM DWGS.
- LIGHT FIXTURES SEE ELECTRICAL DRAWINGS
- UNIT SKYLIGHT, SEE ELECTRICAL DWGS FOR TYPE.
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- EXHAUST AIR DIFFUSER

GENERAL NOTES

1. CENTER SUSPENDED CEILING GRIDS EACH WAY WITHIN SPACE, UNLESS NOTED OTHERWISE
2. CENTER MECHANICAL AIR GRILLES BETWEEN LIGHTS / WALLS IN GYPSUM BOARD CEILINGS AS SHOWN
3. CENTER LIGHT FIXTURES WITHIN SPACES UNLESS NOTED OTHERWISE
4. CEILING HEIGHT IS 9'-0" A.F.F. UNLESS NOTED OTHERWISE
5. FOR ALL LOCATIONS OF N.I.C. LCD PROJECTORS, INSTALL OVERHEAD MOUNTED EQUIPMENT SUPPORT PER ELECTRICAL DRAWINGS.
6. FOR TYPICAL CEILING NOTES AND DETAILS, SEE SHEET A9.1.3
7. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED
8. FOR GYP. BD CEILING DET, SEE 5 & 7/A9.1.2

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
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CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT
LINDA S. FARR
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
REFLECTED CEILING PLAN

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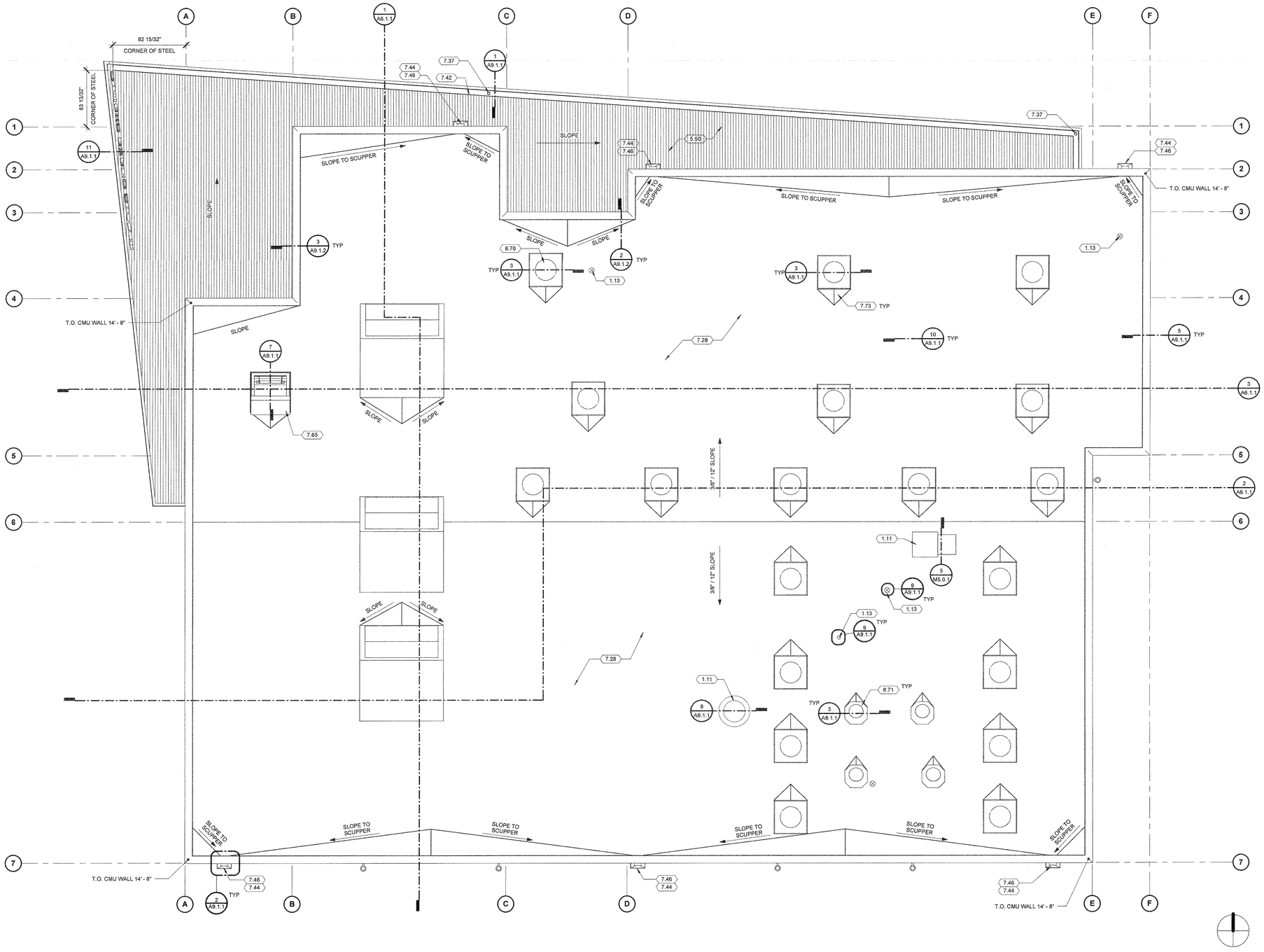

1 A5.0.1 ROOF PLAN
1/4" = 1'-0"

KEYNOTES

1.11	SEE MECHANICAL DRAWINGS
1.13	SEE PLUMBING DRAWINGS
5.50	METAL DECK PFX-1, PER STRUCTURAL - 05 31 00
7.28	PVC SINGLE PLY MEMBRANE - 07 54 19
7.37	METAL DOWNSPOUT - 07 60 00
7.42	METAL GUTTER - 07 60 00
7.44	METAL COLLECTOR BOX - 07 60 00
7.46	OVERFLOW SCUPPER - 07 60 00
7.65	ROOF ACCESS HATCH - 07 72 00
7.73	CRICKET
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00

LEGEND

GENERAL NOTES

1. FOR TYPICAL ROOF PENETRATIONS, SEE SHEET A9.1.1.
2. SEE MECHANICAL FOR TYPICAL DUCT SUPPORT
3. SEE STRUCTURAL FOR T.O. ROOF FRAMING.
4. SEE PLUMBING FOR VENT PENETRATIONS.

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
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PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

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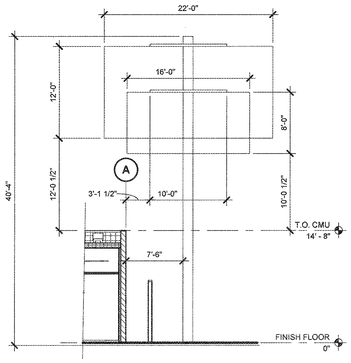
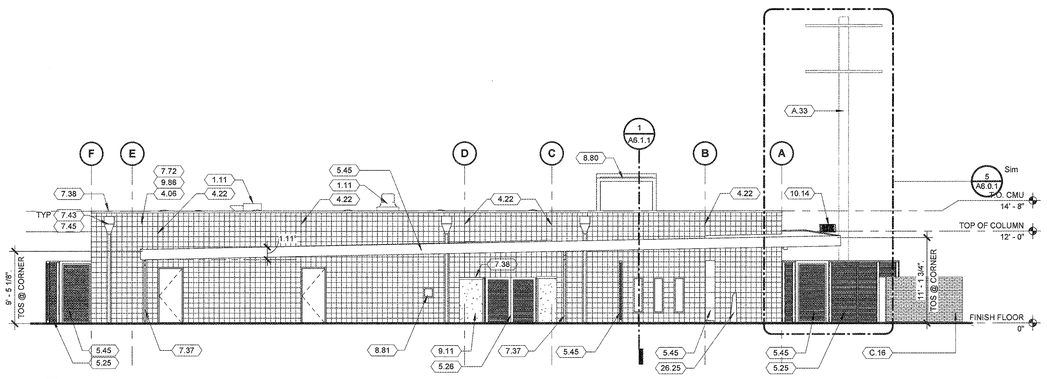
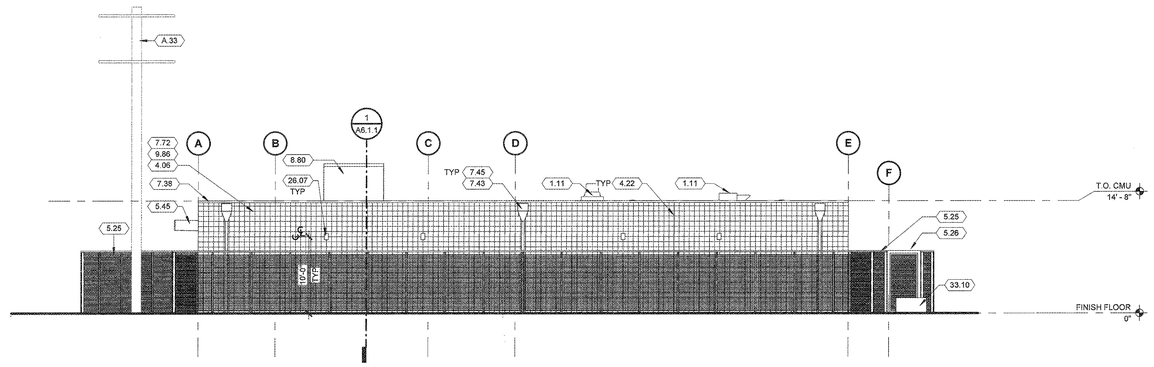


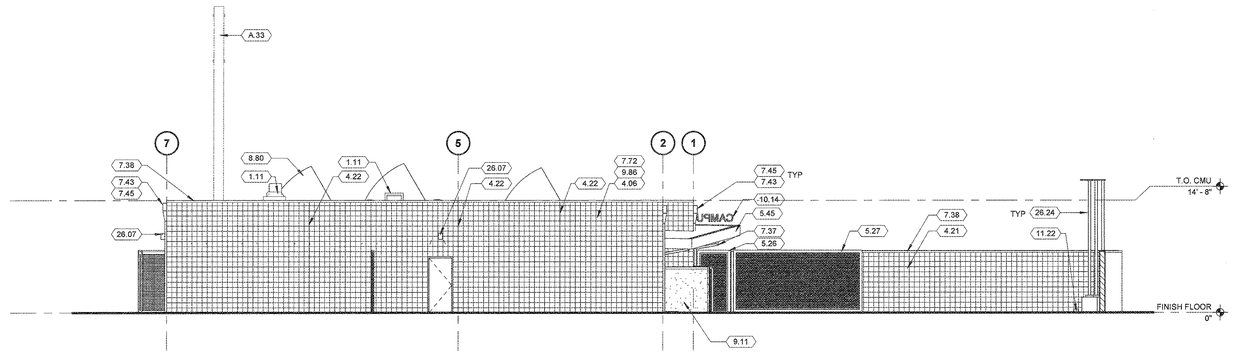
5 A6.0.1 SCE POLE CLEARANCE 1/8" = 1'-0"



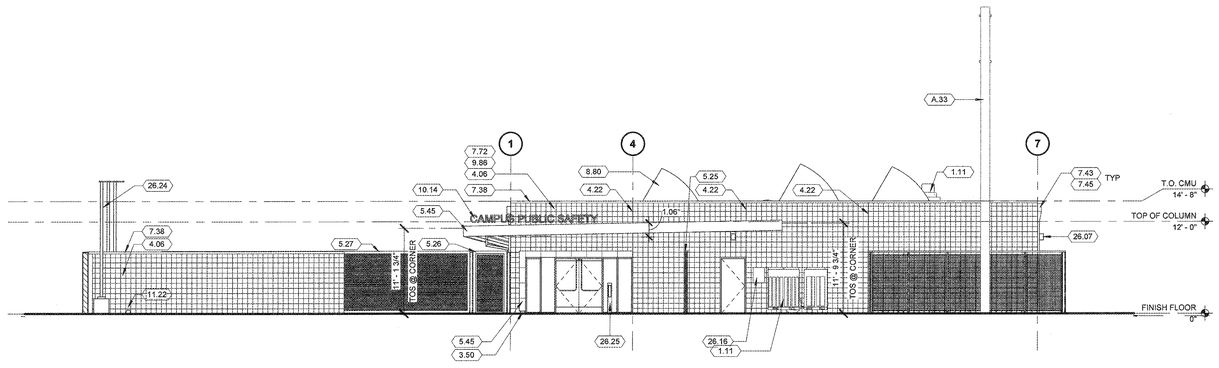
1 A6.0.1 EXTERIOR ELEVATION - SOUTH 1/8" = 1'-0"



2 A6.0.1 EXTERIOR ELEVATION - NORTH 1/8" = 1'-0"



3 A6.0.1 EXTERIOR ELEVATION - EAST 1/8" = 1'-0"



4 A6.0.1 EXTERIOR ELEVATION - WEST 1/8" = 1'-0"

KEYNOTES

1.11	SEE MECHANICAL DRAWINGS
3.50	EXPOSED CAST-IN-PLACE CONCRETE - 32 30 00
4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
4.21	CONCRETE MASONRY UNIT SITE WALL PER 9/S5/2 & METAL COPING CAP PER DETAIL 5/A9.1.1 - 04 22 00
4.22	CONCRETE MASONRY CONTROL JOINT, SEE DET. 2/S5.1
5.25	FABRICATED STEEL FENCE - 32 13 17
5.26	FABRICATED STEEL GATE - 32 13 17
5.27	FABRICATED STEEL ROLLING GATE, SEE SHEET A1.3.3 - 05 50 00
5.45	COMPOSITE METAL PANEL SYSTEM - 07 42 13
7.37	METAL DOWNSPOUT - 07 60 00
7.38	METAL COPING - 07 60 00
7.43	METAL LEADER & DOWNSPOUT - 07 60 00
7.45	METAL SCUPPER - 07 60 00
7.72	WATER REPELLENT - 07 19 00
8.80	CLERESTORY WINDOW
8.81	STEEL PASS-THROUGH EVIDENCE DROP-OFF, SEE DETAIL /
9.11	PORTLAND CEMENT PLASTER - 09 20 00
9.86	GRAFFITI RESISTANT COATING - 09 96 23
10.14	SIGNAGE - 10 14 00
11.22	PARKING WHEEL STOP, SEE DET. 6/A1.3.1 - 32 17 13
26.07	LIGHT FIXTURE, SEE ELECTRICAL
26.16	IRRIGATION CONTROL PANEL, PER LANDSCAPING & ELECTRICAL
26.24	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
26.25	O.I.C.F. SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
33.10	BACKFLOW PREVENTER & ENCLOSURE, PER CIVIL
A.33	(E) UTILITY COMPANY POWER POLE AND BRACE TO REMAIN, PROTECT IN PLACE.
C.16	EXISTING BRICK VENEER WALL & ASSOCIATED GATES TO REMAIN, PROTECT IN PLACE

LEGEND

CONCRETE MASONRY UNIT

GENERAL NOTES

1. FIRST FLOOR FINISH FLOOR FOR BUILDING 'A' IS 0'-0" = 58.67'
2. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT
LISITA T. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

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EXTERIOR ELEVATIONS

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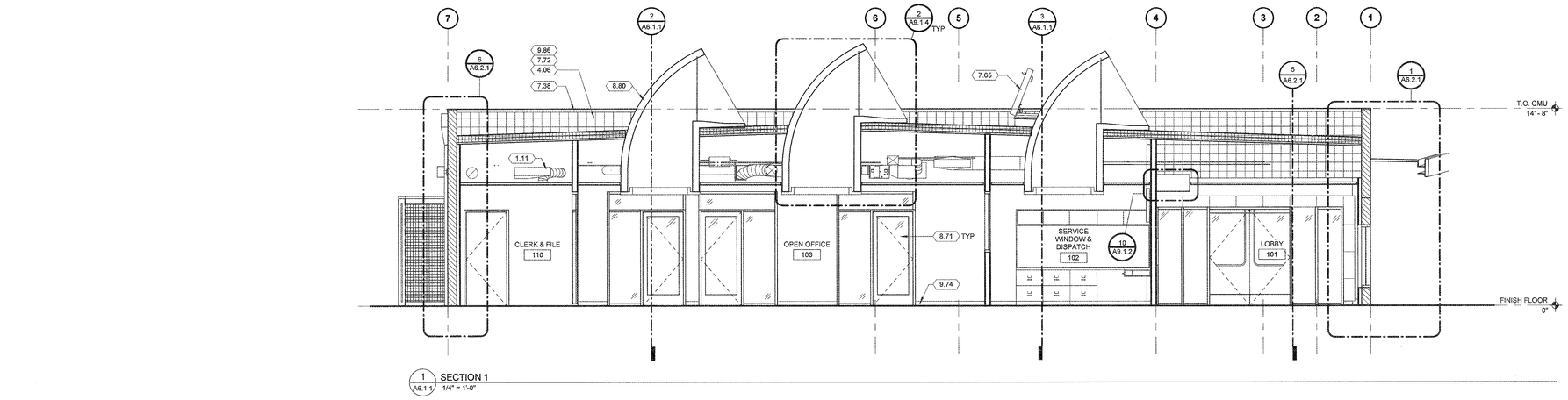
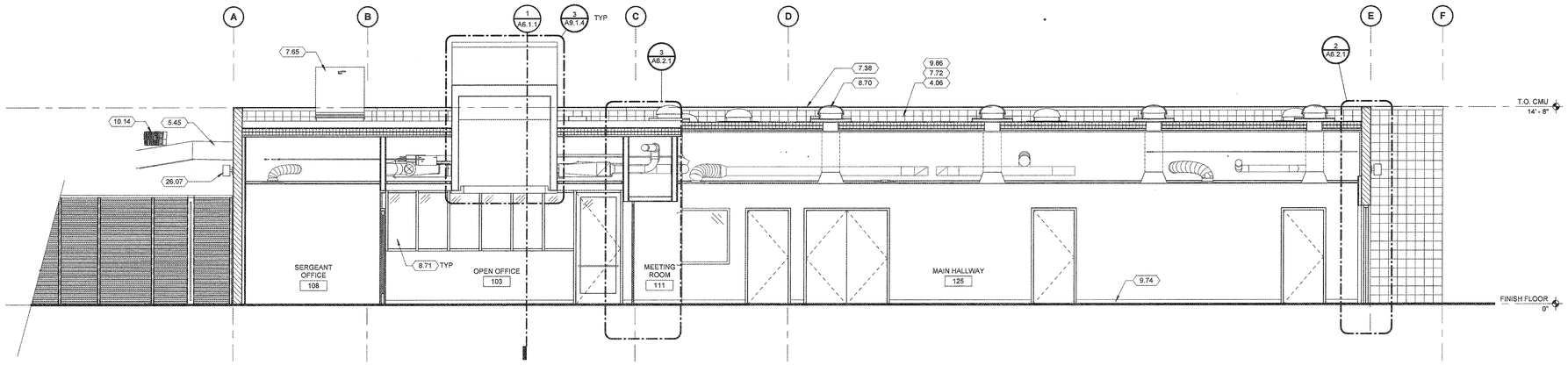
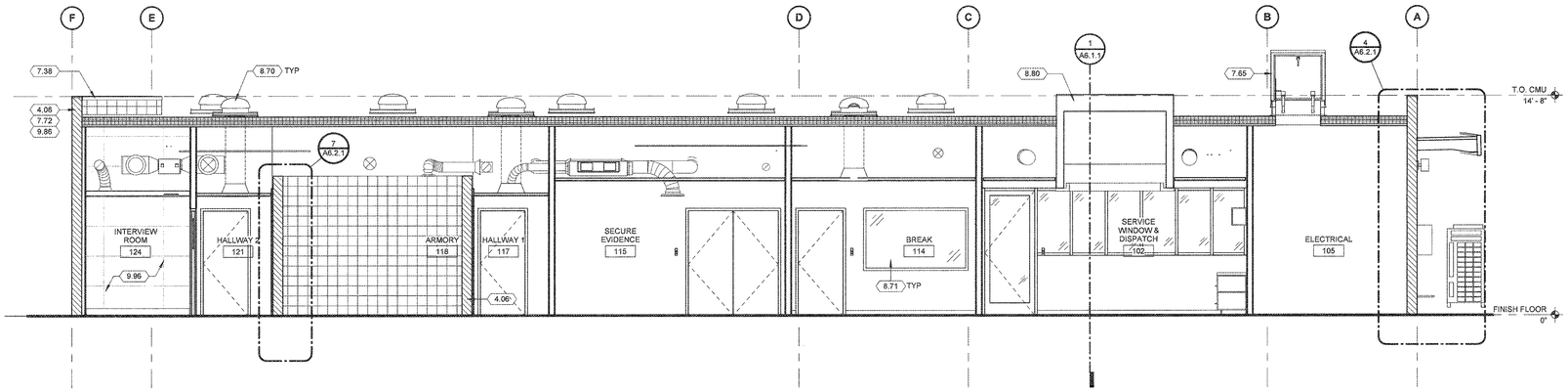


1 A6.1.1 SECTION 1
1/4" = 1'-0"



2 A6.1.1 SECTION 2
1/4" = 1'-0"



3 A6.1.1 SECTION 3
1/4" = 1'-0"

KEYNOTES

1.11	SEE MECHANICAL DRAWINGS
4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
5.45	COMPOSITE METAL PANEL SYSTEM - 07 42 13
7.38	METAL COPING - 07 60 00
7.65	ROOF ACCESS HATCH - 07 72 00
7.72	WATER REPELLENT - 07 19 00
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00
8.80	CLERESTORY WINDOW
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.86	GRAFFITI RESISTANT COATING - 09 96 23
9.96	RIGID PROTECTIVE WALL COVERING - 09 72 17
10.14	SIGNAGE - 10 14 00
26.07	LIGHT FIXTURE, SEE ELECTRICAL

GENERAL NOTES

1. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

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DIVERSIFIED ARCHITECTURAL CONSULTING
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Newport Beach, CA 92660
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RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

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SEAL/SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
BUILDING SECTIONS

PROJECT NUMBER
913-4675-00

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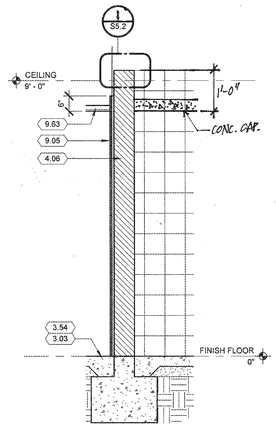
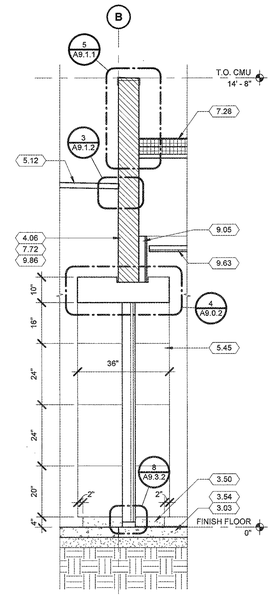
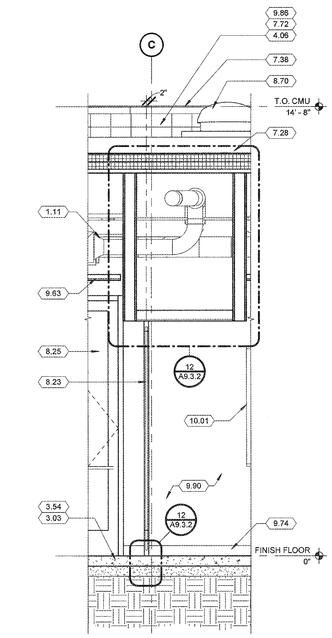


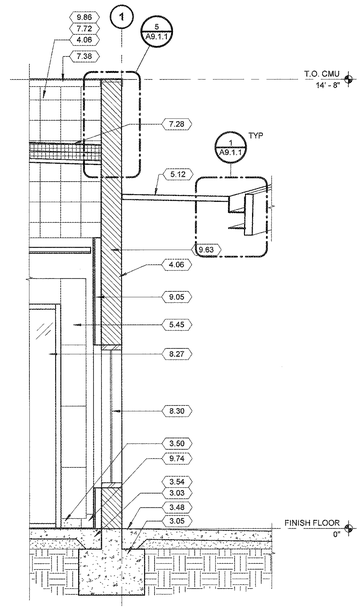
7 A6.2.1 ARMORY TYP. WALL SECTION 1/2" = 1'-0"



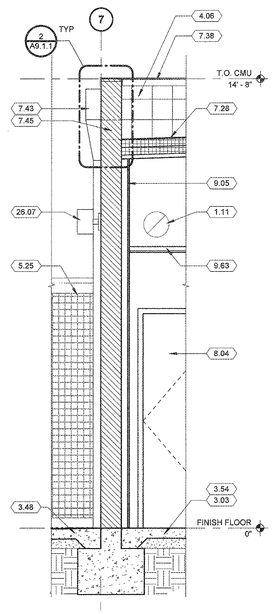
5 A6.2.1 ENTRY 1/2" = 1'-0"



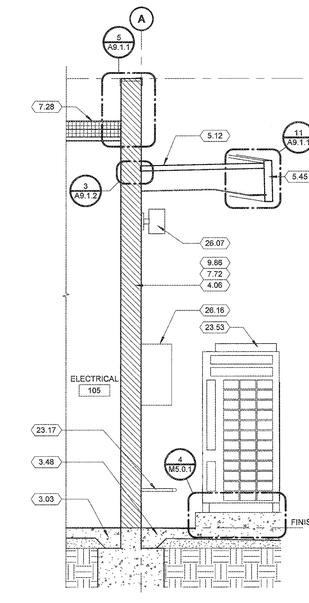
3 A6.2.1 MEETING RM SLIDDING DOORS 1/2" = 1'-0"



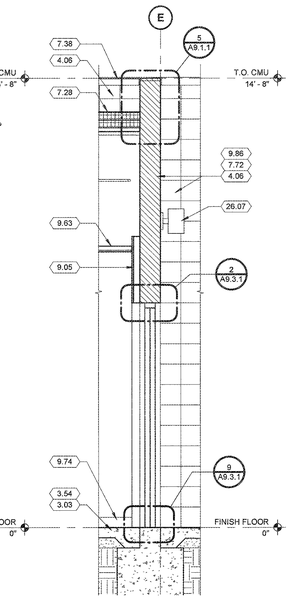
1 A6.2.1 WALL SECTION 1 1/2" = 1'-0"



6 A6.2.1 TYP. DOWNSPOUT @ WALL 1/2" = 1'-0"



4 A6.2.1 TYP. CANOPY @ WALL 1/2" = 1'-0"



2 A6.2.1 TYP EXT. DOOR 1/2" = 1'-0"

KEYNOTES

1.11	SEE MECHANICAL DRAWINGS
3.03	CAST-IN-PLACE CONCRETE SLAB, SEE STRUCTURAL - 03 30 10
3.05	CAST-IN-PLACE CONCRETE FOOTING, SEE STRUCTURAL - 03 30 10
3.48	CONCRETE SIDEWALK/PAVEMENT, SEE CIVIL
3.50	EXPOSED CAST-IN-PLACE CONCRETE - 32 30 00
3.54	POLISHED CONCRETE FINISH - 03 35 10
4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
5.01	STEEL BEAM, PER STRUCTURAL - 05 12 00
5.12	STEEL DECKING, PER STRUCTURAL
5.25	FABRICATED STEEL FENCE - 32 13 17
5.45	COMPOSITE METAL PANEL SYSTEM - 07 42 13
5.51	HOT DIP GALVANIZED CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
7.28	PVC SINGLE PLY MEMBRANE - 07 54 19
7.38	METAL COPING - 07 60 00
7.43	METAL LEADER & DOWNSPOUT - 07 60 00
7.45	METAL SCUPPER - 07 60 00
7.72	WATER REPELLENT - 07 19 00
8.04	HOLLOW METAL DOOR - 08 11 00
8.23	GLASS PANEL DOORS - 08 35 14
8.25	ALUMINUM STOREFRONT DOOR - 08 41 00
8.27	ALUMINUM STOREFRONT SYSTEM - 08 41 00
8.30	HOLLOW METAL WINDOW, SEE ELEVATIONS - 08 51 23
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
9.05	METAL STUD FURRING
9.63	SUSPENDED ACOUSTICAL CEILING (ACP-1) - 09 51 00
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.86	GRAFFITI RESISTANT COATING - 09 96 23
9.90	PAINT FINISH - INTERIOR, SEE FINISH SCHEDULE - 09 91 00
10.01	NON-GLARE, PROJECTABLE MARKERBOARD WALL COVERING - 10 11 16
23.17	REFRIGERANT PIPING, PER MECHANICAL
23.53	HVAC CONDENSING UNIT, PER MECHANICAL - 23 65 00
26.07	LIGHT FIXTURE, SEE ELECTRICAL
26.16	IRRIGATION CONTROL PANEL, PER LANDSCAPING & ELECTRICAL

GENERAL NOTES

1. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

2. FOR FOOTINGS, SEE STRUCTURAL FOUNDATION PLAN 1/S2.1

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM

PRINCIPAL IN CHARGE
RITA S. CARTER

PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN

DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL + SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE

WALL SECTIONS

PROJECT NUMBER

913-4675-00

ISSUE DATE: 12/01/16

SHEET NO.: A6.2.1

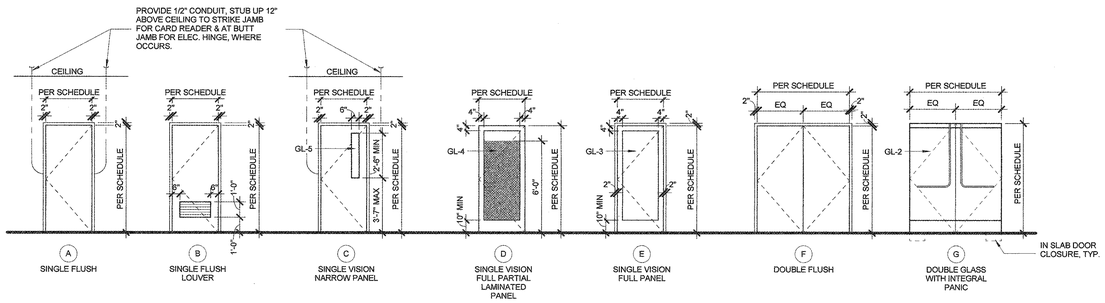
DOOR / GATE SCHEDULE

WT	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MAT.	DOOR FIN.	DOOR GLASS	FRAME TYPE	FRAME MAT.	FRAME FIN.	OPENING LABEL	DETAILS HEAD	DETAILS JAMB	DETAILS THRESH	HW SET	REMARKS
101	3' - 0"	7' - 2"	G	ALUM	ALUM-1	GL-2	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	10/A9.3.2	9/A9.3.1	05	
102	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	04	13
103	3' - 4"	8' - 4"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10 & 4/A9.3.2	9/A9.3.1	06	13
104	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	
105	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	1/A9.3.1	3/A9.3.1	9/A9.3.1	03	
106	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
107	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
108	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
109A	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	4/A9.3.2	9/A9.3.1	02	
109B	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	02	
110	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
111A	3' - 6 1/4"	7' - 8"	D	ALUM	ALUM-1	GL-4	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	13/A9.3.2	9/A9.3.1	01	
111B	3' - 6 1/4"	7' - 8"	D	ALUM	ALUM-1	GL-4	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	13/A9.3.2	9/A9.3.1	01	
111C	3' - 6 1/4"	7' - 8"	D	ALUM	ALUM-1	GL-4	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	13/A9.3.2	9/A9.3.1	01	
111D	3' - 6 1/4"	7' - 8"	D	ALUM	ALUM-1	GL-4	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	13/A9.3.2	9/A9.3.1	01	
111E	3' - 5 1/2"	7' - 8"	D	ALUM	ALUM-1	GL-4	SEE DET.	ALUM	ALUM-1	-	12/A9.3.2	13/A9.3.2	9/A9.3.1	01	
113	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	
114	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	
115	6' - 0"	7' - 0"	F	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	07	
116	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	08	
117A	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	13
117B	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
118	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1 SIM	4/A9.3.1 SIM	9/A9.3.1	11	
119	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	
121A	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	13
121B	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
122	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
123	3' - 0"	7' - 0"	C	HM	PFX-1	GL-5	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	12	
124	3' - 0"	7' - 0"	C	HM	PFX-1	GL-5	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	12	
125	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
126	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
127	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
128	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
130	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
131	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
132	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
134	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	

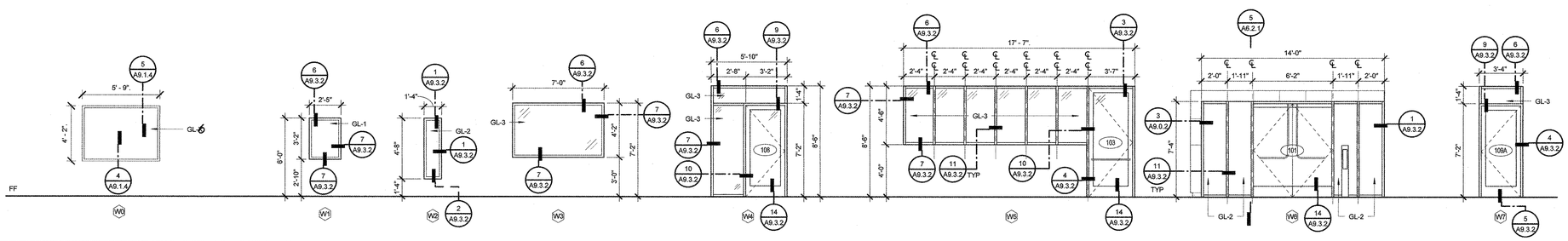
ROOM FINISH SCHEDULE

RM #	ROOM NAME	FLOOR MAT.	FLOOR FIN.	BASE	WALLS NORTH MAT.	WALLS NORTH FIN.	WALLS EAST MAT.	WALLS EAST FIN.	WALLS SOUTH MAT.	WALLS SOUTH FIN.	WALLS WEST MAT.	WALLS WEST FIN.	WAINSCOT MAT.	WAINSCOT FIN.	WAINSCOT HT.	CEILING MAT.	CEILING FIN.	CEILING HT.	GENERAL NOTE REMARKS
101	LOBBY	LVT		MTL-1	GB	PT-1	GB / GBBP	PT-1	GBBP	CT-1	GB / SF	CT-1	-	-	-	ACT	ACT-2	9' - 0"	6
102	SERVICE WINDOW & DISPATCH	CONC	POLISH	MTL-1	GBBP / TBD	PT-1	GB / TBD	PT-1	GB	PT-1	GB / TBD	PT-1	-	-	-	ACT	ACT-2	9' - 0"	6
103	OPEN OFFICE	CONC	POLISH	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-2	9' - 0"	6
104	IDF	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	EXP	-	-	
105	ELECTRICAL	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	EXP	-	-	
106	BREAK OUT	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
107	SERGEANT OFFICE	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	ACT-1	9' - 0"	
108	SERGEANT OFFICE	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	ACT-1	9' - 0"	
109	LIEUTENANT OFFICE	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
110	CLERK & FILE	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
111	MEETING ROOM	CONC	POLISH	MTL-1	GB	EXP	GB	PT-1	GB / TBD	PT-1	GB	PT-1	-	-	-	ACT	ACT-2	9' - 0"	
112	MAIL ROOM	CONC	POLISH	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
113	GENERAL STOR.	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	-	
114	BREAK	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
115	SECURE EVIDENCE	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-1	8' - 0"	
116	DRUG STOR.	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-1	8' - 0"	
117	HALLWAY 1	CONC	POLISH	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
118	ARMORY	CONC	POLISH	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	-	-	-	CAP	EXP	8' - 0"	
119	GUN CLEANING	CONC	POLISH	COVE	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	8' - 0"	
120	WATCH STATION	CONC	POLISH	RB-1	GB	PT-1	-	-	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
121	HALLWAY 2	CONC	POLISH	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
122	TOILET ROOM	CONC	POLISH	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	8' - 0"	
123	INTERVIEW ROOM	CONC	POLISH	COVE	GB	FRP-1	GB	FRP-1	GB	FRP-1	GB	FRP-1	-	-	-	GB	PT-2	8' - 0"	
124	INTERVIEW ROOM	CONC	POLISH	COVE	GB	FRP-1	GB	FRP-1	GB	FRP-1	GB	FRP-1	-	-	-	GB	PT-2	8' - 0"	
125	MAIN HALLWAY	CONC	POLISH	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	-	-	ACT	ACT-1	9' - 0"	
126	OFFICER LOCKER	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
127	OFFICER LOCKER	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
128	LOCKER RM TOILET	CONC	POLISH	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
129	SHOWER	CONC	POLISH	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
130	OFFICER LOCKER	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
131	OFFICER LOCKER	CONC	POLISH	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
132	LOCKER RM TOILET	CONC	POLISH	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
133	SHOWER	CONC	POLISH	COVE	EXP	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
134	CUSTODIAL	CONC	POLISH	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GB	PT-2	9' - 0"	
135	EXTERIOR STORAGE	ASPH	-	-	CMU		CMU		CMU		CMU		-	-	-	EXP	-	-	

DOOR & FRAME TYPES



WINDOW TYPES



MATERIAL FINISHES

ACT	2'-0"x2'-0" ACOUSTICAL PANELS - 09 51 00
CBU	CEMENTITIOUS BACKER UNIT - 09 21 16
CS-1	CONCRETE SEALER - COLORLESS - 03 30 10
CONC	POLISHED CONCRETE SLAB - 03 35 10
CMU	CONCRETE MASONRY UNIT - 04 22 00
CT-1	CERAMIC TILE - 09 30 13
EXP	EXPOSED STRUCTURE
FF	FACTORY FINISH
FRP-1	FIBERGLASS REINFORCED PLASTIC - 09 72 17
GB	GYPSUM BOARD - 09 21 16
GBMR	GYPSUM BOARD, MOISTURE RESISTANT - 09 21 16
TBD	TACKABLE WALL PANELS
RB-1	4" RESILIENT BASE - 09 65 00
MTL-1	4" METAL REVEAL BASE - 09 65 00
LVT-1	LUXURY VINYL TILE FLOORING - 09 65 00
SSTL	STAINLESS STEEL
UNF	UNFINISHED
VCTBD-1	VINYL COVERED TACKABLE WALL PANEL - 09 72 33
VWC-1	VINYL WALL COVERING - 09 72 16
SF	STORE FRONT - 08 41 00
ALUM	ALUMINUM
HM	HOLLOW METAL
WD	WOOD
STL	STEEL

INTERIOR PAINT COLORS

PT-1	PAINT - SEMI-GLOSS, COLOR PER ARCHITECT - 09 91 00
PT-2	PAINT - EPOXY, COLOR PER ARCHITECT - 09 91 00

EXTERIOR PAINT COLORS

PF-1	PAINT - SEMI-GLOSS - 09 91 00
PF-2	PAINT - EGGSHELL - 09 91 00
PF-3	PAINT - SEMI-GLOSS ENAMEL - 09 91 00
PF-4	PAINT - FERROUS METAL PIPING, MISC METALS - 09 91 00
PF-5	PAINT - GALVANIZED DUCTWORK, ELECT CONDUIT - 09 91 00
PF-6	PAINT - EPOXY - 09 91 00
PFX-1	PAINT - STEEL DOORS & FRAMES - 09 91 00
PFX-2	PAINT - HIGH PERFORMANCE COATING - 09 91 00
PFX-3	PAINT - FERROUS METAL PIPING, MISC METALS - 09 91 00
PFX-4	PAINT - FLAT FINISH ACRYLIC - 09 91 00

GLASS TYPES

GL-1	INT. BULLET RESISTANT GLASS - 08 81 00
GL-2	EXT. DUAL INSULATED GLASS, TINTED - 08 81 00
GL-3	INT. CLEAR LAMINATED GLASS, STC 40 - 08 81 00 SAFETY LAM. GLASS.
GL-4	INT. LAMINATED GLASS: PARTIAL OPAQUE & CLEAR, STC 40 - 08 81 00
GL-5	INT. LAMINATED SECURITY GLASS, STC 40 - 08 81 00
GL-6	EXT. CLEAR LOW-E GLASS - 08 81 00

REMARKS

1. FOR TILE PATTERN , SEE ENLARGED PLANS / INTERIOR ELEVATIONS
2. PAINT ALL EXPOSED STRUCTURAL STEEL, METAL DECK, DUCTWORK AND ELECTRICAL COMPONENETS - 09 91 00
3. PROVIDE CT TO WALLS WITH JANITOR SINK PER INTERIOR ELEVATIONS
4. FOR DIAGONALLY ORIENTED ROOMS, NORTHWEST WALL IS ASSUMED AS NORTH WALL
5. SEE DETAIL 9/A9.3.1 FOR TRANSITIONS STRIPS BETWEEN MATERIALS
6. ROOM IDENTIFICATION SIGNAGE - SPEC SECTION 10 14 00 FOR MOUNTING HEIGHT SEE DETAIL 9 / A9.6.2
7. TOILET ROOM SYMBOLS - SPEC SECTION 10 14 00. FOR MOUNTING HEIGHT SEE DETAIL 6 & 7/A9.6.2
11. SEE WINDOW TYPES FOR DOOR / WINDOW FRAME COMBINATIONS
12. GLASS TRANSOM (GLAZING TO MATCH DOOR GLAZING) 08 81 00
13. PANIC HARDWARE. SEE SPEC SECTION 08 71 00

GENERAL NOTES

1. ALL FINISHES SHALL COMPLY WITH C.B.C. CHAPTER 8 AND WITH TITLE 19 C.C.R. & C.F.C.
2. PAINT ALL EXPOSED SURFACES AND ITEMS WHICH ARE NOT FACTORY FINISHED, INCLUDING BUT NOT LIMITED TO; INTERIOR AND EXTERIOR SOFFITS, WOOD TRIM, REVEALS, METAL FLASHINGS AND TRIM, ROOF PENETRATIONS, EXPOSED STEEL STRUCTURE, EXPOSED PLUMBING, DUCTWORK AND OTHER MECHANICAL ITEMS, EXPOSED ELECTRICAL CONDUIT AND OTHER ELECTRICAL ITEMS, UNO.
3. PREPARE ALL SURFACES TO BE FINISHED PRIOR TO PAINTING, INCLUDING GALVANIZED STEEL AND ALL SURFACES ON WHICH DEBRIS OR OTHER RESIDUES EXIST WHICH MAY INTERFERE WITH FINISHING.
4. ALL DOORS ARE 1-3/4" THICK UNLESS NOTED OTHERWISE.
5. DIMENSIONS TO INTERMEDIATE WINDOW MULLIONS ARE TO CENTERLINE OF MULLION. DIMENSIONS TO EDGE MULLIONS ARE TO FACE OF FRAME.
6. AT PERIMETER OF ROOM & AROUND CLERESTORY OPENINGS, ACT SYSTEM TO HAVE SHADOW ANGLE, SEE DETAIL 11/A9.1.2

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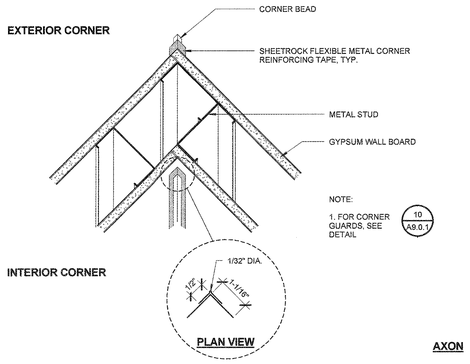
LICENSED ARCHITECT RITA S CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

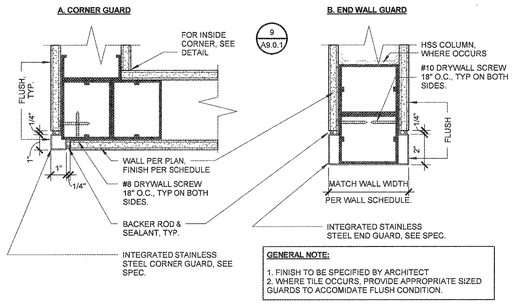
SHEET TITLE
ROOM FINISH, DOOR, & WINDOW SCHEDULE

PROJECT NUMBER
913-4675-00

ISSUE DATE 12/01/16
SHEET NO. A8.0.1



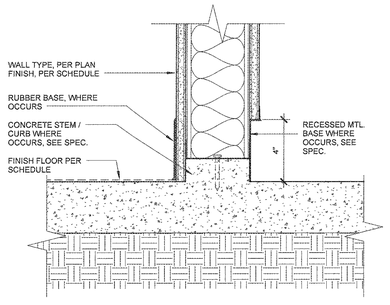
9 A9.0.1 TYP. DRYWALL CORNER
3" = 1'-0"



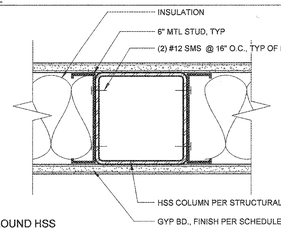
GENERAL NOTE:

1. FINISH TO BE SPECIFIED BY ARCHITECT
2. WHERE TILE OCCURS, PROVIDE APPROPRIATE SIZED GUARDS TO ACCOMIDATE FLUSH CONDITION.

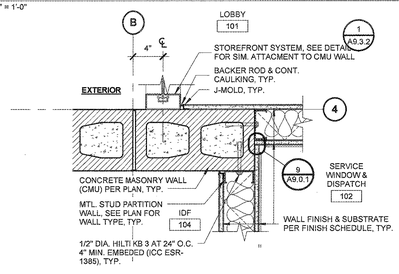
10 A9.0.1 INTEGRATED CORNER & END WALL GUARDS
3" = 1'-0"



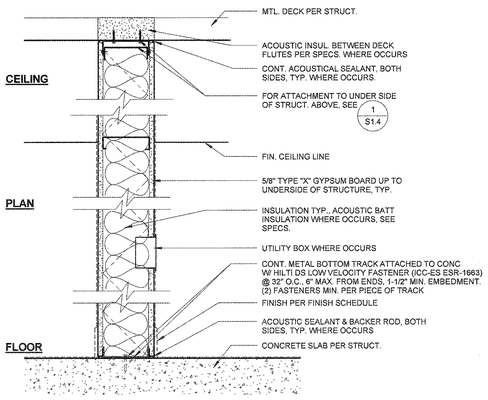
11 A9.0.1 TYP. RUBBER & RECESSED MTL. BASE DETAIL
3" = 1'-0"



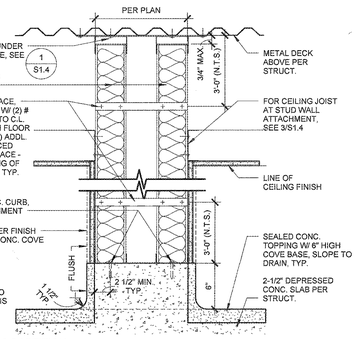
12 A9.0.1 FRAMING AROUND HSS COLUMN
3" = 1'-0"



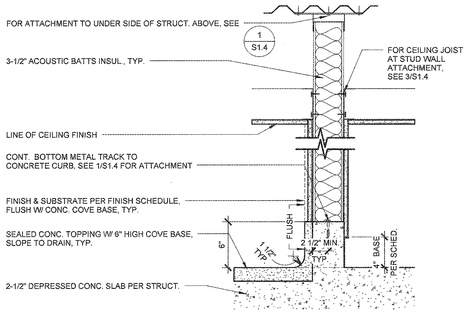
13 A9.0.1 DETAIL OF JUNCTION AT GRID LINE B & 4
1 1/2" = 1'-0"



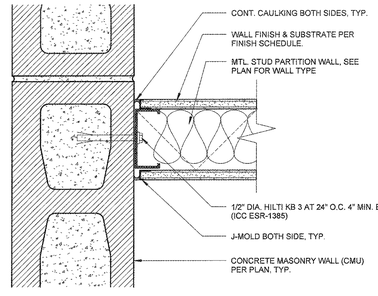
5 A9.0.1 TYP. MTL STUD WALL
1 1/2" = 1'-0"



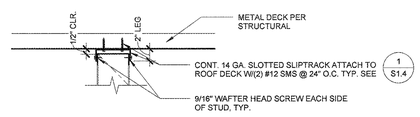
6 A9.0.1 TYP. PLUMBING PARTITION
1 1/2" = 1'-0"



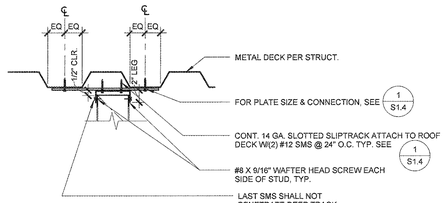
7 A9.0.1 DEPRESSED CONC. SLAB @ CONC. COVE BASE
1 1/2" = 1'-0"



8. A9.0.1 TYP. METAL STUD TO CMU WALL
3" = 1'-0"

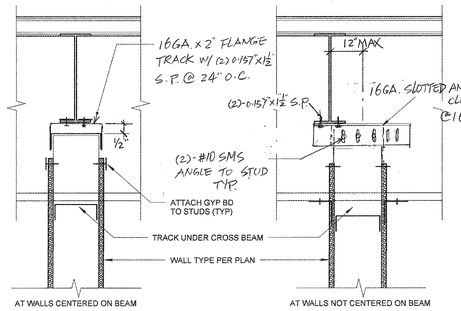


A WALL PERPENDICULAR TO DECK FLUTE

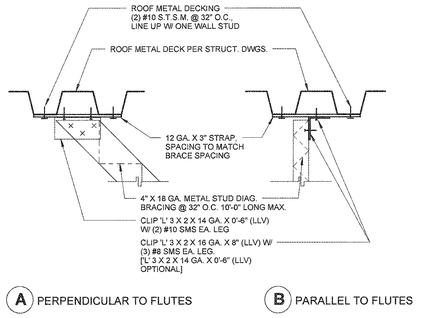


B WALL PARALLEL TO DECK

1 A9.0.1 TYP. STUD CONNECTIONS AT MTL. DECKING
1 1/2" = 1'-0"

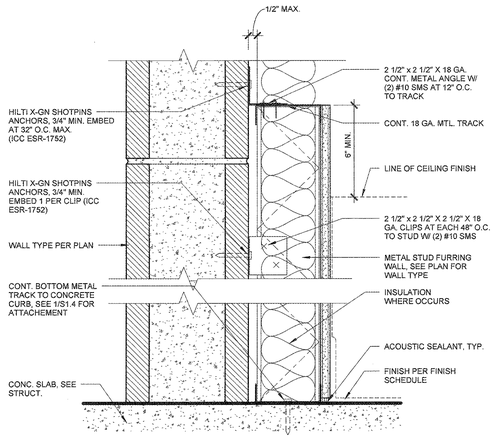


2 A9.0.1 MTL STUD CONN. @ BEAM
1 1/2" = 1'-0"



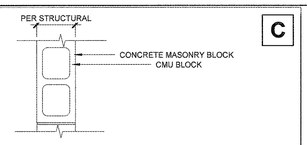
A PERPENDICULAR TO FLUTES **B** PARALLEL TO FLUTES

3 A9.0.1 TYP. DIAGONAL BRACING DETAIL
1 1/2" = 1'-0"



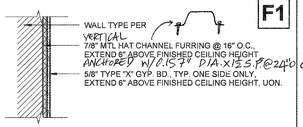
4 A9.0.1 TYP. FURRED METAL STUD AT CMU WALL
3" = 1'-0"

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	1



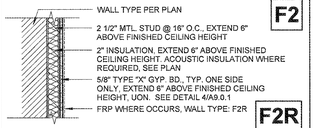
C

SCALE:	1" = 1'-0"
FIRE RATING:	N/A
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



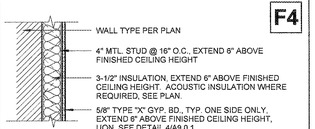
F1

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



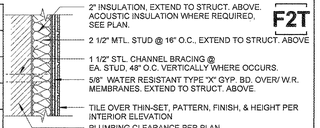
F2 **F2R**

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



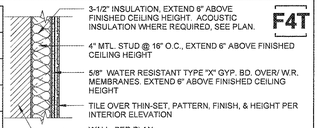
F4

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



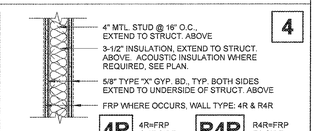
F2T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



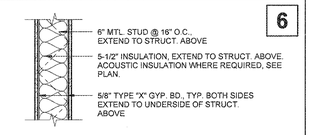
F4T

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



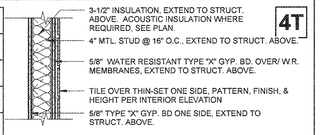
4

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



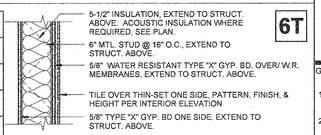
6

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



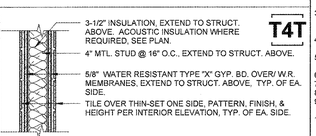
4T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



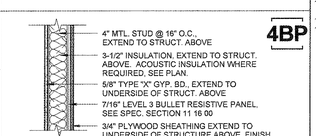
6T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



T4T

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



4BP

GENERAL NOTES

1. SEE SPEC. SECTION 04 22 00. PROVIDE CMU PER ARCHITECTURAL, SHEET A6.0.1. SEE STRUCTURAL FOR SIZE, REINFORCEMENT, & ADDITIONAL INFORMATION.
2. SEE SPEC. SECTION 05 41 00. MTL. STUD THICKNESS SHALL BE 20 GA MIN & DEPENDENT ON HEIGHT AND SPAN. SEE STRUCTURAL AND MTL. STUD. MANUFACTURER FOR ADDITIONAL INFORMATION.
3. WALLS WITH CASEWORK, ELECTRICAL PANELS, & WALL HUNG PLUMBING FIXTURES METAL STUDS SHALL BE 16 GA MIN., UNLESS OTHERWISE NOTED.
4. ALL WALLS SHALL EXTEND TO UNDERSIDE OF DECK ABOVE, U.N.O. FOR DECK TERMINATION DETAILS REFER TO 5/A9.0.1
5. FOR METAL STUD CONNECTIONS & SECTION PROPERTIES REFER TO 1/S1.3 & 9/S1.3 RESPECTIVELY.
6. ALL GYPSUM BOARD SHEETS TO RUN VERTICALLY.
7. NO JOINTS EXCEPT AT STUDS.
8. ALL SCREWS SHALL PENETRATE STUDS.
9. 1/2" CEMENTITIOUS TILE BACKER BOARD AT PORTIONS OF WALLS WITH CERAMIC TILE.
10. BLDG. INSULATION MATERIALS SHALL NOT EXCEED FLAME SPREAD RATING OF 25 OR SMOKE DENSITY OF 450 PER CBC SECT. 719.
11. FOR WALLS WITH ACOUSTICAL INSULATION, SEE PLAN & SPECIFICATIONS FOR MORE INFORMATION.
12. WHERE METAL STUDS HIT ROOF FRAMING, SEE DETAIL 2/A9.0.1
13. FOR MORE INFORMATION ON INSULATION, SEE SPEC. SECTION 07 21 00.

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

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AR: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

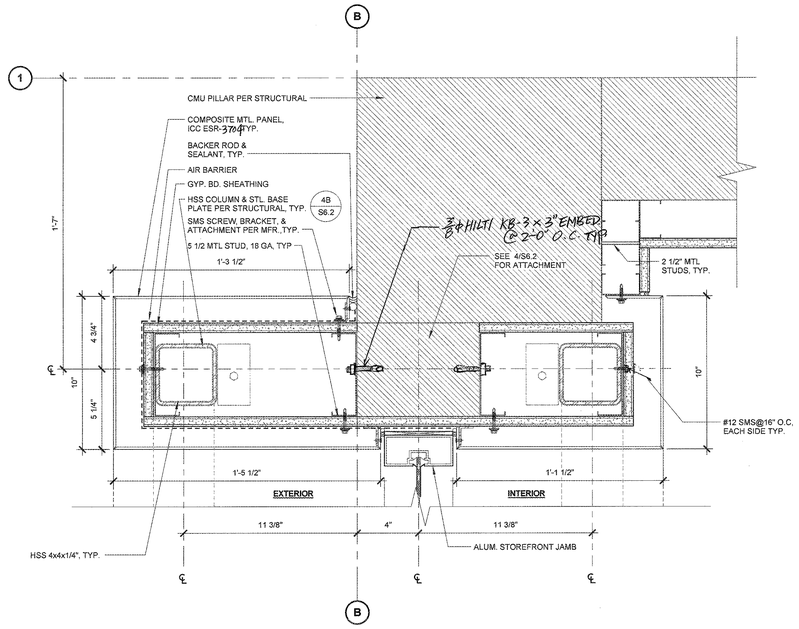
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

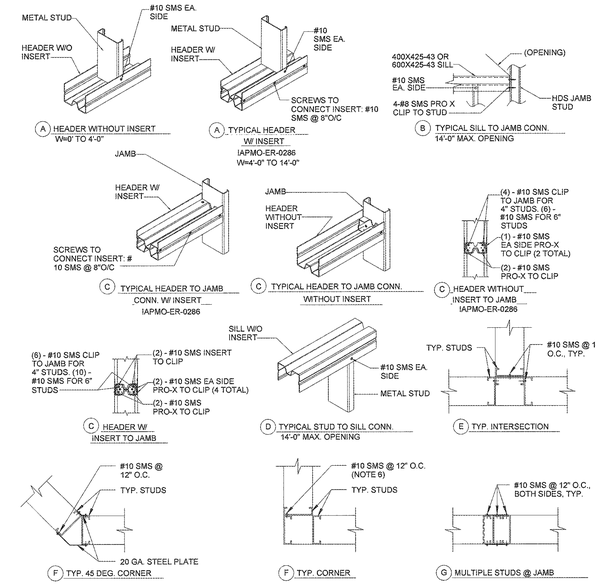
SHEET TITLE
WALL TYPES

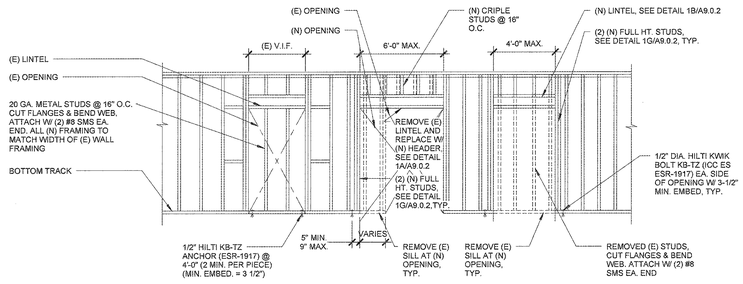
PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET No.
12/01/16	A9.0.1



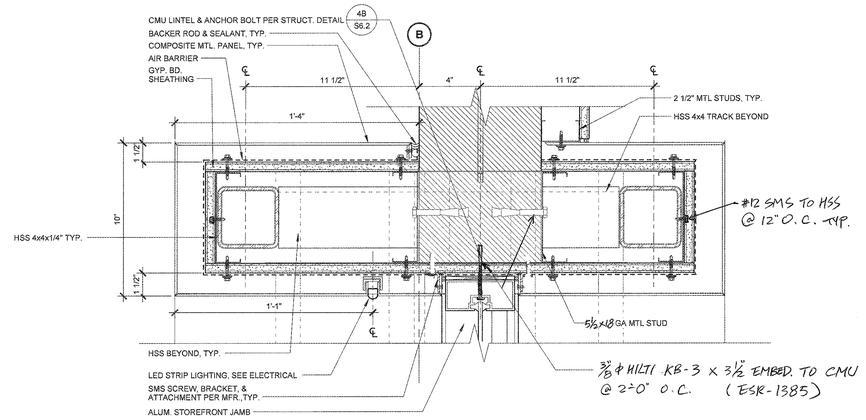
3 A9.0.2 MAIN ENTRANCE JAMB DETAIL
3" = 1'-0"





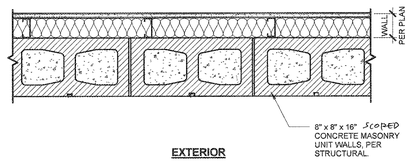
METAL STUD WALL ELEVATION - FULL HEIGHT

1 A9.0.2 PRO-X METAL STUD FRAMING OPTION IAPMO ER-286
1" = 1'-0"



4 A9.0.2 STOREFRONT HEAD @ ENTRY
3" = 1'-0"

INTERIOR



EXTERIOR

2 A9.0.2 CMU ACCENT
1 1/2" = 1'-0"

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RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

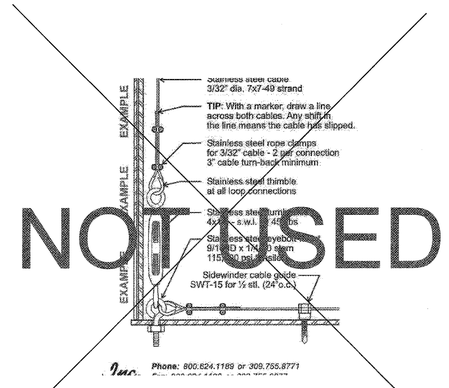
NO	REASON	DATE

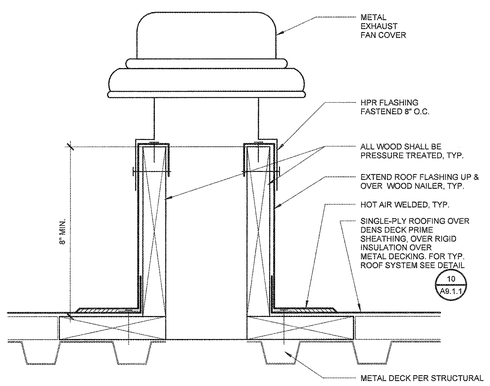
SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

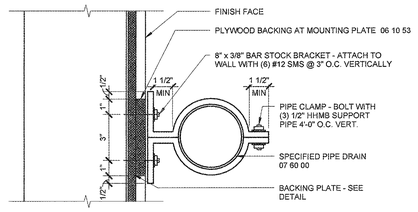
SHEET TITLE
TYP. MTL. STUD FRAMING & EXTERIOR DETAILS

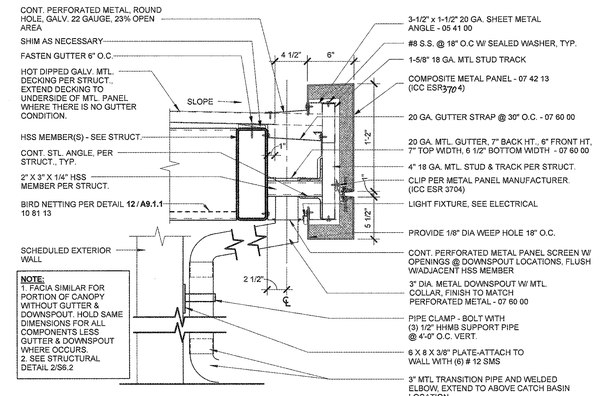
PROJECT NUMBER
913-4675-00

ISSUE DATE 12/01/16
SHEET NO. A9.0.2









12 NET ATTACHMENT
A9.1.1 6" = 1'-0"

16 CONT. PERF. METAL @ CANOPY
A9.1.1 N.T.S.

8 EXHAUST FAN DETAIL
A9.1.1 12" = 1'-0"

NOTES:

1. SOFT METAL PIPE FLASHING:
   - ALUM PER SPECS. OR
   - SHEET COPPER: MINIMUM 16 OZ.
2. IF USING COPPER FLASHING OVER AN IRON OR STEEL PIPE, INSERT A SEPARATOR SHEET (E.G., ASPHALT-SATURATED ROOFING FELT), WRAPPED AROUND PIPE, TO SEPARATE THE COPPER FLASHING FROM DIRECT CONTACT WITH PIPE, TO REDUCE GALVANIC ACTION.
3. VENT STACKS AND OTHER PIPES SHOULD HAVE A MINIMUM OF 12 INCHES .OF CLEARANCE ON ALL SIDES FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.
4. NRCA SUGGESTS THAT THE TOP STRIPPING PLY BE A HEAVY-WEIGHT POLYMER MODIFIED BITUMEN SHEET.

9 TYP. VENT STACK FLASHING
A9.1.1 3" = 1'-0"

10 TYP. ROOF SYSTEM
A9.1.1 3" = 1'-0"

NOTE: SEE DET. 16/A9.1.1 FOR ADD. INFO.

11 SIGNAGE @ CANOPY
A9.1.1 1 1/2" = 1'-0"

4 TYP. DOWNSPOUT ATTACHMENT BRACKET
A9.1.1 3" = 1'-0"

NOTES:

1. THIS DETAIL SHOULD BE USED ONLY WHEN THE ROOF DECK IS SUPPORTED BY THE WALL. (REFER TO STRUCT.)
2. ATTACH NAILER TO DECK WITH SUITABLE FASTENERS.
3. FIBER CANT STRIP SHALL BE SET IN BITUMEN OR ROOF ADHESIVE.

5 TYP. ROOF FLASHING & COPING @ PARAPET
A9.1.1 3" = 1'-0"

6 TYP. ROOF AT C.M.U. WALL
A9.1.1 3" = 1'-0"

7 TYP. ROOF/FLOOR ACCESS HATCH
A9.1.1 1 1/2" = 1'-0"

NOTE:
1. FACIA SIMILAR FOR PORTION OF CANOPY WITHOUT GUTTER & DOWNSPOUT. HOLD SAME DIMENSIONS FOR ALL COMPONENTS LESS GUTTER & DOWNSPOUT WHERE OCCURS.
2. SEE STRUCTURAL DETAIL 2/S6.2

1 TYP. GUTTER AT CANOPY
A9.1.1 1 1/2" = 1'-0"

2 TYP. SCUPPER THRU WALL - ROOF TYPE 1A
A9.1.1 3" = 1'-0"

3 TYP. SOLAR SKYLIGHT
A9.1.1 3" = 1'-0"

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REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE
RITA S. CARTER
NO. C35431
REN. 4-30-19

SHEET TITLE
ROOF DETAILS

PROJECT NUMBER
913-4675-00

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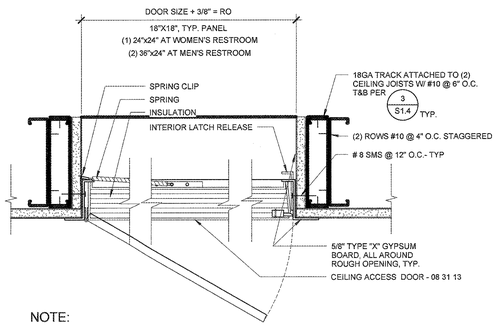
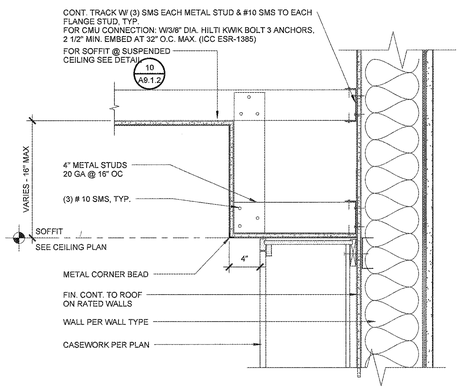
SHEET NO. A9.1.1

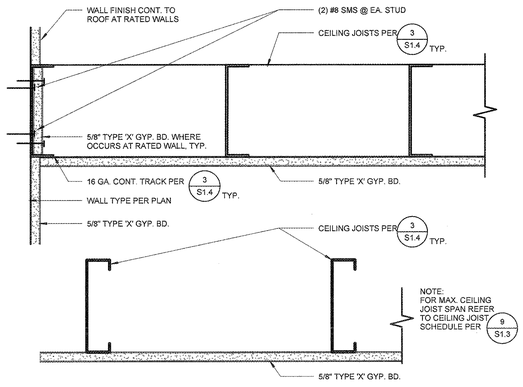


NOTE:
- PAINT ALL EXPOSED SURFACES TO MATCH ADJACENT CEILING.
- ACCESS DOOR TO BE 1-HOUR RATED WITH UL# B LABEL, WHERE REQUIRED

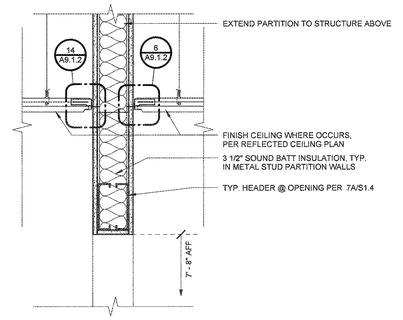
13 / A9.1.2 TYP. ACCESS PANEL AT FRAMED CEILING
3" = 1'-0"



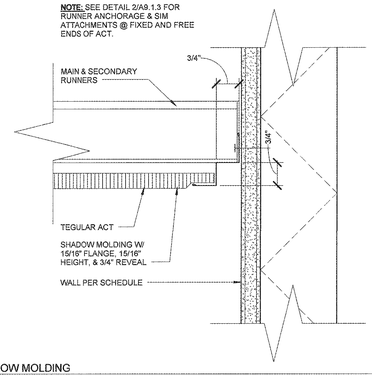
9 / A9.1.2 TYP. SOFFIT AT UPPER CASEWORK
1 1/2" = 1'-0"



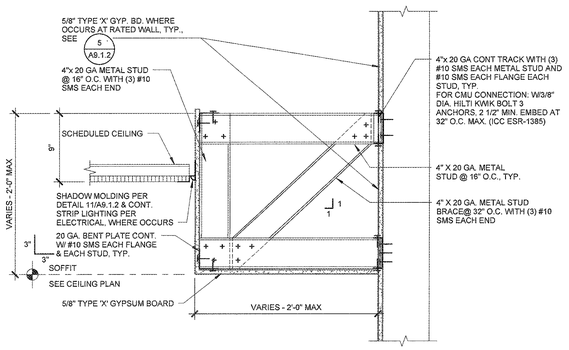
5 / A9.1.2 TYP. FRAMED GYPSUM BOARD CEILING
3" = 1'-0"



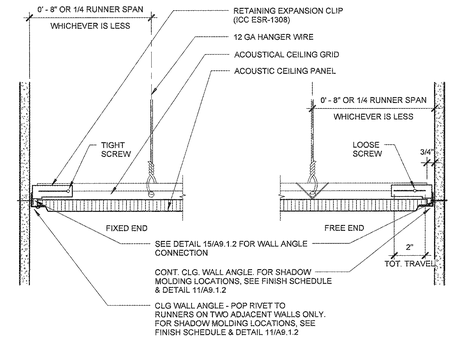
1 / A9.1.2 HEADER @ OPEN OFFICE & MAIN HALLWAY
1 1/2" = 1'-0"



14 / A9.1.2 ACT SHADOW MOLDING
6" = 1'-0"

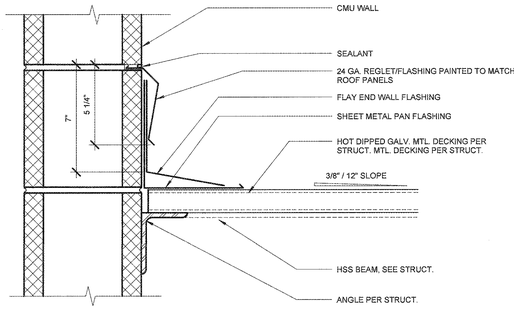


10 / A9.1.2 TYP. SOFFIT AT SUSPENDED CEILING
1 1/2" = 1'-0"



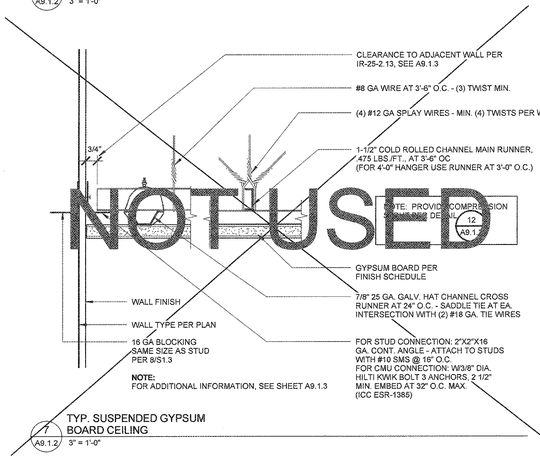
NOTE:
FOR ADDITIONAL INFORMATION, SEE A9.1.3

6 / A9.1.2 TYP. SUSPENDED ACOUSTICAL CEILING
3" = 1'-0"



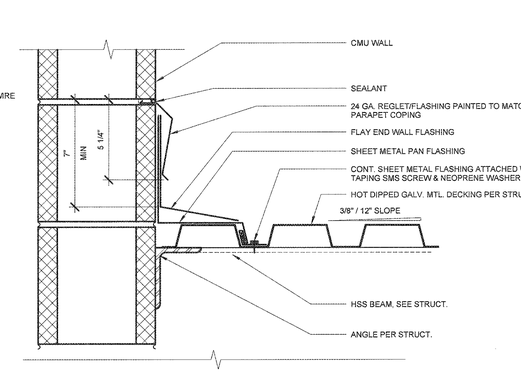
2 / A9.1.2 CANOPY @ CMU EAST-WEST WALLS
3" = 1'-0"

15 / A9.1.2 TYP. CEILING AND SOFFIT CONNECTION DETAILS
3/4" = 1'-0"

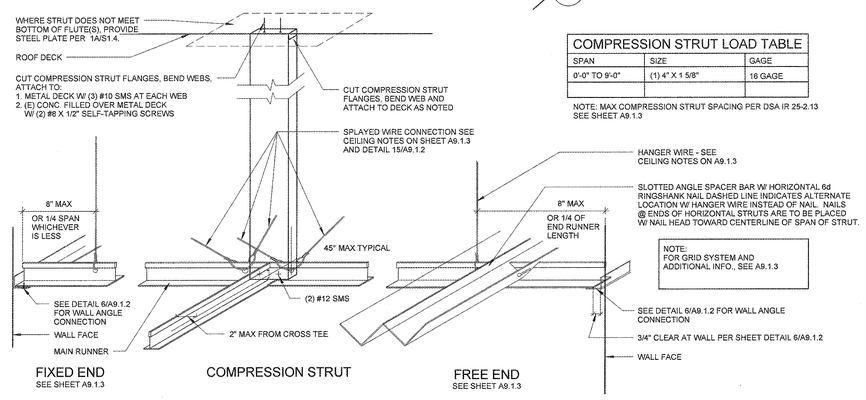


NOTE:
FOR ADDITIONAL INFORMATION, SEE SHEET A9.1.3

7 / A9.1.2 TYP. SUSPENDED GYPSUM BOARD CEILING
3" = 1'-0"



3 / A9.1.2 CANOPY @ CMU NORTH-SOUTH WALLS
3" = 1'-0"

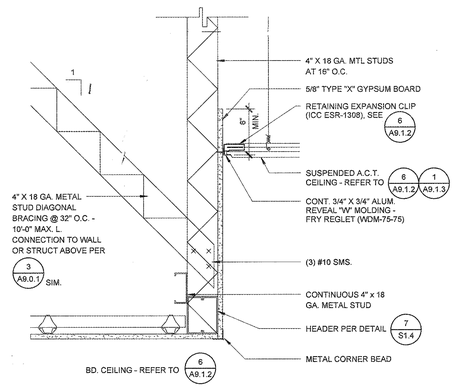


NOTE:
FOR GRID SYSTEM AND ADDITIONAL INFO., SEE A9.1.3

COMPRESSION STRUT LOAD TABLE		
SPAN	SIZE	GAGE
0'-0" TO 9'-0"	(1) 4" X 1 5/8"	16 GAGE

NOTE: MAX COMPRESSION STRUT SPACING PER DSA IR 25-2.13 SEE SHEET A9.1.3

12 / A9.1.2 TYP. CEILING COMPRESSION STRUT
3" = 1'-0"



4 / A9.1.2 TYP. GYPSUM BOARD SOFFIT AT A.C.T. CEILING
1 1/2" = 1'-0"

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

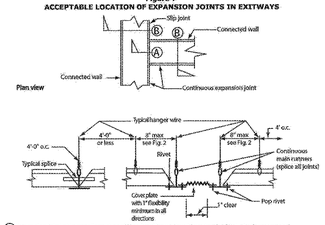
REVISIONS
NO	REASON	DATE

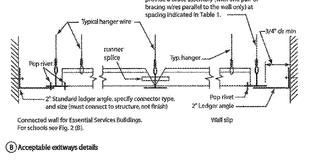
SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35491 REN. 4-30-19 STATE OF CALIFORNIA

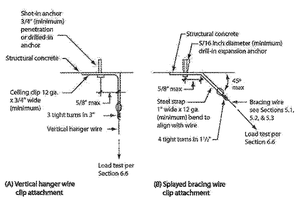
SHEET TITLE
CEILING DETAILS

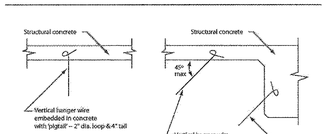
PROJECT NUMBER
913-4675-00

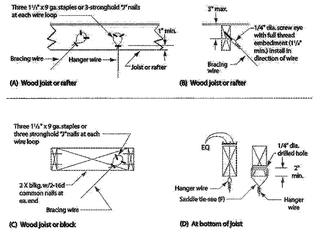
ISSUE DATE 12/01/16
SHEET NO. A9.1.2

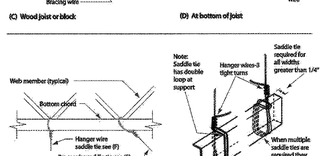


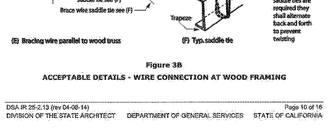


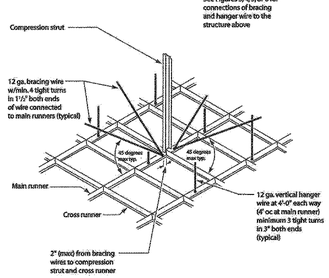


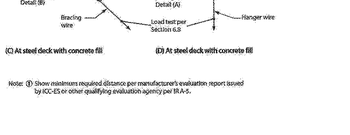


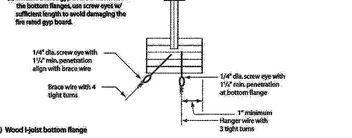


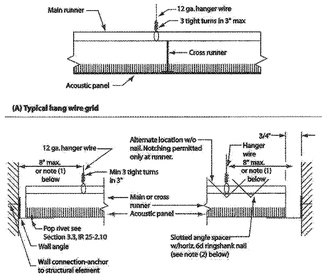


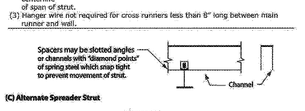


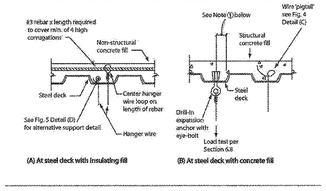












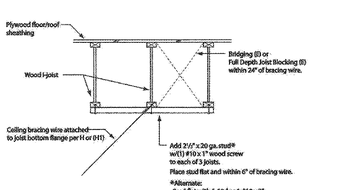


Figure 7
ACCEPTABLE LOCATION OF EXPANSION JOINTS IN EXITWAYS

Ⓐ Expansion joint at intersections of corridors, junctions of corridors and lobbies, similar areas and ceiling areas over 2500 sq. ft.

Ⓑ Acceptable exitways details

Shot-in anchors not allowed for bracing wires

Figure 3B
ACCEPTABLE DETAILS - WIRE CONNECTION AT WOOD FRAMING

Where differences occur between provisions of this IR and the CBC, the provisions of the CBC shall apply.

A list of acceptable grid systems must be shown on the drawings. The grid systems specified shall have valid evaluation reports in accordance with IR A-5. The following information shall be included on the drawings for each acceptable grid system specified:

Classification of ceiling grid is heavy duty.
Manufacturer's catalog number - main runner (1) (2) .
Manufacturer's catalog number - cross runner (2) (3) .
Manufacturer's catalog numbers of detail for runner splice (2) .

Notes: (1) Main runners must be rated as heavy duty.
(2) Show manufacturer, duty classification and catalog numbers.
(3) If a cross runner supports light fixtures, air terminals, or other cross runners, it shall be considered a main runner for the purpose of structural classification.

6.6 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires. Perimeter hanger wires at main runners that are positively attached to the perimeter closure angle, counter-sloping is optional.

Note: See ASTM C636, Figure 1, for counter-sloping methods.

6.7 When connection details differ from those in the attached figures, attachment of bracing wires to the structure above and to the main runners shall be adequate for the load imposed. The weight (W_p) shall be taken as not less than four (4) psf for calculating seismic forces (F_p).

6.8 When drilled-in concrete anchors or power actuated fasteners are used in reinforced concrete for hanger wires, 1 out of 10 wire/anchor assemblies must be field tested for 200 lbs. in tension. When drilled-in concrete anchors are used for bracing wires, 1 out of 2 wire/anchor assemblies must be field tested for 440 lbs. in tension in the direction of the wire. Power actuated fasteners in concrete are not permitted for bracing wires.

Note: Drilled-in anchors or power actuated fasteners require DSA approval prior to use in prestressed concrete.

7. CEILING FIXTURES, TERMINALS, AND DEVICES: All fixtures, terminals, and other devices shall be mounted in a manner that will not compromise ceiling performance in accordance with Section 13.5.6.2.2(5) of ASCE 7-10 as amended by 2013 CBC Section 1616A.1.20 (1616.10.16*) and ASTM E580 Sections 5.3 and 5.4.

7.1 Ceiling panels shall not support any light fixtures, air terminals or devices.

7.2 Light Fixtures:

7.2.1 All light fixtures shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the fixture. Screws or approved fasteners are required. A minimum of two attachments are required at each light fixture, per ASTM E580, Section 5.3.1.

7.2.2 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.

7.2.3 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners and anchored to the structure above.

7.2.4 Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage wires attached to the housing and to the structure above. The four (4) taut #12 gage wires, including their attachment to the structure above, must be capable of supporting four (4) times the weight of the unit.

7.2.5 All four foot x four foot light fixtures must have slack safety wires at each corner unless supported per Section 7.2.4.

7.2.6 Surface-mounted fixtures shall be attached to the main runner with at least two positive clamping devices made of material with a minimum #14 gage. Rotational spring catches do not comply. A #12 gage suspension wire shall be attached to each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer. Maximum spacing between supports shall not exceed eight (8) feet.

7.2.7 Support pendant-mounted light fixtures directly from the structure above with hanger wires or cables passing through each pendant hanger and capable of

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DSA IR 25-2.13

METAL SUSPENSION SYSTEMS FOR LAY-IN PANEL CEILINGS: 2013 CBC

References:
California Code of Regulations (CCR), Title 24,
Part 2: 2013 California Building Code (CBC), Section 1616A.1.20, 1616.10.16*
ASTM C635-07, C636-08, and E580-10a

Disciplines: Structural

History:
Revised 04-08-14
Revised 05-16-13
Revised 12-21-12
Revised in its entirety 05-18-11
Issued 06-22-09 as IR 25-5

*Indicates alternative 2013 CBC sections that may be used by community colleges, per 2013 CBC Section 1.9.2.2.

PURPOSE: The purpose of this Interpretation of Regulations (IR) is to provide guidelines for the installation of metal suspension systems for lay-in ceilings on projects approved under the 2013 California Building Code (CBC). For projects submitted to the DSA for review under the 2007 or 2010 CBC, see IR 25-2.07 or IR 25-2.10, respectively.

1. GENERAL REQUIREMENTS: CBC Section 1616A.1.20 (1616.10.16*) requires the design and installation to be in compliance with ASTM C635, C636, and E580, Section 5, as amended by 2013 CBC Section 1616A.1.20 (1616.10.16*).

Note: Amendments in CBC Section 1616A.1.20 (16161.10.16*) replace ASCE 7, Section 13.5.6.

The requirements in this IR apply to flat and level ceiling systems whose total weight, including ceiling mounted air terminals, services and light fixtures, does not exceed four (4) psf. Heavier systems, systems that are not flat and level, and those supporting lateral loads from partitions are beyond the scope of this IR and will require special design and details.

2. SUSPENSION SYSTEM COMPONENTS: Shall comply with ASTM C635 and Section 5.1 of ASTM E580.

2.1 The ceiling grid system must be rated heavy duty as defined by ASTM C635.

2.2 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi. ←

2.3 Main runners, cross runners, splices, expansion devices, and intersection connectors shall be designed to carry a mean ultimate test load of not less than 180 lbs. in compression and tension per ASTM E580 Section 5.1.2.

3. SUSPENSION SYSTEM INSTALLATION: Shall comply with ASTM C636 and Section 5.2 of ASTM E580.

3.1 #12 gage hanger wires may be used for up to and including a 4 foot by 4 foot grid spacing and shall be attached to main runners.

3.2 Provide #12 gage hanger wires at the ends of all main and cross runners within eight (8) inches of the support or within one-fourth (1/4) of the length of the end tee, whichever is least, for the perimeter of the ceiling area (see Figure 2). Perimeter wires are not required when the length of the end tee is eight (8) inches or less.

California Department of General Services - Division of the State Architect - Interpretation of Regulations Document

MAXIMUM ALLOWABLE LOAD FOR 10 GAGE AND 12 GAGE WIRES

IR 25-1

References:
California Code of Regulations (CCR) Title 24
Part 2, California Building Code (CBC)
2001 CBC, Section 2501A.5
2007 CBC, Sections 803.9.1 and 1614A.1.2
2010 CBC, Sections 803.9.1 and 1615A.1.2, 1610.1.2*

Revised 09-23-10
Revised 04-21-05
Issued 09-01-99 as IR M-2

Discipline: Structural

* Indicates alternative 2010 CBC sections that may be used by community colleges, per 2010 CBC Section 1.9.2.2.

Purpose: The purpose of this IR is to clarify the allowable loads for mild steel wire.

1. Description. "Galvanized soft annealed mild steel wire," as defined in ASTM A641 (Class 1 Coating) is the wire referred to in this IR.

2. Basis of Design Strength. Based on tests which the Division of the State Architect (DSA) has received to-date for this type of wire, an ultimate stress of 60,000 psi will be used for #10 gage and #12 gage wire.

3. Design Value. Basic stress will be the ultimate stress divided by 2.5, or 24,000 psi. Testing is not required when these values are used.

4. Diameter of Wire. #10 wire is 0.135 inches in diameter and a #12 wire is 0.106 inches in diameter as shown by the U.S. Steel Wire Gage.

5. Allowable Load.

Wire Size	Basic Load
#10 wire	343 lbs.
#12 wire	209 lbs.

6. Fabrication. When using twists on wire to develop the maximum allowable load, use a minimum of 4 twists within 1½". Three twists may be used to develop not more than one half the above values.

7. Limitations.

7.1 These values are for tension only. Tearing of thin metal by wire must be considered.

If the specification requires a special wire, a higher allowable base load may be used, subject to DSA approval.

Figure 5
ACCEPTABLE DETAILS - WIRE CONNECTIONS TO STEEL FRAMING

Figure 1
SUSPENDED CEILING BRACING ASSEMBLY

Compression Struts:

Compression struts shall not replace hanger wires. The sizes of compression struts must be shown on construction documents by the engineer or architect. Attach compression struts to main runners within 2" of cross runner. Details of attachment at both ends must be designed and shown on construction documents by the engineer or architect. The attachment at the top shall be capable of supporting four times the weight of the strut.

Figure 2
CEILING HANGER DETAILS

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supporting two (2) times the weight of the fixture. See IR 16-9 for additional requirements for pendent mounted fixtures.

If the pendant mounted light fixture is directly and independently braced below the ceiling, i.e., aircraft cables to walls, then a brace assembly is not required above the ceiling.

If the pendant mounted light fixture is not directly and independently braced below the ceiling, then a bracing assembly, per Figure 1, is required where the pendant hanger penetrates the ceiling. Special details are required to attach the pendant hanger to the bracing assembly to transmit the horizontal force. Exception: Where the weight of the fixture is less than 20 pounds, the compression post shown in Figure 1 is not required.

7.2.8 Rigid conduit shall not be used for attachment of the fixtures.

7.3 Services within the Ceiling:

7.3.1 All flexible sprinkler hose fittings, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the component. Screws or approved fasteners are required. A minimum of two attachments are required at each component.

7.3.2 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached to the terminal or service to the structure above.

7.3.3 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires attached to the terminal or service to the structure above.

7.3.4 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage wires attached to the terminal or service and to the structure above. The four (4) taut #12 gage wires, including their attachment to the structure above, must be capable of supporting four (4) times the weight of the unit.

7.4 Other Devices within the Ceiling:

7.4.1 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid per Section 7.3.1 of this IR. In addition, devices weighing more than 10 lbs. shall have a #12 gage slack safety wire anchored to the structure above per Section 7.2.2 of this IR. Devices weighing more than 20 lbs. shall be supported from the structure above per Section 7.3.4 of this IR.

8. ADDITIONAL REQUIREMENTS:

8.1 Fire Rated Ceilings:

Provide a detail and design number for rated ceiling assemblies from an authorized testing agency. The components and installation details must conform in every respect with the listed detail and number. Details shall clearly depict all components, including insulation materials, framing and attachment of the design so that the assembly can be constructed and inspected accordingly.

Pop rivets, screws, or other attachments are not acceptable unless specifically detailed on the drawings and approved by U.L. and State Fire Marshal (SFM) recognized laboratories.

3.3 Ceiling grid members shall be attached to two (2) adjacent walls per ASTM E580, Section 5.2.3. Ceiling grid members shall be at least 3/4 inch clear of other walls. If walls run diagonally to ceiling grid system runners, one end of main and cross runners should be free, and a minimum of 3/4 inch clear of wall.

3.4 The width of the perimeter supporting closure angle shall be not less than two inches. Grid systems with specialty or proprietary angles and support clips may be acceptable in accordance with Section 11 below.

3.5 At the perimeter of the ceiling area, where main or cross runners are not connected to the adjacent wall, provide interconnection between the runners at the free end to prevent lateral spreading. A metal spreader strut or a #16 gage wire with a positive mechanical connection to the runner may be used and placed within eight (8) inches of the wall. Where the perpendicular distance from the wall to the first parallel runner is eight (8) inches or less, this interlock is not required.

4. EXPANSION JOINTS, SEISMIC SEPARATION JOINTS, AND PENETRATIONS:

4.1 Expansion joints shall be provided in the ceiling at intersections of corridors and at junctions of corridors and lobbies or other similar areas (see Figure 7, Detail A).

4.2 For ceiling areas exceeding 2,500 square feet, a seismic separation joint shall be provided in accordance with Figure 7, Detail A, to divide the ceiling into areas not exceeding 2,500 square feet. Alternatively, comply with ASTM E580, Section 5.2.9.

4.3 Penetrations through the ceiling for sprinkler heads and other similar devices that are not integrally tied to the ceiling system in the lateral direction shall have a two (2) inch oversized ring, sleeve or adapter through the ceiling tile to allow free movement of one (1) inch in all horizontal directions. Alternatively, per ASTM E580, Section 5.2.8.5, a flexible sprinkler hose fitting that can accommodate one (1) inch of ceiling movement shall be permitted to be used in lieu of the oversized ring, sleeve, or adapter.

5. LATERAL FORCE BRACING: Lateral force bracing is required per this section for all ceiling areas. The spacing of the bracing assemblies must be shown on the construction documents.

Exception: Lateral force bracing may be omitted for suspended acoustical ceiling systems with a ceiling area of 144 square feet or less, when perimeter support, in accordance with Section 3.3 of this IR or with ASTM E580 Sections 5.2.2 and 5.2.3, are provided and perimeter walls are designed to carry the ceiling lateral forces. ←

5.1 Provide lateral force bracing assemblies consisting of a compression strut and four (4) #12 gage splayed bracing wires oriented 90 degrees from each other (see Figure 1).

5.2 Lateral force bracing assemblies shall be spaced per Table 1 for all values of the component importance factor (I_p) of the ceiling. ←

Figure 6
ACCEPTABLE DETAILS - WIRE CONNECTIONS TO STEEL DECK

Note: Ⓐ Show minimum required distance per manufacturer's evaluation report issued by ICC-ES or other qualifying evaluation agency per IR A-5.

Figure 3C
ACCEPTABLE DETAILS - WIRE CONNECTION AT WOOD FRAMING

Figure 4
ACCEPTABLE DETAILS - WIRE CONNECTION TO CAST-IN-PLACE CONCRETE

(B) Perimeter details - typical (see Section 3.5)

Notes: (1) 1/4 of the length of the end runner whichever is less.
(2) Nails at the end of horizontal struts are to be placed with nail head toward centerline of span of strut.
(3) Hanger wire not required for cross runners less than 8" long between main runner and wall.

Figure 3A
ACCEPTABLE DETAILS - WIRE CONNECTIONS TO WOOD FRAMING

8.2 Metal and Other Panels:

Metal panels and panels weighing more than one-half (1/2) psf, other than mineral fiber acoustical tile, are to be positively attached to the ceiling suspension runners.

8.3 Essential Services Buildings:

Exitways shall be installed in accordance with Section 13.5.6.2.2(1) of ASCE 7-10 as amended by 2013 CBC Section 1616A.1.20 (1616.10.16*). A main or cross runner shall be installed on all sides of each piece of tile, board or panel and each light fixture or grill (see Figure 7, Detail B). Splices or intersection of such runners shall be attached with through connectors such as pop rivets, screws, pins, plates with end tabs or other approved connectors.

8.4 Suspended Acoustical Ceilings Below Gypsum Board Ceilings:

Where gypsum board or other ceiling finishes are attached to the framing, specific details will be required for the vertical hanger wire and lateral bracing wire support connections to the framing.

9. RE-USE OF EXISTING CEILING HANGER WIRES AND BRACING WIRES:

9.1 The gage and spacing of the wires must comply with the current applicable codes.

9.2 All existing ceiling hanger wire/anchor assemblies must be tested to 200 lbs.

9.3 All existing bracing wire/anchor assemblies must be field tested to 440 lbs.

9.4 If a new wire is to be spliced to an existing wire, the following is required:

- The architect or structural engineer in general responsible charge must submit to the DSA for approval a detail and specification describing how the splice is to be made.
- All new wires, after being spliced to the existing wires, must be field tested per Sections 9.2 and 9.3 above.
- All field tests must be performed in the presence of the project inspector.

10. MODERNIZATION AND ALTERATION: The entire ceiling shall be upgraded to meet the current requirements of the CBC and this IR if any portion of the grid system is cut or altered.

Exception: The replacement of existing ceiling panels with panels of the same materials and light fixtures of the same size, locations, and weights does not require an upgrade to the ceiling grid and suspension system.

11. DSA ACCEPTANCE OF EVALUATION REPORTS: Ceiling grid systems or components, with valid evaluation reports issued by qualified evaluation agencies, in accordance with DSA IR A-5, are accepted by the DSA, provided the system or component meets the requirements of CBC Section 1616A.1.20 (1616.10.16*), ASTM C635, C636 and E580. Where a qualified evaluation report is utilized, the installation shall comply with all the requirements specified in the evaluation report, i.e. connections, member sizes, perimeter details, special clips to wall angles, etc. ←

In accordance with DSA IR A-5, DSA will accept OSHPD Preapproved Details (OPD) "2013 CBC Standard Suspended Ceiling Details for Acoustical Tile or Lay-in Panel Ceilings."

12. CONSTRUCTION DOCUMENTS: Drawings and specifications shall clearly identify all systems and shall define or show all supporting details, lighting fixture attachment, lateral force bracing, partition bracing, seismic separations, etc.

Where accepted proprietary devices, clips, wall angles, etc. are utilized, the details on the approved construction documents shall clearly indicated the installation details as necessary to show compliance with all evaluation report requirements. ←

TABLE 1
LATERAL FORCE BRACE ASSEMBLY SPACING

USE THIS →

Design Spectral Acceleration Parameter S_{DS}	Brace Assembly Spacing
Less than or equal to 1.15	12'x12' Full building Height
Greater than 1.15 and less than or equal to 1.73	8'x12' for z/h greater than 0.5 12'x12' for z/h less than or equal to 0.5
Greater than 1.73	8'x8' for z/h greater than 0.5 8'x12' for z/h less than or equal to 0.5

Where, as defined in ASCE 7-10, Section 13.3.1:

z = height in structure of point of attachment of ceiling with respect to the base.

h = average roof height of the structure with respect to the base.

Where different brace spacing is specified at various stories, the respective ceiling plan shall clearly indicate the brace spacing.

There shall be a brace assembly a distance of not more than one half of the above spacing from each surrounding wall, expansion joint and at the edges of any ceiling vertical offset. For example, where the brace spacing is 8'x12', the distance shall be 4 feet in the direction of the 8 foot spacing and 6 feet in the direction of the 12 foot spacing.

5.3 The slope of bracing wires shall not exceed 45 degrees from the plane of the ceiling and wires shall be taut. Splices in wires are not permitted without DSA approval.

5.4 Compression struts shall be adequate to resist the vertical component induced by the bracing wires, and shall not be more than one (horizontal) in six (vertical) out of plumb.

6. ATTACHMENT OF HANGER AND BRACING WIRES:

6.1 Fasten hanger wires with not less than three (3) tight turns in three (3) inches. Hanger wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops (see ASTM E580, Section 5.2.7.2). ←

6.2 Fasten bracing wires with four (4) tight turns. Make all tight turns within a distance of one and one-half (1-1/2) inches. ←

6.3 Hanger or bracing wire anchored to the structure should be installed in such a manner that the direction of the anchor aligns as closely as possible with the direction of the wire.

6.4 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.

6.5 Hanger wires shall not attach to or bend around interfering material or equipment. Provide trapeze or other supplementary support members at obstructions to typical hanger spacing (see Figure 3A, Detail F). Provide additional hangers, struts or braces as required at all ceiling breaks, soffits, or discontinuous areas.

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE
NO. C35431
REN. 4-30-19

SHEET TITLE
ROOF & CEILING DETAILS

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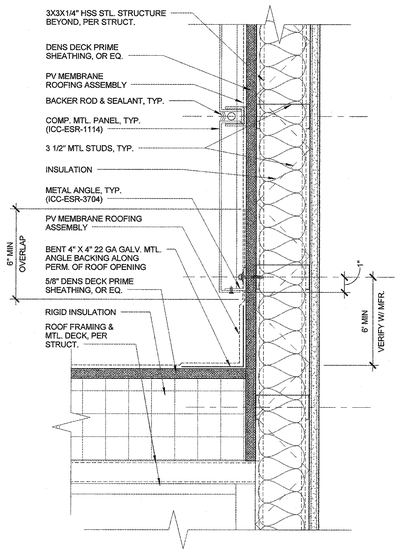
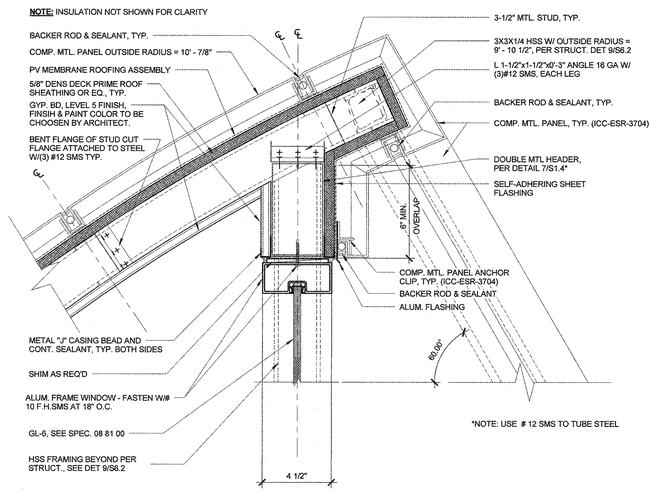
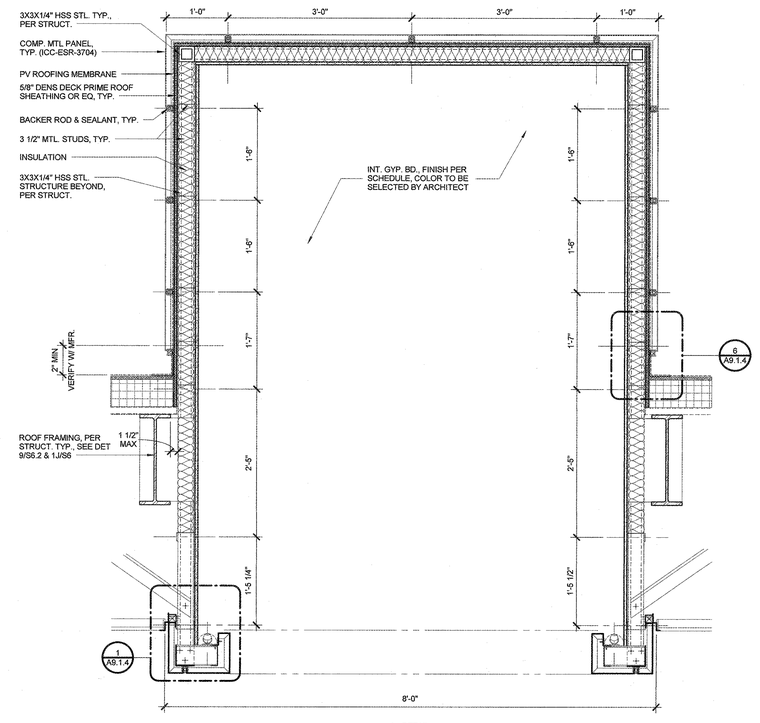
SHEET NO. A9.1.3

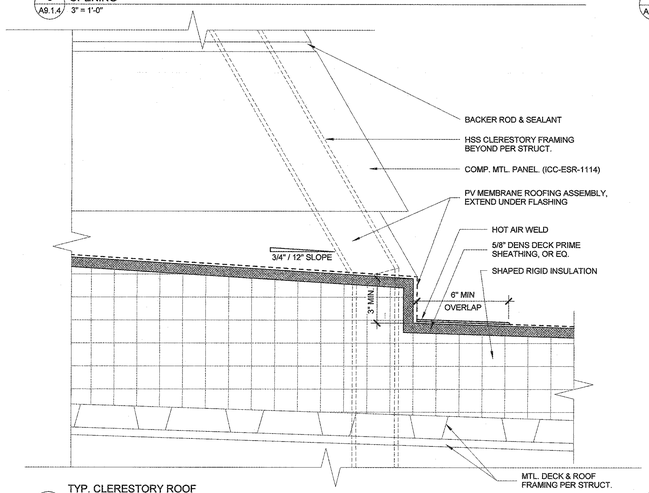






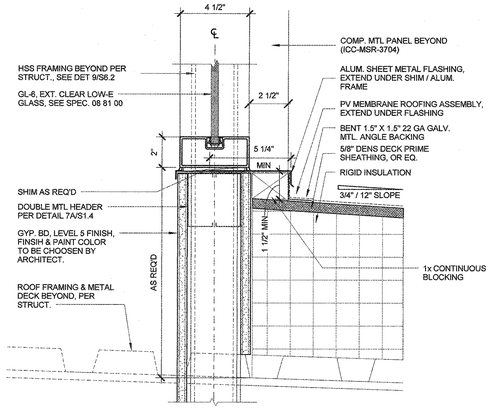
A - DETAIL

6 A9.1.4 TYP. CLERESTORY @ ROOF OPENING
3" = 1'-0"



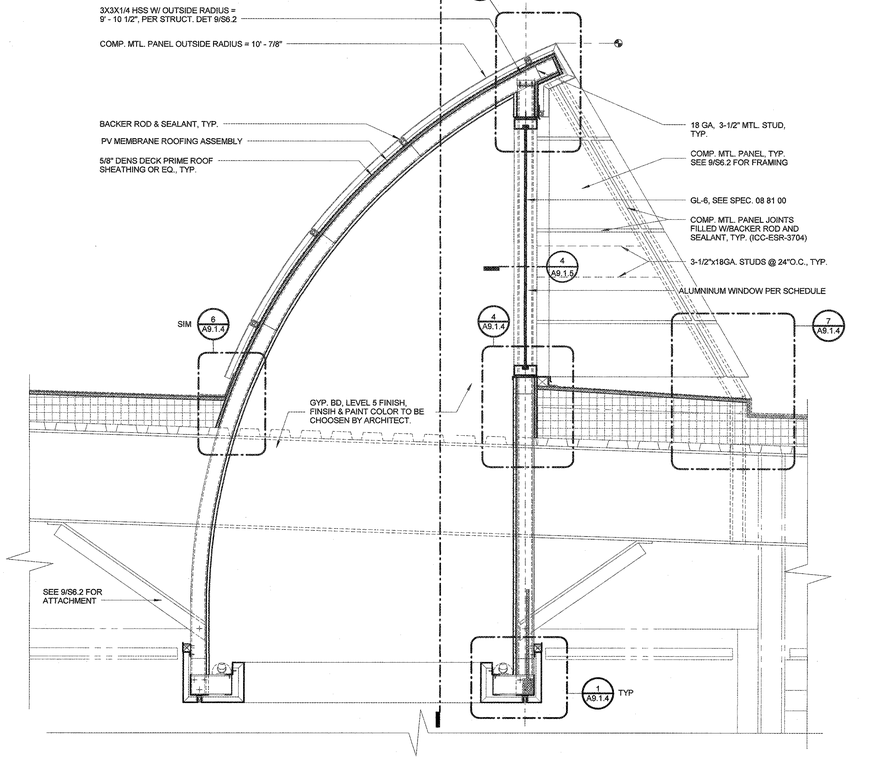
7 A9.1.4 TYP. CLERESTORY ROOF TRANSITION
3" = 1'-0"

5 A9.1.4 TYP. CLERESTORY WINDOW @ HEAD, JAMB SIM.
3" = 1'-0"

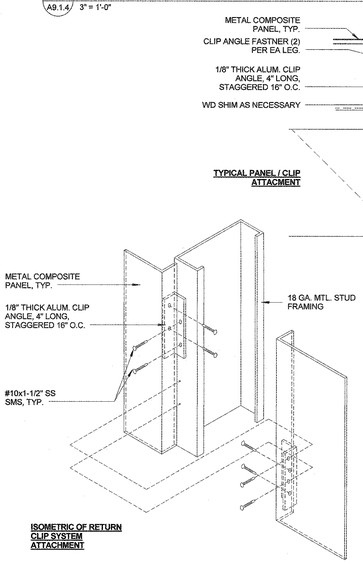


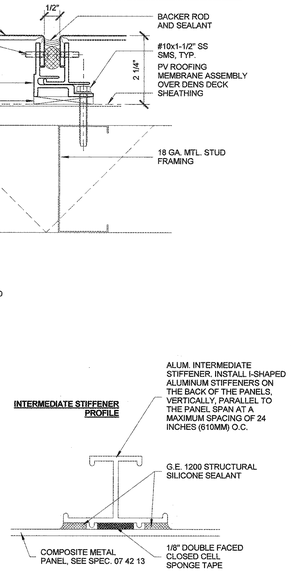
4 A9.1.4 TYP. CLERESTORY WINDOW SILL
3" = 1'-0"

3 A9.1.4 TYP. CLERESTORY - SECTION A
1" = 1'-0"



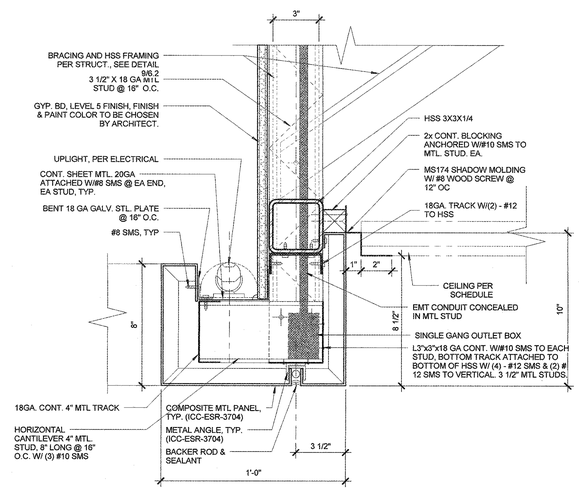
2 A9.1.4 TYP. CLERESTORY - SECTION B
1" = 1'-0"





8 A9.1.4 METAL PANEL ANCHORAGE & STIFFENER
6" = 1'-0"

TYPICAL PANEL / CLIP ATTACMENT



1 A9.1.4 TYP. BOTTOM OF CLERESTORY
3" = 1'-0"

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CONSULTANT

DESIGN TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

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SEAL / SIGNATURE

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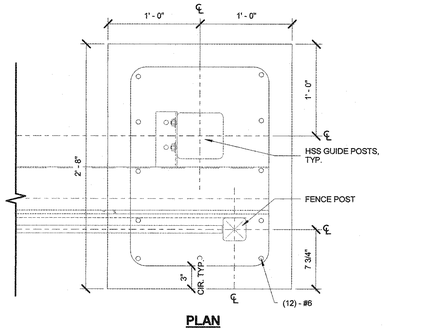
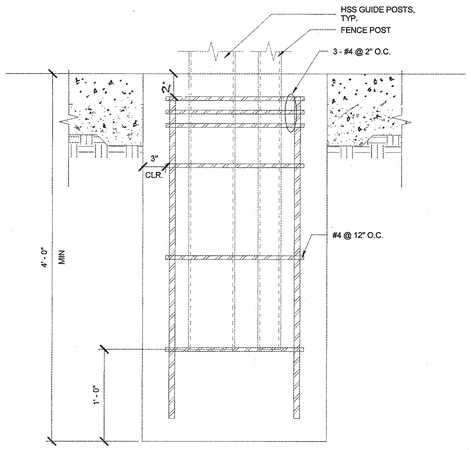
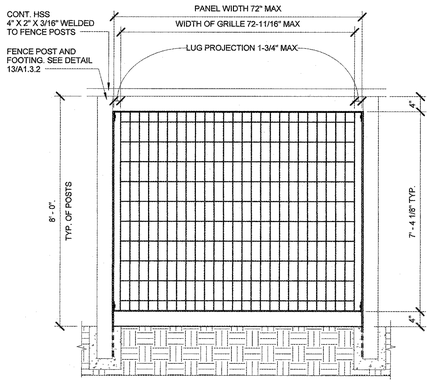


PLAN

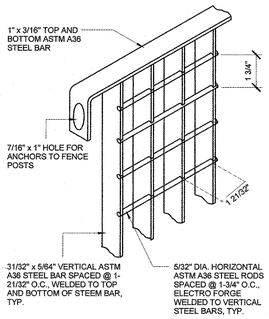


SECTION

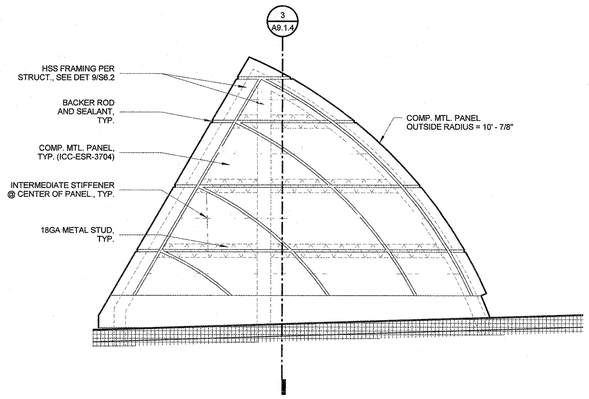
6 A9.1.5/ ROLLING GATE & FENCE POST COMBINED FOOTING
1 1/2" = 1'-0"



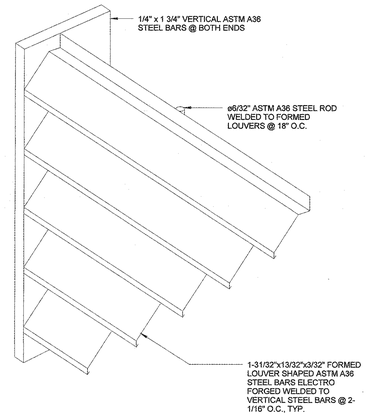
A TYPICAL ELEVATION FENCE ELEVATION



B FENCE & GATE INFILL TYPE "A"



3 A9.1.5/ MONITOR SIDE PANELING
3/4" = 1'-0"



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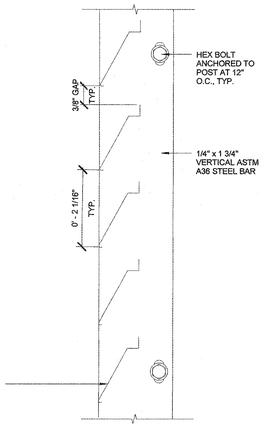
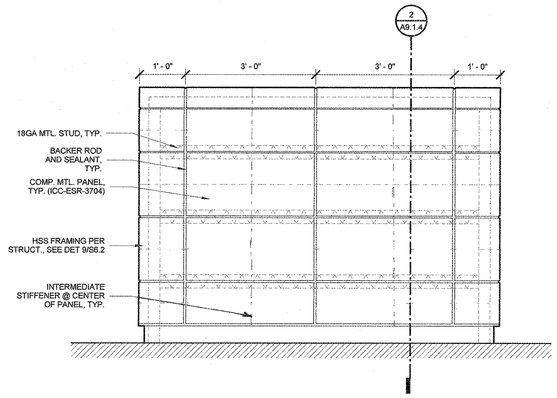


INFILL SECTION

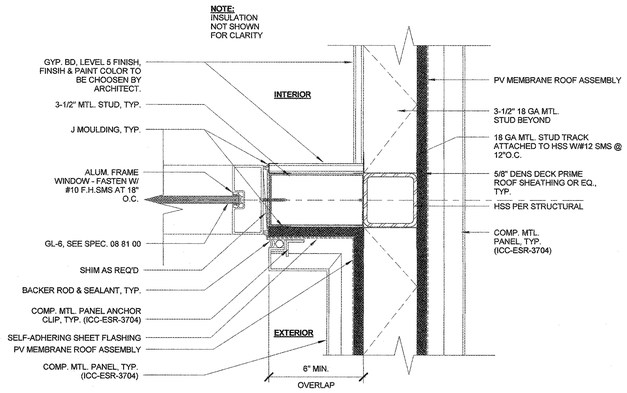


2 A9.1.5/ MONITOR REAR PANELING
3/4" = 1'-0"

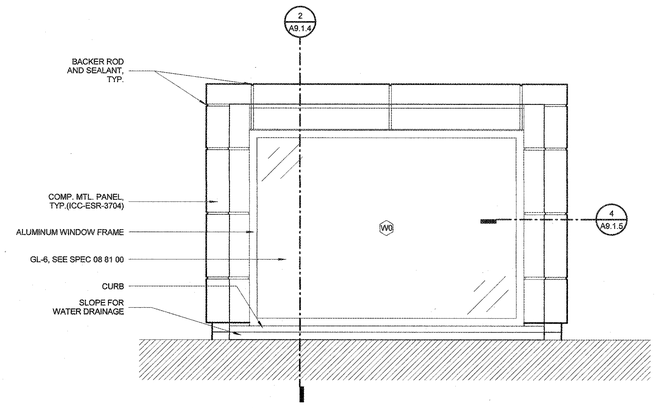
C FENCE & GATE

D FENCE & GATE INFILL TYPE "B"

5 A9.1.5/ FENCE & GATE DETAILS
3/4" = 1'-0"



4 A9.1.5/ TYP. CLERESTORY WINDOW @ JAMB
3" = 1'-0"



1 A9.1.5/ MONITOR OPENING
3/4" = 1'-0"

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CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

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SEAL / SIGNATURE
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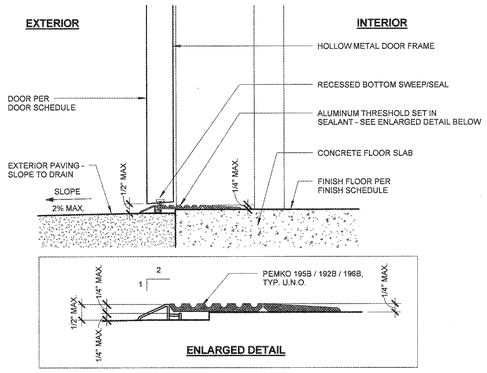
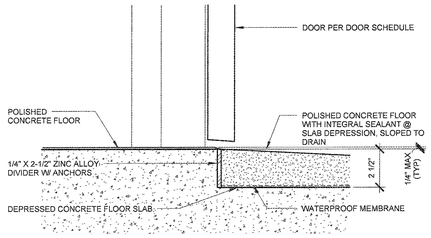
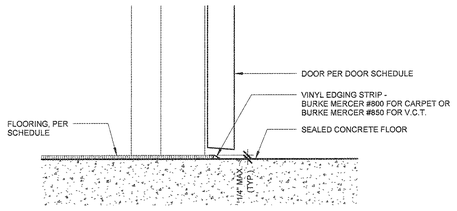


A TYP. THRESHOLD @ EXT DOOR



B POLISHED CONCRETE to CERAMIC TILE

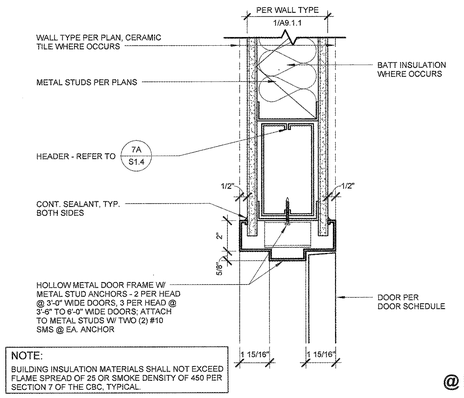


C CARPET, LVT, V.C.T., OR OTHER COMPOSITE FLOOR to POLISHED CONCRETE FLOOR

NOTE:

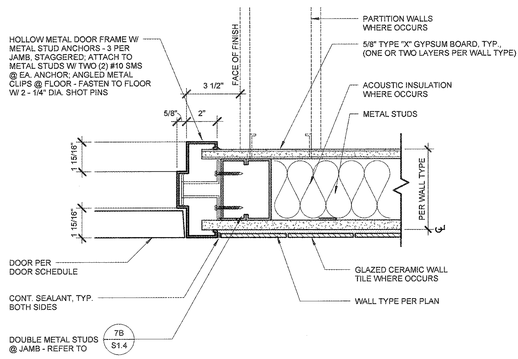
1. AT ALL ACCESSIBLE THRESHOLDS, PROVIDE A MAXIMUM OF 1/4-INCH IN HEIGHT AT TRANSITIONS AND BEVELED PER C.B.C. SECTION 1115B.4.4.2 AND FIGURE 11B-32.
2. VINYL EDGING STRIP COLOR TO BE SELECTED BY ARCHITECT FROM FULL COLOR LINE.

9 / A9.3.1 TYP. DOOR THRESHOLDS
3" = 1'-0"



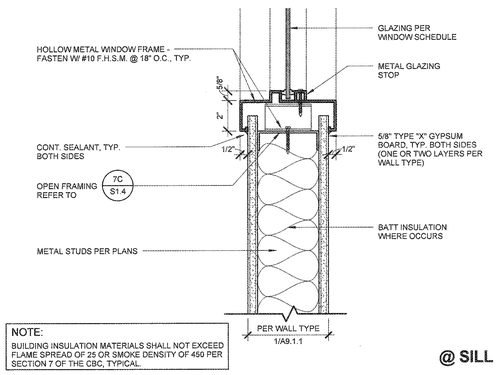
@ HEAD

6 / A9.3.1 TYP. INTEROR HOLLOW METAL FRAME DOOR
3" = 1'-0"



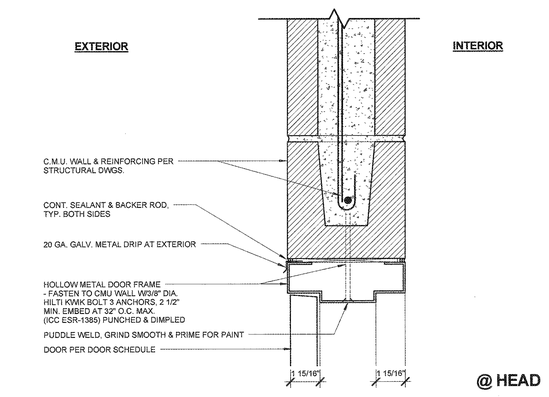
@ JAMB

6 / A9.3.1 TYP. INT. H.M. FRAME DOOR AT CERAMIC TILE WALL
3" = 1'-0"



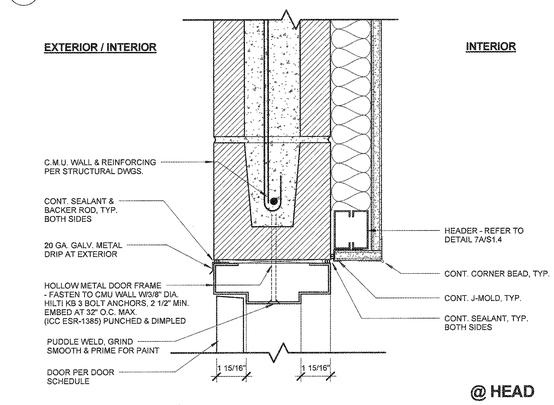
@ SILL

7 / A9.3.1 TYP. HOLLOW METAL FRAME WINDOW - SILL
3" = 1'-0"



@ HEAD

1 / A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



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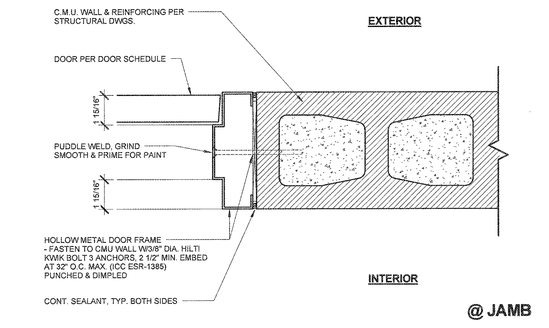
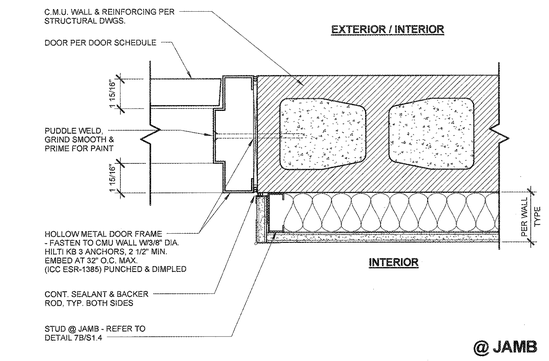
2 / A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



@ JAMB

3 / A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



@ JAMB

4 / A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"

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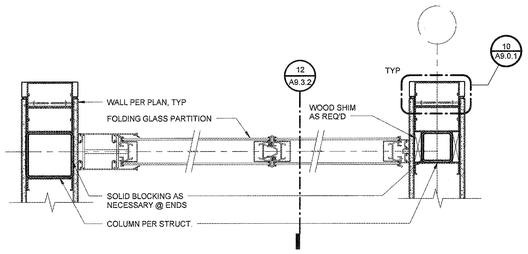
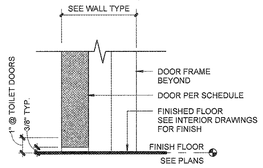
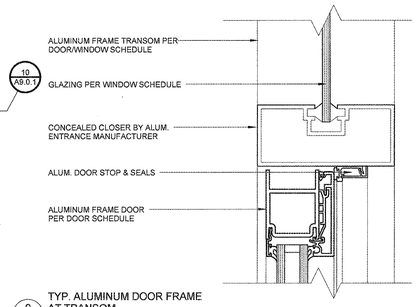
SHEET NO. A9.3.1



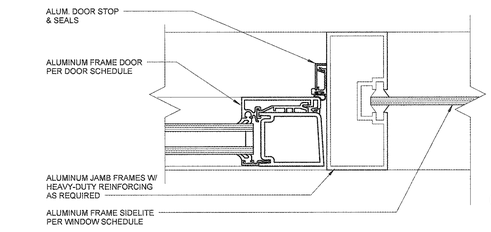
13 A9.3.2 PARTITION @ JAMB
1 1/2" = 1'-0"



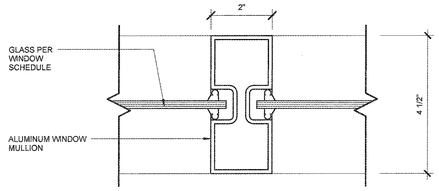
14 A9.3.2 INTERIOR DOOR UNDERCUT
3" = 1'-0"



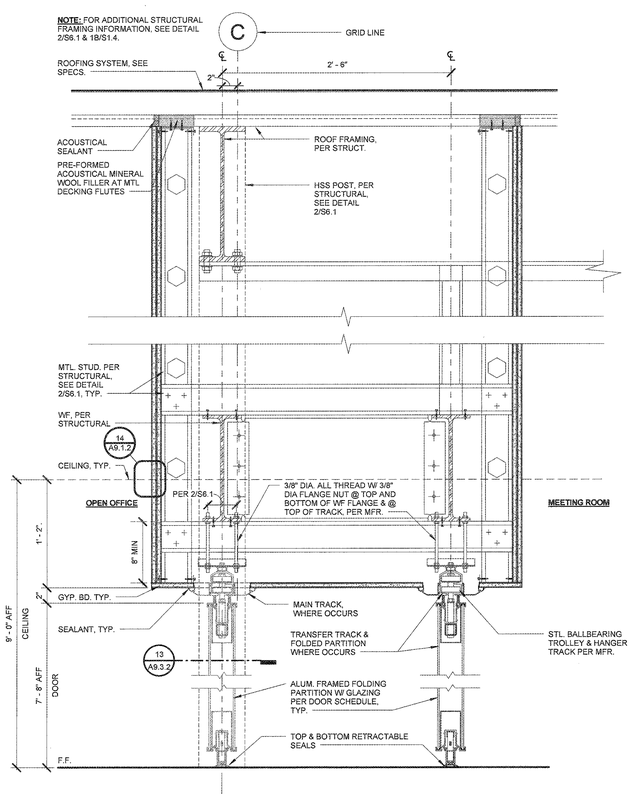
9 A9.3.2 TYP. ALUMINUM DOOR FRAME AT TRANSOM
6" = 1'-0"



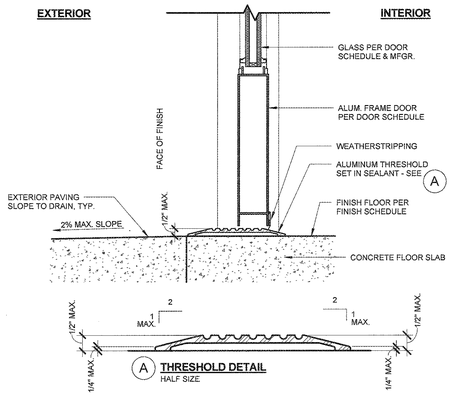
10 A9.3.2 TYP. ALUMINUM DOOR FRAME AT SIDELITE
6" = 1'-0"



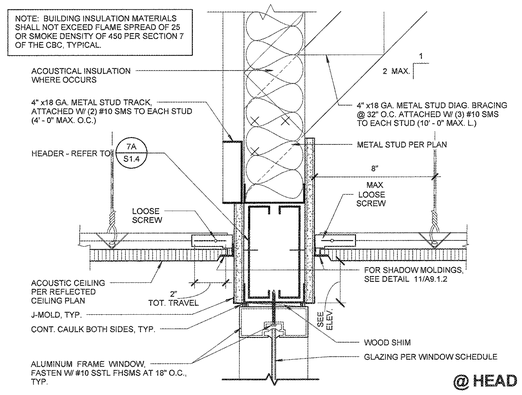
11 A9.3.2 TYP. WINDOW FRAME MULLION
6" = 1'-0"



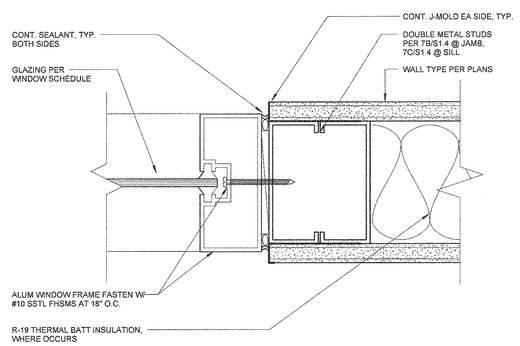
12 A9.3.2 ALUM. FRAMED GLASS PARTITION SUPPORT
1 1/2" = 1'-0"



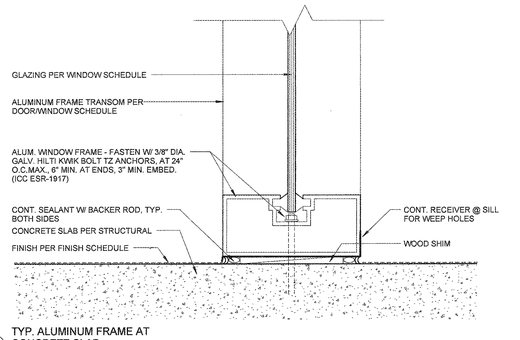
5 A9.3.2 TYP. THRESHOLD AT ALUMINUM DOOR
3" = 1'-0"



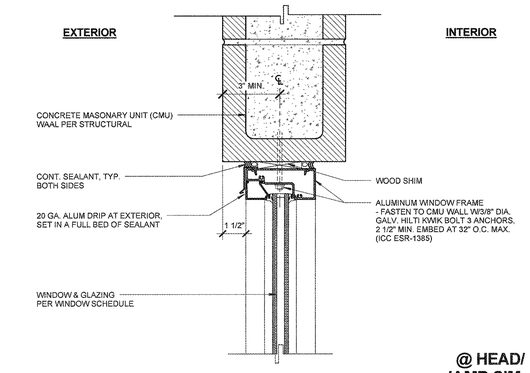
6 A9.3.2 TYP. INTERIOR ALUMINUM FRAMED WINDOW
3" = 1'-0"



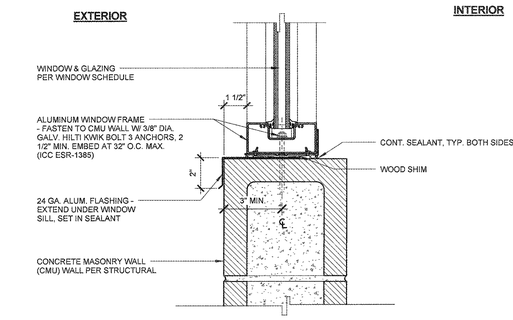
7 A9.3.2 TYP. ALUMINUM FRAME SIDELITE - JAMB
6" = 1'-0"



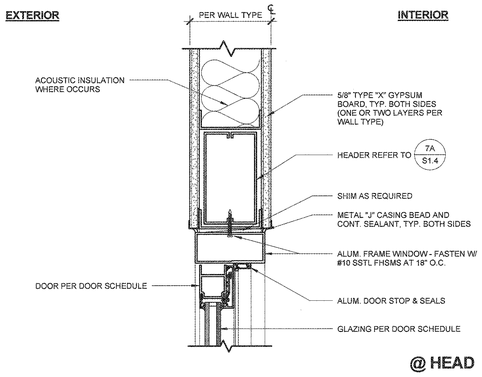
8 A9.3.2 TYP. ALUMINUM FRAME AT CONCRETE SLAB
6" = 1'-0"



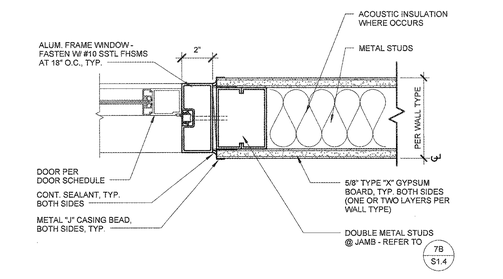
1 A9.3.2 TYP. ALUM. WINDOW AT CMU WALL
3" = 1'-0"



2 A9.3.2 TYP. ALUM. WINDOW AT CMU WALL
3" = 1'-0"



3 A9.3.2 TYP. INTERIOR ALUMINUM FRAME DOOR
3" = 1'-0"



4 A9.3.2 TYP. INTERIOR ALUMINUM FRAME DOOR
3" = 1'-0"

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
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OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

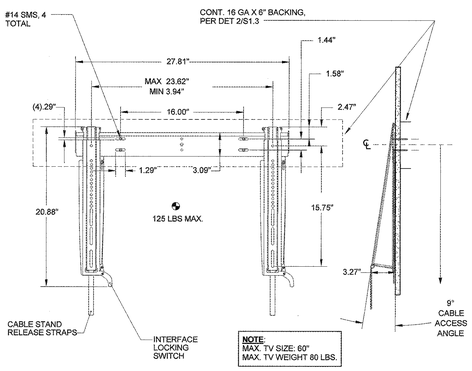
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

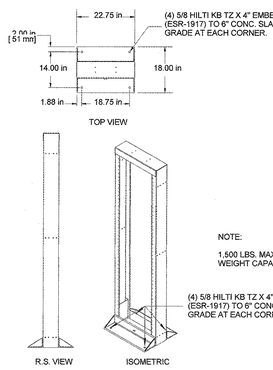
SHEET TITLE
ALUMINUM DOOR & WINDOW DETAILS

PROJECT NUMBER
913-4675-00

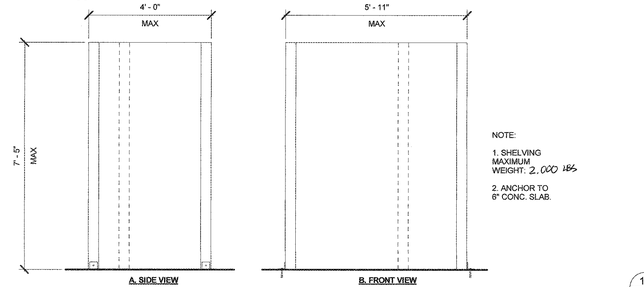
ISSUE DATE	SHEET NO.
12/01/16	A9.3.2



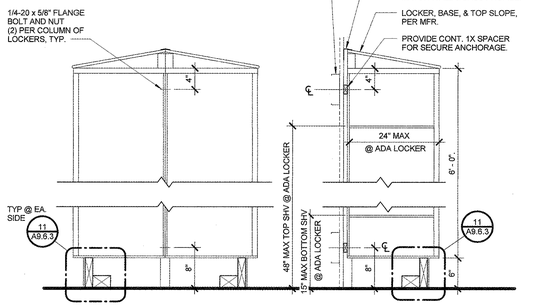
13 A9.6.1 TV MOUNT
1 1/2" = 1'-0"



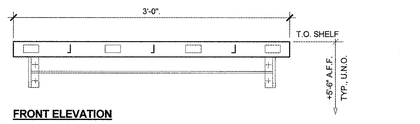
14 A9.6.1 IDF RACK ANCHORAGE
1/2" = 1'-0"



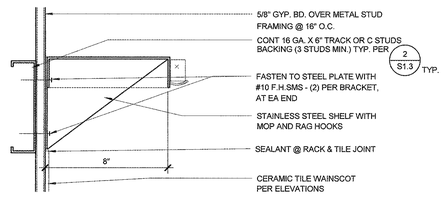
15 A9.6.1 TYP. FREE STANDING STORAGE FLOOR ANCHORAGE
1/2" = 1'-0"



17 A9.6.1 LOCKER DETAIL
1" = 1'-0"

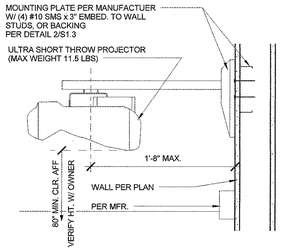


FRONT ELEVATION

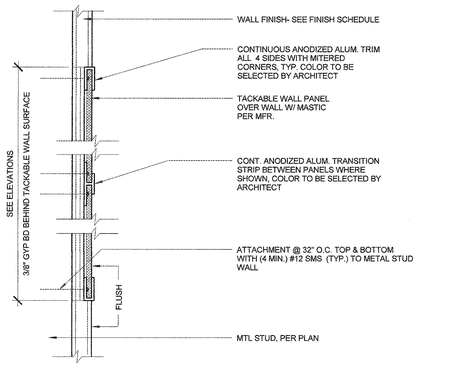


SECTION

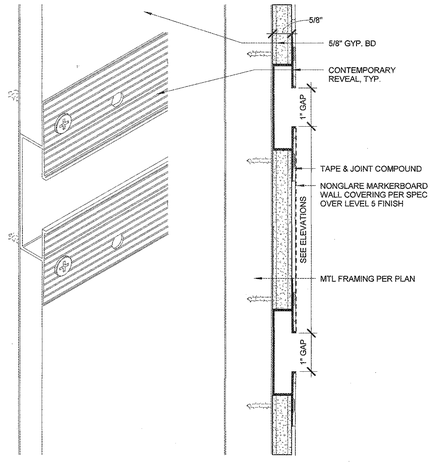
9 A9.6.1 TYP. MOP RACK
3" = 1'-0"



10 A9.6.1 SHORT THROW PROJECTOR MOUNT
1 1/2" = 1'-0"

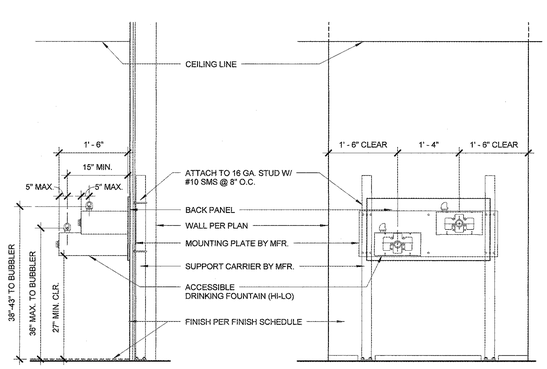


11 A9.6.1 TYP. TACKABLE PANEL SECTION
6" = 1'-0"



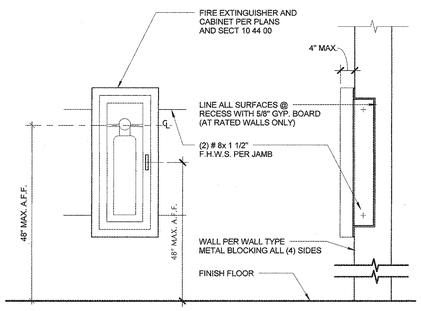
ISOMETRIC VIEW SECTION

12 A9.6.1 MARKERBOARD WALL COVERING
6" = 1'-0"



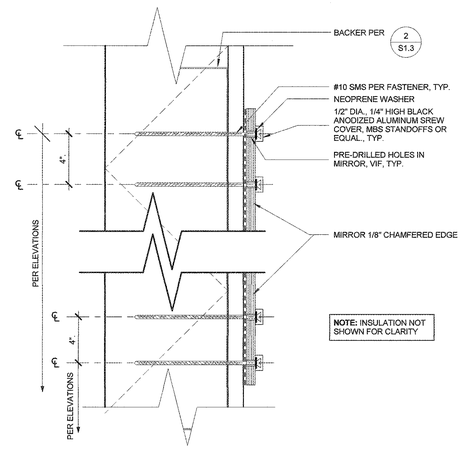
SIDE ELEVATION FRONT ELEVATION

5 A9.6.1 DRINKING FOUNTAIN MOUNTING DETAIL
3/4" = 1'-0"

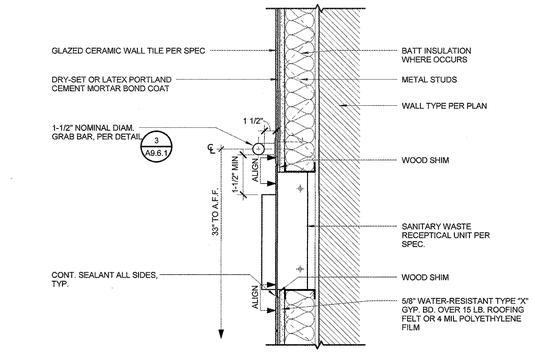


WALL ELEVATION SECTION

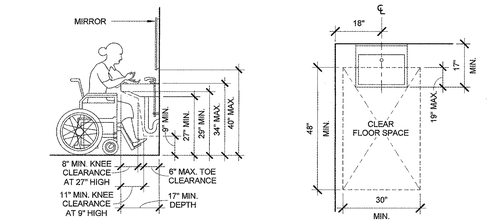
6 A9.6.1 TYP. SEMI-RECESSED FIRE EXTINGUISHER
1" = 1'-0"



7 A9.6.1 TYP. FULL HT. MIRROR SECTION
6" = 1'-0"



8 A9.6.1 TYP. RECESSED MOUNTED UNIT
1 1/2" = 1'-0"



A LAVATORY CLEARANCES - SIDE ELEVATION B PLAN VIEW

2012 UNIFORM PLUMBING CODE & 2013 CALIFORNIA AMENDMENTS PART 5, TITLE 24 C.C.R.

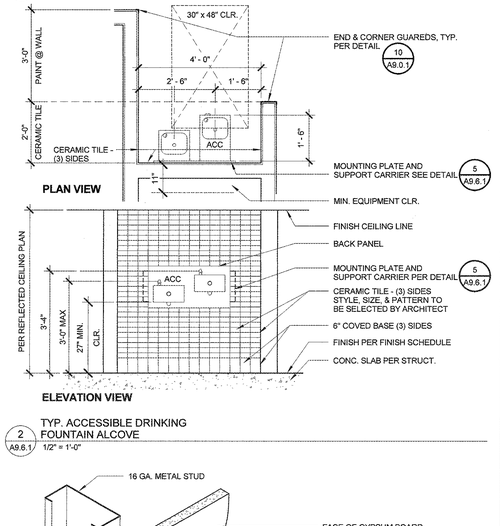
NOTES:

(a) FOR SUGGESTED MOUNTING HEIGHTS OF ACCESSIBLE LAVATORY, SEE **2013 CBC FIG. 11B-1D**
TOE CLEARANCE SHALL BE THE SAME WIDTH AND SHALL BE A MIN. OF 9 INCHES HIGH FROM THE FLOOR AND MIN. OF 17 INCHES DEEP FROM THE FRONT OF THE LAVATORY.

(b) HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

(c) FAUCET CONTROLS AND OPERATING MECHANISM SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHTGRASPING, PINCHING OR TWISTING OF THE WRIST.
THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 lbf. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

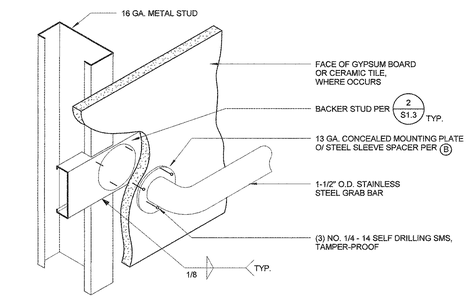
1 A9.6.1 ACCESSIBLE LAVATORY
1/2" = 1'-0"



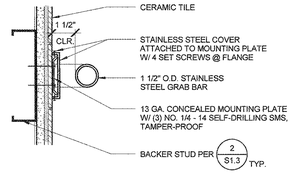
PLAN VIEW

ELEVATION VIEW

2 A9.6.1 TYP. ACCESSIBLE DRINKING FOUNTAIN ALCOVE
1/2" = 1'-0"

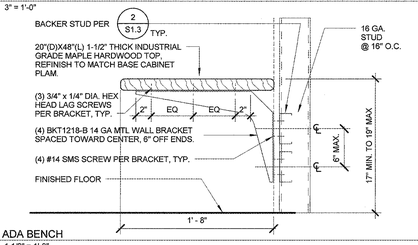


A GRAB BAR AT WALL - ISOMETRIC



B GRAB BAR AT STUD WALL

3 A9.6.1 TYP. GRAB BAR ANCHORAGE
3" = 1'-0"



4 A9.6.1 ADA BENCH
1 1/2" = 1'-0"

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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AC FLS SS
DATE DEC 12 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

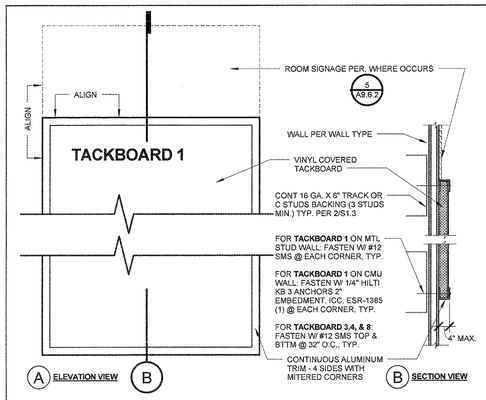
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

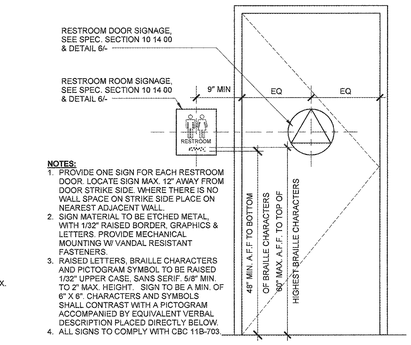
SHEET TITLE
INTERIOR DETAILS

PROJECT NUMBER
913-4675-00

ISSUE DATE	SHEET NO.
12/01/16	A9.6.1

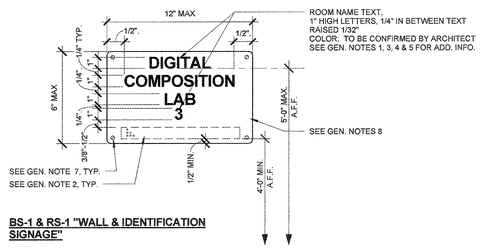


10 A9.6.2 TYPICAL TACKBOARD AND SIGNAGE ATTCHMENT
3" = 1'-0"

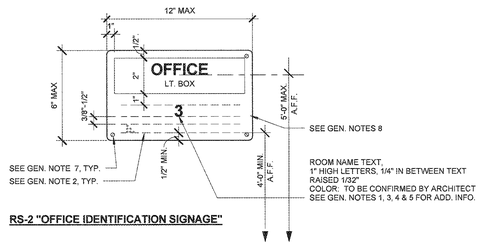


NOTES:
1. PROVIDE ONE SIGN FOR EACH RESTROOM DOOR. LOCATE SIGN MAX. 12" AWAY FROM DOOR STRIKE SIDE. WHERE THERE IS NO WALL SPACE ON STRIKE SIDE PLACE ON NEAREST ADJACENT WALL.
2. SIGN MATERIAL TO BE ETCHED METAL, WITH 1/32" RAISED BORDER, GRAPHICS & LETTERS. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS.
3. RAISED LETTERS, BRAILLE CHARACTERS AND PICTOGRAM SYMBOL TO BE RAISED 1/32" UPPER CASE, SANS SERIF. 5/8" MIN. TO 2" MAX. HEIGHT. SIGN TO BE A MIN. OF 6" X 6". CHARACTERS AND SYMBOLS SHALL CONTRAST WITH A PICTOGRAM ACCOMPANIED BY EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW.
4. ALL SIGNS TO COMPLY WITH CBC 11B-703.

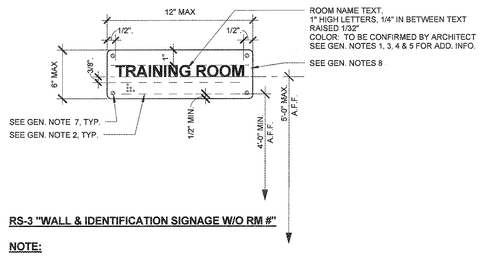
7 A9.6.2 TYPICAL ROOM SIGN DETAIL/ELEVATION
3/4" = 1'-0"



BS-1 & RS-1 "WALL & IDENTIFICATION SIGNAGE"



RS-2 "OFFICE IDENTIFICATION SIGNAGE"

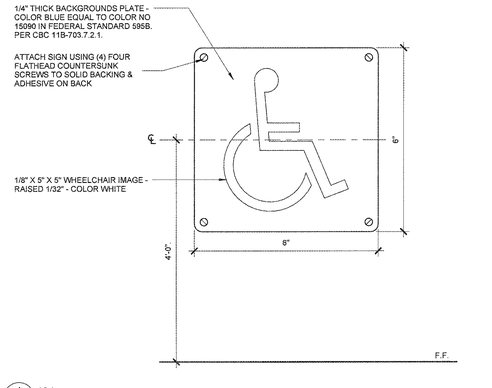


RS-3 "WALL & IDENTIFICATION SIGNAGE W/O RM #"

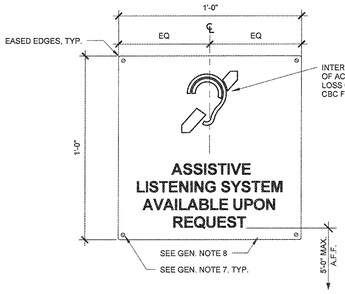
NOTE:

1. ALLOW FOR UP TO THREE (3) LINES AND THIRTY-SIX (36) CHARACTERS TOTAL FOR EACH SIGN. OWNER TO DETERMINE NAMES.
2. FOR MOUNTING LOCATIONS, SEE DETAIL 8/-

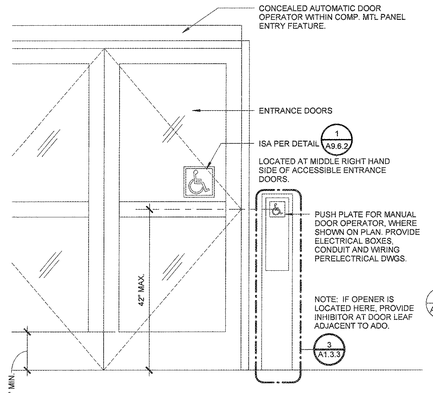
5 A9.6.2 TYP. INTERIOR DOOR & ROOM SIGNAGE
3" = 1'-0"



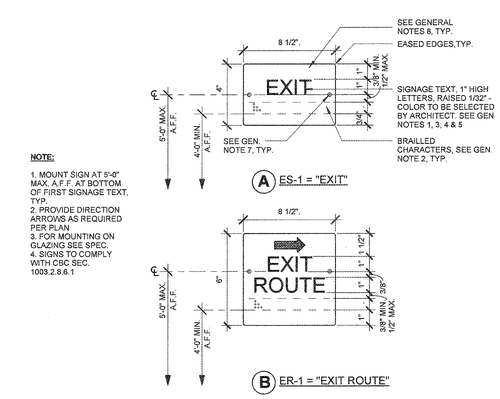
1 A9.6.2 ISA
6" = 1'-0"



11 A9.6.2 TYP. OCCUPANCY POSTING SIGNAGE AT ASSEMBLIES
3" = 1'-0"



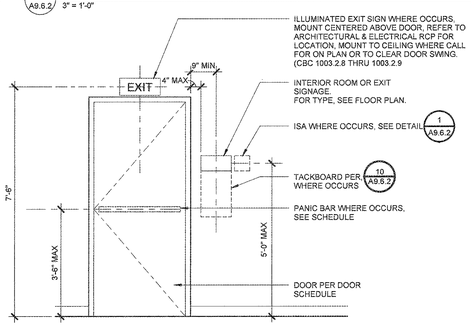
8 A9.6.2 TYP. ENTRANCE DOOR
3" = 1'-0"



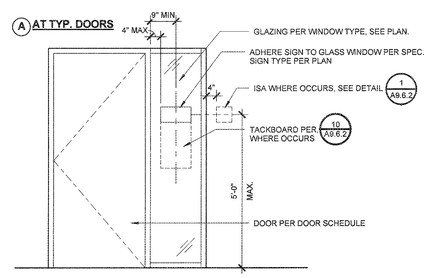
NOTE:

1. MOUNT SIGN AT 5'-0" MAX. A.F.F. AT BOTTOM OF FIRST SIGNAGE TEXT, TYP.
2. PROVIDE DIRECTION ARROWS AS REQUIRED PER PLAN
3. FOR MOUNTING ON GLAZING SEE SPEC. 4. SIGNS TO COMPLY WITH CBC SEC. 1003.2.8.6.1

3 A9.6.2 TACTILE EXIT SIGNAGE
3" = 1'-0"



A AT TYP. DOORS



B AT DOORS WITH SIDELIGHT

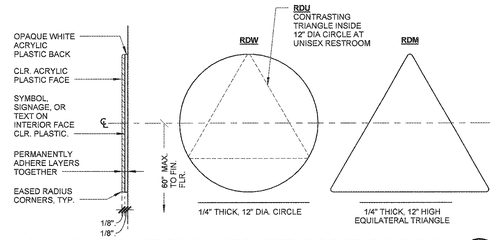
NOTE:

1. PROVIDE ONE SIGN FOR EACH DOOR. LOCATE SIGN MAX. 4" AWAY FROM DOOR STRIKE SIDE, UNO. WHERE THERE IS NO WALL SPACE ON STRIKE SIDE PLACE ON NEAREST ADJACENT WALL.
2. SEE GENERAL NOTES FOR TYP. SIGNAGE MATERIAL, THICKNESS, GRAPHICS, LETTERING, FASTENING, FINISH, BRAILLE REQUIREMENTS, ETC.

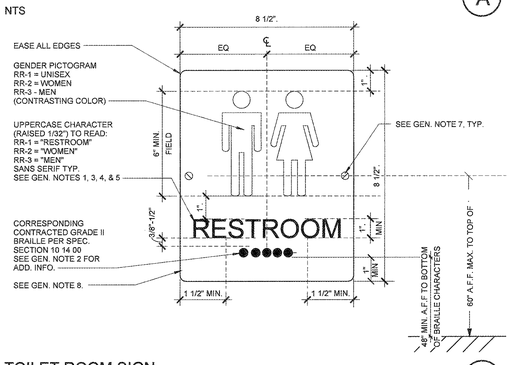
9 A9.6.2 TYP. INTERIOR DOOR SIGNAGE LOCATION
1/2" = 1'-0"

NOTES:

1. FOR MOUNTING LOCATIONS, SEE DETAIL 8/-

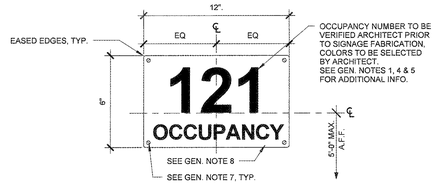


ACCESSIBLE TOILET ROOM GEOMETRIC DOOR SYMBOLS A
NTS



TOILET ROOM SIGN B
3" = 1'-0"

6 A9.6.2 ROOM ID/ TOILET ROOM SIGN/SYMBOL
3" = 1'-0"



4 A9.6.2 TYP. OCCUPANCY POSTING SIGNAGE AT ASSEMBLIES
3" = 1'-0"

LEGEND

GENERAL NOTES

1. CHARACTER TYPE: CHARACTERS ON SIGNS SHALL BE RAISED 1/32" (0.794 mm) MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CONTRACTED GRADE 2 BRAILLE. (SEE NOTE 2 BELOW)

2. BRAILLE: SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH SECTIONS 11B-703.3 AND 11B-703.4. SEE DETAIL 4/-

3. CHARACTER SIZE: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" (15.9 mm) AND A MAXIMUM OF 2" (51 mm) IN HEIGHT, 11B-703.2.5.

4. FINISH & CONTRAST: CONTRAST BETWEEN CHARACTERS, SYMBOLS, AND THEIR BACKGROUND MUST BE 70% MINIMUM AND HAVE A NON-GLARE FINISH. 11B-703.5.1.

5. PROPORTIONS: CHARACTERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 1:5 AND 1:10 11B-703.2.4.

6. ATTACH SIGN USING FLATHEAD COUNTERSUNK SCREWS, QUANTITY AND LOCATIONS SHOWN IN DETAILS, TO SOLID BACKING & ADHESIVE TO BACK.

7. FOR INTERIOR SIGNAGE USE PLATE OF 1/8" THICK PHOTO SENSITIVE ACRYLIC ETCHED TO FORM A SINGLE PLAQUE SIGN WILL BE A (2) TWO COLOR SIGN WITH A LIGHT BACKGROUND & DARK CHARACTERS. COLORS TO BE DETERMINED BY ARCHITECT.

8. FOR EXTERIOR SIGNAGE USE PLATE OF 1/8" ANODIZED ALUMINUM ETCHED TO FORM A SINGLE PLAQUE SIGN WITH (2) COLORS: LIGHT BACKGROUND & DARK CHARACTERS. COLORS TO BE DETERMINED BY ARCHITECT.

9. ALL ROOM LOCATIONS OF SIGNAGE SHALL BE REVIEWED BY OWNER BEFORE INSTALLATION.

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

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OFFICE OF REGULATION SERVICES
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AR: 03-117673
AC FLS SS FO
DATE DEC 1 2 2017

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

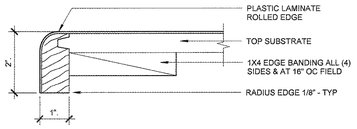
NO	REASON	DATE

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-18 STATE OF CALIFORNIA

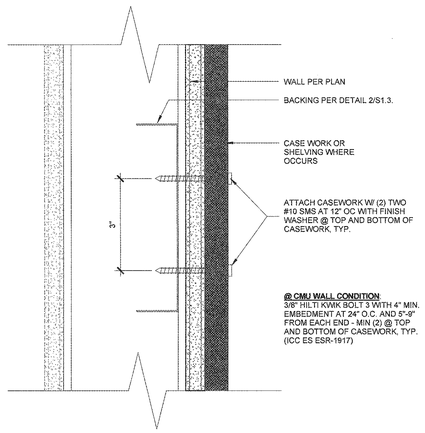
SHEET TITLE
SIGNAGE DETAILS

PROJECT NUMBER
913-4675-00

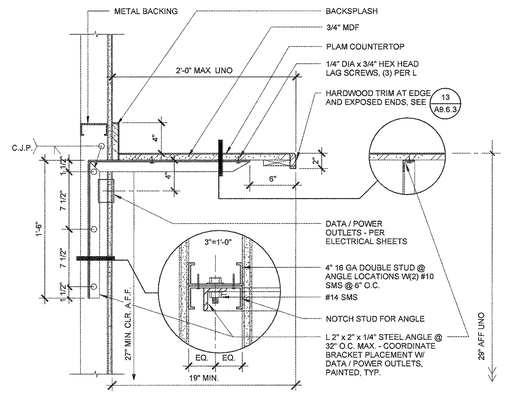
ISSUE DATE	SHEET NO:
12/01/16	A9.6.2



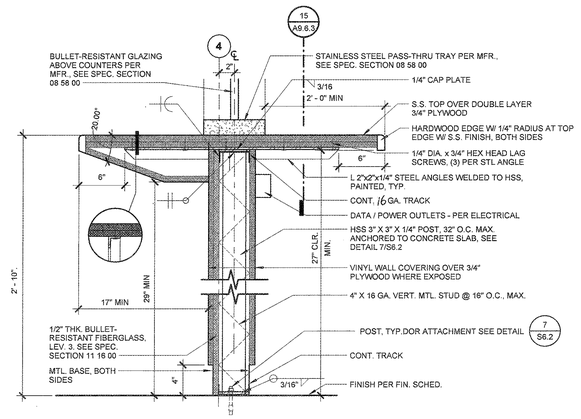
13 A9.6.3 TYP. EDGE DETAIL
6" = 1'-0"



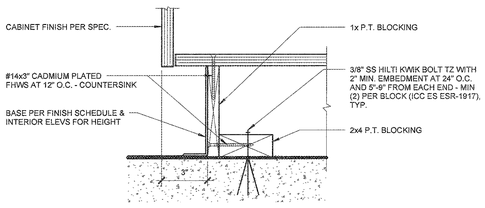
14 A9.6.3 CASEWORK BACKING / BLOCKING DETAIL
6" = 1'-0"



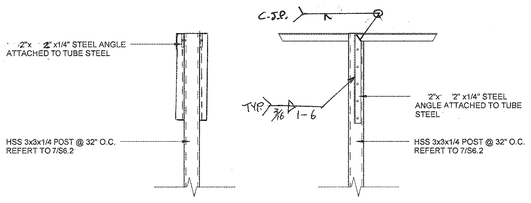
9 A9.6.3 TYP. COUNTERTOP SUPPORT
1 1/2" = 1'-0"



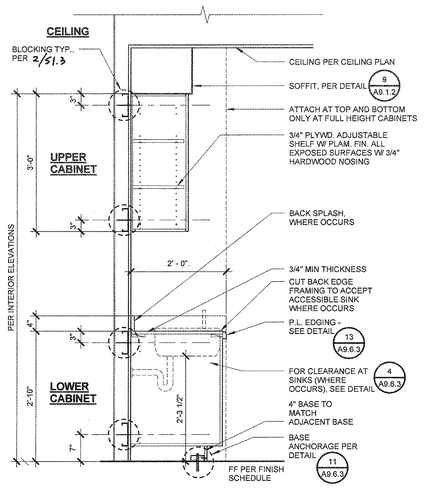
10 A9.6.3 COUNTER & TRANSACTION WINDOW
1 1/2" = 1'-0"



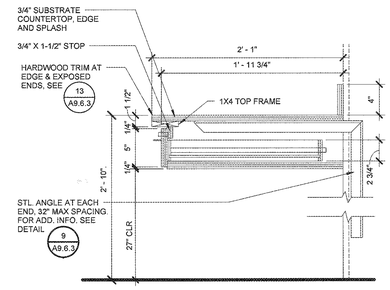
11 A9.6.3 TYP. CABINET BASE ANCHORAGE
3" = 1'-0"



15 A9.6.3 COUNTER & TRANSACTION WINDOW - PLAN
1 1/2" = 1'-0"



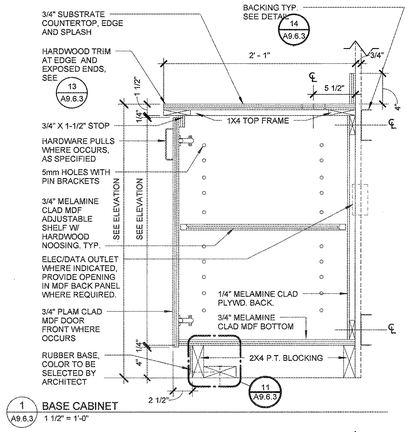
12 A9.6.3 TYP. CABINETRY ANCHORAGE
3/4" = 1'-0"



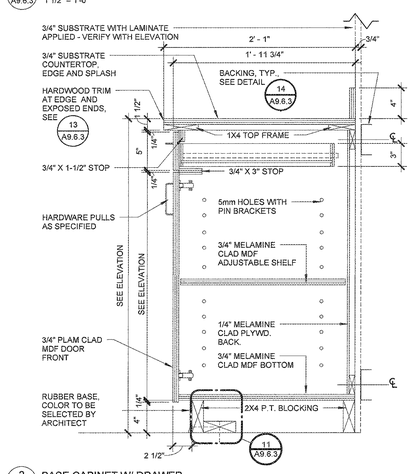
5. A9.6.3 HANGING DRAWERS
1 1/2" = 1'-0"

7. A9.6.3 TYP. UPPER CABINETS
1 1/2" = 1'-0"

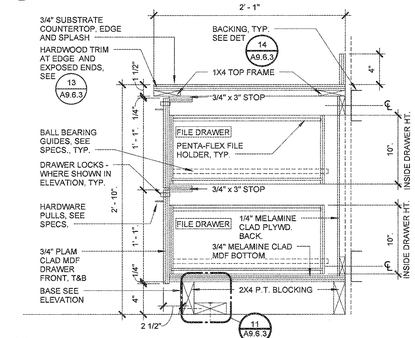
8. A9.6.3 W306 UPPER OPEN CABINETS
1 1/2" = 1'-0"



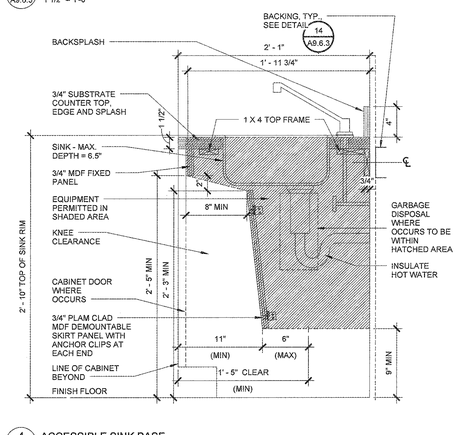
1 A9.6.3 BASE CABINET
1 1/2" = 1'-0"



2 A9.6.3 BASE CABINET W/ DRAWER
1 1/2" = 1'-0"



3 A9.6.3 BASE CABINET 2 FILE DRAWERS
1 1/2" = 1'-0"



4 A9.6.3 ACCESSIBLE SINK BASE
1 1/2" = 1'-0"

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RITA S. CARTER
NO. C35431
REN: 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
MILLWORK DETAILS

PROJECT NUMBER
913-4675-00

ISSUE DATE
12/01/16

SHEET NO.
A9.6.3

GENERAL NOTES

GENERAL

1. ALL WORK SHALL COMPLY WITH 2013 CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 2 OF 2 (INCLUDING ALL SUPPLEMENTS) AND ALL OTHER LOCAL OR STATE AGENCIES HAVING JURISDICTION OVER THIS PROJECT.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
4. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
7. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.
9. FOR TRENCHES OR EXCAVATIONS (5) FIVE FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, THE CONTRACTOR IS TO OBTAIN THE NECESSARY PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
10. REFER TO THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS, ETC. FOR DETAILS, DIMENSIONS, CONDITIONS, PITS, TRENCHES, DEPRESSIONS, OPENINGS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
11. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
12. THE SEISMIC ANCHORAGE OF MECHANICAL, ELECTRICAL, PLUMBING EQUIPMENT AND ARCHITECTURAL ITEMS SHALL CONFORM TO C.C.R. TITLE 24, 2013 CBC .
ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.

EARTHWORK

1. SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR PROPOSED CAMPUS POLICE STATION PROJECT (PROJECT NO. 1529-CR, DATED OCTOBER 24, 2016 BY GEOTEK INC. ; DSA109 DATED ON 1/16/2017, ADDENDUN. BY UNITED-HEIDER DATED ON 4/5/2017, 6/2/2017, & 7/26/2017)
2. THE ON-SITE SOILS HAVE VERY LOW POTENTIAL FOR EXPANSION.
3. SITE PREPARATION WILL REQUIRE THE REMOVAL OF BUILDING DEMOLITION DEBRIS, BURIED FOUNDATION, UTILITIES, ETC., AND REMEDIAL GRADING TO PROVIDE A RELATIVELY UNIFORM SOIL CONDITION FOR SUPPORT OF FUTURE SLABS, HARDSCAPE AND PAVEMENT.
4. ANY EXISTING FILL OR UNSUITABLE SOILS, AS DETERMINED BY THE GEOR, SHALL BE EXCAVATED AND REPLACED BY PROPERLY COMPACTED FILL.
5. EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS SO AS NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
6. ANY IMPORT FILL SOIL THAT MAY BE REQUIRED SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOR PRIOR TO IMPORTING.
7. ALL REQUIRED BACKFILL SHOULD BE MECHANICALLY COMPACTED IN LAYERS. ANY REQUIRED FILL SHOULD BE PLACED IN LOOSE LIFTS NOT MORE THAN 8" THICK AND COMPACTED TO AT LEAST 95% OF THE LABORATORY DRY DENSITY PER THE ASTM D1557 TEST METHOD. THE MOISTURE CONTENT OF FILL MATERIAL AT THE TIME OF COMPACTION SHOULD BE WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.
8. ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE ABOVE MENTIONED REPORT WHICH IS ON FILE WITH THE AOR AND IS A REQUIRED PORTION OF THE CONTRACT DOCUMENTS. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE GEOR. SEE SOIL REPORT FOR DETAILS OF SLAB-ON-GRADE.
9. WHERE DEEP EXCAVATION IS REQUIRED, AND THE NECESSARY SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EXCAVATIONS MAY BE SLOPED BACK IN LIEU OF SHORING. EXCAVATIONS SHALL BE DONE AS RECOMMENDED BY, AND UNDER THE OBSERVATIONS OF, THE GEOR. THE TOP OF EXCAVATIONS SHALL BE PROTECTED BY BARRICADES, ETC., TO PREVENT SURCHARGING AND BERMED TO PREVENT WATER RUN-OFF FROM ENTERING AND ERODING THE EXCAVATION. ADJACENT TO EXISTING BUILDINGS OR IMPROVEMENTS, THE EXCAVATION SHALL BE RESTRICTED TO 2:1 (HORIZONTAL TO VERTICAL) DOWNWARD FROM THE TOE OF THE EXISTING FOOTING, ETC. UNLESS SPECIAL PROCEDURES ARE IMPLEMENTED AS RECOMMENDED BY THE GEOR. ALL APPLICABLE REQUIREMENTS OF THE CALIFORNIA CONSTRUCTION AND GENERAL INDUSTRY SAFETY ORDERS, THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND THE CONSTRUCTION SAFETY ACT SHALL BE MET. IF AMPLE SPACE IS NOT AVAILABLE FOR THE REQUIRED EXCAVATION SLOPE, OR AS A CONSTRUCTION OPTION, SHORING MAY BE A POSSIBLE ALTERNATE. THE CONTRACTOR SHALL FOLLOW SHORING RECOMMENDATIONS BY THE GEOR AND CONFORM TO GENERAL NOTE NO. 8 CONCERNING CONSTRUCTION MEASURES.
10. THE ALLOWABLE SOIL BEARING PRESSURE FOR FOOTING ON THE COMPACTED SUBGRADE SOIL OR NEW COMPACTED FILL IS 2000 PSF FOR DEAD PLUS LIVE LOADS. THE MINIMUM DEPTH SHALL BE 18" BELOW LOWEST ADJACENT FINISH GRADE. A MINIMUM WIDTH OF 18" FOR CONTINOUS FOOTING AND 24" FOR ISOLATED FOOTING. THE ALLOWABLE PASSIVE PRESSURE IS 350 PSF PER FOOTING DEPTH AND THE COEFFICIENT OF FRICTION IS 0.35. BASE FRICTION AND PRESSIVE EARTH PRESSURE CAN BE COMBINED WITHOUT REDUCTION.

SHORING

1. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED AND IS TO BE PROVIDED BY THE CONTRACTOR AND CONFORM EARTHWORK TO NOTE NO. 11.
2. REFER TO THE REPORT OF GEOTECHNICAL INVESTIGATION FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING.
3. SHORING DRAWINGS (BY OTHERS), IF REQUIRED, ARE INCLUDED UNDER A SEPARATE PACKAGE.
4. SHORING/UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT OR REMOVED.

CONCRETE

1. ALL CONCRETE WORK SHALL COMPLY WITH ACI 318-11 AS MODIFIED BY CBC' 2013, TITLE 24, PART 2, VOLUME 2 OF 2.
2. ALL CEMENT SHALL CONFORM AT ASTM C-150, TYPE II MODIFIED OR TYPE V U.N.O. (SEE NOTE 18).
3. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C-33.
4. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTH:
ALL CONCRETE U.N.O. - 3000 PSI NORMAL WEIGHT.
CONCRETE IN CONTACT WITH SOIL, SLAB ON GRADE AND FOUNDATION - 5000 PSI, WATER-TO-CEMENT RATIO IS NO MORE THAN 0.40, MAX. CL^- CONTENT: 0.15% (FOR CORROSIVE SOIL PER SOIL REPORT SECTION 5.3.5).
5. CONCRETE DESIGN MIXES SHALL BE PREPARED BY THE APPROVED TESTING LAB USING ACI 318-11, SECTION 5.3 AND APPROVED BY THE STRUCTURAL ENGINEER.
6. PLACING OF ALL CONCRETE SHALL BE INSPECTED BY THE JOB INSPECTOR. INSPECTOR TO VERIFY THAT REINFORCING STEEL IS SECURELY SUPPORTED IN PLACE DURING THE POUR.
7. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER PRIOR TO POURING CONCRETE AND CONFORM TO ACI 318-11 AS MODIFIED BY CBC 2013, TITLE 24, PART 2, VOLUME 2 OF 2.
9. ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC., SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. ONLY CONCRETE BLOCKS SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
10. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR THEY MAY BE STRIPPED AFTER 3 DAYS AND THEN COVERED WITH BURLAP WHICH SHALL BE KEPT WET FOR AN ADDITIONAL 7 DAYS. NO CURING COMPOUNDS SHALL BE USED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
11. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
13. ALL CONCRETE SHALL BE VIBRATED IN PLACE DURING PLACING OF CONCRETE.
14. THE STRUCTURAL STEEL AND STEEL FORM WILL DEFLECT WHILE CONCRETE IS BEING PLACED ON IT. THIS WILL RESULT IN THE NEED TO ADJUST THE SCREEDS AFTER THE CONCRETE HAS BEEN PLACED TO PRODUCE A LEVEL CONCRETE SURFACE. ALSO, THERE WILL BE ADDITIONAL CONCRETE REQUIRED, WHICH IS TO BE ANTICIPATED, AND NO REQUEST FOR EXTRA COST WILL BE CONSIDERED.
15. NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
16. DRYPACK SHALL BE 1:3-1/2 PORTLAND CEMENT TO SAND WITH A MINIMUM 28 DAY STRENGTH OF 3000 PSI.
17. GROUT SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 7000 PSI.
18. SPECIAL CONCRETE REQUIREMENTS FOR COMBINED FOOTING FOUNDATION: USE TYPE II CEMENT. USE APPROVED RETARDING ADMIXTURE WHEN INGREDIENT MATERIALS CAUSE THE FRESH CONCRETE TEMPERATURE TO EXCEED 75° F. HOT-WEATHER-CONCRETING TECHNIQUES SHALL BE STRICTLY EMPLOYED DURING PERIODS OF HOT WEATHER. CURING OF CONCRETE AS NOTED IN THE SPECIFICATIONS AND CONCRETE NOTE NO. 10 SHALL BE STRICTLY FOLLOWED.

REINFORCING

1. ALL REINFORCING IN SEISMIC FRAME FOOTINGS, COMBINED FOOTINGS, GRADE BEAMS AND WELDING SHALL CONFORM TO ASTM A-706 SPECIFICATIONS, GRADE 60. ALL OTHER REINFORCING SHALL CONFORM TO ASTM-A615, GRADE 60 (EXCEPT #3 BARS MAY BE GRADE 60).
2. REINFORCING BARS SHALL BE SPLICED AND BENT IN STRICT ACCORDANCE WITH THE DRAWINGS AND DETAILS. NO KINKS ALLOWED. ALL BARS SHALL BE CLEAN PRIOR TO CONCRETE PLACEMENT.
3. PROVIDE DOWELS OF SAME SIZE AND NUMBER FROM ADJACENT POUR, BOTH VERTICALLY AND HORIZONTALLY TO MATCH TYPICAL REINFORCING SHOWN. LAPS TO BE IN ACCORDANCE WITH THE DRAWINGS AND DETAILS. DOWELS SHALL BE CLEANED AFTER POUR.
4. USE LOW HYDROGEN ELECTRODES, GRADE E-70 OR E-80, FOR WELDING OF REINFORCING BARS, IF WELDING IS REQUIRED. COMPLY WITH 1903A.7 OF CBC 2010.
5. SHOP DRAWINGS AND WELDING PROCEDURE SPECIFICATIONS FOR REINFORCING STEEL SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
6. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
7. THE CONTRACTOR SHALL FURNISH (AS INSTALLED) 2 TONS OF BARS IN ADDITION TO THAT REQUIRED BY THE DRAWINGS TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATIONS AS NOTED BELOW AND TO THE AISC SPECIFICATIONS FOR FABRICATION AND ERECTION:
   A. ALL WIDE FLANGE COLUMNS, WIDE FLANGE SHAPES W12 AND LARGER (U.N.O.): A-992, GRADE 50

B. ALL WIDE FLANGE BEAMS W10 AND SMALLER, ANGLES, CHANNELS AND MISCELLANEOUS:	A-36.
C. PIPE SECTIONS:	A-53, GRADE B.
D. TUBE SECTIONS:	A-500, GRADE B.
E. BASE PLATES & CONNECTION PLATES:	A-36

2. ALL WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY AND SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES (U.N.O.) AND THE ELECTRIC ARC PROCESS. SUBMIT WELDING PROCEDURE SPECIFICATIONS FOR APPROVAL PRIOR TO FABRICATION.
3. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION, 13TH EDITION, TABLE J.2.4.
4. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. ABRADED AREAS TO BE TOUCHED UP WITH GALVALOY. ALL TUBES AND/OR PIPES SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
5. HIGH STRENGTH BOLTS (H.S.B.) SHALL CONFORM TO ASTM A-325SC STANDARD SPECIFICATIONS TYPICALLY UNLESS NOTED OTHERWISE. OTHER BOLTS, AS NOTED, SHALL CONFORM TO ASTM A-307. ANCHOR ROD MATERIAL SHALL CONFORM TO ASTM F1554 GRADE 36.
6. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF A FABRICATOR LICENSED BY THE LOCAL BUILDING DEPARTMENT AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.
7. ALL FIELD WELDING, EXCEPT MINOR OR TACK WELDING, SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED WELDING INSPECTOR AND CONFORM TO WELDING REQUIREMENTS AS PER AWS D1.1: 2008.
8. PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
9. AT MOMENT CONNECTIONS: HIGH STRENGTH BOLTS SHALL BE FULLY TIGHTENED AFTER WELDING IS DONE AND WELDED CONNECTIONS SHALL BE INSPECTED BY NON-DESTRUCTIVE METHODS SUCH AS X-RAY, ULTRASONIC OR OTHERWISE. CHECK FOR LAMELLAR TEARING.
10. ALL COMPLETE PENETRATION GROOVE WELDS SHALL BE TESTED 100%. ALL C.P. WELD JOINTS WITH MEMBERS OF DIFFERENT THICKNESS OR WIDTHS SHALL BE TRANSITIONED PER AWS D1.1, U.N.O.
11. HIGH STRENGTH BOLTING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED INSPECTOR.

AUTOMATIC END WELDED STUDS

1. AUTOMATIC END WELDED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED SHEAR CONNECTOR OR ANCHOR STUDS (OR APPROVED EQUAL) PER ICC-ES ESR-2856. STUDS SHALL BE MANUFACTURED OF GRADES C-1010 THROUGH C1020 COLD-DRAWN STEEL WHICH CONFORMS TO ASTM SPECIFICATIONS A-108.
2. THE STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" AND UNDER AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE DSA INSPECTOR-OF-RECORD (IOR).

METAL DECKING

1. ALL ROOF AND FLOOR METAL DECK AND ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A653 SPECIFICATIONS.
2. DECK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A924 COMMERCIAL COATING CLASS G-60.
3. ALL DECK SHALL BE VERCO (UES ER-0217) AND THE TYPES AND GAUGES SHALL BE AS INDICATED ON THE DRAWINGS, AND AS FOLLOWS:

SECTION PROPERTIES

TYPE	GAUGE	DEPTH	I(MIN.) IN^4/ FOOT	S(MIN.) IN^3/ FOOT
HSB (ROOF) or PLB (ROOF)	20	1-1/2"	0.216	0.235
	18	1-1/2"	0.302	0.322
	16	1-1/2"	0.377	0.411
W2 FORMLOK	18	2"	0.555	0.510
	16	2"	0.694	0.639

4. DECKING SHALL HAVE MINIMUM 2" BEARING AT SUPPORTS.
5. WELDING OF DECKING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED INSPECTOR.
6. ALL FLOOR AND ROOF DECK RECEIVING CONCRETE SHALL BE VENTED.
7. CONDUITS ARE NOT ALLOWED IN CONCRETE SLAB ON METAL DECK.

EXPANSION ANCHOR BOLTS

1. CONCRETE: USE ONLY EXPANSION ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC-ES REPORT IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC193. ANCHOR SYSTEMS SHOULD BE APPROVED FOR USE IN CRACKED CONCRETE AND SEISMIC DESIGN CATEGORIES A-F PER SECTION 2.0 OF THE ICC EVALUATIONS SERVICES REPORT. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC-ES EVALUATION SERVICES REPORT FOR THE SPECIFIC ANCHOR, AND AS REQUIRED BY THE MANUFACTURER. ALL EXPANSION ANCHORS SHALL BE HILTI TZ (ICC ESR-1917 AT CONCRETE AND HILTI KB3 AT CMU, AS SPECIFIED ON DETAIL. ANY SUBSTITUTION MUST BE APPROVED BY SEOR) .
2. WHERE THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR APPLICABLE ICC-ES EVALUATION SERVICES REPORT CALL FOR THE APPLICATION OF AN INSTALLATION TORQUE, THE SPECIFIED TORQUE SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. THE SPECIFIED INSTALLATION TORQUE SHALL NOT BE EXCEEDED.
3. ANCHORS SHALL BE CARBON STEEL (INTERIOR) & STAINLESS STEEL (EXTERIOR) .
4. THE SPECIAL INSPECTOR SHALL BE ON THE JOBSITE CONTINUOUSLY DURING ANCHOR INSTALLATIONS, UNLESS OTHERWISE NOTED IN ICC-ES ESR, TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS, ANCHOR SPACINGS, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.
5. THE TENSION TESTING OF THE EXPANSION ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, THE ADDITIONAL TESTING REQUIREMENTS SHALL BE PERFORMED ACCORDING TO CBC 2010, SECTION 1916A.7
6. TEST QUANTITY OF ANCHORS AS NOTED BELOW:

APPLICATION	QUANTITY
STRUCTURAL	100% OF BOLTS
NON-STRUCTURAL	50% OF BOLTS
SILL PLATE BOLTING	10% OF BOLTS

7. ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE SPECIAL INSPECTOR.
8. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY TRANSMIT A MEASURABLE TENSION LOAD TO THE ANCHOR. ACCEPTABLE METHODS INCLUDE:
   A. USE OF A HYDRAULIC JACK, WHEREBY EITHER UNCONFINED OR CONFINED TESTING SHALL BE ACCEPTABLE;
   B. USE OF CALIBRATED SPRING LOADED DEVICES; OR
   C. USE OF A CALIBRATED TORQUE WRENCH FOR TORQUE-CONTROLLED EXPANSION ANCHORS.
9. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
   A. HYDRAULIC RAM METHOD: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR EXPANSION ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
   B. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF (1/2) TURN OF THE NUT.
10. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
11. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR.
12. IF REBAR IS ENCOUNTERED DURING THE DRILLING, THE CONTRACTOR SHALL IMMEDIATELY TERMINATE DRILLING AND CONTACT THE ENGINEER OF RECORD.
13. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
14. IF THE CONCRETE CRACKS DURING THE INSTALLATION OF THE ANCHOR, THE ANCHOR SHALL BE REMOVED OR ABANDONED.
15. REQUIRED TEST LOADS SHALL BE DETERMINED AS THE LESSER OF TWICE THE MINIMUM ALLOWABLE TENSION LOAD PROVIDED IN THE ICC-ESR REPORT FOR THE SPECIFIC ANCHOR OR 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT, AS SUMMARIZED IN THE TABLES BELOW:
- HILTI KB-TZ CARBON & STAINLESS STEEL (ICC-ES/ESR-1917)
- CRACKED CONCRETE, SEISMIC (ASD), CONDITION B

HILTI KB-TZ AT CONCRETE

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH, H^{EF} (INCHES)	INSTALLATION TORQUE (FT-LB)
3/8	2	25
1/2	2	40
1/2	3-1/4	40
5/8	3-1/8	60
5/8	4	60
3/4	3-3/4	110
3/4	4-3/4	110

HILTI KH-EZ (ESR-3027)

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH ^{EF} (INCHES)	INSTALLATION TORQUE (FT-LB)
1/4	1 5/8	18
3/8	2 1/2	40
1/2	2 1/4	45

HILTI KB-3 AT CMU (ESR-1835)

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH (INCHES)	INSTALLATION TORQUE (FT-LB)
1/4	2	4
3/8	2-1/2	15
1/2	3-1/2	25
5/8	4	65
3/4	4-3/8	120

16. TESTING SHALL OCCUR A MINIMUM OF 24 HOURS AFTER INSTALLATION OF THE SUBJECT ANCHORS.

ADHESIVE ANCHOR RODS, DOWELS AND REBAR IN HARDENED CONCRETE

1. CHEMICAL ANCHOR SYSTEMS:
   A. CONCRETE: HILTI HIT-RE-500 V3 (ICC-ES ESR 3814). USE ONLY ADHESIVE ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC-ES REPORT IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC308. ANCHOR SYSTEM SHOULD BE APPROVED FOR USE IN CRACKED CONCRETE AND SEISMIC DESIGN CATEGORIES A-F PER SECTION 2.0 OF THE ICC-ES EVALUATION SERVICES REPORT. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC-ES EVALUATION SERVICES REPORT FOR THE SPECIFIC ANCHOR, AND AS REQUIRED BY THE MANUFACTURER.
2. ANCHOR RODS:
HILTI HAS-E CONTINUOUSLY THREADED RODS OR HILTI HIS-N INTERNALLY THREADED INSERTS. ALL RODS SHALL BE ASTM A36 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B 18.22.1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS SHALL USE ASTM 563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS.
3. DOWELS:
ASTM A615 GRADE 60 REINFORCING STEEL.
4. REINFORCEMENT BARS:
ASTM A615 GRADE 60 STEEL.
5. REMOVE GREASE, OIL, RUST AND ANY OTHER LAITANCE FROM RODS AND DOWELS PRIOR TO INSTALLATION.
6. SPECIAL INSPECTION REQUIREMENTS WILL BE DICTATED BY SECTION 4.4 OF THE ICC-ES EVALUATION SERVICES REPORT. ANY SPECIAL INSPECTION SHALL VERIFY ANCHOR TYPE ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS,ANCHOR SPACINGS, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.
7. THE TENSION TESTING OF THE CHEMICAL ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, THE ADDITIONAL TESTING REQUIREMENTS SHALL BE ACCEPTABLE TO THE ENFORCEMENT AGENCY.
8. TEST QUANTITY OF ANCHORS AS NOTED BELOW:

APPLICATION	QUANTITY
STRUCTURAL	100% OF BOLTS
NON -STRUCTURAL	50% OF BOLTS
SILL PLATE BOLTING	10% OF BOLTS

9. ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE SPECIAL INSPECTOR.
10. WHERE ADHESIVE ANCHOR SYSTEMS ARE USED TO INSTALL REINFORCING DOWEL BARS IN HARDENED CONCRETE, ONLY 25% OF THE DOWELS NEED BE TESTED IF THE FOLLOWING CONDITIONS ARE MET:
   A. THE DOWELS ARE USED EXCLUSIVELY TO TRANSMIT SHEAR FORCES ACROSS JOINTS BETWEEN EXISTING AND NEW CONCRETE;
   B. THE NUMBER OF DOWELS IN ANY ONE MEMBER EQUALS OR EXCEEDS 12;
   C. THE DOWELS ARE UNIFORMLY DISTRIBUTED ACROSS SEISMIC FORCE RESISTING MEMBERS (SUCH AS SHEAR WALLS, COLLECTORS AND DIAPHRAGMS).
11. TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLABS ON GRADE WHERE THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM IS NOT REQUIRED.
12. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED WITHIN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
13. A HYDRAULIC CYLINDER SHALL BE USED TO APPLY THE TENSION TEST LOAD TO THE ANCHOR WITH THE CYLINDER SUPPORTED ON A LOADING PLATE HAVING A HOLE DIAMETER EQUAL TO 1.5 TO 2.0 TIMES THE ANCHOR HOLE DIAMETER (CONFINED CONFIGURATION) UNLESS OTHERWISE APPROVED BY ENFORCEMENT AGENCY.
14. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS: A. HYDRAULIC RAM METHOD: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD.
15. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
16. ALL HOLES FOR POST-INSTALLED ANCHORS SHALL BE DRILLED, CLEANED AND PREPARED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE APPLICABLE ICC-ESR. WHERE AN ANCHOR DOES NOT SET PROPERLY, OR FAILS A TENSION TEST, OR REINFORCEMENT IS ENCOUNTERED DURING DRILLING, THE DRILLED HOLE MAY NOT BE REUSED. ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT. THE MINIMUM SPACING BETWEEN AN ABANDONED HOLE AND A DRILLED HOLE USED FOR A POST-INSTALLED ANCHOR SHALL NOT BE LESS THAN 1-1/2 ANCHOR DIAMETERS UNLESS OTHERWISE APPROVED BY THE ENFORCEMENT AGENCY. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE STATE WILL DETERMINE A NEW LOCATION.
17. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.
18. REQUIRED TEST LOADS SHALL BE DETERMINED AS THE LESSER OF TWICE THE MAXIMUM ALLOWABLE TENSION LOAD PROVIDE IN THE ICC-ESR FOR THE SPECIFIC ANCHOR OR 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT, AS SUMMARIZED IN THE TABLE BELOW:

TENSION TEST LOADS (POUNDS)[1]
HILTI HIT-RE 500-V3 (ICC-ES ESR-3814)
CRACKED CONCRETE, SEISMIC (ASD), CONDITION B

NOMINAL ANCHOR DIAMETER	NOMINAL REBAR SIZE	EMBED. DEPTH H_{ef} (INCHES)	NORMAL WEIGHT CONC. f'c = 3000 PSI
			CARBON STEEL
3/8	#3	3"	3436
1/2	#4	6"	6919
5/8	#5	8"	10590
3/4	#6	10"	16365
7/8	#7	12"	21019
1	#8	14"	26581

1. VALUES SHOWN ARE FOR IDEALIZED CASE WITH NO REDUCTIONS FOR EDGE DISTANCE, SPACING, OR BASE THICKNESS. CONTACT ENGINEER FOR VALUES BASED ON ACTUAL CONDITIONS.

STRUCTURAL SHEET INDEX

S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S1.1	TYPICAL DETAILS
S1.2	TYPICAL DETAILS
S1.3	TYPICAL DETAILS
S1.4	TYPICAL DETAILS
S1.5	TYPICAL DETAILS
S2.1	FOUNDATION PLAN
S2.2	ROOF FRAMING PLAN
S4.1	FOUNDATION DETAILS
S5.1	MASONRY DETAILS
S5.2	MASONRY DETAILS
S5.3	MASONRY DETAILS
S6.1	STEEL DETAILS
S6.2	STEEL DETAILS
Grand total: 15	

GENERAL NOTES

NONE 1

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

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CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ✓ FLS ✓ SS
DATE DEC 1 2 2017

CONSULTANT

TTG
- STRUCTURAL
- MECHANICAL
- ELECTRICAL
- CIVIL

901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.ttgcorp.com Project No. 0216.4877.00

TERRY C. TSANG
No.S2992
Exp. 06/30/2018

PROJECT TEAM

PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE

GENERAL NOTES

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/17	S0.1

POWDER ACTUATED FASTENERS

1. ALL POWDER ACTUATED FASTENERS SHALL BE APPROVED FOR TYPE, APPLICATION AND INSTALLATION AND SHALL HAVE AN APPROVED ICC REPORT NUMBER.
2. THE USE OF POWDER DRIVEN FASTENERS, IN TENSION, IS LIMITED TO SUPPORT OF MINOR LOADS SUCH AS DRYWALL OR ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT, ETC. IN GENERAL, LOAD SHOULD BE LIMITED TO LESS THAN 100 POUNDS UNLESS APPROVED BY THE SEOR. POWDER ACTUATED FASTENERS SHALL NOT BE USED TO RESIST SEISMIC OR WIND LOADS.
3. FASTENERS SHALL NOT BE INSTALLED UNTIL THE CONCRETE HAS REACHED ITS DESIGNATED STRENGTH.
4. FASTENERS SHALL NOT BE INSTALLED IN CONCRETE WHOSE THICKNESS IS LESS THAN THREE TIMES THE PENETRATION REQUIRED, EXCEPT 1-1/8" PENETRATION IN 3-1/4" THICK FLOOR SLAB IS ACCEPTABLE.
5. THE MINIMUM DISTANCE FROM THE EDGE OF CONCRETE TO CENTER OF ANCHOR IS 3 INCHES.
6. FASTENERS IN THE UNDERSIDE OF CONCRETE SLABS ON METAL DECKING SHALL BE PLACED IN THE THICK PORTION OF THE SLAB.
7. FASTENERS SHALL BE INSTALLED BY A PRE-QUALIFIED OPERATOR ACCORDING TO THE ICC REPORT AND TESTED AS FOLLOWS: INSPECTOR SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL-OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD, OR 200 POUNDS, WHICHEVER IS GREATER, SHALL BE APPLIED TO THOSE 10 PINS IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PINS.. RANDOM TESTS UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS EXCEPT WHEN THE DESIGN LOAD IS 100 POUNDS OR MORE, ONE HALF OF THE PINS SHALL BE TESTED. SHOULD FAILURE OCCUR ON ANY PIN TESTED, ALL OF THE NEXT 20 INSTALLATIONS MUST BE TESTED AND UNFAIR PINS REPLACED.
8. WHEN INSTALLING POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID HITTING OR DAMAGING THE EXISTING REINFORCING BARS.

QUALITY CONTROL

1. UNLESS NOTED OTHERWISE, MATERIALS SHALL CONFORM TO THE PROVISIONS OF THE 2010 CALIFORNIA BUILDING CODE AND TESTS AND INSPECTIONS SHALL BE PERFORMED BY THE APPROVED TESTING AGENCY AND/OR THE JOB INSPECTOR WHO IS APPROVED BY DSA, THE ARCHITECT AND THE STRUCTURAL ENGINEER. COORDINATE AND WORK WITH THE DSA TESTING, INSPECTION AND OBSERVATION (TIO) PROGRAM FOR THE PROJECT.

DESIGN CRITERIA

GENERAL

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH ASCE/SEI 7-05 (MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES) AS MODIFIED BY 2010 CALIFORNIA BUILDING CODE AND SUPPLEMENTS.
2. LIVE LOADS:
   TYPICAL ROOF — 20 PSF (REDUCIBLE PER CODE)
   MECHANICAL ROOM — 50 PSF (REDUCIBLE PER CODE) AND INCLUDING 15 PSF PARTITION ALLOWANCE ON FLOOR.
3. WIND DESIGN DATA

1. BASIC WIND SPEED (3-SECOND GUST)	110 mph
2. WIND IMPORTANCE FACTOR, I AND OCCUPANCY CATEGORY	1.0, IV
3. WIND EXPOSURE	C

4. EARTHQUAKE DESIGN DATA

1. SEISMIC IMPORTANCE FACTOR, I AND OCCUPANCY CATEGORY	1.5, IV
2. MAPPED SPECTRAL ACCELERATIONS, S_S AND S_1	1.672g, 0.611g
3. SITE CLASS	D
4. SITE SPECIFIC SPECTRAL RESPONSE COEFFICIENTS, S_{DS} AND S_{D1}	1.114g, 0.611g
5. SEISMIC DESIGN CATEGORY	E
6. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)	SPECIAL REINFORCE MASONRY SHEAR WALLS IN BOTH DIRECTIONS, R=5, Ω_0 =2 1/2, C_d =3 1/2
7. SEISMIC BASE SHEAR	$V=C_SW$ = 0.334W

SEISMIC BRACING OF MECHANICAL SYSTEMS & FIRE SPRINKLERS

1. BRACING OF ALL DUCTS, PIPES, CONDUITS, FIRE SPRINKLERS, AND ANY OTHER SYSTEMS SHALL MEET 2013 CBC AND TITLE 24 REQUIREMENTS.
2. FIRE SPRINKLERS SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH THE 2010 VERSION OF NFPA13 AND SHALL HAVE ROD STIFFENERS ON ALL HANGER RODS ADJACENT TO LATERAL BRACING. (ROD STIFFENER SHALL BE PER PAGE 58 OF OSHPD OPA-0114).
3. PRE-APPROVED SYSTEMS SHALL BE USED AND HAVE "OPA" OSHPD APPROVAL
4. CONTRACTOR SHALL NOT MIX COMPONENTS OF TWO OR MORE PRE-APPROVED BRACING SYSTEMS. ONLY ONE PRE-APPROVED BRACING SYSTEM SHALL BE USED FOR RUN OF PIPE, DUCT OR CONDUIT. ANY SUBSTITUTION OF A COMPONENT OF A PRE-APPROVED BRACING SYSTEM REQUIRES DSA REVIEW AND APPROVAL
5. INDEPENDENTLY ENGINEERED SYSTEMS SHALL BE DESIGNED AND STAMPED BY A LICENSED CALIFORNIA STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SHOWING ALL BRACING LOCATIONS AND DETAILS OF ALL CONNECTIONS ARE REQUIRED FOR ALL PRE-APPROVED SYSTEMS. SUBMITTAL SHALL INCLUDE:
   A. REACTION AT SUPPORTS.
   B. REACTION AT BRACES.
   C. PRE-APPROVED SYSTEM ASSEMBLY DETAILS.
   D. SHOP DRAWINGS TO BE SUBMITTED FOR FINAL APPROVAL

METAL STUDS

1. METAL STUDS SHALL BE PER STEEL STUD MANUFACTURERS ASSOC. (OR APPROVED EQUAL). ICC ESR-3064P
2. ALL STEEL STUDS SHALL BE GALVANIZED.
3. STUD FRAMING SHALL BE IN ACCORDANCE WITH AISI, "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".
4. ALL 18GA (43mils) AND LIGHTER SECTIONS SHALL CONFORM TO ASTM A1003, STRUCTURAL GRADE 33 TYPE H, OR ASTM A653 SS GRADE 33. ALL OTHER SECTIONS SHALL CONFORM TO ASTM A1003 STRUCTURAL GRADE 50 TYPE H, OR ASTM A653 SS GRADE 50 CLASS 1.

MASONRY

1. CONCRETE BLOCKS SHALL BE OF SIZES SHOWN ON THE DRAWINGS, TYPE AND COLOR AS SELECTED BY THE ARCHITECT AND CONFORM TO ASTM C-90, GRADE N-1. BLOCK SHALL BE MEDIUM WEIGHT UNITS, fm = 1,900 PSI, f'm = 1,500 PSI. ALL CMU UNITS SHALL BE LAYED IN RUNNING BOND, UNLESS OTHERWISE ON THE DRAWINGS.
2. COARSE GROUT MIX SHALL BE 1:3:2 PORTLAND CEMENT TO SAND TO PEA GRAVEL WITH 1/10 PART LIME PUTTY OR HYDRATED LIME, 2000 PSI.
3. MORTAR MIX SHALL BE 1:3 PORTLAND CEMENT TO SAND WITH NOT MORE THAN ONE-HALF NOR LESS THAN ONE-QUARTER PART LIME PUTTY, TYPE M OR S, 1800 PSI.
4. ALL REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER (1/2" MIN.) OF GROUT AND VERTICAL BARS SHALL BE PLACED IN THE CENTER OF THE WALL UNLESS SHOWN OTHERWISE.
5. GROUT CELLS SOLID IN ALL WALLS. REINFORCING SHALL BE SECURELY HELD IN PLACE. GROUT IN 4'-0" MAXIMUM LOW LIFTS FOR CMU WALLS PER SECTION 1.19 OF BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
6. NO PIPES OR DUCTS SHALL BE PLACED IN MASONRY UNLESS NOTED OR DETAILED SPECIFICALLY.
7. BOLTS SHALL BE GROUTED SOLID WITH 1" MIN. GROUT BETWEEN BOLT AND MASONRY AT BLOCK FACE.
8. ALL CONCRETE TO RECEIVE MASONRY SHALL BE SANDBLASTED CLEAN.
9. BLOCK LAYING AND GROUTING TO BE CONTINUOUSLY INSPECTED BY SPECIAL INSPECTOR.

HIGH LIFT GROUTED CONSTRUCTION

1. WHERE HIGH LIFT GROUTING IS USED, CONFORM TO SECTION 1.19 OF BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
   IT SHALL BE APPROVED BY THE ARCHITECT IN ACCORDANCE WITH "TABLE 1.19.1 (OF REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
2. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF EACH POUR OF GROUT. ANY OVERHANGING MORTAR OR OTHER DEBRIS SHALL BE REMOVED FROM THE INSIDES OF CELL WALLS.
3. THE FOUNDATION OR OTHER HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED OF ALL LOOSE MATERIAL AND MORTAR DROPPINGS BEFORE EACH POUR.
4. THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING. ALL CELLS SHALL BE FILLED WITH GROUT.
5. AN APPROVED ADMIXTURE THAT REDUCES EARLY WATER LOSS AND PRODUCES AN EXPANSIVE ACTION SHALL BE USED IN THE GROUT.
6. HIGH LIFT GROUTING SHOULD COMPLY WITH DSA IR 21-2.10 AND 2010 CBC SECTION 2104A.5.1.2.3

LEGEND

MATERIALS

Earth
Concrete- Poured in Place
Metal Stud
Steel
Gravel
Grout or Drypack
Masonry
Concrete
Welded Wire Fabric
Footing Step
Drain / Overflow — ○ OR ●
Elevation
Difference in Elevation — -1 1/2

Moment Connection
Strut Brace
Hole In Beam
Full Height Connection Plate
Drag Beam
Bent Beam
Splice in Beam
Number of Shear Studs on Beam — (8)
Slab Depression — -6"
Top of Steel Framing Elevation above 1st Floor Elevation 0'-0" (Maintain constant slope) — 16'-0"

Detail
Section
Elevation
Bld'g. Section
Wall Section

ABBREVIATIONS

□	Diameter	Horiz.	Horizontal
#	Number of pounds	Intr.	Interior
@	At	Jt.	Joint
CL	Center line	Lt. Wt.	Lightweight
-3"	Slab depression	M.B.	Machine Bolt
A.B.	Anchor Bolt	Max.	Maximum
Anch.	Anchor	Mechl.	Mechanical
B.O.F.	Bottom of Footing	Mfr.	Manufacturer
Beam	Beam	Min.	Minimum
Bm.	Beam	Mtl.	Metal
Bott.	Bottom	N.I.C.	Not in Contract
Btwn.	Between	N.T.S.	Not to Scale
C.L.	Center Line	No.	Number
C.J.	Control Joint	o.c.	On Center
C.J.P	Complete Joint Penetration	P.D.F.	Power Driven Fasteners
Clr.	Clear	P.H.	Penthouse
Col.	Column	Pl.	Plate
Conc.	Concrete	Plcs.	Places
Cont.	Continuous	P.J.P.	Partial Joint Penetration
Det.	Detail	Reinf.	Reinforcing
Dim.	Dimension	S.	Footing Step
Dwg.	Drawing	S.F.R.S.	Seismic Force Resisting System
Dwl.	Dowel	Sched.	Schedule
E.F.	Each Face	Sect.	Section
E.W.	Each Way	Sepn.	Separation
Ea.	Each	Sim.	Similar
EL	Elevation	Spec.	Specification
Electl.	Electrical	Sq.	Square
Elev.	Elevator or Elevation	Std.	Standard
E.O.S.	Edge of Slab	Stiff.	Stiffener
Exist.	Existing	Stl.	Steel
Exp.	Expansion	Suppt.	Support
Extr.	Exterior	Sym.	Symmetrical
F.O.C.	Face of Concrete	T.C.J.	Typical Construction Joint
F.O.S.	Face of Stud	T.O.	Top of
F.O.W.	Face of Wall	T.O.S.	Top of Steel
Fdn.	Foundation	T.O.W.	Top of Wall
Fin.	Finish	Thk.	Thick
Flr.	Floor	Typ.	Typical
Frmg.	Framing	V.O.J.	Verify on Job
Ftg.	Footing	V.O.S.	Verify on Site
Ga.	Gauge	Vert.	Vertical
Galv.	Galvanized	w/	With
Gr. Bm.	Grade Beam	Wt.	Weight
H.S.B.	High Strength Bolt	U.N.O.	Unless Noted Otherwise

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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TTG
• STRUCTURAL
• MECHANICAL
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• CIVIL
901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.ttgcorp.com Project No. 0216.4677.00

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No.S2992
Exp. 06/30/2018
STRUCTURAL
STATE OF CALIFORNIA

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RITA S. CARTER
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SHEET TITLE
GENERAL NOTES

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/17
SHEET NO. S0.2

FOOTINGS POURED AGAINST EARTH ..... 3"

FORMED SURFACES BELOW GRADE ..... 2"

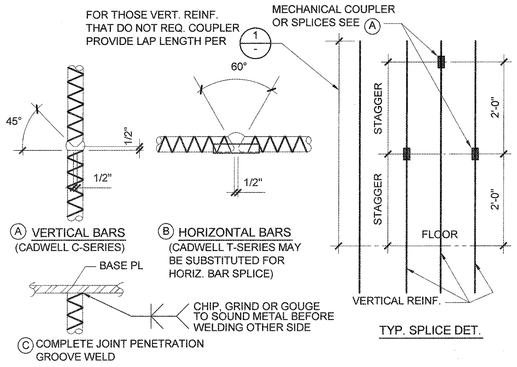
WALLS: EXTERIOR SURFACES ABOVE GRADE ..... 2"

INTERIOR SURFACES ..... 1"

STRUCTURAL SLABS, TOP AND BOTTOM ..... 3/4"

SLABS ON GRADE, TOP ..... 1"

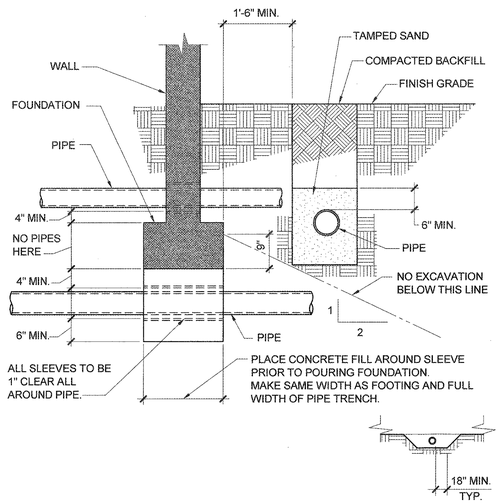
CONC. PROTECTION FOR REINF. STEEL — NONE — 12



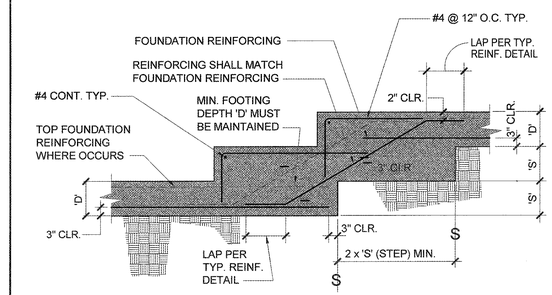
NOTES:

1. A PRE-QUALIFICATION TENSION TEST SHALL BE MADE BY AN APPROVED TESTING LABORATORY ON SAMPLES OF EVERY SIZE BAR BEING WELDED.
2. MATERIALS, CONDITIONS AND WELDING PROCEDURES UTILIZED SHALL COMPLY WITH THE CURRENT APPLICABLE BUILDING CODE AND THE REQUIREMENTS OF THE GOVERNING INSPECTION AGENCY AND APPROVED BY DSA.
3. ALL COSTS INCURRED FOR OBTAINING APPROVALS SHALL BE BORNE BY THE GENERAL CONTRACTOR.
4. REINFORCING COUPLERS IN LIEU OF BUTT WELD AS SHOWN ABOVE TO BE PROVIDED AT CONTRACTORS OPTION. COUPLERS SHALL BE TAPERED THREADED SPLICING COUPLERS (ACCORDING TO ASTM 439.4R & WITH ICC APPROVAL) TO DEVELOP THE FULL ACI TENSION SPLICE STRENGTH REQUIREMENTS 125% OF SPECIFIED YIELD.

TYP. REINF. WELD SPLICE DETAIL — NONE — 11



TYPICAL PIPE TRENCH DETAIL — NONE — 10



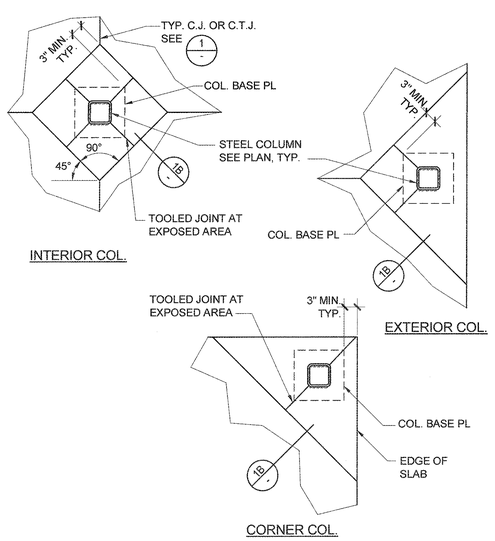
'S' (FOOTING STEP = 1'-6" MAX.)

S FOOTING STEP SHOWN THUSLY ON PLANS

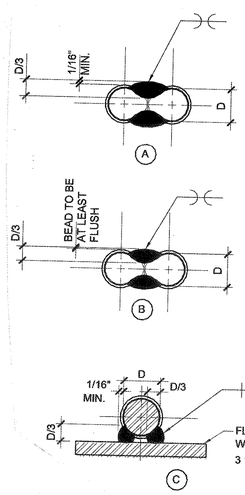
NOTE:

1. STEP FOOTING WHERE SHOWN ON PLANS, AND AS REQUIRED TO MAINTAIN MINIMUM FOOTING DEPTH BELOW GRADE, AND AS REQUIRED TO ACCOMMODATE PIPES PER TYPICAL PIPE TRENCH DETAIL.
2. EXACT LOCATION AND NUMBER OF STEPS FOR FOUNDATION WILL NOT BE SHOWN ENTIRELY ON PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORD. AND VERIFY W/ CIVIL, PLUMBING, LANDSCAPE AND ELECT'L. DWG.

TYPICAL STEPPED FOOTING DETAIL — NONE — 9



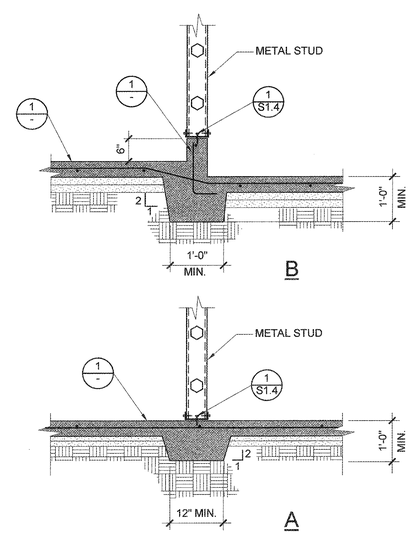
TYPICAL ISOLATION JOINT DETAIL — NONE — 8



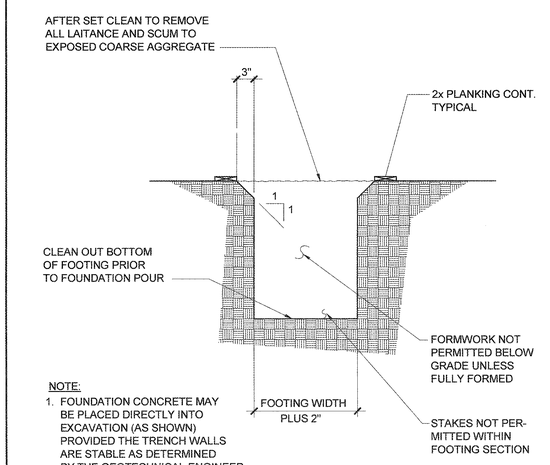
MIN. WELD REQUIREMENT FOR LAP WELDING		
BAR SIZE	WELD DIAGRAM	WELD LENGTH (EA. SIDE)
# 2	A	2"
# 3		2"
# 4	C	2 1/2"
# 5		3"
# 6	B	3 1/2"
# 7		4"

1. #8 BAR & LARGER SHALL BE C.P. BUTT WELDED, SEE 11
2. NO WELDING WITHIN 2D OF BEGINNING OF BAR BEND.
3. SEE GENERAL NOTES & REINF. STEEL NOTES.

REBAR WELDING DETAIL — - — 6



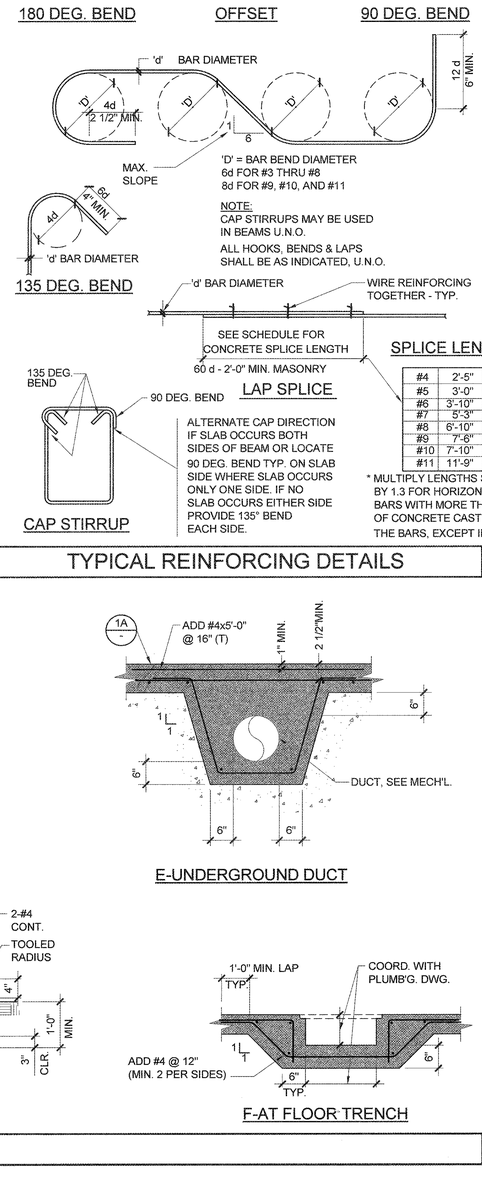
TYP. NON-BEARING WALL DETAIL — NONE — 5



NOTE:

1. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO EXCAVATION (AS SHOWN) PROVIDED THE TRENCH WALLS ARE STABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. FOUNDATIONS SHALL BEAR ON ACCEPTABLE SOIL, PER THE SOIL REPORT, AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

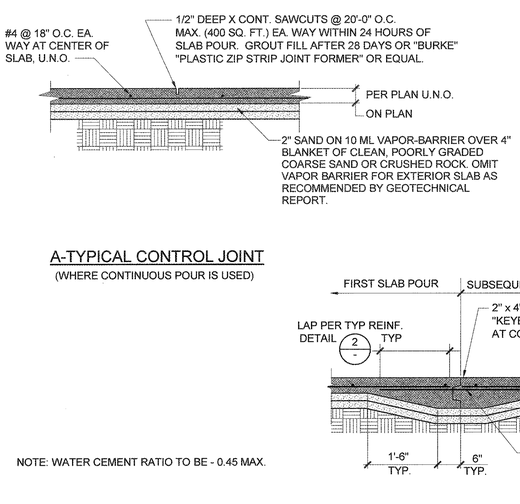
TYP. MANDATORY TRENCH FORMING — NONE — 3



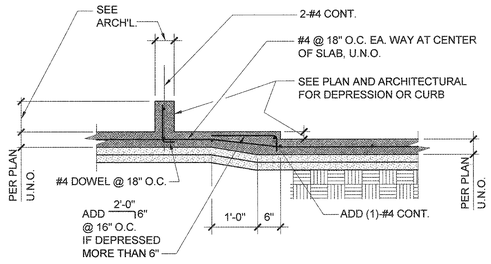
#4	2'-5"
#5	3'-0"
#6	3'-10"
#7	5'-8"
#8	6'-10"
#9	7'-6"
#10	7'-10"
#11	11'-9"

* MULTIPLY LENGTHS SHOWN BY 1.3 FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS, EXCEPT IN WALLS.

TYPICAL REINFORCING DETAILS — NONE — 2

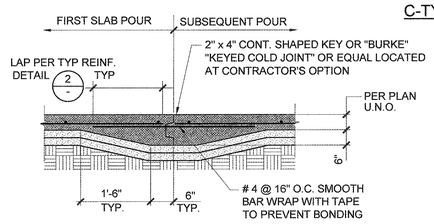


A-TYPICAL CONTROL JOINT
(WHERE CONTINUOUS POUR IS USED)



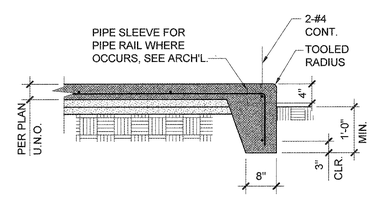
C-TYPICAL SLAB DEPRESSION/CURB

E-UNDERGROUND DUCT



NOTE: WATER CEMENT RATIO TO BE - 0.45 MAX.

B-TYPICAL CONSTRUCTION JOINT



D-TYPICAL EDGE OF SLAB

F-AT FLOOR TRENCH

TYPICAL SLAB ON GRADE DETAILS — NONE — 1

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1300 Dove Street, Suite 100
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CONSULTANT
TTG • STRUCTURAL • MECHANICAL • ELECTRICAL • CIVIL
901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.8915 Fax: 909.477.8916
www.ttgcorp.com Project No. 0216.4877.00

REGISTERED PROFESSIONAL ENGINEER TERRY C. TSANG No.S2992 Exp. 06/30/2018 STRUCTURAL STATE OF CALIFORNIA

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PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
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DRAWN BY
GERARDO CARRANZA

REVISIONS		
NO	REASON	DATE

SEAL / SIGNATURE

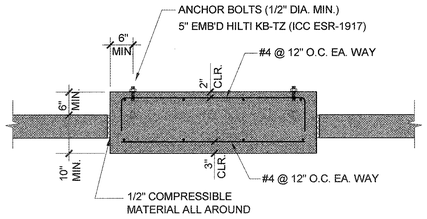
SHEET TITLE
TYPICAL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/17	S1.1

NOT USED | - | 12

TYPICAL ISOLATION PAD DETAIL | NONE | 9



NOTES:

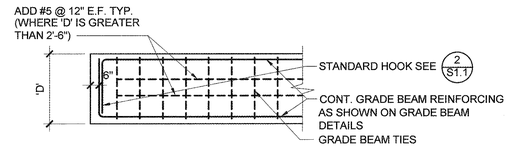
SEE PLUMBING, MECHANICAL, AND ELECTRICAL DWGS.

FOR THE FOLLOWING:

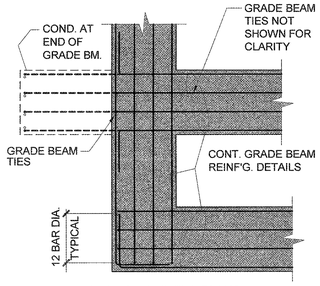
1. LOCATION AND DIMENSIONS OF PADS.
2. LOCATION AND SIZE OF ANCHOR BOLTS
3. DETAILS OF SUPPORTS, ISOLATORS OR OTHERS.
4. EXACT LOCATION AND SIZE OF PAD WILL NOT BE SHOWN ENTIRELY ON PLANS. CONTRACTOR TO COORD. AND VERIFY WITH MECH'L., ELECT'L., KITCHEN, PLUMBING AND ARCH'L.

NOT USED | NONE | 6

TYP. GRADE BM. AND FTG. REINFORCING | NONE | 3



TYP. END ELEV. OF GRADE BEAM



TYP. INTERSECTION AND END PLANS

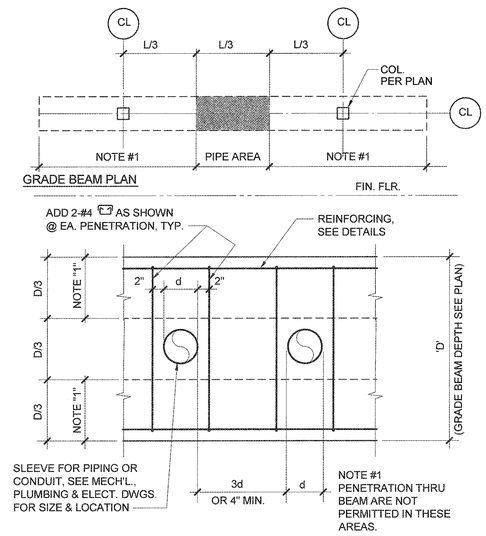
NOTE:

GRADE BEAM REINFO., TOP LAYER OF HIGH REBARS & BOTTOM LAYER OF LOW REBARS 90° BEND FOR 50% OF REBARS, REMAINDER TO BE STRAIGHT. ALTERNATE STRAIGHT BAR AND BENT BAR.

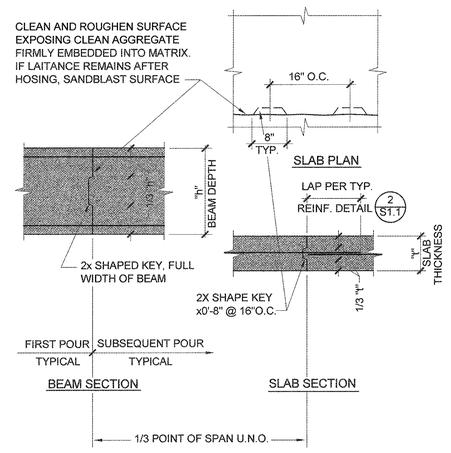
NOT USED | - | 11

TYPICAL CONCRETE PAD DETAIL | NONE | 8

PIPE AND CONDUIT THRU GRADE BEAM | NONE | 5

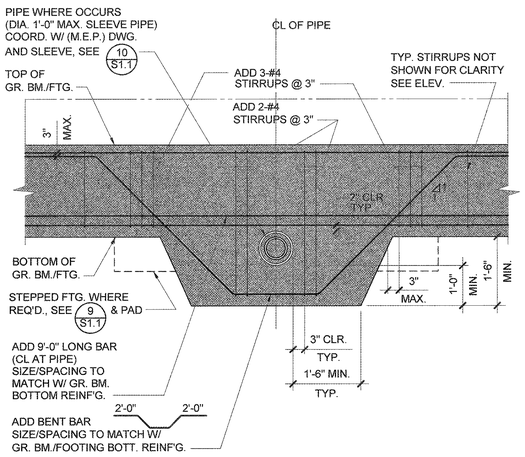


TYP. CONST. JOINT DETAILS | NONE | 2



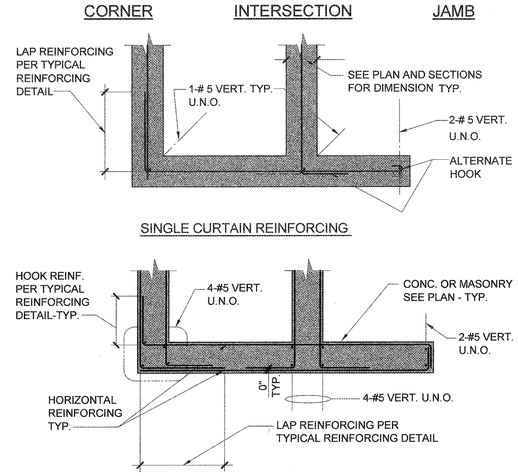
NOT USED | - | 7

TYP. DETAIL PIPE THRU GR. BM./FTG. | NONE | 4

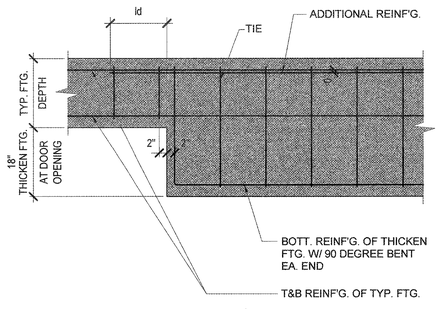


NOTE: PIPE LOCATED AT MIDDLE THIRD OF GR. BM./FOOTING, SEE 5 - AND BELOW GR. BM./FOOTING, SEE 10 S1.1 ,TYP.

TYP. REINFORCING INTERSECTION DET. | NONE | 1



TYPICAL THICKEN FTG. ELEVATION | NONE | 10



NOT USED | - | 12

TYPICAL ISOLATION PAD DETAIL | NONE | 9

NOT USED | NONE | 6

TYP. GRADE BM. AND FTG. REINFORCING | NONE | 3

NOT USED | - | 11

TYPICAL CONCRETE PAD DETAIL | NONE | 8

PIPE AND CONDUIT THRU GRADE BEAM | NONE | 5

TYP. CONST. JOINT DETAILS | NONE | 2

TYPICAL THICKEN FTG. ELEVATION | NONE | 10

NOT USED | - | 7

TYP. DETAIL PIPE THRU GR. BM./FTG. | NONE | 4

TYP. REINFORCING INTERSECTION DET. | NONE | 1

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SHEET TITLE

TYPICAL DETAILS

PROJECT NUMBER

913-4675-01

ISSUE DATE

11/21/17

SHEET NO.

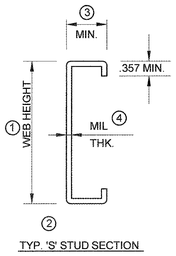
S1.2

MAXIMUM SPAN FOR CEILING JOIST INTERIOR STEEL STUDS, 'S' SECTIONS

TYPE \ MILS SPACING	33	43	54
400S137	16" 7'-4"	9'-10"	
600S137	16" 11'-0"	13'-4"	16'-0"

MAXIMUM HEIGHT FOR NON-BEARING INTERIOR STEEL STUDS, 'S' SECTIONS

TYPE \ MILS SPACING	33	43	54
362S137	16" 16'-9"	18'-2"	19'-6"
400S137	16" 18'-1"	19'-8"	21'-0"
600S137	16" 24'-11"	27'-2"	29'-1"



TYP. 'S' STUD SECTION

NOTES:

GENERAL:

1. METAL STUDS SHALL COMPLY W/ ICC ESR-3064P METAL STUD EFFECTIVE PROPERTIES ARE: Fy=50ksi 54 MIL SECTIONS. Fy=33ksi FOR 43 AND 33 MILS SECTIONS.
2. 1 2 3 4 362S137-33 SEE MANUFACTURERS CALL-OUT FOR (1) STUD DEPTH, (2) STUD STYLE, (3) FLANGE WIDTH AND (4) STUD THICKNESS

CEILING JOIST:

1. ALL DBL JOIST TO BE 54 MILS.
2. TOP OF ALL CEILING JOIST SHALL BE BRACED AT 48" O.C. MAX.
3. CEILING D.L. = 6 PSF L.L.= 10PSF
4. PROVIDE DOUBLE JOIST ON EA. SIDE OF CEILING ACCESS OPENING TYP.

PARTITIONS:

1. ALL TRACKS TO BE ONE MIL THICKER THAN STUDS OR JOIST FRAMING TO THEM UNLESS THICKER MILS REQUIRED AS NOTED BELOW OR NOTED OTHERWISE:
   A) PERIMETER WALLS = 33 MILS MIN.
2. ALL STUDS SUPPORTING DBL JOIST TO BE 54 MILS.
3. ALL PARTITIONS SUPPORTING ANY OF THE FOLLOWING ITEMS SHALL BE 43 MILS:
   A) HUNG CABINETS.
   B) FREE STANDING CABINETS AND EQUIPMENT TALLER THAN 36" SHALL BE ANCHORED TO WALL. SEE ARCH'L.

TRACK SECTION PROPERTIES

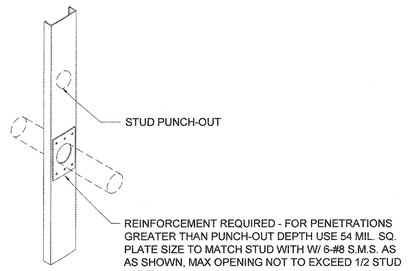
SECTION	Sx (in^3)	Ix (in^4)	AREA IN^2	SECTION	Sx (in^3)	Ix (in^4)	AREA IN^2
362T150-33	0.264	0.499	0.229	600T150-33	0.517	1.590	0.311
362T150-43	0.343	0.650	0.298	600T150-43	0.673	2.072	0.405
362T150-54	0.431	0.823	0.374	600T150-54	0.843	2.611	0.509
400T150-33	0.300	0.622	0.262	162 T125-33	0.087	0.077	0.143
400T150-43	0.390	0.811	0.315				
400T150-54	0.489	1.025	0.396				

METAL STUD SECTION PROPERTIES

SECTION	Sxx (in^3)	Ixx (in^4)	AREA IN^2	SECTION	Sxx (in^3)	Ixx (in^4)	AREA (IN^2)
362S137-33	0.264	0.479	0.336	600S137-33	0.527	1.582	0.318
362S137-43	0.340	0.616	0.306	600S137-43	0.681	2.042	0.413
362S137-54	0.417	0.756	0.379	600S137-54	0.839	2.518	0.514
400S137-33	0.301	0.603	0.249	250S137-43	0.208	0.261	0.255
400S137-43	0.388	0.776	0.303	350S137-43	0.324	0.568	0.300
400S137-54	0.477	0.953	0.421				

CLG. JOIST, PARTITION SCHED. AND METAL 'S' STUDS SECTION PROPERTIES

NONE | 9

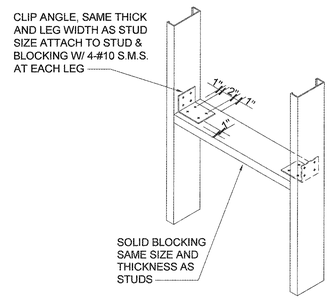


NOTES:

1. FLANGES SHALL NOT BE NOTCHED OR CUT.
2. PRIOR VERIFICATION BY STRUCTURAL IS REQ'D. FOR ANY OPENINGS LOCATED AT CONCENTRATED LOADS AND BEARING ENDS.
3. FOR UNPUNCHED MEMBERS OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO ANY FIELD PENETRATIONS.
4. OPENING LARGER THAN PUNCH-OUT SHALL NOT BE PERMITTED IN MID-THIRD OF THE STUD HEIGHT.

ALLOWABLE STUD WEB PENETRATIONS

NONE | 11

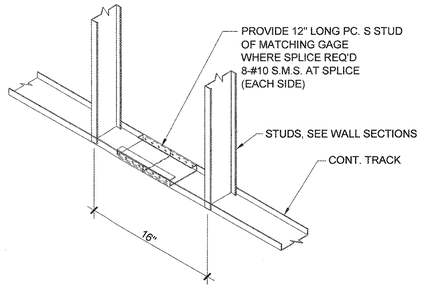


NOTES:

1. WHERE BLOCKING MATERIAL THICKNESS ALLOWS, NOTCH AND BEND TRACK 90° FOR CONNECTION.
2. WHERE PROVISIONS ARE PROVIDED FOR TRANSFER OF FLANGE FORCES TO SOLID BLOCKING, BLOCKING NEED NOT BE THE FULL DEPTH OF THE MEMBER.

SOLID BLOCKING AT STUDS

NONE | 8



NOTE:
PROVIDE SLOTTED TRACK WITH SAME GAGE AT TOP TRACK WHERE SLIP TRACK SYSTEM OCCURS.

TOP AND BOTTOM TRACK SPLICE

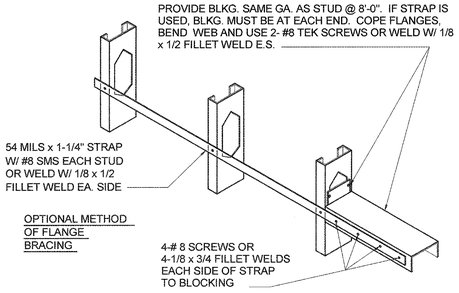
NONE | 10

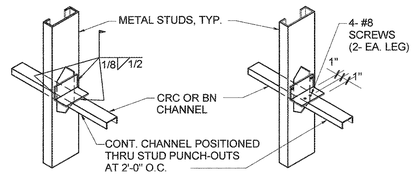
NOT USED

- | 7

STEEL STUD FLANGE BRACING DETAIL

NONE | 3





BRIDGING CHANNEL WELD-ATTACHED USING BRIDGE CLIP

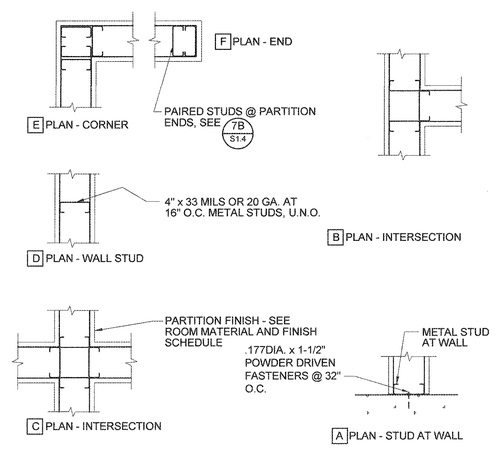
BRIDGING CHANNEL SCREW-ATTACHED USING BRIDGE CLIP

NOTE:

1. USE THIS BRACING AT MID HEIGHT FROM FLOOR TO FLOOR, AND SPACING SHALL NOT EXCEED 4'-0" O.C.
2. PROVIDE STRAP ON SIDE WITH NO FINISH MATERIAL ON WALL. IF NO FINISH ON EITHER SIDE, PROVIDE STRAP ON EACH SIDE.
3. BRACING NOT REQUIRED WHERE GYP. BOARD OCCURS ON BOTH SIDES OF PARTITION WALL.

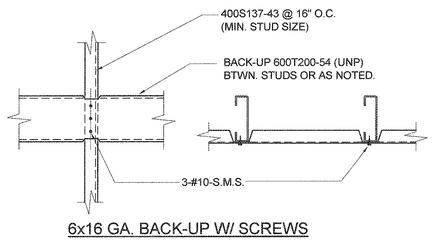
TYP DET. AT WALL INTERSECTIONS

NONE | 5



NOT USED

- | 4



6x16 GA. BACK-UP W/ SCREWS

BACKING DETAIL

NONE | 2

NOT USED

- | 1

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REVISIONS

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TYPICAL DETAILS

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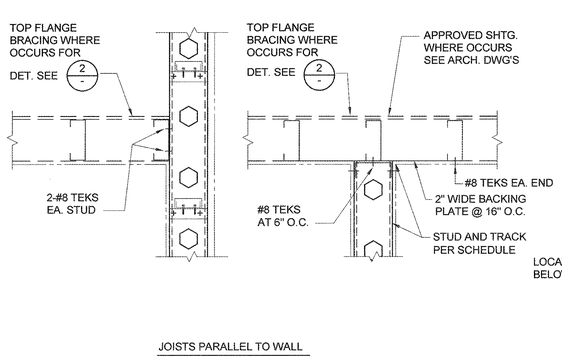
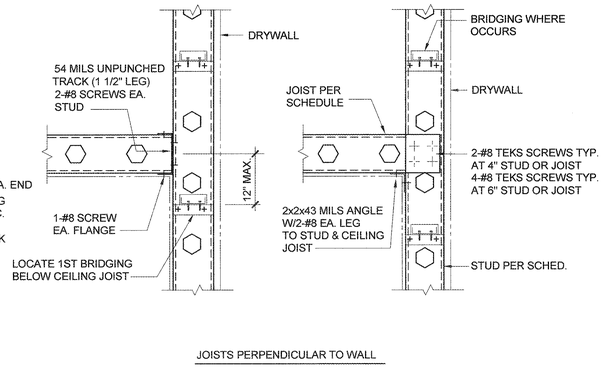
SHEET NO. S1.3

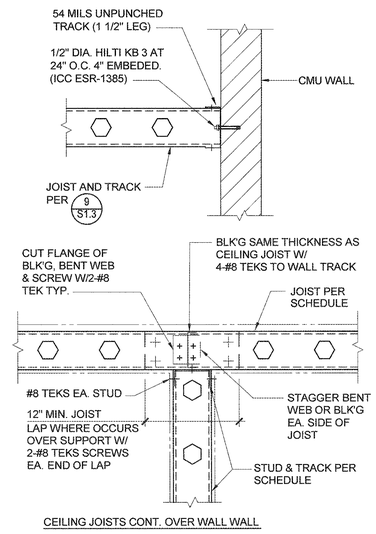
NOT USED | - | 12



JOISTS PARALLEL TO WALL

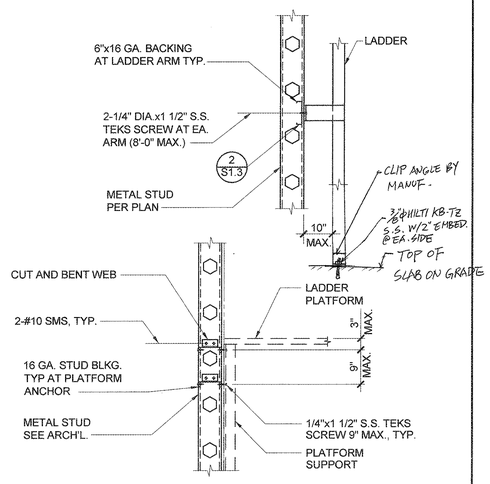


JOISTS PERPENDICULAR TO WALL



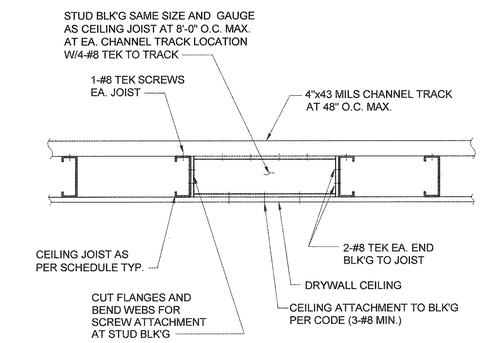
CEILING JOISTS CONT. OVER WALL WALL

NOT USED | - | 11



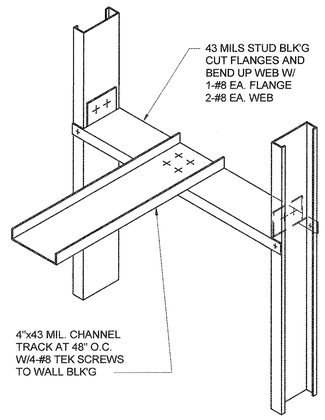
NOTE:
OMIT BLOCKING WHERE PLATFORM SUPPORT IS ANCHORED DIRECTLY TO METAL STUD.

LADDER TO STUD CONNECTION DET. | NONE | 8



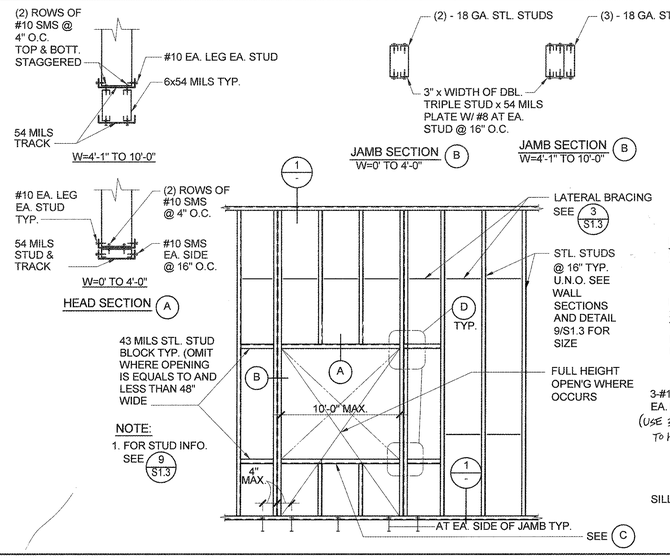
NOTE:
BRACING NOT REQUIRED WHERE APPROVED CONTINUOUS SHEATHING ATTACHED TO TOP OF JOIST OCCURS. SEE ARCH. DWG'S FOR LOCATION.

TYP. CEILING JST BRACING & ANCHOR AT STUD WALL | NONE | 2



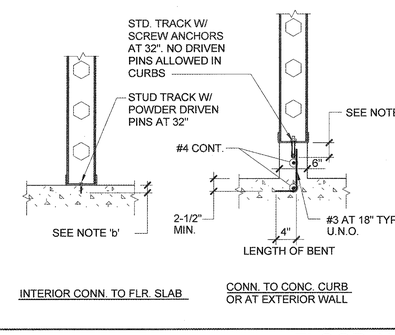
END ANCHORAGE OF CHANNEL TRACK

NOT USED | - | 10



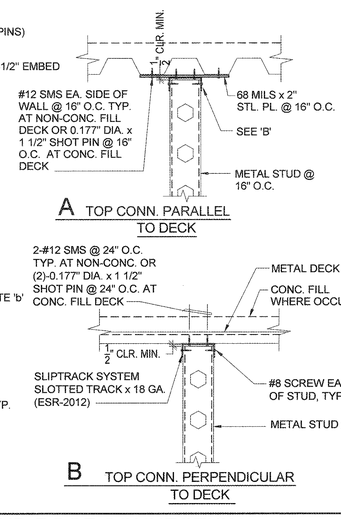
SILL SCHEDULE	
SILL LENGTH	
UP TO 4'-0"	NOT REQ'D
4'-1" TO 10'-0"	54 MILS

TYP. INTERIOR NON-BEARING WALL FRAMING DETAIL | NONE | 7



INTERIOR CONN. TO FLR. SLAB

CONN. TO CONC. CURB OR AT EXTERIOR WALL



NOTE:
TRACK FASTENERS (UNLESS NOTED OTHERWISE)

a) TYPE: HILTI LOW VELOCITY POWDER DRIVEN FASTENER (DRIVE PINS) (ICC ESR 1663) HILTI KH-EZ SCREW ANCHOR (ICC ESR 3027)

b) POWDER DRIVEN PIN (PDP): 0.177 DIAMETER x 1-1/2" LONG MIN. 1-1/2" EMBED SCREW ANCHOR: 3/8" DIAMETER x 2 1/2" EMBED.

c) SPACING: 32" O.C. MAX. AND 6" MAX. FROM ENDS.

d) FASTENERS SHALL NOT BE DRIVEN OR PLACED UNTIL CONCRETE HAS SET 14 DAYS MIN. AND SHALL NOT BE PLACED CLOSER THAN 3" TO THE EDGE OF CONCRETE.

A TOP CONN. PARALLEL TO DECK

B TOP CONN. PERPENDICULAR TO DECK

C TYP. BACKING CONN.

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR STUD LAYOUT, SUSPENDED WALLS, SPECIAL SOFFITS AND WALL BRACING DETAILS.

METAL STUDS

1. METAL STUDS SHALL BE SSMA METAL SYSTEMS OR EQUAL, SEE GENERAL NOTES
2. PROVIDE STUD WALL BRACING PER DETAIL 3/S1.3 AT ALL STEEL STUDS WITH WALL FINISH ON ONE SIDE ONLY.
3. SEE 9/S1.3 FOR SECTION PROPERTIES AND STUD SIZES.
4. BOLT HOLES IN TRACK SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT SPECIFIED, UNLESS NOTED OTHERWISE

FLOOR AND ROOF CONNECTION | NONE | 1

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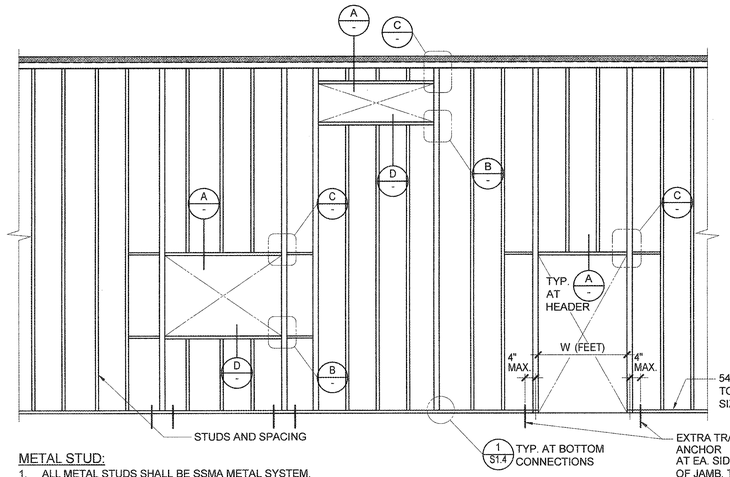
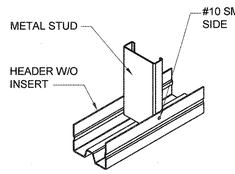
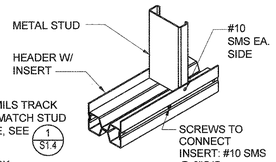




A HEADER WITHOUT INSERT
W=0' TO 4'-0"



A TYPICAL HEADER W/ INSERT UER 0286
W=4'-0" TO 14'-0"

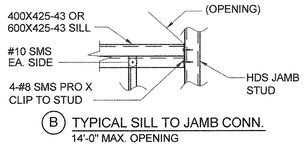
METAL STUD:

1. ALL METAL STUDS SHALL BE SSMA METAL SYSTEM, TYP. @ 16" O.C. U.N.O. SEE 9 S1.3 FOR INTERIOR METAL STUD SIZE AND PROPERTIES.
2. HEADER SHALL BE PRO-X SYSTEM (UER 0286), SEE ARCH'L. DWG. FOR WALL THICKNESS & OPENING SIZE.

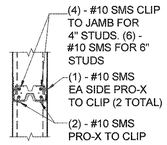
OPENING WIDTH (W)	HEADER SCHEDULE
4'-0" TO 6'-0"	HEADER: 400X425-43 OR 600X425-43
6'-1" TO 14'-0"	HEADER: 400XTC425-54 OR 600XTC425-54

3. IN LIEU OF BUILT-UP JAMB, SINGLE JAMB STUD MAY BE USED PER TABLE BELOW.

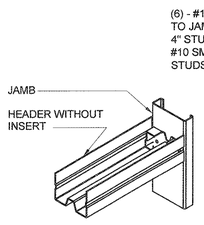
OPENING WIDTH (W)	JAMB
4'-0" TO 6'-0"	JAMB: 400HDS300-43 OR 600HDS300-43
6'-1" TO 14'-0"	JAMB: 400HDS300-54 OR 600HDS300-54



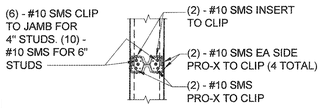
B TYPICAL SILL TO JAMB CONN.
14'-0" MAX. OPENING



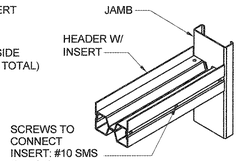
C HEADER WITHOUT INSERT TO JAMB UER 0286



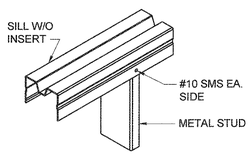
C TYPICAL HEADER TO JAMB CONN. WITHOUT INSERT



C HEADER W/ INSERT TO JAMB



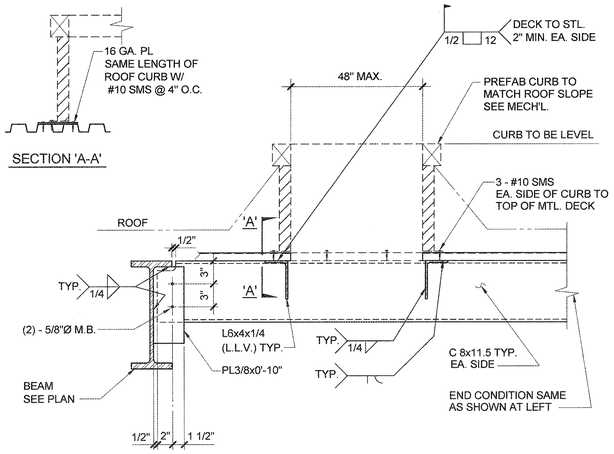
C TYPICAL HEADER TO JAMB CONN. W/ INSERT UER 0286

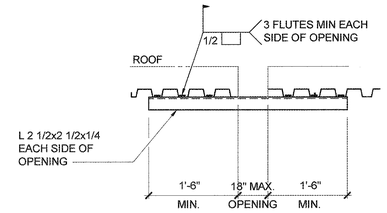


D TYPICAL STUD TO SILL CONN.
14'-0" MAX. OPENING

TYP. INTERIOR NON-BEARING WALL FRAMING DETAIL (OPTIONAL)

NONE | 8





PROVIDE THIS DETAIL FOR OPENINGS 4" TO 18" MAX. DIMENSION WHERE NO CURB IS REQUIRED AND NO EQUIPMENT IS SUPPORTED. (U.N.O. ON PLANS)

NOTES:

1. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR SIZE, LOCATION AND ANY ADDITIONAL REQUIREMENTS NOT NOTED ON THE STRUCTURAL DRAWINGS.
2. ALL OPENINGS SHALL BE AS SHOWN ON THE STRUCTURAL DRAWINGS, OR APPROVED BY THE STRUCTURAL ENGINEER.
3. MAXIMUM ANGLE SPAN = 6'-0"
4. FOR ROOF TOP EXHAUST FANS WITH MAX. OPERATING WT. OF 400 lbs. OR LESS, SEE MECH'L.
5. AROUND OPENING, WELD ROOF DECK TO CHANNEL AND ANGLE PER DETAIL 1 -

TYPICAL ROOF OPENING DETAILS

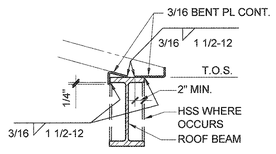
NONE | 3

NOT USED

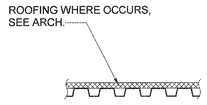
- | 5

NOT USED

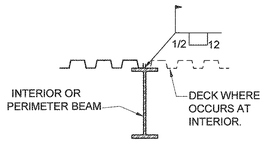
- | 2



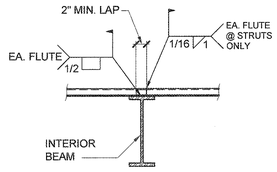
SLOPED DECK AT EAVE



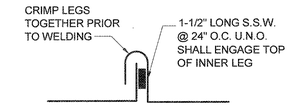
TYPICAL ROOF SECTION



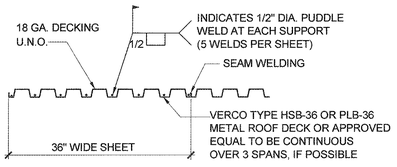
STRUT CONNECTION PARALLEL TO FLUTES DETAIL



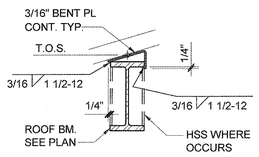
TYPICAL DECK LAP DETAIL



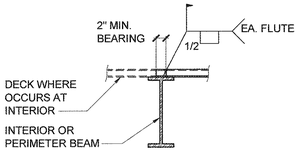
SIDE SEAM WELD (S.S.W.) DETAIL



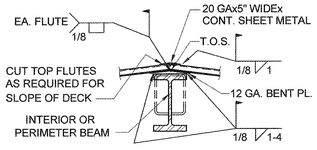
TYPICAL TYPE "HSB" METAL DECK DETAIL



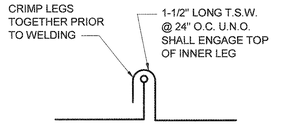
SLOPED DECK AT SLOPED PLATE



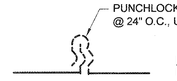
STRUT CONNECTION PERPENDICULAR TO FLUTES DETAIL



TYPICAL DECK BREAK DETAIL



TOP SEAM WELD (T.S.W.) DETAIL



PUNCHLOCK DETAIL
TO USE ONLY WITH VERCO PLB DECK

NOTE:
PUNCHLOCK VSC MAY BE USED ONLY WITH VERCO PLB DECK (NOT W/ HSB OR ASC DECKS)

NOTE:

1. SEE GENERAL NOTES FOR ADDITIONAL DECK INFORMATION.
2. (⟵———) PROVIDE TWO ROWS OF WELDS @ 12" O.C. INDICATED ALONG INTERIOR STRUTS & ONE ROW OF WELD @ 12" O.C. AT EXTERIOR/PERIMETER OF BLDG.

TYPICAL ROOF DECK DETAILS

NONE | 1

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No. S2892
Exp. 06/30/2018
STRUCTURAL
STATE OF CALIFORNIA

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REVISIONS

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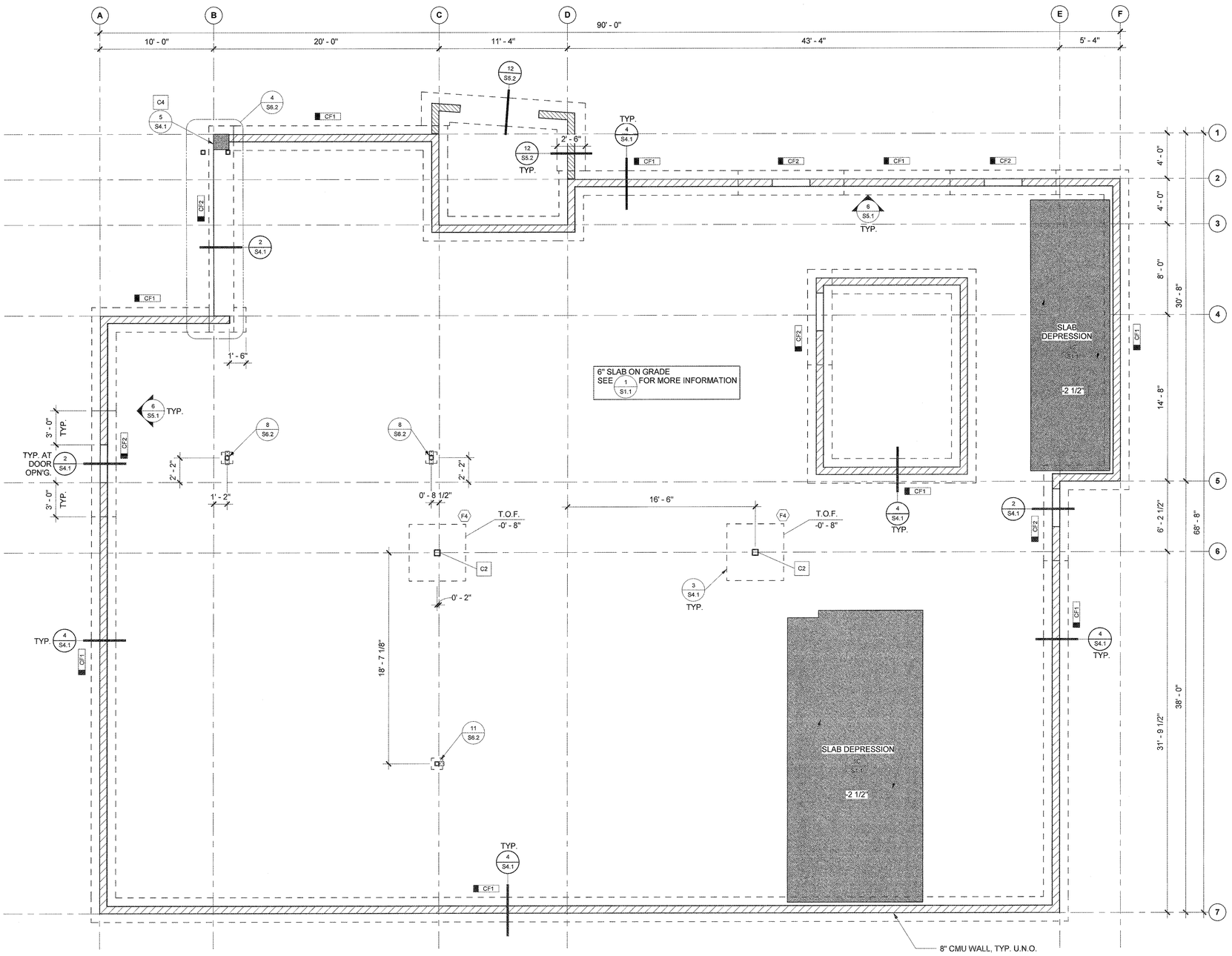

COLUMN SCHEDULE				
MARK	COLUMN SIZE	BASE PLT. THK.	WELD SIZE	SIZE AND NO. OF FDN. A.B. U.N.O.
C2	HSS6x6x1/4	5/8"	1/4"	(4) - 3/4"Ø x 12" A.B
		VERTICAL REINFORCING	TIE SIZE & SPACING	
C4	16"x16" CMU PILASTER (W/ 3000PSI CONC.)	(8) - #5	#4 TIES @ 8" O.C.	N/A

PAD FOOTING & CAISSON SCHEDULE		
MARK	SIZE	REINFORCEMENT
F4	5'-0"x5'-0"x1'-9"	5-#6 EA. WAY

CONTINOUS FOOTING SCHEDULE			
MARK	WIDTH	DEPTH	REINFORCEMENT
CF1	2'-2"	18"	2-#5 TOP AND 3-#5 BOTT. W/ #4 TIES @ 12" O.C.
CF2	2'-2"	3'-0"	3-#5 TOP AND 5-#5 BOTT. IN ADDITION TO CF1

FOUNDATION NOTES:

1. REFER TO SHEETS S0.1 & S0.2 FOR GENERAL NOTES.
2. REFER TO SHEETS S1.1 THRU S1.5 FOR TYPICAL DETAILS.
3. ALL DIMENSIONAL INFORMATION SHOWN IS BASED ON THE ARCHITECTURAL DRAWINGS. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN REFER TO THE ARCHITECTURAL DRAWINGS.
4. ALL SLAB OPENINGS, EDGES, PADS, CURBS, FLOOR SLOPES, DRAINS, TRENCHES, STEPS, EXTERIOR PAVING AND DEPRESSIONS SHALL BE LOCATED AND COORDINATED PER THE ARCHITECTURAL AND CIVIL DRAWINGS.
5. EQUIPMENT NOT SHOWN ENTIRELY FOR CLARITY, COORD., WITH ARCH'L., & MEP, DWG.
6. PROVIDE CORNER BARS AT ALL FOOTING OR GRADE BEAM INTERSECTIONS FOR ALL PERPENDICULARS LONGITUDINAL FOOTING REINFORCING.
7. CONTINUOUS FOOTING OR GRADE BEAM REINFORCING TO BE CONTINUED THROUGH ISOLATED PAD FTGS.
8. FOR TYPICAL FOOTING FORMING DETAIL, SEE 3/S1.1
9. FOR TYPICAL PIPE TRENCH DETAIL, SEE 10/S1.1
10. FOR TYPICAL STRUCTURAL SLAB AND GRADE BEAM CONSTRUCTION JOINT DETAILS, SEE 1/S1.1 & 2/S1.2
11. FOR TYPICAL REINFORCING AT FOOTING INTERSECTION SEE DETAIL 1/S1.2
12. SITE PREPARATION FOR FOOTING AND SLAB ON GRADE SEE 9/S4.1
13. CF2 EXTEND 3'-0" BEYOND EDGE OF OPENING BOTH SIDES, TYP. SEE 10/S1.2 FOR MORE INFO.
14. NON-BEARING WALL FOOTING SEE 5A/S1.1

LEGEND:

1. C1 - INDICATES COLUMN SIZE, SEE SCHEDULE
2. F1 - INDICATES PAD FOOTING SIZE, SEE SCHEDULE
3. CF1 - INDICATES CONTINUOUS FOOTING SIZE, SEE SCHEDULE
4. T.O.F. - INDICATES TOP OF FOOTING ELEVATION
5. - INDICATES 8" CMU WALL PER PLAN W/ #5 VERT. @ 16" O.C. AND #5 HORIZ. @ 16" O.C. (ONE LAYER)
6. -2 1/2" - INDICATES DEPRESSION IN SLAB.

FOUNDATION PLAN

1/4" | 1

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PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.ttgcorp.com Project No. 0216.4877.00

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TERRY C. TSANG
No.S2992
Exp. 09/30/2019
STRUCTURAL
STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

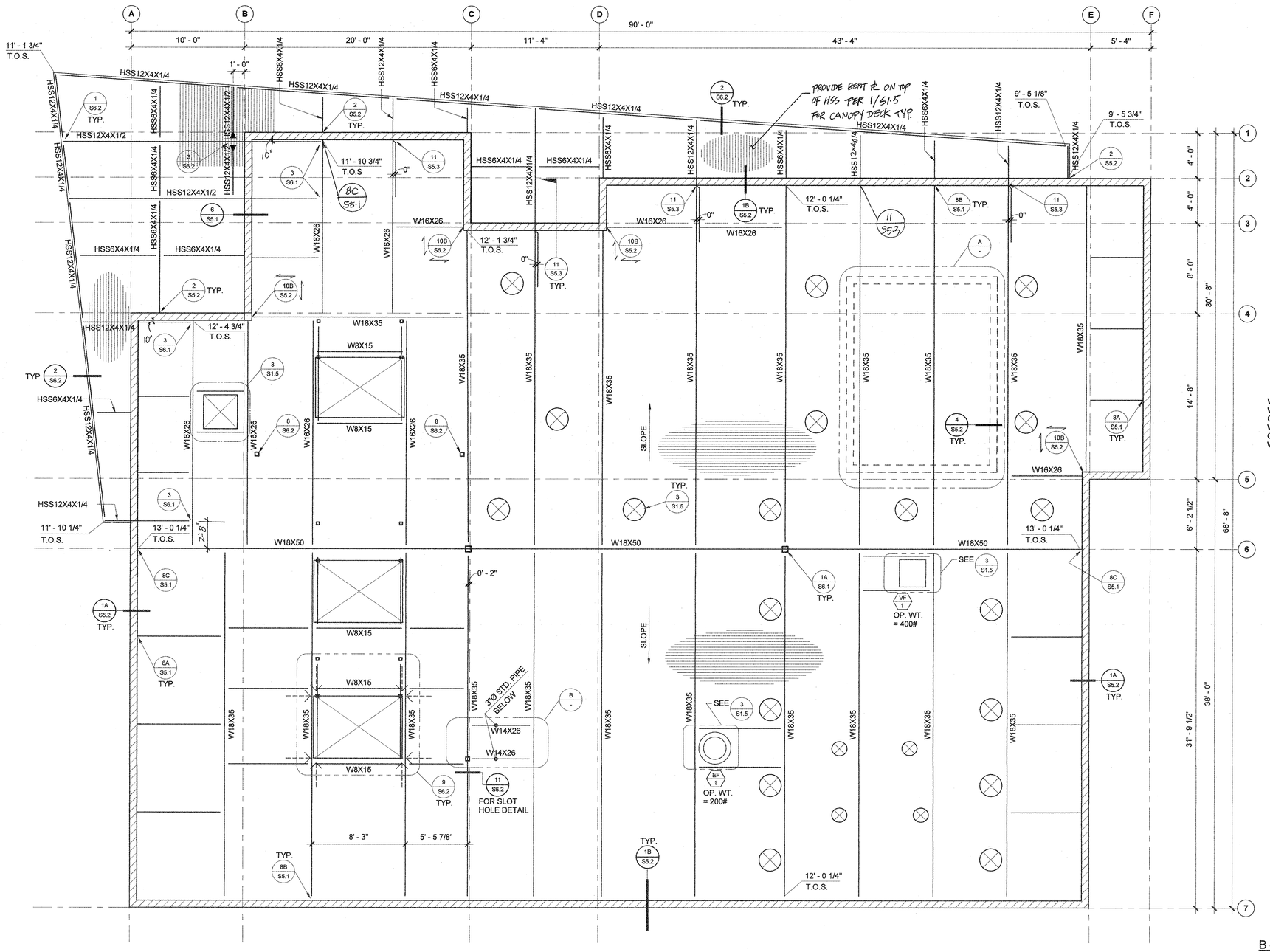
NO	REASON	DATE

SEAL / SIGNATURE

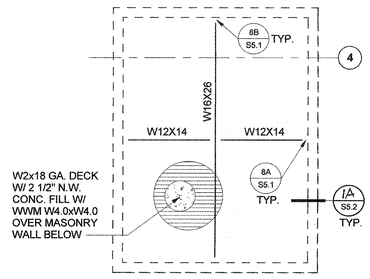
SHEET TITLE
FOUNDATION PLAN

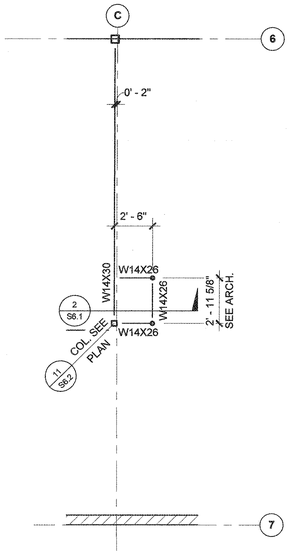
PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/17	S2.1



A - ARMORY ROOM ROOF FRAMING PLAN





B - MEETING ROOM SLIDING DOOR FRAMING PLAN
(AT CEILING LEVEL)

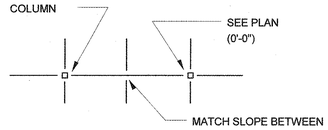
REFERENCE NOTES:

1. REFER TO SHEETS S0.1 & S0.2 FOR GENERAL NOTES.
2. REFER TO SHEETS S1.1 THRU S1.5 FOR TYPICAL DETAILS.
3. ALL DIMENSIONAL INFORMATION SHOWN IS BASED ON THE ARCHITECTURAL DRAWINGS. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN REFER TO THE ARCHITECTURAL DRAWINGS.
4. ALL SLAB OPENINGS, EDGES, PADS, CURBS, FLOOR SLOPES, DRAINS, TRENCHS, TEPS, EXTERIOR PAVING AND DEPRESSIONS SHALL BE LOCATED AND COORDINATED PER THE ARCHITECTURAL AND CIVIL DRAWINGS.
5. BEAM TO BE EQUALLY SPACED BETWEEN SUPPORTS U.N.O.
6. BEAMS SHOWN BUT NOT CALLED OUT SHALL BE W12x14.
7. TOP OF STEEL IS REFERENCE FROM FLOOR ELEVATION U.N.O.
8. WHEN PLACING CONCRETE FILL IN DECK, TOP OF SLAB SHALL BE SHOT TO TRANSIT LEVEL.
9. FOR COLUMN SIZES SEE FOUNDATION PLAN.
10. SEE 3/S1.5 FOR OPENINGS. ALSO, COORDINATE WITH M.E.P. & ARCH'L.

LEGEND:

1. INDICATES BRACE PER 5/S6.1
2. INDICATES 1 1/2"x18GA. VERCO-DECK SEE 1/S1.5
3. INDICATES CMU WALL BELOW SEE FOUNDATION PLAN FOR SIZE.
4. INDICATES CMU WALL SEE FOUNDATION PLAN FOR SIZE.
5. INDICATES DRAG DIRECTION, DECK WELD TO STL. BEAM PER DETAIL 1/S1.5, TYP.

5. TOP OF STEEL OF SLOPING BEAMS ARE INDICATED THUSLY: SEE PLAN (0'-0") TOP OF STEEL INDICATED THUSLY SHALL BE FOR ALL BEAMS FRAMING INTO COLUMN



ROOF FRAMING PLAN | 1/4" | 1

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GERARDO CARRANZA

NO	REASON	DATE

ROOF FRAMING PLAN

913-4675-01

11/21/17 | S2.2

(A) SOILS BELOW THE BUILDING PAD AREA SHOULD BE OVER EXCAVATED PER SOIL REPORT BELOW EXISTING GRADES OR 3'-0" BELOW THE BOTTOM OF DEEPEST FOOTING, WHICHEVER IS GREATER AND BACKFILLED WITH SATISFACTORY BACKFILL MATERIAL COMPACTED TO A MIN. 90% PER SOIL REPORT IN 8" LIFTS. PER ASTM D1557.

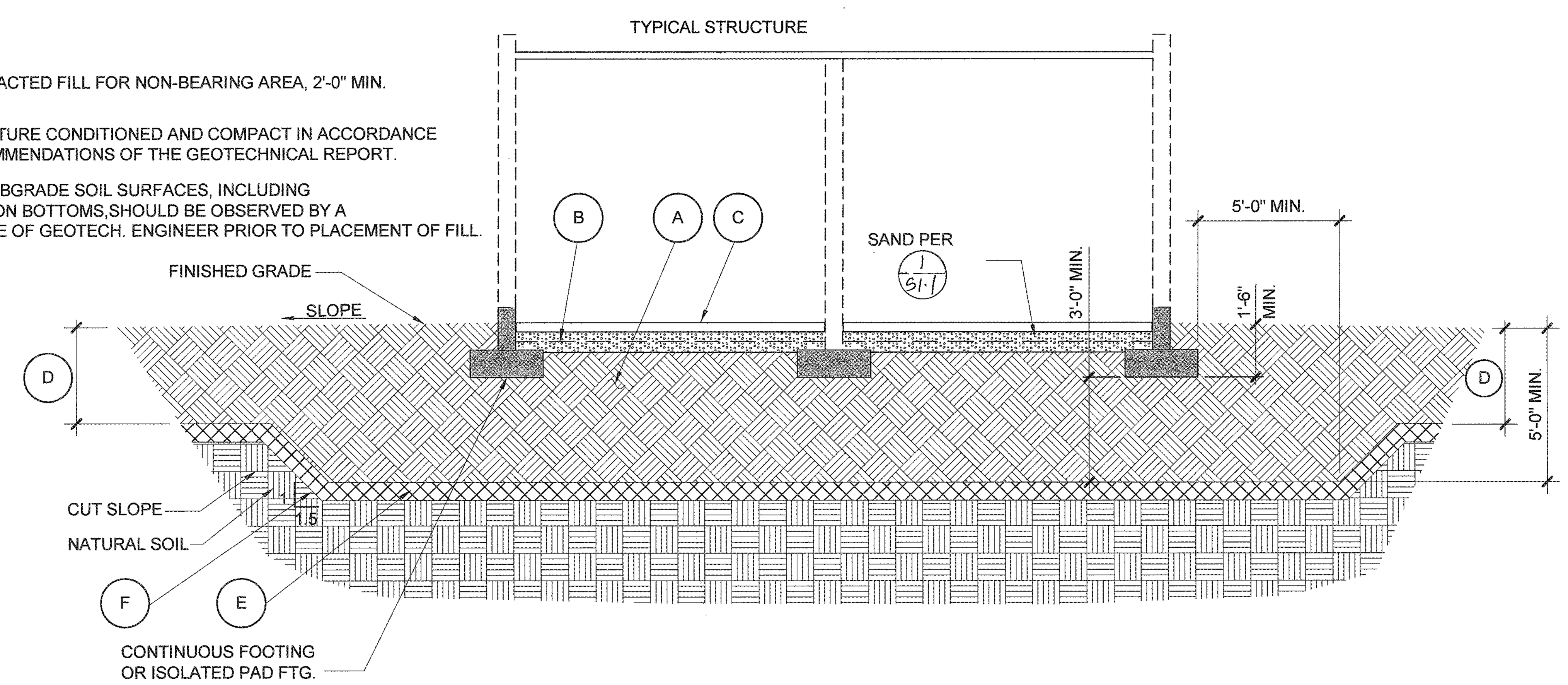
(B) 10 MIL THICK VISQUEEN OVER PROPERTY COMPACTED SUBGRADE

(C) SLAB ON GRADE.

(D) DEPTH OF COMPACTED FILL FOR NON-BEARING AREA, 2'-0" MIN.

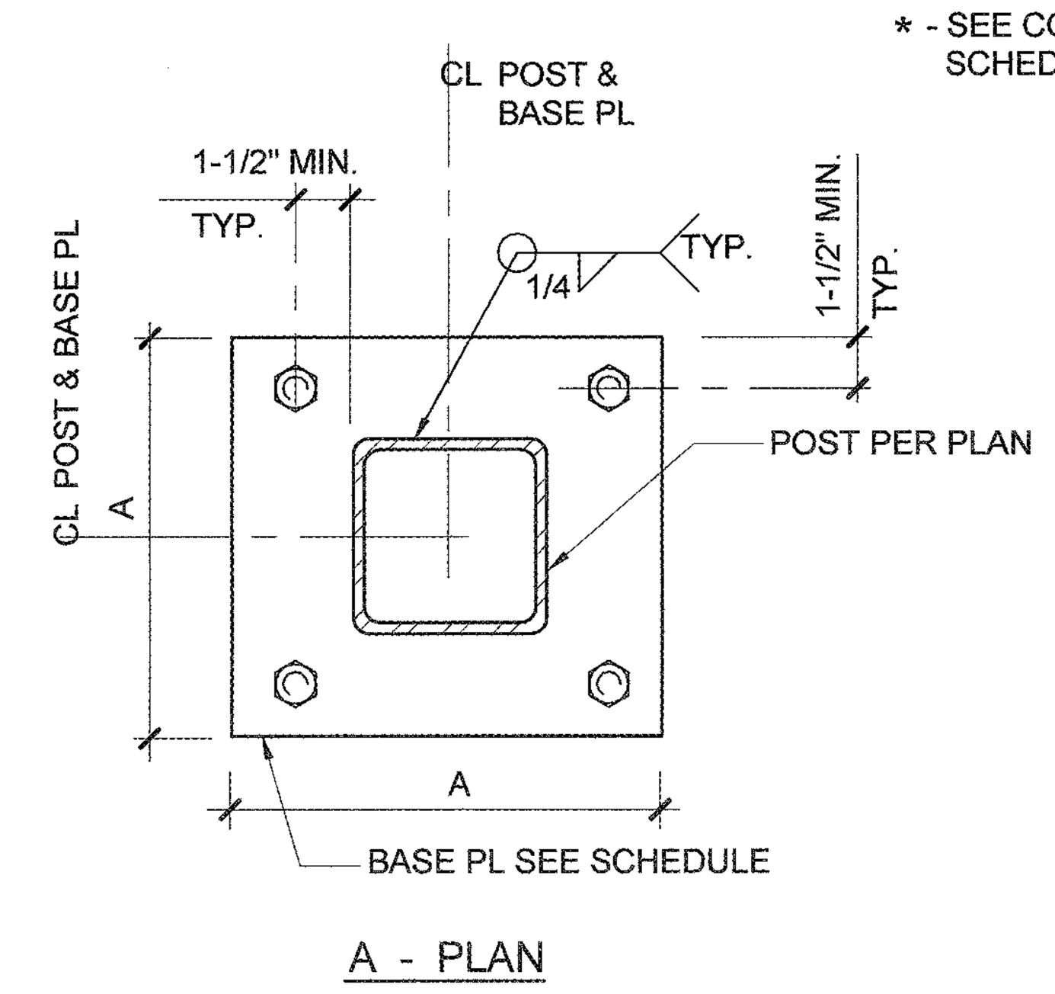
(E) SCARIFY 8" MOISTURE CONDITIONED AND COMPACT IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

(F) ALL EXPOSED SUBGRADE SOIL SURFACES, INCLUDING OVER-EXCAVATION BOTTOMS,SHOULD BE OBSERVED BY A REPRESENTATIVE OF GEOTECH. ENGINEER PRIOR TO PLACEMENT OF FILL.

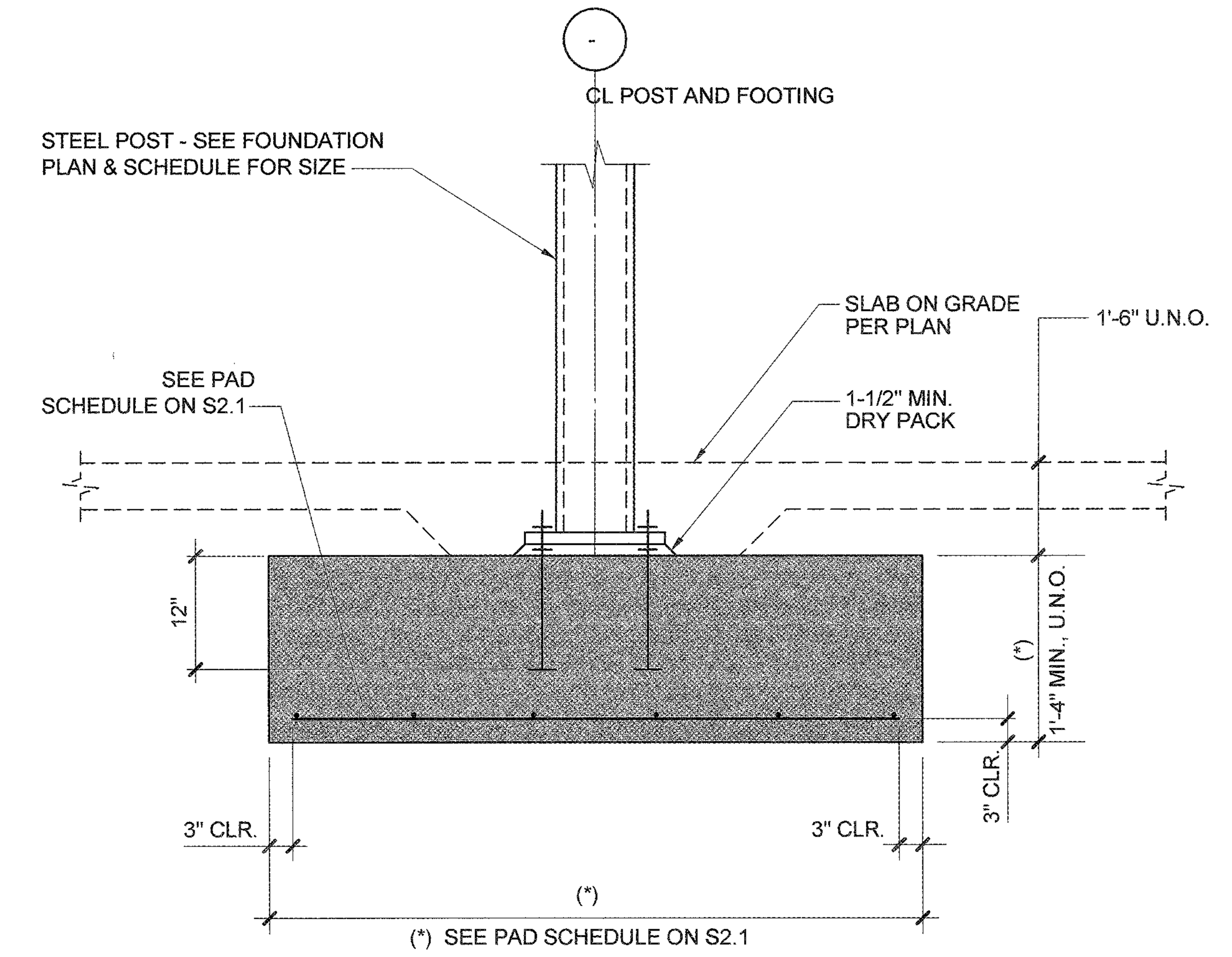


SITE PREPARATION FOR FOOTING AND SLAB ON GRADE | NONE | 9

NOTE:
* - SEE COLUMN SCHEDULE



POST/BASE PLATE SCHEDULE			
COL. SIZE	"A"	THICKNESS	ANCHORS
HSS 6x6x1/4	12"	5/8"	(4)-3/4" DIA.

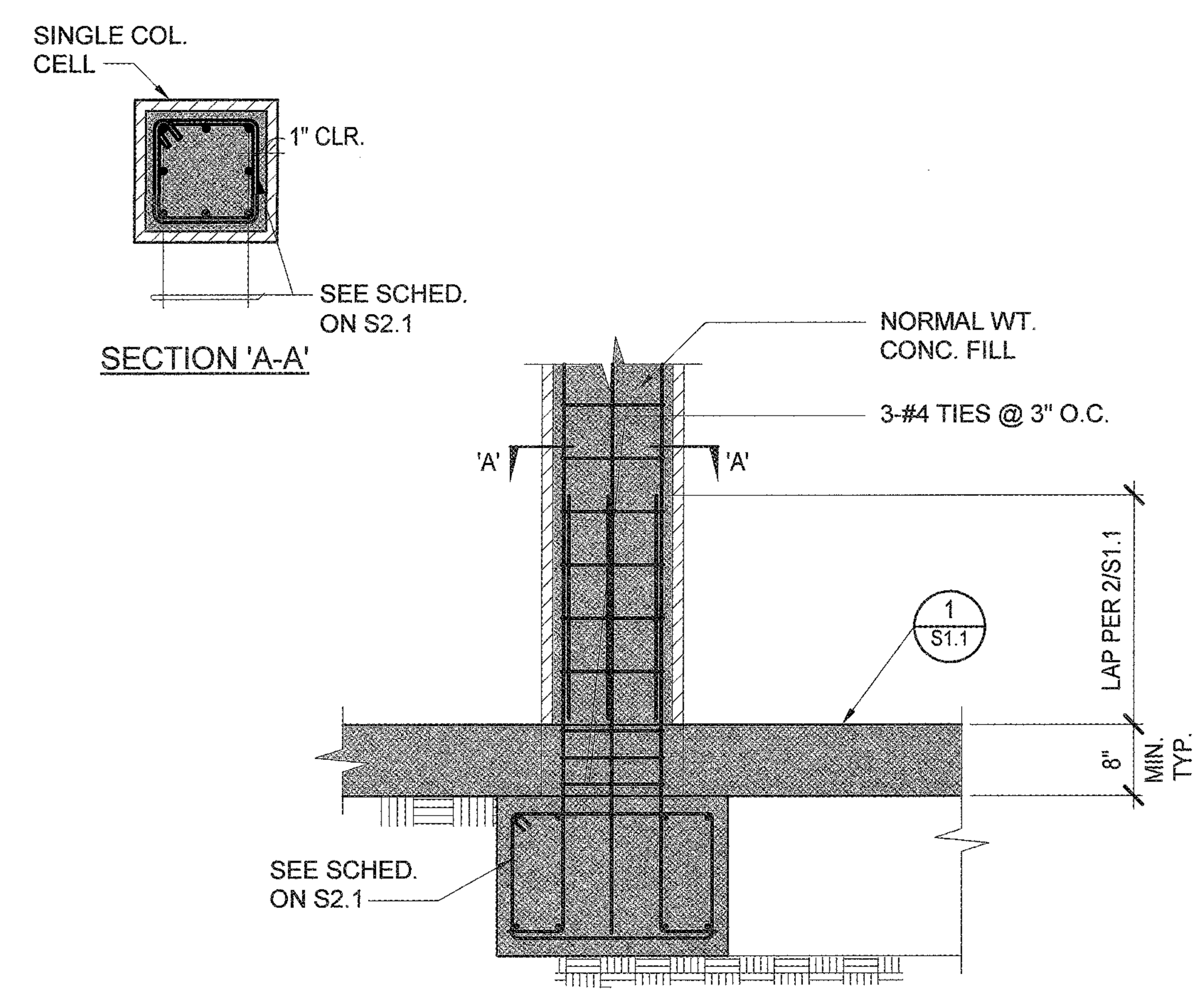


NOTE:
ADJUST REBAR LOCATION TO RECEIVE ANCHOR BOLT.

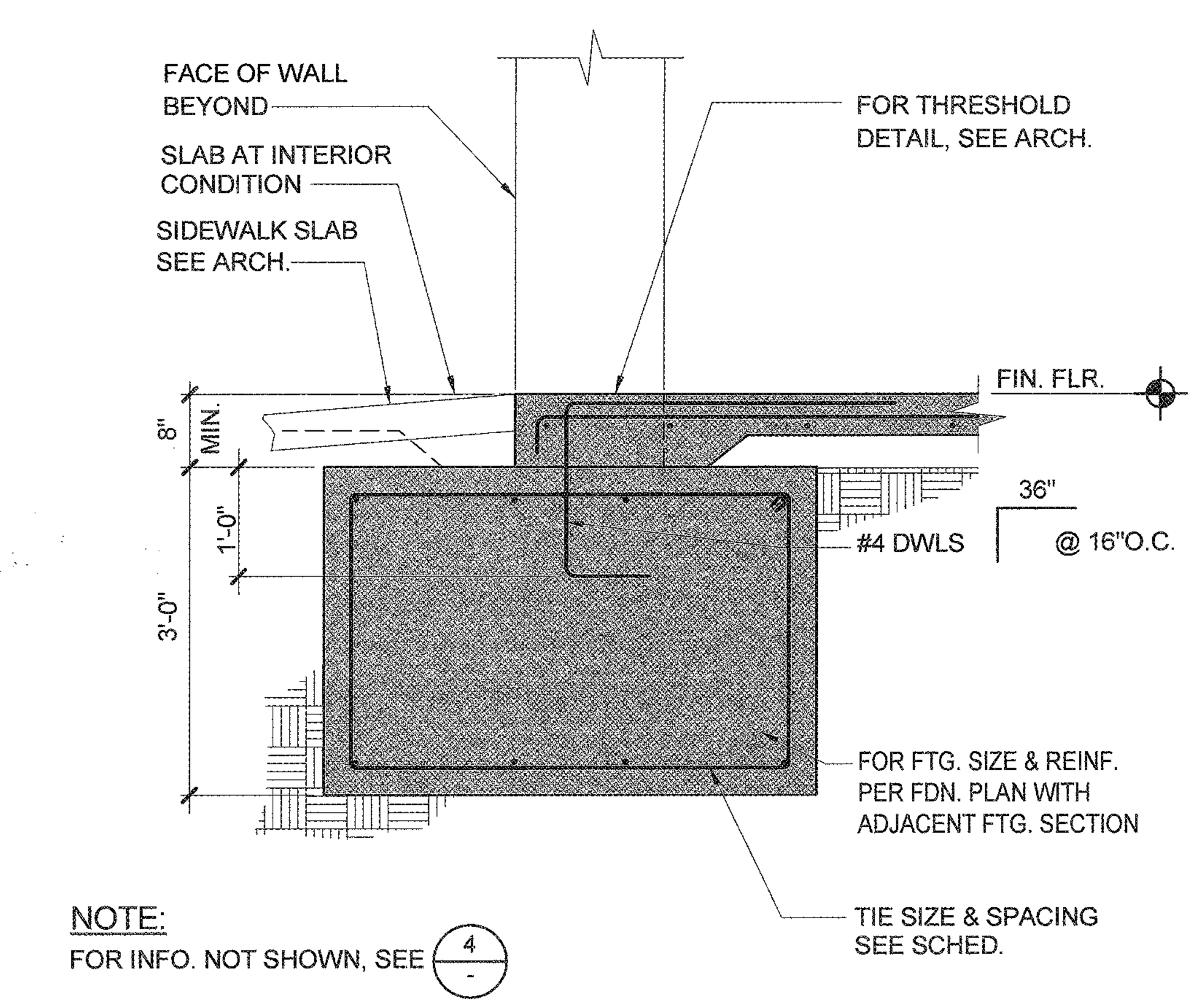
PAD FOOTING W/ HSS POST | NONE | 3

NOT USED | - | 11

NOT USED | - | 8

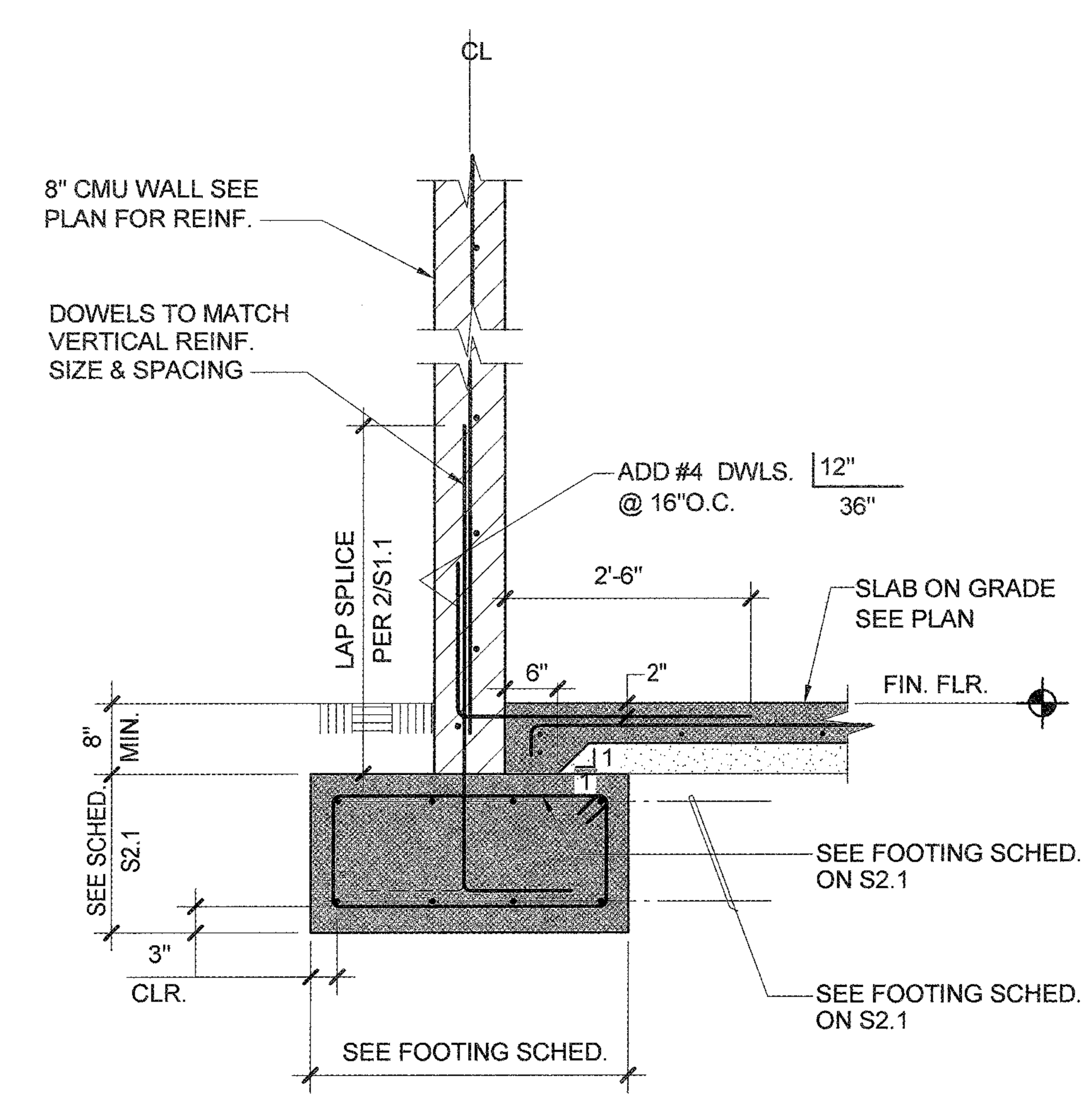


FOOTING DETAIL | NONE | 5



NOTE:
FOR INFO. NOT SHOWN, SEE 4/-

FOOTING SECTION | NONE | 2



NOT USED | - | 10

NOT USED | - | 7

FOOTING SECTION | NONE | 4

NOT USED | - | 1

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GERARDO CARRANZA

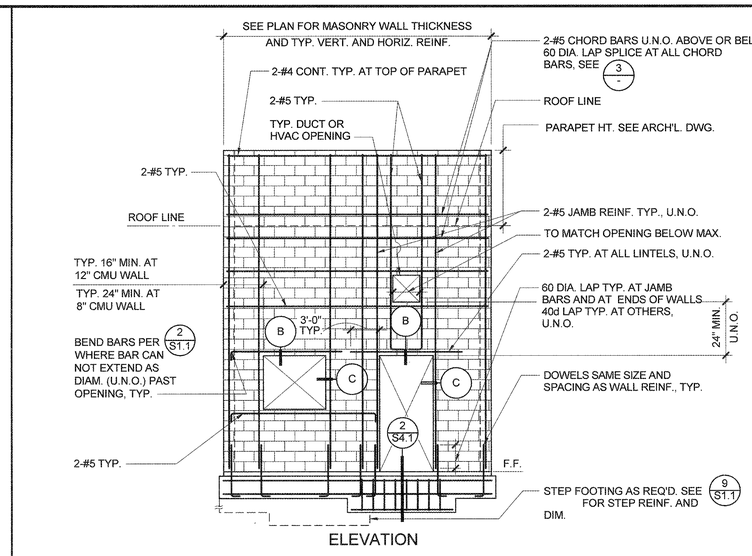
NO	REASON	DATE

FOUNDATION DETAILS

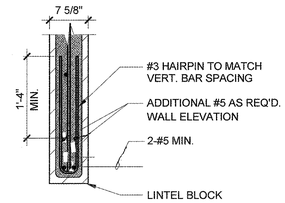
913-4675-01

11/21/17 S4.1

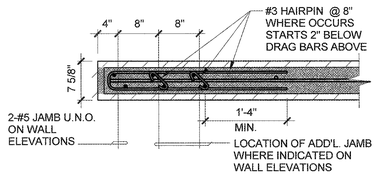
NOT USED | - | 12



ELEVATION



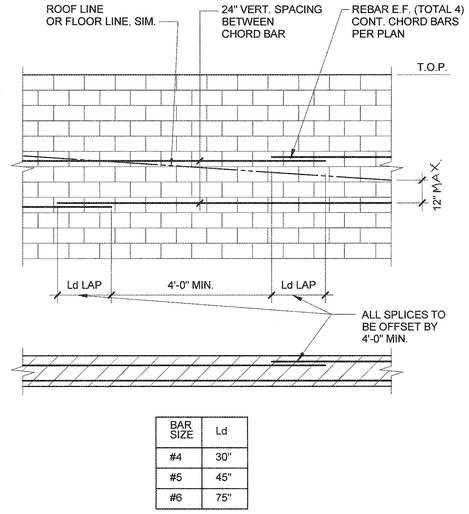
B LINTEL



FOR ONE SINGLE LAYER OF HORIZ. REBAR AT 8" CMU WALL

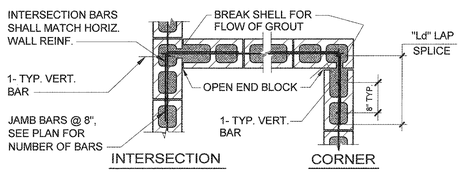
C JAMB OR END OF WALL

CONCRETE BLOCK MINIMUM REINFORCING AT WALL OPENING | NONE | 6



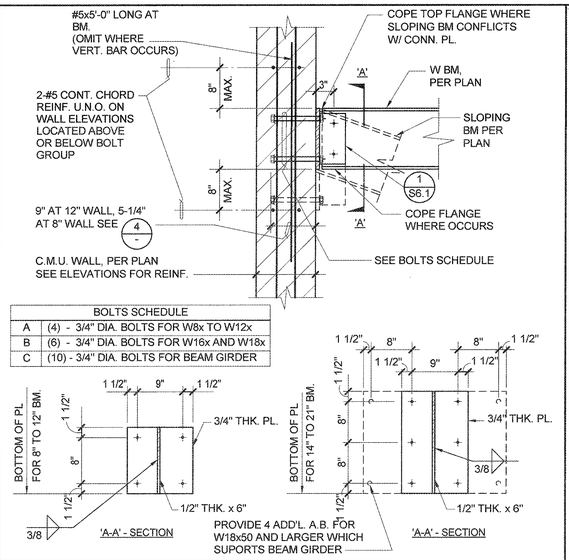
BAR SIZE	Ld
#4	30"
#5	45"
#6	75"

CHORD BAR PLACEMENT | NONE | 3



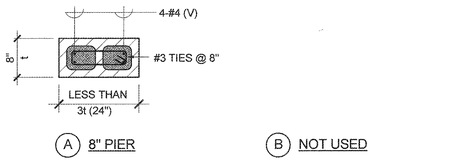
BAR SPLICE SCHEDULE	
BAR SIZE	Ld
#4	30"
#5	45"
#6	75"

CONCRETE BLOCK WALL INTERSECTION | NONE | 11



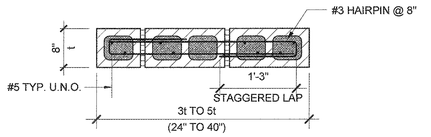
BOLTS SCHEDULE	
A	(4) - 3/4" DIA. BOLTS FOR W8x TO W12x
B	(6) - 3/4" DIA. BOLTS FOR W16x AND W18x
C	(10) - 3/4" DIA. BOLTS FOR BEAM GIRDER

W BM CONNECTION AT CMU WALL | NONE | 8



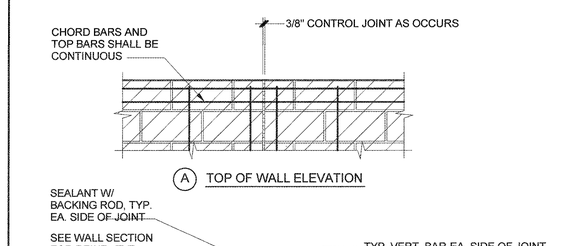
A 8" PIER

B NOT USED



C 8" PIER

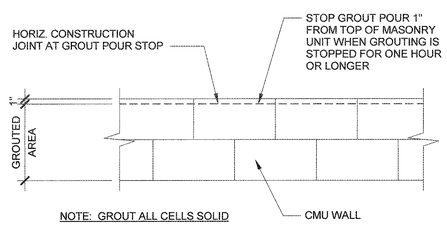
REINFORCEMENT AT CONCRETE BLOCK PIER | NONE | 5



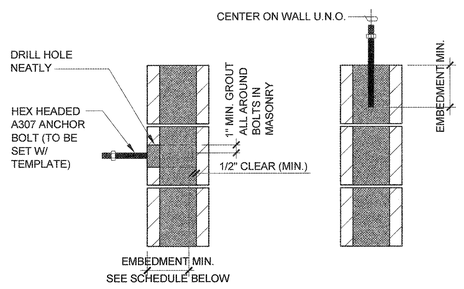
NOTES: (LOCATION OF CONTROL JOINT)
1. AT REGULAR INTERVALS NOT TO EXCEED 32'-0" AT INTERIOR WALL, 24'-0" AT EXTERIOR WALL.
2. AT CHANGE IN WALL HEIGHT OR THICKNESS.
3. AS SHOWN ON WALL ELEVATIONS OR PLAN.
4. SINGLE MAT REINFORCING STEEL SHOWN, FOR DOUBLE MAT REINFORCING STEEL IN 10" AND THICKER WALL.

TYPICAL CONTROL JOINT DETAILS | NONE | 2

NOT USED | - | 10



TYP. CMU WALL CONSTRUCTION JOINT | NONE | 7

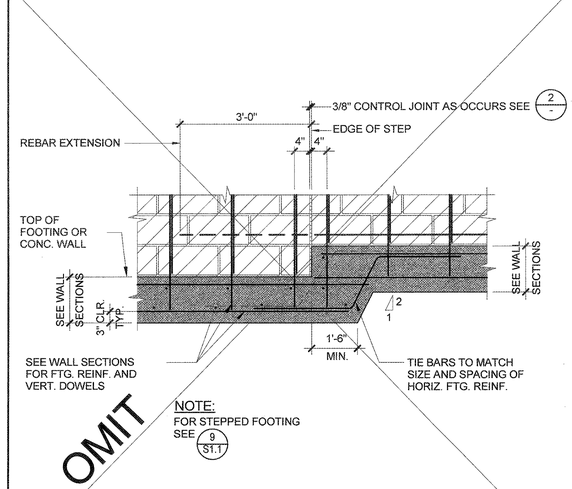


BOLT EMBEDMENT SCHEDULE								
BOLT SIZE	BOLT EMBEDMENT HORIZ. WALL THK. 12"	BOLT EMBEDMENT HORIZ. WALL THK. 8"	BOLT EMBEDMENT VERT.	BOLT SIZE	BOLT EMBEDMENT HORIZ. WALL THK. 12"		BOLT EMBEDMENT VERT.
1/2"	9"	5 1/4"	8"	7/8"	9"		11"
5/8"	9"	5 1/4"	9"	1"	9"		12"
3/4"	9"	5 1/4"	10"				

NOTE: BOLT SPACING SHALL BE 8 BOLT DIAMETER MIN.

WALL	MAX. BOLT
8"	3/4"Ø
10"	7/8"Ø
12"	1"Ø

TYPICAL BOLT EMBEDMENT SCHEDULE | NONE | 4



CONTROL JOINT AT CHANGES IN TOP OF FTG. | NONE | 1

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NO	REASON	DATE

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SHEET TITLE
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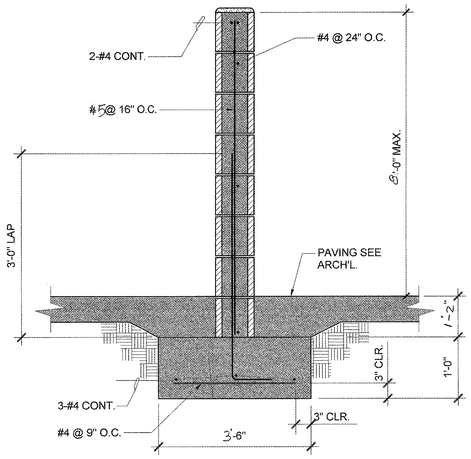
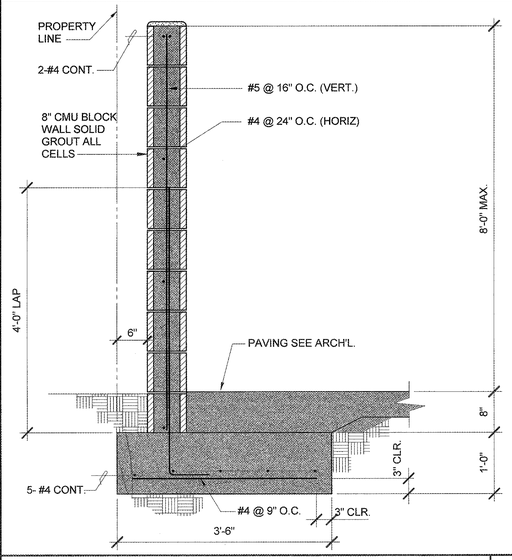
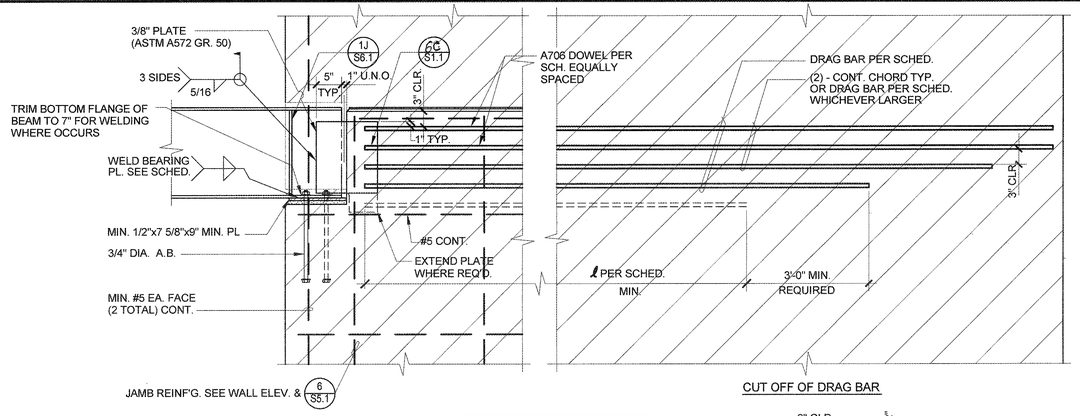
ISSUE DATE 11/21/17
SHEET NO. S5.1



CMU WALL | NONE | 12



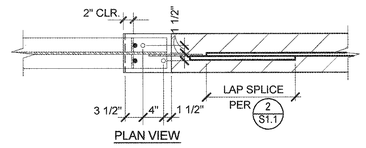
SITE CMU WALL | NONE | 9



NOTES:
1. CENTER STEEL BEAM ON CMU WALL TYP. U.N.O.
2. FOR MORE INFO. SEE DETAIL 11 - & 10 -

CONNECTION TYPE	A706 DOWEL (ℓ)	BEARING PL. WELD
A	2 - #6 x 4'-6"	1/4" x 8"
B	3 - #6 x 4'-6"	1/4" x 8"
C	4 - #6 x 4'-6"	1/4" x 10"
D	5 - #6 x 4'-6"	1/4" x 10"

CUT OFF OF DRAG BAR



PLAN VIEW

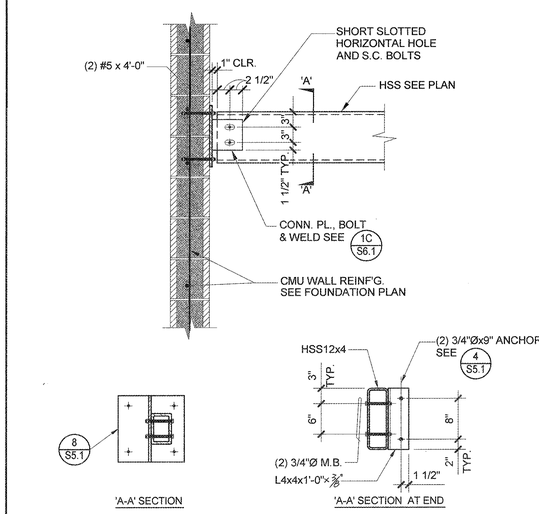
TYPICAL STEEL BEAM/CMU DRAG CONNECTION | NONE | 3

NOTES:
1. FOR INFORMATION NOT NOTED AND CONNECTION TYPE A,B,C, & D SEE 3 - & 10 -
2. ADD SHIM PLATE BETWEEN SHEAR PLATE AND BEAM WEB AS REQ'D. MAINTAIN SAME WELDING BETWEEN SHIM PLATE AND BEAM WEB AS SHOWN.

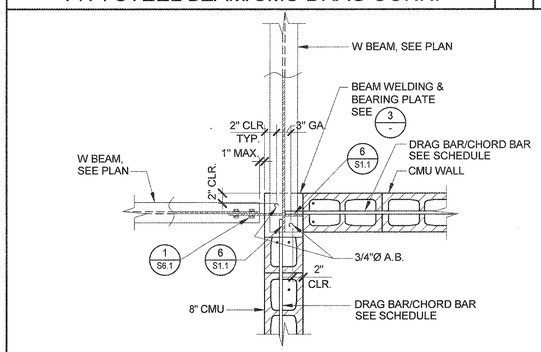
TYP. STEEL BEAM/CMU DRAG CONN. | NONE | 11

NOT USED | - | 8

NOT USED | - | 5



HSS TO CMU WALL CONNECTION | NONE | 2



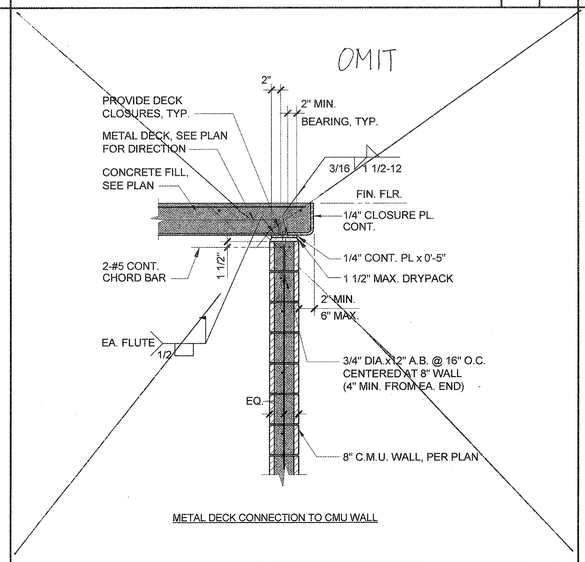
PLAN VIEW

CONNECTION TYPE	A706 DOWEL (ℓ)	BEARING PL. WELD
A	2 - #6 x 4'-6"	1/4" x 8"
B	3 - #6 x 4'-6"	1/4" x 8"
C	4 - #6 x 4'-6"	1/4" x 10"
D	5 - #6 x 4'-6"	1/4" x 10"

NOTE:
1. FOR INFORMATION NOT NOTED SEE 3 - & 11 -
2. ADD SHIM PLATE BETWEEN SHEAR PLATE AND BEAM WEB AS REQUIRED. MAINTAIN SAME WELDING BETWEEN SHIM PLATE AND BEAM WEB AS SHOWN.

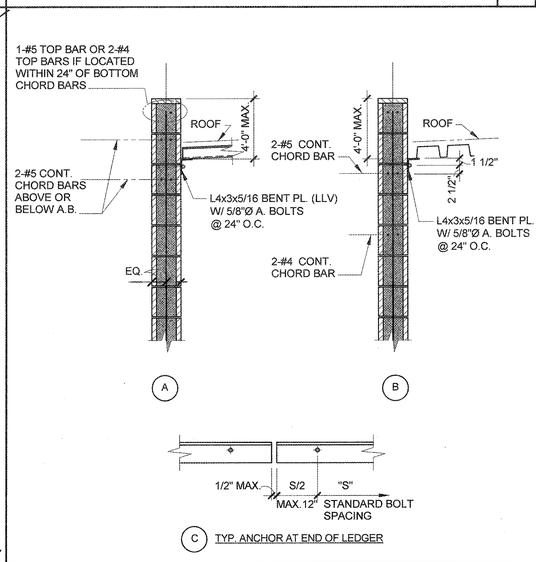
BEAM TO BEAM CONNECTION | NONE | 10

NOT USED | - | 7



METAL DECK CONNECTION TO CMU WALL

TYPICAL WALL SECTION | NONE | 4



C TYP. ANCHOR AT END OF LEDGER

TYPICAL WALL SECTIONS | NONE | 1

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW:
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE: DEC 12 2017

CONSULTANT
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• MECHANICAL
• ELECTRICAL
• CIVIL
901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.6915 Fax: 909.477.6916
www.ttgcorp.com Project No. 0216.4877.00

REGISTERED PROFESSIONAL ENGINEER
TERRY C. TSANG
No.S2992
Exp. 06/30/2018
STRUCTURAL
STATE OF CALIFORNIA

PROJECT MGR.
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS
NO	REASON	DATE

SEAL / SIGNATURE

SHEET TITLE
MASONRY DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/17

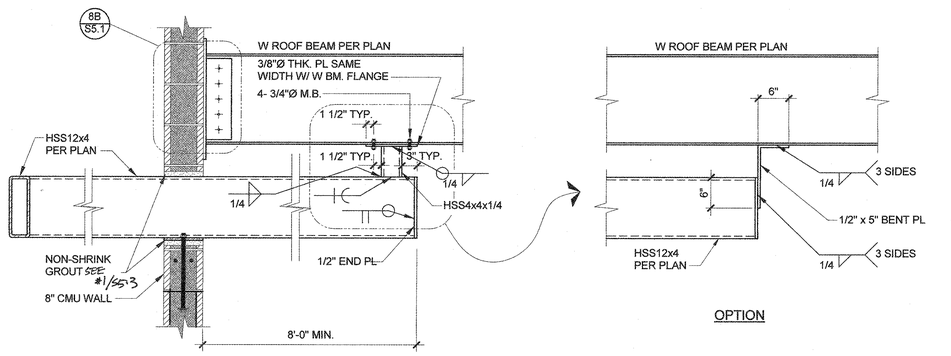
SHEET NO.
S5.2

NOT USED	-	12

NOT USED	-	9

NOT USED	-	6

NOT USED	-	3



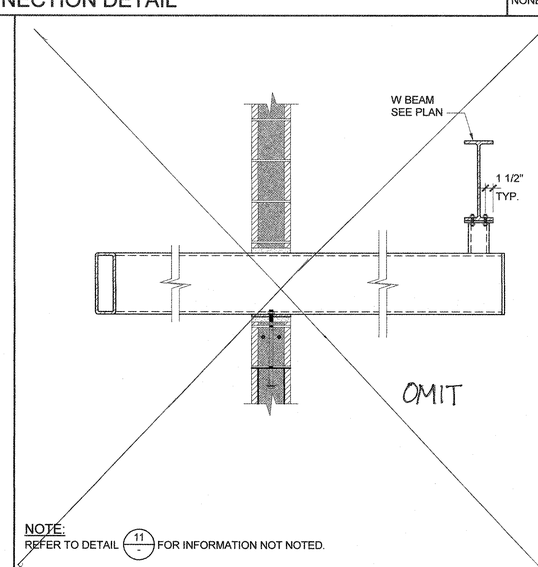
OPTION

HSS TO W BEAM CONNECTION DETAIL	NONE	11

NOT USED	-	5

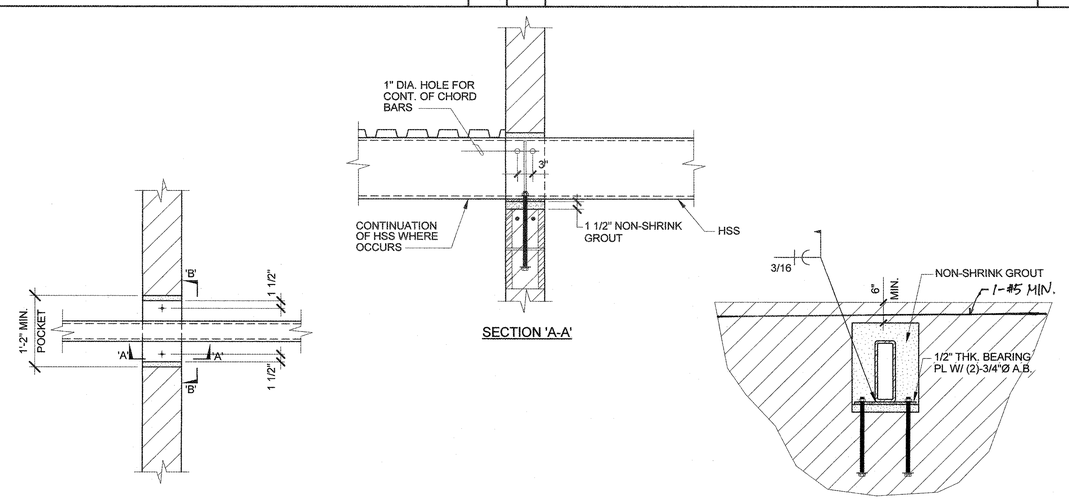
NOT USED	-	2

NOT USED	-	10



NOTE:
REFER TO DETAIL 11/- FOR INFORMATION NOT NOTED.

HSS TO W BEAM CONN. DETAIL	NONE	7



PLAN VIEW

SECTION 'A-A'

SECTION 'B-B'

BEAM CONNECTION TO CMU WALL	NONE	1

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• CIVIL
901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.8515 Fax: 909.477.8916
www.ttgcorp.com Project No. 0216.4877.00

REGISTERED PROFESSIONAL ENGINEER
TERRY C. TSANG
No.S2392
Exp. 06/30/2019
STRUCTURAL
STATE OF CALIFORNIA

PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

NO	REASON	DATE

MASONRY DETAILS

913-4675-01

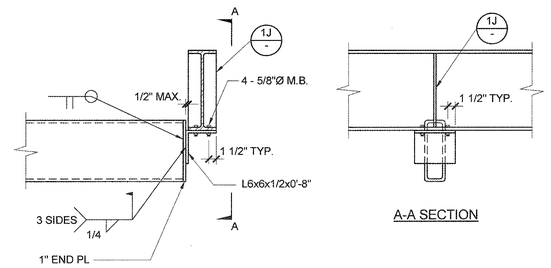
11/21/17

S5.3

NOT USED | - | 12

NOT USED | - | 9

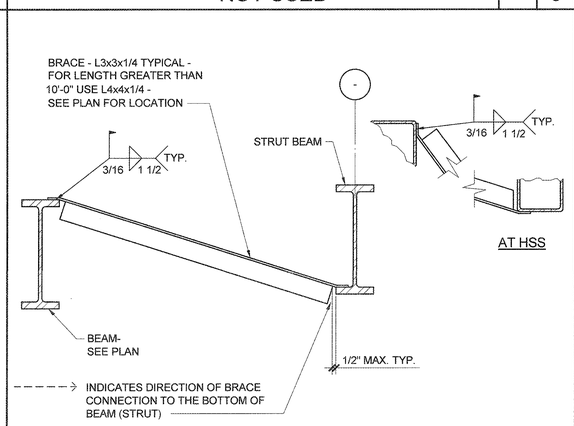
NOT USED | - | 6



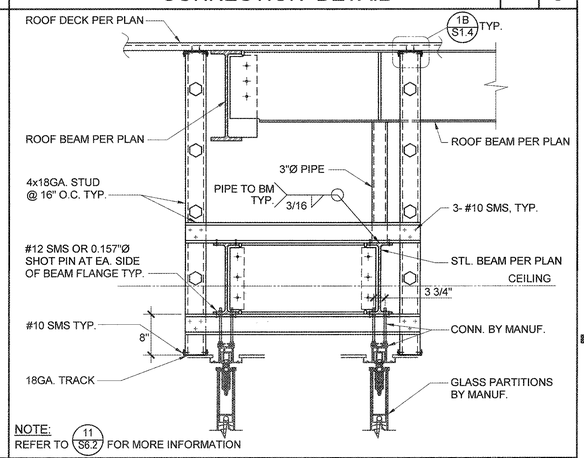
CONNECTION DETAIL | NONE | 3

NOT USED | - | 11

NOT USED | - | 8



TYP. BRACED BEAM CONNECTION | NONE | 5



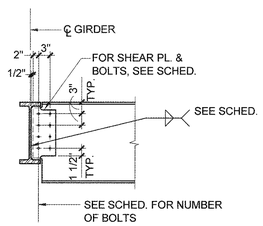
CONNECTION AT GLASS PARTITION | NONE | 2

TYP. BEAM CONNECTION SCHEDULE**

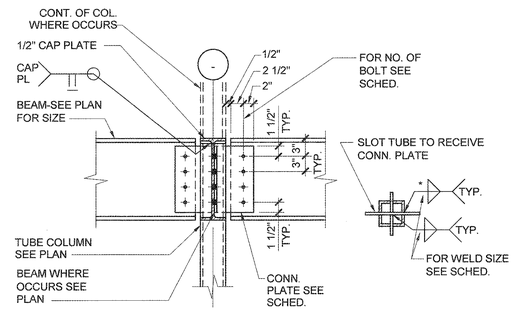
BEAM SIZE	CONNECTION PLATE THK.	CONNECTION* PLATE WELD	NO. OF BOLTS	BOLT SIZE (SC) BOLTS
C8, W6, W8, W10	3/8"	1/4"	2	1" DIA. H.S.B.
C OR MC12 W12, W14	3/8"	5/16"	3	1" DIA. H.S.B.
W 16	3/8"	5/16"	4	1" DIA. H.S.B.
W 18	1/2"	3/8"	5	1" DIA. H.S.B.
W 21	1/2"	3/8"	6	1" DIA. H.S.B.
W 24	1/2"	3/8"	7	1" DIA. H.S.B.

** NOTE:

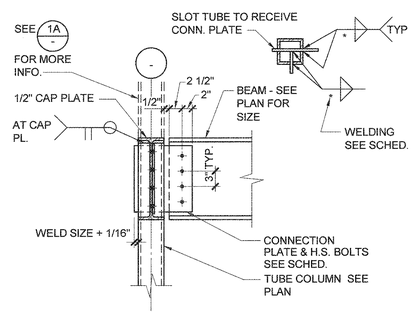
1. WHERE CONNECTION PLATE IS NOT PERPENDICULAR TO BEAM OR COLUMN WEB OR FLANGES, USE COMPLETE PENETRATION BEVEL WELD. SEE 1G -
2. WHERE NUMBER OF BOLTS NOTED IN SCHEDULE CANNOT BE IN A SINGLE ROW, ADD SECOND ROW WITH TWO BOLTS MIN.
3. STIFF. PL. THK. WHERE NOT SPECIFIED SHALL BE SAME THK. AS CONN. PL. TYP. U.N.O.
4. ALL BOLTS ARE HSB, (A325 SC, LSL HOLE IN HORIZONTAL DIRECTION)
5. FOR ALL CONDITION "E", "K", & "L" SHOWN USE 2 ROWS OF BOLTS, IF REQUIRED SPACING NOT AVAILABLE AS SHOWN ON "C".



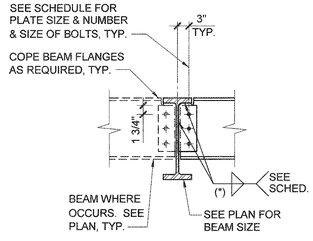
E - DEEP BEAM TO SHALLOW GIRDER



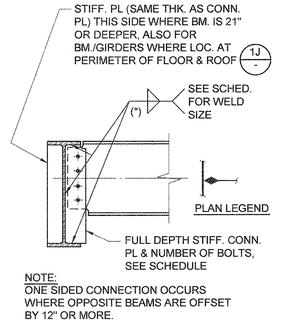
A - AT COLUMN



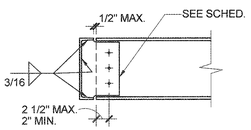
B - AT COLUMN



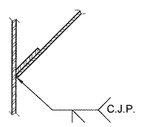
C - BEAM TO BEAM



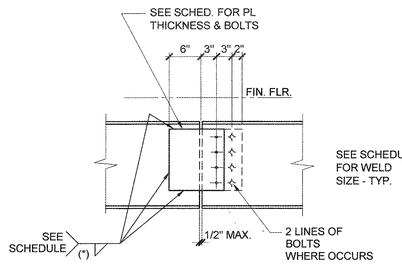
D - ONE SIDE BM. CONN.



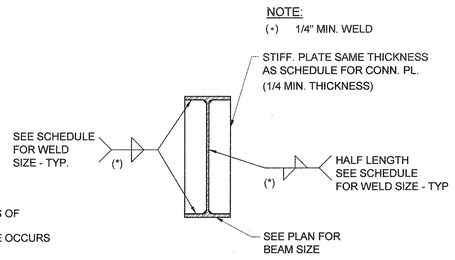
F - CHANNEL



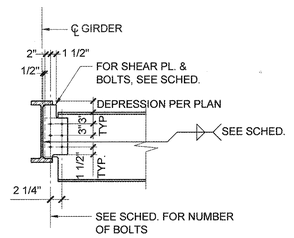
G - SKEWED BEAM



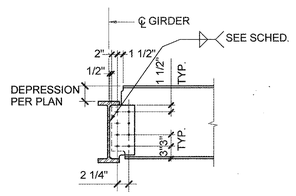
H - CONNECTION AT CANTILEVER



J - STIFFENER PLATE



K - DEPRESSED BEAM TO GIRDER



L - BEAM TO DEPRESSED GIRDER

TYPICAL BEAM TO BEAM CONNECTION DETAILS AND SCHEDULE | NONE | 1

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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901 Via Piemonte Suite 400
Ontario, California 91764
Phone: 909.477.5915 Fax: 909.477.5916
www.ttgcorp.com Project No. 0216.4877.00

REGISTERED PROFESSIONAL ENGINEER
TERRY C. TSANG
No.S2992
Exp. 06/30/2018
STRUCTURAL
STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE

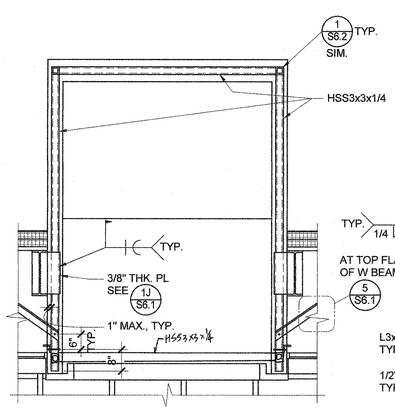
SHEET TITLE

STEEL DETAILS

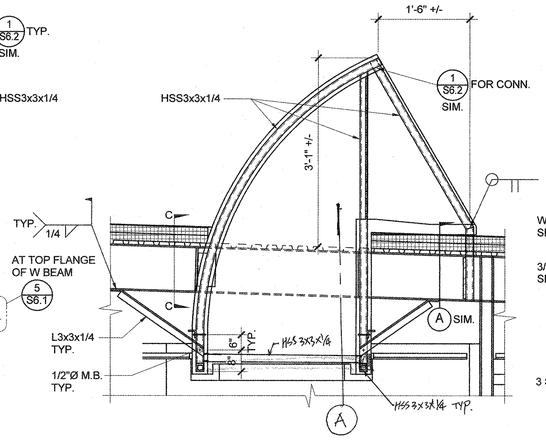
PROJECT NUMBER

913-4675-01

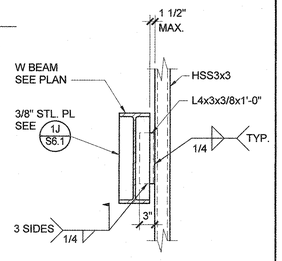
ISSUE DATE	SHEET NO.
11/21/17	S6.1



A - DETAIL



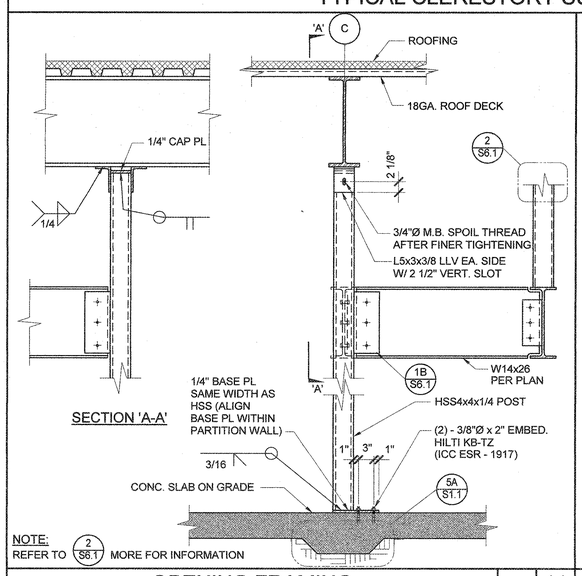
B - DETAIL



C-C SECTION

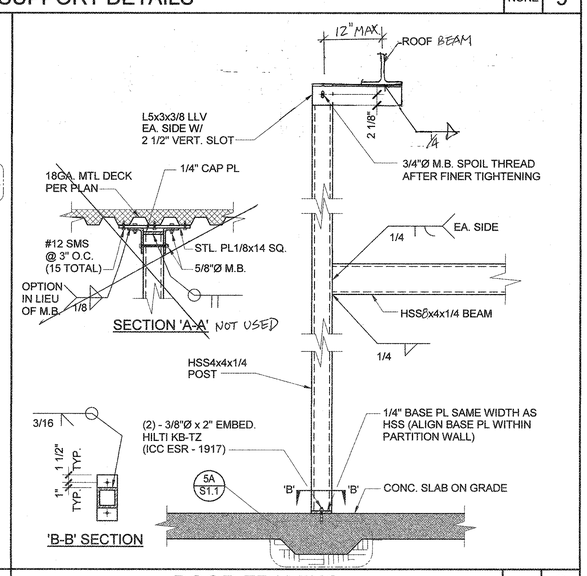
TYPICAL CLERESTORY SUPPORT DETAILS

NONE | 9



OPENING FRAMING

- | 11

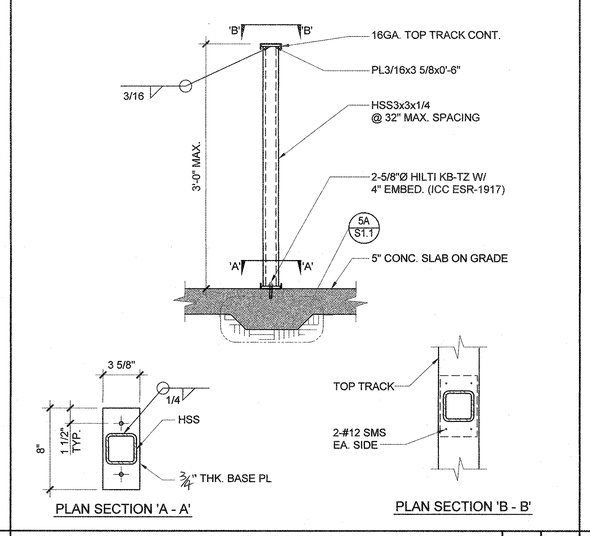


DOOR FRAMING

NONE | 8

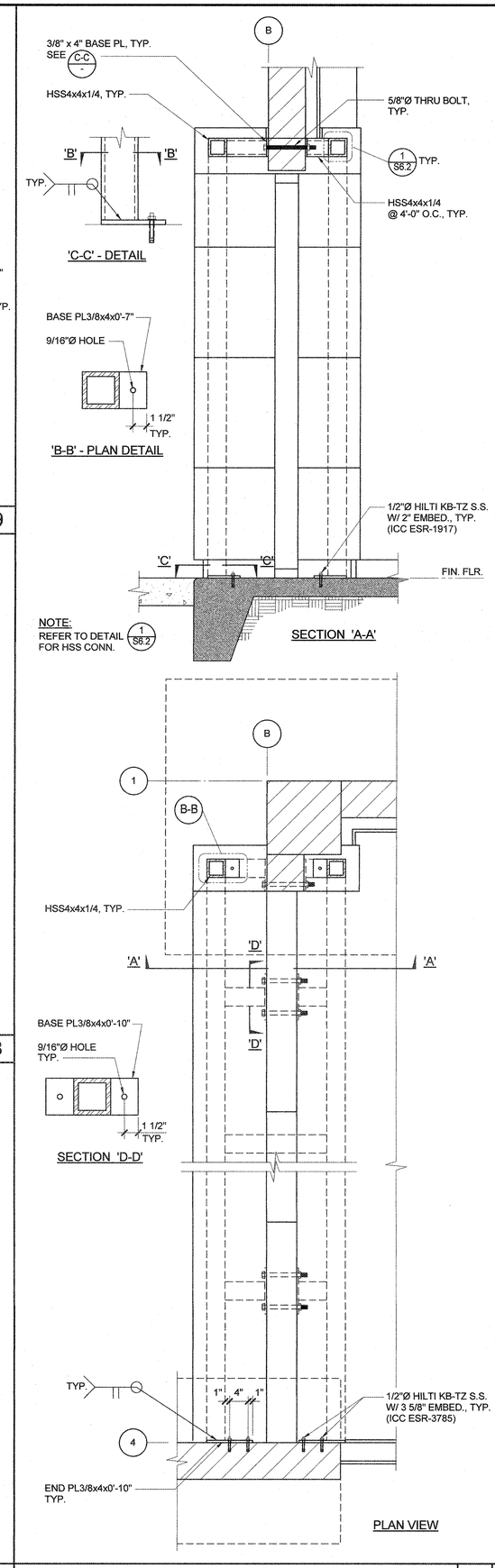
NOT USED

- | 10



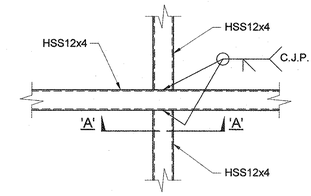
LOW WALL SUPPORT

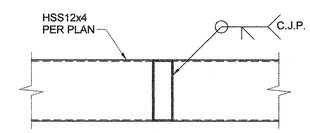
NONE | 7



FRONT ENTRY FRAMING DETAIL

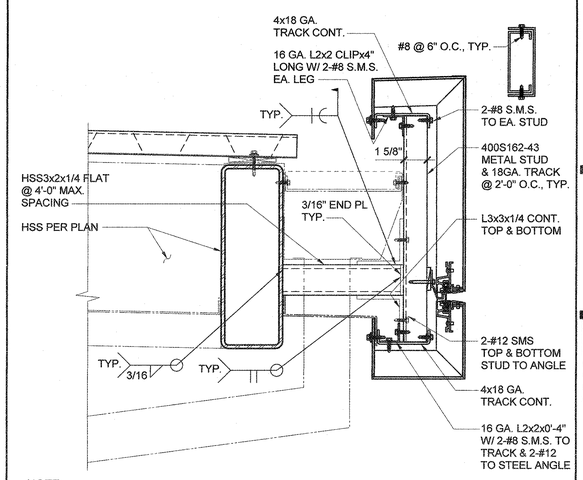
NONE | 4





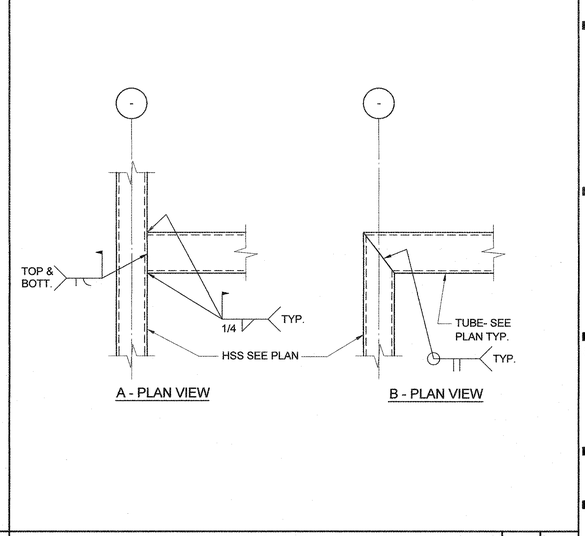
HSS MOMENT CONNECTION

NONE | 3



CANOPY FACIA SUPPORT DETAIL

NONE | 2



HSS TO HSS CONN.

NONE | 1

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NO	REASON	DATE

STEEL DETAILS

913-4675-01

11/21/17 | S6.2

GENERAL NOTES

A. GENERAL:

1. SCOPE OF THE PROJECT INCLUDES WORK SHOWN ON THE DRAWINGS AND IN THE SPECIFICATIONS.
2. WORK SHOWN ON THE DRAWINGS IS ALL INCLUSIVE, WHETHER SHOWN AT ALL LOCATIONS OR NOT, AS LONG AS IT IS SHOWN IN ONE LOCATION ON THE DRAWINGS.
3. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED WORK. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
4. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY OF COORDINATION WITH VARIOUS TRADES AND INCLUDE TURNS, BENDS, ADDITIONAL LENGTHS OF DUCTS, PIPING AND ELEVATION CHANGES, AND TRANSITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR MUST EXAMINE ALL CONSTRAINTS AND THE AVAILABLE SPACE AT THE JOB SITE THAT MAY REQUIRE CUSTOM FABRICATION OR DISASSEMBLY AND RE-ASSEMBLY OF CERTAIN EQUIPMENT.
6. PROTECT MATERIALS INCLUDING DUCTS AND PIPES FROM DUST AND DEBRIS AND KEEP OPEN END OF PIPES AND DUCTS COVERED AT ALL TIMES UNTIL READY FOR INSTALLATION OF NEXT SEGMENT OF WORK. LINED DUCTS THAT ARE DIRTY WILL NOT BE ACCEPTABLE.
7. WORK DAMAGED OR CUT INTO DURING CONSTRUCTION SHALL BE PATCHED, REPAIRED, PAINTED AND FINISHED TO MATCH EXISTING ADJACENT SURFACES IN TEXTURE, COLOR, AND FINISH.
8. MECHANICAL EQUIPMENT, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2013 CALIFORNIA BUILDING CODE, 2013 CALIFORNIA MECHANICAL CODE, 2013 CALIFORNIA ENERGY CODE, 2013 CALIFORNIA PLUMBING CODE AND 2013 CALIFORNIA FIRE CODE.
9. INSULATION SHALL COMPLY WITH THE REQUIREMENTS OF 2013 CALIFORNIA ENERGY CODE AND PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
10. AIR CONDITIONING UNITS SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA ENERGY COMMISSION.
11. ALL OUTDOOR EQUIPMENT, DUCTS, PIPING, CONTROL DEVICES, SMOKE DETECTORS, AND VARIABLE FREQUENCY DRIVES SHALL BE COMPLETELY WEATHERPROOFED.
12. OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM OR 3'-0" BELOW ANY VENTS OR EXHAUST OUTLETS.
13. CURBS, ROOF JACKS AND EQUIPMENT SUPPORT PADS SHALL BE COMPATIBLE WITH ROOFING SYSTEM. FLASH AND COUNTERFLASH ALL WEATHER EXPOSED ROOF OPENINGS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FLASHING DETAILS.
14. CUTTING, BORING, SAWCUTTING, OR DRILLING THROUGH NEW OR EXISTING STRUCTURAL ELEMENTS SHALL BE AS DETAILED ON STRUCTURAL DRAWINGS.
15. COORDINATE TEMPERATURE SENSOR AND THERMOSTAT LOCATION WITH FLOOR ARCHITECTURAL AND FURNITURE FLOOR PLANS. TEMPERATURE SENSOR AND THERMOSTAT ELEVATION SHALL BE 46" AFF AT CENTERLINE OF THE DEVICE AND IN COMPLIANCE WITH ADA AND CBC.
16. ANY CONDITION THAT, IN THE CONTRACTOR'S OPINION, PREVENT THE EXECUTION OF THE WORK AS INTENDED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN THE FORM OF AN RFI.
17. FIELD OBSERVATION BY THE ARCHITECT AND IOR: ALL OF THE WORK PERFORMED UNDER THIS CONTRACT IS SUBJECT TO INSPECTION BY THE BUILDING OWNERS FOR CONFORMITY WITH EXISTING BUILDING SYSTEMS, QUALITY OF PRODUCTS AND INSTALLATION. CONTRACTOR SHALL NOT PERFORM ANY WORK THAT MAY ADVERSELY AFFECT THE EXISTING BUILDING SYSTEMS OPERATION, EITHER DUE TO IMPROPER INSTALLATION, INADEQUATE COORDINATION OR POOR WORKMANSHIP. ANY WORK INSPECTED AND FOUND UNACCEPTABLE BY THE OWNERS AND/OR ARCHITECT/IOR SHALL BE PROMPTLY REPLACED OR CORRECTED AT NO ADDITIONAL COST.
18. DUCTWORK AND PIPING PENETRATING SLAB TO SLAB PARTITIONS SHALL BE SEALED AIRTIGHT. A RESILIENT CAULKING AND PACKING SHALL BE USED. SEAL ALL OPENINGS AROUND DUCTWORK AND PIPING PENETRATING FIRE RESISTIVE RATED WALLS AND FLOORS TO MAINTAIN RATING INTEGRITY.
19. PROVIDE REQUIRED ACCESS DOORS/PANELS FOR SERVICING LISTED ITEMS SUCH AS AIR TERMINAL UNITS, FIRE DAMPERS, COMBINATION SMOKE/ FIRE DAMPERS, VOLUME DAMPERS, VALVES, AND DEVICES REQUIRING ACCESS WHETHER OR NOT SUCH ACCESS IS SHOWN ON ARCHITECTURAL DRAWINGS. COORDINATE EXACT LOCATION OF CEILING, WALL, OR FLOOR ACCESS PANELS WITH ARCHITECTURAL DRAWINGS.
20. LOCATE VALVES IN EASILY ACCESSIBLE LOCATIONS.

B. EQUIPMENT:

1. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE.
2. INSTALL EQUIPMENT IN ACCESSIBLE LOCATION AND PROVIDE ADEQUATE SERVICE CLEARANCE FOR NORMAL MAINTENANCE WITHOUT REQUIRING REMOVAL OF MECHANICAL, ARCHITECTURAL, ELECTRICAL OR STRUCTURAL ELEMENTS.
3. FOR EQUIPMENT LOCATED ABOVE CEILING, INSTALL SUCH EQUIPMENT CLOSE ENOUGH TO THE CEILING ELEVATION TO FACILITATE READY ACCESS FOR MAINTENANCE AND SERVICING.
4. MAINTAIN A MINIMUM OF 42 INCHES CLEAR IN FRONT OF VARIABLE FREQUENCY DRIVES.
5. AIR MOVING SYSTEMS SUPPLYING AIR 2,000 CFM OR MORE TO ENCLOSED SPACES WITHIN BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF VIA SMOKE DETECTOR.

C. DUCTWORK:

1. UNLESS OTHERWISE NOTED, DIMENSIONS FOR DUCTS, GRILLES, DAMPERS, ETC. ARE IN INCHES.
2. DUCTWORK DIMENSIONS ARE INSIDE FREE AREA.
3. DIMENSIONS OF ACOUSTICALLY LINED DUCTWORK AS SHOWN ON PLANS ARE CLEAR INSIDE DIMENSIONS. INCREASE SIZE OF DUCT BY THICKNESS OF ACOUSTICAL LINING.
4. DUCTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 6 OF THE 2010 CALIFORNIA MECHANICAL CODE.
5. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH 2010 CALIFORNIA MECHANICAL CODE.
6. DUCTWORK LOCATED IN SHAFTS OR ENCLOSURES SHALL ALSO BE PRESSURE TESTED PER REQUIREMENTS AS STATED IN THE SPECIFICATIONS PRIOR TO BEING CONCEALED.
7. FOR EXACT LOCATIONS OF DIFFUSERS AND GRILLES, SEE ARCHITECTURAL DRAWINGS.
8. COORDINATE THE CORRECT TYPE OF CEILING DIFFUSER AND GRILLES MARGINS TO BE INSTALLED WITH CEILING SUSPENSION SYSTEM TO BE USED.
9. PROVIDE BUTTERFLY DAMPERS FOR ROUND DUCTS AND OPPOSED BLADE DAMPERS FOR RECTANGULAR DUCTS FOR ALL BRANCH TAKEOFFS.
10. MANUAL VOLUME DAMPERS SHALL BE PROVIDED FOR EACH AND EVERY AIR INLET AND OUTLET. LOCATE MANUAL VOLUME DAMPER AT BRANCH TAKE OFF FOR THE OUTLET, OR AS FAR FROM THE OUTLET AS POSSIBLE.
11. PROVIDE MANUAL VOLUME DAMPERS ON SUPPLY DUCT BRANCHES UPSTREAM OF THE AIR TERMINAL UNITS.
12. PROVIDE MANUAL VOLUME DAMPERS ON DUCTS CONNECTING TO DUCT RISER AT EACH FLOOR. LOCATE DAMPERS NEAR (BUT NOT INSIDE) THE SHAFT ENCLOSURE.
13. PROVIDE MANUAL VOLUME DAMPER REMOTE REGULATOR FOR THE MANUAL VOLUME DAMPER LOCATED ABOVE INACCESSIBLE CEILING AND AT THE LOCATION NOT READILY ACCESSIBLE. REFER TO SPECIFICATIONS FOR TYPE AND FLOOR PLANS FOR LOCATIONS.
14. COMBINATION FIRE/SMOKE DAMPERS SHALL BE FIRE MARSHALL APPROVED AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY.
15. PROVIDE DUCT ACCESS PANELS FOR COMBINATION FIRE/SMOKE DAMPERS.
16. PROVIDE DOUBLE RADIUS TURNING VANES IN RECTANGULAR 90° DUCT ELBOWS.
17. PROVIDE SPLITTER VANES IN RECTANGULAR RADIUS 90° DUCT ELBOWS WITH RADIUS TO WIDTH RATIO OF ONE OR LESS.
18. CIRCULAR METAL DUCTWORK SHALL BE SPIRAL WITH PRE-FABRICATED FITTINGS.
19. ROUND DUCT TAKEOFFS FROM RECTANGULAR DUCT SHALL BE MADE WITH FACTORY FABRICATED SPIN-IN OR CONICAL FITTINGS.
20. LOW PRESSURE FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 6'-0" AND NOT LESS THAN 4'. USE OF MEDIUM PRESSURE FLEXIBLE DUCT AT INLET TO AIR TERMINAL UNITS IS NOT PERMITTED. MINIMUM RADIUS SHALL BE 1-1/2 TIMES DIAMETER OF DUCT.
21. PROVIDE NECESSARY PLENUMS OR TRANSITIONS FOR FLEXIBLE DUCT CONNECTIONS TO DIFFUSERS AND REGISTERS.
22. PROVIDE 1" THICK ACOUSTICAL DUCT LINER INSIDE THE FIRST 10 FT. (MINIMUM) OF THE DUCT LEAVING OR RETURNING TO AIR HANDLING UNIT.
23. SUPPLY DIFFUSERS AND RETURN/EXHAUST GRILLES SHALL BE ALUMINUM IN TOILET ROOMS. EXHAUST DUCTS SERVING THESE ROOMS SHALL BE ALUMINUM DUCT. ALUMINUM DUCT SHALL BE SLOPED TOWARD GRILLES.
24. LOCATION OF POWER AND LOCAL DISCONNECTS FOR COMBINATION FIRE/SMOKE DAMPERS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR UNLESS OTHERWISE INDICATED ON ELECTRICAL DRAWINGS.
25. EXPOSED DUCTWORK AND FITTINGS IN SYSTEM DESIGNATED FOR PAINTING SHALL BE SANDED AND SEALED IN PREPARATION FOR PAINTING.

D. PIPING:

1. PROVIDE HOSE END DRAIN VALVE ON ALL PIPE STRAINERS.
2. PROVIDE ISOLATING VALVES AND UNIONS ON PIPING ADJACENT TO CONTROL VALVES OR EQUIPMENT. LOCATE VALVES SO THE EQUIPMENT CAN BE REMOVED WITHOUT DISMANTLING ANY BRANCH LINES.
3. BALANCING, FLOW, CONTROL AND AUTOMATIC FLOW LIMITERS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDED UPSTREAM AND DOWNSTREAM STRAIGHT PIPE LENGTHS.
4. PROVIDE BALANCING VALVES WITH READOUT PORTS IN THE HYDRONIC PIPING CONNECTING TO PIPE RISERS AT EACH FLOOR. LOCATE VALVES NEAR (BUT NOT INSIDE) THE SHAFT ENCLOSURE.
5. INSTALL DRAIN VALVES AT LOW POINTS OF PIPING SYSTEM TO ENABLE COMPLETE DRAINAGE. PROVIDE AIR VENT AT ALL HIGH POINTS IN THE PIPING SYSTEM.
6. SLOPE HYDRONIC PIPING FOR PROPER DRAINAGE AND ELIMINATION OF AIR.
7. PROVIDE CONDENSATE DRAIN PIPING WITH DRAINAGE FITTINGS FOR COOLING COILS AND ROUTE TO THE NEAREST APPROVED RECEPTOR.
8. SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS. PROVIDE NECESSARY RISER TRAPS AS REQUIRED TO ENSURE PROPER RETURN OF REFRIGERANT.

E. GREEN BUILDING

1. DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL START UP OF THE HEATING AND COOLING EQUIPMENT.
2. 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.
3. THE HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CFCs OR HALONS.

HVAC LEGEND

SYMBOL	ABBREV.	IDENTIFICATION
		EXISTING PIPE, DUCT OR EQUIPMENT
		EXISTING PIPE, DUCT OR EQUIPMENT TO BE REMOVED
		NEW PIPE, DUCT OR EQUIPMENT
	SA	SUPPLY AIR
	RA	RETURN AIR
F	EXH	EXHAUST AIR
OSA	OSA	FRESH AIR OR OUTSIDE AIR
	DIFF	DIFFUSER W/ 24 X 24 CEILING PANEL AND ROUND TO SQUARE ADAPTOR
	RAG	RETURN AIR GRILLE
	CD	CEILING DIFFUSER
MA	MA	MAKE-UP AIR
	SAD	SUPPLY AIR DUCT RISER (SECTION)
	RAD	RETURN AIR DUCT RISER (SECTION)
	EAD	EXHAUST AIR DUCT RISER (SECTION)
	SR	WALL SUPPLY REGISTER
	RR	WALL RETURN REGISTER
CA	CA	COMBUSTION AIR
		DISCHARGE OR RELIEF AIR
	DL	DOOR LOUVER
		ACOUSTICALLY LINED DUCT
R		DUCT RISE IN DIRECTION OF ARROW
D		DUCT DROP IN DIRECTION OF ARROW
		DOUBLE WALL TURNING VANES
		SPIN-IN FITTING WITH COMBINATION BUTTERFLY DAMPER AND EXTRACTOR
	FLEX	FLEXIBLE DUCT
		FLEXIBLE CONNECTION
BDD	BDD	BACKDRAFT DAMPER
	MD	MODULATING/MOTORIZED DAMPER
	VD	MANUAL VOLUME DAMPER
	VDR	MANUAL VOLUME DAMPER WITH REMOTE REGULATOR
FSD	FSD	COMBINATION FIRE SMOKE DAMPER WITH SMOKE DETECTOR
	CHS	CHILLED WATER SUPPLY PIPING
	CHR	CHILLED WATER RETURN PIPING
	HS	HEATING HOT WATER SUPPLY PIPING
	HR	HEATING HOT WATER RETURN PIPING
	D	COOLING COIL CONDENSATE OR EQUIPMENT DRAIN PIPING
	E/(E)	EXISTING

HVAC LEGEND (CONT.)

SYMBOL	ABBREV.	IDENTIFICATION
		RISER DOWN
		RISER UP
		VALVE IN RISER
		FLOW IN DIRECTION OF ARROW
		GATE VALVE
		GLOBE VALVE
		CHECK VALVE
		COMBINATION CHECK, THROTTLING , & SHUT-OFF VALVE
		BUTTERFLY VALVE
		BALL VALVE
		PLUG VALVE
FCV		FLOW CONTROL VALVE
	FCV	FLOW CONTROL VALVE
FMD		FLOW MEASURING DEVICE
PSW		FLOW SWITCH
		SOLENOID OPERATED VALVE
	PRV	PRESSURE REDUCING VALVE
		PRESSURE REGULATOR
		CONTROL VALVE (2-WAY)
		CONTROL VALVE (3-WAY)
	PV	PRESSURE RELIEF VALVE
	PT & R	PRESSURE & TEMPERATURE & RELIEF VALVE
PT	PT	PRESSURE & TEMPERATURE TEST PORT (PETE'S PLUG)
	AV	AUTOMATIC AIR VENT
	CBV	CALIBRATED BALANCE VALVE
	PG	PRESSURE GAGE
		THERMOMETER
	MV	MANUAL AIR VENT
		FLEXIBLE PIPING CONNECTION
		STRAINER
		REDUCER OR INCREASER
BFP	BFP	BACKFLOW PREVENTOR
SD		SUCTION DIFFUSER
		UNION
		FLANGE
SD	SD	SMOKE DETECTOR
T #XXX	STAT	ROOM THERMOSTAT/TEMPERATURE SENSOR W/ CORRESPONDING AIR TERMINAL UNIT NUMBERS
T	STAT	DUCT TEMPERATURE SENSOR
C	CO2	CARBON DIOXIDE MONITOR
S		SWITCH
	POD	POINT OF DISCONNECTION
	POC	POINT OF CONNECTION
		SHEET NOTES
ø	DIA	DIAMETER
3 / M6.1		MECHANICAL DETAIL NUMBER; MECHANICAL DETAIL SYMBOL; MECHANICAL DRAWING NUMBER WHERE DETAIL IS SHOWN
VAV / 1		MECHANICAL EQUIPMENT ABBREVIATION; MECHANICAL EQUIPMENT SYMBOL; MECHANICAL EQUIPMENT NUMBER

MEP COMPONENT ANCHORAGE NOTES

1. MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN 2013 CALIFORNIA BUILDING CODE, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 6 AND 30.
   A. PERMANENT EQUIPMENT AND COMPONENTS.
   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
   C. MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8-HOURS AND HEAVIER THAN 400-POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
   A. COMPONENTS WEIGHING LESS THAN 400-POUNDS AND HAVE A CENTER OF MASS LOCATED 4-FOOT OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20-POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5-POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

SIESMIC BRACING NOTES

1. SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT SHALL BE PROVIDED USING A SEISMIC RESTRAINT MANUAL THAT BEARS AN OSHPD ANCHORAGE PRE-APPROVAL NUMBER: OPA-0349 MASON INDUSTRIES "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK, AND ELECTRICAL SYSTEMS", NO. OPA-0485 I.S.A.T. "ENGINEERED SEISMIC BRACING OF SUSPENDED UTILITIES", OR APPROVED EQUAL.
   A. A COPY OF OSHPD PRE-APPROVED SYSTEMS INSTALLATION GUIDE/MANUAL SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING INSTALLATION AND KEPT ON THE JOB SITE.
   B. PROVIDE SHOP DRAWINGS SHOWING HOW PRE-APPROVED SYSTEM WILL BE APPLIED TO EACH PIPE AND DUCT SYSTEM. STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF SUPPORTING STRUCTURE TO SUPPORT LOADS OF ANCHORAGE AND BRACING SYSTEM BASED ON SHOP DRAWINGS. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS.
   C. SHOP DRAWING SHALL BE STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
   D. SHOP DRAWINGS OF SEISMIC BRACING SHALL BE AVAILABLE TO THE INSPECTOR OF RECORD TO VERIFY THE INSTALLATION OF THE SEISMIC BRACING.
6. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE ANCHOR TYPE AND INSTALLATION REQUIREMENTS.
7. PIPING, DUCTWORK AND CONDUIT CROSSING BUILDING SEISMIC SEPARATIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE CONNECTORS.

ABBREVIATIONS

ABBREVIATION	IDENTIFICATION
A, AMPS	AMPERES
ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMB	AMBIENT
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
ATU	AIR TERMINAL UNIT
AUTO	AUTOMATIC
BDD	BACK DRAFT DAMPER
BE	BOTTOM ELEVATION
BEL	BELOW
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CIRCUIT BREAKER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CFSD	COMBINATION FIRE SMOKE DAMPER
CLG	CEILING
COMP	COMPRESSOR
COND	CONDITION
CONDR	CONDENSER
COP	COEFFICIENT OF PERFORMANCE
CU	CONDENSING UNIT
CV	CONSTANT VOLUME
dB	DECIBEL
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DEFL	DEFLECTION
DEMO	DEMOLITION
DL	DOOR LOUVER
DN	DOWN
DPSW	DIFFERENTIAL PRESSURE SWITCH
DS	DUCT SILENCER (SOUND TRAP)
DSW	DISCONNECT SWITCH
DWGS	DRAWINGS
(E), EX, EXIST	EXISTING
EA	EACH
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELECT	ELECTRICAL
ELEV	ELEVATION
ENCL	ENCLOSURE
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EVAP	EVAPORATOR, EVAPORATIVE
EXH	EXHAUST
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FS	FLOOR SINK
FSW	FLOW SWITCH
FV	FACE VELOCITY
GAL	GALLON
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
HTG	HEATING
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
L	LENGTH
LD	LINEAR DIFFUSER
LRA	LOCKED ROTOR AMPERES
LVG	LEAVING
MA	MIXED AIR
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFGR	MANUFACTURER
MOCP	MAXIMUM OVERCURRENT PROTECTION
MPH	MILES PER HOUR
NC	NOISE CRITERIA
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
OC	ON CENTER
OPNG	OPENING
OP, OPER	OPERATING
OSA	OUTSIDE AIR
PERF	PERFORATED
PD	PRESSURE DROP
PH	PHASE
POC	POINT OF CONNECTION
POD	POINT OF DISCONNECT
PR, PRESS	PRESSURE
PSI	POUND PER SQUARE INCH
QTY	QUANTITY
RA	RETURN AIR
REFR	REFRIGERANT
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RLA	RATED LOAD AMPERES
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SC	SENSIBLE CAPACITY
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF, SQ FT	SQUARE FEET
SG	SUPPLY GRILLE
SHT	SHEET
SO	SCREENED OPENING
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATIONS
SS	STAINLESS STEEL
SW	SWITCH
TA	TRANSFER AIR
TC	TOTAL CAPACITY
TDH	TOTAL DYNAMIC HEAD
TE	TOP ELEVATION
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UC	UNDER CUT
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UTR	UP THRU ROOF
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WT	WEIGHT

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

PROJECT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

PROJECT NUMBER
IDENTIFICATION STAMP
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CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

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VENTILATION FAN UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	SUPPLY FAN						MINIMUM OSA (CFM)	HEATING COIL									FILTERS			ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
					AIRFLOW (CFM)	ESP (IN WG)	RPM	BHP	DRIVE	MOTOR HP		CAPACITY (MBH)	FACE VELOCITY (FPM)	AIR ENT (°F)	AIR LVG (°F)	AIR PD (IN WG)	WATER ENT (°F)	WATER LVG (°F)	WATER GPM	WATER PD (FT WG)	TYPE	QTY	SIZE W x L x D (IN)	MCA	VOLTS	PHASE	HERTZ			
VF 1	COOK 100KSP-B	ROOF –	– –	ROOF MOUNTED	1,575	0.5	795	0.360	BELT	1/2	1,575	–	–	–	–	–	–	–	–	–	MERV 8	–	–	7.38	208	1	60	M5.0.1 5	400	PRE-FABRICATED ROOF CURB, JCI VFD WITH BACNET INTERFACE.

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	CAPACITY (CFM)	SP (IN.)	RPM	BHP	DRIVE		ELECTRICAL CHARACTERISTICS				MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
									TYPE	VFD	HP	VOLTS	PHASE	HERTZ			
EF 1	COOK ACRU-B 150R4B	ROOF –	EXHAUST	UPBLAST ROOF MOUNTED	1,575	0.5	1006	0.260	BELT	Y	1/3	208	1	60	M5.0.1 5	200	BACK DRAFT DAMPER, PRE-FABRICATED ROOF CURB: COOK RCC-40, WEIGHT IS INCLUDED IN THE OPER. WEIGHT OF FAN, JCI VFD WITH BACNET INTERFACE, COOK LORENIZED COATING.

AIR COOLED VARIABLE REFRIGERANT FLOW CONDENSING UNIT

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE HEAT RECOVERY	BC CONTROLLER	COOLING			HEATING			COMPRESSOR					ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
						CAPACITY (MBH)	EFF.	AMBIENT TEMP (°F)	CAPACITY (MBH)	EFF.	AMBIENT TEMP (°F)	REFRIG-ERANT TYPE	QTY.	TYPE	RLA	LRA	MCA	MOCP	VOLTS	PHASE	HERTZ			
CU 1	LG ARUB192BTE4	– –	1ST FLOOR	HEAT RECOVERY FLOOR MTD	–	192.0	– EER	90	216.0	– COP	37	R410A	2	SCROLL	17.0 27.4	–	25.3 40.3	40 60	208	3	60	M5.0.1 4	1,200	1. INDIVIDUAL POWER CONNECTION FOR EA MCA &MOCP LISTED. 2. CONTRACTOR TO FIELD INSTALL TWINNING KIT

DIRECT EXPANSION FAN COIL UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	SUPPLY FAN				MINIMUM OSA (CFM)	COOLING			HEATING	REFRIGERANT			FILTERS			ELECTRICAL DATA						MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
					AIRFLOW (CFM)	ESP (IN WG)	DRIVE	MOTOR OUTPUT (W)		CAPACITY TOTAL (MBH)	CAPACITY SENSIBLE (MBH)	AIR PD (IN WG)	CAPACITY TOTAL (MBH)	TYPE	SUCTION LINE SIZE (IN)	LIQUID LINE SIZE (IN)	TYPE	QTY	SIZE W x L x D (IN)	MCA	MOCP	VOLTS	PHASE	HERTZ			
FC 1	LG ARNU183TQC4	– –	–	SUSPENDED CASSETTE	395	–	DIRECT	–	45	19.1	14.0	–	21.5	R410A	1/2	1/4	MERV 13	– –	– –	0.25	15	208	1	60	M5.0.1 3	100	PROVIDE VENTILATION KIT –
FC 2	LG ARNU093BGA4	– –	–	SUSPENDED DUCTED	450	0.48	DIRECT	–	30	9.6	7.0	–	11.3	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 3	LG ARNU093TRC4	– –	–	SUSPENDED CASSETTE	280	–	DIRECT	–	30	9.6	7.0	–	10.9	R410A	1/2	1/4	MERV 13	– –	– –	0.25	15	208	1	60	M5.0.1 3	100	PROVIDE VENTILATION KIT –
FC 4	LG ARNU073BGA4	– –	–	SUSPENDED DUCTED	260	0.48	DIRECT	–	45	6.9	5.3	–	8.8	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 5	LG ARNU093BGA4	– –	–	SUSPENDED DUCTED	450	0.48	DIRECT	–	60	9.6	7.0	–	11.3	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 6	LG ARNU483BRZ4	– –	–	SUSPENDED DUCTED	840	0.39	DIRECT	–	840	44.3	32.2	–	32.2	R410A	5/8	3/8	MERV 13	– –	– –	1.5	15	208	1	60	M5.0.1 1	200	– –
FC 7	LG ARNU283BGA4	– –	–	SUSPENDED DUCTED	930	0.56	DIRECT	–	350	28.1	20.7	–	32.5	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 8	LG ARNU123BGA4	– –	–	SUSPENDED DUCTED	400	0.48	DIRECT	–	75	11.6	8.8	–	14.1	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 9	LG ARNU073BGA4	– –	–	SUSPENDED DUCTED	240	0.48	DIRECT	–	30	6.8	5.3	–	8.8	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 10	LG ARNU243BGA4	– –	–	SUSPENDED DUCTED	900	0.58	DIRECT	–	70	21.3	17.7	–	28.2	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 11	LG ARNU123SBL4	– –	–	WALL MOUNT	370	–	DIRECT	–	0	12.3	8.8	–	–	R410A	1/2	1/4	MERV 13	– –	– –	0.2	15	208	1	60	M5.0.1 9	100	– –
FC 12	LG ARNU053SBL4	– –	–	WALL MOUNT	230	–	DIRECT	–	0	5.5	3.9	–	–	R410A	1/2	1/4	MERV 13	– –	– –	0.2	15	208	1	60	M5.0.1 9	100	– –

NOTE: PROVIDE CONDENSATE RETURN PUMP AS NECESSARY IF REQUIRED DURING SHOP DRAWING PREPARATION.

HEAT RECOVERY UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
				MCA	MOCP	VOLTS	PHASE	HERTZ			
HRU 1 HRU 2 HRU 3	LG PRHR042A	– –	VRF SYSTEM	0.2	15	208	1	60	M5.0.1 1	80	– –

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE: DEC 12 2017

CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS
NO REASON DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
MECHANICAL SCHEDULES

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/16
SHEET NO: M0.0.2

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A. PROJECT GENERAL INFORMATION

1.	Project Location (city)	Compton	8.	Standards Version	Compliance2015
2.	CA Zip Code	90221	9.	Compliance Software (version)	EnergyPro 6.8
3.	Climate Zone	8	10.	Building Orientation (deg)	(N) 0 deg
4.	Total Conditioned Floor Area in Scope	4,852 ft²	11.	Permitted Scope of Work	NewComplete
5.	Total Unconditioned Floor Area	0 ft²	12.	Building Type(s)	Nonresidential
6.	Total # of Stories (Habitable Above Grade)	1	13	Gas Type	NaturalGas
7.	Total # of dwelling units	0			

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ²-yr) § 140.1

BUILDING COMPLIES

1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard
Space Heating	1.9	0.8	1.1	57.9%
Space Cooling	72.8	74.6	-1.8	-2.5%
Indoor Fans	119.6	93.2	26.4	22.1%
Heat Rejection	--	--	--	--
Pumps & Misc.	--	--	--	--
Domestic Hot Water	4.9	1.5	3.4	69.4%
Indoor Lighting	43.1	43.1	--	0.0%
COMPLIANCE TOTAL	**242.3**	**213.2**	**29.1**	**12.0%**
Receptacle	111.6	111.6	0.0	0.0%
Process	82.8	82.8	0.0	0.0%
Other Ltg	--	--	--	--
TOTAL	**436.7**	**407.6**	**29.1**	**6.7%**

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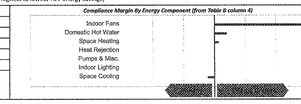
C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)

1st	Indoor Fans: Check envelope and mechanical
2nd	Domestic Hot Water: Check mechanical
3rd	Space Heating: Check envelope and mechanical
4th	Heat Rejection: Check envelope and mechanical
5th	Pumps & Misc.: Check mechanical
6th	Indoor Lighting: Check lighting
7th	Space Cooling: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)



D. EXCEPTIONAL CONDITIONS

This project includes Domestic Hot Water in the analysis. Please verify that Domestic Hot Water is included in the design for the permitted scope of work.

This project includes fenestration that has a U-Factor greater than 1.028 Btu/h-ft2F, which is currently not supported by the simulation software. The U-factor for these fenestrations is modeled and reported in Table J as 1.03 Btu/h-ft2F which may not match the design documents. Please verify with the design team on the actual performance of these fenestration(s).

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

None
Provided

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components use the performance or prescriptive path for compliance. "NA"= not in project

For components that utilize the performance path, indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms *(required for submittal)*	Location of Mandatory Notes on Plans
Envelope	☒ Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
	☐ NA		
Mechanical	☒ Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	☐ NA		
Domestic Hot Water	☒ Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PLB-01-E	
	☐ NA		
Lighting (Indoor Conditioned)	☒ Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	☐ NA		
Covered Process: Commercial Kitchens	☐ Performance	S2 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 03-E	
	☒ NA		
Covered Process: Computer Rooms	☐ Performance	S3 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 04-E	
	☒ NA		
Covered Process: Laboratory Exhaust	☐ Performance	S4 (section of the NRCC-PRF-01-E)	
	☐ Prescriptive	NRCC-PRC-01/ 09-E	
	☒ NA		

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

The following building components are only eligible for prescriptive compliance. Indicate which are relevant to the project.				*The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.*			
Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
☐	☒	Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	 ☐ ☐	 ☒ ☒	Commissioning: §120.8 Simple Systems Complex Systems	 NRCC-CXR-01 / 02 / 03 / 05-E NRCC-CXR-01 / 02 / 04 / 05-E
☐	☒	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E	☐	☒	Electrical: §130.5	NRCC-ELC-01-E
☐	☒	Lighting (Sign) §140.8	NRCC-LTS-01-E	☐	☒	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
☐	☒	Solar Thermal Water Heating: §140.5	NRCC-STH-01-E	 ☐ ☐ ☐ ☐ ☐	 ☒ ☒ ☒ ☒ ☒	Covered Process: §120.6 Parking Garage Commercial Refrigeration Warehouse Refrigeration Compressed Air Process Boilers	NRCC-PRC-01-E NRCC-PRC-02-E NRCC-PRC-05-E NRCC-PRC-06/07/08-E NRCC-PRC-10-E NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Envelope	☒ NRCI-ENV-01-E - For all buildings	☐	☐
	☒ NRCA-ENV-02-F- NFRC label verification for fenestration	☐	☐
Mechanical	☒ NRCI-MCH-01-E - For all buildings with Mechanical Systems	☐	☐
	☒ NRCA-MCH-02-A- Outdoor Air	☐	☐
	☒ NRCA-MCH-03-A – Constant Volume Single Zone HVAC	☐	☐
	☐ NRCA-MCH-04-H- Air Distribution Duct Leakage	☐	☐
	☐ NRCA-MCH-05-A- Air Economizer Controls	☐	☐
	☐ NRCA-MCH-06-A- Demand Control Ventilation	☐	☐
	☐ NRCA-MCH-07-A – Supply Fan Variable Flow Controls	☐	☐
	☐ NRCA-MCH-08-A- Valve Leakage Test	☐	☐
	☐ NRCA-MCH-09-A – Supply Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-10-A- Hydronic System Variable Flow Controls	☐	☐
	☐ NRCA-MCH-11-A – Auto Demand Shed Controls	☐	☐
	☐ NRCA-MCH-12-A- Packaged Direct Expansion Units	☐	☐
	☐ NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units	☐	☐
	☐ NRCA-MCH-14-A- Distributed Energy Storage	☐	☐
	☐ NRCA-MCH-15-A – Thermal Energy Storage	☐	☐
	☐ NRCA-MCH-16-A- Supply Air Temp Reset Controls	☐	☐
	☐ NRCA-MCH-17-A – Condensate Water Temp Reset Controls	☐	☐
	☐ NRCA-MCH-18-A- Energy Management Controls Systems	☐	☐
	☐ NRCV-MCH-04-H- Duct Leakage Test	☐	☐

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Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Plumbing	☒ NRCI-PLB-01-E - For all buildings with Plumbing Systems	☐	☐
	☐ NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-21-H- HERS verified central systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	☐	☐
	☐ NRCI-STH-01-E - Any solar water heating	☐	☐
Indoor Lighting	☒ NRCI-LTI-01-E - For all buildings	☐	☐
	☐ NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)	☐	☐
	☐ NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	☐	☐
	☐ NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	☐	☐
	☐ NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	☐	☐
	☐ NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio	☐	☐
	☐ NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls.	☐	☐
	☐ NRCA-LTI-03-A - Automatic daylighting controls	☐	☐
	☐ NRCA-LTI-04-A - Demand responsive lighting controls	☐	☐
Outdoor Lighting	☐ NRCI-LTO-01-E – Outdoor Lighting	☐	☐
	☐ NRCI-LTO-02-E- EMCS Lighting Control System	☐	☐
	☐ NRCA-LTO-02-A - Outdoor Lighting Control	☐	☐
Sign Lighting	☐ NRCI-LTS-01-E – Sign Lighting	☐	☐
Electrical	☐ NRCI-ELC-01-E - Electrical Power Distribution	☐	☐
Photovoltaic	☐ NRCI-SPV-01-E Photovoltaic Systems	☐	☐

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) –
Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance
(Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).
See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.

Building Component	Compliance Forms *(required for submittal)*	Confirmed Pass	Confirmed Fail
Covered Process	☐ NRCI-PRC-01-E Refrigerated Warehouse	☐	☐
	☐ NRCA-PRC-01-F- Compressed Air Systems	☐	☐
	☐ NRCA-PRC-02-F- Kitchen Exhaust	☐	☐
	☐ NRCA-PRC-03-F- Garage Exhaust	☐	☐
	☐ NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls	☐	☐
	☐ NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	☐	☐
	☐ NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	☐	☐
	☐ NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor	☐	☐
	☐ NRCA-PRC-08-F- Electrical Resistance Underslab Heating System	☐	☐

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)

1.	Total Conditioned Floor Area	4,852 ft²	5.	Number of Floors Above Grade	1
2.	Total Unconditioned Floor Area	0 ft²	6.	Number of Floors Below Grade	0
3.	Addition Conditioned Floor Area	0 ft²			
4.	Addition Unconditioned Floor Area	0 ft²			

7. Opaque Surfaces & Orientation	8. Total Gross Surface Area	9. Total Fenestration Area	10. Window to Wall Ratio	Confirmed Pass	Confirmed Fail
North Wall	1,068 ft²	42 ft²	03.9%	☐	☐
East Wall	868 ft²	0 ft²	00.0%	☐	☐
South Wall	1,069 ft²	0 ft²	00.0%	☐	☐
West Wall	873 ft²	113 ft²	13.0%	☐	☐
Total	**3,878 ft²**	**155 ft²**	**04.0%**	☐	☐
Roof	4,918 ft²	130 ft²	02.6%	☐	☐

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J. FENESTRATION ASSEMBLY SUMMARY § 110.6

1. Fenestration Assembly Name / Tag or I.D.	2. Fenestration Type	3. Certification Method¹	4. Assembly Method	5. Area ft²	6. Overall U-factor	7. Overall SHGC	8. Overall VT	9. Status²	Confirmed Pass	Confirmed Fail
Double Metal Clear	VerticalFenestration	DefaultPerformance	SiteBuilt	155	0.55	0.69	0.77	N	☐	☐
Skylight	Skylight	DefaultPerformance	SiteBuilt	130	1.03	0.69	0.88	N	☐	☐

[1] Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.

[2] Status: N - New, A – Altered, E – Existing

Taking compliance credit for fenestration shading devices? (if "Yes", see NRCC-PRF-ENV-DETAILS for more information)	No

K. OPAQUE SURFACE ASSEMBLY SUMMARY § 120.7/ § 140.3

1. Surface Name	2. Surface Type	3. Area (ft²)	4. Framing Type	5. Cavity R-Value	6. Continuous R-Value	7. U-Factor / F-Factor / C-Factor	8. Status¹	Confirmed Pass	Confirmed Fail
10 Concrete Wall w/R-129	ExteriorWall	3878	NA	0	12	U-Factor: 0.070	N	☐	☐
Steel Deck w/R-2517	Roof	4918	NA	0	23	U-Factor: 0.038	N	☐	☐
Slab On Grade19	UndergroundFloor	4852	NA	0	NA	F-Factor: 0.730	N	☐	☐

[1] Status: N - New, A – Altered, E – Existing

L. ROOFING PRODUCT SUMMARY § 140.3

1. Product Type	2. Product Density (lb/ft²)	3. Aged Solar Reflectance	4. Thermal Emittance	5. SRI	6. Cool Roof Credit	7. Roofing Product Description	Confirmed Pass	Confirmed Fail
Steel Deck w/R-2517	6.87448	0.08	0.75	NA	No	NA	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) § 110.1 / § 110.2

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1. Equip Name	2. Equip Type	3. System Type (Simple ³ or Complex ⁴)	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtuh)	8. Total Cooling Output (kBtu/h)	9. Efficiency Cooling	9. Efficiency Heating	10. Acceptance Testing Required? (Y/N) ⁵	11. Status⁶	Confirmed Pass	Confirmed Fail
VRF-1	SZHP (Split3Phase)	Simple	1	22	Yes	44	19	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-1 LOBBY5	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-2	SZHP (Split3Phase)	Simple	1	11	Yes	44	10	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-2 SERVICE WINDOW22	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-3	SZHP (Split3Phase)	Simple	1	11	Yes	44	10	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-3 BREAK ROOM29	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-4	SZHP (Split3Phase)	Simple	1	9	Yes	44	8	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-4 SERGEANT OFFICE37	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-5	SZHP (Split3Phase)	Simple	1	11	Yes	44	10	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-5 MEETING ROOM49	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-6	SZHP (Split3Phase)	Simple	1	51	Yes	44	48	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-6 LOCKERS57	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-7	SZHP (Split3Phase)	Simple	1	27	Yes	44	30	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information) § 110.1 / § 110.2

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1. Equip Name	2. Equip Type	3. System Type (Simple ³ or Complex ⁴)	4. Qty	5. Total Heating Output (kBtu/h)	6. Supp Heat Source (Y/N)	7. Supp Heat Output (kBtuh)	8. Total Cooling Output (kBtu/h)	9. Efficiency Cooling	9. Efficiency Heating	10. Acceptance Testing Required? (Y/N) ⁵	11. Status⁶	Confirmed Pass	Confirmed Fail
VRF-7 DRUG/EVIDENC E STORA91	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-8	SZHP (Split3Phase)	Simple	1	14	Yes	44	12	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-8 INTERVIEW ROOM127	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-9	SZHP (Split3Phase)	Simple	1	9	Yes	44	8	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-9 LIEUTENANT OFFICE143	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-10	SZHP (Split3Phase)	Simple	1	27	Yes	44	24	SEER-14.0 / EER-12.2	HSPF-8.2	Yes	N	☐	☐
VRF-10 OPEN OFFICE153	Exhaust ((null))	Simple	1	0	No	0	0	NA	NA	No	N	☐	☐
VRF-11	SZAC (Split3Phase)	Simple	1	0	No	0	12	SEER-14.0 / EER-12.2	NA	Yes	N	☐	☐
VRF-12	SZAC (Split3Phase)	Simple	1	0	No	0	6	SEER-14.0 / EER-12.2	NA	Yes	N	☐	☐

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Wet System Equipment ²								Pumps					Confirmed	
12. Equip Name	13. Equip Type	14. Qty	15. Vol (gal)	16. Rated Capacity (kBtu/h)	17. Efficiency	18. Standby Loss	19. Tank Ext. R Value	20. Qty	21. GPM	22. HP	23. VSD (Y/N)	24. Status⁶	Pass	Fail
A O Smith Water Products2	Instantaneous	1	0	199	EF: 0.950	NA	NA	NA	NA	NA	No	N	☐	☐

[1] Dry System Equipment includes furnaces, air handling units, heat pumps, etc.

[2] Wet System Equipment includes boilers, chillers, cooling towers, water heaters, etc.

[3] Simple Systems must complete NRCC-CXR-03-E commissioning design review form

[4] Complex Systems must complete NRCC-CXR-04-E commissioning design review form

[5] A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS

[6] Status: N - New, A – Altered, E – Existing

Discrepancy between modeled and designed equipment sizing? (if "Yes", see Table F. "Additional Remarks" for an explanation)	No

N. ECONOMIZER & FAN SYSTEMS SUMMARY¹ § 140.4

1. Equip Name	2. Outside Air CFM	3. Supply Fan CFM	Supply Fan HP	Supply Fan BHP	Supply Fan TSP (inch WC)	Supply Fan Control	4. Return Fan CFM	Return Fan HP	Return Fan BHP	Return Fan TSP (inch WC)	Return Fan Control	5. Economizer Type (if present)	Confirmed Pass	Confirmed Fail
VRF-1	42	480	0.024	0.024	0.16	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-2	32	355	0.360	0.360	3.22	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-3	38	280	0.024	0.024	0.27	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-4	37	280	0.456	0.456	5.17	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-5	70	355	0.456	0.456	4.08	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-6	140	1560	0.135	0.135	0.28	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-7	186	755	0.360	0.360	1.51	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-8	47	460	0.360	0.360	2.48	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-9	35	280	0.360	0.360	4.08	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-10	78	670	0.360	0.360	1.71	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐
VRF-11	9	370	0.017	0.017	0.14	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

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N. ECONOMIZER & FAN SYSTEMS SUMMARY¹ § 140.4

1. Equip Name	2. Outside Air CFM	3. Supply Fan CFM	Supply Fan HP	Supply Fan BHP	Supply Fan TSP (inch WC)	Supply Fan Control	4. Return Fan CFM	Return Fan HP	Return Fan BHP	Return Fan TSP (inch WC)	Return Fan Control	5. Economizer Type (if present)	Confirmed Pass	Confirmed Fail
VRF-12	15	205	0.017	0.017	0.26	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	☐	☐

[1] Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section

O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Confirmed Pass	Confirmed Fail
VRF-1	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-1 LOBBY5	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-2	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-2 SERVICE WINDOW22	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-3	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-3 BREAK ROOM29	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐

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O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Confirmed Pass	Confirmed Fail
VRF-4	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-4 SERGEANT OFFICE37	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-5	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-5 MEETING ROOM49	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-6	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-6 LOCKERS57	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-7	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-7 DRUG/EVIDENCE STORA91	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐

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O. EQUIPMENT CONTROLS § 120.2

1. Equip Name	2. Equip Type	3. Controls	Confirmed Pass	Confirmed Fail
VRF-8	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-8 INTERVIEW ROOM127	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-9	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-9 LIEUTENANT OFFICE143	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-10	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-10 OPEN OFFICE153	Exhaust	No DCV Controls Economizer type not properly specified No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-11	SZAC	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
VRF-12	SZAC	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start	☐	☐
Undefined Plant1 - SHW	Service Hot Water, Primary Only	Fixed Temperature Control, No DDC	☐	☐

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P. SYSTEM DISTRIBUTION SUMMARY § 120.4/ § 140.4(l)

		Dry System Distribution				Confirmed	
1. Equip Name	2. Equip Type	3. Duct Leakage and Sealing Required per 140.4(l)	4. Duct Leakage will be verified per NA1 and NA2	5. Ducts Insulation R-Value	Ducts Location	Pass	Fail
VRF-1	SZHP	No	No	8	Unconditioned	☐	☐
VRF-2	SZHP	No	No	8	Unconditioned	☐	☐
VRF-3	SZHP	No	No	8	Unconditioned	☐	☐
VRF-4	SZHP	No	No	8	Unconditioned	☐	☐
VRF-5	SZHP	No	No	8	Unconditioned	☐	☐
VRF-6	SZHP	No	No	8	Unconditioned	☐	☐
VRF-7	SZHP	No	No	8	Unconditioned	☐	☐
VRF-8	SZHP	No	No	8	Unconditioned	☐	☐
VRF-9	SZHP	No	No	8	Unconditioned	☐	☐
VRF-10	SZHP	No	No	8	Unconditioned	☐	☐
VRF-11	SZAC	No	No	8	Unconditioned	☐	☐
VRF-12	SZAC	No	No	8	Unconditioned	☐	☐

Does the Project Include Zonal Systems? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Does the Project Include a Solar Hot Water System? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (if "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	No

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Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)³ § 140.6

1. Occupancy Type ¹	2. Conditioned Floor Area ² (ft²)	3. Installed Lighting Power (Watts)	4. Lighting Control Credits (Watts)	5. Additional (Custom) Allowance: Area Category Footnotes (Watts)	5. Additional (Custom) Allowance: Tailored Method (Watts)	Confirmed Pass	Confirmed Fail
						☐	☐
Office (Greater than 250 square feet in floor area)	4,852	3,639	0	0	0	☐	☐
Building Totals:	**4,852**	**3,639**	**0**	**0**	**0**		

[1] See Table 140.6-C

[2] See NRCC-LTI-01-E for unconditioned spaces

[3] Lighting information for existing spaces modeled is not included in the table

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E)¹ § 130.0

This Section Does Not Apply

[1] If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES § 140.9

This Section Does Not Apply

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS § 140.9

This Section Does Not Apply

S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS § 140.9

This Section Does Not Apply

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS § 140.9

This Section Does Not Apply

T. UNMET LOAD HOURS

This Section Does Not Apply

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ___ FLS ___ SS
DATE DEC 1 2 2017

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

KEVIN S. CHEN
M-31154
Exp. 12/31/17

TITLE 24 REPORT

913-4675-01

11/21/16

M0.0.3

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U. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	0.2	--	5.1	--	--
Space Cooling	11.6	12.0	-0.4	--	--	--
Indoor Fans	25.6	19.9	5.7	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	--	--	--	14.5	4.3	10.2
Indoor Lighting	8.2	8.2	0.0	--	--	--
COMPLIANCE TOTAL	**45.4**	**40.3**	**5.1**	**19.6**	**4.3**	**15.3**
Receptacle	20.8	20.8	0.0	--	--	--
Process	15.7	15.7	0.0	--	--	--
Other Ltg	--	--	--	--	--	--
TOTAL	**81.9**	**76.8**	**5.1**	**19.6**	**4.3**	**15.3**

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT § 10-103

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Michael Sung	Signature:
Company: dHA + CALPEC.	
Address: 150 S. Arroyo Parkway	Signature Date: 11-15-2017
City/State/Zip: Pasadena CA 91105	CEA Identification (If applicable):
Phone: 626-445-8580	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1 I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.

2 I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

3 I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:	Declaration Statement Type:	
Phone:	Title:	License #:
Responsible Lighting Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:	Declaration Statement Type:	
Phone:	Title:	License #:
Responsible Mechanical Designer Name: - specify -	Signature:	
Company: dHA + CALPEC		
Address: 150 S. Arroyo Parkway	Date Signed: 11-15-2017	
City/State/Zip: Pasadena CA 91105	Declaration Statement Type:	
Phone: 626-445-8580	Title:	License #: M-31154

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS

1.	2.	3.	4.	Confirmed	
Surface Name	Surface Type	Description of Assembly Layers	Notes	Pass	Fail
10 Concrete Wall w/R-129	ExteriorWall	Concrete - Solid Grout - 105 lb/ft3 - 10 in. Cellular polyisocyanurate (unfaced) - 2 in. R12 Gypsum Board - 5/8 in.		☐	☐
Steel Deck w/R-2517	Roof	Built-up roofing - 3/8 in. Plywood - 5/8 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Cellular polyisocyanurate (unfaced) - 4 in. R23 Metal Deck - 1/16 in.		☐	☐
Slab On Grade19	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0		☐	☐

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)

This Section Does Not Apply

C. OPAQUE DOOR SUMMARY

1.	2.	3.	4.	5.	6.	7.	Confirmed	
Opaque Door Assembly Name / Tag or I.D.	Door Type	Certification Method	Operation	Area	Overall U-factor	Status[1]	Pass	Fail
Metal Double-layer Door111	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	65	0.700	N	☐	☐

[1] *Status: N - New, A – Altered, E – Existing*

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NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT *(Adapted from 2013-NRCC-MCH-03-E)*

	1. DESIGN AIR FLOWS							2. VENTILATION (§ 120.1)									Confirmed	
CONDITIONED ZONE NAME	HEATING / COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Pass	Fail
1-VRF-1 LOBBY	VRF-1	480	NA	NA	NA	NA	N	VRF-1	282	NA	1	30.0	42	42	NA	N	☐	☐
2-VRF-2 SERVICE WINDOW	VRF-2	355	NA	NA	NA	NA	N	VRF-2	210	NA	1	30.0	32	32	NA	N	☐	☐
3-VRF-3 BREAK ROOM	VRF-3	280	NA	NA	NA	NA	N	VRF-3	255	NA	1	30.0	38	38	NA	N	☐	☐
4-VRF-4 SERGEANT OFFICE	VRF-4	280	NA	NA	NA	NA	N	VRF-4	245	NA	1	30.0	37	37	NA	N	☐	☐
5-VRF-5 MEETING ROOM	VRF-5	355	NA	NA	NA	NA	N	VRF-5	467	NA	2	30.0	70	70	NA	N	☐	☐
6-VRF-6 LOCKERS	VRF-6	1,560	NA	NA	NA	NA	N	VRF-6	932	NA	5	30.0	140	140	NA	N	☐	☐
7-VRF-7 DRUG/EVIDENCE STORA	VRF-7	755	NA	NA	NA	NA	N	VRF-7	1,243	NA	6	30.0	186	186	NA	N	☐	☐
8-VRF-8 INTERVIEW ROOM	VRF-8	460	NA	NA	NA	NA	N	VRF-8	311	NA	2	30.0	47	47	NA	N	☐	☐
9-VRF-9 LIEUTENANT OFFICE	VRF-9	280	NA	NA	NA	NA	N	VRF-9	231	NA	1	30.0	35	35	NA	N	☐	☐
10-VRF-10 OPEN OFFICE	VRF-10	670	NA	NA	NA	NA	N	VRF-10	518	NA	3	30.0	78	78	NA	N	☐	☐
11-VRF-11 IDF	VRF-11	370	NA	NA	NA	NA	N	VRF-11	59	NA	0	30.0	9	9	NA	N	☐	☐

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A. MECHANICAL VENTILATION AND REHEAT *(Adapted from 2013-NRCC-MCH-03-E)*

	1. DESIGN AIR FLOWS							2. VENTILATION (§ 120.1)									Confirmed	
CONDITIONED ZONE NAME	HEATING / COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Pass	Fail
12-VRF-12 ELECTRICAL RM	VRF-12	205	NA	NA	NA	NA	N	VRF-12	99	NA	0	30.0	15	15	NA	N	☐	☐
								TOTAL	4,852		NA		NA	NA	NA		☐	☐

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1.	2.	3.	4.		5.	6.	7.			8.			Confirmed	
System ID	System Type	Qty	Rated Capacity (kBtuh)		Economizer	Zone Name	Airflow (cfm)			Fan			Pass	Fail
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
VRF-1 LOBBY5-TRM	Uncontrolled	1	NA	NA	NA	1-VRF-1 LOBBY	480	NA	NA	NA	NA	☐	☐	☐
VRF-2 SERVICE WINDOW22-TRM	Uncontrolled	1	NA	NA	NA	2-VRF-2 SERVICE WINDOW	355	NA	NA	NA	NA	☐	☐	☐
VRF-3 BREAK ROOM29-TRM	Uncontrolled	1	NA	NA	NA	3-VRF-3 BREAK ROOM	280	NA	NA	NA	NA	☐	☐	☐
VRF-4 SERGEANT OFFICE37-TRM	Uncontrolled	1	NA	NA	NA	4-VRF-4 SERGEANT OFFICE	280	NA	NA	NA	NA	☐	☐	☐
VRF-5 MEETING ROOM49-TRM	Uncontrolled	1	NA	NA	NA	5-VRF-5 MEETING ROOM	355	NA	NA	NA	NA	☐	☐	☐
VRF-6 LOCKERS57-TRM	Uncontrolled	1	NA	NA	NA	6-VRF-6 LOCKERS	1560	NA	NA	NA	NA	☐	☐	☐

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B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

1.	2.	3.	4.		5.	6.	7.			8.			Confirmed	
System ID	System Type	Qty	Rated Capacity (kBtuh)		Economizer	Zone Name	Airflow (cfm)			Fan			Pass	Fail
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
VRF-7 DRUG/EVIDENCE STORA91-TRM	Uncontrolled	1	NA	NA	NA	7-VRF-7 DRUG/EVIDENCE STORA	755	NA	NA	NA	NA	☐	☐	☐
VRF-8 INTERVIEW ROOM127-TRM	Uncontrolled	1	NA	NA	NA	8-VRF-8 INTERVIEW ROOM	460	NA	NA	NA	NA	☐	☐	☐
VRF-9 LIEUTENANT OFFICE143-TRM	Uncontrolled	1	NA	NA	NA	9-VRF-9 LIEUTENANT OFFICE	280	NA	NA	NA	NA	☐	☐	☐
VRF-10 OPEN OFFICE153-TRM	Uncontrolled	1	NA	NA	NA	10-VRF-10 OPEN OFFICE	670	NA	NA	NA	NA	☐	☐	☐
VRF-11 IDF165-TRM	Uncontrolled	1	NA	NA	NA	11-VRF-11 IDF	370	NA	NA	NA	NA	☐	☐	☐
VRF-12 ELECTRICAL RM172-TRM	Uncontrolled	1	NA	NA	NA	12-VRF-12 ELECTRICAL RM	205	NA	NA	NA	NA	☐	☐	☐

C. EXHAUST FAN SUMMARY

1.	2.	3.	4.	5.	6.	Confirmed	
System ID	Zone Name	Qty	CFM	Motor BHP	Total Static Pressure (in H20)	Pass	Fail
VRF-1 LOBBY5	1-VRF-1 LOBBY	1	45	0.007	0.59	☐	☐
VRF-2 SERVICE WINDOW22	2-VRF-2 SERVICE WINDOW	1	30	0.005	0.63	☐	☐
VRF-3 BREAK ROOM29	3-VRF-3 BREAK ROOM	1	30	0.005	0.63	☐	☐
VRF-4 SERGEANT OFFICE37	4-VRF-4 SERGEANT OFFICE	1	45	0.007	0.59	☐	☐
VRF-5 MEETING ROOM49	5-VRF-5 MEETING ROOM	1	60	0.010	0.63	☐	☐
VRF-6 LOCKERS57	6-VRF-6 LOCKERS	1	840	0.140	0.63	☐	☐
VRF-7 DRUG/EVIDENCE STORA91	7-VRF-7 DRUG/EVIDENCE STORA	1	350	0.580	6.31	☐	☐
VRF-8 INTERVIEW ROOM127	8-VRF-8 INTERVIEW ROOM	1	75	0.012	0.61	☐	☐
VRF-9 LIEUTENANT OFFICE143	9-VRF-9 LIEUTENANT OFFICE	1	30	0.005	0.63	☐	☐
VRF-10 OPEN OFFICE153	10-VRF-10 OPEN OFFICE	1	75	0.012	0.61	☐	☐

Project Name:	Compton College Campus Public Safety Building	NRCC-PRF-01-E	Page 23 of 28
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D. DHW EQUIPMENT SUMMARY – *(Adapted from NRCC-PLB-01)* § 110.3

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	Confirmed	
DHW Name	Fuel	Type	Qty	Distribution Type	Rated Input kBtuh	Efficiency	Pilot Energy (Btu/h)	External Tank Insulation	Vol	Standby Loss	Vol. of Suppl. Storage Tank	Pass	Fail
A O Smith Water Products2	Gas	Instantaneous	1	Nonrecirculating	199	EF: 0.950	0	NA	0	0	NA	☐	☐

E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)

This Section Does Not Apply

G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2013-NRCC-MCH-01-E)* § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
Undefined Plant1 - SHW	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-1	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-1 LOBBY5	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

Project Name:	Compton College Campus Public Safety Building	NRCC-PRF-01-E	Page 24 of 28
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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2013-NRCC-MCH-01-E)* § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

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Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
VRF-2	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-2 SERVICE WINDOW22	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-3	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-3 BREAK ROOM29	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-4	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-4 SERGEANT OFFICE37	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-5	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-5 MEETING ROOM49	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-6	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-6 LOCKERS57	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-7	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

Project Name:	Compton College Campus Public Safety Building	NRCC-PRF-01-E	Page 25 of 28
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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS *(Adapted from 2013-NRCC-MCH-01-E)* § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
VRF-7 DRUG/EVIDENCE STORA91	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-8	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-8 INTERVIEW ROOM127	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-9	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-9 LIEUTENANT OFFICE143	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-10	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-10 OPEN OFFICE153	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-11	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐
VRF-12	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	☐	☐

Project Name:	Compton College Campus Public Safety Building	NRCC-PRF-01-E	Page 26 of 28
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H. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) § 140.6

This Section Does Not Apply

B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) § 130.1

This Section Does Not Apply

§130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E) § 140.6

General lighting power (see Table D)	0
General lighting power from special function areas (see Table E)	NA
Additional "use it or lose it" (See Table G)	0
Total watts	0

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) § 140.6-D

This Section Does Not Apply

E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E) § 140.6(c) 3H

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft²)	Allowed Watts	Confirmed	
							Pass	Fail
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)

Rectangular Spaces

Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	RCR	Confirmed	
						Pass	Fail
NA	NA	NA	NA	NA	NA	☐	☐

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Non-Rectangular Spaces

This Section Does Not Apply

Note: All applicable spaces are listed under the Non-Rectangular Spaces table

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)

1.	2.	3.	4.		Confirmed	
Wall Display	Combined Floor Display and Task Lighting	Combined Ornamental and Special Effects Lighting	Very Valuable Merchandise	Allowed Watts	Pass	Fail
0	0	0	0	0	☐	☐

5. Wall Display

This Section Does Not Apply

6. Floor Display and Task Lighting

This Section Does Not Apply

7. Combined Ornamental and Special Effects Lighting

This Section Does Not Apply

8. Very Valuable Merchandise

This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E) § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		Indoor			Outdoor	Confirmed	
		NRCA-LTI-02-A	NRCA-LTI-03-A	NRCA-LTI-04-A	NRCA-LTO-02-A		
Equipment Requiring Testing or Verification	# of units	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls	Pass	Fail
Occupant Sensors	0	☐	☐	☐	☐	☐	☐
Automatic Time Switch	0	☐	☐	☐	☐	☐	☐
Automatic Daylighting	0	☐	☐	☐	☐	☐	☐

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H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E) § 130.4

Declaration of Required Acceptance Certificates (NRCA) –Acceptance Certificates that must be verified in the field. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description		Indoor			Outdoor	Confirmed	
		NRCA-LTI-02-A	NRCA-LTI-03-A	NRCA-LTI-04-A	NRCA-LTO-02-A		
Equipment Requiring Testing or Verification	# of units	Occ Sensors / Auto Time Switch	Auto Daylight	Demand Responsive	Outdoor Controls	Pass	Fail
Demand Responsive	0	☐	☐	☐	☐	☐	☐
Outdoor Controls	0	☐	☐	☐	☐	☐	☐

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Newport Beach, CA 92660
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CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW

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150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

KEVIN S. CHEN
M-31154
Exp. 12/31/17

SEAL / SIGNATURE

SHEET TITLE

TITLE 24 REPORT

PROJECT NUMBER

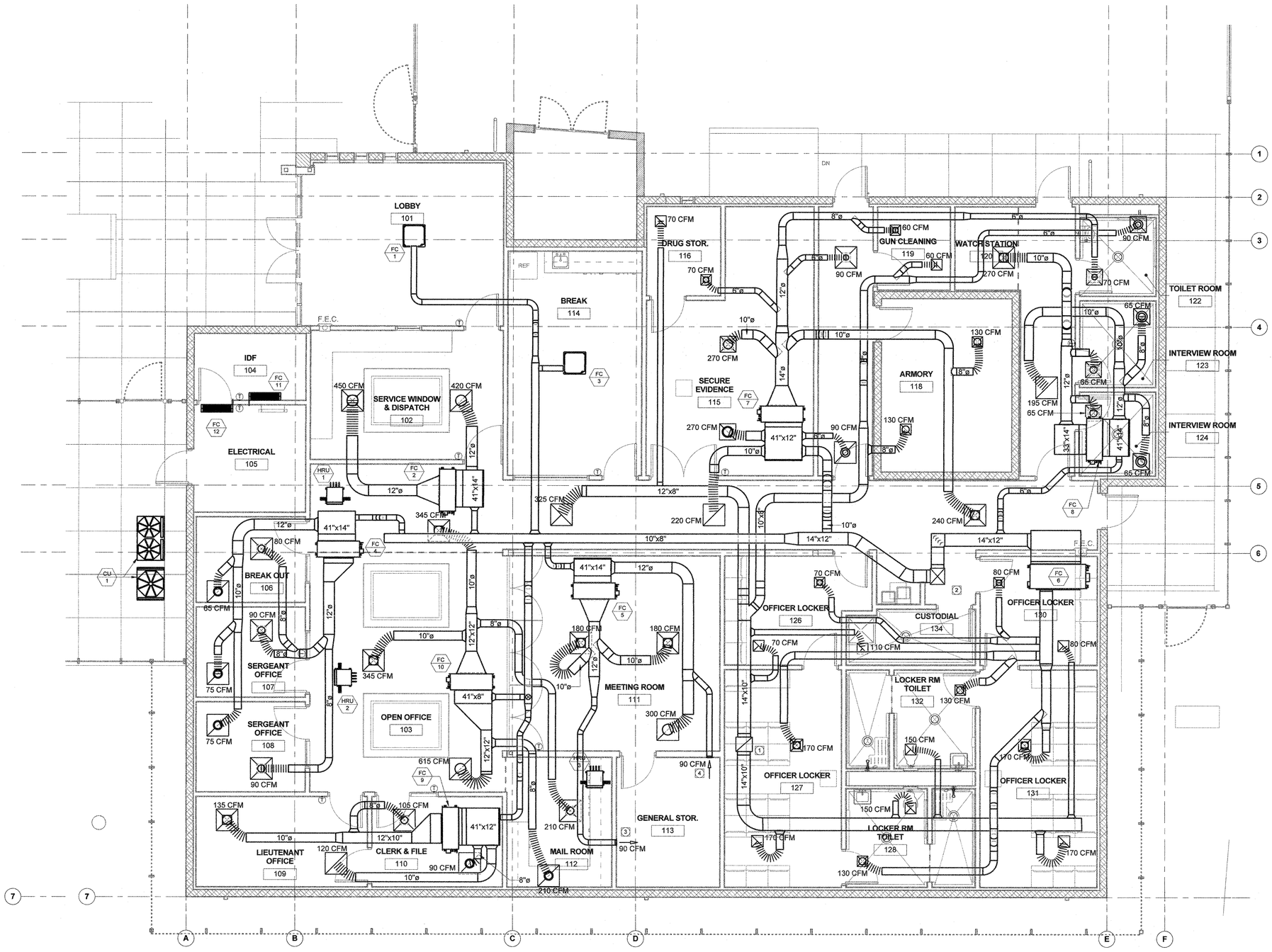
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
M0.0.4

REFERENCE NOTES

1. 18x16 EA DUCT UP THRU ROOF TO EF-1
2. 18x16 SA DUCT UP THRU ROOF TO VF-1
3. 6x6 SA GRILLE
4. 6x6 RA GRILLE



1 MECHANICAL FLOOR PLAN
1/4" = 1'-0"

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SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
Checker
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

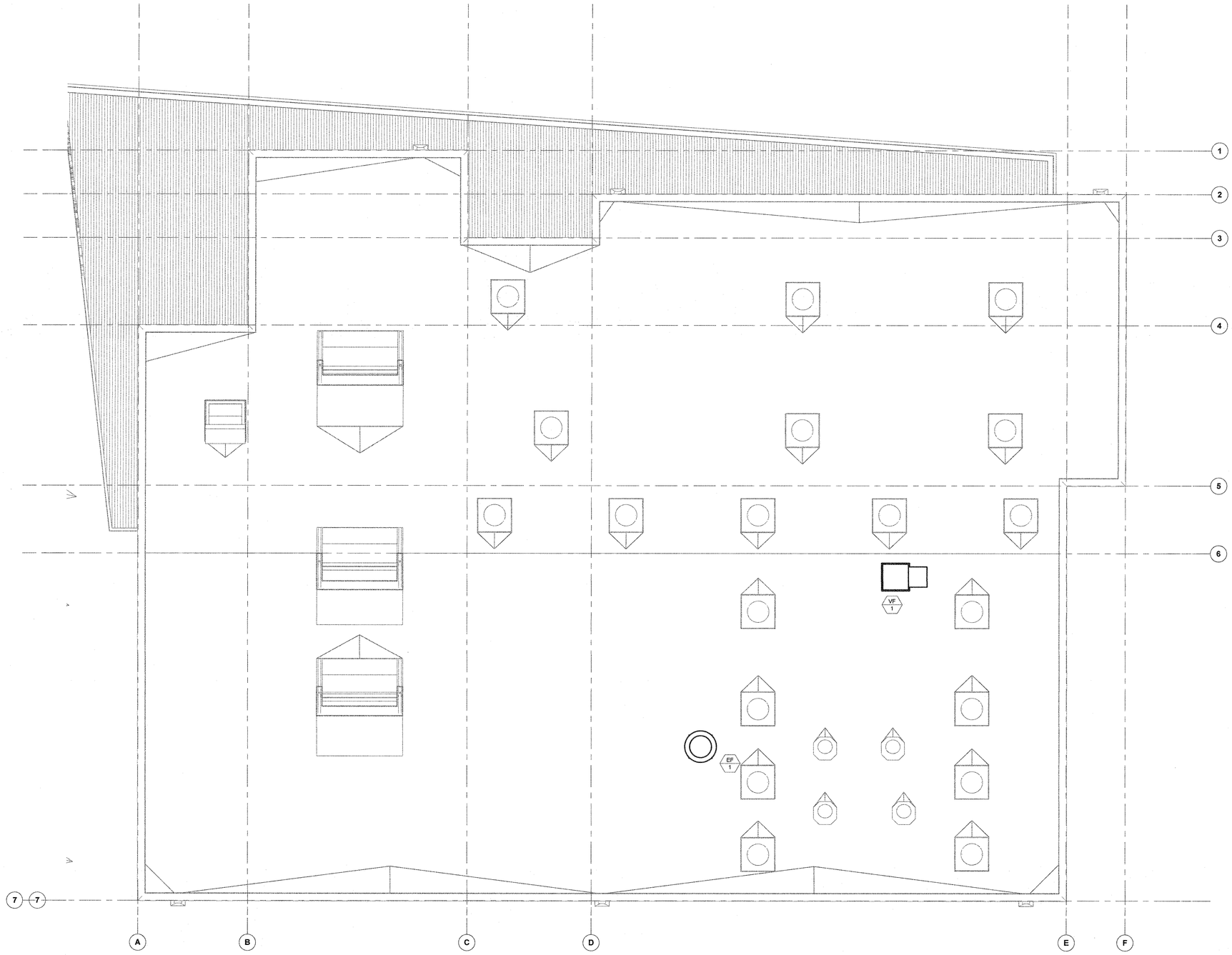
REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL-FLOOR PLAN

100% CD SET

913-4675-01

11/21/2017 | M2.1.1



1 MECHANICAL ROOF PLAN
1/4" = 1'-0"

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dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
Checker
DRAWN BY
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NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL-ROOF PLAN

100% CD SET

913-4675-01

11/21/2017 M2.1.2

REFERENCE NOTES

1. 3/8" LIQUID , 5/8" HPV & 3/4" LPV REFRIGERANT PIPING
2. 1/2" LIQUID , 3/4" HPV & 1-1/8" LPV REFRIGERANT PIPING
3. 5/8" LIQUID , 7/8" HPV & 1-1/8" LPV REFRIGERANT PIPING
4. 3/8" LIQUID , 1/2" HPV & 5/8" LPV REFRIGERANT PIPING
5. 1/2" LIQUID , 7/8" HPV & 1-1/8" LPV REFRIGERANT PIPING
6. 3/8" LIQUID , 3/4" HPV & 7/8" LPV REFRIGERANT PIPING
7. 3/8" LIQUID , 1/2" HPV & 5/8" LPV REFRIGERANT PIPING
8. 1/4" LIQUID & 1/2" VAPOR REFRIGERANT PIPING
9. 3/8" LIQUID & 5/8" VAPOR REFRIGERANT PIPING
10. Y-BRANCH UNIT FROM MANUFACTURER
11. 3/4" CD DOWN TO CUSTODIAL SINK.

LOBBY 101
BREAK 114
DRUG STOR. 116
GUN CLEANING 119
WATCH STATION 120
TOILET ROOM 122
IDF 104
SERVICE WINDOW & DISPATCH 102
SECURE EVIDENCE 115
ARMORY 118
INTERVIEW ROOM 123
INTERVIEW ROOM 124
ELECTRICAL 105
BREAK OUT 106
SERGEANT OFFICE 107
SERGEANT OFFICE 108
OPEN OFFICE 103
MEETING ROOM 111
OFFICER LOCKER 126
CUSTODIAL 134
OFFICER LOCKER 130
LOCKER RM TOILET 132
OFFICER LOCKER 127
OFFICER LOCKER 131
LIEUTENANT OFFICE 109
CLERK & FILE 110
MAIL ROOM 112
GENERAL STOR. 113
LOCKER RM TOILET 128

1 MECHANICAL PIPING FLOOR PLAN
1/4" = 1'-0"

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dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
Checker
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

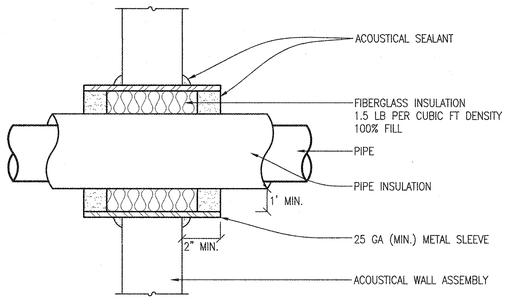
MECHANICAL-PIPING PLAN

100% CD SET

913-4675-01

11/21/2017 | M2.2.1

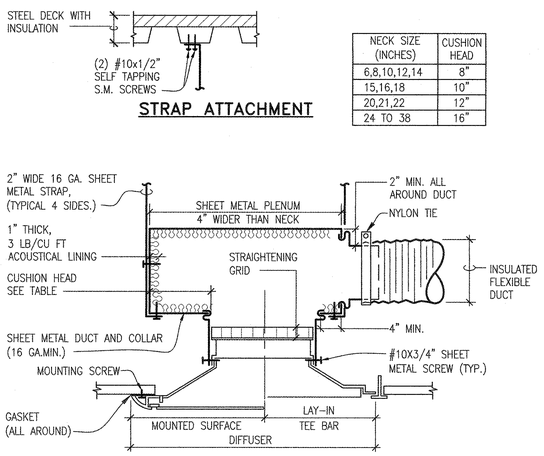
PIPE PENETRATION THROUGH NON-RATED WALL — N.T.S. 10



NOTES:

1. SPACE BETWEEN PIPE AND SLEEVE SHALL BE FREE OF ANY FOREIGN MATERIALS.
2. PIPE SHALL NOT CONTACT STRUCTURE AT ANY TIME. WEDGES SHALL NOT BE USED TO MAINTAIN PIPE IN POSITION.
3. PIPE MUST BE CENTERED IN OPENING.

CEILING DIFFUSER AND GRILLE INSTALLATION — N.T.S. 7

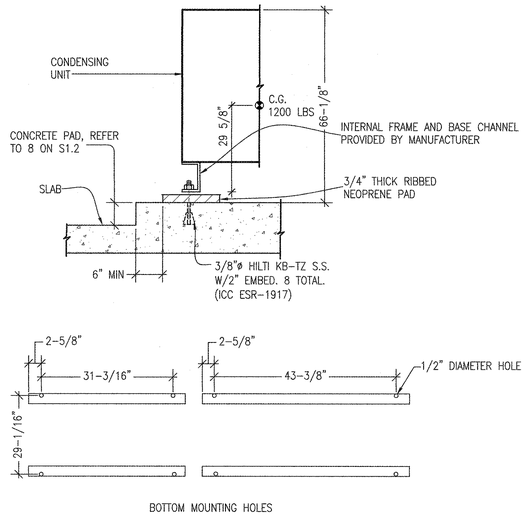


STRAP ATTACHMENT

NECK SIZE (INCHES)	CUSHION HEAD
6,8,10,12,14	8"
15,16,18	10"
20,21,22	12"
24 TO 38	16"

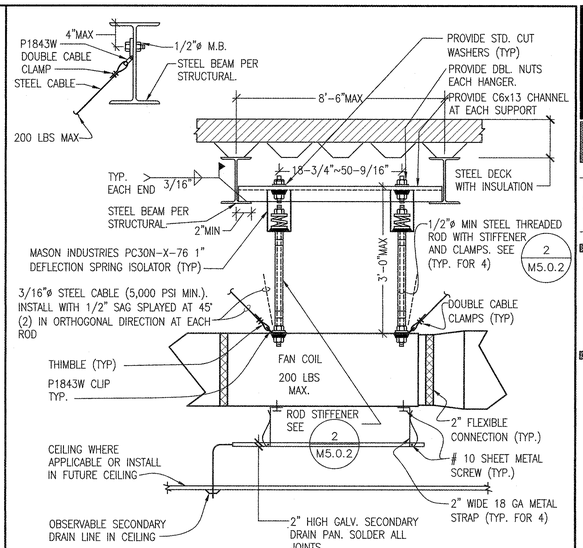
RESTRICED CLEARANCE CEILING

CONDENSING UNIT INSTALLATION — N.T.S. 4

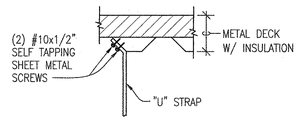


BOTTOM MOUNTING HOLES

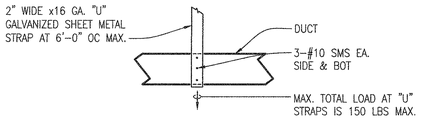
FAN COIL UNIT INSTALLATION — N.T.S. 1



PIPE PENETRATION THROUGH NON-RATED WALL — N.T.S. 10



UPPER ATTACHMENT

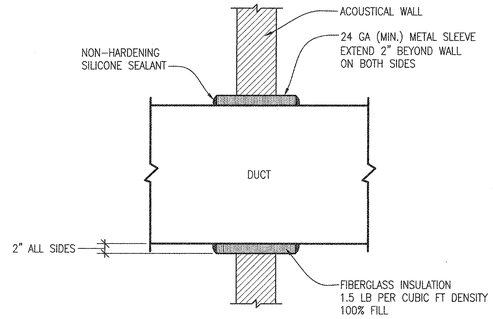


SIDE ELEVATION

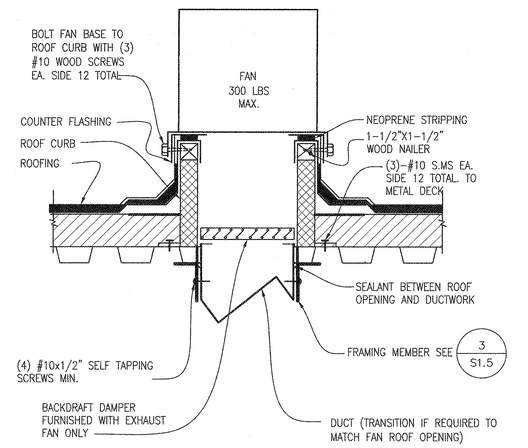
NOTES:

1. SPACING OF DUCT HANGERS SHALL BE 8'-0" ON CENTER.
2. SEISMIC BRACING SHALL BE IN ACCORDANCE WITH SEISMIC RESTRAINT MANUAL CHOSEN TO MEET THE REQUIREMENTS OF SEISMIC BRACING NOTES ON M-001.
   2.1. VERTICAL HANGERS, DIAGONAL AND HORIZONTAL BRACES, BOLT SIZE AND CONNECTION TO STRUCTURAL SUPPORTING MEMBERS, AND SPACING OF BRACING SHALL BE IN ACCORDANCE WITH SEISMIC RESTRAINT MANUAL CHOSEN TO MEET THE REQUIREMENTS OF SEISMIC BRACING NOTES ON M-001 AND AS DETAILED IN THE SEISMIC RESTRAINT MANUAL.

DUCT PENETRATION THROUGH NON-RATED WALL — N.T.S. 8

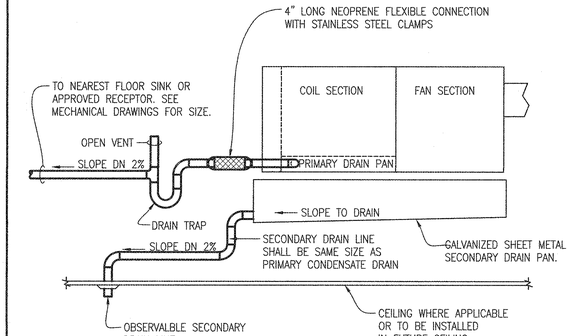


ROOF CURB MOUNTED FAN INSTALLATION — N.T.S. 5



NOT REVIEWED BY DSA

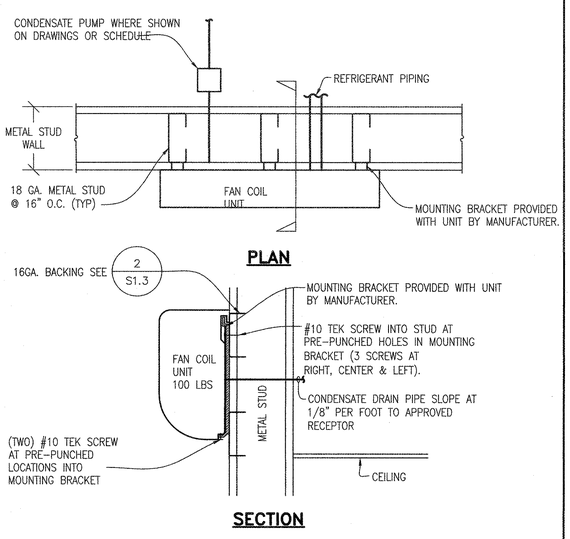
SUSPENDED EQUIPMENT CONDENSATE DRAIN PIPING — N.T.S. 2



STRAP HANGER — N.T.S. -

-

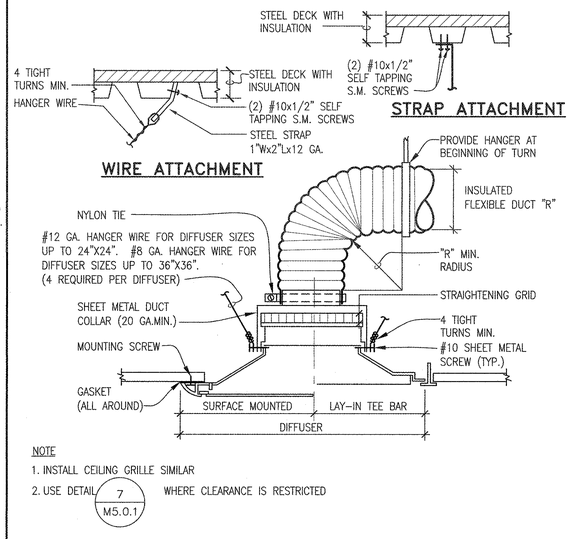
WALL MOUNTED FAN COIL INSTALLATION — N.T.S. 9



PLAN

SECTION

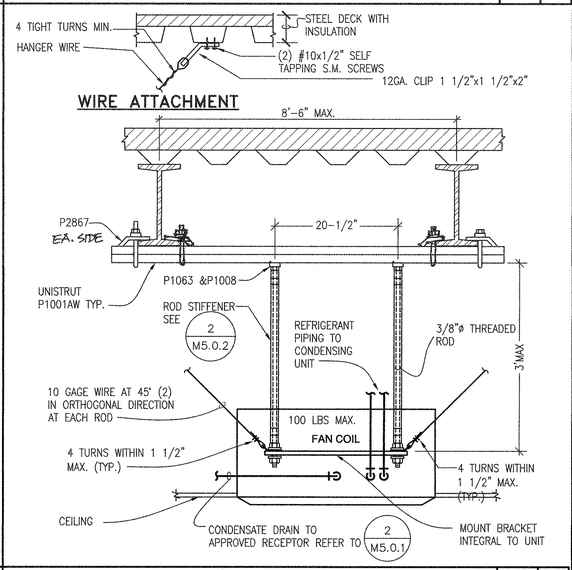
CEILING DIFFUSER AND GRILLE INSTALLATION — N.T.S. 6



NOTE

1. INSTALL CEILING GRILLE SIMILAR
2. USE DETAIL 7 M5.0.1 WHERE CLEARANCE IS RESTRICTED

CEILING CASSETTE TYPE FAN COIL INSTALLATION — N.T.S. 3



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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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16516

dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M-31154 Exp. 12/31/17 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE
MECHANICAL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/2017

SHEET NO. M5.0.1

-

N.T.S. -

NOTES:
ALL STEEL SHALL BE HOT-DIPPED GALV. OR S.S

1/4"ø HHCS, NUT, AND LOCK WASHER THRU PRE-PUNCHED HOLES TO UNISTRUT

3/8"ø M.B.(TYP.)

NEMA 3R ENCLOSURE

PLAN

P1000 UNISTRUT

¼" CAP PL

VFD OR CONTROL PANEL IN NEMA 3R MAX. 100-LB

VFD

2 1/2"ø STD. PIPE

2'-6" MAX

1/4

ROOF MOUNTED VFD OR CONTROL PANEL SUPPORT DETAIL

N.T.S. 5

VARIES

INSULATED FLEXIBLE DUCT 6'-0" MAX. LENGTH

BUTTERFLY DAMPER W/ LOCKING QUADRANT

BRANCH DUCT

18" MAX.

AIR FLOW

NYLON TIE

VARIES

INSULATED FLEX. DUCT

INSULATION

EXTRACTOR DAMPER

DUCT

SPIN-IN FITTING W/ BUTTERFLY DAMPER

18"

45 DEG FITTING W/ EXTRACTOR AND OPPOSED BLADE DAMPER

18"

ROUND DUCT

RECTANGULAR DUCT

RECTANGULAR DUCT

DUCT TAKE-OFFS

N.T.S. 1

3/8 IN POINTSET BOLT

HANGER ROD < 7/8 IN DIA.

UNISTRUT P 1000 OR EQ. 1 5/8 X 1 5/8 X 12 GA

CRADLE CLIP

L 1 x 1 x 1/8 L ROD STIFFENER

1/4 IN. PL.

UNISTRUT P 1000 OR EQ. 1 5/8 X 1 5/8 X 12 GA

HANGER ROD

1/8

1 - 24

3/8 IN. U-BOLT

ROD STIFFENER

ALTERNATE ROD STIFFENERS

METHODS FOR TYING RODS AND ROD STIFFENERS.

NOTES:
1. COORDINATE PIPE SUPPORT SYSTEM WITH STRUCTURAL.
2. SEE SEISMIC RESTRAINT MANUAL GUIDELINES AS INDICATED ON M0.1 SEISMIC BRACING NOTES FOR MECHANICAL SYSTEMS FOR OTHER HANGER ROD AND BRACING INFORMATION.

SEE UPPER ATTACHMENT DETAIL-3 ON M5.0.2 FOR INFO.

1/2"ø MIN STEEL THREADED ROD WITH ROD STIFFENER AND CLAMPS @ MAX 8' SPACING

TEE BOLT WITH LOCK NUT

INSULATION PROTECTION SHIELD (TYP)

INSULATION (TYP)

PIPE CLAMP

(TYP) 1

GALV. P-1100 UNISTRUT CHANNEL

1/4"ø GALV AIRCRAFT CABLE ATTACH TO STRUCTURE. TIGHTEN ONLY TO REMOVE SLACK. INSTALL ONE PAIR IN EACH DIRECTION AT EVERY OTHER HANGER.

MULTIPLE PIPES

(TYP) 1

1/4"ø GALV AIRCRAFT CABLE INSTALL WITH 1/2" SAG. (INSTALL ONE PAIR AT ALTERNATE HANGERS)

DOUBLE CABLE CLAMPS (TYP)

PIPE HANGER

THIMBLE (TYP.)

3/4" CLIP

"PIPE SLEEVE W/ I.D. = BOLT DIA. + 1/4" (TYP.)

SINGLE PIPE

(300 LBS MAX. TOTAL WEIGHT)

PIPE SUPPORT ABOVE CEILING

N.T.S. 2

STEEL DECK WITH INSULATION

(2) #10x1/2" SELF TAPPING S.M. SCREWS

4 TIGHT TURNS MIN.

HANGER WIRE

STEEL DECK WITH INSULATION

(2) #10x1/2" SELF TAPPING S.M. SCREWS

STEEL STRAP 1"Wx2"Lx12 GA.

STRAP ATTACHMENT

WIRE ATTACHMENT

PROVIDE HANGER AT BEGINNING OF TURN

INSULATED FLEXIBLE DUCT "R"

NYLON TIE

#12 GA. HANGER WIRE FOR DIFFUSER SIZES UP TO 24"X24". #8 GA. HANGER WIRE FOR DIFFUSER SIZES UP TO 36"X36". (4 REQUIRED PER DIFFUSER)

"R" MIN. RADIUS

SHEET METAL DUCT COLLAR (20 GA.MIN.)

STRAIGHTENING GRID 4 TIGHT TURNS MIN.

#8 SHEET METAL SCREWS 6" O.C., MIN. 2 PER SIDE

#10 SHEET METAL SCREW (TYP.)

CONCRETE CEILING

DIFFUSER

DIFFUSER WITH CONCRETE CEILING INSTALLATION

N.T.S. 4

4"MAX

P1843W DOUBLE CABLE CLAMP

1/2"ø M.B.

STEEL BEAM PER STRUCTURAL.

STEEL CABLE

200 LBS MAX

9'-0" MAX.

3/16" BENT PLAT AT EACH END

ROOF

3/16

3 SIDES (TYP.)

3x3x3/16 TUBE STEEL

1/2" BOLT

2"

3/16 (TYP.)

THIMBLE

4"

P1843W

DOUBLE CABLE CLAMPS

STEEL BEAM REFER TO STRUCTURAL PLAN

200 LBS MAX

¼" STEEL CABLE

½"ø THREADED ROD

ROD STIFFENER SEE 2 M5.0.2

250 LBS MAX

PIPING HANGER UPPER ATTACHMENTS

N.T.S. 3

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PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
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NO	REASON	DATE

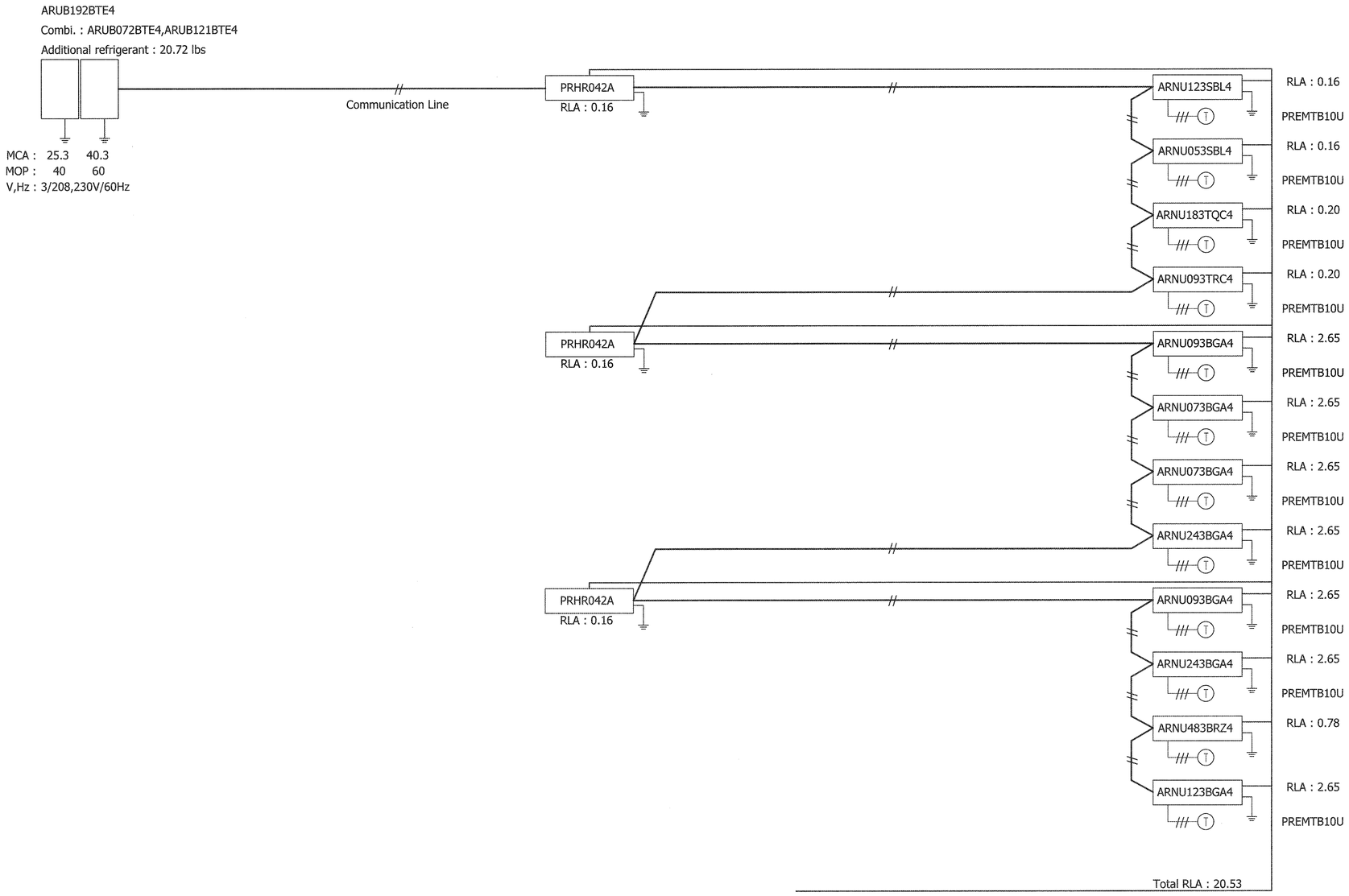
REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M-31154 12/31/17 ELECTRICAL STATE OF CALIFORNIA

MECHANICAL DETAILS

913-4675-01

11/21/16

M5.0.2



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CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS
NO REASON DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
MECHANICAL CONTROLS

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/16
SHEET NO. M6.0.1

SEQUENCE OF OPERATION

1. GENERAL

A. HVAC SYSTEMS SHALL BE CONTROLLED WITH A DIRECT DIGITAL CONTROL (DDC) ACCORDING TO THE POINTS INDICATED ON THE CONTROL DIAGRAMS, AND SHALL BE STAND-ALONE. ADDITIONAL POINTS (WHETHER HARDWARE OR SOFTWARE POINTS) NOT INDICATED ON THE CONTROL DIAGRAMS BUT ARE REQUIRED TO MEET THE FOLLOWING SEQUENCES OF OPERATION SHALL BE PROVIDED. POINTS INDICATED ON CONTROL DIAGRAMS SHALL BE AVAILABLE FOR PROGRAMMING, TRENDING, AND REPORTING ON THE DDC SYSTEM AND ITS PC WORKSTATION.

B. SOFTWARE PROGRAMMING, TRENDING, REPORTS AND ALARMS SHALL BE PROVIDED TO MEET THE FOLLOWING SEQUENCES OF OPERATION.

C. CONTROL SETPOINTS, SCHEDULES AND LIMITS SHALL BE ADJUSTABLE.

D. ACTUATORS FOR VALVES, DAMPERS AND TERMINAL CONTROLLERS SHALL BE ELECTRIC/ELECTRONIC CONTROL.

E. PUMP AND FAN OPERATION (STATUS) SHALL BE MONITORED BY THE CORRESPONDING CURRENT SENSORS.

F. CONTROLLERS, RELAYS, TRANSDUCERS, ETC., REQUIRED FOR STAND-ALONE CONTROL SHALL BE HOUSED IN A NEMA 1 ENCLOSURE WITH A SCREW DRIVER LATCH ON DOOR BY CONTROL CONTRACTOR.

2. VARIABLE REFRIGERANT FLOW SYSTEMS

A. DESCRIPTION:

1) THE VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE CAPABLE OF PROVIDING SIMULTANEOUS HEATING AND COOLING IN DIFFERENT ZONES. EACH VRF SYSTEM SHALL CONSIST OF AN OUTDOOR CONDENSING UNIT (CU), BRANCH CIRCUIT (BC) CONTROLLER, MULTIPLE INDOOR FAN COIL UNITS (FCU), LOCAL THERMOSTATS, CENTRAL CONTROLLERS, AND SOFTWARE AS REQUIRED.
   a) CUs, BCs, FCUs, CENTRAL CONTROLLERS, AND VRF SYSTEM SOFTWARE SHALL BE PROVIDED BY VRF SYSTEM MANUFACTURER.
   b) THERMOSTATS SHALL BE MANUFACTURED BY THE VRF SYSTEM MANUFACTURER.
   c) THE VRF SYSTEM SHALL INTERFACE TO THE CAMPUS EMS THROUGH THE VRF SYSTEM CONTROLLER. CONTROLS CONTRACTOR AND VRF SYSTEM TECHNICIAN SHALL COORDINATE INTERFACES DURING PREPARATION OF SUBMITTALS.

2) THE VRF SYSTEM SHALL AUTOMATICALLY PERMIT FAN COILS IN DIFFERENT ZONES TO OPERATE IN EITHER HEATING OR COOLING MODE SIMULTANEOUSLY BY PROVIDING HEAT RECOVERY BETWEEN THOSE ZONES VIA THE BC CONTROLLER. EACH FAN COIL SHALL BE CAPABLE OF VARYING REFRIGERANT FLOW TO PROVIDE ADEQUATE HVAC ZONE CONTROL.

B. START / STOP CONTROL:

1) IN RESPONSE TO TIME OF DAY SCHEDULE DEFINED AND CONTROLLED BY THE CAMPUS EMS, FCUs SHALL TRANSITION BETWEEN UNOCCUPIED AND OCCUPIED SETTINGS.
   a) OCCUPIED MODE: FCUs SHALL OPERATE IN FAN, HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED OCCUPIED SETPOINTS.
   b) UNOCCUPIED MODE: FCUs SHALL OPERATE IN FAN HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

2) IN RESPONSE TO DOOR / WINDOW SWITCH : FCUs SHALL NOT OPERATE.

3) IN RESPONSE TO OCCUPANCY SENSORS: FCUs SHALL OPERATE IN UNOCCUPIED MODE BASED ON COMMAND FROM CENTRAL CONTOLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

C. ZONE TEMPERATURE CONTROL:

1) SETPOINTS:
   a) OCCUPIED: 74°F COOLING AND 70°F HEATING
   b) UNOCCUPIED: 85°F COOLING AND 55°F HEATING

2) COOLING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT COLD LIQUID REFRIGERANT TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE COOLING LOAD DEMAND. IF TEMPERATURE IN THE SPACE RISES ABOVE THE COOLING SETPOINT, THE FCU SHALL OPERATE IN COOLING MODE. IF TEMPERATURE IN THE SPACE IS BELOW COOLING SETPOINT THE FCU LINEAR EXPANSION VALVE SHALL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

3) HEATING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT HOT REFRIGERANT GAS TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING LOAD DEMAND. IF TEMPERATURE IN THE SPACE FALLS BELOW THE HEATING SETPOINT, THE FCU SHALL OPERATE IN HEATING MODE. IF THE TEMPERATURE IN THE SPACE IS ABOVE THE HEATING SETPOINT, THE FCU LINEAR EXPANSION VALVE WILL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

4) AUTOMATIC CHANGEOVER (AUTO) MODE: IN AUTO MODE, THE INDOOR UNIT SHALL AUTOMATICALLY SWITCH BETWEEN AUTO-HEATING AND AUTO-COOLING TO MAINTAIN SPACE TEMPERATURE SETPOINT. THE SWITCH BETWEEN AUTO-HEATING AND AUTO-COOLING SHALL OCCUR WHEN THE SPACE TEMPERATURE RISES OR FALLS 3°F RELATIVE TO SPACE TEMPERATURE SETPOINT. THE BC CONTROLLER VALVES SHALL BE POSITIONED TO DIVERT HOT OR COLD REFRIGERANT TO FCUs BASED ON THE MODE OF THE INDOOR UNIT. THE REFRIGERANT FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING OR COOLING LOAD DEMAND.
   a) AUTO-COOLING: WHEN FCU IS IN AUTO-COOLING IT SHALL FUNCTION AS DESCRIBED IN COOLING MODE ABOVE.
   b) AUTO-HEATING: WHEN FCU IS IN AUTO-HEATING IT SALL FUNCTION AS DESCRIBED IN HEATING MODE ABOVE.

D. VENTILATION: DURING OCCUPIED HOURS, THE OSA DAMPER SHALL BE SET TO PROVIDE MINIMUM VENTILATION AS SCHEDULED ON THE DIRECT EXPANSION FAN COIL UNIT SCHEDULE ON M0.0.2.

1) VF-1 SHALL BE PROVEN ON BEFORE START OF FC-1 THROUGH FC-12 . IF VF-1 IS NOT ON WHEN ANY ONE OF THESE FCUs IS COMMANDED TO START THEN VF-1 SHALL START.

E. CONTROLS:

1) FCU OPERATION SHALL BE CONTROLLED THROUGH CENTRAL CONTROLLERS AND REMOTELY FROM THE CAMPUS EMS VIA BACNET COMMUNICATION PROTOCOL. OPERATIONAL MODE, TEMPERATURE SETPOINT, FAN SPEED, START/STOP CONTROLL, AND SCHEDULE SHALL BE CONTROLLED IN THIS MANNER.

2) CAMPUS EMS OPERATION AND MONITORING POINTS INCLUDE, BUT ARE NOT LIMITED TO: START/STOP, OPERATION MODE, FAN SPEED, PROHIBIT LOCAL ALARM STATE, ERROR CODE, AND ERROR ADDRESS.

3) TEMPERATURE SETPOINT LIMIT RANGE FOR EACH ZONE SHALL BE DEFINED AND CONTROLLED BY THE CAMPUS EMS.

F. VRF SYSTEM CONTROL NETWORK:

1) THE VRF SYSTEM CONTROL NETWORK (VSCN) SHALL CONSIST OF LOCAL REMOTE AND CENTRAL CONTROLLERS AND/OR INTEGRATED WEB BASED INTERFACE COMMUNICATING OVER A HIGH SPEED COMMUNICATION BUS. THE VSCN SHALL SUPPORT OPERATION MONITORING, SCHEDULING, ERROR AND ALARM REPORTING, ONLINE MAINTENANCE SUPPORT AND INTEGRATION WITH THE CAMPUS EMS USING BACNET INTERFACE.

2) LOCAL REMOTE CONTROLLER (LRC):
   a) THE LRC SHALL BE CAPABLE OF CONTROLLING UP TO 16 FCUs (DEFINED AS A GROUP). THE LRC SHALL HAVE LIMITED USER FUNCTIONALITY THAT ALLOWS THE USER TO CHANGE START/STOP, MODE, SETPOINT, AND FAN SPEED. THE LRC SHALL DISPLAY TEMPERATURE IN FAHRENHEIT OR CELSIUS. THE LRC SHALL DISPLAY ERROR CODE IN THE EVENT OF SYSTEM ABNORMALITY OR ERROR.
   b) THE LRC SHALL ONLY BE USED IN THE SAME GROUP OR WITH OTHER LRCS WITH UP TO 2 LRCs PER GROUP.
   c) THE LRC SHALL REQUIRE NO ADDRESSING AND CONNECT WITH 2-WIRE, STRANDED, NON-POLAR WIRE TO ITS FCU. THE LRC SHALL REQUIRE CROSSOVER WIRING FOR GROUPING TO OTHER FCUs.

3) CENTRAL CONTROLLER:
   a) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF CONTROLLING A MAXIMUM OF 50 FCUs ACROSS MULTIPLE CUs. THE CENTRAL CONTROLLER SHALL BE POWERED BY A POWER SUPPLY UNIT PROVIDED BY THE VRF SYSTEM MANUFACTURER. THE CENTRAL CONTROLLER SHALL SUPPORT SYSTEM CONFIGURATION, SCHEDULING, STATUS MONITORING, SETBACK SETTING, INTERLOCK CONFIGURATION, AND ALARM REPORTING.
   b) THE CENTRAL CONTROLLER SHALL HAVE 5 BASIC OPERATING CONTROLS WHICH CAN BE APPLIED TO A FCU, GROUP OF FCUs, OR ALL FCUs. THE BASIC OPERATING CONTROLS SHALL INCLUDE START/STOP, MODE, TEMPERATURE SETPOINT, FAN SPEED, AIRFLOW DIRECTION SETTING, AND SCHEDULING. THE BASIC OPERATIONS SHALL BE AS DETERMINED BY THE CAMPUS EMS AND SENT TO CENTRAL CONTROLLER FOR DEPLOYMENT OF OPERATIONS.
   c) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF ENABLING OR DISABLING OPERATION OF LRCs.
   d) THE CENTRAL CONTROLLER SHALL BE EQUIPPED WITH 1 RJ-45 ETHERNET PORT.

4) BACNET INTEGRATION:
   a) THE VSCN SHALL INTERFACE WITH THE CAMPUS EMS. THE VSCN INTERFACE SHALL BE COMPLIANT WITH BACNET PROTOCOL AND CERTIFIED BY THE BACNET TESTING LABORATORIES. THE BACNET INTERFACE SHALL SUPPORT BACNET BROADCAST MANAGEMENT.

4. EXHAUST FANS

A. RUN CONDITIONS - INTERLOCKED:
   1) EF-1 SHALL BE INTERLOCKED TO RUN WHENEVER VF-1, VF-3, AND VF-5 RUN UNLESS SHUTDOWN ON SAFETIES.
   2) EF-2 SHALL BE INTERLOCKED TO RUN WHENEVER VF-2 AND VF-4 RUN UNLESS SHUTDOWN ON SAFETIES.

B. FAN: THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

C. EXHAUST AIR DAMPER: THE EXHAUST AIR DAMPER SHALL OPEN ANYTIME THE UNIT RUNS AND SHALL CLOSE ANYTIME THE UNIT STOPS. THE EXHAUST AIR DAMPER SHALL CLOSE 30 SEC (ADJ.) AFTER THE FAN STOPS.

C. DAMPER STATUS: THE FAN SHALL BE ENABLED AFTER THE DAMPER STATUS HAS PROVEN.

D. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

E. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   1) DAMPER FAILURE: COMMANDED OPEN, BUT THE STATUS IS CLOSED.
   2) DAMPER IN HAND: COMMANDED CLOSED, BUT THE STATUS IS OPEN.
   3) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   4) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
   5) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

5. FAN COIL UNIT (100% OSA)

A. RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE TO MATCH BUILDING OPERATION SCHEDULE.

B. FAN: THE FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES.

C. TEMPERATURE CONTROL: THE UNIT SHALL MAINTAIN DISCHARGE TEMPERATURE SETPOINT OF 70°F.

D. HEATING COIL VALVE:

1) THE CONTROLLER SHALL MEASURE THE DISCHARGE TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN SETPOINT.

2) HEATING SHALL BE ENABLED WHENEVER:
   a) AND THE DISCHARGE TEMPERATURE IS BELOW SETPOINT.
   b) AND OUTSIDE AIR TEMPERATURE IS BELOW 60°F.
   c) AND THE FAN IS ON.

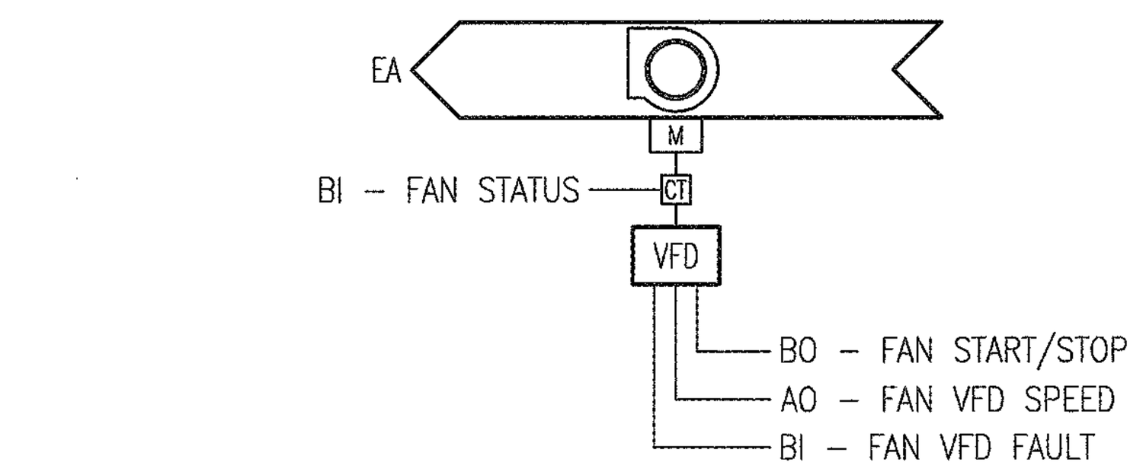
E. FILTER HOURS: THE CONTROLLER SHALL MONITOR THE FAN RUNTIME.

F. DISCHARGE AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

G. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

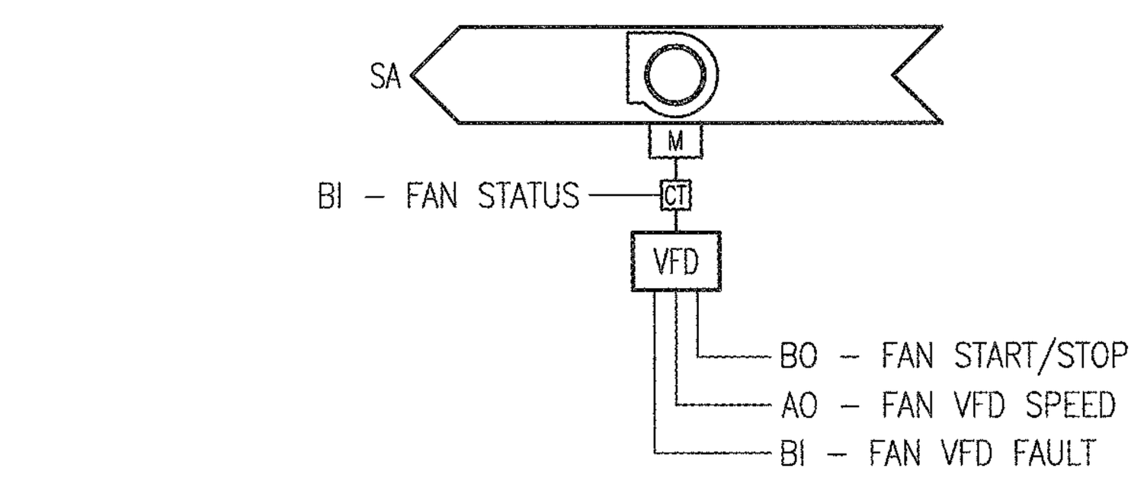
H. AIRFLOW: THE CONTROLLER SHALL MONITOR THE AIRFLOW.

I. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   1) FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.).
   2) HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
   3) LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 40°F (ADJ.).
   4) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   5) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
   6) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
   7) HW VALVE POSITION FAILURE: VALVE FEEDBACK SIGNAL DOES NOT CORRESPOND TO VALVE POSITION.
   8) LOW OUTSIDE AIRFLOW: AIRFLOW IS LESS THAN 15% OF SETPOINT.



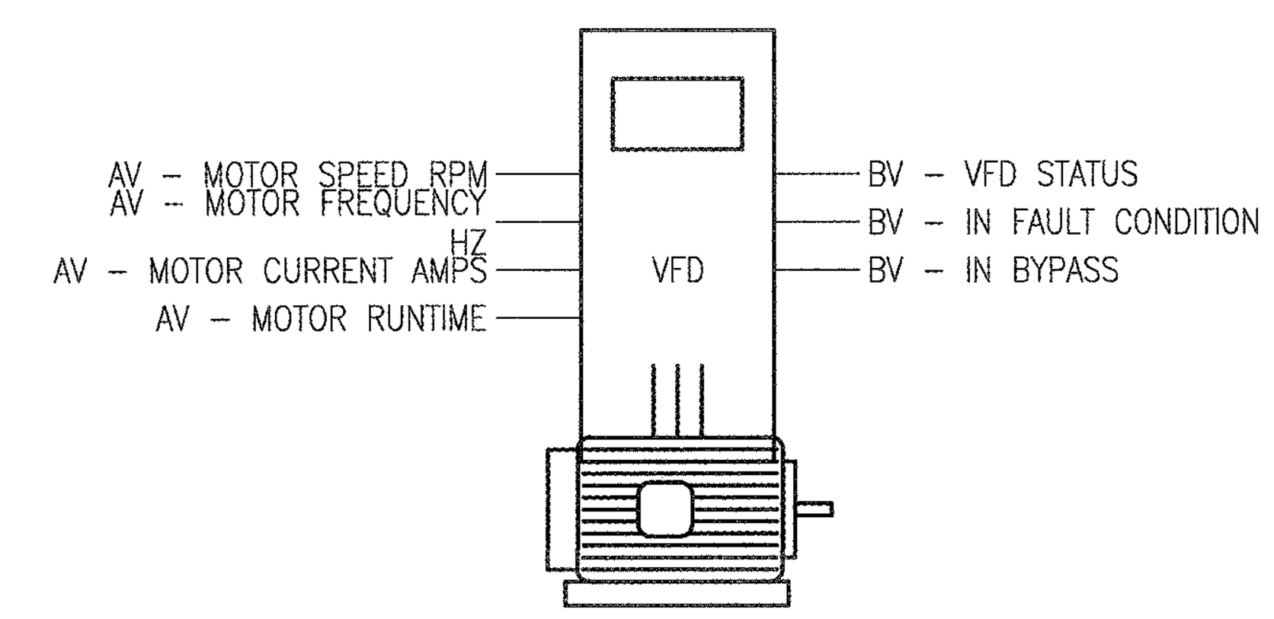
EXHAUST FANS

NOT TO SCALE (6 / M-602)



VENTILATION FANS

NOT TO SCALE (6 / M-602)



VARIABLE FREQUENCY DRIVE INTERFACE

NOT TO SCALE (5 / M-602)

CONTROL LEGEND (M-602 ONLY)

SYMBOL	ABBREV.	INDENTIFICATION
		LOW VOLTAGE WIRING IS PROVIDED AND INSTALLED UNDER DIVISION 15 AND CONDUIT IS INSTALLED UNDER DIVISION 16.
		FAN
		DAMPER - OPPOSED
		FILTER
HW		HOT WATER HEATING COIL
CHW		CHILLED WATER COOLING COIL
		PUMP
M		MOTOR
STARTER		MAGNETIC STARTER
VFD	VFD	VARIABLE FREQUENCY DRIVE
CT	CT	CURRENT SWITCH
DSW	DSW	DISCONNECT SWITCH
		2-WAY CONTROL VALVE
		3-WAY CONTROL VALVE
T		TEMPERATURE SENSOR WITH PIPE WELL INSERTION
T		TEMPERATURE SENSOR IN DUCT
H		HUMIDITY SENSOR IN DUCT
C		CARBON DIOXIDE SENSOR IN DUCT
T		TEMPERATURE SENSOR
H		HUMIDITY SENSOR
C		CARBON DIOXIDE SENSOR
		DIFFERENTIAL PRESSURE SENSOR IN DUCT
SD	SD	SMOKE DETECTOR IN DUCT
		DIFFERENTIAL PRESSURE SENSOR IN PIPING OR ACROSS FILTER
F		FLOW METER IN PIPING
FSW		FLOW SWITCH IN PIPING
		AIR FLOW SENSOR IN DUCT
	AI	ANALOG INPUT
	AO	ANALOG OUTPUT
	BBD	BAROMETRIC BACKDRAFT DAMPER
	BI	BINARY INPUT
	BO	BINARY OUTPUT
	CCP	CENTRAL CONTROL PANEL
	DHW	DOMESTIC HOT WATER
	DHWR	DOMESTIC HOT WATER RETURN
	EF	EXHAUST FAN
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN
	RF	RETURN FAN
	SF	SUPPLY FAN

CONTROLS NOTES

1. CONTROL SYSTEM BASIS OF DESIGN: JOHNSON CONTROLS FX SERIES.
2. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS PRIOR TO BID AND MATERIAL PURCHASE.
3. CONTROL DIAGRAM IS FUNCTIONAL, SINGLE LINE DIAGRAM. CONTROL CONTRACTOR SHALL SUBMIT DETAILED WIRING DIAGRAM FOR APPROVAL, PRIOR TO PURCHASE OR INSTALLATION.
4. CONTROL CONTRACTOR SHALL FURNISH AND INSTALL LOW VOLTAGE CONTROL WIRING AND CONDUIT FOR LOW VOLTAGE CONTROL WIRING. ALL LOW VOLTAGE WIRING SHALL BE IN CONDUIT.
5. CONTROL CONTRACTOR SHALL COORDINATE, REVIEW AND APPROVE CONTROL RELATED CONDUIT AND JUNCTION BOXES LOCATIONS FOR LINE VOLTAGE WIRING PROVIDED BY ELECTRICAL CONTRACTOR.
6. SEE FLOOR PLANS FOR EQUIPMENT QUANTITY AND LOCATION.
7. CONTROL PANELS AND UNITARY CONTROLLERS SHALL BE PROVIDED AND INSTALLED AND POWERED BY THE CONTROL CONTRACTOR.
8. ELECTRICAL CONTRACTOR SHALL POWER CONTROL PANELS AND UNITARY CONTROLLERS. POWER REQUIREMENTS SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ✓ FLS SS
DATE DEC 1 2 2017

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M-31154 Exp. 12/31/17 MECHANICAL STATE OF CALIFORNIA

MECHANICAL CONTROLS

913-4675-01

11/21/16 M6.0.2

SEQUENCE OF OPERATION

1. GENERAL

A. HVAC SYSTEMS SHALL BE CONTROLLED WITH A DIRECT DIGITAL CONTROL (DDC) ACCORDING TO THE POINTS INDICATED ON THE CONTROL DIAGRAMS, AND SHALL BE STAND-ALONE. ADDITIONAL POINTS (WHETHER HARDWARE OR SOFTWARE POINTS) NOT INDICATED ON THE CONTROL DIAGRAMS BUT ARE REQUIRED TO MEET THE FOLLOWING SEQUENCES OF OPERATION SHALL BE PROVIDED. POINTS INDICATED ON CONTROL DIAGRAMS SHALL BE AVAILABLE FOR PROGRAMMING, TRENDING, AND REPORTING ON THE DDC SYSTEM AND ITS PC WORKSTATION.

B. SOFTWARE PROGRAMMING, TRENDING, REPORTS AND ALARMS SHALL BE PROVIDED TO MEET THE FOLLOWING SEQUENCES OF OPERATION.

C. CONTROL SETPOINTS, SCHEDULES AND LIMITS SHALL BE ADJUSTABLE.

D. ACTUATORS FOR VALVES, DAMPERS AND TERMINAL CONTROLLERS SHALL BE ELECTRIC/ELECTRONIC CONTROL.

E. PUMP AND FAN OPERATION (STATUS) SHALL BE MONITORED BY THE CORRESPONDING CURRENT SENSORS.

F. CONTROLLERS, RELAYS, TRANSDUCERS, ETC., REQUIRED FOR STAND-ALONE CONTROL SHALL BE HOUSED IN A NEMA 1 ENCLOSURE WITH A SCREW DRIVER LATCH ON DOOR BY CONTROL CONTRACTOR.

2. VARIABLE REFRIGERANT FLOW SYSTEMS

A. DESCRIPTION:

1) THE VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE CAPABLE OF PROVIDING SIMULTANEOUS HEATING AND COOLING IN DIFFERENT ZONES. EACH VRF SYSTEM SHALL CONSIST OF AN OUTDOOR CONDENSING UNIT (CU), BRANCH CIRCUIT (BC) CONTROLLER, MULTIPLE INDOOR FAN COIL UNITS (FCU), LOCAL THERMOSTATS, CENTRAL CONTROLLERS, AND SOFTWARE AS REQUIRED.
   a) CUs, BCs, FCUs, CENTRAL CONTROLLERS, AND VRF SYSTEM SOFTWARE SHALL BE PROVIDED BY VRF SYSTEM MANUFACTURER.
   b) THERMOSTATS SHALL BE MANUFACTURED BY THE VRF SYSTEM MANUFACTURER.
   c) THE VRF SYSTEM SHALL INTERFACE TO THE CAMPUS EMS THROUGH THE VRF SYSTEM CONTROLLER. CONTROLS CONTRACTOR AND VRF SYSTEM TECHNICIAN SHALL COORDINATE INTERFACES DURING PREPARATION OF SUBMITTALS.

2) THE VRF SYSTEM SHALL AUTOMATICALLY PERMIT FAN COILS IN DIFFERENT ZONES TO OPERATE IN EITHER HEATING OR COOLING MODE SIMULTANEOUSLY BY PROVIDING HEAT RECOVERY BETWEEN THOSE ZONES VIA THE BC CONTROLLER. EACH FAN COIL SHALL BE CAPABLE OF VARYING REFRIGERANT FLOW TO PROVIDE ADEQUATE HVAC ZONE CONTROL.

B. START / STOP CONTROL:

1) IN RESPONSE TO TIME OF DAY SCHEDULE DEFINED AND CONTROLLED BY THE CAMPUS EMS, FCUs SHALL TRANSITION BETWEEN UNOCCUPIED AND OCCUPIED SETTINGS.
   a) OCCUPIED MODE: FCUs SHALL OPERATE IN FAN, HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED OCCUPIED SETPOINTS.
   b) UNOCCUPIED MODE: FCUs SHALL OPERATE IN FAN HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

2) IN RESPONSE TO DOOR / WINDOW SWITCH : FCUs SHALL NOT OPERATE.

3) IN RESPONSE TO OCCUPANCY SENSORS: FCUs SHALL OPERATE IN UNOCCUPIED MODE BASED ON COMMAND FROM CENTRAL CONTOLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

C. ZONE TEMPERATURE CONTROL:

1) SETPOINTS:
   a) OCCUPIED: 74°F COOLING AND 70°F HEATING
   b) UNOCCUPIED: 85°F COOLING AND 55°F HEATING

2) COOLING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT COLD LIQUID REFRIGERANT TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE COOLING LOAD DEMAND. IF TEMPERATURE IN THE SPACE RISES ABOVE THE COOLING SETPOINT, THE FCU SHALL OPERATE IN COOLING MODE. IF TEMPERATURE IN THE SPACE IS BELOW COOLING SETPOINT THE FCU LINEAR EXPANSION VALVE SHALL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

3) HEATING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT HOT REFRIGERANT GAS TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING LOAD DEMAND. IF TEMPERATURE IN THE SPACE FALLS BELOW THE HEATING SETPOINT, THE FCU SHALL OPERATE IN HEATING MODE. IF THE TEMPERATURE IN THE SPACE IS ABOVE THE HEATING SETPOINT, THE FCU LINEAR EXPANSION VALVE WILL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

4) AUTOMATIC CHANGEOVER (AUTO) MODE: IN AUTO MODE, THE INDOOR UNIT SHALL AUTOMATICALLY SWITCH BETWEEN AUTO-HEATING AND AUTO-COOLING TO MAINTAIN SPACE TEMPERATURE SETPOINT. THE SWITCH BETWEEN AUTO-HEATING AND AUTO-COOLING SHALL OCCUR WHEN THE SPACE TEMPERATURE RISES OR FALLS 3°F RELATIVE TO SPACE TEMPERATURE SETPOINT. THE BC CONTROLLER VALVES SHALL BE POSITIONED TO DIVERT HOT OR COLD REFRIGERANT TO FCUs BASED ON THE MODE OF THE INDOOR UNIT. THE REFRIGERANT FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING OR COOLING LOAD DEMAND.
   a) AUTO-COOLING: WHEN FCU IS IN AUTO-COOLING IT SHALL FUNCTION AS DESCRIBED IN COOLING MODE ABOVE.
   b) AUTO-HEATING: WHEN FCU IS IN AUTO-HEATING IT SALL FUNCTION AS DESCRIBED IN HEATING MODE ABOVE.

D. VENTILATION: DURING OCCUPIED HOURS, THE OSA DAMPER SHALL BE SET TO PROVIDE MINIMUM VENTILATION AS SCHEDULED ON THE DIRECT EXPANSION FAN COIL UNIT SCHEDULE ON M0.0.2.

1) VF-1 SHALL BE PROVEN ON BEFORE START OF FC-1 THROUGH FC-12 . IF VF-1 IS NOT ON WHEN ANY ONE OF THESE FCUs IS COMMANDED TO START THEN VF-1 SHALL START.

E. CONTROLS:

1) FCU OPERATION SHALL BE CONTROLLED THROUGH CENTRAL CONTROLLERS AND REMOTELY FROM THE CAMPUS EMS VIA BACNET COMMUNICATION PROTOCOL. OPERATIONAL MODE, TEMPERATURE SETPOINT, FAN SPEED, START/STOP CONTROLL, AND SCHEDULE SHALL BE CONTROLLED IN THIS MANNER.

2) CAMPUS EMS OPERATION AND MONITORING POINTS INCLUDE, BUT ARE NOT LIMITED TO: START/STOP, OPERATION MODE, FAN SPEED, PROHIBIT LOCAL ALARM STATE, ERROR CODE, AND ERROR ADDRESS.

3) TEMPERATURE SETPOINT LIMIT RANGE FOR EACH ZONE SHALL BE DEFINED AND CONTROLLED BY THE CAMPUS EMS.

F. VRF SYSTEM CONTROL NETWORK:

1) THE VRF SYSTEM CONTROL NETWORK (VSCN) SHALL CONSIST OF LOCAL REMOTE AND CENTRAL CONTROLLERS AND/OR INTEGRATED WEB BASED INTERFACE COMMUNICATING OVER A HIGH SPEED COMMUNICATION BUS. THE VSCN SHALL SUPPORT OPERATION MONITORING, SCHEDULING, ERROR AND ALARM REPORTING, ONLINE MAINTENANCE SUPPORT AND INTEGRATION WITH THE CAMPUS EMS USING BACNET INTERFACE.

2) LOCAL REMOTE CONTROLLER (LRC):
   a) THE LRC SHALL BE CAPABLE OF CONTROLLING UP TO 16 FCUs (DEFINED AS A GROUP). THE LRC SHALL HAVE LIMITED USER FUNCTIONALITY THAT ALLOWS THE USER TO CHANGE START/STOP, MODE, SETPOINT, AND FAN SPEED. THE LRC SHALL DISPLAY TEMPERATURE IN FAHRENHEIT OR CELSIUS. THE LRC SHALL DISPLAY ERROR CODE IN THE EVENT OF SYSTEM ABNORMALITY OR ERROR.
   b) THE LRC SHALL ONLY BE USED IN THE SAME GROUP OR WITH OTHER LRCS WITH UP TO 2 LRCs PER GROUP.
   c) THE LRC SHALL REQUIRE NO ADDRESSING AND CONNECT WITH 2-WIRE, STRANDED, NON-POLAR WIRE TO ITS FCU. THE LRC SHALL REQUIRE CROSSOVER WIRING FOR GROUPING TO OTHER FCUs.

3) CENTRAL CONTROLLER:
   a) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF CONTROLLING A MAXIMUM OF 50 FCUs ACROSS MULTIPLE CUs. THE CENTRAL CONTROLLER SHALL BE POWERED BY A POWER SUPPLY UNIT PROVIDED BY THE VRF SYSTEM MANUFACTURER. THE CENTRAL CONTROLLER SHALL SUPPORT SYSTEM CONFIGURATION, SCHEDULING, STATUS MONITORING, SETBACK SETTING, INTERLOCK CONFIGURATION, AND ALARM REPORTING.
   b) THE CENTRAL CONTROLLER SHALL HAVE 5 BASIC OPERATING CONTROLS WHICH CAN BE APPLIED TO A FCU, GROUP OF FCUs, OR ALL FCUs. THE BASIC OPERATING CONTROLS SHALL INCLUDE START/STOP, MODE, TEMPERATURE SETPOINT, FAN SPEED, AIRFLOW DIRECTION SETTING, AND SCHEDULING. THE BASIC OPERATIONS SHALL BE AS DETERMINED BY THE CAMPUS EMS AND SENT TO CENTRAL CONTROLLER FOR DEPLOYMENT OF OPERATIONS.
   c) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF ENABLING OR DISABLING OPERATION OF LRCs.
   d) THE CENTRAL CONTROLLER SHALL BE EQUIPPED WITH 1 RJ-45 ETHERNET PORT.

4) BACNET INTEGRATION:
   a) THE VSCN SHALL INTERFACE WITH THE CAMPUS EMS. THE VSCN INTERFACE SHALL BE COMPLIANT WITH BACNET PROTOCOL AND CERTIFIED BY THE BACNET TESTING LABORATORIES. THE BACNET INTERFACE SHALL SUPPORT BACNET BROADCAST MANAGEMENT.

4. EXHAUST FANS

A. RUN CONDITIONS - INTERLOCKED:
   1) EF-1 SHALL BE INTERLOCKED TO RUN WHENEVER VF-1, VF-3, AND VF-5 RUN UNLESS SHUTDOWN ON SAFETIES.
   2) EF-2 SHALL BE INTERLOCKED TO RUN WHENEVER VF-2 AND VF-4 RUN UNLESS SHUTDOWN ON SAFETIES.

B. FAN: THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

C. EXHAUST AIR DAMPER: THE EXHAUST AIR DAMPER SHALL OPEN ANYTIME THE UNIT RUNS AND SHALL CLOSE ANYTIME THE UNIT STOPS. THE EXHAUST AIR DAMPER SHALL CLOSE 30 SEC (ADJ.) AFTER THE FAN STOPS.

C. DAMPER STATUS: THE FAN SHALL BE ENABLED AFTER THE DAMPER STATUS HAS PROVEN.

D. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

E. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   1) DAMPER FAILURE: COMMANDED OPEN, BUT THE STATUS IS CLOSED.
   2) DAMPER IN HAND: COMMANDED CLOSED, BUT THE STATUS IS OPEN.
   3) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   4) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
   5) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

5. FAN COIL UNIT (100% OSA)

A. RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE TO MATCH BUILDING OPERATION SCHEDULE.

B. FAN: THE FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES.

C. TEMPERATURE CONTROL: THE UNIT SHALL MAINTAIN DISCHARGE TEMPERATURE SETPOINT OF 70°F.

D. HEATING COIL VALVE:

1) THE CONTROLLER SHALL MEASURE THE DISCHARGE TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN SETPOINT.

2) HEATING SHALL BE ENABLED WHENEVER:
   a) AND THE DISCHARGE TEMPERATURE IS BELOW SETPOINT.
   b) AND OUTSIDE AIR TEMPERATURE IS BELOW 60°F.
   c) AND THE FAN IS ON.

E. FILTER HOURS: THE CONTROLLER SHALL MONITOR THE FAN RUNTIME.

F. DISCHARGE AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

G. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

H. AIRFLOW: THE CONTROLLER SHALL MONITOR THE AIRFLOW.

I. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   1) FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.).
   2) HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
   3) LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 40°F (ADJ.).
   4) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
   5) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
   6) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
   7) HW VALVE POSITION FAILURE: VALVE FEEDBACK SIGNAL DOES NOT CORRESPOND TO VALVE POSITION.
   8) LOW OUTSIDE AIRFLOW: AIRFLOW IS LESS THAN 15% OF SETPOINT.

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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CONSULTANT

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

SHEET TITLE
MECHANICAL SEQUENCE OF OPERATION

PROJECT NUMBER
913-4675-01

ISSUE DATE | SHEET NO.
11/21/16 | M6.0.3

GENERAL NOTES

1. THE LOCATIONS SHOWN OF THE EXISTING UTILITIES ARE APPROXIMATE AND ARE TO IDENTIFY POINTS OF CONNECTIONS FOR NEW UTILITY SERVICES OR FOR COORDINATION OF CLEARANCES BETWEEN EXISTING AND NEW UTILITIES. INDICATION OF EXISTING UTILITIES SHALL NOT BE CONSIDERED AS AN EXACT LOCATION OR A COMPLETE SURVEY OF EXISTING UTILITIES.
2. EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED AS APPROXIMATE AND INCOMPLETE. BEFORE ANY WORK IS STARTED, VERIFY AND COORDINATE ELEVATIONS AND SIZES OF EXISTING UTILITIES. DISCREPANCIES BETWEEN FIELD DATA AND DATA ON PLANS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCIES UNTIL DISCREPANCIES HAVE BEEN RESOLVED.
3. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED WORK. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. SUPERVISE AND DIRECT THE WORK FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
4. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
5. NO HOLES SHALL BE DRILLED OR CUT IN OR THROUGH ANY STRUCTURAL ELEMENT WITHOUT APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
6. SLEEVE AND GROUT ALL PIPE PENETRATIONS THROUGH FLOOR OR WALLS. USE CALIFORNIA FIRE MARSHALL APPROVED SEALANT FOR THE RATED FLOOR OR WALL PENETRATIONS.
7. PLUMBING EQUIPMENT, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2013 CALIFORNIA BUILDING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA ENERGY CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA FIRE CODE. AND CALIFORNIA STATE ADMINISTRATIVE CODE TITLE 24.
8. FIELD OBSERVATION AND SUPPORT SERVICES PERFORMED BY THE ENGINEER PRIOR TO, DURING, OR AFTER CONSTRUCTION, ARE PERFORMED FOR THE PURPOSE OF ACHIEVING QUALITY CONTROL AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
9. MANUFACTURERS AND MODEL NUMBERS SHOWN ON FIXTURE AND EQUIPMENT SCHEDULES HAVE BEEN UTILIZED FOR DESIGN. REFER TO SPECIFICATIONS DIVISION 15 FOR ALTERNATE MANUFACTURER AND/OR EQUIVALENTS.
10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED TEMPORARY AND PERMANENT PERMITS, INCLUDING LICENSES, CERTIFICATES, INSPECTIONS AND TESTS.
11. PIPES IN METAL STUD WALLS:
    A. METAL STUDS IN BEARING WALLS SHALL NOT BE BORED OR NOTCHED FOR THE COMBINING OF WATER, DRAIN, VENT OR OTHER SERVICE LINES.

       EXCEPTIONS:

       a. PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

       b. ANY SERVICE PIPE THAT IS 1" OR LESS IN DIAMETER.

    B. PIPE 1-1/4" AND LARGER IN DIAMETER SERVING ANY PLUMBING FIXTURE OR APPLIANCE SHALL RISE VERTICALLY ABOVE THE CEILING LINE AND OFFSET OUTSIDE OF WALL FRAMING BEFORE BEING COMBINED HORIZONTALLY. DRAIN LINES SHALL DROP VERTICALLY TO BELOW THE FLOOR SLAB BEFORE BEING COMBINED HORIZONTALLY. EXCEPTIONS TO THIS PROCEDURE ARE LINES RUNNING BETWEEN THE STUDS FORMING PIPE CHASES AND ISLAND VENTING.
12. THE LOCATION OF ALL PIPE RUNS, RISERS AND DROPS SHALL BE COORDINATED WITH THE FINAL LOCATION OF DUCT RUNS.
13. SEE SPECIFICATIONS, SECTION 22 05 00 FOR COMPLETE PIPE AND FITTINGS MATERIAL SPECIFICATION.
    A. SEWER, WASTE, VENT, STORM DRAIN AND OVERFLOW DRAIN PIPE AND FITTINGS SHALL BE CAST IRON NO-HUB DRAINAGE PATTERN. WATER PIPES, STORM DRAIN AND WASTE PIPES BENEATH SECOND FLOOR RESTROOMS IN CLASSROOM AREAS SHALL BE INSULATED WITH "KINETICS" PIPE LAGGING MATERIAL MODEL KNM-100ALQ.
    B. DOMESTIC WATER AND CONDENSATE DRAIN PIPING ABOVE GRADE SHALL BE TYPE "L" HARD DRAWN COPPER TUBING ASTM B88, WITH WROUGHT COPPER FITTINGS ASTM B18.22. DOMESTIC WATER PIPING AND CONDENSATE DRAIN PIPING BELOW GRADE SHALL BE TYPE "K" HARD DRAWN COPPER TUBING ASTM B.88, WITH WROUGHT COPPER FITTINGS ASTM B16.22 AND WRAPPED.
    C. GAS PIPING AND FITTINGS ABOVE GROUND SHALL BE BLACK STEEL SCHEDULE 40 ASTM A-53 WITH BLACK MALLEABLE FITTINGS. FOR GAS PIPING BELOW GROUND, USE SAME MATERIAL AS ABOVE GROUND PIPING EXCEPT POLYETHYLENE COATED OR WRAPPED.
14. STORM DRAINAGE SYSTEM IS SIZED BASED UPON 2" PER HOUR OF RAINFALL, AND UNLESS OTHERWISE NOTED, STORM AND OVERFLOW DRAIN PIPING IS SLOPED AT 1/4"/FOOT (2.00%).
15. UNLESS OTHERWISE NOTED, SOIL, WASTE AND VENT PIPING IS SLOPED AT 1/4"/FOOT (2.00%).
16. ALL GAS PIPING BELOW BUILDING FLOOR OR SLAB SHALL BE PROVIDED WITH PIPE SLEEVES PER 2013 CALIFORNIA BUILDING CODE, PARAGRAPH 1210.1.6. THE SLEEVE SHALL BE AN APPROVED TYPE, TWO PIPE SIZES LARGER AND VENTED AND SEALED AS REQUIRED.
17. VENT PIPING EXTENDING THRU ROOF SHALL TERMINATE AT NOT LESS THAN 8 INCHES ABOVE THE FINISHED ROOF.
18. HOT WATER PIPING INSULATION SHALL COMPLY WITH TITLE 24 AS A MINIMUM. FOR COMPLETE INFORMATION, SEE PLUMBING SPECIFICATIONS 22 05 00, SECTION 2.5 – INSULATION, PARAGRAPHS A & B.
19. PLUMBING FIXTURES OR FITTINGS INTENDED TO DISPENSE WATER FOR HUMAN CONSUMPTION WHICH CONTAIN MORE THAN 0.25% LEAD ARE NOT PERMITTED TO BE SOLD OR INSTALLED ANYWHERE WITHIN THE STATE OF CALIFORNIA. THESE DEVICES SHALL BE LISTED TO ANNEX G OF NSF/ANSI 61-2008 OR OTHER APPROVED TESTING STANDARD. EVIDENCE OF COMPLIANCE SHALL BE PRESENTED TO THE BUILDING INSPECTOR PRIOR TO FINAL INSPECTION (AB1963).
20. ALL REQUIRED CLEANOUTS SHALL BE INSTALLED PER SECTION 707.0 & 719.0 OF THE PLUMBING CODE.
21. ALL HOSE BIBBS SHALL BE EQUIPPED WITH AN APPROVED NON-REMOVABLE VACUUM BREAKER.
22. EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN TEN (10) FEET FROM OR AT LEAST THREE (3) FEET ABOVE ANY WINDOW, DOOR, OPENING, AIR INTAKE OR VENT SHAFT.
23. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTIOHN 609.9 OF THE PLUMBING CODE.
24. LISTED MECHANICAL WATER HAMMER ARRESTERS SHALL BE INSTALLED FOR QUICK-ACTING VALVES. LOCATION AND METHOD OF INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S SPECIFICATIONS.
25. THE DRAIN PIPES FROM THE GREASE DUCTS SHALL BE PROVIDED AS PART OF THIS CONTRACT WHEN THE DRAINS ARE HARD PIPED. THE DRAIN LINES SHALL TERMINATE TO AN APPROVED INDIRECT WASTE RECEPTOR COMPLETE WITH MINIMUM 2" AIR GAP AS REQUIRED. PROVIDE PIPE SUPPORTS AND SLOPE THE DRAIN PIPE MINIMUM 2.00 %.
26. LOCATION OF WATER HAMMER ARRESTORS IS INDICATED ON THE FLOOR PLANS. FOR ADDITIONAL INFORMATION REFER TO PLUMBING SPECIFICATIONS.
27. NEW PLUMBING FIXTURES AND FITTINGS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATE SPECIFIED IN THE PLUMBING CODE, LATEST EDITION, TABLES 6-5 AND 6-6.
28. PROVIDE REQUIRED CORROSIVE SOIL PROTECTION FOR UNDER SLAB UTILITIES/PIPING AS WELL AS ON SITE UTILITIES/PIPING PER RECOMMENDATION OF THE GEOTECHNICAL REPORT, APPENDIX C. COORDINATE METHOD OF UNDERGROUND PIPING PROTECTION BASED ON THE REPORT WITH CIVIL, ARCHITECTURAL AND OTHER TRADES. "GEOTECHNICAL ENGINEERING AND GEOLOGIC HAZARDS REPORT" DATED APRIL 2, 2015. SEE APPENDIX C, PDF PAGES 50-59 FOR SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
29. THE CALIFORNIA STATE HEALTH AND SAFETY CODE, SECTION 116875, EFFECTIVE JANUARY 1, 2010 STATES IN PART AND REQUIRES THAT, NO PERSON SHALL USE ANY PIPE, PIPE OR PLUMBING FITTING OR FIXTURE, OR SOLDER OR FLUX THAT IS NOT LEAD FREE IN THE INSTALLATION OR REPAIR OF ANY PUBLIC WATER SYSTEM OR ANY PLUMBING IN A FACILITY PROVIDING FOR HUMAN CONSUMPTION EXCEPT WHEN NECESSARY FOR THE REPAIR OF LEADED JOINT OF CAST IRON PIPE. PLUMBING FIXTURES, FITTINGS AND PIPES THAT ARE INSTALLED WHERE THE WATER IS NOT INTENDED FOR HUMAN CONSUMPTION THROUGH DRINKING OR COOKING ARE NOT SUBJECT TO THE REQUIREMENTS OF THIS LAW (DSA BULLETIN #9-10)

SEISMIC BRACING NOTES

1. CONTRACTOR TO PROVIDE SEISMIC ANCHORAGE AND BRACING FOR MECHANICAL EQUIPMENT THAT IS DIRECTLY MOUNTED ON THE FLOOR OR ROOF AND MECHANICAL EQUIPMENT THAT IS SUSPENDED FROM THE FLOOR, WALL OR SUPPORTED BY VIBRATION ISOLATORS IN COMPLIANCE WITH THE 2013 CALIFORNIA BUILDING CODE AND VA H-18-8 (AUG. 2013).
2. ANCHORAGE AND SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED TO WITHSTAND THE LATERAL FORCES AS REQUIRED BY 2013 CALIFORNIA BUILDING CODE AND VA H-18-8 (AUG. 2013).
3. PROVIDE ANCHORAGE CALCULATIONS AND DETAILS CERTIFIED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
4. SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT SHALL BE PROVIDED USING A SEISMIC RESTRAINT MANUAL: MASON INDUSTRIES "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK, AND ELECTRICAL SYSTEMS", I.S.A.T. "ENGINEERED SEISMIC BRACING OF SUSPENDED UTILITIES", OR APPROVED EQUAL.
    A. A COPY OF THE APPROVED SEISMIC RESTRAINT SYSTEMS INSTALLATION GUIDE/MANUAL SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING INSTALLATION AND KEPT ON THE JOB SITE.
    B. PROVIDE SHOP DRAWINGS SHOWING HOW PRE-APPROVED SYSTEM WILL BE APPLIED TO EACH PIPE AND DUCT SYSTEM. STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF SUPPORTING STRUCTURE TO SUPPORT LOADS OF ANCHORAGE AND BRACING SYSTEM BASED ON SHOP DRAWINGS. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS.
    C. SHOP DRAWINGS OF SEISMIC BRACING SHALL BE AVAILABLE TO THE INSPECTOR OF RECORD TO VERIFY THE INSTALLATION OF THE SEISMIC BRACING.
5. THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND VA ENGINEER.
6. WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF VA ENGINEER, THE ARCHITECT, STRUCTURAL ENGINEER, AND MECHANICAL ENGINEER.
7. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE ANCHOR TYPE AND INSTALLATION REQUIREMENTS.
8. PIPING, DUCTWORK AND CONDUIT CROSSING BUILDING SEISMIC SEPARATIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE CONNECTORS.

PLUMBING PIPE TYPE LEGEND

SYMBOL	FLUID ABBREV.	DESCRIPTION
S OR W	S OR W	SOIL OR WASTE PIPING
S OR W	S OR W	SOIL OR WASTE PIPING BELOW FLOOR OR GRADE
V	V	VENT PIPING
SD	SD	STORM DRAIN PIPING
SD	SD	STORM DRAIN PIPING BELOW FLOOR OR GRADE
OD	OD	OVERFLOW STORM DRAIN PIPING
OD	OD	OVERFLOW STORM DRAIN PIPING BELOW FLOOR OR GRADE
CW	CW	POTABLE COLD PIPING
CW	CW	POTABLE COLD WATER PIPING BELOW FLOOR OR GRADE
HW	HW	POTABLE HOT WATER PIPING (ABOVE 110°F)
HW	HW	POTABLE HOT WATER PIPING BELOW FLOOR OR GRADE
HWR	HWR	POTABLE HOT WATER RETURN PIPING
HWR	HWR	POTABLE HOT WATER RETURN PIPING BELOW FLOOR OR GRADE
TP	TP	TRAP PRIMER WATER SUPPLY PIPING BELOW FLOOR OR GRADE
TW	TW	POTABLE TEMPERED WATER (85°F TO 110°F)
ICW	ICW	INDUSTRIAL COLD WATER
G	G	LOW PRESSURE GAS PIPING (8 TO 14-INCH WATER GAUGE)
G	G	LOW PRESSURE GAS PIPING BELOW FLOOR OR GRADE
MPG	MPG	MEDIUM PRESSURE GAS PIPING (3 OR 5-PSIG)
MPG	MPG	MEDIUM PRESSURE GAS PIPING BELOW FLOOR OR GRADE

PLUMBING ABBREVIATIONS

ABBREV.	DESCRIPTION
A, AMPS	AMPERES
ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	AUTOMATIC FIRE SPRINKLER
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
BEH	BEHIND
BEL	BELOW
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
C.C.	CENTER TO CENTER
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CLG	CEILING
COMP	COMPRESSOR
CONC	CONCRETE
CONN	CONNECTION
CP	CIRCULATING PUMP
CTR	COUNTER
CV	CHECK VALVE
D	DRAIN
DI	DEIONIZED WATER
DEMO	DEMOLITION
DN	DOWN
DWGS	DRAWINGS
EX, EXIST	EXISTING
EA	EACH
ESEW	EMERGENCY SHOWER AND EYEWASH
EWC	ELECTRIC WATER COOLING
ELECT	ELECTRICAL
ELEV	ELEVATION
ENCL	ENCLOSURE
°F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FR	FROM
FS	FLOOR SINK
FT	FOOT
FU	FIXTURE UNITS
FUT	FUTURE
FV	FLUSH VALVE
GAL	GALLON
GC	GAS COCK
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GT	GAS TURRET
H	HEIGHT
HB	HOSE BIBB
HDR	HEADER
HP	HORSEPOWER
HR	HOUR
HZ	HERTZ
I.E.	INVERT ELVATION
IN	INCH
KW	KILOWATT
L	LENGTH
LAV	LAVATORY
LBS	POUNDS

ABBREV.	DESCRIPTION
LO2	LIQUID OXYGEN
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFGR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NO.	NUMBER
OC	ON CENTER
OFCI	OWNER FURNISHED AND CONTRACTOR INSTALLED
OPNG	OPENING
OP, OPER	OPERATING
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PR, PRESS	PRESSURE
PSI	POUND PER SQUARE INCH
QTY	QUANTITY
REF	REFRIGERATOR
RPM	REVOLUTIONS PER MINUTE
SH	SHOWER
SHD	SHOWER DRAIN
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF, SQ FT	SQUARE FEET
SK	SINK
SKT	SINK TRIM
SOV	SHUT-OFF VALVE
SP	SUMP PUMP
SPEC(S)	SPECIFICATIONS
SS	SERVICE SINK
SW	SWITCH
T	TRANSFORMER
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UOS	UNDER OTHER SECTION OF SPECIFICATIONS
UR	URINAL
UTR	UP THRU ROOF
V	VOLTS
VB	VACUUM BREAKER
VO	VENT OFFSET
VR	VENT RISER
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W	WIDTH
W/	WITH
WC	WATER CLOSET
WCS	SECURITY WATER GAUGE
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHER PROOF
WT	WEIGHT
WTR	WATER
YB	YARD BOX

PLUMBING SYMBOL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
(E)XX	(E)	EXISTING TO REMAIN (XX INDICATES FLUID ABBREVIATION, REFER TO PLUMBING PIPE TYPE LEGEND)
XX	(N)	NEW WORK (XX INDICATES FLUID ABBREVIATION, REFER TO PLUMBING PIPE TYPE LEGEND)
		FLOW IN DIRECTION OF ARROW
		PIPE ELBOW DOWN OR AWAY FROM VIEWER
		PIPE ELBOW UP OR TOWARD VIEWER
		PIPE TEE DOWN OR AWAY FROM VIEWER
		PIPE TEE UP OR TOWARD VIEWER
		VALVE IN PIPE RISER DOWN OR AWAY FROM VIEWER
BFP	BFP	BACKFLOW PRENVENTOR (REFER TO DRAWINGS FOR TYPE)
		BALL VALVE
		BUTTERFLY VALVE
	BLV	BALANCING VALVE
		CAPPED PIPE END
		CHECK VALVE
FCO	FCO	CLEAN-OUT (FLOOR)
COTG	COTG	CLEAN-OUT TO GRADE
WCO	WCO	CLEAN-OUT (WALL)
	CO	CLEAN-OUT
	EJ	EXPANSION JOINT
		INCREASER OR REDUCER
		FLEXIBLE PIPING CONNECTION
FSW	FSW	FLOW SWITCH
	SOV	SHUT-OFF VALVE
		PIPE SUPPORT
	GC	GAS COCK VALVE
		PLUG VALVE
PT		PRESSURE AND TEMPERATURE TEST PORT
P	PG	PRESSURE GAUGE
	PRV	PRESSURE REGULATING VALVE
PRV		PRESSURE RELIEF VALVE
P&TR	P&TR	PRESSURE AND TEMPERATURE RELIEF VALVE
		PUMP
		SOLENOID VALVE
	RD	STORM (ROOF) DRAIN
	OD	STORM DRAIN (OVERFLOW)
		STRAINER
		THERMOMETER IN PIPING
		UNION
		ANCHOR
	VTR	VENT THROUGH ROOF
OR	WHA	WATER HAMMER ARRESTOR (LOCATE BEHIND ACCESS PANEL)

PLUMBING NOTATION LEGEND

SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT OR DEMOLITION
1		SHEET KEY NOTES DEMOLITION
(1)		SHEET KEY NOTES NEW WORK
ø	DIA	DIAMETER
X / XX		DETAIL NUMBER / DETAIL SYMBOL / DRAWING NUMBER WHERE DETAIL IS SHOWN
XX		PLUMBING EQUIPMENT OR FIXTURE ABBREVIATION
X		PLUMBING EQUIPMENT OR FIXTURE SYMBOL
XX / X		PLUMBING EQUIPMENT OR FIXTURE NUMBER

PLUMBING DRAWING LIST

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

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IDENTIFICATION STAMP
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16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

PLUMBING - LEGEND AND GENERAL NOTES

PROJECT NUMBER
913-4675-01

11/21/16

P0.0.1

DOMESTIC TANKLESS GAS-FIRED HOT WATER HEATER SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	STORAGE CAPACITY (GALLONS)	RATE OF RECOVERY @ 60°F	NO. OF CFH	ELECTRICAL REQUIREMENTS			OPERATING WEIGHT (LBS.)	MOUNTING DETAIL	REMARKS
							VOLTS	PHASE	HERTZ			
WH 1	WATER HEATER	CUSTODIAL ROOM #A120	AO SMITH ATI 540H-N	TANKLESS	6.3 (GPM)	199	120	1	60	60	9 / P5.01	COMMERCIAL GAS TANKLESS HIGH EFFICIENCY CONDENSING ULTRA-LOW NOx WALL MOUNTED. PROVIDE IN LINE WATER HEATER SHIELD EHS-10, AQASTAT & 3" PVC CONCENTRIC VENT KIT. 9007611005

DOMESTIC HOT WATER CIRCULATING PUMP SCHEDULE

SYMBOL	MANUFACTURER & MODEL NUMBER	LOCATION	SERVICE	TYPE	CAPACITY (GPM)	TOTAL DYNAMIC HEAD (FT)	RPM	ELECTRICAL DATA				OPERATING WEIGHT (LBS.)	REMARKS
								HP	VOLTS	PHASE	HERTZ		
CP 1	GRUNDFOS UPS 15-55 SUC	CUSTODIAL ROOM #A120	WH-1	INLINE	--	-	-	0.12	115	1	60	15	3 SPEED PUMP

THERMOSTATIC MIXING VALVE SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	CW IN	HW IN	HW/TW OUT	REMARKS
TMV 1	THERMOSTATIC MIXING VALVE	FOR EACH LAVATORY AND SINK	LEONARD 170-LF-BP-BRKT	3/8"	3/8"	3/8"	
TMV 2	THERMOSTATIC MIXING VALVE	CUSTODIAL ROOM #A120	LEONARD XL-32-LF-BDT	3/4"	3/4"	3/4"	SET MIXING VALVE TEMERATURE AT 105°F MIN. AND 120°F MAX.

EXPANSION TANK SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	STORAGE CAPACITY (GALLONS)	OPERATING WEIGHT (LBS.)	REMARKS
ET 1	EXPANSION TANK	CUSTODIAL ROOM #A120	"AMTROL" THERM-X-TROL ST-5-C	2.1	40	USE WITH WH-1 ASME RATED FOR 150 PSIG.

EARTHQUAKE VALVE SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NUMBER	SIZE	REMARKS
EQV 1	EARTHQUAKE VALVE	KOSO 301-7 SERIES	1"	-

GAS PRESSURE REGULATOR SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NUMBER	CFH	SIZE	GAS PRESSURE		SPRING COLOR	VENT	SPRING NUMBER	REMARKS
					IN	OUT				
GPR 1	GAS PRESSURE REGULATOR	SENSUS 143-80-2	199	1"	2 P.S.I.	8" WATER COLUM	GREEN	3/8"	143-82-201-17	

AIR COMPRESSOR SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NUMBER	LOCATION AND DRAWING REFERENCE	-	ELECTRICAL DATA				OPERATING WEIGHT (LBS.)	MOUNTING DETAIL	REMARKS
					HP	VOLTS	PHASE	HERTZ			
CA 1	AIR COMPRESSOR WITH HOSE REEL	AIR MACHINE 8670-2FBGA WITH 6026	PARKING LOT	-	3/4	120	1	60	125	10 / P5.01	JE ADAMS AIR MACHIN 3/4HP OILESS AIR COMPRESSOR CUT RESISTANT 25'x1/4" AIR HOUSE W/INFLATOR GUGE PUSH BUTTON OPERATION COMPLETE WITH JE ADAMES RETRACTABLE HOSE BASE STAINLESS STEEL

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	BRANCH CONNECTION					CARRIER	REMARKS
		TRAP	WASTE	VENT	HW	CW		
WC 1	WATER CLOSET WALL HUNG	INTEGRAL	4"	2	-	1-1/2"	JR SMITH 0400 OR 0200 SERIES	"AMERICAN STANDARD" AFWALL FLOWISE MODEL 3351.001 VITREOUS CHINA, WHITE, ELONGATED BOWL, SIPHON JET, COMPLETE WITH SLOAN "ROYAL" 111-1.28 SOLAR MANUAL FLUSHOMETER, 1.28 GALLONS PER FLUSH, "BEMIS" 1955C ELONGATED OPEN FRONT SEAT LESS COVER. MOUNT PER A.D.A REQ'S.
WC 2	WATER CLOSET WALL HUNG - ADA	INTEGRAL	4"	2	-	1-1/2"	JR SMITH 0400 SERIES	"ACORN" 2105-W-1-CN 1.28-FVH-ADA SIPHON JET 1.28 GPF COMPLETE WITH HYDRAULIC FLUSH VALVE WITH HYDRAULIC PUSHBUTTON P/N 3918762. MOUNT PER A.D.A REQ'S.
L 1	LAVATORY COUNTER MOUNTED	1-1/2"	2"	-	3/4"	3/4"	-	AMERICAN STANDARD DROP IN SELF RIMMING LAVATORY MODEL 0476.028 WITH SLOAN EBF-650-BDT FAUCET AND BELOW DECK THERMOSTATIC MIXING VALVE. FAUCET SHALL BE ELECTRONIC FAUCET, FLOW RATE 0.5-GPM FOR A 15-SEC. CYCLE. 4 C CELL ALKALINE BATTERIES. PROVIDE "TRUEBRO" INSULATING KIT FOR WASTE & HW SUPPLY. TRIMS & SUPPLIES (SELF CLOSING).
L 2	LAVATORY WALL HUNG	1-1/2"	2"	-	3/4"	3/4"	-	"ACORN" 1652-1-BP-03-M 18"LAVATORY WITH OVAL BOWL. MOUNT PER A.D.A REQ'S.
SK 1	1-COMPARTMENT SINK COUNTERTOP MOUNTED	1-1/2" CP 17 GA. CAST BRASS	2"	1-1/2"	3/4"	3/4"	-	"JUST" #SL-ADA-1921-A-GR, 19"x21"x6.5" DEEP. PROVIDE #J-ADA-35 BASKET STRAINER CHICAGO #201-AE35ABCP LEVER FAUCET, 1.5 GPM. RIGID RISER, ESCUTCHEON, ALL IN CHROME, OR ACCEPTED EQUAL. PROVIDE "TRUEBRO" W & HW INSULATING KIT.
SS 1	SERVICE SINK	3"	3"	2"	3/4"	3/4"	-	KOHLER "WHITBY" #K-6710 OR ACCEPTED EQUAL, SINK: 28"x28", FLOOR MOUNTED, ENAMELED CAST-IRON WITH VINYL RIM COVER K-8940 AND FAUCET WITH 2 3/8" HANDLES, STOPS, VACUUM BREAKER, BUCKET HOOK AND SPOUT BRACE TO WALL. FAUCET SHALL BE "CHICAGO" 897-RCF.
DF 1	DRINKING FOUNTAIN ACCESSIBLE	1-1/2" CP 17 GA. CAST BRASS	2"	1-1/2"	-	3/4"	-	"ELKAY" #LZWS-EDFPBM117K, DUAL LEVEL STAINLESS STEEL HI-LO WITH EZH2O BOTTLE FILLING STATION, INDOOR, WITH ADDITIONAL REPLACEMENT FILTER #51300C_3 PACK. 100% LEAD FREE WATERWAYS.
HB 1	HOSE BIBB	-	-	-	-	3/4"	-	"ACORN" 8121-SSLF STAINLESS STEEL LEAD FREE WITH VACUUM BREAKER.
HB 2	HOSE BIBB	-	-	-	-	3/4"	-	"ACORN" 8151-SSLF STAINLESS STEEL RECESSED HOSE BOX WITH WALL FLANGE LEAD FREE WITH VACUUM BREAKER.
TP 1	TRAP PRIMER (ELECTRONIC)	-	-	-	-	3/4" / 1/2"TP	-	TRAP PRIMER SHALL BE PPP INC. "MINI-PRIME" #MP-500-115V COMPLETE WITH DISTRIBUTION #DU-X UNIT AS REQUIRED OR APPROVED EQUAL BY MIFAB OR SIOUX CHIEF. PROVIDE ACCESS PANEL AND SHUT-OFF VALVE FOR EACH ASSEMBLY.
TP 2	TRAP PRIMER	-	-	-	-	3/4" / 1/2"TP	-	TRAP PRIMER SHALL BE PPP INC. "PRIME-RITE" #PR-500 COMPLETE WITH DISTRIBUTION #DU-X UNIT AS REQUIRED OR APPROVED EQUAL BY MIFAB OR SIOUX CHIEF. PROVIDE ACCESS PANEL AND SHUT-OFF VALVE FOR EACH ASSEMBLY.
FD 1	FLOOR DRAIN	2"	2"	1-1/2"	-	1/2"TP	-	"J.R. SMITH" FIG. 2005Y(B)-U-P050-BHP-PB CAST IRON BODY COMPLETE WITH FLASHING COLLAR, NO HUB CONNECTION, SQUARE TOP VANDAL PROOF SCREWS, TRAP PRIMER CONNECTION, ADJUSTABLE POLISH BRONZE STRAINER HEAD WITH HEEL PROOF GRATE OR APPROVED EQUAL. FLOOR DRAIN 1/2" MAX OPENINGS
SH 1	SHOWER	-	-	-	3/4"	3/4"	-	"LEONARD" THERMOSTATIC/PRESSURE SHOWERMASTER MODEL 7600-VP-515P-D-2L-H-06-1.5-D. VANDAL RESISTANT SCREW, 1.5 GPM HAND SPRAY, STAINLESS STEEL FLEX HOSE, SLIDE BAR, DOUBLE CHECK VALVE BACKFLOW PRVENTER, LEVER HANDLE DIVERTERS AND 1.5 GPM FIXED SHOWER HEAD OR APPROVED EQUAL.
SHD 1	SHOWER DRAIN	2"	2"	1-1/2"	-	-	-	"J.R. SMITH" FIG. 2005YA-PB CAST IRON BODY COMPLETE WITH FLASHING COLLAR, NO HUB CONNECTION, ADJUSTABLE POLISHED BRONZE STRAINER HEAD OR APPROVED EQUAL. DRAIN OPENING 1/4" MAX.

NOTE: ALL PLUMBING FIXTURES APPLIANCES AND DEVICES, EQUIPMENT SHALL BE LISTED OR APPROVED TYPE. THEY MUST ALSO MEET LEAD FREE AND L.A. CITY PLUMBING CODE 2014, SECTION 402. ALL FAUCETS IN PUBLIC RESTROOMS SHALL BE SELF CLOSING OR SELF CLOSING METERING FAUCETS PER L.A. PLUMBING CODE 2014, SECTION 402.

PLUMBING WATER SUPPLY FIXTURE UNITS CALCULATION

TYPE	NUMBER OF FIXTURE	FIXTURE UNIT		TOTAL FIXTURE UNITS
WATER CLOSET	3	5		15
LAVATORY	3	1		3
SHOWER HEAD	2	2		4
SINK	1	2		2
SERVICE SINK	1	3		3
DRINKING FOUNTAIN	1	1		1
HOSE BIBB	7	2.5/1		8.5
			OVERALL FIXTURE UNIT VALUE	34.5

PLUMBING DRAINAGE FIXTURE UNITS CALCULATION

TYPE	NUMBER OF QUALITIES	FIXTURE UNIT		DIFFERENCE FIXTURE UNITS
WATER CLOSET	3	4		12
LAVATORY	3	1		3
SHOWER DRAIN	2	2		4
SINK	1	2		2
SERVICE SINK	1	3		3
FLOOR DRAIN	6	2		12
DRINKING FOUNTAIN	1	1		1
			OVERALL FIXTURE UNIT VALUE	37

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
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AC FLS SS
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16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

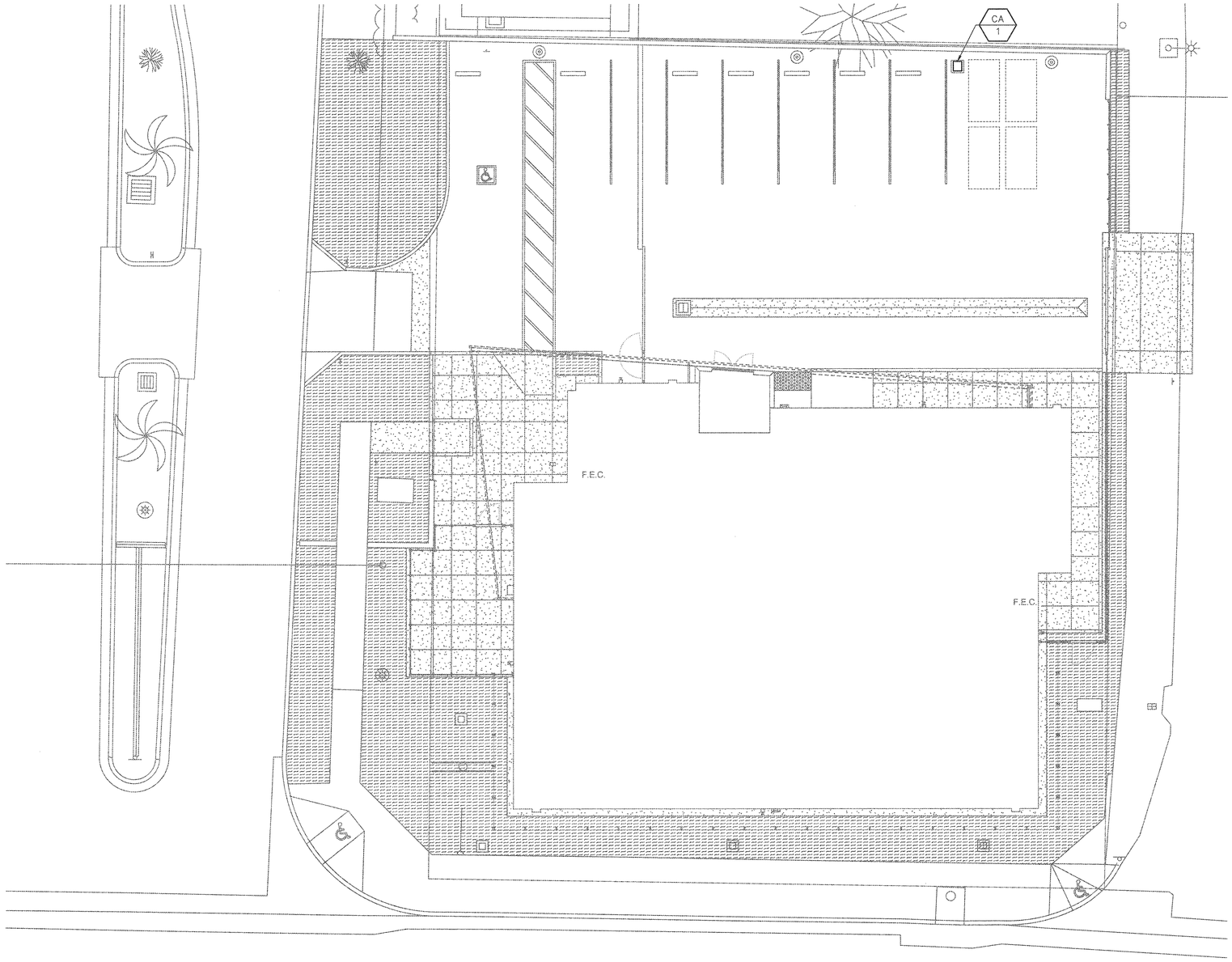
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

SHEET TITLE
PLUMBING SCHEDULES

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/16	P0.0.2



N

1 PLUMBING SITE PLAN
1/8" = 1'-0"

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

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COMPTON CALIFORNIA 90221

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160 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

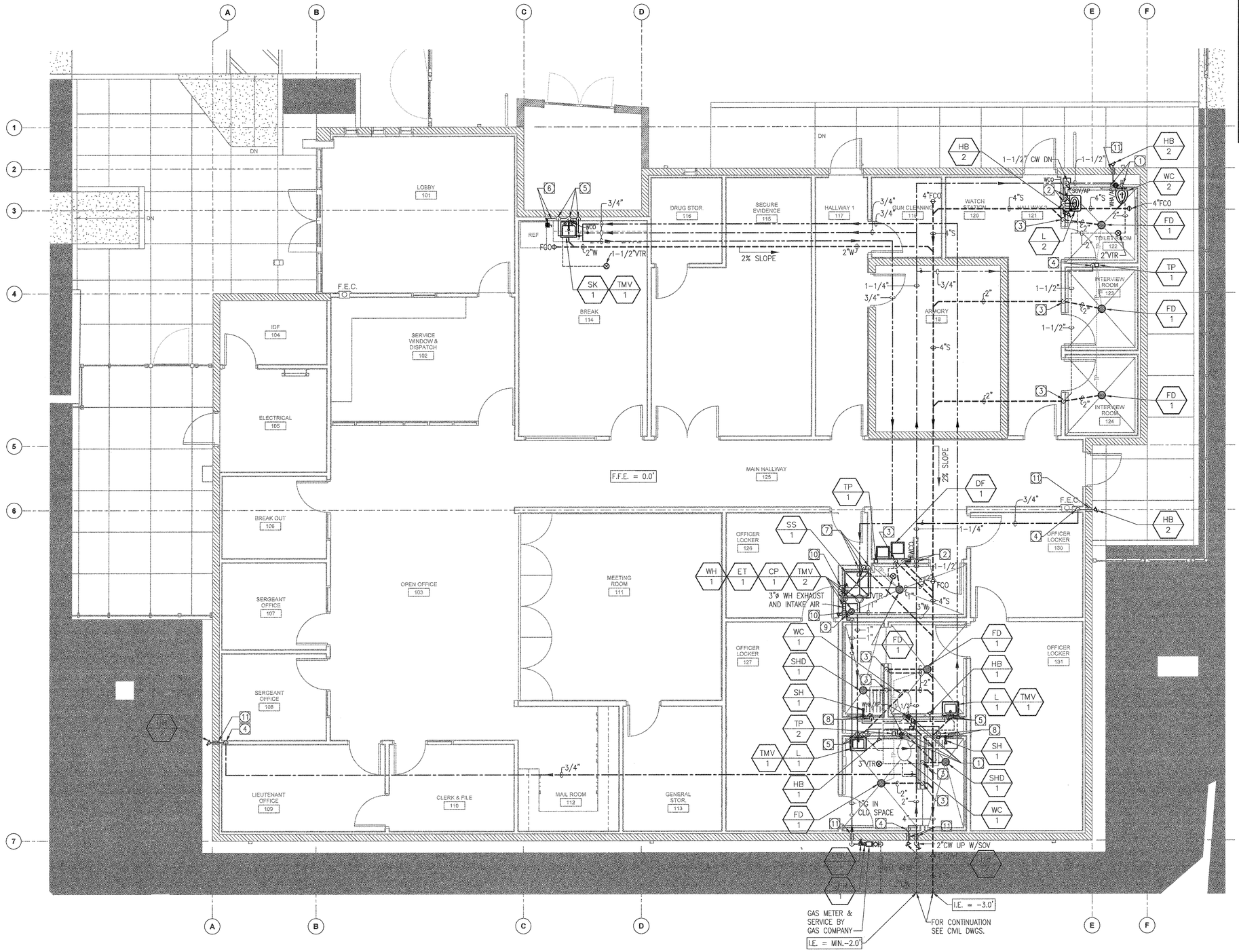
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
MECHANICAL
STATE OF CALIFORNIA

PLUMBING - SITE PLAN

913-4675-01

11/21/16 | P1.1.1



REFERENCE NOTES

1. 1-1/2"CW, 4"S DN & 2"VO.
2. 3/4"CW, 2"W DN & 1-1/2"VO.
3. 2"W DN & 1-1/2"VO.
4. 3/4"CW DN IN WALL.
5. 3/4"CW DN, 3/4"HW DN, 2"W DN & 1-1/2"VO.
6. EXTEND 3/4"CW & STUB-OUT W/SOV FOR THE REF.
7. 3/4"CW, 3/4"HW DN, 3"W DN & 2"VO.
8. 3/4"CW & 3/4"HW DN.
9. PROVIDE GAS COCK & FLEXIBLE CONNECTION.
10. 1"CW DN W/SOV.
11. PROVIDE PIPE SLEEVE.

1 PLUMBING FLOOR PLAN
1/4" = 1'-0"

N

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE DEC. 1 2 2017

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
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dHA+CALPEC

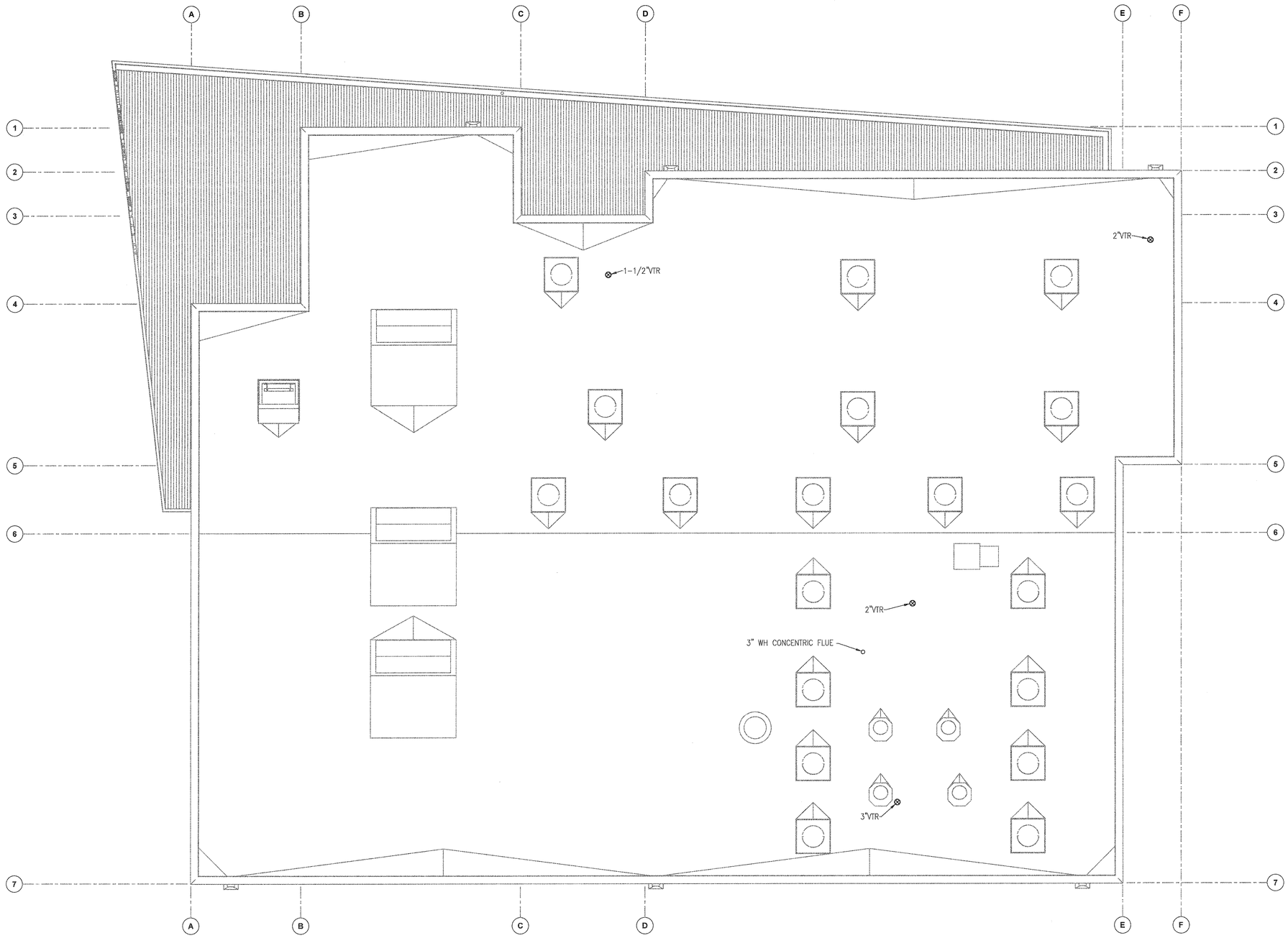
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. HEW
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

PLUMBING - FLOOR PLAN

913-4675-01

11/21/16 | P2.1.1



1 PLUMBING ROOF PLAN
1/4" = 1'-0"

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CLIENT NAME
COMPTON CCD

PROJECT NAME
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1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
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ENGINEER

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
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REVISION

NO	REASON	DATE

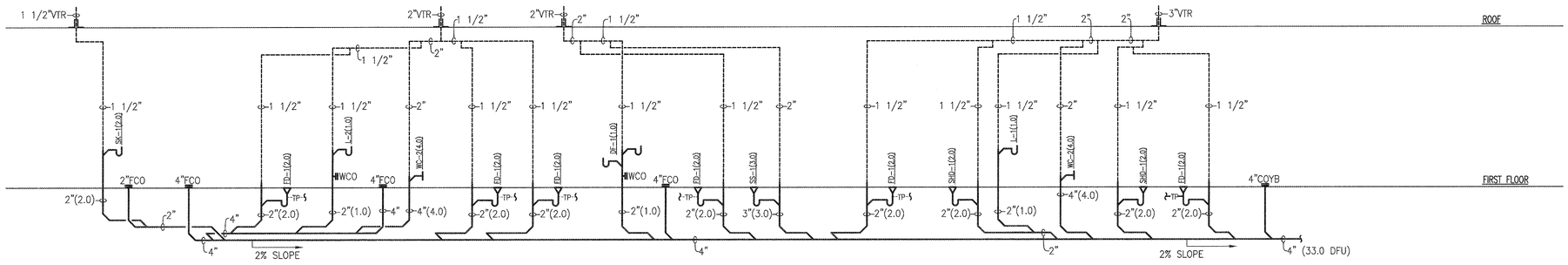
REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
STATE OF CALIFORNIA

SEAL(S) / SIGNATURE(S)

SHEET TITLE
PLUMBING - ROOF PLAN

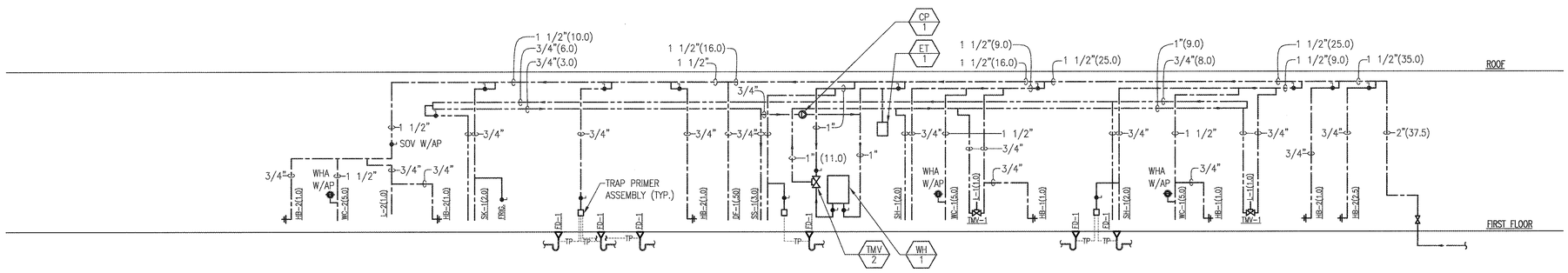
PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/16
SHEET NO.: P2.2.1



SANITARY WASTE & VENT RISER DIAGRAM

N.T.S. | 1



NOTES:

1. NUMBERS IN ( ) PARENTHESES INDICATES COLD WATER & HOT WATER FIXTURE UNITS.
2. REFER TO PLUMBING FIXTURE SCHEDULE ON DRAWING P0.0.2 FOR BRANCH CONNECTIONS FOR CW & HW SIZES TO EACH FIXTURE.
3. FIXTURE UNITS INDICATED ARE FOR PUBLIC USE, TABLE A-2, 2013 CALIFORNIA PLUMBING CODE.

POTABLE WATER CW PIPE SIZING CHART

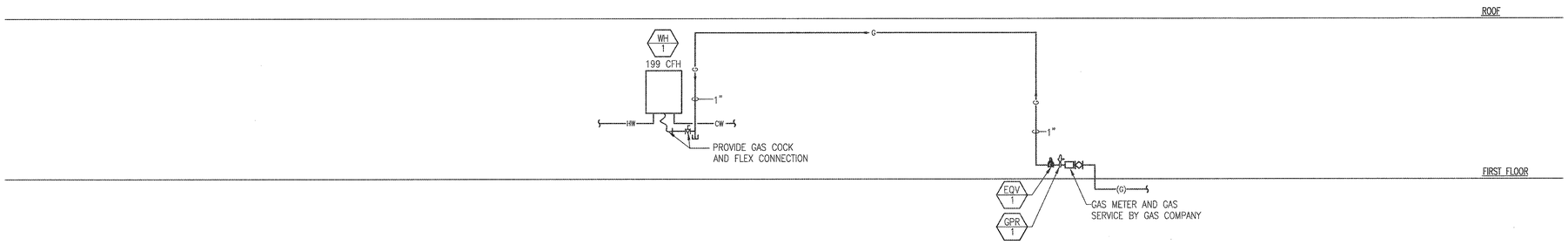
TYPE "L" COPPER PIPE 12.4 PSI PER 100 FT. MAX. VEL. @ 8 FPS	MAXIMUM GPM/FU ALLOWABLE			TYPE "L" COPPER PIPE 12.4 PSI PER 100 FT. MAX. VEL. @ 8 FPS	MAXIMUM GPM/FU ALLOWABLE		
SIZE	GPM	FLUSH TANK FU	FLUSH VALVE FU	SIZE	GPM	FLUSH TANK FU	FLUSH VALVE FU
1/2"	3	3	0	2"	77	260	136
3/4"	8	11	0	2-1/2"	117	474	358
1"	16	23	0	3"	170	747	699
1-1/4"	30	54	13	–	–	–	–
1-1/2"	44	104	35	–	–	–	–

POTABLE WATER HW PIPE SIZING CHART

TYPE "L" COPPER PIPE 12.4 PSI PER 100 FT. MAX. VEL. @ 5 FPS	MAXIMUM GPM/FU ALLOWABLE			TYPE "L" COPPER PIPE 12.4 PSI PER 100 FT. MAX. VEL. @ 5 FPS	MAXIMUM GPM/FU ALLOWABLE		
SIZE	GPM	FLUSH TANK FU		SIZE	GPM	FLUSH TANK FU	
1/2"	3	3		2"	48	120	
3/4"	8	9		2-1/2"	74	246	
1"	12	17		3"	105	412	
1-1/4"	19	29		–	–	–	
1-1/2"	27	48		–	–	–	

DOMESTIC WATER RISER DIAGRAM

N.T.S. | 2



GAS PIPE SIZING SCHEDULE

PIPE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
CFH	65	137	237	528	791	1520	2,430	4,290	8,760

GAS DEVELOPED LENGTH – 60± FEET
INLET PRESSURE: LESS THAN 2 PSI
PRESSURE DROP: 0.5 IN. W.C.
SPECIFIC GRAVITY: 0.60
GAS LOAD: 199 CFH
PIPE SIZE: 1" GAS

GAS RISER DIAGRAM

N.T.S. | 3

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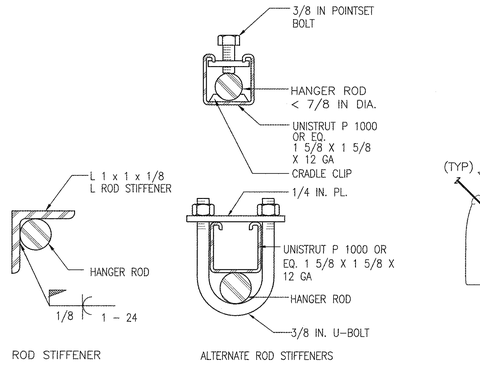
PLUMBING - RISER DIAGRAMS

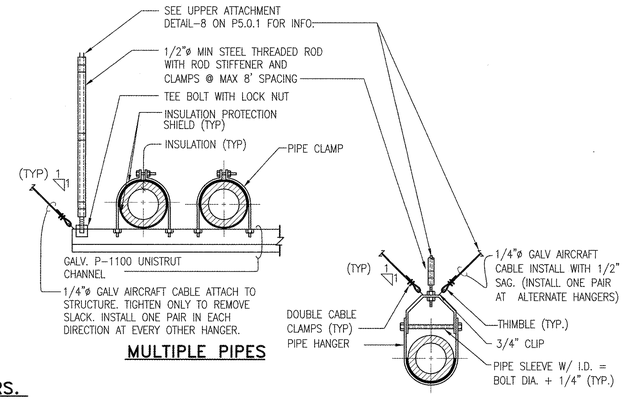
913-4675-01

11/21/16

P4.0.1



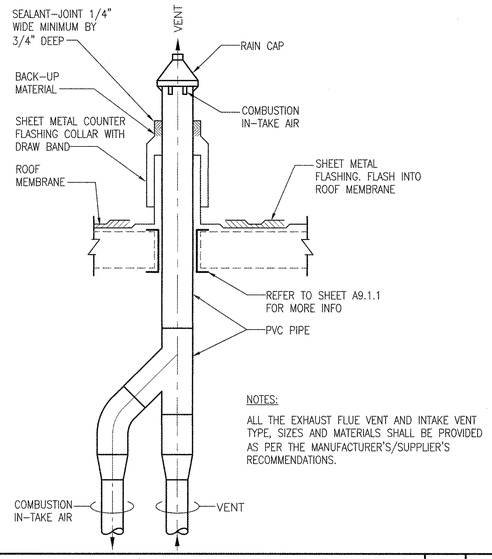
METHODS FOR TYING RODS AND ROD STIFFENERS.



(300 LBS MAX. TOTAL WEIGHT)

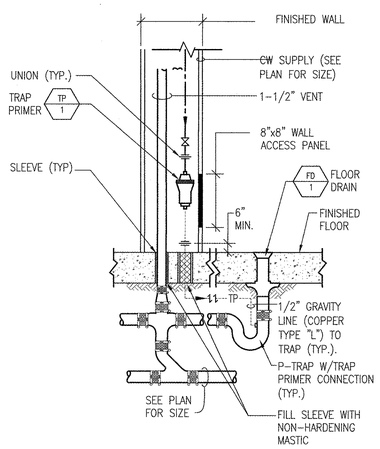
NOTES:
1. COORDINATE PIPE SUPPORT SYSTEM WITH STRUCTURAL.
2. SEE SEISMIC RESTRAINT MANUAL GUIDELINES AS INDICATED ON M0.1 SEISMIC BRACING NOTES FOR MECHANICAL SYSTEMS FOR OTHER HANGER ROD AND BRACING INFORMATION.

PIPE SUPPORT ABOVE CEILING — N.T.S. 7

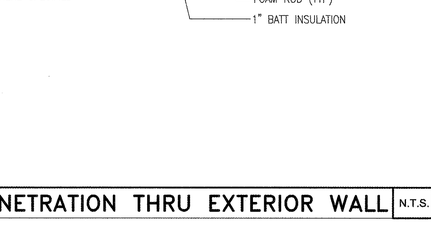


NOTES:
ALL THE EXHAUST FLUE VENT AND INTAKE VENT TYPE, SIZES AND MATERIALS SHALL BE PROVIDED AS PER THE MANUFACTURER'S/SUPPLIER'S RECOMMENDATIONS.

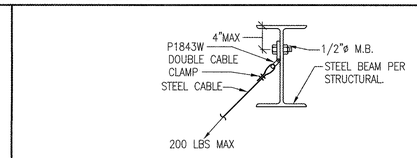
PVC SEALED DIRECT VENT W/CONCENTRIC VENT VERTICAL TERMINATION — N.T.S. 4

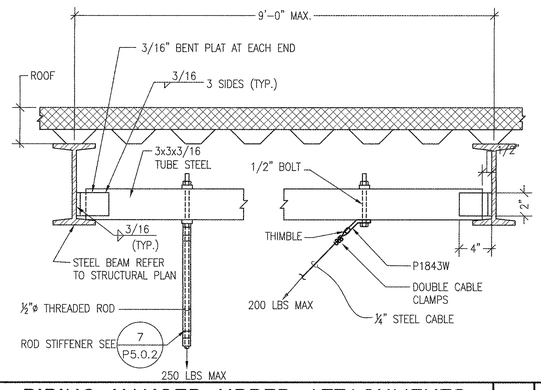


TRAP PRIMER ASSEMBLY — N.T.S. 1

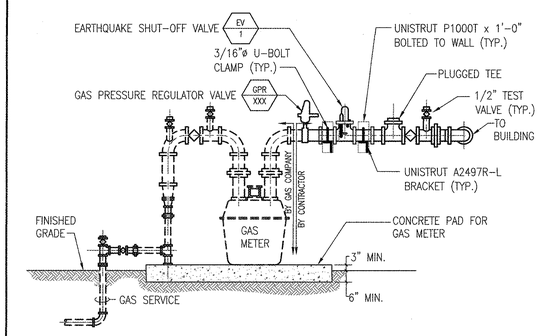


AIR COMPRESSOR — N.T.S. 10

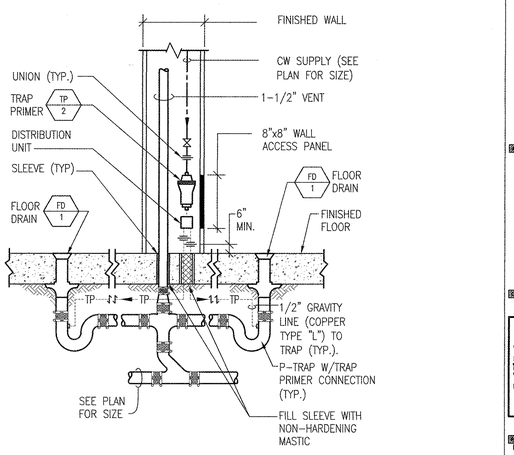




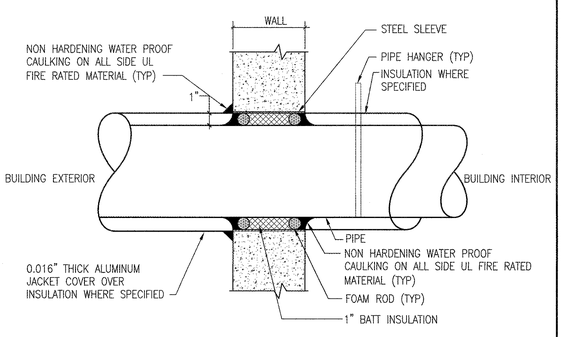
PIPING HANGER UPPER ATTACHMENTS — N.T.S. 8



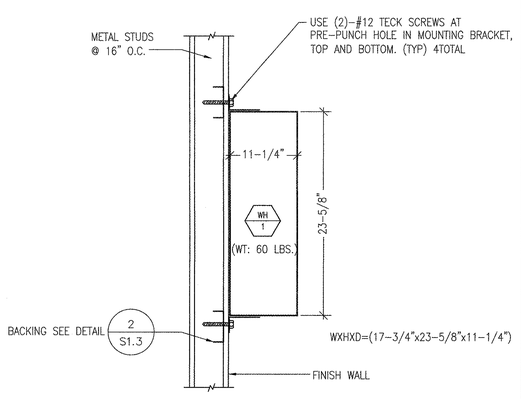
EARTHQUAKE VALVE — N.T.S. 5



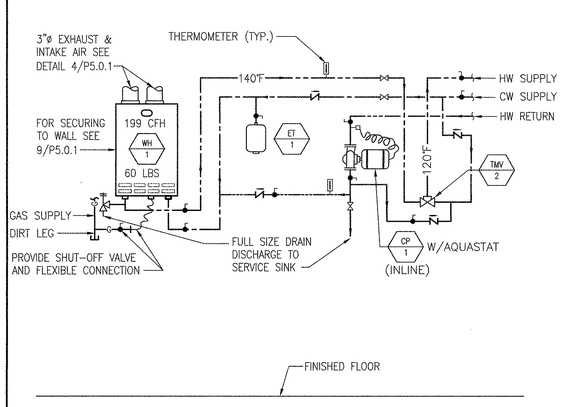
TRAP PRIMER ASSEMBLY — N.T.S. 2



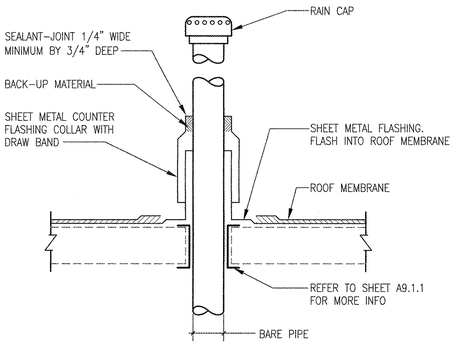
PIPE PENETRATION THRU EXTERIOR WALL — N.T.S. 11



SECURING TO WALL OF TANKLESS HOT WATER HEATER — N.T.S. 9



GAS FIRED WATER HEATER — N.T.S. 6



VENT PIPE THRU ROOF — N.T.S. 3

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Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M-31154 Exp. 12/31/17 MECHANICAL STATE OF CALIFORNIA

PLUMBING - DETAILS

913-4675-01

11/21/2017 P5.0.1

DEMOLITION & ALTERATION NOTES

1. CONTRACTOR SHALL VISIT THE SITE AND MAKE HIMSELF THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS.
2. ALL WORK SHALL BE PERFORMED TO CHANGE THE EXISTING ELECTRICAL INSTALLATION AS INDICATED OR AS REQUIRED TO PERFORM THE NEW WORK, IN ACCORDANCE WITH ARCHITECTURAL DEMOLITION PLAN.
3. REMOVE ALL LIGHT FIXTURES, SWITCHES, SPEAKERS, TELEPHONE OUTLETS, RECEPTACLES, MISCELLANEOUS CONDUIT, WIRE, ETC. THAT INTERFERES WITH NEW CONSTRUCTION. EXTEND ANY INTERRUPTED CIRCUITS. PROVIDE BLANK COVER PLATES AS REQUIRED IN FINISHED AREAS, COVER PLATES SHALL MATCH THE WALL SURFACE.
4. INFORMATION GIVEN ON THE DRAWINGS ABOUT EXISTING INSTALLATIONS HAS BEEN OBTAINED FROM THE BEST SOURCES AVAILABLE BUT CANNOT BE GUARANTEED ACCURATE IN ALL RESPECTS. VERIFY ALL SUCH INFORMATION BEFORE PROCEEDING WITH ANY NEW WORK THAT MAY BE AFFECTED. INCLUDE AS A PART OF THE CONTRACT ALL WORK REQUIRED TO PRODUCE THE INDICATED RESULT.
5. EXCEPT AS MAY BE SPECIFICALLY INDICATED OTHERWISE, ALL ELECTRICAL MATERIALS AND EQUIPMENT REMOVED FROM THE EXISTING INSTALLATION IN THE COURSE OF PERFORMING THE INDICATED WORK AND NOT INDICATED TO BE REUSED SHALL BE TREATED AS FOLLOWS:
   - A. ALL CONDUITS, CONDUCTORS, OUTLET BOXES AND FITTINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
   - B. ALL OTHER REMOVED ITEMS (PANELS, TRANSFORMERS, DISCONNECT SWITCHES, LIGHT FIXTURES, AND OTHER ELECTRICAL EQUIPMENT) SHALL BE TURNED OVER TO THE OWNER AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
6. CLEAN ALL REMOVED ITEMS THAT ARE TO BE REUSED, EQUIPMENT THAT IS INDICATED TO BE REUSED SHALL BE PROTECTED DURING CONSTRUCTION, CLEANED AND TESTED BEFORE RE-INSTALLATION IN A NEW PERMANENT LOCATION.
7. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL EXISTING WIRING, CONDUITS, JUNCTION BOXES AND OTHER ELECTRICAL DEVICES IN AREAS WHERE NEW WORK OCCURS, SHALL BE REMOVED EXCEPT WHEN SUCH DEVICES ARE REQUIRED TO MAINTAIN SERVICES TO OTHER AREAS. IN SUCH CASES, CONTRACTOR SHALL RELOCATE THESE DEVICES WHERE REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR REMOVE ANY OF THE EXISTING ITEMS WHEN SUCH ITEMS ARE CONCEALED AND DO NOT INTERFERE WITH THE NEW WORK OF ALL TRADES.
8. NUMBER OF CONDUCTORS SHOWN ON EXISTING CONDUITS REPRESENT THOSE REQUIRED TO PERFORM THE WORK. WHEN NUMBER OF EXISTING IS INADEQUATE, CONTRACTOR SHALL PROVIDE ADDITIONAL WIRES AND ALL NECESSARY WORK AND ACCESSORIES REQUIRED TO CONFORM TO THE NUMBER OF CONDUCTORS SHOWN ON THE DRAWINGS. ALL EXTRA EXISTING WIRES SHALL BE TAPED, COILED AND TAGGED AS "NOT-USED" AT BOTH ENDS IN JUNCTION BOXES. CONTRACTOR SHALL EXAMINE AND REPLACE ALL EXISTING WIRES IN BAD CONDITION WITH EQUIVALENT NEW ONES.
9. CONTRACTOR TO COORDINATE WITH UTILITY POWER COMPANY FOR ANY TEMPORARY SHUT-DOWN AND/OR TO PROVIDE TEMPORARY POWER AS REQUIRED DURING DEMOLITION AND CONSTRUCTION PHASE OF WORKS.
10. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

DEMOLITION/REMODEL:

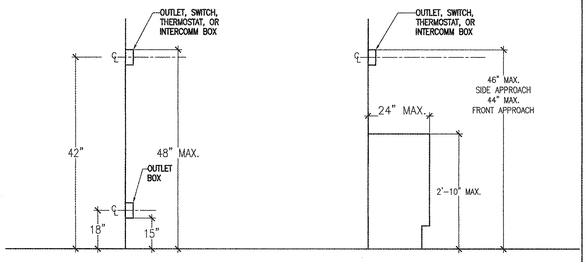
(E)	WHEN SHOWN ADJACENT TO LIGHTING FIXTURE, OUTLETS, PANELS, IN CONDUIT RUNS, ETC., DENOTES EXISTING TO REMAIN.
(EA)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES EXISTING EQUIPMENT TO BE ABANDONED.
(ER)	WHEN SHOWN ADJACENT TO LIGHTING FIXTURE, OUTLETS, PANELS, IN CONDUIT RUNS, ETC., DENOTES EXISTING TO BE DISCONNECTED AND RELOCATED.
(RE)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES NEW LOCATION OF RELOCATED EQUIPMENT.
(R)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES DISCONNECT AND REMOVE EQUIPMENT WITH ASSOCIATED CONDUIT AND WIRING U.O.N.

SCOPE OF WORK

IN SUMMARY THE ELECTRICAL SYSTEM SCOPE OF WORK NOT LIMITED TO THE ABOVE DESCRIPTION BOT ALSO INCLUDES THE FOLLOWING:

1. PROVIDE NEW MAIN SERVICE SWITCHBOARD FOR 208Y/120V. 3PH-4W SERVICE, DISTRIBUTION TRANSFORMERS AND SYSTEM WITH THE NEW BRANCH CIRCUIT PANEL BOARDS.
2. PROVIDE NEW LED SUSPENDED LINEAR LIGHT FIXTURES WITH SEPARATE OCCUPANCY SENSORS AND PHOTO-CONTROL.
3. PROVIDE NEW DIGITAL WALL DIMMER SWITCHES AND LIGHTING CONTROL SYSTEM IN ACCORDANCE WITH 2013 CEC REQUIREMENTS.
4. PROVIDE NEW POWER, VOICE/DATA, AND COMMUNICATION OUTLETS PER-DISTRICT REQUIREMENTS.
5. PROVIDE NEW FIRE ALARM SYSTEM. COMPLETE WITH CONTROL PANEL AND PERIPHERAL DEVICES.

ACCESSIBLE MOUNTING HEIGHTS



FRONT APPROACH

PER 11B - 308.2.1
&
11B- 308.3.1

REACH REQUIRED OVER OBSTRUCTION

PER 11B - 308.2.2
&
11B- 308.3.2

SHEET LIST

E0.0.1	ELECTRICAL LEGEND AND NOTES
E0.0.2	SINGLE LINE DIAGRAM & SCHEDULES
E0.0.3	LIGHTING FIXTURE SCHEDULE
E0.0.4	ELECTRICAL DETAILS
E0.0.5	ELECTRICAL DETAILS
E0.0.6	ELECTRICAL DETAILS
E0.0.7	ELECTRICAL DETAILS
E0.0.8	INDOOR TITLE 24 COMPLIANCE FORMS
E0.0.9	OUTDOOR TITLE 24 COMPLIANCE FORMS
E1.1.0	ELECTRICAL OVERALL SITE PLAN
E1.1.1	ELECTRICAL SITE PLAN
E2.1.1	LIGHTING PLAN
E2.1.2	POWER & SIGNAL PLAN
E2.1.3	ELECTRICAL MECHANICAL POWER PLAN
E3.1.1	ELECTRICAL ROOF PLAN

SYMBOL LIST

GENERAL:

	NEMA 5-20R DUPLEX WHITE RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE PASS AND SEYMOUR # 5362W OR EQUAL
	QUADPLEX NEMA 5-20R WHITE RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE (2) PASS AND SEYMOUR # 5362W OR EQUAL
GFI	NEMA 5-20R GFCI-ILLUMINATED TYPE WHITE RECEPTACLE AT +48"A.F.F (U.N.O) AND 302S/S COVER PLATE. PASS AND SEYMOUR # 2095WL OR EQUAL
	NEMA 5-20R GREY RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE. PASS AND SEYMOUR # 5362GRY OR EQUAL
	QUADPLEX NEMA 5-20R GREY RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE. (2) PASS AND SEYMOUR # 5362GRY OR EQUAL
Ⓣ	THERMOSTAT AT +48" A.F.F (U.N.O)
Ⓙ	JUNCTION BOX.
Ⓙ	JUNCTION BOX WALL MOUNTED.
C	NEMA 5-20R DUPLEX WHITE RECEPTACLE ON CEILING W/ WHITE NYLON COVER PLATE FOR VIDEO PROJECTOR
T	BY-PASS TIMER 0-6 HOUR - MARKTIME #9007 AT +4'-0" (MOUNT ADJACENT TO THERMOSTAT).
	MOTOR CONNECTION.
S_M	MANUAL MOTOR STARTER WITH, 16A -2POLES WITH GREEN PILOT LIGHTS SIMILAR TO SQUARE D, CLASS 2510, TYPE FG2PG.
"1" ☒	MAGNETIC MOTOR STARTER. NEMA SIZE AS INDICATED.
"1" 30A ☒	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT SWITCH, SIZE AS INDICATED.
☐	DISCONNECT SWITCH, 30 AMP, 3 POLE, NON-FUSED U.O.N..
60A 50A ☐	DISCONNECT SWITCH, 60 AMP, 3 POLE WITH 50 AMP TIME DELAY REJECTION TYPE FUSES.
	TERMINAL CABINET AS NOTED.
	SURFACE MOUNTED LIGHTING AND RECEPTACLE PANELBOARD.
	FLUSH/RECESSED MOUNTED LIGHTING AND RECEPTACLE PANELBOARD.
▨	SWITCHBOARD OR POWER PANELBOARD.
⊡	PUSH-BUTTON, +48" A.F.F., U.O.N..
	CONNECTION TO EQUIPMENT.
T	TRANSFORMER.
2LA	PANEL, SWITCHBOARD, TRANSFORMER OR TERMINAL CABINET DESIGNATION.
2	DEMO REFERENCE NOTE.
②	REFERENCE NOTE ON ELECTRICAL PLAN.
☐	ELECTRICAL DEVICE AS NOTED (I.E. RELAY, TIME CLOCK).
✕	FLUSH FLOOR COUPLING.
———	CONDUIT CONCEALED IN CEILING OR WALL.
- - - - - - - -	EXPOSED CONDUIT.
—— – ——	CONDUIT CONCEALED BELOW FLOOR SLAB OR UNDERGROUND.
○———	CONDUIT TURNING UP. ●——— CONDUIT TURNING DOWN.
	3/4"C.-2#12&1#12EG 3/4"C.-3#12&1#12EG 3/4"C.-4#12&1#12EG
#6	CONDUCTORS OTHER THAN #12 AWG AS INDICATED (3#6 AWG & 1#6 EG) SIZE CONDUIT PER APPLICABLE CODES.
2LA-1&3&5	HOMERUN TO PANEL "2LA" CIRCUITS 1,3,5, 3#12 & 1#12EG (3-POLE CIRCUIT BREAKER).
2LA-2,4,6	HOMERUN TO PANEL "2LA" CIRCUITS 2,4,6 WITH COMMON NEUTRAL, 4#12 & 1#12EG (3 SINGLE POLE BREAKERS) - PROVIDE TIE-BRANCH CIRCUIT BREAKER HANDLE FOR CIRCUIT 2,4,6 (TO SIMULTANEOUSLY DISCONNECT CIRCUITS WITH SHARED NEUTRAL)
	CONDUIT STUB WITH CAP. (WITH POLY-PROPYLENE PULL WIRE).
	CONDUIT SEAL.
Ⓙ △	WIREMOLD 5400 WITH DIVIDER FOR POWER AND DATA AT EACH RECEPTACLE INDICATED, PROVIDE A #5407 DEVICE BRACKET. PROVIDE A NEMA 5-20R DUPLEX RECEPTACLE AND A WIREMOLD 5407D PLATE FOR POWER; A #5407RJ COVER FOR DATA. SPECIAL NON-STANDARD COLOR IS REQUIRED, TO BE SELECTED BY ARCHITECT U.O.N. VERTICAL SURFACE MOUNTED WIREMOLD 5400 DROP TO HORIZONTAL RACEWAY U.O.N.

SINGLE LINE DIAGRAM:

150A 3P	CIRCUIT BREAKER, MOLDED CASE, 3 POLE, 150 AMP TRIP.
100A 70A 3P	SWITCH AND FUSE, 3 POLE, 100 AMP WITH (3) 70 AMP FUSES.
M	METERING AND CURRENT/POTENTIAL TRANSFORMER AS REQUIRED.
G	GROUND FAULT SENSOR.
	TRANSFORMER WITH SECONDARY GROUND.
FDR-6	FEEDER NO. 6 - SEE FEEDER SCHEDULE.
⊙	GROUND WELL WITH ROD.
	GROUND TO COLD WATER PIPE, U.O.N.
G	UFER GROUND.
N	NEUTRAL BUS.
G	EQUIPMENT GROUND BUS.

LIGHTING:

CLG.	WALL	
○ 6a	○	LIGHTING FIXTURE, "6" DENOTES CIRCUIT NUMBER, "a" DENOTES CONTROLLING SWITCH.
		LED LIGHTING FIXTURE.
		LED STRIP LIGHTING FIXTURE.
	⊗	SINGLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS IF INDICATED. WALL MOUNTED.
↑⊗↑		DOUBLE FACE EXIT LIGHT FIXTURE WITH DIRECTIONAL ARROWS IF INDICATED. CEILING MOUNTED.
	●	LIGHT FIXTURE EQUIPPED WITH EMERGENCY BATTERY PACK.
A 100		FIXTURE TYPE "A" , INPUT POWER OF 100 VOLT-AMPERE EACH, INCLUDING BALLAST LOSS IF ANY - TYPICAL IN ROOM OR AREA U.O.N.
▭		2'x4' FIXTURE RECESSED IN "T" BAR CEILING SYSTEM
	S_a^3	SINGLE POLE TOGGLE SWITCH, +42" A.F.F., U.O.N.. SUBSCRIPTS INDICATE THE FOLLOWING:

a - OUTLETS CONTROLLED.
2 - TWO POLE.
3 - THREE WAY.
4 - FOUR WAY.
K - KEYED.
P - PILOT LIGHT.
M - MANUAL MOTOR STARTER.
D - DIMMER.
R - REMOTE CONTROL, MOMENTARY CONTACT.
F - FLY FAN DOOR SWITCH.

WALL MOUNTED OCCUPANCY SENSOR SWITCH, +42" A.F.F., U.O.N., GREENGATE #OSW-P-0451-DMV-DUAL LEVEL

OCCUPANCY SENSOR FOR LIGHTING CONTROL SYSTEM NOTES:

OCCUPANCY SENSOR (NOT PART OF LIGHTING CONTROL PANEL) FOR LIGHTING CONTROL SYSTEM SHALL BE BY "GREENGATE'" (COOPER CONTROLS), WITH THE FOLLOWING PRODUCT NUMBERS:

1. WALL MOUNTED SENSOR;
   PIR TECHNOLOGY, AUTO OR MANUAL ON FOR PRIVATE/SMALL OFFICE, CONFERENCE ROOM AND STORAGE:
   - a- DUAL LEVEL, GREENGATE #OSW-P-0451-DMV (COVERAGE >100-300 SQUARE FEET)
   - b- SINGLE LEVEL, GREENGATE #OSW-P-0451-MV (COVERAGE >100-SQUARE FEET)
2. CEILING MOUNTED SENSOR:
   ULTRASONIC SENSOR TECHNOLOGY, TO BE INSTALLED WITH SWITCH PACK, GREENGATE #SP20-MV AND MANUAL WALL MOUNTED SWITCH:
   - a- SMALL OFFICE, <1270 S.F., GREENGATE #OMC-U-1001 ONE WAY COVERAGE.
   - b- OPEN OFFICE OR RESTROOM <2500 S.F.,GREENGATE #OMC-U-2000 TWO WAY COVERAGE.
   - c- CORRIDORS OR NARROW HALLWAYS, 13 FT.x 100 FT. COVERAGE, GREENGATE #ODC-U-0100-H, TWO WAY COVERAGE.
3. WALL OR CEILING DAYLIGHT SENSOR FOR LIGHT WELL LOCATIONS:
   - a- AUTO. ADJUSTING, GREENGATE #DSRC-FMOIR, MULTI-ZONE SENSOR.
   - b- MOUNTING BRACKET, GREENGATE #DSCM-MT.

EACH SENSOR TIME DELAY SHALL BE SET AT 8 MINUTES.

CONTRACTOR TO COORDINATE WITH MANUFACTURER REPRESENTATIVE FOR THE BEST PLACEMENT AND QUANTITY OF THE CEILING MOUNTED SENSORS, AND ADDITIONAL ACCESSORIES FOR COMPLETE AND OPERABLE LIGHTING CONTROL SYSTEM.

COMMUNICATION SYSTEMS SYMBOL:

▶	WALL PHONE OUTLET WITH COVER PLATE, AT +48"A.F.F (U.N.O), ONE CAT6 CABLE DROP - PROVIDE SINGLE GANG BOX WITH 1G FACE PLATE AND 3/4"C STUB-UP INTO ACCESSIBLE CEILING SPACE U.O.N.
2	DATA OUTLET WITH COVER PLATE, AT +15"A.F.F (U.N.O), SUBSCRIPT INDICATES NUMBER OF DATA DROPS (CAT-6) - PROVIDE 4S J-BOX WITH 1G FACE PLATE AND 3/4"C STUB-UP INTO ACCESSIBLE CEILING SPACE U.O.N.
	DATA OUTLET WITH COVER PLATE, AT +96"A.F.F (U.N.O) FOR TV/LED MONITOR, SUBSCRIPT INDICATES NUMBER OF DATA DROPS (SHIELDED CAT-6) - PROVIDE 4S J-BOX WITH 1G FACE PLATE AND 3/4"C TO TERMINATE IN THE LOCAL MEDIA HUB IN THE CLASSROOM
AV	MEDIA HUB OUTLET WITH COVER PLATE, AT +15"A.F.F (U.N.O) AT THE MEDIA CABINET LOCATION ADJACENT TO TEACHER'S DESK, TERMINATE ALL OF THE SHIELDED CAT6 CABLE RUNS (FROM TV'S AND CEILING PROJECTOR SCREEN) IN THE CLASSROOM (SHIELDED CAT-6) - PROVIDE 5S J-BOX WITH GROMETTED 1-1/4"DIA S/S FACE PLATE.
2 WAP	WALL MOUNT WIRELESS ACCESS POINT. PROVIDE SURFACE MOUNTED 4S-BOX AS REQUIRED WITH 3/4"C RUN WITH CAT6 CABLE TO IDF OR MDF LOCATION OF BUILDING, COORDINATE/VERIFY WITH DISTRICT IT ENGINEER FOR LOCATION PRIOR TO ROUGH-IN.

LOW VOLTAGE SYSTEMS SYMBOL:

	SECURITY SYSTEM CAMERA. PROVIDE/INSTALL FLUSH 4S BOX (WP FOR EXTERIOR LOCATIONS) WITH SEALTITE CONDUIT WHIP TO CAMERA.
CR	SECURITY/INSTRUTION SYSTEM CARD READER. PROVIDE/INSTALL FLUSH 4S OUTLET BOX. MOUNT AT +48" TO CENTER.

LOW VOLTAGE/COMMUNICATION CABLE LEGEND:

REFER TO SPECIFICATION DIVISION 27 & 28 FOR LOW VOLTAGE CABLE REQUIREMENT. PROVIDE IN MINIMUM 3/4"C U.N.O.

ALL LISTED CABLES BELOW SHALL BE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED, U.N.O.

FO - FIBER OPTIC CABLE.
C - COMPUTER CABLE (CAT-6)
S/I - SECURITY AND INTRUSION CABLING.

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2013 CALIFORNIA ELECTRICAL CODE (CEC) AND ALL APPLICABLE LOCAL CODES AND REGULATIONS:
   2013 CALIFORNIA ELECTRICAL CODE
   2013 CALIFORNIA FIRE CODE
   2013 CALIFORNIA BUILDING CODE
   2013 CALIFORNIA MECHANICAL CODE
   2013 CALIFORNIA PLUMBING CODE
   2013 CALIFORNIA ENERGY CODE
2. MINIMUM SIZE OF CONDUIT SHALL BE 3/4", MINIMUM SIZE OF CONDUCTOR SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
3. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE CONDUCTORS SHOWN.
4. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
5. ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN.
6. ALL PULL BOXES IN FINISHED AREAS SHALL HAVE FACTORY APPLIED PRIME COAT OF PAINT.
7. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL, PLUMBING, AND ALL OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
8. DOORS SHALL BE EQUIPPED WITH FLUSH TYPE, SPRING-LATCHING, CORBIN LOCKS FOR METAL DOORS, KEYED TO CORBIN NO. 60 KEYS. UNLESS OTHERWISE NOTED.
9. STUB OUT (2) 1" CONDUITS FROM ALL FLUSH MOUNTED PANELBOARDS INTO ACCESSIBLE CEILING SPACE AND CAP FOR FUTURE USE.
10. ELECTRICAL CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
11. ALL MOUNTING HEIGHTS SHOWN ARE TO CENTER LINE OF OUTLET OR DEVICE AND SHALL APPLY UNLESS INDICATED OTHERWISE.
12. DRAWINGS ARE DIAGRAMMATIC AND INDICATED GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND SPACE CONDITIONS AT ALL TIMES.
13. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOOR, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
14. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR CLOCKS, SWITCHES, HORNS FIRE ALARM MANUAL PULL STATIONS, SPEAKERS, RECEPTACLES ETC.
15. WHERE ELECTRONIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
16. EXPOSED RACEWAYS (WHEN INDICATED ON DRAWINGS) SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
17. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
18. FURNISH FISH WIRE IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
19. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, UNLESS OTHERWISE INDICATED.
20. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT.
21. SUPPORT PANELBOARDS, JUNCTION AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
22. OUTLET BOXES FOR FIXTURES RECESSED IN HARD LID/GYP BOARD CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
23. SEE MECHANICAL, PLUMBING DRAWINGS FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS AND TRANSFORMERS, SWITCHES, TIME CLOCKS, VALVES, STATS, RELAYS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
24. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT SHALL BE WEATHERPROOF TYPE.
25. NO CONDUIT RUNS WILL BE ALLOWED IN CONCRETE SLAB. ALL CONDUITS WILL BE PLACED IN THE HUNG CEILING UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
26. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK TO BACK.
27. WHERE MORE THAN (1) ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE.
28. WHERE MOUNTING HEIGHTS OR DIMENSIONS OF DEVICE LOCATIONS ARE SHOWN, CONTRACTOR SHALL CONFIRM SUCH DIMENSIONS WITH ARCHITECTURAL DRAWINGS. WHERE CONFLICT IN DIMENSIONS OCCUR BETWEEN DRAWINGS, OR WHERE NO DIMENSIONS OR MOUNTING HEIGHTS ARE INDICATED ON EITHER SET OF DRAWINGS, CONTRACTOR SHALL VERIFY THESE ITEMS WITH ARCHITECT IN FIELD PRIOR TO ROUGH-IN.
29. 30. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROTECTED BY MATERIALS TESTED IN ACCORDANCE WITH UL1479/ASTM E-814. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS AND MAINTAIN THE FIRE RATING OF WALLS AND/OR FLOORS AFFECTED. PROVIDE HILTI C5240 FIRESTOP SEALANT, CSFM LISTING NO. 4060-1200:100, OR EQUIVALENT STATE FIRE MARSHALL APPROVED AND LISTED MATERIAL.
30. WHERE LIGHTING FIXTURES ARE FOR LAY-IN MOUNTING IN AN EXPOSED RUNNER TYPE OF CEILING, PROVIDE EACH FIXTURE WITH CLIPS (4 REQUIRED) OR EQUIVALENT MEANS TO PREVENT THE ACCIDENTAL DISENGAGEMENT OF THE FIXTURE FROM THE CEILING. WHERE FIXTURES IN SUCH CEILINGS ARE SQUARE OR RECTANGULAR IN SHAPE, PROVIDE EACH FIXTURE WITH FOUR (4) #12 AWG GALVANIZED STEEL WIRES WITHIN 3 INCHES OF EACH OF THE CORNERS.
31. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO ASCE 7-10, CHAPTER 13.
32. ALL CONDUCTORS SHALL BE COPPER, TYPE THHN/THWN, U.O.N. CONDUCTORS IN CONDUIT EXPOSED ON THE ROOF SHALL HAVE 90° NSULATION (THHN), #12 AND SMALLER SHALL BE SOLID TYPE, AND #10 AWG AND LARGER SHALL BE STRANDED.
33. TRANSFORMERS SHALL BE NEMA TP-1 ENERGY EFFICIENT TYPE WITH INSULATION SUITABLE FOR 150° AVERAGE TEMPERATURE RISE. SEE SPECIFICATIONS FOR DETAILS.
34. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT THREADED TYPE ALUMINUM OR STEEL. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT FIXTURE AND OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUIT RUNS.
35. RIGID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND THOROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE NOT ACCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP, SQUEEZE TYPE OR STEEL TWIST-IN TYPE WITH INSULTED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.
36. RECESSED FIXTURE IN FIRE RATED ASSEMBLY SHALL BE APPROVED BY AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION PER 2010 CBC-SECTION 713.3. AND 713.4.
37. BOXES SHALL BE SECURED AS PER 2013 CEC ARTICLE 314.23.
38. 39. ALL U.L. LISTED EQUIPMENT SHALL BE INSTALLED AS PER LISTING OR LABELING (i.e. MAX. FUSE SIZE MEANS FUSE PROTECTION REQUIRED), AND SHALL BE INSTALLED AS APPROVED.
39. ALL EQUIPMENT SHALL BE LISTED BY AN ACCEPTED TESTING LAB AND BEAR THE LISTING STICKER IN AN ACCESSIBLE LOCATION.
40. SUBMIT TORQUE CERTIFICATE FOR ALL ELECTRICAL EQUIPMENT/CONNECTIONS PRIOR TO CERTIFICATE OF OCCUPANCY ISSUANCE.
41. CONSULT WITH THE DISTRICT INSPECTOR BEFORE STARTING WORK.
42. ALL FEEDERS AND BRANCH CIRCUITS SHALL CARRY A GROUND WIRE, SIZED AS PER N.E.C. ARTICLE 250.
43. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

MEP COMPONENT ANCHORAGE NOTES

1. MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN 2013 CALIFORNIA BUILDING CODE, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 6 AND 30.
   - A. PERMANENT EQUIPMENT AND COMPONENTS.
   - B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
   - C. MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8-HOURS AND HEAVIER THAN 400-POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
   - A. COMPONENTS WEIGHING LESS THAN 400-POUNDS AND HAVE A CENTER OF MASS LOCATED 4-FOOT OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   - B. COMPONENTS WEIGHING LESS THAN 20-POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5-POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

SIESMIC BRACING NOTES

1. SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT SHALL BE PROVIDED USING A SEISMIC RESTRAINT MANUAL THAT BEARS AN OSHPD ANCHORAGE PRE-APPROVAL NUMBER: OPA-0349 MASON INDUSTRIES "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK, AND ELECTRICAL SYSTEMS", NO. OPA-0485 I.S.A.T. "ENGINEERED SEISMIC BRACING OF SUSPENDED UTILITIES", OR APPROVED EQUAL.
   - A. A COPY OF OSHPD PRE-APPROVED SYSTEMS INSTALLATION GUIDE/MANUAL SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING INSTALLATION AND KEPT ON THE JOB SITE.
   - B. PROVIDE SHOP DRAWINGS SHOWING HOW PRE-APPROVED SYSTEM WILL BE APPLIED TO EACH PIPE AND DUCT SYSTEM. STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF SUPPORTING STRUCTURE TO SUPPORT LOADS OF ANCHORAGE AND BRACING SYSTEM BASED ON SHOP DRAWINGS. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS.
   - C. SHOP DRAWING SHALL BE STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
   - D. SHOP DRAWINGS OF SEISMIC BRACING SHALL BE AVAILABLE TO THE INSPECTOR OF RECORD TO VERIFY THE INSTALLATION OF THE SEISMIC BRACING.
2. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE ANCHOR TYPE AND INSTALLATION REQUIREMENTS.
3. PIPING, DUCTWORK AND CONDUIT CROSSING BUILDING SEISMIC SEPARATIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE CONNECTORS.

ABBREVIATIONS

A	AMPERES.
A/C	AIR CONDITIONING.
AFF	ABOVE FINISHED FLOOR.
AFG	ABOVE FINISHED GRADE.
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
BKBD	BACKBOARD.
C	CONDUIT WITH WIRES.
CATV	CABLE TELEVISION
C/B	CIRCUIT BREAKER.
CKT	CIRCUIT.
CLDC	CLASSROOM LIMITED DISTRIBUTION CABINET.
CLG	CEILING.
CO	CONDUIT ONLY WITH PULL WIRE.
CU	COPPER
DE	DUAL ELEMENT FUSES.
DISC	DISCONNECT.
DIST	DISTRIBUTION.
DWG	DRAWING.
DDC	DIRECT DIGITAL CONTROL
EA	EACH.
EG	EQUIPMENT/GREEN GROUND
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL.
EM	EMERGENCY
EMT	ELECTRICAL METALLIC
EQUIP	EQUIPMENT.
EXIST	EXISTING.
F	FUSE.
FA	FIRE ALARM
FIXT	FIXTURE.
FLUOR	FLUORESCENT.
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER.
GND	GROUND.
HOA	HAND-OFF-AUTOMATIC.
HP	HORSEPOWER.
Isc	SHORT CIRCUIT CURRENT
IC	INTERCOM.
IDF	INTERMEDIATE DISTRIBUTION FRAME
J	JUNCTION.
LCL	LONG CONTINUOUS LOAD.
LTG	LIGHTING.
MAX	MAXIMUM.
MIN	MINIMUM.
MTG	MOUNTING.
NF	NON-FUSED.
NIC	NOT IN CONTRACT.
NL	NIGHT LIGHT.
NTS	NOT TO SCALE.
OFCI	OWNER FURNISH CONTRACTOR INSTALL
OFOI	OWNER FURNISH OWNER INSTALL
P	POLE.
PA	PUBLIC ADDRESS.
PB	PULL BOX.
PC	PHOTO CELL
PH	PHASE
PNL	PANEL.
PWR	POWER.
RECEPT	RECEPTACLE
REQ'D	REQUIRED.
RM	ROOM
SC	SEPARATE CIRCUIT
SHT	SHEET.
SPST	SINGLE POLE, SINGLE THROW.
SURF	SURFACE.
SW	SWITCH.
SWGR	SWITCHGEAR
TC	TIME CLOCK.
TERM	TERMINAL.
TEL	TELEPHONE
TV	TELEVISION.
TYP	TYPICAL.
UG	UNDERGROUND.
UGPS	UNDERGROUND PULL SECTION
UON	UNLESS OTHERWISE NOTED.
V	VOLTS.
W/	WITH.
WCR	WITHSTAND AND CLOSING RATING
WP	WEATHERPROOF.
XFMR	TRANSFORMER
4/S	JUNCTION BOX 4" SQUARE.
5/S	JUNCTION BOX 4-11/16".

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1300 Dove Street, Suite 100
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CLIENT NAME
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PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD,
COMPTON CALIFORNIA 90221

AGENCY REVIEW
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CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

ANDREW H. INJO
E-13884
Exp. 06/30/18

SEAL / SIGNATURE

SHEET TITLE
ELECTRICAL LEGEND
AND NOTES

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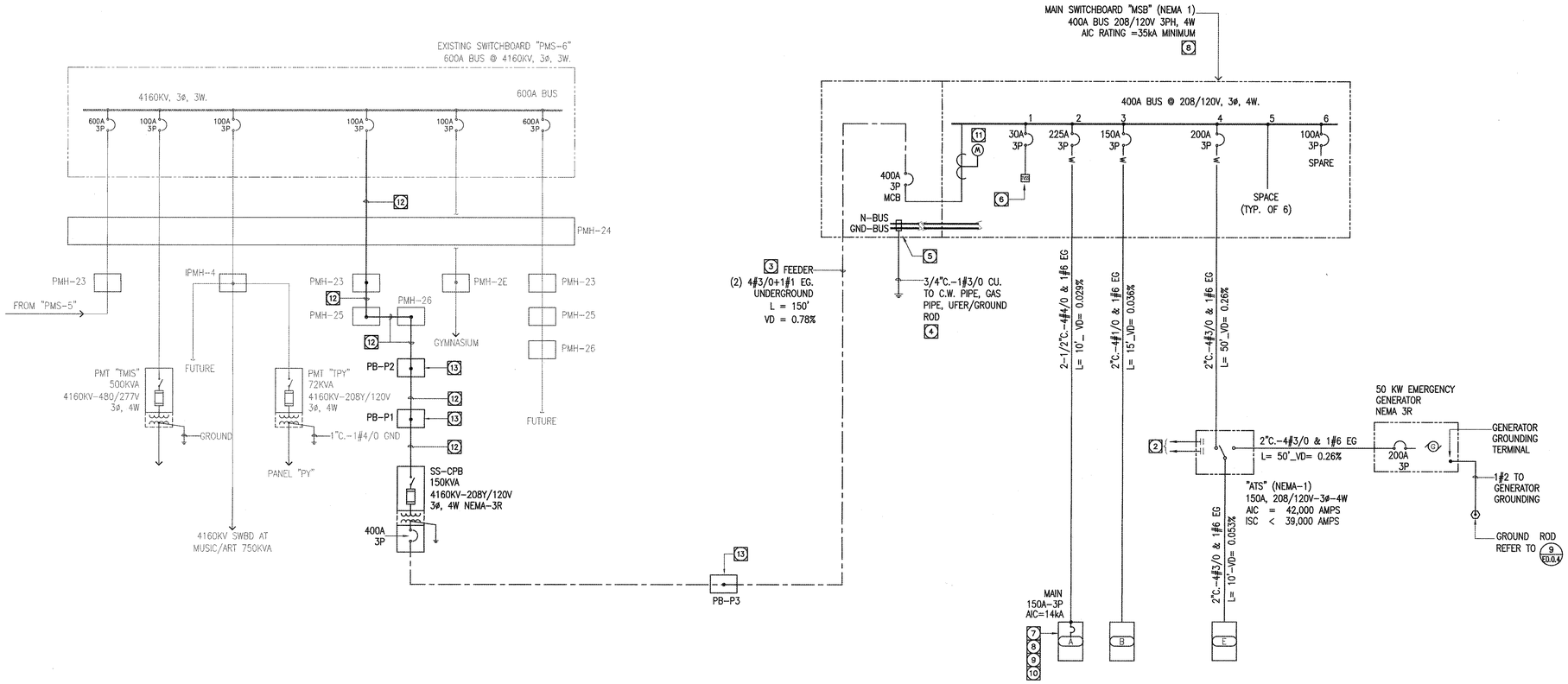


SHEET NOTES:

1. SCREENED ITEMS DENOTES ON SINGLE LINE EXISTING EQUIPMENT TO REMAIN IN PLACE U.O.N.
2. BOLD ITEMS DENOTES NEW WORK.

GENERAL NOTES:

1. SWITCHGEAR SHOP DRAWING SUBMITTAL SHALL INCLUDE SAMPLE OF ARC-FLASH LABEL, ARC-FLASH LABEL SHALL BE PROVIDED BY SWITCHGEAR MANUFACTURER AND INCLUDE NOMINAL SYSTEM VOLTAGE, ARC-FLASH BOUNDARY AND SPECIFIC LEVEL PPE/ ARC-FLASH PPE CATEGORY.
2. SWITCHBOARD, DISTRIBUTION PANELS, FEEDERS, CIRCUIT BREAKERS, DISCONNECT SWITCH AND FUSES (SHOWN IN SCREENED) ARE EXISTING TO REMAIN, UNLESS OTHERWISE NOTED.
3. PROVIDE NAME PLATE FOR THE NEW EQUIPMENT, NAME PLATE SHALL BE ATTACHED WITH SHEET METAL SCREWS, GLUE ON ADHESIVES NOT ACCEPTABLE. SAMPLE PANELBOARD NAME PLATE SHALL INCLUDE THE FOLLOWING INFORMATION:
   PANEL "LD"
   600A MAIN, 208Y/120V-3PH-4W
   FED FROM "1MS"
4. ALL CIRCUIT BREAKERS SHALL BE 3 POLES - MCCB TYPE CIRCUIT BREAKER, UNLESS OTHERWISE NOTED.
5. MINIMUM CIRCUIT BREAKER AMPERE INTERRUPTING CAPACITY SHALL BE 10,000 AMPS FOR 208/120V-3PH-4W BRANCH CIRCUIT PANEL BOARD.
6. FEEDER LENGTHS ARE SHOWN FOR CALCULATION PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING/MATERIAL TAKE-OFF.
7. FUSES FOR MOTOR SERVICE DISCONNECT SWITCH SHALL BE TIME DELAY AND DUAL ELEMENT TYPE.
8. SINGLE LINE DIAGRAM SHOWN IS ENGINEERED BASED ON "EATON" SWITCHGEAR & IFS SWITCHBOARD WITH CU-BUS AS BASIS OF DESIGN, ADDITIONAL ENGINEERING SERVICES REQUIRED ON THE IMPLEMENTATION OF THE ALTERNATE QUALIFIED SWITCHGEAR SHALL BE CONTRACTOR'S RESPONSIBILITY.
9. ALL ELECTRICAL FACILITIES REQUIRED FOR ELECTRICAL SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE SCE ELECTRICAL SERVICE REQUIREMENTS AND SCE PROPOSED ELECTRIC UNDERGROUND LAYOUT PLAN FOR CUSTOMER INSTALLATION (DWG # 16PO315).
10. MAIL FOUR COPIES OF SHOP DRAWINGS SHOWING PROPOSED SERVICE AND METERING FACILITIES PRIOR TO FABRICATION OF THE SERVICE SWITCHBOARD, AND OBTAIN APPROVAL FROM : SCE - COMPTON SERVICE CENTER, ATTENTION: DWAYNE HORTEN

REFERENCE NOTES

1. NOT USED.
2. PROVIDE/INSTALL 1"C.-4#12 TO EMERGENCY GENERATOR CONTROL PANEL, FOR ENGINE START. VERIFY EXACT P.O.C. IN FIELD PRIOR TO INSTALLATION.
3. COORDINATE WITH SITE PLAN FOR EXACT LOCATION OF SUB-STATION.
4. PROVIDE (2) 3/4" DIA. x 10'-0" COPPER-CLAD STEEL GROUND RODS, MINIMUM 6'-0" APART, FACILITY COLD WATER PIPE, GAS PIPE AND UFER GROUND CONNECTIONS. EACH GROUND ROD SHALL BE IN PRECAST GROUND ELECTRODE ENCLOSURE WITH TRAFFIC COVER (GROUND WELL) AND CONNECT WITH 3/4"C.-1#3/0 CU. TO SERVICE SWITCHBOARD GROUND BUS.
5. PROVIDE BONDING JUMPER REQUIRED AT THE SERVICE SWITCHBOARD "MSB" GROUND BUS.
6. INTEGRATED INTO DISTRIBUTION SECTION. 200KA-208Y/120VAC, 3ø, 4W.
7. PROVIDE "HACR" TYPE BRANCH CIRCUIT BREAKER IN THE PANELBOARD FOR BREAKERS SERVING HVAC PACKAGE UNITS.
8. PROVIDE ARC FLASH LABEL AND ARC FLASH WARNING.
9. FURNISH GROUND BUS IN EACH BRANCH CIRCUIT PANEL. ALL PANELS 208/120 VOLT, SHALL HAVE THE FEEDER EQUIPMENT GROUNDING CONDUCTOR AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO GROUND BUS. FURNISH EQUIPMENT GROUNDING CONDUCTOR IN EVERY FEEDER AND BRANCH CIRCUIT, RUN TO LAST OUTLET AND CONNECT TO BUS. CONDUIT GROUND IS NOT ACCEPTABLE AS A SUBSTITUTE. TYPICAL ALL PANELS, SWITCHBOARDS, DISTRIBUTION PANELBOARDS, AND SWITCHGEAR.
10. FURNISH AND INSTALL POWER DISTRIBUTION PANELBOARDS AS INDICATED ON THIS SHEET.
11. EATON'S PX-MULTIPOINT METER (PXMP) WITH COLOR TOUCH SCREEN, ENERGY PORTAL MODULE (EPM) WITH ETHERNET CAPABILITY - TO MONITOR EACH DOWN STREAM FEEDER BREAKER POWER AND ENERGY. REFER TO DETAIL #5/E0.06.
12. PROVIDE/INSTALL CONDUCTORS FROM NEW SUBSTATION TO EXISTING SWITCHBOARD "PMS-6".
13. REFER TO SHEET E1.1.0 FOR PULLBOX REQUIREMENTS.

PANEL : A | PHASE : 3 | WIRE : 4 | MOUNTING : SURFACE
VOLTAGE : 208 / 120 | LOCATION : ELECT. RM A105 | DISTANCE : FT
BUS AMPERE : 225 AMP | FED FROM : DP-A | POLES : 42
MAIN C/B : 225 AMP | MAIN TYPE : AUTO C/B | SPARE CAP : 0 %

CK NO	DESCRIPTION	LTG	RECP	MTR	HTG	MISC	CIRCUIT BREAKER	CIRCUIT KVA A	CIRCUIT KVA B	CIRCUIT KVA C	CK NO
1	LTS-RM'S. A103-A108,A111,A119-A127,A129,A130	47					20 / 1	1.25			1
2	SPARE						20 / 1	0.00			2
3	LTS-RM'S. A108-A110,CORA112,CORA,114-A116,A128	55					20 / 1		1.30		3
4	SPARE						20 / 1		0.00		4
5	LIGHTS - COVE - RMS. A107, A109	24					20 / 1			0.72	5
6	LIGHTS - EXTERIOR SOFFIT	15					20 / 1			0.80	6
7	PARKING LOT LIGHTS					3	20 / 1	0.50			7
8	RECEPTS. - RMS. A121,A122		5				20 / 1	0.90			8
9	SPARE						20 / 1		0.00		9
10	RECEPTS. - RMS. A119,A123 & EXT.		6				20 / 1		1.08		10
11	LIGHTS - EXTERIOR SOFFIT						20 / 1			1.86	11
12	SPARE						20 / 1			0.00	12
13	SPARE						20 / 1	0.00			13
14	RECEPTS. - RMS. A110,A112,A113		9				20 / 1	1.62			14
15	RECEPTS. - RMS. A116,A128		6				20 / 1		1.08		15
16	RECEPTS. - RM. A110 (REFRIG.)					1	20 / 1		0.90		16
17	RECEPTS. - RMS. A114 - A116,CORR.		6				20 / 1			1.08	17
18	RECEPTS. - RM. A110		2				20 / 1			0.36	18
19	RECEPTS. - RMS. A121,A120,A126,CORR.		5				20 / 1	0.90			19
20	RECEPTS. - RM. A111		4				20 / 1	0.72			20
21	RECEPTS. - RMS. A119,A122,A123,A127		5				20 / 1		0.90		21
22	RECEPTS. - RM. A111		5			1	20 / 1		1.28		22
23	RECEPTS. - RMS. A106,A109		5				20 / 1			0.90	23
24	RECEPTS. - RMS. A104,A124,A125,CORR.		6				20 / 1			1.08	24
25	RECEPTS. - RM. A130		4				20 / 1	0.72			25
26	RECEPTS. - RM. A108		5				20 / 1	0.90			26
27	RECEPTS. - RMS. A103,A129		8				20 / 1		1.44		27
28	RECEPTS. - RM. A108 (TV MONITOR)					1	20 / 1		0.20		28
29	CUBICLE WORK STATION - RM. A109					1	20 / 1			0.54	29
30	SPARE						20 / 1			0.00	30
31	CUBICLE WORK STATION - RM. A109					1	20 / 1	0.54			31
32	W.P. RECEPT. - GOLF CART CHARGING					1	20 / 1	1.20			32
33	SPARE						20 / 1		0.00		33
34	W.P. RECEPT. - GOLF CART CHARGING					1	20 / 1		1.20		34
35	IRRIGATION CONTROLLER					1	20 / 1			0.10	35
36	W.P. RECEPT. - GOLF CART CHARGING					1	20 / 1			1.20	36
37	SPARE						20 / 1	0.00			37
38	W.P. RECEPT. - GOLF CART CHARGING					1	20 / 1	1.20			38
39	SPARE						20 / 1		0.00		39
40	SPARE						20 / 1		0.00		40
41	SPARE						20 / 1			0.00	41
42	SPARE						20 / 1			0.00	42

CONN LOAD = 27.86 KVA | TOTAL BY PHASE (KVA) = | 10.46 | 9.27 | 8.23
MIN FDR = 80 AMP | MIN C/B = 80 AMP | LGST MTR = 0 AMP | SPARE = 0.00 KVA
LCL(LTG+HTG) = 3.86 KVA | 25% LCL = 0.97 KVA | CONN LOAD + 25% LCL = 28.93 KVA

PANEL : B | PHASE : 3 | WIRE : 4 | MOUNTING : SURFACE
VOLTAGE : 208 / 120 | LOCATION : ELECT. RM | DISTANCE : FT
BUS AMPERE : 225 AMP | FED FROM : ATS | POLES : 42
MAIN C/B : 225 AMP | MAIN TYPE : AUTO C/B | SPARE CAP : 0 %

CK NO	DESCRIPTION	LTG	RECP	MTR	HTG	MISC	CIRCUIT BREAKER	CIRCUIT KVA A	CIRCUIT KVA B	CIRCUIT KVA C	CK NO
1	**FAN COIL UNIT "FC-1" - RM. 108**					1	20 / 2	0.26			1
2	**FAN COIL UNIT "FC-3" - RM. 110**					1	20 / 2	0.26			2
3	**W/CKT 1**						------ / ---		0.26		3
4	**W/CKT 2**						------ / ---		0.26		4
5	**FAN COIL UNIT "FC-4" - RM. 109**					1	20 / 2			0.34	5
6	**FAN COIL UNIT "FC-5" - RM. 111**					1	20 / 2			0.34	6
7	**W/CKT 5**						------ / ---	0.34			7
8	**W/CKT 6**						------ / ---	0.34			8
9	**FAN COIL UNIT "FC-6" - CORRIDOR**					1	20 / 2		0.46		9
10	**FAN COIL UNIT "FC-7" - RM. 112**					1	20 / 2		0.34		10
11	**W/CKT 9**						------ / ---			0.46	11
12	**W/CKT 10**						------ / ---			0.34	12
13	**FAN COIL UNIT "FC-8" - CORRIDOR**					1	20 / 2	0.34			13
14	**FAN COIL UNIT "FC-9" - RM. 104**					1	20 / 2	0.34			14
15	**W/CKT 13**						------ / ---		0.34		15
16	**W/CKT 14**						------ / ---		0.34		16
17	**FAN COIL UNIT "FC-10" - RM. 109**					1	20 / 2			0.34	17
18	**CIRC. PUMP "CP-1" (0.12HP) - RM. 120**					1	20 / 1			0.10	18
19	**W/CKT 17**						------ / ---	0.34			19
20	**WATER HTR. "WH-1" - RM. 120**					1	20 / 1	0.01			20
21	**"VF-1" - (ROOF)**					1	20 / 2		0.77		21
22	**TRAP PRIMER "TP-1" - RMS. 114,120,126**					3	20 / 1		0.03		22
23	**W/CKT 21**						------ / ---			0.77	23
24	**"EF-1" (1/3HP) - ROOF**					1	20 / 2			0.37	24
25	**AIR COMPRESSOR**					1	20 / 1	1.66			25
26	**W/CKT 24**						------ / ---	0.37			26
27	**SPARE**						20 / 1		0.00		27
28	**RECEPT. - ROOF**				1		20 / 1		0.18		28
29	**SPARE**						20 / 1			0.00	29
30	**SPARE**						20 / 1			0.00	30
31	**SPACE**						------ / ---	0.00			31
32	**SPACE**						------ / ---	0.00			32
33	**SPACE**						------ / ---		0.00		33
34	**SPACE**						------ / ---		0.00		34
35	**SPACE**						------ / ---			0.00	35
36	**SPACE**						------ / ---			0.00	36
37	**SPACE**						------ / ---	0.00			37
38	**SPACE**						------ / ---	0.00			38
39	**SPACE**						------ / ---		0.00		39
40	**SPACE**						------ / ---		0.00		40
41	**SPACE**						------ / ---			0.00	41
42	**SPACE**						------ / ---			0.00	42

CONN LOAD = 10.30 KVA | TOTAL BY PHASE (KVA) = | 4.27 | 2.97 | 3.06
MIN FDR = 29 AMP | MIN C/B = 29 AMP | LGST MTR = 0 AMP | SPARE = 0.00 KVA
LCL(LTG+HTG) = 0.00 KVA | 25% LCL = 0.00 KVA | CONN LOAD + 25% LCL = 10.30 KVA

PANEL : E (EMERGENCY) | PHASE : 3 | WIRE : 4 | MOUNTING : SURFACE
VOLTAGE : 208 / 120 | LOCATION : ELECT. RM | DISTANCE : FT
BUS AMPERE : 225 AMP | FED FROM : ATS | POLES : 42
MAIN C/B : 225 AMP | MAIN TYPE : AUTO C/B | SPARE CAP : 0 %

CK NO	DESCRIPTION	LTG	RECP	MTR	HTG	MISC	CIRCUIT BREAKER	CIRCUIT KVA A	CIRCUIT KVA B	CIRCUIT KVA C	CK NO
1	LTS-RM'S. A105,A107-A109,A111-A113,CORA116,CORA	44					20 / 1	0.91			1
2	SPARE						20 / 1	0.00			2
3	LIGHTS - EXTERIOR & FRONT ENTRY	6					20 / 1		0.13		3
4	SPARE						20 / 1		0.00		4
5	SPARE						20 / 1			0.00	5
6	AUTO. DOOR OPERATOR - LOBBY A108						20 / 1			0.30	6
7	PARKING LOT LIGHTS					3	20 / 1	0.50			7
8	SPARE						20 / 1	0.00			8
9	SPARE						20 / 1		0.00		9
10	BLOCK HEATER - EMERG. GEN.					1	20 / 1		1.50		10
11	SEC. CAMERA CONTR. - IDF RM. 131					1	20 / 1			0.10	11
12	BATTERY CHARGER - EMERG. GEN.					1	20 / 1			1.80	12
13	RECEPTS. - DISPATCH				1		20 / 1	0.18			13
14	RECEPTS. (MONITORS) - DISPATCH					6	20 / 1	1.80			14
15	RECEPTS. - DISPATCH				1		20 / 1		0.18		15
16	RECEPTS. (MONITORS) - DISPATCH					6	20 / 1		1.80		16
17	RECEPTS. - DISPATCH				1		20 / 1			0.18	17
18	SPARE						20 / 1			0.00	18
19	RECEPTS. - ELEC. RM. 105,IDF RM. 131		4				20 / 1	0.72			19
20	CONDENSING UNIT "CU-1A" - EXTERIOR					1	60 / 3	4.83			20
21	RECEPTS. - IT RM. (IDF CABINET)					1	20 / 1		0.50		21
22	W/CKT 20						------ / ---		4.83		22
23	SPARE						20 / 1			0.00	23
24	W/CKT 20						------ / ---			4.83	24
25	MOTORIZED GATE CONTROLLER					1	20 / 1	0.50			25
26	SPARE						20 / 1	0.00			26
27	MOTORIZED GATE CONTROLLER					1	20 / 1		0.50		27
28	ELEC. DOOR LATCH - RMS. 107,108,CORR.,128,CORR.					7	20 / 1		0.07		28
29	REMOTE GEN. CONTROLLER - DISPATCH					1	20 / 1			0.01	29
30	FACP - ELEC. RM.					1	20 / 1			0.25	30
31	CONDENSING UNIT "CU-1B" - EXTERIOR					1	40 / 3	3.03			31
32	FAN COIL UNIT "FC-2" - DISPATCH					1	20 / 2	0.34			32
33	W/CKT 31						------ / ---		3.03		33
34	W/CKT 32						------ / ---		0.34		34
35	W/CKT 31						------ / ---			3.03	35
36	FAN COIL UNIT "FC-11" - IT RM.					1	20 / 2			0.02	36
37	FAN COIL UNIT "FC-12" - ELEC. RM.					1	20 / 2	0.02			37
38	W/CKT 38						------ / ---	0.02			38
39	W/CKT 37						------ / ---		0.02		39
40	SPARE						20 / 1		0.00		40
41	SPARE						20 / 1			0.00	41
42	SPARE						20 / 1			0.00	42

CONN LOAD = 36.29 KVA | TOTAL BY PHASE (KVA) = | 12.88 | 12.91 | 10.52
MIN FDR = 101 AMP | MIN C/B = 101 AMP | LGST MTR = 0 AMP | SPARE = 0.00 KVA
LCL(LTG+HTG) = 1.05 KVA | 25% LCL = 0.26 KVA | CONN LOAD + 25% LCL = 36.55 KVA

Compton Community College - Public Safety Building
1111 East Artesia Boulevard, Compton California 90221

Electrical Load Information

1. Main Switchboard:
New Main Switchboard to be 400amp 208/120 volt 3 Phase, 4 Wire

New Electrical Load Calculations

Description	Unit Load	Connected KVA Loads
A. Office Building		
Single Story (5,400 SF)		
Lighting	3.5 VA/SF	18.9
Power	3.0 VA/SF	16.2
HVAC	4.5 VA/SF	24.30
B. Parking Lot/Site		
Driveway/Parking Lighting		1.50
Motorized Gate Power		5.00
Security Equipment		5.00
Misc		10.00
	Connected Totals =	80.90
Future Building Growth	20%	16.18
	Total Connected Load =	96.18

= 267.166 Amp at 208Y/120V-3Phase, 4W

SWITCHGEAR SCHEDULE

ID #	DESCRIPTION	MTG.	DIMENSIONS (L x W x H)	WEIGHT (LBS)	DETAIL REF.
SS - CPF	150Kva SUB STATION	PAD MOUNTED			
SECTION 1	HV FUSED SWITCH	PAD MOUNTED	41" x 55" x 95"	800	E0.0.7/2
SECTION 2	XFRMR SECTION	PAD MOUNTED	84" x 66" x 102"	1500	
SECTION 3	XFRMR CB SECTION	PAD MOUNTED	55" x 81" x 90"	800	
MS	MAIN SWITCHBOARD				
SECTION 1	(MAIN & DIST. CB'S)	FLOOR STANDING	45" x 18" x 90"	771	E.0.0.4/1.2
ATS	TRANSFER SWITCH	WALL MOUNTED	18" x 13" x 38"	184	E.0.0.4/11
		+60" AFG TO TOP			
GCC	PANEL BOARD	WALL MOUNTED	30" x 10" x 36"	90	E.0.0.4/11
		+60" AFG TO TOP			

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

DISTRICT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC FLS SS
DATE DEC. 1 2 2017

CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT MGR.
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

APPROVALS

NO	REASON	DATE

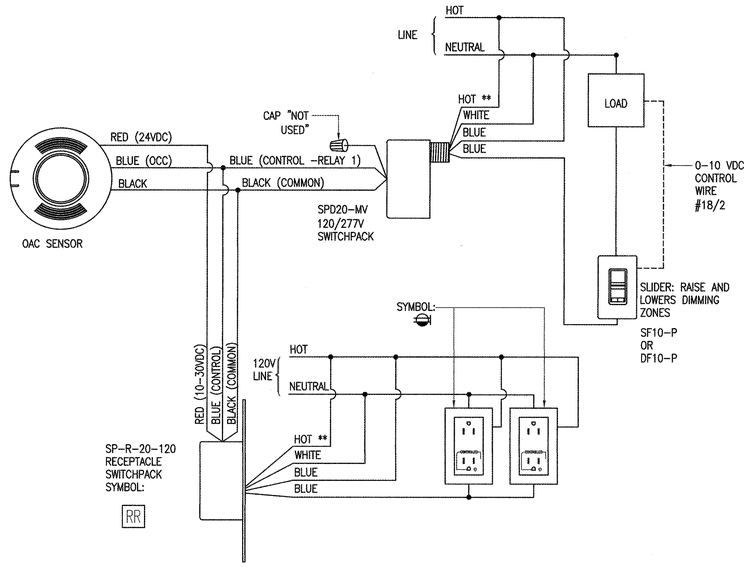
REGISTERED PROFESSIONAL ENGINEER
ANDREW W. HO
E-13884
Exp. 06/30/18
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
SINGLE LINE DIAGRAM & SCHEDULES

PROJECT NUMBER
913-4675-01

ISSUE DATE | SHEET NO.
11/21/2017 | E0.0.2



2 LIGHTING AND RECEPTACLE CONTROL WIRING DETAIL

GENERAL NOTES:

1. SEE LIGHTING AND POWER PLAN E2.3-1 & E2.3-2 FOR DEVICE REQUIREMENTS IN EACH ROOM.
2. LIGHTING: COOPER SPD20-MV-NO SWITCH PACK. 120/277VAC,
   RECEPTACLE: SP-R-20-120 SWTCH PACK OR EQUAL 20AMP RATING PER RELAY.
3. BLUE AND RED WIRE LEADS ARE NON-POLARITY SENSITIVE.
4. COOPER OAC-P-500 CEILING OCCUPANCY SENSOR OR EQUAL SHOWN.

ROOM CONTROLLER AND SMART DEVICES USE CLICK & GO TECHNOLOGY:

THE RC3DE WILL AUTOMTICALLY RECOGNIZE ANY SMART DEVICE CONNECTED WITH THE QUICK CONNECT CABLE (PROVIDED) AND START WORKING IMMEDIATELY UPON POWER UP WITH NO PROGRAMMING REQUIRED.
THE RC3DE DEFAULTS TO MANUAL ON/AUTOMATIC OFF VACANCY SENSOR MODE FOR MAXIMUM ENERGY SAVINGS. OFFICE WALLSTATIONS WILL PROVIDE ON/OFF/PRESET/RAISE/LOWER CONTROL OF THE LIGHTING LOADS AND DIMMERS. THE DAYLIGHT SENSOR WILL AUTOMATICALLY ON POWER UP PROVIDE MULTI-ZONE DAYLIGHT DIMMING IN THE SPACE. (REMOTE ADJUSTMENTS CAN BE MADE LATER)

EMERGENCY NOTE:

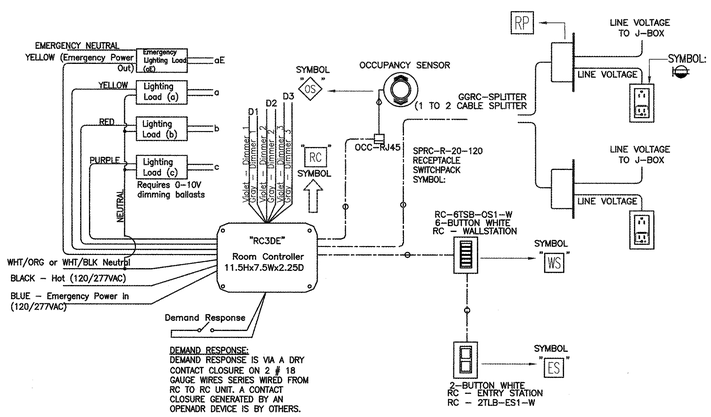
EMERGENCY LOAD TRACKS WITH NORMAL LIGHTING YELLOW LOAD FOR ON/OFF. IF DIMMING IT WILL BE ADJUSTED WITH THE DIMMING ZONE IT IS CONNECTED TO. UPON LOSS OF NORMAL POWER TO THE RC3DE, THE EMERGENCY LOAD WILL BE FORCED ON AND FULL BRIGHT TO 100%.
EMERGENCY RELAYS ARE ONLY AVAILABLE WITH THE RC3DE MODEL.
RC3DE IS UL924 LISTED.
0-10V DIMMING CONNECTION
0-10V DIMMING ZONE NOTE:
THE 0-10V DIMMING ZONES WITHIN THE ROOM CONTROLLER CAN BE WIRED AND CONTROLLED INDEPENDENT OF THE CONNECTED LOADS. THIS ALLOWS EACH LOAD TO HAVE A DEDICATED 0-10V DIMMING ZONE OR A SINGLE LOAD TO HAVE UP TO THREE 0-10V DIMMING ZONES.

NOTES

1	Refer to plans for locations and quantity.
2	Refer to all manufacturers installation instructions for correct wiring information
3	Each Occupancy sensors and BMS output requires an OCC-RJ45
4	Each Room Controller can power up to 4 Wallstations and 5 Receptacle Controls
5	Each Room Controller can power up to 2 Occupancy sensors and 1 Daylight sensor
6	Daylight sensors can only be used for Room Controllers with dimming capability

CABLE

◊	LV3	Low Voltage Input wire - #18 AWG, 3 conductor wire
□	LV2	Low Voltage Input wire - #18 AWG, 2 conductor wire
o	QC	Quick Connect Cable, Pre-Terminated RJ45 - Category 5 cable provided by Cooper Controls



DEMAND RESPONSE:
DEMAND RESPONSE IS VIA A DRY CONTACT CLOSURE ON 2 # 18 GAUGE WIRES SERIES WIRED FROM RC TO RC UNIT. A CONTACT CLOSURE GENERATED BY AN OPENADR DEVICE IS BY OTHERS.

3 ROOM CONTROLLER WIRING DETAIL

FIXTURE SCHEDULE

FIXTURE SYMBOL	FIXTURE DESCRIPTION	DIMMING SPEC'D	PRODUCT ID#	LAMPS, LUMENS, KELVIN, CRI, BUG	VOLT	WATTS	QTY	MOUTING, LOCATION
A 16	4" RECESSED DOWNLIGHT, CUSTOM ALZAK RFL	0-10V	CLI-NACSBA	LEDM OSRAM, 1000LM, 3500K	120	16	34	LOBBY, SERVICE WINDOW & DISPATCH AREA, RECESSED, 9'0" OR 8'0" AT HALLWAY
D 16	12" RECESSED DOWNLIGHT. CONTROL W/0-10V DAYLIGHT HARVESTING SENSOR	0-10V	CLI-NACSBD1	LEDM, 1100LM, 3500K	120	16	14	TOILET & SHOWER, CORRIDORS, WATCH STATION & BREAK, LAYIN GRID CEILING
B4 37	2X4 CENTER BASKET LED LAYIN	0-10V	CLI-NACSBB4	LEDM, 3800LM, 3500K	UNV	37	20	LAYIN GRID CEILING, OFFICES
B4F 37	SAME AS TYPE B BUT W/FLANGE KIT	0-10V	CLI-NACSBB4F	LEDM, 3800LM, 3500K	UNV	37	8	INTERVIEW ROOMS & SECURE EVIDENCE, RECESSED IN SHEETROCK AT 9'0"
C 31	2X4 LENSED LED LAYIN W/FLANGE KIT	0-10V	CLI-NACSBC	LEDM, 3300LM, 3500K	UNV	31	3	ARMORY, RECESSED IN SHEETROCK AT 8'-0'
E 39	STRIP, LED, LENSED 4'	0-10V	CLI-NACSBE	LEDM, 3800LM, 3500K	UNV	39	12	ELECTRICAL, STORAGE, SUPENDED, OPEN CEILING & FLUSH MT IN TOILETS & CUSTODIAL
EE 54	SAME AS TYPE E BUT HIGHER LUMENS	0-10V	CLI-NACSBEE	LEDM, 4800LM, 3500K	UNV	54	1	GUNS CLEANING, SUSPENDED, OPEN CEILING
F 16	6" RECESSED DOWNLIGHT, GLASS LENS, CUSTOM WHITE SPLAY	0-10V	CLI-NACSBF	LEDM OSRAM, 951LM, 3500K	120	16	2	RECESSED IN SHOWERS
G 22	WALL CYLINDER, EXTERIOR RATED, DOWNLIGHT ONLY, BLACK	120V	CLI-NACSBG	LEDM, 1500LM, 3500K	120	22	4	OVER SIDE & REAR CORRIDOR ENTRANCES
GF 22	SAME AS G BUT SILVER	120V	CLI-NACSBGF	LEDM, 1500LM, 3500K	120	22	15	SURFACE MT AT EXTERIOR SOFFIT
H 3	4" IN-GROUND LIGHT, STAINLESS STEEL	120V	CLI-NACSBH	LEDM, 250LM, 3500K	12V	3	3	RECESSED AT FAÇADE WINDOWS
J 16	4" WALLWASH DOWNLIGHT, CUSTOM ALZAK RFL, WHITE TRIM, WET LOCATION	0-10V	CLI-NACSBJ	LEDM, 1000LM, 3500K	120	16	20	RECESSED AT LOBBY, OPEN OFFICE & METTING ROOM
L1 48	4' LED LINEAR COVE, OPTICS 30X60	0-10V	CLI-NACSBL1	LEDM, 1000LM/FT, 3500K	UNV	48	12	SURFACE MT AT SKYLIGHTS
L2 12	SAME AS TYPE L1 BUT 1'	0-10V	CLI-NACSBL2	LEDM, 1000LM, 3500K	UNV	12	12	SURFACE MT AT SKYLIGHTS
L3 4.4/ft	LED STRIPLIGHTING, 1/2 WIDE, FIELD CUTTABLE EVERY 2", MAX RUN 16', WITH CHANNEL & 0-10V DIMMABLE DRIVER	0-10V	CLI-NACSBL3	LEDM, 370LM/FT, 3500K	120/24	4.4W/FT	14'	SURFACE MT AT ENTRANCE
L4 12	EXTERIOR BLUE LED NEON ROOF TUBE LIGHTING, WITH EXTRUSION, DRIVERS AND ACCESSORIES.	NON	CLI-NACSBL4	LEDM, 40LM/FT, 12W/FT	120	12	137'-10"	LTG VENDOR TO PROVIDE ALL REQUIRED ACCESSORIES FOR FULL INSTALLATION. REFER TO A9.1.1 - DET. 11.
L5 8.8/ft	LED STRIPLIGHTING, 1/2 WIDE, FIELD CUTTABLE EVERY 2", MAX RUN 16', WITH CHANNEL & 0-10V DIMMABLE DRIVER	0-10V	CLI-NACSBL3	LEDM, 700LM/FT, 3500K	120/24	8.8W/FT	17'	SURFACE MT AT ENTRANCE SOFFIT COVE
SL1 74	49" ADJUSTABLE MOUNT SIGNAGE LIGHT	NON	CLI-NACSBSL1	LEDM, 4000LM, 4200K	UNV	74	4	MOUNTED TO THE CANOPY OVERHANG EDGE TO UPLIGHT SIGNAGE. REFER TO A9.1.1 - DET. 11.
SL2 4/ft	INTEGRAL SIGNAGE LIGHT STRIP (OPTION 2)	NON	CLI-NACSBSL2	LEDM, 360LM/FT, 3500K	120/24	4W/FT	TBD	MOUNTED WITHIN THE SIGNAGE TO BACKLIGHT ACRYLIC PANELS
ST2 26	SOLATUBE 14", ACRYLIC DOME, 6" FLAT/NO PITCH METAL, SELF MOUNTED, 2 EXTENSION TUBES MAX60", CLASSIC DIFFUSER, NATURAL EFFECT LENS, W/CF LIGHT KIT	NON	CLI-NACSBST2	3500LM, 6430K AT FULL SUNLIGHT + CF26DD/E	N/A	26	13	TOILET & SHOWER, CORRIDORS, WATCH STATION & BREAK. REFER TO A9.1.1/3.
ST3 —	SOLATUBE 21" CLOSED CEILING, ACRYLIC DOME, 8" SELF MOUNTED, 1 EXTENSION TUBE MAX60", PRISMATIC DIFFUSER	NON	CLI-NACSBST3	3500LM, 6430K AT FULL SUNLIGHT	N/A	N/A	8	LOCKERS AREAS REFER TO A9.1.1/3.
S 138	PARKING LOT POLE LIGHT, TYPE III DISTRIBUTION WITH PHOTOCELL & MOTION SENSOR, DARK BRONZE, 15' LONG 4" ROUND STRAIGHT STEEL POLE, 11GA	120V	LITHONIA DSXO - SERIES	LED 15010LM, 4000K LED DRIVER (120VAC) WITH PHOTO CELL CONTROL	MV	138	3	MOUNT ON CONCRETE PEDESTAL. REFER TO E.0.0.G/7.
XB 2	EXIT, EDGE LIT BLADE, LED, RED OR GREEN ON CLEAR OR WHITE, WHITE, BLACK OR ALUMINUM COLOR HOUSING, SELF POWERED OR AC. WALL RECES AVAILABLE.	NON	SURE-LITES EUX7-R (ALUMHSG)	LEDM	DV	2		CEILING RECESSED. WALL RECESSED AVAILABLE
XU 2	EXIT, SNGL/DBL RED/GRN ON WHITE, UNIV MT, SELF POW	NON	SURE-LITES LPX-7	LEDM	DV	2		UNIVERSAL WALL OR CEILING
XUC 4	UNIV EXIT W//2 HD EMERG COMBO	NON	SURE-LITES LPX-7-DH	LEDM & 2-LEDM	DV	4		WALL MT
EU 2	EMERGENCY LIGHT, UNIVERSAL MOUNT, WHITE	NON	SURE-LITES SEL17	2-LEDM	DV	2		UNIVERSAL WALL OR CEILING. SEL60 AVAIL FOR HIGHOUTPUT
ERC 25	EMERGENCY LIGHT, RECESSED GIMBAL, WHITE, 6V	NON	SURE-LITES RG2-WH	25W BI-PIN HALOGEN SEALED BEAM PAR36	DV	25		RECESSED
ER2 18	EMERGENCY LIGHT, RECESSED 9"X13" WHITE	NON	SURE-LITES RLM2	2-6V 9PAR36 HALOGEN	DV	18		RECESSED
T 28	4FT NARROW LED LENSED STRIPLIGHT.	0-10V	METALUX-4SNLED-LD4-34SL-LC-UNV-L840-CD1-U	LED 4000K 3431LM	120-277	28	4	SURFACE CEILING IDF/UTILITY RMS.

FIXTURE SCHEDULE NOTES:

1. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTIONS OF LIGHTING FIXTURE AND SPECIFIC MANUFACTURER CATALOG NUMBERS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY EACH FIXTURE'S EXACT LOCATION AND PROVIDE WITH NECESSARY TRIMS AND MOUNTING HARDWARE MATCHING REFLECTED CEILING PLAN AND CEILING SYSTEM PER-ARCHITECTURAL DRAWINGS.
2. WHERE ONLY ONE FIXTURE TAG SHOWN IN AN AREA OR ROOM ON THE LIGHTING PLAN, THE TAG SHALL APPLY TO ALL FIXTURES IN THAT AREA OR ROOM, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE IN THE SHOP DRAWING SUBMITTAL ALL CUT-SHEETS OF THE SPECIFIED LIGHTING FIXTURES WITH SPECIFIED LED CHARACTERISTIC AND DRIVER INDICATED ON SCHEDULE, INCOMPLETE SUBMITTAL WILL NOT BE REVIEWED AND RETURNED FOR COMPLETE RE-SUBMITTAL.
4. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE INSTALATION OF LIGHT FIXTURE LOCATION IN MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT ROOMS WHERE CONDUITS, DUCT WORKS, PIPINGS AND ETC. ARE PRESENT TO AVOID CONFLICT AND ENABLE PROPER ILLUMINATION DISTRIBUTION IN THE ROOM.
5. PROVIDE FIXTURE WITH SET OF END CAPS LN-EC, CANOPY KITS LN-CK-5-AC & LN-CK-0-AC AS REQUIRED.
6. FIXTURE WITH INVERTER ISI ABC 125 277V, 125W INVERTER FOR SURFACE CEILING INSTALLATION FOR ASSIGNED EMERGENCY EGRESS FIXTURES. (TYPICAL ONE INVERTER PER-CLASSROOM)
7. PROVIDE FIXTURE WITH CREE SMARTCAST 0-10V INTERFACE DEVICE CAT #CIF-10V AND #CWC-SNSR
8. INTEGRAL SMART CAST MODULE EQUIPPED LIGHT FIXTURE SHALL BE CONTROLLED BY CREE DIMMER SWITCH # CWD CWC WH/CFP1WH

1 LIGHTING FIXTURE SCHEDULE & NOTES

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

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CONSULTANT

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8882
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

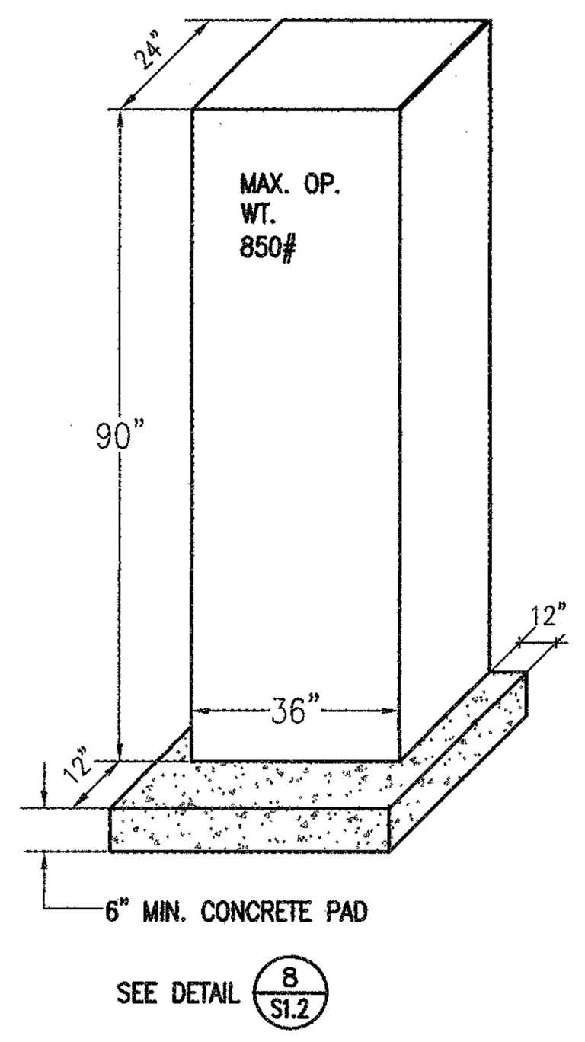
REGISTERED PROFESSIONAL ENGINEER
ANDREW H. TANG
E-13884
09/30/18
STATE OF CALIFORNIA

SEAL / SIGNATURE

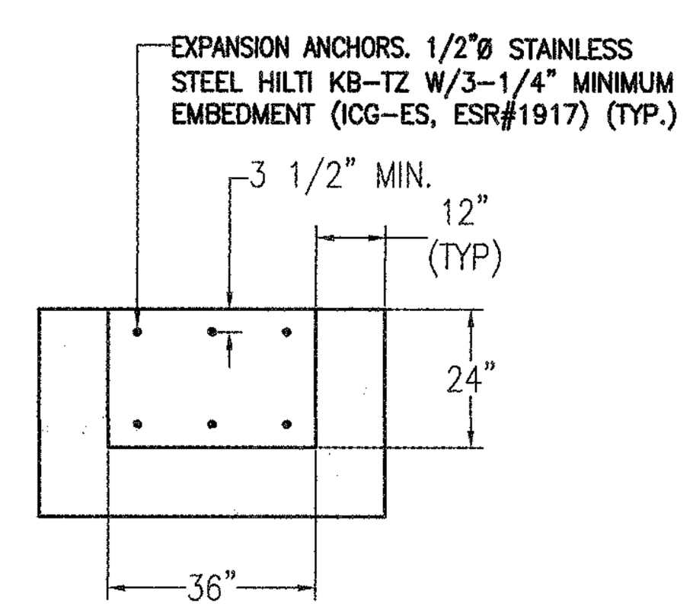
SHEET TITLE
LIGHTING FIXTURE SCHEDULE

PROJECT NUMBER
913-4675-01

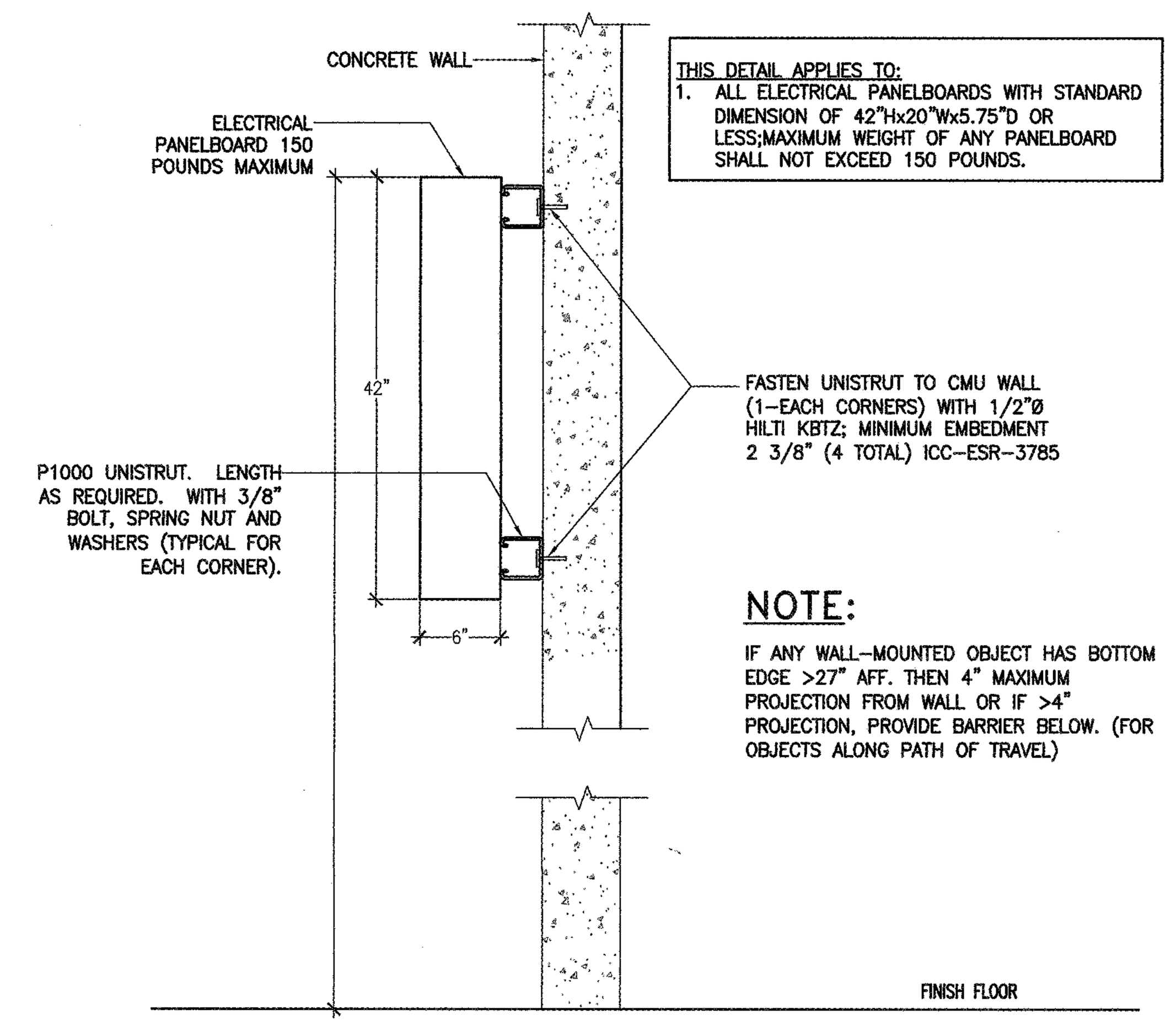
ISSUE DATE 11/21/2017 | SHEET NO. E0.0.3



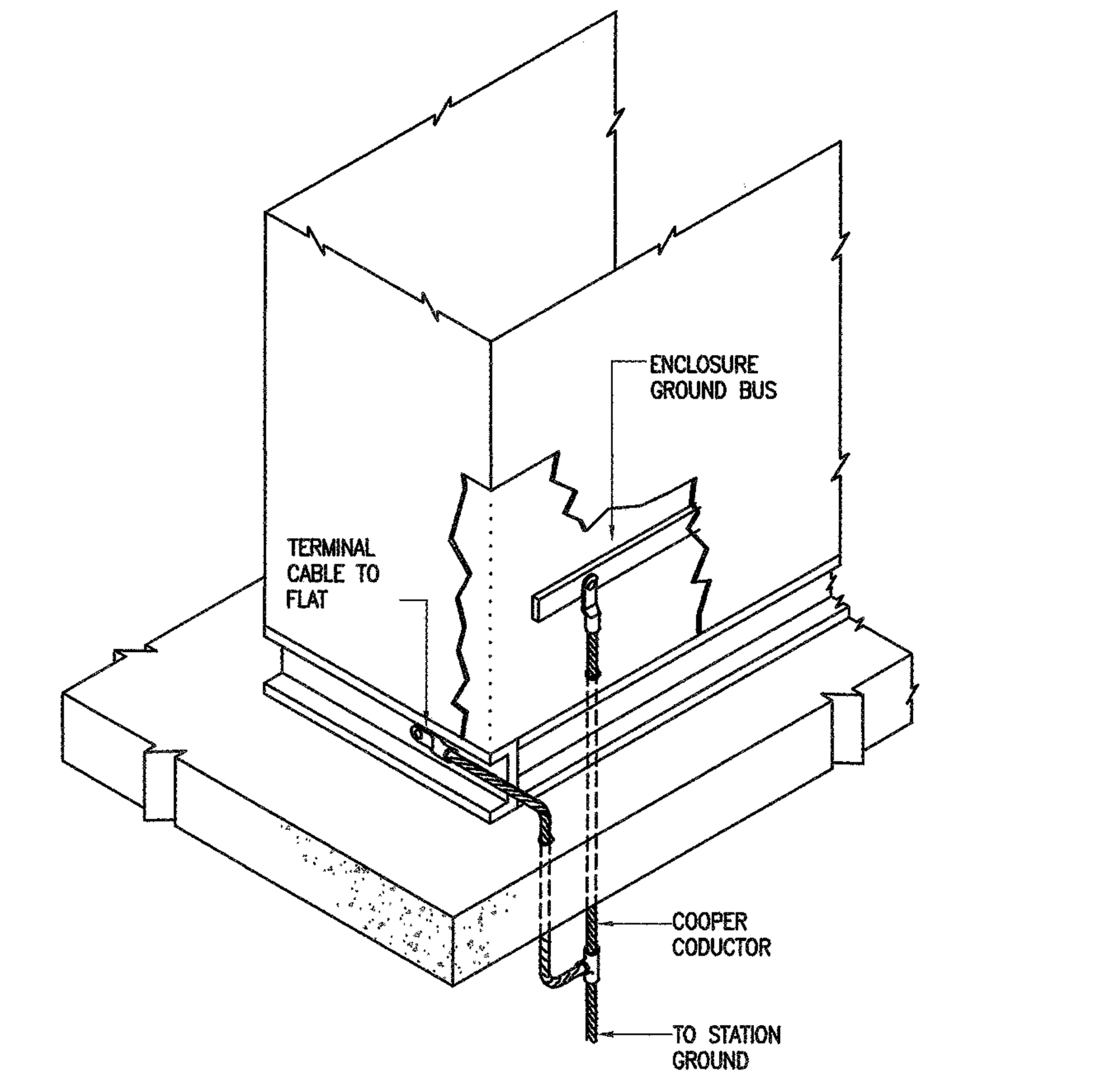
SWITCHBOARD "MSB" – ELEVATION	N.T.S.	1



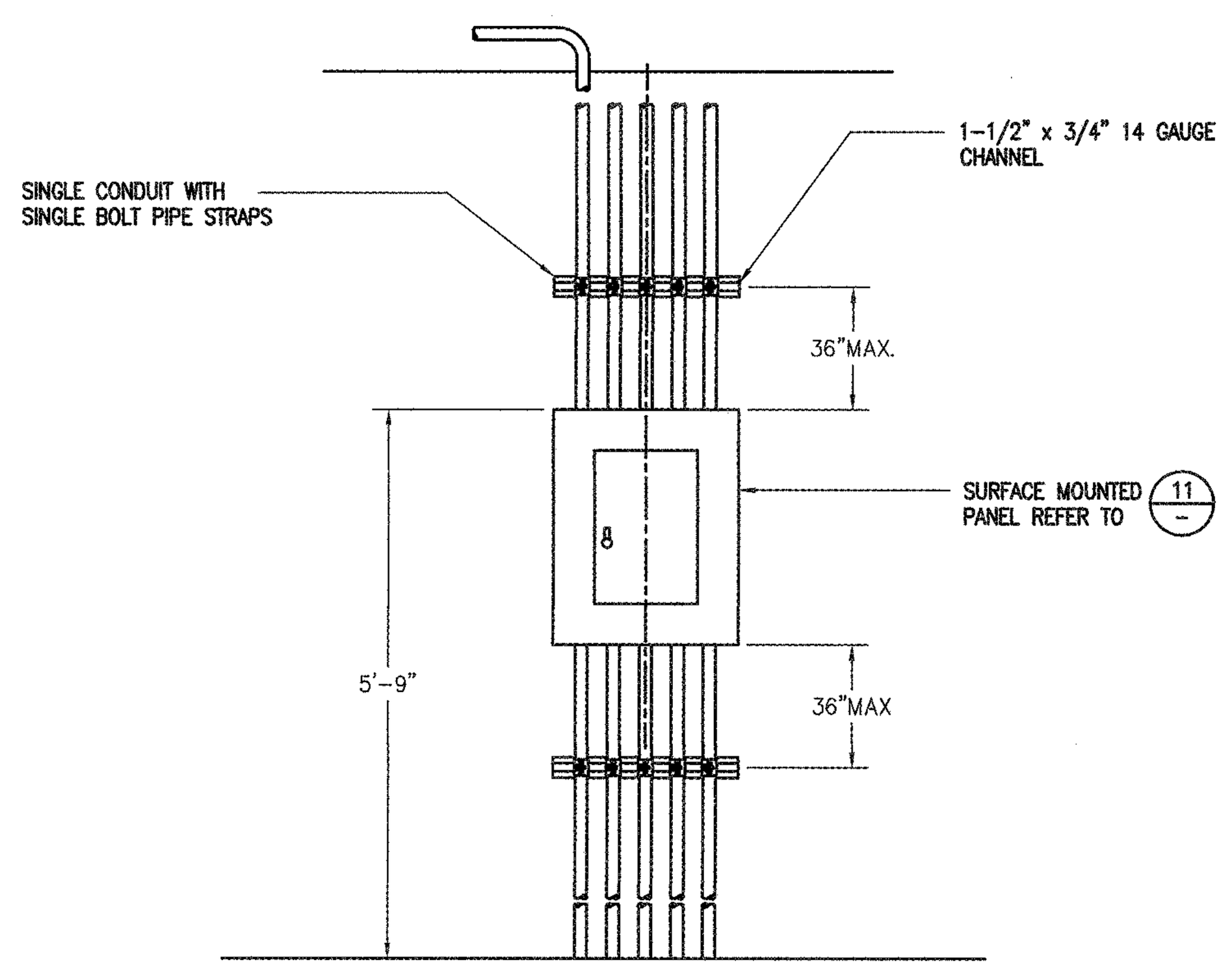
SWITCHBOARD "MSB" ANCHORAGE	N.T.S.	2



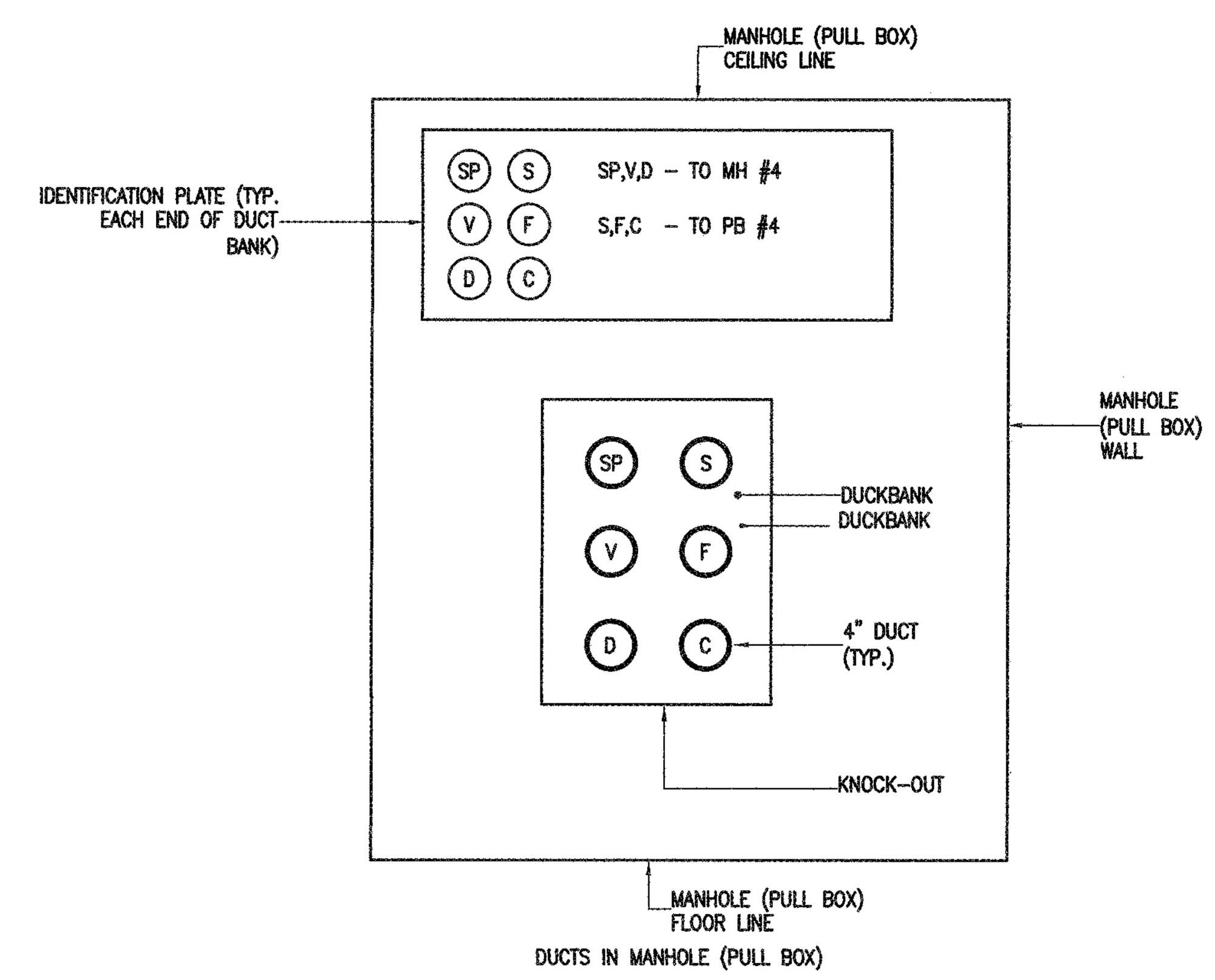
SURFACE MOUNTED PANELBOARD ON CONCRETE WALL DETAIL	N.T.S.	3



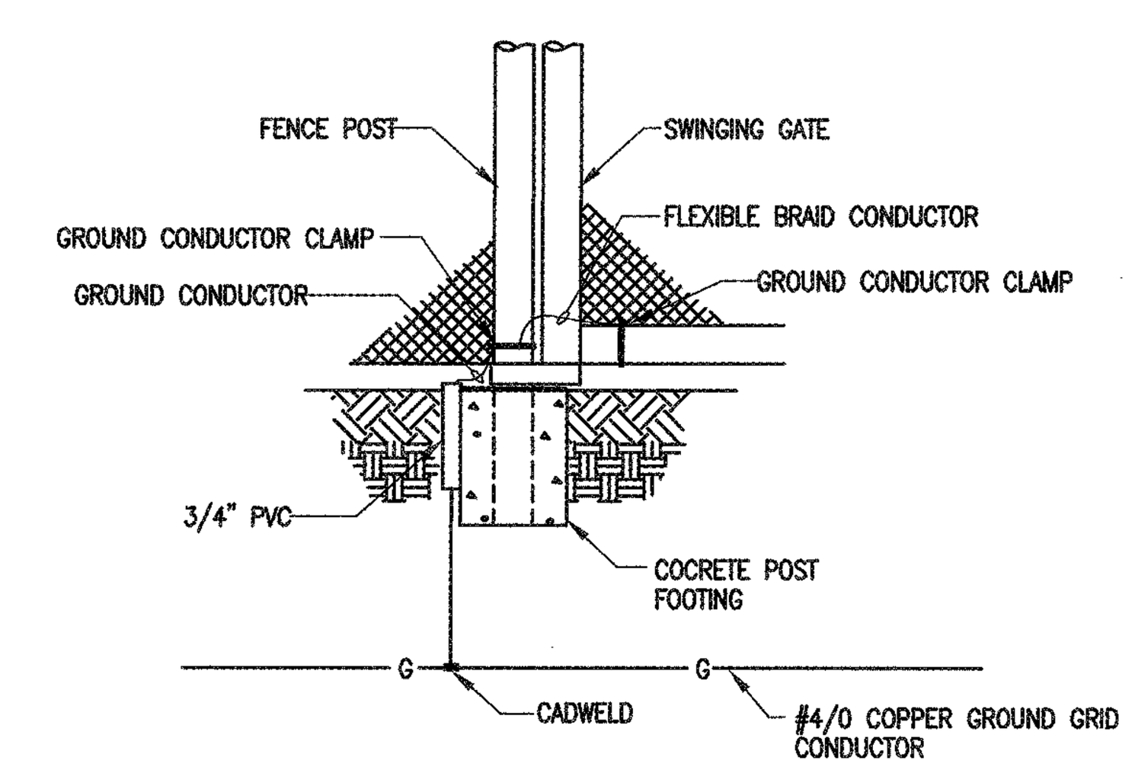
MAIN SWITCHBOARD GROUNDING	N.T.S.	4



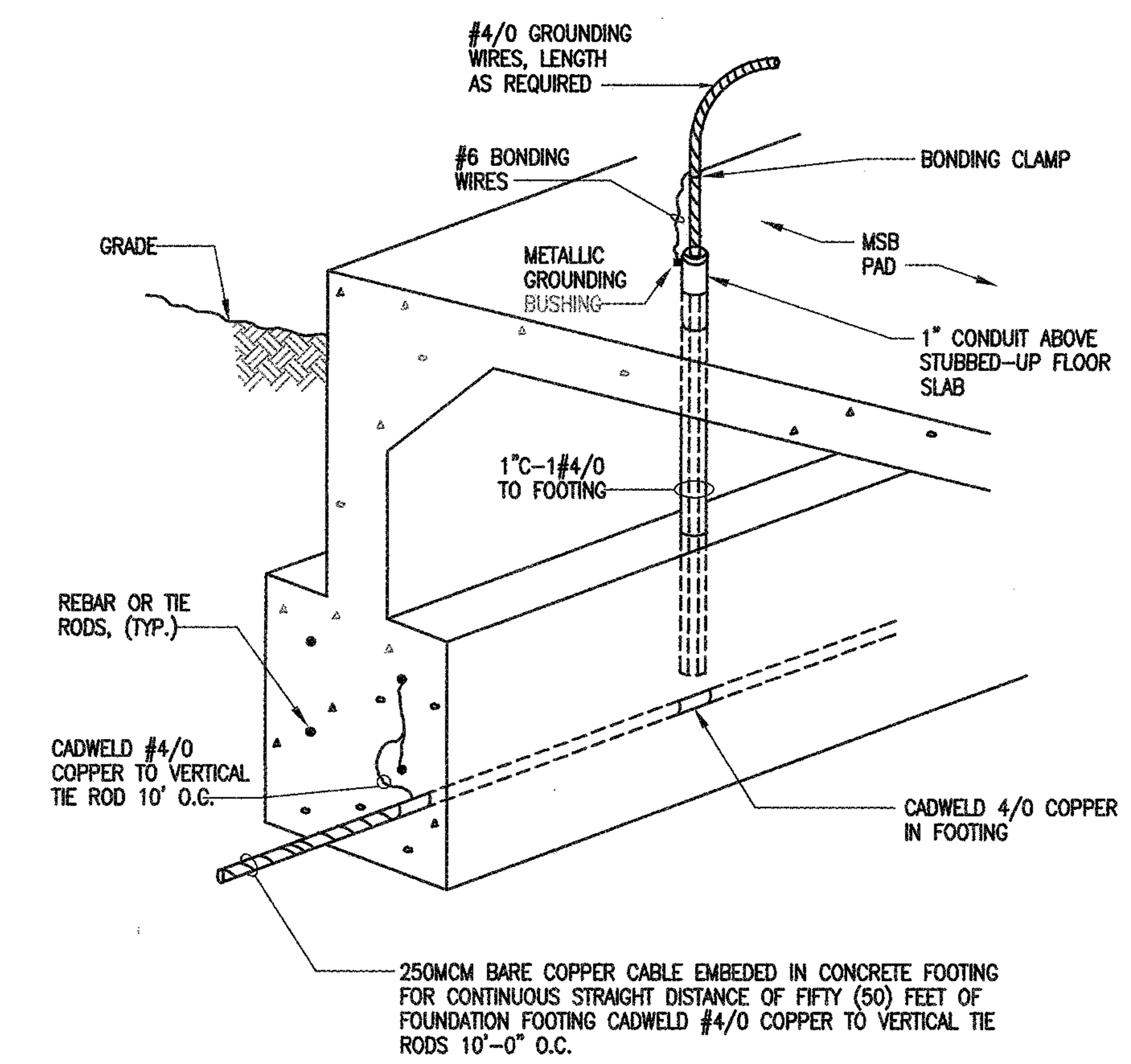
CONDUIT SUPPORT DETAIL	N.T.S.	5



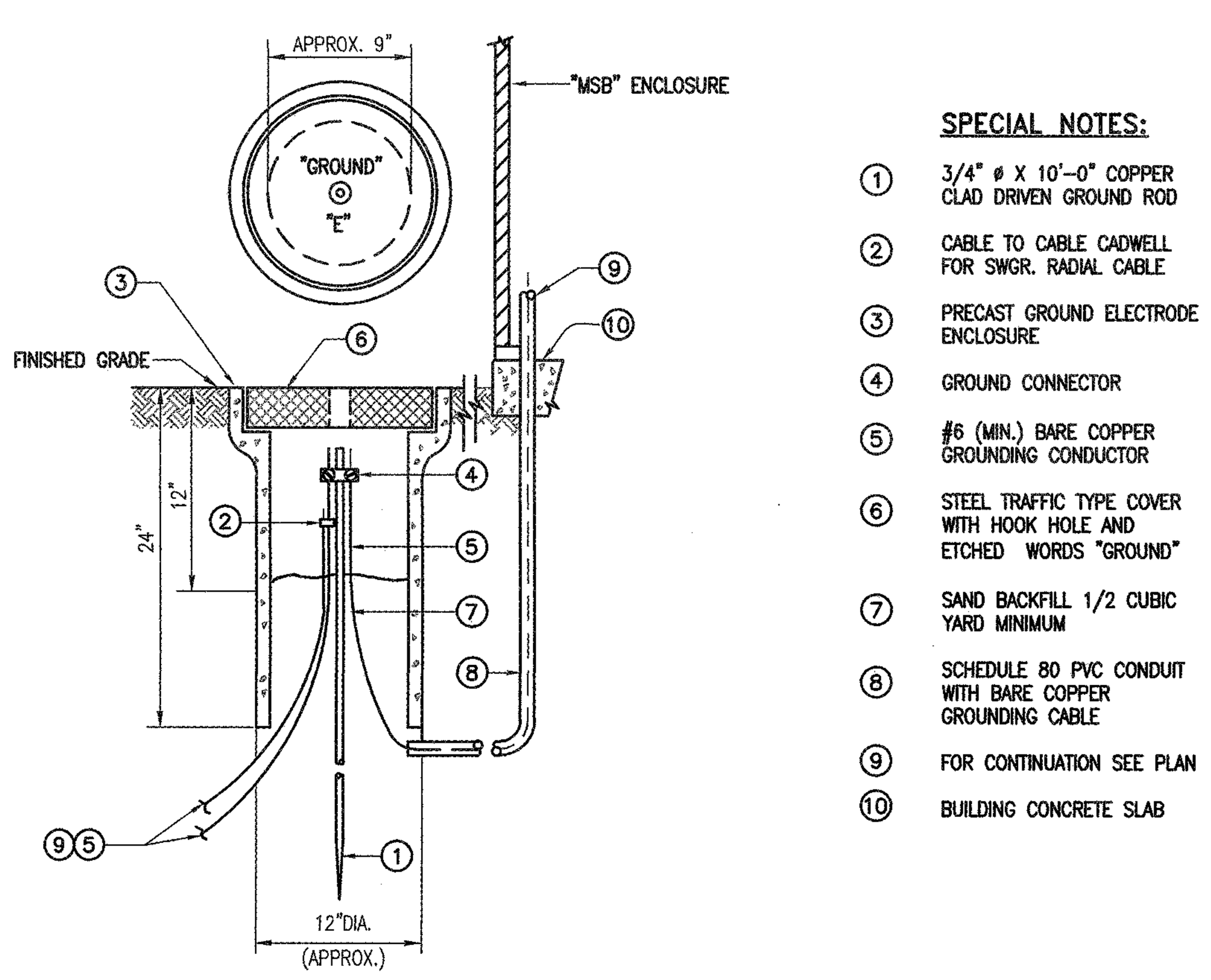
TYPICAL IDENTIFICATION PLATE	N.T.S.	6



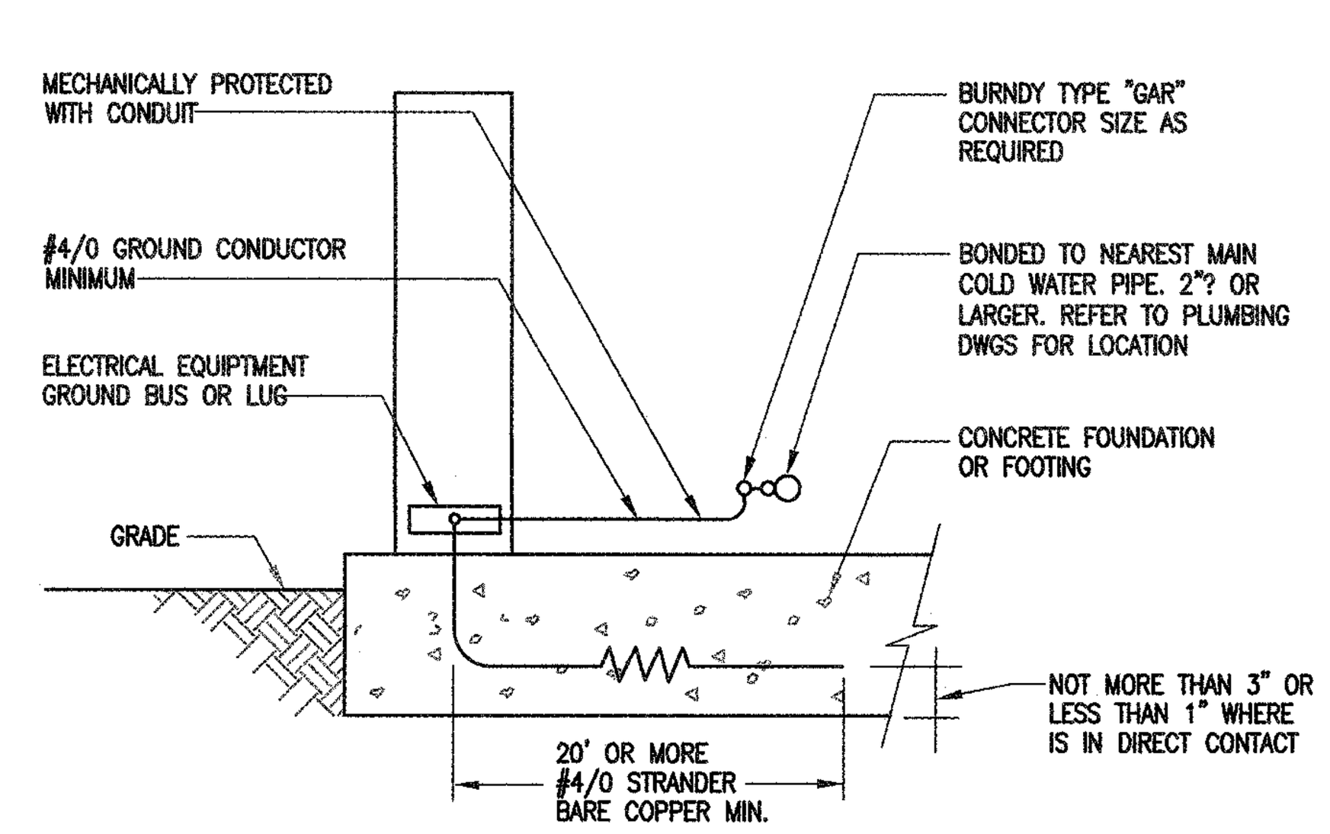
FENCE GATE GROUNDING DETAIL	N.T.S.	7



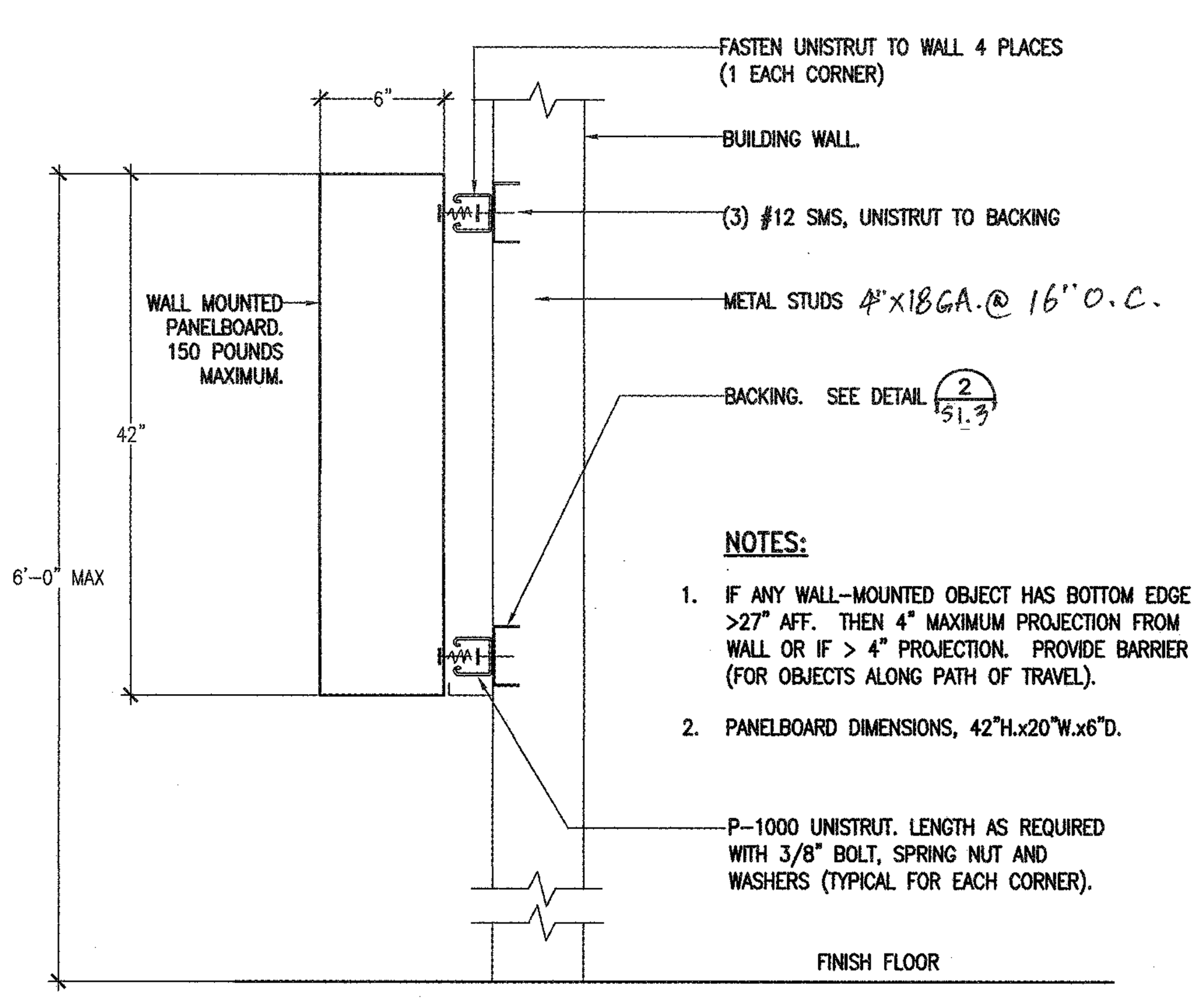
UFER GROUNDING DETAIL	N.T.S.	8



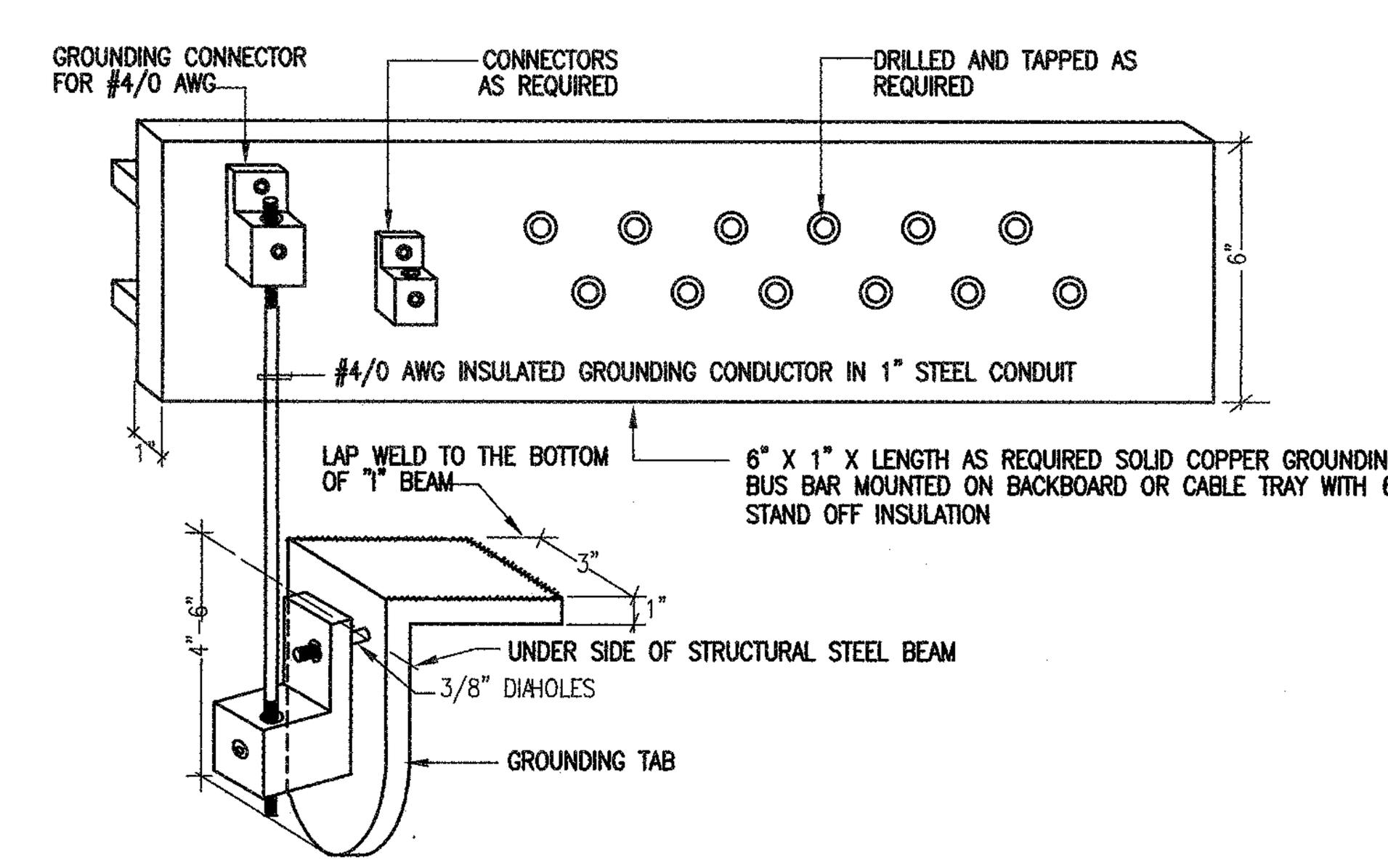
GROUND WELL	N.T.S.	9



SWITCHBOARD GROUND	N.T.S.	10



SURFACE MOUNTED PANEL DETAIL	N.T.S.	11



TYPICAL GROUNDING DETAIL	N.T.S.	12

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150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

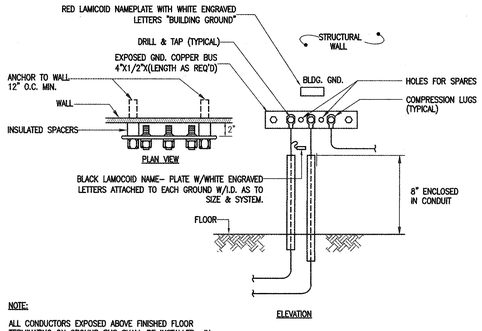
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER ANDREW H. HUO E-13884 STATE OF CALIFORNIA

ELECTRICAL DETAILS

913-4675-01

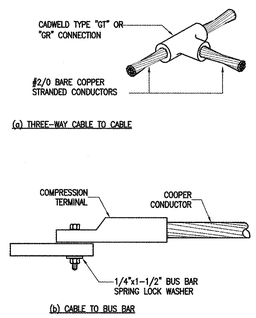
11/21/2017 E0.0.4



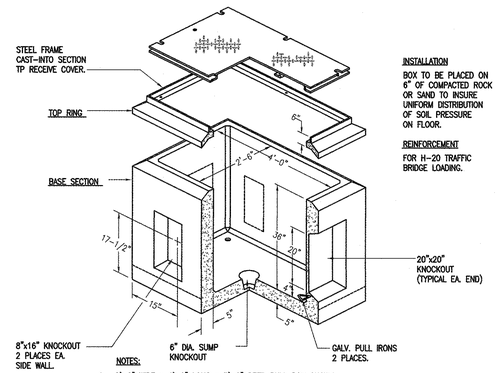
NOTE:

ALL CONDUCTORS EXPOSED ABOVE FINISHED FLOOR TERMINATING ON GROUND BUS SHALL BE INSTALLED IN CONDUIT.

GROUNDING BUS BAR | N.T.S. | 1



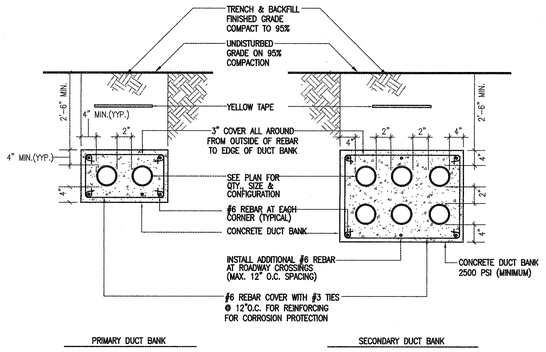
GROUND CONNECTORS | N.T.S. | 2



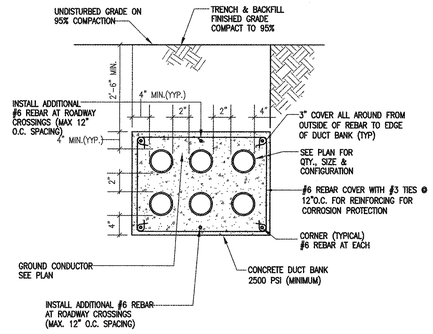
NOTES:

1. 2'-6" WIDE x 4'-0" LONG x 3'-0" DEEP PULL BOX SHOWN. 2'-0" WIDE x 3'-0" LONG x 3'-0" DEEP PULL BOX SHALL BE SIMILAR.
2. PROVIDE GROUND ROD KNOCKOUT HOLE IN CORNER OF EACH PULL BOX.

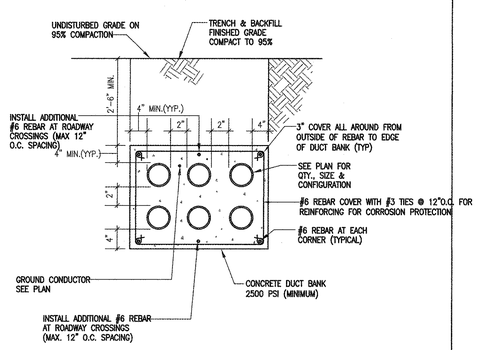
PRE-CAST CONCRETE PULL BOX DETAIL | N.T.S. | 3



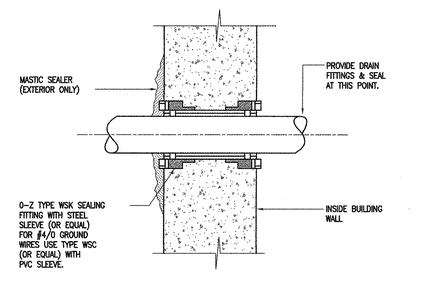
ELECTRICAL SERVICE DUCT BANK | N.T.S. | 4



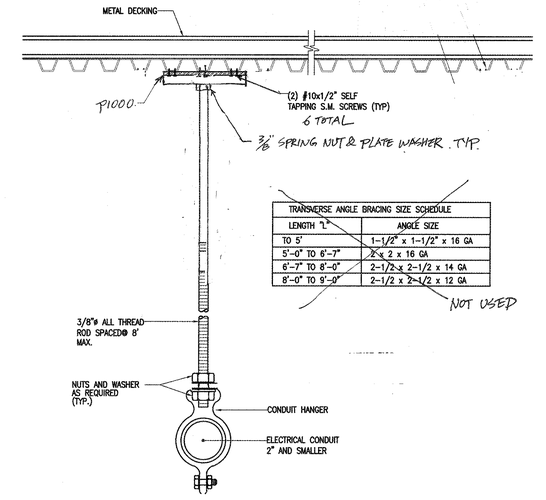
TYPICAL DUCT BANK SECTION | N.T.S. | 5



TYPICAL DUCT BANK SECTION | N.T.S. | 6



TYPICAL CONDUIT ENTRANCE BELOW GRADE | N.T.S. | 7

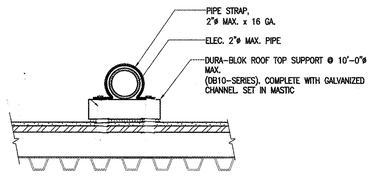


TRANSVERSE ANGLE BRACING SIZE SCHEDULE

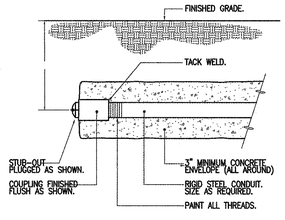
LENGTH "L"	ANGLE SIZE
TO 5'	1-1/2" x 1-1/2" x 16 GA
5'-0" TO 6'-7"	2" x 2 x 16 GA
6'-7" TO 8'-0"	2-1/2 x 2-1/2 x 14 GA
8'-0" TO 9'-0"	2-1/2 x 2-1/2 x 12 GA

NOT USED

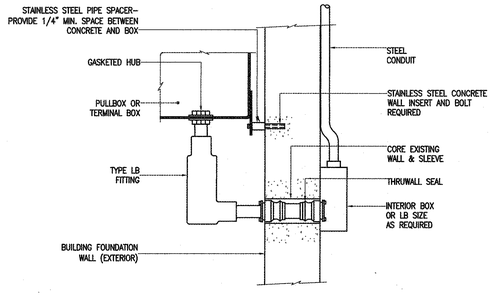
SINGLE CONDUIT SUPPORT DETAIL | N.T.S. | 8



CONDUIT SUPPORT ON ROOF | N.T.S. | 9



CONDUIT STUB-OUT DETAIL | N.T.S. | 10



CONDUIT PENETRATION DETAIL | N.T.S. | 11

-- | N.T.S. | 12

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PASADENA, CA. 91105
TEL: (626) 445-8880
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

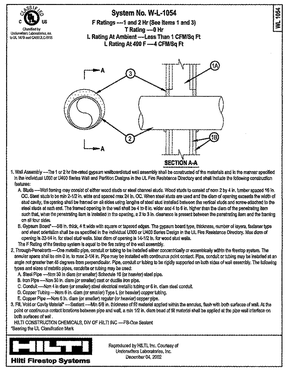
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER MATTHEW H. UNO E-13684 06/30/2018 STATE OF CALIFORNIA

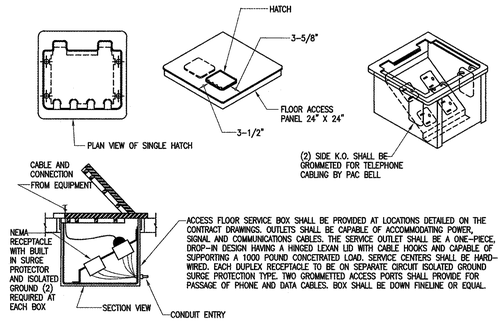
ELECTRICAL DETAILS

913-4675-01

11/21/2017 E0.0.5



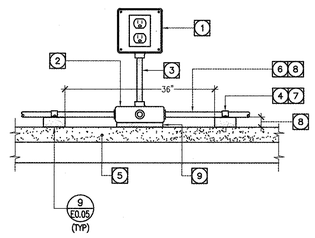
PENETRATION FIRESTOP FOR METAL CONDUIT | N.T.S. | 1



ACCESS FLOOR SERVICE BOX SHALL BE PROVIDED AT LOCATIONS DETAILED ON THE CONTRACT DRAWINGS. OUTLETS SHALL BE CAPABLE OF ACCOMMODATING POWER, SIGNAL AND COMMUNICATIONS CABLES. THE SERVICE OUTLET SHALL BE A ONE-PIECE, DROP-IN DESIGN HAVING A HINGED LEXAN LID WITH CABLE HOOKS AND CAPABLE OF SUPPORTING A 1000 POUND CONCENTRATED LOAD. SERVICE CENTERS SHALL BE HARD-WIRED. EACH DUPLEX RECEPTACLE TO BE ON SEPARATE CIRCUIT ISOLATED GROUND SURGE PROTECTION TYPE. TWO GROMMETED ACCESS PORTS SHALL PROVIDE FOR PASSAGE OF PHONE AND DATA CABLES. BOX SHALL BE DOWN FINELINE OR EQUAL.

NOTES:
1. BOX TO BE SECURED TO REINFORCING MESH DURING RECONSTRUCTION OF EXISTING CONCRETE FLOOR AREA.

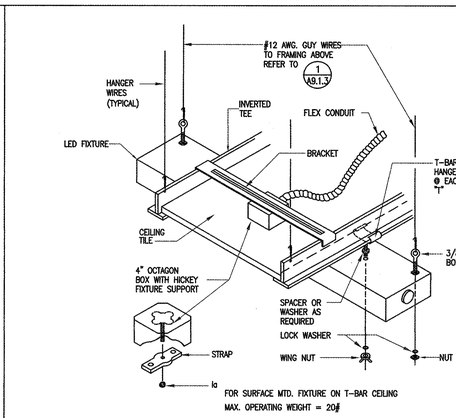
MEETING ROOM FLOOR POCKET | N.T.S. | 2



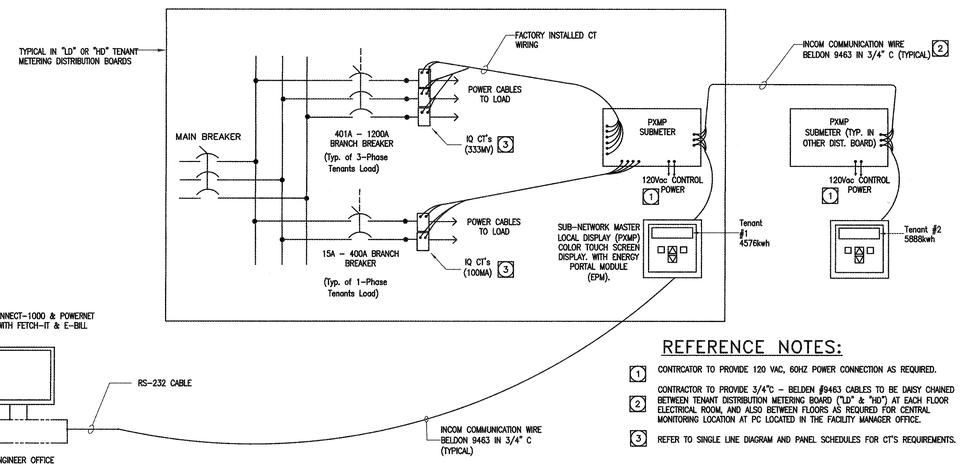
REFERENCE NOTES:

1. PROVIDE A 120V DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER. RECEPTACLE TO BE MOUNTED IN A CROUSE-HINDS "FS" SINGLE GANG BOX WITH SPRING DOOR COVER.
2. PROVIDE A CROUSE-HINDS "GRFX" CAST STEEL BOX WITH "GRF" GASKETED COVER. REFER TO DETAIL-9/E0.05 FOR DURA-BLOC SUPPORT. DO NOT ANCHOR CONDUITS AND/OR ASSOCIATED MATERIALS ON ROOF CONSTRUCTION.
3. CONDUIT PEDESTAL. 8" LONG 3/4" RIGID GALVANIZED CONDUIT NIPPLE.
4. HOMERUN CONDUIT.
5. BUILT-UP ROOFING CONSTRUCTION.
6. BRANCH CIRCUIT CONDUIT RUNNING ON ROOF.
7. USE GALVANIZED RIGID STEEL OR IMC ONLY.
8. MAINTAIN A MINIMUM OF 3" CLEARANCE OFF ROOF.
9. DURABLOC SUPPORT JUNCTION BOX. REFER TO DETAIL-9/E0.05

ROOF RECEPTACLE | N.T.S. | 3



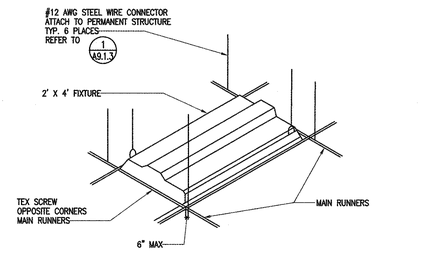
SURFACE FIXTURE SUPPORT | N.T.S. | 4



REFERENCE NOTES:

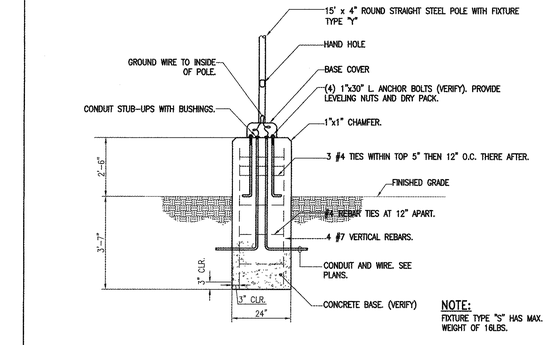
1. CONTRCATOR TO PROVIDE 120 VAC, 60HZ POWER CONNECTION AS REQUIRED.
2. CONTRACTOR TO PROVIDE 3/4"C - BELDEN #9463 CABLES TO BE DAISY CHAINED BETWEEN TENANT DISTRIBUTION METERING BOARD ("LD" & "HD") AT EACH FLOOR ELECTRICAL ROOM, AND ALSO BETWEEN FLOORS AS REQUIRED FOR CENTRAL MONITORING LOCATION AT PC LOCATED IN THE FACILITY MANAGER OFFICE.
3. REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULES FOR CT'S REQUIREMENTS.

TYPICAL DISTRIBUTION BOARDS TENANT METERING COMMUNICATION WIRING DIAGRAM | N.T.S. | 5



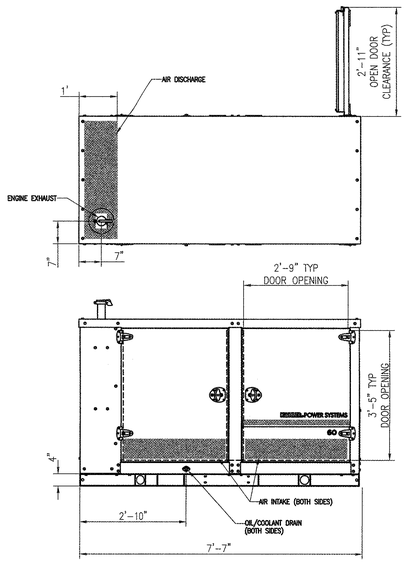
FIXTURE MAX. OPERATING WEIGHT=20#

FIXTURE SUPPORT DETAIL | N.T.S. | 6



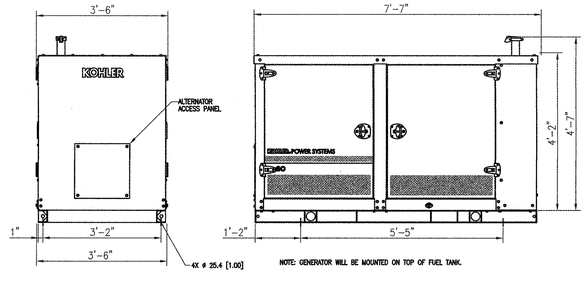
NOTE:
FIXTURE TYPE "S" HAS MAX. WEIGHT OF 16LBS.

POLE BASE DETAIL | N.T.S. | 7



MODEL	GENERATOR WEIGHT KG [LBS]
STEEL SOUND	272[2186]

NOTE:
1. IF TANK IS ORDERED, ENCLOSURE MOUNTS DIRECTLY TO TANK w/(20)-7/8" ø M.B. STAINLESS STEEL (A2-70)
2. TANK MAY EXTEND BEYOND ENCLOSURE (DISCHARGE END ONLY)



EMERGENCY GENERATOR DETAIL | N.T.S. | 8

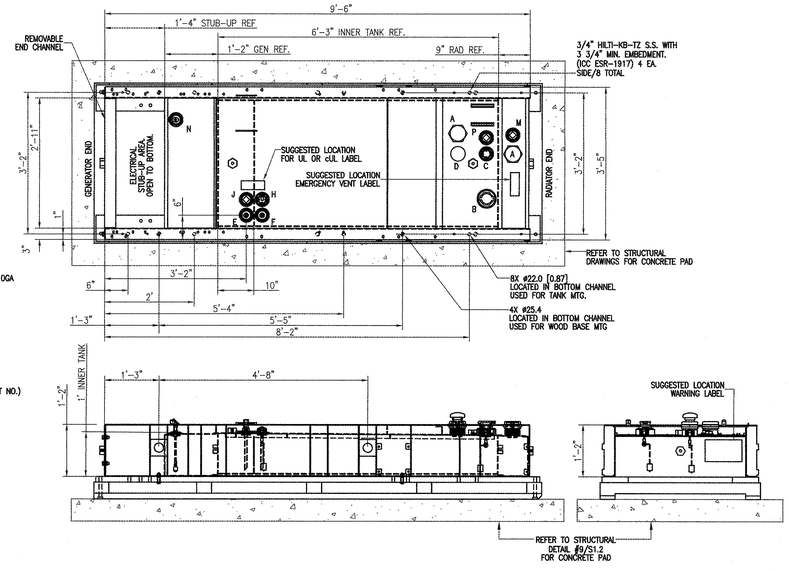
TANK FITTINGS:
A. 3" NPT EMERGENCY VENT FITTING PER NFPA 30 WITH VENT CAPS (QTY 2).
B. 4" NPT FUEL FILL FITTING BUSHED TO 2" NPT WITH LOCKABLE CAP AND 2" RISER.
C. 2" NPT FUEL LEVEL GAUGE FITTING WITH DIRECT READING MECHANICAL GAUGE.
D. 2" NPT NORMAL VENT FITTING WITH MUSHROOM VENT CAP AND 5" RISER.
E. 2" NPT FITTING FOR REMOVABLE ENGINE SUPPLY DIP TUBE (3/8" NPT FEMALE WITH CHECK VALVE).
F. 2" NPT FITTING FOR REMOVABLE FUEL RETURN DIP TUBE (3/8" NPT FEMALE).
H. 2" NPT FOR FUEL LEVEL SENDING UNIT.
J. 2" NPT ADDITIONAL FITTING FOR OPTIONAL ACCESSORY (INSTALL STEEL 2" NPT PIPE PLUG).
M. 2" NPT BASIN DRAIN (INSTALL STEEL 2" NPT PIPE PLUG).
N. 2" NPT FOR FUEL IN BASIN SWITCH
P. 2" NPT ADDITIONAL FITTING FOR OPTIONAL ACCESSORY (INSTALL STEEL 2" NPT PIPE PLUG).

ALL FITTINGS INSTALLED BY SUPPLIER.

NOTES:
1. BAFFLE TO SEPARATE HOT AND COLD SIDE OF TANK.
2. MATERIAL:
COVER: 7 GA
INNER TANK (ENDS, SIDES/BOTTOM, BAFFLE), 10GA
RAILS, END CHANNELS & GUSSETS, 7 GA
OUTER TANK BOTTOM, 10GA
3. EXTERIOR: PRIME AND PAINT BLACK PER G-57.
4. TANK WEIGHT.....424 KG [934 LBS]
5. THIS FUEL TANK IS DESIGNED TO SUPPORT A GENERATOR SET.
6. FITTINGS "E" & "F" TO BE PLUGGED WITH PLASTIC SHIPPING PLUGS.
7. EACH TANK TO BE PACKAGED AS A SEPARATE UNIT.
8. LABELS AS REQUIRED PER ORDER
- UL LABEL OR cUL LABEL
- "GENERAL" SERIAL NO. LABEL (WITH SERIAL NO. & KOHLER PART NO.)
- ATMOSPHERIC TANK WARNING LABEL
- EMERGENCY VENT LABEL
- PORT IDENTIFICATION LABEL
- ADD'TL cUL LABELS WHEN REQUIRED
9. TANK CAPACITY.....442 L [116 GAL]
10. CONTAINMENT: 140%
11. TANK VENTING CAPACITY.....36,786 CFH

WELD SPEC:
WELD PER WELD SPECIFICATION
WEL 7.5.1-36 WELDING OF PRODUCTS

TOTAL WEIGHT OF TANK WITH FUEL = 1775 LBS



FUEL TANK DETAIL | N.T.S. | 9

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
P: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC / FLS / SS
DATE DEC 12 2017

CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

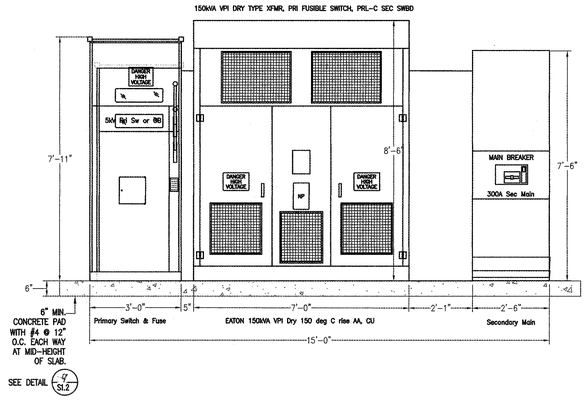
REGISTERED PROFESSIONAL ENGINEER ANDREW P. TAYLOR E-13884 EXP. 09/30/18 ELECTRICAL STATE OF CALIFORNIA

SHEET DESCRIPTION
ELECTRICAL DETAILS

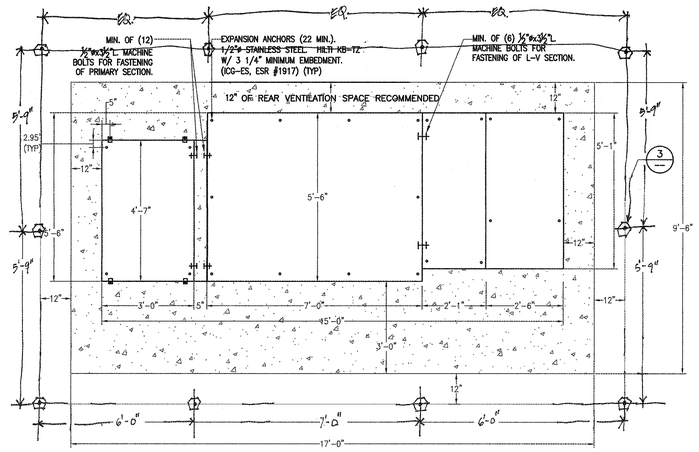
PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
E0.0.6

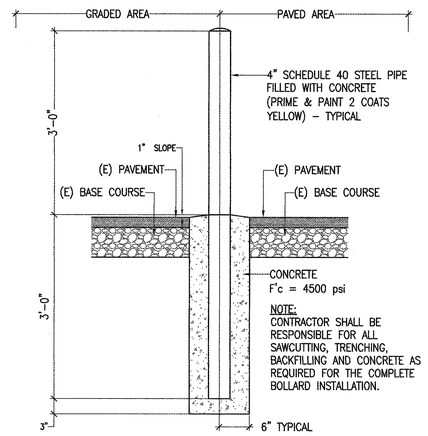


SUB STATION ELEVATION DETAIL | N.T.S. | 1



TOTAL WEIGHT OF SUB-STATION = 7600 LBS

SUB STATION ANCHORING DETAIL | N.T.S. | 2



BOLLARD DETAIL | N.T.S. | 3

-- | N.T.S. | 4

-- | N.T.S. | 5

-- | N.T.S. | 6

-- | N.T.S. | 7

-- | N.T.S. | 8

-- | N.T.S. | 9

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COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC. / FLS. / SS
DATE DEC 12 2017

CONSULTANT

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SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
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PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW W. INGE
E-13884
06/30/19
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

DRAWING TITLE
ELECTRICAL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE | SHEET NO.
11/21/2017 | E0.0.7

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 1 of 5)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

Climate Zone: 8	Conditioned Floor Area : 4938 S.F.		
	Unconditioned Floor Area :		

General Information

Building Type:	☑ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel
☐ Schools	☐ Relocatable Public Schools	☑ Conditioned Spaces	☐ Unconditioned Spaces
Phase of Construction:	☐ New Construction	☐ Addition	☑ Alteration
Method of Compliance:	☑ Complete Building	☑ Area Category	☐ Tailored

LIGHTING COMPLIANCE DOCUMENTS (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	FORM	TITLE
Y		NRCC-LIT-01-E	Certificate of Compliance. All Pages required on plans for all submittals.
Y		NRCC-LIT-02-E	Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
Y		NRCC-LIT-03-E	Indoor Lighting Power Allowance
	N	NRCC-LIT-04-E	Tailored Method Worksheets
	N	NRCC-LIT-05-E	Line Voltage Track Lighting Worksheets

Summary of Allowed Lighting Power
Conditioned and Unconditioned space Lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
1.	**Installed** Lighting NRCC-LTI-01-E, page 4	+	3737	**Installed** Lighting NRCC-LTI-01-E, page 4	+	
2.	PORTABLE ONLY FOR OFFICES NRCC-LTI-01-E, page 3	+	0			
3.	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	
4.	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	=	3737	Adjusted **Installed** Lighting Power (row 1 minus row 3)	=	

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 2 of 5)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

5.	Complies ONLY if **Installed** ≤ **Allowed**	↕	Complies ONLY if **Installed** ≤ **Allowed**	↕
6.	**Allowed** Lighting Power Conditioned NRCC-LTI-03-E, page 1	3956	**Allowed** Lighting Power Unconditioned NRCC-LTI-03-E, page 1	

Declaration of Required Installation Certificates – Declare by selecting yes for all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Form/Title	
Y		NRCI-LTI-01-E - Must be submitted for all buildings	☐ Field Inspector
Y		NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐ Field Inspector
Y		NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐ Field Inspector
	N	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ Field Inspector
	N	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐ Field Inspector
	N	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐ Field Inspector

Declaration of Required Certificates of Acceptance – Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Form/Title	
Y		NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
	N	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐ Field Inspector
	N	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐ Field Inspector

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 3 of 5)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

A. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST
☑ The actual indoor lighting power listed on this page and on the next page includes all installed permanent and planned portable lighting systems.
☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
☑ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
☐ Also include track lighting in schedule, and submit the track lighting compliance form (NRCC-LTI-05-E) when line-voltage track lighting is installed.

B. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)
☐ This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance form.
☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

Office Portable Luminaire Schedule	Office Installed Portable Luminaire Watts Per Square Foot						Accountable Watts	Office Location	Field Inspector	
A	B	C	D	E	F	G	H	I	J	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (B x C)	Square feet of this office	Watts per square foot (D / E)	If F ≤ 0.3, enter zero; If F > 0.3, (F-0.3)	E x G	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
									☐	☐
Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office:							0	Enter sum total of all pages into NRCC-LTI-01-E; Page 1		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 4 of 5)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

C. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Luminaire Schedule		Installed Watts					Location	Field Inspector [1]	
A	B	C	D: How wattage was determined		E	F	G	H	
Name or Item Tag	Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total Installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	Pass	Fail
A	4" RECESSED DOWNLIGHT	16	☐	☑	21	336		☐	☐
F	6" DOWNLIGHT	16	☐	☑	2	32		☐	☐
GF	6" DOWNLIGHT	22	☐	☑	2	44		☐	☐
B4/BF4	2X4 CENTER BASKET LED LAYIN	37	☐	☑	31	1147		☐	☐
E	STRIP, LED, LENSED 4'	39	☐	☑	12	468		☐	☐
EE	STRIP, LED, LENSED 4' HIGHER LUMENS	54	☐	☑	1	54		☐	☐
J	WALL WASH	16	☐	☑	20	320		☐	☐
F	6" RECESSED DOWNLIGHT	16	☐	☑	1	16		☐	☐
D1	12" RECESSED DOWNLIGHT	16	☐	☑	14	224		☐	☐
L1	4' LED LINEAR COVE	48	☐	☑	12	576		☐	☐
L2	1' LED LINEAR COVE	12	☐	☑	12	144		☐	☐
XU	EXIT SIGN	2	☐	☑	6	12		☐	☐
ST2	SOLATUBE 14" W/CF LIGHT KIT	26	☐	☑	14	364		☐	☐
ST3	SOLATUBE 21" CLOSED CEILING		☐	☑	8	0		☐	☐
INSTALLED WATTS PAGE TOTAL:						3,737	Enter sum total of all pages into NRCC-LTI-01-E; Page 2	3737	

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-01-E
Indoor Lighting — (Page 5 of 5)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Andrew H. Injo	Documentation Author Signature: [signature]
Company: dHA + CALPEC	Signature Date: 10-17-2016
Address: 150 S Arroyo Parkway Suite 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pasadena, CA 91105	Phone: (626) 445-8580

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Andrew H. Injo	Responsible Designer Signature: [signature]
Company : dHA + CALPEC	Date Signed: 10-17-2016
Address: 150 S Arroyo Parkway Suite 100	License: E-13884
City/State/Zip: Pasadena, CA 91105	Phone: (626) 445-8580

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 1 of 3)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

The NRCC-LTI-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.

Mandatory Lighting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)

YES	NO	Control Requirements
Y		Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
Y		Lighting shall be controlled by a lighting control a system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
	N	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
	N	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
Y		All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
Y		All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
Y		General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.1(a)4.
Y		The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
Y		All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
	N	Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
	N	Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
Y		Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 2 of 3)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)							PAF Credit Calculation [2]: Watts of Controlled Lighting	PAF	Control Credit (K x L)	✓ if Acceptance Test Required	Field Inspector	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc...)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
	WALL OCC. SENSOR			E	✓	✓ E	E	E	E			0		☐	☐
												0		☐	☐
												0		☐	☐
												0		☐	☐
												0		☐	☐
												0		☐	☐
												0		☐	☐
Control Credit PAGE TOTAL (Sum of Column M):												0			
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column M):															
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-02-E
Indoor Lighting - Lighting Controls — (Page 3 of 3)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Andrew H. Injo	Documentation Author Signature: [signature]
Company: dHA + CALPEC	Signature Date: 10-17-2016
Address: 150 S Arroyo Parkway Suite 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pasadena, CA 91105	Phone: (626) 445-8580

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
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5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Andrew H. Injo	Responsible Designer Signature: [signature]
Company : dHA + CALPEC	Date Signed: 10-17-2016
Address: 150 S Arroyo Parkway Suite 100	License: E-13884
City/State/Zip: Pasadena, CA 91105	Phone: (626) 445-8580

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 1 of 4)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

ALLOWED LIGHTING POWER
A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES
☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
☑ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

	(a)	(b)
1. Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page)		
2. Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)		
3. Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E		
TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1		

☐ Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

A	B		C		D
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER (ft^2)	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
	Total Area:				
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)					

C -1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)	Watts
Total from section C-2	3,956
Total from section C-3	0,00
Total Watts. Enter Total Watts into section A, row 2 (Above on this page)	3956

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 2 of 4)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

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☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

C -2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE
☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in section B of NRCC-LTI-01-E.
☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

A: AREA CATEGORY (From §140.6 Table 140.6-C) — Location in Building	Primary Function Area per Table 140.6-C	B: WATTS PER (ft^2)	X	C: AREA (ft^2)	=	D: ALLOWED WATTS
LOCKER RM A119,A121,A122A123	LOCKER	0.8		646		516.8
TOILET A114, A126, A127	RESTROOM	0.6		264		158.4
A112, 113, 116, 120, 124, 125	STORAGE AREAS	0.6		859		515.4
OPEN OFFICE A109, MEETING RM. A111	OFFICES > 250	0.75		886		664.5
OFFICES A103,104,106,129,130,117,118	OFFICES <= 250	1		846		846
LOBBY A108	LOBBY AREA	1.5		277		415.5
BREAK A110	LOUNGE AREA	1.1		255		280.5
CORRIDOR/HALLWAY	CORRIDOR, STAIR & SUPPORT AREA	0.6		696		417.6
IDF A131, ELEC RM 105	ELECTRICAL, MECHANICAL, TELEPHONE RM.	0.7		158		110.6
GUN CLEANING A115	ALL OTHER AREA	0.6		51		30.6
						0
						0
						0
						0
						0
						0
		TOTALS		4938		
Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance form)						3,956 WATTS

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 3 of 4)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

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C-3 AREA CATEGORY METHOD Additional Lighting Wattage Allowance (from Table 140.6-C Footnotes)

A	B	C [2]	D	E	F	G
Primary Function	Sq Ft or linear ft [3]	Additional Watts Allowed	Wattage Allowance (B x C)	Description(s) and Quantity of Special Luminaire Types in each Primary Function Area	Total Design Watts [1]	ALLOWED WATTS Smaller of D or F
						0
						0
						0
						0
						0
						0
						0
						0
						0
						0
						0
						0
						0
						0
TOTALS – Enter into TOTAL AREA CATEGORY METHOD ADDITIONAL ALLOWANCES – Section C-1						0

1. Use linear feet only for additional allowance for white board or chalk board. All other additional Area Category allowances shall use watts per square foot.
2. Additional watts are available only when allowed according to the footnotes on bottom of Table 140.6-C, which include: Specialized task work; Ornamental lighting; Precision commercial and industrial work; Per linear foot of white board or chalk board; Accent, display and feature lighting; and Videoconferencing Studio lighting.
3. Luminaire classification and wattage shall be determined in accordance with §130.0(c) of the Standards.

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
CEC-NRCC-LTI-03-E (Revised 06/14) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance — (Page 4 of 4)
Project Name: COMPTON COLLEGE CAMPUS PUBLIC SAFETY BUILDING — Date Prepared: 10-17-2016

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1. I certify that this Certificate of Compliance documentation is accurate and complete.

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LITTLE™
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ___ FLS ___ SS ___
DATE DEC 12 2017

CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER — ANDREW H. INJO — E-13884 — Exp. 06/30/18 — ELECTRICAL — STATE OF CALIFORNIA

SEAL & SIGNATURE

SHEET TITLE
INDOOR TITLE 24 COMPLIANCE FORMS

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/2017 — SHEET NO: E0.0.8

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-01-E
Outdoor Lighting	(Page 1 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

A. General Information
Project Address: 1111 EAST ARTESIA BLVD., COMPTON CA 90221
Total Illuminated Hardscape Area: 5,548
Phase of Construction: ☑ New Construction ☐ Addition ☐ Alteration
Outdoor Lighting Zone (OLZ) ☐ OLZ-1 ☐ OLZ-2 ☑ OLZ-3 ☐ OLZ-4
I have confirmed with the AHJ which OLZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114

B. LIGHTING COMPLIANCE DOCUMENTS
(check box for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

☑	NRCC-LTO-01-E	Certificate of Compliance
☑	NRCC-LTO-02-E	Outdoor Lighting Controls Certificate of Compliance
☑	NRCC-LTO-03-E	Outdoor Lighting Power Allowance Certificate of Compliance

C. Summary of Allowed Outdoor Lighting Power

	C. Summary of Allowed Outdoor Lighting Power		Watts
1.	**Sum Total ALLOWED** Outdoor Lighting Wattage from NRCC-LTO-03-E, page 1	=	2,470.72
	Complies ONLY if **Installed ≤ Allowed**		
2.	**Sum Total INSTALLED** Outdoor lighting Wattage from NRCC-LTO-01-E, page 3		778

D. Declaration of Required Installation Certificates
Declare by checking all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)
☑ NRCI-LTO-01-E - Must be submitted for all buildings ☐ Field Inspector
☑ NRCI-LTO-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance. ☐ Field Inspector

E. Declaration of Required Certificates of Acceptance
Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)
☑ NRCA-LTO-02-A - Must be submitted for outdoor lighting controls. ☐ Field Inspector

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STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-01-E
Outdoor Lighting	(Page 2 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

F. Schedule of luminaires exempt from the outdoor lighting power requirements in §140.7

Name or Symbol	Description of exempt luminaire in accordance with the exemptions

G. Schedule of luminaires exempt from the cutoff requirements in §130.2(b)

Name or Symbol	Description of exempt luminaire in accordance with the exemptions

H. Schedule of luminaires exempt from the outdoor lighting control requirements in §130.2(c)

Name or Symbol	Description of exempt luminaire in accordance with the exemptions
GF	FIXTURE UNDER 30 WATT, EXCEPTION 3 APPLIES.

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-01-E
Outdoor Lighting	(Page 3 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

I. Outdoor Lighting Schedule and Field Inspection Energy Checklist

Luminaire Schedule		Installed Watts					Location	Cutoff	Field Inspector	
A	B	C	D		E	F	G	H	I	
			How wattage was determined							
Name or Item Tag	Complete Luminaire Description	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number of Luminaires	Total Installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	BUG Rating	Pass	Fail
S	17'-6" TALL SINGLE HEAD LED POLE MOUNTED	138	☐	☑	3	414	PARKING LOT LIGHTS	3/0/3	○	○
L4	LED WALL MOUNTED CONTINUOUS FIXTURE	12W/FT	☐	☑	1	12	FACE OF SOFFIT		○	○
SL1	WALL MOUNTED LED FIXTURE	74	☐	☑	4	296	BUILDING ENTRANCE		○	○
SL2	WALL MOUNTED LED FIXTURE	4W/FT	☐	☑	1	4	NONSALES CANOPIES		○	○
GF	SOFFIT MOUNTED LED	4	☐	☐	13	52	BUILDING ENTRANCE		○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
			☐	☐		0			○	○
INSTALLED WATTS PAGE TOTAL:						778	Enter sum total of all pages or if only one page is used, enter PAGE total here (**Sum Total INSTALLED** Outdoor lighting wattage)		778	

STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-01-E
Outdoor Lighting	(Page 4 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: ANDREW INJO	Documentation Author Signature:
Company: dHA+CALPEC	Signature Date: 11-14-2016
Address: 150 SOUTH ARROYO PARKWAY	CEA Certification Identification (if applicable):
City/State/Zip: PASADENA/CA/91105	Phone: (626) 445 8580

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Responsible Designer Name: ANDREW INJO	Responsible Designer Signature:
Company: dHA+CALPEC	Date Signed: 11-14-2016
Address: 150 SOUTH ARROYO PARKWAY	License: E-13884
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STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-02-E
Outdoor Lighting Controls	(Page 1 of 3)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

The NRCC-LTO-02-E shall be used to document all mandatory outdoor lighting controls that are applicable to the project.

A. Mandatory Outdoor Lighting Control Declaration Statements
Check all that apply:
- ☑ Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with §110.9(a).
- ☐ Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with §130.4(b).
- ☑ All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.1
- ☑ Part-Night Outdoor Lighting Controls, as defined in Section 100.1(b), shall meet the requirements in Section 110.9(b)5
- ☐ All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.
- ☑ All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)
- ☑ All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control in accordance with Section 130.2(c)1
- ☑ All installed outdoor lighting shall be circuited and independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2
- ☑ All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3
- ☐ For Outdoor Sales Frontage, Outdoor Sales Lots, and Outdoor Sales Canopies lighting, an automatic lighting control in accordance with Section 130.2(c)4
- ☐ For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5
- ☑ Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-02-E
Outdoor Lighting Controls	(Page 2 of 3)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

B. Mandatory Outdoor Lighting Control Schedule and Field Inspection Checklist

Outdoor Lighting Control Schedule			Standards Complying With (✓ all that apply, or leave empty if Exempted)						✓ if Acceptance Test Required	Field Inspector	
A	B	C	D	E	F	G	H	I	J	K	
Location and Application of Luminaires being controlled	Type/ Description of Lighting Control (i.e. motion sensor, photocontrol, outdoor astronomical time-switch control, centralized time-based zone lighting control)	# of Units	§130.2(a)	§130.2(c)1	§130.2(c)2	§130.2(c)3	§130.2(c)4	§130.2(c)5		Pass	Fail
EXITS/TYPE G WALL MOUNT LED LIGHTS	PHOTOCONTROL	7		✓	✓				☑	○	○
FRONT ENTRY/TYPE GF SOFFIT LIGHTS	TIME CLOCK	4		✓	✓				☑	○	○
FRONT FACADE/TYPE SL1 WALL MT. LED	PHOTOCONTROL	1		✓	✓				☑	○	○
FRONT FACADE/TYPE SL2 WALL MT. LED	PHOTOCONTROL	1		✓	✓				☑	○	○
30' HIGH PARKING LIGHTS	PHOTOCONTROL	3		✓	✓				☑	○	○
										○	○
										○	○
										○	○
										○	○
FRONT FACADE/TYPE L4 WALL MT. LED	PHOTOCONTROL	1		✓	✓				☑	○	○
									☐	○	○
									☐	○	○
									☐	○	○
									☐	○	○
									☐	○	○
									☐	○	○
									☐	○	○

STATE OF CALIFORNIA
OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-02-E
Outdoor Lighting Controls	(Page 3 of 3)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

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STATE OF CALIFORNIA
OUTDOOR LIGHTING POWER ALLOWANCES
CEC-NRCC-LTO-03-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 1 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

A. OUTDOOR LIGHTING POWER ALLOWANCE SUMMARY
1. General Hardscape Lighting Power Allowance (Site Total from Section B of NRCC-LTO-03-E) 1. 2,216.72

2. Additional Specific "use it or lose it" Lighting Power Allowances listed in each of these cells shall be identical to total allowed watts determined in Section C-1 to C-4 of NRCC-LTO-03-E.

PER APPLICATION from Section C-1		PER UNIT LENGTH (SALES FRONTAGE) from Section C-2		PER HARDSCAPE AREA (ORNAMENTAL LIGHTING) from Section C-3		PER SPECIFIC AREA from Section C-4.		
154	+	0	+	0	+	100	=	2. 254

3. **Sum Total ALLOWED** Outdoor Lighting Wattage (add rows 1 and 2) 3. 2,470.72

B. GENERAL HARDSCAPE LIGHTING POWER ALLOWANCE FROM TABLE 140.7-A

Area Wattage Allowance (AWA)				Linear Wattage Allowance (LWA)			Initial Wattage Allowance (IWA)	Total General Hardscape Lighting Allowance
A	B	C	D	E	F	G	H	I
Name of area	Illuminated Hardscape Area	AWA Per Square Foot	AWA (B x C)	Perimeter Length of General Hardscape	LPA per Linear Foot	LWA (E x F)	IWA (Watts)	D + G + H
PARKING LOT	5,548.00	0.09	499.32	1,579.00	0.6	947.4	770	2,216.72
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
			0			0		0
							TOTAL	2,216.72

STATE OF CALIFORNIA
OUTDOOR LIGHTING POWER ALLOWANCES
CEC-NRCC-LTO-03-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 2 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

C. ADDITIONAL "USE IT OR LOSE IT" OUTDOOR LIGHTING POWER ALLOWANCES FOR SPECIFIC APPLICATIONS
- The additional specific outdoor lighting power allowance shall be the smaller of the allowed lighting power or the actual lighting power used.
- Use Outdoor Lighting Zone (OLZ) that is documented on page 1 of NRCC-LTO-01-E to calculate the specific wattage allowances.

C-1. WATTAGE ALLOWANCE PER APPLICATION – Table 140.7-B
- Available only for qualifying locations, which include Building Entrances or Exits; Primary Entrances to Senior Care Facilities, Police Stations, Hospitals, Fire Stations, and Emergency Vehicle Facilities; Drive Up Windows; Vehicle Service Station Uncovered Fuel Dispenser
- If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of Location for which allowance is claimed	Number of qualifying locations	Wattage Allowance per qualifying location	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
ENTRANCE	1	90	90	GF	CEILING MOUNTED LED	4	22	88	88
EXITS	3	90	270	G	WALL MOUNTED LED	3	22	66	66
			0					0	
			0					0	
								Sum total allowance per application on this site:	154

C-2. WATTAGE ALLOWANCE PER UNIT LENGTH (Sales Frontage) from Table 140.7-B
- If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of Location for which allowance is claimed	Linear feet of Sales Frontage	Wattage Allowance per linear foot	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
			0					0	
			0					0	
			0					0	
			0					0	
								Sum total allowance for sales frontage on the site:.	0

STATE OF CALIFORNIA
OUTDOOR LIGHTING POWER ALLOWANCES
CEC-NRCC-LTO-03-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 3 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

C-3. WATTAGE ALLOWANCE PER SQUARE FOOT OF HARDSCAPE AREA (Ornamental Lighting) – Table 140.7-B
- Allowance for the total site illuminated hardscape area. Luminaires qualifying for this allowance shall be rated for 100 watts or less as determined in accordance with Section 130.0(c), and shall be post-top luminaires, lanterns, pendant luminaires, or chandeliers.
- If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of area for which ornamental allowance is claimed	Square feet of Hardscape	Wattage Allowance per square foot	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
			0					0	
			0					0	
			0					0	
			0					0	
								Sum total allowance for ornamental lighting on the site:.	0

C-4. WATTAGE ALLOWANCE PER SQUARE FOOT OF SPECIFIC AREA - Table 140.7-B
- Allowances for Building Facades; Outdoor Sales Lots; Vehicle Service Station Hardscape; Vehicle Service Station Canopies; Sales Canopies; Non-sales Canopies; Guard Stations; Student Pick-up/Drop-off zone: Outdoor Dining; Special Security Lighting for Retail Parking and Pedestrian Hardscape.
- If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of Location for which allowance is claimed	Illuminated Area of Application	Wattage Allowance per square foot	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
NON-SALES CANOPY	645	0.408	263.16	L4	FRONT FACADE/WALL MTD. LED	1	20	20	100
			0					0	
			0					0	
			0					0	
								Sum total allowance for specific area on the site:	100

STATE OF CALIFORNIA
OUTDOOR LIGHTING POWER ALLOWANCES
CEC-NRCC-LTO-03-E (Revised 08/15) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 4 of 4)
Project Name: COMPTON CITY COLLEGE - PUBLIC SAFETY BUILDING	Date Prepared: 11-14-2016

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: ANDREW INJO	Documentation Author Signature:
Company: dHA+CALPEC	Signature Date: 11-14-2016
Address: 150 SOUTH ARROYO PARKWAY	CEA Certification Identification (if applicable):
City/State/Zip: PASADENA/CA/91105	Phone: (626) 445 8580

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: ANDREW INJO	Responsible Designer Signature:
Company: dHA+CALPEC	Date Signed: 11-14-2016
Address: 150 SOUTH ARROYO PARKWAY	License: E-13884
City/State/Zip: PASADENA/CA/91105	Phone: (626) 445 8580

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
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CLIENT NAME

COMPTON
CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

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COMPTON CALIFORNIA 90221

AGENCY REVIEW

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CONSULTANT

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

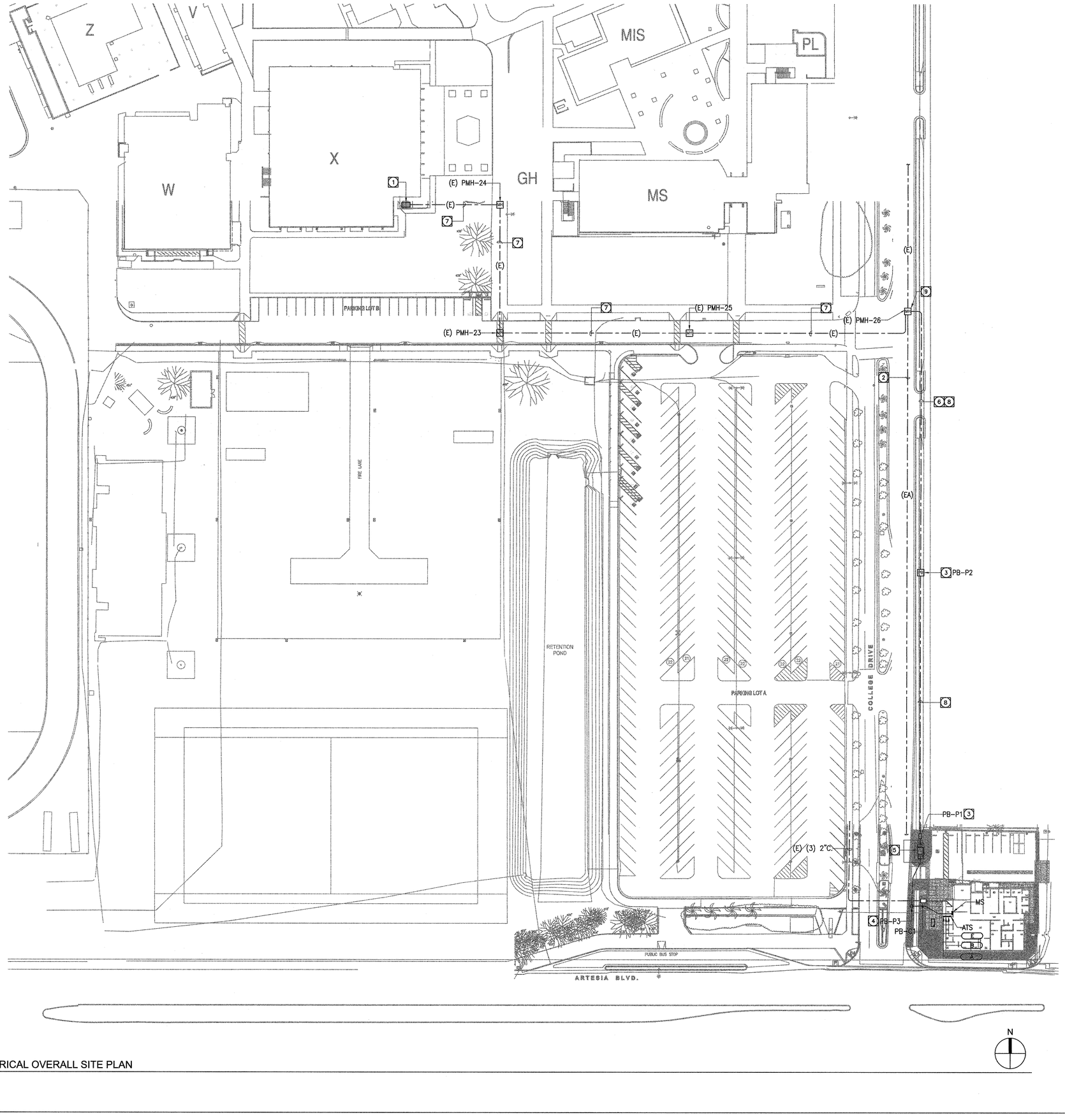
ANDREW H. INJO
E-13884
Exp. 06/30/18

SEAL / SIGNATURE

SHEET TITLE
OUTDOOR TITLE 24
COMPLIANCE FORMS

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	E0.0.9



1 ELECTRICAL OVERALL SITE PLAN
1" = 40'-0"

REFERENCE NOTES

1. EXISTING H.V. POWER SWITCHBOARD "PMH-6". VERIFY EXACT LOCATION IN FIELD. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR ELECTRICAL SCOPE.
2. EXISTING H.V. INFRASTRUCTURE DUCT BANK. EXISTING 5" SPARE CONDUIT TO BE ABANDONED. REFER TO REFERENCE NOTE #6 (N.I.C.).
3. PROVIDE/INSTALL PRE CAST CONCRETE PULLBOX 3'x5' MIN. DEPTH AS REQUIRED. THE PULLBOX SHALL MEET SIZE REQUIREMENTS IN COMPLIANCE WITH CEC 314.71. REFER TO SHEET E1.1.1 FOR ADDITIONAL REQUIREMENTS (N.I.C.).
4. PROVIDE/INSTALL PRE CAST CONCRETE PULLBOX 2'x3'x DEPTH AS REQUIRED. COMPLETE WITH HEAVY DUTY BOLT DOWN TRAFFIC COVER MARKED "ELECTRIC". REFER TO SHEET E1.1.1 FOR ADDITIONAL REQUIREMENTS.
5. REFER TO SHEET E1.1.1 FOR ENLARGED SITE PLAN.
6. REPLACEMENT (2) 5" UNDERGROUND INFRASTRUCTURE CONDUITS. (N.I.C.).
7. EXISTING H.V. INFRASTRUCTURE DUCT BANK. EXISTING 5" SPARE CONDUIT TO BE UTILIZED FOR ROUTING CONDUCTORS. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR ADDITIONAL REQUIREMENTS.
8. H.V. CONDUCTORS FOR NEW SUB-STATION TO BE PROVIDED/INSTALLED FROM NEW SUBSTATION TO EXISTING SWITCHBOARD "PMS-6".

EXISTING INFORMATION OBTAINED FROM CAMPUS-WIDE U.G. UTILITY INFRASTRUCTURE - PHASE 1 A#03-113780, CERTIFIED #2.

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1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

COMPTON CCD

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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16516

dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

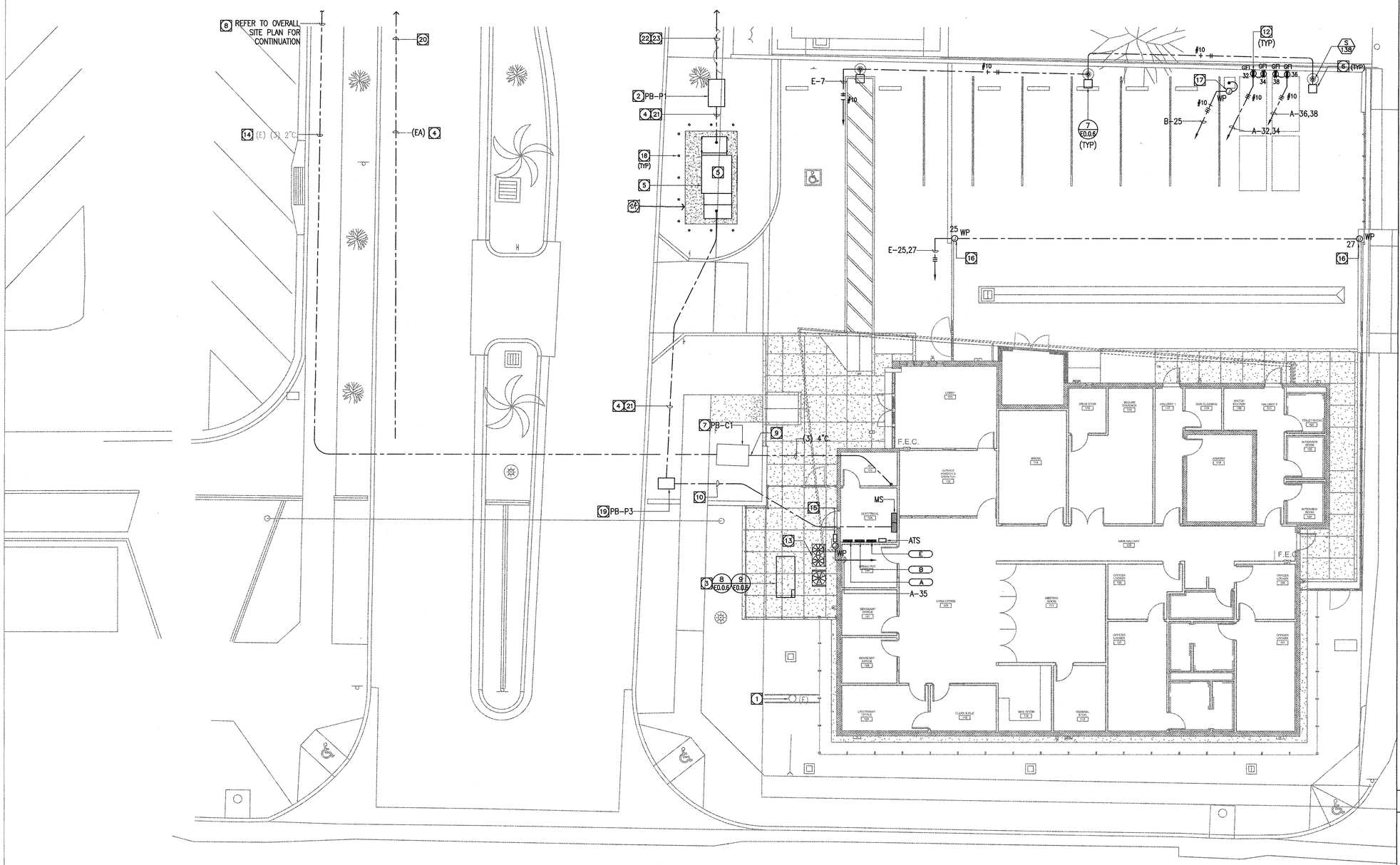
NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER ANDREW N. TRUE E-13884 EXP. 08/31/19 ELECTRICAL STATE OF CALIFORNIA

SHEET TITLE
ELECTRICAL OVERALL SITE PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/2017
SHEET NO. E1.1.0



1 ELECTRICAL SITE PLAN
1/8" = 1'-0"

N

REFERENCE NOTES

1. EXISTING UTILITY CO. POWER POLE TO REMAIN.
2. PROVIDE/INSTALL PRE CAST CONCRETE PULLBOX 3'x5' MIN. WITH DEPTH AS REQUIRED. THE PULLBOX SHALL MEET SIZE REQUIREMENT IN COMPLIANCE WITH CEC 314.71 COMPLETE WITH HEAVY DUTY TRAFFIC COVER MARKED "HIGH VOLTAGE" (N.I.C.).
3. 50KW EMERGENCY GENERATOR WITH SOUND ATTENUATED ENCLOSURE. REFER TO SINGLE LINE DIAGRAM.
4. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR FEEDER REQUIREMENTS.
5. LOCATION OF NEW PAD MOUNTED SUB-STATION. REFER TO ARCH. SITE PLAN FOR EXACT LOCATION.
6. PROVIDE/INSTALL PARKING LOT LIGHT STANDARD. COMPLETE WITH POLE, LED LUMINAIRE AND CONCRETE FOOTING. FIXTURE SHALL BE PROVIDED BY CCC AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. EXISTING U.G. CONCRETE PULLBOX WITH HEAVY DUTY TRAFFIC COVER MARKED "COMMUNICATIONS". EXISTING 12/12 SINGLE MODE/MULTIMODE HYBRID FIBER OPTIC CABLING TO BE EXTENDED TO IDF ROOM AT NEW BUILDING.
8. TO EXISTING CAMPUS MAIN I.T. ROOM.
9. PROVIDE/INSTALL (3) 4"C. EXISTING MULTI-MODE FIBER OPTIC CABLING TO BE EXTENDED TO NEW I.T. ROOM.
10. PROVIDE/INSTALL SECONDARY SERVICE FEEDER. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.02 FOR REQUIREMENTS.
11. INTERCEPT 5" UNDERGROUND CONDUIT. H.V. CONDUCTORS FROM "PB-1" TO (E) SWITCHBOARD "PMS-6" SHALL BE INSTALLED UNDER SEPARATE CONTRACT (N.I.C.). REFER TO SITE UTILITY NOTES ON THIS SHEET.
12. W.P. RECEPTACLE FOR GOLF CART CHARGING. RECEPTACLES SHALL BE RECESSED AT SITE WALL.
13. CONDENSER UNIT TO BE PROVIDED WITH EMERGENCY BACKUP POWER PROVISION.
14. EXISTING FIBER OPTIC CABLING TO EXISTING MAIN I.T. ROOM.
15. IRRIGATION CONTROLLER. VERIFY EXACT LOCATION IN FIELD PRIOR TO INSTALLATION.
16. CONNECT TO AUTOMATIC GATE CONTROLLER. VERIFY EXACT LOCATION OF JUNCTION BOX AND P.O.C. IN FIELD PRIOR TO INSTALLATION.
17. PROVIDE CONNECTION TO AIR COMPRESSOR.
18. PROVIDE/INSTALL STEEL PROTECTIVE BOLLARDS. REFER TO DETAIL – 3/E0.0.7.
19. PROVIDE/INSTALL PRECAST CONCRETE PULLBOX 2'x3'x DEPTH AS REQUIRED. COMPLETE HEAVY DUTY TRAFFIC COVER MARKED "ELECTRIC". SET ON 12" OF CRUSHED ROCK. COORDINATE EXACT LOCATION WITH CIVIL AND LANDSCAPE DRAWINGS PRIOR TO INSTALLATION.
20. REFER TO SHEET E1.1.0 FOR CONTINUATION.
21. PROVIDE ALL SAWCUTTING, TRENCHING, DUCT BANK, AND COMPACTION AS REQUIRED FOR THE COMPLETE DUCT BANK INSTALLATION. REFER TO DETAIL-4/E0.0.5. ROUTE DUCT BANK TO "PB-1". "PB-1" INSTALLED UNDER SEPARATE BID PACKAGE.
22. REPLACEMENT (2) 5" UNDERGROUND INFRASTRUCTURE CONDUITS (N.I.C.) INSTALLED UNDER SEPARATE BID PACKAGE. REFER TO SHEET E1.1.0 FOR CONTINUATION.
23. H.V. CONDUCTORS FROM "PB-1" TO EXISTING SWITCHBOARD "PMS-6".
24. *REFER TO A1.1.1 FOR CHAIN LINK FENCE ENCLOSURE.*

SITE UTILITY NOTES

1. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT @ (800) 642-2444 48 HOURS PRIOR TO EXCAVATION.
2. CONTRACTOR SHALL INCLUDE AS A PART OF THE BID PROPOSAL THE FOLLOWING:
   - A. PROVIDE REQUIRED MATERIAL AND LABOR FOR REFURBISHING THE FINISH GRADE TO MATCH EXISTING CONDITIONS, IMPACTED BY NEW UNDERGROUND CONDUIT INSTALLATION.
   - B. PROVIDE UTILITY LOCATING EQUIPMENT FOR TRACING EXISTING UNDERGROUND CABLE, CONDUIT, AND PIPING. CONTACT ACCURATE LOCATORS @ (866) 369-1975 FOR EQUIPMENT QUOTATIONS.
   - C. CONTRACTOR SHALL FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING NEW UNDERGROUND CONDUITS.
   - D. CONTRACTOR SHALL REPAIR DAMAGED UNDERGROUND UTILITIES IF NECESSARY IMPACTED BY THE NEW UNDERGROUND CONDUIT SYSTEM. THE COST OF REPAIRING DAMAGED OF EXISTING UNDERGROUND UTILITIES SHALL BE BORNE BY THE CONTRACTOR.

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dHA + CALPEC
150 S. ARROYO PARKWAY
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PASADENA, CA. 91105
TEL: (626) 445-8880
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

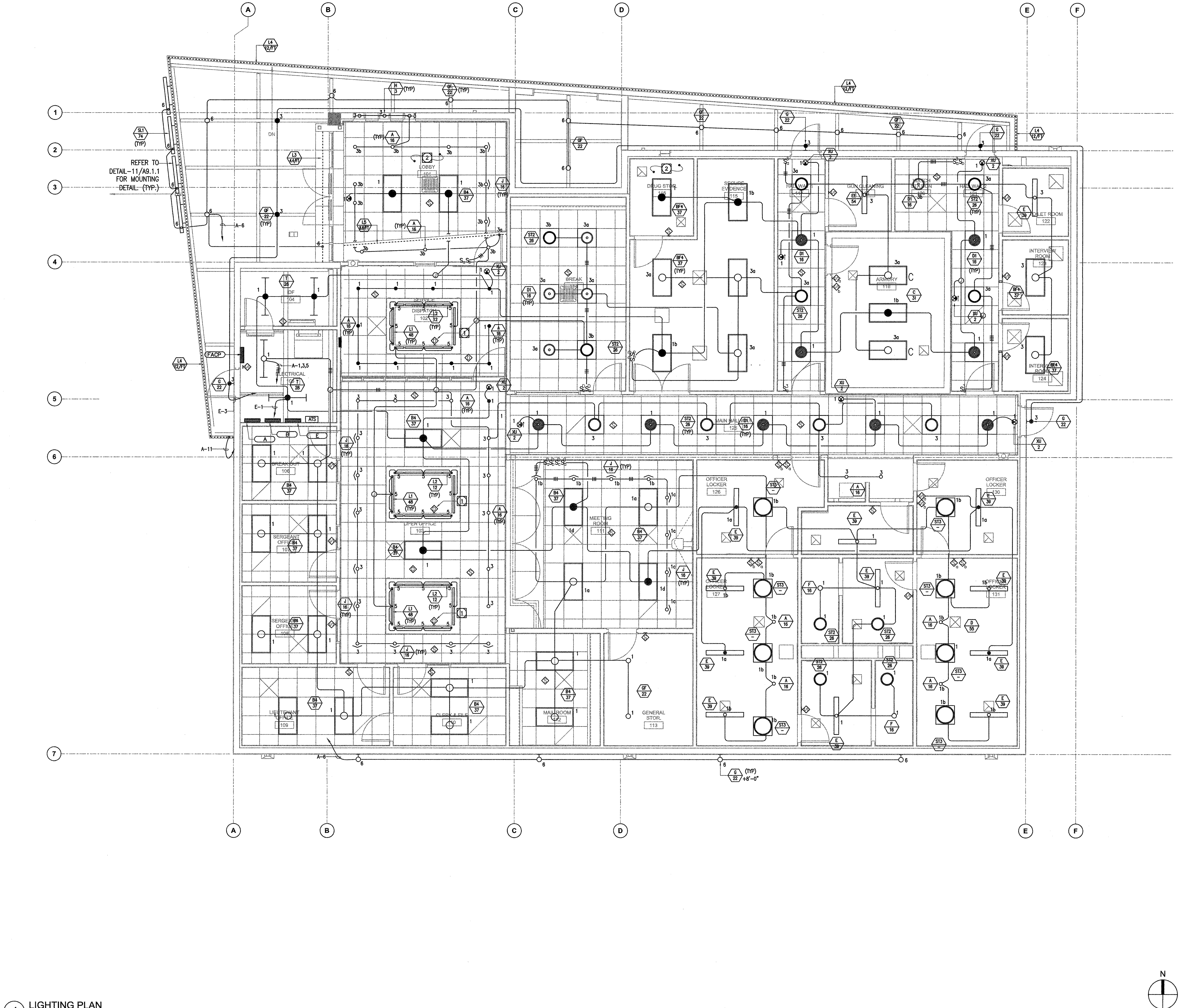
REGISTERED PROFESSIONAL ENGINEER
ANDREW H. JANG
E-13884
Exp. 08/31/18
STATE OF CALIFORNIA

ELECTRICAL SITE PLAN

913-4675-01

11/21/2017

E1.1.1



1 LIGHTING PLAN
1/4" = 1'-0"

REFERENCE NOTES

1. LOCATE DAYLIGHT SENSOR IN SKYLIGHT WELL. VERIFY EXACT LOCATION IN FIELD PRIOR TO ROUGH-IN.
2. DAYLIGHTING CONTROLS NOT REQUIRED. TOTAL WATTAGE OF LIGHTING LESS THAN 120 WATTS.

GENERAL NOTES

1. AUTOMATIC DAYLIGHTING CONTROLS EXCEPTION 1 OF SECTION 130.1(d)2: ROOMS IN WHICH THE COMBINED TOTAL INSTALLED GENERAL LIGHTING POWER IN THE SKYLIT DAYLIT ZONE AND PRIMARY SIDELIT DAYLIT ZONE IS LESS THAN 120 WATTS.
2. SECTION 130.1(d)(2)(D)(iv): IN AREAS SERVED BY LIGHTING THAT IS DAYLIGHT CONTROLLED, WHEN THE ILLUMINANCE RECEIVED FROM THE DAYLIGHT IS GREATER THAT 150 PERCENT OF THE DESIGNED ILLUMINANCE RECEIVED FROM THE GENERAL LIGHTING SYSTEM AT FULL POWER, THE GENERAL LIGHTING POWER IN THAT DAYLIGHT ZONE SHALL BE REDUCED BY A MINIMUM OF 65 PERCENT.
3. SECTION 130.1 (b) MULTILEVEL LIGHTING CONTROLS: GENERAL LIGHTING OF ANY ENCLOSED AREA 100 SQUARE FEET OR LARGER, WITH A CONNECTED LIGHTING LOAD THAT EXCEEDS 0.5 WATTS PER SQUARE FOOT SHALL MEET REQUIREMENTS 130.1(b)(1-3).
4. MULTILEVEL LIGHTING CONTROLS EXCEPTION 2 OF SECTION 130.1(b): AN AREA ENCLOSED BY CEILING HEIGHT PARTITIONS THAT HAS ONLY ONE LUMINAIRE WITH NO MORE THAN TWO LAMPS.
5. DEMAND RESPONSE NOT REQUIRED PER SECTION 130.1 (e) DEMAND RESPONSE CONTROLS: SPACES THAT ARE NONHABITABLE SHALL NOT BE USED TO COMPLY WITH THIS REQUIREMENT, AND SPACES WITH A LIGHTING POWER DENSITY OF LESS THAN 0.5 WATTS PER SQUARE FOOT SHALL NOT BE COUNTED TOWARDS THE BUILDING'S TOTAL LIGHTING POWER.
6. ALL EXISTING LIGHTING IN SCOPE OF WORK TO BE REUTILIZED AND RETROFITTED. U.O.N. SEE FIXTURE SCHEDULE ON SHEET E0.1 FOR DETAILS.

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PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

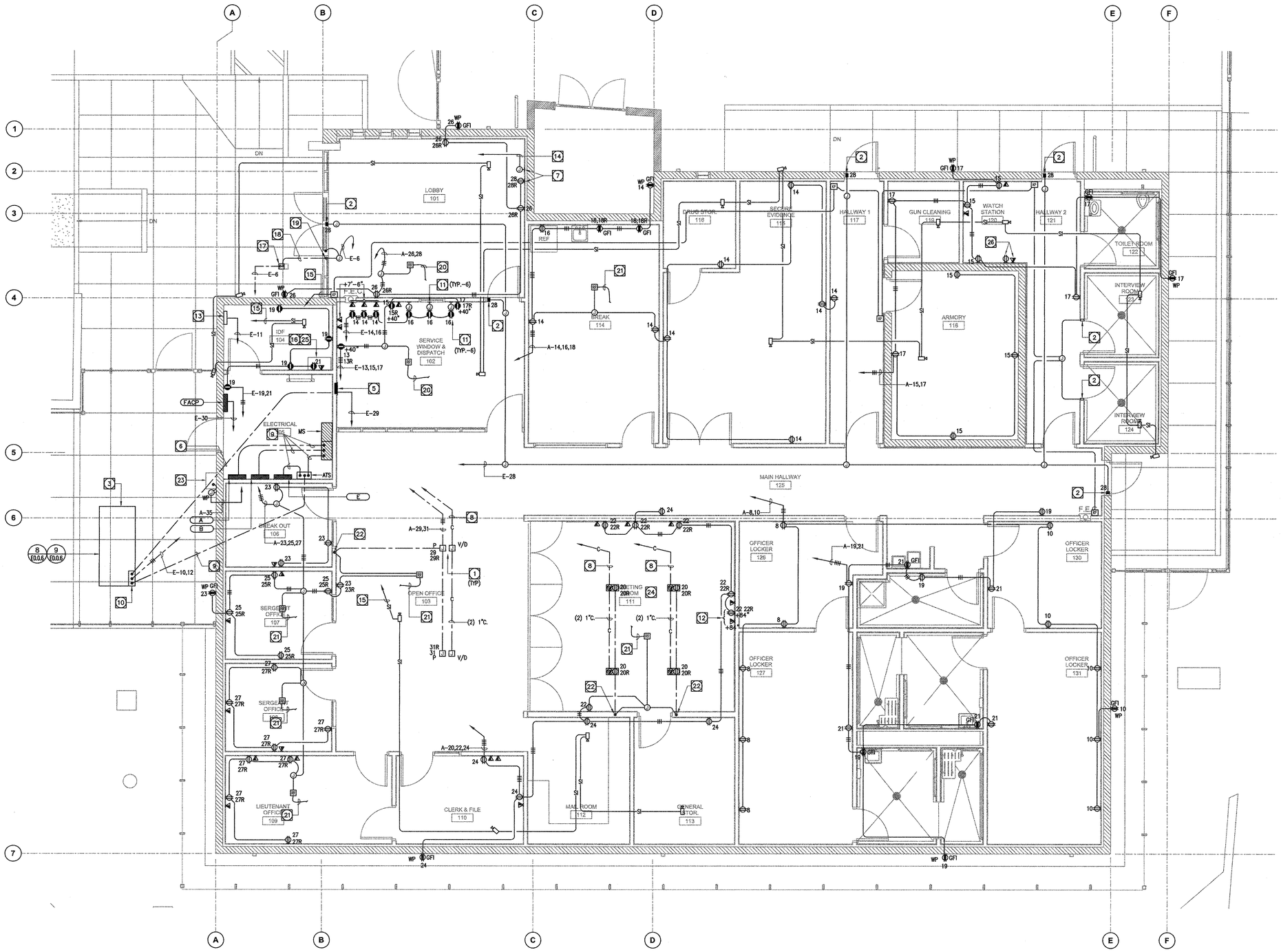
NO	REASON	DATE

E-13884

SHEET TITLE
LIGHTING PLAN

PROJECT NUMBER
913-4675-01

11/21/2017 E2.1.1



1 POWER & SIGNAL PLAN
1/4" = 1'-0"

REFERENCE NOTES

1. FLOOR OUTLETS FOR MODULAR FURNITURE.
2. ELECTRIC DOOR STRIKE TO BE PROVIDED WITH EMERGENCY POWER PROVISION.
3. 50KW EMERGENCY GENERATOR. REFER TO DETAILS 8 & 9 ON SHEET E0.0.6.
4. NOT USED.
5. REMOTE GENERATOR CONTROLLER.
6. 1"C. WITH (2) PAIRS 2#12 (THHN) AND (1) BELDEN 9841 STRANDED..
7. FOR TV MONITOR. MOUNT AT +7'-0".
8. ROUTE (2) 1"C. TO IDF ROOM 131. STUB UP CONDUITS AT EQUIPMENT RACK LOCATION. VERIFY EXACT STUB-UP LOCATIONS IN FIELD WITH CAMPUS IT SERVICES PRIOR TO INSTALLATION.
9. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR FEEDER SIZE.
10. PROVIDE STUB-UPS AND CONNECTIONS TO GENERATOR CONTROL PANEL. VERIFY EXACT STUB-UP LOCATIONS AND P.O.C. IN FIELD PRIOR TO INSTALLATION.
11. FOR SURVEILLANCE MONITORS. MOUNT AT +7'-6".
12. FOR WALL MOUNTED PROJECTOR. MOUNT RECEPT./DATA OUTLET AT +7'-0" AFF.
13. SECURITY CAMERA CONTROLLER.
14. ROUTE 3/4"C. TO MAIN MONITORING CONTROL PANEL.
15. ROUTE 1"C. TO SECURITY SYSTEM CONTROL PANEL LOCATED IN IDF ROOM.
16. IDF RACK. REFER TO DETAIL A6.1.9/14.
17. STEEL BOLLARD TO HOUSE CARD READER FOR DOUBLE ENTRY DOORS. REFER TO DETAIL-3/A1.3.3 FOR CONDUIT REQUIREMENTS. VERIFY EXACT CONDUIT STUB-UPS AND P.O.C.'S IN FIELD PRIOR TO ROUGH-IN. PROVIDE/INSTALL OUTLET BOX FOR CARD READER.
18. ROUTE 1"C.-2#12&1#12 EG. TO AUTO. DOOR CONTROLLER.
19. ROUTE UP INSIDE MULLION AND CONNECT TO AUTO. DOOR CONTROLLER.
20. CONNECT TO RECEPTACLE POWER PACK. REFER TO DETAIL 2/E0.0.3.
21. CONNECT TO RECEPTACLE POWER PACK. REFER TO DETAIL 3/E0.0.3.
22. ROUTE CONDUIT INSIDE WALL DOWN TO U.G. CONDUIT.
23. IRRIGATION CONTROL PANEL. REFER TO LANDSCAPE DRAWINGS FOR EXACT LOCATION.
24. PROVIDE/INSTALL EN INFRARED "ASSISTIVE LISTENING SYSTEM" (ALS). COMPLETE WITH AMPLIFIER, RECEIVER, HEADSETS AND ALL RELATED COMPONENTS REQUIRED FOR A CODE COMPLIANT, COMPLETE/OPERABLE SYSTEM. REFER TO SPEC. SECTION FOR REQUIREMENTS.
25. ASSISTIVE LISTENING SYSTEM (ALS) AMPLIFIER TO BE LOCATED IN IDF RACK.
26. FOR LIFE-SCAN MACHINE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.

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Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
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CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. JAO
E-13884
EXP. 06/30/18
CIVIL
STATE OF CALIFORNIA

AGENCY SUBMITTAL

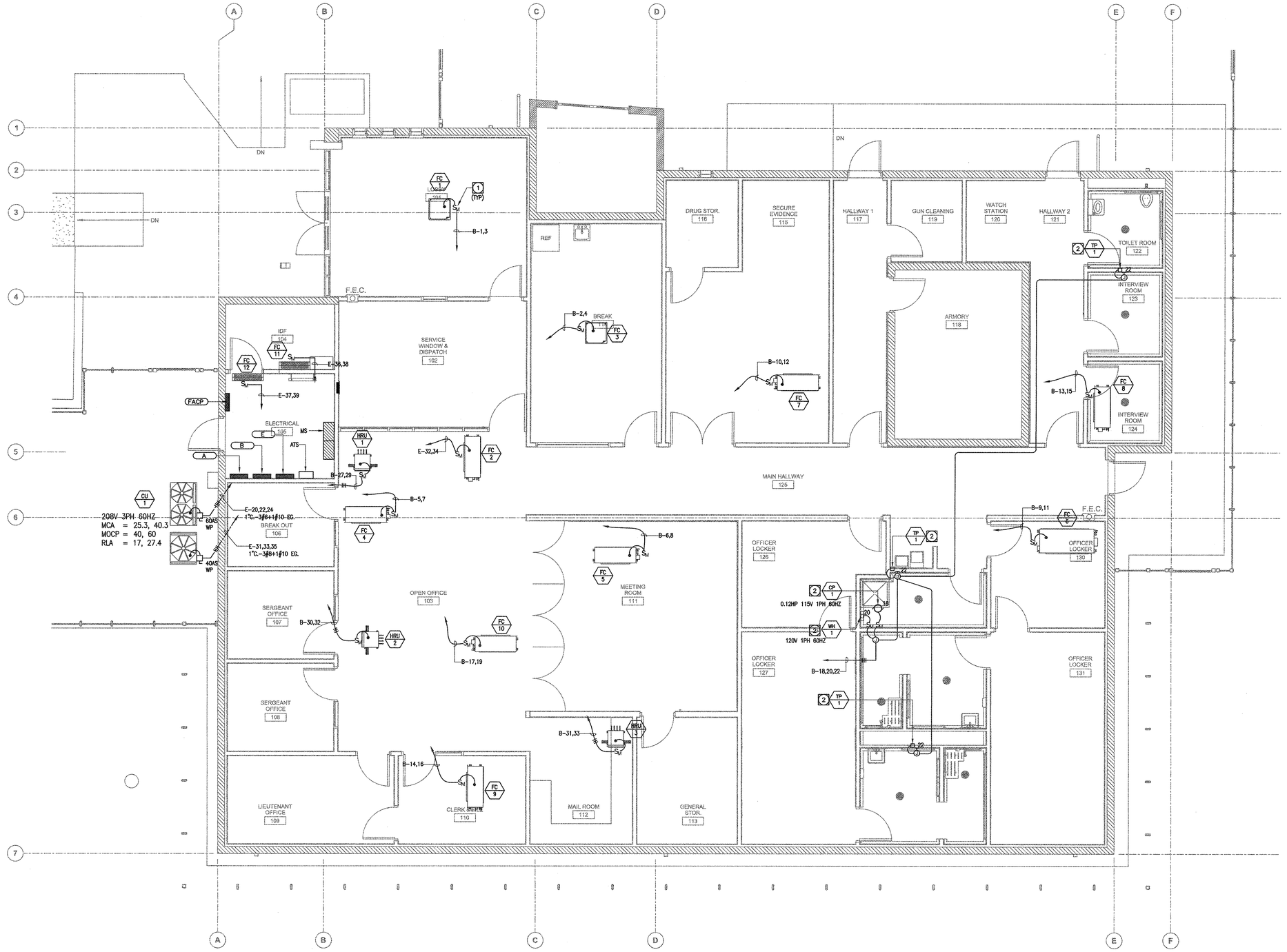
SHEET TITLE
POWER & SIGNAL PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/2017
SHEET NO.: E2.1.2

REFERENCE NOTES

1. VERIFY EXACT LOCATION OF DISCONNECT SWITCH AND P.O.C. IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
2. VERIFY EXACT LOCATION OF P.O.C. IN FIELD WITH PLUMBING CONTRACTOR PRIOR TO INSTALLATION.



N

1 ELECTRICAL MECHANICAL POWER PLAN
1/4" = 1'-0"

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

PROJECT NAME
COMPTON CCD

PROJECT ADDRESS
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
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CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. TAO
E-13884
06/30/19
ELECTRICAL
STATE OF CALIFORNIA

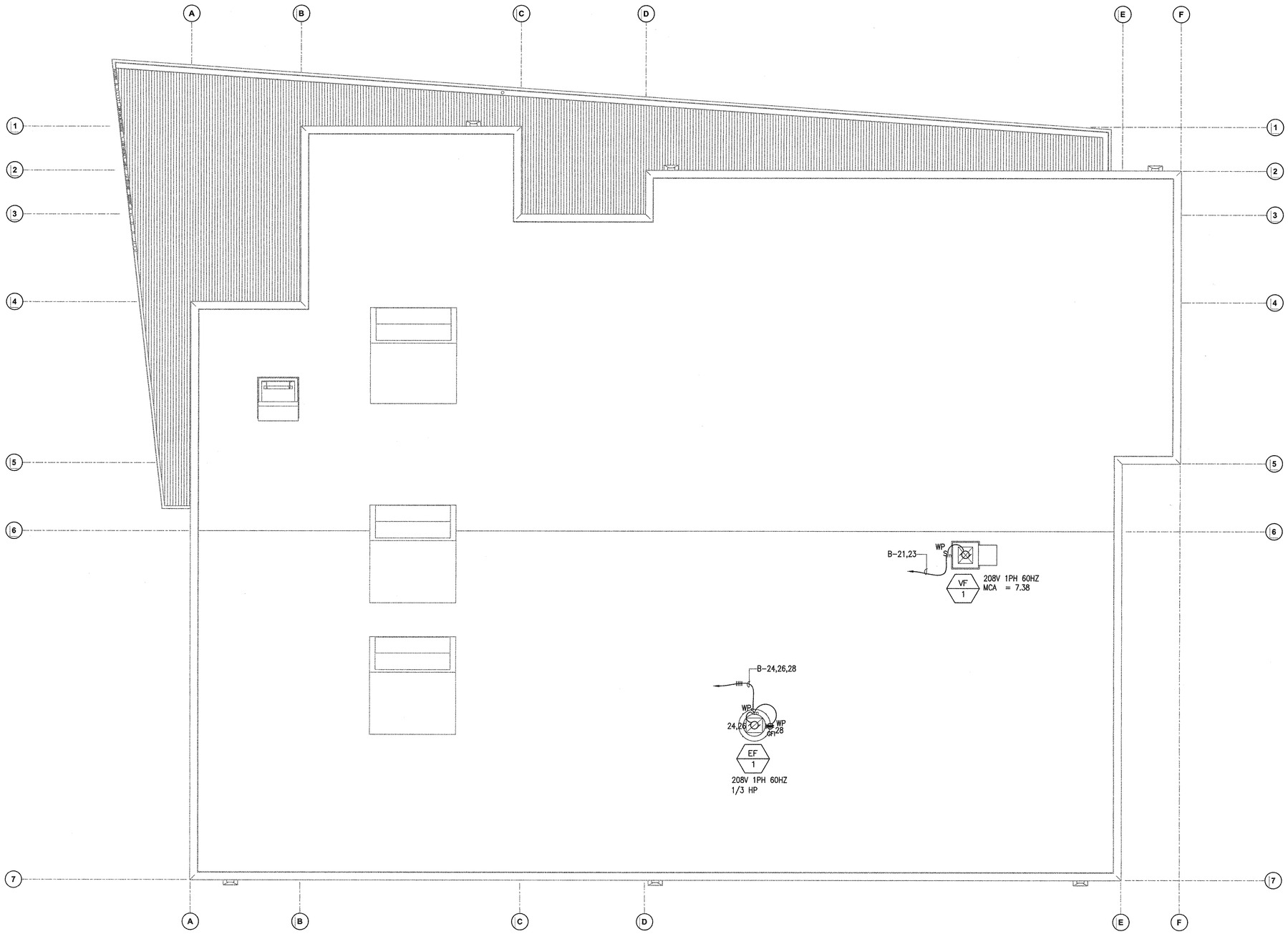
PROJECT ENGINEER

SHEET TITLE
ELECTRICAL MECHANICAL POWER PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
E2.1.3



1 ELECTRICAL ROOF PLAN
1/4" = 1'-0"

N

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DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1800 F: 949.698.1433
www.littleonline.com

ENTITY NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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A#: 03-117673
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DATE DEC 12 2017

CONSULTANT
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8500
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS
NO REASON DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. IKKO
E-13984
Exp. 06/30/18
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
ELECTRICAL ROOF PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/2017
SHEET NO. E3.1.1

ELECTRICAL SPECIFICATIONS

1. MINIMUM SIZE OF CONDUIT SHALL BE 3/4", MINIMUM SIZE OF CONDUCTOR SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
2. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
3. ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN.
4. ALL PULL BOXES IN FINISHED AREAS SHALL HAVE FACTORY APPLIED PRIME COAT OF PAINT.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR CLOCKS, SWITCHES, HORNS FIRE ALARM MANUAL PULL STATIONS, SPEAKERS, RECEPTACLES ETC.
6. FURNISH FISH WIRE IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
7. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT.
8. SUPPORT JUNCTION AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
9. NO CONDUIT RUNS WILL BE ALLOWED IN CONCRETE SLAB. ALL CONDUITS WILL BE PLACED IN THE HUNG CEILING UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
10. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROTECTED BY MATERIALS TESTED IN ACCORDANCE WITH UL1479/ASTM E-814. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS AND MAINTAIN THE FIRE RATING OF WALLS AND/OR FLOORS AFFECTED. PROVIDE HILTI CS240 FIRESTOP SEALANT, CSFM LISTING NO. 4060-1200:100, OR EQUIVALENT STATE FIRE MARSHALL APPROVED AND LISTED MATERIAL.
11. IDENTIFICATION NAMEPLATES SHALL BE MICARTA 1/8" THICK AND OF APPROVED SIZE WITH BEVELED EDGES AND ENGRAVED WHITE LETTERS A MINIMUM OF 1/4" HIGH ON BLACK BACKGROUND. NAMEPLATES SHALL BE PROVIDED FOR FIRE ALARM CONTROL PANEL, POWER SUPPLY CABINET AND PULLBOXES. ALL NAMEPLATES SHALL BE ATTACHED WITH SCREWS.PULL BOXES, JUNCTION BOXES, AND DEVICE BOXES SHALL BE MARKED WITH A PERMANENT MARKER.
12. THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION FOR THE CONTRACTOR TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER.
13. SHOP DRAWINGS (SUBMITTAL BOOKLET) SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, AND MANUFACTURER'S BROCHURES. SHOP DRAWINGS SHALL BE SUBMITTED FOR ITEMS LISTED IN THE FIRE ALARM SYMBOLS LIST. PARTIAL, INCOMPLETE, OR UNBOUND SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
14. 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 FORM EACH REPRESENTATIVE.

FIRE ALARM WIRING LEGEND

FIRE ALARM WIRE LIST

CIRCUIT DESCRIPTION		WIRE	SINGLE CONDUCTOR(THHN,TFFN)	PLENUM RATED: FPLP
M	MAPNET/IDNET CIRCUIT 1 PAIR 18 AWG TWISTED OVERALL SHIELD	SG ANIX./PAIGE 740215 AREA=0.0196 SQ. INCH ANIXTER PART NUMBER T740215		
V	VISUAL/SIGNAL CIRCUIT - 2 CONDUCTOR 12 AWG STRANDED	ANIXTER PART NUMBER FA-1202C-2-1N-03 AREA=0.0445 SQ. INCH	(2) #12 AWG AREA=0.0133 SQ. INCH (EACH)	
A	NOTIFICATION APPLIANCE CIRCUIT- 2 CONDUCTOR#14 STRANDED TWP	PAIGE PART NUMBER #75142MRN	(2) #14 AWG 0.210 NOM.O.D.	
B	RUI+ COMMUNICATION 1 PAIR 18 AWG UNSHIELDED TWISTED (SUBSCRIPT "u" IF MIXED w/SHIELDED)	SG ANIX./PAIGE 454703ARE AREA=0.0204 SQ. INCHANIXTER PART NUMBER FA-1802C-1-1N-		
P	POWER CIRCUIT 2 CONDUCTOR 14 AWG SOLID (SUBSCRIPT "r" IF RESETTABLE)	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	

CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH *	1-1/4"	0.60 SQ INCH *
3/4"	0.21 SQ INCH *	1-1/2"	0.82 SQ INCH *
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *

* 40% FILL PER C.E.C.

THE CABLES SPECIFIED HERE ARE FOR REFERENCE OF REQUIRED ELECTRICAL CHARCTERISTICS AS WELL AS CODE REQUIREMENTS. ALTERNATE SUPPLIERS MAY BE SUBSITITUTED PROVIDEING EQUIVALENT CHARACTERISTICS ARE MAINTAINED. ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THE SYSTEM INSTALLATION. REFERENCE HTTPS://WWW.ANIXTER.COM/CUSTOMER/TYCOFS FOR SG ANXTER CABLE DATA

SHEET LIST

FA0.1	FIRE ALARM LEGENDS & NOTES
FA0.2	FIRE ALARM RISER DIAGRAM
FA0.3	FIRE ALARM DETAILS
FA0.3.1	FIRE ALARM DETAILS
FA0.3.2	FIRE ALARM DETAILS
FA0.4	FIRE ALARM CALCULATIONS
FA2.1	FIRE ALARM PLAN

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO	C.S.F.M.
FACP	FIRE ALARM CONTROL PANEL	SIMPLEX	4100 9114	7165-0026:0251
ANN	LCD REMOTE ANNUNCIATOR	SIMPLEX	4603 9101	7120-0026:0179
SD	SMOKE DETECTOR SMOKE DETECTOR BASE	SIMPLEX	4098 9714 4098 9792	7272-0026:0218 7300-0026:0217
F	MANUAL PULL STATION	SIMPLEX	4099 9021	7150-0026:0224
15CD	HORN/STROBE (15CD) WALL	SIMPLEX	4906 9151	7320-0026:0247
75CD	HORN/STROBE (75CD) WALL	SIMPLEX	4906 9151	7320-0026:0247
15CD H	STROBE (15CD) WALL	SIMPLEX	4906 9101	7125-0026:0316
WP	WEATHER PROOF HORN/STROBE 15CD	SIMPLEX	4906 9131	7125-0026:0331
SDACT	SDACT - DIGITAL ALARM COMMUNICATING TRANSMITTER MODULE	SIMPLEX	4100 6052	7165-0026:0251
DIALER	DIALER CAPTURE MODULE	BOSCH	C900V2	7300-1615:0180

SEISMIC BRACING NOTES

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2013 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 6 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE 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 STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

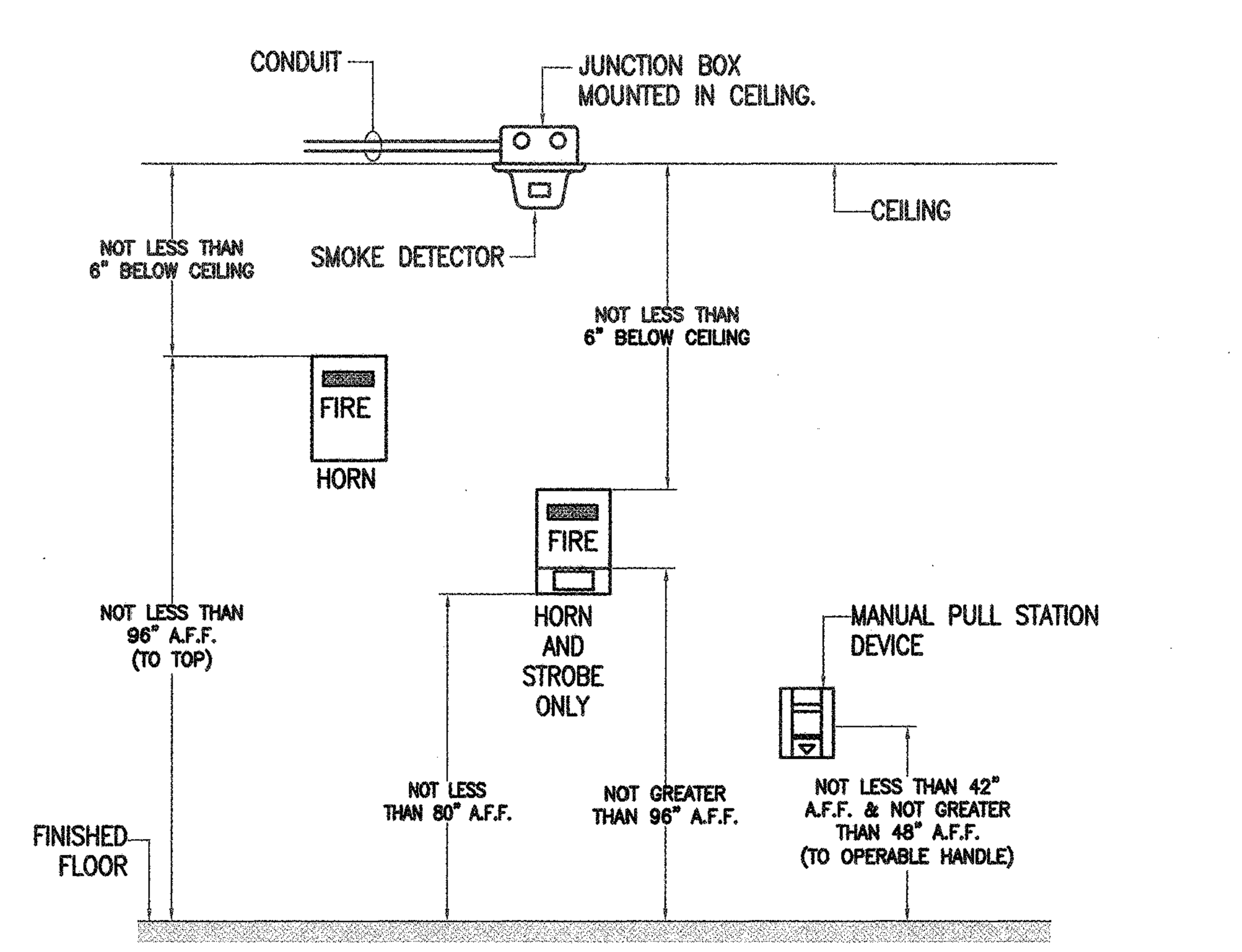
PIPING DUCTWORK. AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A1.25 AND 1616A.1.26.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE DSA PRE-APPROVALS (OPM#) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D. MASON INDUSTRIES OPM-0043-13.

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

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

F.A. DEVICE MOUNTING DETAIL



FIRE ALARM CABLE REQUIREMENTS

1. NOTIFICATION APPLIANCE CIRCUITS (STROBE, HORNS):
   a. 2#12 CU.THHN CONDUCTORS. STROBE/AUDIBLE CKT.
2. 24VDC POWER DISTRIBUTIVE CIRCUITS (MODULES AND DETECTORS WITH RELAY BASE):
   a. #12 CU.THHN CONDUCTORS.
3. ADDRESSABLE DEVICES CIRCUITS: (MODULES AND DETECTORS)
   a. (1) WESTPENN #D990 2/C #18 TWISTED SHIELDED PAIR CABLE.

REFER TO WIRE SCHEDULE THIS SHEET FOR DETAILED REQUIREMENTS.

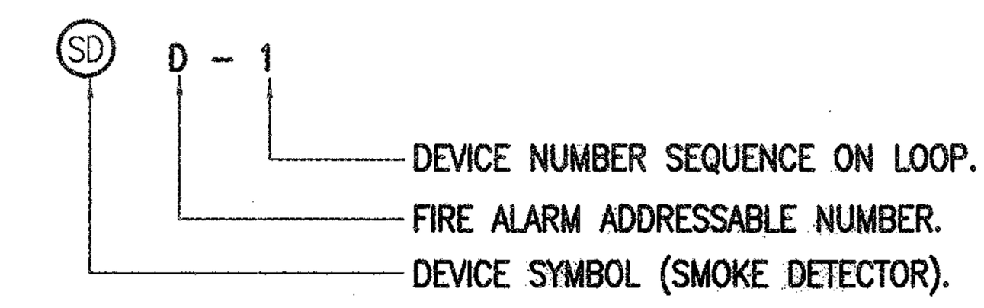
FIRE ALARM SCOPE OF WORK

PROJECT SHALL CONSIST OF INSTALLATION OF NEW FIRE ALARM CONTROL PANEL AND DEVICES AT NEW CAMPUS PUBLIC SAFETY BUILDING. FIRE ALARM SYSTEM BASED ON SIMPLEX 4100 FIRE ALARM CONTROL PANEL.

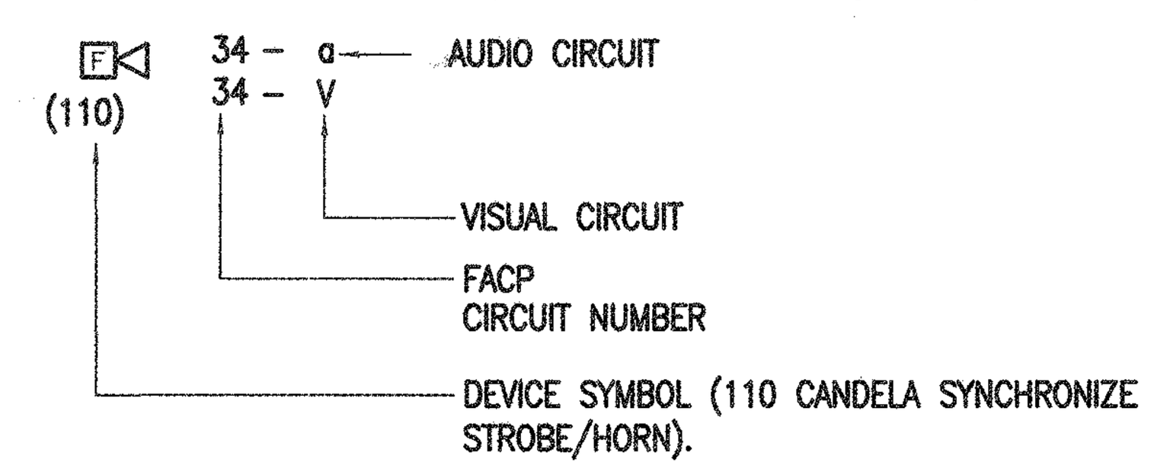
AT THE COMPLETION OF THE PROJECT. THE FIRE ALARM SYSTEM SHALL BE TESTED AND CERTIFIED, COORDINATE WITH FIRE INSPECTOR FOR CERTIFICATION REQUIREMENT.

FIRE ALARM DEVICE IDENTIFICATION

INITIATION DEVICE



NOTIFICATION APPLIANCE CIRCUIT DEVICE (N.A.C.)



WIRING METHOD:

A. SLC CIRCUIT (ADDRESSABLE ANALOG DEVICES), CLASS B.
B. SLC CIRCUIT (DATA, AUDIO) STYLE 7, CLASS A.
C. INITIATION CIRCUIT STYLE A OR B, CLASS B.
D. NOTIFICATION APPLIANCE CIRCUIT, STYLE Y, CLASS B.

FACP ALARM SEQUENCE OF OPERATION

DEVICE ACTION	MANUAL PULL STATION	ALARM AT REMOTE NETWORK FACP	AREA SMOKE & HEAT DETECTORS	DUCT DETECTOR (NOT USED)
ANNUNCIATE AT MAIN FACP & AT NETWORK ANNUNICATOR	YES	YES	YES	N/A
ANNUNCIATE AT CENTRAL STATION	YES	YES	YES	N/A
ALARM AT SECURITY PANEL	NO	YES *	NO	N/A
RELEASE DOOR LATCHES FOR SECURITY SYSTEM	YES	N/A	N/A	N/A
HVAC UNIT SHUT DOWN	NO	NO	YES	N/A
SMOKE/FIRE DAMPER SHUT DOWN	NO	NO	NO	N/A
PA SYSTEM BACKGROUND MUSIC SHUT DOWN	YES	YES	YES	N/A

NOTE: IF DEVICE/ACTION FUNCTION DOESN'T APPLY TO THE CURRENT PROJECT, INDICATE AS "N/A"
* ON SPRINKLER WATER FLOW ALARM ONLY
** AS SUPERVISORY ONLY

FIRE ALARM NOTES

1. ALL WIRING INITIATING DEVICE AND ANNUNCIATOR PANEL WIRING SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (F/A PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL CIRCUITS AND INITIATING DEVICES).
2. WIRING SHALL NOT BE LOOPED THROUGH DEVICES, WIRE MUST BE CUT FOR IN AND OUT. POINT AND COMMON ANNUNCIATION AND T-TAPPING PROHIBITED EXCEPTION:
3. "T" TAPPING IS ALLOWED FOR MAPNET COMMUNICATION LOOP CLASS "B" STYLE 4 WIRING ONLY. INITIATION CIRCUIT, CLASS B, STYLE B OR A. NOTIFICATION APPLIANCE CIRCUIT, CLASS "B" STYLE Y WIRING ONLY. ALL WIRING TO BE IN CONDUIT WITH SIZES AS INDICATED ON CONDUIT SCHEDULE. THE FIRE ALARM CONTROL PANEL IS NOT TO BE USED AS A TERMINAL CABINET. ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUMS CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS (IE. NO OF BENDS, ETC.) BUT SHALL NOT BE SMALLER THAN 3/4".
4. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS. ALL FIRE ALARM WIRING MUST ENTER AT THE TOP AND BOTTOM RIGHT OF THE FIRE ALARM CONTROL PANEL.
5. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
6. CONDUIT AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
7. PULL STATIONS SHALL BE MOUNTED PER DETAIL THIS SHEET PER NFPA-72 SECTION 17.14.5.
8. PENETRATIONS TO FIRE RATED ASSEMBLIES SHALL BE PROTECTED BY A UL APPROVED THROUGH-PENETRATION FIRE-STOP SYSTEM.
9. ALL CABLE SHIELDING SHALL BE ISOLATED FROM GROUND EXCEPT AT THE MFACP AND SHALL MAINTAIN CONTINUITY THROUGHOUT.
10. CHANGES TO SUGGEST WIRE TYPE AND ROUTE MUST BE APPROVED IN WRITING BY SIMPLEX SYSTEMS PRIOR TO USE.
11. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE.
12. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHALL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY DSA.
13. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY.
14. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO MANUFACTURERS SPECIFICATIONS.
15. AUDIBILITY OF ALARM AND VOICE COMMUNICATION SHALL BE NOT LESS THAN 15 dBA ABOVE ABIENT SOUND, BUT NOT LESS THAN 75 dBA, THROUGHOUT AREA OF ALARM.
16. AREAS HAVING MORE THAN 2 STROBES IN THE FIELD OF VIEW SHALL BE SYNCHRONIZED.
17. SMOKE DETECTORS AND HEAT DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH MAXIMUM HEIGHT OF 10 FEET UNLESS OTHERWISE NOTED.
18. STROBE LOCATION IS BASE ON 10 FOOT CEILING HEIGHT AND ARE INSTALLED ACCORDING TO NFPA 72 REQUIREMENTS UNLESS OTHERWISE NOTED.
19. WALL-MOUNTED STROBES SHALL HAVE THEIR BOTTOMS NOT LESS THAN 80 INCHES ABOVE FINISHED FLOOR AND NO GREATER THEN 96 INCHES ABOVE FINISHED FLOOR.
20. NO HORIZONTAL OR VERTICAL CONDUIT RUNS ARE PERMITTED IN CMU OR CONCRETE WALLS.
21. FIRE ALARM INSTALLER SHALL BE RESPONSIBLE FOR IDENTIFYING REQUIRED TESTING BY THE STATE FIRE MARSHAL AND LOCAL AUTHORITIES HAVING JURISDICTION (AHJ), COORDINATING, SCHEDULING, AND CONDUCTING TEST BEFORE SUBSTANTIAL COMPLETION.
22. FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AN APPROVED FIRE WATCH SERVICE WHERE A REQUIRED FIRE PROTECTION SYSTEM OUT OF SERVICE OR IMPAIRMENT DURING CONSTRUCTION. FIRE WATCH SERVICE SHALL BE PROVIDED UNTIL THE FIRE PROTECTION SYSTEM IS RETURNED TO SERVICE.
23. ALL CONDUIT SHALL BE CONNECTED WHERE AT ALL POSSIBLE.
24. ALL EXPOSED CONDUIT & PIPE TO BE PAINTED - COLOR PER ARCHITECT.

APPLICABLE CODES

2013 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2013 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R,
2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
2013 NFPA-72
2013 NFPA-101
TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

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REVISIONS

NO	REASON	DATE

SHEET TITLE

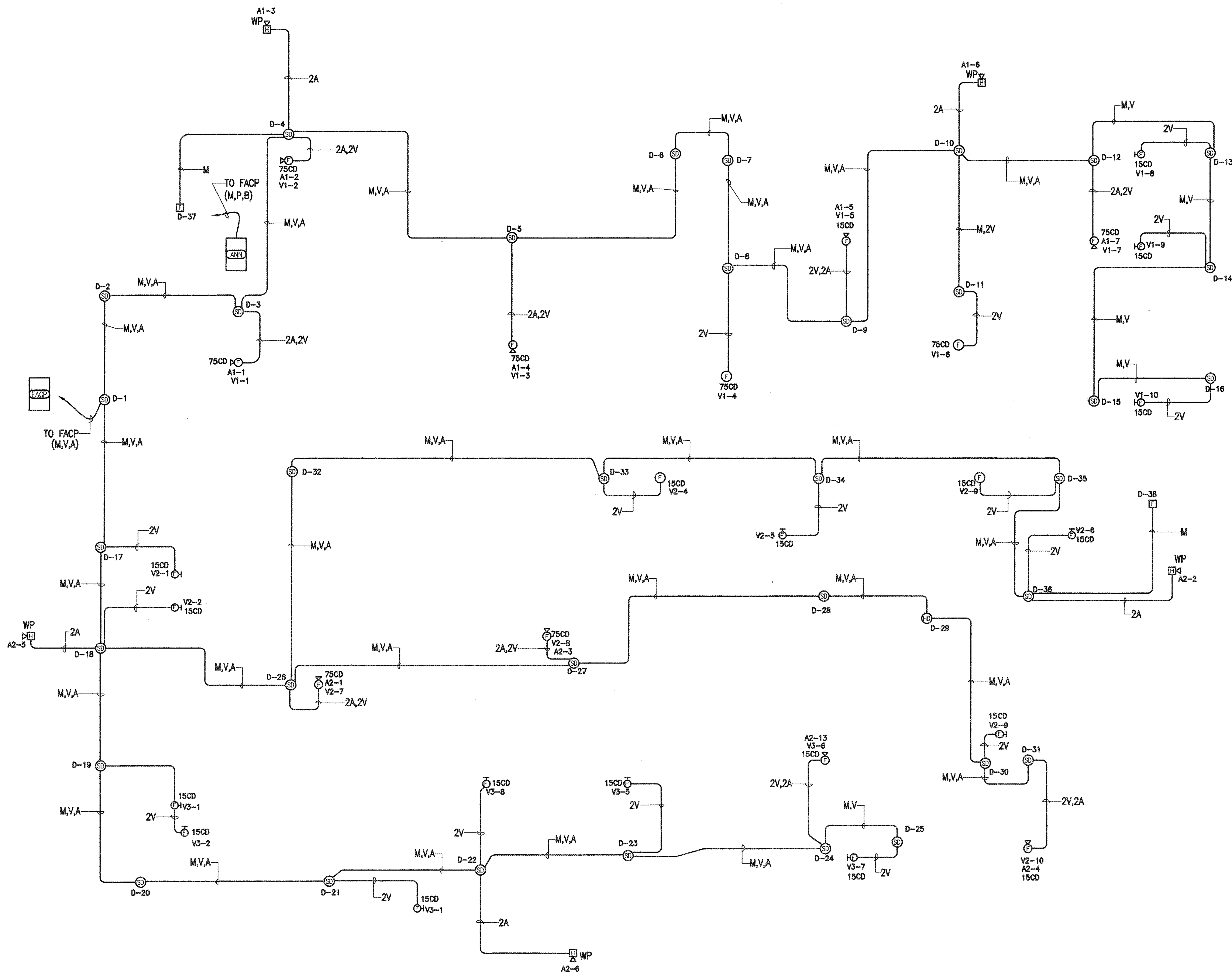
FIRE ALARM LEGENDS & NOTES

PROJECT NUMBER

913-4675-01

ISSUE DATE: 11/21/2017

SHEET NO: FA0.1



1 FIRE ALARM RISER DIAGRAM

N.T.S.

LITTLE

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T: 949.698.1400 F: 949.698.1433
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TEL: (626) 445-8590
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN

PROJECT MANAGER
-

DRAWN BY
dHA+CALPEC

NO	REASON	DATE

FIRE ALARM RISER DIAGRAM

913-4675-01

11/21/2017

FA0.2

4098-9792 STANDARD SENSOR BASE

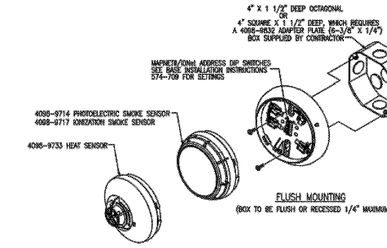
PRODUCT INFORMATION

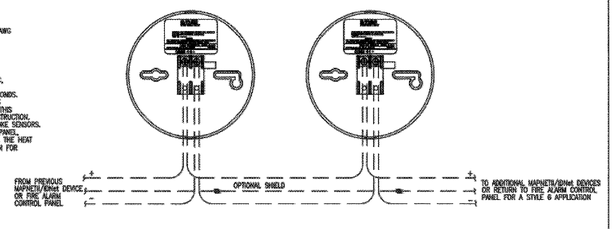
FEATURES:
- UL LISTED, FM APPROVED
- TRUEALARM ANALOG SENSING PROVIDES DIGITAL TRANSMISSION OF ANALOG SENSOR VALUES VIA MAPNET/II, OR ID/Net SLC TWO WIRE COMMUNICATIONS
- FIRE ALARM CONTROL PANEL PROVIDES:
  - –INDIVIDUAL SENSITIVITY SELECTION FOR EACH SENSOR
  - –PEAK VALUE LOGGING ALLOWING ACCURATE ANALYSIS FOR SENSITIVITY SELECTION
  - –AUTOMATIC ENVIRONMENTAL COMPENSATION
  - –DISPLAY OF SENSITIVITY IN PERCENT PER FOOT
  - –MULTISTAGE ALARM OPERATION
  - –ABILITY TO DISPLAY AND PRINT DETAILED SENSOR INFORMATION IN PLAIN ENGLISH LANGUAGE
- PHOTOELECTRIC SMOKE SENSOR 4098-9714: SEVEN LEVELS OF SENSITIVITY FROM 0.2% TO 3.7% X
- IONIZATION SMOKE SENSOR 4098-9717: FOUR LEVELS OF SENSITIVITY FROM 0.5% TO 1.7%.
- HEAT SENSOR 4098-9733:
  - –RATE-OF-RISE TEMPERATURE DETECTION IS SELECTABLE AT THE CONTROL PANEL FOR EITHER 15°F OR 20°F PER MINUTE
  - –FIXED TEMPERATURE SENSING IS INDEPENDENT OF RATE-OF-RISE AND PROGRAMMABLE TO OPERATE AT 135°F OR 155°F
  - –BUILDING HEAT SENSORS CAN BE PROGRAMMED AS A UTILITY DEVICE TO MONITOR FOR TEMPERATURE EXTREMES IN THE RANGE FROM 32° F TO 120° F.
- UL STANDARD SPACING:
  - –60 FT SPACING FOR 135° F
  - –40 FT SPACING FOR 155° F
- INTEGRAL RED LED FOR POWER-ON (PULSING), OR ALARM OR TROUBLE (STEADY ON)
- BASE MOUNTED ADDRESS SELECTION:
  - –ACCESSIBLE FROM FRONT (DIP SWITCH UNDER SENSOR)
  - –ADDRESS REMAINS WITH ITS PROGRAMMED LOCATION
- FOR USE WITH SIMPLEX 4010, 4100, 4020, AND 4120 SERIES CONTROL PANELS.
- MAXIMUM QUANTITY OF DEVICES:
  - –127 FOR 4020, 4100, 4120
  - –250 FOR 4010, 4100
- MOUNTING: CEILING OR WALL.
- COLOR : FROST WHITE
- BASE DIMENSIONS: 15/16" X 4-7/8"

SPECIFICATIONS:
- UL LISTED TEMPERATURE RANGE: 32°F TO 100°F
- OPERATING TEMPERATURE RANGE: 32°F TO 120°F
- HUMIDITY RANGE: 10% TO 93% RH
- PHOTOELECTRIC SENSOR AIR VELOCITY RANGE: 0–2000 FT/MIN
- IONIZATION SENSOR AIR VELOCITY RANGE: 0–300 FT/MIN
- WIRING CONNECTIONS: SCREW TERMINALS FOR IN/OUT WIRING, #18 TO #14 AWG
- COMMUNICATIONS: MAPNET/II/ID/Net SLC: 1 ADDRESS PER BASE
  VOLTAGE: (MAPNET/II/ID/Net SLC): 24–40VDC
  CURRENT: 400uA TYPICAL

DESCRIPTION:
TRUEALARM SENSOR BASES CONTAIN INTEGRAL ADDRESSABLE ELECTRONICS THAT CONSTANTLY MONITOR THE STATUS OF THE DETACHABLE PHOTOELECTRIC, IONIZATION, OR HEAT SENSORS. EACH SENSOR'S OUTPUT IS DIGITIZED AND TRANSMITTED TO THE SYSTEM FIRE ALARM CONTROL PANEL EVERY FOUR SECONDS. SINCE TRUEALARM SENSORS USE THE SAME BASE, DIFFERENT SENSOR TYPES CAN BE EASILY INTERCHANGED TO MEET SPECIFIC LOCATION REQUIREMENTS. THIS FEATURE ALLOWS INTENTIONAL SENSOR SUBSTITUTION DURING BUILDING CONSTRUCTION, WHEN CONDITIONS ARE TEMPORARILY DUSTY, INSTEAD OF COVERING THE SMOKE SENSORS. HEAT SENSORS MAY BE INSTALLED WITHOUT REPROGRAMMING THE CONTROL PANEL. ALTHOUGH THE CONTROL PANEL WILL INDICATE AN INCORRECT SENSOR TYPE, THE HEAT SENSOR WILL OPERATE AS A DEFAULT SENSITIVITY PROVIDING HEAT DETECTION FOR BUILDING PROTECTION AT THAT LOCATION.

WIRING:
1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY.
4. MAPNET/II/ID/Net SLC WIRING TO BE #18 AWG TWISTED SHIELDED PAIR.
5. IF SHIELD IS PRESENT, CONNECT TO THE OUTGOING ID/Net SLC SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE ID/Net SLC CHANNEL. METHOD OF SPLICE DETERMINED BY AHJ.
6. REFER TO INSTALLATION INSTRUCTIONS (574–707)
7. REFER TO APPLICATION MANUAL (574–708)



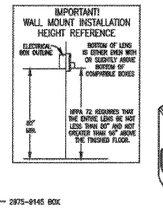


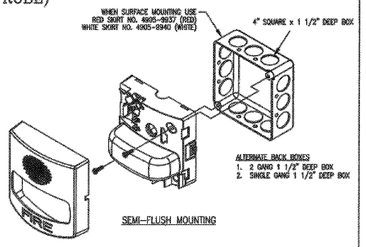
TrueAlert™ NON–ADDRESSABLE MULTI–CANDELA AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (ELECTRONIC HORN W/STROBE)

PRODUCT INFORMATION

FEATURES:
- CLASS B (STYLE Y) OPERATION REQUIRES CONNECTION TO A COMPATIBLE SMARTSYNC HNC OR TO SMARTSYNC CONTROL MODULE (SCM) 4905–9938
- CLASS A (STYLE Z) OPERATION WHEN CONNECTED TO THE 4906–9933 SCM OR 4100U SERIES FIRE ALARM CONTROL PANEL HNC'S

SPECIFICATIONS:
- HOUSING DIMENSIONS (INCLUDING LENS) : 5 1/8"H X 5" W X 2 3/4"D
- TEMPERATURE RANGE: 32° F TO 122° F (0° TO 50° C)
- HUMIDITY RANGE: 10% TO 93% NON–CONDENSING AT 100° F (38° C)
- TERMINAL BLOCKS FOR 18 AWG TO 12 AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.





HORN
– SOUND OUTPUT CHARACTERISTICS: 2400 TO 3700 Hz SWEEP, MODULATED AT 120 Hz RATE

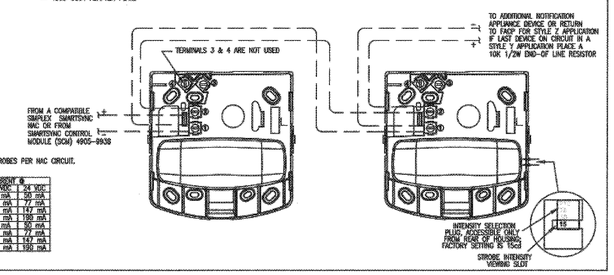
HORN SOUND OUTPUT RATINGS @ 10 FT. (3m)						
VOLTAGE	16 VDC		24 VDC		33 VDC	
SOUND TYPE *	STEADY	CODED	STEADY	CODED	STEADY	CODED
REVERBERANT CHAMBER UL 464 TEST	86 dBA	82 dBA	88 dBA	84 dBA	90 dBA	86 dBA
ANECHOIC CHAMBER	92 dBA	91 dBA	94 dBA	95 dBA	96 dBA	96 dBA

* CODED VALUES ARE TYPICAL OF THE OUTPUT MEASURED WITH A TEMPORAL CODED OR A MARCH TIME CODED PULSE AND WITH A SOUND LEVEL METER READING ON A "FAST" SETTING. UNDER THE SAME TEST CONDITIONS, CODED HORN OUTPUT "PEAK" SOUND LEVEL READINGS ARE TYPICALLY 4 dBA HIGHER.

STROBE
– RATED VOLTAGE RANGE: UL: REGULATED 24VDC PER UL 1971
  ULC: 20VDC TO 30VDC PER ULC S526–M878
– FLASH RATE: 1Hz
– SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING AND HORN ON.

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	NAC CURRENT @ 16 VDC*	NAC CURRENT @ 24 VDC*
4906–9127	RED	WHITE	15cd	75 mA	97 mA	120 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	195 mA	147 mA
			110cd	285 mA	253 mA	190 mA
4906–9128	WHITE	RED	15cd	75 mA	97 mA	120 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	195 mA	147 mA
			110cd	285 mA	253 mA	190 mA



4099–9021 SINGLE ACTION NO GRIP IDNet SLC ADDRESSABLE MANUAL STATION

PRODUCT INFORMATION

FEATURES:
- UL LISTED
- SINGLE ACTION, NO GRIP, ID/Net SLC ADDRESSABLE
- PULL LEVER PROTRUDES WHEN ALARMED
- LED INDICATOR FLASHES DURING COMMUNICATION
- TAMPER RESISTANT RESET KEY LOCK
- MOUNTING: SEMI–FLUSH, SURFACE
- OPERATING TEMPERATURE RANGE: 32 – 120° F
- OPERATING HUMIDITY RANGE: 0 – 93% RH
- ADAPTER PLATES 2099–9813 OR 2099–9814 CAN BE USE FOR RETROFIT APPLICATIONS.
- 5" HIGH X 3 3/4" WIDE X 1" DEEP
- SCREW TERMINALS FOR 18 TO 14 AWG WIRE
- ADDRESSED BY MEANS OF AN 8 POSITION DIP SWITCH
- COMPATIBLE WITH ID/Net SLC/AMPNET

OPERATION:
ACTUATION:
4099–9021 NO GRIP SINGLE ACTION STATION PROVIDES A MORE EASILY ACTUATED PULL LEVER FOR ANTICIPATED USERS MAY FIND THE STANDARD STATION LEVER DIFFICULT TO ACTUATE. COMPLETING THIS ACTION BREAKS AN INTERNAL PLASTIC BREAK–ROD THAT IS VISIBLE BELOW THE PULL LEVER (USE OF PLASTIC ROD IS OPTIONAL). THE PULL LEVEL LATCHES INTO THE ALARM POSITION AND REMAINS EXTENDED OUT OF THE HOUSING TO PROVIDE A VISIBLE INDICATION.

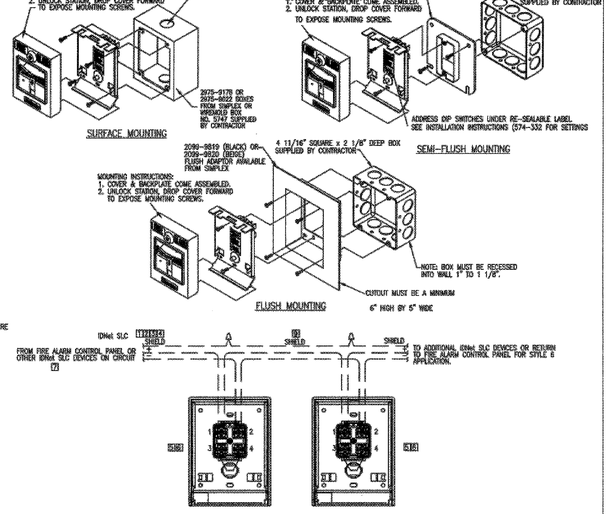
RESETTING:
4099–9021 SINGLE ACTION STATION REQUIRES A KEY TO RESET THE ACTIVATION LEVER AND DEACTIVATE THE ALARM SWITCH. (IF OPTIONAL PLASTIC BREAK ROD WAS USED IT MUST BE REPLACED)

CONSTRUCTION:
STATION HOUSING AND PULL LEVER ARE CONSTRUCTED OF CHIP RESISTANT AND DIRT RESISTANT, HIGH IMPACT LEXAN.
HOUSING IS RED WITH RAISED WHITE LETTERING AND PULL LEVER IS WHITE WITH RED RAISED LETTERING.
* LEXAN IS A REGISTERED TRADEMARK OF THE GENERAL ELECTRIC CO.

APPLICATION:
PULL STATIONS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND ADA GUIDE LINES.

INTRODUCTION:
THE 4099–9021 ADDRESSABLE PULL STATION PROVIDES TWO–STATE STATUS INFORMATION (NORMAL AND SHORT) TO THE ID/Net SLC COMPARABLE FIRE ALARM CONTROL PANEL (FACP) VIA THE ID/Net SLC CHANNEL. THE ID/Net SLC CHANNEL PROVIDES THE COMMUNICATION LINK BETWEEN PULL STATION AND THE FACP AND POWERS THE ENTIRE CIRCUITRY.

WIRING:
1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY
4. ID/Net SLC LINES ARE TO BE 18 AWG TWISTED SHIELDED PAIR
5. MAXIMUM LINE RUN FROM PANEL TO FARTHEST DEVICE NOT TO EXCEED 2500 FEET.
6. MAXIMUM TOTAL WIRE (INCLUDING ALL T–TAPS) FROM PANEL NOT TO EXCEED 10,000 FEET.
7. MAXIMUM QUANTITY OF DEVICES PER CIRCUIT: 250
8. TERMINALS 1 AND 2 FOR FIELD WIRING. TERMINALS 3 AND 4 ARE FACTORY WIRING.
9. WIRE NUT, SPLICE, OR SOLDER THE SHIELD WIRES.
10. IF SHIELD IS PRESENT, IT SHOULD BE CONNECTED TO THE OUTGOING ID/Net SLC SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE ID/Net SLC CHANNEL. SHIELD SHOULD BE INSULATED FROM THE ELECTRICAL BOX.
11. SEE INSTALLATION INSTRUCTIONS 574–332



TrueAlert™ NON–ADDRESSABLE MULTI–CANDELA VISIBLE NOTIFICATION APPLIANCE (WALL MOUNT)

PRODUCT INFORMATION

FEATURES:
- UL LISTED TO STANDARD 1971
- HNA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:
- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL HAC INPUTS

SPECIFICATIONS:
- HOUSING DIMENSIONS: 5–1/8" H X 5" W X 2–3/4" D (130mm X 127mm X 70mm)
- TEMPERATURE RANGE: 32°F TO 122°F (0 TO 50°C)
- HUMIDITY RANGE: 10% TO 93% NON–CONDENSING AT 100°F (38°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

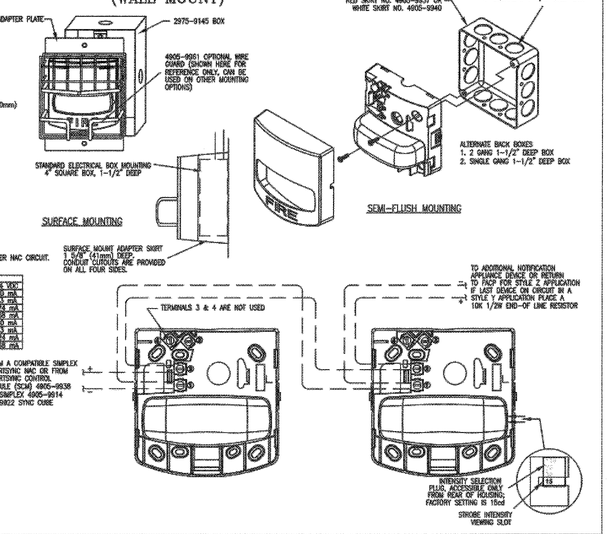
WIRING:
1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER–LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579–548) FOR ADDITIONAL INFORMATION.

STROBE:
- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971
  ULC LISTED: 20 VDC TO 30 VDC PER ULC S526–M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	NAC CURRENT @ UL 1971 RATINGS @ 32°F TO 122°F (0°C TO 50°C) 16 VDC*	24 VDC*	33 VDC*
4906–9101	RED	WHITE	15cd	60 mA	53 mA	49 mA
			30cd	94 mA	84 mA	74 mA
			75cd	186 mA	165 mA	144 mA
			110cd	252 mA	224 mA	198 mA
4906–9103	WHITE	RED	15cd	61 mA	53 mA	47 mA
			30cd	97 mA	83 mA	69 mA
			75cd	186 mA	165 mA	144 mA
			110cd	252 mA	224 mA	198 mA

	UL 1638 RATINGS @ 32°F TO 122°F (0°C TO 50°C) 16 VDC*	24 VDC*	33 VDC*
WP75cd	209 mA	182 mA	137 mA
	UL 1638 RATINGS @ –31°F TO 150°F (–35°C TO 66°C) 16 VDC*	24 VDC*	33 VDC*
WP75cd	277 mA	246 mA	185 mA



TrueAlert™ NON–ADDRESSABLE MULTI–CANDELA AUDIBLE/VISIBLE NOTIFICATION APPLIANCE WEATHERPROOF

PRODUCT INFORMATION

FEATURES:
- UL LISTED TO STANDARD 1971 FOR INDOOR APPLICATIONS WITH SELECTABLE STROBE INTENSITY SETTINGS
- UL LISTED TO STANDARD 1638 FOR OUTDOOR APPLICATIONS
- UL LISTED TO STANDARD 464
- INDOOR APPLICATIONS ARE ADA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:
- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL HAC INPUTS

SPECIFICATIONS:
- HOUSING DIMENSIONS: 5–1/8" H X 5" W X 2–3/4" D (130mm X 127mm X 70mm)
- UL 1971 LISTED TEMPERATURE RANGE: 32°F TO 122°F (0°C TO 50°C)
- UL 1638 LISTED TEMPERATURE RANGE: –31°F TO 150°F (–35°C TO 66°C)
- UL 464 LISTED TEMPERATURE RANGE: 32°F TO 122°F (0°C TO 50°C)
- UL 1971 LISTED HUMIDITY RANGE: 10% TO 93% NON–CONDENSING AT 100°F (38°C)
- UL 1638 LISTED HUMIDITY RANGE: UP TO 85% AT 104°F (40°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

WIRING:
1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER–LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579–857) FOR ADDITIONAL INFORMATION.

AUDIBLE:
- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 464

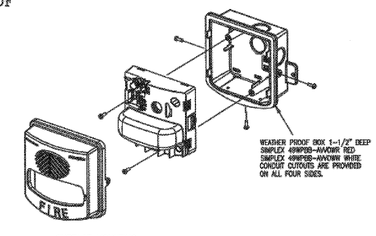
HORN OUTPUT

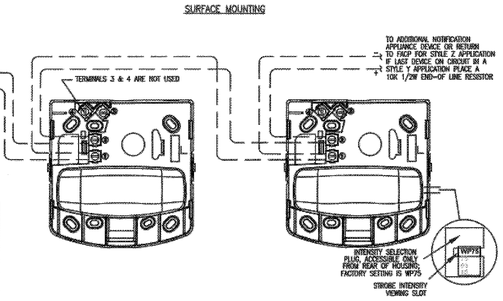
CHAMBER	16 VDC STEADY	16 VDC CODED	24 VDC STEADY	24 VDC CODED	33 VDC STEADY	33 VDC CODED
REVERBERANT	81 DBA	76 DBA	84 DBA	79 DBA	86 DBA	82 DBA
ANECHOIC	96 DBA	93 DBA	99 DBA	96 DBA	101 DBA	98 DBA

STROBE:
- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971, UL 1638 AND UL 464
- FLASH RATE: 1Hz
- NAC LOADING: MAXIMUM OF 24 STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING WITH AUDIBLE ON

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	UL 1971 RATINGS @ 32°F TO 122°F (0°C TO 50°C) 16 VDC*	24 VDC*	33 VDC*
4906–9131	RED	WHITE	15cd	61 mA	53 mA	47 mA
4906–9132	WHITE	RED	30cd	97 mA	83 mA	69 mA
			75cd	186 mA	165 mA	144 mA
				UL 1638 RATINGS @ 32°F TO 122°F (0°C TO 50°C) 16 VDC*	24 VDC*	33 VDC*
			WP75cd	209 mA	182 mA	137 mA
				UL 1638 RATINGS @ –31°F TO 150°F (–35°C TO 66°C) 16 VDC*	24 VDC*	33 VDC*
			WP75cd	277 mA	246 mA	185 mA





LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER ANDREW H. HILD E–13984 Exp. 06/30/19 ELECTRICAL STATE OF CALIFORNIA

SHEET TITLE
FIRE ALARM DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/16
SHEET NO FA0.3

TrueAlert™ NON-ADDRESSABLE MULTI-CANDELA AUDIBLE/VISIBLE NOTIFICATION APPLIANCE

(ELECTRONIC HORN W/STROBE)

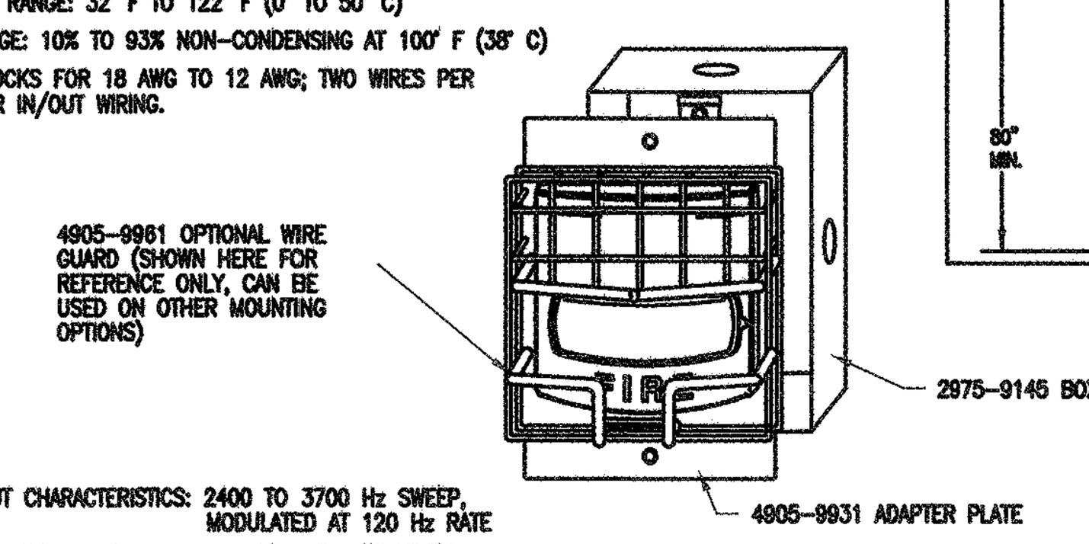
PRODUCT INFORMATION

FEATURES:

- CLASS B (STYLE Y) OPERATION REQUIRES CONNECTION TO A COMPATIBLE SMARTSYNC NAC OR TO SMARTSYNC CONTROL MODULE (SCM) 4905-9938
- CLASS A (STYLE Z) OPERATION WHEN CONNECTED TO THE 4905-9938 SCM OR 4100U SERIES FIRE ALARM CONTROL PANEL NAC'S

SPECIFICATIONS:

- HOUSING DIMENSIONS (INCLUDING LENS) : 5 1/8"H X 5" W X 2 3/4"D
- TEMPERATURE RANGE: 32° F TO 122° F (0° TO 50° C)
- HUMIDITY RANGE: 10% TO 93% NON-CONDENSING AT 100° F (38° C)
- TERMINAL BLOCKS FOR 18 AWG TO 12 AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.



HORN

- SOUND OUTPUT CHARACTERISTICS: 2400 TO 3700 Hz SWEEP, MODULATED AT 120 Hz RATE

HORN SOUND OUTPUT RATINGS @ 10 FT. (3m)						
VOLTAGE	16 VDC		24 VDC		33 VDC	
SOUND TYPE *	STEADY	CODED	STEADY	CODED	STEADY	CODED
REVERBERATE CHAMBER UL 464 TEST	86 dBA	82 dBA	88 dBA	84 dBA	90 dBA	86 dBA
ANECHOIC CHAMBER	92 dBA	91 dBA	94 dBA	95 dBA	96 dBA	96 dBA

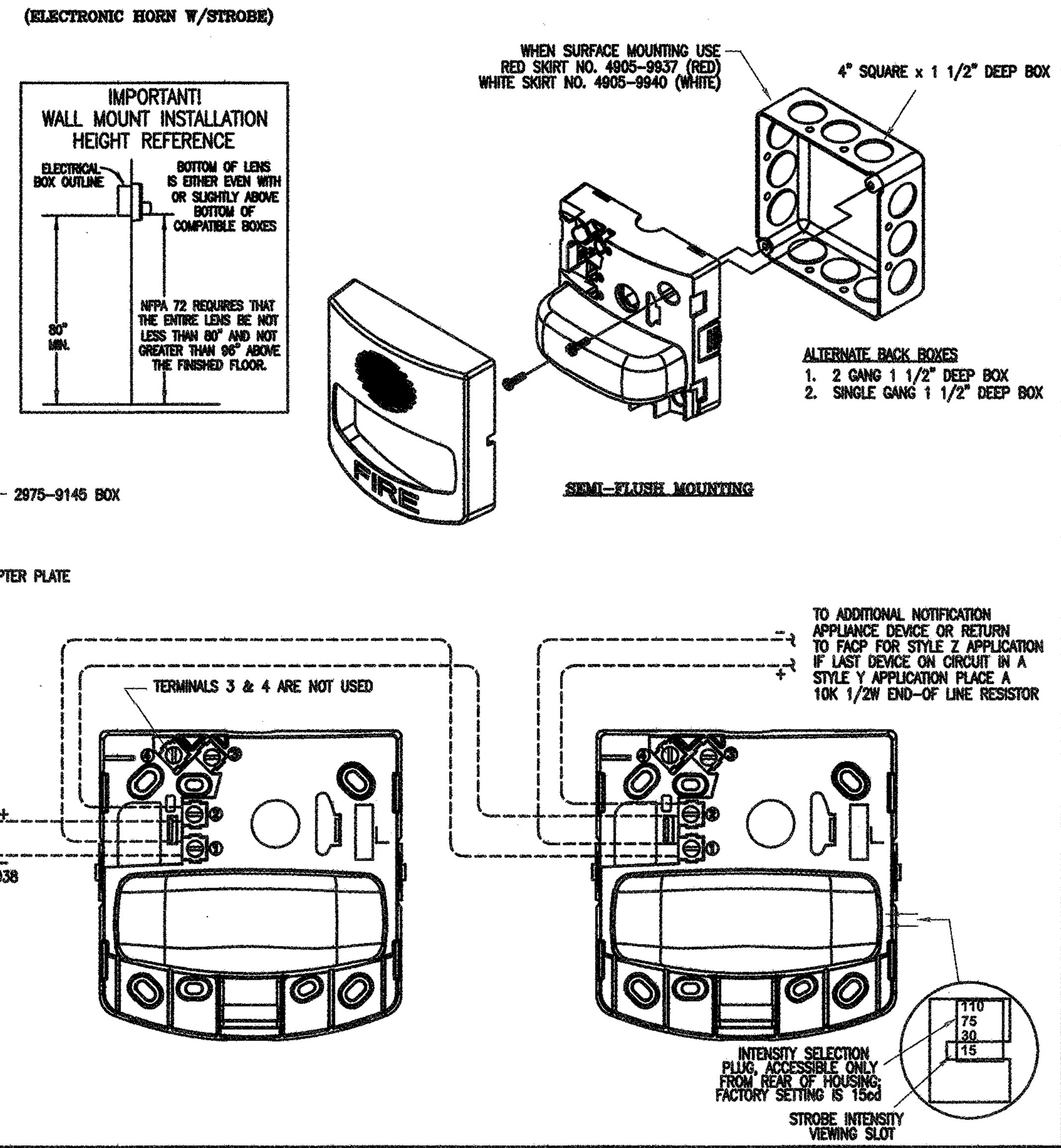
* CODED VALUES ARE TYPICAL OF THE OUTPUT MEASURED WITH A TEMPORAL CODED OR A MARCH TIME CODED PULSE AND WITH A SOUND LEVEL METER READING ON A "FAST" SETTING. UNDER THE SAME TEST CONDITIONS, CODED HORN OUTPUT "PEAK" SOUND LEVEL READINGS ARE TYPICALLY 4 dBA HIGHER.

STROBE

- RATED VOLTAGE RANGE: UL: REGULATED 24VDC PER UL 1971
  ULC: 20VDC TO 30VDC PER ULC S526-M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING AND HORN ON.

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT @ 16 VDC	18 VDC	24 VDC
4906-9127	RED	WHITE	15cd	75 mA	67 mA	50 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	196 mA	147 mA
			110cd	285 mA	253 mA	190 mA
4906-9129	WHITE	RED	15cd	75 mA	67 mA	50 mA
			30cd	116 mA	103 mA	77 mA
			75cd	221 mA	196 mA	147 mA
			110cd	285 mA	253 mA	190 mA



4603-9101 REMOTE ANNUNCIATOR

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- FM APPROVED
- FLUSH MOUNT ON STANDARD ELECTRICAL BOXES

SPECIFICATIONS:

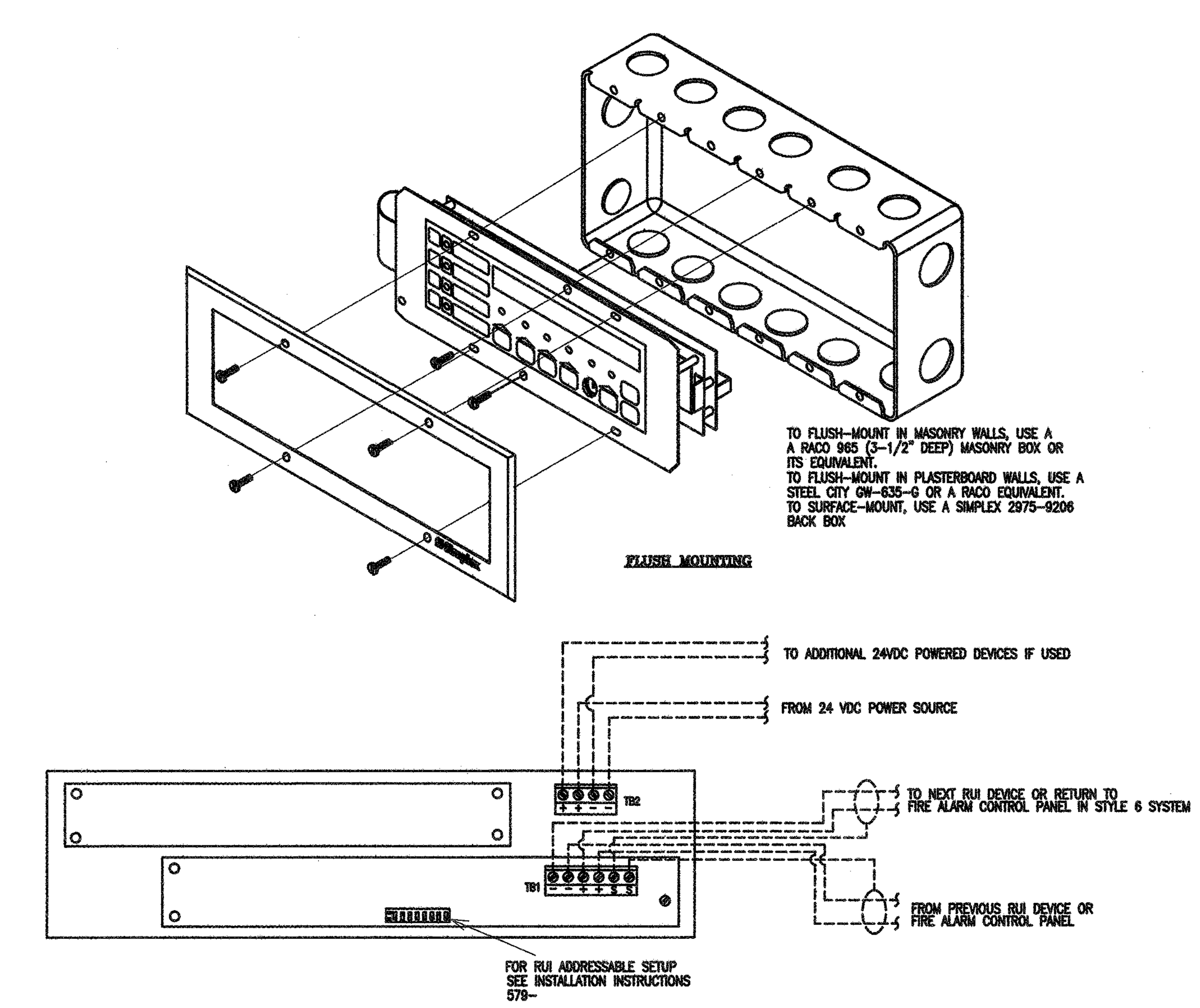
- VOLTAGE: 24VDC NOMINAL
- CURRENT: ALARM 140mA
  SUPERVISORY 65mA
- OPERATING TEMPERATURE: 32° F TO 120° F
- HUMIDITY RANGE: 10% TO 90% RH FROM 32° F TO 104° F
- STANDARD TRIM: BEIGE (SUPPLIED WITH BOTH SLOTTED AND TAMPERPROOF SCREWS)

OPTIONS

- BRUSHED ALUMINUM TRIM: 4603-9111
- SURFACE BOX: 2975-9206
- DIMENSIONS 11 31/32"L X 4 5/8" W X 2 3/4"D
- FINISH: LIGHT BROWN ENAMEL

NOTES:

1. ALL WIRING TO BE No. 18 AWG OR TO LOCAL CODE.
2. ALL WIRING SUPERVISED
3. WIRE TO BE 18 AWG TWISTED SHIELDED PAIR RECOMMENDED CONSULT SALES ENGINEERING FOR EXCEPTIONS.
   2500 FT ONE WAY MAX COMMUNICATION LINE POWER
   32 VDC MAX
   130 mA MAX
   1200 OR 9600 BAUD
4. WHEN WIRING LEAVES THE BUILDING, OVER VOLTAGE PROTECTORS ARE REQUIRED; USE 2081-9044 ONE IS INSTALLED WHERE IT LEAVE THE BUILDING AND ONE WHERE IT ENTERS THE NEXT BUILDING. TWO 2081-9044 (MAX)



WHEELOCK MODEL MB-G6-24-R SERIES BELLS

(SIMPLEX 4901-9303)

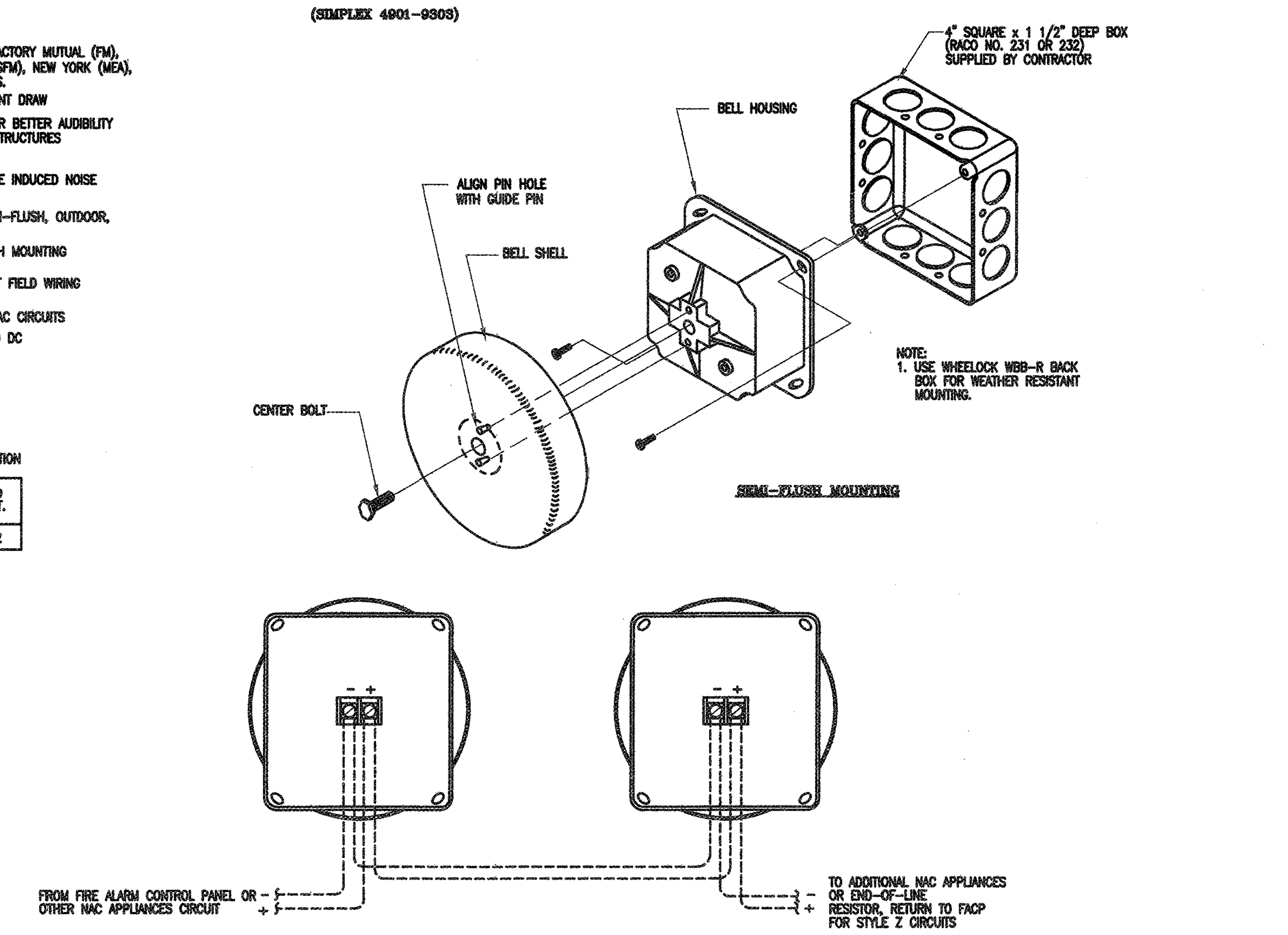
PRODUCT INFORMATION

FEATURES:

- APPROVALS INCLUDE:
  - UNDERWRITERS LABORATORIES UL, FACTORY MUTUAL (FM), CALIFORNIA STATE FIRE MARSHAL (CSFM), NEW YORK (MEA), AND CHICAGO (BFP) ON ALL MODELS.
- HIGH SOUND OUTPUT WITH LOW CURRENT DRAW
- LOW FREQUENCY ALUMINUM SHELLS FOR BETTER AUDIBILITY THROUGH WALLS, DOORS AND OTHER STRUCTURES
- 6" SHELL SIZE
- INTEGRAL RFI SUPPRESSION TO MINIMIZE INDUCED NOISE ON THE NAC CIRCUITS
- MOUNTING OPTIONS FOR SURFACE, SEMI-FLUSH, OUTDOOR, AND CONCEALED CONDUIT INSTALLATION
- BUILT-IN TRIMPLATE MAKES SEMI-FLUSH MOUNTING EASIER AND LESS EXPENSIVE
- SCREW TERMINALS PERMIT FAST IN-OUT FIELD WIRING OF #12 TO #18 AWG WIRE
- POLARIZED FOR DC SUPERVISION OF NAC CIRCUITS
- OPERATES ON FILTERED OR UNFILTERED DC

SPECIFICATIONS AND ORDERING INFORMATION

SHELL SIZE	INPUT VOLTAGE (VDC)	INPUT CURRENT	dBA @ 10 FT.
6 INCH	24	0.030	92



4099-9021 SINGLE ACTION NO GRIP IDNet SLC ADDRESSABLE MANUAL STATION

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- SINGLE ACTION, NO GRIP, IDNet SLC ADDRESSABLE
- PULL LEVEL PROTRUDES WHEN ALARMED
- LED INDICATOR FLASHES DURING COMMUNICATION
- TAMPER RESISTANT RESET KEY LOCK
- MOUNTING: SEMI-FLUSH, SURFACE
- OPERATING TEMPERATURE RANGE: 32 – 120° F
- OPERATING HUMIDITY RANGE: 0 – 93% RH
- ADAPTER PLATES 2099-9813 OR 2099-9814 CAN BE USE FOR RETROFIT APPLICATIONS.
- 5" HIGH X 3 3/4" WIDE X 1" DEEP
- SCREW TERMINALS FOR 18 TO 14 AWG WIRE
- ADDRESSED BY MEANS OF AN 8 POSITION DIP SWITCH
- COMPATIBLE WITH IDNet SLC/MAPNET

OPERATION:

ACTIVATION:
4099-9021 NO GRIP SINGLE ACTION STATION PROVIDES A MORE EASILY ACTIVATED PULL LEVER FOR ANTICIPATED USERS MAY FIND THE STANDARD STATION LEVER DIFFICULT TO ACTIVATE. COMPLETING THIS ACTION BREAKS AN INTERNAL PLASTIC BREAK-ROD THAT IS VISIBLE BELOW THE PULL LEVER (USE OF PLASTIC ROD IS OPTIONAL). THE PULL LEVEL LATCHES INTO THE ALARM POSITION AND REMAINS EXTENDED OUT OF THE HOUSING TO PROVIDE A VISIBLE INDICATION.

RESETTING
4099-9021 SINGLE ACTION STATION REQUIRES A KEY TO RESET THE ACTIVATION LEVER AND DEACTIVATE THE ALARM SWITCH. (IF OPTIONAL PLASTIC BREAK ROD WAS USED IT MUST BE REPLACED)

CONSTRUCTION:

STATION HOUSING AND PULL LEVER ARE CONSTRUCTED OF CHIP RESISTANT AND DIRT RESISTANT, HIGH IMPACT LEXAN.
HOUSING IS RED WITH RAISED WHITE LETTERING AND PULL LEVER IS WHITE WITH RED RAISED LETTERING.
* LEXAN IS A REGISTERED TRADEMARK OF THE GENERAL ELECTRIC CO.

APPLICATION:

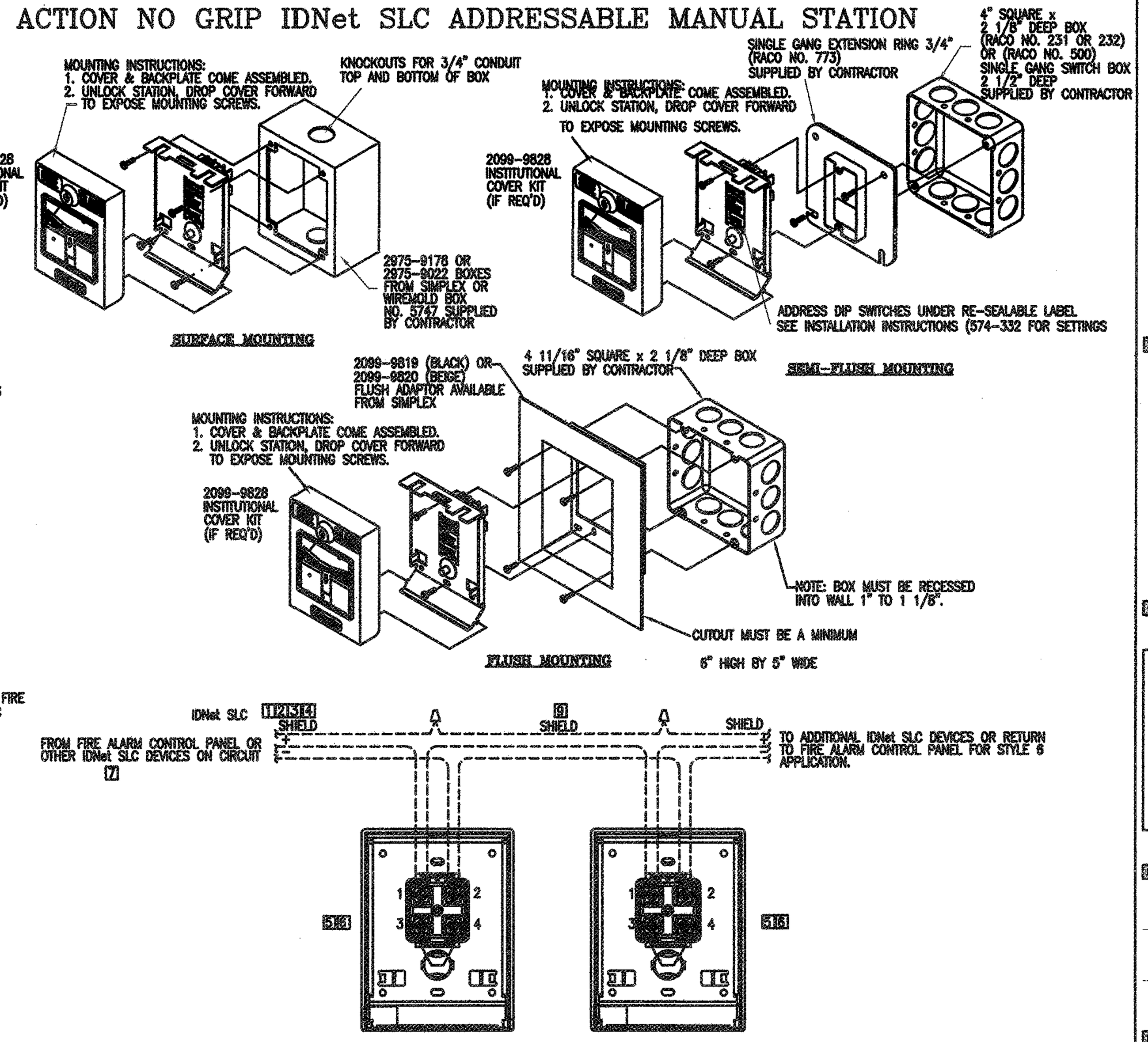
PULL STATIONS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND ADA GUIDE LINES.

INTRODUCTION:

THE 4099-9021 ADDRESSABLE PULL STATION PROVIDES TWO-STATE STATUS INFORMATION (NORMAL AND SHORT) TO THE IDNet SLC COMPATIBLE FIRE ALARM CONTROL PANEL (FACP) VIA THE IDNet SLC CHANNEL. THE IDNet SLC CHANNEL PROVIDES THE COMMUNICATION LINK BETWEEN PULL STATION AND THE FACP AND POWERS THE ENTIRE CIRCUITRY.

WIRING:

1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY
4. IDNet SLC LINES ARE TO BE 18 AWG TWISTED SHIELDED PAIR
5. MAXIMUM LINE RUN FROM PANEL TO FARTHEST DEVICE NOT TO EXCEED 2500 FEET.
6. MAXIMUM TOTAL WIRE (INCLUDING ALL T-TAPS) FROM PANEL NOT TO EXCEED 10,000 FEET.
7. MAXIMUM QUANTITY OF DEVICES PER CIRCUIT: 250
8. TERMINALS 1 AND 2 FOR FIELD WIRING. TERMINALS 3 AND 4 ARE FACTORY WIRING.
9. WIRE NUT, SPLICE, OR SOLDER THE SHIELD WIRES.
10. IF SHIELD IS PRESENT, IT SHOULD BE CONNECTED TO THE OUTGOING IDNet SLC SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet SLC CHANNEL. SHIELD SHOULD BE INSULATED FROM THE ELECTRICAL BOX.
11. SEE INSTALLATION INSTRUCTIONS 574-332



4100ES BACKBOX INSTALLATION

INSTRUCTIONS

1. REMOVE ELECTRONIC CARD CAGE (IF PRESENT) AND STORE IT IN A SAFE DRY AREA.
2. NO KNOCKOUTS PROVIDED. CUT CONDUIT/SERVICE ENTRANCE OPENINGS. REFER TO FIG.1 FOR PROPER LOCATIONS. CONDUIT PROTRUSION INTO BOX 1/2" MAX.
3. MOUNT BOX TO WALL: BOX MUST BE LEVEL AND PLUMB.
   FOR SURFACE MOUNT USE TEAR DROP AND CLEARANCE HOLES ON BACK SURFACE.
   FOR SEMI-FLUSH MOUNT: USE WALL STUD GUIDES FOR MAXIMUM ALLOWABLE BOX DEPTH TO PROVIDE OPEN DOOR CLEARANCE.
   USE KNOCKOUTS ON SIDE WALL, SCREW OR NAIL BOX TO WALL STUDS.
4. MINIMUM DISTANCE BETWEEN ANY TWO BOXES IS 3 1/4" (6" MAXIMUM).
5. IF PRESENT, USE WIRE MANAGEMENT BRACKETS ON BOX SIDES TO SECURE WIRE RUNS.
6. NEMA RATING: NEMA 1 – GENERAL PURPOSE.
7. DO NOT LOCATE POWER-LIMITED WIRING IN THE SHADED AREAS OF THE BACKBOX, THIS AREA IS RESERVED FOR NON-POWER LIMITED CIRCUITRY SUCH AS AC POWER, BATTERIES AND CITY CONNECTION.
8. REFER TO SIMPLEX BACKBOX INSTALLATION DOCUMENT 579-117 FOR DETAILED INSTRUCTIONS.

NOTE: ADA REQUIREMENTS LIMIT THE ALLOWABLE PROTRUSION OF OBJECTS MOUNTED IN PUBLIC ACCESSIBLE WALKS, HALLS, CORRIDORS, PASSAGEWAYS OR AISLES. THE 4 INCH (100mm) RESTRICTION APPLIES TO ANY ITEM IN WHICH THE MEASUREMENT FROM THE FLOOR TO THE BOTTOM OF THE UNIT IS MORE THAN 27 INCHES.

PKG. SIZE	PID NUMBER	BOX HEIGHT
~~1 BAY~~	~~2975-9407~~	~~22"~~
~~2 BAY~~	~~2975-9408~~	~~40"~~
3 BAY	2975-9409	56"
~~1 BAY~~	~~2975-9410~~	~~22"~~
~~2 BAY~~	~~2975-9411~~	~~40"~~
~~3 BAY~~	~~2975-9412~~	~~56"~~
~~1 BAY~~	~~2975-9438~~	~~22"~~
~~2 BAY~~	~~2975-9439~~	~~40"~~
~~3 BAY~~	~~2975-9440~~	~~56"~~

TYPICAL CONDUIT LOCATION FOR PWR. LIMITED FIELD WIRING

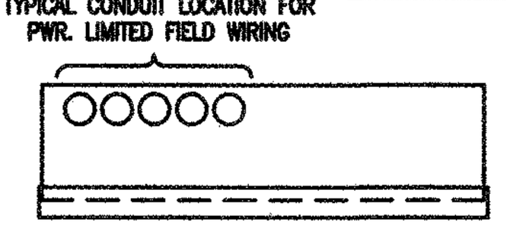
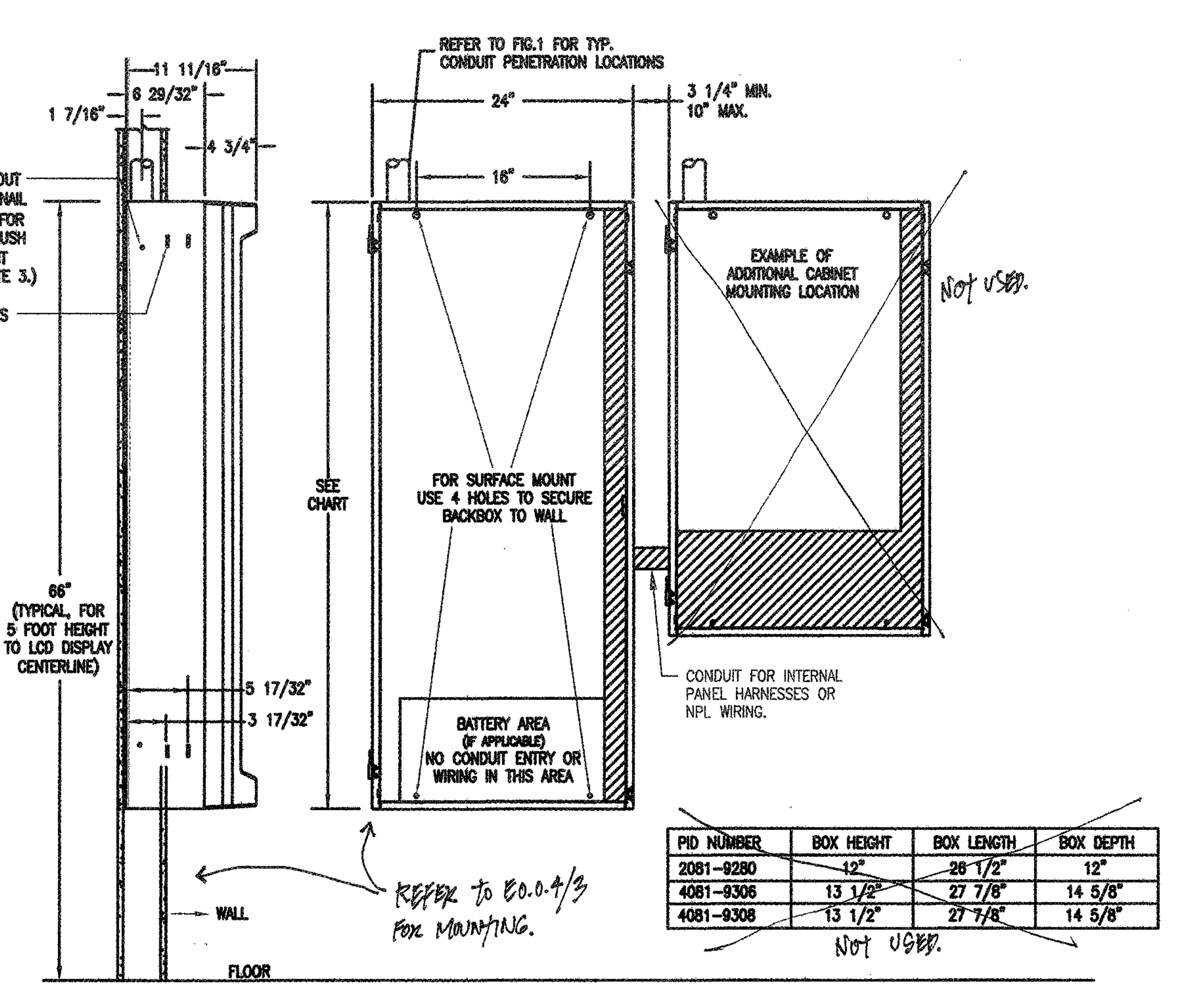


FIG. 1



PID NUMBER	BOX HEIGHT	BOX LENGTH	BOX DEPTH
2081-9280	12"	28 1/2"	12"
4081-9306	13 1/2"	27 7/8"	14 5/8"
4081-9308	13 1/2"	27 7/8"	14 5/8"

Not used.

Refer to E0.0.4/3 for mounting.

NOT USED.

4090-9002 IDNet SLC, INDIVIDUAL ADDRESSABLE OUTPUT MODULE RELAY (AOM)

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- A SINGLE ADDRESSABLE POINT BOTH CONTROLS A 2A FORM "C" CONTACT AND TRACKS ITS STATUS
- COMPATIBLE WITH SIMPLEX MODEL 4010 AND 4100 ADDRESSABLE FIRE ALARM CONTROL PANEL
- LATCHING RELAY DESIGN ALLOWS DATA AND POWER TO BE BOTH SUPPLIED BY IDNet COMMUNICATIONS
- COMPACT, SEALED CONSTRUCTION:
  - SCREW TERMINALS FOR WIRING CONNECTIONS
  - REDUCES DUST INFILTRATION

SPECIFICATIONS:

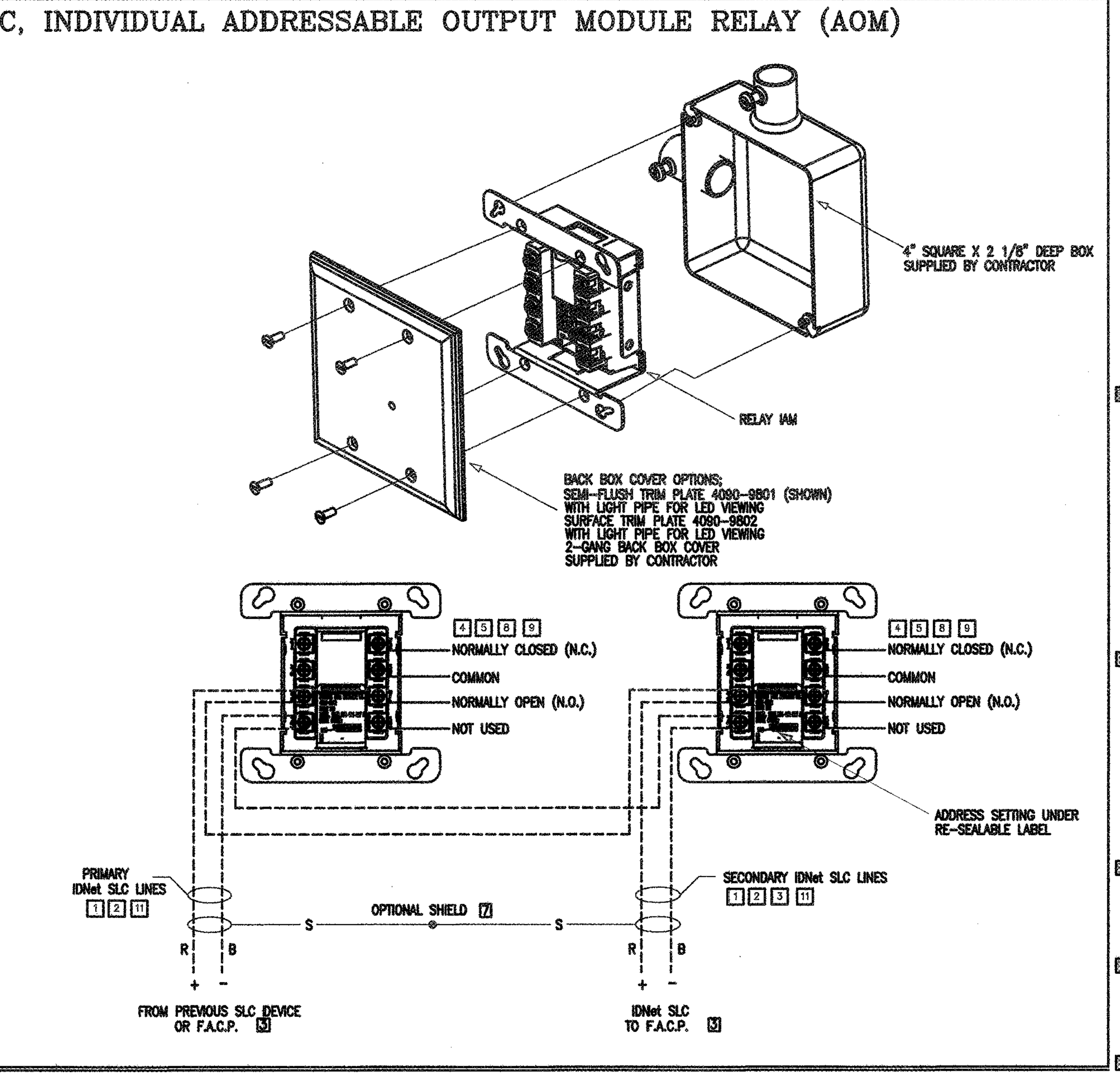
- RELAY IAM POWER: SUPPLIED BY IDNet COMMUNICATIONS
- RELAY IAM CONTACTS (FORM "C", SPDT)
- POWER LIMITED RATING: 2A @ 24VDC, TRANSIENT SUPPRESSED LOADS, 1A @ 24VDC FOR INDUCTIVE LOADS
- NON POWER LIMITED RATING: 1/2A @ 24VAC, TRANSIENT SUPPRESSED LOADS, 1A @ 24 VDC FOR INDUCTIVE LOADS
- WIRE CONNECTIONS: SCREW TERMINALS FOR IN/OUT WIRING, #18 TO #14 AWG WIRE
- COMPATIBLE WITH SIMPLEX 2081-9044 OVER VOLTAGE PROTECTORS
- DIMENSIONS: 4 1/8"H x 4 1/8"W x 1 3/8"D (105mm x 105mm x 35mm)
- HOUSING MATERIAL: BLACK THERMOPLASTIC
- MOUNTING PLATE MATERIAL: SHEET METAL, GALVANIZED
- TEMPERATURE RANGE: 32° F TO 120° F (0° C TO 49° C) INTENDED FOR INDOOR OPERATION
- HUMIDITY RANGE UP TO 93% RH AT 100° F (38° C)

DESCRIPTION:

IDNet SLC RELAY MODULES ALLOW THE SIMPLEX FIRE ALARM CONTROL PANEL TO CONTROL A REMOTELY LOCATED FORM "C" CONTACT USING IDNet ADDRESSABLE COMMUNICATIONS FOR BOTH DATA AND POWER. TYPICAL APPLICATIONS WOULD BE FOR SWITCHING LOCAL POWER FOR CONTROL FUNCTIONS SUCH AS ELEVATOR CAPTURE, OR CONTROL OF HVAC COMPONENTS, PRESSURIZATION FANS, DAMPERS, ETC. RELAY STATUS IS ALSO COMMUNICATED REQUIRING ONLY ONE DEVICE ADDRESS.

WIRING NOTES:

1. IDNet LINES ARE TO BE #18 AWG TWISTED PAIR (CONSULT SG SALES ENGINEERING FOR EXCEPTIONS).
2. MAXIMUM ALLOWABLE LINE RUN, FROM THE F.A.C.P. TO THE FARTHEST DEVICE, NOT TO EXCEED 2500 FEET.
3. MAXIMUM QUANTITY OF DEVICES PER CIRCUIT: CONTROL PANEL MODULE DEPENDENT
4. CONTRACTOR WIRING TO RELAY CONTACTS IS UNSUPERVISED. USE #14 AWG WIRE TO LOCAL CODE.
5. RELAY CONTACTS RATED 2A, 24VDC (1A FOR INDUCTIVE LOAD) RELAY CONTACTS RATED 0.5A 120VAC (NON POWER LIMITED) FOR POWER-LIMITED OPERATION, POWER MUST BE PROVIDED FROM FACP OR POWER-LIMITED POWER SUPPLY LISTED FOR FIRE PROTECTIVE SIGNALING USE.
6. SEE INSTALLATION INSTRUCTIONS 574-184.
7. IF SHIELD IS PRESENT, CONNECT TO THE OUTGOING IDNet SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet CHANNEL. METHOD OF SPLICE DETERMINED BY AHJ.
8. WHEN CONNECTED TO A NON POWER-LIMITED SOURCE, THE WIRING MUST MAINTAIN A MINIMUM 1/4 INCH SEPARATION FROM IDNet WIRING.
9. WHEN USED WITH NON POWER-LIMITED SOURCE, THE "POWER LIMITED WIRING" INDICATION ON THE DEVICE LABEL MUST BE OBLITERATED.
10. WHEN BOTH POWER-LIMITED AND NON POWER-LIMITED SOURCES ARE PRESENT, USE TYPE FPL, FPLR OR FPLP POWER LIMITED CABLE FOR POWER-LIMITED CIRCUITS.
11. MAXIMUM TOTAL WIRE (INCLUDING ALL T-TAPS) ON CIRCUIT, FROM THE F.A.C.P. NOT TO EXCEED 10,000 FEET OR .58uF. (CLASS B ONLY)
12. REFER TO FIELD WIRING DIAGRAM 842-073



LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ✓ FLS ___ SS ___
DATE DEC 1 2 2017

CONSULTANT

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM

PRINCIPAL IN CHARGE: KEVIN CHEN

PROJECT MANAGER: -

DRAWN BY: dHA+CALPEC

REVISIONS

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. INJO
E-13884
Exp. 06/30/18
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE

FIRE ALARM DETAILS

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	FA0.3.1

2098–9806 REMOTE ALARM INDICATOR/KEY SWITCH

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS: 2908–9806 ALARM INDICATOR 7300–0026:150
- MOUNTING: FLUSH
- FINISH: CHROME OR STAINLESS STEEL

SPECIFICATIONS:

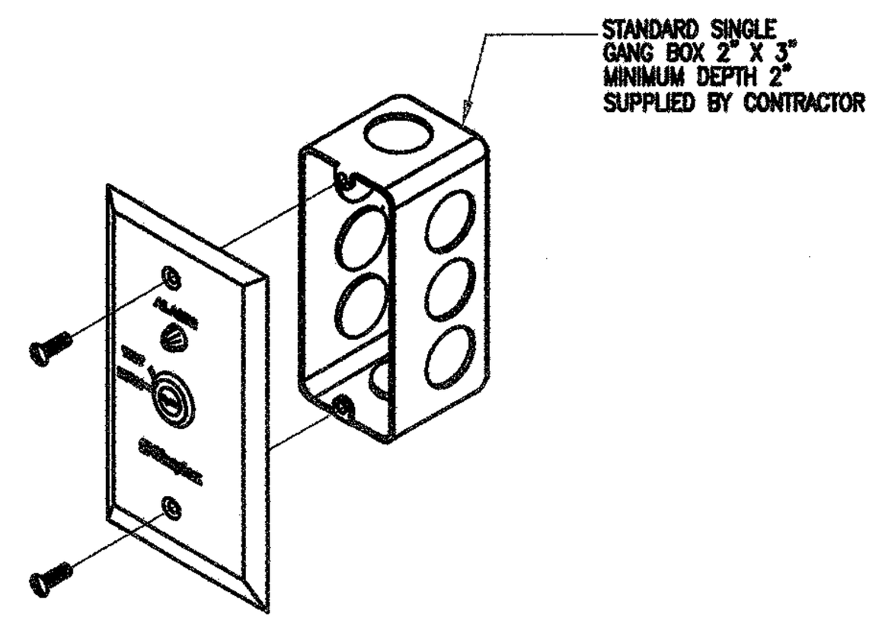
- ALARM CURRENT: 2.8 mA
- DIMENSIONS OF BOX: 2 "W X 3"H X 2"D

DESCRIPTION:

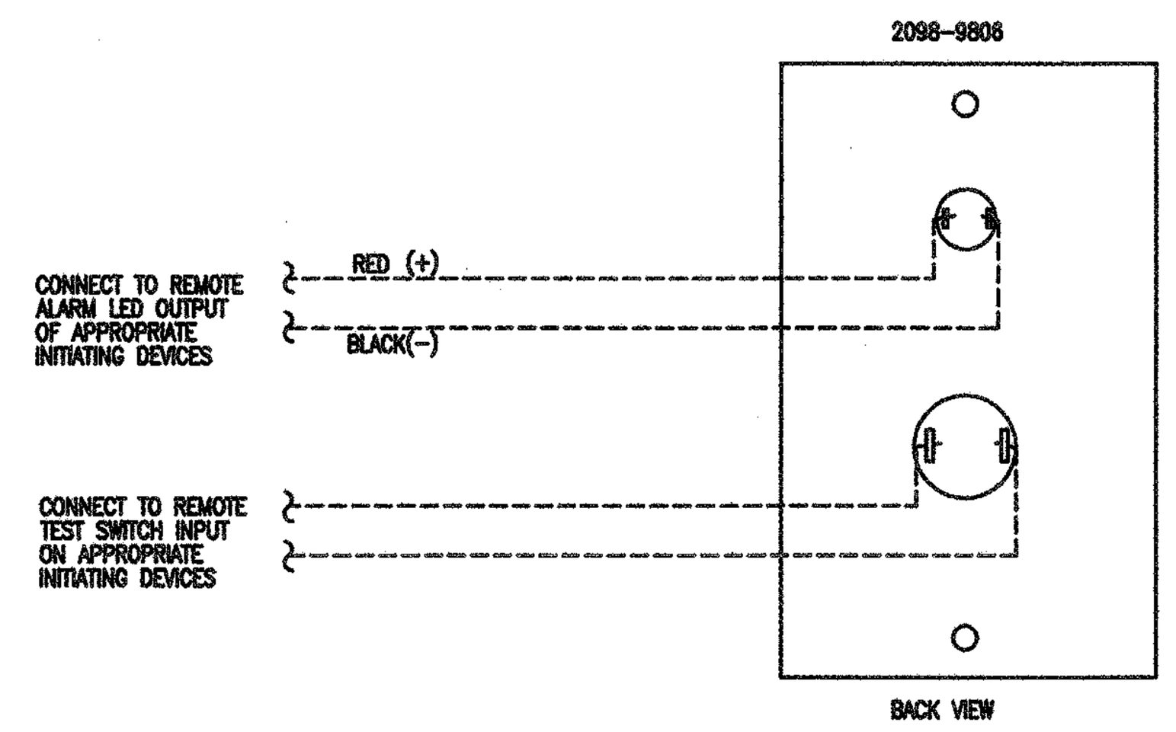
2098–9806 REMOTE TEST STATION, PROVIDES A REMOTE RED ALARM LED STATUS INDICATOR AND A REMOTE TEST KEY ACTIVATED SWITCH MOUNTED ON A SINGLE GANG STAINLESS STEEL PLATE. THE LED WILL PULSE TO INDICATE NORMAL OPERATION OF THE DUCT DETECTOR AND WILL ENERGIZE CONTINUOUS WHEN IN ALARM OR IN TROUBLE. (THE EXACT STATUS OF THE SENSOR WILL BE DISPLAYED AT THE FIRE ALARM CONTROL PANEL.) TURNING THE TEST SWITCH TO "TEST" WILL INITIATE AN ALARM AND ALLOW THE RESULTING SYSTEM RESPONSES TO BE VERIFIED.

WIRING:

- MINIMUM 18 AWG OR TO LOCAL CODE.
- CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
- REMOTE ALARM LED IS POLARIZED, OBSERVE COLOR CODED WIRING.
- ONE INDICATOR MAY BE INSTALLED PER DETECTOR.



FLUSH MOUNTING



BACK VIEW

AIR PRODUCTS MR–101/C SPDT CONTROL RELAY

(SIMPLEX 2088–9008)

PRODUCT INFORMATION

FEATURES:

- UL LISTED
- MULTIPLE COIL VOLTAGE INPUTS, DIODE POLARIZED
- SPDT CONTACTS
- RELAY STATUS LED
- METAL ENCLOSURES WITH LED VIEWING PORT
- MOUNTING: WALL, SURFACE

SPECIFICATIONS:

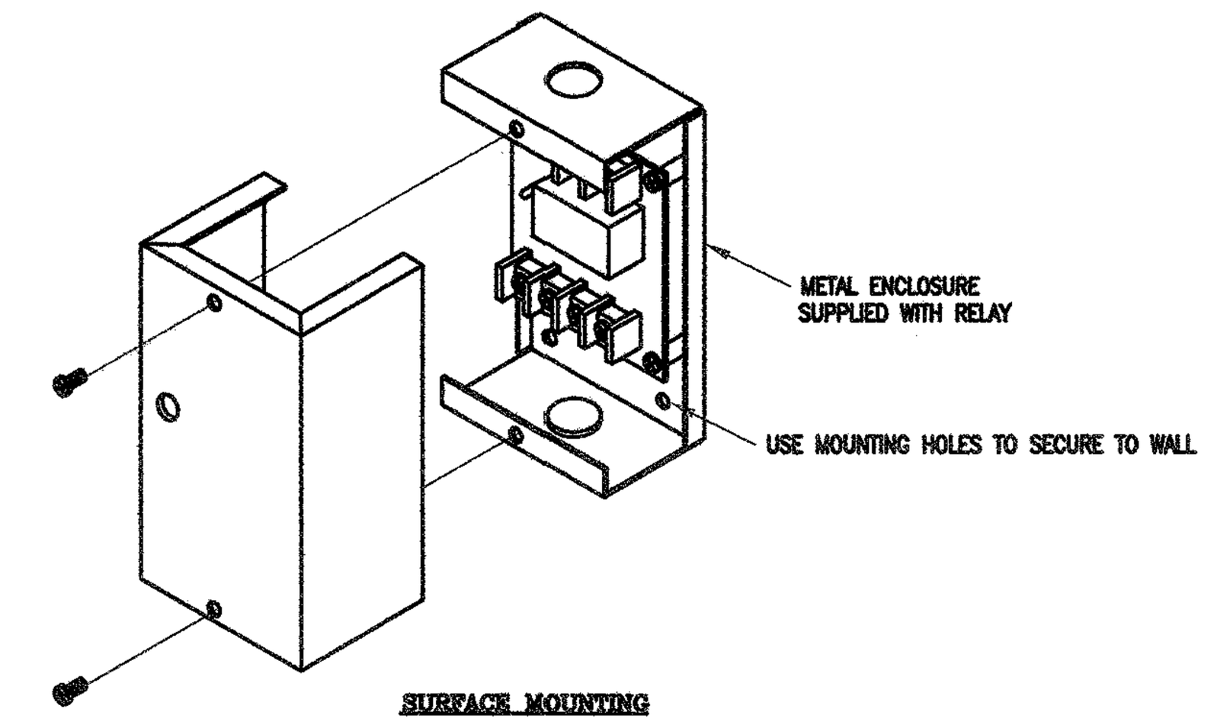
- COIL REQUIREMENT: 0.015A @ 18–35VDC/VAC, 115VAC, 230VAC
- CONTACT RATING: 10.0A @ 115VAC
- TERMINAL BLOCK RATING: UP TO #14AWG
- TEMPERATURE RANGE: –58°F TO +185°F (–50°C TO 85°C)
- DIMENSIONS (METAL ENCLOSURE) : 6–1/8"H X 3–1/4"W X 2–1/2"D (155.76mm H X 82.55mm W X 63.5mm D)

DESCRIPTION:

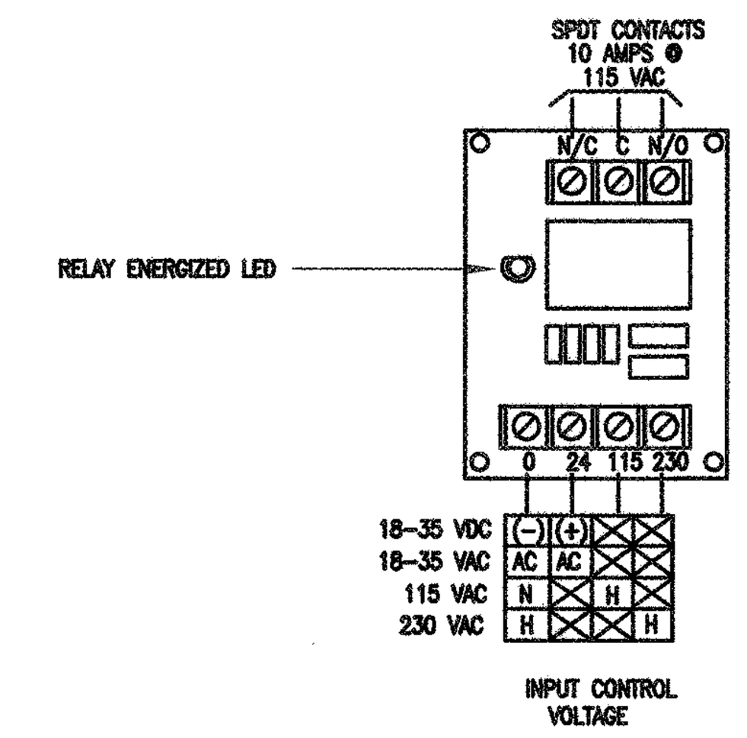
THE MR–101/C CONTROL RELAY OFFERS SPDT 10 AMP CONTACT WHICH MAY BE OPERATED BY ONE OF FOUR INPUT VOLTAGES. A SINGLE RELAY MAY BE ENERGIZED FROM A VOLTAGE SOURCE OF 18–35 VDC OR VAC, 115VAC, OR 230VAC BY WIRING TO APPROPRIATE INPUT TERMINALS. EACH RELAY CONTAINS A RED LED WHICH INDICATES THE RELAY COIL IS ENERGIZED. THESE DEVICES ARE IDEAL FOR APPLICATIONS WHERE LOCAL CONTACTS ARE REQUIRED FOR SYSTEM STATUS, REMOTE CONTACTS FOR CONTROL OF ELECTRICAL LOADS AND GENERAL PURPOSE SWITCHING.

WIRING:

1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. MAINTAIN CORRECT POLARITY
3. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.



SURFACE MOUNTING



TrueAlert™ NON–ADDRESSABLE MULTI–CANDELA VISIBLE NOTIFICATION APPLIANCE (CEILING MOUNT)

PRODUCT INFORMATION

FEATURES:

- UL LISTED TO STANDARD 1971
- ADA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:

- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL NAC INPUTS

SPECIFICATIONS:

- HOUSING DIMENSIONS: 4–3/4" L X 2–5/16" W X 2–5/8" D (121mm X 75mm X 67mm)
- TEMPERATURE RANGE: 32°F TO 122°F (0 TO 50°C)
- HUMIDITY RANGE: 10% TO 93% NON–CONDENSING AT 100°F (38°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

WIRING NOTES:

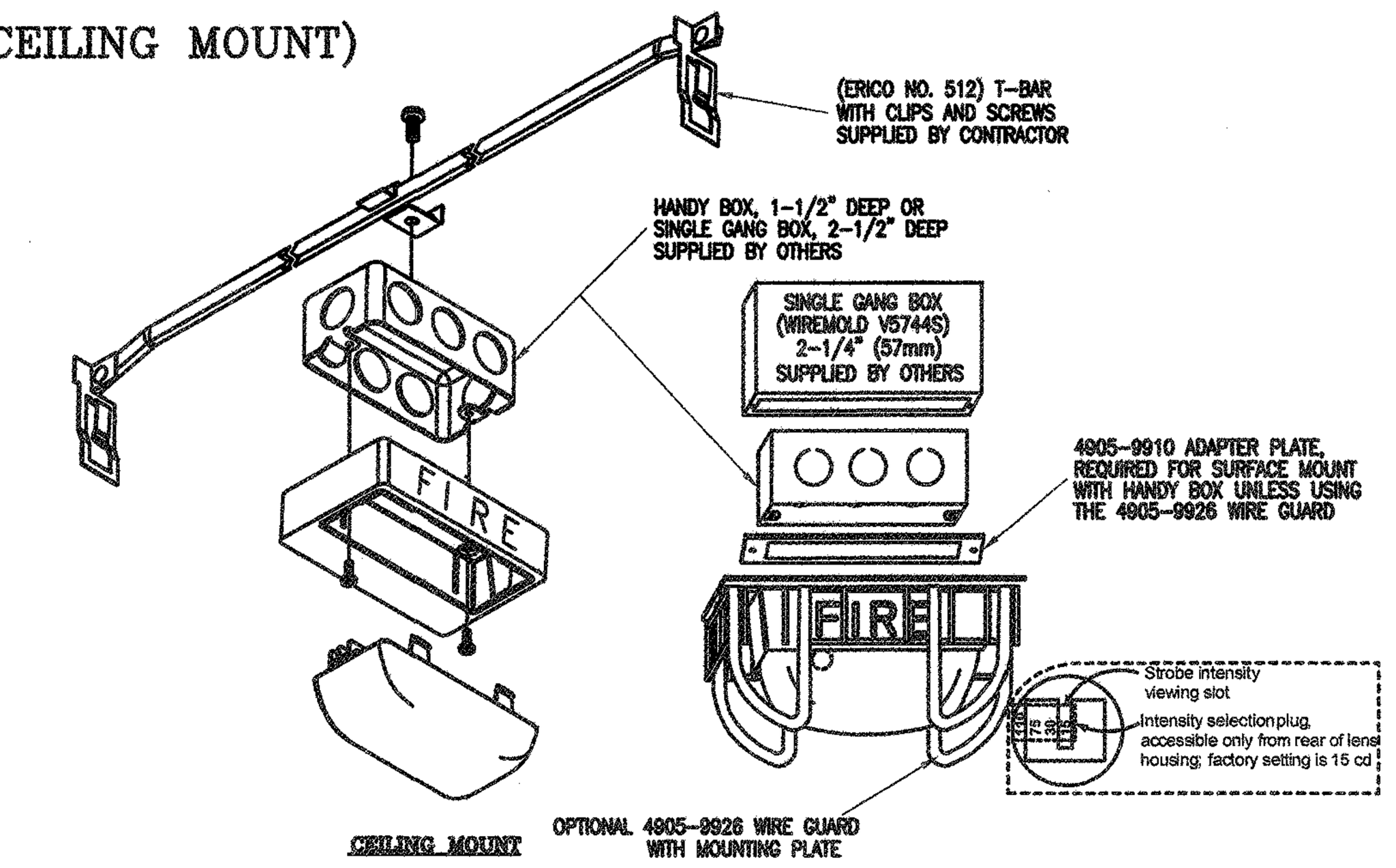
1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER–LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579–548) FOR ADDITIONAL INFORMATION.

STROBE:

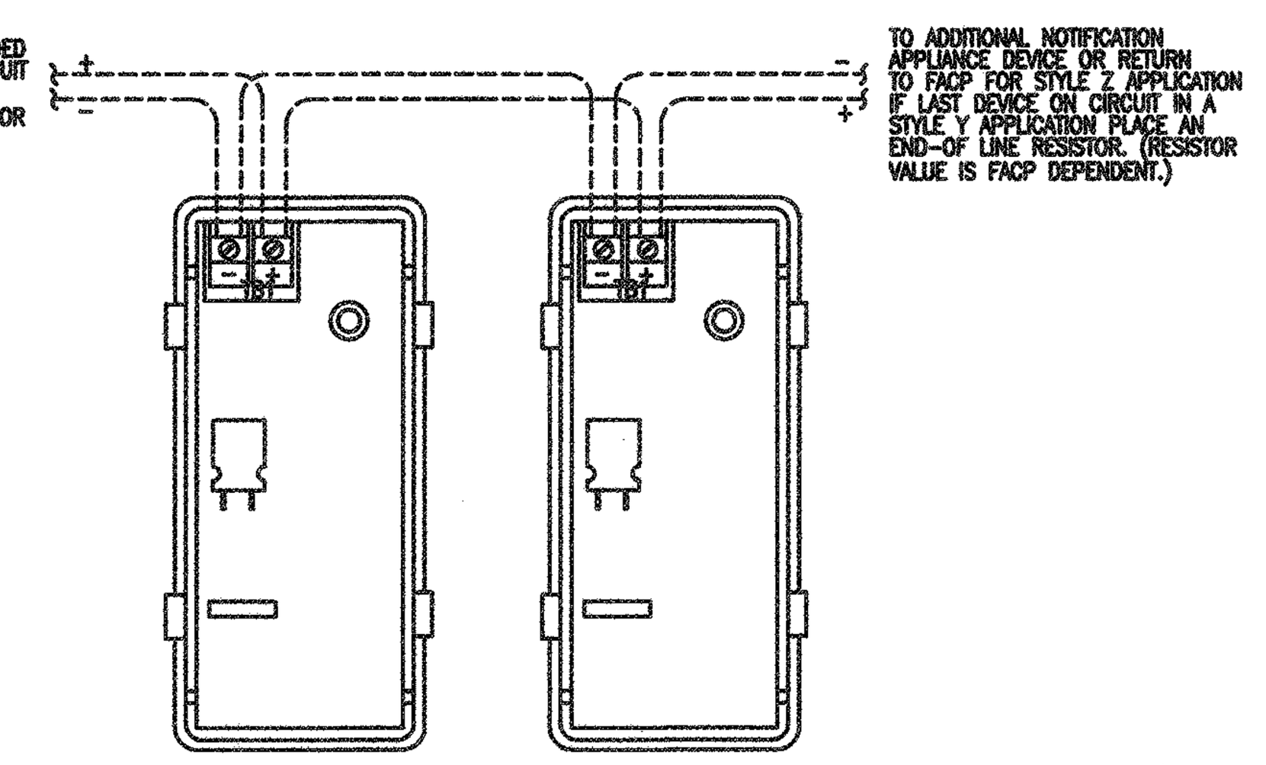
- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971
  ULC LISTED: 20 VDC TO 30 VDC PER ULC S526–M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT @ 16 VDC	18 VDC	24 VDC
4906–9102	RED	WHITE	15cd	75 mA	67 mA	50 mA
			30cd	125 mA	111 mA	83 mA
			75cd	233 mA	207 mA	155 mA
			110cd	316 mA	281 mA	211 mA
4906–9104	WHITE	RED	15cd	75 mA	67 mA	50 mA
			30cd	125 mA	111 mA	83 mA
			75cd	233 mA	207 mA	155 mA
			110cd	316 mA	281 mA	211 mA



CEILING MOUNT



TrueAlert™ NON–ADDRESSABLE MULTI–CANDELA AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (CEILING MOUNT)

PRODUCT INFORMATION

FEATURES:

- CLASS B (STYLE Y) OPERATION REQUIRES CONNECTION TO A COMPATIBLE SMARTSYNC NAC OR TO SMARTSYNC CONTROL MODULE (SCM) 4905–9938
- CLASS A (STYLE Z) OPERATION WHEN CONNECTED TO THE 4905–9938 SCM OR 4100 SERIES FIRE ALARM CONTROL PANEL NAC'S

SPECIFICATIONS:

- HOUSING DIMENSIONS (INCLUDING LENS) : 4–3/4"L X 6–7/8" W X 2–5/8"D
- TEMPERATURE RANGE: 32° F TO 122° F (0° TO 50° C)
- HUMIDITY RANGE: 10% TO 93% NON–CONDENSING AT 100° F (38° C)
- TERMINAL BLOCKS FOR 18 AWG TO 12 AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

STROBE

– RATED VOLTAGE RANGE: UL: 16 VDC TO 33 VDC PER UL 1971
  ULC: 20VDC TO 30VDC PER ULC S526–M878
– FLASH RATE: 1Hz
– SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

*CURRENT DRAWS REFLECT STROBE FLASHING AND HORN ON.

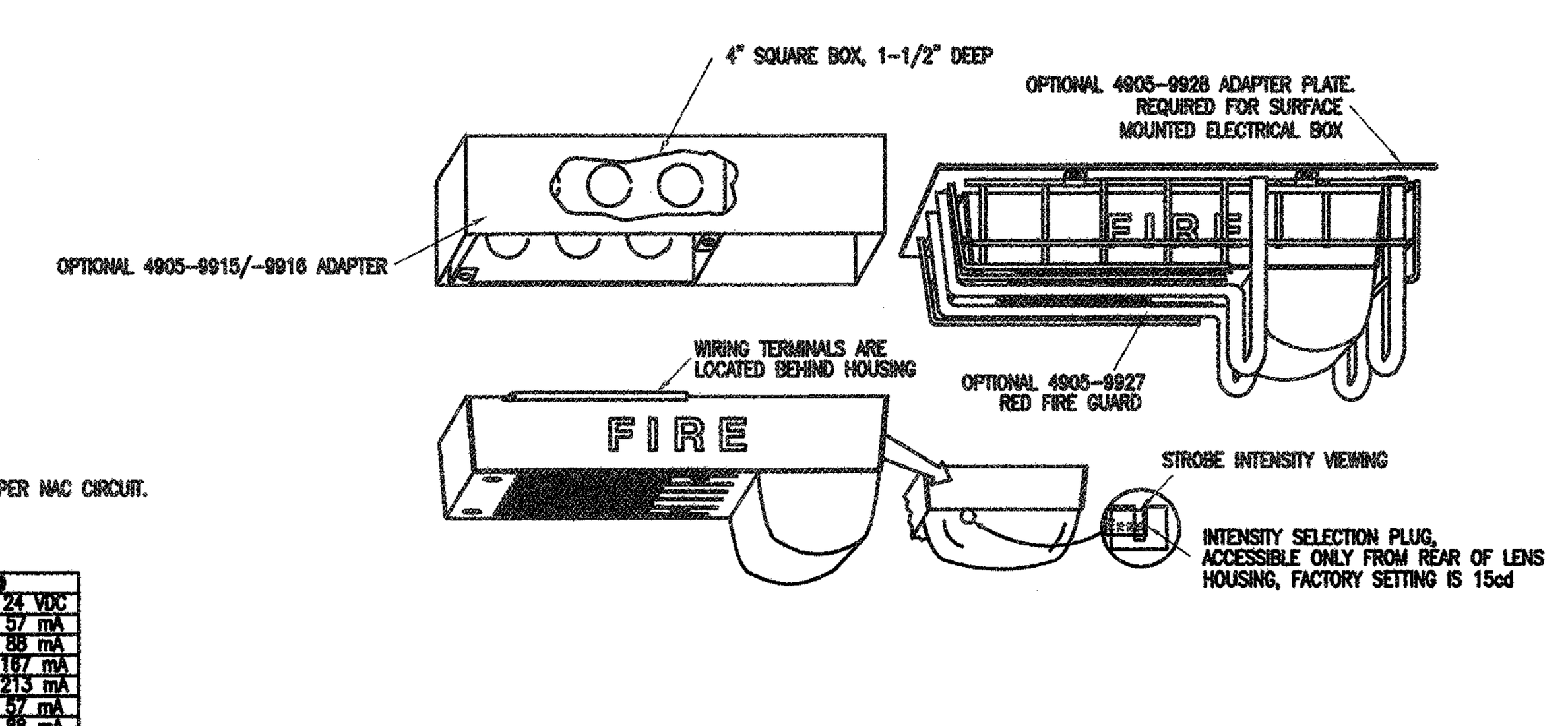
MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT @ 16 VDC	18 VDC	24 VDC
4906–9128	RED	WHITE	15cd	86 mA	76 mA	57 mA
			30cd	132 mA	117 mA	88 mA
			75cd	250 mA	222 mA	167 mA
			110cd	320 mA	284 mA	213 mA
4906–9130	WHITE	RED	15cd	86 mA	76 mA	57 mA
			30cd	132 mA	117 mA	88 mA
			75cd	250 mA	222 mA	167 mA
			110cd	320 mA	284 mA	213 mA

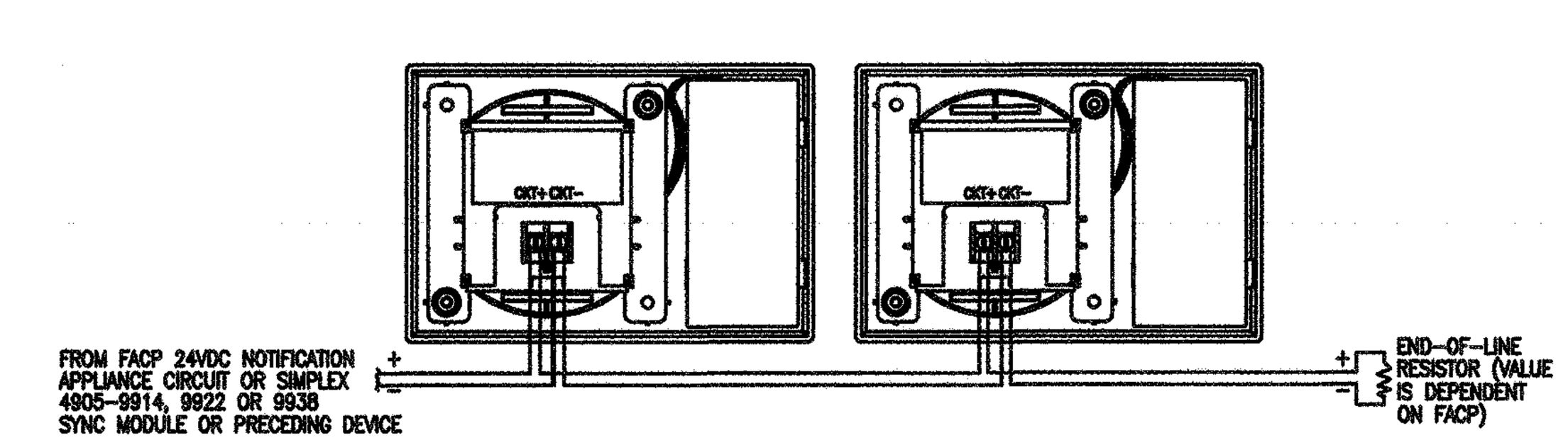
HORN

– SOUND OUTPUT CHARACTERISTICS: 2400 TO 3700 Hz SWEEP, MODULATED AT 120 Hz RATE

HORN SOUND OUTPUT RATINGS @ 10 FT. (3m)						
VOLTAGE	16 VDC		24 VDC		33 VDC	
SOUND TYPE *	STEADY	CODED	STEADY	CODED	STEADY	CODED
REVERBERATE CHAMBER UL 464 TEST	86 dBA	82 dBA	88 dBA	84 dBA	90 dBA	86 dBA
ANECHOIC CHAMBER	92 dBA	91 dBA	94 dBA	95 dBA	96 dBA	96 dBA

* CODED VALUES ARE TYPICAL OF THE OUTPUT MEASURED WITH A TEMPORAL CODED OR A MARCH TIME CODED PULSE AND WITH A SOUND LEVEL METER READING ON A "FAST" SETTING. UNDER THE SAME TEST CONDITIONS, CODED HORN OUTPUT "PEAK" SOUND LEVEL READINGS ARE TYPICALLY 4 dBA HIGHER.





LITTLE™
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ✓ FLS [signature] SS [signature]
DATE DEC 12 2017

CONSULTANT

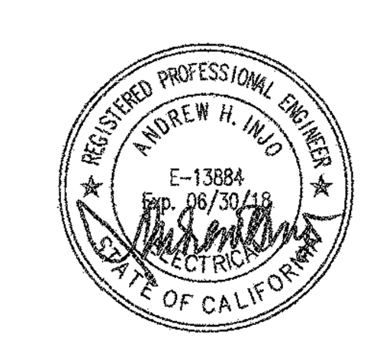
16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

SEAL / SIGNATURE



SHEET TITLE

FIRE ALARM DETAILS

PROJECT NUMBER

913-4675-01

ISSUE DATE: 11/21/2017

SHEET NO: FA0.3.2

CAMPUS PUBLIC SAFETY BUILDING 4100es FACP VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED STRANDED COPPER WIRE) @ 75 Celsius

													PID	4906-9127	4906-9127	4906-9101	4906-9131				
													Candela	15cd	75cd	15cd	WP75				
													Device Type	MC A/V	MC A/V	MC V/D	WP A/V				
													Supv. Current	0.0000	0.0000	0.0000	0.0000				
													Alarm Current	0.0750	0.2210	0.0600	0.2770				
													Alarm Current @ 23 Volts	0.0750	0.2210	0.0600	0.2770				
NOTIFICATION CIRCUIT DESCRIPTION	Power Supply	Panel Circuit	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance						Circuit Capacity (Amps)	Minimum Voltage @ NAC Output Terminals	Spare Circuit / Branch Capacity	Device Quantity Per Circuit/ Branch
CAMPUS PUBLIC SAFETY BUILDING STROBE	SPS-1	SIG1	V1	300	12ga	0.0020	1.993	2.425	17.075	12.43%	16vdc	433 Ft.						3A	19.5	30.7%	14
	SPS-1	SIG2	V2	300	12ga	0.0020	1.431				16vdc	433 Ft.		1	2	6	3	3A	19.5		12
	SPS-1	SIG3	V2	300	12ga	0.0020	0.375				16vdc	433 Ft.		1		5		3A	19.5		6

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THAT THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL SIMPLEXGRINNELL DISTRICT OFFICE.

VOLTAGE DROP CALCULATION — N.T.S. 2

UL LLC

CERTIFICATE OF COMPLIANCE COVER PAGE

MARIA GUIDO
SIMPLEXGRINNELL L P
14200 E Exposition Ave
Aurora CO 80012-2540

Applicant Subscriber No: 214821-001
Service Center Number: 28
Service Contract No: -

ACTIVE LISTINGS

CCN	File No.	Vol. No.
UUFX	S5242	3

Listed Service From: AURORA, CO

Alarm Service Company:
SIMPLEXGRINNELL L P
14200 E EXPOSITION AVE
AURORA CO 80012-2540

Service Center:
SIMPLEXGRINNELL L P
14200 E EXPOSITION AVE
AURORA CO 80012-2540

Applicant ID No: 214821-001
Service Center No: 28
Expires: 31-MAR-2017

CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY that the Alarm Service Company indicated below is included by Underwriters Laboratories Inc. (UL) in its Product Directories as eligible to use the UL Listing Mark in connection with Certificated Alarm Systems. The only evidence of compliance with UL's requirements is the issuance of a UL Certificate for the Alarm System and the Certificate is current under UL's Certificate Verification Service. This Certificate does not apply in any way to the communication channel between the protected property and any facility that monitors signals from the protected property unless the use of a UL listed or Classified Alarm Transport Company is specified on the Certificate.

Listed Service From: AURORA, CO

Alarm Service Company: (100570-534)
SIMPLEXGRINNELL L P
14200 E EXPOSITION AVE
AURORA CO 80012-2540

Service Center: (100570-534)
SIMPLEXGRINNELL L P
14200 E EXPOSITION AVE
AURORA CO 80012-2540

The Alarm Service Company is Listed in the following Certificate Service Categories:

File - Vol No.	CCN	Listing Category
S5242-3	UUFX	[Signal and Fire Alarm Equipment and Services] (Protective Signaling Services) Central Station

THIS CERTIFICATE EXPIRES ON 31-MAR-2017

"LOOK FOR THE UL ALARM SYSTEM CERTIFICATE"

CENTRAL MONITORING STATION DOCUMENT — N.T.S. 3

CAMPUS PUBLIC SAFETY BUILDING 4100es FACP

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-9114	1	4100 MASTER CONTROLLER, INFO-ALARM DISPLAY	*	0.4450	0.4450	0.5000	0.5000
			Panel Totals		0.4450		0.5000
IDNet Addressable Devices (SLC)							
4088-9021	2	ADDRESSABLE SINGLE ACTION NO GRIP PULL STATION	*	Constant current draw of .8mA standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".			
4088-9714	36	TRUEALARM PHOTO SMOKE SENSOR					
4088-9792	36	TRUEALARM SENSOR BASE	*				
Notification Appliances							
4906-9101	15	V/D MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0600	0.4800
4906-9127	5	A/V MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0750	0.1500
4906-9127	1	A/V MC NON-ADDRESS, RED, WALL	75	0.0000	0.0000	0.2210	0.8630
4906-9131	5	WP MC A/V NON-ADDR WALL MT RED	WP75	0.0000	0.0000	0.2770	1.1080
			Peripheral Totals		0.0000		2.4010
			Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices		0.0000		0.0000
			RUI Totals	0	0.0000		0.0000
			Address Totals	20 Addresses	0.0160		0.0200
			System Totals*:	Standby	0.4610	Alarm	2.9210

* Device Address current draw included below (See Additional Current Draws):

Battery Set #1 (Cabinet/Charger #1)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
SPS-1				0.4450		2.9010
		Sub Total		0.4450		2.9010
Additional Current Draws:						
MAPNET/IDNet Device Address Communication Current	20	x 0.000800		= 0.0160	x 0.001000	= 0.0200
		Sub Total		0.4610		2.9210
Spare addressable point capacity	0%	0	x 0.0008	= 0.0000	x 0.001	= 0.0000
		Total		0.4610		2.9210
Standby Time =	24	Hrs	x 0.4610	= 11.0640 Standby Ah		
Alarm Time =	5	Min	0.08333 x 2.921	= 0.2434 Alarm Ah		
				11.3074		
Additional Spare Battery Capacity =	0%		+	0.0000		
				11.3074		
Battery Discharge Factor =	20%		+	2.2615		
Minimum Battery Required	2081-9275 18AH (2x)			13.5689		
Battery Supplied	2081-9267 25AH (2x)					

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

FACP PANEL CALCULATION — N.T.S. 1

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY ADDRESS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
AR: 03-117673
AC ✓ FLS ✓ SS ✓
DATE DEC 12 2017

COMMENTS

16516
dHA + CALPEC
150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8580
FAX: (626) 445-8081

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KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

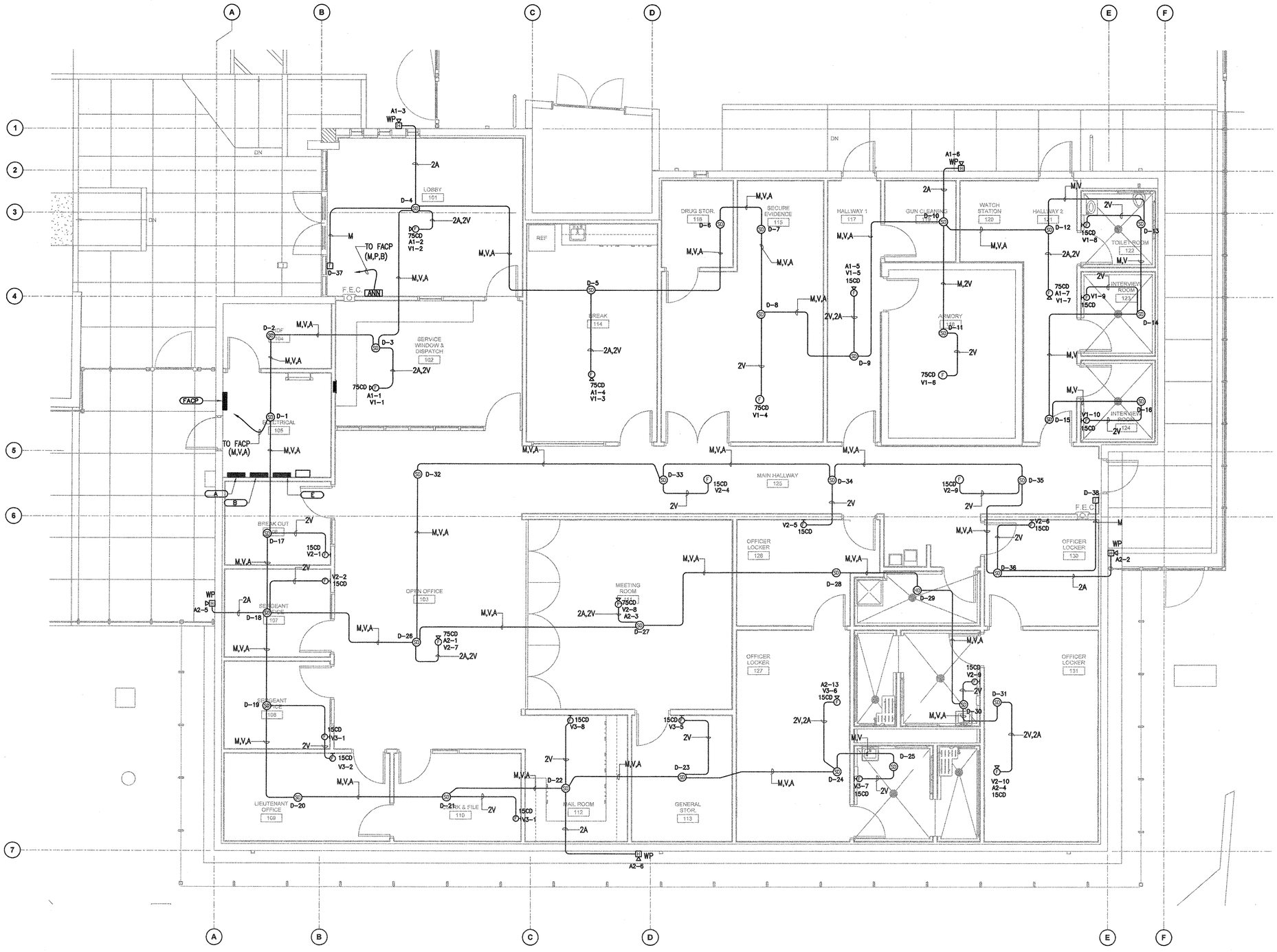
REGISTERED PROFESSIONAL ENGINEER
ANDREW H. HUU
E-13884
EXP. 06/30/18
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
FIRE ALARM CALCULATIONS

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/2017
SHEET NO.: FA0.4



1 FIRE ALARM PLAN

1/4" = 1'-0"

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1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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150 S. ARROYO PARKWAY
SUITE NO. 100
PASADENA, CA. 91105
TEL: (626) 445-8500
FAX: (626) 445-8051

PROJECT TEAM

PRINCIPAL IN CHARGE
KEVIN CHEN

PROJECT MANAGER
-

DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. HUO
E-13884
06/30/2018
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE

FIRE ALARM PLAN

PROJECT NUMBER

913-4675-01

ISSUE DATE

11/21/2017

SHEET NO.

FA2.1